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**VAPOR MITIGATION COMPLETION REPORT
1160 KERN AVENUE
SUNNYVALE, CALIFORNIA**

By Haley & Aldrich, Inc.
Oakland, California

For Advanced Micro Devices, Inc.
Sunnyvale, California

File No. 39800-010
22 May 2015





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22 May 2015
File No. 39800-008

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Attention: Mr. Max Shahbazian, PG

Subject: Vapor Mitigation Completion Report
1160 Kern Avenue
Sunnyvale, California

Dear Mr. Shahbazian:

Haley & Aldrich, Inc., on behalf of Advanced Micro Devices, Inc. (AMD), has prepared this Vapor Mitigation Completion Report for the former Monolithic Memories, Inc. facility located at 1160 Kern Avenue in Sunnyvale, California. Please contact any of the undersigned if you have any questions or require any additional information.

Sincerely yours,

HALEY & ALDRICH, INC.

Handwritten signature of Peter Scaramella in black ink.

Peter Scaramella
Senior Risk Assessor

Handwritten signature of Peter Bennett in blue ink.

Peter Bennett, PG, CHG
Lead Hydrogeologist and Vice President

Handwritten signature of Michael Calhoun in black ink.

Michael Calhoun, PG, CHG
Senior Technical Specialist / Project Manager

Enclosures

cc: United States Environmental Protection Agency; Attn: Ms. Melanie Morash
Advanced Micro Devices, Inc.; Attn: Ms. Heather O'Cleirigh

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1. Introduction

On behalf of Advanced Micro Devices, Inc. (AMD), Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this report summarizing vapor intrusion assessment and mitigation activities completed at the former Monolithic Memories, Inc. (MMI) facility at 1160 Kern Avenue in Sunnyvale, California (Figures 1 and 2). The Site, together with the adjacent 1165 and 1175 East Arques Avenue properties, comprises the MMI Superfund Site (the Site). The California Regional Water Quality Control Board, San Francisco Bay Region (Water Board) is the lead agency for the Site¹; the United States Environmental Protection Agency (USEPA) Region 9 is providing technical assistance to Water Board staff on vapor intrusion issues.

Several rounds of indoor air samples have been collected at the Site. Tetrachloroethene (PCE) and trichloroethene (TCE) were previously detected in indoor air samples collected at the women's warehouse restroom at concentrations exceeding their respective long-term indoor air screening levels (Regional Screening Levels, or RSLs, for industrial air as reported in USEPA, 2015). Although pure TCE solvent was identified as a cleaning product inside the building during the latest pre-sampling inspection inside the building, it is also possible that detections of PCE and TCE in indoor air are in part due to the upward transport of vapors from the subsurface (i.e., vapor intrusion), through pathways such as cracks in the concrete slab and floor drains, as identified in previous investigations.

Sealing the floor drains was recommended as a potential mitigation option for vapor intrusion by USEPA via email on 18 November 2014. The building tenant, Resource Area for Teaching (RAFT), approved this mitigation option in an email dated 4 December 2014. After the mitigation activities described in this report were completed, PCE and TCE concentrations in confirmation indoor air samples collected at the Site were below RSLs.

In the following sections, this report describes the Site background, results of an assessment of the integrity of the sewer system at the Site, methods used to seal the floor drains at the warehouse restrooms, methods and results of confirmation indoor air sampling, conclusions, and recommendations. Relevant regulatory correspondence is included in Appendix A.

¹ *Site Cleanup Requirements Order Number 91-139* (the Order) was issued on 20 September 1991, by the Water Board. Although the Site is designated as a Superfund site, USEPA delegated oversight authority to the Water Board on 22 October 1987 under the Multi-Site Cooperative Agreement.

2. Background

2.1 SITE HISTORY

MMI began leasing the 1160 Kern Avenue property in 1974; prior to 1974, Amdahl Corporation occupied the property for computer product assembly (USEPA, 1991). In 1987, AMD merged with MMI and assumed responsibility for the 1160 Kern Avenue property. The building on this property, also known as “Building 3,” was used for office space, product handling and testing, and administration until 2003, when AMD closed the building. The lease on the property was terminated at the end of 2006. The 1160 Kern property currently is owned by RAFT, a non-profit organization for teachers, which operates a warehouse on the property.

The properties immediately to the south previously contained two buildings, referred to as Building 1 (1165 E. Arques Avenue) and Building 2 (1175 E. Arques Avenue). These buildings were used by MMI and AMD for semiconductor manufacturing operations until 1991, when operations ceased. In April 2005, AMD donated the 1165/1175 E. Arques Avenue property to a local charity, which then sold the property to TWC Storage, LLC (TWC). TWC purchased the property intending to redevelop the Site for use as a self-storage facility. Both Building 1 and Building 2 and associated facilities, including the on-Site groundwater treatment system, were demolished to accommodate property redevelopment in the spring and summer of 2005. During demolition activities on 15 July 2005, a transformer on a pad in the northwestern corner of the Site was damaged by TWC’s contractors, spilling approximately 250 gallons of PCE on the ground surface (Clayton, 2005). Hereafter, this discharge is referred to as the “PCE spill.”

2.2 GROUNDWATER IMPACTS

The Site hydrostratigraphy is classified into three water-bearing units for convenience: the A, B, and C Zones (Arcadis, 2001). The A Zone extends to a depth of approximately 15 to 25 feet below ground surface (bgs), and is separated from the B Zone by the A-B aquitard (Canonie Environmental, 1986). The B Zone is present from approximately 30 to 45 feet bgs. It is separated from the C Zone by the B-C aquitard (Canonie Environmental, 1986). The B Zone is subdivided into an upper B1 Zone overlying the B2 Zone. Depth to water at the Site is approximately 10 feet bgs. Groundwater in the A and B Zones generally flows to the north/northeast.

The primary chemicals of concern (COCs) in groundwater related to former MMI operations (referred to as “MMI Indicator Compounds”) include PCE, 1,1-dichloroethane (1,1-DCA), 1,2-dichlorobenzene (1,2-DCB), and chlorobenzene (Haley & Aldrich, 2014a). These COCs have been detected primarily in samples collected from shallow (A-Zone) groundwater beneath the Site. Other release sites exist in the vicinity of the Site and to the south (hydraulically upgradient); groundwater beneath the Site is affected by historical releases migrating from at least one of these other release sites. Groundwater beneath the Texas Instruments (TI, formerly National Semiconductor Corporation [NSC]) facility upgradient of the Site at 2900 Semiconductor Drive (Subunit 1 of OU1), has been reported to contain TCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and Freon 113 (“OU-1 Indicator Compounds”; Treadwell & Rollo, 2013). These same compounds have been detected in groundwater samples beneath the Site in both the A Zone and deeper B Zone, and have been attributed to upgradient sources. NSC (now TI) assumed responsibility for operation and monitoring of the groundwater extraction network operating beneath the entire OU1, including Subunit 2, on 31 January 2002.

2.3 REGULATORY OVERSIGHT

Site Cleanup Requirements Order Number 91-139 was issued on 20 September 1991 by the Water Board. The Order designates the MMI Superfund Site, which includes the 1160 Kern Avenue property, as a portion of the area defined in the Record of Decision (ROD; USEPA 1991) as Operable Unit 1 (OU1) of the Eastern Sunnyvale Study Area (Figure 1). OU1 begins approximately 2,000 feet south of the Site and extends approximately 4,000 feet north of the Site, beyond Highway 101. OU1 is subdivided into three subunit areas (Subunits 1, 2, and 3). The MMI Superfund Site is designated as Subunit 2 of OU1.

An Administrative Civil Liability Order (ACL), No. R2-2006-0030, was issued on 10 May 2006 to TWC by the Water Board related to the PCE spill; AMD is not named as a discharger on the ACL and TWC is responsible for cleanup and monitoring of the PCE spill.

During a 17 December 2013 meeting with AMD and Haley & Aldrich, the Water Board and USEPA Region 9 staff expressed appreciation for the vapor intrusion studies AMD has already completed at the Site, but indicated that a request for additional information on the vapor intrusion work completed would be forthcoming to ensure consistency with USEPA's draft guidance and guidelines.

In a letter to AMD on 3 January 2014, the Water Board requested a report comparing the methods used and conditions under which a vapor intrusion evaluation was completed previously at the Site with those methods and conditions recommended in the following United States Environmental Protection Agency (USEPA) documents:

- 2013 Office of Solid Waste and Emergency Response External Review Draft – Final Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from the Subsurface to Indoor Air (External Review Draft OSWER VI Guidance).
- 3 December 2013, USEPA Region 9 Guidelines and Supplemental Information Needed for Vapor Intrusion Evaluations at South Bay National Priority List (NPL) Sites (Region 9 Guidelines).

2.4 VAPOR INTRUSION EVALUATION AND MITIGATION – 2011 TO 2014

Five indoor air sampling events were completed by AMD at 1160 Kern Avenue from 2011 to 2014, and three mitigation efforts were completed. The indoor air sampling results are summarized in Table 1 and the following mitigation efforts were completed:

- On 13 December 2011, TrapGuard® drain inserts were installed in each of the drains in the warehouse and lobby restrooms to mitigate the potential for vapors without interfering with the operation of the drains.
- On 26 and 27 September 2013, based on the results of an assessment of the heating, ventilation, and air conditioning (HVAC) system, two improvements were made to the HVAC system: 1) minimum outside air intake rates were set on the rooftop HVAC systems that service the front offices and volunteer room, and 2) vents were installed in the restroom doors to mitigate negative pressure observed in several restrooms.
- On 15 to 20 January 2014, Retro-Coat™ Vapor Intrusion Coating System (Retro-Coat™ system) was applied to the floors in the warehouse restrooms to mitigate the migration of COCs from the sub-slab to indoor air in January 2014.

These sampling and mitigation events are summarized in greater detail in the Vapor Intrusion Evaluation Report (VI Report), submitted to the Water Board and USEPA on 28 February 2014 (Haley & Aldrich, 2014b).²

An Addendum to the VI Report was submitted to the Water Board and USEPA on 31 March 2014 describing the results of a preferential pathway evaluation. This report concluded that the shower and floor drains were a potential pathway for vapor intrusion and that an additional level of protection could be achieved through sealing the drains (Haley & Aldrich, 2014c). This report describes assessment and mitigation activities that were completed after the submittal of the Addendum to the VI Report.

² AMD submitted four reports to the Water Board to document indoor air sampling and vapor intrusion mitigation events prior to the submittal of the VI Report (AMEC, 2011, 2012; Haley & Aldrich, 2013, 2014c).

3. Assessment of Integrity of Sewer System

An assessment of the integrity of the sewer system was performed to support the selection of an appropriate mitigation action to reduce concentrations of PCE and TCE in indoor air at the women's warehouse restroom. Figure 4 presents the locations of the cleanouts and piping observed during the video inspection. The field activities implemented to assess the integrity of the sewer system are described in Appendix B.

The results of the sewer integrity assessment suggest that the on-site sewer system has at least two separate laterals and is in generally good condition. One sewer lateral appears to service the warehouse restrooms, and this lateral was not observed to service other portions of the building. Thus, the implementation of mitigation measures, such as sealing the floor drains in the warehouse restrooms, are not expected to affect other portions of the building. The portion of the drains at the warehouse restrooms that was accessible to video inspection appeared in good condition, indicating that replacing the floor drains would not mitigate the potential for vapor intrusion at this preferential pathway.

Additional observations from the sewer integrity assessment are presented below.

3.1 GENERAL OBSERVATIONS

- A visual inspection of the building interior identified where two 3-inch cleanouts could be accessed for a video inspection. A 2-inch cleanout was found in the lobby, but it was too small for a video inspection. A circular area of the slab northeast of the warehouse restrooms was observed, possibly indicating a former cleanout; however, this location was completely filled with cement and continuous with the concrete slab. No other sewer access points were identified inside or outside the building, though the entire slab could not be inspected because of items being stored throughout the warehouse.
- Two separate laterals were identified: one on the western side of the building, north of the warehouse restrooms; and the other on the eastern side of the building, north of the lobby restrooms and volunteer room.
- The portions of the sewer system that were accessed via a toilet in the women's warehouse restroom are composed of 2- to 3-inch cast iron pipes. No cracks in the sewer pipe were apparent during the video inspection.
- The portions of the sewer system that were observed in the building, via the cleanouts, are composed of 4-inch cast iron pipes. The pipes are approximately 2 feet below grade.
- No cracks in the sewer pipe were apparent during the video inspection.
- Locating utilities inside the building was complicated by interference with building rebar and obstructions inside the building (e.g., storage, cabinets, and walls).

3.2 WAREHOUSE SEWER SYSTEM

The sewer video assessment of the warehouse sewer system indicated the following:

- The sewer line from the cleanout in the warehouse northwest of the warehouse restrooms runs north toward Kern Avenue. The sewer line from the warehouse restrooms connects to this

pipings at a wye (“Y”-shaped pipe connector) about 38 feet north of the cleanout. Each of the toilets in the men’s and women’s restroom was flushed to confirm connectivity between the warehouse restrooms and this cleanout. Water was observed entering the cleanout shortly after each flush.

- The section of lateral between the warehouse restrooms and the wye could not be performed because the camera could not be turned around to move toward the restrooms.
- Near the landscaping just north of the parking lot, the sewer line connects to a sewer header line of different construction (6- to 8-inch clay pipe) that appeared to run parallel to Kern Avenue. The camera was not able to move beyond the junction of the pipes because of the sharp bend. No direct connection was observed between the lateral and the sewer main, which was previously identified as running along the northern half of Kern Avenue. An access point to the clay pipe was not found outside the building, and the depth of this pipe could not be determined because the utility locating equipment did not detect the lateral pipe outside the building using several different locating methods.
- Sags were observed in the sewer piping at the connection with the clay pipe outside of the building (pooled water was observed upstream of the tee) and at the wye connection with the warehouse restroom piping (pooled material was observed upstream of the wye).
- The video assessment via the cleanout near the warehouse restrooms revealed a sewer pipe parallel to Kern Avenue, but south of the street, near the northern property boundary of 1160 Kern. The purpose and full alignment of this pipe are not known.

3.3 LOBBY SEWER SYSTEM

The video inspection of the lobby sewer system indicated the following:

- The sewer piping from the lobby restrooms runs north toward the lobby, then continues to the north/northeast.
- In the supply room, between the volunteer room and the lobby, a wye was observed in the sewer piping, with one branch leading toward Kern Avenue and one branch coming in from the south. Sharp bends in the piping kept the video inspection from continuing beyond the wye.
- Additional cleanouts were observed during the course of the sewer video inspection, but the cleanouts were buried or otherwise inaccessible and were not identified above ground.
- A sag was observed in the sewer line just north of the cleanout.
- No connection was observed between the kitchen sewer piping and the office sewer line.

3.4 KERN AVENUE SEWER MAIN

The video inspection of the sewer main in Kern Avenue indicated the following:

- The invert of the sewer was 11 feet below grade, and the pipe was 8-inch vitrified clay pipe. Turbulent flow was observed and the pipe was approximately 90 percent full, indicating that the sewer was likely undersized for the volume of flow.

- At 215 feet east of the manhole (in Kern Avenue, in front of the 1160 Kern building), an obstruction was encountered and could not be passed. When the video inspection was reattempted, the tread on the device broke and could not be fixed.

4. Vapor Intrusion Mitigation at Warehouse Restrooms

Haley & Aldrich subcontracted with Innovative Construction Solutions (ICS), based in Santa Ana, California, to seal the floor drains and patch the flooring at these locations with a volatile organic compound (VOC) impervious sealant. Mitigation of the potential for vapor intrusion at the warehouse restroom was performed in March 2015. Permit requirements for the sealing of the floor drains are described in Section 4.1. Section 4.2 summarizes the field activities.

4.1 BUILDING PERMIT

The City of Sunnyvale Building Department (Building Department) issued permit #2015-0783 to “seal floor drains and remove shower at restrooms in warehouse” (Appendix C). After the floor drains were sealed, the Building Department requested the installation of new floor drains for compliance with the building code. The Building Department would not issue the final approval to close permit #2015-0783.

On 19 February 2015, Melanie Morash, USEPA Remedial Project Manager, informed the Building Department of the USEPA’s requirement to remove the floor drains. Ms. Morash also spoke with the Building Department on 23 February 2015. Email correspondence between the Building Department and USEPA is included in Appendix A.

4.2 VAPOR INTRUSION MITIGATION FIELD ACTIVITIES

The four floor drains in the warehouse restrooms were sealed and the associated flooring was patched with the Retro-Coat™ Vapor Intrusion Coating System (Retro-Coat™ system) by American Industrial Coatings (AIC) of Esparto, California, as a subcontractor to ICS, from 2 through 6 March 2015, under the direction of Haley & Aldrich. The Retro-Coat™ system is manufactured by Land Science Technologies [Land Science] of San Clemente, California, specifically to mitigate vapor intrusion. AIC previously installed the Retro-Coat™ system at the warehouse restrooms to mitigate the migration of COCs from the sub-slab to indoor air in January 2014 (Haley & Aldrich, 2014b).

The existing TrapGuard® drain inserts were removed from the floor drains on 2 March 2015. Between 2 and 3 March 2015, Rapid Set® Professional Grade Mortar Mix High Strength Repair Mortar was poured to completely fill the floor drain and p-trap. The mortar was poured into each floor drain, and additional mortar was used to partially fill the depression in the floor around each floor drain. A paint thinner that did not contain the COCs was applied to the existing floor surrounding the mortar on 3 March 2015 to clean and prime the surface for application of the floor covering.

The Retro-Coat™ system was applied in the following three steps, in accordance with Land Science’s specifications:

1. AIC applied the VOC-impervious material, Retro-Coat™, at the former shower floor drains in both restrooms on 3 March 2015 and at the former restroom floor drains in both restrooms on 4 March 2015. The two-part Retro-Coat™ material was applied in two 10-mil (1 mil equals 0.001 inch) coats (20 mil total) in each restroom in accordance with LST’s specifications; however, due to the depression in the floor, a sealant thickness of approximately 30 mil was applied on top of each former floor drain location.

2. AIC applied about 3 or 4 pounds of green/gray color chips on top of the Retro-Coat™ material until the chips completely covered the top of the Retro-Coat™ material to provide a decorative finish and texture.
3. AIC coated the floor with approximately 40 mil of a two-part clear epoxy sealer, Retro-Coat™ SEALER (Sealer), on 5 March 2015.

Shower fixtures, including the fold-down seats, handle bars, shower heads, and faucet handles were removed on 2 March 2015. Before removing tile, drywall, and mastic, these materials were sampled and analyzed for asbestos; no asbestos were detected. The existing wall tiles were chipped out as needed to remove the shower fixtures. With the water service to the warehouse restrooms temporarily shut off, the water pipes serving the showers were saw-cut with a handheld tool and capped with push-on ½-inch brass caps on 2 March 2015. After the shower fixtures were removed, the voids within the wall where the faucets and shower head were located were patched with drywall and re-tiled.

Photographs showing the drains and showers at the warehouse restrooms “before” and “after” the mitigation activities are presented in Appendix D.

5. April 2015 Confirmation Indoor Air Sampling

To confirm the effectiveness of mitigation measures implemented at the warehouse restrooms, indoor air samples were collected on 9 April 2015. USEPA and Water Board were notified via email on 19 March 2015 of the proposed confirmation sampling program, including the locations of the indoor air samples. In addition, USEPA and Water Board were given updates on the results of building surveys and the date of indoor air sample collection on 27 March and 7 April 2015. This email correspondence is included in Appendix A.

This section discusses the pre-sampling field activities, indoor air sampling methodology, analytical results, and quality assurance/quality control activities.

5.1 BUILDING SURVEY

Before collecting indoor air samples, Haley & Aldrich conducted pre-sampling building walkthroughs to assess the building's condition and potential indoor sources of VOCs. A handheld photoionization detector capable of detecting VOCs in the parts per billion range (i.e., ppbRAE 3000, manufactured by RAE Systems) was used to identify potential indoor sources of VOCs. A tenant representative was interviewed regarding indoor chemical usage and chemical storage. The following list summarizes the observations made during the walkthroughs and appropriate actions taken before indoor air sampling began:

- The floor covering previously applied in the warehouse restrooms was inspected on 16 March 2015 and found to be in good condition. The exposed areas of the concrete slab throughout the building were visually inspected and cracks were not observed; however, storage pallets and cabinets cover much of the slab in the warehouse, and the floor in most of the northern portion of the building is tiled, so the slab could not be visually inspected.
- A urinal deodorizer was observed on 16 March 2015 in the supply cabinet in the women's warehouse restrooms, and VOCs were also detected by a ppbRAE in the supply cabinet. The product was removed from the restrooms on 17 March 2015 and placed in a sealed container in the warehouse until completion of indoor air sampling.
- On 16 March 2015, the existing tile grout in the women's and men's warehouse restrooms and former shower areas was observed to be in poor condition in several locations along the wall separating the two restrooms, and VOCs were detected by a ppbRAE at several such locations in the women's warehouse restroom. On 17 and 19 March 2015, the spaces with cracked or deteriorated tile grout were patched and sealed by Haley & Aldrich, using TEC® Invision® Ready to Use Sanded Caulk; the Material Safety Data Sheet (MSDS) for the sealant is provided in Appendix E. The freshly grouted locations were scanned with a ppbRAE on 7 and 9 April 2015, and VOCs were not detected above typical building interior VOC concentrations measured by the ppbRAE.
- Upon arrival for indoor air sampling on 24 March 2015, approximately 5 days after tile grout patching in the women's warehouse restroom, Haley & Aldrich observed that the tenant was in the process of painting the volunteer room, lobby, and hallway adjacent to the lobby. A variety of paint products and a spackling product were observed, and the MSDS are provided in Appendix F. Indoor air sampling was postponed to allow residual concentrations of VOCs associated with the paint products to be removed by the HVAC system. On 7 April 2015, Haley &

Aldrich observed that the interior painting activities had been completed. The freshly painted surfaces were scanned with a ppbRAE and VOCs were not detected above typical building interior VOC concentrations measured by the ppbRAE. Surplus paint products were identified within the building, and these products were moved to a storage enclosure outside of the building until completion of indoor air sampling.

- On 7 April 2015, a variety of chemicals were observed in the warehouse work bench area, including consumer quantities of products. The photographic log in Appendix F includes a photograph of these chemicals. Spikes in VOC concentrations were not detected with a ppbRAE in the vicinity of the chemicals. One of the electronic parts cleaners, Misty® SuperSolve, is composed primarily of TCE; the MSDS is provided in Appendix E. A representative of the tenant indicated that RAFT accumulates donated chemicals, and that these products are stored in the warehouse work bench area until they are disposed of. The electronic parts cleaner and several additional VOC-containing chemicals were moved to a separate storage enclosure outside the building until completion of indoor air sampling.

According to a previous Air Systems Inc. inspection, three HVAC units and three exhaust fans are present on the building roof. The HVAC units have outside air intake and economizers. Additional ventilation is provided by exhaust fans serving each set of the restrooms, and a rollup door in the shipping and receiving area. The HVAC units operate by thermostat, and the operation of the ventilation system was confirmed visually and audibly during the walkthroughs and indoor air sampling. The ventilation system operations were previously evaluated and optimized, and the associated field activities are summarized in the 28 February 2014 VI Report (Haley & Aldrich, 2014b).

5.2 CONFIRMATION INDOOR AIR SAMPLING

Indoor air sampling was performed on 9 April 2015, approximately 48 hours after the VOC-containing cleaning products were removed from the building. Indoor air samples were collected at the same locations and under the same conditions as the previous two sampling events (27 September 2013 and 10 February 2014) where previous TCE concentrations were observed at concentrations above RSLs. On 9 April 2015, Haley & Aldrich collected four indoor air samples, one duplicate indoor air sample, and one outdoor air sample during normal building occupancy with the HVAC system on at the front office space. There is no HVAC system at the warehouse portion of the building. An exhaust fan operates continuously in each of the warehouse restrooms with a passive connection from the front offices to supply makeup air.

Samples were collected over an 8-hour period in selective ion monitoring mode (SIM) certified clean 6-liter passivated (e.g., SUMMA®) canisters and analyzed for the Site COCs using USEPA Method TO-15 SIM. The analysis was performed by TestAmerica Laboratories, Inc. in West Sacramento, California, which is certified by the National Environmental Laboratory Accreditation Program. The analytical results are provided in Table 1.

As shown in Figure 3, indoor air samples IA-2, IA-5, IA-6, and IA-7 were collected in the women's warehouse restroom, the volunteer room, the southeastern interior of the warehouse, and the men's warehouse restroom, respectively. A duplicate air sample (IA-2B) was collected at location IA-2 for field quality assurance/quality control (QA/QC) purposes. The sample intake was set in the breathing zone, about 3 to 4 feet above the floor.

The selected indoor air sample locations provide adequate areal representation and different interior space types in the building. In addition to indoor air sampling, an outdoor air sample was collected to compare outdoor air sampling results with indoor air sampling results. Appendix F provides photographs taken during sampling activities. Appendix G provides a meteorological summary for the day of sampling, and Table 2 summarizes the outdoor air temperatures during sampling.

5.3 RESULTS OF CONFIRMATION SAMPLING

The sampling results are compared to the USEPA Region 9 RSLs for Industrial Air, which are shown in Table 1. The RSL for TCE is 3.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Outdoor air samples are compared to the indoor air samples to evaluate the impact of the outdoor air on indoor air quality.

Table 1 summarizes the results of indoor air samples collected in the 1160 Kern Avenue building. Appendix H provides the analytical laboratory report associated with the 9 April 2015 sampling event.

As shown in Table 1, and summarized below, the sampling results indicated the following:

- PCE was detected at all four indoor air sample locations at concentrations ranging from $0.33 \mu\text{g}/\text{m}^3$ (IA-6) to $1.0 \mu\text{g}/\text{m}^3$ (IA-2); all sample results were below the PCE RSL of $2.08 \mu\text{g}/\text{m}^3$. PCE was detected in outdoor air at $0.069 \mu\text{g}/\text{m}^3$.
- TCE was detected at all four indoor air sample locations at concentrations ranging from $0.25 \mu\text{g}/\text{m}^3$ (IA-6) to $1.7 \mu\text{g}/\text{m}^3$ (IA-2B); all sample results were below the TCE RSL of $3.0 \mu\text{g}/\text{m}^3$. TCE was not detected in outdoor air above the laboratory reporting limit.
- 1,1,1-TCA was detected at all four indoor air sample locations at concentrations ranging from $0.041 \mu\text{g}/\text{m}^3$ (IA-6) to $0.073 \mu\text{g}/\text{m}^3$ (IA-2); all sample results were below the 1,1,1-TCA RSL of $4,400 \mu\text{g}/\text{m}^3$. 1,1,1-TCA was detected in outdoor air at $0.027 \mu\text{g}/\text{m}^3$.
- Freon 113 was detected at all four indoor air sample locations at concentrations ranging from $0.54 \mu\text{g}/\text{m}^3$ (IA-7) to $0.63 \mu\text{g}/\text{m}^3$ (IA-2B); all sample results were below the Freon 113 RSL of $130,000 \mu\text{g}/\text{m}^3$. Freon 113 was detected in outdoor air at $0.53 \mu\text{g}/\text{m}^3$.
- Chlorobenzene was detected at two indoor air sample locations at concentrations of $0.068 \mu\text{g}/\text{m}^3$ (IA-5) and $0.076 \mu\text{g}/\text{m}^3$ (IA-2); all sample results were below the chlorobenzene RSL of $220 \mu\text{g}/\text{m}^3$. Chlorobenzene was detected in outdoor air at $0.20 \mu\text{g}/\text{m}^3$.

One field duplicate (IA-2B) was collected at location IA-2 during the sampling event. Precision was evaluated by assessing the relative percent difference (RPD) between primary and field duplicate samples. RPD was calculated when a given analyte was detected above the laboratory reporting limit in both the primary sample and the field duplicate sample at a given location. Results were below the project data quality objective of less than 30 percent RPD. All data reported were validated and no qualifications were recommended for any results; QA/QC evaluation documentation (e.g., Data Usability Summary Report) is included in Appendix I.

6. Conclusions and Recommendations

Previous assessments at the Site identified floor drains in the women's warehouse restrooms as potential preferential pathways for the migration of PCE and TCE from the subsurface to indoor air. This pathway was further evaluated with a video assessment of the sewer system. Two separate laterals that appeared to be in generally good condition were identified to service the Site; one of the laterals serviced the warehouse restrooms. The floor drains in the warehouse restrooms were sealed with mortar in March 2015, and the associated flooring was patched with the Retro-Coat™ system.

Indoor air samples were collected on 9 April 2015 to evaluate the effectiveness of VI mitigation measures implemented at the warehouse restrooms. No COCs were detected in indoor air samples at concentrations above their respective industrial air RSLs. The results of indoor air samples collected on 9 April 2015 showed that the potential for vapor intrusion at the women's warehouse restroom to result in concentrations of PCE and TCE in exceedance of the industrial air RSLs was effectively mitigated.

To confirm the results of indoor air samples collected in April 2015, Haley & Aldrich recommends collecting one additional round of indoor air samples during the winter of 2016 at the same locations and conditions sampled in April 2015. If the results of indoor air samples collected in the winter of 2016 are consistent with the April 2015 indoor air sample results, no further action is recommended.

References

1. AMEC, 2011b. Report of Results—Indoor Air Sampling, 1160 Kern Avenue, Sunnyvale, California, October.
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4. California Department of Toxic Substances Control (DTSC), 2013. Human Health Risk Assessment (HHRA) Note 3, Office of Human and Ecological Risk (HERO), May 21.
5. California Regional Water Quality Control Board, San Francisco Bay Region, 1991. Order No. 91-139, Site Cleanup Requirements for Advanced Micro Devices, National Semiconductor Corporation, Hewlett-Packard, and Shahinian Trust, Subunit 2, Operable Unit 1, Sunnyvale and Santa Clara, Santa Clara County, September 20.
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9. Haley & Aldrich, Inc., 2013. Preferential Pathway Investigation Report and Proposed Mitigation Measures, 1160 Kern Avenue, Sunnyvale, California, July 8.
10. Haley & Aldrich, Inc., 2014a. Fourth Five-Year Review Report, 1165/1175 East Arques Avenue, Sunnyvale, California, January 30.
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17. United States Environmental Protection Agency, 2014. EPA Region 9 Response Action Levels and Recommendations to Address Near-Term Inhalation Exposures to TCE in Air from Subsurface Vapor Intrusion, July 9.
18. United States Environmental Protection Agency (USEPA), 2015. Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites, December.

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TABLES

TABLE 1
HISTORICAL ANALYTICAL RESULTS FOR INDOOR AIR SAMPLES
 1160 KERN AVENUE
 SUNNYVALE, CALIFORNIA

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Sample ID	Sample Type	Location	Date Collected	Chloro-benzene	1,2-DCB	1,1-DCA	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	PCE	1,1,1-TCA	TCE	Freon 113	Vinyl Chloride
August 2011—Initial sampling event ¹														
AMB-1	Ambient ²	Parking lot	8/21/2011	<0.092 ³	<0.30	<0.020	<0.055	<0.055	<0.040	<0.14	<0.11	<0.027	0.79 ⁴	<0.013
AMB-2	Ambient	Roof	8/21/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	<0.14	<0.11	0.053	0.74	<0.013
IA-1	Breathing Zone ⁵	Warehouse/storage	8/21/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	1.6	<0.11	1.2	0.75	<0.013
IA-10	Blind Field Duplicate ⁶		8/21/2011	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	1.4	<0.11	1.2	0.66	<0.013
IA-2	Preferential Pathway ⁷	Womens restroom in warehouse	8/21/2011	<0.092	<0.30	0.021	0.25	<0.055	<0.040	14 ⁸	0.16	27	1.4	0.017
IA-3	Breathing Zone	Conference room	8/21/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	2.1	<0.11	1.6	0.83	<0.013
IA-4	Breathing Zone	Lobby	8/21/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	1.0	<0.11	0.84	0.71	<0.013
IA-5	Breathing Zone	Volunteer room	8/21/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	2.4	<0.11	1.8	0.88	<0.013
IA-6	Breathing Zone	Warehouse/storage	8/21/2011	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	3.0	<0.11	1.7	0.62	<0.013
December 2011—Post-mitigation; Trap-Guard® barriers installed in floor drains of warehouse restrooms on 13 December 2011														
AMB-3	Ambient	Parking lot	12/22/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	<0.14	<0.11	0.040	0.70 J ⁹	<0.013
IA-2R	Preferential Pathway (and Blind Field Duplicates)	Womens restroom in warehouse	12/22/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	3.7	<0.11	6.9	1.1 J	<0.013
IA-20R			12/22/2011	<0.092	<0.30	<0.020	<0.055	<0.055	<0.040	4.2	<0.11	7.6	1.5 J	<0.013
IA-7	Preferential Pathway	Mens restroom in warehouse	12/22/2011	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	1.2	<0.11	1.3	0.74 J	<0.013
IA-8	Preferential Pathway	Mens restroom off lobby	12/22/2011	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	1.4	<0.11	1.4	0.76 J	<0.013
IA-9	Preferential Pathway	Womens restroom off lobby	12/22/2011	1.0	0.81	<0.020	<0.055	<0.055	<0.040	1.5	<0.11	2.0	0.79 J	<0.013
July 2012—Followup sampling														
AMB-4	Ambient	Parking lot	7/8/2012	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	0.52 J	<0.11	<0.027	0.70	<0.013
IA-2B ¹⁰	Preferential Pathway (and Blind Field Duplicates)	Womens restroom in warehouse	7/8/2012	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	6.0 J	0.14	14	0.88	<0.013
IA-20B			7/8/2012	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	7.8 J	0.15	15	1.0	<0.013
IA-7B	Preferential Pathway	Mens restroom in warehouse	7/8/2012	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	2.5 J	0.11	2.2	0.75	<0.013
IA-8B	Preferential Pathway	Mens restroom off lobby	7/8/2012	<0.092	<0.30	<0.020	<0.056	<0.056	<0.040	2.7 J	<0.11	2.1	0.74	<0.013
IA-9B	Preferential Pathway	Womens restroom off lobby	7/8/2012	<0.092	<0.30	<0.020	0.15	<0.055	<0.040	3.2 J	<0.11	4.2	0.74	<0.013
September 2013—Followup sampling														
AMBIENT-09272013	Ambient	Roof	9/27/2013	<4.5	<5.8	<3.9	<3.8	<3.8	<3.8	<6.6	<5.3	<1.0	<7.4	<0.50
IA-2	Breathing Zone	Womens restroom in warehouse	9/27/2013	<4.9	<6.5	<4.4	<4.3	<4.3	<4.3	<7.3	<5.9	5.2	<8.2	<0.55
IA-5	Breathing Zone	Volunteer room	9/27/2013	<4.7	<6.2	<4.2	<4.1	<4.1	<4.1	<7.0	<5.6	<1.1	<7.9	<0.53
IA-6	Breathing Zone	Warehouse/storage	9/27/2013	<4.3	<5.6	<3.8	<3.7	<3.7	<3.7	<6.3	<5.1	<1.0	<7.1	<0.48
IA-9	Breathing Zone	Womens restroom off lobby	9/27/2013	<7.8	<10	<6.8	<6.7	<6.7	<6.7	<11	<9.2	<1.8	<13	<0.86
IA-9B			9/27/2013	<7.8	<10	<6.9	<6.7	<6.7	<6.7	<12	<9.3	<1.8	<13	<0.87
February 2014—Post-mitigation; HVAC system improvements, installation of restroom door vents, and application of Retro-Coat™ Vapor Intrusion Coating System														
AMBIENT-02102014	Ambient	Parking lot	2/10/2014	0.042 J	0.074 J	<0.081	<0.079	<0.079	<0.079	<0.14	0.063 J	0.081 J	0.96	<0.051
IA-2	Breathing Zone	Womens restroom in warehouse	2/10/2014	0.040 J	<0.30	<0.081	<0.079	<0.079	<0.079	1.8	0.12	3.5	0.78	<0.051
IA-2B			2/10/2014	0.033 J	<0.30	<0.081	<0.079	<0.079	<0.079	1.7	0.13	3.3	0.78	<0.051
IA-5	Breathing Zone	Volunteer room	2/10/2014	0.038 J	<0.30	<0.081	<0.079	<0.079	<0.079	0.92	0.063 J	0.97	0.62	<0.051
IA-6	Breathing Zone	Warehouse/storage	2/10/2014	0.034 J	<0.30	<0.081	<0.079	<0.079	<0.079	0.98	0.068 J	0.98	0.62	<0.051
IA-7	Breathing Zone	Mens restroom in warehouse	2/10/2014	0.030 J	<0.30	<0.081	<0.079	<0.079	<0.079	0.72	0.085 J	0.91	0.50	<0.051
April 2015—Post-mitigation; warehouse restroom floor drains sealed														
AMBIENT-04092015	Ambient	Parking lot	4/9/2015	0.20	<0.30	<0.081	<0.079	<0.079	<0.079	0.069 J	0.027 J	<0.11	0.53	<0.051
IA-2	Breathing Zone	Womens restroom in warehouse	4/9/2015	0.076 J	<0.30	<0.081	<0.079	<0.079	<0.079	1.0	0.073 J	1.6	0.60	<0.051
IA-2B			4/9/2015	0.070 J	<0.30	<0.081	<0.079	<0.079	<0.079	1.0	0.069 J	1.7	0.63	<0.051
IA-5	Breathing Zone	Volunteer room	4/9/2015	0.068 J	<0.30	<0.081	<0.079	<0.079	<0.079	0.43	0.059 J	0.40	0.55	<0.051
IA-6	Breathing Zone	Warehouse/storage	4/9/2015	<0.092	<0.30	<0.081	<0.079	<0.079	<0.079	0.33	0.041 J	0.25	0.55	<0.051
IA-7	Breathing Zone	Mens restroom in warehouse	4/9/2015	<0.092	<0.30	<0.081	<0.079	<0.079	<0.079	0.47	0.062 J	0.53	0.54	<0.051
USEPA Region 9 Regional Screening Level (RSL) for Industrial Air¹¹				220	880	7.7	31 ¹²	Removed ¹³	310 ¹²	2.08 ¹²	4,400 ¹²	3.0 ¹⁴	130,000	0.16 ¹²
USEPA Region 9 Response Action Level (RAL) for Commercial Air¹⁵				--	--	--	--	--	--	--	--	8	--	--

Notes

1. HVAC systems service the front offices and volunteer room; no HVAC system services the warehouse portion of the building. Indoor air samples were collected with the HVAC system off in August 2011, December 2011, and July 2012 and operating at normal occupancy settings in September 2013, February 2014, and April 2015.
2. Ambient samples were collected outdoors, in an approximate upwind direction of the building and/or near the intake of the building's passive air intake.
3. "<" indicates that the analyte was not detected at or above the laboratory reporting limit shown.
4. Results shown in **bold** indicate that the analyte was detected in the sample at or above the laboratory reporting limit
5. Breathing zone samples were collected indoors from the approximate height of a seated worker.
6. Each duplicate sample was collected simultaneously the associated primary sample, using a T-splitter.
7. Preferential pathway samples were collected indoors, as close as possible to a potential source. Preferential pathway sample results are not necessarily representative of employee exposure.
8. Shaded cells indicate that the analyte was detected in the sample above the RSL.
9. "J" indicates that the analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
10. The indoor air sample IA-2B collected on 8 July 2015 is considered a "grab" sample; the canister had filled completely by the time field personnel arrived to close it.
11. USEPA, 2015, Regional Screening Levels, January, http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm.
12. Alternative air screening level currently recommended in lieu of the November 2012 RSLs (DTSC, 2012, HERO HHRA Note 3).
13. The RSL for trans-1,2-DCE was removed from the RSL tables in May 2014.
14. The USEPA updated the RSL for TCE in November 2011; the RSL for TCE used in prior reports for this site is 6.1 µg/m³.
15. USEPA Region 9 Interim TCE Indoor Air Response Action Level for Commercial/Industrial TCE Inhalation Exposure from Vapor Intrusion for a 8-hour workday (USEPA, 2014).

Abbreviations

-- = not applicable

1,1,1-TCA = 1,1,1-trichloroethane

1,1-DCA = 1,1-dichloroethane

1,1-DCE = 1,1-dichloroethene

1,2-DCB = 1,2-dichlorobenzene

cis-1,2-DCE = cis-1,2-dichloroethene

Freon 113 = 1,1,2-trichloro-1,2,2-trifluoromethane

HVAC = heating, ventilation, and air conditioning

PCE = tetrachloroethene

RSL = U.S. EPA Region 9 Regional Screening Level

TCE = trichloroethene

trans-1,2-DCE = trans-1,2-dichloroethene

USEPA = U.S. Environmental Protection Agency

TABLE 2**SUMMARY OF OUTSIDE AIR TEMPERATURES DURING INDOOR AIR SAMPLING EVENTS ¹**

1160 KERN AVENUE
SUNNYVALE, CALIFORNIA

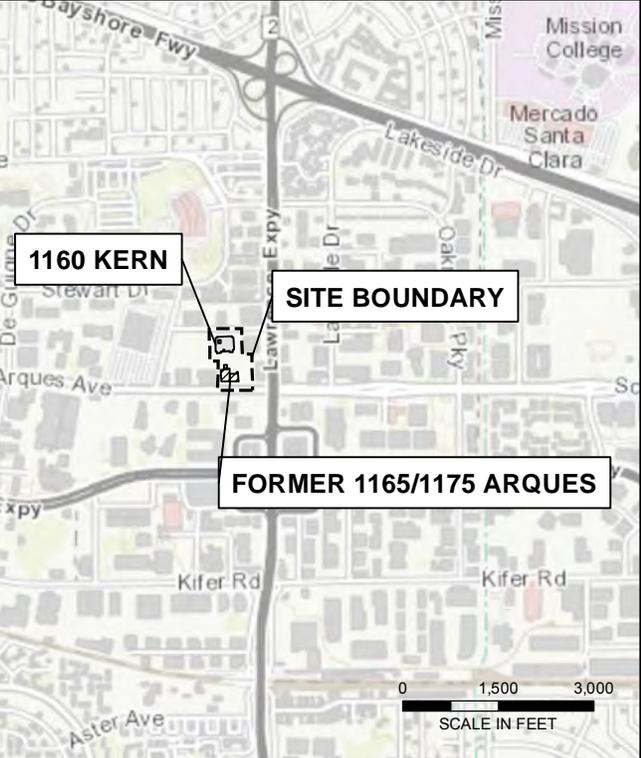
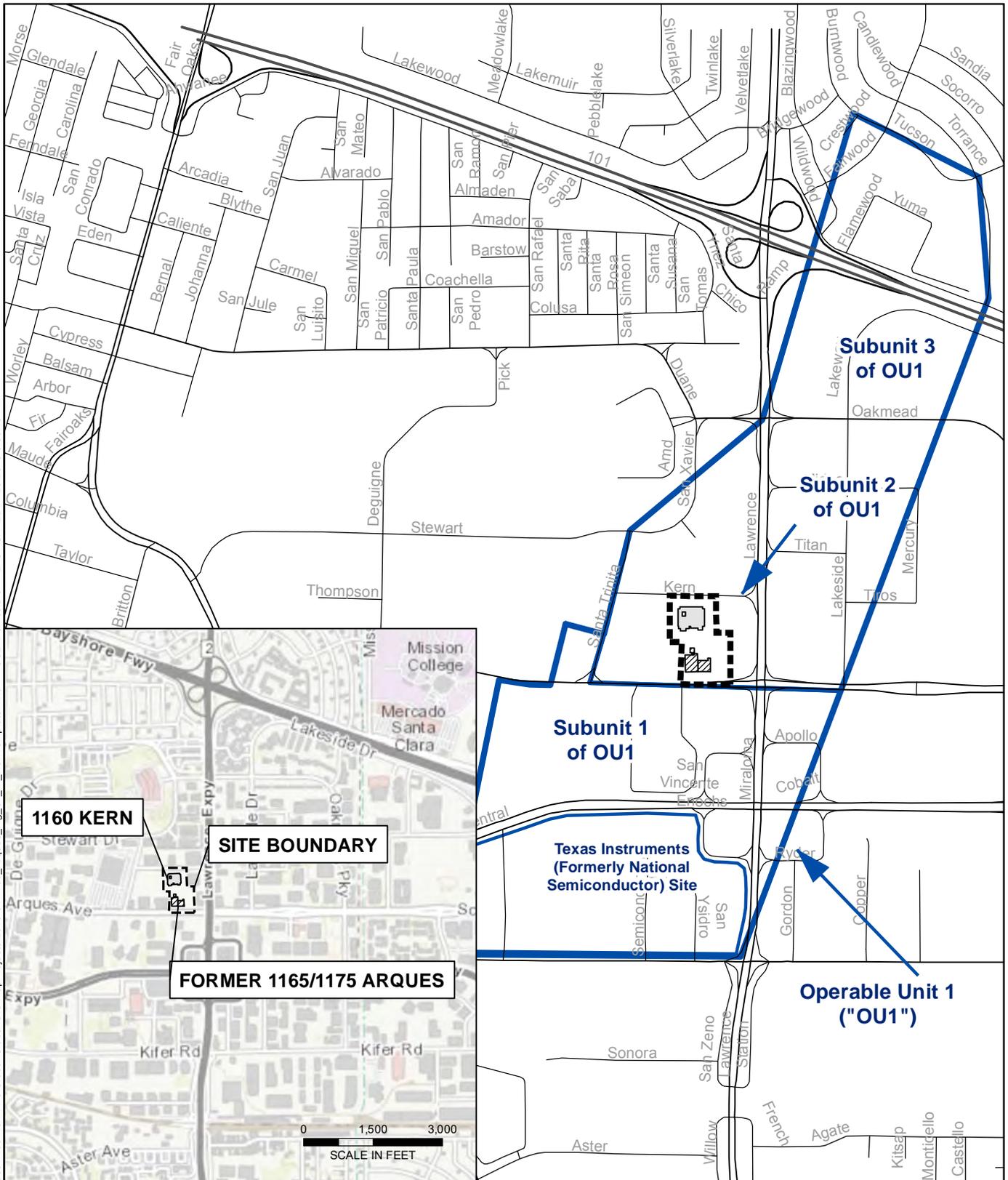
Date	Start of Sampling		End of Sampling		Maximum	
	Time	Temperature (° F) ²	Time	Temperature (° F)	Time	Temperature (° F)
21-Aug-2011	8:00 AM	60.1	6:18 PM	68.0	1:56 PM	70.0
22-Dec-2011	7:58 AM	45.0	5:50 PM	55.0	1:56 PM	63.0
8-Jul-2012	8:03 AM	53.1	6:18 PM	71.1	2:56 PM and 3:56 PM	78.1
27-Sep-2013	7:22 AM	57.9	3:50 PM	68.0	2:56 PM	68.0
10-Feb-2014	7:37 AM	55.4	3:43 PM	60.8	3:31 PM	60.8
9-Apr-2015	7:19 AM	46.9	3:07 PM	66.9	3:56 PM and 4:56 PM	68.0

Notes

1. Appendix F presents the complete meteorological summaries for 9 April 2015 indoor air sampling events. Meteorological summaries for previous indoor air sampling events are presented in Vapor Intrusion Evaluation Report (Haley & Aldrich, 2014b).
2. Temperature is presented in units of degrees Fahrenheit.

FIGURES

GIS FILE PATH: G:\39800_AMD_1165 E Arques\Global\GIS\MapProjects\2015-04\1165_Arques_Fig_01_1A_NewTemplate.mxd — USER: amcure — LAST SAVED: 4/23/2015 3:58:15 PM



HALEY ALDRICH

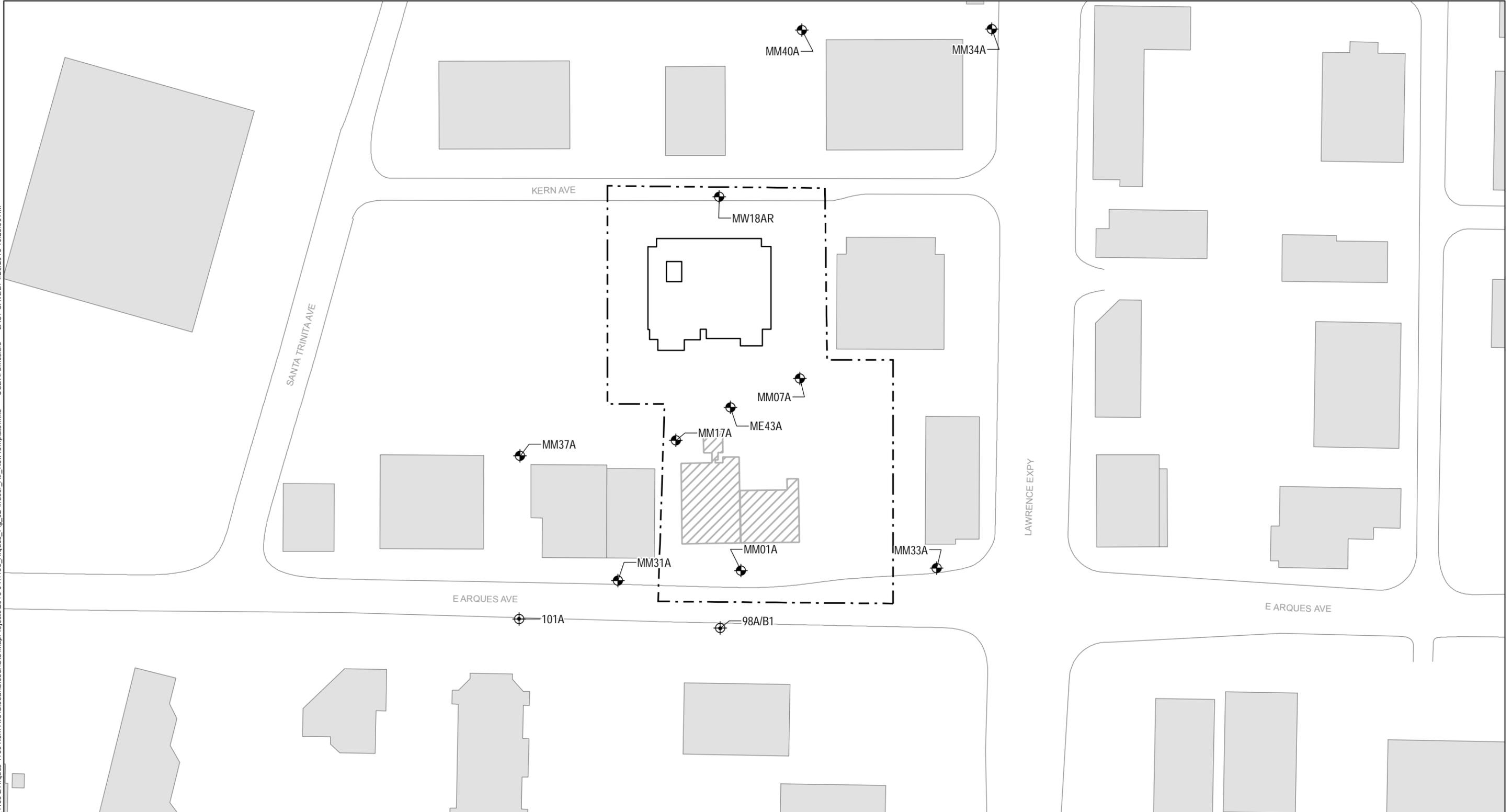
1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA

SITE LOCATION MAP AND VICINITY

APRIL 2015

FIGURE 1

GIS FILE PATH: \\oa\kcommon\39800_AMD_1165 E Arques-1160 Kern Ave\Global\GIS\MapProjects\2015\0411165_Arques_Fig_02-Indoor_Air_NewTemplate.mxd — USER: amcdure — LAST SAVED: 4/28/2015 10:23:50 AM



LEGEND

- MONITORING WELLS
-  AMD
 -  TEXAS INSTRUMENTS
-  FORMER 1165/1175 ARQUES BUILDINGS
 -  CURRENT ON-SITE BUILDING (1160 KERN)
 -  SITE BOUNDARY
 -  OTHER BUILDING

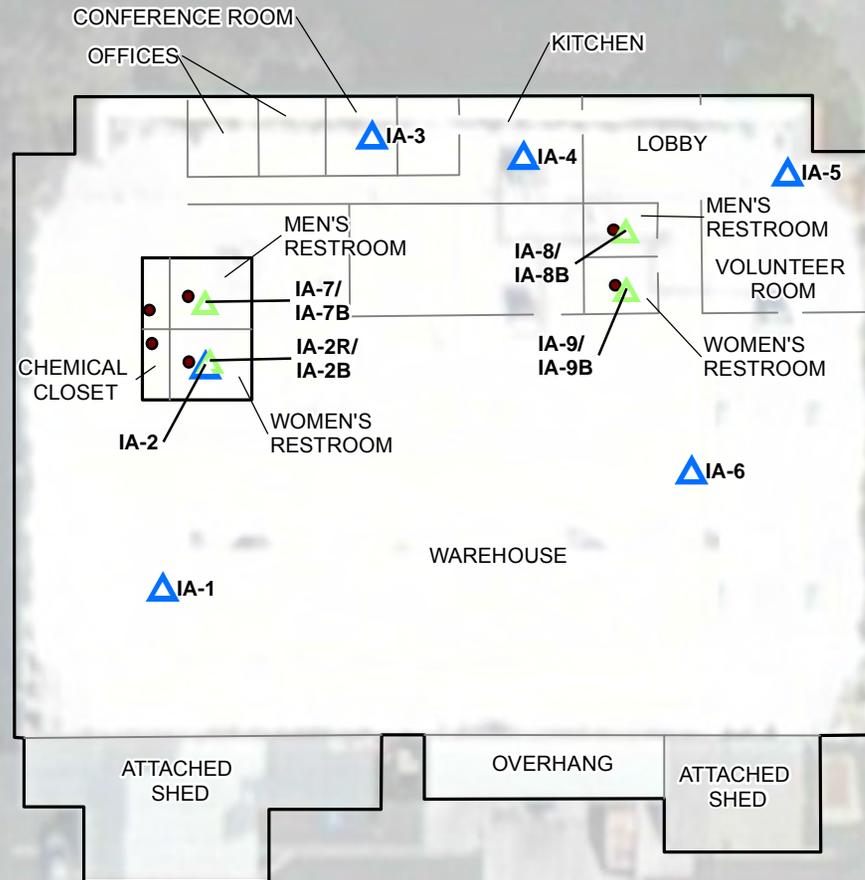


HALEY ALDRICH 1165/1175 ARQUES AVENUE
SUNNYVALE, CALIFORNIA

SITE PLAN AND VICINITY

APRIL 2015

FIGURE 2



LEGEND

-  APPROXIMATE LOCATION OF INDOOR AIR SAMPLE COLLECTED ON DECEMBER 22, 2011 AND JULY 8, 2012
-  APPROXIMATE LOCATION OF INDOOR AIR SAMPLE COLLECTED ON AUGUST 21, 2011
-  APPROXIMATE LOCATION OF FLOOR DRAIN

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE
2. AERIAL IMAGE SOURCE: ESRI



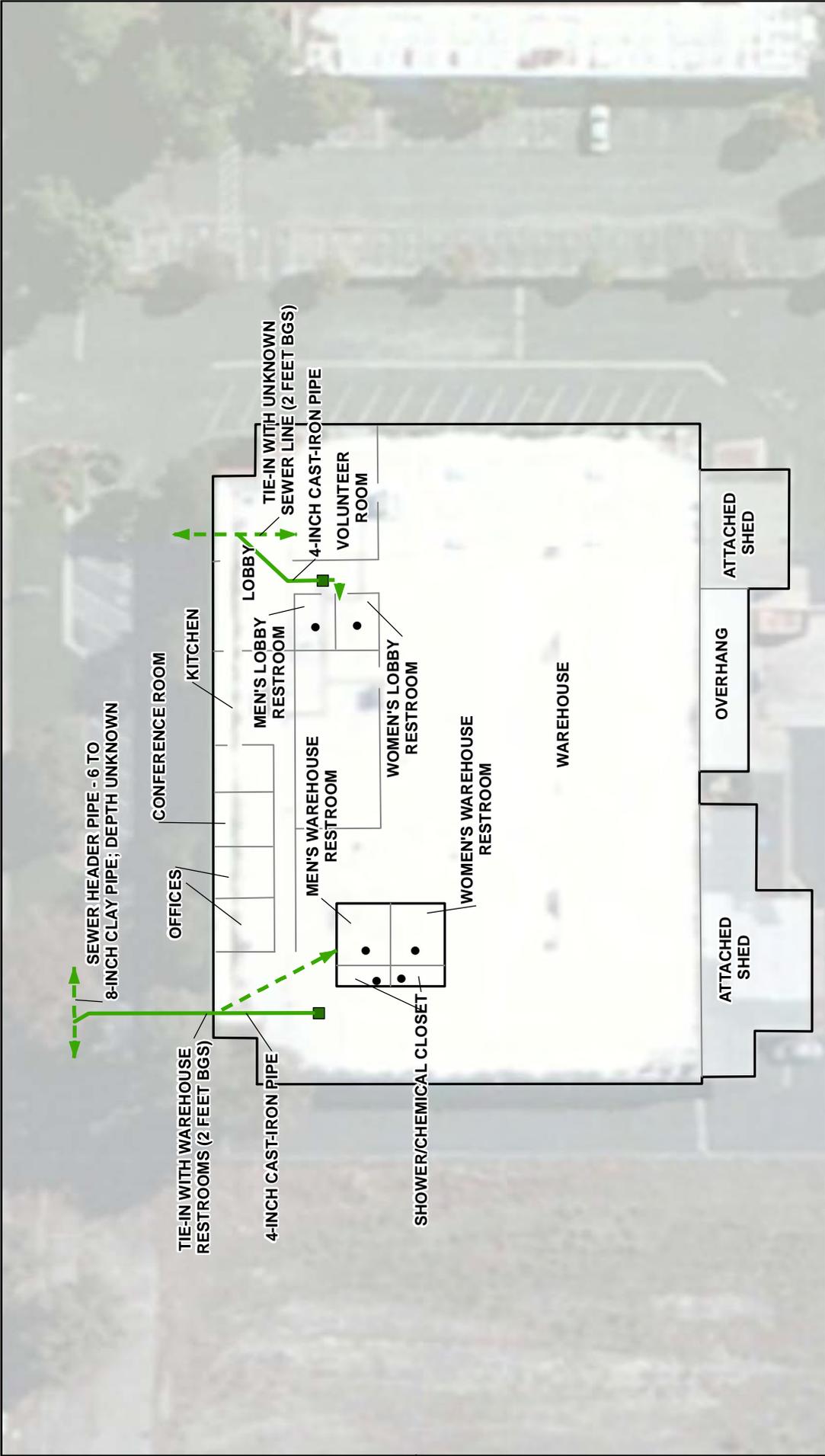
**HALEY
ALDRICH**

1160 KERN AVENUE
SUNNYVALE, CALIFORNIA

INDOOR AIR SAMPLE LOCATIONS

APRIL 2015

FIGURE 3



HALEY ALDRICH
 1160 KERN AVENUE
 SUNNYVALE, CALIFORNIA

SITE PLAN AND LOCATION OF SEWER LINES

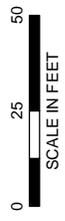
APRIL 2015

FIGURE 4

NOTES

1. ALL OBSERVED ON-SITE SEWER PIPES WERE 4-INCH CAST IRON.
2. BGS = BELOW GROUND SURFACE

- LEGEND**
- SEWER PIPE OBSERVED DURING VIDEO SURVEY
 - SEWER PIPE - TIE-IN OBSERVED DURING VIDEO SURVEY; ALIGNMENT IS INFERRED
 - SEWER CLEAN-OUT ACCESSED FOR VIDEO SURVEY
 - APPROXIMATE LOCATION OF FLOOR DRAIN



APPENDIX A

Regulator Email Correspondence

Scaramella, Peter

From: Scaramella, Peter
Sent: Thursday, June 05, 2014 9:36 AM
To: 'Shahbazian, Max@Waterboards'; Melanie Morash (morash.melanie@epa.gov)
Cc: Stringer, Brett (brett.stringer@amd.com); Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
Subject: 1160 Kern Ave--schedule update

Max and Melanie,

Per your request, I've pulled together a draft schedule for the upcoming work at 1160 Kern Avenue. Unfortunately, we have not yet been able to obtain an encroachment permit from the City of Sunnyvale to evaluate the drains at the warehouse by accessing the sewer system at the street. The City asked our subcontractor to make a couple small revisions to the traffic control plan, and the permit application was re-submitted on May 29th. We expect to receive the encroachment permit on June 12th. Based on this assumption, I have estimated the following schedule:

- June 16 to 20; evaluate the integrity of the drains at the warehouse restrooms.
- June 23 to July 11; develop overall approach for mitigation at warehouse restrooms.
- July 14 to July 25; discuss results of drain evaluation and overall approach for mitigation at warehouse restrooms with Water Board and EPA.
- August 1; provide overall project schedule to Water Board and EPA.

We have contacted RAFT, and they will be working throughout the summer. We will include the potential modification to the ventilation system suggested by Max as potential options for a long-term solution.

Best regards,
Pete

Peter Scaramella
Senior Risk Assessor
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
office phone: (510) 879-4559
cell phone: (415) 867-7675

pscaramella@haleyaldrich.com
www.HaleyAldrich.com

Scaramella, Peter

From: Scaramella, Peter
Sent: Thursday, July 31, 2014 11:40 AM
To: Shahbazian, Max; Melanie Morash (morash.melanie@epa.gov)
Cc: Stringer, Brett; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
Subject: FW: 1160 Kern Ave--schedule update

Max and Melanie,

I am writing to provide an update on the vapor intrusion investigation at 1160 Kern Avenue. We completed the video survey of the sewer system at the building on June 27, 2014. We were only able to access portions of the sewer system, but the portions that were accessible appeared in good condition.

I spoke with Doug Lang at RAFT on July 17, 2014, to provide him with an update on the results of the video survey. I also asked Doug if RAFT was open to decommissioning the restrooms in the warehouse to permanently seal the drains. Doug indicated that he would discuss this option with the RAFT the management team. We are currently waiting to hear back from Doug.

I will provide a further update by September 2, 2014, including RAFT's response, our proposed next steps and a revised schedule. Please let me know if you would like to schedule a call to discuss the results of the video survey or potential next steps.

Best regards,
Pete

Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

From: Scaramella, Peter
Sent: Thursday, June 05, 2014 9:36 AM
To: 'Shahbazian, Max@Waterboards'; Melanie Morash (morash.melanie@epa.gov)
Cc: Stringer, Brett (brett.stringer@amd.com); Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
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Best regards,
Pete

Peter Scaramella
Senior Risk Assessor
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
office phone: (510) 879-4559
cell phone: (415) 867-7675

pscaramella@haleyaldrich.com
www.HaleyAldrich.com

Scaramella, Peter

From: MORASH, MELANIE <morash.melanie@epa.gov>
Sent: Monday, August 04, 2014 3:56 PM
To: Scaramella, Peter; Shahbazian, Max
Cc: Stringer, Brett; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Ave--schedule update

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Melanie Morash, Remedial Project Manager California Site Cleanup Section I, Superfund Division

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San Francisco, CA 94105

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Subject: Re: 1160 Kern Ave--schedule update

Follow Up Flag: Follow up
Flag Status: Completed

Hi Peter,

Thank you for the opportunity to weigh in on the proposed mitigation plan. The mitigation approach needs to be acceptable to the current owner/tenant, so here are some alternatives for the men's restroom, given that the owner prefers to retain multiple stalls (and thus prompts the need for open floor drains).

- Work with the local building department to obtain a variance from this building code requirement to retain floor drains in restrooms with multiple stalls. See <http://www.epa.gov/superfund/cleanup/pdfs/rdra/permit.pdf> EPA is exempt from local and state permitting processes for CERCLA on-site response actions, which is the case here. I can help facilitate this process. You would still need to work with the City to meet the substantive provisions of the relevant building code. Perhaps this would entail a plan for appropriate disposal of washwater from that restroom.

- Periodic indoor air sampling in the men's restroom, to confirm that indoor air levels of VOCs related to the Site continue to be protective of public health.

- Indoor air purifying units, enhanced ventilation, etc.

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office phone: (510) 879-4559
cell phone: (415) 867-7675

From: Scaramella, Peter

Sent: Thursday, June 05, 2014 9:36 AM

To: 'Shahbazian, Max@Waterboards'; Melanie Morash (morash.melanie@epa.gov)

Cc: Stringer, Brett (brett.stringer@amd.com); Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)

Subject: 1160 Kern Ave--schedule update

Max and Melanie,

Per your request, I've pulled together a draft schedule for the upcoming work at 1160 Kern Avenue. Unfortunately, we have not yet been able to obtain an encroachment permit from the City of Sunnyvale to evaluate the drains at the warehouse by accessing the sewer system at the street. The City asked our subcontractor to make a couple small revisions to the traffic control plan, and the permit application was re-submitted on May 29th. We expect to receive the encroachment permit on June 12th. Based on this assumption, I have estimated the following schedule:

- June 16 to 20; evaluate the integrity of the drains at the warehouse restrooms.
- June 23 to July 11; develop overall approach for mitigation at warehouse restrooms.
- July 14 to July 25; discuss results of drain evaluation and overall approach for mitigation at warehouse restrooms with Water Board and EPA.
- August 1; provide overall project schedule to Water Board and EPA.

We have contacted RAFT, and they will be working throughout the summer. We will include the potential modification to the ventilation system suggested by Max as potential options for a long-term solution.

Best regards,
Pete

Peter Scaramella
Senior Risk Assessor
HALEY & ALDRICH
1956 Webster Street, Suite 450
Oakland, CA 94612
office phone: (510) 879-4559
cell phone: (415) 867-7675

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www.HaleyAldrich.com

Scaramella, Peter

From: Scaramella, Peter
Sent: Monday, December 08, 2014 5:08 PM
To: 'shuang@sunnyvale.ca.gov'
Cc: Melanie Morash (morash.melanie@epa.gov)
Subject: Building permit for 1160 Kern Avenue

Mr. Huang,

I'm writing in response to your voicemail from 5 December 2014 requesting clarification as to why the floor drains should be removed at the warehouse restrooms at 1160 Kern Avenue. In February, we completed a sampling program and identified the floor drains as a potential pathway for volatile organic compounds to enter the restrooms. Sealing the floor drains will provide a permanent mitigation remedy for this pathway at the restrooms.

I've cc'ed Melanie Morash, the EPA Project Manager for the site. EPA has approved of our plan to seal the drains.

Prior to commencing work in the restrooms, I will submit a permit application to document that the substantive requirements of the permits are met. Let me know if you have any other questions regarding this work, and thank you for your assistance with this matter.

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To: 'shuang@sunnyvale.ca.gov'
Cc: Melanie Morash (morash.melanie@epa.gov); Bennett, Peter (PBennett@haleyaldrich.com)
Subject: FW: Building permit for 1160 Kern Avenue
Attachments: 1160 Kern Permit application.PDF; permit.pdf

Mr. Huang,

I'm submitting the attached permit application for the work planned at 1160 Kern Avenue. This work is required by EPA.

Please contact me if you have any questions,
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Scaramella, Peter

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Sent: Thursday, February 19, 2015 9:48 AM
To: Scaramella, Peter
Cc: Melanie Morash (morash.melanie@epa.gov); Bennett, Peter
Subject: Re: FW: Building permit for 1160 Kern Avenue
Attachments: Alternate Materials Request.pdf

Peter,

As previously discussed, in order for the city to allow removal of the required floor drains in the restroom an alternate means and materials form should be provided to document deviation from code requirements. In support of the approval for the application, you may include documentation from EPA mandating removal of the drains.

Steven Huang
Plan Checker
Building Safety Division
City of Sunnyvale
Phone: (408) 730-7252

On Thu, Feb 19, 2015 at 9:35 AM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

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Scaramella, Peter

From: MORASH, MELANIE <morash.melanie@epa.gov>
Sent: Thursday, February 19, 2015 10:55 AM
To: Steven Huang; Scaramella, Peter
Cc: Bennett, Peter; MORASH, MELANIE; Shahbazian, Max@Waterboards (Max.Shahbazian@waterboards.ca.gov)
Subject: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Good morning, Steven,

Please use this e-mail as documentation of EPA's requirement that Haley and Aldrich, on behalf of Advanced Micro Devices (AMD), remove the floor drains in the 1160 Kern Avenue building bathrooms, as part of the required Superfund Site vapor intrusion mitigation activities.

The permanent closure of these floor drains will remove an identified preferential pathway for trichloroethene (TCE) vapor intrusion into the building and address potential unacceptable human exposures to TCE (a chemical that can cause cancer and other health effects) due to the subsurface-to-indoor air vapor intrusion pathway.

Many thanks for your cooperation, and please do not hesitate to contact me if you have any questions.

--Melanie Morash

Melanie Morash, Remedial Project Manager
California Site Cleanup Section I, Superfund Division

US EPA Region 9
75 Hawthorne Street (SFD-7-1)
San Francisco, CA 94105

(415) 972-3050 [phone]
(415) 947-3528 [fax]
morash.melanie@epa.gov

From: Steven Huang [<mailto:shuang@sunnyvale.ca.gov>]
Sent: Thursday, February 19, 2015 9:48 AM
To: Scaramella, Peter
Cc: MORASH, MELANIE; Bennett, Peter
Subject: Re: FW: Building permit for 1160 Kern Avenue

Peter,

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Scaramella, Peter

From: Scaramella, Peter
Sent: Monday, February 23, 2015 3:00 PM
To: 'MORASH, MELANIE'; Steven Huang
Cc: Bennett, Peter; Shahbazian, Max@Waterboards (Max.Shahbazian@waterboards.ca.gov)
Subject: RE: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA
Attachments: Kern Permit Application.pdf

Steven,

Please find attached the supplemental permit information that you requested. We are planning to perform this work on March 2 and 3, 2015.

Best regards,
Pete

Peter Scaramella
office phone: (510) 879-4559
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From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
Sent: Thursday, February 19, 2015 10:55 AM
To: Steven Huang; Scaramella, Peter
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Sent: Thursday, February 19, 2015 9:48 AM
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From: Steven Huang <shuang@sunnyvale.ca.gov>
Sent: Tuesday, February 24, 2015 2:36 PM
To: Scaramella, Peter
Subject: Re: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Peter,

Under the original permit application you submitted, there appears to be mention of a shower. Please clarify the work in association with the shower.

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From: Steven Huang [<mailto:shuang@sunnyvale.ca.gov>]

Sent: Thursday, February 19, 2015 9:48 AM

To: Scaramella, Peter

Cc: MORASH, MELANIE; Bennett, Peter

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Scaramella, Peter

From: Steven Huang <shuang@sunnyvale.ca.gov>
Sent: Tuesday, February 24, 2015 4:10 PM
To: Scaramella, Peter
Subject: Re: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA
Attachments: SKMBT_36315022417070.pdf

Peter,

I have obtained the Building Official approval for your request. Please find attached the fee estimate for your proposed project. Have the contractor come in to pull the building permit prior to start of work.

Steven Huang
Plan Checker
Building Safety Division
City of Sunnyvale
Phone: (408) 730-7252

On Tue, Feb 24, 2015 at 3:13 PM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

Steven,

There currently is a shower located at the rear of each restroom. I've indicated the location of the showers on the attached figure. We are planning to cap the plumbing associated with the (2) showers (hot & cold water lines, & shower fixtures) behind the walls. The walls will be patched and re-tiled to match the existing tile.

Please let me know if you have any other questions. Thanks for your help with this matter,

Pete

Peter Scaramella

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From: Steven Huang [mailto:shuang@sunnyvale.ca.gov]

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Scaramella, Peter

From: Scaramella, Peter
Sent: Thursday, February 26, 2015 3:56 PM
To: Melanie Morash (morash.melanie@epa.gov)
Cc: Bennett, Peter (PBennett@haleyaldrich.com); Shahbazian, Max
Subject: RE: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Melanie,

I am writing to inform you that we are planning seal the floor drains at the warehouse restrooms at 1160 Kern Ave on Monday and Tuesday of next week (March 2 and 3). Please give me a call if you have any questions about this work.

Pete

Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
Sent: Thursday, February 19, 2015 10:55 AM
To: Steven Huang; Scaramella, Peter
Cc: Bennett, Peter; MORASH, MELANIE; Shahbazian, Max@Waterboards (Max.Shabbazian@waterboards.ca.gov)
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morash.melanie@epa.gov

From: Steven Huang [<mailto:shuang@sunnyvale.ca.gov>]
Sent: Thursday, February 19, 2015 9:48 AM
To: Scaramella, Peter
Cc: MORASH, MELANIE; Bennett, Peter
Subject: Re: FW: Building permit for 1160 Kern Avenue

Peter,

As previously discussed, in order for the city to allow removal of the required floor drains in the restroom a alternate means and materials form should be provided to document deviation from code requirements. In support of the approval for the application, you may include documentation from EPA mandating removal of the drains.

Steven Huang
Plan Checker
Building Safety Division
City of Sunnyvale
Phone: (408) 730-7252

On Thu, Feb 19, 2015 at 9:35 AM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

Mr. Huang,

I'm submitting the attached permit application for the work planned at 1160 Kern Avenue. This work is required by EPA.

Please contact me if you have any questions,

Pete

Peter Scaramella

office phone: [\(510\) 879-4559](tel:5108794559)

cell phone: [\(415\) 867-7675](tel:4158677675)

From: Scaramella, Peter
Sent: Monday, December 08, 2014 5:08 PM
To: 'shuang@sunnyvale.ca.gov'
Cc: Melanie Morash (morash.melanie@epa.gov)
Subject: Building permit for 1160 Kern Avenue

Mr. Huang,

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I've cc'ed Melanie Morash, the EPA Project Manager for the site. EPA has approved of our plan to seal the drains.

Prior to commencing work in the restrooms, I will submit a permit application to document that the substantive requirements of the permits are met. Let me know if you have any other questions regarding this work, and thank you for your assistance with this matter.

Pete

Peter Scaramella

Senior Risk Assessor

HALEY & ALDRICH

1956 Webster Street, Suite 450

Oakland, CA 94612

office phone: [\(510\) 879-4559](tel:5108794559)

cell phone: [\(415\) 867-7675](tel:4158677675)

pscaramella@haleyaldrich.com

Scaramella, Peter

From: Shahbazian, Max@Waterboards <Max.Shahbazian@waterboards.ca.gov>
Sent: Thursday, February 26, 2015 4:13 PM
To: Scaramella, Peter; Melanie Morash (morash.melanie@epa.gov)
Cc: Bennett, Peter
Subject: RE: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Hi Pete,

Thanks for the update on the subject Vapor Intrusion Mitigation work. Please take photos of the floor drains before and after sealing them.

Max Shahbazian, P.G.

CalEPA

Regional Water Quality Control Board

San Francisco Bay Region

1515 Clay Street, Suite 1400

Oakland, CA 94612

Tel. (510) 622-4824

From: Scaramella, Peter [mailto:PScaramella@haleyaldrich.com]
Sent: Thursday, February 26, 2015 3:56 PM
To: Melanie Morash (morash.melanie@epa.gov)
Cc: Bennett, Peter; Shahbazian, Max@Waterboards
Subject: RE: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Melanie,

I am writing to inform you that we are planning seal the floor drains at the warehouse restrooms at 1160 Kern Ave on Monday and Tuesday of next week (March 2 and 3). Please give me a call if you have any questions about this work.

Pete

Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

From: MORASH, MELANIE [mailto:morash.melanie@epa.gov]
Sent: Thursday, February 19, 2015 10:55 AM
To: Steven Huang; Scaramella, Peter
Cc: Bennett, Peter; MORASH, MELANIE; Shahbazian, Max@Waterboards (Max.Shahbazian@waterboards.ca.gov)
Subject: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Good morning, Steven,

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The permanent closure of these floor drains will remove an identified preferential pathway for trichloroethene (TCE) vapor intrusion into the building and address potential unacceptable human exposures to TCE (a chemical that can cause cancer and other health effects) due to the subsurface-to-indoor air vapor intrusion pathway.

Many thanks for your cooperation, and please do not hesitate to contact me if you have any questions.

--Melanie Morash

Melanie Morash, Remedial Project Manager
California Site Cleanup Section I, Superfund Division

US EPA Region 9
75 Hawthorne Street (SFD-7-1)
San Francisco, CA 94105

(415) 972-3050 [phone]
(415) 947-3528 [fax]
morash.melanie@epa.gov

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Cc: Melanie Morash (morash.melanie@epa.gov)
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I've cc'ed Melanie Morash, the EPA Project Manager for the site. EPA has approved of our plan to seal the drains.

Prior to commencing work in the restrooms, I will submit a permit application to document that the substantive requirements of the permits are met. Let me know if you have any other questions regarding this work, and thank you for your assistance with this matter.

Pete

Peter Scaramella

Senior Risk Assessor

HALEY & ALDRICH

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pscaramella@haleyaldrich.com

www.HaleyAldrich.com

Scaramella, Peter

From: Steven Huang <shuang@sunnyvale.ca.gov>
Sent: Wednesday, March 04, 2015 7:42 AM
To: Scaramella, Peter
Subject: Re: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Yes a building and a fire final will be required at the completion of the project

Steven Huang
Plan Checker
Building Safety Division
City of Sunnyvale
Phone: (408) 730-7252

On Fri, Feb 27, 2015 at 4:17 PM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

Hi Steven,

ICS pulled the permit for this work today. Just to confirm our phone conversation, we will need to schedule an inspection of the floor drains after they are sealed.

In addition, the tile work also will need to be inspected. Does this inspection also occur after the work has been completed?

Thanks for all your help with this,

Pete

Peter Scaramella

office phone: [\(510\) 879-4559](tel:(510)879-4559)

cell phone: [\(415\) 867-7675](tel:(415)867-7675)

From: Steven Huang [mailto:shuang@sunnyvale.ca.gov]
Sent: Tuesday, February 24, 2015 4:10 PM
To: Scaramella, Peter
Subject: Re: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Peter,

I have obtained the Building Official approval for your request. Please find attached the fee estimate for your proposed project. Have the contractor come in to pull the building permit prior to start of work.

Steven Huang

Plan Checker

Building Safety Division

City of Sunnyvale

Phone: [\(408\) 730-7252](tel:4087307252)

On Tue, Feb 24, 2015 at 3:13 PM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

Steven,

There currently is a shower located at the rear of each restroom. I've indicated the location of the showers on the attached figure. We are planning to cap the plumbing associated with the (2) showers (hot & cold water lines, & shower fixtures) behind the walls. The walls will be patched and re-tiled to match the existing tile.

Please let me know if you have any other questions. Thanks for your help with this matter,

Pete

Peter Scaramella

office phone: [\(510\) 879-4559](tel:5108794559)

cell phone: [\(415\) 867-7675](tel:4158677675)

From: Steven Huang [mailto:shuang@sunnyvale.ca.gov]

Sent: Tuesday, February 24, 2015 2:36 PM

To: Scaramella, Peter

Subject: Re: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

Peter,

Under the original permit application you submitted, there appears to be mention of a shower. Please clarify the work in association with the shower.

Steven Huang

Plan Checker

Building Safety Division

City of Sunnyvale

Phone: [\(408\) 730-7252](tel:(408)730-7252)

On Mon, Feb 23, 2015 at 3:00 PM, Scaramella, Peter <PScaramella@haleyaldrich.com> wrote:

Steven,

Please find attached the supplemental permit information that you requested. We are planning to perform this work on March 2 and 3, 2015.

Best regards,

Pete

Peter Scaramella

office phone: [\(510\) 879-4559](tel:5108794559)

cell phone: [\(415\) 867-7675](tel:4158677675)

From: MORASH, MELANIE [mailto:morash.melanie@epa.gov]

Sent: Thursday, February 19, 2015 10:55 AM

To: Steven Huang; Scaramella, Peter

Cc: Bennett, Peter; MORASH, MELANIE; Shahbazian, Max@Waterboards (Max.Shabbazian@waterboards.ca.gov)

Subject: EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

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Many thanks for your cooperation, and please do not hesitate to contact me if you have any questions.

--Melanie Morash

Melanie Morash, Remedial Project Manager

California Site Cleanup Section I, Superfund Division

US EPA Region 9

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[\(415\) 972-3050](tel:(415)972-3050) [phone]

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morash.melanie@epa.gov

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Cc: MORASH, MELANIE; Bennett, Peter

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Scaramella, Peter

From: Scaramella, Peter
Sent: Monday, March 09, 2015 9:24 AM
To: Melanie Morash (morash.melanie@epa.gov); Shahbazian, Max
Cc: 'Stringer, Brett'; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
Subject: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms
Attachments: 2015_0306-HAI 1160_Kern_Floor_Drains_Photo_Log.pdf

Melanie and Max,

The sealing of the floor drains at the warehouse restrooms at 1160 Kern Avenue was completed this week. Each floor drain was grouted with cement, and then Retro-Coat sealant was applied to match the existing floor sealant. In addition, the fixtures at both showers were removed, the associated plumbing was capped, and the walls were patched and tiled. I have attached a PDF with “before” and “after” photos of the drains and showers. We would like to collect indoor air samples at each of the warehouse restrooms to test the effectiveness of this mitigation measure the week of March 16th.

As you know, we followed all appropriate procedures in having this work approved by the City of Sunnyvale prior to undertaking construction:

- We had multiple discussions with the City over the phone and email to clearly state our objective of sealing the drains in place to remove a potential preferential vapor intrusion pathway.
- We obtained a permit for this work from the Building Department at the City of Sunnyvale. Our permit application clearly indicated that the drains were to be sealed and there were no plans to replace them.
- We paid a permit fee of \$997 to the City prior to starting work.

After approving the sealing of the drains, the City later decided that floor drains were needed to maintain building code compliance. The City did not inform us of this change until after the drains were sealed. The City staff involved with this project stated that they are aware of the vapor intrusion issues but the building code must be complied with. Despite the City’s approval of the permit, the City has said it will not sign off on the work as complete unless new floor drains are installed. We think adding floor drains could introduce a preferential pathway, a step backwards in our progress towards mitigating vapor intrusion.

We are continuing our discussions with the City regarding the permit issue. If those discussions are unsuccessful, we may request your assistance with the City on the permit issue.

Best regards,
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Scaramella, Peter

From: Shahbazian, Max@Waterboards <Max.Shahbazian@waterboards.ca.gov>
Sent: Monday, March 09, 2015 9:41 AM
To: Scaramella, Peter
Cc: Stringer, Brett; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael; Melanie Morash (morash.melanie@epa.gov)
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Hi Peter,

I suggest that AMD and Haley & Aldrich representatives meet with the City representatives to resolve the floor drain issue. If needed, Melanie and I can participate in the meeting via a conference call.

Thank you,

Max Shahbazian, P.G.

CalEPA

Regional Water Quality Control Board

San Francisco Bay Region

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Oakland, CA 94612

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Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Follow Up Flag: Follow up
Flag Status: Completed

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Cc: Stringer, Brett; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms
Attachments: 39800-001-0003-Air Sample Locations.pdf

Melanie and Max,

I am writing to provide you with an update on the vapor mitigation at the warehouse restrooms at 1160 Kern Avenue in Sunnyvale. The floor drains were sealed the week of March 6th, and indoor air sampling was planned for this week (March 16) to test the effectiveness of this mitigation measure. A building survey was completed on March 16 and VOCs were measured with a ppb RAE from urinal mints stored a cabinet in the women's warehouse restroom. In addition, we found some cracks to the caulking in the interior walls of the restroom, and we applied new caulking to repair these cracks. While we don't expect PCE or TCE to be associated with the urinal mints or caulking, we've postponed sampling until 24 March 2015 so that the sample detection limits are not affected by the presence of VOCs in the restroom. As with previous sampling events, indoor air samples will be collected in general accordance with the Work Plan for Indoor Air Investigation submitted in 2011 by AMEC. The same locations will be sampled as the February 2014 event, with the HVAC system active:

- women's warehouse restroom (IA-2),
- volunteer room (IA-5),
- warehouse/storage room (IA-6), and
- men's warehouse restroom (IA-7).

These same locations were sampled in February 2014. In addition, one outdoor air sample will be collected at the parking lot.

Please let me know if you have any questions,
Pete

Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

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www.haleyaldrich.com

Scaramella, Peter

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Sent: Monday, March 23, 2015 2:23 PM
To: Scaramella, Peter
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Follow Up Flag: Follow up
Flag Status: Completed

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Sent: Thursday, March 19, 2015 4:27 PM
To: MORASH, MELANIE; Shahbazian, Max@Waterboards
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Sent: Tuesday, April 07, 2015 5:17 PM
To: Melanie Morash (morash.melanie@epa.gov); Shahbazian, Max
Cc: OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms
Attachments: Misty-Supersolve-MSDS-1007-English.pdf

Hi Melanie and Max,

We've re-scheduled the indoor air sampling at 1160 Kern Avenue for Thursday, April 9th. The interior painting activities have been completed at the facility and we performed a building survey this morning. The freshly painted surfaces were scanned with a handheld PPB Rae and VOCs were not detected (above background). Surplus paint products were identified within the facility, and these products were moved to a closed, storage enclosure area located outside of the building (with RAFT's consent).

Our field staff identified an electronic parts cleaner, Misty SuperSolve, that is comprised primarily of TCE in the warehouse. I've attached the MSDS for this product and included a photo below. The Misty SuperSolve as well as some other VOC-containing products were moved to the storage enclosure outside the building.

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From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
Sent: Monday, March 09, 2015 11:26 AM
To: Shahbazian, Max@Waterboards; Scaramella, Peter
Cc: Stringer, Brett; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael; MORASH, MELANIE
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Hi Peter,

I spoke with a representative from the City on Monday, Feb. 23rd to discuss this issue. At the close of our call the inspector agreed that closing of the floor drains was appropriate to protect human health from the vapor intrusion pathway, and to issue the needed permit. I would be willing to participate in an in-person meeting to further resolve this issue.

--Melanie

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Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Hi Peter,

I suggest that AMD and Haley & Aldrich representatives meet with the City representatives to resolve the floor drain issue. If needed, Melanie and I can participate in the meeting via a conference call.

Thank you,

Max Shahbazian, P.G.
CalEPA
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400

From: Scaramella, Peter [<mailto:PScaramella@haleyaldrich.com>]
Sent: Monday, March 09, 2015 9:24 AM
To: Melanie Morash (morash.melanie@epa.gov); Shahbazian, Max@Waterboards
Cc: Stringer, Brett; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael
Subject: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Melanie and Max,

The sealing of the floor drains at the warehouse restrooms at 1160 Kern Avenue was completed this week. Each floor drain was grouted with cement, and then Retro-Coat sealant was applied to match the existing floor sealant. In addition, the fixtures at both showers were removed, the associated plumbing was capped, and the walls were patched and tiled. I have attached a PDF with “before” and “after” photos of the drains and showers. We would like to collect indoor air samples at each of the warehouse restrooms to test the effectiveness of this mitigation measure the week of March 16th.

As you know, we followed all appropriate procedures in having this work approved by the City of Sunnyvale prior to undertaking construction:

- We had multiple discussions with the City over the phone and email to clearly state our objective of sealing the drains in place to remove a potential preferential vapor intrusion pathway.
- We obtained a permit for this work from the Building Department at the City of Sunnyvale. Our permit application clearly indicated that the drains were to be sealed and there were no plans to replace them.
- We paid a permit fee of \$997 to the City prior to starting work.

After approving the sealing of the drains, the City later decided that floor drains were needed to maintain building code compliance. The City did not inform us of this change until after the drains were sealed. The City staff involved with this project stated that they are aware of the vapor intrusion issues but the building code must be complied with. Despite the City’s approval of the permit, the City has said it will not sign off on the work as complete unless new floor drains are installed. We think adding floor drains could introduce a preferential pathway, a step backwards in our progress towards mitigating vapor intrusion.

We are continuing our discussions with the City regarding the permit issue. If those discussions are unsuccessful, we may request your assistance with the City on the permit issue.

Best regards,
Pete

Peter Scaramella
Senior Risk Assessor

Haley & Aldrich, Inc.
1956 Webster Street, Suite 450
Oakland, CA 94612
office: (510) 879-4559 | cell: (415) 867-7675
www.haleyaldrich.com

Scaramella, Peter

From: Shahbazian, Max@Waterboards <Max.Shahbazian@waterboards.ca.gov>
Sent: Tuesday, April 07, 2015 5:31 PM
To: Scaramella, Peter
Cc: OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Melanie Morash (morash.melanie@epa.gov); Nicole M. Martin; Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Follow Up Flag: Follow up
Flag Status: Completed

Hi Peter,

Thanks for the update on vapor mitigation and sampling events and activates at the subject site.

When I inspected the site about a year ago, I noticed they had a computer repair and refurbishing shop in the RAFT building. I believe the computer technician uses the Misty SuperSolve to clean the computer parts. Hope he knows that Misty has toxic chemicals in it. Perhaps you should leave him a note with a copy of the MSDS.

Regards,

Max Shahbazian, P.G.

CalEPA

Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Tel. (510) 622-4824

From: Scaramella, Peter [mailto:PScaramella@haleyaldrich.com]
Sent: Tuesday, April 07, 2015 5:17 PM
To: Melanie Morash (morash.melanie@epa.gov); Shahbazian, Max@Waterboards
Cc: OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Hi Melanie and Max,

We've re-scheduled the indoor air sampling at 1160 Kern Avenue for Thursday, April 9th. The interior painting activities have been completed at the facility and we performed a building survey this morning. The freshly painted surfaces were scanned with a handheld PPB Rae and VOCs were not detected (above background). Surplus paint products were identified within the facility, and these products were moved to a closed, storage enclosure area located outside of the building (with RAFT's consent).

Our field staff identified an electronic parts cleaner, Misty SuperSolve, that is comprised primarily of TCE in the warehouse. I've attached the MSDS for this product and included a photo below. The Misty SuperSolve as well as some other VOC-containing products were moved to the storage enclosure outside the building.

Please let me know if you have any questions. Best regards,
Pete



Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
Sent: Tuesday, March 31, 2015 12:10 PM
To: Scaramella, Peter; Shahbazian, Max
Cc: Brett Stringer (brett.stringer@amd.com); Heather O'Cleirigh (Heather.OCleirigh@amd.com); Shaun Moore (shaun.moore@amd.com); R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Hi Peter,

Thank you for the update. Re-scheduling makes sense to me.

Best,

Melanie

From: Scaramella, Peter [<mailto:PScaramella@haleyaldrich.com>]
Sent: Friday, March 27, 2015 5:23 PM
To: MORASH, MELANIE; Shahbazian, Max
Cc: Brett Stringer (brett.stringer@amd.com); Heather O'Cleirigh (Heather.OCleirigh@amd.com); Shaun Moore (shaun.moore@amd.com); R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

I have update regarding 1160 Kern Avenue. We were not able to collect indoor air samples this week. When we arrived at 1160 Kern Avenue on Tuesday morning, RAFT was painting the volunteer room, lobby and hallway. Our field staff had scheduled this sampling event with RAFT and discussed potential indoor sources of VOCs, but our contact at RAFT had forgotten that interior painting was scheduled.

I will reschedule this sampling event with RAFT when they have completed the interior painting. Prior to sampling, we will perform a building survey that includes screening the freshly painted surfaces with a ppb RAE. I'm hoping to reschedule this sampling event for the week of April 6th, but I need to confirm this date with RAFT. I will email you when I have the specific sampling date confirmed.

Please let me know if you have any questions,
Pete

Peter Scaramella

office phone: (510) 879-4559
cell phone: (415) 867-7675

From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
Sent: Monday, March 23, 2015 2:23 PM
To: Scaramella, Peter
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Thank you for the update.

From: Scaramella, Peter [<mailto:PScaramella@haleyaldrich.com>]
Sent: Thursday, March 19, 2015 4:27 PM
To: MORASH, MELANIE; Shahbazian, Max@Waterboards
Cc: Stringer, Brett; OCleirigh, Heather; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Bennett, Peter; Calhoun, Michael
Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

Melanie and Max,

I am writing to provide you with an update on the vapor mitigation at the warehouse restrooms at 1160 Kern Avenue in Sunnyvale. The floor drains were sealed the week of March 6th, and indoor air sampling was planned for this week (March 16) to test the effectiveness of this mitigation measure. A building survey was completed on March 16 and VOCs were measured with a ppb RAE from urinal mints stored a cabinet in the women's warehouse restroom. In addition, we found some cracks to the caulking in the interior walls of the restroom, and we applied new caulking to repair these cracks. While we don't expect PCE or TCE to be associated with the urinal mints or caulking, we've postponed sampling until 24 March 2015 so that the sample detection limits are not affected by the presence of VOCs in the restroom. As with previous sampling events, indoor air samples will be collected in general accordance with the Work Plan for Indoor Air Investigation submitted in 2011 by AMEC. The same locations will be sampled as the February 2014 event, with the HVAC system active:

- women's warehouse restroom (IA-2),
- volunteer room (IA-5),
- warehouse/storage room (IA-6), and
- men's warehouse restroom (IA-7).

These same locations were sampled in February 2014. In addition, one outdoor air sample will be collected at the parking lot.

Please let me know if you have any questions,
Pete

Peter Scaramella
office phone: (510) 879-4559
cell phone: (415) 867-7675

From: MORASH, MELANIE [<mailto:morash.melanie@epa.gov>]
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Subject: RE: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

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Thank you,

Max Shahbazian, P.G.

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Subject: 1160 Kern Update—Sealing of Floor Drains at Warehouse Restrooms

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As you know, we followed all appropriate procedures in having this work approved by the City of Sunnyvale prior to undertaking construction:

- We had multiple discussions with the City over the phone and email to clearly state our objective of sealing the drains in place to remove a potential preferential vapor intrusion pathway.
- We obtained a permit for this work from the Building Department at the City of Sunnyvale. Our permit application clearly indicated that the drains were to be sealed and there were no plans to replace them.

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After approving the sealing of the drains, the City later decided that floor drains were needed to maintain building code compliance. The City did not inform us of this change until after the drains were sealed. The City staff involved with this project stated that they are aware of the vapor intrusion issues but the building code must be complied with. Despite the City's approval of the permit, the City has said it will not sign off on the work as complete unless new floor drains are installed. We think adding floor drains could introduce a preferential pathway, a step backwards in our progress towards mitigating vapor intrusion.

We are continuing our discussions with the City regarding the permit issue. If those discussions are unsuccessful, we may request your assistance with the City on the permit issue.

Best regards,
Pete

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www.haleyaldrich.com

Scaramella, Peter

From: Scaramella, Peter
Sent: Wednesday, April 22, 2015 11:53 AM
To: Melanie Morash (morash.melanie@epa.gov); Shahbazian, Max
Cc: 'OCleirigh, Heather'; Moore, Shaun; R. Morgan Gilhuly (rmg@bcltlaw.com); Nicole M. Martin; Bennett, Peter (PBennett@haleyaldrich.com); Calhoun, Michael (MCalhoun@haleyaldrich.com)
Subject: 1160 Kern Ave--Indoor Air Sampling Results
Attachments: 2015 0420-HAI_AMD_IA results-D.PDF; 39800-001-0003-Air Sample Locations.pdf

Max and Melanie,

I am writing to transmit the results of the indoor and ambient air samples collected at 1160 Kern Avenue on 9 April 2015. These samples were collected to test the effectiveness of sealing the floor drains at the warehouse restrooms. No data quality issues were identified, and the indoor air results are considered valid and useable for decision making purposes. No volatile organic compounds (VOCs) were detected in any samples at concentrations above the Regional Screening Level (RSL) for industrial air. Trichloroethene was detected at the following concentrations, which are below the long-term RSL of 3.0 ug/m3 for industrial air:

- 1.6 and 1.7 ug/m3 in a duplicate sample pair, women's warehouse restroom (IA-2);
- 0.40 ug/m3, volunteer room (IA-5);
- 0.25 ug/m3, warehouse/storage room (IA-6); and
- 0.53 ug/m3, men's warehouse restroom (IA-7).

I have included a figure depicting these locations and a table presenting the analytical results for all indoor air samples collected at 1160 Kern Avenue. I will also transmit the results of these indoor air samples to RAFT.

We will prepare a Vapor Mitigation Completion Report for submittal by 22 May 2015 to document:

- Methods and results of the sewer assessment,
- Protocol for sealing of the warehouse restroom floor drains, including the application of the retro-coat floor seal, and
- Methods and results of this indoor air sampling event.

Please let me know if this approach is acceptable to you,
Pete

Peter Scaramella
Senior Risk Assessor

Haley & Aldrich, Inc.
1956 Webster Street, Suite 450
Oakland, CA 94612
office: (510) 879-4559 | cell: (415) 867-7675
www.haleyaldrich.com

APPENDIX B

Sewer Integrity Assessment Field Activities

Appendix B

Sewer Integrity Assessment Field Activities

1160 Kern Avenue
Sunnyvale, California

The field activities associated with the assessment of the on-Site sewer system are summarized below. Haley & Aldrich subcontracted with Subtronic Corporation (Subtronic) of Martinez, California, to conduct the video inspections of the sewer-system. A Site-specific health and safety plan was prepared before field activities began.

Women's Warehouse Restroom

On 29 April 2014, Subtronic performed a video inspection of the portions of the on-Site sewer system that were accessible by a toilet in the women's warehouse restroom. The toilet was removed and a video camera was inserted into the sewer and connected via a cable to the power supply and controls. The camera was allowed to slowly move through the sewer pipe. However, due to the multiple 90-degree bends in the pipes, only a limited portion of the sewer system was accessible. The camera was inserted approximately 4 feet into the sewer system, ending at a tee ("T"-shaped pipe connector) suspected to be connected to a urinal in the men's restroom. Multiple attempts were made with two different cables to insert the camera past this tee, without success.

The floor drains in the warehouse restrooms were inspected, but deemed infeasible for a video assessment due to the water trap (i.e., p-trap) and small diameter pipe. A drain waste vent was observed exiting through the roof of the warehouse near the warehouse restrooms (the lobby restroom drain waste vents could not be inspected for safety reasons). However, the drain waste vent was connected with a water line and therefore not likely a sewer access point. No other sewer access points were observed.

Kern Avenue Sewer Main

A video assessment of the sewer main at Kern Avenue was completed to supplement the results of the video assessment at the women's warehouse restroom. Before Site-work started, a traffic control plan dated 13 May 2014 was prepared by Subtronic and approved (following the submittal of a revised version) by the City of Sunnyvale on 13 June 2014. The video assessment was conducted by accessing the nearest downstream sewer manhole, on Kern Avenue, approximately 125 feet east of the building. A device fitted with front and lateral cameras (one to see straight ahead and one to locate the lateral) was inserted into the sewer and connected via a cable to the power supply and controls. The device was also fitted with a sonde (a transmitter) to allow detection with a handheld pipe locator during the video inspection. The device was allowed to move slowly through the sewer pipe. However, the high flow volume and turbulent flow impaired visibility and therefore no laterals could be observed.

Warehouse Sewer Cleanouts

Two cleanouts were identified as viable access points to conduct a video inspection of sewer lines inside the building. One cleanout is near the warehouse restrooms and the other is in the hallway near the lobby restrooms (Figure 4). An additional cleanout was observed in the hallway/lobby area; however, this cleanout was not large enough to provide access for the video camera.

On 27 June 2014, Subtronic performed a video inspection of the portions of the on-Site sewer system that were accessible by the two cleanouts, as described above. A video camera was inserted into each cleanout and connected via a cable to the power supply and controls. The camera was fitted with a sonde (a transmitter) to allow detection with a handheld pipe locator during the video inspection. The camera was allowed to move slowly through the sewer pipe; however, as is typically the case for sewer inspections, the camera's movement was restricted by bends in the sewer pipe.

APPENDIX C

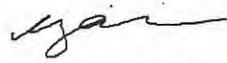
City of Sunnyvale Building Permit



BUILDING PROJECT PERMIT
 DEPARTMENT OF COMMUNITY DEVELOPMENT
 BUILDING DIVISION
 456 W. OLIVE AVE.
 SUNNYVALE, CA 94086
 (408) 730-7444

INSPECTION PHONE NUMBERS
 BUILDING: (408) 730-7790
 FIRE: (408) 730-7652

INSPECTION WEB SITE
<http://www.e-permits.net>

THIS PERMIT BECOMES NULL AND VOID IF WORK IS NOT COMMENCED WITHIN 180 DAYS FROM DATE OF ISSUANCE, OR IF WORK IS SUSPENDED AT ANY TIME FOR MORE THAN 180 DAYS OR IF WORK IS DONE IN VIOLATION OF ANY CITY OR STATE LAWS RELATING THERETO		RECEIPT 131608 Ch:101	PLEASE USE THE PROJECT NUMBER BELOW WHEN MAKING INQUIRIES OR REQUESTING INSPECTIONS	
PROJECT DESCRIPTION SEAL FLOOR DRAINS & REMOVE SHOWER AT RESTROOMS IN WAREHOUSE PER EPA SUP		PROJECT # 2015-0783	RV 1	
PROJECT ADDRESS 1160 KERN AV		ISSUED DATE 02/27/15	ISSUED BY Joe Espinoza	
CONST. TYPE Remodel	STRUCTURE DESCRIPTION Commercial Office-Bank		FEES Issue Fee \$26.50 Building Permit \$273.32 Fire Prev. Perm. \$191.32 Plumbing Permit \$242.00 Plan Check \$191.32 Construction Tax \$40.50 General Plan \$11.25 Technology \$18.00 ----- Total Paid \$994.21 02/27/15 02:15pm	
APN 205-24-002	ZONE MS	OCC. GRP. B		CLASS
BLDG. SQFT 800	VALUATION \$7,500	FLOORS		UNITS
PROJECT PERMITS BL FP PL		REFERENCE #		
OWNER	The Resource Area For Teachers 1355 Ridder Park Dr San Jose, CA 95131-2306			
CONTRACTOR	LICENSED CONTRACTORS DECLARATION I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect, and I am authorized by the property owner to pull this permit. License Class: C21 License Number: 764815 Date: 02/27/15 Contractor: INNOVATIVE CONSTRUCTION SOLUTIONS			
WORKERS' COMPENSATION DECLARATION I have and will maintain workers compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers compensation insurance carrier is: FEDERAL INS. CO and my policy number is: WC0044727770.			I understand that per Sunnyvale Municipal Code Chapter 8.16 all solid waste collection must be performed by the City's franchised collector. The permittee is responsible to ensure that all sub-contractors and their subs obtain a City business license prior to commencement of their work and maintain a valid business license for the duration of the work. I certify that I have read this application and state that the above information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction, and hereby authorize representatives of this county to enter upon the above mentioned property for inspection purposes.  <div style="text-align: right;">02/27/15</div>	
			PERMITEE SIGNATURE _____ DATE _____ PERMITEE INNOVATIVE CONSTRUCTION SOLUTIONS ADDRESS 4011 W. CHANDLER AVE SANTA ANA, CA 92704	



Steven Huang <shuang@sunnyvale.ca.gov>

EPA Requirement to Close Floor Drains - Vapor Intrusion Mitigation - 1160 Kern Avenue, Sunnyvale, CA

1 message

MORASH, MELANIE <morash.melanie@epa.gov> Thu, Feb 19, 2015 at 10:55 AM
To: Steven Huang <shuang@sunnyvale.ca.gov>, "Scaramella, Peter" <PScaramella@haleyaldrich.com>
Cc: "Bennett, Peter" <PBennett@haleyaldrich.com>, "MORASH, MELANIE" <morash.melanie@epa.gov>, "Shahbazian, Max@Waterboards (Max.Shahbazian@waterboards.ca.gov)" <Max.Shahbazian@waterboards.ca.gov>

Good morning, Steven,

Please use this e-mail as documentation of EPA's requirement that Haley and Aldrich, on behalf of Advanced Micro Devices (AMD), remove the floor drains in the 1160 Kern Avenue building bathrooms, as part of the required Superfund Site vapor intrusion mitigation activities.

The permanent closure of these floor drains will remove an identified preferential pathway for trichloroethene (TCE) vapor intrusion into the building and address potential unacceptable human exposures to TCE (a chemical that can cause cancer and other health effects) due to the subsurface-to-indoor air vapor intrusion pathway.

Building Safety Division
City of Sunnyvale
FEB 26 2015
For Installation in the City of Sunnyvale subject to Code Amendments
APPROVED
By: BUILDING-PLUMBING-ELECTRICAL-MECHANICAL
The stamping of this job shall not be held to permit or to be an approval of the violation of any provision of any City or State Law

Many thanks for your cooperation, and please do not hesitate to contact me if you have any questions.

--Melanie Morash

JOB COPY
These plans must be kept on the job at all times.
CITY OF SUNNYVALE

Melanie Morash, Remedial Project Manager

California Site Cleanup Section I, Superfund Division

US EPA Region 9

75 Hawthorne Street (SFD-7-1)

San Francisco, CA 94105

(415) 972-3050 [phone]

(415) 947-3528 [fax]

morash.melanie@epa.gov

From: Steven Huang [mailto:shuang@sunnyvale.ca.gov]

Sent: Thursday, February 19, 2015 9:48 AM

To: Scaramella, Peter

Cc: MORASH, MELANIE; Bennett, Peter

Subject: Re: FW: Building permit for 1160 Kern Avenue

Peter,

As previously discussed, in order for the city to allow removal of the required floor drains in the restroom a alternate means and materials form should be provided to document deviation from code requirements. In support of the approval for the application, you may include documentation from EPA mandating removal of the drains.

Steven Huang

Plan Checker

Building Safety Division

City of Sunnyvale

Phone: (408) 730-7252

On Thu, Feb 19, 2015 at 9:35 AM, Scaramella, Peter
<PScaramella@haleyaldrich.com> wrote:

Mr. Huang,

I'm submitting the attached permit application for the work planned at 1160 Kern Avenue. This work is required by EPA.

Please contact me if you have any questions,

Pete

Peter Scaramella

office phone: (510) 879-4559

cell phone: (415) 867-7675

From: Scaramella, Peter

Sent: Monday, December 08, 2014 5:08 PM

To: 'shuang@sunnyvale.ca.gov'

Cc: Melanie Morash (morash.melanie@epa.gov)

Subject: Building permit for 1160 Kern Avenue

Mr. Huang,

I'm writing in response to your voicemail from 5 December 2014 requesting clarification as to why the floor drains should be removed at the warehouse restrooms at 1160 Kern Avenue. In February, we completed a sampling program and identified the floor drains as a potential pathway for volatile organic compounds to enter the restrooms. Sealing the floor drains will provide a permanent mitigation remedy for this pathway at the restrooms.

I've cc'ed Melanie Morash, the EPA Project Manager for the site. EPA has approved of our plan to seal the drains.

Prior to commencing work in the restrooms, I will submit a permit application to document that the substantive requirements of the permits are met. Let me know if you have any other questions regarding this work, and thank you for your assistance with this matter.

Pete

Peter Scaramella

Senior Risk Assessor

HALEY & ALDRICH

1956 Webster Street, Suite 450

Oakland, CA 94612

office phone: (510) 879-4559

cell phone: (415) 867-7675

pscaramella@haleyaldrich.com

www.HaleyAldrich.com

**CITY OF SUNNYVALE
REQUEST FOR ALTERNATIVE MATERIALS, DESIGN OR METHODS OF CONSTRUCTION**

Project Address: 1160 Kern Ave Project Number: _____

Type of Construction: concrete Occupancy Group(s): RAFT

Is the Building Equipped with an Approved Fire Sprinkler System?: Yes

Number of Stories of the Building: ONE

Total Floor Area of the Entire Building: ~37,000 sq. Ft

Floor Area of Each Floor: ~37,000 sq. Ft

Floor Area and Number of Floor of Tenant Space: One Tenant -> 37,000 sq. Ft

Subject of Alternative Materials, Design, or Methods of Construction Requested: _____

Seal 4 Floor Joists in warehouse RESTROOMS

Standard Code Requirement (specify code edition and section): _____

California Building Code Ch. 4 Section 419.3

Requested By (all parties below need to sign):

Print Name	Sign Name	Telephone Number
Property Owner: <u>DOUGLAS LANG</u>	<u>Rough Jung</u>	<u>(831) 332-6000 (FOR RAFT)</u>
Architect: _____	_____	_____
Engineer: <u>Susan Gallardo</u>	<u>Susan Gallardo</u>	<u>(510) 879-4552</u> CA PE 038154 Exp 3/2015
Contractor: <u>Eric Roger</u>	<u>ER</u>	<u>510-182-8415</u>

Attach two copies of reference material test reports, expert opinions, or any other supporting documentation. The Chief Building Official may require that a consultant be hired by the applicant to perform all applicable tests, research and analysis and submit a full evaluation report.

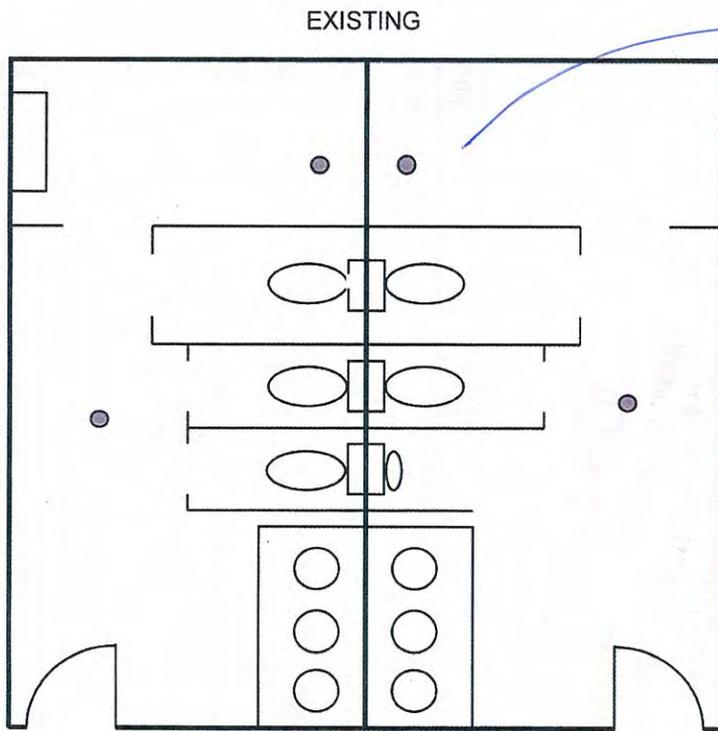
*****Staff Use*****

Staff Findings: _____

Staff Recommendation: Approve Deny Staff: _____

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Denied	Approved	Denied
Chief Building Official: <u>[Signature]</u>	Fire Marshal: _____		

Building Safety Division
CITY OF SUNNYVALE
FEB 11 2015
APPROVED
For installation in the... subject to code requirements
By: BUILDING-PLUMBING-ELECTRICAL-MECHANICAL
The stamping of this plan shall not be held responsible or to
be an approval of the violation of any City or State Law
JOB COPY
These plans must be kept
on the job at all times
CITY OF SUNNYVALE



Shower stalls to be removed
cap plumbing and repatch tile

JOB COPY
These plans must be kept
on the job at all times.
CITY OF SUNNYVALE

Building Safety Division
City of Sunnyvale

FEB 26 2015

For Installation in the City of Sunnyvale subject to code requirements
APPROVED

By BUILDING-PLUMBING-ELECTRICAL-MECHANICAL
The stamping of this plan shall not be held to permit or to
be an approval of the violation of any provision of any City or State Law.

EXPLANATION

● FLOOR DRAIN *TO BE REMOVED*

NOTE: FIGURE NOT TO SCALE

HALEY & ALDRICH 1160 KERN AVE

LOCATION OF FLOOR DRAINS
Warehouse Restrooms

FIGURE 1

Project #	2015 0783	Revision	
Address	1160 KERN AVE		
Received Date		Coordinator	
Due Date		Occupancy Type	
Final Date		Construction Type	

DIVISION	CLEAR	HOLD	INITIALS
Planning	2/26/15		JJR
Public Works			
Fire Prevention	2/24/15		
Hazardous Materials			
Structural			
Water Pollution			
Building	2/26/15		SNA

JOB COPY
 These plans must be kept
 on the job at all times.
CITY OF SUNNYVALE

Building Safety Division
 City of Sunnyvale

FEB 26 2015

For Installation in the City of Sunnyvale subject to code requirements
 APPROVED

By BUILDING-PLUMBING-ELECTRICAL-MECHANICAL
 The stamping of this plan shall not be held as permit or to
 be an approval of the violation of any provision of any city or State Law.

City of Sunnyvale Construction Permit

BUILDING SAFETY DIVISION
COMMUNITY DEVELOPMENT DEPARTMENT

On-Line Building Inspection Scheduling

www.e-onestop.net

Building Inspection Scheduling - (408) 730-7790

Fire Inspection Scheduling - (408) 730-7652

One-Stop Permit Center - (408) 730-7444

Permitted Hours of Construction

(Refer to Sunnyvale Municipal Code 16.08 for more information)

Monday-Friday: 7 am – 6 pm

Saturday: 8 am – 5 pm

No Work on Sunday/Holidays

This permit is for on-site work only. Any work within the public right-of-way shall be reviewed and approved by the Public Works Department, as a separate permit, prior to commencement.

This building permit card shall be kept on the site of the work and available for the inspectors until completion of the project.

Inspections shall be scheduled by the permittee and performed as required by the Sunnyvale Municipal Code.

When installing foundations, footings, piers, or similar components, do not pour concrete until after all required inspections have been approved.

When fire sprinklers are required, an approved fire sprinkler inspection must be completed prior to rough frame and/or above ceiling inspections.

This permit becomes null and void if work is not commenced and an inspection performed within 180 days from the date of issuance, if work is suspended for more than 180 days, or if work is done in violation of any city or state law relating hereto.

Project Number: 2015-0783 1

Project Address: 1160 KERN AV

Permits Issued: Bldg Fire Plum

Description: SEAL FLOOR DRAINS & REMOVE SHOWER AT RESTROOMS IN WAREHOUSE PER EPA SUPERFUND

Permittee: INNOVATIVE CONSTRUCTION SOLUTIONS
4011 W. CHANDLER AVE
SANTA ANA, CA 92704

Construction Type: Remodel **Occupancy:** B

Date Issued: 02/27/15 **Issued By:** dr

Signature in the area below indicates consent to final this permit; however, final approval is not provided until Building Inspection Final is approved.

Department	Date	Signed by
Public Works		
Public Safety/Fire		
Other/HazMat		

When properly signed below, this card is a CERTIFICATE OF OCCUPANCY

The building must not be occupied until a final building inspection is approved and signed below.

BUILDING INSPECTION FINAL:

Date: Inspector:

DATE	INSPECTOR	COMMENTS
------	-----------	----------

FOUNDATION

SETBACKS		
FOOTING STEEL		
SLAB		
PIER BLOCKS		
POST BEAM FTGS		
COLUMNS		
MASONRY STEEL		
HD'S/STRAPS ANCHOR		
UFER GROUND		

ELECTRICAL

UNDERGROUND		
ROUGH		
METER RELEASE		
BONDING		
GR. ELECTRODE		
ABOVE T-BAR		
GENERATOR TEST		
EMERGENCY LIGHTS		

PLUMBING

STORM LINE		
SEWER		
WATER SERVICE		
UNDERFLOOR/SLAB		
ROUGH		
TOP OUT		
SHOWER PAN		
GAS TEST		
ABOVE T-BAR		
PROCESS PIPING		

MECHANICAL

ROUGH		
UNDERFLOOR		
DUCTS		
FLUES		
FURNACE/BOILER		
COMBUSTION AIR		
AIR CONDITIONING		
CONDENSATE		
HOODS		
ABOVE T-BAR		
HVAC SMOKE TEST		
FIRE DAMPER		

STRUCTURE

	Floor	Roof	Wall
UNDER FL FRAME			
INSULATION			
FLOOR NAIL			
ROOF NAIL			
EXT. SHEAR WALL			
EXT. STRAPS			
FRAME			
HD'S/STRAPS			
TRUSSES			
INT. SHEAR WALL			
EXT. SHEATHING			
T-BAR			
WINDOWS			

ROOFING

IN-PROGRESS		
-------------	--	--

POOLS

PRE-GUNITE		
PRE-PLASTER		
DRAIN HOLES		

FINISH

WATER RESIST. BRD		
RATED DRYWALL	1 st Layer	2 nd Layer
EXTERIOR LATH		
TILE LATH		
SMOKE ALARMS		
CARBON MONO ALRM		
STREET ADDRESS		

OTHER

THIS PERMIT EXPIRES 180 DAYS AFTER THE LAST INSPECTION IF NOT FINALLED.



City of Sunnyvale Fire Inspection Record

Insp. Type	Date	Inspector	Comments
Underground Hydro/Rough/Flush			
Fire Sprinkler Hydro/Rough			
Alarm Systems			
Other Extinguishing Systems			
Emergency/Exit Signs			
Fire Lanes			
Signage			
Fire Extinguisher			
Door Hardware			
Other			

Additional Fire Inspection Comments

Green Building Inspection Record

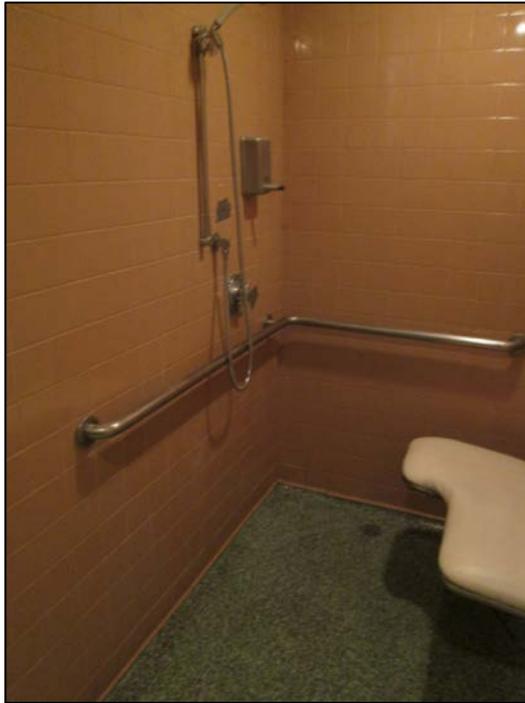
Insp. Type	Date	Inspector	3rd Party Certification	Date	Comments
Site Planning and Design					
Storm Water					
Drainage					
Foundation					
Landscaping					
Structural Frame, Building Envelope, and Exterior Finishes					
Engineered Lumber					
Durable Materials					
Bldg O & M					
Water Efficiency and Conservation					
Insulate Hot Water					
Efficient Fixtures					
Irrigation Controllers					
Meters					
HVAC and Energy Efficiency					
HVAC Filters					
Bathroom Fans					
Whole House Fan					
Seal Joints/Openings					
Finishes and Environmental Quality					
Low VOC Paints/Coatings					
Low VOC Caulks/Adhesives					
Cover Duct Openings					
Flooring, Appliances, and Lighting					
Carpet/Flooring is Low Emitting					
Energy Star Dishwasher/Refrigerator					
Other					

Additional Inspection Comments

APPENDIX D

Photographic Log of Mitigation Activities

Sealing of Floor Drains at the Warehouse Restrooms



Photograph 1. View of men's shower prior to field activities.



Photograph 2. View of men's shower floor drain after drain plug removed and prior to sealing floor drain.

Sealing of Floor Drains at the Warehouse Restrooms



Photograph 3. View of men's shower after sealing the floor drain and removing the shower fixtures. Work area is delineated to allow sealant to cure.



Photograph 4. View of men's restroom floor drain after drain plug removed and prior to sealing floor drain.

Sealing of Floor Drains at the Warehouse Restrooms



Photograph 5. View of men's restroom after sealing the floor drain. The work area is delineated to allow the sealant to cure.

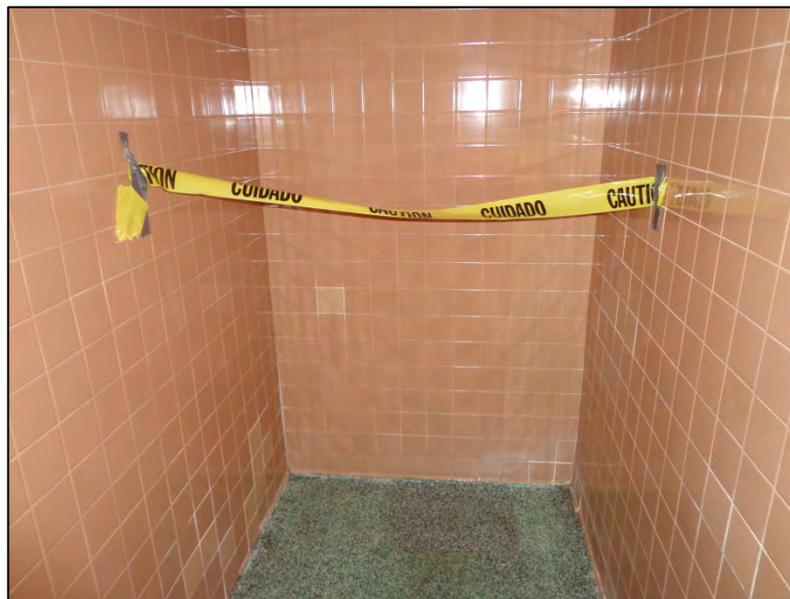


Photograph 6. View of women's shower prior to field activities.

Sealing of Floor Drains at the Warehouse Restrooms



Photograph 7. View of women's shower floor drain after drain plug removed and prior to sealing floor drain.



Photograph 8. View of women's shower after sealing the floor drain and removing the shower fixtures. Work area is delineated to allow sealant to cure.

Sealing of Floor Drains at the Warehouse Restrooms



Photograph 9. View of women's restroom floor drain after removing drain plug and prior to sealing floor drain.



Photograph 10. View of women's restroom after sealing the floor drain. The work area is delineated to allow the sealant to cure.

APPENDIX E

Material Safety Data Sheets

	Material Safety Data Sheet		24 Hour Emergency Phone Numbers: Medical/Poison Control: In U.S.: Call 1-800-222-1222 Outside U.S.: Call your local poison control center Transportation/National Response Center: 1-800-535-5053 1-352-323-3500
			<p>.....</p> <p>•NOTE: The National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.</p> <p>.....</p>

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in American Spanish upon request.
Los Datos de Seguridad del Producto pueden obtenerse en Español si lo requiere.

Product Name:	Phenomenal Patch-N-Paint Lightweight Spackling	Revision Date:	01/15/2013
Product UPC Number:	070798015029, 070798015111, 070798015173	Supersedes:	05/08/2012
Product Use/Class:	Spackle/Wallboard Repair	MSDS Number:	00079942005
Manufacturer:	PHENOMENAL BRANDS PhenoPatch Products A Division of DAP Products Inc. 2400 Boston Street Suite 200 Baltimore, MD 21224-4723 410-779-3265 (non-emergency matters)		

Section 2 - Hazards Identification

Emergency Overview: A(n) white to off-white paste product with a very slight ammonia odor. **WARNING!** May cause eye, skin, nose, throat and respiratory tract irritation. Removal of this product after use or by dry sanding will generate dust and exposure to this dust may be irritating to the eyes, ears, nose and mouth. Harmful by inhalation and if swallowed. If dry-sanded, exposure to dust may result in build-up of material in eyes, ears, nose, and mouth.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation. Signs and symptoms may include: pain, tears, swelling, redness and blurred vision.

Effects Of Overexposure - Skin Contact: May cause skin irritation. May cause dry skin.

Effects Of Overexposure - Inhalation: Inhalation of dust may cause lung damage or other adverse pulmonary and respiratory effects. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may result in obstruction when material hardens.

Effects Of Overexposure - Chronic Hazards: None known.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation

Medical Conditions which May be Aggravated by Exposure: If dry sanded, asthma and asthma-like conditions may worsen from prolonged or repeated exposure to dust.

Carcinogenicity:

None

Section 3 - Composition / Information On Ingredients

Chemical Name	CASRN	Wt%
Sodium silicate glass	1344-09-8	10-30
Limestone	1317-65-3	1-5
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	1-5

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water.

First Aid - Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

First Aid - Ingestion: Call a physician or Poison Control Center immediately. Do not induce vomiting.

Note to Physician: None.

COMMENTS: If over-exposure occurs, call your poison control center at 1-800-222-1222.

Section 5 - Fire Fighting Measures

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: None known.

Special Firefighting Procedures: Cool fire-exposed containers using water spray.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Scrape up dried material and place into containers.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! Avoid contact with skin and eyes. Do not breathe dust. Removal of this product after use will result in the generation of Dust. If dry-sanded, exposure to dust may result in the build-up of material in eyes, ears, nose, and mouth which may cause irritation. Avoid excessive heat and handling. Wash thoroughly after handling.

Storage: Avoid excessive heat and freezing. Keep tightly closed. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name	CASRN	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skin
Sodium silicate glass	1344-09-8	10 MGM3	N.E.	N.E.	5 MGM3	N.E.	N.E.	No
Limestone	1317-65-3	10 MGM3	N.E.	N.E.	5 MGM3 (respirable fraction)	N.E.	N.E.	No
Sodium Borate; Boric Acid, Sodium Salt	7775-19-1	2 MGM3	6 MGM3	N.E.	N.E.	N.E.	N.E.	No

Precautionary Measures: Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

Engineering Controls: Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits. Prevent build-up of dust and vapors by opening windows and doors or use other means to ensure fresh air entry during application, drying and sanding. Wet sanding is recommended to avoid generation of dust.

Respiratory Protection: If concentrations exceed the exposure limits specified, use of a NIOSH-approved supplied air respirator is recommended. Where the protection factor is exceeded, use of a Self Contained Breathing Apparatus (SCBA) may be necessary. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Use an approved NIOSH/OSHA respirator if dry sanded.

Skin Protection: Wear gloves with repeated or prolonged use.

Eye Protection: Safety glasses with side-shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Remove and wash contaminated clothing before re-use.

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	Vapor Density:	Heavier Than Air
Odor:	Very Slight Ammonia	Odor Threshold:	Not Established
Color:	White to Off-White	Evaporation Rate:	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	Specific Gravity:	0.42 - 0.42
Freeze Point:	Not Established	pH:	Between 7.0 and 12.0
Vapor Pressure:	Not Established	Viscosity:	Not Established
Physical State:	Paste	Flammability:	Non-Flammable
Flash Point, F:	Greater than 200	Method:	(Seta Closed Cup)
Lower Explosive Limit, %:	Not Determined	Upper Explosive Limit, %:	Not Determined

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under normal conditions.

Section 11 - Toxicological Information

Product LD50: Not Established

Product LC50: Not Established

None

Significant Data with Possible Relevance to Humans: None.

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Not Regulated.	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	N.A.	DOT UN/NA Number:	N.A.

Note: The shipping information provided is applicable for domestic ground transport only. Different categorization may apply if shipped via other modes of transportation and/or to non-domestic destinations.

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Water	7732-18-5
Acrylic polymer	Proprietary

California Proposition 65:

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

HMIS Ratings:

Health: 1	Flammability: 1	Reactivity: 0	Personal Protection: X
-----------	-----------------	---------------	------------------------

Volatile Organic Compounds (VOC), less water less exempts: g/L: 5.3 lb/gal: 0.04 wt:wt%: 0.9

Volatile Organic Compounds (VOC), less water less exempts, less LVP-VOCs: wt:wt%: 0.0

REASON FOR REVISION: Periodic Update

Legend:

N.A. – Not Applicable

ACGIH – American Conference of Governmental Industrial Hygienists

N.E. – Not Established

SARA – Superfund Amendments and Reauthorization Act of 1986

N.D. – Not Determined

NJRTK – New Jersey Right-to-Know Law

VOC – Volatile Organic Compound

OSHA – Occupational Safety and Health Administration

PEL – Permissible Exposure Limit

HMIS – Hazardous Materials Identification System

TLV – Threshold Limit Value

NTP – National Toxicology Program

CEIL – Ceiling Exposure Limit

STEL – Short Term Exposure Limit

LD50 – Lethal Dose 50

LC50 – Lethal Concentration 50

F – Degree Fahrenheit

MSDS – Material Safety Data Sheet

PHENOMENAL BRANDS believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>



THE #1 CHOICE OF
PAINTING PROFESSIONALS®

MATERIAL SAFETY DATA SHEET

MSDS FORM A: COATINGS WITH NO REPORTABLE HAZARDOUS INGREDIENTS

The following Material Safety Data Sheet (MSDS) is being provided pursuant to requirements of the Fed/OSHA (29 CFR 1910.1200) and Cal/OSHA (8 CCR 5194) Hazard Communication Standards. The health and hazards information given here is based on data believed to be accurate by Dunn-Edwards Corporation; we do not, however, assume any liability for the accuracy or completeness of this information. We neither suggest nor guarantee that any hazards mentioned are the only ones that may exist. All persons intending to rely on any recommendation, or to use any technique, equipment, or material mentioned should first satisfy themselves that they can meet all applicable safety and health standards.

The following MSDS supersedes any previously issued MSDS for each product covered. The reader is advised to destroy any obsolete MSDS and refer only to this MSDS. As permitted by OSHA, each MSDS may apply to a class of products which have similar hazards and contents.

Products covered by this MSDS are listed below:

ACBL10-0: ACRI-BUILD Flat
ACHS10-0: ACRI-HUES Flat
ACWC10-0: ACRI-WALL Flat Concentrate
ACWL10-0: ACRI-WALL Flat Ready-To-Use
ACWL30-0: ACRI-WALL Eggshell
ACWL50-0: ACRI-WALL Semi-Gloss
AQUA10-0: AQUAFALL Flat
AQUA30-0: AQUAFALL Eggshell
AQUA40-0: AQUAFALL Low Sheen
EDLV10-0: ENDURALASTIC 5 Elastomeric Flat
EDLX10-0: ENDURALASTIC 10 Elastomeric Flat
ENSO00-0: ENSO Primer
ENSO10-0: ENSO Flat
ENSO30-0: ENSO Eggshell
ENSO50-0: ENSO Semi-Gloss
ESPR00-1: EFF-STOP Premium
EVER10-0: EVEREST Flat
EVER20-0: EVEREST Velvet
EVER30-0: EVEREST Eggshell
EVER50-0: EVEREST Semi-Gloss
EVSH10-0: EVERSIELD Flat
EVSH10-2: EVERSIELD Flat
EVSH20-0: EVERSIELD Velvet
EVSH20-2: EVERSIELD Velvet
EVSH30-0: EVERSIELD Eggshell
EVSH30-2: EVERSIELD Eggshell
EVSH40-0: EVERSIELD Low Sheen
EVSH40-2: EVERSIELD Low-Sheen
EVSH50-0: EVERSIELD Semi-Gloss

EVSH60-2: EVERSIELD Gloss
EZPR00-1: EZ-PRIME Premium
IKPR00-1-WH: INTER-KOTE Premium Zero VOC
PMCE10-0: CONTRACTOR'S EDGE Flat
PMCE30-0: CONTRACTOR'S EDGE Eggshell
PMCE50-0: CONTRACTOR'S EDGE Semi-Gloss
SPMA10-0: SUPREMA Flat
SPMA10-1: SUPREMA Flat
SPMA20-0: SUPREMA Velvet
SPMA20-1: SUPREMA Velvet
SPMA30-0: SUPREMA Eggshell
SPMA40-0: SUPREMA Low Sheen
SPMA50-0: SUPREMA Semi-Gloss
SSHL10-0: SPARTASHIELD Flat
SSHL20-0: SPARTASHIELD Velvet
SSHL30-0: SPARTASHIELD Eggshell
SSHV10-0: SPARTASHIELD VA Flat
SWLL10-0: SPARTAWALL Flat
SWLL20-0: SPARTAWALL Velvet
SWLL30-0: SPARTAWALL Eggshell
SWLL40-0: SPARTAWALL Low Sheen
SWLL50-0: SPARTAWALL Semi-Gloss
SZRO10-0: SPARTAZERO Flat
SZRO20-0: SPARTAZERO Velvet
SZRO30-0: SPARTAZERO Eggshell
SZRO40-0: SPARTAZERO Low Sheen
SZRO50-0: SPARTAZERO Semi-Gloss

continued

04/15/15 (01/13/15)

MSDS FORM A: COATINGS WITH NO REPORTABLE HAZARDOUS INGREDIENTS continued

UGPR00-1: ULTRA-GRIP Premium
UGSL00-0: ULTRA-GRIP Select
UGSL00-1: ULTRA-GRIP Select Zero VOC
ULDM00-0-GR: ULTRASHIELD DTM Gray Primer
ULDM50-0: ULTRASHIELD DTM Semi-Gloss Paint
ULMS00-0-WH: ULTRASHIELD Multi-Surface Primer
ULSH40-0: ULTRASHIELD Low Sheen Paint
ULSH60-0: ULTRASHIELD Gloss Paint
VNPR00-0: VINYLASTIC Premium
VNPR00-1: VINYLASTIC Premium Ultra-Low VOC
VNSL00-0: VINYLASTIC Select
VNSL00-1: VINYLASTIC Select Zero VOC
W 360V: ENDURASEAL
W 370: ENDURAWALL
W 600: ECOSHIELD Primer
W 601: ECOSHIELD Flat
W 602: ECOSHIELD Low Sheen
W 603: ECOSHIELD Semi-Gloss
W 615: ACOUSTIKOTE
W 5361: Athletic Field Striping Paint
W 6079: AQUAFALL Flat
W 6240: VERSAFLAT
W 6310: DURA-TILT
W 6401V: QUIK-WALL
W 6402V: SUPER-WALL
W 6403V: SUPER-WALL Ready-To-Use

EMERGENCY AND FIRST AID PROCEDURES: If affected by inhalation of vapor, move victim to fresh air. If not breathing, apply artificial respiration and call emergency medical care. For eye contact, flush eyes with fresh water for at least 15 minutes. If irritation persists, seek medical attention. For skin contact, wash thoroughly with soap and water. Remove any contaminated clothing. If swallowed, have victim drink enough fresh water to ensure dilution. Call emergency medical care.

SECTION VI - REACTIVITY DATA

STABILITY: Stable. HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion can produce carbon monoxide and/or carbon dioxide.
CONDITIONS TO AVOID: Avoid storage or use at temperatures below 40°F. Avoid freezing.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid water-reactive materials, strong oxidizers, acids and alkalis.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING, STORAGE, AND DISPOSAL

PRECAUTIONS FOR HANDLING AND STORAGE: Keep containers closed when not in use. Do not handle or store near heat, flame, or strong oxidizers, acids and alkalis. Store in cool, well-ventilated area. Rotate stock, use older material first. Inspect all containers for leaks.
STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED: Dike and absorb spilled liquid with inert material such as clay granules, sand, earth, or sawdust. Use rags to clean up small amounts of spilled material.
WASTE DISPOSAL METHOD: Collect contaminated absorbent material and rags into a suitable container and dispose in accordance with all applicable local, state, and federal regulations.

SECTION VIII - CONTROL MEASURES FOR SAFE USE

RESPIRATORY PROTECTION: For spray application, use particulate filter mask to avoid breathing spray mist. Exposed persons with unusual allergic sensitivity may need organic vapor respirator (NIOSH/MSHA TC 23C or equivalent).
VENTILATION: For interior use, general mechanical ventilation may be sufficient to disperse vapor. Otherwise, open doors and windows or use portable fans to provide local exhaust.
EYE PROTECTION: Use safety glasses, goggles, or face shield to protect eyes.
PROTECTIVE GLOVES: Use waterproof gloves (e.g., latex, vinyl, rubber, neoprene) to avoid skin contact.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Waterproof headcovering and general protective clothing are recommended for protection as necessary.
WORK/HYGIENIC PRACTICES: Wash hands and face before eating.

SECTION IX - SPECIAL CAUTIONS

Do not store in areas subject to freezing temperatures. Keep above 40°F at all times. Use only with adequate ventilation or protection. Avoid breathing spray mist or vapor. Do not ingest. Avoid contact with skin. Close container after each use. Keep out of reach of children.

SECTION X - TRANSPORTATION INFORMATION

Shipping Requirements: Products covered by this MSDS are not subject to DOT, IATA/ICAO, or IMO/IMDG transportation regulations. Acceptable for air transport as non-hazardous goods.

***** DISCLAIMER *****

THE INFORMATION CONVEYED ABOVE, ALTHOUGH OBTAINED FROM SOURCES WE CONSIDER RELIABLE, IS FURNISHED BY DUNN-EDWARDS CORPORATION WITHOUT ANY WARRANTY (WHETHER EXPRESS OR IMPLIED) AS TO ITS ACCURACY, ADEQUACY, OR APPLICABILITY TO ANY PARTICULAR NEEDS OR CIRCUMSTANCES.



MATERIAL SAFETY DATA SHEET

prepared 01/19/11

HAZARDS IDENTIFICATION (ANSI Section 3)

Primary route(s) of exposure : Inhalation, skin contact, eye contact, ingestion.

Effects of overexposure :

Inhalation : Irritation of respiratory tract. Prolonged inhalation may lead to mucous membrane irritation, dizziness and/or lightheadedness, headache, nausea, coughing, central nervous system depression, difficulty of breathing, severe lung irritation or damage.

Skin contact : Irritation of skin.

Eye contact : Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, tearing of eyes, redness of eyes.

Ingestion : Ingestion may cause mouth and throat irritation, fatigue, dizziness and/or lightheadedness, headache, nausea, diarrhea, gastro-intestinal disturbances, abdominal pain, intoxication.

Medical conditions aggravated by exposure : Eye, skin, respiratory disorders, asthma-like conditions.

FIRST-AID MEASURES (ANSI Section 4)

Inhalation : Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty. Remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact : Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use. If irritation occurs, consult a physician.

Eye contact : Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion : If swallowed, obtain medical treatment immediately.

FIRE-FIGHTING MEASURES (ANSI Section 5)

Fire extinguishing media : Dry chemical or foam water fog. Carbon dioxide. Closed containers may burst if exposed to extreme heat or fire. In closed tanks, water or foam may cause frothing or eruption.

Fire fighting procedures : Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide. Oxides of calcium.

ACCIDENTAL RELEASE MEASURES (ANSI Section 6)

Steps to be taken in case material is released or spilled : Comply with all applicable health and environmental regulations. Eliminate all sources of ignition. Ventilate area. Spills may be collected with absorbent materials. Evacuate all unnecessary personnel. Place collected material in proper container. Complete personal protective equipment must be used during cleanup. Large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - use absorbent to pick up residue and dispose of properly.

HANDLING AND STORAGE (ANSI Section 7)

Handling and storage : Store below 100f (38c). Keep from freezing. Keep container tightly closed in a well-ventilated area.

Other precautions : Use only with adequate ventilation. Do not take internally. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under exposure controls/personal protection. Empty containers may contain hazardous residues.

EXPOSURE CONTROLS/PERSONAL PROTECTION (ANSI Section 8)

Respiratory protection : Control environmental concentrations below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) Approved elastomeric sealing- surface facepiece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters. Determine the proper level of protection by conducting appropriate air monitoring. Consult 29CFR1910.134 For selection of respirators (Canadian z94.4).

Ventilation : Provide dilution ventilation or local exhaust to prevent build-up of vapors.

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves, impervious clothing.

STABILITY AND REACTIVITY (ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, ammonium salts.

Conditions to avoid : Elevated temperatures, contact with oxidizing agent, freezing, sparks, open flame.

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION (ANSI Section 11)

Supplemental health information : Contains a chemical that may be absorbed through skin. Notice - reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Other effects of overexposure may include toxicity to liver, kidney, blood.

Carcinogenicity : Contains crystalline silica which is considered a hazard by inhalation. IARC has classified crystalline silica as carcinogenic to humans (group 1). Crystalline silica is also a known cause of silicosis, a noncancerous lung disease. The national toxicology program (NTP) has classified crystalline silica as a known human carcinogen. In a lifetime inhalation study, exposure to 250 mg/m3 titanium dioxide resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown but questionable. The international agency for research on cancer (IARC) has classified titanium dioxide as possibly carcinogenic to humans (group 2b) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Reproductive effects : No reproductive effects are anticipated

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : No teratogenic effects are anticipated

ECOLOGICAL INFORMATION (ANSI Section 12)

No ecological testing has been done by akzo nobel paints llc on this product as a whole.

The information contained herein is based on data available at the time of preparation of this data sheet which Akzo Nobel Paints believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. Akzo Nobel Paints shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and the users of this material. Complies with OSHA hazard communication standard 29CFR1910.1200.

Akzo Nobel Paints 15885 Sprague Road Strongsville, Ohio 44136 EMERGENCY TELEPHONE NO. (800) 545-2643

GLIDDEN PROFESSIONAL GRIPPER PRIMER SEALER

GP3210

DISPOSAL CONSIDERATIONS

(ANSI Section 13)

Waste disposal : Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

REGULATORY INFORMATION

(ANSI Section 15)

As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

Physical Data

(ANSI Sections 1, 9, and 14)

Product Code	Description	Wt. / Gal.	VOC gr. / ltr.	% Volatile by Volume	Flash Point	Boiling Range	HMIS	DOT, proper shipping name
3210-1200	gripper primer white	11.18	81.68	53.83	none	212-501	*310	paint**protect from freezing**
3210-1300	gripper primer grey	10.57	90.33	54.89	none	212-453	*210	paint**protect from freezing**

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	3210-1200	3210-1300
1,2-ethanediol	ethylene glycol	107-21-1		.1-1.0
ethanol, 2-(2-butoxyethoxy)-limestone	diethylene glycol monobutyl ether	112-34-5		1-5
titanium oxide	limestone	1317-65-3	10-20	5-10
quartz	titanium dioxide	13463-67-7	10-20	1-5
2-propenoic acid, butyl ester, polymer with ethenyl acetate	quartz	14808-60-7	.1-1.0	10-20
propanoic acid, 2-methyl-, monoester with 2,2,4-trimethyl-1,3-pentanediol	vinyl acrylic latex	25067-01-0	10-20	
2-propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene and 2-ethylhexyl 2-propenoate	texanol	25265-77-4	1-5	
nepheline syenite	styrene copolymer	25750-06-5		1-5
water	feldspar-type minerals	37244-96-5	10-20	
oxirane, methyl-, polymer with oxirane	water	7732-18-5	30-40	30-40
styrene acrylic copolymer	surfactant	9003-11-6		1-5
	styrene acrylic copolymer	Sup. Conf.	10-20	20-30

Chemical Hazard Data

(ANSI Sections 2, 8, 11, and 15)

Common Name	CAS. No.	ACGIH-TLV				OSHA-PEL				S.R. Std.	S2	S3	CC						
		8-Hour TWA	STEL	C	S	8-Hour TWA	STEL	C	S					H	M	N	I	O	
diethylene glycol monobutyl ether	112-34-5	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	y	n	y	n	n	n	n	n
limestone	1317-65-3	10 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
titanium dioxide	13463-67-7	10 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	y	y	n	n
quartz	14808-60-7	.025 mg/m3	not est.	not est.	not est.	0.1 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	y	y	n
vinyl acrylic latex	25067-01-0	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
texanol	25265-77-4	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
feldspar-type minerals	37244-96-5	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
surfactant	9003-11-6	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n

Footnotes:

C=Ceiling - Concentration that should not be exceeded, even instantaneously.

S=Skin - Additional exposure, over and above airborne exposure, may result from skin absorption.

n/a=not applicable
not est=not established
CC=CERCLA Chemical

ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R. Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no



MATERIAL SAFETY DATA SHEET

prepared 04/23/10

HAZARDS IDENTIFICATION (ANSI Section 3)

Primary route(s) of exposure : Inhalation, skin contact, eye contact, ingestion.

Effects of overexposure :

Inhalation : Irritation of respiratory tract, lungs. Prolonged inhalation may lead to mucous membrane irritation, dizziness and/or lightheadedness, headache, nausea, coughing, pneumoconiosis.

Skin contact : Irritation of skin.

Eye contact : Irritation of eyes.

Ingestion : Ingestion may cause mouth and throat irritation, mucous membrane irritation, gastrointestinal disturbances.

Medical conditions aggravated by exposure : Eye, skin, respiratory disorders, lung disorders.

FIRST-AID MEASURES (ANSI Section 4)

Inhalation : Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty. Remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact : Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing. Wash contaminated clothing before re-use.

Eye contact : Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion : If swallowed, obtain medical treatment immediately.

FIRE-FIGHTING MEASURES (ANSI Section 5)

Fire extinguishing media : Dry chemical or foam water fog. Carbon dioxide. Closed containers may burst if exposed to extreme heat or fire. In closed tanks, water or foam may cause frothing or eruption.

Fire fighting procedures : Water may be used to cool and protect exposed containers. Firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus.

Hazardous decomposition or combustion products : Carbon monoxide, carbon dioxide. Vinyl acetate monomer acrylic monomers. Sodium oxide, acetaldehyde.

ACCIDENTAL RELEASE MEASURES (ANSI Section 6)

Steps to be taken in case material is released or spilled : Comply with all applicable health and environmental regulations. Ventilate area. Evacuate all unnecessary personnel. Place collected material in proper container. Spilled material is extremely slippery. Complete personal protective equipment must be used during cleanup. Large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - use absorbent to pick up residue and dispose of properly.

HANDLING AND STORAGE (ANSI Section 7)

Handling and storage : Store below 100f (38c). Keep from freezing.

Other precautions : Use only with adequate ventilation. Do not take internally. Keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. Keep containers tightly closed and upright when not in use. Avoid conditions which result in formation of inhalable particles such as spraying or abrading

(sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under exposure controls/personal protection.

EXPOSURE CONTROLS/PERSONAL PROTECTION (ANSI Section 8)

Respiratory protection : Control environmental concentrations below applicable exposure standards when using this material. When respiratory protection is determined to be necessary, use a NIOSH/MSHA (Canadian z94.4) Approved elastomeric sealing- surface facepiece respirator outfitted with organic vapor cartridges and paint spray (dust/mist) prefilters. Determine the proper level of protection by conducting appropriate air monitoring. Consult 29CFR1910.134 For selection of respirators (Canadian z94.4).

Ventilation : Provide dilution ventilation or local exhaust to prevent build-up of vapors.

Personal protective equipment : Eye wash, safety shower, safety glasses or goggles. Impervious gloves.

STABILITY AND REACTIVITY (ANSI Section 10)

Under normal conditions : Stable see section 5 fire fighting measures

Materials to avoid : Oxidizers, acids, bases, alkalis. Styrene monomer.

Conditions to avoid : Elevated temperatures, freezing, sparks, open flame.

Hazardous polymerization : Will not occur

TOXICOLOGICAL INFORMATION (ANSI Section 11)

Supplemental health information : No additional effects are anticipated

Carcinogenicity : Treatment related nasal tumors were observed in rats and mice exposed to vinyl acetate via inhalation at 600 ppm for 2 years. In a lifetime inhalation study, exposure to 250 mg/m³ titanium dioxide resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown but questionable. The international agency for research on cancer (IARC) has classified titanium dioxide as possibly carcinogenic to humans (group 2b) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Reproductive effects : No reproductive effects are anticipated

Mutagenicity : No mutagenic effects are anticipated

Teratogenicity : No teratogenic effects are anticipated

ECOLOGICAL INFORMATION (ANSI Section 12)

No ecological testing has been done by akzo nobel paints llc on this product as a whole.

DISPOSAL CONSIDERATIONS (ANSI Section 13)

Waste disposal : Dispose in accordance with all applicable regulations. Avoid discharge to natural waters.

REGULATORY INFORMATION (ANSI Section 15)

As of the date of this MSDS, all of the components in this product are listed (or are otherwise exempt from listing) on the TSCA inventory. This product has been classified in accordance with the hazard criteria of the CPR (controlled products regulations) and the MSDS contains all the information required by the CPR.

The information contained herein is based on data available at the time of preparation of this data sheet which Akzo Nobel Paints believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. Akzo Nobel Paints shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and the users of this material. Complies with OSHA hazard communication standard 29CFR1910.1200.

Akzo Nobel Paints 15885 Sprague Road Strongsville, Ohio 44136 EMERGENCY TELEPHONE NO. (800) 545-2643

GP ULTRA-HIDE NO VOC INTERIOR EGGSHELL

GP1411

Physical Data

(ANSI Sections 1, 9, and 14)

Product Code	Description	Wt. / Gal.	VOC gr. / ltr.	% Volatile by Volume	Flash Point	Boiling Range	HMIS	DOT, proper shipping name
1411-0110	glidden professional ultra-hide no voc eggshell - white tint base	10.50	No VOC	66.01	none	212-212	310	paint ** protect from freezing **
1411-0300	glidden professional ultra-hide no voc eggshell - intermediate tint base	9.89	No VOC	68.41	none	212-212	310	paint ** protect from freezing **
1411-0400	glidden professional ultra-hide no voc eggshell - deep tint base	9.59	No VOC	68.73	none	212-212	310	paint ** protect from freezing **

Ingredients

Product Codes with % by Weight (ANSI Section 2)

Chemical Name	Common Name	CAS. No.	1411-0110	1411-0300	1411-0400
kaolin	clay	1332-58-7	5-10	5-10	10-20
silicic acid, aluminum sodium salt	sodium aluminosilicate	1344-00-9	1-5	1-5	
titanium oxide	titanium dioxide	13463-67-7	10-20	5-10	1-5
hexanoic acid, 2-ethyl-, oxybis(2,1-ethanediyloxy- 2,1-ethanediy) ester	tetraethylene glycol di(2-ethylhexoate)	18268-70-7			1-5
water	water	7732-18-5	50-60	50-60	50-60
acrylic resin	acrylic resin	Sup. Conf.			20-30
vinyl acetate/acrylic copolymer	vinyl acetate/acrylic copolymer	Sup. Conf.	10-20	10-20	

Chemical Hazard Data

(ANSI Sections 2, 8, 11, and 15)

Common Name	CAS. No.	ACGIH-TLV				OSHA-PEL				S.R. Std.	S2	S3	CC	H	M	N	I	O	
		8-Hour TWA	STEL	C	S	8-Hour TWA	STEL	C	S										
clay	1332-58-7	2 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
sodium aluminosilicate	1344-00-9	10 mg/m3	not est.	not est.	not est.	5 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
titanium dioxide	13463-67-7	10 mg/m3	not est.	not est.	not est.	10 mg/m3	not est.	not est.	not est.	not est.	n	n	n	n	n	y	y	n	n
tetraethylene glycol di(2-ethylhexoate)	18268-70-7	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n
vinyl acetate/acrylic copolymer	Sup. Conf.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	not est.	n	n	n	n	n	n	n	n	n

Footnotes:

C=Ceiling - Concentration that should not be exceeded, even instantaneously.

S=Skin - Additional exposure, over and above airborne exposure, may result from skin absorption.

n/a=not applicable
not est=not established
CC=CERCLA Chemical

ppm=parts per million
mg/m3=milligrams per cubic meter
Sup Conf=Supplier Confidential

S2=Sara Section 302 EHS
S3=Sara Section 313 Chemical
S.R.Std.=Supplier Recommended Standard

H=Hazardous Air Pollutant, M=Marine Pollutant
P=Pollutant, S=Severe Pollutant
Carcinogenicity Listed By:
N=NTP, I=IARC, O=OSHA, y=yes, n=no

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Misty Supersolve
Product Number: A00366
Product Use: Electrical/Electronics Solvent.
Manufacturer/Supplier: Amrep, Inc.
990 Industrial Park Drive
Marietta, GA 30062
Phone Number: (770) 422-2071 (Mon - Fri / 8am - 5pm ET)
D.O.T. Emergency Phone: CHEM TEL (800) 255-3924
INTERNATIONAL: +01-813-248-0584
Date of Preparation: October 5, 2007 **Revision #:** 1.0

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS: See Section 15

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. Symptoms may include redness and drying of the skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Trichloroethylene	79-01-6	60 - 100
Carbon dioxide	124-38-9	1 - 5

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon, chlorates, small amounts of phosgene.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

Other Information: Not available.

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Section 7: HANDLING AND STORAGE

Handling:

Keep away from sources of ignition. - No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:

Keep out of the reach of children. Keep container in a well-ventilated place. Do not store at temperatures above 49°C / 120°F. Keep away from food, drink and animal foodstuffs.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Trichloroethylene	100 ppm	50 ppm
Carbon dioxide	5000 ppm	5000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

HMIS: See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear.
Color:	Colorless.
Odour:	Characteristic.
Odour Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	Not applicable.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	1.46 (Concentrate only)
Solubility in Water:	Insoluble.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	98
VOC content, wt. %:	98.0% (US federal/CARB/OTC/LADCO)

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers. Contact with soft metals. Aluminum. Magnesium.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, chlorates, small amounts of phosgene.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD₅₀ (oral)	LC₅₀
Trichloroethylene	5650 mg/kg, rat	Not available.
Carbon dioxide	Not available.	Not available.

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin: May cause skin irritation. Symptoms may include redness and drying of the skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness and dizziness.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Trichloroethylene	I-2A, N-2, CP65
Carbon dioxide	Not listed.

* See Section 15 for more information.

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Mutagenicity: Hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification

ORM-D

TDG Classification

Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient

	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Trichloroethylene	Not listed.	Not listed.	100	313
Carbon dioxide	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:

This product contains a chemical known to the state of California to cause cancer.

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Global Inventories

Ingredient

Trichloroethylene
Carbon dioxide

Canada DSL/NDSL	USA TSCA
DSL	Yes.
DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 2 Flammability - 0 Physical Hazard - 0 PPE - B

NFPA - National Fire Protection Association:

Health - 2 Fire - 0 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class A - Compressed Gas
Class D2A - Carcinogenicity
Class D2B - Mutagenicity
Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

MATERIAL SAFETY DATA SHEET

Misty Supersolve

Section 16: OTHER INFORMATION

Disclaimer:

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: October 5, 2010

Prepared by: Nexreg Compliance Inc.

Prepared for: Amrep, Inc.

Phone: (770) 422-2071 (Mon - Fri / 8am - 5pm ET)

MATERIAL SAFETY DATA SHEET

REVISION DATE: 09-13-2012

SUPERSEDES: 01-10-2011

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY INFORMATION**

H.B. Fuller Construction Products Inc.
1105 S. Frontenac Street
Aurora, IL 60504
Phone: 1-800-552-6225

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT NUMBER: INVISION CAULK - SANDED CAMEL
PRODUCT DESCRIPTION: Sealant
PRODUCT IDENTIFIER: 826186PM

SECTION 2: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL STATE: Semi-solid
COLOR: Light Tan
ODOR: Neutral

Cancer hazard.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause minor irritation, tearing and reddening.

SKIN: Can cause minor skin irritation, defatting, and dermatitis.

INHALATION: Can cause minor respiratory irritation. Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.
Overexposure to crystalline silica may cause silicosis.

This product contains one or more materials that may be hazardous when present as an airborne dust. During normal handling of the product, the material is encapsulated within the product and will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): Lungs

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.
Crystalline silica

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	PERCENT
Calcium carbonate	471-34-1	30 - 50
Crystalline silica	14808-60-7	10 - 30

MATERIAL SAFETY DATA SHEET

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: Use an eye wash to remove a chemical from your eye regardless of the level of hazard. Flush the affected eye for at least twenty minutes. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Seek medical advice after flushing.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.
CLEAN-UP:	Avoid creating dusts. Cover material with absorbent and moisten and collect for disposal. Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity. Avoid breathing material.

Storage: Store in a cool, dry place.
Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:	Wear safety glasses when handling this product.
SKIN PROTECTION:	Avoid skin contact by wearing chemically resistant gloves.
GLOVES:	Not normally required. Use nitrile gloves if conditions warrant.
RESPIRATORY PROTECTION:	Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved

MATERIAL SAFETY DATA SHEET

air purifying respirator with dust/mist filter.
Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	OSHA PEL
Calcium carbonate	Not established	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)
Crystalline silica	0.025 mg/m ³ TWA (respirable fraction)	((250)/(%SiO ₂ + 5) mppcf TWA (respirable)); ((10)/(%SiO ₂ + 2) mg/m ³ TWA (respirable)); ((30)/(%SiO ₂ + 2) mg/m ³ TWA (total dust))

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Semi-solid
COLOR:	Light Tan
ODOR:	Neutral
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	13.25
SPECIFIC GRAVITY:	1.590
SOLIDS (% by weight):	81.2
pH:	7.4
FLASH POINT:	Non flammable
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
VOC, weight percent	0.60
VOC, EPA Method 24, less water and exempt solvents (theoretically determined)	12g/liter of material

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT	LD50/LC50
Calcium carbonate	Oral LD50 Rat = 6,450 mg/kg
Crystalline silica	Not established

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

MATERIAL SAFETY DATA SHEET

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

- U.S. EPA TSCA:** This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
- CANADIAN CEPA DSL:** The components of this product are included on the DSL or are exempt from DSL requirements.
- EUROPEAN EINECS:** As a result of the introduction of REACH into Europe, this product cannot be imported into Europe unless the REACH requirements are met.
- AUSTRALIA AICS:** This product is in compliance with the Australian Inventory of Chemical Substances requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2A

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
Quartz (Carcinogen)	14808-60-7	10 - 30
Titanium dioxide (Carcinogen)	13463-67-7	0.01 - 0.1
Carbon black (Carcinogen)	1333-86-4	0.01 - 0.1
Ethyl acrylate (Carcinogen)	140-88-5	< 10 ppm
Methanol (Developmental toxin)	67-56-1	< 10 ppm

MATERIAL SAFETY DATA SHEET

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to H.B. Fuller Construction Products, Inc. from its suppliers, and because H.B. Fuller Construction Products, Inc. has no control over the conditions of handling and use, H.B. Fuller Construction Products, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and H.B. Fuller Construction Products, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Construction Products, Inc. products to comply with all applicable federal, state and local laws and regulations.

APPENDIX F

Photographic Log of Indoor Air Samples



Photograph 1. View of sealed space between tiles in women's warehouse restroom. Other locations in the wall tiles were similarly sealed with tile grout.



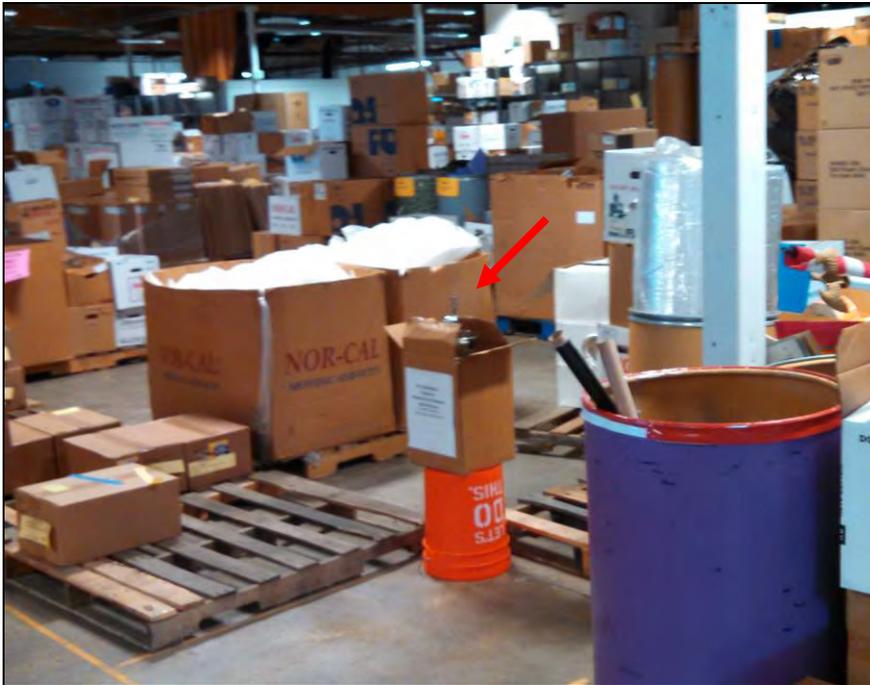
Photograph 2. View of typical chemicals stored in the warehouse work bench area. Misty SuperSolve, which contains trichloroethene, was removed prior to sampling.



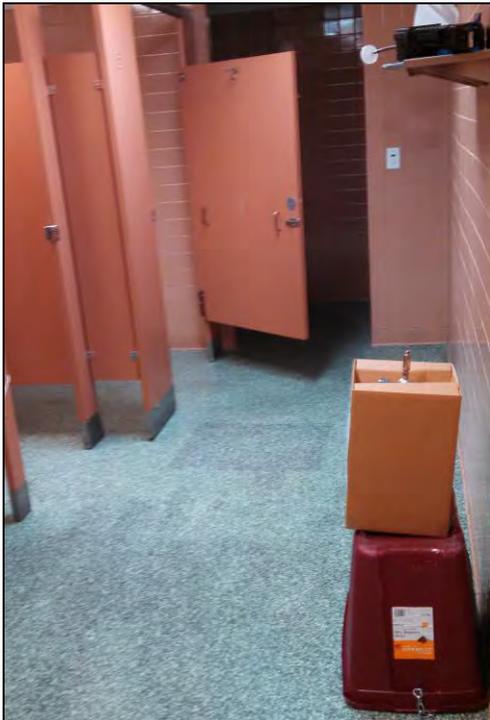
Photograph 3. View of sample location IA-2 and duplicate IA-2B in the warehouse women's restroom. A sealed floor drain is visible in the background.



Photograph 4. View of sample location IA-5 in the volunteer room.



Photograph 5. View of sample IA-6 located in the eastern portion of the warehouse.



Photograph 6. View of sample location IA-7 located in the men's warehouse restroom. A sealed floor drain is visible in the background.



Photograph 7. View of the outdoor ambient sample location at the landscaped area north of the building.

APPENDIX G

Meteorological Summary for Indoor Air Sampling Events

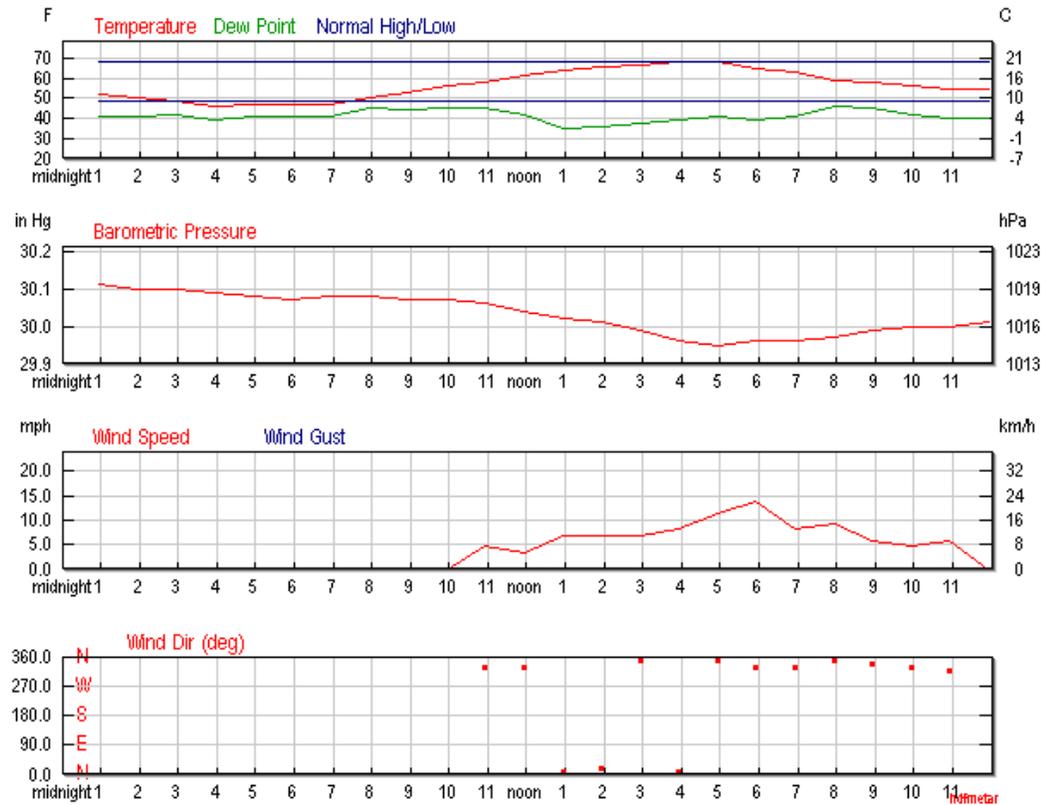
Actual Average Record

Events

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KNUQ

Submit

Trip Planner

Search our weather history database for the weather conditions in past years. The results will help you decide how hot, cold, wet, or windy it might be!

Date:

Astronomy

Apr. 09, 2015

Rise

Set

Actual Time

6:42 AM PDT

7:37 PM PDT

Apr. 09, 2015	Rise	Set
<u>Civil Twilight</u>	6:15 AM PDT	8:04 PM PDT
<u>Nautical Twilight</u>	5:44 AM PDT	8:36 PM PDT
<u>Astronomical Twilight</u>	5:11 AM PDT	9:09 PM PDT
Moon	No Moon Rise	10:13 AM PDT [4/9]
<u>Length of Visible Light</u>	13h 49m	
<u>Length of Day</u>	12h 55m	

Waning Gibbous, 74% of the Moon is Illuminated

Apr 9	Apr 11	Apr 18	Apr 25	May 3
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:56 AM	52.0 °F	41.0 °F	66%	30.11 in	10.0 mi	Calm	Calm	-	N/A		Clear
1:56 AM	50.0 °F	41.0 °F	71%	30.10 in	10.0 mi	Calm	Calm	-	N/A		Clear
2:56 AM	48.9 °F	42.1 °F	77%	30.10 in	10.0 mi	Calm	Calm	-	N/A		Clear
3:56 AM	46.0 °F	39.0 °F	76%	30.09 in	10.0 mi	Calm	Calm	-	N/A		Clear
4:56 AM	46.9 °F	41.0 °F	80%	30.08 in	10.0 mi	Calm	Calm	-	N/A		Clear
5:56 AM	46.9 °F	41.0 °F	80%	30.07 in	10.0 mi	Calm	Calm	-	N/A		Clear
6:56 AM	46.9 °F	41.0 °F	80%	30.08 in	10.0 mi	Calm	Calm	-	N/A		Clear
7:56 AM	50.0 °F	45.0 °F	83%	30.08 in	10.0 mi	Calm	Calm	-	N/A		Clear
8:56 AM	53.1 °F	44.1 °F	71%	30.07 in	10.0 mi	Calm	Calm	-	N/A		Clear
9:56 AM	55.9 °F	45.0 °F	67%	30.07 in	10.0 mi	Calm	Calm	-	N/A		Clear
10:56 AM	57.9 °F	45.0 °F	62%	30.06 in	10.0 mi	NNW	4.6 mph	-	N/A		Clear

Time (PDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
11:56 AM	61.0 °F	42.1 °F	50%	30.04 in	10.0 mi	NNW	3.5 mph	-	N/A		Clear
12:56 PM	64.0 °F	35.1 °F	34%	30.02 in	10.0 mi	North	6.9 mph	-	N/A		Clear
1:56 PM	66.0 °F	36.0 °F	33%	30.01 in	10.0 mi	NNE	6.9 mph	-	N/A		Clear
2:56 PM	66.9 °F	37.9 °F	34%	29.99 in	10.0 mi	North	6.9 mph	-	N/A		Clear
3:56 PM	68.0 °F	39.0 °F	35%	29.96 in	10.0 mi	North	8.1 mph	-	N/A		Clear
4:56 PM	68.0 °F	41.0 °F	37%	29.95 in	10.0 mi	North	11.5 mph	-	N/A		Clear
5:56 PM	64.9 °F	39.0 °F	39%	29.96 in	10.0 mi	NNW	13.8 mph	-	N/A		Clear
6:56 PM	63.0 °F	41.0 °F	45%	29.96 in	10.0 mi	NNW	8.1 mph	-	N/A		Clear
7:56 PM	59.0 °F	46.0 °F	62%	29.97 in	10.0 mi	North	9.2 mph	-	N/A		Clear
8:56 PM	57.9 °F	45.0 °F	62%	29.99 in	10.0 mi	NNW	5.8 mph	-	N/A		Clear
9:56 PM	55.9 °F	42.1 °F	60%	30.00 in	10.0 mi	NNW	4.6 mph	-	N/A		Clear
10:56 PM	55.0 °F	39.9 °F	57%	30.00 in	10.0 mi	NW	5.8 mph	-	N/A		Clear
11:56 PM	55.0 °F	39.9 °F	57%	30.01 in	10.0 mi	Calm	Calm	-	N/A		Clear

||

APPENDIX H

**Analytical Laboratory Report for
Indoor and Outdoor Samples Collected on 9 April 2015**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-12488-1
Client Project/Site: 1160 Kern Ave

For:
Haley & Aldrich, Inc.
1956 Webster Street
Suite 450
Oakland, California 94612

Attn: Peter Scaramella

Beth Riley

Authorized for release by:
4/15/2015 7:56:46 AM

Beth Riley, Project Manager II
(714)258-8610
beth.riley@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Definitions/Glossary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Case Narrative

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Job ID: 320-12488-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative
320-12488-1

Receipt

The samples were received on 4/10/2015 10:00 AM; the samples arrived in good condition.

Air - GC/MS VOA

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

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Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: AMBIENT-04092015

Lab Sample ID: 320-12488-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.043		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.010	J	0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.069		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.0050	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.20		0.092	0.046	ug/m3	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.069	J	0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.53		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.027	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

Client Sample ID: IA-02-04092015

Lab Sample ID: 320-12488-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.017	J	0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.15		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.078		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Trichloroethene	0.30		0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.013	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.076	J	0.092	0.046	ug/m3	1		TO-15 SIM	Total/NA
Tetrachloroethene	1.0		0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.60		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
Trichloroethene	1.6		0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.073	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

Client Sample ID: IA-02B-04092015

Lab Sample ID: 320-12488-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.015	J	0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.15		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.082		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Trichloroethene	0.32		0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.013	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.070	J	0.092	0.046	ug/m3	1		TO-15 SIM	Total/NA
Tetrachloroethene	1.0		0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.63		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
Trichloroethene	1.7		0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.069	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

Client Sample ID: IA-05-04092015

Lab Sample ID: 320-12488-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.015	J	0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.063		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.071		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Trichloroethene	0.074		0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.011	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: IA-05-04092015 (Continued)

Lab Sample ID: 320-12488-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	0.068	J	0.092	0.046	ug/m3	1		TO-15 SIM	Total/NA
Tetrachloroethene	0.43		0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.55		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
Trichloroethene	0.40		0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.059	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

Client Sample ID: IA-06-04092015

Lab Sample ID: 320-12488-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.049		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.072		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Trichloroethene	0.046		0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.0075	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.33		0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.55		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
Trichloroethene	0.25		0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.041	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

Client Sample ID: IA-07-04092015

Lab Sample ID: 320-12488-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.070		0.020	0.010	ppb v/v	1		TO-15 SIM	Total/NA
Freon 113	0.071		0.030	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Trichloroethene	0.098		0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.011	J	0.020	0.0050	ppb v/v	1		TO-15 SIM	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.47		0.14	0.068	ug/m3	1		TO-15 SIM	Total/NA
Freon 113	0.54		0.23	0.038	ug/m3	1		TO-15 SIM	Total/NA
Trichloroethene	0.53		0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA
1,1,1-Trichloroethane	0.062	J	0.11	0.027	ug/m3	1		TO-15 SIM	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: AMBIENT-04092015

Lab Sample ID: 320-12488-1

Date Collected: 04/09/15 07:40

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.043		0.020	0.010	ppb v/v			04/14/15 01:17	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 01:17	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 01:17	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 01:17	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 01:17	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 01:17	1
Tetrachloroethene	0.010	J	0.020	0.010	ppb v/v			04/14/15 01:17	1
Freon 113	0.069		0.030	0.0050	ppb v/v			04/14/15 01:17	1
Trichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 01:17	1
1,1,1-Trichloroethane	0.0050	J	0.020	0.0050	ppb v/v			04/14/15 01:17	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 01:17	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.20		0.092	0.046	ug/m3			04/14/15 01:17	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 01:17	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 01:17	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 01:17	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 01:17	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 01:17	1
Tetrachloroethene	0.069	J	0.14	0.068	ug/m3			04/14/15 01:17	1
Freon 113	0.53		0.23	0.038	ug/m3			04/14/15 01:17	1
Trichloroethene	ND		0.11	0.027	ug/m3			04/14/15 01:17	1
1,1,1-Trichloroethane	0.027	J	0.11	0.027	ug/m3			04/14/15 01:17	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 01:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130					04/14/15 01:17	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 130					04/14/15 01:17	1
Toluene-d8 (Surr)	105		70 - 130					04/14/15 01:17	1

Client Sample ID: IA-02-04092015

Lab Sample ID: 320-12488-2

Date Collected: 04/09/15 07:19

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.017	J	0.020	0.010	ppb v/v			04/14/15 02:15	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 02:15	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 02:15	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 02:15	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 02:15	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 02:15	1
Tetrachloroethene	0.15		0.020	0.010	ppb v/v			04/14/15 02:15	1
Freon 113	0.078		0.030	0.0050	ppb v/v			04/14/15 02:15	1
Trichloroethene	0.30		0.020	0.0050	ppb v/v			04/14/15 02:15	1
1,1,1-Trichloroethane	0.013	J	0.020	0.0050	ppb v/v			04/14/15 02:15	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 02:15	1

TestAmerica Sacramento

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: IA-02-04092015

Lab Sample ID: 320-12488-2

Date Collected: 04/09/15 07:19

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.076	J	0.092	0.046	ug/m3			04/14/15 02:15	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 02:15	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 02:15	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 02:15	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 02:15	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 02:15	1
Tetrachloroethene	1.0		0.14	0.068	ug/m3			04/14/15 02:15	1
Freon 113	0.60		0.23	0.038	ug/m3			04/14/15 02:15	1
Trichloroethene	1.6		0.11	0.027	ug/m3			04/14/15 02:15	1
1,1,1-Trichloroethane	0.073	J	0.11	0.027	ug/m3			04/14/15 02:15	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 02:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130					04/14/15 02:15	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130					04/14/15 02:15	1
Toluene-d8 (Surr)	99		70 - 130					04/14/15 02:15	1

Client Sample ID: IA-02B-04092015

Lab Sample ID: 320-12488-3

Date Collected: 04/09/15 07:19

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.015	J	0.020	0.010	ppb v/v			04/14/15 03:13	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 03:13	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 03:13	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 03:13	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 03:13	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 03:13	1
Tetrachloroethene	0.15		0.020	0.010	ppb v/v			04/14/15 03:13	1
Freon 113	0.082		0.030	0.0050	ppb v/v			04/14/15 03:13	1
Trichloroethene	0.32		0.020	0.0050	ppb v/v			04/14/15 03:13	1
1,1,1-Trichloroethane	0.013	J	0.020	0.0050	ppb v/v			04/14/15 03:13	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 03:13	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.070	J	0.092	0.046	ug/m3			04/14/15 03:13	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 03:13	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 03:13	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 03:13	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 03:13	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 03:13	1
Tetrachloroethene	1.0		0.14	0.068	ug/m3			04/14/15 03:13	1
Freon 113	0.63		0.23	0.038	ug/m3			04/14/15 03:13	1
Trichloroethene	1.7		0.11	0.027	ug/m3			04/14/15 03:13	1
1,1,1-Trichloroethane	0.069	J	0.11	0.027	ug/m3			04/14/15 03:13	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 03:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130					04/14/15 03:13	1

TestAmerica Sacramento

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: IA-02B-04092015

Lab Sample ID: 320-12488-3

Date Collected: 04/09/15 07:19

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		04/14/15 03:13	1
Toluene-d8 (Surr)	98		70 - 130		04/14/15 03:13	1

Client Sample ID: IA-05-04092015

Lab Sample ID: 320-12488-4

Date Collected: 04/09/15 07:25

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.015	J	0.020	0.010	ppb v/v			04/14/15 04:12	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 04:12	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 04:12	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 04:12	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 04:12	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 04:12	1
Tetrachloroethene	0.063		0.020	0.010	ppb v/v			04/14/15 04:12	1
Freon 113	0.071		0.030	0.0050	ppb v/v			04/14/15 04:12	1
Trichloroethene	0.074		0.020	0.0050	ppb v/v			04/14/15 04:12	1
1,1,1-Trichloroethane	0.011	J	0.020	0.0050	ppb v/v			04/14/15 04:12	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 04:12	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.068	J	0.092	0.046	ug/m3			04/14/15 04:12	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 04:12	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 04:12	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 04:12	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 04:12	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 04:12	1
Tetrachloroethene	0.43		0.14	0.068	ug/m3			04/14/15 04:12	1
Freon 113	0.55		0.23	0.038	ug/m3			04/14/15 04:12	1
Trichloroethene	0.40		0.11	0.027	ug/m3			04/14/15 04:12	1
1,1,1-Trichloroethane	0.059	J	0.11	0.027	ug/m3			04/14/15 04:12	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 04:12	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	100		70 - 130		04/14/15 04:12	1			
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		04/14/15 04:12	1			
Toluene-d8 (Surr)	96		70 - 130		04/14/15 04:12	1			

Client Sample ID: IA-06-04092015

Lab Sample ID: 320-12488-5

Date Collected: 04/09/15 07:27

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.020	0.010	ppb v/v			04/14/15 05:11	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 05:11	1

TestAmerica Sacramento

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: IA-06-04092015

Lab Sample ID: 320-12488-5

Date Collected: 04/09/15 07:27

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 05:11	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 05:11	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 05:11	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 05:11	1
Tetrachloroethene	0.049		0.020	0.010	ppb v/v			04/14/15 05:11	1
Freon 113	0.072		0.030	0.0050	ppb v/v			04/14/15 05:11	1
Trichloroethene	0.046		0.020	0.0050	ppb v/v			04/14/15 05:11	1
1,1,1-Trichloroethane	0.0075	J	0.020	0.0050	ppb v/v			04/14/15 05:11	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 05:11	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.092	0.046	ug/m3			04/14/15 05:11	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 05:11	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 05:11	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 05:11	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 05:11	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 05:11	1
Tetrachloroethene	0.33		0.14	0.068	ug/m3			04/14/15 05:11	1
Freon 113	0.55		0.23	0.038	ug/m3			04/14/15 05:11	1
Trichloroethene	0.25		0.11	0.027	ug/m3			04/14/15 05:11	1
1,1,1-Trichloroethane	0.041	J	0.11	0.027	ug/m3			04/14/15 05:11	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 05:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130					04/14/15 05:11	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130					04/14/15 05:11	1
Toluene-d8 (Surr)	98		70 - 130					04/14/15 05:11	1

Client Sample ID: IA-07-04092015

Lab Sample ID: 320-12488-6

Date Collected: 04/09/15 07:21

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.020	0.010	ppb v/v			04/14/15 06:09	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/14/15 06:09	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/14/15 06:09	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 06:09	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 06:09	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/14/15 06:09	1
Tetrachloroethene	0.070		0.020	0.010	ppb v/v			04/14/15 06:09	1
Freon 113	0.071		0.030	0.0050	ppb v/v			04/14/15 06:09	1
Trichloroethene	0.098		0.020	0.0050	ppb v/v			04/14/15 06:09	1
1,1,1-Trichloroethane	0.011	J	0.020	0.0050	ppb v/v			04/14/15 06:09	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/14/15 06:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.092	0.046	ug/m3			04/14/15 06:09	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/14/15 06:09	1

TestAmerica Sacramento

Client Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: IA-07-04092015

Lab Sample ID: 320-12488-6

Date Collected: 04/09/15 07:21

Matrix: Air

Date Received: 04/10/15 10:00

Sample Container: Summa Canister 6L

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/14/15 06:09	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 06:09	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 06:09	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/14/15 06:09	1
Tetrachloroethene	0.47		0.14	0.068	ug/m3			04/14/15 06:09	1
Freon 113	0.54		0.23	0.038	ug/m3			04/14/15 06:09	1
Trichloroethene	0.53		0.11	0.027	ug/m3			04/14/15 06:09	1
1,1,1-Trichloroethane	0.062	J	0.11	0.027	ug/m3			04/14/15 06:09	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/14/15 06:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130					04/14/15 06:09	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130					04/14/15 06:09	1
Toluene-d8 (Surr)	98		70 - 130					04/14/15 06:09	1

Surrogate Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	12DCE	TOL
		(70-130)	(70-130)	(70-130)
320-12488-1	AMBIENT-04092015	99	108	105
320-12488-2	IA-02-04092015	98	103	99
320-12488-3	IA-02B-04092015	98	101	98
320-12488-4	IA-05-04092015	100	99	96
320-12488-5	IA-06-04092015	101	99	98
320-12488-6	IA-07-04092015	96	100	98
LCS 320-70989/3	Lab Control Sample	106	108	100
LCSD 320-70989/4	Lab Control Sample Dup	105	105	102
MB 320-70989/7	Method Blank	92	109	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 320-70989/7

Matrix: Air

Analysis Batch: 70989

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.020	0.010	ppb v/v			04/13/15 17:30	1
1,2-Dichlorobenzene	ND		0.050	0.010	ppb v/v			04/13/15 17:30	1
1,1-Dichloroethane	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
1,1-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
cis-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
trans-1,2-Dichloroethene	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
Tetrachloroethene	ND		0.020	0.010	ppb v/v			04/13/15 17:30	1
Freon 113	ND		0.030	0.0050	ppb v/v			04/13/15 17:30	1
Trichloroethene	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
1,1,1-Trichloroethane	ND		0.020	0.0050	ppb v/v			04/13/15 17:30	1
Vinyl chloride	ND		0.020	0.010	ppb v/v			04/13/15 17:30	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.092	0.046	ug/m3			04/13/15 17:30	1
1,2-Dichlorobenzene	ND		0.30	0.060	ug/m3			04/13/15 17:30	1
1,1-Dichloroethane	ND		0.081	0.020	ug/m3			04/13/15 17:30	1
1,1-Dichloroethene	ND		0.079	0.020	ug/m3			04/13/15 17:30	1
cis-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/13/15 17:30	1
trans-1,2-Dichloroethene	ND		0.079	0.020	ug/m3			04/13/15 17:30	1
Tetrachloroethene	ND		0.14	0.068	ug/m3			04/13/15 17:30	1
Freon 113	ND		0.23	0.038	ug/m3			04/13/15 17:30	1
Trichloroethene	ND		0.11	0.027	ug/m3			04/13/15 17:30	1
1,1,1-Trichloroethane	ND		0.11	0.027	ug/m3			04/13/15 17:30	1
Vinyl chloride	ND		0.051	0.026	ug/m3			04/13/15 17:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		04/13/15 17:30	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 130		04/13/15 17:30	1
Toluene-d8 (Surr)	101		70 - 130		04/13/15 17:30	1

Lab Sample ID: LCS 320-70989/3

Matrix: Air

Analysis Batch: 70989

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	1.20	1.17		ppb v/v		97	69 - 129
1,2-Dichlorobenzene	1.20	1.48		ppb v/v		124	56 - 137
1,1-Dichloroethane	1.20	1.16		ppb v/v		96	75 - 137
1,1-Dichloroethene	1.20	1.00		ppb v/v		84	70 - 131
cis-1,2-Dichloroethene	1.20	1.18		ppb v/v		98	75 - 136
trans-1,2-Dichloroethene	1.20	1.12		ppb v/v		93	75 - 136
Tetrachloroethene	1.20	1.19		ppb v/v		99	70 - 126
Freon 113	1.20	1.03		ppb v/v		86	71 - 129
Trichloroethene	1.20	1.11		ppb v/v		93	70 - 130
1,1,1-Trichloroethane	1.20	1.31		ppb v/v		109	75 - 135
Vinyl chloride	1.20	1.26		ppb v/v		105	66 - 142

TestAmerica Sacramento

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

(Continued)

Lab Sample ID: LCS 320-70989/3

Matrix: Air

Analysis Batch: 70989

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	5.5	5.37		ug/m3		97	69 - 129
1,2-Dichlorobenzene	7.2	8.92		ug/m3		124	56 - 137
1,1-Dichloroethane	4.9	4.68		ug/m3		96	75 - 137
1,1-Dichloroethene	4.8	3.98		ug/m3		84	70 - 131
cis-1,2-Dichloroethene	4.8	4.66		ug/m3		98	75 - 136
trans-1,2-Dichloroethene	4.8	4.43		ug/m3		93	75 - 136
Tetrachloroethene	8.1	8.07		ug/m3		99	70 - 126
Freon 113	9.2	7.90		ug/m3		86	71 - 129
Trichloroethene	6.4	5.98		ug/m3		93	70 - 130
1,1,1-Trichloroethane	6.5	7.15		ug/m3		109	75 - 135
Vinyl chloride	3.1	3.22		ug/m3		105	66 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 320-70989/4

Matrix: Air

Analysis Batch: 70989

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
Chlorobenzene	1.20	1.20		ppb v/v		100	69 - 129	3	25
1,2-Dichlorobenzene	1.20	1.53		ppb v/v		128	56 - 137	3	25
1,1-Dichloroethane	1.20	1.22		ppb v/v		102	75 - 137	6	25
1,1-Dichloroethene	1.20	1.08		ppb v/v		90	70 - 131	8	25
cis-1,2-Dichloroethene	1.20	1.25		ppb v/v		104	75 - 136	6	25
trans-1,2-Dichloroethene	1.20	1.20		ppb v/v		100	75 - 136	7	25
Tetrachloroethene	1.20	1.22		ppb v/v		102	70 - 126	2	25
Freon 113	1.20	1.08		ppb v/v		90	71 - 129	5	25
Trichloroethene	1.20	1.14		ppb v/v		95	70 - 130	2	25
1,1,1-Trichloroethane	1.20	1.36		ppb v/v		114	75 - 135	4	25
Vinyl chloride	1.20	1.35		ppb v/v		113	66 - 142	7	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	5.5	5.52		ug/m3		100	69 - 129	3	25
1,2-Dichlorobenzene	7.2	9.20		ug/m3		128	56 - 137	3	25
1,1-Dichloroethane	4.9	4.95		ug/m3		102	75 - 137	6	25
1,1-Dichloroethene	4.8	4.29		ug/m3		90	70 - 131	8	25
cis-1,2-Dichloroethene	4.8	4.97		ug/m3		104	75 - 136	6	25
trans-1,2-Dichloroethene	4.8	4.76		ug/m3		100	75 - 136	7	25
Tetrachloroethene	8.1	8.27		ug/m3		102	70 - 126	2	25
Freon 113	9.2	8.29		ug/m3		90	71 - 129	5	25
Trichloroethene	6.4	6.11		ug/m3		95	70 - 130	2	25
1,1,1-Trichloroethane	6.5	7.44		ug/m3		114	75 - 135	4	25
Vinyl chloride	3.1	3.45		ug/m3		113	66 - 142	7	25

TestAmerica Sacramento

QC Sample Results

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Method: TO-15 SIM - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCSD 320-70989/4

Matrix: Air

Analysis Batch: 70989

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	105		70 - 130
1,2-Dichloroethane-d4 (Surr)	105		70 - 130
Toluene-d8 (Surr)	102		70 - 130

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QC Association Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Air - GC/MS VOA

Analysis Batch: 70989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-12488-1	AMBIENT-04092015	Total/NA	Air	TO-15 SIM	
320-12488-2	IA-02-04092015	Total/NA	Air	TO-15 SIM	
320-12488-3	IA-02B-04092015	Total/NA	Air	TO-15 SIM	
320-12488-4	IA-05-04092015	Total/NA	Air	TO-15 SIM	
320-12488-5	IA-06-04092015	Total/NA	Air	TO-15 SIM	
320-12488-6	IA-07-04092015	Total/NA	Air	TO-15 SIM	
LCS 320-70989/3	Lab Control Sample	Total/NA	Air	TO-15 SIM	
LCSD 320-70989/4	Lab Control Sample Dup	Total/NA	Air	TO-15 SIM	
MB 320-70989/7	Method Blank	Total/NA	Air	TO-15 SIM	

Lab Chronicle

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Client Sample ID: AMBIENT-04092015

Date Collected: 04/09/15 07:40

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	970 mL	500 mL	70989	04/14/15 01:17	TAD	TAL SAC

Client Sample ID: IA-02-04092015

Date Collected: 04/09/15 07:19

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	935 mL	500 mL	70989	04/14/15 02:15	TAD	TAL SAC

Client Sample ID: IA-02B-04092015

Date Collected: 04/09/15 07:19

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	985 mL	500 mL	70989	04/14/15 03:13	TAD	TAL SAC

Client Sample ID: IA-05-04092015

Date Collected: 04/09/15 07:25

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	970 mL	500 mL	70989	04/14/15 04:12	TAD	TAL SAC

Client Sample ID: IA-06-04092015

Date Collected: 04/09/15 07:27

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	1010 mL	500 mL	70989	04/14/15 05:11	TAD	TAL SAC

Client Sample ID: IA-07-04092015

Date Collected: 04/09/15 07:21

Date Received: 04/10/15 10:00

Lab Sample ID: 320-12488-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15 SIM		1	965 mL	500 mL	70989	04/14/15 06:09	TAD	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Laboratory: TestAmerica Sacramento

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	CA200005	01-29-16

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Method Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Method	Method Description	Protocol	Laboratory
TO-15 SIM	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA-21	TAL SAC

Protocol References:

EPA-21 = "Compendium Of Methods For The Determination Of Toxic Organic Compounds In Ambient Air", Second Edition, EPA/625/R-96/010B, January 1999

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Haley & Aldrich, Inc.
Project/Site: 1160 Kern Ave

TestAmerica Job ID: 320-12488-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-12488-1	AMBIENT-04092015	Air	04/09/15 07:40	04/10/15 10:00
320-12488-2	IA-02-04092015	Air	04/09/15 07:19	04/10/15 10:00
320-12488-3	IA-02B-04092015	Air	04/09/15 07:19	04/10/15 10:00
320-12488-4	IA-05-04092015	Air	04/09/15 07:25	04/10/15 10:00
320-12488-5	IA-06-04092015	Air	04/09/15 07:27	04/10/15 10:00
320-12488-6	IA-07-04092015	Air	04/09/15 07:21	04/10/15 10:00

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TestAmerica Sacramento

880 Riverside Parkway

Canister Samples Chain of Custody Record

West Sacramento, CA 95605

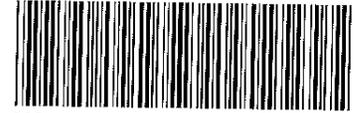
TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples

phone 916-373-5600 fax 916-372-1059

Client Contact Information	Project Manager: Peter Scaramella	Samples Collected By: M. Zlotoff	1 of 1 COCs
Company: Haley & Aldrich	Phone: 510-879-4559		
Address: 1956 Webster St., Ste. 450	Email: pscaramella@haleyaldrich.com		
City/State/Zip: Oakland, CA, 94612			
Phone: 510-879-4559	Site Contact: Peter Scaramella		
FAX: 510-251-1304	TA Contact: Beth Riley		
Project Name: 1160 Kern Ave	Analysis Turnaround Time		
Site: 1160 Kern Ave., Sunnyvale, CA	Standard (Specify) <u>10 business days</u>		
PO #: 30800-007 <u>39800-008</u>	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Canister ID	Flow Controller ID	TO-15 SIM *	MA-APH	EPA 3C	EPA 25C / 25.3	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
AMBIENT-0409 2015	4/09/15	0740	1537	-30.0	-3.0	34001446	7246	X										X			
IA-02-0409 2015	4/09/15	0719	1502	-30.0	-3.0	34001283	7192	X									X				
IA-02B-0409 2015	4/09/15	0719	1502	-30	-3.5	34000466	7280	X									X				
IA-05-0409 2015	4/09/15	0725	1507	-30	-3.5	34000713	8137	X									X				
IA-06-0409 2015	4/09/15	0727	1459	-29.5	-4.5	34000819	8141	X									X				
IA-07-0409 2015	4/09/15	0721	1430	-28.0	-2.5	34000510	8003	X									X				

Temperature (Fahrenheit)		Interior		Ambient	
Start					
Stop					
Pressure (inches of Hg)		Interior		Ambient	
Start					
Stop					



320-12488 Chain of Custody

Special Instructions/QC Requirements & Comments:
 * Report only TCE, PCE, cis-1,2-DCE, trans-1,2-DCE, Vinyl Chloride, 1,1-DCA, 1,1-DCE, chlorobenzene, 1,2-dichlorobenzene, Freon 113, and 1,1,1-TCA
 Send report to Peter Scaramella cc m.zlotoff@haleyaldrich.com

Samples Shipped by: <u>Michael Zlotoff</u>	Date/Time: <u>4/09/2015 16:00</u>	Samples Received by: <u>[Signature]</u>	Date/Time: <u>4/10/15 1000</u>
Samples Relinquished by:	Date/Time:	Received by:	
Relinquished by:	Date/Time:	Received by:	

Lab Use Only Shipper Name: Opened by: Condition:



JOB # **320-12488**
Sample # **1**

Client/Project:		VFR ID:	
Canister Serial #:	34001446	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	13.05	04/13/15	AO	
FINAL PRESSURE (PSIA)	25.36	04/13/15	AO	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.94			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.94		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.94	X	Load DF = 0.5154639	X	Bag DF = 1	=	FINAL DF 1.001698463
		LVf (mLs) 500		BVf (mLs)		
		LVi (mLs) 970		Bvi (mLs)		
Canister DF = 1.94	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		
Canister DF = 1.94	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		



JOB # **320-12488**
Sample # **2**

Client/Project:		VFR ID:	
Canister Serial #:	34001283	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	13.54	04/13/15	AO	
FINAL PRESSURE (PSIA)	25.34	04/13/15	AO	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.87			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.87		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.87	4/13/2015	MS1		X	FINAL DF	
					1.000797795	
Load DF = 0.5347594				X		
LVf (mLs) = 500						
LVi (mLs) = 935						
Bag DF = 1						
BVf (mLs)						
Bvi (mLs)						
Canister DF = 1.87				X	FINAL DF	
					#DIV/0!	
Load DF = #DIV/0!				X		
LVf (mLs)						
LVi (mLs)						
Bag DF = 1						
BVf (mLs)						
Bvi (mLs)						
Canister DF = 1.87				X	FINAL DF	
					#DIV/0!	
Load DF = #DIV/0!				X		
LVf (mLs)						
LVi (mLs)						
Bag DF = 1						
BVf (mLs)						
Bvi (mLs)						



JOB # **320-12488**
Sample # **3**

Client/Project:		VFR ID:	
Canister Serial #:	34000466	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING		PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)		29.8		JMT
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)		12.93	04/13/15	AO
FINAL PRESSURE (PSIA)		25.60	04/13/15	AO
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	1.98			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.98		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
Canister DF =	1.98	X	Load DF =	0.5076142	X	Bag DF =	1	=	FINAL DF	1.00502118
			LVf (mLs)	500		BVf (mLs)				
			LVi (mLs)	985		BVi (mLs)				
Canister DF =	1.98	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
			LVf (mLs)			BVf (mLs)				
			LVi (mLs)			BVi (mLs)				
Canister DF =	1.98	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
			LVf (mLs)			BVf (mLs)				
			LVi (mLs)			BVi (mLs)				



JOB # **320-12488**
Sample # **4**

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Client/Project:		VFR ID:	
Canister Serial #:	34000713	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	13.10	04/13/15	AO	
FINAL PRESSURE (PSIA)	25.52	04/13/15	AO	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.95			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.95		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
Canister DF = 1.95	X	Load DF = 0.5154639	X	Date	Instr.	File #
				4/13/2015	MS1	
				FINAL DF		
				Bag DF = 1	=	1.004170929
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		
Canister DF = 1.95	X	Load DF = #DIV/0!	X	Date	Instr.	File #
				FINAL DF		
				Bag DF = 1	=	#DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		
Canister DF = 1.95	X	Load DF = #DIV/0!	X	Date	Instr.	File #
				FINAL DF		
				Bag DF = 1	=	#DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		BVi (mLs)		

JOB # **320-12488**
Sample # **5**

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Client/Project:		VFR ID:	
Canister Serial #:	34000819	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.64	04/13/15	AO	
FINAL PRESSURE (PSIA)	25.55	04/13/15	AO	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.02			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.02		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
Canister DF =	2.02	X	Load DF =	0.4950495	X	Bag DF =	1	=	FINAL DF	1.000673643
			LVf (mLs)	500		BVf (mLs)				
			LVi (mLs)	1010		Bvi (mLs)				
Canister DF =	2.02	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
			LVf (mLs)			BVf (mLs)				
			LVi (mLs)			Bvi (mLs)				
Canister DF =	2.02	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
			LVf (mLs)			BVf (mLs)				
			LVi (mLs)			Bvi (mLs)				

Login Sample Receipt Checklist

Client: Haley & Aldrich, Inc.

Job Number: 320-12488-1

Login Number: 12488

List Source: TestAmerica Sacramento

List Number: 1

Creator: Sadler, Jeremy

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

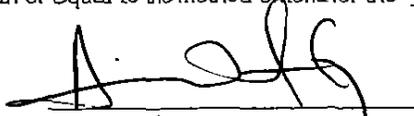
Certification Type TO-15 SIM
 Date Cleaned/Batch ID 2/9/15 320-11614
 Date of QC 2/11/15



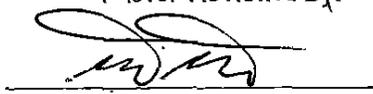
320-11614 Chain of Custody

Canister ID	Filename	Canister ID	Filename
34000713	M55021114		
0462	↓	15	
0556	↓	16	
1395	↓	17	
1538	_____		
0878	M5502 ¹¹ 19		
0271	↓ ^{2/9/15}	20	
1200	↓	21	
1661	↓	22	
1389	↓	23	
7534	↓	24	
8428	_____		

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.


 1st level Reviewed By:

2/23/15
 Date:


 2nd level Reviewed By:

3/2/15
 Date:

Certification Type

TO-15 SIM

Date Cleaned/Batch ID

2/19/15 320-11847

Date of QC

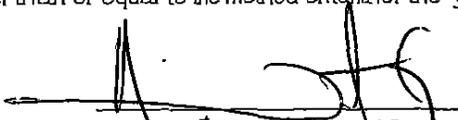
3/5/15; 3/07/15
67378 67632



320-11847 Chain of Custody

Canister ID	Filename	Canister ID	Filename
3400050	M55030513		
1283		14	
0819		15	
1353		16	
1446		17	
1439		18	
0779		19	
0248			
2156	M55030916		
1316		17	
0188		18	
1213		19	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.


1st level Reviewed By:

3/17/15
Date:

AS [Signature]
2nd level Reviewed By:

3/18/15
Date:

Certification Type

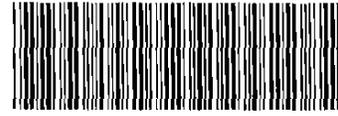
70-15 SIM

Date Cleaned/Batch ID

3/13/15 320-12103

Date of QC

3/31/15



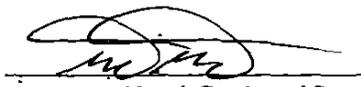
320-12103 Chain of Custody

Canister ID	Filename	Canister ID	Filename
34000466	M55033108		
0575	↓	09	
1249	↓	10	
0392	↓		
0919	M55033112		
0497	↓	13	
1559	↓	14	
0160	↓	15	
8353	↓	16	
7989	↓	17	
8219	↓	18	
8217	↓	19	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.


1st level Reviewed By:

4/01/15
Date:


2nd level Reviewed By:

4/1/15
Date:

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34000713 Lab Sample ID: 320-11614-1
 Matrix: Air Lab File ID: MS5021114.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/11/2015 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021114.D
 Lims ID: 320-11614-A-1 Lab Sample ID: 320-11614-1
 Client ID: 34000713
 Sample Type: Client
 Inject. Date: 11-Feb-2015 23:42:30 ALS Bottle#: 8 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-1
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 15:14:46 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam

Date: 11-Mar-2015 12:32:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.932	11.932	0.000	100	35623	2.00	
* 2 1,4-Difluorobenzene	114	14.027	14.030	-0.003	100	174629	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.601	20.601	0.000	99	154097	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	74152	2.26	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	118291	1.92	
\$ 6 4-Bromofluorobenzene (Surr	95	23.135	23.135	0.000	96	106101	1.98	
53 Chlorobenzene	112	20.677	20.677	0.000	51	156	0.001593	7
67 1,2-Dichlorobenzene	146	26.341	26.341	-0.001	99	942	0.009720	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021114.D

Injection Date: 11-Feb-2015 23:42:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-1

Lab Sample ID: 320-11614-1

Client ID: 34000713

Operator ID: AO

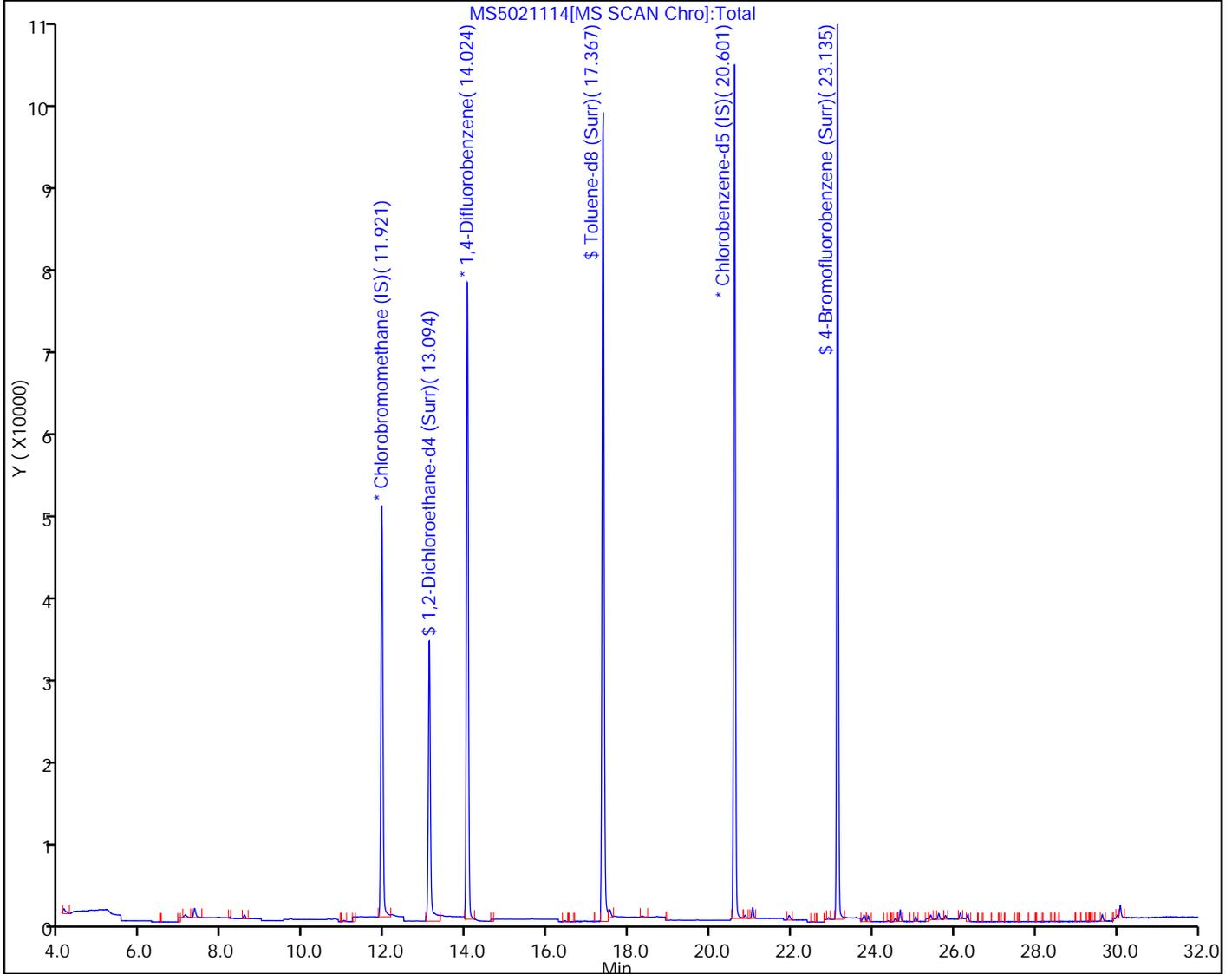
ALS Bottle#: 8 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34000462 Lab Sample ID: 320-11614-2
 Matrix: Air Lab File ID: MS5021115.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 00:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		70-130
2037-26-5	Toluene-d8 (Surr)	98		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021115.D
 Lims ID: 320-11614-A-2 Lab Sample ID: 320-11614-2
 Client ID: 34000462
 Sample Type: Client
 Inject. Date: 12-Feb-2015 00:41:30 ALS Bottle#: 9 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-2
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 15:14:46 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam

Date: 12-Feb-2015 07:43:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	95	27412	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	134021	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.602	20.601	0.001	98	122635	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	59771	2.37	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	92615	1.96	
\$ 6 4-Bromofluorobenzene (Surr	95	23.127	23.135	-0.008	100	85541	2.00	
53 Chlorobenzene	112	20.677	20.677	0.000	51	128	0.001643	7
67 1,2-Dichlorobenzene	146	26.341	26.341	0.000	97	689	0.008933	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021115.D

Injection Date: 12-Feb-2015 00:41:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-2

Lab Sample ID: 320-11614-2

Client ID: 34000462

Operator ID: AO

ALS Bottle#: 9

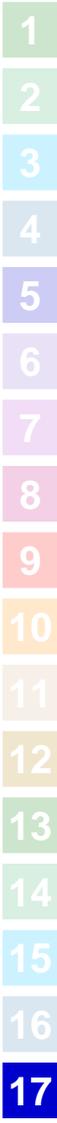
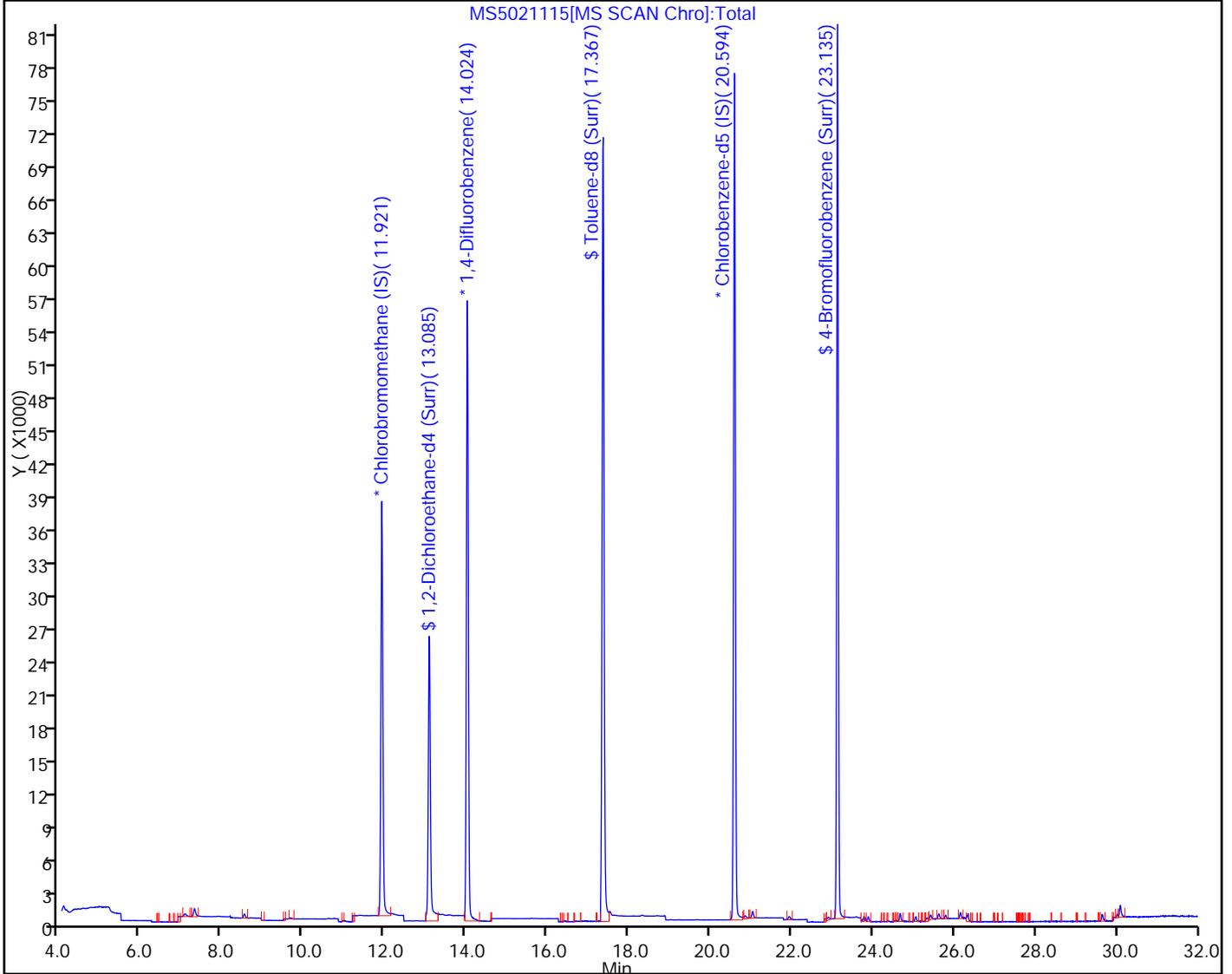
Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34000556 Lab Sample ID: 320-11614-3
 Matrix: Air Lab File ID: MS5021116.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 01:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		70-130
2037-26-5	Toluene-d8 (Surr)	99		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021116.D
 Lims ID: 320-11614-A-3 Lab Sample ID: 320-11614-3
 Client ID: 34000556
 Sample Type: Client
 Inject. Date: 12-Feb-2015 01:40:30 ALS Bottle#: 10 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-3
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam

Date: 12-Feb-2015 07:44:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	26969	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	134953	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.602	20.601	0.001	98	124724	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	60345	2.38	
\$ 5 Toluene-d8 (Surr)	100	17.365	17.367	-0.002	100	94055	1.97	
\$ 6 4-Bromofluorobenzene (Surr	95	23.127	23.135	-0.008	100	87089	2.00	
22 Methylene Chloride	49	8.542	8.548	-0.006	97	871	0.0186	7
38 Benzene	78	13.412	13.421	-0.009	100	166	0.001816	7
46 Toluene	91	17.529	17.540	-0.011	97	413	0.003889	7
54 Ethylbenzene	91	20.852	20.859	-0.007	97	306	0.002170	7
55 m-Xylene & p-Xylene	91	21.041	21.040	0.001	100	806	0.007400	7
56 o-Xylene	91	21.941	21.936	0.005	99	406	0.003541	7
70 Naphthalene	128	30.086	30.086	0.000	100	2965	0.0174	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021116.D

Injection Date: 12-Feb-2015 01:40:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-3

Lab Sample ID: 320-11614-3

Client ID: 34000556

Operator ID: AO

ALS Bottle#: 10

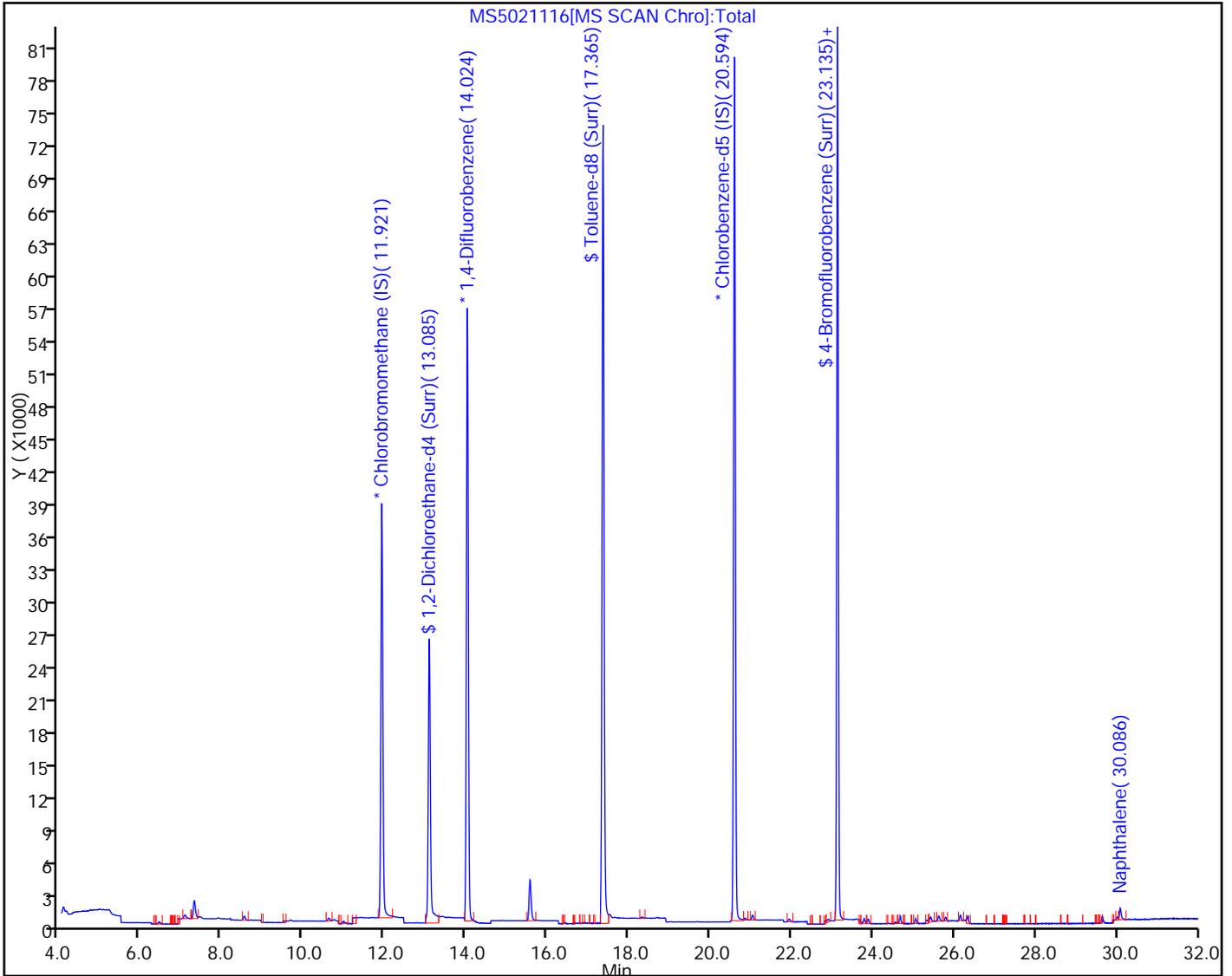
Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34001395 Lab Sample ID: 320-11614-4
 Matrix: Air Lab File ID: MS5021117.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 02:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		70-130
2037-26-5	Toluene-d8 (Surr)	100		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021117.D
 Lims ID: 320-11614-A-4 Lab Sample ID: 320-11614-4
 Client ID: 34001395
 Sample Type: Client
 Inject. Date: 12-Feb-2015 02:40:30 ALS Bottle#: 11 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-4
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam Date: 12-Feb-2015 07:44:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	25013	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	125940	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.601	20.601	0.000	98	118721	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	57762	2.44	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	89129	2.00	
\$ 6 4-Bromofluorobenzene (Surr	95	23.129	23.135	-0.006	99	83431	2.02	
22 Methylene Chloride	49	8.541	8.548	-0.007	95	712	0.0164	7
38 Benzene	78	13.412	13.421	-0.009	96	199	0.002333	7
46 Toluene	91	17.531	17.540	-0.009	94	269	0.002715	7
54 Ethylbenzene	91	20.866	20.859	0.007	100	227	0.001691	7
55 m-Xylene & p-Xylene	91	21.040	21.040	0.000	99	599	0.005777	7
56 o-Xylene	91	21.940	21.936	0.004	97	295	0.002703	7
70 Naphthalene	128	30.091	30.086	0.005	100	2795	0.0172	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021117.D

Injection Date: 12-Feb-2015 02:40:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-4

Lab Sample ID: 320-11614-4

Client ID: 34001395

Operator ID: AO

ALS Bottle#: 11

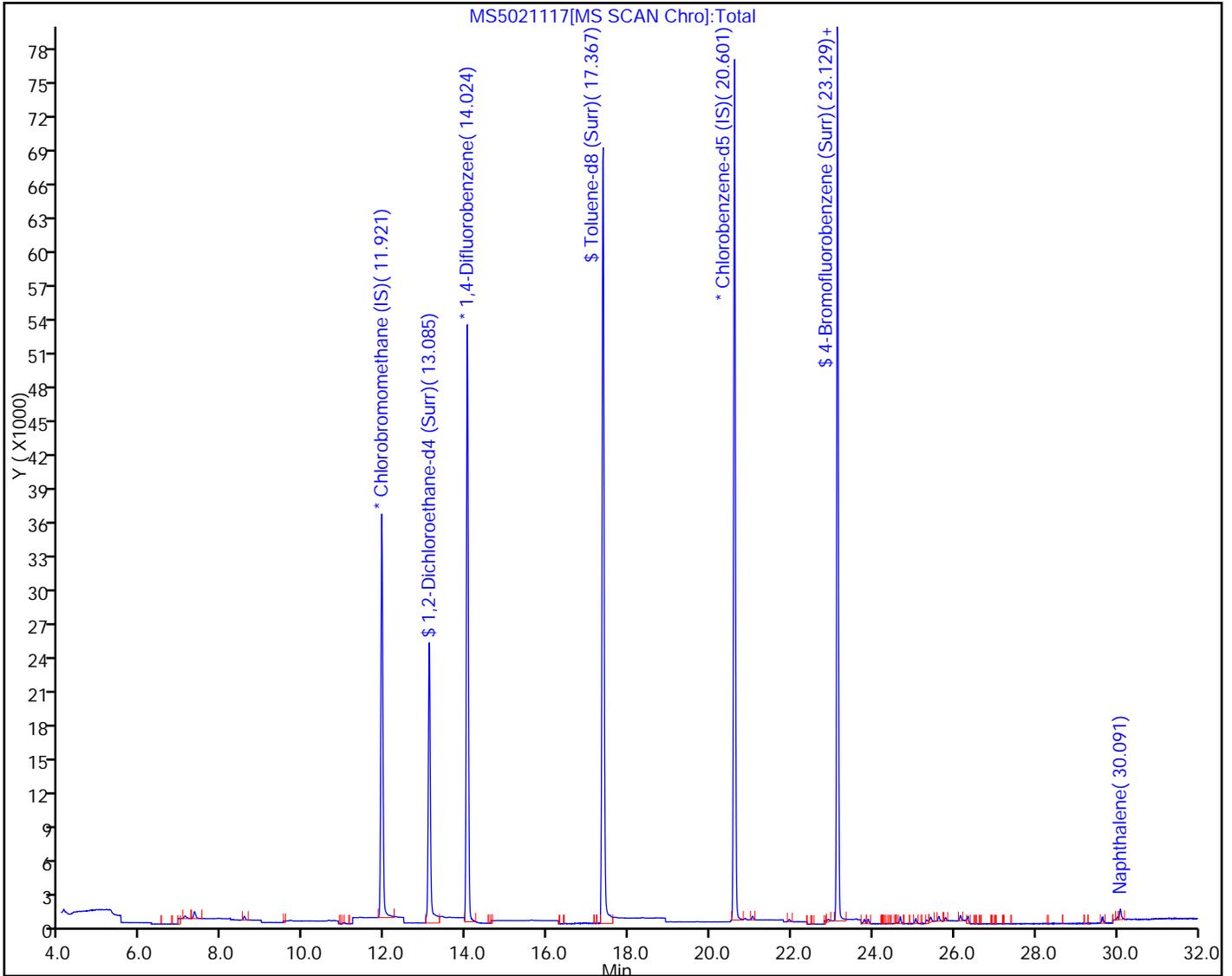
Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34000878 Lab Sample ID: 320-11614-6
 Matrix: Air Lab File ID: MS5021119.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 04:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		70-130
2037-26-5	Toluene-d8 (Surr)	100		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021119.D
 Lims ID: 320-11614-A-6 Lab Sample ID: 320-11614-6
 Client ID: 34000878
 Sample Type: Client
 Inject. Date: 12-Feb-2015 04:40:30 ALS Bottle#: 13 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-6
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam Date: 12-Feb-2015 13:43:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	22045	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	110530	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.602	20.601	0.001	98	104831	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	50678	2.44	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	78317	2.01	
\$ 6 4-Bromofluorobenzene (Surr	95	23.135	23.135	0.000	96	75180	2.06	
22 Methylene Chloride	49	8.541	8.548	-0.007	94	673	0.0176	7
38 Benzene	78	13.412	13.421	-0.009	98	1420	0.0190	
46 Toluene	91	17.531	17.540	-0.009	98	331	0.003806	7
54 Ethylbenzene	91	20.866	20.859	0.007	99	231	0.001949	7
55 m-Xylene & p-Xylene	91	21.040	21.040	0.000	100	510	0.005571	7
56 o-Xylene	91	21.932	21.936	-0.004	96	271	0.002812	7
70 Naphthalene	128	30.090	30.086	0.004	100	2586	0.0180	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021119.D

Injection Date: 12-Feb-2015 04:40:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-6

Lab Sample ID: 320-11614-6

Client ID: 34000878

Operator ID: AO

ALS Bottle#: 13

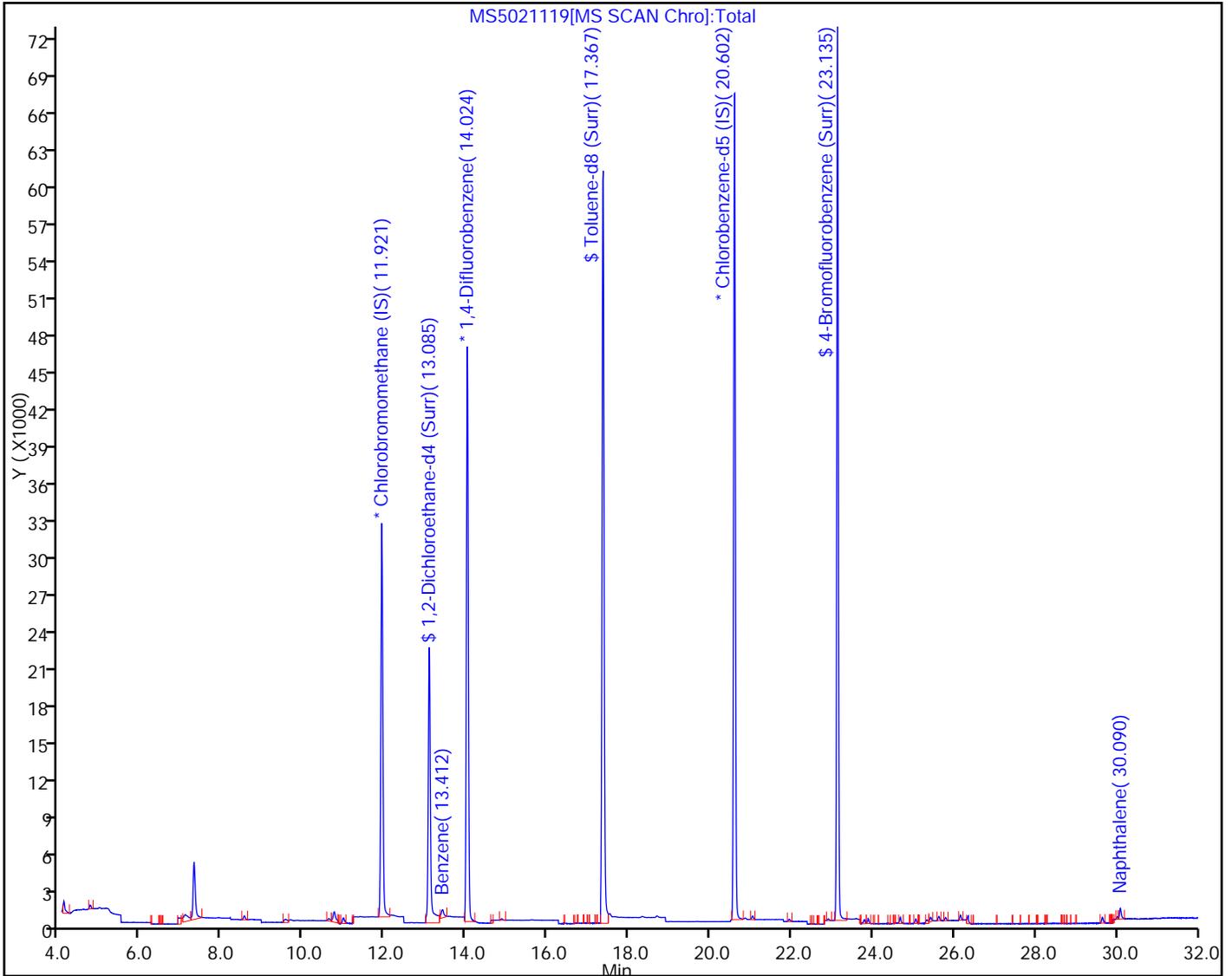
Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34000271 Lab Sample ID: 320-11614-7
 Matrix: Air Lab File ID: MS5021120.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 05:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	123		70-130
2037-26-5	Toluene-d8 (Surr)	101		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021120.D
 Lims ID: 320-11614-A-7 Lab Sample ID: 320-11614-7
 Client ID: 34000271
 Sample Type: Client
 Inject. Date: 12-Feb-2015 05:41:30 ALS Bottle#: 14 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-7
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam

Date: 12-Feb-2015 13:43:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	20771	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	103515	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.601	20.601	0.000	98	98462	2.00	
\$ 4 1,2-Dichloroethane-d4 (Surr)	65	13.085	13.094	-0.009	64	47749	2.45	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	73840	2.02	
\$ 6 4-Bromofluorobenzene (Surr)	95	23.135	23.135	-0.001	96	70127	2.04	
11 Vinyl chloride	62	4.726	4.826	-0.100	8	14	0.000900	7
22 Methylene Chloride	49	8.541	8.548	-0.007	93	627	0.0174	7
38 Benzene	78	13.421	13.421	0.000	100	712	0.0102	
46 Toluene	91	17.531	17.540	-0.009	99	434	0.005328	7
54 Ethylbenzene	91	20.859	20.859	0.000	98	321	0.002883	7
55 m-Xylene & p-Xylene	91	21.048	21.040	0.008	99	598	0.006955	7
56 o-Xylene	91	21.936	21.936	0.000	97	272	0.003005	7
70 Naphthalene	128	30.091	30.086	0.005	100	2394	0.0178	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021120.D

Injection Date: 12-Feb-2015 05:41:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-7

Lab Sample ID: 320-11614-7

Client ID: 34000271

Operator ID: AO

ALS Bottle#: 14

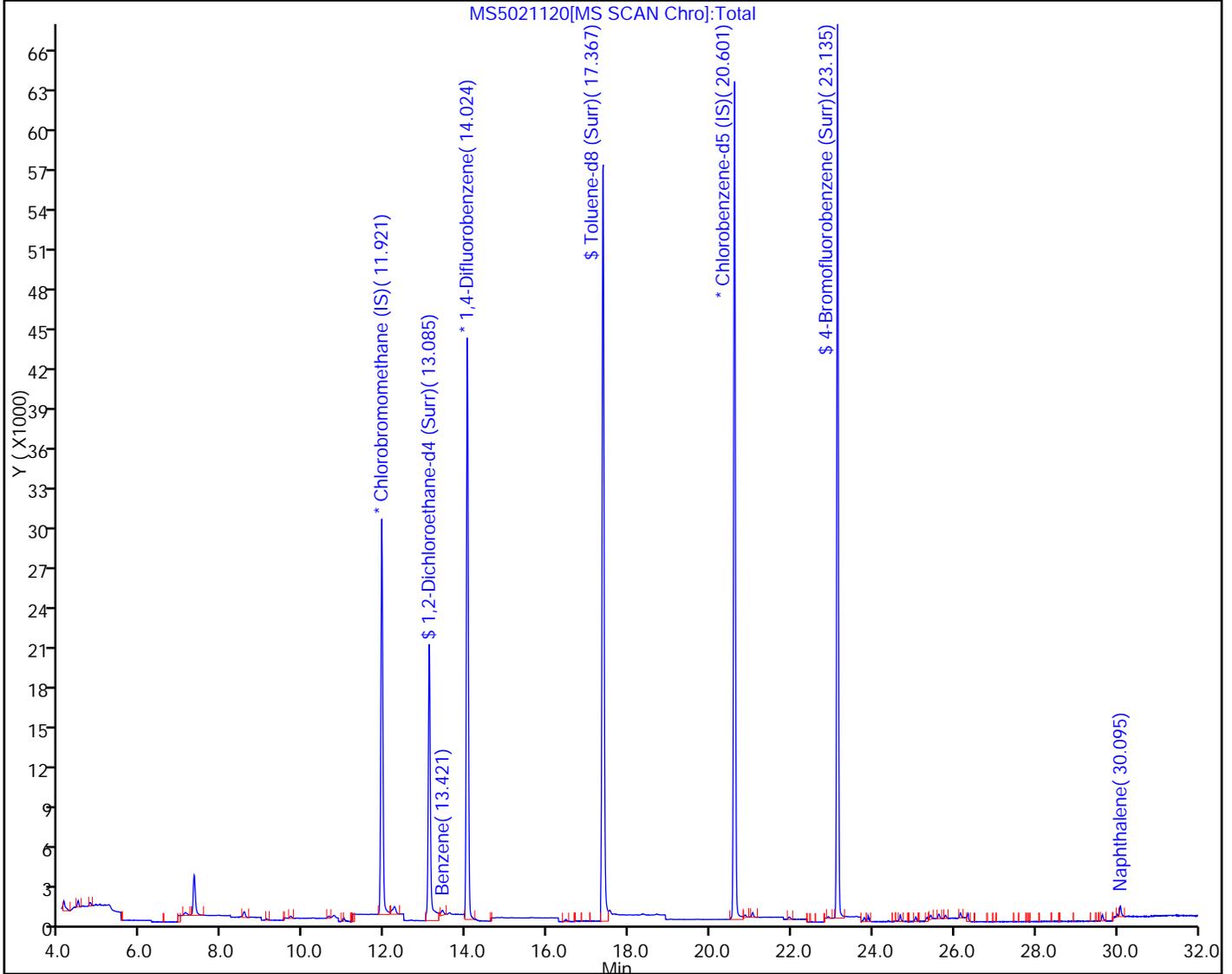
Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34001200 Lab Sample ID: 320-11614-8
 Matrix: Air Lab File ID: MS5021121.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 06:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	121		70-130
2037-26-5	Toluene-d8 (Surr)	100		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021121.D
 Lims ID: 320-11614-A-8 Lab Sample ID: 320-11614-8
 Client ID: 34001200
 Sample Type: Client
 Inject. Date: 12-Feb-2015 06:42:30 ALS Bottle#: 15 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-8
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam

Date: 12-Feb-2015 13:44:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	21775	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	110104	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.601	20.601	0.000	98	104326	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	50265	2.43	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	78157	2.01	
\$ 6 4-Bromofluorobenzene (Surr	95	23.129	23.135	-0.006	99	73960	2.04	
22 Methylene Chloride	49	8.541	8.548	-0.007	95	704	0.0187	7
38 Benzene	78	13.403	13.421	-0.018	95	165	0.002213	7
46 Toluene	91	17.531	17.540	-0.009	95	184	0.002124	7
54 Ethylbenzene	91	20.866	20.859	0.007	96	167	0.001416	7
55 m-Xylene & p-Xylene	91	21.040	21.040	0.000	98	404	0.004434	7
56 o-Xylene	91	21.945	21.936	0.009	90	191	0.001992	7
70 Naphthalene	128	30.091	30.086	0.005	100	2719	0.0191	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021121.D

Injection Date: 12-Feb-2015 06:42:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-8

Lab Sample ID: 320-11614-8

Client ID: 34001200

Operator ID: AO

ALS Bottle#: 15

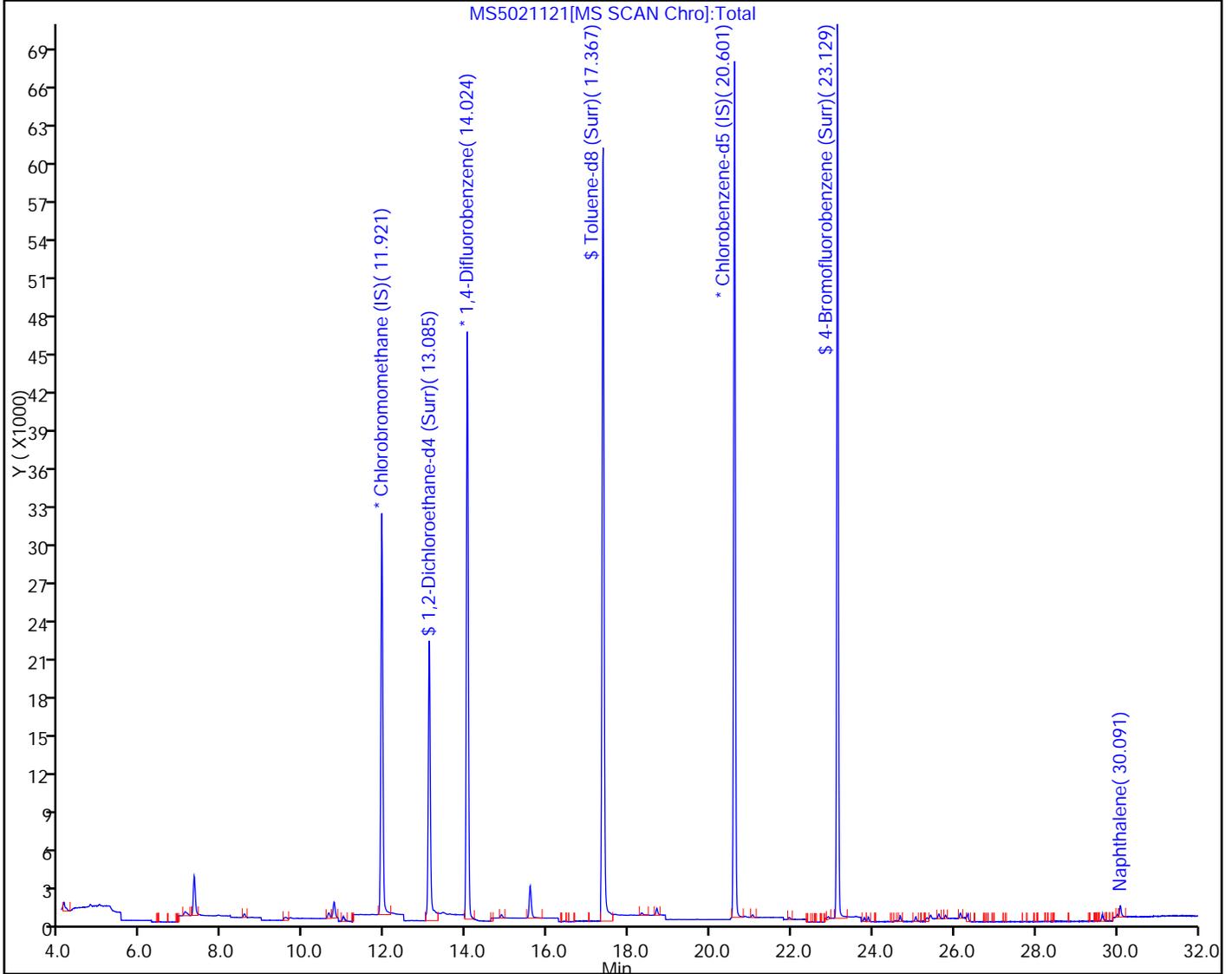
Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34001661 Lab Sample ID: 320-11614-9
 Matrix: Air Lab File ID: MS5021122.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 07:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	122		70-130
2037-26-5	Toluene-d8 (Surr)	101		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021122.D
 Lims ID: 320-11614-A-9 Lab Sample ID: 320-11614-9
 Client ID: 34001661
 Sample Type: Client
 Inject. Date: 12-Feb-2015 07:42:30 ALS Bottle#: 16 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-9
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam Date: 12-Feb-2015 09:17:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.932	11.932	0.000	97	22197	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	111167	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.602	20.601	0.001	98	104928	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	51075	2.44	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	79021	2.01	
\$ 6 4-Bromofluorobenzene (Surr	95	23.127	23.135	-0.008	100	74640	2.04	
22 Methylene Chloride	49	8.535	8.548	-0.013	94	857	0.0223	7
38 Benzene	78	13.412	13.421	-0.009	97	366	0.004861	7
46 Toluene	91	17.540	17.540	0.000	98	390	0.004459	7
54 Ethylbenzene	91	20.859	20.859	0.000	100	200	0.001686	7
55 m-Xylene & p-Xylene	91	21.048	21.040	0.008	99	497	0.005424	7
56 o-Xylene	91	21.940	21.936	0.004	93	261	0.002706	7
70 Naphthalene	128	30.090	30.086	0.004	100	2664	0.0186	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021122.D

Injection Date: 12-Feb-2015 07:42:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-9

Lab Sample ID: 320-11614-9

Client ID: 34001661

Operator ID: AO

ALS Bottle#: 16

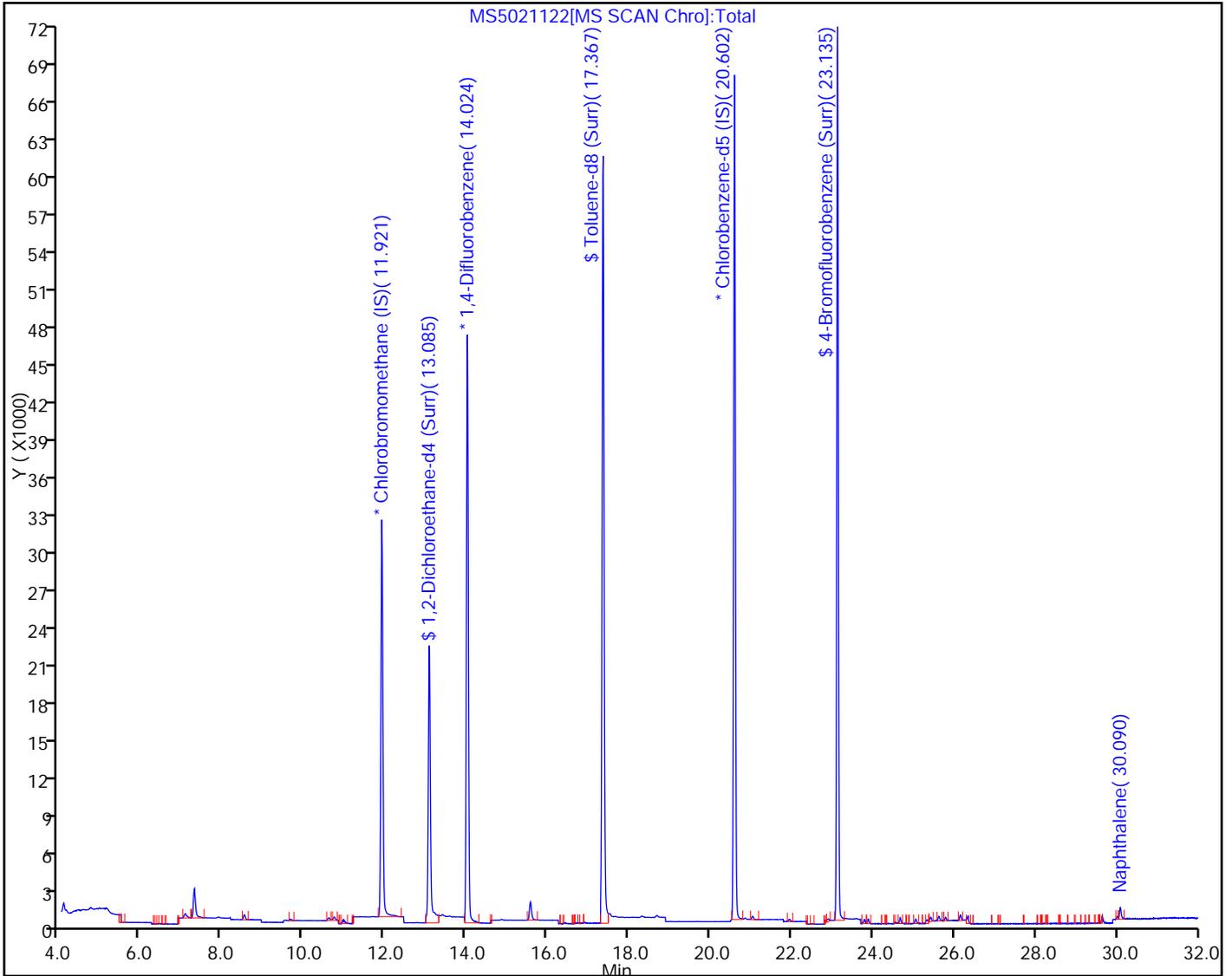
Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 34001389 Lab Sample ID: 320-11614-10
 Matrix: Air Lab File ID: MS5021123.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 08:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	120		70-130
2037-26-5	Toluene-d8 (Surr)	100		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021123.D
 Lims ID: 320-11614-A-10 Lab Sample ID: 320-11614-10
 Client ID: 34001389
 Sample Type: Client
 Inject. Date: 12-Feb-2015 08:40:30 ALS Bottle#: 2 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-10
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam

Date: 12-Feb-2015 10:21:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.943	11.932	0.011	96	22560	2.00	
* 2 1,4-Difluorobenzene	114	14.034	14.030	0.004	100	114752	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.601	20.601	0.000	99	108275	2.00	
\$ 4 1,2-Dichloroethane-d4 (Surr)	65	13.103	13.094	0.009	64	51670	2.40	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	81276	2.01	
\$ 6 4-Bromofluorobenzene (Surr)	95	23.135	23.135	0.000	97	77122	2.05	
22 Methylene Chloride	49	8.554	8.548	0.006	93	747	0.0191	7
38 Benzene	78	13.421	13.421	0.000	100	309	0.003976	7
46 Toluene	91	17.531	17.540	-0.009	93	212	0.002348	7
54 Ethylbenzene	91	20.866	20.859	0.007	97	171	0.001397	7
55 m-Xylene & p-Xylene	91	21.048	21.040	0.008	98	437	0.004622	7
56 o-Xylene	91	21.945	21.936	0.009	88	186	0.001869	7
70 Naphthalene	128	30.090	30.086	0.004	100	3171	0.0214	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021123.D

Injection Date: 12-Feb-2015 08:40:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-10

Lab Sample ID: 320-11614-10

Client ID: 34001389

Operator ID: AO

ALS Bottle#: 2

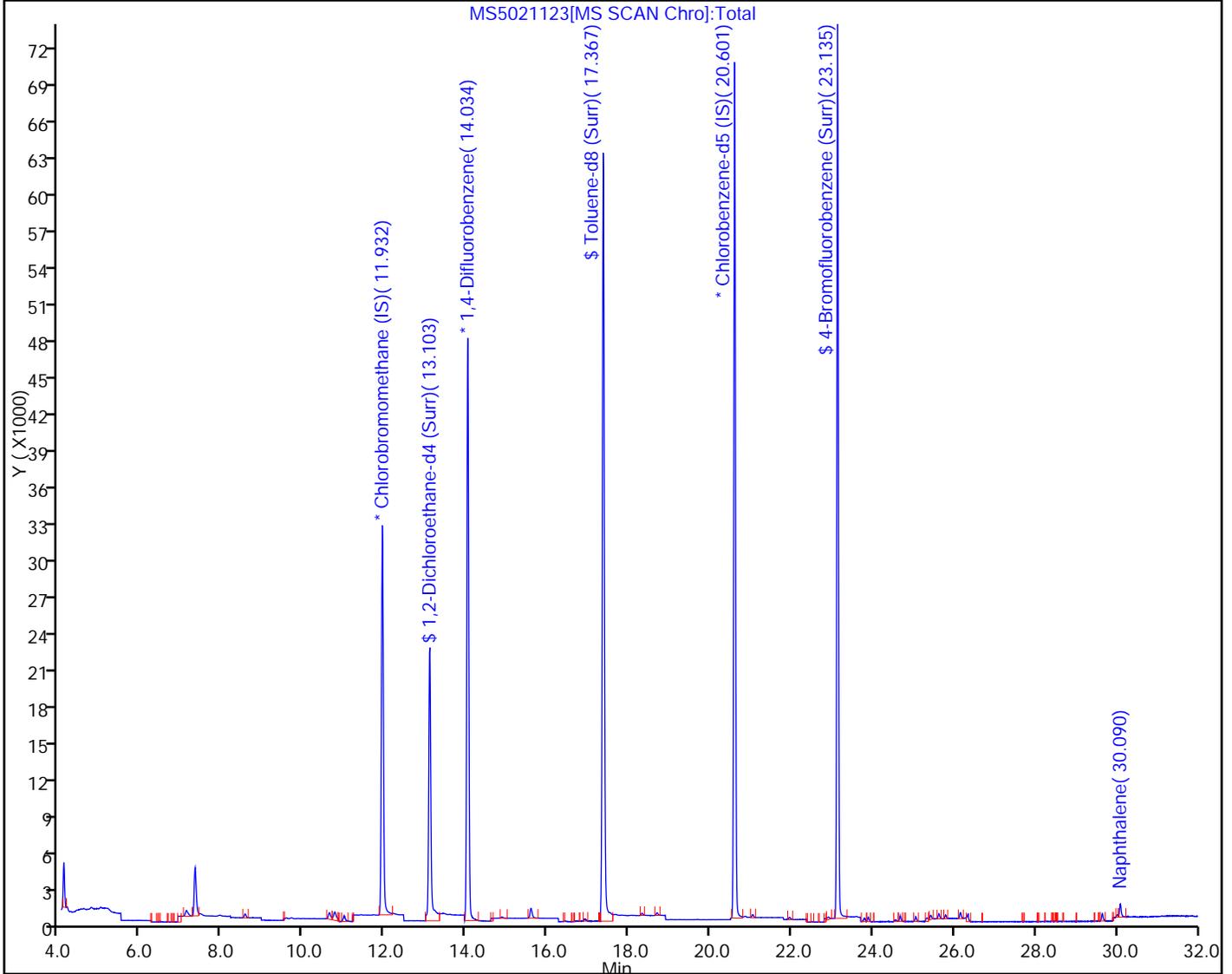
Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11614-1
 SDG No.: _____
 Client Sample ID: 7534 Lab Sample ID: 320-11614-11
 Matrix: Air Lab File ID: MS5021124.D
 Analysis Method: TO-15 SIM Date Collected: 02/09/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 02/12/2015 09:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 65453 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
127-18-4	Tetrachloroethene	ND		0.020	0.010
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
75-09-2	Methylene Chloride	ND		0.20	0.10
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
67-66-3	Chloroform	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
75-00-3	Chloroethane	ND		0.045	0.020

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	123		70-130
2037-26-5	Toluene-d8 (Surr)	101		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021124.D
 Lims ID: 320-11614-A-11 Lab Sample ID: 320-11614-11
 Client ID: 7534
 Sample Type: Client
 Inject. Date: 12-Feb-2015 09:38:30 ALS Bottle#: 4 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11614-A-11
 Misc. Info.: Can cert;1000MLCAN CERT;1000ML
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 12-Feb-2015 10:21:37 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK022

First Level Reviewer: ortizam Date: 12-Feb-2015 13:47:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.932	-0.011	94	21802	2.00	
* 2 1,4-Difluorobenzene	114	14.024	14.030	-0.006	100	108982	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.600	20.601	-0.001	98	102175	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.085	13.094	-0.009	64	50350	2.46	
\$ 5 Toluene-d8 (Surr)	100	17.367	17.367	0.000	100	77475	2.01	
\$ 6 4-Bromofluorobenzene (Surr	95	23.128	23.135	-0.007	100	70691	1.99	
22 Methylene Chloride	49	8.535	8.548	-0.013	95	1206	0.0319	7
38 Benzene	78	13.403	13.421	-0.018	100	349	0.004728	7
46 Toluene	91	17.540	17.540	0.000	95	406	0.004735	7
54 Ethylbenzene	91	20.865	20.859	0.006	99	193	0.001671	7
55 m-Xylene & p-Xylene	91	21.047	21.040	0.007	98	457	0.005122	7
56 o-Xylene	91	21.930	21.936	-0.006	94	242	0.002577	7
70 Naphthalene	128	30.091	30.086	0.005	100	2426	0.0174	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00142 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150211-19390.b\MS5021124.D

Injection Date: 12-Feb-2015 09:38:30

Instrument ID: ATMS5

Lims ID: 320-11614-A-11

Lab Sample ID: 320-11614-11

Client ID: 7534

Operator ID: AO

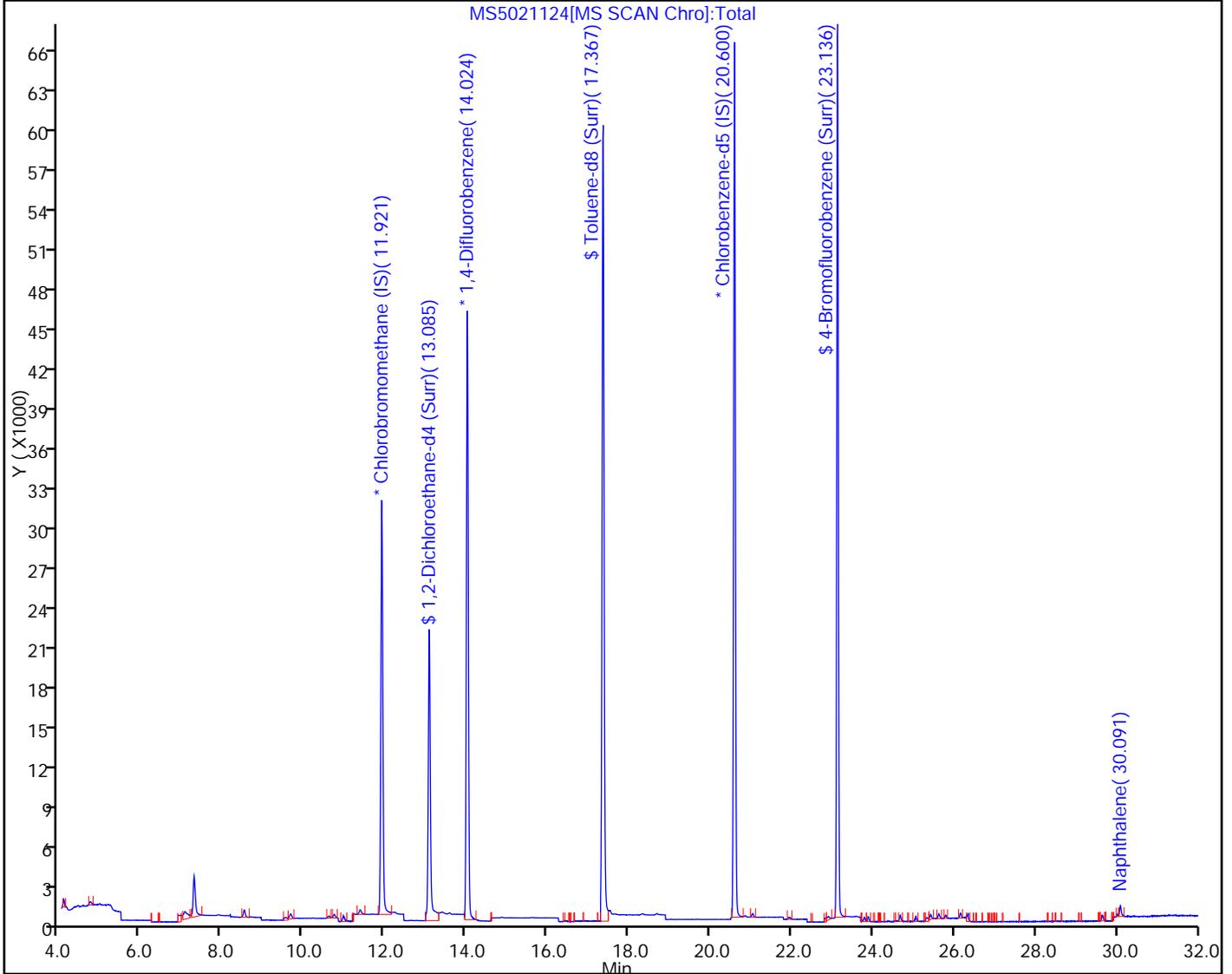
ALS Bottle#: 4 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34000510 Lab Sample ID: 320-11847-1
 Matrix: Air Lab File ID: MS5030513.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 06:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030513.D
 Lims ID: 320-11847-A-1 Lab Sample ID: 320-11847-1
 Client ID: 34000510
 Sample Type: Client
 Inject. Date: 06-Mar-2015 06:46:30 ALS Bottle#: 11 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-1
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:02:27 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam Date: 09-Mar-2015 12:15:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.910	11.921	-0.011	100	44400	2.00	
* 2 1,4-Difluorobenzene	114	14.011	14.011	0.000	100	210307	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	184436	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	88248	2.23	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	99	142419	1.92	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	94	123024	1.92	
14 Chloroethane	64	5.836	5.845	-0.009	95	154	0.006335	7
50 Tetrachloroethene	166	19.004	19.004	0.000	90	150	0.003252	7
53 Chlorobenzene	112	20.650	20.658	-0.008	51	92	0.000785	7
67 1,2-Dichlorobenzene	146	26.315	26.315	0.000	98	678	0.005845	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030513.D

Injection Date: 06-Mar-2015 06:46:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-1

Lab Sample ID: 320-11847-1

Client ID: 34000510

Operator ID: AO

ALS Bottle#: 11

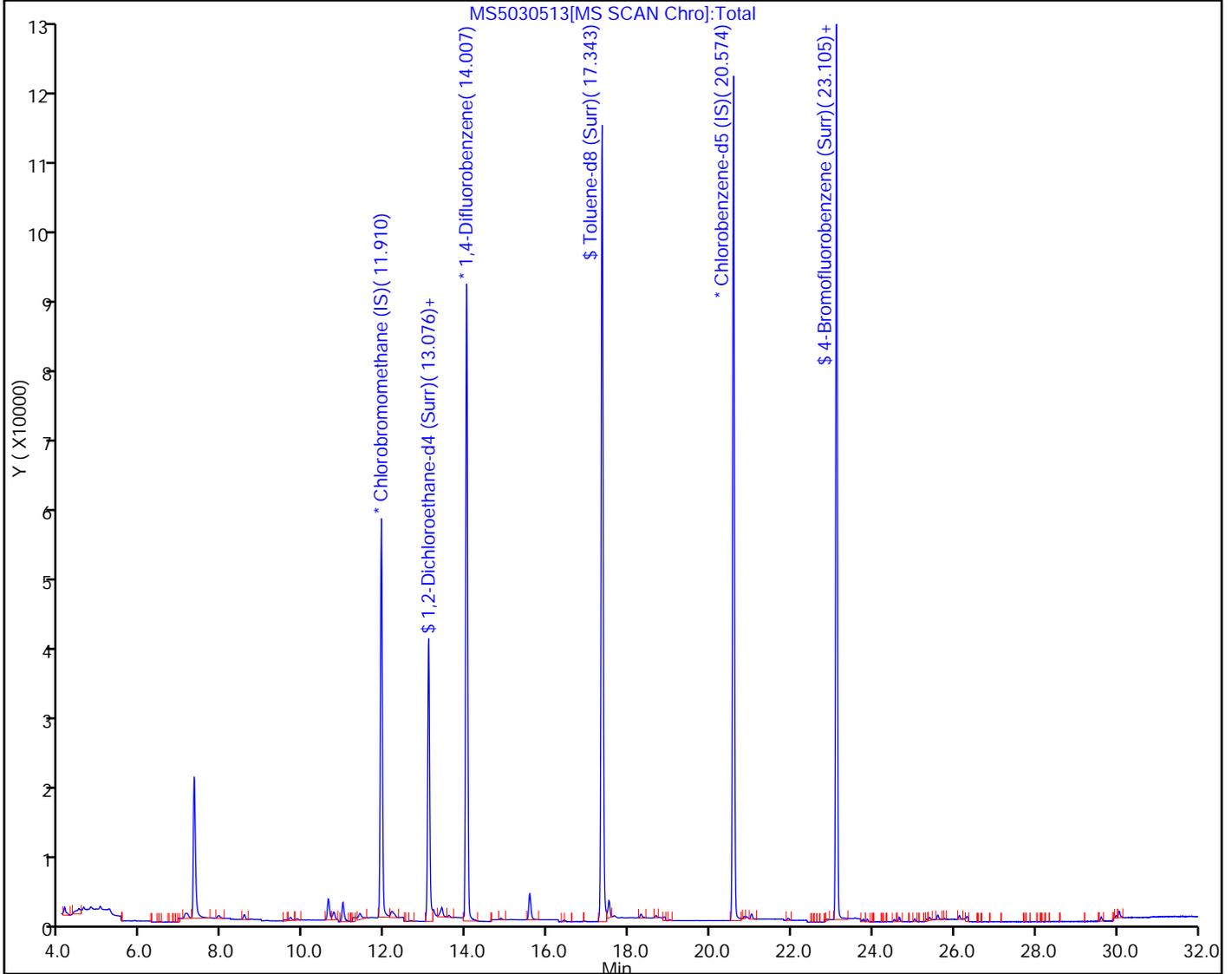
Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001283 Lab Sample ID: 320-11847-2
 Matrix: Air Lab File ID: MS5030514.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 07:45
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030514.D
 Lims ID: 320-11847-A-2 Lab Sample ID: 320-11847-2
 Client ID: 34001283
 Sample Type: Client
 Inject. Date: 06-Mar-2015 07:45:30 ALS Bottle#: 12 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-2
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:02:27 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam Date: 06-Mar-2015 10:06:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.910	11.921	-0.011	98	39742	2.00	
* 2 1,4-Difluorobenzene	114	14.010	14.011	-0.001	100	189269	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	164323	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	82678	2.32	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	128515	1.92	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	96	109600	1.92	
14 Chloroethane	64	5.836	5.845	-0.009	98	222	0.0102	7
15 Trichlorofluoromethane	101	6.463	6.458	0.005	92	141	0.001747	7
37 1,2-Dichloroethane	62	13.239	13.267	-0.028	52	10	0.000185	7
40 Trichloroethene	130	14.751	14.751	0.000	99	56	0.001321	7
50 Tetrachloroethene	166	18.998	19.004	-0.006	80	77	0.001874	7
53 Chlorobenzene	112	20.657	20.658	-0.001	51	113	0.001082	7
67 1,2-Dichlorobenzene	146	26.315	26.315	0.000	100	606	0.005864	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030514.D

Injection Date: 06-Mar-2015 07:45:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-2

Lab Sample ID: 320-11847-2

Client ID: 34001283

Operator ID: AO

ALS Bottle#: 12

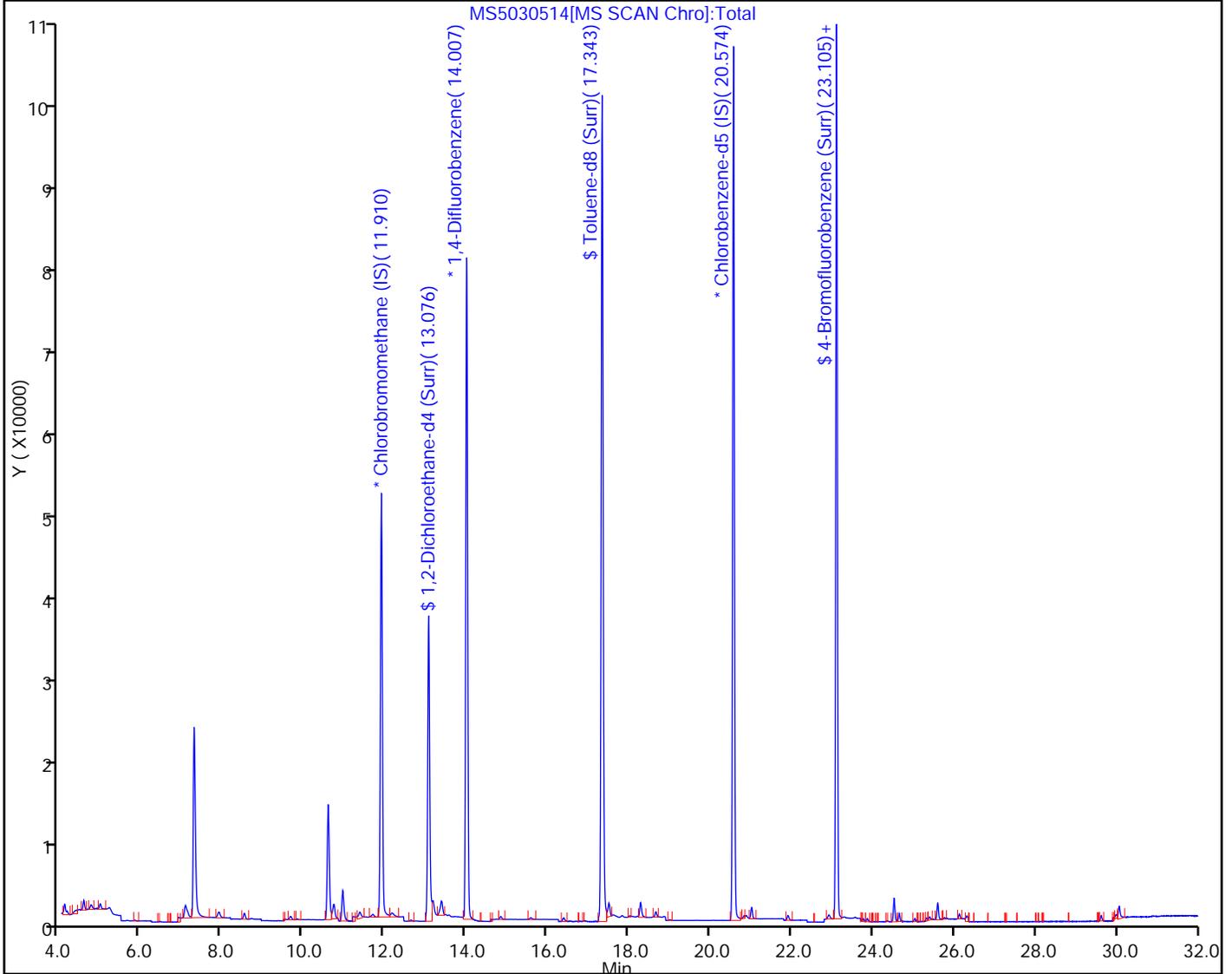
Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34000819 Lab Sample ID: 320-11847-3
 Matrix: Air Lab File ID: MS5030515.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 08:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	118		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030515.D
 Lims ID: 320-11847-A-3 Lab Sample ID: 320-11847-3
 Client ID: 34000819
 Sample Type: Client
 Inject. Date: 06-Mar-2015 08:44:30 ALS Bottle#: 13 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-3
 Misc. Info.: 1000ML CANCESTS1000ML CANCESTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:02:27 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam

Date: 06-Mar-2015 09:24:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.921	0.000	100	35702	2.00	
* 2 1,4-Difluorobenzene	114	14.010	14.011	-0.001	100	169472	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	143016	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	75356	2.37	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	113371	1.89	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	96	91633	1.84	
50 Tetrachloroethene	166	18.920	19.004	-0.084	93	82	0.002292	7
53 Chlorobenzene	112	20.658	20.658	0.000	51	76	0.000836	7
67 1,2-Dichlorobenzene	146	26.320	26.315	0.005	100	477	0.005303	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030515.D

Injection Date: 06-Mar-2015 08:44:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-3

Lab Sample ID: 320-11847-3

Client ID: 34000819

Operator ID: AO

ALS Bottle#: 13

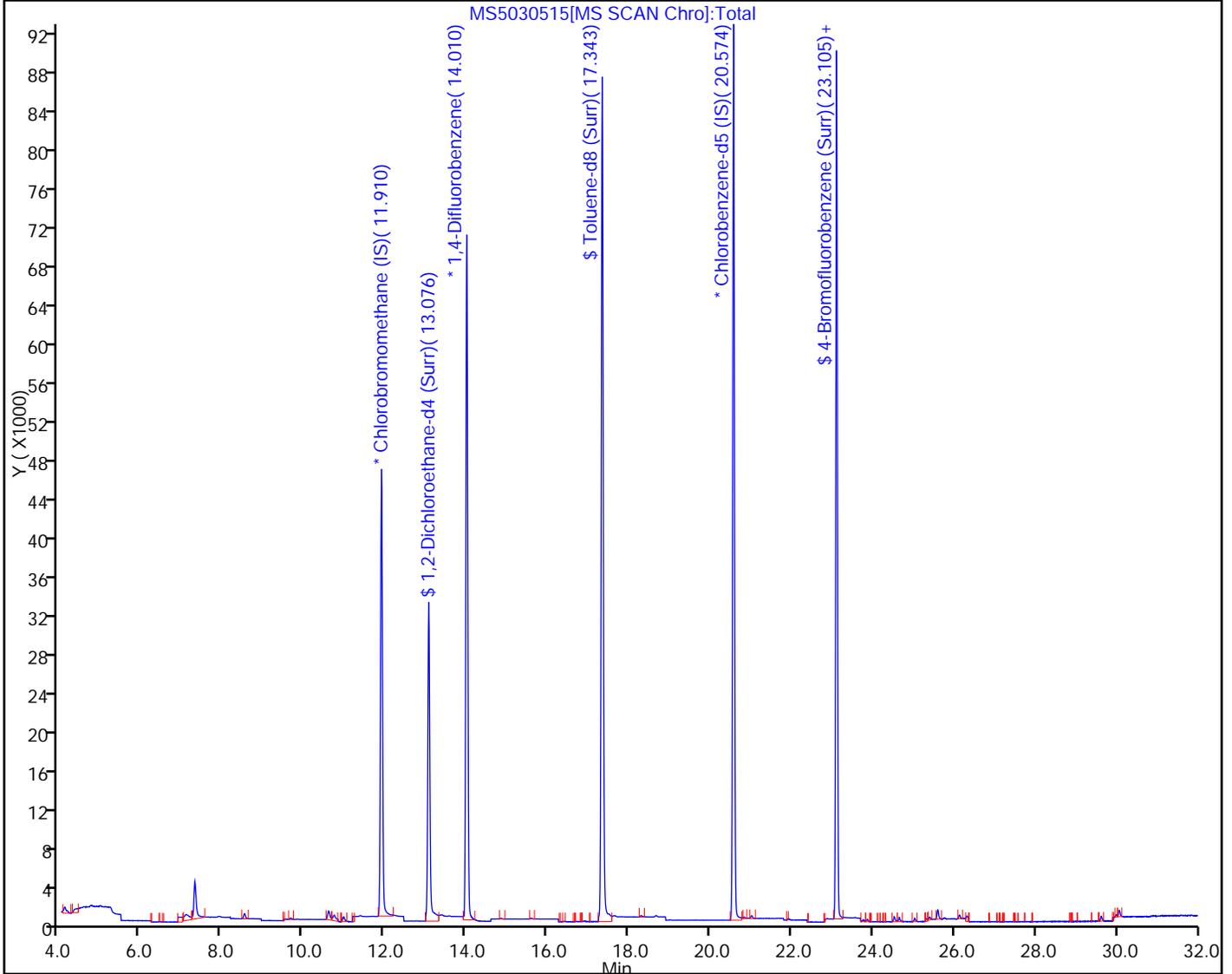
Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001353 Lab Sample ID: 320-11847-4
 Matrix: Air Lab File ID: MS5030516.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 09:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	121		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030516.D
 Lims ID: 320-11847-A-4 Lab Sample ID: 320-11847-4
 Client ID: 34001353
 Sample Type: Client
 Inject. Date: 06-Mar-2015 09:44:30 ALS Bottle#: 14 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-4
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 06-Mar-2015 10:53:54 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK016

First Level Reviewer: ortizam

Date: 06-Mar-2015 10:53:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.921	0.000	99	34403	2.00	
* 2 1,4-Difluorobenzene	114	14.014	14.011	0.003	100	163763	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	138895	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	74376	2.42	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	109469	1.89	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	96	90596	1.87	
38 Benzene	78	13.412	13.403	0.009	100	202	0.001821	7
46 Toluene	91	17.516	17.516	0.000	91	244	0.001894	7
54 Ethylbenzene	91	20.839	20.839	0.000	99	166	0.001057	7
55 m-Xylene & p-Xylene	91	21.021	21.021	0.000	95	389	0.003207	7
56 o-Xylene	91	21.913	21.913	0.000	94	174	0.001363	7
70 Naphthalene	128	30.065	30.056	0.009	100	1888	0.0099	7M

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

VASUISIM_00154

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030516.D

Injection Date: 06-Mar-2015 09:44:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-4

Lab Sample ID: 320-11847-4

Client ID: 34001353

Operator ID: AO

ALS Bottle#: 14

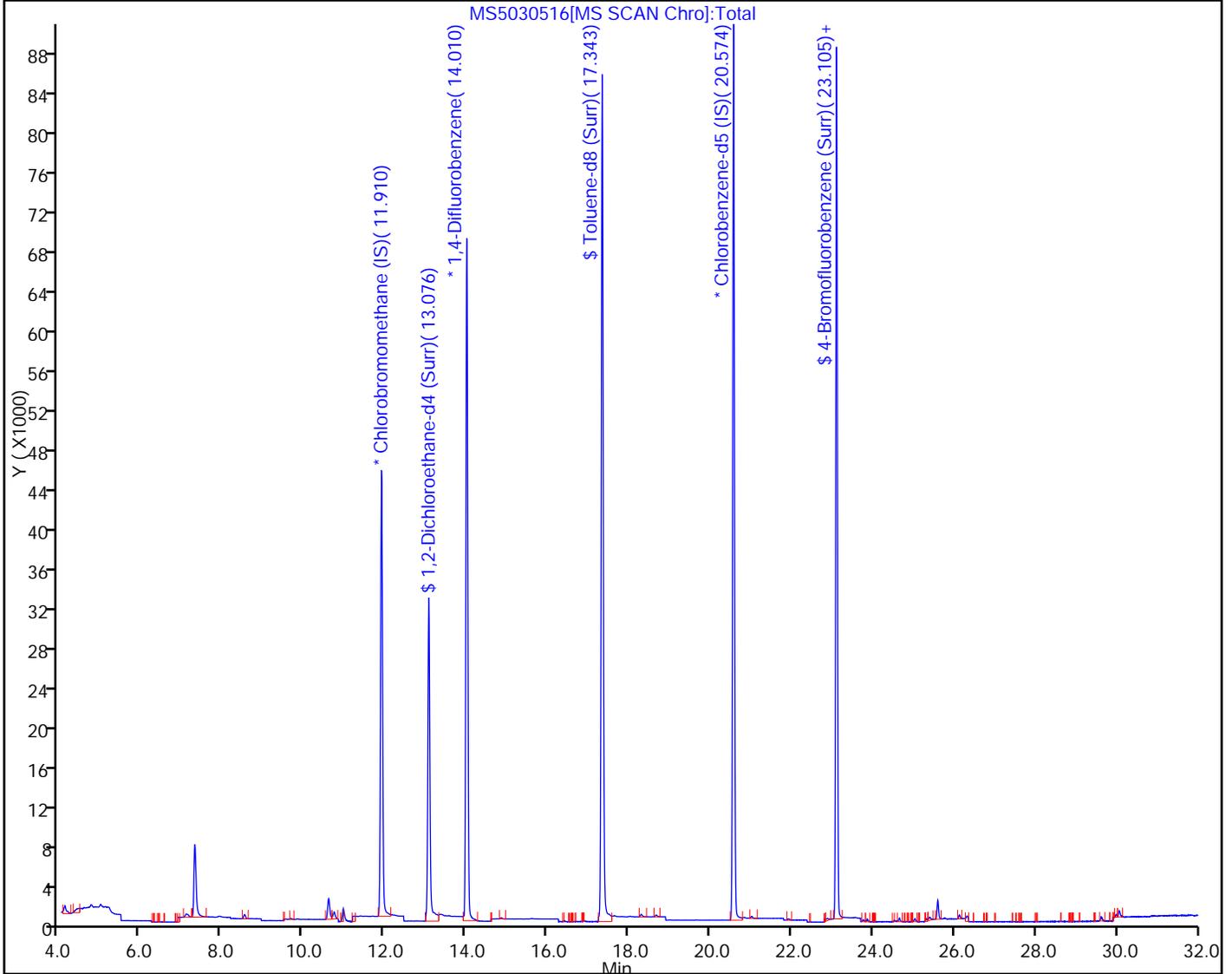
Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



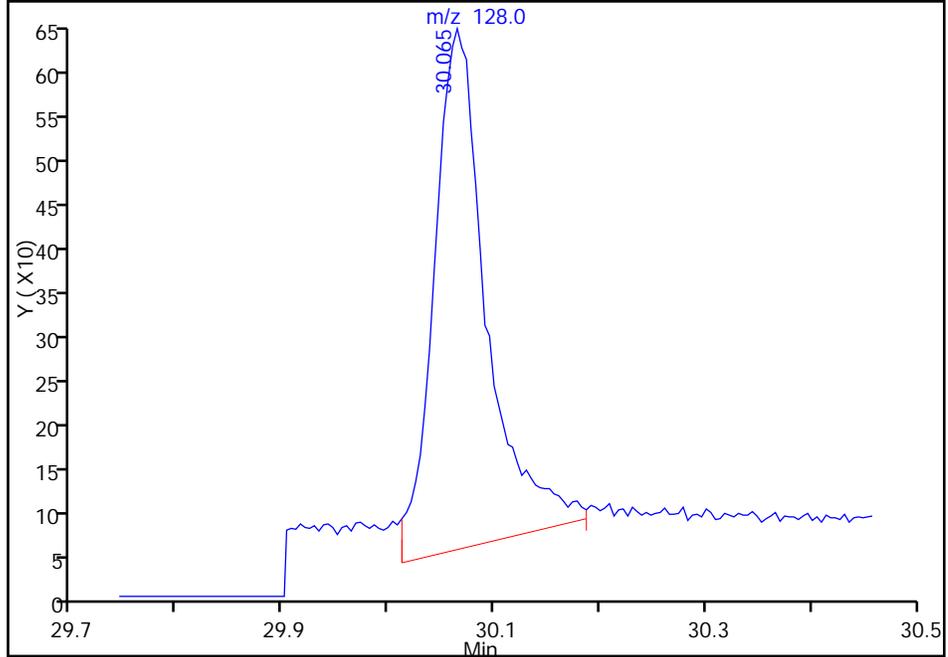
TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030516.D
Injection Date: 06-Mar-2015 09:44:30 Instrument ID: ATMS5
Lims ID: 320-11847-A-4 Lab Sample ID: 320-11847-4
Client ID: 34001353
Operator ID: AO ALS Bottle#: 14 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: TO15 SIM Limit Group: MSA - TO-15_SIM_ICAL
Column: Detector MS SCAN

70 Naphthalene, CAS: 91-20-3

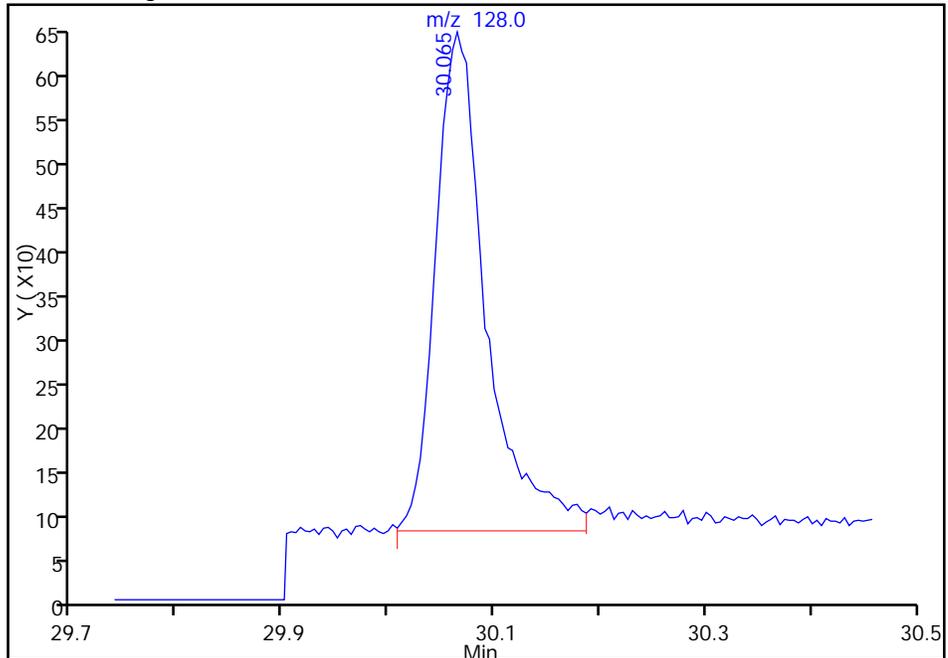
RT: 30.06
Area: 2049
Amount: 0.010791
Amount Units: ppb v/v

Processing Integration Results



RT: 30.06
Area: 1888
Amount: 0.009943
Amount Units: ppb v/v

Manual Integration Results



Reviewer: ortizam, 06-Mar-2015 10:53:54
Audit Action: Manually Integrated
Audit Reason: Baseline



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001446 Lab Sample ID: 320-11847-5
 Matrix: Air Lab File ID: MS5030517.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 10:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		70-130
2037-26-5	Toluene-d8 (Surr)	94		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030517.D
 Lims ID: 320-11847-A-5 Lab Sample ID: 320-11847-5
 Client ID: 34001446
 Sample Type: Client
 Inject. Date: 06-Mar-2015 10:44:30 ALS Bottle#: 15 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-5
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:02:27 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam Date: 06-Mar-2015 11:24:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.910	11.921	-0.011	97	32864	2.00	
* 2 1,4-Difluorobenzene	114	14.011	14.011	0.000	100	154957	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	98	129934	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	69501	2.39	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	103006	1.88	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	96	84313	1.86	
67 1,2-Dichlorobenzene	146	26.320	26.315	0.005	99	460	0.005629	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030517.D

Injection Date: 06-Mar-2015 10:44:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-5

Lab Sample ID: 320-11847-5

Client ID: 34001446

Operator ID: AO

ALS Bottle#: 15

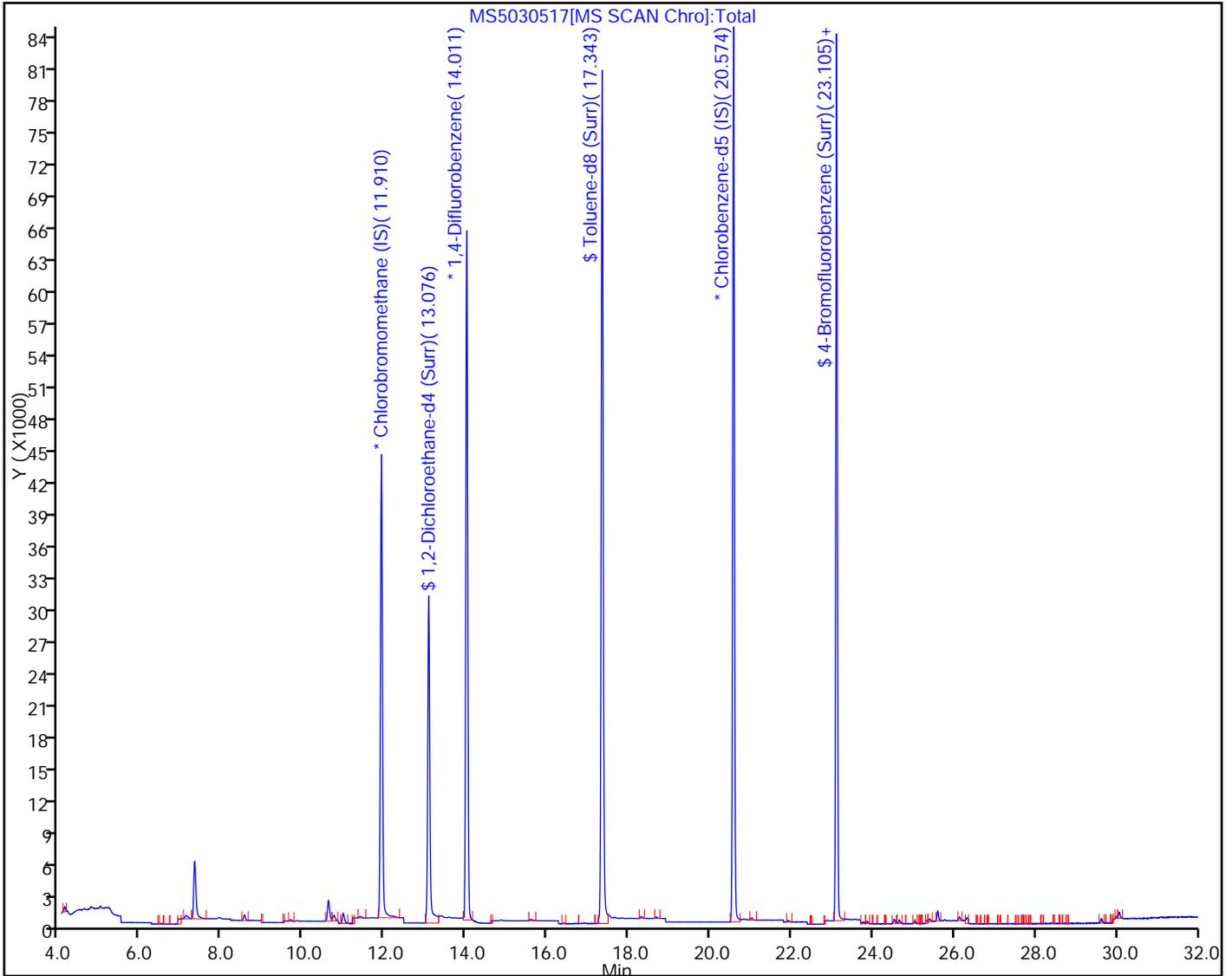
Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001439 Lab Sample ID: 320-11847-6
 Matrix: Air Lab File ID: MS5030518.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 11:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	118		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030518.D
 Lims ID: 320-11847-A-6 Lab Sample ID: 320-11847-6
 Client ID: 34001439
 Sample Type: Client
 Inject. Date: 06-Mar-2015 11:43:30 ALS Bottle#: 16 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-6
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:01:00 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: ortizam

Date: 06-Mar-2015 12:20:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.921	0.000	98	34412	2.00	
* 2 1,4-Difluorobenzene	114	14.014	14.011	0.003	100	164591	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.582	20.574	0.008	98	141131	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	72827	2.35	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	110347	1.90	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	97	93576	1.90	
38 Benzene	78	13.403	13.403	0.000	96	167	0.001498	7
46 Toluene	91	17.516	17.516	0.000	97	211	0.001629	7
54 Ethylbenzene	91	20.839	20.839	0.000	84	184	0.001153	7
55 m-Xylene & p-Xylene	91	21.021	21.021	0.000	100	306	0.002483	7
56 o-Xylene	91	21.913	21.913	0.000	95	150	0.001156	7
70 Naphthalene	128	30.065	30.056	0.009	100	1834	0.009505	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030518.D

Injection Date: 06-Mar-2015 11:43:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-6

Lab Sample ID: 320-11847-6

Client ID: 34001439

Operator ID: AO

ALS Bottle#: 16

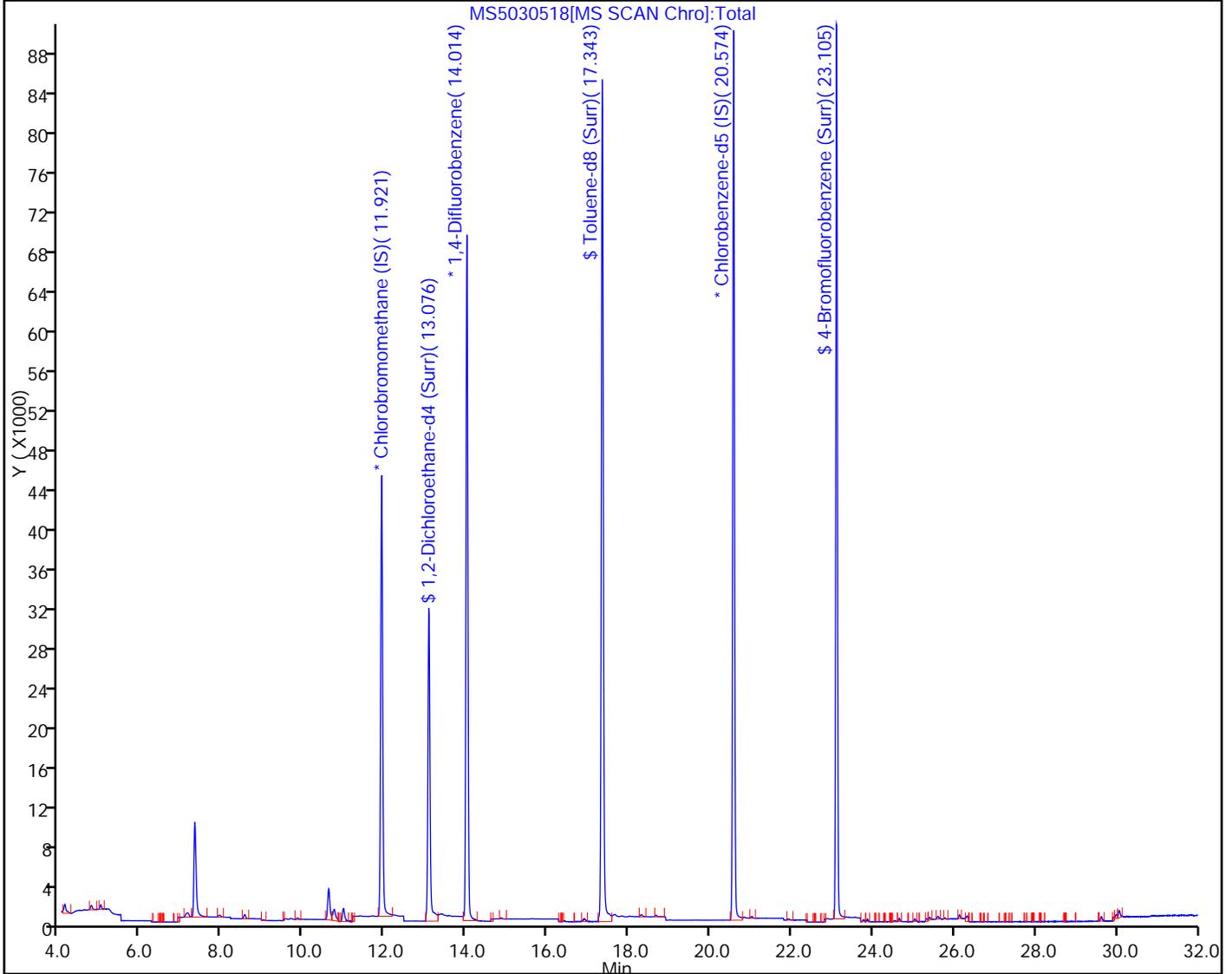
Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34000779 Lab Sample ID: 320-11847-7
 Matrix: Air Lab File ID: MS5030519.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 1267 (mL) Date Analyzed: 03/06/2015 12:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67378 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
108-90-7	Chlorobenzene	ND		0.020	0.0050
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030519.D
 Lims ID: 320-11847-A-7 Lab Sample ID: 320-11847-7
 Client ID: 34000779
 Sample Type: Client
 Inject. Date: 06-Mar-2015 12:41:30 ALS Bottle#: 1 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-7
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 09-Mar-2015 14:02:27 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam Date: 06-Mar-2015 13:21:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.921	11.921	0.000	99	35839	2.00	
* 2 1,4-Difluorobenzene	114	14.014	14.011	0.003	100	170972	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	144020	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	75055	2.34	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	115626	1.91	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	96	93010	1.85	
53 Chlorobenzene	112	20.658	20.658	0.000	51	79	0.000863	7
67 1,2-Dichlorobenzene	146	26.315	26.315	0.000	96	509	0.005619	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150305-19936.b\MS5030519.D

Injection Date: 06-Mar-2015 12:41:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-7

Lab Sample ID: 320-11847-7

Client ID: 34000779

Operator ID: AO

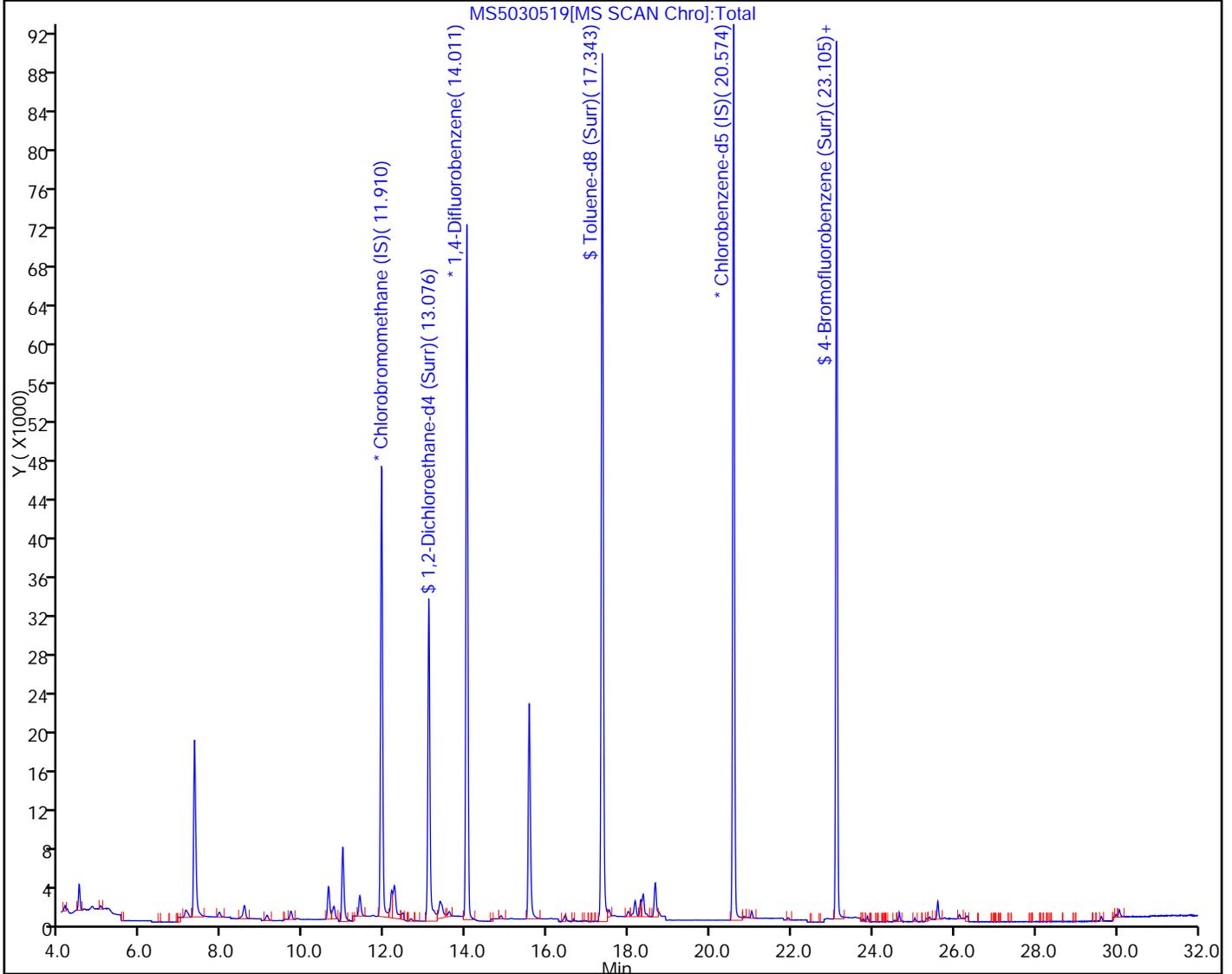
ALS Bottle#: 1 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34002156 Lab Sample ID: 320-11847-9
 Matrix: Air Lab File ID: MS5030916.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 500(mL) Date Analyzed: 03/10/2015 01:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67632 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
71-43-2	Benzene	ND		0.020	0.010
75-09-2	Methylene Chloride	ND		0.20	0.10
67-66-3	Chloroform	ND		0.020	0.0050
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030916.D
 Lims ID: 320-11847-A-9 Lab Sample ID: 320-11847-9
 Client ID: 34002156
 Sample Type: Client
 Inject. Date: 10-Mar-2015 01:26:30 ALS Bottle#: 10 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-9
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 10-Mar-2015 14:29:39 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam

Date: 10-Mar-2015 10:32:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.911	11.921	-0.010	97	41733	2.00	
* 2 1,4-Difluorobenzene	114	14.010	14.011	-0.001	100	200512	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	99	167660	2.00	
\$ 4 1,2-Dichloroethane-d4 (Surr)	65	13.069	13.076	-0.007	64	85435	2.27	
\$ 5 Toluene-d8 (Surr)	100	17.342	17.343	-0.001	100	135135	1.91	
\$ 6 4-Bromofluorobenzene (Surr)	95	23.104	23.105	-0.001	97	110827	1.90	
14 Chloroethane	64	5.849	5.849	0.000	80	47	0.002057	7
22 Methylene Chloride	49	8.542	8.541	0.001	97	1135	0.0157	7
38 Benzene	78	13.397	13.403	-0.006	99	1124	0.008277	7
46 Toluene	91	17.506	17.516	-0.010	99	885	0.005609	7
54 Ethylbenzene	91	20.831	20.839	-0.008	100	228	0.001203	7
55 m-Xylene & p-Xylene	91	21.020	21.021	-0.001	100	583	0.003982	7
56 o-Xylene	91	21.912	21.909	0.003	95	233	0.001512	7
70 Naphthalene	128	30.065	30.056	0.009	100	2947	0.0129	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030916.D

Injection Date: 10-Mar-2015 01:26:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-9

Lab Sample ID: 320-11847-9

Client ID: 34002156

Operator ID: AO

ALS Bottle#: 10

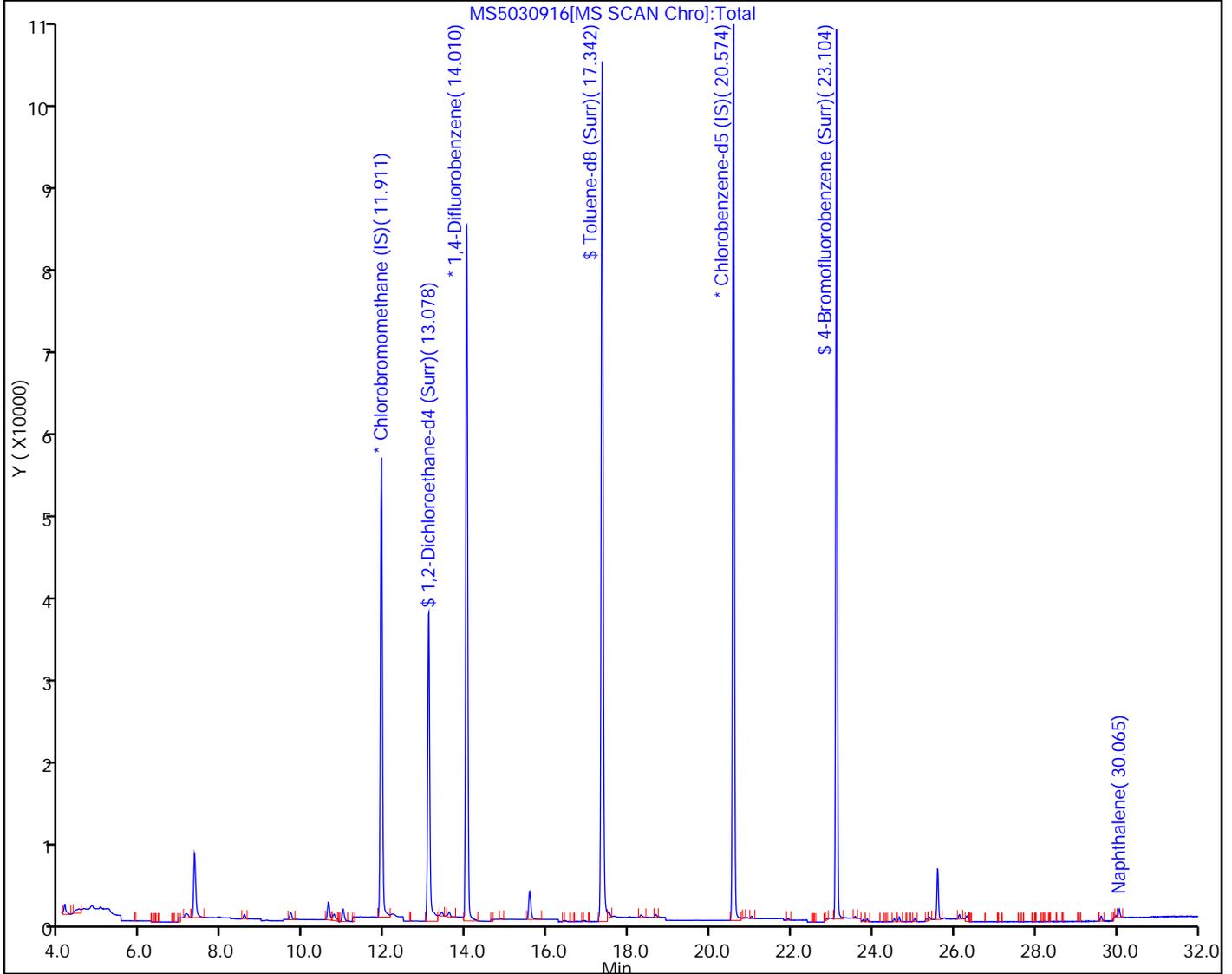
Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001316 Lab Sample ID: 320-11847-10
 Matrix: Air Lab File ID: MS5030917.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 500(mL) Date Analyzed: 03/10/2015 02:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67632 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
71-43-2	Benzene	ND		0.020	0.010
75-09-2	Methylene Chloride	ND		0.20	0.10
67-66-3	Chloroform	ND		0.020	0.0050
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-130
2037-26-5	Toluene-d8 (Surr)	96		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030917.D
 Lims ID: 320-11847-A-10 Lab Sample ID: 320-11847-10
 Client ID: 34001316
 Sample Type: Client
 Inject. Date: 10-Mar-2015 02:26:30 ALS Bottle#: 11 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-10
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 10-Mar-2015 14:29:39 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam Date: 10-Mar-2015 10:32:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.932	11.921	0.011	99	39035	2.00	
* 2 1,4-Difluorobenzene	114	14.020	14.011	0.009	100	190255	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.576	20.574	0.002	99	159845	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.087	13.076	0.011	64	80299	2.25	
\$ 5 Toluene-d8 (Surr)	100	17.344	17.343	0.001	100	129084	1.92	
\$ 6 4-Bromofluorobenzene (Surr	95	23.106	23.105	0.001	98	105758	1.90	
22 Methylene Chloride	49	8.561	8.541	0.020	96	1113	0.0165	7
38 Benzene	78	13.406	13.403	0.003	98	580	0.004501	7
46 Toluene	91	17.526	17.516	0.010	98	261	0.001743	7
54 Ethylbenzene	91	20.841	20.839	0.002	81	210	0.001162	7
55 m-Xylene & p-Xylene	91	21.022	21.021	0.001	99	501	0.003589	7
56 o-Xylene	91	21.911	21.909	0.002	98	235	0.001599	7
70 Naphthalene	128	30.065	30.056	0.009	100	2527	0.0116	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030917.D

Injection Date: 10-Mar-2015 02:26:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-10

Lab Sample ID: 320-11847-10

Client ID: 34001316

Operator ID: AO

ALS Bottle#: 11

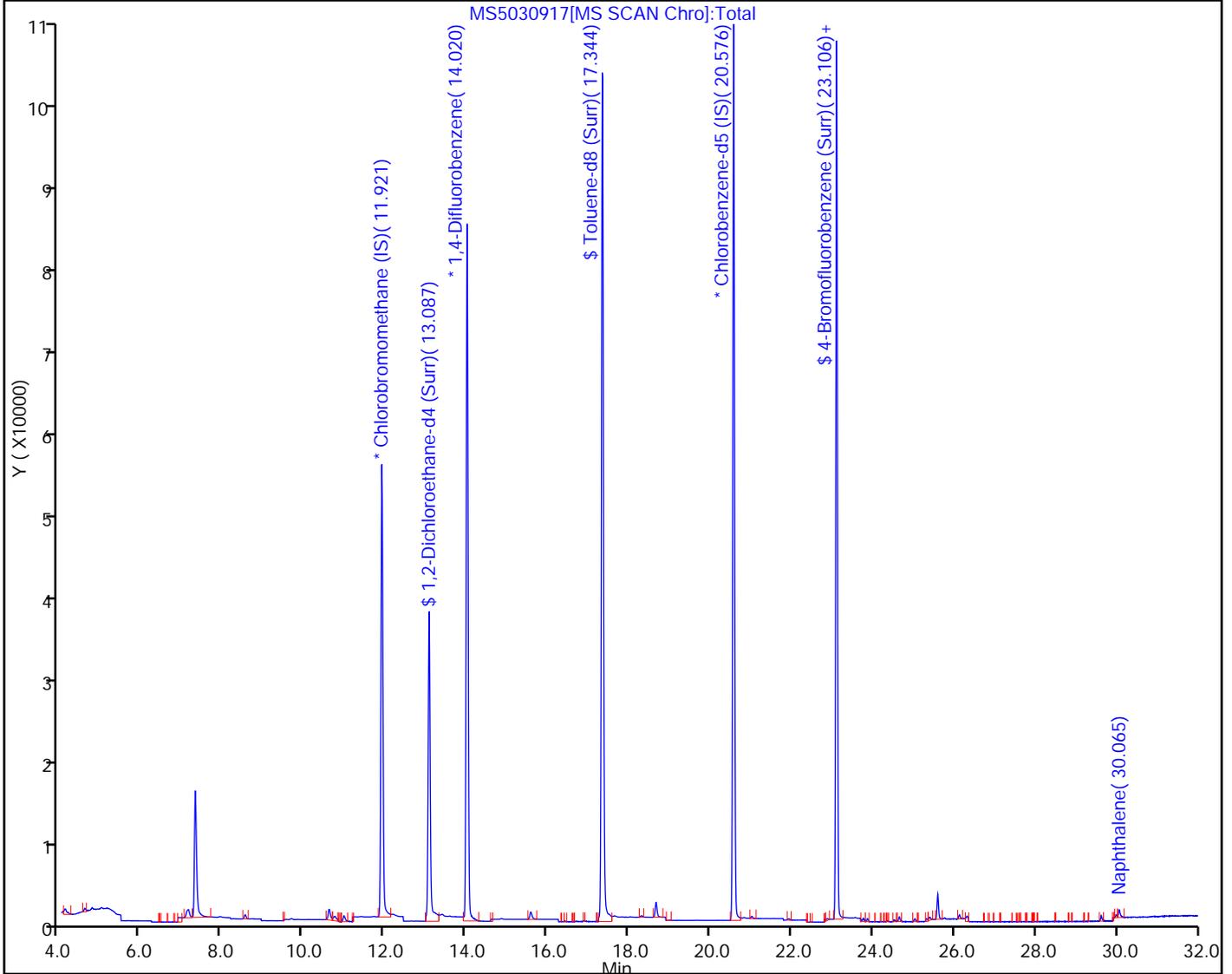
Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34000188 Lab Sample ID: 320-11847-11
 Matrix: Air Lab File ID: MS5030918.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 500(mL) Date Analyzed: 03/10/2015 03:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67632 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
71-43-2	Benzene	ND		0.020	0.010
75-09-2	Methylene Chloride	ND		0.20	0.10
67-66-3	Chloroform	ND		0.020	0.0050
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030918.D
 Lims ID: 320-11847-A-11 Lab Sample ID: 320-11847-11
 Client ID: 34000188
 Sample Type: Client
 Inject. Date: 10-Mar-2015 03:27:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-11
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 10-Mar-2015 14:29:39 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: ortizam

Date: 10-Mar-2015 10:32:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.910	11.921	-0.011	97	37516	2.00	
* 2 1,4-Difluorobenzene	114	14.004	14.011	-0.007	100	176986	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.574	20.574	0.000	98	145759	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.067	13.076	-0.009	64	76884	2.31	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	99	118788	1.90	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	97	94883	1.87	
14 Chloroethane	64	5.827	5.849	-0.022	57	43	0.002093	7
19 1,1,2-Trichloro-1,2,2-trif	101	7.439	7.458	-0.019	99	124	0.001933	7
22 Methylene Chloride	49	8.542	8.541	0.001	97	2085	0.0321	7
38 Benzene	78	13.394	13.403	-0.009	98	552	0.004605	7
46 Toluene	91	17.507	17.516	-0.009	97	609	0.004373	7
54 Ethylbenzene	91	20.839	20.839	0.000	99	226	0.001371	7
55 m-Xylene & p-Xylene	91	21.021	21.021	0.000	96	515	0.004046	7
56 o-Xylene	91	21.909	21.909	0.000	96	234	0.001747	7
70 Naphthalene	128	30.061	30.056	0.004	100	2015	0.0101	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030918.D

Injection Date: 10-Mar-2015 03:27:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-11

Lab Sample ID: 320-11847-11

Client ID: 34000188

Operator ID: AO

ALS Bottle#: 12

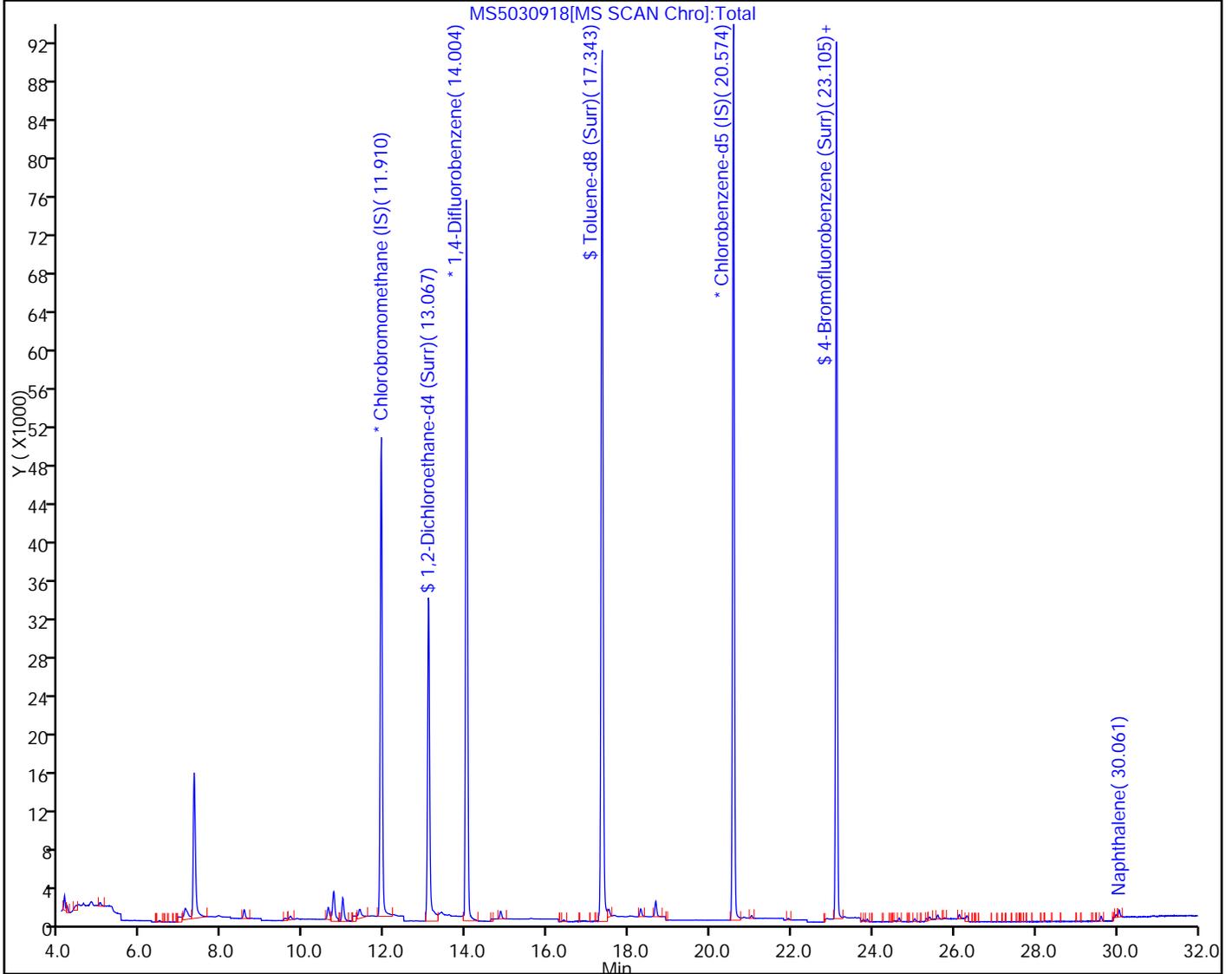
Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-11847-1
 SDG No.: _____
 Client Sample ID: 34001213 Lab Sample ID: 320-11847-12
 Matrix: Air Lab File ID: MS5030919.D
 Analysis Method: TO-15 SIM Date Collected: 02/19/2015 00:00
 Sample wt/vol: 500(mL) Date Analyzed: 03/10/2015 04:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32(mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 67632 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040
71-43-2	Benzene	ND		0.020	0.010
75-09-2	Methylene Chloride	ND		0.20	0.10
67-66-3	Chloroform	ND		0.020	0.0050
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
76-13-1	Freon-113	ND		0.030	0.0050

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		70-130
2037-26-5	Toluene-d8 (Surr)	95		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030919.D
 Lims ID: 320-11847-A-12 Lab Sample ID: 320-11847-12
 Client ID: 34001213
 Sample Type: Client
 Inject. Date: 10-Mar-2015 04:27:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-11847-A-12
 Misc. Info.: 1000ML CANCERTS1000ML CANCERTS
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 10-Mar-2015 14:29:39 Calib Date: 27-Jan-2015 21:15:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150127-18995.b\MS5012711.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: ortizam Date: 10-Mar-2015 10:33:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.910	11.921	-0.011	96	34954	2.00	
* 2 1,4-Difluorobenzene	114	14.007	14.011	-0.004	100	165641	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.575	20.574	0.000	98	139790	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.076	13.076	0.000	64	73154	2.35	
\$ 5 Toluene-d8 (Surr)	100	17.343	17.343	0.000	100	111593	1.91	
\$ 6 4-Bromofluorobenzene (Surr	95	23.105	23.105	0.000	97	92070	1.89	
22 Methylene Chloride	49	8.542	8.541	0.001	97	999	0.0165	7
38 Benzene	78	13.394	13.403	-0.009	97	217	0.001934	7
46 Toluene	91	17.507	17.516	-0.009	94	199	0.001527	7
50 Tetrachloroethene	166	18.907	19.005	-0.097	90	44	0.001258	7
54 Ethylbenzene	91	20.839	20.839	0.000	83	164	0.001038	7
55 m-Xylene & p-Xylene	91	21.021	21.021	0.000	99	269	0.002203	7
56 o-Xylene	91	21.917	21.909	0.008	90	137	0.001066	7
70 Naphthalene	128	30.061	30.056	0.005	100	1940	0.0102	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00154 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150309-20015.b\MS5030919.D

Injection Date: 10-Mar-2015 04:27:30

Instrument ID: ATMS5

Lims ID: 320-11847-A-12

Lab Sample ID: 320-11847-12

Client ID: 34001213

Operator ID: AO

ALS Bottle#: 13

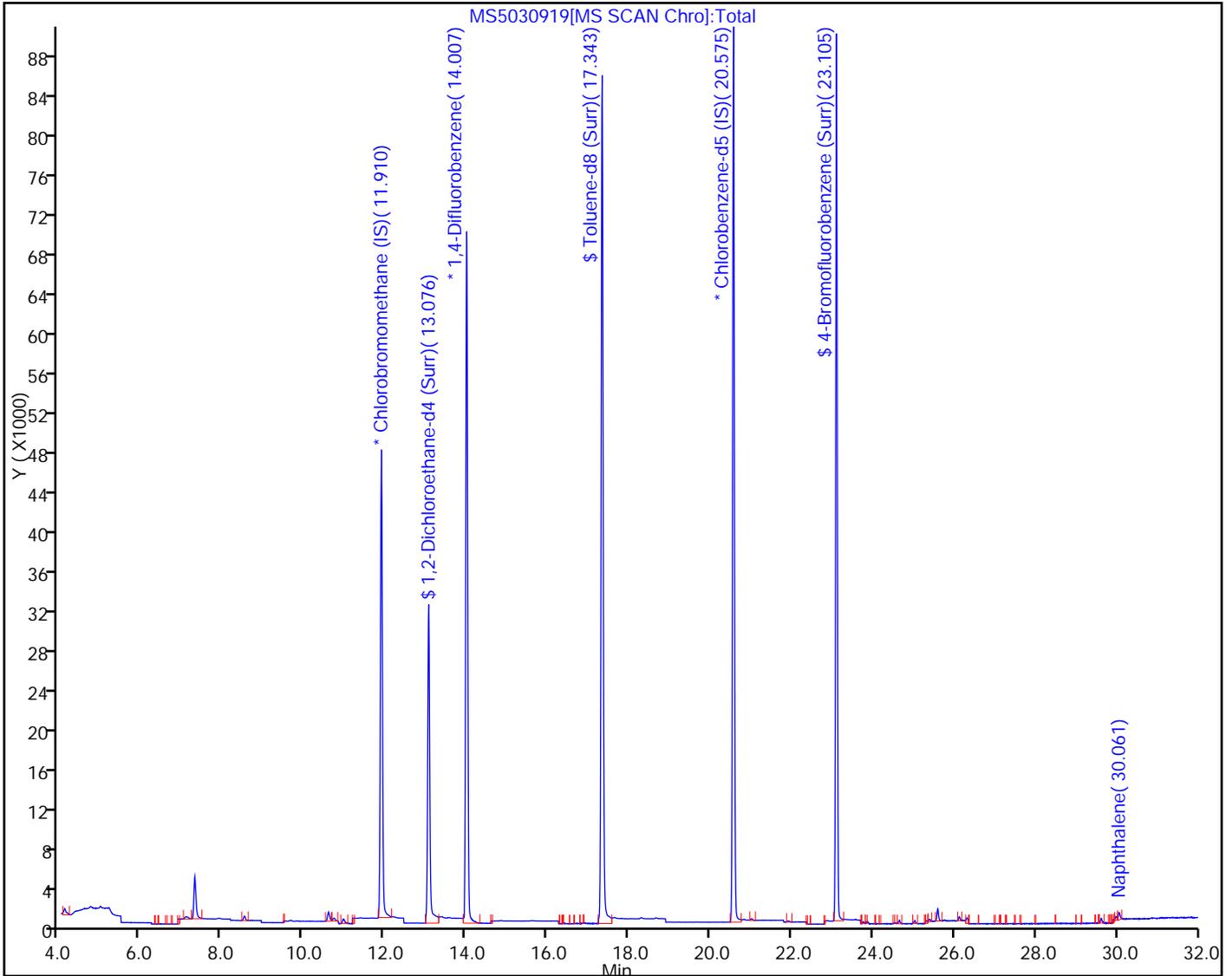
Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000466 Lab Sample ID: 320-12103-1
 Matrix: Air Lab File ID: MS5033108.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 03/31/2015 20:51
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-44-7	Benzyl chloride	ND		0.10	0.010
75-27-4	Bromodichloromethane	ND		0.012	0.0019
108-90-7	Chlorobenzene	ND		0.020	0.0050
75-00-3	Chloroethane	ND		0.045	0.020
67-66-3	Chloroform	ND		0.020	0.0050
74-87-3	Chloromethane	ND		0.20	0.030
124-48-1	Dibromochloromethane	ND		0.010	0.0050
106-93-4	1,2-Dibromoethane (EDB)	ND		0.010	0.0023
95-50-1	1,2-Dichlorobenzene	ND		0.050	0.010
541-73-1	1,3-Dichlorobenzene	ND		0.10	0.010
106-46-7	1,4-Dichlorobenzene	ND		0.10	0.010
75-71-8	Dichlorodifluoromethane	ND		0.020	0.0050
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
78-87-5	1,2-Dichloropropane	ND		0.040	0.020
10061-01-5	cis-1,3-Dichloropropene	ND		0.020	0.0042
10061-02-6	trans-1,3-Dichloropropene	ND		0.020	0.0050
123-91-1	1,4-Dioxane	ND		0.10	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
87-68-3	Hexachlorobutadiene	ND		0.020	0.010
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.025	0.010
75-09-2	Methylene Chloride	ND		0.20	0.10
100-42-5	Styrene	ND		0.030	0.0050
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.020	0.010
127-18-4	Tetrachloroethene	ND		0.020	0.010
108-88-3	Toluene	ND		0.020	0.010
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.030	0.0050
120-82-1	1,2,4-Trichlorobenzene	ND		0.050	0.020
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
79-00-5	1,1,2-Trichloroethane	ND		0.050	0.0050
79-01-6	Trichloroethene	ND		0.020	0.0050

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000466 Lab Sample ID: 320-12103-1
 Matrix: Air Lab File ID: MS5033108.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 03/31/2015 20:51
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-69-4	Trichlorofluoromethane	ND		0.045	0.010
75-01-4	Vinyl chloride	ND		0.020	0.0040
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-130
2037-26-5	Toluene-d8 (Surr)	107		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033108.D
 Lims ID: 320-12103-A-1 Lab Sample ID: 320-12103-1
 Client ID: 34000466
 Sample Type: Client
 Inject. Date: 31-Mar-2015 20:51:30 ALS Bottle#: 10 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-1
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 15:06:38 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam

Date: 01-Apr-2015 15:05:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.889	0.000	95	38926	2.00	
* 2 1,4-Difluorobenzene	114	13.986	13.987	-0.001	100	172774	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	165742	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.047	13.051	-0.004	75	39827	1.95	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.315	0.001	100	127730	2.15	
\$ 6 4-Bromofluorobenzene (Surr	95	23.085	23.086	-0.001	99	92114	1.98	
8 Dichlorodifluoromethane	85	4.181	4.190	-0.009	84	173	0.002948	7
19 1,1,2-Trichloro-1,2,2-trif	101	7.440	7.440	0.000	94	148	0.002748	7
22 Methylene Chloride	49	8.529	8.522	0.007	96	404	0.0150	7
38 Benzene	78	13.374	13.378	-0.004	100	269	0.002577	7
43 1,4-Dioxane	88	15.570	15.537	0.033	98	121	0.004745	7
46 Toluene	91	17.489	17.488	0.001	93	307	0.002348	7
47 trans-1,3-Dichloropropene	75	17.753	17.760	-0.007	52	15	0.000272	7
53 Chlorobenzene	112	20.628	20.634	-0.006	52	179	0.001533	7
55 m-Xylene & p-Xylene	91	20.999	20.997	0.002	99	470	0.003269	7
59 1,1,2,2-Tetrachloroethane	83	22.850	22.858	-0.008	97	102	0.001053	7
65 1,4-Dichlorobenzene	146	25.573	25.572	0.001	98	495	0.004342	7
66 Benzyl chloride	91	25.744	25.738	0.006	98	446	0.002351	7
67 1,2-Dichlorobenzene	146	26.294	26.293	0.001	98	420	0.003579	7
70 Naphthalene	128	30.041	30.038	0.003	100	2730	0.0118	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160

Amount Added: 50.00

Units: mL

Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033108.D

Injection Date: 31-Mar-2015 20:51:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-1

Lab Sample ID: 320-12103-1

Client ID: 34000466

Operator ID: AO

ALS Bottle#: 10

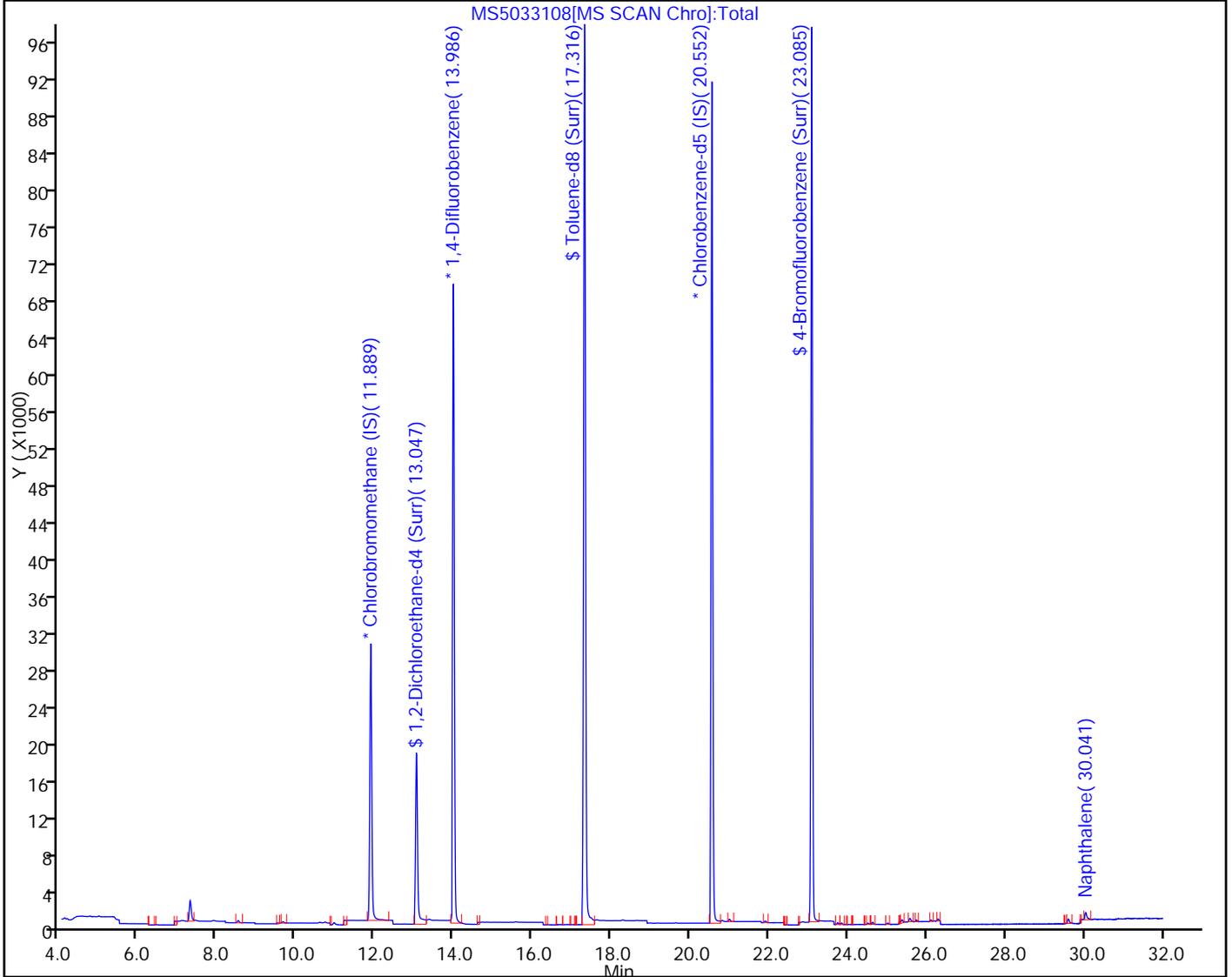
Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000575 Lab Sample ID: 320-12103-2
 Matrix: Air Lab File ID: MS5033109.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 03/31/2015 21:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-130
2037-26-5	Toluene-d8 (Surr)	106		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033109.D
 Lims ID: 320-12103-A-2 Lab Sample ID: 320-12103-2
 Client ID: 34000575
 Sample Type: Client
 Inject. Date: 31-Mar-2015 21:49:30 ALS Bottle#: 11 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-2
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:31:14 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D

Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 09:31:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	96	41103	2.00	
* 2 1,4-Difluorobenzene	114	13.986	13.990	-0.004	100	182388	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	168116	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.047	13.060	-0.013	75	42396	1.97	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	133562	2.13	
\$ 6 4-Bromofluorobenzene (Surr	95	23.085	23.086	-0.001	100	89765	1.90	
38 Benzene	78	13.374	13.378	-0.004	99	369	0.003349	7
46 Toluene	91	17.480	17.488	-0.008	99	242	0.001753	7
54 Ethylbenzene	91	20.817	20.816	0.001	99	195	0.001012	7
55 m-Xylene & p-Xylene	91	20.991	20.997	-0.006	99	327	0.002242	7
56 o-Xylene	91	21.887	21.890	-0.003	94	123	0.000807	7

QC Flag Legend

Processing Flags

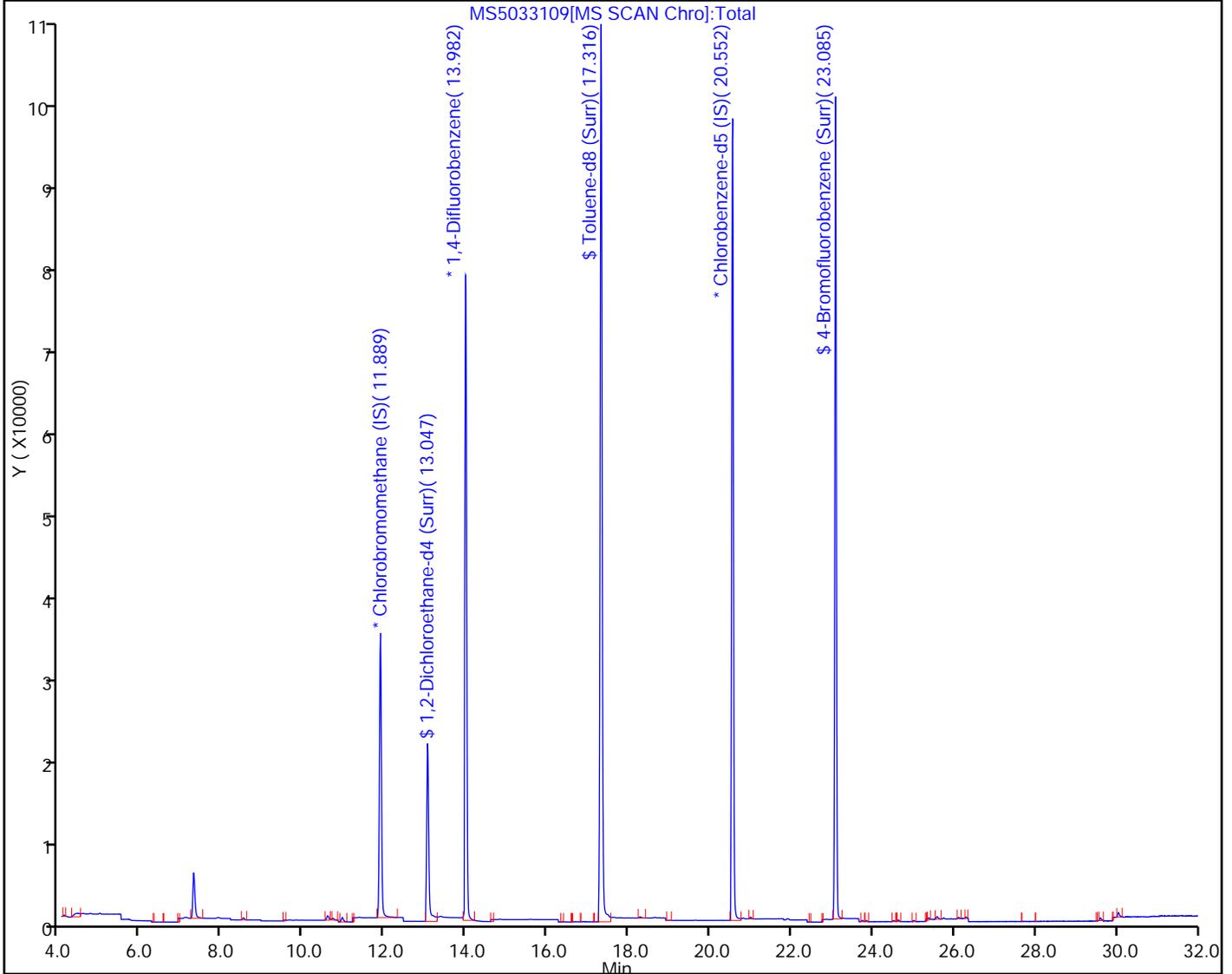
7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033109.D
Injection Date: 31-Mar-2015 21:49:30 Instrument ID: ATMS5
Lims ID: 320-12103-A-2 Lab Sample ID: 320-12103-2
Client ID: 34000575
Operator ID: AO ALS Bottle#: 11 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: TO15 SIM Limit Group: MSA - TO-15_SIM_ICAL



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FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34001249 Lab Sample ID: 320-12103-3
 Matrix: Air Lab File ID: MS5033110.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 03/31/2015 22:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-130
2037-26-5	Toluene-d8 (Surr)	106		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033110.D
 Lims ID: 320-12103-A-3 Lab Sample ID: 320-12103-3
 Client ID: 34001249
 Sample Type: Client
 Inject. Date: 31-Mar-2015 22:48:30 ALS Bottle#: 12 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-3
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:31:14 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 09:31:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	100	43381	2.00	
* 2 1,4-Difluorobenzene	114	13.986	13.990	-0.004	100	195248	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	178630	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.047	13.060	-0.013	75	45972	2.00	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	142076	2.11	
\$ 6 4-Bromofluorobenzene (Surr	95	23.085	23.086	-0.001	100	96515	1.92	
38 Benzene	78	13.374	13.378	-0.004	100	847	0.007181	7
46 Toluene	91	17.489	17.488	0.001	97	614	0.004155	7
54 Ethylbenzene	91	20.809	20.816	-0.007	100	214	0.001045	7
55 m-Xylene & p-Xylene	91	20.999	20.997	0.002	99	597	0.003853	7
56 o-Xylene	91	21.887	21.890	-0.003	98	215	0.001328	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033110.D

Injection Date: 31-Mar-2015 22:48:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-3

Lab Sample ID: 320-12103-3

Client ID: 34001249

Operator ID: AO

ALS Bottle#: 12

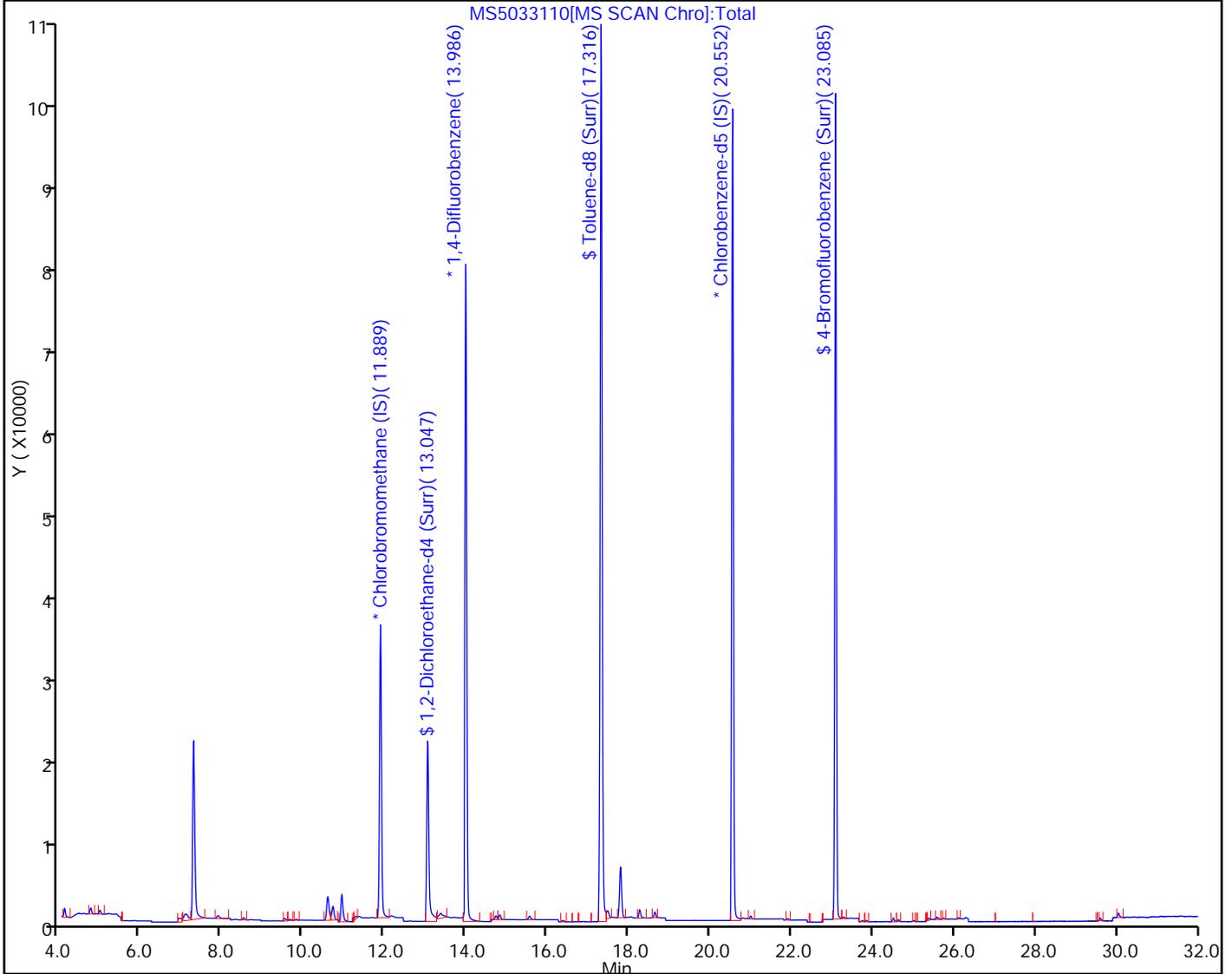
Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000919 Lab Sample ID: 320-12103-5
 Matrix: Air Lab File ID: MS5033112.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 01:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-130
2037-26-5	Toluene-d8 (Surr)	105		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033112.D
 Lims ID: 320-12103-A-5 Lab Sample ID: 320-12103-5
 Client ID: 34000919
 Sample Type: Client
 Inject. Date: 01-Apr-2015 01:01:30 ALS Bottle#: 1 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-5
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 11:23:24 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 09:59:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	100	42237	2.00	
* 2 1,4-Difluorobenzene	114	13.989	13.990	-0.001	100	192250	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	171528	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.056	13.060	-0.004	76	44774	1.97	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	138922	2.10	
\$ 6 4-Bromofluorobenzene (Surr	95	23.085	23.086	-0.001	100	92320	1.91	

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033112.D

Injection Date: 01-Apr-2015 01:01:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-5

Lab Sample ID: 320-12103-5

Client ID: 34000919

Operator ID: AO

ALS Bottle#: 1

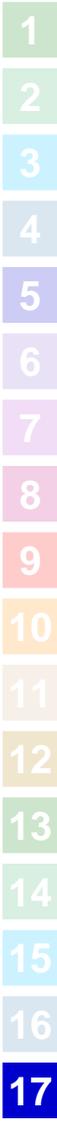
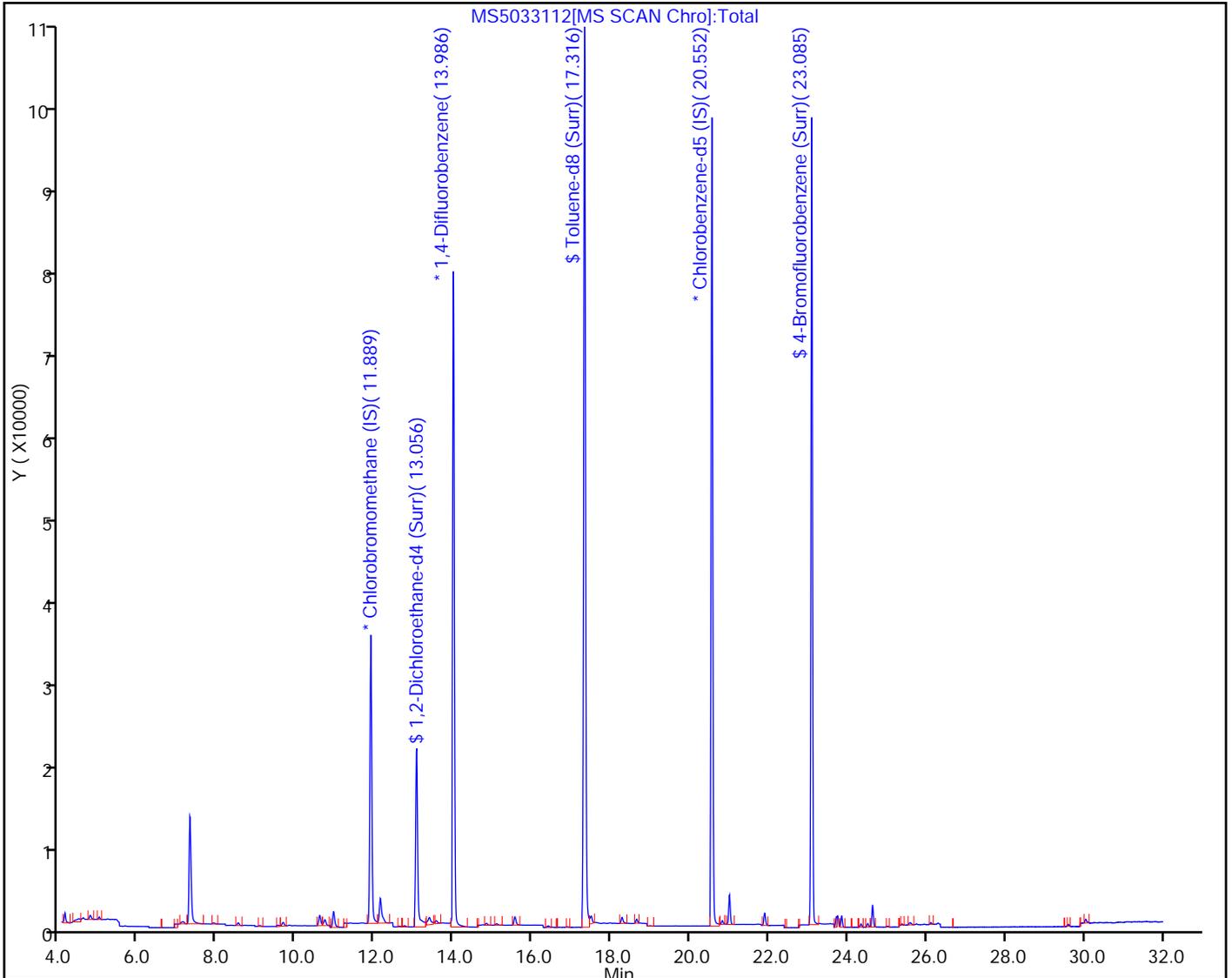
Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000497 Lab Sample ID: 320-12103-6
 Matrix: Air Lab File ID: MS5033113.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 02:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-130
2037-26-5	Toluene-d8 (Surr)	104		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033113.D
 Lims ID: 320-12103-A-6 Lab Sample ID: 320-12103-6
 Client ID: 34000497
 Sample Type: Client
 Inject. Date: 01-Apr-2015 02:00:30 ALS Bottle#: 15 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-6
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 11:23:55 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:45:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	100	42824	2.00	
* 2 1,4-Difluorobenzene	114	13.986	13.990	-0.004	100	196664	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	175606	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.047	13.060	-0.013	75	45576	1.96	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	141250	2.09	
\$ 6 4-Bromofluorobenzene (Surr	95	23.085	23.086	-0.001	99	92488	1.87	
14 Chloroethane	64	5.841	5.845	-0.004	99	95	0.005821	7
40 Trichloroethene	130	14.732	14.733	-0.001	94	153	0.003300	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033113.D

Injection Date: 01-Apr-2015 02:00:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-6

Lab Sample ID: 320-12103-6

Client ID: 34000497

Operator ID: AO

ALS Bottle#: 15

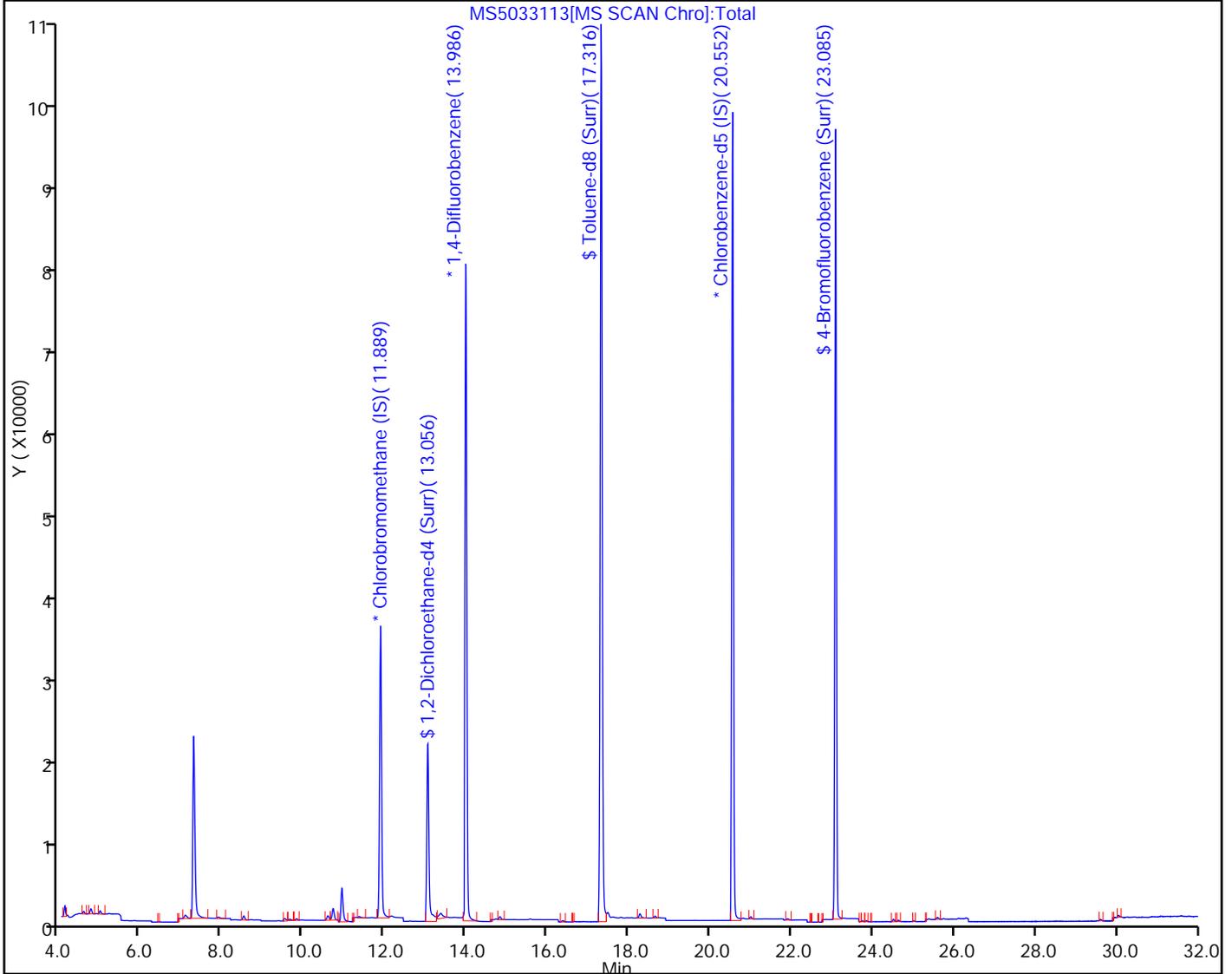
Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34001559 Lab Sample ID: 320-12103-7
 Matrix: Air Lab File ID: MS5033114.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-130
2037-26-5	Toluene-d8 (Surr)	107		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033114.D
 Lims ID: 320-12103-A-7 Lab Sample ID: 320-12103-7
 Client ID: 34001559
 Sample Type: Client
 Inject. Date: 01-Apr-2015 02:58:30 ALS Bottle#: 16 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-7
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:58:55 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:45:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	100	42794	2.00	
* 2 1,4-Difluorobenzene	114	13.987	13.990	-0.003	100	190915	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.551	20.551	0.000	100	173923	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.051	13.060	-0.009	76	45771	2.03	
\$ 5 Toluene-d8 (Surr)	100	17.315	17.324	-0.009	100	141141	2.15	
\$ 6 4-Bromofluorobenzene (Surr	95	23.086	23.086	0.000	99	93060	1.90	
38 Benzene	78	13.378	13.378	0.000	100	359	0.003113	7
46 Toluene	91	17.497	17.488	0.009	98	164	0.001135	7
55 m-Xylene & p-Xylene	91	20.997	20.997	0.000	98	264	0.001750	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033114.D

Injection Date: 01-Apr-2015 02:58:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-7

Lab Sample ID: 320-12103-7

Client ID: 34001559

Operator ID: AO

ALS Bottle#: 16

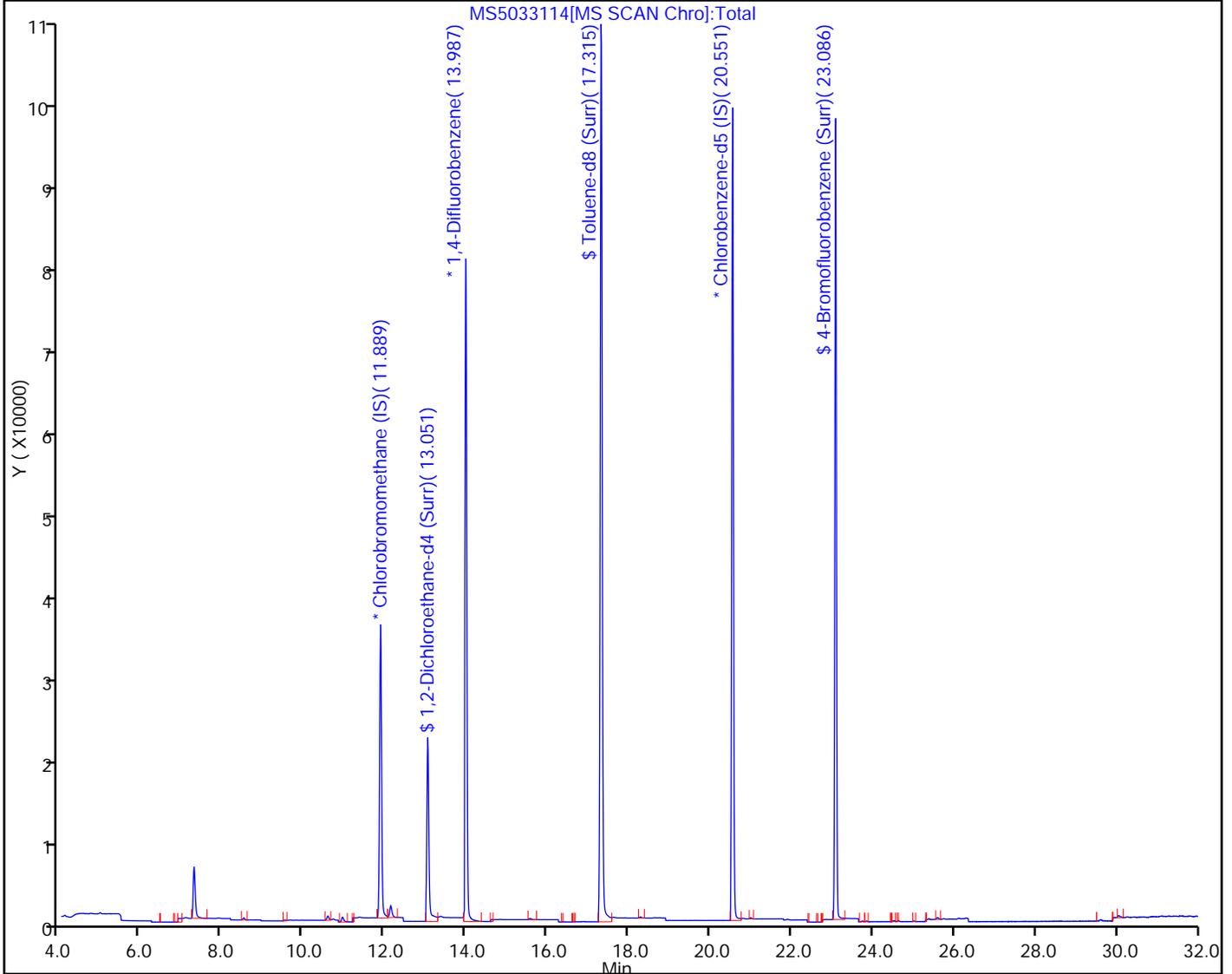
Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 34000160 Lab Sample ID: 320-12103-8
 Matrix: Air Lab File ID: MS5033115.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 03:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		70-130
2037-26-5	Toluene-d8 (Surr)	105		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033115.D
 Lims ID: 320-12103-A-8 Lab Sample ID: 320-12103-8
 Client ID: 34000160
 Sample Type: Client
 Inject. Date: 01-Apr-2015 03:56:30 ALS Bottle#: 4 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-8
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:58:55 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:45:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.900	11.900	0.000	97	41952	2.00	
* 2 1,4-Difluorobenzene	114	13.988	13.990	-0.002	100	191077	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	172096	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.049	13.060	-0.011	76	44808	1.99	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	138447	2.10	
\$ 6 4-Bromofluorobenzene (Surr	95	23.087	23.086	0.001	100	91612	1.89	
38 Benzene	78	13.385	13.378	0.007	98	303	0.002625	7
46 Toluene	91	17.498	17.488	0.010	93	164	0.001134	7
55 m-Xylene & p-Xylene	91	20.998	20.997	0.001	98	273	0.001829	7
56 o-Xylene	91	21.891	21.890	0.001	97	138	0.000885	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033115.D

Injection Date: 01-Apr-2015 03:56:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-8

Lab Sample ID: 320-12103-8

Client ID: 34000160

Operator ID: AO

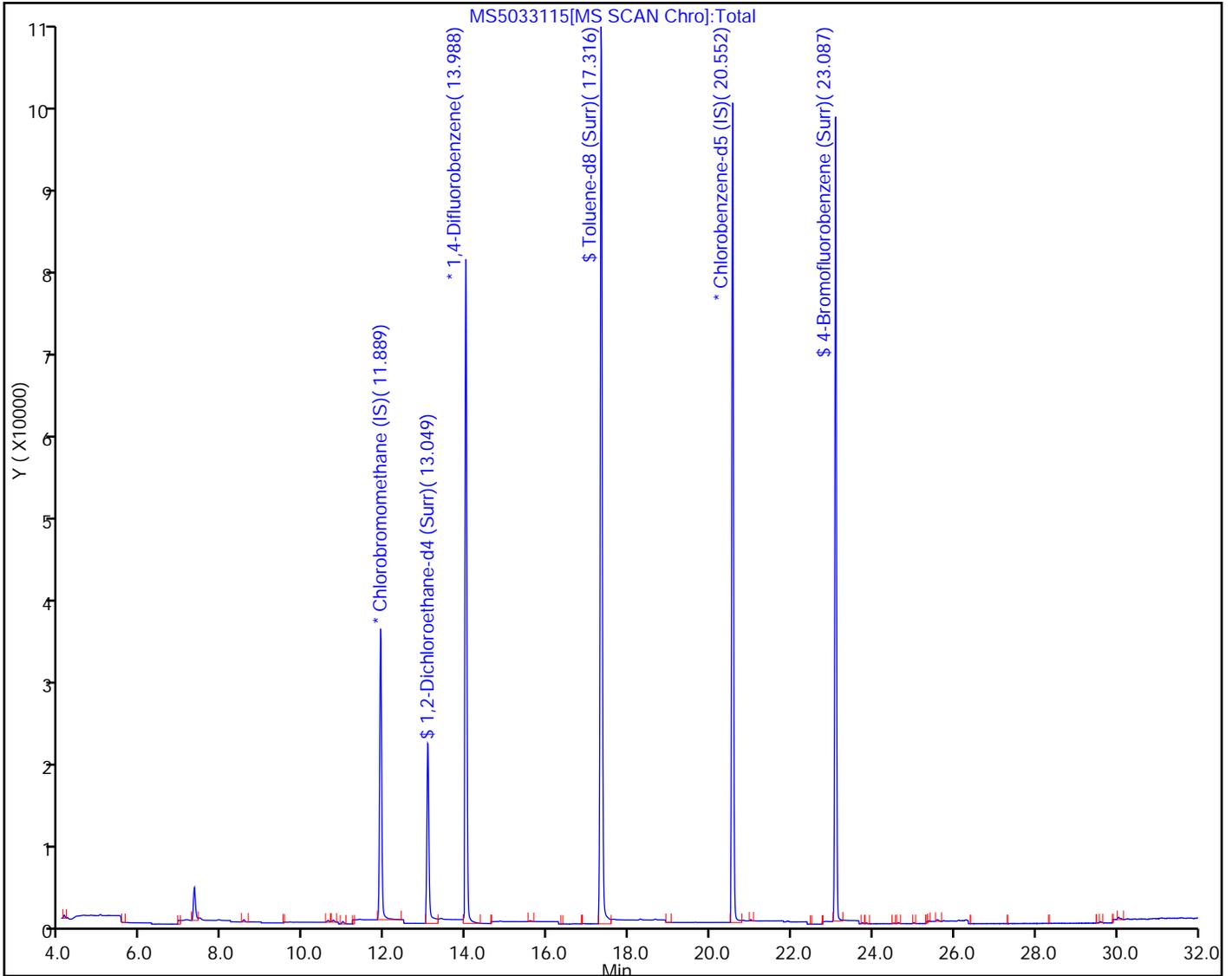
ALS Bottle#: 4 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 8353 Lab Sample ID: 320-12103-9
 Matrix: Air Lab File ID: MS5033116.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 04:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-130
2037-26-5	Toluene-d8 (Surr)	110		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033116.D
 Lims ID: 320-12103-A-9 Lab Sample ID: 320-12103-9
 Client ID: 8353
 Sample Type: Client
 Inject. Date: 01-Apr-2015 04:55:30 ALS Bottle#: 5 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-9
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 11:24:31 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:46:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	100	43374	2.00	
* 2 1,4-Difluorobenzene	114	13.983	13.990	-0.007	100	191372	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.551	20.551	0.000	100	177833	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.051	13.060	-0.009	76	46407	2.06	
\$ 5 Toluene-d8 (Surr)	100	17.315	17.324	-0.009	100	144626	2.19	
\$ 6 4-Bromofluorobenzene (Surr	95	23.086	23.086	0.000	100	94881	1.90	
14 Chloroethane	64	5.823	5.845	-0.022	99	49	0.002964	7

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033116.D

Injection Date: 01-Apr-2015 04:55:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-9

Lab Sample ID: 320-12103-9

Client ID: 8353

Operator ID: AO

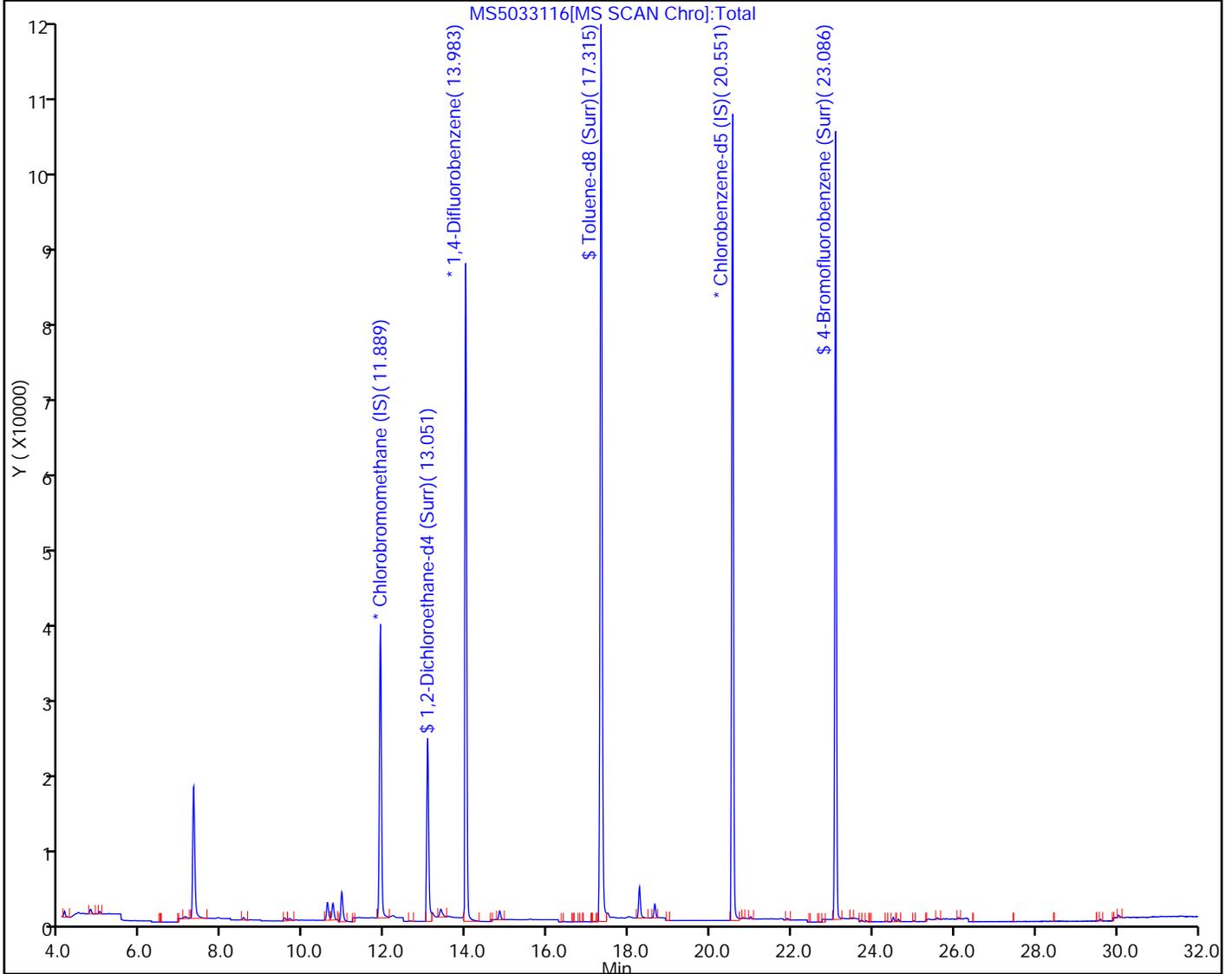
ALS Bottle#: 5 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 7989 Lab Sample ID: 320-12103-10
 Matrix: Air Lab File ID: MS5033117.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 05:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-130
2037-26-5	Toluene-d8 (Surr)	108		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033117.D
 Lims ID: 320-12103-A-10 Lab Sample ID: 320-12103-10
 Client ID: 7989
 Sample Type: Client
 Inject. Date: 01-Apr-2015 05:55:30 ALS Bottle#: 6 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-10
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:58:55 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam

Date: 01-Apr-2015 10:46:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	98	42184	2.00	
* 2 1,4-Difluorobenzene	114	13.987	13.990	-0.003	100	188189	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.553	20.551	0.002	100	170986	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.051	13.060	-0.009	76	45710	2.06	
\$ 5 Toluene-d8 (Surr)	100	17.317	17.324	-0.007	100	140347	2.17	
\$ 6 4-Bromofluorobenzene (Surr	95	23.079	23.086	-0.007	96	92269	1.92	
38 Benzene	78	13.378	13.378	0.000	100	305	0.002683	7
46 Toluene	91	17.490	17.488	0.002	99	157	0.001102	7
55 m-Xylene & p-Xylene	91	20.999	20.997	0.002	95	195	0.001315	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033117.D

Injection Date: 01-Apr-2015 05:55:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-10

Lab Sample ID: 320-12103-10

Client ID: 7989

Operator ID: AO

ALS Bottle#: 6

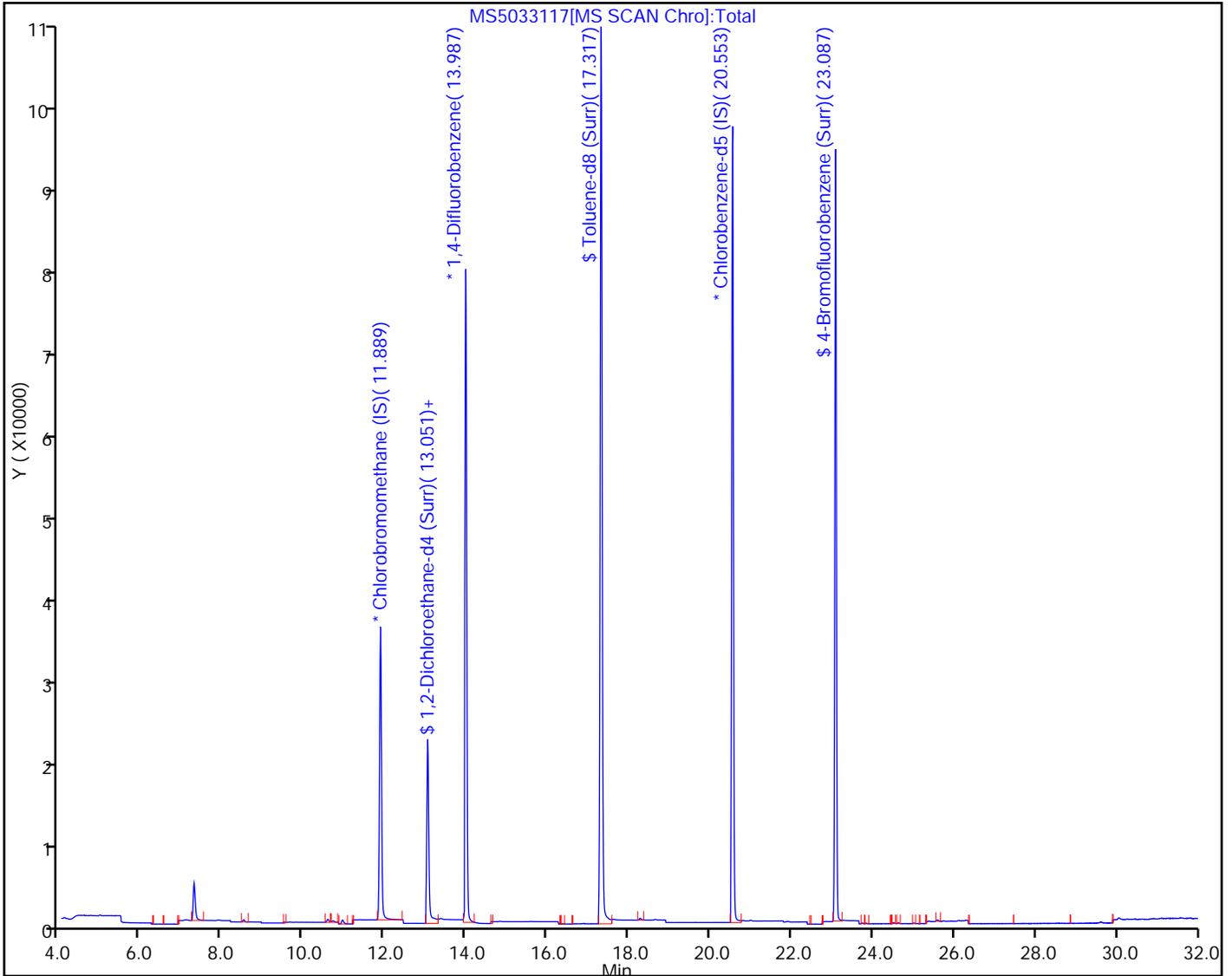
Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 8219 Lab Sample ID: 320-12103-11
 Matrix: Air Lab File ID: MS5033118.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 06:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	ND		0.020	0.0050
107-06-2	1,2-Dichloroethane	ND		0.020	0.0043
75-35-4	1,1-Dichloroethene	ND		0.020	0.0050
156-59-2	cis-1,2-Dichloroethene	ND		0.020	0.0023
156-60-5	trans-1,2-Dichloroethene	ND		0.020	0.0050
127-18-4	Tetrachloroethene	ND		0.020	0.010
71-55-6	1,1,1-Trichloroethane	ND		0.020	0.0018
75-00-3	Chloroethane	ND		0.045	0.020
79-01-6	Trichloroethene	ND		0.020	0.0050
75-01-4	Vinyl chloride	ND		0.020	0.0040

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-130
2037-26-5	Toluene-d8 (Surr)	107		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033118.D
 Lims ID: 320-12103-A-11 Lab Sample ID: 320-12103-11
 Client ID: 8219
 Sample Type: Client
 Inject. Date: 01-Apr-2015 06:57:30 ALS Bottle#: 7 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-11
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 11:24:48 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:46:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	97	43078	2.00	
* 2 1,4-Difluorobenzene	114	13.987	13.990	-0.003	100	192913	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.551	20.551	0.000	100	175835	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.051	13.060	-0.009	76	46469	2.04	
\$ 5 Toluene-d8 (Surr)	100	17.315	17.324	-0.009	100	142677	2.15	
\$ 6 4-Bromofluorobenzene (Surr	95	23.086	23.086	0.000	99	93469	1.89	

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033118.D

Injection Date: 01-Apr-2015 06:57:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-11

Lab Sample ID: 320-12103-11

Client ID: 8219

Operator ID: AO

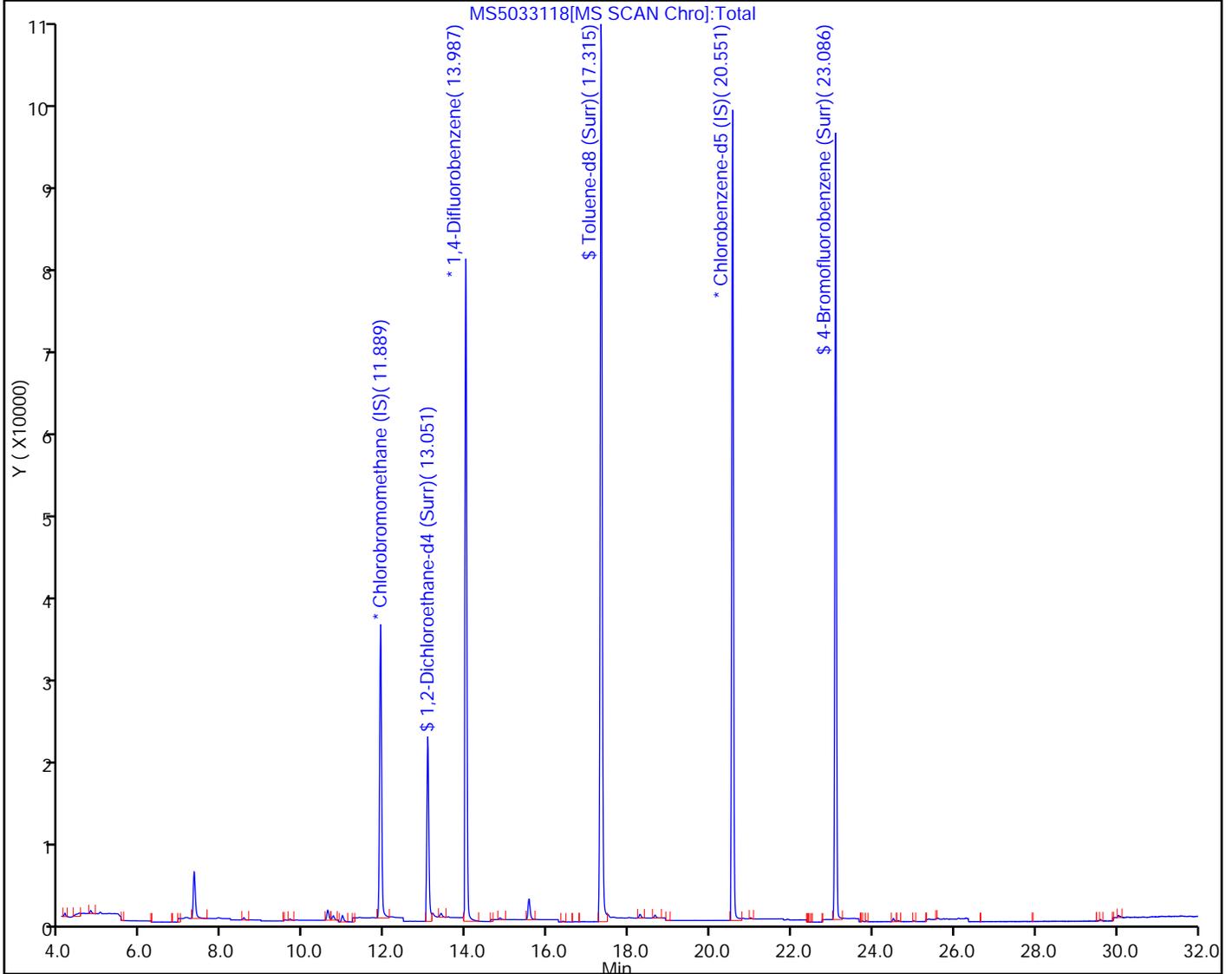
ALS Bottle#: 7 Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-12103-1
 SDG No.: _____
 Client Sample ID: 8217 Lab Sample ID: 320-12103-12
 Matrix: Air Lab File ID: MS5033119.D
 Analysis Method: TO-15 SIM Date Collected: 03/13/2015 00:00
 Sample wt/vol: 1000 (mL) Date Analyzed: 04/01/2015 07:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 69922 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		0.020	0.010
100-41-4	Ethylbenzene	ND		0.020	0.010
91-20-3	Naphthalene	ND		0.013	0.010
108-88-3	Toluene	ND		0.020	0.010
179601-23-1	m,p-Xylene	ND		0.040	0.020
95-47-6	o-Xylene	ND		0.020	0.010

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-130
2037-26-5	Toluene-d8 (Surr)	107		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033119.D
 Lims ID: 320-12103-A-12 Lab Sample ID: 320-12103-12
 Client ID: 8217
 Sample Type: Client
 Inject. Date: 01-Apr-2015 07:56:30 ALS Bottle#: 8 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-12103-A-12
 Operator ID: AO Instrument ID: ATMS5
 Method: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\TO15 SIM.m
 Limit Group: MSA - TO-15_SIM_ICAL
 Last Update: 01-Apr-2015 09:58:55 Calib Date: 26-Mar-2015 03:17:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\SACCHROM\ChromData\ATMS5\20150326-20538.b\MS5032518.D
 Column 1 : Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: ortizam Date: 01-Apr-2015 10:46:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	11.889	11.900	-0.011	98	42876	2.00	
* 2 1,4-Difluorobenzene	114	13.984	13.990	-0.006	100	193119	2.00	
* 3 Chlorobenzene-d5 (IS)	117	20.552	20.551	0.001	100	174641	2.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.049	13.060	-0.011	76	46905	2.06	
\$ 5 Toluene-d8 (Surr)	100	17.316	17.324	-0.008	100	142850	2.15	
\$ 6 4-Bromofluorobenzene (Surr	95	23.087	23.086	0.001	99	94367	1.92	
38 Benzene	78	13.376	13.378	-0.002	98	257	0.002203	7
46 Toluene	91	17.489	17.488	0.001	98	135	0.000924	7
55 m-Xylene & p-Xylene	91	20.991	20.997	-0.006	96	199	0.001314	7

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

VASUISIM_00160 Amount Added: 50.00 Units: mL Run Reagent

TestAmerica Sacramento

Data File: \\SACCHROM\ChromData\ATMS5\20150331-20662.b\MS5033119.D

Injection Date: 01-Apr-2015 07:56:30

Instrument ID: ATMS5

Lims ID: 320-12103-A-12

Lab Sample ID: 320-12103-12

Client ID: 8217

Operator ID: AO

ALS Bottle#: 8

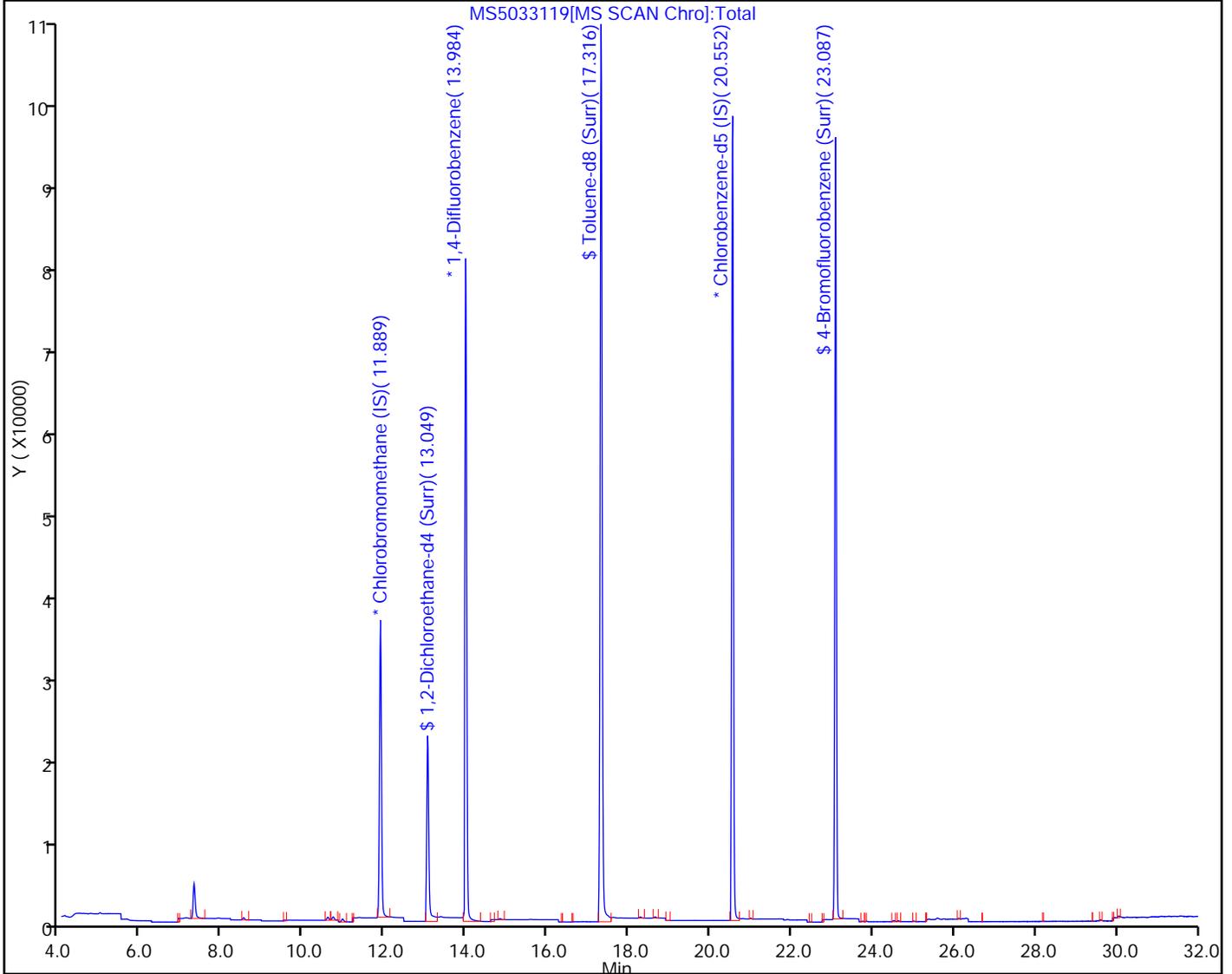
Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: TO15 SIM

Limit Group: MSA - TO-15_SIM_ICAL



APPENDIX I

Quality Assurance/Quality Control Documentation

Data Usability Summary Report (DUSR)
1160 Kern Ave
Analytical Laboratory: TestAmerica, Inc. - West Sacramento, CA
Sample Delivery Group # 320-12488-1

Analytical results for the project samples were reviewed to evaluate the data usability. Data was assessed in accordance with guidance from the following Federal and/or State guidance documents:

- USEPA National Functional Guidelines for Organic Data Review (EPA 540-R-08-01) and/or USEPA National Functional Guidelines for Low Concentration Organic Data Review (EPA 540-R-00-006)

and method protocol criteria where applicable as prescribed by "Test Methods for Evaluating Solid Waste", SW846, Update III, 1996, or Standard Methods for the Examination of Water and Wastewater, Eds 18-20.

This DUSR pertains to the following samples:

Sample ID
AMBIENT-04092015
IA-02-04092015
IA-02B-04092015
IA-05-04092015
IA-06-04092015
IA-07-04092015

Project Samples were analyzed according to the following analytical methods:

	Parameter	Analytical Method	Holding Time Criteria
1.	VOCs	EPA TO-15	30 days

The following items/criteria applicable to the analysis of project samples and associated QA/QC procedures were reviewed.

- Holding Times
- Blank Sample Analysis
- System Monitoring Compound Recoveries
- Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries
- Field Duplicate Sample Analysis
- Sample Data Reporting Format
- Data Qualifiers
- Summary

Preservation and Holding Times

Maximum allowable holding times, measured from the time of sample collection to the time of sample preparation or analysis, were met for each project sample analyzed as part of this sample delivery group. No qualification of the data is recommended.

Blank Sample Analysis

In accordance with cited USEPA guidelines, positive sample results should be reported unless the concentration of the compound in the project sample is less than or equal to 10 times (10X) the amount in any blank for metals and the common organic laboratory contaminants (methylene chloride, acetone, 2-butanone, cyclohexane, and phthalate esters), or 5 times (5X) the amount for other target compounds. Target analytes were not detected in associated blank samples (trip, equipment, method) prepared and analyzed concurrently with the project samples. No qualification of the data is recommended.

System Monitoring Compound Recoveries

System monitoring/surrogate compounds are added to each sample prior to analysis of organic parameters to confirm the efficiency of the sample preparation procedure. The calculated recovery for each surrogate compound was evaluated to confirm the accuracy of the reported results. The calculated recovery of these compounds fell within the laboratory specific quality control criteria. No qualification of the data is recommended.

Laboratory Control Samples, Matrix Spike/Matrix Spike Duplicate Recoveries

Analytical precision and accuracy was evaluated based on the laboratory control and matrix spike sample analyses performed concurrently with the project samples. For matrix spike samples, after the addition of a known amount of each target analyte to the sample matrix, the sample was analyzed to confirm the ability to identify these compounds within the sample matrix. For LCS analyses, after the addition of a known amount of each target analyte into laboratory reagent water, the sample was analyzed to confirm the ability of the analytical system to accurately quantify the compounds. The reported recovery of MS/MSD and LCS analyses fell within the laboratory QA acceptance criteria. No qualification of the data is recommended.

Field Duplicate Sample Analysis

The overall variability attributable to the sampling procedure, sample matrix, and laboratory procedures, was evaluated by assessing the relative percent difference (RPD) data from field duplicate samples. All calculated RPD values were within matrix specific data quality objectives, with the exception of results qualified "J" as shown in the table(s) below:

Target Analyte(s)	Original Sample ID.	FD Sample ID.	%RPD	Flag Original and FD sample results with:
	IA-02-04092015	IA-02B-04092015		
Chlorobenzene	0.076	0.07	8%	
Tetrachloroethene	1	1	0%	
Freon 113	0.6	0.63	5%	
Trichloroethene	1.6	1.7	6%	
1,1,1-Trichloroethane	0.073	0.069	6%	

Action:

If the sample matrix is solid and the %RPD is greater than 50%, the original sample results are qualified "J". If the sample matrix is water or air and the %RPD is greater than 35%, the original sample results are qualified "J".

Sample Data Reporting Format

The sample data are presented using USEPA Contract Laboratory Protocol (CLP) format or equivalent. The data package has been reviewed for completeness and found to contain each required sample result and associated QA/QC report form. The reporting format is complete and compliant with the objectives of the project. No qualification of the data is recommended.

Data Qualifiers

Samples that contain results between the MDL and RL were flagged as estimated, "J", by the laboratory. The data user should be aware that there is a possibility of false positive or mis-identification at the quantitation levels. The laboratory also qualified results when target analytes were detected in the associated method/preparation blank sample. Based on a spot check of the data qualifiers used, these flags appeared to be applied to the reported results in accordance with EPA guidance.

Summary

The results presented in each report were found to be compliant with the data quality objectives for the project and usable. Based on our review, the usability of the data is 100%, with the few exceptions noted above.