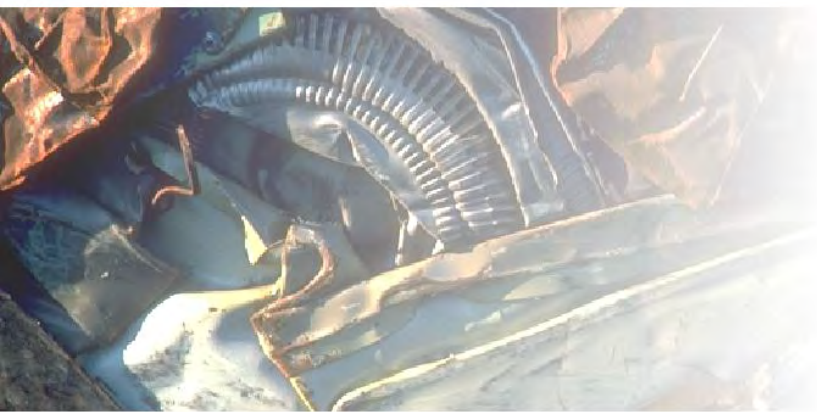
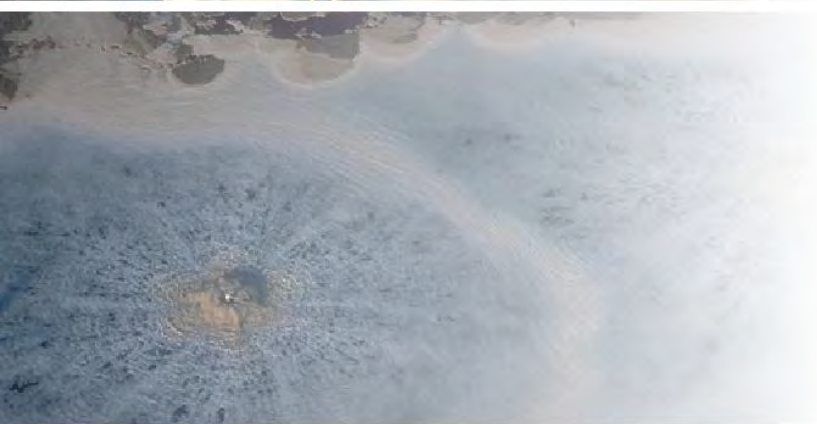


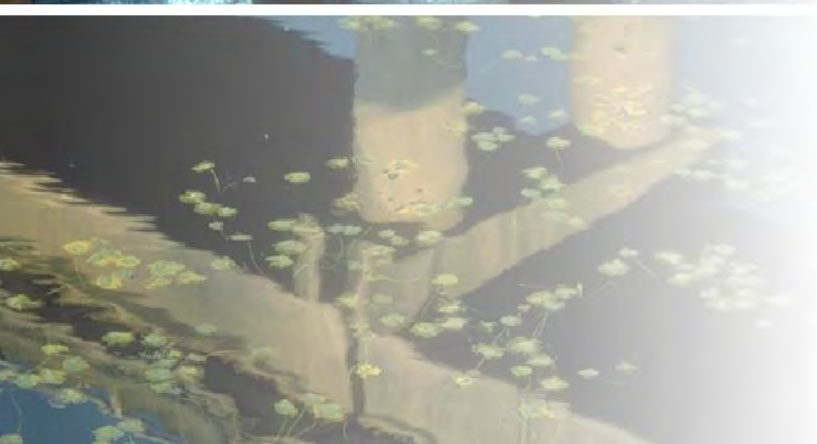
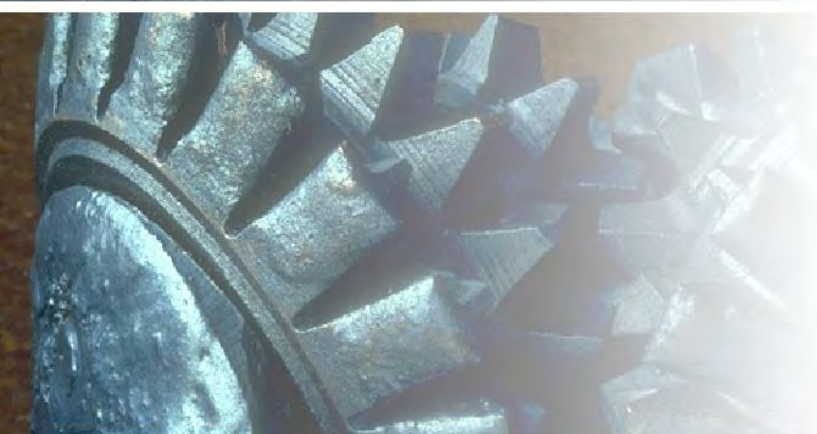
***Data Gap Investigation Report
Frank Wear Site
Yakima, Washington***



***Prepared for
State of Washington
Department of Ecology***



***September 12, 2012
17800-23/Task 3***





***Data Gap Investigation Report
Frank Wear Site
Yakima, Washington***

***Prepared for
State of Washington
Department of Ecology***

***September 18, 2012
17800-23***

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DATA GAP INVESTIGATION REPORT

FRANK WEAR SITE

YAKIMA, WASHINGTON

1.0 INTRODUCTION

Hart Crowser has prepared this Data Gap Investigation (DGI) Report for the former Frank Wear dry cleaner (site) in Yakima, Washington (Figure 1). All work was performed at the request of the Washington Department of Ecology (Ecology) under Task 3 of Work Assignment Number C110144W and Amendment 1.

1.1 Purpose

The purpose of this data gap investigation was to address data gaps with respect to delineating chlorinated volatile organic compound (cVOC) contamination in soil and groundwater at the site. The 2007 Feasibility Study for the site identified *in situ* bioremediation as the presumed preferred groundwater remedy (Hart Crowser 2007). In order to successfully execute this *in situ* bioremediation approach, shallow cVOC plume delineation and baseline bioremediation assessments were necessary to finalize a design. The specific objectives of this data gap investigation included the following:

- Shallow cVOC plume delineation;
- Deep groundwater zone contamination characterization; and
- Baseline bioremediation evaluation.

1.2 Scope of Work

To accomplish these objectives, we performed the data gap investigation activities in general accordance with the procedures presented in our January 20, 2012, Data Gap Investigation Technical Memorandum (Work Plan) (Hart Crowser 2012a) and the March 14, 2012, Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP)(Hart Crowser 2012c). The data gap investigation was completed from March through June 2012 and included the installation of eight exploratory borings with the collection of soil and groundwater samples; installation of seven new shallow and three new deep monitoring wells; and sampling of the new and existing monitoring wells (24 wells total).

1.3 Report Contents and Organization

This report presents the results of the data gap investigation performed by Hart Crowser. A description of subsequent sections of this report with the topics discussed are as follows:

- Section 2.0: Site background and history including site description, geology and hydrogeology, historical operations and nature of contamination, previous environmental investigations, and interim cleanup actions.
- Section 3.0: Field activities and findings including preparatory activities, the Geoprobe® explorations, sonic drilling and explorations, monitoring well installations, groundwater monitoring, management of investigation-derived waste, and deviations from work plan.
- Section 4.0: Investigation results including groundwater elevations and flow directions, chemical analyses performed, chemical results, and bioremediation data assessment.
- Section 5.0: Comparison of chemical results to applicable cleanup levels includes soil and groundwater results comparisons.
- Section 6.0: Conclusions.
- Section 7.0: References.

1.4 Limitations

Work performed by Hart Crowser for this project and the preparation of this report was conducted in accordance with generally accepted professional practices in the same or similar localities, related to the nature of the work accomplished at the time our services were performed. This report is for specific application to the referenced project and for the exclusive use of Washington Ecology. No other warranty, express or implied, is made.

2.0 BACKGROUND AND HISTORY

Background project information including site description, geologic information, past site operations, and previous environmental investigation activities were based on documents and references provided by Ecology.

2.1 Site Location and Description

The Site is located at 106 South 3rd Avenue, Yakima, Washington (Figure 1). The former Frank Wear property is now a vacant gravel lot zoned within the Central Business District. The property is bounded to the north by an asphalt parking lot, an alley and businesses to the west, a children's daycare facility to the south, and by South 3rd Avenue to the east (Figure 2).

2.2 Geology and Hydrogeology

The site's shallow upper aquifer is unconfined and consists of unconsolidated alluvium, primarily coarse-grained sands, gravels, and cobbles with occasional interbedded lenses of clay and silt; and the Thorp Gravel, primarily highly weathered, poorly cemented, coarse sands and gravels. This alluvium extends from approximately 10 to 80 feet below ground surface (bgs) and is representative of the alluvium that blankets most of the Yakima Valley floor. Below this material is the Upper Ellensburg Formation, which consists of alluvial and volcanic mudslide deposits (lahar) that have been semi-consolidated. The Upper Ellensburg Formation overlies basalt bedrock (Columbia River Basalts) and interbedded Ellensburg Formation, and is present from 50 to 1,600 feet bgs. The upper member of the Upper Ellensburg Formation is the principle water source for the Ahtanum-Moxee Basin.

Site groundwater elevations fluctuate seasonally as a result of localized recharge created from irrigation canals. During the winter months (January through March), the shallow groundwater table at the site is typically present at approximately 20 to 25 feet bgs with flow direction toward the south. Irrigation ditches throughout the Yakima area are charged from late March through early October each year, raising the water table to between 12 to 18 feet bgs and changing the flow direction toward the east-southeast through the autumn months. Groundwater horizontal gradients at the site range from 0.008 foot/foot (winter) to 0.025 foot/foot (through autumn). Groundwater velocities within the alluvial aquifer have been estimated to be approximately 240 feet per year during the winter.

Two aquifers have been identified at the study site: a deep drinking water aquifer and a shallow water table aquifer. The interconnection between these aquifers has not been directly investigated. The aquifers are believed to be separated by a sequence of discontinuous, but thick and gradational low permeability layers.

2.3 Historical Operations and Nature of Contamination

The Frank Wear site was a dry cleaning business from the early 1940s to 2000. The use of the site prior to 1940 is unknown. The business was owned and operated by the Frank Wear family from the early 1940s to 1980. The dry cleaning operations primarily used Stoddard solvent as the dry cleaning fluid. However, sometime during the 1970s, the business began using tetrachloroethene (PCE) as the dry cleaning solvent. Spent PCE from the dry cleaning operations was reclaimed using a distillation unit. Sludges or still bottoms from the reclamation process were reportedly deposited on the property for dust abatement. Overflow from the dry cleaning machine was also periodically discharged to a catch basin or overflow tray located outside the southwest corner of the building.

Occasionally, the catch basin would overflow, potentially causing spills of the PCE-contaminated liquids to the ground surface. Leaks and spills from the dry cleaning machines and associated equipment would have collected in floor drains and these floor drains may have carried PCE-contaminated wastewaters out to the west end of the building. In 1989, the owner reportedly removed a 500-gallon gasoline underground storage tank (UST) and a 1,000-gallon heating oil UST.

Based on releases, the Site has been identified as one source of chlorinated volatile organic compounds (cVOCs) within the broader Yakima Railroad Area (YRRA) plume.

2.4 Previous Environmental Investigations and Interim Cleanup Actions

Ecology first inspected the site in 1985 due to complaints of sludges being disposed in the back parking lot. Subsequent site inspections by Ecology in 1987 and 1989 detected PCE in soil. Soil samples collected during the 1989 UST excavations contained PCE up to 10 milligrams per kilogram (mg/kg) at depths to 12 feet bgs.

A remedial investigation (RI) of the Site was performed during 1995. A 25-point soil vapor survey was completed on the site in January 1995, and PCE was detected in every sample ranging from 7 to 727 micrograms per liter of air. The dry cleaner building was still present during the soil vapor sampling (the building was demolished in 2000 and concrete floor removed in 2001), soil vapor sampling did not include areas under the building. These results suggested two main sources of the PCE; one beneath the northeast corner of the property near a plumbing access trench, and the other at the northwest corner of the former building near the former heating oil UST. However, because sampling did not

occur under the building, PCE sources within or around (or due north) of the building footprint are suspected to be more significant than those sources indicated by this soil vapor study.

During the RI, four shallow monitoring wells were installed and screened from 10 to 35 feet bgs. In September 1995, 610 tons of soil was excavated from 3 to 12 feet bgs from the former heating oil UST area with the extent based on confirmation soil sampling.

A five-well ozone sparging system intermittently operated during 1997 and 1998 with inconclusive results. In 2000, the Frank Wear building was demolished and in 2001, an additional 432 tons of soil were removed from within the building footprint. In 2005, four of the five original 4-inch diameter ozone sparging wells were converted to monitoring wells and five new additional 2-inch monitoring wells were installed at the site. Locations of the 14 monitoring wells installed prior to 2012 are presented on Figure 2.

3.0 FIELD ACTIVITIES AND FINDINGS

The field activities for the data gap investigation were completed from March through June 2012 and included the installation of eight exploratory borings with the collection of soil and groundwater samples; installation of seven new shallow and three new deep monitoring wells; and sampling of the new and existing monitoring wells (24 wells total). The exploratory borings were completed first for purposes of determining locations of the new monitoring wells. The discussion below summarizes the field activities and deviations from the Work Plan and SAP/QAPP.

3.1 Preparatory Activities

Site Health and Safety Plan. A site Health and Safety Plan (HASP) was prepared for the data gap investigation activities (Hart Crowser 2012b). The HASP was prepared in general accordance with WAC 173-340-810 and applicable federal Occupational Safety and Health Administration requirements. A draft HASP was previously submitted to Ecology prior to implementing the field work.

Site Sampling and Analysis Plan/Quality Assurance Project Plan. A site Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP) was prepared for the data gap investigation activities in general accordance with WAC 173-340-820 (Hart Crowser 2012c). The SAP/QAPP described proposed sampling locations, procedures, and analytical methods. The SAP/QAPP was submitted to Ecology prior to implementing the field work.

Property Access. Ecology arranged for site access and secured agreements with the affected property owners to allow the exploratory borings and monitoring well installations on their respective properties. Hart Crowser coordinated with the City of Yakima to obtain the Street Break Permits and Temporary Right of Way Closure Permits for the boring and well installations in the public right of ways.

Underground Utility Location. For each of the separate field efforts (Geoprobe® boring installations in March, sonic drilling exploratory borings in April, and monitoring well installations in June) Hart Crowser contacted the Washington utility notification service (Washington811) to locate underground utilities in the public right of ways. We also subcontracted with Utilities Plus, LLC, a local utility locating company, to locate the underground utilities on the private properties within the targeted work areas.

3.2 Geoprobe® Explorations (March 2012)

The Work Plan identified up to 26 push probes that would be completed to a depth of 35 feet to further delineate the extent of the cVOC contamination in the subsurface soil and groundwater beyond the former Frank Wear property. These push probe explorations were to be installed using a track-mounted Geoprobe® drill rig. Cascade Drilling (Cascade) initiated the drill work on March 19, 2012. However, the subsurface conditions, consisting of mostly cobbles, proved too difficult for the Geoprobe® rig to complete the borings. Six different probe locations were attempted using the Geoprobe® rig. Multiple attempts were made at each of these locations to reach the desired 35-foot depth. The Geoprobe® rig could not advance further than 21 feet bgs before refusal was reached. Because the Geoprobe® rig could not drill down to the desired depths for soil and groundwater sample collection, no samples were collected for chemical analyses. In consultation with Ecology, it was determined that the Geoprobe® rig would not be able to complete the explorations as planned and this phase of field work was rescheduled for April 2012 using a sonic drill rig. Cascade Drilling demobilized from the site on March 20, 2012.

3.3 Sonic Drilling and Explorations (April 2012)

Because the site subsurface conditions prevented completion of the soil borings using the Geoprobe® rig, a more robust drilling method using a sonic drill rig was used to complete the soil borings. In consultation with Ecology, the number of planned exploratory borings was reduced from 26 to 17 to compensate for the slower installation rates and higher costs by the sonic drilling methods compared to the Geoprobe® methods.

Cascade Drilling completed the soil exploratory borings from April 11 through 18, 2012, using a rotary-sonic drill rig. The rotary-sonic action of the drill rig allows it to slowly grind and break apart rocks in the subsurface. The drill rig utilizes a hollow auger casing that collects soils in the center of the casing as it penetrates the subsurface. The casing is occasionally pulled from the ground and the accumulated soil is collected into long plastic bags. This method is not optimal for recovering undisturbed soil samples, but this drilling method was necessary to penetrate the rocky subsurface.

The rotary-sonic drill rig was able to penetrate to the required depth of 35 feet bgs; however, the subsurface conditions caused the sonic drilling to proceed at a rate slower than anticipated. As a result, only eight of the planned 17 borings were completed due to cost concerns. The borings were completed in accordance with the applicable requirements of WAC Chapter 173-160. Logs of the completed borings are provided in Appendix A.

Locations. The locations of the eight completed borings are shown on Figure 2 (B-4, B-5, B-6, B-9, B-12, B-13, B-15, and B-16). These boring locations were targeted to assess the horizontal and vertical extent of the contamination in soil and groundwater. Locations were selected based on proximity to Frank Wear site, apparent groundwater flow direction, and previous soil and groundwater sampling results.

Screening and Sampling. Soil cuttings were collected continuously from each boring location for description by Hart Crowser field staff. The soil was also field screened for sheen and volatile vapors using a photoionization detector; both are indications of possible solvent contamination. Groundwater samples were collected from all of the eight completed locations. Soil samples were collected from five of the eight locations. Exploratory boring locations and associated analysis results are shown on Figure 5. Analytical results from the exploratory phase of work can also be found in Tables 1 and 2. Data from this phase of the investigation was compiled and used to determine the best location and construction of the new monitoring wells in the vicinity of the Frank Wear site.

Boring B-4, located cross-gradient and to the west of the site, was completed to a depth of 30 feet bgs. Soil was loose and dry, and consisted of mostly gravel and cobble with varying degrees of silty and sandy lenses. Groundwater was encountered at 22 feet bgs. A groundwater sample was collected to determine the extent of the plume to the west of the site where no previous data had been collected. No signs of contamination were observed by field screening methods during the drilling of this boring.

Borings B-5 and B-13 are located the furthest downgradient from the site. These locations were completed to a depth of 30 feet bgs. Soil was loose and dry, and consisted of mostly gravel and cobble with varying degrees of silty and sandy lenses. Groundwater samples were collected from these locations to determine the extent of downgradient contamination. Groundwater was encountered at about 26 and 23 feet bgs in B-5 and B-13, respectively. Soil in both locations became more dense and gray once the water table was reached. No signs of contamination were observed by field screening methods at either location during drilling.

Boring locations B-6, B-12, B-15, and B-16 are located downgradient of the site along West Walnut Street within the City of Yakima's right of way (Figure 2). These locations were chosen to determine the horizontal extent of the downgradient portion of the contaminant plume. Soil and groundwater samples were collected from each location and analyzed for chlorinated solvents. Soil encountered was generally loose and dry, and consisted of mostly gravel and cobble with varying degrees of silty and sandy lenses. Groundwater was encountered between 25 and 26 feet bgs at each location. No signs of contamination were observed by field screening methods at these locations during drilling.

Approximately 150 feet downgradient from the site within the known extent of the contaminant plume, boring B-9 was completed to a depth of 35 feet. This location was selected to provide information on the vertical extent of contamination in the soil. Three soil samples were collected and analyzed from varying depths during drilling activities. Groundwater was also collected and analyzed from the boring location. Soil encountered at this location was generally loose and dry, and consisted of mostly gravel and cobble with varying degrees of silty and sandy lenses. Groundwater was encountered at 28 feet bgs at this location. No signs of contamination were observed by field screening methods during the drilling of this boring.

Decontamination Procedures. Cascade Drilling used a specialized, self-contained decontamination trailer with a pressure washer and steam cleaner to clean the drilling equipment, such as drill rods and casing, prior to beginning each new boring. The investigation-derived waste (IDW) was contained and transferred to drums stored on the site.

Groundwater samples were collected from the borings using a stainless steel screen sampler attached to the drill rod and dedicated tubing. Hart Crowser field staff decontaminated the screen before the collection of each well sample. Cleaning procedures consisted of washing the well screen in a detergent

(Alconox[®]) solution, rinsing with tap water, and rinsing a second time with deionized water.

Completion and Abandonment. After sampling activities were completed, each boring was located by hand-measuring to fixed site features and was abandoned by filling the boring with granular bentonite and hydrating the bentonite with water.

3.4 Monitoring Well Installations

Additional monitoring well installations were required to determine the extent of the contaminant plume originating from the Frank Wear property. Information gathered during the exploratory boring phase was used to determine the ten locations for monitoring well installations. Seven new shallow monitoring wells, completed to 35 feet bgs, and three new deep monitoring wells, completed to 90 feet bgs, were installed from May 29 through June 13, 2012, by Cascade Drilling using sonic drilling methods. Figure 2 shows the locations of the new monitoring wells.

Locations. The shallow well locations were selected for purposes of delineating the extent of the contamination in the shallow alluvial groundwater. Monitoring wells MW-20, MW-21, MW-22, MW-23, MW-24, and MW-25 were installed downgradient from the site (Figure 2). MW-16 was installed as an upgradient well. The current upgradient well, MW-5, has had detections of PCE that make it difficult to determine if it is a true upgradient well.

In addition to delineating the contaminant plume, some of the shallow wells may be converted to extraction or injection points as part of the groundwater recirculation system planned for the site.

The deep well locations were selected to determine if site contaminants have migrated vertically into the surficial aquifer, and measure the vertical hydraulic gradient. The deep well locations included an upgradient well (MW-17), a site well (MW-18), and a downgradient well (MW-19) (Figure 2).

Construction. The upgradient shallow well (MW-16) was constructed of 2-inch inside-diameter polyvinyl chloride (PVC) with a 5-foot length of 0.01-inch slot well screen placed from the bottom of the boring. The downgradient shallow wells are 4-inch diameter PVC with 10-foot lengths of 0.02-inch slot well screen, with the exception of MW-20 on the Central Washington Comprehensive Mental Health (CWCMH) facility which has a 5-foot well screen. The deep wells are all 2-inch diameter PVC, with a 5-foot length of 0.01-inch slot well screen.

All of the new wells have a bentonite seal placed from about 2 feet above the screen to within about 2 feet bgs. A concrete surface seal secures a flush-mounted, traffic-rated monument. A watertight locking cap and lock secures the wellhead, and bolts secure the monument cover. All monuments are permanently marked with well identification numbers. Monitoring well construction details are provided in Table 3. The monitoring well construction logs are provided in Appendix B.

Development and Surveying. After installation, each well was developed by Cascade Drilling by purging at least six casing volumes. Well development was completed on June 14, 2012. Elevations at the top of each well casing and monument and the locations of each well casing were surveyed by Hart Crowser field representatives using standard surveying equipment.

3.5 Groundwater Monitoring

Hart Crowser collected groundwater samples from the 14 existing site monitoring wells on April 9 and 10, 2012. Additional groundwater samples were collected from the new monitoring wells after installation and development on June 15, 2012.

Groundwater monitoring consisted of measuring water levels, purging and sampling groundwater, and recording groundwater field parameters.

Groundwater Level Measurements. Water levels in the monitoring wells were measured for the purpose of determining groundwater elevations and gradients. The wells were opened, and the water levels allowed to equilibrate before measurements were taken. The depth to groundwater was measured to the nearest 0.01 foot using an electronic probe.

Purging. After the groundwater levels were measured, each well was purged using a peristaltic pump and low-flow sampling techniques. Purging was considered complete when the water quality parameters (i.e., pH, temperature, and conductivity) stabilized within 10 percent for three consecutive measurements. In addition to the water quality parameters mentioned above, the oxidation-reduction potential (ORP) and dissolved oxygen (DO) were measured during the purging process. Field parameters are listed in Table 6.

Sampling. Groundwater samples were obtained from the well immediately after purging using a peristaltic pump. Water quality data collected during the April and June 2012 sampling events are included in Table 4.

Sample Handling and Storage. Clean sample containers were provided by the analytical laboratory and were ready for sample collection, including preservatives, if necessary. Sample containers for VOC analysis were fully filled, leaving no headspace. A label was affixed to each sample container and marked with identifying information. Sample containers were immediately placed in a cooled ice chest upon collection. Samples were stored in a cooled environment until transported to the analytical laboratory. A chain of custody was maintained and documented at all times.

Decontamination Procedures. All groundwater samples were collected using dedicated equipment, so decontamination of equipment was not needed. A peristaltic pump was used with new tubing that was replaced between each sampling event.

3.6 Handling of Investigation-Derived Waste

IDW consisted of soil from drilling activities, purge water, decontamination water, and personal protective equipment (PPE). PPE was disposed as solid waste. All other IDW was segregated by media and stored temporarily at the site in properly labeled U.S. Department of Transportation-approved 55-gallon drums. Each container was labeled with the project name, general contents, and date. Thirty-five drums of soil IDW and 24 drums of water IDW were generated during this work. Eight additional drums are on-site from previous work conducted at the site. IDW is currently located on the site awaiting transport to an off-site facility for proper disposal.

3.7 Deviations from the Work Plan

During our field activities, we adhered to the Work Plan as closely as practicable; however, some changes were made as necessitated by field conditions. These changes, or deviations, are as follows.

- The Geoprobe® rig originally scoped for the investigation was unable to advance to the required depths of 35 feet due to harder than expected subsurface material. Cascade Drilling remobilized to the site with a sonic drill rig to complete the borings. Because of the slower installation rates and higher costs associated with using the sonic drilling rig compared to the Geoprobe® rig, the number of planned boring locations was reduced from 26 to 17. As the sonic drilling progressed at a slower pace than anticipated due to the subsurface material, the number of boring locations was further reduced to eight in an effort to control project costs and avoid further delays in the overall project schedule.

- The groundwater level in MW-2 was not measured in June 2012 because it was not accessible.

4.0 INVESTIGATION RESULTS

This sections discusses the results of the data gap investigation including interpretations of groundwater elevations and flow directions (Section 4.1); presentation of the chemical analysis performed (Section 4.2); chemical results (Section 4.3); and the bioremediation parameter evaluation (4.4).

4.1 *Groundwater Elevations and Flow Directions*

Shallow Groundwater Flow Direction. Water levels were measured in the 14 existing monitoring wells in April 2012. The elevations are shown in Table 5 and elevation contours shown on Figure 3. Elevations measured for this sampling event suggest a horizontal flow direction toward the south/southeast. Water levels were also measured from the 13 of the 14 existing wells and 10 of the new monitoring wells in June 2012. These elevations are provided in Table 5 and elevation contours for the shallow zone shown on Figure 4. Access to monitoring well MW-2 was temporarily blocked by a soil pile generated from the on-site vapor extraction system installation work, so the water level in this well was not measured.

Elevations measured in the shallow wells in June suggest a horizontal flow direction toward the southeast. The April and June flow directions are consistent with historic data that show seasonal fluctuations as a result of the localized recharge created from the irrigation canals. The charging of the irrigation ditches was initiated in mid April. The April groundwater south/southeast flow direction is consistent with the period at the beginning of the irrigation season. The June groundwater southeast flow direction is consistent with the continuous charging of the irrigation ditches. The higher elevations in the existing monitoring wells in the June monitoring event compared to the April event also indicate that groundwater recharge from the irrigation ditches is occurring.

Deep Groundwater Flow Direction. Groundwater elevations were also measured in the three deep monitoring wells in June. Elevation data for the deep wells are provided in Table 5. These data suggest groundwater flow in the deeper zone is toward the southeast.

Vertical Gradients. Comparing the elevation data for shallow/deep well pairs MW-16/MW-17, MW-10/MW-18, and MW-20/MW-19 shows that groundwater elevations in the shallow wells are higher than the deeper wells. This suggests a

downward gradient from the shallow to the deep zone groundwater. Calculated downward vertical gradients in these three well pairs ranged from 0.069 to 0.091 foot/foot.

4.2 Chemical Analyses Performed

We analyzed samples collected during the above investigation to further assess the nature, extent, and magnitude of chemical constituents in subsurface soils and groundwater. Samples were submitted to TestAmerica Laboratories, Inc. (TA) in Tacoma, Washington, and Beaverton, Oregon (under subcontract to Hart Crowser), for chemical analysis. Methane, ethane, and ethene in groundwater were analyzed by Microseeps, Inc., in Pittsburg, Pennsylvania. A data quality assurance review is provided in Appendix C. Copies of the laboratory reports are included Appendix D.

Based on previous environmental site activities, the primary contaminants at the site are chlorinated solvents originating from past dry cleaning activities. As such, samples were analyzed for VOCs. Select groundwater samples were analyzed for bioremediation parameters including nitrate, sulfate, chloride, methane, ethane, ethene, iron, and total organic carbon (TOC).

Soil Analyses. Soil samples were collected during the exploratory drilling and monitoring well installation activities. Seven soil samples were selected from the exploratory boring locations. A total of fifteen soil samples were collected during the installation of monitoring wells.

Three soil samples were collected from varying depths at exploratory boring location B-9. Samples were analyzed for VOCs and TOC. One sample was collected from each boring: B-6, B-12, B-15, and B-16 at depths within the groundwater table, ranging between approximately 30 to 35 feet bgs. Samples were analyzed for VOCs only, with the exception of B-12 which was additionally analyzed for TOC.

A total of 15 soil samples were submitted for analysis during the construction of monitoring wells MW-17, MW-18, and MW-19. Six samples were collected from MW-17, with five samples collected from MW-18, and four from MW-19. Soil samples were analyzed for VOCs only.

Selection was made based on field indications of contamination and/or where contamination might be anticipated (e.g., similar depth as other samples with contamination, or at the groundwater table). Soil samples were analyzed for VOCs by EPA Method 8260B and TOC by Method 415.1/5310C.

Also, during the drilling of MW-21, petroleum odors and high PID readings were noted at depths of approximately 20 to 25 feet bgs. A sample was collected from a depth of approximately 21 feet and analyzed for total petroleum hydrocarbons by Method NWTPH HCID and VOCs by Method 8260B.

Groundwater Analyses. Groundwater samples from the exploratory borings and monitoring wells were analyzed for VOCs by EPA Method 8260B. Select locations were analyzed for the bioremediation parameters nitrate, sulfate, chloride, methane, ethane, ethene, iron, and TOC in addition to VOCs. Nitrate, sulfate, and chloride were analyzed by Method 300.0, methane, ethane, ethene by Method AM20GAX, iron by Method 6010B, and TOC by Method 415.1/5310C.

4.3 Chemical Results

Chemical results for soil and groundwater samples from the exploratory boring and monitoring well installations and groundwater samples from the monitoring wells are discussed below. Soil results are presented in Table 1. Groundwater results are presented in Tables 2 and 4. Locations of the soil and groundwater samples with corresponding VOC concentrations are shown on Figures 5 and 6.

4.3.1 Exploratory Borings

Soil Results. Exploratory boring location B-9 is located downgradient from the site within the area of known contamination. Three soil samples were collected from B-9 at depths of 16, 22, and 34.5 feet bgs, and at these depths the analytical results showed concentrations of PCE at 36 micrograms per kilogram ($\mu\text{g}/\text{kg}$), 28 $\mu\text{g}/\text{kg}$, and 64 $\mu\text{g}/\text{kg}$, respectively. No other contaminants of concern were detected. The three B-9 samples were analyzed for total organic carbon (TOC), although TOC was not detected in any of the samples.

PCE was detected in two downgradient boring locations, B-6 and B-15, at concentrations of 27 $\mu\text{g}/\text{kg}$ and 18 $\mu\text{g}/\text{kg}$, respectively, at approximately 30 feet bgs. PCE was not detected in samples collected from downgradient locations, B-12 and B-16. No other contaminants of concern were detected. The B-12 boring sample was additionally analyzed for TOC. TOC was not detected in this sample.

Groundwater Results. Groundwater was collected from the eight exploratory boring locations. PCE was the only contaminant of concern detected in groundwater samples. PCE was not detected in B-4, cross-gradient from the site. The remaining seven samples resulted in detections of PCE. Concentrations ranged from 2.9 $\mu\text{g}/\text{L}$ in B-16 to 83 $\mu\text{g}/\text{L}$ in B-9.

Temporary boring locations with corresponding VOC concentrations in the soil and groundwater are shown on Figure 5. Analytical results from the boring locations are provided in Tables 1 and 2.

4.3.2 Monitoring Wells

Soil Results. Soil samples were collected during the construction of the three deep monitoring wells. PCE was the only site contaminant of concern detected in the soil samples.

Upgradient from the site, PCE was detected in soil removed during the construction of MW-17 at a concentration of 24 µg/kg at a depth of 16.5 feet. At 26 feet bgs, the PCE concentration increased to 260 µg/kg. Analysis at 44 feet bgs indicated PCE decreased to 16 µg/kg. Soil samples were also collected at depths of 49, 55.5, and 90.5 feet bgs from MW-17. PCE was not detected in the deeper soil samples.

MW-18 was constructed as a deep well on the Frank Wear property. Five soil samples from this location were collected from varying depths. PCE was detected in the sample collected from 40.5 feet bgs at a concentration of 370 µg/kg. PCE was not detected in samples collected from 51.5, 61, 71, and 91 feet bgs.

Monitoring well MW-19 is located downgradient from the site within the area of known contamination. Soil samples from MW-19 were collected from depths of 39.5, 58.5, 76, and 93 feet bgs. PCE was detected at 61 µg/kg in the sample collected from 39.5 feet bgs. PCE was not detected in any of the deeper samples.

The soil sample collected from MW-21 at 21 feet bgs, where possible petroleum contamination was encountered during the well installation, contained sec-butylbenzene at 870 µg/kg; 1,2,4-trimethylbenzene at 570 µg/kg; and gasoline range hydrocarbons at 160 mg/kg.

Groundwater Results. The network of 25 on- and off-site monitoring wells were sampled for VOCs with select locations receiving additional bioremediation parameter analysis. Nitrate, sulfate, chloride, methane, ethane, ethene, iron, and TOC concentrations are used to determine the viability of an *in situ* bioremediation plan for the site. These results are discussed in the bioremediation data assessment section below (Section 4.4.). Analytical results from the sampling events are provided in Table 4. The sample locations with corresponding VOC concentrations are shown on Figure 6.

Shallow monitoring wells MW-5, MW-16, and the deep well MW-17 are located upgradient from the Frank Wear property. Directly west and cross-gradient from the site are the monitoring wells MW-6 and MW-7. Concentrations of PCE in shallow wells MW-5, MW-6, MW-7, and MW-16 ranged from 4.9 µg/L to 36 µg/L. PCE was the only contaminant of concern detected at these locations in the shallow aquifer. There were no detections of contaminants of concern in MW-17.

MW-1 and SPW-14 are located on the southeast corner of the property, east of the former Frank Wear building. Samples from these monitoring wells were collected and analyzed for VOCs. All contaminants of concern were at non-detect levels for this sampling event.

Monitoring wells MW-10, SPW-12, SPW-13, SPW-15, and the deep well MW-18 are located within the footprint and along the northern boundary of the former Frank Wear building. PCE concentrations in this region ranged from 380 µg/L to 2,300 µg/L in the shallow aquifer at wells MW-10, SPW-12, SPW-13 and SPW-15. In addition to PCE, SPW-12, SPW-13, and MW-10 samples contained concentrations of trichloroethene (TCE) and *cis*-1,2-dichloroethene (*cis*-DCE). TCE ranged from 1.0 µg/L in MW-10 to 21 µg/L in SPW-12. *Cis*-DCE ranged from 8.5 µg/L in SPW-13 to 70 µg/L in SPW-12. PCE was detected at a concentration of 1.2 µg/L in the deep aquifer (MW-18) with all other contaminants of concern at non-detect levels. Bioremediation parameter samples were collected and analyzed from MW-10 and MW-18.

Monitoring wells MW-2 and MW-8 are located on the Frank Wear property to the west of the former Frank Wear building. PCE concentrations of 16 µg/L and 260 µg/L were detected in MW-2 and MW-8, respectively. No other contaminants of concern were detected at these locations. MW-2 was selected to have bioremediation parameters analyzed during this sampling event.

Ten monitoring wells are located downgradient from the Frank Wear site. MW-19 is the only well in the deep aquifer downgradient from the site. There were no detections of any contaminants of concern in MW-19. PCE was detected in the remaining nine wells. Detected concentrations ranged from 6.5 µg/L in MW-25 to 2,700 µg/L in MW-9. Monitoring well samples MW-3 and MW-9 had detections of *cis*-DCE at concentrations of 1.2 µg/L and 3.2 µg/L, respectively. TCE was detected in MW-3 and MW-4 at concentrations of 1.5 µg/L and 1.3 µg/L, respectively. All other contaminants of concern in these wells were at non-detect levels.

4.4 Bioremediation Data Assessment

Several parameters were monitored to assess baseline conditions around the site that are most directly related to natural attenuation and enhanced bioremediation. This assessment includes field parameters and groundwater samples collected to monitor the status of aquifer conditions, including geochemistry, electron acceptors, and bioremediation products. These results include: field parameters; electron donors (such as TOC); competing electron acceptors (such as nitrate and sulfate); and indicators of reductive biological products (total iron and methane); reductive dechlorination end products (ethene and ethane); and overall cVOC ratios.

4.4.1 Groundwater Field Parameters

Field parameters can be very useful in interpreting and confirming geochemistry changes and electron acceptor availability. The data assessment in the following paragraphs describes each field parameter and how they contribute to an assessment of site conditions as they relate to bioremediation.

pH. Dechlorinating microbes prefer a pH of 6 to 8 for optimal growth and activity. By stimulating reductive dechlorination through the addition of electron donors, hydrochloric acid and organic acids are produced, potentially shifting values toward a pH of 6. Under natural attenuation conditions, lower levels of carbon fermentation can result in the accumulation of bicarbonate, shifting values toward a pH of 7.5 to 8.0. Excessive bicarbonate accumulation can interfere with the dechlorination process, and excessive aquifer acidity can mobilize metals.

Shallow groundwater pH around the site was typically around 7.0, suggesting very balanced conditions. Closer to the shallow source area, pH was 7.5 or higher in wells MW-9, MW-16, and MW-25. These wells are in general alignment, extending from approximately 100 feet northwest of the site property to 150 feet southeast of the property. Elevated pH values were also noted in deeper monitoring wells MW-17, MW-18, and MW-19. As discussed below, all of these wells (except MW-9) also had negative oxidation-reduction potential (ORP) values, suggesting the finite accumulation of bicarbonate due to the presence of electron donors.

ORP. Groundwater ORP can indicate the availability or lack of electrons in collected samples. Complete reductive dechlorination can typically be observed when ORP values fall below zero millivolts (mV). These conditions are suitable for creation of dissolved hydrogen gas, the primary electron donor for microbes (e.g., dehalococcoides sp.) responsible for complete dechlorination. Reductive

dechlorination operates most efficiently at an ORP between -130 to -300 mV. Coupled reductive dechlorination and oxidation of *cis*-DCE and VC to chloroacetic acids (one natural attenuation mechanism of cVOCs) can occur at ORPs between 0 to +100 mV.

Shallow monitoring wells MW-16, MW-23, MW-25 and all deeper monitoring wells had negative ORP values, ranging from -29 mV in MW-25 to -248 mV in MW-17. The deeper aquifer wells were the most reductive. As discussed in detail below, MW-23, MW-18, and MW-19 also had the highest detection of dechlorination end products ethene and ethane in groundwater. MW-16 and MW-25 samples were not analyzed for ethene and ethane. MW-16 had the lowest ORP in the shallow aquifer (-112 mV), consistent with the detection of petroleum constituents, including VOC electron donors benzene and isopropylbenzene. Most shallow monitoring had ORPs between +120 mV and +190 mV during this DGI though, consistent with the persistence of PCE and TCE without significant accumulation of *cis*-DCE or VC.

Dissolved Oxygen. Dissolved oxygen (DO) is one of the strongest natural electron acceptors in groundwater. Its presence inhibits the anaerobic reductive dechlorination processes as it is a preferred electron acceptor to PCE. While DO can be relatively high in the aquifer, discrete pockets of organic carbon can create localized anoxic conditions suitable for PCE and TCE dechlorination and subsequent mobilization of *cis*-DCE and VC. DO is suitable for oxidation of mobilized *cis*-DCE and VC to chloroacetic acids, and eventually, carbon dioxide and chloride in groundwater. A DO measurement of less than 1 mg/L suggests anoxic conditions have broadly established within an aquifer unit.

Consistent with ORP values between +120 mV and +190 mV, relatively high concentrations of dissolved oxygen were detected in the shallow aquifer. Lowest DO concentrations in shallow groundwater during the DGI were recorded in MW-16 (0.7 mg/L) and SPW-12 (4.6 mg/L). Again, these wells fall along the MW-16/MW-25 axis noted above, and the MW-16 DO value is consistent with the lowest ORP measured at the site. Depressed DO concentrations in SPW-12 are consistent with discrete anoxic pockets and the highest concentration of TCE and *cis*-DCE dechlorination products detected during the DGI. The deeper aquifer wells all had DO concentrations of 1.5 mg/L or less, consistent with the low measured ORP values and high ethene+ethane to PCE ratio, as discussed in Section 4.4.2 below.

Conductivity. Conductivity is a measure of groundwater's ability to carry an electrical current. Greater conductivity suggests a greater concentration of ions and charged molecules in groundwater. Reductive processes (e.g., dechlorination) releases ions like chloride, iron, manganese, and organic acids

into groundwater, increasing field-measured conductivity values. Conductivity during the DGI was common for shallow groundwater in oxidative aquifers, generally ranging from 0.15 to 0.30 milliSiemens per centimeter (mS/cm). Slightly elevated conductivity was noted in shallow wells MW-3, MW-4, and MW-25. However, as discussed in Section 4.4.2 below, values in MW-3 and MW-4 are probably related to relatively high concentrations of chloride ions in groundwater and not reductive activity. Slightly elevated conductivity in MW-25 may be related to reductive activity based on ORP and/or elevated chloride, which was not analyzed.

4.4.2 Groundwater Chemical Analyses

Groundwater samples were collected for laboratory analyses to evaluate both contaminant distribution, natural attenuation, and to estimate what level of electron donor will be required to promote enhanced reductive dechlorination. The data assessment in the following paragraphs describes each key parameter analyzed and how they confirm proper conditions and activity for reductive dechlorination. For organizational purposes, chemical analysis results are generally discussed in the order of oxidation state, with the most oxidized compounds discussed first (except for cVOCs).

Nitrate. Nitrate is considered a competing electron acceptor and at concentrations of more than 1.0 mg/L can inhibit the reductive dechlorination process. Nitrate can be a preferred electron acceptor to dechlorination, and rapid reductions in nitrate concentrations are typically observed when enhanced reductive dechlorination begins. In general, groundwater samples collected from shallow wells support the conclusion of an aerobic aquifer and oxidized geochemistry. The highest concentrations of nitrate at the site were detected in shallow wells MW-3 and MW-23. These wells are located along the same groundwater flow path southwest of the site property. The elevated nitrate in MW-23 is not consistent with measured ORP, suggesting localized infiltration of nitrogen-rich water in the MW-23 vicinity and subsequent oxidation of aquifer geochemistry.

Total Iron. Oxidized, ferric iron is commonly found in aquifers containing concentrations of DO and nitrate above 1.0 mg/L. The localized presence or addition of electron donors stimulates reductive activity, which converts low-mobility ferric iron to mobile ferrous iron. Even during redox recovery beyond areas of electron donor, ferric iron can persist as a colloid or suspended during groundwater purging. So elevated total iron concentrations in groundwater can be confirmation of reductive activity. The highest concentrations of total iron (up to 2.9 mg/L in MW-19) were detected in the deeper aquifer unit, consistent with more reductive conditions and low DO and nitrate concentrations.

In the shallow aquifer, total iron concentrations were low, consistent with the generally oxidized nature of groundwater in this zone. MW-22 contained the highest concentration of total iron in the shallow aquifer, consistent with its location downgradient of MW-23 (the second highest total iron concentration at 0.26 mg/L) and MW-3. As discussed above, ORP values and nitrate concentrations suggest redox recovery in MW-3 (less than 0.04 mg/L total iron). ORP values and nitrate concentrations drop again by the time groundwater reaches MW-22, consistent with the observed increase in total iron.

Sulfate. Sulfate is a competing electron acceptor to the process of complete reductive dechlorination. A concentration in excess of 20 mg/L may inhibit the process of complete reductive dechlorination. Additionally, declines in the aquifer sulfate concentration during enhanced reductive dechlorination confirm that strong reducing conditions conducive to vinyl chloride (VC) dechlorination to ethene have been achieved. Sulfate concentrations at the site were all naturally below 20 mg/L during the DGI, ranging between 8.1 mg/L to 15 mg/L. This data indicates that sulfate will not be a significant inhibitor of complete dechlorination.

Methane. The presence of methane indicates a highly reduced environment containing elevated concentrations of dissolved hydrogen gas. An environment rich in hydrogen gas allows methanogenic bacteria to form methane from carbon dioxide to yield energy. This is the same environment preferred for rapid, complete reduction of cVOCs. These two processes competitively consume available hydrogen generated from organic carbon fermentation. Concentrations of methane greater than 0.50 mg/L suggest an environment suitable for the rapid conversion of cVOCs to ethene and ethane. Concentrations of methane less than 6.0 µg/L are considered the most efficient use of electron donor during enhanced reductive bioremediation.

Some microbes use dissolved oxygen to oxidize methane to carbon dioxide. The enzymes responsible for this process (e.g., methane monooxygenase) can also convert TCE, *cis*-DCE, *trans*-DCE, and VC to chloroacetic acids via co-metabolism. Co-metabolism will not reduce dissolved concentrations of PCE due to steric hindrance by the four chloride atoms. Co-metabolism, unlike reductive dechlorination, does not typically generate intermediates reported through the 8260 analysis, making direct co-metabolism assessment difficult without more advanced analysis.

Consistent with lower ORP values, DO, and nitrate, the deeper aquifer had the highest detections of methane, up to 0.012 mg/L in MW-18. As discussed below, MW-18 also had the highest concentrations of ethene and ethane in analyzed samples. The low levels of methane detected in analyzed shallow aquifer samples, along with the availability of DO, suggest that co-metabolic

natural attenuation is likely occurring. Overall, groundwater methane concentrations at the site support the conclusion of sporadic and discrete zones of strong reducing conditions.

cVOCs. This cVOC discussion only pertains to groundwater data in the context of bioremediation and natural attenuation. Particularly useful is the presence of dechlorination products *cis*-DCE and VC and the ratio of dechlorination products to PCE and TCE. Because of the generally oxidative nature of the aquifer in the site vicinity, TCE may also be considered as a significant dechlorination product under natural conditions. At sites undergoing enhanced reductive dechlorination, TCE is typically considered comparable to PCE due to very rapid rate of the first dechlorination step.

Dechlorination intermediate *cis*-DCE was only detected in shallow wells MW-3, MW-9, MW-10, SPW-12, and SPW-13. No *cis*-DCE was detected in deeper aquifer wells. Additionally, VC was not detected in any wells during the DGI. As discussed above, this pattern of cVOC detections supports the conclusion that reductive dechlorination is only occurring in discrete pockets of the aquifer and aerobic oxidation of *cis*-DCE and VC is likely occurring. Using the simplistic groundwater ratio of PCE to total cVOC, greatest dechlorination is evident in MW-3 (approximately 0.75) with relatively low rates of dechlorination in SPW-12 and SPW-13, at 0.96 and 0.97, respectively. As discussed in the TOC section below, these ratios are consistent with organic carbon-limited natural attenuation. During enhanced reductive bioremediation, ratios can rapidly drop to 0.001 or lower.

Ethene and Ethane. Ethene and ethane are the final degradation products of the reductive dechlorination process (PCE to TCE to *cis*-DCE or *trans*-DCE to VC to ethene to ethane). Detection of ethene and/or ethane molecules typically confirm that the process of complete cVOC dechlorination is occurring at the site. Additionally, higher ethane to ethene ratios typically indicate that little bio-available cVOC remain since ethene hydrogenation does yields little energy for the microbe as they consume electron donors. During enhanced reductive dechlorination, the molar (concentration of molecules) balance of cVOCs versus ethene+ethane commonly ranges around five percent due to various processes that convert these end products into other compounds.

As noted above, the highest concentrations of ethene and ethane were detected in deeper aquifer wells, consistent with geochemical and competing electron acceptor data. The highest concentrations were noted in MW-18, at 2.1 and 4.7 µg/L, respectively. On a molar concentration basis, the ethene+ethane concentration in MW-18 is over 30-times the concentration of PCE. This

suggests a strong natural attenuation front is present at depth, likely inhibiting movement of shallower cVOC into the deeper aquifer in the site vicinity.

In the shallow aquifer, both ethene and ethane were detected in almost every sample analyzed. The highest ethene+ethane concentration was detected in MW-23, consistent with lower ORP and higher conductivity values. While present at very low concentrations, the detected ethene+ethane molar concentration is still approximately 1.3 times the PCE molar concentration, indicating reductive natural attenuation is occurring in the well vicinity. Similar conditions may be present in MW-16 and MW-25.

TOC. Total organic carbon (TOC) is one measure of electron donor availability. Dissolved TOC in groundwater is one method for assessing appropriate electron donor loading during enhanced reductive dechlorination treatment. When the source of detected TOC is low-solubility donors (e.g., native humic compounds, oil/petroleum), then concentrations of 20 mg/L or more are typically recommended to stimulate robust, complete dechlorination. When TOC is due to added high-solubility donors (e.g., sugars, lactates), dissolved TOC above 200 mg/L is commonly recommended.

Based on the above data, it is evident that low-solubility TOC is fueling the observed dechlorination. Based on the concentration of TOC in both shallow and deeper aquifer units (all less than 10 percent of the recommended loading), the rate of cVOC degradation is electron donor limited. The addition of more electron donor would likely improve dechlorination rates.

Chloride. Chloride is a byproduct of cVOCs degradation through both reductive and oxidative processes. Concentrations of chloride in the shallow aquifer ranged as high as 160 mg/L (MW-4) and 7.9 mg/L (MW-18) in the deeper aquifer. Aggressive, enhanced reductive bioremediation of PCE is unlikely to result in chloride concentration changes of more than 100 mg/L unless PCE free-product is present. The elevated chloride is likely due to the periodic use of chloride-containing de-icer. As a result, we cannot derive any conclusion from the chloride data, and future chloride data is not likely to be useful.

5.0 COMPARISON OF CHEMICAL RESULTS TO APPLICABLE CLEANUP LEVELS

Detected constituents in soil and groundwater were screened against the applicable MTCA Method B Cleanup Levels (CUL). These cleanup levels were provided by Ecology for development of the feasibility study for the site and are summarized in Table 7.

5.1 Soil Results Comparison

Table 1 provides a summary of the analytical results for soils analyzed during the exploratory boring work and new monitoring well installations. Screening of these data show that concentrations of PCE exceeded the CUL of 19.6 µg/kg in boring B-6 at a depth of 29.5 feet bgs, B-9 to 34.5 feet bgs, MW-17 to 26 feet bgs, MW-18 to 40.5 feet bgs, and MW-19 to 39.5 feet bgs. No other detected constituents in the soil samples analyzed exceeded the applicable CUL.

5.2 Groundwater Results Comparison

Push Probe Groundwater Detections. Table 2 provides a summary of the analytical results for groundwater samples collected from the exploratory borings during April. These results were compared to the MTCA Method B groundwater CULs. Groundwater samples collected from borings B-5, B-9, B-12, B-13, and B-15 exceeded the CUL for PCE of 5.0 µg/L.

Monitoring Well Detections. Groundwater monitoring results from the April and June 2012 monitoring events are provided in Table 4. These results were compared to the MTCA Method B groundwater CULs. Groundwater samples collected from all of the shallow monitoring wells with the exception of MW-6 and SPW-14 exceeded the CUL for PCE of 5.0 µg/L. Concentrations of TCE in SPW-12 also exceeded the CUL of 3.98 µg/L. No other detected constituents in the shallow groundwater samples analyzed exceeded the applicable CULs.

None of the detected analytes in the deep monitoring well samples exceeded applicable MTCA Method B CULs.

6.0 CONCLUSIONS

The data gap investigation was completed from April through June 2012 to obtain data and delineate the extent of contamination on and off the former Frank Wear site. The data were evaluated to further our understanding of the current conditions of the site. Our conclusions are summarized below.

- Field observations and sampling of soil during the soil exploratory borings and monitoring well installations suggest PCE migration to depths between 40 and 60 feet at and near the site. This migration is indicated by PCE detections to depths of 40 feet bgs on the site in MW-18, to depths of 60 feet to the south of the site at MW-19, and at depths of 30 feet at downgradient locations, B-6 and B-15.

- Results of the groundwater monitoring for shallow wells indicate the horizontal extent of the PCE contamination extends from the site to the downgradient wells MW-24 and MW-21. The highest detected PCE concentration in groundwater was at MW-9, located off-site to the south of the site near the Children's Daycare Center, indicating that the PCE mass may have shifted to the south from the previous high-concentration areas around MW-10. MW-4 also had high concentrations of PCE, possibly indicating mass migration.
- With the exception of the MW-6 and SPW-14 wells, groundwater samples from all of the site shallow monitoring wells exceeded the MTCA Method B CUL for PCE of 5.0 µg/L.
- PCE was detected in the on-site deep well MW-18, suggesting vertical migration at depth. However, PCE was not detected in the downgradient deep well MW-19, indicating off-site migration in the deeper zone does not appear to be occurring.
- The bioremediation data assessment indicates shallow groundwater is generally oxidative and the deeper zone more reductive, which can act as a barrier to downward migration.
- There is evidence of complete dechlorination occurring in the shallow groundwater with only simple electron donor availability as the limiting factor. This indicates that an enhanced *in situ* bioremediation remedy using reductive processes can be effective in achieving complete dechlorination.
- The proposed groundwater remedy using enhanced *in situ* bioremediation with a recirculation system to deliver amendment is still appropriate for the Frank Wear site. It appears the most effective operation of a recirculation system may be during periods of high water during the irrigation season to more effectively target the contaminants that are vertically distributed throughout the soil matrix and shallow aquifer.

7.0 REFERENCES

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Hart Crowser, 2012a. Technical Memorandum Re: Data Gap Investigation, Frank Wear Site, Yakima, Washington. January 20, 2012.

Hart Crowser, 2012b. Health and Safety Plan, Former Frank Wear Site, Yakima, Washington. February 10, 2012.

Hart Crowser, 2012c. Sampling and Analysis Plan/Quality Assurance Project Plan, Frank Wear Site, Yakima, Washington. March 14, 2012.

Table 1 - Exploratory Boring Soil Analyses Results
Frank Wear
Yakima, Washington

Sample Identification	Sampling Date	Inferred Sample Depth in feet bgs	Volatile Organic Compounds (VOCs)						Total Organic Carbon
			Tetrachloroethene	Trichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	
Hart Crowser Site Investigation			Concentration in Microgram per Kilogram (µg/Kg)						
Data Gap Soil Boring									
B-6/S-1	4/12/2012	29.5	27	<20	<25	<50	<50	<10	-
B-9/S-1	4/18/2012	16.0	36	<15	<19	<38	<38	<7.6	<2,000
B-9/S-2	4/18/2012	22.0	28	<14	<17	<34	<34	<6.8	<2,000
B-9/S-3	4/18/2012	34.5	64	<14	<18	<35	<35	<7.1	<2,000
B-12/S-1	4/17/2012	35.0	<16	<13	<16	<32	<32	<6.4	<2,000
B-15/S-1	4/16/2012	30.0	18	<14	<17	<35	<35	<6.9	-
B-16/S-1	4/17/2012	34.0	<18	<15	<18	<37	<37	<7.3	-
Monitoring Well Installation									
MW-17/S-1	5/29/2012	16.5	24	<14	<18 ^	<35 ^	<35 ^	<7.0	-
MW-17/S-2	5/30/2012	26.0	260	<17	<21 ^	<42 ^	<42 ^	<8.5	-
MW-17/S-3	5/30/2012	44.0	16	<13	<16 ^	<31 ^	<31 ^	<6.3	-
MW-17/S-4	5/30/2012	49.0	<16	<12	<16 ^	<31 ^	<31 ^	<6.2	-
MW-17/S-5	5/30/2012	55.5	<17	<14	<17 ^	<35 ^	<35 ^	<7.0	-
MW-17/S-6	5/31/2012	90.5	<17	<14	<17 ^	<34 ^	<34 ^	<6.8	-
MW-18/S-1	6/4/2012	40.5	370	<13	<16	<33	<33	<6.6	-
MW-18/S-2	6/4/2012	51.5	<17	<13	<17	<33	<33	<6.7	-
MW-18/S-3	6/4/2012	61.0	<17	<13	<17	<34	<34	<6.7	-
MW-18/S-4	6/5/2012	71.0	<18	<15	<18	<37	<37	<7.3	-
MW-18/S-5	6/5/2012	91.0	<18	<14	<18	<35	<35	<7.0	-
MW-19/S-1	6/6/2012	39.5	61	<14	<18	<36	<36	<7.1	-
MW-19/S-2	6/6/2012	58.5	<21	<17	<21	<43	<43	<8.5	-
MW-19/S-3	6/6/2012	76.0	<19	<15	<19	<37	<37	<7.5	-

**Table 1 - Exploratory Boring Soil Analyses Results
Frank Wear
Yakima, Washington**

MW-19/S-4	6/6/2012	93.0	<20	<16	<20	<39	<39	<7.8	-
MW-21/S-1	6/8/2012	21.0	<570	<570	<570	<570	<570	<2800	-
MTCA Method B Soil Cleanup Levels									
			19.6	398	-	-	8,000	-	-

Notes:

VOCs by EPA Method 8260B; Total Organic Carbon by Method 415.1/5310C.

µg/Kg = micrograms per Kilogram; ppb = parts per billion.

Bold denotes a detected concentration.

< = Not detected above the indicated laboratory method reporting limit.

- = Not analyzed for or not available.

Shading indicate the analyte exceeded an applicable MTCA Method B cleanup level.

^ = Continued calibration verification recovered above the upper control limit. Analyte non-detect status deemed appropriate.

Table 2 - Exploratory Boring Groundwater Analyses Results
Frank Wear
Yakima, Washington

Sample Identification	Sampling Date	Volatile Organic Compounds (VOCs)						General Chemistry				
		Tetrachloroethene	Trichloroethene	1,1-Dichloroethene	trans-1,2-Dichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	Nitrate as N	Sulfate	Total Organic Carbon	Chloride	Iron
Hart Crowser Site Investigation		Concentration in Micrograms per Liter (µg/L)						Concentration in Milligrams per Liter (mg/L)				
B-4	4/11/2012	<1.0 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	-	-	-	-	-
B-5	4/12/2012	12	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
B-6	4/12/2012	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
B-9	4/18/2012	83	<1.0	<1.0	<1.0	<1.0	<1.0	2.7	26	2.6	130	210
B-12	4/17/2012	11	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	9.3	1.8	27	350
B-13	4/13/2012	42	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
B-15	4/16/2012	25	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
B-16	4/17/2012	2.9	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
B-16 Dup	4/17/2012	3.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
QC Samples												
R.Blank 1	4/13/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
R. Blank 2	4/18/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
MTCA Method B Groundwater Cleanup Levels												
		5.0	3.98	-	-	80.0	-	-	-	-	-	-

Notes:

VOCs by EPA Method 8260B; Chloride, Sulfate, and Nitrate by Method 300.0; Iron by Method 6010B;

Total Organic Carbon by Method 415.1/5310C.

µg/L = micrograms per Liter; ppb = parts per billion.

mg/L = milligrams per Liter; ppm = parts per million.

Bold denotes a detected concentration.

< = Not detected above the indicated laboratory method reporting limit.

- = Not analyzed for or not available.

Shading indicate the analyte exceeded an applicable MTCA Method B cleanup level.

H = Sample was prepped or analyzed beyond the specified holding time.

Table 3 - Monitoring Well Construction
Frank Wear
Yakima, Washington

Well	Completion Date	Well ID Tag No.	Location Description	On-Site/ Off-site Well	Well Material	Well Casing ID (inches)	Measured Well Depth (feet)	Screen Length (feet)	Screen Slot Size (inches)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Sump Length (feet)	Top of Sand Pack Depth (ft bgs)	Bottom of Sand Pack Depth (ft bgs)	Comments
Shallow Wells															
MW-1	Feb 1995	NA	Frank Wear Property	On-Site	PVC	2	35.0	25	0.01	10.0	35.0	None	7.0	35.0	
MW-2	Feb 1995	NA	Frank Wear Property	On-Site	PVC	2	35.0	25	0.01	10.0	35.0	None	7.0	35.0	
MW-3	Feb 1995	NA	Sidewalk - South of CWCMH	Off-Site	PVC	2	35.0	25	0.01	10.0	35.0	None	7.0	35.0	
MW-4	Feb 1995	NA	Sidewalk - Southeast of CWCMH	Off-Site	PVC	2	35.0	25	0.01	10.0	35.0	None	7.0	35.0	
MW-5	1997	NA	Alley (North of Site)	Off-Site	PVC	2	35.0	20	0.01	15.0	35.0	None	12.0	35.0	
MW-6	2-May-2005	AKN 055	Alley (West of Site)	Off-Site	PVC	2	35.0	20	0.02	15.0	35.0	None	13.0	35.0	
MW-7	2-May-2005	AKN 056	Alley (West of Site)	Off-Site	PVC	2	35.0	20	0.02	15.0	35.0	None	13.0	35.0	
MW-8	3-May-2005	AKN 057	Frank Wear Property	On-Site	PVC	2	35.0	20	0.02	15.0	35.0	None	13.0	35.0	
MW-9	4-May-2005	AKN 058	East of Day Care Center	Off-Site	PVC	2	34.5	20	0.02	14.5	34.5	None	12.5	34.5	
MW-10	5-May-2005	AKN 059	Frank Wear Property	On-Site	PVC	2	35.0	20	0.02	15.0	35.0	None	13.0	35.0	
SPW-12	1997	NA	Frank Wear Property	On-Site	PVC	4	35.0	10 8	NK NK	9.0 21.0	19.0 29.0	None None	7.0 21.0	19.0 29.0	Constructed as sparge well with 2 screened intervals.
SPW-13	1997	NA	Frank Wear Property	On-Site	PVC	4	35.0	10 8	NK NK	9.0 21.0	19.0 29.0	None None	7.0 21.0	19.0 29.0	Constructed as sparge well with 2 screened intervals.
SPW-14	1997	NA	Frank Wear Property	On-Site	PVC	4	35.0	10 8	NK NK	9.0 21.0	19.0 29.0	None None	7.0 21.0	19.0 29.0	Constructed as sparge well with 2 screened intervals.
SPW-15	1997	NA	Frank Wear Property	On-Site	PVC	4	35.0	10 8	NK NK	9.0 21.0	19.0 29.0	None None	7.0 21.0	19.0 29.0	Constructed as sparge well with 2 screened intervals.
MW-16	29-May-2012		Eagles Parking Lot	Off-Site	PVC	2	35.00	5	0.01	29.66	34.66	0.34	27.5	35.0	
MW-20	7-Jun-2012		CWCMH Parking Lot	Off-Site	PVC	4	34.75	5	0.02	29.50	34.50	0.25	27.0	34.75	
MW-21	8-Jun-2012		Parking Lot - East of Java Hut	Off-Site	PVC	4	35.58	10	0.02	25.33	35.33	0.25	23.0	35.58	
MW-22	11-Jun-2012		Parking Lot - South of W Walnut & West of S 3rd Ave	Off-Site	PVC	4	35.50	10	0.02	25.17	35.17	0.33	23.0	35.50	
MW-23	12-Jun-2012		Parking Lot - West of Alley (West of CWCMH)	Off-Site	PVC	4	35.58	10	0.02	25.33	35.33	0.25	23.0	35.58	
MW-24	12-Jun-2012		East ROW on S 3rd, South of W Walnut	Off-Site	PVC	4	35.83	10	0.02	25.50	35.50	0.33	23.0	35.83	
MW-25	13-Jun-2012		East ROW on S 3rd, North of W Walnut	Off-Site	PVC	4	34.92	10	0.02	24.58	34.58	0.33	23.0	34.92	
Deep Wells															
MW-17	31-May-2012		Eagles Parking Lot	Off-Site	PVC	2	93.50	5	0.01	88.00	93.00	0.50	86.0	93.50	
MW-18	5-Jun-2012		Frank Wear Property	On-Site	PVC	2	92.00	5	0.01	86.67	91.67	0.33	82.0	92.00	
MW-19	7-Jun-2012		CWCMH Parking Lot	Off-Site	PVC	2	93.50	5	0.01	88.17	93.17	0.33	85.0	93.50	

Notes:
 CWCMH = Central Washington Comprehensive Mental Health Facility
 ft bgs = feet below ground surface
 PVC = Polyvinyl Chloride
 ID = Inner Diameter
 NK = Not known
 NA = Not Available

Table 4 - Monitoring Well Groundwater Analyses Results
Frank Wear
Yakima, Washington

Sample Identification	Sampling Date	Volatile Organic Compounds (VOCs)								Bioremediation-Related Parameters					
		PCE	TCE	1,1-DCE	tDCE	cDCE	VC	Ethene	Ethane	Nitrate (as N)	Total Iron	Sulfate	Methane	TOC	Chloride
		Concentration in Micrograms per Liter (µg/L)								Concentration in Milligrams per Liter (mg/L)					
Shallow Monitoring Wells															
MW-1	4/9/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-2	4/10/2012	16	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	5.2 H	<0.040	11	-	<1.0	24
MW-3	4/10/2012	8.0	1.5	<1.0	<1.0	1.2	<1.0	-	-	11 H	<0.040	11	-	<1.0	48
MW-3 Dup	4/10/2012	8.2	1.4	<1.0	<1.0	1.1	<1.0	-	-	-	-	-	-	-	-
MW-4	4/10/2012	1,900	1.3	<1.0	<1.0	<1.0	<1.0	-	-	3.8	0.089	13	-	<1.0	160
MW-5	4/9/2012	12	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-6	4/9/2012	4.9	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-7	4/9/2012	27	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-8	4/9/2012	260	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-9	4/9/2012	2,700	<1.0	<1.0	<1.0	3.2	<1.0	-	-	-	-	-	-	-	-
MW-10	4/10/2012	1,800	1.0	<1.0	<1.0	14	<1.0	-	-	2.7	<0.040	8.1	-	<1.0	18
MW-16	6/13/2012	36 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	-	-	-	-	-	-	-	-
MW-20	6/15/2012	16	<1.0	<1.0	<1.0	<1.0	<1.0	0.026	<0.025	4.9	0.20	11	0.0002	1.0	36
MW-21	6/14/2012	28	<1.0	<1.0	<1.0	<1.0	<1.0	0.038	0.029	3.8	0.077	9.3	0.0018	1.0	42
MW-22	6/14/2012	760 H	<1.0	<1.0	<1.0	<1.0	<1.0	0.27	0.29	4.5 H	0.60	12	0.0046	1.1	47
MW-23	6/14/2012	7.4 H	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.3	18 H	0.26	15	0.0060	<1.0	32
MW-23 Dup	6/14/2012	7.2 H	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
MW-24	6/14/2012	130	<1.0	<1.0	<1.0	<1.0	<1.0	0.11	0.11	3.6	0.11	9.3	0.00044	<1.0	36
MW-25	6/15/2012	6.5	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
SPW-12	4/9/2012	2,300	21	<1.0	<1.0	70	<1.0	-	-	-	-	-	-	-	-
SPW-13	4/9/2012	380	3.1	<1.0	<1.0	8.5	<1.0	-	-	-	-	-	-	-	-
SPW-14	4/9/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-
SPW-15	4/9/2012	670	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-

Please see notes on last page

Table 4 - Monitoring Well Groundwater Analyses Results
Frank Wear
Yakima, Washington

Sample Identification	Sampling Date	Volatile Organic Compounds (VOCs)								Bioremediation-Related Parameters						
		PCE	TCE	1,1-DCE	tDCE	cDCE	VC	Ethene	Ethane	Nitrate (as N)	Total Iron	Sulfate	Methane	TOC	Chloride	
		Concentration in Micrograms per Liter (µg/L)								Concentration in Milligrams per Liter (mg/L)						
Deep Monitoring Wells																
MW-17	6/13/2012	<1.0 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	<1.0 H	-	-	-	-	-	-	-	-	-
MW-18	6/14/2012	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	4.7	2.2	2.3	12	0.0120	<1.0	7.9	
MW-19	6/15/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	2.9	1.5	2.9	12	0.0081	<1.0	7.5	
QC Samples																
Trip Blank	4/4/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-
Trip Blank	6/15/2012	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-
MTCA Method B Groundwater Cleanup Levels																
		5.0	3.98	-	-	80.0	-	-	-	-	-	-	-	-	-	-

Notes:

VOCs by EPA Method 8260B; Chloride, Sulfate, and Nitrate by Method 300.0; Iron by Method 6010B; Total Organic Carbon by Method 415.1/5310C.
 Methane, Ethane, and Ethene by Method AM20GAX.
 µg/L = micrograms per Liter; ppb = parts per billion.
 mg/L = milligrams per Liter; ppm = parts per million.
 Bold denotes a detected concentration.
 < = Not detected above the indicated laboratory method reporting limit.
 - = Not analyzed for or not available.
 Shading indicate the analyte exceeded an applicable MTCA Method B cleanup level.
 H = Sample was prepped or analyzed beyond the specified holding time.

Acronyms:

PCE = tetrachloroethene
 TCE = trichloroethene
 1,1-DCE = 1,1-dichloroethene
 cDCE = *cis*-1,2-dichloroethene
 tDCE = *trans*-1,2-dichloroethene
 VC = vinyl chloride
 TOC = total organic carbon

**Table 5 - Monitoring Well Groundwater Elevations
Frank Wear
Yakima, Washington**

Well ID	Date	Top of Casing Elevation [feet above msl]	Depth to Water [feet btoc]	Groundwater Elevation [feet above msl]
Shallow Zone				
MW-1	9-Apr-12	1,062.90	22.63	1,040.27
	15-Jun-12		20.76	1,042.14
MW-2	9-Apr-12	1063.59	24.81	1,038.78
MW-3	9-Apr-12	1,061.17	24.85	1,036.32
	15-Jun-12		20.32	1,040.85
MW-4	9-Apr-12	1,060.93	25.65	1,035.28
	15-Jun-12		20.61	1,040.32
MW-5	9-Apr-12	1,064.16	24.97	1,039.19
	15-Jun-12		21.59	1,042.57
MW-6	9-Apr-12	1,063.47	24.45	1,039.02
	15-Jun-12		21.30	1,042.17
MW-7	9-Apr-12	1,063.85	25.20	1,038.65
	15-Jun-12		21.81	1,042.04
MW-8	9-Apr-12	1,063.44	24.84	1,038.60
	15-Jun-12		21.27	1,042.17
MW-9	9-Apr-12	1,062.65	24.71	1,037.94
	15-Jun-12		20.60	1,042.05
MW-10	9-Apr-12	1,062.49	23.76	1,038.73
	15-Jun-12		20.34	1,042.15
MW-16	15-Jun-12	1,065.40	22.18	1,043.22
MW-20	15-Jun-12	1,060.45	19.52	1,040.93
MW-21	15-Jun-12	1,061.80	22.27	1,039.53
MW-22	15-Jun-12	1,060.92	20.89	1,040.03
MW-23	15-Jun-12	1,062.55	21.53	1,041.02
MW-24	15-Jun-12	1,058.70	19.95	1,038.75
MW-25	15-Jun-12	1,061.86	21.94	1,039.92
SPW-12	9-Apr-12	1,063.84	22.85	1,040.99
	15-Jun-12		20.19	1,043.65
SPW-13	9-Apr-12	1,063.68	23.20	1,040.48
	15-Jun-12		21.42	1,042.26

Pease refer to notes at the end of this table.

**Table 5 - Monitoring Well Groundwater Elevations
Frank Wear
Yakima, Washington**

Well ID	Date	Top of Casing Elevation [feet above msl]	Depth to Water [feet btoc]	Groundwater Elevation [feet above msl]
Shallow Zone Continued				
SPW-14	9-Apr-12	1,063.16	22.78	1,040.38
	15-Jun-12		21.00	1,042.16
SPW-15	9-Apr-12	1063.24	24.92	1,038.32
	15-Jun-12		21.08	1,042.16
Deep Zone				
MW-17	15-Jun-12	1,065.58	27.64	1,037.94
MW-18	15-Jun-12	1,062.55	24.69	1,037.86
MW-19	15-Jun-12	1,060.55	23.70	1,036.85

Notes:

msl = mean sea level.

btoc = below top of casing.

**Table 6 - Monitoring Well Groundwater Field Parameters
Frank Wear
Yakima, Washington**

Well ID	Sample Date	Field Parameters				
		Temperature [°C]	pH	Conductivity [mS/cm]	ORP [mV]	DO [mg/L]
Shallow Monitoring Wells Zone						
MW-1	9-Apr-12	15.3	6.9	0.165	139	8.8
MW-2	10-Apr-12	15.3	6.8	0.227	146	5.7
MW-3	10-Apr-12	16.3	6.7	0.345	167	5.7
MW-4	10-Apr-12	15.4	6.9	0.524	188	6.9
MW-5	9-Apr-12	16.9	6.8	0.285	161	7.7
MW-6	9-Apr-12	16.8	6.9	0.226	151	7.4
MW-7	9-Apr-12	17.4	6.9	0.258	147	6.9
MW-8	9-Apr-12	15.9	6.9	0.213	141	7.4
MW-9	9-Apr-12	16.2	7.5	0.201	120	7.3
MW-10	9-Apr-12	14.3	7.0	0.159	156	8.4
MW-16	13-Jun-12	18.9	8.4	0.278	-112	0.7
MW-20	15-Jun-12	16.6	7.2	0.246	121	7.6
MW-21	14-Jun-12	17.1	7.0	0.249	123	7.3
MW-22	14-Jun-12	17.8	7.3	0.291	13	7.2
MW-23	14-Jun-12	17.9	7.3	0.387	-30	5.1
MW-24	14-Jun-12	18.4	7.1	0.241	57	7.0
MW-25	15-Jun-12	15.8	7.5	0.349	-29	6.6
SPW-12	9-Apr-12	16.6	6.8	0.261	153	4.6
SPW-13	9-Apr-12	15.9	6.9	0.172	156	7.7
SPW-14	9-Apr-12	15.2	7.1	0.143	139	8.8
SPW-15	9-Apr-12	15.3	7.0	0.163	140	7.9
Deep Monitoring Wells						
MW-17	13-Jun-12	18.4	8.1	0.255	-248	0.4
MW-18	14-Jun-12	18.4	8.2	0.220	-216	1.5
MW-19	15-Jun-12	16.5	8.3	0.205	-171	1.3

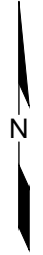
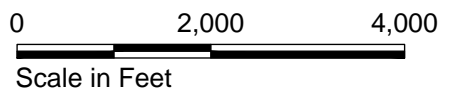
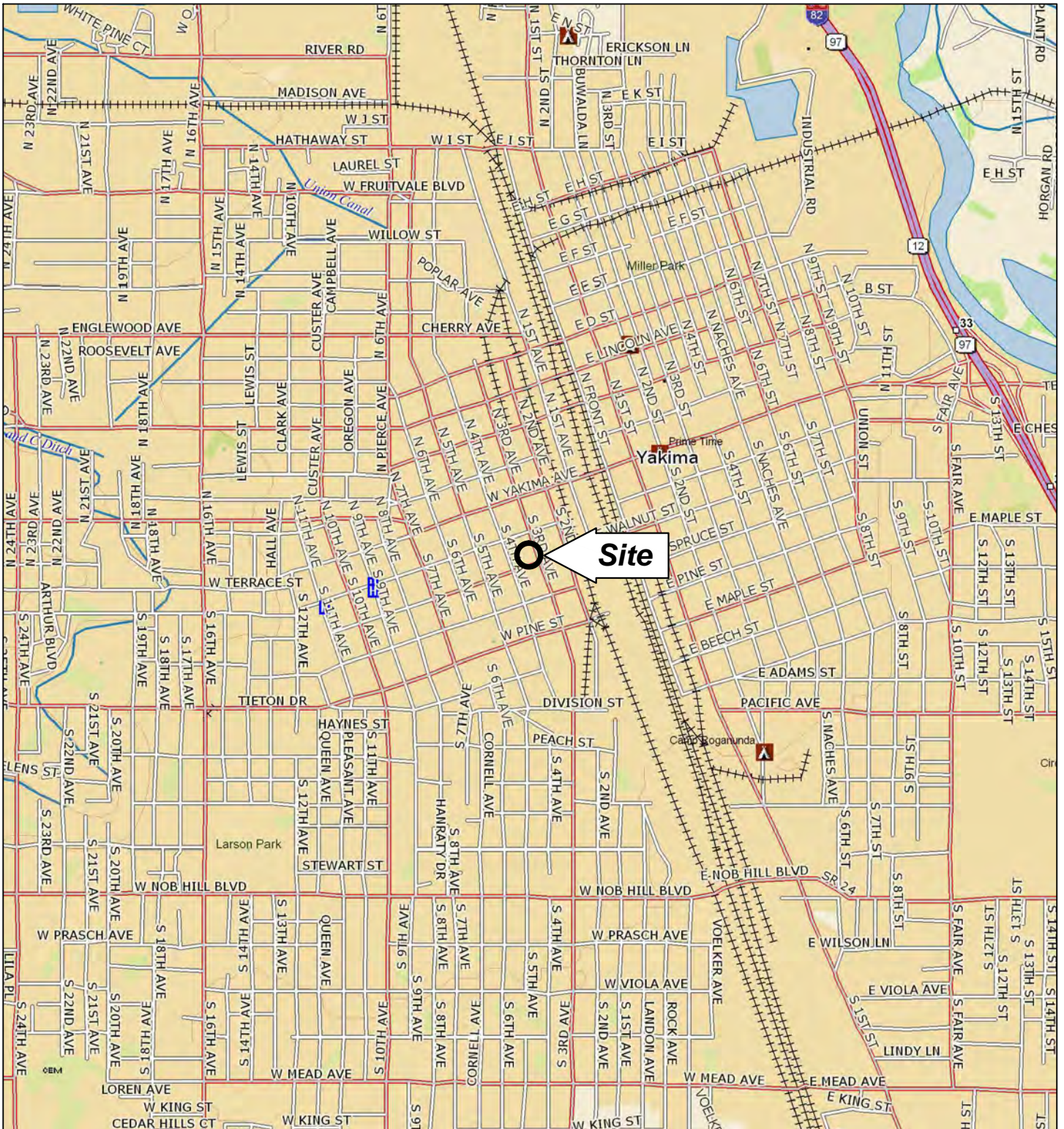
Notes:


- °C = degrees Celsius.
- mS/cm = millisiemens per centimeter.
- ORP = oxidation reduction potential.
- mV = millivolts.
- DO = dissolved oxygen.
- mg/L = milligrams per liter.

**Table 7 – MTCA Method B Cleanup Levels (CULs)
Frank Wear
Yakima, Washington**






Chemical Group	Contaminant of Concern	Soil CUL in µg/kg	Groundwater CUL in µg/L
VOC	Perchloroethylene (PCE)	19.6	5.0*
VOC	Chloroform	717	7.17
VOC	cis-1,2-dichloroethene	8,000	80
VOC	Trichloroethene (TCE)	398	3.98
VOC	1,1,1-trichloroethane	720,000	7,200
VOC	1,1,1,2-tetrachloroethane	168	1.68
VOC	1,2-dichlorobenzene	72,000	720
VOC	Chlorobenzene	16,000	160
VOC	1,2-dichloroethane	48.1	0.481
VOC	trans-1,3-dichloropropene	24.3	0.243

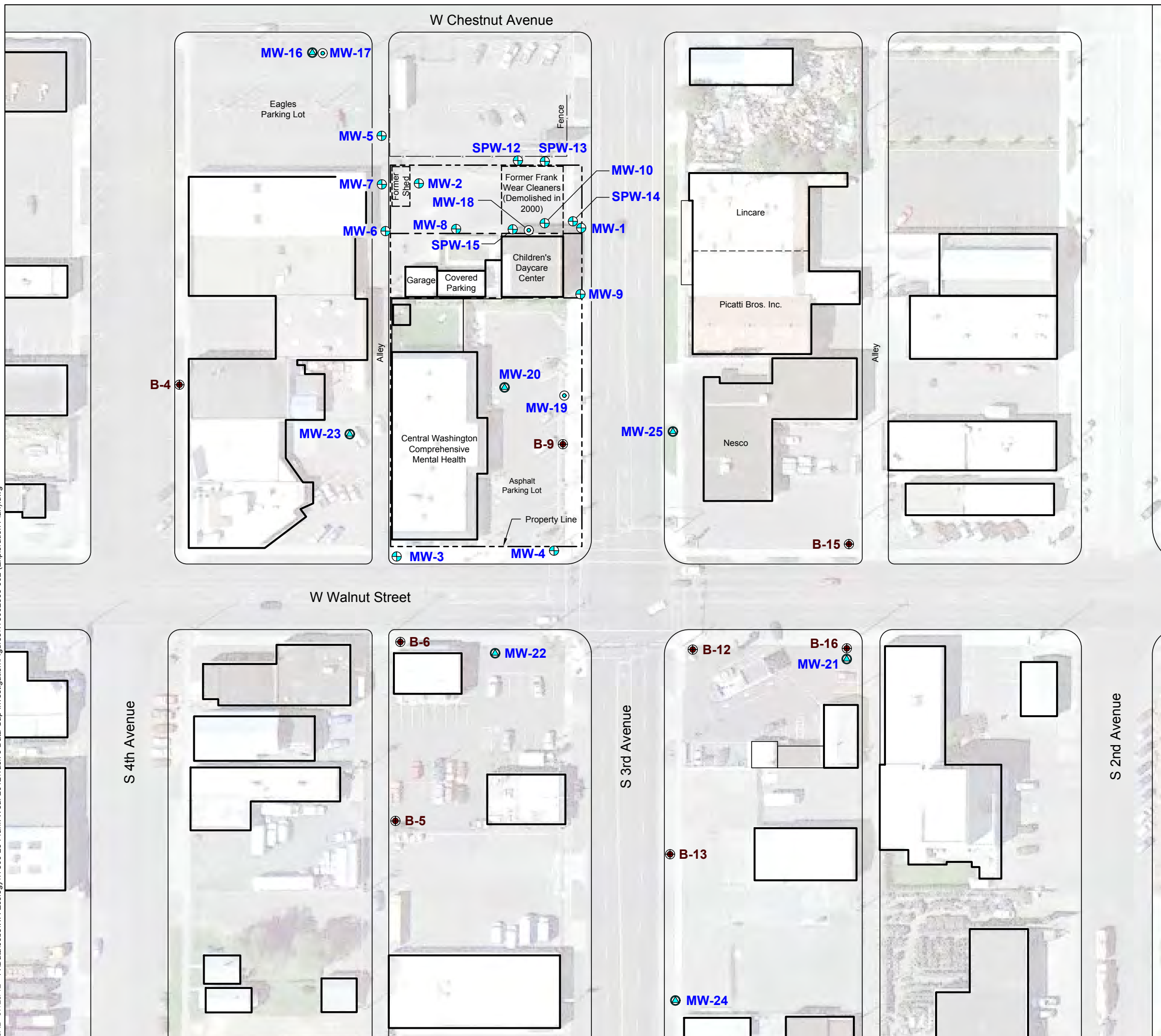
* This is not a MTCA Method B Groundwater Cleanup Level, but a site-specific one.



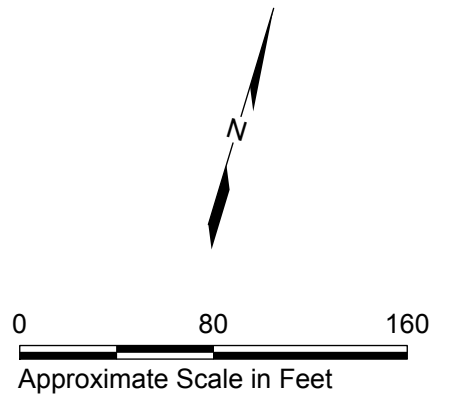
Frank Wear Site Yakima, Washington	
Vicinity Map	
17800-23	9/12
	
Figure 1	

JAB_07/19/12 F:\Data\Lobs\WA Ecology\17800-23 Frank Wear 2012\Task 3 Data Gap Investigation\Figures\178002303-001 (Vicinity Map).dwg

Source:     



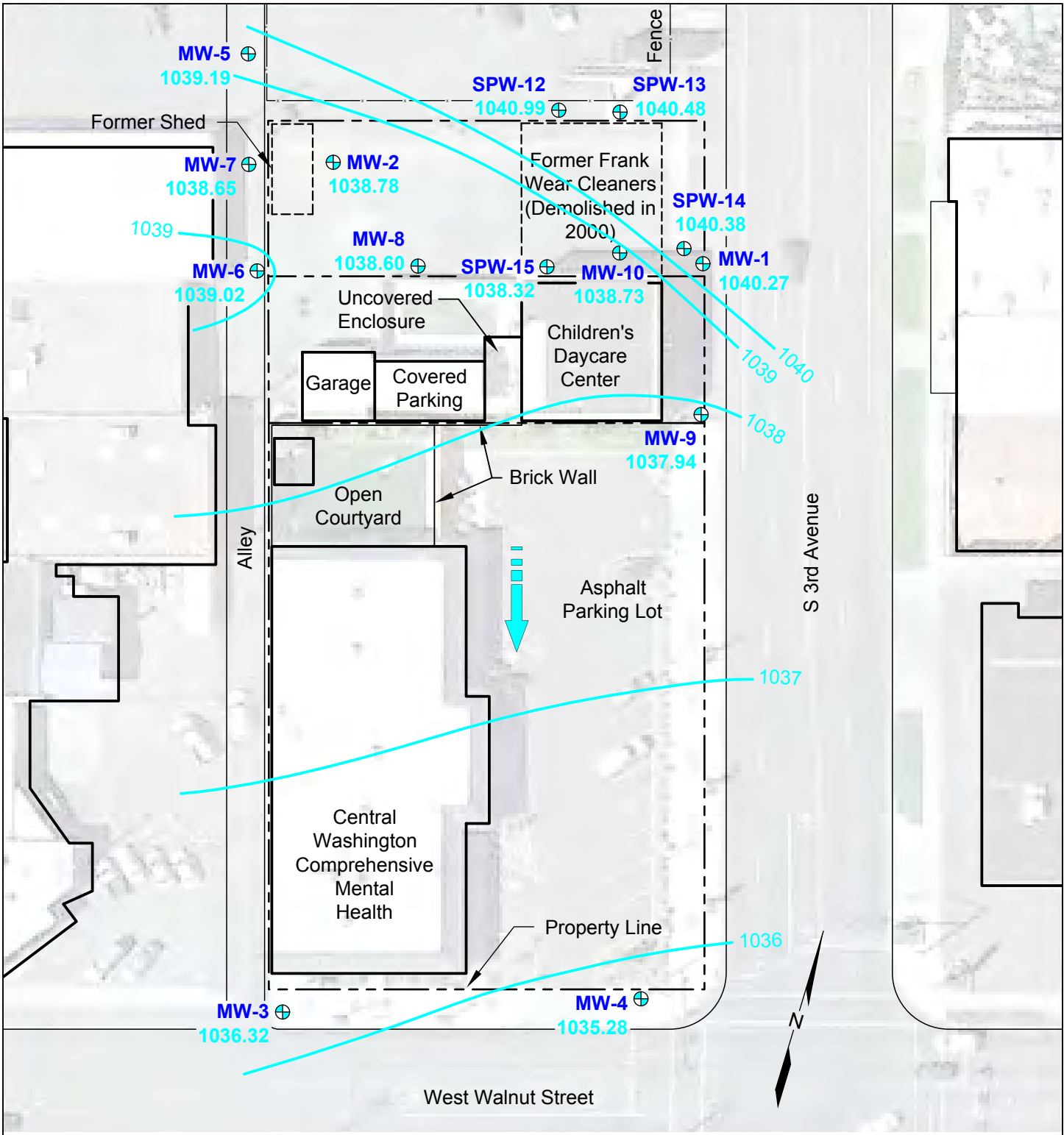
- MW-5** Monitoring Well Location and Number - Pre-2012
- MW-16** Shallow Monitoring Well Location and Number (35 ft.) - 2012
- MW-17** Deep Monitoring Well Location and Number (90 ft.) - 2012
- B-6** Soil Boring Location and Number - April 2012



Source: Maxim 1995 PCE Concentration Plan, aerial photograph, site reconnaissance in July 2007, City of Yakima GIS.

Frank Wear Site Yakima, Washington	
Site Exploration Plan	
17800-23	9/12
HARTCROWSER	Figure 2

F:\Data\Jobs\WA Ecology\17800-23 Frank Wear 2012\Task 3 Data Gap Investigation\Figures\178002303-003 (GW Elev. 4-12).dwg



MW-8 ⊕ Monitoring Well Location and Number - Pre-2012

1036.37 Groundwater Elevation in Feet Above MSL

1040 — Groundwater Elevation Contour in Feet Above MSL

▬▬▬▬▬▬ → Inferred Groundwater Flow Direction



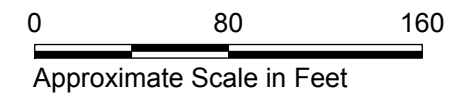
Frank Wear Site Yakima, Washington	
Groundwater Elevations - April 2012	
17800-23	9/12
HARTCROWSER	Figure 3

Source: Maxim 1995 PCE Concentration Plan, aerial photograph, and site reconnaissance July 2007.


JAB 07/27/12 F:\Data\Jobs\WA Ecology\17800-23 Frank Wear 2012\Task 3 Data Cap Investigation\Figures\178002303-004 (GW Elev. 6-12).dwg



- ⊕ MW-5 Monitoring Well Location and Number - Pre-2012
- ⊙ MW-16 Shallow Monitoring Well Location and Number (35 ft.) - 2012
- ⊙ MW-17 Deep Monitoring Well Location and Number (90 ft.) - 2012 - Not Used in this Contour
- 1039.53 Groundwater Elevation in Feet Above MSL
- * Water Level Not Used in this Contour
- 1041 Groundwater Elevation Contour in Feet Above MSL
- ➔ Inferred Groundwater Flow Direction



Source: Maxim 1995 PCE Concentration Plan, aerial photograph, site reconnaissance in July 2007, City of Yakima GIS.

Frank Wear Site Yakima, Washington	
Groundwater Elevations - June 2012	
17800-23	9/12
	Figure 4



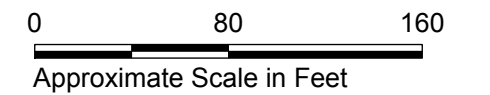
- MW-5** ⊕ Monitoring Well Location and Number - Pre-2012
- MW-17** ⊙ Deep Monitoring Well Location and Number (90 ft.) - 2012
- B-6** ⊕ Soil Boring Location and Number - April 2012

Groundwater Results:
(Concentrations Shown in µg/L)


B-5	Sample Identification
12	Tetrachloroethene (PCE)
<1.0	Trichloroethene (TCE)
<3.0	Total Dichloroethene (DCE)
<1.0	Vinyl Chloride (VC)

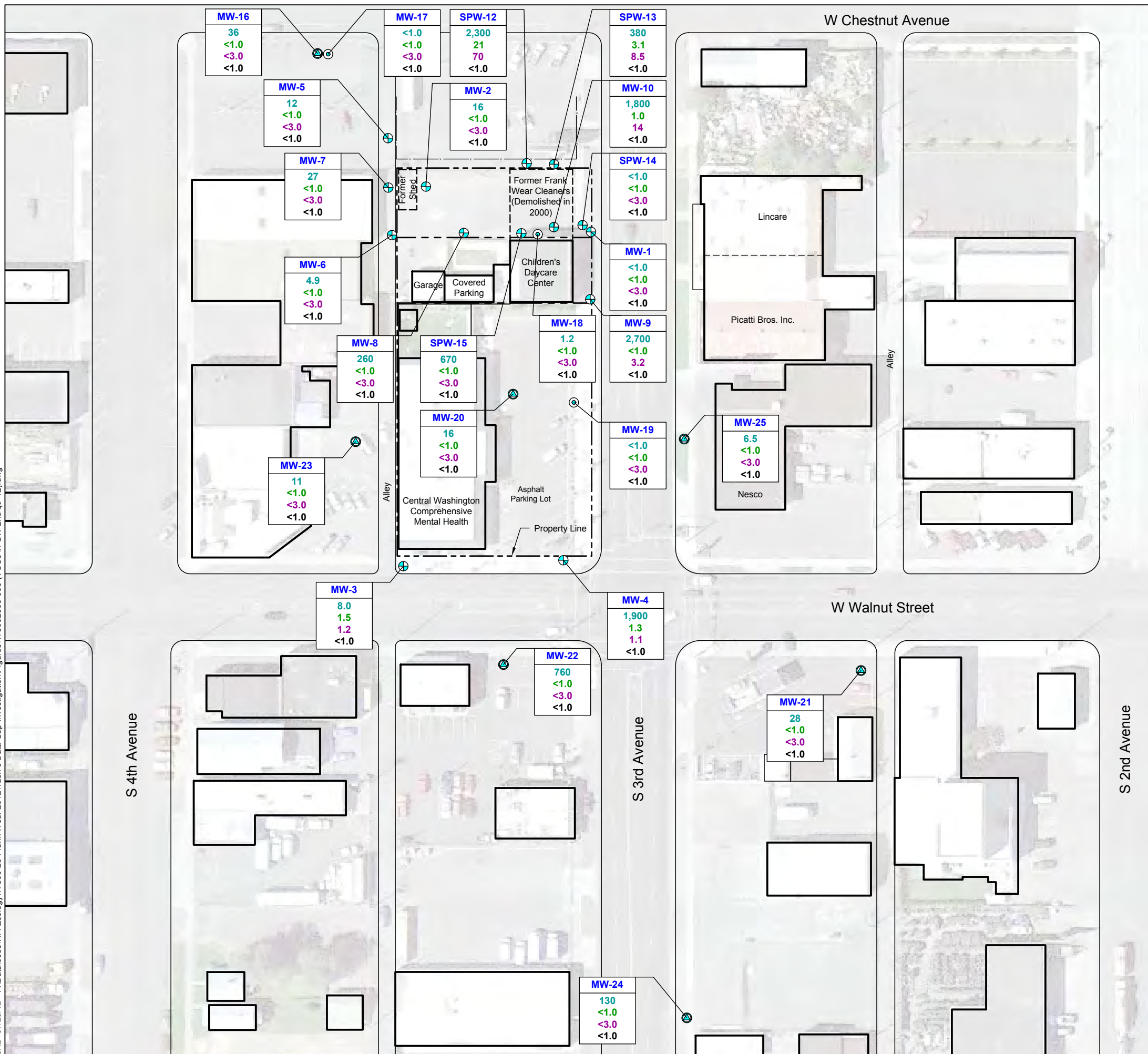
Soil Results:
(Concentrations Shown in µg/kg)

B-12/35.0	Sample Identification/Sample Depth in Feet
<16	Tetrachloroethene (PCE)
<13	Trichloroethene (TCE)
<80	Total Dichloroethene (DCE)
<6.4	Vinyl Chloride (VC)



Source: Maxim 1995 PCE Concentration Plan, aerial photograph, site reconnaissance in July 2007, City of Yakima GIS.

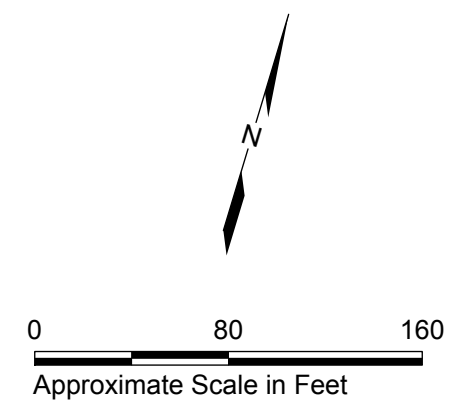
Frank Wear Site Yakima, Washington	
Exploratory Investigation Soil and Groundwater Results	
17800-23	9/12
 HARTCROWSER	Figure 5



- MW-5** Monitoring Well Location and Number - Pre-2012
- MW-16** Shallow Monitoring Well Location and Number (35 ft.) - 2012
- MW-17** Deep Monitoring Well Location and Number (90 ft.) - 2012

Chlorinated VOC Concentrations in Groundwater:
(Concentrations Shown in µg/L)

SPW-15	Sample Identification
670	Tetrachloroethene (PCE)
<1.0	Trichloroethene (TCE)
<3.0	Total Dichloroethene (DCE)
<1.0	Vinyl Chloride (VC)



Source: Maxim 1995 PCE Concentration Plan, aerial photograph, site reconnaissance in July 2007, City of Yakima GIS.

Frank Wear Site Yakima, Washington	
Chlorinated VOCs in Groundwater - Second Quarter 2012	
17800-23	9/12
HARTCROWSER	Figure 6

**APPENDIX A
EXPLORATION LOGS**

Key to Exploration Logs

Sample Description

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 were used as an identification guide.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance. Soil density/consistency in test pits and probes is estimated based on visual observation and is presented parenthetically on the logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot
Very loose	0 to 4	Very soft	0 to 2
Loose	4 to 10	Soft	2 to 4
Medium dense	10 to 30	Medium stiff	4 to 8
Dense	30 to 50	Stiff	8 to 15
Very dense	>50	Very stiff	15 to 30
		Hard	>30

Moisture

Dry Little perceptible moisture
 Damp Some perceptible moisture, likely below optimum
 Moist Likely near optimum moisture content
 Wet Much perceptible moisture, likely above optimum

Minor Constituents Estimated Percentage

Trace	<5
Slightly (clayey, silty, etc.)	5 - 12
Clayey, silty, sandy, gravelly	12 - 30
Very (clayey, silty, etc.)	30 - 50

Sampling Test Symbols

	Split Spoon		Cuttings		Core Run
	Push Probe		Grab (Jar)		

Test Symbols

NA	Not Available
NS	No Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
PID	Photoionization Detector Reading

SOIL CLASSIFICATION CHART

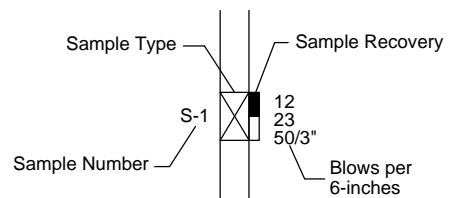
MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SC	CLAYEY SANDS, SAND - CLAY MIXTURES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Groundwater Indicators

Groundwater Level on Date or (ATD) At Time of Drilling
 Groundwater Seepage (Test Pits)

Sample Key



HARTCROWSER

17800-23

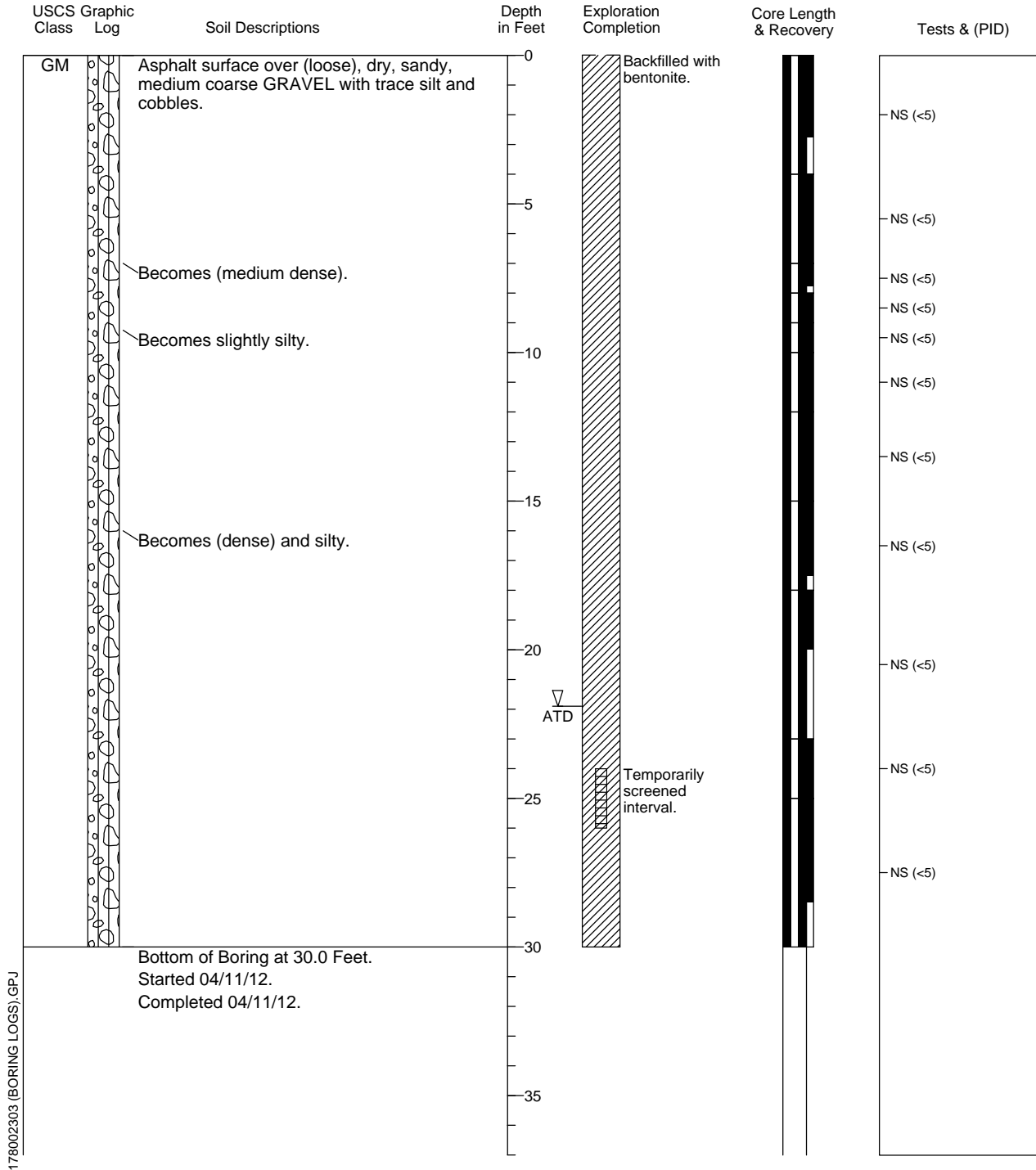
9/12

Figure A-1

Boring Log B-4

Location: Yakima, Washington
 Logged By: Jason M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"

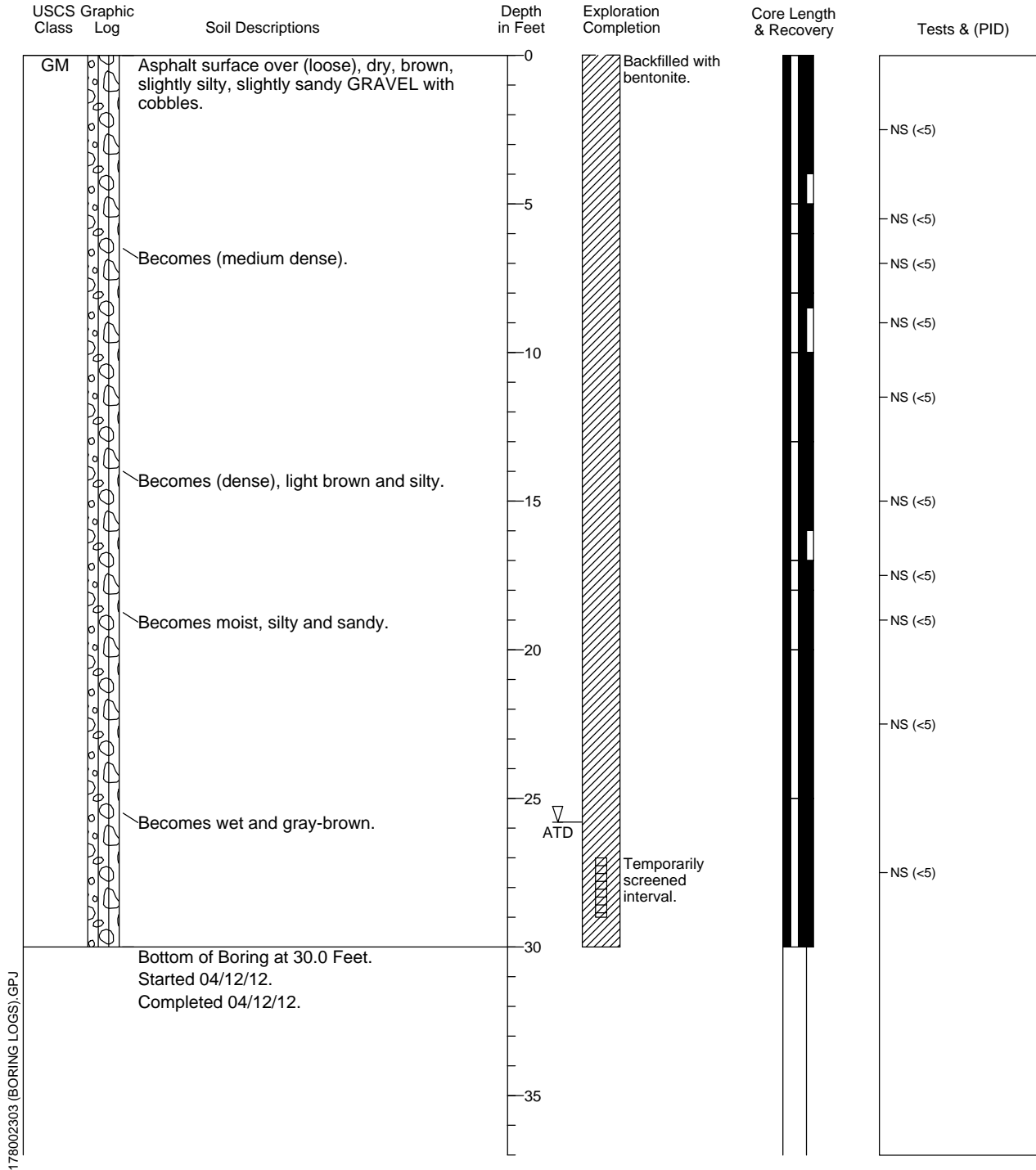


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Boring Log B-5

Location: Yakima, Washington
 Logged By: Jason M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"

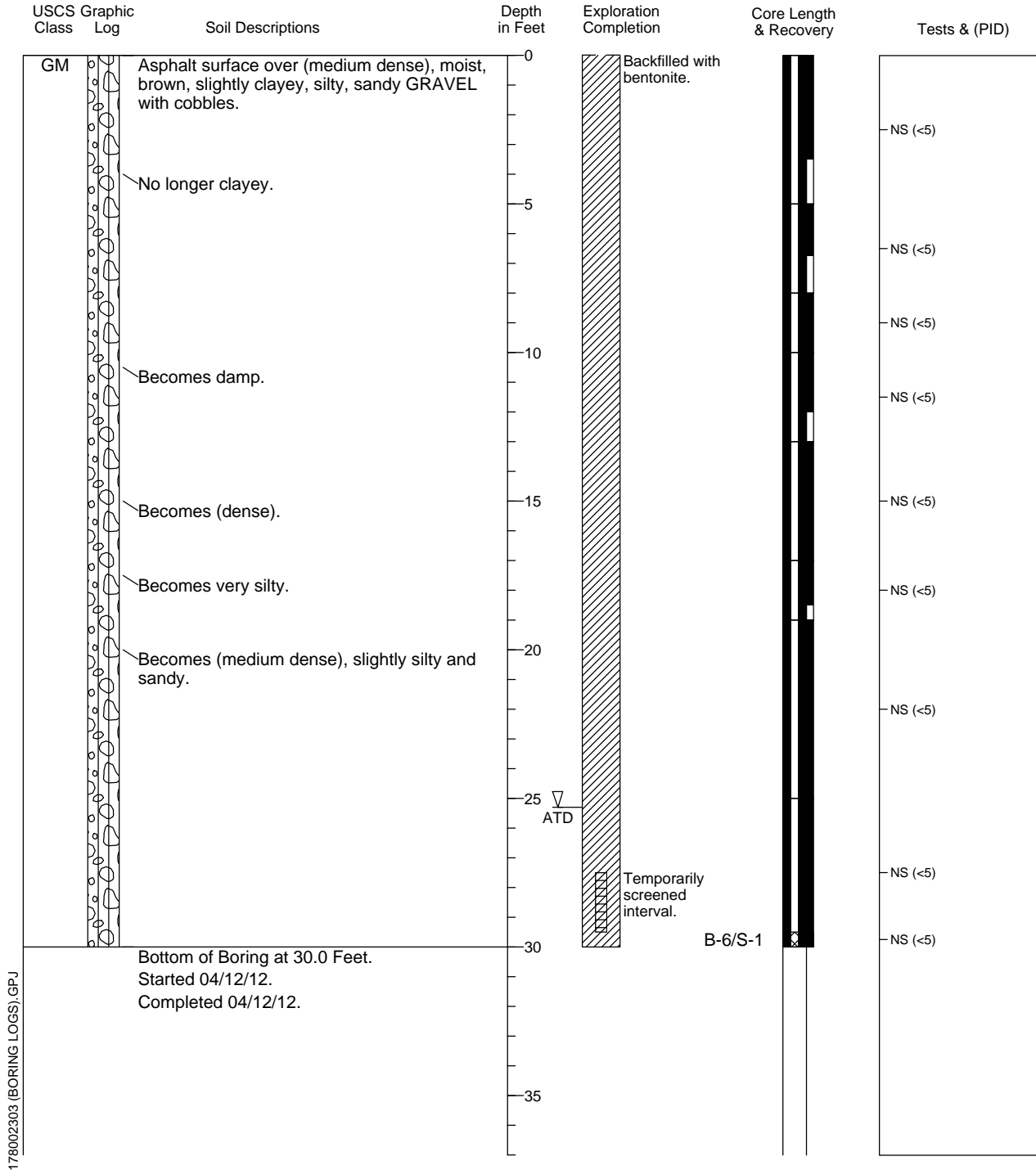


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Boring Log B-6

Location: Yakima, Washington
 Logged By: Jason M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"

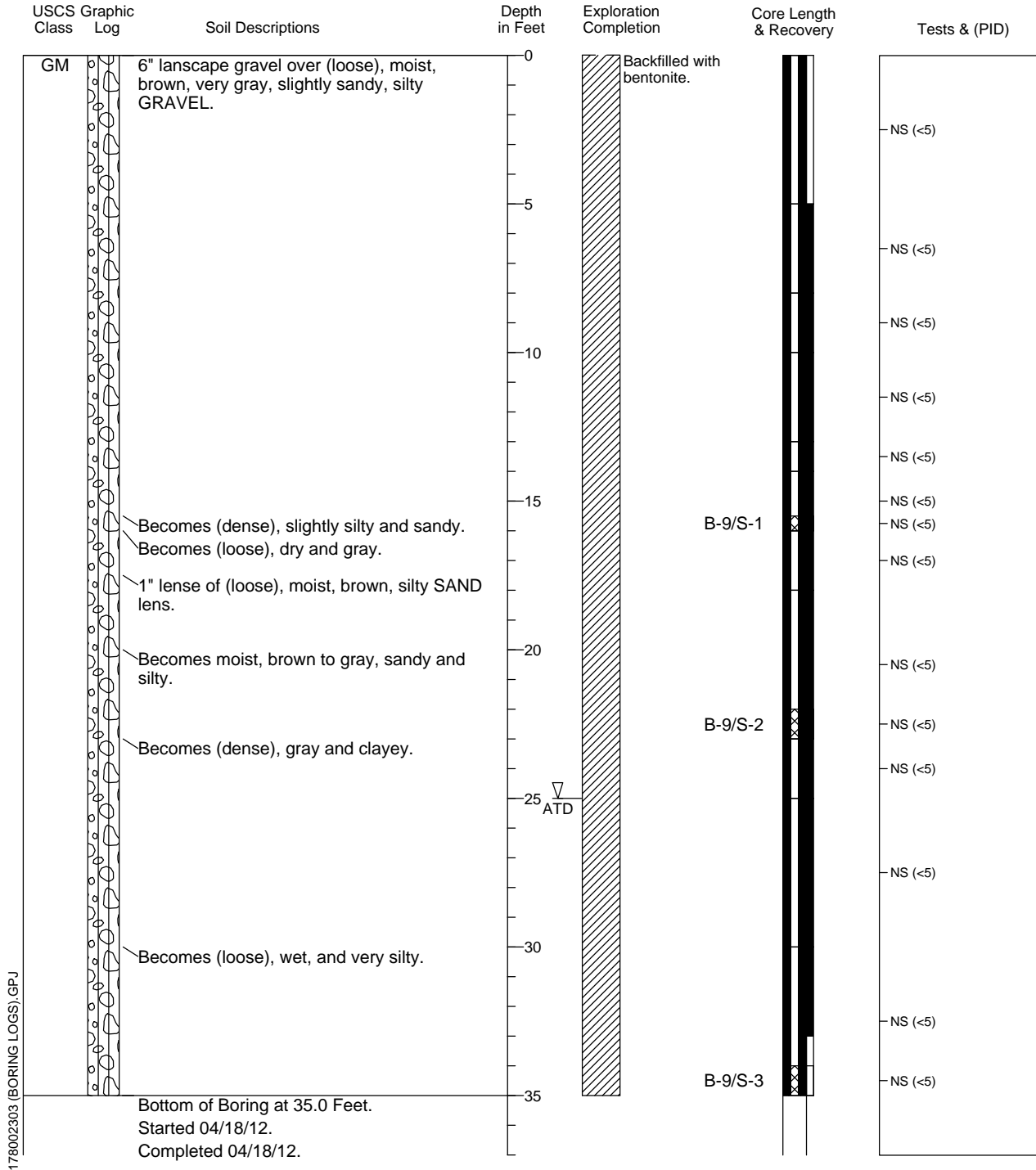


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Boring Log B-9

Location: Yakima, Washington
 Logged By: Chris M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

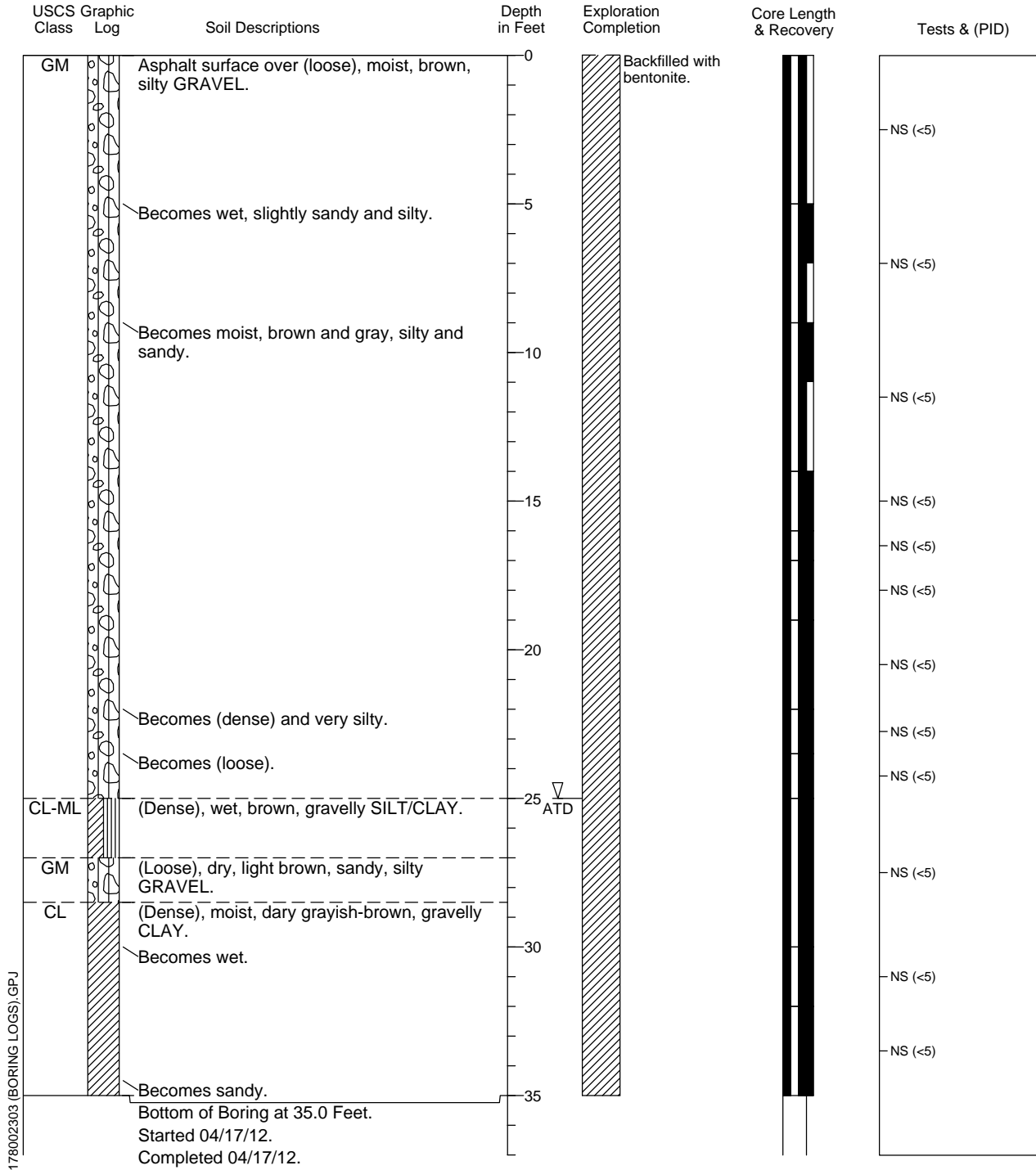
9/12

Figure A-5

Boring Log B-12

Location: Yakima, Washington
 Logged By: Chris M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"

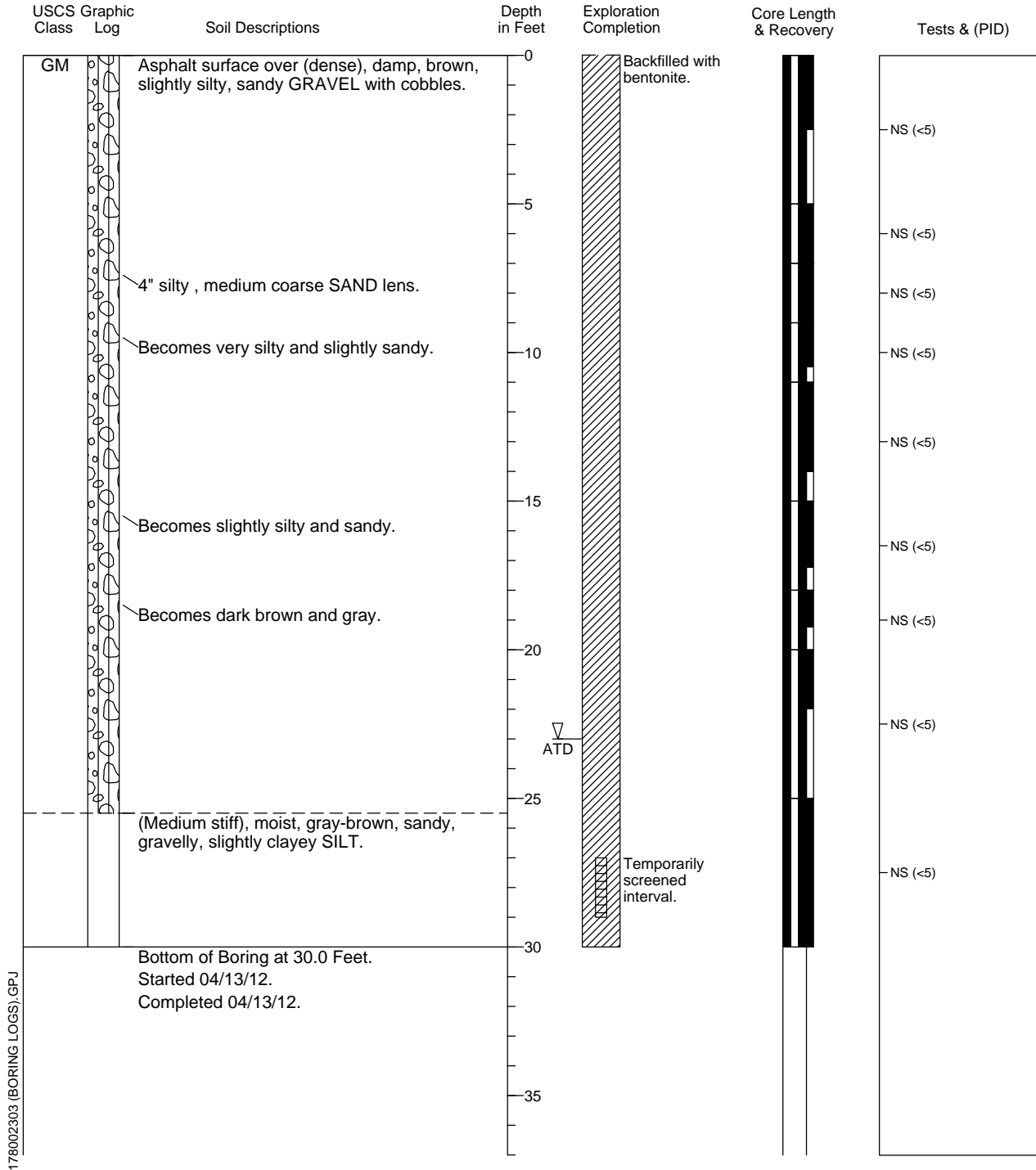


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Boring Log B-13

Location: Yakima, Washington
 Logged By: Jason M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

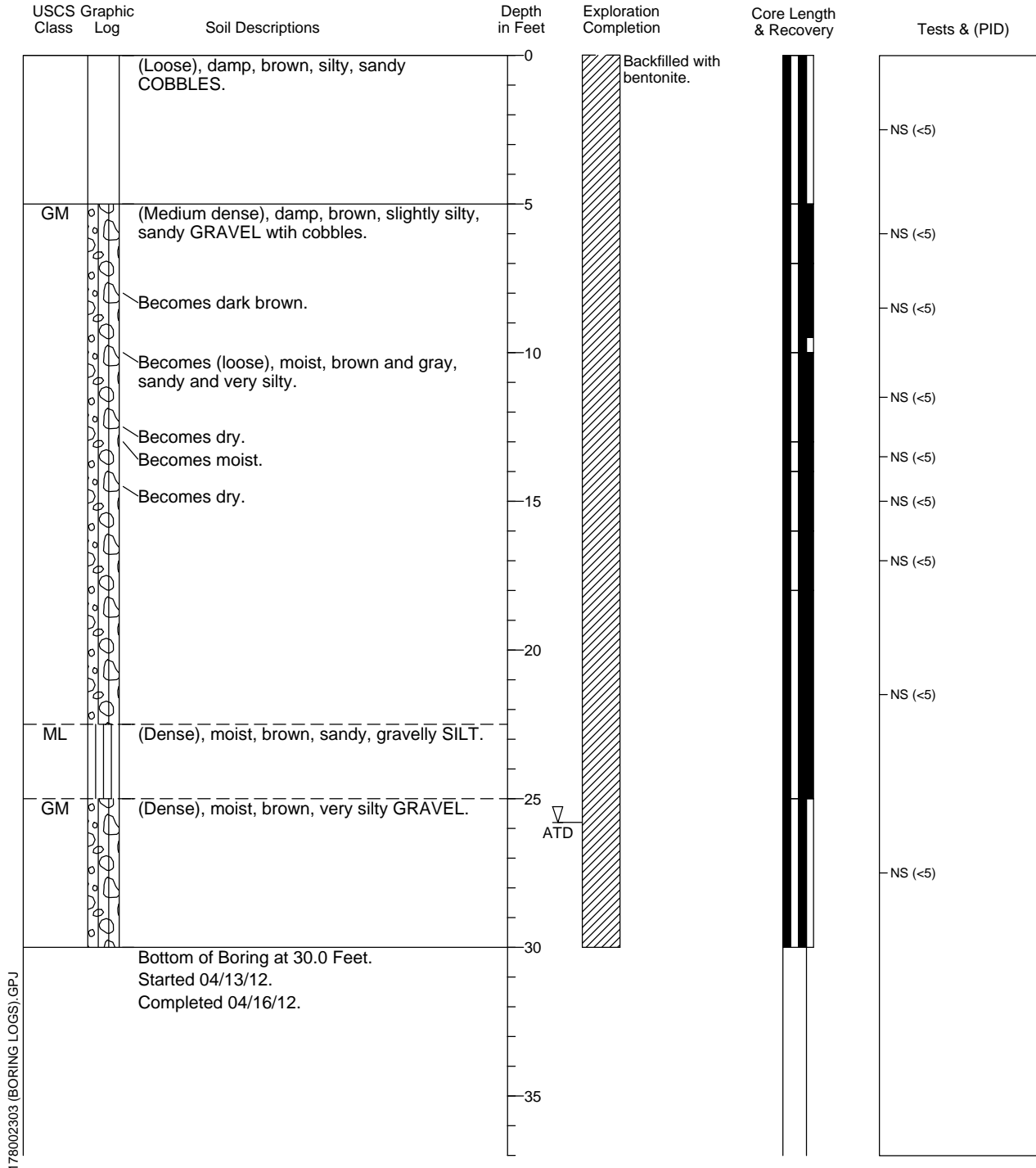
9/12

Figure A-7

Boring Log B-15

Location: Yakima, Washington
 Logged By: Jason M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

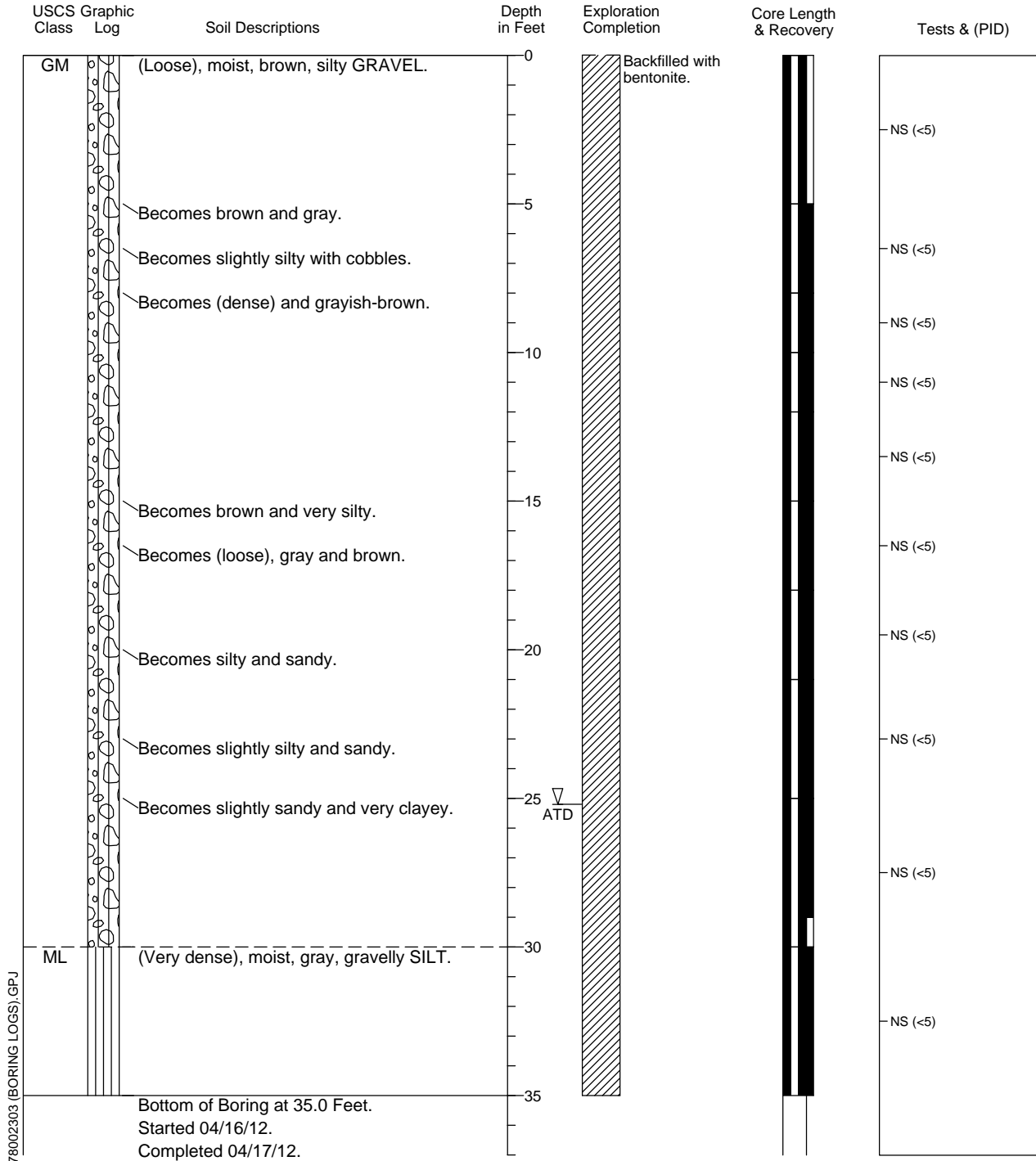
9/12

Figure A-8

Boring Log B-16

Location: Yakima, Washington
 Logged By: Chris M.
 Reviewed By: Jill K.

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

9/12

Figure A-9

APPENDIX B
MONITORING WELL CONSTRUCTION LOGS

Key to Exploration Logs

Sample Description

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 were used as an identification guide.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance. Soil density/consistency in test pits and probes is estimated based on visual observation and is presented parenthetically on the logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot
Very loose	0 to 4	Very soft	0 to 2
Loose	4 to 10	Soft	2 to 4
Medium dense	10 to 30	Medium stiff	4 to 8
Dense	30 to 50	Stiff	8 to 15
Very dense	>50	Very stiff	15 to 30
		Hard	>30

Minor Constituents

Minor Constituents	Estimated Percentage
Trace	<5
Slightly (clayey, silty, etc.)	5 - 12
Clayey, silty, sandy, gravelly	12 - 30
Very (clayey, silty, etc.)	30 - 50

Sampling Symbols

- Split Spoon
- Push Probe
- Cuttings
- Grab (Jar)
- Core Run

Moisture

- Dry Little perceptible moisture
- Damp Some perceptible moisture, likely below optimum
- Moist Likely near optimum moisture content
- Wet Much perceptible moisture, likely above optimum

Test Symbols

- NA Not Available
- NS No Sheen
- SS Slight Sheen
- MS Moderate Sheen
- HS Heavy Sheen
- PID Photoionization Detector Reading

Groundwater Indicators

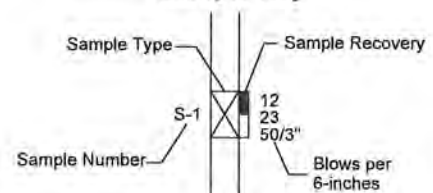
- Groundwater Level on Date or (ATD) At Time of Drilling
- Groundwater Seepage (Test Pits)

SOIL CLASSIFICATION CHART

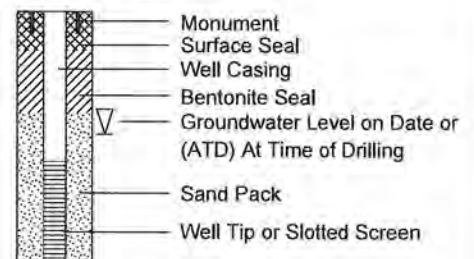
MAJOR DIVISIONS		SYMBOLS		TYPICAL DESCRIPTIONS
		GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE		SM	SILTY SANDS, SAND - SILT MIXTURES	
MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE		SC	CLAYEY SANDS, SAND - CLAY MIXTURES	
FINE GRAINED SOILS	SILTS AND CLAYS		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Sample Key



Exploration Details



HARTCROWSER

17800-23

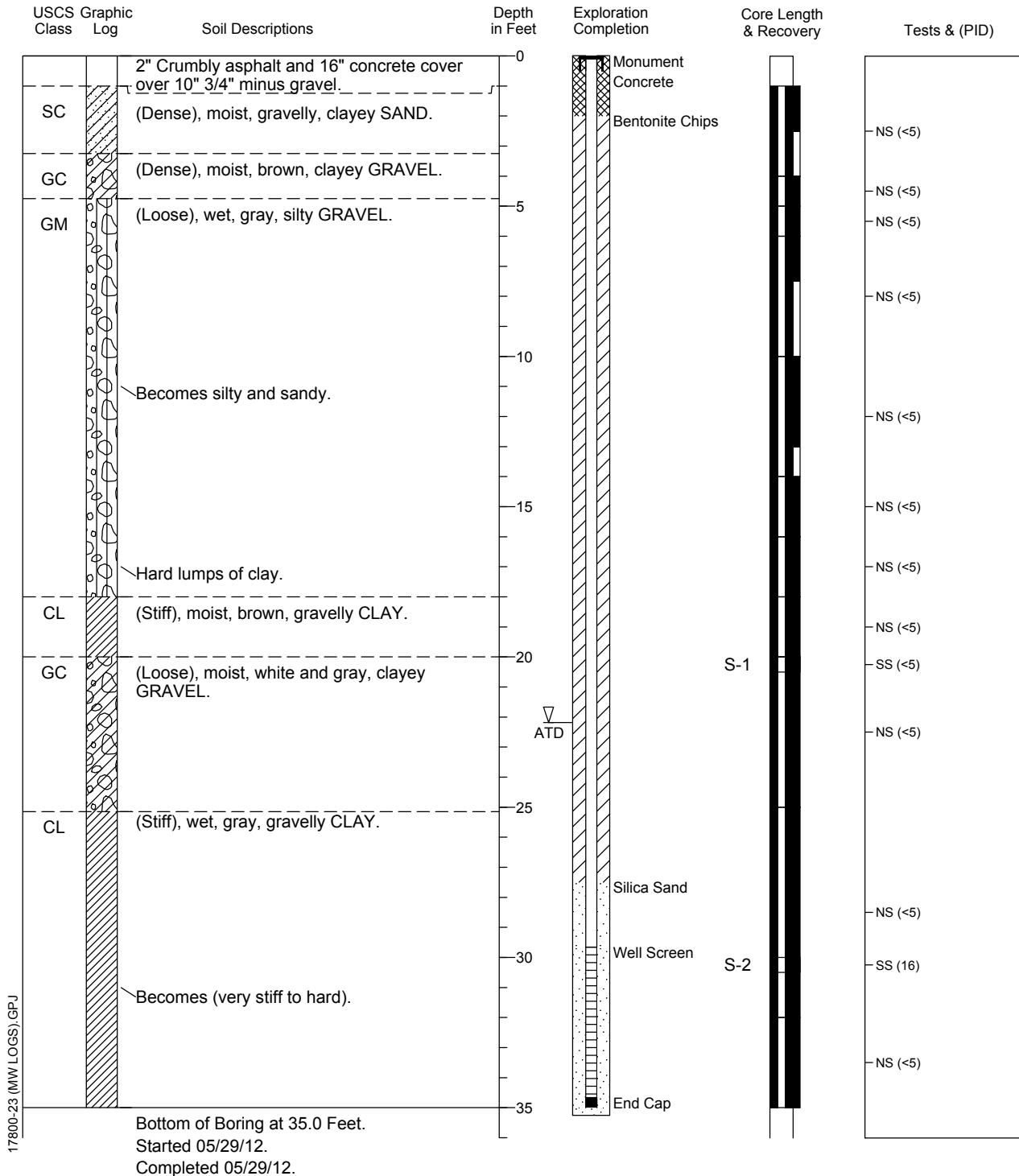
9/12

Figure B-1

Monitoring Well Construction Data for MW-16

Location: Yakima, Washington
 Logged By: Chris Martin
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



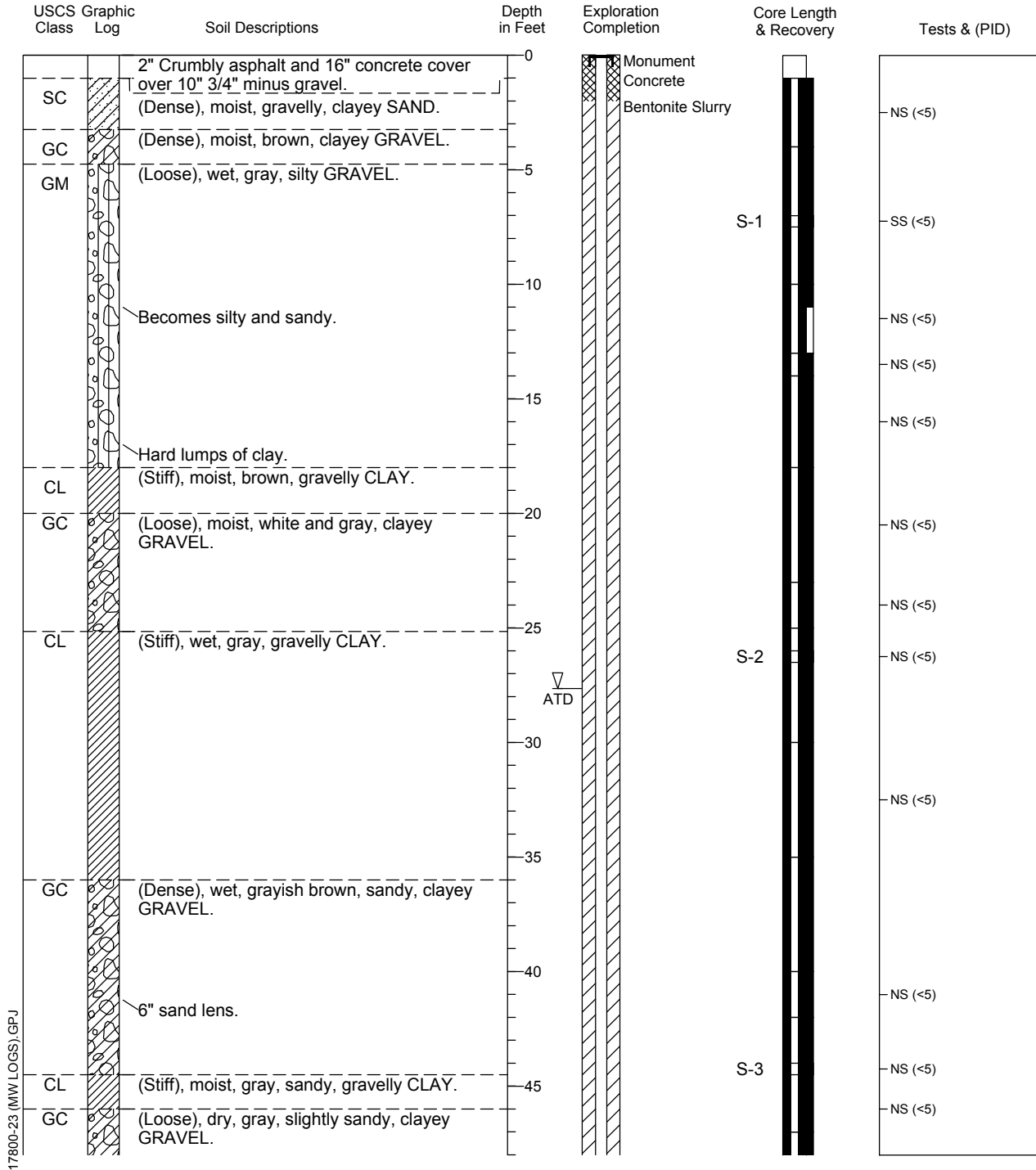
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



Monitoring Well Construction Data for MW-17

Location: Yakima, Washington
 Logged By: Chris Martin
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

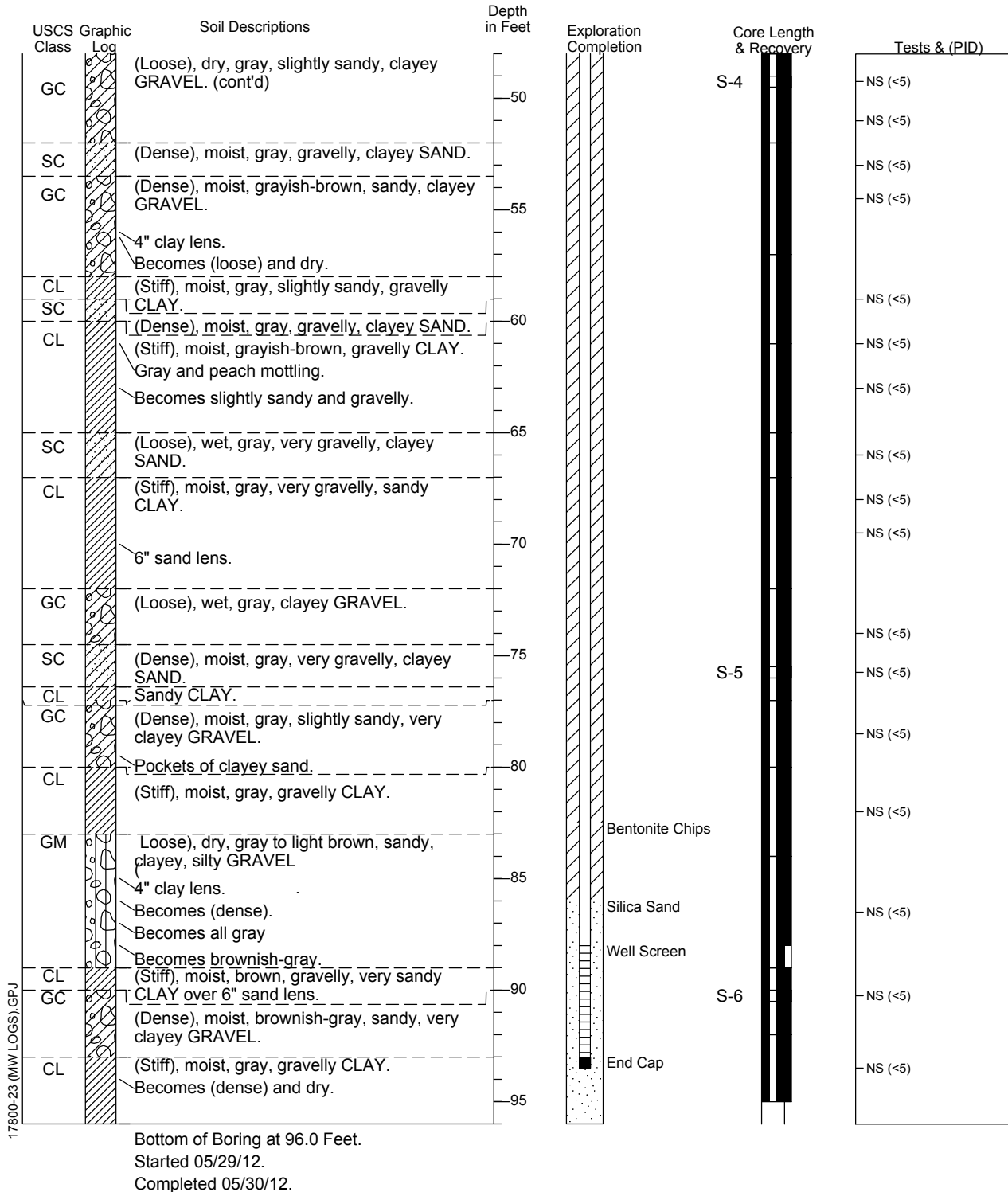
9/12

Figure B-3

Monitoring Well Construction Data for MW-17

Location: Yakima, Washington
 Logged By: Chris Martin
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"

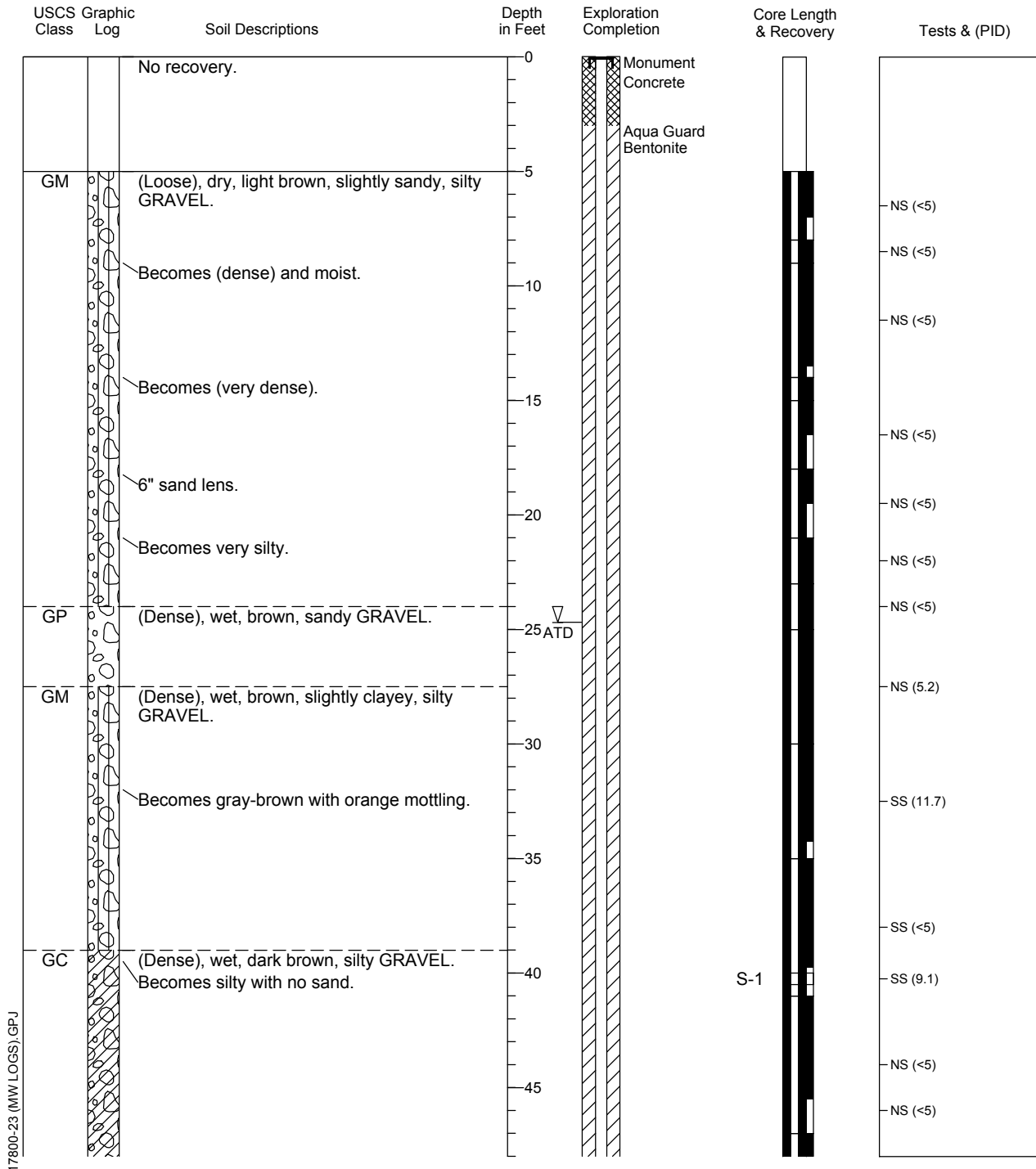


1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Monitoring Well Construction Data for MW-18

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"

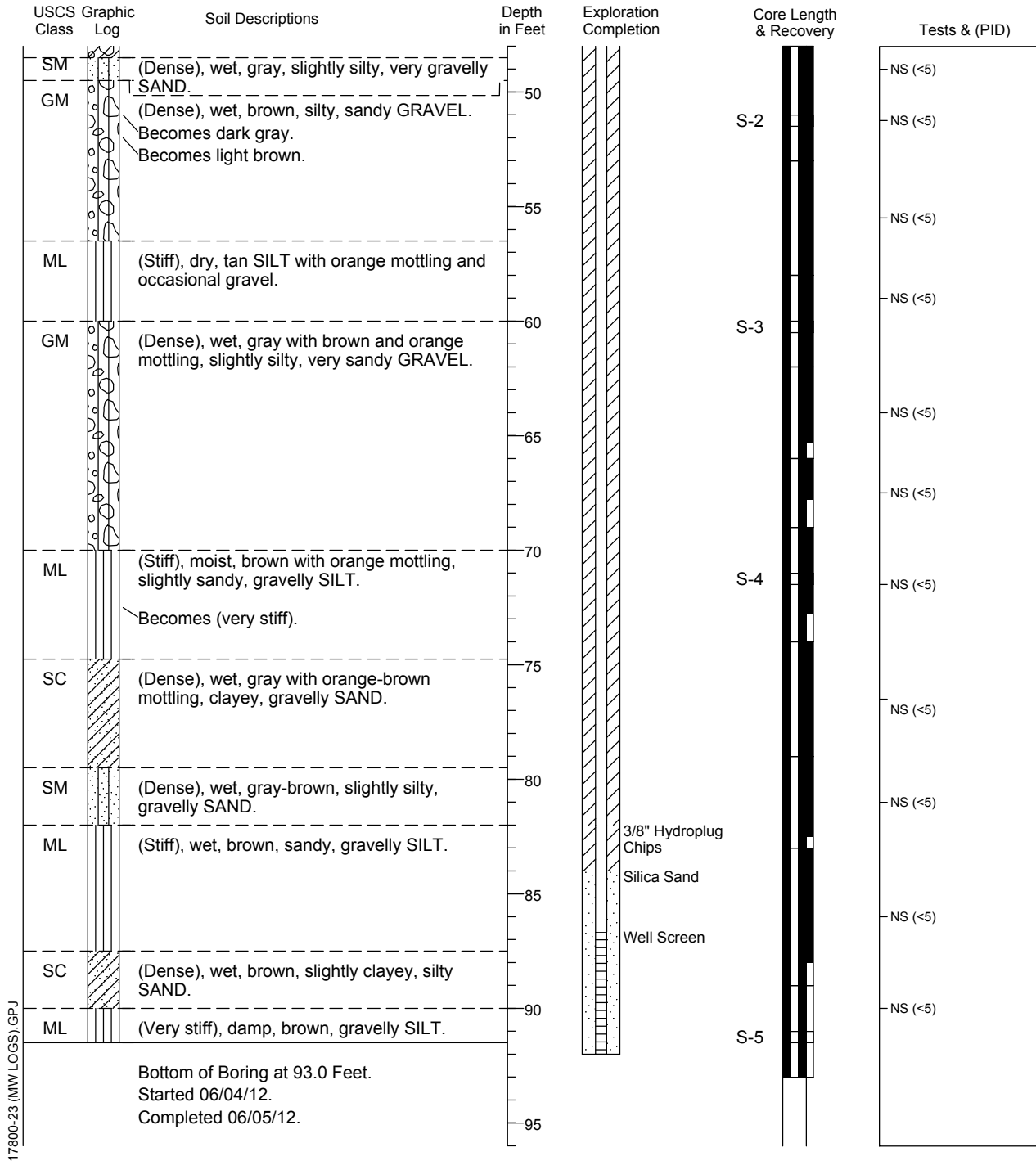


1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Monitoring Well Construction Data for MW-18

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"

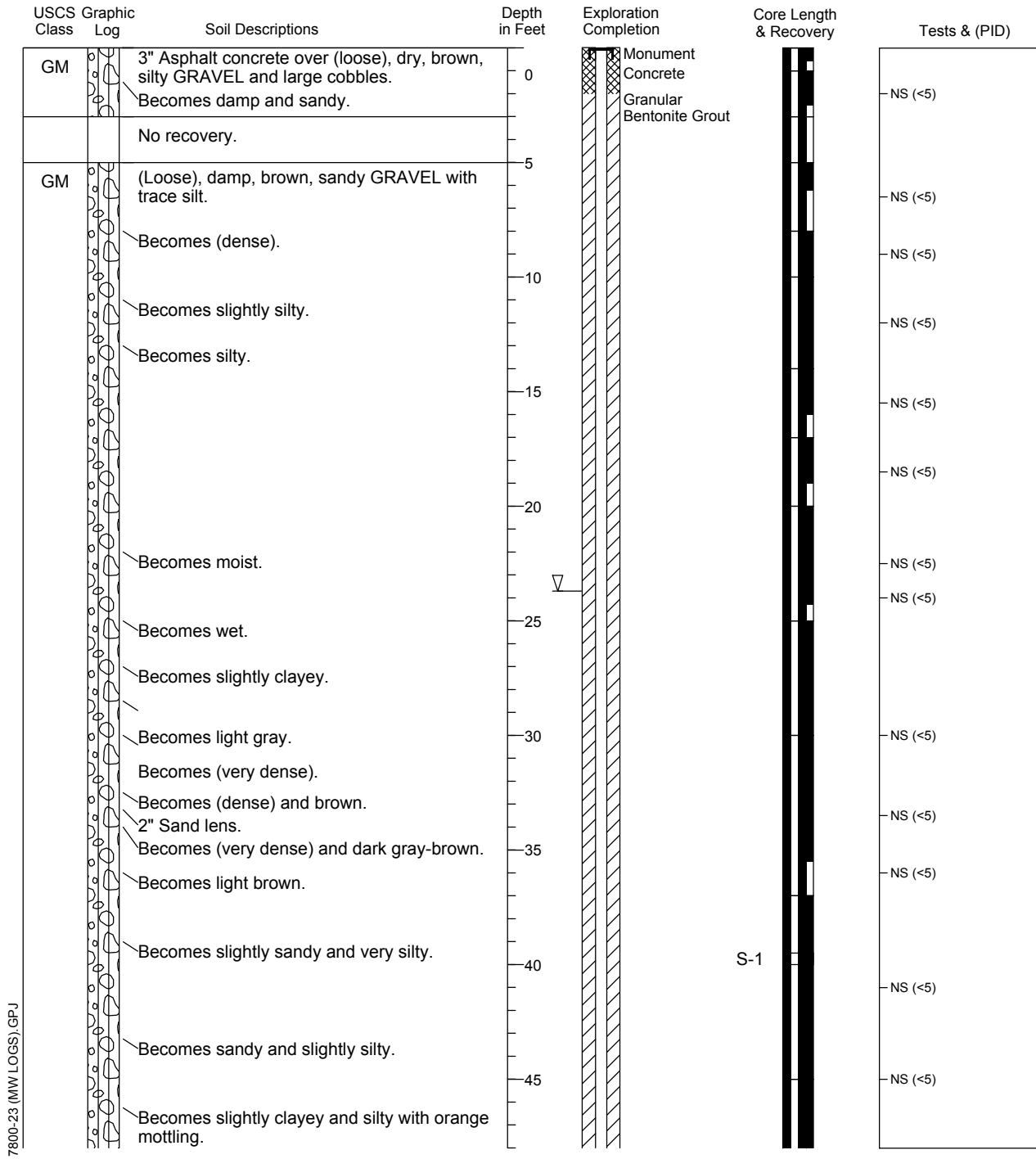


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

Monitoring Well Construction Data for MW-19

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



17800-23 (MW LOGS).GPJ

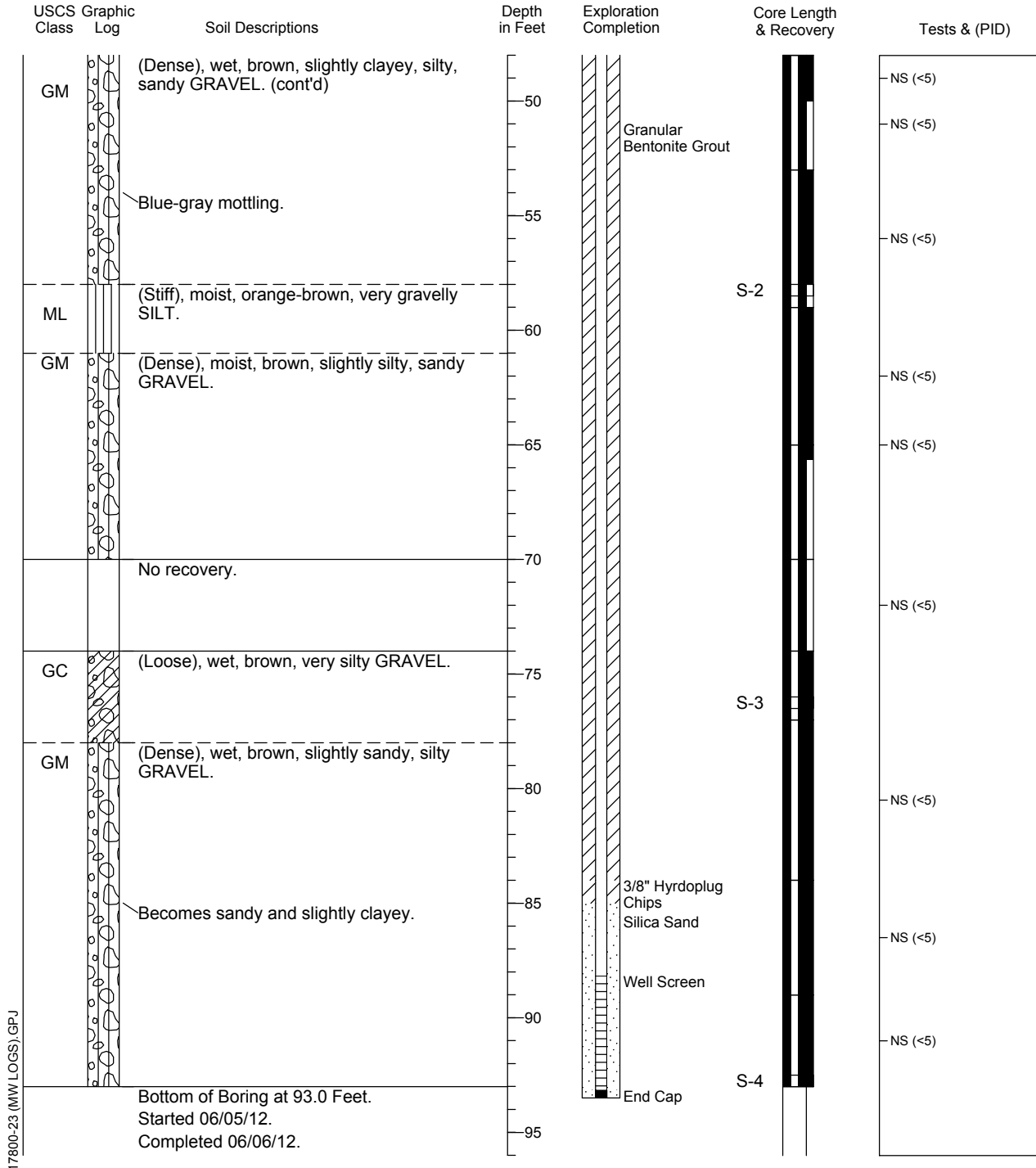
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



Monitoring Well Construction Data for MW-19

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



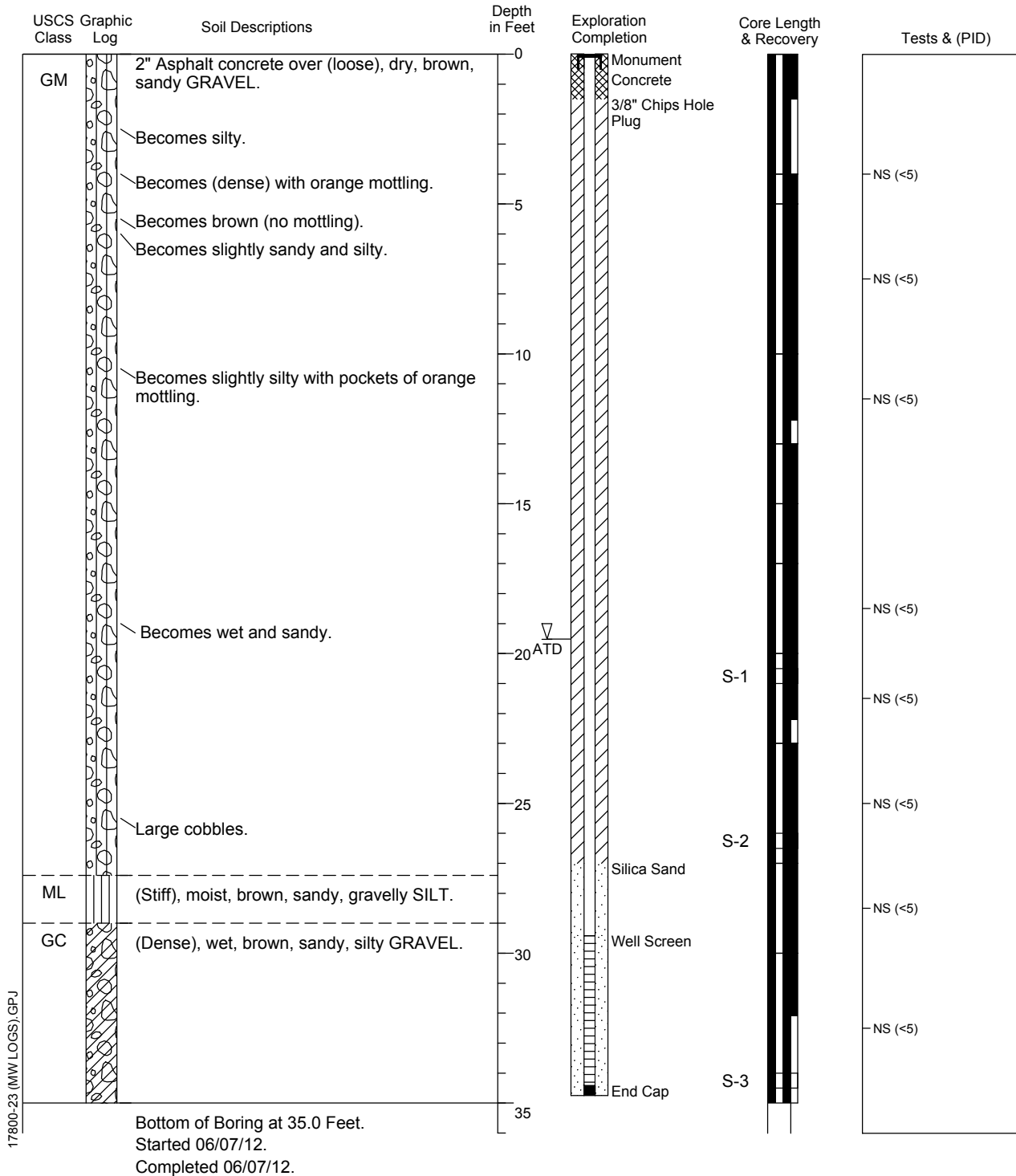
17800-23
 Figure B-5

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Monitoring Well Construction Data for MW-20

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

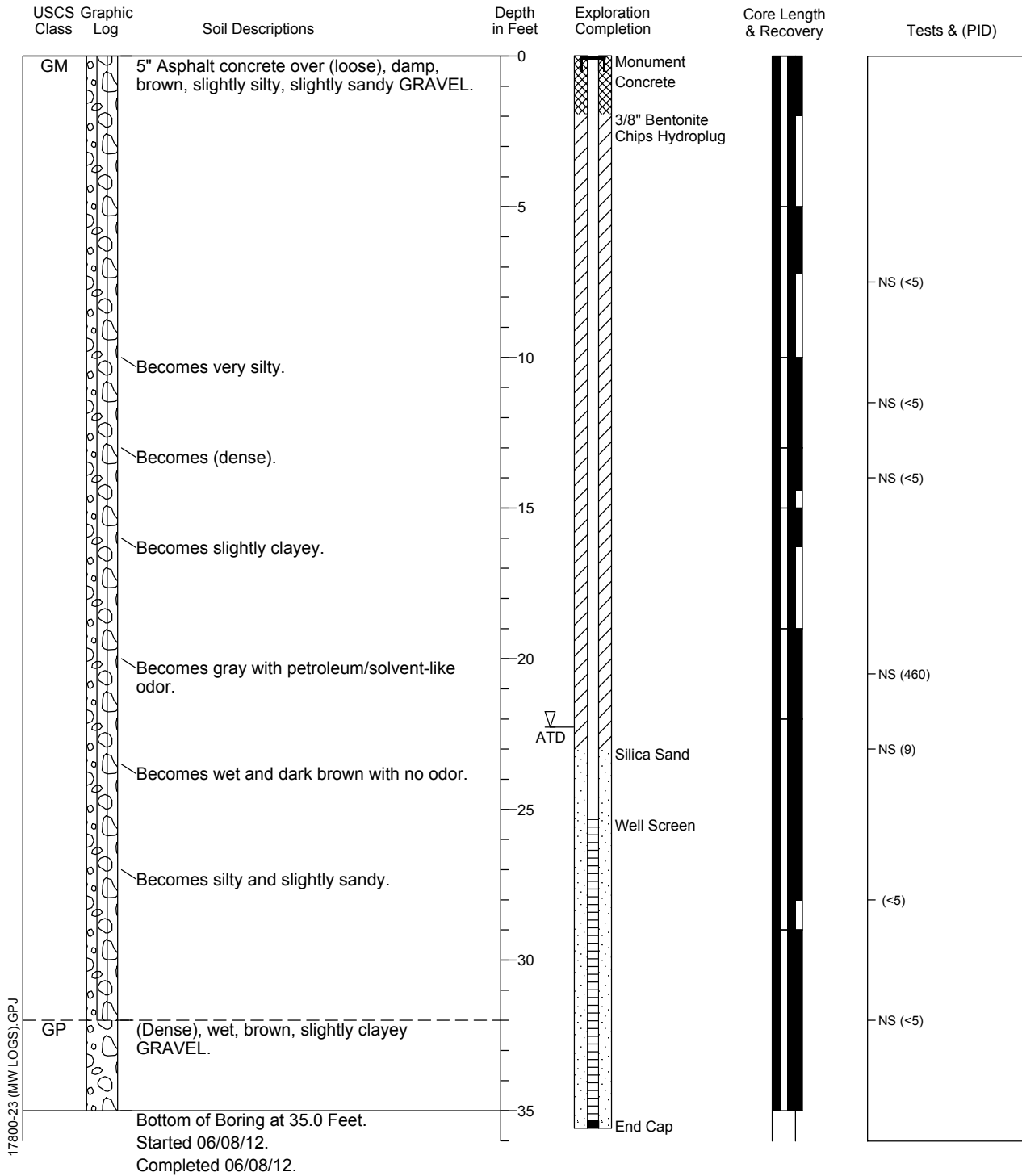


17800-23
 Figure B-6

Monitoring Well Construction Data for MW-21

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

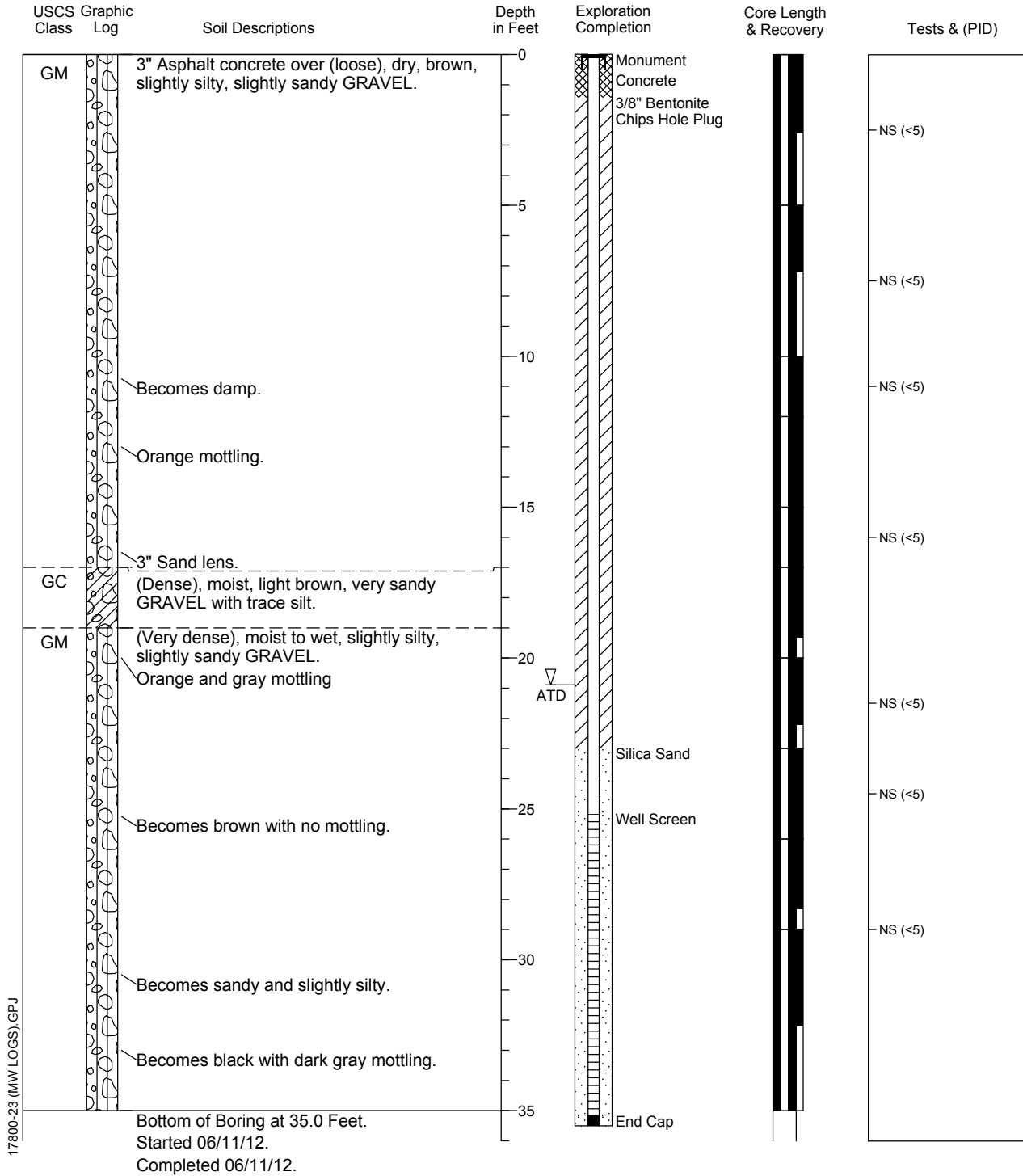


17800-23
 Figure B-7

Monitoring Well Construction Data for MW-22

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



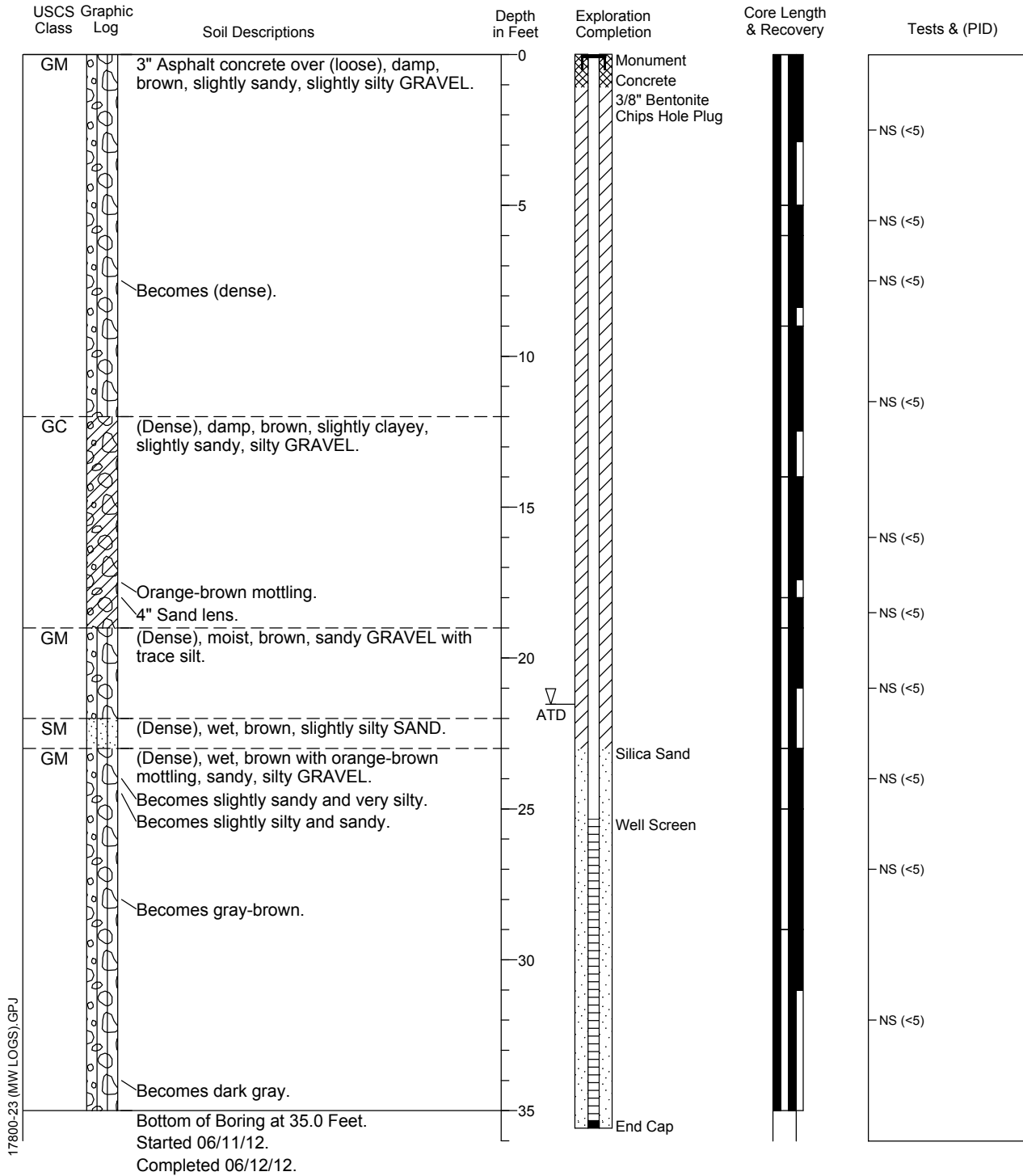
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



Monitoring Well Construction Data for MW-23

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling

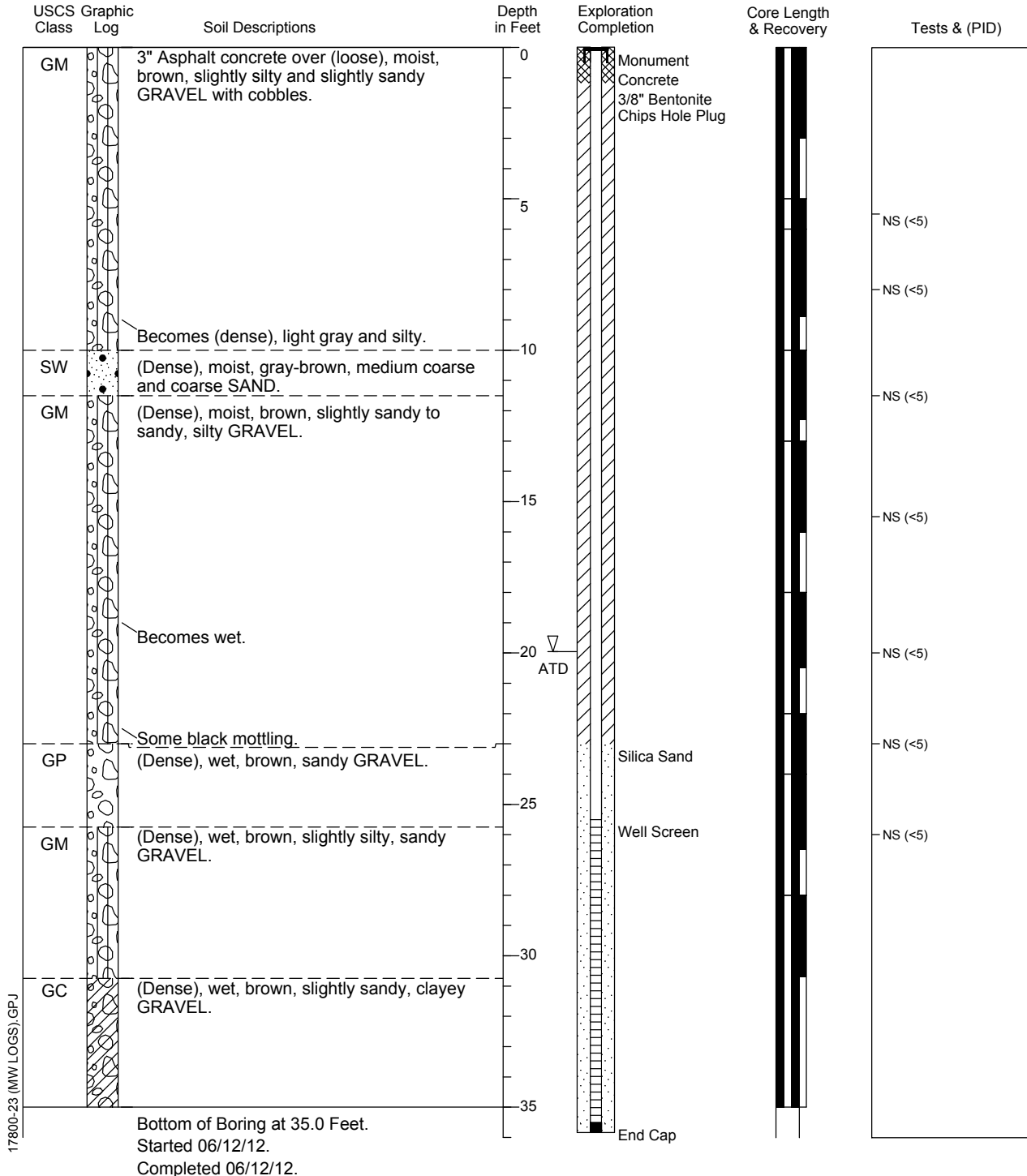


17800-23
 Figure B-9

Monitoring Well Construction Data for MW-24

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



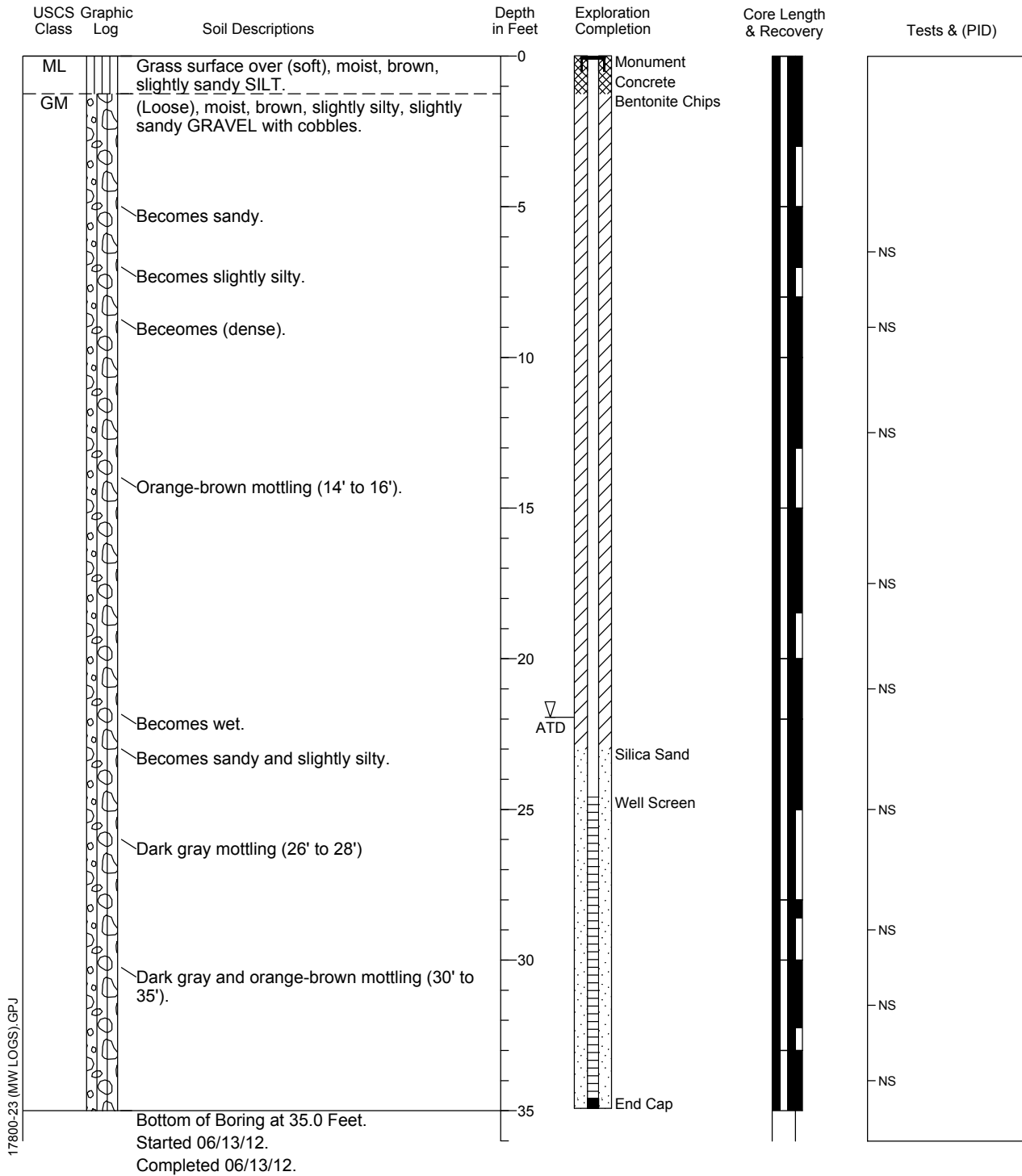
1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



Monitoring Well Construction Data for MW-25

Location: Yakima, Washington
 Logged By: Jason Miles
 Reviewed By: Leon Lahiere, LG

Drilling Type: Sonic
 Soil Sampler: Core
 Hole Diameter: 6"
 Inside Diameter of PVC Casing: 2"



1. Refer to Figure B-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. USCS designations are based on visual manual classification (ASTM D 2488) unless otherwise supported by laboratory testing (ASTM D 2487).
4. Sample interval based on interpretation of core recovery and geological observations.
5. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
6. Drilled By: Cascade Drilling



17800-23

Figure B-11

9/12

APPENDIX C
DATA QUALITY ASSURANCE REVIEW

APPENDIX C

QUALITY ASSURANCE REVIEW

This appendix documents the results of a quality assurance (QA) review of the analytical data for samples collected for site investigation activities. TestAmerica Laboratories, Inc. (TA) of Tacoma, Washington, and Microseeps, Inc. of Pittsburg, Pennsylvania, performed the soil and groundwater chemical analyses under subcontract to Hart Crowser. A copy of the analytical laboratory report is included in this appendix.

The QA review included examination and validation of the laboratories' summary reports, including:

- Analytical methods;
- Detection limits;
- Sample holding times;
- Custody records;
- Surrogates, spikes, and blanks;
- Initial and continuing calibration verification; and
- Field and laboratory duplicates.

The QA review did not include a review of raw data.

1.0 ANALYTICAL METHODS AND DETECTION LIMITS

1.1 Chemical Analyses on Soil

Soil samples were analyzed for VOCs by Environmental Protection Agency (EPA) Method 8260B and TOC by Method 415.1/5310C.

1.2 Chemical Analyses on Groundwater

Groundwater samples from the temporary borings and monitoring wells were analyzed for VOCs by EPA Method 8260B. Bioremediation parameters were analyzed on select samples. Nitrate, sulfate, and chloride were analyzed by Method 300.0, methane, ethane, ethene by Method AM20GAX, Iron by Method 6010B, and TOC by Method 415.1/5310C.

1.3 Detection Limits

Detection limits are set by the laboratory and are based on instrumentation abilities, sample matrix, and suggested detection limits by the EPA or the Department of Ecology (Ecology). Detection limits were generally consistent with industry standards and below promulgated regulatory standards.

2.0 DATA QUALITY ASSURANCE

Data quality is indicated by assessing their completeness, representativeness, accuracy, precision, and comparability. An evaluation of the data follows.

2.1 Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid. The completeness goal is essentially that a sufficient amount of valid data be generated to meet the objectives of the investigation (i.e., assess soil and groundwater conditions and human health risk). Eight laboratory reports were received and are included in Appendix D. The data completeness for the samples is 100 percent for all requested analyses.

2.2 Representativeness

Representativeness is a measure of how closely the results reflect the actual concentration of the parameters in the medium sampled. It is not possible to measure this directly, so representativeness is controlled and ensured by using standard protocols for sample handling and custody, analyzing samples within prescribed holding times, and analyzing blank samples.

Sample Handling and Custody. We collected samples in general accordance with industry standards. This included requirements for collection, containers, labeling, packaging, shipping, and storage. Compliance with these procedures is documented on chain of custody forms. Copies of chain of custody forms are included with the laboratory reports.

Holding Times. Collection dates for all samples submitted are documented on the chain of custody forms. Collection and analysis dates are indicated in the laboratory reports. Holding times required by EPA CLP protocols were met for all applicable soil analyses. Groundwater had the following samples analyzed outside the required holding times; B-4, MW-2, MW-3, MW-16, MW-17, MW-22, MW-23, and MW-23 Dup. Reasons for the exceedances included; insufficient preservative reducing the acceptable hold times, laboratory case load

preventing on-time analysis, and sample dilutions performed outside the acceptable hold times. Holding time requirements on all other groundwater samples were met.

2.3 Accuracy

Surrogates. In a surrogate analysis, a known amount of a compound similar to the constituent of interest is added to a sample and measured. The surrogate analysis assesses the accuracy of a chemical measurement by comparing the measured value to the actual spiked value. Up to four surrogates are added to each sample. Surrogate recoveries were within control limits, with the exception of MW-24. Trifluorotoluene was detected outside the upper control limit. The laboratory states, "Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed."

Matrix Spike Samples. Matrix spike analyses are performed on samples submitted to the laboratory that are of the same matrix as the actual sample. It is spiked with known levels of the constituents of interest. These analyses are used to assess the potential for matrix interference with recovery or detection of the constituents of interest and the accuracy of the determination. The spiked sample results are compared to the expected result (i.e., sample concentration plus spike amount) and are reported as percent recovery. All matrix spike analyses were within control limits, with the exception of the matrix spike sample associated with the MW-17 soil samples. The matrix spike acceptable control limits were exceeded by numerous analytes. The matrix spike results were compared to the associated laboratory control samples and shown to be biased high. Since sample results were not detected for the analytes in question, the data was deemed usable.

Laboratory Control Samples. The laboratory also analyzed a laboratory control sample (LCS) to assess the accuracy of the analytical equipment. The sample is prepared from the analyte-free matrix, which is then spiked with known levels of the constituents of interest (i.e., a standard). The concentrations are measured, and the results are compared to the known spiked levels. This comparison is expressed as percent recovery. The percent recoveries of LCS samples were within control limits, with the exception of the LCS associated with the MW-17 soil samples. 1,2-dichloropropane exceeded the upper control limit and is biased high. Since soil results from the batch did not detect 1,2-dichloropropane the data was deemed usable.

2.4 Precision

Field Duplicates. For field duplicates, a second sample is collected in the field in conjunction with the original and both are submitted for analysis. The duplicate is then prepared along with the original. It is analyzed and compared to the first sample to assess the precision of the analytical method and the potential variability of the sample matrix. Three duplicate groundwater samples were collected by filling an additional set of sample containers. Original and duplicate samples were analyzed for VOCs.

Field duplicate results are compared to the initial results to assess variability in the sample matrix and bias due to sampling procedures. This comparison is normally expressed by the relative percent difference (RPD) between the original and duplicate samples. RPDs up to 50 percent are considered to be acceptable. RPDs for tetrachloroethene (PCE) detected in both the original and duplicate samples were 2 percent for the three sets of samples. These results indicate that the field duplicate data are acceptable.

Laboratory Duplicates. A laboratory duplicate is a second laboratory sample taken from a submitted sample. The duplicate is then prepared along with the original. It is analyzed and compared to the first to assess the precision of the analytical method and the potential variability of the sample matrix. This comparison is reported as the RPD. For the laboratory duplicates, RPDs were acceptable.

Matrix Spike Duplicates. A second matrix spike sample (a.k.a., the matrix spike duplicate) is prepared as above and analyzed. This is compared to the initial matrix spike to assess the precision of the analytical method (i.e., RPD). For this method, both a percent recovery and an RPD are reported. Matrix spike duplicates were performed only for VOC analyses. Percent recoveries and RPDs were within control limits, with the exception of the matrix spike duplicate sample associated with the MW-17 soil samples. The matrix spike duplicate acceptable control limits were exceeded by numerous analytes. The matrix spike duplicate results were compared to the associated laboratory control samples and shown to be biased high. Since sample results were not detected for the analytes in question, the data was deemed usable.

LCS Duplicates. A duplicate is a second analysis of an LCS. The duplicate is then prepared along with the original. It is analyzed and compared to the first to assess the precision of the analytical method and the potential variability of the sample matrix. For this method, both a percent recovery and an RPD are reported. QC results were within control limits, with the exception of the LCS duplicate associated with the MW-17 soil samples. 1,2-dichloropropane

exceeded the upper control limit and is biased high. Since soil results from the batch did not detect 1,2-dichloropropane the data was deemed usable.

2.5 Comparability

All samples were analyzed in accordance with accepted methods of the EPA or Ecology. Because similar or the same methods were used, the quality of the data collected are consistent for all data sets and are, therefore, comparable.

APPENDIX D
ANALYTICAL LABORATORY REPORTS

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-32318-1

Client Project/Site: Yakima/Frank Ware

For:

Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan



Authorized for release by:
4/27/2012 2:14:18 PM

Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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

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

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- 2
- 3
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- 10
- 11



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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Job ID: 580-32318-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 4/11/2012 9:50 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.70 C.

GC/MS VOA - Method 8260B

Samples MW-5 (580-32318-6), MW-6 (580-32318-7) and SPW-14 (580-32318-14) were reanalyzed in analytical batch 580-109817 for the target compound Tetrachloroethene due to the potential for carry over contamination of said compound in the original analyses.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry - Method 300.0

The following samples required a dilution which was performed outside of the analytical holding time: MW - 2 (580-32318-2), MW - 3 (580-32318-3).

No other analytical or quality issues were noted.

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Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 1

Lab Sample ID: 580-32318-1

Date Collected: 04/09/12 11:44

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 17:49	1
Chloromethane	ND		5.0		ug/L			04/18/12 17:49	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 17:49	1
Bromomethane	ND		5.0		ug/L			04/18/12 17:49	1
Chloroethane	ND		5.0		ug/L			04/18/12 17:49	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 17:49	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 17:49	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 17:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 17:49	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 17:49	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 17:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 17:49	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 17:49	1
Chloroform	24		1.0		ug/L			04/18/12 17:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 17:49	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 17:49	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 17:49	1
Benzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 17:49	1
Trichloroethene	ND		1.0		ug/L			04/18/12 17:49	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 17:49	1
Dibromomethane	ND		1.0		ug/L			04/18/12 17:49	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 17:49	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 17:49	1
Toluene	ND		1.0		ug/L			04/18/12 17:49	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 17:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 17:49	1
Tetrachloroethene	ND		1.0		ug/L			04/18/12 17:49	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 17:49	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 17:49	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 17:49	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 17:49	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 17:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 17:49	1
o-Xylene	ND		1.0		ug/L			04/18/12 17:49	1
Styrene	ND		1.0		ug/L			04/18/12 17:49	1
Bromoform	ND		1.0		ug/L			04/18/12 17:49	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
Bromobenzene	ND		1.0		ug/L			04/18/12 17:49	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 17:49	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 17:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 17:49	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 17:49	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 1

Lab Sample ID: 580-32318-1

Date Collected: 04/09/12 11:44

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 17:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 17:49	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 17:49	1
Naphthalene	ND		1.0		ug/L			04/18/12 17:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 17:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		04/18/12 17:49	1
Toluene-d8 (Surr)	96		85 - 120		04/18/12 17:49	1
Ethylbenzene-d10	97		80 - 120		04/18/12 17:49	1
4-Bromofluorobenzene (Surr)	94		75 - 120		04/18/12 17:49	1
Trifluorotoluene (Surr)	98		80 - 120		04/18/12 17:49	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 2

Lab Sample ID: 580-32318-2

Date Collected: 04/10/12 09:04

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 18:16	1
Chloromethane	ND		5.0		ug/L			04/18/12 18:16	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 18:16	1
Bromomethane	ND		5.0		ug/L			04/18/12 18:16	1
Chloroethane	ND		5.0		ug/L			04/18/12 18:16	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 18:16	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 18:16	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 18:16	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 18:16	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 18:16	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 18:16	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 18:16	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 18:16	1
Chloroform	4.4		1.0		ug/L			04/18/12 18:16	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 18:16	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 18:16	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 18:16	1
Benzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 18:16	1
Trichloroethene	ND		1.0		ug/L			04/18/12 18:16	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 18:16	1
Dibromomethane	ND		1.0		ug/L			04/18/12 18:16	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 18:16	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 18:16	1
Toluene	ND		1.0		ug/L			04/18/12 18:16	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 18:16	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 18:16	1
Tetrachloroethene	16		1.0		ug/L			04/18/12 18:16	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 18:16	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 18:16	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 18:16	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 18:16	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 18:16	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 18:16	1
o-Xylene	ND		1.0		ug/L			04/18/12 18:16	1
Styrene	ND		1.0		ug/L			04/18/12 18:16	1
Bromoform	ND		1.0		ug/L			04/18/12 18:16	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
Bromobenzene	ND		1.0		ug/L			04/18/12 18:16	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 18:16	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 18:16	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 18:16	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 18:16	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 2

Lab Sample ID: 580-32318-2

Date Collected: 04/10/12 09:04

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 18:16	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 18:16	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 18:16	1
Naphthalene	ND		1.0		ug/L			04/18/12 18:16	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 18:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/18/12 18:16	1
Toluene-d8 (Surr)	93		85 - 120		04/18/12 18:16	1
Ethylbenzene-d10	95		80 - 120		04/18/12 18:16	1
4-Bromofluorobenzene (Surr)	94		75 - 120		04/18/12 18:16	1
Trifluorotoluene (Surr)	99		80 - 120		04/18/12 18:16	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.040		mg/L		04/21/12 13:00	04/23/12 17:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24		0.90		mg/L			04/11/12 17:26	1
Nitrate as N	5.2	H	4.5		mg/L			04/12/12 10:32	5
Sulfate	11		1.2		mg/L			04/11/12 17:26	1
Total Organic Carbon	ND		1.0		mg/L			04/17/12 09:45	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 3

Lab Sample ID: 580-32318-3

Date Collected: 04/10/12 10:43

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 18:43	1
Chloromethane	ND		5.0		ug/L			04/18/12 18:43	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 18:43	1
Bromomethane	ND		5.0		ug/L			04/18/12 18:43	1
Chloroethane	ND		5.0		ug/L			04/18/12 18:43	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 18:43	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 18:43	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 18:43	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 18:43	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 18:43	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 18:43	1
cis-1,2-Dichloroethene	1.2		1.0		ug/L			04/18/12 18:43	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 18:43	1
Chloroform	3.6		1.0		ug/L			04/18/12 18:43	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 18:43	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 18:43	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 18:43	1
Benzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 18:43	1
Trichloroethene	1.5		1.0		ug/L			04/18/12 18:43	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 18:43	1
Dibromomethane	ND		1.0		ug/L			04/18/12 18:43	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 18:43	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 18:43	1
Toluene	ND		1.0		ug/L			04/18/12 18:43	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 18:43	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 18:43	1
Tetrachloroethene	8.0		1.0		ug/L			04/18/12 18:43	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 18:43	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 18:43	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 18:43	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 18:43	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 18:43	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 18:43	1
o-Xylene	ND		1.0		ug/L			04/18/12 18:43	1
Styrene	ND		1.0		ug/L			04/18/12 18:43	1
Bromoform	ND		1.0		ug/L			04/18/12 18:43	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
Bromobenzene	ND		1.0		ug/L			04/18/12 18:43	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 18:43	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 18:43	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 18:43	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 18:43	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 3

Lab Sample ID: 580-32318-3

Date Collected: 04/10/12 10:43

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 18:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 18:43	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 18:43	1
Naphthalene	ND		1.0		ug/L			04/18/12 18:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 18:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		04/18/12 18:43	1
Toluene-d8 (Surr)	94		85 - 120		04/18/12 18:43	1
Ethylbenzene-d10	95		80 - 120		04/18/12 18:43	1
4-Bromofluorobenzene (Surr)	95		75 - 120		04/18/12 18:43	1
Trifluorotoluene (Surr)	99		80 - 120		04/18/12 18:43	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.040		mg/L		04/21/12 13:00	04/23/12 17:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48		0.90		mg/L			04/11/12 18:09	1
Nitrate as N	11	H	9.0		mg/L			04/12/12 10:46	10
Sulfate	11		1.2		mg/L			04/11/12 18:09	1
Total Organic Carbon	ND		1.0		mg/L			04/17/12 09:45	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 3 DUP

Lab Sample ID: 580-32318-4

Date Collected: 04/10/12 10:43

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 19:10	1
Chloromethane	ND		5.0		ug/L			04/18/12 19:10	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 19:10	1
Bromomethane	ND		5.0		ug/L			04/18/12 19:10	1
Chloroethane	ND		5.0		ug/L			04/18/12 19:10	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 19:10	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 19:10	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 19:10	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 19:10	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 19:10	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 19:10	1
cis-1,2-Dichloroethene	1.1		1.0		ug/L			04/18/12 19:10	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 19:10	1
Chloroform	3.7		1.0		ug/L			04/18/12 19:10	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 19:10	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 19:10	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 19:10	1
Benzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 19:10	1
Trichloroethene	1.4		1.0		ug/L			04/18/12 19:10	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 19:10	1
Dibromomethane	ND		1.0		ug/L			04/18/12 19:10	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 19:10	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 19:10	1
Toluene	ND		1.0		ug/L			04/18/12 19:10	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 19:10	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 19:10	1
Tetrachloroethene	8.2		1.0		ug/L			04/18/12 19:10	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 19:10	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 19:10	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 19:10	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 19:10	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 19:10	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 19:10	1
o-Xylene	ND		1.0		ug/L			04/18/12 19:10	1
Styrene	ND		1.0		ug/L			04/18/12 19:10	1
Bromoform	ND		1.0		ug/L			04/18/12 19:10	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
Bromobenzene	ND		1.0		ug/L			04/18/12 19:10	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 19:10	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 19:10	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 19:10	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 19:10	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 3 DUP

Lab Sample ID: 580-32318-4

Date Collected: 04/10/12 10:43

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 19:10	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 19:10	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 19:10	1
Naphthalene	ND		1.0		ug/L			04/18/12 19:10	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 19:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120					04/18/12 19:10	1
Toluene-d8 (Surr)	95		85 - 120					04/18/12 19:10	1
Ethylbenzene-d10	97		80 - 120					04/18/12 19:10	1
4-Bromofluorobenzene (Surr)	93		75 - 120					04/18/12 19:10	1
Trifluorotoluene (Surr)	98		80 - 120					04/18/12 19:10	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 4

Lab Sample ID: 580-32318-5

Date Collected: 04/10/12 10:15

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 19:37	1
Chloromethane	ND		5.0		ug/L			04/18/12 19:37	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 19:37	1
Bromomethane	ND		5.0		ug/L			04/18/12 19:37	1
Chloroethane	ND		5.0		ug/L			04/18/12 19:37	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 19:37	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 19:37	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 19:37	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 19:37	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 19:37	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 19:37	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 19:37	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 19:37	1
Chloroform	3.3		1.0		ug/L			04/18/12 19:37	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 19:37	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 19:37	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 19:37	1
Benzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 19:37	1
Trichloroethene	1.3		1.0		ug/L			04/18/12 19:37	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 19:37	1
Dibromomethane	ND		1.0		ug/L			04/18/12 19:37	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 19:37	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 19:37	1
Toluene	ND		1.0		ug/L			04/18/12 19:37	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 19:37	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 19:37	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 19:37	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 19:37	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 19:37	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 19:37	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 19:37	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 19:37	1
o-Xylene	ND		1.0		ug/L			04/18/12 19:37	1
Styrene	ND		1.0		ug/L			04/18/12 19:37	1
Bromoform	ND		1.0		ug/L			04/18/12 19:37	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
Bromobenzene	ND		1.0		ug/L			04/18/12 19:37	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 19:37	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 19:37	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 19:37	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 19:37	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 4

Lab Sample ID: 580-32318-5

Date Collected: 04/10/12 10:15

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 19:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 19:37	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 19:37	1
Naphthalene	ND		1.0		ug/L			04/18/12 19:37	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/18/12 19:37	1
Toluene-d8 (Surr)	93		85 - 120		04/18/12 19:37	1
Ethylbenzene-d10	97		80 - 120		04/18/12 19:37	1
4-Bromofluorobenzene (Surr)	102		75 - 120		04/18/12 19:37	1
Trifluorotoluene (Surr)	94		80 - 120		04/18/12 19:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1900		20		ug/L			04/24/12 15:58	20

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.089		0.040		mg/L		04/21/12 13:00	04/23/12 17:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		4.5		mg/L			04/24/12 19:26	5
Nitrate as N	3.8		0.90		mg/L			04/11/12 17:55	1
Sulfate	13		1.2		mg/L			04/11/12 17:55	1
Total Organic Carbon	ND		1.0		mg/L			04/17/12 09:45	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 5

Lab Sample ID: 580-32318-6

Date Collected: 04/09/12 15:02

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 20:04	1
Chloromethane	ND		5.0		ug/L			04/18/12 20:04	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 20:04	1
Bromomethane	ND		5.0		ug/L			04/18/12 20:04	1
Chloroethane	ND		5.0		ug/L			04/18/12 20:04	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 20:04	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 20:04	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 20:04	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:04	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 20:04	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:04	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:04	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 20:04	1
Chloroform	3.9		1.0		ug/L			04/18/12 20:04	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 20:04	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 20:04	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 20:04	1
Benzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 20:04	1
Trichloroethene	ND		1.0		ug/L			04/18/12 20:04	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:04	1
Dibromomethane	ND		1.0		ug/L			04/18/12 20:04	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 20:04	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:04	1
Toluene	ND		1.0		ug/L			04/18/12 20:04	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:04	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 20:04	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 20:04	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 20:04	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 20:04	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:04	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:04	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 20:04	1
o-Xylene	ND		1.0		ug/L			04/18/12 20:04	1
Styrene	ND		1.0		ug/L			04/18/12 20:04	1
Bromoform	ND		1.0		ug/L			04/18/12 20:04	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
Bromobenzene	ND		1.0		ug/L			04/18/12 20:04	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 20:04	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:04	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:04	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 20:04	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 5

Lab Sample ID: 580-32318-6

Date Collected: 04/09/12 15:02

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 20:04	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:04	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 20:04	1
Naphthalene	ND		1.0		ug/L			04/18/12 20:04	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/18/12 20:04	1
Toluene-d8 (Surr)	94		85 - 120		04/18/12 20:04	1
Ethylbenzene-d10	96		80 - 120		04/18/12 20:04	1
4-Bromofluorobenzene (Surr)	91		75 - 120		04/18/12 20:04	1
Trifluorotoluene (Surr)	96		80 - 120		04/18/12 20:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	12		1.0		ug/L			04/23/12 21:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/23/12 21:39	1
Toluene-d8 (Surr)	94		85 - 120		04/23/12 21:39	1
Ethylbenzene-d10	97		80 - 120		04/23/12 21:39	1
4-Bromofluorobenzene (Surr)	96		75 - 120		04/23/12 21:39	1
Trifluorotoluene (Surr)	99		80 - 120		04/23/12 21:39	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 6

Lab Sample ID: 580-32318-7

Date Collected: 04/09/12 14:10

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 20:30	1
Chloromethane	ND		5.0		ug/L			04/18/12 20:30	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 20:30	1
Bromomethane	ND		5.0		ug/L			04/18/12 20:30	1
Chloroethane	ND		5.0		ug/L			04/18/12 20:30	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 20:30	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 20:30	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 20:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:30	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 20:30	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:30	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:30	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 20:30	1
Chloroform	6.1		1.0		ug/L			04/18/12 20:30	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 20:30	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 20:30	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 20:30	1
Benzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 20:30	1
Trichloroethene	ND		1.0		ug/L			04/18/12 20:30	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:30	1
Dibromomethane	ND		1.0		ug/L			04/18/12 20:30	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 20:30	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:30	1
Toluene	ND		1.0		ug/L			04/18/12 20:30	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:30	1
1,1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 20:30	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 20:30	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 20:30	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 20:30	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:30	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:30	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 20:30	1
o-Xylene	ND		1.0		ug/L			04/18/12 20:30	1
Styrene	ND		1.0		ug/L			04/18/12 20:30	1
Bromoform	ND		1.0		ug/L			04/18/12 20:30	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
Bromobenzene	ND		1.0		ug/L			04/18/12 20:30	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 20:30	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:30	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:30	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 20:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 6

Lab Sample ID: 580-32318-7

Date Collected: 04/09/12 14:10

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 20:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:30	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 20:30	1
Naphthalene	ND		1.0		ug/L			04/18/12 20:30	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 20:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		04/18/12 20:30	1
Toluene-d8 (Surr)	95		85 - 120		04/18/12 20:30	1
Ethylbenzene-d10	97		80 - 120		04/18/12 20:30	1
4-Bromofluorobenzene (Surr)	99		75 - 120		04/18/12 20:30	1
Trifluorotoluene (Surr)	100		80 - 120		04/18/12 20:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	4.9		1.0		ug/L			04/23/12 21:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		04/23/12 21:12	1
Toluene-d8 (Surr)	93		85 - 120		04/23/12 21:12	1
Ethylbenzene-d10	95		80 - 120		04/23/12 21:12	1
4-Bromofluorobenzene (Surr)	96		75 - 120		04/23/12 21:12	1
Trifluorotoluene (Surr)	97		80 - 120		04/23/12 21:12	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 7

Lab Sample ID: 580-32318-8

Date Collected: 04/09/12 14:35

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 20:57	1
Chloromethane	ND		5.0		ug/L			04/18/12 20:57	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 20:57	1
Bromomethane	ND		5.0		ug/L			04/18/12 20:57	1
Chloroethane	ND		5.0		ug/L			04/18/12 20:57	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 20:57	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 20:57	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 20:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:57	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 20:57	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:57	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 20:57	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 20:57	1
Chloroform	4.9		1.0		ug/L			04/18/12 20:57	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 20:57	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 20:57	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 20:57	1
Benzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 20:57	1
Trichloroethene	ND		1.0		ug/L			04/18/12 20:57	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 20:57	1
Dibromomethane	ND		1.0		ug/L			04/18/12 20:57	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 20:57	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:57	1
Toluene	ND		1.0		ug/L			04/18/12 20:57	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 20:57	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 20:57	1
Tetrachloroethene	27		1.0		ug/L			04/18/12 20:57	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 20:57	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 20:57	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 20:57	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:57	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 20:57	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 20:57	1
o-Xylene	ND		1.0		ug/L			04/18/12 20:57	1
Styrene	ND		1.0		ug/L			04/18/12 20:57	1
Bromoform	ND		1.0		ug/L			04/18/12 20:57	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
Bromobenzene	ND		1.0		ug/L			04/18/12 20:57	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 20:57	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:57	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 20:57	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 20:57	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 7

Lab Sample ID: 580-32318-8

Date Collected: 04/09/12 14:35

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 20:57	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 20:57	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 20:57	1
Naphthalene	ND		1.0		ug/L			04/18/12 20:57	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					04/18/12 20:57	1
Toluene-d8 (Surr)	92		85 - 120					04/18/12 20:57	1
Ethylbenzene-d10	98		80 - 120					04/18/12 20:57	1
4-Bromofluorobenzene (Surr)	92		75 - 120					04/18/12 20:57	1
Trifluorotoluene (Surr)	98		80 - 120					04/18/12 20:57	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 8

Lab Sample ID: 580-32318-9

Date Collected: 04/09/12 13:24

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 21:24	1
Chloromethane	ND		5.0		ug/L			04/18/12 21:24	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 21:24	1
Bromomethane	ND		5.0		ug/L			04/18/12 21:24	1
Chloroethane	ND		5.0		ug/L			04/18/12 21:24	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 21:24	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 21:24	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 21:24	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 21:24	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 21:24	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 21:24	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 21:24	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 21:24	1
Chloroform	6.2		1.0		ug/L			04/18/12 21:24	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 21:24	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 21:24	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 21:24	1
Benzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 21:24	1
Trichloroethene	ND		1.0		ug/L			04/18/12 21:24	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 21:24	1
Dibromomethane	ND		1.0		ug/L			04/18/12 21:24	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 21:24	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 21:24	1
Toluene	ND		1.0		ug/L			04/18/12 21:24	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 21:24	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 21:24	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 21:24	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 21:24	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 21:24	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 21:24	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 21:24	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 21:24	1
o-Xylene	ND		1.0		ug/L			04/18/12 21:24	1
Styrene	ND		1.0		ug/L			04/18/12 21:24	1
Bromoform	ND		1.0		ug/L			04/18/12 21:24	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
Bromobenzene	ND		1.0		ug/L			04/18/12 21:24	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 21:24	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 21:24	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 21:24	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 21:24	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 8

Lab Sample ID: 580-32318-9

Date Collected: 04/09/12 13:24

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 21:24	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 21:24	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 21:24	1
Naphthalene	ND		1.0		ug/L			04/18/12 21:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120		04/18/12 21:24	1
Toluene-d8 (Surr)	95		85 - 120		04/18/12 21:24	1
Ethylbenzene-d10	97		80 - 120		04/18/12 21:24	1
4-Bromofluorobenzene (Surr)	98		75 - 120		04/18/12 21:24	1
Trifluorotoluene (Surr)	96		80 - 120		04/18/12 21:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	260		20		ug/L			04/23/12 22:06	20

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 9

Lab Sample ID: 580-32318-10

Date Collected: 04/09/12 11:18

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 21:50	1
Chloromethane	ND		5.0		ug/L			04/18/12 21:50	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 21:50	1
Bromomethane	ND		5.0		ug/L			04/18/12 21:50	1
Chloroethane	ND		5.0		ug/L			04/18/12 21:50	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 21:50	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 21:50	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 21:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 21:50	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 21:50	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 21:50	1
cis-1,2-Dichloroethene	3.2		1.0		ug/L			04/18/12 21:50	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 21:50	1
Chloroform	11		1.0		ug/L			04/18/12 21:50	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 21:50	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 21:50	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 21:50	1
Benzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 21:50	1
Trichloroethene	ND		1.0		ug/L			04/18/12 21:50	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 21:50	1
Dibromomethane	ND		1.0		ug/L			04/18/12 21:50	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 21:50	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 21:50	1
Toluene	ND		1.0		ug/L			04/18/12 21:50	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 21:50	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 21:50	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 21:50	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 21:50	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 21:50	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,1,1,2-Tetrachloroethane	1.0		1.0		ug/L			04/18/12 21:50	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 21:50	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 21:50	1
o-Xylene	ND		1.0		ug/L			04/18/12 21:50	1
Styrene	ND		1.0		ug/L			04/18/12 21:50	1
Bromoform	ND		1.0		ug/L			04/18/12 21:50	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
Bromobenzene	ND		1.0		ug/L			04/18/12 21:50	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 21:50	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 21:50	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 21:50	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 21:50	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 9

Lab Sample ID: 580-32318-10

Date Collected: 04/09/12 11:18

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 21:50	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 21:50	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 21:50	1
Naphthalene	ND		1.0		ug/L			04/18/12 21:50	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 21:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		04/18/12 21:50	1
Toluene-d8 (Surr)	94		85 - 120		04/18/12 21:50	1
Ethylbenzene-d10	99		80 - 120		04/18/12 21:50	1
4-Bromofluorobenzene (Surr)	101		75 - 120		04/18/12 21:50	1
Trifluorotoluene (Surr)	97		80 - 120		04/18/12 21:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2700		20		ug/L			04/23/12 22:32	20

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 10

Lab Sample ID: 580-32318-11

Date Collected: 04/10/12 09:35

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 22:17	1
Chloromethane	ND		5.0		ug/L			04/18/12 22:17	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 22:17	1
Bromomethane	ND		5.0		ug/L			04/18/12 22:17	1
Chloroethane	ND		5.0		ug/L			04/18/12 22:17	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 22:17	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 22:17	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 22:17	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 22:17	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 22:17	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 22:17	1
cis-1,2-Dichloroethene	14		1.0		ug/L			04/18/12 22:17	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 22:17	1
Chloroform	20		1.0		ug/L			04/18/12 22:17	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 22:17	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 22:17	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 22:17	1
Benzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 22:17	1
Trichloroethene	1.0		1.0		ug/L			04/18/12 22:17	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 22:17	1
Dibromomethane	ND		1.0		ug/L			04/18/12 22:17	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 22:17	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 22:17	1
Toluene	ND		1.0		ug/L			04/18/12 22:17	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 22:17	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 22:17	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 22:17	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 22:17	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 22:17	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 22:17	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 22:17	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 22:17	1
o-Xylene	ND		1.0		ug/L			04/18/12 22:17	1
Styrene	ND		1.0		ug/L			04/18/12 22:17	1
Bromoform	ND		1.0		ug/L			04/18/12 22:17	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
Bromobenzene	ND		1.0		ug/L			04/18/12 22:17	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 22:17	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 22:17	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 22:17	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 22:17	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 10

Lab Sample ID: 580-32318-11

Date Collected: 04/10/12 09:35

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 22:17	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 22:17	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 22:17	1
Naphthalene	ND		1.0		ug/L			04/18/12 22:17	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 22:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/18/12 22:17	1
Toluene-d8 (Surr)	97		85 - 120		04/18/12 22:17	1
Ethylbenzene-d10	99		80 - 120		04/18/12 22:17	1
4-Bromofluorobenzene (Surr)	98		75 - 120		04/18/12 22:17	1
Trifluorotoluene (Surr)	94		80 - 120		04/18/12 22:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1800		20		ug/L			04/24/12 16:25	20

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.040		mg/L		04/21/12 13:00	04/23/12 17:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		0.90		mg/L			04/11/12 17:40	1
Nitrate as N	2.7		0.90		mg/L			04/11/12 17:40	1
Sulfate	8.1		1.2		mg/L			04/11/12 17:40	1
Total Organic Carbon	ND		1.0		mg/L			04/17/12 09:45	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 12

Lab Sample ID: 580-32318-12

Date Collected: 04/09/12 15:33

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 22:44	1
Chloromethane	ND		5.0		ug/L			04/18/12 22:44	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 22:44	1
Bromomethane	ND		5.0		ug/L			04/18/12 22:44	1
Chloroethane	ND		5.0		ug/L			04/18/12 22:44	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 22:44	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 22:44	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 22:44	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 22:44	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 22:44	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 22:44	1
cis-1,2-Dichloroethene	70		1.0		ug/L			04/18/12 22:44	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 22:44	1
Chloroform	3.7		1.0		ug/L			04/18/12 22:44	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 22:44	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 22:44	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 22:44	1
Benzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 22:44	1
Trichloroethene	21		1.0		ug/L			04/18/12 22:44	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 22:44	1
Dibromomethane	ND		1.0		ug/L			04/18/12 22:44	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 22:44	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 22:44	1
Toluene	ND		1.0		ug/L			04/18/12 22:44	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 22:44	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 22:44	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 22:44	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 22:44	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 22:44	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 22:44	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 22:44	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 22:44	1
o-Xylene	ND		1.0		ug/L			04/18/12 22:44	1
Styrene	ND		1.0		ug/L			04/18/12 22:44	1
Bromoform	ND		1.0		ug/L			04/18/12 22:44	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
Bromobenzene	ND		1.0		ug/L			04/18/12 22:44	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 22:44	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 22:44	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 22:44	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 22:44	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 12

Lab Sample ID: 580-32318-12

Date Collected: 04/09/12 15:33

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 22:44	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 22:44	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 22:44	1
Naphthalene	ND		1.0		ug/L			04/18/12 22:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 22:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120		04/18/12 22:44	1
Toluene-d8 (Surr)	94		85 - 120		04/18/12 22:44	1
Ethylbenzene-d10	99		80 - 120		04/18/12 22:44	1
4-Bromofluorobenzene (Surr)	96		75 - 120		04/18/12 22:44	1
Trifluorotoluene (Surr)	97		80 - 120		04/18/12 22:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2300		20		ug/L			04/23/12 22:58	20

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 13

Lab Sample ID: 580-32318-13

Date Collected: 04/09/12 16:03

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 23:10	1
Chloromethane	ND		5.0		ug/L			04/18/12 23:10	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 23:10	1
Bromomethane	ND		5.0		ug/L			04/18/12 23:10	1
Chloroethane	ND		5.0		ug/L			04/18/12 23:10	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 23:10	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 23:10	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 23:10	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 23:10	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 23:10	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 23:10	1
cis-1,2-Dichloroethene	8.5		1.0		ug/L			04/18/12 23:10	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 23:10	1
Chloroform	17		1.0		ug/L			04/18/12 23:10	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 23:10	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 23:10	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 23:10	1
Benzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 23:10	1
Trichloroethene	3.1		1.0		ug/L			04/18/12 23:10	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 23:10	1
Dibromomethane	ND		1.0		ug/L			04/18/12 23:10	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 23:10	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 23:10	1
Toluene	ND		1.0		ug/L			04/18/12 23:10	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 23:10	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 23:10	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 23:10	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 23:10	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 23:10	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 23:10	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 23:10	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 23:10	1
o-Xylene	ND		1.0		ug/L			04/18/12 23:10	1
Styrene	ND		1.0		ug/L			04/18/12 23:10	1
Bromoform	ND		1.0		ug/L			04/18/12 23:10	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
Bromobenzene	ND		1.0		ug/L			04/18/12 23:10	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 23:10	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 23:10	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 23:10	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 23:10	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 13

Lab Sample ID: 580-32318-13

Date Collected: 04/09/12 16:03

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 23:10	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 23:10	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 23:10	1
Naphthalene	ND		1.0		ug/L			04/18/12 23:10	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 23:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120					04/18/12 23:10	1
Toluene-d8 (Surr)	94		85 - 120					04/18/12 23:10	1
Ethylbenzene-d10	94		80 - 120					04/18/12 23:10	1
4-Bromofluorobenzene (Surr)	97		75 - 120					04/18/12 23:10	1
Trifluorotoluene (Surr)	98		80 - 120					04/18/12 23:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	380		20		ug/L			04/23/12 23:25	20

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 14

Lab Sample ID: 580-32318-14

Date Collected: 04/09/12 12:16

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 23:37	1
Chloromethane	ND		5.0		ug/L			04/18/12 23:37	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 23:37	1
Bromomethane	ND		5.0		ug/L			04/18/12 23:37	1
Chloroethane	ND		5.0		ug/L			04/18/12 23:37	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 23:37	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 23:37	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 23:37	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 23:37	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 23:37	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 23:37	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 23:37	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 23:37	1
Chloroform	25		1.0		ug/L			04/18/12 23:37	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 23:37	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 23:37	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 23:37	1
Benzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 23:37	1
Trichloroethene	ND		1.0		ug/L			04/18/12 23:37	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 23:37	1
Dibromomethane	ND		1.0		ug/L			04/18/12 23:37	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 23:37	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 23:37	1
Toluene	ND		1.0		ug/L			04/18/12 23:37	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 23:37	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 23:37	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 23:37	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 23:37	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 23:37	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 23:37	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 23:37	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 23:37	1
o-Xylene	ND		1.0		ug/L			04/18/12 23:37	1
Styrene	ND		1.0		ug/L			04/18/12 23:37	1
Bromoform	ND		1.0		ug/L			04/18/12 23:37	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
Bromobenzene	ND		1.0		ug/L			04/18/12 23:37	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 23:37	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 23:37	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 23:37	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 23:37	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 14

Lab Sample ID: 580-32318-14

Date Collected: 04/09/12 12:16

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 23:37	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 23:37	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 23:37	1
Naphthalene	ND		1.0		ug/L			04/18/12 23:37	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 23:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		04/18/12 23:37	1
Toluene-d8 (Surr)	93		85 - 120		04/18/12 23:37	1
Ethylbenzene-d10	96		80 - 120		04/18/12 23:37	1
4-Bromofluorobenzene (Surr)	95		75 - 120		04/18/12 23:37	1
Trifluorotoluene (Surr)	97		80 - 120		04/18/12 23:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			04/23/12 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		04/23/12 20:45	1
Toluene-d8 (Surr)	93		85 - 120		04/23/12 20:45	1
Ethylbenzene-d10	90		80 - 120		04/23/12 20:45	1
4-Bromofluorobenzene (Surr)	95		75 - 120		04/23/12 20:45	1
Trifluorotoluene (Surr)	98		80 - 120		04/23/12 20:45	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 15

Lab Sample ID: 580-32318-15

Date Collected: 04/09/12 12:44

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/19/12 00:03	1
Chloromethane	ND		5.0		ug/L			04/19/12 00:03	1
Vinyl chloride	ND		1.0		ug/L			04/19/12 00:03	1
Bromomethane	ND		5.0		ug/L			04/19/12 00:03	1
Chloroethane	ND		5.0		ug/L			04/19/12 00:03	1
Trichlorofluoromethane	ND		1.0		ug/L			04/19/12 00:03	1
1,1-Dichloroethene	ND		1.0		ug/L			04/19/12 00:03	1
Methylene Chloride	ND		3.0		ug/L			04/19/12 00:03	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/19/12 00:03	1
1,1-Dichloroethane	ND		1.0		ug/L			04/19/12 00:03	1
2,2-Dichloropropane	ND		1.0		ug/L			04/19/12 00:03	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/19/12 00:03	1
Chlorobromomethane	ND		1.0		ug/L			04/19/12 00:03	1
Chloroform	16		1.0		ug/L			04/19/12 00:03	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/19/12 00:03	1
Carbon tetrachloride	ND		1.0		ug/L			04/19/12 00:03	1
1,1-Dichloropropene	ND		1.0		ug/L			04/19/12 00:03	1
Benzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2-Dichloroethane	ND		1.0		ug/L			04/19/12 00:03	1
Trichloroethene	ND		1.0		ug/L			04/19/12 00:03	1
1,2-Dichloropropane	ND		1.0		ug/L			04/19/12 00:03	1
Dibromomethane	ND		1.0		ug/L			04/19/12 00:03	1
Dichlorobromomethane	ND		1.0		ug/L			04/19/12 00:03	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/19/12 00:03	1
Toluene	ND		1.0		ug/L			04/19/12 00:03	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/19/12 00:03	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/19/12 00:03	1
1,3-Dichloropropane	ND		1.0		ug/L			04/19/12 00:03	1
Chlorodibromomethane	ND		1.0		ug/L			04/19/12 00:03	1
Ethylene Dibromide	ND		1.0		ug/L			04/19/12 00:03	1
Chlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1
Ethylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/19/12 00:03	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/19/12 00:03	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/19/12 00:03	1
o-Xylene	ND		1.0		ug/L			04/19/12 00:03	1
Styrene	ND		1.0		ug/L			04/19/12 00:03	1
Bromoform	ND		1.0		ug/L			04/19/12 00:03	1
Isopropylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
Bromobenzene	ND		1.0		ug/L			04/19/12 00:03	1
N-Propylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/19/12 00:03	1
2-Chlorotoluene	ND		1.0		ug/L			04/19/12 00:03	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
4-Chlorotoluene	ND		1.0		ug/L			04/19/12 00:03	1
tert-Butylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
sec-Butylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1
4-Isopropyltoluene	ND		1.0		ug/L			04/19/12 00:03	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: SPW - 15

Lab Sample ID: 580-32318-15

Date Collected: 04/09/12 12:44

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/19/12 00:03	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/19/12 00:03	1
Hexachlorobutadiene	ND		1.0		ug/L			04/19/12 00:03	1
Naphthalene	ND		1.0		ug/L			04/19/12 00:03	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/19/12 00:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120					04/19/12 00:03	1
Toluene-d8 (Surr)	94		85 - 120					04/19/12 00:03	1
Ethylbenzene-d10	94		80 - 120					04/19/12 00:03	1
4-Bromofluorobenzene (Surr)	97		75 - 120					04/19/12 00:03	1
Trifluorotoluene (Surr)	96		80 - 120					04/19/12 00:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	670		20		ug/L			04/23/12 23:52	20

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32318-16

Date Collected: 04/04/12 00:00

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 17:22	1
Chloromethane	ND		5.0		ug/L			04/18/12 17:22	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 17:22	1
Bromomethane	ND		5.0		ug/L			04/18/12 17:22	1
Chloroethane	ND		5.0		ug/L			04/18/12 17:22	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 17:22	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 17:22	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 17:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 17:22	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 17:22	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 17:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 17:22	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 17:22	1
Chloroform	ND		1.0		ug/L			04/18/12 17:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 17:22	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 17:22	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 17:22	1
Benzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 17:22	1
Trichloroethene	ND		1.0		ug/L			04/18/12 17:22	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 17:22	1
Dibromomethane	ND		1.0		ug/L			04/18/12 17:22	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 17:22	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 17:22	1
Toluene	ND		1.0		ug/L			04/18/12 17:22	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 17:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 17:22	1
Tetrachloroethene	ND		1.0		ug/L			04/18/12 17:22	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 17:22	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 17:22	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 17:22	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 17:22	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 17:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 17:22	1
o-Xylene	ND		1.0		ug/L			04/18/12 17:22	1
Styrene	ND		1.0		ug/L			04/18/12 17:22	1
Bromoform	ND		1.0		ug/L			04/18/12 17:22	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
Bromobenzene	ND		1.0		ug/L			04/18/12 17:22	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 17:22	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 17:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 17:22	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 17:22	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32318-16

Date Collected: 04/04/12 00:00

Matrix: Water

Date Received: 04/11/12 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 17:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 17:22	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 17:22	1
Naphthalene	ND		1.0		ug/L			04/18/12 17:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120					04/18/12 17:22	1
Toluene-d8 (Surr)	95		85 - 120					04/18/12 17:22	1
Ethylbenzene-d10	93		80 - 120					04/18/12 17:22	1
4-Bromofluorobenzene (Surr)	93		75 - 120					04/18/12 17:22	1
Trifluorotoluene (Surr)	100		80 - 120					04/18/12 17:22	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: MB 580-109561/5

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/18/12 15:34	1
Chloromethane	ND		5.0		ug/L			04/18/12 15:34	1
Vinyl chloride	ND		1.0		ug/L			04/18/12 15:34	1
Bromomethane	ND		5.0		ug/L			04/18/12 15:34	1
Chloroethane	ND		5.0		ug/L			04/18/12 15:34	1
Trichlorofluoromethane	ND		1.0		ug/L			04/18/12 15:34	1
1,1-Dichloroethene	ND		1.0		ug/L			04/18/12 15:34	1
Methylene Chloride	ND		3.0		ug/L			04/18/12 15:34	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 15:34	1
1,1-Dichloroethane	ND		1.0		ug/L			04/18/12 15:34	1
2,2-Dichloropropane	ND		1.0		ug/L			04/18/12 15:34	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/18/12 15:34	1
Chlorobromomethane	ND		1.0		ug/L			04/18/12 15:34	1
Chloroform	ND		1.0		ug/L			04/18/12 15:34	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/18/12 15:34	1
Carbon tetrachloride	ND		1.0		ug/L			04/18/12 15:34	1
1,1-Dichloropropene	ND		1.0		ug/L			04/18/12 15:34	1
Benzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2-Dichloroethane	ND		1.0		ug/L			04/18/12 15:34	1
Trichloroethene	ND		1.0		ug/L			04/18/12 15:34	1
1,2-Dichloropropane	ND		1.0		ug/L			04/18/12 15:34	1
Dibromomethane	ND		1.0		ug/L			04/18/12 15:34	1
Dichlorobromomethane	ND		1.0		ug/L			04/18/12 15:34	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 15:34	1
Toluene	ND		1.0		ug/L			04/18/12 15:34	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/18/12 15:34	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/18/12 15:34	1
Tetrachloroethene	ND		1.0		ug/L			04/18/12 15:34	1
1,3-Dichloropropane	ND		1.0		ug/L			04/18/12 15:34	1
Chlorodibromomethane	ND		1.0		ug/L			04/18/12 15:34	1
Ethylene Dibromide	ND		1.0		ug/L			04/18/12 15:34	1
Chlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
Ethylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 15:34	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/18/12 15:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/18/12 15:34	1
o-Xylene	ND		1.0		ug/L			04/18/12 15:34	1
Styrene	ND		1.0		ug/L			04/18/12 15:34	1
Bromoform	ND		1.0		ug/L			04/18/12 15:34	1
Isopropylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
Bromobenzene	ND		1.0		ug/L			04/18/12 15:34	1
N-Propylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/18/12 15:34	1
2-Chlorotoluene	ND		1.0		ug/L			04/18/12 15:34	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
4-Chlorotoluene	ND		1.0		ug/L			04/18/12 15:34	1
tert-Butylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
sec-Butylbenzene	ND		1.0		ug/L			04/18/12 15:34	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: MB 580-109561/5

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
4-Isopropyltoluene	ND		1.0		ug/L			04/18/12 15:34	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
n-Butylbenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/18/12 15:34	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/18/12 15:34	1
Hexachlorobutadiene	ND		1.0		ug/L			04/18/12 15:34	1
Naphthalene	ND		1.0		ug/L			04/18/12 15:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/18/12 15:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120		04/18/12 15:34	1
Toluene-d8 (Surr)	93		85 - 120		04/18/12 15:34	1
Ethylbenzene-d10	94		80 - 120		04/18/12 15:34	1
4-Bromofluorobenzene (Surr)	97		75 - 120		04/18/12 15:34	1
Trifluorotoluene (Surr)	97		80 - 120		04/18/12 15:34	1

Lab Sample ID: LCS 580-109561/6

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	20.1	19.5		ug/L		97	30 - 155
Chloromethane	20.1	21.8		ug/L		108	40 - 125
Vinyl chloride	20.1	23.8		ug/L		118	50 - 145
Bromomethane	20.1	20.9		ug/L		104	30 - 145
Chloroethane	20.1	22.0		ug/L		110	60 - 135
Trichlorofluoromethane	20.1	22.4		ug/L		112	60 - 145
1,1-Dichloroethene	19.9	20.8		ug/L		105	70 - 130
Methylene Chloride	20.1	21.7		ug/L		108	55 - 140
trans-1,2-Dichloroethene	20.1	21.1		ug/L		105	60 - 140
1,1-Dichloroethane	19.9	23.0		ug/L		116	70 - 135
2,2-Dichloropropane	20.1	20.9		ug/L		104	70 - 135
cis-1,2-Dichloroethene	20.0	20.8		ug/L		104	70 - 125
Chlorobromomethane	19.9	21.8		ug/L		110	65 - 130
Chloroform	20.1	22.2		ug/L		111	65 - 135
1,1,1-Trichloroethane	20.1	22.2		ug/L		111	65 - 130
Carbon tetrachloride	20.1	21.3		ug/L		106	65 - 140
1,1-Dichloropropene	19.9	21.8		ug/L		110	75 - 130
Benzene	20.0	21.7		ug/L		109	80 - 120
1,2-Dichloroethane	19.9	20.6		ug/L		104	70 - 130
Trichloroethene	20.1	21.7		ug/L		108	70 - 125
1,2-Dichloropropane	20.1	20.2		ug/L		101	75 - 125
Dibromomethane	19.8	20.6		ug/L		104	75 - 125
Dichlorobromomethane	19.8	20.0		ug/L		101	75 - 120
cis-1,3-Dichloropropene	21.1	16.9		ug/L		80	70 - 130
Toluene	20.1	21.4		ug/L		107	75 - 120

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: LCS 580-109561/6

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	19.0	17.6		ug/L		92	55 - 140
1,1,2-Trichloroethane	19.8	20.5		ug/L		103	75 - 125
Tetrachloroethene	20.1	21.5		ug/L		107	45 - 150
1,3-Dichloropropane	20.0	20.2		ug/L		101	75 - 125
Chlorodibromomethane	19.9	17.5		ug/L		88	60 - 135
Ethylene Dibromide	20.0	20.4		ug/L		102	80 - 120
Chlorobenzene	20.1	21.3		ug/L		106	80 - 120
Ethylbenzene	19.9	22.0		ug/L		111	75 - 125
1,1,1,2-Tetrachloroethane	19.8	21.4		ug/L		108	80 - 130
1,1,2,2-Tetrachloroethane	20.1	19.5		ug/L		97	65 - 130
m-Xylene & p-Xylene	40.1	44.2		ug/L		110	75 - 130
o-Xylene	19.9	21.5		ug/L		108	80 - 120
Styrene	20.0	22.1		ug/L		111	65 - 135
Bromoform	20.0	18.9		ug/L		95	70 - 130
Isopropylbenzene	20.1	21.3		ug/L		106	75 - 125
Bromobenzene	20.0	21.1		ug/L		106	75 - 125
N-Propylbenzene	20.1	21.1		ug/L		105	70 - 130
1,2,3-Trichloropropane	19.8	20.4		ug/L		103	75 - 125
2-Chlorotoluene	19.8	22.3		ug/L		112	75 - 125
1,3,5-Trimethylbenzene	20.1	22.6		ug/L		113	75 - 130
4-Chlorotoluene	19.8	22.1		ug/L		112	75 - 130
tert-Butylbenzene	20.0	22.4		ug/L		112	70 - 130
1,2,4-Trimethylbenzene	20.1	22.4		ug/L		112	75 - 130
sec-Butylbenzene	20.1	22.2		ug/L		111	70 - 125
1,3-Dichlorobenzene	20.0	20.6		ug/L		103	75 - 125
4-Isopropyltoluene	20.1	21.6		ug/L		108	75 - 130
1,4-Dichlorobenzene	20.0	21.0		ug/L		105	75 - 125
n-Butylbenzene	19.9	21.3		ug/L		107	70 - 135
1,2-Dichlorobenzene	19.7	20.1		ug/L		102	70 - 120
1,2-Dibromo-3-Chloropropane	20.1	13.7		ug/L		68	50 - 130
1,2,4-Trichlorobenzene	19.9	15.9		ug/L		80	65 - 135
1,2,3-Trichlorobenzene	20.1	14.7		ug/L		73	55 - 140
Hexachlorobutadiene	20.0	17.8		ug/L		89	50 - 140
Naphthalene	20.1	16.1		ug/L		80	55 - 140
Methyl tert-butyl ether	20.1	18.7		ug/L		93	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	101		80 - 120
Toluene-d8 (Surr)	101		85 - 120
Ethylbenzene-d10	104		80 - 120
4-Bromofluorobenzene (Surr)	102		75 - 120
Trifluorotoluene (Surr)	100		80 - 120

Lab Sample ID: LCSD 580-109561/7

Matrix: Water

Analysis Batch: 109561

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
Dichlorodifluoromethane	20.1	19.3		ug/L		96	30 - 155	1.03	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: LCSD 580-109561/7

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD
							Limits	RPD	
Chloromethane	20.1	21.7		ug/L		108	40 - 125	0.000	30
Vinyl chloride	20.1	23.3		ug/L		116	50 - 145	2.12	30
Bromomethane	20.1	20.9		ug/L		104	30 - 145	0.000	30
Chloroethane	20.1	23.1		ug/L		115	60 - 135	4.88	30
Trichlorofluoromethane	20.1	21.6		ug/L		108	60 - 145	3.64	30
1,1-Dichloroethene	19.9	19.7		ug/L		99	70 - 130	5.43	30
Methylene Chloride	20.1	21.7		ug/L		108	55 - 140	0.000	30
trans-1,2-Dichloroethene	20.1	20.7		ug/L		103	60 - 140	1.91	30
1,1-Dichloroethane	19.9	23.3		ug/L		117	70 - 135	1.30	30
2,2-Dichloropropane	20.1	20.4		ug/L		102	70 - 135	2.42	30
cis-1,2-Dichloroethene	20.0	20.3		ug/L		101	70 - 125	2.43	30
Chlorobromomethane	19.9	20.9		ug/L		105	65 - 130	4.22	30
Chloroform	20.1	22.1		ug/L		110	65 - 135	0.000	30
1,1,1-Trichloroethane	20.1	22.3		ug/L		111	65 - 130	0.000	30
Carbon tetrachloride	20.1	21.3		ug/L		106	65 - 140	0.000	30
1,1-Dichloropropene	19.9	21.4		ug/L		108	75 - 130	1.85	30
Benzene	20.0	21.6		ug/L		108	80 - 120	0.000	30
1,2-Dichloroethane	19.9	21.1		ug/L		106	70 - 130	2.40	30
Trichloroethene	20.1	21.4		ug/L		107	70 - 125	1.39	30
1,2-Dichloropropane	20.1	20.3		ug/L		101	75 - 125	0.000	30
Dibromomethane	19.8	20.6		ug/L		104	75 - 125	0.000	30
Dichlorobromomethane	19.8	20.3		ug/L		102	75 - 120	1.49	30
cis-1,3-Dichloropropene	21.1	17.5		ug/L		83	70 - 130	3.49	30
Toluene	20.1	21.7		ug/L		108	75 - 120	1.39	30
trans-1,3-Dichloropropene	19.0	17.4		ug/L		91	55 - 140	1.14	30
1,1,2-Trichloroethane	19.8	20.1		ug/L		101	75 - 125	1.97	30
Tetrachloroethene	20.1	21.4		ug/L		107	45 - 150	0.000	30
1,3-Dichloropropane	20.0	20.4		ug/L		102	75 - 125	1.00	30
Chlorodibromomethane	19.9	18.2		ug/L		92	60 - 135	3.92	30
Ethylene Dibromide	20.0	20.4		ug/L		102	80 - 120	0.000	30
Chlorobenzene	20.1	20.7		ug/L		103	80 - 120	2.86	30
Ethylbenzene	19.9	21.9		ug/L		110	75 - 125	0.000	30
1,1,1,2-Tetrachloroethane	19.8	21.2		ug/L		107	80 - 130	1.00	30
1,1,2,2-Tetrachloroethane	20.1	19.4		ug/L		97	65 - 130	1.00	30
m-Xylene & p-Xylene	40.1	43.4		ug/L		108	75 - 130	1.83	30
o-Xylene	19.9	21.8		ug/L		110	80 - 120	1.39	30
Styrene	20.0	22.0		ug/L		110	65 - 135	0.000	30
Bromoform	20.0	18.8		ug/L		94	70 - 130	1.00	30
Isopropylbenzene	20.1	21.1		ug/L		105	75 - 125	1.00	30
Bromobenzene	20.0	21.1		ug/L		106	75 - 125	0.000	30
N-Propylbenzene	20.1	21.1		ug/L		105	70 - 130	0.000	30
1,2,3-Trichloropropane	19.8	19.7		ug/L		100	75 - 125	3.49	30
2-Chlorotoluene	19.8	22.0		ug/L		111	75 - 125	1.35	30
1,3,5-Trimethylbenzene	20.1	22.9		ug/L		114	75 - 130	1.32	30
4-Chlorotoluene	19.8	21.9		ug/L		111	75 - 130	1.00	30
tert-Butylbenzene	20.0	21.8		ug/L		109	70 - 130	2.71	30
1,2,4-Trimethylbenzene	20.1	22.8		ug/L		114	75 - 130	1.77	30
sec-Butylbenzene	20.1	22.2		ug/L		111	70 - 125	0.000	30
1,3-Dichlorobenzene	20.0	20.2		ug/L		101	75 - 125	1.96	30
4-Isopropyltoluene	20.1	21.7		ug/L		108	75 - 130	0.000	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: LCSD 580-109561/7

Matrix: Water

Analysis Batch: 109561

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	20.0	20.2		ug/L		101	75 - 125	3.88	30
n-Butylbenzene	19.9	21.5		ug/L		108	70 - 135	1.00	30
1,2-Dichlorobenzene	19.7	20.3		ug/L		103	70 - 120	1.00	30
1,2-Dibromo-3-Chloropropane	20.1	13.9		ug/L		69	50 - 130	1.45	30
1,2,4-Trichlorobenzene	19.9	16.3		ug/L		82	65 - 135	2.48	30
1,2,3-Trichlorobenzene	20.1	15.8		ug/L		79	55 - 140	7.21	30
Hexachlorobutadiene	20.0	19.0		ug/L		95	50 - 140	6.52	30
Naphthalene	20.1	16.4		ug/L		82	55 - 140	1.85	30
Methyl tert-butyl ether	20.1	19.3		ug/L		96	65 - 125	3.16	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	100		85 - 120
Ethylbenzene-d10	102		80 - 120
4-Bromofluorobenzene (Surr)	98		75 - 120
Trifluorotoluene (Surr)	102		80 - 120

Lab Sample ID: MB 580-109817/4

Matrix: Water

Analysis Batch: 109817

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			04/23/12 13:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120		04/23/12 13:33	1
Toluene-d8 (Surr)	96		85 - 120		04/23/12 13:33	1
Ethylbenzene-d10	95		80 - 120		04/23/12 13:33	1
4-Bromofluorobenzene (Surr)	98		75 - 120		04/23/12 13:33	1
Trifluorotoluene (Surr)	99		80 - 120		04/23/12 13:33	1

Lab Sample ID: LCS 580-109817/5

Matrix: Water

Analysis Batch: 109817

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	23.7		ug/L		118	45 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorobenzene (Surr)	96		80 - 120
Toluene-d8 (Surr)	104		85 - 120
Ethylbenzene-d10	103		80 - 120
4-Bromofluorobenzene (Surr)	103		75 - 120
Trifluorotoluene (Surr)	103		80 - 120

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: LCSD 580-109817/6

Matrix: Water

Analysis Batch: 109817

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Tetrachloroethene	20.0	25.8		ug/L		129	45 - 150	8	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	106		80 - 120
4-Bromofluorobenzene (Surr)	103		75 - 120
Trifluorotoluene (Surr)	107		80 - 120

Lab Sample ID: MB 580-109903/4

Matrix: Water

Analysis Batch: 109903

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0		ug/L			04/24/12 12:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120		04/24/12 12:24	1
Toluene-d8 (Surr)	96		85 - 120		04/24/12 12:24	1
Ethylbenzene-d10	94		80 - 120		04/24/12 12:24	1
4-Bromofluorobenzene (Surr)	93		75 - 120		04/24/12 12:24	1
Trifluorotoluene (Surr)	104		80 - 120		04/24/12 12:24	1

Lab Sample ID: LCS 580-109903/5

Matrix: Water

Analysis Batch: 109903

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.1	21.8		ug/L		109	45 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	99		85 - 120
Ethylbenzene-d10	103		80 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Trifluorotoluene (Surr)	105		80 - 120

Lab Sample ID: LCSD 580-109903/6

Matrix: Water

Analysis Batch: 109903

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Tetrachloroethene	20.1	21.5		ug/L		107	45 - 150	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		85 - 120
Ethylbenzene-d10	105		80 - 120

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

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

Lab Sample ID: LCSD 580-109903/6
Matrix: Water
Analysis Batch: 109903

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		75 - 120
Trifluorotoluene (Surr)	103		80 - 120

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-109763/13-A
Matrix: Water
Analysis Batch: 109887

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 109763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.040		mg/L		04/21/12 13:00	04/23/12 16:19	1

Lab Sample ID: LCS 580-109763/14-A
Matrix: Water
Analysis Batch: 109887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	10.6		mg/L		106	80 - 120

Lab Sample ID: LCSD 580-109763/15-A
Matrix: Water
Analysis Batch: 109887

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 109763

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Iron	10.0	10.3		mg/L		103	80 - 120	3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-109868/32
Matrix: Water
Analysis Batch: 109868

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90		mg/L			04/11/12 18:53	1
Sulfate	ND		1.2		mg/L			04/11/12 18:53	1

Lab Sample ID: LCS 580-109868/33
Matrix: Water
Analysis Batch: 109868

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.98		mg/L		100	90 - 110
Sulfate	15.0	14.8		mg/L		99	90 - 110

Lab Sample ID: 580-32318-3 MS
Matrix: Water
Analysis Batch: 109868

Client Sample ID: MW - 3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	48		40.0	90.4		mg/L		106	90 - 110

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-32318-3 MS
Matrix: Water
Analysis Batch: 109868

Client Sample ID: MW - 3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	11		40.0	51.8		mg/L		101	90 - 110

Lab Sample ID: 580-32318-3 DU
Matrix: Water
Analysis Batch: 109868

Client Sample ID: MW - 3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	48		48.1		mg/L		0.06	10
Sulfate	11		11.3		mg/L		0.2	10

Lab Sample ID: MB 580-109870/32
Matrix: Water
Analysis Batch: 109870

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90		mg/L			04/11/12 18:53	1

Lab Sample ID: LCS 580-109870/33
Matrix: Water
Analysis Batch: 109870

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.57		mg/L		103	90 - 110

Lab Sample ID: 580-32318-3 MS
Matrix: Water
Analysis Batch: 109870

Client Sample ID: MW - 3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	12		4.00	16.1		mg/L		95	90 - 110

Lab Sample ID: 580-32318-3 DU
Matrix: Water
Analysis Batch: 109870

Client Sample ID: MW - 3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	11	H	10.6		mg/L		0	10

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-109549/1
Matrix: Water
Analysis Batch: 109549

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			04/17/12 09:45	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 580-109549/2
Matrix: Water
Analysis Batch: 109549

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	14.9		mg/L		99	85 - 115

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 1
Date Collected: 04/09/12 11:44
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 17:49	MAT	TAL SEA

Client Sample ID: MW - 2
Date Collected: 04/10/12 09:04
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 18:16	MAT	TAL SEA
Total/NA	Prep	200.8			109763	04/21/12 13:00	ZF	TAL SEA
Total/NA	Analysis	200.8		1	109887	04/23/12 17:06	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109549	04/17/12 09:45	JP	TAL SEA
Total/NA	Analysis	300.0		1	109868	04/11/12 17:26	AM	TAL SEA
Total/NA	Analysis	300.0		5	109870	04/12/12 10:32	AM	TAL SEA

Client Sample ID: MW - 3
Date Collected: 04/10/12 10:43
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 18:43	MAT	TAL SEA
Total/NA	Prep	200.8			109763	04/21/12 13:00	ZF	TAL SEA
Total/NA	Analysis	200.8		1	109887	04/23/12 17:09	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109549	04/17/12 09:45	JP	TAL SEA
Total/NA	Analysis	300.0		1	109868	04/11/12 18:09	AM	TAL SEA
Total/NA	Analysis	300.0		10	109870	04/12/12 10:46	AM	TAL SEA

Client Sample ID: MW - 3 DUP
Date Collected: 04/10/12 10:43
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 19:10	MAT	TAL SEA

Client Sample ID: MW - 4
Date Collected: 04/10/12 10:15
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 19:37	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109903	04/24/12 15:58	SK	TAL SEA
Total/NA	Prep	200.8			109763	04/21/12 13:00	ZF	TAL SEA
Total/NA	Analysis	200.8		1	109887	04/23/12 17:12	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109549	04/17/12 09:45	JP	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 4

Date Collected: 04/10/12 10:15
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	109868	04/11/12 17:55	AM	TAL SEA
Total/NA	Analysis	300.0		5	109868	04/24/12 19:26	AM	TAL SEA
Total/NA	Analysis	300.0		1	109870	04/11/12 17:55	AM	TAL SEA

Client Sample ID: MW - 5

Date Collected: 04/09/12 15:02
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 20:04	MAT	TAL SEA
Total/NA	Analysis	8260B	RA	1	109817	04/23/12 21:39	SK	TAL SEA

Client Sample ID: MW - 6

Date Collected: 04/09/12 14:10
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 20:30	MAT	TAL SEA
Total/NA	Analysis	8260B	RA	1	109817	04/23/12 21:12	SK	TAL SEA

Client Sample ID: MW - 7

Date Collected: 04/09/12 14:35
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 20:57	MAT	TAL SEA

Client Sample ID: MW - 8

Date Collected: 04/09/12 13:24
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 21:24	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109817	04/23/12 22:06	SK	TAL SEA

Client Sample ID: MW - 9

Date Collected: 04/09/12 11:18
Date Received: 04/11/12 09:50

Lab Sample ID: 580-32318-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 21:50	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109817	04/23/12 22:32	SK	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: MW - 10

Lab Sample ID: 580-32318-11

Date Collected: 04/10/12 09:35

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 22:17	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109903	04/24/12 16:25	SK	TAL SEA
Total/NA	Prep	200.8			109763	04/21/12 13:00	ZF	TAL SEA
Total/NA	Analysis	200.8		1	109887	04/23/12 17:15	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109549	04/17/12 09:45	JP	TAL SEA
Total/NA	Analysis	300.0		1	109868	04/11/12 17:40	AM	TAL SEA
Total/NA	Analysis	300.0		1	109870	04/11/12 17:40	AM	TAL SEA

Client Sample ID: SPW - 12

Lab Sample ID: 580-32318-12

Date Collected: 04/09/12 15:33

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 22:44	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109817	04/23/12 22:58	SK	TAL SEA

Client Sample ID: SPW - 13

Lab Sample ID: 580-32318-13

Date Collected: 04/09/12 16:03

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 23:10	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109817	04/23/12 23:25	SK	TAL SEA

Client Sample ID: SPW - 14

Lab Sample ID: 580-32318-14

Date Collected: 04/09/12 12:16

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 23:37	MAT	TAL SEA
Total/NA	Analysis	8260B	RA	1	109817	04/23/12 20:45	SK	TAL SEA

Client Sample ID: SPW - 15

Lab Sample ID: 580-32318-15

Date Collected: 04/09/12 12:44

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/19/12 00:03	MAT	TAL SEA
Total/NA	Analysis	8260B	DL	20	109817	04/23/12 23:52	SK	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32318-16

Date Collected: 04/04/12 00:00

Matrix: Water

Date Received: 04/11/12 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109561	04/18/12 17:22	MAT	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-32318-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-32318-1	MW - 1	Water	04/09/12 11:44	04/11/12 09:50
580-32318-2	MW - 2	Water	04/10/12 09:04	04/11/12 09:50
580-32318-3	MW - 3	Water	04/10/12 10:43	04/11/12 09:50
580-32318-4	MW - 3 DUP	Water	04/10/12 10:43	04/11/12 09:50
580-32318-5	MW - 4	Water	04/10/12 10:15	04/11/12 09:50
580-32318-6	MW - 5	Water	04/09/12 15:02	04/11/12 09:50
580-32318-7	MW - 6	Water	04/09/12 14:10	04/11/12 09:50
580-32318-8	MW - 7	Water	04/09/12 14:35	04/11/12 09:50
580-32318-9	MW - 8	Water	04/09/12 13:24	04/11/12 09:50
580-32318-10	MW - 9	Water	04/09/12 11:18	04/11/12 09:50
580-32318-11	MW - 10	Water	04/10/12 09:35	04/11/12 09:50
580-32318-12	SPW - 12	Water	04/09/12 15:33	04/11/12 09:50
580-32318-13	SPW - 13	Water	04/09/12 16:03	04/11/12 09:50
580-32318-14	SPW - 14	Water	04/09/12 12:16	04/11/12 09:50
580-32318-15	SPW - 15	Water	04/09/12 12:44	04/11/12 09:50
580-32318-16	Trip Blank	Water	04/04/12 00:00	04/11/12 09:50

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Rush
 Short Hold

Chain of Custody Record

Client: East Crowser Client Contact: Bill Korman Date: 04/10/12 Chain of Custody Number: 14837

Address: 8910 SW Gemini Drive Telephone Number (Area Code)/Fax Number: 503-620-7284 / 503-620-6918 Lab Number: 32318 Page 1 of 2

City: Beaverton State: OR Zip Code: 97008 Sampler: Jason Miles Lab Contact: K15 Analysis (Attach list if more space is needed)

Project Name and Location (State): Trak Way Yakima, WA Billing Contact: S.J. Korman Containers & Preservatives: VOCs 8260B
Nitrate, Sulfate, Cl- 36000
TOC 5MS310C
Total Iron 6508

Contract/Purchase Order/Quote No.: 17800-23 Matrix: Soil Special Instructions/Conditions of Receipt

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Sample Disposal	Return To Client	Archive For	Months	(A fee may be assessed if samples are retained longer than 1 month)
MW-1	04/09/12	1144	X										X				
MW-2	04/10/12	0804	X										X				
MW-3	04/10/12	1043	X										X				
MW-3 Pq	04/10/12	1043	X										X				
MW-4	04/10/12	1015	X										X				
MW-5	04/09/12	1502	X										X				
MW-6	04/09/12	1410	X										X				
MW-7	04/10/12	1435	X										X				
MW-8	04/10/12	1324	X										X				
MW-9	04/09/12	1118	X										X				
MW-10	04/10/12	0935	X										X				
SPW-12	04/09/12	1533	X										X				

Turn Around Time Required (business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other: Standard

1. Relinquished By: Jason P. Miles Date: 4/10/12 Time: 14:00
 2. Relinquished By: Jason P. Miles Date: 4/10/12 Time: 14:00
 3. Relinquished By: Sign/Print Date: Time:

Comments: kg Blue/white wet/other Fed SO IR=4.7/4.5

TestAmerica

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TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Rush
 Short Hold

Chain of Custody Record

Client: Hart Cover Client Contact: 5:11 Kirman Date: 04/10/12 Chain of Custody Number: 14838

Address: 8910 SW Gemini Drive Telephone Number (Area Code)/Fax Number: 503-620-7284/503-620-6918 Lab Number: 2 of 2

City: Seawater State: OR Zip Code: 97008 Sampler: Toson Miles Lab Contact: KRIS

Project Name and Location (State): Frank Moor (Salem, OR) Billing Contact: 5:11 Kirman

Contract/Purchase Order/Quote No.: 17800-23 Matrix: Containers & Preservatives

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)

Sample I.D. and Location/Description	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH			
-13 SPW-13	4/9/12	1603	X												
-14 SPW-14	4/9/12	1216	X												
-15 SPW-15	4/9/12	1244	X												
-16 Trip Blank	4/9/12	-	X												

Cooler: Yes No Cooler Temp: _____ Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown

Turn Around Time Required (business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other: Standard

1. Relinquished By Sign/Print: [Signature] Date: 4/10/12 Time: 14:00
 2. Relinquished By Sign/Print: [Signature] Date: 4/10/12 Time: 14:00
 3. Relinquished By Sign/Print: [Signature] Date: 4/11/12 Time: 0950

Comments: _____

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-32318-1

Login Number: 32318

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom

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

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-32383-1
Client Project/Site: Frank Wear

For:
Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan



Authorized for release by:
4/30/2012 2:43:27 PM

Terri Torres
Project Manager II
terri.torres@testamericainc.com

Designee for
Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

LINKS

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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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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Job ID: 580-32383-1

Laboratory: TestAmerica Seattle

Narrative

**Job Narrative
580-32383-1**

Receipt

The samples were received on 4/17/2012 10:30 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.10 C.

Except: The following samples were received with headspace in the sample vial greater than 1/4": B-4 and B-13. The methanol vial for sample B-6/5-1 contains less than 10 grams of soil. The VOA vials received for the following samples contain a large amount of sediment: B-4, B-5, B-6 and B-13.

GC/MS VOA - Method(s) 8260B:

The following sample(s) submitted for volatiles analysis was received with insufficient preservation (pH >2): B-4 (580-32383-1). The following sample was analyzed outside of analytical holding time due to being analyzed outside of the seven day hold time for unpreserved samples: B-4 (580-32383-1).

The following sample was received with headspace in the sample vial: B-4 (580-32383-1). The approximate size of the headspace bubble was 10 mm and has been recorded in the batch record.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.



Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-4

Lab Sample ID: 580-32383-1

Date Collected: 04/11/12 16:56

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Chloromethane	ND	H	5.0		ug/L			04/20/12 21:42	1
Vinyl chloride	ND	H	1.0		ug/L			04/20/12 21:42	1
Bromomethane	ND	H	5.0		ug/L			04/20/12 21:42	1
Chloroethane	ND	H	5.0		ug/L			04/20/12 21:42	1
Trichlorofluoromethane	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1-Dichloroethene	ND	H	1.0		ug/L			04/20/12 21:42	1
Methylene Chloride	ND	H	3.0		ug/L			04/20/12 21:42	1
trans-1,2-Dichloroethene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1-Dichloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
2,2-Dichloropropane	ND	H	1.0		ug/L			04/20/12 21:42	1
cis-1,2-Dichloroethene	ND	H	1.0		ug/L			04/20/12 21:42	1
Chlorobromomethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Chloroform	2.9	H	1.0		ug/L			04/20/12 21:42	1
1,1,1-Trichloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Carbon tetrachloride	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1-Dichloropropene	ND	H	1.0		ug/L			04/20/12 21:42	1
Benzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2-Dichloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Trichloroethene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2-Dichloropropane	ND	H	1.0		ug/L			04/20/12 21:42	1
Dibromomethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Dichlorobromomethane	ND	H	1.0		ug/L			04/20/12 21:42	1
cis-1,3-Dichloropropene	ND	H	1.0		ug/L			04/20/12 21:42	1
Toluene	ND	H	1.0		ug/L			04/20/12 21:42	1
trans-1,3-Dichloropropene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1,2-Trichloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Tetrachloroethene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,3-Dichloropropane	ND	H	1.0		ug/L			04/20/12 21:42	1
Chlorodibromomethane	ND	H	1.0		ug/L			04/20/12 21:42	1
Ethylene Dibromide	ND	H	1.0		ug/L			04/20/12 21:42	1
Chlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
Ethylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1,1,2-Tetrachloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
1,1,2,2-Tetrachloroethane	ND	H	1.0		ug/L			04/20/12 21:42	1
m-Xylene & p-Xylene	ND	H	2.0		ug/L			04/20/12 21:42	1
o-Xylene	ND	H	1.0		ug/L			04/20/12 21:42	1
Styrene	ND	H	1.0		ug/L			04/20/12 21:42	1
Bromoform	ND	H	1.0		ug/L			04/20/12 21:42	1
Isopropylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
Bromobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
N-Propylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2,3-Trichloropropane	ND	H	1.0		ug/L			04/20/12 21:42	1
2-Chlorotoluene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,3,5-Trimethylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
4-Chlorotoluene	ND	H	1.0		ug/L			04/20/12 21:42	1
tert-Butylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2,4-Trimethylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
sec-Butylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,3-Dichlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
4-Isopropyltoluene	ND	H	1.0		ug/L			04/20/12 21:42	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-4

Lab Sample ID: 580-32383-1

Date Collected: 04/11/12 16:56

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
n-Butylbenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2-Dichlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2-Dibromo-3-Chloropropane	ND	H	2.0		ug/L			04/20/12 21:42	1
1,2,4-Trichlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
1,2,3-Trichlorobenzene	ND	H	1.0		ug/L			04/20/12 21:42	1
Hexachlorobutadiene	ND	H	1.0		ug/L			04/20/12 21:42	1
Naphthalene	ND	H	1.0		ug/L			04/20/12 21:42	1
Methyl tert-butyl ether	ND	H	1.0		ug/L			04/20/12 21:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					04/20/12 21:42	1
Toluene-d8 (Surr)	97		85 - 120					04/20/12 21:42	1
Ethylbenzene-d10	98		80 - 120					04/20/12 21:42	1
4-Bromofluorobenzene (Surr)	100		75 - 120					04/20/12 21:42	1
Trifluorotoluene (Surr)	94		80 - 120					04/20/12 21:42	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-5

Lab Sample ID: 580-32383-2

Date Collected: 04/12/12 12:02

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 22:08	1
Chloromethane	ND		5.0		ug/L			04/20/12 22:08	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 22:08	1
Bromomethane	ND		5.0		ug/L			04/20/12 22:08	1
Chloroethane	ND		5.0		ug/L			04/20/12 22:08	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 22:08	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 22:08	1
Methylene Chloride	ND		3.0		ug/L			04/20/12 22:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 22:08	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 22:08	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 22:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 22:08	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 22:08	1
Chloroform	3.0		1.0		ug/L			04/20/12 22:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 22:08	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 22:08	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 22:08	1
Benzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 22:08	1
Trichloroethene	ND		1.0		ug/L			04/20/12 22:08	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 22:08	1
Dibromomethane	ND		1.0		ug/L			04/20/12 22:08	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 22:08	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 22:08	1
Toluene	ND		1.0		ug/L			04/20/12 22:08	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 22:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 22:08	1
Tetrachloroethene	12		1.0		ug/L			04/20/12 22:08	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 22:08	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 22:08	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 22:08	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 22:08	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 22:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 22:08	1
o-Xylene	ND		1.0		ug/L			04/20/12 22:08	1
Styrene	ND		1.0		ug/L			04/20/12 22:08	1
Bromoform	ND		1.0		ug/L			04/20/12 22:08	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
Bromobenzene	ND		1.0		ug/L			04/20/12 22:08	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 22:08	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 22:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 22:08	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 22:08	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-5

Lab Sample ID: 580-32383-2

Date Collected: 04/12/12 12:02

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 22:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 22:08	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 22:08	1
Naphthalene	ND		1.0		ug/L			04/20/12 22:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 22:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					04/20/12 22:08	1
Toluene-d8 (Surr)	94		85 - 120					04/20/12 22:08	1
Ethylbenzene-d10	100		80 - 120					04/20/12 22:08	1
4-Bromofluorobenzene (Surr)	97		75 - 120					04/20/12 22:08	1
Trifluorotoluene (Surr)	104		80 - 120					04/20/12 22:08	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-6

Lab Sample ID: 580-32383-3

Date Collected: 04/12/12 17:47

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 22:35	1
Chloromethane	ND		5.0		ug/L			04/20/12 22:35	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 22:35	1
Bromomethane	ND		5.0		ug/L			04/20/12 22:35	1
Chloroethane	ND		5.0		ug/L			04/20/12 22:35	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 22:35	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 22:35	1
Methylene Chloride	ND		3.0		ug/L			04/20/12 22:35	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 22:35	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 22:35	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 22:35	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 22:35	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 22:35	1
Chloroform	1.4		1.0		ug/L			04/20/12 22:35	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 22:35	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 22:35	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 22:35	1
Benzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 22:35	1
Trichloroethene	ND		1.0		ug/L			04/20/12 22:35	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 22:35	1
Dibromomethane	ND		1.0		ug/L			04/20/12 22:35	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 22:35	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 22:35	1
Toluene	ND		1.0		ug/L			04/20/12 22:35	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 22:35	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 22:35	1
Tetrachloroethene	2.1		1.0		ug/L			04/20/12 22:35	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 22:35	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 22:35	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 22:35	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 22:35	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 22:35	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 22:35	1
o-Xylene	ND		1.0		ug/L			04/20/12 22:35	1
Styrene	ND		1.0		ug/L			04/20/12 22:35	1
Bromoform	ND		1.0		ug/L			04/20/12 22:35	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
Bromobenzene	ND		1.0		ug/L			04/20/12 22:35	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 22:35	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 22:35	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 22:35	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 22:35	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-6

Lab Sample ID: 580-32383-3

Date Collected: 04/12/12 17:47

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 22:35	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 22:35	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 22:35	1
Naphthalene	ND		1.0		ug/L			04/20/12 22:35	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					04/20/12 22:35	1
Toluene-d8 (Surr)	94		85 - 120					04/20/12 22:35	1
Ethylbenzene-d10	96		80 - 120					04/20/12 22:35	1
4-Bromofluorobenzene (Surr)	96		75 - 120					04/20/12 22:35	1
Trifluorotoluene (Surr)	100		80 - 120					04/20/12 22:35	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-6/5-1

Lab Sample ID: 580-32383-4

Date Collected: 04/12/12 17:34

Matrix: Solid

Date Received: 04/17/12 10:30

Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chloromethane	ND		500		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Vinyl chloride	ND		10		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Bromomethane	ND		180		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chloroethane	ND		500		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Trichlorofluoromethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1-Dichloroethene	ND		25		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Methylene Chloride	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
trans-1,2-Dichloroethene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1-Dichloroethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
2,2-Dichloropropane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
cis-1,2-Dichloroethene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chlorobromomethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chloroform	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1,1-Trichloroethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Carbon tetrachloride	ND		25		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1-Dichloropropene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Benzene	ND		20		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,2-Dichloroethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Trichloroethene	ND		20		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,2-Dichloropropane	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Dibromomethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Dichlorobromomethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
cis-1,3-Dichloropropene	ND		20		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Toluene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
trans-1,3-Dichloropropene	ND		20		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1,1,2-Trichloroethane	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Tetrachloroethene	27		25		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,3-Dichloropropane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chlorodibromomethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Ethylene Dibromide	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Chlorobenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Ethylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1,1,2-Tetrachloroethane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,1,2,2-Tetrachloroethane	ND		13		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
m-Xylene & p-Xylene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
o-Xylene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Styrene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Bromoform	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Isopropylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
Bromobenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
N-Propylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,2,3-Trichloropropane	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
2-Chlorotoluene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,3,5-Trimethylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
4-Chlorotoluene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
tert-Butylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,2,4-Trimethylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
sec-Butylbenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
1,3-Dichlorobenzene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1
4-Isopropyltoluene	ND		50		ug/Kg	*	04/24/12 13:35	04/24/12 18:26	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-6/5-1

Lab Sample ID: 580-32383-4

Date Collected: 04/12/12 17:34

Matrix: Solid

Date Received: 04/17/12 10:30

Percent Solids: 90.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
n-Butylbenzene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
1,2-Dichlorobenzene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
1,2-Dibromo-3-Chloropropane	ND		250		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
1,2,4-Trichlorobenzene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
1,2,3-Trichlorobenzene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
Hexachlorobutadiene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
Naphthalene	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1
Methyl tert-butyl ether	ND		50		ug/Kg	☼	04/24/12 13:35	04/24/12 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120	04/24/12 13:35	04/24/12 18:26	1
Toluene-d8 (Surr)	87		80 - 120	04/24/12 13:35	04/24/12 18:26	1
Ethylbenzene-d10	87		70 - 120	04/24/12 13:35	04/24/12 18:26	1
4-Bromofluorobenzene (Surr)	95		70 - 120	04/24/12 13:35	04/24/12 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91		0.10		%			04/26/12 14:51	1
Percent Moisture	9.3		0.10		%			04/26/12 14:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-13

Lab Sample ID: 580-32383-5

Date Collected: 04/13/12 14:15

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 23:01	1
Chloromethane	ND		5.0		ug/L			04/20/12 23:01	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 23:01	1
Bromomethane	ND		5.0		ug/L			04/20/12 23:01	1
Chloroethane	ND		5.0		ug/L			04/20/12 23:01	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 23:01	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 23:01	1
Methylene Chloride	ND		3.0		ug/L			04/20/12 23:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 23:01	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 23:01	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 23:01	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 23:01	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 23:01	1
Chloroform	3.9		1.0		ug/L			04/20/12 23:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 23:01	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 23:01	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 23:01	1
Benzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 23:01	1
Trichloroethene	ND		1.0		ug/L			04/20/12 23:01	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 23:01	1
Dibromomethane	ND		1.0		ug/L			04/20/12 23:01	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 23:01	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 23:01	1
Toluene	ND		1.0		ug/L			04/20/12 23:01	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 23:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 23:01	1
Tetrachloroethene	42		1.0		ug/L			04/20/12 23:01	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 23:01	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 23:01	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 23:01	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 23:01	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 23:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 23:01	1
o-Xylene	ND		1.0		ug/L			04/20/12 23:01	1
Styrene	ND		1.0		ug/L			04/20/12 23:01	1
Bromoform	ND		1.0		ug/L			04/20/12 23:01	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
Bromobenzene	ND		1.0		ug/L			04/20/12 23:01	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 23:01	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 23:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 23:01	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 23:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-13

Lab Sample ID: 580-32383-5

Date Collected: 04/13/12 14:15

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 23:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 23:01	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 23:01	1
Naphthalene	ND		1.0		ug/L			04/20/12 23:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 23:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					04/20/12 23:01	1
Toluene-d8 (Surr)	93		85 - 120					04/20/12 23:01	1
Ethylbenzene-d10	101		80 - 120					04/20/12 23:01	1
4-Bromofluorobenzene (Surr)	100		75 - 120					04/20/12 23:01	1
Trifluorotoluene (Surr)	100		80 - 120					04/20/12 23:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: R. Blank 1

Lab Sample ID: 580-32383-6

Date Collected: 04/13/12 08:30

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 17:01	1
Chloromethane	ND		5.0		ug/L			04/20/12 17:01	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 17:01	1
Bromomethane	ND		5.0		ug/L			04/20/12 17:01	1
Chloroethane	ND		5.0		ug/L			04/20/12 17:01	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 17:01	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 17:01	1
Methylene Chloride	7.1		3.0		ug/L			04/20/12 17:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 17:01	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 17:01	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 17:01	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 17:01	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 17:01	1
Chloroform	ND		1.0		ug/L			04/20/12 17:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 17:01	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 17:01	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 17:01	1
Benzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 17:01	1
Trichloroethene	ND		1.0		ug/L			04/20/12 17:01	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 17:01	1
Dibromomethane	ND		1.0		ug/L			04/20/12 17:01	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 17:01	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 17:01	1
Toluene	ND		1.0		ug/L			04/20/12 17:01	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 17:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 17:01	1
Tetrachloroethene	ND		1.0		ug/L			04/20/12 17:01	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 17:01	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 17:01	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 17:01	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 17:01	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 17:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 17:01	1
o-Xylene	ND		1.0		ug/L			04/20/12 17:01	1
Styrene	ND		1.0		ug/L			04/20/12 17:01	1
Bromoform	ND		1.0		ug/L			04/20/12 17:01	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
Bromobenzene	ND		1.0		ug/L			04/20/12 17:01	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 17:01	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 17:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 17:01	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 17:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: R. Blank 1

Lab Sample ID: 580-32383-6

Date Collected: 04/13/12 08:30

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 17:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 17:01	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 17:01	1
Naphthalene	ND		1.0		ug/L			04/20/12 17:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	96		80 - 120					04/20/12 17:01	1
Toluene-d8 (Surr)	94		85 - 120					04/20/12 17:01	1
Ethylbenzene-d10	99		80 - 120					04/20/12 17:01	1
4-Bromofluorobenzene (Surr)	94		75 - 120					04/20/12 17:01	1
Trifluorotoluene (Surr)	99		80 - 120					04/20/12 17:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32383-7

Date Collected: 04/11/12 00:00

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 16:35	1
Chloromethane	ND		5.0		ug/L			04/20/12 16:35	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 16:35	1
Bromomethane	ND		5.0		ug/L			04/20/12 16:35	1
Chloroethane	ND		5.0		ug/L			04/20/12 16:35	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 16:35	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 16:35	1
Methylene Chloride	ND		3.0		ug/L			04/20/12 16:35	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 16:35	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 16:35	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 16:35	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 16:35	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 16:35	1
Chloroform	ND		1.0		ug/L			04/20/12 16:35	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 16:35	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 16:35	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 16:35	1
Benzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 16:35	1
Trichloroethene	ND		1.0		ug/L			04/20/12 16:35	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 16:35	1
Dibromomethane	ND		1.0		ug/L			04/20/12 16:35	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 16:35	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 16:35	1
Toluene	ND		1.0		ug/L			04/20/12 16:35	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 16:35	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 16:35	1
Tetrachloroethene	ND		1.0		ug/L			04/20/12 16:35	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 16:35	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 16:35	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 16:35	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 16:35	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 16:35	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 16:35	1
o-Xylene	ND		1.0		ug/L			04/20/12 16:35	1
Styrene	ND		1.0		ug/L			04/20/12 16:35	1
Bromoform	ND		1.0		ug/L			04/20/12 16:35	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
Bromobenzene	ND		1.0		ug/L			04/20/12 16:35	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 16:35	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 16:35	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 16:35	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 16:35	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32383-7

Date Collected: 04/11/12 00:00

Matrix: Water

Date Received: 04/17/12 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 16:35	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 16:35	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 16:35	1
Naphthalene	ND		1.0		ug/L			04/20/12 16:35	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 16:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					04/20/12 16:35	1
Toluene-d8 (Surr)	93		85 - 120					04/20/12 16:35	1
Ethylbenzene-d10	99		80 - 120					04/20/12 16:35	1
4-Bromofluorobenzene (Surr)	94		75 - 120					04/20/12 16:35	1
Trifluorotoluene (Surr)	99		80 - 120					04/20/12 16:35	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: MB 580-109742/5

Matrix: Water

Analysis Batch: 109742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/20/12 13:50	1
Chloromethane	ND		5.0		ug/L			04/20/12 13:50	1
Vinyl chloride	ND		1.0		ug/L			04/20/12 13:50	1
Bromomethane	ND		5.0		ug/L			04/20/12 13:50	1
Chloroethane	ND		5.0		ug/L			04/20/12 13:50	1
Trichlorofluoromethane	ND		1.0		ug/L			04/20/12 13:50	1
1,1-Dichloroethene	ND		1.0		ug/L			04/20/12 13:50	1
Methylene Chloride	ND		3.0		ug/L			04/20/12 13:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 13:50	1
1,1-Dichloroethane	ND		1.0		ug/L			04/20/12 13:50	1
2,2-Dichloropropane	ND		1.0		ug/L			04/20/12 13:50	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/20/12 13:50	1
Chlorobromomethane	ND		1.0		ug/L			04/20/12 13:50	1
Chloroform	ND		1.0		ug/L			04/20/12 13:50	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/20/12 13:50	1
Carbon tetrachloride	ND		1.0		ug/L			04/20/12 13:50	1
1,1-Dichloropropene	ND		1.0		ug/L			04/20/12 13:50	1
Benzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2-Dichloroethane	ND		1.0		ug/L			04/20/12 13:50	1
Trichloroethene	ND		1.0		ug/L			04/20/12 13:50	1
1,2-Dichloropropane	ND		1.0		ug/L			04/20/12 13:50	1
Dibromomethane	ND		1.0		ug/L			04/20/12 13:50	1
Dichlorobromomethane	ND		1.0		ug/L			04/20/12 13:50	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 13:50	1
Toluene	ND		1.0		ug/L			04/20/12 13:50	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/20/12 13:50	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/20/12 13:50	1
Tetrachloroethene	ND		1.0		ug/L			04/20/12 13:50	1
1,3-Dichloropropane	ND		1.0		ug/L			04/20/12 13:50	1
Chlorodibromomethane	ND		1.0		ug/L			04/20/12 13:50	1
Ethylene Dibromide	ND		1.0		ug/L			04/20/12 13:50	1
Chlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
Ethylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 13:50	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/20/12 13:50	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/20/12 13:50	1
o-Xylene	ND		1.0		ug/L			04/20/12 13:50	1
Styrene	ND		1.0		ug/L			04/20/12 13:50	1
Bromoform	ND		1.0		ug/L			04/20/12 13:50	1
Isopropylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
Bromobenzene	ND		1.0		ug/L			04/20/12 13:50	1
N-Propylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/20/12 13:50	1
2-Chlorotoluene	ND		1.0		ug/L			04/20/12 13:50	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
4-Chlorotoluene	ND		1.0		ug/L			04/20/12 13:50	1
tert-Butylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
sec-Butylbenzene	ND		1.0		ug/L			04/20/12 13:50	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: MB 580-109742/5

Matrix: Water

Analysis Batch: 109742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
4-Isopropyltoluene	ND		1.0		ug/L			04/20/12 13:50	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
n-Butylbenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/20/12 13:50	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/20/12 13:50	1
Hexachlorobutadiene	ND		1.0		ug/L			04/20/12 13:50	1
Naphthalene	ND		1.0		ug/L			04/20/12 13:50	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/20/12 13:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		04/20/12 13:50	1
Toluene-d8 (Surr)	95		85 - 120		04/20/12 13:50	1
Ethylbenzene-d10	95		80 - 120		04/20/12 13:50	1
4-Bromofluorobenzene (Surr)	99		75 - 120		04/20/12 13:50	1
Trifluorotoluene (Surr)	99		80 - 120		04/20/12 13:50	1

Lab Sample ID: LCS 580-109742/6

Matrix: Water

Analysis Batch: 109742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	20.1	21.9		ug/L		109	30 - 155
Chloromethane	20.1	22.7		ug/L		113	40 - 125
Vinyl chloride	20.1	24.6		ug/L		122	50 - 145
Bromomethane	20.1	22.7		ug/L		113	30 - 145
Chloroethane	20.1	23.2		ug/L		116	60 - 135
Trichlorofluoromethane	20.1	22.7		ug/L		113	60 - 145
1,1-Dichloroethene	19.9	20.5		ug/L		103	70 - 130
Methylene Chloride	20.1	21.4		ug/L		107	55 - 140
trans-1,2-Dichloroethene	20.1	21.0		ug/L		105	60 - 140
1,1-Dichloroethane	19.9	23.2		ug/L		117	70 - 135
2,2-Dichloropropane	20.1	21.0		ug/L		105	70 - 135
cis-1,2-Dichloroethene	20.0	20.7		ug/L		103	70 - 125
Chlorobromomethane	19.9	21.4		ug/L		108	65 - 130
Chloroform	20.1	22.0		ug/L		110	65 - 135
1,1,1-Trichloroethane	20.1	22.5		ug/L		112	65 - 130
Carbon tetrachloride	20.1	22.1		ug/L		110	65 - 140
1,1-Dichloropropene	19.9	21.7		ug/L		109	75 - 130
Benzene	20.0	21.7		ug/L		109	80 - 120
1,2-Dichloroethane	19.9	21.8		ug/L		110	70 - 130
Trichloroethene	20.1	21.5		ug/L		107	70 - 125
1,2-Dichloropropane	20.1	19.7		ug/L		98	75 - 125
Dibromomethane	19.8	21.3		ug/L		108	75 - 125
Dichlorobromomethane	19.8	20.3		ug/L		102	75 - 120
cis-1,3-Dichloropropene	21.1	17.8		ug/L		84	70 - 130
Toluene	20.1	21.1		ug/L		105	75 - 120

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: LCS 580-109742/6

Matrix: Water

Analysis Batch: 109742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	19.0	19.1		ug/L		100	55 - 140
1,1,2-Trichloroethane	19.8	20.2		ug/L		102	75 - 125
Tetrachloroethene	20.1	21.1		ug/L		105	45 - 150
1,3-Dichloropropane	20.0	20.7		ug/L		103	75 - 125
Chlorodibromomethane	19.9	18.7		ug/L		94	60 - 135
Ethylene Dibromide	20.0	20.8		ug/L		104	80 - 120
Chlorobenzene	20.1	20.0		ug/L		100	80 - 120
Ethylbenzene	19.9	20.6		ug/L		103	75 - 125
1,1,1,2-Tetrachloroethane	19.8	20.6		ug/L		104	80 - 130
1,1,1,2,2-Tetrachloroethane	20.1	20.3		ug/L		101	65 - 130
m-Xylene & p-Xylene	40.1	41.1		ug/L		103	75 - 130
o-Xylene	19.9	20.3		ug/L		102	80 - 120
Styrene	20.0	21.0		ug/L		105	65 - 135
Bromoform	20.0	19.5		ug/L		98	70 - 130
Isopropylbenzene	20.1	20.2		ug/L		101	75 - 125
Bromobenzene	20.0	19.7		ug/L		99	75 - 125
N-Propylbenzene	20.1	20.1		ug/L		100	70 - 130
1,2,3-Trichloropropane	19.8	20.7		ug/L		105	75 - 125
2-Chlorotoluene	19.8	21.4		ug/L		108	75 - 125
1,3,5-Trimethylbenzene	20.1	22.0		ug/L		110	75 - 130
4-Chlorotoluene	19.8	20.8		ug/L		105	75 - 130
tert-Butylbenzene	20.0	20.9		ug/L		105	70 - 130
1,2,4-Trimethylbenzene	20.1	21.4		ug/L		107	75 - 130
sec-Butylbenzene	20.1	21.3		ug/L		106	70 - 125
1,3-Dichlorobenzene	20.0	19.7		ug/L		98	75 - 125
4-Isopropyltoluene	20.1	20.5		ug/L		102	75 - 130
1,4-Dichlorobenzene	20.0	20.0		ug/L		100	75 - 125
n-Butylbenzene	19.9	21.0		ug/L		106	70 - 135
1,2-Dichlorobenzene	19.7	19.6		ug/L		100	70 - 120
1,2-Dibromo-3-Chloropropane	20.1	16.1		ug/L		80	50 - 130
1,2,4-Trichlorobenzene	19.9	16.4		ug/L		82	65 - 135
1,2,3-Trichlorobenzene	20.1	16.0		ug/L		80	55 - 140
Hexachlorobutadiene	20.0	18.5		ug/L		92	50 - 140
Naphthalene	20.1	16.5		ug/L		82	55 - 140
Methyl tert-butyl ether	20.1	19.2		ug/L		96	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		85 - 120
Ethylbenzene-d10	104		80 - 120
4-Bromofluorobenzene (Surr)	99		75 - 120
Trifluorotoluene (Surr)	102		80 - 120

Lab Sample ID: MB 580-109923/1-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109923

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: MB 580-109923/1-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109923

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloromethane	ND		400		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Vinyl chloride	ND		8.0		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromomethane	ND		140		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chloroethane	ND		400		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Trichlorofluoromethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloroethene	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Methylene Chloride	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
trans-1,2-Dichloroethene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
2,2-Dichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
cis-1,2-Dichloroethene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorobromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chloroform	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,1-Trichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Carbon tetrachloride	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloropropene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Benzene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Trichloroethene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichloropropane	ND		12		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Dibromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Dichlorobromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Toluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,2-Trichloroethane	ND		12		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Tetrachloroethene	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,3-Dichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorodibromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Ethylene Dibromide	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Ethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
m-Xylene & p-Xylene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
o-Xylene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Styrene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromoform	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Isopropylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
N-Propylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,3-Trichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
2-Chlorotoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
4-Chlorotoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
tert-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
sec-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,3-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
4-Isopropyltoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: MB 580-109923/1-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
n-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Hexachlorobutadiene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Naphthalene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Methyl tert-butyl ether	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120	04/24/12 13:35	04/24/12 15:51	1
Toluene-d8 (Surr)	89		80 - 120	04/24/12 13:35	04/24/12 15:51	1
Ethylbenzene-d10	87		70 - 120	04/24/12 13:35	04/24/12 15:51	1
4-Bromofluorobenzene (Surr)	98		70 - 120	04/24/12 13:35	04/24/12 15:51	1
Trifluorotoluene (Surr)	98		65 - 140	04/24/12 13:35	04/24/12 15:51	1

Lab Sample ID: LCS 580-109923/2-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	800	708		ug/Kg		88	35 - 135
Chloromethane	800	700		ug/Kg		87	50 - 130
Vinyl chloride	795	816		ug/Kg		103	60 - 125
Bromomethane	802	864		ug/Kg		108	30 - 160
Chloroethane	799	716		ug/Kg		90	40 - 155
Trichlorofluoromethane	799	836		ug/Kg		105	25 - 185
1,1-Dichloroethene	801	836		ug/Kg		104	65 - 135
Methylene Chloride	800	828		ug/Kg		103	55 - 140
trans-1,2-Dichloroethene	801	792		ug/Kg		99	65 - 135
1,1-Dichloroethane	800	768		ug/Kg		96	75 - 125
2,2-Dichloropropane	799	812		ug/Kg		102	65 - 135
cis-1,2-Dichloroethene	801	772		ug/Kg		96	65 - 125
Chlorobromomethane	802	788		ug/Kg		98	70 - 125
Chloroform	800	820		ug/Kg		102	70 - 125
1,1,1-Trichloroethane	800	828		ug/Kg		103	70 - 135
Carbon tetrachloride	803	584		ug/Kg		73	65 - 135
1,1-Dichloropropene	802	808		ug/Kg		101	70 - 135
Benzene	799	788		ug/Kg		99	75 - 125
1,2-Dichloroethane	801	804		ug/Kg		100	70 - 135
Trichloroethene	812	808		ug/Kg		100	75 - 125
1,2-Dichloropropane	800	800		ug/Kg		100	70 - 120
Dibromomethane	802	780		ug/Kg		97	75 - 130
Dichlorobromomethane	809	684		ug/Kg		85	70 - 130
cis-1,3-Dichloropropene	790	612		ug/Kg		78	70 - 125
Toluene	801	720		ug/Kg		90	70 - 125
trans-1,3-Dichloropropene	812	576		ug/Kg		71	65 - 125
1,1,2-Trichloroethane	802	704		ug/Kg		88	60 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: LCS 580-109923/2-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
							Lower	Upper
Tetrachloroethene	800	704		ug/Kg		88	65 - 140	
1,3-Dichloropropane	801	736		ug/Kg		92	75 - 125	
Chlorodibromomethane	810	632		ug/Kg		78	65 - 130	
Ethylene Dibromide	802	692		ug/Kg		86	70 - 125	
Chlorobenzene	800	800		ug/Kg		100	75 - 125	
Ethylbenzene	800	800		ug/Kg		100	75 - 125	
1,1,1,2-Tetrachloroethane	802	664		ug/Kg		83	75 - 125	
1,1,1,2,2-Tetrachloroethane	799	812		ug/Kg		102	55 - 130	
m-Xylene & p-Xylene	1600	1640		ug/Kg		102	80 - 125	
o-Xylene	802	764		ug/Kg		95	75 - 125	
Styrene	802	784		ug/Kg		98	75 - 125	
Bromoform	800	496		ug/Kg		62	55 - 135	
Isopropylbenzene	802	784		ug/Kg		98	75 - 130	
Bromobenzene	801	752		ug/Kg		94	65 - 120	
N-Propylbenzene	800	816		ug/Kg		102	65 - 135	
1,2,3-Trichloropropane	802	864		ug/Kg		108	65 - 130	
2-Chlorotoluene	801	752		ug/Kg		94	70 - 130	
1,3,5-Trimethylbenzene	799	772		ug/Kg		97	65 - 135	
4-Chlorotoluene	802	772		ug/Kg		96	75 - 125	
tert-Butylbenzene	802	760		ug/Kg		95	65 - 130	
1,2,4-Trimethylbenzene	800	776		ug/Kg		97	65 - 135	
sec-Butylbenzene	800	792		ug/Kg		99	65 - 130	
1,3-Dichlorobenzene	801	744		ug/Kg		93	70 - 125	
4-Isopropyltoluene	800	772		ug/Kg		96	75 - 135	
1,4-Dichlorobenzene	801	760		ug/Kg		95	70 - 125	
n-Butylbenzene	800	820		ug/Kg		102	65 - 140	
1,2-Dichlorobenzene	800	736		ug/Kg		92	75 - 120	
1,2-Dibromo-3-Chloropropane	801	620		ug/Kg		77	40 - 135	
1,2,4-Trichlorobenzene	802	744		ug/Kg		93	65 - 130	
1,2,3-Trichlorobenzene	800	724		ug/Kg		90	60 - 135	
Hexachlorobutadiene	802	736		ug/Kg		92	55 - 140	
Naphthalene	800	752		ug/Kg		94	40 - 125	
Methyl tert-butyl ether	800	772		ug/Kg		97	65 - 125	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	98		80 - 120
Toluene-d8 (Surr)	90		80 - 120
Ethylbenzene-d10	91		70 - 120
4-Bromofluorobenzene (Surr)	97		70 - 120
Trifluorotoluene (Surr)	96		65 - 140

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD Limit	
							Lower	Upper	RPD	Limit
Dichlorodifluoromethane	800	760		ug/Kg		95	35 - 135	7	30	
Chloromethane	800	760		ug/Kg		95	50 - 130	8	30	
Vinyl chloride	795	876		ug/Kg		110	60 - 125	7	30	

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109923

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Bromomethane	802	852		ug/Kg		106	30 - 160	1	30	
Chloroethane	799	708		ug/Kg		89	40 - 155	1	30	
Trichlorofluoromethane	799	956		ug/Kg		120	25 - 185	13	30	
1,1-Dichloroethene	801	932		ug/Kg		116	65 - 135	11	30	
Methylene Chloride	800	904		ug/Kg		113	55 - 140	9	30	
trans-1,2-Dichloroethene	801	888		ug/Kg		111	65 - 135	11	30	
1,1-Dichloroethane	800	832		ug/Kg		104	75 - 125	8	30	
2,2-Dichloropropane	799	884		ug/Kg		111	65 - 135	8	30	
cis-1,2-Dichloroethene	801	844		ug/Kg		105	65 - 125	9	30	
Chlorobromomethane	802	832		ug/Kg		104	70 - 125	5	30	
Chloroform	800	884		ug/Kg		110	70 - 125	8	30	
1,1,1-Trichloroethane	800	916		ug/Kg		114	70 - 135	10	30	
Carbon tetrachloride	803	640		ug/Kg		80	65 - 135	9	30	
1,1-Dichloropropene	802	892		ug/Kg		111	70 - 135	10	30	
Benzene	799	860		ug/Kg		108	75 - 125	9	30	
1,2-Dichloroethane	801	880		ug/Kg		110	70 - 135	9	30	
Trichloroethene	812	836		ug/Kg		103	75 - 125	3	30	
1,2-Dichloropropane	800	868		ug/Kg		108	70 - 120	8	30	
Dibromomethane	802	788		ug/Kg		98	75 - 130	1	30	
Dichlorobromomethane	809	700		ug/Kg		87	70 - 130	2	30	
cis-1,3-Dichloropropene	790	640		ug/Kg		81	70 - 125	4	30	
Toluene	801	744		ug/Kg		93	70 - 125	3	30	
trans-1,3-Dichloropropene	812	604		ug/Kg		74	65 - 125	5	30	
1,1,2-Trichloroethane	802	700		ug/Kg		87	60 - 125	1	30	
Tetrachloroethene	800	712		ug/Kg		89	65 - 140	1	30	
1,3-Dichloropropane	801	740		ug/Kg		92	75 - 125	1	30	
Chlorodibromomethane	810	652		ug/Kg		81	65 - 130	3	30	
Ethylene Dibromide	802	724		ug/Kg		90	70 - 125	5	30	
Chlorobenzene	800	824		ug/Kg		103	75 - 125	3	30	
Ethylbenzene	800	828		ug/Kg		104	75 - 125	3	30	
1,1,1,2-Tetrachloroethane	802	708		ug/Kg		88	75 - 125	6	30	
1,1,2,2-Tetrachloroethane	799	788		ug/Kg		99	55 - 130	3	30	
m-Xylene & p-Xylene	1600	1700		ug/Kg		106	80 - 125	4	30	
o-Xylene	802	800		ug/Kg		100	75 - 125	5	30	
Styrene	802	812		ug/Kg		101	75 - 125	4	30	
Bromoform	800	516		ug/Kg		64	55 - 135	4	30	
Isopropylbenzene	802	836		ug/Kg		104	75 - 130	6	30	
Bromobenzene	801	768		ug/Kg		96	65 - 120	2	30	
N-Propylbenzene	800	856		ug/Kg		107	65 - 135	5	30	
1,2,3-Trichloropropane	802	776		ug/Kg		97	65 - 130	11	30	
2-Chlorotoluene	801	800		ug/Kg		100	70 - 130	6	30	
1,3,5-Trimethylbenzene	799	820		ug/Kg		103	65 - 135	6	30	
4-Chlorotoluene	802	772		ug/Kg		96	75 - 125	0	30	
tert-Butylbenzene	802	796		ug/Kg		99	65 - 130	5	30	
1,2,4-Trimethylbenzene	800	816		ug/Kg		102	65 - 135	5	30	
sec-Butylbenzene	800	840		ug/Kg		105	65 - 130	6	30	
1,3-Dichlorobenzene	801	780		ug/Kg		97	70 - 125	5	30	
4-Isopropyltoluene	800	824		ug/Kg		103	75 - 135	7	30	
1,4-Dichlorobenzene	801	796		ug/Kg		99	70 - 125	5	30	
n-Butylbenzene	800	856		ug/Kg		107	65 - 140	4	30	

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

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

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
1,2-Dichlorobenzene	800	800		ug/Kg		100	75 - 120	8	30	
1,2-Dibromo-3-Chloropropane	801	636		ug/Kg		79	40 - 135	3	30	
1,2,4-Trichlorobenzene	802	748		ug/Kg		93	65 - 130	1	30	
1,2,3-Trichlorobenzene	800	716		ug/Kg		89	60 - 135	1	30	
Hexachlorobutadiene	802	776		ug/Kg		97	55 - 140	5	30	
Naphthalene	800	736		ug/Kg		92	40 - 125	2	30	
Methyl tert-butyl ether	800	820		ug/Kg		103	65 - 125	6	30	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	102		80 - 120
Toluene-d8 (Surr)	88		80 - 120
Ethylbenzene-d10	86		70 - 120
4-Bromofluorobenzene (Surr)	95		70 - 120
Trifluorotoluene (Surr)	97		65 - 140

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: B-4

Date Collected: 04/11/12 16:56

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 21:42	SK	TAL SEA

Client Sample ID: B-5

Date Collected: 04/12/12 12:02

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 22:08	SK	TAL SEA

Client Sample ID: B-6

Date Collected: 04/12/12 17:47

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 22:35	SK	TAL SEA

Client Sample ID: B-6/5-1

Date Collected: 04/12/12 17:34

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-4

Matrix: Solid

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 18:26	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110120	04/26/12 14:51	GH	TAL SEA

Client Sample ID: B-13

Date Collected: 04/13/12 14:15

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 23:01	SK	TAL SEA

Client Sample ID: R. Blank 1

Date Collected: 04/13/12 08:30

Date Received: 04/17/12 10:30

Lab Sample ID: 580-32383-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 17:01	SK	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-32383-7

Date Collected: 04/11/12 00:00

Matrix: Water

Date Received: 04/17/12 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	109742	04/20/12 16:35	SK	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-32383-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-32383-1	B-4	Water	04/11/12 16:56	04/17/12 10:30
580-32383-2	B-5	Water	04/12/12 12:02	04/17/12 10:30
580-32383-3	B-6	Water	04/12/12 17:47	04/17/12 10:30
580-32383-4	B-6/5-1	Solid	04/12/12 17:34	04/17/12 10:30
580-32383-5	B-13	Water	04/13/12 14:15	04/17/12 10:30
580-32383-6	R. Blank 1	Water	04/13/12 08:30	04/17/12 10:30
580-32383-7	Trip Blank	Water	04/11/12 00:00	04/17/12 10:30

Sample Custody Record

JOB NUMBER 17800-23 LAB NUMBER _____
 PROJECT MANAGER Jill Kernan
 PROJECT NAME Frank Wear
 DATE 04/14/2012 PAGE 1 OF 1



HART CROWSNER

Hart Crowsner, Inc.
 Five Centerpointe Drive, Suite 240
 Lake Oswego, Oregon 97035
 8910 SW Gorman, Dr
 Beaverton, OR, 97008

LAB NO.	SAMPLE	TIME	STATION Date	MATRIX	TESTING	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
B-4	1656	04/11/12		Water		3	VOX's by 8260R VOX's by 50335/8260R
B-5	1202	04/12/12		Water		3	
B-6	1747	4/12/12		Water		4	
B-6/5-1	1734	4/12/12		Soil		2	
B-13	1415	4/13/12		Water		4	
R. Bank 1	0830	4/13/12		Water		3	
Triq Blank	-	3/15/12		Water		1	
RELINQUISHED BY					DATE	RECEIVED BY	DATE
SIGNATURE <u>[Signature]</u>					04/11/12	SIGNATURE <u>[Signature]</u>	4/17/12
PRINTED NAME <u>Jason R. Miles</u>					TIME	PRINTED NAME <u>Nicole Rixey</u>	TIME
COMPANY <u>Hart Crowsner</u>					DATE <u>1/10/12</u>	COMPANY <u>TA-Ser</u>	DATE <u>10-30</u>
RELINQUISHED BY					DATE	RECEIVED BY	DATE
SIGNATURE						SIGNATURE	
PRINTED NAME					TIME	PRINTED NAME	TIME
COMPANY						COMPANY	

TOTAL NUMBER OF CONTAINERS 21

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS

METHOD OF SHIPMENT FedEx

DISTRIBUTION:

1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY
2. RETURN PINK COPY TO PROJECT MANAGER
3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT
4. LABORATORY TO RETURN WHITE COPY TO HART CROWSNER

Cooler/TB Dig/IR cor 3.1 unc 3.0
 Cooler Dsc by 50/10 @ Lab
 WebPacks Packing Team/Beaverton
 W/CS FedEx 50

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-32383-1

Login Number: 32383

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	See NCM.
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	False	See NCM. Headspace larger than 1/4" in one or more vials.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-32427-1
Client Project/Site: Frank Ware

For:
Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan

Kristine D. Allen

Authorized for release by:
5/3/2012 5:02:53 PM

Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

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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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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Job ID: 580-32427-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 4/19/2012 10:20 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.30 C.

The following samples were submitted for analysis; however, they were not listed on the Chain-of-Custody (COC): B-16 Dup (580-32427-11), R. Blank 2 (580-32427-12) Three voa vials were received labeled B-16 Dup with a date and time of 4/17/12 09:55 that were not indicated on the COC. Also three voa vials labeled R. Blank 2 (4/18/12 09:35) were received but not mentioned on the COC. Both samples were written in on the COC of custody according to their labels and logged in.

The majority of the VOA vials from the following aqueous samples had large amounts of sediment in them: B-9 (580-32427-7), B-12 (580-32427-8), B-15 (580-32427-9), B-16 (580-32427-10), B-16 Dup (580-32427-11).

The following samples were received with headspace in the sample vial: all three vials of sample B-9 (580-32427-7) and two out of three of the vials containing sample B-12 (580-32427-8).

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): B-12/S-1 (580-32427-4). The container label lists the sample as B-12. The COC lists the soil sample as B-12/S-1. The time and date on the label for this sample as well as the matrix match the COC so the sample was logged in and labeled according to the COC.

The container label for sample B-9/S-2 did not match the information listed on the Chain-of-Custody (COC): B-9/S-2 (580-32427-2). All three container labels for this sample list a time of 12:50. The COC lists a time of 12:53. Sample times were logged in according to the information provided on the COC.

The container labels for sample B-16/S-1 do not match the information listed on the Chain-of-Custody (COC): B-16/S-1 (580-32427-6). The container labels list a time of 9:40. The COC lists a time of 9:20. Samples were logged in according to the information provided on the COC.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): B-12/S-1 (580-32427-4). The container label for the MeOH VOA vial does not list a time. The COC lists a time of 16:40 for this sample. The vial was labeled according to the information provided on the COC.

GC/MS VOA - Method 8260B

The following sample was received with headspace in the sample vial: B-9 (580-32427-7). The approximate size of the headspace bubble was 14mm and has been recorded in the batch record.

The following sample submitted for volatiles analysis was received with insufficient preservation (pH >2): B-9 (580-32427-7).

Per SW846 Chapter 4, section 4.1.2, samples that contain analytes that are subject to biological degradation prior to analysis need to be preserved. Samples where aromatic hydrocarbons are target analytes, which are most subject to biological degradation, need to be preserved, unless they are to be analyzed immediately on-site, even if other VOA compound classes are present. Sample B-9 (580-32427-7) was received with insufficient preservation and all aromatic compounds have been flagged "H" due to the requirement outlined above.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-1

Lab Sample ID: 580-32427-1

Date Collected: 04/18/12 11:55

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chloromethane	ND		380		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Vinyl chloride	ND		7.6		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Bromomethane	ND		130		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chloroethane	ND		380		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Trichlorofluoromethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1-Dichloroethene	ND		19		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Methylene Chloride	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
trans-1,2-Dichloroethene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1-Dichloroethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
2,2-Dichloropropane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
cis-1,2-Dichloroethene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chlorobromomethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chloroform	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1,1-Trichloroethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Carbon tetrachloride	ND		19		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1-Dichloropropene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Benzene	ND		15		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2-Dichloroethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Trichloroethene	ND		15		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Dibromomethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Dichlorobromomethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
cis-1,3-Dichloropropene	ND		15		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Toluene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
trans-1,3-Dichloropropene	ND		15		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Tetrachloroethene	36		19		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,3-Dichloropropane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chlorodibromomethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Ethylene Dibromide	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Chlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Ethylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1,1,2-Tetrachloroethane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,1,2,2-Tetrachloroethane	ND		9.5		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
m-Xylene & p-Xylene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
o-Xylene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Styrene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Bromoform	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Isopropylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Bromobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
N-Propylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2,3-Trichloropropane	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
2-Chlorotoluene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,3,5-Trimethylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
4-Chlorotoluene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
tert-Butylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2,4-Trimethylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
sec-Butylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,3-Dichlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
4-Isopropyltoluene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-1

Lab Sample ID: 580-32427-1

Date Collected: 04/18/12 11:55

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
n-Butylbenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2-Dichlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2-Dibromo-3-Chloropropane	ND		190		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2,4-Trichlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
1,2,3-Trichlorobenzene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Hexachlorobutadiene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Naphthalene	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Methyl tert-butyl ether	ND		38		ug/Kg	☼	04/24/12 13:35	04/24/12 18:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120				04/24/12 13:35	04/24/12 18:48	1
Toluene-d8 (Surr)	88		80 - 120				04/24/12 13:35	04/24/12 18:48	1
Ethylbenzene-d10	85		70 - 120				04/24/12 13:35	04/24/12 18:48	1
4-Bromofluorobenzene (Surr)	95		70 - 120				04/24/12 13:35	04/24/12 18:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000		mg/Kg			04/30/12 17:43	1
Percent Solids	91		0.10		%			04/26/12 14:51	1
Percent Moisture	8.7		0.10		%			04/26/12 14:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-2

Lab Sample ID: 580-32427-2

Date Collected: 04/18/12 12:53

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chloromethane	ND		340		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Vinyl chloride	ND		6.8		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Bromomethane	ND		120		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chloroethane	ND		340		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Trichlorofluoromethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1-Dichloroethene	ND		17		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Methylene Chloride	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
trans-1,2-Dichloroethene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1-Dichloroethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
2,2-Dichloropropane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
cis-1,2-Dichloroethene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chlorobromomethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chloroform	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1,1-Trichloroethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Carbon tetrachloride	ND		17		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1-Dichloropropene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Benzene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,2-Dichloroethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Trichloroethene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,2-Dichloropropane	ND		10		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Dibromomethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Dichlorobromomethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Toluene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1,2-Trichloroethane	ND		10		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Tetrachloroethene	28		17		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,3-Dichloropropane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chlorodibromomethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Ethylene Dibromide	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Chlorobenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Ethylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1,1,2-Tetrachloroethane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,1,2,2-Tetrachloroethane	ND		8.5		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
m-Xylene & p-Xylene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
o-Xylene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Styrene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Bromoform	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Isopropylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
Bromobenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
N-Propylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,2,3-Trichloropropane	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
2-Chlorotoluene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,3,5-Trimethylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
4-Chlorotoluene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
tert-Butylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,2,4-Trimethylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
sec-Butylbenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
1,3-Dichlorobenzene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1
4-Isopropyltoluene	ND		34		ug/Kg	*	04/24/12 13:35	04/24/12 19:10	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-2

Lab Sample ID: 580-32427-2

Date Collected: 04/18/12 12:53

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
n-Butylbenzene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
1,2-Dichlorobenzene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
1,2,4-Trichlorobenzene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
1,2,3-Trichlorobenzene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
Hexachlorobutadiene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
Naphthalene	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1
Methyl tert-butyl ether	ND		34		ug/Kg	☼	04/24/12 13:35	04/24/12 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120	04/24/12 13:35	04/24/12 19:10	1
Toluene-d8 (Surr)	89		80 - 120	04/24/12 13:35	04/24/12 19:10	1
Ethylbenzene-d10	88		70 - 120	04/24/12 13:35	04/24/12 19:10	1
4-Bromofluorobenzene (Surr)	95		70 - 120	04/24/12 13:35	04/24/12 19:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000		mg/Kg			04/30/12 17:43	1
Percent Solids	91		0.10		%			04/26/12 14:51	1
Percent Moisture	9.4		0.10		%			04/26/12 14:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-3

Lab Sample ID: 580-32427-3

Date Collected: 04/18/12 14:10

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chloromethane	ND		350		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Vinyl chloride	ND		7.1		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Bromomethane	ND		120		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chloroethane	ND		350		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Trichlorofluoromethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1-Dichloroethene	ND		18		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Methylene Chloride	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
trans-1,2-Dichloroethene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1-Dichloroethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
2,2-Dichloropropane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
cis-1,2-Dichloroethene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chlorobromomethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chloroform	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1,1-Trichloroethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Carbon tetrachloride	ND		18		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1-Dichloropropene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Benzene	ND		14		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2-Dichloroethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Trichloroethene	ND		14		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Dibromomethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Dichlorobromomethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Toluene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Tetrachloroethene	64		18		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,3-Dichloropropane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chlorodibromomethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Ethylene Dibromide	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Chlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Ethylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1,1,2-Tetrachloroethane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,1,2,2-Tetrachloroethane	ND		8.9		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
m-Xylene & p-Xylene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
o-Xylene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Styrene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Bromoform	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Isopropylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Bromobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
N-Propylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2,3-Trichloropropane	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
2-Chlorotoluene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,3,5-Trimethylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
4-Chlorotoluene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
tert-Butylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2,4-Trimethylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
sec-Butylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,3-Dichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
4-Isopropyltoluene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-3

Lab Sample ID: 580-32427-3

Date Collected: 04/18/12 14:10

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
n-Butylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2-Dichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2,4-Trichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
1,2,3-Trichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Hexachlorobutadiene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Naphthalene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1
Methyl tert-butyl ether	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120	04/24/12 13:35	04/24/12 19:32	1
Toluene-d8 (Surr)	88		80 - 120	04/24/12 13:35	04/24/12 19:32	1
Ethylbenzene-d10	85		70 - 120	04/24/12 13:35	04/24/12 19:32	1
4-Bromofluorobenzene (Surr)	95		70 - 120	04/24/12 13:35	04/24/12 19:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000		mg/Kg			04/30/12 17:43	1
Percent Solids	86		0.10		%			04/26/12 15:06	1
Percent Moisture	14		0.10		%			04/26/12 15:06	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-12/S-1

Lab Sample ID: 580-32427-4

Date Collected: 04/17/12 16:40

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chloromethane	ND		320		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Vinyl chloride	ND		6.4		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Bromomethane	ND		110		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chloroethane	ND		320		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Trichlorofluoromethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1-Dichloroethene	ND		16		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Methylene Chloride	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
trans-1,2-Dichloroethene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1-Dichloroethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
2,2-Dichloropropane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
cis-1,2-Dichloroethene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chlorobromomethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chloroform	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1,1-Trichloroethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Carbon tetrachloride	ND		16		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1-Dichloropropene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Benzene	ND		13		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,2-Dichloroethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Trichloroethene	ND		13		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,2-Dichloropropane	ND		9.6		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Dibromomethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Dichlorobromomethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
cis-1,3-Dichloropropene	ND		13		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Toluene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
trans-1,3-Dichloropropene	ND		13		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1,2-Trichloroethane	ND		9.6		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Tetrachloroethene	ND		16		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,3-Dichloropropane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chlorodibromomethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Ethylene Dibromide	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Chlorobenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Ethylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1,1,2-Tetrachloroethane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,1,2,2-Tetrachloroethane	ND		8.0		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
m-Xylene & p-Xylene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
o-Xylene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Styrene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Bromoform	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Isopropylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
Bromobenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
N-Propylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,2,3-Trichloropropane	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
2-Chlorotoluene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,3,5-Trimethylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
4-Chlorotoluene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
tert-Butylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,2,4-Trimethylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
sec-Butylbenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
1,3-Dichlorobenzene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1
4-Isopropyltoluene	ND		32		ug/Kg	*	04/24/12 13:35	04/24/12 19:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-12/S-1

Lab Sample ID: 580-32427-4

Date Collected: 04/17/12 16:40

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
n-Butylbenzene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
1,2-Dichlorobenzene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
1,2-Dibromo-3-Chloropropane	ND		160		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
1,2,4-Trichlorobenzene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
1,2,3-Trichlorobenzene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
Hexachlorobutadiene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
Naphthalene	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1
Methyl tert-butyl ether	ND		32		ug/Kg	☼	04/24/12 13:35	04/24/12 19:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120	04/24/12 13:35	04/24/12 19:54	1
Toluene-d8 (Surr)	89		80 - 120	04/24/12 13:35	04/24/12 19:54	1
Ethylbenzene-d10	84		70 - 120	04/24/12 13:35	04/24/12 19:54	1
4-Bromofluorobenzene (Surr)	92		70 - 120	04/24/12 13:35	04/24/12 19:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000		mg/Kg			04/30/12 17:43	1
Percent Solids	87		0.10		%			04/26/12 15:06	1
Percent Moisture	13		0.10		%			04/26/12 15:06	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-15/S-1

Lab Sample ID: 580-32427-5

Date Collected: 04/16/12 13:45

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chloromethane	ND		350		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Vinyl chloride	ND		6.9		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Bromomethane	ND		120		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chloroethane	ND		350		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Trichlorofluoromethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1-Dichloroethene	ND		17		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Methylene Chloride	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
trans-1,2-Dichloroethene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1-Dichloroethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
2,2-Dichloropropane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
cis-1,2-Dichloroethene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chlorobromomethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chloroform	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1,1-Trichloroethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Carbon tetrachloride	ND		17		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1-Dichloropropene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Benzene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,2-Dichloroethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Trichloroethene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,2-Dichloropropane	ND		10		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Dibromomethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Dichlorobromomethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Toluene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1,2-Trichloroethane	ND		10		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Tetrachloroethene	18		17		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,3-Dichloropropane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chlorodibromomethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Ethylene Dibromide	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Chlorobenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Ethylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1,1,2-Tetrachloroethane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,1,2,2-Tetrachloroethane	ND		8.7		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
m-Xylene & p-Xylene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
o-Xylene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Styrene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Bromoform	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Isopropylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
Bromobenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
N-Propylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,2,3-Trichloropropane	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
2-Chlorotoluene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,3,5-Trimethylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
4-Chlorotoluene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
tert-Butylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,2,4-Trimethylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
sec-Butylbenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
1,3-Dichlorobenzene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1
4-Isopropyltoluene	ND		35		ug/Kg	*	04/24/12 13:35	04/24/12 20:16	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-15/S-1

Lab Sample ID: 580-32427-5

Date Collected: 04/16/12 13:45

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
n-Butylbenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
1,2-Dichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
1,2,4-Trichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
1,2,3-Trichlorobenzene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
Hexachlorobutadiene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
Naphthalene	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1
Methyl tert-butyl ether	ND		35		ug/Kg	☼	04/24/12 13:35	04/24/12 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120	04/24/12 13:35	04/24/12 20:16	1
Toluene-d8 (Surr)	88		80 - 120	04/24/12 13:35	04/24/12 20:16	1
Ethylbenzene-d10	85		70 - 120	04/24/12 13:35	04/24/12 20:16	1
4-Bromofluorobenzene (Surr)	94		70 - 120	04/24/12 13:35	04/24/12 20:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88		0.10		%			04/27/12 09:59	1
Percent Moisture	12		0.10		%			04/27/12 09:59	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16/S-1

Lab Sample ID: 580-32427-6

Date Collected: 04/17/12 09:20

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chloromethane	ND		370		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Vinyl chloride	ND		7.3		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Bromomethane	ND		130		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chloroethane	ND		370		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Trichlorofluoromethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1-Dichloroethene	ND		18		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Methylene Chloride	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
trans-1,2-Dichloroethene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1-Dichloroethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
2,2-Dichloropropane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
cis-1,2-Dichloroethene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chlorobromomethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chloroform	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1,1-Trichloroethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Carbon tetrachloride	ND		18		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1-Dichloropropene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Benzene	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,2-Dichloroethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Trichloroethene	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,2-Dichloropropane	ND		11		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Dibromomethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Dichlorobromomethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
cis-1,3-Dichloropropene	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Toluene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
trans-1,3-Dichloropropene	ND		15		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1,2-Trichloroethane	ND		11		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Tetrachloroethene	ND		18		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,3-Dichloropropane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chlorodibromomethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Ethylene Dibromide	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Chlorobenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Ethylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1,1,2-Tetrachloroethane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,1,2,2-Tetrachloroethane	ND		9.2		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
m-Xylene & p-Xylene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
o-Xylene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Styrene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Bromoform	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Isopropylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
Bromobenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
N-Propylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,2,3-Trichloropropane	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
2-Chlorotoluene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,3,5-Trimethylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
4-Chlorotoluene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
tert-Butylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,2,4-Trimethylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
sec-Butylbenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
1,3-Dichlorobenzene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1
4-Isopropyltoluene	ND		37		ug/Kg	*	04/24/12 13:35	04/24/12 20:38	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16/S-1

Lab Sample ID: 580-32427-6

Date Collected: 04/17/12 09:20

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
n-Butylbenzene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
1,2-Dichlorobenzene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
1,2,4-Trichlorobenzene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
1,2,3-Trichlorobenzene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
Hexachlorobutadiene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
Naphthalene	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1
Methyl tert-butyl ether	ND		37		ug/Kg	☼	04/24/12 13:35	04/24/12 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120	04/24/12 13:35	04/24/12 20:38	1
Toluene-d8 (Surr)	88		80 - 120	04/24/12 13:35	04/24/12 20:38	1
Ethylbenzene-d10	85		70 - 120	04/24/12 13:35	04/24/12 20:38	1
4-Bromofluorobenzene (Surr)	94		70 - 120	04/24/12 13:35	04/24/12 20:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			04/27/12 09:59	1
Percent Moisture	9.7		0.10		%			04/27/12 09:59	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9

Lab Sample ID: 580-32427-7

Date Collected: 04/18/12 14:26

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/25/12 22:55	1
Chloromethane	ND		5.0		ug/L			04/25/12 22:55	1
Vinyl chloride	ND		1.0		ug/L			04/25/12 22:55	1
Bromomethane	ND		5.0		ug/L			04/25/12 22:55	1
Chloroethane	ND		5.0		ug/L			04/25/12 22:55	1
Trichlorofluoromethane	ND		1.0		ug/L			04/25/12 22:55	1
1,1-Dichloroethene	ND		1.0		ug/L			04/25/12 22:55	1
Methylene Chloride	ND		3.0		ug/L			04/25/12 22:55	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 22:55	1
1,1-Dichloroethane	ND		1.0		ug/L			04/25/12 22:55	1
2,2-Dichloropropane	ND		1.0		ug/L			04/25/12 22:55	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 22:55	1
Chlorobromomethane	ND		1.0		ug/L			04/25/12 22:55	1
Chloroform	1.8		1.0		ug/L			04/25/12 22:55	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/25/12 22:55	1
Carbon tetrachloride	ND		1.0		ug/L			04/25/12 22:55	1
1,1-Dichloropropene	ND		1.0		ug/L			04/25/12 22:55	1
Benzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2-Dichloroethane	ND		1.0		ug/L			04/25/12 22:55	1
Trichloroethene	ND		1.0		ug/L			04/25/12 22:55	1
1,2-Dichloropropane	ND		1.0		ug/L			04/25/12 22:55	1
Dibromomethane	ND		1.0		ug/L			04/25/12 22:55	1
Dichlorobromomethane	ND		1.0		ug/L			04/25/12 22:55	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 22:55	1
Toluene	ND	H	1.0		ug/L			04/25/12 22:55	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 22:55	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/25/12 22:55	1
Tetrachloroethene	83		1.0		ug/L			04/25/12 22:55	1
1,3-Dichloropropane	ND		1.0		ug/L			04/25/12 22:55	1
Chlorodibromomethane	ND		1.0		ug/L			04/25/12 22:55	1
Ethylene Dibromide	ND		1.0		ug/L			04/25/12 22:55	1
Chlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
Ethylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 22:55	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 22:55	1
m-Xylene & p-Xylene	ND	H	2.0		ug/L			04/25/12 22:55	1
o-Xylene	ND	H	1.0		ug/L			04/25/12 22:55	1
Styrene	ND	H	1.0		ug/L			04/25/12 22:55	1
Bromoform	ND		1.0		ug/L			04/25/12 22:55	1
Isopropylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
Bromobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
N-Propylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/25/12 22:55	1
2-Chlorotoluene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,3,5-Trimethylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
4-Chlorotoluene	ND	H	1.0		ug/L			04/25/12 22:55	1
tert-Butylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2,4-Trimethylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
sec-Butylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,3-Dichlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
4-Isopropyltoluene	ND	H	1.0		ug/L			04/25/12 22:55	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9

Lab Sample ID: 580-32427-7

Date Collected: 04/18/12 14:26

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
n-Butylbenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2-Dichlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/25/12 22:55	1
1,2,4-Trichlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
1,2,3-Trichlorobenzene	ND	H	1.0		ug/L			04/25/12 22:55	1
Hexachlorobutadiene	ND		1.0		ug/L			04/25/12 22:55	1
Naphthalene	ND		1.0		ug/L			04/25/12 22:55	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/25/12 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					04/25/12 22:55	1
Toluene-d8 (Surr)	95		85 - 120					04/25/12 22:55	1
Ethylbenzene-d10	103		80 - 120					04/25/12 22:55	1
4-Bromofluorobenzene (Surr)	97		75 - 120					04/25/12 22:55	1
Trifluorotoluene (Surr)	106		80 - 120					04/25/12 22:55	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	210		0.20		mg/L		04/24/12 13:16	04/26/12 06:12	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		9.0		mg/L			04/19/12 19:00	10
Nitrate as N	2.7		0.90		mg/L			04/19/12 13:57	1
Sulfate	26		1.2		mg/L			04/19/12 13:57	1
Total Organic Carbon	2.6		1.0		mg/L			04/23/12 16:41	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-12

Lab Sample ID: 580-32427-8

Date Collected: 04/17/12 17:00

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/25/12 23:22	1
Chloromethane	ND		5.0		ug/L			04/25/12 23:22	1
Vinyl chloride	ND		1.0		ug/L			04/25/12 23:22	1
Bromomethane	ND		5.0		ug/L			04/25/12 23:22	1
Chloroethane	ND		5.0		ug/L			04/25/12 23:22	1
Trichlorofluoromethane	ND		1.0		ug/L			04/25/12 23:22	1
1,1-Dichloroethene	ND		1.0		ug/L			04/25/12 23:22	1
Methylene Chloride	ND		3.0		ug/L			04/25/12 23:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 23:22	1
1,1-Dichloroethane	ND		1.0		ug/L			04/25/12 23:22	1
2,2-Dichloropropane	ND		1.0		ug/L			04/25/12 23:22	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 23:22	1
Chlorobromomethane	ND		1.0		ug/L			04/25/12 23:22	1
Chloroform	14		1.0		ug/L			04/25/12 23:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/25/12 23:22	1
Carbon tetrachloride	ND		1.0		ug/L			04/25/12 23:22	1
1,1-Dichloropropene	ND		1.0		ug/L			04/25/12 23:22	1
Benzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2-Dichloroethane	ND		1.0		ug/L			04/25/12 23:22	1
Trichloroethene	ND		1.0		ug/L			04/25/12 23:22	1
1,2-Dichloropropane	ND		1.0		ug/L			04/25/12 23:22	1
Dibromomethane	ND		1.0		ug/L			04/25/12 23:22	1
Dichlorobromomethane	ND		1.0		ug/L			04/25/12 23:22	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 23:22	1
Toluene	ND		1.0		ug/L			04/25/12 23:22	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 23:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/25/12 23:22	1
Tetrachloroethene	11		1.0		ug/L			04/25/12 23:22	1
1,3-Dichloropropane	ND		1.0		ug/L			04/25/12 23:22	1
Chlorodibromomethane	ND		1.0		ug/L			04/25/12 23:22	1
Ethylene Dibromide	ND		1.0		ug/L			04/25/12 23:22	1
Chlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
Ethylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 23:22	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 23:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/25/12 23:22	1
o-Xylene	ND		1.0		ug/L			04/25/12 23:22	1
Styrene	ND		1.0		ug/L			04/25/12 23:22	1
Bromoform	ND		1.0		ug/L			04/25/12 23:22	1
Isopropylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
Bromobenzene	ND		1.0		ug/L			04/25/12 23:22	1
N-Propylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/25/12 23:22	1
2-Chlorotoluene	ND		1.0		ug/L			04/25/12 23:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
4-Chlorotoluene	ND		1.0		ug/L			04/25/12 23:22	1
tert-Butylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
sec-Butylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
4-Isopropyltoluene	ND		1.0		ug/L			04/25/12 23:22	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-12

Lab Sample ID: 580-32427-8

Date Collected: 04/17/12 17:00

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
n-Butylbenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/25/12 23:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/25/12 23:22	1
Hexachlorobutadiene	ND		1.0		ug/L			04/25/12 23:22	1
Naphthalene	ND		1.0		ug/L			04/25/12 23:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/25/12 23:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		04/25/12 23:22	1
Toluene-d8 (Surr)	95		85 - 120		04/25/12 23:22	1
Ethylbenzene-d10	97		80 - 120		04/25/12 23:22	1
4-Bromofluorobenzene (Surr)	97		75 - 120		04/25/12 23:22	1
Trifluorotoluene (Surr)	114		80 - 120		04/25/12 23:22	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	350		0.20		mg/L		04/24/12 13:16	04/26/12 06:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		0.90		mg/L			04/19/12 14:11	1
Nitrate as N	2.3		0.90		mg/L			04/19/12 14:11	1
Sulfate	9.3		1.2		mg/L			04/19/12 14:11	1
Total Organic Carbon	1.8		1.0		mg/L			04/23/12 16:41	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-15

Lab Sample ID: 580-32427-9

Date Collected: 04/16/12 14:03

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/25/12 23:49	1
Chloromethane	ND		5.0		ug/L			04/25/12 23:49	1
Vinyl chloride	ND		1.0		ug/L			04/25/12 23:49	1
Bromomethane	ND		5.0		ug/L			04/25/12 23:49	1
Chloroethane	ND		5.0		ug/L			04/25/12 23:49	1
Trichlorofluoromethane	ND		1.0		ug/L			04/25/12 23:49	1
1,1-Dichloroethene	ND		1.0		ug/L			04/25/12 23:49	1
Methylene Chloride	ND		3.0		ug/L			04/25/12 23:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 23:49	1
1,1-Dichloroethane	ND		1.0		ug/L			04/25/12 23:49	1
2,2-Dichloropropane	ND		1.0		ug/L			04/25/12 23:49	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 23:49	1
Chlorobromomethane	ND		1.0		ug/L			04/25/12 23:49	1
Chloroform	6.6		1.0		ug/L			04/25/12 23:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/25/12 23:49	1
Carbon tetrachloride	ND		1.0		ug/L			04/25/12 23:49	1
1,1-Dichloropropene	ND		1.0		ug/L			04/25/12 23:49	1
Benzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2-Dichloroethane	ND		1.0		ug/L			04/25/12 23:49	1
Trichloroethene	ND		1.0		ug/L			04/25/12 23:49	1
1,2-Dichloropropane	ND		1.0		ug/L			04/25/12 23:49	1
Dibromomethane	ND		1.0		ug/L			04/25/12 23:49	1
Dichlorobromomethane	ND		1.0		ug/L			04/25/12 23:49	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 23:49	1
Toluene	ND		1.0		ug/L			04/25/12 23:49	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 23:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/25/12 23:49	1
Tetrachloroethene	25		1.0		ug/L			04/25/12 23:49	1
1,3-Dichloropropane	ND		1.0		ug/L			04/25/12 23:49	1
Chlorodibromomethane	ND		1.0		ug/L			04/25/12 23:49	1
Ethylene Dibromide	ND		1.0		ug/L			04/25/12 23:49	1
Chlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
Ethylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 23:49	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 23:49	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/25/12 23:49	1
o-Xylene	ND		1.0		ug/L			04/25/12 23:49	1
Styrene	ND		1.0		ug/L			04/25/12 23:49	1
Bromoform	ND		1.0		ug/L			04/25/12 23:49	1
Isopropylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
Bromobenzene	ND		1.0		ug/L			04/25/12 23:49	1
N-Propylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/25/12 23:49	1
2-Chlorotoluene	ND		1.0		ug/L			04/25/12 23:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
4-Chlorotoluene	ND		1.0		ug/L			04/25/12 23:49	1
tert-Butylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
sec-Butylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
4-Isopropyltoluene	ND		1.0		ug/L			04/25/12 23:49	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-15

Lab Sample ID: 580-32427-9

Date Collected: 04/16/12 14:03

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
n-Butylbenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/25/12 23:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/25/12 23:49	1
Hexachlorobutadiene	ND		1.0		ug/L			04/25/12 23:49	1
Naphthalene	ND		1.0		ug/L			04/25/12 23:49	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/25/12 23:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120		04/25/12 23:49	1
Toluene-d8 (Surr)	94		85 - 120		04/25/12 23:49	1
Ethylbenzene-d10	101		80 - 120		04/25/12 23:49	1
4-Bromofluorobenzene (Surr)	93		75 - 120		04/25/12 23:49	1
Trifluorotoluene (Surr)	103		80 - 120		04/25/12 23:49	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16

Lab Sample ID: 580-32427-10

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/26/12 00:16	1
Chloromethane	ND		5.0		ug/L			04/26/12 00:16	1
Vinyl chloride	ND		1.0		ug/L			04/26/12 00:16	1
Bromomethane	ND		5.0		ug/L			04/26/12 00:16	1
Chloroethane	ND		5.0		ug/L			04/26/12 00:16	1
Trichlorofluoromethane	ND		1.0		ug/L			04/26/12 00:16	1
1,1-Dichloroethene	ND		1.0		ug/L			04/26/12 00:16	1
Methylene Chloride	ND		3.0		ug/L			04/26/12 00:16	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/26/12 00:16	1
1,1-Dichloroethane	ND		1.0		ug/L			04/26/12 00:16	1
2,2-Dichloropropane	ND		1.0		ug/L			04/26/12 00:16	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/26/12 00:16	1
Chlorobromomethane	ND		1.0		ug/L			04/26/12 00:16	1
Chloroform	21		1.0		ug/L			04/26/12 00:16	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/26/12 00:16	1
Carbon tetrachloride	ND		1.0		ug/L			04/26/12 00:16	1
1,1-Dichloropropene	ND		1.0		ug/L			04/26/12 00:16	1
Benzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2-Dichloroethane	ND		1.0		ug/L			04/26/12 00:16	1
Trichloroethene	ND		1.0		ug/L			04/26/12 00:16	1
1,2-Dichloropropane	ND		1.0		ug/L			04/26/12 00:16	1
Dibromomethane	ND		1.0		ug/L			04/26/12 00:16	1
Dichlorobromomethane	ND		1.0		ug/L			04/26/12 00:16	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/26/12 00:16	1
Toluene	ND		1.0		ug/L			04/26/12 00:16	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/26/12 00:16	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/26/12 00:16	1
Tetrachloroethene	2.9		1.0		ug/L			04/26/12 00:16	1
1,3-Dichloropropane	ND		1.0		ug/L			04/26/12 00:16	1
Chlorodibromomethane	ND		1.0		ug/L			04/26/12 00:16	1
Ethylene Dibromide	ND		1.0		ug/L			04/26/12 00:16	1
Chlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
Ethylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/26/12 00:16	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/26/12 00:16	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/26/12 00:16	1
o-Xylene	ND		1.0		ug/L			04/26/12 00:16	1
Styrene	ND		1.0		ug/L			04/26/12 00:16	1
Bromoform	ND		1.0		ug/L			04/26/12 00:16	1
Isopropylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
Bromobenzene	ND		1.0		ug/L			04/26/12 00:16	1
N-Propylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/26/12 00:16	1
2-Chlorotoluene	ND		1.0		ug/L			04/26/12 00:16	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
4-Chlorotoluene	ND		1.0		ug/L			04/26/12 00:16	1
tert-Butylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
sec-Butylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
4-Isopropyltoluene	ND		1.0		ug/L			04/26/12 00:16	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16

Lab Sample ID: 580-32427-10

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
n-Butylbenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/26/12 00:16	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/26/12 00:16	1
Hexachlorobutadiene	ND		1.0		ug/L			04/26/12 00:16	1
Naphthalene	ND		1.0		ug/L			04/26/12 00:16	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/26/12 00:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120					04/26/12 00:16	1
Toluene-d8 (Surr)	95		85 - 120					04/26/12 00:16	1
Ethylbenzene-d10	100		80 - 120					04/26/12 00:16	1
4-Bromofluorobenzene (Surr)	94		75 - 120					04/26/12 00:16	1
Trifluorotoluene (Surr)	109		80 - 120					04/26/12 00:16	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16 Dup

Lab Sample ID: 580-32427-11

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/26/12 00:43	1
Chloromethane	ND		5.0		ug/L			04/26/12 00:43	1
Vinyl chloride	ND		1.0		ug/L			04/26/12 00:43	1
Bromomethane	ND		5.0		ug/L			04/26/12 00:43	1
Chloroethane	ND		5.0		ug/L			04/26/12 00:43	1
Trichlorofluoromethane	ND		1.0		ug/L			04/26/12 00:43	1
1,1-Dichloroethene	ND		1.0		ug/L			04/26/12 00:43	1
Methylene Chloride	ND		3.0		ug/L			04/26/12 00:43	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/26/12 00:43	1
1,1-Dichloroethane	ND		1.0		ug/L			04/26/12 00:43	1
2,2-Dichloropropane	ND		1.0		ug/L			04/26/12 00:43	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/26/12 00:43	1
Chlorobromomethane	ND		1.0		ug/L			04/26/12 00:43	1
Chloroform	21		1.0		ug/L			04/26/12 00:43	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/26/12 00:43	1
Carbon tetrachloride	ND		1.0		ug/L			04/26/12 00:43	1
1,1-Dichloropropene	ND		1.0		ug/L			04/26/12 00:43	1
Benzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2-Dichloroethane	ND		1.0		ug/L			04/26/12 00:43	1
Trichloroethene	ND		1.0		ug/L			04/26/12 00:43	1
1,2-Dichloropropane	ND		1.0		ug/L			04/26/12 00:43	1
Dibromomethane	ND		1.0		ug/L			04/26/12 00:43	1
Dichlorobromomethane	ND		1.0		ug/L			04/26/12 00:43	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/26/12 00:43	1
Toluene	ND		1.0		ug/L			04/26/12 00:43	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/26/12 00:43	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/26/12 00:43	1
Tetrachloroethene	3.0		1.0		ug/L			04/26/12 00:43	1
1,3-Dichloropropane	ND		1.0		ug/L			04/26/12 00:43	1
Chlorodibromomethane	ND		1.0		ug/L			04/26/12 00:43	1
Ethylene Dibromide	ND		1.0		ug/L			04/26/12 00:43	1
Chlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
Ethylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/26/12 00:43	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/26/12 00:43	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/26/12 00:43	1
o-Xylene	ND		1.0		ug/L			04/26/12 00:43	1
Styrene	ND		1.0		ug/L			04/26/12 00:43	1
Bromoform	ND		1.0		ug/L			04/26/12 00:43	1
Isopropylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
Bromobenzene	ND		1.0		ug/L			04/26/12 00:43	1
N-Propylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/26/12 00:43	1
2-Chlorotoluene	ND		1.0		ug/L			04/26/12 00:43	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
4-Chlorotoluene	ND		1.0		ug/L			04/26/12 00:43	1
tert-Butylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
sec-Butylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
4-Isopropyltoluene	ND		1.0		ug/L			04/26/12 00:43	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16 Dup

Lab Sample ID: 580-32427-11

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
n-Butylbenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/26/12 00:43	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/26/12 00:43	1
Hexachlorobutadiene	ND		1.0		ug/L			04/26/12 00:43	1
Naphthalene	ND		1.0		ug/L			04/26/12 00:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/26/12 00:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120					04/26/12 00:43	1
Toluene-d8 (Surr)	96		85 - 120					04/26/12 00:43	1
Ethylbenzene-d10	96		80 - 120					04/26/12 00:43	1
4-Bromofluorobenzene (Surr)	93		75 - 120					04/26/12 00:43	1
Trifluorotoluene (Surr)	109		80 - 120					04/26/12 00:43	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: R. Blank 2

Lab Sample ID: 580-32427-12

Date Collected: 04/18/12 09:35

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/25/12 16:39	1
Chloromethane	ND		5.0		ug/L			04/25/12 16:39	1
Vinyl chloride	ND		1.0		ug/L			04/25/12 16:39	1
Bromomethane	ND		5.0		ug/L			04/25/12 16:39	1
Chloroethane	ND		5.0		ug/L			04/25/12 16:39	1
Trichlorofluoromethane	ND		1.0		ug/L			04/25/12 16:39	1
1,1-Dichloroethene	ND		1.0		ug/L			04/25/12 16:39	1
Methylene Chloride	10		3.0		ug/L			04/25/12 16:39	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 16:39	1
1,1-Dichloroethane	ND		1.0		ug/L			04/25/12 16:39	1
2,2-Dichloropropane	ND		1.0		ug/L			04/25/12 16:39	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 16:39	1
Chlorobromomethane	ND		1.0		ug/L			04/25/12 16:39	1
Chloroform	ND		1.0		ug/L			04/25/12 16:39	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/25/12 16:39	1
Carbon tetrachloride	ND		1.0		ug/L			04/25/12 16:39	1
1,1-Dichloropropene	ND		1.0		ug/L			04/25/12 16:39	1
Benzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2-Dichloroethane	ND		1.0		ug/L			04/25/12 16:39	1
Trichloroethene	ND		1.0		ug/L			04/25/12 16:39	1
1,2-Dichloropropane	ND		1.0		ug/L			04/25/12 16:39	1
Dibromomethane	ND		1.0		ug/L			04/25/12 16:39	1
Dichlorobromomethane	ND		1.0		ug/L			04/25/12 16:39	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 16:39	1
Toluene	ND		1.0		ug/L			04/25/12 16:39	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 16:39	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/25/12 16:39	1
Tetrachloroethene	ND		1.0		ug/L			04/25/12 16:39	1
1,3-Dichloropropane	ND		1.0		ug/L			04/25/12 16:39	1
Chlorodibromomethane	ND		1.0		ug/L			04/25/12 16:39	1
Ethylene Dibromide	ND		1.0		ug/L			04/25/12 16:39	1
Chlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
Ethylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 16:39	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 16:39	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/25/12 16:39	1
o-Xylene	ND		1.0		ug/L			04/25/12 16:39	1
Styrene	ND		1.0		ug/L			04/25/12 16:39	1
Bromoform	ND		1.0		ug/L			04/25/12 16:39	1
Isopropylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
Bromobenzene	ND		1.0		ug/L			04/25/12 16:39	1
N-Propylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/25/12 16:39	1
2-Chlorotoluene	ND		1.0		ug/L			04/25/12 16:39	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
4-Chlorotoluene	ND		1.0		ug/L			04/25/12 16:39	1
tert-Butylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
sec-Butylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
4-Isopropyltoluene	ND		1.0		ug/L			04/25/12 16:39	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: R. Blank 2

Lab Sample ID: 580-32427-12

Date Collected: 04/18/12 09:35

Matrix: Water

Date Received: 04/19/12 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
n-Butylbenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/25/12 16:39	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/25/12 16:39	1
Hexachlorobutadiene	ND		1.0		ug/L			04/25/12 16:39	1
Naphthalene	ND		1.0		ug/L			04/25/12 16:39	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/25/12 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	97		80 - 120					04/25/12 16:39	1
Toluene-d8 (Surr)	96		85 - 120					04/25/12 16:39	1
Ethylbenzene-d10	97		80 - 120					04/25/12 16:39	1
4-Bromofluorobenzene (Surr)	93		75 - 120					04/25/12 16:39	1
Trifluorotoluene (Surr)	101		80 - 120					04/25/12 16:39	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: MB 580-109923/1-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chloromethane	ND		400		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Vinyl chloride	ND		8.0		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromomethane	ND		140		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chloroethane	ND		400		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Trichlorofluoromethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloroethene	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Methylene Chloride	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
trans-1,2-Dichloroethene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
2,2-Dichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
cis-1,2-Dichloroethene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorobromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chloroform	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,1-Trichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Carbon tetrachloride	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1-Dichloropropene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Benzene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Trichloroethene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichloropropane	ND		12		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Dibromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Dichlorobromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Toluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,2-Trichloroethane	ND		12		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Tetrachloroethene	ND		20		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,3-Dichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorodibromomethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Ethylene Dibromide	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Chlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Ethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
m-Xylene & p-Xylene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
o-Xylene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Styrene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromoform	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Isopropylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Bromobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
N-Propylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,3-Trichloropropane	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
2-Chlorotoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
4-Chlorotoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
tert-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
sec-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: MB 580-109923/1-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
4-Isopropyltoluene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,4-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
n-Butylbenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Hexachlorobutadiene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Naphthalene	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1
Methyl tert-butyl ether	ND		40		ug/Kg		04/24/12 13:35	04/24/12 15:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120	04/24/12 13:35	04/24/12 15:51	1
Toluene-d8 (Surr)	89		80 - 120	04/24/12 13:35	04/24/12 15:51	1
Ethylbenzene-d10	87		70 - 120	04/24/12 13:35	04/24/12 15:51	1
4-Bromofluorobenzene (Surr)	98		70 - 120	04/24/12 13:35	04/24/12 15:51	1
Trifluorotoluene (Surr)	98		65 - 140	04/24/12 13:35	04/24/12 15:51	1

Lab Sample ID: LCS 580-109923/2-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	800	708		ug/Kg		88	35 - 135
Chloromethane	800	700		ug/Kg		87	50 - 130
Vinyl chloride	795	816		ug/Kg		103	60 - 125
Bromomethane	802	864		ug/Kg		108	30 - 160
Chloroethane	799	716		ug/Kg		90	40 - 155
Trichlorofluoromethane	799	836		ug/Kg		105	25 - 185
1,1-Dichloroethene	801	836		ug/Kg		104	65 - 135
Methylene Chloride	800	828		ug/Kg		103	55 - 140
trans-1,2-Dichloroethene	801	792		ug/Kg		99	65 - 135
1,1-Dichloroethane	800	768		ug/Kg		96	75 - 125
2,2-Dichloropropane	799	812		ug/Kg		102	65 - 135
cis-1,2-Dichloroethene	801	772		ug/Kg		96	65 - 125
Chlorobromomethane	802	788		ug/Kg		98	70 - 125
Chloroform	800	820		ug/Kg		102	70 - 125
1,1,1-Trichloroethane	800	828		ug/Kg		103	70 - 135
Carbon tetrachloride	803	584		ug/Kg		73	65 - 135
1,1-Dichloropropene	802	808		ug/Kg		101	70 - 135
Benzene	799	788		ug/Kg		99	75 - 125
1,2-Dichloroethane	801	804		ug/Kg		100	70 - 135
Trichloroethene	812	808		ug/Kg		100	75 - 125
1,2-Dichloropropane	800	800		ug/Kg		100	70 - 120
Dibromomethane	802	780		ug/Kg		97	75 - 130
Dichlorobromomethane	809	684		ug/Kg		85	70 - 130
cis-1,3-Dichloropropene	790	612		ug/Kg		78	70 - 125
Toluene	801	720		ug/Kg		90	70 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCS 580-109923/2-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
trans-1,3-Dichloropropene	812	576		ug/Kg		71	65 - 125	
1,1,2-Trichloroethane	802	704		ug/Kg		88	60 - 125	
Tetrachloroethene	800	704		ug/Kg		88	65 - 140	
1,3-Dichloropropane	801	736		ug/Kg		92	75 - 125	
Chlorodibromomethane	810	632		ug/Kg		78	65 - 130	
Ethylene Dibromide	802	692		ug/Kg		86	70 - 125	
Chlorobenzene	800	800		ug/Kg		100	75 - 125	
Ethylbenzene	800	800		ug/Kg		100	75 - 125	
1,1,1,2-Tetrachloroethane	802	664		ug/Kg		83	75 - 125	
1,1,1,2-Tetrachloroethane	799	812		ug/Kg		102	55 - 130	
m-Xylene & p-Xylene	1600	1640		ug/Kg		102	80 - 125	
o-Xylene	802	764		ug/Kg		95	75 - 125	
Styrene	802	784		ug/Kg		98	75 - 125	
Bromoform	800	496		ug/Kg		62	55 - 135	
Isopropylbenzene	802	784		ug/Kg		98	75 - 130	
Bromobenzene	801	752		ug/Kg		94	65 - 120	
N-Propylbenzene	800	816		ug/Kg		102	65 - 135	
1,2,3-Trichloropropane	802	864		ug/Kg		108	65 - 130	
2-Chlorotoluene	801	752		ug/Kg		94	70 - 130	
1,3,5-Trimethylbenzene	799	772		ug/Kg		97	65 - 135	
4-Chlorotoluene	802	772		ug/Kg		96	75 - 125	
tert-Butylbenzene	802	760		ug/Kg		95	65 - 130	
1,2,4-Trimethylbenzene	800	776		ug/Kg		97	65 - 135	
sec-Butylbenzene	800	792		ug/Kg		99	65 - 130	
1,3-Dichlorobenzene	801	744		ug/Kg		93	70 - 125	
4-Isopropyltoluene	800	772		ug/Kg		96	75 - 135	
1,4-Dichlorobenzene	801	760		ug/Kg		95	70 - 125	
n-Butylbenzene	800	820		ug/Kg		102	65 - 140	
1,2-Dichlorobenzene	800	736		ug/Kg		92	75 - 120	
1,2-Dibromo-3-Chloropropane	801	620		ug/Kg		77	40 - 135	
1,2,4-Trichlorobenzene	802	744		ug/Kg		93	65 - 130	
1,2,3-Trichlorobenzene	800	724		ug/Kg		90	60 - 135	
Hexachlorobutadiene	802	736		ug/Kg		92	55 - 140	
Naphthalene	800	752		ug/Kg		94	40 - 125	
Methyl tert-butyl ether	800	772		ug/Kg		97	65 - 125	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	98		80 - 120
Toluene-d8 (Surr)	90		80 - 120
Ethylbenzene-d10	91		70 - 120
4-Bromofluorobenzene (Surr)	97		70 - 120
Trifluorotoluene (Surr)	96		65 - 140

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. RPD	
							Limits	RPD Limit
Dichlorodifluoromethane	800	760		ug/Kg		95	35 - 135	7 30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109932

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Chloromethane	800	760		ug/Kg		95	50 - 130	8	30	
Vinyl chloride	795	876		ug/Kg		110	60 - 125	7	30	
Bromomethane	802	852		ug/Kg		106	30 - 160	1	30	
Chloroethane	799	708		ug/Kg		89	40 - 155	1	30	
Trichlorofluoromethane	799	956		ug/Kg		120	25 - 185	13	30	
1,1-Dichloroethene	801	932		ug/Kg		116	65 - 135	11	30	
Methylene Chloride	800	904		ug/Kg		113	55 - 140	9	30	
trans-1,2-Dichloroethene	801	888		ug/Kg		111	65 - 135	11	30	
1,1-Dichloroethane	800	832		ug/Kg		104	75 - 125	8	30	
2,2-Dichloropropane	799	884		ug/Kg		111	65 - 135	8	30	
cis-1,2-Dichloroethene	801	844		ug/Kg		105	65 - 125	9	30	
Chlorobromomethane	802	832		ug/Kg		104	70 - 125	5	30	
Chloroform	800	884		ug/Kg		110	70 - 125	8	30	
1,1,1-Trichloroethane	800	916		ug/Kg		114	70 - 135	10	30	
Carbon tetrachloride	803	640		ug/Kg		80	65 - 135	9	30	
1,1-Dichloropropene	802	892		ug/Kg		111	70 - 135	10	30	
Benzene	799	860		ug/Kg		108	75 - 125	9	30	
1,2-Dichloroethane	801	880		ug/Kg		110	70 - 135	9	30	
Trichloroethene	812	836		ug/Kg		103	75 - 125	3	30	
1,2-Dichloropropane	800	868		ug/Kg		108	70 - 120	8	30	
Dibromomethane	802	788		ug/Kg		98	75 - 130	1	30	
Dichlorobromomethane	809	700		ug/Kg		87	70 - 130	2	30	
cis-1,3-Dichloropropene	790	640		ug/Kg		81	70 - 125	4	30	
Toluene	801	744		ug/Kg		93	70 - 125	3	30	
trans-1,3-Dichloropropene	812	604		ug/Kg		74	65 - 125	5	30	
1,1,2-Trichloroethane	802	700		ug/Kg		87	60 - 125	1	30	
Tetrachloroethene	800	712		ug/Kg		89	65 - 140	1	30	
1,3-Dichloropropane	801	740		ug/Kg		92	75 - 125	1	30	
Chlorodibromomethane	810	652		ug/Kg		81	65 - 130	3	30	
Ethylene Dibromide	802	724		ug/Kg		90	70 - 125	5	30	
Chlorobenzene	800	824		ug/Kg		103	75 - 125	3	30	
Ethylbenzene	800	828		ug/Kg		104	75 - 125	3	30	
1,1,1,2-Tetrachloroethane	802	708		ug/Kg		88	75 - 125	6	30	
1,1,2,2-Tetrachloroethane	799	788		ug/Kg		99	55 - 130	3	30	
m-Xylene & p-Xylene	1600	1700		ug/Kg		106	80 - 125	4	30	
o-Xylene	802	800		ug/Kg		100	75 - 125	5	30	
Styrene	802	812		ug/Kg		101	75 - 125	4	30	
Bromoform	800	516		ug/Kg		64	55 - 135	4	30	
Isopropylbenzene	802	836		ug/Kg		104	75 - 130	6	30	
Bromobenzene	801	768		ug/Kg		96	65 - 120	2	30	
N-Propylbenzene	800	856		ug/Kg		107	65 - 135	5	30	
1,2,3-Trichloropropane	802	776		ug/Kg		97	65 - 130	11	30	
2-Chlorotoluene	801	800		ug/Kg		100	70 - 130	6	30	
1,3,5-Trimethylbenzene	799	820		ug/Kg		103	65 - 135	6	30	
4-Chlorotoluene	802	772		ug/Kg		96	75 - 125	0	30	
tert-Butylbenzene	802	796		ug/Kg		99	65 - 130	5	30	
1,2,4-Trimethylbenzene	800	816		ug/Kg		102	65 - 135	5	30	
sec-Butylbenzene	800	840		ug/Kg		105	65 - 130	6	30	
1,3-Dichlorobenzene	801	780		ug/Kg		97	70 - 125	5	30	
4-Isopropyltoluene	800	824		ug/Kg		103	75 - 135	7	30	

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCSD 580-109923/3-A

Matrix: Solid

Analysis Batch: 109923

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 109923

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	801	796		ug/Kg		99	70 - 125	5	30
n-Butylbenzene	800	856		ug/Kg		107	65 - 140	4	30
1,2-Dichlorobenzene	800	800		ug/Kg		100	75 - 120	8	30
1,2-Dibromo-3-Chloropropane	801	636		ug/Kg		79	40 - 135	3	30
1,2,4-Trichlorobenzene	802	748		ug/Kg		93	65 - 130	1	30
1,2,3-Trichlorobenzene	800	716		ug/Kg		89	60 - 135	1	30
Hexachlorobutadiene	802	776		ug/Kg		97	55 - 140	5	30
Naphthalene	800	736		ug/Kg		92	40 - 125	2	30
Methyl tert-butyl ether	800	820		ug/Kg		103	65 - 125	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	102		80 - 120
Toluene-d8 (Surr)	88		80 - 120
Ethylbenzene-d10	86		70 - 120
4-Bromofluorobenzene (Surr)	95		70 - 120
Trifluorotoluene (Surr)	97		65 - 140

Lab Sample ID: MB 580-110005/4

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			04/25/12 14:52	1
Chloromethane	ND		5.0		ug/L			04/25/12 14:52	1
Vinyl chloride	ND		1.0		ug/L			04/25/12 14:52	1
Bromomethane	ND		5.0		ug/L			04/25/12 14:52	1
Chloroethane	ND		5.0		ug/L			04/25/12 14:52	1
Trichlorofluoromethane	ND		1.0		ug/L			04/25/12 14:52	1
1,1-Dichloroethene	ND		1.0		ug/L			04/25/12 14:52	1
Methylene Chloride	ND		3.0		ug/L			04/25/12 14:52	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 14:52	1
1,1-Dichloroethane	ND		1.0		ug/L			04/25/12 14:52	1
2,2-Dichloropropane	ND		1.0		ug/L			04/25/12 14:52	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			04/25/12 14:52	1
Chlorobromomethane	ND		1.0		ug/L			04/25/12 14:52	1
Chloroform	ND		1.0		ug/L			04/25/12 14:52	1
1,1,1-Trichloroethane	ND		1.0		ug/L			04/25/12 14:52	1
Carbon tetrachloride	ND		1.0		ug/L			04/25/12 14:52	1
1,1-Dichloropropene	ND		1.0		ug/L			04/25/12 14:52	1
Benzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2-Dichloroethane	ND		1.0		ug/L			04/25/12 14:52	1
Trichloroethene	ND		1.0		ug/L			04/25/12 14:52	1
1,2-Dichloropropane	ND		1.0		ug/L			04/25/12 14:52	1
Dibromomethane	ND		1.0		ug/L			04/25/12 14:52	1
Dichlorobromomethane	ND		1.0		ug/L			04/25/12 14:52	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 14:52	1
Toluene	ND		1.0		ug/L			04/25/12 14:52	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			04/25/12 14:52	1
1,1,2-Trichloroethane	ND		1.0		ug/L			04/25/12 14:52	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: MB 580-110005/4

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloroethene	ND		1.0		ug/L			04/25/12 14:52	1
1,3-Dichloropropane	ND		1.0		ug/L			04/25/12 14:52	1
Chlorodibromomethane	ND		1.0		ug/L			04/25/12 14:52	1
Ethylene Dibromide	ND		1.0		ug/L			04/25/12 14:52	1
Chlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
Ethylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 14:52	1
1,1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			04/25/12 14:52	1
m-Xylene & p-Xylene	ND		2.0		ug/L			04/25/12 14:52	1
o-Xylene	ND		1.0		ug/L			04/25/12 14:52	1
Styrene	ND		1.0		ug/L			04/25/12 14:52	1
Bromoform	ND		1.0		ug/L			04/25/12 14:52	1
Isopropylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
Bromobenzene	ND		1.0		ug/L			04/25/12 14:52	1
N-Propylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2,3-Trichloropropane	ND		1.0		ug/L			04/25/12 14:52	1
2-Chlorotoluene	ND		1.0		ug/L			04/25/12 14:52	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
4-Chlorotoluene	ND		1.0		ug/L			04/25/12 14:52	1
tert-Butylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
sec-Butylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,3-Dichlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
4-Isopropyltoluene	ND		1.0		ug/L			04/25/12 14:52	1
1,4-Dichlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
n-Butylbenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2-Dichlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			04/25/12 14:52	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			04/25/12 14:52	1
Hexachlorobutadiene	ND		1.0		ug/L			04/25/12 14:52	1
Naphthalene	ND		1.0		ug/L			04/25/12 14:52	1
Methyl tert-butyl ether	ND		1.0		ug/L			04/25/12 14:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Fluorobenzene (Surr)	100		80 - 120		04/25/12 14:52	1
Toluene-d8 (Surr)	95		85 - 120		04/25/12 14:52	1
Ethylbenzene-d10	96		80 - 120		04/25/12 14:52	1
4-Bromofluorobenzene (Surr)	97		75 - 120		04/25/12 14:52	1
Trifluorotoluene (Surr)	101		80 - 120		04/25/12 14:52	1

Lab Sample ID: LCS 580-110005/5

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Dichlorodifluoromethane	20.1	21.4		ug/L		107	30 - 155
Chloromethane	20.1	24.8		ug/L		123	40 - 125
Vinyl chloride	20.1	25.1		ug/L		125	50 - 145

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCS 580-110005/5

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	20.1	23.7		ug/L		118	30 - 145
Chloroethane	20.1	24.6		ug/L		123	60 - 135
Trichlorofluoromethane	20.1	24.1		ug/L		120	60 - 145
1,1-Dichloroethene	19.9	22.4		ug/L		113	70 - 130
Methylene Chloride	20.1	23.5		ug/L		117	55 - 140
trans-1,2-Dichloroethene	20.1	23.2		ug/L		116	60 - 140
1,1-Dichloroethane	19.9	25.7		ug/L		129	70 - 135
2,2-Dichloropropane	20.1	23.2		ug/L		116	70 - 135
cis-1,2-Dichloroethene	20.0	23.0		ug/L		115	70 - 125
Chlorobromomethane	19.9	23.4		ug/L		118	65 - 130
Chloroform	20.1	23.9		ug/L		119	65 - 135
1,1,1-Trichloroethane	20.1	25.0		ug/L		125	65 - 130
Carbon tetrachloride	20.1	25.6		ug/L		127	65 - 140
1,1-Dichloropropene	19.9	23.6		ug/L		119	75 - 130
Benzene	20.0	23.3		ug/L		117	80 - 120
1,2-Dichloroethane	19.9	22.4		ug/L		113	70 - 130
Trichloroethene	20.1	21.9		ug/L		109	70 - 125
1,2-Dichloropropane	20.1	20.7		ug/L		103	75 - 125
Dibromomethane	19.8	21.5		ug/L		109	75 - 125
Dichlorobromomethane	19.8	22.1		ug/L		112	75 - 120
cis-1,3-Dichloropropene	21.1	19.4		ug/L		92	70 - 130
Toluene	20.1	21.9		ug/L		109	75 - 120
trans-1,3-Dichloropropene	19.0	20.6		ug/L		108	55 - 140
1,1,2-Trichloroethane	19.8	22.0		ug/L		111	75 - 125
Tetrachloroethene	20.1	21.0		ug/L		105	45 - 150
1,3-Dichloropropane	20.0	21.2		ug/L		106	75 - 125
Chlorodibromomethane	19.9	20.5		ug/L		103	60 - 135
Ethylene Dibromide	20.0	21.7		ug/L		108	80 - 120
Chlorobenzene	20.1	20.9		ug/L		104	80 - 120
Ethylbenzene	19.9	21.7		ug/L		109	75 - 125
1,1,1,2-Tetrachloroethane	19.8	23.2		ug/L		117	80 - 130
1,1,2,2-Tetrachloroethane	20.1	21.6		ug/L		108	65 - 130
m-Xylene & p-Xylene	40.1	43.9		ug/L		110	75 - 130
o-Xylene	19.9	22.1		ug/L		111	80 - 120
Styrene	20.0	22.5		ug/L		113	65 - 135
Bromoform	20.0	21.3		ug/L		107	70 - 130
Isopropylbenzene	20.1	21.6		ug/L		108	75 - 125
Bromobenzene	20.0	21.5		ug/L		108	75 - 125
N-Propylbenzene	20.1	21.5		ug/L		107	70 - 130
1,2,3-Trichloropropane	19.8	21.0		ug/L		106	75 - 125
2-Chlorotoluene	19.8	22.2		ug/L		112	75 - 125
1,3,5-Trimethylbenzene	20.1	23.6		ug/L		118	75 - 130
4-Chlorotoluene	19.8	22.5		ug/L		114	75 - 130
tert-Butylbenzene	20.0	23.7		ug/L		119	70 - 130
1,2,4-Trimethylbenzene	20.1	23.3		ug/L		116	75 - 130
sec-Butylbenzene	20.1	22.9		ug/L		114	70 - 125
1,3-Dichlorobenzene	20.0	20.9		ug/L		104	75 - 125
4-Isopropyltoluene	20.1	22.6		ug/L		113	75 - 130
1,4-Dichlorobenzene	20.0	21.4		ug/L		107	75 - 125
n-Butylbenzene	19.9	22.3		ug/L		112	70 - 135

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCS 580-110005/5

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	19.7	20.7		ug/L		105	70 - 120
1,2-Dibromo-3-Chloropropane	20.1	18.7		ug/L		93	50 - 130
1,2,4-Trichlorobenzene	19.9	17.7		ug/L		89	65 - 135
1,2,3-Trichlorobenzene	20.1	17.1		ug/L		85	55 - 140
Hexachlorobutadiene	20.0	19.8		ug/L		99	50 - 140
Naphthalene	20.1	18.1		ug/L		90	55 - 140
Methyl tert-butyl ether	20.1	20.4		ug/L		102	65 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorobenzene (Surr)	104		80 - 120
Toluene-d8 (Surr)	100		85 - 120
Ethylbenzene-d10	106		80 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Trifluorotoluene (Surr)	105		80 - 120

Lab Sample ID: LCSD 580-110005/6

Matrix: Water

Analysis Batch: 110005

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
Dichlorodifluoromethane	20.1	21.4		ug/L		107	30 - 155	0	30
Chloromethane	20.1	23.0		ug/L		114	40 - 125	8	30
Vinyl chloride	20.1	22.7		ug/L		113	50 - 145	10	30
Bromomethane	20.1	21.3		ug/L		106	30 - 145	11	30
Chloroethane	20.1	22.6		ug/L		113	60 - 135	8	30
Trichlorofluoromethane	20.1	23.0		ug/L		115	60 - 145	5	30
1,1-Dichloroethene	19.9	21.9		ug/L		110	70 - 130	2	30
Methylene Chloride	20.1	22.7		ug/L		113	55 - 140	3	30
trans-1,2-Dichloroethene	20.1	21.7		ug/L		108	60 - 140	7	30
1,1-Dichloroethane	19.9	24.4		ug/L		123	70 - 135	5	30
2,2-Dichloropropane	20.1	22.3		ug/L		111	70 - 135	4	30
cis-1,2-Dichloroethene	20.0	21.3		ug/L		106	70 - 125	8	30
Chlorobromomethane	19.9	21.6		ug/L		109	65 - 130	8	30
Chloroform	20.1	22.4		ug/L		112	65 - 135	6	30
1,1,1-Trichloroethane	20.1	24.6		ug/L		123	65 - 130	2	30
Carbon tetrachloride	20.1	25.0		ug/L		124	65 - 140	2	30
1,1-Dichloropropene	19.9	22.3		ug/L		112	75 - 130	6	30
Benzene	20.0	22.3		ug/L		112	80 - 120	4	30
1,2-Dichloroethane	19.9	22.7		ug/L		114	70 - 130	1	30
Trichloroethene	20.1	22.0		ug/L		110	70 - 125	0	30
1,2-Dichloropropane	20.1	20.8		ug/L		104	75 - 125	0	30
Dibromomethane	19.8	20.5		ug/L		104	75 - 125	5	30
Dichlorobromomethane	19.8	21.9		ug/L		111	75 - 120	1	30
cis-1,3-Dichloropropene	21.1	19.2		ug/L		91	70 - 130	1	30
Toluene	20.1	22.0		ug/L		110	75 - 120	0	30
trans-1,3-Dichloropropene	19.0	20.3		ug/L		107	55 - 140	1	30
1,1,2-Trichloroethane	19.8	21.7		ug/L		110	75 - 125	1	30
Tetrachloroethene	20.1	21.7		ug/L		108	45 - 150	3	30
1,3-Dichloropropane	20.0	21.7		ug/L		108	75 - 125	2	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

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

Lab Sample ID: LCSD 580-110005/6

Matrix: Water

Analysis Batch: 110005

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		
Chlorodibromomethane	19.9	20.6		ug/L		104	60 - 135	0	30
Ethylene Dibromide	20.0	21.9		ug/L		109	80 - 120	1	30
Chlorobenzene	20.1	20.7		ug/L		103	80 - 120	1	30
Ethylbenzene	19.9	21.6		ug/L		109	75 - 125	0	30
1,1,1,2-Tetrachloroethane	19.8	22.7		ug/L		115	80 - 130	2	30
1,1,2,2-Tetrachloroethane	20.1	20.7		ug/L		103	65 - 130	4	30
m-Xylene & p-Xylene	40.1	43.8		ug/L		109	75 - 130	0	30
o-Xylene	19.9	21.5		ug/L		108	80 - 120	3	30
Styrene	20.0	21.8		ug/L		109	65 - 135	3	30
Bromoform	20.0	20.7		ug/L		104	70 - 130	3	30
Isopropylbenzene	20.1	20.9		ug/L		104	75 - 125	3	30
Bromobenzene	20.0	21.1		ug/L		106	75 - 125	2	30
N-Propylbenzene	20.1	21.1		ug/L		105	70 - 130	2	30
1,2,3-Trichloropropane	19.8	20.9		ug/L		106	75 - 125	0	30
2-Chlorotoluene	19.8	21.3		ug/L		107	75 - 125	4	30
1,3,5-Trimethylbenzene	20.1	22.7		ug/L		113	75 - 130	4	30
4-Chlorotoluene	19.8	21.5		ug/L		109	75 - 130	5	30
tert-Butylbenzene	20.0	23.0		ug/L		115	70 - 130	3	30
1,2,4-Trimethylbenzene	20.1	22.6		ug/L		113	75 - 130	3	30
sec-Butylbenzene	20.1	22.4		ug/L		112	70 - 125	2	30
1,3-Dichlorobenzene	20.0	20.2		ug/L		101	75 - 125	3	30
4-Isopropyltoluene	20.1	21.8		ug/L		109	75 - 130	4	30
1,4-Dichlorobenzene	20.0	21.1		ug/L		105	75 - 125	1	30
n-Butylbenzene	19.9	21.7		ug/L		109	70 - 135	3	30
1,2-Dichlorobenzene	19.7	20.7		ug/L		105	70 - 120	0	30
1,2-Dibromo-3-Chloropropane	20.1	16.8		ug/L		84	50 - 130	11	30
1,2,4-Trichlorobenzene	19.9	18.0		ug/L		90	65 - 135	2	30
1,2,3-Trichlorobenzene	20.1	17.9		ug/L		89	55 - 140	5	30
Hexachlorobutadiene	20.0	20.1		ug/L		100	50 - 140	2	30
Naphthalene	20.1	19.0		ug/L		95	55 - 140	5	30
Methyl tert-butyl ether	20.1	20.3		ug/L		101	65 - 125	0	30

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		85 - 120
Ethylbenzene-d10	106		80 - 120
4-Bromofluorobenzene (Surr)	99		75 - 120
Trifluorotoluene (Surr)	108		80 - 120

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-109920/26-A

Matrix: Water

Analysis Batch: 110061

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 109920

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	ND		0.040		mg/L		04/24/12 13:16	04/26/12 03:33	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-109920/27-A
Matrix: Water
Analysis Batch: 110061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 109920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	10.0	9.69		mg/L		97	80 - 120

Lab Sample ID: LCSD 580-109920/28-A
Matrix: Water
Analysis Batch: 110061

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 109920

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	10.0	9.84		mg/L		98	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-110160/3
Matrix: Water
Analysis Batch: 110160

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90		mg/L			04/19/12 13:28	1
Sulfate	ND		1.2		mg/L			04/19/12 13:28	1

Lab Sample ID: LCS 580-110160/4
Matrix: Water
Analysis Batch: 110160

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.58		mg/L		92	90 - 110
Sulfate	15.0	14.0		mg/L		93	90 - 110

Lab Sample ID: MB 580-110164/3
Matrix: Water
Analysis Batch: 110164

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90		mg/L			04/19/12 13:28	1

Lab Sample ID: LCS 580-110164/4
Matrix: Water
Analysis Batch: 110164

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.43		mg/L		97	90 - 110

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-110336/3
Matrix: Solid
Analysis Batch: 110336

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		2000		mg/Kg			04/30/12 17:43	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCSSRM 580-110336/4

Matrix: Solid

Analysis Batch: 110336

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2720	4200		mg/Kg		154	34 - 166

Lab Sample ID: 580-32427-1 MS

Matrix: Solid

Analysis Batch: 110336

Client Sample ID: B-9/S-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	ND		20000	22100		mg/Kg		106	76 - 128

Lab Sample ID: 580-32427-1 DU

Matrix: Solid

Analysis Batch: 110336

Client Sample ID: B-9/S-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	ND		ND		mg/Kg		NC	50

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-109863/1

Matrix: Water

Analysis Batch: 109863

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			04/23/12 16:41	1

Lab Sample ID: LCS 580-109863/2

Matrix: Water

Analysis Batch: 109863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	15.4		mg/L		103	85 - 115

Lab Sample ID: 580-32427-7 MS

Matrix: Water

Analysis Batch: 109863

Client Sample ID: B-9

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	2.6		750	781		mg/L		104	85 - 115

Lab Sample ID: 580-32427-7 DU

Matrix: Water

Analysis Batch: 109863

Client Sample ID: B-9

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	2.6		2.17		mg/L		17	20

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-9/S-1

Date Collected: 04/18/12 11:55

Date Received: 04/19/12 10:20

Lab Sample ID: 580-32427-1

Matrix: Solid
Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 18:48	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110120	04/26/12 14:51	GH	TAL SEA
Total/NA	Analysis	9060		1	110336	04/30/12 17:43	MT	TAL SEA

Client Sample ID: B-9/S-2

Date Collected: 04/18/12 12:53

Date Received: 04/19/12 10:20

Lab Sample ID: 580-32427-2

Matrix: Solid
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 19:10	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110120	04/26/12 14:51	GH	TAL SEA
Total/NA	Analysis	9060		1	110336	04/30/12 17:43	MT	TAL SEA

Client Sample ID: B-9/S-3

Date Collected: 04/18/12 14:10

Date Received: 04/19/12 10:20

Lab Sample ID: 580-32427-3

Matrix: Solid
Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 19:32	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110120	04/26/12 15:06	GH	TAL SEA
Total/NA	Analysis	9060		1	110336	04/30/12 17:43	MT	TAL SEA

Client Sample ID: B-12/S-1

Date Collected: 04/17/12 16:40

Date Received: 04/19/12 10:20

Lab Sample ID: 580-32427-4

Matrix: Solid
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 19:54	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110120	04/26/12 15:06	GH	TAL SEA
Total/NA	Analysis	9060		1	110336	04/30/12 17:43	MT	TAL SEA

Client Sample ID: B-15/S-1

Date Collected: 04/16/12 13:45

Date Received: 04/19/12 10:20

Lab Sample ID: 580-32427-5

Matrix: Solid
Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 20:16	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110149	04/27/12 09:59	KKW	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16/S-1

Lab Sample ID: 580-32427-6

Date Collected: 04/17/12 09:20

Matrix: Solid

Date Received: 04/19/12 10:20

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			109923	04/24/12 13:35	EZ	TAL SEA
Total/NA	Analysis	8260B		1	109932	04/24/12 20:38	SK	TAL SEA
Total/NA	Analysis	D 2216		1	110149	04/27/12 09:59	KKW	TAL SEA

Client Sample ID: B-9

Lab Sample ID: 580-32427-7

Date Collected: 04/18/12 14:26

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/25/12 22:55	SK	TAL SEA
Total/NA	Prep	200.8			109920	04/24/12 13:16	PAB	TAL SEA
Total/NA	Analysis	200.8		5	110061	04/26/12 06:12	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109863	04/23/12 16:41	JP	TAL SEA
Total/NA	Analysis	300.0		10	110160	04/19/12 19:00	AM	TAL SEA
Total/NA	Analysis	300.0		1	110160	04/19/12 13:57	AM	TAL SEA
Total/NA	Analysis	300.0		1	110164	04/19/12 13:57	AM	TAL SEA

Client Sample ID: B-12

Lab Sample ID: 580-32427-8

Date Collected: 04/17/12 17:00

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/25/12 23:22	SK	TAL SEA
Total/NA	Prep	200.8			109920	04/24/12 13:16	PAB	TAL SEA
Total/NA	Analysis	200.8		5	110061	04/26/12 06:17	FCW	TAL SEA
Total/NA	Analysis	SM 5310B		1	109863	04/23/12 16:41	JP	TAL SEA
Total/NA	Analysis	300.0		1	110160	04/19/12 14:11	AM	TAL SEA
Total/NA	Analysis	300.0		1	110164	04/19/12 14:11	AM	TAL SEA

Client Sample ID: B-15

Lab Sample ID: 580-32427-9

Date Collected: 04/16/12 14:03

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/25/12 23:49	SK	TAL SEA

Client Sample ID: B-16

Lab Sample ID: 580-32427-10

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/26/12 00:16	SK	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Client Sample ID: B-16 Dup

Lab Sample ID: 580-32427-11

Date Collected: 04/17/12 09:55

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/26/12 00:43	SK	TAL SEA

Client Sample ID: R. Blank 2

Lab Sample ID: 580-32427-12

Date Collected: 04/18/12 09:35

Matrix: Water

Date Received: 04/19/12 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	110005	04/25/12 16:39	SK	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Ware

TestAmerica Job ID: 580-32427-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-32427-1	B-9/S-1	Solid	04/18/12 11:55	04/19/12 10:20
580-32427-2	B-9/S-2	Solid	04/18/12 12:53	04/19/12 10:20
580-32427-3	B-9/S-3	Solid	04/18/12 14:10	04/19/12 10:20
580-32427-4	B-12/S-1	Solid	04/17/12 16:40	04/19/12 10:20
580-32427-5	B-15/S-1	Solid	04/16/12 13:45	04/19/12 10:20
580-32427-6	B-16/S-1	Solid	04/17/12 09:20	04/19/12 10:20
580-32427-7	B-9	Water	04/18/12 14:26	04/19/12 10:20
580-32427-8	B-12	Water	04/17/12 17:00	04/19/12 10:20
580-32427-9	B-15	Water	04/16/12 14:03	04/19/12 10:20
580-32427-10	B-16	Water	04/17/12 09:55	04/19/12 10:20
580-32427-11	B-16 Dup	Water	04/17/12 09:55	04/19/12 10:20
580-32427-12	R. Blank 2	Water	04/18/12 09:35	04/19/12 10:20

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Rush
 Short Hold

Chain of Custody Record

Client: Hart Gousser Client Contact: Bill Korman Date: 4/18/12 Chain of Custody Number: 13590

Address: 8910 SW Gemma Dr Telephone Number (Area Code)/Fax Number: 503-620-7284 Lab Number: _____ Page: 1 of 1

City: Brewerton State: OR Zip Code: 97008 Sampler: Chris M Lab Contact: _____

Project Name and Location (State): Frank Meay Yakima, WA Billing Contact: _____

Contract/Purchase Order/Quote No.: 17800-23 Matrix: _____ Containers & Preservatives: _____

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	MeOH	Analysis (Attach list if more space is needed)
B-9/S-1	4/16/12	1155				X	X						X	TOC 8260 TOC 415.1/9530C Total Tox 6000 Chloride, sulfate, nitrate Nitrate 2000
B-9/S-2	4/16/12	1253				X	X						X	
B-9/S-3	4/16/12	1410				X	X						X	
B-12/S-1	4/17/12	1640				X	X						X	
B-15/S-1	4/16/12	1345				X	X						X	
B-16/S-1	4/17/12	0920				X	X						X	
B-9	4/18/12	1426				X	X	X	X	X			X	
B-12	4/17/12	1700				X	X	X	X	X			X	
B-15	4/16/12	1403				X	X	X	X	X			X	
B-16	4/17/12	0955				X							X	
B-16 DUP	4/17/12	0955				X							X	
R. Blank 2	4/18/12	0935												

Cooler: Yes No Cooler Temp: _____ Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Sample Disposal: Return to Client Disposal By Lab Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (Business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other: Standard

1. Relinquished By Sign/Print: Chris Martin Date: 4/18/12 Time: 1500 1. Received By Sign/Print: Nick Kelly Date: 04/19/12 Time: 10:20

2. Relinquished By Sign/Print: _____ Date: _____ Time: _____ 2. Received By Sign/Print: _____ Date: _____ Time: _____

3. Relinquished By Sign/Print: _____ Date: _____ Time: _____ 3. Received By Sign/Print: _____ Date: _____ Time: _____

Comments: _____
Cooler: DB Dig/IR cor-03 unc 03
Cooler Disc: Lab
WebPacks: Packing
W/6 N2
FedEx Ground

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-32427-1

Login Number: 32427

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	See NCM. Received extra samples not listed on COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	False	See NCM. Headspace larger than 1/4".
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Portland
9405 SW Nimbus Ave.
Beaverton, OR 97008
Tel: (503)906-9200

TestAmerica Job ID: 250-3800-1

TestAmerica Sample Delivery Group: 17800-23
Client Project/Site: Ecology Frank Wear

For:

Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan



Authorized for release by:
6/20/2012 2:45:53 PM

Vanessa Frahs
Project Manager I
vanessa.frahs@testamericainc.com

LINKS

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results through
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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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Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
250-3800-1	MW-21/S-1	Solid	06/08/12 12:40	06/13/12 07:45

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Client Sample ID: MW-21/S-1

Date Collected: 06/08/12 12:40

Date Received: 06/13/12 07:45

Lab Sample ID: 250-3800-1

Matrix: Solid

Percent Solids: 87.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	H	14000		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Benzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Bromobenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Bromochloromethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Bromodichloromethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Bromoform	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Bromomethane	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
2-Butanone (MEK)	ND	H	5700		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
n-Butylbenzene	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
sec-Butylbenzene	870	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
tert-Butylbenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Carbon disulfide	ND	H	5700		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Carbon tetrachloride	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Chlorobenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Chloroethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Chloroform	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Chloromethane	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
2-Chlorotoluene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
4-Chlorotoluene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,2-Dibromo-3-Chloropropane	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Dibromochloromethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,2-Dibromoethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Dibromomethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,2-Dichloroethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,3-Dichlorobenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,4-Dichlorobenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Dichlorodifluoromethane	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,1-Dichloroethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,1-Dichloroethene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
cis-1,2-Dichloroethene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
trans-1,2-Dichloroethene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,2-Dichloropropane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,3-Dichloropropane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
2,2-Dichloropropane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,1-Dichloropropene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
cis-1,3-Dichloropropene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
trans-1,3-Dichloropropene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Ethylbenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Hexachlorobutadiene	ND	H	2300		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
2-Hexanone	ND	H	5700		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Isopropylbenzene	ND	H	1100		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
p-Isopropyltoluene	ND	H	1100		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
4-Methyl-2-pentanone (MIBK)	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Methyl tert-butyl ether	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Methylene Chloride	ND	H	2800		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Naphthalene	ND	H	1100		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
N-Propylbenzene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Styrene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,1,1,2-Tetrachloroethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
1,1,1,2,2-Tetrachloroethane	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5
Tetrachloroethene	ND	H	570		ug/Kg	*	06/13/12 19:05	06/14/12 14:12	5

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Client Sample ID: MW-21/S-1
Date Collected: 06/08/12 12:40
Date Received: 06/13/12 07:45

Lab Sample ID: 250-3800-1
Matrix: Solid
Percent Solids: 87.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,2,3-Trichlorobenzene	ND	H	2800		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,2,4-Trichlorobenzene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,1,1-Trichloroethane	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,1,2-Trichloroethane	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
Trichloroethene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
Trichlorofluoromethane	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,2,3-Trichloropropane	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,2,4-Trimethylbenzene	570	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,3,5-Trimethylbenzene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
Vinyl chloride	ND	H	2800		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
m,p-Xylene	ND	H	1100		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
o-Xylene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
1,2-Dichlorobenzene	ND	H	570		ug/Kg	☼	06/13/12 19:05	06/14/12 14:12	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>1,2-Dichloroethane-d4 (Surr)</i>	98		75 - 125				06/13/12 19:05	06/14/12 14:12	5
<i>4-Bromofluorobenzene (Surr)</i>	97		75 - 125				06/13/12 19:05	06/14/12 14:12	5
<i>Dibromofluoromethane (Surr)</i>	100		75 - 125				06/13/12 19:05	06/14/12 14:12	5
<i>Toluene-d8 (Surr)</i>	101		75 - 125				06/13/12 19:05	06/14/12 14:12	5

Client Sample Results

Client: Hart Crowser, Inc.
 Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
 SDG: 17800-23

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Client Sample ID: MW-21/S-1
Date Collected: 06/08/12 12:40
Date Received: 06/13/12 07:45

Lab Sample ID: 250-3800-1
Matrix: Solid
Percent Solids: 87.2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C12-C24)	ND		57		mg/Kg	✱	06/19/12 21:21	06/19/12 23:28	1
ORO (C24-C36)	ND		110		mg/Kg	✱	06/19/12 21:21	06/19/12 23:28	1
Gasoline Range Hydrocarbons	160		23		mg/Kg	✱	06/19/12 21:21	06/19/12 23:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctadecane	97		50 - 150				06/19/12 21:21	06/19/12 23:28	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

General Chemistry

Client Sample ID: MW-21/S-1
Date Collected: 06/08/12 12:40
Date Received: 06/13/12 07:45

Lab Sample ID: 250-3800-1
Matrix: Solid

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		0.010		%			06/13/12 21:10	1
Percent Solids	87		0.010		%			06/13/12 21:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: MB 250-6281/1-A

Matrix: Solid

Analysis Batch: 6309

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6281

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Benzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Bromobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Bromochloromethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Bromodichloromethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Bromoform	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Bromomethane	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
2-Butanone (MEK)	ND		1000		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
n-Butylbenzene	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
sec-Butylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
tert-Butylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Carbon disulfide	ND		1000		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Carbon tetrachloride	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Chlorobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Chloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Chloroform	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Chloromethane	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
2-Chlorotoluene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
4-Chlorotoluene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2-Dibromo-3-Chloropropane	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Dibromochloromethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2-Dibromoethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Dibromomethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2-Dichloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,3-Dichlorobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,4-Dichlorobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Dichlorodifluoromethane	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1-Dichloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1-Dichloroethene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
cis-1,2-Dichloroethene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
trans-1,2-Dichloroethene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2-Dichloropropane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,3-Dichloropropane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
2,2-Dichloropropane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1-Dichloropropene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
cis-1,3-Dichloropropene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
trans-1,3-Dichloropropene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Ethylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Hexachlorobutadiene	ND		400		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
2-Hexanone	ND		1000		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Isopropylbenzene	ND		200		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
p-Isopropyltoluene	ND		200		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
4-Methyl-2-pentanone (MIBK)	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Methyl tert-butyl ether	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Methylene Chloride	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Naphthalene	ND		200		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
N-Propylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Styrene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1,1,2-Tetrachloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: MB 250-6281/1-A
Matrix: Solid
Analysis Batch: 6309

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6281

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Tetrachloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Toluene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2,3-Trichlorobenzene	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2,4-Trichlorobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1,1-Trichloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,1,2-Trichloroethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Trichloroethene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Trichlorofluoromethane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2,3-Trichloropropane	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2,4-Trimethylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,3,5-Trimethylbenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
Vinyl chloride	ND		500		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
m,p-Xylene	ND		200		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
o-Xylene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1
1,2-Dichlorobenzene	ND		100		ug/Kg		06/13/12 08:12	06/13/12 09:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		75 - 125	06/13/12 08:12	06/13/12 09:57	1
4-Bromofluorobenzene (Surr)	98		75 - 125	06/13/12 08:12	06/13/12 09:57	1
Dibromofluoromethane (Surr)	100		75 - 125	06/13/12 08:12	06/13/12 09:57	1
Toluene-d8 (Surr)	100		75 - 125	06/13/12 08:12	06/13/12 09:57	1

Lab Sample ID: LCS 250-6281/2-A
Matrix: Solid
Analysis Batch: 6309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6281

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	9600	11900		ug/Kg		124	65 - 150
Benzene	1920	2140		ug/Kg		112	80 - 120
Bromobenzene	1920	1990		ug/Kg		104	80 - 120
Bromochloromethane	1920	2220		ug/Kg		116	80 - 120
Bromodichloromethane	1920	2270		ug/Kg		118	80 - 140
Bromoform	1920	2160		ug/Kg		113	75 - 150
Bromomethane	1920	1830		ug/Kg		95	65 - 130
2-Butanone (MEK)	9600	11100		ug/Kg		116	70 - 125
n-Butylbenzene	1920	2010		ug/Kg		105	80 - 150
sec-Butylbenzene	1920	2150		ug/Kg		112	80 - 135
tert-Butylbenzene	1920	2180		ug/Kg		113	80 - 130
Carbon disulfide	3840	4730		ug/Kg		123	65 - 140
Carbon tetrachloride	1920	2110		ug/Kg		110	70 - 130
Chlorobenzene	1920	2230		ug/Kg		116	80 - 125
Chloroethane	1920	1950		ug/Kg		101	75 - 125
Chloroform	1920	2160		ug/Kg		112	80 - 120
Chloromethane	1920	1650		ug/Kg		86	40 - 150
2-Chlorotoluene	1920	2030		ug/Kg		106	80 - 120
4-Chlorotoluene	1920	1980		ug/Kg		103	80 - 125
1,2-Dibromo-3-Chloropropane	1920	1950		ug/Kg		101	60 - 130
Dibromochloromethane	1920	2300		ug/Kg		120	75 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: LCS 250-6281/2-A

Matrix: Solid

Analysis Batch: 6309

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6281

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	1920	2340		ug/Kg		122	80 - 125
Dibromomethane	1920	2290		ug/Kg		119	80 - 120
1,2-Dichloroethane	1920	2220		ug/Kg		116	80 - 120
1,3-Dichlorobenzene	1920	2050		ug/Kg		107	80 - 125
1,4-Dichlorobenzene	1920	1990		ug/Kg		104	75 - 120
Dichlorodifluoromethane	1920	1680		ug/Kg		87	75 - 120
1,1-Dichloroethane	1920	2130		ug/Kg		111	80 - 120
1,1-Dichloroethene	1920	2150		ug/Kg		112	75 - 125
cis-1,2-Dichloroethene	1920	2140		ug/Kg		112	75 - 125
trans-1,2-Dichloroethene	1920	2140		ug/Kg		112	75 - 125
1,2-Dichloropropane	1920	2190		ug/Kg		114	80 - 125
1,3-Dichloropropane	1920	2300		ug/Kg		120	75 - 130
2,2-Dichloropropane	1920	1950		ug/Kg		101	70 - 130
1,1-Dichloropropene	1920	2190		ug/Kg		114	80 - 125
cis-1,3-Dichloropropene	1920	2380		ug/Kg		124	80 - 125
trans-1,3-Dichloropropene	1920	2440		ug/Kg		127	65 - 145
Ethylbenzene	1920	2040		ug/Kg		106	80 - 125
Hexachlorobutadiene	1920	2230		ug/Kg		116	80 - 150
2-Hexanone	9600	11200		ug/Kg		117	55 - 120
Isopropylbenzene	1920	2050		ug/Kg		107	80 - 130
p-Isopropyltoluene	1920	2190		ug/Kg		114	80 - 120
4-Methyl-2-pentanone (MIBK)	9600	11400		ug/Kg		119	50 - 120
Methyl tert-butyl ether	1920	2060		ug/Kg		108	75 - 125
Methylene Chloride	1920	2170		ug/Kg		113	75 - 125
Naphthalene	1920	2070		ug/Kg		108	80 - 130
N-Propylbenzene	1920	2090		ug/Kg		109	80 - 120
Styrene	1920	2180		ug/Kg		114	80 - 125
1,1,1,2-Tetrachloroethane	1920	2160		ug/Kg		112	80 - 130
1,1,1,2,2-Tetrachloroethane	1920	2080		ug/Kg		108	70 - 135
Tetrachloroethene	1920	2260		ug/Kg		118	80 - 125
Toluene	1920	2190		ug/Kg		114	80 - 120
1,2,3-Trichlorobenzene	1920	2170		ug/Kg		113	80 - 145
1,2,4-Trichlorobenzene	1920	2150		ug/Kg		112	85 - 150
1,1,1-Trichloroethane	1920	2060		ug/Kg		107	80 - 125
1,1,2-Trichloroethane	1920	2260		ug/Kg		118	80 - 125
Trichloroethene	1920	2230		ug/Kg		116	80 - 125
Trichlorofluoromethane	1920	1980		ug/Kg		103	55 - 150
1,2,3-Trichloropropane	1920	1980		ug/Kg		103	65 - 125
1,2,4-Trimethylbenzene	1920	2130		ug/Kg		111	80 - 135
1,3,5-Trimethylbenzene	1920	2140		ug/Kg		111	80 - 135
Vinyl chloride	1920	722		ug/Kg		38	10 - 140
m,p-Xylene	3840	4140		ug/Kg		108	80 - 120
o-Xylene	1920	2070		ug/Kg		108	80 - 125
1,2-Dichlorobenzene	1920	1930		ug/Kg		100	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		75 - 125
4-Bromofluorobenzene (Surr)	103		75 - 125
Dibromofluoromethane (Surr)	107		75 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: LCS 250-6281/2-A
Matrix: Solid
Analysis Batch: 6309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6281

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
<i>%Recovery</i>	<i>Qualifier</i>		
<i>Toluene-d8 (Surr)</i>	110		75 - 125

Lab Sample ID: 250-3726-C-1-C MS
Matrix: Solid
Analysis Batch: 6309

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 6281

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
Acetone	ND		10800	9980		ug/Kg	☼	92	60 - 145
Benzene	ND		2170	2280		ug/Kg	☼	105	80 - 125
Bromobenzene	ND		2170	2100		ug/Kg	☼	97	70 - 130
Bromochloromethane	ND		2170	2390		ug/Kg	☼	110	80 - 130
Bromodichloromethane	ND		2170	2130		ug/Kg	☼	98	80 - 135
Bromoform	ND		2170	1890		ug/Kg	☼	87	70 - 130
Bromomethane	ND		2170	1690		ug/Kg	☼	78	70 - 130
2-Butanone (MEK)	ND		10800	10700		ug/Kg	☼	99	70 - 145
n-Butylbenzene	ND		2170	2080		ug/Kg	☼	96	70 - 140
sec-Butylbenzene	ND		2170	2240		ug/Kg	☼	103	70 - 135
tert-Butylbenzene	ND		2170	2270		ug/Kg	☼	105	80 - 135
Carbon disulfide	ND		4340	4810		ug/Kg	☼	111	70 - 130
Carbon tetrachloride	ND		2170	1970		ug/Kg	☼	91	70 - 125
Chlorobenzene	ND		2170	2320		ug/Kg	☼	107	70 - 130
Chloroethane	ND		2170	2150		ug/Kg	☼	99	70 - 130
Chloroform	ND		2170	2280		ug/Kg	☼	105	80 - 125
Chloromethane	ND		2170	1770		ug/Kg	☼	81	40 - 150
2-Chlorotoluene	ND		2170	2100		ug/Kg	☼	97	80 - 125
4-Chlorotoluene	ND		2170	2100		ug/Kg	☼	97	70 - 130
1,2-Dibromo-3-Chloropropane	ND		2170	1850		ug/Kg	☼	85	60 - 145
Dibromochloromethane	ND		2170	2060		ug/Kg	☼	95	80 - 130
1,2-Dibromoethane	ND		2170	2370		ug/Kg	☼	109	80 - 130
Dibromomethane	ND		2170	2330		ug/Kg	☼	107	75 - 125
1,2-Dichloroethane	ND		2170	2370		ug/Kg	☼	109	75 - 120
1,3-Dichlorobenzene	ND		2170	2170		ug/Kg	☼	100	80 - 130
1,4-Dichlorobenzene	ND		2170	2140		ug/Kg	☼	99	80 - 120
Dichlorodifluoromethane	ND		2170	1710		ug/Kg	☼	79	65 - 135
1,1-Dichloroethane	ND		2170	2290		ug/Kg	☼	105	80 - 125
1,1-Dichloroethene	ND		2170	2330		ug/Kg	☼	107	70 - 130
cis-1,2-Dichloroethene	ND		2170	2290		ug/Kg	☼	106	75 - 120
trans-1,2-Dichloroethene	ND		2170	2310		ug/Kg	☼	106	70 - 130
1,2-Dichloropropane	ND		2170	2310		ug/Kg	☼	106	80 - 130
1,3-Dichloropropane	ND		2170	2400		ug/Kg	☼	111	75 - 130
2,2-Dichloropropane	ND		2170	2050		ug/Kg	☼	95	70 - 130
1,1-Dichloropropene	ND		2170	2350		ug/Kg	☼	108	80 - 125
cis-1,3-Dichloropropene	ND		2170	2370		ug/Kg	☼	109	80 - 130
trans-1,3-Dichloropropene	ND		2170	2360		ug/Kg	☼	109	70 - 145
Ethylbenzene	ND		2170	2160		ug/Kg	☼	100	80 - 125
Hexachlorobutadiene	ND		2170	2180		ug/Kg	☼	101	45 - 150
2-Hexanone	ND		10800	11300		ug/Kg	☼	104	65 - 150
Isopropylbenzene	ND		2170	2180		ug/Kg	☼	101	80 - 130
p-Isopropyltoluene	ND		2170	2300		ug/Kg	☼	106	70 - 140

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: 250-3726-C-1-C MS

Matrix: Solid

Analysis Batch: 6309

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 6281

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
4-Methyl-2-pentanone (MIBK)	ND		10800	11400		ug/Kg	*	105	60 - 150	
Methyl tert-butyl ether	ND		2170	2180		ug/Kg	*	100	70 - 130	
Methylene Chloride	ND		2170	2290		ug/Kg	*	104	70 - 120	
Naphthalene	ND		2170	2110		ug/Kg	*	97	70 - 130	
N-Propylbenzene	ND		2170	2260		ug/Kg	*	104	70 - 130	
Styrene	ND		2170	2300		ug/Kg	*	106	85 - 120	
1,1,1,2-Tetrachloroethane	ND		2170	2060		ug/Kg	*	95	80 - 130	
1,1,2,2-Tetrachloroethane	ND		2170	2070		ug/Kg	*	96	70 - 130	
Tetrachloroethene	ND		2170	2420		ug/Kg	*	111	75 - 140	
Toluene	ND		2170	2310		ug/Kg	*	106	70 - 130	
1,2,3-Trichlorobenzene	ND		2170	2180		ug/Kg	*	101	70 - 130	
1,2,4-Trichlorobenzene	ND		2170	2160		ug/Kg	*	100	70 - 150	
1,1,1-Trichloroethane	ND		2170	2150		ug/Kg	*	99	80 - 125	
1,1,2-Trichloroethane	ND		2170	2370		ug/Kg	*	109	80 - 130	
Trichloroethene	ND		2170	2410		ug/Kg	*	111	80 - 125	
Trichlorofluoromethane	ND		2170	2170		ug/Kg	*	100	70 - 130	
1,2,3-Trichloropropane	ND		2170	2080		ug/Kg	*	96	70 - 130	
1,2,4-Trimethylbenzene	ND		2170	2230		ug/Kg	*	103	70 - 130	
1,3,5-Trimethylbenzene	ND		2170	2230		ug/Kg	*	103	75 - 140	
Vinyl chloride	ND		2170	1020		ug/Kg	*	47	10 - 140	
m,p-Xylene	ND		4340	4450		ug/Kg	*	103	75 - 135	
o-Xylene	ND		2170	2200		ug/Kg	*	102	70 - 130	
1,2-Dichlorobenzene	ND		2170	2010		ug/Kg	*	93	80 - 120	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		75 - 125
4-Bromofluorobenzene (Surr)	101		75 - 125
Dibromofluoromethane (Surr)	104		75 - 125
Toluene-d8 (Surr)	106		75 - 125

Lab Sample ID: 250-3726-C-1-D MSD

Matrix: Solid

Analysis Batch: 6309

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6281

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Acetone	ND		10600	9550		ug/Kg	*	90	60 - 145	4	25	
Benzene	ND		2130	2180		ug/Kg	*	103	80 - 125	5	25	
Bromobenzene	ND		2130	2030		ug/Kg	*	95	70 - 130	4	25	
Bromochloromethane	ND		2130	2220		ug/Kg	*	104	80 - 130	7	25	
Bromodichloromethane	ND		2130	2170		ug/Kg	*	102	80 - 135	2	25	
Bromoform	ND		2130	1950		ug/Kg	*	92	70 - 130	3	25	
Bromomethane	ND		2130	1710		ug/Kg	*	81	70 - 130	2	25	
2-Butanone (MEK)	ND		10600	10900		ug/Kg	*	102	70 - 145	1	25	
n-Butylbenzene	ND		2130	1980		ug/Kg	*	93	70 - 140	5	25	
sec-Butylbenzene	ND		2130	2100		ug/Kg	*	99	70 - 135	6	25	
tert-Butylbenzene	ND		2130	2130		ug/Kg	*	100	80 - 135	6	25	
Carbon disulfide	ND		4250	4980		ug/Kg	*	117	70 - 130	3	25	
Carbon tetrachloride	ND		2130	1990		ug/Kg	*	93	70 - 125	1	25	
Chlorobenzene	ND		2130	2220		ug/Kg	*	104	70 - 130	5	25	

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: 250-3726-C-1-D MSD

Matrix: Solid

Analysis Batch: 6309

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 6281

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Chloroethane	ND		2130	2100		ug/Kg	*	99	70 - 130	2	25
Chloroform	ND		2130	2150		ug/Kg	*	101	80 - 125	6	25
Chloromethane	ND		2130	1720		ug/Kg	*	81	40 - 150	2	25
2-Chlorotoluene	ND		2130	2010		ug/Kg	*	94	80 - 125	5	25
4-Chlorotoluene	ND		2130	2000		ug/Kg	*	94	70 - 130	5	25
1,2-Dibromo-3-Chloropropane	ND		2130	1870		ug/Kg	*	88	60 - 145	1	25
Dibromochloromethane	ND		2130	2110		ug/Kg	*	99	80 - 130	2	25
1,2-Dibromoethane	ND		2130	2380		ug/Kg	*	112	80 - 130	1	25
Dibromomethane	ND		2130	2300		ug/Kg	*	108	75 - 125	1	25
1,2-Dichloroethane	ND		2130	2290		ug/Kg	*	108	75 - 120	3	25
1,3-Dichlorobenzene	ND		2130	2050		ug/Kg	*	96	80 - 130	5	25
1,4-Dichlorobenzene	ND		2130	2000		ug/Kg	*	94	80 - 120	7	25
Dichlorodifluoromethane	ND		2130	1670		ug/Kg	*	78	65 - 135	2	25
1,1-Dichloroethane	ND		2130	2180		ug/Kg	*	102	80 - 125	5	25
1,1-Dichloroethene	ND		2130	2170		ug/Kg	*	102	70 - 130	7	25
cis-1,2-Dichloroethene	ND		2130	2210		ug/Kg	*	104	75 - 120	4	25
trans-1,2-Dichloroethene	ND		2130	2130		ug/Kg	*	100	70 - 130	8	25
1,2-Dichloropropane	ND		2130	2230		ug/Kg	*	105	80 - 130	4	25
1,3-Dichloropropane	ND		2130	2370		ug/Kg	*	111	75 - 130	1	25
2,2-Dichloropropane	ND		2130	1870		ug/Kg	*	88	70 - 130	9	25
1,1-Dichloropropene	ND		2130	2200		ug/Kg	*	104	80 - 125	7	25
cis-1,3-Dichloropropene	ND		2130	2310		ug/Kg	*	108	80 - 130	3	25
trans-1,3-Dichloropropene	ND		2130	2420		ug/Kg	*	114	70 - 145	2	25
Ethylbenzene	ND		2130	2060		ug/Kg	*	97	80 - 125	5	25
Hexachlorobutadiene	ND		2130	2170		ug/Kg	*	102	45 - 150	0	25
2-Hexanone	ND		10600	11500		ug/Kg	*	108	65 - 150	2	25
Isopropylbenzene	ND		2130	2060		ug/Kg	*	97	80 - 130	6	25
p-Isopropyltoluene	ND		2130	2160		ug/Kg	*	102	70 - 140	7	25
4-Methyl-2-pentanone (MIBK)	ND		10600	11600		ug/Kg	*	109	60 - 150	2	25
Methyl tert-butyl ether	ND		2130	2180		ug/Kg	*	102	70 - 130	0	25
Methylene Chloride	ND		2130	2190		ug/Kg	*	101	70 - 120	5	25
Naphthalene	ND		2130	2090		ug/Kg	*	98	70 - 130	1	25
N-Propylbenzene	ND		2130	2070		ug/Kg	*	97	70 - 130	9	25
Styrene	ND		2130	2180		ug/Kg	*	103	85 - 120	6	25
1,1,1,2-Tetrachloroethane	ND		2130	2060		ug/Kg	*	97	80 - 130	0	25
1,1,2,2-Tetrachloroethane	ND		2130	2080		ug/Kg	*	98	70 - 130	1	25
Tetrachloroethene	ND		2130	2320		ug/Kg	*	109	75 - 140	4	25
Toluene	ND		2130	2220		ug/Kg	*	104	70 - 130	4	25
1,2,3-Trichlorobenzene	ND		2130	2150		ug/Kg	*	101	70 - 130	1	25
1,2,4-Trichlorobenzene	ND		2130	2120		ug/Kg	*	100	70 - 150	2	25
1,1,1-Trichloroethane	ND		2130	2060		ug/Kg	*	97	80 - 125	4	25
1,1,2-Trichloroethane	ND		2130	2280		ug/Kg	*	107	80 - 130	4	25
Trichloroethene	ND		2130	2250		ug/Kg	*	106	80 - 125	7	25
Trichlorofluoromethane	ND		2130	2140		ug/Kg	*	101	70 - 130	2	25
1,2,3-Trichloropropane	ND		2130	2040		ug/Kg	*	96	70 - 130	2	25
1,2,4-Trimethylbenzene	ND		2130	2090		ug/Kg	*	98	70 - 130	6	25
1,3,5-Trimethylbenzene	ND		2130	2090		ug/Kg	*	98	75 - 140	7	25
Vinyl chloride	ND		2130	1240		ug/Kg	*	58	10 - 140	19	25
m,p-Xylene	ND		4250	4180		ug/Kg	*	98	75 - 135	6	25
o-Xylene	ND		2130	2100		ug/Kg	*	99	70 - 130	5	25

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

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

Lab Sample ID: 250-3726-C-1-D MSD
Matrix: Solid
Analysis Batch: 6309

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 6281

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene	ND		2130	1940		ug/Kg	✖	91	80 - 120	4	25
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	103		75 - 125								
4-Bromofluorobenzene (Surr)	103		75 - 125								
Dibromofluoromethane (Surr)	107		75 - 125								
Toluene-d8 (Surr)	110		75 - 125								

Method: NWTPH-HCID - Northwest - Hydrocarbon Identification (GC)

Lab Sample ID: MB 250-6565/1-A
Matrix: Solid
Analysis Batch: 6603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6565

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C12-C24)	ND		47		mg/Kg		06/19/12 08:30	06/19/12 10:31	1
ORO (C24-C36)	ND		93		mg/Kg		06/19/12 08:30	06/19/12 10:31	1
Gasoline Range Hydrocarbons	ND		19		mg/Kg		06/19/12 08:30	06/19/12 10:31	1
MB MB									
Surrogate	%Recovery	Qualifier	Limits		Prepared		Analyzed	Dil Fac	
1-Chlorooctadecane	106		50 - 150		06/19/12 08:30		06/19/12 10:31	1	

Lab Sample ID: 250-3856-A-1-C DU
Matrix: Solid
Analysis Batch: 6603

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 6565

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
DRO (C12-C24)	4800		4560		mg/Kg	✖	5	50
ORO (C24-C36)	170		166		mg/Kg	✖	0.5	50
Gasoline Range Hydrocarbons	2500		2300		mg/Kg	✖	9	50
DU DU								
Surrogate	%Recovery	Qualifier	Limits					
1-Chlorooctadecane	81		50 - 150					

Method: D2216-80 - Percent Dry Weight (Solids) per ASTM D2216-80

Lab Sample ID: 250-3797-A-1 DU
Matrix: Solid
Analysis Batch: 6351

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	14		15		%		4	20
Percent Solids	86		85		%		0.7	20

QC Association Summary

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

GC/MS VOA

Prep Batch: 6281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3726-C-1-C MS	Matrix Spike	Total/NA	Solid	5035	
250-3726-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
250-3800-1	MW-21/S-1	Total/NA	Solid	5035	
LCS 250-6281/2-A	Lab Control Sample	Total/NA	Solid	5035	
MB 250-6281/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 6309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3726-C-1-C MS	Matrix Spike	Total/NA	Solid	8260B	6281
250-3726-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	6281
LCS 250-6281/2-A	Lab Control Sample	Total/NA	Solid	8260B	6281
MB 250-6281/1-A	Method Blank	Total/NA	Solid	8260B	6281

Analysis Batch: 6384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3800-1	MW-21/S-1	Total/NA	Solid	8260B	6281

GC Semi VOA

Prep Batch: 6565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3800-1	MW-21/S-1	Total/NA	Solid	3550B	
250-3856-A-1-C DU	Duplicate	Total/NA	Solid	3550B	
MB 250-6565/1-A	Method Blank	Total/NA	Solid	3550B	

Analysis Batch: 6603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3800-1	MW-21/S-1	Total/NA	Solid	NWTPH-HCID	6565
250-3856-A-1-C DU	Duplicate	Total/NA	Solid	NWTPH-HCID	6565
MB 250-6565/1-A	Method Blank	Total/NA	Solid	NWTPH-HCID	6565

General Chemistry

Analysis Batch: 6351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
250-3797-A-1 DU	Duplicate	Total/NA	Solid	D2216-80	
250-3800-1	MW-21/S-1	Total/NA	Solid	D2216-80	

Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Portland	Alaska	State Program	10	OR00040
TestAmerica Portland	Alaska (UST)	State Program	10	UST-012
TestAmerica Portland	California	State Program	9	2597
TestAmerica Portland	Oregon	NELAC	10	OR100021
TestAmerica Portland	USDA	Federal		P330-11-00092
TestAmerica Portland	Washington	State Program	10	C586

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



Method Summary

Client: Hart Crowser, Inc.
Project/Site: Ecology Frank Wear

TestAmerica Job ID: 250-3800-1
SDG: 17800-23

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PRT
NWTPH-HCID	Northwest - Hydrocarbon Identification (GC)	NWTPH	TAL PRT
D2216-80	Percent Dry Weight (Solids) per ASTM D2216-80	ASTM	TAL PRT

Protocol References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

TAL PRT = TestAmerica Portland, 9405 SW Nimbus Ave., Beaverton, OR 97008, TEL (503)906-9200



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 425-420-9200 FAX 420-9210
 11922 E. First Ave, Spokane, WA 99206-5302
 509-924-9700
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 503-907-250
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119
 907-563-3800

CHAIN OF CUSTODY REPORT

Work Order #: **TURNAROUND**

INVOICE TO: **Jill Kiernan
Hart Crosser**

CLIENT: **Hart Crosser**
 REPORT TO: **Jill Kiernan**
 ADDRESS: **8910 SW Gemini Dr
Beaverton, OR 97008**
 PHONE: _____ FAX: _____

PROJECT NAME: **Ecology Frank Wear**
 PROJECT NUMBER: **17800-73**

SAMPLED BY: **Jason Miles**

CLIENT SAMPLE IDENTIFICATION

1 **MW-21/S-1** **6/8/12** **1240**

2

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RELEASED BY: **Chris Martin**

FIRM: **Hart Crosser**

DATE: **6/13/12**

TIME: **0745**

DATE:

TIME:

RECEIVED BY:

PRINT NAME:

RECEIVED BY:

PRINT NAME:

DATE: **6/13/12**

TIME: **0745**

DATE:

TIME:

TEMP: **5.5**

PAGE **5.5** OF

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ADDITIONAL REMARKS:

P.O. NUMBER:

PRESERVATIVE

REQUESTED ANALYSES

TURNAROUND

in Business Days *

Organic & Inorganic Analyses

STD. 7 5 4 3 2 1 <1

Petroleum Hydrocarbon Analyses

STD. 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

MATRIX (W, S, O) **S 2** LOCATION/COMMENTS TA W/O ID

2

3

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7

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9

10

RECEIVED BY: **Phil Suckale**

PRINT NAME: **Phil Suckale**

RECEIVED BY:

PRINT NAME:

DATE: **6/13/12**

TIME: **0745**

DATE:

TIME:

TEMP: **5.5**

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Mr. Ben Glass /

ADDITIONAL REMARKS:



Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 250-3800-1

SDG Number: 17800-23

Login Number: 3800

List Number: 1

Creator: Svabik-Seror, Philip

List Source: TestAmerica Portland

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



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-33374-1
Client Project/Site: Frank Wear

For:
Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan

Kristine D. Allen

Authorized for release by:
6/22/2012 4:09:19 PM

Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

LINKS

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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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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Job ID: 580-33374-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 6/8/2012 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3° C.

GC/MS VOA - Method 8260B

The method blank for batch 113214 contained Methylene Chloride above the reporting limit (RL). This analyte is a known common laboratory contaminant and was detected at a concentration less than five times the RL; therefore, re-extraction and/or re-analysis of samples was not performed. The associated data have been flagged as appropriate and reported.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.



Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-1

Lab Sample ID: 580-33374-1

Date Collected: 06/04/12 15:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chloromethane	ND		330		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Vinyl chloride	ND		6.6		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Bromomethane	ND		120		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chloroethane	ND		330		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Trichlorofluoromethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1-Dichloroethene	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Methylene Chloride	54	B	33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
trans-1,2-Dichloroethene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1-Dichloroethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
2,2-Dichloropropane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
cis-1,2-Dichloroethene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chlorobromomethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chloroform	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1,1-Trichloroethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Carbon tetrachloride	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1-Dichloropropene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Benzene	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2-Dichloroethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Trichloroethene	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2-Dichloropropane	ND		9.9		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Dibromomethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Dichlorobromomethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
cis-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Toluene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
trans-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1,2-Trichloroethane	ND		9.9		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Tetrachloroethene	370		16		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,3-Dichloropropane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chlorodibromomethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Ethylene Dibromide	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Chlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Ethylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1,1,2-Tetrachloroethane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,1,2,2-Tetrachloroethane	ND		8.2		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
m-Xylene & p-Xylene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
o-Xylene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Styrene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Bromoform	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Isopropylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Bromobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
N-Propylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2,3-Trichloropropane	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
2-Chlorotoluene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,3,5-Trimethylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
4-Chlorotoluene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
tert-Butylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2,4-Trimethylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
sec-Butylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,3-Dichlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
4-Isopropyltoluene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-1

Lab Sample ID: 580-33374-1

Date Collected: 06/04/12 15:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
n-Butylbenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2-Dichlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2-Dibromo-3-Chloropropane	ND		160		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2,4-Trichlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
1,2,3-Trichlorobenzene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Hexachlorobutadiene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Naphthalene	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1
Methyl tert-butyl ether	ND		33		ug/Kg	☼	06/13/12 10:09	06/13/12 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/13/12 10:09	06/13/12 19:29	1
Toluene-d8 (Surr)	91		80 - 120	06/13/12 10:09	06/13/12 19:29	1
Ethylbenzene-d10	98		70 - 120	06/13/12 10:09	06/13/12 19:29	1
4-Bromofluorobenzene (Surr)	92		70 - 120	06/13/12 10:09	06/13/12 19:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			06/20/12 14:17	1
Percent Moisture	10		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-2

Lab Sample ID: 580-33374-2

Date Collected: 06/04/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chloromethane	ND		330		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Vinyl chloride	ND		6.7		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Bromomethane	ND		120		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chloroethane	ND		330		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Trichlorofluoromethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1-Dichloroethene	ND		17		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Methylene Chloride	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
trans-1,2-Dichloroethene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1-Dichloroethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
2,2-Dichloropropane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
cis-1,2-Dichloroethene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chlorobromomethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chloroform	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1,1-Trichloroethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Carbon tetrachloride	ND		17		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1-Dichloropropene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Benzene	ND		13		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2-Dichloroethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Trichloroethene	ND		13		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2-Dichloropropane	ND		10		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Dibromomethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Dichlorobromomethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
cis-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Toluene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
trans-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1,2-Trichloroethane	ND		10		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Tetrachloroethene	ND		17		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,3-Dichloropropane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chlorodibromomethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Ethylene Dibromide	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Chlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Ethylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1,1,2-Tetrachloroethane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,1,2,2-Tetrachloroethane	ND		8.3		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
m-Xylene & p-Xylene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
o-Xylene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Styrene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Bromoform	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Isopropylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Bromobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
N-Propylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2,3-Trichloropropane	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
2-Chlorotoluene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,3,5-Trimethylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
4-Chlorotoluene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
tert-Butylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2,4-Trimethylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
sec-Butylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,3-Dichlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
4-Isopropyltoluene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-2

Lab Sample ID: 580-33374-2

Date Collected: 06/04/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
n-Butylbenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2-Dichlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2,4-Trichlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
1,2,3-Trichlorobenzene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Hexachlorobutadiene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Naphthalene	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1
Methyl tert-butyl ether	ND		33		ug/Kg	☼	06/14/12 09:14	06/14/12 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	90		80 - 120	06/14/12 09:14	06/14/12 17:11	1
Toluene-d8 (Surr)	95		80 - 120	06/14/12 09:14	06/14/12 17:11	1
Ethylbenzene-d10	98		70 - 120	06/14/12 09:14	06/14/12 17:11	1
4-Bromofluorobenzene (Surr)	95		70 - 120	06/14/12 09:14	06/14/12 17:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87		0.10		%			06/20/12 14:17	1
Percent Moisture	13		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-3

Lab Sample ID: 580-33374-3

Date Collected: 06/04/12 17:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chloromethane	ND		340		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Vinyl chloride	ND		6.7		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Bromomethane	ND		120		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chloroethane	ND		340		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Trichlorofluoromethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1-Dichloroethene	ND		17		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Methylene Chloride	50	B	34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
trans-1,2-Dichloroethene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1-Dichloroethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
2,2-Dichloropropane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
cis-1,2-Dichloroethene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chlorobromomethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chloroform	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1,1-Trichloroethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Carbon tetrachloride	ND		17		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1-Dichloropropene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Benzene	ND		13		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,2-Dichloroethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Trichloroethene	ND		13		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,2-Dichloropropane	ND		10		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Dibromomethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Dichlorobromomethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
cis-1,3-Dichloropropene	ND		13		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Toluene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
trans-1,3-Dichloropropene	ND		13		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1,2-Trichloroethane	ND		10		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Tetrachloroethene	ND		17		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,3-Dichloropropane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chlorodibromomethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Ethylene Dibromide	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Chlorobenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Ethylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1,1,2-Tetrachloroethane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,1,2,2-Tetrachloroethane	ND		8.4		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
m-Xylene & p-Xylene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
o-Xylene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Styrene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Bromoform	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Isopropylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
Bromobenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
N-Propylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,2,3-Trichloropropane	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
2-Chlorotoluene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,3,5-Trimethylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
4-Chlorotoluene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
tert-Butylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,2,4-Trimethylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
sec-Butylbenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
1,3-Dichlorobenzene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1
4-Isopropyltoluene	ND		34		ug/Kg	*	06/13/12 10:09	06/13/12 19:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-3

Lab Sample ID: 580-33374-3

Date Collected: 06/04/12 17:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
n-Butylbenzene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
1,2-Dichlorobenzene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
1,2,4-Trichlorobenzene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
1,2,3-Trichlorobenzene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
Hexachlorobutadiene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
Naphthalene	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1
Methyl tert-butyl ether	ND		34		ug/Kg	☼	06/13/12 10:09	06/13/12 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/13/12 10:09	06/13/12 19:51	1
Toluene-d8 (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 19:51	1
Ethylbenzene-d10	99		70 - 120	06/13/12 10:09	06/13/12 19:51	1
4-Bromofluorobenzene (Surr)	91		70 - 120	06/13/12 10:09	06/13/12 19:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			06/20/12 14:17	1
Percent Moisture	10		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-4

Lab Sample ID: 580-33374-4

Date Collected: 06/05/12 09:24

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chloromethane	ND		370		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Vinyl chloride	ND		7.3		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Bromomethane	ND		130		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chloroethane	ND		370		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Trichlorofluoromethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1-Dichloroethene	ND		18		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Methylene Chloride	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
trans-1,2-Dichloroethene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1-Dichloroethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
2,2-Dichloropropane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
cis-1,2-Dichloroethene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chlorobromomethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chloroform	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1,1-Trichloroethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Carbon tetrachloride	ND		18		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1-Dichloropropene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Benzene	ND		15		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,2-Dichloroethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Trichloroethene	ND		15		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,2-Dichloropropane	ND		11		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Dibromomethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Dichlorobromomethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
cis-1,3-Dichloropropene	ND		15		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Toluene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
trans-1,3-Dichloropropene	ND		15		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1,2-Trichloroethane	ND		11		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Tetrachloroethene	ND		18		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,3-Dichloropropane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chlorodibromomethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Ethylene Dibromide	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Chlorobenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Ethylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1,1,2-Tetrachloroethane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,1,2,2-Tetrachloroethane	ND		9.1		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
m-Xylene & p-Xylene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
o-Xylene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Styrene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Bromoform	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Isopropylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
Bromobenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
N-Propylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,2,3-Trichloropropane	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
2-Chlorotoluene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,3,5-Trimethylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
4-Chlorotoluene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
tert-Butylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,2,4-Trimethylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
sec-Butylbenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
1,3-Dichlorobenzene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1
4-Isopropyltoluene	ND		37		ug/Kg	*	06/14/12 09:14	06/14/12 17:34	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-4

Lab Sample ID: 580-33374-4

Date Collected: 06/05/12 09:24

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
n-Butylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
1,2-Dichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
1,2,4-Trichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
1,2,3-Trichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
Hexachlorobutadiene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
Naphthalene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1
Methyl tert-butyl ether	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/14/12 09:14	06/14/12 17:34	1
Toluene-d8 (Surr)	93		80 - 120	06/14/12 09:14	06/14/12 17:34	1
Ethylbenzene-d10	98		70 - 120	06/14/12 09:14	06/14/12 17:34	1
4-Bromofluorobenzene (Surr)	91		70 - 120	06/14/12 09:14	06/14/12 17:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89		0.10		%			06/20/12 14:17	1
Percent Moisture	11		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-5

Lab Sample ID: 580-33374-5

Date Collected: 06/05/12 12:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chloromethane	ND		350		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Vinyl chloride	ND		7.0		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Bromomethane	ND		120		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chloroethane	ND		350		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Trichlorofluoromethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1-Dichloroethene	ND		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Methylene Chloride	57	B	35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
trans-1,2-Dichloroethene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1-Dichloroethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
2,2-Dichloropropane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
cis-1,2-Dichloroethene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chlorobromomethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chloroform	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1,1-Trichloroethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Carbon tetrachloride	ND		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1-Dichloropropene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Benzene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2-Dichloroethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Trichloroethene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Dibromomethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Dichlorobromomethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Toluene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Tetrachloroethene	ND		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,3-Dichloropropane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chlorodibromomethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Ethylene Dibromide	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Chlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Ethylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1,1,2-Tetrachloroethane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,1,2,2-Tetrachloroethane	ND		8.8		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
m-Xylene & p-Xylene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
o-Xylene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Styrene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Bromoform	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Isopropylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Bromobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
N-Propylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2,3-Trichloropropane	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
2-Chlorotoluene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,3,5-Trimethylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
4-Chlorotoluene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
tert-Butylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2,4-Trimethylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
sec-Butylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,3-Dichlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
4-Isopropyltoluene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-5

Lab Sample ID: 580-33374-5

Date Collected: 06/05/12 12:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
n-Butylbenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2-Dichlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2,4-Trichlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
1,2,3-Trichlorobenzene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Hexachlorobutadiene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Naphthalene	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1
Methyl tert-butyl ether	ND		35		ug/Kg	☼	06/13/12 10:09	06/13/12 20:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 20:14	1
Toluene-d8 (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 20:14	1
Ethylbenzene-d10	98		70 - 120	06/13/12 10:09	06/13/12 20:14	1
4-Bromofluorobenzene (Surr)	90		70 - 120	06/13/12 10:09	06/13/12 20:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88		0.10		%			06/20/12 14:17	1
Percent Moisture	12		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-1

Lab Sample ID: 580-33374-6

Date Collected: 06/06/12 11:34

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chloromethane	ND		360		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Vinyl chloride	ND		7.1		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Bromomethane	ND		120		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chloroethane	ND		360		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Trichlorofluoromethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1-Dichloroethene	ND		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Methylene Chloride	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
trans-1,2-Dichloroethene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1-Dichloroethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
2,2-Dichloropropane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
cis-1,2-Dichloroethene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chlorobromomethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chloroform	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1,1-Trichloroethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Carbon tetrachloride	ND		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1-Dichloropropene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Benzene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2-Dichloroethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Trichloroethene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Dibromomethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Dichlorobromomethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Toluene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Tetrachloroethene	61		18		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,3-Dichloropropane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chlorodibromomethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Ethylene Dibromide	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Chlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Ethylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1,1,2-Tetrachloroethane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,1,2,2-Tetrachloroethane	ND		8.9		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
m-Xylene & p-Xylene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
o-Xylene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Styrene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Bromoform	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Isopropylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Bromobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
N-Propylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2,3-Trichloropropane	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
2-Chlorotoluene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,3,5-Trimethylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
4-Chlorotoluene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
tert-Butylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2,4-Trimethylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
sec-Butylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,3-Dichlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
4-Isopropyltoluene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-1

Lab Sample ID: 580-33374-6

Date Collected: 06/06/12 11:34

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
n-Butylbenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2-Dichlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2,4-Trichlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
1,2,3-Trichlorobenzene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Hexachlorobutadiene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Naphthalene	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1
Methyl tert-butyl ether	ND		36		ug/Kg	☼	06/13/12 10:09	06/13/12 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/13/12 10:09	06/13/12 20:36	1
Toluene-d8 (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 20:36	1
Ethylbenzene-d10	98		70 - 120	06/13/12 10:09	06/13/12 20:36	1
4-Bromofluorobenzene (Surr)	90		70 - 120	06/13/12 10:09	06/13/12 20:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			06/20/12 14:17	1
Percent Moisture	10		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-2

Lab Sample ID: 580-33374-7

Date Collected: 06/06/12 13:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chloromethane	ND		430		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Vinyl chloride	ND		8.5		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Bromomethane	ND		150		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chloroethane	ND		430		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Trichlorofluoromethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1-Dichloroethene	ND		21		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Methylene Chloride	69	B	43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
trans-1,2-Dichloroethene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1-Dichloroethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
2,2-Dichloropropane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
cis-1,2-Dichloroethene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chlorobromomethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chloroform	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1,1-Trichloroethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Carbon tetrachloride	ND		21		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1-Dichloropropene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Benzene	ND		17		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2-Dichloroethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Trichloroethene	ND		17		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2-Dichloropropane	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Dibromomethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Dichlorobromomethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
cis-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Toluene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
trans-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1,2-Trichloroethane	ND		13		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Tetrachloroethene	ND		21		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,3-Dichloropropane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chlorodibromomethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Ethylene Dibromide	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Chlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Ethylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1,1,2-Tetrachloroethane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,1,2,2-Tetrachloroethane	ND		11		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
m-Xylene & p-Xylene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
o-Xylene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Styrene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Bromoform	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Isopropylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Bromobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
N-Propylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2,3-Trichloropropane	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
2-Chlorotoluene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,3,5-Trimethylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
4-Chlorotoluene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
tert-Butylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2,4-Trimethylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
sec-Butylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,3-Dichlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
4-Isopropyltoluene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-2

Lab Sample ID: 580-33374-7

Date Collected: 06/06/12 13:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
n-Butylbenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2-Dichlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2-Dibromo-3-Chloropropane	ND		210		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2,4-Trichlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
1,2,3-Trichlorobenzene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Hexachlorobutadiene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Naphthalene	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Methyl tert-butyl ether	ND		43		ug/Kg	☼	06/13/12 10:09	06/13/12 20:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120				06/13/12 10:09	06/13/12 20:58	1
Toluene-d8 (Surr)	90		80 - 120				06/13/12 10:09	06/13/12 20:58	1
Ethylbenzene-d10	97		70 - 120				06/13/12 10:09	06/13/12 20:58	1
4-Bromofluorobenzene (Surr)	92		70 - 120				06/13/12 10:09	06/13/12 20:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			06/20/12 14:17	1
Percent Moisture	9.8		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-3

Lab Sample ID: 580-33374-8

Date Collected: 06/06/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chloromethane	ND		370		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Vinyl chloride	ND		7.5		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Bromomethane	ND		130		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chloroethane	ND		370		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Trichlorofluoromethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1-Dichloroethene	ND		19		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Methylene Chloride	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
trans-1,2-Dichloroethene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1-Dichloroethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
2,2-Dichloropropane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
cis-1,2-Dichloroethene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chlorobromomethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chloroform	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1,1-Trichloroethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Carbon tetrachloride	ND		19		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1-Dichloropropene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Benzene	ND		15		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2-Dichloroethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Trichloroethene	ND		15		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Dibromomethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Dichlorobromomethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
cis-1,3-Dichloropropene	ND		15		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Toluene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
trans-1,3-Dichloropropene	ND		15		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Tetrachloroethene	ND		19		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,3-Dichloropropane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chlorodibromomethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Ethylene Dibromide	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Chlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Ethylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1,1,2-Tetrachloroethane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,1,2,2-Tetrachloroethane	ND		9.4		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
m-Xylene & p-Xylene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
o-Xylene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Styrene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Bromoform	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Isopropylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Bromobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
N-Propylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2,3-Trichloropropane	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
2-Chlorotoluene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,3,5-Trimethylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
4-Chlorotoluene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
tert-Butylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2,4-Trimethylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
sec-Butylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,3-Dichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
4-Isopropyltoluene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-3

Lab Sample ID: 580-33374-8

Date Collected: 06/06/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
n-Butylbenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2-Dichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2-Dibromo-3-Chloropropane	ND		190		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2,4-Trichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
1,2,3-Trichlorobenzene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Hexachlorobutadiene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Naphthalene	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1
Methyl tert-butyl ether	ND		37		ug/Kg	☼	06/14/12 09:14	06/14/12 17:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	90		80 - 120	06/14/12 09:14	06/14/12 17:56	1
Toluene-d8 (Surr)	93		80 - 120	06/14/12 09:14	06/14/12 17:56	1
Ethylbenzene-d10	98		70 - 120	06/14/12 09:14	06/14/12 17:56	1
4-Bromofluorobenzene (Surr)	92		70 - 120	06/14/12 09:14	06/14/12 17:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89		0.10		%			06/20/12 14:17	1
Percent Moisture	11		0.10		%			06/20/12 14:17	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-4

Lab Sample ID: 580-33374-9

Date Collected: 06/06/12 17:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chloromethane	ND		390		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Vinyl chloride	ND		7.8		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Bromomethane	ND		140		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chloroethane	ND		390		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Trichlorofluoromethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1-Dichloroethene	ND		20		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Methylene Chloride	68	B	39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
trans-1,2-Dichloroethene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1-Dichloroethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
2,2-Dichloropropane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
cis-1,2-Dichloroethene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chlorobromomethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chloroform	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1,1-Trichloroethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Carbon tetrachloride	ND		20		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1-Dichloropropene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Benzene	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2-Dichloroethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Trichloroethene	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2-Dichloropropane	ND		12		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Dibromomethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Dichlorobromomethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
cis-1,3-Dichloropropene	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Toluene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
trans-1,3-Dichloropropene	ND		16		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1,2-Trichloroethane	ND		12		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Tetrachloroethene	ND		20		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,3-Dichloropropane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chlorodibromomethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Ethylene Dibromide	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Chlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Ethylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1,1,2-Tetrachloroethane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,1,2,2-Tetrachloroethane	ND		9.8		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
m-Xylene & p-Xylene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
o-Xylene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Styrene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Bromoform	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Isopropylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Bromobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
N-Propylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2,3-Trichloropropane	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
2-Chlorotoluene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,3,5-Trimethylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
4-Chlorotoluene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
tert-Butylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2,4-Trimethylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
sec-Butylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,3-Dichlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
4-Isopropyltoluene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-4

Lab Sample ID: 580-33374-9

Date Collected: 06/06/12 17:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
n-Butylbenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2-Dichlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2,4-Trichlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
1,2,3-Trichlorobenzene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Hexachlorobutadiene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Naphthalene	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1
Methyl tert-butyl ether	ND		39		ug/Kg	☼	06/13/12 10:09	06/13/12 21:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/13/12 10:09	06/13/12 21:21	1
Toluene-d8 (Surr)	90		80 - 120	06/13/12 10:09	06/13/12 21:21	1
Ethylbenzene-d10	97		70 - 120	06/13/12 10:09	06/13/12 21:21	1
4-Bromofluorobenzene (Surr)	89		70 - 120	06/13/12 10:09	06/13/12 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87		0.10		%			06/20/12 14:17	1
Percent Moisture	13		0.10		%			06/20/12 14:17	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: MB 580-113211/1-A

Matrix: Solid

Analysis Batch: 113214

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113211

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chloromethane	ND		400		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Vinyl chloride	ND		8.0		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Bromomethane	ND		140		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chloroethane	ND		400		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Trichlorofluoromethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1-Dichloroethene	ND		20		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Methylene Chloride	66.1		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
trans-1,2-Dichloroethene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1-Dichloroethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
2,2-Dichloropropane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
cis-1,2-Dichloroethene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chlorobromomethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chloroform	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1,1-Trichloroethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Carbon tetrachloride	ND		20		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1-Dichloropropene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Benzene	ND		16		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2-Dichloroethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Trichloroethene	ND		16		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2-Dichloropropane	ND		12		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Dibromomethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Dichlorobromomethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Toluene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1,2-Trichloroethane	ND		12		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Tetrachloroethene	ND		20		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,3-Dichloropropane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chlorodibromomethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Ethylene Dibromide	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Chlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Ethylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
m-Xylene & p-Xylene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
o-Xylene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Styrene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Bromoform	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Isopropylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Bromobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
N-Propylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2,3-Trichloropropane	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
2-Chlorotoluene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
4-Chlorotoluene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
tert-Butylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
sec-Butylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: MB 580-113211/1-A

Matrix: Solid

Analysis Batch: 113214

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113211

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
4-Isopropyltoluene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,4-Dichlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
n-Butylbenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2-Dichlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Hexachlorobutadiene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Naphthalene	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1
Methyl tert-butyl ether	ND		40		ug/Kg		06/13/12 10:09	06/13/12 13:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 13:06	1
Toluene-d8 (Surr)	92		80 - 120	06/13/12 10:09	06/13/12 13:06	1
Ethylbenzene-d10	101		70 - 120	06/13/12 10:09	06/13/12 13:06	1
4-Bromofluorobenzene (Surr)	93		70 - 120	06/13/12 10:09	06/13/12 13:06	1
Trifluorotoluene (Surr)	96		65 - 140	06/13/12 10:09	06/13/12 13:06	1

Lab Sample ID: LCS 580-113211/2-A

Matrix: Solid

Analysis Batch: 113214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	784	454		ug/Kg		58	35 - 135
Chloromethane	799	471		ug/Kg		59	50 - 130
Vinyl chloride	801	597		ug/Kg		75	60 - 125
Bromomethane	799	647		ug/Kg		81	30 - 160
Chloroethane	798	641		ug/Kg		80	40 - 155
Trichlorofluoromethane	792	655		ug/Kg		83	25 - 185
1,1-Dichloroethene	792	629		ug/Kg		79	65 - 135
Methylene Chloride	800	696		ug/Kg		87	55 - 140
trans-1,2-Dichloroethene	801	610		ug/Kg		76	65 - 135
1,1-Dichloroethane	792	667		ug/Kg		84	75 - 125
2,2-Dichloropropane	801	658		ug/Kg		82	65 - 135
cis-1,2-Dichloroethene	800	639		ug/Kg		80	65 - 125
Chlorobromomethane	794	656		ug/Kg		83	70 - 125
Chloroform	800	651		ug/Kg		81	70 - 125
1,1,1-Trichloroethane	800	630		ug/Kg		79	70 - 135
Carbon tetrachloride	801	593		ug/Kg		74	65 - 135
1,1-Dichloropropene	793	645		ug/Kg		81	70 - 135
Benzene	796	614		ug/Kg		77	75 - 125
1,2-Dichloroethane	793	635		ug/Kg		80	70 - 135
Trichloroethene	800	740		ug/Kg		92	75 - 125
1,2-Dichloropropane	800	815		ug/Kg		102	70 - 120
Dibromomethane	789	736		ug/Kg		93	75 - 130
Dichlorobromomethane	790	583		ug/Kg		74	70 - 130
cis-1,3-Dichloropropene	840	614		ug/Kg		73	70 - 125
Toluene	800	720		ug/Kg		90	70 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: LCS 580-113211/2-A

Matrix: Solid

Analysis Batch: 113214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113211

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	760	577		ug/Kg		76	65 - 125
1,1,1,2-Trichloroethane	790	705		ug/Kg		89	60 - 125
Tetrachloroethene	801	768		ug/Kg		96	65 - 140
1,3-Dichloropropane	800	686		ug/Kg		86	75 - 125
Chlorodibromomethane	793	559		ug/Kg		70	65 - 130
Ethylene Dibromide	800	721		ug/Kg		90	70 - 125
Chlorobenzene	800	854		ug/Kg		107	75 - 125
Ethylbenzene	794	841		ug/Kg		106	75 - 125
1,1,1,2-Tetrachloroethane	789	815		ug/Kg		103	75 - 125
1,1,1,2,2-Tetrachloroethane	800	757		ug/Kg		95	55 - 130
m-Xylene & p-Xylene	1600	1700		ug/Kg		106	80 - 125
o-Xylene	792	803		ug/Kg		101	75 - 125
Styrene	798	868		ug/Kg		109	75 - 125
Bromoform	797	700		ug/Kg		88	55 - 135
Isopropylbenzene	800	794		ug/Kg		99	75 - 130
Bromobenzene	796	835		ug/Kg		105	65 - 120
N-Propylbenzene	800	784		ug/Kg		98	65 - 135
1,2,3-Trichloropropane	788	801		ug/Kg		102	65 - 130
2-Chlorotoluene	792	850		ug/Kg		107	70 - 130
1,3,5-Trimethylbenzene	800	870		ug/Kg		109	65 - 135
4-Chlorotoluene	788	856		ug/Kg		109	75 - 125
tert-Butylbenzene	797	813		ug/Kg		102	65 - 130
1,2,4-Trimethylbenzene	801	845		ug/Kg		106	65 - 135
sec-Butylbenzene	800	830		ug/Kg		104	65 - 130
1,3-Dichlorobenzene	798	819		ug/Kg		103	70 - 125
4-Isopropyltoluene	800	826		ug/Kg		103	75 - 135
1,4-Dichlorobenzene	799	804		ug/Kg		101	70 - 125
n-Butylbenzene	792	834		ug/Kg		105	65 - 140
1,2-Dichlorobenzene	786	800		ug/Kg		102	75 - 120
1,2-Dibromo-3-Chloropropane	800	639		ug/Kg		80	40 - 135
1,2,4-Trichlorobenzene	795	714		ug/Kg		90	65 - 130
1,2,3-Trichlorobenzene	800	749		ug/Kg		94	60 - 135
Hexachlorobutadiene	800	780		ug/Kg		98	55 - 140
Naphthalene	800	653		ug/Kg		82	40 - 125
Methyl tert-butyl ether	800	610		ug/Kg		76	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	94		80 - 120
Toluene-d8 (Surr)	96		80 - 120
Ethylbenzene-d10	104		70 - 120
4-Bromofluorobenzene (Surr)	102		70 - 120
Trifluorotoluene (Surr)	90		65 - 140

Lab Sample ID: MB 580-113264/1-A

Matrix: Solid

Analysis Batch: 113340

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113264

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: MB 580-113264/1-A

Matrix: Solid

Analysis Batch: 113340

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113264

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloromethane	ND		400		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Vinyl chloride	ND		8.0		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Bromomethane	ND		140		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Chloroethane	ND		400		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Trichlorofluoromethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1-Dichloroethene	ND		20		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Methylene Chloride	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
trans-1,2-Dichloroethene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1-Dichloroethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
2,2-Dichloropropane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
cis-1,2-Dichloroethene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Chlorobromomethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Chloroform	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1,1-Trichloroethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Carbon tetrachloride	ND		20		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1-Dichloropropene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Benzene	ND		16		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2-Dichloroethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Trichloroethene	ND		16		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2-Dichloropropane	ND		12		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Dibromomethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Dichlorobromomethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Toluene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1,2-Trichloroethane	ND		12		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Tetrachloroethene	ND		20		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,3-Dichloropropane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Chlorodibromomethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Ethylene Dibromide	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Chlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Ethylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
m-Xylene & p-Xylene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
o-Xylene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Styrene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Bromoform	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Isopropylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Bromobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
N-Propylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2,3-Trichloropropane	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
2-Chlorotoluene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
4-Chlorotoluene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
tert-Butylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
sec-Butylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,3-Dichlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
4-Isopropyltoluene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: MB 580-113264/1-A

Matrix: Solid

Analysis Batch: 113340

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
n-Butylbenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2-Dichlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Hexachlorobutadiene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Naphthalene	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1
Methyl tert-butyl ether	ND		40		ug/Kg		06/13/12 14:50	06/14/12 14:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120	06/13/12 14:50	06/14/12 14:56	1
Toluene-d8 (Surr)	92		80 - 120	06/13/12 14:50	06/14/12 14:56	1
Ethylbenzene-d10	100		70 - 120	06/13/12 14:50	06/14/12 14:56	1
4-Bromofluorobenzene (Surr)	92		70 - 120	06/13/12 14:50	06/14/12 14:56	1
Trifluorotoluene (Surr)	96		65 - 140	06/13/12 14:50	06/14/12 14:56	1

Lab Sample ID: LCS 580-113264/2-A

Matrix: Solid

Analysis Batch: 113340

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	784	447		ug/Kg		57	35 - 135
Chloromethane	799	432		ug/Kg		54	50 - 130
Vinyl chloride	801	634		ug/Kg		79	60 - 125
Bromomethane	799	601		ug/Kg		75	30 - 160
Chloroethane	798	614		ug/Kg		77	40 - 155
Trichlorofluoromethane	792	638		ug/Kg		81	25 - 185
1,1-Dichloroethene	792	674		ug/Kg		85	65 - 135
Methylene Chloride	800	707		ug/Kg		88	55 - 140
trans-1,2-Dichloroethene	801	654		ug/Kg		82	65 - 135
1,1-Dichloroethane	792	700		ug/Kg		88	75 - 125
2,2-Dichloropropane	801	657		ug/Kg		82	65 - 135
cis-1,2-Dichloroethene	800	620		ug/Kg		78	65 - 125
Chlorobromomethane	794	693		ug/Kg		87	70 - 125
Chloroform	800	697		ug/Kg		87	70 - 125
1,1,1-Trichloroethane	800	669		ug/Kg		84	70 - 135
Carbon tetrachloride	801	625		ug/Kg		78	65 - 135
1,1-Dichloropropene	793	660		ug/Kg		83	70 - 135
Benzene	796	631		ug/Kg		79	75 - 125
1,2-Dichloroethane	793	668		ug/Kg		84	70 - 135
Trichloroethene	800	792		ug/Kg		99	75 - 125
1,2-Dichloropropane	800	817		ug/Kg		102	70 - 120
Dibromomethane	789	778		ug/Kg		99	75 - 130
Dichlorobromomethane	790	610		ug/Kg		77	70 - 130
cis-1,3-Dichloropropene	840	622		ug/Kg		74	70 - 125
Toluene	800	738		ug/Kg		92	70 - 125
trans-1,3-Dichloropropene	760	577		ug/Kg		76	65 - 125
1,1,2-Trichloroethane	790	733		ug/Kg		93	60 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

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

Lab Sample ID: LCS 580-113264/2-A

Matrix: Solid

Analysis Batch: 113340

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113264

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Tetrachloroethene	801	802		ug/Kg		100	65 - 140
1,3-Dichloropropane	800	699		ug/Kg		87	75 - 125
Chlorodibromomethane	793	568		ug/Kg		72	65 - 130
Ethylene Dibromide	800	754		ug/Kg		94	70 - 125
Chlorobenzene	800	874		ug/Kg		109	75 - 125
Ethylbenzene	794	853		ug/Kg		107	75 - 125
1,1,1,2-Tetrachloroethane	789	861		ug/Kg		109	75 - 125
1,1,1,2-Tetrachloroethane	800	751		ug/Kg		94	55 - 130
m-Xylene & p-Xylene	1600	1730		ug/Kg		108	80 - 125
o-Xylene	792	820		ug/Kg		103	75 - 125
Styrene	798	885		ug/Kg		111	75 - 125
Bromoform	797	723		ug/Kg		91	55 - 135
Isopropylbenzene	800	828		ug/Kg		104	75 - 130
Bromobenzene	796	848		ug/Kg		106	65 - 120
N-Propylbenzene	800	802		ug/Kg		100	65 - 135
1,2,3-Trichloropropane	788	846		ug/Kg		107	65 - 130
2-Chlorotoluene	792	857		ug/Kg		108	70 - 130
1,3,5-Trimethylbenzene	800	894		ug/Kg		112	65 - 135
4-Chlorotoluene	788	888		ug/Kg		113	75 - 125
tert-Butylbenzene	797	840		ug/Kg		105	65 - 130
1,2,4-Trimethylbenzene	801	865		ug/Kg		108	65 - 135
sec-Butylbenzene	800	845		ug/Kg		106	65 - 130
1,3-Dichlorobenzene	798	836		ug/Kg		105	70 - 125
4-Isopropyltoluene	800	837		ug/Kg		105	75 - 135
1,4-Dichlorobenzene	799	826		ug/Kg		103	70 - 125
n-Butylbenzene	792	847		ug/Kg		107	65 - 140
1,2-Dichlorobenzene	786	828		ug/Kg		105	75 - 120
1,2-Dibromo-3-Chloropropane	800	716		ug/Kg		89	40 - 135
1,2,4-Trichlorobenzene	795	725		ug/Kg		91	65 - 130
1,2,3-Trichlorobenzene	800	782		ug/Kg		98	60 - 135
Hexachlorobutadiene	800	798		ug/Kg		100	55 - 140
Naphthalene	800	688		ug/Kg		86	40 - 125
Methyl tert-butyl ether	800	694		ug/Kg		87	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	92		80 - 120
Toluene-d8 (Surr)	96		80 - 120
Ethylbenzene-d10	101		70 - 120
4-Bromofluorobenzene (Surr)	99		70 - 120
Trifluorotoluene (Surr)	91		65 - 140

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-18/S-1

Lab Sample ID: 580-33374-1

Date Collected: 06/04/12 15:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 19:29	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-18/S-2

Lab Sample ID: 580-33374-2

Date Collected: 06/04/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113264	06/14/12 09:14	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113340	06/14/12 17:11	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-18/S-3

Lab Sample ID: 580-33374-3

Date Collected: 06/04/12 17:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 19:51	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-18/S-4

Lab Sample ID: 580-33374-4

Date Collected: 06/05/12 09:24

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113264	06/14/12 09:14	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113340	06/14/12 17:34	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-18/S-5

Lab Sample ID: 580-33374-5

Date Collected: 06/05/12 12:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 20:14	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Client Sample ID: MW-19/S-1

Lab Sample ID: 580-33374-6

Date Collected: 06/06/12 11:34

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 20:36	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-19/S-2

Lab Sample ID: 580-33374-7

Date Collected: 06/06/12 13:40

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 20:58	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-19/S-3

Lab Sample ID: 580-33374-8

Date Collected: 06/06/12 16:20

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113264	06/14/12 09:14	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113340	06/14/12 17:56	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Client Sample ID: MW-19/S-4

Lab Sample ID: 580-33374-9

Date Collected: 06/06/12 17:52

Matrix: Solid

Date Received: 06/08/12 10:15

Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113211	06/13/12 10:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113214	06/13/12 21:21	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113728	06/20/12 14:17	JL	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	Florida	NELAC	4	E871074
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Louisiana	NELAC	6	05016
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear

TestAmerica Job ID: 580-33374-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-33374-1	MW-18/S-1	Solid	06/04/12 15:52	06/08/12 10:15
580-33374-2	MW-18/S-2	Solid	06/04/12 16:20	06/08/12 10:15
580-33374-3	MW-18/S-3	Solid	06/04/12 17:40	06/08/12 10:15
580-33374-4	MW-18/S-4	Solid	06/05/12 09:24	06/08/12 10:15
580-33374-5	MW-18/S-5	Solid	06/05/12 12:20	06/08/12 10:15
580-33374-6	MW-19/S-1	Solid	06/06/12 11:34	06/08/12 10:15
580-33374-7	MW-19/S-2	Solid	06/06/12 13:40	06/08/12 10:15
580-33374-8	MW-19/S-3	Solid	06/06/12 16:20	06/08/12 10:15
580-33374-9	MW-19/S-4	Solid	06/06/12 17:52	06/08/12 10:15



THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
 5755 8th Street E.
 Tacoma, WA 98424
 Tel. 253-922-2310
 Fax 253-922-5047
 www.testamericainc.com

Rush
 Short Hold

Chain of Custody Record

Client: <u>Hart Crossed</u>		Client Contact: <u>S. J. Kerman</u>		Date: <u>06/10/12</u>	Chain of Custody Number: <u>17713</u>
Address: <u>8910 SW Gemini Drive</u>		Telephone Number (Area Code/Fax Number): <u>503-620-7284/503-620-6918</u>		Lab Number: <u>38374</u>	Page: <u>1</u> of <u>1</u>
City: <u>Beaverton</u>	State: <u>OR</u>	Zip Code: <u>97008</u>	Sampler: <u>Susan Miles</u>	Analysis (Attach list if more space is needed)	
Project Name and Location (State): <u>Frank Wear / Yakima, WA</u>		Billing Contact: <u>S. J. Kerman</u>	Lab Contact:	Special Instructions/ Conditions of Receipt	
Contract/Purchase Order/Quote No.: <u>17860-23</u>		Matrix: <u>MeOH</u>		Containers & Preservatives: <u>MeOH</u>	

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	MeOH	Analysis (Attach list if more space is needed)
1- MW-18/5-1	06/09/12	1532				X							X	Hold for possible analysis
2- MW-18/5-2		1620				X							X	Hold for possible analysis
3- MW-18/5-3		1740				X							X	Hold for possible analysis
4- MW-18/5-4	06/05/12	0924				X							X	Hold for possible analysis
5- MW-19/5-5	06/05/12	1220				X							X	Hold for possible analysis
6- MW-19/5-1	06/06/12	1134				X							X	Hold for possible analysis
7- MW-19/5-2		1340				X							X	Hold for possible analysis
8- MW-19/5-3		1620				X							X	Hold for possible analysis
4- MW-19/5-4		1752				X							X	Hold for possible analysis

<input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temp: _____ <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input type="checkbox"/> 15 Days <input type="checkbox"/> Other: <u>Standard</u>	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B	Sample Disposal <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	Disposal By Lab (A fee may be assessed if samples are retained longer than 1 month)
--	---	--	--

QC Requirements (Specify)

Cooler/TB Dig/IR cor 403 un 403
 Cooler Dsc Log Bu/Lmt @ Lab
 Wet/Packs Packing outside
 FALCO

1. Relinquished By Sign/Print: <u>Susan E. Miles</u>	Date: <u>06/07/12</u>	Time: <u>1038</u>	1. Received By Sign/Print: <u>Jack Nley Nicole Eley</u>	Date: <u>06/08/2012</u>	Time: <u>1015</u>
2. Relinquished By Sign/Print: _____	Date: _____	Time: _____	2. Received By Sign/Print: _____	Date: _____	Time: _____
3. Relinquished By Sign/Print: _____	Date: _____	Time: _____	3. Received By Sign/Print: _____	Date: _____	Time: _____

Comments

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-33374-1

Login Number: 33374

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

TestAmerica Job ID: 580-33318-1

Client Project/Site: Yakima/Frank Ware

For:

Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan



Authorized for release by:
6/27/2012 1:18:51 PM

Ella Sandquist
Project Manager I
ella.sandquist@testamericainc.com

Designee for
Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

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results through
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Visit us at:
www.testamericainc.com

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

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

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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Job ID: 580-33318-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 6/7/2012 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

GC/MS VOA - Method(s) 8260B:

The continuing calibration verification (CCV) for 1,1-Dichloroethene and Chloroform associated with batch 580-113072 recovered above the upper control limit. As these compounds were also CCC's, all target compounds were evaluated to +/-20%D calibration criteria. Several other target compounds recovered above +20%D. As all samples associated with this CCV were non-detects for the affected analytes, the affected compounds have been flagged as appropriate "A" and the data reported.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch 580-113072 exceeded control limits for the following analyte: 1,2-Dichloropropane. This analyte was biased high in the LCS and LCSD and was not detected in the associated samples; therefore, the data have been reported.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 580-113072 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria as discussed in ncm#53357.

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
*	LCS or LCSD exceeds the control limits
F	MS or MSD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-1

Lab Sample ID: 580-33318-1

Date Collected: 05/29/12 08:40

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chloromethane	ND		350		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Vinyl chloride	ND		7.0		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Bromomethane	ND	^	120		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chloroethane	ND	^	350		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Trichlorofluoromethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1-Dichloroethene	ND	^	18		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Methylene Chloride	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
trans-1,2-Dichloroethene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1-Dichloroethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
2,2-Dichloropropane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
cis-1,2-Dichloroethene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chlorobromomethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chloroform	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1,1-Trichloroethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Carbon tetrachloride	ND		18		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1-Dichloropropene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Benzene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2-Dichloroethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Trichloroethene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2-Dichloropropane	ND	*	11		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Dibromomethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Dichlorobromomethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Toluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Tetrachloroethene	24		18		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,3-Dichloropropane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chlorodibromomethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Ethylene Dibromide	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Chlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Ethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1,1,2-Tetrachloroethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,1,2,2-Tetrachloroethane	ND		8.8		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
m-Xylene & p-Xylene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
o-Xylene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Styrene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Bromoform	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Isopropylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Bromobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
N-Propylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2,3-Trichloropropane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
2-Chlorotoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,3,5-Trimethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
4-Chlorotoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
tert-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2,4-Trimethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
sec-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,3-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
4-Isopropyltoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-1

Lab Sample ID: 580-33318-1

Date Collected: 05/29/12 08:40

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
n-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2,4-Trichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
1,2,3-Trichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Hexachlorobutadiene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Naphthalene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1
Methyl tert-butyl ether	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	94		80 - 120	06/11/12 09:09	06/11/12 17:28	1
Toluene-d8 (Surr)	95		80 - 120	06/11/12 09:09	06/11/12 17:28	1
Ethylbenzene-d10	87		70 - 120	06/11/12 09:09	06/11/12 17:28	1
4-Bromofluorobenzene (Surr)	89		70 - 120	06/11/12 09:09	06/11/12 17:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88		0.10		%			06/20/12 12:54	1
Percent Moisture	12		0.10		%			06/20/12 12:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-2

Lab Sample ID: 580-33318-2

Date Collected: 05/30/12 11:00

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chloromethane	ND		420		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Vinyl chloride	ND		8.5		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Bromomethane	ND	^	150		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chloroethane	ND	^	420		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Trichlorofluoromethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1-Dichloroethene	ND	^	21		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Methylene Chloride	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
trans-1,2-Dichloroethene	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1-Dichloroethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
2,2-Dichloropropane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
cis-1,2-Dichloroethene	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chlorobromomethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chloroform	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1,1-Trichloroethane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Carbon tetrachloride	ND		21		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1-Dichloropropene	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Benzene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2-Dichloroethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Trichloroethene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2-Dichloropropane	ND	*	13		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Dibromomethane	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Dichlorobromomethane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
cis-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Toluene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
trans-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1,2-Trichloroethane	ND		13		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Tetrachloroethene	260		21		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,3-Dichloropropane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chlorodibromomethane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Ethylene Dibromide	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Chlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Ethylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1,1,2-Tetrachloroethane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,1,2,2-Tetrachloroethane	ND		11		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
m-Xylene & p-Xylene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
o-Xylene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Styrene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Bromoform	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Isopropylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Bromobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
N-Propylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2,3-Trichloropropane	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
2-Chlorotoluene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,3,5-Trimethylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
4-Chlorotoluene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
tert-Butylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2,4-Trimethylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
sec-Butylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,3-Dichlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
4-Isopropyltoluene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-2

Lab Sample ID: 580-33318-2

Date Collected: 05/30/12 11:00

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
n-Butylbenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2-Dichlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2-Dibromo-3-Chloropropane	ND		210		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2,4-Trichlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
1,2,3-Trichlorobenzene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Hexachlorobutadiene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Naphthalene	ND		42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1
Methyl tert-butyl ether	ND	^	42		ug/Kg	☼	06/11/12 09:09	06/11/12 17:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	93		80 - 120	06/11/12 09:09	06/11/12 17:51	1
Toluene-d8 (Surr)	94		80 - 120	06/11/12 09:09	06/11/12 17:51	1
Ethylbenzene-d10	85		70 - 120	06/11/12 09:09	06/11/12 17:51	1
4-Bromofluorobenzene (Surr)	87		70 - 120	06/11/12 09:09	06/11/12 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78		0.10		%			06/20/12 12:54	1
Percent Moisture	22		0.10		%			06/20/12 12:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-3

Lab Sample ID: 580-33318-3

Date Collected: 05/30/12 13:25

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chloromethane	ND		310		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Vinyl chloride	ND		6.3		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Bromomethane	ND	^	110		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chloroethane	ND	^	310		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Trichlorofluoromethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1-Dichloroethene	ND	^	16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Methylene Chloride	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
trans-1,2-Dichloroethene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1-Dichloroethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
2,2-Dichloropropane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
cis-1,2-Dichloroethene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chlorobromomethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chloroform	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1,1-Trichloroethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Carbon tetrachloride	ND		16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1-Dichloropropene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Benzene	ND		13		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2-Dichloroethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Trichloroethene	ND		13		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2-Dichloropropane	ND	*	9.4		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Dibromomethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Dichlorobromomethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
cis-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Toluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
trans-1,3-Dichloropropene	ND		13		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1,2-Trichloroethane	ND		9.4		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Tetrachloroethene	16		16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,3-Dichloropropane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chlorodibromomethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Ethylene Dibromide	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Chlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Ethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1,1,2-Tetrachloroethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,1,2,2-Tetrachloroethane	ND		7.8		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
m-Xylene & p-Xylene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
o-Xylene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Styrene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Bromoform	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Isopropylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Bromobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
N-Propylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2,3-Trichloropropane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
2-Chlorotoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,3,5-Trimethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
4-Chlorotoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
tert-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2,4-Trimethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
sec-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,3-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
4-Isopropyltoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-3

Lab Sample ID: 580-33318-3

Date Collected: 05/30/12 13:25

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
n-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2-Dibromo-3-Chloropropane	ND		160		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2,4-Trichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
1,2,3-Trichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Hexachlorobutadiene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Naphthalene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1
Methyl tert-butyl ether	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	94		80 - 120	06/11/12 09:09	06/11/12 18:14	1
Toluene-d8 (Surr)	96		80 - 120	06/11/12 09:09	06/11/12 18:14	1
Ethylbenzene-d10	86		70 - 120	06/11/12 09:09	06/11/12 18:14	1
4-Bromofluorobenzene (Surr)	86		70 - 120	06/11/12 09:09	06/11/12 18:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92		0.10		%			06/20/12 12:54	1
Percent Moisture	7.9		0.10		%			06/20/12 12:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-4

Lab Sample ID: 580-33318-4

Date Collected: 05/30/12 13:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chloromethane	ND		310		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Vinyl chloride	ND		6.2		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Bromomethane	ND	^	110		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chloroethane	ND	^	310		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Trichlorofluoromethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1-Dichloroethene	ND	^	16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Methylene Chloride	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
trans-1,2-Dichloroethene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1-Dichloroethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
2,2-Dichloropropane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
cis-1,2-Dichloroethene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chlorobromomethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chloroform	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1,1-Trichloroethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Carbon tetrachloride	ND		16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1-Dichloropropene	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Benzene	ND		12		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2-Dichloroethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Trichloroethene	ND		12		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2-Dichloropropane	ND	*	9.3		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Dibromomethane	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Dichlorobromomethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
cis-1,3-Dichloropropene	ND		12		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Toluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
trans-1,3-Dichloropropene	ND		12		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1,2-Trichloroethane	ND		9.3		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Tetrachloroethene	ND		16		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,3-Dichloropropane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chlorodibromomethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Ethylene Dibromide	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Chlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Ethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1,1,2-Tetrachloroethane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,1,2,2-Tetrachloroethane	ND		7.8		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
m-Xylene & p-Xylene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
o-Xylene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Styrene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Bromoform	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Isopropylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Bromobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
N-Propylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2,3-Trichloropropane	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
2-Chlorotoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,3,5-Trimethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
4-Chlorotoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
tert-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2,4-Trimethylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
sec-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,3-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
4-Isopropyltoluene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-4

Lab Sample ID: 580-33318-4

Date Collected: 05/30/12 13:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
n-Butylbenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2-Dichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2-Dibromo-3-Chloropropane	ND		160		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2,4-Trichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
1,2,3-Trichlorobenzene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Hexachlorobutadiene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Naphthalene	ND		31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1
Methyl tert-butyl ether	ND	^	31		ug/Kg	☼	06/11/12 09:09	06/11/12 18:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	95		80 - 120	06/11/12 09:09	06/11/12 18:37	1
Toluene-d8 (Surr)	98		80 - 120	06/11/12 09:09	06/11/12 18:37	1
Ethylbenzene-d10	86		70 - 120	06/11/12 09:09	06/11/12 18:37	1
4-Bromofluorobenzene (Surr)	88		70 - 120	06/11/12 09:09	06/11/12 18:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92		0.10		%			06/20/12 12:54	1
Percent Moisture	7.9		0.10		%			06/20/12 12:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-5

Lab Sample ID: 580-33318-5

Date Collected: 05/30/12 17:30

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chloromethane	ND		350		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Vinyl chloride	ND		7.0		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Bromomethane	ND	^	120		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chloroethane	ND	^	350		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Trichlorofluoromethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1-Dichloroethene	ND	^	17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Methylene Chloride	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
trans-1,2-Dichloroethene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1-Dichloroethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
2,2-Dichloropropane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
cis-1,2-Dichloroethene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chlorobromomethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chloroform	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1,1-Trichloroethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Carbon tetrachloride	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1-Dichloropropene	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Benzene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2-Dichloroethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Trichloroethene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2-Dichloropropane	ND	*	10		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Dibromomethane	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Dichlorobromomethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Toluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1,2-Trichloroethane	ND		10		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Tetrachloroethene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,3-Dichloropropane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chlorodibromomethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Ethylene Dibromide	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Chlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Ethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1,1,2-Tetrachloroethane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,1,2,2-Tetrachloroethane	ND		8.7		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
m-Xylene & p-Xylene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
o-Xylene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Styrene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Bromoform	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Isopropylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Bromobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
N-Propylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2,3-Trichloropropane	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
2-Chlorotoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,3,5-Trimethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
4-Chlorotoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
tert-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2,4-Trimethylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
sec-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,3-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
4-Isopropyltoluene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-5

Lab Sample ID: 580-33318-5

Date Collected: 05/30/12 17:30

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
n-Butylbenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2-Dichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2,4-Trichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
1,2,3-Trichlorobenzene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Hexachlorobutadiene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Naphthalene	ND		35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1
Methyl tert-butyl ether	ND	^	35		ug/Kg	☼	06/11/12 09:09	06/11/12 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	90		80 - 120	06/11/12 09:09	06/11/12 19:00	1
Toluene-d8 (Surr)	90		80 - 120	06/11/12 09:09	06/11/12 19:00	1
Ethylbenzene-d10	92		70 - 120	06/11/12 09:09	06/11/12 19:00	1
4-Bromofluorobenzene (Surr)	86		70 - 120	06/11/12 09:09	06/11/12 19:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91		0.10		%			06/20/12 12:54	1
Percent Moisture	8.7		0.10		%			06/20/12 12:54	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-6

Lab Sample ID: 580-33318-6

Date Collected: 05/31/12 09:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 90.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chloromethane	ND		340		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Vinyl chloride	ND		6.8		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Bromomethane	ND	^	120		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chloroethane	ND	^	340		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Trichlorofluoromethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1-Dichloroethene	ND	^	17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Methylene Chloride	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
trans-1,2-Dichloroethene	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1-Dichloroethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
2,2-Dichloropropane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
cis-1,2-Dichloroethene	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chlorobromomethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chloroform	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1,1-Trichloroethane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Carbon tetrachloride	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1-Dichloropropene	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Benzene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2-Dichloroethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Trichloroethene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2-Dichloropropane	ND	*	10		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Dibromomethane	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Dichlorobromomethane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Toluene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1,2-Trichloroethane	ND		10		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Tetrachloroethene	ND		17		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,3-Dichloropropane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chlorodibromomethane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Ethylene Dibromide	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Chlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Ethylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1,1,2-Tetrachloroethane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,1,2,2-Tetrachloroethane	ND		8.5		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
m-Xylene & p-Xylene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
o-Xylene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Styrene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Bromoform	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Isopropylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Bromobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
N-Propylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2,3-Trichloropropane	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
2-Chlorotoluene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,3,5-Trimethylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
4-Chlorotoluene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
tert-Butylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2,4-Trimethylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
sec-Butylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,3-Dichlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
4-Isopropyltoluene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-6

Lab Sample ID: 580-33318-6

Date Collected: 05/31/12 09:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 90.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
n-Butylbenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2-Dichlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2-Dibromo-3-Chloropropane	ND		170		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2,4-Trichlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
1,2,3-Trichlorobenzene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Hexachlorobutadiene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Naphthalene	ND		34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Methyl tert-butyl ether	ND	^	34		ug/Kg	☼	06/11/12 09:09	06/11/12 19:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	91		80 - 120				06/11/12 09:09	06/11/12 19:23	1
Toluene-d8 (Surr)	88		80 - 120				06/11/12 09:09	06/11/12 19:23	1
Ethylbenzene-d10	95		70 - 120				06/11/12 09:09	06/11/12 19:23	1
4-Bromofluorobenzene (Surr)	88		70 - 120				06/11/12 09:09	06/11/12 19:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90		0.10		%			06/20/12 12:54	1
Percent Moisture	9.6		0.10		%			06/20/12 12:54	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: MB 580-113061/1-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113061

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chloromethane	ND		400		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Vinyl chloride	ND		8.0		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Bromomethane	ND	^	140		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chloroethane	ND	^	400		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Trichlorofluoromethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1-Dichloroethene	ND	^	20		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Methylene Chloride	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
trans-1,2-Dichloroethene	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1-Dichloroethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
2,2-Dichloropropane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
cis-1,2-Dichloroethene	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chlorobromomethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chloroform	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1,1-Trichloroethane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Carbon tetrachloride	ND		20		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1-Dichloropropene	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Benzene	ND		16		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2-Dichloroethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Trichloroethene	ND		16		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2-Dichloropropane	ND		12		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Dibromomethane	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Dichlorobromomethane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Toluene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1,2-Trichloroethane	ND		12		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Tetrachloroethene	ND		20		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,3-Dichloropropane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chlorodibromomethane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Ethylene Dibromide	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Chlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Ethylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
m-Xylene & p-Xylene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
o-Xylene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Styrene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Bromoform	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Isopropylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Bromobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
N-Propylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2,3-Trichloropropane	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
2-Chlorotoluene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
4-Chlorotoluene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
tert-Butylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
sec-Butylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: MB 580-113061/1-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113061

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
4-Isopropyltoluene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,4-Dichlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
n-Butylbenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2-Dichlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Hexachlorobutadiene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Naphthalene	ND		40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1
Methyl tert-butyl ether	ND	^	40		ug/Kg		06/11/12 09:09	06/11/12 12:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	94		80 - 120	06/11/12 09:09	06/11/12 12:31	1
Toluene-d8 (Surr)	95		80 - 120	06/11/12 09:09	06/11/12 12:31	1
Ethylbenzene-d10	86		70 - 120	06/11/12 09:09	06/11/12 12:31	1
4-Bromofluorobenzene (Surr)	87		70 - 120	06/11/12 09:09	06/11/12 12:31	1
Trifluorotoluene (Surr)	118		65 - 140	06/11/12 09:09	06/11/12 12:31	1

Lab Sample ID: LCS 580-113061/2-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	800	933	^	ug/Kg		117	35 - 135
Chloromethane	800	823		ug/Kg		103	50 - 130
Vinyl chloride	795	847		ug/Kg		107	60 - 125
Bromomethane	802	1200	^	ug/Kg		150	30 - 160
Chloroethane	799	1070	^	ug/Kg		134	40 - 155
Trichlorofluoromethane	799	962	^	ug/Kg		120	25 - 185
1,1-Dichloroethene	801	1000	^	ug/Kg		125	65 - 135
Methylene Chloride	800	937	^	ug/Kg		117	55 - 140
trans-1,2-Dichloroethene	801	975	^	ug/Kg		122	65 - 135
1,1-Dichloroethane	800	945	^	ug/Kg		118	75 - 125
2,2-Dichloropropane	799	874	^	ug/Kg		109	65 - 135
cis-1,2-Dichloroethene	801	957	^	ug/Kg		119	65 - 125
Chlorobromomethane	802	980	^	ug/Kg		122	70 - 125
Chloroform	800	989	^	ug/Kg		124	70 - 125
1,1,1-Trichloroethane	800	906		ug/Kg		113	70 - 135
Carbon tetrachloride	803	900		ug/Kg		112	65 - 135
1,1-Dichloropropene	802	981	^	ug/Kg		122	70 - 135
Benzene	799	913		ug/Kg		114	75 - 125
1,2-Dichloroethane	801	996	^	ug/Kg		124	70 - 135
Trichloroethene	812	938		ug/Kg		116	75 - 125
1,2-Dichloropropane	800	1010	*	ug/Kg		126	70 - 120
Dibromomethane	802	939	^	ug/Kg		117	75 - 130
Dichlorobromomethane	809	747		ug/Kg		92	70 - 130
cis-1,3-Dichloropropene	790	806		ug/Kg		102	70 - 125
Toluene	801	905		ug/Kg		113	70 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: LCS 580-113061/2-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	812	781		ug/Kg		96	65 - 125
1,1,2-Trichloroethane	802	928		ug/Kg		116	60 - 125
Tetrachloroethene	800	964		ug/Kg		121	65 - 140
1,3-Dichloropropane	801	887		ug/Kg		111	75 - 125
Chlorodibromomethane	810	737		ug/Kg		91	65 - 130
Ethylene Dibromide	802	959		ug/Kg		120	70 - 125
Chlorobenzene	800	750		ug/Kg		94	75 - 125
Ethylbenzene	800	744		ug/Kg		93	75 - 125
1,1,1,2-Tetrachloroethane	802	740		ug/Kg		92	75 - 125
1,1,1,2,2-Tetrachloroethane	799	727		ug/Kg		91	55 - 130
m-Xylene & p-Xylene	1600	1530		ug/Kg		95	80 - 125
o-Xylene	802	720		ug/Kg		90	75 - 125
Styrene	802	790		ug/Kg		98	75 - 125
Bromoform	800	635		ug/Kg		79	55 - 135
Isopropylbenzene	802	759		ug/Kg		95	75 - 130
Bromobenzene	801	737		ug/Kg		92	65 - 120
N-Propylbenzene	800	761		ug/Kg		95	65 - 135
1,2,3-Trichloropropane	802	749		ug/Kg		93	65 - 130
2-Chlorotoluene	801	737		ug/Kg		92	70 - 130
1,3,5-Trimethylbenzene	799	766		ug/Kg		96	65 - 135
4-Chlorotoluene	802	758		ug/Kg		95	75 - 125
tert-Butylbenzene	802	751		ug/Kg		94	65 - 130
1,2,4-Trimethylbenzene	800	764		ug/Kg		96	65 - 135
sec-Butylbenzene	800	747		ug/Kg		93	65 - 130
1,3-Dichlorobenzene	801	746		ug/Kg		93	70 - 125
4-Isopropyltoluene	800	776		ug/Kg		97	75 - 135
1,4-Dichlorobenzene	801	710		ug/Kg		89	70 - 125
n-Butylbenzene	800	749		ug/Kg		94	65 - 140
1,2-Dichlorobenzene	800	717		ug/Kg		90	75 - 120
1,2-Dibromo-3-Chloropropane	801	700		ug/Kg		87	40 - 135
1,2,4-Trichlorobenzene	802	657		ug/Kg		82	65 - 130
1,2,3-Trichlorobenzene	800	666		ug/Kg		83	60 - 135
Hexachlorobutadiene	802	713		ug/Kg		89	55 - 140
Naphthalene	800	605		ug/Kg		76	40 - 125
Methyl tert-butyl ether	800	962	^	ug/Kg		120	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	103		80 - 120
Ethylbenzene-d10	89		70 - 120
4-Bromofluorobenzene (Surr)	100		70 - 120
Trifluorotoluene (Surr)	114		65 - 140

Lab Sample ID: LCSD 580-113061/3-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD
							Limits	RPD	
Dichlorodifluoromethane	800	934	^	ug/Kg		117	35 - 135	0	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: LCSD 580-113061/3-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD
							Limits	RPD	Limit
Chloromethane	800	823		ug/Kg		103	50 - 130	0	30
Vinyl chloride	795	868		ug/Kg		109	60 - 125	2	30
Bromomethane	802	1070	^	ug/Kg		134	30 - 160	11	30
Chloroethane	799	1050	^	ug/Kg		132	40 - 155	1	30
Trichlorofluoromethane	799	1040	^	ug/Kg		130	25 - 185	8	30
1,1-Dichloroethene	801	1010	^	ug/Kg		125	65 - 135	0	30
Methylene Chloride	800	968	^	ug/Kg		121	55 - 140	3	30
trans-1,2-Dichloroethene	801	985	^	ug/Kg		123	65 - 135	1	30
1,1-Dichloroethane	800	951	^	ug/Kg		119	75 - 125	1	30
2,2-Dichloropropane	799	891	^	ug/Kg		112	65 - 135	2	30
cis-1,2-Dichloroethene	801	928	^	ug/Kg		116	65 - 125	3	30
Chlorobromomethane	802	974	^	ug/Kg		121	70 - 125	1	30
Chloroform	800	986	^	ug/Kg		123	70 - 125	0	30
1,1,1-Trichloroethane	800	909		ug/Kg		114	70 - 135	0	30
Carbon tetrachloride	803	888		ug/Kg		111	65 - 135	1	30
1,1-Dichloropropene	802	980	^	ug/Kg		122	70 - 135	0	30
Benzene	799	910		ug/Kg		114	75 - 125	0	30
1,2-Dichloroethane	801	965	^	ug/Kg		120	70 - 135	3	30
Trichloroethene	812	897		ug/Kg		110	75 - 125	5	30
1,2-Dichloropropane	800	1030	*	ug/Kg		129	70 - 120	2	30
Dibromomethane	802	920	^	ug/Kg		115	75 - 130	2	30
Dichlorobromomethane	809	732		ug/Kg		90	70 - 130	2	30
cis-1,3-Dichloropropene	790	786		ug/Kg		100	70 - 125	2	30
Toluene	801	877		ug/Kg		109	70 - 125	3	30
trans-1,3-Dichloropropene	812	784		ug/Kg		97	65 - 125	0	30
1,1,2-Trichloroethane	802	903		ug/Kg		113	60 - 125	3	30
Tetrachloroethene	800	949		ug/Kg		119	65 - 140	2	30
1,3-Dichloropropane	801	864		ug/Kg		108	75 - 125	3	30
Chlorodibromomethane	810	721		ug/Kg		89	65 - 130	2	30
Ethylene Dibromide	802	922		ug/Kg		115	70 - 125	4	30
Chlorobenzene	800	724		ug/Kg		90	75 - 125	4	30
Ethylbenzene	800	722		ug/Kg		90	75 - 125	3	30
1,1,1,2-Tetrachloroethane	802	735		ug/Kg		92	75 - 125	1	30
1,1,2,2-Tetrachloroethane	799	679		ug/Kg		85	55 - 130	7	30
m-Xylene & p-Xylene	1600	1490		ug/Kg		93	80 - 125	3	30
o-Xylene	802	714		ug/Kg		89	75 - 125	1	30
Styrene	802	763		ug/Kg		95	75 - 125	3	30
Bromoform	800	614		ug/Kg		77	55 - 135	3	30
Isopropylbenzene	802	752		ug/Kg		94	75 - 130	1	30
Bromobenzene	801	723		ug/Kg		90	65 - 120	2	30
N-Propylbenzene	800	757		ug/Kg		95	65 - 135	1	30
1,2,3-Trichloropropane	802	740		ug/Kg		92	65 - 130	1	30
2-Chlorotoluene	801	720		ug/Kg		90	70 - 130	2	30
1,3,5-Trimethylbenzene	799	749		ug/Kg		94	65 - 135	2	30
4-Chlorotoluene	802	752		ug/Kg		94	75 - 125	1	30
tert-Butylbenzene	802	743		ug/Kg		93	65 - 130	1	30
1,2,4-Trimethylbenzene	800	744		ug/Kg		93	65 - 135	3	30
sec-Butylbenzene	800	736		ug/Kg		92	65 - 130	2	30
1,3-Dichlorobenzene	801	729		ug/Kg		91	70 - 125	2	30
4-Isopropyltoluene	800	747		ug/Kg		93	75 - 135	4	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: LCSD 580-113061/3-A

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	801	696		ug/Kg		87	70 - 125	2	30
n-Butylbenzene	800	724		ug/Kg		90	65 - 140	3	30
1,2-Dichlorobenzene	800	706		ug/Kg		88	75 - 120	2	30
1,2-Dibromo-3-Chloropropane	801	668		ug/Kg		83	40 - 135	5	30
1,2,4-Trichlorobenzene	802	631		ug/Kg		79	65 - 130	4	30
1,2,3-Trichlorobenzene	800	642		ug/Kg		80	60 - 135	4	30
Hexachlorobutadiene	802	683		ug/Kg		85	55 - 140	4	30
Naphthalene	800	577		ug/Kg		72	40 - 125	5	30
Methyl tert-butyl ether	800	983	^	ug/Kg		123	65 - 125	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	96		80 - 120
Toluene-d8 (Surr)	105		80 - 120
Ethylbenzene-d10	91		70 - 120
4-Bromofluorobenzene (Surr)	102		70 - 120
Trifluorotoluene (Surr)	111		65 - 140

Lab Sample ID: 580-33318-1 MS

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	ND	^	705	949	^	ug/Kg	☼	135	35 - 135
Chloromethane	ND		705	843		ug/Kg	☼	120	50 - 130
Vinyl chloride	ND		700	885	F	ug/Kg	☼	126	60 - 125
Bromomethane	ND	^	706	1120	^	ug/Kg	☼	159	30 - 160
Chloroethane	ND	^	704	1020	^	ug/Kg	☼	144	40 - 155
Trichlorofluoromethane	ND	^	704	1050	^	ug/Kg	☼	149	25 - 185
1,1-Dichloroethene	ND	^	706	1010	^ F	ug/Kg	☼	143	65 - 135
Methylene Chloride	ND	^	705	934	^	ug/Kg	☼	132	55 - 140
trans-1,2-Dichloroethene	ND	^	706	969	^ F	ug/Kg	☼	137	65 - 135
1,1-Dichloroethane	ND	^	705	932	^ F	ug/Kg	☼	132	75 - 125
2,2-Dichloropropane	ND	^	704	895	^	ug/Kg	☼	127	65 - 135
cis-1,2-Dichloroethene	ND	^	706	926	^ F	ug/Kg	☼	131	65 - 125
Chlorobromomethane	ND	^	706	949	^ F	ug/Kg	☼	134	70 - 125
Chloroform	ND	^	705	956	^ F	ug/Kg	☼	135	70 - 125
1,1,1-Trichloroethane	ND		705	888		ug/Kg	☼	126	70 - 135
Carbon tetrachloride	ND		708	883		ug/Kg	☼	125	65 - 135
1,1-Dichloropropene	ND	^	707	961	^ F	ug/Kg	☼	136	70 - 135
Benzene	ND		704	896	F	ug/Kg	☼	127	75 - 125
1,2-Dichloroethane	ND	^	706	939	^	ug/Kg	☼	133	70 - 135
Trichloroethene	ND		715	907	F	ug/Kg	☼	127	75 - 125
1,2-Dichloropropane	ND	*	705	829		ug/Kg	☼	117	70 - 120
Dibromomethane	ND	^	707	906	^	ug/Kg	☼	128	75 - 130
Dichlorobromomethane	ND		713	750		ug/Kg	☼	105	70 - 130
cis-1,3-Dichloropropene	ND		696	785		ug/Kg	☼	113	70 - 125
Toluene	ND		706	863		ug/Kg	☼	122	70 - 125
trans-1,3-Dichloropropene	ND		715	780		ug/Kg	☼	109	65 - 125
1,1,2-Trichloroethane	ND		706	880		ug/Kg	☼	125	60 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: 580-33318-1 MS

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Tetrachloroethene	24		705	956		ug/Kg	*	132	65 - 140
1,3-Dichloropropane	ND		706	846		ug/Kg	*	120	75 - 125
Chlorodibromomethane	ND		713	726		ug/Kg	*	102	65 - 130
Ethylene Dibromide	ND		707	929	F	ug/Kg	*	131	70 - 125
Chlorobenzene	ND		705	713		ug/Kg	*	101	75 - 125
Ethylbenzene	ND		705	715		ug/Kg	*	101	75 - 125
1,1,1,2-Tetrachloroethane	ND		707	708		ug/Kg	*	100	75 - 125
1,1,2,2-Tetrachloroethane	ND		704	668		ug/Kg	*	95	55 - 130
m-Xylene & p-Xylene	ND		1410	1450		ug/Kg	*	102	80 - 125
o-Xylene	ND		707	695		ug/Kg	*	98	75 - 125
Styrene	ND		707	754		ug/Kg	*	107	75 - 125
Bromoform	ND		705	630		ug/Kg	*	89	55 - 135
Isopropylbenzene	ND		707	726		ug/Kg	*	103	75 - 130
Bromobenzene	ND		706	706		ug/Kg	*	100	65 - 120
N-Propylbenzene	ND		705	734		ug/Kg	*	104	65 - 135
1,2,3-Trichloropropane	ND		706	694		ug/Kg	*	98	65 - 130
2-Chlorotoluene	ND		706	703		ug/Kg	*	100	70 - 130
1,3,5-Trimethylbenzene	ND		704	734		ug/Kg	*	104	65 - 135
4-Chlorotoluene	ND		707	733		ug/Kg	*	104	75 - 125
tert-Butylbenzene	ND		706	719		ug/Kg	*	102	65 - 130
1,2,4-Trimethylbenzene	ND		705	735		ug/Kg	*	104	65 - 135
sec-Butylbenzene	ND		705	716		ug/Kg	*	102	65 - 130
1,3-Dichlorobenzene	ND		706	709		ug/Kg	*	101	70 - 125
4-Isopropyltoluene	ND		705	728		ug/Kg	*	103	75 - 135
1,4-Dichlorobenzene	ND		706	675		ug/Kg	*	96	70 - 125
n-Butylbenzene	ND		705	718		ug/Kg	*	102	65 - 140
1,2-Dichlorobenzene	ND		705	686		ug/Kg	*	97	75 - 120
1,2-Dibromo-3-Chloropropane	ND		706	674		ug/Kg	*	96	40 - 135
1,2,4-Trichlorobenzene	ND		706	633		ug/Kg	*	90	65 - 130
1,2,3-Trichlorobenzene	ND		705	622		ug/Kg	*	88	60 - 135
Hexachlorobutadiene	ND		706	688		ug/Kg	*	97	55 - 140
Naphthalene	ND		705	580		ug/Kg	*	82	40 - 125
Methyl tert-butyl ether	ND	^	705	938	^	ug/Kg	*	133	59 - 137

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	97		80 - 120
Toluene-d8 (Surr)	105		80 - 120
Ethylbenzene-d10	94		70 - 120
4-Bromofluorobenzene (Surr)	104		70 - 120
Trifluorotoluene (Surr)	127		65 - 140

Lab Sample ID: 580-33318-1 MSD

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Dichlorodifluoromethane	ND	^	705	940	^	ug/Kg	*	133	35 - 135	1	30
Chloromethane	ND		705	844		ug/Kg	*	120	50 - 130	0	30
Vinyl chloride	ND		700	900	F	ug/Kg	*	128	60 - 125	2	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: 580-33318-1 MSD

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Bromomethane	ND	^	706	936	^	ug/Kg	*	133	30 - 160	18	30
Chloroethane	ND	^	704	1030	^	ug/Kg	*	147	40 - 155	2	30
Trichlorofluoromethane	ND	^	704	1090	^	ug/Kg	*	155	25 - 185	3	30
1,1-Dichloroethene	ND	^	706	1060	^ F	ug/Kg	*	149	65 - 135	4	30
Methylene Chloride	ND	^	705	988	^	ug/Kg	*	140	55 - 140	6	30
trans-1,2-Dichloroethene	ND	^	706	1010	^ F	ug/Kg	*	143	65 - 135	4	30
1,1-Dichloroethane	ND	^	705	971	^ F	ug/Kg	*	138	75 - 125	4	30
2,2-Dichloropropane	ND	^	704	975	^ F	ug/Kg	*	139	65 - 135	9	30
cis-1,2-Dichloroethene	ND	^	706	997	^ F	ug/Kg	*	141	65 - 125	7	30
Chlorobromomethane	ND	^	706	971	^ F	ug/Kg	*	137	70 - 125	2	30
Chloroform	ND	^	705	962	^ F	ug/Kg	*	136	70 - 125	1	30
1,1,1-Trichloroethane	ND		705	924		ug/Kg	*	131	70 - 135	4	30
Carbon tetrachloride	ND		708	933		ug/Kg	*	132	65 - 135	6	30
1,1-Dichloropropene	ND	^	707	951	^	ug/Kg	*	135	70 - 135	1	30
Benzene	ND		704	903	F	ug/Kg	*	128	75 - 125	1	30
1,2-Dichloroethane	ND	^	706	955	^	ug/Kg	*	135	70 - 135	2	30
Trichloroethene	ND		715	907	F	ug/Kg	*	127	75 - 125	0	30
1,2-Dichloropropane	ND	*	705	824		ug/Kg	*	117	70 - 120	1	30
Dibromomethane	ND	^	707	919	^	ug/Kg	*	130	75 - 130	1	30
Dichlorobromomethane	ND		713	756		ug/Kg	*	106	70 - 130	1	30
cis-1,3-Dichloropropene	ND		696	777		ug/Kg	*	112	70 - 125	1	30
Toluene	ND		706	854		ug/Kg	*	121	70 - 125	1	30
trans-1,3-Dichloropropene	ND		715	757		ug/Kg	*	106	65 - 125	3	30
1,1,2-Trichloroethane	ND		706	870		ug/Kg	*	123	60 - 125	1	30
Tetrachloroethene	24		705	1040	F	ug/Kg	*	144	65 - 140	8	30
1,3-Dichloropropane	ND		706	835		ug/Kg	*	118	75 - 125	1	30
Chlorodibromomethane	ND		713	728		ug/Kg	*	102	65 - 130	0	30
Ethylene Dibromide	ND		707	890	F	ug/Kg	*	126	70 - 125	4	30
Chlorobenzene	ND		705	710		ug/Kg	*	101	75 - 125	0	30
Ethylbenzene	ND		705	711		ug/Kg	*	101	75 - 125	1	30
1,1,1,2-Tetrachloroethane	ND		707	736		ug/Kg	*	104	75 - 125	4	30
1,1,2,2-Tetrachloroethane	ND		704	656		ug/Kg	*	93	55 - 130	2	30
m-Xylene & p-Xylene	ND		1410	1460		ug/Kg	*	104	80 - 125	1	30
o-Xylene	ND		707	701		ug/Kg	*	99	75 - 125	1	30
Styrene	ND		707	758		ug/Kg	*	107	75 - 125	0	30
Bromoform	ND		705	628		ug/Kg	*	89	55 - 135	0	30
Isopropylbenzene	ND		707	736		ug/Kg	*	104	75 - 130	1	30
Bromobenzene	ND		706	706		ug/Kg	*	100	65 - 120	0	30
N-Propylbenzene	ND		705	739		ug/Kg	*	105	65 - 135	1	30
1,2,3-Trichloropropane	ND		706	708		ug/Kg	*	100	65 - 130	2	30
2-Chlorotoluene	ND		706	715		ug/Kg	*	101	70 - 130	2	30
1,3,5-Trimethylbenzene	ND		704	751		ug/Kg	*	107	65 - 135	2	30
4-Chlorotoluene	ND		707	728		ug/Kg	*	103	75 - 125	1	30
tert-Butylbenzene	ND		706	736		ug/Kg	*	104	65 - 130	2	30
1,2,4-Trimethylbenzene	ND		705	727		ug/Kg	*	103	65 - 135	1	30
sec-Butylbenzene	ND		705	721		ug/Kg	*	102	65 - 130	1	30
1,3-Dichlorobenzene	ND		706	698		ug/Kg	*	99	70 - 125	2	30
4-Isopropyltoluene	ND		705	739		ug/Kg	*	105	75 - 135	1	30
1,4-Dichlorobenzene	ND		706	675		ug/Kg	*	96	70 - 125	0	30
n-Butylbenzene	ND		705	712		ug/Kg	*	101	65 - 140	1	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

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

Lab Sample ID: 580-33318-1 MSD

Matrix: Solid

Analysis Batch: 113072

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Prep Batch: 113061

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
1,2-Dichlorobenzene	ND		705	676		ug/Kg	*	96	75 - 120	2	30
1,2-Dibromo-3-Chloropropane	ND		706	678		ug/Kg	*	96	40 - 135	1	30
1,2,4-Trichlorobenzene	ND		706	619		ug/Kg	*	88	65 - 130	2	30
1,2,3-Trichlorobenzene	ND		705	608		ug/Kg	*	86	60 - 135	2	30
Hexachlorobutadiene	ND		706	683		ug/Kg	*	97	55 - 140	1	30
Naphthalene	ND		705	575		ug/Kg	*	81	40 - 125	1	30
Methyl tert-butyl ether	ND	^	705	993	^ F	ug/Kg	*	141	59 - 137	6	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	103		80 - 120
Ethylbenzene-d10	94		70 - 120
4-Bromofluorobenzene (Surr)	100		70 - 120
Trifluorotoluene (Surr)	126		65 - 140

Method: D 2216 - Percent Moisture

Lab Sample ID: 580-33318-1 DU

Matrix: Solid

Analysis Batch: 113714

Client Sample ID: MW-17/S-1

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD
	Result	Qualifier	Result	Qualifier				Limit
Percent Solids	88		83		%		5	20
Percent Moisture	12		17	F	%		30	20

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-1

Lab Sample ID: 580-33318-1

Date Collected: 05/29/12 08:40

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 17:28	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Client Sample ID: MW-17/S-2

Lab Sample ID: 580-33318-2

Date Collected: 05/30/12 11:00

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 17:51	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Client Sample ID: MW-17/S-3

Lab Sample ID: 580-33318-3

Date Collected: 05/30/12 13:25

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 18:14	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Client Sample ID: MW-17/S-4

Lab Sample ID: 580-33318-4

Date Collected: 05/30/12 13:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 18:37	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Client Sample ID: MW-17/S-5

Lab Sample ID: 580-33318-5

Date Collected: 05/30/12 17:30

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 19:00	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Client Sample ID: MW-17/S-6

Lab Sample ID: 580-33318-6

Date Collected: 05/31/12 09:50

Matrix: Solid

Date Received: 06/07/12 09:30

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113061	06/11/12 09:09	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113072	06/11/12 19:23	SK	TAL SEA
Total/NA	Analysis	D 2216		1	113714	06/20/12 12:54	ZF	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.



Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Yakima/Frank Ware

TestAmerica Job ID: 580-33318-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-33318-1	MW-17/S-1	Solid	05/29/12 08:40	06/07/12 09:30
580-33318-2	MW-17/S-2	Solid	05/30/12 11:00	06/07/12 09:30
580-33318-3	MW-17/S-3	Solid	05/30/12 13:25	06/07/12 09:30
580-33318-4	MW-17/S-4	Solid	05/30/12 13:50	06/07/12 09:30
580-33318-5	MW-17/S-5	Solid	05/30/12 17:30	06/07/12 09:30
580-33318-6	MW-17/S-6	Solid	05/31/12 09:50	06/07/12 09:30



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 5755 8th Street East, Tacoma, WA 98424
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210
 253-922-2310 FAX 922-5047
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

6/27/2012

CHAIN OF CUSTODY REPORT

Work Order #: 33318

CLIENT: *Hart Coaster*

INVOICE TO: *Bill Keenan*

TURNAROUND REQUEST

In Business Days*

Organic & Inorganic Analyses

Petroleum Hydrocarbon Analyses

STD: 7 5 4 3 2 1 <1

STD: 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

REPORT TO: *Bill Keenan*

ADDRESS: *8910 SW Gemini Dr*

Beaverton, OR 97008

PHONE: *503 906 9200*

FAX: *503 906 9210*

PROJECT NAME: *Eddy Frank wear*

PROJECT NUMBER: *17800-23*

PO. NUMBER: *17800-23*

PRESERVATIVE

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	DATE	TIME	DATE	TIME	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1 MW-17/S-1	5/29/12	0840	X						-1
2 MW-17/S-2	5/30/12	1100	X						-2
3 MW-17/S-3		1325	X						-3
4 MW-17/S-4		1350	X						-4
5 MW-17/S-5		1730	X						-5
6 MW-17/S-6	5/31/12	0950	X						-6
7									
8									
9									
10									

RELEASED BY: *Chris Martin*

PRINT NAME: *Chris Martin*

DATE: *6-6-12*

TIME: *1430*

FIRM: *Hart Coaster*

RECEIVED BY: *Bill Keenan*

PRINT NAME: *Bill Keenan*

DATE: *6/11/12*

TIME: *4:50 PM*

FIRM: *TA SA*

RELEASED BY: *Chris Martin*

PRINT NAME: *Chris Martin*

DATE: *6-6-12*

TIME: *9:30*

FIRM: *Hart Coaster*

RECEIVED BY: *Bill Keenan*

PRINT NAME: *Bill Keenan*

DATE: *6/11/12*

TIME: *4:50 PM*

FIRM: *TA SA*

ADDITIONAL REMARKS:

Cooler/TB DigIRecor³⁴ unc³¹
 Cooler Dsc by *lab* @ Lab
 WetPacks Packing bubble
w/ea 1000 N/A

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-33318-1

Login Number: 33318

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom

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



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310


TestAmerica Job ID: 580-33472-1

Client Project/Site: Frank Wear/Yakima, WA

For:

Hart Crowser, Inc.
8910 SW Gemini Drive
Beaverton, Oregon 97008

Attn: Jill Kiernan



Authorized for release by:
7/12/2012 2:35:30 PM

Kristine Allen
Project Manager I
kristine.allen@testamericainc.com

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results through
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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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Case Narrative

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Job ID: 580-33472-1

Laboratory: TestAmerica Seattle

Narrative

Receipt

The samples were received on 6/15/2012 1:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 5.9° C and 6.0° C.

GC/MS VOA - Method 8260

Every attempt was made to analyze the samples within holding time, however due to capacity issues at the time of sample receipt the following samples were analyzed two days outside of analytical holding time: MW-16 (580-33472-1) and MW-17 (580-33472-2).

The following sample(s) required a dilution for Tetrachloroethene which was performed outside of the analytical holding time: MW-22 (580-33472-7), MW-23 (580-33472-8) and MW-23 DUP (580-33472-9).

Trifluorotoluene surrogate recovery for the following sample(s) was outside the upper control limits: MW-24 (580-33472-10). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Metals

No analytical or quality issues were noted.

General Chemistry - Method 300.0

The following samples required a dilution which was performed outside of the analytical holding time: MW-22 (580-33472-7), MW-23 (580-33472-8).

No other analytical or quality issues were noted.



Definitions/Glossary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-16

Lab Sample ID: 580-33472-1

Date Collected: 06/13/12 16:57

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Chloromethane	ND	H	5.0		ug/L			06/29/12 00:29	1
Vinyl chloride	ND	H	1.0		ug/L			06/29/12 00:29	1
Bromomethane	ND	H	5.0		ug/L			06/29/12 00:29	1
Chloroethane	ND	H	5.0		ug/L			06/29/12 00:29	1
Trichlorofluoromethane	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:29	1
Methylene Chloride	ND	H	3.0		ug/L			06/29/12 00:29	1
trans-1,2-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1-Dichloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
2,2-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:29	1
cis-1,2-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:29	1
Chlorobromomethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Chloroform	4.6	H	1.0		ug/L			06/29/12 00:29	1
1,1,1-Trichloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Carbon tetrachloride	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:29	1
Benzene	1.5	H	1.0		ug/L			06/29/12 00:29	1
1,2-Dichloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Trichloroethene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:29	1
Dibromomethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Dichlorobromomethane	ND	H	1.0		ug/L			06/29/12 00:29	1
cis-1,3-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:29	1
Toluene	ND	H	1.0		ug/L			06/29/12 00:29	1
trans-1,3-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1,2-Trichloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Tetrachloroethene	36	H	1.0		ug/L			06/29/12 00:29	1
1,3-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:29	1
Chlorodibromomethane	ND	H	1.0		ug/L			06/29/12 00:29	1
Ethylene Dibromide	ND	H	1.0		ug/L			06/29/12 00:29	1
Chlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
Ethylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1,1,2-Tetrachloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
1,1,2,2-Tetrachloroethane	ND	H	1.0		ug/L			06/29/12 00:29	1
m-Xylene & p-Xylene	ND	H	2.0		ug/L			06/29/12 00:29	1
o-Xylene	ND	H	1.0		ug/L			06/29/12 00:29	1
Styrene	ND	H	1.0		ug/L			06/29/12 00:29	1
Bromoform	ND	H	1.0		ug/L			06/29/12 00:29	1
Isopropylbenzene	2.7	H	1.0		ug/L			06/29/12 00:29	1
Bromobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
N-Propylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2,3-Trichloropropane	ND	H	1.0		ug/L			06/29/12 00:29	1
2-Chlorotoluene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,3,5-Trimethylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
4-Chlorotoluene	ND	H	1.0		ug/L			06/29/12 00:29	1
tert-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2,4-Trimethylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
sec-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,3-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
4-Isopropyltoluene	ND	H	1.0		ug/L			06/29/12 00:29	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-16

Lab Sample ID: 580-33472-1

Date Collected: 06/13/12 16:57

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
n-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2-Dibromo-3-Chloropropane	ND	H	2.0		ug/L			06/29/12 00:29	1
1,2,4-Trichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
1,2,3-Trichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:29	1
Hexachlorobutadiene	ND	H	1.0		ug/L			06/29/12 00:29	1
Naphthalene	ND	H	1.0		ug/L			06/29/12 00:29	1
Methyl tert-butyl ether	ND	H	1.0		ug/L			06/29/12 00:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	103		80 - 120					06/29/12 00:29	1
Toluene-d8 (Surr)	98		85 - 120					06/29/12 00:29	1
Ethylbenzene-d10	96		80 - 120					06/29/12 00:29	1
4-Bromofluorobenzene (Surr)	99		75 - 120					06/29/12 00:29	1
Trifluorotoluene (Surr)	105		80 - 120					06/29/12 00:29	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-17

Lab Sample ID: 580-33472-2

Date Collected: 06/13/12 17:33

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Chloromethane	ND	H	5.0		ug/L			06/29/12 00:57	1
Vinyl chloride	ND	H	1.0		ug/L			06/29/12 00:57	1
Bromomethane	ND	H	5.0		ug/L			06/29/12 00:57	1
Chloroethane	ND	H	5.0		ug/L			06/29/12 00:57	1
Trichlorofluoromethane	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:57	1
Methylene Chloride	ND	H	3.0		ug/L			06/29/12 00:57	1
trans-1,2-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1-Dichloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
2,2-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:57	1
cis-1,2-Dichloroethene	ND	H	1.0		ug/L			06/29/12 00:57	1
Chlorobromomethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Chloroform	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1,1-Trichloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Carbon tetrachloride	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:57	1
Benzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2-Dichloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Trichloroethene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:57	1
Dibromomethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Dichlorobromomethane	ND	H	1.0		ug/L			06/29/12 00:57	1
cis-1,3-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:57	1
Toluene	ND	H	1.0		ug/L			06/29/12 00:57	1
trans-1,3-Dichloropropene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1,2-Trichloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Tetrachloroethene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,3-Dichloropropane	ND	H	1.0		ug/L			06/29/12 00:57	1
Chlorodibromomethane	ND	H	1.0		ug/L			06/29/12 00:57	1
Ethylene Dibromide	ND	H	1.0		ug/L			06/29/12 00:57	1
Chlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
Ethylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1,1,2-Tetrachloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
1,1,1,2-Tetrachloroethane	ND	H	1.0		ug/L			06/29/12 00:57	1
m-Xylene & p-Xylene	ND	H	2.0		ug/L			06/29/12 00:57	1
o-Xylene	ND	H	1.0		ug/L			06/29/12 00:57	1
Styrene	ND	H	1.0		ug/L			06/29/12 00:57	1
Bromoform	ND	H	1.0		ug/L			06/29/12 00:57	1
Isopropylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
Bromobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
N-Propylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2,3-Trichloropropane	ND	H	1.0		ug/L			06/29/12 00:57	1
2-Chlorotoluene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,3,5-Trimethylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
4-Chlorotoluene	ND	H	1.0		ug/L			06/29/12 00:57	1
tert-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2,4-Trimethylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
sec-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,3-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
4-Isopropyltoluene	ND	H	1.0		ug/L			06/29/12 00:57	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-17

Lab Sample ID: 580-33472-2

Date Collected: 06/13/12 17:33

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
n-Butylbenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2-Dichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2-Dibromo-3-Chloropropane	ND	H	2.0		ug/L			06/29/12 00:57	1
1,2,4-Trichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
1,2,3-Trichlorobenzene	ND	H	1.0		ug/L			06/29/12 00:57	1
Hexachlorobutadiene	ND	H	1.0		ug/L			06/29/12 00:57	1
Naphthalene	ND	H	1.0		ug/L			06/29/12 00:57	1
Methyl tert-butyl ether	ND	H	1.0		ug/L			06/29/12 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120					06/29/12 00:57	1
Toluene-d8 (Surr)	100		85 - 120					06/29/12 00:57	1
Ethylbenzene-d10	97		80 - 120					06/29/12 00:57	1
4-Bromofluorobenzene (Surr)	95		75 - 120					06/29/12 00:57	1
Trifluorotoluene (Surr)	105		80 - 120					06/29/12 00:57	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-18

Lab Sample ID: 580-33472-3

Date Collected: 06/14/12 14:13

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 17:57	1
Chloromethane	ND		5.0		ug/L			06/28/12 17:57	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 17:57	1
Bromomethane	ND		5.0		ug/L			06/28/12 17:57	1
Chloroethane	ND		5.0		ug/L			06/28/12 17:57	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 17:57	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 17:57	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 17:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 17:57	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 17:57	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 17:57	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 17:57	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 17:57	1
Chloroform	ND		1.0		ug/L			06/28/12 17:57	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 17:57	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 17:57	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 17:57	1
Benzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 17:57	1
Trichloroethene	ND		1.0		ug/L			06/28/12 17:57	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 17:57	1
Dibromomethane	ND		1.0		ug/L			06/28/12 17:57	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 17:57	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 17:57	1
Toluene	ND		1.0		ug/L			06/28/12 17:57	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 17:57	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 17:57	1
Tetrachloroethene	1.2		1.0		ug/L			06/28/12 17:57	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 17:57	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 17:57	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 17:57	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 17:57	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 17:57	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 17:57	1
o-Xylene	ND		1.0		ug/L			06/28/12 17:57	1
Styrene	ND		1.0		ug/L			06/28/12 17:57	1
Bromoform	ND		1.0		ug/L			06/28/12 17:57	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
Bromobenzene	ND		1.0		ug/L			06/28/12 17:57	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 17:57	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 17:57	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 17:57	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 17:57	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-18

Lab Sample ID: 580-33472-3

Date Collected: 06/14/12 14:13

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 17:57	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 17:57	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 17:57	1
Naphthalene	ND		1.0		ug/L			06/28/12 17:57	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 17:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	103		80 - 120					06/28/12 17:57	1
Toluene-d8 (Surr)	95		85 - 120					06/28/12 17:57	1
Ethylbenzene-d10	99		80 - 120					06/28/12 17:57	1
4-Bromofluorobenzene (Surr)	101		75 - 120					06/28/12 17:57	1
Trifluorotoluene (Surr)	108		80 - 120					06/28/12 17:57	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2.3		0.040		mg/L		06/27/12 11:43	06/27/12 19:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		0.90		mg/L			06/15/12 18:52	1
Nitrate as N	2.2		0.90		mg/L			06/15/12 18:52	1
Sulfate	12		1.2		mg/L			06/15/12 18:52	1
Total Organic Carbon	ND		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-19

Lab Sample ID: 580-33472-4

Date Collected: 06/15/12 09:13

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 22:40	1
Chloromethane	ND		5.0		ug/L			06/28/12 22:40	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 22:40	1
Bromomethane	ND		5.0		ug/L			06/28/12 22:40	1
Chloroethane	ND		5.0		ug/L			06/28/12 22:40	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 22:40	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 22:40	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 22:40	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 22:40	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 22:40	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 22:40	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 22:40	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 22:40	1
Chloroform	ND		1.0		ug/L			06/28/12 22:40	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 22:40	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 22:40	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 22:40	1
Benzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 22:40	1
Trichloroethene	ND		1.0		ug/L			06/28/12 22:40	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 22:40	1
Dibromomethane	ND		1.0		ug/L			06/28/12 22:40	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 22:40	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 22:40	1
Toluene	ND		1.0		ug/L			06/28/12 22:40	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 22:40	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 22:40	1
Tetrachloroethene	ND		1.0		ug/L			06/28/12 22:40	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 22:40	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 22:40	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 22:40	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 22:40	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 22:40	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 22:40	1
o-Xylene	ND		1.0		ug/L			06/28/12 22:40	1
Styrene	ND		1.0		ug/L			06/28/12 22:40	1
Bromoform	ND		1.0		ug/L			06/28/12 22:40	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
Bromobenzene	ND		1.0		ug/L			06/28/12 22:40	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 22:40	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 22:40	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 22:40	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 22:40	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-19

Lab Sample ID: 580-33472-4

Date Collected: 06/15/12 09:13

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 22:40	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 22:40	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 22:40	1
Naphthalene	ND		1.0		ug/L			06/28/12 22:40	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120		06/28/12 22:40	1
Toluene-d8 (Surr)	98		85 - 120		06/28/12 22:40	1
Ethylbenzene-d10	99		80 - 120		06/28/12 22:40	1
4-Bromofluorobenzene (Surr)	98		75 - 120		06/28/12 22:40	1
Trifluorotoluene (Surr)	104		80 - 120		06/28/12 22:40	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2.9		0.040		mg/L		06/27/12 11:43	06/27/12 19:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.5		0.90		mg/L			06/15/12 19:07	1
Nitrate as N	1.5		0.90		mg/L			06/15/12 19:07	1
Sulfate	12		1.2		mg/L			06/15/12 19:07	1
Total Organic Carbon	ND		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-20

Lab Sample ID: 580-33472-5

Date Collected: 06/15/12 09:41

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 23:08	1
Chloromethane	ND		5.0		ug/L			06/28/12 23:08	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 23:08	1
Bromomethane	ND		5.0		ug/L			06/28/12 23:08	1
Chloroethane	ND		5.0		ug/L			06/28/12 23:08	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 23:08	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 23:08	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 23:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 23:08	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 23:08	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 23:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 23:08	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 23:08	1
Chloroform	5.4		1.0		ug/L			06/28/12 23:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 23:08	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 23:08	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 23:08	1
Benzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 23:08	1
Trichloroethene	ND		1.0		ug/L			06/28/12 23:08	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 23:08	1
Dibromomethane	ND		1.0		ug/L			06/28/12 23:08	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 23:08	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 23:08	1
Toluene	ND		1.0		ug/L			06/28/12 23:08	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 23:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 23:08	1
Tetrachloroethene	16		1.0		ug/L			06/28/12 23:08	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 23:08	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 23:08	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 23:08	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 23:08	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 23:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 23:08	1
o-Xylene	ND		1.0		ug/L			06/28/12 23:08	1
Styrene	ND		1.0		ug/L			06/28/12 23:08	1
Bromoform	ND		1.0		ug/L			06/28/12 23:08	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
Bromobenzene	ND		1.0		ug/L			06/28/12 23:08	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 23:08	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 23:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 23:08	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 23:08	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-20

Lab Sample ID: 580-33472-5

Date Collected: 06/15/12 09:41

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 23:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 23:08	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 23:08	1
Naphthalene	ND		1.0		ug/L			06/28/12 23:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		06/28/12 23:08	1
Toluene-d8 (Surr)	98		85 - 120		06/28/12 23:08	1
Ethylbenzene-d10	93		80 - 120		06/28/12 23:08	1
4-Bromofluorobenzene (Surr)	98		75 - 120		06/28/12 23:08	1
Trifluorotoluene (Surr)	107		80 - 120		06/28/12 23:08	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.20		0.040		mg/L		06/27/12 11:43	06/27/12 19:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		0.90		mg/L			06/15/12 19:21	1
Nitrate as N	4.9		0.90		mg/L			06/15/12 19:21	1
Sulfate	11		1.2		mg/L			06/15/12 19:21	1
Total Organic Carbon	1.0		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-21

Lab Sample ID: 580-33472-6

Date Collected: 06/14/12 13:21

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 18:25	1
Chloromethane	ND		5.0		ug/L			06/28/12 18:25	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 18:25	1
Bromomethane	ND		5.0		ug/L			06/28/12 18:25	1
Chloroethane	ND		5.0		ug/L			06/28/12 18:25	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 18:25	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 18:25	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 18:25	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 18:25	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 18:25	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 18:25	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 18:25	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 18:25	1
Chloroform	10		1.0		ug/L			06/28/12 18:25	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 18:25	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 18:25	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 18:25	1
Benzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 18:25	1
Trichloroethene	ND		1.0		ug/L			06/28/12 18:25	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 18:25	1
Dibromomethane	ND		1.0		ug/L			06/28/12 18:25	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 18:25	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 18:25	1
Toluene	ND		1.0		ug/L			06/28/12 18:25	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 18:25	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 18:25	1
Tetrachloroethene	28		1.0		ug/L			06/28/12 18:25	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 18:25	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 18:25	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 18:25	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 18:25	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 18:25	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 18:25	1
o-Xylene	ND		1.0		ug/L			06/28/12 18:25	1
Styrene	ND		1.0		ug/L			06/28/12 18:25	1
Bromoform	ND		1.0		ug/L			06/28/12 18:25	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
Bromobenzene	ND		1.0		ug/L			06/28/12 18:25	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 18:25	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 18:25	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 18:25	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 18:25	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-21

Lab Sample ID: 580-33472-6

Date Collected: 06/14/12 13:21

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 18:25	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 18:25	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 18:25	1
Naphthalene	ND		1.0		ug/L			06/28/12 18:25	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 18:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					06/28/12 18:25	1
Toluene-d8 (Surr)	98		85 - 120					06/28/12 18:25	1
Ethylbenzene-d10	101		80 - 120					06/28/12 18:25	1
4-Bromofluorobenzene (Surr)	95		75 - 120					06/28/12 18:25	1
Trifluorotoluene (Surr)	109		80 - 120					06/28/12 18:25	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.077		0.040		mg/L		06/27/12 11:43	06/27/12 19:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42		0.90		mg/L			06/15/12 18:38	1
Nitrate as N	3.8		0.90		mg/L			06/15/12 18:38	1
Sulfate	9.3		1.2		mg/L			06/15/12 18:38	1
Total Organic Carbon	1.0		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-22

Lab Sample ID: 580-33472-7

Date Collected: 06/14/12 12:11

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 18:51	1
Chloromethane	ND		5.0		ug/L			06/28/12 18:51	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 18:51	1
Bromomethane	ND		5.0		ug/L			06/28/12 18:51	1
Chloroethane	ND		5.0		ug/L			06/28/12 18:51	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 18:51	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 18:51	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 18:51	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 18:51	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 18:51	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 18:51	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 18:51	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 18:51	1
Chloroform	3.5		1.0		ug/L			06/28/12 18:51	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 18:51	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 18:51	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 18:51	1
Benzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 18:51	1
Trichloroethene	ND		1.0		ug/L			06/28/12 18:51	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 18:51	1
Dibromomethane	ND		1.0		ug/L			06/28/12 18:51	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 18:51	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 18:51	1
Toluene	ND		1.0		ug/L			06/28/12 18:51	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 18:51	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 18:51	1
Tetrachloroethene	760	H	10		ug/L			06/29/12 18:12	10
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 18:51	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 18:51	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 18:51	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 18:51	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 18:51	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 18:51	1
o-Xylene	ND		1.0		ug/L			06/28/12 18:51	1
Styrene	ND		1.0		ug/L			06/28/12 18:51	1
Bromoform	ND		1.0		ug/L			06/28/12 18:51	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
Bromobenzene	ND		1.0		ug/L			06/28/12 18:51	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 18:51	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 18:51	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 18:51	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 18:51	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-22

Lab Sample ID: 580-33472-7

Date Collected: 06/14/12 12:11

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 18:51	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 18:51	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 18:51	1
Naphthalene	ND		1.0		ug/L			06/28/12 18:51	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 18:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120		06/28/12 18:51	1
Fluorobenzene (Surr)	101		80 - 120		06/29/12 18:12	10
Toluene-d8 (Surr)	96		85 - 120		06/28/12 18:51	1
Toluene-d8 (Surr)	98		85 - 120		06/29/12 18:12	10
Ethylbenzene-d10	99		80 - 120		06/28/12 18:51	1
Ethylbenzene-d10	97		80 - 120		06/29/12 18:12	10
4-Bromofluorobenzene (Surr)	103		75 - 120		06/28/12 18:51	1
4-Bromofluorobenzene (Surr)	95		75 - 120		06/29/12 18:12	10
Trifluorotoluene (Surr)	109		80 - 120		06/28/12 18:51	1
Trifluorotoluene (Surr)	113		80 - 120		06/29/12 18:12	10

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.60		0.040		mg/L		06/27/12 11:43	06/27/12 19:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47		0.90		mg/L			06/15/12 18:09	1
Nitrate as N	4.5	H	4.5		mg/L			06/18/12 10:03	5
Sulfate	12		1.2		mg/L			06/15/12 18:09	1
Total Organic Carbon	1.1		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-23

Lab Sample ID: 580-33472-8

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 19:18	1
Chloromethane	ND		5.0		ug/L			06/28/12 19:18	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 19:18	1
Bromomethane	ND		5.0		ug/L			06/28/12 19:18	1
Chloroethane	ND		5.0		ug/L			06/28/12 19:18	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 19:18	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 19:18	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 19:18	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 19:18	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 19:18	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 19:18	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 19:18	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 19:18	1
Chloroform	3.7		1.0		ug/L			06/28/12 19:18	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 19:18	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 19:18	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 19:18	1
Benzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 19:18	1
Trichloroethene	ND		1.0		ug/L			06/28/12 19:18	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 19:18	1
Dibromomethane	ND		1.0		ug/L			06/28/12 19:18	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 19:18	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 19:18	1
Toluene	ND		1.0		ug/L			06/28/12 19:18	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 19:18	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 19:18	1
Tetrachloroethene	11		1.0		ug/L			06/28/12 19:18	1
Tetrachloroethene	7.4 H		1.0		ug/L			07/11/12 12:04	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 19:18	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 19:18	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 19:18	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 19:18	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 19:18	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 19:18	1
o-Xylene	ND		1.0		ug/L			06/28/12 19:18	1
Styrene	ND		1.0		ug/L			06/28/12 19:18	1
Bromoform	ND		1.0		ug/L			06/28/12 19:18	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
Bromobenzene	ND		1.0		ug/L			06/28/12 19:18	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 19:18	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 19:18	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 19:18	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-23

Lab Sample ID: 580-33472-8

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 19:18	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 19:18	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 19:18	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 19:18	1
Naphthalene	ND		1.0		ug/L			06/28/12 19:18	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 19:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					06/28/12 19:18	1
Toluene-d8 (Surr)	97		85 - 120					06/28/12 19:18	1
Ethylbenzene-d10	97		80 - 120					06/28/12 19:18	1
4-Bromofluorobenzene (Surr)	98		75 - 120					06/28/12 19:18	1
Trifluorotoluene (Surr)	106		80 - 120					06/28/12 19:18	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.26		0.040		mg/L		06/27/12 11:43	06/27/12 19:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32		0.90		mg/L			06/15/12 17:55	1
Nitrate as N	18	H	9.0		mg/L			06/18/12 09:48	10
Sulfate	15		1.2		mg/L			06/15/12 17:55	1
Total Organic Carbon	ND		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-23 DUP

Lab Sample ID: 580-33472-9

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 19:44	1
Chloromethane	ND		5.0		ug/L			06/28/12 19:44	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 19:44	1
Bromomethane	ND		5.0		ug/L			06/28/12 19:44	1
Chloroethane	ND		5.0		ug/L			06/28/12 19:44	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 19:44	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 19:44	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 19:44	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 19:44	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 19:44	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 19:44	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 19:44	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 19:44	1
Chloroform	3.5		1.0		ug/L			06/28/12 19:44	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 19:44	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 19:44	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 19:44	1
Benzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 19:44	1
Trichloroethene	ND		1.0		ug/L			06/28/12 19:44	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 19:44	1
Dibromomethane	ND		1.0		ug/L			06/28/12 19:44	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 19:44	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 19:44	1
Toluene	ND		1.0		ug/L			06/28/12 19:44	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 19:44	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 19:44	1
Tetrachloroethene	10		1.0		ug/L			06/28/12 19:44	1
Tetrachloroethene	7.2 H		1.0		ug/L			07/11/12 12:30	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 19:44	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 19:44	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 19:44	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 19:44	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 19:44	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 19:44	1
o-Xylene	ND		1.0		ug/L			06/28/12 19:44	1
Styrene	ND		1.0		ug/L			06/28/12 19:44	1
Bromoform	ND		1.0		ug/L			06/28/12 19:44	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
Bromobenzene	ND		1.0		ug/L			06/28/12 19:44	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 19:44	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 19:44	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 19:44	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-23 DUP

Lab Sample ID: 580-33472-9

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 19:44	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 19:44	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 19:44	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 19:44	1
Naphthalene	ND		1.0		ug/L			06/28/12 19:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 19:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					06/28/12 19:44	1
Toluene-d8 (Surr)	100		85 - 120					06/28/12 19:44	1
Ethylbenzene-d10	96		80 - 120					06/28/12 19:44	1
4-Bromofluorobenzene (Surr)	97		75 - 120					06/28/12 19:44	1
Trifluorotoluene (Surr)	108		80 - 120					06/28/12 19:44	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-24

Lab Sample ID: 580-33472-10

Date Collected: 06/14/12 12:46

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 20:12	1
Chloromethane	ND		5.0		ug/L			06/28/12 20:12	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 20:12	1
Bromomethane	ND		5.0		ug/L			06/28/12 20:12	1
Chloroethane	ND		5.0		ug/L			06/28/12 20:12	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 20:12	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 20:12	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 20:12	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 20:12	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 20:12	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 20:12	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 20:12	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 20:12	1
Chloroform	11		1.0		ug/L			06/28/12 20:12	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 20:12	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 20:12	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 20:12	1
Benzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 20:12	1
Trichloroethene	ND		1.0		ug/L			06/28/12 20:12	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 20:12	1
Dibromomethane	ND		1.0		ug/L			06/28/12 20:12	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 20:12	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 20:12	1
Toluene	ND		1.0		ug/L			06/28/12 20:12	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 20:12	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 20:12	1
Tetrachloroethene	130		1.0		ug/L			06/28/12 20:12	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 20:12	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 20:12	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 20:12	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 20:12	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 20:12	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 20:12	1
o-Xylene	ND		1.0		ug/L			06/28/12 20:12	1
Styrene	ND		1.0		ug/L			06/28/12 20:12	1
Bromoform	ND		1.0		ug/L			06/28/12 20:12	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
Bromobenzene	ND		1.0		ug/L			06/28/12 20:12	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 20:12	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 20:12	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 20:12	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 20:12	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-24

Lab Sample ID: 580-33472-10

Date Collected: 06/14/12 12:46

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 20:12	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 20:12	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 20:12	1
Naphthalene	ND		1.0		ug/L			06/28/12 20:12	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120		06/28/12 20:12	1
Toluene-d8 (Surr)	100		85 - 120		06/28/12 20:12	1
Ethylbenzene-d10	102		80 - 120		06/28/12 20:12	1
4-Bromofluorobenzene (Surr)	97		75 - 120		06/28/12 20:12	1
Trifluorotoluene (Surr)	132	X	80 - 120		06/28/12 20:12	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.11		0.040		mg/L		06/27/12 11:43	06/27/12 19:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		0.90		mg/L			06/15/12 18:24	1
Nitrate as N	3.6		0.90		mg/L			06/15/12 18:24	1
Sulfate	9.3		1.2		mg/L			06/15/12 18:24	1
Total Organic Carbon	ND		1.0		mg/L			06/22/12 17:05	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-25

Lab Sample ID: 580-33472-11

Date Collected: 06/15/12 10:16

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 23:34	1
Chloromethane	ND		5.0		ug/L			06/28/12 23:34	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 23:34	1
Bromomethane	ND		5.0		ug/L			06/28/12 23:34	1
Chloroethane	ND		5.0		ug/L			06/28/12 23:34	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 23:34	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 23:34	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 23:34	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 23:34	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 23:34	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 23:34	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 23:34	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 23:34	1
Chloroform	2.4		1.0		ug/L			06/28/12 23:34	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 23:34	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 23:34	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 23:34	1
Benzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 23:34	1
Trichloroethene	ND		1.0		ug/L			06/28/12 23:34	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 23:34	1
Dibromomethane	ND		1.0		ug/L			06/28/12 23:34	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 23:34	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 23:34	1
Toluene	ND		1.0		ug/L			06/28/12 23:34	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 23:34	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 23:34	1
Tetrachloroethene	6.5		1.0		ug/L			06/28/12 23:34	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 23:34	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 23:34	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 23:34	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 23:34	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 23:34	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 23:34	1
o-Xylene	ND		1.0		ug/L			06/28/12 23:34	1
Styrene	ND		1.0		ug/L			06/28/12 23:34	1
Bromoform	ND		1.0		ug/L			06/28/12 23:34	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
Bromobenzene	ND		1.0		ug/L			06/28/12 23:34	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 23:34	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 23:34	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 23:34	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 23:34	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-25

Lab Sample ID: 580-33472-11

Date Collected: 06/15/12 10:16

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 23:34	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 23:34	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 23:34	1
Naphthalene	ND		1.0		ug/L			06/28/12 23:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 23:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	99		80 - 120					06/28/12 23:34	1
Toluene-d8 (Surr)	98		85 - 120					06/28/12 23:34	1
Ethylbenzene-d10	101		80 - 120					06/28/12 23:34	1
4-Bromofluorobenzene (Surr)	100		75 - 120					06/28/12 23:34	1
Trifluorotoluene (Surr)	108		80 - 120					06/28/12 23:34	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-33472-12

Date Collected: 06/15/12 00:00

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/12 00:01	1
Chloromethane	ND		5.0		ug/L			06/29/12 00:01	1
Vinyl chloride	ND		1.0		ug/L			06/29/12 00:01	1
Bromomethane	ND		5.0		ug/L			06/29/12 00:01	1
Chloroethane	ND		5.0		ug/L			06/29/12 00:01	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/12 00:01	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/12 00:01	1
Methylene Chloride	ND		3.0		ug/L			06/29/12 00:01	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/12 00:01	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/12 00:01	1
2,2-Dichloropropane	ND		1.0		ug/L			06/29/12 00:01	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/29/12 00:01	1
Chlorobromomethane	ND		1.0		ug/L			06/29/12 00:01	1
Chloroform	ND		1.0		ug/L			06/29/12 00:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/12 00:01	1
Carbon tetrachloride	ND		1.0		ug/L			06/29/12 00:01	1
1,1-Dichloropropene	ND		1.0		ug/L			06/29/12 00:01	1
Benzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2-Dichloroethane	ND		1.0		ug/L			06/29/12 00:01	1
Trichloroethene	ND		1.0		ug/L			06/29/12 00:01	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/12 00:01	1
Dibromomethane	ND		1.0		ug/L			06/29/12 00:01	1
Dichlorobromomethane	ND		1.0		ug/L			06/29/12 00:01	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/29/12 00:01	1
Toluene	ND		1.0		ug/L			06/29/12 00:01	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/29/12 00:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/29/12 00:01	1
Tetrachloroethene	ND		1.0		ug/L			06/29/12 00:01	1
1,3-Dichloropropane	ND		1.0		ug/L			06/29/12 00:01	1
Chlorodibromomethane	ND		1.0		ug/L			06/29/12 00:01	1
Ethylene Dibromide	ND		1.0		ug/L			06/29/12 00:01	1
Chlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
Ethylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/29/12 00:01	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/29/12 00:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/29/12 00:01	1
o-Xylene	ND		1.0		ug/L			06/29/12 00:01	1
Styrene	ND		1.0		ug/L			06/29/12 00:01	1
Bromoform	ND		1.0		ug/L			06/29/12 00:01	1
Isopropylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
Bromobenzene	ND		1.0		ug/L			06/29/12 00:01	1
N-Propylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/29/12 00:01	1
2-Chlorotoluene	ND		1.0		ug/L			06/29/12 00:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
4-Chlorotoluene	ND		1.0		ug/L			06/29/12 00:01	1
tert-Butylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
sec-Butylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
4-Isopropyltoluene	ND		1.0		ug/L			06/29/12 00:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-33472-12

Date Collected: 06/15/12 00:00

Matrix: Water

Date Received: 06/15/12 13:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
n-Butylbenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/29/12 00:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/29/12 00:01	1
Hexachlorobutadiene	ND		1.0		ug/L			06/29/12 00:01	1
Naphthalene	ND		1.0		ug/L			06/29/12 00:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/29/12 00:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					06/29/12 00:01	1
Toluene-d8 (Surr)	96		85 - 120					06/29/12 00:01	1
Ethylbenzene-d10	100		80 - 120					06/29/12 00:01	1
4-Bromofluorobenzene (Surr)	96		75 - 120					06/29/12 00:01	1
Trifluorotoluene (Surr)	103		80 - 120					06/29/12 00:01	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: HC Drum

Lab Sample ID: 580-33472-13

Date Collected: 06/13/12 11:57

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 92.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chloromethane	ND		360		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Vinyl chloride	ND		7.2		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Bromomethane	ND		130		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chloroethane	ND		360		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Trichlorofluoromethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1-Dichloroethene	ND		18		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Methylene Chloride	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
trans-1,2-Dichloroethene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1-Dichloroethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
2,2-Dichloropropane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
cis-1,2-Dichloroethene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chlorobromomethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chloroform	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1,1-Trichloroethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Carbon tetrachloride	ND		18		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1-Dichloropropene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Benzene	ND		14		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2-Dichloroethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Trichloroethene	ND		14		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2-Dichloropropane	ND		11		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Dibromomethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Dichlorobromomethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
cis-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Toluene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
trans-1,3-Dichloropropene	ND		14		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1,2-Trichloroethane	ND		11		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Tetrachloroethene	28		18		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,3-Dichloropropane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chlorodibromomethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Ethylene Dibromide	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Chlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Ethylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1,1,2-Tetrachloroethane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,1,2,2-Tetrachloroethane	ND		9.0		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
m-Xylene & p-Xylene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
o-Xylene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Styrene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Bromoform	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Isopropylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Bromobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
N-Propylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2,3-Trichloropropane	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
2-Chlorotoluene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,3,5-Trimethylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
4-Chlorotoluene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
tert-Butylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2,4-Trimethylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
sec-Butylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,3-Dichlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
4-Isopropyltoluene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: HC Drum

Lab Sample ID: 580-33472-13

Date Collected: 06/13/12 11:57

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 92.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
n-Butylbenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2-Dichlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2-Dibromo-3-Chloropropane	ND		180		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2,4-Trichlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
1,2,3-Trichlorobenzene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Hexachlorobutadiene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Naphthalene	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Methyl tert-butyl ether	ND		36		ug/Kg	☼	06/19/12 10:27	06/19/12 17:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	98		80 - 120				06/19/12 10:27	06/19/12 17:13	1
Toluene-d8 (Surr)	97		80 - 120				06/19/12 10:27	06/19/12 17:13	1
Ethylbenzene-d10	94		70 - 120				06/19/12 10:27	06/19/12 17:13	1
4-Bromofluorobenzene (Surr)	94		70 - 120				06/19/12 10:27	06/19/12 17:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		100		ug/L			06/26/12 14:43	100
1,1-Dichloroethene	ND		100		ug/L			06/26/12 14:43	100
2-Butanone	ND		1000		ug/L			06/26/12 14:43	100
Chloroform	ND		100		ug/L			06/26/12 14:43	100
Carbon tetrachloride	ND		100		ug/L			06/26/12 14:43	100
Benzene	ND		100		ug/L			06/26/12 14:43	100
1,2-Dichloroethane	ND		100		ug/L			06/26/12 14:43	100
Trichloroethene	ND		100		ug/L			06/26/12 14:43	100
Tetrachloroethene	ND		100		ug/L			06/26/12 14:43	100
Chlorobenzene	ND		100		ug/L			06/26/12 14:43	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120					06/26/12 14:43	100
Toluene-d8 (Surr)	96		85 - 120					06/26/12 14:43	100
Ethylbenzene-d10	94		80 - 120					06/26/12 14:43	100
4-Bromofluorobenzene (Surr)	100		75 - 120					06/26/12 14:43	100
Trifluorotoluene (Surr)	104		80 - 120					06/26/12 14:43	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92		0.10		%			06/25/12 14:33	1
Percent Moisture	8.0		0.10		%			06/25/12 14:33	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: KJ Drum

Lab Sample ID: 580-33472-14

Date Collected: 06/14/12 15:00

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 94.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chloromethane	ND		430		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Vinyl chloride	ND		8.6		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Bromomethane	ND		150		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chloroethane	ND		430		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Trichlorofluoromethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1-Dichloroethene	ND		21		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Methylene Chloride	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
trans-1,2-Dichloroethene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1-Dichloroethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
2,2-Dichloropropane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
cis-1,2-Dichloroethene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chlorobromomethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chloroform	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1,1-Trichloroethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Carbon tetrachloride	ND		21		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1-Dichloropropene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Benzene	ND		17		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2-Dichloroethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Trichloroethene	ND		17		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2-Dichloropropane	ND		13		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Dibromomethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Dichlorobromomethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
cis-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Toluene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
trans-1,3-Dichloropropene	ND		17		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1,2-Trichloroethane	ND		13		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Tetrachloroethene	23		21		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,3-Dichloropropane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chlorodibromomethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Ethylene Dibromide	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Chlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Ethylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1,1,2-Tetrachloroethane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,1,2,2-Tetrachloroethane	ND		11		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
m-Xylene & p-Xylene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
o-Xylene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Styrene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Bromoform	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Isopropylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Bromobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
N-Propylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2,3-Trichloropropane	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
2-Chlorotoluene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,3,5-Trimethylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
4-Chlorotoluene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
tert-Butylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2,4-Trimethylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
sec-Butylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,3-Dichlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
4-Isopropyltoluene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1

Client Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: KJ Drum

Lab Sample ID: 580-33472-14

Date Collected: 06/14/12 15:00

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 94.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
n-Butylbenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2-Dichlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2-Dibromo-3-Chloropropane	ND		210		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2,4-Trichlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
1,2,3-Trichlorobenzene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Hexachlorobutadiene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Naphthalene	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Methyl tert-butyl ether	ND		43		ug/Kg	☼	06/19/12 10:27	06/19/12 17:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	94		80 - 120				06/19/12 10:27	06/19/12 17:59	1
Toluene-d8 (Surr)	98		80 - 120				06/19/12 10:27	06/19/12 17:59	1
Ethylbenzene-d10	95		70 - 120				06/19/12 10:27	06/19/12 17:59	1
4-Bromofluorobenzene (Surr)	90		70 - 120				06/19/12 10:27	06/19/12 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		100		ug/L			06/26/12 15:07	100
1,1-Dichloroethene	ND		100		ug/L			06/26/12 15:07	100
2-Butanone	ND		1000		ug/L			06/26/12 15:07	100
Chloroform	ND		100		ug/L			06/26/12 15:07	100
Carbon tetrachloride	ND		100		ug/L			06/26/12 15:07	100
Benzene	ND		100		ug/L			06/26/12 15:07	100
1,2-Dichloroethane	ND		100		ug/L			06/26/12 15:07	100
Trichloroethene	ND		100		ug/L			06/26/12 15:07	100
Tetrachloroethene	ND		100		ug/L			06/26/12 15:07	100
Chlorobenzene	ND		100		ug/L			06/26/12 15:07	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120				06/26/12 15:07	06/26/12 15:07	100
Toluene-d8 (Surr)	98		85 - 120				06/26/12 15:07	06/26/12 15:07	100
Ethylbenzene-d10	92		80 - 120				06/26/12 15:07	06/26/12 15:07	100
4-Bromofluorobenzene (Surr)	95		75 - 120				06/26/12 15:07	06/26/12 15:07	100
Trifluorotoluene (Surr)	100		80 - 120				06/26/12 15:07	06/26/12 15:07	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94		0.10		%			06/25/12 14:33	1
Percent Moisture	6.0		0.10		%			06/25/12 14:33	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-113626/1-A

Matrix: Solid

Analysis Batch: 113645

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 113626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chloromethane	ND		400		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Vinyl chloride	ND		8.0		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Bromomethane	ND		140		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chloroethane	ND		400		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Trichlorofluoromethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1-Dichloroethene	ND		20		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Methylene Chloride	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
trans-1,2-Dichloroethene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1-Dichloroethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
2,2-Dichloropropane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
cis-1,2-Dichloroethene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chlorobromomethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chloroform	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1,1-Trichloroethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Carbon tetrachloride	ND		20		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1-Dichloropropene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Benzene	ND		16		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2-Dichloroethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Trichloroethene	ND		16		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2-Dichloropropane	ND		12		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Dibromomethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Dichlorobromomethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
cis-1,3-Dichloropropene	ND		16		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Toluene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
trans-1,3-Dichloropropene	ND		16		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1,2-Trichloroethane	ND		12		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Tetrachloroethene	ND		20		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,3-Dichloropropane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chlorodibromomethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Ethylene Dibromide	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Chlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Ethylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1,1,2-Tetrachloroethane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,1,2,2-Tetrachloroethane	ND		10		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
m-Xylene & p-Xylene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
o-Xylene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Styrene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Bromoform	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Isopropylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Bromobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
N-Propylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2,3-Trichloropropane	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
2-Chlorotoluene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,3,5-Trimethylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
4-Chlorotoluene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
tert-Butylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2,4-Trimethylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
sec-Butylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-113626/1-A
Matrix: Solid
Analysis Batch: 113645

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 113626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
4-Isopropyltoluene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,4-Dichlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
n-Butylbenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2-Dichlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2-Dibromo-3-Chloropropane	ND		200		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2,4-Trichlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
1,2,3-Trichlorobenzene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Hexachlorobutadiene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Naphthalene	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1
Methyl tert-butyl ether	ND		40		ug/Kg		06/19/12 10:27	06/19/12 12:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	93		80 - 120	06/19/12 10:27	06/19/12 12:42	1
Toluene-d8 (Surr)	97		80 - 120	06/19/12 10:27	06/19/12 12:42	1
Ethylbenzene-d10	92		70 - 120	06/19/12 10:27	06/19/12 12:42	1
4-Bromofluorobenzene (Surr)	93		70 - 120	06/19/12 10:27	06/19/12 12:42	1
Trifluorotoluene (Surr)	105		65 - 140	06/19/12 10:27	06/19/12 12:42	1

Lab Sample ID: LCS 580-113626/2-A
Matrix: Solid
Analysis Batch: 113645

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 113626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	800	726		ug/Kg		91	35 - 135
Chloromethane	800	654		ug/Kg		82	50 - 130
Vinyl chloride	795	711		ug/Kg		89	60 - 125
Bromomethane	802	944		ug/Kg		118	30 - 160
Chloroethane	799	978		ug/Kg		122	40 - 155
Trichlorofluoromethane	799	907		ug/Kg		114	25 - 185
1,1-Dichloroethene	801	803		ug/Kg		100	65 - 135
Methylene Chloride	800	763		ug/Kg		95	55 - 140
trans-1,2-Dichloroethene	801	756		ug/Kg		94	65 - 135
1,1-Dichloroethane	800	735		ug/Kg		92	75 - 125
2,2-Dichloropropane	799	744		ug/Kg		93	65 - 135
cis-1,2-Dichloroethene	801	782		ug/Kg		98	65 - 125
Chlorobromomethane	802	770		ug/Kg		96	70 - 125
Chloroform	800	732		ug/Kg		91	70 - 125
1,1,1-Trichloroethane	800	721		ug/Kg		90	70 - 135
Carbon tetrachloride	803	713		ug/Kg		89	65 - 135
1,1-Dichloropropene	802	774		ug/Kg		96	70 - 135
Benzene	799	725		ug/Kg		91	75 - 125
1,2-Dichloroethane	801	769		ug/Kg		96	70 - 135
Trichloroethene	812	805		ug/Kg		99	75 - 125
1,2-Dichloropropane	800	946		ug/Kg		118	70 - 120
Dibromomethane	802	845		ug/Kg		105	75 - 130
Dichlorobromomethane	809	700		ug/Kg		87	70 - 130
cis-1,3-Dichloropropene	790	716		ug/Kg		91	70 - 125
Toluene	801	785		ug/Kg		98	70 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCS 580-113626/2-A

Matrix: Solid

Analysis Batch: 113645

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 113626

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	812	723		ug/Kg		89	65 - 125
1,1,2-Trichloroethane	802	777		ug/Kg		97	60 - 125
Tetrachloroethene	800	782		ug/Kg		98	65 - 140
1,3-Dichloropropane	801	784		ug/Kg		98	75 - 125
Chlorodibromomethane	810	714		ug/Kg		88	65 - 130
Ethylene Dibromide	802	812		ug/Kg		101	70 - 125
Chlorobenzene	800	779		ug/Kg		97	75 - 125
Ethylbenzene	800	791		ug/Kg		99	75 - 125
1,1,1,2-Tetrachloroethane	802	821		ug/Kg		102	75 - 125
1,1,1,2-Tetrachloroethane	799	775		ug/Kg		97	55 - 130
m-Xylene & p-Xylene	1600	1590		ug/Kg		100	80 - 125
o-Xylene	802	770		ug/Kg		96	75 - 125
Styrene	802	802		ug/Kg		100	75 - 125
Bromoform	800	683		ug/Kg		85	55 - 135
Isopropylbenzene	802	777		ug/Kg		97	75 - 130
Bromobenzene	801	811		ug/Kg		101	65 - 120
N-Propylbenzene	800	804		ug/Kg		101	65 - 135
1,2,3-Trichloropropane	802	850		ug/Kg		106	65 - 130
2-Chlorotoluene	801	751		ug/Kg		94	70 - 130
1,3,5-Trimethylbenzene	799	782		ug/Kg		98	65 - 135
4-Chlorotoluene	802	765		ug/Kg		95	75 - 125
tert-Butylbenzene	802	776		ug/Kg		97	65 - 130
1,2,4-Trimethylbenzene	800	778		ug/Kg		97	65 - 135
sec-Butylbenzene	800	782		ug/Kg		98	65 - 130
1,3-Dichlorobenzene	801	777		ug/Kg		97	70 - 125
4-Isopropyltoluene	800	785		ug/Kg		98	75 - 135
1,4-Dichlorobenzene	801	745		ug/Kg		93	70 - 125
n-Butylbenzene	800	787		ug/Kg		98	65 - 140
1,2-Dichlorobenzene	800	742		ug/Kg		93	75 - 120
1,2-Dibromo-3-Chloropropane	801	683		ug/Kg		85	40 - 135
1,2,4-Trichlorobenzene	802	741		ug/Kg		92	65 - 130
1,2,3-Trichlorobenzene	800	828		ug/Kg		103	60 - 135
Hexachlorobutadiene	802	778		ug/Kg		97	55 - 140
Naphthalene	800	675		ug/Kg		84	40 - 125
Methyl tert-butyl ether	800	749		ug/Kg		94	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	95		80 - 120
Toluene-d8 (Surr)	101		80 - 120
Ethylbenzene-d10	97		70 - 120
4-Bromofluorobenzene (Surr)	100		70 - 120
Trifluorotoluene (Surr)	101		65 - 140

Lab Sample ID: MB 580-114267/5

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	ND		1.0		ug/L			06/28/12 15:57	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-114267/5

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		5.0		ug/L			06/28/12 15:57	1
Vinyl chloride	ND		1.0		ug/L			06/28/12 15:57	1
Bromomethane	ND		5.0		ug/L			06/28/12 15:57	1
Chloroethane	ND		5.0		ug/L			06/28/12 15:57	1
Trichlorofluoromethane	ND		1.0		ug/L			06/28/12 15:57	1
1,1-Dichloroethene	ND		1.0		ug/L			06/28/12 15:57	1
Methylene Chloride	ND		3.0		ug/L			06/28/12 15:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 15:57	1
1,1-Dichloroethane	ND		1.0		ug/L			06/28/12 15:57	1
2,2-Dichloropropane	ND		1.0		ug/L			06/28/12 15:57	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/28/12 15:57	1
Chlorobromomethane	ND		1.0		ug/L			06/28/12 15:57	1
Chloroform	ND		1.0		ug/L			06/28/12 15:57	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/28/12 15:57	1
Carbon tetrachloride	ND		1.0		ug/L			06/28/12 15:57	1
1,1-Dichloropropene	ND		1.0		ug/L			06/28/12 15:57	1
Benzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2-Dichloroethane	ND		1.0		ug/L			06/28/12 15:57	1
Trichloroethene	ND		1.0		ug/L			06/28/12 15:57	1
1,2-Dichloropropane	ND		1.0		ug/L			06/28/12 15:57	1
Dibromomethane	ND		1.0		ug/L			06/28/12 15:57	1
Dichlorobromomethane	ND		1.0		ug/L			06/28/12 15:57	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 15:57	1
Toluene	ND		1.0		ug/L			06/28/12 15:57	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/28/12 15:57	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/28/12 15:57	1
Tetrachloroethene	ND		1.0		ug/L			06/28/12 15:57	1
1,3-Dichloropropane	ND		1.0		ug/L			06/28/12 15:57	1
Chlorodibromomethane	ND		1.0		ug/L			06/28/12 15:57	1
Ethylene Dibromide	ND		1.0		ug/L			06/28/12 15:57	1
Chlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
Ethylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 15:57	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/28/12 15:57	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/28/12 15:57	1
o-Xylene	ND		1.0		ug/L			06/28/12 15:57	1
Styrene	ND		1.0		ug/L			06/28/12 15:57	1
Bromoform	ND		1.0		ug/L			06/28/12 15:57	1
Isopropylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
Bromobenzene	ND		1.0		ug/L			06/28/12 15:57	1
N-Propylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/28/12 15:57	1
2-Chlorotoluene	ND		1.0		ug/L			06/28/12 15:57	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
4-Chlorotoluene	ND		1.0		ug/L			06/28/12 15:57	1
tert-Butylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
sec-Butylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
4-Isopropyltoluene	ND		1.0		ug/L			06/28/12 15:57	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-114267/5

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
n-Butylbenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/28/12 15:57	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/28/12 15:57	1
Hexachlorobutadiene	ND		1.0		ug/L			06/28/12 15:57	1
Naphthalene	ND		1.0		ug/L			06/28/12 15:57	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/28/12 15:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	101		80 - 120		06/28/12 15:57	1
Toluene-d8 (Surr)	98		85 - 120		06/28/12 15:57	1
Ethylbenzene-d10	98		80 - 120		06/28/12 15:57	1
4-Bromofluorobenzene (Surr)	101		75 - 120		06/28/12 15:57	1
Trifluorotoluene (Surr)	104		80 - 120		06/28/12 15:57	1

Lab Sample ID: LCS 580-114267/6

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	20.1	24.4		ug/L		121	30 - 155
Chloromethane	20.1	22.7		ug/L		113	40 - 125
Vinyl chloride	19.9	24.8		ug/L		124	50 - 145
Bromomethane	20.1	24.4		ug/L		121	30 - 145
Chloroethane	20.0	23.1		ug/L		115	60 - 135
Trichlorofluoromethane	20.0	25.2		ug/L		126	60 - 145
1,1-Dichloroethene	20.1	22.6		ug/L		112	70 - 130
Methylene Chloride	20.1	21.1		ug/L		105	55 - 140
trans-1,2-Dichloroethene	20.1	22.5		ug/L		112	60 - 140
1,1-Dichloroethane	20.1	22.2		ug/L		111	70 - 135
2,2-Dichloropropane	20.0	24.5		ug/L		122	70 - 135
cis-1,2-Dichloroethene	20.1	22.0		ug/L		110	70 - 125
Chlorobromomethane	20.1	21.9		ug/L		109	65 - 130
Chloroform	20.1	22.1		ug/L		110	65 - 135
1,1,1-Trichloroethane	20.1	23.5		ug/L		117	65 - 130
Carbon tetrachloride	20.1	23.5		ug/L		116	65 - 140
1,1-Dichloropropene	20.1	22.5		ug/L		112	75 - 130
Benzene	20.0	22.2		ug/L		111	80 - 120
1,2-Dichloroethane	20.1	22.1		ug/L		110	70 - 130
Trichloroethene	20.3	21.8		ug/L		107	70 - 125
1,2-Dichloropropane	20.1	22.6		ug/L		113	75 - 125
Dibromomethane	20.1	21.0		ug/L		105	75 - 125
Dichlorobromomethane	20.3	22.7		ug/L		112	75 - 120
cis-1,3-Dichloropropene	19.8	21.3		ug/L		108	70 - 130
Toluene	20.1	21.9		ug/L		109	75 - 120
trans-1,3-Dichloropropene	20.4	20.1		ug/L		98	55 - 140
1,1,2-Trichloroethane	20.1	21.5		ug/L		107	75 - 125

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCS 580-114267/6

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	22.0		ug/L		110	45 - 150
1,3-Dichloropropane	20.1	22.0		ug/L		109	75 - 125
Chlorodibromomethane	20.3	22.0		ug/L		108	60 - 135
Ethylene Dibromide	20.1	22.4		ug/L		112	80 - 120
Chlorobenzene	20.0	20.6		ug/L		103	80 - 120
Ethylbenzene	20.0	21.7		ug/L		108	75 - 125
1,1,1,2-Tetrachloroethane	20.1	22.0		ug/L		110	80 - 130
1,1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	65 - 130
m-Xylene & p-Xylene	40.2	43.6		ug/L		108	75 - 130
o-Xylene	20.1	21.6		ug/L		107	80 - 120
Styrene	20.1	21.9		ug/L		109	65 - 135
Bromoform	20.1	18.5		ug/L		92	70 - 130
Isopropylbenzene	20.1	22.0		ug/L		110	75 - 125
Bromobenzene	20.1	20.9		ug/L		104	75 - 125
N-Propylbenzene	20.0	22.4		ug/L		112	70 - 130
1,2,3-Trichloropropane	20.1	20.7		ug/L		103	75 - 125
2-Chlorotoluene	20.1	21.0		ug/L		104	75 - 125
1,3,5-Trimethylbenzene	20.0	21.6		ug/L		108	75 - 130
4-Chlorotoluene	20.1	19.7		ug/L		98	75 - 130
tert-Butylbenzene	20.1	22.0		ug/L		109	70 - 130
1,2,4-Trimethylbenzene	20.0	21.5		ug/L		107	75 - 130
sec-Butylbenzene	20.1	22.1		ug/L		110	70 - 125
1,3-Dichlorobenzene	20.1	20.6		ug/L		103	75 - 125
4-Isopropyltoluene	20.1	22.2		ug/L		110	75 - 130
1,4-Dichlorobenzene	20.1	20.4		ug/L		102	75 - 125
n-Butylbenzene	20.1	22.6		ug/L		112	70 - 135
1,2-Dichlorobenzene	20.1	20.4		ug/L		102	70 - 120
1,2-Dibromo-3-Chloropropane	20.1	21.1		ug/L		105	50 - 130
1,2,4-Trichlorobenzene	20.1	20.4		ug/L		102	65 - 135
1,2,3-Trichlorobenzene	20.1	20.8		ug/L		104	55 - 140
Hexachlorobutadiene	20.1	22.0		ug/L		109	50 - 140
Naphthalene	20.1	20.6		ug/L		103	55 - 140
Methyl tert-butyl ether	20.1	22.9		ug/L		114	65 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	101		80 - 120
Toluene-d8 (Surr)	101		85 - 120
Ethylbenzene-d10	97		80 - 120
4-Bromofluorobenzene (Surr)	100		75 - 120
Trifluorotoluene (Surr)	112		80 - 120

Lab Sample ID: LCSD 580-114267/7

Matrix: Water

Analysis Batch: 114267

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
Dichlorodifluoromethane	20.1	23.0		ug/L		115	30 - 155	6	30
Chloromethane	20.1	21.9		ug/L		109	40 - 125	3	30
Vinyl chloride	19.9	23.8		ug/L		119	50 - 145	4	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCSD 580-1142677

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
Bromomethane	20.1	22.7		ug/L		113	30 - 145	7	30
Chloroethane	20.0	19.8		ug/L		99	60 - 135	15	30
Trichlorofluoromethane	20.0	23.8		ug/L		119	60 - 145	6	30
1,1-Dichloroethene	20.1	23.2		ug/L		115	70 - 130	3	30
Methylene Chloride	20.1	20.4		ug/L		102	55 - 140	3	30
trans-1,2-Dichloroethene	20.1	22.3		ug/L		111	60 - 140	1	30
1,1-Dichloroethane	20.1	22.1		ug/L		110	70 - 135	0	30
2,2-Dichloropropane	20.0	24.0		ug/L		120	70 - 135	2	30
cis-1,2-Dichloroethene	20.1	22.0		ug/L		109	70 - 125	0	30
Chlorobromomethane	20.1	21.8		ug/L		108	65 - 130	1	30
Chloroform	20.1	22.4		ug/L		112	65 - 135	1	30
1,1,1-Trichloroethane	20.1	23.6		ug/L		117	65 - 130	0	30
Carbon tetrachloride	20.1	23.9		ug/L		119	65 - 140	2	30
1,1-Dichloropropene	20.1	22.3		ug/L		111	75 - 130	1	30
Benzene	20.0	21.8		ug/L		109	80 - 120	2	30
1,2-Dichloroethane	20.1	22.4		ug/L		111	70 - 130	1	30
Trichloroethene	20.3	22.3		ug/L		109	70 - 125	2	30
1,2-Dichloropropane	20.1	23.1		ug/L		115	75 - 125	2	30
Dibromomethane	20.1	21.3		ug/L		106	75 - 125	1	30
Dichlorobromomethane	20.3	23.1		ug/L		114	75 - 120	2	30
cis-1,3-Dichloropropene	19.8	21.3		ug/L		107	70 - 130	0	30
Toluene	20.1	22.1		ug/L		110	75 - 120	1	30
trans-1,3-Dichloropropene	20.4	20.5		ug/L		101	55 - 140	2	30
1,1,2-Trichloroethane	20.1	21.8		ug/L		108	75 - 125	1	30
Tetrachloroethene	20.0	22.3		ug/L		111	45 - 150	1	30
1,3-Dichloropropane	20.1	21.9		ug/L		109	75 - 125	0	30
Chlorodibromomethane	20.3	21.6		ug/L		106	60 - 135	2	30
Ethylene Dibromide	20.1	22.8		ug/L		113	80 - 120	1	30
Chlorobenzene	20.0	20.9		ug/L		104	80 - 120	1	30
Ethylbenzene	20.0	22.1		ug/L		110	75 - 125	2	30
1,1,1,2-Tetrachloroethane	20.1	22.6		ug/L		112	80 - 130	3	30
1,1,2,2-Tetrachloroethane	20.0	21.0		ug/L		105	65 - 130	1	30
m-Xylene & p-Xylene	40.2	44.5		ug/L		111	75 - 130	2	30
o-Xylene	20.1	22.2		ug/L		110	80 - 120	3	30
Styrene	20.1	22.6		ug/L		112	65 - 135	3	30
Bromoform	20.1	18.2		ug/L		90	70 - 130	2	30
Isopropylbenzene	20.1	22.7		ug/L		113	75 - 125	3	30
Bromobenzene	20.1	21.6		ug/L		108	75 - 125	3	30
N-Propylbenzene	20.0	22.8		ug/L		114	70 - 130	2	30
1,2,3-Trichloropropane	20.1	21.1		ug/L		105	75 - 125	2	30
2-Chlorotoluene	20.1	22.0		ug/L		109	75 - 125	5	30
1,3,5-Trimethylbenzene	20.0	22.7		ug/L		113	75 - 130	5	30
4-Chlorotoluene	20.1	20.1		ug/L		100	75 - 130	2	30
tert-Butylbenzene	20.1	22.1		ug/L		110	70 - 130	1	30
1,2,4-Trimethylbenzene	20.0	21.7		ug/L		108	75 - 130	1	30
sec-Butylbenzene	20.1	22.4		ug/L		112	70 - 125	2	30
1,3-Dichlorobenzene	20.1	21.0		ug/L		104	75 - 125	2	30
4-Isopropyltoluene	20.1	22.2		ug/L		111	75 - 130	0	30
1,4-Dichlorobenzene	20.1	20.6		ug/L		103	75 - 125	1	30
n-Butylbenzene	20.1	21.8		ug/L		109	70 - 135	3	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCSD 580-1142677

Matrix: Water

Analysis Batch: 114267

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichlorobenzene	20.1	20.3		ug/L		101	70 - 120	0	30
1,2-Dibromo-3-Chloropropane	20.1	21.9		ug/L		109	50 - 130	4	30
1,2,4-Trichlorobenzene	20.1	21.3		ug/L		106	65 - 135	4	30
1,2,3-Trichlorobenzene	20.1	21.0		ug/L		105	55 - 140	1	30
Hexachlorobutadiene	20.1	21.0		ug/L		104	50 - 140	5	30
Naphthalene	20.1	21.4		ug/L		107	55 - 140	4	30
Methyl tert-butyl ether	20.1	21.9		ug/L		109	65 - 125	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Fluorobenzene (Surr)	101		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	104		80 - 120
4-Bromofluorobenzene (Surr)	106		75 - 120
Trifluorotoluene (Surr)	112		80 - 120

Lab Sample ID: MB 580-114344/5

Matrix: Water

Analysis Batch: 114344

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			06/29/12 16:36	1
Chloromethane	ND		5.0		ug/L			06/29/12 16:36	1
Vinyl chloride	ND		1.0		ug/L			06/29/12 16:36	1
Bromomethane	ND		5.0		ug/L			06/29/12 16:36	1
Chloroethane	ND		5.0		ug/L			06/29/12 16:36	1
Trichlorofluoromethane	ND		1.0		ug/L			06/29/12 16:36	1
1,1-Dichloroethene	ND		1.0		ug/L			06/29/12 16:36	1
Methylene Chloride	ND		3.0		ug/L			06/29/12 16:36	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			06/29/12 16:36	1
1,1-Dichloroethane	ND		1.0		ug/L			06/29/12 16:36	1
2,2-Dichloropropane	ND		1.0		ug/L			06/29/12 16:36	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			06/29/12 16:36	1
Chlorobromomethane	ND		1.0		ug/L			06/29/12 16:36	1
Chloroform	ND		1.0		ug/L			06/29/12 16:36	1
1,1,1-Trichloroethane	ND		1.0		ug/L			06/29/12 16:36	1
Carbon tetrachloride	ND		1.0		ug/L			06/29/12 16:36	1
1,1-Dichloropropene	ND		1.0		ug/L			06/29/12 16:36	1
Benzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2-Dichloroethane	ND		1.0		ug/L			06/29/12 16:36	1
Trichloroethene	ND		1.0		ug/L			06/29/12 16:36	1
1,2-Dichloropropane	ND		1.0		ug/L			06/29/12 16:36	1
Dibromomethane	ND		1.0		ug/L			06/29/12 16:36	1
Dichlorobromomethane	ND		1.0		ug/L			06/29/12 16:36	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			06/29/12 16:36	1
Toluene	ND		1.0		ug/L			06/29/12 16:36	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			06/29/12 16:36	1
1,1,2-Trichloroethane	ND		1.0		ug/L			06/29/12 16:36	1
Tetrachloroethene	ND		1.0		ug/L			06/29/12 16:36	1
1,3-Dichloropropane	ND		1.0		ug/L			06/29/12 16:36	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-114344/5

Matrix: Water

Analysis Batch: 114344

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlorodibromomethane	ND		1.0		ug/L			06/29/12 16:36	1
Ethylene Dibromide	ND		1.0		ug/L			06/29/12 16:36	1
Chlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
Ethylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			06/29/12 16:36	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			06/29/12 16:36	1
m-Xylene & p-Xylene	ND		2.0		ug/L			06/29/12 16:36	1
o-Xylene	ND		1.0		ug/L			06/29/12 16:36	1
Styrene	ND		1.0		ug/L			06/29/12 16:36	1
Bromoform	ND		1.0		ug/L			06/29/12 16:36	1
Isopropylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
Bromobenzene	ND		1.0		ug/L			06/29/12 16:36	1
N-Propylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2,3-Trichloropropane	ND		1.0		ug/L			06/29/12 16:36	1
2-Chlorotoluene	ND		1.0		ug/L			06/29/12 16:36	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
4-Chlorotoluene	ND		1.0		ug/L			06/29/12 16:36	1
tert-Butylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
sec-Butylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,3-Dichlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
4-Isopropyltoluene	ND		1.0		ug/L			06/29/12 16:36	1
1,4-Dichlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
n-Butylbenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2-Dichlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			06/29/12 16:36	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			06/29/12 16:36	1
Hexachlorobutadiene	ND		1.0		ug/L			06/29/12 16:36	1
Naphthalene	ND		1.0		ug/L			06/29/12 16:36	1
Methyl tert-butyl ether	ND		1.0		ug/L			06/29/12 16:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Fluorobenzene (Surr)	99		80 - 120		06/29/12 16:36	1
Toluene-d8 (Surr)	97		85 - 120		06/29/12 16:36	1
Ethylbenzene-d10	97		80 - 120		06/29/12 16:36	1
4-Bromofluorobenzene (Surr)	98		75 - 120		06/29/12 16:36	1
Trifluorotoluene (Surr)	110		80 - 120		06/29/12 16:36	1

Lab Sample ID: LCS 580-114344/6

Matrix: Water

Analysis Batch: 114344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Dichlorodifluoromethane	20.1	22.0		ug/L		109	30 - 155
Chloromethane	20.1	22.1		ug/L		110	40 - 125
Vinyl chloride	19.9	22.9		ug/L		115	50 - 145
Bromomethane	20.1	22.3		ug/L		111	30 - 145
Chloroethane	20.0	22.7		ug/L		113	60 - 135

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCS 580-114344/6

Matrix: Water

Analysis Batch: 114344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	20.0	24.3		ug/L		121	60 - 145
1,1-Dichloroethene	20.1	23.1		ug/L		115	70 - 130
Methylene Chloride	20.1	20.6		ug/L		103	55 - 140
trans-1,2-Dichloroethene	20.1	23.0		ug/L		115	60 - 140
1,1-Dichloroethane	20.1	22.0		ug/L		110	70 - 135
2,2-Dichloropropane	20.0	24.2		ug/L		121	70 - 135
cis-1,2-Dichloroethene	20.1	22.3		ug/L		111	70 - 125
Chlorobromomethane	20.1	21.6		ug/L		108	65 - 130
Chloroform	20.1	21.9		ug/L		109	65 - 135
1,1,1-Trichloroethane	20.1	23.7		ug/L		118	65 - 130
Carbon tetrachloride	20.1	23.2		ug/L		115	65 - 140
1,1-Dichloropropene	20.1	22.6		ug/L		112	75 - 130
Benzene	20.0	21.8		ug/L		109	80 - 120
1,2-Dichloroethane	20.1	20.9		ug/L		104	70 - 130
Trichloroethene	20.3	22.0		ug/L		108	70 - 125
1,2-Dichloropropane	20.1	22.5		ug/L		112	75 - 125
Dibromomethane	20.1	21.3		ug/L		106	75 - 125
Dichlorobromomethane	20.3	22.4		ug/L		111	75 - 120
cis-1,3-Dichloropropene	19.8	21.0		ug/L		106	70 - 130
Toluene	20.1	22.3		ug/L		111	75 - 120
trans-1,3-Dichloropropene	20.4	19.0		ug/L		93	55 - 140
1,1,2-Trichloroethane	20.1	21.6		ug/L		107	75 - 125
Tetrachloroethene	20.0	22.6		ug/L		113	45 - 150
1,3-Dichloropropane	20.1	21.4		ug/L		107	75 - 125
Chlorodibromomethane	20.3	21.7		ug/L		107	60 - 135
Ethylene Dibromide	20.1	21.6		ug/L		108	80 - 120
Chlorobenzene	20.0	21.2		ug/L		106	80 - 120
Ethylbenzene	20.0	22.3		ug/L		111	75 - 125
1,1,1,2-Tetrachloroethane	20.1	22.7		ug/L		113	80 - 130
1,1,2,2-Tetrachloroethane	20.0	20.3		ug/L		101	65 - 130
m-Xylene & p-Xylene	40.2	44.6		ug/L		111	75 - 130
o-Xylene	20.1	22.4		ug/L		111	80 - 120
Styrene	20.1	22.4		ug/L		111	65 - 135
Bromoform	20.1	16.2		ug/L		81	70 - 130
Isopropylbenzene	20.1	23.1		ug/L		115	75 - 125
Bromobenzene	20.1	21.4		ug/L		106	75 - 125
N-Propylbenzene	20.0	23.1		ug/L		115	70 - 130
1,2,3-Trichloropropane	20.1	20.5		ug/L		102	75 - 125
2-Chlorotoluene	20.1	22.0		ug/L		109	75 - 125
1,3,5-Trimethylbenzene	20.0	22.8		ug/L		114	75 - 130
4-Chlorotoluene	20.1	22.0		ug/L		110	75 - 130
tert-Butylbenzene	20.1	22.5		ug/L		112	70 - 130
1,2,4-Trimethylbenzene	20.0	22.2		ug/L		111	75 - 130
sec-Butylbenzene	20.1	23.0		ug/L		115	70 - 125
1,3-Dichlorobenzene	20.1	20.9		ug/L		104	75 - 125
4-Isopropyltoluene	20.1	22.8		ug/L		114	75 - 130
1,4-Dichlorobenzene	20.1	20.9		ug/L		104	75 - 125
n-Butylbenzene	20.1	23.0		ug/L		114	70 - 135
1,2-Dichlorobenzene	20.1	20.2		ug/L		101	70 - 120
1,2-Dibromo-3-Chloropropane	20.1	18.8		ug/L		93	50 - 130

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCS 580-114344/6

Matrix: Water

Analysis Batch: 114344

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	20.1	20.3		ug/L		101	65 - 135
1,2,3-Trichlorobenzene	20.1	19.5		ug/L		97	55 - 140
Hexachlorobutadiene	20.1	22.0		ug/L		109	50 - 140
Naphthalene	20.1	19.9		ug/L		99	55 - 140
Methyl tert-butyl ether	20.1	20.3		ug/L		101	65 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	105		85 - 120
Ethylbenzene-d10	106		80 - 120
4-Bromofluorobenzene (Surr)	104		75 - 120
Trifluorotoluene (Surr)	112		80 - 120

Lab Sample ID: LCSD 580-114344/7

Matrix: Water

Analysis Batch: 114344

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
Dichlorodifluoromethane	20.1	23.3		ug/L		116	30 - 155	6	30
Chloromethane	20.1	22.4		ug/L		111	40 - 125	1	30
Vinyl chloride	19.9	24.1		ug/L		121	50 - 145	5	30
Bromomethane	20.1	23.9		ug/L		119	30 - 145	7	30
Chloroethane	20.0	22.6		ug/L		113	60 - 135	0	30
Trichlorofluoromethane	20.0	24.1		ug/L		120	60 - 145	1	30
1,1-Dichloroethene	20.1	22.6		ug/L		113	70 - 130	2	30
Methylene Chloride	20.1	20.9		ug/L		104	55 - 140	2	30
trans-1,2-Dichloroethene	20.1	22.5		ug/L		112	60 - 140	2	30
1,1-Dichloroethane	20.1	22.0		ug/L		110	70 - 135	0	30
2,2-Dichloropropane	20.0	24.2		ug/L		121	70 - 135	0	30
cis-1,2-Dichloroethene	20.1	21.4		ug/L		106	70 - 125	4	30
Chlorobromomethane	20.1	21.2		ug/L		105	65 - 130	2	30
Chloroform	20.1	22.0		ug/L		109	65 - 135	0	30
1,1,1-Trichloroethane	20.1	23.8		ug/L		119	65 - 130	0	30
Carbon tetrachloride	20.1	23.3		ug/L		116	65 - 140	0	30
1,1-Dichloropropene	20.1	22.0		ug/L		110	75 - 130	2	30
Benzene	20.0	21.8		ug/L		109	80 - 120	0	30
1,2-Dichloroethane	20.1	21.0		ug/L		105	70 - 130	1	30
Trichloroethene	20.3	22.0		ug/L		108	70 - 125	0	30
1,2-Dichloropropane	20.1	22.5		ug/L		112	75 - 125	0	30
Dibromomethane	20.1	21.0		ug/L		104	75 - 125	2	30
Dichlorobromomethane	20.3	22.0		ug/L		109	75 - 120	2	30
cis-1,3-Dichloropropene	19.8	20.3		ug/L		103	70 - 130	3	30
Toluene	20.1	22.1		ug/L		110	75 - 120	1	30
trans-1,3-Dichloropropene	20.4	19.6		ug/L		96	55 - 140	3	30
1,1,2-Trichloroethane	20.1	21.2		ug/L		105	75 - 125	2	30
Tetrachloroethene	20.0	22.5		ug/L		112	45 - 150	0	30
1,3-Dichloropropane	20.1	21.3		ug/L		106	75 - 125	0	30
Chlorodibromomethane	20.3	21.5		ug/L		106	60 - 135	1	30
Ethylene Dibromide	20.1	22.3		ug/L		111	80 - 120	3	30

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: LCSD 580-114344/7

Matrix: Water

Analysis Batch: 114344

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	20.0	20.5		ug/L		102	80 - 120	3	30
Ethylbenzene	20.0	21.4		ug/L		107	75 - 125	4	30
1,1,1,2-Tetrachloroethane	20.1	21.6		ug/L		107	80 - 130	5	30
1,1,2,2-Tetrachloroethane	20.0	20.1		ug/L		100	65 - 130	1	30
m-Xylene & p-Xylene	40.2	43.2		ug/L		108	75 - 130	3	30
o-Xylene	20.1	21.7		ug/L		108	80 - 120	3	30
Styrene	20.1	21.3		ug/L		106	65 - 135	5	30
Bromoform	20.1	17.4		ug/L		86	70 - 130	7	30
Isopropylbenzene	20.1	22.7		ug/L		113	75 - 125	2	30
Bromobenzene	20.1	20.9		ug/L		104	75 - 125	2	30
N-Propylbenzene	20.0	22.5		ug/L		112	70 - 130	2	30
1,2,3-Trichloropropane	20.1	20.5		ug/L		102	75 - 125	0	30
2-Chlorotoluene	20.1	21.5		ug/L		107	75 - 125	2	30
1,3,5-Trimethylbenzene	20.0	22.3		ug/L		111	75 - 130	2	30
4-Chlorotoluene	20.1	20.6		ug/L		102	75 - 130	7	30
tert-Butylbenzene	20.1	22.1		ug/L		110	70 - 130	2	30
1,2,4-Trimethylbenzene	20.0	22.5		ug/L		112	75 - 130	1	30
sec-Butylbenzene	20.1	22.9		ug/L		114	70 - 125	0	30
1,3-Dichlorobenzene	20.1	21.0		ug/L		105	75 - 125	0	30
4-Isopropyltoluene	20.1	22.7		ug/L		113	75 - 130	1	30
1,4-Dichlorobenzene	20.1	20.2		ug/L		101	75 - 125	4	30
n-Butylbenzene	20.1	22.5		ug/L		112	70 - 135	2	30
1,2-Dichlorobenzene	20.1	20.6		ug/L		103	70 - 120	2	30
1,2-Dibromo-3-Chloropropane	20.1	19.6		ug/L		97	50 - 130	4	30
1,2,4-Trichlorobenzene	20.1	20.6		ug/L		103	65 - 135	1	30
1,2,3-Trichlorobenzene	20.1	20.7		ug/L		103	55 - 140	6	30
Hexachlorobutadiene	20.1	22.5		ug/L		112	50 - 140	2	30
Naphthalene	20.1	20.4		ug/L		101	55 - 140	2	30
Methyl tert-butyl ether	20.1	20.8		ug/L		104	65 - 125	2	30

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	105		85 - 120
Ethylbenzene-d10	100		80 - 120
4-Bromofluorobenzene (Surr)	103		75 - 120
Trifluorotoluene (Surr)	113		80 - 120

Lab Sample ID: MB 580-115018/5

Matrix: Water

Analysis Batch: 115018

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloroethene	ND		1.0		ug/L			07/11/12 10:28	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Fluorobenzene (Surr)	106		80 - 120		07/11/12 10:28	1
Toluene-d8 (Surr)	98		85 - 120		07/11/12 10:28	1
Ethylbenzene-d10	103		80 - 120		07/11/12 10:28	1
4-Bromofluorobenzene (Surr)	94		75 - 120		07/11/12 10:28	1

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-115018/5

Matrix: Water

Analysis Batch: 115018

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	106		80 - 120		07/11/12 10:28	1

Lab Sample ID: LCS 580-115018/6

Matrix: Water

Analysis Batch: 115018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	18.2		ug/L		91	45 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Fluorobenzene (Surr)	106		80 - 120
Toluene-d8 (Surr)	104		85 - 120
Ethylbenzene-d10	109		80 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Trifluorotoluene (Surr)	110		80 - 120

Lab Sample ID: LCSD 580-115018/7

Matrix: Water

Analysis Batch: 115018

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Tetrachloroethene	20.0	19.4		ug/L		97	45 - 150	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Fluorobenzene (Surr)	107		80 - 120
Toluene-d8 (Surr)	102		85 - 120
Ethylbenzene-d10	106		80 - 120
4-Bromofluorobenzene (Surr)	101		75 - 120
Trifluorotoluene (Surr)	109		80 - 120

Lab Sample ID: MB 580-114004/1-A

Matrix: Solid

Analysis Batch: 114076

Client Sample ID: Method Blank

Prep Type: TCLP

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	ND		1000		ug/L			06/26/12 12:43	100
Vinyl chloride	ND		100		ug/L			06/26/12 12:43	100
1,1-Dichloroethene	ND		100		ug/L			06/26/12 12:43	100
Chloroform	ND		100		ug/L			06/26/12 12:43	100
Carbon tetrachloride	ND		100		ug/L			06/26/12 12:43	100
Benzene	ND		100		ug/L			06/26/12 12:43	100
1,2-Dichloroethane	ND		100		ug/L			06/26/12 12:43	100
Trichloroethene	ND		100		ug/L			06/26/12 12:43	100
Tetrachloroethene	ND		100		ug/L			06/26/12 12:43	100
Chlorobenzene	ND		100		ug/L			06/26/12 12:43	100

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Fluorobenzene (Surr)	100		80 - 120		06/26/12 12:43	100

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: MB 580-114004/1-A
Matrix: Solid
Analysis Batch: 114076

Client Sample ID: Method Blank
Prep Type: TCLP

Surrogate	MB MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery Qualifier				
Toluene-d8 (Surr)	98	85 - 120		06/26/12 12:43	100
Ethylbenzene-d10	93	80 - 120		06/26/12 12:43	100
4-Bromofluorobenzene (Surr)	96	75 - 120		06/26/12 12:43	100
Trifluorotoluene (Surr)	103	80 - 120		06/26/12 12:43	100

Lab Sample ID: LCS 580-114004/2-A
Matrix: Solid
Analysis Batch: 114076

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone	4040	4410		ug/L		109	30 - 150
Vinyl chloride	2020	1850		ug/L		91	50 - 145
1,1-Dichloroethene	2000	1990		ug/L		100	70 - 130
Chloroform	2020	2130		ug/L		106	65 - 135
Carbon tetrachloride	2020	2160		ug/L		107	65 - 140
Benzene	2010	2200		ug/L		110	80 - 120
1,2-Dichloroethane	2000	2000		ug/L		100	70 - 130
Trichloroethene	2020	2240		ug/L		111	70 - 125
Tetrachloroethene	2020	2100		ug/L		104	45 - 150
Chlorobenzene	2020	2250		ug/L		111	80 - 120

Surrogate	LCS LCS	Limits
	%Recovery Qualifier	
Fluorobenzene (Surr)	99	80 - 120
Toluene-d8 (Surr)	101	85 - 120
Ethylbenzene-d10	96	80 - 120
4-Bromofluorobenzene (Surr)	104	75 - 120
Trifluorotoluene (Surr)	106	80 - 120

Lab Sample ID: 580-33472-13 MS
Matrix: Solid
Analysis Batch: 114076

Client Sample ID: HC Drum
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone	ND		4040	4030		ug/L		100	30 - 150
Vinyl chloride	ND		2020	2120		ug/L		105	50 - 145
1,1-Dichloroethene	ND		2000	2050		ug/L		103	70 - 130
Chloroform	ND		2020	2150		ug/L		107	65 - 135
Carbon tetrachloride	ND		2020	2220		ug/L		110	65 - 140
Benzene	ND		2010	2270		ug/L		113	80 - 120
1,2-Dichloroethane	ND		2000	2060		ug/L		103	70 - 130
Trichloroethene	ND		2020	2210		ug/L		109	70 - 125
Tetrachloroethene	ND		2020	2100		ug/L		104	45 - 150
Chlorobenzene	ND		2020	2280		ug/L		113	80 - 120

Surrogate	MS MS	Limits
	%Recovery Qualifier	
Fluorobenzene (Surr)	101	80 - 120
Toluene-d8 (Surr)	99	85 - 120
Ethylbenzene-d10	98	80 - 120
4-Bromofluorobenzene (Surr)	100	75 - 120

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

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

Lab Sample ID: 580-33472-13 MS
Matrix: Solid
Analysis Batch: 114076

Client Sample ID: HC Drum
Prep Type: TCLP

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Trifluorotoluene (Surr)	108		80 - 120

Lab Sample ID: 580-33472-13 MSD
Matrix: Solid
Analysis Batch: 114076

Client Sample ID: HC Drum
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits	RPD		
2-Butanone	ND		4040	4240		ug/L		105	30 - 150	5	30	
Vinyl chloride	ND		2020	1990		ug/L		99	50 - 145	6	30	
1,1-Dichloroethene	ND		2000	2010		ug/L		100	70 - 130	2	30	
Chloroform	ND		2020	2120		ug/L		105	65 - 135	2	30	
Carbon tetrachloride	ND		2020	2160		ug/L		107	65 - 140	3	30	
Benzene	ND		2010	2190		ug/L		109	80 - 120	3	30	
1,2-Dichloroethane	ND		2000	2020		ug/L		101	70 - 130	2	30	
Trichloroethene	ND		2020	2180		ug/L		107	70 - 125	1	30	
Tetrachloroethene	ND		2020	2150		ug/L		106	45 - 150	2	30	
Chlorobenzene	ND		2020	2200		ug/L		109	80 - 120	3	30	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Fluorobenzene (Surr)	101		80 - 120
Toluene-d8 (Surr)	99		85 - 120
Ethylbenzene-d10	98		80 - 120
4-Bromofluorobenzene (Surr)	102		75 - 120
Trifluorotoluene (Surr)	106		80 - 120

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-114190/14-A
Matrix: Water
Analysis Batch: 114296

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 114190

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	ND		0.040		mg/L		06/27/12 11:43	06/27/12 18:46	1

Lab Sample ID: LCS 580-114190/15-A
Matrix: Water
Analysis Batch: 114296

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 114190

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Iron	10.0	10.3		mg/L		103	80 - 120	

Lab Sample ID: LCSD 580-114190/16-A
Matrix: Water
Analysis Batch: 114296

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 114190

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Iron	10.0	10.3		mg/L		103	80 - 120	0	20	

QC Sample Results

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-113546/11
Matrix: Water
Analysis Batch: 113546

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.90		mg/L			06/15/12 13:05	1
Sulfate	ND		1.2		mg/L			06/15/12 13:05	1

Lab Sample ID: LCS 580-113546/14
Matrix: Water
Analysis Batch: 113546

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.00	4.89		mg/L		98	90 - 110
Sulfate	15.0	14.5		mg/L		97	90 - 110

Lab Sample ID: MB 580-114260/11
Matrix: Water
Analysis Batch: 114260

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.90		mg/L			06/15/12 13:05	1

Lab Sample ID: LCS 580-114260/24
Matrix: Water
Analysis Batch: 114260

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.50		mg/L		100	90 - 110

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-114021/1
Matrix: Water
Analysis Batch: 114021

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			06/22/12 17:05	1

Lab Sample ID: LCS 580-114021/2
Matrix: Water
Analysis Batch: 114021

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	15.0	14.5		mg/L		97	85 - 115

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-16

Date Collected: 06/13/12 16:57

Date Received: 06/15/12 13:45

Lab Sample ID: 580-33472-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/29/12 00:29	BT	TAL SEA

Client Sample ID: MW-17

Date Collected: 06/13/12 17:33

Date Received: 06/15/12 13:45

Lab Sample ID: 580-33472-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/29/12 00:57	BT	TAL SEA

Client Sample ID: MW-18

Date Collected: 06/14/12 14:13

Date Received: 06/15/12 13:45

Lab Sample ID: 580-33472-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 17:57	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:27	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 18:52	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		1	114260	06/15/12 18:52	AM	TAL SEA

Client Sample ID: MW-19

Date Collected: 06/15/12 09:13

Date Received: 06/15/12 13:45

Lab Sample ID: 580-33472-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 22:40	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:30	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 19:07	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		1	114260	06/15/12 19:07	AM	TAL SEA

Client Sample ID: MW-20

Date Collected: 06/15/12 09:41

Date Received: 06/15/12 13:45

Lab Sample ID: 580-33472-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 23:08	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:33	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 19:21	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-20

Lab Sample ID: 580-33472-5

Date Collected: 06/15/12 09:41

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	114260	06/15/12 19:21	AM	TAL SEA

Client Sample ID: MW-21

Lab Sample ID: 580-33472-6

Date Collected: 06/14/12 13:21

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 18:25	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:37	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 18:38	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		1	114260	06/15/12 18:38	AM	TAL SEA

Client Sample ID: MW-22

Lab Sample ID: 580-33472-7

Date Collected: 06/14/12 12:11

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 18:51	BT	TAL SEA
Total/NA	Analysis	8260B		10	114344	06/29/12 18:12	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:40	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 18:09	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		5	114260	06/18/12 10:03	AM	TAL SEA

Client Sample ID: MW-23

Lab Sample ID: 580-33472-8

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 19:18	BT	TAL SEA
Total/NA	Analysis	8260B		1	115018	07/11/12 12:04	SK	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:44	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 17:55	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		10	114260	06/18/12 09:48	AM	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: MW-23 DUP

Lab Sample ID: 580-33472-9

Date Collected: 06/14/12 11:12

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 19:44	BT	TAL SEA
Total/NA	Analysis	8260B		1	115018	07/11/12 12:30	SK	TAL SEA

Client Sample ID: MW-24

Lab Sample ID: 580-33472-10

Date Collected: 06/14/12 12:46

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 20:12	BT	TAL SEA
Total/NA	Prep	200.8			114190	06/27/12 11:43	PAB	TAL SEA
Total/NA	Analysis	200.8		1	114296	06/27/12 19:47	FCW	TAL SEA
Total/NA	Analysis	300.0		1	113546	06/15/12 18:24	AM	TAL SEA
Total/NA	Analysis	SM 5310B		1	114021	06/22/12 17:05	JP	TAL SEA
Total/NA	Analysis	300.0		1	114260	06/15/12 18:24	AM	TAL SEA

Client Sample ID: MW-25

Lab Sample ID: 580-33472-11

Date Collected: 06/15/12 10:16

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/28/12 23:34	BT	TAL SEA

Client Sample ID: Trip Blank

Lab Sample ID: 580-33472-12

Date Collected: 06/15/12 00:00

Matrix: Water

Date Received: 06/15/12 13:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	114267	06/29/12 00:01	BT	TAL SEA

Client Sample ID: HC Drum

Lab Sample ID: 580-33472-13

Date Collected: 06/13/12 11:57

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113626	06/19/12 10:27	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113645	06/19/12 17:13	SK	TAL SEA
TCLP	Leach	1311			114004	06/25/12 13:25	RS	TAL SEA
TCLP	Analysis	8260B		100	114076	06/26/12 14:43	BT	TAL SEA
Total/NA	Analysis	D 2216		1	114008	06/25/12 14:33	EZ	TAL SEA

Lab Chronicle

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Client Sample ID: KJ Drum

Lab Sample ID: 580-33472-14

Date Collected: 06/14/12 15:00

Matrix: Solid

Date Received: 06/15/12 13:45

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			113626	06/19/12 10:27	EZ	TAL SEA
Total/NA	Analysis	8260B		1	113645	06/19/12 17:59	SK	TAL SEA
TCLP	Leach	1311			114004	06/25/12 13:25	RS	TAL SEA
TCLP	Analysis	8260B		100	114076	06/26/12 15:07	BT	TAL SEA
Total/NA	Analysis	D 2216		1	114008	06/25/12 14:33	EZ	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Certification Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Seattle	Alaska (UST)	State Program	10	UST-022
TestAmerica Seattle	California	NELAC	9	1115CA
TestAmerica Seattle	L-A-B	DoD ELAP		L2236
TestAmerica Seattle	L-A-B	ISO/IEC 17025		L2236
TestAmerica Seattle	Montana (UST)	State Program	8	N/A
TestAmerica Seattle	Oregon	NELAC	10	WA100007
TestAmerica Seattle	USDA	Federal		P330-11-00222
TestAmerica Seattle	Washington	State Program	10	C553

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.



Sample Summary

Client: Hart Crowser, Inc.
Project/Site: Frank Wear/Yakima, WA

TestAmerica Job ID: 580-33472-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-33472-1	MW-16	Water	06/13/12 16:57	06/15/12 13:45
580-33472-2	MW-17	Water	06/13/12 17:33	06/15/12 13:45
580-33472-3	MW-18	Water	06/14/12 14:13	06/15/12 13:45
580-33472-4	MW-19	Water	06/15/12 09:13	06/15/12 13:45
580-33472-5	MW-20	Water	06/15/12 09:41	06/15/12 13:45
580-33472-6	MW-21	Water	06/14/12 13:21	06/15/12 13:45
580-33472-7	MW-22	Water	06/14/12 12:11	06/15/12 13:45
580-33472-8	MW-23	Water	06/14/12 11:12	06/15/12 13:45
580-33472-9	MW-23 DUP	Water	06/14/12 11:12	06/15/12 13:45
580-33472-10	MW-24	Water	06/14/12 12:46	06/15/12 13:45
580-33472-11	MW-25	Water	06/15/12 10:16	06/15/12 13:45
580-33472-12	Trip Blank	Water	06/15/12 00:00	06/15/12 13:45
580-33472-13	HC Drum	Solid	06/13/12 11:57	06/15/12 13:45
580-33472-14	KJ Drum	Solid	06/14/12 15:00	06/15/12 13:45

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Rush
 Short Hold

Chain of
Custody Record

Client: Hart Croasser Client Contact: Jill Kierman Date: 06/15/12 Chain of Custody Number: 17115

Address: 8910 SW Gemini Drive Telephone Number (Area Code/Fax Number): 503-620-7894/503-620-6918 Lab Number: 33472 Page 1 of 2

City: Beaverton State: OR Zip Code: 97008 Sampler: Jason Miles Lab Contract: 1 Analysis (Attach list if more space is needed): VOCs 8260, Nitrate, Sulfate, TOC, Total Iron

Project Name and Location (State): Frost Wear/Yakima, WA Billing Contact: Jason Miles

Contract/Purchase Order/Quote No.: 17800-23 Containers & Preservatives: NaOH, ZnAc/NaOH

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives						Analysis (Attach list if more space is needed)									
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH		ZnAc/NaOH								
1- MW-16	06/13/12	1657	X																		
2- MW-17	06/14/12	1733	X																		
3- MW-18	06/14/12	1413																			
4- MW-19	06/15/12	0913																			
5- MW-20	06/15/12	0941																			
6- MW-21	06/14/12	1321																			
7- MW-22		1211																			
8- MW-23		1112																			
9- MW-23 Dup		1112																			
10- MW-24		1246																			
11- MW-25	06/13/12	1016																			
12- Trip Blank																					

Turn Around Time Required (business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other: Standard

1. Relinquished By: Jason R. Miles Date: 06/19/12 Time: 13:45

2. Relinquished By: Jason R. Miles Date: 06/19/12 Time: 13:45

3. Relinquished By: Sign/Print Date: Time:

1. Received By: Sign/Print Date: 06/15/12 Time: 13:45

2. Received By: Sign/Print Date: 06/15/12 Time: 13:45

3. Received By: Sign/Print Date: Time:

Comments: COOLER/TB Dig/IR cor @ Lab
COOLER DSC @ Lab
Wet/Packs Packing @ Lab

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.testamericainc.com

Rush
 Short Hold

Chain of Custody Record

Chain of Custody Number
17114

7/12/2012

Client: Hort Center Client Contact: S. J. Kiermar Date: _____
Address: 8910 SW Gemini Drive Telephone Number (Area Code)/Fax Number: 503-620-7284 / 503-620-6912 Lab Number: 33472
City: Beaverton State: OR Zip Code: 97008 Sampler: Susan Miles Lab Contact: _____ Page: 2 of 2
Project Name and Location (State): Franklin / Salem, WA Billing Contact: _____
Contract/Purchase Order/Quote No.: 17800-23

Sample ID and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives					Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt							
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl			NaOH	ZnAc/ NaOH	MeOH				
13- HC Drum	06/13/12	1157																	
14- KS Drum	06/14/12	1500																	
15- Trip Blank No. 1112																			

Cooler Yes No Cooler Temp: _____ Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Sample Disposal Return To Client Archive For _____ Months Disposal By Lab
 Turn Around Time Required (business days)
 24 Hours 48 Hours 5 Days 10 Days 15 Days Other Standard
 QC Requirements (Specify): _____
 (A fee may be assessed if samples are retained longer than 1 month)

1. Relinquished By Sign/Print: Susan R. Miles Date: 06/15/12 Time: 13:45
 2. Relinquished By Sign/Print: _____ Date: _____ Time: _____
 3. Relinquished By Sign/Print: _____ Date: _____ Time: _____

1. Received By Sign/Print: Cathy (TMS) Date: 6/10/12 Time: 13:45
 2. Received By Sign/Print: _____ Date: _____ Time: _____
 3. Received By Sign/Print: _____ Date: _____ Time: _____

Comments: _____

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

Login Sample Receipt Checklist

Client: Hart Crowser, Inc.

Job Number: 580-33472-1

Login Number: 33472

List Source: TestAmerica Seattle

List Number: 1

Creator: Riley, Nicole

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

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Microseeps, Inc
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

June 28, 2012

Jill Kiernan
Hart Crowser
8910 SW Gemini Drive
Beaverton, OR 97008

RE: **FRANK WEAR / 17800-23/ TASK 3**

Microseeps Workorder: 5608

Dear Jill Kiernan:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, June 19, 2012. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Julianne C. Sproull (12) 6/28/12

Julianne Sproull 06/28/2012
jsproull@microseeps.com

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 13

Report ID: 5608 - 242186

Page 1 of 11

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LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	NELAP: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87832
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: State of Louisiana, Department of Environmental Quality
Accreditation ID:	04104
Scope:	Solid and Chemical Materials; Non-Potable Water
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Microseeps is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).

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SAMPLE SUMMARY

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID	Sample ID	Matrix	Date Collected	Date Received
56080001	MW-18	Water	6/14/2012 14:13	6/19/2012 11:00
56080002	MW-19	Water	6/15/2012 09:13	6/19/2012 11:00
56080003	MW-20	Water	6/15/2012 09:41	6/19/2012 11:00
56080004	MW-21	Water	6/14/2012 13:21	6/19/2012 11:00
56080005	MW-22	Water	6/14/2012 12:11	6/19/2012 11:00
56080006	MW-23	Water	6/14/2012 11:12	6/19/2012 11:00
56080007	MW-24	Water	6/14/2012 12:46	6/19/2012 11:00

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: 56080001 Date Received: 6/19/2012 11:00 Matrix: Water
Sample ID: MW-18 Date Collected: 6/14/2012 14:13

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX			Analytical Method: AM20GAX						
Methane	12	ug/l	0.10	0.018	1		6/22/2012 09:51	BW	
Ethane	4.7	ug/l	0.025	0.0070	1		6/22/2012 09:51	BW	
Ethene	2.1	ug/l	0.025	0.0050	1		6/22/2012 09:51	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: 56080002
Sample ID: MW-19

Date Received: 6/19/2012 11:00 Matrix: Water
Date Collected: 6/15/2012 09:13

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX Analytical Method: AM20GAX									
Methane	8.1	ug/l	0.10	0.018	1		6/22/2012 10:05	BW	
Ethane	2.9	ug/l	0.025	0.0070	1		6/22/2012 10:05	BW	
Ethene	1.4	ug/l	0.025	0.0050	1		6/22/2012 10:05	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: 56080003 Date Received: 6/19/2012 11:00 Matrix: Water
 Sample ID: MW-20 Date Collected: 6/15/2012 09:41

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
------------	---------	-------	-----	-----	-------------	----	----------	----	------

RISK - MICR

Analysis Desc: AM20GAX

Analytical Method: AM20GAX

Methane	0.20	ug/l	0.10	0.018	1		6/22/2012 10:15	BW	
Ethane	<0.025	ug/l	0.025	0.0070	1		6/22/2012 10:15	BW	
Ethene	0.026	ug/l	0.025	0.0050	1		6/22/2012 10:15	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: **56080004** Date Received: 6/19/2012 11:00 Matrix: Water
Sample ID: **MW-21** Date Collected: 6/14/2012 13:21

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX					Analytical Method: AM20GAX				
Methane	1.8	ug/l	0.10	0.018	1		6/22/2012 10:26	BW	
Ethane	0.029	ug/l	0.025	0.0070	1		6/22/2012 10:26	BW	
Ethene	0.038	ug/l	0.025	0.0050	1		6/22/2012 10:26	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: 56080005 Date Received: 6/19/2012 11:00 Matrix: Water
Sample ID: MW-22 Date Collected: 6/14/2012 12:11

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX		Analytical Method: AM20GAX							
Methane	4.6	ug/l	0.10	0.018	1		6/22/2012 10:36	BW	
Ethane	0.29	ug/l	0.025	0.0070	1		6/22/2012 10:36	BW	
Ethene	0.27	ug/l	0.025	0.0050	1		6/22/2012 10:36	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: 56080006 Date Received: 6/19/2012 11:00 Matrix: Water
Sample ID: MW-23 Date Collected: 6/14/2012 11:12

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX					Analytical Method: AM20GAX				
Methane	6.0	ug/l	0.10	0.018	1		6/22/2012 10:47	BW	
Ethane	1.3	ug/l	0.025	0.0070	1		6/22/2012 10:47	BW	
Ethene	1.2	ug/l	0.025	0.0050	1		6/22/2012 10:47	BW	

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ANALYTICAL RESULTS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

Lab ID: **56080007** Date Received: 6/19/2012 11:00 Matrix: Water
Sample ID: **MW-24** Date Collected: 6/14/2012 12:46

Parameters	Results	Units	RDL	MDL	DF Prepared	By	Analyzed	By	Qual
RISK - MICR									
Analysis Desc: AM20GAX			Analytical Method: AM20GAX						
Methane	0.44	ug/l	0.10	0.018	1		6/22/2012 11:31	BW	
Ethane	0.11	ug/l	0.025	0.0070	1		6/22/2012 11:31	BW	
Ethene	0.11	ug/l	0.025	0.0050	1		6/22/2012 11:31	BW	

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ANALYTICAL RESULTS QUALIFIERS

Workorder: 5608 FRANK WEAR / 17800-23/ TASK 3

PARAMETER QUALIFIERS

- U Indicates the compound was analyzed for, but not detected.
- J Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (RDL).

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Microseeps
Lab. Proj. #

5668

CHAIN - OF - CUSTODY RECORD

Microseeps
COC cont. #

Phone: (412) 826-5245

Microseeps, Inc. - 220 William Pitt Way - Pittsburgh, PA 15238

Fax No.: (412) 826-3433

Company: Hart Crouse, Inc

Co. Address: 8910 Sw Gemini Dr, Beaver ton, OR, 97008

Phone #: 503-620-7284 Fax #: 503-620-6918

Proj. Manager: Jill Kierman

Proj. Name/Number: Frank Wear / 17800-23/Task 3

Sampler's signature: [Signature]

Cooler Temp. 1.6°C

Parameters Requested

Results to:

jill.kierman@hartcrouse.com

Invoice to:

Remarks:

Methane, Ethane, Propane, Acetylene, but level

Sample ID	Sample Description	Sample Type		Date	Time	Bottles	Remarks
		Water	Vapor/Solid				
MW-18		X		6/14/12	1413	2	
MW-19		X		6/15/12	0913	2	
MW-20		X		6/15/12	0941	2	
MW-21		X		6/14/12	1321	2	
MW-22		X			1211	2	
MW-23		X			1112	2	
MW-24		X			1246	2	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
<u>[Signature]</u>	<u>Hart Crouse</u>	<u>6/14/12</u>	<u>1330</u>	<u>[Signature]</u>	<u>MS</u>	<u>6-19-12</u>	<u>1100</u>
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

Cooler Receipt Form

Client Name: Hart Crowser Project: Frank Wear / 17800-23/Task 3 Lab Work Order: 5608

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other: _____ Air bill Present: Yes No

Tracking Number: 1Z9YX04Y0149166627

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: _____

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 1.6°C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments: _____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	<input checked="" type="checkbox"/>			
Chain of Custody relinquished	<input checked="" type="checkbox"/>			
Sampler Name & Signature on COC	<input checked="" type="checkbox"/>			
Containers intact	<input checked="" type="checkbox"/>			
Were samples in separate bags	<input checked="" type="checkbox"/>			
Sample container labels match COC Sample name/date and time collected	<input checked="" type="checkbox"/>			
Sufficient volume provided	<input checked="" type="checkbox"/>			
Microseeps containers used	<input checked="" type="checkbox"/>			
Are containers properly preserved for the requested testing? (as labeled)	<input checked="" type="checkbox"/>			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			<input checked="" type="checkbox"/>	
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			<input checked="" type="checkbox"/>	

Comments: _____

Cooler contents examined/received by: HLV Date: 6-19-12

Project Manager Review: JS Date: 6-19-12