Nowell, Keith, Env. Health

From: Michael Harrison <mharrison@enviroassets.com>
Sent: Friday, April 06, 2018 4:59 PM
To: John Till; Jonathan W. Redding
Cc: Alexander, Jeriann; Nowell, Keith, Env. Health; dwood@wshblaw.com; Khatri, Paresh, Env. Health; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell; gmead@enviroassts.com; Nowell, Keith, Env. Health; Roe, Dilan, Env. Health
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland
Attachments: EA23677-18 Update ACDEH Responsive Investigation.pdf

Dear all:
Attached please find an update of the ACDEH responsive investigation at 307 63rd Street; and 6251, 6253, and 6255 College Avenue, Oakland, CA 94618. A complete report will follow once we are able to collect the additional soil vapor sample in the nook between the buildings. Dilan, the final report will also provide a summary of the source/type of depth measurements for the groundwater summary figure 2.

Sincerely,

Michael Harrison, P.E., QSD/QSP, LEED AP
Principal
EnviroAssets, Inc.
(888) 748-8820
Web: http://www.enviroassets.com/

From: John Till <jtill@paladinlaw.com>
Sent: Thursday, April 05, 2018 10:24 AM
To: Jonathan W. Redding <JRedding@wendel.com>
Cc: Alexander, Jeriann <jalexander@fugro.com>; Michael Harrison <mharrison@enviroassets.com>; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; dwood@wshblaw.com; Khatri, Paresh, Env. Health <paresh.khatri@acgov.org>; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell <DCresswell@wendel.com>; gmead@enviroassts.com; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland

Jonathan
Please provide your consultants data collected during your consultant's oversight of the work as required by the access agreement.

John R. Till
Attorney At Law
Paladin Law Group® LLP
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Walnut Creek, CA 94595
Telephone: 925.947.5700
Facsimile: 925.935.8488
Email: jtill@PaladinLaw.com
Website: www.PaladinLaw.com

Please consider the environment before printing this email.

From: Jonathan W. Redding [mailto:JRedding@wendel.com]
Sent: Thursday, March 22, 2018 2:46 PM
To: John Till <jtill@paladinlaw.com>
Cc: Alexander, Jeriann <jalexander@fugro.com>; mharrison@enviroassets.com; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; dwood@wshblaw.com; Khatri, Paresh, Env. Health <paresh.khatri@acgov.org>; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell <DCresswell@wendel.com>; gmead@enviroassts.com; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland

Dear John:

Thank you for the initial soil sample data. We are not entirely surprised by the non-detects identified as the impacts appear most readily in soil vapor and groundwater samples.

Field measurements obtained during vapor pin sampling and as well as upon removal of the concrete cores in all 6 locations investigation points inside the 305-307 63rd St tenant unit suggest a positive presence of some volatiles in the space below the floor slabs. As I understand it, there is soil vapor and groundwater data that should be available for review later this week or early next week. Accordingly, , it would seem most reasonable to wait until all remaining data has been received and reviewed by us and the regulators prior to removal of the slab. Certainly all that can be done, without causing any interruption to your start date in two weeks? Please advise as to when the soil gas and groundwater samples will be available.

Finally, I believe Fugro has asked to be present upon removal of the slab and upon the excavation of the soils and uncovering of the utility lines beneath the slabs,

with the potential to take samples during the later events. It would be useful to know the proposed sequencing and current scheduling of those activities so that our consultant, and perhaps the County can be present, to make observations, take field measurements and samples as appropriate.

Thanks, Jonathan

Jonathan W. Redding
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(510) 219-8751 (Cell)
(510) 834-6600 (Office)
(510) 622-7697 (Direct)
(510) 808-4685 (Fax)
jredding@wendel.com

From: John Till [mailto:jtill@paladinlaw.com]
Sent: Thursday, March 22, 2018 12:40 PM
To: Jonathan W. Redding
Cc: Alexander, Jeriann; mharrison@enviroassets.com; Nowell, Keith, Env. Health; dwood@wshblaw.com; Khatri, Paresh, Env. Health; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell; gmead@enviroassts.com; Nowell, Keith, Env. Health; Roe, Dilan, Env. Health
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland
Importance: High

Dear Mr. Redding:
During work conducted on March 15 and 16, 2018, with oversight by your consultant, Fugro USA Land, Inc., appropriate testing of sub-slab vapor, shallow, and deep soil vapor, soil, and groundwater, were completed at 307 63rd Street and 6235-6239 College Avenue in Oakland. Attached please find the first analytical data received yesterday from the sampling effort - shallow soil samples collected from the first native layer beneath the concrete slab and base material at 307 63rd Street. These samples were submitted for expedited analysis to allow evaluation with respect to soil conditions and soil removal.

No volatile organic compounds were detected in the two shallow soil samples - including chlorinated solvents tetrachloroethylene (PCE) and related compounds trichloroethylene (TCE), dichloroethylenes (DCEs), and vinyl chloride.

Based on EnviroAssets' evaluation of the inorganic data, the concentrations of chromium in sample B15 S/GW-S2-A and lead in sample B16 S/GW-S2-A exceed the sample preparation dilution based rules-of-thumb to identify samples that could potentially exceed TCLP and STLC regulatory limits after analysis. Consequently, EnviroAssets has submitted the samples for TCLP and STLC extraction and analysis for chromium and lead, respectively.

As the proposed soil, soil vapor, subslab vapor, and groundwater samples have been collected and submitted for analysis prior to removal of the building slab in 307 63rd Street as requested, please confirm that our clients can proceed with slab removal and seismic retrofit work as soon as soil disposal options are clarified by receipt of the TCLP and STLC results for the shallow soil samples. It is my understanding that your consultant would like to be on site during slab and

soil removal which is tentatively scheduled for approximately two weeks from today. We will keep you posted on that schedule.

John R. Till
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Please consider the environment before printing this email.

From: Roe, Dilan, Env. Health [mailto:Dilan.Roe@acgov.org]
Sent: Friday, March 09, 2018 12:18 PM
To: John Till <jtill@paladinlaw.com>
Cc: Alexander, Jeriann <jalexander@fugro.com>; mharrison@enviroassets.com; ronpatelvidge@gmail.com; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; dwood@wshblaw.com; pton@ww-envlaw.com; Khatri, Paresh, Env. Health <paresh.khatri@acgov.org>; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell <DCresswell@wendel.com>; gmead@enviroassts.com; Jonathan W. Redding <JRedding@wendel.com>; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland

John:

I am sorry to hear about Mike's sisters passing. Please send my condolences to him.

Thank you for the clarification on the timeline of the upcoming work. Alameda County Department of Environmental Health staff would like to be present at the site during slab removal and the uncovering of the sewer line. Please provide notification of when these activities will be occurring. Advanced notice of 48 hours would be the best but if that is not possible please let us know as soon as your team has determined the schedule.

Dilan Roe, PE, C73703
Chief – Land Water Division
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA
510.567.6767; Ext. 36767
QIC: 30440
dilan.roe@acgov.org

From: John Till [mailto:jtill@paladinlaw.com]
Sent: Friday, March 9, 2018 12:13 PM
To: Jonathan W. Redding <JRedding@wendel.com>
Cc: Alexander, Jeriann <jalexander@fugro.com>; mharrison@enviroassets.com; ronpatelvidge@gmail.com; Roe, Dilan, Env. Health <Dilan.Roe@acgov.org>; Nowell, Keith, Env. Health <Keith.Nowell@acgov.org>; dwood@wshblaw.com; pton@ww-envlaw.com; Khatri, Paresh, Env. Health <paresh.khatri@acgov.org>; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell <DCresswell@wendel.com>; gmead@enviroassts.com
Subject: RE: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland
Importance: High

All

First, I was trying to communicate that Mike Harrison's sister passed away. Mr. Harrison is dealing with family issues arising from this.

Here is the current tentative schedule for up-coming on-site activities with EnviroAssets at the Bouzos property....6251-6255 College Avenue in Oakland, California. EnviroAssets will be onsite for all of the activities below.

Tuesday March 13: Subsonic will perform utility clearance of boring locations and utility survey within the alley and EnviroAssets will mark site for USA 800AM to 1200PM

Wednesday March 14: Confluence Environmental will take vapor samples from the 4 vapor pins which were previously installed. This sampling will start around 300PM and will likely last approximately 2 hours. These samples will be taken prior to the slab in the 307 63rd space is drilled for the other sampling set forth in the work plan.

Thursday-Friday March 15 and 16th Gregg Drilling will be on site to implement the other sampling set out in the workplan. Except the vapor sampling between the building located at 6251 and 6241 College. The date of this sampling will be set at a later date.

Once we have received the sample results from all of these sampling events related to the 307 space. The slab will be removed and the other earthquake retrofit work will continue. Results of sampling be reviewed to determine other additional steps that might be required.

The video survey of the sanitary sewer is being scheduled with Subtronic for the earliest available date. The sewer will not be replaced until this sewer video survey has been completed. Currently it is anticipated that this will be two weeks away (Friday March 23). Confirmation of this date should happen this afternoon.

Mr. Redding or Ms. Alexander

Please let me know which activities you will be attending and what you are requesting to do during the various activities. Thank you.

John R. Till
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Please consider the environment before printing this email.

From: Jonathan W. Redding [mailto:JRedding@wendel.com]
Sent: Friday, March 9, 2018 11:31 AM
To: John Till <jtill@paladinlaw.com>
Cc: Alexander, Jeriann <jalexander@fugro.com>; mharrison@enviroassets.com; ronpatelvidge@gmail.com; dilan.roe@acgov.org; keith.nowell@acgov.org; dwood@wshblaw.com; pton@ww-envlaw.com; paresh.khatri@acgov.org; dsobelman@downeybrand.com; epoppler@behblaw.com; Donna Cresswell <DCresswell@wendel.com>
Subject: Re: Work Plan for VOC Testing and Pipeline Inspection - 6251-6255 College Avenue and 305 and 307 63rd St, Oakland

Thanks for the reply. Condolences to Michael. Please make sure the slab is not breached before appropriate testing can be done. Thanks. Jonathan

Sent from my iPad. Pardon the computer generated or difficult to correct typos.

On Mar 9, 2018, at 10:20 AM, John Till <jtill@paladinlaw.com> wrote:

All

Michael's passed away last night. We are trying to confirm schedule. I hope to get back to you all later today. I am in Washington DC but am working to try to get confirmation.

Sent from my iPhone

On Mar 9, 2018, at 11:46 AM, Alexander, Jeriann <jalexander@fugro.com> wrote:

> HI Michael,
> I called and left you a voice message this morning regarding the potential start of sampling for the Bouzos property. Fugro is planning on being onsite to observe various field activities as outlined in the brief memorandum attached. As of March 2, 2018, I understood that the anticipated date for slab removal was during the week of March 12th and that soil vapor and vapor pin sampling was to precede slab removal, but had not received an update on any field work as of March 8.
>
> I am trying to schedule my time for next week and would appreciate at least 24-hour notice of planned field work/sampling so may manage my time onsite accordingly.
>
> I am working out of our Walnut Creek office today and can be reached at 925-949-7103 or at my cell number 510-610-8052, to discuss the proposed schedule.
>
> **Kind regards,**
>
> **Jeriann Alexander, PE, REPA**
> Principal Engineer
>
> T +1 916 773 2600 | D +1 916 559 6873
> M +1 510 610 8052
> jalexander@fugro.com | www.fugro.com
>
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>
> 2420 Del Paso Road, Suite 250, Sacramento, California 95834, USA
> 1777 Botelho Drive, Suite 262, Walnut Creek, California 94596, USA
> 469 Roland Way, Oakland, California 94621, USA

From: Donna Cresswell [mailto:DCresswell@wendel.com]
Sent: Tuesday, March 06, 2018 3:19 PM
To: 'JTill@PaladinLaw.com' <JTill@PaladinLaw.com>
Cc: 'ronpatelvidge@gmail.com' <ronpatelvidge@gmail.com>; 'dilan.roe@acgov.org' <dilan.roe@acgov.org>; 'keith.nowell@acgov.org' <keith.nowell@acgov.org>; 'dwood@wshblaw.com' <dwood@wshblaw.com>; 'pton@ww-envlaw.com' <pton@ww-envlaw.com>; 'paresh.khatri@acgov.org' <paresh.khatri@acgov.org>; 'dsobelman@downeybrand.com' <dsobelman@downeybrand.com>; 'epoppler@behblaw.com' <epoppler@behblaw.com>; Alexander, Jeriann <jalexander@fugro.com>; Jonathan W. Redding <JRedding@wendel.com>
Subject: Your letter of February 28, 2018 and March 2, 2018 email concerning proposed Environmental Investigation Work Plan for VOC testing and pipeline inspection, removal, etc.

Mr. Till:

At the request of Jonathan Redding, I am emailing you his letter dated today.

Best regards,

Donna

Donna B. Cresswell | Wendel Rosen Black & Dean LLP
————————————————————
Assistant to Richard P. Waxman, Jonathan W. Redding
and Michael A. Dean
T: (510) 834-6600 | D: (510) 622-7545 | F: (510) 834-1928
1111 Broadway, 24th Floor | Oakland, CA 94607-4036
Email: dcresswell@wendel.com | www.wendel.com
Please consider the environment before printing this email. Thank you!

<Memo re Comments and Access 03062018.pdf>

April 6, 2018

Dilan Roe, P.E.
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Keith Nowell, P.G. C.H.G.
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: Data Update - ACDEH Responsive Environmental Investigation
Former Dry Cleaners (T10000011188
307 63rd Street; and 6251, 6253, and 6255 College Avenue, Oakland, CA 94618

Dear Ms. Roe and Mr. Nowell:
EnviroAssets, Inc. ("EnviroAssets") is pleased to provide the following summary of data collected at 307 63rd Street; and 6251, 6253, and 6255 College Avenue ("Subject Property"). Collection of an addition shallow soil gas sample within the unpaved small limited access area between 6251 College Avenue and 6241 College Avenue was delayed due to rainfall and is anticipated for collection within the next two weeks. The utility survey drawing provided by Subtronic of the alleyway between the Subject Property and 309 63rd Street is attached. A comprehensive report will be prepared and submitted to the ACDEH following collection of the final shallow vapor sample.

Soil, Soil Gas, and Groundwater Samples 307 63rd Street

On March 14 through 16, 2018, samples were collected beneath 307 63rd Street (Figure 1). Prior to penetrating the building slab in preparation for the subsurface investigation, a sub-slab soil vapor sample was collected from an existing vapor pin ("VP-1") within the 307 63rd Street location. The sample ("V-VP-1-A"), collected from immediately beneath the building slab, contained tetrachloroethylene ("PCE") at 78.87 µg/m3 (Table 1). No other chlorinated volatile organic compounds ("CVOCs") were detected in the sample. This concentration is substantially beneath the current soil vapor Environmental Screening Level ("ESL") for commercial properties provided by the Water Board of 2,100 µg/m3[1].

Following completion of the sub-slab vapor sampling, sampling of soil, soil vapor, and grab groundwater was completed at two locations consistent with the ACDEH Responsive Environmental Investigation Workplan[2] ("Workplan"). Consistent with ACDEH requests, soil and groundwater samples were advanced next to the sanitary sewer, and vapor samples were placed near the western wall proximate to the alleyway. During the field work, soil samples were collected from the first native soil encountered beneath the concrete slab and base materials from

[1] San Francisco Bay Regional Water Quality Board (Water Board), *Environmental Screening Levels (ESLs)*, February 2016.
[2] EnviroAssets, *ACDEH Responsive Environmental Investigation Workplan*, February 28, 2018

approximately 1.5-2 foot bgs; soil samples were collected from below the sanitary sewer invert (shown on attached Subtronic utility survey from 5 to 5.5 feet bgs) at approximately 7.5-8 feet bgs; soil vapor samples were collected from 7 and 15-feet bgs; and a grab groundwater sample was collected from first groundwater which was observed at approximately 23.7-feet bgs from boring B15. No groundwater was encountered in boring B16. No CVOCs were detected in soil samples collected from either boring at either depth. CVOCs PCE and trichloroethylene (TCE) were identified in vapor samples significantly below current commercial soil vapor ESLs. PCE and TCE were identified in the grab groundwater sample from boring B15 at 4.6 µg/L and 0.69 µg/L, respectively - concentrations below drinking water standards that are set at 5 µg/L for both chemicals (drinking water standards are referred to as maximum contaminant levels or "MCLs"). Analytical results for vapor samples are summarized in attached Table 1, with soil and groundwater sampling results summarized in attached Table 2. We note that soil vapor samples were collected beneath the existing building during a rainfall event consistent with applicable regulatory guidance, which states "soil gas sampling after rainfall can proceed where infiltration has not occurred, such as under buildings or beneath high-integrity pavement"[3].

Sub-slab Vapor Sampling Beneath 6251, 6253, and 6255 College Avenue

Prior to penetrating the building slab for drilling rod advancement and sample collection at 307 63rd Street, sub-slab vapor samples were collected from three existing vapor pins at 6251, 6253, and 6255 College Avenue on March 14, 2018. Vapor sampling results are presented on Table 1. PCE was detected within the three samples at concentrations of 270.60, 239.11 and 12.69 µg/m3. These concentrations are substantially below the current commercial vapor ESL of 2,100 µg/m3.

Soil Characterization Sampling Results 307 63rd Street

Shallow soil samples were evaluated to characterize shallow soils anticipated to be removed during seismic retrofit activities - when approximately 12 to 17 cubic feet of soil will be removed to between 12" and 18" below grade within the 310 sf 307 63rd Street space. Concentrations of CVOCs were not identified in soil samples, and no concentrations were identified that present a threat to excavation workers in shallow soil gas and sub-slab vapor. In addition to volatile organic compounds, the two shallow samples were analyzed for inorganics (Table 3). Inorganic chemicals were below regulatorily significant concentrations with the following exceptions: chromium in sample "B15 S/GW-S2-A" and lead in sample "B16 S/GW-S2-A" exceeded the 20x dilution rule-of-thumb used to identify samples that could potentially exceed the toxicity characteristic leaching procedure ("TCLP") that is provided under federal regulations to simulate leaching through a landfill and designate hazardous waste. Consequently, TCLP and soluble threshold limit concentration ("STLC", the California version of the landfill leaching test for

[3] DTSC, *Advisory Active Soil Gas Investigations*, July 2015

state hazardous waste) extraction and analysis were conducted. Only the STLC test for lead in sample "B16 S/GW-S2-A" exceeded regulatory limits for California hazardous waste.

The concentrations of lead in samples B15 S/GW-S2-A and B16 S/GW-S2-A were 34 mg/Kg and 240 mg/Kg for and average concentration of 137 mg/Kg. It is assumed the source of elevated lead in sample B16 S/GW-S2-A is historical construction practices as lead was commonly used during the early 20th century period when the building was constructed. The observed and averaged concentrations are all below commercial ESLs, however the concentration in lead of 240 mg/Kg for sample B16 S/GW-S2-A exceeds the construction worker ESL of 160 mg/Kg. Therefore, we performed a screening evaluation of whether this concentration of lead in soil if mobilized as dust during excavation work associated with the seismic retrofit could potentially create unacceptable worker exposures to lead via dust inhalation exposure. The federal Occupational Safety and Health Administration ("OSHA") provides standards for nuisance dust at 15 mg/m3 of total dust and 5 mg/m3 for the respirable fraction with an 8-hour time-weighted average PEL for lead at 50 µg/m3 and action level of 30 µg/m3. These values were compared against the potential exposure in dust using the average and maximum concentration of lead in soil and a conservative assumption that the dust in air will be at the OSHA maximum of 15 mg/m3 during the entire 8-hours workday:

Average soil lead (Pb) Concentration:

$$\frac{137\ mg\ Pb}{10^6 mg\ soil} * \frac{15\ mg\ soil}{m^3} = 0.00206\ \frac{mg\ Pb}{m^3} = 2.1\ \frac{\mu g\ Pb}{m^3}$$

Maximum soil lead (Pb) Concentration:

$$\frac{240\ mg\ Pb}{10^6 mg\ soil} * \frac{15\ mg\ soil}{m^3} = 0.0036\ \frac{mg\ Pb}{m^3} = 3.6\ \frac{\mu g\ Pb}{m^3}$$

The values of 2.1 and 3.6 µg/m3 are both well below the construction lead air standard of 50 µg/m3 as well as the lead action limit of 30 µg/m3. Based on this screening-level evaluation, there is a negligible potential that construction worker inhalation exposures to lead in soil could exceed OSHA workplace standards.

Based on these data, we recommend that construction activities are conducted with best management practices to control dust during construction such that both onsite and potential offsite exposures to fugitive dusts are minimized. Excavated soils are recommended for management as California hazardous waste for lead, with properly transportation and disposal at a licensed facility. Furthermore, we recommend that after excavation is completed, four additional shallow soil samples are collected from the final excavation bottom to confirm if residual lead remains.

DISCUSSION

Groundwater Subject Property

Groundwater samples collected from two locations on the Subject Property, approximately 30-feet apart and located downgradient of the former dry cleaning area (MW-1, in the alleyway behind 6251 College Avenue) and the Subject Property sanitary sewer lateral (B15, within 307 63rd Street), were found to contain PCE at concentrations below drinking water standards. Neither sample concentration suggest that a significant release occurred at the Subject Property, and both are considered de-minimis with respect to environmental guidance.

The two groundwater sampling locations, MW-1 and B15, are located downgradient of the former dry cleaning area and the Subject Property sanitary sewer lateral (respectively) in locations well chosen to evaluate the potential for significant releases from the Subject Property. The hydrogeology at the Subject Property is primarily low-permeability clayey soils with a relatively flat groundwater gradient trending to the southeast[4]. That type of hydrology would allow diffusion and dispersion through low permeability soils to cause lateral spreading of contamination in both groundwater and soil vapor over the potential release timeline of over 30-years (Red Hanger left the Subject Property in approximate to 1987). Consequently, sample spacing of approximately 30-feet is appropriate to detect if a significant release occurred at the Subject Property.

Groundwater 6235 College Avenue Property (CCV Property)

When evaluated in context with historical grab and monitoring well data, as depicted on Figure 2, these low-level detections in B15 and MW-1 are not the source of groundwater concentrations observed downgradient of the Subject Property that are an order of magnitude higher, as high as 58 µg/L (SB1) and 56 µg/L (B10), at locations proximate to identified releases from the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property). This is consistent with industry knowledge that concentrations of contaminants will decrease with distance from a source area due to natural attenuation processes, including "biodegradation, dispersion, dilution, adsorption, volatilization and chemical or biological stabilization or destruction of contaminants"[5]. The groundwater data provided on Figure 2 demonstrate that concentrations *increase* downgradient of the Subject Property with proximity to the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property). This aligns with the source of elevated groundwater contamination being at the 6235 College Avenue (CCV Property) because "the greater the distance between a source of

[4] LRM, *Supplemental Remedial Investigation Report*, September 27, 2017 [LRM 2017], (Figure 2)
[5] ITRC, *Natural Attenuation of Chlorinated Solvents in Groundwater, Principles and Practices*, September 1999

contamination and a ground water source, the more likely that natural processes will reduce the impacts of contamination"[6].

We note that figures and tables provided in its September 2017 report[7] and conclusions drawn by LRM[8] that there is an absence of PCE impacted groundwater downgradient of the Subject Property were made without considering grab groundwater samples collected for their client from 2008 through 2016 (Figure 2). These samples include detections of PCE ranging from 7 to 18 µg/L from locations B7, B8, and B13 that were collected in the vicinity of the August 2017 non-detections in monitoring wells MW-2 and MW-3 that LRM relied upon for its conclusion. These concentrations exceed those collected on the Subject Property – an inverse gradient to the Subject Property.

Soil Vapor Subject Property

Six soil vapor samples were collected at the Subject Property within 307 63rd Street and in the alleyway behind 6251 College Avenue: three from approximately 7-feet bgs, and three from approximately 15-feet bgs within 30-feet of the former location of dry cleaning equipment, back storage area, and sanitary sewer lateral. These sampling locations and depths were selected because they are either proximate to a potential release source (such as the sanitary sewer or former dry cleaning equipment area), or are downgradient of these areas. Additionally, sample spacing is approximately 30-feet or less, which is effective for source identification in low permeability materials and flat groundwater gradients that enhance lateral spreading of contaminants over time. Therefore, the sampling locations are sufficient to identify if a release that presents a significant threat to human health or the environmental and merits remediation exists at the Subject Property. The highest concentration of PCE identified in these subsurface soil vapor samples is 49.04 µg/m3 and PCE was not detected in vapor samples collected from location B16[9], or in the 7-foot sample from SG-12. Four sub-slab vapor samples were also collected; with the highest measured PCE concentration of 270.60 µg/m3.

All concentrations are substantially below the current commercial soil vapor ESL of 2,100 µg/m3 and are well below soil vapor samples collected proximate to the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property).

[6] Belk, Tom, *Wellhead Protection: A Guide for Small Communities*, 1994
[7] Op. cit., LRM 2017
[8] LRM, *Response to EnviroAssets, Inc. (EAI) Comments on The Supplemental Remedial Investigation Report*, November 6, 2017 [LRM 2017a]
[9] TCE was detected at 38.73 µg/m3 from location B16 at 7-feet bgs.

Soil Vapor 6235 College Avenue Property (CCV Property)

In contrast to the Subject Property, soil vapor samples collected within 30-feet of the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property) collected prior to soil vapor extraction system operation have been as high as 61,000 µg/m3 in shallow soil gas (SG6-7) and 120,000 µg/m3 in deep soil gas (SG2-17) and **every** sample collected within 30-feet of the dry cleaning area, and rear storage area and associated sewer lateral has contained PCE at concentrations well above Subject Property concentrations and associated regulatory screening levels.

Again, the data demonstrate that concentrations ***increase*** with distance when moving away from the Subject Property and ***increase*** with proximately to the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property). This identifies the source on the 6235 College Avenue (CCV Property) as "[v]apor concentrations generally decrease with increasing distance from a subsurface vapor source"[10].

The fact that soil vapor concentrations of PCE increase with proximity to the former dry cleaning equipment area within the 6235 College Avenue (CCV Property) and its associated sewer lateral connection, the storage and delivery area behind the cleaning area, and the sewer lateral that has identified breaks, is conspicuous and self-evident on the two soil vapor contours (shallow and deep) prepared by P&D Environmental and attached to this document (P&D, figures 7 and 8). We note also that these contours highlight very elevated soil vapor concentrations (7,000 µg/m3 in SG7-7, and 37,000 µg/m3 at SG7-17) that have been detected on the 6235 College Avenue (CCV Property) within 30-feet of the Subject Property boundary – presenting a high likelihood that the vapor plume or "mound" emanating from 6235 College Avenue (CCV Property) has "migrate[d] radially in all directions from the source (i.e., upward toward the atmosphere, laterally outward, and downward toward the water table"[11] and spread out laterally onto the Subject Property.

With respect to ACDEH stated interest in clarifying the source of soil vapor at locations SG 11 and SG 4, we note that the soil vapor concentrations observed at these locations (observed as high as 34,000 µg/m3) are significantly higher than those on the Subject Property, demonstrating an inverse gradient from the Subject Property. Additionally, SG 4 and SG 11 are within approximately 12-feet of the sewer lateral at 6235 College Avenue (CCV Property) and over 60-feet from the Subject property sewer lateral or former dry cleaning equipment area. These data indicate that the source of soil vapor at these locations is the former dry cleaning area, and rear

[10] USEPA, *Technical Guide for Addressing Petroleum Vapor Intrusion At Leaking Underground Storage Tank Sites*, June 2015

[11] USEPA, *Conceptual Model Scenarios for the Vapor Intrusion Pathway*, February 2012

storage area and sewer lateral at 6235 College Avenue (CCV Property) and not the Subject Property.

Please note that during preparation of this summary update, we were unable to reconcile soil vapor sample locations presented on figures provided by P&D Environmental Inc.[12] ("P&D") and LRM Consulting Inc.[13] ("LRM") including noting that location SVE3 is depicted as inside the building outlines by LRM and outside the building by P&D. Consequently, we have attached soil vapor figures provided by the two consultants rather than compiling a comprehensive single figure.

CONCLUSION

Based on the data collected to date, concentrations of chlorinated solvents at the Subject Property are below current conservative commercial property screening levels and drinking water standards. Therefore, based on soil, soil vapor, and groundwater data that are all below applicable regulatory guidance and drinking water standards, no further action is warranted at the Subject Property.

Furthermore, these data in context of the comprehensive dataset of soil vapor and groundwater data associated with the identified release from the former dry cleaning area, and rear storage area and sewer lateral at 6235 College Avenue (CCV Property) demonstrate concentration gradients that are opposite what would be anticipated if the Subject Property was an upgradient source of the contamination at 6235 College Avenue (CCV Property).

Based on these data, the "source of elevated soil vapor impacts at adjacent property locations"[14] is the release at 6235 College Avenue (CCV Property).

LIMITATIONS

This project update is presented in accordance with generally accepted professional environmental practices, based on available data discussed within this report, and within the scope of the project. There is no other warranty, either express or implied.

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[12] P&D Environmental Inc., *Site Investigation and Soil Vapor Extraction Report*, July 11, 2016, [P&D 2016], Figures 3-8

[13] Op. cit., LRM 2017, Figures 1-4

[14] Op. cit., LRM 2017a
Report for Former Red Hanger Kleaners, November 6, 2017

Respectfully submitted,

Michael Harrison, P.E.
Principal Engineer

Attachments:
Figure 1 Subject Property Data Summary
Figure 2 Tetrachloroethylene (PCE) in Groundwater Summary
Table 1 Soil Vapor Analytical Summary
Table 2 Soil and Groundwater Analytical Summary - CVOCs
Table 3 Soil Analytical Summary - Inorganics
LRM 2017, Figure 3
P&D 2016, Figures 7 and 8
Laboratory Analytical Reports

B16				
Date	Matrix	Depth	PCE	Units
3/15/2018	S	2	<5.8	µg/Kg
3/15/2018	S	8	<3.8	µg/Kg

B16V				
Date	Matrix	Depth	PCE	Units
3/15/2018	V	7	<4.12	µg/m3
3/15/2018	V	15	<4.91	µg/m3

VP-2				
Date	Matrix	Depth	PCE	Units
3/14/2018	V	NA	270.60	µg/m3

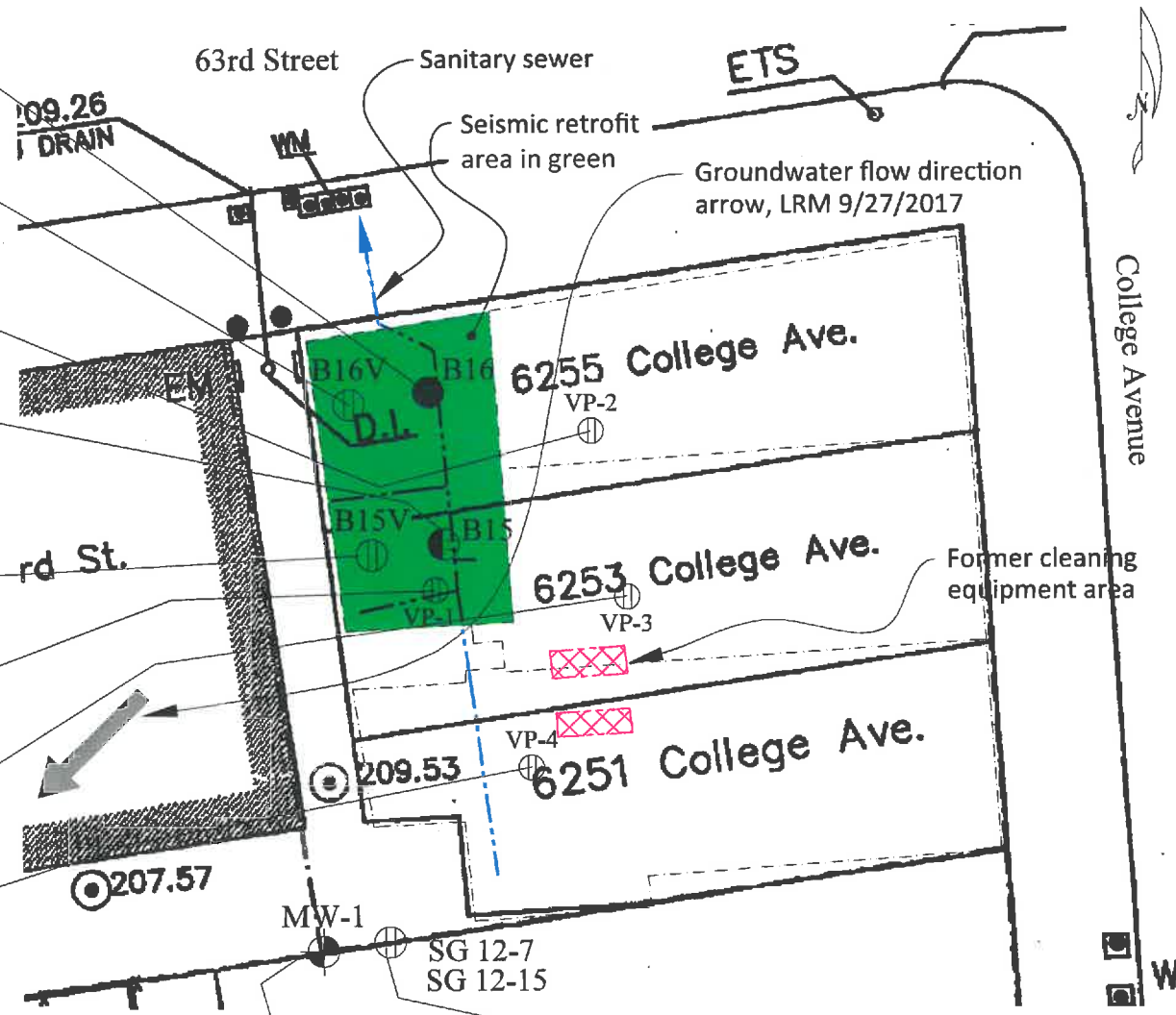
B15				
Date	Matrix	Depth	PCE	Units
3/15/2018	S	2	<4.6	µg/Kg
3/15/2018	S	8	<3.9	µg/Kg
3/16/2018	W	23.5	4.6	µg/L

B15V				
3/15/2018	V	7	49.04	µg/m3
3/15/2018	V	15	14.06	µg/m3

VP-1				
Date	Matrix	Depth	PCE	Units
3/14/2018	V	NA	78.87	µg/m3

VP-3				
Date	Matrix	Depth	PCE	Units
3/14/2018	V	NA	239.11	µg/m3

VP-4				
Date	Matrix	Depth	PCE	Units
3/14/2018	V	NA	12.69	µg/m3



MW-1 (screen 17-27)				
Date	Matrix	Depth	PCE	Units
7/25/2017	S	5	<5.0	µg/Kg
7/25/2017	S	15	<5.0	µg/Kg
7/25/2017	S	25	<10	µg/Kg
8/9/2017	W	17.6	1.2	µg/L

SG-12				
Date	Matrix	Depth	PCE	Units
8/7/2017	V	7	<3.4	µg/m3
8/7/2017	V	15	3.9	µg/m3

Legend

B16 — Soil sample location

B15 — Soil and groundwater sample location

B16V — Vapor sample location

MW-1 — Monitoring well

Matrix: S-soil, V-soil vapor, W-water

0 15

Scale in Feet

Note: background excerpted from Virgil Chavez Land Surveying, "Site Map". Sample locations and other features are approximate.

EnviroAssets, Inc.
www.EnviroAssets.com
V: (888) 748-8820
V: (510) 346-9500 F: (510) 346-9501

No.	Date	Revision	Approved

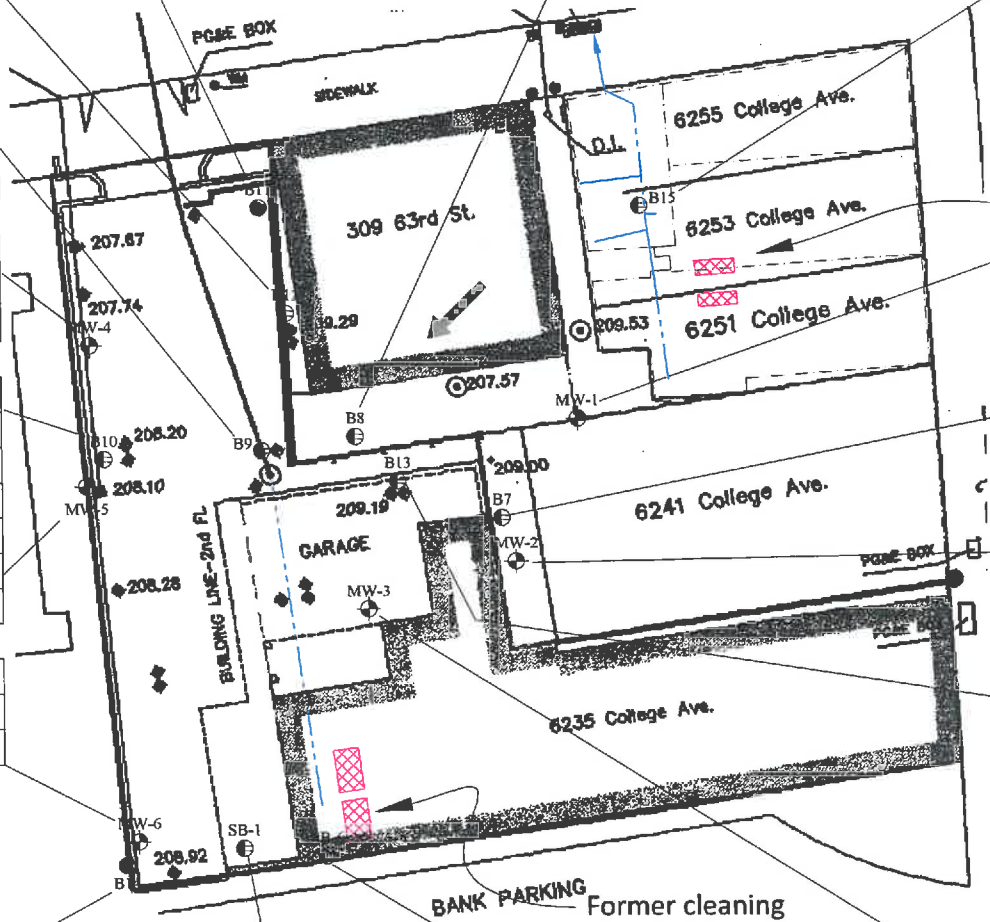
Date:	4/2/2018
Drawn:	MH
File Name:	EA23490-18

SUBJECT PROPERTY DATA SUMMARY

307 63rd Street; and 6251, 6253, and 6255 College Avenue

Oakland, California

Figure
1
Project
EA270



B12		
Date	Depth	PCE
3/28/2016	26.8	3

B11		
Date	Depth	PCE
3/28/2016	18.5	18

B8		
Date	Depth	PCE
8/14/2008	21.2	7

B15		
Date	Depth	PCE
3/16/2018	23.5	4.6

B9		
Date	Depth	PCE
3/28/2016	16.2	38

MW-4 (screen from 17-27)		
Date	DTW	PCE
8/8/2017	16.15	<0.50

MW-1 (screen 17-27)		
Date	DTW	PCE
8/9/2017	17.6	1.2

B10		
Date	Depth	PCE
3/28/2016	15.5	56

B7		
Date	Depth	PCE
8/14/2008	22.3	12

MW-5 (screen from 18-28)		
Date	DTW	PCE
8/8/2017	16.55	<0.50

MW-2 (screen 17-27)		
Date	DTW	PCE
8/9/2017	17.5	<0.50

MW-6 (screen 18-28)		
Date	DTW	PCE
8/8/2017	17.8	1.9

B13		
Date	Depth	PCE
3/28/2016	17.2	18

B14		
Date	Depth	PCE
3/29/2016	19.3	2.1

SB1		
Date	Depth	PCE
5/3/2005	15.8	58

SB6		
Date	Depth	PCE
6/28/2005	16	15

MW-3 (screen 17-27)		
Date	DTW	PCE
8/8/2017	17.67	<0.50

Legend

PCE concentrations provided in µg/L

Groundwater flow direction arrow, LRM 9/27/2017

Sanitary sewer lateral.

MW-1 Monitoring well location

B15 Soil and groundwater sample location

0 15 30

Scale in Feet

Note: background excerpted from Virgil Chavez Land Surveying, "Site Map". Sample locations and other features are approximate.

EnviroAssets, Inc.
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V: (510) 346-9500 F: (510) 346-9501

No.	Date	Revision	Approved

Date: 4/4/2018
Drawn: MH
File Name: EA23490-18

TETRACHLOROETHYLENE (PCE) IN GROUNDWATER SUMMARY

Red Hanger Kleaners
Oakland, California

Figure 2
Project EA270

TABLE 1: SOIL VAPOR ANALYTICAL SUMMARY
307 63rd Street; and 6251, 6253, and 6255 College Avenue
Oakland, California

Sample Location	Field Sample ID	Sample Date	Sample Type	Depth	Units	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-Dichloroethylene (c-1,2-DCE)	trans-1,2-Dichloroethylene (trans-1,2-DCE)	Vinyl chloride	Helium (presented in %)
Environmental Screening Level (ESL) - commercial						*2,100*	*3,000*	*35,000*	*350,000*	*160*	*1%**
B15V	V-B15-7-A	3/15/2018	PRI	7	µg/m3	**49.04**	**12.92**	<6.93	<4.65	<4.18	<0.150%
B15V	V-B15-15-A	3/15/2018	PRI	15	µg/m3	**14.06**	**32.85**	<6.34	<4.25	<3.82	**0.757%**
B16V	V-B16-7-A	3/15/2018	PRI	7	µg/m3	<4.12	**38.73**	<5.33	<3.58	<3.21	<0.081%
B16V	V-B16-15-A	3/15/2018	PRI	15	µg/m3	<4.91	<7.44	<6.34	<4.25	<3.82	**0.101 J%**
VP-1	V-VP-1-A	3/14/2018	PRI	NA	µg/m3	**78.87**	<7.82	<6.66	<4.47	<4.02	<0.117%
VP-2	V-VP-2-A	3/14/2018	PRI	NA	µg/m3	**270.60**	<8.13	<6.93	<4.65	<4.18	<0.120%
VP-3	V-VP-3-A	3/14/2018	PRI	NA	µg/m3	**239.11**	<8.44	<7.19	<4.83	<4.34	<0.129%
VP-4	V-VP-4-A	3/14/2018	PRI	NA	µg/m3	**12.69**	<8.01	<6.82	<4.58	<4.11	<0.123%
SG-12	SG-12-7	8/7/2017	PRI	7	µg/m3	<3.4	<2.8	<2.0	<2.0	<1.3	<0.0505%
SG-12	SG-12-15	8/7/2017	PRI	15	µg/m3	**3.9**	<2.8	<2.0	<2.0	<1.3	<0.050%

Note:
<# not detected below provided detection limit
NA Not applicable (sub-slab sampling collected immediately beneath building slab)
Use of the subslab ESLs for the subslab line of evidence assumes an intact slab
* DTSC guidance allows for ambient air leak up to 5%. Tracer concentration of ~20% helium used in sampling shrouc
J Estimated concentration

TABLE 2: SOIL AND GROUNDWATER ANALYTICAL SUMMARY - CVOCs
307 63rd Street; and 6251, 6253, and 6255 College Avenue
Oakland, California

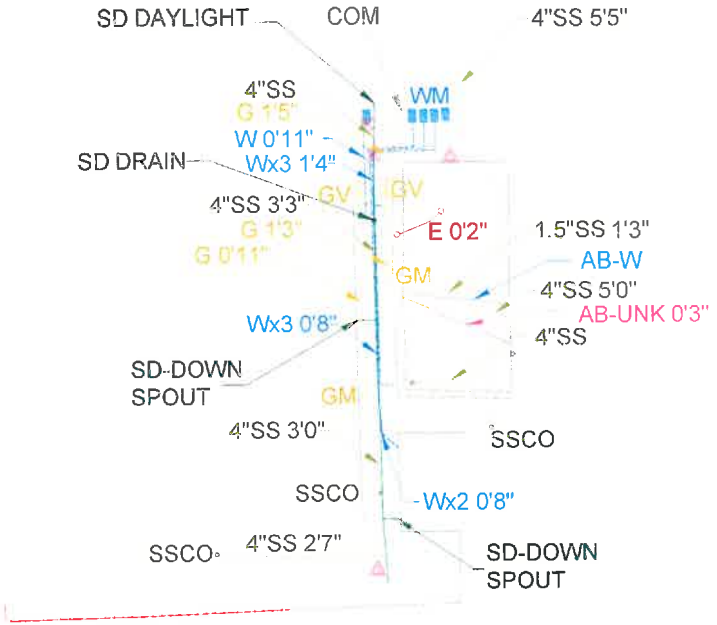
Sample Location	Matrix	Field Sample ID	Sample Date	Sample Depth	Units	Tetrachloroethylene (PCE)	Trichloroethylene (TCE)	cis-1,2-Dichloroethylene (c-1,2-DCE)	trans-1,2-Dichloroethylene (trans-1,2-DCE)	Vinyl chloride
B15	S	B15 S/GW-S2-A	3/15/2018	2	µg/Kg	<4.6	<4.6	<4.6	<4.6	<4.6
B15	S	B15 S/GW-S8-A	3/15/2018	8	µg/Kg	<3.9	<3.9	<3.9	<3.9	<3.9
B16	S	B16 S/GW-S2-A	3/15/2018	2	µg/Kg	<5.8	<5.8	<5.8	<5.8	<5.8
B16	S	B16 S/GW-S8-A	3/15/2018	8	µg/Kg	<3.8	<3.8	<3.8	<3.8	<3.8
B16	W	B16 S/GW-W	3/16/2018	23.5	µg/L	**4.6**	**0.69**	<0.50	<0.50	<0.50
MW-1	S	MW-1 @ 5	7/25/2017	5	µg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0
MW-1	S	MW-1 @ 15	7/25/2017	15	µg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0
MW-1	S	MW-1-25'	7/25/2017	25	µg/Kg	<10	<10	<10	<10	<10
MW-1	W	MW-1	8/9/2017	17.6	µg/L	**1.2**	<0.50	<0.50	<0.50	<0.50

Note:
S soil
W water
<# not detected below provided detection limit

TABLE 3: SOIL ANALYTICAL SUMMARY - INORGANICS
307 63rd Street; and 6251, 6253, and 6255 College Avenue
Oakland, California

Sample Location	B15	B16
Sample Name	B15 S/GW-S2-A	B16 S/GW-S2-A
Lab Sample ID	720-85358-1	720-85358-3
Sample Date	3/15/2018	3/15/2018
Sample Depth	2	2
Metals/Inorganics Results Presented in mg/Kg		
Antimony	2.8	<1.8
Arsenic	5.9	4
Barium	150	180
Beryllium	0.47	0.43
Cadmium	<0.41	<0.45
Chromium	140	33
Cobalt	11	8.5
Copper	50	32
Lead	34	240
Mercury	0.039	0.085
Molybdenum	16	<1.8
Nickel	51	32
Selenium	<3.3	<3.6
Silver	<0.81	<0.91
Thallium	<1.6	<1.8
Vanadium	41	36
Zinc	80	110
STLC Results Presented in mg/L		
Chromium	0.22	
Lead		160
TCLP Results Presented in mg/L		
Chromium	<0.10	
Lead		0.29

Note:
<# Not detected below listed detection limit



NOTES

Not all utilities may be shown.
Some laterals were not accessible & were therefore not located.
Depths shown are to center of conductive utility & are generally +/-10% of actual depth, when not distorted by adjacent conductors. Accuracy of electronic depth decreases when adjacent utilities are located within 5 ft.
Critical depths require verification by potholing.
Sanitary & storm depths are measured from rim to invert level.

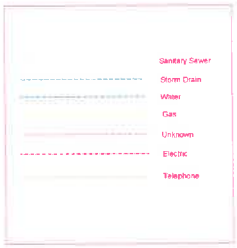
ABREVIATIONS

ABBREVIATIONS

AB	ABANDONED
CA	COMPRESSED AIR
CB	CATCH BASIN
CI	CAST IRON
CM	COMMUNICATION
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CP	TEST CORROSION PROTECTION BOX
E	ELECTRIC
EOP	END OF PIPE
EOT	END OF TRACE
FH	FIRE HYDRANT
FO	FIBER OPTIC
FW	FIRE WATER
G	GAS
GA	GAS ANODE
GM	GAS METER
GBX	GAS BOX
G RSR	GAS RISER
GV	GAS VALVE
HV	HIGH VOLTAGE
IBX	IRRIGATION BOX
IRC	IRRIGATION CONTROL
ICV	IRRIGATION CONTROL VALVE
IRR	IRRIGATION
LV	LOW VOLTAGE
MH	MANHOLE
NL	NOT LOCATED
OE	OPEN END
PED	PEDESTAL
RCB	REINFORCED CONCRETE BOX
RSR	RISER
SD	STORM DRAIN
SIG	SIGNAL
SL	STREET LIGHT
SS	SANITARY SEWER
T	TELEPHONE
TOP	TOP OF PIPE
TON	TOP OF VALVE NUT
TR	TRAFFIC SIGNAL
TRP	TRAFFIC SIGNAL POLE
TRBX	TRAFFIC SIGNAL BOX
WBX	WATER BOX
WM	WATER METER
WV	WATER VALVE
UN	UNKNOWN UTILITY

N

LEGEND:



DIAMETER (INCHES)
UTILITY NAME
DEPTH

6SS 4'10"

Legend

- Soil gas sampling-Existing Well
- Groundwater monitoring well
- Soil gas well, 7 and 14/15 feet bgs
- Water line
- Sanitary sewer line
- Storm drain

Well ID	Date	PCE	TCE
SG 11-17	8/10/2016	34000	<1200
	8/8/2017	10000	37

Well ID	Date	PCE	TCE
SVE 4	8/8/2017	**1200**	<2.8

Well ID	Date	PCE	TCE
SG 3-17	12/2/2015	62000	<130
	8/10/2016	10000	<65
	8/8/2017	5900	<2.8

Well ID	Date	PCE	TCE
SG 2-17	12/2/2015	120000	<810
	8/10/2016	39000	<68
	8/8/2017	6600	4.6

Well ID	Date	PCE	TCE
SG 6-17	12/2/2015	41000	<110
	8/10/2016	8600	<69
	8/8/2017	**420**	<2.8

Well ID	Date	PCE	TCE
SG 4-17	8/10/2016	9800	<64
	8/8/2017	**480**	<2.8

Well ID	Date	PCE	TCE
SG 12-7	8/7/2017	<2.8	<2.8
SG 12-15	8/7/2017	3.9	<2.8

Well ID	Date	PCE	TCE
SG13-7	8/8/2017	**930**	<2.8
SG13-14	8/8/2017	**560**	<2.8

Well ID	Date	PCE	TCE
SG 7-17	12/2/2015	37000	<200
	8/10/2016	5700	<66
	8/7/2017	2600	3

63rd Street
Mehta Family Ownership (2010 to present)
305 and 307 63rd St Bldg
Bouzos Family Ownership (1949 to present)
Sidewalk
College Avenue
6253
309 63rd Street
6251 College Avenue
Gordon Family Ownership (2005 to present)
321 63rd Street
SG-12 (7 and 15 ft bgs)
SG-13 (7 and 14 ft bgs)
6241-6247 College Avenue
College Avenue
6235-6239 College Avenue
Gordon Family Ownership (1984-2005)
College Claremont Ownership (2005 to present)

B11, B12, B13, B10, B9, B8, B7
SG11-17, SG1-7, SG4-17, SG4-7, SG3-17, SG2-7, SG2-17, SG7-17, SG7-7, SG6-7, SG6-17, SG5-7, SG5-17, SG10-7, SG9-17, SG8-7
SVE4, SVE1, SVE2, SVE5, SVE8, SVE3, SVE-5, SVE7, SVE6
MW-4, MW-5, MW-1, MW-2, MW-3, MW-6

0 20 ft
N
0 4 m

Note: Building extents at 321 and 323 63rd Street are approximate.

- Manhole
- Drain inlet
- Sanitary sewer cleanout
- Soil vapor extraction point
- Previous boring
- Building outline
- Fence
- Garage

Property Ownership

- Bouzos Family, 1949 to present
- College Claremont, 2005 to present
- Gordon Family, 1984-2005
- Gordon Family, 2005 to present
- Mehta Family, 2010 to present

Former dry cleaners use

5900 PCE concentrations in ug/m3
Bolded detections reflect exceedance of residential ESL of 240 ug/m3
Bolded and shaded detections reflect exceedance of both residential ESL and commercial/industrial ESL (2,100 ug/m3)

Basemap Source: Fuguro, 2017

PCE AND TCE CONCENTRATIONS IN SOIL VAPOR - 2015-2017

FORMER RED HANGER KLEANERS OAKLAND, CALIFORNIA

LRM consulting inc.

Date: **8/17/2017**

Figure: 3

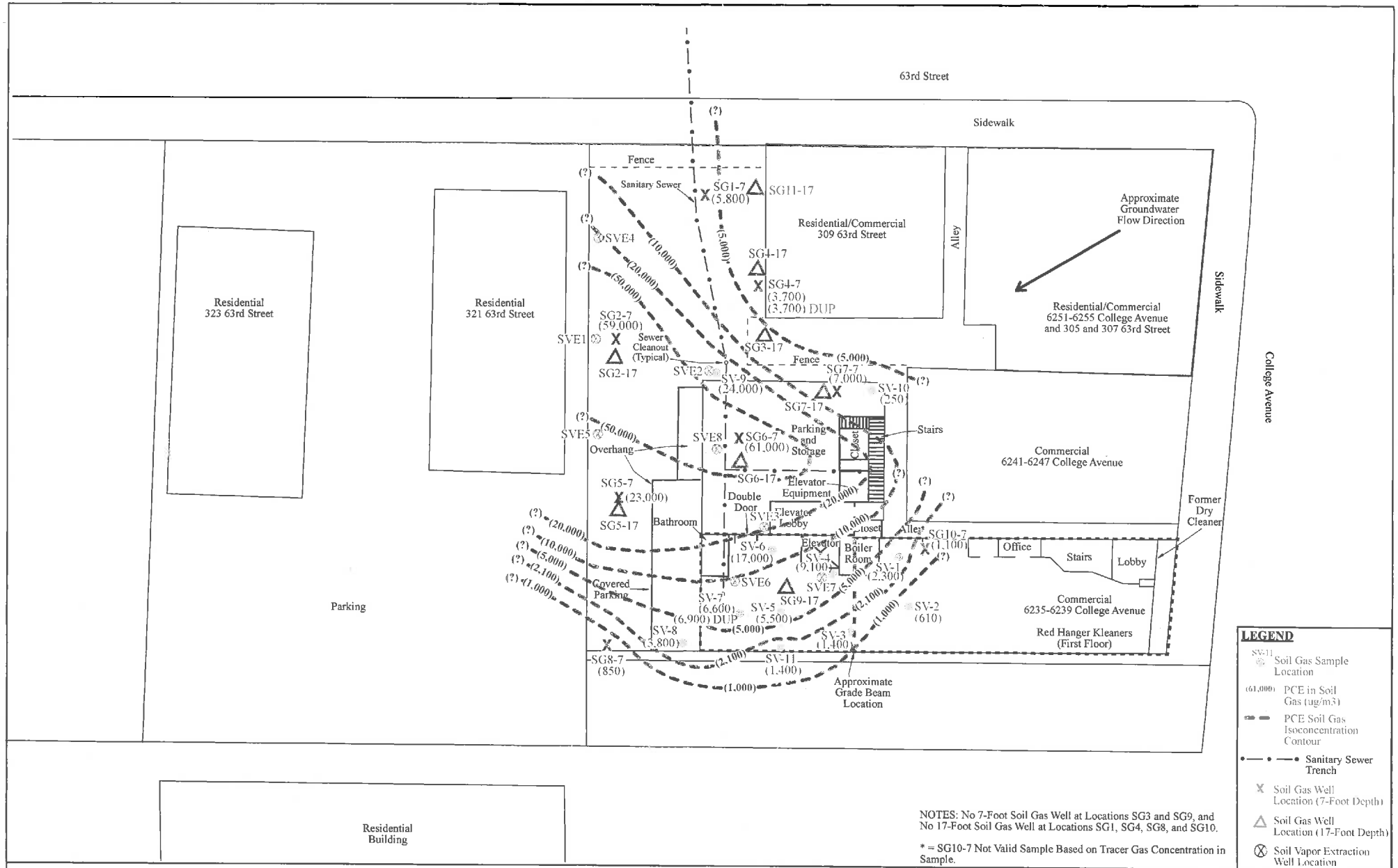


Figure 7
Site Plan Showing PCE Concentrations in Shallow Soil Gas
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 15 30
Approximate Scale in Feet

N

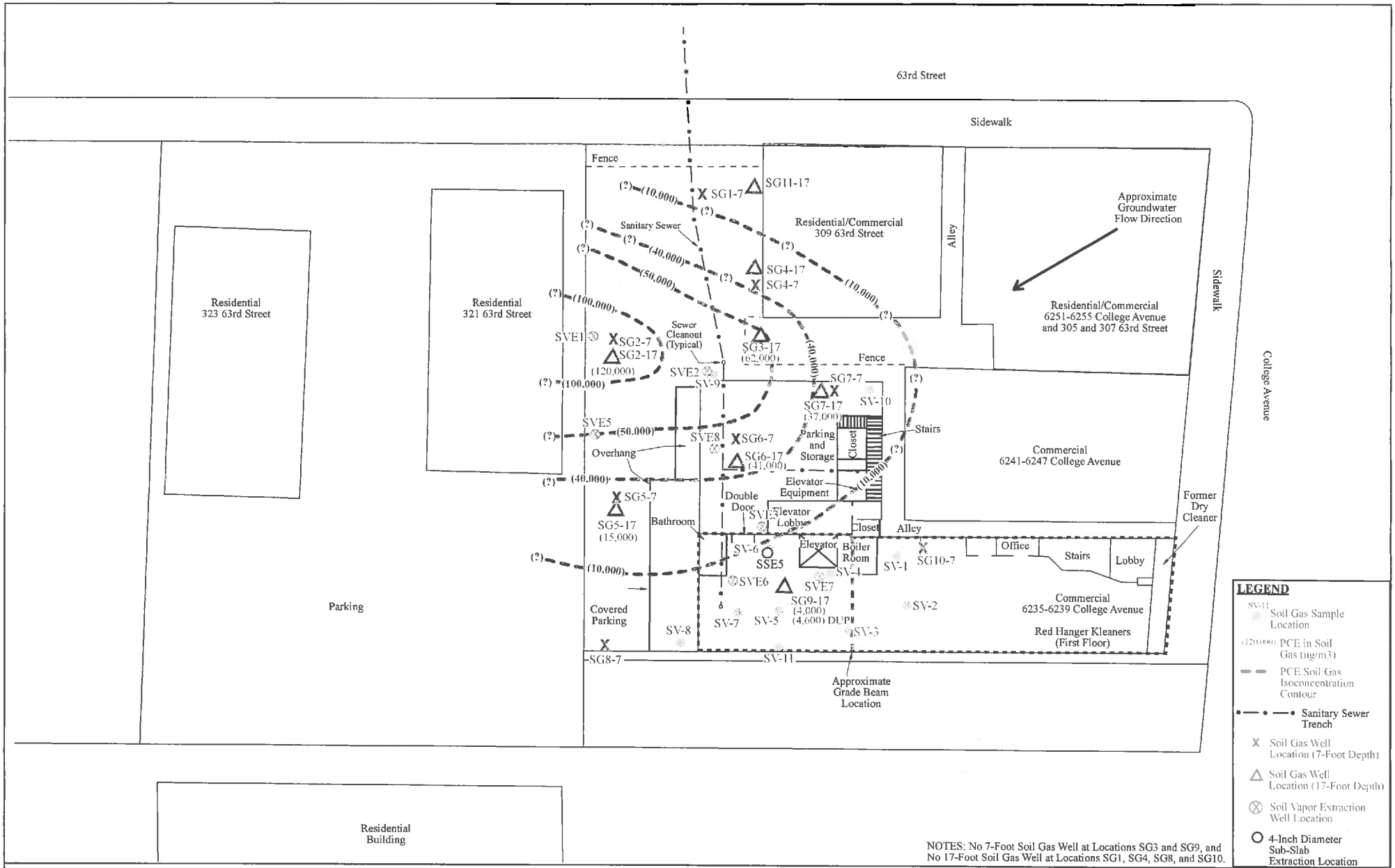


Figure 8
Site Plan Showing PCE Concentrations in Deep Soil Gas
Red Hanger Kleaners
6239 College Avenue
Oakland, California

Base Map from:
Gordon Building, July 30, 2007, Alameda County Assessor's Map, Revised June 15,1989, and Google Earth, 2015

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 15 30
Approximate Scale in Feet

N

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 720-85358-3
Client Project/Site: Red Hanger Cleaners

For:
EnviroAssets Inc
6037 La Salle Ave
Oakland, California 94611-3227

Attn: Michael Harrison

Authorized for release by:
3/29/2018 5:13:19 PM

Micah Smith, Project Manager II
(916)374-4302
micah.smith@testamericainc.com

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 720-85358-1
Client Project/Site: Red Hanger Cleaners
Revision: 1

For:
EnviroAssets Inc
6037 La Salle Ave
Oakland, California 94611-3227

Attn: Michael Harrison

Authorized for release by:
4/5/2018 9:34:35 AM
Criselda Caparas, Project Management Assistant I
criselda.caparas@testamericainc.com

Designee for

Micah Smith, Project Manager II
(916)374-4302
micah.smith@testamericainc.com

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

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

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-85358-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-85358-1

Comments
Revise report on 04/05/2018 Lab needs to correct sample ID on water.
No additional comments.

Receipt
The samples were received on 3/16/2018 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 720-240883 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: B15 S/GW-S8-A (720-85358-2) and B16 S/GW-S8-A (720-85358-4).

Method(s) 8260B: The following analyte(s) recovered outside control limits for the LCSD associated with analytical batch 720-240961: Trichlorofluoromethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 720-240961 recovered outside control limits for the following analytes: 1,2-Dibromo-3-Chloropropane.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-1

Client Sample ID: B15 S/GW-S8-A — Lab Sample ID: 720-85358-2

No Detections.

Client Sample ID: B16 S/GW-S8-A — Lab Sample ID: 720-85358-4

No Detections.

Client Sample ID: B15 S/GW-W — Lab Sample ID: 720-85358-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	4.6		0.50		ug/L	1		8260B	Total/NA
Trichloroethene	0.69		0.50		ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 720-85358-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: B15 S/GW-S8-A
Date Collected: 03/15/18 11:12
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Acetone	ND		39		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Benzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Dichlorobromomethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Bromobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chlorobromomethane	ND		15		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Bromoform	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Bromomethane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
2-Butanone (MEK)	ND		39		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
n-Butylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
sec-Butylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
tert-Butylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Carbon disulfide	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Carbon tetrachloride	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chloroethane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chloroform	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chloromethane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
2-Chlorotoluene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
4-Chlorotoluene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Chlorodibromomethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2-Dichlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,3-Dichlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,4-Dichlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,3-Dichloropropane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1-Dichloropropene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2-Dibromo-3-Chloropropane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Ethylene Dibromide	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Dibromomethane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Dichlorodifluoromethane	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1-Dichloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2-Dichloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1-Dichloroethene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
cis-1,2-Dichloroethene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
trans-1,2-Dichloroethene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2-Dichloropropane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
cis-1,3-Dichloropropene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
trans-1,3-Dichloropropene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Ethylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Hexachlorobutadiene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
2-Hexanone	ND		39		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Isopropylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
4-Isopropyltoluene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Methylene Chloride	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
4-Methyl-2-pentanone (MIBK)	ND		39		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Naphthalene	ND		7.7		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
N-Propylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Styrene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1,1,2-Tetrachloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1

Client Sample ID: B15 S/GW-S8-A
Date Collected: 03/15/18 11:12
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Tetrachloroethene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Toluene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2,3-Trichlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2,4-Trichlorobenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1,1-Trichloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1,2-Trichloroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Trichloroethene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Trichlorofluoromethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2,3-Trichloropropane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,2,4-Trimethylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
1,3,5-Trimethylbenzene	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Vinyl acetate	ND		15		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Vinyl chloride	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
Xylenes, Total	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1
2,2-Dichloropropane	ND		3.9		ug/Kg		03/16/18 16:30	03/19/18 22:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*45 - 131*	*03/16/18 16:30*	*03/19/18 22:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*60 - 140*	*03/16/18 16:30*	*03/19/18 22:48*	*1*
Toluene-d8 (Surr)	*97*		*58 - 140*	*03/16/18 16:30*	*03/19/18 22:48*	*1*

Client Sample ID: B16 S/GW-S8-A
Date Collected: 03/15/18 13:13
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Acetone	ND		38		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Benzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Dichlorobromomethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Bromobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chlorobromomethane	ND		15		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Bromoform	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Bromomethane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
2-Butanone (MEK)	ND		38		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
n-Butylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
sec-Butylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
tert-Butylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Carbon disulfide	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Carbon tetrachloride	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chloroethane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chloroform	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chloromethane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
2-Chlorotoluene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
4-Chlorotoluene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Chlorodibromomethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2-Dichlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,3-Dichlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,4-Dichlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,3-Dichloropropane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1-Dichloropropene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2-Dibromo-3-Chloropropane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Ethylene Dibromide	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Dibromomethane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Dichlorodifluoromethane	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1-Dichloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2-Dichloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1-Dichloroethene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
cis-1,2-Dichloroethene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
trans-1,2-Dichloroethene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2-Dichloropropane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
cis-1,3-Dichloropropene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
trans-1,3-Dichloropropene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Ethylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Hexachlorobutadiene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
2-Hexanone	ND		38		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Isopropylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
4-Isopropyltoluene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Methylene Chloride	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
4-Methyl-2-pentanone (MIBK)	ND		38		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Naphthalene	ND		7.5		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
N-Propylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Styrene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1,1,2-Tetrachloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1

Client Sample ID: B16 S/GW-S8-A
Date Collected: 03/15/18 13:13
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Tetrachloroethene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Toluene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2,3-Trichlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2,4-Trichlorobenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1,1-Trichloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1,2-Trichloroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Trichloroethene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Trichlorofluoromethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2,3-Trichloropropane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,2,4-Trimethylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
1,3,5-Trimethylbenzene	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Vinyl acetate	ND		15		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Vinyl chloride	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
Xylenes, Total	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1
2,2-Dichloropropane	ND		3.8		ug/Kg		03/16/18 16:30	03/19/18 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*45 - 131*	*03/16/18 16:30*	*03/19/18 23:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 140*	*03/16/18 16:30*	*03/19/18 23:18*	*1*
Toluene-d8 (Surr)	*97*		*58 - 140*	*03/16/18 16:30*	*03/19/18 23:18*	*1*

Client Sample ID: B15 S/GW-W
Date Collected: 03/16/18 09:35
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			03/21/18 03:09	1
Acetone	ND		50		ug/L			03/21/18 03:09	1
Benzene	ND		0.50		ug/L			03/21/18 03:09	1
Dichlorobromomethane	ND		0.50		ug/L			03/21/18 03:09	1
Bromobenzene	ND		1.0		ug/L			03/21/18 03:09	1
Chlorobromomethane	ND		1.0		ug/L			03/21/18 03:09	1
Bromoform	ND		1.0		ug/L			03/21/18 03:09	1
Bromomethane	ND		1.0		ug/L			03/21/18 03:09	1
2-Butanone (MEK)	ND		50		ug/L			03/21/18 03:09	1
n-Butylbenzene	ND		1.0		ug/L			03/21/18 03:09	1
sec-Butylbenzene	ND		1.0		ug/L			03/21/18 03:09	1
tert-Butylbenzene	ND		1.0		ug/L			03/21/18 03:09	1
Carbon disulfide	ND		5.0		ug/L			03/21/18 03:09	1
Carbon tetrachloride	ND		0.50		ug/L			03/21/18 03:09	1
Chlorobenzene	ND		0.50		ug/L			03/21/18 03:09	1
Chloroethane	ND		1.0		ug/L			03/21/18 03:09	1
Chloroform	ND		1.0		ug/L			03/21/18 03:09	1
Chloromethane	ND		1.0		ug/L			03/21/18 03:09	1
2-Chlorotoluene	ND		0.50		ug/L			03/21/18 03:09	1
4-Chlorotoluene	ND		0.50		ug/L			03/21/18 03:09	1
Chlorodibromomethane	ND		0.50		ug/L			03/21/18 03:09	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/21/18 03:09	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/21/18 03:09	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/21/18 03:09	1
1,3-Dichloropropane	ND		1.0		ug/L			03/21/18 03:09	1
1,1-Dichloropropene	ND		0.50		ug/L			03/21/18 03:09	1
1,2-Dibromo-3-Chloropropane	ND	*	1.0		ug/L			03/21/18 03:09	1
Ethylene Dibromide	ND		0.50		ug/L			03/21/18 03:09	1
Dibromomethane	ND		0.50		ug/L			03/21/18 03:09	1
Dichlorodifluoromethane	ND		0.50		ug/L			03/21/18 03:09	1
1,1-Dichloroethane	ND		0.50		ug/L			03/21/18 03:09	1
1,2-Dichloroethane	ND		0.50		ug/L			03/21/18 03:09	1
1,1-Dichloroethene	ND		0.50		ug/L			03/21/18 03:09	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/21/18 03:09	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/21/18 03:09	1
1,2-Dichloropropane	ND		0.50		ug/L			03/21/18 03:09	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/21/18 03:09	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/21/18 03:09	1
Ethylbenzene	ND		0.50		ug/L			03/21/18 03:09	1
Hexachlorobutadiene	ND		1.0		ug/L			03/21/18 03:09	1
2-Hexanone	ND		50		ug/L			03/21/18 03:09	1
Isopropylbenzene	ND		0.50		ug/L			03/21/18 03:09	1
4-Isopropyltoluene	ND		1.0		ug/L			03/21/18 03:09	1
Methylene Chloride	ND		5.0		ug/L			03/21/18 03:09	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			03/21/18 03:09	1
Naphthalene	ND		1.0		ug/L			03/21/18 03:09	1
N-Propylbenzene	ND		1.0		ug/L			03/21/18 03:09	1
Styrene	ND		0.50		ug/L			03/21/18 03:09	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/21/18 03:09	1

Client Sample ID: B15 S/GW-W
Date Collected: 03/16/18 09:35
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/21/18 03:09	1
Tetrachloroethene	**4.6**		0.50		ug/L			03/21/18 03:09	1
Toluene	ND		0.50		ug/L			03/21/18 03:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/21/18 03:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/21/18 03:09	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/21/18 03:09	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/21/18 03:09	1
Trichloroethene	**0.69**		0.50		ug/L			03/21/18 03:09	1
Trichlorofluoromethane	ND	*	1.0		ug/L			03/21/18 03:09	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/21/18 03:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/21/18 03:09	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/21/18 03:09	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/21/18 03:09	1
Vinyl acetate	ND		10		ug/L			03/21/18 03:09	1
Vinyl chloride	ND		0.50		ug/L			03/21/18 03:09	1
Xylenes, Total	ND		0.50		ug/L			03/21/18 03:09	1
2,2-Dichloropropane	ND		0.50		ug/L			03/21/18 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*77*		*67 - 130*		*03/21/18 03:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*		*03/21/18 03:09*	*1*
Toluene-d8 (Surr)	*84*		*70 - 130*		*03/21/18 03:09*	*1*

Client Sample ID: TRIP BLANK
Date Collected: 03/16/18 00:00
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			03/20/18 10:30	1
Acetone	ND		50		ug/L			03/20/18 10:30	1
Benzene	ND		0.50		ug/L			03/20/18 10:30	1
Dichlorobromomethane	ND		0.50		ug/L			03/20/18 10:30	1
Bromobenzene	ND		1.0		ug/L			03/20/18 10:30	1
Chlorobromomethane	ND		1.0		ug/L			03/20/18 10:30	1
Bromoform	ND		1.0		ug/L			03/20/18 10:30	1
Bromomethane	ND		1.0		ug/L			03/20/18 10:30	1
2-Butanone (MEK)	ND		50		ug/L			03/20/18 10:30	1
n-Butylbenzene	ND		1.0		ug/L			03/20/18 10:30	1
sec-Butylbenzene	ND		1.0		ug/L			03/20/18 10:30	1
tert-Butylbenzene	ND		1.0		ug/L			03/20/18 10:30	1
Carbon disulfide	ND		5.0		ug/L			03/20/18 10:30	1
Carbon tetrachloride	ND		0.50		ug/L			03/20/18 10:30	1
Chlorobenzene	ND		0.50		ug/L			03/20/18 10:30	1
Chloroethane	ND		1.0		ug/L			03/20/18 10:30	1
Chloroform	ND		1.0		ug/L			03/20/18 10:30	1
Chloromethane	ND		1.0		ug/L			03/20/18 10:30	1
2-Chlorotoluene	ND		0.50		ug/L			03/20/18 10:30	1
4-Chlorotoluene	ND		0.50		ug/L			03/20/18 10:30	1
Chlorodibromomethane	ND		0.50		ug/L			03/20/18 10:30	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/20/18 10:30	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/20/18 10:30	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/20/18 10:30	1
1,3-Dichloropropane	ND		1.0		ug/L			03/20/18 10:30	1
1,1-Dichloropropene	ND		0.50		ug/L			03/20/18 10:30	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/20/18 10:30	1
Ethylene Dibromide	ND		0.50		ug/L			03/20/18 10:30	1
Dibromomethane	ND		0.50		ug/L			03/20/18 10:30	1
Dichlorodifluoromethane	ND		0.50		ug/L			03/20/18 10:30	1
1,1-Dichloroethane	ND		0.50		ug/L			03/20/18 10:30	1
1,2-Dichloroethane	ND		0.50		ug/L			03/20/18 10:30	1
1,1-Dichloroethene	ND		0.50		ug/L			03/20/18 10:30	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 10:30	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 10:30	1
1,2-Dichloropropane	ND		0.50		ug/L			03/20/18 10:30	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 10:30	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 10:30	1
Ethylbenzene	ND		0.50		ug/L			03/20/18 10:30	1
Hexachlorobutadiene	ND		1.0		ug/L			03/20/18 10:30	1
2-Hexanone	ND		50		ug/L			03/20/18 10:30	1
Isopropylbenzene	ND		0.50		ug/L			03/20/18 10:30	1
4-Isopropyltoluene	ND		1.0		ug/L			03/20/18 10:30	1
Methylene Chloride	ND		5.0		ug/L			03/20/18 10:30	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			03/20/18 10:30	1
Naphthalene	ND		1.0		ug/L			03/20/18 10:30	1
N-Propylbenzene	ND		1.0		ug/L			03/20/18 10:30	1
Styrene	ND		0.50		ug/L			03/20/18 10:30	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 10:30	1

Client Sample ID: TRIP BLANK
Date Collected: 03/16/18 00:00
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 10:30	1
Tetrachloroethene	ND		0.50		ug/L			03/20/18 10:30	1
Toluene	ND		0.50		ug/L			03/20/18 10:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/20/18 10:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/20/18 10:30	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/20/18 10:30	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/20/18 10:30	1
Trichloroethene	ND		0.50		ug/L			03/20/18 10:30	1
Trichlorofluoromethane	ND		1.0		ug/L			03/20/18 10:30	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/20/18 10:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/20/18 10:30	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/20/18 10:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/20/18 10:30	1
Vinyl acetate	ND		10		ug/L			03/20/18 10:30	1
Vinyl chloride	ND		0.50		ug/L			03/20/18 10:30	1
Xylenes, Total	ND		0.50		ug/L			03/20/18 10:30	1
2,2-Dichloropropane	ND		0.50		ug/L			03/20/18 10:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*03/20/18 10:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*		*03/20/18 10:30*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/20/18 10:30*	*1*

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

Lab Sample ID: MB 720-240883/4
Matrix: Solid
Analysis Batch: 240883

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg			03/19/18 19:44	1
Acetone	ND		50		ug/Kg			03/19/18 19:44	1
Benzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Dichlorobromomethane	ND		5.0		ug/Kg			03/19/18 19:44	1
Bromobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Chlorobromomethane	ND		20		ug/Kg			03/19/18 19:44	1
Bromoform	ND		5.0		ug/Kg			03/19/18 19:44	1
Bromomethane	ND		10		ug/Kg			03/19/18 19:44	1
2-Butanone (MEK)	ND		50		ug/Kg			03/19/18 19:44	1
n-Butylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
sec-Butylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
tert-Butylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Carbon disulfide	ND		5.0		ug/Kg			03/19/18 19:44	1
Carbon tetrachloride	ND		5.0		ug/Kg			03/19/18 19:44	1
Chlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Chloroethane	ND		10		ug/Kg			03/19/18 19:44	1
Chloroform	ND		5.0		ug/Kg			03/19/18 19:44	1
Chloromethane	ND		10		ug/Kg			03/19/18 19:44	1
2-Chlorotoluene	ND		5.0		ug/Kg			03/19/18 19:44	1
4-Chlorotoluene	ND		5.0		ug/Kg			03/19/18 19:44	1
Chlorodibromomethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,3-Dichloropropane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1-Dichloropropene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2-Dibromo-3-Chloropropane	ND		10		ug/Kg			03/19/18 19:44	1
Ethylene Dibromide	ND		5.0		ug/Kg			03/19/18 19:44	1
Dibromomethane	ND		10		ug/Kg			03/19/18 19:44	1
Dichlorodifluoromethane	ND		10		ug/Kg			03/19/18 19:44	1
1,1-Dichloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2-Dichloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1-Dichloroethene	ND		5.0		ug/Kg			03/19/18 19:44	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg			03/19/18 19:44	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2-Dichloropropane	ND		5.0		ug/Kg			03/19/18 19:44	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg			03/19/18 19:44	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg			03/19/18 19:44	1
Ethylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Hexachlorobutadiene	ND		5.0		ug/Kg			03/19/18 19:44	1
2-Hexanone	ND		50		ug/Kg			03/19/18 19:44	1
Isopropylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
4-Isopropyltoluene	ND		5.0		ug/Kg			03/19/18 19:44	1
Methylene Chloride	ND		10		ug/Kg			03/19/18 19:44	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg			03/19/18 19:44	1
Naphthalene	ND		10		ug/Kg			03/19/18 19:44	1
N-Propylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Styrene	ND		5.0		ug/Kg			03/19/18 19:44	1

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

Lab Sample ID: MB 720-240883/4
Matrix: Solid
Analysis Batch: 240883

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
Tetrachloroethene	ND		5.0		ug/Kg			03/19/18 19:44	1
Toluene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
Trichloroethene	ND		5.0		ug/Kg			03/19/18 19:44	1
Trichlorofluoromethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg			03/19/18 19:44	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg			03/19/18 19:44	1
Vinyl acetate	ND		20		ug/Kg			03/19/18 19:44	1
Vinyl chloride	ND		5.0		ug/Kg			03/19/18 19:44	1
Xylenes, Total	ND		5.0		ug/Kg			03/19/18 19:44	1
2,2-Dichloropropane	ND		5.0		ug/Kg			03/19/18 19:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*		*03/19/18 19:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*		*03/19/18 19:44*	*1*
Toluene-d8 (Surr)	*99*		*58 - 140*		*03/19/18 19:44*	*1*

Lab Sample ID: LCS 720-240883/5
Matrix: Solid
Analysis Batch: 240883

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	50.1		ug/Kg		100	70 - 144
Acetone	250	246		ug/Kg		98	30 - 162
Benzene	50.0	48.1		ug/Kg		96	70 - 130
Dichlorobromomethane	50.0	51.9		ug/Kg		104	70 - 140
Bromobenzene	50.0	49.1		ug/Kg		98	70 - 130
Chlorobromomethane	50.0	49.6		ug/Kg		99	70 - 130
Bromoform	50.0	52.9		ug/Kg		106	59 - 158
Bromomethane	50.0	56.1		ug/Kg		112	59 - 132
2-Butanone (MEK)	250	250		ug/Kg		100	59 - 159
n-Butylbenzene	50.0	51.7		ug/Kg		103	70 - 142
sec-Butylbenzene	50.0	49.8		ug/Kg		100	70 - 136
tert-Butylbenzene	50.0	49.9		ug/Kg		100	70 - 130
Carbon disulfide	50.0	47.3		ug/Kg		95	60 - 140
Carbon tetrachloride	50.0	54.4		ug/Kg		109	70 - 142
Chlorobenzene	50.0	48.4		ug/Kg		97	70 - 130
Chloroethane	50.0	56.1		ug/Kg		112	65 - 130
Chloroform	50.0	49.6		ug/Kg		99	77 - 127
Chloromethane	50.0	58.7		ug/Kg		117	55 - 140
2-Chlorotoluene	50.0	48.5		ug/Kg		97	70 - 138

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

Lab Sample ID: LCS 720-240883/5
Matrix: Solid
Analysis Batch: 240883

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorotoluene	50.0	49.4		ug/Kg		99	70 - 136
Chlorodibromomethane	50.0	52.7		ug/Kg		105	70 - 146
1,2-Dichlorobenzene	50.0	49.0		ug/Kg		98	70 - 130
1,3-Dichlorobenzene	50.0	50.1		ug/Kg		100	70 - 131
1,4-Dichlorobenzene	50.0	50.3		ug/Kg		101	70 - 130
1,3-Dichloropropane	50.0	47.7		ug/Kg		95	70 - 140
1,1-Dichloropropene	50.0	51.1		ug/Kg		102	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	49.3		ug/Kg		99	60 - 145
Ethylene Dibromide	50.0	49.9		ug/Kg		100	70 - 140
Dibromomethane	50.0	50.8		ug/Kg		102	70 - 139
Dichlorodifluoromethane	50.0	73.5		ug/Kg		147	37 - 158
1,1-Dichloroethane	50.0	48.8		ug/Kg		98	70 - 130
1,2-Dichloroethane	50.0	48.7		ug/Kg		97	70 - 130
1,1-Dichloroethene	50.0	45.7		ug/Kg		91	74 - 122
cis-1,2-Dichloroethene	50.0	48.0		ug/Kg		96	70 - 138
trans-1,2-Dichloroethene	50.0	48.3		ug/Kg		97	67 - 130
1,2-Dichloropropane	50.0	48.8		ug/Kg		98	73 - 127
cis-1,3-Dichloropropene	50.0	49.7		ug/Kg		99	68 - 147
trans-1,3-Dichloropropene	50.0	48.5		ug/Kg		97	70 - 155
Ethylbenzene	50.0	48.4		ug/Kg		97	80 - 137
Hexachlorobutadiene	50.0	50.2		ug/Kg		100	70 - 132
2-Hexanone	250	256		ug/Kg		103	62 - 158
Isopropylbenzene	50.0	50.0		ug/Kg		100	70 - 130
4-Isopropyltoluene	50.0	50.5		ug/Kg		101	70 - 133
Methylene Chloride	50.0	44.2		ug/Kg		88	70 - 134
4-Methyl-2-pentanone (MIBK)	250	257		ug/Kg		103	60 - 160
Naphthalene	50.0	47.9		ug/Kg		96	60 - 147
N-Propylbenzene	50.0	50.0		ug/Kg		100	70 - 130
Styrene	50.0	48.8		ug/Kg		98	70 - 130
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/Kg		105	70 - 130
1,1,2,2-Tetrachloroethane	50.0	46.2		ug/Kg		92	70 - 146
Tetrachloroethene	50.0	50.1		ug/Kg		100	70 - 132
Toluene	50.0	47.4		ug/Kg		95	75 - 120
1,2,3-Trichlorobenzene	50.0	50.7		ug/Kg		101	60 - 140
1,2,4-Trichlorobenzene	50.0	49.8		ug/Kg		100	60 - 140
1,1,1-Trichloroethane	50.0	51.3		ug/Kg		103	70 - 130
1,1,2-Trichloroethane	50.0	48.1		ug/Kg		96	70 - 130
Trichloroethene	50.0	51.5		ug/Kg		103	70 - 133
Trichlorofluoromethane	50.0	58.0		ug/Kg		116	60 - 140
1,2,3-Trichloropropane	50.0	48.9		ug/Kg		98	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.0		ug/Kg		102	60 - 140
1,2,4-Trimethylbenzene	50.0	49.3		ug/Kg		99	70 - 130
1,3,5-Trimethylbenzene	50.0	49.1		ug/Kg		98	70 - 131
Vinyl acetate	50.0	56.9		ug/Kg		114	38 - 176
Vinyl chloride	50.0	55.5		ug/Kg		111	58 - 125
m-Xylene & p-Xylene	50.0	48.5		ug/Kg		97	70 - 146
o-Xylene	50.0	49.4		ug/Kg		99	70 - 140

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

Lab Sample ID: LCS 720-240883/5
Matrix: Solid
Analysis Batch: 240883

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	50.0	55.5		ug/Kg		111	70 - 162

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*95*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCSD 720-240883/6
Matrix: Solid
Analysis Batch: 240883

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	50.0	49.3		ug/Kg		99	70 - 144	2	20
Acetone	250	235		ug/Kg		94	30 - 162	4	30
Benzene	50.0	48.0		ug/Kg		96	70 - 130	0	20
Dichlorobromomethane	50.0	51.1		ug/Kg		102	70 - 140	1	20
Bromobenzene	50.0	48.4		ug/Kg		97	70 - 130	1	20
Chlorobromomethane	50.0	49.1		ug/Kg		98	70 - 130	1	20
Bromoform	50.0	51.1		ug/Kg		102	59 - 158	3	20
Bromomethane	50.0	54.8		ug/Kg		110	59 - 132	2	20
2-Butanone (MEK)	250	234		ug/Kg		93	59 - 159	7	20
n-Butylbenzene	50.0	51.6		ug/Kg		103	70 - 142	0	20
sec-Butylbenzene	50.0	49.9		ug/Kg		100	70 - 136	0	20
tert-Butylbenzene	50.0	49.9		ug/Kg		100	70 - 130	0	20
Carbon disulfide	50.0	46.7		ug/Kg		93	60 - 140	1	20
Carbon tetrachloride	50.0	54.5		ug/Kg		109	70 - 142	0	20
Chlorobenzene	50.0	48.0		ug/Kg		96	70 - 130	1	20
Chloroethane	50.0	54.7		ug/Kg		109	65 - 130	2	20
Chloroform	50.0	49.5		ug/Kg		99	77 - 127	0	20
Chloromethane	50.0	57.9		ug/Kg		116	55 - 140	1	20
2-Chlorotoluene	50.0	48.3		ug/Kg		97	70 - 138	0	20
4-Chlorotoluene	50.0	49.3		ug/Kg		99	70 - 136	0	20
Chlorodibromomethane	50.0	52.6		ug/Kg		105	70 - 146	0	20
1,2-Dichlorobenzene	50.0	48.4		ug/Kg		97	70 - 130	1	20
1,3-Dichlorobenzene	50.0	49.3		ug/Kg		99	70 - 131	2	20
1,4-Dichlorobenzene	50.0	49.7		ug/Kg		99	70 - 130	1	20
1,3-Dichloropropane	50.0	46.9		ug/Kg		94	70 - 140	2	20
1,1-Dichloropropene	50.0	50.5		ug/Kg		101	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	50.0	46.6		ug/Kg		93	60 - 145	6	20
Ethylene Dibromide	50.0	49.5		ug/Kg		99	70 - 140	1	20
Dibromomethane	50.0	49.4		ug/Kg		99	70 - 139	3	20
Dichlorodifluoromethane	50.0	73.6		ug/Kg		147	37 - 158	0	20
1,1-Dichloroethane	50.0	48.8		ug/Kg		98	70 - 130	0	20
1,2-Dichloroethane	50.0	48.2		ug/Kg		96	70 - 130	1	20
1,1-Dichloroethene	50.0	44.8		ug/Kg		90	74 - 122	2	20
cis-1,2-Dichloroethene	50.0	48.0		ug/Kg		96	70 - 138	0	20
trans-1,2-Dichloroethene	50.0	48.4		ug/Kg		97	67 - 130	0	20
1,2-Dichloropropane	50.0	48.6		ug/Kg		97	73 - 127	0	20

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

Lab Sample ID: LCSD 720-240883/6
Matrix: Solid
Analysis Batch: 240883

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	50.0	49.0		ug/Kg		98	68 - 147	1	20
trans-1,3-Dichloropropene	50.0	47.4		ug/Kg		95	70 - 155	2	20
Ethylbenzene	50.0	48.5		ug/Kg		97	80 - 137	0	20
Hexachlorobutadiene	50.0	50.3		ug/Kg		101	70 - 132	0	20
2-Hexanone	250	242		ug/Kg		97	62 - 158	6	20
Isopropylbenzene	50.0	49.5		ug/Kg		99	70 - 130	1	20
4-Isopropyltoluene	50.0	50.7		ug/Kg		101	70 - 133	0	20
Methylene Chloride	50.0	43.3		ug/Kg		87	70 - 134	2	20
4-Methyl-2-pentanone (MIBK)	250	244		ug/Kg		98	60 - 160	5	20
Naphthalene	50.0	45.8		ug/Kg		92	60 - 147	4	20
N-Propylbenzene	50.0	49.5		ug/Kg		99	70 - 130	1	20
Styrene	50.0	48.4		ug/Kg		97	70 - 130	1	20
1,1,1,2-Tetrachloroethane	50.0	52.3		ug/Kg		105	70 - 130	0	20
1,1,2,2-Tetrachloroethane	50.0	44.1		ug/Kg		88	70 - 146	4	20
Tetrachloroethene	50.0	50.0		ug/Kg		100	70 - 132	0	20
Toluene	50.0	47.0		ug/Kg		94	75 - 120	1	20
1,2,3-Trichlorobenzene	50.0	49.5		ug/Kg		99	60 - 140	2	20
1,2,4-Trichlorobenzene	50.0	49.2		ug/Kg		98	60 - 140	1	20
1,1,1-Trichloroethane	50.0	51.4		ug/Kg		103	70 - 130	0	20
1,1,2-Trichloroethane	50.0	46.8		ug/Kg		94	70 - 130	3	20
Trichloroethene	50.0	51.0		ug/Kg		102	70 - 133	1	20
Trichlorofluoromethane	50.0	56.9		ug/Kg		114	60 - 140	2	20
1,2,3-Trichloropropane	50.0	46.6		ug/Kg		93	70 - 146	5	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	49.2		ug/Kg		98	60 - 140	4	20
1,2,4-Trimethylbenzene	50.0	49.4		ug/Kg		99	70 - 130	0	20
1,3,5-Trimethylbenzene	50.0	49.4		ug/Kg		99	70 - 131	1	20
Vinyl acetate	50.0	55.7		ug/Kg		111	38 - 176	2	20
Vinyl chloride	50.0	55.1		ug/Kg		110	58 - 125	1	20
m-Xylene & p-Xylene	50.0	48.9		ug/Kg		98	70 - 146	1	20
o-Xylene	50.0	49.2		ug/Kg		98	70 - 140	0	20
2,2-Dichloropropane	50.0	55.5		ug/Kg		111	70 - 162	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*96*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Lab Sample ID: MB 720-240900/4
Matrix: Water
Analysis Batch: 240900

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			03/20/18 08:06	1
Acetone	ND		50		ug/L			03/20/18 08:06	1
Benzene	ND		0.50		ug/L			03/20/18 08:06	1
Dichlorobromomethane	ND		0.50		ug/L			03/20/18 08:06	1
Bromobenzene	ND		1.0		ug/L			03/20/18 08:06	1

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

Lab Sample ID: MB 720-240900/4
Matrix: Water
Analysis Batch: 240900

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	ND		1.0		ug/L			03/20/18 08:06	1
Bromoform	ND		1.0		ug/L			03/20/18 08:06	1
Bromomethane	ND		1.0		ug/L			03/20/18 08:06	1
2-Butanone (MEK)	ND		50		ug/L			03/20/18 08:06	1
n-Butylbenzene	ND		1.0		ug/L			03/20/18 08:06	1
sec-Butylbenzene	ND		1.0		ug/L			03/20/18 08:06	1
tert-Butylbenzene	ND		1.0		ug/L			03/20/18 08:06	1
Carbon disulfide	ND		5.0		ug/L			03/20/18 08:06	1
Carbon tetrachloride	ND		0.50		ug/L			03/20/18 08:06	1
Chlorobenzene	ND		0.50		ug/L			03/20/18 08:06	1
Chloroethane	ND		1.0		ug/L			03/20/18 08:06	1
Chloroform	ND		1.0		ug/L			03/20/18 08:06	1
Chloromethane	ND		1.0		ug/L			03/20/18 08:06	1
2-Chlorotoluene	ND		0.50		ug/L			03/20/18 08:06	1
4-Chlorotoluene	ND		0.50		ug/L			03/20/18 08:06	1
Chlorodibromomethane	ND		0.50		ug/L			03/20/18 08:06	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/20/18 08:06	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/20/18 08:06	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/20/18 08:06	1
1,3-Dichloropropane	ND		1.0		ug/L			03/20/18 08:06	1
1,1-Dichloropropene	ND		0.50		ug/L			03/20/18 08:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/20/18 08:06	1
Ethylene Dibromide	ND		0.50		ug/L			03/20/18 08:06	1
Dibromomethane	ND		0.50		ug/L			03/20/18 08:06	1
Dichlorodifluoromethane	ND		0.50		ug/L			03/20/18 08:06	1
1,1-Dichloroethane	ND		0.50		ug/L			03/20/18 08:06	1
1,2-Dichloroethane	ND		0.50		ug/L			03/20/18 08:06	1
1,1-Dichloroethene	ND		0.50		ug/L			03/20/18 08:06	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 08:06	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 08:06	1
1,2-Dichloropropane	ND		0.50		ug/L			03/20/18 08:06	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 08:06	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 08:06	1
Ethylbenzene	ND		0.50		ug/L			03/20/18 08:06	1
Hexachlorobutadiene	ND		1.0		ug/L			03/20/18 08:06	1
2-Hexanone	ND		50		ug/L			03/20/18 08:06	1
Isopropylbenzene	ND		0.50		ug/L			03/20/18 08:06	1
4-Isopropyltoluene	ND		1.0		ug/L			03/20/18 08:06	1
Methylene Chloride	ND		5.0		ug/L			03/20/18 08:06	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			03/20/18 08:06	1
Naphthalene	ND		1.0		ug/L			03/20/18 08:06	1
N-Propylbenzene	ND		1.0		ug/L			03/20/18 08:06	1
Styrene	ND		0.50		ug/L			03/20/18 08:06	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 08:06	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 08:06	1
Tetrachloroethene	ND		0.50		ug/L			03/20/18 08:06	1
Toluene	ND		0.50		ug/L			03/20/18 08:06	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/20/18 08:06	1

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

Lab Sample ID: MB 720-240900/4
Matrix: Water
Analysis Batch: 240900

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/20/18 08:06	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/20/18 08:06	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/20/18 08:06	1
Trichloroethene	ND		0.50		ug/L			03/20/18 08:06	1
Trichlorofluoromethane	ND		1.0		ug/L			03/20/18 08:06	1
1,2,3-Trichloropropane	ND		0.50		ug/L			03/20/18 08:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/20/18 08:06	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/20/18 08:06	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/20/18 08:06	1
Vinyl acetate	ND		10		ug/L			03/20/18 08:06	1
Vinyl chloride	ND		0.50		ug/L			03/20/18 08:06	1
Xylenes, Total	ND		0.50		ug/L			03/20/18 08:06	1
2,2-Dichloropropane	ND		0.50		ug/L			03/20/18 08:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*67 - 130*		*03/20/18 08:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*72 - 130*		*03/20/18 08:06*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/20/18 08:06*	*1*

Lab Sample ID: LCS 720-240900/5
Matrix: Water
Analysis Batch: 240900

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	23.3		ug/L		93	70 - 130
Acetone	125	104		ug/L		84	58 - 147
Benzene	25.0	26.5		ug/L		106	84 - 130
Dichlorobromomethane	25.0	26.3		ug/L		105	81 - 130
Bromobenzene	25.0	26.5		ug/L		106	84 - 130
Chlorobromomethane	25.0	23.6		ug/L		94	81 - 130
Bromoform	25.0	25.4		ug/L		102	79 - 127
Bromomethane	25.0	23.7		ug/L		95	65 - 151
2-Butanone (MEK)	125	116		ug/L		92	66 - 133
n-Butylbenzene	25.0	29.1		ug/L		117	86 - 134
sec-Butylbenzene	25.0	29.1		ug/L		117	85 - 134
tert-Butylbenzene	25.0	28.4		ug/L		114	85 - 135
Carbon disulfide	25.0	26.7		ug/L		107	60 - 159
Carbon tetrachloride	25.0	28.1		ug/L		112	79 - 133
Chlorobenzene	25.0	26.4		ug/L		106	85 - 130
Chloroethane	25.0	26.0		ug/L		104	62 - 148
Chloroform	25.0	24.8		ug/L		99	82 - 130
Chloromethane	25.0	24.2		ug/L		97	46 - 147
2-Chlorotoluene	25.0	28.5		ug/L		114	83 - 130
4-Chlorotoluene	25.0	30.2		ug/L		121	85 - 130
Chlorodibromomethane	25.0	25.8		ug/L		103	77 - 133
1,2-Dichlorobenzene	25.0	26.1		ug/L		104	85 - 130
1,3-Dichlorobenzene	25.0	26.7		ug/L		107	86 - 130
1,4-Dichlorobenzene	25.0	25.9		ug/L		104	86 - 130

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

Lab Sample ID: LCS 720-240900/5
Matrix: Water
Analysis Batch: 240900

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	25.7		ug/L		103	77 - 130
1,1-Dichloropropene	25.0	28.0		ug/L		112	83 - 130
1,2-Dibromo-3-Chloropropane	25.0	21.3		ug/L		85	70 - 136
Ethylene Dibromide	25.0	25.2		ug/L		101	80 - 130
Dibromomethane	25.0	24.3		ug/L		97	79 - 130
Dichlorodifluoromethane	25.0	22.0		ug/L		88	18 - 173
1,1-Dichloroethane	25.0	25.5		ug/L		102	77 - 130
1,2-Dichloroethane	25.0	24.6		ug/L		99	66 - 132
1,1-Dichloroethene	25.0	24.8		ug/L		99	64 - 128
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	77 - 130
trans-1,2-Dichloroethene	25.0	24.1		ug/L		96	79 - 130
1,2-Dichloropropane	25.0	26.0		ug/L		104	79 - 130
cis-1,3-Dichloropropene	25.0	26.8		ug/L		107	82 - 130
trans-1,3-Dichloropropene	25.0	27.8		ug/L		111	76 - 129
Ethylbenzene	25.0	27.7		ug/L		111	87 - 127
Hexachlorobutadiene	25.0	28.5		ug/L		114	78 - 140
2-Hexanone	125	129		ug/L		103	57 - 140
Isopropylbenzene	25.0	29.7		ug/L		119	90 - 130
4-Isopropyltoluene	25.0	30.0		ug/L		120	88 - 130
Methylene Chloride	25.0	23.6		ug/L		94	75 - 128
4-Methyl-2-pentanone (MIBK)	125	124		ug/L		99	58 - 140
Naphthalene	25.0	24.8		ug/L		99	81 - 130
N-Propylbenzene	25.0	28.5		ug/L		114	84 - 130
Styrene	25.0	26.8		ug/L		107	84 - 130
1,1,1,2-Tetrachloroethane	25.0	26.3		ug/L		105	88 - 130
1,1,2,2-Tetrachloroethane	25.0	25.0		ug/L		100	70 - 130
Tetrachloroethene	25.0	26.9		ug/L		108	81 - 130
Toluene	25.0	28.3		ug/L		113	85 - 120
1,2,3-Trichlorobenzene	25.0	24.8		ug/L		99	87 - 130
1,2,4-Trichlorobenzene	25.0	25.4		ug/L		102	78 - 138
1,1,1-Trichloroethane	25.0	26.9		ug/L		107	81 - 130
1,1,2-Trichloroethane	25.0	24.3		ug/L		97	80 - 130
Trichloroethene	25.0	26.0		ug/L		104	85 - 130
Trichlorofluoromethane	25.0	26.4		ug/L		106	75 - 132
1,2,3-Trichloropropane	25.0	24.1		ug/L		96	77 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.4		ug/L		101	70 - 145
1,2,4-Trimethylbenzene	25.0	27.3		ug/L		109	87 - 132
1,3,5-Trimethylbenzene	25.0	27.9		ug/L		112	87 - 130
Vinyl acetate	25.0	23.9		ug/L		96	43 - 146
Vinyl chloride	25.0	27.4		ug/L		110	50 - 156
m-Xylene & p-Xylene	25.0	29.0		ug/L		116	86 - 126
o-Xylene	25.0	28.1		ug/L		112	86 - 130
2,2-Dichloropropane	25.0	27.5		ug/L		110	80 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*88*		*72 - 130*

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

Lab Sample ID: LCS 720-240900/5
Matrix: Water
Analysis Batch: 240900

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: LCSD 720-240900/6
Matrix: Water
Analysis Batch: 240900

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	23.9		ug/L		96	70 - 130	3	20
Acetone	125	118		ug/L		95	58 - 147	13	30
Benzene	25.0	26.6		ug/L		106	84 - 130	0	20
Dichlorobromomethane	25.0	26.4		ug/L		106	81 - 130	0	20
Bromobenzene	25.0	27.1		ug/L		108	84 - 130	2	20
Chlorobromomethane	25.0	23.4		ug/L		94	81 - 130	1	20
Bromoform	25.0	27.4		ug/L		110	79 - 127	8	20
Bromomethane	25.0	23.0		ug/L		92	65 - 151	3	20
2-Butanone (MEK)	125	134		ug/L		107	66 - 133	15	22
n-Butylbenzene	25.0	28.1		ug/L		112	86 - 134	4	20
sec-Butylbenzene	25.0	28.1		ug/L		112	85 - 134	4	20
tert-Butylbenzene	25.0	27.8		ug/L		111	85 - 135	2	20
Carbon disulfide	25.0	25.5		ug/L		102	60 - 159	5	20
Carbon tetrachloride	25.0	27.4		ug/L		109	79 - 133	2	20
Chlorobenzene	25.0	26.4		ug/L		105	85 - 130	0	20
Chloroethane	25.0	24.9		ug/L		100	62 - 148	4	20
Chloroform	25.0	24.3		ug/L		97	82 - 130	2	20
Chloromethane	25.0	23.7		ug/L		95	46 - 147	2	20
2-Chlorotoluene	25.0	27.5		ug/L		110	83 - 130	3	20
4-Chlorotoluene	25.0	30.1		ug/L		120	85 - 130	0	20
Chlorodibromomethane	25.0	27.3		ug/L		109	77 - 133	6	20
1,2-Dichlorobenzene	25.0	26.0		ug/L		104	85 - 130	1	20
1,3-Dichlorobenzene	25.0	26.8		ug/L		107	86 - 130	0	20
1,4-Dichlorobenzene	25.0	26.0		ug/L		104	86 - 130	0	20
1,3-Dichloropropane	25.0	27.9		ug/L		112	77 - 130	8	20
1,1-Dichloropropene	25.0	27.8		ug/L		111	83 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	24.0		ug/L		96	70 - 136	12	20
Ethylene Dibromide	25.0	27.9		ug/L		112	80 - 130	10	20
Dibromomethane	25.0	25.4		ug/L		102	79 - 130	4	20
Dichlorodifluoromethane	25.0	21.2		ug/L		85	18 - 173	4	20
1,1-Dichloroethane	25.0	25.0		ug/L		100	77 - 130	2	20
1,2-Dichloroethane	25.0	25.2		ug/L		101	66 - 132	2	20
1,1-Dichloroethene	25.0	23.3		ug/L		93	64 - 128	6	20
cis-1,2-Dichloroethene	25.0	24.4		ug/L		97	77 - 130	3	20
trans-1,2-Dichloroethene	25.0	23.5		ug/L		94	79 - 130	3	20
1,2-Dichloropropane	25.0	26.4		ug/L		105	79 - 130	1	20
cis-1,3-Dichloropropene	25.0	28.1		ug/L		112	82 - 130	5	20
trans-1,3-Dichloropropene	25.0	30.4		ug/L		122	76 - 129	9	20
Ethylbenzene	25.0	27.3		ug/L		109	87 - 127	1	20
Hexachlorobutadiene	25.0	28.0		ug/L		112	78 - 140	1	20
2-Hexanone	125	158		ug/L		127	57 - 140	21	24

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

Lab Sample ID: LCSD 720-240900/6
Matrix: Water
Analysis Batch: 240900

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene	25.0	28.6		ug/L		114	90 - 130	4	20
4-Isopropyltoluene	25.0	29.0		ug/L		116	88 - 130	3	20
Methylene Chloride	25.0	22.8		ug/L		91	75 - 128	3	20
4-Methyl-2-pentanone (MIBK)	125	138		ug/L		111	58 - 140	11	21
Naphthalene	25.0	25.8		ug/L		103	81 - 130	4	20
N-Propylbenzene	25.0	27.8		ug/L		111	84 - 130	3	20
Styrene	25.0	27.0		ug/L		108	84 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	25.3		ug/L		101	88 - 130	4	20
1,1,2,2-Tetrachloroethane	25.0	26.4		ug/L		106	70 - 130	5	20
Tetrachloroethene	25.0	27.4		ug/L		109	81 - 130	2	20
Toluene	25.0	28.0		ug/L		112	85 - 120	1	20
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	87 - 130	2	20
1,2,4-Trichlorobenzene	25.0	24.9		ug/L		99	78 - 138	2	20
1,1,1-Trichloroethane	25.0	26.1		ug/L		104	81 - 130	3	20
1,1,2-Trichloroethane	25.0	26.3		ug/L		105	80 - 130	8	20
Trichloroethene	25.0	26.2		ug/L		105	85 - 130	1	20
Trichlorofluoromethane	25.0	24.9		ug/L		100	75 - 132	6	20
1,2,3-Trichloropropane	25.0	26.1		ug/L		104	77 - 130	8	20
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.4		ug/L		97	70 - 145	4	20
1,2,4-Trimethylbenzene	25.0	26.4		ug/L		106	87 - 132	4	20
1,3,5-Trimethylbenzene	25.0	26.8		ug/L		107	87 - 130	4	20
Vinyl acetate	25.0	25.9		ug/L		103	43 - 146	8	20
Vinyl chloride	25.0	26.0		ug/L		104	50 - 156	5	20
m-Xylene & p-Xylene	25.0	28.8		ug/L		115	86 - 126	1	20
o-Xylene	25.0	27.3		ug/L		109	86 - 130	3	20
2,2-Dichloropropane	25.0	26.9		ug/L		108	80 - 140	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*89*		*72 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: MB 720-240961/9
Matrix: Water
Analysis Batch: 240961

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			03/20/18 21:24	1
Acetone	ND		50		ug/L			03/20/18 21:24	1
Benzene	ND		0.50		ug/L			03/20/18 21:24	1
Dichlorobromomethane	ND		0.50		ug/L			03/20/18 21:24	1
Bromobenzene	ND		1.0		ug/L			03/20/18 21:24	1
Chlorobromomethane	ND		1.0		ug/L			03/20/18 21:24	1
Bromoform	ND		1.0		ug/L			03/20/18 21:24	1
Bromomethane	ND		1.0		ug/L			03/20/18 21:24	1
2-Butanone (MEK)	ND		50		ug/L			03/20/18 21:24	1
n-Butylbenzene	ND		1.0		ug/L			03/20/18 21:24	1

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

Lab Sample ID: MB 720-240961/9
Matrix: Water
Analysis Batch: 240961

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.0		ug/L			03/20/18 21:24	1
tert-Butylbenzene	ND		1.0		ug/L			03/20/18 21:24	1
Carbon disulfide	ND		5.0		ug/L			03/20/18 21:24	1
Carbon tetrachloride	ND		0.50		ug/L			03/20/18 21:24	1
Chlorobenzene	ND		0.50		ug/L			03/20/18 21:24	1
Chloroethane	ND		1.0		ug/L			03/20/18 21:24	1
Chloroform	ND		1.0		ug/L			03/20/18 21:24	1
Chloromethane	ND		1.0		ug/L			03/20/18 21:24	1
2-Chlorotoluene	ND		0.50		ug/L			03/20/18 21:24	1
4-Chlorotoluene	ND		0.50		ug/L			03/20/18 21:24	1
Chlorodibromomethane	ND		0.50		ug/L			03/20/18 21:24	1
1,2-Dichlorobenzene	ND		0.50		ug/L			03/20/18 21:24	1
1,3-Dichlorobenzene	ND		0.50		ug/L			03/20/18 21:24	1
1,4-Dichlorobenzene	ND		0.50		ug/L			03/20/18 21:24	1
1,3-Dichloropropane	ND		1.0		ug/L			03/20/18 21:24	1
1,1-Dichloropropene	ND		0.50		ug/L			03/20/18 21:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			03/20/18 21:24	1
Ethylene Dibromide	ND		0.50		ug/L			03/20/18 21:24	1
Dibromomethane	ND		0.50		ug/L			03/20/18 21:24	1
Dichlorodifluoromethane	ND		0.50		ug/L			03/20/18 21:24	1
1,1-Dichloroethane	ND		0.50		ug/L			03/20/18 21:24	1
1,2-Dichloroethane	ND		0.50		ug/L			03/20/18 21:24	1
1,1-Dichloroethene	ND		0.50		ug/L			03/20/18 21:24	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 21:24	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			03/20/18 21:24	1
1,2-Dichloropropane	ND		0.50		ug/L			03/20/18 21:24	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 21:24	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			03/20/18 21:24	1
Ethylbenzene	ND		0.50		ug/L			03/20/18 21:24	1
Hexachlorobutadiene	ND		1.0		ug/L			03/20/18 21:24	1
2-Hexanone	ND		50		ug/L			03/20/18 21:24	1
Isopropylbenzene	ND		0.50		ug/L			03/20/18 21:24	1
4-Isopropyltoluene	ND		1.0		ug/L			03/20/18 21:24	1
Methylene Chloride	ND		5.0		ug/L			03/20/18 21:24	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			03/20/18 21:24	1
Naphthalene	ND		1.0		ug/L			03/20/18 21:24	1
N-Propylbenzene	ND		1.0		ug/L			03/20/18 21:24	1
Styrene	ND		0.50		ug/L			03/20/18 21:24	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 21:24	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			03/20/18 21:24	1
Tetrachloroethene	ND		0.50		ug/L			03/20/18 21:24	1
Toluene	ND		0.50		ug/L			03/20/18 21:24	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			03/20/18 21:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			03/20/18 21:24	1
1,1,1-Trichloroethane	ND		0.50		ug/L			03/20/18 21:24	1
1,1,2-Trichloroethane	ND		0.50		ug/L			03/20/18 21:24	1
Trichloroethene	ND		0.50		ug/L			03/20/18 21:24	1
Trichlorofluoromethane	ND		1.0		ug/L			03/20/18 21:24	1

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

Lab Sample ID: MB 720-240961/9
Matrix: Water
Analysis Batch: 240961

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.50		ug/L			03/20/18 21:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			03/20/18 21:24	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			03/20/18 21:24	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			03/20/18 21:24	1
Vinyl acetate	ND		10		ug/L			03/20/18 21:24	1
Vinyl chloride	ND		0.50		ug/L			03/20/18 21:24	1
Xylenes, Total	ND		0.50		ug/L			03/20/18 21:24	1
2,2-Dichloropropane	ND		0.50		ug/L			03/20/18 21:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*03/20/18 21:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*03/20/18 21:24*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/20/18 21:24*	*1*

Lab Sample ID: LCS 720-240961/5
Matrix: Water
Analysis Batch: 240961

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	25.0		ug/L		100	70 - 130
Acetone	125	105		ug/L		84	58 - 147
Benzene	25.0	24.1		ug/L		96	84 - 130
Dichlorobromomethane	25.0	25.5		ug/L		102	81 - 130
Bromobenzene	25.0	25.0		ug/L		100	84 - 130
Chlorobromomethane	25.0	23.3		ug/L		93	81 - 130
Bromoform	25.0	25.7		ug/L		103	79 - 127
Bromomethane	25.0	18.0		ug/L		72	65 - 151
2-Butanone (MEK)	125	118		ug/L		95	66 - 133
n-Butylbenzene	25.0	25.5		ug/L		102	86 - 134
sec-Butylbenzene	25.0	24.9		ug/L		100	85 - 134
tert-Butylbenzene	25.0	24.7		ug/L		99	85 - 135
Carbon disulfide	25.0	21.5		ug/L		86	60 - 159
Carbon tetrachloride	25.0	24.7		ug/L		99	79 - 133
Chlorobenzene	25.0	24.4		ug/L		97	85 - 130
Chloroethane	25.0	19.1		ug/L		76	62 - 148
Chloroform	25.0	23.1		ug/L		92	82 - 130
Chloromethane	25.0	16.2		ug/L		65	46 - 147
2-Chlorotoluene	25.0	25.6		ug/L		102	83 - 130
4-Chlorotoluene	25.0	27.6		ug/L		111	85 - 130
Chlorodibromomethane	25.0	25.6		ug/L		103	77 - 133
1,2-Dichlorobenzene	25.0	24.9		ug/L		100	85 - 130
1,3-Dichlorobenzene	25.0	25.0		ug/L		100	86 - 130
1,4-Dichlorobenzene	25.0	24.7		ug/L		99	86 - 130
1,3-Dichloropropane	25.0	24.7		ug/L		99	77 - 130
1,1-Dichloropropene	25.0	25.5		ug/L		102	83 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.0		ug/L		96	70 - 136
Ethylene Dibromide	25.0	25.2		ug/L		101	80 - 130
Dibromomethane	25.0	23.4		ug/L		94	79 - 130

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

Lab Sample ID: LCS 720-240961/5
Matrix: Water
Analysis Batch: 240961

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	25.0	15.0		ug/L		60	18 - 173
1,1-Dichloroethane	25.0	23.1		ug/L		92	77 - 130
1,2-Dichloroethane	25.0	23.6		ug/L		94	66 - 132
1,1-Dichloroethene	25.0	20.5		ug/L		82	64 - 128
cis-1,2-Dichloroethene	25.0	22.9		ug/L		92	77 - 130
trans-1,2-Dichloroethene	25.0	22.4		ug/L		90	79 - 130
1,2-Dichloropropane	25.0	24.1		ug/L		97	79 - 130
cis-1,3-Dichloropropene	25.0	25.7		ug/L		103	82 - 130
trans-1,3-Dichloropropene	25.0	27.0		ug/L		108	76 - 129
Ethylbenzene	25.0	24.7		ug/L		99	87 - 127
Hexachlorobutadiene	25.0	25.9		ug/L		104	78 - 140
2-Hexanone	125	139		ug/L		111	57 - 140
Isopropylbenzene	25.0	26.3		ug/L		105	90 - 130
4-Isopropyltoluene	25.0	26.5		ug/L		106	88 - 130
Methylene Chloride	25.0	22.9		ug/L		91	75 - 128
4-Methyl-2-pentanone (MIBK)	125	130		ug/L		104	58 - 140
Naphthalene	25.0	25.4		ug/L		102	81 - 130
N-Propylbenzene	25.0	25.1		ug/L		100	84 - 130
Styrene	25.0	25.1		ug/L		101	84 - 130
1,1,1,2-Tetrachloroethane	25.0	25.4		ug/L		102	88 - 130
1,1,2,2-Tetrachloroethane	25.0	24.6		ug/L		98	70 - 130
Tetrachloroethene	25.0	24.3		ug/L		97	81 - 130
Toluene	25.0	25.3		ug/L		101	85 - 120
1,2,3-Trichlorobenzene	25.0	25.5		ug/L		102	87 - 130
1,2,4-Trichlorobenzene	25.0	25.2		ug/L		101	78 - 138
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	81 - 130
1,1,2-Trichloroethane	25.0	24.4		ug/L		98	80 - 130
Trichloroethene	25.0	23.6		ug/L		95	85 - 130
Trichlorofluoromethane	25.0	19.5		ug/L		78	75 - 132
1,2,3-Trichloropropane	25.0	24.6		ug/L		99	77 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.1		ug/L		88	70 - 145
1,2,4-Trimethylbenzene	25.0	24.5		ug/L		98	87 - 132
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	87 - 130
Vinyl acetate	25.0	21.8		ug/L		87	43 - 146
Vinyl chloride	25.0	17.5		ug/L		70	50 - 156
m-Xylene & p-Xylene	25.0	26.3		ug/L		105	86 - 126
o-Xylene	25.0	25.5		ug/L		102	86 - 130
2,2-Dichloropropane	25.0	24.6		ug/L		99	80 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

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

Lab Sample ID: LCSD 720-240961/6
Matrix: Water
Analysis Batch: 240961

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	20.9		ug/L		84	70 - 130	18	20
Acetone	125	81.1		ug/L		65	58 - 147	26	30
Benzene	25.0	23.3		ug/L		93	84 - 130	3	20
Dichlorobromomethane	25.0	24.1		ug/L		97	81 - 130	6	20
Bromobenzene	25.0	24.2		ug/L		97	84 - 130	3	20
Chlorobromomethane	25.0	21.1		ug/L		84	81 - 130	10	20
Bromoform	25.0	22.8		ug/L		91	79 - 127	12	20
Bromomethane	25.0	16.9		ug/L		68	65 - 151	6	20
2-Butanone (MEK)	125	95.6		ug/L		77	66 - 133	21	22
n-Butylbenzene	25.0	25.4		ug/L		102	86 - 134	0	20
sec-Butylbenzene	25.0	24.3		ug/L		97	85 - 134	3	20
tert-Butylbenzene	25.0	24.4		ug/L		98	85 - 135	1	20
Carbon disulfide	25.0	20.4		ug/L		81	60 - 159	6	20
Carbon tetrachloride	25.0	23.4		ug/L		94	79 - 133	5	20
Chlorobenzene	25.0	24.0		ug/L		96	85 - 130	2	20
Chloroethane	25.0	18.0		ug/L		72	62 - 148	6	20
Chloroform	25.0	21.8		ug/L		87	82 - 130	6	20
Chloromethane	25.0	15.2		ug/L		61	46 - 147	6	20
2-Chlorotoluene	25.0	24.4		ug/L		98	83 - 130	5	20
4-Chlorotoluene	25.0	27.5		ug/L		110	85 - 130	0	20
Chlorodibromomethane	25.0	24.1		ug/L		96	77 - 133	6	20
1,2-Dichlorobenzene	25.0	23.5		ug/L		94	85 - 130	6	20
1,3-Dichlorobenzene	25.0	24.5		ug/L		98	86 - 130	2	20
1,4-Dichlorobenzene	25.0	24.5		ug/L		98	86 - 130	1	20
1,3-Dichloropropane	25.0	23.5		ug/L		94	77 - 130	5	20
1,1-Dichloropropene	25.0	25.0		ug/L		100	83 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	19.0	*	ug/L		76	70 - 136	23	20
Ethylene Dibromide	25.0	23.8		ug/L		95	80 - 130	6	20
Dibromomethane	25.0	21.1		ug/L		84	79 - 130	11	20
Dichlorodifluoromethane	25.0	13.5		ug/L		54	18 - 173	11	20
1,1-Dichloroethane	25.0	21.9		ug/L		88	77 - 130	5	20
1,2-Dichloroethane	25.0	21.6		ug/L		86	66 - 132	9	20
1,1-Dichloroethene	25.0	19.4		ug/L		77	64 - 128	6	20
cis-1,2-Dichloroethene	25.0	21.3		ug/L		85	77 - 130	7	20
trans-1,2-Dichloroethene	25.0	21.2		ug/L		85	79 - 130	6	20
1,2-Dichloropropane	25.0	23.2		ug/L		93	79 - 130	4	20
cis-1,3-Dichloropropene	25.0	25.3		ug/L		101	82 - 130	2	20
trans-1,3-Dichloropropene	25.0	26.9		ug/L		108	76 - 129	0	20
Ethylbenzene	25.0	24.3		ug/L		97	87 - 127	2	20
Hexachlorobutadiene	25.0	26.0		ug/L		104	78 - 140	0	20
2-Hexanone	125	131		ug/L		105	57 - 140	6	24
Isopropylbenzene	25.0	25.5		ug/L		102	90 - 130	3	20
4-Isopropyltoluene	25.0	25.9		ug/L		103	88 - 130	2	20
Methylene Chloride	25.0	20.4		ug/L		82	75 - 128	11	20
4-Methyl-2-pentanone (MIBK)	125	108		ug/L		86	58 - 140	18	21
Naphthalene	25.0	21.7		ug/L		87	81 - 130	16	20
N-Propylbenzene	25.0	24.4		ug/L		98	84 - 130	3	20
Styrene	25.0	24.9		ug/L		100	84 - 130	1	20

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

Lab Sample ID: LCSD 720-240961/6
Matrix: Water
Analysis Batch: 240961

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	23.4		ug/L		94	88 - 130	8	20
1,1,2,2-Tetrachloroethane	25.0	20.8		ug/L		83	70 - 130	17	20
Tetrachloroethene	25.0	24.6		ug/L		99	81 - 130	1	20
Toluene	25.0	25.0		ug/L		100	85 - 120	1	20
1,2,3-Trichlorobenzene	25.0	22.7		ug/L		91	87 - 130	12	20
1,2,4-Trichlorobenzene	25.0	23.3		ug/L		93	78 - 138	8	20
1,1,1-Trichloroethane	25.0	22.5		ug/L		90	81 - 130	6	20
1,1,2-Trichloroethane	25.0	22.9		ug/L		92	80 - 130	6	20
Trichloroethene	25.0	23.3		ug/L		93	85 - 130	2	20
Trichlorofluoromethane	25.0	18.5	*	ug/L		74	75 - 132	6	20
1,2,3-Trichloropropane	25.0	20.5		ug/L		82	77 - 130	18	20
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	20.9		ug/L		84	70 - 145	5	20
1,2,4-Trimethylbenzene	25.0	23.4		ug/L		94	87 - 132	4	20
1,3,5-Trimethylbenzene	25.0	23.8		ug/L		95	87 - 130	4	20
Vinyl acetate	25.0	19.5		ug/L		78	43 - 146	11	20
Vinyl chloride	25.0	17.2		ug/L		69	50 - 156	2	20
m-Xylene & p-Xylene	25.0	25.9		ug/L		104	86 - 126	1	20
o-Xylene	25.0	24.6		ug/L		98	86 - 130	4	20
2,2-Dichloropropane	25.0	23.2		ug/L		93	80 - 140	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*88*		*72 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

GC/MS VOA

Prep Batch: 240846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-2	B15 S/GW-S8-A	Total/NA	Solid	5035	
720-85358-4	B16 S/GW-S8-A	Total/NA	Solid	5035	

Analysis Batch: 240883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-2	B15 S/GW-S8-A	Total/NA	Solid	8260B	240846
720-85358-4	B16 S/GW-S8-A	Total/NA	Solid	8260B	240846
MB 720-240883/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-240883/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-240883/6	Lab Control Sample Dup	Total/NA	Solid	8260B	

Analysis Batch: 240900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-6	TRIP BLANK	Total/NA	Water	8260B	
MB 720-240900/4	Method Blank	Total/NA	Water	8260B	
LCS 720-240900/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-240900/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 240961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-5	B15 S/GW-W	Total/NA	Water	8260B	
MB 720-240961/9	Method Blank	Total/NA	Water	8260B	
LCS 720-240961/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 720-240961/6	Lab Control Sample Dup	Total/NA	Water	8260B	

Lab Chronicle

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-1

Client Sample ID: B15 S/GW-S8-A

Lab Sample ID: 720-85358-2
Matrix: Solid
Date Collected: 03/15/18 11:12
Date Received: 03/16/18 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			240846	03/16/18 16:30	AJS	TAL PLS
Total/NA	Analysis	8260B		1	240883	03/19/18 22:48	AJS	TAL PLS

Client Sample ID: B16 S/GW-S8-A

Lab Sample ID: 720-85358-4
Matrix: Solid
Date Collected: 03/15/18 13:13
Date Received: 03/16/18 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			240846	03/16/18 16:30	AJS	TAL PLS
Total/NA	Analysis	8260B		1	240883	03/19/18 23:18	AJS	TAL PLS

Client Sample ID: B15 S/GW-W

Lab Sample ID: 720-85358-5
Matrix: Water
Date Collected: 03/16/18 09:35
Date Received: 03/16/18 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	240961	03/21/18 03:09	JRM	TAL PLS

Client Sample ID: TRIP BLANK

Lab Sample ID: 720-85358-6
Matrix: Water
Date Collected: 03/16/18 00:00
Date Received: 03/16/18 14:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	240900	03/20/18 10:30	A1C	TAL PLS

Laboratory References:

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

Accreditation/Certification Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-1

Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2496	01-31-20
USDA	Federal		P330-17-00380	12-11-20

Method Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-85358-2	B15 S/GW-S8-A	Solid	03/15/18 11:12	03/16/18 14:40
720-85358-4	B16 S/GW-S8-A	Solid	03/15/18 13:13	03/16/18 14:40
720-85358-5	B15 S/GW-W	Water	03/16/18 09:35	03/16/18 14:40
720-85358-6	TRIP BLANK	Water	03/16/18 00:00	03/16/18 14:40

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-85358

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

Reference #: 181823

Date 3/16/18 Page 1 of 1

4/5/2018 (Rev. 1)

Report To

Attn: Mike Harrison
Company: Enviro Assets
Address: 6037 La Salle Ave, Oakland CA
Email: mharrison@enviroassets.com
Bill To: Mike Harrison
Sampled By: George Mead
Attn
Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☐ 8270C SIM	Oil and Grease ☐ Petroleum (EPA 1664/9071) ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	Metals: ☐ 6020 ☐ 200.8 (ICP-MS):	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH - ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity	3 day RUSH	Number of Containers
B15 S/GW-S2-A	3/16/18	1250	S		X								X									X	
B15 S/GW-S8-A	3/16/18	1112	S		X																		
B16 S/GW-S2-A	3/16/18	1307	S		X								X									X	
B16 S/GW-S8-A	3/16/18	1313	S		X																		
B15 S/GW W	3/16/18	0935	W		X																		
Trip Blank	3/16/18		W		X																		

RUSH

720-85358 Chain of Custody

Page 34 of 35

Project Info.

Project Name/ #: Red Hanger Cleaners EA270
PO#.

Sample Receipt

of Containers:
Head Space:
Temp: 5.6 °C

Credit Card Y/N: If yes, please call with payment information ASAP

TAT: 10 Day | (5 Day) | 4 Day | 3 Day | 2 Day | 1 Day | Other.

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 1440	Signature: Time:	Signature: Time:
Printed Name: George Mead Date: 3/16/18	Printed Name: Date:	Printed Name: Date:
Company: Enviro Assets	Company:	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1440	Signature: Time:	Signature: Time:
Printed Name: Dennis Arave Date: 3/16/18	Printed Name: Date:	Printed Name: Date:
Company: TA 720	Company:	Company:

Re

Login Sample Receipt Checklist

Client: EnviroAssets Inc

Job Number: 720-85358-1

Login Number: 85358
List Number: 1
Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

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

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-85358-3

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-85358-3

Comments
No additional comments.

Receipt
The samples were received on 3/16/2018 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.6° C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Client Sample ID: B15 S/GW-S2-A — Lab Sample ID: 720-85358-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.22		0.10		mg/L	1		6010B	STLC Citrate

Client Sample ID: B16 S/GW-S2-A — Lab Sample ID: 720-85358-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.29		0.050		mg/L	1		6010B	TCLP
Lead	160		0.050		mg/L	1		6010B	STLC Citrate

This Detection Summary does not include radiochemical test results.

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Client Sample ID: B15 S/GW-S2-A
Date Collected: 03/15/18 10:50
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-1
Matrix: Solid

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.10		mg/L		03/24/18 12:01	03/26/18 15:42	1

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**0.22**		0.10		mg/L		03/26/18 14:52	03/26/18 17:52	1

Client Sample ID: B16 S/GW-S2-A
Date Collected: 03/15/18 13:07
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-3
Matrix: Solid

Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.29		0.050		mg/L		03/24/18 12:01	03/26/18 15:46	1

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	160		0.050		mg/L		03/26/18 14:52	03/26/18 17:56	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-241222/1-A
Matrix: Solid
Analysis Batch: 241285

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 241222

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.010		mg/L		03/24/18 12:01	03/26/18 14:25	1
Lead	ND		0.0050		mg/L		03/24/18 12:01	03/26/18 14:25	1

Lab Sample ID: LCS 720-241222/2-A
Matrix: Solid
Analysis Batch: 241285

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 241222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	1.00	0.936		mg/L		94	80 - 120
Lead	1.00	0.900		mg/L		90	80 - 120

Lab Sample ID: MB 720-241276/1-A
Matrix: Solid
Analysis Batch: 241291

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 241276

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.010		mg/L		03/26/18 14:49	03/26/18 16:19	1
Lead	ND		0.0050		mg/L		03/26/18 14:49	03/26/18 16:19	1

Lab Sample ID: LCS 720-241276/2-A
Matrix: Solid
Analysis Batch: 241291

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 241276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	1.00	0.928		mg/L		93	80 - 120
Lead	1.00	0.938		mg/L		94	80 - 120

Lab Sample ID: LB 720-241173/1-B
Matrix: Solid
Analysis Batch: 241285

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 241222

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.10		mg/L		03/24/18 12:01	03/26/18 14:34	1
Lead	ND		0.050		mg/L		03/24/18 12:01	03/26/18 14:34	1

Lab Sample ID: LB4 720-241169/1-B
Matrix: Solid
Analysis Batch: 241291

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 241276

Analyte	LB4 Result	LB4 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.10		mg/L		03/26/18 14:49	03/26/18 16:28	1
Lead	ND		0.050		mg/L		03/26/18 14:49	03/26/18 16:28	1

Metals

Leach Batch: 241169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	STLC Citrate	Solid	CA WET Citrate	
720-85358-3	B16 S/GW-S2-A	STLC Citrate	Solid	CA WET Citrate	
LB4 720-241169/1-B	Method Blank	STLC Citrate	Solid	CA WET Citrate	

Leach Batch: 241173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	TCLP	Solid	1311	
720-85358-3	B16 S/GW-S2-A	TCLP	Solid	1311	
LB 720-241173/1-B	Method Blank	TCLP	Solid	1311	

Prep Batch: 241222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	TCLP	Solid	3010A	241173
720-85358-3	B16 S/GW-S2-A	TCLP	Solid	3010A	241173
LB 720-241173/1-B	Method Blank	TCLP	Solid	3010A	241173
MB 720-241222/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 720-241222/2-A	Lab Control Sample	Total/NA	Solid	3010A	

Prep Batch: 241276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	STLC Citrate	Solid	3005A	241169
720-85358-3	B16 S/GW-S2-A	STLC Citrate	Solid	3005A	241169
LB4 720-241169/1-B	Method Blank	STLC Citrate	Solid	3005A	241169
MB 720-241276/1-A	Method Blank	Total Recoverable	Solid	3005A	
LCS 720-241276/2-A	Lab Control Sample	Total Recoverable	Solid	3005A	

Analysis Batch: 241285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	TCLP	Solid	6010B	241222
720-85358-3	B16 S/GW-S2-A	TCLP	Solid	6010B	241222
LB 720-241173/1-B	Method Blank	TCLP	Solid	6010B	241222
MB 720-241222/1-A	Method Blank	Total/NA	Solid	6010B	241222
LCS 720-241222/2-A	Lab Control Sample	Total/NA	Solid	6010B	241222

Analysis Batch: 241291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-85358-1	B15 S/GW-S2-A	STLC Citrate	Solid	6010B	241276
720-85358-3	B16 S/GW-S2-A	STLC Citrate	Solid	6010B	241276
LB4 720-241169/1-B	Method Blank	STLC Citrate	Solid	6010B	241276
MB 720-241276/1-A	Method Blank	Total Recoverable	Solid	6010B	241276
LCS 720-241276/2-A	Lab Control Sample	Total Recoverable	Solid	6010B	241276

Lab Chronicle

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Client Sample ID: B15 S/GW-S2-A

Date Collected: 03/15/18 10:50
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
STLC Citrate	Leach	CA WET Citrate			241169	03/24/18 10:32	AAP	TAL PLS
STLC Citrate	Prep	3005A			241276	03/26/18 14:52	MAG	TAL PLS
STLC Citrate	Analysis	6010B		1	241291	03/26/18 17:52	OBI	TAL PLS
TCLP	Leach	1311			241173	03/23/18 17:10	AAP	TAL PLS
TCLP	Prep	3010A			241222	03/24/18 12:01	AAP	TAL PLS
TCLP	Analysis	6010B		1	241285	03/26/18 15:42	BKR	TAL PLS

Client Sample ID: B16 S/GW-S2-A

Date Collected: 03/15/18 13:07
Date Received: 03/16/18 14:40

Lab Sample ID: 720-85358-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
STLC Citrate	Leach	CA WET Citrate			241169	03/24/18 10:32	AAP	TAL PLS
STLC Citrate	Prep	3005A			241276	03/26/18 14:52	MAG	TAL PLS
STLC Citrate	Analysis	6010B		1	241291	03/26/18 17:56	OBI	TAL PLS
TCLP	Leach	1311			241173	03/23/18 17:10	AAP	TAL PLS
TCLP	Prep	3010A			241222	03/24/18 12:01	AAP	TAL PLS
TCLP	Analysis	6010B		1	241285	03/26/18 15:46	BKR	TAL PLS

Laboratory References:

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

Accreditation/Certification Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Laboratory: TestAmerica Pleasanton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2496	01-31-20
USDA	Federal		P330-17-00380	12-11-20

Method Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL PLS

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: EnviroAssets Inc
Project/Site: Red Hanger Cleaners

TestAmerica Job ID: 720-85358-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-85358-1	B15 S/GW-S2-A	Solid	03/15/18 10:50	03/16/18 14:40
720-85358-3	B16 S/GW-S2-A	Solid	03/15/18 13:07	03/16/18 14:40

Smith, Micah

From: Michael Harrison <mharrison@enviroassets.com>
Sent: Thursday, March 22, 2018 10:02 AM
To: Smith, Micah
Subject: RE: TestAmerica EDD and report files from 720-85358-2 Red Hanger Cleaners

-External Email-

Dear Micah:
Thank you for the expedited results. Please perform the following additional leaching analyses:

- Client sample B15 S/GW-S2-A (Lab Sample ID: 720-85358-1): TCLP and STLC for Chromium
- Client sample B16 S/GW-S2-A (Lab Sample ID: 720-85358-3): TCLP and STLC for Lead

Please let me know an ETA for these analyses.

Sincerely,

Michael Harrison, P.E., QSD/QSP, LEED AP
Principal
EnviroAssets, Inc.
(888) 748-8820
Web: http://www.enviroassets.com/

From: Smith, Micah <micah.smith@testamericainc.com>
Sent: Wednesday, March 21, 2018 2:36 PM
To: Michael Harrison <mharrison@enviroassets.com>
Subject: TestAmerica EDD and report files from 720-85358-2 Red Hanger Cleaners

Hello,

Attached please find the EDD and report files for job 720-85358-2; Red Hanger Cleaners

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: Project Feedback

MICAH SMITH
Project Manager

TestAmerica Pleasanton
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 916.374.4302
www.testamericainc.com

Reference: [272463]
Attachments: 3

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

720-85358

TESTAMERICA Pleasanton Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756

Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 181823

Date 3/16/18 Page 1 of 1

3/29/2018

Report To

Attn: Mike Harrison

Company: Enviro Assets

Address: 6037 La Salle Ave, Oakland CA

Email: mharrison@enviroassets.com

Bill To: Mike Harrison

Sampled By: George Mead

Attn

Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☐ 8270C SIM	Oil and Grease ☐ Petroleum (EPA 1664/9071) ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:	Metals: ☐ 6020 ☐ 200.8 (ICP-MS):	W.E.T (STLC) ☐ ☐ W.E.T (DI) ☐ TCLP	Hex Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH - ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity	3 day RUSH	Number of Containers
B15 S/GW-S2-A	3/16/18	1250	S		X								X									X	
B15 S/GW-S8-A	3/16/18	1112	S		X																		
B16 S/GW-S2-A	3/16/18	1307	S		X								X									X	
B16 S/GW-S8-A	3/16/18	1313	S		X																		
B15 S/GW W	3/16/18	0935	W		X																		
Trip Blank	3/16/18		W		X																		

RUSH

720-85358 Chain of Custody

Page 16 of 17

Project Info.

Project Name/ #: Red Hanger Cleaners EA270

PO#.

Sample Receipt

of Containers:

Head Space:

Temp: 5.6 °C

Credit Card Y/N: If yes, please call with payment information ASAP

TAT: 10 Day | (5 Day) | 4 Day | 3 Day | 2 Day | 1 Day | Other.

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF

Special Instructions / Comments: ☐ Global ID

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 1440	Signature: Time:	Signature: Time:
Printed Name: George Mead Date: 3/16/18	Printed Name: Date:	Printed Name: Date:
Company: Enviro Assets	Company:	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1440	Signature: Time:	Signature: Time:
Printed Name: Dennis Argo 3/16/18 Date:	Printed Name: Date:	Printed Name: Date:
Company: TA 720	Company:	Company:

Login Sample Receipt Checklist

Client: EnviroAssets Inc

Job Number: 720-85358-3

Login Number: 85358
List Number: 1
Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

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

ENVIRONMENTAL
Analytical Service, Inc.

Laboratory Report

Project Name:

Red Hanger Cleaners

EAS SDG Number: 218173

Task:

Client Project Manager: Michael Harrison

Prepared For:
EnviroAssets, Inc.
6037 La Salle Avenue
Oakland CA 94611

Project Number: 17331
Sample Event Date: 3/14/18
Received Date: 3/23/2018
Report Date: 3/27/2018

Project Number: EA270
PO Number: EA270

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is an unique identifier for the sample.

This Report Contains:

Laboratory Work Order
Project Sample Media
Laboratory Case Narrative and Chain of Custody
Method Description (when applicable)
Quality Control Reports
Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 218173
Client: Michael Harrison
EnviroAssets, Inc.

Project Number: 17331
Received: 3/23/2018

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
V-VP-1-A	218173 1	EPA TO-15 Short Chlorinated List	3/14/2018
V-VP-1-A	218173 1	ASTM D1945 Helium	3/14/2018
V-VP-3-A	218173 2	ASTM D1945 Helium	3/14/2018
V-VP-3-A	218173 2	EPA TO-15 Short Chlorinated List	3/14/2018
V-VP-2-A	218173 3	ASTM D1945 Helium	3/14/2018
V-VP-2-A	218173 3	EPA TO-15 Short Chlorinated List	3/14/2018
V-VP-4-A	218173 4	EPA TO-15 Short Chlorinated List	3/14/2018
V-VP-4-A	218173 4	ASTM D1945 Helium	3/14/2018
V-B15-7-A	218173 5	EPA TO-15 Short Chlorinated List	3/15/2018
V-B15-7-A	218173 5	ASTM D1945 Helium	3/15/2018
V-B15-15-A	218173 6	ASTM D1945 Helium	3/15/2018
V-B15-15-A	218173 6	EPA TO-15 Short Chlorinated List	3/15/2018
V-B16-7-A	218173 7	ASTM D1945 Helium	3/15/2018
V-B16-7-A	218173 7	EPA TO-15 Short Chlorinated List	3/15/2018
V-B16-15-A	218173 8	EPA TO-15 Short Chlorinated List	3/15/2018
V-B16-15-A	218173 8	ASTM D1945 Helium	3/15/2018

Project Sample Media

SDG Number: 218173

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. Canisters that are received with sub-ambient pressures are pressurized to about 5 psig. The initial pressure of the canister when it is received is recorded along with the final pressure after pressurization. The canister dilution factor is the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample Media	Batch	Pressure, torr Initial	Final	Can Factor
218173	1	V-VP-1-A	305	030218A	479	600	1.25
218173	2	V-VP-3-A	368	030218A	437	591	1.35
218173	3	V-VP-2-A	332	030718B	469	611	1.30
218173	4	V-VP-4-A	317	030718B	469	600	1.28
218173	5	V-B15-7-A	301	022718A	422	547	1.30
218173	6	V-B15-15-A	344	022718A	506	602	1.19
218173	7	V-B16-7-A	935	021418A	690	690	1.00
218173	8	V-B16-15-A	378	022718A	496	590	1.19

Laboratory Case Narrative

EAS SDG Number: 218173 **Project Number:** 17331

Client: EnviroAssets, Inc.

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytyical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.

Date Approved: 3/27/2018

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

ENVIRONMENTAL
Analytical Service, Inc.

173 Cross Street
San Luis Obispo, CA
93401 - 7597
805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number EA270 | Project Name: Red Hanger Cleaners | Quote Number:

REPORT TO:

Company Enviro Assets
Address 6037 La Salle Avenue
City/State/Zip Oakland CA 94611
Phone 510 346 9500 (FAX)
ATTENTION Mike Harrison

MATRIX LEGEND
A - Ambient Air, Low Level
I - Indoor Air
S - Source Air, High Level
G - Gas/Product

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	CANISTER NUMBER	COMP	GRAB	MATRIX A	MATRIX I	MATRIX S	MATRIX G	INITIAL PRESSURE	FINAL PRESSURE	EAS LABORATORY ID	ANALYTICAL TESTS: TO-15 SIM	Regulator # REMARKS
VP-1-A	3/14/18	2141	305			X				25	11	218173-01	X	2643
VP-3-A		2226	368			X				27	13	-02	X	2588
VP-2-A		2254	332			X				32	16	-03	X	2640
VP-4-A		2350	317			X				27	15	-04	X	2515
B15-7-A	3/15/18	1232	301			X				28	13	-05	X	2633
B15-15-A		1230	344			X				24	12	-06	X	2576
B16-7-A		1329	935			X				25	10	-07	X	2594
B16-15-A		1334	378			X				32	15	-08	X	2555

COMMENTS

BILLING INFORMATION

Company Enviro Assets
Address 6037 La Salle Avenue
City/State/Zip Oakland CA 94611
ATTENTION Mike Harrison
Purchase Order/Billing Reference EA 270

	Date	Time		Date	Time
SAMPLED BY: J. Houseworth GeI/Enc	3/15/18	1415	Received by: Enviro Assets	3/15/18	1415
Relinquished By: Enviro Assets	3/20/18	1610	Received by: Fed Ex	3/20/18	1610
Relinquished By:			Received by:		
Relinquished By:			Received for lab by:	3-23-18	12:00

Quality Control Report

EAS SDG Number 218173

Project Number: 17331

QC Narrative

Samples were anlayzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different the referrenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

A method blank is a laboratory generated sample which assesses the degree to which laboratory operations and procedures cause a false positive. In the method blank, compounds should be present below the reporting limit (RL). Compounds present above the RL are flagged with a "B" in the Analytical Reports in that batch unless the result is greater then ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC
Laboratory ID: B03268

File Name: B03268B.D
Description: METHOD BLANK
Canister:
QC_Batch: 032618-MA1

Date Sampled:
Date Analyzed: 03/26/18
Can Dilution Factor: 1.00
Air Volume: 200 ml

Time:
Time: 11:55

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.26	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	104	70	130	

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD
Analytical Method: D1945

SDG: LABQC
Laboratory Number: B03278

File Name: B03278B
Description: METHOD BLANK
Can/Tube#:
QC_Batch: 032718-GCO

Date Sampled:
Date Analyzed: 03/27/18

Time:
Time: 12:22

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.020	0.06	ND	200	600	ND	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 032618-MA1
Date: 03/26/18

CAS#	Compound	LCS Recovery %	Flag	LCD Recovery %	Flag	Spike Limit LCL %	Spike Limit UCL %	Duplicate %	Duplicate Limit %	Flag
75-01-4	Vinyl chloride	94		99		70	130	5	25	
75-35-4	1,1-Dichloroethene	96		99		70	130	4	25	
75-09-2	Dichloromethane	91		96		70	130	5	25	
75-34-3	1,1-Dichloroethane	88		98		70	130	10	25	
67-66-3	Chloroform	89		95		70	130	7	25	
71-55-6	1,1,1-Trichloroethane	91		95		70	130	5	25	
107-06-2	1,2-Dichloroethane	89		90		70	130	1	25	
71-43-2	Benzene	91		91		70	130	0	25	
56-23-5	Carbon tetrachloride	93		92		70	130	1	25	
79-01-6	Trichloroethene	85		91		70	130	6	25	
108-88-3	Toluene	84		90		70	130	8	25	
127-18-4	Tetrachloroethene	89		88		70	130	1	25	
100-41-4	Ethylbenzene	82		88		70	130	7	25	
1330-20-7	m,p-Xylenes	81		87		70	130	7	25	
95-47-6	o-Xylene	85		85		70	130	0	25	
108-67-8	1,3,5-Trimethylbenzene	87		90		70	130	3	25	

LCS - Laboratory Control Spike
LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

Analytical Reports

EAS SDG Number 218173

Project Number: 17331

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications are listed in the method descriptions, and the QC modifications are in the QC Criteria table in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

DETECTION LIMITS

MDL: The MDL is initially determined from the standard deviation of seven replicate measurements, but the value in the report is set from a MDL verification sample run at a level near the calculated MDL.

RL: The reporting limit (RL) is usually the lowest concentration standard on the calibration curve, and represents the lowest concentration that can be measured that will meet all of the QC Criteria for the method.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags. The not detect flag is either a "ND" or a "U". If the "U" flag is selected, the MDL for the compound is reported in the Amount column instead of "ND". Other flags are listed below:

B - This compound was detected in the batch method blank above the reporting limit.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and above the MDL

F - Higher detection limits because of matrix interference

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure. It is different from the ppb unit used to report water or soil data, which is a mass ratio.

UG/M3 OR MG/M3: Micrograms (or milligrams) per cubic meter is a mass/volume ratio and does depend on temperature and pressure of the source at time of sample collection. The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: UG/M3 = PPBV x MW/24.46 where 24.26 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173
Analytical Method: TO-15 **Laboratory ID:** 01

File Name: 1817301A.D
Description: V-VP-1-A
Canister: 305
QC_Batch: 032618-MA1

Date Sampled: 03/14/18 **Time:** 21:41
Date Analyzed: 03/26/18 **Time:** 14:30
Can Dilution Factor: 1.25
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.31	1.57	ND	0.80	4.02	ND	
75-35-4	1,1-Dichloroethene	0.31	1.55	ND	1.24	6.14	ND	
156-60-5	trans-1,2-Dichloroethene	0.31	1.13	ND	1.24	4.47	ND	
75-34-3	1,1-Dichloroethane	0.31	1.56	ND	1.26	6.31	ND	
156-59-2	cis-1,2-Dichloroethene	0.63	1.68	ND	2.48	6.66	ND	
71-55-6	1,1,1-Trichloroethane	0.31	1.39	ND	1.70	7.57	ND	
107-06-2	1,2-Dichloroethane	0.31	1.43	ND	1.26	5.77	ND	
79-01-6	Trichloroethene	0.19	1.46	ND	1.01	7.82	ND	
127-18-4	Tetrachloroethene	0.19	0.76	11.64	1.27	5.16	78.87	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	102	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 01

File Name: 1817301A
Description: V-VP-1-A
Can/Tube#: 305
QC_Batch: 032718-GCO

Date Sampled: 03/14/18 **Time:** 21:41
Date Analyzed: 03/27/18 **Time:** 12:27

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.039	0.117	ND	394	1,182	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173

Analytical Method: TO-15 **Laboratory ID:** 02

File Name: 1817302A.D **Date Sampled:** 03/14/18 **Time:** 22:26
Description: V-VP-3-A **Date Analyzed:** 03/26/18 **Time:** 15:07
Canister: 368 **Can Dilution Factor:** 1.35
QC_Batch: 032618-MA1 **Air Volume:** 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.34	1.70	ND	0.86	4.34	ND	
75-35-4	1,1-Dichloroethene	0.34	1.67	ND	1.34	6.63	ND	
156-60-5	trans-1,2-Dichloroethene	0.34	1.22	ND	1.34	4.83	ND	
75-34-3	1,1-Dichloroethane	0.34	1.68	ND	1.37	6.81	ND	
156-59-2	cis-1,2-Dichloroethene	0.68	1.82	ND	2.67	7.19	ND	
71-55-6	1,1,1-Trichloroethane	0.34	1.50	ND	1.84	8.17	ND	
107-06-2	1,2-Dichloroethane	0.34	1.54	ND	1.37	6.23	ND	
79-01-6	Trichloroethene	0.20	1.57	ND	1.09	8.44	ND	
127-18-4	Tetrachloroethene	0.20	0.82	35.28	1.37	5.57	239.11	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	103	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 02

File Name: 1817302A
Description: V-VP-3-A
Can/Tube#: 368
QC_Batch: 032718-GCO

Date Sampled: 03/14/18 **Time:** 22:26
Date Analyzed: 03/27/18 **Time:** 13:41

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.043	0.129	ND	434	1,302	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173
Analytical Method: TO-15 **Laboratory ID:** 03

File Name: 1817303A.D
Description: V-VP-2-A
Canister: 332
QC_Batch: 032618-MA1

Date Sampled: 03/14/18 **Time:** 22:54
Date Analyzed: 03/26/18 **Time:** 15:41
Can Dilution Factor: 1.30
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.33	1.63	ND	0.83	4.18	ND	
75-35-4	1,1-Dichloroethene	0.33	1.61	ND	1.29	6.39	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.17	ND	1.29	4.65	ND	
75-34-3	1,1-Dichloroethane	0.33	1.62	ND	1.32	6.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.65	1.75	ND	2.57	6.93	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.44	ND	1.77	7.87	ND	
107-06-2	1,2-Dichloroethane	0.33	1.48	ND	1.32	6.00	ND	
79-01-6	Trichloroethene	0.20	1.51	ND	1.05	8.13	ND	
127-18-4	Tetrachloroethene	0.20	0.79	39.92	1.32	5.36	270.60	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	106	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 03

File Name: 1817303A
Description: V-VP-2-A
Can/Tube#: 332
QC_Batch: 032718-GCO

Date Sampled: 03/14/18 **Time:** 22:54
Date Analyzed: 03/27/18 **Time:** 13:54

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.040	0.12	ND	402	1,206	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218173
Laboratory ID: 04

File Name: 1817304A.D
Description: V-VP-4-A
Canister: 317
QC_Batch: 032618-MA1

Date Sampled: 03/14/18 **Time:** 23:50
Date Analyzed: 03/26/18 **Time:** 16:15
Can Dilution Factor: 1.28
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.32	1.61	ND	0.82	4.11	ND	
75-35-4	1,1-Dichloroethene	0.32	1.59	ND	1.27	6.29	ND	
156-60-5	trans-1,2-Dichloroethene	0.32	1.16	ND	1.27	4.58	ND	
75-34-3	1,1-Dichloroethane	0.32	1.60	ND	1.30	6.46	ND	
156-59-2	cis-1,2-Dichloroethene	0.64	1.72	ND	2.54	6.82	ND	
71-55-6	1,1,1-Trichloroethane	0.32	1.42	ND	1.75	7.75	ND	
107-06-2	1,2-Dichloroethane	0.32	1.46	ND	1.30	5.91	ND	
79-01-6	Trichloroethene	0.19	1.49	ND	1.03	8.01	ND	
127-18-4	Tetrachloroethene	0.19	0.78	1.87	1.30	5.28	12.69	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	105	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: . D1945

SDG: 218173
Laboratory Number: 04

File Name: 1817304A
Description: V-VP-4-A
Can/Tube#: 317
QC_Batch: 032718-GCO

Date Sampled: 03/14/18 **Time:** 23:50
Date Analyzed: 03/27/18 **Time:** 13:59

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.041	0.123	ND	406	1,218	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173
Analytical Method: TO-15 **Laboratory ID:** 05

File Name: 1817305B.D **Date Sampled:** 03/15/18 **Time:** 12:32
Description: V-B15-7-A **Date Analyzed:** 03/26/18 **Time:** 17:25
Canister: 301 **Can Dilution Factor:** 1.30
QC_Batch: 032618-MA1 **Air Volume:** 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.33	1.63	ND	0.83	4.18	ND	
75-35-4	1,1-Dichloroethene	0.33	1.61	ND	1.29	6.39	ND	
156-60-5	trans-1,2-Dichloroethene	0.33	1.17	ND	1.29	4.65	ND	
75-34-3	1,1-Dichloroethane	0.33	1.62	ND	1.32	6.56	ND	
156-59-2	cis-1,2-Dichloroethene	0.65	1.75	ND	2.57	6.93	ND	
71-55-6	1,1,1-Trichloroethane	0.33	1.44	ND	1.77	7.87	ND	
107-06-2	1,2-Dichloroethane	0.33	1.48	ND	1.32	6.00	ND	
79-01-6	Trichloroethene	0.20	1.51	2.41	1.05	8.13	12.92	
127-18-4	Tetrachloroethene	0.20	0.79	7.24	1.32	5.36	49.04	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	128	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 05

File Name: 1817305A
Description: V-B15-7-A
Can/Tube#: 301
QC_Batch: 032718-GCO

Date Sampled: 03/15/18 **Time:** 12:32
Date Analyzed: 03/27/18 **Time:** 14:15

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.050	0.15	ND	502	1,506	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 218173
Laboratory ID: 06

File Name: 1817306A.D
Description: V-B15-15-A
Canister: 344
QC_Batch: 032618-MA1

Date Sampled: 03/15/18 **Time:** 12:30
Date Analyzed: 03/26/18 **Time:** 17:59
Can Dilution Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.30	1.50	ND	0.76	3.82	ND	
75-35-4	1,1-Dichloroethene	0.30	1.48	ND	1.18	5.85	ND	
156-60-5	trans-1,2-Dichloroethene	0.30	1.07	ND	1.18	4.25	ND	
75-34-3	1,1-Dichloroethane	0.30	1.48	ND	1.20	6.00	ND	
156-59-2	cis-1,2-Dichloroethene	0.60	1.60	ND	2.36	6.34	ND	
71-55-6	1,1,1-Trichloroethane	0.30	1.32	ND	1.62	7.20	ND	
107-06-2	1,2-Dichloroethane	0.30	1.36	ND	1.20	5.49	ND	
79-01-6	Trichloroethene	0.18	1.39	6.12	0.96	7.44	32.85	
127-18-4	Tetrachloroethene	0.18	0.72	2.07	1.21	4.91	14.06	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	120	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 06

File Name: 1817306A
Description: V-B15-15-A
Can/Tube#: 344
QC_Batch: 032718-GCO

Date Sampled: 03/15/18 **Time:** 12:30
Date Analyzed: 03/27/18 **Time:** 14:18

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.037	0.111	0.757	372	1,116	7,571	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173
Analytical Method: TO-15 **Laboratory ID:** 07

File Name: 1817307A.D **Date Sampled:** 03/15/18 **Time:** 13:29
Description: V-B16-7-A **Date Analyzed:** 03/26/18 **Time:** 18:34
Canister: 935 **Can Dilution Factor:** 1.00
QC_Batch: 032618-MA1 **Air Volume:** 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.21	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.91	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.05	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.33	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.36	6.05	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
79-01-6	Trichloroethene	0.15	1.16	7.21	0.81	6.26	38.73	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.12	ND	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	122	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 07

File Name: 1817307A
Description: V-B16-7-A
Can/Tube#: 935
QC_Batch: 032718-GCO

Date Sampled: 03/15/18 **Time:** 13:29
Date Analyzed: 03/27/18 **Time:** 14:22

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.027	0.081	ND	272	816	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 218173
Analytical Method: TO-15 **Laboratory ID:** 08

File Name: 1817308A.D
Description: V-B16-15-A
Canister: 378
QC_Batch: 032618-MA1

Date Sampled: 03/15/18 **Time:** 13:34
Date Analyzed: 03/26/18 **Time:** 19:09
Can Dilution Factor: 1.19
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-01-4	Vinyl chloride	0.30	1.50	ND	0.76	3.82	ND	
75-35-4	1,1-Dichloroethene	0.30	1.48	ND	1.18	5.85	ND	
156-60-5	trans-1,2-Dichloroethene	0.30	1.07	ND	1.18	4.25	ND	
75-34-3	1,1-Dichloroethane	0.30	1.48	ND	1.20	6.00	ND	
156-59-2	cis-1,2-Dichloroethene	0.60	1.60	ND	2.36	6.34	ND	
71-55-6	1,1,1-Trichloroethane	0.30	1.32	ND	1.62	7.20	ND	
107-06-2	1,2-Dichloroethane	0.30	1.36	ND	1.20	5.49	ND	
79-01-6	Trichloroethene	0.18	1.39	ND	0.96	7.44	ND	
127-18-4	Tetrachloroethene	0.18	0.72	ND	1.21	4.91	ND	

	Surrogate Recovery	% Rec.	QC Limits LCL	UCL	Flag
2037-26-5	Toluene-d8	104	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

ASTM D 1945 Helium GC/TCD

Analytical Method: D1945

SDG: 218173
Laboratory Number: 08

File Name: 1817308A
Description: V-B16-15-A
Can/Tube#: 378
QC_Batch: 032718-GCO

Date Sampled: 03/15/18 **Time:** 13:34
Date Analyzed: 03/27/18 **Time:** 14:26

CAS#	Compound	MDL %	RL %	Result %	MDL ppmv	RL ppmv	Result ppmV	Flag
7440-59-7	Helium	0.039	0.117	0.101	386	1,158	1,012	J