

March 27, 2017

Mr. Paul Cho, P.G.
California Regional Water Quality Control Board, Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Re: ***Revised Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel.***
Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard
Norwalk, California

Dear Mr. Cho,

On behalf of the DLA Installation Support for Energy (DLA) and SFPP, L.P. (SFPP), The Source Group, Inc., a division of Apex Companies, LLC (SGI), and CH2M have prepared this combined cover letter to present the findings of additional sampling and analysis and revised human health risk assessment (HHRA) for shallow soil present within the eastern 15-acre parcel of the Defense Fuel Supply Point Norwalk (the Site) located at 15306 Norwalk Boulevard in Norwalk, California. This submittal follows the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) February 2, 2017 request for a revised HHRA, following earlier HHRA submittals by DLA and SFPP (see below for a list of cited documents and correspondence).

Background

The Site formerly operated as a DLA fuel storage and distribution facility.

DLA operational equipment previously included ten 80,000- and two 55,000-barrel aboveground storage tanks (ASTs) that were used to store and distribute various grades of jet propellants, including JP-4, JP-5 and JP-8. The site was placed into permanent closure in 1999 and the ASTs were drained, cleaned, and marine chemist certified. Within the tank farm, the individual tank lateral pipes were drained, disconnected, and individually cleaned. The ASTs, concrete pads, and connecting pipeline systems were demolished and removed in 2011 and 2012.

SFPP previously operated a pump station near the south-central area of the Site. The pump station was used to transfer fuel to and from the Site, and as an in-line pumping station for portions of the SFPP pipeline network. The pump station was decommissioned in 2001 and then removed in 2016 and 2017 as part of SFPP's pipeline relocation project. Three SFPP pipelines heading eastward along the southern boundary of the property (one of which bends at the southeastern corner of the Site and continues northward within the eastern easement) remain in service and continue to convey refined petroleum fuels including gasoline, diesel, and jet fuel.

In preparation for future re-use of the property, remedial action plans were developed by both SFPP and DLA and submitted and approved by the RWQCB. The remedial plans were developed assuming future industrial/commercial property use. Following U.S. Congressional action, it was determined that the approximately 15 eastern-most acres of the site would be conveyed to the City of Norwalk for recreational park

use. However, the eastern 15-acres has been zoned by the City of Norwalk as industrial/commercial as part of the land use and environmental restrictions for this portion of the Site. Figure 1 presents a site map and the location of the eastern 15-acre boundary.

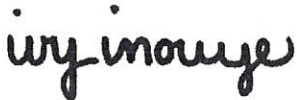
Human Health Risk Assessment

After completion of the requisite soil remediation activities, in August 2016, DLA and SFPP compiled site data and presented the findings of risk calculations in two separate documents with the objective of obtaining regulatory closure status of the shallow (0 to 10 feet) soils within the eastern 15 acres of the Site. Following receipt of a RWQCB and Office of Environmental Health Hazard Assessment (OEHHA) request for additional investigation and modified evaluation (in a letter dated February 2, 2017), additional sampling was conducted by DLA and SFPP immediately thereafter between February 14 and February 24, 2017. The attached submittals (Attachments A and B) present the results of these supplemental investigations and updated risk evaluations to support a No Further Action determination for shallow soil in the eastern 15-acre portion of the Site.

The attached revised HHRAs, based on additional data and modified evaluation requested by the RWQCB and OEHHA, document that granting No Further Action status for the shallow soil in the eastern 15-acre part of the Site is warranted.

Please contact the undersigned if you have any questions or comments.

Sincerely,
SGI



Ivy Inouye
Senior Toxicologist



Neil F. Irish, P.G.
Principal Geologist

CH2M



John Lowe, CIH
Vapor Intrusion Consultant



Dan Jablonski
Sr. Project Manager

List of Figures

Figure 1 15-Acre Eastern Portion

List of Attachments

Attachment A *Revised Human Health Risk Assessment, DLA Responsible Area of the Eastern Portion of DFSP Norwalk, 15306 Norwalk Blvd., Norwalk, California, The Source Group, Inc., March 20, 2017.*

Attachment B *Results of Additional Soil and Soil Vapor Sampling and Revised Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, Defense Fuel Support Norwalk, Norwalk, California, CH2M, March 16, 2017.*

Documents Cited:

- California Regional Water Quality Control Board, Los Angeles Region. 2017 *Requirement for Revised Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel*. February 2.
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2016. Letter to Ms. Carol Devier-Heeney and Mr. Steve Defibaugh. *Review of Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel Shallow Soil*. Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286A/B, Site ID No. 16638 and 204DM00). August 30.
- CH2M. 2016. *Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, Defense Fuel Support Point, Norwalk, California*. June 28.
- The Source Group, Inc. (SGI). 2016. *Human Health Risk Assessment DLA-Energy Responsible Area of the Eastern Portion, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California*. May 31.
- SGI and CH2M. 2016 *Response to the Office of Environmental Health Hazard Assessment (OEHHA) Comments on the: Human Health Risk Assessment, DLA-Energy Responsible Area of Eastern Portion, dated May 31, 2016, and Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, dated June 28, 2016*. October 12.

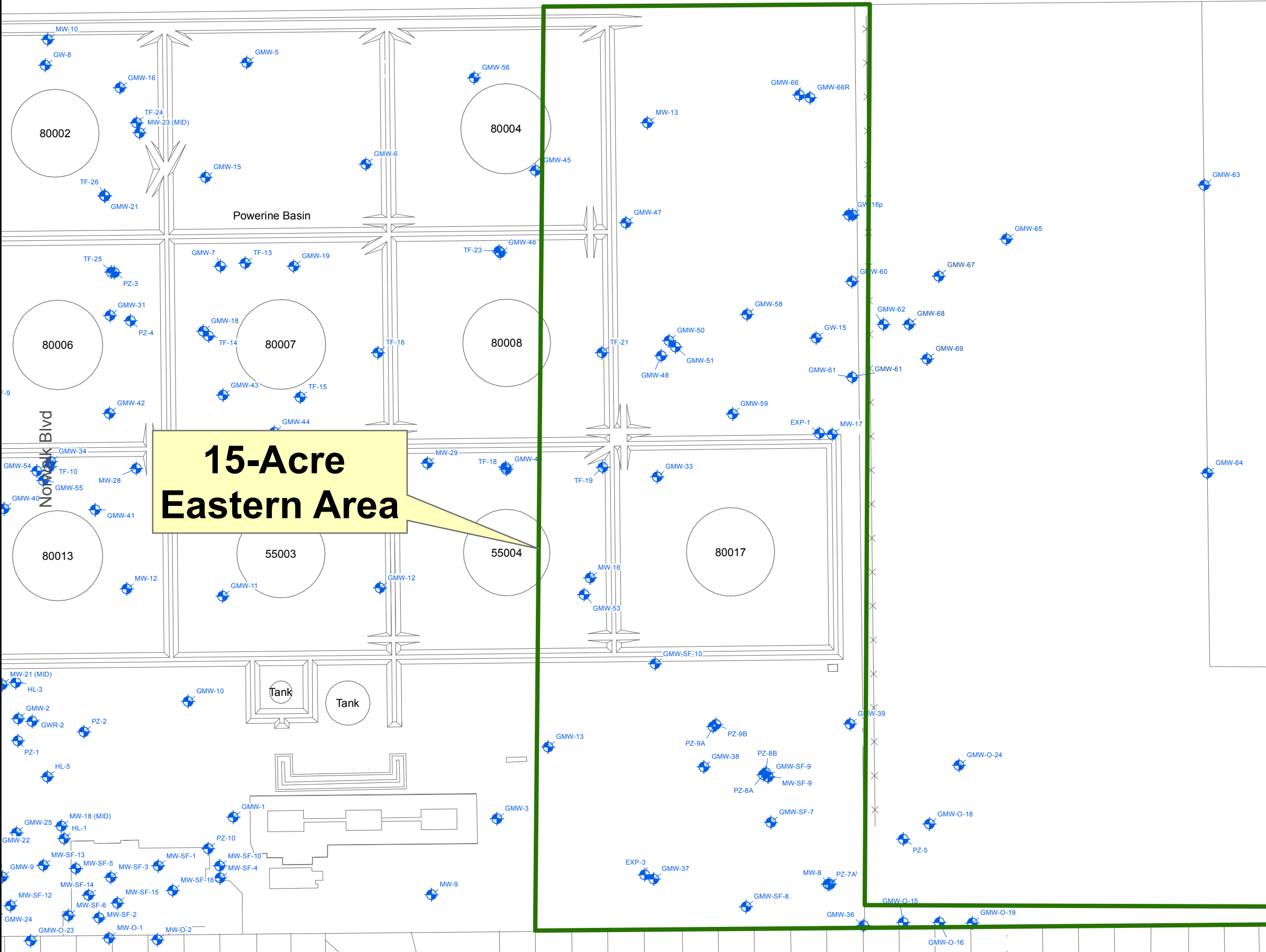
Distribution:

- Steve Defibaugh, Kinder Morgan Energy Partners, L.P.
- Carol Devier-Heeney, Defense Logistics Agency Energy (electronic only)
- Minxia Dong, Norwalk Public Library
- Adam Ly, Park Water Company (electronic only)
- Adriana Figueroa, City of Norwalk (electronic only)
- Angela Mancillas, Office of Congresswoman Linda T. Sanchez (electronic only)
- Brian Partington, Water Replenishment District of Southern California (electronic only)
- Carina Chacon, Office of Assemblymember Christina Garcia (electronic only)
- Charles Emig, City of Cerritos (electronic only)
- Daniel Swensson, The Source Group, Inc. (electronic only)
- Everett Ferguson, Water Replenishment District of Southern California (electronic only)
- Jon Wreschinsky, March ARB (electronic only)
- Lorena Sierra, John Dolland Elementary School (electronic only)
- Mary Jane McIntosh, Restoration Advisory Board (RAB) Co-Chair (electronic only)
- Michael T. Wilson, Air Force Real Property Agency (electronic only)
- Molly Black, The Source Group, Inc. (electronic only)
- Neil F. Irish, P.G., The Source Group, Inc. (electronic only)
- Norman Dupont, Esq., Ring Bender Law (electronic only)
- Paul Parmentier, The Source Group, Inc. (electronic only)
- Perla Hernandez, Office of Congresswoman Grace Napolitano (electronic only)
- Tracy Winkler, RAB (electronic only)
- Walter Scherer, March ARB (electronic only)
- Yahaira Ortiz, Office of State Senator Tony Mendoza (electronic only)

FIGURES




Document Path: R:\DLA-Norwalk\GIS Maps\GWM Well Map\Fig-1_DFSPN_15 Acre Eastern Portion_101116.mxd

Excelsior Dr



15-Acre Eastern Area

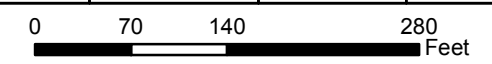
Legend

-  Former Above Ground Storage Tanks
-  Existing Groundwater Monitoring / Extraction Wells
-  15 Acre Expanded Holifield Park Area



DFSP Norwalk
15306 Norwalk Boulevard
Norwalk, California

| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 10/11/2016 | PW | PP |



15-Acre Eastern Portion

SGI THE SOURCE GROUP, INC.
environmental
1962 Freeman Avenue
Signal Hill, CA 90755
(562) 597-1055

Figure
1

ATTACHMENT A

Revised Human Health Risk Assessment, DLA Responsible Area of the Eastern Portion of DFSP Norwalk, 15306 Norwalk Blvd., Norwalk, California, The Source Group, Inc., March 17, 2017.

**REVISED HUMAN HEALTH RISK ASSESSMENT
DLA-ENERGY RESPONSIBLE AREA OF THE
EASTERN PORTION**

**Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard
Norwalk, California**

04-NDLA-007

Prepared For:

Defense Logistics Agency - Energy
8725 John J. Kingman Road
Fort Belvoir, Virginia 22060-6222

Prepared By:



1962 Freeman Avenue
Signal Hill, California 90755

March 20, 2017

Prepared By:

A handwritten signature in black ink that reads 'Ivy Inouye'.

Ivy Inouye
Senior Toxicologist

Reviewed By:

A handwritten signature in blue ink, appearing to read 'Neil F. Irish'.

Neil F. Irish, P.G.
Principal Geologist



TABLE OF CONTENTS

| | PAGE |
|--|-------------|
| LIST OF FIGURES | ii |
| LIST OF TABLES | ii |
| LIST OF APPENDICES | ii |
| ACRONYMS | iii |
| | |
| 1.0 INTRODUCTION | 1-1 |
| | |
| 2.0 BACKGROUND | 2-1 |
| 2.1 Regional Geology | 2-1 |
| 2.2 Hydrogeology..... | 2-2 |
| 2.3 Previous Site Investigations and Distribution of Constituents of Concern | 2-3 |
| 2.4 February 2017 Additional Site Investigation | 2-5 |
| | |
| 3.0 CONCEPTUAL SITE MODEL | 3-1 |
| 3.1 Potential Sources | 3-1 |
| 3.2 Exposure Setting and Land Use | 3-1 |
| 3.3 Chemical Release Mechanisms and Identification of Transport Media | 3-2 |
| 3.3.1 Volatilization of Chemical Vapors | 3-2 |
| 3.3.2 Emission of Fugitive Dust | 3-2 |
| 3.3.3 Leaching | 3-3 |
| 3.3.4 Lateral Migration of Groundwater into Offsite Surface Water | 3-3 |
| 3.3.5 Stormwater Runoff | 3-3 |
| 3.4 Potential Human Receptors | 3-3 |
| 3.5 Potential Exposure Points | 3-4 |
| 3.6 Exposure Pathways Considered Potentially Complete and Significant | 3-4 |
| 3.6.1 Hypothetical On-Site Construction Worker Receptor | 3-5 |
| 3.6.2 Hypothetical On-Site Commercial/Industrial Worker Receptor | 3-5 |
| 3.6.3 Hypothetical On-Site Park Visitor Receptor | 3-5 |
| | |
| 4.0 HUMAN HEALTH SCREENING-LEVEL RISK ASSESSMENT | 4-1 |
| 4.1 Data Evaluation and Exposure Point Concentrations | 4-1 |
| 4.1.1 Exposure Point Concentrations in Soil | 4-1 |
| 4.1.2 Exposure Point Concentrations in Soil Gas | 4-2 |
| 4.2 Site-Specific Cleanup Goals and Screening Levels..... | 4-2 |
| 4.2.1 Soil Cleanup Goals and Screening Levels..... | 4-3 |
| 4.2.2 Soil Gas Screening Levels..... | 4-4 |
| 4.3 Soil Results | 4-4 |
| 4.4 Soil Gas Results | 4-5 |
| 4.5 Results of the Human Health Screening-Level Risk Assessment..... | 4-5 |
| | |
| 5.0 SUMMARY AND CONCLUSIONS | 5-1 |
| | |
| 6.0 REFERENCES | 6-1 |
| | |
| 7.0 LIMITATIONS | 7-1 |

LIST OF FIGURES

| | |
|----------|---|
| Figure 1 | Site Location Map |
| Figure 2 | Site Layout Map |
| Figure 3 | Groundwater Monitoring Well and Soil Boring Locations |
| Figure 4 | Groundwater Equipotential and Gradient Map, October 2016 |
| Figure 5 | Site Layout with Proposed Excavations |
| Figure 6 | Excavation Map with Park Area Cross Trenches |
| Figure 7 | Excavation Map with Park Area Backfill Origins |
| Figure 8 | Soil Gas Benzene Concentrations, Southeast Corner of 15-Acre Area |
| Figure 9 | Conceptual Site Model |

LIST OF TABLES

| | |
|---------|--|
| Table 1 | Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil (0 to 10 feet bgs) – 2015/2016 Investigation |
| Table 2 | Statistical Summary of 2016 Analytical Data and Screening-Level Risk Assessment for Soil Gas at 5 feet bgs – 2016 Investigation |
| Table 3 | Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 10 feet bgs – 2016 Investigation |
| Table 4 | Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 5 feet bgs – 2017 Investigation |
| Table 5 | Statistical Summary of 2017 Analytical Data and Screening-Level Risk Assessment for Soil Gas at 10 feet bgs – 2017 Investigation |

LIST OF APPENDICES

| | |
|------------|--|
| Appendix A | February 2017 Additional Site Investigation |
| Appendix B | Analytical Results for TPH and VOCs in Soil (0 to 10 feet bgs) |
| Appendix C | Analytical Results for VOCs in Soil Gas |
| Appendix D | ProUCL Output |
| Appendix E | Soil and Soil Gas Screening Levels |
| Appendix F | Risk Characterization |

ACRONYMS

| | |
|-------------------|--|
| 95UCL | 95-percent upper confidence limit of the mean |
| mg/kg | milligram per kilogram |
| µg/L | microgram per liter |
| µg/m ³ | microgram per cubic meter |
| ft/ft | foot/foot |
| ft/day | feet per day |
| AST | aboveground storage tank |
| bgs | below ground surface |
| BMP | best management practice |
| BTEX | benzene, toluene, ethylbenzene, and xylene |
| CalEPA | California Environmental Protection Agency |
| CAM | California Assessment Metal |
| CHHSL | California Human Health Screening Level |
| COPC | chemical of potential concern |
| CSM | conceptual site model |
| DFSP | Defense Fuel Support Point |
| DLA-Energy | Defense Logistics Agency-Energy |
| DTSC | Department of Toxic Substances Control |
| EPC | exposure point concentration |
| ESL | Environmental Screening Level |
| HASP | Health and Safety Plan |
| HHRA | human health risk assessment |
| KMEP | Kinder Morgan Energy Partner |
| K _{oc} | organic-carbon partition coefficient |
| LARWQCB | Los Angeles Regional Water Quality Control Board |
| MTBE | methyl tert-butyl ether |
| OEHHA | Office of Health Hazard Assessment |
| PAH | polyaromatic hydrocarbon |
| PCB | polychlorinated biphenyl |
| RAP | Remedial Action Plan |
| RME | reasonable maximum exposure |
| RSL | Regional Screening Level |
| SFRWQCB | San Francisco Bay Regional Water Quality Control Board |
| SIG | The Source Group, Inc. |
| SMP | Site Management Plan |
| SVE | soil vapor extraction |
| SVM | soil vapor monitoring |
| SVOC | semi-volatile organic compound |
| TBA | tert-butyl alcohol |
| TPH | total petroleum hydrocarbons |
| USAF | U.S. Air Force |
| USEPA | U.S. Environmental Protection Agency |
| VOC | volatile organic compound |

1.0 INTRODUCTION

This report presents the Revised Human Health Risk Assessment (HHRA) conducted for the Eastern Portion of the former Defense Fuel Support Point (DFSP) Norwalk facility located at 15306 Norwalk Boulevard in Norwalk, California (Site; Figure 1). The Eastern Portion of the Site wherein the Defense Logistics Agency-Energy (DLA-Energy) is responsible for the restoration of shallow soils and the subject of this HHRA is depicted on Figure 2. This report is submitted on behalf of the DLA-Energy, lessee of the property currently owned by the United States Air Force (USAF). In support of closure for the 15 eastern acres of the Site, this HHRA focuses on shallow soil (0 to 10 feet below ground surface [bgs]) and soil gas collected in the Eastern Portion of the Site.

This Revised HHRA incorporates comments provided by Office of Environmental Human Health Assessment (OEHHA) in a letter dated August 2, 2016, and transmitted by the Los Angeles Regional Water Quality Control Board (LARWQCB) in a letter dated August 30, 2016. A letter response to OEHHA's comments was prepared and submitted to LARWQCB on October 12, 2016.

Between March 2015 and February 2016, soil remediation was performed to address contaminants detected in soil and soil gas, principally total petroleum hydrocarbons (TPH), and volatile organic carbons (VOCs). The remediation was performed under the regulatory oversight of the Los Angeles Regional Water Quality Control Board (LARWQCB) and in accordance with the *Soil Remedial Action Plan* (RAP), dated November 30, 2014, and the *Addendum to the Soil Remedial Action Plan* (Addendum), dated December 10, 2014. Authorization to proceed with the RAP was provided in the letter from the LARWQCB entitled *Review of Soil Remedial Action Plan and Soil Management Plan*, dated January 7, 2015. A *Shallow Soil Closure Report – Defense Logistics Agency- Energy (DLA-Energy) Responsible Area of the Eastern Portion* (Closure Report), dated April 18, 2016, was prepared and submitted to the LARWQCB to document the completion of shallow soil remediation activities on the Eastern Portion of the Site. Copies of other project-related work plans, documents, and communications from the LARWQCB are available on the Geotracker website for the Site.

At the request of the LARWQCB and OEHHA, DLA-Energy and Kinder Morgan Energy Partner (KMEP) conducted additional Site investigations in the southeastern corner of the 15-acre Eastern Portion of the Site. In February 2017, DLA-Energy installed and sampled four soil vapor monitoring (SVM) probes (SVM-24 through SVM-27) and KMEP installed and sampled four SVM probes (SVM-20 through SVM-23) in the KMEP operational area. KMEP's investigation results) in the KMEP operational area are provided in a separate report. DLA-Energy's additional Site investigation is included in this Revised HHRA.

As a requirement for soil closure by the LARWQCB, this HHRA was specifically prepared for the Eastern Portion of the Site for land conveyance to the City of Norwalk. This HHRA is based on the data presented in the Closure Report (SGI, 2016) and the February 2017 additional Site investigation (Appendix A). The purpose of the HHRA was to evaluate potential exposures to identify whether any residual soil and soil gas contamination poses a risk to human health. Initially, the soil and soil

gas data were screened with Site-specific cleanup goals and acceptable regulatory screening levels. Based on the results of the screening-level risk assessment, a Site-specific risk assessment may be necessary to further evaluate the need for additional remediation or engineering solutions to adequately protect human health.

The remainder of this report is presented as follows:

- Background (Section 2.0);
- Conceptual Site Model (Section 3.0);
- Human Health Screening-Level Risk Assessment (Section 4.0); and
- Summary and Conclusions (Section 5.0).

References and limitations are provided in Sections 6.0 and 7.0, respectively.

2.0 BACKGROUND

The Site previously contained ten 80,000 and two 55,000-barrel aboveground storage tanks (ASTs) that were used to store and distribute jet propellants 5 and 8 (JP-5 and JP-8). JP-4 was also historically stored at the Site. The former truck loading racks are located in the south-central portion of the Site and occupy approximately one acre (Figure 2). In the past, fuel was transferred from the facility via tanker trucks filled at the loading racks, but by the early 1990s, jet fuel was no longer being routinely transferred from the facility via tanker trucks. Subsequently, a 10-inch diameter, government owned multi-product pipeline, carried fuel from DFSP San Pedro to DFSP Norwalk and a 6-inch diameter pipeline carried fuel from DFSP Norwalk to the former El Toro Marine Corp Air Station. Investigations at the Site found that releases had occurred at several locations at the facility. The Site was placed into permanent closure in 1999 and the ASTs were drained, cleaned, and marine chemist certified. Within the tank farm, the individual tank lateral pipes were drained, disconnected, and individually cleaned. The ASTs, concrete pads, and connecting pipeline systems were demolished and removed in 2011 and 2012. Following removal of the tanks and pads, soil confirmation samples were collected from beneath the AST locations and included in the Concrete Demolition and Soil Confirmation Sampling Completion Report (Parsons, 2013).

In preparation for future re-use of the property, remedial action plans were developed, submitted, and approved by the LARWQCB. The remedial plans were developed assuming future industrial/commercial property re-use. However, following U.S. Congressional action, it was determined that the approximately 15 eastern-most acres of the Site would be conveyed to the City of Norwalk for recreational public park use. Therefore, the Closure Report and this HHRA were prepared specifically to address the 15 eastern acres of the Site to allow closure status of the shallow (0 to 10 feet bgs) soils to be granted.

An approximate 2-acre area leased by KMEP is operated as a pump station along the southern property line. Known releases of automotive gasoline and other fuels have occurred at the KMEP lease area and have been detailed in reports prepared by KMEP. Most recently (February 2003), the 24-inch pipeline running along the southern edge of the Site released hydrocarbons near a block valve located at the southeast corner of the Site. The leak was repaired, and the pipeline returned to operation. KMEP investigated this release and has since installed a soil vapor extraction (SVE) well to remediate the soil in this area. As depicted on Figure 2, KMEP is responsible for the remediation of shallow soil in this portion of the eastern side of the Site.

Figure 3 shows the multiple wells and borings installed at the Site during the numerous investigations and remediation activities conducted during the past 10 years (Section 2.3).

2.1 Regional Geology

DFSP Norwalk is located between the Montebello Forebay and the Downey Plain in the Central Basin pressure area. Approximately 50 to 60 feet of alluvium (primarily sand, gravel, silt, and clay)

cover the underlying Lakewood Formation in this area. The Lakewood Formation is composed of marine and continental gravel, sand, silt, and clay deposits. The San Pedro Formation underlies the area, approximately 300 feet below grade, and consists of marine and continental gravel, sandy silt, silt, and clay deposits¹.

Lithologic logs of borings drilled during previous investigations indicate that sediments beneath the Site consist of clayey silt, sandy silt, silty sand, medium to coarse-grained sand, and deeper coarse-grained sand with granitic cobbles. The top of a clay layer (preliminarily identified as the uppermost sediment layer of the Bellflower aquitard) was encountered at a depth of approximately 55 to 65 feet during previous investigations. Detailed cross-sections of the Site are available in the Closure Report (SGI, 2016).

2.2 Hydrogeology

A shallow, semi-perched aquifer, consisting of silts, fine to medium sands, and coarse sands, exists in the alluvial sediments underlying the Site. Groundwater from this semi-perched aquifer is found between 31 and 34 feet below grade. Off-site groundwater depth ranges from approximately 26 to 30 feet below grade. The shallow aquifer is approximately 30 to 35 feet thick, based on the inferred presence of the clay layer at approximately 55 to 65 feet below grade. The October 2016 Groundwater Equipotential and Gradient Map is included as Figure 4, and suggests that local groundwater flow within the semi-perched aquifer is to the northwest, with an estimated horizontal hydraulic gradient of approximately 0.012 foot per foot (ft/ft) in the south-central plume area to nearly flat in the truck loading and tank farm north-central areas. Hydraulic conductivity of the unconfined alluvial aquifer has been determined to range between 12 and 73 feet per day (ft/day) in the south-central area to 20 to 60 ft/day in the southeastern area.

The Bellflower Aquitard, composed of approximately 70 feet of interbedded silts and clays with minor gravel and sand, separates shallow groundwater from the deeper Exposition and Gage aquifers of the Lakewood Formation. Near the Site, the Exposition and Gage aquifers are found at 150 and 250 feet below grade, respectively². Due to low well yields, local water service companies do not make extensive use of aquifers in the Lakewood Formation. The deeper San Pedro Formation includes the following aquifers, listed from shallowest to deepest: Hollydale, Jefferson, Lynwood, and Silverado.

Groundwater flow in the underlying Exposition aquifer is generally to the east-southeastward with a horizontal hydraulic gradient of approximately 0.0003 ft/ft. This southeastward flow direction in the Exposition aquifer is roughly opposite the general groundwater flow direction of the uppermost groundwater zone. These distinctly different hydraulic conditions, consistently interpreted over time

¹ California Department of Water Resources, Planned Utilization of the Groundwater Basins of the Coastal Plains of Los Angeles County, Groundwater Geology, Appendix A, Bulletin 104, 1961.

² GTI, Assessment Report, Tank Farm Area, DFSP, October 21, 1994.

above and below the Bellflower aquitard, support the interpretation that the Bellflower aquitard in this area is laterally continuous and has a relatively low vertical hydraulic conductivity.

The Site is located within West Coast Subbasin of the Coastal Plain in Los Angeles County. Groundwater within this basin is designated for municipal, industrial service supply, industrial process supply, and agricultural. The nearest municipal supply well is Park Company Water Well #29K that is located approximately 0.5 miles northwest of the northwest corner of DFSP Norwalk. Water Well #29K is screened in the Silverado Aquifer with a screened production zone approximately between 684 and 718 feet below ground surface.

2.3 Previous Site Investigations and Distribution of Constituents of Concern

The lateral and vertical extent of hydrocarbon affected soil and groundwater at the Site was initially investigated by various consultants from 1985 to 1995. These investigations identified three principal areas that were impacted with hydrocarbons. The impacted areas consisted of two liquid hydrocarbon plumes in the northern portion of the facility; a dissolved-phase hydrocarbon plume beneath the central portion of the facility; and hydrocarbon impacts located in the unsaturated soil:

- The two liquid hydrocarbon plumes in the northern portion of the facility consisted of a larger plume and a smaller plume. The larger plume was located beneath tanks 80007 and 80008, southeast of tank 80002, and north and northeast of tank 55004. The smaller plume was located beneath tank 8006 and extended to the southwest of this tank (north central and northwestern plume).
- The northern and southern dissolved phase hydrocarbon plume and benzene plume commingled beneath the central portion of the facility to form one dissolved-phase plume. The benzene plume did not extend to the northern or western boundaries of the Site. But the dissolved phase hydrocarbon plume extended beyond Site boundaries. The off-site portion of this dissolved-phase hydrocarbon plume was not associated with the releases from the tank farm.
- Lastly, vadose zone hydrocarbon impacts were identified near tanks 80006, 80007, 80008, and 55004, and these impacts were located either in the deeper zone or in the shallower zone.

Based on these investigations, a final RAP was submitted in 1995, which identified the areas of concern, and proposed a remedial strategy. However, after the implementation of the RAP, additional areas of concern were identified, including several within the Eastern Portion of Site. A detailed summary of previous investigation and remediation activities specifically completed in the DLA-Energy responsible area of the Eastern Portion of the Site is provided in the Closure Report (SGI, 2016). Figures 5, 6, and 7 show excavation areas and backfill origins in the Eastern Portion of the Site. The following is a brief summary of the nature and extent of contaminants based on previous investigations:

- From 1994 to 2015, prior to soil remediation activities, two rounds of soil gas sampling and approximately 25 years of semi-annual groundwater monitoring and sampling indicated that prior operations at the Site resulted in the contamination of soil, groundwater, and soil gas in localized areas within the eastern 15 acres of the Site. The areas of soil impact within the 15 eastern acres included (1) the northeast corner suspected former settling ponds, (2), the eastern boundary and eastern boundary off-site area (within Holifield Park), (3) AST 80008, and (4) AST 55004. The constituents of concern included select fuel-related VOCs and TPH as gasoline and fuel product.
- From December 2010 through December 2011, prior to soil vapor remediation, soil gas monitoring was conducted for five consecutive quarters. The soil gas samples were collected from seven VMPs that border the northern site property boundary and three vapor monitoring locations in Holifield Park along the eastern park boundary, bordering Dolland Elementary School. The VOC detected at the highest concentration was isobutane at 0.45 µg/L at 15 feet bgs from the fourth quarter 2011. Benzene was not detected. The maximum concentrations of these detected soil gas VOCs were used in a *Human Health Risk Assessment Model* for the Site and found to pose no unacceptable health risks to potential residential, commercial or industrial Site receptors.
- In July 2014, a total of 82 soil samples were collected from 24 direct-push borings throughout the tank farm for California Assessment Metal (CAM) metals evaluation in July 2014. Metal analytical results were compared with California Human Health Screening Levels (CHHSLs) for industrial/commercial settings and in the case of arsenic, the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC) screening level of 12 mg/kg. Either the 95-percent upper confidence limit of the mean (95UCL) or maximum detected concentration for metals did not exceed the commercial/industrial screening levels. Additional soil samples were collected from several soil stockpiles representing the eastern and western portions of the Site and submitted for analysis of polychlorinated biphenyls (PCBs) and semi-volatile organic compounds (SVOCs). PCBs and SVOCs were not detected at or above laboratory reporting limits in any of the analyzed soil samples, indicating that these compounds are not constituents of concern at this Site.
- Based on groundwater monitoring and sampling during previous investigations, the constituents of concern for groundwater beneath the Site include TPH and several VOCs including (benzene, toluene, ethylbenzene, and total xylenes [BTEX]) compounds, methyl tert-butyl ether (MTBE), and tert-butyl alcohol (TBA).
- During March 2016, soil gas data was collected from the Site at depths of 5 and 10 feet bgs. On the Eastern Portion of the Site, 29 soil gas samples were collected at 26 locations at 5 feet bgs and 27 soil gas samples were collected from 26 locations at 10 feet bgs, respectively. The constituents of concern for soil gas include BTEX compounds. The soil gas probe locations are shown on Figure 8.

2.4 February 2017 Additional Site Investigation

In February 2017, at the request of the LARWQCB and OEHHA, DLA-Energy and KMEP conducted additional Site investigations in the southeastern corner of the 15-acre Eastern Portion of the Site. As shown on Figure 8, DLA-Energy installed and sampled four SVM probes (SVM-24 through SVM-27) and KMEP installed and sampled four SVM probes (SVM-20 through SVM-23). On February 15, 2017, four soil borings (SB-24 through SB-27) were advanced using direct push technologies. The methods and procedures of the February 2017 additional Site investigation are described in Appendix A.

Soil samples were collected from each boring at 5 and 10 feet bgs and submitted to the laboratory for analysis for TPH by EPA method 8015 and VOCs by EPA Method 8260B. No TPH or VOC compounds were present at concentrations above the laboratory reporting limits in any soil sample (Appendix B, Tables B-3 and B-4.)

Four SVM probes were installed at a depth of 5 and 10 feet bgs at probe locations SVM-24 through SVM-27. On February 16, 2017, after allowing the subsurface to equilibrate the requisite 24 hours following installation of the probes, soil gas samples were collected from SVM probes SVM-24 through SVM-27 at 5 and 10 feet bgs. The samples were analyzed for VOCs by EPA Method TO-15. Laboratory analysis of the soil gas samples indicated that several VOCs, including BTEX, were present at concentrations above laboratory reporting limits. The analytical results are summarized in Appendix C, Table C-2.

3.0 CONCEPTUAL SITE MODEL

This section describes the conceptual site model (CSM) for the Eastern Portion of the DFSP Norwalk facility, based on the nature and extent of constituents of concern and current and future land uses. Based on the data collected during remediation activities in 2015/2016 and additional Site investigation in 2017 for the Eastern Portion of the DFSP Norwalk facility, a human health screening-level risk assessment was conducted for the Site. To develop a conceptual understanding of the Site, information regarding potential chemical source, chemical release and transport mechanisms, locations of potentially exposed human receptors, and potential exposure routes were assessed. This information is outlined schematically in a CSM shown on Figure 9. The CSM assists in quantifying potential impacts to human health by identifying potentially exposed hypothetical receptors and the most likely ways they might be exposed to chemicals at the Site.

As defined by the U.S. Environmental Protection Agency (USEPA, 1989), all of the following four components are necessary for a chemical exposure pathway to be considered complete and for chemical exposure to occur:

- A chemical source and a mechanism of chemical release to the environment;
- An environmental transport medium (e.g., soil) for the released chemical;
- A point of contact between the contaminated medium and the receptor (i.e., the exposure point); and
- An exposure route (e.g., dermal contact with chemically-impacted soils) at the exposure point.

The following sections describe these components and provide a basis for the CSM.

3.1 Potential Sources

The sources of potential contamination at a Site are related to exposure setting (site characteristics and past and current site operations) and land and groundwater uses at the Site and surrounding area. The primary sources for potential contamination at the Site are related to former Site operations (ASTs, a truck loading area, and associated piping and facilities) and subsequent releases to on-site soil. Following a release to soil, secondary sources may include ambient air, fugitive dust, groundwater, and surface water.

3.2 Exposure Setting and Land Use

The DFSP Norwalk facility is a 50-acre facility previously occupied by 12 aboveground fuel storage tanks, a truck loading area, and associated piping and facilities (Figure 2). The facility was decommissioned in 2001 and the aboveground fuel tanks, truck loading area, and associated piping have been removed. While the DFSP Norwalk facility is no longer operational, the KMEP leased area contains active fuel-transmission pipelines that traverse the southern and eastern boundaries of the Site. KMEP currently has workers maintaining their pipeline and remediation systems. In the future, the eastern 15 acres of DFSP Norwalk will be re-developed into a public park owned and

operated by the city of Norwalk. Proposed park may include the construction of restroom facilities and potentially support buildings (e.g., equipment storage, etc.).

Between March 2015 and February 2016, under the regulatory oversight of the LARWQCB, soil remediation was performed at the Site to address contaminants detected in soil and soil gas, principally TPH and VOCs. The remediation removed contaminants from the Eastern Portion of the DFSP Norwalk facility (i.e., future parkland) to a depth of 10 feet bgs. The results of historical (pre-soil remediation) and recent (post soil remediation) show that the residual concentrations of contaminants in Site soils are de minimis (SGI, 2016). In February 2017, additional soil and soil gas samples were collected and analyzed to further characterize the Eastern Portion of the Site (Appendix A).

3.3 Chemical Release Mechanisms and Identification of Transport Media

Chemical properties of the Site-related chemicals and the physical characteristics of the Site were reviewed to identify the factors that might allow the release of a chemical to the environment, and transport to or through soil, soil gas, and groundwater.

Currently, portions of the Site are unpaved and future development may or may not include paving. Future development plans for the Eastern Portion of the DFSP Norwalk facility include a public park. Therefore, both current and future visitors to the Site may be directly exposed to soil on-site. Release of chemicals can potentially occur through volatilization, wind and/or mechanical erosion (i.e., during construction), migration of chemicals into the groundwater, lateral migration of chemicals in groundwater, or migration of chemicals via stormwater runoff. These types of releases may result in chemical vapor or dust (with sorbed chemicals) emissions in air, or the movement of chemicals downward into groundwater with infiltrating rain water (i.e., leaching from soil) or stormwater runoff. These potential release mechanisms are discussed in more detail below.

3.3.1 Volatilization of Chemical Vapors

Some of the chemicals detected at the Site are VOCs. These chemicals typically have a low organic-carbon partition coefficient (K_{oc}), a low molecular weight, and a high Henry's Law constant, indicating that these chemicals may volatilize. Therefore, volatilization of VOCs was considered a potential release mechanism.

3.3.2 Emission of Fugitive Dust

Some chemicals (e.g., metals in soil) adsorb readily to dust particles. Chemicals adsorbed to soil particles can be blown into the air by wind and/or mechanical erosion. This is referred to as fugitive dust. The predominant Site-related contaminants include TPH and VOCs, which typically volatilize. Therefore, exposure to chemicals in soil via fugitive dust emissions was not considered a significant release mechanism for Site-related contaminants.

3.3.3 Leaching

The potential for chemicals to leach from soil depends on the physical and chemical properties of the chemicals, soil type, pH (for metals), and other site-specific conditions. For example, chemicals with high water solubility tend to leach more readily than chemicals with lower solubility. In addition, a chemical's K_{oc} is important for assessing the degree of chemical sorption to soil particles; chemicals with a high sorption potential do not tend to leach as readily (i.e., metals). Site-specific conditions are also important for assessing whether leaching may occur, such as soil type (leaching occurs more readily in sandy soils than in clayey or silty soils), amount of rainfall, gradient, etc. In addition, other competing migration pathways can affect the tendency of a chemical to leach.

The evaluation of chemical concentrations in soil for groundwater protection (soil leaching) is designed to address the potential leaching of chemicals from vadose zone soils and their subsequent impact on groundwater. Because non-volatile compounds are expected to sorb strongly to soil and sediment particles, and because VOCs are expected to volatilize, leaching is not expected to occur at the Site to any significant extent. In addition, because groundwater is recognized as historically impacted, it is assumed that equilibrium with soil has already been established. Regardless, the leaching potential of Site-related contaminants from vadose zone soil into groundwater may be a potential chemical release mechanism. Therefore, exposure to chemicals in groundwater via leaching, which is then secondarily released to the environment via lateral migration/discharge into surface water was considered a potential release mechanism.

3.3.4 Lateral Migration of Groundwater into Offsite Surface Water

The nearest surface water bodies to the Site are the San Gabriel River, located approximately 2 miles west of the Site, and the North Fork Coyote Creek, located approximately 3 miles to the east of the Site. Based on these distances from the Site, lateral migration of groundwater from Site into off-site surface water bodies was not considered a potential release mechanism.

3.3.5 Stormwater Runoff

Stormwater runoff from areas of contaminated soil has the potential to transport contaminants bound to soil particles. However, re-development at the Site will include engineering controls to control stormwater runoff from the Site. Additionally, Site-related contaminants are more likely to volatilize and less likely to be adsorbed to any surface soil runoff. Although the potential chemical release via stormwater runoff is possible, it was not considered a significant release mechanism.

3.4 Potential Human Receptors

The third component necessary for an exposure pathway to be complete is identification of potential receptors at the Site. Hypothetical human receptors were identified based on proximity to the Site, proposed activities that could possibly result in direct or indirect contact with Site-related chemicals, and anticipated Site use. The following hypothetical on-site receptors were evaluated in this risk assessment:

- Construction Worker Receptor;
- Commercial/Industrial Worker Receptor; and
- Park Visitor Receptor.

These potential receptors are described further in Section 3.6. Trespassers may occasionally visit the Site. However, it should be noted that trespasser exposures are considerably lower than industrial workers; therefore, trespasser exposures are not evaluated.

3.5 Potential Exposure Points

The other portion of the third component necessary for an exposure pathway to be complete is a point of contact between the contaminated medium and the receptor (i.e., the exposure point). This risk assessment evaluates potential exposure of receptors assuming that access to the Site is unrestricted and that on-site receptors are exposed directly to contaminated soil and indirectly to soil gas and groundwater. For soil and soil gas, the exposure point is assumed to be the area within the Eastern Portion of the DFSP Norwalk facility.

Depth to shallow groundwater is approximately 30 feet bgs. In general, utility trenching or excavations do not exceed 10 feet bgs; therefore, it is unlikely a hypothetical on-site construction worker receptor would contact groundwater during re-development of the Site. In the event groundwater is encountered during re-development, any hypothetical construction worker receptor will be performing activities consistent with a Site Management Plan (SMP) and a Site Health and Safety Plan (HASP). The SMP, HASP, and best management practices (BMPs) will protect construction worker receptors from exposure to site-related contaminants. The SMP, HASP, and BMP will require dewatering to preclude any direct contact with groundwater for workers at the Site. Therefore, direct contact with groundwater for on-site workers was not considered in this assessment.

Volatile compounds can be released from the subsurface into indoor and outdoor air resulting in an indirect exposure to contaminants in soil gas. Inhalation of volatile compounds in outdoor air is generally negligible due to dispersion in ambient air. As recommended by the DTSC (2011), for the vapor intrusion pathway into indoor air, exposure to subsurface contamination is best characterized through the collection of soil gas samples. Therefore, concentrations detected in soil gas were used in the evaluation of potential indoor air impacts.

3.6 Exposure Pathways Considered Potentially Complete and Significant

The fourth and final component, a complete exposure pathway (i.e., route of exposure) is discussed in combination with the third component (i.e., presence of receptors at an exposure point) to define those exposure pathways considered to be complete and significant. The following sections summarize those pathways considered complete and significant for each receptor.

3.6.1 Hypothetical On-Site Construction Worker Receptor

The hypothetical on-site construction worker receptor is included in the event any construction or re-development occurs at the Site. This receptor spends the workday outdoors performing construction-related tasks. This receptor is expected to come in direct contact with soil. Inhalation of chemical vapors while indoors was not considered a complete and significant exposure pathway because this receptor is not expected to be working inside buildings. The exposure pathways assumed to be complete and significant for the hypothetical on-site construction worker receptor include:

- Incidental ingestion of soil;
- Dermal contact with soil; and
- Inhalation of vapors in outdoor air generated from the subsurface.

3.6.2 Hypothetical On-Site Commercial/Industrial Worker Receptor

The hypothetical on-site commercial/industrial worker receptor is included based on current and expected future land use. Currently, there are workers maintaining the KMEP pipeline and remediation systems. In the future as a public park, there will be workers maintaining the park facilities. This receptor is a long-term receptor (i.e., greater than 7 years [USEPA, 1989]). This receptor is a full-time employee that is assumed to spend 250 days per year at work for 25 years. This receptor primarily spends the workday conducting outdoor activities, which may include moderate soil invasive activities in surface or near surface soils. This receptor may spend part of the workday inside park facility buildings (i.e., maintaining restroom facilities). The exposure pathways assumed to be complete and significant for the hypothetical on-site commercial/industrial worker receptor include:

- Incidental ingestion of soil;
- Dermal contact with soil;
- Inhalation of vapors in outdoor air generated from the subsurface; and
- Inhalation of vapors in indoor air generated from the subsurface.

3.6.3 Hypothetical On-Site Park Visitor Receptor

The hypothetical on-site park visitor receptor is included based on expected future land use as a public park. This receptor is a long-term receptor. This receptor is assumed to visit the park every weekend (104 days per year) for a period of 30 years (as both a child [6 years] and an adult [24 years]). This receptor spends the day (8 hours per day) outdoors. Potential exposures for this receptor are expected to occur from time spent outdoors only. Although this receptor may occasionally use indoor restroom facilities, indoor exposure will be infrequent and for short durations resulting in insignificant exposures. The exposure pathway assumed to be complete and significant for the hypothetical on-site park visitor receptor includes:

- Incidental ingestion of soil;
- Dermal contact with soil;
- Inhalation of vapors in outdoor air generated from the subsurface.

4.0 HUMAN HEALTH SCREENING-LEVEL RISK ASSESSMENT

4.1 Data Evaluation and Exposure Point Concentrations

Typically, only the most toxic, persistent, and prevalent site-related chemicals detected at a site are fully evaluated in a risk assessment. In this way, the assessment can focus solely on those chemicals that are expected to account for most of the estimated health impacts at the Site. These selected chemicals are known as chemicals of potential concern (COPCs). The nature and extent of constituents of concern were discussed in Section 2.0. The CSM, including potentially exposed hypothetical receptors and the most likely ways they might be exposed to chemicals was discussed in Section 3.0. This section evaluates which chemical concentrations exceed applicable screening levels by media. Data Evaluation and Exposure Point Concentrations

This human health screening-level risk assessment focuses on the shallow soil (0 to 10 feet bgs) and soil gas data collected during the 2015/2016 remediation activities and 2017 additional Site investigation. From March 2015 and February 2016, the remediation of shallow soils (0 to 10 feet bgs) and in selected areas deeper soil (from 10 feet bgs to 25 feet bgs) was conducted at the facility. This work was conducted under the oversight of the LARWQCB and entailed the excavation, on-site treatment, and re-use of soil. The originally proposed excavations, as provided in the RAP, are shown on Figure 5; Excavations #3, #4, #5, #14, #19, #35, #37 were completed on the 15 eastern-most acres of the Site. Soil samples were collected to ensure that Site-specific soil cleanup goals had been achieved in excavation sidewalls and in the treated soil. The 2015/2016 data were provided to the LARWQCB in summary reports and are available on the Geotracker website and the 2017 data are provided in this Revised HHRA. The soil and soil gas data used in this screening-level risk assessment are provided in Appendices B and C, respectively.

The exposure point concentration (EPC) represents the amount of a chemical to which a hypothetical receptor is assumed exposed. The EPC is a conservative estimate of the chemical concentration in an environmental medium. The EPC may represent the lesser of the maximum detected concentration and the 95 percent upper confidence limit (95UCL) of the average concentration for each COPC, depending on the nature of exposure, the number of samples, and chemical distribution. The EPCs were used to compare with soil and soil gas screening levels. Under the screening-level risk assessment, a chemical was identified as a COPC if the EPC exceeded applicable screening levels. The EPCs for soil and soil gas are described in the following sections.

4.1.1 Exposure Point Concentrations in Soil

It is unlikely that a potential receptor will spend the entire exposure duration residing over maximum detected concentrations in soil. Therefore, it is relevant and appropriate to statistically evaluate the soil data on an area-wide basis. A USEPA software package, ProUCL Version 5.1 (USEPA, 2015), was used to estimate the upper confidence limit of the mean concentration (UCL; [typically the 95UCL, but sometimes the 97.5 or 99UCL, depending on the data set]). ProUCL software makes

recommendations for estimating UCLs and was developed as a tool to support risk assessment. Non-detect results were input into ProUCL as the detection limit value. Due to limitations of certain data sets (i.e., limited number of samples or low detection frequency), ProUCL was not used to estimate a UCL. UCLs were not estimated for analytes with fewer than five detected concentrations. For those analytes with adequate data sets, the ProUCL output spreadsheets are presented in Appendix D. Consistent with USEPA (1989) procedures, the lesser of the maximum detected concentration and the 95UCL was selected as the soil EPC. Soil EPCs were used for evaluating the direct contact with soil exposure pathway. For the 2015/2016 soil data, summary of the maximum detected concentrations, recommended UCL concentrations, when estimated, and soil EPCs are presented in Table 1. No TPH or VOCs were detected at concentrations above laboratory reporting limits in soil samples collected during the 2017 additional Site investigation.

4.1.2 Exposure Point Concentrations in Soil Gas

The only complete exposure pathway associated with soil gas is inhalation of vapors in indoor air volatilizing from the subsurface. Based on the assumption that a building may be located anywhere on-site, it is assumed that hypothetical indoor receptors reside over maximum detected concentrations. For the 2015/2016 soil gas data, a summary of the EPCs for soil gas at 5 feet bgs and 10 feet bgs are presented in Tables 2 and 3, respectively. For the 2017 soil gas data, a summary of the EPCs for soil gas at 5 feet bgs and 10 feet bgs are presented in Tables 4 and 5, respectively.

4.2 Site-Specific Cleanup Goals and Screening Levels

Regulatory oversight is provided by the LARWQCB; therefore, the Site-specific soil cleanup goals that were approved by the LARWQCB and San Francisco San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil and soil gas are assumed to be appropriate for the Site. The soil data were screened with the Site-specific soil cleanup goals that were approved by the LARWQCB in their letter entitled *Approval of Modification to Cleanup Goals*, July 16, 2015. In the absence of a Site-specific soil cleanup goals, SFRWQCB ESLs (SFRWQCB, 2016) were used. The soil gas data were screened with the SFRWQCB ESLs (SFRWQCB, 2016), DTSC modified screening levels (DTSC-SLs; DTSC, 2016), and USEPA Regional Screening Levels (RSLs; USEPA, 2016). For comparison purposes, the SFRWQCB, DTSC, USEPA, and OEHHA screening levels for the chemicals detected at the Site in soil and soil gas are provided in Tables E-1 and E-2 of Appendix E, respectively. For most COPCs, the SFRWQCB ESLs were generally equal to or less than available screening levels from DTSC and USEPA. OEHHA CHHSLs are presented in Appendix E, but CHHSLs have not been updated since 2010 and were not used in this screening-level risk assessment.

The results of the screening-level risk assessment were used to determine if further evaluation of potential exposures associated with proposed re-development was necessary. Although the hypothetical on-site park visitor receptor is a potential future receptor with potentially complete exposure pathways, there are no known published regulatory screening levels to evaluate this

specific receptor. The potentially complete exposure pathways for this receptor are associated with direct contact with soil. The Site-specific soil cleanup goals have been approved by the LARWQCB for the Site and should be protective of the occasional park visitor receptor. For comparison, the conservative SFRWQCB Tier 1 ESLs, are essentially the same as the Site-specific soil cleanup goals and in some cases, slightly higher. The Tier 1 ESLs are designed as conservative values for unrestricted land use. For the purposed of this screening-level risk assessment, both the Site-specific cleanup goals and the SFRWQCB Tier 1 ESLs should be appropriate screening levels to use for the evaluation of the hypothetical on-site park visitor receptor.

The soil and soil gas screening levels are described in more detail in the following sections.

4.2.1 Soil Cleanup Goals and Screening Levels

In order of priority, soil screening levels were selected from the following:

- Site-specific soil cleanup goals, as approved by LARWQCB; and
- SFRWQCB ESLs (SFRWQCB, 2016).

Site-specific soil cleanup goals were calculated using the procedures proscribed in the Regional Water Quality Control Board, Los Angeles Region (LARWQCB), *Interim Site Assessment & Cleanup Guidebook* (Guidebook; LARWQCB, 1996). Cleanup goals were calculated in compliance with Table 4-1 of the Guidebook. Depth to groundwater at the Site was found to be between 25 and 30 feet bgs based on historical and recent groundwater gauging data. Site-specific soil parameters including thickness of the clay, sand, and silt layers were used when calculating attenuation factors - values calculated for the DFSP Norwalk cleanup Site were adopted when more conservative (lower). The Site-specific soil cleanup goals were approved by the LARWQCB in their letter entitled *Approval of Modification to Cleanup Goals*, July 16, 2015. The soil cleanup goals were determined for 3 soil profiles: 0 to 5 feet bgs, 5 to 10 feet bgs, and 11 to 30 feet bgs. The Site-specific soil cleanup goals are summarized on the data tables provided in Appendix B. In this screening-level risk assessment, the lesser of the soil cleanup goals for 0 to 5 feet bgs and 5 to 10 feet bgs were used (Table 1).

For TPH carbon range C₃₃-C₄₄ and TPH carbon range C₂₃-C₄₄, o-xylene, and m,p-xylene, Site-specific soil cleanup goals were not available. Therefore, for the purposes of this screening-level risk assessment, the SFRWQCB ESLs for soil were used. The SFRWQCB ESLs include a broad scope of screening levels, some of which are not strictly risk-based. The risk-based ESLs correspond to an excess cancer risk of 1×10^{-6} or a hazard quotient of 1, based on standardized equations (SFRWQCB, 2016) that combine exposure assumptions with agency-derived toxicity data. The risk-based ESLs are developed for direct contact with soil exposure scenarios (i.e., ingestion, dermal contact, and inhalation of dust/vapor in outdoor air). The Tier 1 ESLs represent the most conservative ESLs and are designed for use at most sites for protection of sites with unrestricted land and water use, shallow soil contamination, shallow groundwater, and permeable soil. Although the groundwater at the Site is not shallow (i.e., approximately 30 feet bgs), the Tier 1 ESLs represent

the most conservative values and were used for this screening-level risk assessment. The SFRWQCB Tier 1 ESLs are summarized in Table E-1 of Appendix E.

4.2.2 Soil Gas Screening Levels

In order of priority, soil gas screening levels were selected from the following acceptable regulatory screening levels:

- SFRWQCB ESLs (SFRWQCB, 2016); and
- DTSC-SLs (DTSC, 2016); and
- USEPA RSLs (USEPA, 2016).

SFRWQCB ESLs have been developed for soil gas. The SFRWQCB ESLs for vapor intrusion of soil gas into indoor air correspond to an excess cancer risk of 1×10^{-6} or a hazard quotient of 1, based on standardized equations (SFRWQCB, 2016) that combine exposure assumptions with agency-derived toxicity data. The risk-based ESLs are developed for soil gas under residential and commercial/industrial exposure scenarios.

SFRWQCB soil gas ESLs were not available for carbon disulfide, 1,3-dichlorobenzene, isopropanol, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene, so the DTSC-SLs or USEPA RSLs were used. DTSC-SLs and USEPA RSLs have been developed for indoor air, but not soil gas. The residential and commercial/industrial soil gas screening levels are based on applying a DTSC default attenuation factor to the lowest of DTSC and USEPA air SLs. The resident air SLs and industrial air SLs were divided by DTSC default attenuation factors of 0.002 for residential and 0.001 for commercial, respectively (DTSC, 2011). The resulting values represent the soil gas screening levels. The lesser of the USEPA RSL or DTSC-SL was used. The soil gas screening levels are summarized on in Table E-2 of Appendix E.

4.3 Soil Results

Based on a comparison of 2015/2016 soil data and the Site-specific soil cleanup goals, no COPCs were identified in soil at the Site. For compounds detected in one or more soil samples, Table 1 provides a summary of the soil data and applicable screening levels. The soil EPCs for all TPH and VOCs were below the soil screening levels for commercial land use. In addition, except for two TPH carbon ranges (C_{13} - C_{22} and C_{23} - C_{32}), the maximum detected concentrations for TPH and VOCs were below the soil screening levels for commercial land use.

For TPH carbon ranges (C_{13} - C_{22} and C_{23} - C_{32}), the individual soil samples with detected concentrations that were above the soil screening levels were located within the upper shallow soil zone (0 to 5 feet bgs). This upper shallow soil zone (0 to 5 feet bgs) was further evaluated statistically to ensure that if the soil dataset were limited to the upper 5 feet, that the resulting soil EPC would remain below the soil screening level. The results of the evaluation of the upper shallow soil zone (0 to 5 feet bgs) indicated the following:

- For TPH carbon range C₁₃-C₂₂ the maximum detected concentration was 604 mg/kg and the 95UCL was 8.8 mg/kg; and
- For TPH carbon range C₂₃-C₃₂ the maximum detected concentration was 1,200 mg/kg and the 95UCL was 72 mg/kg.

This evaluation indicates that both soil EPCs from shallow soil (0 to 10 feet bgs) and upper shallow soil (0 to 5 feet bgs) are well below the soil screening levels for TPH carbon ranges (C₁₃-C₂₂ and C₂₃-C₃₂) of 100 mg/kg and 1,000 mg/kg, respectively.

4.4 Soil Gas Results

Based on a comparison of 2016 and 2017 soil gas data at 5 and 10 feet bgs and the soil gas screening levels, only benzene concentrations at 10 feet bgs exceeded residential screening levels. No VOCs were detected in soil gas at concentrations exceeding the commercial screening levels. For compounds detected in one or more soil samples, Tables 2 through 5 provide a summary of the soil gas data and applicable screening levels.

Based on the 2016 soil gas data, benzene was detected at concentrations above the residential screening level of 48 µg/m³ in 5 of 26 soil gas samples collected at 10 feet bgs. In these 5 soil gas sample locations, benzene was not detected above the detection limit at the same soil gas locations at 5 feet bgs. Based on the 2017 soil gas data, benzene was detected at a concentration above the residential screening level of 48 µg/m³ in only 1 of 5 soil gas samples collected at 10 feet bgs. Benzene was only detected at a concentration of 2.4 µg/m³ at the same soil gas location at 5 feet bgs. Furthermore, during both 2016 and 2017 site investigations, no soil gas samples collected at 5 feet bgs at the Site were detected above the residential screening level of 48 µg/m³. The benzene concentrations detected at 5 feet bgs ranged from 2.2 µg/m³ to 30 µg/m³. Based on soil gas benzene concentrations closest to the surface (at 5 feet bgs), benzene concentrations do not exceed the residential screening levels.

Based on future land use as a park, the use of residential screening levels may be overly conservative. The exposure parameters for a future on-site park visitor receptor would be significantly less than exposure parameters assumed in the development of the screening levels for a long-term resident receptor (24 hours per day for 26 years). For the protection of a future on-site park maintenance worker, the maximum detected benzene concentrations at 5 feet bgs and 10 feet bgs were less than the commercial screening level of 420 µg/m³.

4.5 Results of the Human Health Screening-Level Risk Assessment

A human health screening-level risk assessment was performed using Site-specific cleanup goals and acceptable regulatory screening levels. The soil EPCs and soil gas EPCs were below the screening levels. Therefore, further evaluation of potential exposures associated with proposed development is not necessary and no additional remediation or engineering solutions are necessary to adequately protect human health. Based on the results of the human health screening –level risk

assessment, the Eastern Portion of the DFSP Norwalk Site is acceptable for current and anticipated future land use.

Based on the result of the human health screening-level risk assessment, the cumulative cancer risks and hazards were expected to be well below regulatory thresholds. However, in response to OEHHA's comments in their letter dated August 2, 2016, cumulative cancer risks and hazards associated with exposure to COPCs in soil and soil gas are estimated and presented in Appendix F. Based on the risk characterization evaluation, estimated cancer risks and noncancer hazards are below regulatory thresholds and COPCs in soil and soil gas do not pose a human health risk to potential residential or commercial receptors in the Eastern Portion of the DFSP Norwalk Site.

5.0 SUMMARY AND CONCLUSIONS

This report presents the Revised HHRA conducted for the Eastern Portion of the former Defense Fuel Support Point Norwalk facility located at 15306 Norwalk Boulevard in Norwalk, California (Site; Figure 1). This Revised HHRA incorporates comments provided by OEHHA in a letter dated August 2, 2016, and transmitted by the LARWQCB in a letter dated August 30, 2016. The HHRA was prepared to identify whether any residual soil and soil gas contamination poses a risk to human receptors.

Between March 2015 and February 2016, soil remediation was performed to address contaminants detected in soil and soil gas, principally TPH, and VOCs. The remediation was performed under the regulatory oversight of the LARWQCB and in accordance with the *Soil Remedial Action Plan (RAP)*, dated November 30, 2014, and the *Addendum to the Soil Remedial Action Plan (Addendum)*, dated December 10, 2014. At the request of LARWQCB and OEHHA, in February 2017, additional soil and soil gas samples were collected and analyzed to further characterize the Eastern Portion of the Site.

As a requirement for soil closure by the LARWQCB, this HHRA was specifically prepared for DLA-Energy responsible area of the Eastern Portion of DFSP Norwalk. The human health screening-level risk assessment focuses on the data collected during 2015/2016 remediation activities and 2017 additional Site investigation activities. The purpose of the HHRA was to evaluate potential exposures to identify whether any residual soil and soil gas contamination poses a risk to human health.

In the human health screening-level risk assessment, the soil and soil gas data were screened with Site-specific cleanup goals and acceptable regulatory screening levels. Based on the results of the screening-level risk assessment, the following conclusions are made:

- The soil EPCs were below the human health screening levels.
- The soil gas EPCs were below the human health screening levels.
- Cumulative cancer risks and hazards were below regulatory thresholds.
- Further evaluation of potential exposures associated with proposed development as a public park is not necessary.
- No additional remediation or engineering solutions are necessary to adequately protect human health.
- The Eastern Portion of the DFSP Norwalk Site is acceptable for current and anticipated future land use.

Based on the currently encountered residual contaminant concentrations and distribution at the Site, no further remediation of soils or soil gas is considered necessary.

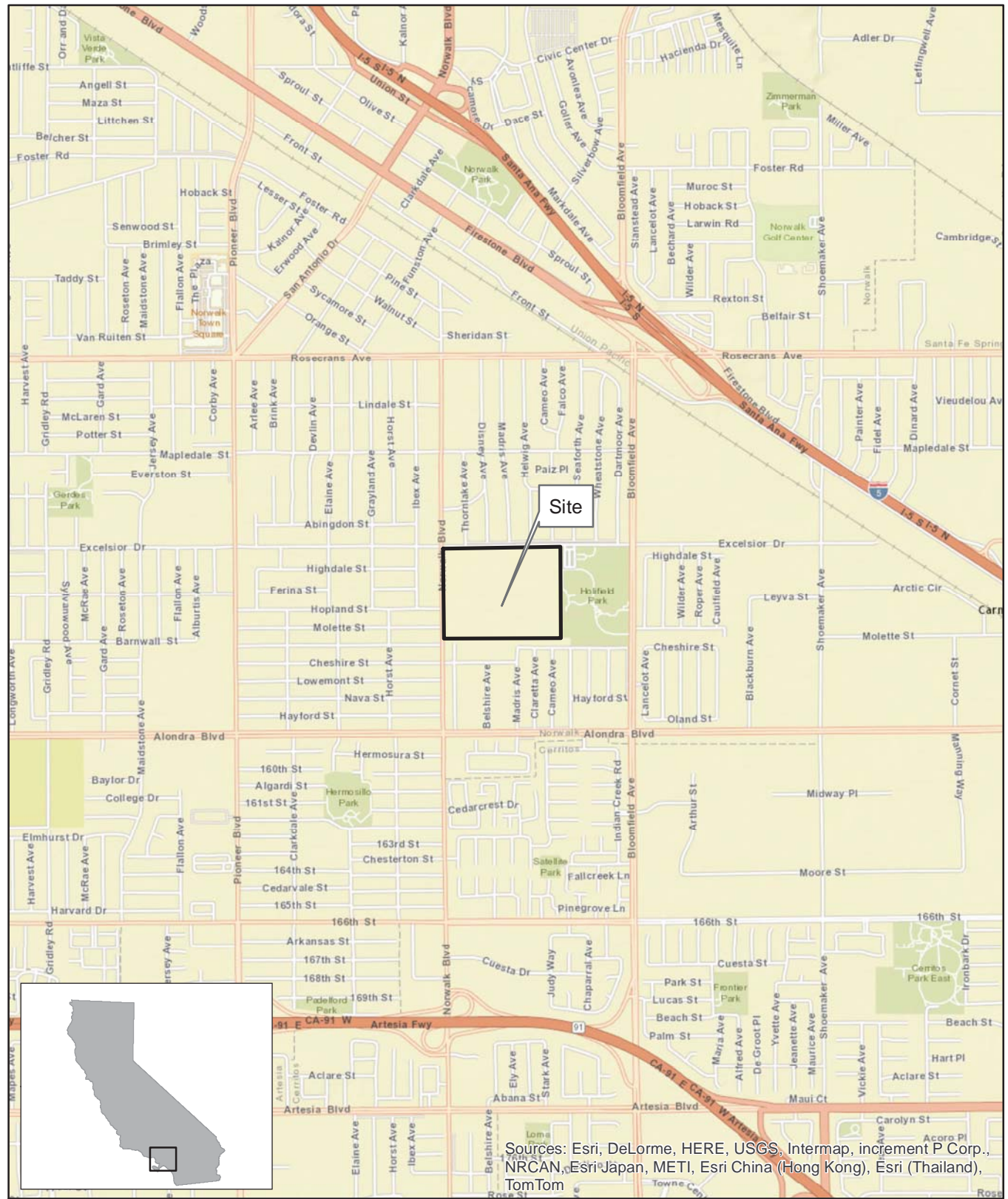
6.0 REFERENCES

- Department of Toxic Substances Control (DTSC). 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October
- DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.
- Los Angeles Regional Water Quality Control Board (LARWQCB). 1996. Interim Site Assessment & Cleanup Guidebook. Los Angeles and Venture Counties, Region 4. May.
- LARWQCB. 2015. *Correspondence to DLA Installation Support - Review of Soil Remedial Action Plan and Soil Management Plan*. January 7.
- Office of Environmental Health Hazard Assessment (OEHHA). 2010. California Human Health Screening Levels (CHHSLs). California Environmental Protection Agency (CalEPA). September.
- Parsons. 2013. *Concrete Demolition and Soil Confirmation Sampling Report*. February.
- San Francisco Bay Regional Water Quality Control Board (SFRWQCB). 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.
- The Source Group, Inc. (SGI). 2014a. Soil Remedial Action Plan, Defense Fuel Support Point Norwalk. November 30.
- SGI. 2014b. Addendum to Soil Remedial Action Plan, Defense Fuel Support Point Norwalk. December 10.
- SGI. 2016. Shallow Soil Closure Report – Defense Logistics Agency Energy (DLA-Energy) Responsible Area of the Eastern Portion, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California. April 18.
- U.S. Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Human Health Evaluation Manual, Part A. Interim Final. Solid Waste and Emergency Response. December.
- USEPA. 2015. ProUCL Version 5.1 User Guide, Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R-07/041. October
- USEPA. 2016. Regional Screening Levels (RSLs). May.

7.0 LIMITATIONS

This document was prepared for the exclusive use of the Defense Logistics Agency - Energy (DLA Energy) and the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB) for the express purpose of complying with a client or regulatory directive for environmental investigation or restoration. SGI and DLA Energy must approve any re-use of this work product in whole or in part for a different purpose or by others in writing. If any such unauthorized use occurs, it shall be at the user's sole risk without liability to SGI or DLA Energy. To the extent that this report is based on information provided to SGI by third parties, including DLA Energy, their direct contractors, previous workers, and other stakeholders, SGI cannot guarantee the completeness or accuracy of this information, even where efforts were made to verify third-party information. SGI has exercised professional judgment to collect and present findings and opinions of a scientific and technical nature. The opinions expressed are based on the conditions of the Site existing at the time of the field investigation, current regulatory requirements, and any specified assumptions. The presented findings and recommendations in this report are intended to be taken in their entirety to assist DLA Energy and LARWQCB personnel in applying their own professional judgment in making decisions related to the property. SGI cannot provide conclusions on environmental conditions outside the completed scope of work. SGI cannot guarantee that future conditions will not change and affect the validity of the presented conclusions and recommended work. No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, conclusions, and recommendations.

FIGURES



Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom

SOURCE:
ESRI 7.5 MINUTE TOPOGRAPHIC MAP.
<http://resources.esri.com/arcgisonline/services>

| | | | |
|--------------|-----------|---------|----------|
| PROJECT NO.: | DATE: | DR. BY: | APP. BY: |
| 04-NDLA-001 | 5/28/2014 | JK | PP |

SCALE= 1:24,000

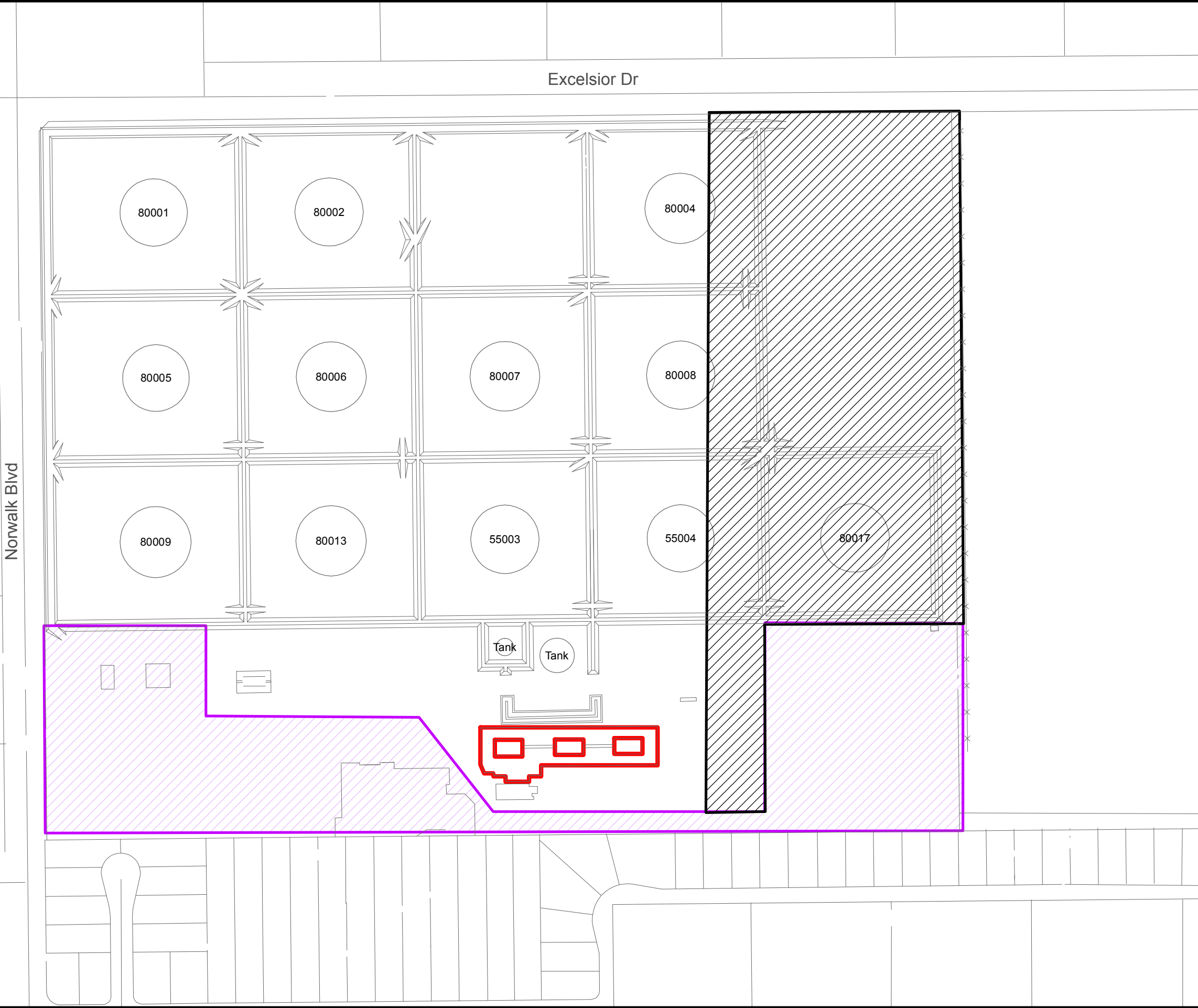


FIGURE
1





SGI THE SOURCE GROUP, INC.
environmental
1962 FREEMAN AVENUE
SIGNAL HILL, CA 90755
(562) 597-1055

**DEFENSE FUEL SUPPORT POINT
NORWALK**
15306 NORWALK BOULEVARD
NORWALK, CALIFORNIA

SITE LOCATION MAP



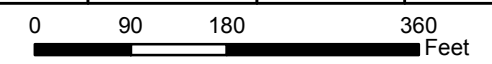
Legend

-  Former Above Ground Storage Tanks
-  DLA Responsible Area - Eastern Portion of DFSP Norwalk
-  Former Truck Loading Racks
-  Kinder Morgan Responsible Area



DFSP Norwalk
 15306 Norwalk Boulevard
 Norwalk, California

| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 04/07/2016 | P. Wu | N. Irish |



Site Layout Map








SGI environmental
THE SOURCE GROUP, INC.
 1962 Freeman Avenue
 Signal Hill, CA 90755
 (562) 597-1055

Figure
2

Excelsior Dr.

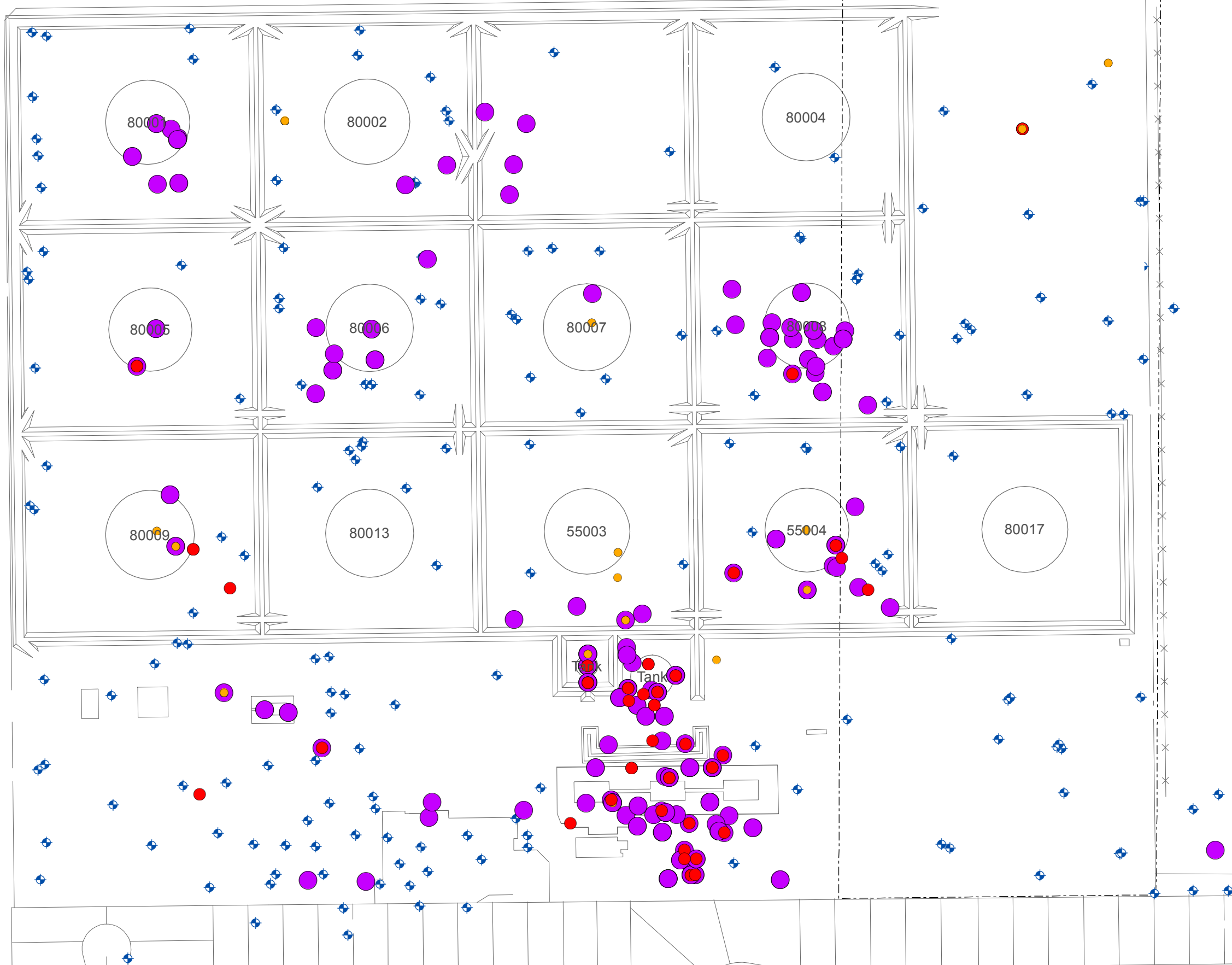
Excelsior Dr.

Legend

-  Former Above Ground Storage Tanks
-  DFSP Norwalk Border
-  Expanded Holifield Park Boundary
-  Groundwater Monitoring Well Locations
-  Concentrations Exceeding Cleanup Goals of 500 mg/kg for TPHg or JP-5 or 100 mg/kg for TPHd in Soil 0 to 5 ft bgs
-  Concentrations Exceeding Cleanup Goal of 100 mg/kg for TPHg or JP-5 or TPHd in Soil 5.5 to 10 ft bgs
-  Concentrations Exceeding Cleanup Goal of 100 mg/kg for TPHg or JP-5 or TPHd in Soil 10.5 to 25 ft bgs

Notes:

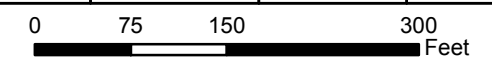
Los Angeles Regional Water Quality Control Board 2012 Cleanup Goals
 TPHg = Total Petroleum Hydrocarbons as Gasoline
 JP-5 = Jet Propellant-5 (Jet Fuel)
 TPHd = Total Petroleum Hydrocarbons as Diesel
 bgs = Below Ground Surface



DFSP Norwalk

15306 Norwalk Boulevard
 Norwalk, California

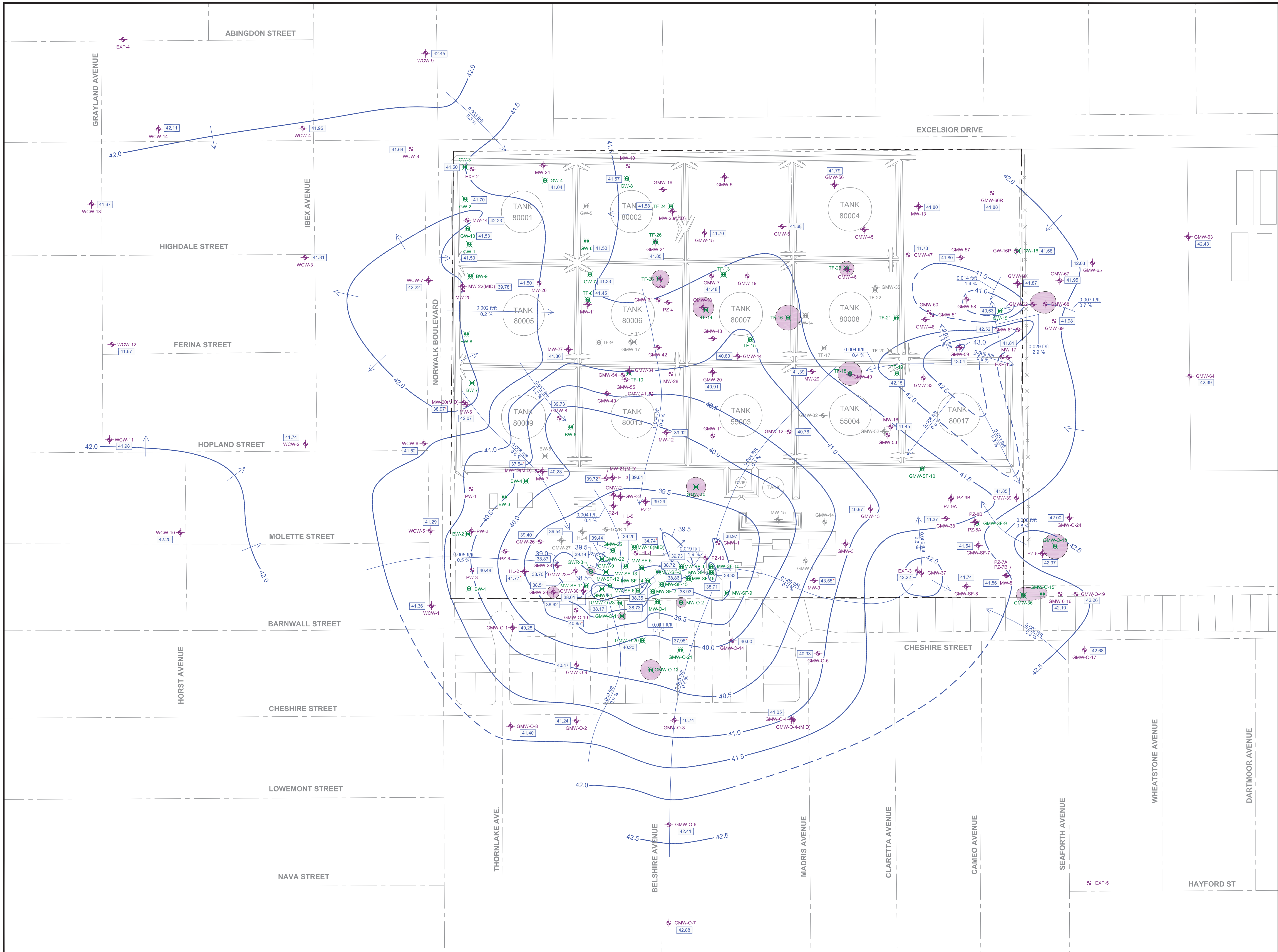
| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 04/07/2016 | A. Czuba | N. Irish |






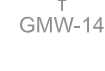






Locations of Groundwater Monitoring Wells and Soil Borings

SGI THE SOURCE GROUP, INC.
 environmental
 1962 Freeman Avenue
 Signal Hill, CA 90755
 (562) 597-1055

Figure 3



EXPLANATION:

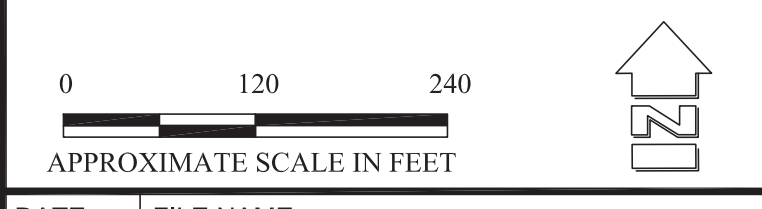
-  FORMER ABOVEGROUND STORAGE TANKS
-  DFSP NORWALK BORDER
-  GROUNDWATER MONITORING WELL
-  WELLS SHOWN IN GREY WERE DECOMMISSIONED BY DLA ENERGY PRIOR TO REMEDIAL EXCAVATION
-  EXTRACTION WELL USED FOR VAPOR, GROUNDWATER, TOTAL FLUIDS, OR FLOATING PRODUCT EXTRACTION
-  GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL MEASURED OCTOBER 3, 2015
-  ASTERISK INDICATES DATA NOT USED TO DEVELOP THIS EQUIPOTENTIAL MAP
-  LINE OF EQUAL GROUNDWATER ELEVATION (REFERENCE = MEAN SEA LEVEL) CONTOUR INTERVAL = 0.5 FOOT DASHED WHERE INFERRRED
-  GROUNDWATER GRADIENT DIRECTION WITH GRADIENT IN FEET PER FOOT (ft/ft) AND PERCENT; DASHED WHERE INFERRRED
-  ESTIMATED EXTENT OF MEASURABLE LIGHT NONAQUEOUS PHASE LIQUID (LNAPL, FLOATING PRODUCT) ON GROUNDWATER REFER TO FIGURE 4 OR TABLE 2 FOR MEASURED THICKNESSES

NOTES:

1. GROUNDWATER ELEVATIONS AND INTERPRETED PRODUCT EXTENT ARE BASED ON DATA COLLECTED BY SGI & BLAINE TECH OCTOBER 3, 2016.
2. DLA ENERGY'S AND SFPP'S REMEDIATION SYSTEMS WERE SHUT DOWN APPROXIMATELY 1 WEEK PRIOR TO COLLECTING FLUID LEVEL MEASUREMENTS IN OCTOBER 2016.
3. WELLS SCREENED IN THE EXPOSITION AQUIFER OR NEAR THE BOTTOM OF THE UPPERMOST AQUIFER ARE NOT USED IN CONTOURING.

SURVEY NOTES:

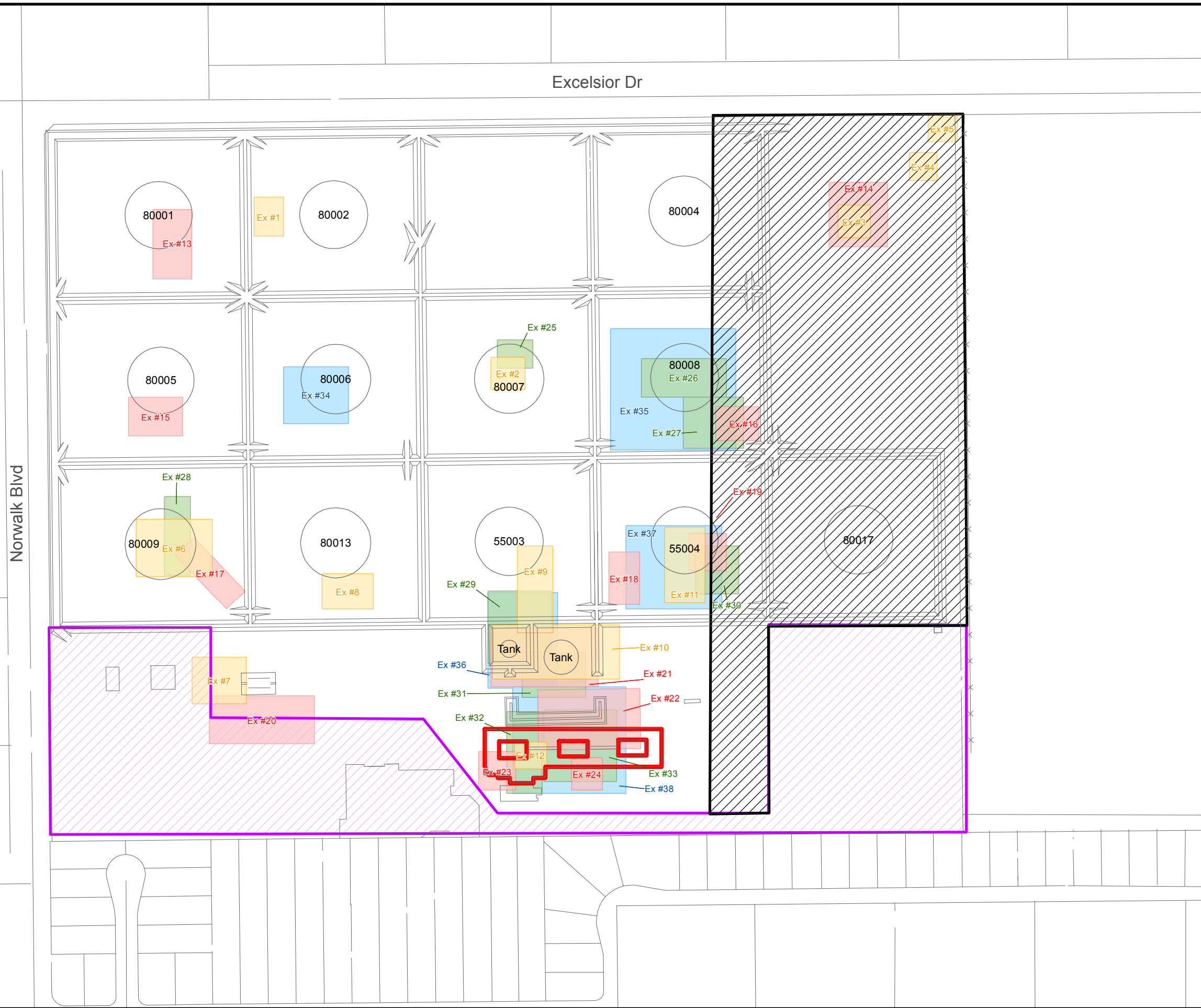
1. BASE MAP PREPARED FROM DATA PROVIDED BY FLUOR DANIEL GTI, DULIN & BOYNTON, GEOMATRIX, AND PARSONS
2. EXCEPT AS NOTED BELOW, WELL LOCATIONS SURVEYED BY DULIN & BOYNTON
3. LOCATIONS OF WELLS HL-1, HL-3, AND HL-4 BASED ON FIELD MEASUREMENTS BY FLUOR DANIEL GTI AND WOODWARD-CLYDE



| | |
|---------------------------|------------------------------------|
| DATE: 12/2016 | FILE NAME: DFSP-Norwalk-SE2-16.dwg |
| PROJECT No.: 091-NDLA-018 | CONTRACT: SPO-600-14-D-5410 |

**GROUNDWATER EQUIPOTENTIAL AND GRADIENT MAP
UPPERMOST GROUNDWATER ZONE
OCTOBER 3, 2016**

DFSP NORWALK
15306 NORWALK BOULEVARD
NORWALK, CALIFORNIA



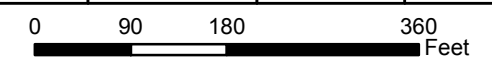
Legend

- Former Above Ground Storage Tanks
- EX # 12 Excavations 0-5ft bgs
- EX # 24 Excavation 5-10ft bgs
- EX # 33 Excavation 10-15ft bgs
- EX # 38 Excavation 15-25ft bgs
- DLA Responsible Area - Eastern Portion of DFSP Norwalk
- Former Truck Loading Racks
- Kinder Morgan Responsible Area



DFSP Norwalk
15306 Norwalk Boulevard
Norwalk, California

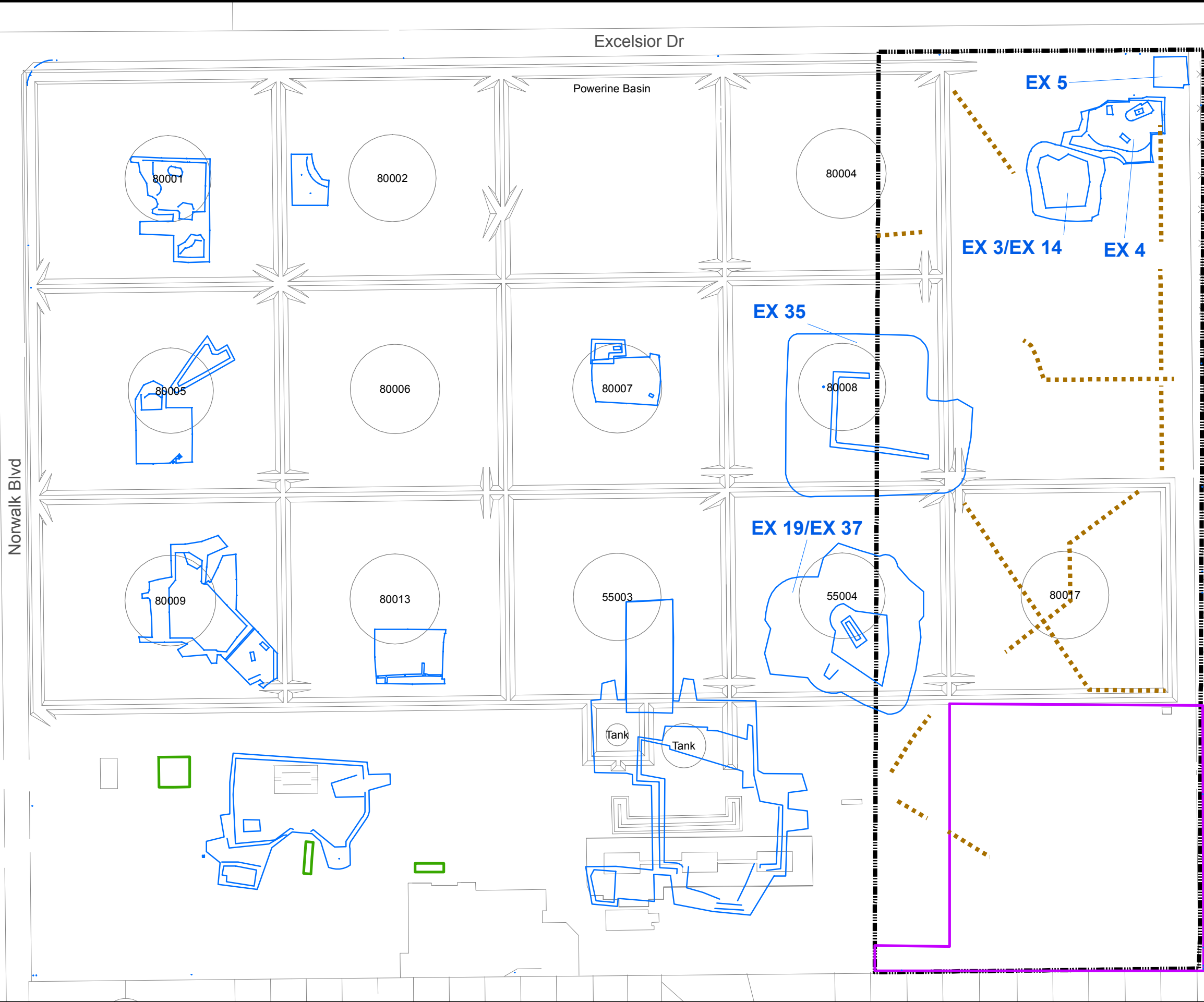
| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 04/07/2016 | P. Wu | N. Irish |







Site Layout with Proposed Excavations

SGI environmental
THE SOURCE GROUP, INC.
1962 Freeman Avenue
Signal Hill, CA 90755
(562) 597-1055

Figure
5



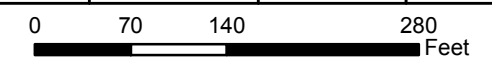
Legend

-  Former Above Ground Storage Tanks
-  Cross Trenches (Completed by SGI/DLA)
-  Excavation Areas
-  Buildings
-  Kinder-Morgan Conveyance Area (Soil Conceptual Site Model, Parsons, September 4, 2012)
-  Surveyed Park Boundary (by Coast Surveying, Inc., October 2015)



DFSP Norwalk
15306 Norwalk Boulevard
Norwalk, California

| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 04/07/2016 | P. W | N. I |

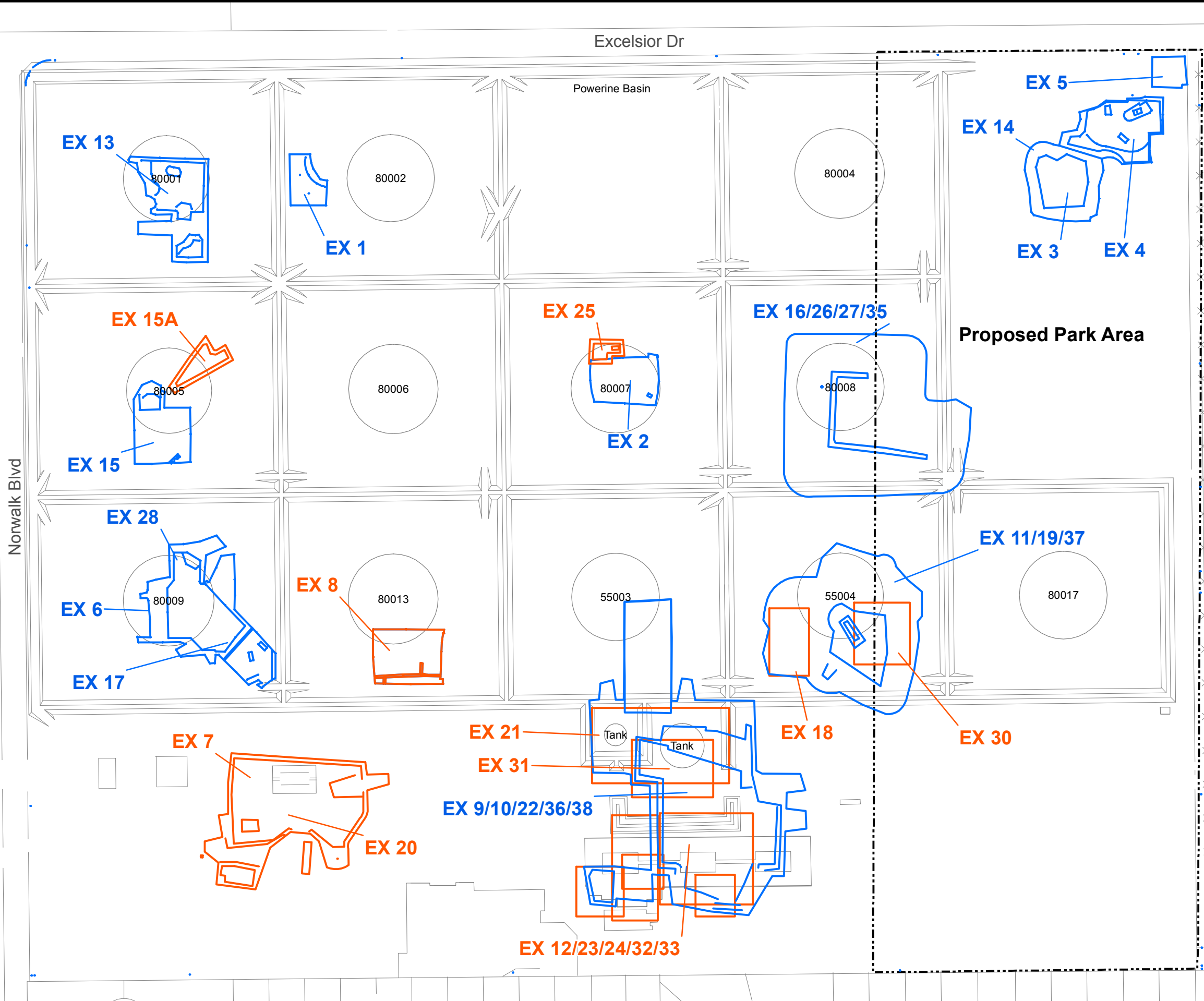


EXCAVATION MAP WITH PARK AREA CROSS TRENCHES

SGI environmental
THE SOURCE GROUP, INC.
1962 Freeman Avenue
Signal Hill, CA 90755
(562) 597-1055

Figure 6

Document Path: Y:\DLA-Norwalk\GIS_Maps\Park_Area_Maps\Eio-7_Excavation_Show_Soil_Origin_2016-04-07.mxd



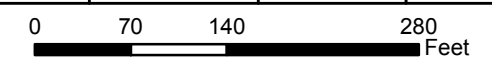
Legend

- Former Above Ground Storage Tanks
- Soil from excavations were fully or partially used as backfill for the proposed park
- Soil from excavations were not used as backfill for the proposed park
- Surveyed Park Boundary (by Coast Surveying, Inc., October 2015)



DFSP Norwalk
15306 Norwalk Boulevard
Norwalk, California

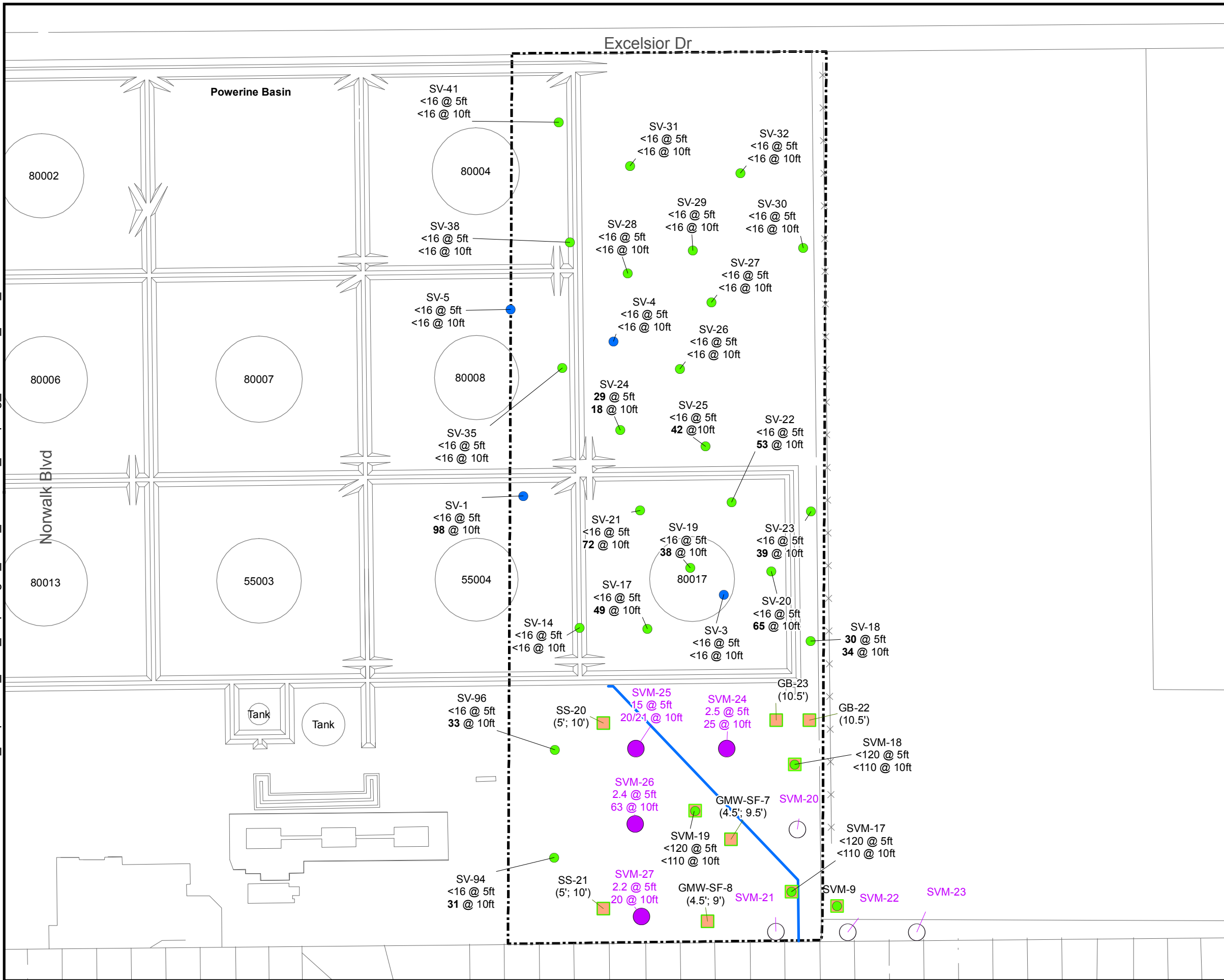
| | | | |
|-----------------|------------|-----------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 04-NDLA-007 | 04/07/2016 | A. C | N. I |



EXCAVATION MAP WITH PARK AREA BACKFILL ORIGINS

SGI environmental
THE SOURCE GROUP, INC.
1962 Freeman Avenue
Signal Hill, CA 90755
(562) 597-1055

Figure
7



Legend

- SV-13 Sampled Soil Vapor Probe Locations
- SV-1 Soil Vapor Probe Locations (SGI 2015)
- GB-23 Previous Soil Sampling Locations - Southeast Corner
- SVM-24 Additional Soil (SB) and Soil Gas (SV) Sampling Locations (DLA 2017)
- SVM-22
- 2017 Sampling Locations (KMEP)
- SFPP Remediation Piping - Southeast Corner
- ⊠ Surveyed Park Boundary (by Coast Surveying, Inc., October 2015)

Note

<16 @ 5ft: Concentration of Benzene at 5 feet below ground surface is not detected.

49 @ 10ft: Concentration of Benzene at 10 feet below ground surface is 49 µg/m3.

DLA - Defense Logistics Agency.

KMEP - Kinder Morgan Energy Partner.

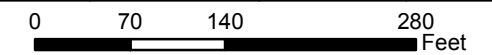
SFPP - Santa Fe Pacific Pipeline.

All concentrations are in micrograms per meters cubed (µg/m3).



DFSP Norwalk
15306 Norwalk Boulevard
Norwalk, California

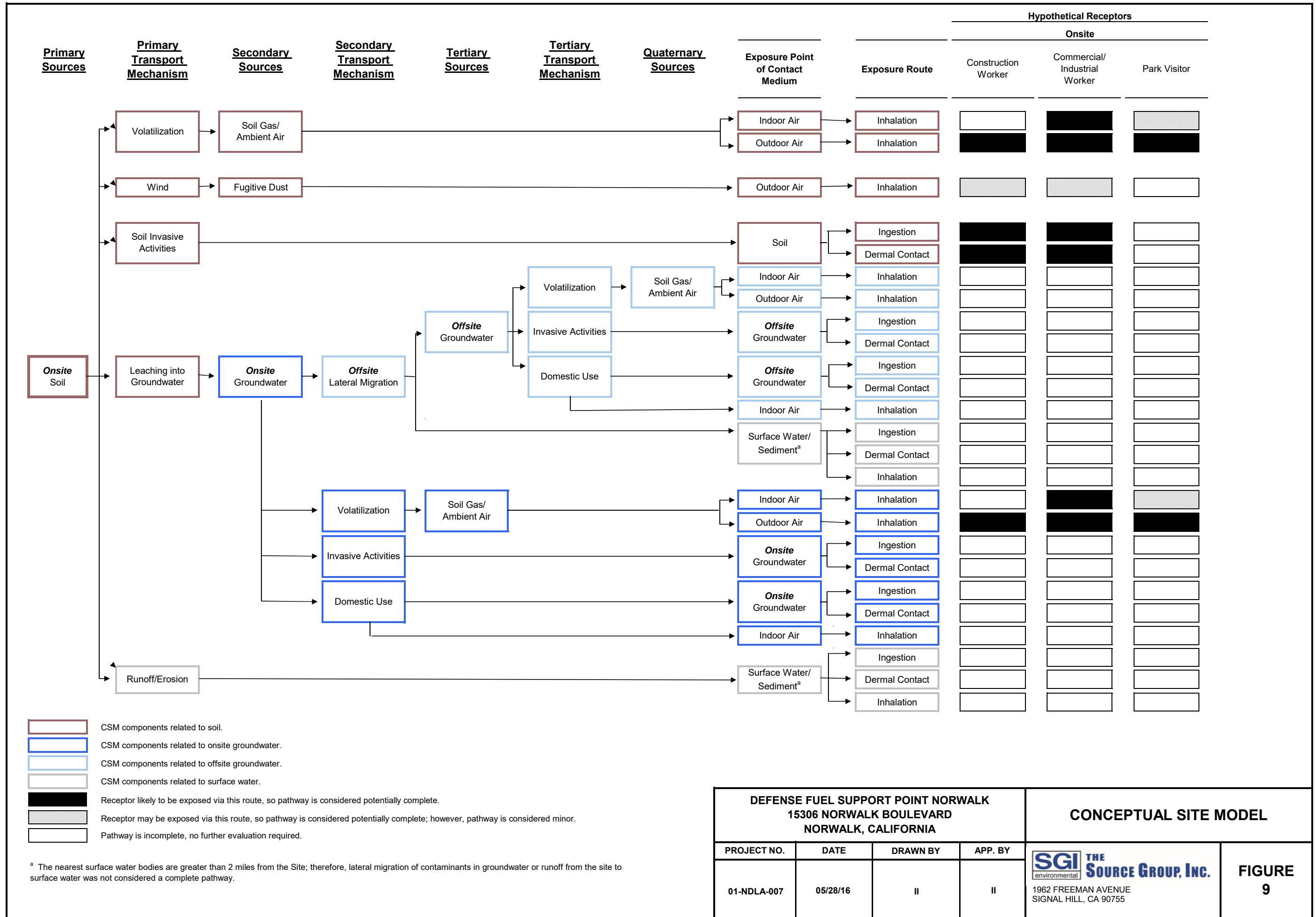
| | | | |
|-----------------|----------|-------------|--------------|
| Project Number: | Date: | Drawn By: | Approved By: |
| 091-NDLA-020 | 3/3/2017 | P. W / C. S | P. P |



Soil Gas Benzene Concentrations Southeast Corner of 15-Acre Area

SGI environmental
THE SOURCE GROUP, INC.
1962 Freeman Avenue
Signal Hill, CA 90755
(562) 597-1055

Figure
8



- CSM components related to soil.
- CSM components related to onsite groundwater.
- CSM components related to offsite groundwater.
- CSM components related to surface water.
- Receptor likely to be exposed via this route, so pathway is considered potentially complete.
- Receptor may be exposed via this route, so pathway is considered potentially complete; however, pathway is considered minor.
- Pathway is incomplete, no further evaluation required.

^a The nearest surface water bodies are greater than 2 miles from the Site; therefore, lateral migration of contaminants in groundwater or runoff from the site to surface water was not considered a complete pathway.

| | | | | | |
|---|-------------|-----------------|----------------|--|--|
| DEFENSE FUEL SUPPORT POINT NORWALK 15306 NORWALK BOULEVARD NORWALK, CALIFORNIA | | | | CONCEPTUAL SITE MODEL | |
| PROJECT NO. | DATE | DRAWN BY | APP. BY | | |
| 01-NDLA-007 | 05/28/16 | II | II | | |
| | | | | 1962 FREEMAN AVENUE SIGNAL HILL, CA 90755 | |
| | | | | FIGURE 9 | |

TABLES

Table 1
Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil (0 to 10 feet bgs) - 2015/2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical ¹ | Site-Specific Cleanup Goals ² (mg/kg) | Soil SL ³ (mg/kg) | Number of Samples | Number of Detections | Frequency of Detection | Arithmetic Mean of Detected (mg/kg) | Standard Deviation of Detected (mg/kg) | Minimum Detected Concentration (mg/kg) | Maximum Detected Concentration (mg/kg) | 95 Percent Upper Confidence Limit of the Arithmetic Mean (95UCL) ⁴ (mg/kg) | Soil Exposure Point Concentration ⁵ EPC _{soil} (mg/kg) | Does EPC _{soil} Exceed Soil SL? |
|---|---|---------------------------------|-------------------|----------------------|------------------------|--|---|---|---|--|--|--|
| Total Petroleum Hydrocarbons (TPH) | | | | | | | | | | | | |
| Carbon Range (C6-C12) | 100 | 100 | 360 | 18 | 5% | 4.2 | 7.2 | 0.55 | 31 | 1.0 | 1.0 | No |
| Carbon Range (C13-C22) | 100 | 230 | 936 | 277 | 30% | 30 | 54 | 0.55 | 604 | 14 | 14 | No |
| Carbon Range (C23-C32) | --- | 5100 | 936 | 497 | 53% | 83 | 112 | 0.60 | 1,200 | 58 | 58 | No |
| Carbon Range (C33-C44) | --- | 5100 | 936 | 470 | 50% | 76 | 104 | 0.55 | 1,268 | 51 | 51 | No |
| Carbon Range (C23-C44) | 1000 | 5100 | 923 | 498 | 54% | 154 | 202 | 1.0 | 1,710 | 108 | 108 | No |
| Volatile Organic Compounds (VOCs) | | | | | | | | | | | | |
| Acetone | 0.994 | 0.5 | 942 | 51 | 5% | 0.071 | 0.021 | 0.051 | 0.13 | 0.052 | 0.052 | No |
| tert-Butyl alcohol (TBA) | 0.02 | 0.075 | 942 | 1 | 0.1% | 0.023 | NE | 0.023 | 0.023 | NE | 0.023 | No |
| Ethylbenzene | 1.07 | 1.4 | 942 | 10 | 1% | 0.0027 | 0.0012 | 0.0020 | 0.0059 | 0.0020 | 0.0020 | No |
| Toluene | 0.356 | 2.9 | 942 | 98 | 10% | 0.0029 | 0.0010 | 0.0020 | 0.0073 | 0.0021 | 0.0021 | No |
| 1,2,4-Trimethylbenzene | 0.12 | --- | 942 | 5 | 1% | 0.0053 | 0.00022 | 0.0050 | 0.0056 | 0.0050 | 0.0050 | No |
| o-Xylene | --- | 2.3 | 942 | 13 | 1% | 0.0066 | 0.0018 | 0.0025 | 0.0089 | 0.0021 | 0.0021 | No |
| m,p-Xylenes | --- | 2.3 | 942 | 76 | 8% | 0.0055 | 0.0062 | 0.0020 | 0.024 | 0.0026 | 0.0026 | No |
| Gasoline Range Organics (GRO) | 100 | 100 | 942 | 7 | 1% | 0.77 | 0.26 | 0.61 | 1.3 | 0.50 | 0.50 | No |

Notes:

- SL = screening level.
- feet bgs = feet below ground surface.
- mg/kg = milligrams per kilogram.
- NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).
- = Not available or not applicable.

- ¹ Represents statistical summary of chemicals detected in one or more samples.
- ² Represents the final site-specific cleanup goals for soil, approved by the RWQCB in their letter entitled *Approval of Modification to Cleanup Goals*, July 16, 2015.
- ³ Represents San Francisco Regional Water Quality Control Board (SFRWQCB) Tier 1 Environmental Screening Levels (ESLs) for soil, dated February 2016 revision 3.
- ⁴ Values are the upper confidence limit on the unknown mean as calculated and recommended by USEPA's ProUCL software. Non-detect results were entered as the detection limit value.
UCLs were not calculated for analytes with fewer than five detected concentrations.
- ⁵ Value represents the lesser of the maximum detected concentration and the 95UCL.

References:

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

Table 2
Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 5 feet bgs - 2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical ¹ | Soil Gas SL Residential ² (µg/m ³) | Soil Gas SL Commercial ² (µg/m ³) | Number of Samples | Number of Detections | Frequency of Detection | Arithmetic Mean of Detected (µg/m ³) | Standard Deviation of Detected (µg/m ³) | Minimum Detected Concentration (µg/m ³) | Maximum Detected Concentration (µg/m ³) | Soil Gas Exposure Point Concentration ³ EPC _{sg} (µg/m ³) | Does EPC _{sg} Exceed Soil Gas SL? (µg/m ³) |
|-----------------------|--|---|-------------------|----------------------|------------------------|---|--|--|--|---|--|
| Acetone | 16,000,000 | 140,000,000 | 29 | 16 | 55% | 87 | 43 | 54 | 190 | 190 | No |
| Benzene | 48 | 420 | 29 | 3 | 10% | 29 | 1.0 | 28 | 30 | 30 | No |
| Toluene | 160,000 | 1,300,000 | 29 | 6 | 21% | 86 | 32 | 40 | 120 | 120 | No |
| m,p-Xylene | 52,000 | 440,000 | 29 | 3 | 10% | 57 | 9.0 | 48 | 66 | 66 | No |

Notes:

SL = screening level.

feet bgs = feet below ground surface.

µg/m³ = micrograms per liter.

¹ Represents statistical summary of chemicals detected in one or more samples.

² Represents San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil gas, dated February 2016 revision 3.

³ Value represents the maximum detected concentration.

References:

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

Table 3
Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 10 feet bgs - 2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical ¹ | Soil Gas SL Residential ² (µg/m ³) | Soil Gas SL Commercial ² (µg/m ³) | Number of Samples | Number of Detections | Frequency of Detection | Arithmetic Mean of Detected (µg/m ³) | Standard Deviation of Detected (µg/m ³) | Minimum Detected Concentration (µg/m ³) | Maximum Detected Concentration (µg/m ³) | Soil Gas Exposure Point Concentration ³ EPC _{sg} (µg/m ³) | Does EPC _{sg} Exceed Soil Gas SL? (µg/m ³) |
|----------------------------|--|---|-------------------|----------------------|------------------------|---|--|--|--|---|--|
| Acetone | 16,000,000 | 140,000,000 | 27 | 17 | 63% | 122 | 123 | 49 | 530 | 530 | No |
| Benzene | 48 | 420 | 27 | 13 | 48% | 47 | 21 | 18 | 98 | 98 | Yes (6) |
| Toluene | 160,000 | 1,300,000 | 27 | 15 | 56% | 180 | 104 | 40 | 390 | 390 | No |
| Ethylbenzene | 560 | 4,900 | 27 | 11 | 41% | 36 | 14 | 25 | 69 | 69 | No |
| m,p-Xylene | 52,000 | 440,000 | 27 | 14 | 52% | 103 | 65 | 46 | 270 | 270 | No |
| o-Xylene | 52,000 | 440,000 | 27 | 10 | 37% | 39 | 15 | 28 | 74 | 74 | No |
| 2-Butanone (MEK) | 2,600,000 | 22,000,000 | 27 | 2 | 7% | 74 | 4.9 | 70 | 77 | 77 | No |
| (4) 4-Ethyltoluene | 160,000 | 1,300,000 | 27 | 1 | 4% | NE | NE | 59 | 59 | 59 | No |
| (5) 1,2,4-Trimethylbenzene | 3,650 | 31,000 | 27 | 1 | 4% | NE | NE | 52 | 52 | 52 | No |

Notes:

SL = screening level.

feet bgs = feet below ground surface.

µg/m³ = micrograms per liter.

NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).

¹ Represents statistical summary of chemicals detected in one or more samples.

² Represents San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil gas, dated February 2016 revision 3, unless otherwise noted.

³ Value represents the maximum detected concentration.

⁴ SFRWQCB ESLs were not available for 4-ethyltoluene; therefore, the ESL for toluene was used.

⁵ SFRWQCB ESLs were not available; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) were used, dated May 2016. USEPA RSLs have been developed for indoor air, but not soil gas. The residential and commercial soil gas SLs are based on applying a DTSC default attenuation factor to the air SLs. The resident air SLs and industrial air SLs were divided by DTSC default attenuation factors of 0.002 and 0.001, respectively (DTSC, 2011). The resulting value is the soil gas SL.

⁶ EPC_{sg} exceeds the soil gas SLs for residential land use.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

Table 4
Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 5 feet bgs - 2017 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical ¹ | Soil Gas SL Residential ² (µg/m ³) | Soil Gas SL Commercial ² (µg/m ³) | Number of Samples | Number of Detections | Frequency of Detection | Arithmetic Mean of Detected (µg/m ³) | Standard Deviation of Detected (µg/m ³) | Minimum Detected Concentration (µg/m ³) | Maximum Detected Concentration (µg/m ³) | Soil Gas Exposure Point Concentration ³ EPC _{sg} (µg/m ³) | Does EPC _{sg} Exceed Soil Gas SL? (µg/m ³) |
|----------------------------|--|---|-------------------|----------------------|------------------------|---|--|--|--|---|--|
| Acetone | 16,000,000 | 140,000,000 | 4 | 4 | 100% | 64 | 32 | 32 | 98 | 98 | No |
| Benzene | 48 | 420 | 4 | 4 | 100% | 5.5 | 6.3 | 2.2 | 15 | 15 | No |
| Toluene | 160,000 | 1,300,000 | 4 | 4 | 100% | 75 | 97 | 24 | 220 | 220 | No |
| Ethylbenzene | 560 | 4,900 | 4 | 4 | 100% | 24 | 31 | 6.7 | 71 | 71 | No |
| m,p-Xylene | 52,000 | 440,000 | 4 | 4 | 100% | 93 | 118 | 26 | 270 | 270 | No |
| o-Xylene | 52,000 | 440,000 | 4 | 4 | 100% | 32 | 39 | 10 | 90 | 90 | No |
| 2-Butanone (MEK) | 2,600,000 | 22,000,000 | 4 | 4 | 100% | 22 | 17 | 5.9 | 41 | 41 | No |
| (4) 1,3-Dichlorobenzene | 65,000 | 530,000 | 4 | 4 | 100% | 250 | 65 | 170 | 320 | 320 | No |
| Ethanol | --- | --- | 4 | 4 | 100% | 205 | 31 | 170 | 240 | 240 | No |
| (6) 4-Ethyltoluene | 160,000 | 1,300,000 | 4 | 4 | 100% | 14 | 19 | 3.3 | 42 | 42 | No |
| (7) Isopropanol | 15,500,000 | 130,000,000 | 4 | 4 | 100% | 27 | 4.1 | 23 | 31 | 31 | No |
| 4-Methyl-2-Pentanone | 1,600,000 | 13,000,000 | 4 | 2 | 50% | 9.2 | 1.2 | 8.3 | 10 | 10 | No |
| Tetrachloroethene | 240 | 2,100 | 4 | 1 | 25% | 7.3 | NE | 7.3 | 7.3 | 7.3 | No |
| Trichloroethene | 240 | 3,000 | 4 | 1 | 25% | 3.9 | NE | 3.9 | 3.9 | 3.9 | No |
| (5) 1,2,4-Trimethylbenzene | 3,650 | 31,000 | 4 | 4 | 100% | 43 | 52 | 12 | 120 | 120 | No |
| (4) 1,3,5-Trimethylbenzene | 21,000 | 180,000 | 4 | 4 | 100% | 13 | 18 | 3.3 | 40 | 40 | No |

Notes:

SL = screening level.

feet bgs = feet below ground surface.

µg/m³ = micrograms per liter.

NE = Not estimated due to limitations in database (i.e., not detected in more than one sample).

--- = SL not available.

¹ Represents statistical summary of chemicals detected in one or more samples.

² Represents San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil gas, dated February 2016 revision 3, unless otherwise noted.

³ Value represents the maximum detected concentration.

⁴ SFRWQCB ESLs were not available; therefore, the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office Note 3 modified screening levels (DTSC-SLs) were used, dated June 2016. See Note 8.

⁵ SFRWQCB ESLs were not available; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) were used, dated May 2016. See Note 8.

⁶ SFRWQCB ESLs were not available for 4-ethyltoluene; therefore, the ESL for toluene was used.

⁷ USEPA RSLs were not available for isopropanol; therefore, the RSL for sec-butyl alcohol was used.

⁸ DTSC-SLs and USEPA RSLs have been developed for indoor air, but not soil gas. The residential and commercial soil gas SLs are based on applying a DTSC default attenuation factor to the air SLs. The resident air SLs and industrial air SLs were divided by DTSC default attenuation factors of 0.002 and 0.001, respectively (DTSC, 2011). The resulting value is the soil gas SL.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

Table 5
Statistical Summary of Analytical Data and Screening-Level Risk Assessment for Soil Gas at 10 feet bgs - 2017 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical ¹ | Soil Gas SL Residential ² (µg/m ³) | Soil Gas SL Commercial ² (µg/m ³) | Number of Samples | Number of Detections | Frequency of Detection | Arithmetic Mean of Detected (µg/m ³) | Standard Deviation of Detected (µg/m ³) | Minimum Detected Concentration (µg/m ³) | Maximum Detected Concentration (µg/m ³) | Soil Gas Exposure Point Concentration ³ EPC _{sg} (µg/m ³) | Does EPC _{sg} Exceed Soil Gas SL? (µg/m ³) |
|----------------------------|--|---|-------------------|----------------------|------------------------|---|--|--|--|---|--|
| Acetone | 16,000,000 | 140,000,000 | 5 | 5 | 100% | 85 | 35 | 37 | 120 | 120 | No |
| Benzene | 48 | 420 | 5 | 5 | 100% | 30 | 19 | 20 | 63 | 63 | Yes (9) |
| Toluene | 160,000 | 1,300,000 | 5 | 5 | 100% | 410 | 133 | 300 | 640 | 640 | No |
| Ethylbenzene | 560 | 4,900 | 5 | 5 | 100% | 120 | 26 | 90 | 150 | 150 | No |
| m,p-Xylene | 52,000 | 440,000 | 5 | 5 | 100% | 428 | 94 | 300 | 520 | 520 | No |
| o-Xylene | 52,000 | 440,000 | 5 | 5 | 100% | 154 | 45 | 91 | 200 | 200 | No |
| 2-Butanone (MEK) | 2,600,000 | 22,000,000 | 5 | 5 | 100% | 36 | 17 | 9.9 | 53 | 53 | No |
| (4) Carbon Disulfide | 365,000 | 3,100,000 | 5 | 4 | 80% | 12 | 5.6 | 7.4 | 20 | 20 | No |
| (5) 1,3-Dichlorobenzene | 65,000 | 530,000 | 5 | 5 | 100% | 230 | 28 | 210 | 270 | 270 | No |
| Ethanol | --- | --- | 5 | 5 | 100% | 152 | 29 | 110 | 190 | 190 | No |
| (6) 4-Ethyltoluene | 160,000 | 1,300,000 | 5 | 5 | 100% | 57 | 24 | 24 | 85 | 85 | No |
| (7) Isopropanol | 15,500,000 | 130,000,000 | 5 | 5 | 100% | 23 | 2.4 | 20 | 26 | 26 | No |
| 4-Methyl-2-Pentanone | 1,600,000 | 13,000,000 | 5 | 3 | 60% | 16 | 4.4 | 11 | 19 | 19 | No |
| Tetrachloroethene | 240 | 2,100 | 5 | 2 | 40% | 8.8 | 1.7 | 7.6 | 10 | 10 | No |
| (4) 1,2,4-Trimethylbenzene | 3,650 | 31,000 | 5 | 5 | 100% | 164 | 83 | 58 | 270 | 270 | No |
| (5) 1,3,5-Trimethylbenzene | 21,000 | 180,000 | 5 | 5 | 100% | 53 | 22 | 24 | 79 | 79 | No |

Notes:

SL = screening level.

feet bgs = feet below ground surface.

µg/m³ = micrograms per liter.

--- = SL not available.

¹ Represents statistical summary of chemicals detected in one or more samples.

² Represents San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil gas, dated February 2016 revision 3, unless otherwise noted.

³ Value represents the maximum detected concentration.

⁴ SFRWQCB ESLs were not available; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) were used, dated May 2016. See Note 8.

⁵ SFRWQCB ESLs were not available; therefore, the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office Note 3 modified screening levels (DTSC-SLs) were used, dated June 2016. See Note 8.

⁶ SFRWQCB ESLs were not available for 4-ethyltoluene; therefore, the ESL for toluene was used.

⁷ USEPA RSLs were not available for isopropanol; therefore, the RSL for sec-butyl alcohol was used.

⁸ DTSC-SLs and USEPA RSLs have been developed for indoor air, but not soil gas. The residential and commercial soil gas SLs are based on applying a DTSC default attenuation factor to the air SLs. The resident air SLs and industrial air SLs were divided by DTSC default attenuation factors of 0.002 and 0.001, respectively (DTSC, 2011). The resulting value is the soil gas SL.

⁹ EPC_{sg} exceeds the soil gas SLs for residential land use.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

APPENDIX A

FEBRUARY 2017 ADDITIONAL SITE INVESTIGATION

2017 ADDITIONAL SITE INVESTIGATION

In February 2017, at the request of the LARWQCB and Office of Environmental Health Hazard Assessment (OEHHA), Defense Logistics Agency-Energy (DLA-Energy) and Kinder Morgan Energy Partner (KMEP) conducted additional Site investigations in the southeastern corner of the 15-acre Eastern Portion of the Site. DLA-Energy installed four soil gas probes (SVM-24 through SVM-27) and KMEP installed four soil gas probes (SVM-20 through SVM-23). KMEP's investigation results are reported separately. DLA-Energy's additional Site investigation is described in this appendix.

Pre-Field Activities

Prior to mobilization to the field, a boring permit was secured from Los Angeles County Department of Public Health for drilling at the proposed soil and soil gas sampling locations (Attachment A).

The Site-Specific Health and Safety Plan (HASP) was updated for the proposed field activities. All SGI personnel and subcontractors associated with the project were required to be familiar with and comply with all provisions of the HASP. In accordance with the HASP, the proposed sampling locations were marked and cleared of underground utilities by Underground Services Alert (USA) as well as a private utility locating service prior to initiating any subsurface activity.

Soil Boring Activities

On February 15, 2017, a total of four soil borings (SB-24 through SB-27) were advanced by Environmental Support Technologies (EST) of Irvine, California. The borings were advanced using direct-push technology (DPT). During advancement of each boring, a soil sample was collected at 5 and 10 feet below ground surface (bgs). Soil samples were transported under chain-of-custody protocol to American Analytics in Chatsworth, California, for analysis for total petroleum hydrocarbons (TPH) by EPA method 8015 and volatile organic compounds (VOCs) by EPA Method 8260B. Laboratory analytical report is provided in Attachment B.

Soil in each boring was logged in general accordance with the Unified Soil Classification System (USCS). Boring logs were prepared for each of the cored borings and are provided in Attachment C. Each boring log includes the observed lithology, drilling and sampling methods, soil sample intervals, and soil vapor monitoring (SVM) probe construction details, where applicable.

Soil Vapor Monitoring Probe Installation

Four multi-level SVM probes (SVM-24 through SVM-27) were installed in the borings advanced at the Site. Installation activities were completed on February 15, 2017. Each SVM probe was constructed in a nested fashion, at depths of 5 and 10 feet bgs. Each SVM probe was constructed as follows:

1. A soil vapor filter tip, attached to ¼-inch outside diameter Teflon® tubing, was placed in the center of the borehole and advanced to the deepest sample depth;

2. A one-foot-thick sand pack (6-inches above and 6-inches below the filter tip) was emplaced within the borehole;
3. Above the sand pack, one foot of dry granular bentonite was emplaced within the borehole around the Teflon® tubing followed by hydrated bentonite up to 6-inches below the next sampling interval to prevent intrusion of ambient air into the borehole annulus during sampling;
4. Teflon® tubing for additional sample intervals was installed and the borehole filled as described above;
5. Above the upper-most sand pack at each location, hydrated bentonite was emplaced in the borehole to ground surface;
6. Upon completion of each sample interval, a cap was fitted to the top-end of the tubing and the tubing was labeled to identify the respective sample interval; and,
7. Following hydration of the bentonite seal, the probe was allowed to sit for a minimum of two hours to allow for the subsurface to equilibrate back to representative conditions.

Soil Gas Sampling

The soil gas sampling activities were conducted in general accordance with the methodologies outlined in the July 2015 Advisory – Active Soil Gas Investigations, (Soil Gas Advisory) published by the Department of Toxic Substances Control and Regional Water Quality Control Board (DTSC-RWQCB, 2015).

On February 16, 2017, soil gas samples were collected from probes SVM-24, SVM-25, SVM-26, and SVM-27 at 5 and 10 feet bgs. A duplicate soil gas sample was collected from probe SVM-25 at 10 feet bgs. Soil gas samples were collected from each location using a 1-liter SUMMA™ canister provided by Eurofins/Calscience in Garden Gove (Eurofins). Sampling manifolds were equipped with flow regulators limiting the vapor flow rate to 200 milliliters per minute (mL/min).

Prior to sampling each point, a shut-in test was performed. The above-ground sample train consisting of the 1-liter SUMMA™ sample canister, sample probe, and sampling tray consisting of syringe and vacuum pump was assembled. The system was then evacuated using a syringe, while a three-way valve was closed to the sample probe and the sample canister valve was also closed, the vacuum gauge was then observed for at least one minute. If any loss of vacuum was observed, the fittings were adjusted until the vacuum in the sample train did not noticeably dissipate. Once the shut-in test was validated, the sample train was switched to the sample probe consisting of Teflon® tubing.

Following completion of the shut-in test, each probe was purged to ensure that stagnant air was removed from the sampling system and that samples were representative of subsurface conditions. Approximately three volumes of the SVM probe were purged. Purging was achieved using a vacuum pump connected to the sampling manifold.

After purging was complete, samples were collected in the laboratory-provided 1-liter SUMMA™ canisters. Canister vacuum was monitored and recorded throughout sampling, and the canister was closed when approximately 1 to 2 inches of mercury (in Hg) of vacuum remained.

As a quality control measure, leak detection during sampling was conducted using isopropanol.

Following the collection of each sample, the canister was prepared for delivery to the laboratory for analysis. The sample containers were labeled with sample point identification, date, and time of collection. The samples were relinquished under chain-of-custody protocol to Eurofins for analysis by EPA method TO-15 for VOCs, including leak check compound isopropanol. The laboratory analytical report is provided in Attachment D.

Equipment Decontamination

To minimize the potential for cross-contamination between sampling locations, soil gas sampling equipment was either discarded or decontaminated prior to initiating work at each drilling location. All disposable sampling implements (tubing, glass sample syringes, etc.) were discarded and the direct-push rods and other non-disposable components were decontaminated between each boring.

References

Department of Toxic Substances Control and Regional Water Quality Control Board (DTSC-RWQCB). 2015. Advisory – Active Soil Gas Investigations, (Soil Gas Advisory). July.

**ATTACHMENT A
PERMIT**



Drinking Water Program

5050 Commerce Drive, Baldwin Park, CA 91706
Telephone: (626) 430-5420 • Facsimile: (626) 813-3016
http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm



Well Permit Approval

TO BE COMPLETED BY APPLICANT:


| | | | |
|--|-----------------|-----------------|---|
| WORK SITE ADDRESS 15306 Norwalk Blvd. | CITY Norwalk | ZIP CA 90650 | EMAIL ADDRESS FOR WELL PERMIT APPROVAL paul.parmentier@apexcos.com |
|--|-----------------|-----------------|---|

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- THIS WELL PERMIT APPROVAL IS LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- NOTIFY THE DRINKING WATER PROGRAM BY EMAIL 3 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.

Juan Rodriguez 626-430-5386 or Jurodriguez@ph.lacounty.gov

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

| | | |
|---|--|--|
| <input type="checkbox"/> WORK PLAN INCOMPLETE; SUBMIT THE FOLLOWING: | <input checked="" type="checkbox"/> WORK PLAN APPROVED Los Angeles County Drinking Water Stamp | DATE: <i>2/1/17</i> |
| |  R.E.H.S. NO: <i>6330</i> <i>Juan Rodriguez</i> | ADDITIONAL APPROVAL CONDITIONS: <i>on 1/30/17 \$516.00 was paid for Permit # SR0094992 to advance 3 soil borings at above-mentioned site.</i> |

| | |
|---|--|
| <input type="checkbox"/> ANNULAR SEAL FINAL INSPECTION REQUIRED | <input type="checkbox"/> WELL COMPLETION LOG REQUIRED |
| DATE ACCEPTED: _____ REHS signature: _____ | DATE ACCEPTED: _____ REHS signature: _____ |
| <input type="checkbox"/> WATER QUALITY—BACTERIOLOGICAL STANDARDS REQUIRED | <input type="checkbox"/> WATER QUALITY—CHEMICAL STANDARDS REQUIRED |
| DATE ACCEPTED: _____ REHS signature: _____ | DATE ACCEPTED: _____ REHS signature: _____ |
| <input type="checkbox"/> WATER SUPPLY YIELD REQUIRED | <input type="checkbox"/> OTHER REQUIRED |
| DATE ACCEPTED: _____ REHS signature: _____ | DATE ACCEPTED: _____ REHS signature: _____ |

ATTACHMENT B
SOIL LABORATORY ANALYTICAL REPORT



9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

February 27, 2017

Neil Irish

The Source Group, Inc. (SH)
1962 Freeman Ave.
Signal Hill, CA 90755

**Re : DFSP Norwalk Soil Remediation / 04-NDLA-007
A5332063 / 7B16011**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 02/16/17 15:27 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Sample ID | Laboratory ID | Matrix | TAT | Date Sampled | Date Received |
|-----------|---------------|--------|-----|--------------|---------------|
|-----------|---------------|--------|-----|--------------|---------------|

8260B/5035 +OXY+TPHG

| | | | | | |
|-----------|------------|------|---|----------------|----------------|
| SB-24-5' | 7B16011-01 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-24-10' | 7B16011-02 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-25-5' | 7B16011-03 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-25-10' | 7B16011-04 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-26-5' | 7B16011-05 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-26-10' | 7B16011-06 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-27-5' | 7B16011-07 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-27-10' | 7B16011-08 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |

Carbon Chain Custom

| | | | | | |
|-----------|------------|------|---|----------------|----------------|
| SB-24-5' | 7B16011-01 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-24-10' | 7B16011-02 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-25-5' | 7B16011-03 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-25-10' | 7B16011-04 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-26-5' | 7B16011-05 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-26-10' | 7B16011-06 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-27-5' | 7B16011-07 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |
| SB-27-10' | 7B16011-08 | Soil | 5 | 02/15/17 00:00 | 02/16/17 15:27 |

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| AA ID No: | 7B16011-01 | 7B16011-02 | 7B16011-03 | 7B16011-04 | |
| Client ID No: | SB-24-5' | SB-24-10' | SB-25-5' | SB-25-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

8260B/5035 +OXY+TPHG (EPA 8260B/5035)

| | | | | | |
|-------------------------------|---------|---------|---------|---------|--------|
| Acetone | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 |
| tert-Amyl Methyl Ether (TAME) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Benzene | <0.010 | <0.010 | <0.010 | <0.010 | 0.010 |
| Bromobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Bromochloromethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Bromodichloromethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Bromoform | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Bromomethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 2-Butanone (MEK) | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 |
| tert-Butyl alcohol (TBA) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| sec-Butylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| tert-Butylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| n-Butylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Carbon Disulfide | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Carbon Tetrachloride | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Chlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Chloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Chloroform | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Chloromethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 2-Chlorotoluene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 4-Chlorotoluene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2-Dibromo-3-chloropropane | <0.010 | <0.010 | <0.010 | <0.010 | 0.010 |
| Dibromochloromethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2-Dibromoethane (EDB) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Dibromomethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,4-Dichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,3-Dichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| AA ID No: | 7B16011-01 | 7B16011-02 | 7B16011-03 | 7B16011-04 | |
| Client ID No: | SB-24-5' | SB-24-10' | SB-25-5' | SB-25-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

8260B/5035 +OXY+TPHG (EPA 8260B/5035) (continued)

| | | | | | |
|--------------------------------|---------|---------|---------|---------|--------|
| 1,2-Dichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Dichlorodifluoromethane (R12) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1-Dichloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2-Dichloroethane (EDC) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| trans-1,2-Dichloroethylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| cis-1,2-Dichloroethylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1-Dichloroethylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 2,2-Dichloropropane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,3-Dichloropropane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2-Dichloropropane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| trans-1,3-Dichloropropylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1-Dichloropropylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| cis-1,3-Dichloropropylene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Diisopropyl ether (DIPE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Ethylbenzene | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |
| Ethyl-tert-Butyl Ether (ETBE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Gasoline Range Organics (GRO) | <0.50 | <0.50 | <0.50 | <0.50 | 0.50 |
| Hexachlorobutadiene | <0.010 | <0.010 | <0.010 | <0.010 | 0.010 |
| 2-Hexanone (MBK) | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 |
| Isopropylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 4-Isopropyltoluene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Methyl-tert-Butyl Ether (MTBE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Methylene Chloride | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 |
| 4-Methyl-2-pentanone (MIBK) | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 |
| Naphthalene | <0.010 | <0.010 | <0.010 | <0.010 | 0.010 |
| n-Propylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| AA ID No: | 7B16011-01 | 7B16011-02 | 7B16011-03 | 7B16011-04 | |
| Client ID No: | SB-24-5' | SB-24-10' | SB-25-5' | SB-25-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

8260B/5035 +OXY+TPHG (EPA 8260B/5035) (continued)

| | | | | | |
|--|---------|---------|---------|---------|--------|
| Styrene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,1,2-Tetrachloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2,2-Tetrachloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Tetrachloroethylene (PCE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Toluene | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |
| 1,2,4-Trichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,3-Trichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2-Trichloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,1-Trichloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Trichloroethylene (TCE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Trichlorofluoromethane (R11) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,3-Trichloropropane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,3,5-Trimethylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,4-Trimethylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Vinyl chloride | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| o-Xylene | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |
| m,p-Xylenes | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |

Surrogates

| | | | | | %REC Limits |
|----------------------|------|------|------|------|--------------------|
| 4-Bromofluorobenzene | 127% | 128% | 134% | 134% | 70-140 |
| Dibromofluoromethane | 124% | 125% | 126% | 129% | 70-140 |
| Toluene-d8 | 110% | 109% | 111% | 111% | 70-140 |

Viorel Vasile
 Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

Table with 5 columns: Date Sampled, Date Prepared, Date Analyzed, AA ID No, Client ID No, Matrix, Dilution Factor, and MRL. Rows include dates (02/15/17, 02/17/17), IDs (7B16011-05 to 08), client IDs (SB-26-5', SB-26-10', SB-27-5', SB-27-10'), matrix (Soil), and dilution factor (1).

8260B/5035 +OXY+TPHG (EPA 8260B/5035)

Table listing chemical compounds and their concentrations across four samples. Compounds include Acetone, tert-Amyl Methyl Ether (TAME), Benzene, Bromobenzene, Bromochloromethane, Bromodichloromethane, Bromoform, Bromomethane, 2-Butanone (MEK), tert-Butyl alcohol (TBA), sec-Butylbenzene, tert-Butylbenzene, n-Butylbenzene, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, 1,2-Dibromo-3-chloropropane, Dibromochloromethane, 1,2-Dibromoethane (EDB), Dibromomethane, 1,4-Dichlorobenzene, and 1,3-Dichlorobenzene. Concentrations are mostly <0.050 or <0.0050, with MRL values ranging from 0.0050 to 0.050.

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

Table with 5 columns: Date Sampled, Date Prepared, Date Analyzed, AA ID No, Client ID No, Matrix, Dilution Factor, and MRL. Rows include sample dates (02/15/17, 02/17/17), IDs (7B16011-05 to 08), client IDs (SB-26-5', SB-26-10', SB-27-5', SB-27-10'), matrix (Soil), and dilution factor (1).

8260B/5035 +OXY+TPHG (EPA 8260B/5035) (continued)

Table listing chemical compounds and their concentrations across four samples. Compounds include 1,2-Dichlorobenzene, Dichlorodifluoromethane (R12), 1,1-Dichloroethane, 1,2-Dichloroethane (EDC), trans-1,2-Dichloroethylene, cis-1,2-Dichloroethylene, 1,1-Dichloroethylene, 2,2-Dichloropropane, 1,3-Dichloropropane, 1,2-Dichloropropane, trans-1,3-Dichloropropylene, 1,1-Dichloropropylene, cis-1,3-Dichloropropylene, Diisopropyl ether (DIPE), Ethylbenzene, Ethyl-tert-Butyl Ether (ETBE), Gasoline Range Organics (GRO), Hexachlorobutadiene, 2-Hexanone (MBK), Isopropylbenzene, 4-Isopropyltoluene, Methyl-tert-Butyl Ether (MTBE), Methylene Chloride, 4-Methyl-2-pentanone (MIBK), Naphthalene, and n-Propylbenzene.

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: VOCs, OXY & TPHG by GC/MS EPA 5035

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| AA ID No: | 7B16011-05 | 7B16011-06 | 7B16011-07 | 7B16011-08 | |
| Client ID No: | SB-26-5' | SB-26-10' | SB-27-5' | SB-27-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

8260B/5035 +OXY+TPHG (EPA 8260B/5035) (continued)

| | | | | | |
|--|---------|---------|---------|---------|--------|
| Styrene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,1,2-Tetrachloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2,2-Tetrachloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Tetrachloroethylene (PCE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Toluene | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |
| 1,2,4-Trichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,3-Trichlorobenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2-Trichloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,1-Trichloroethane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Trichloroethylene (TCE) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Trichlorofluoromethane (R11) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,3-Trichloropropane | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,3,5-Trimethylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| 1,2,4-Trimethylbenzene | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| Vinyl chloride | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0050 |
| o-Xylene | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |
| m,p-Xylenes | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0020 |

Surrogates

| | | | | | |
|----------------------|------|------|------|------|--------------------|
| | | | | | %REC Limits |
| 4-Bromofluorobenzene | 130% | 135% | 140% | 124% | 70-140 |
| Dibromofluoromethane | 128% | 130% | 134% | 131% | 70-140 |
| Toluene-d8 | 110% | 116% | 118% | 110% | 70-140 |

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: Carbon Chain by GC/FID

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| AA ID No: | 7B16011-01 | 7B16011-02 | 7B16011-03 | 7B16011-04 | |
| Client ID No: | SB-24-5' | SB-24-10' | SB-25-5' | SB-25-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

Carbon Chain Custom (EPA 8015M)

| | | | | | |
|---------|-----|-----|-----|-----|----|
| C13-C22 | <10 | <10 | <10 | <10 | 10 |
| C23-C32 | <10 | <10 | <10 | <10 | 10 |
| C33-C44 | <10 | <10 | <10 | <10 | 10 |

Surrogates

| | | | | | |
|-------------|------|------|------|------|-------------------------------------|
| o-Terphenyl | 144% | 134% | 137% | 133% | <u>%REC Limits</u> 50-150 |
|-------------|------|------|------|------|-------------------------------------|

Viorel Vasile
 Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation
Method: Carbon Chain by GC/FID

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17
Units: mg/kg

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/15/17 | 02/15/17 | 02/15/17 | 02/15/17 | |
| Date Prepared: | 02/17/17 | 02/17/17 | 02/17/17 | 02/17/17 | |
| Date Analyzed: | 02/17/17 | 02/17/17 | 02/18/17 | 02/18/17 | |
| AA ID No: | 7B16011-05 | 7B16011-06 | 7B16011-07 | 7B16011-08 | |
| Client ID No: | SB-26-5' | SB-26-10' | SB-27-5' | SB-27-10' | |
| Matrix: | Soil | Soil | Soil | Soil | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

Carbon Chain Custom (EPA 8015M)

| | | | | | |
|---------|-----|-----|-----|-----|----|
| C13-C22 | <10 | <10 | <10 | <10 | 10 |
| C23-C32 | <10 | <10 | <10 | <10 | 10 |
| C33-C44 | <10 | <10 | <10 | <10 | 10 |

Surrogates

| | | | | | |
|-------------|------|------|------|------|-------------------------------------|
| o-Terphenyl | 130% | 141% | 137% | 136% | <u>%REC Limits</u> 50-150 |
|-------------|------|------|------|------|-------------------------------------|

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | %REC Limits | RPD RPD | RPD Limit | Notes |
|---------|------------------|-----------------|-------|-------------|---------------|-----------|-------------|---------|-----------|-------|
|---------|------------------|-----------------|-------|-------------|---------------|-----------|-------------|---------|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

Blank (B7B1708-BLK1)

Prepared & Analyzed: 02/17/17

| | | | | | | | | | | |
|-------------------------------|---------|--------|-------|--|--|--|--|--|--|--|
| Acetone | <0.050 | 0.050 | mg/kg | | | | | | | |
| tert-Amyl Methyl Ether (TAME) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Benzene | <0.010 | 0.010 | mg/kg | | | | | | | |
| Bromobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Bromochloromethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Bromodichloromethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Bromoform | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Bromomethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 2-Butanone (MEK) | <0.050 | 0.050 | mg/kg | | | | | | | |
| tert-Butyl alcohol (TBA) | <0.020 | 0.020 | mg/kg | | | | | | | |
| sec-Butylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| tert-Butylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| n-Butylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Carbon Disulfide | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Carbon Tetrachloride | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Chlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Chloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Chloroform | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Chloromethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 2-Chlorotoluene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 4-Chlorotoluene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2-Dibromo-3-chloropropane | <0.010 | 0.010 | mg/kg | | | | | | | |
| Dibromochloromethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2-Dibromoethane (EDB) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Dibromomethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,4-Dichlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,3-Dichlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2-Dichlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Dichlorodifluoromethane (R12) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1-Dichloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2-Dichloroethane (EDC) | <0.0050 | 0.0050 | mg/kg | | | | | | | |

Viorel Vasile
Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Limit | Units | Spike Level | Source Result | %REC %REC | Limits | RPD RPD | Limit | Notes |
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|---------|-------|-------|
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|---------|-------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

Blank (B7B1708-BLK1) Continued

Prepared & Analyzed: 02/17/17

| | | | | | | | | | | |
|--------------------------------|---------|--------|-------|--|--|--|--|--|--|--|
| trans-1,2-Dichloroethylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| cis-1,2-Dichloroethylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1-Dichloroethylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 2,2-Dichloropropane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,3-Dichloropropane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2-Dichloropropane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| trans-1,3-Dichloropropylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1-Dichloropropylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| cis-1,3-Dichloropropylene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Diisopropyl ether (DIPE) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Ethylbenzene | <0.0020 | 0.0020 | mg/kg | | | | | | | |
| Ethyl-tert-Butyl Ether (ETBE) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Gasoline Range Organics (GRO) | <0.50 | 0.50 | mg/kg | | | | | | | |
| Hexachlorobutadiene | <0.010 | 0.010 | mg/kg | | | | | | | |
| 2-Hexanone (MBK) | <0.050 | 0.050 | mg/kg | | | | | | | |
| Isopropylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 4-Isopropyltoluene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Methyl-tert-Butyl Ether (MTBE) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Methylene Chloride | <0.050 | 0.050 | mg/kg | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | <0.050 | 0.050 | mg/kg | | | | | | | |
| Naphthalene | <0.010 | 0.010 | mg/kg | | | | | | | |
| n-Propylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Styrene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1,1,2-Tetrachloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1,2,2-Tetrachloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Tetrachloroethylene (PCE) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Toluene | <0.0020 | 0.0020 | mg/kg | | | | | | | |
| 1,2,4-Trichlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2,3-Trichlorobenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1,2-Trichloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1,1-Trichloroethane | <0.0050 | 0.0050 | mg/kg | | | | | | | |

Viorel Vasile
 Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | Limit | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-----------|-------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-----------|-------|-----|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

Blank (B7B1708-BLK1) Continued

Prepared & Analyzed: 02/17/17

| | | | | | | | | | | |
|--|---------|--------|-------|--|--|--|--|--|--|--|
| Trichloroethylene (TCE) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Trichlorofluoromethane (R11) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2,3-Trichloropropane | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,3,5-Trimethylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| 1,2,4-Trimethylbenzene | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| Vinyl chloride | <0.0050 | 0.0050 | mg/kg | | | | | | | |
| o-Xylene | <0.0020 | 0.0020 | mg/kg | | | | | | | |
| m,p-Xylenes | <0.0020 | 0.0020 | mg/kg | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|-------|--|-------|------|--|-----|--------|--|--|--|
| Surrogate: 4-Bromofluorobenzene | 0.124 | | mg/kg | 0.10 | | 124 | 70-140 | | | |
| Surrogate: Dibromofluoromethane | 0.118 | | mg/kg | 0.10 | | 118 | 70-140 | | | |
| Surrogate: Toluene-d8 | 0.110 | | mg/kg | 0.10 | | 110 | 70-140 | | | |

LCS (B7B1708-BS1)

Prepared & Analyzed: 02/17/17

| | | | | | | | | | | |
|-------------------------------|--------|--------|-------|-------|--|------|--------|--|----|--|
| Acetone | 0.0483 | 0.050 | mg/kg | 0.040 | | 121 | 70-130 | | 30 | |
| tert-Amyl Methyl Ether (TAME) | 0.0431 | 0.0050 | mg/kg | 0.040 | | 108 | 70-130 | | 30 | |
| Benzene | 0.0403 | 0.010 | mg/kg | 0.040 | | 101 | 70-130 | | 30 | |
| Bromobenzene | 0.0383 | 0.0050 | mg/kg | 0.040 | | 95.8 | 70-130 | | 30 | |
| Bromochloromethane | 0.0367 | 0.0050 | mg/kg | 0.040 | | 91.8 | 70-130 | | 30 | |
| Bromodichloromethane | 0.0416 | 0.0050 | mg/kg | 0.040 | | 104 | 70-130 | | 30 | |
| Bromoform | 0.0346 | 0.0050 | mg/kg | 0.040 | | 86.6 | 70-130 | | 30 | |
| Bromomethane | 0.0466 | 0.0050 | mg/kg | 0.040 | | 117 | 70-130 | | 30 | |
| 2-Butanone (MEK) | 0.0403 | 0.050 | mg/kg | 0.040 | | 101 | 70-130 | | 30 | |
| tert-Butyl alcohol (TBA) | 0.209 | 0.020 | mg/kg | 0.20 | | 105 | 70-130 | | 30 | |
| sec-Butylbenzene | 0.0436 | 0.0050 | mg/kg | 0.040 | | 109 | 70-130 | | 30 | |
| tert-Butylbenzene | 0.0420 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | | 30 | |
| n-Butylbenzene | 0.0457 | 0.0050 | mg/kg | 0.040 | | 114 | 70-130 | | 30 | |
| Carbon Disulfide | 0.0377 | 0.0050 | mg/kg | 0.040 | | 94.2 | 70-130 | | 30 | |
| Carbon Tetrachloride | 0.0386 | 0.0050 | mg/kg | 0.040 | | 96.6 | 70-130 | | 30 | |
| Chlorobenzene | 0.0412 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | | 30 | |
| Chloroethane | 0.0441 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | | 30 | |

Viorel Vasile
Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Limit | Units | Spike Level | Source Result | %REC %REC | Limits | RPD | RPD Limit | Notes |
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|-----|-----------|-------|
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|-----|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

LCS (B7B1708-BS1) Continued

Prepared & Analyzed: 02/17/17

| | | | | | | | | | | |
|-------------------------------|---------------|--------|-------|-------|--|------|--------|--|----|--|
| Chloroform | 0.0411 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | | 30 | |
| Chloromethane | 0.0358 | 0.0050 | mg/kg | 0.040 | | 89.5 | 70-130 | | 30 | |
| 2-Chlorotoluene | 0.0389 | 0.0050 | mg/kg | 0.040 | | 97.2 | 70-130 | | 30 | |
| 4-Chlorotoluene | 0.0436 | 0.0050 | mg/kg | 0.040 | | 109 | 70-130 | | 30 | |
| 1,2-Dibromo-3-chloropropane | 0.0397 | 0.010 | mg/kg | 0.040 | | 99.2 | 70-130 | | 30 | |
| Dibromochloromethane | 0.0399 | 0.0050 | mg/kg | 0.040 | | 99.7 | 70-130 | | 30 | |
| 1,2-Dibromoethane (EDB) | 0.0397 | 0.0050 | mg/kg | 0.040 | | 99.2 | 70-130 | | 30 | |
| Dibromomethane | 0.0407 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | | 30 | |
| 1,4-Dichlorobenzene | 0.0422 | 0.0050 | mg/kg | 0.040 | | 106 | 70-130 | | 30 | |
| 1,3-Dichlorobenzene | 0.0411 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | | 30 | |
| 1,2-Dichlorobenzene | 0.0404 | 0.0050 | mg/kg | 0.040 | | 101 | 70-130 | | 30 | |
| Dichlorodifluoromethane (R12) | 0.0361 | 0.0050 | mg/kg | 0.040 | | 90.2 | 70-130 | | 30 | |
| 1,1-Dichloroethane | 0.0417 | 0.0050 | mg/kg | 0.040 | | 104 | 70-130 | | 30 | |
| 1,2-Dichloroethane (EDC) | 0.0443 | 0.0050 | mg/kg | 0.040 | | 111 | 70-130 | | 30 | |
| trans-1,2-Dichloroethylene | 0.0441 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | | 30 | |
| cis-1,2-Dichloroethylene | 0.0399 | 0.0050 | mg/kg | 0.040 | | 99.8 | 70-130 | | 30 | |
| 1,1-Dichloroethylene | 0.0414 | 0.0050 | mg/kg | 0.040 | | 104 | 70-130 | | 30 | |
| 2,2-Dichloropropane | 0.0421 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | | 30 | |
| 1,3-Dichloropropane | 0.0432 | 0.0050 | mg/kg | 0.040 | | 108 | 70-130 | | 30 | |
| 1,2-Dichloropropane | 0.0406 | 0.0050 | mg/kg | 0.040 | | 101 | 70-130 | | 30 | |
| trans-1,3-Dichloropropylene | 0.0420 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | | 30 | |
| 1,1-Dichloropropylene | 0.0410 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | | 30 | |
| cis-1,3-Dichloropropylene | 0.0438 | 0.0050 | mg/kg | 0.040 | | 109 | 70-130 | | 30 | |
| Diisopropyl ether (DIPE) | 0.0421 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | | 30 | |
| Ethylbenzene | 0.0430 | 0.0020 | mg/kg | 0.040 | | 107 | 70-130 | | 30 | |
| Ethyl-tert-Butyl Ether (ETBE) | 0.0412 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | | 30 | |
| Gasoline Range Organics (GRO) | 0.961 | 0.50 | mg/kg | 1.0 | | 96.1 | 70-130 | | 30 | |
| Hexachlorobutadiene | 0.0353 | 0.010 | mg/kg | 0.040 | | 88.2 | 70-130 | | 30 | |
| 2-Hexanone (MBK) | 0.0438 | 0.050 | mg/kg | 0.040 | | 110 | 70-130 | | 30 | |
| Isopropylbenzene | 0.0424 | 0.0050 | mg/kg | 0.040 | | 106 | 70-130 | | 30 | |
| 4-Isopropyltoluene | 0.0451 | 0.0050 | mg/kg | 0.040 | | 113 | 70-130 | | 30 | |

Viorel Vasile
 Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | Limit | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-----------|-------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-----------|-------|-----|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

LCS (B7B1708-BS1) Continued

Prepared & Analyzed: 02/17/17

| | | | | | | | |
|--|--------|--------|-------|-------|------|--------|----|
| Methyl-tert-Butyl Ether (MTBE) | 0.0796 | 0.0050 | mg/kg | 0.080 | 99.5 | 70-130 | 30 |
| Methylene Chloride | 0.0415 | 0.050 | mg/kg | 0.040 | 104 | 70-130 | 30 |
| 4-Methyl-2-pentanone (MIBK) | 0.0381 | 0.050 | mg/kg | 0.040 | 95.4 | 70-130 | 30 |
| Naphthalene | 0.0354 | 0.010 | mg/kg | 0.040 | 88.5 | 70-130 | 30 |
| n-Propylbenzene | 0.0468 | 0.0050 | mg/kg | 0.040 | 117 | 70-130 | 30 |
| Styrene | 0.0424 | 0.0050 | mg/kg | 0.040 | 106 | 70-130 | 30 |
| 1,1,1,2-Tetrachloroethane | 0.0356 | 0.0050 | mg/kg | 0.040 | 89.0 | 70-130 | 30 |
| 1,1,2,2-Tetrachloroethane | 0.0398 | 0.0050 | mg/kg | 0.040 | 99.4 | 70-135 | 30 |
| Tetrachloroethylene (PCE) | 0.0357 | 0.0050 | mg/kg | 0.040 | 89.2 | 70-130 | 30 |
| Toluene | 0.0423 | 0.0020 | mg/kg | 0.040 | 106 | 70-130 | 30 |
| 1,2,4-Trichlorobenzene | 0.0349 | 0.0050 | mg/kg | 0.040 | 87.2 | 70-130 | 30 |
| 1,2,3-Trichlorobenzene | 0.0323 | 0.0050 | mg/kg | 0.040 | 80.9 | 70-130 | 30 |
| 1,1,2-Trichloroethane | 0.0389 | 0.0050 | mg/kg | 0.040 | 97.2 | 70-130 | 30 |
| 1,1,1-Trichloroethane | 0.0400 | 0.0050 | mg/kg | 0.040 | 100 | 70-130 | 30 |
| Trichloroethylene (TCE) | 0.0359 | 0.0050 | mg/kg | 0.040 | 89.6 | 70-130 | 30 |
| Trichlorofluoromethane (R11) | 0.0394 | 0.0050 | mg/kg | 0.040 | 98.5 | 70-130 | 30 |
| 1,2,3-Trichloropropane | 0.0400 | 0.0050 | mg/kg | 0.040 | 100 | 70-130 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | 0.0419 | 0.0050 | mg/kg | 0.040 | 105 | 70-130 | 30 |
| 1,3,5-Trimethylbenzene | 0.0421 | 0.0050 | mg/kg | 0.040 | 105 | 70-130 | 30 |
| 1,2,4-Trimethylbenzene | 0.0434 | 0.0050 | mg/kg | 0.040 | 108 | 70-130 | 30 |
| Vinyl chloride | 0.0358 | 0.0050 | mg/kg | 0.040 | 89.6 | 70-130 | 30 |
| o-Xylene | 0.0407 | 0.0020 | mg/kg | 0.040 | 102 | 70-130 | 30 |
| m,p-Xylenes | 0.0841 | 0.0020 | mg/kg | 0.080 | 105 | 70-130 | 30 |

| | | | | | | | |
|---------------------------------|-------|--|-------|------|-----|--------|--|
| Surrogate: 4-Bromofluorobenzene | 0.108 | | mg/kg | 0.10 | 108 | 70-140 | |
| Surrogate: Dibromofluoromethane | 0.106 | | mg/kg | 0.10 | 106 | 70-140 | |
| Surrogate: Toluene-d8 | 0.109 | | mg/kg | 0.10 | 109 | 70-140 | |

LCS Dup (B7B1708-BSD1)

Prepared: 02/17/17 Analyzed: 02/18/17

| | | | | | | | | |
|-------------------------------|--------|--------|-------|-------|-----|--------|------|----|
| Acetone | 0.0450 | 0.050 | mg/kg | 0.040 | 112 | 70-130 | 7.20 | 30 |
| tert-Amyl Methyl Ether (TAME) | 0.0402 | 0.0050 | mg/kg | 0.040 | 101 | 70-130 | 6.96 | 30 |
| Benzene | 0.0437 | 0.010 | mg/kg | 0.040 | 109 | 70-130 | 8.14 | 30 |

Viorel Vasile
Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | %REC Limits | RPD RPD | RPD Limit | Notes |
|---------|------------------|-----------------|-------|-------------|---------------|-----------|-------------|---------|-----------|-------|
|---------|------------------|-----------------|-------|-------------|---------------|-----------|-------------|---------|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

LCS Dup (B7B1708-BSD1) Continued

Prepared: 02/17/17 Analyzed: 02/18/17

| | | | | | | | | | | |
|-------------------------------|--------|--------|-------|-------|--|------|--------|-------|----|--|
| Bromobenzene | 0.0391 | 0.0050 | mg/kg | 0.040 | | 97.6 | 70-130 | 1.91 | 30 | |
| Bromochloromethane | 0.0391 | 0.0050 | mg/kg | 0.040 | | 97.8 | 70-130 | 6.33 | 30 | |
| Bromodichloromethane | 0.0449 | 0.0050 | mg/kg | 0.040 | | 112 | 70-130 | 7.67 | 30 | |
| Bromoform | 0.0353 | 0.0050 | mg/kg | 0.040 | | 88.3 | 70-130 | 2.00 | 30 | |
| Bromomethane | 0.0489 | 0.0050 | mg/kg | 0.040 | | 122 | 70-130 | 4.81 | 30 | |
| 2-Butanone (MEK) | 0.0330 | 0.050 | mg/kg | 0.040 | | 82.6 | 70-130 | 19.8 | 30 | |
| tert-Butyl alcohol (TBA) | 0.225 | 0.020 | mg/kg | 0.20 | | 113 | 70-130 | 7.39 | 30 | |
| sec-Butylbenzene | 0.0439 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | 0.869 | 30 | |
| tert-Butylbenzene | 0.0427 | 0.0050 | mg/kg | 0.040 | | 107 | 70-130 | 1.70 | 30 | |
| n-Butylbenzene | 0.0459 | 0.0050 | mg/kg | 0.040 | | 115 | 70-130 | 0.436 | 30 | |
| Carbon Disulfide | 0.0405 | 0.0050 | mg/kg | 0.040 | | 101 | 70-130 | 7.12 | 30 | |
| Carbon Tetrachloride | 0.0411 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | 6.22 | 30 | |
| Chlorobenzene | 0.0408 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | 1.02 | 30 | |
| Chloroethane | 0.0456 | 0.0050 | mg/kg | 0.040 | | 114 | 70-130 | 3.35 | 30 | |
| Chloroform | 0.0449 | 0.0050 | mg/kg | 0.040 | | 112 | 70-130 | 8.79 | 30 | |
| Chloromethane | 0.0413 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | 14.2 | 30 | |
| 2-Chlorotoluene | 0.0364 | 0.0050 | mg/kg | 0.040 | | 91.0 | 70-130 | 6.59 | 30 | |
| 4-Chlorotoluene | 0.0423 | 0.0050 | mg/kg | 0.040 | | 106 | 70-130 | 2.94 | 30 | |
| 1,2-Dibromo-3-chloropropane | 0.0399 | 0.010 | mg/kg | 0.040 | | 99.6 | 70-130 | 0.453 | 30 | |
| Dibromochloromethane | 0.0419 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | 4.94 | 30 | |
| 1,2-Dibromoethane (EDB) | 0.0410 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | 3.32 | 30 | |
| Dibromomethane | 0.0443 | 0.0050 | mg/kg | 0.040 | | 111 | 70-130 | 8.51 | 30 | |
| 1,4-Dichlorobenzene | 0.0409 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | 3.27 | 30 | |
| 1,3-Dichlorobenzene | 0.0399 | 0.0050 | mg/kg | 0.040 | | 99.7 | 70-130 | 2.96 | 30 | |
| 1,2-Dichlorobenzene | 0.0411 | 0.0050 | mg/kg | 0.040 | | 103 | 70-130 | 1.57 | 30 | |
| Dichlorodifluoromethane (R12) | 0.0391 | 0.0050 | mg/kg | 0.040 | | 97.8 | 70-130 | 8.09 | 30 | |
| 1,1-Dichloroethane | 0.0446 | 0.0050 | mg/kg | 0.040 | | 112 | 70-130 | 6.81 | 30 | |
| 1,2-Dichloroethane (EDC) | 0.0480 | 0.0050 | mg/kg | 0.040 | | 120 | 70-130 | 8.02 | 30 | |
| trans-1,2-Dichloroethylene | 0.0471 | 0.0050 | mg/kg | 0.040 | | 118 | 70-130 | 6.75 | 30 | |
| cis-1,2-Dichloroethylene | 0.0428 | 0.0050 | mg/kg | 0.040 | | 107 | 70-130 | 7.01 | 30 | |
| 1,1-Dichloroethylene | 0.0432 | 0.0050 | mg/kg | 0.040 | | 108 | 70-130 | 4.25 | 30 | |

Viorel Vasile
 Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Limit | Units | Spike Level | Source Result | %REC %REC | Limits | RPD | RPD Limit | Notes |
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|-----|-----------|-------|
|---------|------------------|-------|-------|-------------|---------------|-----------|--------|-----|-----------|-------|

VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control

Batch B7B1708 - EPA 5035

LCS Dup (B7B1708-BSD1) Continued

Prepared: 02/17/17 Analyzed: 02/18/17

| | | | | | | | | | | |
|--------------------------------|--------|--------|-------|-------|--|------|--------|-------|----|--|
| 2,2-Dichloropropane | 0.0430 | 0.0050 | mg/kg | 0.040 | | 108 | 70-130 | 2.11 | 30 | |
| 1,3-Dichloropropane | 0.0442 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | 2.24 | 30 | |
| 1,2-Dichloropropane | 0.0449 | 0.0050 | mg/kg | 0.040 | | 112 | 70-130 | 10.2 | 30 | |
| trans-1,3-Dichloropropylene | 0.0440 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | 4.51 | 30 | |
| 1,1-Dichloropropylene | 0.0438 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | 6.65 | 30 | |
| cis-1,3-Dichloropropylene | 0.0443 | 0.0050 | mg/kg | 0.040 | | 111 | 70-130 | 1.23 | 30 | |
| Diisopropyl ether (DIPE) | 0.0462 | 0.0050 | mg/kg | 0.040 | | 115 | 70-130 | 9.24 | 30 | |
| Ethylbenzene | 0.0434 | 0.0020 | mg/kg | 0.040 | | 108 | 70-130 | 0.926 | 30 | |
| Ethyl-tert-Butyl Ether (ETBE) | 0.0458 | 0.0050 | mg/kg | 0.040 | | 115 | 70-130 | 10.5 | 30 | |
| Gasoline Range Organics (GRO) | 0.958 | 0.50 | mg/kg | 1.0 | | 95.8 | 70-130 | 0.309 | 30 | |
| Hexachlorobutadiene | 0.0348 | 0.010 | mg/kg | 0.040 | | 87.0 | 70-130 | 1.31 | 30 | |
| 2-Hexanone (MBK) | 0.0398 | 0.050 | mg/kg | 0.040 | | 99.4 | 70-130 | 9.72 | 30 | |
| Isopropylbenzene | 0.0433 | 0.0050 | mg/kg | 0.040 | | 108 | 70-130 | 1.96 | 30 | |
| 4-Isopropyltoluene | 0.0451 | 0.0050 | mg/kg | 0.040 | | 113 | 70-130 | 0.00 | 30 | |
| Methyl-tert-Butyl Ether (MTBE) | 0.0885 | 0.0050 | mg/kg | 0.080 | | 111 | 70-130 | 10.6 | 30 | |
| Methylene Chloride | 0.0392 | 0.050 | mg/kg | 0.040 | | 97.9 | 70-130 | 5.80 | 30 | |
| 4-Methyl-2-pentanone (MIBK) | 0.0354 | 0.050 | mg/kg | 0.040 | | 88.4 | 70-130 | 7.51 | 30 | |
| Naphthalene | 0.0364 | 0.010 | mg/kg | 0.040 | | 91.0 | 70-130 | 2.79 | 30 | |
| n-Propylbenzene | 0.0475 | 0.0050 | mg/kg | 0.040 | | 119 | 70-130 | 1.48 | 30 | |
| Styrene | 0.0422 | 0.0050 | mg/kg | 0.040 | | 106 | 70-130 | 0.472 | 30 | |
| 1,1,1,2-Tetrachloroethane | 0.0362 | 0.0050 | mg/kg | 0.040 | | 90.6 | 70-130 | 1.73 | 30 | |
| 1,1,2,2-Tetrachloroethane | 0.0386 | 0.0050 | mg/kg | 0.040 | | 96.5 | 70-135 | 2.96 | 30 | |
| Tetrachloroethylene (PCE) | 0.0356 | 0.0050 | mg/kg | 0.040 | | 88.9 | 70-130 | 0.393 | 30 | |
| Toluene | 0.0433 | 0.0020 | mg/kg | 0.040 | | 108 | 70-130 | 2.38 | 30 | |
| 1,2,4-Trichlorobenzene | 0.0347 | 0.0050 | mg/kg | 0.040 | | 86.8 | 70-130 | 0.402 | 30 | |
| 1,2,3-Trichlorobenzene | 0.0323 | 0.0050 | mg/kg | 0.040 | | 80.8 | 70-130 | 0.124 | 30 | |
| 1,1,2-Trichloroethane | 0.0408 | 0.0050 | mg/kg | 0.040 | | 102 | 70-130 | 4.92 | 30 | |
| 1,1,1-Trichloroethane | 0.0430 | 0.0050 | mg/kg | 0.040 | | 107 | 70-130 | 7.08 | 30 | |
| Trichloroethylene (TCE) | 0.0399 | 0.0050 | mg/kg | 0.040 | | 99.6 | 70-130 | 10.6 | 30 | |
| Trichlorofluoromethane (R11) | 0.0429 | 0.0050 | mg/kg | 0.040 | | 107 | 70-130 | 8.60 | 30 | |
| 1,2,3-Trichloropropane | 0.0399 | 0.0050 | mg/kg | 0.040 | | 99.8 | 70-130 | 0.100 | 30 | |

Viorel Vasile
 Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Limit | Units | Spike Level | Source Result | %REC %REC | Limits | RPD | RPD Limit | Notes |
|---|------------------|--------|--------------|-------------|---------------|------------|---------------|-------|-----------|-------|
| VOCs, OXY & TPHG by GC/MS EPA 5035 - Quality Control | | | | | | | | | | |
| <i>Batch B7B1708 - EPA 5035</i> | | | | | | | | | | |
| LCS Dup (B7B1708-BSD1) Continued Prepared: 02/17/17 Analyzed: 02/18/17 | | | | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | 0.0435 | 0.0050 | mg/kg | 0.040 | | 109 | 70-130 | 3.84 | 30 | |
| 1,3,5-Trimethylbenzene | 0.0428 | 0.0050 | mg/kg | 0.040 | | 107 | 70-130 | 1.65 | 30 | |
| 1,2,4-Trimethylbenzene | 0.0441 | 0.0050 | mg/kg | 0.040 | | 110 | 70-130 | 1.65 | 30 | |
| Vinyl chloride | 0.0419 | 0.0050 | mg/kg | 0.040 | | 105 | 70-130 | 15.5 | 30 | |
| o-Xylene | 0.0406 | 0.0020 | mg/kg | 0.040 | | 102 | 70-130 | 0.197 | 30 | |
| m,p-Xylenes | 0.0834 | 0.0020 | mg/kg | 0.080 | | 104 | 70-130 | 0.884 | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>0.107</i> | | <i>mg/kg</i> | <i>0.10</i> | | <i>107</i> | <i>70-140</i> | | | |
| <i>Surrogate: Dibromofluoromethane</i> | <i>0.112</i> | | <i>mg/kg</i> | <i>0.10</i> | | <i>112</i> | <i>70-140</i> | | | |
| <i>Surrogate: Toluene-d8</i> | <i>0.110</i> | | <i>mg/kg</i> | <i>0.10</i> | | <i>110</i> | <i>70-140</i> | | | |
| Carbon Chain by GC/FID - Quality Control | | | | | | | | | | |
| <i>Batch B7B1713 - EPA 3550B</i> | | | | | | | | | | |
| Blank (B7B1713-BLK1) Prepared & Analyzed: 02/17/17 | | | | | | | | | | |
| C13-C22 | <10 | 10 | mg/kg | | | | | | | |
| C23-C32 | <10 | 10 | mg/kg | | | | | | | |
| C33-C44 | <10 | 10 | mg/kg | | | | | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>11.3</i> | | <i>mg/kg</i> | <i>10</i> | | <i>113</i> | <i>50-150</i> | | | |
| LCS (B7B1713-BS1) Prepared & Analyzed: 02/17/17 | | | | | | | | | | |
| Diesel Range Organics as Diesel | 220 | 10 | mg/kg | 200 | | 110 | 70-130 | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>14.3</i> | | <i>mg/kg</i> | <i>10</i> | | <i>143</i> | <i>50-150</i> | | | |
| LCS Dup (B7B1713-BSD1) Prepared & Analyzed: 02/17/17 | | | | | | | | | | |
| Diesel Range Organics as Diesel | 215 | 10 | mg/kg | 200 | | 108 | 70-130 | 2.21 | 40 | |
| <i>Surrogate: o-Terphenyl</i> | <i>14.2</i> | | <i>mg/kg</i> | <i>10</i> | | <i>142</i> | <i>50-150</i> | | | |
| Matrix Spike (B7B1713-MS1) Source: 7B16011-08 Prepared: 02/17/17 Analyzed: 02/18/17 | | | | | | | | | | |
| Diesel Range Organics as Diesel | 218 | 10 | mg/kg | 200 | | 109 | 60-140 | | | |
| <i>Surrogate: o-Terphenyl</i> | <i>15.0</i> | | <i>mg/kg</i> | <i>10</i> | | <i>150</i> | <i>50-150</i> | | | |
| Matrix Spike Dup (B7B1713-MSD1) Source: 7B16011-08 Prepared: 02/17/17 Analyzed: 02/18/17 | | | | | | | | | | |
| Diesel Range Organics as Diesel | 213 | 10 | mg/kg | 200 | | 107 | 60-140 | 2.34 | 40 | |

Viorel Vasile
Operations Manager

**LABORATORY ANALYSIS RESULTS**

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

| Analyte | Reporting Result | Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|------------------|-------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
| Carbon Chain by GC/FID - Quality Control | | | | | | | | | | |
| <i>Batch B7B1713 - EPA 3550B</i> | | | | | | | | | | |
| Matrix Spike Dup (B7B1713-MSD1) Source: 7B16011-08 Prepared: 02/17/17 Analyzed: 02/18/17 | | | | | | | | | | |
| Continued | | | | | | | | | | |
| Surrogate: o-Terphenyl | 13.8 | | mg/kg | 10 | | 138 | 50-150 | | | |

Viorel Vasile
Operations Manager



LABORATORY ANALYSIS RESULTS

Client: The Source Group, Inc. (SH)
Project No: 04-NDLA-007
Project Name: DFSP Norwalk Soil Remediation

AA Project No: A5332063
Date Received: 02/16/17
Date Reported: 02/27/17

Special Notes

Gasoline Range Organics (GRO) concentration represents the C4-C12 carbon range.

Viorel Vasile
Operations Manager



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: NDLA-020

70046663

Page 1 of 1

Client: Apex/Source Group, Inc Project Name / No.: NDLA-020 Sampler's Name: Kevin Nguyen
 Project Manager: Neil Irish Site Address: 15306 Norwalk Blvd Sampler's Signature: *[Signature]*
 Phone: 562-597-1055 City: Norwalk P.O. No.: 091-NDLA-020
 Fax: 562-597-1070 State & Zip: CA 90650 Quote No.: _____

TAT Turnaround Codes **

- ① = Same Day Rush
- ② = 24 Hour Rush
- ③ = 48 Hour Rush
- ④ = 72 Hour Rush
- ⑤ = 5 Day Rush
- X = 10 Working Days (Standard TAT)

| Client I.D. | A.A. I.D. | Date | Time | Sample Matrix | No. of Cont | ANALYSIS REQUESTED (Test Name) | | | | | | | | Special instructions | | | | | |
|-------------|------------|---------|------|---------------|-------------|--|--|--|--|--|--|--|--|----------------------|--|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
| SB-24-51 | 7B16011-01 | 2/15/17 | | Soil | 4 | <input checked="" type="checkbox"/> | | | | | | | | | | | | | |
| SB-24-101 | -02 | | | | | | | | | | | | | | | | | | |
| SB-25-51 | -03 | | | | | | | | | | | | | | | | | | |
| SB-25-101 | -04 | | | | | | | | | | | | | | | | | | |
| SB-26-51 | -05 | | | | | | | | | | | | | | | | | | |
| SB-26-101 | -06 | | | | | | | | | | | | | | | | | | |
| SB-27-51 | -07 | | | | | | | | | | | | | | | | | | |
| SB-27-101 | -08 | | | | | | | | | | | | | | | | | | |
| | | | | | | Please enter the TAT Turnaround Codes ** below | | | | | | | | | | | | | |

For Laboratory Use

REVIEWED
 Date 2/16/17 Time 1630
 TAT N Days Sign: *[Signature]*

| | | | | | |
|------------------------------------|---------------------|-------------------|--------------------------------|---------------------|-------------------|
| Relinquished by <i>[Signature]</i> | Date <u>2/15/17</u> | Time <u>12:07</u> | Received by <i>[Signature]</i> | Date <u>2/16/17</u> | Time <u>15:27</u> |
| Relinquished by <i>[Signature]</i> | Date <u>2/16/17</u> | Time <u>15:27</u> | Received by <i>[Signature]</i> | Date <u>2/16/17</u> | Time <u>15:27</u> |
| Relinquished by <i>[Signature]</i> | Date _____ | Time _____ | Received by _____ | Date _____ | Time _____ |

A.A. Project No.: AS332063/7B16011

Note: By relinquishing samples to American Analytcs, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 45 days following the submittal of the sample(s) to American Analytcs.

**ATTACHMENT C
SOIL BORING LOGS**

PROJECT NAME/NO.: DFSP Norwalk; 091-NDLA-20

LOCATION: DFSP Norwalk, 15306 Norwalk Blvd, Norwalk, California - Southeast Corner

START DATE: 2/15/17

FINISH DATE: 2/15/17

GW DEPTH (FT BGS): NA

DRILLER: Morgan and Marty

SURFACE ELEV. (FT MSL): NA

LOGGED BY: Kevin Nguyen

DRILL EQUIP: CME-85

NORTHING: NA

CHECKED BY: Paul Parmentier

DRILL METHOD: Hollow-Stem Auger

EASTING: NA

SAMPLE METHOD: Split Spoon

BORE ANGLE: Vertical

CONTRACTOR: EST

HOLE DIAM. (IN.)/DEPTH (FT BGS): 2.25

MONITORING DEVICE: Mini Rae 3000 PID

BACKFILL MATERIAL: Bentonite / Cement Grout

| DEPTH (FT.) | Time | Blow Counts | SAMPLE ID | VOCs (PPM) PID | LITH. SYMBOL | USCS | SOIL DESCRIPTION [% Gravel; % Sand; % Silt; % Clay] | BORING BACKFILL |
|-------------|-------|-------------|-----------|----------------|--------------|------|--|-----------------|
| 0.0 | | | | | | | | |
| | | | | | | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -5.0 | 10:05 | | SB-24-5' | 0 | | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -10.0 | 10:09 | | SB-24-10' | 0 | | ML | SILT [0;5;80;15] grayish brown, slightly moist, fine-grained, poorly graded, medium plasticity, no hydrocarbon odor. | |

← Bentonite/
Cement
Grout

PROJECT NAME/NO.: DFSP Norwalk; 091-NDLA-20

LOCATION: DFSP Norwalk, 15306 Norwalk Blvd, Norwalk, California - Southeast Corner

START DATE: 2/15/17

FINISH DATE: 2/15/17

GW DEPTH (FT BGS): NA

DRILLER: Morgan and Marty

SURFACE ELEV. (FT MSL): NA

LOGGED BY: Kevin Nguyen

DRILL EQUIP: CME-85

NORTHING: NA

CHECKED BY: Paul Parmentier

DRILL METHOD: Hollow-Stem Auger

EASTING: NA

SAMPLE METHOD: Split Spoon

BORE ANGLE: Vertical

CONTRACTOR: EST

HOLE DIAM. (IN.)/DEPTH (FT BGS): 2.25

MONITORING DEVICE: Mini Rae 3000 PID

BACKFILL MATERIAL: Bentonite / Cement Grout

| DEPTH (FT.) | Time | Blow Counts | SAMPLE ID | VOCs (PPM) PID | LITH. SYMBOL | USCS | SOIL DESCRIPTION [% Gravel; % Sand; % Silt; % Clay] | BORING BACKFILL |
|-------------|-------|-------------|-----------|----------------|------------------------|------|--|------------------|
| 0.0 | | | | | | | | |
| | | | | | [Green Dotted Pattern] | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -5.0 | 09:30 | | SB-25-5' | 5.7 | [Green Dotted Pattern] | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -10.0 | 09:55 | | SB-25-10' | 0 | [Brown Vertical Lines] | ML | SILT [0;5;80;15] grayish brown, slightly moist, fine-grained, poorly graded, medium plasticity, no hydrocarbon odor. | [Grey Triangles] |

Bentonite/
Cement
Grout

PROJECT NAME/NO.: DFSP Norwalk; 091-NDLA-20

LOCATION: DFSP Norwalk, 15306 Norwalk Blvd, Norwalk, California - Southeast Corner

START DATE: 2/15/17

FINISH DATE: 2/15/17

GW DEPTH (FT BGS): NA

DRILLER: Morgan and Marty

SURFACE ELEV. (FT MSL): NA

LOGGED BY: Kevin Nguyen

DRILL EQUIP: CME-85

NORTHING: NA

CHECKED BY: Paul Parmentier

DRILL METHOD: Hollow-Stem Auger

EASTING: NA

SAMPLE METHOD: Split Spoon

BORE ANGLE: Vertical

CONTRACTOR: EST

HOLE DIAM. (IN.)/DEPTH (FT BGS): 2.25

MONITORING DEVICE: Mini Rae 3000 PID

BACKFILL MATERIAL: Bentonite / Cement Grout

| DEPTH (FT.) | Time | Blow Counts | SAMPLE ID | VOCs (PPM) PID | LITH. SYMBOL | USCS | SOIL DESCRIPTION [% Gravel; % Sand; % Silt; % Clay] | BORING BACKFILL |
|-------------|-------|-------------|-----------|----------------|--------------|------|--|-----------------|
| 0.0 | | | | | | | | |
| | | | | | █ | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -5.0 | 10:20 | | SB-26-5' | 0 | █ | SM | SILTY SAND [0;80;20;0] brown, slightly moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| | | | | | █ | | | █ |
| | | | | | █ | | | █ |
| -10.0 | 10:27 | | SB-26-10' | 0 | █ | ML | SILT [0;5;80;15] grayish brown, slightly moist, fine-grained, poorly graded, medium plasticity, no hydrocarbon odor. | |
| | | | | | █ | | | █ |
| | | | | | █ | | | █ |

← Bentonite/
Cement
Grout

PROJECT NAME/NO.: DFSP Norwalk; 091-NDLA-20 **LOCATION:** DFSP Norwalk, 15306 Norwalk Blvd, Norwalk, California - Southeast Corner

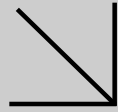
| | | |
|---|--|------------------------------------|
| START DATE: 2/15/17 | FINISH DATE: 2/15/17 | GW DEPTH (FT BGS): NA |
| DRILLER: Morgan and Marty | SURFACE ELEV. (FT MSL): NA | LOGGED BY: Kevin Nguyen |
| DRILL EQUIP: CME-85 | NORTHING: NA | CHECKED BY: Paul Parmentier |
| DRILL METHOD: Hollow-Stem Auger | EASTING: NA | |
| SAMPLE METHOD: Split Spoon | BORE ANGLE: Vertical | |
| CONTRACTOR: EST | HOLE DIAM. (IN.)/DEPTH (FT BGS): 2.25 | |
| MONITORING DEVICE: Mini Rae 3000 PID | BACKFILL MATERIAL: Bentonite / Cement Grout | |

| DEPTH (FT.) | Time | Blow Counts | SAMPLE ID | VOCs (PPM) PID | LITH. SYMBOL | USCS | SOIL DESCRIPTION [% Gravel; % Sand; % Silt; % Clay] | BORING BACKFILL |
|-------------|-------|-------------|-----------|----------------|--------------|------|--|------------------------------------|
| 0.0 | | | | | | | | |
| | | | | | █ | SM | SILTY SAND [0;80;20;0] brown, moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -5.0 | 10:30 | | SB-27-5' | 0 | █ | SM | SILTY SAND [0;80;20;0] brown, moist, fine-grained, poorly graded, no plasticity, no hydrocarbon odor. | |
| -10.0 | 10:35 | | SB-27-10' | 0 | █ | SP | SAND [0;100;0;0] grayish brown, slightly moist, fine-grained, poorly graded, medium plasticity, no hydrocarbon odor. | █ Bentonite/ Cement Grout |

ATTACHMENT D
SOIL GAS LABORATORY ANALYTICAL REPORT



Calscience



WORK ORDER NUMBER: 17-02-1474

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Environmental Support Technologies, Inc.

Client Project Name: Former Defense Fuel Depot / EST3043

Attention: Ashley Flores
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Approved for release on 02/22/2017 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Contents

Client Project Name: Former Defense Fuel Depot / EST3043
Work Order Number: 17-02-1474

| | | |
|---|---|----|
| 1 | Work Order Narrative. | 3 |
| 2 | Sample Summary. | 4 |
| 3 | Client Sample Data. | 5 |
| | 3.1 EPA TO-15 Full List + Oxygenates (Air). | 5 |
| 4 | Quality Control Sample Data. | 25 |
| | 4.1 LCS/LCSD. | 25 |
| 5 | Summa Canister Vacuum Summary. | 29 |
| 6 | Sample Analysis Summary. | 30 |
| 7 | Glossary of Terms and Qualifiers. | 31 |
| 8 | Chain-of-Custody/Sample Receipt Form. | 32 |

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/16/17. They were assigned to Work Order 17-02-1474.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

| | | |
|--|-----------------------|-------------------------------------|
| Client: Environmental Support Technologies, Inc. | Work Order: | 17-02-1474 |
| 8 Goodyear, Suite 125 | Project Name: | Former Defense Fuel Depot / EST3043 |
| Irvine, CA 92618-3745 | PO Number: | EST3043 |
| | Date/Time Received: | 02/16/17 13:52 |
| | Number of Containers: | 9 |

Attn: Ashley Flores

| Sample Identification | Lab Number | Collection Date and Time | Number of Containers | Matrix |
|-----------------------|--------------|--------------------------|----------------------|--------|
| SVM27-5' | 17-02-1474-1 | 02/16/17 08:37 | 1 | Air |
| SVM27-10' | 17-02-1474-2 | 02/16/17 09:11 | 1 | Air |
| SVM26-5' | 17-02-1474-3 | 02/16/17 09:51 | 1 | Air |
| SVM26-10' | 17-02-1474-4 | 02/16/17 10:32 | 1 | Air |
| SVM25-5' | 17-02-1474-5 | 02/16/17 11:06 | 1 | Air |
| SVM25-10' | 17-02-1474-6 | 02/16/17 11:27 | 1 | Air |
| SVM25-10' Dup | 17-02-1474-7 | 02/16/17 11:36 | 1 | Air |
| SVM24-5' | 17-02-1474-8 | 02/16/17 12:06 | 1 | Air |
| SVM24-10' | 17-02-1474-9 | 02/16/17 12:27 | 1 | Air |


 Return to Contents



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 1 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM27-5' | 17-02-1474-1-A | 02/16/17 08:37 | Air | GC/MS AA | N/A | 02/20/17 20:42 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 40 | 4.8 | 1.00 | |
| Benzene | 2.2 | 1.6 | 1.00 | |
| Benzyl Chloride | ND | 7.8 | 1.00 | |
| Bromodichloromethane | ND | 3.4 | 1.00 | |
| Bromoform | ND | 5.2 | 1.00 | |
| Bromomethane | ND | 1.9 | 1.00 | |
| 2-Butanone | 11 | 4.4 | 1.00 | |
| Carbon Disulfide | ND | 6.2 | 1.00 | |
| Carbon Tetrachloride | ND | 3.1 | 1.00 | |
| Chlorobenzene | ND | 2.3 | 1.00 | |
| Chloroethane | ND | 1.3 | 1.00 | |
| Chloroform | ND | 2.4 | 1.00 | |
| Chloromethane | ND | 1.0 | 1.00 | |
| Dibromochloromethane | ND | 4.3 | 1.00 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.00 | |
| 1,1-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.00 | |
| 1,2-Dibromoethane | ND | 3.8 | 1.00 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.00 | |
| 1,2-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,2-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,2-Dichloropropane | ND | 2.3 | 1.00 | |
| 1,3-Dichlorobenzene | 170 | 3.0 | 1.00 | |
| 1,4-Dichlorobenzene | ND | 3.0 | 1.00 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.00 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,3-Dichloropropene | ND | 4.5 | 1.00 | |
| Ethanol | 220 | 9.4 | 1.00 | |
| Ethylbenzene | 6.7 | 2.2 | 1.00 | |
| 4-Ethyltoluene | 3.3 | 2.5 | 1.00 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.00 | |
| 2-Hexanone | ND | 6.1 | 1.00 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.2 | 1.00 | |
| Methylene Chloride | ND | 17 | 1.00 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 2 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | ND | 6.1 | 1.00 | |
| o-Xylene | 10 | 2.2 | 1.00 | |
| p/m-Xylene | 26 | 8.7 | 1.00 | |
| Styrene | ND | 6.4 | 1.00 | |
| Tetrachloroethene | ND | 3.4 | 1.00 | |
| Toluene | 24 | 1.9 | 1.00 | |
| Trichloroethene | ND | 2.7 | 1.00 | |
| Trichlorofluoromethane | ND | 5.6 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 11 | 1.00 | |
| 1,1,1-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,1,2-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,3,5-Trimethylbenzene | 3.3 | 2.5 | 1.00 | |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | 1.00 | |
| 1,2,4-Trimethylbenzene | 12 | 7.4 | 1.00 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.00 | |
| Vinyl Acetate | ND | 7.0 | 1.00 | |
| Vinyl Chloride | ND | 1.3 | 1.00 | |
| Isopropanol | 31 | 12 | 1.00 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 111 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 109 | 67-133 | | |
| Toluene-d8 | 100 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 3 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM27-10' | 17-02-1474-2-A | 02/16/17 09:11 | Air | GC/MS AA | N/A | 02/20/17 21:38 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 62 | 4.8 | 1.00 | |
| Benzene | 20 | 1.6 | 1.00 | |
| Benzyl Chloride | ND | 7.8 | 1.00 | |
| Bromodichloromethane | ND | 3.4 | 1.00 | |
| Bromoform | ND | 5.2 | 1.00 | |
| Bromomethane | ND | 1.9 | 1.00 | |
| 2-Butanone | 31 | 4.4 | 1.00 | |
| Carbon Disulfide | 11 | 6.2 | 1.00 | |
| Carbon Tetrachloride | ND | 3.1 | 1.00 | |
| Chlorobenzene | ND | 2.3 | 1.00 | |
| Chloroethane | ND | 1.3 | 1.00 | |
| Chloroform | ND | 2.4 | 1.00 | |
| Chloromethane | ND | 1.0 | 1.00 | |
| Dibromochloromethane | ND | 4.3 | 1.00 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.00 | |
| 1,1-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.00 | |
| 1,2-Dibromoethane | ND | 3.8 | 1.00 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.00 | |
| 1,2-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,2-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,2-Dichloropropane | ND | 2.3 | 1.00 | |
| 1,3-Dichlorobenzene | 210 | 3.0 | 1.00 | |
| 1,4-Dichlorobenzene | ND | 3.0 | 1.00 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.00 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,3-Dichloropropene | ND | 4.5 | 1.00 | |
| Ethanol | 110 | 9.4 | 1.00 | |
| Ethylbenzene | 99 | 2.2 | 1.00 | |
| 4-Ethyltoluene | 46 | 2.5 | 1.00 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.00 | |
| 2-Hexanone | ND | 6.1 | 1.00 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.2 | 1.00 | |
| Methylene Chloride | ND | 17 | 1.00 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 4 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | ND | 6.1 | 1.00 | |
| o-Xylene | 130 | 2.2 | 1.00 | |
| p/m-Xylene | 370 | 8.7 | 1.00 | |
| Styrene | ND | 6.4 | 1.00 | |
| Tetrachloroethene | 7.6 | 3.4 | 1.00 | |
| Toluene | 300 | 1.9 | 1.00 | |
| Trichloroethene | ND | 2.7 | 1.00 | |
| Trichlorofluoromethane | ND | 5.6 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 11 | 1.00 | |
| 1,1,1-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,1,2-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,3,5-Trimethylbenzene | 42 | 2.5 | 1.00 | |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | 1.00 | |
| 1,2,4-Trimethylbenzene | 120 | 7.4 | 1.00 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.00 | |
| Vinyl Acetate | ND | 7.0 | 1.00 | |
| Vinyl Chloride | ND | 1.3 | 1.00 | |
| Isopropanol | 24 | 12 | 1.00 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 103 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 110 | 67-133 | | |
| Toluene-d8 | 98 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 5 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM26-5' | 17-02-1474-3-A | 02/16/17 09:51 | Air | GC/MS AA | N/A | 02/20/17 22:33 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 98 | 4.8 | 1.00 | |
| Benzene | 2.4 | 1.6 | 1.00 | |
| Benzyl Chloride | ND | 7.8 | 1.00 | |
| Bromodichloromethane | ND | 3.4 | 1.00 | |
| Bromoform | ND | 5.2 | 1.00 | |
| Bromomethane | ND | 1.9 | 1.00 | |
| 2-Butanone | 41 | 4.4 | 1.00 | |
| Carbon Disulfide | ND | 6.2 | 1.00 | |
| Carbon Tetrachloride | ND | 3.1 | 1.00 | |
| Chlorobenzene | ND | 2.3 | 1.00 | |
| Chloroethane | ND | 1.3 | 1.00 | |
| Chloroform | ND | 2.4 | 1.00 | |
| Chloromethane | ND | 1.0 | 1.00 | |
| Dibromochloromethane | ND | 4.3 | 1.00 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.00 | |
| 1,1-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.00 | |
| 1,2-Dibromoethane | ND | 3.8 | 1.00 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.00 | |
| 1,2-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,2-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,2-Dichloropropane | ND | 2.3 | 1.00 | |
| 1,3-Dichlorobenzene | 280 | 3.0 | 1.00 | |
| 1,4-Dichlorobenzene | ND | 3.0 | 1.00 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.00 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,3-Dichloropropene | ND | 4.5 | 1.00 | |
| Ethanol | 240 | 9.4 | 1.00 | |
| Ethylbenzene | 9.6 | 2.2 | 1.00 | |
| 4-Ethyltoluene | 6.1 | 2.5 | 1.00 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.00 | |
| 2-Hexanone | ND | 6.1 | 1.00 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.2 | 1.00 | |
| Methylene Chloride | ND | 17 | 1.00 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 6 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | 8.3 | 6.1 | 1.00 | |
| o-Xylene | 16 | 2.2 | 1.00 | |
| p/m-Xylene | 41 | 8.7 | 1.00 | |
| Styrene | ND | 6.4 | 1.00 | |
| Tetrachloroethene | ND | 3.4 | 1.00 | |
| Toluene | 29 | 1.9 | 1.00 | |
| Trichloroethene | ND | 2.7 | 1.00 | |
| Trichlorofluoromethane | ND | 5.6 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 11 | 1.00 | |
| 1,1,1-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,1,2-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,3,5-Trimethylbenzene | 5.5 | 2.5 | 1.00 | |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | 1.00 | |
| 1,2,4-Trimethylbenzene | 23 | 7.4 | 1.00 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.00 | |
| Vinyl Acetate | ND | 7.0 | 1.00 | |
| Vinyl Chloride | ND | 1.3 | 1.00 | |
| Isopropanol | 29 | 12 | 1.00 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 102 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 97 | 67-133 | | |
| Toluene-d8 | 97 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 7 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-----------------------|---------------------------|------------|-----------------|---------------|---------------------------|------------------|
| SVM26-10' | 17-02-1474-4-A | 02/16/17 10:32 | Air | GC/MS AA | N/A | 02/20/17 23:28 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 97 | 5.2 | 1.09 | |
| Benzene | 63 | 1.7 | 1.09 | |
| Benzyl Chloride | ND | 8.5 | 1.09 | |
| Bromodichloromethane | ND | 3.7 | 1.09 | |
| Bromoform | ND | 5.6 | 1.09 | |
| Bromomethane | ND | 2.1 | 1.09 | |
| 2-Butanone | 38 | 4.8 | 1.09 | |
| Carbon Disulfide | 20 | 6.8 | 1.09 | |
| Carbon Tetrachloride | ND | 3.4 | 1.09 | |
| Chlorobenzene | ND | 2.5 | 1.09 | |
| Chloroethane | ND | 1.4 | 1.09 | |
| Chloroform | ND | 2.7 | 1.09 | |
| Chloromethane | ND | 1.1 | 1.09 | |
| Dibromochloromethane | ND | 4.6 | 1.09 | |
| Dichlorodifluoromethane | ND | 2.7 | 1.09 | |
| 1,1-Dichloroethane | ND | 2.2 | 1.09 | |
| 1,1-Dichloroethene | ND | 2.2 | 1.09 | |
| 1,2-Dibromoethane | ND | 4.2 | 1.09 | |
| Dichlorotetrafluoroethane | ND | 15 | 1.09 | |
| 1,2-Dichlorobenzene | ND | 3.3 | 1.09 | |
| 1,2-Dichloroethane | ND | 2.2 | 1.09 | |
| 1,2-Dichloropropane | ND | 2.5 | 1.09 | |
| 1,3-Dichlorobenzene | 270 | 3.3 | 1.09 | |
| 1,4-Dichlorobenzene | ND | 3.3 | 1.09 | |
| c-1,3-Dichloropropene | ND | 2.5 | 1.09 | |
| c-1,2-Dichloroethene | ND | 2.2 | 1.09 | |
| t-1,2-Dichloroethene | ND | 2.2 | 1.09 | |
| t-1,3-Dichloropropene | ND | 4.9 | 1.09 | |
| Ethanol | 190 | 10 | 1.09 | |
| Ethylbenzene | 150 | 2.4 | 1.09 | |
| 4-Ethyltoluene | 57 | 2.7 | 1.09 | |
| Hexachloro-1,3-Butadiene | ND | 17 | 1.09 | |
| 2-Hexanone | ND | 6.7 | 1.09 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.9 | 1.09 | |
| Methylene Chloride | ND | 19 | 1.09 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 8 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|---------------|-----------|-----------|-------------------|
| 4-Methyl-2-Pentanone | 11 | 6.7 | 1.09 | |
| o-Xylene | 200 | 2.4 | 1.09 | |
| p/m-Xylene | 520 | 9.5 | 1.09 | |
| Styrene | ND | 7.0 | 1.09 | |
| Tetrachloroethene | ND | 3.7 | 1.09 | |
| Trichloroethene | ND | 2.9 | 1.09 | |
| Trichlorofluoromethane | ND | 6.1 | 1.09 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 13 | 1.09 | |
| 1,1,1-Trichloroethane | ND | 3.0 | 1.09 | |
| 1,1,2-Trichloroethane | ND | 3.0 | 1.09 | |
| 1,3,5-Trimethylbenzene | 50 | 2.7 | 1.09 | |
| 1,1,2,2-Tetrachloroethane | ND | 7.5 | 1.09 | |
| 1,2,4-Trimethylbenzene | 150 | 8.0 | 1.09 | |
| 1,2,4-Trichlorobenzene | ND | 16 | 1.09 | |
| Vinyl Acetate | ND | 7.7 | 1.09 | |
| Vinyl Chloride | ND | 1.4 | 1.09 | |
| Isopropanol | 26 | 13 | 1.09 | |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------|-----------------|-----------------------|-------------------|
| 1,4-Bromofluorobenzene | 102 | 68-134 | |
| 1,2-Dichloroethane-d4 | 97 | 67-133 | |
| Toluene-d8 | 95 | 70-130 | |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-----------------------|---------------------------|------------|-----------------|---------------|---------------------------|------------------|
| SVM26-10' | 17-02-1474-4-A | 02/16/17 10:32 | Air | GC/MS AA | N/A | 02/18/17 23:25 | 170218L01 |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Toluene | 640 | 19 | 10.0 | |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------|-----------------|-----------------------|-------------------|
| 1,4-Bromofluorobenzene | 102 | 68-134 | |
| 1,2-Dichloroethane-d4 | 106 | 67-133 | |
| Toluene-d8 | 94 | 70-130 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 9 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM25-5' | 17-02-1474-5-A | 02/16/17 11:06 | Air | GC/MS AA | N/A | 02/21/17 00:24 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 84 | 5.2 | 1.09 | |
| Benzene | 15 | 1.7 | 1.09 | |
| Benzyl Chloride | ND | 8.5 | 1.09 | |
| Bromodichloromethane | ND | 3.7 | 1.09 | |
| Bromoform | ND | 5.6 | 1.09 | |
| Bromomethane | ND | 2.1 | 1.09 | |
| 2-Butanone | 31 | 4.8 | 1.09 | |
| Carbon Disulfide | ND | 6.8 | 1.09 | |
| Carbon Tetrachloride | ND | 3.4 | 1.09 | |
| Chlorobenzene | ND | 2.5 | 1.09 | |
| Chloroethane | ND | 1.4 | 1.09 | |
| Chloroform | ND | 2.7 | 1.09 | |
| Chloromethane | ND | 1.1 | 1.09 | |
| Dibromochloromethane | ND | 4.6 | 1.09 | |
| Dichlorodifluoromethane | ND | 2.7 | 1.09 | |
| 1,1-Dichloroethane | ND | 2.2 | 1.09 | |
| 1,1-Dichloroethene | ND | 2.2 | 1.09 | |
| 1,2-Dibromoethane | ND | 4.2 | 1.09 | |
| Dichlorotetrafluoroethane | ND | 15 | 1.09 | |
| 1,2-Dichlorobenzene | ND | 3.3 | 1.09 | |
| 1,2-Dichloroethane | ND | 2.2 | 1.09 | |
| 1,2-Dichloropropane | ND | 2.5 | 1.09 | |
| 1,3-Dichlorobenzene | 230 | 3.3 | 1.09 | |
| 1,4-Dichlorobenzene | ND | 3.3 | 1.09 | |
| c-1,3-Dichloropropene | ND | 2.5 | 1.09 | |
| c-1,2-Dichloroethene | ND | 2.2 | 1.09 | |
| t-1,2-Dichloroethene | ND | 2.2 | 1.09 | |
| t-1,3-Dichloropropene | ND | 4.9 | 1.09 | |
| Ethanol | 190 | 10 | 1.09 | |
| Ethylbenzene | 71 | 2.4 | 1.09 | |
| 4-Ethyltoluene | 42 | 2.7 | 1.09 | |
| Hexachloro-1,3-Butadiene | ND | 17 | 1.09 | |
| 2-Hexanone | ND | 6.7 | 1.09 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.9 | 1.09 | |
| Methylene Chloride | ND | 19 | 1.09 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 10 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | 10 | 6.7 | 1.09 | |
| o-Xylene | 90 | 2.4 | 1.09 | |
| p/m-Xylene | 270 | 9.5 | 1.09 | |
| Styrene | ND | 7.0 | 1.09 | |
| Tetrachloroethene | ND | 3.7 | 1.09 | |
| Toluene | 220 | 2.1 | 1.09 | |
| Trichloroethene | 3.9 | 2.9 | 1.09 | |
| Trichlorofluoromethane | ND | 6.1 | 1.09 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 13 | 1.09 | |
| 1,1,1-Trichloroethane | ND | 3.0 | 1.09 | |
| 1,1,2-Trichloroethane | ND | 3.0 | 1.09 | |
| 1,3,5-Trimethylbenzene | 40 | 2.7 | 1.09 | |
| 1,1,2,2-Tetrachloroethane | ND | 7.5 | 1.09 | |
| 1,2,4-Trimethylbenzene | 120 | 8.0 | 1.09 | |
| 1,2,4-Trichlorobenzene | ND | 16 | 1.09 | |
| Vinyl Acetate | ND | 7.7 | 1.09 | |
| Vinyl Chloride | ND | 1.4 | 1.09 | |
| Isopropanol | 23 | 13 | 1.09 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 103 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 97 | 67-133 | | |
| Toluene-d8 | 99 | 70-130 | | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 11 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM25-10' | 17-02-1474-6-A | 02/16/17 11:27 | Air | GC/MS AA | N/A | 02/21/17 01:18 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 110 | 5.0 | 1.06 | |
| Benzene | 20 | 1.7 | 1.06 | |
| Benzyl Chloride | ND | 8.2 | 1.06 | |
| Bromodichloromethane | ND | 3.6 | 1.06 | |
| Bromoform | ND | 5.5 | 1.06 | |
| Bromomethane | ND | 2.1 | 1.06 | |
| 2-Butanone | 48 | 4.7 | 1.06 | |
| Carbon Disulfide | 9.5 | 6.6 | 1.06 | |
| Carbon Tetrachloride | ND | 3.3 | 1.06 | |
| Chlorobenzene | ND | 2.4 | 1.06 | |
| Chloroethane | ND | 1.4 | 1.06 | |
| Chloroform | ND | 2.6 | 1.06 | |
| Chloromethane | ND | 1.1 | 1.06 | |
| Dibromochloromethane | ND | 4.5 | 1.06 | |
| Dichlorodifluoromethane | ND | 2.6 | 1.06 | |
| 1,1-Dichloroethane | ND | 2.1 | 1.06 | |
| 1,1-Dichloroethene | ND | 2.1 | 1.06 | |
| 1,2-Dibromoethane | ND | 4.1 | 1.06 | |
| Dichlorotetrafluoroethane | ND | 15 | 1.06 | |
| 1,2-Dichlorobenzene | ND | 3.2 | 1.06 | |
| 1,2-Dichloroethane | ND | 2.1 | 1.06 | |
| 1,2-Dichloropropane | ND | 2.4 | 1.06 | |
| 1,3-Dichlorobenzene | 210 | 3.2 | 1.06 | |
| 1,4-Dichlorobenzene | ND | 3.2 | 1.06 | |
| c-1,3-Dichloropropene | ND | 2.4 | 1.06 | |
| c-1,2-Dichloroethene | ND | 2.1 | 1.06 | |
| t-1,2-Dichloroethene | ND | 2.1 | 1.06 | |
| t-1,3-Dichloropropene | ND | 4.8 | 1.06 | |
| Ethanol | 160 | 10 | 1.06 | |
| Ethylbenzene | 120 | 2.3 | 1.06 | |
| 4-Ethyltoluene | 73 | 2.6 | 1.06 | |
| Hexachloro-1,3-Butadiene | ND | 17 | 1.06 | |
| 2-Hexanone | ND | 6.5 | 1.06 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.6 | 1.06 | |
| Methylene Chloride | ND | 18 | 1.06 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 12 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | 18 | 6.5 | 1.06 | |
| o-Xylene | 160 | 2.3 | 1.06 | |
| p/m-Xylene | 440 | 9.2 | 1.06 | |
| Styrene | ND | 6.8 | 1.06 | |
| Tetrachloroethene | ND | 3.6 | 1.06 | |
| Toluene | 350 | 2.0 | 1.06 | |
| Trichloroethene | ND | 2.8 | 1.06 | |
| Trichlorofluoromethane | ND | 6.0 | 1.06 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 12 | 1.06 | |
| 1,1,1-Trichloroethane | ND | 2.9 | 1.06 | |
| 1,1,2-Trichloroethane | ND | 2.9 | 1.06 | |
| 1,3,5-Trimethylbenzene | 72 | 2.6 | 1.06 | |
| 1,1,2,2-Tetrachloroethane | ND | 7.3 | 1.06 | |
| 1,2,4-Trimethylbenzene | 220 | 7.8 | 1.06 | |
| 1,2,4-Trichlorobenzene | ND | 16 | 1.06 | |
| Vinyl Acetate | ND | 7.5 | 1.06 | |
| Vinyl Chloride | ND | 1.4 | 1.06 | |
| Isopropanol | 25 | 13 | 1.06 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 102 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 97 | 67-133 | | |
| Toluene-d8 | 98 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 13 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-----------------------|---------------------------|------------|-----------------|---------------|---------------------------|------------------|
| SVM25-10' Dup | 17-02-1474-7-A | 02/16/17 11:36 | Air | GC/MS AA | N/A | 02/21/17 02:14 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 120 | 4.8 | 1.02 | |
| Benzene | 21 | 1.6 | 1.02 | |
| Benzyl Chloride | ND | 7.9 | 1.02 | |
| Bromodichloromethane | ND | 3.4 | 1.02 | |
| Bromoform | ND | 5.3 | 1.02 | |
| Bromomethane | ND | 2.0 | 1.02 | |
| 2-Butanone | 53 | 4.5 | 1.02 | |
| Carbon Disulfide | 7.4 | 6.4 | 1.02 | |
| Carbon Tetrachloride | ND | 3.2 | 1.02 | |
| Chlorobenzene | ND | 2.3 | 1.02 | |
| Chloroethane | ND | 1.3 | 1.02 | |
| Chloroform | ND | 2.5 | 1.02 | |
| Chloromethane | ND | 1.1 | 1.02 | |
| Dibromochloromethane | ND | 4.3 | 1.02 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.02 | |
| 1,1-Dichloroethane | ND | 2.1 | 1.02 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.02 | |
| 1,2-Dibromoethane | ND | 3.9 | 1.02 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.02 | |
| 1,2-Dichlorobenzene | ND | 3.1 | 1.02 | |
| 1,2-Dichloroethane | ND | 2.1 | 1.02 | |
| 1,2-Dichloropropane | ND | 2.4 | 1.02 | |
| 1,3-Dichlorobenzene | 250 | 3.1 | 1.02 | |
| 1,4-Dichlorobenzene | ND | 3.1 | 1.02 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.02 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.02 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.02 | |
| t-1,3-Dichloropropene | ND | 4.6 | 1.02 | |
| Ethanol | 160 | 9.6 | 1.02 | |
| Ethylbenzene | 140 | 2.2 | 1.02 | |
| 4-Ethyltoluene | 85 | 2.5 | 1.02 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.02 | |
| 2-Hexanone | ND | 6.3 | 1.02 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.4 | 1.02 | |
| Methylene Chloride | ND | 18 | 1.02 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 14 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | 19 | 6.3 | 1.02 | |
| o-Xylene | 190 | 2.2 | 1.02 | |
| p/m-Xylene | 510 | 8.9 | 1.02 | |
| Styrene | ND | 6.5 | 1.02 | |
| Tetrachloroethene | ND | 3.5 | 1.02 | |
| Toluene | 370 | 1.9 | 1.02 | |
| Trichloroethene | ND | 2.7 | 1.02 | |
| Trichlorofluoromethane | ND | 5.7 | 1.02 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 12 | 1.02 | |
| 1,1,1-Trichloroethane | ND | 2.8 | 1.02 | |
| 1,1,2-Trichloroethane | ND | 2.8 | 1.02 | |
| 1,3,5-Trimethylbenzene | 79 | 2.5 | 1.02 | |
| 1,1,2,2-Tetrachloroethane | ND | 7.0 | 1.02 | |
| 1,2,4-Trimethylbenzene | 270 | 7.5 | 1.02 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.02 | |
| Vinyl Acetate | ND | 7.2 | 1.02 | |
| Vinyl Chloride | ND | 1.3 | 1.02 | |
| Isopropanol | 22 | 13 | 1.02 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 98 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 94 | 67-133 | | |
| Toluene-d8 | 97 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 15 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM24-5' | 17-02-1474-8-A | 02/16/17 12:06 | Air | GC/MS AA | N/A | 02/21/17 03:10 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 32 | 4.8 | 1.00 | |
| Benzene | 2.5 | 1.6 | 1.00 | |
| Benzyl Chloride | ND | 7.8 | 1.00 | |
| Bromodichloromethane | ND | 3.4 | 1.00 | |
| Bromoform | ND | 5.2 | 1.00 | |
| Bromomethane | ND | 1.9 | 1.00 | |
| 2-Butanone | 5.9 | 4.4 | 1.00 | |
| Carbon Disulfide | ND | 6.2 | 1.00 | |
| Carbon Tetrachloride | ND | 3.1 | 1.00 | |
| Chlorobenzene | ND | 2.3 | 1.00 | |
| Chloroethane | ND | 1.3 | 1.00 | |
| Chloroform | ND | 2.4 | 1.00 | |
| Chloromethane | ND | 1.0 | 1.00 | |
| Dibromochloromethane | ND | 4.3 | 1.00 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.00 | |
| 1,1-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.00 | |
| 1,2-Dibromoethane | ND | 3.8 | 1.00 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.00 | |
| 1,2-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,2-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,2-Dichloropropane | ND | 2.3 | 1.00 | |
| 1,3-Dichlorobenzene | 320 | 3.0 | 1.00 | |
| 1,4-Dichlorobenzene | ND | 3.0 | 1.00 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.00 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,3-Dichloropropene | ND | 4.5 | 1.00 | |
| Ethanol | 170 | 9.4 | 1.00 | |
| Ethylbenzene | 8.9 | 2.2 | 1.00 | |
| 4-Ethyltoluene | 4.0 | 2.5 | 1.00 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.00 | |
| 2-Hexanone | ND | 6.1 | 1.00 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.2 | 1.00 | |
| Methylene Chloride | ND | 17 | 1.00 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 16 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | ND | 6.1 | 1.00 | |
| o-Xylene | 13 | 2.2 | 1.00 | |
| p/m-Xylene | 35 | 8.7 | 1.00 | |
| Styrene | ND | 6.4 | 1.00 | |
| Tetrachloroethene | 7.3 | 3.4 | 1.00 | |
| Toluene | 28 | 1.9 | 1.00 | |
| Trichloroethene | ND | 2.7 | 1.00 | |
| Trichlorofluoromethane | ND | 5.6 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 11 | 1.00 | |
| 1,1,1-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,1,2-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,3,5-Trimethylbenzene | 4.1 | 2.5 | 1.00 | |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | 1.00 | |
| 1,2,4-Trimethylbenzene | 15 | 7.4 | 1.00 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.00 | |
| Vinyl Acetate | ND | 7.0 | 1.00 | |
| Vinyl Chloride | ND | 1.3 | 1.00 | |
| Isopropanol | 23 | 12 | 1.00 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 101 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 96 | 67-133 | | |
| Toluene-d8 | 97 | 70-130 | | |



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 17 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| SVM24-10' | 17-02-1474-9-A | 02/16/17 12:27 | Air | GC/MS AA | N/A | 02/21/17 04:06 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | 37 | 5.5 | 1.16 | |
| Benzene | 25 | 1.9 | 1.16 | |
| Benzyl Chloride | ND | 9.0 | 1.16 | |
| Bromodichloromethane | ND | 3.9 | 1.16 | |
| Bromoform | ND | 6.0 | 1.16 | |
| Bromomethane | ND | 2.3 | 1.16 | |
| 2-Butanone | 9.9 | 5.1 | 1.16 | |
| Carbon Disulfide | ND | 7.2 | 1.16 | |
| Carbon Tetrachloride | ND | 3.6 | 1.16 | |
| Chlorobenzene | ND | 2.7 | 1.16 | |
| Chloroethane | ND | 1.5 | 1.16 | |
| Chloroform | ND | 2.8 | 1.16 | |
| Chloromethane | ND | 1.2 | 1.16 | |
| Dibromochloromethane | ND | 4.9 | 1.16 | |
| Dichlorodifluoromethane | ND | 2.9 | 1.16 | |
| 1,1-Dichloroethane | ND | 2.3 | 1.16 | |
| 1,1-Dichloroethene | ND | 2.3 | 1.16 | |
| 1,2-Dibromoethane | ND | 4.5 | 1.16 | |
| Dichlorotetrafluoroethane | ND | 16 | 1.16 | |
| 1,2-Dichlorobenzene | ND | 3.5 | 1.16 | |
| 1,2-Dichloroethane | ND | 2.3 | 1.16 | |
| 1,2-Dichloropropane | ND | 2.7 | 1.16 | |
| 1,3-Dichlorobenzene | 210 | 3.5 | 1.16 | |
| 1,4-Dichlorobenzene | ND | 3.5 | 1.16 | |
| c-1,3-Dichloropropene | ND | 2.6 | 1.16 | |
| c-1,2-Dichloroethene | ND | 2.3 | 1.16 | |
| t-1,2-Dichloroethene | ND | 2.3 | 1.16 | |
| t-1,3-Dichloropropene | ND | 5.3 | 1.16 | |
| Ethanol | 140 | 11 | 1.16 | |
| Ethylbenzene | 90 | 2.5 | 1.16 | |
| 4-Ethyltoluene | 24 | 2.9 | 1.16 | |
| Hexachloro-1,3-Butadiene | ND | 19 | 1.16 | |
| 2-Hexanone | ND | 7.1 | 1.16 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 8.4 | 1.16 | |
| Methylene Chloride | ND | 20 | 1.16 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 18 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|---------------|-----------|-----------|-------------------|
| 4-Methyl-2-Pentanone | ND | 7.1 | 1.16 | |
| o-Xylene | 91 | 2.5 | 1.16 | |
| p/m-Xylene | 300 | 10 | 1.16 | |
| Styrene | ND | 7.4 | 1.16 | |
| Tetrachloroethene | 10 | 3.9 | 1.16 | |
| Toluene | 390 | 2.2 | 1.16 | |
| Trichloroethene | ND | 3.1 | 1.16 | |
| Trichlorofluoromethane | ND | 6.5 | 1.16 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 13 | 1.16 | |
| 1,1,1-Trichloroethane | ND | 3.2 | 1.16 | |
| 1,1,2-Trichloroethane | ND | 3.2 | 1.16 | |
| 1,3,5-Trimethylbenzene | 24 | 2.9 | 1.16 | |
| 1,1,2,2-Tetrachloroethane | ND | 8.0 | 1.16 | |
| 1,2,4-Trimethylbenzene | 58 | 8.6 | 1.16 | |
| 1,2,4-Trichlorobenzene | ND | 17 | 1.16 | |
| Vinyl Acetate | ND | 8.2 | 1.16 | |
| Vinyl Chloride | ND | 1.5 | 1.16 | |
| Isopropanol | 20 | 14 | 1.16 | |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------|-----------------|-----------------------|-------------------|
| 1,4-Bromofluorobenzene | 97 | 68-134 | |
| 1,2-Dichloroethane-d4 | 94 | 67-133 | |
| Toluene-d8 | 97 | 70-130 | |

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------------|---------------------|------------|-----------------|---------------|-----------------------|------------------|
| Method Blank | 095-01-021-18138 | N/A | Air | GC/MS AA | N/A | 02/18/17 14:31 | 170218L01 |

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|------------------|---------------|-----------|-----------|-------------------|
| Toluene | ND | 1.9 | 1.00 | |

| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> |
|------------------------|-----------------|-----------------------|-------------------|
| 1,4-Bromofluorobenzene | 100 | 68-134 | |
| 1,2-Dichloroethane-d4 | 103 | 67-133 | |
| Toluene-d8 | 98 | 70-130 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 19 of 20

| Client Sample Number | Lab Sample Number | Date/Time Collected | Matrix | Instrument | Date Prepared | Date/Time Analyzed | QC Batch ID |
|----------------------|-------------------|---------------------|--------|------------|---------------|--------------------|-------------|
| Method Blank | 095-01-021-18144 | N/A | Air | GC/MS AA | N/A | 02/20/17 15:48 | 170220L01 |

| Parameter | Result | RL | DF | Qualifiers |
|-----------------------------|--------|-----|------|------------|
| Acetone | ND | 4.8 | 1.00 | |
| Benzene | ND | 1.6 | 1.00 | |
| Benzyl Chloride | ND | 7.8 | 1.00 | |
| Bromodichloromethane | ND | 3.4 | 1.00 | |
| Bromoform | ND | 5.2 | 1.00 | |
| Bromomethane | ND | 1.9 | 1.00 | |
| 2-Butanone | ND | 4.4 | 1.00 | |
| Carbon Disulfide | ND | 6.2 | 1.00 | |
| Carbon Tetrachloride | ND | 3.1 | 1.00 | |
| Chlorobenzene | ND | 2.3 | 1.00 | |
| Chloroethane | ND | 1.3 | 1.00 | |
| Chloroform | ND | 2.4 | 1.00 | |
| Chloromethane | ND | 1.0 | 1.00 | |
| Dibromochloromethane | ND | 4.3 | 1.00 | |
| Dichlorodifluoromethane | ND | 2.5 | 1.00 | |
| 1,1-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,1-Dichloroethene | ND | 2.0 | 1.00 | |
| 1,2-Dibromoethane | ND | 3.8 | 1.00 | |
| Dichlorotetrafluoroethane | ND | 14 | 1.00 | |
| 1,2-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,2-Dichloroethane | ND | 2.0 | 1.00 | |
| 1,2-Dichloropropane | ND | 2.3 | 1.00 | |
| 1,3-Dichlorobenzene | ND | 3.0 | 1.00 | |
| 1,4-Dichlorobenzene | ND | 3.0 | 1.00 | |
| c-1,3-Dichloropropene | ND | 2.3 | 1.00 | |
| c-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,2-Dichloroethene | ND | 2.0 | 1.00 | |
| t-1,3-Dichloropropene | ND | 4.5 | 1.00 | |
| Ethanol | ND | 9.4 | 1.00 | |
| Ethylbenzene | ND | 2.2 | 1.00 | |
| 4-Ethyltoluene | ND | 2.5 | 1.00 | |
| Hexachloro-1,3-Butadiene | ND | 16 | 1.00 | |
| 2-Hexanone | ND | 6.1 | 1.00 | |
| Methyl-t-Butyl Ether (MTBE) | ND | 7.2 | 1.00 | |
| Methylene Chloride | ND | 17 | 1.00 | |

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15
Units: ug/m3

Project: Former Defense Fuel Depot / EST3043

Page 20 of 20

| <u>Parameter</u> | <u>Result</u> | <u>RL</u> | <u>DF</u> | <u>Qualifiers</u> |
|---------------------------------------|-----------------|-----------------------|-------------------|-------------------|
| 4-Methyl-2-Pentanone | ND | 6.1 | 1.00 | |
| o-Xylene | ND | 2.2 | 1.00 | |
| p/m-Xylene | ND | 8.7 | 1.00 | |
| Styrene | ND | 6.4 | 1.00 | |
| Tetrachloroethene | ND | 3.4 | 1.00 | |
| Toluene | ND | 1.9 | 1.00 | |
| Trichloroethene | ND | 2.7 | 1.00 | |
| Trichlorofluoromethane | ND | 5.6 | 1.00 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | ND | 11 | 1.00 | |
| 1,1,1-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,1,2-Trichloroethane | ND | 2.7 | 1.00 | |
| 1,3,5-Trimethylbenzene | ND | 2.5 | 1.00 | |
| 1,1,2,2-Tetrachloroethane | ND | 6.9 | 1.00 | |
| 1,2,4-Trimethylbenzene | ND | 7.4 | 1.00 | |
| 1,2,4-Trichlorobenzene | ND | 15 | 1.00 | |
| Vinyl Acetate | ND | 7.0 | 1.00 | |
| Vinyl Chloride | ND | 1.3 | 1.00 | |
| Isopropanol | ND | 12 | 1.00 | |
| <u>Surrogate</u> | <u>Rec. (%)</u> | <u>Control Limits</u> | <u>Qualifiers</u> | |
| 1,4-Bromofluorobenzene | 95 | 68-134 | | |
| 1,2-Dichloroethane-d4 | 103 | 67-133 | | |
| Toluene-d8 | 97 | 70-130 | | |


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15

Project: Former Defense Fuel Depot / EST3043

Page 1 of 4

| Quality Control Sample ID | Type | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---------------------------|------|--------|------------|---------------|----------------|-----------------------|
| 095-01-021-18138 | LCS | Air | GC/MS AA | N/A | 02/18/17 12:00 | 170218L01 |
| 095-01-021-18138 | LCSD | Air | GC/MS AA | N/A | 02/18/17 12:48 | 170218L01 |

| Parameter | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL | RPD | RPD CL | Qualifiers |
|-----------------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Acetone | 59.39 | 63.80 | 107 | 61.69 | 104 | 67-133 | 56-144 | 3 | 0-30 | |
| Benzene | 79.87 | 76.94 | 96 | 77.16 | 97 | 70-130 | 60-140 | 0 | 0-30 | |
| Benzyl Chloride | 129.4 | 146.9 | 114 | 150.3 | 116 | 38-158 | 18-178 | 2 | 0-30 | |
| Bromodichloromethane | 167.5 | 169.4 | 101 | 164.9 | 98 | 70-130 | 60-140 | 3 | 0-30 | |
| Bromoform | 258.4 | 271.7 | 105 | 276.5 | 107 | 63-147 | 49-161 | 2 | 0-30 | |
| Bromomethane | 97.08 | 88.90 | 92 | 86.92 | 90 | 70-139 | 58-150 | 2 | 0-30 | |
| 2-Butanone | 73.73 | 80.00 | 109 | 75.31 | 102 | 66-132 | 55-143 | 6 | 0-30 | |
| Carbon Disulfide | 77.85 | 70.23 | 90 | 71.16 | 91 | 68-146 | 55-159 | 1 | 0-30 | |
| Carbon Tetrachloride | 157.3 | 161.4 | 103 | 156.0 | 99 | 70-136 | 59-147 | 3 | 0-30 | |
| Chlorobenzene | 115.1 | 115.6 | 100 | 121.5 | 106 | 70-130 | 60-140 | 5 | 0-30 | |
| Chloroethane | 65.96 | 60.73 | 92 | 61.81 | 94 | 65-149 | 51-163 | 2 | 0-30 | |
| Chloroform | 122.1 | 119.4 | 98 | 117.1 | 96 | 70-130 | 60-140 | 2 | 0-30 | |
| Chloromethane | 51.63 | 51.09 | 99 | 49.76 | 96 | 69-141 | 57-153 | 3 | 0-30 | |
| Dibromochloromethane | 213.0 | 221.9 | 104 | 225.5 | 106 | 70-138 | 59-149 | 2 | 0-30 | |
| Dichlorodifluoromethane | 123.6 | 116.7 | 94 | 113.0 | 91 | 67-139 | 55-151 | 3 | 0-30 | |
| 1,1-Dichloroethane | 101.2 | 98.84 | 98 | 95.22 | 94 | 70-130 | 60-140 | 4 | 0-30 | |
| 1,1-Dichloroethene | 99.12 | 98.56 | 99 | 99.05 | 100 | 70-135 | 59-146 | 0 | 0-30 | |
| 1,2-Dibromoethane | 192.1 | 207.5 | 108 | 212.0 | 110 | 70-133 | 60-144 | 2 | 0-30 | |
| Dichlorotetrafluoroethane | 174.8 | 165.1 | 94 | 160.3 | 92 | 51-135 | 37-149 | 3 | 0-30 | |
| 1,2-Dichlorobenzene | 150.3 | 163.6 | 109 | 165.7 | 110 | 48-138 | 33-153 | 1 | 0-30 | |
| 1,2-Dichloroethane | 101.2 | 103.8 | 103 | 101.7 | 100 | 70-132 | 60-142 | 2 | 0-30 | |
| 1,2-Dichloropropane | 115.5 | 111.2 | 96 | 110.4 | 96 | 70-130 | 60-140 | 1 | 0-30 | |
| 1,3-Dichlorobenzene | 150.3 | 159.3 | 106 | 163.1 | 109 | 56-134 | 43-147 | 2 | 0-30 | |
| 1,4-Dichlorobenzene | 150.3 | 161.0 | 107 | 162.4 | 108 | 52-136 | 38-150 | 1 | 0-30 | |
| c-1,3-Dichloropropene | 113.5 | 122.8 | 108 | 120.0 | 106 | 70-130 | 60-140 | 2 | 0-30 | |
| c-1,2-Dichloroethene | 99.12 | 99.07 | 100 | 97.40 | 98 | 70-130 | 60-140 | 2 | 0-30 | |
| t-1,2-Dichloroethene | 99.12 | 94.52 | 95 | 95.40 | 96 | 70-130 | 60-140 | 1 | 0-30 | |
| t-1,3-Dichloropropene | 113.5 | 124.4 | 110 | 125.6 | 111 | 70-147 | 57-160 | 1 | 0-30 | |
| Ethanol | 188.4 | 198.9 | 106 | 190.1 | 101 | 37-139 | 20-156 | 5 | 0-30 | |
| Ethylbenzene | 108.6 | 112.0 | 103 | 113.7 | 105 | 70-130 | 60-140 | 2 | 0-30 | |
| 4-Ethyltoluene | 122.9 | 131.6 | 107 | 124.6 | 101 | 68-130 | 58-140 | 5 | 0-30 | |
| Hexachloro-1,3-Butadiene | 266.6 | 243.0 | 91 | 251.6 | 94 | 44-146 | 27-163 | 3 | 0-30 | |
| 2-Hexanone | 102.4 | 114.5 | 112 | 117.7 | 115 | 70-136 | 59-147 | 3 | 0-30 | |
| Methyl-t-Butyl Ether (MTBE) | 90.13 | 88.11 | 98 | 85.86 | 95 | 68-130 | 58-140 | 3 | 0-30 | |
| Methylene Chloride | 86.84 | 84.73 | 98 | 83.31 | 96 | 69-130 | 59-140 | 2 | 0-30 | |
| 4-Methyl-2-Pentanone | 102.4 | 103.1 | 101 | 105.3 | 103 | 70-130 | 60-140 | 2 | 0-30 | |

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15

Project: Former Defense Fuel Depot / EST3043

Page 2 of 4

| Parameter | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL | RPD | RPD CL | Qualifiers |
|---------------------------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| o-Xylene | 108.6 | 107.1 | 99 | 108.5 | 100 | 69-130 | 59-140 | 1 | 0-30 | |
| p/m-Xylene | 217.1 | 218.4 | 101 | 218.3 | 101 | 70-132 | 60-142 | 0 | 0-30 | |
| Styrene | 106.5 | 115.8 | 109 | 114.5 | 107 | 65-131 | 54-142 | 1 | 0-30 | |
| Tetrachloroethene | 169.6 | 167.6 | 99 | 166.9 | 98 | 70-130 | 60-140 | 0 | 0-30 | |
| Toluene | 94.21 | 93.37 | 99 | 94.02 | 100 | 70-130 | 60-140 | 1 | 0-30 | |
| Trichloroethene | 134.3 | 136.5 | 102 | 135.2 | 101 | 70-130 | 60-140 | 1 | 0-30 | |
| Trichlorofluoromethane | 140.5 | 140.6 | 100 | 135.5 | 96 | 63-141 | 50-154 | 4 | 0-30 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 191.6 | 184.5 | 96 | 183.7 | 96 | 70-136 | 59-147 | 0 | 0-30 | |
| 1,1,1-Trichloroethane | 136.4 | 143.1 | 105 | 134.7 | 99 | 70-130 | 60-140 | 6 | 0-30 | |
| 1,1,2-Trichloroethane | 136.4 | 137.7 | 101 | 134.1 | 98 | 70-130 | 60-140 | 3 | 0-30 | |
| 1,3,5-Trimethylbenzene | 122.9 | 128.2 | 104 | 126.2 | 103 | 62-130 | 51-141 | 2 | 0-30 | |
| 1,1,2,2-Tetrachloroethane | 171.6 | 183.2 | 107 | 186.8 | 109 | 63-130 | 52-141 | 2 | 0-30 | |
| 1,2,4-Trimethylbenzene | 122.9 | 129.0 | 105 | 131.0 | 107 | 60-132 | 48-144 | 2 | 0-30 | |
| 1,2,4-Trichlorobenzene | 185.5 | 165.2 | 89 | 170.7 | 92 | 31-151 | 11-171 | 3 | 0-30 | |
| Vinyl Acetate | 88.03 | 91.62 | 104 | 88.05 | 100 | 58-130 | 46-142 | 4 | 0-30 | |
| Vinyl Chloride | 63.91 | 60.68 | 95 | 60.64 | 95 | 70-134 | 59-145 | 0 | 0-30 | |
| Isopropanol | 61.45 | 64.96 | 106 | 63.12 | 103 | 57-135 | 44-148 | 3 | 0-30 | |

Total number of LCS compounds: 53

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15

Project: Former Defense Fuel Depot / EST3043

Page 3 of 4

| Quality Control Sample ID | Type | Matrix | Instrument | Date Prepared | Date Analyzed | LCS/LCSD Batch Number |
|---------------------------|------|--------|------------|---------------|----------------|-----------------------|
| 095-01-021-18144 | LCS | Air | GC/MS AA | N/A | 02/20/17 13:05 | 170220L01 |
| 095-01-021-18144 | LCSD | Air | GC/MS AA | N/A | 02/20/17 13:59 | 170220L01 |

| Parameter | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL | RPD | RPD CL | Qualifiers |
|-----------------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| Acetone | 59.39 | 61.62 | 104 | 58.02 | 98 | 67-133 | 56-144 | 6 | 0-30 | |
| Benzene | 79.87 | 77.71 | 97 | 78.06 | 98 | 70-130 | 60-140 | 0 | 0-30 | |
| Benzyl Chloride | 129.4 | 141.4 | 109 | 143.7 | 111 | 38-158 | 18-178 | 2 | 0-30 | |
| Bromodichloromethane | 167.5 | 163.5 | 98 | 167.0 | 100 | 70-130 | 60-140 | 2 | 0-30 | |
| Bromoform | 258.4 | 273.9 | 106 | 275.6 | 107 | 63-147 | 49-161 | 1 | 0-30 | |
| Bromomethane | 97.08 | 85.77 | 88 | 84.00 | 87 | 70-139 | 58-150 | 2 | 0-30 | |
| 2-Butanone | 73.73 | 72.65 | 99 | 75.19 | 102 | 66-132 | 55-143 | 3 | 0-30 | |
| Carbon Disulfide | 77.85 | 69.51 | 89 | 65.84 | 85 | 68-146 | 55-159 | 5 | 0-30 | |
| Carbon Tetrachloride | 157.3 | 155.5 | 99 | 157.4 | 100 | 70-136 | 59-147 | 1 | 0-30 | |
| Chlorobenzene | 115.1 | 122.7 | 107 | 119.7 | 104 | 70-130 | 60-140 | 2 | 0-30 | |
| Chloroethane | 65.96 | 61.38 | 93 | 58.83 | 89 | 65-149 | 51-163 | 4 | 0-30 | |
| Chloroform | 122.1 | 111.7 | 92 | 113.6 | 93 | 70-130 | 60-140 | 2 | 0-30 | |
| Chloromethane | 51.63 | 49.34 | 96 | 47.36 | 92 | 69-141 | 57-153 | 4 | 0-30 | |
| Dibromochloromethane | 213.0 | 223.0 | 105 | 219.9 | 103 | 70-138 | 59-149 | 1 | 0-30 | |
| Dichlorodifluoromethane | 123.6 | 103.1 | 83 | 111.3 | 90 | 67-139 | 55-151 | 8 | 0-30 | |
| 1,1-Dichloroethane | 101.2 | 95.04 | 94 | 95.00 | 94 | 70-130 | 60-140 | 0 | 0-30 | |
| 1,1-Dichloroethene | 99.12 | 95.67 | 97 | 94.88 | 96 | 70-135 | 59-146 | 1 | 0-30 | |
| 1,2-Dibromoethane | 192.1 | 207.0 | 108 | 205.3 | 107 | 70-133 | 60-144 | 1 | 0-30 | |
| Dichlorotetrafluoroethane | 174.8 | 158.5 | 91 | 156.3 | 89 | 51-135 | 37-149 | 1 | 0-30 | |
| 1,2-Dichlorobenzene | 150.3 | 160.6 | 107 | 161.6 | 107 | 48-138 | 33-153 | 1 | 0-30 | |
| 1,2-Dichloroethane | 101.2 | 98.03 | 97 | 99.46 | 98 | 70-132 | 60-142 | 1 | 0-30 | |
| 1,2-Dichloropropane | 115.5 | 109.4 | 95 | 114.7 | 99 | 70-130 | 60-140 | 5 | 0-30 | |
| 1,3-Dichlorobenzene | 150.3 | 158.8 | 106 | 164.5 | 109 | 56-134 | 43-147 | 3 | 0-30 | |
| 1,4-Dichlorobenzene | 150.3 | 162.5 | 108 | 164.4 | 109 | 52-136 | 38-150 | 1 | 0-30 | |
| c-1,3-Dichloropropene | 113.5 | 118.6 | 104 | 120.8 | 106 | 70-130 | 60-140 | 2 | 0-30 | |
| c-1,2-Dichloroethene | 99.12 | 97.32 | 98 | 96.75 | 98 | 70-130 | 60-140 | 1 | 0-30 | |
| t-1,2-Dichloroethene | 99.12 | 94.61 | 95 | 97.24 | 98 | 70-130 | 60-140 | 3 | 0-30 | |
| t-1,3-Dichloropropene | 113.5 | 121.4 | 107 | 119.9 | 106 | 70-147 | 57-160 | 1 | 0-30 | |
| Ethanol | 188.4 | 180.8 | 96 | 174.7 | 93 | 37-139 | 20-156 | 3 | 0-30 | |
| Ethylbenzene | 108.6 | 111.7 | 103 | 116.6 | 107 | 70-130 | 60-140 | 4 | 0-30 | |
| 4-Ethyltoluene | 122.9 | 129.9 | 106 | 134.1 | 109 | 68-130 | 58-140 | 3 | 0-30 | |
| Hexachloro-1,3-Butadiene | 266.6 | 254.1 | 95 | 251.8 | 94 | 44-146 | 27-163 | 1 | 0-30 | |
| 2-Hexanone | 102.4 | 115.8 | 113 | 114.1 | 111 | 70-136 | 59-147 | 1 | 0-30 | |
| Methyl-t-Butyl Ether (MTBE) | 90.13 | 86.56 | 96 | 86.63 | 96 | 68-130 | 58-140 | 0 | 0-30 | |
| Methylene Chloride | 86.84 | 82.78 | 95 | 82.34 | 95 | 69-130 | 59-140 | 1 | 0-30 | |
| 4-Methyl-2-Pentanone | 102.4 | 103.9 | 101 | 106.1 | 104 | 70-130 | 60-140 | 2 | 0-30 | |

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Environmental Support Technologies, Inc.
8 Goodyear, Suite 125
Irvine, CA 92618-3745

Date Received: 02/16/17
Work Order: 17-02-1474
Preparation: N/A
Method: EPA TO-15

Project: Former Defense Fuel Depot / EST3043

Page 4 of 4

| Parameter | Spike Added | LCS Conc. | LCS %Rec. | LCSD Conc. | LCSD %Rec. | %Rec. CL | ME CL | RPD | RPD CL | Qualifiers |
|---------------------------------------|-------------|-----------|-----------|------------|------------|----------|--------|-----|--------|------------|
| o-Xylene | 108.6 | 106.1 | 98 | 108.4 | 100 | 69-130 | 59-140 | 2 | 0-30 | |
| p/m-Xylene | 217.1 | 214.3 | 99 | 218.2 | 100 | 70-132 | 60-142 | 2 | 0-30 | |
| Styrene | 106.5 | 118.5 | 111 | 115.1 | 108 | 65-131 | 54-142 | 3 | 0-30 | |
| Tetrachloroethene | 169.6 | 172.5 | 102 | 172.8 | 102 | 70-130 | 60-140 | 0 | 0-30 | |
| Toluene | 94.21 | 94.70 | 101 | 92.20 | 98 | 70-130 | 60-140 | 3 | 0-30 | |
| Trichloroethene | 134.3 | 133.2 | 99 | 134.1 | 100 | 70-130 | 60-140 | 1 | 0-30 | |
| Trichlorofluoromethane | 140.5 | 129.7 | 92 | 121.6 | 87 | 63-141 | 50-154 | 6 | 0-30 | |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 191.6 | 178.5 | 93 | 164.7 | 86 | 70-136 | 59-147 | 8 | 0-30 | |
| 1,1,1-Trichloroethane | 136.4 | 130.8 | 96 | 134.9 | 99 | 70-130 | 60-140 | 3 | 0-30 | |
| 1,1,2-Trichloroethane | 136.4 | 134.0 | 98 | 133.7 | 98 | 70-130 | 60-140 | 0 | 0-30 | |
| 1,3,5-Trimethylbenzene | 122.9 | 123.4 | 100 | 132.4 | 108 | 62-130 | 51-141 | 7 | 0-30 | |
| 1,1,2,2-Tetrachloroethane | 171.6 | 181.7 | 106 | 182.3 | 106 | 63-130 | 52-141 | 0 | 0-30 | |
| 1,2,4-Trimethylbenzene | 122.9 | 129.9 | 106 | 129.0 | 105 | 60-132 | 48-144 | 1 | 0-30 | |
| 1,2,4-Trichlorobenzene | 185.5 | 170.3 | 92 | 161.4 | 87 | 31-151 | 11-171 | 5 | 0-30 | |
| Vinyl Acetate | 88.03 | 83.50 | 95 | 83.00 | 94 | 58-130 | 46-142 | 1 | 0-30 | |
| Vinyl Chloride | 63.91 | 59.77 | 94 | 59.74 | 93 | 70-134 | 59-145 | 0 | 0-30 | |
| Isopropanol | 61.45 | 60.72 | 99 | 57.75 | 94 | 57-135 | 44-148 | 5 | 0-30 | |

Total number of LCS compounds: 53

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Summa Canister Vacuum Summary

Work Order: 17-02-1474

Page 1 of 1

| Sample Name | Vacuum Out | Vacuum In | Equipment | Description |
|---------------|--------------|-------------|-----------|-------------------|
| SVM27-5' | -29.50 in Hg | -1.50 in Hg | LC244 | Summa Canister 1L |
| SVM27-10' | -29.50 in Hg | -0.40 in Hg | SLC095 | Summa Canister 1L |
| SVM26-5' | -29.50 in Hg | 0.00 in Hg | LC742 | Summa Canister 1L |
| SVM26-10' | -29.50 in Hg | -2.20 in Hg | LC258 | Summa Canister 1L |
| SVM25-5' | -29.50 in Hg | -2.30 in Hg | LC775 | Summa Canister 1L |
| SVM25-10' | -29.50 in Hg | -2.50 in Hg | LC1203 | Summa Canister 1L |
| SVM25-10' Dup | -29.50 in Hg | -0.90 in Hg | LC934 | Summa Canister 1L |
| SVM24-5' | -29.50 in Hg | -1.00 in Hg | LC921 | Summa Canister 1L |
| SVM24-10' | -29.50 in Hg | -2.40 in Hg | LC291 | Summa Canister 1L |



Calscience

Sample Analysis Summary Report

Work Order: 17-02-1474

Page 1 of 1

| <u>Method</u> | <u>Extraction</u> | <u>Chemist ID</u> | <u>Instrument</u> | <u>Analytical Location</u> |
|---------------|-------------------|-------------------|-------------------|----------------------------|
| EPA TO-15 | N/A | 953 | GC/MS AA | 2 |


Return to Contents

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 17-02-1474

Page 1 of 1

| <u>Qualifiers</u> | <u>Definition</u> |
|-------------------|---|
| * | See applicable analysis comment. |
| < | Less than the indicated value. |
| > | Greater than the indicated value. |
| 1 | Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification. |
| 2 | Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification. |
| 3 | Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control. |
| 4 | The MS/MSD RPD was out of control due to suspected matrix interference. |
| 5 | The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference. |
| 6 | Surrogate recovery below the acceptance limit. |
| 7 | Surrogate recovery above the acceptance limit. |
| B | Analyte was present in the associated method blank. |
| BU | Sample analyzed after holding time expired. |
| BV | Sample received after holding time expired. |
| CI | See case narrative. |
| E | Concentration exceeds the calibration range. |
| ET | Sample was extracted past end of recommended max. holding time. |
| HD | The chromatographic pattern was inconsistent with the profile of the reference fuel standard. |
| HDH | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected). |
| HDL | The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected). |
| J | Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated. |
| JA | Analyte positively identified but quantitation is an estimate. |
| ME | LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean). |
| ND | Parameter not detected at the indicated reporting limit. |
| Q | Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater. |
| SG | The sample extract was subjected to Silica Gel treatment prior to analysis. |
| X | % Recovery and/or RPD out-of-range. |
| Z | Analyte presence was not confirmed by second column or GC/MS analysis. |
| | Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis. |
| | Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time. |
| | A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations. |



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

AIR CHAIN-OF-CUSTODY RECORD

WO NO./LAB USE ONLY

17-02-1474

DATE: 2/16/17
PAGE: 1 OF 1

LABORATORY CLIENT: Environmental Support Technologies
 ADDRESS: 8 Goodyear, Suite 125, Irvine, CA 92618
 TEL: 949-679-9500 ashley.flores@goemdsinc.com
 TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD")
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD
 EDD: COELT EDF OTHER
 SPECIAL INSTRUCTIONS:

LABORATORY CLIENT: Former Defense Fuel Depot
 PROJECT CONTACT: Ashley Flores
 PROJECT ADDRESS: 15306 Norwalk Blvd, Norwalk, Ca
 P.O. NO.: EST 3043
 LAB CONTACT OR QUOTE NO.: Don Burley
 SAMPLER(S): (PRINT) AR

| LAB USE ONLY | SAMPLE ID | FIELD ID / POINT OF COLLECTION | MATRIX | SAMPLING EQUIPMENT | | | START SAMPLING INFORMATION | | | STOP SAMPLING INFORMATION | | | REQUESTED ANALYSES |
|--------------|----------------|--------------------------------|--------|--------------------|------------------------|--------------------|----------------------------|------------------------|---------------------------|---------------------------|--------------------|---------------------------|--------------------|
| | | | | Media ID | Canister Size 6L or 1L | Flow Controller ID | Date | Time (24 hr clock) | Canister Pressure (in Hg) | Date | Time (24 hr clock) | Canister Pressure (in Hg) | |
| 1 | SVM 27-5' | | SV | LC244 | 1L | A152 | 2/16/17 | 8:30 | -30 | 2/16/17 | 8:37 | -1 | X |
| 2 | SVM 27-10' | | | SLC095 | | A38 | | 9:04 | -30 | | 9:11 | -2 | |
| 3 | SVM 26-5' | | | LC742 | | A350 | | 9:42 | -30 | | 9:51 | -3 | |
| 4 | SVM 26-10' | | | LC258 | | A168 | | 10:26 | -30 | | 10:32 | -2 | |
| 5 | SVM 25-5' | | | LC775 | | A394 | | 11:00 | -30 | | 11:06 | -2 | |
| 6 | SVM 25-10' | | | LC1209 | | A221 | | 11:21 | -30 | | 11:27 | -2 | |
| 7 | SVM 25-10' Dup | | | LC934 | | A221 | | 11:30 | -30 | | 11:36 | -2 | |
| 8 | SVM 24-5' | | | LC921 | | A885 | | 12:06 ^{11:59} | -30 | | 12:06 | -2 | |
| 9 | SVM 24-10' | | | LC291 | | A285 | | 12:21 | -30 | | 12:27 | -1 | |

Relinquished by: (Signature) [Signature] Date: 2/16/17 Time: 1352
 Relinquished by: (Signature) [Signature] Date: [] Time: []
 Relinquished by: (Signature) [Signature] Date: [] Time: []



SAMPLE RECEIPT CHECKLIST

COOLER 0 OF 0

CLIENT: EST

DATE: 02/16/2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): _____°C (w/ CF): _____°C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 836

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1053

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB

125PB_z_{na} 250AGB 250CGB 250CGB_s 250PB 250PB_n 500AGB 500AGJ 500AGJ_s

500PB 1AGB 1AGB_{na2} 1AGB_s 1PB 1PB_{na} _____ _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (_____) : _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1053

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 836

Return to Contents

APPENDIX B

ANALYTICAL RESULTS FOR TPH AND VOCS IN SOIL (0 TO 10 FEET BGS)

2015/2016 ANALYTICAL RESULTS

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-03-E1-1 | 1 | 3/19/2015 | <0.50 | <1.0 | 10 | 53 | 28 | 81 |
| EX-03-E1-3 | 3 | 3/19/2015 | <0.50 | <1.0 | 88 | 440 | 158 | 597 |
| EX-03-E2-1 | 1 | 3/19/2015 | <0.50 | <2.0 | 28 | 346 | 178 | 524 |
| EX-03-E2-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-E2-5 | 5 | 3/19/2015 | <0.50 | <1.0 | 19 | 53 | 28 | 81 |
| EX-03-S1-1 | 1 | 3/19/2015 | <0.50 | <1.0 | 1.3 | 12 | 13 | 25 |
| EX-03-S1-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-S1-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-S2-1 | 1 | 3/19/2015 | <0.50 | <1.0 | <1.0 | 6.9 | 5.9 | 13 |
| EX-03-S2-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-S2-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-W1-1 | 1 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-W1-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | 2.4 | <1.0 | 2.4 |
| EX-03-W1-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-W2-1 | 1 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-W2-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | 3.0 | <1.0 | 3 |
| EX-03-W2-5 | 5 | 3/19/2015 | <0.50 | <1.0 | 23 | 112 | 50 | 162 |
| EX-03-N1-1 | 1 | 3/19/2015 | <0.50 | <1.0 | <1.0 | 2.3 | <1.0 | 2.3 |
| EX-03-N1-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-N1-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-N2-1 | 1 | 3/19/2015 | <0.50 | <1.0 | 22 | 91 | 64 | 155 |
| EX-03-N2-3 | 3 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-N2-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-F1-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | 2.4 | 2.4 |
| EX-03-F2-5 | 5 | 3/19/2015 | <0.50 | <1.0 | 7.0 | 47 | 36 | 83 |
| EX-03-F3-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-F4-5 | 5 | 3/19/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-03-F5-5 | 5 | 3/19/2015 | <0.50 | <10 | 350 | 1,200 | 510 | 1,710 |
| EX-03-F6-5 | 5 | 3/19/2015 | <0.50 | <1.0 | 76 | 285 | 111 | 396 |
| EX-4-E1-1 | 1 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 2.5 | <1.0 | <1.0 |
| EX-4-E1-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-E1-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 1.2 | <1.0 | <1.0 |
| EX-4-E2-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-E2-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-E3-1 | 1 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 1.8 | <1.0 | <1.0 |
| EX-4-E3-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 8.0 | 31 | 39 |
| EX-4-E3-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-E4-1 | 1 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 2.7 | <1.0 | <1.0 |
| EX-4-E4-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-E4-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 2.8 | <1.0 | <1.0 |
| EX-4-F1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-4-F3-5 | 5 | 4/8/2015 | <0.50 | 0.60 | 17 | 62 | 26 | 88 |
| EX-4-F4-8-JD * | 8 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-4-F5-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 7.1 | 4.7 | <1.0 | <1.0 |
| EX-4-F6-5 | 5 | 4/8/2015 | <0.50 | 0.70 | 604 | 953 | 370 | 1,322 |
| EX-4-F7-5 | 5 | 4/8/2015 | <0.50 | 1.8 | 99 | 215 | 61 | 276 |
| EX-4-F8-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-F9-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 83 | 235 | 121 | 355 |
| EX-04-F10-12 * | 10 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-4-N1-1 | 1 | 4/7/2015 | <0.50 | 0.55 | 30 | 363 | 481 | 844 |
| EX-4-N1-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N1-5 | 5 | 4/7/2015 | <0.50 | <1.0 | 5.2 | 95 | 228 | 323 |
| EX-4-N2-1 | 1 | 4/7/2015 | <0.50 | 0.95 | 201 | 599 | 260 | 858 |
| EX-4-N2-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N2-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N3-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N3-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N4-1 | 1 | 4/7/2015 | <0.50 | <1.0 | 3.7 | 95 | 45 | 140 |
| EX-4-N4-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-N4-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-S1-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-S1-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-S2-1 | 1 | 4/7/2015 | <0.50 | <1.0 | 1.8 | 43 | 15 | 58 |
| EX-4-S2-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-S2-5 | 5 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-S3-1 | 1 | 4/7/2015 | <0.50 | <1.0 | <1.0 | 1.4 | <1.0 | <1.0 |
| EX-4-S3-3 | 3 | 4/7/2015 | <0.50 | <1.0 | 78 | 414 | 479 | 892 |
| EX-4-S3-5 | 5 | 4/7/2015 | <0.50 | <1.0 | 9.6 | 81 | 2.0 | 83 |
| EX-4-W1-1 | 1 | 4/7/2015 | <0.50 | 4.7 | 168 | 194 | 214 | 408 |
| EX-4-W1-3 | 3 | 4/7/2015 | <0.50 | <1.0 | 2.9 | 49 | 29 | 78 |
| EX-4-W1-5 | 5 | 4/7/2015 | <0.50 | <1.0 | 10 | 66 | 32 | 98 |
| EX-4-W2-1 | 1 | 4/7/2015 | <0.50 | <1.0 | 4.7 | 119 | 293 | 412 |
| EX-4-W2-3 | 3 | 4/7/2015 | <0.50 | <1.0 | 16 | 137 | 204 | 340 |
| EX-4-W3-1 | 1 | 4/7/2015 | <0.50 | 5.0 | 211 | 569 | 1,040 | 1,609 |
| EX-4-W3-5 | 5 | 4/7/2015 | 0.91 | 9.4 | 116 | 306 | 296 | 601 |
| EX-4-W4-1 | 1 | 4/7/2015 | <0.50 | <1.0 | 95 | 457 | 291 | 748 |
| EX-4-W4-3 | 3 | 4/7/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-4-W4-5 | 5 | 4/7/2015 | <0.50 | <5.0 | 5.5 | 382 | 1,268 | 1,650 |
| EX-04-F2-12 * | 2 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-4-E2-1-JD * | 2 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-4-F10-8-JD * | 8 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-4-F11-5-JD * | 5 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-4-F2-5-JD * | 5 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-4-N3-3-JD * | 3 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-4-S1-1-JD * | 1 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-4-W3-1-JD * | 1 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-4-W3-5-JD * | 5 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-5-E1-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 22 | 121 | 115 | 236 |
| EX-5-E1-3 | 3 | 4/8/2015 | <0.50 | <1.0 | 34 | 261 | 325 | 586 |
| EX-5-E1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 4.8 | 52 | 38 | 90 |
| EX-5-E2-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 5.3 | 85 | 147 | 232 |
| EX-5-E2-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-E2-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-F1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-F2-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | 1.3 | <1.0 | <1.0 |
| EX-5-F3-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-N1-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 50 | 276 | 180 | 456 |
| EX-5-N1-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-N1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 3.7 | 31.5 | 24 | 55 |
| EX-5-N2-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 3.3 | 48 | 67 | 115 |
| EX-5-N2-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | 16 | 8.0 | 24 |
| EX-5-N2-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-N3-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 15 | 112 | 96 | 208 |
| EX-5-N3-3 | 3 | 4/8/2015 | <0.50 | <1.0 | 21 | 125 | 73 | 197 |
| EX-5-N3-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 14 | 106 | 87 | 193 |
| EX-5-S1-1 | 1 | 4/8/2015 | <0.50 | <1.0 | <1.0 | 1.7 | <1.0 | <1.0 |
| EX-5-S1-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-S1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-S2-1 | 1 | 4/8/2015 | <0.50 | <1.0 | <1.0 | 14 | 16 | 30 |
| EX-5-S2-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-S2-5 | 5 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-W1-1 | 1 | 4/8/2015 | <0.50 | <1.0 | 23 | 285 | 320 | 604 |
| EX-5-W1-3 | 3 | 4/8/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-5-W1-5 | 5 | 4/8/2015 | <0.50 | <1.0 | 7.5 | 151 | 151 | 302 |
| EX-5-E1-3-JD * | 3 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-5-F4-5 * | 5 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-5-N1-3-JD * | 3 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-5-S1-3-JD * | 3 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-5-W1-1-JD * | 1 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-14-E1-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E1-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E1-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E1-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-14-E1-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E2-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E2-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E2-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E2-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E2-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E3-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 2.7 | <1.0 | <1.0 |
| EX-14-E3-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E3-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E3-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E3-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E4-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E4-3 | 3 | 3/25/2015 | <0.50 | <1.0 | 0.65 | 8.5 | 5.2 | 14 |
| EX-14-E4-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E4-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E4-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E5-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 1.7 | <1.0 | <1.0 |
| EX-14-E5-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 2.8 | 2.1 | 4.8 |
| EX-14-E5-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E5-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-E5-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N1-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N1-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N1-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N1-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N1-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N2-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N2-3 | 3 | 3/25/2015 | <0.50 | 3.2 | 8.3 | 25 | 47 | 72 |
| EX-14-N2-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N2-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N2-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N3-1 | 1 | 3/25/2015 | <0.50 | <1.0 | 0.55 | 12 | 38 | 50 |
| EX-14-N3-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N3-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N3-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N3-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N4-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 7.1 | 37 | 44 |
| EX-14-N4-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 6.6 | 37 | 44 |
| EX-14-N4-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N4-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-N4-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-14-S1-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 5.1 | 8.6 | 14 |
| EX-14-S1-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S1-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 2.8 | 0.55 | 3.3 |
| EX-14-S1-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S1-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S2-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 6.0 | 3.0 | 9.0 |
| EX-14-S2-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S2-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S2-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S2-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S3-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S3-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S3-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S3-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-S3-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W1-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | 1.3 | 4.6 | 5.9 |
| EX-14-W1-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W1-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W1-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W1-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W2-1 | 1 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W2-5 | 5 | 3/25/2015 | <0.50 | 0.75 | 52 | 103 | 81 | 183 |
| EX-14-W2-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W2-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W3-1 | 1 | 3/25/2015 | <0.50 | <1.0 | 47 | 89 | 122 | 211 |
| EX-14-W3-3 | 3 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W3-5 | 5 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W3-8 | 8 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-W3-10 | 10 | 3/25/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B10-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B1-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B2-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B3-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B4-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B5-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B6-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B7-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B8-10 | 10 | 3/27/2015 | <0.50 | <1.0 | 12 | 18 | 2.7 | 20 |
| EX-14-B9-10 | 10 | 3/27/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-14-B11-10 * | 10 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-14-B12-10 * | 10 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-14-E1-3-JD * | 3 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-14-E5-1-JD * | 1 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-14-N1-1-JD * | 1 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-14-S1-5-JD * | 5 | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | --- |
| EX-14-S3-8-JD * | 8 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-14-W1-8-JD * | 8 | 7/1/2015 | <0.50 | --- | <10 | 55 | 55 | --- |
| EX-14-W2-3-JD * | 3 | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| EX-35-N1-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | 23 | 24 | 47 |
| EX-35-N1-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N1-9 | 9 | 10/20/2015 | <0.50 | --- | 27 | 240 | 180 | 420 |
| EX-35-N2-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N2-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N2-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N3-3 | 3 | 10/20/2015 | <0.50 | --- | 12 | 63 | 54 | 117 |
| EX-35-N3-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N3-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N4-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N4-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N4-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N5-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N5-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N5-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N6-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N6-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N6-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N7-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N7-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N7-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N8-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N8-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-N8-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W1-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W1-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W1-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W2-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W2-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | 17 | 20 | 37 |
| EX-35-W2-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W3-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W3-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W3-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W4-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-35-W4-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W4-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W5-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W5-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W5-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W6-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W6-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W6-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W7-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | 20 | 21 | 41 |
| EX-35-W7-6 | 6 | 10/20/2015 | <0.50 | --- | 52 | 430 | 230 | 660 |
| EX-35-W7-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | 16 | 21 | 37 |
| EX-35-W8-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W8-6 | 6 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W8-9 | 9 | 10/20/2015 | <0.50 | --- | <10 | 21 | 22 | 43 |
| EX-35-W9-3 | 3 | 10/20/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-W9-6 | 6 | 10/20/2015 | <0.50 | --- | 98 | 110 | <50 | 110 |
| EX-35-W9-9 | 9 | 10/20/2015 | <0.50 | --- | 54 | 350 | 270 | 620 |
| EX-35-E10-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E10-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E10-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E11-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E11-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E11-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E1-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E1-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E1-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E2-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E2-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E2-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E3-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E3-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E3-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E4-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E4-6 | 6 | 11/17/2015 | 0.66 | --- | <10 | <10 | <10 | <10 |
| EX-35-E4-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E12-3 | 3 | 12/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E12-6 | 6 | 12/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E5-9 | 9 | 11/17/2015 | 0.61 | --- | <10 | <10 | <10 | <10 |
| EX-35-E6-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E6-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E6-9 | 9 | 11/17/2015 | 0.61 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-35-E7-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | 15 | 14 | 29 |
| EX-35-E7-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E7-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E8-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E8-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E8-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E9-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E9-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-E9-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S10-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S10-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S10-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S11-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S11-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S11-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S1-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S1-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S1-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S2-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S2-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S2-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S3-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S3-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S3-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S4-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S4-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S4-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S5-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S5-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S5-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S6-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S6-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S6-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S7-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S7-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S7-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S8-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S8-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S8-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S9-3 | 3 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-35-S9-6 | 6 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-35-S9-9 | 9 | 11/17/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-GP-1 | --- | 5/22/2015 | --- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-19-GP-2 | --- | 5/22/2015 | --- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-19-GP-3 | --- | 5/22/2015 | --- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-19-GP-4 | --- | 5/22/2015 | --- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-19-GP-5 | --- | 5/22/2015 | --- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| EX-19-N1-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N1-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N1-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N2-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N2-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N2-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N3-3 | 3 | 9/1/2015 | <0.50 | --- | 24 | 130 | 120 | 250 |
| EX-19-N3-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N3-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N4-3 | 3 | 9/1/2015 | <0.50 | --- | 11 | 71 | 24 | 95 |
| EX-19-N4-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N4-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N5-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N5-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | 51 | 18 | 69 |
| EX-19-N5-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N6-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | 10 | <10 | 10 |
| EX-19-N6-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | 35 | 30 | 65 |
| EX-19-N6-9 | 9 | 9/1/2015 | <0.50 | --- | 19 | 110 | 61 | 171 |
| EX-19-N7-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N7-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N7-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N8-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N8-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-N8-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W1-3 | 3 | 9/1/2015 | <0.50 | --- | 420 | 390 | 140 | 530 |
| EX-19-W1-6 | 6 | 9/1/2015 | <0.50 | --- | 24 | 25 | 12 | 37 |
| EX-19-W1-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W2-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | 30 | 23 | 53 |
| EX-19-W2-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | 26 | 24 | 50 |
| EX-19-W2-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W3-3 | 3 | 9/1/2015 | <0.50 | --- | 32 | 98 | 110 | 208 |
| EX-19-W3-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W3-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W4-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W4-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-19-W4-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W5-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W5-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W5-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W6-3 | 3 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W6-6 | 6 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-W6-9 | 9 | 9/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E1-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E1-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E1-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E2-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E2-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E2-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E3-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E3-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E3-9 | 9 | 12/7/2015 | <0.50 | --- | 14 | 92 | 75 | 167 |
| EX-19-E4-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E4-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E4-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E5-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E5-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E5-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E6-3 | 3 | 12/7/2015 | <0.50 | --- | 15 | 140 | 130 | 270 |
| EX-19-E6-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E6-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E7-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E7-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-E7-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S1-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | 23 | 16 | 39 |
| EX-19-S1-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S1-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S2-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S2-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S2-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S3-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S3-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S3-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S4-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | 71 | 80 | 151 |
| EX-19-S4-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | 27 | 20 | 47 |
| EX-19-S4-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S5-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| EX-19-S5-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S5-9A | 9 | 12/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S6-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | 22 | 22 | 44 |
| EX-19-S6-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S6-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S7-3 | 3 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S7-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S7-9 | 9 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S8-3 | 3 | 12/7/2015 | <0.50 | --- | 28 | 200 | 140 | 340 |
| EX-19-S8-6 | 6 | 12/7/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| EX-19-S8-9 | 9 | 12/7/2015 | <0.50 | --- | 11 | 29 | 23 | 52 |
| C00066 | --- | 5/5/2015 | <0.50 | <1.0 | 16 | 97 | 47 | 144 |
| C00067 | --- | 5/5/2015 | <0.50 | <1.0 | 0.60 | 30 | 28 | 58 |
| C00068 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00069 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00070 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00071 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | 4.8 | 0.90 | 5.7 |
| C00072 | --- | 5/5/2015 | <0.50 | <1.0 | 6.3 | 43 | 26 | 69 |
| C00073 | --- | 5/5/2015 | <0.50 | <1.0 | 7.2 | 47 | 24 | 71 |
| C00074 | --- | 5/5/2015 | <0.50 | <1.0 | 15 | 88 | 46 | 134 |
| C00075 | --- | 5/5/2015 | <0.50 | <1.0 | 31 | 196 | 115 | 311 |
| C00076 | --- | 5/5/2015 | <0.50 | <1.0 | 6.0 | 36 | 23 | 59 |
| C00077 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | 4.4 | <1.0 | 4.4 |
| C00078 | --- | 5/5/2015 | <0.50 | <1.0 | 0.65 | 10 | 0.80 | 11 |
| C00079 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | 2.8 | <1.0 | 2.8 |
| C00080 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | 6.3 | 1.9 | 8.2 |
| C00081 | --- | 5/5/2015 | <0.50 | <1.0 | 11 | 85 | 76 | 161 |
| C00082 | --- | 5/5/2015 | <0.50 | <1.0 | 26 | 153 | 82 | 235 |
| C00083 | --- | 5/5/2015 | <0.50 | <1.0 | 10 | 14 | 4.0 | 18 |
| C00084 | --- | 5/5/2015 | <0.50 | <1.0 | 0.65 | 8.5 | 4.3 | 13 |
| C00086 | --- | 5/5/2015 | <0.50 | <1.0 | 17 | 42 | 22 | 65 |
| C00087 | --- | 5/5/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00088 | --- | 5/5/2015 | <0.50 | <1.0 | 8.4 | 43 | 19 | 63 |
| C00089 | --- | 5/5/2015 | <0.50 | <1.0 | 0.85 | 14 | 7.5 | 22 |
| CS-1-69A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-1-69A-M * | Middle | 7/1/2015 | <0.50 | --- | 11 | 120 | 140 | 260 |
| CS-1-71A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | 33 | 32 | 65 |
| CS-1-71A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | 21 | 24 | 45 |
| CS-1-73A-JD * | --- | 7/1/2015 | <0.50 | --- | 13 | 100 | 140 | 240 |
| CS-1-75A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 87 | 130 | 217 |
| CS-1-75-JD * | --- | 7/1/2015 | <0.50 | --- | 13 | 120 | 150 | 270 |
| CS-1-78A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 21 | 20 | 41 |
| CS-1-85-JD * | --- | 7/1/2015 | <0.50 | --- | 53 | 290 | 210 | 500 |
| CS-1-86A-JD * | --- | 7/1/2015 | <0.50 | --- | 37 | 200 | 160 | 360 |
| C00121 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 4.8 | 4.3 | 9.1 |
| C00122 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 9.2 | 8.5 | 18 |
| C00123 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00124 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 5.1 | 3.6 | 8.7 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00125 | --- | 5/28/2015 | <0.50 | <1.0 | 2.8 | 21 | 22 | 42 |
| C00126 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 8.1 | 12 | 20 |
| C00127 | --- | 5/28/2015 | <0.50 | <1.0 | 5.3 | 29 | 36 | 64 |
| C00128 | --- | 5/28/2015 | <0.50 | <1.0 | 2.3 | 21 | 26 | 47 |
| C00129 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 3.2 | 7.9 | 11 |
| C00130 | --- | 5/28/2015 | <0.50 | <1.0 | 2.7 | 26 | 27 | 53 |
| C00131 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 2.2 | 3.7 | 5.9 |
| C00132 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 5.4 | 11 | 16 |
| C00133 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 6.5 | 6.5 | 13 |
| C00134 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00135 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 1.1 | <1.0 | 1.1 |
| C00136 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00137 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 6.6 | 6.9 | 14 |
| C00138 | --- | 5/28/2015 | <0.50 | <1.0 | 1.1 | 14 | 9.6 | 23 |
| C00139 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00140 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00141 | --- | 5/28/2015 | <0.50 | <1.0 | 1.0 | 5.7 | 0.55 | 6.2 |
| C00142 | --- | 5/28/2015 | <0.50 | <1.0 | 0.95 | 16 | 11 | 27 |
| C00143 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 2.9 | 0.65 | 3.5 |
| C00144 | --- | 5/28/2015 | <0.50 | <1.0 | 2.5 | 16 | 12 | 28 |
| C00145 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 10 | 10 | 20 |
| C00146 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 2.3 | 0.65 | 2.9 |
| C00147 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 7.6 | 5.1 | 13 |
| C00148 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 3.3 | 0.85 | 4.1 |
| C00149 | --- | 5/28/2015 | <0.50 | <1.0 | 11 | 67 | 41 | 108 |
| CS-2A-126A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-2A-129A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-2A-130-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-2A-135A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-2A-138A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 18 | 43 | 61 |
| CS-2A-142-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-2A-143A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | 10 | 14 | 24 |
| CS-2A-143A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | 15 | 16 | 31 |
| CS-2A-148A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-2A-148A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00352 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00353 | --- | 9/21/2015 | <0.50 | --- | <10 | 59 | 40 | 99 |
| C00354 | --- | 9/21/2015 | <0.50 | --- | 19 | 130 | 170 | 300 |
| C00356 | --- | 9/21/2015 | <0.50 | --- | <10 | 12 | 14 | 26 |
| C00357 | --- | 9/21/2015 | <0.50 | --- | <10 | 18 | 15 | 33 |
| C00358 | --- | 9/21/2015 | <0.50 | --- | <10 | 88 | 160 | 248 |
| C00359 | --- | 9/21/2015 | <0.50 | --- | <10 | 34 | 37 | 71 |
| C00360 | --- | 9/21/2015 | <0.50 | --- | 17 | 120 | 160 | 280 |
| C00361 | --- | 9/21/2015 | <0.50 | --- | <10 | 12 | 15 | 27 |
| C00362 | --- | 9/21/2015 | <0.50 | --- | <10 | 79 | 120 | 199 |
| C00363 | --- | 9/21/2015 | <0.50 | --- | 11 | 49 | 49 | 98 |
| C00364 | --- | 9/21/2015 | <0.50 | --- | 70 | 230 | 270 | 500 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00365 | --- | 9/21/2015 | <0.50 | --- | <10 | 41 | 89 | 130 |
| C00366 | --- | 9/21/2015 | <0.50 | --- | <10 | 24 | 47 | 71 |
| C00367 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00368-4.5 | --- | 9/21/2015 | <0.50 | --- | <10 | 17 | 38 | 55 |
| C00369-4.5 | --- | 9/21/2015 | <0.50 | --- | 43 | 250 | 290 | 540 |
| C00370 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | 14 | 14 |
| C00371 | --- | 9/21/2015 | <0.50 | --- | 25 | 130 | 150 | 280 |
| C00372 | --- | 9/21/2015 | <0.50 | --- | <10 | 48 | 92 | 140 |
| C00373 | --- | 9/21/2015 | <0.50 | --- | <10 | 25 | 40 | 65 |
| C00374 | --- | 9/21/2015 | <0.50 | --- | 13 | 120 | 78 | 198 |
| C00375 | --- | 9/21/2015 | <0.50 | --- | <10 | 37 | 26 | 63 |
| C00376 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00377-4.5 | --- | 9/21/2015 | <0.50 | --- | 25 | 130 | 66 | 196 |
| C00459 * | --- | 11/18/2015 | <0.50 | --- | 22 | 200 | 160 | 360 |
| C00460 * | --- | 11/18/2015 | <0.50 | --- | 17 | 150 | 150 | 300 |
| C00461 * | --- | 11/18/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00462 * | --- | 11/18/2015 | <0.50 | --- | <10 | 28 | 34 | 62 |
| C00463 * | --- | 11/18/2015 | <0.50 | --- | 13 | 100 | 110 | 210 |
| C00464 * | --- | 11/18/2015 | <0.50 | --- | 55 | 130 | 74 | 204 |
| C00465 * | --- | 11/18/2015 | <0.50 | --- | 27 | 210 | 180 | 390 |
| C00466 * | --- | 11/18/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00467 * | --- | 11/18/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00468 * | --- | 11/18/2015 | <0.50 | --- | <10 | 46 | 54 | 100 |
| C00388 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00389 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00390 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00391 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00392 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00393 | --- | 9/23/2015 | <0.50 | --- | <10 | 33 | 47 | 80 |
| C00394 | --- | 9/23/2015 | <0.50 | --- | <10 | 53 | 82 | 135 |
| C00395 | --- | 9/23/2015 | <0.50 | --- | 19 | 58 | 79 | 137 |
| C00396 | --- | 9/23/2015 | <0.50 | --- | <10 | 47 | 57 | 104 |
| C00397 | --- | 9/23/2015 | <0.50 | --- | <50 | 86 | 140 | 226 |
| C00398 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00399 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00400 | --- | 9/23/2015 | <0.50 | --- | 83 | 220 | 220 | 440 |
| C00401 | --- | 9/23/2015 | <0.50 | --- | 26 | 150 | 240 | 390 |
| C00402 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00403 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | 16 | 16 |
| C00404 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00405 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | 14 | 14 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00406 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00407 | --- | 9/23/2015 | <0.50 | --- | <10 | 29 | 39 | 68 |
| C00408 | --- | 9/23/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00294 | --- | 6/4/2015 | <0.50 | --- | 66 | 430 | 290 | 720 |
| C00295 | --- | 6/4/2015 | <0.50 | --- | 81 | 400 | 290 | 690 |
| C00296 | --- | 6/4/2015 | <0.50 | --- | 25 | 170 | 190 | 360 |
| C00297 | --- | 6/4/2015 | <0.50 | --- | 18 | 120 | 130 | 250 |
| C00298 | --- | 6/4/2015 | <0.50 | --- | 18 | 130 | 140 | 270 |
| C00299 | --- | 6/4/2015 | <0.50 | --- | 20 | 140 | 150 | 290 |
| C00300 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00301 | --- | 6/4/2015 | <0.50 | --- | 12 | 100 | 120 | 220 |
| C00302 | --- | 6/4/2015 | <0.50 | --- | 18 | 160 | 160 | 320 |
| C00303 | --- | 6/4/2015 | <0.50 | --- | <10 | 81 | 85 | 166 |
| C00304 | --- | 6/4/2015 | <0.50 | --- | 21 | 160 | 170 | 330 |
| C00305 | --- | 6/4/2015 | <0.50 | --- | 18 | 170 | 170 | 340 |
| C00306 | --- | 6/4/2015 | <0.50 | --- | 15 | 120 | 130 | 250 |
| C00307 | --- | 6/4/2015 | <0.50 | --- | 14 | 130 | 130 | 260 |
| C00308 | --- | 6/4/2015 | <0.50 | --- | <10 | 99 | 110 | 209 |
| C00309 | --- | 6/4/2015 | <0.50 | --- | 24 | 160 | 150 | 310 |
| C00310 | --- | 6/4/2015 | <0.50 | --- | 27 | 200 | 180 | 380 |
| C00311 | --- | 6/4/2015 | <0.50 | --- | 27 | 170 | 160 | 330 |
| C00312 | --- | 6/4/2015 | <0.50 | --- | 62 | 360 | 290 | 650 |
| C00313 | --- | 6/4/2015 | <0.50 | --- | 29 | 220 | 190 | 410 |
| C00040 | --- | 4/30/2015 | <0.50 | 1.9 | 39 | 150 | 90 | 239 |
| C00041 | --- | 4/30/2015 | <0.50 | <1.0 | 27 | 111 | 67 | 178 |
| C00042 | --- | 4/30/2015 | <0.50 | <1.0 | 23 | 107 | 71 | 177 |
| C00043 | --- | 4/30/2015 | <0.50 | <1.0 | 19 | 90 | 59 | 148 |
| C00044 | --- | 4/30/2015 | <0.50 | <1.0 | <1.0 | 5.7 | 1.1 | 6.8 |
| C00045 | --- | 4/30/2015 | <0.50 | <1.0 | 31 | 163 | 81 | 244 |
| C00046 | --- | 4/30/2015 | <0.50 | <1.0 | 41 | 187 | 99 | 286 |
| C00047 | --- | 4/30/2015 | <0.50 | <1.0 | 37 | 194 | 97 | 291 |
| C00048 | --- | 4/30/2015 | <0.50 | 6.4 | 93 | 267 | 109 | 376 |
| C00049 | --- | 4/30/2015 | <0.50 | 0.55 | 45 | 125 | 87 | 212 |
| C00050 | --- | 4/30/2015 | <0.50 | <1.0 | 17 | 76 | 50 | 126 |
| C00051 | --- | 4/30/2015 | <0.50 | <1.0 | 17 | 90 | 80 | 169 |
| C00052 | --- | 4/30/2015 | <0.50 | <1.0 | 3.1 | 24 | 7.2 | 31 |
| C00053 | --- | 4/30/2015 | <0.50 | <1.0 | <1.0 | 1.0 | <1.0 | 1.0 |
| C00054 | --- | 4/30/2015 | <0.50 | <1.0 | 4.4 | 39 | 26 | 65 |
| C00055 | --- | 4/30/2015 | <0.50 | <1.0 | 18 | 88 | 49 | 137 |
| C00056 | --- | 4/30/2015 | <0.50 | <1.0 | 33 | 153 | 79 | 232 |
| C00057 | --- | 4/30/2015 | <0.50 | 0.55 | 28 | 250 | 193 | 443 |
| C00058 | --- | 4/30/2015 | <0.50 | <1.0 | 6.7 | 49 | 30 | 79 |
| C00059 | --- | 4/30/2015 | <0.50 | <1.0 | 0.80 | 26 | 24 | 50 |
| C00060 | --- | 4/30/2015 | <0.50 | <1.0 | 6.2 | 132 | 117 | 249 |
| C00061 | --- | 4/30/2015 | <0.50 | <1.0 | 31 | 165 | 89 | 253 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00062 | --- | 4/30/2015 | <0.50 | <1.0 | 46 | 224 | 110 | 334 |
| C00063 | --- | 4/30/2015 | <0.50 | <1.0 | 19 | 107 | 56 | 163 |
| C00064 | --- | 4/30/2015 | <0.50 | <1.0 | 30 | 156 | 88 | 244 |
| C00065 | --- | 4/30/2015 | <0.50 | 1.1 | 28 | 150 | 97 | 246 |
| CS-10-40A-JD * | --- | 7/1/2015 | <0.50 | --- | 16 | 110 | 120 | 230 |
| CS-10-42A-L * | Lower | 7/1/2015 | <0.50 | --- | 26 | 120 | 120 | 240 |
| CS-10-42A-M * | Middle | 7/1/2015 | <0.50 | --- | 18 | 130 | 130 | 260 |
| CS-10-46A-L * | Lower | 7/1/2015 | <0.50 | --- | 37 | 220 | 220 | 440 |
| CS-10-46A-M * | Middle | 7/1/2015 | <0.50 | --- | 56 | 320 | 270 | 590 |
| CS-10-48A-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-10-54A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 29 | 26 | 55 |
| CS-10-61A-JD * | --- | 7/1/2015 | <0.50 | --- | 31 | 190 | 170 | 360 |
| CS-10-65-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| C00090 | --- | 5/28/2015 | <0.50 | <1.0 | 12 | 68 | 98 | 165 |
| C00091 | --- | 5/28/2015 | <0.50 | <1.0 | 0.80 | 13 | 17 | 30 |
| C00092 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | 1.2 | 1.2 |
| C00093 | --- | 5/28/2015 | <0.50 | <1.0 | 2.6 | 22 | 25 | 47 |
| C00094 | --- | 5/28/2015 | <0.50 | <1.0 | 6.0 | 35 | 41 | 76 |
| C00095 | --- | 5/28/2015 | <0.50 | <1.0 | 2.1 | 26 | 39 | 65 |
| C00096 | --- | 5/28/2015 | <0.50 | <1.0 | 9.2 | 46 | 42 | 88 |
| C00097 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00098 | --- | 5/28/2015 | <0.50 | <1.0 | 12 | 32 | 45 | 78 |
| C00099 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 6.7 | 12 | 18 |
| C00100 | --- | 5/28/2015 | <0.50 | <1.0 | 1.5 | 11 | 6.2 | 17 |
| C00101 | --- | 5/28/2015 | <0.50 | <1.0 | 18 | 58 | 26 | 84 |
| C00102 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 5.7 | 3.9 | 10 |
| C00103 | --- | 5/28/2015 | <0.50 | <1.0 | 11 | 58 | 39 | 98 |
| C00104 | --- | 5/28/2015 | <0.50 | <1.0 | 1.5 | 28 | 18 | 46 |
| C00105 | --- | 5/28/2015 | <0.50 | <1.0 | 2.2 | 20 | 17 | 37 |
| C00106 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00107 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00108 | --- | 5/28/2015 | <0.50 | <1.0 | 3.4 | 25 | 14 | 40 |
| C00109 | --- | 5/28/2015 | <0.50 | <1.0 | 2.5 | 18 | 9.7 | 27 |
| C00110 | --- | 5/28/2015 | <0.50 | <1.0 | 10 | 52 | 35 | 87 |
| C00111 | --- | 5/28/2015 | <0.50 | <1.0 | 7.0 | 39 | 28 | 67 |
| C00112 | --- | 5/28/2015 | <0.50 | <1.0 | 12 | 80 | 51 | 131 |
| C00113 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 2.6 | <1.0 | 2.6 |
| C00114 | --- | 5/28/2015 | <0.50 | <1.0 | 2.5 | 17 | 4.5 | 22 |
| C00115 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 1.0 | <1.0 | 1.0 |
| C00116 | --- | 5/28/2015 | <0.50 | <1.0 | 2.7 | 19 | 9.6 | 29 |
| C00117 | --- | 5/28/2015 | <0.50 | <1.0 | 6.8 | 36 | 23 | 59 |
| C00118 | --- | 5/28/2015 | <0.50 | <1.0 | <1.0 | 6.0 | 3.8 | 10 |
| C00119 | --- | 5/28/2015 | <0.50 | <1.0 | 26 | 109 | 67 | 176 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00120 | --- | 5/28/2015 | <0.50 | <1.0 | 0.55 | 10 | 7.1 | 17 |
| C00209 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | 12 | 12 |
| C00210 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00211 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00212 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00213 | --- | 6/2/2015 | <0.50 | --- | 11 | 100 | 120 | 220 |
| C00214 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00215 | --- | 6/2/2015 | <0.50 | --- | 42 | 62 | 51 | 113 |
| C00216 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00217 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00218 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00219 | --- | 6/2/2015 | <0.50 | --- | <10 | 44 | 46 | 90 |
| C00220 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00221 | --- | 6/2/2015 | <0.50 | --- | <10 | 25 | 33 | 58 |
| C00222 | --- | 6/2/2015 | <0.50 | --- | <10 | 12 | 20 | 32 |
| C00223 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00224 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00225 | --- | 6/2/2015 | <0.50 | --- | <10 | 58 | 65 | 123 |
| C00226 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | 15 | 15 |
| C00227 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00228 | --- | 6/2/2015 | <0.50 | --- | <10 | 29 | 40 | 69 |
| C00229 | --- | 6/2/2015 | <0.50 | --- | <10 | 40 | 60 | 100 |
| C00230 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00231 | --- | 6/2/2015 | <0.50 | --- | 13 | 78 | 84 | 162 |
| C00232 | --- | 6/2/2015 | <0.50 | --- | <10 | 49 | 58 | 107 |
| C00233 | --- | 6/2/2015 | <0.50 | --- | <10 | 52 | 61 | 113 |
| C00234 | --- | 6/2/2015 | <0.50 | --- | <10 | 55 | 58 | 113 |
| C00235 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | 21 | 21 |
| C00236 | --- | 6/2/2015 | <0.50 | --- | 13 | 83 | 81 | 164 |
| C00237 | --- | 6/2/2015 | <0.50 | --- | <10 | 39 | 52 | 91 |
| C00238 | --- | 6/2/2015 | <0.50 | --- | <10 | 21 | 32 | 53 |
| C00239 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00240 | --- | 6/2/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-12-212A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-12-213-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-12-215A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | 19 | 19 |
| CS-12-218A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 13 | 41 | 54 |
| CS-12-223A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 25 | 78 | 103 |
| CS-12-226A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 21 | 53 | 74 |
| CS-12-233A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | 20 | 55 | 75 |
| CS-12-233A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | 49 | 120 | 169 |
| CS-12-233-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-12-236A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | 61 | 140 | 201 |
| CS-12-236A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | 32 | 83 | 115 |
| CS-12-238A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | <10 | 11 | 11 |
| CS-12-238A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-12-240A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00150 | --- | 6/1/2015 | <0.50 | <1.0 | 31 | 40 | 19 | 60 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00151 | --- | 6/1/2015 | <0.50 | <1.0 | 16 | 52 | 26 | 77 |
| C00152 | --- | 6/1/2015 | <0.50 | 31 | 46 | 156 | 78 | 234 |
| C00153 | --- | 6/1/2015 | <0.50 | <1.0 | 3.0 | 21 | 11 | 32 |
| C00154 | --- | 6/1/2015 | <0.50 | <1.0 | 7.5 | 44 | 26 | 70 |
| C00155 | --- | 6/1/2015 | <0.50 | <1.0 | 16 | 80 | 53 | 134 |
| C00156 | --- | 6/1/2015 | <0.50 | <1.0 | 15 | 74 | 43 | 117 |
| C00157 | --- | 6/1/2015 | <0.50 | <1.0 | 17 | 37 | 20 | 57 |
| C00158 | --- | 6/1/2015 | <0.50 | <1.0 | 1.7 | 10 | 7.2 | 17 |
| C00159 | --- | 6/1/2015 | <0.50 | <1.0 | 1.2 | 8.2 | 2.6 | 11 |
| C00160 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00161 | --- | 6/1/2015 | <0.50 | <1.0 | 7.9 | 39 | 22 | 61 |
| C00162 | --- | 6/1/2015 | <0.50 | <1.0 | 6.1 | 33 | 22 | 54 |
| C00163 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 7.3 | 2.8 | 10 |
| C00164 | --- | 6/1/2015 | <0.50 | <1.0 | 3.4 | 19 | 9.4 | 29 |
| C00165 | --- | 6/1/2015 | <0.50 | <1.0 | 42 | 66 | 29 | 95 |
| C00166 | --- | 6/1/2015 | <0.50 | <1.0 | 7.2 | 33 | 16 | 49 |
| C00167 | --- | 6/1/2015 | <0.50 | <1.0 | 3.9 | 22 | 8.8 | 31 |
| C00168 | --- | 6/1/2015 | <0.50 | <1.0 | 7.7 | 52 | 52 | 104 |
| C00169 | --- | 6/1/2015 | <0.50 | 1.5 | 38 | 122 | 69 | 191 |
| C00170 | --- | 6/1/2015 | <0.50 | <1.0 | 11 | 27 | 28 | 55 |
| C00171 | --- | 6/1/2015 | <0.50 | <1.0 | 14 | 57 | 64 | 121 |
| C00172 | --- | 6/1/2015 | <0.50 | <1.0 | 16 | 20 | 13 | 33 |
| C00173 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 2.8 | 3.9 | 6.7 |
| C00174 | --- | 6/1/2015 | <0.50 | <1.0 | 14 | 73 | 63 | 136 |
| C00175 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 2.6 | 2.3 | 4.8 |
| C00176 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00177 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00178 | --- | 6/1/2015 | <0.50 | <1.0 | 40 | 287 | 286 | 573 |
| C00179 | --- | 6/1/2015 | <0.50 | <1.0 | 6.7 | 52 | 49 | 101 |
| C00180 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 2.5 | 0.65 | 3.1 |
| C00181 | --- | 6/1/2015 | <0.50 | <1.0 | 6.3 | 43 | 38 | 81 |
| C00182 | --- | 6/1/2015 | <0.50 | <1.0 | 8.9 | 46 | 44 | 90 |
| C00183 | --- | 6/1/2015 | <0.50 | <1.0 | 0.70 | 13 | 17 | 30 |
| C00184 | --- | 6/1/2015 | <0.50 | <1.0 | 4.0 | 33 | 32 | 65 |
| C00185 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00186 | --- | 6/1/2015 | <0.50 | <1.0 | 2.7 | 20 | 21 | 41 |
| C00187 | --- | 6/1/2015 | <0.50 | 4.1 | 59 | 121 | 88 | 209 |
| C00188 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00189 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 8.1 | 10 | 18 |
| C00190 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00191 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 1.4 | <1.0 | 1.4 |
| C00192 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00193 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 7.2 | 2.1 | 9.3 |
| C00194 | --- | 6/1/2015 | <0.50 | <1.0 | 0.65 | 22 | 30 | 52 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00195 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00196 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 0.60 | 1.6 | 2.2 |
| C00197 | --- | 6/1/2015 | <0.50 | <1.0 | 0.75 | 13 | 13 | 26 |
| C00198 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 3.0 | 4.1 | 7.0 |
| C00199 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 3.2 | 2.4 | 5.5 |
| C00200 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 3.1 | 1.8 | 4.9 |
| C00201 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 2.7 | 2.9 | 5.6 |
| C00202 | --- | 6/1/2015 | <0.50 | <1.0 | 33 | 195 | 208 | 402 |
| C00203 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 1.4 | <1.0 | 1.4 |
| C00204 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00205 | --- | 6/1/2015 | <0.50 | <1.0 | 0.90 | 11 | 10 | 21 |
| C00206 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | 1.2 | <1.0 | 1.2 |
| C00207 | --- | 6/1/2015 | <0.50 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| C00208 | --- | 6/1/2015 | <0.50 | <1.0 | 10 | 70 | 74 | 144 |
| CS-14-179A-JD * | --- | 7/1/2015 | <0.50 | --- | 11 | 79 | 72 | 151 |
| CS-14-180-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-14-183A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 14 | 14 | 28 |
| CS-14-186A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 34 | 34 | 68 |
| CS-14-190A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-193A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | 17 | 19 | 36 |
| CS-14-197A-JD * | --- | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-200A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-200A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-202A-L * | Lower | 7/1/2015 | <0.50 | --- | 22 | 150 | 120 | 270 |
| CS-14-202A-M * | Middle | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-202-JD * | --- | 7/1/2015 | <0.50 | --- | --- | --- | --- | --- |
| CS-14-207A-L * | Lower | 7/1/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| CS-14-207A-M * | Middle | 7/1/2015 | <0.50 | --- | 17 | 85 | 67 | 152 |
| C00266 | --- | 6/3/2015 | <0.50 | --- | <10 | 36 | 35 | 71 |
| C00267 | --- | 6/3/2015 | <0.50 | --- | 39 | 190 | 200 | 390 |
| C00268 | --- | 6/3/2015 | <0.50 | --- | <10 | 15 | 14 | 29 |
| C00269 | --- | 6/3/2015 | <0.50 | --- | <10 | 23 | 21 | 44 |
| C00270 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00271 | --- | 6/3/2015 | <0.50 | --- | <10 | 16 | 20 | 36 |
| C00272 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00273 | --- | 6/3/2015 | <0.50 | --- | <10 | 64 | 69 | 133 |
| C00274 | --- | 6/3/2015 | <0.50 | --- | <10 | 38 | 40 | 78 |
| C00275 | --- | 6/3/2015 | <0.50 | --- | <10 | 22 | 28 | 50 |
| C00276 | --- | 6/3/2015 | <0.50 | --- | <10 | 21 | 28 | 49 |
| C00277 | --- | 6/3/2015 | <0.50 | --- | 21 | 120 | 130 | 250 |
| C00278 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00279 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00280 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00281 | --- | 6/3/2015 | <0.50 | --- | <10 | 24 | 28 | 52 |
| C00282 | --- | 6/3/2015 | <0.50 | --- | <10 | 52 | 68 | 120 |
| C00283 | --- | 6/3/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00284 | --- | 6/3/2015 | <0.50 | --- | <10 | 27 | 35 | 62 |
| C00285 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00286 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00287 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00288 | --- | 6/4/2015 | <0.50 | --- | 47 | 31 | <10 | 31 |
| C00289 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00290 | --- | 6/4/2015 | <0.50 | --- | 26 | 35 | 23 | 58 |
| C00291 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00292 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00293 | --- | 6/4/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00378 | --- | 9/22/2015 | <0.50 | --- | <10 | 68 | 68 | 136 |
| C00379 | --- | 9/22/2015 | <0.50 | --- | <10 | 24 | 31 | 55 |
| C00381 | --- | 9/22/2015 | <0.50 | --- | <10 | 22 | 27 | 49 |
| C00382 | --- | 9/22/2015 | <0.50 | --- | <10 | <10 | <10 | <31 |
| C00383 | --- | 9/22/2015 | <0.50 | --- | <10 | 12 | 14 | 26 |
| C00384 | --- | 9/22/2015 | <0.50 | --- | 17 | 140 | 140 | 280 |
| C00385 | --- | 9/22/2015 | <0.50 | --- | 23 | 190 | 170 | 360 |
| C00386 | --- | 9/22/2015 | <0.50 | --- | <10 | <10 | <10 | <31 |
| C00314 | --- | 9/21/2015 | <0.50 | --- | <10 | 11 | 13 | 24 |
| C00315 | --- | 9/21/2015 | <0.50 | --- | <10 | 47 | 63 | 110 |
| C00316 | --- | 9/21/2015 | <0.50 | --- | <10 | 80 | 120 | 200 |
| C00317 | --- | 9/21/2015 | <0.50 | --- | 19 | 160 | 170 | 330 |
| C00318 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | 14 | 14 |
| C00319 | --- | 9/21/2015 | <0.50 | --- | 99 | 300 | 280 | 580 |
| C00320 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00321 | --- | 9/21/2015 | <0.50 | --- | <10 | 20 | 37 | 57 |
| C00322 | --- | 9/21/2015 | <0.50 | --- | <10 | 50 | 76 | 126 |
| C00323 | --- | 9/21/2015 | <0.50 | --- | 60 | 320 | 300 | 620 |
| C00324 | --- | 9/21/2015 | <0.50 | --- | <10 | 24 | 37 | 61 |
| C00325 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | 12 | 12 |
| C00326 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00327 | --- | 9/21/2015 | <0.50 | --- | <10 | 31 | 39 | 70 |
| C00328 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00329 | --- | 9/21/2015 | <0.50 | --- | <10 | 11 | 19 | 30 |
| C00330 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00331 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | 14 | 14 |
| C00332 | --- | 9/21/2015 | <0.50 | --- | <10 | 20 | 25 | 45 |
| C00333 | --- | 9/21/2015 | <0.50 | --- | <10 | 17 | 31 | 48 |
| C00334 | --- | 9/21/2015 | <0.50 | --- | 79 | 210 | 98 | 308 |
| C00335 | --- | 9/21/2015 | <0.50 | --- | 13 | 65 | 58 | 123 |
| C00336 | --- | 9/21/2015 | <0.50 | --- | 24 | 110 | 79 | 189 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00337 | --- | 9/21/2015 | <0.50 | --- | <10 | 30 | 22 | 52 |
| C00338 | --- | 9/21/2015 | <0.50 | --- | 30 | 130 | 92 | 222 |
| C00339 | --- | 9/21/2015 | <0.50 | --- | 37 | 160 | 110 | 270 |
| C00340 | --- | 9/21/2015 | <0.50 | --- | 73 | 160 | 100 | 260 |
| C00341 | --- | 9/21/2015 | <0.50 | --- | 12 | 65 | 51 | 116 |
| C00342 | --- | 9/21/2015 | <0.50 | --- | 11 | 59 | 46 | 105 |
| C00343 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00344 | --- | 9/21/2015 | <0.50 | --- | <10 | 46 | 34 | 80 |
| C00345 | --- | 9/21/2015 | <0.50 | --- | 11 | 71 | 35 | 106 |
| C00346 | --- | 9/21/2015 | <0.50 | --- | <10 | 20 | 21 | 41 |
| C00347 | --- | 9/21/2015 | <0.50 | --- | <10 | 24 | 22 | 46 |
| C00348 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00349 | --- | 9/21/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00350 | --- | 9/21/2015 | <0.50 | --- | <10 | 35 | 24 | 59 |
| C00410 | --- | 10/27/2015 | <0.50 | --- | 40 | 160 | 120 | 280 |
| C00411 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00412 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00413 | --- | 10/27/2015 | <0.50 | --- | <10 | 39 | 25 | 64 |
| C00414 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00415 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00416 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00417 | --- | 10/27/2015 | <0.50 | --- | <10 | 32 | 33 | 65 |
| C00418 | --- | 10/27/2015 | <0.50 | --- | <10 | 12 | <10 | 12 |
| C00419 | --- | 10/27/2015 | <0.50 | --- | 18 | 89 | 61 | 150 |
| C00420 | --- | 10/27/2015 | <0.50 | --- | <10 | 23 | 15 | 38 |
| C00421 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00422 | --- | 10/27/2015 | <0.50 | --- | 14 | 31 | 20 | 51 |
| C00423 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00424 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00425 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00426 | --- | 10/27/2015 | <0.50 | --- | <10 | 39 | 30 | 69 |
| C00427 | --- | 10/27/2015 | <0.50 | --- | 13 | 110 | 85 | 195 |
| C00428 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00429 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00430 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00431 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00432 | --- | 10/27/2015 | <0.50 | --- | 67 | 120 | 58 | 178 |
| C00433 | --- | 10/27/2015 | <0.50 | --- | <10 | 23 | 17 | 40 |
| C00434 | --- | 10/27/2015 | <0.50 | --- | <10 | 33 | 31 | 64 |
| C00435 | --- | 10/27/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00436 | --- | 10/28/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00437 | --- | 10/28/2015 | <0.50 | --- | <10 | 35 | 22 | 57 |
| C00438 | --- | 10/28/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00439 | --- | 10/28/2015 | <0.50 | --- | <10 | 67 | 51 | 118 |
| C00440 | --- | 10/28/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00441 | --- | 10/28/2015 | <0.50 | --- | <10 | 27 | 22 | 49 |
| C00442 | --- | 10/28/2015 | <0.50 | --- | <10 | 24 | 20 | 44 |
| C00443 | --- | 10/28/2015 | <0.50 | --- | 18 | 99 | 75 | 174 |
| C00444 | --- | 10/28/2015 | <0.50 | --- | <10 | 41 | 31 | 72 |
| C00445 | --- | 10/28/2015 | <0.50 | --- | 11 | 74 | 54 | 128 |
| C00446 | --- | 10/28/2015 | <0.50 | --- | <10 | 50 | 35 | 85 |
| C00447 | --- | 10/28/2015 | <0.50 | --- | 25 | 140 | 96 | 236 |
| C00448 | --- | 10/28/2015 | <0.50 | --- | <10 | 24 | 18 | 42 |
| C00449 | --- | 10/28/2015 | <0.50 | --- | <10 | 14 | <10 | 14 |
| C00450 | --- | 10/28/2015 | <0.50 | --- | <10 | 11 | <10 | 11 |
| C00451 | --- | 10/28/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00452 | --- | 10/28/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00473 | --- | 12/7/2015 | <0.50 | --- | <10 | 10 | <10 | 10 |
| C00474 | --- | 12/7/2015 | <0.50 | --- | <10 | 30 | 39 | 69 |
| C00475 | --- | 12/7/2015 | <0.50 | --- | <10 | 57 | 63 | 120 |
| C00476 | --- | 12/7/2015 | <0.50 | --- | <10 | 43 | 49 | 92 |
| C00477 | --- | 12/7/2015 | <0.50 | --- | 14 | 83 | 71 | 154 |
| C00478 | --- | 12/7/2015 | <0.50 | --- | <10 | 26 | 40 | 66 |
| C00479 | --- | 12/7/2015 | <0.50 | --- | <10 | 33 | 61 | 94 |
| C00480 | --- | 12/7/2015 | <0.50 | --- | <10 | 40 | 50 | 90 |
| C00481 | --- | 12/7/2015 | <0.50 | --- | <10 | 10 | <10 | 10 |
| C00482 | --- | 12/7/2015 | <0.50 | --- | <10 | 88 | 85 | 173 |
| C00483 | --- | 12/7/2015 | <0.50 | --- | 29 | 270 | 210 | 480 |
| C00484 | --- | 12/7/2015 | <0.50 | --- | 10 | 86 | 84 | 170 |
| C00485 | --- | 12/7/2015 | <0.50 | --- | 29 | 170 | 130 | 300 |
| C00486 | --- | 12/7/2015 | <0.50 | --- | <10 | 17 | 19 | 36 |
| C00487 | --- | 12/7/2015 | <0.50 | --- | <10 | 26 | 28 | 54 |
| C00488 | --- | 12/7/2015 | <0.50 | --- | 22 | 68 | 74 | 142 |
| C00489 | --- | 12/7/2015 | <0.50 | --- | 13 | 110 | 110 | 220 |
| C00490 | --- | 12/7/2015 | <0.50 | --- | <10 | 85 | 94 | 179 |
| C00491 | --- | 12/7/2015 | <0.50 | --- | <10 | 89 | 110 | 199 |
| C00492 | --- | 12/7/2015 | <0.50 | --- | 12 | 130 | 140 | 270 |
| C00493 | --- | 12/7/2015 | <0.50 | --- | 84 | 150 | 110 | 260 |
| C00494 | --- | 12/7/2015 | <0.50 | --- | <10 | 49 | 47 | 96 |
| C00495 | --- | 12/7/2015 | <0.50 | --- | <10 | 120 | 86 | 206 |
| C00496 | --- | 12/7/2015 | <0.50 | --- | <10 | 180 | 210 | 390 |
| C00497 | --- | 12/7/2015 | <0.50 | --- | 54 | 330 | 210 | 540 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00498 | --- | 12/7/2015 | <0.50 | --- | 30 | 240 | 190 | 430 |
| C00499 | --- | 12/7/2015 | <0.50 | --- | <10 | 76 | 91 | 167 |
| C00500 | --- | 12/7/2015 | <0.50 | --- | 11 | 94 | 88 | 182 |
| C00501 | --- | 12/7/2015 | <0.50 | --- | <10 | 31 | 47 | 78 |
| C00502 | --- | 12/7/2015 | <0.50 | --- | <10 | 50 | 54 | 104 |
| C00503 | --- | 12/7/2015 | <0.50 | --- | <10 | 29 | 33 | 62 |
| C00504 | --- | 12/7/2015 | <0.50 | --- | <10 | 91 | 92 | 183 |
| C00506 | --- | 12/7/2015 | <0.50 | --- | <10 | 53 | 56 | 109 |
| C00507 | --- | 12/7/2015 | <0.50 | --- | <10 | 72 | 64 | 136 |
| C00508 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00509 | --- | 12/15/2015 | <0.50 | --- | <10 | 20 | 12 | 32 |
| C00510 | --- | 12/15/2015 | <0.50 | --- | <10 | 120 | 100 | 220 |
| C00511 | --- | 12/15/2015 | <0.50 | --- | <10 | 13 | 12 | 25 |
| C00512 | --- | 12/15/2015 | <0.50 | --- | <10 | 58 | 41 | 99 |
| C00513 | --- | 12/15/2015 | <0.50 | --- | <10 | 33 | 25 | 58 |
| C00514 | --- | 12/15/2015 | <0.50 | --- | 16 | 10 | <10 | 10 |
| C00515 | --- | 12/15/2015 | <0.50 | --- | <10 | 11 | <10 | 11 |
| C00516 | --- | 12/15/2015 | <0.50 | --- | <10 | 30 | 19 | 49 |
| C00517 | --- | 12/15/2015 | <0.50 | --- | <10 | 11 | <10 | 11 |
| C00518 | --- | 12/15/2015 | <0.50 | --- | <10 | 10 | <10 | 10 |
| C00519 | --- | 12/15/2015 | <0.50 | --- | <10 | 39 | 36 | 75 |
| C00520 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00521 | --- | 12/15/2015 | <0.50 | --- | <10 | 13 | 11 | 24 |
| C00522 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00523 | --- | 12/15/2015 | <0.50 | --- | 20 | 160 | 96 | 256 |
| C00524 | --- | 12/15/2015 | <0.50 | --- | <10 | 70 | 50 | 120 |
| C00525 | --- | 12/15/2015 | <0.50 | --- | 22 | 380 | 130 | 510 |
| C00526 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00527 | --- | 12/15/2015 | <0.50 | --- | 40 | 23 | <10 | 23 |
| C00528 | --- | 12/15/2015 | <0.50 | --- | <10 | 37 | 40 | 77 |
| C00529 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00530 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00532 | --- | 12/15/2015 | <0.50 | --- | 13 | 48 | 31 | 79 |
| C00533 | --- | 12/15/2015 | <0.50 | --- | 39 | 200 | 150 | 350 |
| C00534 | --- | 12/15/2015 | <0.50 | --- | <10 | 16 | 10 | 26 |
| C00535 | --- | 12/15/2015 | <0.50 | --- | <10 | 14 | <10 | 14 |
| C00536 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00537 | --- | 12/15/2015 | 0.63 | --- | <10 | <10 | <10 | <10 |
| C00538 | --- | 12/15/2015 | <0.50 | --- | <10 | 20 | <10 | 20 |
| C00539 | --- | 12/15/2015 | 0.65 | --- | 12 | 140 | 110 | 250 |
| C00540 | --- | 12/15/2015 | <0.50 | --- | <10 | 41 | 30 | 71 |

Table B-1
2016 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth | Date Sampled (ft bgs) | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range (C6-C12) (mg/kg) | Carbon Range (C13-C22) (mg/kg) | Carbon Range (C23-C32) (mg/kg) | Carbon Range (C33-C44) (mg/kg) | Carbon Range (C23-C44) (mg/kg) |
|--|--------------|--------------------------|--|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | 100 | --- | --- | 1,000 |
| C00541 | --- | 12/15/2015 | <0.50 | --- | 99 | 340 | 180 | 520 |
| C00542 | --- | 12/15/2015 | <0.50 | --- | <10 | 30 | 20 | 50 |
| C00543 | --- | 12/15/2015 | <0.50 | --- | 14 | 130 | 88 | 218 |
| C00544 | --- | 12/15/2015 | 1.30 | --- | 70 | 88 | 58 | 146 |
| C00545 | --- | 12/15/2015 | <0.50 | --- | 15 | 28 | 13 | 41 |
| C00546 | --- | 12/15/2015 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00547 | --- | 12/15/2015 | <0.50 | --- | 11 | 30 | 22 | 52 |
| C00548 | --- | 12/15/2015 | <0.50 | --- | 39 | 110 | 86 | 196 |
| C00549 | --- | 12/15/2015 | <0.50 | --- | 57 | 150 | 120 | 270 |
| C00550 | --- | 12/15/2015 | <0.50 | --- | 25 | 61 | 41 | 102 |
| C00551 | --- | 12/15/2015 | <0.50 | --- | 11 | 32 | 24 | 56 |
| C00552 | --- | 12/15/2015 | <0.50 | --- | 36 | 16 | <10 | 16 |
| C00505-A | --- | 1/7/2016 | <0.50 | --- | <10 | 11 | <10 | 11 |
| C00505-B | --- | 1/7/2016 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00505-C | --- | 1/7/2016 | <0.50 | --- | 28 | 77 | 57 | 134 |
| C00505-D | --- | 1/7/2016 | <0.50 | --- | <10 | 120 | 170 | 290 |
| C00531A | --- | 1/21/2016 | <0.50 | --- | 12 | 87 | 100 | 187 |
| C00531B | --- | 1/21/2016 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00531C | --- | 1/21/2016 | <0.50 | --- | <10 | <10 | <10 | <10 |
| C00531D | --- | 1/21/2016 | <0.50 | --- | 15 | 120 | 110 | 230 |
| Number of Samples | | | 952 | 360 | 936 | 936 | 936 | 923 |
| Number of Detections | | | 7 | 18 | 277 | 497 | 470 | 498 |
| Detection Frequency | | | 1% | 5% | 30% | 53% | 50% | 54% |
| Mean | | | 0.77 | 4.2 | 30 | 83 | 76 | 154 |
| Standard Deviation | | | 0.26 | 7.2 | 54 | 112 | 104 | 202 |
| Minimum Detected Concentration | | | 0.61 | 0.55 | 0.55 | 0.60 | 0.55 | 1.0 |
| Maximum Detected Concentration | | | 1.3 | 31 | 604 | 1,200 | 1,268 | 1,710 |

Notes: All concentrations are presented in milligrams per kilogram (mg/kg).
Detections are shown in **bold**.
C13-C22 = carbon chains ranging from C13 through C22.
ft bgs = feet below ground surface.
<10 = not detected at or above the indicated laboratory reporting limit.
RWQCB = Regional Water Quality Control Board.
Hydrocarbon Chain Identification by EPA Method 8015B(M).
GRO by EPA Method 8260B/5035.
-- = not applicable.
* = resampled locations.

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| EX-4-S2-1 | 1 | 4/7/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | |
|--|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|--------------|--------------|--------------|--------------|--------------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | |
| EX-35-S3-9 | 9 | 11/17/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoflorm (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|--------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| EX-19-E1-6 | 6 | 12/7/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00066 | --- | 5/5/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | |
| C00083 | --- | 5/5/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00361 | --- | 9/21/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00043 | --- | 4/30/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | 2,2-Dichloropropane (mg/kg) | 1,1-Dichloropropylene (mg/kg) | trans-1,3-Dichloropropylene (mg/kg) | cis-1,3-Dichloropropylene (mg/kg) | Diisopropyl ether (DIPE) (mg/kg) | Ethylbenzene (mg/kg) | Ethyl-tert-Butyl Ether (ETBE) (mg/kg) | Hexachlorobutadiene (mg/kg) | 2-Hexanone (MEK) (mg/kg) | Isopropylbenzene (mg/kg) | 4-Isopropyltoluene (mg/kg) | 4-Methyl-2-pentanone (MIBK) (mg/kg) | Methylene Chloride (mg/kg) | Methyl-tert-Butyl Ether (MTBE) (mg/kg) | Naphthalene (mg/kg) | n-Propylbenzene (mg/kg) | Styrene (mg/kg) | 1,1,1,2-Tetrachloroethane (mg/kg) | 1,1,2,2-Tetrachloroethane (mg/kg) | Tetrachloroethylene (PCE) (mg/kg) | Toluene (mg/kg) | 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) (mg/kg) | 1,2,3-Trichlorobenzene (mg/kg) | 1,2,4-Trichlorobenzene (mg/kg) | 1,1,1-Trichloroethane (mg/kg) | 1,1,2-Trichloroethane (mg/kg) | Trichloroethylene (TCE) (mg/kg) | Trichlorofluoromethane (R11) (mg/kg) | 1,2,3-Trichloropropane (mg/kg) | 1,2,4-Trimethylbenzene (mg/kg) | 1,3,5-Trimethylbenzene (mg/kg) | Vinyl Chloride (mg/kg) | o-Xylene (mg/kg) | m,p-Xylenes (mg/kg) | Gasoline Range Organics (GRO) (mg/kg) | | |
|---|-----------------------|--------------|-----------------------------|-------------------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------|---------------------------------------|-----------------------------|--------------------------|--------------------------|----------------------------|-------------------------------------|----------------------------|--|---------------------|-------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------|--|--------------------------------|--------------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------|------------------|---------------------|---------------------------------------|---------|-------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.424 | 1.44 | 0.005 | 0.01 | 0.05 | 4.78 | 0.005 | 0.05 | 0.05 | 0.005 | 0.231 | 1.87 | 0.399 | 0.005 | 0.005 | 0.005 | 0.444 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 1.8 | 1.77 | 0.005 | -- | -- | 500 | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.212 | 1.07 | 0.005 | 0.01 | 0.05 | 0.303 | 0.005 | 0.05 | 0.05 | 0.005 | 0.012 | 0.114 | 0.03 | 0.005 | 0.005 | 0.005 | 0.356 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.12 | 0.118 | 0.005 | -- | -- | 100 | | |
| C00361 | --- | 9/21/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 | |
| C00043 | --- | 4/30/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00044 | --- | 4/30/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00120 | --- | 5/28/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|-------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00209 | --- | 6/2/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | |
| C00165 | --- | 6/1/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | 2,2-Dichloropropane (mg/kg) | 1,1-Dichloroethylene (mg/kg) | trans-1,3-Dichloropropylene (mg/kg) | cis-1,3-Dichloropropylene (mg/kg) | Diisopropyl ether (DIPE) (mg/kg) | Ethylbenzene (mg/kg) | Ethyl-tert-Butyl Ether (ETBE) (mg/kg) | Hexachlorobutadiene (mg/kg) | 2-Hexanone (MBK) (mg/kg) | Isopropylbenzene (mg/kg) | 4-Isopropyltoluene (mg/kg) | 4-Methyl-2-pentanone (MIBK) (mg/kg) | Methylene Chloride (mg/kg) | Methyl-tert-Butyl Ether (MTBE) (mg/kg) | Naphthalene (mg/kg) | n-Propylbenzene (mg/kg) | Styrene (mg/kg) | 1,1,1,2-Tetrachloroethane (mg/kg) | 1,1,2,2-Tetrachloroethane (mg/kg) | Tetrachloroethylene (PCE) (mg/kg) | Toluene (mg/kg) | 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) (mg/kg) | 1,2,3-Trichlorobenzene (mg/kg) | 1,2,4-Trichlorobenzene (mg/kg) | 1,1,1-Trichloroethane (mg/kg) | 1,1,2-Trichloroethane (mg/kg) | Trichloroethylene (TCE) (mg/kg) | Trichlorofluoromethane (R11) (mg/kg) | 1,2,3-Trichloropropane (mg/kg) | 1,2,4-Trimethylbenzene (mg/kg) | 1,3,5-Trimethylbenzene (mg/kg) | Vinyl chloride (mg/kg) | o-Xylene (mg/kg) | m,p-Xylenes (mg/kg) | Gasoline Range Organics (GRO) (mg/kg) | |
|---|-----------------------|--------------|-----------------------------|------------------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------|---------------------------------------|-----------------------------|--------------------------|--------------------------|----------------------------|-------------------------------------|----------------------------|--|---------------------|-------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------|--|--------------------------------|--------------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------|------------------|---------------------|---------------------------------------|-------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.424 | 1.44 | 0.005 | 0.01 | 0.05 | 4.78 | 0.005 | 0.05 | 0.05 | 0.005 | 0.231 | 1.87 | 0.399 | 0.005 | 0.005 | 0.005 | 0.444 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 1.8 | 1.77 | 0.005 | -- | -- | 500 | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.212 | 1.07 | 0.005 | 0.01 | 0.05 | 0.303 | 0.005 | 0.05 | 0.05 | 0.005 | 0.012 | 0.114 | 0.03 | 0.005 | 0.005 | 0.005 | 0.356 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.12 | 0.118 | 0.005 | -- | -- | 100 | | |
| C00209 | --- | 6/2/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 |
| C00165 | --- | 6/1/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00166 | --- | 6/1/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00270 | --- | 6/3/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromofluoromethane (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|----------------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00271 | --- | 6/3/2015 | <0.050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00343 | --- | 9/21/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | 2,2-Dichloropropane (mg/kg) | 1,1-Dichloropropylene (mg/kg) | trans-1,3-Dichloropropylene (mg/kg) | cis-1,3-Dichloropropylene (mg/kg) | Diisopropyl ether (DIPE) (mg/kg) | Ethylbenzene (mg/kg) | Ethyl-tert-Butyl Ether (ETBE) (mg/kg) | Hexachlorobutadiene (mg/kg) | 2-Hexanone (MIBK) (mg/kg) | Isopropylbenzene (mg/kg) | 4-Isopropyltoluene (mg/kg) | 4-Methyl-2-pentanone (MIBK) (mg/kg) | Methylene Chloride (mg/kg) | Methyl-tert-Butyl Ether (MTBE) (mg/kg) | Naphthalene (mg/kg) | n-Propylbenzene (mg/kg) | Styrene (mg/kg) | 1,1,1,2-Tetrachloroethane (mg/kg) | 1,1,2,2-Tetrachloroethane (mg/kg) | Tetrachloroethylene (PCE) (mg/kg) | Toluene (mg/kg) | 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) (mg/kg) | 1,2,3-Trichlorobenzene (mg/kg) | 1,2,4-Trichlorobenzene (mg/kg) | 1,1,1-Trichloroethane (mg/kg) | 1,1,2-Trichloroethane (mg/kg) | Trichloroethylene (TCE) (mg/kg) | Trichlorofluoromethane (R11) (mg/kg) | 1,2,3-Trichloropropane (mg/kg) | 1,2,4-Trimethylbenzene (mg/kg) | 1,3,5-Trimethylbenzene (mg/kg) | Vinyl chloride (mg/kg) | o-Xylene (mg/kg) | m,p-Xylenes (mg/kg) | Gasoline Range Organics (GRO) (mg/kg) | |
|--|-----------------------|--------------|-----------------------------|-------------------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------|---------------------------------------|-----------------------------|---------------------------|--------------------------|----------------------------|-------------------------------------|----------------------------|--|---------------------|-------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------|--|--------------------------------|--------------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------|------------------|---------------------|---------------------------------------|-------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.424 | 1.44 | 0.005 | 0.01 | 0.05 | 4.78 | 0.005 | 0.05 | 0.05 | 0.005 | 0.231 | 1.87 | 0.399 | 0.005 | 0.005 | 0.005 | 0.444 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 1.8 | 1.77 | 0.005 | --- | --- | 500 | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.212 | 1.07 | 0.005 | 0.01 | 0.05 | 0.303 | 0.005 | 0.05 | 0.05 | 0.005 | 0.012 | 0.114 | 0.03 | 0.005 | 0.005 | 0.005 | 0.356 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.12 | 0.118 | 0.005 | --- | --- | 100 | | |
| C00271 | --- | 6/3/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | Acetone (mg/kg) | tert-Amyl Methyl Ether (TAME) (mg/kg) | Benzene (mg/kg) | Bromobenzene (mg/kg) | Bromochloromethane (mg/kg) | Bromodichloromethane (mg/kg) | Bromoform (mg/kg) | Bromomethane (mg/kg) | 2-Butanone (MEK) (mg/kg) | tert-Butyl alcohol (TBA) (mg/kg) | sec-Butylbenzene (mg/kg) | tert-Butylbenzene (mg/kg) | n-Butylbenzene (mg/kg) | Carbon Disulfide (mg/kg) | Carbon Tetrachloride (mg/kg) | Chlorobenzene (mg/kg) | Chloroethane (mg/kg) | Chloroform (mg/kg) | Chloromethane (mg/kg) | 2-Chlorotoluene (mg/kg) | 4-Chlorotoluene (mg/kg) | 1,2-Dibromo-3-chloropropane (mg/kg) | Dibromochloromethane (mg/kg) | 1,2-Dibromoethane (EDB) (mg/kg) | Dibromomethane (mg/kg) | 1,2-Dichlorobenzene (mg/kg) | 1,3-Dichlorobenzene (mg/kg) | 1,4-Dichlorobenzene (mg/kg) | Dichlorodifluoromethane (R12) (mg/kg) | 1,1-Dichloroethane (mg/kg) | 1,2-Dichloroethane (EDC) (mg/kg) | trans-1,2-Dichloroethylene (mg/kg) | cis-1,2-Dichloroethylene (mg/kg) | 1,1-Dichloroethylene (mg/kg) | 1,2-Dichloropropane (mg/kg) | 1,3-Dichloropropane (mg/kg) | | | | | | |
|---|-----------------------|--------------|-----------------|---------------------------------------|-----------------|----------------------|----------------------------|------------------------------|-------------------|----------------------|--------------------------|----------------------------------|--------------------------|---------------------------|------------------------|--------------------------|------------------------------|-----------------------|----------------------|--------------------|-----------------------|-------------------------|-------------------------|-------------------------------------|------------------------------|---------------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------------|----------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.994 | 0.005 | 0.013 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 2.22 | 1.78 | 3.4 | 0.046 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 1.28 | 0.005 | 0.011 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.05 | 0.02 | 0.129 | 0.11 | 0.179 | 0.023 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.01 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| C00485 | --- | 12/7/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| C00548 | --- | 12/15/2015 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | <0.020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Table B-2
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil (0 to 10 feet bgs)
 Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Date Sampled | 2,2-Dichloropropane (mg/kg) | 1,1-Dichloropropylene (mg/kg) | trans-1,3-Dichloropropylene (mg/kg) | cis-1,3-Dichloropropylene (mg/kg) | Diisopropyl ether (DIPE) (mg/kg) | Ethylbenzene (mg/kg) | Ethyl-tert-Butyl Ether (ETBE) (mg/kg) | Hexachlorobutadiene (mg/kg) | 2-Hexanone (MBK) (mg/kg) | Isopropylbenzene (mg/kg) | 4-Isopropyltoluene (mg/kg) | 4-Methyl-2-pentanone (MIBK) (mg/kg) | Methylene Chloride (mg/kg) | Methyl-tert-Butyl Ether (MTBE) (mg/kg) | Naphthalene (mg/kg) | n-Propylbenzene (mg/kg) | Styrene (mg/kg) | 1,1,1,2-Tetrachloroethane (mg/kg) | 1,1,2,2-Tetrachloroethane (mg/kg) | Tetrachloroethylene (PCE) (mg/kg) | Toluene (mg/kg) | 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) (mg/kg) | 1,2,3-Trichlorobenzene (mg/kg) | 1,2,4-Trichlorobenzene (mg/kg) | 1,1,1-Trichloroethane (mg/kg) | 1,1,2-Trichloroethane (mg/kg) | Trichloroethylene (TCE) (mg/kg) | Trichlorofluoromethane (R11) (mg/kg) | 1,2,3-Trichloropropane (mg/kg) | 1,2,4-Trimethylbenzene (mg/kg) | 1,3,5-Trimethylbenzene (mg/kg) | Vinyl chloride (mg/kg) | o-Xylene (mg/kg) | m,p-Xylenes (mg/kg) | Gasoline Range Organics (GRO) (mg/kg) | | |
|---|-----------------------|--------------|-----------------------------|-------------------------------|-------------------------------------|-----------------------------------|----------------------------------|----------------------|---------------------------------------|-----------------------------|--------------------------|--------------------------|----------------------------|-------------------------------------|----------------------------|--|---------------------|-------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------|--|--------------------------------|--------------------------------|-------------------------------|-------------------------------|---------------------------------|--------------------------------------|--------------------------------|--------------------------------|--------------------------------|------------------------|------------------|---------------------|---------------------------------------|---------|-------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.424 | 1.44 | 0.005 | 0.01 | 0.05 | 4.78 | 0.005 | 0.05 | 0.05 | 0.005 | 0.231 | 1.87 | 0.399 | 0.005 | 0.005 | 0.005 | 0.444 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 1.8 | 1.77 | 0.005 | -- | -- | 500 | |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 0.005 | 0.005 | 0.005 | 0.005 | 0.212 | 1.07 | 0.005 | 0.01 | 0.05 | 0.303 | 0.005 | 0.05 | 0.05 | 0.005 | 0.012 | 0.114 | 0.03 | 0.005 | 0.005 | 0.005 | 0.356 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.12 | 0.118 | 0.005 | -- | -- | 100 | | |
| C00485 | --- | 12/7/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 | |
| C00548 | --- | 12/15/2015 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.010 | <0.050 | <0.0050 | <0.0050 | <0.050 | <0.0050 | <0.010 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0020 | <0.0020 | <0.0020 | <0.50 |

2017 ANALYTICAL RESULTS

Table B-3
2017 Analytical Results for Gasoline Range Organics and Hydrocarbon Chain Ranges
in Soil (0 to 10 feet bgs)

Defense Fuel Support Point Norwalk
 15306 Norwalk Boulevard, Norwalk, California

| Sample ID | Sample Depth (ft bgs) | Sample Date | Gasoline Range Organics (GRO) (mg/kg) | Carbon Range C13-C22 (mg/kg) | Carbon Range C23-C32 (mg/kg) | Carbon Range C32-C44 (mg/kg) | Carbon Range C32-C44 (mg/kg) |
|--|--------------------------|-------------|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| RWQCB Site-Specific Soil Cleanup Goal (0.5 feet below ground surface) | | | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (5 feet below ground surface) | | | 500 | 1,000 | --- | --- | 10,000 |
| RWQCB Site-Specific Soil Cleanup Goal (10 feet below ground surface) | | | 100 | 100 | --- | --- | 1,000 |
| SB-24-5' | 5 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-24-10' | 10 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-25-5' | 5 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-25-10' | 10 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-26-5' | 5 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-26-10' | 10 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-27-5' | 5 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |
| SB-27-10' | 10 | 2/15/2017 | <0.50 | <10 | <10 | <10 | <10 |

Notes: All concentrations are presented in milligrams per kilogram (mg/kg).
 Detections are shown in **bold**.
 C13-C22 = carbon chains ranging from C13 through C22.
 ft bgs = feet below ground surface.
 <0.50 = not detected at or above the indicated laboratory reporting limit.
 RWQCB = Regional Water Quality Control Board.
 Hydrocarbon Chain Identification by EPA Method 8015B(M).
 GRO by EPA Method 8260B/5035.

APPENDIX C

ANALYTICAL RESULTS FOR VOCs IN SOIL GAS

2015/2016 ANALYTICAL RESULTS

Table C-1
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil Gas
 Defense Fuel Support Point Norwalk
 15306 Norwalk Blvd, Norwalk, CA 90650

| Sample ID | Depth (ft bgs) | Date Sampled | Acetone ($\mu\text{g}/\text{m}^3$) | Benzene ($\mu\text{g}/\text{m}^3$) | Toluene ($\mu\text{g}/\text{m}^3$) | Ethylbenzene ($\mu\text{g}/\text{m}^3$) | m,p-Xylene ($\mu\text{g}/\text{m}^3$) | o-Xylene ($\mu\text{g}/\text{m}^3$) | 2- Butanone (MEK) ($\mu\text{g}/\text{m}^3$) | 4- Ethyltoluene ($\mu\text{g}/\text{m}^3$) | 1,2,4- Trimethylbenzene ($\mu\text{g}/\text{m}^3$) |
|---------------------------------------|-------------------|-----------------|---|---|---|--|--|--|---|--|--|
| SV-1-5 | 5 | 03/11/16 | 140 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-14-5 | 5 | 03/09/16 | 61 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-17-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-18-5 | 5 | 03/08/16 | 83 | 30 | 120 | <22 | 66 | <22 | <60 | <50 | <50 |
| SV-19-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-20-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-21-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-22-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-23-5 | 5 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-24-5 | 5 | 03/10/16 | 86 | 28 | 110 | <22 | 57 | <22 | <60 | <50 | <50 |
| SV-24-5 REP | 5 | 03/10/16 | 170 | 29 | 110 | <22 | 48 | <22 | <60 | <50 | <50 |
| SV-25-5 | 5 | 03/09/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-26-5 | 5 | 03/09/16 | 67 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-27-5 | 5 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-28-5 | 5 | 03/10/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-29-5 | 5 | 03/08/16 | 58 | <16 | 40 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-3-5 | 5 | 03/11/16 | 59 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-30-5 | 5 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-31-5 | 5 | 03/10/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-32-5 | 5 | 03/08/16 | 55 | <16 | 66 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-32-5 REP | 5 | 03/08/16 | 63 | <16 | 70 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-35-5 | 5 | 03/11/16 | 54 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-38-5 | 5 | 03/10/16 | 190 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-4-5 | 5 | 03/11/16 | 75 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-41-5 | 5 | 03/10/16 | 100 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-5-5 | 5 | 03/11/16 | 54 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-5-5 REP | 5 | 03/11/16 | 75 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-94-5 | 5 | 03/10/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-96-5 | 5 | 03/10/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| Number of Samples | | | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |
| Number of Detections | | | 16 | 3 | 6 | 0 | 3 | 0 | 0 | 0 | 0 |
| Detection Frequency | | | 55% | 10% | 21% | 0% | 10% | 0% | 0% | 0% | 0% |
| Mean | | | 87 | 29 | 86 | ND | 57 | ND | ND | ND | ND |
| Standard Deviation | | | 43 | 1.0 | 32 | ND | 9.0 | ND | ND | ND | ND |
| Minimum Detected Concentration | | | 54 | 28 | 40 | ND | 48 | ND | ND | ND | ND |
| Maximum Detected Concentration | | | 190 | 30 | 120 | ND | 66 | ND | ND | ND | ND |

Table C-1
2016 Analytical Results for Volatile Organic Compounds (VOCs) in Soil Gas
 Defense Fuel Support Point Norwalk
 15306 Norwalk Blvd, Norwalk, CA 90650

| Sample ID | Depth (ft bgs) | Date Sampled | Acetone ($\mu\text{g}/\text{m}^3$) | Benzene ($\mu\text{g}/\text{m}^3$) | Toluene ($\mu\text{g}/\text{m}^3$) | Ethylbenzene ($\mu\text{g}/\text{m}^3$) | m,p-Xylene ($\mu\text{g}/\text{m}^3$) | o-Xylene ($\mu\text{g}/\text{m}^3$) | 2- Butanone (MEK) ($\mu\text{g}/\text{m}^3$) | 4- Ethyltoluene ($\mu\text{g}/\text{m}^3$) | 1,2,4- Trimethylbenzene ($\mu\text{g}/\text{m}^3$) |
|---------------------------------------|-------------------|-----------------|---|---|---|--|--|--|---|--|--|
| SV-1-10 | 10 | 03/11/16 | <48 | 98 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-14-10 | 10 | 03/09/16 | 96 | <16 | 110 | 29 | 66 | 31 | <60 | <50 | <50 |
| SV-17-10 | 10 | 03/09/16 | 59 | 49 | 200 | 27 | 75 | 28 | <60 | <50 | <50 |
| SV-18-10 | 10 | 03/08/16 | 69 | 34 | 130 | 27 | 60 | 31 | <60 | <50 | <50 |
| SV-19-10 | 10 | 03/09/16 | 51 | 38 | 200 | 33 | 93 | 35 | <60 | <50 | <50 |
| SV-19-10 REP | 10 | 03/09/16 | 49 | 34 | 190 | 27 | 86 | <22 | <60 | <50 | <50 |
| SV-20-10 | 10 | 03/09/16 | 77 | 65 | 390 | 56 | 170 | 48 | <60 | <50 | <50 |
| SV-21-10 | 10 | 03/09/16 | 63 | 72 | 380 | 43 | 190 | 51 | <60 | <50 | <50 |
| SV-22-10 | 10 | 03/09/16 | 100 | 53 | 230 | 36 | 120 | 34 | <60 | <50 | <50 |
| SV-23-10 | 10 | 03/08/16 | 72 | 39 | 150 | <22 | 48 | <22 | <60 | <50 | <50 |
| SV-24-10 | 10 | 03/10/16 | 320 | 18 | 96 | <22 | 51 | <22 | <60 | <50 | <50 |
| SV-25-10 | 10 | 03/09/16 | <48 | 42 | 260 | 69 | 270 | 74 | <60 | 59 | 52 |
| SV-26-10 | 10 | 03/09/16 | <48 | <16 | <38 | <22 | 46 | <22 | <60 | <50 | <50 |
| SV-27-10 | 10 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-28-10 | 10 | 03/10/16 | 150 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-29-10 | 10 | 03/08/16 | <48 | <16 | 41 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-3-10 | 10 | 03/11/16 | 57 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-30-10 | 10 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-31-10 | 10 | 03/10/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-32-10 | 10 | 03/08/16 | <48 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-35-10 | 10 | 03/11/16 | 52 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-38-10 | 10 | 03/10/16 | 91 | <16 | 40 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-4-10 | 10 | 03/11/16 | 130 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-41-10 | 10 | 03/10/16 | 100 | <16 | <38 | <22 | <44 | <22 | <60 | <50 | <50 |
| SV-5-10 | 10 | 03/11/16 | 530 | <16 | <38 | <22 | <44 | <22 | 70 | <50 | <50 |
| SV-94-10 | 10 | 03/10/16 | <48 | 31 | 140 | 26 | 89 | 28 | <60 | <50 | <50 |
| SV-96-10 | 10 | 03/10/16 | <48 | 33 | 140 | 25 | 84 | 29 | 77 | <50 | <50 |
| Number of Samples | | | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| Number of Detections | | | 17 | 13 | 15 | 11 | 14 | 10 | 2 | 1 | 1 |
| Detection Frequency | | | 63% | 48% | 56% | 41% | 52% | 37% | 7% | 4% | 4% |
| Mean | | | 122 | 47 | 180 | 36 | 103 | 39 | 74 | NE | NE |
| Standard Deviation | | | 123 | 21 | 104 | 14 | 65 | 15 | 4.9 | NE | NE |
| Minimum Detected Concentration | | | 49 | 18 | 40 | 25 | 46 | 28 | 70 | 59 | 52 |
| Maximum Detected Concentration | | | 530 | 98 | 390 | 69 | 270 | 74 | 77 | 59 | 52 |

Notes: Analytes detected during the 2016 site investigation in soil gas are included in this table. Detected concentrations are shown in **bold**.
 ft bgs = feet below ground surface.
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.
 <48 = not detected at or above the indicated laboratory reporting limit.
 ND = not detected.
 NE = not estimated.

2017 ANALYTICAL RESULTS

APPENDIX D

PROUCL STATISTICAL EVALUATION

TOTAL PETROLEUM HYDROCARBONS IN SOIL (0 TO 10 FEET BGS)

**ProUCL Statistical Evaluation of Total Petroleum Hydrocarbons (C6-C12) in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-------|---------------------------------|-------|
| Total Number of Observations | 360 | Number of Distinct Observations | 19 |
| | | Number of Missing Observations | 396 |
| Number of Detects | 18 | Number of Non-Detects | 342 |
| Number of Distinct Detects | 16 | Number of Distinct Non-Detects | 4 |
| Minimum Detect | 0.55 | Minimum Non-Detect | 1 |
| Maximum Detect | 31.4 | Maximum Non-Detect | 10 |
| Variance Detects | 52.31 | Percent Non-Detects | 95% |
| Mean Detects | 4.164 | SD Detects | 7.232 |
| Median Detects | 1.625 | CV Detects | 1.737 |
| Skewness Detects | 3.495 | Kurtosis Detects | 13.31 |
| Mean of Logged Detects | 0.663 | SD of Logged Detects | 1.166 |

Normal GOF Test on Detects Only

| | | |
|--------------------------------|-------|---|
| Shapiro Wilk Test Statistic | 0.524 | Shapiro Wilk GOF Test |
| 5% Shapiro Wilk Critical Value | 0.897 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.309 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.202 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-------|-----------------------------------|-------|
| KM Mean | 0.84 | KM Standard Error of Mean | 0.108 |
| KM SD | 1.753 | 95% KM (BCA) UCL | 1.053 |
| 95% KM (t) UCL | 1.018 | 95% KM (Percentile Bootstrap) UCL | 1.034 |
| 95% KM (z) UCL | 1.018 | 95% KM Bootstrap t UCL | 1.206 |
| 90% KM Chebyshev UCL | 1.164 | 95% KM Chebyshev UCL | 1.311 |
| 97.5% KM Chebyshev UCL | 1.515 | 99% KM Chebyshev UCL | 1.916 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|---|
| A-D Test Statistic | 1.043 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.777 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.203 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.211 | Detected data appear Gamma Distributed at 5% Significance Level |

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-------|---------------------------------|-------|
| k hat (MLE) | 0.78 | k star (bias corrected MLE) | 0.687 |
| Theta hat (MLE) | 5.34 | Theta star (bias corrected MLE) | 6.062 |
| nu hat (MLE) | 28.07 | nu star (bias corrected) | 24.73 |
| Mean (detects) | 4.164 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|--|--------|--|-------|
| Minimum | 0.01 | Mean | 0.576 |
| Maximum | 31.4 | Median | 0.01 |
| SD | 1.999 | CV | 3.473 |
| k hat (MLE) | 0.253 | k star (bias corrected MLE) | 0.253 |
| Theta hat (MLE) | 2.273 | Theta star (bias corrected MLE) | 2.275 |
| nu hat (MLE) | 182.4 | nu star (bias corrected) | 182.2 |
| Adjusted Level of Significance (β) | 0.0493 | | |
| Approximate Chi Square Value (182.22, α) | 152 | Adjusted Chi Square Value (182.22, β) | 151.9 |
| 95% Gamma Approximate UCL (use when n>=50) | 0.69 | 95% Gamma Adjusted UCL (use when n<50) | 0.691 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-------|-----------------|-------|
| Mean (KM) | 0.84 | SD (KM) | 1.753 |
| Variance (KM) | 3.071 | SE of Mean (KM) | 0.108 |
| k hat (KM) | 0.23 | k star (KM) | 0.229 |

| | | | |
|--|--------|---|--------|
| nu hat (KM) | 165.3 | nu star (KM) | 165.2 |
| theta hat (KM) | 3.658 | theta star (KM) | 3.659 |
| 80% gamma percentile (KM) | 1.18 | 90% gamma percentile (KM) | 2.533 |
| 95% gamma percentile (KM) | 4.167 | 99% gamma percentile (KM) | 8.571 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (165.22, α) | 136.5 | Adjusted Chi Square Value (165.22, β) | 136.4 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 1.016 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 1.017 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Test Statistic | 0.911 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.897 | Detected Data appear Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.14 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.202 | Detected Data appear Lognormal at 5% Significance Level | |
| Detected Data appear Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 0.969 | Mean in Log Scale | -0.41 |
| SD in Original Scale | 1.822 | SD in Log Scale | 0.791 |
| 95% t UCL (assumes normality of ROS data) | 1.128 | 95% Percentile Bootstrap UCL | 1.15 |
| 95% BCA Bootstrap UCL | 1.222 | 95% Bootstrap t UCL | 1.293 |
| 95% H-UCL (Log ROS) | 0.985 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -0.374 | KM Geo Mean | 0.688 |
| KM SD (logged) | 0.395 | 95% Critical H Value (KM-Log) | 1.748 |
| KM Standard Error of Mean (logged) | 0.0751 | 95% H-UCL (KM -Log) | 0.772 |
| KM SD (logged) | 0.395 | 95% Critical H Value (KM-Log) | 1.748 |
| KM Standard Error of Mean (logged) | 0.0751 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.703 | Mean in Log Scale | -0.613 |
| SD in Original Scale | 1.782 | SD in Log Scale | 0.416 |
| 95% t UCL (Assumes normality) | 0.858 | 95% H-Stat UCL | 0.614 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Detected Data appear Approximate Gamma Distributed at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM Approximate Gamma UCL | 1.016 | | |

**ProUCL Statistical Evaluation of Total Petroleum Hydrocarbons (C13-C22) in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-------|---------------------------------|--------|
| Total Number of Observations | 936 | Number of Distinct Observations | 187 |
| | | Number of Missing Observations | 39 |
| Number of Detects | 277 | Number of Non-Detects | 659 |
| Number of Distinct Detects | 186 | Number of Distinct Non-Detects | 3 |
| Minimum Detect | 0.55 | Minimum Non-Detect | 1 |
| Maximum Detect | 603.7 | Maximum Non-Detect | 50 |
| Variance Detects | 2947 | Percent Non-Detects | 70.41% |
| Mean Detects | 29.6 | SD Detects | 54.29 |
| Median Detects | 16.8 | CV Detects | 1.834 |
| Skewness Detects | 6.793 | Kurtosis Detects | 58.78 |
| Mean of Logged Detects | 2.679 | SD of Logged Detects | 1.255 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|--------|--|
| Shapiro Wilk Test Statistic | 0.448 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.296 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.0536 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-------|-----------------------------------|-------|
| KM Mean | 9.7 | KM Standard Error of Mean | 1.058 |
| KM SD | 32.22 | 95% KM (BCA) UCL | 11.66 |
| 95% KM (t) UCL | 11.44 | 95% KM (Percentile Bootstrap) UCL | 11.59 |
| 95% KM (z) UCL | 11.44 | 95% KM Bootstrap t UCL | 12.06 |
| 90% KM Chebyshev UCL | 12.87 | 95% KM Chebyshev UCL | 14.31 |
| 97.5% KM Chebyshev UCL | 16.31 | 99% KM Chebyshev UCL | 20.23 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|--------|--|
| A-D Test Statistic | 4.022 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.793 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.109 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.0568 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-------|---------------------------------|-------|
| k hat (MLE) | 0.833 | k star (bias corrected MLE) | 0.826 |
| Theta hat (MLE) | 35.55 | Theta star (bias corrected MLE) | 35.83 |
| nu hat (MLE) | 461.3 | nu star (bias corrected) | 457.6 |
| Mean (detects) | 29.6 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|--------|--|-------|
| Minimum | 0.01 | Mean | 8.813 |
| Maximum | 603.7 | Median | 0.01 |
| SD | 32.43 | CV | 3.68 |
| k hat (MLE) | 0.167 | k star (bias corrected MLE) | 0.167 |
| Theta hat (MLE) | 52.77 | Theta star (bias corrected MLE) | 52.71 |
| nu hat (MLE) | 312.6 | nu star (bias corrected) | 313 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (312.98, α) | 273 | Adjusted Chi Square Value (312.98, β) | 272.9 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 10.1 | 95% Gamma Adjusted UCL (use when $n < 50$) | 10.11 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|--------|-----------------|--------|
| Mean (KM) | 9.7 | SD (KM) | 32.22 |
| Variance (KM) | 1038 | SE of Mean (KM) | 1.058 |
| k hat (KM) | 0.0907 | k star (KM) | 0.0911 |

| | | | |
|--|-----------|--|-------|
| nu hat (KM) | 169.7 | nu star (KM) | 170.5 |
| theta hat (KM) | 107 | theta star (KM) | 106.5 |
| 80% gamma percentile (KM) | 5.826 | 90% gamma percentile (KM) | 24.74 |
| 95% gamma percentile (KM) | 56.5 | 99% gamma percentile (KM) | 161.4 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (170.51, α) | 141.3 | Adjusted Chi Square Value (170.51, β) | 141.3 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 11.7 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 11.71 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.953 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 1.3107E-8 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.121 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0536 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 9.999 | Mean in Log Scale | 0.722 |
| SD in Original Scale | 32.16 | SD in Log Scale | 1.819 |
| 95% t UCL (assumes normality of ROS data) | 11.73 | 95% Percentile Bootstrap UCL | 11.92 |
| 95% BCA Bootstrap UCL | 12.41 | 95% Bootstrap t UCL | 12.48 |
| 95% H-UCL (Log ROS) | 12.76 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | 0.734 | KM Geo Mean | 2.083 |
| KM SD (logged) | 1.545 | 95% Critical H Value (KM-Log) | 2.581 |
| KM Standard Error of Mean (logged) | 0.0642 | 95% H-UCL (KM -Log) | 7.83 |
| KM SD (logged) | 1.545 | 95% Critical H Value (KM-Log) | 2.581 |
| KM Standard Error of Mean (logged) | 0.0642 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 11.31 | Mean in Log Scale | 1.421 |
| SD in Original Scale | 31.85 | SD in Log Scale | 1.393 |
| 95% t UCL (Assumes normality) | 13.02 | 95% H-Stat UCL | 12.2 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (Chebyshev) UCL | 14.31 | | |

**ProUCL Statistical Evaluation of Total Petroleum Hydrocarbons (C23-C32) in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-------|---------------------------------|-------|
| Total Number of Observations | 936 | Number of Distinct Observations | 293 |
| | | Number of Missing Observations | 39 |
| Number of Detects | 497 | Number of Non-Detects | 439 |
| Number of Distinct Detects | 293 | Number of Distinct Non-Detects | 2 |
| Minimum Detect | 0.6 | Minimum Non-Detect | 1 |
| Maximum Detect | 1200 | Maximum Non-Detect | 10 |
| Variance Detects | 12535 | Percent Non-Detects | 46.9% |
| Mean Detects | 82.95 | SD Detects | 112 |
| Median Detects | 44 | CV Detects | 1.35 |
| Skewness Detects | 4.118 | Kurtosis Detects | 28.59 |
| Mean of Logged Detects | 3.682 | SD of Logged Detects | 1.358 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|--------|--|
| Shapiro Wilk Test Statistic | 0.664 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.231 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.0401 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-------|-----------------------------------|-------|
| KM Mean | 44.71 | KM Standard Error of Mean | 2.982 |
| KM SD | 91.11 | 95% KM (BCA) UCL | 49.45 |
| 95% KM (t) UCL | 49.61 | 95% KM (Percentile Bootstrap) UCL | 49.58 |
| 95% KM (z) UCL | 49.61 | 95% KM Bootstrap t UCL | 50.25 |
| 90% KM Chebyshev UCL | 53.65 | 95% KM Chebyshev UCL | 57.7 |
| 97.5% KM Chebyshev UCL | 63.33 | 99% KM Chebyshev UCL | 74.37 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|--------|--|
| A-D Test Statistic | 1.853 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.794 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.0591 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.0421 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-------|---------------------------------|-------|
| k hat (MLE) | 0.805 | k star (bias corrected MLE) | 0.802 |
| Theta hat (MLE) | 103 | Theta star (bias corrected MLE) | 103.5 |
| nu hat (MLE) | 800.3 | nu star (bias corrected) | 796.8 |
| Mean (detects) | 82.95 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|--|--------|--|-------|
| Minimum | 0.01 | Mean | 44.05 |
| Maximum | 1200 | Median | 2.8 |
| SD | 91.46 | CV | 2.076 |
| k hat (MLE) | 0.186 | k star (bias corrected MLE) | 0.187 |
| Theta hat (MLE) | 236.3 | Theta star (bias corrected MLE) | 236.1 |
| nu hat (MLE) | 349 | nu star (bias corrected) | 349.2 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (349.24, α) | 306.9 | Adjusted Chi Square Value (349.24, β) | 306.9 |
| 95% Gamma Approximate UCL (use when n \geq 50) | 50.12 | 95% Gamma Adjusted UCL (use when n<50) | 50.13 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-------|-----------------|-------|
| Mean (KM) | 44.71 | SD (KM) | 91.11 |
| Variance (KM) | 8300 | SE of Mean (KM) | 2.982 |
| k hat (KM) | 0.241 | k star (KM) | 0.241 |

| | | | |
|--|-----------|--|-------|
| nu hat (KM) | 450.7 | nu star (KM) | 450.6 |
| theta hat (KM) | 185.7 | theta star (KM) | 185.7 |
| 80% gamma percentile (KM) | 64.03 | 90% gamma percentile (KM) | 134.5 |
| 95% gamma percentile (KM) | 218.8 | 99% gamma percentile (KM) | 444.4 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (450.63, α) | 402.4 | Adjusted Chi Square Value (450.63, β) | 402.3 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 50.06 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 50.07 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.964 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 2.7372E-9 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.0499 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0401 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 45.45 | Mean in Log Scale | 2.212 |
| SD in Original Scale | 90.81 | SD in Log Scale | 2.03 |
| 95% t UCL (assumes normality of ROS data) | 50.34 | 95% Percentile Bootstrap UCL | 50.26 |
| 95% BCA Bootstrap UCL | 50.98 | 95% Bootstrap t UCL | 51.04 |
| 95% H-UCL (Log ROS) | 87.89 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | 1.896 | KM Geo Mean | 6.657 |
| KM SD (logged) | 2.21 | 95% Critical H Value (KM-Log) | 3.271 |
| KM Standard Error of Mean (logged) | 0.0768 | 95% H-UCL (KM -Log) | 96.9 |
| KM SD (logged) | 2.21 | 95% Critical H Value (KM-Log) | 3.271 |
| KM Standard Error of Mean (logged) | 0.0768 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 45.71 | Mean in Log Scale | 2.36 |
| SD in Original Scale | 90.68 | SD in Log Scale | 1.871 |
| 95% t UCL (Assumes normality) | 50.59 | 95% H-Stat UCL | 72.89 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (Chebyshev) UCL | 57.7 | | |

**ProUCL Statistical Evaluation of Total Petroleum Hydrocarbons (C33-C44) in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-------|---------------------------------|--------|
| Total Number of Observations | 936 | Number of Distinct Observations | 261 |
| | | Number of Missing Observations | 39 |
| Number of Detects | 470 | Number of Non-Detects | 466 |
| Number of Distinct Detects | 260 | Number of Distinct Non-Detects | 3 |
| Minimum Detect | 0.55 | Minimum Non-Detect | 1 |
| Maximum Detect | 1268 | Maximum Non-Detect | 50 |
| Variance Detects | 10911 | Percent Non-Detects | 49.79% |
| Mean Detects | 76.13 | SD Detects | 104.5 |
| Median Detects | 44.4 | CV Detects | 1.372 |
| Skewness Detects | 5.638 | Kurtosis Detects | 51.73 |
| Mean of Logged Detects | 3.676 | SD of Logged Detects | 1.289 |

Normal GOF Test on Detects Only

| | | | |
|------------------------------|--------|--|--|
| Shapiro Wilk Test Statistic | 0.609 | Normal GOF Test on Detected Observations Only | |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.235 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0412 | Detected Data Not Normal at 5% Significance Level | |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-------|-----------------------------------|-------|
| KM Mean | 38.88 | KM Standard Error of Mean | 2.713 |
| KM SD | 82.88 | 95% KM (BCA) UCL | 43.07 |
| 95% KM (t) UCL | 43.35 | 95% KM (Percentile Bootstrap) UCL | 43.74 |
| 95% KM (z) UCL | 43.34 | 95% KM Bootstrap t UCL | 44.1 |
| 90% KM Chebyshev UCL | 47.02 | 95% KM Chebyshev UCL | 50.7 |
| 97.5% KM Chebyshev UCL | 55.82 | 99% KM Chebyshev UCL | 65.87 |

Gamma GOF Tests on Detected Observations Only

| | | | |
|-----------------------|--------|--|--|
| A-D Test Statistic | 1.509 | Anderson-Darling GOF Test | |
| 5% A-D Critical Value | 0.79 | Detected Data Not Gamma Distributed at 5% Significance Level | |
| K-S Test Statistic | 0.0549 | Kolmogorov-Smirnov GOF | |
| 5% K-S Critical Value | 0.0433 | Detected Data Not Gamma Distributed at 5% Significance Level | |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-------|---------------------------------|-------|
| k hat (MLE) | 0.892 | k star (bias corrected MLE) | 0.888 |
| Theta hat (MLE) | 85.35 | Theta star (bias corrected MLE) | 85.77 |
| nu hat (MLE) | 838.4 | nu star (bias corrected) | 834.4 |
| Mean (detects) | 76.13 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|--|--------|--|-------|
| Minimum | 0.01 | Mean | 38.23 |
| Maximum | 1268 | Median | 0.6 |
| SD | 83.21 | CV | 2.176 |
| k hat (MLE) | 0.182 | k star (bias corrected MLE) | 0.183 |
| Theta hat (MLE) | 209.5 | Theta star (bias corrected MLE) | 209.4 |
| nu hat (MLE) | 341.6 | nu star (bias corrected) | 341.8 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (341.84, α) | 300 | Adjusted Chi Square Value (341.84, β) | 299.9 |
| 95% Gamma Approximate UCL (use when n \geq 50) | 43.56 | 95% Gamma Adjusted UCL (use when n<50) | 43.57 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-------|-----------------|-------|
| Mean (KM) | 38.88 | SD (KM) | 82.88 |
| Variance (KM) | 6868 | SE of Mean (KM) | 2.713 |
| k hat (KM) | 0.22 | k star (KM) | 0.22 |

| | | | |
|--|-----------|--|-------|
| nu hat (KM) | 412 | nu star (KM) | 412 |
| theta hat (KM) | 176.7 | theta star (KM) | 176.7 |
| 80% gamma percentile (KM) | 53.67 | 90% gamma percentile (KM) | 117.5 |
| 95% gamma percentile (KM) | 195.2 | 99% gamma percentile (KM) | 406.2 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (412.01, α) | 366 | Adjusted Chi Square Value (412.01, β) | 365.9 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 43.77 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 43.78 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.955 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 9.992E-16 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.0638 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0412 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 39.93 | Mean in Log Scale | 2.216 |
| SD in Original Scale | 82.46 | SD in Log Scale | 1.909 |
| 95% t UCL (assumes normality of ROS data) | 44.37 | 95% Percentile Bootstrap UCL | 44.61 |
| 95% BCA Bootstrap UCL | 45.01 | 95% Bootstrap t UCL | 45.15 |
| 95% H-UCL (Log ROS) | 68.24 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | 1.788 | KM Geo Mean | 5.977 |
| KM SD (logged) | 2.16 | 95% Critical H Value (KM-Log) | 3.218 |
| KM Standard Error of Mean (logged) | 0.0791 | 95% H-UCL (KM -Log) | 77.38 |
| KM SD (logged) | 2.16 | 95% Critical H Value (KM-Log) | 3.218 |
| KM Standard Error of Mean (logged) | 0.0791 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 39.95 | Mean in Log Scale | 2.248 |
| SD in Original Scale | 82.44 | SD in Log Scale | 1.871 |
| 95% t UCL (Assumes normality) | 44.39 | 95% H-Stat UCL | 65.08 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (Chebyshev) UCL | 50.7 | | |

**ProUCL Statistical Evaluation of Total Petroleum Hydrocarbons (C23-C44) in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-------|---------------------------------|--------|
| Total Number of Observations | 923 | Number of Distinct Observations | 356 |
| | | Number of Missing Observations | 52 |
| Number of Detects | 498 | Number of Non-Detects | 425 |
| Number of Distinct Detects | 356 | Number of Distinct Non-Detects | 3 |
| Minimum Detect | 1 | Minimum Non-Detect | 1 |
| Maximum Detect | 1710 | Maximum Non-Detect | 31 |
| Variance Detects | 40732 | Percent Non-Detects | 46.05% |
| Mean Detects | 154.4 | SD Detects | 201.8 |
| Median Detects | 80.65 | CV Detects | 1.307 |
| Skewness Detects | 3.655 | Kurtosis Detects | 20.38 |
| Mean of Logged Detects | 4.308 | SD of Logged Detects | 1.377 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|--------|--|
| Shapiro Wilk Test Statistic | 0.671 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.224 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.0401 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-------|-----------------------------------|-------|
| KM Mean | 83.97 | KM Standard Error of Mean | 5.488 |
| KM SD | 166.6 | 95% KM (BCA) UCL | 93.61 |
| 95% KM (t) UCL | 93.01 | 95% KM (Percentile Bootstrap) UCL | 93.34 |
| 95% KM (z) UCL | 93 | 95% KM Bootstrap t UCL | 94.35 |
| 90% KM Chebyshev UCL | 100.4 | 95% KM Chebyshev UCL | 107.9 |
| 97.5% KM Chebyshev UCL | 118.2 | 99% KM Chebyshev UCL | 138.6 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|--------|--|
| A-D Test Statistic | 1.302 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.794 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.0572 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.0421 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-------|---------------------------------|-------|
| k hat (MLE) | 0.811 | k star (bias corrected MLE) | 0.807 |
| Theta hat (MLE) | 190.4 | Theta star (bias corrected MLE) | 191.3 |
| nu hat (MLE) | 807.4 | nu star (bias corrected) | 803.8 |
| Mean (detects) | 154.4 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|--------|--|-------|
| Minimum | 0.01 | Mean | 83.29 |
| Maximum | 1710 | Median | 9.3 |
| SD | 167 | CV | 2.005 |
| k hat (MLE) | 0.178 | k star (bias corrected MLE) | 0.178 |
| Theta hat (MLE) | 468.8 | Theta star (bias corrected MLE) | 468.4 |
| nu hat (MLE) | 328 | nu star (bias corrected) | 328.3 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (328.25, α) | 287.3 | Adjusted Chi Square Value (328.25, β) | 287.2 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 95.17 | 95% Gamma Adjusted UCL (use when $n < 50$) | 95.19 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-------|-----------------|-------|
| Mean (KM) | 83.97 | SD (KM) | 166.6 |
| Variance (KM) | 27740 | SE of Mean (KM) | 5.488 |
| k hat (KM) | 0.254 | k star (KM) | 0.254 |

| | | | |
|--|-----------|--|-------|
| nu hat (KM) | 469.3 | nu star (KM) | 469.1 |
| theta hat (KM) | 330.3 | theta star (KM) | 330.5 |
| 80% gamma percentile (KM) | 122.7 | 90% gamma percentile (KM) | 251.7 |
| 95% gamma percentile (KM) | 404.5 | 99% gamma percentile (KM) | 810.2 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (469.06, α) | 419.8 | Adjusted Chi Square Value (469.06, β) | 419.8 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 93.82 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 93.83 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.956 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 1.554E-15 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.0644 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0401 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 85.55 | Mean in Log Scale | 2.824 |
| SD in Original Scale | 165.9 | SD in Log Scale | 2.063 |
| 95% t UCL (assumes normality of ROS data) | 94.54 | 95% Percentile Bootstrap UCL | 94.67 |
| 95% BCA Bootstrap UCL | 96.85 | 95% Bootstrap t UCL | 95.45 |
| 95% H-UCL (Log ROS) | 174.7 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | 2.406 | KM Geo Mean | 11.09 |
| KM SD (logged) | 2.321 | 95% Critical H Value (KM-Log) | 3.392 |
| KM Standard Error of Mean (logged) | 0.0784 | 95% H-UCL (KM -Log) | 212.3 |
| KM SD (logged) | 2.321 | 95% Critical H Value (KM-Log) | 3.392 |
| KM Standard Error of Mean (logged) | 0.0784 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 84.87 | Mean in Log Scale | 2.691 |
| SD in Original Scale | 166.2 | SD in Log Scale | 2.158 |
| 95% t UCL (Assumes normality) | 93.88 | 95% H-Stat UCL | 190.1 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (Chebyshev) UCL | 107.9 | | |

VOLATILE ORGANIC COMPOUNDS IN SOIL (0 TO 10 FEET BGS)

**ProUCL Statistical Evaluation of Acetone in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|--------|
| Total Number of Observations | 942 | Number of Distinct Observations | 30 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 51 | Number of Non-Detects | 891 |
| Number of Distinct Detects | 29 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.051 | Minimum Non-Detect | 0.05 |
| Maximum Detect | 0.13 | Maximum Non-Detect | 0.05 |
| Variance Detects | 4.4195E-4 | Percent Non-Detects | 94.59% |
| Mean Detects | 0.0706 | SD Detects | 0.021 |
| Median Detects | 0.064 | CV Detects | 0.298 |
| Skewness Detects | 1.245 | Kurtosis Detects | 0.672 |
| Mean of Logged Detects | -2.688 | SD of Logged Detects | 0.268 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|-----------|--|
| Shapiro Wilk Test Statistic | 0.827 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 9.4901E-8 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.194 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.123 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|---------|-----------------------------------|-----------|
| KM Mean | 0.0511 | KM Standard Error of Mean | 2.2145E-4 |
| KM SD | 0.00673 | 95% KM (BCA) UCL | 0.0515 |
| 95% KM (t) UCL | 0.0515 | 95% KM (Percentile Bootstrap) UCL | 0.0515 |
| 95% KM (z) UCL | 0.0515 | 95% KM Bootstrap t UCL | 0.0515 |
| 90% KM Chebyshev UCL | 0.0518 | 95% KM Chebyshev UCL | 0.0521 |
| 97.5% KM Chebyshev UCL | 0.0525 | 99% KM Chebyshev UCL | 0.0533 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|--|
| A-D Test Statistic | 2.325 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.749 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.171 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.124 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|---------|---------------------------------|---------|
| k hat (MLE) | 13.47 | k star (bias corrected MLE) | 12.69 |
| Theta hat (MLE) | 0.00524 | Theta star (bias corrected MLE) | 0.00557 |
| nu hat (MLE) | 1374 | nu star (bias corrected) | 1295 |
| Mean (detects) | 0.0706 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|---------|---|---------|
| Minimum | 0.01 | Mean | 0.0153 |
| Maximum | 0.13 | Median | 0.01 |
| SD | 0.0155 | CV | 1.012 |
| k hat (MLE) | 2.531 | k star (bias corrected MLE) | 2.523 |
| Theta hat (MLE) | 0.00604 | Theta star (bias corrected MLE) | 0.00605 |
| nu hat (MLE) | 4768 | nu star (bias corrected) | 4754 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 4595 | Adjusted Chi Square Value (N/A, β) | 4595 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.0158 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.0158 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.0511 | SD (KM) | 0.00673 |
| Variance (KM) | 4.5289E-5 | SE of Mean (KM) | 2.2145E-4 |
| k hat (KM) | 57.7 | k star (KM) | 57.51 |

| | | | |
|--|-----------|--|-----------|
| nu hat (KM) | 108702 | nu star (KM) | 108357 |
| theta hat (KM) | 8.8597E-4 | theta star (KM) | 8.8879E-4 |
| 80% gamma percentile (KM) | 0.0567 | 90% gamma percentile (KM) | 0.0599 |
| 95% gamma percentile (KM) | 0.0627 | 99% gamma percentile (KM) | 0.0681 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 107592 | Adjusted Chi Square Value (N/A, β) | 107591 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.0515 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.0515 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.871 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 9.7279E-6 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.156 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.123 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 0.0194 | Mean in Log Scale | -4.228 |
| SD in Original Scale | 0.0167 | SD in Log Scale | 0.76 |
| 95% t UCL (assumes normality of ROS data) | 0.0203 | 95% Percentile Bootstrap UCL | 0.0204 |
| 95% BCA Bootstrap UCL | 0.0204 | 95% Bootstrap t UCL | 0.0203 |
| 95% H-UCL (Log ROS) | 0.0204 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -2.979 | KM Geo Mean | 0.0508 |
| KM SD (logged) | 0.0931 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00306 | 95% H-UCL (KM -Log) | N/A |
| KM SD (logged) | 0.0931 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00306 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.0275 | Mean in Log Scale | -3.635 |
| SD in Original Scale | 0.0114 | SD in Log Scale | 0.235 |
| 95% t UCL (Assumes normality) | 0.0281 | 95% H-Stat UCL | 0.0275 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.0515 | KM H-UCL | N/A |
| 95% KM (BCA) UCL | 0.0515 | | |

**ProUCL Statistical Evaluation of Ethylbenzene in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk
15306 Norwalk Boulevard
Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|---------|
| Total Number of Observations | 942 | Number of Distinct Observations | 7 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 10 | Number of Non-Detects | 932 |
| Number of Distinct Detects | 7 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.002 | Minimum Non-Detect | 0.002 |
| Maximum Detect | 0.0059 | Maximum Non-Detect | 0.002 |
| Variance Detects | 1.3329E-6 | Percent Non-Detects | 98.94% |
| Mean Detects | 0.00268 | SD Detects | 0.00115 |
| Median Detects | 0.0023 | CV Detects | 0.431 |
| Skewness Detects | 2.935 | Kurtosis Detects | 8.927 |
| Mean of Logged Detects | -5.976 | SD of Logged Detects | 0.312 |

Normal GOF Test on Detects Only

| | | |
|--------------------------------|-------|---|
| Shapiro Wilk Test Statistic | 0.549 | Shapiro Wilk GOF Test |
| 5% Shapiro Wilk Critical Value | 0.842 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.393 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.262 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-----------|-----------------------------------|-----------|
| KM Mean | 0.00201 | KM Standard Error of Mean | 4.5551E-6 |
| KM SD | 1.3263E-4 | 95% KM (BCA) UCL | 0.00202 |
| 95% KM (t) UCL | 0.00201 | 95% KM (Percentile Bootstrap) UCL | 0.00202 |
| 95% KM (z) UCL | 0.00201 | 95% KM Bootstrap t UCL | 0.00203 |
| 90% KM Chebyshev UCL | 0.00202 | 95% KM Chebyshev UCL | 0.00203 |
| 97.5% KM Chebyshev UCL | 0.00204 | 99% KM Chebyshev UCL | 0.00205 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|--|
| A-D Test Statistic | 1.635 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.726 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.348 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.267 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-----------|---------------------------------|-----------|
| k hat (MLE) | 9.364 | k star (bias corrected MLE) | 6.622 |
| Theta hat (MLE) | 2.8619E-4 | Theta star (bias corrected MLE) | 4.0472E-4 |
| nu hat (MLE) | 187.3 | nu star (bias corrected) | 132.4 |
| Mean (detects) | 0.00268 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
For such situations, GROS method may yield incorrect values of UCLs and BTVs
This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|-----------|---|-----------|
| Minimum | 0.002 | Mean | 0.00992 |
| Maximum | 0.01 | Median | 0.01 |
| SD | 7.5903E-4 | CV | 0.0765 |
| k hat (MLE) | 74.19 | k star (bias corrected MLE) | 73.96 |
| Theta hat (MLE) | 1.3374E-4 | Theta star (bias corrected MLE) | 1.3416E-4 |
| nu hat (MLE) | 139781 | nu star (bias corrected) | 139337 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 138470 | Adjusted Chi Square Value (N/A, β) | 138468 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.00998 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.00998 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.00201 | SD (KM) | 1.3263E-4 |
| Variance (KM) | 1.7591E-8 | SE of Mean (KM) | 4.5551E-6 |
| k hat (KM) | 229 | k star (KM) | 228.3 |

| | | | |
|--|----------------|--|-----------|
| nu hat (KM) | 431494 | nu star (KM) | 430121 |
| theta hat (KM) | 8.7640E-6 | theta star (KM) | 8.7919E-6 |
| 80% gamma percentile (KM) | 0.00212 | 90% gamma percentile (KM) | 0.00218 |
| 95% gamma percentile (KM) | 0.00223 | 99% gamma percentile (KM) | 0.00233 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 428597 | Adjusted Chi Square Value (N/A, β) | 428594 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.00201 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.00201 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Test Statistic | 0.657 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.842 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.321 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.262 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 2.4793E-4 | Mean in Log Scale | -8.932 |
| SD in Original Scale | 3.7745E-4 | SD in Log Scale | 1.126 |
| 95% t UCL (assumes normality of ROS data) | 2.6818E-4 | 95% Percentile Bootstrap UCL | 2.6942E-4 |
| 95% BCA Bootstrap UCL | 2.7031E-4 | 95% Bootstrap t UCL | 2.7050E-4 |
| 95% H-UCL (Log ROS) | 2.6981E-4 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -6.212 | KM Geo Mean | 0.00201 |
| KM SD (logged) | 0.0391 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00134 | 95% H-UCL (KM -Log) | N/A |
| KM SD (logged) | 0.0391 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00134 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.00102 | Mean in Log Scale | -6.898 |
| SD in Original Scale | 2.0597E-4 | SD in Log Scale | 0.1 |
| 95% t UCL (Assumes normality) | 0.00103 | 95% H-Stat UCL | 0.00102 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.00201 | KM H-UCL | N/A |
| 95% KM (BCA) UCL | 0.00202 | | |

**ProUCL Statistical Evaluation of Toluene in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|---------|
| Total Number of Observations | 942 | Number of Distinct Observations | 27 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 98 | Number of Non-Detects | 844 |
| Number of Distinct Detects | 27 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.002 | Minimum Non-Detect | 0.002 |
| Maximum Detect | 0.0073 | Maximum Non-Detect | 0.002 |
| Variance Detects | 1.0299E-6 | Percent Non-Detects | 89.6% |
| Mean Detects | 0.00287 | SD Detects | 0.00101 |
| Median Detects | 0.00255 | CV Detects | 0.354 |
| Skewness Detects | 2.143 | Kurtosis Detects | 5.717 |
| Mean of Logged Detects | -5.902 | SD of Logged Detects | 0.292 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|--------|--|
| Shapiro Wilk Test Statistic | 0.772 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.196 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.0897 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-----------|-----------------------------------|-----------|
| KM Mean | 0.00209 | KM Standard Error of Mean | 1.3746E-5 |
| KM SD | 4.1972E-4 | 95% KM (BCA) UCL | 0.00212 |
| 95% KM (t) UCL | 0.00211 | 95% KM (Percentile Bootstrap) UCL | 0.00211 |
| 95% KM (z) UCL | 0.00211 | 95% KM Bootstrap t UCL | 0.00212 |
| 90% KM Chebyshev UCL | 0.00213 | 95% KM Chebyshev UCL | 0.00215 |
| 97.5% KM Chebyshev UCL | 0.00218 | 99% KM Chebyshev UCL | 0.00223 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|--------|--|
| A-D Test Statistic | 3.971 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.752 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.157 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.0903 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-----------|---------------------------------|-----------|
| k hat (MLE) | 10.71 | k star (bias corrected MLE) | 10.39 |
| Theta hat (MLE) | 2.6777E-4 | Theta star (bias corrected MLE) | 2.7605E-4 |
| nu hat (MLE) | 2099 | nu star (bias corrected) | 2036 |
| Mean (detects) | 0.00287 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|---------|---|---------|
| Minimum | 0.002 | Mean | 0.00926 |
| Maximum | 0.01 | Median | 0.01 |
| SD | 0.0022 | CV | 0.238 |
| k hat (MLE) | 8.815 | k star (bias corrected MLE) | 8.788 |
| Theta hat (MLE) | 0.00105 | Theta star (bias corrected MLE) | 0.00105 |
| nu hat (MLE) | 16608 | nu star (bias corrected) | 16556 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 16258 | Adjusted Chi Square Value (N/A, β) | 16258 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.00943 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.00943 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.00209 | SD (KM) | 4.1972E-4 |
| Variance (KM) | 1.7617E-7 | SE of Mean (KM) | 1.3746E-5 |
| k hat (KM) | 24.8 | k star (KM) | 24.72 |

| | | | |
|--|----------------|--|-----------|
| nu hat (KM) | 46724 | nu star (KM) | 46577 |
| theta hat (KM) | 8.4281E-5 | theta star (KM) | 8.4548E-5 |
| 80% gamma percentile (KM) | 0.00243 | 90% gamma percentile (KM) | 0.00264 |
| 95% gamma percentile (KM) | 0.00283 | 99% gamma percentile (KM) | 0.00319 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 46076 | Adjusted Chi Square Value (N/A, β) | 46075 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.00211 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.00211 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.872 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 6.241E-12 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.142 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.0897 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 9.9859E-4 | Mean in Log Scale | -7.177 |
| SD in Original Scale | 8.2528E-4 | SD in Log Scale | 0.734 |
| 95% t UCL (assumes normality of ROS data) | 0.00104 | 95% Percentile Bootstrap UCL | 0.00104 |
| 95% BCA Bootstrap UCL | 0.00104 | 95% Bootstrap t UCL | 0.00105 |
| 95% H-UCL (Log ROS) | 0.00105 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -6.182 | KM Geo Mean | 0.00207 |
| KM SD (logged) | 0.134 | 95% Critical H Value (KM-Log) | 1.663 |
| KM Standard Error of Mean (logged) | 0.00438 | 95% H-UCL (KM -Log) | 0.0021 |
| KM SD (logged) | 0.134 | 95% Critical H Value (KM-Log) | 1.663 |
| KM Standard Error of Mean (logged) | 0.00438 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.00119 | Mean in Log Scale | -6.803 |
| SD in Original Scale | 6.5691E-4 | SD in Log Scale | 0.321 |
| 95% t UCL (Assumes normality) | 0.00123 | 95% H-Stat UCL | 0.00119 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.00211 | KM H-UCL | 0.0021 |
| 95% KM (BCA) UCL | 0.00212 | | |

ProUCL Statistical Evaluation of 1,2,4-Trimethylbenzene in Soil (0 to 10 feet bgs)

(Data in milligrams per kilogram [mg/kg])

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|-----------|
| Total Number of Observations | 942 | Number of Distinct Observations | 4 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 5 | Number of Non-Detects | 937 |
| Number of Distinct Detects | 4 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.005 | Minimum Non-Detect | 0.005 |
| Maximum Detect | 0.0056 | Maximum Non-Detect | 0.005 |
| Variance Detects | 4.7000E-8 | Percent Non-Detects | 99.47% |
| Mean Detects | 0.00528 | SD Detects | 2.1679E-4 |
| Median Detects | 0.0053 | CV Detects | 0.0411 |
| Skewness Detects | 0.422 | Kurtosis Detects | 1.435 |
| Mean of Logged Detects | -5.244 | SD of Logged Detects | 0.0409 |

Normal GOF Test on Detects Only

| | | | |
|---|-------|--|--|
| Shapiro Wilk Test Statistic | 0.951 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.762 | Detected Data appear Normal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.263 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.343 | Detected Data appear Normal at 5% Significance Level | |
| Detected Data appear Normal at 5% Significance Level | | | |

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-----------|-----------------------------------|-----------|
| KM Mean | 0.005 | KM Standard Error of Mean | 9.0227E-7 |
| KM SD | 2.4769E-5 | 95% KM (BCA) UCL | N/A |
| 95% KM (t) UCL | 0.005 | 95% KM (Percentile Bootstrap) UCL | N/A |
| 95% KM (z) UCL | 0.005 | 95% KM Bootstrap t UCL | N/A |
| 90% KM Chebyshev UCL | 0.005 | 95% KM Chebyshev UCL | 0.00501 |
| 97.5% KM Chebyshev UCL | 0.00501 | 99% KM Chebyshev UCL | 0.00501 |

Gamma GOF Tests on Detected Observations Only

| | | | |
|--|-------|---|--|
| A-D Test Statistic | 0.296 | Anderson-Darling GOF Test | |
| 5% A-D Critical Value | 0.678 | detected data appear Gamma Distributed at 5% Significance Level | |
| K-S Test Statistic | 0.254 | Kolmogorov-Smirnov GOF | |
| 5% K-S Critical Value | 0.357 | detected data appear Gamma Distributed at 5% Significance Level | |
| Detected data appear Gamma Distributed at 5% Significance Level | | | |

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-----------|---------------------------------|-----------|
| k hat (MLE) | 745.6 | k star (bias corrected MLE) | 298.4 |
| Theta hat (MLE) | 7.0815E-6 | Theta star (bias corrected MLE) | 1.7696E-5 |
| nu hat (MLE) | 7456 | nu star (bias corrected) | 2984 |
| Mean (detects) | 0.00528 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
 For such situations, GROS method may yield incorrect values of UCLs and BTVs
 This is especially true when the sample size is small.
 For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|--|-----------|--|-----------|
| Minimum | 0.005 | Mean | 0.00997 |
| Maximum | 0.01 | Median | 0.01 |
| SD | 3.4344E-4 | CV | 0.0344 |
| k hat (MLE) | 565.1 | k star (bias corrected MLE) | 563.3 |
| Theta hat (MLE) | 1.7651E-5 | Theta star (bias corrected MLE) | 1.7707E-5 |
| nu hat (MLE) | 1064698 | nu star (bias corrected) | 1061309 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 1058914 | Adjusted Chi Square Value (N/A, β) | 1058910 |
| 95% Gamma Approximate UCL (use when n>=50) | 0.01 | 95% Gamma Adjusted UCL (use when n<50) | 0.01 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.005 | SD (KM) | 2.4769E-5 |
| Variance (KM) | 6.135E-10 | SE of Mean (KM) | 9.0227E-7 |
| k hat (KM) | 40774 | k star (KM) | 40644 |

| | | | |
|--|-----------|---|-----------|
| nu hat (KM) | 76817954 | nu star (KM) | 76573312 |
| theta hat (KM) | 1.2266E-7 | theta star (KM) | 1.2306E-7 |
| 80% gamma percentile (KM) | 0.00502 | 90% gamma percentile (KM) | 0.00503 |
| 95% gamma percentile (KM) | 0.00504 | 99% gamma percentile (KM) | 0.00506 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 76552958 | Adjusted Chi Square Value (N/A, β) | 76552927 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.005 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.005 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Test Statistic | 0.955 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.762 | Detected Data appear Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.257 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.343 | Detected Data appear Lognormal at 5% Significance Level | |
| Detected Data appear Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 0.0031 | Mean in Log Scale | -5.794 |
| SD in Original Scale | 6.0543E-4 | SD in Log Scale | 0.193 |
| 95% t UCL (assumes normality of ROS data) | 0.00314 | 95% Percentile Bootstrap UCL | 0.00314 |
| 95% BCA Bootstrap UCL | 0.00314 | 95% Bootstrap t UCL | 0.00314 |
| 95% H-UCL (Log ROS) | 0.00314 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -5.298 | KM Geo Mean | 0.005 |
| KM SD (logged) | 0.00473 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 1.7238E-4 | 95% H-UCL (KM -Log) | N/A |
| KM SD (logged) | 0.00473 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 1.7238E-4 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.00251 | Mean in Log Scale | -5.987 |
| SD in Original Scale | 2.0260E-4 | SD in Log Scale | 0.0544 |
| 95% t UCL (Assumes normality) | 0.00253 | 95% H-Stat UCL | N/A |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Detected Data appear Normal Distributed at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.005 | | |

**ProUCL Statistical Evaluation of o-Xylene in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|---------|
| Total Number of Observations | 942 | Number of Distinct Observations | 13 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 13 | Number of Non-Detects | 929 |
| Number of Distinct Detects | 12 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.0025 | Minimum Non-Detect | 0.002 |
| Maximum Detect | 0.0089 | Maximum Non-Detect | 0.002 |
| Variance Detects | 3.4083E-6 | Percent Non-Detects | 98.62% |
| Mean Detects | 0.0066 | SD Detects | 0.00185 |
| Median Detects | 0.0071 | CV Detects | 0.28 |
| Skewness Detects | -0.934 | Kurtosis Detects | 0.549 |
| Mean of Logged Detects | -5.069 | SD of Logged Detects | 0.351 |

Normal GOF Test on Detects Only

| | | |
|--------------------------------|-------|--|
| Shapiro Wilk Test Statistic | 0.928 | Shapiro Wilk GOF Test |
| 5% Shapiro Wilk Critical Value | 0.866 | Detected Data appear Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.201 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.234 | Detected Data appear Normal at 5% Significance Level |

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|-----------|-----------------------------------|-----------|
| KM Mean | 0.00206 | KM Standard Error of Mean | 1.9522E-5 |
| KM SD | 5.7568E-4 | 95% KM (BCA) UCL | 0.0021 |
| 95% KM (t) UCL | 0.0021 | 95% KM (Percentile Bootstrap) UCL | 0.0021 |
| 95% KM (z) UCL | 0.0021 | 95% KM Bootstrap t UCL | 0.0021 |
| 90% KM Chebyshev UCL | 0.00212 | 95% KM Chebyshev UCL | 0.00215 |
| 97.5% KM Chebyshev UCL | 0.00219 | 99% KM Chebyshev UCL | 0.00226 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|---|
| A-D Test Statistic | 0.653 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.734 | detected data appear Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.231 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.237 | detected data appear Gamma Distributed at 5% Significance Level |

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|-----------|---------------------------------|-----------|
| k hat (MLE) | 10.51 | k star (bias corrected MLE) | 8.136 |
| Theta hat (MLE) | 6.2794E-4 | Theta star (bias corrected MLE) | 8.1117E-4 |
| nu hat (MLE) | 273.3 | nu star (bias corrected) | 211.5 |
| Mean (detects) | 0.0066 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
 GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)
 For such situations, GROS method may yield incorrect values of UCLs and BTVs
 This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|-----------|---|-----------|
| Minimum | 0.0025 | Mean | 0.00995 |
| Maximum | 0.01 | Median | 0.01 |
| SD | 4.4829E-4 | CV | 0.045 |
| k hat (MLE) | 294.6 | k star (bias corrected MLE) | 293.7 |
| Theta hat (MLE) | 3.3782E-5 | Theta star (bias corrected MLE) | 3.3889E-5 |
| nu hat (MLE) | 555084 | nu star (bias corrected) | 553317 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 551588 | Adjusted Chi Square Value (N/A, β) | 551585 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.00998 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.00998 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.00206 | SD (KM) | 5.7568E-4 |
| Variance (KM) | 3.3141E-7 | SE of Mean (KM) | 1.9522E-5 |
| k hat (KM) | 12.85 | k star (KM) | 12.81 |

| | | | |
|--|-----------|--|-----------|
| nu hat (KM) | 24206 | nu star (KM) | 24130 |
| theta hat (KM) | 1.6060E-4 | theta star (KM) | 1.6111E-4 |
| 80% gamma percentile (KM) | 0.00253 | 90% gamma percentile (KM) | 0.00283 |
| 95% gamma percentile (KM) | 0.00309 | 99% gamma percentile (KM) | 0.00364 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 23770 | Adjusted Chi Square Value (N/A, β) | 23769 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.00209 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.00209 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Test Statistic | 0.833 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.866 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.235 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.234 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 7.8036E-4 | Mean in Log Scale | -7.683 |
| SD in Original Scale | 0.00101 | SD in Log Scale | 1.03 |
| 95% t UCL (assumes normality of ROS data) | 8.3466E-4 | 95% Percentile Bootstrap UCL | 8.3604E-4 |
| 95% BCA Bootstrap UCL | 8.4083E-4 | 95% Bootstrap t UCL | 8.3860E-4 |
| 95% H-UCL (Log ROS) | 8.4049E-4 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -6.199 | KM Geo Mean | 0.00203 |
| KM SD (logged) | 0.139 | 95% Critical H Value (KM-Log) | 1.664 |
| KM Standard Error of Mean (logged) | 0.00473 | 95% H-UCL (KM -Log) | 0.00207 |
| KM SD (logged) | 0.139 | 95% Critical H Value (KM-Log) | 1.664 |
| KM Standard Error of Mean (logged) | 0.00473 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.00108 | Mean in Log Scale | -6.882 |
| SD in Original Scale | 6.8610E-4 | SD in Log Scale | 0.218 |
| 95% t UCL (Assumes normality) | 0.00111 | 95% H-Stat UCL | 0.00106 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Detected Data appear Normal Distributed at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.0021 | | |

**ProUCL Statistical Evaluation of m,p-Xylene in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|-----------|---------------------------------|---------|
| Total Number of Observations | 942 | Number of Distinct Observations | 33 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 76 | Number of Non-Detects | 866 |
| Number of Distinct Detects | 33 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.002 | Minimum Non-Detect | 0.002 |
| Maximum Detect | 0.024 | Maximum Non-Detect | 0.002 |
| Variance Detects | 3.8900E-5 | Percent Non-Detects | 91.93% |
| Mean Detects | 0.00551 | SD Detects | 0.00624 |
| Median Detects | 0.0027 | CV Detects | 1.133 |
| Skewness Detects | 1.958 | Kurtosis Detects | 2.305 |
| Mean of Logged Detects | -5.592 | SD of Logged Detects | 0.776 |

Normal GOF Test on Detects Only

| | | |
|------------------------------|-------|--|
| Shapiro Wilk Test Statistic | 0.583 | Normal GOF Test on Detected Observations Only |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.346 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.102 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|---------|-----------------------------------|-----------|
| KM Mean | 0.00228 | KM Standard Error of Mean | 6.5671E-5 |
| KM SD | 0.002 | 95% KM (BCA) UCL | 0.00239 |
| 95% KM (t) UCL | 0.00239 | 95% KM (Percentile Bootstrap) UCL | 0.00239 |
| 95% KM (z) UCL | 0.00239 | 95% KM Bootstrap t UCL | 0.00243 |
| 90% KM Chebyshev UCL | 0.00248 | 95% KM Chebyshev UCL | 0.00257 |
| 97.5% KM Chebyshev UCL | 0.00269 | 99% KM Chebyshev UCL | 0.00294 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|--|
| A-D Test Statistic | 9.906 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.771 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.282 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.104 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|---------|---------------------------------|---------|
| k hat (MLE) | 1.427 | k star (bias corrected MLE) | 1.379 |
| Theta hat (MLE) | 0.00386 | Theta star (bias corrected MLE) | 0.00399 |
| nu hat (MLE) | 216.8 | nu star (bias corrected) | 209.6 |
| Mean (detects) | 0.00551 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|-----------|---|-----------|
| Minimum | 0.002 | Mean | 0.00964 |
| Maximum | 0.024 | Median | 0.01 |
| SD | 0.00214 | CV | 0.223 |
| k hat (MLE) | 11.89 | k star (bias corrected MLE) | 11.85 |
| Theta hat (MLE) | 8.1084E-4 | Theta star (bias corrected MLE) | 8.1338E-4 |
| nu hat (MLE) | 22393 | nu star (bias corrected) | 22323 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 21977 | Adjusted Chi Square Value (N/A, β) | 21976 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.00979 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.00979 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|-----------|
| Mean (KM) | 0.00228 | SD (KM) | 0.002 |
| Variance (KM) | 4.0091E-6 | SE of Mean (KM) | 6.5671E-5 |
| k hat (KM) | 1.3 | k star (KM) | 1.297 |

| | | | |
|--|-----------|--|-----------|
| nu hat (KM) | 2449 | nu star (KM) | 2443 |
| theta hat (KM) | 0.00176 | theta star (KM) | 0.00176 |
| 80% gamma percentile (KM) | 0.00359 | 90% gamma percentile (KM) | 0.00493 |
| 95% gamma percentile (KM) | 0.00625 | 99% gamma percentile (KM) | 0.00925 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 2329 | Adjusted Chi Square Value (N/A, β) | 2329 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.00239 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.00239 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Approximate Test Statistic | 0.735 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk P Value | 0 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.23 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.102 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 6.3602E-4 | Mean in Log Scale | -9.247 |
| SD in Original Scale | 0.0023 | SD in Log Scale | 1.972 |
| 95% t UCL (assumes normality of ROS data) | 7.5914E-4 | 95% Percentile Bootstrap UCL | 7.6345E-4 |
| 95% BCA Bootstrap UCL | 7.7803E-4 | 95% Bootstrap t UCL | 7.8456E-4 |
| 95% H-UCL (Log ROS) | 8.1704E-4 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -6.164 | KM Geo Mean | 0.0021 |
| KM SD (logged) | 0.277 | 95% Critical H Value (KM-Log) | 1.697 |
| KM Standard Error of Mean (logged) | 0.00908 | 95% H-UCL (KM -Log) | 0.00222 |
| KM SD (logged) | 0.277 | 95% Critical H Value (KM-Log) | 1.697 |
| KM Standard Error of Mean (logged) | 0.00908 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.00136 | Mean in Log Scale | -6.802 |
| SD in Original Scale | 0.00215 | SD in Log Scale | 0.42 |
| 95% t UCL (Assumes normality) | 0.00148 | 95% H-Stat UCL | 0.00124 |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (Chebyshev) UCL | 0.00257 | | |

**ProUCL Statistical Evaluation of Gasoline Range Organics in Soil (0 to 10 feet bgs)
(Data in milligrams per kilogram [mg/kg])**

Defense Fuel Support Point Norwalk

15306 Norwalk Boulevard

Norwalk, California

General Statistics

| | | | |
|------------------------------|--------|---------------------------------|--------|
| Total Number of Observations | 942 | Number of Distinct Observations | 7 |
| | | Number of Missing Observations | 19 |
| Number of Detects | 7 | Number of Non-Detects | 935 |
| Number of Distinct Detects | 6 | Number of Distinct Non-Detects | 1 |
| Minimum Detect | 0.61 | Minimum Non-Detect | 0.5 |
| Maximum Detect | 1.3 | Maximum Non-Detect | 0.5 |
| Variance Detects | 0.0663 | Percent Non-Detects | 99.26% |
| Mean Detects | 0.767 | SD Detects | 0.257 |
| Median Detects | 0.65 | CV Detects | 0.336 |
| Skewness Detects | 1.928 | Kurtosis Detects | 3.407 |
| Mean of Logged Detects | -0.304 | SD of Logged Detects | 0.286 |

Normal GOF Test on Detects Only

| | | |
|--------------------------------|-------|---|
| Shapiro Wilk Test Statistic | 0.694 | Shapiro Wilk GOF Test |
| 5% Shapiro Wilk Critical Value | 0.803 | Detected Data Not Normal at 5% Significance Level |
| Lilliefors Test Statistic | 0.376 | Lilliefors GOF Test |
| 5% Lilliefors Critical Value | 0.304 | Detected Data Not Normal at 5% Significance Level |

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

| | | | |
|------------------------|--------|-----------------------------------|---------|
| KM Mean | 0.502 | KM Standard Error of Mean | 0.00108 |
| KM SD | 0.0308 | 95% KM (BCA) UCL | 0.504 |
| 95% KM (t) UCL | 0.504 | 95% KM (Percentile Bootstrap) UCL | 0.504 |
| 95% KM (z) UCL | 0.504 | 95% KM Bootstrap t UCL | 0.506 |
| 90% KM Chebyshev UCL | 0.505 | 95% KM Chebyshev UCL | 0.507 |
| 97.5% KM Chebyshev UCL | 0.509 | 99% KM Chebyshev UCL | 0.513 |

Gamma GOF Tests on Detected Observations Only

| | | |
|-----------------------|-------|--|
| A-D Test Statistic | 1.007 | Anderson-Darling GOF Test |
| 5% A-D Critical Value | 0.708 | Detected Data Not Gamma Distributed at 5% Significance Level |
| K-S Test Statistic | 0.382 | Kolmogorov-Smirnov GOF |
| 5% K-S Critical Value | 0.312 | Detected Data Not Gamma Distributed at 5% Significance Level |

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

| | | | |
|-----------------|--------|---------------------------------|-------|
| k hat (MLE) | 12.97 | k star (bias corrected MLE) | 7.507 |
| Theta hat (MLE) | 0.0591 | Theta star (bias corrected MLE) | 0.102 |
| nu hat (MLE) | 181.6 | nu star (bias corrected) | 105.1 |
| Mean (detects) | 0.767 | | |

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

| | | | |
|---|--------|---|--------|
| Minimum | 0.01 | Mean | 0.0184 |
| Maximum | 1.3 | Median | 0.01 |
| SD | 0.073 | CV | 3.968 |
| k hat (MLE) | 1.068 | k star (bias corrected MLE) | 1.066 |
| Theta hat (MLE) | 0.0172 | Theta star (bias corrected MLE) | 0.0173 |
| nu hat (MLE) | 2013 | nu star (bias corrected) | 2008 |
| Adjusted Level of Significance (β) | 0.0497 | | |
| Approximate Chi Square Value (N/A, α) | 1905 | Adjusted Chi Square Value (N/A, β) | 1904 |
| 95% Gamma Approximate UCL (use when $n \geq 50$) | 0.0194 | 95% Gamma Adjusted UCL (use when $n < 50$) | 0.0194 |

Estimates of Gamma Parameters using KM Estimates

| | | | |
|---------------|-----------|-----------------|---------|
| Mean (KM) | 0.502 | SD (KM) | 0.0308 |
| Variance (KM) | 9.4861E-4 | SE of Mean (KM) | 0.00108 |
| k hat (KM) | 265.6 | k star (KM) | 264.8 |

| | | | |
|--|---------|--|--------|
| nu hat (KM) | 500468 | nu star (KM) | 498875 |
| theta hat (KM) | 0.00189 | theta star (KM) | 0.0019 |
| 80% gamma percentile (KM) | 0.528 | 90% gamma percentile (KM) | 0.542 |
| 95% gamma percentile (KM) | 0.554 | 99% gamma percentile (KM) | 0.577 |
| Gamma Kaplan-Meier (KM) Statistics | | | |
| Approximate Chi Square Value (N/A, α) | 497234 | Adjusted Chi Square Value (N/A, β) | 497231 |
| 95% Gamma Approximate KM-UCL (use when $n \geq 50$) | 0.504 | 95% Gamma Adjusted KM-UCL (use when $n < 50$) | 0.504 |
| Lognormal GOF Test on Detected Observations Only | | | |
| Shapiro Wilk Test Statistic | 0.732 | Shapiro Wilk GOF Test | |
| 5% Shapiro Wilk Critical Value | 0.803 | Detected Data Not Lognormal at 5% Significance Level | |
| Lilliefors Test Statistic | 0.366 | Lilliefors GOF Test | |
| 5% Lilliefors Critical Value | 0.304 | Detected Data Not Lognormal at 5% Significance Level | |
| Detected Data Not Lognormal at 5% Significance Level | | | |
| Lognormal ROS Statistics Using Imputed Non-Detects | | | |
| Mean in Original Scale | 0.0552 | Mean in Log Scale | -3.626 |
| SD in Original Scale | 0.0923 | SD in Log Scale | 1.212 |
| 95% t UCL (assumes normality of ROS data) | 0.0601 | 95% Percentile Bootstrap UCL | 0.0604 |
| 95% BCA Bootstrap UCL | 0.0611 | 95% Bootstrap t UCL | 0.0608 |
| 95% H-UCL (Log ROS) | 0.0608 | | |
| Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution | | | |
| KM Mean (logged) | -0.69 | KM Geo Mean | 0.501 |
| KM SD (logged) | 0.0405 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00142 | 95% H-UCL (KM -Log) | N/A |
| KM SD (logged) | 0.0405 | 95% Critical H Value (KM-Log) | N/A |
| KM Standard Error of Mean (logged) | 0.00142 | | |
| DL/2 Statistics | | | |
| DL/2 Normal | | DL/2 Log-Transformed | |
| Mean in Original Scale | 0.254 | Mean in Log Scale | -1.378 |
| SD in Original Scale | 0.049 | SD in Log Scale | 0.0958 |
| 95% t UCL (Assumes normality) | 0.256 | 95% H-Stat UCL | N/A |
| DL/2 is not a recommended method, provided for comparisons and historical reasons | | | |
| Nonparametric Distribution Free UCL Statistics | | | |
| Data do not follow a Discernible Distribution at 5% Significance Level | | | |
| Suggested UCL to Use | | | |
| 95% KM (t) UCL | 0.504 | KM H-UCL | N/A |
| 95% KM (BCA) UCL | 0.504 | | |

APPENDIX E
SOIL AND SOIL GAS SCREENING LEVELS

Table E-1
Soil Screening Levels
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Screening Levels (SLs) | | | | | | | | | |
|---|---|--------------------------------|---|-------------------------|------------------------------|-----------------------|------------------------------|-----------------------|------------------------------|------------------------|
| | Site-Specific Cleanup Goals ¹ (mg/kg) | Tier 1 ³ (mg/kg) | SFRWQCB ESL ² | | OEHHA CHHSL ⁵ | | DTSC-SL ⁶ | | USEPA RSL ⁷ | |
| | | | Risk-Based - Direct Exposure ⁴ | | Risk-Based - Direct Exposure | | Risk-Based - Direct Exposure | | Risk-Based - Direct Exposure | |
| | | | Residential (mg/kg) | Commercial (mg/kg) | Residential (mg/kg) | Commercial (mg/kg) | Residential (mg/kg) | Commercial (mg/kg) | Residential (mg/kg) | Commercial (mg/kg) |
| Total Petroleum Hydrocarbons (TPH) | | | | | | | | | | |
| Carbon Range (C6-C12) | 100 | 100 | 740 | 3,900 | --- | --- | --- | --- | 82 ⁽⁸⁾ | 420 ⁽⁸⁾ |
| Carbon Range (C13-C22) | 100 | 230 | 230 | 1,100 | --- | --- | --- | --- | 96 ⁽⁹⁾ | 440 ⁽⁹⁾ |
| Carbon Range (C23-C32) | --- | 5100 | --- | --- | --- | --- | --- | --- | 2500 ⁽¹⁰⁾ | 33,000 ⁽¹⁰⁾ |
| Carbon Range (C33-C44) | --- | 5100 | --- | --- | --- | --- | --- | --- | --- | --- |
| Carbon Range (C23-C44) | 1,000 | 5100 | 11,000 ⁽¹¹⁾ | 140,000 ⁽¹¹⁾ | --- | --- | --- | --- | --- | --- |
| Volatile Organic Compounds (VOCs) | | | | | | | | | | |
| Acetone | 0.994 | 0.5 | 59,000 | 630,000 | --- | --- | --- | --- | 61,000 | 670,000 |
| tert-Butyl alcohol (TBA) | 0.02 | 0.075 | --- | --- | --- | --- | --- | --- | --- | --- |
| Ethylbenzene | 1.07 | 1.4 | 5.1 | 22 | --- | --- | --- | --- | 5.8 | 25 |
| Toluene | 0.356 | 2.9 | 970 | 4,600 | --- | --- | 1,100 | 5,400 | 4,900 | 47,000 |
| 1,2,4-Trimethylbenzene | 0.12 | --- | --- | --- | --- | --- | --- | --- | 58 | 240 |
| o-Xylene | --- | 2.3 | 560 | 2,400 | --- | --- | --- | --- | 650 | 2,800 |
| m,p-Xylenes | --- | 2.3 | 560 | 2,400 | --- | --- | --- | --- | 550 | 2,400 |
| Gasoline Range Organics (GRO) | 100 | 100 | 740 | 3,900 | --- | --- | --- | --- | 82 ⁽⁸⁾ | 420 ⁽⁸⁾ |

Notes:

mg/kg = milligrams per kilogram.

--- = Not available.

¹ Represents the final site-specific cleanup goals for soil, approved by the RWQCB in their letter entitled *Approval of Modification to Cleanup Goals*, dated July 16, 2015.

² Represents San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil (SFRWQCB, 2016).

³ Represents SFRWQCB Tier 1 ESLs for soil, which are based on unrestricted land use.

⁴ Represents SFRWQCB human health risk-based ESLs for soil, developed for direct contact with soil exposure scenarios.

⁵ Represents Office of Environmental Health Hazard Assessment (OEHHA) California Human Health Screening Levels (CHHSLs) for soil (OEHHA, 2010), developed for direct contact with soil exposure scenarios.

⁶ Represents Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office Note 3 modified screening levels for soil (DTSC-SLs; DTSC, 2016), developed for direct contact with soil exposure scenarios.

⁷ Represents U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for soil (USEPA, 2016), developed for direct contact with soil exposure scenarios.

⁸ Represents the lowest of the low aliphatic or low aromatic fraction USEPA RSL for TPH carbon range C5 to C8.

⁹ Represents the lowest of the medium aliphatic or medium aromatic fraction USEPA RSL for TPH carbon range C9 to C18.

¹⁰ Represents the lowest of the high aliphatic or high aromatic fraction USEPA RSL for TPH carbon range C17 to C32.

¹¹ Represents SFRWQCB ESL for TPH motor oil carbon range C18 to C34+.

References:

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.

OEHHA. 2010. California Human Health Screening Levels (CHHSLs). California Environmental Protection Agency (CalEPA). September.

USEPA. 2016. Regional Screening Levels (RSLs). May.

Table E-2
Soil Gas Screening Levels
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Gas Screening Levels (SLs) - Vapor Intrusion into Indoor Air | | | | | | | |
|------------------------|---|------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|-------------------------------------|------------------------------------|
| | SFRWQCB ESL ¹ | | OEHHA CHHSL ² | | DTSC-SL ^{3,5} | | USEPA RSL ^{4,5} | |
| | Residential (µg/m ³) | Commercial (µg/m ³) | Residential (µg/m ³) | Commercial (µg/m ³) | Residential (µg/m ³) | Commercial (µg/m ³) | Residential (µg/m ³) | Commercial (µg/m ³) |
| Acetone | 16,000,000 | 140,000,000 | --- | --- | --- | --- | 16,000,000 | 140,000,000 |
| Benzene | 48 | 420 | 36 | 120 | 49 | 420 | 180 | 1,600 |
| Toluene | 160,000 | 1,300,000 | 140,000 | 380,000 | 155,000 | 1,300,000 | 2,600,000 | 22,000,000 |
| Ethylbenzene | 560 | 4,900 | 420 | 1,400 | --- | --- | 550 | 4,900 |
| m,p-Xylene | 52,000 | 440,000 | 320,000 | 890,000 | --- | --- | 50,000 | 440,000 |
| o-Xylene | 52,000 | 440,000 | 320,000 | 890,000 | --- | --- | 50,000 | 440,000 |
| 2-Butanone (MEK) | 2,600,000 | 22,000,000 | --- | --- | --- | --- | 2,600,000 | 22,000,000 |
| Carbon Disulfide | --- | --- | --- | --- | --- | --- | 365,000 | 3,100,000 |
| 1,3-Dichlorobenzene | --- | --- | --- | --- | 65,000 | 530,000 | --- | --- |
| Ethanol | --- | --- | --- | --- | --- | --- | --- | --- |
| (6) 4-Ethyltoluene | 160,000 | 1,300,000 | 140,000 | 380,000 | 155,000 | 1,300,000 | 2,600,000 | 22,000,000 |
| (7) Isopropanol | --- | --- | --- | --- | --- | --- | 15,500,000 | 130,000,000 |
| 4-Methyl-2-Pentanone | 1,600,000 | 13,000,000 | --- | --- | --- | --- | 1,550,000 | 13,000,000 |
| Tetrachloroethene | 240 | 2,100 | 180 | 600 | 240 | 2,100 | 5,500 | 47,000 |
| Trichloroethene | 240 | 3,000 | 530 | 1,800 | --- | --- | 240 | 3,000 |
| 1,2,4-Trimethylbenzene | --- | --- | --- | --- | --- | --- | 3,650 | 31,000 |
| 1,3,5-Trimethylbenzene | --- | --- | --- | --- | 21,000 | 180,000 | --- | --- |

Notes:

µg/m³ = micrograms per liter.

--- = Not available.

¹ Represents San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESLs) for soil gas (SFRWQCB, 2016).

² Represents Office of Environmental Health Hazard Assessment (OEHHA) California Human Health Screening Levels (CHHSLs) for soil gas for volatile chemicals below buildings constructed without engineered fill below sub-slab gravel (OEHHA, 2010).

³ Represents Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Note 3 modified screening levels for indoor air (DTSC-SLs; DTSC, 2016). See Note 5.

⁴ Represents U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for indoor air (USEPA, 2016). See Note 5.

⁵ California Department of Toxic Substances (DTSC) modified screening levels (2016) and USEPA RSLs (2016) have been developed for indoor air, but not soil gas. The residential and commercial soil gas screening levels (SLs) are based on applying a DTSC default attenuation factor to the air SLs. The resident air SLs and industrial air SLs were divided by DTSC default attenuation factors of 0.002 and 0.001, respectively (DTSC, 2011). The resulting value is the soil gas SL.

⁶ Soil gas SLs were not available for 4-ethyltoluene; therefore, the available SLs for toluene were used.

⁷ Soil gas SLs were not available for isopropanol; therefore, the available SL for sec-butyl alcohol was used.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

DTSC. 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.

OEHHA. 2010. California Human Health Screening Levels (CHHSLs). California Environmental Protection Agency (CalEPA). September.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

APPENDIX F
RISK CHARACTERIZATION

RISK CHARACTERIZATION

The exposure point concentrations (EPCs) for the compounds detected in soil and soil gas were below their respective screening levels; therefore, the cumulative risks and hazards were expected to be below regulatory thresholds. However, in response to the Office of Environmental Health Hazard Assessment's (OEHHA) comments #7 and #11 in their letter dated August 2, 2016, cumulative cancer risks and hazards associated with exposure to chemicals of potential concern (COPCs) in soil and soil gas were estimated. The methodology for estimating the cumulative cancer risks and hazards are presented in this appendix.

The excess cancer risk and noncancer hazard were estimated using the appropriate screening level (SL) based on carcinogenic and noncarcinogenic effects, target hazard index (HI) and target excess cancer risk, and EPCs in soil or soil gas. SLs for noncarcinogenic effects are based on a target hazard quotient of one and screening levels for carcinogenic effects are based on a target excess cancer risk of 1×10^{-6} , which represents the lower end (most stringent) of the California Environmental Protection Agency's (CalEPA) risk management range and is the point of departure for risk management decisions for all receptors. The soil and soil gas screening levels are discussed in Section 4.0 of Revised Human Health Risk Assessment (HHRA) and presented in Tables F-1 through F-5.

In order of priority, soil screening levels were selected from the following:

- Site-specific soil cleanup goals, as approved by Los Angeles Regional Water Quality Control Board (LARWQCB); and
- San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (SFRWQCB ESLs; SFRWQCB, 2016).

In order of priority, soil gas screening levels were selected from the following acceptable regulatory screening levels:

- SFRWQCB ESLs (SFRWQCB, 2016); and
- Department of Toxic Substances Control modified screening levels (DTSC-SLs; DTSC, 2016); and
- U.S. Environmental Protection Agency Regional Screening Levels (USEPA RSLs; USEPA, 2016).

The excess cancer risk and noncancer hazard were estimated using following equations:

Site-Specific Excess Cancer Risk

$$CR_i = \frac{CR_T \times EPC_i}{SL_{c,i}}$$

Where:

CR_i = Excess cancer risk for chemical i (unitless).

CR_T = Target excess cancer risk (1×10^{-6}), the upper end (most stringent) of CalEPA's risk management range of one-in-ten thousand (1×10^{-4}) to one-in-one-million (1×10^{-6});

EPC_i = Exposure point concentration for source for chemical i (milligram per kilogram [mg/kg] for soil, microgram per cubic meter [$\mu\text{g}/\text{m}^3$] for soil gas); and

$SL_{c,i}$ = SL based on carcinogenic effects for chemical i (mg/kg for soil, $\mu\text{g}/\text{m}^3$ for soil gas).

Site-Specific Noncancer Hazard

$$HQ_i = \frac{HQ_T \times EPC_i}{SL_{nc,i}}$$

Where:

HQ_i = Hazard quotient for chemical i (unitless).

HQ_T = Target hazard quotient (1), a HQ less than or equal to 1 indicates that no adverse noncancer health effects are expected to occur (USEPA, 1989; unitless);

EPC_i = Exposure point concentration for source for chemical i (mg/kg for soil, $\mu\text{g}/\text{m}^3$ for soil gas); and

$ESL_{nc,i}$ = SL based on noncarcinogenic effects for chemical i (mg/kg for soil, $\mu\text{g}/\text{m}^3$ for soil gas).

Risk Characterization Results for COPCs in Soil

For soil exposures in a residential or commercial scenario, the resulting cumulative noncancer hazard quotients are below the USEPA and CalEPA target level of one and the cumulative excess cancer risk estimates are less than 1×10^{-6} , which is the most stringent end of CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} . Therefore, soil exposures do not pose a human health risk to potential residential or commercial receptors at the Site. The estimated cumulative risks and hazards for soil for residential and commercial exposure scenarios are presented in Tables F-1 and F-2.

Risk Characterization Results for COPCs in Soil Gas

In the evaluation of the soil gas data collected in 2016 and 2017, for exposure to soil gas at 5 feet below ground surface (bgs) volatilizing into indoor air in a residential or commercial scenario, the resulting cumulative noncancer hazard quotients are below the USEPA and CalEPA target level of one and the cumulative excess cancer risk estimates are less than 1×10^{-6} , which is the most stringent end of CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} .

In the evaluation of the soil gas data collected in 2016 and 2017, for exposure to soil gas at 10 feet bgs volatilizing into indoor air in a residential or commercial scenario, the resulting cumulative noncancer hazard quotients are below the USEPA and CalEPA target level of one and the cumulative excess cancer risk estimates are below or within CalEPA's risk management range of 1×10^{-6} to 1×10^{-4} . For the residential exposure scenario, the excess cancer risk estimate of 2×10^{-6} is due to benzene. As discussed in Section 4.4 of the Revised HHRA, benzene concentrations in soil gas closest to the surface (at 5 feet bgs) are significantly lower concentrations. As a result, exposure to soil gas at 5 feet bgs results in a hazard quotient below the USEPA and CalEPA target level of one and a cumulative excess cancer risk less than 1×10^{-6} . Although benzene concentrations are slightly higher at 10 feet bgs, these concentrations are attenuating as they move upwards through the vadose zone.

The estimated cumulative risks and hazards for soil for residential and commercial exposure scenarios for the soil gas data collected in 2016 and 2017 are presented in Tables F-3 through F-6.

Based on the risk characterization evaluation, estimate cancer risks and noncancer hazards are below regulatory thresholds and COPCs in soil and soil gas do not pose a human health risk to potential residential or commercial receptors in the Eastern Portion of the DFSP Norwalk Site.

References

- Department of Toxic Substances Control (DTSC). 2016. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). California Environmental Protection Agency (CalEPA). June.
- San Francisco Bay Regional Water Quality Control Board (SFRWQCB). 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.
- U.S. Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Human Health Evaluation Manual, Part A. Interim Final. Solid Waste and Emergency Response. December.
- USEPA. 2016. Regional Screening Levels (RSLs). May.

TABLES

Table F-1
Risk Characterization for Soil for Residential Exposure Scenario - 2015/2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Screening Level (SL) ¹ | | | | Site Data - Soil from 0 to 10 feet bgs | | |
|---|---|--|-------------------------------|--|--|-------------------------------------|--|
| | Soil SL Based on Carcinogenic Effects (mg/kg) | Soil SL Based on Noncarcinogenic Effects (mg/kg) | Target Cancer Risk (unitless) | Target Noncancer Hazard Index (unitless) | EPC _{soil} ² (mg/kg) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) |
| Total Petroleum Hydrocarbons (TPH) | | | | | | | |
| Carbon Range (C6-C12) | --- | 740 | 1 E-06 | 1 E+00 | 1.0 | --- | 1 E-03 |
| Carbon Range (C13-C22) | --- | 230 | 1 E-06 | 1 E+00 | 14 | --- | 6 E-02 |
| Carbon Range (C23-C32) | --- | --- | 1 E-06 | 1 E+00 | 58 | --- | --- |
| Carbon Range (C33-C44) | --- | --- | 1 E-06 | 1 E+00 | 51 | --- | --- |
| Carbon Range (C23-C44) | --- | 11,000 | 1 E-06 | 1 E+00 | 108 | --- | 1 E-02 |
| Volatile Organic Compounds (VOCs) | | | | | | | |
| Acetone | --- | 59,000 | 1 E-06 | 1 E+00 | 0.052 | --- | 9 E-07 |
| tert-Butyl alcohol (TBA) | --- | --- | 1 E-06 | 1 E+00 | 0.023 | --- | --- |
| Ethylbenzene | 5.1 | 3,100 | 1 E-06 | 1 E+00 | 0.0020 | 4 E-10 | 6 E-07 |
| Toluene | --- | 970 | 1 E-06 | 1 E+00 | 0.0021 | --- | 2 E-06 |
| (5) 1,2,4-Trimethylbenzene | --- | 58 | 1 E-06 | 1 E+00 | 0.0050 | --- | 9 E-05 |
| o-Xylene | --- | 560 | 1 E-06 | 1 E+00 | 0.0021 | --- | 4 E-06 |
| m,p-Xylenes | --- | 560 | 1 E-06 | 1 E+00 | 0.0026 | --- | 5 E-06 |
| Gasoline Range Organics (GRO) | --- | 740 | 1 E-06 | 1 E+00 | 0.50 | --- | 7 E-04 |
| | | | | | Total | 4 E-10 | 7 E-02 |

Notes:

bgs = below ground surface.

mg/kg = milligram per kilogram.

SL = screening level.

--- = not available or not applicable.

EPC = exposure point concentration.

¹ Unless otherwise noted, represents the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Level (ESL) based on noncarcinogenic or carcinogenic effects for direct exposure to shallow soil, dated February 2016 revision 3.

² Value represents the lesser of the maximum detected concentration and the 95UCL.

³ Represents the excess cancer risk, based on a target excess cancer risk of one-in-one million (1×10^{-6}).

$$\text{Excess Cancer Risk for compound } i = \text{Soil EPC}_i \times \text{Target Cancer Risk of } 1 \times 10^{-6} / \text{Soil SL}_i$$

⁴ Represents the noncancer hazard, based on a target hazard quotient of one (1).

$$\text{Hazard Quotient for compound } i = \text{Soil EPC}_i \times \text{Target Noncancer Hazard Index of } 1 / \text{Soil SL}_i$$

⁵ SFRWQCB ESLs were not available for 1,2,4-trimethylbenzene; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) based on carcinogenic and noncarcinogenic effects were used, dated May 2016.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). Oct

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

Table F-2
Risk Characterization for Soil for Commercial Exposure Scenario - 2015/2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Screening Level (SL) ¹ | | | | Site Data - Soil from 0 to 10 feet bgs | | |
|---|--|---|-------------------------------|--|---|-------------------------------------|--|
| | Soil SL Based on Carcinogenic Effects (µg/m ³) | Soil SL Based on Noncarcinogenic Effects (µg/m ³) | Target Cancer Risk (unitless) | Target Noncancer Hazard Index (unitless) | EPC _{soil} ² (µg/m ³) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) |
| Total Petroleum Hydrocarbons (TPH) | | | | | | | |
| Carbon Range (C6-C12) | --- | 3,900 | 1 E-06 | 1 E+00 | 1.0 | --- | 3 E-04 |
| Carbon Range (C13-C22) | --- | 1,100 | 1 E-06 | 1 E+00 | 14 | --- | 1 E-02 |
| Carbon Range (C23-C32) | --- | --- | 1 E-06 | 1 E+00 | 58 | --- | --- |
| Carbon Range (C33-C44) | --- | --- | 1 E-06 | 1 E+00 | 51 | --- | --- |
| Carbon Range (C23-C44) | --- | 140,000 | 1 E-06 | 1 E+00 | 108 | --- | 8 E-04 |
| Volatile Organic Compounds (VOCs) | | | | | | | |
| Acetone | --- | 630,000 | 1 E-06 | 1 E+00 | 0.052 | --- | 8 E-08 |
| tert-Butyl alcohol (TBA) | --- | --- | 1 E-06 | 1 E+00 | 0.023 | --- | --- |
| Ethylbenzene | 22 | 18,000 | 1 E-06 | 1 E+00 | 0.0020 | 9 E-11 | 1 E-07 |
| Toluene | --- | 4,600 | 1 E-06 | 1 E+00 | 0.0021 | --- | 5 E-07 |
| (5) 1,2,4-Trimethylbenzene | --- | 240 | 1 E-06 | 1 E+00 | 0.0050 | --- | 2 E-05 |
| o-Xylene | --- | 2,400 | 1 E-06 | 1 E+00 | 0.0021 | --- | 9 E-07 |
| m,p-Xylenes | --- | 2,400 | 1 E-06 | 1 E+00 | 0.0026 | --- | 1 E-06 |
| Gasoline Range Organics (GRO) | --- | 3,900 | 1 E-06 | 1 E+00 | 0.50 | --- | 1 E-04 |
| | | | | | Total | 9 E-11 | 1 E-02 |

Notes:

bgs = below ground surface.

SL = screening level.

EPC = exposure point concentration.

mg/kg = milligram per kilogram.

--- = not available or not applicable.

¹ Unless otherwise noted, represents the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Level (ESL) based on noncarcinogenic or carcinogenic effects for direct exposure to shallow soil (SFRWQCB ESLs dated February 2016 revision 3).

² Value represents the lesser of the maximum detected concentration and the 95UCL.

³ Represents the excess cancer risk, based on a target excess cancer risk of one-in-one million (1 x 10⁻⁶).

$$\text{Excess Cancer Risk for compound } i = \text{Soil EPC}_i \times \text{Target Cancer Risk of } 1 \times 10^{-6} / \text{Soil SL}_i$$

⁴ Represents the noncancer hazard, based on a target hazard quotient of one (1).

$$\text{Hazard Quotient for compound } i = \text{Soil EPC}_i \times \text{Target Noncancer Hazard Index of } 1 / \text{Soil SL}_i$$

⁵ SFRWQCB ESLs were not available for 1,2,4-trimethylbenzene; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) based on carcinogenic and noncarcinogenic effects were used, dated May 2016.

Table F-3
Risk Characterization for Soil Vapor for Residential Exposure Scenario - 2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Gas Screening Level (SL) ¹ | | | | Site Data - Soil Gas at 5 feet bgs | | | Site Data - Soil Gas at 10 feet bgs | | |
|----------------------------|--|---|-------------------------------|--|---|-------------------------------------|--|---|-------------------------------------|--|
| | Soil Gas SL Based on Carcinogenic Effects (µg/m ³) | Soil Gas SL Based on Noncarcinogenic Effects (µg/m ³) | Target Cancer Risk (unitless) | Target Noncancer Hazard Index (unitless) | EPC _{soil gas} ² (µg/m ³) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) | EPC _{soil gas} ⁵ (µg/m ³) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) |
| Acetone | --- | 16,000,000 | 1 E-06 | 1 E+00 | 190 | --- | 1 E-05 | 530 | --- | 3 E-05 |
| Benzene | 48 | 1,600 | 1 E-06 | 1 E+00 | 30 | 6 E-07 | 2 E-02 | 98 | 2 E-06 | 6 E-02 |
| Toluene | --- | 160,000 | 1 E-06 | 1 E+00 | 120 | --- | 8 E-04 | 390 | --- | 2 E-03 |
| Ethylbenzene | 560 | 520,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 69 | 1 E-07 | 1 E-04 |
| m,p-Xylene | --- | 52,000 | 1 E-06 | 1 E+00 | 66 | --- | 1 E-03 | 270 | --- | 5 E-03 |
| o-Xylene | --- | 52,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 74 | --- | 1 E-03 |
| 2-Butanone (MEK) | --- | 2,600,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 77 | --- | 3 E-05 |
| (6) 4-Ethyltoluene | --- | 160,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 59 | --- | 4 E-04 |
| (7) 1,2,4-Trimethylbenzene | --- | 3,650 | 1 E-06 | 1 E+00 | --- | --- | --- | 52 | --- | 1 E-02 |
| | | | | | Total | 6 E-07 | 2 E-02 | Total | 2 E-06 | 9 E-02 |

Notes:

bgs = below ground surface.

µg/m³ = micrograms per cubic meter.

SL = screening level.

--- = not available or not applicable.

EPC = exposure point concentration.

¹ Unless otherwise noted, represents the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Level (ESL) based on noncarcinogenic or carcinogenic effects (SFRWQCB ESLs dated February 2016 revision 3).

² Value represents the maximum detected concentration in soil gas collected from 5 feet bgs.

³ Represents the excess cancer risk, based on a target excess cancer risk of one-in-one million (1 x 10⁻⁶).

$$\text{Excess Cancer Risk for compound } i = \text{Soil Gas EPC}_i \times \text{Target Cancer Risk of } 1 \times 10^{-6} / \text{Soil Gas SL}_i$$

⁴ Represents the noncancer hazard, based on a target hazard quotient of one (1).

$$\text{Hazard Quotient for compound } i = \text{Soil Gas EPC}_i \times \text{Target Noncancer Hazard Index of } 1 / \text{Soil Gas SL}_i$$

⁵ Value represents the maximum detected concentration in soil gas collected from 10 feet bgs.

⁶ SFRWQCB ESLs were not available for 4-ethyltoluene; therefore, the ESL for toluene was used.

⁷ SFRWQCB ESLs were not available; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) based on carcinogenic and noncarcinogenic effects were used, dated May 2016. USEPA RSLs have been developed for indoor air, but not soil gas. The residential soil gas SL is based on applying a DTSC default attenuation factor to the air SL. The resident air SL was divided by DTSC default attenuation factor of 0.002 (DTSC, 2011). The resulting value is the soil gas SL.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

Table F-4
Risk Characterization for Soil Vapor for Commercial Exposure Scenario - 2016 Investigation
 Defense Fuel Support Point - Norwalk
 Norwalk, California

| Chemical | Soil Gas Screening Level (SL) ¹ | | | | Site Data - Soil Gas at 5 feet bgs | | | Site Data - Soil Gas at 10 feet bgs | | |
|----------------------------|--|---|-------------------------------|--|---|-------------------------------------|--|---|-------------------------------------|--|
| | Soil Gas SL Based on Carcinogenic Effects (µg/m ³) | Soil Gas SL Based on Noncarcinogenic Effects (µg/m ³) | Target Cancer Risk (unitless) | Target Noncancer Hazard Index (unitless) | EPC _{soil gas} ² (µg/m ³) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) | EPC _{soil gas} ⁵ (µg/m ³) | Cancer Risk ³ (unitless) | Noncancer Hazard Index ⁴ (unitless) |
| Acetone | --- | 140,000,000 | 1 E-06 | 1 E+00 | 190 | --- | 1 E-06 | 530 | --- | 4 E-06 |
| Benzene | 420 | 13,000 | 1 E-06 | 1 E+00 | 30 | 7 E-08 | 2 E-03 | 98 | 2 E-07 | 8 E-03 |
| Toluene | --- | 1,300,000 | 1 E-06 | 1 E+00 | 120 | --- | 9 E-05 | 390 | --- | 3 E-04 |
| Ethylbenzene | 4,900 | 4,400,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 69 | 1 E-08 | 2 E-05 |
| m,p-Xylene | --- | 440,000 | 1 E-06 | 1 E+00 | 66 | --- | 2 E-04 | 270 | --- | 6 E-04 |
| o-Xylene | --- | 440,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 74 | --- | 2 E-04 |
| 2-Butanone (MEK) | --- | 22,000,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 77 | --- | 4 E-06 |
| (6) 4-Ethyltoluene | --- | 1,300,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 59 | --- | 5 E-05 |
| (7) 1,2,4-Trimethylbenzene | --- | 31,000 | 1 E-06 | 1 E+00 | --- | --- | --- | 52 | --- | 2 E-03 |
| | | | | | Total | 7 E-08 | 3 E-03 | Total | 2 E-07 | 1 E-02 |

Notes:

bgs = below ground surface.

µg/m³ = micrograms per cubic meter.

SL = screening level.

--- = not available or not applicable.

EPC = exposure point concentration.

¹ Unless otherwise noted, represents the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Level (ESL) based on noncarcinogenic or carcinogenic effects (SFRWQCB ESLs dated February 2016 revision 3).

² Value represents the maximum detected concentration in soil gas collected from 5 feet bgs.

³ Represents the excess cancer risk, based on a target excess cancer risk of one-in-one million (1 x 10⁻⁶).

$$\text{Excess Cancer Risk for compound } i = \text{Soil Gas EPC}_i \times \text{Target Cancer Risk of } 1 \times 10^{-6} / \text{Soil Gas SL}_i$$

⁴ Represents the noncancer hazard, based on a target hazard quotient of one (1).

$$\text{Hazard Quotient for compound } i = \text{Soil Gas EPC}_i \times \text{Target Noncancer Hazard Index of } 1 / \text{Soil Gas SL}_i$$

⁵ Value represents the maximum detected concentration in soil gas collected from 10 feet bgs.

⁶ SFRWQCB ESLs were not available for 4-ethyltoluene; therefore, the ESL for toluene was used.

⁷ SFRWQCB ESLs were not available; therefore, the U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) based on carcinogenic and noncarcinogenic effects were used, dated May 2016. USEPA RSLs have been developed for indoor air, but not soil gas. The commercial soil gas SL is based on applying a DTSC default attenuation factor to the air SL. The industrial air SL was divided by DTSC default attenuation factor of 0.001 (DTSC, 2011). The resulting value is the soil gas SL.

References:

DTSC. 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. California Environmental Protection Agency (CalEPA). October.

SFRWQCB. 2016. Environmental Screening Levels (ESLs). San Francisco Bay Region. Revision 3. February.

USEPA. 2016. Regional Screening Levels (RSLs). May.

ATTACHMENT B

Results of Additional Soil and Soil Vapor Sampling and Revised Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, Defense Fuel Support Point Norwalk, Norwalk, California, CH2M, March 16, 2017.



CH2M
6 Hutton Center Drive
Suite 700
Santa Ana, CA 92707
O +1 714 429 2000
F +1 714 429 2050
www.ch2m.com

Mr. Paul Cho
Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

March 16, 2017

Subject: Results of Additional Soil and Soil Vapor Sampling and Revised Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, Defense Fuel Support Point, Norwalk, California

Dear Mr. Cho,

This letter report summarizes additional soil and soil vapor sampling data, and a revised human health risk assessment (HHRA) for the eastern 15-acre parcel of the Defense Fuel Support Point, Norwalk, located at 15306 Norwalk Boulevard, Norwalk, California (Figure 1). This report has been prepared by CH2M HILL Engineers, Inc. (CH2M) on behalf of SFPP, L.P. (SFPP), an operating partner of Kinder Morgan, Inc. (Kinder Morgan), and is a follow-up to the previous report dated June 28, 2016 (CH2M, 2016). The work described herein was performed in response to the Regional Water Quality Control Board, Los Angeles Region (RWQCB) letter dated February 2, 2017, requesting a revised HHRA for shallow soil that incorporates additional soil and soil vapor data.

The following sections provide a summary of the background, approach, results, and recommendation for shallow soil closure (upper 10 feet) in the area of the eastern 15-acre parcel impacted by a release from SFPP's pipeline.

Background

In May and June 2016, DLA Energy (DLA) and SFPP submitted the following reports to the RWQCB, which provided a summary of soil and soil vapor data collected from the eastern 15-acre parcel and the results of an HHRA:

- *Human Health Risk Assessment, DLA Energy Responsible Area of Eastern Portion for the Former Defense Fuel Support Point Norwalk*, prepared by The Source Group, Inc. (SGI), dated May 31, 2016.
- *Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel for the Defense Fuel Support Point Norwalk*, prepared by CH2M, dated June 28, 2016.

On August 2, 2016, the Office of Environmental Health Hazard Assessment (OEHHA) issued comments on the reports in separate memoranda, which were transmitted by the RWQCB to DLA and SFPP in a letter dated August 30, 2016.

On October 12, 2016, DLA and SFPP provided a combined response to OEHHA's comments in a technical document titled, *Response to the Office of Environmental Health Hazard Assessment (OEHHA) Comments on the: Human Health Risk Assessment, DLA Energy Responsible Area of Eastern Portion, dated May 31, 2016, and Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel, dated June 28, 2016* (this technical document is referred to herein as the "Response").

OEHHA reviewed the Response and provided additional comments to the RWQCB in a memorandum dated November 18, 2016; a copy of this memorandum is included in Attachment A. OEHHA's general comments (Nos. 1, 4, 5, and 6) to SFPP generally stated that the current soil and soil vapor data collected near the former fuel release at the southeastern 24-inch block valve were not adequate to address the cumulative risk in this area.

To further assess human health risk in this area, SFPP proposed to collect additional soil and soil vapor samples at four locations in the vicinity of the southeastern 24-inch block valve release area. The number and locations of the sampling points were approved by the RWQCB in an email to SGI, DLA, Kinder Morgan, and CH2M on January 19, 2017. The data collected from these four locations will supplement SFPP's soil and soil vapor data collected in the eastern 15-acre parcel during May 2016. Soil and soil vapor samples are proposed to be collected at 5 and 10 feet below ground surface (bgs) and analyzed for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs). The data collected from the investigation will be used to support the HHRA and soil closure request for the upper 10 feet of soil in the eastern 15-acre parcel. The approach and results of the investigation are discussed in the next sections.

Approach

Pre-field Activities

CH2M performed the following field preparation activities prior to commencing soil and soil vapor sampling:

- Updated the existing site-specific health and safety plan to incorporate the planned fieldwork.
- Marked the proposed boring locations.
- Notified Dig Alert. As required by Dig Alert, the borings were called-in and marked-out in white paint at least 2 business days prior to boring advancement. Dig Alert Ticket No. A70400037 was issued.
- Performed an underground utility check using a private utility-locating subcontractor, Spectrum Geophysics.
- Obtained Los Angeles County Department of Public Health boring permits (Attachment B).
- Coordinated with Kinder Morgan staff regarding potential conflicts with SFPP's pipelines.

Field Activities

On February 14 and 15, 2017, CH2M retained Gregg Drilling and Testing of Signal Hill, California, to advance borings using hand auger methods to facilitate the collection of discrete-depth soil samples and the installation of nested soil vapor probes. The locations included SVM-20, SVM-21, SVM-22, and SVM-23, as shown on Figure 2. Prior to hand augering at SVM-21, SVM-22, and SVM-23, air knifing was performed to a depth of 10 feet at collocated borings to clear for known subsurface fuel pipelines in that area. Soil samples were then collected by hand auger methods to a maximum depth of 10 feet bgs. Discrete soil samples were collected at 5 and 10 feet bgs for laboratory analysis. Nested soil vapor

probes were completed at 5 and 10 feet bgs at all four boring locations. American Analytics of Chatsworth, California, completed sampling of the vapor probes on February 24, 2016.

Soil Sampling and Analysis

CH2M used hand auger methods to collect soil samples for lithologic logging, field screening with a photoionization detector (PID), and laboratory analysis. The lithology was described by a State of California licensed professional geologist. Soil was described using visual manual procedures of ASTM International Method D2488, which are based on the Unified Soil Classification System for guidance. Color, moisture content, grain size, and other pertinent soil characteristics were recorded on the boring logs. Soil was screened in the field for the potential presence of VOCs using a PID. Copies of the boring logs are provided in Attachment C.

Discrete-depth soil samples were collected at each boring location for field screening using a PID, and for laboratory analysis as follows:

- At 5 and 10 feet bgs, soil samples were transferred from a 3.5-inch-diameter stainless steel hand auger to 8-ounce glass jars provided by the laboratory. Subcore samples were immediately collected from the jars using a Terracore sample device for transfer of approximately 5 grams of soil to each of five 40-milliliter glass volatile organic analytic (VOA) vials with sodium bisulfate and methanol preservative. The jars were subsequently filled with additional soil, as needed, for use by the laboratory.
- For quality assurance and quality control purposes, one field duplicate soil sample was collected at the 5-foot depth at SVM-22. In addition, one equipment blank (water sample) was collected at the end of sampling activities.
- Samples were placed in an ice-chilled cooler and submitted under chain-of-custody protocol to Asset Laboratories of Las Vegas, Nevada. Asset is certified under the California Environmental Laboratory Accreditation Program.

The soil samples, including the field duplicate sample, and the equipment blank sample were analyzed for the following:

- TPH-g (C4–C12), TPH-d (C13–C22), and TPH quantified as oil (TPH-o) (C23–C44) using U.S. Environmental Protection Agency (EPA) Methods 3550B and 8015M
- VOCs and fuel oxygenates using EPA Method 8260B

Soil Vapor Probe Installation

The soil vapor monitoring probes completed in the eastern 15-acre parcel include SVM-20, SVM-21, SVM-22, and SVM-23 (Figure 2). Each monitoring location consists of a soil vapor probe nest with probes installed at depths of approximately 5 and 10 feet bgs in a single borehole. Figure 3 presents a diagram of a typical nested probe.

The soil vapor probes were completed in the same borings that were used to facilitate the collection of soil samples. At each location, soil vapor probes were installed at approximately 5 and 10 feet bgs. Each vapor probe was constructed with new ¼-inch-outside-diameter Teflon tubing with a nominal 6-inch-long stainless steel screen. A 1-foot-thick filter pack consisting of No. 3 sand was placed around each screen. A 1-foot-thick dry granular bentonite was placed on top of each filter sand pack. The boring was then backfilled to ground surface in 6-inch-thick lifts, with granular bentonite hydrated in place. A sampling valve was fitted to the end of the tubing. Each soil vapor monitoring point was completed at the surface with a flush-mounted, traffic-rated well box.

Completion details for each soil vapor probe are summarized in Table 1. Soil vapor probe completion diagrams are presented in the boring logs in Attachment C.

Soil Vapor Probe Sampling and Analysis

Soil vapor samples were collected by American Analytics with CH2M oversight on February 24, 2017. Samples were transported to the American Analytics fixed laboratory in Chatsworth, California, for subsequent analysis. SFPP's southeastern area soil vapor extraction (SVE) wells were offline for the duration of sampling. The SVE system has been offline since November 2016 to facilitate construction of a new regenerative thermal oxidizer.

The soil vapor probes at each monitoring location were purged and sampled in accordance with the recommended guidelines in the California Department of Toxic Substances Control (DTSC) *Advisory for Active Soil Gas Investigations* (Advisory) (DTSC, 2015). The analytical results were evaluated by comparison with soil gas screening levels based on the most current DTSC guidance (DTSC, 2016). The soil gas screening levels are calculated from indoor air screening levels published by DTSC in its HHRA Note Number 3 (DTSC, 2016) using the default attenuation factors presented in DTSC's vapor intrusion guidance (DTSC, 2011).

As described previously, soil vapor sampling was conducted at probes SVM-20 to SVM-23. The soil vapor probes from each monitoring location were purged and sampled using a vacuum/pressure sampling pump calibrated to a flow rate of 200 milliliters per minute in accordance with recommended flow rates in the Advisory (DTSC, 2015).

Soil vapor samples were collected using 1.4-liter Summa canisters and were analyzed by American Analytics for VOCs using EPA Method TO-15 and TPH-g using EPA Method TO-3. Included in the TO-15 list of analytes are benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tertiary butyl ether (MTBE); naphthalene; tertiary butyl alcohol (TBA), also known as tert-butanol; 1,2-dichloroethane; 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; n-butylbenzene; sec-butylbenzene; isopropylbenzene; n-propylbenzene; and 2-propanol (the leak test compound). These constituents were identified as contaminants of potential concern (COPCs) in the SFPP remediation areas based on the results of the 2006 soil gas investigation and HHRA (Geomatrix, 2006).

In accordance with the Advisory (DTSC, 2015), field duplicate soil vapor samples were collected at a minimum frequency of 1 per every 20 soil vapor samples collected. A duplicate soil vapor sample was collected at SVM-22 at the 10-foot depth. The duplicate sample was collected and analyzed in the same manner as the primary samples.

Analytical Results

Soil Results

The soil analytical results for samples collected from SVM-20 to SVM-23 are provided in this section. A copy of the laboratory analytical report is provided in Attachment D.

TPH and VOCs

Table 2 presents a summary of TPH and VOC results for samples collected at SVM-17, SVM-18, SVM-19, SS-20, and SS-21. DLA's soil cleanup goals for 0.5-, 5-, and 10-foot depths are also provided in the table for comparison purposes. Parsons (DLA's consultant) calculated soil cleanup goals for the site according to the methods provided in the RWQCB *Interim Site Assessment and Cleanup Guidebook* (Guidebook) (RWQCB, 1996). These goals were approved by the RWQCB in its letter to DLA, dated July 12, 2012 (RWQCB, 2012). The RWQCB also approved DLA's modification of soil cleanup goals for TPH in its letter to DLA, dated July 16, 2015 (RWQCB, 2015). In its letter to the RWQCB, dated January 14, 2013, SFPP

provided conditional concurrence with some shallow soil cleanup goals (0.5 foot to 10 feet) that are relevant to SFPP's former releases (CH2M, 2013).

As shown in Table 2, TPH-g was detected in all samples at J-flagged (estimated) concentrations above the laboratory minimum detection limits (MDLs) and below the laboratory reporting limits (RLs). TPH-d was detected in one sample (SVM-21, 5-foot depth) at a concentration of 4.9 J milligrams per kilogram (mg/kg). TPH-o was detected in all samples at concentrations between 12 and 120 mg/kg. All TPH-g, TPH-d, and TPH-o detections were below soil cleanup goals.

Benzene, toluene, 2-butanone, and dichloromethane were the only VOCs detected in soil samples; detections were J-flagged at concentrations above the laboratory MDLs and below the laboratory RLs. Of these, benzene and toluene are the only VOCs considered to be COPCs for SFPP's remediation areas. Benzene detections ranged from 0.67 J micrograms per kilogram ($\mu\text{g}/\text{kg}$) at the 10-foot depth of SVM-20, to 2.2 J $\mu\text{g}/\text{kg}$ at the 5-foot depth of SVM-23. Toluene detections ranged from 0.68 J $\mu\text{g}/\text{kg}$ in the 10-foot depth at SVM-20, to 1.8 J $\mu\text{g}/\text{kg}$ at the 5-foot depth in SVM-23. All benzene and toluene detections were below soil cleanup goals. 2-Butanone was detected in SVM-21, SVM-22, and SVM-23 at concentrations that ranged from 2.9 J $\mu\text{g}/\text{kg}$ at the 10-foot depth in SVM-22, to 4.5 J $\mu\text{g}/\text{kg}$ at the 5-foot depth in SVM-21. All detections were below soil cleanup goals. Dichloromethane was detected in all samples but at J-flagged concentrations. Concentrations ranged from 1.2 J $\mu\text{g}/\text{kg}$ at the 10-foot depth in SVM-21, to 1.8 J $\mu\text{g}/\text{kg}$ at the 5-foot depth in SVM-20. All J-flagged detections were above DLA soil cleanup goals; however, dichloromethane is not believed to be a contaminant of concern for SFPP. Although there were J-flagged detections of dichloromethane, the presence of this chemical cannot be confirmed with the available data because these trace concentrations were below the laboratory RLs. Dichloromethane is a common laboratory solvent; therefore, these trace detections may be a result of laboratory cross-contamination.

Equipment Blank Results

Table 3 presents a summary of detected TPH and VOCs in the equipment blank sample. As shown in the table, dichloromethane (0.91 J microgram per liter [$\mu\text{g}/\text{L}$]), toluene (0.22 J $\mu\text{g}/\text{L}$), TPH-g (30 J $\mu\text{g}/\text{L}$), and TPH-o (22 J $\mu\text{g}/\text{L}$) were detected in the equipment blank sample. These J-flagged detections are below the laboratory RLs and likely did not have any impact on soil analytical results.

Soil Vapor Results

Table 4 presents a summary of laboratory analytical results for soil vapor samples collected from SVM-20 to SVM-23. A copy of the laboratory analytical report is presented in Attachment E. As shown in Table 4, TPH-g and all COPCs were nondetect. The laboratory RLs used were below screening levels under residential and commercial scenarios. Other non-COPC compounds detected include 2,2,4-trimethylpentane, cyclohexane, and tetrachloroethylene (PCE). These compounds were detected at one or more probes, but at concentrations below established screening levels under residential or commercial scenarios. All VOCs and TPH-g were nondetect in both probe depths at SVM-20. PCE was detected at both probe depths of SVM-21 to SVM-23, with concentrations ranging between 0.021 and 0.052 $\mu\text{g}/\text{L}$. All PCE detections were below the residential and commercial screening levels of 0.48 and 2.1 $\mu\text{g}/\text{L}$, respectively.

Conclusions and Recommendations

As presented above, the shallow soil and soil vapor data for COPCs collected as part of the eastern 15-acre investigation were below soil cleanup goals and human health screening levels, respectively, and are consistent with the results of the previous HHRA. The lack of significant hydrocarbon concentrations in shallow soil to 10 feet bgs (above the smear zone) is consistent with the conceptual

site model of the historical hydrocarbon release mechanisms and fate of the hydrocarbons since their release. The historical fuel release at the southeastern 24-inch block valve area migrated downward and spread on the water table, where these hydrocarbons have been contained and controlled and are being removed by SFPP's current remediation systems and naturally occurring processes, including biodegradation. The overlying soil proposed for soil closure is above this zone.

Based on the human health risk data collected in this report and previously submitted HHRA report (CH2M, 2016), there is no unacceptable human health risk in the upper 10 feet of soil in the southern portion of the eastern 15-acre parcel. Therefore, SFPP recommends that the RWQCB proceed with issuing shallow soil closure for this area. SFPP will continue to operate its current remediation systems in the southeastern area, including SVE and total fluids extraction, for continued hydrocarbon mass removal and groundwater containment in the uppermost groundwater zone. SFPP will also continue to evaluate the feasibility of biosparge system expansion to the southeastern area as a long-term remediation strategy for enhanced hydrocarbon mass removal in deeper soil and groundwater. SVE operations will continue during biosparging for vapor control. The total fluids extraction system may be decommissioned once dissolved-phase concentrations become asymptotic and free product is no longer measurable in the southeastern area.

If you have any questions regarding this letter report, please contact Mr. Dan Jablonski of CH2M at (213) 228-8271 or Mr. Steve Defibaugh of Kinder Morgan at (714) 560-4802.

Regards,
CH2M HILL Engineers, Inc.



Dan Jablonski
Project Manager



John Lowe, CIH
Vapor Intrusion Consultant

Attachments:

- References
- Table 1 – Soil Vapor Monitoring Probe Completion Details
- Table 2 – Summary of Soil TPH and VOC Results
- Table 3 – Summary of Detected TPH and VOCs in Equipment Blank Sample
- Table 4 – Summary of Soil Vapor Analytical Results – February 2017
- Figure 1 – Site Location Map
- Figure 2 – Soil and Soil Vapor Monitoring Probe Locations, Eastern 15-Acre Parcel
- Figure 3 – Soil Vapor Monitoring Probe Completion Diagram
- Attachment A – OEHHA Memorandum, Dated November 18, 2016
- Attachment B – Los Angeles County Department of Public Health Boring Permits
- Attachment C – Soil Boring Logs
- Attachment D – Laboratory Analytical Report for Soil
- Attachment E – Laboratory Analytical Report for Soil Vapor

Distribution:

Steve Defibaugh, Kinder Morgan Energy Partners, L.P.
Carol Devier-Heeney, Defense Logistics Agency Energy (electronic only)
Minxia Dong, Norwalk Public Library
Adam Ly, Park Water Company (electronic only)
Adriana Figueroa, City of Norwalk (electronic only)
Angela Mancillas, Office of Congresswoman Linda T. Sanchez (electronic only)
Brian Partington, Water Replenishment District of Southern California (electronic only)
Carina Chacon, Office of Assemblymember Christina Garcia (electronic only)
Charles Emig, City of Cerritos (electronic only)
Daniel Swensson, The Source Group, Inc. (electronic only)
Everett Ferguson, Water Replenishment District of Southern California (electronic only)
Jon Wreschinsky, March ARB (electronic only)
Lorena Sierra, John Dolland Elementary School (electronic only)
Mary Jane McIntosh, Restoration Advisory Board (RAB) Co-Chair (electronic only)
Michael T. Wilson, Air Force Real Property Agency (electronic only)
Molly Black, The Source Group, Inc. (electronic only)
Neil F. Irish, P.G., The Source Group, Inc. (electronic only)
Norman Dupont, Esq., Ring Bender Law (electronic only)
Paul Parmentier, The Source Group, Inc. (electronic only)
Perla Hernandez, Office of Congresswoman Grace Napolitano (electronic only)
Tracy Winkler, RAB (electronic only)
Walter Scherer, March ARB (electronic only)
Yahaira Ortiz, Office of State Senator Tony Mendoza (electronic only)

References

- California Department of Toxic Substances Control (DTSC). 2011. *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*. October. http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf
- California Department of Toxic Substances Control (DTSC). 2015. *Advisory for Active Soil Gas Investigations*. July.
- California Department of Toxic Substances Control (DTSC). 2016. *Human Health Risk Assessment (HHRA) Note Number 3: DTSC-Modified Screening Levels (DTSC-SLs)*. June. http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note_3_-2016-06.pdf
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 1996. *Interim Site Assessment & Cleanup Guidebook*. California Regional Water Quality Control Board, Los Angeles and Ventura Counties, Region 4. May.
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2012. Letter to Mr. Mathew Young. *Review of Proposed Soil Cleanup Goals, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286A, Site No. 16683)*. July 12.
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2015. Letter to Mr. Nicholas Carros. *Approval of Modification to the Soil Cleanup Goals, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286A, Site No. 16683)*. July 16.
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2016. Letter to Ms. Carol Devier-Heeney and Mr. Steve Defibaugh. *Review of Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel Shallow Soil*. Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286A/B, Site ID No. 16638 and 204DM00). August 30.
- California Regional Water Quality Control Board, Los Angeles Region (RWQCB). 2017. Letter to Ms. Carol Devier-Heeney and Mr. Steve Defibaugh. *Requirement for Revised Human Health Risk Assessment for No Further Action Determination for Shallow Soil at the Eastern 15-Acre Parcel*. Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286A/B, Site ID No. 16638 and 204DM00). February 2.
- CH2M HILL (CH2M). 2013. Letter to California Regional Water Quality Control Board, Los Angeles Region (RWQCB). *Response to DLA Energy Approved Soil Cleanup Goals SFPP Norwalk Pump Station, Norwalk, California*. January 14.
- CH2M HILL (CH2M). 2016. *Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment to Support Shallow Soil Closure for the Eastern 15-Acre Parcel for the Defense Fuel Support Point Norwalk*. June 28.
- Geomatrix Consultants, Inc. (Geomatrix). 2006. *Vapor Intrusion Sampling and Human Health Risk Assessment, DFSP Norwalk Facility, Norwalk, California*. December 15.
- The Source Group, Inc. (SGI). 2016. *Human Health Risk Assessment, DLA Energy Responsible Area of Eastern Portion for the Former Defense Fuel Support Point Norwalk*. May 31.

Tables

Table 1. Soil Vapor Monitoring Probe Completion Details
Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| Probe | Zone | Installation Method | Borehole Diameter (inches) | Boring Total Depth (feet bgs) | Screen Interval (feet bgs) | | Filter Pack Top (feet bgs) | Filter Pack Bottom (feet bgs) | Dry Bentonite Top (feet bgs) | Dry Bentonite Bottom (feet bgs) | Hydrated Bentonite Top (feet bgs) | Hydrated Bentonite Bottom (feet bgs) |
|--------|---------|---------------------|----------------------------|-------------------------------|----------------------------|------|----------------------------|-------------------------------|------------------------------|---------------------------------|-----------------------------------|--------------------------------------|
| | | | | | From | To | | | | | | |
| SVM-20 | Shallow | Hand Auger | 3.5 | --- | 4.75 | 5.25 | 4.5 | 5.5 | 3.5 | 4.5 | 0.5 | 3.5 |
| SVM-20 | Deep | Hand Auger | 3.5 | 10.5 | 9.5 | 10 | 9 | 10.5 | 8 | 9 | 5.5 | 8 |
| SVM-21 | Shallow | Hand Auger | 3.5 | --- | 4.75 | 5.25 | 4.5 | 5.5 | 3.5 | 4.5 | 0.5 | 3.5 |
| SVM-21 | Deep | Hand Auger | 3.5 | 10.5 | 9.5 | 10 | 9 | 10.5 | 8 | 9 | 5.5 | 8 |
| SVM-22 | Shallow | Hand Auger | 3.5 | --- | 4.75 | 5.25 | 4.5 | 5.5 | 3.5 | 4.5 | 0.5 | 3.5 |
| SVM-22 | Deep | Hand Auger | 3.5 | 10.5 | 9.5 | 10 | 9 | 10.5 | 8 | 9 | 5.5 | 8 |
| SVM-23 | Shallow | Hand Auger | 3.5 | --- | 4.75 | 5.25 | 4.5 | 5.5 | 3.5 | 4.5 | 0.5 | 3.5 |
| SVM-23 | Deep | Hand Auger | 3.5 | 10.5 | 9.5 | 10 | 9 | 10.5 | 8 | 9 | 5.5 | 8 |

Notes:
 Filter pack consists of #3 Monterey fine sand.
 Bentonite is granular bentonite.
 --- = does not apply
 bgs = below ground surface

Table 2. Summary of Soil TPH and VOC Results

Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | TPH-g (mg/kg) | TPH-d (mg/kg) | TPH-o (mg/kg) | Benzene (µg/kg) | Toluene (µg/kg) | Ethyl-benzene (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|---------------|---------------|---------------|-----------------|-----------------|-----------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | 0.1 J | <2.9 | 13 | <0.12 | <0.11 | <0.15 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | 0.091 J | <2.9 | 13 | 0.67 J | 0.68 J | <0.12 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | 0.1 J | 4.9 J | 120 | 0.69 J | <0.097 | <0.13 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | 0.087 J | <2.9 | 35 | 1.5 J | 1.3 J | <0.12 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | 0.11 J | <2.9 | 13 | <0.13 | <0.12 | <0.16 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | 0.11 J | <2.9 | 14 | <0.12 | <0.11 | <0.15 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | 0.086 J | <2.9 | 14 | 1.4 J | 1.1 J | <0.13 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | 0.092 J | <2.9 | 55 | 2.2 J | 1.8 J | <0.12 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | 0.092 J | <2.9 | 12 | 0.81 J | <0.095 | <0.13 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 500 | 1,000 | 10,000 | 15 | 614 |
| 5 Feet | | | | | 500 | 1,000 | 10,000 | 13 | 440 | 1,440 |
| 10 Feet | | | | | 100 | 100 | 1,000 | 12 | 391 | 1,190 |

Table 2. Summary of Soil TPH and VOC Results
 Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | Total Xylenes (µg/kg) | MTBE (µg/kg) | TBA (µg/kg) | DIPE (µg/kg) | 1,1,1,2-Tetrachloroethane (µg/kg) | 1,1,2-Trichloroethane (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|-----------------------|--------------|-------------|--------------|-----------------------------------|-------------------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | <0.15 | <0.23 | <1.5 | <0.11 | <0.18 | <0.25 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | <0.12 | <0.19 | <1.2 | <0.088 | <0.15 | <0.21 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | <0.13 | <0.21 | <1.4 | <0.098 | <0.17 | <0.23 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | <0.12 | <0.18 | <1.2 | <0.086 | <0.15 | <0.2 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | <0.16 | <0.25 | <1.7 | <0.12 | <0.2 | <0.28 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | <0.15 | <0.24 | <1.6 | <0.11 | <0.19 | <0.26 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | <0.13 | <0.21 | <1.4 | <0.097 | <0.17 | <0.23 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | <0.12 | <0.19 | <1.2 | <0.087 | <0.15 | <0.2 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | <0.13 | <0.21 | <1.4 | <0.096 | <0.17 | <0.23 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 5,550 | 0.907 | 1.0 | 449 | 2.3 |
| 5 Feet | | | | | 3,770 | 0.910 | 1.2 | 424 | 2.0 | 2.9 |
| 10 Feet | | | | | 3,090 | 0.843 | 1.3 | 364 | 1.5 | 2.3 |

Table 2. Summary of Soil TPH and VOC Results
Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | 1,2,3-Trichlorobenzene (µg/kg) | 1,2,3-Trichloropropane (µg/kg) | 1,2,4-Trimethylbenzene (µg/kg) | 1,2-Dibromo-3-Chloropropane (DBCP) (µg/kg) | 1,2-Dibromoethane (EDB) (µg/kg) | 1,2-Dichloroethane (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|--------------------------------|--------------------------------|--------------------------------|--|---------------------------------|----------------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | <0.061 | <0.26 | <0.068 | <0.5 | <0.17 | <0.13 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | <0.05 | <0.22 | <0.056 | <0.41 | <0.14 | <0.11 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | <0.056 | <0.24 | <0.063 | <0.46 | <0.15 | <0.12 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | <0.049 | <0.21 | <0.055 | <0.4 | <0.14 | <0.11 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | <0.068 | <0.29 | <0.076 | <0.55 | <0.19 | <0.15 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | <0.063 | <0.27 | <0.071 | <0.52 | <0.18 | <0.14 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | <0.056 | <0.24 | <0.062 | <0.45 | <0.15 | <0.12 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | <0.049 | <0.21 | <0.055 | <0.4 | <0.14 | <0.11 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | <0.055 | <0.24 | <0.062 | <0.45 | <0.15 | <0.12 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 74 | 0.000874 | 2,100 | 0.250 | 0.00305 |
| 5 Feet | | | | | 63.4 | 0.000766 | 1,800 | 0.219 | 0.00278 | 0.1040 |
| 10 Feet | | | | | 46.7 | 0.000587 | 1,340 | 0.168 | 0.00227 | 0.0937 |

Table 2. Summary of Soil TPH and VOC Results
Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | 1,3,5-Trimethylbenzene (µg/kg) | 2-Butanone (MEK) (µg/kg) | 2-Chlorotoluene (µg/kg) | 2-Hexanone (mg/L) | 4-Chlorotoluene (µg/kg) | Acetone (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|--------------------------------|--------------------------|-------------------------|-------------------|-------------------------|-----------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | <0.087 | <1.8 | <0.1 | <1.8 | <0.19 | <2.3 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | <0.071 | <1.5 | <0.084 | <1.2 | <0.16 | <1.6 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | <0.079 | 4.5 J | <0.093 | <1.3 | <0.17 | <1.6 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | <0.07 | <1.5 | <0.082 | <1.3 | <0.15 | <1.7 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | <0.096 | <2 | <0.11 | <1.5 | <0.21 | <2 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | <0.09 | <1.9 | <0.11 | <1.7 | <0.2 | <2.1 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | <0.079 | 2.9 J | <0.093 | <1.3 | <0.17 | <1.7 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | <0.07 | 4.1 J | <0.082 | <1.2 | <0.15 | <1.6 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | <0.078 | <1.6 | <0.091 | <1.3 | <0.17 | <1.7 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 2,060 | 557 | 558 | 7.3 | 547 |
| 5 Feet | | | | | 1,770 | 607 | 481 | 7.2 | 472 | 1,170 |
| 10 Feet | | | | | 1,310 | 617 | 358 | 6.5 | 351 | 1,280 |

Table 2. Summary of Soil TPH and VOC Results
Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | Bromomethane (µg/kg) | Carbon Disulfide (µg/kg) | Chlorobenzene (µg/kg) | Chloroethane (µg/kg) | Chloroform (µg/kg) | Dichloro-difluoromethane (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|----------------------|--------------------------|-----------------------|----------------------|--------------------|----------------------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | <0.39 | <0.17 | <0.098 | <0.53 | <0.16 | <0.2 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | <0.32 | <0.14 | <0.081 | <0.44 | <0.13 | <0.16 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | <0.35 | <0.16 | <0.09 | <0.48 | <0.14 | <0.18 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | <0.31 | <0.14 | <0.079 | <0.42 | <0.13 | <0.16 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | <0.43 | <0.19 | <0.11 | <0.59 | <0.17 | <0.22 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | <0.4 | <0.18 | <0.1 | <0.55 | <0.16 | <0.21 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | <0.35 | <0.16 | <0.09 | <0.48 | <0.14 | <0.18 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | <0.31 | <0.14 | <0.08 | <0.43 | <0.13 | <0.16 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | <0.35 | <0.15 | <0.089 | <0.48 | <0.14 | <0.18 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 1.5 | 49 | 119 | 2,230 | 0.0738 |
| 5 Feet | | | | | 1.4 | 46 | 104 | 2,470 | 0.0682 | 868 |
| 10 Feet | | | | | 1.3 | 39 | 79 | 2,550 | 0.0567 | 672 |

Table 2. Summary of Soil TPH and VOC Results

Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | Dichloromethane (µg/kg) | Isopropylbenzene (µg/kg) | Naphthalene (µg/kg) | n-Butylbenzene (µg/kg) | n-Propylbenzene (µg/kg) | p-Isopropyltoluene (µg/kg) |
|------------------------|-------------------------------|-------------|-------------------|----------------------------------|-------------------------|--------------------------|---------------------|------------------------|-------------------------|----------------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | 1.8 J | <0.081 | <0.11 | <0.1 | <0.12 | <0.11 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | 1.5 J | <0.067 | <0.094 | <0.086 | <0.1 | <0.087 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | 1.5 J | <0.074 | <0.1 | <0.096 | <0.11 | <0.097 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | 1.2 J | <0.065 | <0.092 | <0.084 | <0.097 | <0.085 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | 1.6 J | <0.09 | <0.13 | <0.12 | <0.13 | <0.12 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | 1.7 J | <0.085 | <0.12 | <0.11 | <0.13 | <0.11 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | 1.7 J | <0.074 | <0.1 | <0.096 | <0.11 | <0.096 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | 1.4 J | <0.066 | <0.093 | <0.085 | <0.098 | <0.086 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | 1.5 J | <0.073 | <0.1 | <0.094 | <0.11 | <0.095 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 0.778 | 5,560 | 270 | 3,970 | 2,180 |
| 5 Feet | | | | | 0.799 | 4,780 | 231 | 3,400 | 1,870 | 2,420 |
| 10 Feet | | | | | 0.761 | 3,530 | 170 | 2,500 | 1,390 | 1,790 |

Table 2. Summary of Soil TPH and VOC Results
 Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| General Area | Sample Location | Sample Date | Sample ID | Sample Depth Interval (feet bgs) | sec-Butylbenzene (µg/kg) | Styrene (µg/kg) | tert-Butylbenzene (µg/kg) | Trichloroethene (µg/kg) |
|------------------------|--------------------------------------|-------------|-------------------|----------------------------------|--------------------------|-----------------|---------------------------|-------------------------|
| Eastern 15-Acre Parcel | SVM-20 | 2/15/2017 | SVM-20-4.5-021517 | 4.5-5 | <0.098 | <0.21 | <0.13 | <0.12 |
| | | 2/15/2017 | SVM-20-9.5-021517 | 9.5-10 | <0.081 | <0.17 | <0.11 | <0.097 |
| | SVM-21 | 2/14/2017 | SVM-21-4.5-021417 | 4.5-5 | <0.09 | <0.19 | <0.12 | <0.11 |
| | | 2/14/2017 | SVM-21-9.5-021417 | 9.5-10 | <0.079 | <0.17 | <0.1 | <0.095 |
| | SVM-22 | 2/14/2017 | SVM-22-4.5-021417 | 4.5-5 | <0.11 | <0.23 | <0.14 | <0.13 |
| | | 2/14/2017 | DUP-1-4.5-021417 | 4.5-5 | <0.1 | <0.22 | <0.13 | <0.12 |
| | | 2/14/2017 | SVM-22-9.5-021417 | 9.5-10 | <0.09 | <0.19 | <0.12 | <0.11 |
| | SVM-23 | 2/14/2017 | SVM-23-4.5-021417 | 4.5-5 | <0.08 | <0.17 | <0.1 | <0.095 |
| | | 2/14/2017 | SVM-23-9.5-021417 | 9.5-10 | <0.089 | <0.19 | <0.12 | <0.11 |
| | DLA Energy Soil Cleanup Goals | | | | 0.5 Feet | 2,590 | 463 | 2,070 |
| | | | | 5 Feet | 2,220 | 399 | 1,780 | 6.1 |
| | | | | 10 Feet | 1,640 | 296 | 1,320 | 4.7 |

Notes:

The soil analytical data presented are based on wet weight.

The total xylenes result is the sum of m,p-xylenes and o-xylenes when detected.

13 **Bold font** represents data detected above the laboratory minimum detection limit

<1.4 = not detected at or above the laboratory minimum detection limit shown

J qualifier indicates that the result was detected above the laboratory minimum detection limit, but below the laboratory reporting limit

µg/kg = microgram(s) per kilogram

bgs = below ground surface

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

mg/kg = milligram(s) per kilogram

MTBE = methyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

TPH = total petroleum hydrocarbons

TPH-d = total extractable petroleum hydrocarbons quantified using a diesel standard (C13-C22)

TPH-g = total purgeable petroleum hydrocarbons quantified using a gasoline standard (C4-C12)

TPH-o = total extractable petroleum hydrocarbons quantified using a motor oil standard (C23-C44)

VOC = volatile organic compound

Table 3. Summary of Detected TPH and VOCs in Equipment Blank Sample

Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| Sample Location | Sample Date | Sample ID | TPH-g (µg/L) | TPH-o (µg/L) | Toluene (µg/L) | Dichloromethane (µg/L) |
|-----------------|-------------|-----------|-----------------|-----------------|-------------------|---------------------------|
| Equipment Blank | 2/15/2017 | EB-1 | 30 J | 22 J | 0.22 J | 0.91 J |

Notes:

30 **Bold font** represents data detected above the laboratory minimum detection limit

J qualifier indicates that the result was detected above the laboratory minimum detection limit but below the laboratory reporting limit

µg/L = microgram(s) per liter

TPH = total petroleum hydrocarbons

TPH-g = total purgeable petroleum hydrocarbons quantified using a gasoline standard (C4-C12)

TPH-o = total extractable petroleum hydrocarbons quantified using an oil standard (C23-C44)

VOC = volatile organic compound

Table 4. Soil Vapor Analytical Results - February 2017
Eastern 15-acre Parcel, Defense Fuel Support Point, Norwalk, California

| Analyte Type | Analyte | Unit | Current Residential Soil Gas Screening Level ^{a,b} | Current Commercial Soil Gas Screening Level ^{a,b} | SVM-20-5 2/24/2017 SVM-20 5-5.5 | SVM-20-10 2/24/2017 SVM-20 10-10.5 | SVM-21-5 2/24/2017 SVM-21 5-5.5 | SVM-21-10 2/24/2017 SVM-21 10-10.5 | SVM-22-5 2/24/2017 SVM-22 5-5.5 | SVM-22-10 2/24/2017 SVM-22 10-10.5 | SVM-22-10 DUP 2/24/2017 SVM-22 10-10.5 | SVM-23-5 2/24/2017 SVM-23 5-5.5 | SVM-23-10 2/24/2017 SVM-23 10-10.5 |
|--------------------------|---------------------------------|------|---|--|--|---|--|---|--|---|---|--|---|
| COPCs ^d | 1,2,4-Trimethylbenzene | µg/L | 7.3 | 31 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | 1,2-Dichloroethane | µg/L | 0.11 | 0.47 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | 1,3,5-Trimethylbenzene | µg/L | --- | --- | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | 2-Propanol (leak test compound) | µg/L | --- | --- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| | Benzene | µg/L | 0.097 | 0.42 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | Ethylbenzene | µg/L | 1.1 | 4.9 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | Isopropylbenzene | µg/L | --- | --- | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | m,p-Xylenes | µg/L | 100 | 440 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | Methyl tert-butyl ether (MTBE) | µg/L | 11 | 47 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | Naphthalene | µg/L | 0.083 | 0.36 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | n-Butylbenzene | µg/L | --- | --- | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | n-Propylbenzene | µg/L | 1000 | 4400 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | o-Xylene | µg/L | 100 | 440 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | sec-Butylbenzene | µg/L | --- | --- | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| | tert-Butanol (TBA) | µg/L | --- | --- | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| Toluene | µg/L | 310 | 1300 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | |
| TPH-gas | TPH-g (C4-C12) | µg/L | 630 ^c | 2600 ^c | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| Other Detected Compounds | 2,2,4-Trimethylpentane | µg/L | --- | --- | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | 0.44 | 3 |
| | Cyclohexane | µg/L | 6300 | 26000 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | 0.063 | 0.26 |
| | Tetrachloroethylene (PCE) | µg/L | 0.48 | 2.1 | <0.02 | <0.02 | 0.037 | 0.052 | 0.021 | 0.022 | 0.023 | 0.028 | 0.045 |

Notes:

^a Source for the Indoor Air Screening Levels: California Department of Toxic Substances Control (DTSC). 2016. Human Health Risk Assessment (HHRA) Note Number 3: DTSC-Modified Screening Levels (DTSC-SLs). June http://www.dtsc.ca.gov/AssessingRisk/upload/HHRA_Note_3_-2016-06.pdf

^b Attenuation factor for current land use = 0.001. Source for the attenuation factors: DTSC, 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October. http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf

^c TPH aliphatic low screening level used for TPH-g screening levels

^d Chemicals of potential concern identified from the 2006 soil gas investigation and HHRA (Geomatrix, 2006)

--- = not available

<0.02 = not detected at the laboratory minimum reporting limit

µg/L = micrograms per liter

COPC = chemical of potential concern

DUP = field duplicate

TPH-g = total petroleum hydrocarbons quantified as gasoline

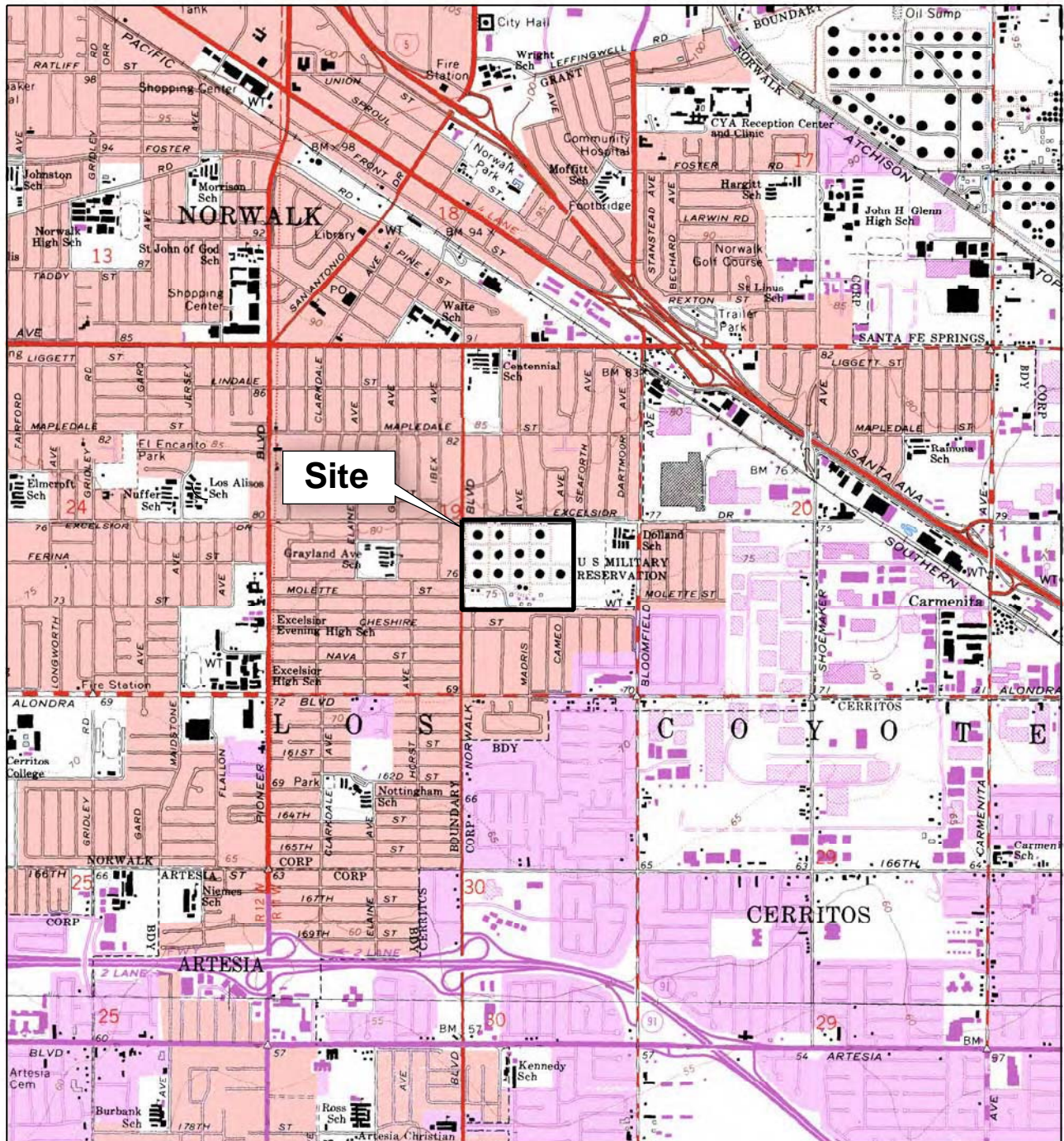
SVM-20-5 = sample ID

2/24/2017 = sample date

SVM-20 = sample location

5-5.5 = sample depth in feet below ground surface

Figures



Site

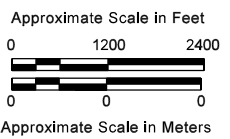
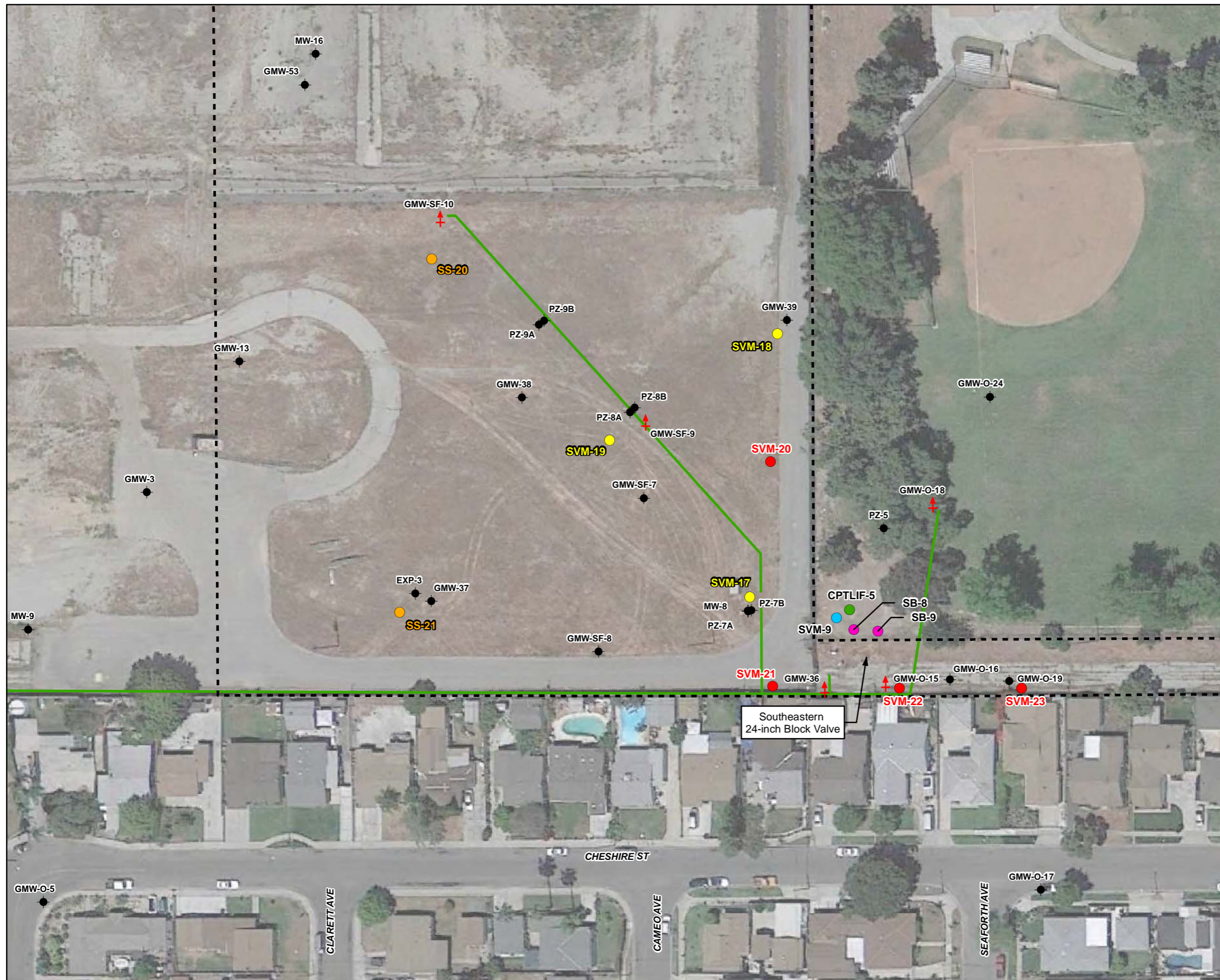


Figure 1
Site Location Map
 Defense Fuel Support Point, Norwalk
 Norwalk, California

BASEMAP MODIFIED FROM U.S.G.S. 7.5 MINUTE QUADRANGLE MAP
 LOS ALAMITOS 1964, CALIFORNIA. PHOTO-REVISED 1981.
 WHITTIER 1965, CALIFORNIA. PHOTO-REVISED 1981.





- Legend**
- February 2017 Eastern 15-Acre Soil Vapor Monitoring Probe Location
 - May 2016 Eastern 15-Acre Soil Sample Location
 - May 2016 Eastern 15-Acre Soil Vapor Monitoring Probe Location
 - Offsite Soil Vapor Monitoring Probe Location
 - 2011 CPT/LIF Boring
 - 2012 Soil Boring Location
 - Existing Groundwater Monitoring Well
 - ⊕ Existing Remediation Well
 - KMEP Remediation Piping Layout (above ground and below ground)
 - - - Proposed Eastern 15-Acre Property Boundary

Imagery Source:
Google Earth April 17, 2013.

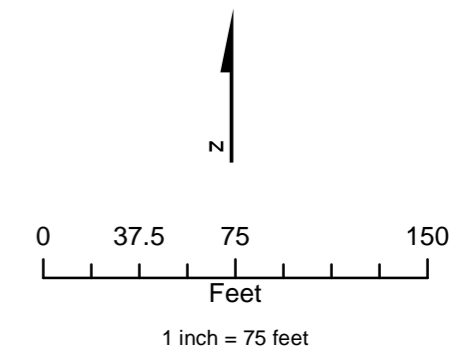
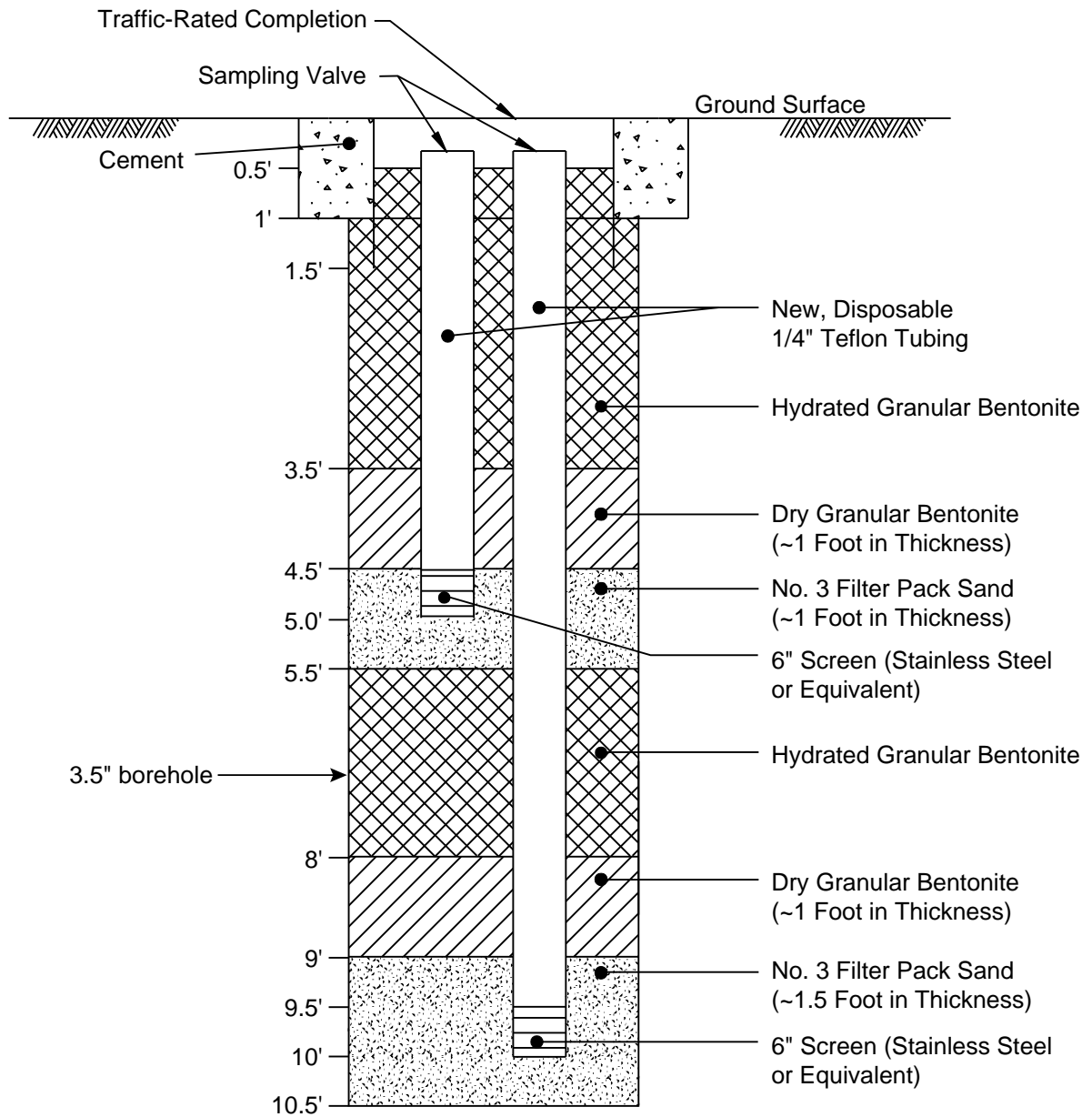


Figure 2
Soil and Soil Vapor Monitoring
Probe Locations, Eastern 15-Acre Parcel
Defense Fuel Support Point, Norwalk
Norwalk, California





Not to Scale

Figure 3
Soil Vapor Monitoring Probe Completion Diagram
 SFPP Norwalk Pump Station
 Norwalk, California



Attachment A
OEHHA Memorandum, Dated
November 18, 2016

Office of Environmental Health Hazard Assessment

Lauren Zeise, Ph.D., Acting Director
Headquarters • 1001 I Street • Sacramento, California 95814
Mailing Address: P.O. Box 4010 • Sacramento, California 95812-4010
Oakland Office • Mailing Address: 1515 Clay Street, 16th Floor • Oakland, California 94612



Edmund G. Brown Jr.
Governor

Matthew Rodriguez
Secretary for
Environmental Protection

MEMORANDUM

TO: Paul Cho
Engineering Geologist
Site Cleanup Unit V

FROM: Nathalie Pham, Ph.D. *N.P.*
Staff Toxicologist
Integrated Risk Assessment Branch
Office of Environmental Health Hazard Assessment

DATE: November 18, 2016

SUBJECT: Response to Comments. RESULTS OF ADDITIONAL SOIL AND SOIL VAPOR SAMPLING AND HUMAN HEALTH RISK ASSESSMENT TO SUPPORT SHALLOW SOIL CLOSURE FOR THE EASTERN 15-ACRE PARCEL – Kinder Morgan / SGP – Norwalk Tank Farm, Defense Fuel Support Point Norwalk, Norwalk, CA

R4-16-001

OEHHA # 880423-00

Document reviewed

- CH2M responses to Cal/EPA OEHHA's comments on Summary of Results of Additional Soil and Soil Vapor Sampling and Human Health Risk Assessment, Defense Fuel Support Point Norwalk, Norwalk, CA dated June 28, 2016 by CH2M.
- OEHHA's updated responses are in italics.

History

- In a memo dated August 2, 2016, the human health risk assessment report for the site Defense Fuel Support Norwalk was reviewed by Nathalie Pham.

Comments and Responses

GENERAL COMMENTS

Comment #1: There are five soil and three soil vapor sampling locations in an area of 60,000ft². If the most northern perimeter is at GMW-SF-10, the area would still be about

California Environmental Protection Agency

Sacramento: (916) 324-7572 Oakland: (510) 622-3200

www.oehha.ca.gov

40,000ft². The limited number of sample locations may not capture all significant contamination in the area of concern. Besides the ten groundwater monitoring wells, there is no evidence that any other previous sampling had taken place within the area.

CH2M Response #1: The number and locations of soil and soil vapor samples collected as part of the eastern 15-acre investigation were approved by the RWQCB in an email dated, April 15, 2016. Because there is no evidence of significant shallow soil contamination in eastern 15-acre parcel caused by the release of hydrocarbons at the southeastern 24-inch block valve, five soil and three soil vapor sample locations were deemed sufficient.

OEHHA #1: *OEHHA stands by our previous comment on the limitation of the current sampling plan. In addition, it is unclear what the rationale for selecting those specific locations was and why they were not sampled closer to the release from the block valve. The revision of the current sampling plan is at the discretion of the RWQCB.*

SOIL ASSESSMENT

Comment #2: It is unclear what "PZ" for sampling locations stood for.

CH2M Response #2: "PZ" is an abbreviation for piezometer or monitoring well.

OEHHA #2: *The response is satisfactory.*

Comment #3: Soil analytical results for TPH and VOCs are compared to the cleanup goals provided by the 1996 RWQCB Interim Site Assessment and Cleanup Guidebook. COPC detections in soil are below cleanup goals. OEHHA recommends more updated screening levels.

CH2M Response #3: These goals were approved by the RWQCB in its letter to DLA Energy, dated July 12, 2012 (RWQCB, 2012). OEHHA compared the soil concentrations for COPCs with available CHHSLs and DTSC's screening levels and screening levels for those COPCs were not exceeded.

OEHHA #3: *Screening levels were approved by RWQCB and were not exceeded. The response is satisfactory.*

Comment #4: The five soil sampling locations are more than 100' apart from each other. As mentioned previously, potential hot spots may be overlooked with this distance between single sampling locations.

CH2M Response #4: The occurrence of COPCs in the eastern 15-acre parcel is related to deeper soil (smear zone) and groundwater, rather than from fuel releases in shallow soil, which makes tight spacing of sample locations less critical for assessing risks. As stated above, there is no documentation to support significant shallow soil contamination in the eastern 15-acre property; therefore, the RWQCB agreed that five soil sample locations would be sufficient. The data collected from the eastern 15-acre parcel and near the southeastern 24-inch block valve (source area) do not support shallow soil contamination. In summary, shallow and deeper soil data collected by SFPP at or near the eastern 15-acre parcel between 1994 and 2016 support the conceptual site model (CSM) for this site. Soil impacts related to the 24-inch block valve

release (source area) are limited to depths greater than 18 feet bgs, and are related to the hydrocarbon constituents within the smear zone and groundwater.

OEHHA #4: *OEHHA can only comment on the delineation of the sampling locations. There is potential lateral migration of contamination over time and insufficient or non-representative data may underestimate the risk assessment results. VOCs in depth can also migrate through preferential pathways. OEHHA stands by our previous comment and recommends more sampling for the risk evaluation.*

SOIL VAPOR ASSESSMENT

Comment #5: The rationale for the number and location of the samples is not given.

CH2M Response #5: The number and locations of soil vapor samples collected as part of the eastern 15-acre investigation were approved by the RWQCB, as stated above.

OEHHA #5: *Please refer to OEHHA's previous comments (#1 and #4).*

Comment #6: It should be noted that overall variability of concentrations from a single sampling event may contribute to the potential underestimation of risk.

CH2M Response #6: The sampling results from the one event needs to be considered in light of other lines of evidence. Annual sampling near the source area at SVM-9 should also be considered. Data collected from SVM-9 since 2012 have been below screening levels as stated above.

OEHHA #6: *OEHHA agrees that other lines of evidence need to be taken into account as well. However, a single annual sampling at SVM-19 is not adequate to address the cumulative risk at a Site.*

Comment #7: The western side of the Eastern parcel (the area of concern) is not sampled for soil vapor COPCs

CH2M Response #7: As stated above, two additional soil vapor locations (SV-94 and SV-96) within the eastern 15-acre parcel were positioned approximately 220 feet to the northeast/southeast of SVM-19 to provide representation of the western portion of that area. The probes were installed and sampled by DLA Energy's consultant; results are documented in DLA-Energy's Human Health Risk Assessment Report

OEHHA #7: *These two additional locations were not presented in the original Shallow Soil report. These additions for sampling are satisfactory.*

Comment #8: Typically, a 100-foot buffer zone beyond the extent of the soil gas plume should be demonstrated at a Site (DTSC, 2011). This 100-foot buffer is warranted due to uncertainty about future soil gas migration upon redevelopment.

CH2M Response #8: As discussed in the CSM report, there have been several rounds of soil vapor monitoring which confirm the limited extent of VOCs in soil vapor potentially arising from volatilization from groundwater. In addition, an assessment of vapor intrusion was conducted in 2006 in residences adjacent and to the south of the site. The results from this assessment indicated that potential VI pathways did not

appear to be complete in those residences. These results represent a second line of evidence along with the soil vapor monitoring results indicating VI exposure pathways are unlikely to be complete. While the 100-ft distance from the extent of groundwater and soil vapor samples represents a boundary for determining when VI should be investigated, there are already multiple lines of evidence for this site which provide an understanding of the potential for VI pathways, both under current or future land use conditions.

OEHHA #8: *The multiple lines of evidence are supportive. This response is satisfactory.*

Comment #9: In addition, for a residential scenario, there should ideally be a minimum one soil gas sample location for every potential residential building. For comparison, the parcel size for most residential housing tracts in California is approximately one-eighth to one-quarter acre. Hence, the density of soil gas collection for future residential developments should be based on this type of spacing. Bear in mind that the area of concern is 15 acres.

CH2M Response #9: The eastern 15-acre parcel is zoned by the City of Norwalk as industrial/commercial, not residential, as noted in the land use restrictions for this area. Therefore, the soil gas spacing requirements under a residential scenario should not apply.

OEHHA #9: *Please refer to OEHHA's original memo (August 2, 2016). Target scenarios are not explicitly defined in reports. It is implied that scenarios include current and future residential, commercial, and construction workers. If development/remediation of the Site is inconsistent with the land uses identified evaluated in this risk assessment, additional evaluation of potential health risks may be necessary. OEHHA recommends to the RWQCB a deed restriction for the Site to indicate the need for additional site investigations in the case of a change of land use.*

Comment #10: Out of the three soil vapor locations, only one is analyzed for PAHs or PCBs. Please explain.

CH2M Response #10: One soil sample was analyzed for PAHs and PCBs at SVM-19 (5-foot depth). These analyses were specifically requested by the RWQCB. Soil vapor samples were analyzed for VOCs and TPH-g only.

OEHHA #10: *The response is satisfactory.*

Comment #11: Please clarify justification for not using the Johnson & Ettinger model to evaluate vapor intrusion of VOCs.

CH2M Response #11: A conservative assumption for the rate of biodegradation was used based on the range of rates published in the literature, and sandy soil is assumed for purposes of estimating vapor diffusion. The results of this modeling are presented in the 2015 PVI guidance as Figures 9 and 10, and EPA states these can be used to estimate values for α for situations where the total vapor concentration at the source and the vertical separation between the source and bottom building are known. This

approach was used for this site as it is considered more representative for estimating α than the standard J&E model provided by DTSC.

OEHHA #11: *If the VOCs are TPHs only and the source is a gas station, the PVI risk guidance may apply. The rationale is given. This response is satisfactory.*

Comment #12: Table 7 results are from EPA's Petroleum Vapor Intrusion model, but there are no calculations to show the derivation of these results.

CH2M Response #12: The methodology is described in the Shallow Soil Closure Report, but it is summarized below for completeness.

OEHHA #12: *A risk assessment report should be transparent and all statements should be supported and referred to the appropriate documents. The response is satisfactory.*

Comment #13: OEHHA used the J&E model to evaluate the potential risks from vapor intrusion using the COPC groundwater detections from Table 7.

CH2M Response #13: As stated above, the J&E model used by OEHHA does not address the biodegradation known to occur with petroleum hydrocarbons, and isn't recommended for assessing petroleum hydrocarbon risks. The modeling used in the Shallow Closure Report (CH2M, 2016) is consistent with the guidelines presented in EPA's PVI guidance.

OEHHA #13: *The response is satisfactory.*

Comment #14: Groundwater concentrations were based on those detected at GMW-O-15. Please explain why concentrations from this particular monitoring well (and not others) were chosen.

CH2M Response #14: As stated above, groundwater concentrations from GMW-O-15 were selected since this well had the most recent and highest detected concentrations in groundwater and therefore provided the highest overall risk.

OEHHA #14: *This response is satisfactory.*

Comment #15: A current SFPP remediation system is mentioned in the Conclusions of the report, but the types of controls are not explicitly stated or described.

CH2M Response #15: SFPP's remediation systems in the southeastern area (SVE and total fluids extraction) will continue to operate for hydrocarbon mass removal and groundwater containment in the uppermost groundwater zone.

OEHHA #15: *This response is satisfactory.*

EDITORIAL COMMENTS

Comment #16: Page 4 of the report states "one ambient air sample was collected on each day of sampling and analyzed." The language indicates that there may be more than one sample collected, but only one ambient air sample is shown in Table 6.

CH2M Response #16: Comment noted. Only one day was required to complete sampling; therefore, only one ambient air sample was collected.

Paul Cho
11/18/16
Page 6

OEHHA #16: *Response is noted. More ambient samples may need to be collected pending future assessment.*

Please do not hesitate to contact me at (916) 327-7338 or by e-mail at Nathalie.Pham@oehha.ca.gov, if you have any questions related to this review.

Memo reviewed by

Hristo Hristov

Hristo Hristov, MD, PhD.
Staff Toxicologist

References

DTSC, 2011. Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). Department of Toxic Substances Control, California Environmental Protection Agency, October, 2011.

US EPA, 1996. Soil Screening Guidance: User's Guide. Office of Solid Waste and Emergency Response, July 1996.

CH2M HILL (CH2M). 2016. Results of September 2015 Soil Vapor Monitoring at the South-Central and Southeastern Areas of the SFPP Norwalk Pump Station, Norwalk, California.

Attachment B
Los Angeles County Department of
Public Health Boring Permits



ENVIRONMENTAL HEALTH

Drinking Water Program



5050 Commerce Drive, Baldwin Park, CA 91706

Telephone: (626) 430-5420 • Facsimile: (626) 813-3013 • Email: vgallegos@ph.lacounty.gov

http://publichealth.lacounty.gov/eh/ep/dw/dw_main.htm

SR0095468

15306 Norwalk Blvd Norwalk 90650 Work Plan Approval

TO BE COMPLETED BY APPLICANT:

| | | | |
|--|-----------------|--------------|--|
| WORK SITE ADDRESS 15306 Norwalk Boulevard | CITY Norwalk | ZIP 90650 | EMAIL ADDRESS FOR WELL PERMIT APPROVAL Daniel.jablonski@ch2m.com |
|--|-----------------|--------------|--|

NOTICE:

- WORK PLAN APPROVALS ARE VALID FOR 180 DAYS. 30 DAY EXTENSIONS OF WORK PLAN APPROVALS ARE CONSIDERED ON AN INDIVIDUAL (CASE-BY-CASE) BASIS AND MAY BE SUBJECT TO ADDITIONAL PLAN REVIEW FEES (HOURLY RATE AS APPLICABLE).
- WORK PLAN MODIFICATIONS MAY BE REQUIRED IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED AT THE SITE INSPECTION ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- WORK PLAN APPROVALS ARE LIMITED TO COMPLIANCE WITH THE CALIFORNIA WELL STANDARDS AND THE LOS ANGELES COUNTY CODE AND DOES NOT GRANT ANY RIGHTS TO CONSTRUCT, RENOVATE, OR DECOMMISSION ANY WELL. THE APPLICANT IS RESPONSIBLE FOR SECURING ALL OTHER NECESSARY PERMITS SUCH AS WATER RIGHTS, PROPERTY RIGHTS, COASTAL COMMISSION APPROVALS, USE COVENANTS, ENCROACHMENT PERMISSIONS, UTILITY LINE SETBACKS, CITY/COUNTY PUBLIC WORKS RIGHTS OF WAY, ETC.
- ALL FIELD WORK MUST BE CONDUCTED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF CALIFORNIA.
- THIS PERMIT IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE SIGNED BY THE DEPUTY HEALTH OFFICER. WORK SHALL NOT BE INITIATED WITHOUT A WORK PLAN APPROVAL STAMPED BY THE DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM.
- **ONCE APPROVED NOTIFY VINCENT GALLEGOS AT vgallegos@ph.lacounty.gov PREFERABLY 4 BUSINESS DAYS BEFORE WORK IS SCHEDULED TO BEGIN.**

TO BE COMPLETED BY DEPARTMENT OF PUBLIC HEALTH—DRINKING WATER PROGRAM:

X WORK PLAN APPROVED: 5 Monitoring Well Installations

DATE: February 7, 2017

ADDITIONAL APPROVAL CONDITIONS:

- Please provide/ verify project dates and time via my email listed above this comment box
- Submit Copies Well Drillers Completion Report(s) within 30 days.



Vincent Gallegos R.E.H.S.
Drinking Water Program
vgallegos@ph.lacounty.gov

GROUT SEAL INSPECTION

WELL DRILLERS COMPLETION REPORT(S)

| | | | |
|----------------|----------------|----------------|----------------|
| DATE ACCEPTED: | REHS signature | DATE ACCEPTED: | REHS signature |
|----------------|----------------|----------------|----------------|

Attachment C
Soil Boring Logs



PROJECT NUMBER
684731.PM.01

BORING NUMBER
SVM-20

SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Eastern 15-Acre Investigation, DFSP Norwalk LOCATION: 33.89184558, 118.0675068 DATE: 2/15/2017

WEATHER: Partly Cloudy, 70 deg F DRILLING CONTRACT OF Gregg Drilling and Testing

DRILLING METHOD AND EQUIPMENT USED: SST hand auger 3.5" bucket; MiniRae PID; Trimble Handheld GPS

WATER LEVELS n/a START : 0' 0" END : 10' 6" LOGGER : M. Mayry

| DEPTH BELOW SURFACE (FT) | LAB SAMPLE (FT) | | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | CORE DESCRIPTION | Soil Vapor Probe Completion | |
|--------------------------|---|----------|--|--|-----------------------------|--|
| | SAMPLE INTERVAL (FT) | #/TYPE | | | Details | Comments |
| | | | | | | |
| 1_ | | | | Top soil from 0-2" bgs | | Flush mount traffic rated well box |
| 2_ | | | | Poorly graded sand (SP), dry to moist, grayish brown 2.5Y 5/2, 100% fine to medium grain sand, PID = 0.0 ppm, no odor, no staining | | Hydrated Bentonite |
| 3_ | | | | | | |
| 4_ | | | | | | Dry Bentonite |
| 5_ | SVM-20-4.5 | 4.5-5.0 | HA | n/a as above (SP) | ◆ | #3 Filter pack sand Vapor probe set at 5 ft bgs Hydrated Bentonite |
| 6_ | | | | | | |
| 7_ | | | | | | |
| 8_ | | | | | | |
| 9_ | | | | | | Dry Bentonite |
| 10_ | SVM-20-9.5 | 9.5-10.0 | HA | n/a as above (SP), moist, dark gray 2.5Y 4/1, 100% fine grain sand, micaceous, trace fines, PID = 0.0 ppm, no odor, no staining | ◆ | #3 Filter pack sand Vapor probe set at 9.5 ft bgs Hydrated Bentonite |
| | Soil samples analyzed for VOCs, TPH-g, TPH-d, TPH-o | | | Total Depth = 10.5 ft bgs | | 3.5" diameter borehole |
| | | | | | | Hand augered to 10.5' using 3.5" bucket |



PROJECT NUMBER
684731.PM.01

BORING NUMBER
SVM-21

SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Eastern 15-Acre Investigation, DFSP Norwalk LOCATION: 33.89139676, 118.0674707 DATE: 2/14/2017

WEATHER: Partly Cloudy, 70 deg F DRILLING CONTRACTOR: Gregg Drilling and Testing

DRILLING METHOD AND EQUIPMENT USED: SST hand auger 3.5" bucket; MiniRae PID; Trimble Handheld GPS

WATER LEVELS n/a START : 0' 0" END : 10' 6" LOGGER : M. Mayry

| DEPTH BELOW SURFACE (FT) | LAB SAMPLE (FT) | | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | CORE DESCRIPTION | Soil Vapor Probe Completion | |
|--------------------------|----------------------|--------|--|--|-----------------------------|--|
| | SAMPLE INTERVAL (FT) | #/TYPE | | | Details | Comments |
| | | | | | | |
| 1_ | | | | Top soil from 0-2" bgs | | Flush mount traffic rated well box |
| 2_ | | | | Poorly graded sand (SP), dry to moist, grayish brown 2.5Y 5/2, 100% fine to medium grain sand, PID = 0.0 ppm, no odor, no staining | | Hydrated Bentonite |
| 3_ | | | | | | |
| 4_ | SVM-21-4.5 | | | | | Dry Bentonite |
| 5_ | 4.5-5.0 | HA | n/a | as above (SP) | ◆ | #3 Filter pack sand Vapor probe set at 5 ft bgs Hydrated Bentonite |
| 6_ | | | | | | |
| 7_ | | | | | | |
| 8_ | | | | | | |
| 9_ | | | | | | Dry Bentonite |
| 10_ | SVM-21-9.5 | | | | | #3 Filter pack sand Vapor probe set at 9.5 ft bgs Hydrated Bentonite |
| | 9.5-10.0 | HA | n/a | as above (SP), moist, dark gray 2.5Y 4/1, 100% fine grain sand, micaceous, trace fines, PID = 1.1 ppm, no odor, no staining | ◆ | |
| | | | | Total Depth = 10.5 ft bgs | | 3.5" diameter borehole |
| | | | | | | Hand augered to 10.5' using 3.5" bucket |

Soil samples analyzed for VOCs, TPH-g, TPH-d, TPH-o



PROJECT NUMBER
684731.PM.01

BORING NUMBER
SVM-22

SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Eastern 15-Acre Investigation, DFSP Norwalk LOCATION: 33.89139274, 118.0671841 DATE: 2/14/2017

WEATHER: Partly Cloudy, 70 deg F DRILLING CONTRACTOR: Gregg Drilling and Testing

DRILLING METHOD AND EQUIPMENT USED: SST hand auger 3.5" bucket; MiniRae PID; Trimble Handheld GPS

WATER LEVELS n/a START : 0' 0" END : 10' 6" LOGGER : M. Mayry

| DEPTH BELOW SURFACE (FT) | LAB SAMPLE (FT) | | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | CORE DESCRIPTION | Soil Vapor Probe Completion | |
|--------------------------|---|----------|--|---------------------------|--|--|
| | SAMPLE INTERVAL (FT) | #/TYPE | | | Details | Comments |
| | | | | | | |
| 1_ | | | | 3" Asphalt | | Flush mount traffic rated well box |
| 2_ | | | | 1' Road base, gravel | | Hydrated Bentonite |
| 3_ | | | | | | |
| 4_ | | | | | | Dry Bentonite |
| 5_ | SVM-22-4.5 | 4.5-5.0 | HA | n/a | Poorly graded sand (SP), moist, light olive brown 2.5Y 5/3, 100% fine grain sand, trace mica, trace fines, PID = 0.0 ppm, no odor, no staining | #3 Filter pack sand Vapor probe set at 5 ft bgs Hydrated Bentonite |
| 6_ | | | | | | |
| 7_ | | | | | | |
| 8_ | | | | | | |
| 9_ | | | | | | Dry Bentonite |
| 10_ | SVM-22-9.5 | 9.5-10.0 | HA | n/a | as above (SP), moist, olive gray 5Y 4/2, 95% fine grain sand, 5% fines, micaceous, PID = 2.3 ppm, no odor, no staining | #3 Filter pack sand Vapor probe set at 9.5 ft bgs Hydrated Bentonite |
| | Soil samples analyzed for VOCs, TPH-g, TPH-d, TPH-o | | | Total Depth = 10.5 ft bgs | | 3.5" diameter borehole |
| | | | | | | Hand augered to 10.5' using 3.5" bucket |



PROJECT NUMBER
684731.PM.01

BORING NUMBER
SVM-23

SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Eastern 15-Acre Investigation, DFSP Norwalk LOCATION: 33.89138678, 118.0668955 DATE: 2/14/2017

WEATHER: Partly Cloudy, 70 deg F DRILLING CONTRACTOR: Gregg Drilling and Testing

DRILLING METHOD AND EQUIPMENT USED: SST hand auger 3.5" bucket; MiniRae PID; Trimble Handheld GPS

WATER LEVELS n/a START : 0' 0" END : 10' 6" LOGGER : M. Mayry

| DEPTH BELOW SURFACE (FT) | LAB SAMPLE (FT) | | STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N) | CORE DESCRIPTION | Soil Vapor Probe Completion | |
|--------------------------|----------------------|----------|--|---|-----------------------------|---|
| | SAMPLE INTERVAL (FT) | #/TYPE | | | Details | Comments |
| | | | | | | |
| 1_ | | | | 3" Asphalt | | Flush mount traffic rated well box |
| 2_ | | | | 1' Road base, gravel | | Hydrated Bentonite |
| 3_ | | | | Poorly graded sand (SP), moist, olive brown 2.5Y 4/3, 95% fine grain sand, micaceous, 5% fines | | |
| 4_ | | | | | | Dry Bentonite |
| 5_ | SVM-23-4.5 | 4.5-5.0 | HA | n/a | | #3 Filter pack sand |
| 6_ | | | | as above (SP), color change to grayish brown 2.5Y 5/2, fine to medium grain sand, PID = 0.0 ppm, no odor, no staining | | Vapor probe set at 5 ft bgs |
| 7_ | | | | | | Hydrated Bentonite |
| 8_ | | | | | | |
| 9_ | | | | | | Dry Bentonite |
| 10_ | SVM-23-9.5 | 9.5-10.0 | HA | n/a | | #3 Filter pack sand |
| | | | | | | Vapor probe set at 9.5 ft bgs |
| | | | | | | Hydrated Bentonite |
| | | | | Total Depth = 10.5 ft bgs | | 3.5" diameter borehole |
| | | | | | | Hand augered to 10.5' using 3.5" bucket |

Soil samples analyzed for VOCs, TPH-g, TPH-d, TPH-o

Attachment D
Laboratory Analytical Report for
Soil

February 23, 2017

Dan Jablonski
CH2MHill
1000 Wilshire Blvd.
Los Angeles, CA 90017

CA-ELAPNo.: 2676
NV Cert. No.: NV-00922

TEL:
FAX:

Workorder No.: N023124

RE: KMEP Norwalk

Attention: Dan Jablonski

Enclosed are the results for sample(s) received on February 15, 2017 by ASSET Laboratories .
The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in
accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the
page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Puri Romualdo
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in
its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.269
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Project: KMEP Norwalk
Lab Order: N023124

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

Analytical Comments for EPA 8015B-GRO:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries are out of criteria possibly due to matrix interference; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 8260B_Soil:

Laboratory Control Sample Duplicate (LCSD) recovery and RPD of Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) for acetone and 2-hexanone are outside acceptance criteria in analytical batch P17VS015. However, samples were not reported for these analytes in this analytical run.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for QC samples N023121-001AMS and N023121-001AMSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B_Water:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for QC samples N023124-010AMS and N023124-010AMSD possibly due to matrix interference. The associated



CLIENT: CH2MHill
Project: KMEP Norwalk
Lab Order: N023124

CASE NARRATIVE

Laboratory Control Sample (LCS) recovery was acceptable.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Serving Clients with Passion and Professionalism™

CALIFORNIA | P: 562.219.7435 F: 562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P: 702.307.2659 F: 702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

Date: 23-Feb-17

CLIENT: CH2MHill
Project: KMEP Norwalk
Lab Order: N023124
Contract No:

Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---------------|------------------|--------|-----------------------|---------------|---------------|
| N023124-001A | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-001B | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-001C | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-001D | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-001E | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-001F | SVM-23-4.5 | Soil | 2/14/2017 9:25:00 AM | 2/15/2017 | |
| N023124-002A | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-002B | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-002C | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-002D | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-002E | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-002F | SVM-23-9.5 | Soil | 2/14/2017 9:40:00 AM | 2/15/2017 | |
| N023124-003A | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-003B | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-003C | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-003D | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-003E | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-003F | SVM-22-4.5 | Soil | 2/14/2017 11:00:00 AM | 2/15/2017 | |
| N023124-004A | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-004B | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-004C | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-004D | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-004E | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-004F | DUP-1-4.5 | Soil | 2/14/2017 11:05:00 AM | 2/15/2017 | |
| N023124-005A | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |
| N023124-005B | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |
| N023124-005C | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |
| N023124-005D | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |
| N023124-005E | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.269.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Project: KMEP Norwalk
Lab Order: N023124
Contract No:

Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---------------|------------------|--------|-----------------------|---------------|---------------|
| N023124-005F | SVM-22-9.5 | Soil | 2/14/2017 11:15:00 AM | 2/15/2017 | |
| N023124-006A | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-006B | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-006C | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-006D | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-006E | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-006F | SVM-21-4.5 | Soil | 2/14/2017 1:20:00 PM | 2/15/2017 | |
| N023124-007A | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-007B | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-007C | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-007D | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-007E | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-007F | SVM-21-9.5 | Soil | 2/14/2017 2:25:00 PM | 2/15/2017 | |
| N023124-008A | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-008B | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-008C | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-008D | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-008E | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-008F | SVM-20-4.5 | Soil | 2/15/2017 8:00:00 AM | 2/15/2017 | |
| N023124-009A | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-009B | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-009C | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-009D | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-009E | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-009F | SVM-20-9.5 | Soil | 2/15/2017 8:15:00 AM | 2/15/2017 | |
| N023124-010A | EB-1 | Water | 2/15/2017 9:05:00 AM | 2/15/2017 | |
| N023124-010B | EB-1 | Water | 2/15/2017 9:05:00 AM | 2/15/2017 | |
| N023124-010C | EB-1 | Water | 2/15/2017 9:05:00 AM | 2/15/2017 | |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-001

Client Sample ID: SVM-23-4.5
Collection Date: 2/14/2017 9:25:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1,1-Trichloroethane | ND | 0.096 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1,2-Trichloroethane | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1-Dichloroethane | ND | 0.11 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1-Dichloroethene | ND | 0.27 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,1-Dichloropropene | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2,3-Trichlorobenzene | ND | 0.049 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2,3-Trichloropropane | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2,4-Trichlorobenzene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2,4-Trimethylbenzene | ND | 0.055 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.40 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2-Dibromoethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2-Dichlorobenzene | ND | 0.10 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2-Dichloroethane | ND | 0.11 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,2-Dichloropropane | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,3,5-Trimethylbenzene | ND | 0.070 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,3-Dichlorobenzene | ND | 0.11 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,3-Dichloropropane | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 1,4-Dichlorobenzene | ND | 0.081 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 2,2-Dichloropropane | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 2-Butanone | 4.1 | 1.5 | 43 | J ug/Kg | 1 | 2/18/2017 01:44 AM |
| 2-Chlorotoluene | ND | 0.082 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 2-Hexanone | ND | 1.2 | 44 | ug/Kg | 1 | 2/21/2017 02:17 PM |
| 4-Chlorotoluene | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 4-Isopropyltoluene | ND | 0.086 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| 4-Methyl-2-pentanone | ND | 0.52 | 43 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Acetone | ND | 1.6 | 44 | ug/Kg | 1 | 2/21/2017 02:17 PM |
| Acrolein | ND | 4.0 | 87 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Acrylonitrile | ND | 1.4 | 43 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Benzene | 2.2 | 0.097 | 4.3 | J ug/Kg | 1 | 2/18/2017 01:44 AM |
| Bromobenzene | ND | 0.24 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Bromochloromethane | ND | 0.47 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Bromodichloromethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Bromoform | ND | 0.37 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Bromomethane | ND | 0.31 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-001

Client Sample ID: SVM-23-4.5
Collection Date: 2/14/2017 9:25:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Carbon tetrachloride | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Chlorobenzene | ND | 0.080 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Chloroethane | ND | 0.43 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Chloroform | ND | 0.13 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Chloromethane | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| cis-1,2-Dichloroethene | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| cis-1,3-Dichloropropene | ND | 0.088 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Di-isopropyl ether | ND | 0.087 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Dibromochloromethane | ND | 0.40 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Dibromomethane | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Dichlorodifluoromethane | ND | 0.16 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Ethyl Tert-butyl ether | ND | 0.13 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Ethylbenzene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Freon-113 | ND | 0.49 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Hexachlorobutadiene | ND | 0.23 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Isopropylbenzene | ND | 0.066 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| m,p-Xylene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Methylene chloride | 1.4 | 0.88 | 4.3 | J ug/Kg | 1 | 2/18/2017 01:44 AM |
| MTBE | ND | 0.19 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| n-Butylbenzene | ND | 0.085 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| n-Propylbenzene | ND | 0.098 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Naphthalene | ND | 0.093 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| o-Xylene | ND | 0.047 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| sec-Butylbenzene | ND | 0.080 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Styrene | ND | 0.17 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Tert-amyl methyl ether | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Tert-Butanol | ND | 1.2 | 22 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| tert-Butylbenzene | ND | 0.10 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Tetrachloroethene | ND | 0.24 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Toluene | 1.8 | 0.086 | 4.3 | J ug/Kg | 1 | 2/18/2017 01:44 AM |
| trans-1,2-Dichloroethene | ND | 0.18 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| trans-1,3-Dichloropropene | ND | 0.068 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Trichloroethene | ND | 0.095 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Trichlorofluoromethane | ND | 0.54 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |
| Vinyl chloride | ND | 0.18 | 4.3 | ug/Kg | 1 | 2/18/2017 01:44 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-001

Client Sample ID: SVM-23-4.5
Collection Date: 2/14/2017 9:25:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB |
|-----------------------------|--------------------|----------|-----------|----------------------|
| Xylenes, Total | ND 0.12 | 4.3 | ug/Kg | 1 2/18/2017 01:44 AM |
| Surr: 1,2-Dichloroethane-d4 | 129 0 | 52-149 | %REC | 1 2/21/2017 02:17 PM |
| Surr: 1,2-Dichloroethane-d4 | 118 0 | 52-149 | %REC | 1 2/18/2017 01:44 AM |
| Surr: 4-Bromofluorobenzene | 96.6 0 | 65-135 | %REC | 1 2/18/2017 01:44 AM |
| Surr: 4-Bromofluorobenzene | 97.0 0 | 65-135 | %REC | 1 2/21/2017 02:17 PM |
| Surr: Dibromofluoromethane | 102 0 | 65-135 | %REC | 1 2/18/2017 01:44 AM |
| Surr: Dibromofluoromethane | 107 0 | 65-135 | %REC | 1 2/21/2017 02:17 PM |
| Surr: Toluene-d8 | 101 0 | 75-125 | %REC | 1 2/18/2017 01:44 AM |
| Surr: Toluene-d8 | 105 0 | 75-125 | %REC | 1 2/21/2017 02:17 PM |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: NV00922-GC3_170221B | QC Batch: 61335 | PrepDate | 2/21/2017 | Analyst: MDM |
|----------------------------|-----------------|----------|-----------|----------------------|
| TPH-Diesel (C13-C22) | ND 2900 | 10000 | ug/Kg | 1 2/22/2017 03:29 PM |
| TPH-Oil (C23-C44) | 55000 1800 | 10000 | ug/Kg | 1 2/22/2017 03:29 PM |
| Surr: Octacosane | 92.0 0 | 25-162 | %REC | 1 2/22/2017 03:29 PM |
| Surr: p-Terphenyl | 93.7 0 | 47-142 | %REC | 1 2/22/2017 03:29 PM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: NV00922-GC4_170220A | QC Batch: E17VS027 | PrepDate | 2/20/2017 | Analyst: RB |
|----------------------------|--------------------|----------|-----------|----------------------|
| GRO (C4 - C12) | 0.092 0.039 | 0.88 | J mg/Kg | 1 2/20/2017 03:13 PM |
| Surr: Chlorobenzene - d5 | 142 0 | 46-154 | %REC | 1 2/20/2017 03:13 PM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified
E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.269
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-002

Client Sample ID: SVM-23-9.5
Collection Date: 2/14/2017 9:40:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.17 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1,1-Trichloroethane | ND | 0.11 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1-Dichloroethane | ND | 0.12 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1-Dichloroethene | ND | 0.30 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,1-Dichloropropene | ND | 0.22 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2,3-Trichlorobenzene | ND | 0.055 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2,3-Trichloropropane | ND | 0.24 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2,4-Trichlorobenzene | ND | 0.13 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2,4-Trimethylbenzene | ND | 0.062 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.45 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2-Dibromoethane | ND | 0.15 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2-Dichlorobenzene | ND | 0.11 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2-Dichloroethane | ND | 0.12 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,2-Dichloropropane | ND | 0.23 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,3,5-Trimethylbenzene | ND | 0.078 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,3-Dichlorobenzene | ND | 0.12 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,3-Dichloropropane | ND | 0.16 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 1,4-Dichlorobenzene | ND | 0.090 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 2,2-Dichloropropane | ND | 0.13 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 2-Butanone | ND | 1.6 | 48 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 2-Chlorotoluene | ND | 0.091 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 2-Hexanone | ND | 1.3 | 47 | ug/Kg | 1 | 2/21/2017 02:40 PM |
| 4-Chlorotoluene | ND | 0.17 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 4-Isopropyltoluene | ND | 0.095 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| 4-Methyl-2-pentanone | ND | 0.58 | 48 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Acetone | ND | 1.7 | 47 | ug/Kg | 1 | 2/21/2017 02:40 PM |
| Acrolein | ND | 4.5 | 96 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Acrylonitrile | ND | 1.6 | 48 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Benzene | 0.81 | 0.11 | 4.8 | J ug/Kg | 1 | 2/18/2017 02:07 AM |
| Bromobenzene | ND | 0.27 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Bromochloromethane | ND | 0.52 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Bromodichloromethane | ND | 0.16 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Bromoform | ND | 0.41 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Bromomethane | ND | 0.35 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-002

Client Sample ID: SVM-23-9.5
Collection Date: 2/14/2017 9:40:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.15 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Carbon tetrachloride | ND | 0.16 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Chlorobenzene | ND | 0.089 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Chloroethane | ND | 0.48 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Chloroform | ND | 0.14 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Chloromethane | ND | 0.17 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| cis-1,2-Dichloroethene | ND | 0.23 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| cis-1,3-Dichloropropene | ND | 0.098 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Di-isopropyl ether | ND | 0.096 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Dibromochloromethane | ND | 0.44 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Dibromomethane | ND | 0.22 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Dichlorodifluoromethane | ND | 0.18 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Ethyl Tert-butyl ether | ND | 0.14 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Ethylbenzene | ND | 0.13 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Freon-113 | ND | 0.54 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Hexachlorobutadiene | ND | 0.26 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Isopropylbenzene | ND | 0.073 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| m,p-Xylene | ND | 0.13 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Methylene chloride | 1.5 | 0.97 | 4.8 | J ug/Kg | 1 | 2/18/2017 02:07 AM |
| MTBE | ND | 0.21 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| n-Butylbenzene | ND | 0.094 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| n-Propylbenzene | ND | 0.11 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Naphthalene | ND | 0.10 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| o-Xylene | ND | 0.052 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| sec-Butylbenzene | ND | 0.089 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Styrene | ND | 0.19 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Tert-amyl methyl ether | ND | 0.16 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Tert-Butanol | ND | 1.4 | 24 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| tert-Butylbenzene | ND | 0.12 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Tetrachloroethene | ND | 0.27 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Toluene | ND | 0.095 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| trans-1,2-Dichloroethene | ND | 0.20 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| trans-1,3-Dichloropropene | ND | 0.075 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Trichloroethene | ND | 0.11 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Trichlorofluoromethane | ND | 0.60 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Vinyl chloride | ND | 0.21 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-002

Client Sample ID: SVM-23-9.5
Collection Date: 2/14/2017 9:40:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| Xylenes, Total | ND | 0.13 | 4.8 | ug/Kg | 1 | 2/18/2017 02:07 AM |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 52-149 | %REC | 1 | 2/21/2017 02:40 PM |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 52-149 | %REC | 1 | 2/18/2017 02:07 AM |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:07 AM |
| Surr: 4-Bromofluorobenzene | 94.5 | 0 | 65-135 | %REC | 1 | 2/21/2017 02:40 PM |
| Surr: Dibromofluoromethane | 102 | 0 | 65-135 | %REC | 1 | 2/21/2017 02:40 PM |
| Surr: Dibromofluoromethane | 98.5 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:07 AM |
| Surr: Toluene-d8 | 99.8 | 0 | 75-125 | %REC | 1 | 2/18/2017 02:07 AM |
| Surr: Toluene-d8 | 101 | 0 | 75-125 | %REC | 1 | 2/21/2017 02:40 PM |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: NV00922-GC3_170221B | QC Batch: 61335 | PrepDate | 2/21/2017 | Analyst: MDM | | |
|----------------------------|-----------------|----------|-----------|--------------|---|--------------------|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 04:02 PM |
| TPH-Oil (C23-C44) | 12000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 04:02 PM |
| Surr: Octacosane | 89.2 | 0 | 25-162 | %REC | 1 | 2/22/2017 04:02 PM |
| Surr: p-Terphenyl | 92.3 | 0 | 47-142 | %REC | 1 | 2/22/2017 04:02 PM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: NV00922-GC4_170220A | QC Batch: E17VS027 | PrepDate | 2/20/2017 | Analyst: RB | | |
|----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| GRO (C4 - C12) | 0.092 | 0.043 | 0.97 | J mg/Kg | 1 | 2/20/2017 03:47 PM |
| Surr: Chlorobenzene - d5 | 147 | 0 | 46-154 | %REC | 1 | 2/20/2017 03:47 PM |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-003

Client Sample ID: SVM-22-4.5
Collection Date: 2/14/2017 11:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.20 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1,1-Trichloroethane | ND | 0.13 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.19 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1,2-Trichloroethane | ND | 0.28 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1-Dichloroethane | ND | 0.14 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1-Dichloroethene | ND | 0.37 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,1-Dichloropropene | ND | 0.27 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2,3-Trichlorobenzene | ND | 0.068 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2,3-Trichloropropane | ND | 0.29 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2,4-Trichlorobenzene | ND | 0.16 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2,4-Trimethylbenzene | ND | 0.076 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.55 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2-Dibromoethane | ND | 0.19 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2-Dichlorobenzene | ND | 0.14 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2-Dichloroethane | ND | 0.15 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,2-Dichloropropane | ND | 0.29 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,3,5-Trimethylbenzene | ND | 0.096 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,3-Dichlorobenzene | ND | 0.15 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,3-Dichloropropane | ND | 0.20 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 1,4-Dichlorobenzene | ND | 0.11 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 2,2-Dichloropropane | ND | 0.16 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 2-Butanone | ND | 2.0 | 59 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 2-Chlorotoluene | ND | 0.11 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 2-Hexanone | ND | 1.5 | 54 | ug/Kg | 1 | 2/21/2017 03:02 PM |
| 4-Chlorotoluene | ND | 0.21 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 4-Isopropyltoluene | ND | 0.12 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| 4-Methyl-2-pentanone | ND | 0.72 | 59 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Acetone | ND | 2.0 | 54 | ug/Kg | 1 | 2/21/2017 03:02 PM |
| Acrolein | ND | 5.5 | 120 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Acrylonitrile | ND | 1.9 | 59 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Benzene | ND | 0.13 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Bromobenzene | ND | 0.33 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Bromochloromethane | ND | 0.64 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Bromodichloromethane | ND | 0.19 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Bromoform | ND | 0.50 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Bromomethane | ND | 0.43 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-003

Client Sample ID: SVM-22-4.5
Collection Date: 2/14/2017 11:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.19 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Carbon tetrachloride | ND | 0.20 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Chlorobenzene | ND | 0.11 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Chloroethane | ND | 0.59 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Chloroform | ND | 0.17 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Chloromethane | ND | 0.21 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| cis-1,2-Dichloroethene | ND | 0.28 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| cis-1,3-Dichloropropene | ND | 0.12 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Di-isopropyl ether | ND | 0.12 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Dibromochloromethane | ND | 0.54 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Dibromomethane | ND | 0.27 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Dichlorodifluoromethane | ND | 0.22 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Ethyl Tert-butyl ether | ND | 0.17 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Ethylbenzene | ND | 0.16 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Freon-113 | ND | 0.67 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Hexachlorobutadiene | ND | 0.32 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Isopropylbenzene | ND | 0.090 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| m,p-Xylene | ND | 0.16 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Methylene chloride | 1.6 | 1.2 | 5.9 | J ug/Kg | 1 | 2/18/2017 02:30 AM |
| MTBE | ND | 0.25 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| n-Butylbenzene | ND | 0.12 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| n-Propylbenzene | ND | 0.13 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Naphthalene | ND | 0.13 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| o-Xylene | ND | 0.064 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| sec-Butylbenzene | ND | 0.11 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Styrene | ND | 0.23 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Tert-amyl methyl ether | ND | 0.20 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Tert-Butanol | ND | 1.7 | 30 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| tert-Butylbenzene | ND | 0.14 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Tetrachloroethene | ND | 0.33 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Toluene | ND | 0.12 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| trans-1,2-Dichloroethene | ND | 0.25 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| trans-1,3-Dichloropropene | ND | 0.092 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Trichloroethene | ND | 0.13 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Trichlorofluoromethane | ND | 0.74 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |
| Vinyl chloride | ND | 0.25 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-003

Client Sample ID: SVM-22-4.5
Collection Date: 2/14/2017 11:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: | NV00922-MS5_170217B | QC Batch: | P17VS015 | PrepDate | 2/17/2017 | Analyst: | RB |
|-----------------------------|---------------------|-----------|----------|----------|-----------|--------------------|----|
| Xylenes, Total | ND | 0.16 | 5.9 | ug/Kg | 1 | 2/18/2017 02:30 AM | |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 52-149 | %REC | 1 | 2/21/2017 03:02 PM | |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 52-149 | %REC | 1 | 2/18/2017 02:30 AM | |
| Surr: 4-Bromofluorobenzene | 96.9 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:30 AM | |
| Surr: 4-Bromofluorobenzene | 95.9 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:02 PM | |
| Surr: Dibromofluoromethane | 103 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:30 AM | |
| Surr: Dibromofluoromethane | 109 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:02 PM | |
| Surr: Toluene-d8 | 101 | 0 | 75-125 | %REC | 1 | 2/18/2017 02:30 AM | |
| Surr: Toluene-d8 | 102 | 0 | 75-125 | %REC | 1 | 2/21/2017 03:02 PM | |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: | NV00922-GC3_170221B | QC Batch: | 61335 | PrepDate | 2/21/2017 | Analyst: | MDM |
|----------------------|---------------------|-----------|--------|----------|-----------|--------------------|-----|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 04:34 PM | |
| TPH-Oil (C23-C44) | 13000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 04:34 PM | |
| Surr: Octacosane | 88.6 | 0 | 25-162 | %REC | 1 | 2/22/2017 04:34 PM | |
| Surr: p-Terphenyl | 91.7 | 0 | 47-142 | %REC | 1 | 2/22/2017 04:34 PM | |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: | NV00922-GC4_170220A | QC Batch: | E17VS027 | PrepDate | 2/20/2017 | Analyst: | RB |
|--------------------------|---------------------|-----------|----------|----------|-----------|--------------------|--------------------|
| GRO (C4 - C12) | 0.11 | 0.049 | 1.1 | J | mg/Kg | 1 | 2/20/2017 04:21 PM |
| Surr: Chlorobenzene - d5 | 143 | 0 | 46-154 | %REC | 1 | 2/20/2017 04:21 PM | |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-004

Client Sample ID: DUP-1-4.5
Collection Date: 2/14/2017 11:05:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.19 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1,1-Trichloroethane | ND | 0.12 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.18 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1,2-Trichloroethane | ND | 0.26 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1-Dichloroethane | ND | 0.14 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1-Dichloroethene | ND | 0.35 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,1-Dichloropropene | ND | 0.26 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2,3-Trichlorobenzene | ND | 0.063 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2,3-Trichloropropane | ND | 0.27 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2,4-Trichlorobenzene | ND | 0.15 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2,4-Trimethylbenzene | ND | 0.071 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.52 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2-Dibromoethane | ND | 0.18 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2-Dichlorobenzene | ND | 0.13 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2-Dichloroethane | ND | 0.14 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,2-Dichloropropane | ND | 0.27 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,3,5-Trimethylbenzene | ND | 0.090 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,3-Dichlorobenzene | ND | 0.14 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,3-Dichloropropane | ND | 0.19 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 1,4-Dichlorobenzene | ND | 0.10 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 2,2-Dichloropropane | ND | 0.15 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 2-Butanone | ND | 1.9 | 56 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 2-Chlorotoluene | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 2-Hexanone | ND | 1.7 | 58 | ug/Kg | 1 | 2/21/2017 03:25 PM |
| 4-Chlorotoluene | ND | 0.20 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 4-Isopropyltoluene | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| 4-Methyl-2-pentanone | ND | 0.67 | 56 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Acetone | ND | 2.1 | 58 | ug/Kg | 1 | 2/21/2017 03:25 PM |
| Acrolein | ND | 5.2 | 110 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Acrylonitrile | ND | 1.8 | 56 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Benzene | ND | 0.12 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Bromobenzene | ND | 0.31 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Bromochloromethane | ND | 0.60 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Bromodichloromethane | ND | 0.18 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Bromoform | ND | 0.47 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Bromomethane | ND | 0.40 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-004

Client Sample ID: DUP-1-4.5
Collection Date: 2/14/2017 11:05:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.18 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Carbon tetrachloride | ND | 0.19 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Chlorobenzene | ND | 0.10 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Chloroethane | ND | 0.55 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Chloroform | ND | 0.16 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Chloromethane | ND | 0.19 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| cis-1,2-Dichloroethene | ND | 0.27 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| cis-1,3-Dichloropropene | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Di-isopropyl ether | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Dibromochloromethane | ND | 0.51 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Dibromomethane | ND | 0.26 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Dichlorodifluoromethane | ND | 0.21 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Ethyl Tert-butyl ether | ND | 0.16 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Ethylbenzene | ND | 0.15 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Freon-113 | ND | 0.63 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Hexachlorobutadiene | ND | 0.30 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Isopropylbenzene | ND | 0.085 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| m,p-Xylene | ND | 0.15 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Methylene chloride | 1.7 | 1.1 | 5.6 | J ug/Kg | 1 | 2/18/2017 02:53 AM |
| MTBE | ND | 0.24 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| n-Butylbenzene | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| n-Propylbenzene | ND | 0.13 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Naphthalene | ND | 0.12 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| o-Xylene | ND | 0.060 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| sec-Butylbenzene | ND | 0.10 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Styrene | ND | 0.22 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Tert-amyl methyl ether | ND | 0.18 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Tert-Butanol | ND | 1.6 | 28 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| tert-Butylbenzene | ND | 0.13 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Tetrachloroethene | ND | 0.31 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Toluene | ND | 0.11 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| trans-1,2-Dichloroethene | ND | 0.23 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| trans-1,3-Dichloropropene | ND | 0.087 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Trichloroethene | ND | 0.12 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Trichlorofluoromethane | ND | 0.70 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Vinyl chloride | ND | 0.24 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-004

Client Sample ID: DUP-1-4.5
Collection Date: 2/14/2017 11:05:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| Xylenes, Total | ND | 0.15 | 5.6 | ug/Kg | 1 | 2/18/2017 02:53 AM |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 52-149 | %REC | 1 | 2/21/2017 03:25 PM |
| Surr: 1,2-Dichloroethane-d4 | 118 | 0 | 52-149 | %REC | 1 | 2/18/2017 02:53 AM |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:53 AM |
| Surr: 4-Bromofluorobenzene | 96.1 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:25 PM |
| Surr: Dibromofluoromethane | 106 | 0 | 65-135 | %REC | 1 | 2/18/2017 02:53 AM |
| Surr: Dibromofluoromethane | 108 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:25 PM |
| Surr: Toluene-d8 | 99.6 | 0 | 75-125 | %REC | 1 | 2/18/2017 02:53 AM |
| Surr: Toluene-d8 | 102 | 0 | 75-125 | %REC | 1 | 2/21/2017 03:25 PM |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: NV00922-GC3_170221B | QC Batch: 61335 | PrepDate | 2/21/2017 | Analyst: MDM | | |
|----------------------------|-----------------|----------|-----------|--------------|---|--------------------|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 05:07 PM |
| TPH-Oil (C23-C44) | 14000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 05:07 PM |
| Surr: Octacosane | 85.5 | 0 | 25-162 | %REC | 1 | 2/22/2017 05:07 PM |
| Surr: p-Terphenyl | 88.3 | 0 | 47-142 | %REC | 1 | 2/22/2017 05:07 PM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: NV00922-GC4_170220A | QC Batch: E17VS027 | PrepDate | 2/20/2017 | Analyst: RB | | |
|----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| GRO (C4 - C12) | 0.11 | 0.053 | 1.2 | J mg/Kg | 1 | 2/20/2017 04:55 PM |
| Surr: Chlorobenzene - d5 | 145 | 0 | 46-154 | %REC | 1 | 2/20/2017 04:55 PM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified
E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-005

Client Sample ID: SVM-22-9.5
Collection Date: 2/14/2017 11:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1,1-Trichloroethane | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1-Dichloroethane | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1-Dichloroethene | ND | 0.31 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,1-Dichloropropene | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2,3-Trichlorobenzene | ND | 0.056 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2,3-Trichloropropane | ND | 0.24 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2,4-Trichlorobenzene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2,4-Trimethylbenzene | ND | 0.062 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.45 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2-Dibromoethane | ND | 0.15 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2-Dichlorobenzene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2-Dichloroethane | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,2-Dichloropropane | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,3,5-Trimethylbenzene | ND | 0.079 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,3-Dichlorobenzene | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,3-Dichloropropane | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 1,4-Dichlorobenzene | ND | 0.092 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 2,2-Dichloropropane | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 2-Butanone | 2.9 | 1.7 | 49 | J ug/Kg | 1 | 2/18/2017 03:16 AM |
| 2-Chlorotoluene | ND | 0.093 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 2-Hexanone | ND | 1.3 | 45 | ug/Kg | 1 | 2/21/2017 03:47 PM |
| 4-Chlorotoluene | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 4-Isopropyltoluene | ND | 0.096 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| 4-Methyl-2-pentanone | ND | 0.59 | 49 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Acetone | ND | 1.7 | 45 | ug/Kg | 1 | 2/21/2017 03:47 PM |
| Acrolein | ND | 4.5 | 97 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Acrylonitrile | ND | 1.6 | 49 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Benzene | 1.4 | 0.11 | 4.9 | J ug/Kg | 1 | 2/18/2017 03:16 AM |
| Bromobenzene | ND | 0.27 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Bromochloromethane | ND | 0.53 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Bromodichloromethane | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Bromoform | ND | 0.41 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Bromomethane | ND | 0.35 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-005

Client Sample ID: SVM-22-9.5
Collection Date: 2/14/2017 11:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Carbon tetrachloride | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Chlorobenzene | ND | 0.090 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Chloroethane | ND | 0.48 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Chloroform | ND | 0.14 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Chloromethane | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| cis-1,2-Dichloroethene | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| cis-1,3-Dichloropropene | ND | 0.099 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Di-isopropyl ether | ND | 0.097 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Dibromochloromethane | ND | 0.45 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Dibromomethane | ND | 0.22 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Dichlorodifluoromethane | ND | 0.18 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Ethyl Tert-butyl ether | ND | 0.14 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Ethylbenzene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Freon-113 | ND | 0.55 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Hexachlorobutadiene | ND | 0.26 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Isopropylbenzene | ND | 0.074 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| m,p-Xylene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Methylene chloride | 1.7 | 0.99 | 4.9 | J ug/Kg | 1 | 2/18/2017 03:16 AM |
| MTBE | ND | 0.21 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| n-Butylbenzene | ND | 0.096 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| n-Propylbenzene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Naphthalene | ND | 0.10 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| o-Xylene | ND | 0.053 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| sec-Butylbenzene | ND | 0.090 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Styrene | ND | 0.19 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Tert-amyl methyl ether | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Tert-Butanol | ND | 1.4 | 24 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| tert-Butylbenzene | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Tetrachloroethene | ND | 0.27 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Toluene | 1.1 | 0.096 | 4.9 | J ug/Kg | 1 | 2/18/2017 03:16 AM |
| trans-1,2-Dichloroethene | ND | 0.20 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| trans-1,3-Dichloropropene | ND | 0.076 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Trichloroethene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Trichlorofluoromethane | ND | 0.61 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Vinyl chloride | ND | 0.21 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-005

Client Sample ID: SVM-22-9.5
Collection Date: 2/14/2017 11:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| Xylenes, Total | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:16 AM |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 52-149 | %REC | 1 | 2/21/2017 03:47 PM |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 52-149 | %REC | 1 | 2/18/2017 03:16 AM |
| Surr: 4-Bromofluorobenzene | 95.6 | 0 | 65-135 | %REC | 1 | 2/18/2017 03:16 AM |
| Surr: 4-Bromofluorobenzene | 93.0 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:47 PM |
| Surr: Dibromofluoromethane | 101 | 0 | 65-135 | %REC | 1 | 2/18/2017 03:16 AM |
| Surr: Dibromofluoromethane | 102 | 0 | 65-135 | %REC | 1 | 2/21/2017 03:47 PM |
| Surr: Toluene-d8 | 102 | 0 | 75-125 | %REC | 1 | 2/18/2017 03:16 AM |
| Surr: Toluene-d8 | 102 | 0 | 75-125 | %REC | 1 | 2/21/2017 03:47 PM |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: NV00922-GC3_170221B | QC Batch: 61335 | PrepDate | 2/21/2017 | Analyst: MDM | | |
|----------------------------|-----------------|----------|-----------|--------------|---|--------------------|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 05:40 PM |
| TPH-Oil (C23-C44) | 14000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 05:40 PM |
| Surr: Octacosane | 93.7 | 0 | 25-162 | %REC | 1 | 2/22/2017 05:40 PM |
| Surr: p-Terphenyl | 97.0 | 0 | 47-142 | %REC | 1 | 2/22/2017 05:40 PM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: NV00922-GC4_170220A | QC Batch: E17VS027 | PrepDate | 2/20/2017 | Analyst: RB | | |
|----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| GRO (C4 - C12) | 0.086 | 0.036 | 0.82 | J mg/Kg | 1 | 2/20/2017 05:29 PM |
| Surr: Chlorobenzene - d5 | 148 | 0 | 46-154 | %REC | 1 | 2/20/2017 05:29 PM |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-006

Client Sample ID: SVM-21-4.5
Collection Date: 2/14/2017 1:20:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1,1-Trichloroethane | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1-Dichloroethane | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1-Dichloroethene | ND | 0.31 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,1-Dichloropropene | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2,3-Trichlorobenzene | ND | 0.056 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2,3-Trichloropropane | ND | 0.24 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2,4-Trichlorobenzene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2,4-Trimethylbenzene | ND | 0.063 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.46 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2-Dibromoethane | ND | 0.15 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2-Dichlorobenzene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2-Dichloroethane | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,2-Dichloropropane | ND | 0.24 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,3,5-Trimethylbenzene | ND | 0.079 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,3-Dichlorobenzene | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,3-Dichloropropane | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 1,4-Dichlorobenzene | ND | 0.092 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 2,2-Dichloropropane | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 2-Butanone | 4.5 | 1.7 | 49 | J ug/Kg | 1 | 2/18/2017 03:39 AM |
| 2-Chlorotoluene | ND | 0.093 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 2-Hexanone | ND | 1.3 | 44 | ug/Kg | 1 | 2/21/2017 04:10 PM |
| 4-Chlorotoluene | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 4-Isopropyltoluene | ND | 0.097 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| 4-Methyl-2-pentanone | ND | 0.59 | 49 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Acetone | ND | 1.6 | 44 | ug/Kg | 1 | 2/21/2017 04:10 PM |
| Acrolein | ND | 4.5 | 98 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Acrylonitrile | ND | 1.6 | 49 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Benzene | 0.69 | 0.11 | 4.9 | J ug/Kg | 1 | 2/18/2017 03:39 AM |
| Bromobenzene | ND | 0.27 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Bromochloromethane | ND | 0.53 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Bromodichloromethane | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Bromoform | ND | 0.41 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Bromomethane | ND | 0.35 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-006

Client Sample ID: SVM-21-4.5
Collection Date: 2/14/2017 1:20:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Carbon tetrachloride | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Chlorobenzene | ND | 0.090 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Chloroethane | ND | 0.48 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Chloroform | ND | 0.14 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Chloromethane | ND | 0.17 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| cis-1,2-Dichloroethene | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| cis-1,3-Dichloropropene | ND | 0.10 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Di-isopropyl ether | ND | 0.098 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Dibromochloromethane | ND | 0.45 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Dibromomethane | ND | 0.23 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Dichlorodifluoromethane | ND | 0.18 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Ethyl Tert-butyl ether | ND | 0.14 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Ethylbenzene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Freon-113 | ND | 0.55 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Hexachlorobutadiene | ND | 0.26 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Isopropylbenzene | ND | 0.074 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| m,p-Xylene | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Methylene chloride | 1.5 | 0.99 | 4.9 | J ug/Kg | 1 | 2/18/2017 03:39 AM |
| MTBE | ND | 0.21 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| n-Butylbenzene | ND | 0.096 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| n-Propylbenzene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Naphthalene | ND | 0.10 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| o-Xylene | ND | 0.053 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| sec-Butylbenzene | ND | 0.090 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Styrene | ND | 0.19 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Tert-amyl methyl ether | ND | 0.16 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Tert-Butanol | ND | 1.4 | 24 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| tert-Butylbenzene | ND | 0.12 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Tetrachloroethene | ND | 0.27 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Toluene | ND | 0.097 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| trans-1,2-Dichloroethene | ND | 0.21 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| trans-1,3-Dichloropropene | ND | 0.076 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Trichloroethene | ND | 0.11 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Trichlorofluoromethane | ND | 0.61 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |
| Vinyl chloride | ND | 0.21 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-006

Client Sample ID: SVM-21-4.5
Collection Date: 2/14/2017 1:20:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: | NV00922-MS5_170217B | QC Batch: | P17VS015 | PrepDate | 2/17/2017 | Analyst: | RB |
|-----------------------------|---------------------|-----------|----------|----------|-----------|--------------------|----|
| Xylenes, Total | ND | 0.13 | 4.9 | ug/Kg | 1 | 2/18/2017 03:39 AM | |
| Surr: 1,2-Dichloroethane-d4 | 124 | 0 | 52-149 | %REC | 1 | 2/21/2017 04:10 PM | |
| Surr: 1,2-Dichloroethane-d4 | 123 | 0 | 52-149 | %REC | 1 | 2/18/2017 03:39 AM | |
| Surr: 4-Bromofluorobenzene | 97.1 | 0 | 65-135 | %REC | 1 | 2/18/2017 03:39 AM | |
| Surr: 4-Bromofluorobenzene | 87.5 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:10 PM | |
| Surr: Dibromofluoromethane | 107 | 0 | 65-135 | %REC | 1 | 2/18/2017 03:39 AM | |
| Surr: Dibromofluoromethane | 113 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:10 PM | |
| Surr: Toluene-d8 | 103 | 0 | 75-125 | %REC | 1 | 2/18/2017 03:39 AM | |
| Surr: Toluene-d8 | 103 | 0 | 75-125 | %REC | 1 | 2/21/2017 04:10 PM | |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: | NV00922-GC3_170221B | QC Batch: | 61335 | PrepDate | 2/21/2017 | Analyst: | MDM |
|----------------------|---------------------|-----------|--------|----------|-----------|--------------------|--------------------|
| TPH-Diesel (C13-C22) | 4900 | 2900 | 10000 | J | ug/Kg | 1 | 2/22/2017 06:12 PM |
| TPH-Oil (C23-C44) | 120000 | 1800 | 10000 | | ug/Kg | 1 | 2/22/2017 06:12 PM |
| Surr: Octacosane | 86.5 | 0 | 25-162 | %REC | 1 | 2/22/2017 06:12 PM | |
| Surr: p-Terphenyl | 89.1 | 0 | 47-142 | %REC | 1 | 2/22/2017 06:12 PM | |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: | NV00922-GC4_170220A | QC Batch: | E17VS027 | PrepDate | 2/20/2017 | Analyst: | RB |
|--------------------------|---------------------|-----------|----------|----------|-----------|--------------------|--------------------|
| GRO (C4 - C12) | 0.10 | 0.044 | 1.0 | J | mg/Kg | 1 | 2/20/2017 06:03 PM |
| Surr: Chlorobenzene - d5 | 136 | 0 | 46-154 | %REC | 1 | 2/20/2017 06:03 PM | |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-007

Client Sample ID: SVM-21-9.5
Collection Date: 2/14/2017 2:25:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1,1-Trichloroethane | ND | 0.095 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1,2-Trichloroethane | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1-Dichloroethane | ND | 0.10 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1-Dichloroethene | ND | 0.27 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,1-Dichloropropene | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2,3-Trichlorobenzene | ND | 0.049 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2,3-Trichloropropane | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2,4-Trichlorobenzene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2,4-Trimethylbenzene | ND | 0.055 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.40 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2-Dibromoethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2-Dichlorobenzene | ND | 0.099 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2-Dichloroethane | ND | 0.11 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,2-Dichloropropane | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,3,5-Trimethylbenzene | ND | 0.070 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,3-Dichlorobenzene | ND | 0.11 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,3-Dichloropropane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 1,4-Dichlorobenzene | ND | 0.081 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 2,2-Dichloropropane | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 2-Butanone | ND | 1.5 | 43 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 2-Chlorotoluene | ND | 0.082 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 2-Hexanone | ND | 1.3 | 46 | ug/Kg | 1 | 2/21/2017 04:33 PM |
| 4-Chlorotoluene | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 4-Isopropyltoluene | ND | 0.085 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| 4-Methyl-2-pentanone | ND | 0.52 | 43 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Acetone | ND | 1.7 | 46 | ug/Kg | 1 | 2/21/2017 04:33 PM |
| Acrolein | ND | 4.0 | 86 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Acrylonitrile | ND | 1.4 | 43 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Benzene | 1.5 | 0.096 | 4.3 | J ug/Kg | 1 | 2/18/2017 04:02 AM |
| Bromobenzene | ND | 0.24 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Bromochloromethane | ND | 0.47 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Bromodichloromethane | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Bromoform | ND | 0.36 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Bromomethane | ND | 0.31 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-007

Client Sample ID: SVM-21-9.5
Collection Date: 2/14/2017 2:25:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Carbon tetrachloride | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Chlorobenzene | ND | 0.079 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Chloroethane | ND | 0.42 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Chloroform | ND | 0.13 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Chloromethane | ND | 0.15 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| cis-1,2-Dichloroethene | ND | 0.21 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| cis-1,3-Dichloropropene | ND | 0.088 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Di-isopropyl ether | ND | 0.086 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Dibromochloromethane | ND | 0.40 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Dibromomethane | ND | 0.20 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Dichlorodifluoromethane | ND | 0.16 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Ethyl Tert-butyl ether | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Ethylbenzene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Freon-113 | ND | 0.49 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Hexachlorobutadiene | ND | 0.23 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Isopropylbenzene | ND | 0.065 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| m,p-Xylene | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Methylene chloride | 1.2 | 0.87 | 4.3 | J ug/Kg | 1 | 2/18/2017 04:02 AM |
| MTBE | ND | 0.18 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| n-Butylbenzene | ND | 0.084 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| n-Propylbenzene | ND | 0.097 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Naphthalene | ND | 0.092 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| o-Xylene | ND | 0.046 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| sec-Butylbenzene | ND | 0.079 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Styrene | ND | 0.17 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Tert-amyl methyl ether | ND | 0.14 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Tert-Butanol | ND | 1.2 | 21 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| tert-Butylbenzene | ND | 0.10 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Tetrachloroethene | ND | 0.24 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Toluene | 1.3 | 0.085 | 4.3 | J ug/Kg | 1 | 2/18/2017 04:02 AM |
| trans-1,2-Dichloroethene | ND | 0.18 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| trans-1,3-Dichloropropene | ND | 0.067 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Trichloroethene | ND | 0.095 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Trichlorofluoromethane | ND | 0.54 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |
| Vinyl chloride | ND | 0.18 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-007

Client Sample ID: SVM-21-9.5
Collection Date: 2/14/2017 2:25:00 PM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: | NV00922-MS5_170217B | QC Batch: | P17VS015 | PrepDate | 2/17/2017 | Analyst: | RB |
|-----------------------------|---------------------|-----------|----------|----------|-----------|--------------------|----|
| Xylenes, Total | ND | 0.12 | 4.3 | ug/Kg | 1 | 2/18/2017 04:02 AM | |
| Surr: 1,2-Dichloroethane-d4 | 121 | 0 | 52-149 | %REC | 1 | 2/18/2017 04:02 AM | |
| Surr: 1,2-Dichloroethane-d4 | 122 | 0 | 52-149 | %REC | 1 | 2/21/2017 04:33 PM | |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:02 AM | |
| Surr: 4-Bromofluorobenzene | 97.8 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:33 PM | |
| Surr: Dibromofluoromethane | 102 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:02 AM | |
| Surr: Dibromofluoromethane | 105 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:33 PM | |
| Surr: Toluene-d8 | 101 | 0 | 75-125 | %REC | 1 | 2/18/2017 04:02 AM | |
| Surr: Toluene-d8 | 101 | 0 | 75-125 | %REC | 1 | 2/21/2017 04:33 PM | |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: | NV00922-GC3_170221B | QC Batch: | 61335 | PrepDate | 2/21/2017 | Analyst: | MDM |
|----------------------|---------------------|-----------|--------|----------|-----------|--------------------|-----|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 06:45 PM | |
| TPH-Oil (C23-C44) | 35000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 06:45 PM | |
| Surr: Octacosane | 86.1 | 0 | 25-162 | %REC | 1 | 2/22/2017 06:45 PM | |
| Surr: p-Terphenyl | 87.8 | 0 | 47-142 | %REC | 1 | 2/22/2017 06:45 PM | |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: | NV00922-GC4_170220A | QC Batch: | E17VS027 | PrepDate | 2/20/2017 | Analyst: | RB |
|--------------------------|---------------------|-----------|----------|----------|-----------|--------------------|--------------------|
| GRO (C4 - C12) | 0.087 | 0.040 | 0.92 | J | mg/Kg | 1 | 2/20/2017 06:38 PM |
| Surr: Chlorobenzene - d5 | 139 | 0 | 46-154 | %REC | 1 | 2/20/2017 06:38 PM | |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-008

Client Sample ID: SVM-20-4.5
Collection Date: 2/15/2017 8:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.18 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1,1-Trichloroethane | ND | 0.12 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.17 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1,2-Trichloroethane | ND | 0.25 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1-Dichloroethane | ND | 0.13 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1-Dichloroethene | ND | 0.34 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,1-Dichloropropene | ND | 0.25 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2,3-Trichlorobenzene | ND | 0.061 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2,3-Trichloropropane | ND | 0.26 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2,4-Trichlorobenzene | ND | 0.14 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2,4-Trimethylbenzene | ND | 0.068 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.50 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2-Dibromoethane | ND | 0.17 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2-Dichlorobenzene | ND | 0.12 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2-Dichloroethane | ND | 0.13 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,2-Dichloropropane | ND | 0.26 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,3,5-Trimethylbenzene | ND | 0.087 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,3-Dichlorobenzene | ND | 0.14 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,3-Dichloropropane | ND | 0.18 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 1,4-Dichlorobenzene | ND | 0.10 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 2,2-Dichloropropane | ND | 0.15 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 2-Butanone | ND | 1.8 | 53 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 2-Chlorotoluene | ND | 0.10 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 2-Hexanone | ND | 1.8 | 62 | ug/Kg | 1 | 2/21/2017 04:55 PM |
| 4-Chlorotoluene | ND | 0.19 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 4-Isopropyltoluene | ND | 0.11 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| 4-Methyl-2-pentanone | ND | 0.65 | 53 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Acetone | ND | 2.3 | 62 | ug/Kg | 1 | 2/21/2017 04:55 PM |
| Acrolein | ND | 5.0 | 110 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Acrylonitrile | ND | 1.7 | 53 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Benzene | ND | 0.12 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Bromobenzene | ND | 0.30 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Bromochloromethane | ND | 0.58 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Bromodichloromethane | ND | 0.17 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Bromoform | ND | 0.45 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Bromomethane | ND | 0.39 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-008

Client Sample ID: SVM-20-4.5
Collection Date: 2/15/2017 8:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.17 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Carbon tetrachloride | ND | 0.18 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Chlorobenzene | ND | 0.098 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Chloroethane | ND | 0.53 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Chloroform | ND | 0.16 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Chloromethane | ND | 0.19 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| cis-1,2-Dichloroethene | ND | 0.26 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| cis-1,3-Dichloropropene | ND | 0.11 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Di-isopropyl ether | ND | 0.11 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Dibromochloromethane | ND | 0.49 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Dibromomethane | ND | 0.25 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Dichlorodifluoromethane | ND | 0.20 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Ethyl Tert-butyl ether | ND | 0.16 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Ethylbenzene | ND | 0.15 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Freon-113 | ND | 0.60 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Hexachlorobutadiene | ND | 0.29 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Isopropylbenzene | ND | 0.081 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| m,p-Xylene | ND | 0.15 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Methylene chloride | 1.8 | 1.1 | 5.3 | J ug/Kg | 1 | 2/18/2017 04:25 AM |
| MTBE | ND | 0.23 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| n-Butylbenzene | ND | 0.10 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| n-Propylbenzene | ND | 0.12 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Naphthalene | ND | 0.11 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| o-Xylene | ND | 0.058 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| sec-Butylbenzene | ND | 0.098 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Styrene | ND | 0.21 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Tert-amyl methyl ether | ND | 0.18 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Tert-Butanol | ND | 1.5 | 27 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| tert-Butylbenzene | ND | 0.13 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Tetrachloroethene | ND | 0.30 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Toluene | ND | 0.11 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| trans-1,2-Dichloroethene | ND | 0.22 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| trans-1,3-Dichloropropene | ND | 0.083 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Trichloroethene | ND | 0.12 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Trichlorofluoromethane | ND | 0.67 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |
| Vinyl chloride | ND | 0.23 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-008

Client Sample ID: SVM-20-4.5
Collection Date: 2/15/2017 8:00:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: | NV00922-MS5_170217B | QC Batch: | P17VS015 | PrepDate | 2/17/2017 | Analyst: | RB |
|-----------------------------|---------------------|-----------|----------|----------|-----------|--------------------|----|
| Xylenes, Total | ND | 0.15 | 5.3 | ug/Kg | 1 | 2/18/2017 04:25 AM | |
| Surr: 1,2-Dichloroethane-d4 | 120 | 0 | 52-149 | %REC | 1 | 2/21/2017 04:55 PM | |
| Surr: 1,2-Dichloroethane-d4 | 123 | 0 | 52-149 | %REC | 1 | 2/18/2017 04:25 AM | |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:25 AM | |
| Surr: 4-Bromofluorobenzene | 96.3 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:55 PM | |
| Surr: Dibromofluoromethane | 107 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:25 AM | |
| Surr: Dibromofluoromethane | 108 | 0 | 65-135 | %REC | 1 | 2/21/2017 04:55 PM | |
| Surr: Toluene-d8 | 101 | 0 | 75-125 | %REC | 1 | 2/18/2017 04:25 AM | |
| Surr: Toluene-d8 | 104 | 0 | 75-125 | %REC | 1 | 2/21/2017 04:55 PM | |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: | NV00922-GC3_170221B | QC Batch: | 61335 | PrepDate | 2/21/2017 | Analyst: | MDM |
|----------------------|---------------------|-----------|--------|----------|-----------|--------------------|-----|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 07:17 PM | |
| TPH-Oil (C23-C44) | 13000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 07:17 PM | |
| Surr: Octacosane | 90.4 | 0 | 25-162 | %REC | 1 | 2/22/2017 07:17 PM | |
| Surr: p-Terphenyl | 93.2 | 0 | 47-142 | %REC | 1 | 2/22/2017 07:17 PM | |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: | NV00922-GC4_170220A | QC Batch: | E17VS027 | PrepDate | 2/20/2017 | Analyst: | RB |
|--------------------------|---------------------|-----------|----------|----------|-----------|--------------------|--------------------|
| GRO (C4 - C12) | 0.10 | 0.047 | 1.1 | J | mg/Kg | 1 | 2/20/2017 07:12 PM |
| Surr: Chlorobenzene - d5 | 145 | 0 | 46-154 | %REC | 1 | 2/20/2017 07:12 PM | |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-009

Client Sample ID: SVM-20-9.5
Collection Date: 2/15/2017 8:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.15 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1,1-Trichloroethane | ND | 0.098 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.14 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1,2-Trichloroethane | ND | 0.21 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1-Dichloroethane | ND | 0.11 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1-Dichloroethene | ND | 0.28 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,1-Dichloropropene | ND | 0.20 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2,3-Trichlorobenzene | ND | 0.050 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2,3-Trichloropropane | ND | 0.22 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2,4-Trichlorobenzene | ND | 0.12 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2,4-Trimethylbenzene | ND | 0.056 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.41 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2-Dibromoethane | ND | 0.14 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2-Dichlorobenzene | ND | 0.10 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2-Dichloroethane | ND | 0.11 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,2-Dichloropropane | ND | 0.21 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,3,5-Trimethylbenzene | ND | 0.071 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,3-Dichlorobenzene | ND | 0.11 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,3-Dichloropropane | ND | 0.15 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 1,4-Dichlorobenzene | ND | 0.083 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 2,2-Dichloropropane | ND | 0.12 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 2-Butanone | ND | 1.5 | 44 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 2-Chlorotoluene | ND | 0.084 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 2-Hexanone | ND | 1.2 | 43 | ug/Kg | 1 | 2/21/2017 05:18 PM |
| 4-Chlorotoluene | ND | 0.16 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 4-Isopropyltoluene | ND | 0.087 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| 4-Methyl-2-pentanone | ND | 0.53 | 44 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Acetone | ND | 1.6 | 43 | ug/Kg | 1 | 2/21/2017 05:18 PM |
| Acrolein | ND | 4.1 | 88 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Acrylonitrile | ND | 1.4 | 44 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Benzene | 0.67 | 0.099 | 4.4 | J ug/Kg | 1 | 2/18/2017 04:48 AM |
| Bromobenzene | ND | 0.25 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Bromochloromethane | ND | 0.48 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Bromodichloromethane | ND | 0.14 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Bromoform | ND | 0.37 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Bromomethane | ND | 0.32 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-009

Client Sample ID: SVM-20-9.5
Collection Date: 2/15/2017 8:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------------|---------------------------|----------|------------------|--------------------|---|--------------------|
| Carbon disulfide | ND | 0.14 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Carbon tetrachloride | ND | 0.15 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Chlorobenzene | ND | 0.081 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Chloroethane | ND | 0.44 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Chloroform | ND | 0.13 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Chloromethane | ND | 0.15 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| cis-1,2-Dichloroethene | ND | 0.21 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| cis-1,3-Dichloropropene | ND | 0.090 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Di-isopropyl ether | ND | 0.088 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Dibromochloromethane | ND | 0.41 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Dibromomethane | ND | 0.20 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Dichlorodifluoromethane | ND | 0.16 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Ethyl Tert-butyl ether | ND | 0.13 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Ethylbenzene | ND | 0.12 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Freon-113 | ND | 0.50 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Hexachlorobutadiene | ND | 0.24 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Isopropylbenzene | ND | 0.067 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| m,p-Xylene | ND | 0.12 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Methylene chloride | 1.5 | 0.89 | 4.4 | J ug/Kg | 1 | 2/18/2017 04:48 AM |
| MTBE | ND | 0.19 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| n-Butylbenzene | ND | 0.086 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| n-Propylbenzene | ND | 0.10 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Naphthalene | ND | 0.094 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| o-Xylene | ND | 0.048 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| sec-Butylbenzene | ND | 0.081 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Styrene | ND | 0.17 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Tert-amyl methyl ether | ND | 0.15 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Tert-Butanol | ND | 1.2 | 22 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| tert-Butylbenzene | ND | 0.11 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Tetrachloroethene | ND | 0.25 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Toluene | 0.68 | 0.087 | 4.4 | J ug/Kg | 1 | 2/18/2017 04:48 AM |
| trans-1,2-Dichloroethene | ND | 0.19 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| trans-1,3-Dichloropropene | ND | 0.069 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Trichloroethene | ND | 0.097 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Trichlorofluoromethane | ND | 0.55 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Vinyl chloride | ND | 0.19 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-009

Client Sample ID: SVM-20-9.5
Collection Date: 2/15/2017 8:15:00 AM
Matrix: SOIL

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217B | QC Batch: P17VS015 | PrepDate | 2/17/2017 | Analyst: RB | | |
|-----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| Xylenes, Total | ND | 0.12 | 4.4 | ug/Kg | 1 | 2/18/2017 04:48 AM |
| Surr: 1,2-Dichloroethane-d4 | 124 | 0 | 52-149 | %REC | 1 | 2/21/2017 05:18 PM |
| Surr: 1,2-Dichloroethane-d4 | 121 | 0 | 52-149 | %REC | 1 | 2/18/2017 04:48 AM |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:48 AM |
| Surr: 4-Bromofluorobenzene | 99.6 | 0 | 65-135 | %REC | 1 | 2/21/2017 05:18 PM |
| Surr: Dibromofluoromethane | 102 | 0 | 65-135 | %REC | 1 | 2/18/2017 04:48 AM |
| Surr: Dibromofluoromethane | 108 | 0 | 65-135 | %REC | 1 | 2/21/2017 05:18 PM |
| Surr: Toluene-d8 | 102 | 0 | 75-125 | %REC | 1 | 2/18/2017 04:48 AM |
| Surr: Toluene-d8 | 104 | 0 | 75-125 | %REC | 1 | 2/21/2017 05:18 PM |

DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID

EPA 3550B

EPA 8015B

| RunID: NV00922-GC3_170221B | QC Batch: 61335 | PrepDate | 2/21/2017 | Analyst: MDM | | |
|----------------------------|-----------------|----------|-----------|--------------|---|--------------------|
| TPH-Diesel (C13-C22) | ND | 2900 | 10000 | ug/Kg | 1 | 2/22/2017 07:50 PM |
| TPH-Oil (C23-C44) | 13000 | 1800 | 10000 | ug/Kg | 1 | 2/22/2017 07:50 PM |
| Surr: Octacosane | 87.4 | 0 | 25-162 | %REC | 1 | 2/22/2017 07:50 PM |
| Surr: p-Terphenyl | 90.3 | 0 | 47-142 | %REC | 1 | 2/22/2017 07:50 PM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B(M)

| RunID: NV00922-GC4_170220A | QC Batch: E17VS027 | PrepDate | 2/20/2017 | Analyst: RB | | |
|----------------------------|--------------------|----------|-----------|-------------|---|--------------------|
| GRO (C4 - C12) | 0.091 | 0.042 | 0.96 | J mg/Kg | 1 | 2/20/2017 07:46 PM |
| Surr: Chlorobenzene - d5 | 121 | 0 | 46-154 | %REC | 1 | 2/20/2017 07:46 PM |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-010

Client Sample ID: EB-1
Collection Date: 2/15/2017 9:05:00 AM
Matrix: WATER

Analyses Result MDL PQL Qual Units DF Date Analyzed

SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM

EPA 3510C

EPA 8270CSIM

| RunID: NV00922-MS9_170216A | QC Batch: 61275 | PrepDate | 2/16/2017 | Analyst: MDM |
|------------------------------|-----------------|----------|-----------|-----------------------------|
| 1-Methylnaphthalene | ND | 0.018 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| 2-Methylnaphthalene | ND | 0.022 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Acenaphthene | ND | 0.018 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Acenaphthylene | ND | 0.017 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Anthracene | ND | 0.018 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Benzo(a)anthracene | ND | 0.015 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Benzo(a)pyrene | ND | 0.031 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Benzo(b)fluoranthene | ND | 0.044 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Benzo(g,h,i)perylene | ND | 0.015 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Benzo(k)fluoranthene | ND | 0.015 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Chrysene | ND | 0.027 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Dibenz(a,h)anthracene | ND | 0.015 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Fluoranthene | ND | 0.017 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Fluorene | ND | 0.017 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Indeno(1,2,3-cd)pyrene | ND | 0.017 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Naphthalene | ND | 0.022 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Phenanthrene | 0.020 | 0.018 | 0.20 | J ug/L 1 2/16/2017 05:35 PM |
| Pyrene | ND | 0.015 | 0.20 | ug/L 1 2/16/2017 05:35 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 53.0 | 0 | 27-100 | %REC 1 2/16/2017 05:35 PM |
| Surr: 2-Fluorobiphenyl | 51.0 | 0 | 34-135 | %REC 1 2/16/2017 05:35 PM |
| Surr: 4-Terphenyl-d14 | 63.0 | 0 | 34-167 | %REC 1 2/16/2017 05:35 PM |
| Surr: Nitrobenzene-d5 | 52.0 | 0 | 25-135 | %REC 1 2/16/2017 05:35 PM |

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217A | QC Batch: P17VW025 | PrepDate | Analyst: RB |
|----------------------------|--------------------|----------|--------------------------------|
| 1,1,1,2-Tetrachloroethane | ND | 0.089 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,1,1-Trichloroethane | ND | 0.15 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.14 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,1,2-Trichloroethane | ND | 0.15 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,1-Dichloroethane | ND | 0.13 | 0.50 ug/L 1 2/17/2017 06:25 PM |
| 1,1-Dichloroethene | ND | 0.15 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,1-Dichloropropene | ND | 0.12 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,2,3-Trichlorobenzene | ND | 0.16 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,2,3-Trichloropropane | ND | 0.097 | 1.0 ug/L 1 2/17/2017 06:25 PM |
| 1,2,4-Trichlorobenzene | ND | 0.13 | 1.0 ug/L 1 2/17/2017 06:25 PM |

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-010

Client Sample ID: EB-1
Collection Date: 2/15/2017 9:05:00 AM
Matrix: WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217A | QC Batch: P17VW025 | | | | PrepDate | Analyst: RB |
|-----------------------------------|---------------------------|-------|------|------|----------|--------------------|
| 1,2,4-Trimethylbenzene | ND | 0.094 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.36 | 2.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,2-Dibromoethane | ND | 0.18 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,2-Dichlorobenzene | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,2-Dichloroethane | ND | 0.13 | 0.50 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,2-Dichloropropane | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,3,5-Trimethylbenzene | ND | 0.11 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,3-Dichlorobenzene | ND | 0.11 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 1,4-Dichlorobenzene | ND | 0.13 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 2,2-Dichloropropane | ND | 0.16 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 2-Butanone | ND | 1.9 | 10 | ug/L | 1 | 2/17/2017 06:25 PM |
| 2-Chlorotoluene | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 2-Hexanone | ND | 1.7 | 5.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 4-Chlorotoluene | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 4-Isopropyltoluene | ND | 0.13 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| 4-Methyl-2-pentanone | ND | 1.4 | 10 | ug/L | 1 | 2/17/2017 06:25 PM |
| Acetone | ND | 4.3 | 10 | ug/L | 1 | 2/17/2017 06:25 PM |
| Acrolein | ND | 1.9 | 20 | ug/L | 1 | 2/17/2017 06:25 PM |
| Acrylonitrile | ND | 2.5 | 20 | ug/L | 1 | 2/17/2017 06:25 PM |
| Benzene | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Bromobenzene | ND | 0.13 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Bromochloromethane | ND | 0.15 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Bromodichloromethane | ND | 0.10 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Bromoform | ND | 0.34 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Bromomethane | ND | 0.12 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Carbon disulfide | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Carbon tetrachloride | ND | 0.13 | 0.50 | ug/L | 1 | 2/17/2017 06:25 PM |
| Chlorobenzene | ND | 0.13 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Chloroethane | ND | 0.19 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Chloroform | ND | 0.18 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Chloromethane | ND | 0.22 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| cis-1,2-Dichloroethene | ND | 0.20 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| cis-1,3-Dichloropropene | ND | 0.14 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Di-isopropyl ether | ND | 0.18 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |
| Dibromochloromethane | ND | 0.12 | 1.0 | ug/L | 1 | 2/17/2017 06:25 PM |

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit S Spike/Surrogate outside of limits due to matrix interference
Results are wet unless otherwise specified DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-010

Client Sample ID: EB-1
Collection Date: 2/15/2017 9:05:00 AM
Matrix: WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

| RunID: NV00922-MS5_170217A | QC Batch: P17VW025 | | | | PrepDate | Analyst: RB |
|-----------------------------------|---------------------------|-------|--------|---|----------|----------------------|
| Dibromomethane | ND | 0.12 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Dichlorodifluoromethane | ND | 0.17 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Ethyl tert-butyl ether | ND | 0.15 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Ethylbenzene | ND | 0.14 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Freon-113 | ND | 0.19 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Hexachlorobutadiene | ND | 0.15 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Isopropylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Methylene chloride | 0.91 | 0.26 | 2.0 | J | ug/L | 1 2/17/2017 06:25 PM |
| MTBE | ND | 0.13 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| n-Butylbenzene | ND | 0.15 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| n-Propylbenzene | ND | 0.16 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Naphthalene | ND | 0.094 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| o-Xylene | ND | 0.13 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| sec-Butylbenzene | ND | 0.12 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Styrene | ND | 0.14 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Tert-amyl methyl ether | ND | 0.12 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Tert-Butanol | ND | 1.8 | 5.0 | | ug/L | 1 2/17/2017 06:25 PM |
| tert-Butylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Tetrachloroethene | ND | 0.13 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Toluene | 0.22 | 0.14 | 2.0 | J | ug/L | 1 2/17/2017 06:25 PM |
| trans-1,2-Dichloroethene | ND | 0.20 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| trans-1,3-Dichloropropene | ND | 0.13 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Trichloroethene | ND | 0.14 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Trichlorofluoromethane | ND | 0.13 | 1.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Vinyl chloride | ND | 0.15 | 0.50 | | ug/L | 1 2/17/2017 06:25 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 2/17/2017 06:25 PM |
| Surr: 1,2-Dichloroethane-d4 | 91.4 | 0 | 72-119 | | %REC | 1 2/17/2017 06:25 PM |
| Surr: 4-Bromofluorobenzene | 97.8 | 0 | 76-119 | | %REC | 1 2/17/2017 06:25 PM |
| Surr: Dibromofluoromethane | 94.6 | 0 | 85-115 | | %REC | 1 2/17/2017 06:25 PM |
| Surr: Toluene-d8 | 100 | 0 | 81-120 | | %REC | 1 2/17/2017 06:25 PM |

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

| RunID: NV00922-GC3_170221A | QC Batch: 61334 | | | | PrepDate | 2/21/2017 | Analyst: MDM |
|-----------------------------------|------------------------|----|----|--|----------|------------------|---------------------|
| TPH-Diesel (C13-C22) | ND | 15 | 25 | | ug/L | 1 | 2/22/2017 11:42 AM |

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified

E Value above quantitation range
J Analyte detected below quantitation limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Feb-17

CLIENT: CH2MHill
Lab Order: N023124
Project: KMEP Norwalk
Lab ID: N023124-010

Client Sample ID: EB-1
Collection Date: 2/15/2017 9:05:00 AM
Matrix: WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|----------|--------|-----|-----|------|-------|----|---------------|
|----------|--------|-----|-----|------|-------|----|---------------|

TPH EXTRACTABLE BY GC/FID

EPA 3510C

EPA 8015B

| | | | | | | | |
|-----------------------------------|------------------------|----|--------|----------|------------------|---|---------------------|
| RunID: NV00922-GC3_170221A | QC Batch: 61334 | | | PrepDate | 2/21/2017 | | Analyst: MDM |
| TPH-Oil (C23-C44) | 22 | 14 | 25 | J | ug/L | 1 | 2/22/2017 11:42 AM |
| Surr: Octacosane | 84.8 | 0 | 26-152 | | %REC | 1 | 2/22/2017 11:42 AM |
| Surr: p-Terphenyl | 88.0 | 0 | 57-132 | | %REC | 1 | 2/22/2017 11:42 AM |

GASOLINE RANGE ORGANICS BY GC/FID

EPA 8015B

| | | | | | | | |
|-----------------------------------|---------------------------|----|--------|----------|------|---|--------------------|
| RunID: NV00922-GC4_170219A | QC Batch: E17VW019 | | | PrepDate | | | Analyst: RB |
| TPH-Gasoline (C4-C12) | 30 | 16 | 50 | J | ug/L | 1 | 2/19/2017 07:07 PM |
| Surr: Chlorobenzene - d5 | 115 | 0 | 74-138 | | %REC | 1 | 2/19/2017 07:07 PM |

TOTAL TPH

EPA 8015B

| | | | | | | | |
|-----------------------------------|--------------------------|----|-----|----------|------|---|---------------------|
| RunID: NV00922-GC3_170221A | QC Batch: R113662 | | | PrepDate | | | Analyst: MDM |
| Total TPH | 52 | 16 | 100 | J | ug/L | 1 | 2/23/2017 |

| | | | | |
|--------------------|----|--|----|--|
| Qualifiers: | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike/Surrogate outside of limits due to matrix interference |
| | | Results are wet unless otherwise specified | DO | Surrogate Diluted Out |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Servina Clients with Passion and Professionalism™

CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NV00922
 ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_S_DM_SFPP

| | | | | | | | | | | | |
|---------------------------|------------------------|------------------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID MB-61335 | SampType: MBLK | TestCode: 8015_S_DM_ | Units: ug/Kg | Prep Date: 2/21/2017 | RunNo: 113695 | | | | | | |
| Client ID: PBS | Batch ID: 61335 | TestNo: EPA 8015B EPA 3550B | | Analysis Date: 2/22/2017 | SeqNo: 2576657 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Diesel (C13-C22) | ND | 10000 | | | | | | | | | |
| TPH-Oil (C23-C44) | 9049.000 | 10000 | | | | | | | | | J |
| Surr: Octacosane | 25328.667 | | 26670 | | 95.0 | 25 | 162 | | | | |
| Surr: p-Terphenyl | 24674.667 | | 26670 | | 92.5 | 47 | 142 | | | | |

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values



CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.269
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert NVO0922
 ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_FP_SFPP

| Sample ID MB-61334 | SampType: MBLK | TestCode: 8015_W_FP_ | Units: ug/L | Prep Date: 2/21/2017 | RunNo: 113662 | | | | | | |
|---------------------------|------------------------|------------------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: PBW | Batch ID: 61334 | TestNo: EPA 8015B EPA 3510C | | Analysis Date: 2/22/2017 | SeqNo: 2576565 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Diesel (C13-C22) | ND | 25 | | | | | | | | | |
| TPH-Oil (C23-C44) | 24.097 | 25 | | | | | | | | | J |
| Surr: Octacosane | 70.879 | | 80.00 | | 88.6 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 70.274 | | 80.00 | | 87.8 | 57 | 132 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_SFPPTOT

| | | | | | | | | | | | |
|-----------------------------|--------------------------|-----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID MB-R113662 | SampType: MBLK | TestCode: 8015_W_SFP | Units: ug/L | Prep Date: | RunNo: 113662 | | | | | | |
| Client ID: PBW | Batch ID: R113662 | TestNo: EPA 8015B | | Analysis Date: 2/23/2017 | SeqNo: 2577238 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Total TPH | 56.000 | 100 | | | | | | | | | J |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_5035C4C12

| | | | | | | | | | | | |
|-----------------------------|---------------------------|-----------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID E170220LCS | SampType: LCS | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: LCSS | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | | Analysis Date: 2/20/2017 | SeqNo: 2573891 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|--------------------------|---------|-----|-------|---|------|----|-----|--|--|--|--|
| GRO (C4 - C12) | 4.869 | 1.0 | 5.000 | 0 | 97.4 | 70 | 137 | | | | |
| Surr: Chlorobenzene - d5 | 104.901 | | 100.0 | | 105 | 46 | 154 | | | | |

| | | | | | | | | | | | |
|------------------------------|---------------------------|-----------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID E170220LCSD | SampType: LCSD | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: LCSS02 | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | | Analysis Date: 2/20/2017 | SeqNo: 2573892 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|--------------------------|---------|-----|-------|---|-----|----|-----|-------|------|----|--|
| GRO (C4 - C12) | 5.015 | 1.0 | 5.000 | 0 | 100 | 70 | 137 | 4.869 | 2.95 | 20 | |
| Surr: Chlorobenzene - d5 | 106.239 | | 100.0 | | 106 | 46 | 154 | | 0 | | |

| | | | | | | | | | | | |
|-----------------------------|---------------------------|-----------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID E170220MB2 | SampType: MBLK | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: PBS | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | | Analysis Date: 2/20/2017 | SeqNo: 2573894 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|--------------------------|---------|-----|-------|--|-----|----|-----|--|--|--|---|
| GRO (C4 - C12) | 0.101 | 1.0 | | | | | | | | | J |
| Surr: Chlorobenzene - d5 | 110.225 | | 100.0 | | 110 | 46 | 154 | | | | |

| | | | | | | | | | | | |
|----------------------------------|---------------------------|-----------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023125-047ADUP | SampType: DUP | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: ZZZZZZ | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | | Analysis Date: 2/20/2017 | SeqNo: 2573898 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|--------------------------|---------|-----|-------|--|-----|----|-----|---------|---|----|---|
| GRO (C4 - C12) | 0.090 | 1.0 | | | | | | 0.09900 | 0 | 20 | J |
| Surr: Chlorobenzene - d5 | 115.206 | | 100.0 | | 115 | 46 | 154 | | 0 | | |

| | | | | | | | | | | | |
|---------------------------------|---------------------------|-----------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023125-048AMS | SampType: MS | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: ZZZZZZ | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | | Analysis Date: 2/20/2017 | SeqNo: 2573899 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|----------------|-------|-----|-------|---------|------|----|-----|--|--|--|---|
| GRO (C4 - C12) | 2.246 | 1.0 | 5.000 | 0.09600 | 43.0 | 46 | 155 | | | | S |
|----------------|-------|-----|-------|---------|------|----|-----|--|--|--|---|

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_5035C4C12

| | | | | | | | | | | | |
|---------------------------------|---------------------------|-----------------------------|---------------------------------|-----------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023125-048AMS | SampType: MS | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: ZZZZZ | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | Analysis Date: 2/20/2017 | SeqNo: 2573899 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Surr: Chlorobenzene - d5 | 104.919 | | 100.0 | | 105 | 46 | 154 | | | | |

| | | | | | | | | | | | |
|----------------------------------|---------------------------|-----------------------------|---------------------------------|-----------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023125-048AMSD | SampType: MSD | TestCode: 8015GAS_50 | Units: mg/Kg | Prep Date: | RunNo: 113641 | | | | | | |
| Client ID: ZZZZZ | Batch ID: E17VS027 | TestNo: EPA 8015B(M) | Analysis Date: 2/20/2017 | SeqNo: 2573900 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| GRO (C4 - C12) | 2.131 | 1.0 | 5.000 | 0.09600 | 40.7 | 46 | 155 | 2.246 | 5.25 | 20 | S |
| Surr: Chlorobenzene - d5 | 93.632 | | 100.0 | | 93.6 | 46 | 154 | | 0 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015GAS_WSFPP

| | | | | | | | | | | | |
|-----------------------------|---------------------------|----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID E170219LCS | SampType: LCS | TestCode: 8015GAS_W | Units: ug/L | Prep Date: | RunNo: 113620 | | | | | | |
| Client ID: LCSW | Batch ID: E17VW019 | TestNo: EPA 8015B | | Analysis Date: 2/19/2017 | SeqNo: 2573953 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Gasoline (C4-C12) | 905.000 | 50 | 1000 | 0 | 90.5 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 58326.000 | | 50000 | | 117 | 74 | 138 | | | | |

| | | | | | | | | | | | |
|-----------------------------|---------------------------|----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID E170219MB2 | SampType: MBLK | TestCode: 8015GAS_W | Units: ug/L | Prep Date: | RunNo: 113620 | | | | | | |
| Client ID: PBW | Batch ID: E17VW019 | TestNo: EPA 8015B | | Analysis Date: 2/19/2017 | SeqNo: 2573955 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Gasoline (C4-C12) | 32.000 | 50 | | | | | | | | | J |
| Surr: Chlorobenzene - d5 | 63003.000 | | 50000 | | 126 | 74 | 138 | | | | |

| | | | | | | | | | | | |
|---------------------------------|---------------------------|----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023124-010AMS | SampType: MS | TestCode: 8015GAS_W | Units: ug/L | Prep Date: | RunNo: 113620 | | | | | | |
| Client ID: ZZZZZ | Batch ID: E17VW019 | TestNo: EPA 8015B | | Analysis Date: 2/19/2017 | SeqNo: 2573957 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Gasoline (C4-C12) | 832.000 | 50 | 1000 | 30.00 | 80.2 | 67 | 136 | | | | |
| Surr: Chlorobenzene - d5 | 59040.000 | | 50000 | | 118 | 74 | 138 | | | | |

| | | | | | | | | | | | |
|----------------------------------|---------------------------|----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023124-010AMSD | SampType: MSD | TestCode: 8015GAS_W | Units: ug/L | Prep Date: | RunNo: 113620 | | | | | | |
| Client ID: ZZZZZ | Batch ID: E17VW019 | TestNo: EPA 8015B | | Analysis Date: 2/19/2017 | SeqNo: 2573958 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| TPH-Gasoline (C4-C12) | 899.000 | 50 | 1000 | 30.00 | 86.9 | 67 | 136 | 832.0 | 7.74 | 30 | |
| Surr: Chlorobenzene - d5 | 57003.000 | | 50000 | | 114 | 74 | 138 | | 0 | 0 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | P170217LCS | SampType: LCS | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|-----------------------------|------------|---------------|-----------------------|--------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | LCSS | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2570915 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 42.110 | 5.0 | 40.00 | 0 | 105 | 74 | 125 | | | | |
| 1,1,1-Trichloroethane | 36.810 | 5.0 | 40.00 | 0 | 92.0 | 68 | 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 39.050 | 5.0 | 40.00 | 0 | 97.6 | 59 | 140 | | | | |
| 1,1,2-Trichloroethane | 38.080 | 5.0 | 40.00 | 0 | 95.2 | 62 | 127 | | | | |
| 1,1-Dichloroethane | 35.440 | 5.0 | 40.00 | 0 | 88.6 | 73 | 125 | | | | |
| 1,1-Dichloroethene | 35.140 | 5.0 | 40.00 | 0 | 87.9 | 65 | 136 | | | | |
| 1,1-Dichloropropene | 38.750 | 5.0 | 40.00 | 0 | 96.9 | 70 | 135 | | | | |
| 1,2,3-Trichlorobenzene | 36.620 | 5.0 | 40.00 | 0 | 91.6 | 62 | 133 | | | | |
| 1,2,3-Trichloropropane | 36.500 | 5.0 | 40.00 | 0 | 91.2 | 63 | 130 | | | | |
| 1,2,4-Trichlorobenzene | 35.010 | 5.0 | 40.00 | 0 | 87.5 | 65 | 131 | | | | |
| 1,2,4-Trimethylbenzene | 42.170 | 5.0 | 40.00 | 0 | 105 | 65 | 135 | | | | |
| 1,2-Dibromo-3-chloropropane | 43.500 | 5.0 | 40.00 | 0 | 109 | 49 | 135 | | | | |
| 1,2-Dibromoethane | 42.340 | 5.0 | 40.00 | 0 | 106 | 70 | 124 | | | | |
| 1,2-Dichlorobenzene | 41.130 | 5.0 | 40.00 | 0 | 103 | 74 | 120 | | | | |
| 1,2-Dichloroethane | 37.450 | 5.0 | 40.00 | 0 | 93.6 | 72 | 137 | | | | |
| 1,2-Dichloropropane | 37.730 | 5.0 | 40.00 | 0 | 94.3 | 71 | 120 | | | | |
| 1,3,5-Trimethylbenzene | 40.550 | 5.0 | 40.00 | 0 | 101 | 65 | 133 | | | | |
| 1,3-Dichlorobenzene | 40.080 | 5.0 | 40.00 | 0 | 100 | 72 | 124 | | | | |
| 1,3-Dichloropropane | 41.590 | 5.0 | 40.00 | 0 | 104 | 76 | 123 | | | | |
| 1,4-Dichlorobenzene | 39.520 | 5.0 | 40.00 | 0 | 98.8 | 72 | 125 | | | | |
| 2,2-Dichloropropane | 36.630 | 5.0 | 40.00 | 0 | 91.6 | 67 | 134 | | | | |
| 2-Butanone | 219.890 | 50 | 400.0 | 0 | 55.0 | 40 | 135 | | | | |
| 2-Chlorotoluene | 37.530 | 5.0 | 40.00 | 0 | 93.8 | 69 | 128 | | | | |
| 2-Hexanone | 261.850 | 50 | 400.0 | 0 | 65.5 | 70 | 130 | | | | S |
| 4-Chlorotoluene | 38.970 | 5.0 | 40.00 | 0 | 97.4 | 73 | 126 | | | | |
| 4-Isopropyltoluene | 42.930 | 5.0 | 40.00 | 0 | 107 | 70 | 130 | | | | |
| 4-Methyl-2-pentanone | 348.320 | 50 | 400.0 | 0 | 87.1 | 65 | 135 | | | | |
| Acetone | 200.880 | 50 | 400.0 | 0 | 50.2 | 40 | 141 | | | | |
| Acrolein | 381.390 | 100 | 400.0 | 0 | 95.3 | 65 | 135 | | | | |
| Acrylonitrile | 380.640 | 50 | 400.0 | 0 | 95.2 | 65 | 135 | | | | |

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | P170217LCS | SampType: | LCS | TestCode: | 8260_S_5035 | Units: | ug/Kg | Prep Date: | RunNo: | | | |
|-------------------------|------------|-----------|-----------|-------------|-------------|----------------|-----------|-------------|---------|----------|------|--|
| Client ID: | LCSS | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2570915 | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Benzene | 38.170 | 5.0 | 40.00 | 0 | 95.4 | 73 | 126 | | | | | |
| Bromobenzene | 37.070 | 5.0 | 40.00 | 0 | 92.7 | 66 | 121 | | | | | |
| Bromochloromethane | 39.250 | 5.0 | 40.00 | 0 | 98.1 | 71 | 127 | | | | | |
| Bromodichloromethane | 40.710 | 5.0 | 40.00 | 0 | 102 | 72 | 128 | | | | | |
| Bromoform | 40.160 | 5.0 | 40.00 | 0 | 100 | 66 | 137 | | | | | |
| Bromomethane | 35.330 | 5.0 | 40.00 | 0 | 88.3 | 45 | 141 | | | | | |
| Carbon disulfide | 29.760 | 5.0 | 40.00 | 0 | 74.4 | 66 | 135 | | | | | |
| Carbon tetrachloride | 40.650 | 5.0 | 40.00 | 0 | 102 | 67 | 133 | | | | | |
| Chlorobenzene | 40.100 | 5.0 | 40.00 | 0 | 100 | 75 | 123 | | | | | |
| Chloroethane | 39.140 | 5.0 | 40.00 | 0 | 97.9 | 41 | 141 | | | | | |
| Chloroform | 36.880 | 5.0 | 40.00 | 0 | 92.2 | 72 | 124 | | | | | |
| Chloromethane | 31.480 | 5.0 | 40.00 | 0 | 78.7 | 51 | 129 | | | | | |
| cis-1,2-Dichloroethene | 37.440 | 5.0 | 40.00 | 0 | 93.6 | 67 | 125 | | | | | |
| cis-1,3-Dichloropropene | 41.140 | 5.0 | 40.00 | 0 | 103 | 72 | 126 | | | | | |
| Di-isopropyl ether | 33.210 | 5.0 | 40.00 | 0 | 83.0 | 70 | 130 | | | | | |
| Dibromochloromethane | 44.550 | 5.0 | 40.00 | 0 | 111 | 66 | 130 | | | | | |
| Dibromomethane | 38.820 | 5.0 | 40.00 | 0 | 97.0 | 73 | 128 | | | | | |
| Dichlorodifluoromethane | 40.220 | 5.0 | 40.00 | 0 | 101 | 34 | 136 | | | | | |
| Ethyl Tert-butyl ether | 33.650 | 5.0 | 40.00 | 0 | 84.1 | 70 | 130 | | | | | |
| Ethylbenzene | 38.710 | 5.0 | 40.00 | 0 | 96.8 | 74 | 127 | | | | | |
| Freon-113 | 30.200 | 5.0 | 40.00 | 0 | 75.5 | 65 | 135 | | | | | |
| Hexachlorobutadiene | 41.650 | 5.0 | 40.00 | 0 | 104 | 53 | 142 | | | | | |
| Isopropylbenzene | 32.200 | 5.0 | 40.00 | 0 | 80.5 | 77 | 129 | | | | | |
| m,p-Xylene | 78.270 | 5.0 | 80.00 | 0 | 97.8 | 79 | 126 | | | | | |
| Methylene chloride | 36.970 | 5.0 | 40.00 | 0 | 92.4 | 63 | 137 | | | | | |
| MTBE | 34.390 | 5.0 | 40.00 | 0 | 86.0 | 50 | 135 | | | | | |
| n-Butylbenzene | 35.140 | 5.0 | 40.00 | 0 | 87.9 | 65 | 138 | | | | | |
| n-Propylbenzene | 39.960 | 5.0 | 40.00 | 0 | 99.9 | 63 | 135 | | | | | |
| Naphthalene | 41.810 | 5.0 | 40.00 | 0 | 105 | 51 | 135 | | | | | |
| o-Xylene | 40.910 | 5.0 | 40.00 | 0 | 102 | 77 | 125 | | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | P170217LCS | SampType: | LCS | TestCode: | 8260_S_5035 | Units: | ug/Kg | Prep Date: | RunNo: 113598 | | | |
|-----------------------------|------------|-----------|-----------|-------------|-------------|----------------|-----------|----------------|---------------|----------|------|--|
| Client ID: | LCSS | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: 2570915 | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| sec-Butylbenzene | 41.670 | 5.0 | 40.00 | 0 | 104 | 63 | 132 | | | | | |
| Styrene | 40.660 | 5.0 | 40.00 | 0 | 102 | 74 | 128 | | | | | |
| Tert-amyl methyl ether | 36.230 | 5.0 | 40.00 | 0 | 90.6 | 70 | 130 | | | | | |
| Tert-Butanol | 189.000 | 25 | 200.0 | 0 | 94.5 | 70 | 130 | | | | | |
| tert-Butylbenzene | 40.850 | 5.0 | 40.00 | 0 | 102 | 65 | 132 | | | | | |
| Tetrachloroethene | 37.990 | 5.0 | 40.00 | 0 | 95.0 | 67 | 139 | | | | | |
| Toluene | 36.460 | 5.0 | 40.00 | 0 | 91.2 | 71 | 127 | | | | | |
| trans-1,2-Dichloroethene | 37.440 | 5.0 | 40.00 | 0 | 93.6 | 66 | 134 | | | | | |
| trans-1,3-Dichloropropene | 40.790 | 5.0 | 40.00 | 0 | 102 | 65 | 127 | | | | | |
| Trichloroethene | 40.620 | 5.0 | 40.00 | 0 | 102 | 77 | 124 | | | | | |
| Trichlorofluoromethane | 41.940 | 5.0 | 40.00 | 0 | 105 | 49 | 139 | | | | | |
| Vinyl chloride | 35.370 | 5.0 | 40.00 | 0 | 88.4 | 58 | 126 | | | | | |
| Xylenes, Total | 119.180 | 5.0 | 120.0 | 0 | 99.3 | 65 | 125 | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 48.190 | | 50.00 | | 96.4 | 52 | 149 | | | | | |
| Surr: 4-Bromofluorobenzene | 51.350 | | 50.00 | | 103 | 65 | 135 | | | | | |
| Surr: Dibromofluoromethane | 48.430 | | 50.00 | | 96.9 | 65 | 135 | | | | | |
| Surr: Toluene-d8 | 50.640 | | 50.00 | | 101 | 75 | 125 | | | | | |

| Sample ID | P170217LCSD | SampType: | LCSD | TestCode: | 8260_S_5035 | Units: | ug/Kg | Prep Date: | RunNo: 113598 | | | |
|---------------------------|-------------|-----------|-----------|-------------|-------------|----------------|-----------|----------------|---------------|----------|------|--|
| Client ID: | LCSS02 | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: 2570916 | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| 1,1,1,2-Tetrachloroethane | 43.660 | 5.0 | 40.00 | 0 | 109 | 74 | 125 | 42.11 | 3.61 | 30 | | |
| 1,1,1-Trichloroethane | 39.270 | 5.0 | 40.00 | 0 | 98.2 | 68 | 130 | 36.81 | 6.47 | 30 | | |
| 1,1,2,2-Tetrachloroethane | 39.730 | 5.0 | 40.00 | 0 | 99.3 | 59 | 140 | 39.05 | 1.73 | 30 | | |
| 1,1,2-Trichloroethane | 39.220 | 5.0 | 40.00 | 0 | 98.0 | 62 | 127 | 38.08 | 2.95 | 30 | | |
| 1,1-Dichloroethane | 36.100 | 5.0 | 40.00 | 0 | 90.3 | 73 | 125 | 35.44 | 1.85 | 30 | | |
| 1,1-Dichloroethene | 36.860 | 5.0 | 40.00 | 0 | 92.2 | 65 | 136 | 35.14 | 4.78 | 30 | | |
| 1,1-Dichloropropene | 40.540 | 5.0 | 40.00 | 0 | 101 | 70 | 135 | 38.75 | 4.52 | 30 | | |
| 1,2,3-Trichlorobenzene | 36.510 | 5.0 | 40.00 | 0 | 91.3 | 62 | 133 | 36.62 | 0.301 | 30 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | P170217LCSD | SampType: | LCSD | TestCode: | 8260_S_5035 | Units: | ug/Kg | Prep Date: | RunNo: | | | |
|-----------------------------|-------------|-----------|-----------|-------------|-------------|----------------|-----------|-------------|---------|----------|------|--|
| Client ID: | LCSS02 | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2570916 | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| 1,2,3-Trichloropropane | 36.240 | 5.0 | 40.00 | 0 | 90.6 | 63 | 130 | 36.50 | 0.715 | 30 | | |
| 1,2,4-Trichlorobenzene | 35.210 | 5.0 | 40.00 | 0 | 88.0 | 65 | 131 | 35.01 | 0.570 | 30 | | |
| 1,2,4-Trimethylbenzene | 42.890 | 5.0 | 40.00 | 0 | 107 | 65 | 135 | 42.17 | 1.69 | 30 | | |
| 1,2-Dibromo-3-chloropropane | 43.550 | 5.0 | 40.00 | 0 | 109 | 49 | 135 | 43.50 | 0.115 | 30 | | |
| 1,2-Dibromoethane | 42.800 | 5.0 | 40.00 | 0 | 107 | 70 | 124 | 42.34 | 1.08 | 30 | | |
| 1,2-Dichlorobenzene | 41.580 | 5.0 | 40.00 | 0 | 104 | 74 | 120 | 41.13 | 1.09 | 30 | | |
| 1,2-Dichloroethane | 38.530 | 5.0 | 40.00 | 0 | 96.3 | 72 | 137 | 37.45 | 2.84 | 30 | | |
| 1,2-Dichloropropane | 40.020 | 5.0 | 40.00 | 0 | 100 | 71 | 120 | 37.73 | 5.89 | 30 | | |
| 1,3,5-Trimethylbenzene | 41.210 | 5.0 | 40.00 | 0 | 103 | 65 | 133 | 40.55 | 1.61 | 30 | | |
| 1,3-Dichlorobenzene | 40.030 | 5.0 | 40.00 | 0 | 100 | 72 | 124 | 40.08 | 0.125 | 30 | | |
| 1,3-Dichloropropane | 42.800 | 5.0 | 40.00 | 0 | 107 | 76 | 123 | 41.59 | 2.87 | 30 | | |
| 1,4-Dichlorobenzene | 40.410 | 5.0 | 40.00 | 0 | 101 | 72 | 125 | 39.52 | 2.23 | 30 | | |
| 2,2-Dichloropropane | 37.870 | 5.0 | 40.00 | 0 | 94.7 | 67 | 134 | 36.63 | 3.33 | 30 | | |
| 2-Butanone | 195.910 | 50 | 400.0 | 0 | 49.0 | 40 | 135 | 219.9 | 11.5 | 30 | | |
| 2-Chlorotoluene | 38.030 | 5.0 | 40.00 | 0 | 95.1 | 69 | 128 | 37.53 | 1.32 | 30 | | |
| 2-Hexanone | 248.580 | 50 | 400.0 | 0 | 62.1 | 70 | 130 | 261.8 | 5.20 | 30 | S | |
| 4-Chlorotoluene | 38.910 | 5.0 | 40.00 | 0 | 97.3 | 73 | 126 | 38.97 | 0.154 | 30 | | |
| 4-Isopropyltoluene | 44.050 | 5.0 | 40.00 | 0 | 110 | 70 | 130 | 42.93 | 2.58 | 30 | | |
| 4-Methyl-2-pentanone | 355.150 | 50 | 400.0 | 0 | 88.8 | 65 | 135 | 348.3 | 1.94 | 30 | | |
| Acetone | 148.190 | 50 | 400.0 | 0 | 37.0 | 40 | 141 | 200.9 | 30.2 | 30 | SR | |
| Acrolein | 373.880 | 100 | 400.0 | 0 | 93.5 | 65 | 135 | 381.4 | 1.99 | 30 | | |
| Acrylonitrile | 382.150 | 50 | 400.0 | 0 | 95.5 | 65 | 135 | 380.6 | 0.396 | 30 | | |
| Benzene | 39.680 | 5.0 | 40.00 | 0 | 99.2 | 73 | 126 | 38.17 | 3.88 | 30 | | |
| Bromobenzene | 38.200 | 5.0 | 40.00 | 0 | 95.5 | 66 | 121 | 37.07 | 3.00 | 30 | | |
| Bromochloromethane | 39.630 | 5.0 | 40.00 | 0 | 99.1 | 71 | 127 | 39.25 | 0.963 | 30 | | |
| Bromodichloromethane | 41.130 | 5.0 | 40.00 | 0 | 103 | 72 | 128 | 40.71 | 1.03 | 30 | | |
| Bromoform | 41.260 | 5.0 | 40.00 | 0 | 103 | 66 | 137 | 40.16 | 2.70 | 30 | | |
| Bromomethane | 35.530 | 5.0 | 40.00 | 0 | 88.8 | 45 | 141 | 35.33 | 0.564 | 30 | | |
| Carbon disulfide | 31.360 | 5.0 | 40.00 | 0 | 78.4 | 66 | 135 | 29.76 | 5.24 | 30 | | |
| Carbon tetrachloride | 43.980 | 5.0 | 40.00 | 0 | 110 | 67 | 133 | 40.65 | 7.87 | 30 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | P170217LCSD | SampType: | LCSD | TestCode: | 8260_S_5035 | Units: | ug/Kg | Prep Date: | RunNo: | | | |
|--------------------------|-------------|-----------|-----------|-------------|-------------|----------------|-----------|-------------|---------|----------|------|--|
| Client ID: | LCSS02 | Batch ID: | P17VS015 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2570916 | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Chlorobenzene | 41.720 | 5.0 | 40.00 | 0 | 104 | 75 | 123 | 40.10 | 3.96 | 30 | | |
| Chloroethane | 40.570 | 5.0 | 40.00 | 0 | 101 | 41 | 141 | 39.14 | 3.59 | 30 | | |
| Chloroform | 38.110 | 5.0 | 40.00 | 0 | 95.3 | 72 | 124 | 36.88 | 3.28 | 30 | | |
| Chloromethane | 32.840 | 5.0 | 40.00 | 0 | 82.1 | 51 | 129 | 31.48 | 4.23 | 30 | | |
| cis-1,2-Dichloroethene | 38.480 | 5.0 | 40.00 | 0 | 96.2 | 67 | 125 | 37.44 | 2.74 | 30 | | |
| cis-1,3-Dichloropropene | 41.900 | 5.0 | 40.00 | 0 | 105 | 72 | 126 | 41.14 | 1.83 | 30 | | |
| Di-isopropyl ether | 33.650 | 5.0 | 40.00 | 0 | 84.1 | 70 | 130 | 33.21 | 1.32 | 30 | | |
| Dibromochloromethane | 44.940 | 5.0 | 40.00 | 0 | 112 | 66 | 130 | 44.55 | 0.872 | 30 | | |
| Dibromomethane | 38.890 | 5.0 | 40.00 | 0 | 97.2 | 73 | 128 | 38.82 | 0.180 | 30 | | |
| Dichlorodifluoromethane | 33.350 | 5.0 | 40.00 | 0 | 83.4 | 34 | 136 | 40.22 | 18.7 | 30 | | |
| Ethyl Tert-butyl ether | 34.970 | 5.0 | 40.00 | 0 | 87.4 | 70 | 130 | 33.65 | 3.85 | 30 | | |
| Ethylbenzene | 40.830 | 5.0 | 40.00 | 0 | 102 | 74 | 127 | 38.71 | 5.33 | 30 | | |
| Freon-113 | 32.380 | 5.0 | 40.00 | 0 | 81.0 | 65 | 135 | 30.20 | 6.97 | 30 | | |
| Hexachlorobutadiene | 43.200 | 5.0 | 40.00 | 0 | 108 | 53 | 142 | 41.65 | 3.65 | 30 | | |
| Isopropylbenzene | 33.090 | 5.0 | 40.00 | 0 | 82.7 | 77 | 129 | 32.20 | 2.73 | 30 | | |
| m,p-Xylene | 80.730 | 5.0 | 80.00 | 0 | 101 | 79 | 126 | 78.27 | 3.09 | 30 | | |
| Methylene chloride | 37.610 | 5.0 | 40.00 | 0 | 94.0 | 63 | 137 | 36.97 | 1.72 | 30 | | |
| MTBE | 35.770 | 5.0 | 40.00 | 0 | 89.4 | 50 | 135 | 34.39 | 3.93 | 30 | | |
| n-Butylbenzene | 35.620 | 5.0 | 40.00 | 0 | 89.0 | 65 | 138 | 35.14 | 1.36 | 30 | | |
| n-Propylbenzene | 40.890 | 5.0 | 40.00 | 0 | 102 | 63 | 135 | 39.96 | 2.30 | 30 | | |
| Naphthalene | 41.580 | 5.0 | 40.00 | 0 | 104 | 51 | 135 | 41.81 | 0.552 | 30 | | |
| o-Xylene | 42.050 | 5.0 | 40.00 | 0 | 105 | 77 | 125 | 40.91 | 2.75 | 30 | | |
| sec-Butylbenzene | 42.650 | 5.0 | 40.00 | 0 | 107 | 63 | 132 | 41.67 | 2.32 | 30 | | |
| Styrene | 42.000 | 5.0 | 40.00 | 0 | 105 | 74 | 128 | 40.66 | 3.24 | 30 | | |
| Tert-amyl methyl ether | 36.690 | 5.0 | 40.00 | 0 | 91.7 | 70 | 130 | 36.23 | 1.26 | 30 | | |
| Tert-Butanol | 174.730 | 25 | 200.0 | 0 | 87.4 | 70 | 130 | 189.0 | 7.85 | 30 | | |
| tert-Butylbenzene | 41.450 | 5.0 | 40.00 | 0 | 104 | 65 | 132 | 40.85 | 1.46 | 30 | | |
| Tetrachloroethene | 40.620 | 5.0 | 40.00 | 0 | 102 | 67 | 139 | 37.99 | 6.69 | 30 | | |
| Toluene | 37.930 | 5.0 | 40.00 | 0 | 94.8 | 71 | 127 | 36.46 | 3.95 | 30 | | |
| trans-1,2-Dichloroethene | 37.910 | 5.0 | 40.00 | 0 | 94.8 | 66 | 134 | 37.44 | 1.25 | 30 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID P170217LCSD | SampType: LCSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | | |
|------------------------------|---------------------------|------------------------------|---------------------------------|-----------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: P17VS015 | TestNo: EPA 8260B | Analysis Date: 2/17/2017 | SeqNo: 2570916 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,3-Dichloropropene | 41.660 | 5.0 | 40.00 | 0 | 104 | 65 | 127 | 40.79 | 2.11 | 30 | |
| Trichloroethene | 41.070 | 5.0 | 40.00 | 0 | 103 | 77 | 124 | 40.62 | 1.10 | 30 | |
| Trichlorofluoromethane | 44.120 | 5.0 | 40.00 | 0 | 110 | 49 | 139 | 41.94 | 5.07 | 30 | |
| Vinyl chloride | 36.070 | 5.0 | 40.00 | 0 | 90.2 | 58 | 126 | 35.37 | 1.96 | 30 | |
| Xylenes, Total | 122.780 | 5.0 | 120.0 | 0 | 102 | 65 | 125 | 119.2 | 2.98 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 48.430 | | 50.00 | | 96.9 | 52 | 149 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 52.640 | | 50.00 | | 105 | 65 | 135 | | 0 | | |
| Surr: Dibromofluoromethane | 49.340 | | 50.00 | | 98.7 | 65 | 135 | | 0 | | |
| Surr: Toluene-d8 | 52.000 | | 50.00 | | 104 | 75 | 125 | | 0 | | |

| Sample ID P170217MB3 | SampType: MBLK | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | | |
|-----------------------------|---------------------------|------------------------------|---------------------------------|-----------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: PBS | Batch ID: P17VS015 | TestNo: EPA 8260B | Analysis Date: 2/17/2017 | SeqNo: 2570919 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | ND | 5.0 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 5.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 5.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 5.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 5.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 5.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 5.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 5.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 5.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 5.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 5.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 5.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 5.0 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 5.0 | | | | | | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| | | | | | | | | | | | |
|-----------------------------|---------------------------|------------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID P170217MB3 | SampType: MBLK | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | | |
| Client ID: PBS | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2570919 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

| | | | | | | | | | | | |
|-------------------------|----|-----|--|--|--|--|--|--|--|--|--|
| 1,3,5-Trimethylbenzene | ND | 5.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 5.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 5.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 5.0 | | | | | | | | | |
| 2-Butanone | ND | 50 | | | | | | | | | |
| 2-Chlorotoluene | ND | 5.0 | | | | | | | | | |
| 2-Hexanone | ND | 50 | | | | | | | | | |
| 4-Chlorotoluene | ND | 5.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 5.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 50 | | | | | | | | | |
| Acetone | ND | 50 | | | | | | | | | |
| Acrolein | ND | 100 | | | | | | | | | |
| Acrylonitrile | ND | 50 | | | | | | | | | |
| Benzene | ND | 5.0 | | | | | | | | | |
| Bromobenzene | ND | 5.0 | | | | | | | | | |
| Bromochloromethane | ND | 5.0 | | | | | | | | | |
| Bromodichloromethane | ND | 5.0 | | | | | | | | | |
| Bromoform | ND | 5.0 | | | | | | | | | |
| Bromomethane | ND | 5.0 | | | | | | | | | |
| Carbon disulfide | ND | 5.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 5.0 | | | | | | | | | |
| Chlorobenzene | ND | 5.0 | | | | | | | | | |
| Chloroethane | ND | 5.0 | | | | | | | | | |
| Chloroform | ND | 5.0 | | | | | | | | | |
| Chloromethane | ND | 5.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 5.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 5.0 | | | | | | | | | |
| Di-isopropyl ether | ND | 5.0 | | | | | | | | | |
| Dibromochloromethane | ND | 5.0 | | | | | | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|--------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217MB3 | MBLK | 8260_S_5035 | ug/Kg | | 113598 | | | | | | |
| Client ID: PBS | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2570919 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Dibromomethane | ND | 5.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 5.0 | | | | | | | | | |
| Ethyl Tert-butyl ether | ND | 5.0 | | | | | | | | | |
| Ethylbenzene | ND | 5.0 | | | | | | | | | |
| Freon-113 | ND | 5.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 5.0 | | | | | | | | | |
| Isopropylbenzene | ND | 5.0 | | | | | | | | | |
| m,p-Xylene | ND | 5.0 | | | | | | | | | |
| Methylene chloride | 2.050 | 5.0 | | | | | | | | | J |
| MTBE | ND | 5.0 | | | | | | | | | |
| n-Butylbenzene | ND | 5.0 | | | | | | | | | |
| n-Propylbenzene | ND | 5.0 | | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | | |
| o-Xylene | ND | 5.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 5.0 | | | | | | | | | |
| Styrene | ND | 5.0 | | | | | | | | | |
| Tert-amyl methyl ether | ND | 5.0 | | | | | | | | | |
| Tert-Butanol | ND | 25 | | | | | | | | | |
| tert-Butylbenzene | ND | 5.0 | | | | | | | | | |
| Tetrachloroethene | ND | 5.0 | | | | | | | | | |
| Toluene | ND | 5.0 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 5.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 5.0 | | | | | | | | | |
| Trichloroethene | ND | 5.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 5.0 | | | | | | | | | |
| Vinyl chloride | ND | 5.0 | | | | | | | | | |
| Xylenes, Total | ND | 5.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 49.470 | | 50.00 | | 98.9 | 52 | 149 | | | | |
| Surr: 4-Bromofluorobenzene | 50.790 | | 50.00 | | 102 | 65 | 135 | | | | |
| Surr: Dibromofluoromethane | 49.140 | | 50.00 | | 98.3 | 65 | 135 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| | | | | | | | | | | | |
|-----------------------------|---------------------------|------------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID P170217MB3 | SampType: MBLK | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | | |
| Client ID: PBS | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2570919 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Surr: Toluene-d8 | 51.410 | | 50.00 | | 103 | 75 | 125 | | | | |

| | | | | | | | | | | | |
|---------------------------------|---------------------------|------------------------------|---------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023121-001AMS | SampType: MS | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | | |
| Client ID: ZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570937 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 1760.000 | 250 | 2000 | 0 | 88.0 | 74 | 125 | | | | |
| 1,1,1-Trichloroethane | 1528.000 | 250 | 2000 | 0 | 76.4 | 68 | 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 1989.500 | 250 | 2000 | 0 | 99.5 | 59 | 140 | | | | |
| 1,1,2-Trichloroethane | 1947.500 | 250 | 2000 | 0 | 97.4 | 62 | 127 | | | | |
| 1,1-Dichloroethane | 1523.500 | 250 | 2000 | 0 | 76.2 | 73 | 125 | | | | |
| 1,1-Dichloroethene | 1405.500 | 250 | 2000 | 0 | 70.3 | 65 | 136 | | | | |
| 1,1-Dichloropropene | 1619.500 | 250 | 2000 | 0 | 81.0 | 70 | 135 | | | | |
| 1,2,3-Trichlorobenzene | 1860.500 | 250 | 2000 | 0 | 93.0 | 62 | 133 | | | | |
| 1,2,3-Trichloropropane | 1821.500 | 250 | 2000 | 0 | 91.1 | 63 | 130 | | | | |
| 1,2,4-Trichlorobenzene | 1766.500 | 250 | 2000 | 0 | 88.3 | 65 | 131 | | | | |
| 1,2,4-Trimethylbenzene | 1734.500 | 250 | 2000 | 0 | 86.7 | 65 | 135 | | | | |
| 1,2-Dibromo-3-chloropropane | 2397.500 | 250 | 2000 | 0 | 120 | 49 | 135 | | | | |
| 1,2-Dibromoethane | 2077.500 | 250 | 2000 | 0 | 104 | 70 | 124 | | | | |
| 1,2-Dichlorobenzene | 1765.000 | 250 | 2000 | 0 | 88.3 | 74 | 120 | | | | |
| 1,2-Dichloroethane | 1827.500 | 250 | 2000 | 0 | 91.4 | 72 | 137 | | | | |
| 1,2-Dichloropropane | 1691.500 | 250 | 2000 | 0 | 84.6 | 71 | 120 | | | | |
| 1,3,5-Trimethylbenzene | 1586.000 | 250 | 2000 | 0 | 79.3 | 65 | 133 | | | | |
| 1,3-Dichlorobenzene | 1640.500 | 250 | 2000 | 0 | 82.0 | 72 | 124 | | | | |
| 1,3-Dichloropropane | 2022.500 | 250 | 2000 | 0 | 101 | 76 | 123 | | | | |
| 1,4-Dichlorobenzene | 1667.500 | 250 | 2000 | 0 | 83.4 | 72 | 125 | | | | |
| 2,2-Dichloropropane | 1416.000 | 250 | 2000 | 0 | 70.8 | 67 | 134 | | | | |
| 2-Butanone | 8697.500 | 2500 | 20000 | 0 | 43.5 | 40 | 135 | | | | |
| 2-Chlorotoluene | 1527.500 | 250 | 2000 | 0 | 76.4 | 69 | 128 | | | | |
| 2-Hexanone | 14065.000 | 2500 | 20000 | 0 | 70.3 | 70 | 130 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-------------------------|---------------------------|--------------------------|--------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| N023121-001AMS | MS | 8260_S_5035 | ug/Kg | | 113598 | | | | | | |
| Client ID: ZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570937 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | 1565.500 | 250 | 2000 | 0 | 78.3 | 73 | 126 | | | | |
| 4-Isopropyltoluene | 2883.500 | 250 | 2000 | 0 | 144 | 70 | 130 | | | | S |
| 4-Methyl-2-pentanone | 19313.000 | 2500 | 20000 | 0 | 96.6 | 65 | 135 | | | | |
| Acetone | 5507.500 | 2500 | 20000 | 0 | 27.5 | 40 | 141 | | | | S |
| Acrolein | 18248.000 | 5000 | 20000 | 0 | 91.2 | 65 | 135 | | | | |
| Acrylonitrile | 17008.000 | 2500 | 20000 | 0 | 85.0 | 65 | 135 | | | | |
| Benzene | 1642.000 | 250 | 2000 | 0 | 82.1 | 73 | 126 | | | | |
| Bromobenzene | 1558.000 | 250 | 2000 | 0 | 77.9 | 66 | 121 | | | | |
| Bromochloromethane | 1758.000 | 250 | 2000 | 0 | 87.9 | 71 | 127 | | | | |
| Bromodichloromethane | 1731.500 | 250 | 2000 | 0 | 86.6 | 72 | 128 | | | | |
| Bromoform | 1934.000 | 250 | 2000 | 0 | 96.7 | 66 | 137 | | | | |
| Bromomethane | 1298.500 | 250 | 2000 | 0 | 64.9 | 45 | 141 | | | | |
| Carbon disulfide | 1123.000 | 250 | 2000 | 0 | 56.2 | 66 | 135 | | | | S |
| Carbon tetrachloride | 1611.000 | 250 | 2000 | 0 | 80.6 | 67 | 133 | | | | |
| Chlorobenzene | 1708.500 | 250 | 2000 | 0 | 85.4 | 75 | 123 | | | | |
| Chloroethane | 830.500 | 250 | 2000 | 0 | 41.5 | 41 | 141 | | | | |
| Chloroform | 1616.000 | 250 | 2000 | 0 | 80.8 | 72 | 124 | | | | |
| Chloromethane | 1420.000 | 250 | 2000 | 0 | 71.0 | 51 | 129 | | | | |
| cis-1,2-Dichloroethene | 1641.500 | 250 | 2000 | 0 | 82.1 | 67 | 125 | | | | |
| cis-1,3-Dichloropropene | 1685.000 | 250 | 2000 | 0 | 84.3 | 72 | 126 | | | | |
| Di-isopropyl ether | 1501.500 | 250 | 2000 | 0 | 75.1 | 70 | 130 | | | | |
| Dibromochloromethane | 1991.000 | 250 | 2000 | 0 | 99.6 | 66 | 130 | | | | |
| Dibromomethane | 1869.500 | 250 | 2000 | 0 | 93.5 | 73 | 128 | | | | |
| Dichlorodifluoromethane | 1036.000 | 250 | 2000 | 0 | 51.8 | 34 | 136 | | | | |
| Ethyl Tert-butyl ether | 1623.500 | 250 | 2000 | 0 | 81.2 | 70 | 130 | | | | |
| Ethylbenzene | 1638.500 | 250 | 2000 | 0 | 81.9 | 74 | 127 | | | | |
| Freon-113 | 1104.500 | 250 | 2000 | 0 | 55.2 | 65 | 135 | | | | S |
| Hexachlorobutadiene | 1846.500 | 250 | 2000 | 0 | 92.3 | 53 | 142 | | | | |
| Isopropylbenzene | 1254.500 | 250 | 2000 | 0 | 62.7 | 77 | 129 | | | | S |
| m,p-Xylene | 3425.000 | 250 | 4000 | 0 | 85.6 | 79 | 126 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | N023121-001AMS | SampType: MS | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|-----------------------------|----------------|--------------------|-----------------------|--------------|--------------------------|----------------|-----------|-------------|------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570937 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Methylene chloride | 1655.000 | 250 | 2000 | 0 | 82.8 | 63 | 137 | | | | |
| MTBE | 1692.500 | 250 | 2000 | 0 | 84.6 | 50 | 135 | | | | |
| n-Butylbenzene | 1666.000 | 250 | 2000 | 0 | 83.3 | 65 | 138 | | | | |
| n-Propylbenzene | 1566.000 | 250 | 2000 | 0 | 78.3 | 63 | 135 | | | | |
| Naphthalene | 2243.000 | 250 | 2000 | 0 | 112 | 51 | 135 | | | | |
| o-Xylene | 1783.500 | 250 | 2000 | 0 | 89.2 | 77 | 125 | | | | |
| sec-Butylbenzene | 1897.000 | 250 | 2000 | 0 | 94.8 | 63 | 132 | | | | |
| Styrene | 1713.000 | 250 | 2000 | 0 | 85.6 | 74 | 128 | | | | |
| Tert-amyl methyl ether | 1682.500 | 250 | 2000 | 0 | 84.1 | 70 | 130 | | | | |
| Tert-Butanol | 8105.500 | 1200 | 10000 | 0 | 81.1 | 70 | 130 | | | | |
| tert-Butylbenzene | 1557.000 | 250 | 2000 | 0 | 77.8 | 65 | 132 | | | | |
| Tetrachloroethene | 1511.500 | 250 | 2000 | 0 | 75.6 | 67 | 139 | | | | |
| Toluene | 1529.000 | 250 | 2000 | 0 | 76.5 | 71 | 127 | | | | |
| trans-1,2-Dichloroethene | 1511.000 | 250 | 2000 | 0 | 75.6 | 66 | 134 | | | | |
| trans-1,3-Dichloropropene | 1736.000 | 250 | 2000 | 0 | 86.8 | 65 | 127 | | | | |
| Trichloroethene | 1589.000 | 250 | 2000 | 0 | 79.4 | 77 | 124 | | | | |
| Trichlorofluoromethane | 834.500 | 250 | 2000 | 0 | 41.7 | 49 | 139 | | | | S |
| Vinyl chloride | 1145.500 | 250 | 2000 | 0 | 57.3 | 58 | 126 | | | | S |
| Xylenes, Total | 5208.500 | 250 | 6000 | 0 | 86.8 | 65 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 2525.500 | | 2500 | | 101 | 52 | 149 | | | | |
| Surr: 4-Bromofluorobenzene | 2571.000 | | 2500 | | 103 | 65 | 135 | | | | |
| Surr: Dibromofluoromethane | 2432.500 | | 2500 | | 97.3 | 65 | 135 | | | | |
| Surr: Toluene-d8 | 2538.000 | | 2500 | | 102 | 75 | 125 | | | | |

| Sample ID | N023121-001AMS | SampType: MSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|---------------------------|----------------|--------------------|-----------------------|--------------|--------------------------|----------------|-----------|-------------|-------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570938 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 1878.500 | 250 | 2000 | 0 | 93.9 | 74 | 125 | 1760 | 6.51 | 30 | |
| 1,1,1-Trichloroethane | 1542.000 | 250 | 2000 | 0 | 77.1 | 68 | 130 | 1528 | 0.912 | 30 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | N023121-001AMSD | SampType: MSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|-----------------------------|-----------------|--------------------|-----------------------|--------------|--------------------------|----------------|-----------|-------------|-------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570938 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | 2082.500 | 250 | 2000 | 0 | 104 | 59 | 140 | 1990 | 4.57 | 30 | |
| 1,1,2-Trichloroethane | 1866.500 | 250 | 2000 | 0 | 93.3 | 62 | 127 | 1948 | 4.25 | 30 | |
| 1,1-Dichloroethane | 1582.000 | 250 | 2000 | 0 | 79.1 | 73 | 125 | 1524 | 3.77 | 30 | |
| 1,1-Dichloroethene | 1402.500 | 250 | 2000 | 0 | 70.1 | 65 | 136 | 1406 | 0.214 | 30 | |
| 1,1-Dichloropropene | 1625.500 | 250 | 2000 | 0 | 81.3 | 70 | 135 | 1620 | 0.370 | 30 | |
| 1,2,3-Trichlorobenzene | 2007.000 | 250 | 2000 | 0 | 100 | 62 | 133 | 1860 | 7.58 | 30 | |
| 1,2,3-Trichloropropane | 1913.000 | 250 | 2000 | 0 | 95.6 | 63 | 130 | 1822 | 4.90 | 30 | |
| 1,2,4-Trichlorobenzene | 1978.500 | 250 | 2000 | 0 | 98.9 | 65 | 131 | 1766 | 11.3 | 30 | |
| 1,2,4-Trimethylbenzene | 1872.500 | 250 | 2000 | 0 | 93.6 | 65 | 135 | 1734 | 7.65 | 30 | |
| 1,2-Dibromo-3-chloropropane | 2460.500 | 250 | 2000 | 0 | 123 | 49 | 135 | 2398 | 2.59 | 30 | |
| 1,2-Dibromoethane | 2148.000 | 250 | 2000 | 0 | 107 | 70 | 124 | 2078 | 3.34 | 30 | |
| 1,2-Dichlorobenzene | 1900.000 | 250 | 2000 | 0 | 95.0 | 74 | 120 | 1765 | 7.37 | 30 | |
| 1,2-Dichloroethane | 1867.500 | 250 | 2000 | 0 | 93.4 | 72 | 137 | 1828 | 2.17 | 30 | |
| 1,2-Dichloropropane | 1793.000 | 250 | 2000 | 0 | 89.7 | 71 | 120 | 1692 | 5.83 | 30 | |
| 1,3,5-Trimethylbenzene | 1704.000 | 250 | 2000 | 0 | 85.2 | 65 | 133 | 1586 | 7.17 | 30 | |
| 1,3-Dichlorobenzene | 1739.500 | 250 | 2000 | 0 | 87.0 | 72 | 124 | 1640 | 5.86 | 30 | |
| 1,3-Dichloropropane | 2159.500 | 250 | 2000 | 0 | 108 | 76 | 123 | 2023 | 6.55 | 30 | |
| 1,4-Dichlorobenzene | 1818.000 | 250 | 2000 | 0 | 90.9 | 72 | 125 | 1668 | 8.64 | 30 | |
| 2,2-Dichloropropane | 1427.000 | 250 | 2000 | 0 | 71.4 | 67 | 134 | 1416 | 0.774 | 30 | |
| 2-Butanone | 8920.000 | 2500 | 20000 | 0 | 44.6 | 40 | 135 | 8698 | 2.53 | 30 | |
| 2-Chlorotoluene | 1605.000 | 250 | 2000 | 0 | 80.2 | 69 | 128 | 1528 | 4.95 | 30 | |
| 2-Hexanone | 14155.500 | 2500 | 20000 | 0 | 70.8 | 70 | 130 | 14060 | 0.641 | 30 | |
| 4-Chlorotoluene | 1639.500 | 250 | 2000 | 0 | 82.0 | 73 | 126 | 1566 | 4.62 | 30 | |
| 4-Isopropyltoluene | 2948.500 | 250 | 2000 | 0 | 147 | 70 | 130 | 2884 | 2.23 | 30 | S |
| 4-Methyl-2-pentanone | 19567.000 | 2500 | 20000 | 0 | 97.8 | 65 | 135 | 19310 | 1.31 | 30 | |
| Acetone | 6407.500 | 2500 | 20000 | 0 | 32.0 | 40 | 141 | 5508 | 15.1 | 30 | S |
| Acrolein | 18805.500 | 5000 | 20000 | 0 | 94.0 | 65 | 135 | 18250 | 3.01 | 30 | |
| Acrylonitrile | 19040.000 | 2500 | 20000 | 0 | 95.2 | 65 | 135 | 17010 | 11.3 | 30 | |
| Benzene | 1676.000 | 250 | 2000 | 0 | 83.8 | 73 | 126 | 1642 | 2.05 | 30 | |
| Bromobenzene | 1641.500 | 250 | 2000 | 0 | 82.1 | 66 | 121 | 1558 | 5.22 | 30 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | N023121-001AMSD | SampType: MSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|-------------------------|-----------------|--------------------|-----------------------|--------------|--------------------------|----------------|-----------|-------------|-------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570938 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Bromochloromethane | 1840.500 | 250 | 2000 | 0 | 92.0 | 71 | 127 | 1758 | 4.59 | 30 | |
| Bromodichloromethane | 1812.000 | 250 | 2000 | 0 | 90.6 | 72 | 128 | 1732 | 4.54 | 30 | |
| Bromoform | 2019.000 | 250 | 2000 | 0 | 101 | 66 | 137 | 1934 | 4.30 | 30 | |
| Bromomethane | 1304.500 | 250 | 2000 | 0 | 65.2 | 45 | 141 | 1298 | 0.461 | 30 | |
| Carbon disulfide | 1116.500 | 250 | 2000 | 0 | 55.8 | 66 | 135 | 1123 | 0.580 | 30 | S |
| Carbon tetrachloride | 1666.000 | 250 | 2000 | 0 | 83.3 | 67 | 133 | 1611 | 3.36 | 30 | |
| Chlorobenzene | 1794.000 | 250 | 2000 | 0 | 89.7 | 75 | 123 | 1708 | 4.88 | 30 | |
| Chloroethane | 856.500 | 250 | 2000 | 0 | 42.8 | 41 | 141 | 830.5 | 3.08 | 30 | |
| Chloroform | 1650.000 | 250 | 2000 | 0 | 82.5 | 72 | 124 | 1616 | 2.08 | 30 | |
| Chloromethane | 1483.500 | 250 | 2000 | 0 | 74.2 | 51 | 129 | 1420 | 4.37 | 30 | |
| cis-1,2-Dichloroethene | 1663.000 | 250 | 2000 | 0 | 83.2 | 67 | 125 | 1642 | 1.30 | 30 | |
| cis-1,3-Dichloropropene | 1799.000 | 250 | 2000 | 0 | 90.0 | 72 | 126 | 1685 | 6.54 | 30 | |
| Di-isopropyl ether | 1560.500 | 250 | 2000 | 0 | 78.0 | 70 | 130 | 1502 | 3.85 | 30 | |
| Dibromochloromethane | 2093.000 | 250 | 2000 | 0 | 105 | 66 | 130 | 1991 | 5.00 | 30 | |
| Dibromomethane | 1915.000 | 250 | 2000 | 0 | 95.8 | 73 | 128 | 1870 | 2.40 | 30 | |
| Dichlorodifluoromethane | 1000.500 | 250 | 2000 | 0 | 50.0 | 34 | 136 | 1036 | 3.49 | 30 | |
| Ethyl Tert-butyl ether | 1671.000 | 250 | 2000 | 0 | 83.6 | 70 | 130 | 1624 | 2.88 | 30 | |
| Ethylbenzene | 1735.000 | 250 | 2000 | 0 | 86.8 | 74 | 127 | 1639 | 5.72 | 30 | |
| Freon-113 | 1087.500 | 250 | 2000 | 0 | 54.4 | 65 | 135 | 1104 | 1.55 | 30 | S |
| Hexachlorobutadiene | 1877.000 | 250 | 2000 | 0 | 93.8 | 53 | 142 | 1846 | 1.64 | 30 | |
| Isopropylbenzene | 1340.500 | 250 | 2000 | 0 | 67.0 | 77 | 129 | 1254 | 6.63 | 30 | S |
| m,p-Xylene | 3657.000 | 250 | 4000 | 0 | 91.4 | 79 | 126 | 3425 | 6.55 | 30 | |
| Methylene chloride | 1710.500 | 250 | 2000 | 0 | 85.5 | 63 | 137 | 1655 | 3.30 | 30 | |
| MTBE | 1723.000 | 250 | 2000 | 0 | 86.2 | 50 | 135 | 1692 | 1.79 | 30 | |
| n-Butylbenzene | 1847.000 | 250 | 2000 | 0 | 92.4 | 65 | 138 | 1666 | 10.3 | 30 | |
| n-Propylbenzene | 1667.500 | 250 | 2000 | 0 | 83.4 | 63 | 135 | 1566 | 6.28 | 30 | |
| Naphthalene | 2430.000 | 250 | 2000 | 0 | 122 | 51 | 135 | 2243 | 8.00 | 30 | |
| o-Xylene | 1883.000 | 250 | 2000 | 0 | 94.2 | 77 | 125 | 1784 | 5.43 | 30 | |
| sec-Butylbenzene | 2019.000 | 250 | 2000 | 0 | 101 | 63 | 132 | 1897 | 6.23 | 30 | |
| Styrene | 1829.000 | 250 | 2000 | 0 | 91.4 | 74 | 128 | 1713 | 6.55 | 30 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | N023121-001AMSD | SampType: MSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113598 | | | | | |
|-----------------------------|-----------------|--------------------|-----------------------|--------------|--------------------------|----------------|-----------|-------------|------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VS015 | TestNo: EPA 8260B | | Analysis Date: 2/18/2017 | SeqNo: 2570938 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Tert-amyl methyl ether | 1774.500 | 250 | 2000 | 0 | 88.7 | 70 | 130 | 1682 | 5.32 | 30 | |
| Tert-Butanol | 9723.000 | 1200 | 10000 | 0 | 97.2 | 70 | 130 | 8106 | 18.1 | 30 | |
| tert-Butylbenzene | 1662.500 | 250 | 2000 | 0 | 83.1 | 65 | 132 | 1557 | 6.55 | 30 | |
| Tetrachloroethene | 1604.500 | 250 | 2000 | 0 | 80.2 | 67 | 139 | 1512 | 5.97 | 30 | |
| Toluene | 1581.000 | 250 | 2000 | 0 | 79.0 | 71 | 127 | 1529 | 3.34 | 30 | |
| trans-1,2-Dichloroethene | 1583.500 | 250 | 2000 | 0 | 79.2 | 66 | 134 | 1511 | 4.69 | 30 | |
| trans-1,3-Dichloropropene | 1793.000 | 250 | 2000 | 0 | 89.7 | 65 | 127 | 1736 | 3.23 | 30 | |
| Trichloroethene | 1672.500 | 250 | 2000 | 0 | 83.6 | 77 | 124 | 1589 | 5.12 | 30 | |
| Trichlorofluoromethane | 954.000 | 250 | 2000 | 0 | 47.7 | 49 | 139 | 834.5 | 13.4 | 30 | S |
| Vinyl chloride | 1111.500 | 250 | 2000 | 0 | 55.6 | 58 | 126 | 1146 | 3.01 | 30 | S |
| Xylenes, Total | 5540.000 | 250 | 6000 | 0 | 92.3 | 65 | 125 | 5208 | 6.17 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 2389.500 | | 2500 | | 95.6 | 52 | 149 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 2520.500 | | 2500 | | 101 | 65 | 135 | | 0 | | |
| Surr: Dibromofluoromethane | 2328.000 | | 2500 | | 93.1 | 65 | 135 | | 0 | | |
| Surr: Toluene-d8 | 2474.000 | | 2500 | | 99.0 | 75 | 125 | | 0 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|--------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170221LCS | LCS | 8260_S_5035 | ug/Kg | | 113673 | | | | | | |
| Client ID: LCSS | Batch ID: P17VS016 | TestNo: EPA 8260B | | Analysis Date: 2/21/2017 | SeqNo: 2575570 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 2-Hexanone | 321.250 | 50 | 400.0 | 0 | 80.3 | 70 | 130 | | | | |
| Acetone | 313.120 | 50 | 400.0 | 0 | 78.3 | 40 | 141 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 50.420 | | 50.00 | | 101 | 52 | 149 | | | | |
| Surr: 4-Bromofluorobenzene | 49.700 | | 50.00 | | 99.4 | 65 | 135 | | | | |
| Surr: Dibromofluoromethane | 48.980 | | 50.00 | | 98.0 | 65 | 135 | | | | |
| Surr: Toluene-d8 | 50.730 | | 50.00 | | 101 | 75 | 125 | | | | |

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|--------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170221MB3 | MBLK | 8260_S_5035 | ug/Kg | | 113673 | | | | | | |
| Client ID: PBS | Batch ID: P17VS016 | TestNo: EPA 8260B | | Analysis Date: 2/21/2017 | SeqNo: 2575573 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 2-Hexanone | ND | 50 | | | | | | | | | |
| Acetone | ND | 50 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 50.510 | | 50.00 | | 101 | 52 | 149 | | | | |
| Surr: 4-Bromofluorobenzene | 46.000 | | 50.00 | | 92.0 | 65 | 135 | | | | |
| Surr: Dibromofluoromethane | 49.120 | | 50.00 | | 98.2 | 65 | 135 | | | | |
| Surr: Toluene-d8 | 51.010 | | 50.00 | | 102 | 75 | 125 | | | | |

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|--------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| N023129-001AMS | MS | 8260_S_5035 | ug/Kg | | 113673 | | | | | | |
| Client ID: ZZZZZ | Batch ID: P17VS016 | TestNo: EPA 8260B | | Analysis Date: 2/21/2017 | SeqNo: 2575590 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 2-Hexanone | 486.900 | 50 | 400.0 | 0 | 122 | 70 | 130 | | | | |
| Acetone | 534.120 | 50 | 400.0 | 0 | 134 | 40 | 141 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 59.290 | | 50.00 | | 119 | 52 | 149 | | | | |
| Surr: 4-Bromofluorobenzene | 52.350 | | 50.00 | | 105 | 65 | 135 | | | | |
| Surr: Dibromofluoromethane | 48.840 | | 50.00 | | 97.7 | 65 | 135 | | | | |
| Surr: Toluene-d8 | 50.690 | | 50.00 | | 101 | 75 | 125 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_S_5035PGE

| Sample ID N023129-001AMSD | SampType: MSD | TestCode: 8260_S_5035 | Units: ug/Kg | Prep Date: | RunNo: 113673 | | | | | | |
|----------------------------------|---------------------------|------------------------------|---------------------------------|-----------------------|----------------------|----------|-----------|-------------|------|----------|------|
| Client ID: ZZZZZZ | Batch ID: P17VS016 | TestNo: EPA 8260B | Analysis Date: 2/21/2017 | SeqNo: 2575591 | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 2-Hexanone | 461.510 | 50 | 400.0 | 0 | 115 | 70 | 130 | 486.9 | 5.35 | 30 | |
| Acetone | 559.820 | 50 | 400.0 | 0 | 140 | 40 | 141 | 534.1 | 4.70 | 30 | |
| Surr: 1,2-Dichloroethane-d4 | 60.180 | | 50.00 | | 120 | 52 | 149 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 50.840 | | 50.00 | | 102 | 65 | 135 | | 0 | | |
| Surr: Dibromofluoromethane | 49.720 | | 50.00 | | 99.4 | 65 | 135 | | 0 | | |
| Surr: Toluene-d8 | 50.960 | | 50.00 | | 102 | 75 | 125 | | 0 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217LCS | LCS | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: LCSW | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571530 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 21.110 | 1.0 | 20.00 | 0 | 106 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 19.260 | 1.0 | 20.00 | 0 | 96.3 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 18.690 | 1.0 | 20.00 | 0 | 93.5 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 19.630 | 1.0 | 20.00 | 0 | 98.2 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 18.100 | 0.50 | 20.00 | 0 | 90.5 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 19.210 | 1.0 | 20.00 | 0 | 96.0 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.890 | 1.0 | 20.00 | 0 | 104 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 17.890 | 1.0 | 20.00 | 0 | 89.4 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 18.280 | 1.0 | 20.00 | 0 | 91.4 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 17.540 | 1.0 | 20.00 | 0 | 87.7 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.670 | 1.0 | 20.00 | 0 | 108 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 20.260 | 2.0 | 20.00 | 0 | 101 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.200 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.000 | 0.50 | 20.00 | 0 | 95.0 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.630 | 1.0 | 20.00 | 0 | 98.2 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.830 | 1.0 | 20.00 | 0 | 104 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.620 | 1.0 | 20.00 | 0 | 103 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.400 | 1.0 | 20.00 | 0 | 102 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.030 | 1.0 | 20.00 | 0 | 100 | 69 | 137 | | | | |
| 2-Butanone | 148.700 | 10 | 200.0 | 0 | 74.4 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.130 | 1.0 | 20.00 | 0 | 95.7 | 73 | 126 | | | | |
| 2-Hexanone | 172.640 | 5.0 | 200.0 | 0 | 86.3 | 70 | 130 | | | | |
| 4-Chlorotoluene | 19.560 | 1.0 | 20.00 | 0 | 97.8 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.590 | 1.0 | 20.00 | 0 | 113 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 176.550 | 10 | 200.0 | 0 | 88.3 | 58 | 134 | | | | |
| Acetone | 165.750 | 10 | 200.0 | 0 | 82.9 | 40 | 135 | | | | |
| Acrolein | 186.390 | 20 | 200.0 | 0 | 93.2 | 75 | 125 | | | | |
| Acrylonitrile | 175.170 | 20 | 200.0 | 0 | 87.6 | 75 | 125 | | | | |

Qualifiers:

- B Analyte detected in the associated Method Blank
 - J Analyte detected below quantitation limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - H Holding times for preparation or analysis exceeded
 - R RPD outside accepted recovery limits
- Calculations are based on raw values

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID P170217LCS | SampType: LCS | TestCode: 8260_WP_SF Units: ug/L | | | | Prep Date: | | | RunNo: 113586 | | |
|-----------------------------|---------------------------|--|-----------|-------------|------|---------------------------------|-----------|-------------|-----------------------|----------|------|
| Client ID: LCSW | Batch ID: P17VW025 | TestNo: EPA 8260B | | | | Analysis Date: 2/17/2017 | | | SeqNo: 2571530 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Benzene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 81 | 122 | | | | |
| Bromobenzene | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 76 | 124 | | | | |
| Bromochloromethane | 19.100 | 1.0 | 20.00 | 0 | 95.5 | 65 | 129 | | | | |
| Bromodichloromethane | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 76 | 121 | | | | |
| Bromoform | 19.110 | 1.0 | 20.00 | 0 | 95.6 | 69 | 128 | | | | |
| Bromomethane | 17.630 | 1.0 | 20.00 | 0 | 88.2 | 53 | 141 | | | | |
| Carbon disulfide | 16.040 | 1.0 | 20.00 | 0 | 80.2 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.900 | 0.50 | 20.00 | 0 | 110 | 66 | 138 | | | | |
| Chlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 81 | 122 | | | | |
| Chloroethane | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 58 | 133 | | | | |
| Chloroform | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 69 | 128 | | | | |
| Chloromethane | 16.230 | 1.0 | 20.00 | 0 | 81.2 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 18.740 | 1.0 | 20.00 | 0 | 93.7 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 20.620 | 1.0 | 20.00 | 0 | 103 | 69 | 131 | | | | |
| Di-isopropyl ether | 16.710 | 1.0 | 20.00 | 0 | 83.6 | 70 | 130 | | | | |
| Dibromochloromethane | 21.110 | 1.0 | 20.00 | 0 | 106 | 66 | 133 | | | | |
| Dibromomethane | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 21.610 | 1.0 | 20.00 | 0 | 108 | 53 | 153 | | | | |
| Ethyl tert-butyl ether | 16.730 | 1.0 | 20.00 | 0 | 83.6 | 70 | 130 | | | | |
| Ethylbenzene | 20.300 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | | | | |
| Freon-113 | 16.490 | 1.0 | 20.00 | 0 | 82.5 | 75 | 125 | | | | |
| Hexachlorobutadiene | 21.810 | 1.0 | 20.00 | 0 | 109 | 67 | 131 | | | | |
| Isopropylbenzene | 16.780 | 1.0 | 20.00 | 0 | 83.9 | 75 | 127 | | | | |
| m,p-Xylene | 40.550 | 1.0 | 40.00 | 0 | 101 | 76 | 128 | | | | |
| Methylene chloride | 17.890 | 2.0 | 20.00 | 0 | 89.4 | 63 | 137 | | | | |
| MTBE | 17.110 | 1.0 | 20.00 | 0 | 85.6 | 65 | 123 | | | | |
| n-Butylbenzene | 18.140 | 1.0 | 20.00 | 0 | 90.7 | 69 | 137 | | | | |
| n-Propylbenzene | 20.820 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 18.750 | 1.0 | 20.00 | 0 | 93.8 | 54 | 138 | | | | |
| o-Xylene | 20.970 | 1.0 | 20.00 | 0 | 105 | 80 | 121 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | P170217LCS | SampType: LCS | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-----------------------------|------------|---------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | LCSW | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571530 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| sec-Butylbenzene | 21.850 | 1.0 | 20.00 | 0 | 109 | 72 | 127 | | | | |
| Styrene | 20.650 | 1.0 | 20.00 | 0 | 103 | 65 | 134 | | | | |
| Tert-amyl methyl ether | 17.970 | 1.0 | 20.00 | 0 | 89.8 | 70 | 130 | | | | |
| Tert-Butanol | 88.520 | 5.0 | 100.0 | 0 | 88.5 | 70 | 130 | | | | |
| tert-Butylbenzene | 21.210 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | | | | |
| Tetrachloroethene | 20.470 | 1.0 | 20.00 | 0 | 102 | 66 | 128 | | | | |
| Toluene | 19.060 | 2.0 | 20.00 | 0 | 95.3 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.550 | 1.0 | 20.00 | 0 | 103 | 59 | 135 | | | | |
| Trichloroethene | 20.860 | 1.0 | 20.00 | 0 | 104 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.320 | 1.0 | 20.00 | 0 | 96.6 | 57 | 129 | | | | |
| Vinyl chloride | 18.820 | 0.50 | 20.00 | 0 | 94.1 | 50 | 134 | | | | |
| Xylenes, Total | 61.520 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 24.400 | | 25.00 | | 97.6 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.650 | | 25.00 | | 98.6 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 24.540 | | 25.00 | | 98.2 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.100 | | 25.00 | | 100 | 81 | 120 | | | | |

| Sample ID | P170217LCSD | SampType: LCSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|---------------------------|-------------|----------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | LCSS02 | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571531 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 20.700 | 1.0 | 20.00 | 0 | 104 | 81 | 129 | 21.11 | 1.96 | 20 | |
| 1,1,1-Trichloroethane | 19.180 | 1.0 | 20.00 | 0 | 95.9 | 67 | 132 | 19.26 | 0.416 | 20 | |
| 1,1,2,2-Tetrachloroethane | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 63 | 128 | 18.69 | 4.60 | 20 | |
| 1,1,2-Trichloroethane | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 75 | 125 | 19.63 | 1.77 | 20 | |
| 1,1-Dichloroethane | 18.120 | 0.50 | 20.00 | 0 | 90.6 | 69 | 133 | 18.10 | 0.110 | 20 | |
| 1,1-Dichloroethene | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 68 | 130 | 19.21 | 2.16 | 20 | |
| 1,1-Dichloropropene | 20.370 | 1.0 | 20.00 | 0 | 102 | 73 | 132 | 20.89 | 2.52 | 20 | |
| 1,2,3-Trichlorobenzene | 18.060 | 1.0 | 20.00 | 0 | 90.3 | 67 | 137 | 17.89 | 0.946 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | P170217LCSD | SampType: LCSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-----------------------------|-------------|----------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | LCSS02 | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571531 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,2,3-Trichloropropane | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 73 | 124 | 18.28 | 2.06 | 20 | |
| 1,2,4-Trichlorobenzene | 17.450 | 1.0 | 20.00 | 0 | 87.2 | 66 | 134 | 17.54 | 0.514 | 20 | |
| 1,2,4-Trimethylbenzene | 21.310 | 1.0 | 20.00 | 0 | 107 | 74 | 132 | 21.67 | 1.68 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.490 | 2.0 | 20.00 | 0 | 112 | 50 | 132 | 20.26 | 10.4 | 20 | |
| 1,2-Dibromoethane | 20.880 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | 20.81 | 0.336 | 20 | |
| 1,2-Dichlorobenzene | 21.010 | 1.0 | 20.00 | 0 | 105 | 71 | 122 | 21.20 | 0.900 | 20 | |
| 1,2-Dichloroethane | 19.630 | 0.50 | 20.00 | 0 | 98.2 | 69 | 132 | 19.00 | 3.26 | 20 | |
| 1,2-Dichloropropane | 19.600 | 1.0 | 20.00 | 0 | 98.0 | 75 | 125 | 19.63 | 0.153 | 20 | |
| 1,3,5-Trimethylbenzene | 20.390 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | 20.83 | 2.13 | 20 | |
| 1,3-Dichlorobenzene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 75 | 124 | 20.31 | 1.69 | 20 | |
| 1,3-Dichloropropane | 21.030 | 1.0 | 20.00 | 0 | 105 | 73 | 126 | 20.62 | 1.97 | 20 | |
| 1,4-Dichlorobenzene | 20.060 | 1.0 | 20.00 | 0 | 100 | 74 | 123 | 20.40 | 1.68 | 20 | |
| 2,2-Dichloropropane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 69 | 137 | 20.03 | 1.92 | 20 | |
| 2-Butanone | 149.820 | 10 | 200.0 | 0 | 74.9 | 49 | 136 | 148.7 | 0.750 | 20 | |
| 2-Chlorotoluene | 18.450 | 1.0 | 20.00 | 0 | 92.2 | 73 | 126 | 19.13 | 3.62 | 20 | |
| 2-Hexanone | 170.030 | 5.0 | 200.0 | 0 | 85.0 | 70 | 130 | 172.6 | 1.52 | 20 | |
| 4-Chlorotoluene | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 74 | 128 | 19.56 | 1.70 | 20 | |
| 4-Isopropyltoluene | 21.810 | 1.0 | 20.00 | 0 | 109 | 73 | 130 | 22.59 | 3.51 | 20 | |
| 4-Methyl-2-pentanone | 184.130 | 10 | 200.0 | 0 | 92.1 | 58 | 134 | 176.6 | 4.20 | 20 | |
| Acetone | 171.500 | 10 | 200.0 | 0 | 85.8 | 40 | 135 | 165.8 | 3.41 | 20 | |
| Acrolein | 206.130 | 20 | 200.0 | 0 | 103 | 75 | 125 | 186.4 | 10.1 | 20 | |
| Acrylonitrile | 203.070 | 20 | 200.0 | 0 | 102 | 75 | 125 | 175.2 | 14.8 | 20 | |
| Benzene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 81 | 122 | 19.98 | 3.20 | 20 | |
| Bromobenzene | 18.540 | 1.0 | 20.00 | 0 | 92.7 | 76 | 124 | 18.85 | 1.66 | 20 | |
| Bromochloromethane | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 65 | 129 | 19.10 | 1.74 | 20 | |
| Bromodichloromethane | 20.040 | 1.0 | 20.00 | 0 | 100 | 76 | 121 | 19.85 | 0.953 | 20 | |
| Bromoform | 19.590 | 1.0 | 20.00 | 0 | 98.0 | 69 | 128 | 19.11 | 2.48 | 20 | |
| Bromomethane | 17.040 | 1.0 | 20.00 | 0 | 85.2 | 53 | 141 | 17.63 | 3.40 | 20 | |
| Carbon disulfide | 15.550 | 1.0 | 20.00 | 0 | 77.8 | 75 | 125 | 16.04 | 3.10 | 20 | |
| Carbon tetrachloride | 21.250 | 0.50 | 20.00 | 0 | 106 | 66 | 138 | 21.90 | 3.01 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



CALIFORNIA | P:562.219.7435 F:562.219.7436
 11110 Artesia Blvd., Ste B, Cerritos, CA 90703
 ELAP Cert 2921
 EPA ID CA01638

NEVADA | P:702.307.2659 F:702.307.2697
 3151 W. Post Rd., Las Vegas, NV 89118
 ELAP Cert 2676 | NV Cert N000922
 ORELAP/NELAP Cert 4046

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|--------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|-------|----------|------|
| P170217LCSD | LCSD | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: LCSS02 | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571531 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chlorobenzene | 20.770 | 1.0 | 20.00 | 0 | 104 | 81 | 122 | 20.60 | 0.822 | 20 | |
| Chloroethane | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 58 | 133 | 19.76 | 0.857 | 20 | |
| Chloroform | 18.670 | 1.0 | 20.00 | 0 | 93.4 | 69 | 128 | 19.05 | 2.01 | 20 | |
| Chloromethane | 16.520 | 1.0 | 20.00 | 0 | 82.6 | 56 | 131 | 16.23 | 1.77 | 20 | |
| cis-1,2-Dichloroethene | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 72 | 126 | 18.74 | 1.43 | 20 | |
| cis-1,3-Dichloropropene | 20.680 | 1.0 | 20.00 | 0 | 103 | 69 | 131 | 20.62 | 0.291 | 20 | |
| Di-isopropyl ether | 16.580 | 1.0 | 20.00 | 0 | 82.9 | 70 | 130 | 16.71 | 0.781 | 20 | |
| Dibromochloromethane | 22.240 | 1.0 | 20.00 | 0 | 111 | 66 | 133 | 21.11 | 5.21 | 20 | |
| Dibromomethane | 19.500 | 1.0 | 20.00 | 0 | 97.5 | 76 | 125 | 19.41 | 0.463 | 20 | |
| Dichlorodifluoromethane | 22.320 | 1.0 | 20.00 | 0 | 112 | 53 | 153 | 21.61 | 3.23 | 20 | |
| Ethyl tert-butyl ether | 17.210 | 1.0 | 20.00 | 0 | 86.1 | 70 | 130 | 16.73 | 2.83 | 20 | |
| Ethylbenzene | 19.800 | 1.0 | 20.00 | 0 | 99.0 | 73 | 127 | 20.30 | 2.49 | 20 | |
| Freon-113 | 15.770 | 1.0 | 20.00 | 0 | 78.8 | 75 | 125 | 16.49 | 4.46 | 20 | |
| Hexachlorobutadiene | 20.670 | 1.0 | 20.00 | 0 | 103 | 67 | 131 | 21.81 | 5.37 | 20 | |
| Isopropylbenzene | 16.060 | 1.0 | 20.00 | 0 | 80.3 | 75 | 127 | 16.78 | 4.38 | 20 | |
| m,p-Xylene | 40.090 | 1.0 | 40.00 | 0 | 100 | 76 | 128 | 40.55 | 1.14 | 20 | |
| Methylene chloride | 18.430 | 2.0 | 20.00 | 0 | 92.2 | 63 | 137 | 17.89 | 2.97 | 20 | |
| MTBE | 17.390 | 1.0 | 20.00 | 0 | 87.0 | 65 | 123 | 17.11 | 1.62 | 20 | |
| n-Butylbenzene | 17.490 | 1.0 | 20.00 | 0 | 87.5 | 69 | 137 | 18.14 | 3.65 | 20 | |
| n-Propylbenzene | 20.150 | 1.0 | 20.00 | 0 | 101 | 72 | 129 | 20.82 | 3.27 | 20 | |
| Naphthalene | 19.580 | 1.0 | 20.00 | 0 | 97.9 | 54 | 138 | 18.75 | 4.33 | 20 | |
| o-Xylene | 20.580 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | 20.97 | 1.88 | 20 | |
| sec-Butylbenzene | 21.040 | 1.0 | 20.00 | 0 | 105 | 72 | 127 | 21.85 | 3.78 | 20 | |
| Styrene | 20.580 | 1.0 | 20.00 | 0 | 103 | 65 | 134 | 20.65 | 0.340 | 20 | |
| Tert-amyl methyl ether | 18.110 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | 17.97 | 0.776 | 20 | |
| Tert-Butanol | 90.880 | 5.0 | 100.0 | 0 | 90.9 | 70 | 130 | 88.52 | 2.63 | 20 | |
| tert-Butylbenzene | 20.320 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | 21.21 | 4.29 | 20 | |
| Tetrachloroethene | 20.420 | 1.0 | 20.00 | 0 | 102 | 66 | 128 | 20.47 | 0.245 | 20 | |
| Toluene | 18.690 | 2.0 | 20.00 | 0 | 93.5 | 77 | 122 | 19.06 | 1.96 | 20 | |
| trans-1,2-Dichloroethene | 18.720 | 1.0 | 20.00 | 0 | 93.6 | 63 | 137 | 19.00 | 1.48 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217LCSD | LCSD | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: LCSS02 | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571531 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| trans-1,3-Dichloropropene | 20.920 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 20.55 | 1.78 | 20 | |
| Trichloroethene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 70 | 127 | 20.86 | 4.56 | 20 | |
| Trichlorofluoromethane | 21.340 | 1.0 | 20.00 | 0 | 107 | 57 | 129 | 19.32 | 9.94 | 20 | |
| Vinyl chloride | 18.330 | 0.50 | 20.00 | 0 | 91.7 | 50 | 134 | 18.82 | 2.64 | 20 | |
| Xylenes, Total | 60.670 | 2.0 | 60.00 | 0 | 101 | 75 | 125 | 61.52 | 1.39 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 25.810 | | 25.00 | | 103 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.310 | | 25.00 | | 101 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 24.800 | | 25.00 | | 99.2 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.200 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217MB3 | MBLK | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: PBW | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571532 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217MB3 | MBLK | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: PBW | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571532 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 2-Hexanone | ND | 5.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 1.0 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Di-isopropyl ether | ND | 1.0 | | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|-----------------------------|---------------------------|--------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| P170217MB3 | MBLK | 8260_WP_SF | ug/L | | 113586 | | | | | | |
| Client ID: PBW | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571532 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethyl tert-butyl ether | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | 0.510 | 2.0 | | | | | | | | | J |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| Tert-amyl methyl ether | ND | 1.0 | | | | | | | | | |
| Tert-Butanol | ND | 5.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 2.0 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 24.020 | | 25.00 | | 96.1 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.300 | | 25.00 | | 97.2 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 24.000 | | 25.00 | | 96.0 | 85 | 115 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| | | | | | | | | | | | |
|-----------------------------|---------------------------|-----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID P170217MB3 | SampType: MBLK | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | | |
| Client ID: PBW | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571532 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Surr: Toluene-d8 | 25.600 | | 25.00 | | 102 | 81 | 120 | | | | |

| | | | | | | | | | | | |
|---------------------------------|---------------------------|-----------------------------|--------------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| Sample ID N023124-010AMS | SampType: MS | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | | |
| Client ID: ZZZZZ | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571549 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 20.310 | 1.0 | 20.00 | 0 | 102 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 18.350 | 1.0 | 20.00 | 0 | 91.8 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 18.740 | 1.0 | 20.00 | 0 | 93.7 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 19.260 | 1.0 | 20.00 | 0 | 96.3 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 17.040 | 0.50 | 20.00 | 0 | 85.2 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 17.920 | 1.0 | 20.00 | 0 | 89.6 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.680 | 1.0 | 20.00 | 0 | 98.4 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 17.350 | 1.0 | 20.00 | 0 | 86.8 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 17.110 | 1.0 | 20.00 | 0 | 85.6 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 16.630 | 1.0 | 20.00 | 0 | 83.2 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 18.270 | 1.0 | 20.00 | 0 | 91.4 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 20.000 | 2.0 | 20.00 | 0 | 100 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 19.700 | 1.0 | 20.00 | 0 | 98.5 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.200 | 1.0 | 20.00 | 0 | 101 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 18.750 | 0.50 | 20.00 | 0 | 93.8 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 16.740 | 1.0 | 20.00 | 0 | 83.7 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.140 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 17.510 | 1.0 | 20.00 | 0 | 87.6 | 69 | 137 | | | | |
| 2-Butanone | 84.760 | 10 | 200.0 | 0 | 42.4 | 49 | 136 | | | | S |
| 2-Chlorotoluene | 17.860 | 1.0 | 20.00 | 0 | 89.3 | 73 | 126 | | | | |
| 2-Hexanone | 114.360 | 5.0 | 200.0 | 0 | 57.2 | 70 | 130 | | | | S |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | N023124-010AMS | SampType: MS | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-------------------------|----------------|--------------------|----------------------|--------------------------|----------------|---------------|-----------|-------------|------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VW025 | TestNo: EPA 8260B | Analysis Date: 2/17/2017 | SeqNo: 2571549 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | 18.590 | 1.0 | 20.00 | 0 | 93.0 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.810 | 1.0 | 20.00 | 0 | 104 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 163.270 | 10 | 200.0 | 0 | 81.6 | 58 | 134 | | | | |
| Acetone | 52.500 | 10 | 200.0 | 0 | 26.2 | 40 | 135 | | | | S |
| Acrolein | 135.880 | 20 | 200.0 | 0 | 67.9 | 75 | 125 | | | | S |
| Acrylonitrile | 161.900 | 20 | 200.0 | 0 | 81.0 | 75 | 125 | | | | |
| Benzene | 18.980 | 1.0 | 20.00 | 0 | 94.9 | 81 | 122 | | | | |
| Bromobenzene | 18.220 | 1.0 | 20.00 | 0 | 91.1 | 76 | 124 | | | | |
| Bromochloromethane | 18.190 | 1.0 | 20.00 | 0 | 91.0 | 65 | 129 | | | | |
| Bromodichloromethane | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 76 | 121 | | | | |
| Bromoform | 17.820 | 1.0 | 20.00 | 0 | 89.1 | 69 | 128 | | | | |
| Bromomethane | 17.560 | 1.0 | 20.00 | 0 | 87.8 | 53 | 141 | | | | |
| Carbon disulfide | 14.820 | 1.0 | 20.00 | 0 | 74.1 | 75 | 125 | | | | S |
| Carbon tetrachloride | 20.570 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 81 | 122 | | | | |
| Chloroethane | 19.700 | 1.0 | 20.00 | 0 | 98.5 | 58 | 133 | | | | |
| Chloroform | 17.670 | 1.0 | 20.00 | 0 | 88.4 | 69 | 128 | | | | |
| Chloromethane | 15.140 | 1.0 | 20.00 | 0 | 75.7 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 18.010 | 1.0 | 20.00 | 0 | 90.1 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 131 | | | | |
| Di-isopropyl ether | 15.850 | 1.0 | 20.00 | 0 | 79.2 | 70 | 130 | | | | |
| Dibromochloromethane | 20.840 | 1.0 | 20.00 | 0 | 104 | 66 | 133 | | | | |
| Dibromomethane | 18.580 | 1.0 | 20.00 | 0 | 92.9 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 21.010 | 1.0 | 20.00 | 0 | 105 | 53 | 153 | | | | |
| Ethyl tert-butyl ether | 16.070 | 1.0 | 20.00 | 0 | 80.4 | 70 | 130 | | | | |
| Ethylbenzene | 19.310 | 1.0 | 20.00 | 0 | 96.6 | 73 | 127 | | | | |
| Freon-113 | 15.700 | 1.0 | 20.00 | 0 | 78.5 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.110 | 1.0 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 15.840 | 1.0 | 20.00 | 0 | 79.2 | 75 | 127 | | | | |
| m,p-Xylene | 37.110 | 1.0 | 40.00 | 0 | 92.8 | 76 | 128 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
 Work Order: N023124
 Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | N023124-010AMS | SampType: MS | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-----------------------------|----------------|--------------------|----------------------|-------------|--------------------------|----------------|-----------|-------------|------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571549 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Methylene chloride | 17.850 | 2.0 | 20.00 | 0.9100 | 84.7 | 63 | 137 | | | | |
| MTBE | 16.240 | 1.0 | 20.00 | 0 | 81.2 | 65 | 123 | | | | |
| n-Butylbenzene | 17.170 | 1.0 | 20.00 | 0 | 85.9 | 69 | 137 | | | | |
| n-Propylbenzene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 72 | 129 | | | | |
| Naphthalene | 17.220 | 1.0 | 20.00 | 0 | 86.1 | 54 | 138 | | | | |
| o-Xylene | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.390 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | | | | |
| Styrene | 16.770 | 1.0 | 20.00 | 0 | 83.9 | 65 | 134 | | | | |
| Tert-amyl methyl ether | 17.540 | 1.0 | 20.00 | 0 | 87.7 | 70 | 130 | | | | |
| Tert-Butanol | 86.770 | 5.0 | 100.0 | 0 | 86.8 | 70 | 130 | | | | |
| tert-Butylbenzene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 70 | 129 | | | | |
| Tetrachloroethene | 20.270 | 1.0 | 20.00 | 0 | 101 | 66 | 128 | | | | |
| Toluene | 17.970 | 2.0 | 20.00 | 0.2200 | 88.8 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 18.170 | 1.0 | 20.00 | 0 | 90.9 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 59 | 135 | | | | |
| Trichloroethene | 19.680 | 1.0 | 20.00 | 0 | 98.4 | 70 | 127 | | | | |
| Trichlorofluoromethane | 20.720 | 1.0 | 20.00 | 0 | 104 | 57 | 129 | | | | |
| Vinyl chloride | 17.540 | 0.50 | 20.00 | 0 | 87.7 | 50 | 134 | | | | |
| Xylenes, Total | 56.250 | 2.0 | 60.00 | 0 | 93.8 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 23.330 | | 25.00 | | 93.3 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.330 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 23.430 | | 25.00 | | 93.7 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.300 | | 25.00 | | 101 | 81 | 120 | | | | |

| Sample ID | N023124-010AMSD | SampType: MSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|---------------------------|-----------------|--------------------|----------------------|-------------|--------------------------|----------------|-----------|-------------|------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: P17VW025 | TestNo: EPA 8260B | | Analysis Date: 2/17/2017 | SeqNo: 2571550 | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,1,2-Tetrachloroethane | 21.020 | 1.0 | 20.00 | 0 | 105 | 81 | 129 | 20.31 | 3.44 | 20 | |
| 1,1,1-Trichloroethane | 18.920 | 1.0 | 20.00 | 0 | 94.6 | 67 | 132 | 18.35 | 3.06 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | N023124-010AMSD | SampType: MSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-----------------------------|-----------------|---------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571550 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | 18.470 | 1.0 | 20.00 | 0 | 92.4 | 63 | 128 | 18.74 | 1.45 | 20 | |
| 1,1,2-Trichloroethane | 18.900 | 1.0 | 20.00 | 0 | 94.5 | 75 | 125 | 19.26 | 1.89 | 20 | |
| 1,1-Dichloroethane | 18.090 | 0.50 | 20.00 | 0 | 90.4 | 69 | 133 | 17.04 | 5.98 | 20 | |
| 1,1-Dichloroethene | 17.570 | 1.0 | 20.00 | 0 | 87.9 | 68 | 130 | 17.92 | 1.97 | 20 | |
| 1,1-Dichloropropene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 73 | 132 | 19.68 | 0.714 | 20 | |
| 1,2,3-Trichlorobenzene | 18.670 | 1.0 | 20.00 | 0 | 93.4 | 67 | 137 | 17.35 | 7.33 | 20 | |
| 1,2,3-Trichloropropane | 17.350 | 1.0 | 20.00 | 0 | 86.8 | 73 | 124 | 17.11 | 1.39 | 20 | |
| 1,2,4-Trichlorobenzene | 17.850 | 1.0 | 20.00 | 0 | 89.2 | 66 | 134 | 16.63 | 7.08 | 20 | |
| 1,2,4-Trimethylbenzene | 17.400 | 1.0 | 20.00 | 0 | 87.0 | 74 | 132 | 18.27 | 4.88 | 20 | |
| 1,2-Dibromo-3-chloropropane | 20.990 | 2.0 | 20.00 | 0 | 105 | 50 | 132 | 20.00 | 4.83 | 20 | |
| 1,2-Dibromoethane | 21.220 | 1.0 | 20.00 | 0 | 106 | 80 | 121 | 19.70 | 7.43 | 20 | |
| 1,2-Dichlorobenzene | 20.450 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | 20.20 | 1.23 | 20 | |
| 1,2-Dichloroethane | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 69 | 132 | 18.75 | 2.53 | 20 | |
| 1,2-Dichloropropane | 19.260 | 1.0 | 20.00 | 0 | 96.3 | 75 | 125 | 18.93 | 1.73 | 20 | |
| 1,3,5-Trimethylbenzene | 15.670 | 1.0 | 20.00 | 0 | 78.4 | 74 | 131 | 16.74 | 6.60 | 20 | |
| 1,3-Dichlorobenzene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 75 | 124 | 19.35 | 2.10 | 20 | |
| 1,3-Dichloropropane | 20.630 | 1.0 | 20.00 | 0 | 103 | 73 | 126 | 20.14 | 2.40 | 20 | |
| 1,4-Dichlorobenzene | 19.820 | 1.0 | 20.00 | 0 | 99.1 | 74 | 123 | 19.46 | 1.83 | 20 | |
| 2,2-Dichloropropane | 18.160 | 1.0 | 20.00 | 0 | 90.8 | 69 | 137 | 17.51 | 3.64 | 20 | |
| 2-Butanone | 90.080 | 10 | 200.0 | 0 | 45.0 | 49 | 136 | 84.76 | 6.09 | 20 | S |
| 2-Chlorotoluene | 17.960 | 1.0 | 20.00 | 0 | 89.8 | 73 | 126 | 17.86 | 0.558 | 20 | |
| 2-Hexanone | 118.270 | 5.0 | 200.0 | 0 | 59.1 | 70 | 130 | 114.4 | 3.36 | 20 | S |
| 4-Chlorotoluene | 19.160 | 1.0 | 20.00 | 0 | 95.8 | 74 | 128 | 18.59 | 3.02 | 20 | |
| 4-Isopropyltoluene | 20.710 | 1.0 | 20.00 | 0 | 104 | 73 | 130 | 20.81 | 0.482 | 20 | |
| 4-Methyl-2-pentanone | 169.590 | 10 | 200.0 | 0 | 84.8 | 58 | 134 | 163.3 | 3.80 | 20 | |
| Acetone | 50.000 | 10 | 200.0 | 0 | 25.0 | 40 | 135 | 52.50 | 4.88 | 20 | S |
| Acrolein | 147.470 | 20 | 200.0 | 0 | 73.7 | 75 | 125 | 135.9 | 8.18 | 20 | S |
| Acrylonitrile | 193.680 | 20 | 200.0 | 0 | 96.8 | 75 | 125 | 161.9 | 17.9 | 20 | |
| Benzene | 19.440 | 1.0 | 20.00 | 0 | 97.2 | 81 | 122 | 18.98 | 2.39 | 20 | |
| Bromobenzene | 18.650 | 1.0 | 20.00 | 0 | 93.3 | 76 | 124 | 18.22 | 2.33 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | N023124-010AMSD | SampType: MSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-------------------------|-----------------|---------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571550 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Bromochloromethane | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 65 | 129 | 18.19 | 6.18 | 20 | |
| Bromodichloromethane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 76 | 121 | 19.14 | 2.63 | 20 | |
| Bromoform | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 69 | 128 | 17.82 | 5.35 | 20 | |
| Bromomethane | 17.820 | 1.0 | 20.00 | 0 | 89.1 | 53 | 141 | 17.56 | 1.47 | 20 | |
| Carbon disulfide | 15.210 | 1.0 | 20.00 | 0 | 76.1 | 75 | 125 | 14.82 | 2.60 | 20 | |
| Carbon tetrachloride | 21.170 | 0.50 | 20.00 | 0 | 106 | 66 | 138 | 20.57 | 2.87 | 20 | |
| Chlorobenzene | 20.300 | 1.0 | 20.00 | 0 | 102 | 81 | 122 | 20.04 | 1.29 | 20 | |
| Chloroethane | 19.710 | 1.0 | 20.00 | 0 | 98.6 | 58 | 133 | 19.70 | 0.0507 | 20 | |
| Chloroform | 18.490 | 1.0 | 20.00 | 0 | 92.5 | 69 | 128 | 17.67 | 4.54 | 20 | |
| Chloromethane | 16.390 | 1.0 | 20.00 | 0 | 82.0 | 56 | 131 | 15.14 | 7.93 | 20 | |
| cis-1,2-Dichloroethene | 18.980 | 1.0 | 20.00 | 0 | 94.9 | 72 | 126 | 18.01 | 5.24 | 20 | |
| cis-1,3-Dichloropropene | 20.300 | 1.0 | 20.00 | 0 | 102 | 69 | 131 | 19.84 | 2.29 | 20 | |
| Di-isopropyl ether | 17.090 | 1.0 | 20.00 | 0 | 85.4 | 70 | 130 | 15.85 | 7.53 | 20 | |
| Dibromochloromethane | 21.400 | 1.0 | 20.00 | 0 | 107 | 66 | 133 | 20.84 | 2.65 | 20 | |
| Dibromomethane | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 76 | 125 | 18.58 | 3.02 | 20 | |
| Dichlorodifluoromethane | 21.650 | 1.0 | 20.00 | 0 | 108 | 53 | 153 | 21.01 | 3.00 | 20 | |
| Ethyl tert-butyl ether | 17.050 | 1.0 | 20.00 | 0 | 85.2 | 70 | 130 | 16.07 | 5.92 | 20 | |
| Ethylbenzene | 19.220 | 1.0 | 20.00 | 0 | 96.1 | 73 | 127 | 19.31 | 0.467 | 20 | |
| Freon-113 | 15.440 | 1.0 | 20.00 | 0 | 77.2 | 75 | 125 | 15.70 | 1.67 | 20 | |
| Hexachlorobutadiene | 20.880 | 1.0 | 20.00 | 0 | 104 | 67 | 131 | 20.11 | 3.76 | 20 | |
| Isopropylbenzene | 15.140 | 1.0 | 20.00 | 0 | 75.7 | 75 | 127 | 15.84 | 4.52 | 20 | |
| m,p-Xylene | 36.710 | 1.0 | 40.00 | 0 | 91.8 | 76 | 128 | 37.11 | 1.08 | 20 | |
| Methylene chloride | 18.750 | 2.0 | 20.00 | 0.9100 | 89.2 | 63 | 137 | 17.85 | 4.92 | 20 | |
| MTBE | 16.830 | 1.0 | 20.00 | 0 | 84.2 | 65 | 123 | 16.24 | 3.57 | 20 | |
| n-Butylbenzene | 17.270 | 1.0 | 20.00 | 0 | 86.4 | 69 | 137 | 17.17 | 0.581 | 20 | |
| n-Propylbenzene | 19.360 | 1.0 | 20.00 | 0 | 96.8 | 72 | 129 | 19.77 | 2.10 | 20 | |
| Naphthalene | 17.860 | 1.0 | 20.00 | 0 | 89.3 | 54 | 138 | 17.22 | 3.65 | 20 | |
| o-Xylene | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 80 | 121 | 19.14 | 1.91 | 20 | |
| sec-Butylbenzene | 20.180 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 20.39 | 1.04 | 20 | |
| Styrene | 15.520 | 1.0 | 20.00 | 0 | 77.6 | 65 | 134 | 16.77 | 7.74 | 20 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_SFPP

| Sample ID | N023124-010AMSD | SampType: MSD | TestCode: 8260_WP_SF | Units: ug/L | Prep Date: | RunNo: 113586 | | | | | |
|-----------------------------|-----------------|---------------|----------------------|-------------|------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | ZZZZZZ | Batch ID: | P17VW025 | TestNo: | EPA 8260B | Analysis Date: | 2/17/2017 | SeqNo: | 2571550 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Tert-amyl methyl ether | 17.820 | 1.0 | 20.00 | 0 | 89.1 | 70 | 130 | 17.54 | 1.58 | 20 | |
| Tert-Butanol | 89.490 | 5.0 | 100.0 | 0 | 89.5 | 70 | 130 | 86.77 | 3.09 | 20 | |
| tert-Butylbenzene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 70 | 129 | 19.97 | 0.401 | 20 | |
| Tetrachloroethene | 20.270 | 1.0 | 20.00 | 0 | 101 | 66 | 128 | 20.27 | 0 | 20 | |
| Toluene | 17.950 | 2.0 | 20.00 | 0.2200 | 88.6 | 77 | 122 | 17.97 | 0.111 | 20 | |
| trans-1,2-Dichloroethene | 18.280 | 1.0 | 20.00 | 0 | 91.4 | 63 | 137 | 18.17 | 0.604 | 20 | |
| trans-1,3-Dichloropropene | 19.720 | 1.0 | 20.00 | 0 | 98.6 | 59 | 135 | 19.33 | 2.00 | 20 | |
| Trichloroethene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 70 | 127 | 19.68 | 1.11 | 20 | |
| Trichlorofluoromethane | 20.580 | 1.0 | 20.00 | 0 | 103 | 57 | 129 | 20.72 | 0.678 | 20 | |
| Vinyl chloride | 18.280 | 0.50 | 20.00 | 0 | 91.4 | 50 | 134 | 17.54 | 4.13 | 20 | |
| Xylenes, Total | 56.220 | 2.0 | 60.00 | 0 | 93.7 | 75 | 125 | 56.25 | 0.0533 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 24.750 | | 25.00 | | 99.0 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.300 | | 25.00 | | 105 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 24.480 | | 25.00 | | 97.9 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.690 | | 25.00 | | 103 | 81 | 120 | | 0 | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

| Sample ID | LCS-61275 | SampType: LCS | TestCode: 8270_W_SIM Units: ug/L | | | Prep Date: 2/16/2017 | | | RunNo: 113565 | | |
|------------------------------|-----------|---------------|----------------------------------|-------------------------------|------|--------------------------|-----------|-------------|----------------|----------|------|
| Client ID: | LCSW | Batch ID: | 61275 | TestNo: EPA 8270CSI EPA 3510C | | Analysis Date: 2/16/2017 | | | SeqNo: 2569019 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1-Methylnaphthalene | 0.750 | 0.20 | 1.000 | 0 | 75.0 | 35 | 131 | | | | |
| 2-Methylnaphthalene | 0.780 | 0.20 | 1.000 | 0 | 78.0 | 36 | 121 | | | | |
| Acenaphthene | 0.800 | 0.20 | 1.000 | 0 | 80.0 | 39 | 125 | | | | |
| Acenaphthylene | 0.810 | 0.20 | 1.000 | 0 | 81.0 | 43 | 140 | | | | |
| Anthracene | 0.720 | 0.20 | 1.000 | 0 | 72.0 | 41 | 132 | | | | |
| Benzo(a)anthracene | 0.960 | 0.20 | 1.000 | 0 | 96.0 | 58 | 141 | | | | |
| Benzo(a)pyrene | 0.820 | 0.20 | 1.000 | 0 | 82.0 | 31 | 142 | | | | |
| Benzo(b)fluoranthene | 0.950 | 0.20 | 1.000 | 0 | 95.0 | 42 | 156 | | | | |
| Benzo(g,h,i)perylene | 0.760 | 0.20 | 1.000 | 0 | 76.0 | 12 | 171 | | | | |
| Benzo(k)fluoranthene | 0.730 | 0.20 | 1.000 | 0 | 73.0 | 49 | 165 | | | | |
| Chrysene | 0.760 | 0.20 | 1.000 | 0 | 76.0 | 51 | 155 | | | | |
| Dibenz(a,h)anthracene | 0.820 | 0.20 | 1.000 | 0 | 82.0 | 28 | 153 | | | | |
| Fluoranthene | 0.870 | 0.20 | 1.000 | 0 | 87.0 | 47 | 158 | | | | |
| Fluorene | 0.850 | 0.20 | 1.000 | 0 | 85.0 | 40 | 140 | | | | |
| Indeno(1,2,3-cd)pyrene | 0.810 | 0.20 | 1.000 | 0 | 81.0 | 20 | 167 | | | | |
| Naphthalene | 0.710 | 0.20 | 1.000 | 0 | 71.0 | 39 | 125 | | | | |
| Phenanthrene | 0.890 | 0.20 | 1.000 | 0 | 89.0 | 46 | 144 | | | | |
| Pyrene | 0.870 | 0.20 | 1.000 | 0 | 87.0 | 39 | 158 | | | | |
| Surr: 1,2-Dichlorobenzene-d4 | 0.590 | | 1.000 | | 59.0 | 27 | 100 | | | | |
| Surr: 2-Fluorobiphenyl | 0.620 | | 1.000 | | 62.0 | 34 | 135 | | | | |
| Surr: 4-Terphenyl-d14 | 0.670 | | 1.000 | | 67.0 | 34 | 167 | | | | |
| Surr: Nitrobenzene-d5 | 0.540 | | 1.000 | | 54.0 | 25 | 135 | | | | |

| Sample ID | LCSD-61275 | SampType: LCSD | TestCode: 8270_W_SIM Units: ug/L | | | Prep Date: 2/16/2017 | | | RunNo: 113565 | | |
|---------------------|------------|----------------|----------------------------------|-------------------------------|------|--------------------------|-----------|-------------|----------------|----------|------|
| Client ID: | LCSS02 | Batch ID: | 61275 | TestNo: EPA 8270CSI EPA 3510C | | Analysis Date: 2/16/2017 | | | SeqNo: 2569020 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1-Methylnaphthalene | 0.680 | 0.20 | 1.000 | 0 | 68.0 | 35 | 131 | 0.7500 | 9.79 | 30 | |
| 2-Methylnaphthalene | 0.700 | 0.20 | 1.000 | 0 | 70.0 | 36 | 121 | 0.7800 | 10.8 | 30 | |
| Acenaphthene | 0.720 | 0.20 | 1.000 | 0 | 72.0 | 39 | 125 | 0.8000 | 10.5 | 30 | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

| Sample ID | LCSD-61275 | SampType: LCSD | TestCode: 8270_W_SIM | Units: ug/L | Prep Date: 2/16/2017 | RunNo: 113565 | | | | | |
|------------------------------|------------|----------------|----------------------|-------------|-----------------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | LCSS02 | Batch ID: | 61275 | TestNo: | EPA 8270CSI EPA 3510C | Analysis Date: | 2/16/2017 | SeqNo: | 2569020 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Acenaphthylene | 0.750 | 0.20 | 1.000 | 0 | 75.0 | 43 | 140 | 0.8100 | 7.69 | 30 | |
| Anthracene | 0.670 | 0.20 | 1.000 | 0 | 67.0 | 41 | 132 | 0.7200 | 7.19 | 30 | |
| Benzo(a)anthracene | 0.900 | 0.20 | 1.000 | 0 | 90.0 | 58 | 141 | 0.9600 | 6.45 | 30 | |
| Benzo(a)pyrene | 0.770 | 0.20 | 1.000 | 0 | 77.0 | 31 | 142 | 0.8200 | 6.29 | 30 | |
| Benzo(b)fluoranthene | 0.880 | 0.20 | 1.000 | 0 | 88.0 | 42 | 156 | 0.9500 | 7.65 | 30 | |
| Benzo(g,h,i)perylene | 0.700 | 0.20 | 1.000 | 0 | 70.0 | 12 | 171 | 0.7600 | 8.22 | 30 | |
| Benzo(k)fluoranthene | 0.700 | 0.20 | 1.000 | 0 | 70.0 | 49 | 165 | 0.7300 | 4.20 | 30 | |
| Chrysene | 0.780 | 0.20 | 1.000 | 0 | 78.0 | 51 | 155 | 0.7600 | 2.60 | 30 | |
| Dibenz(a,h)anthracene | 0.760 | 0.20 | 1.000 | 0 | 76.0 | 28 | 153 | 0.8200 | 7.59 | 30 | |
| Fluoranthene | 0.850 | 0.20 | 1.000 | 0 | 85.0 | 47 | 158 | 0.8700 | 2.33 | 30 | |
| Fluorene | 0.770 | 0.20 | 1.000 | 0 | 77.0 | 40 | 140 | 0.8500 | 9.88 | 30 | |
| Indeno(1,2,3-cd)pyrene | 0.750 | 0.20 | 1.000 | 0 | 75.0 | 20 | 167 | 0.8100 | 7.69 | 30 | |
| Naphthalene | 0.640 | 0.20 | 1.000 | 0 | 64.0 | 39 | 125 | 0.7100 | 10.4 | 30 | |
| Phenanthrene | 0.830 | 0.20 | 1.000 | 0 | 83.0 | 46 | 144 | 0.8900 | 6.98 | 30 | |
| Pyrene | 0.830 | 0.20 | 1.000 | 0 | 83.0 | 39 | 158 | 0.8700 | 4.71 | 30 | |
| Surr: 1,2-Dichlorobenzene-d4 | 0.540 | | 1.000 | | 54.0 | 27 | 100 | | 0 | | |
| Surr: 2-Fluorobiphenyl | 0.570 | | 1.000 | | 57.0 | 34 | 135 | | 0 | | |
| Surr: 4-Terphenyl-d14 | 0.640 | | 1.000 | | 64.0 | 34 | 167 | | 0 | | |
| Surr: Nitrobenzene-d5 | 0.510 | | 1.000 | | 51.0 | 25 | 135 | | 0 | | |

| Sample ID | MB-61275 | SampType: MBLK | TestCode: 8270_W_SIM | Units: ug/L | Prep Date: 2/16/2017 | RunNo: 113565 | | | | | |
|---------------------|----------|----------------|----------------------|-------------|-----------------------|----------------|-----------|-------------|---------|----------|------|
| Client ID: | PBW | Batch ID: | 61275 | TestNo: | EPA 8270CSI EPA 3510C | Analysis Date: | 2/16/2017 | SeqNo: | 2569021 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| 1-Methylnaphthalene | ND | 0.20 | | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.20 | | | | | | | | | |
| Acenaphthene | ND | 0.20 | | | | | | | | | |
| Acenaphthylene | ND | 0.20 | | | | | | | | | |
| Anthracene | ND | 0.20 | | | | | | | | | |
| Benzo(a)anthracene | 0.020 | 0.20 | | | | | | | | | J |

Qualifiers:

- B Analyte detected in the associated Method Blank
 - E Value above quantitation range
 - H Holding times for preparation or analysis exceeded
 - J Analyte detected below quantitation limits
 - ND Not Detected at the Reporting Limit
 - R RPD outside accepted recovery limits
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: CH2MHill
Work Order: N023124
Project: KMEP Norwalk

ANALYTICAL QC SUMMARY REPORT

TestCode: 8270_W_SIMPGE

| Sample ID | SampType | TestCode | Units | Prep Date | RunNo | | | | | | |
|------------------------------|------------------------|--------------------------------------|-------------|---------------------------------|-----------------------|----------|-----------|-------------|------|----------|------|
| MB-61275 | MBLK | 8270_W_SIM | ug/L | 2/16/2017 | 113565 | | | | | | |
| Client ID: PBW | Batch ID: 61275 | TestNo: EPA 8270CSI EPA 3510C | | Analysis Date: 2/16/2017 | SeqNo: 2569021 | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Benzo(a)pyrene | ND | 0.20 | | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.20 | | | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.20 | | | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.20 | | | | | | | | | |
| Chrysene | ND | 0.20 | | | | | | | | | |
| Dibenz(a,h)anthracene | ND | 0.20 | | | | | | | | | |
| Fluoranthene | 0.040 | 0.20 | | | | | | | | | J |
| Fluorene | ND | 0.20 | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.20 | | | | | | | | | |
| Naphthalene | ND | 0.20 | | | | | | | | | |
| Phenanthrene | 0.040 | 0.20 | | | | | | | | | J |
| Pyrene | 0.020 | 0.20 | | | | | | | | | J |
| Surr: 1,2-Dichlorobenzene-d4 | 0.430 | | 1.000 | | 43.0 | 27 | 100 | | | | |
| Surr: 2-Fluorobiphenyl | 0.510 | | 1.000 | | 51.0 | 34 | 135 | | | | |
| Surr: 4-Terphenyl-d14 | 0.650 | | 1.000 | | 65.0 | 34 | 167 | | | | |
| Surr: Nitrobenzene-d5 | 0.450 | | 1.000 | | 45.0 | 25 | 135 | | | | |

Qualifiers:

- | | | |
|--|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits |
| S Spike/Surrogate outside of limits due to matrix interference | DO Surrogate Diluted Out | Calculations are based on raw values |



CHAIN OF CUSTODY RECORD

Contact us:

Nevada: 3151 W. Post Road, Las Vegas, NV 89118

P: 702.307.2659 F: 702.307.2691

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703

P: 562.219.7435 F: 562.219.7436

www.assetlaboratories.com

Page 1 of 1

| | | | | | |
|---|---|---|-------------------------------------|-------------------------------------|---|
| Client: CH2M Hill | Report to: Daniel Jablonski | Bill to: | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 6 Hutton Centre Drive Suite 700 | Company: CH2M Hill | Address: | Excel EDD <input type="checkbox"/> | RTNE <input type="checkbox"/> | Y <input type="checkbox"/> N <input type="checkbox"/> |
| Address: Santa Ana, CA 92707 | Email: daniel.jablonski@ch2m.com | Address: | Geotracker <input type="checkbox"/> | RWQCB <input type="checkbox"/> | 1. Chilled <input checked="" type="checkbox"/> |
| Phone: 949-228-8971 | Address: 6 Hutton Centre Drive 700 | Email to: | Labspec <input type="checkbox"/> | CalTrans <input type="checkbox"/> | 2. Headspace <input type="checkbox"/> |
| Fax: | Address: Santa Ana, CA 92707 | PO#: | Others <input type="checkbox"/> | Level III <input type="checkbox"/> | 3. Container Intact <input checked="" type="checkbox"/> |
| Submitted By: Matt Mayry | Phone: 949-228-8971 | Phone: | Specify: | LEVEL IV <input type="checkbox"/> | 4. Seal Present <input type="checkbox"/> |
| Occupation: Hydrogeologist | Fax: | Fax: | Global ID: | Regulatory <input type="checkbox"/> | 5. IR number 2 |
| Date: | Sampled By: Steven Sanchez | Matrix | Specify State: | 6. Method of Cooling Jce | 6. Method of Cooling Jce |
| Project Name: KMER Norwalk | Signature: Steven Sanchez | Analyses Requested | | Sample Temp: 2.3°C / 2.1°C | |
| Project Number: | Date: 1/14/17 | Ground <input type="checkbox"/> Sediment <input type="checkbox"/> | | | |
| | | Potable <input type="checkbox"/> Soil <input checked="" type="checkbox"/> | | | |
| | | NPDES <input type="checkbox"/> Other Solid <input type="checkbox"/> | | | |
| | | Surface <input type="checkbox"/> Misc X | | | |

| Lab No. | Laboratory Work Order No. | Sample ID/Location | Date | Time | Water | Solid | Others | Turn Around Time | No. of container | Container Type | PRESERVATION | Remarks |
|---------|---------------------------|--------------------|---------|------|-------|-------|-----------|------------------|------------------|----------------|--------------|---------|
| 1 | N023124-01 | SVM-28-4.5 | 1/14/17 | 0905 | | 6 | X X X X | | | | | |
| 2 | -02 | SVM-28-9.5 | ↓ | 0940 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 3 | -03 | SVM-22-4.5 | ↓ | 1100 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 4 | -04 | SVM-22-9.5 | ↓ | 1105 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 5 | -05 | SVM-22-4.5 | ↓ | 1115 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 6 | -06 | SVM-21-4.5 | ↓ | 1330 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 7 | -07 | SVM-21-9.5 | ↓ | 1425 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 8 | -08 | SVM-20-4.5 | 2/15/17 | 0800 | | 6 | X X X X | | | | | |
| 9 | -09 | SVM-20-9.5 | ↓ | 0815 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |
| 10 | -10 | EB-1 | ↓ | 0905 | 8 | ↓ | X X X X X | | | | | |
| 11 | SB-13-4.5 | mm | ↓ | 0945 | | 6 | ↓ ↓ ↓ ↓ | | | | | |
| 12 | SB-13-9.5 | mm | ↓ | 0955 | | ↓ | ↓ ↓ ↓ ↓ | | | | | |

| | | | | | |
|--|----------------------------------|--|----------------------------------|---|---|
| Released by (Signature and Printed Name): Matt Mayry/CH2M | Date / Time: 2-15-17 1410 | Received by (Signature and Printed Name): Murphy A. | Date / Time: 2-15-17 1410 | Turn Around Time (TAT) | Special Instruction: |
| Released by (Signature and Printed Name): [Signature] | Date / Time: 2-15-17 1600 | Received by (Signature and Printed Name): Yeandro Rodriguez | Date / Time: 2/16/17 8:10 | <input type="checkbox"/> A < 24 Hrs or Same Day TAT | |
| Released by (Signature and Printed Name): | Date / Time: | Received by (Signature and Printed Name): | Date / Time: | <input type="checkbox"/> B = Next Workday | |
| Released by (Signature and Printed Name): | Date / Time: | Received by (Signature and Printed Name): | Date / Time: | <input type="checkbox"/> C = 2 Workdays | |
| Released by (Signature and Printed Name): | Date / Time: | Received by (Signature and Printed Name): | Date / Time: | <input type="checkbox"/> D = 3 Workdays | <input type="checkbox"/> E = Routine 5-7 Workdays |
| Released by (Signature and Printed Name): | Date / Time: | Received by (Signature and Printed Name): | Date / Time: | TAT Starts at 8 AM the following day if samples received after 3:00 PM. | |

1. Samples will be disposed in 45 days upon receipt and records will be destroyed in 5 years upon submission of final report.
 2. Turnaround Time (TAT) is 5-7 business days, surcharges will apply for rush analysis.
 3. Less than 24 Hrs = 200% Next Day = 100% 2 Workdays = 50% 3 Workdays = 35% 4 Workdays = 20%
 4. Turn EDD formats will be an additional 3% of the total project price.
 5. 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
 6. Trip Blanks and Equipment Blanks are billable sample.
 7. ASSET Laboratories is not responsible for samples collected using incorrect methodology.
 8. Terms are net 30 days.
 9. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
 10. For subcontract analysis, TAT and Surcharges will vary.
 11. White = Laboratory Copy
 12. Yellow = Customer's Copy

| | |
|--|-------------------------------|
| Preservatives: | Container Type: |
| H = HCl N = HNO ₃ S = H ₂ SO ₄ C = 4°C | T = Tube V = VOA P = Pint |
| Z = Zn(Ac) ₂ O = NaOH T = Na ₂ S ₂ O ₃ | J = Jar B = Tedlar G = Glass |
| Others/Specify: | M = Metal P = Plastic C = Can |

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 2/15/2017 Workorder: N023124
 Rep sample Temp (Deg C): 2.3/2.1 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: Golden State Overnight
 Last 4 digits of Tracking No.: 1128/1130 Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? Was Client notified? | Yes <input type="checkbox"/> Yes <input type="checkbox"/> | No <input type="checkbox"/> No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: YR YR 2/17/2017

Reviewed By: 2/22/2017

quennie@assetlaboratories.com

From: Marlon Cartin [marlon@assetlaboratories.com]
Sent: Wednesday, February 22, 2017 9:44 AM
To: quennie@assetlaboratories.com
Cc: nancy@assetlaboratories.com
Subject: FW: Soil Wet Versus Dry Weight

Forwarding.

Marlon Cartin
Project Manager - ASSET Laboratories
California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

From: Daniel.Jablonski@CH2M.com [<mailto:Daniel.Jablonski@CH2M.com>]
Sent: Tuesday, February 21, 2017 5:25 PM
To: marlon@assetlaboratories.com
Subject: RE: Soil Wet Versus Dry Weight

Yes, just wet weight is fine.
No need for dry weight

Daniel Jablonski
Project Manager
D 213.228.8271
M 818.257.3630

CH2M
Los Angeles, California (Teleworker)
www.ch2m.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

From: Marlon Cartin [<mailto:marlon@assetlaboratories.com>]
Sent: Tuesday, February 21, 2017 3:59 PM
To: Jablonski, Daniel/LAC <Daniel.Jablonski@CH2M.com>
Subject: RE: Soil Wet Versus Dry Weight [EXTERNAL]

So wet weight result is good enough for now?

Marlon Cartin
Project Manager - ASSET Laboratories
California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

From: Daniel.Jablonski@CH2M.com [<mailto:Daniel.Jablonski@CH2M.com>]
Sent: Tuesday, February 21, 2017 3:13 PM
To: marlon@assetlaboratories.com
Subject: RE: Soil Wet Versus Dry Weight

Actually, I just confirmed the other PRP at Norwalk is using wet weight basis so I'm fine with that for both COCs.

Daniel Jablonski
Project Manager

D 213.228.8271
M 818.257.3630

CH2M

Los Angeles, California (Teleworker)
www.ch2m.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

From: Jablonski, Daniel/LAC
Sent: Tuesday, February 21, 2017 3:08 PM
To: 'Marlon B. Cartin' <marlon@assetlaboratories.com>
Subject: RE: Soil Wet Versus Dry Weight [EXTERNAL]

It would be good to provide 2 reports for each COC.
One dry weight and one wet weight.

Daniel Jablonski
Project Manager
D 213.228.8271
M 818.257.3630

CH2M

Los Angeles, California (Teleworker)
www.ch2m.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)

From: Marlon B. Cartin [<mailto:marlon@assetlaboratories.com>]
Sent: Tuesday, February 21, 2017 3:05 PM
To: Jablonski, Daniel/LAC <Daniel.Jablonski@CH2M.com>
Subject: FW: Soil Wet Versus Dry Weight [EXTERNAL]

Hi Dan,

Do you still need a dry-wt basis results?

Thanks,

Marlon B. Cartin
Project Manager
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

From: John.Lowe@CH2M.com [<mailto:John.Lowe@CH2M.com>]
Sent: Tuesday, February 21, 2017 5:51 AM
To: Daniel.Jablonski@CH2M.com; Mark.Fesler@CH2M.com
Cc: marlon@assetlaboratories.com; Benny.Pataray@CH2M.com
Subject: RE: Soil Wet Versus Dry Weight

I've seen different opinions about the weight basis for reporting soil analytical results. Some prefer reporting soil concentrations on a dry soil basis because it's standardized. For me, as long as I know the weight basis, I can work with soil results reported as either dry- or wet-weight. If we're also analyzing for other physical parameters such as bulk density, that's measured on a dry-weight basis. If we have moisture contents reported for each sample, we can calculate dry-weight concentrations ourselves, if that's needed. However, I can work with wet-weight soil results.

From: Jablonski, Daniel/LAC
Sent: Monday, February 20, 2017 3:30 PM
To: Fesler, Mark/RDD <Mark.Fesler@CH2M.com>; Lowe, John/SPK <John.Lowe@CH2M.com>
Cc: Marlon Cartin (marlon@assetlaboratories.com) <marlon@assetlaboratories.com>; Pataray, Benny/SLC <Benny.Pataray@CH2M.com>
Subject: Soil Wet Versus Dry Weight
Importance: High

Mark, John:

It seems we have not been consistent with reporting soil results as wet versus dry weight basis for comparison of data with the Norwalk soil clean up goals and CHHSLs.

I assume wet weight is the one that we want for risk analysis. Can you please confirm?

Thanks,

Daniel Jablonski
Project Manager
D 213.228.8271
M 818.257.3630

CH2M
Los Angeles, California (Teleworker)
www.ch2m.com | [LinkedIn](#) | [Twitter](#) | [Facebook](#)



This email has been checked for viruses by Avast antivirus software.
www.avast.com



This email has been checked for viruses by Avast antivirus software.
www.avast.com

ASSET Laboratories

WORK ORDER Summary

17-Feb-17

WorkOrder: N023124

Client ID: CH2HI03

Project: KMEP Norwalk

QC Level: RTNE

Date Received: 2/15/2017

Comments:

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|--------------|------------------|----------------------|-----------|--------|--------------|---|--------------------------|--------------------------|--------------------------|---------|
| N023124-001A | SVM-23-4.5 | 2/14/2017 9:25:00 AM | 2/22/2017 | Soil | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-001B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-001C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-001D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-001E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-001F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| N023124-002A | SVM-23-9.5 | 2/14/2017 9:40:00 AM | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-002B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-002C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-002D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-002E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-002F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |

ASSET Laboratories

WORK ORDER Summary

17-Feb-17

WorkOrder: N023124

Client ID: CH2HI03

Project: KMEP Norwalk

QC Level: RTNE

Date Received: 2/15/2017

Comments:

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|--------------|------------------|-----------------------|-----------|--------|--------------|---|--------------------------|--------------------------|--------------------------|---------|
| N023124-003A | SVM-22-4.5 | 2/14/2017 11:00:00 AM | 2/22/2017 | Soil | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-003B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-003C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-003D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-003E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-003F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| N023124-004A | DUP-1-4.5 | 2/14/2017 11:05:00 AM | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-004B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-004C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-004D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-004E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-004F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |

ASSET Laboratories

WORK ORDER Summary

17-Feb-17

WorkOrder: N023124

Client ID: CH2HI03

Project: KMEP Norwalk

QC Level: RTNE

Date Received: 2/15/2017

Comments:

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|--------------|------------------|-----------------------|-----------|--------|--------------|---|--------------------------|--------------------------|--------------------------|---------|
| N023124-005A | SVM-22-9.5 | 2/14/2017 11:15:00 AM | 2/22/2017 | Soil | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-005B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-005C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-005D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-005E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-005F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| N023124-006A | SVM-21-4.5 | 2/14/2017 1:20:00 PM | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-006B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-006C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-006D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-006E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-006F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |

ASSET Laboratories

WORK ORDER Summary

17-Feb-17

WorkOrder: N023124

Client ID: CH2HI03

Project: KMEP Norwalk

QC Level: RTNE

Date Received: 2/15/2017

Comments:

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|--------------|------------------|----------------------|-----------|--------|--------------|---|--------------------------|--------------------------|--------------------------|---------|
| N023124-007A | SVM-21-9.5 | 2/14/2017 2:25:00 PM | 2/22/2017 | Soil | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-007B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-007C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-007D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-007E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-007F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| N023124-008A | SVM-20-4.5 | 2/15/2017 8:00:00 AM | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-008B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-008C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-008D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-008E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-008F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |

ASSET Laboratories

WORK ORDER Summary

17-Feb-17

WorkOrder: N023124

Client ID: CH2HI03

Project: KMEP Norwalk

QC Level: RTNE

Date Received: 2/15/2017

Comments:

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|--------------|------------------|----------------------|-----------|--------|--------------|---|--------------------------|--------------------------|--------------------------|---------|
| N023124-009A | SVM-20-9.5 | 2/15/2017 8:15:00 AM | 2/22/2017 | Soil | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-009B | | | 2/22/2017 | | EPA 5035 | Closed System Purge and Trap | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| | | | 2/22/2017 | | EPA 8015B(M) | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-009C | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-009D | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-009E | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VS |
| N023124-009F | | | 2/22/2017 | | EPA 3550B | ULTRASONIC EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| | | | 2/22/2017 | | D2216 | PERCENT MOISTURE | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WS |
| N023124-010A | EB-1 | 2/15/2017 9:05:00 AM | 2/22/2017 | Water | EPA 8015B | GASOLINE RANGE ORGANICS BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VW |
| | | | 2/22/2017 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | VW |
| N023124-010B | | | 2/22/2017 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WW |
| | | | 2/22/2017 | | EPA 8015B | TPH EXTRACTABLE BY GC/FID | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WW |
| | | | 2/22/2017 | | EPA 8015B | Total TPH | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WW |
| N023124-010C | | | 2/22/2017 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C - SIM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | MDM |
| | | | 2/22/2017 | | EPA 8270CSIM | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS-SIM | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | MDM |
| N023124-011A | FOLDER | 2/22/2017 | 2/22/2017 | Folder | Folder | Folder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | LAB |



800-322-5555 www.gso.com

Ship From
ASSET LABORATORIES
MOLKY BRAR
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Tracking #: 535061128

CPS



Ship To
ATL INC
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

LVS
LAS VEGAS

A

COD: \$0.00
Weight: 0 lb(s)
Reference:

C89102A

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: REQUIRED



62926525

Print Date: 2/15/2017 5:27 PM

Package 1 of 3

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

2,3^{cc}
SP # 2

2/15/2017



800-322-5555 www.gso.com

Ship From
ASSET LABORATORIES
MOLKY BRAR
11110 ARTESIA BLVD. SUITE B
CERRITOS, CA 90703

Tracking #: 535061130

CPS



Ship To
ATL INC
MARLON CARTIN
3151 W. POST RD.,
LAS VEGAS, NV 89118

LVS
LAS VEGAS

A

COD: \$0.00
Weight: 0 lb(s)
Reference:

C89102A

Delivery Instructions:
HOLD FOR PICK UP
Signature Type: REQUIRED



62926527

Print Date: 2/15/2017 5:27 PM

Package 3 of 3

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

2.10c
JL# 2

Attachment E
Laboratory Analytical Report for
Soil Vapor



9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 01, 2017

Dan Jablonski
CH2M Hill, Inc.
1000 Wilshire Blvd., Suite 2100
Los Angeles, CA 90017-2457

**Re : KMEP Norwalk Biosparge Startup / 496965.A1.01
MB187313 / 7B24005**

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 02/24/17 12:34 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analyticals.

Sincerely,

A handwritten signature in black ink, appearing to read 'Allen A.', written in a cursive style.

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Sample ID | Laboratory ID | Matrix | TAT | Date Sampled | Date Received |
|-----------|---------------|--------|-----|--------------|---------------|
|-----------|---------------|--------|-----|--------------|---------------|

TO-15 (Mid Level)

| | | | | | |
|---------------|------------|-------|---|----------------|----------------|
| SVM-20-5 | 7B24005-01 | Vapor | 3 | 02/24/17 08:29 | 02/24/17 12:34 |
| SVM-20-10 | 7B24005-02 | Vapor | 3 | 02/24/17 08:32 | 02/24/17 12:34 |
| SVM-21-5 | 7B24005-03 | Vapor | 3 | 02/24/17 08:37 | 02/24/17 12:34 |
| SVM-21-10 | 7B24005-04 | Vapor | 3 | 02/24/17 08:43 | 02/24/17 12:34 |
| SVM-22-5 | 7B24005-05 | Vapor | 3 | 02/24/17 09:43 | 02/24/17 12:34 |
| SVM-22-10 | 7B24005-06 | Vapor | 3 | 02/24/17 09:59 | 02/24/17 12:34 |
| SVM-22-10 DUP | 7B24005-07 | Vapor | 3 | 02/24/17 09:59 | 02/24/17 12:34 |
| SVM-23-5 | 7B24005-08 | Vapor | 3 | 02/24/17 10:01 | 02/24/17 12:34 |
| SVM-23-10 | 7B24005-09 | Vapor | 3 | 02/24/17 10:01 | 02/24/17 12:34 |

TO-3

| | | | | | |
|---------------|------------|-------|---|----------------|----------------|
| SVM-20-5 | 7B24005-01 | Vapor | 3 | 02/24/17 08:29 | 02/24/17 12:34 |
| SVM-20-10 | 7B24005-02 | Vapor | 3 | 02/24/17 08:32 | 02/24/17 12:34 |
| SVM-21-5 | 7B24005-03 | Vapor | 3 | 02/24/17 08:37 | 02/24/17 12:34 |
| SVM-21-10 | 7B24005-04 | Vapor | 3 | 02/24/17 08:43 | 02/24/17 12:34 |
| SVM-22-5 | 7B24005-05 | Vapor | 3 | 02/24/17 09:43 | 02/24/17 12:34 |
| SVM-22-10 | 7B24005-06 | Vapor | 3 | 02/24/17 09:59 | 02/24/17 12:34 |
| SVM-22-10 DUP | 7B24005-07 | Vapor | 3 | 02/24/17 09:59 | 02/24/17 12:34 |
| SVM-23-5 | 7B24005-08 | Vapor | 3 | 02/24/17 10:01 | 02/24/17 12:34 |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Sample ID | Laboratory ID | Matrix | TAT | Date Sampled | Date Received |
|-----------|---------------|--------|-----|----------------|----------------|
| SVM-23-10 | 7B24005-09 | Vapor | 3 | 02/24/17 10:01 | 02/24/17 12:34 |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

ANALYTICAL DATA SUMMARY

| Analyte | Sample Name | Result | MRL | Units | Dilution | Prepared | Analyzed | Method |
|---------|-------------|--------|-----|-------|----------|----------|----------|--------|
|---------|-------------|--------|-----|-------|----------|----------|----------|--------|

VOCs by EPA TO-3

VOCs by GCMS EPA TO-15

| | | | | | | | | |
|---------------------------|---------------|--------------|-------|------|----|----------|----------|-------|
| Tetrachloroethylene (PCE) | SVM-21-5 | 0.037 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-21-10 | 0.052 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-22-5 | 0.021 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-22-10 | 0.022 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-22-10 DUP | 0.023 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Cyclohexane | SVM-23-5 | 0.063 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-23-5 | 0.028 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| 2,2,4-Trimethylpentane | SVM-23-5 | 0.44 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Cyclohexane | SVM-23-10 | 0.26 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| Tetrachloroethylene (PCE) | SVM-23-10 | 0.045 | 0.020 | ug/L | 1 | 02/27/17 | 02/27/17 | TO-15 |
| 2,2,4-Trimethylpentane | SVM-23-10 | 3.0 | 0.20 | ug/L | 10 | 02/27/17 | 02/27/17 | TO-15 |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by EPA TO-3

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-01 | 7B24005-02 | 7B24005-03 | 7B24005-04 | |
| Client ID No: | SVM-20-5 | SVM-20-10 | SVM-21-5 | SVM-21-10 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-3 (TO-3)

| | | | | | |
|-------------------------------|-----|-----|-----|-----|----|
| Gasoline Range Organics (GRO) | <20 | <20 | <20 | <20 | 20 |
|-------------------------------|-----|-----|-----|-----|----|

Surrogates

| | | | | | |
|----------------------|-----|-----|-----|-----|-------------------------------------|
| 4-Bromofluorobenzene | 94% | 95% | 92% | 97% | <u>%REC Limits</u> 70-130 |
|----------------------|-----|-----|-----|-----|-------------------------------------|

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by EPA TO-3

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | | | | |
|-------------------------|------------|------------|---------------|------------|-----|
| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-05 | 7B24005-06 | 7B24005-07 | 7B24005-08 | |
| Client ID No: | SVM-22-5 | SVM-22-10 | SVM-22-10 DUP | SVM-23-5 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-3 (TO-3)

| | | | | | |
|-------------------------------|-----|-----|-----|-----|----|
| Gasoline Range Organics (GRO) | <20 | <20 | <20 | <20 | 20 |
|-------------------------------|-----|-----|-----|-----|----|

Surrogates

| | | | | | |
|----------------------|-----|-----|-----|-----|-------------------------------------|
| 4-Bromofluorobenzene | 94% | 94% | 93% | 94% | <u>%REC Limits</u> 70-130 |
|----------------------|-----|-----|-----|-----|-------------------------------------|

Allen Aminian
 QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by EPA TO-3

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | |
|-------------------------|------------|-----|
| Date Sampled: | 02/24/17 | |
| Date Prepared: | 02/27/17 | |
| Date Analyzed: | 02/28/17 | |
| AA ID No: | 7B24005-09 | |
| Client ID No: | SVM-23-10 | |
| Matrix: | Vapor | |
| Dilution Factor: | 1 | MRL |

TO-3 (TO-3)

| | | |
|-------------------------------|-----|----|
| Gasoline Range Organics (GRO) | <20 | 20 |
|-------------------------------|-----|----|

Surrogates

| | | |
|----------------------|-----|-------------------------------------|
| 4-Bromofluorobenzene | 97% | <u>%REC Limits</u> 70-130 |
|----------------------|-----|-------------------------------------|

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-01 | 7B24005-02 | 7B24005-03 | 7B24005-04 | |
| Client ID No: | SVM-20-5 | SVM-20-10 | SVM-21-5 | SVM-21-10 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15)

| | | | | | |
|-------------------------------|--------|--------|--------|--------|-------|
| Acetone | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Allyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| tert-Amyl Methyl Ether (TAME) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Benzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Benzyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromodichloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromoform | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromomethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3-Butadiene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2-Butanone (MEK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| tert-Butyl alcohol (TBA) | <20 | <20 | <20 | <20 | 20 |
| Carbon Disulfide | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Carbon Tetrachloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloroform | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Cyclohexane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Dibromochloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dibromoethane (EDB) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,4-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Dichlorodifluoromethane (R12) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1-Dichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichloroethane (EDC) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| cis-1,2-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-01 | 7B24005-02 | 7B24005-03 | 7B24005-04 | |
| Client ID No: | SVM-20-5 | SVM-20-10 | SVM-21-5 | SVM-21-10 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | | | | |
|--------------------------------|--------|--------|--------------|--------------|-------|
| 1,1-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| trans-1,2-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichloropropane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| trans-1,3-Dichloropropylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| cis-1,3-Dichloropropylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Dichlorotetrafluoroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Diisopropyl ether (DIPE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,4-Dioxane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethanol | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethyl Acetate | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethyl-tert-Butyl Ether (ETBE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Ethyltoluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Heptane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Hexachlorobutadiene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Hexane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2-Hexanone (MBK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Isopropanol (IPA) | <0.20 | <0.20 | <0.20 | <0.20 | 0.20 |
| Methyl-tert-Butyl Ether (MTBE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Methylene Chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Methyl-2-pentanone (MIBK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Naphthalene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Propylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Styrene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2,2-Tetrachloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Tetrachloroethylene (PCE) | <0.020 | <0.020 | 0.037 | 0.052 | 0.020 |
| Tetrahydrofuran (THF) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | | | | |
|-------------------------|------------|------------|------------|------------|-----|
| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-01 | 7B24005-02 | 7B24005-03 | 7B24005-04 | |
| Client ID No: | SVM-20-5 | SVM-20-10 | SVM-21-5 | SVM-21-10 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | | | | |
|--|--------|--------|--------|--------|-------|
| Toluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,4-Trichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2-Trichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,1-Trichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Trichloroethylene (TCE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Trichlorofluoromethane (R11) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3,5-Trimethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,4-Trimethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2,2,4-Trimethylpentane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Vinyl acetate | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Vinyl bromide | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Vinyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| o-Xylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| m,p-Xylenes | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,1,2-Tetrachloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,3-Trichloropropane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| sec-Butylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Isopropylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Propylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Isopropyltoluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Butylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

Surrogates

| | | | | | |
|----------------------|-----|-----|-----|-----|------------------------------|
| 4-Bromofluorobenzene | 93% | 94% | 92% | 96% | %REC Limits 70-130 |
|----------------------|-----|-----|-----|-----|------------------------------|

Allen Aminian

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
|------------------|------------|------------|---------------|------------|-----|
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-05 | 7B24005-06 | 7B24005-07 | 7B24005-08 | |
| Client ID No: | SVM-22-5 | SVM-22-10 | SVM-22-10 DUP | SVM-23-5 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15)

| | | | | | |
|-------------------------------|--------|--------|--------|--------------|-------|
| Acetone | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Allyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| tert-Amyl Methyl Ether (TAME) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Benzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Benzyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromodichloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromoform | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Bromomethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3-Butadiene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2-Butanone (MEK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| tert-Butyl alcohol (TBA) | <20 | <20 | <20 | <20 | 20 |
| Carbon Disulfide | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Carbon Tetrachloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloroform | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Chloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Cyclohexane | <0.020 | <0.020 | <0.020 | 0.063 | 0.020 |
| Dibromochloromethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dibromoethane (EDB) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,4-Dichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Dichlorodifluoromethane (R12) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1-Dichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichloroethane (EDC) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| cis-1,2-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
|------------------|------------|------------|---------------|------------|-----|
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-05 | 7B24005-06 | 7B24005-07 | 7B24005-08 | |
| Client ID No: | SVM-22-5 | SVM-22-10 | SVM-22-10 DUP | SVM-23-5 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | | | | |
|--------------------------------|--------------|--------------|--------------|--------------|-------|
| 1,1-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| trans-1,2-Dichloroethylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2-Dichloropropane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| trans-1,3-Dichloropropylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| cis-1,3-Dichloropropylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Dichlorotetrafluoroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Diisopropyl ether (DIPE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,4-Dioxane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethanol | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethyl Acetate | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Ethyl-tert-Butyl Ether (ETBE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Ethyltoluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Heptane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Hexachlorobutadiene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Hexane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2-Hexanone (MBK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Isopropanol (IPA) | <0.20 | <0.20 | <0.20 | <0.20 | 0.20 |
| Methyl-tert-Butyl Ether (MTBE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Methylene Chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Methyl-2-pentanone (MIBK) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Naphthalene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Propylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Styrene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2,2-Tetrachloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Tetrachloroethylene (PCE) | 0.021 | 0.022 | 0.023 | 0.028 | 0.020 |
| Tetrahydrofuran (THF) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| Date Sampled: | 02/24/17 | 02/24/17 | 02/24/17 | 02/24/17 | |
|------------------|------------|------------|---------------|------------|-----|
| Date Prepared: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| Date Analyzed: | 02/27/17 | 02/27/17 | 02/27/17 | 02/27/17 | |
| AA ID No: | 7B24005-05 | 7B24005-06 | 7B24005-07 | 7B24005-08 | |
| Client ID No: | SVM-22-5 | SVM-22-10 | SVM-22-10 DUP | SVM-23-5 | |
| Matrix: | Vapor | Vapor | Vapor | Vapor | |
| Dilution Factor: | 1 | 1 | 1 | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | | | | |
|--|--------|--------|--------|-------------|-------|
| Toluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,4-Trichlorobenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2-Trichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,1-Trichloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Trichloroethylene (TCE) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Trichlorofluoromethane (R11) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,3,5-Trimethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,4-Trimethylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 2,2,4-Trimethylpentane | <0.020 | <0.020 | <0.020 | 0.44 | 0.020 |
| Vinyl acetate | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Vinyl bromide | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Vinyl chloride | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| o-Xylene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| m,p-Xylenes | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,1,1,2-Tetrachloroethane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 1,2,3-Trichloropropane | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| sec-Butylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| Isopropylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Propylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| 4-Isopropyltoluene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |
| n-Butylbenzene | <0.020 | <0.020 | <0.020 | <0.020 | 0.020 |

| <u>Surrogates</u> | | | | | <u>%REC Limits</u> |
|----------------------|-----|-----|-----|-----|--------------------|
| 4-Bromofluorobenzene | 93% | 93% | 93% | 94% | 70-130 |

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | |
|-------------------------|------------|-----|
| Date Sampled: | 02/24/17 | |
| Date Prepared: | 02/27/17 | |
| Date Analyzed: | 02/27/17 | |
| AA ID No: | 7B24005-09 | |
| Client ID No: | SVM-23-10 | |
| Matrix: | Vapor | |
| Dilution Factor: | 1 | MRL |

TO-15 (Mid Level) (TO-15)

| | | |
|-------------------------------|-------------|-------|
| Acetone | <0.020 | 0.020 |
| Allyl chloride | <0.020 | 0.020 |
| tert-Amyl Methyl Ether (TAME) | <0.020 | 0.020 |
| Benzene | <0.020 | 0.020 |
| Benzyl chloride | <0.020 | 0.020 |
| Bromodichloromethane | <0.020 | 0.020 |
| Bromoform | <0.020 | 0.020 |
| Bromomethane | <0.020 | 0.020 |
| 1,3-Butadiene | <0.020 | 0.020 |
| 2-Butanone (MEK) | <0.020 | 0.020 |
| tert-Butyl alcohol (TBA) | <20 | 20 |
| Carbon Disulfide | <0.020 | 0.020 |
| Carbon Tetrachloride | <0.020 | 0.020 |
| Chlorobenzene | <0.020 | 0.020 |
| Chloroethane | <0.020 | 0.020 |
| Chloroform | <0.020 | 0.020 |
| Chloromethane | <0.020 | 0.020 |
| Cyclohexane | 0.26 | 0.020 |
| Dibromochloromethane | <0.020 | 0.020 |
| 1,2-Dibromoethane (EDB) | <0.020 | 0.020 |
| 1,2-Dichlorobenzene | <0.020 | 0.020 |
| 1,3-Dichlorobenzene | <0.020 | 0.020 |
| 1,4-Dichlorobenzene | <0.020 | 0.020 |
| Dichlorodifluoromethane (R12) | <0.020 | 0.020 |
| 1,1-Dichloroethane | <0.020 | 0.020 |
| 1,2-Dichloroethane (EDC) | <0.020 | 0.020 |
| cis-1,2-Dichloroethylene | <0.020 | 0.020 |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | |
|-------------------------|------------|-----|
| Date Sampled: | 02/24/17 | |
| Date Prepared: | 02/27/17 | |
| Date Analyzed: | 02/27/17 | |
| AA ID No: | 7B24005-09 | |
| Client ID No: | SVM-23-10 | |
| Matrix: | Vapor | |
| Dilution Factor: | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | |
|--------------------------------|--------------|-------|
| 1,1-Dichloroethylene | <0.020 | 0.020 |
| trans-1,2-Dichloroethylene | <0.020 | 0.020 |
| 1,2-Dichloropropane | <0.020 | 0.020 |
| trans-1,3-Dichloropropylene | <0.020 | 0.020 |
| cis-1,3-Dichloropropylene | <0.020 | 0.020 |
| Dichlorotetrafluoroethane | <0.020 | 0.020 |
| Diisopropyl ether (DIPE) | <0.020 | 0.020 |
| 1,4-Dioxane | <0.020 | 0.020 |
| Ethanol | <0.020 | 0.020 |
| Ethyl Acetate | <0.020 | 0.020 |
| Ethylbenzene | <0.020 | 0.020 |
| Ethyl-tert-Butyl Ether (ETBE) | <0.020 | 0.020 |
| 4-Ethyltoluene | <0.020 | 0.020 |
| Heptane | <0.020 | 0.020 |
| Hexachlorobutadiene | <0.020 | 0.020 |
| n-Hexane | <0.020 | 0.020 |
| 2-Hexanone (MBK) | <0.020 | 0.020 |
| Isopropanol (IPA) | <0.20 | 0.20 |
| Methyl-tert-Butyl Ether (MTBE) | <0.020 | 0.020 |
| Methylene Chloride | <0.020 | 0.020 |
| 4-Methyl-2-pentanone (MIBK) | <0.020 | 0.020 |
| Naphthalene | <0.020 | 0.020 |
| Propylene | <0.020 | 0.020 |
| Styrene | <0.020 | 0.020 |
| 1,1,2,2-Tetrachloroethane | <0.020 | 0.020 |
| Tetrachloroethylene (PCE) | 0.045 | 0.020 |
| Tetrahydrofuran (THF) | <0.020 | 0.020 |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup
Method: VOCs by GCMS EPA TO-15

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17
Units: ug/L

| | | |
|-------------------------|------------|-----|
| Date Sampled: | 02/24/17 | |
| Date Prepared: | 02/27/17 | |
| Date Analyzed: | 02/27/17 | |
| AA ID No: | 7B24005-09 | |
| Client ID No: | SVM-23-10 | |
| Matrix: | Vapor | |
| Dilution Factor: | 1 | MRL |

TO-15 (Mid Level) (TO-15) (continued)

| | | |
|--|------------|-------|
| Toluene | <0.020 | 0.020 |
| 1,2,4-Trichlorobenzene | <0.020 | 0.020 |
| 1,1,2-Trichloroethane | <0.020 | 0.020 |
| 1,1,1-Trichloroethane | <0.020 | 0.020 |
| Trichloroethylene (TCE) | <0.020 | 0.020 |
| Trichlorofluoromethane (R11) | <0.020 | 0.020 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.020 | 0.020 |
| 1,3,5-Trimethylbenzene | <0.020 | 0.020 |
| 1,2,4-Trimethylbenzene | <0.020 | 0.020 |
| 2,2,4-Trimethylpentane | 3.0 | 0.020 |
| Vinyl acetate | <0.020 | 0.020 |
| Vinyl bromide | <0.020 | 0.020 |
| Vinyl chloride | <0.020 | 0.020 |
| o-Xylene | <0.020 | 0.020 |
| m,p-Xylenes | <0.020 | 0.020 |
| 1,1,1,2-Tetrachloroethane | <0.020 | 0.020 |
| 1,2,3-Trichloropropane | <0.020 | 0.020 |
| sec-Butylbenzene | <0.020 | 0.020 |
| Isopropylbenzene | <0.020 | 0.020 |
| n-Propylbenzene | <0.020 | 0.020 |
| 4-Isopropyltoluene | <0.020 | 0.020 |
| n-Butylbenzene | <0.020 | 0.020 |

| | | |
|--------------------------|-----|---------------------------|
| <u>Surrogates</u> | | <u>%REC Limits</u> |
| 4-Bromofluorobenzene | 93% | 70-130 |

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC Limits | RPD | RPD Limit | Notes |
|---|---------------|-----------------|-------|--|---------------|------------------|------|-----------|-------|
| VOCs by EPA TO-3 - Quality Control | | | | | | | | | |
| <i>Batch B7B2826 - *** DEFAULT PREP ***</i> | | | | | | | | | |
| Blank (B7B2826-BLK1) | | | | Prepared & Analyzed: 02/27/17 | | | | | |
| Gasoline Range Organics (GRO) | <20 | 20 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0345 | | ug/L | 0.036 | 96.4 | 70-130 | | | |
| LCS (B7B2826-BS1) | | | | Prepared & Analyzed: 02/27/17 | | | | | |
| Gasoline Range Organics (GRO) | 0.586 | 20 | ug/L | 0.82 | 71.7 | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 0.0346 | | ug/L | 0.036 | 96.8 | 70-130 | | | |
| LCS Dup (B7B2826-BSD1) | | | | Prepared & Analyzed: 02/27/17 | | | | | |
| Gasoline Range Organics (GRO) | 0.658 | 20 | ug/L | 0.82 | 80.4 | 70-130 | 11.5 | 30 | |
| Surrogate: 4-Bromofluorobenzene | 0.0359 | | ug/L | 0.036 | 100 | 70-130 | | | |
| Duplicate (B7B2826-DUP1) | | | | Source: 7B24005-08 Prepared: 02/27/17 Analyzed: 02/28/17 | | | | | |
| Gasoline Range Organics (GRO) | <20 | 20 | ug/L | | 2.08 | | 4.48 | 30 | |
| Surrogate: 4-Bromofluorobenzene | 0.0346 | | ug/L | 0.036 | 96.6 | 70-130 | | | |

VOCs by GCMS EPA TO-15 - Quality Control

*Batch B7B2824 - *** DEFAULT PREP ****

| | | | | | | | | | |
|-------------------------------|--------|-------|------|-------------------------------|--|--|--|--|--|
| Blank (B7B2824-BLK1) | | | | Prepared & Analyzed: 02/27/17 | | | | | |
| Acetone | <0.020 | 0.020 | ug/L | | | | | | |
| Allyl chloride | <0.020 | 0.020 | ug/L | | | | | | |
| tert-Amyl Methyl Ether (TAME) | <0.020 | 0.020 | ug/L | | | | | | |
| Benzene | <0.020 | 0.020 | ug/L | | | | | | |
| Benzyl chloride | <0.020 | 0.020 | ug/L | | | | | | |
| Bromodichloromethane | <0.020 | 0.020 | ug/L | | | | | | |
| Bromoform | <0.020 | 0.020 | ug/L | | | | | | |
| Bromomethane | <0.020 | 0.020 | ug/L | | | | | | |
| 1,3-Butadiene | <0.020 | 0.020 | ug/L | | | | | | |
| 2-Butanone (MEK) | <0.020 | 0.020 | ug/L | | | | | | |
| tert-Butyl alcohol (TBA) | <20 | 20 | ug/L | | | | | | |
| Carbon Disulfide | <0.020 | 0.020 | ug/L | | | | | | |
| Carbon Tetrachloride | <0.020 | 0.020 | ug/L | | | | | | |
| Chlorobenzene | <0.020 | 0.020 | ug/L | | | | | | |
| Chloroethane | <0.020 | 0.020 | ug/L | | | | | | |

Allen Aminian

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|-------------|---------------|-----------|-------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| <i>Batch B7B2824 - *** DEFAULT PREP ***</i> | | | | | | | | | | |
| Blank (B7B2824-BLK1) Continued | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| Chloroform | <0.020 | 0.020 | ug/L | | | | | | | |
| Chloromethane | <0.020 | 0.020 | ug/L | | | | | | | |
| Cyclohexane | <0.020 | 0.020 | ug/L | | | | | | | |
| Dibromochloromethane | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2-Dibromoethane (EDB) | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2-Dichlorobenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,3-Dichlorobenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,4-Dichlorobenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| Dichlorodifluoromethane (R12) | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1-Dichloroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2-Dichloroethane (EDC) | <0.020 | 0.020 | ug/L | | | | | | | |
| cis-1,2-Dichloroethylene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1-Dichloroethylene | <0.020 | 0.020 | ug/L | | | | | | | |
| trans-1,2-Dichloroethylene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2-Dichloropropane | <0.020 | 0.020 | ug/L | | | | | | | |
| trans-1,3-Dichloropropylene | <0.020 | 0.020 | ug/L | | | | | | | |
| cis-1,3-Dichloropropylene | <0.020 | 0.020 | ug/L | | | | | | | |
| Dichlorotetrafluoroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| Diisopropyl ether (DIPE) | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,4-Dioxane | <0.020 | 0.020 | ug/L | | | | | | | |
| Ethanol | <0.020 | 0.020 | ug/L | | | | | | | |
| Ethyl Acetate | <0.020 | 0.020 | ug/L | | | | | | | |
| Ethylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| Ethyl-tert-Butyl Ether (ETBE) | <0.020 | 0.020 | ug/L | | | | | | | |
| 4-Ethyltoluene | <0.020 | 0.020 | ug/L | | | | | | | |
| Heptane | <0.020 | 0.020 | ug/L | | | | | | | |
| Hexachlorobutadiene | <0.020 | 0.020 | ug/L | | | | | | | |
| n-Hexane | <0.020 | 0.020 | ug/L | | | | | | | |
| 2-Hexanone (MBK) | <0.020 | 0.020 | ug/L | | | | | | | |
| Isopropanol (IPA) | <0.20 | 0.20 | ug/L | | | | | | | |
| Methyl-tert-Butyl Ether (MTBE) | <0.020 | 0.020 | ug/L | | | | | | | |
| Methylene Chloride | <0.020 | 0.020 | ug/L | | | | | | | |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC %REC | Limits | RPD | RPD Limit | Notes |
|---|--------------|-----------------|-------------|-------------|---------------|-------------|---------------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| <i>Batch B7B2824 - *** DEFAULT PREP ***</i> | | | | | | | | | | |
| Blank (B7B2824-BLK1) Continued | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | <0.020 | 0.020 | ug/L | | | | | | | |
| Naphthalene | <0.020 | 0.020 | ug/L | | | | | | | |
| Propylene | <0.020 | 0.020 | ug/L | | | | | | | |
| Styrene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| Tetrachloroethylene (PCE) | <0.020 | 0.020 | ug/L | | | | | | | |
| Tetrahydrofuran (THF) | <0.020 | 0.020 | ug/L | | | | | | | |
| Toluene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2,4-Trichlorobenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1,1-Trichloroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| Trichloroethylene (TCE) | <0.020 | 0.020 | ug/L | | | | | | | |
| Trichlorofluoromethane (R11) | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,3,5-Trimethylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2,4-Trimethylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 2,2,4-Trimethylpentane | <0.020 | 0.020 | ug/L | | | | | | | |
| Vinyl acetate | <0.020 | 0.020 | ug/L | | | | | | | |
| Vinyl bromide | <0.020 | 0.020 | ug/L | | | | | | | |
| Vinyl chloride | <0.020 | 0.020 | ug/L | | | | | | | |
| o-Xylene | <0.020 | 0.020 | ug/L | | | | | | | |
| m,p-Xylenes | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,1,1,2-Tetrachloroethane | <0.020 | 0.020 | ug/L | | | | | | | |
| 1,2,3-Trichloropropane | <0.020 | 0.020 | ug/L | | | | | | | |
| sec-Butylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| Isopropylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| n-Propylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| 4-Isopropyltoluene | <0.020 | 0.020 | ug/L | | | | | | | |
| n-Butylbenzene | <0.020 | 0.020 | ug/L | | | | | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>0.137</i> | | <i>ug/L</i> | <i>0.14</i> | | <i>95.9</i> | <i>70-130</i> | | | |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| Batch B7B2824 - *** DEFAULT PREP *** | | | | | | | | | | |
| LCS (B7B2824-BS1) | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| Acetone | 0.0245 | 0.020 | ug/L | 0.024 | | 103 | 70-130 | | 30 | |
| Benzene | 0.0348 | 0.020 | ug/L | 0.032 | | 109 | 70-130 | | 30 | |
| Benzyl chloride | 0.0502 | 0.020 | ug/L | 0.052 | | 97.0 | 70-130 | | 30 | |
| Bromodichloromethane | 0.0696 | 0.020 | ug/L | 0.067 | | 104 | 70-130 | | 30 | |
| Bromoform | 0.109 | 0.020 | ug/L | 0.10 | | 105 | 70-130 | | 30 | |
| Bromomethane | 0.0369 | 0.020 | ug/L | 0.039 | | 95.0 | 70-130 | | 30 | |
| 2-Butanone (MEK) | 0.0314 | 0.020 | ug/L | 0.029 | | 107 | 70-130 | | 30 | |
| Carbon Disulfide | 0.0318 | 0.020 | ug/L | 0.031 | | 102 | 70-130 | | 30 | |
| Carbon Tetrachloride | 0.0662 | 0.020 | ug/L | 0.063 | | 105 | 70-130 | | 30 | |
| Chlorobenzene | 0.0490 | 0.020 | ug/L | 0.046 | | 106 | 70-130 | | 30 | |
| Chloroethane | 0.0336 | 0.020 | ug/L | 0.026 | | 128 | 70-130 | | 30 | |
| Chloroform | 0.0499 | 0.020 | ug/L | 0.049 | | 102 | 70-130 | | 30 | |
| Chloromethane | 0.0203 | 0.020 | ug/L | 0.021 | | 98.1 | 70-130 | | 30 | |
| Dibromochloromethane | 0.0961 | 0.020 | ug/L | 0.085 | | 113 | 70-130 | | 30 | |
| 1,2-Dibromoethane (EDB) | 0.0883 | 0.020 | ug/L | 0.077 | | 115 | 70-130 | | 30 | |
| 1,2-Dichlorobenzene | 0.0643 | 0.020 | ug/L | 0.060 | | 107 | 70-130 | | 30 | |
| 1,3-Dichlorobenzene | 0.0642 | 0.020 | ug/L | 0.060 | | 107 | 70-130 | | 30 | |
| 1,4-Dichlorobenzene | 0.0626 | 0.020 | ug/L | 0.060 | | 104 | 70-130 | | 30 | |
| Dichlorodifluoromethane (R12) | 0.0528 | 0.020 | ug/L | 0.049 | | 107 | 70-130 | | 30 | |
| 1,1-Dichloroethane | 0.0409 | 0.020 | ug/L | 0.040 | | 101 | 70-130 | | 30 | |
| 1,2-Dichloroethane (EDC) | 0.0393 | 0.020 | ug/L | 0.040 | | 97.2 | 70-130 | | 30 | |
| cis-1,2-Dichloroethylene | 0.0400 | 0.020 | ug/L | 0.040 | | 101 | 70-130 | | 30 | |
| 1,1-Dichloroethylene | 0.0410 | 0.020 | ug/L | 0.040 | | 103 | 70-130 | | 30 | |
| trans-1,2-Dichloroethylene | 0.0402 | 0.020 | ug/L | 0.040 | | 102 | 70-130 | | 30 | |
| 1,2-Dichloropropane | 0.0509 | 0.020 | ug/L | 0.046 | | 110 | 70-130 | | 30 | |
| trans-1,3-Dichloropropylene | 0.0470 | 0.020 | ug/L | 0.045 | | 104 | 70-130 | | 30 | |
| cis-1,3-Dichloropropylene | 0.0508 | 0.020 | ug/L | 0.045 | | 112 | 70-130 | | 30 | |
| Dichlorotetrafluoroethane | 0.0708 | 0.020 | ug/L | 0.070 | | 101 | 70-130 | | 30 | |
| Ethylbenzene | 0.0465 | 0.020 | ug/L | 0.043 | | 107 | 70-130 | | 30 | |
| 4-Ethyltoluene | 0.0520 | 0.020 | ug/L | 0.049 | | 106 | 70-130 | | 30 | |
| Hexachlorobutadiene | 0.115 | 0.020 | ug/L | 0.11 | | 108 | 70-130 | | 30 | |
| 2-Hexanone (MBK) | 0.0424 | 0.020 | ug/L | 0.041 | | 103 | 70-130 | | 30 | |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|-------------|---------------|--------|-------------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| Batch B7B2824 - *** DEFAULT PREP *** | | | | | | | | | | |
| LCS (B7B2824-BS1) Continued | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| Isopropanol (IPA) | 0.0253 | 0.20 | ug/L | 0.025 | 103 | 70-130 | | 30 | | |
| Methylene Chloride | 0.0335 | 0.020 | ug/L | 0.035 | 96.5 | 70-130 | | 30 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.0427 | 0.020 | ug/L | 0.041 | 104 | 70-130 | | 30 | | |
| Styrene | 0.0462 | 0.020 | ug/L | 0.043 | 108 | 70-130 | | 30 | | |
| 1,1,2,2-Tetrachloroethane | 0.0728 | 0.020 | ug/L | 0.069 | 106 | 70-130 | | 30 | | |
| Tetrachloroethylene (PCE) | 0.0832 | 0.020 | ug/L | 0.068 | 123 | 70-130 | | 30 | | |
| Toluene | 0.0424 | 0.020 | ug/L | 0.038 | 112 | 70-130 | | 30 | | |
| 1,2,4-Trichlorobenzene | 0.0738 | 0.020 | ug/L | 0.074 | 99.5 | 70-130 | | 30 | | |
| 1,1,2-Trichloroethane | 0.0611 | 0.020 | ug/L | 0.055 | 112 | 70-130 | | 30 | | |
| 1,1,1-Trichloroethane | 0.0553 | 0.020 | ug/L | 0.055 | 101 | 70-130 | | 30 | | |
| Trichloroethylene (TCE) | 0.0611 | 0.020 | ug/L | 0.054 | 114 | 70-130 | | 30 | | |
| Trichlorofluoromethane (R11) | 0.0605 | 0.020 | ug/L | 0.056 | 108 | 70-130 | | 30 | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | 0.0822 | 0.020 | ug/L | 0.077 | 107 | 70-130 | | 30 | | |
| 1,3,5-Trimethylbenzene | 0.0516 | 0.020 | ug/L | 0.049 | 105 | 70-130 | | 30 | | |
| 1,2,4-Trimethylbenzene | 0.0518 | 0.020 | ug/L | 0.049 | 105 | 70-130 | | 30 | | |
| Vinyl acetate | 0.0362 | 0.020 | ug/L | 0.035 | 103 | 70-130 | | 30 | | |
| Vinyl chloride | 0.0237 | 0.020 | ug/L | 0.026 | 92.9 | 70-130 | | 30 | | |
| o-Xylene | 0.0450 | 0.020 | ug/L | 0.043 | 104 | 70-130 | | 30 | | |
| m,p-Xylenes | 0.0920 | 0.020 | ug/L | 0.087 | 106 | 70-130 | | 30 | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | ug/L | | | 70-130 | | 30 | | |
| 1,2,3-Trichloropropane | 0.0678 | 0.020 | ug/L | 0.060 | 112 | 70-130 | | 30 | | |
| sec-Butylbenzene | 0.0663 | 0.020 | ug/L | 0.055 | 121 | 70-130 | | 30 | | |
| Isopropylbenzene | 0.0555 | 0.020 | ug/L | 0.049 | 113 | 70-130 | | 30 | | |
| n-Propylbenzene | 0.0561 | 0.020 | ug/L | 0.049 | 114 | 70-130 | | 30 | | |
| 4-Isopropyltoluene | 0.0670 | 0.020 | ug/L | 0.055 | 122 | 70-130 | | 30 | | |
| Surrogate: 4-Bromofluorobenzene | 0.138 | | ug/L | 0.14 | 96.3 | 70-130 | | | | |
| LCS Dup (B7B2824-BS1) | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| Acetone | 0.0252 | 0.020 | ug/L | 0.024 | 106 | 70-130 | 2.96 | 30 | | |
| Benzene | 0.0360 | 0.020 | ug/L | 0.032 | 113 | 70-130 | 3.52 | 30 | | |
| Benzyl chloride | 0.0509 | 0.020 | ug/L | 0.052 | 98.3 | 70-130 | 1.33 | 30 | | |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|-------------|---------------|--------|-------------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| Batch B7B2824 - *** DEFAULT PREP *** | | | | | | | | | | |
| LCS Dup (B7B2824-BSD1) Continued | | | | | | | | | | |
| Prepared & Analyzed: 02/27/17 | | | | | | | | | | |
| Bromodichloromethane | 0.0726 | 0.020 | ug/L | 0.067 | 108 | 70-130 | 4.24 | 30 | | |
| Bromoform | 0.105 | 0.020 | ug/L | 0.10 | 102 | 70-130 | 3.19 | 30 | | |
| Bromomethane | 0.0577 | 0.020 | ug/L | 0.039 | 149 | 70-130 | 44.0 | 30 | | ** |
| 2-Butanone (MEK) | 0.0332 | 0.020 | ug/L | 0.029 | 112 | 70-130 | 5.39 | 30 | | |
| Carbon Disulfide | 0.0328 | 0.020 | ug/L | 0.031 | 105 | 70-130 | 3.09 | 30 | | |
| Carbon Tetrachloride | 0.0674 | 0.020 | ug/L | 0.063 | 107 | 70-130 | 1.79 | 30 | | |
| Chlorobenzene | 0.0513 | 0.020 | ug/L | 0.046 | 112 | 70-130 | 4.68 | 30 | | |
| Chloroethane | 0.0349 | 0.020 | ug/L | 0.026 | 132 | 70-130 | 3.54 | 30 | | ** |
| Chloroform | 0.0535 | 0.020 | ug/L | 0.049 | 110 | 70-130 | 6.80 | 30 | | |
| Chloromethane | 0.0211 | 0.020 | ug/L | 0.021 | 102 | 70-130 | 4.29 | 30 | | |
| Dibromochloromethane | 0.0949 | 0.020 | ug/L | 0.085 | 111 | 70-130 | 1.25 | 30 | | |
| 1,2-Dibromoethane (EDB) | 0.0903 | 0.020 | ug/L | 0.077 | 118 | 70-130 | 2.24 | 30 | | |
| 1,2-Dichlorobenzene | 0.0642 | 0.020 | ug/L | 0.060 | 107 | 70-130 | 0.187 | 30 | | |
| 1,3-Dichlorobenzene | 0.0648 | 0.020 | ug/L | 0.060 | 108 | 70-130 | 0.839 | 30 | | |
| 1,4-Dichlorobenzene | 0.0635 | 0.020 | ug/L | 0.060 | 106 | 70-130 | 1.53 | 30 | | |
| Dichlorodifluoromethane (R12) | 0.0552 | 0.020 | ug/L | 0.049 | 112 | 70-130 | 4.58 | 30 | | |
| 1,1-Dichloroethane | 0.0438 | 0.020 | ug/L | 0.040 | 108 | 70-130 | 6.69 | 30 | | |
| 1,2-Dichloroethane (EDC) | 0.0423 | 0.020 | ug/L | 0.040 | 105 | 70-130 | 7.33 | 30 | | |
| cis-1,2-Dichloroethylene | 0.0431 | 0.020 | ug/L | 0.040 | 109 | 70-130 | 7.44 | 30 | | |
| 1,1-Dichloroethylene | 0.0446 | 0.020 | ug/L | 0.040 | 112 | 70-130 | 8.53 | 30 | | |
| trans-1,2-Dichloroethylene | 0.0446 | 0.020 | ug/L | 0.040 | 112 | 70-130 | 10.2 | 30 | | |
| 1,2-Dichloropropane | 0.0525 | 0.020 | ug/L | 0.046 | 114 | 70-130 | 3.04 | 30 | | |
| trans-1,3-Dichloropropylene | 0.0478 | 0.020 | ug/L | 0.045 | 105 | 70-130 | 1.82 | 30 | | |
| cis-1,3-Dichloropropylene | 0.0496 | 0.020 | ug/L | 0.045 | 109 | 70-130 | 2.44 | 30 | | |
| Dichlorotetrafluoroethane | 0.0711 | 0.020 | ug/L | 0.070 | 102 | 70-130 | 0.394 | 30 | | |
| Ethylbenzene | 0.0480 | 0.020 | ug/L | 0.043 | 110 | 70-130 | 3.22 | 30 | | |
| 4-Ethyltoluene | 0.0547 | 0.020 | ug/L | 0.049 | 111 | 70-130 | 5.16 | 30 | | |
| Hexachlorobutadiene | 0.107 | 0.020 | ug/L | 0.11 | 100 | 70-130 | 7.19 | 30 | | |
| 2-Hexanone (MBK) | 0.0453 | 0.020 | ug/L | 0.041 | 111 | 70-130 | 6.82 | 30 | | |
| Isopropanol (IPA) | 0.0255 | 0.20 | ug/L | 0.025 | 104 | 70-130 | 0.484 | 30 | | |
| Methylene Chloride | 0.0368 | 0.020 | ug/L | 0.035 | 106 | 70-130 | 9.29 | 30 | | |
| 4-Methyl-2-pentanone (MIBK) | 0.0454 | 0.020 | ug/L | 0.041 | 111 | 70-130 | 6.23 | 30 | | |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

VOCs by GCMS EPA TO-15 - Quality Control

Batch B7B2824 - *** DEFAULT PREP ***

LCS Dup (B7B2824-BSD1) Continued

Prepared & Analyzed: 02/27/17

| | | | | | | | | | |
|--|--------|-------|------|-------|------|--------|-------|----|--|
| Styrene | 0.0473 | 0.020 | ug/L | 0.043 | 111 | 70-130 | 2.28 | 30 | |
| 1,1,2,2-Tetrachloroethane | 0.0776 | 0.020 | ug/L | 0.069 | 113 | 70-130 | 6.48 | 30 | |
| Tetrachloroethylene (PCE) | 0.0797 | 0.020 | ug/L | 0.068 | 117 | 70-130 | 4.33 | 30 | |
| Toluene | 0.0439 | 0.020 | ug/L | 0.038 | 116 | 70-130 | 3.50 | 30 | |
| 1,2,4-Trichlorobenzene | 0.0753 | 0.020 | ug/L | 0.074 | 101 | 70-130 | 1.89 | 30 | |
| 1,1,2-Trichloroethane | 0.0619 | 0.020 | ug/L | 0.055 | 113 | 70-130 | 1.24 | 30 | |
| 1,1,1-Trichloroethane | 0.0586 | 0.020 | ug/L | 0.055 | 107 | 70-130 | 5.75 | 30 | |
| Trichloroethylene (TCE) | 0.0614 | 0.020 | ug/L | 0.054 | 114 | 70-130 | 0.526 | 30 | |
| Trichlorofluoromethane (R11) | 0.0628 | 0.020 | ug/L | 0.056 | 112 | 70-130 | 3.74 | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | 0.0907 | 0.020 | ug/L | 0.077 | 118 | 70-130 | 9.93 | 30 | |
| 1,3,5-Trimethylbenzene | 0.0546 | 0.020 | ug/L | 0.049 | 111 | 70-130 | 5.74 | 30 | |
| 1,2,4-Trimethylbenzene | 0.0543 | 0.020 | ug/L | 0.049 | 110 | 70-130 | 4.73 | 30 | |
| Vinyl acetate | 0.0386 | 0.020 | ug/L | 0.035 | 110 | 70-130 | 6.40 | 30 | |
| Vinyl chloride | 0.0243 | 0.020 | ug/L | 0.026 | 95.0 | 70-130 | 2.24 | 30 | |
| o-Xylene | 0.0481 | 0.020 | ug/L | 0.043 | 111 | 70-130 | 6.53 | 30 | |
| m,p-Xylenes | 0.0964 | 0.020 | ug/L | 0.087 | 111 | 70-130 | 4.66 | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | ug/L | | | 70-130 | | 30 | |
| 1,2,3-Trichloropropane | 0.0713 | 0.020 | ug/L | 0.060 | 118 | 70-130 | 5.03 | 30 | |
| sec-Butylbenzene | 0.0685 | 0.020 | ug/L | 0.055 | 125 | 70-130 | 3.34 | 30 | |
| Isopropylbenzene | 0.0592 | 0.020 | ug/L | 0.049 | 120 | 70-130 | 6.43 | 30 | |
| n-Propylbenzene | 0.0603 | 0.020 | ug/L | 0.049 | 123 | 70-130 | 7.18 | 30 | |
| 4-Isopropyltoluene | 0.0697 | 0.020 | ug/L | 0.055 | 127 | 70-130 | 3.93 | 30 | |

Surrogate: 4-Bromofluorobenzene 0.137 ug/L 0.14 95.9 70-130

Duplicate (B7B2824-DUP1) Source: 7B24005-08 Prepared: 02/27/17 Analyzed: 02/28/17

| | | | | | | | | | |
|-------------------------------|--------|-------|------|--------|--|--|--|----|--|
| Acetone | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |
| Allyl chloride | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |
| tert-Amyl Methyl Ether (TAME) | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |
| Benzene | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |
| Benzyl chloride | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |
| Bromodichloromethane | <0.020 | 0.020 | ug/L | <0.020 | | | | 30 | |

Allen Aminian

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|-------------|---------------|------|-------------|-------|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| <i>Batch B7B2824 - *** DEFAULT PREP ***</i> | | | | | | | | | | |
| Duplicate (B7B2824-DUP1) Continued Source: 7B24005-08 Prepared: 02/27/17 Analyzed: 02/28/17 | | | | | | | | | | |
| Bromoform | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Bromomethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,3-Butadiene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 2-Butanone (MEK) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| tert-Butyl alcohol (TBA) | <20 | 20 | ug/L | | <20 | | | | 30 | |
| Carbon Disulfide | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Carbon Tetrachloride | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Chlorobenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Chloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Chloroform | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Chloromethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Cyclohexane | 0.0639 | 0.020 | ug/L | | 0.0633 | | | 0.920 | 30 | |
| Dibromochloromethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2-Dibromoethane (EDB) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2-Dichlorobenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,3-Dichlorobenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,4-Dichlorobenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Dichlorodifluoromethane (R12) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1-Dichloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2-Dichloroethane (EDC) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| cis-1,2-Dichloroethylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1-Dichloroethylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| trans-1,2-Dichloroethylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2-Dichloropropane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| trans-1,3-Dichloropropylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| cis-1,3-Dichloropropylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Dichlorotetrafluoroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Diisopropyl ether (DIPE) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,4-Dioxane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Ethanol | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Ethyl Acetate | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Ethylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|---------------|-----------------|-------|-------------|---------------|------|-------------|------|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| <i>Batch B7B2824 - *** DEFAULT PREP ***</i> | | | | | | | | | | |
| Duplicate (B7B2824-DUP1) Continued Source: 7B24005-08 Prepared: 02/27/17 Analyzed: 02/28/17 | | | | | | | | | | |
| Ethyl-tert-Butyl Ether (ETBE) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 4-Ethyltoluene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Heptane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Hexachlorobutadiene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| n-Hexane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 2-Hexanone (MBK) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Isopropanol (IPA) | <0.20 | 0.20 | ug/L | | <0.20 | | | | 30 | |
| Methyl-tert-Butyl Ether (MTBE) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Methylene Chloride | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 4-Methyl-2-pentanone (MIBK) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Naphthalene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Propylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Styrene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1,2,2-Tetrachloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Tetrachloroethylene (PCE) | 0.0326 | 0.020 | ug/L | | 0.0276 | | | 16.5 | 30 | |
| Tetrahydrofuran (THF) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Toluene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2,4-Trichlorobenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1,2-Trichloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1,1-Trichloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Trichloroethylene (TCE) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Trichlorofluoromethane (R11) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (R113) | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,3,5-Trimethylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2,4-Trimethylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 2,2,4-Trimethylpentane | 0.431 | 0.020 | ug/L | | 0.444 | | | 2.85 | 30 | |
| Vinyl acetate | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Vinyl bromide | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Vinyl chloride | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| o-Xylene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| m,p-Xylenes | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|--------------|-----------------|-------------|-------------|---------------|-------------|---------------|-----|-----------|-------|
| VOCs by GCMS EPA TO-15 - Quality Control | | | | | | | | | | |
| <i>Batch B7B2824 - *** DEFAULT PREP ***</i> | | | | | | | | | | |
| Duplicate (B7B2824-DUP1) Continued Source: 7B24005-08 Prepared: 02/27/17 Analyzed: 02/28/17 | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 1,2,3-Trichloropropane | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| sec-Butylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| Isopropylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| n-Propylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| 4-Isopropyltoluene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| n-Butylbenzene | <0.020 | 0.020 | ug/L | | <0.020 | | | | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>0.137</i> | | <i>ug/L</i> | <i>0.14</i> | | <i>95.8</i> | <i>70-130</i> | | | |

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: CH2M Hill, Inc.
Project No: 496965.A1.01
Project Name: KMEP Norwalk Biosparge Startup

AA Project No: MB187313
Date Received: 02/24/17
Date Reported: 03/01/17

Special Notes

[1] = ** : Analyte recovery exceeded the upper control limit.

A handwritten signature in black ink, appearing to read 'Allen Aminian'.

Allen Aminian
QA/QC Manager



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 FAX: 818-998-7258

A.A. COC No.: 126754

70047945
Page 1 of 1

Client: CH2M HILL Project Name / No.: KINDOL MORGAN NORWALK Sampler's Name: WILLIAM SCHROEDER
 Project Manager: DAN JABLONSKI Site Address: 15306 NORWALK BLVD Sampler's Signature: [Signature]
 Phone: _____ City: NORWALK P.O. No.: _____
 Fax: _____ State & Zip: CA Quote No.: _____

TAT Turnaround Codes **

- ① = Same Day Rush
- ② = 24 Hour Rush
- ③ = 48 Hour Rush
- ④ = 72 Hour Rush
- ⑤ = 5 Day Rush
- X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

| Client I.D. | A.A. I.D. | Date | Time | Sample Matrix | No. of Cont | Please enter the TAT Turnaround Codes ** below | | | | | | | | | | Special Instructions | |
|---------------|------------|---------|------|---------------|-------------|--|---|---|---|---|---|--|--|--|--|----------------------|-----------|
| | | | | | | 1 | 2 | 3 | 4 | 5 | X | | | | | | |
| SUM 20-5 | 7B74005-01 | 2-24-17 | 0829 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 20-10 | 2 | | 0832 | V | 1 | ✓ | X | | | | | | | | | | 3 DAY TAT |
| SUM 21-5 | 3 | | 0837 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 21-10 | 4 | | 0843 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 22-5 | 5 | | 0943 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 22-10 | 6 | | 0959 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 22-10 DUP | 7 | | 0959 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 23-5 | 8 | | 1001 | V | 1 | ✓ | X | | | | | | | | | | |
| SUM 23-10 | 9 | ✓ | 1001 | V | 1 | ✓ | X | | | | | | | | | | |

For Laboratory Use

PRIORITY

Rush 72 Hrs SH
 Date 2/24/17 Time 1426 Sign [Signature]

| | | | |
|---------------------------------------|------------------------|---------------------|-----------------------------------|
| Relinquished by <u>[Signature]</u> | Date <u>2-24-17</u> | Time <u>1054</u> | Received by <u>[Signature]</u> |
| Relinquished by <u>[Signature]</u> | Date <u>2/24/17</u> | Time <u>1234</u> | Received by <u>[Signature]</u> |
| Relinquished by | Date | Time | Received by |

A.A. Project No.: MB187313 / 7B24005

Note: By relinquishing samples to American Analytics, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project