Paloma Environmental Services, Inc.

Site Conceptual Model, Additional Site Assessment Report, and Request for Case Closure

Former Hansen Auto Tow
4620 Lincoln Avenue, Cypress, California

Prepared for:

Bonanni Development, Inc.
5500 Bolsa Avenue, Suite 120
Huntington Beach, California

Paloma Environmental Services, Inc. | 52 El Prisma Rancho Santa Margarita California 92688

20180515 | Report No 7 | September 1, 2019

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1. Introduction

Paloma Environmental Services, Inc. (Paloma), on behalf of Bonanni Development, Inc. (Bonanni), has prepared this *Site Conceptual Model, Additional Site Assessment Report, and Request for Case Closure* (Report) for the former Hansen Auto Tow (Hansen) facility located at 4620 Lincoln Avenue in Cypress, California (Site). The Site is planned to undergo redevelopment as a three-story residential building in the near future. This report discusses the well installation details for the replacement of former onsite well HMW-10 (HMW-10R) and additional soil and grab groundwater sampling from three HydroPunch™ borings directly south to southwest of former HMW-10 (Figure 2). In addition, this report summarizes the results from the collection and analysis of the groundwater or light non-aqueous phase liquid (LNAPL) from the existing monitoring wells and replacement monitoring well HMW-10R on June 11, 2019.

The results were compared against human health screening levels from the San Francisco Regional Water Quality Control Board (SFRWQCB) and the State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP), which showed that there is no unacceptable risk to future occupants of the proposed residential building. The well installation, HydroPunch™ borings, groundwater and LNAPL sampling were conducted in accordance with the approved *Additional Site Assessment Work Plan* (Work Plan), dated April 24, 2019.

Based on the review and evaluation of the Site data, Paloma requests that the SWRCB rescind their appeal to close the environmental case for the former Mercury Rentals Inc. (Mercury) facility located at 4664 Lincoln Avenue since the residual LNAPL source mass beneath their property was determined to be from the former UST complex located at the Mercury facility. Since the source was determined to be from the adjacent Mercury site, Paloma also requests that the SWRCB grant environmental case closure of the Hansen facility and issue a no further action (NFA) letter.

2. Site Background

2.1 Site Description

The Site is located along Lincoln Avenue between Sumner Place and Alekona Court in Cypress, California (Figure 1). The Site currently is an open graded lot, which is being prepared for the construction of a future three-story residential building. The Site is in an area of mixed commercial and industrial use and is bordered by Lincoln Avenue to the north, RV storage facility to the south, metal fabrication facility to the west, and a public storage facility and a strip mall to the east (Figure 2).

2.1 Site History

The Site has historically operated as a commercial repair and storage facility for automobiles. In addition, a trucking firm operated at the Site prior to Hansen Auto Tow (EarthCon Consultants CA, Inc. [EarthCon], 2017). The Site previously had several single-story structures consisting of office space, vehicle repair, maintenance and preparation/spray booths. The structures were located along the northern and western property boundaries with vehicle storage towards the southern portion of the Site. Figure 2 presents the site plans showing the former major site features and the area under investigation prior to Orange County Health Care Agency (OCHCA) granting closure to the Site in October 2000.

The Site also contained two steel single-walled underground storage tanks (USTs) along the east side of the Site, each with a capacity of 2,000 gallons. The tanks stored leaded and unleaded gasoline before being removed in March 1992. In addition, a diesel aboveground storage tank (AST) was thought to have been located immediately south of the former UST area adjacent to an elongated canopy (EarthCon, 2017 & Giles Engineering Associates, Inc. [GEA], 1996a). GEA indicated that an Orange County Fire Marshall permit on-file with the building permits at the City of Cypress (City) indicated that the AST was removed in approximately 1979. Paloma reviewed the building permits for the Former Hansen Auto Tow facility and couldn't find the associated Orange County Fire Marshall permit on-file with the City. However, Paloma discovered a building permit from the City dated December 9, 1974 indicating that a 4,000 gallon AST was located in this same area and was used as a storage tank associated with a former steam cleaner rack ("elongated canopy"), which was scheduled to be pumped out periodically via a vacuum truck (Appendix A). Therefore, the inferred AST was not associated with either the storage or dispensing of diesel as suggested in previous reports from both EarthCon and GEA.

2.2 Geology

As identified in the Department of Water Resources' (DWR's) 2004 *Bulletin 118, Coastal Plain of Orange Groundwater Basin,* the Site is located within the Orange County Groundwater Basin, which is underlain by coastal alluvial plain deposits. These deposits are divided into three water-bearing zones: the Upper, Middle, and Lower Aquifer Systems. The Upper Aquifer System is approximately 800 feet thick and consists mostly of sand, gravel, and conglomerate with some silt and clay beds. Groundwater in the Upper Aquifer System generally flows to the southwest and is utilized for irrigation water for the basin. Groundwater is also produced from the Middle and Lower Aquifer Systems, which occur deeper than 800 feet below the surface of the Coastal Plain (DWR, 2004). The stratigraphy at the Site is heterogeneous with the shallow soil types consisting mainly of sands with some interbedded layers of silts and clays. Fill material consisting of sandy gravel, silty sand and clayey silt was noted in the former tank pit area. In addition, several alternating layers of concrete/asphalt and base were noted from the surface to about 1 to 3 feet below grade (fbg) in the previous borings at the Site.

2.3 Hydrogeology

Regional groundwater in the Site vicinity occurs in the Artesia aquifer at a depth of approximately 50 fbg and tends to flow toward the southwest (Los Angeles County Department of Public Works, Groundwater Contour Map, Fall, 1990). A perched groundwater zone was encountered at a depth of approximately 4.52 fbg (HMW-9) to 10.67 fbg (HMW-5) during previous investigations, with a groundwater flow direction to the north-northeast. The underlying Bellflower aquitard protects the potable Artesia aquifer which is 100 to 200 fbg. Based on the fine-grained materials and low hydraulic gradient observed at the Site, lateral migration would be extremely slow.

During the last groundwater monitoring event at the Site prior to case closure on October 11, 2000, the depth to groundwater beneath the Site ranged from 5.88 to 9.23 fbg. The groundwater depth data collected was used to determine the groundwater flow direction across the Site. Based on the data collected by Atlas Environmental Engineering, Inc. (Atlas), the flow across the Site was generally north-northeast at a shallow gradient of 0.003 feet per foot (ft/ft). This was generally consistent with previous groundwater monitoring and/or event conducted by EarthCon in September 2016 and July 2018, respectively. A groundwater contour map is presented in Figure 4 in Appendix B.

2.4 Previous Investigations

A chronology of previous Site investigations including historical soil, groundwater, and soil vapor analytical data are presented below. Historical soil and groundwater analytical data are presented in Appendix C. All available well, boring, and sample locations are presented in Figure 2.

May 1992 UST Removal: Based on historical information, two 2,000-gallon gasoline USTs were removed from the Site on March 11, 1992. The approximate location of the previously removed tanks as shown in Figure 2. After completing the tank removal operations, four soil samples were collected, two beneath each tank. Briefly, the results showed the presence of total petroleum hydrocarbons (TPH) ranging from 220 milligrams per kilogram (mg/kg) to 13,300 mg/kg. Concentrations of volatile aromatic compounds (BTEX) ranged from 2 to 1,240 mg/kg. A summary of the analytical results obtained during the tank removal operations is included in Appendix C. As indicated by the previous owner, the spoils were returned to the excavation and the area paved. An Underground Storage Tank Unauthorized Release (LEAK)/Contamination Site Report was filed by the owner on March 11, 1992 (Atlas, 1999).

April 1994 Soil Boring Installation: On April 1, 1994, Atlas advanced seven (7) borings, HB-1 to HB-7, in the area of the former tank pit as shown on Figure 2. Details of the investigation conducted were described in the Atlas report titled *Report of Preliminary Site Assessment*, dated May 23, 1994. A total of thirteen (13) soil samples were collected between 4 and 7.5 fbg and analyzed for total petroleum hydrocarbon as gasoline (TPHg), total recoverable petroleum hydrocarbons (TRPH), and BTEX. Results from this investigation confirmed the presence of TPH in the area of the former tank pit, up to 7,900 mg/kg TPHg and the limits of affected soil were not established to the north and east. Due to the presence of 370 mg/kg TPH noted in HB-4A-7.5 and 170 mg/kg noted in HB-7-7.5, additional soil characterization was warranted. The samples collected from HB-2 and HB-4, south of HB-4A and closer to the former tank pit, exhibited TPH concentrations less than 100 mg/kg (Atlas, 1999). A summary of the analytical results of samples collected is presented in Appendix C.

November 1994 Soil Boring and Well Installation: On November 12, 1994, Atlas advanced five (5) additional borings at the Site, HB-8, HB-9, and HMW-1 to HMW-3. Three (3) of the borings were converted to 2-inch diameter groundwater monitoring wells. The extent of these borings extended from about 8 to 18 fbg at the locations shown on Figure 2. The wells were constructed with a screened interval extending from about 3 to 18 fbg followed by blank casing to the surface. A total of five (5) soil samples were analyzed in the laboratory. No concentrations of TPHg, total petroleum hydrocarbon as diesel (TPHd) and BTEX were detected in samples HB-8-7.5, HB-9-8.0 and HMW-1-8.0. Samples HMW-2-8.0 and HMW-3-8.0 had TPHg concentrations of 390 mg/kg and 570 mg/kg, respectively. TPHd results had concentrations of 9,400 mg/kg and 35,000 mg/kg, respectively, in the two samples. BTEX concentrations of these samples ranged from non-detect to 3.2 mg/kg (Atlas, 1995). A summary of the results is presented in Appendix C.

1995 Monitoring Well Installation: On July 25, October 31, and December 13, 1995, Atlas installed three (3) additional wells, HMW-4, HMW-5, and HMW-7, in order to further assess the lateral extent of both dissolved and liquid phase hydrocarbons present in the groundwater beneath the Site. In addition, seven (7) shallow hand borings, HB-10 through HB-16, were advanced in an attempt to delineate the affected soil zone.

Soil samples were generally collected at depths of about 5 to 6 fbg (near the smear zone). One sample was collected at a depth of 3 fbg in boring HB-13, but was not analyzed due to its gravelly nature. From borings HMW-4, HMW-5 and HMW-7, samples were also collected at 10 fbg and were used for lithologic descriptions.

A total of nine (9) soil samples were analyzed. Two samples, HB-15-6 and HB-16-6, did not have any measurable of TPHg, TPHd or BTEX concentrations. However, the other samples collected from HB-10, HB-11, HB-12, HB-14, HMW-4, HMW-5 and HMW-7, had TPHg concentrations ranging from 14 to 480 mg/kg. TPHd concentrations in these samples ranged from 48 to 42,000 mg/kg and BTEX concentrations ranged from non-detect to 1.0 mg/kg. A summary of the results is presented in Appendix C.

No TPHg, TPHd or BTEX concentrations were noted in groundwater samples collected from wells HMW-1, HMW-2, and HMW-7. Groundwater from HHMW-5 exhibited 110 milligrams per liter (mg/L) TPHg and BTEX ranged from non-detect to 0.6 mg/L. No TPHd was detected in any of the samples collected. Appendix C presents the results of the historical groundwater sampling at the Site.

Measurable LNAPL has been detected in wells HMW-3, HMW-4, and HMW-5. LNAPL has historically been removed by hand bailing in addition to skimming through EarthCon's former remediation system. Atlas personnel removed an estimated 93 gallons of LNAPL by hand bailing HMW-3 and HMW-4 between December 1994 to April 1996 (Appendix C). This LNAPL has been characterized to have 88.3% diesel, 10.2% gasoline and 1.5% oil (Atlas, 1995).

March to April 1996 Soil Boring and Well Installation: On March 29 and April 2, 1996, two (2) additional wells, HMW-6 and HMW-8, were installed as shown on Figure 2. In addition, two (2) shallow hand borings, HB-17 and HB-18, were advanced in an attempt to delineate the southern extent of the affected soil zone. Soil samples were collected at depths of about 6 and 10 fbg in HMW-6 and HMW-8 and 6 fbg in HB-17 and HB-18. Soil samples HB-17-6 and HB-18-6 did not detect TPHg, TPHd, BTEX, or methyl tert-butyl ether (MTBE). Samples HMW-6-6 and HMW-6-10 exhibited TPHg concentrations of 6,400 mg/kg and 660 mg/kg, respectively. BTEX concentrations ranged from 5.6 to 1,650 mg/kg for HMW-6-6 and HMW-6-10. Sample HMW-8-6 exhibited a TPHg concentration of 5.5 mg/kg and BTEX constituents ranged from 0.14 to 1.38 mg/kg. However, there wasn't any detectable levels of TPHg or BTEX in sample HMW-8-10.

TPHd was detected in samples HMW-6-6 and HMW-6-10 at concentrations of 12,000 mg/kg and 3,740 mg/kg, respectively. Samples from HMW-8 did not detect TPHd. In addition, MTBE was not detected in any of the samples. A summary of the results is presented in Appendix C (Atlas, 1996a).

July 1996 Soil Boring and Well Installation: On July 16, 1996, Atlas advanced a single boring, HB-19, approximately 1 foot south of boring HB-10 and installed a groundwater well, HMW-9, southwest of boring HB-14 as shown on Figure 2. Of the three soil samples collected from HB-19, only HB-19-5 suggested the presence of the hydrocarbons. This sample exhibited 3,100 mg/kg TPHd and 150 mg/kg TPHg. BTEX concentrations ranged from less than 0.02 to 0.48 mg/kg. MTBE was not reported above 0.04 mg/kg. Soil samples from HB-19-3, HB-19-8, HMW-9-5, and HMW-9-10 did not have any volatile organic compound (VOC) detections. The groundwater sample from HMW-9 also did not have any detectable TPHg, TPHd, BTEX or MTBE concentrations (Atlas, 1999). A summary of the historical soil results is presented in Appendix C.

October to November 1996 Site Assessment: On October 31 and November 6, 1996, Atlas advanced three exploratory borings, HB-20, HB-21, HMW-10 at the location shown on Figure 2 in the presence of OCHCA personnel. With the exception of HB-20, which encountered refusal, the borings were completed to the water table at approximately 7 fbg on October 31, 1996. Then, on November 6, 1996, HB-20 was advanced to a depth of 7.5 fbg and HMW-10 to a depth of 18 fbg.

Soil samples collected from the borings at depths of 3 fbg exhibited TPHg concentrations ranging from 150 to 440 mg/kg and TPHd ranged from 11,000 to 54,600 mg/kg. Samples collected from depths of 5 fbg exhibited TPHg concentrations ranging from 29 to 510 mg/kg and TPHd ranged from 420 to 28,000 mg/kg. Samples collected from depths of 7 fbg exhibited TPHg concentrations ranging from 5.5 to 34 mg/kg and TPHd ranged from 150 to 790 mg/kg. Samples collected from HMW-10 at 10 fbg and 15 fbg suggested TPHg concentrations of 1.0 mg/kg and 5.6 mg/kg, respectively. TPHd concentrations were established at 47 mg/kg and less than 10 mg/kg in the two samples. BTEX constituents of the samples collected ranged from less than 0.005 to 1.2 mg/kg and MTBE ranged from less than 0.01 to 0.22 mg/kg. A summary of the soil analytical results obtained from this investigation is presented in Appendix C.

In OCHCA's field notes from the October 31, 1996 sampling event, they indicated that "The samples from the shed borehole (HB-21) had an organic odor. There was plastic, roots, etc in the samples. The soil samples from MW-10 also had the same organic/peet odor" (OCHCA, 1996a).

A groundwater sample was not collected from HMW-10 due to the presence of 0.96 feet of LNAPL. The characterization of the LNAPL indicated 97.3% Diesel, 2.3% Gasoline and 0.4% Oil (Atlas, 1999).

April 1999 Overexcavation of Former UST Complex: Atlas personnel observed the excavation of 947.05 tons of hydrocarbon affected soil from the area of the former tank pit to a depth of approximately 11.5 fbg as shown on Figure 6 in Appendix D. The contractor, Strongarm Environmental Field Services, Inc. (Strongarm), coordinated the excavation activities.

The excavation of affected soil encompassed the area of former tank complex and near former well HMW-6, which was physically removed by the excavator in order to facilitate cleanup within this area (Figure 6 in Appendix D). The excavation of material continued radially outward until field readings suggested that the limits of affected soil had been reached. However, limitations for expanding the excavation existed to the east and west due to the location of structures and limited access of the excavator. Also, the excavation of material was accomplished only up to the edge of the onsite clarifier to the south in order to maintain its integrity. No limitations were noted to the north.

In order to remove additional soil along the eastern edge of the excavation, Strongarm was required to provide support or shore an existing natural gas line. Following the support of line, excavation was continued to the east until access was no longer available for the excavator.

Atlas personnel collected excavation samples, EX1 through EX11 were collected at depths ranging from 8 to 11.5 fbg. In addition, stockpile samples, SP1-A, SP1-B, CS-1 and CS-2, were collected for profiling and disposal purposes. The sampling was conducted in the presence of OCHCA personnel or with their direct knowledge if not available to observe the activities. While on site, OCHCA personnel observed the exposed side walls and excavation terminus in addition to conducting limited assessment utilizing one of the on-site vapor meters.

Analytical results of soil samples collected from the excavation suggested TPHg ranging from non-detect to 94 mg/kg, BTEX constituents from non-detect to 0.276 mg/kg and MTBE by Gas Chromatography - Photoionization Detector (GC/PID) from non-detect to 1.7 mg/kg. Verification of MTBE by EPA method 8260A was performed on three (3) samples and the results were comparable to those reported by GC/PID with concentrations ranging from 0.43 mg/kg to 1.44 mg/kg. Soil samples, CS-1 and CS-2, from the material to remain onsite suggested no detectable levels of TPHg, BTEX or MTBE. The stockpile samples of the material hauled from the site had

TPHg concentrations ranging from 34 to 191 mg/kg, BTEX constituents from 0.029 to 2.19 mg/kg, and no detectable MTBE. Historical soil analytical results are included in Appendix C.

Prior to starting excavation activities each day, groundwater was removed from the excavation using a pump truck with a stinger. This allowed access for further excavation and provided some level of mitigation. A total of 12,162 gallons of water was removed from the excavation during remedial activities.

As discussed above, well HMW-6 was removed during the excavation process. However, during backfill operations, two 6-inch diameter screened access casings were provided along the eastern wall of the excavation. These wells, RW-1 and RW-2, were placed at the bottom of the excavation, at about 11.5 fbg, and were completed with traffic boxes at the surface.

The results of verification soil samples from the side walls and excavation indicated that the majority of the source mass has been removed and that further environmental work was not warranted (Atlas, 1999).

2000 Case Closure: On October 11, 2000, the OCHCA granted case closure because the “Agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required” (OCHCA, 2000a).

June 2018 Soil Vapor Survey: On June 5, 2018, Paloma conducted a soil vapor survey at 5 locations: one at each of the four corners and along the length of the proposed residential building at a depth of 2.5 and 5 fbg each. TPH as oil (TPHo) was detected in the soil between 150 to 398 mg/kg at 2.5 fbg in SV-2 and 2.5 and 5 fbg in SV-3. No other VOCs were detected in any of the soil samples. Tetrachloroethene (PCE), trichloroethene (TCE), and trichlorofluoromethane (Freon-11) were detected in the soil vapor at concentrations up to 270 micrograms per cubic meter ($\mu g/m^3$), 180 $\mu g/m^3$, and 2,450 $\mu g/m^3$, respectively, within the 2.5 fbg and 5 fbg SV-4 vapor probes. No other VOCs were detected in any of the samples. It was determined that the soil and soil vapor analytical results were below the target concentrations determined from DTSC, CalEPA, and SWRCB guidance documents. Historical soil and soil vapor analytical results are included in Appendix E.

November 2018 Soil Vapor Survey and Well Destruction: On November 8, 2018, Paloma supervised the installation of four (4) cluster soil vapor probes (SV-4A, SV-4B, SV-5A, and SV-5B) at 2.5 and 5 fbg to perform a soil vapor survey to re-evaluate the potential subsurface vapor intrusion pathways and identity human health and environmental risks in preparation for Site redevelopment as a residential building. Paloma evaluated the potential risk from vapor intrusion to indoor air from the associated petroleum hydrocarbon concentrations and determined that all sample results were below the SWRCB LTCP for every analyte. For the 2.5 fbg soil vapor samples, SLs and RSLs for ambient air were adjusted to soil vapor screening levels using site-specific attenuation factors derived from DTSC’s version of the Johnson and Ettinger (J&E) Model. Paloma verified the human health risk associated with the concentrations of PCE, TCE, benzene, ethylbenzene, naphthalene and chloroform within the 2.5 fbg soil vapor samples do not represent a human health risk for cancer of greater than the one in a 1,000,000 threshold or a health hazard quotient greater than the threshold of concern of 1.0 for residential use.

On November 8, 2018, it was discovered that onsite monitoring wells HMW-2 and HMW-8 were damaged and had been filled with peagravel to the surface during previous grading activities. On

November 30, 2018, Strongarm used a mini excavator to remove the approximate 18-foot well casings from both HMW-2 and HMW-8 (Table 1). The remaining void space from each well location was backfilled to grade with bentonite. Historical soil vapor analytical results are included in Appendix E.

2019 Soil Vapor Survey: On June 27, 2019, Paloma reevaluated the potential risk from vapor intrusion to indoor air from SV-4A, SV-4B, SV-5A, and SV-5B at 5 fbg and determined that all sample results were below the SWRCB LTCP for every analyte. For the 2.5 fbg samples, Paloma used the DTSC modification of the U.S. EPA version of the J&E vapor intrusion model and determined that the cancer risk level for all the constituents were less than the target risk level of 1×10^{-6} and that the health hazard quotient was less than the threshold of concern of 1.0 for residential use. Historical soil vapor analytical results are included in Appendix E.

3. Nature of Diesel and Gasoline Constituents

3.1 Hydrocarbon Distribution in Soil

Available historical soil sample location maps are presented in Figure 2 and the historical soil data is summarized in Appendix C. The primary VOCs are TPHg, TPHd, and BTEX. In general, the source area appears to be located in the vicinity of the former USTs as indicated by soil analytical data from well HMW-6 and grab samples 3A and 4A, which were located beneath the east and west end of the former USTs, respectively (Figure 5 in Appendix D). The majority of the VOC concentrations were generally detected within the smear zone at approximately 5.5 to 8 fbg, which is likely attributable to the groundwater fluctuations at the Site. However, elevated VOCs were also detected between approximately 3 to 5 fbg, which according to Atlas are the “result of past over-spilling during filling operations or loose riser connections” since the “tank[s] integrity was good with no obvious signs of leaks” (Atlas, 1999).

The highest hydrocarbon concentrations detected in Site soils were:

- 13,300 mg/kg TPHg in 4A (beneath the west end of the former UST) (3/1992)
- 54,600 mg/kg TPHd in HB-21 at 3 fbg (10/31/1996)
- 220 mg/kg benzene in 3A (beneath the east end of the former UST) (3/1992)
- 1,040 mg/kg toluene in 4A (beneath the west end of the former UST) (3/1992)
- 349 mg/kg ethylbenzene in 4A (beneath the west end of the former UST) (3/1992)
- 1,650 mg/kg total xylenes in HMW-6 at 6 fbg (3/29/1996 and/or 4/2/1996)
- 1.7 mg/kg MTBE in EX5 and EX2A at 8fbg (4/13/1999 and/or 4/16/1999)

The shallow diesel detection in HB-21 likely came from the overspilling during filling operations of Mercury’s former USTs and/or dispensers due to its relative proximity to these areas and historical surface gradient since there was no associated diesel AST in the area around HB-21 (as stated in Section 2.1). This is further evidenced by the similar concentrations within the 5.5 fbg sample from HMW-5 (18,800 ug/L) and HB-12 (11,700 ug/L), which are located cross-gradient and upgradient of the inferred AST area, respectively, while the 5 fbg sample in HB-21 was 14,500 ug/L. Also, the OCHCA indicated in their field notes from the October 31, 1996 sampling event, “The samples from the shed borehole (HB-21) had an organic odor. There was plastic, roots, etc in the samples. The soil samples from HMW-10 also had the same organic/peet odor." Therefore, the 3 fbg sample from HB-21 may also have been attributed to interference with the potential organic/peet material within this area.

Various phases of remediation have occurred since significant hydrocarbon impact was detected in these areas of the Site in 1992, including source removal during UST removal, overexcavation, LNAPL removal, and natural attenuation. Therefore, the historical soil data does not reflect the current conditions at the Site.

The highest hydrocarbon concentrations detected in Site soils around the former UST complex after the April 1999 excavation were:

- 94 mg/kg TPHg in EX6 at 8 fbg (4/13/1999)
- 0.276 mg/kg benzene in EX5 at 8 fbg (4/13/1999)
- 0.019 mg/kg toluene in EX1 at 8 fbg (4/13/1999)
- 0.429 mg/kg ethylbenzene in EX6 at 8 fbg (4/13/1999)
- 0.13 mg/kg total xylenes in EX10 at 8 fbg (4/14/1999)
- 1.7 mg/kg MTBE in EX5 and EX2A at 8fbg (4/13/1999 and 4/16/1999)

According to OCHCA's July 7, 2000 *Case Closure Summary*, "All soil verification samples collected from the excavation were either non-detect or slightly above for BTEX except for one sample showing [0.276 mg/kg] benzene. The MTBE concentration ranged between non-detect to [1.7 mg/kg]. The area where the highest MTBE (sample EX2A) was detected could not be excavated any further due to the presence of a natural gas line" (OCHCA, 2000b). Therefore, the historical data suggests that the horizontal extent of impacted soil is generally defined by low level VOC concentrations, except for possibly to the east of the Site. However, the Mercury facility is located directly to the east of the Site, which currently has an open environmental case (Santa Ana Regional Water Quality Control Board [SARWQCB] Case Number 083002678T, OCHCA Case Number 95UT024). As such, additional assessment by the former Hansen Auto Tow facility is not warranted to the east of the Site.

3.2 Hydrocarbon Distribution in Groundwater

LNAPL has historically been detected in Site monitoring wells HMW-6 and HMW-10 and offsite monitoring wells HMW-3 to HMW-5, and HMW-7. The maximum LNAPL thickness measured was 3.78 feet in offsite well HMW-4 in September 1997. In July 2018, LNAPL was still detected in offsite wells HMW-3A (formerly HMW-3), HMW-4, HMW-5, MMW-6 (Mercury), HMW-7, MMW-7 (Mercury), MMW-9B (Mercury), and RW (Mercury) with thicknesses ranging between a sheen to 2.93 feet, with the highest measurements being within the footprint of the former USTs at the Mercury facility (Figure 3 in Appendix B).

Monitoring well HMW-10 was not gauged during the first quarter of 2000 prior to Site closure, but during the fourth quarter of 1999 groundwater monitoring event 1.18 ft of LNAPL was measured. However, as indicated from the fingerprint analysis conducted in 1996 from this well, the LNAPL consisted of 97.3% diesel, 2.3% gasoline and 0.4% oil, which is along the same composition magnitude as offsite wells HMW-3 and HMW-4, which consisted of 88.3% diesel, 10.2% gasoline and 1.5% oil, which are within close proximity of Mercury's former UST area. Since Mercury's former UST area was known to have consisted of five USTs: two diesel, one gasoline, and one motor oil, and one waste oil, the composition breakdown of the LNAPL falls directly in line with the number and types of USTs used at this site. Therefore, any associated LNAPL from HMW-10 is assumed to have been associated with the former Mercury facility release to the east since there is no known source of diesel (attributed to 88.3% to 97.3% of the LNAPL) that existed at the Former Hansen Auto Tow facility (see Section 2.1).

Generally, the LNAPL thicknesses have increased with decreasing depth to water, indicating that the majority of the hydrocarbon mass was submerged, which is further evidenced by the elevated soil concentrations within the smear zone. Also, during the most recent drought conditions in Southern California there was an average drop of groundwater levels of 3.6 feet at the Site. As a result, there was a rise of LNAPL thickness in monitoring wells that were at or near sheen conditions in HMW-3A, HMW-4, HMW-5, MMW-7, and MMW-9B. Despite this phenomenon, the overall LNAPL thickness is decreasing over time and LNAPL has not been detected in several wells within the last five years. Other monitoring wells (HMW-3A, HMW-5, and MMW-7) increased either during the September 2016 and July 2018 gauging and/or sampling event but have since began to decrease. However, the LNAPL thickness in MMW-9B has continued to increase since the September 2016 groundwater monitoring event (see Section 6.4).

Similar to the soil conditions, the primary VOCs in groundwater are TPHg, TPHd, and BTEX. Groundwater elevations at the Site have historically ranged between approximately 4.52 fbg (HMW-9) to 10.67 fbg (HMW-5), with a groundwater flow direction to the north-northeast. The highest LNAPL thicknesses and dissolved-phase concentrations are either upgradient or cross-gradient of the Site. Available historical monitoring well location maps are presented in Figure 2, and the historical groundwater data is summarized in Appendix C.

The highest historical dissolved-phase concentrations detected in the Site monitoring wells prior to the Site being closed in 2000 were:

- 2,700 μg/L TPHg in HMW-7 at a depth to water (DTW) of 6.42 fbg (5/5/1997)
- 3,460 μg/L TPHd in HMW-5 at a DTW of 6.78 fbg (12/14/1998)
- 8.9 μg/L benzene in HMW-5 at a DTW of 6.78 fbg (12/14/1998)
- 2.8 μg/L toluene in in HMW-1 at a DTW of 7.20 fbg (12/5/1994)
- 13.8 μg/L ethylbenzene in HMW-5 at a DTW of 6.78 fbg (12/14/1998)
- 2.4 μg/L total xylenes in HMW-1 at a DTW of 7.20 fbg (12/5/1994)
- 1,600 μg/L MTBE in HMW-7 at a DTW of 6.30 fbg (2/18/1997)

Based on these dissolved-phase concentrations, it is apparent from the TPH to BTEX ratio that the majority of the more volatile compounds (BTEX) have significantly degraded, indicating that this is an older release.

In OCHCA's July 7, 2000 *Case Closure Summary*, they indicated that the MTBE concentrations found in HMW-7 "…may be attributed to the adjacent property's [Mercury] plume since MW-7 is located downgradient from the adjacent property's former tank area that contained a gasoline tank in addition to the diesel tanks" (OCHCA, 2000b).

Therefore, the horizontal extent of impacted groundwater is generally defined, with the exception to the east-northeast due to the open environmental case for Mercury. Therefore, additional assessment and/or delineation is not warranted.

The highest historical dissolved-phase concentrations detected in the Site monitoring wells (including Mercury wells) since 2000 were:

- 89,000 μg/L TPHg in MMW-3 at a DTW of 8.39 fbg (6/28/2013)
- 150,000 μg/L TPHd in MMW-6 at a DTW of 9.39 fbg (6/10/2015)
- 74 μg/L benzene in MMW-4 at a DTW of 7.80 fbg (9/26/2006)
- 74 μg/L toluene in MMW-4 at a DTW of 7.80 fbg (9/26/2006)
- 170 μg/L ethylbenzene in MMW-4 at a DTW of 8.89 fbg (6/12/2014)
- 430 μg/L total xylenes in in MMW-4 at a DTW of 7.20 fbg (11/4/2004)
- 350 μg/L MTBE in HMW-7 at a DTW of 6.41 fbg (11/4/2004)

The highest TPHg and TPHd dissolved-phase concentrations since Site closure in 2000 were observed in the vicinity of the northeastern and eastern portion of the former UST complex at the Mercury facility in monitoring wells MMW-3 and MMW-6, respectively. These wells are either cross-gradient and upgradient to the former Hansen Auto Tow Site's inferred source location.

The highest BTEX concentrations were observed in MMW-4, which is located along the northern parking lot of the Mercury facility, which is situated within close proximity to the former dispensers of the Top Oil service station that resided in this area (see Appendix F). OCHCA has expressed their concerns to Mercury about the residual concentrations in MMW-4 and MMW-5 in their response to Mercury's petition for case closure in 2013, citing that "TPHg, TPHd, and benzene concentrations in groundwater samples collected from well MW-4 have fluctuated from 50 μg/L to 1,500 μg/L, not detected (ND) to 4,900 μg/L, and 1.6 μg/L to 70 μg/L, respectively, during the last four quarters of monitoring which is not indicative of a stable plume. In addition, a hydropunch sample collected at the site in August 2012 showed a benzene concentration of 2,000 μg/L" (OCHCA, 2014).

MTBE had its highest concentrations in monitoring well HMW-7, but as indicated above, this well is located downgradient from the former Mercury facility's UST area.

During the groundwater monitoring event conducted by EarthCon at the Mercury site in September 2016 (Table 4):

- TPHg was detected in 14 of 17 wells sampled at concentrations ranging from 160 μg/L (MMW-9A) to 18,000 μg/L (MMW-2) for the offsite wells and non-detect (HMW-8) to 350 μg/L (HMW-2) for the existing onsite wells.
- TPHd was detected in 14 of 17 wells sampled at concentrations ranging from 560 μg/L (MMW-4) to 35,000 μg/L (HMW-7) for the offsite wells and non-detect (HMW-8) to 900 μg/L (HMW-2) for the existing onsite wells.
- Benzene was detected in the groundwater samples from MMW-4 and MMW-6 at concentrations of 19 μg/L and 25 μg/L, respectively.
- Toluene was detected in the groundwater sample collected from well MMW-4 at a concentration of 3.9 μg/L.
- Ethylbenzene was detected in the groundwater sample collected from well MMW-4 at a concentration of 76 μg/L.

- Total Xylenes was detected in the groundwater sample collected from well MMW-4 at a concentration of 142 µg/L.
- MTBE was detected in 8 of the 17 groundwater samples. The reported concentrations were 1.5 µg/L at MMW-3, 5.8 µg/L at MMW-9B, 1.7 µg/L at HMW-2, 3.3 µg/L at HMW-3A, 4.2 µg/L at HMW-4, 18 µg/L at HMW-7, 4.9 µg/L at HMW-8, and 4.4 µg/L at RW (EarthCon, 2016).

The highest TPHg concentration during the September 2016 groundwater monitoring event was observed in the vicinity of the southeast portion of the former UST complex at the Mercury facility (MMW-2), which is cross-gradient and/or upgradient to the former Hansen Auto Tow Site's inferred source location. In addition, the highest TPHd concentration was observed in HMW-7. With typical groundwater flow direction to the north-northeast, the TPHd concentrations observed in HMW-7 groundwater appear to be within the same magnitude and concentration trends in the site wells immediately upgradient and are therefore likely a continuation of the impacted groundwater plume associated with the Mercury site. The TPHg and TPHd groundwater contour maps from this sampling event are presented in Figures 4 and 5 in Appendix B. In addition, OCHCA indicated in their July 7, 2000 *Case Closure Summary* that "…free product that contained diesel (88.3% when tested) was present in the off-site wells. Since there was no on-site diesel source further investigation was conducted. After the diesel source was determined to be from the former tanks belonging to the adjacent property owner [Mercury], free product removal activities were ceased" (OCHCA, 2000b).

4. Sensitive Receptors and Risk Assessment

Paloma conducted a sensitive receptor survey to determine if any potential receptors exist within a 1-mile radius of the Site. The following is a summary of the identified sensitive receptors and a risk assessment evaluating if there is a potential risk to the receptors posed from the hydrocarbon and oxygenate release at the Site.

4.1 Surface Waters

The nearest surface water to the Site is Moody Creek, which ranges between 2,200 to 2,800 feet to the northwest and north, respectively. However, this creek is considered an intermittent riverine, which consists of an artificially created open conduit to contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent. When having flowing water, Moody Creek flows west and is a tributary to Coyote Creek, which is another intermittent riverine that is open and completely concrete-lined with steep and/or vertical walls that flows south to the Los Alamitos Channel based on the US Fish and Wildlife Service's Wetlands Mapper (https://www.fws.gov/wetlands/data/mapper.html). Surface waters from the Coyote Channel are beneficial for municipal, non-contact recreational, and wildlife habitats uses, while contact recreational and warm water habitats are considered "presumptive" based on its intermittent designation (SARWQCB, 2019). The extent of groundwater contamination at the Site does not extend to the Moody Creek and concentrations are stable to decreasing, therefore, there is no risk to the waters of Coyote Creek.

4.2 Groundwater Wells

Paloma reviewed the SWRCB GeoTracker Groundwater Ambient Monitoring and Assessment (GAMA) Program, which confirmed there are two known water supply wells downgradient from the Site, which are the Forest Lawn irrigation well about ¼-mile (1,320 feet) northwest and a municipal company well about 1.2 miles northeast of the Site (GeoTracker, 2019). According to an interview in 2012 with the owner of Forest Lawn, Granath, “the Forest Lawn well draws water from the Artesia aquifer and is only used for irrigation” and their potable water is provided by the Golden State Water Company. A representative from the Golden State Water Company, Jordan, in 2012 also indicated that the municipal well located approximately 1.2 miles downgradient “has a total depth of 600 feet, suggesting it is drawing groundwater from the confined Lynwood aquifer” (Gary L. Guymon, 2013).

4.3 Hospitals, Schools, and Daycare Centers

Paloma assessed other potential receptors within a 1-mile radius of the Site including hospitals, schools, child day care centers, and senior day care centers. Results of a Site reconnaissance and an Internet search by Paloma indicate the following:

- No hospitals are located within a 1-mile radius of the Site (Google Maps, 2019).
- Seven elementary schools and four preschools were identified within a 1-mile radius of the Site. The closest elementary school is A.E. Arnold Elementary School, located approximately 0.25 mile southwest of the Site. The closest preschool is ABC Development Preschool, located approximately 0.3 mile southwest of the Site. Three middle schools or high schools are located within a 1-mile radius of the Site. The closest middle school is location approximately 0.5 mile to the southwest (Google Maps, 2019).
- Six child day care centers were identified within a 1-mile radius of the Site. The closest is Stepping Stones Learning Center and Infant Care, located approximately 0.3 mile west of the Site (Google Maps, 2019).
- No senior care centers are located within a 1-mile radius of the Site (Google Maps, 2019).

Historical groundwater data indicates the monitoring well network defines the extent of contamination. Concentrations are decreasing to stable and show the plume will not reach any hospitals, schools or day care facilities identified above.

4.4 On-Site Human Receptors

The Site is currently a vacant lot, but is preparing to undergo redevelopment into a residential complex. The SWRCB LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to indoor and outdoor air poses an insignificant threat to human health (SWRCB, 2012).

4.4.1 Direct Contact Soil Exposure

Sites where human exposure may occur satisfy media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following:

1. Maximum concentrations of petroleum constituents in soil are less than those listed in Table A below for the specified depth below ground surface for soils at residential facilities:

Table A: Direct Contact Soil Exposure – Residential			
Constituent	Depth	Screening Level (mg/kg)	Maximum Concentration (mg/kg)
Benzene	5	1.9	0.21

	10	2.8	0.009
Ethylbenzene	5	21	0.60
	10	32	0.005
Naphthalene	5	9.7	ND <0.010
	10	9.7	ND <0.010
PAHs	5	0.063	---
	10	NA	---

PAHs = poly aromatic hydrocarbons
ND = non-detect
NA = not applicable
--- = not analyzed

2. Maximum concentrations of petroleum constituents in soil are less than levels that a site-specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or

3. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.

Polycyclic aromatic hydrocarbons (PAHs) are only required to be analyzed if there was a release from a waste oil UST. However, there was no known waste oil UST located onsite. Therefore, samples were not historically analyzed for PAHs.

Benzene, ethylbenzene, and naphthalene concentrations in soil are below the LTCP screening criteria (option "a") for residential use property. The 5-10 fbg criteria is intended to protect from inhalation of volatile soil emissions. Therefore, the Site meets the screening criteria of option "a" for direct contact. The volatilization to indoor and outdoor air are further evaluated in Section 4.4.2 below.

4.4.2 Direct Indoor and Outdoor Air Exposure

Paloma evaluated the soil vapor data collected on June 5, 2018, November 8, 2018, and June 27, 2019 based on the California DTSC's *HERO HHRA Note Number 3: DTSC-modified Screening Levels (Table 3. Screening Levels for Volatile Compounds in Ambient Air)* (Note 3) (DTSC, 2018 & 2019) and U.S. EPA's Regional Screening Levels for Resident Air (EPA, 2018 & 2019), where indoor air screening levels were identified for most reported analytes. DTSC Note 3 advises that "the air screening levels for VOCs have applications for screening soil gas data when used in concert with appropriate attenuation factors as described in DTSC's 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* [DTSC, 2011]".

Table B: Subsurface Soil Vapor Analytical Data

Probe ID	Sample Date	Sample Depth (fbg)	Benzene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Naphth-alene ($\mu g/m^3$)	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Freon-11 ($\mu g/m^3$)
SV-4	6/5/18	2.5	<30	<500	--	270	180	<60	2,450
		5.0	<30	<500	--	140	100	<60	1,900
SV-4A	11/8/18	2.5	2.7	2.9	<2.0	41	8.0	<2.2	430

		5.0	<2.2	<2.2	<2.0	90	22	<2.3	990
SV-4A DUP	11/8/18	2.5	2.3	<2.2	<2.0	37	7.3	<2.3	430
SV-4A	6/11/19	2.5	7.3	41	13	110	8.9	<4.9	360
		5.0	6.1	54	13	160	18	<4.9	870
SV-4B	11/8/18	2.5	6.6	<2.1	<2.0	18	13	<2.2	120
		5.0	3.9	<2.2	<2.0	32	43	<2.3	980
SV-4B	6/27/19	2.5	5.3	53	20	49	6.5	<4.9	18
		5.0	8.4	110	20	290	83	<4.9	600
SV-5	6/5/18	2.5	<30	<500	--	<100	<100	<60	<1,000
		5.0	<30	<500	--	<100	<100	<60	<1,000
SV-5A	11/8/18	2.5	5.0	3.7	<2.0	5.7	<2.3	3.1	7.6
		5.0	<2.1	2.3	<2.0	7.5	<2.2	2.8	16
SV-5A	6/27/19	2.5	6.5	120	22	14	<5.5	<4.9	<5.6
		5.0	3.3	48	20	17	<5.5	<4.9	<5.6
SV-5B	11/8/18	2.5	3.7	3.9	<2.0	3.8	<2.2	2.9	16
		5.0	4.6	4.3	<2.0	<2.2	<2.2	5.2	27
SV-5B	6/27/19	2.5	9.3	330	33	16	<5.5	<4.9	<5.6
		5.0	<3.2	41	20	18	<5.5	7.4	<5.6
SV-5B DUP	6/27/19	2.5	<3.2	47	24	18	<5.5	7.6	<5.6
μg/m³ <n ND PCE TCE Freon-11			Micrograms per cubic meter Indicates constituent was not detected at or above laboratory reporting limit "n" Not Detected Tetrachloroethene Trichloroethene Trichlorofluoromethane						

The 2011 DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (VIG) Table 2 recommends utilizing an attenuation factor of 0.001 for evaluating future residential buildings near contaminant source samples (DTSC, 2011). The 5 fbg soil vapor samples collected by Paloma represent near contaminant source samples. Paloma modified the DTSC Note 3 indoor air screening levels using the attenuation factor of 0.001 to obtain target screening levels for the Site.

The 2.5 fbg soil vapor samples collected by Paloma on November 8, 2018 and June 27, 2019 were evaluated using conservative Site-specific attenuation factors derived using the DTSC version of U.S. EPA's J&E Model. The resulting attenuation factors were then used to modify the conservative DTSC SLs for residential air, or if not available, the U.S. EPA RSLs for residential air. The target screening levels for both the 2.5 and 5 fbg soil vapor samples and the indoor air screening levels are presented along with the sample results in Appendix E.

Paloma also completed an analysis of the human health risk associated with the detected concentrations of PCE, TCE, benzene, ethylbenzene, naphthalene and chloroform within the 2.5 fbg soil vapor samples using the DTSC modification of the U.S. EPA version of the J&E vapor intrusion model. Based upon the J&E model analysis, the detected soil gas concentrations do not represent a human health risk for cancer of greater than the one in a 1,000,000 threshold or a health hazard quotient greater than the threshold of concern of 1.0 for residential use for PCE, TCE, benzene, ethylbenzene, naphthalene and chloroform. No other constituents were either detected at or above the laboratory reporting limit or they did not have a considerable associated human health risk designation within the J&E model.

Table C: J&E Model Estimated Human Health Risk

Probe ID	Sample Depth (fbg)	Benzene	Ethyl-benzene	Naphta-lene	PCE	TCE	Chloro-form
SV-4A	2.5	1.3E-08	1.1E-09	NA	3.3E-08	4.9E-09	NA
SV-4A	2.5	1.4E-07	6.1E-08	2.5E-07	3.5E-07	2.2E-08	NA
SV-4B	2.5	3.1E-08	NA	NA	1.4E-08	8.0E-09	NA
SV-4B	2.5	1.0E-07	7.9E-08	3.9E-07	1.6E-07	1.6E-08	NA
SV-5A	2.5	2.3E-08	1.4E-09	NA	4.5E-09	NA	1.1E-08
SV-5A	2.5	1.2E-07	1.8E-07	4.3E-07	4.5E-08	NA	NA
SV-5B	2.5	1.7E-08	1.5E-09	NA	3.0E-09	NA	1.1E-08
SV-5B	2.5	1.7E-07	4.9E-07	4.7E-07	5.1E-08	NA	NA
NA	Not applicable since constituent was not detected above laboratory reporting limit						
PCE	Tetrachloroethene						
TCE	Trichloroethene						

Paloma evaluated the potential human health risk from vapor intrusion to indoor air from the associated petroleum hydrocarbon and chlorinated VOC concentrations by comparing the maximum reported concentration of each detected analyte at both depth intervals to its respective target screening level and determined that all sample results were below the SWRCB LTCP and/or modified DTSC SLs, or U.S. EPA RSLs, if DTSC SLs were not available, for every analyte. In addition, the SWRCB LTCP (SWRCB, 2012) guidance for petroleum vapor intrusion to indoor provides two scenarios for soil vapor samples collected at 5 fbg for existing or future construction and provides target concentrations for benzene, ethylbenzene and naphthalene. The two scenarios are for sites with and without a 5-foot bioattenuation zone where a bioattenuation zone is defined where oxygen concentrations are above 4% at the lower end of the 5-foot zone. All of the 2.5-foot and 5-foot probes met the requirements for a bioattenuation zone, but the results of this study meet the more conservative scenario of a site without a bioattenuation zone where target concentrations of benzene, ethylbenzene and naphthalene are 85 $\mu g/m^3$, 1,100 $\mu g/m^3$ and 93 $\mu g/m^3$, respectively.

Based on EarthCon's September 2016 soil vapor survey at the Mercury site, the highest VOC concentrations were within the footprint of former UST complex at the Mercury site, which is cross-gradient and/or upgradient to the former Hansen Auto Tow Site's inferred source location (Appendix G). In addition, the inferred soil vapor plume around this area indicates it did not originate from the Site and is not within footprint of the proposed residential building, which was further confirmed by Paloma's non-detect and/or low detections from the soil vapor results at SV-5 on June 5, 2018, November 8, 2018, and June 27, 2019.

Even though PCE, TCE, and Freon-11 were detected in the soil vapor samples from SV-4A and SV-4B at both 2.5 and 5 fbg, they were not detected in any of the soil samples collected from this from this location on June 5, 2018. The historical operations at the Site have consisted of commercial automobile repair and storage and chlorinated solvents have not previously been detected at the Site. Therefore, it is unlikely that these chemicals were previously used onsite. However, based on the proximity of the sample location for SV-4A and SV-4B, it is likely related to the adjacent metal fabrication facility since chlorinated solvents have known to have been used for degreasing and cleaning metals.

The results of the study show that all VOCs evaluated, including chlorinated VOCs, meet the residential screening levels. Therefore, there is no unacceptable risk from soil vapor intrusion to indoor air for future occupants of the proposed building.

5. HydroPunch™ and Monitoring Well Drilling and Sampling

On June 6, 2019, BC2 Environmental (BC2) installed a temporary monitoring well (HMW-10R) to replace former monitoring well HMW-10. In addition, three HydroPunch™ borings, HP-1 to HP-3, were installed by Strongarm Environmental Field Services, Inc. (Strongarm) directly south to southwest of replacement well HMW-10R to further assess the extent of the adsorbed- and dissolved-phase hydrocarbon concentrations within the soil and groundwater. The locations are depicted on Figure 2.

All fieldwork associated with the installation of the well and borings was conducted under the supervision of a State of California licensed Professional Engineer.

5.1 Site-Specific Health and Safety Plan

Paloma prepared a Site- and activity-specific health and safety plan (HASP) to inform site workers of known hazards and to provide health and safety guidance. The HASP was reviewed and signed by all site workers and visitors prior to start of work. The HASP was kept onsite during all field activities.

5.2 Pre-Field Protocol

Paloma obtained the associated well construction permits from OCHCA (permits #19-05-42 and #19-06-01) for the installation of well HMW-10R and the three HydroPunch™ borings (Appendix H). The proposed well and boring locations were marked and Underground Service Alert (USA) was contacted to clear the locations with all utility companies with service lines through the work area at least 72 hours prior to drilling activities.

5.3 Soil Boring Drilling and Sampling

The HydroPunch™ borings were drilled by Strongarm using a Geoprobe 6620 track-mounted unit with a 2.5-inch outer diameter direct push probe to a depth of approximately 20 fbg. Soil was logged continuously from 4-foot long acetate liners and screened in the field using a photo-ionization detector (PID). Paloma logged the borings by collecting soil cuttings during hand augering and by observing soil samples collected from the 4-foot long acetate liners (see Appendix I). Soil samples were collected at approximate 5-foot intervals at 2.5 fbg, 5 fbg, 10 fbg, 15 fbg, and 20 fbg. En Core® Samplers were used to collect soil samples within the acetate liner in accordance with EPA Method 5035 for the preservation of volatile constituents. In addition, an undisturbed 6-inch section of the acetate liner was covered with Teflon tape and capped on both ends for each sample, which were submitted for laboratory analysis. These samples were stored on ice and submitted to Advance Technology Laboratories (ATL), a state-certified laboratory, for analysis under chain-of-custody procedures. ATL analyzed the soil samples for TPHd, TPHg, and TPHo by EPA Method 8015B and full scan VOCs by EPA Method 8260B.

5.4 Soil Analytical Results

The subsurface soil analytical results from HMW-10R, HP-1, HP-2, and HP-3 are presented in Table 2 and laboratory analytical reports are provided in Appendix J. However, a summary of constituents of concern (COC) concentrations detected during this event are detailed in the following Table D.

Table D: Soil Analytical Data

Probe ID	Sample Depth (fbg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)	Naphth-alene (µg/kg)	n-Butyl benzene (µg/kg)	n-Propyl benzene (µg/kg)	sec-Butyl benzene (µg/kg)
HMW-10R	2.5	<1.0	**19**	**67**	<3.7	<3.7	<3.7	<3.7
	5	<1.0	**50**	**110**	<3.9	<3.9	<3.9	<3.9
	10	<1.0	<10	<10	<3.7	<3.7	<3.7	<3.7
	15	<1.0	**14**	<10	<4.0	<4.0	<4.0	<4.0
	20	<1.0	**17**	**15**	<5.0	<5.0	<5.0	<5.0
HP-1	2.5	<1.0	**30**	**72**	<3.7	<3.7	<3.7	<3.7
	5	<1.0	**22**	**48**	<3.9	<3.9	<3.9	<3.9
	10	<1.0	**25**	**41**	<3.7	<3.7	<3.7	<3.7
	15	<1.0	**21**	**29**	<4.0	<4.0	<4.0	<4.0
	20	<1.0	**24**	**19**	<5.0	<5.0	<5.0	<5.0
HP-2	2.5	<1.0	**190**	**400**	<5.0	<5.0	<5.0	<5.0
	5	<1.0	**19**	**10**	<4.0	<4.0	<4.0	<4.0
	10	<1.0	**19**	**11**	<5.1	<5.1	<5.1	<5.1
	15	<1.0	**13**	<10	<4.4	<4.4	<4.4	<4.4
	20	<1.0	<10	<10	<4.0	<4.0	<4.0	<4.0
HP-3	2.5	<1.0	**66**	**73**	<3.9	<3.9	<3.9	<3.9
	5	<1.0	**3,400**	**1,300**	**2,200**	**490**	**310**	**350**
	5*	NA	<10	<10	NA	NA	NA	NA
	10	<1.0	**180**	**66**	<4.2	<4.2	<4.2	<4.2
	15	<1.0	**13**	<10	<4.1	<4.1	<4.1	<4.1
	20	<1.0	<10	<10	<4.1	<4.1	<4.1	<4.1

mg/kg Milligrams per kilogram
µg/kg Micrograms per kilogram
<n Indicates constituent was not detected at or above laboratory reporting limit "n"
NA Not analyzed
* Sample was reanalyzed to determine validity of TPHd and TPHo concentrations only

The soil detections at the Site consisted of petroleum hydrocarbons. No chlorinated VOCs were detected above their respective reporting limits. Therefore, Paloma evaluated the soil data based on the SFRWQCB Environmental Screening Levels (ESLs) for shallow residential soil exposure and construction worker soil exposure (SFRWQCB, 2019). All detected concentrations were below both the residential and construction worker exposure ESLs, except for the TPHd concentration in HP-3 at 5 fbg. However, this sample was reanalyzed for TPHd and TPHo and the concentrations were not measured above the detection limit. Therefore, the original analysis was likely erroneous or the impacts were limited within the 6-inch acetate liner sample.

The concentrations within the borehole for HMW-10R were also very low, which was installed within the footprint of the inferred AST that was thought to have stored diesel. However, these low concentrations are further evidence that the former AST at the Site did not store and/or release diesel since it was used as a storage tank associated with a former steam cleaner rack as discussed in Section 2.1.

Both the Site's previous cross-gradient borings HB-15 and HB-16 and upgradient borings installed in 1995 and HB-17 and HB-18 installed in March 29 and April 2, 1996 had non-detect to low soil concentrations. In addition, the non-detect to low groundwater concentrations historically detected in former onsite monitoring well HMW-9 indicate that there are no cross-gradient and/or upgradient sources. Based on this data, it was also determined during a meeting with OCHCA, SARWQCB, Hansen, Mercury, Atlas, and GEA on July 12, 1996 that "there are no upgradient sources" (OCHCA, 1996b).

5.5 Grab Groundwater Sample Collection

Strongarm collected grab groundwater samples from the three HydroPunch™ borings at approximately 2 feet below the first encountered groundwater. Before groundwater samples were collected, Strongarm waited a minimum of 20 minutes for groundwater conditions to stabilize. The groundwater samples were collected from within the screen zone of the HydroPunch™ sampler using a peristaltic pump. The water samples were decanted into 40 milliliter (ml) Volatile Organic Analysis (VOA) vials preserved with hydrochloric acid and 1-liter amber jars that were stored in ice chilled coolers and submitted to ATL for analysis under chain-of-custody procedures. ATL analyzed the grab groundwater samples for TPHd, TPHg, and TPHo by EPA Method 8015B and full scan VOCs by EPA Method 8260B.

Table E: Grab Groundwater Analytical Data

Probe ID	*TPHg (mg/L)*	*TPHd (mg/L)*	*TPHo (mg/L)*	*Ethyl benzene (µg/L)*	*MTBE (µg/L)*	*Naphth -alene (µg/L)*	*1,2,4-TMB (µg/L)*	*4-IPT (µg/L)*	*IPB (µg/L)*	*n-Butyl benzene (µg/L)*	*n-Propyl benzene (µg/L)*	*sec-Butyl benzene (µg/L)*
HP-1	<0.20	**0.89**	**0.62**	<0.50	**1.4**	<0.50	**1.0**	**0.72**	<0.50	<0.50	**0.55**	<0.50
HP-2	<0.20	**0.84**	**0.65**	<0.50	**1.1**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HP-3	**0.46**	**500**	**180**	**2.3**	<0.50	**160**	<1.0	**0.72**	**4.4**	**5.7**	**8.5**	**4.7**
Trip Blank	NA	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

mg/L	Milligrams per liter
µg/L	Micrograms per liter
<n	Indicates constituent was not detected at or above laboratory reporting limit "n"
NA	Not analyzed
1,2,4-TMB	1,2,4-Trimethylbenzene
4-IPT	4-Isopropyltoluene
IPB	Isopropylbenzene

Similar to the soil samples, the grab groundwater detections at the Site consisted of petroleum hydrocarbons and did not have any detectable chlorinated VOCs. Paloma evaluated the grab groundwater concentrations against the California Maximum Contaminant Levels (MCLs). All detected concentrations were below the California MCLs for all constituents. However, the concentrations of TPHd and TPHo in HP-3 seem high, but these concentrations appear to be fairly limited in their extent and are not associated and/or commingled with the Mercury facility release since both the upgradient and cross-gradient borings (HP-1 and HP-2) and the current and/or former upgradient (HMW-9) and downgradient monitoring wells (former HMW-2 and HMW-10R) concentrations ranged between two to three orders of magnitude less than the concentrations in HP-3. This is further evidenced by the soil concentrations within HP-3, which were all low except for the detection at 5 fbg that appeared to be either erroneous or limited in its extents within the 6-inch acetate liner.

These overall low grab groundwater concentrations are further evidence that there were no additional sources onsite that are or have been contributing to the source mass present within the adjacent alleyway and footprint of the former Mercury UST complex. The grab groundwater analytical results are presented in Table 3 and laboratory analytical reports are provided in Appendix J.

5.6 Monitoring Well Installation

The replacement well for HMW-10 (HMW-10R) was constructed using a 4-inch diameter Schedule 40 PVC casing. HMW-10R was screened from approximately 5 to 20 fbg with 0.020-inch slot size. The sand pack in the well was placed from the bottom of the well screen up to 1 foot above the top of the well screen, followed by a hydrated bentonite seal to grade. Due to the proposed redevelopment activities at the Site, the monitoring well was elevated approximately 2 feet aboveground, which was protected by a 2-foot concrete collar and secured with a locking cap. A boring log for this monitoring well is presented in Appendix I.

5.7 Well Development and Survey

Blaine Tech Services, Inc. (BTS) developed HMW-10R on June 7, 2019 in order to allow a minimum of 72 hours between development and the groundwater sampling event on June 11, 2019. BTS purged 14 casing volumes from HMW-10R in order to reduce the turbidity to less than 100 NTUs using swabbing, bailing, surging, and pumping techniques. BTS also periodically collected groundwater temperature, pH, conductivity, and turbidity parameters during purging (see Appendix K).

Since monitoring well HMW-10R will primarily be used to determine whether or not LNAPL is still present within this area, Paloma did not survey this well due to the anticipated limited timeframe that it would be used before and during the redevelopment.

6. Groundwater Monitoring

6.1 Groundwater Monitoring

On June 11, 2019, BTS gauged, purged, and sampled the entire monitoring well network (16 wells) located on both the Mercury facility and HMW-10R onsite. Groundwater monitoring and sampling field documentation are included in Appendix K. Results of the current monitoring event indicated the following:

- Current Phase of Project — Investigation
- Are Separate Phase Hydrocarbons (LNAPL) Present — Yes
- Groundwater Flow Direction — North-Northeast

- Groundwater Gradient 0.001 ft/ft
- Depth to Water 5.92 (RW) to 9.01 feet (MMW-9B)
- Groundwater Elevation 29.29 to 32.37 feet

All monitoring wells were measured for depth to groundwater (DTW) and presence of LNAPL and were subsequently sampled. Sampling activities were performed in accordance with local, state and federal guidelines.

The direction of groundwater flow was predominantly to the north-northeast and the groundwater gradient at approximately 0.001 ft/ft.

6.2 Groundwater Analytical Results

The groundwater analytical results from the June 11, 2019 monitoring event are presented in Table 4 and laboratory analytical reports are provided in Appendix L. However, a summary of the maximum COC dissolved-phase concentrations detected during this event are detailed below.

- The maximum TPHg concentration detected was 12,000 µg/L (or 3,500 µg/L upon reanalysis) in monitoring well MMW-4 and/or 7,600 µg/L in MMW-1.
- The maximum TPHd concentration detected was 19,000 µg/L in monitoring well MMW-6.
- The maximum TPHo concentration detected was 14,000 µg/L in monitoring well MMW-6.
- The maximum benzene concentration detected was 540 µg/L (or 440 µg/L upon reanalysis) in monitoring well MMW-4.
- The maximum toluene concentration detected was 440 µg/L (or 320 µg/L upon reanalysis) in monitoring well MMW-4.
- The maximum ethylbenzene concentration detected was 450 µg/L (or 440 µg/L upon reanalysis) in monitoring well MMW-4.
- The maximum total xylenes concentration detected was 400 µg/L (or 390 µg/L upon reanalysis) in monitoring well MMW-4.
- The maximum MTBE concentration detected was 16 µg/L in monitoring well MMW-8.

The dissolved-phase concentrations for TPHg, TPHd and TPHo are predominantly located within footprint of the former USTs located at the Mercury facility (MMW-1 to MMW-3, MMW-6, & MMW-9A). However, the dissolved-phase concentrations for BTEX and oxygenates are primarily located along the north side of the Mercury parking lot (MMW-4 and MMW-5). Other VOC concentrations detected were 1,2,4-trimethylbenzene (1,2,4-TMB), 1,3,5-trimethylbenzene (1,3,5-TMB), 4-isopropyltoluene, isopropylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, tert-amyl methyl ether (TAME) in low concentrations ranging from 0.94 µg/L (isopropylbenzene) to 380 µg/L (1,2,4-TMB), which were only detected in monitoring wells MMW-4 and MMW-5, with the exception of a naphthalene detection of 26 µg/L in MMW-2.

Monitoring wells MMW-4 and MMW-5, which had residual BTEX and oxygenate concentrations during this groundwater monitoring event, reside within close proximity to the dispensers at the former Top Oil service station that was located along the northern parking lot (see Section 3.2 and Appendix F).

6.3 VOC Concentration Trends in Groundwater

Paloma uses the guidance provided in the EPA document *Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies* (November 2002) to model the estimated time to reach water quality objectives and evaluate VOC trends. Additionally, Paloma also used the EPA document *On-line Tools for Assessing Petroleum Releases* (September 2004) to assess the proper methodology of determining where to begin the trend analysis. As described on page 24 of the 2004 EPA document, a receptor (in this case, a monitoring well) is located some distance from the source, and no impact to the receptor is seen when the release first occurs. The VOCs take time to travel to the receptor. The first data points that show VOC detection are called the first arrival time. The first arrival time varies for each receptor based upon distance from the receptor and the transport rates through the heterogeneous medium. As the petroleum hydrocarbon plume expands and stabilizes, the VOC concentrations will reach a maximum. If the source of the release is finite (i.e., a single release from a UST), the concentration will eventually decrease from the maximum to below a given Water Quality Objective (WQO). This period is called the duration.

Paloma evaluated the groundwater monitoring data from most of the wells and created a degradation trend analysis for TPHg and TPHd from the maximum detection through the latest sampling date. The starting point can vary from the maximum detection if the transport mechanisms are not sufficiently linear. For example, groundwater monitoring data may show that the maximum concentration occurred at some point in the past and that degradation seemed to be occurring. However, due to the heterogeneous nature of the subsurface and seasonal groundwater level fluctuations, the duration does not demonstrate a steady degradation behavior. The concentrations of the VOC may increase one or more times before showing consistent attenuation towards the concentration objective.

Paloma calculated dissolved TPHg and TPHd concentration trends to predict when concentrations would meet WQOs. Because the Site may qualify for case closure under the LTCP and currently meets the minimum groundwater concentrations established therein, SFRWQCB ESLs were used to represent hypothetical WQOs. The inclusion of the ESLs is for quantitative evaluation of degradation trends only and do not represent standards that this Site must achieve. For this model, TPHg and TPHd were evaluated using the ESL WQOs of 760 μg/L and 200 μg/L, respectively (SFRWQCB, 2019). The following first order exponential decay rate equation was used to estimate the time to meet the ESL WQOs:

$$y = be^{(ax)}$$

Where "a" is a decay constant, "b" is a concentration at time (x), y is concentration (WQO) and "x" is time. A summary of the historical maximum concentrations and current concentrations for most of the active wells and projections to meet the ESL WQOs are presented in Table F below. Degradation calculations are presented as Appendix M.

Table F: Summary of Degradation Rates and Time to Reach ESL Water Quality Objectives

Well	Analyte	Maximum Concentration (μg/L)	Current Concentration (μg/L)	WQO (μg/L)	Half Life (years)	Date to Reach WQO
MMW-1	TPHg	7,600	7,600	760	N/A	Increasing
	TPHd	8,300	5,000	200	N/A	Stable
MMW-2	TPHg	18,000	5,300	760	N/A	Increasing

	TPHd	13,000	2,700	200	6.33	May 2032
MMW-3	TPHg	89,000	1,600	760	4.74	Jun 2035
	TPHd	25,000	8,000	200	9.49	Aug 2057
MMW-4	TPHg	12,000	12,000	760	N/A	Increasing
	TPHd	4,900	1,500	200	N/A	WQO Previously Met
MMW-6	TPHg	46,000	2,100	760	4.74	WQO Previously Met
	TPHd	150,000	19,000	200	1.90	Sep 2055
MMW-9A	TPHg	900	900	760	N/A	Increasing
	TPHd	8,900	3,600	200	N/A	Stable
HMW-2*	TPHg	350	Abandoned	760	N/A	WQO Met
	TPHd	5,000	Abandoned	200	1.90	May 2032
HMW-7	TPHg	36,000	1,500	760	3.80	May 2031
	TPHd	140,000	6,600	200	0.95	Feb 2025
*	HMW-2 was abandoned on November 30, 2018 in preparation for Site redevelopment					

These results indicate that the dissolved-phase TPHg and TPHd concentrations in these wells are stable and/or declining and are expected to reach ESL WQOs within a reasonable time frame. However, TPHg concentrations are increasing in MMW-1, MMW-2, MMW-4, and MMW-9A. In addition, even though the current TPHd concentrations in both MMW-4 and MMW-6 currently exceed the ESL, the first order exponential decay rate equation could not provide an estimated timeframe for these to reach the WQO since their historical and/or recent concentrations had already met the ESL. However, since these monitoring wells are located within the footprint of Mercury's former UST complex (MMW-1, MMW-2, MMW-6, and MMW-9A) or within the dispensers of the former Top Oil service station (MMW-4), the impacts within these wells were previously determined to not be associated with the Site's activities (see Section 2.1).

Onsite monitoring well HMW-2, which was previously abandoned on November 30, 2018, had TPHg concentrations that already met the WQOs and the TPHd concentrations are projected to meet their WQOs in less than 13 years (May 2032).

TPHo has not historically been sampled at the Site. Therefore, the projections to WQOs for TPHo are assumed to be similar to those of TPHg and TPHd in these wells. Hydrographs showing depth to groundwater and the dissolved-phase hydrocarbon concentrations over time are included as Appendix M.

6.4 Light Non-Aqueous Phase Liquid Distribution

Most of the monitoring wells have historically had LNAPL since they were installed. However, wells MMW-2 to MMW-6, MMW-9A, HMW-7, and HMW-10R do not currently have any LNAPL present. Wells MMW-1, MMW-7, MMW-9B, HMW-3A, HMW-4, HMW-5, and RW have still periodically contained measurable LNAPL, which are primarily within the former UST area at the Mercury facility.

A summary of historical maximum and current LNAPL thickness for these monitoring wells are presented in Table G below. In addition, the LNAPL thickness present in each well over time is presented in Appendix M.

Table G: Summary of LNAPL Thickness

Well	Maximum SPH Thickness (ft)	Current SPH Thickness (ft)
MMW-1	0.01	0.01
MMW-7	2.93	0.61
MMW-9B	2.72	2.72
HMW-3A	3.41	1.11
HMW-4	3.78	0.12
HMW-5	1.84	1.09
RW	0.30	0.03

LNAPL was first observed in September 2006 in MMW-1 and has only been detected as a sheen (0.01 ft) up to five times since monitoring began on this well in May 1996. LNAPL has primarily been measured as a sheen in MMW-2, MMW-3, MMW-6, MMW-9A, and HMW-7, but it has not been not been detected since September 2016, June 2015, July 2018, March 2014, and July 2018 in each of these wells, respectively. In addition, the LNAPL thickness for HMW-4 has decreased significantly over time from 3.78 ft to 0.12 ft. Even though recovery well, RW, has seldomly been gauged and/or sampled, the LNAPL thickness decreased from 0.30 ft to 0.03 ft over time.

Monitoring wells MMW-7 and HMW-3A had high LNAPL thicknesses towards the beginning of their initial gauging in 1997 and 1994, but then they both dropped to almost a sheen thickness sometime between 2011 and 2015. However, the LNAPL thickness in both MMW-7 and HMW-3A increased significantly during the September 2016 (1.66 ft) and July 2018 (2.93 ft) gauging and/or sampling events, respectively. Since then, the LNAPL thicknesses have both decreased to 0.61 ft in MMW-7 and 1.11 ft in HMW-3A. The LNAPL in HMW-5 has historically been measured as a sheen (0.01 ft), but then suddenly increased to 1.84 ft during the September 2016 groundwater monitoring event. Subsequently, the LNAPL thickness has since decreased to 1.09 ft. Similar to HMW-5, MMW-9B has historically been detected as a sheen. However, LNAPL thickness in this monitoring well has steadily increased over time to its highest thickness of 2.72 ft.

However, both HMW-3A and MMW-9B do not appear to follow this same pattern of increasing LNAPL thickness with increasing depth to water. GEA also noticed this phenomenon within these monitoring wells when evaluating the French drain system performance in 2002 indicating that there is almost no fluctuation depth to water and that "The only other environmental factor that may explain the LPH [LNAPL] fluctuation might be barometric pressures which do have a general patter and may be associated with a more-or-less seasonal fluctuation of LPH [LNAPL] in some of the wells" (GEA, 2002). However, this could also be due to the soil heterogeneities within the formation surrounding these wells since the depth to water and/or LNAPL thickness in these wells typically varies significantly with other wells in the immediate vicinity. For example, MW-9A which is approximately 6.5 feet away from HMW-3A, has only detected LNAPL as a sheen and the depth to groundwater was 2.61 and 2.81 ft higher than HMW-3A and MMW-9B during the June 11, 2019, respectively.

Despite this potential phenomenon, the LNAPL thickness is decreasing over time and has not been detected in several wells within the last five years. Other wells (HMW-3A, HMW-5, and MMW-7) increased either during the September 2016 and July 2018 gauging and/or sampling event but have since began to decrease. However, the LNAPL thickness in MMW-9B has continued to increase since the September 2016 groundwater monitoring event. However, the potential impact that the LNAPL would have to potential surface water is low since it underlies impervious paved areas and has and will remain stationary for many years while the LNAPL slowly biodegrades, which is what we are currently seeing. In addition, each of the remaining monitoring wells with elevated LNAPL thickness (HMW-3A, HMW-5, MMW-7, and MMW-9B) reside either directly within or in close proximity to the former UST pit at the Mercury facility.

6.5 LNAPL Analytical Results

LNAPL samples were collected by BTS for fingerprint characterization from MMW-7, MMW-9B, HMW-3A, HMW-4, and HMW-5 on June 11, 2019. The groundwater monitoring and sampling field documentation are included in Appendix K. Wells MMW-1 and RW did not have enough volume of LNAPL to sample. These samples were submitted to ESS Laboratory (ESS) for analysis under chain-of-custody procedures. ESS has provided analytical testing services for petroleum forensic investigations for over 20 years and is considered one of the leaders in the industry in providing scientifically defensible data.

ESS prepared each of the LNAPL samples by solvent dilution (EPA Method 3580) using dichloromethane (DCM). The extracts were spiked with internal standard and analyzed by GC/FID (EPA Method 8015M) for fingerprinting and by GC/MS/SIM (EPA Method 8270M) for mono- and polycyclic aromatic hydrocarbons (MAHs and PAHs), alkyl PAH homologues and other selected compounds. The GC conditions were modified to detect both volatile and semivolatile organic compounds from hexane (C6) to tetracontane (C40), effectively combining two analyses. This range includes gasoline to heavy oil.

GC/FID fingerprints provide qualitative and semi-quantitative information on the composition of the sample. Products such as gasoline, diesel, asphalt, creosote and others are clearly identifiable. The GC/FID fingerprints can indicate whether the sample contains mixed materials, such as gasoline and diesel fuel, and whether and to what degree some materials have weathered. Detection limits for individual compounds in LNAPL are about 1 part per million (ppm). The GC/MS/SIM method quantifies PAHs from benzene to benzo(g,h,i)perylene and many of their alkylated homologs. The LNAPL analytical results are provided in Appendix N.

Paloma contracted META Environmental, Inc. (META) to provide an independent environmental forensic evaluation of the data provided by ESS. META personnel have over 30 years of experience in the characterization of source identification studies at dozens of petroleum spill and UST sites.

Since HMW-5 is along the centerline of the former UST complex at the Mercury facility and is considered both upgradient and cross-gradient from the inferred AST at the Site, the LNAPL sample from this monitoring well was used as the “source” sample to compare all other LNAPL samples against. META concluded that the LNAPL from HMW-5 contained petrogenic material. “The petrogenic material was characterized by an unresolved complex mixture (UCM) that eluted from about nonane (n-C9) to about tetracosane (n-C24) in the GC/FID chromatogram (Appendix A [of META’s report]). No normal alkanes were detected; however, isoprenoid hydrocarbons, including pristane and phytane, were clearly present. These features are consistent with weathered No. 2 fuel oils and diesel fuels” (Appendix N).

The TPH composition and weathering ratios for each of these five monitoring well LNAPL samples are compared in Table H below, which are also presented in META's report in Appendix N.

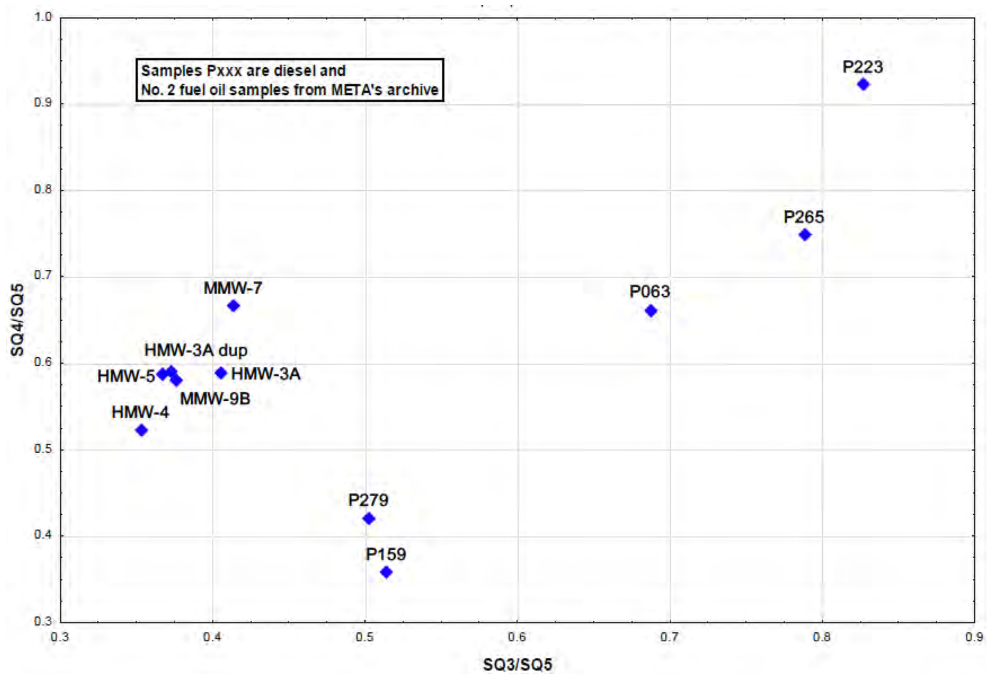
Table H: TPH Composition and Weathering Ratio Comparison

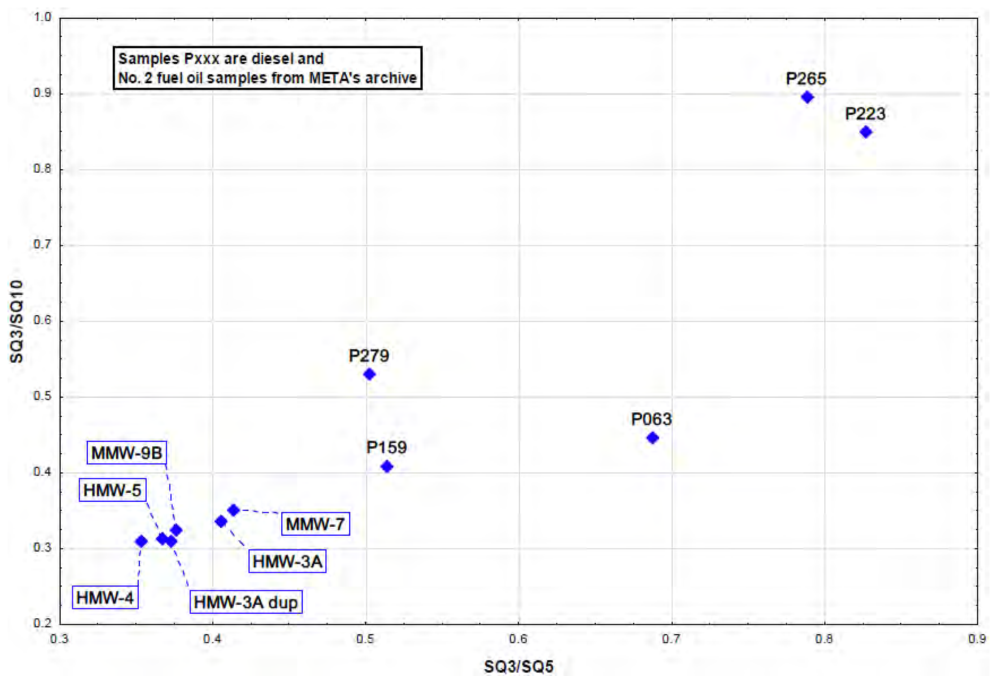
Well	TPH Composition (%)	Pri/Phy (%)	C3D/ C3PA (%)	C3D/ C3PA (%)
HMW-5	78.1	1.42	0.83	0.66
MMW-7	82.9	1.45	0.78	0.61
HMW-4	91.9	1.45	1.07	0.81
MMW-9B	78.5	1.44	1.05	0.79
HMW-3A	83.0	1.42	1.03	0.80
HMW-3A DUP	--	1.46	1.05	0.79
RSD (%)	--	1.2	13.4	11.6
RSD Pri/Phy C3D/C3PA C2D/C2PA	Relative standard deviation Pristane/phytane Trialkylated dibenzothiophenes/trialkylated phenanthrenes Dialkylated dibenzothiophenes/dialkylated phenanthrenes			

The relative standard deviation (RSD) of the pristane/phytane (Pri/Phy) ratios was only 1.2% indicating that the five LNAPL samples were likely the same product. The higher variability of the C3D, C2D, C3PA, and C2PA ratios is likely due to their low concentration in the samples.

The LNAPL samples were also compared using sesquiterpane biomarker compounds. Biomarkers are chemicals found in petroleum that are unchanged or contains minor changes from their natural plant or animal precursors. Biomarker compounds are usually present at detectable levels using modern GC/MS techniques and tend to be resistant to degradation. Furthermore, the distribution of biomarker compounds varies between each petroleum source, making them one of the most important hydrocarbon groups used for petroleum fingerprinting.

The distribution of sesquiterpane biomarker compounds in the LNAPL samples is shown graphically in the figures below and in Appendix N. Several No. 2 fuel oil and diesel fuel samples from META's archive were included for comparison. Similarly, the ratios of selected sesquiterpane biomarker compounds in the NAPL samples are shown in double ratio plots.





The difference between samples HMW-3A and the laboratory duplicate of HMW-3A can be used as an estimate of the natural variability of the same product and the variability contributed by the laboratory procedures. The figures above indicate that there is little difference among the LNAPL samples when compared to the laboratory duplicate precision. Moreover, it is not unusual for the composition of the same fuel oil released to the subsurface to vary somewhat resulting from batch to batch variations and differences in the degree of weathering.

Based on the GC/FID and GC/MS data, all five samples were moderately weathered diesel fuel or No. 2 fuel oil. The relative amounts of several weathering-resistant compounds were nearly identical, indicating that the samples were the same product.

Currently, the LNAPL plume primarily resides within or in close proximity to the former USTs at the Mercury facility. Each of the four remaining LNAPL samples are considered the same as the “source” sample, HMW-5, which is located within the middle of the Mercury facility UST pit area. Since the LNAPL properties for HMW-5 are similar to those in the other four LNAPL samples, which are further downgradient from HMW-5, it is concluded that this is from the same product and therefore from the same source which originated from the six USTs at the former Mercury Rentals facility. This is further evidence that either a diesel AST never existed at the Site or that it at least never contributed to the LNAPL plume. However, as indicated in Section 7 below, the inferred AST in this area did not store and/or dispense diesel.

7. Historical Documentation Review

A diesel AST was thought to have been located immediately south of the former gasoline UST area adjacent to an elongated canopy located near the western boundary of the Site (EarthCon, 2017 & GEA, 1996a). This dispute was based upon aerial photograph interpretations and an Orange County Fire Authority permit that was on-file with the City of Cypress indicating that an AST was removed in approximately 1979. Paloma reviewed the building permits for the Former Hansen Auto Tow facility and couldn’t find the associated Orange County Fire Marshall permit on-file with the City. However, Paloma did discover a building permit from the City dated December 9, 1974 indicating that a 4,000 gallon AST was located in this area and was used as a storage tank associated with a former steam cleaner rack (“elongated canopy”), which was scheduled to be pumped out periodically via a vacuum truck (Appendix A). Therefore, this AST was not associated with either the storage or dispensing of diesel as suggested in previous reports from both EarthCon and GEA.

In OCHCA’s notes from a meeting with SARWQCB, Atlas, GEA and representatives from both Hansen and Mercury on October 31, 1996, the soil sample (B-3) collected by the contractor during tank removal at the Mercury facility indicated “high concentration of diesel detected” and that “the levels may have been higher prior to the removal of 16 cubic yards of soil” (OCHCA, 1996a). Also, given the large footprint of the former UST complex at the Mercury facility (~40 ft x ~85 ft) and that only 16 cubic yards were removed from this area infers that the remaining soil excavated was then backfilled in this area. Assuming that the bottom of the USTs were installed to approximately 14 fbg, this would indicate that approximately 1,600 cubic yards of soil was within this area that was likely disturbed and/or excavated, which also includes the estimated displacement volume of the former USTs. If this is the case, then there was only ~1% of the soil that was physically removed from the Site.

Despite having removed the gasoline USTs at the former Hansen Auto Tow site in May 1992, they decided to overexcavate this area in April 1999 to ensure the removal of the majority of the impacts where they removed 947.05 tons of hydrocarbon affected soil from the area of the former tank pit to a depth of approximately 11.5 fbg. The results of verification soil samples from the side walls and excavation indicated that the majority of the source mass had been removed and that further environmental work was not warranted (Atlas, 1999). Conversely, this does not appear to be the case for the former Mercury Rentals facility since a majority of the impacts appear to have been left in place, which have likely contributed to the ongoing residual dissolved-phase and LNAPL source mass within the subsurface.

In a Phase I Environmental Site Assessment (ESA) performed by The Earth Technology Corporation (Earth Technology) in March 1990, they were provided information from Mr. Winton Kemmis (Mercury) indicating that Hazardous Materials Services (HMS) removed five USTs in 1985 that was from the previous construction equipment rental and repair facility at 4664 Lincoln Ave, but only “minor soil was hauled to Bakersfield…related to a minor oil spill at the time of the tank removal.” However, Mr. Kemmis could not locate any documents indicating the closure of the citation by the OCHCA and details on the volume or quantity of the release were not available. In addition, according to Mr. Kemmis “no soil or water was tested or remediated from the remainder of the site beyond the UST area” (Earth Technology, 1990).

On December 21, 1994, OCHCA indicated that “There’s 2’ of FP [LNAPL] in the well located in the alley [HMW-3] and the source may be the storage co. [Mercury] located adjacent to this site since they had a tank & dispenser in this area” (OCHCA, 1994). The approximate location of the dispenser was confirmed on March 22, 1995 when OCHCA went to the Site to look at an aerial photograph “showing dispenser which was located in the alley” (OCHCA, 1995a). This information is considered pertinent since shallow impacts were detected within borings HB-21 and former MW-10 at the Site, which likely emanated from the source within the Mercury facility since the dispenser and USTs were within the alleyway immediately adjacent to this area. As further evidence of this, a sample taken from 1 fbg during the removal of the former Mercury USTs in 1985 had a petroleum hydrocarbon concentration of 48,153 ppm [mg/kg] (GEA, 1996b). In addition, there were several bore logs (boring 4 and 6 to 9) that indicated that there was a “slight petroleum hydrocarbon odor” in the shallow soils (GEA, 1996b).

Based upon a Preliminary Assessment Report (Phase I ESA) conducted at the Mercury facility in 1990, there was another citation noted for surface releases that were occurring at the site since “In June 1982 DOHS [Department of Health Services] performed a drive-by of the site and noted that the work yard area was unpaved and several spills of substances which appeared to be paint, solvent, oil, and resin were visible on soil” (Ecology and Environment, Inc., 1990). This is a clear indication that surface releases were present and/or occurring at the Mercury facility, which likely ran offsite onto the Former Hansen Auto Tow site due to its close proximity.

According to information received from Mr. Kemmis (Mercury), “the diesel USTs at the former Mercury Rentals UST facility were situated in the southern area of the facility” (GEA, 1998). Since HMW-10 is considered downgradient from the former UST area and since a release was noted from this area in 1985, it is assumed that the LNAPL originated from the upgradient diesel USTs at the Mercury facility. This hypothesis was also supported by both OCHCA and SARWQCB based on OCHCA’s activity/comment notes dated April 16, 1997, which stated, “The boring samples in the suspected diesel above ground tank shows the highest contamination is near surface 3’ and that the samples at or below the capillary fringe are below 1000 ppm [mg/kg] TPH diesel. Therefore, it appears that the free product [LNAPL] is from Mercury Rentals, Inc.” (OCHCA, 1997).

Monitoring well HMW-10 was not gauged during the first quarter of 2000 prior to Site closure, but during the fourth quarter of 1999 groundwater monitoring event 1.18 ft of LNAPL was measured. However, as indicated from the fingerprint analysis conducted in 1996 from this well, the LNAPL consisted of 97.3% diesel, 2.3% gasoline and 0.4% oil, which is along the same composition and magnitude as offsite wells HMW-3 and HMW-4, which were sampled in 1995 and consisted of 88.3% diesel, 10.2% gasoline and 1.5% oil. Since Mercury’s former UST area was known to have consisted of five USTs: two diesel, one gasoline, and one motor oil, and one waste oil, the composition breakdown of the LNAPL falls directly in line with the number and types of USTs used at this site. Based on the June 11, 2019 fingerprint analysis from MMW-7, MMW-9B, HMW-3A, HMW-4, and HMW-5, all five samples were moderately weathered diesel fuel or No. 2 fuel oil. The relative amounts of several weathering-resistant compounds were nearly identical, indicating that the samples were the same product. Therefore, since HMW-3A and HMW-4 are considered the same as the LNAPL in upgradient monitoring well HMW-5, it is assumed that this would've been the same product that was originally found in HMW-10 between 1997 and 2000 since their compositions were similar to the samples taken from each of these wells in 1995 and 1996.

Therefore, any associated LNAPL from HMW-10 is assumed to have originated from the former Mercury facility release to the east since there is no known source of diesel (attributed to 88.3% to 97.3% of the LNAPL) that existed at the former Hansen Auto Tow facility. This was also supported by OCHCA personnel during the time when the product samples were analyzed by Hansen, indicating that "the product is about 88% diesel, 1% oils, etc. The facility adjacent to the site [Mercury] had #30 oil & hydraulic oil USTs" (OCHCA, 1996c).

On March 20, 1996, OCHCA instructed Hansen that "The current free product [LNAPL] removal activities should be discontinued due to the source not being related to the tanks which were removed from this site. In addition, the recommended interim free product removal plan must not be implemented at this time (OCHCA, 1996d)." In addition, the SWRCB Underground Storage Tank Cleanup Fund (USTCF) indicated on May 1, 1996 that LNAPL remediation "should not continue until the source of the diesel is identified" (OCHCA, 1996e). Therefore, both OCHCA and SARWQCB met with each of the responsible parties on July 12, 1996 and "decided that regardless of detection of free product [LNAPL] in the newly installed (Mercury) wells, if a diesel source/release evidence is not found at the Hansen property, then Mercury will be responsible for remediating the free product" (OCHCA, 1996b). Since sufficient evidence was not found for a contributing source at the Site, a meeting was held in June 1998 with OCHCA, SARWQCB, the responsible parties and their consultants indicating that "It was agreed that the remediation of the LPH [LNAPL] plume that is present beneath both Hansen's and Mercury Rentals sites is the responsibility of the Winton G. Kemmis Trust [Mercury]" (GEA, 2002).

8. Conclusions

The majority of the source mass from the Site has been previously removed from overexcavation, LNAPL removal activities, and natural attenuation based on the low level VOC concentrations in soil onsite. However, further delineation could not be achieved to the east due to the Mercury facility located adjacent to the Site, which currently has an open environmental case.

The additional soil investigation conducted on June 6, 2019 entailed the installation of monitoring well HMW-10R and the three HydroPunch™ borings (HP-1 to HP-3), which were located directly south to southwest of former HMW-10 detected petroleum hydrocarbons. Paloma evaluated the soil data based on the SFRWQCB ESLs for shallow residential soil exposure and construction worker soil exposure (SFRWQCB, 2019). All detected concentrations were below both the residential and construction worker exposure ESLs, except for the TPHd concentration in HP-3 at 5 fbg. However, this sample was reanalyzed for TPHd and TPHo and the concentrations were not measured above the detection limit. Therefore, the original analysis was likely erroneous or the impacts were limited within the 6-inch acetate liner sample.

The soil concentrations within the borehole for HMW-10R were also very low, which was installed within the footprint of the inferred AST that was thought to have stored diesel. However, these low concentrations are further evidence that the former AST at the Site did not store and/or release diesel since it was used as a storage tank associated with a former steam cleaner rack as discussed in Section 2.1.

Both the Site's previous cross-gradient borings HB-15 and HB-16 and upgradient borings installed in 1995 and HB-17 and HB-18 installed in March 29 and April 2, 1996 had non-detect to low soil concentrations. In addition, the non-detect to low groundwater concentrations historically detected in former onsite monitoring well HMW-9 indicate that there are no cross-gradient and/or upgradient sources. Based on this data, it was also determined during a meeting with OCHCA, SARWQCB, Hansen, Mercury, Atlas, and GEA on July 12, 1996 that "there are no upgradient sources" (OCHCA, 1996b). Therefore, additional assessment by the former Hansen Auto Tow facility is not warranted.

Similar to the HydroPunch™ soil samples, the grab groundwater detections from HP-1 to HP-3 consisted of petroleum hydrocarbons and were evaluated against their California MCLs. All detected concentrations were below the California MCLs for all constituents. However, the concentrations of TPHd and TPHo in HP-3 seem high, but these concentrations appear to be fairly limited in their extent and are not associated and/or commingled with the Mercury facility release since both the upgradient and cross-gradient borings (HP-1 and HP-2) and the current and/or former upgradient (HMW-9) and downgradient monitoring wells (former HMW-2 and HMW-10R) concentrations ranged between two to three orders of magnitude less than the concentrations in HP-3. This is further evidenced by the soil concentrations within HP-3, which were all low except for the detection at 5 fbg that appeared to be either erroneous or limited in its extents within the 6-inch acetate liner.

These overall low grab groundwater concentrations are further evidence that there were no additional sources onsite that are or have been contributing to the source mass present within the adjacent alleyway and footprint of the former Mercury UST complex.

Based on the historical dissolved-phase concentrations at the Site, it is apparent from the TPH to BTEX ratio that the majority of the more volatile compounds (BTEX) have significantly degraded, indicating that this is an older release. In addition, the historical concentration trends indicate that the dissolved-phase TPHg and TPHd in the monitoring wells are stable and/or declining and are expected to reach ESL WQOs within a reasonable time frame. However, TPHg concentrations are increasing in MMW-1, MMW-2, MMW-4, and MMW-9A. Since these monitoring wells are located within the footprint of Mercury's former UST complex (MMW-1, MMW-2, MMW-6, and MMW-9A), which are cross-gradient and/or upgradient to the former Hansen Auto Tow Site's inferred source location or are located within the close proximity to the dispensers of the former Top Oil service station (MMW-4), the impacts within these wells were previously determined to not be associated with the Site's activities (see Section 6.4). The residual BTEX and oxygenate concentrations are primarily located along the north side of the Mercury parking lot (MMW-4 and MMW-5), which are in close proximity to the dispensers at the former Top Oil service station that was located along the northern parking lot (see Section 3.2 and Appendix F).

Onsite monitoring well HMW-2, which was previously abandoned on November 30, 2018, had TPHg concentrations that already met the WQOs and the TPHd concentrations are projected to meet their WQOs in less than 13 years (May 2032). Therefore, the horizontal extent of impacted groundwater is generally defined, with the exception to the east-northeast due to the open environmental case for Mercury. Consequently, additional assessment and/or delineation is not warranted for the Site.

LNAPL has historically been detected in Site monitoring wells HMW-6 and HMW-10 and offsite monitoring wells HMW-3A to HMW-5, HMW-7, MMW-1 to MMW-4, MMW-6, MMW-7, and MMW-9A/B. However, wells MMW-2 to MMW-6, MMW-9A, HMW-7, and HMW-10R do not currently have any LNAPL present. Wells MMW-1, MMW-7, MMW-9B, HMW-3A, HMW-4, HMW-5, and RW have still periodically contained measurable LNAPL, which are primarily within the former UST area at the Mercury facility (Figure 3 of Appendix B). However, the overall LNAPL thickness is decreasing over time and LNAPL has not been detected in several wells within the last five years. The LNAPL thickness in monitoring wells MMW-7, HMW-5, and HMW-3A has increased either during the September 2016 and July 2018 gauging and/or sampling event but have since began to decrease.

However, the LNAPL thickness in MMW-9B has continued to increase since the September 2016 groundwater monitoring event (see Section 6.4).

Onsite wells HMW-2 and HMW-8 have not historically had any measurable LNAPL, with the exception of HMW-10. However, as indicated from the fingerprint analysis conducted in the well in 1996, the LNAPL consisted of 97.3% diesel, 2.3% gasoline and 0.4% oil, which is along the same magnitude as the offsite wells MW-3 and MW-4, which consisted of 88.3% diesel, 10.2% gasoline and 1.5% oil, which are within close proximity to Mercury's former UST area. Since Mercury's former UST area was known to have consisted of five USTs: two diesel, one gasoline, and one motor oil, and one waste oil, the composition breakdown of the LNAPL falls directly in line with the number and types of USTs used at this site.

Based on the June 11, 2019 fingerprint analysis from MMW-7, MMW-9B, HMW-3A, HMW-4, and HMW-5, all five samples were moderately weathered diesel fuel or No. 2 fuel oil. The relative amounts of several weathering-resistant compounds were nearly identical, indicating that the samples contained the same product. Therefore, since HMW-3A and HMW-4 are considered the same as the LNAPL in upgradient monitoring well HMW-5, it is assumed that this would've been the same product that was originally found in HMW-10 between 1997 and 2000 since their compositions were similar to the samples taken from each of these wells in 1995 and 1996.

In addition, the former AST that was located along the east side of the Site and immediately south of the former UST area in the 1970's was discovered to have been a storage tank associated with a former steam cleaner rack (Appendix A). Therefore, this AST was not associated with storage and/or dispensing of diesel as listed in previous reports from both EarthCon and GEA (EarthCon, 2017 & GEA, 1996a). As such, this concludes that there is no known source of diesel that would've contributed to the existing LNAPL plume associated with the offsite wells. In addition, OCHCA indicated in their July 7, 2000 *Case Closure Summary* that the diesel plume "…was determined to be from the former tanks belonging to the adjacent property owner [Mercury]…" (OCHCA, 2000b).

Paloma evaluated the soil vapor data collected on June 5, 2018, November 8, 2018, and June 27, 2019 based on the California DTSC's *HERO HHRA Note Number 3: DTSC-modified Screening Levels (Table 3. Screening Levels for Volatile Compounds in Ambient Air)* (Note 3) (DTSC, 2018 & 2019) and U.S. EPA's Regional Screening Levels for Resident Air (EPA, 2018 & 2019), where indoor air screening levels were identified for most reported analytes. DTSC Note 3 advises that "the air screening levels for VOCs have applications for screening soil gas data when used in concert with appropriate attenuation factors as described in DTSC's 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* [DTSC, 2011]".

The 2011 DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (VIG) Table 2 recommends utilizing an attenuation factor of 0.001 for evaluating future residential buildings near contaminant source samples (DTSC, 2011). The 5 fbg soil vapor samples collected by Paloma represent near contaminant source samples. Paloma modified the DTSC Note 3 indoor air screening levels using the attenuation factor of 0.001 to obtain target screening levels for the Site.

The 2.5 fbg soil vapor samples collected by Paloma on November 8, 2018 and June 27, 2019 were evaluated using conservative site-specific attenuation factors derived using the DTSC version of U.S. EPA's J&E Model. The resulting attenuation factors were then used to modify the conservative DTSC SLs for residential air, or if not available, the U.S. EPA RSLs for residential air. The target screening levels for both the 2.5 and 5 fbg soil vapor samples and the indoor air screening levels are presented along with the sample results in Appendix E.

Paloma also completed an analysis of the human health risk associated with the detected concentrations of PCE, TCE, benzene, ethylbenzene, naphthalene, and chloroform within the 2.5 fbg soil vapor samples using the DTSC modification of the U.S. EPA version of the J&E vapor intrusion model. Based upon the J&E model analysis, the detected soil gas concentrations do not represent a human health risk for cancer of greater than the one in a 1,000,000 threshold or a health hazard quotient greater than the threshold of concern of 1.0 for residential use for PCE, TCE, benzene, ethylbenzene, naphthalene and chloroform. No other constituents were either detected at or above the laboratory reporting limit or they did not have a considerable associated human health risk designation within the J&E model.

Paloma evaluated the potential human health risk from vapor intrusion to indoor air from the associated petroleum hydrocarbon and chlorinated VOC concentrations by comparing the maximum reported concentration of each detected analyte at both depth intervals to its respective target screening level and determined that all sample results were below the SWRCB LTCP and/or modified DTSC SLs, or U.S. EPA RSLs, if DTSC SLs were not available, for every analyte. In addition, the SWRCB LTCP (SWRCB, 2012) guidance for petroleum vapor intrusion to indoor provides two scenarios for soil vapor samples collected at 5 fbg for existing or future construction and provides target concentrations for benzene, ethylbenzene and naphthalene. The two scenarios are for sites with and without a 5 foot bioattenuation zone where a bioattenuation zone is defined where oxygen concentrations are above 4% at the lower end of the 5 foot zone. All of the 2.5-foot and 5-foot probes met the requirements for a bioattenuation zone, but the results of this study meet the more conservative scenario of a site without a bioattenuation zone where target concentrations of benzene, ethylbenzene and naphthalene are 85 $\mu g/m^3$, 1,100 $\mu g/m^3$ and 93 $\mu g/m^3$, respectively.

Based on EarthCon's September 2016 soil vapor survey at the Mercury site, the highest VOC concentrations were within the footprint of former UST complex at the Mercury site, which is cross-gradient and/or upgradient to the former Hansen Auto Tow Site's inferred source location. In addition, the inferred soil vapor plume around this area indicates it did not originate from the Site and is not within footprint of the proposed residential building, which was further confirmed by Paloma's non-detect and/or low detections from the soil vapor results at SV-5 on June 5, 2018, November 8, 2018, and June 27, 2019.

Even though PCE, TCE, and Freon-11 were detected in the soil vapor samples from SV-4A and SV-4B at both 2.5 and 5 fbg, they were not detected in any of the soil samples collected from this from this location on June 5, 2018. The historical operations at the Site have consisted of commercial automobile repair and storage and chlorinated solvents have not previously been detected at the Site. Therefore, it is unlikely that these chemicals were previously used onsite. However, based on the proximity of the sample location for SV-4A and SV-4B, it is likely related to the adjacent metal fabrication facility since chlorinated solvents have known to have been used for degreasing and cleaning metals.

The results of the study show that all VOCs evaluated, including chlorinated VOCs, meet the residential screening levels. Therefore, there is no unacceptable risk from soil vapor intrusion to indoor air for future occupants of the proposed building.

9. Site Eligibility for Low-Threat Closure

Paloma concludes that this Site is eligible for environmental case closure because the Site has been adequately characterized, on-site petroleum constituents are diminishing and/or have been removed to the extent practicable, and the Site meets all requirements under the LTCP. The Site's compliance with low-threat criteria are summarized below:

1. **The Site is located in an area serviced by an existing public water system.**

   The Site is located in an area serviced by an existing public water system. Water is supplied to the Site and area by Golden State Water Company.

2. **The unauthorized release consists only of petroleum fuels.**

   The unauthorized release consists only of petroleum fuels.

3. **The unauthorized release has been stopped from all suspected source areas.**

   The unauthorized release has been stopped from all suspected source areas.

4. **Free product, light non-aqueous phase liquid (LNAPL), has been removed to the extent practicable.**

   Atlas estimated that 93 gallons of LNAPL had been removed by hand bailing MW-3 and MW-4 between December 1994 to April 1996. Continued efforts by GEA, Miller Brooks Environmental, and EarthCon have conducted the following LNAPL removal activities at the Mercury facility:

   - A French drain system was installed in April 1999 and operated through October 2002, which removed an estimated 639 gallons of LNAPL.
   - Skimmers, hand bailers, and vacuum truck operations removed a combined 959 gallons of LNAPL.
   - A 5-day DPE event was conducted in May 2007 and then again from July 2008 to November 2011, which removed 37 gallons and 152 gallons of LNAPL, respectively.

   During the entire LNAPL removal activities from December 1994 to November 2011, it is estimated that 1,880 gallons have been removed altogether. GEA originally estimated an original LPH volume of 2,924 gallons that was present, which indicates that there is approximately 1,044 gallons (36%) of LNAPL remaining (GEA, 2002). Therefore, approximately 64% of the LNAPL has been removed causing the majority of the LNAPL to have been eliminated and/or reduced to sheen in several monitoring wells. In addition, the remaining LNAPL is generally confined to the area around the former UST are at the Mercury facility indicating that it has not mobilized offsite and will likely further degrade over time.

   Based on the silt-like material with variable textures ranging from clay to fine sand with a very low hydraulic conductivity, the groundwater moves very slowly which is why the plume has not mobilized within the last 25 years.

   LNAPL has not been detected recently in any of the onsite wells, with the exception of HMW-10 from 1997 to 2000. However, as indicated from the fingerprint analysis conducted in the well, the LNAPL consisted of 97.3% diesel, 2.3% gasoline and 0.4% oil, which is along the same magnitude as the offsite wells MW-3 and MW-4, which consisted of 88.3% diesel, 10.2% gasoline and 1.5% oil, which are within close proximity of Mercury's former UST area. Since Mercury's former UST area was known to have consisted of five USTs: two diesel, one gasoline, and one motor oil, and one waste oil, the composition breakdown of the LNAPL falls directly in line with the number and types of USTs used at this site. Therefore, any associated

LNAPL from MW-10 is assumed to have been associated with the Mercury facility release to the east since there is no known source of diesel (attributed to 88.3% to 97.3% of the LNAPL) that existed at the Former Hansen Auto Tow facility (see Section 2.1). However, LNAPL was not detected in HMW-10R during the June 11, 2019 groundwater sampling event.

5. **A Conceptual Site Model has been developed for this Site.**

   Several CSMs have been developed for the Site. An updated CSM was included in the preceding sections of this report. These CSMs have adequately assessed the nature, extent, mobility, and risks to potential receptors from historical releases at the Site.

6. **The secondary sources have been removed to the extent practicable.**

   The secondary source has been removed to the extent practicable. On March 11, 1992 two USTs were removed from the Site.

   In April 1999, the former UST pit area was overexcavated and 947.05 tons of hydrocarbon affected soil were removed to a depth of approximately 11.5 fbg. In addition, a total of 12,162 gallons of water was removed from the excavation during remedial activities. The results of verification soil samples from the side walls and excavation indicated that the majority of the source mass has been removed and that further environmental work was not warranted that OCHCA granted closure to the site in October 2000.

7. **Soil and groundwater have been tested for MTBE.**

   Soil and groundwater have been tested for MTBE since 1996.

8. **No nuisance conditions exist.**

   No nuisance conditions exist at this Site, as defined by the Water Code Section 13050.

9. **The contaminant plume that exceeds WQOs is stable or decreasing in aerial extent and meets the additional characteristics in one of the five classes identified in this policy.**

   Satisfied: The Site meets the following requirement specified in Criterion 2 for groundwater in the LTC Policy:

   a. The contaminant plume that exceeds water quality objectives is less than 250 feet in length,

   b. There is no free product,

   c. The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary, and

   d. The dissolved concentration of benzene is less than 3,000 µg/L, and the dissolved concentration of MTBE is less than 1,000 µg/L.

   The Site meets this criterion because the on-Site dissolved-phase contaminant plume is stable and/or concentrations are declining, the plume length is less than 250 feet in areal extent from the known on-Site sources, and no LNAPL has been detected in groundwater in on-Site wells since the Site was closed in 2000, which was attributed to the former Mercury release.

   The nearest water body is Moody Creek, which ranges between 2,200 to 2,800 feet to the northwest and north, respectively, and flows intermittently. The nearest confirmed water supply well is over ¼-mile (1,320 feet) away from the Site, which draws water from the Artesia aquifer and is only used for irrigation for the Forest Lawn Cemetery. The maximum dissolved benzene and MTBE concentrations from the June 11, 2019 sampling event are 540 μg/L (MMW-4) and 16 μg/L (MMW-8), respectively. TBA is not detected in groundwater, and the on-Site dissolved TPHg, benzene, and MTBE plumes are defined and/or decreasing. Even the extent of the off-Site plume associated with the Mercury release is approximately 250 feet downgradient of the source area. In addition, MMW-5, the furthest monitoring well downgradient has had non-detect to low concentrations since June 2012.

10. The Site meets media-specific criteria for vapor intrusion.

As evidenced from Paloma's soil vapor assessments on June 5, 2018, November 8, 2018, and June 27, 2019, there is no concern that subsurface contamination poses an unacceptable indoor inhalation health risk to the future residential tenants since the maximum concentrations reported in soil vapor were all well below the target screening levels derived for the site and the associated PCE, TCE, benzene, ethylbenzene, naphthalene, and chloroform hazard index were all less than the carcinogenic risk of 1.0×10^{-6}.

11. The Site meets one or more of the low-threat direct contact and outdoor exposure criteria.

The Site is currently a vacant lot, but is preparing to undergo redevelopment into a residential complex. The State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP) describes conditions where direct contact with contaminated soil or inhalation of contaminants volatized to outdoor air poses an insignificant threat to human health (SWRCB, 2012). Sites where human exposure may occur satisfy media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if they meet any of the following:

a. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the table below for the specified depth below ground surface for soils at residential facilities:

Direct Contact and Outdoor Air Exposure – Residential			
Constituent	Depth	Screening Level (mg/kg)	Maximum Concentration (mg/kg)
Benzene	5	1.9	0.21
	10	2.8	0.009
Ethylbenzene	5	21	0.60
	10	32	0.005
Naphthalene	5	9.7	ND <0.010
	10	9.7	ND <0.010
PAHs	5	0.063	---
	10	NA	---

PAHs = poly aromatic hydrocarbons
ND = non-detect

NA = not applicable
--- = not analyzed

b. Maximum concentrations of petroleum constituents in soil are less than levels that a site specific risk assessment demonstrates will have no significant risk of adversely affecting human health; or

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, the regulatory agency determines that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health.

Polycyclic aromatic hydrocarbons (PAHs) are only required to be analyzed if there was a release from a waste oil UST. However, there was no known waste oil UST located on-Site. Therefore, samples were not historically analyzed for PAHs.

Benzene, ethylbenzene, and naphthalene concentrations in soil are below the LTCP screening criteria (option “a”) for residential use property. The 5-10 fbg criteria is intended to protect from inhalation of volatile soil emissions. Therefore, the Site meets the screening criteria of option “a” for direct contact.

Paloma performed a site-specific risk assessment to evaluate the risk to on-Site human receptors from vapor intrusion to indoor air on June 5, 2018, November 8, 2018, and June 27, 2019. Paloma determined that the benzene and ethylbenzene hazard index was less than one, and the benzene carcinogenic risk was less than 1.0×10^{-6}. Vapor intrusion to indoor air poses a greater risk than vapor intrusion to outdoor air, so the results of EarthCon (2016) survey show that site conditions are also protective of human health with regards to soil vapor volatilization to outdoor air. Site data meets the criteria outlined in option “a” for direct contact, and a site-specific risk assessment (option “b”) shows that there is no unacceptable risk from volatilization to outdoor air.

10. Recommendations

Based on review of the information presented in this and previous submittals, the soil, soil vapor, and groundwater analytical results are below the target concentrations determined from DTSC, CalEPA, SFRWQCB, and SWRCB guidance documents. Therefore, there are no unacceptable risks associated with the future occupants of the proposed residential development. Paloma recommends that the Site be allowed to undergo redevelopment immediately in order to facilitate the construction of the proposed residential building.

The Site also satisfies the case closure requirements of Health and Safety Code section 25296.10 and case closure is consistent with Resolution 92-49 that requires that the secondary has been removed to the extent practicable, which has been accomplished through previous source removal during UST removal and overexcavation, LNAPL removal, and natural attenuation. As previously mentioned, the remaining source mass at the Site is attributed to the Mercury facility since the majority of the contamination consists of diesel, which there has not been a known historical source and/or release of from the Site. Therefore, Paloma requests that the SWRCB rescind their appeal to close the environmental case for the former Mercury Rentals Inc. facility. In addition, since the Site conditions meet the general and media-specific criteria established in the LTCP, and therefore pose no threat to human health, safety, and the environment, we propose that the SWRCB grant environmental case closure and, ultimately, issue a No Further Action Letter for the former Hansen Auto Tow facility.

11. Limitations

Environmental conditions may exist at the Site that cannot be identified by visual observation. Where subsurface work is performed, the analyses and interpretations presented in this report have been developed based on the results from the review of existing information pertaining to the Site and the results from the laboratory analyses of the soil, groundwater, and soil vapor samples collected from discrete locations that may not represent actual conditions at unsampled locations. If conditions are not identified during the study, such a finding should not be construed as a guarantee of the absence of such conditions at the Site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

This work was performed and the report has been prepared for the sole use of Bonanni Development and State Water Resources Control Board. Any reliance on this report by a third party is at such party's sole risk.

Work on this project as described in this report was completed by or under the direct supervision of a California licensed Professional Engineer. Paloma's professional services were performed, findings obtained, and recommendations applied present engineering and scientific judgment and use a level of effort consistent with the standard of practice measured on the date of work and in locale of the Site for similar type studies in California. Paloma makes no warranty, express or implied.

All of which is Respectfully Submitted,

Paloma

Matthew B. Smith, PE

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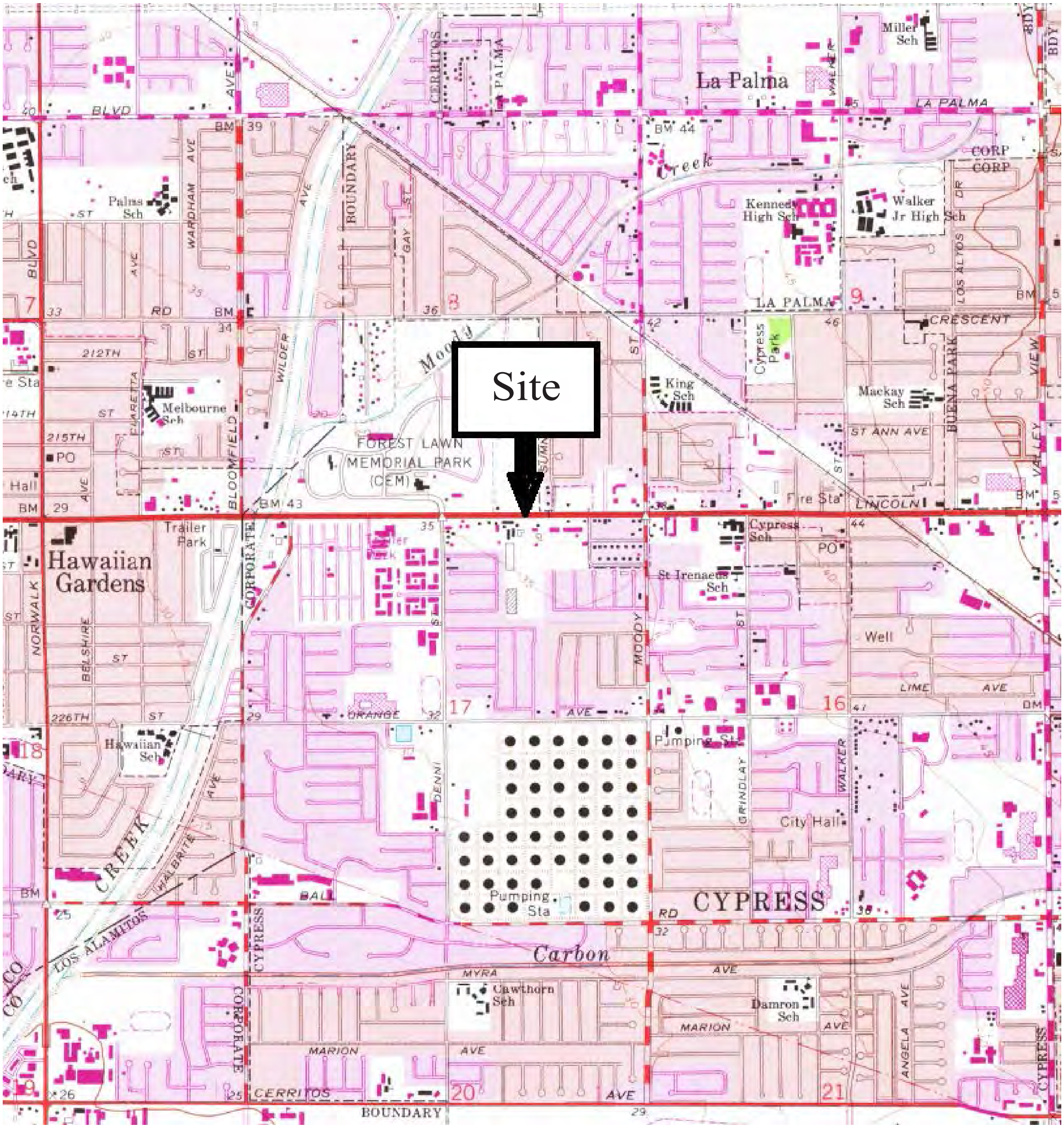

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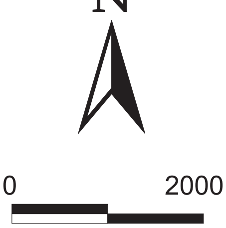
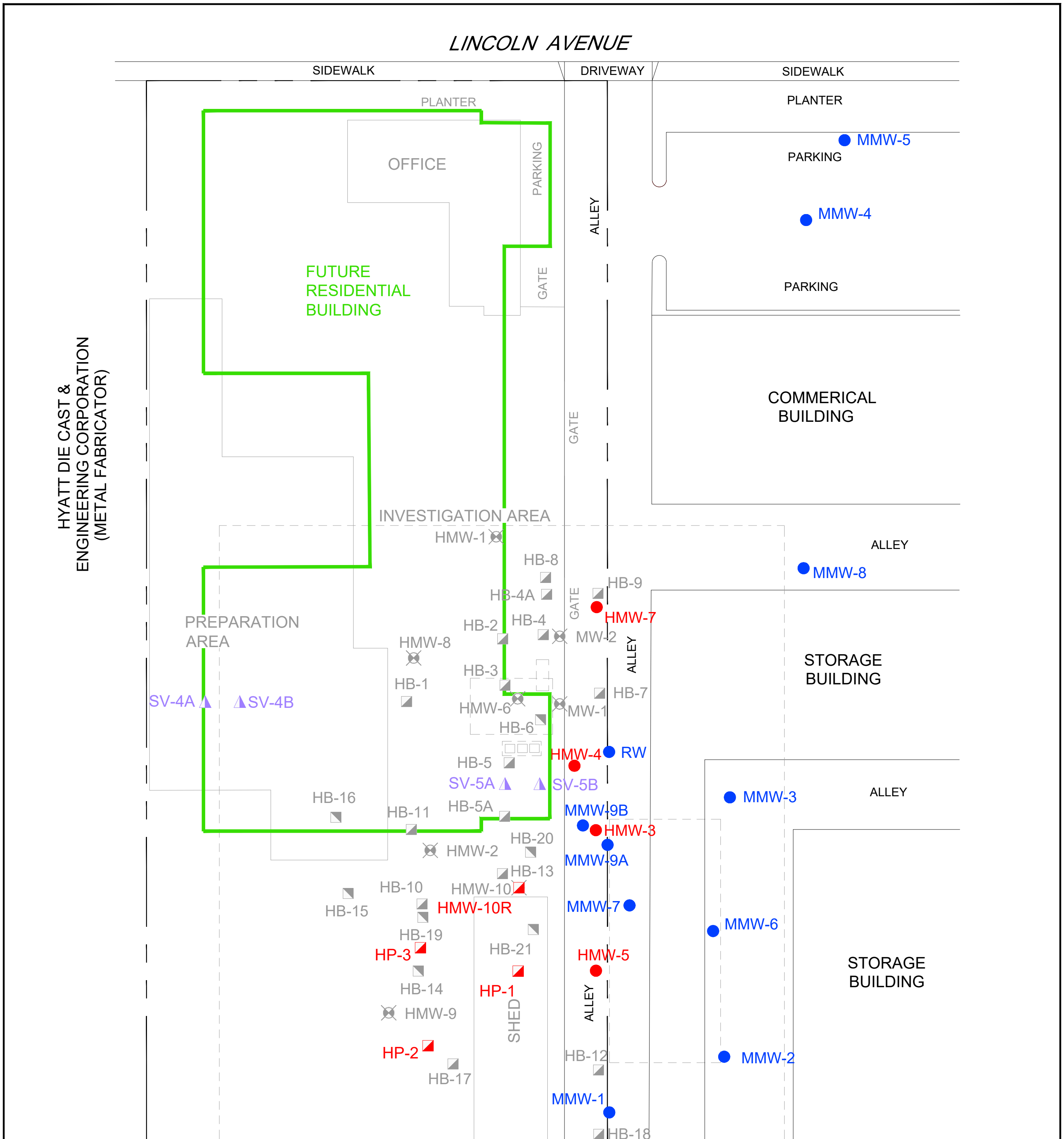


0 2000

Approximate Scale

U.S. Geological Survey, 1981
Quadrangle: Los Alamitos
County: Orange
Series: 7.5-Minute Quad

Paloma Environmental Services, Inc. 52 El Prisma Rancho Santa Margarita, CA 92688	DATE: June 5, 2018	APPROXIMATE SCALE: 1" = 2000'	FIGURE 1
	COMPANY: Bonanni Development, Inc.	TITLE: Site Vicinity Map 4620 Lincoln Ave., Cypress, CA	



MMW-7 ●	GROUNDWATER MONITORING WELL (MERCURY RENTALS)
HMW-1 ●	GROUNDWATER MONITORING WELL (HANSEN)
SV-5a	SOIL VAPOR PROBE LOCATIONS
MW-1	ABANDONED GROUNDWATER MONITORING WELL
HP-1	PROPOSED HYDROPUNCH LOCATIONS
HB-11	SOIL BORING LOCATION
	FORMER UST/DISPENSER
	HANSEN PROPERTY LINE
	FUTURE RESIDENTIAL BUILDING

0 25 50

N

FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

20180515
Aug 19, 2019

PALOMA ENVIRONMENTAL SERVICES, INC.

SITE PLAN

FIGURE 2

CAD File: C:\Users\Matt\Documents\Business 7-2019\CalClean\Hansens Auto Tow\Site Figures\Hansen Auto Tow Site Plan Rev2.DWG

Table 1
Well Construction Details
Former Hansen Auto Tow
4620 Lincoln Avenue
Cypress, CA

Well ID	Well Casing Diameter (in)	Well Casing Material	Depth of Well (fbg)	Screen Interval (fbg)
MW-1*	6"	PVC	11.69	~2 to ~11.69
MW-2*	6"	PVC	11.62	~2 to ~11.62
HMW-2	2"	PVC	18.32	3 to 18
HMW-3A	4"	PVC	20.46	5 to 20
HMW-4	2"	PVC	18.07	3 to 18
HMW-5	2"	PVC	16.28	3 to 18
HMW-7	2"	PVC	18.03	3 to 18
HMW-8	2"	PVC	18.49	3 to 18
MMW-1	2"	PVC	19.50	3 to 18
MMW-2	2"	PVC	16.32	4.5 to 19.5
MMW-3	2"	PVC	19.60	4.5 to 19.5
MMW-4	2"	PVC	18.93	4.5 to 19.5
MMW-5	2"	PVC	19.43	4.5 to 19.5
MMW-6	2"	PVC	18.00	4.5 to 19.5
MMW-7	2"	PVC	19.70	4.5 to 19.5
MMW-8	4"	PVC	20.90	5 to 20
MMW-9B	4"	PVC	20.47	5 to 20
MMW-9**	4"	PVC	20.40	4.5 to 19.5
RW	12"	PVC	10.34	NA

Abbreviations and Notes
fbg - feet below ground surface
NA - Not available
*MMW-1 and MMW-2 were abandoned on June 20, 2012
**Well is also refered to as MMW-9A

Table 2
Soil Analytical Data
Former Hansen Auto Tow, 4620 Lincoln Ave, Cypress, CA

Sample ID	Date Sampled	Sample Depth (fbg)	TPHg (mg/kg)	TPHd (mg/kg)	TPHo (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-Benzene (ug/kg)	Total Xylenes (ug/kg)	MTBE (ug/kg)	ETBE (ug/kg)	DIPE (ug/kg)	TAME (ug/kg)	TBA (ug/kg)	Naphthalene (ug/kg)	n-Butylbenzene (ug/kg)	n-Propylbenzene (ug/kg)	sec-Butylbenzene (ug/kg)
HMW-10R	6/6/2019	2.5	<1.0	**19**	**67**	<3.7	<3.7	<3.7	<11.0	<3.7	<3.7	<3.7	<3.7	<73	<3.7	<3.7	<3.7	<3.7
HMW-10R	6/6/2019	5	<1.0	**50**	**110**	<3.9	<3.9	<3.9	<11.7	<3.9	<3.9	<3.9	<3.9	<78	<3.9	<3.9	<3.9	<3.9
HMW-10R	6/6/2019	10	<1.0	<10	<10	<3.7	<3.7	<3.7	<11.1	<3.7	<3.7	<3.7	<3.7	<74	<3.7	<3.7	<3.7	<3.7
HMW-10R	6/6/2019	15	<1.0	**14**	<10	<4.0	<4.0	<4.0	<12.0	<4.0	<4.0	<4.0	<4.0	<80	<4.0	<4.0	<4.0	<4.0
HMW-10R	6/6/2019	20	<1.0	**17**	**15**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0
HP-1	6/6/2019	2.5	<1.0	**30**	**72**	<3.7	<3.7	<3.7	<11.1	<3.7	<3.7	<3.7	<3.7	<74	<3.7	<3.7	<3.7	<3.7
HP-1	6/6/2019	5	<1.0	**22**	**48**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0
HP-1	6/6/2019	10	<1.0	**25**	**41**	<3.6	<3.6	<3.6	<10.8	<3.6	<3.6	<3.6	<3.6	<72	<3.6	<3.6	<3.6	<3.6
HP-1	6/6/2019	15	<1.0	**21**	**29**	<4.1	<4.1	<4.1	<12.3	<4.1	<4.1	<4.1	<4.1	<82	<4.1	<4.1	<4.1	<4.1
HP-1	6/6/2019	20	<1.0	**24**	**19**	<4.2	<4.2	<4.2	<12.7	<4.2	<4.2	<4.2	<4.2	<85	<4.2	<4.2	<4.2	<4.2
HP-2	6/6/2019	2.5	<1.0	**190**	**400**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0
HP-2	6/6/2019	5	<1.0	**19**	**10**	<4.0	<4.0	<4.0	<12.1	<4.0	<4.0	<4.0	<4.0	<81	<4.0	<4.0	<4.0	<4.0
HP-2	6/6/2019	10	<1.0	**19**	**11**	<5.1	<5.1	<5.1	<15.1	<5.1	<5.1	<5.1	<5.1	<100	<5.1	<5.1	<5.1	<5.1
HP-2	6/6/2019	15	<1.0	**13**	<10	<4.4	<4.4	<4.4	<13.1	<4.4	<4.4	<4.4	<4.4	<87	<4.4	<4.4	<4.4	<4.4
HP-2	6/6/2019	20	<1.0	<10	<10	<4.0	<4.0	<4.0	<12.0	<4.0	<4.0	<4.0	<4.0	<80	<4.0	<4.0	<4.0	<4.0
HP-3	6/6/2019	2.5	<1.0	**66**	**73**	<3.9	<3.9	<3.9	<11.7	<3.9	<3.9	<3.9	<3.9	<78	<3.9	<3.9	<3.9	<3.9
HP-3	6/6/2019	5	<1.0	**3,400**	**1,300**	<220	<220	<220	<670	<220	<220	<220	<220	<4,500	**2,200**	**490**	**310**	**350**
HP-3*	6/6/2019	5	N/A	<10	<10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HP-3	6/6/2019	10	**210**	**180**	**66**	<4.2	<4.2	<4.2	<12.7	<4.2	<4.2	<4.2	<4.2	<87	<4.2	<4.2	<4.2	<4.2
HP-3	6/6/2019	15	<1.0	**13**	<10	<4.1	<4.1	<4.1	<12.2	<4.1	<4.1	<4.1	<4.1	<81	<4.1	<4.1	<4.1	<4.1
HP-3	6/6/2019	20	<1.0	<10	<10	<4.1	<4.1	<4.1	<12.3	<4.1	<4.1	<4.1	<4.1	<82	<4.1	<4.1	<4.1	<4.1
SFRWQCB Residential Soil ESL			**430**	**260**	**12,000**	**330**	**1,100,000**	**5,900**	**580,000**	**47,000**	--	--	--	--	**3,800**	--	--	--
SFRWQCB Construction Worker Soil ESL			**1,800**	**1,100**	**54,000**	**33,000**	**4,700,000**	**540,000**	**2,400,000**	**4,100,000**	--	--	--	--	**400,000**	--	--	--

Abbreviations and Notes:

fbg = feet below ground
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TPHo = Total petroleum hydrocarbons as oil

MTBE = Methyl tertiary butyl ether
ETBE = Ethyl tertiary butyl ether
DIPE = Di-isopropyl ether
TAME = Tertiary amyl methyl ether
TBA = Tertiary butyl alcohol
N/A = Not analyzed

TPHg, TPHd, and TPHo analyzed by EPA Method 8015
Benzene, toluene, ethyl-benzene, and total xylenes (BTEX) analyzed by EPA Method 5035/8260B except where specified otherwise
VOCs, Oxygenates, naphthalene, and other analyzed by EPA Method 5035/8260B except where specified otherwise
*Sample was reanalyzed to determine validity of TPHd and TPHo concentrations only
SFRWQCB ESL = San Francisco Regional Water Quality Control Board, Environmental Screening Levels - Soil (January 2019)

Table 3

Grab Groundwater Analytical Data

Former Hansen Auto Tow, 4620 Lincoln Ave, Cypress, CA

Sample ID	Date Sampled	TPHg (mg/L)	TPHd (mg/L)	TPHo (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	TBA (µg/L)	Naphthalene (µg/L)	1,2,4-Trimethyl benzene (µg/L)	4-Isopropyl toluene (µg/L)	Isopropyl benzene (µg/L)	n-Butylbenzene (µg/L)	n-Propylbenzene (µg/L)	sec-Butylbenzene (µg/L)
HP-1	6/6/2019	<0.20	**0.89**	**0.62**	<0.50	<0.50	<0.50	<1.5	**1.4**	<0.50	<0.50	<0.50	<10	<0.50	**1.0**	**0.72**	<0.50	<0.50	**0.55**	<0.50
HP-2	6/6/2019	<0.20	**0.84**	**0.65**	<0.50	<0.50	<0.50	<1.5	**1.1**	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HP-3	6/6/2019	**0.46**	**500**	**180**	<1.0	<1.0	**2.3**	<3.0	<0.50	<1.0	<1.0	<1.0	<20	**160**	<1.0	**0.72**	**4.4**	**5.7**	**8.5**	**4.7**
Trip Blank	6/6/2019	--	--	--	<0.50	<0.50	<0.50	<1.5	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	California MCL	**--**	**--**	**--**	**1**	**150**	**30**	**1,750**	**5**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Abbreviations and Notes:

µg/L = micrograms per liter
TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TPHo = Total petroleum hydrocarbons as oil
MTBE = Methyl tertiary butyl ether
ETBE = Ethyl tertiary butyl ether
DIPE = Di-isopropyl ether
TAME = Tertiary amyl methyl ether
TBA = Tertiary butyl alcohol

TPHg, TPHd, and TPHo analyzed by EPA Method 8015B
Benzene, toluene, ethyl-benzene, and total xylenes (BTEX) analyzed by EPA Method 5035/8260B except where specified otherwise
VOCs, Oxygenates, naphthalene, and other analyzed by EPA Method 5035/8260B except where specified otherwise
California MCLs = Maximum contaminant levels for drinking water

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5(2)**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
MMW-1	5/8/1996	NA	NA	NA	NA	**300**	**940**	--	--	--	--	--	--	--	**1.8**	--	--	--	--	**32**	--	ND	--	--	--	--	--	--	--	ND	**0.5**	--
	6/16/1997	NA	NA	NA	NA	ND<50	ND<200	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/22/1998	NA	NA	NA	NA	**110**	**1500**	--	--	--	--	--	--	--	ND	--	--	--	--	**0.75**	--		--	--	--	--	--	--	--	ND	ND	--
	7/23/1998	NA	NA	NA	NA	ND<500	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/20/1999	NA	NA	NA	NA	--	ND<500	--	--	--	--	--		--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	6/28/1999	NA	NA	NA	NA	--	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	1/10/2000	NA	NA	NA	NA	ND<500	ND<0.5	--	--	--	--	--	--	--	**4**	--	--	--	--	**1**	--	**41**	--	--	--	--	--	--	--	ND	ND	--
	4/7/2000	NA	NA	NA	NA	ND<500	ND<0.5	--	--	--	--	--	--	--	**3.4**	--	--	--	--	**2.3**	--	ND<20	--	--	--	--	--	--	--	ND	**2.3**	--
	10/31/2000	NA	NA	NA	NA	**640**	**700**	--	--	--	--	--	--	--	**3.2**	--	--	--	--	**1.5**	--	ND	--	--	--	--	--	--	--	ND	ND	--
	6/22/2001	NA	NA	NA	NA	**1,000**	ND	--	--	--	--	--	--	--	**14**	--	--	--	--	**18**	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/10/2002	NA	NA	NA	NA	ND	ND	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	11/4/2004	38.66	6.91	ND	31.75	**70**	**4,300**	--	--	--	--	--	--	--	**3.1**	--	--	ND<4.0	ND<4.0	ND<1.0	--	ND<2.0	--	--	--	--	ND<4.0	ND<40	--	ND<1.0	ND<4.0	--
	5/23/2005	38.66	5.48	ND	33.18	**120**	**4,000**	--	--	--	--	--	--	--	**1.7**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.66	6.61	ND	32.05	ND<50	**2,200**	--	--	--	--	--	--	--	**1.3**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	38.66	6.89	Sheen	31.77	**160**	**3,300**	--	--	--	--	--	--	--	**2.4**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/28/2007	38.66	6.70	ND	31.96	**63**	**0.92**	--	**2.0**	**2.0**	**2.0**	ND<0.5	ND<0.5	ND<0.5	**0.98**	**2.0**	**4.7**	ND<2.0	ND<2.0	ND<0.5	**1.1**	ND<1.0	ND<0.5	**1.6**	**1.9**	**2.00**	ND<2.0	ND<20	ND<0.5	ND<0.5	ND<2.0	**0.57**
	6/29-30/2007	38.66	7.52	ND	31.14	**62**	**2,400**	--	**1.3**	ND<1.0	**1.3**	**2.3**	**2.2**	ND<0.5	**1.2**	ND<1.0	**4.5**	ND<1.0	ND<1.0	**2.1**	**3.1**	**1.8**	ND<0.5	ND<0.5	**1.7**	**1.70**	ND<1.0	ND<10	ND<0.5	**0.55**	ND<2.0	ND<0.5
	9/27/2007	38.66	7.75	ND	30.91	ND<50	**1,200**	--	ND<0.5	ND<1.0	**2.2**	ND<0.5	ND<0.5	ND<0.5	**1.1**	ND<1.0	**6.4**	ND<1.0	ND<1.0	ND<0.5	**0.7**	ND<1.0	ND<0.5	ND<0.5	**0.69**	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/27/2007	38.66	7.67	ND	30.99	**56**	**2,200**	--	ND<0.5	ND<1.0	**1.4**	ND<0.5	ND<0.5	ND<0.5	**1.4**	ND<1.0	**4.8**	ND<1.0	ND<1.0	ND<0.5	**0.82**	ND<1.0	ND<0.5	ND<0.5	**0.86**	**0.58**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	38.66	7.06	0.01	31.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14-15/2008	38.66	7.10	ND	31.56	ND<50	**3,600**	--	ND<0.5	ND<1.0	**0.71**	ND<0.5	ND<0.5	ND<0.5	**0.76**	ND<1.0	**3.0**	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	7/28/2008	38.66	7.29	ND	31.37	**72**	**2,900**	--	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**1.2**	ND<2.0	**4.2**	ND<2.0	ND<2.0	ND<1.0	**2.8**	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<20	ND<1.0	ND<1.0	ND<4.0	ND<1.0
	12/11/2008	38.66	7.82	ND	30.84	**54**	**2,800**	--	ND<5.0	ND<5.0	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<5.0	ND<2.5	ND<5.0	ND<5.0	ND<2.5	ND<2.5	ND<5.0	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<5.0	ND<50	ND<2.5	ND<2.5	ND<10	ND<2.5
	2/19/2009	38.66	7.30	ND	31.36	ND<50	**1,200**	--	ND<0.50	ND<1.0	ND<0.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.50	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.50	ND<0.5	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/26/2009	38.66	7.42	ND	31.24	ND<50	**970**	--	ND<0.50	ND<1.0	ND<0.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.50	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.50	ND<0.5	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/29-30/2009	38.66	7.92	Sheen	30.74	**64**	ND<500	--	ND<0.50	ND<1.0	**1.8**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	**4.6**	ND<1.0	ND<1.0	ND<0.5	**1.0**	ND<1.0	ND<0.5	ND<0.50	ND<0.5	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/21/2009	38.66	7.98	ND	30.68	**58**	**2,700**	--	ND<0.50	ND<1.0	ND<0.50	ND<0.5	ND<0.5	ND<0.5	**0.82**	ND<1.0	**6.8**	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.50	ND<0.5	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/30/2010	38.66	6.90	ND	31.76	**93**	**8,300**	--	ND<0.50	ND<1.0	**4**	ND<0.5	ND<0.5	ND<0.5	**1.0**	ND<1.0	**11**	ND<1.0	ND<1.0	**0.69**	**8.6**	ND<1.0	ND<0.5	**0.8**	**3.6**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/30/2010	38.66	6.83	ND	31.83	**57**	**2,600**	--	ND<0.50	ND<1.0	**2.1**	ND<0.5	ND<0.5	ND<0.5	**1.0**	ND<1.0	**8.2**	ND<1.0	ND<1.0	ND<0.5	**2.6**	ND<1.0	ND<1.0	ND<0.50	ND<0.5	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/22/2010	38.66	7.02	ND	31.64	**64**	**1,300**	--	ND<0.50	ND<1.0	**3.3**	ND<0.5	ND<0.5	ND<0.5	**1.0**	ND<1.0	**8.4**	ND<1.0	ND<1.0	ND<0.5	**3.4**	ND<1.0	ND<1.0	ND<0.50	**1.9**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	38.66	6.59	ND	32.07	ND<50	**840**	--	ND<0.50	ND<1.0	**2.2**	ND<0.5	**0.60**	ND<0.5	**1.1**	ND<1.0	**6.2**	ND<1.0	ND<1.0	**0.55**	**1.5**	ND<1.0	ND<1.0	ND<0.50	**1.3**	ND<0.50	ND<1.0	ND<10	ND<0.5	**0.56**	ND<2.0	ND<0.5
	3/14/2011	38.66	6.11	ND	32.55	ND<50	**100**	--	ND<0.50	ND<1.0	**2.6**	ND<0.5	ND<0.5	ND<0.5	**0.7**	ND<1.0	**7.3**	ND<1.0	ND<1.0	ND<0.5	**2**	ND<1.0	ND<1.0	ND<0.50	**1.5**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/8/2011	38.66	5.95	ND	32.71	**120**	**1,400**	--	ND<0.50	ND<1.0	**3.8**	**0.94**	ND<0.5	ND<0.5	**1.0**	**0.61**	**10**	ND<1.0	ND<1.0	**0.81**	**3.5**	ND<1.0	ND<1.0	ND<0.50	**1.6**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	**2.22**	ND<0.5
	9/26/2011	38.66	6.32	ND	32.34	**92**	**1,200**	--	ND<0.50	ND<1.0	**3**	ND<0.5	ND<0.5	ND<0.5	**0.9**	**0.60**	**7.4**	ND<1.0	ND<1.0	ND<2.0	**2**	ND<1.0	ND<1.0	ND<0.50	**0.96**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/14/2011	38.66	6.52	ND	32.14	**120 HD**	**950**	--	ND<0.50	ND<1.0	**2.1**	ND<0.5	ND<0.5	ND<0.5	**0.85**	ND<1.0	**5.2**	ND<1.0	ND<1.0	ND<2.0	**1**	ND<1.0	**1.2**	ND<0.50	**0.70**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/1/2012	38.66	6.61	ND	32.05	**130 HD**	**1,000**	--	ND<0.50	ND<1.0	**1.7**	ND<0.5	ND<0.5	ND<0.5	**1.1**	ND<1.0	**4.7**	ND<1.0	ND<1.0	ND<2.0	**1.2**	ND<1.0	ND<1.0	ND<0.50	**0.72**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	38.66	6.79	ND	31.87	**52 HD**	**2,500**	--	ND<0.50	ND<1.0	**2.4**	ND<0.5	ND<0.5	ND<0.5	**1.3**	**0.59**	**5.8**	ND<1.0	ND<1.0	ND<2.0	**1.6**	ND<1.0	ND<1.0	ND<0.50	**1.0**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/6/2012	38.66	7.11	ND	31.55	ND<50	**2,400**	--	ND<0.50	ND<1.0	**2.5**	ND<0.5	ND<0.5	ND<0.50	**1.3**	**0.54**	**6.2**	ND<1.0	ND<1.0	ND<2.0	**1.9**	ND<1.0	ND<1.0	ND<0.50	**1.1**	ND<0.50	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19/2012	38.66	7.42	ND	31.24	**95**	**1,900 HD**	--	ND<0.50	ND<1.0	**2.7**	ND<0.5	ND<0.5	ND<0.50	**1.3**	**0.55**	**6.8**	ND<1.0	ND<1.0	ND<2.0	**2.4**	ND<1.0	ND<1.0	ND<0.50	**1.7**	**0.56**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2013	38.66	7.29	ND	31.37	**200 HD**	**2,000 HD**	--	ND<0.50	ND<1.0	**3.2**	ND<0.5	ND<0.5	ND<0.50	**1.1**	**0.55**	**7.5**	ND<1.0	ND<1.0	ND<2.0	**2.7**	ND<1.0	ND<1.0	ND<0.50	**1.6**	**0.58**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/28/2013	38.66	7.40	ND	31.26	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.66	7.72	ND	30.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.66	8.02	ND	30.64	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.66	7.86	ND	30.80	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.66	7.96	ND	30.70	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.66	8.38	Sheen	30.28	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.66	8.07	ND	30.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.66	8.25	ND	30.41	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	38.66	8.97	ND	29.69	**940 HD**	**6,400 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**8.5**	ND<5.0	ND<5.0	ND<5.0	**5.1**	ND<5.0	ND<10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	7/31/2018	38.66	8.00	ND	30.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.66	6.55	Sheen	32.11	**7,600**	**5,000**	**4,000**	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<100	ND<2,000	ND<100	ND<100	ND<300	ND<100
MMW-2	7/31/1996	NA	NA	NA	NA	**100**	**1,900**	--	--	--	--	--	--	--	ND	--	--	--	--	**1**	--	NS	--	--	--	--	--	--	--	ND	**2.6**	--
	1/22/1998	NA	NA	NA	NA	**70**	**4,300**	--	--	--	--	--	--	--	**1.3**	--	--	--	--	ND	--	NS	--	--	--	--	--	--	--	ND	**1.6**	--
	6/16/1997	38.63	NM	Sheen	---	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/1997	NA	NA	NA	NA	ND<500	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/20/1999	NA	NA	NA	NA	NS	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	6/28/1999	NA	NA	NA	NA	NS	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	1/10/2000	NA	NA	NA	NA	ND<500	ND<0.5	--	--	--	--	--	--	--	**2**	--	--	--	--	ND	--	**39**	--	--	--	--	--	--	--	ND	ND	--
	4/7/2000	NA	NA	NA	NA	ND<500	ND<0.5	--	--	--	--	--	--	--	**2.2**	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	10/31/2000	NA	NA	NA	NA	ND<500	**800**	--	--	--	--	--	--	--	**1.4**	--	--	--	--	**2.9**	--	ND	--	--	--	--	--	--	--	ND	ND	--
	6/22/2001	NA	NA	NA	NA	ND	ND	--	--	--	--	--	--	--	**1.4**	--	--	--	--	**4**	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/10/2002	NA	NA	NA	NA	**2.5**	**1,400**	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	11/4/2004	38.63	6.86	ND	31.77	**190**	**12,000**	--	--	--	--	--	--	--	**3.1**	--	--	ND<4.0	ND<4.0	**2**	--	ND<2.0	--	--	--	--	ND<4.0	ND<40	--	ND<1.0	ND<4.0	--
	5/23/2005	38.63	5.91	ND	32.72	**170**	**11,000**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.63	6.73	0.01	31.91	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2006	38.63	7.07	0.03	31.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.63	6.70	0.01	31.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.63	7.64	ND	30.99	**58**	**1,300**	--	--	--	--	--	--	--	**0.51**	--	--	ND<1.0	ND<1.0	**1.9**	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.5	ND<2.0	--
	9/27/2007	38.63	7.85	ND	30.78	**58**	**13,000**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<1.0	ND<1.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.5	ND<2.0	--
	12/27/2007	38.63	7.76	ND	30.87	**190**	**5,400**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<1.0	ND<1.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.5	ND<2.0	--
	3/5/2008	38.63	7.17	0.005	31.46	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.63	7.20	Sheen	31.43	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.63	7.35	Sheen	31.28	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/11/2008	38.63	7.91	Sheen	30.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.63	7.34	Sheen	31.29	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2006	38.63	7.54	Sheen	31.09	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.63	8.04	Sheen	30.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.63	8.16	Sheen	30.47	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.63	8.16	Sheen	30.47	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.63	6.96	Sheen	31.67	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.63	6.86	Sheen	31.77	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	5	6	600	--	--	--	1	6	--	--	--	300	--	13/ 5(2)	--	--	--	--	--	--	5	150	1,750	5
MMW-2	9/22/2010	38.63	7.01	Sheen	31.62	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.63	6.61	Sheen	32.02	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.63	6.15	Sheen	32.48	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.63	6.10	Sheen	32.53	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.63	6.51	Sheen	32.12	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.63	6.46	Sheen	32.17	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.63	6.71	Sheen	31.92	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.63	6.97	Sheen	31.66	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.63	7.22	Sheen	31.41	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.63	7.55	ND	31.08	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.63	6.45	ND	32.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.63	7.53	ND	31.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.63	7.85	ND	30.78	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.63	8.19	Sheen	30.44	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.63	8.05	ND	30.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.63	8.11	Sheen	30.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.63	8.55	Sheen	30.08	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.63	8.24	Sheen	30.39	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.63	8.39	Sheen	30.24	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	38.63	9.14	Sheen	29.49	**18,000 HD**	**3,400 HD**	--	ND<2.0	ND<2.0	**2.9**	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**6.7**	ND<2.0	ND<2.0	ND<2.0	**6.8**	ND<2.0	**18**	**2.2**	**5.2**	**2.4**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.63	8.07	ND	30.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.63	6.64	ND	31.99	**5,300**	**2,700**	**2,600**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**26**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
MMW-3	7/31/1996	NA	NA	NA	NA	ND<0.5	**2,400**	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	ND	ND	--
	6/16/1997	38.97	NM	Sheen	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/22/1998	38.97	NM	0.89	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/1998	38.97	NM	0.92	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/1999	38.97	NM	0.31	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/28/1999	38.97	NM	0.32	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/10/2000	38.97	NM	0.35	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/2000	38.97	NM	Sheen	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/31/2000	38.97	NM	0.15	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/2001	38.97	NM	0.21	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/10/2002	38.97	NM	0.2	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2004	38.97	7.30	0.21	31.83	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2005	38.97	5.81	0.01	33.17	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2006	38.97	7.19	0.08	31.84	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/26/2006	38.97	7.46	0.11	31.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.97	7.25	0.08	31.78	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.97	8.26	0.22	30.88	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/27/2007	38.97	8.51	0.21	30.62	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	38.97	8.26	0.21	30.87	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2008	38.97	7.71	0.11	31.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.97	7.89	0.19	31.22	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.97	7.85	Sheen	31.12	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/11/2008	38.97	8.37	Sheen	30.60	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.97	7.87	Sheen	31.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2009	38.97	8.08	Sheen	30.89	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.97	8.59	0.02	30.40	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.97	8.68	0.01	30.30	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.97	7.38	Sheen	31.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.97	7.31	Sheen	31.66	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.97	7.45	Sheen	31.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.97	6.90	Sheen	32.07	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.97	6.42	Sheen	32.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.97	6.25	Sheen	32.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.97	6.64	Sheen	32.33	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.97	6.78	0.01	32.20	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.97	7.06	Sheen	31.91	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.97	7.32	Sheen	31.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.97	7.91	Sheen	31.06	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.97	8.25	Sheen	30.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.97	8.18	Sheen	30.79	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.97	8.39	Sheen	30.58	**89,000 HD**	**21,000 HD**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**0.84**	ND<0.5	**0.55**	ND<0.5	ND<0.5	ND<0.5	**2.4**	ND<0.5	ND<1.0	**5.0**	**3.1**	**6.4**	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/11/2013	38.97	8.52	Sheen	30.45	**1,600 HD**	**25,000 HD**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**0.54**	ND<0.5	ND<0.5	ND<0.5	**0.57**	ND<0.5	ND<1.0	ND<0.5	ND<0.5	**0.93**	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/18/2013	38.97	8.80	Sheen	30.17	**4,800 HD**	**5,500 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	3/6/2014	38.97	8.84	Sheen	30.13	**560 HD**	**11,000 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	**1.1**	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	6/12/2014	38.97	8.85	Sheen	30.12	**2,400 HD**	**7,600 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	9/23/2014	38.97	9.34	Sheen	29.63	**690 HD**	**2,100 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	12/19/2014	38.97	9.02	Sheen	29.95	**730 HD**	**4,700 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1.0	ND<5.0	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	3/20/2015	38.97	8.78	Sheen	30.19	**2,200 HD**	**12,000 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	6/10/2015	38.97	9.09	Sheen	29.88	**5,800 HD**	**25,000 HD**	--	ND<0.50	ND<0.50	ND<0.50	**0.65**	ND<0.50	ND<0.50	**0.87**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**0.91**	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	9/7/2016	38.97	9.59	ND	29.38	**4,200 HD**	**3,500 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**1.2**	**1.5**	NS<2.0	ND<1.0	**1.0**	**1.7**	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	7/31/2018	38.97	8.47	ND	30.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.97	7.06	ND	31.91	**1,600**	**8,000**	**7,800**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
MMW-4	7/31/1996	NA	NA	NA	NA	**300**	--	--	--	--	--	--	--	--	**7.9**	--	--	--	--	**16**	--	--	--	--	--	--	--	--	--	**30**	**43**	--
	6/16/1997	NA	NA	NA	NA	**1,400**	--	--	--	--	--	--	--	--	**140**	--	--	--	--	**110**	--	**0.68**	--	--	--	--	--	--	--	**74**	**290**	--
	7/23/1998	NA	NA	NA	NA	**2,800**	--	--	--	--	--	--	--	--	**33**	--	--	--	--	**85**	--	ND	--	--	--	--	--	--	--	**40**	**210**	--
	1/20/1999	NA	NA	NA	NA	--	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	**1**	--	ND<20	--	--	--	--	--	--	--	ND	**16**	--
	4/7/2000	NA	NA	NA	NA	ND<0.5	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/10/2000	NA	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/7/2000	NA	NA	NA	NA	ND<0.5	ND<500	--	--	--	--	--	--	--	**26**	--	--	--	--	**17**	--	ND<20	--	--	--	--	--	--	--	**11**	**57**	--

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	5	6	600	--	--	--	1	6	--	--	--	300	--	13/ 5[2]	--	--	--	--	--	--	5	150	1,750	5
MMW-4	11/4/2004	38.74	7.20	ND	31.54	2,000	ND<500	--	--	--	--	--	--	--	19	--	--	ND<2.0	ND<2.0	130	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	28	430	--
	5/23/2005	38.74	6.57	ND	32.17	1,800	ND<500	--	--	--	--	--	--	--	37	--	--	ND<2.0	ND<2.0	140	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	17	350	--
	3/15/2006	38.74	6.88	ND	31.86	1,600	ND<500	--	--	--	--	--	--	--	21	--	--	ND<2.0	ND<2.0	78	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	19	220	--
	9/26/2006	38.74	7.80	ND	30.94	2,900	ND<500	--	--	--	--	--	--	--	74	--	--	ND<2.0	ND<2.0	160	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	74	420	--
	3/28/2007	38.74	7.60	ND	31.14	180	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	7.3	3.7	ND<0.5	1.8	ND<0.5	ND<0.5	ND<2.0	ND<2.0	0.88	0.53	ND<1.0	ND<0.5	1.9	1.6	ND<0.5	ND<2.0	ND<20	ND<0.5	1.5	29	ND<0.5
	6/29-30/2007	38.74	8.38	ND	30.36	1,100	ND<500	--	ND<0.5	ND<1.0	ND<0.5	60	14	2.5	10	ND<1.0	ND<0.5	ND<1.0	ND<1.0	53	5.1	ND<1.0	4.0	3.5	7.2	1.9	ND<1.0	ND<10	ND<0.5	17	160	ND<0.5
	9/27/2007	38.74	8.51	ND	30.23	370	ND<500	--	ND<0.5	ND<1.0	ND<0.5	33	7.8	ND<0.5	5.8	ND<1.0	ND<0.5	ND<1.0	ND<1.0	26	2.4	ND<1.0	1.3	ND<0.5	4.3	ND<0.5	ND<1.0	ND<10	ND<0.5	19	70	ND<0.5
	12/27/2007	38.74	8.35	ND	30.39	480	ND<500	--	ND<0.5	ND<1.0	ND<0.5	34	6.6	ND<0.5	9.7	ND<1.0	ND<0.5	ND<1.0	ND<1.0	30	2.5	ND<1.0	1.7	ND<0.5	5.3	ND<0.5	ND<1.0	ND<10	ND<0.5	9.8	74	ND<0.5
	3/5/2008	38.74	7.815	ND	30.93	250	ND<500	--	ND<0.5	ND<1.0	ND<0.5	22	5.1	ND<0.5	3	ND<1.0	ND<0.5	ND<1.0	ND<1.0	17	1.0	ND<1.0	3.1	ND<0.5	2.2	ND<0.5	ND<1.0	ND<10	ND<0.5	4.7	47	ND<0.5
	5/14-15/2008	38.74	8.10	ND	30.64	310	ND<500	--	ND<0.5	ND<1.0	ND<0.5	8.4	1.9	ND<0.5	0.61	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.3	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	0.82	22	ND<0.5
	7/28/2008	38.74	8.20	ND	30.54	210	ND<500	--	ND<0.5	ND<1.0	ND<0.5	6.6	3.2	ND<0.5	2.4	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.3	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	1.2	21	ND<0.5
	12/11/2008	38.74	8.43	ND	30.31	360	ND<500	--	ND<0.5	ND<1.0	ND<0.5	11	9	ND<0.5	8.3	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.8	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	2.9	67	ND<0.5
	2/19/2009	38.74	7.88	ND	30.86	450	ND<500	--	ND<0.5	ND<1.0	ND<0.5	9.6	13	ND<0.5	4.8	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.1	ND<0.5	ND<1.0	2.9	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	7.1	65	ND<0.5
	6/26/2009	38.74	8.47	ND	30.27	160	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1	ND<1.0	ND<0.5	ND<1.0	ND<1.0	0.93	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	1.3	ND<2.0	ND<0.5
	9/29-30/2009	38.74	8.86	ND	29.88	900	ND<500	--	ND<0.5	ND<1.0	ND<0.5	21	5.8	ND<0.5	5.3	ND<1.0	ND<0.5	ND<1.0	ND<1.0	12	1.6	ND<1.0	ND<0.5	ND<0.5	1.7	ND<0.5	ND<1.0	ND<10	ND<0.5	11	45	ND<0.5
	12/21/2009	38.74	8.85	ND	29.89	230	ND<500	--	ND<0.5	ND<1.0	ND<0.5	16	3.5	ND<0.5	3.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	6.7	0.56	ND<1.0	ND<0.5	ND<0.5	0.94	ND<0.5	ND<1.0	ND<10	ND<0.5	5.8	22	ND<0.5
	3/30/2010	38.74	6.05	0.06	32.69	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.0	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	0.5	3.5	ND<0.5
	6/30/2010	38.74	7.91	ND	30.83	600	ND<500	--	ND<0.5	ND<1.0	ND<0.5	34	7.0	ND<0.5	2.7	ND<1.0	ND<0.5	ND<1.0	ND<1.0	19	2.1	ND<1.0	ND<1.0	ND<0.5	3.1	ND<0.5	ND<1.0	ND<10	ND<0.5	3.2	66	ND<0.5
	9/22/2010	38.74	8.11	ND	30.63	87	ND<500	--	ND<0.5	ND<1.0	ND<0.5	3.7	ND<0.5	ND<0.5	0.83	ND<1.0	ND<0.5	ND<1.0	ND<1.0	2	ND<0.5	ND<1.0	ND<1.0	ND<0.5	0.53	ND<0.5	ND<1.0	ND<10	ND<0.5	0.6	5.5	ND<0.5
	12/28/2010	38.74	6.90	ND	31.84	210	ND<500	--	ND<0.5	ND<1.0	ND<0.5	9.9	1.6	ND<0.5	1.2	ND<1.0	ND<0.5	ND<1.0	ND<1.0	6.4	0.57	ND<1.0	ND<1.0	ND<0.5	1.1	ND<0.5	ND<1.0	ND<10	ND<0.5	0.79	16	ND<0.5
	3/14/2011	38.74	7.21	ND	31.53	70	ND<500	--	ND<0.5	ND<1.0	ND<0.5	7	1.7	ND<0.5	2	ND<1.0	ND<0.5	ND<1.0	ND<1.0	10	ND<0.5	ND<1.0	ND<1.0	ND<0.5	1.2	ND<0.5	ND<1.0	ND<10	ND<0.5	1.7	25	ND<0.5
	6/8/2011	38.74	7.24	ND	31.50	380	ND<500	--	ND<0.5	ND<1.0	ND<0.5	13	3.1	ND<0.5	5.1	ND<1.0	ND<0.5	ND<1.0	ND<1.0	18	1.5	ND<1.0	ND<1.0	ND<0.5	1.5	ND<0.5	ND<1.0	ND<10	ND<0.5	3.9	49	ND<0.5
	9/26/2011	38.74	7.49	ND	31.25	1,700	ND<500	--	ND<0.5	ND<1.0	ND<0.5	66	10	ND<0.5	25	ND<1.0	ND<0.5	ND<1.0	ND<1.0	90	4.2	ND<1.0	1.8	0.86	5.7	0.50	ND<1.0	ND<10	ND<0.5	28	205	ND<0.5
	12/14/2011	38.74	7.60	ND	31.14	280	ND<500	--	ND<0.5	ND<1.0	ND<0.5	16	3.9	ND<0.5	3.8	ND<1.0	ND<0.5	ND<1.0	ND<1.0	17	1.6	ND<1.0	ND<1.0	ND<0.5	2.3	ND<0.5	ND<1.0	ND<10	ND<0.5	2.3	44	ND<0.5
	3/1/2012	38.74	8.01	ND	30.73	140	ND<500	--	ND<0.5	ND<1.0	ND<0.5	0.79	ND<0.5	ND<0.5	0.51	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	2.58	ND<0.5
	6/25/2012	38.74	7.85	ND	30.89	130	ND<500	--	ND<0.5	ND<1.0	ND<0.5	9.1	1.8	ND<0.5	1.0	ND<1.0	ND<0.5	ND<1.0	ND<1.0	8.6	0.70	ND<1.0	ND<1.0	ND<0.5	1.1	ND<0.5	ND<1.0	ND<10	ND<0.5	2.2	23.8	ND<0.5
	9/6/2012	38.74	8.22	ND	30.52	170	ND<500	--	ND<0.5	ND<1.0	ND<0.5	30	7.7	ND<0.5	10	ND<1.0	ND<0.5	ND<1.0	ND<1.0	38	4.1	ND<1.0	ND<1.0	0.58	5.4	ND<0.5	ND<1.0	ND<10	ND<0.5	11	104	ND<0.5
	12/19/2012	38.74	8.61	ND	30.13	50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	20	5.5	ND<0.5	3.7	ND<1.0	ND<0.5	ND<1.0	ND<1.0	22	2.2	ND<1.0	ND<1.0	1.1	3.5	ND<0.5	ND<1.0	ND<10	ND<0.5	1.9	46	ND<0.5
	3/5/2013	38.74	8.56	ND	30.18	110	ND<500	--	ND<0.5	ND<1.0	ND<0.5	7.4	1.3	ND<0.5	1.6	ND<1.0	ND<0.5	ND<1.0	ND<1.0	6.9	1.8	ND<1.0	ND<1.0	ND<0.5	2.7	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	16.5	ND<0.5
	6/28/2013	38.74	8.45	ND	30.29	1,200	ND<500	--	ND<1.0	ND<1.0	ND<1.0	73	13	1.2	36	ND<1.0	ND<1.0	ND<1.0	ND<1.0	76	12	ND<1.0	4.2	2.2	21	1.4	ND<1.0	ND<20	ND<1.0	32	165	ND<1.0
	9/11/2013	38.74	8.62	ND	30.12	1,500	4,900 HD	--	ND<2.0	ND<2.0	ND<2.0	79	17	ND<2.0	70	ND<2.0	ND<2.0	ND<2.0	ND<2.0	97	17	ND<2.0	4.8	3.3	30	2.0	ND<2.0	ND<40	ND<2.0	58	181	ND<2.0
	12/18/2013	38.74	8.80	ND	29.94	1,500	520 HD	--	ND<2.0	ND<2.0	ND<2.0	140	29	ND<2.0	21	ND<2.0	ND<2.0	ND<2.0	ND<2.0	120	11	ND<2.0	7.5	3.9	23	ND<2.0	ND<2.0	ND<40	ND<2.0	8.1	254	ND<2.0
	3/6/2014	38.74	8.61	ND	30.13	220	ND<500	--	ND<0.5	ND<0.5	ND<0.5	21	4.1	ND<0.5	8.8	ND<0.5	ND<0.5	ND<0.5	ND<0.5	14	3.5	ND<0.5	1.9	0.86	6.0	ND<0.5	ND<0.5	ND<10	ND<0.5	0.98	31.3	ND<0.5
	6/12/2014	38.74	8.89	ND	29.85	1,600	ND<520	--	ND<0.5	ND<0.5	ND<0.5	170	30	2.0	54	ND<0.5	ND<0.5	ND<0.5	ND<0.5	170	18	ND<0.5	12	4.6	34	2.1	ND<0.5	ND<10	ND<0.5	25	324	ND<0.5
	9/23/2014	38.74	9.26	ND	29.48	160	840 HD	--	ND<0.5	ND<0.5	ND<0.5	35	6.9	0.63	22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	24	4.8	ND<0.5	2.2	1.4	9.8	0.64	ND<0.5	ND<10	ND<0.5	17	71	ND<0.5
	12/19/2014	38.74	8.89	ND	29.85	660	ND<520	--	ND<0.5	ND<0.5	ND<0.5	72 E	16	0.96	36	ND<0.5	ND<0.5	ND<0.5	ND<0.5	69 E	8.2	ND<0.5	7.7	2.4	17	1.0	ND<0.5	ND<10	ND<0.5	18	134 E	ND<0.5
	3/20/2015	38.74	8.80	ND	29.94	380	620 HD	--	ND<0.50	ND<0.50	ND<0.50	29	6.3	ND<0.50	8.5	ND<0.50	ND<0.50	ND<0.50	ND<0.50	20	4.8	ND<0.50	3.4	1.0	8.7	0.53	ND<0.50	ND<10	ND<0.50	ND<0.50	42	ND<0.50
	6/10/2015	38.74	9.07	ND	29.67	780	ND<510	--	ND<1.0	ND<1.0	ND<1.0	92	15	1.0	21	ND<1.0	ND<1.0	ND<1.0	ND<1.0	76	10	ND<1.0	5.3	2.3	17	1.3	ND<1.0	ND<20	ND<1.0	4.2	143	ND<1.0
	9/7/2016	38.74	9.63	ND	29.11	770	560 HD	--	ND<2.0	ND<2.0	ND<2.0	95	16	ND<2.0	19	ND<2.0	ND<2.0	ND<2.0	ND<2.0	76	8.7	ND<2.0	6.5	2.7	17	ND<2.0	ND<2.0	ND<40	ND<2.0	3.9	142	ND<2.0
	7/31/2018	38.74	8.31	ND	30.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.74	7.12	ND	31.62	12,000	1,500	290	ND<5.0	ND<5.0	ND<5.0	380	19	5.6	540	ND<5.0	ND<5.0	ND<5.0	ND<5.0	450	30	ND<5.0	76	ND<5.0	64	ND<5.0	ND<5.0	ND<5.0	ND<5.0	440	400	ND<5.0
	6/11/2019**	38.74	7.12	ND	31.62	3,500	1,900	430	ND<5.0	ND<5.0	ND<5.0	330	19	8.2	440	ND<5.0	ND<5.0	ND<5.0	ND<5.0	440	32	ND<5.0	85	ND<5.0	58	ND<5.0	ND<5.0	ND<5.0	ND<5.0	320	390	ND<5.0
MMW-5	6/16/1997	NA	NA	NA	NA	ND	--	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/22/1998	NA	NA	NA	NA	ND	ND	--	--	--	--	--	--	--	ND	--	--	--	--	1.3	--	ND	--	--	--	--	--	--	--	ND	ND	--
	7/23/1998	NA	NA	NA	NA	ND	ND	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	ND	ND	--
	1/20/1999	NA	NA	NA	NA	--	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	6/28/1999	NA	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/10/2000	NA	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/22/2001	NA	NA	NA	NA	16,000	ND<500	--	--	--	--	--	--	--	2.2	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	11/4/2004	38.65	7.13	ND	31.52	ND<50	ND<500	--	--	--	--	--	--	--	0.54	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	5/23/2005	38.65	6.72	ND	31.93	ND<50	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.65	7.01	ND	31.64	69	ND<500	--	--	--	--	--	--	--	1.3	--	--	ND<2.0	ND<2.0	7.3	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	38.65	7.80	Sheen	30.85	56	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/28/2007	38.65	7.60	Sheen	31.05	ND<50	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<20	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/29-30/2007	38.65	8.40	ND	30.25	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	5.8
	9/27/2007	38.65	8.45	ND	30.20	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/27/2007	38.65	8.27	ND	30.38	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	38.65	7.82	ND	30.83	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	5/14-15/2008	38.65	8.12	ND	30.53	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	7/28/2008	38.65	8.15	ND	30.50	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/11/2008	38.65	8.34	ND	30.31	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	2/19/2009	38.65	7.80	ND	30.85	51	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	1.7	ND<0.5	ND<1.0	ND<0.5	ND<0.5	0.53	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/26/2009	38.65	8.44	ND	30.21	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/29-30/2009	38.65	8.76	ND	29.89	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/21/2009	38.65	8.78	ND	29.87	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/30/2010	38.65	6.96	ND	31.69	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/30/2010	38.65	8.01	ND	30.64	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/22/2010	38.65	8.15	ND	30.50	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	38.65	6.74	ND	31.91	160	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	0.71	ND<0.5	33	ND<1.0	ND<0.5	ND<1.0	ND<1.0	0.93	0.80	ND<1.0	ND<1.0	0.59	0.62	ND<0.5	ND<1.0	ND<10	ND<0.5	0.69	ND<2.0	ND<0.5
	3/14/2011	38.65	7.52	ND	31.13	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/8/2011	38.65	7.52	ND	31.13	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/26-27/2011	38.65	7.71	ND	30.94	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/14/2011	38.65	7.56	ND	31.09	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/1/2012	38.65	7.97	ND	30.68	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	38.65	8.04	ND	30.61	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	0.51	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	0.91	ND<0.5
	9/6/2012	38.65	8.44	ND	30.21	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19/2012	38.65	8.26	ND	30.39	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2013	38.65	8.36	ND	30.29	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/28/2013	38.65	8.47	ND	30.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.65	8.63	ND	30.02	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.65	8.74	ND	29.91	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5(2)**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
MMW-5	3/6/2014	38.65	8.55	ND	30.10	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	6/12/2014	38.65	8.87	ND	29.78	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/23/2014	38.65	9.22	ND	29.43	ND<50	ND<500	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/19/2014	38.65	8.83	ND	29.82	ND<50	ND<520	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	3/20/2015	38.65	8.78	ND	29.87	ND<50	ND<500	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	6/10/2015	38.65	9.06	ND	29.59	ND<50	ND<500	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	9/7/2016	38.65	9.54	ND	29.11	ND<50	ND<500	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/31/2018	38.65	8.25	ND	30.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.65	7.12	ND	31.53	**660**	**650**	**220**	ND<0.50	ND<0.50	ND<0.50	**38**	ND<0.50	ND<0.50	**75**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**94**	**15**	ND<0.50	**44**	**3.6**	**36**	**3.5**	**2.6**	ND<10	ND<0.50	**2.6**	**14.9**	ND<0.50
	6/11/2019**	38.65	7.12	ND	31.53	**2,000**	**930**	**550**	ND<0.50	ND<0.50	ND<0.50	**1.1**	ND<0.50	ND<0.50	**11**	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**3.7**	**0.94**	ND<0.50	**6.5**	**3.6**	**0.50**	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	**1.48**	ND<0.50
MMW-6	6/16/1997	38.74	NM	Sheen	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/22/1998	38.74	NM	Sheen	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/1998	38.74	NM	0.05	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/1998	NA	NA	NA	NA	ND<500	ND	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	6/28/1999	NA	NA	NA	NA	ND<0.5	**530**	--	--	--	--	--	--	--	**11**	--	--	--	--	**1**	--	ND<20	--	--	--	--	--	--	--	ND	**2**	--
	1/10/2000	38.74	NM	0.01	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/2000	38.74	NM	0.01	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/31/2000	NA	NA	NA	NA	**500**	**2,600**	--	--	--	--	--	--	--	**19**	--	--	--	--	**4.9**	--	ND	--	--	--	--	--	--	--	ND	ND	--
	10/31/2000	38.74	NM	0.70	NM	NA	**14**	--	--	--	--	--	--	--	**23**	--	--	--	--	**5**	--	ND	--	--	--	--	--	--	--	**7**	**54**	--
	1/10/2002	NA	NA	NA	NA	**30**	**17,000**	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	11/4/2004	38.74	7.11	0.01	31.64	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2005	38.74	6.67	0.02	32.09	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2006	38.74	7.69	0.05	31.09	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/26/2006	38.74	7.69	0.07	31.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.74	7.67	0.05	31.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.74	7.82	0.07	30.97	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/27/2007	38.74	8.09	0.07	30.70	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	38.74	7.98	NM*	30.76	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2008	38.74	7.64	0.04	31.13	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.74	7.46	0.085	31.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.71	7.58	0.020	31.15	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/11/2008	38.71	8.05	Sheen	30.66	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.71	7.77	Sheen	30.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2009	38.71	7.74	Sheen	30.97	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.71	8.79	0.01	29.92	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.71	8.41	Sheen	30.30	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.71	8.06	Sheen	30.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.71	8.01	Sheen	30.70	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.71	8.09	Sheen	30.62	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.71	7.68	Sheen	31.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.71	6.55	Sheen	32.16	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.71	6.42	Sheen	32.29	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.71	6.35	Sheen	32.36	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.71	6.51	Sheen	32.20	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.71	6.75	Sheen	31.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.71	7.58	Sheen	31.13	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.71	7.57	Sheen	31.14	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.71	8.29	SR	30.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.71	8.61	0.01	30.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.71	8.11	SR	30.60	**46,000 HD**	**41,000 HD**	--	ND<2.0	ND<2.0	ND<2.0	**61**	ND<2.0	**12**	**27**	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**12**	**5.7**	ND<2.0	**82**	**14**	**11**	**12**	ND<2.0	ND<40	ND<2.0	ND<2.0	**15**	ND<2.0
	9/11/2013	38.71	8.84	0.02	29.89	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.71	8.45	Sheen	30.26	**3,200 HD**	**16,000 HD**	--	ND<5.0	ND<5.0	ND<5.0	**17**	ND<5.0	ND<5.0	**30**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**5.8**	ND<5.0	ND<5.0	**17**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	**8.1**	ND<5.0
	3/6/2014	38.71	8.41	Sheen	30.30	**1600 HD**	**120,000 H**	--	D ND<5.0	ND<5.0	ND<5.0	**12**	ND<5.0	ND<5.0	**17**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<10	ND<5.0	**5.6**	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	6/12/2014	38.71	8.59	Sheen	30.12	**3,500 HD**	**13,000 HD**	--	ND<10	ND<10	ND<10	**12**	ND<10	ND<10	**21**	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<200	ND<10	ND<10	ND<10	ND<10
	9/23/2014	38.71	9.02	Sheen	29.69	**770 HD**	**8,100 HD**	--	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	**19**	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<200	ND<10	ND<10	ND<10	ND<10
	12/19/2014	38.71	8.78	Sheen	29.93	**1,500 HD**	**6,000 HD**	--	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	**24**	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<200	ND<10	ND<10	ND<10	ND<10
	3/20/2015	38.71	8.61	Sheen	30.10	**11,000 HD**	**36,000 HD**	--	ND<10	ND<10	ND<10	**11**	ND<10	ND<10	**19**	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<20	ND<10	ND<10	ND<10	ND<10	ND<200	ND<10	ND<10	ND<10	ND<10
	6/10/2015	38.71	9.39	Sheen	29.32	**7,700 HD**	**150,000 H**	--	**D** ND<1.0	ND<1.0	ND<1.0	**14**	ND<1.0	**3.9**	**19**	ND<1.0	**1.2**	ND<1.0	ND<1.0	**2.1**	**3.9**	ND<1.0	**19**	**5.4**	**7.2**	**4.6**	ND<1.0	ND<20	ND<1.0	ND<1.0	**2.7**	ND<1.0
	9/7/2016	38.71	9.29	Sheen	29.42	**8,000 HD**	**23,000 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**25**	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**4.7**	ND<2.0	ND<4.0	**3.6**	**8.5**	**4.4**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.71	8.28	Sheen	30.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.71	6.79	ND	31.92	**2,100**	**19,000**	**14,000**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
MMW-7	6/16/1997	38.43	NM	2.56	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/22/1998	38.43	NM	2.84	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/1998	38.43	NM	0.18	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/20/1999	38.43	NM	0.26	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/28/1999	38.43	NM	0.14	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/10/2000	38.43	NM	0.54	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/2000	38.43	NM	0.50	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/7/2000	39.64	NM	ND	NM	ND<500	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/22/2001	38.43	NM	0.55	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/10/2002	38.43	NM	0.36	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/4/2004	38.43	7.55	0.56	31.30	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2005	38.43	5.44	0.01	33.00	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2006	38.43	6.72	0.05	31.75	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/26/2006	38.43	7.01	0.12	31.51	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.43	6.70	0.11	31.81	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.43	7.80	0.01	30.64	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/27/2007	38.43	8.10	0.10	30.41	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	38.43	7.89	0.09	30.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2008	38.43	7.36	0.04	31.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.43	7.54	0.05	30.93	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5[(2)]**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
MMW-7	7/28/2008	38.43	7.78	0.08	30.71	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/11/2008	38.43	8.11	0.03	30.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.43	7.68	0.03	30.77	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2009	38.43	7.90	Sheen	30.53	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.43	8.31	0.10	30.12	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.43	8.54	0.07	29.89	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.43	6.88	0.18	31.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.43	6.55	Sheen	31.88	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.43	6.85	Sheen	31.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.43	6.95	0.08	31.48	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.43	6.52	Sheen	31.91	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.43	6.60	0.06	31.88	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.43	6.23	0.10	32.28	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.43	6.66	0.04	31.80	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.43	6.70	0.23	31.90	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.43	7.02	0.32	31.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.43	7.55	Sheen	30.88	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.43	7.74	SE	30.69	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.43	7.78	Sheen	30.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.43	7.80	Sheen	30.63	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.43	7.99	ND	30.44	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.43	8.34	Sheen	30.09	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.43	7.34	Sheen	31.09	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.43	8.42	ND	30.01	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.43	8.82	sheen	29.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.43	8.21	0.01	30.22	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.43	8.01	0.03	30.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.43	8.30	0.15	30.13	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/8/2016	38.43	9.58	0.79	28.85	**840 HD**	**27,000 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**2.1**	ND<2.0	**12**	ND<2.0	**3.5**	**2.5**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.43	10.38	2.93	28.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.43	6.87	0.61	31.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MMW-8	6/16/1997	39.64	NM	ND	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/22/1998	39.64	NM	ND	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/23/1998	39.64	NM	ND	NM	ND<500	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/20/1999	39.64	NM	ND	NM	--	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	6/28/1999	39.64	NM	ND	NM	--	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	1/10/2000	39.64	NM	ND	NM	ND<500	NA	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	6/29/2007	39.64	7.71	Sheen	31.93	NS	ND<0.5	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND<20	--	--	--	--	--	--	--	ND	ND	--
	10/31/2000	39.64	NM	ND	NM	ND<500	ND<500	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	6/22/2001	39.64	NM	ND	NM	ND	ND	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	1/10/2002	39.64	NM	ND	NM	ND	ND	--	--	--	--	--	--	--	ND	--	--	--	--	ND	--	ND	--	--	--	--	--	--	--	ND	ND	--
	11/4/2004	39.64	7.79	ND	31.85	ND<50	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	5/23/2005	39.64	6.68	ND	32.96	**80**	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	39.64	7.06	ND	32.58	ND<50	**3,800**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	39.64	8.26	Sheen	31.38	**59**	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/28/2007	39.64	7.90	Sheen	31.74	ND<50	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5	ND<1.0	**5.0**	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<20	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/29-30/2007	39.64	8.97	ND	30.67	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/27/2007	39.64	9.20	ND	30.44	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/27/2007	39.64	9.11	ND	30.53	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	39.64	8.48	ND	31.16	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	5/14-15/2008	39.64	8.63	ND	31.01	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	7/28/2008	39.64	8.75	ND	30.89	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/11/2008	39.64	9.17	ND	30.47	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	2/19/2009	39.64	8.68	ND	30.96	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/26/2009	39.64	9.01	ND	30.63	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/29-30/2009	39.64	9.49	ND	30.15	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/21/2009	39.64	9.55	ND	30.09	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/30/2010	39.64	8.32	ND	31.32	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	**0.68**	**0.78**	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/30/2010	39.64	8.25	ND	31.39	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/22/2010	39.64	8.39	ND	31.25	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	39.64	7.57	ND	32.07	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/14/2011	39.64	7.19	ND	32.45	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/8/2011	39.64	7.12	ND	32.52	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/26/2011	39.64	7.48	ND	32.16	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/14/2011	39.64	7.66	ND	31.98	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/1/2012	39.64	7.76	ND	31.88	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	39.64	8.33	ND	31.31	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/6/2012	39.64	8.73	ND	30.91	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19/2012	39.64	9.00	ND	30.64	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2013	39.64	9.96	ND	29.68	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**0.68**	ND<0.5
	6/28/2013	39.64	9.03	ND	30.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	39.64	9.37	ND	30.27	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	39.64	9.61	ND	30.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	39.64	9.42	ND	30.22	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	39.64	9.61	ND	30.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	39.64	10.02	ND	29.62	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	39.64	9.74	ND	29.90	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	39.64	9.58	ND	30.06	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	39.64	9.80	ND	29.84	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	39.64	10.37	ND	29.27	ND<50	ND<500	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	7/31/2018	39.64	9.17	ND	30.47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5[(2)]**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
MMW-8	6/11/2019	39.64	7.79	Sheen	31.85	**1,300**	**2,300**	**2,400**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**16**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
MMW-9A	11/4/2004	38.57	8.48	0.02	30.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/23/2005	38.57	5.29	ND	33.28	**55**	**1,200**	--	--	--	--	--	--	--	**1.3**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.57	5.78	ND	32.79	ND<50	**3,200**	--	--	--	--	--	--	--	**2.1**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	38.57	6.70	Sheen	31.87	**81**	**2,300**	--	--	--	--	--	--	--	**0.83**	--	--	ND<2.0	ND<2.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/28/2007	38.57	5.75	Sheen	32.82	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29-30/2007	38.57	7.41	ND	31.16	ND<50	**3,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	**2.2**	**3.5**	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	**2.9**	ND<1.0	ND<0.5	**2.9**	**1.8**	**1.7**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/27/2007	38.57	7.61	ND	30.96	ND<50	**8,900**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/27/2007	38.57	6.91	ND	31.66	ND<50	**3,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	38.57	5.71	ND	32.86	ND<50	**2,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	5/14-15/2008	38.57	7.01	ND	31.56	ND<50	**3,400**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	7/28/2008	38.57	7.20	ND	31.37	ND<50	**2,800**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/11/2008	38.57	7.66	ND	30.91	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	2/19/2009	38.57	5.21	ND	33.36	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/26/2009	38.57	7.36	Sheen	31.21	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29-30/2009	38.57	7.92	ND	30.65	ND<50	**1,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	**1.4**	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/21/2009	38.57	11.99	ND	26.58	ND<50	**1,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/30/2010	38.57	6.61	ND	31.96	ND<50	**1,400**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/30/2010	38.57	6.84	ND	31.73	ND<50	**1,300**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/23/2010	38.57	6.86	ND	31.71	ND<50	**1,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	38.57	4.96	ND	33.61	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**100**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/14/2011	38.57	5.77	ND	32.80	ND<50	ND<500	--	--	--	--	--	--	--	ND<0.5	--	--	ND<1.0	ND<1.0	ND<0.5	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.5	ND<2.0	--
	6/8/2011	38.57	5.75	ND	32.82	ND<50	**940**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/26-27/2011	38.57	6.15	ND	32.42	ND<50	**1,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/14/2011	38.57	5.70	ND	32.87	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/1-2/2012	38.57	6.33	ND	32.24	ND<50	**2,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	38.57	6.68	ND	31.89	ND<50	**1,300**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/6/2012	38.57	6.99	ND	31.58	ND<50	**4,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19-20/2012	38.57	6.79	ND	31.78	**81**	**2,200 HD**	--	ND<0.5	ND<1.0	ND<0.5	**3.9**	**1.3**	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	**3.4**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	**0.72**	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**8.9**	ND<0.5
	3/5/2013	38.57	7.11	ND	31.46	ND<50	**1,700 HD**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**0.63**	ND<0.5
	6/28/2013	38.57	7.35	ND	31.22	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.57	7.65	ND	30.92	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.57	7.95	Sheen	30.62	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.57	7.24	0.01	31.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.57	7.88	ND	30.69	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.57	8.30	ND	30.27	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.57	7.60	ND	30.97	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.57	7.90	ND	30.67	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.57	8.11	ND	30.46	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	38.57	8.86	ND	29.71	**160 HD**	**1,700 HD**	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/31/2018	38.57	7.78	ND	30.79	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.57	6.20	ND	32.37	**900**	**3,600**	**3,500**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
MMW-9B	3/14/2011	38.30	5.91	sheen	32.39	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.30	5.88	Sheen	32.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.30	6.29	0.03	32.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.30	6.29	0.02	32.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.30	6.53	0.02	31.79	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.30	6.74	0.02	31.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.30	7.13	0.03	31.19	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.30	7.32	Sheen	30.98	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.30	7.22	ND	31.08	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.30	7.39	Sheen	30.91	**6,900 HD**	**19,000 HD**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**15**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**11**	**2.9**	**5.7**	**68**	**1.3**	**4.1**	**1.7**	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/11/2013	38.30	7.71	0.02	30.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.30	7.98	0.02	30.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.30	7.75	Sheen	30.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.30	7.91	0.01	30.40	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.30	8.35	0.06	30.00	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.30	8.82	0.01	29.48	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.30	8.22	0.33	30.08	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.30	8.34	0.24	29.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/8/2016	38.30	10.44	1.81	27.86	**1,000 HD**	**16,000 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**3.0**	**5.8**	**14**	**2.7**	**5.9**	**3.1**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.30	9.24	1.53	29.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.30	9.01	2.72	29.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-1	12/5/1994	49.25	7.20	NA	42.05	<50	--	--	--	--	--	--	--	--	**0.94**	--	--	--	--	**0.4**	--	--	--	--	--	--	--	--	--	**2.8**	**2.4**	--
	3/31/1995	49.25	5.95	NA	43.30	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/28/1995	49.25	6.03	NA	43.22	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	8/17/1995	49.25	6.22	NA	43.03	<50	--	--	--	--	--	--	--	--	**0.4**	--	--	--	--	**0.6**	--	--	--	--	--	--	--	--	--	**1.4**	**2.1**	--
	11/28/1995	49.25	6.70	NA	42.55	<50	--	--	--	--	--	--		--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/26/1996	49.25	6.50	NA	42.75	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/5/1996	49.25	6.40	NA	42.85	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	8/19/1996	49.25	6.58	NA	42.67	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/26/1996	49.25	6.83	NA	42.42	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/18/1997	49.25	6.12	NA	43.13	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	0.4	<0.6	--
	5/5/1997	49.25	6.30	NA	42.95	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	**0.3**	**1.3**	--
	9/24/1997	49.25	6.68	NA	42.57	<50	--	--	--	--	--	--	--	--	**0.5**	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	**0.4**	**1.3**	--
	12/18/1997	49.25	6.60	NA	42.65	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/30/1998	49.25	5.33	NA	43.92	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/1/1998	49.25	5.50	NA	43.75	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/14/1998	49.25	6.08	NA	43.17	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**2.2**	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/14/1998	49.25	6.43	NA	42.82	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/24/1999	49.25	6.45	NA	42.80	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5[2]**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
HMW-1	6/14/1999	49.25	6.60	NA	42.65	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/13/1999	49.25	6.86	NA	42.39	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/29/1999	49.25	7.26	NA	41.99	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	**0.4**	<0.6	--
	3/14/2000	49.25	6.79	NA	42.46	<50	<500	--	--	--	--	--	--	--	**0.7**	--	--	--	--	**0.7**	--	**5.2**	--	--	--	--	--	--	--	**1.0**	**3.1**	--
HMW-2*	12/5/1994	49.15	6.85	NA	42.30	**57**	--	--	--	--	--	--	--	--	**1.0**	--	--	--	--	**0.8**	--	--	--	--	--	--	--	--	--	**2.1**	**2.3**	--
	3/31/1995	49.15	5.70	NA	43.45	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/28/1995	49.15	5.73	NA	43.42	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	8/17/1995	49.15	5.90	NA	43.25	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/28/1995	49.15	6.32	NA	42.83	<50	--	--	--	--	--	--		--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/26/1996	49.15	6.14	NA	43.01	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/5/1996	49.15	6.00	NA	43.15	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	8/19/1996	49.15	6.24	NA	42.91	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/26/1996	49.15	6.43	NA	42.72	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/18/1997	49.15	5.78	NA	43.37	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	5/5/1997	49.15	5.89	NA	43.26	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/24/1997	49.15	6.18	NA	42.97	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**3.4**	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/18/1997	49.15	6.20	NA	42.95	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**2.0**	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/30/1998	49.15	5.09	NA	44.06	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/1/1998	49.15	5.02	NA	44.13	<50	**500**	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/14/1998	49.15	5.50	NA	43.65	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/14/1998	49.15	5.93	NA	43.22	**66**	<500	--	--	--	--	--	--	--	**1.3**	--	--	--	--	<0.3	--	**1.4**	--	--	--	--	--	--	--	<0.3	**0.7**	--
	3/24/1999	49.15	6.02	NA	43.13	**60**	<500	--	--	--	--	--	--	--	**0.7**	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/14/1999	49.15	6.15	NA	43.00	**68**	<500	--	--	--	--	--	--	--	**0.7**	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/13/1999	49.15	6.36	NA	42.79	<50	<500	--	--	--	--	--	--	--	**0.9**	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/29/1999	49.15	6.75	NA	42.40	<50	<500	--	--	--	--	--	--	--	**0.7**	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/14/2000	49.15	6.38	NA	42.77	<50	<500	--	--	--	--	--	--	--	**0.6**	--	--	--	--	**0.4**	--	<1.0	--	--	--	--	--	--	--	**0.5**	**1.6**	--
	12/27/2007	NA	6.93	ND	NC	ND<50	**2,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	NA	6.27	ND	NC	ND<50	**1,300**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	5/14-15/2008	NA	6.45	ND	NC	ND<50	**3,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	7/28/2008	NA	6.70	ND	NC	ND<50	**3,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.0**	**3.2**	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/11/2008	NA	7.06	ND	NC	**110**	**3,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	2/19/2009	NA	6.60	ND	NC	ND<50	**1,400**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/26/2009	NA	6.73	ND	NC	ND<50	**2,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/29-30/2009	NA	7.21	ND	NC	ND<50	**700**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/21/2009	NA	7.78	ND	NC	ND<50	**3,800**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/30/2010	NA	6.12	ND	NC	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/30/2010	NA	6.15	ND	NC	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.4**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/23/2010	NA	6.42	ND	NC	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.7**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	NA	5.87	ND	NC	ND<50	**1,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	**0.64**	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	**0.63**	ND<0.5	**1.4**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**2.1**	ND<0.5
	3/14/2011	NA	5.45	ND	NC	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	**0.64**	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/8/2011	37.75	5.65	ND	32.10	**85**	**2,800**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.9**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**0.66**	ND<0.5
	9/26-27/2011	37.75	5.89	ND	31.86	**73**	**2,800**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.8**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/14/2011	37.75	6.52	ND	31.23	**87 HD**	**3,600**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.3**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**0.62**	ND<0.5
	3/1/2012	37.75	6.06	ND	31.69	**110 HD**	**3,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.6**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	**10**	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	37.75	6.24	ND	31.51	ND<50	**5,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**0.54**	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.3**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/6/2012	37.75	6.53	ND	31.22	ND<50	**4,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	**0.51**	**1.4**	ND<1.0	ND<0.5	ND<0.5	**0.52**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19/2012	37.75	6.69	ND	31.06	ND<50	**4,400 HD**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.6**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2013	37.75	6.60	ND	31.15	**85 HD**	**2,800 HD**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.3**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/28/2013	37.75	6.99	ND	30.76	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	37.75	7.03	ND	30.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	37.75	7.25	ND	30.50	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	37.75	7.11	ND	30.64	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	37.75	7.24	ND	30.51	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	37.75	7.57	Sheen	30.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	37.75	7.42	ND	30.33	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	37.75	7.21	ND	30.54	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	37.75	7.48	ND	30.27	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	37.75	8.12	ND	29.63	**350 HD**	**900 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**1.7**	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	11/30/2018		Well was abandoned in preparation of redevelopment																													
HMW-3	12/5/1994	50.00	9.00	1.70	42.28	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/31/1995	50.00	7.37	0.92	43.32	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/1995	50.00	7.57	1.05	43.22	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/17/1995	50.00	8.33	1.85	43.07	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/28/1995	50.00	7.97	0.90	42.80	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1996	50.00	8.33	1.39	42.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/5/1996	50.00	9.10	2.55	42.83	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/19/1996	50.00	9.80	3.10	42.54	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/26/1996	50.00	9.80	2.78	42.30	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/1997	50.00	9.00	2.62	42.98	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/1997	50.00	9.23	2.85	42.92	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/1997	50.00	10.05	3.41	42.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/1997	50.00	9.75	3.00	42.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	50.00	7.60	1.77	43.74	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	50.00	6.45	0.53	43.95	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	50.00	7.30	1.10	43.53	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	50.00	7.30	0.52	43.09	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/24/1999	50.00	7.40	0.57	43.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	50.00	9.03	2.83	43.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/13/1999	50.00	9.34	2.44	42.50	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/1999	50.00	9.78	2.51	42.12	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2000	50.00	9.23	2.42	42.60	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5[2]**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
HMW-3A	3/14/2011	38.40	6.02	Sheen	32.38	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.40	5.98	Sheen	32.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.40	6.39	0.04	32.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.40	6.41	0.04	32.02	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.40	6.66	0.04	31.77	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.40	6.92	0.06	31.53	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.40	7.26	0.04	31.17	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.40	7.37	0.01	31.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.40	7.36	ND	31.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.40	7.51	0.01	30.90	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.40	7.81	0.01	30.60	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.40	8.08	Sheen	30.32	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.40	7.91	0.01	30.50	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.40	8.21	0.21	30.35	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.40	8.70	0.32	29.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.40	8.50	0.27	29.90	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.40	8.63	0.64	29.77	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.40	8.62	0.40	29.78	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/8/2016	38.40	10.42	1.66	27.98	**360 HD**	**4,700 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**2.0**	**3.3**	**14**	ND<2.0	**3.5**	**2.2**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.40	9.24	1.53	29.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.40	8.81	1.11	29.59	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-4	8/17/1995	49.77	7.50	1.08	43.09	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/28/1995	49.77	8.70	1.95	42.74	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1996	49.77	9.15	2.10	42.21	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/5/1996	49.77	9.65	3.35	42.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/19/1996	49.77	10.12	3.67	42.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/26/1996	49.77	10.05	3.30	42.21	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/1997	49.77	9.57	3.50	42.84	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/1997	49.77	9.77	3.65	42.76	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/1997	49.77	10.20	3.78	42.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/1997	49.77	10.02	3.54	42.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	49.77	7.26	1.63	43.74	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	49.77	6.12	0.37	43.93	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	49.77	7.12	0.82	43.27	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	49.77	7.48	0.93	42.99	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/24/1999	49.77	7.38	0.74	42.95	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	49.77	8.18	1.95	43.06	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/13/1999	49.77	7.74	0.69	42.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/1999	49.77	8.10	0.62	42.14	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2000	49.77	7.85	0.80	42.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/4/2004	38.05	6.59	ND	31.46	NA	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/23/2005	38.02	5.29	ND	32.73	**330**	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/23/2005	38.05	5.29	0.01	32.77	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2006	38.05	NM	NM	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/26/2006	38.05	NM	NM	NM	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.05	NM	NM	NM	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.05	7.45	SHEEN	30.60	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/27/2007	38.05	8.06	0.46	30.34	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	38.05	NM	NM	NM	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2008	38.05	7.50	0.86	31.20	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.05	7.80	0.94	30.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.05	7.40	0.25	30.84	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/11/2008	38.05	7.92	0.08	30.19	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.05	6.76	0.08	31.35	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2009	38.05	7.58	0.04	30.50	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.05	7.91	0.05	30.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.05	8.46	0.60	30.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.05	8.01	Sheen	30.49	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.05	6.91	Sheen	31.14	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.05	7.38	0.85	30.67	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.05	6.65	0.48	31.40	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.05	6.59	0.39	31.46	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.05	6.72	0.42	31.65	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.05	6.43	0.18	31.76	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.05	6.20	0.20	32.00	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.05	6.60	0.40	31.75	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.05	6.79	0.38	31.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.05	7.40	0.01	30.66	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.05	7.01	SE	31.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.05	7.46	Sheen	30.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.05	7.49	SE	30.56	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.05	7.81	Sheen	30.24	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.05	8.10	0.01	29.95	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014		could not access due to car parked on top of location																													
	6/12/2014	38.05	8.11	Sheen	29.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014		could not access due to car parked on top of location					--																								
	12/19/2014		could not access due to car parked on top of location					--																								
	3/20/2015		could not access due to car parked on top of location					--																								
	6/10/2015	38.05	7.87	0.06	30.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/8/2016	38.05	8.97	0.55	29.08	**1,900 HD**	**11,000 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**4.2**	**29**	ND<2.0	**2.7**	ND<2.0	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.05	7.60	0.22	30.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5[2]**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
HMW-4	6/11/2019	38.05	6.08	0.12	31.97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-5	8/17/1995	50.00	6.69	ND	43.31	**280**	--	--	--	--	--	--	--	--	**0.47**	--	--	--	--	**1.4**	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/28/1995	50.00	7.18	ND	42.82	**110**	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	**0.4**	**0.6**	--
	2/26/1996	50.00	7.05	0.01	42.95	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/5/1996	50.00	6.82	0.01	43.18	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/19/1996	50.00	7.03	0.01	42.97	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/26/1996	50.00	7.30	0.01	42.70	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/1997	50.00	6.66	0.01	43.34	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/1997	50.00	6.67	0.01	43.33	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/1997	50.00	7.00	0.01	43.00	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/1997	50.00	7.06	0.01	42.94	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	50.00	6.00	0.01	44.00	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	50.00	5.87	0.01	44.13	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	50.00	6.30	0.01	43.70	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	50.00	6.78	ND	43.22	**645**	**3,460**	--	--	--	--	--	--	--	**8.9**	--	--	--	--	**13.8**	--	**1.4**	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/24/1999	50.00	6.82	0.01	43.18	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	50.00	6.93	0.01	43.07	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/13/1999	50.00	7.15	0.01	42.85	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/1999	50.00	7.52	0.01	42.48	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2000	50.00	7.21	0.01	42.79	LPH	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/4/2004	38.65	6.90	ND	31.75	**280**	**9,100**	--	--	--	--	--	--	--	**12**	--	--	ND<4.0	ND<4.0	**17**	--	ND<2.0	--	--	--	--	ND<4.0	ND<40	--	ND<1.0	ND<4.0	--
	5/23/2005	38.65	5.55	ND	33.10	**2,200**	**23,000**	--	--	--	--	--	--	--	**11**	--	--	ND<2.0	ND<2.0	**21**	--	**3.8**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.65	6.69	ND	31.96	**480**	**43,000**	--	--	--	--	--	--	--	ND<50	--	--	ND<200	ND<200	ND<50	--	ND<100	--	--	--	--	ND<200	ND<2000	--	ND<50	ND<200	--
	9/26/2006	38.65	6.93	0.01	31.73	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/28/2007	38.65	6.70	0.01	31.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/29/2007	38.65	7.70	0.01	30.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/27/2007	38.65	NM	NM	NM	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/27/2007	38.65	7.74	NM*	30.91	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2008	38.65	7.065	0.005	31.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2008	38.65	7.20	Sheen	31.45	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.65	7.36	ND	31.29	**580**	**13,000**	--	--	--	--	--	--	--	**2.5**	--	--	ND<1.0	ND<1.0	**4.2**	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.5	ND>2.0	--
	12/11/2008	38.65	7.86	ND	30.79	**360**	**3,100**	--	--	--	--	--	--	--	ND<10	--	--	ND<20	ND<20	ND<10	--	ND<20	--	--	--	--	ND<20	ND<200	--	ND<10	ND<40	--
	2/19/2009	38.65	7.31	ND	31.34	**350**	**3,600**	--	--	--	--	--	--	--	ND<0.50	--	--	ND<1.0	ND<1.0	ND<0.50	--	ND<1.0	--	--	--	--	ND<1.0	ND<10	--	ND<0.50	ND<2.0	--
	6/26/2009	38.65	7.54	0.02	31.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.65	8.04	Sheen	30.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.65	8.04	Sheen	30.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.65	6.91	Sheen	31.74	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.65	6.89	Sheen	31.76	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.65	7.10	Sheen	31.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.65	6.55	Sheen	32.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.65	6.10	Sheen	32.55	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.65	5.95	Sheen	32.70	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.65	6.41	Sheen	32.24	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.65	6.49	0.01	32.17	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.65	6.71	Sheen	31.94	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.65	6.94	Sheen	31.71	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.65	7.41	Sheen	31.24	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.65	7.61	SR	31.04	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.65	7.42	Sheen	31.23	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.65	7.54	Sheen	31.11	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.65	7.85	0.01	30.81	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.65	8.13	Sheen	30.52	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.65	8.28	Sheen	30.37	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.65	8.24	0.01	30.42	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.65	8.96	0.04	29.72	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.65	8.76	Sheen	29.89	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.65	8.51	0.20	30.14	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.65	8.87	0.15	29.78	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/8/2016	38.65	10.67	1.84	27.98	**830 HD**	**8,500 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**2.4**	ND<2.0	**31**	**3.4**	ND<2.0	**2.1**	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	38.65	9.48	1.66	29.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.65	7.54	1.09	31.11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-6	6/5/1996	49.85	7.46	0.74	42.95	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/19/1996	49.85	8.67	1.87	42.59	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/26/1996	49.85	9.62	2.72	42.28	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/1997	49.85	9.06	2.87	42.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/1997	49.85	9.28	3.00	42.84	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/1997	49.85	9.90	3.51	42.60	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/1997	49.85	10.08	3.55	42.45	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	49.85	8.50	3.08	43.68	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	49.85	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	49.85	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	49.85	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/24/1999	49.85	7.14	0.36	42.98	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	49.85	Abandoned			NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-7	8/17/1995	49.38	6.36	ND	43.02	<50	<0.3	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	**0.4**	<0.6	--
	11/28/1995	49.38	6.85	ND	42.53	<50	<0.3	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	--	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/26/1996	49.38	6.68	ND	42.70	**80**	<0.3	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**47.6**	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/5/1996	49.38	6.55	ND	42.83	**560**	**0.4**	--	--	--	--	--	--	--	**0.4**	--	--	--	--	<0.3	--	**510**	--	--	--	--	--	--	--	**0.6**	<0.6	--
	8/19/1996	49.38	6.80	ND	42.58	**900**	**0.6**	--	--	--	--	--	--	--	**0.6**	--	--	--	--	<0.3	--	**730**	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/26/1996	49.38	7.00	ND	42.38	**570**	**0.5**	--	--	--	--	--	--	--	**0.5**	--	--	--	--	<0.3	--	**460**	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/18/1997	49.38	6.30	ND	43.08	**1,900**	**1.7**	--	--	--	--	--	--	--	**1.7**	--	--	--	--	<0.3	--	**1,600**	--	--	--	--	--	--	--	<0.3	<0.6	--

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5(2)**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
HMW-7	5/5/1997	49.38	6.42	ND	42.96	**2,700**	**2.5**	--	--	--	--	--	--	--	**2.5**	--	--	--	--	<0.3	--	**1,300**	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/24/1997	49.38	6.82	ND	42.56	**2,500**	**2.8**	--	--	--	--	--	--	--	**2.8**	--	--	--	--	**0.9**	--	**1,400**	--	--	--	--	--	--	--	**0.4**	**1.1**	--
	12/18/1997	49.38	6.82	0.02	42.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	49.38	5.57	0.01	43.81	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	49.38	5.64	0.01	43.74	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	49.38	6.20	0.01	43.18	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	49.38	6.54	0.01	42.84	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/24/1999	49.38	6.56	0.01	42.82	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	49.38	6.69	0.01	42.69	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/13/1999	49.38	6.94	0.01	42.45	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/1999	49.38	7.45	0.13	42.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2000	49.38	6.92	0.01	42.46	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/4/2004	38.02	6.41	ND	31.61	**310**	**5,400**	--	--	--	--	--	--	--	**1.3**	--	--	ND<4.0	ND<4.0	ND<1.0	--	**350**	--	--	--	--	ND<4.0	ND<40	--	ND<1.0	ND<4.0	--
	5/23/2005	38.02	5.29	ND	32.73	**330**	**6,000**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	**210**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.02	6.35	ND	31.67	ND<50	**770**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	**91**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	38.02	NM	NM	NM	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/28/2007	38.02	6.30	ND	31.72	**110**	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	**0.54**	**89**	ND<0.5	ND<0.5	**1.4**	**2.2**	ND<2.0	ND<20	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/29-30/2007	38.02	7.26	ND	30.76	**77**	**17,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	**2.5**	**110**	**3.6**	ND<0.5	ND<0.5	**2.0**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/27/2007	38.02	7.51	ND	30.51	**110**	**11,000**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**90**	ND<0.5	ND<0.5	ND<0.5	**0.73**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/27/2007	38.02	7.36	ND	30.66	**75**	**4,700**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**100**	ND<0.5	ND<0.5	ND<0.5	**0.81**	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2008	38.02	6.69	ND	31.33	**95**	**2,700**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**140**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	5/14-15/2008	38.02	6.90	0.050	31.16	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/2008	38.02	7.05	ND	30.97	ND<50	**5,600**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**140**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND>1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/11/2008	38.02	7.46	Sheen	30.56	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/19/2009	38.02	6.89	Sheen	31.13	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2009	38.02	7.15	Sheen	30.87	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/29/2009	38.02	7.65	Sheen	30.37	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/21/2009	38.02	7.69	Sheen	30.33	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/2010	38.02	6.53	Sheen	31.49	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/30/2010	38.02	6.57	Sheen	31.45	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2010	38.02	6.77	Sheen	31.25	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/28/2010	38.02	5.99	Sheen	32.03	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2011	38.02	5.72	ND	32.30	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/8/2011	38.02	5.82	Sheen	32.20	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/26/2011	38.02	6.14	Sheen	31.88	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/2011	38.02	6.10	0.01	31.93	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/1/2012	38.02	6.41	Sheen	31.61	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/25/2012	38.02	6.59	Sheen	31.43	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/6/2012	38.02	7.01	Sheen	31.01	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2012	38.02	7.20	SR	30.82	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/5/2013	38.02	7.15	Sheen	30.87	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2013	38.02	7.24	SR	30.78	**4,100 HD**	**17,000 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**24**	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	9/11/2013	38.02	7.48	SR	30.54	**36,000 HD**	**580 HD**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**32**	**1.2**	ND<0.5	ND<0.5	**1.4**	ND<0.5	**22**	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/18/2013	38.02	8.34	Sheen	29.68	**5,300 HD**	**12,000 HD**	--	ND<5.0	ND<5.0	ND<5.0	**17**	ND<5.0	ND<5.0	ND<0.5	ND<5.0	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<5.0	**22**	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<0.5	ND<10	ND<5.0	ND<0.5	ND<0.5	ND<5.0
	3/6/2014	38.02	7.58	Sheen	30.44	**1,200 HD**	**54,000 HD**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**16**	ND<1.0	ND<0.5	ND<0.5	**0.94**	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	6/12/2014	38.02	7.70	Sheen	30.32	**5,300 HD**	**11,000 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**16**	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	9/23/2014	38.02	8.11	Sheen	29.91	**460 HD**	**7,100 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**25**	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	12/19/2014	38.02	7.91	Sheen	30.11	**240 HD**	**3,500 HD**	--	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**20**	ND<10.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<5.0	ND<5.0
	3/20/2015	38.02	7.70	Sheen	30.32	**2,200 HD**	**11,000 HD**	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**21**	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	6/10/2015	38.02	8.15	ND	29.87	**2,100 HD**	**140,000 H**	--	**D** ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**16**	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	9/7/2016	38.02	8.49	Sheen	29.53	**3,300 HD**	**35,000 HD**	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	**18**	ND<1.0	ND<0.50	ND<0.50	**0.53**	ND<0.50	ND<10	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	7/31/2018	38.02	7.37	Sheen	30.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	38.02	6.00	ND	32.02	**1,500**	**6,600**	**4,500**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
HMW-8	6/5/1996	49.67	6.65	ND	43.02	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	8/19/1996	49.67	6.86	ND	42.81	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/26/1996	49.67	7.06	ND	42.61	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/18/1997	49.67	6.38	ND	43.29	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	5/5/1997	49.67	6.52	ND	43.15	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/24/1997	49.67	6.88	ND	42.79	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**5.5**	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/18/1997	49.67	6.83	ND	42.84	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	**0.9**	<0.6	--
	3/30/1998	49.67	5.62	ND	44.05	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/14/1998	49.67	6.20	ND	43.47	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/14/1998	49.67	6.60	ND	43.07	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/24/1999	49.67	6.70	ND	42.97	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/14/1999	49.67	6.77	ND	42.90	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/13/1999	49.67	7.08	ND	42.59	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/29/1999	49.67	7.45	ND	42.22	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/14/2000	49.67	7.02	ND	42.65	**63**	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/4/2004	38.28	6.80	ND	31.48	ND<50	ND<500	--	--	--	--	--	--	--	**9.5**	--	--	ND<2.0	ND<2.0	ND<0.5	--	**2.1**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	5/23/2005	38.28	5.60	ND	32.68	**65**	**540**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	**5.5**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/15/2006	38.28	6.73	ND	31.55	ND<50	ND<500	--	--	--	--	--	--	--	**12**	--	--	ND<2.0	ND<2.0	ND<0.5	--	**7.5**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	9/26/2006	38.28	6.91	ND	31.37	**59**	**510**	--	--	--	--	--	--	--	ND<0.5	--	--	ND<2.0	ND<2.0	ND<0.5	--	**6.8**	--	--	--	--	ND<2.0	ND<20	--	ND<0.5	ND<2.0	--
	3/28/2007	38.28	6.57	ND	31.71	ND<50	**5.9**	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<2.0	ND<0.5	ND<0.5	**5.8**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<20	**1.1**	ND<0.5	ND<2.0	**6.6**
	6/29-30/2007	38.28	7.48	ND	30.80	ND<50	**1,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.2**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**7.4**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	**0.58**	ND<0.5	ND<2.0	**5.7**
	9/27/2007	38.28	7.70	ND	30.58	ND<50	**1,300**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.3**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**4.8**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	**0.72**	ND<0.5	ND<2.0	**5.2**
	12/27/2007	38.28	7.57	ND	30.71	ND<50	**1,200**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.4**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**3.9**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	**0.66**	ND<0.5	ND<2.0	**4.6**
	3/5/2008	38.28	6.845	ND	31.44	ND<50	**870**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.3**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**4**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	**0.65**	ND<0.5	ND<2.0	**4.6**
	5/14-15/2008	38.28	7.07	ND	31.21	ND<50	**880**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**4.2**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**3.4**
	7/28/2008	38.28	7.28	ND	31.00	ND<50	**760**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**5.4**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**2.1**
	12/11/2008	38.28	7.65	ND	30.63	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**5.6**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**2.8**
	2/19/2009	38.28	7.09	ND	31.19	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**2.3**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**2.2**

Sample Description	Date	Top of Well Casing Elevation (in feet above MSL)	Depth to Water (ft)	Product Thickness (ft)	Groundwater Elevation (ft)	TPH-G	TPH-D	TPH-O	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	4-Isopropyl-toluene	Benzene	cis-1,2-Dichloro-ethene	Chlorobenzene	DIPE	ETBE	Ethylbenzene	Isopropyl-benzene	MTBE	Naphthalene	n-Butyl-benzene	n-propyl benzene	sec-Butyl-benzene	TAME	TBA	Tetrachloro-ethene	Toluene	Total Xylenes	Trichloroethene
California Primary MCL						--	--	--	**5**	**6**	**600**	--	--	--	**1**	**6**	--	--	--	**300**	--	**13/ 5(2)**	--	--	--	--	--	--	**5**	**150**	**1,750**	**5**
HMW-8	6/26/2009	38.28	7.32	ND	30.96	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**0.92**
	9/29-30/2009	38.28	7.77	ND	30.51	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**2.3**
	12/21/2009	38.28	7.18	ND	31.10	ND<50	**750**	--	ND<0.5	ND<1.0	ND<0.5	**0.51**	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**3.3**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**3.3**
	3/30/2010	38.28	6.70	ND	31.58	ND<50	**830**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**1.6**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**1.2**
	6/30/2010	38.28	6.73	ND	31.55	ND<50	**730**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**2.6**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**2.1**
	9/23/2010	38.28	7.00	ND	31.28	ND<50	**600**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.3**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**3.5**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/28/2010	38.28	6.24	ND	32.04	ND<50	**680**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	**0.77**	ND<0.5	**3.7**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	**2.3**	**1.7**
	3/14/2011	38.28	6.02	ND	32.26	ND<50	ND<500	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**3.3**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**0.82**
	6/8/2011	38.28	6.19	ND	32.09	ND<50	**840**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**0.65**	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**6.5**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<10	ND<0.5	ND<0.5	ND<2.0	**0.85**
	9/26-27/2011	38.28	6.46	ND	31.82	ND<50	**740**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**11**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	**0.64**
	12/14/2011	38.28	6.45	ND	31.83	ND<50	**1,300**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0		ND<0.5	**14**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/1/2012	38.28	7.76	ND	30.52	**63 HD**	**2,100**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**22**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/25/2012	38.28	6.8	ND	31.48	ND<50	**1,600**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**20**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	9/6/2012	38.28	7.11	ND	31.17	ND<50	**1,500**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**14**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	12/19/2012	38.28	7.26	ND	31.02	ND<50	**1,500 HD**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**13**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	3/5/2013	38.28	7.23	ND	31.05	ND<50	**1,000 HD**	--	ND<0.5	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	**9.4**	ND<1.0	ND<0.5	ND<0.5	ND<0.5	ND<1.0	ND<1.0	ND<0.5	ND<0.5	ND<2.0	ND<0.5
	6/28/2013	38.28	7.38	ND	30.90	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2013	38.28	7.62	ND	30.66	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/2013	38.28	7.84	ND	30.44	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/6/2014	38.28	7.7	ND	30.58	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/2014	38.28	7.82	ND	30.46	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/23/2014	38.28	8.16	ND	30.12	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/19/2014	38.28	7.97	ND	30.31	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/20/2015	38.28	7.77	ND	30.51	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/10/2015	38.28	8.05	ND	30.23	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/7/2016	38.28	8.65	ND	29.63	ND<50	ND<500	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	**4.9**	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<20	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	11/30/2018		Well was abandoned in preparation of redevelopment																													
HMW-9	8/19/1996	48.85	5.75	ND	43.10	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/26/1996	48.85	5.94	ND	42.91	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	2/18/1997	48.85	5.30	ND	43.55	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	5/5/1997	48.85	5.38	ND	43.47	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/24/1997	48.85	5.70	ND	43.15	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**34**	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/18/1997	48.85	5.68	ND	43.17	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/30/1998	48.85	4.62	ND	44.23	<50	--	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/1/1998	48.85	4.52	ND	44.33	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/14/1998	48.85	5.08	ND	43.77	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	12/14/1998	48.85	5.45	ND	43.40	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/24/1999	48.85	5.58	ND	43.27	68	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	6/14/1999	48.85	6.64	ND	42.21	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	9/13/1999	48.85	5.87	ND	42.98	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	11/29/1999	48.85	6.23	ND	42.62	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	<1.0	--	--	--	--	--	--	--	<0.3	<0.6	--
	3/14/2000	48.85	5.88	ND	42.97	<50	<500	--	--	--	--	--	--	--	<0.3	--	--	--	--	<0.3	--	**1.6**	--	--	--	--	--	--	--	<0.3	<0.6	--
HMW-10	2/18/1997	48.85	7.78	1.30	43.17	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/1997	48.85	8.06	1.58	43.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/24/1997	48.85	8.56	2.20	43.07	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/18/1997	48.85	8.60	2.19	43.02	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/30/1998	48.85	7.60	2.14	43.99	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/1/1998	48.85	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/1998	48.85	6.55	0.10	42.30	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/14/1998	48.85	7.06	0.33	43.16	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/24/1999	48.85	7.14	0.36	43.10	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/14/1999	48.85	7.46	0.59	42.96	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/13/1999	48.85	8.00	0.94	42.68	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/1999	48.85	8.59	1.18	42.27	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/14/2000	48.85	NA	NA	NA	NS	NS	--	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HMW-10R	6/11/2019	38.66	8.42	ND	30.24	**1,200**	**3,400**	**3,500**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<100	ND<5.0	ND<5.0	ND<15	ND<5.0
RW	9/8/2016	NA	8.85	0.30	NA	**280 HD**	**6,600 HD**	--	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	**4.4**	ND<4.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<40	ND<2.0	ND<2.0	ND<2.0	ND<2.0
	7/31/2018	NA	7.66	0.25	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/11/2019	NA	5.92	0.03	NA	**2,100**	**17,000**	**12,000**	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<200	ND<10	ND<10	ND<30	ND<10

Notes:

$CaCO_3$ = Calcium Carbonate
DIPE = Di-isopropyl Ether
E = Concentration exceeds the calibration range
ETBE = Ethyl tert-butyl Ether
ft= feet
HD = The chromatographic pattern was inconsistent with the profile of the reference fuel standard mg/L= milligrams per liter
MTBE = Methyl tert butyl ether
MSL = mean sea level (National Geodetic Vertical Datum, 1929) NA =Not available
ND = not detected at limit indicated on official laboratory report
NM = Not Measured
NM* = Product observed in well but not measurable
NS = not sampled
SE = skimmer emptied
SPH = Solid Phase Hydrocarbons
SR = sock replaced
TAME = Tert-amyl methyl ether
TBA = Tert-butyl alcohol
TDS= Total Dissolved Solids
TPH-D = total petroleum hydrocarbons as diesel
TPH-G = total petroleum hydrocarbons as gasoline
-- = not analyzed
* = Not Sampled Prior to 12/27/2007

** = Sample was reanalyzed to determine validity of VOC concentrations
(1) = Measurement used was taken during DPE event on 12/18/2009. Measurement taken on 12/21/2009 was anomalous and erroneous due to equipment malfunction.
(2) = California Secondary MCL
- Data prior to November 4, 2004 was provided by the Orange County Health Care Agency Regulator.
- Unless otherwise noted, all concentrations are in micrograms per liter (µg/L).
- Volatile organic compound analysis was performed using EPA Method 8260B.
- Total Alkalinity ($CaCO_3$) analysis was performed using Standard Method 2320B.
- TDS analysis was performed using Standard Method 2540C.
- Total Hardness ($CaCO_3$) analysis was performed using Standard Method 2340C.
- TPH-D and TPH-G analysis were performed using EPA Method 8015B.
- Monitoring wells were surveyed to County of Orange Benchmark No. #1M-12-90 (elevation = 37.220) relative to the top of the well casing.
- Sheen = 0.01' or less of product
- Groundwater elevations corrected for the presence of SPH using a specific gravity of 0.75.

Appendix A
Historical Building Permits

B-1
REV. 7-72

CITY OF CYPRESS — BUILDING

5275 ORANGE AVENUE : TELEPHONE: 828-2200

DEPARTMENT OF BUILDING AND SAFETY PERMIT - APPLICATION

BUILDING ADDRESS: 4622 LINCOLN.

FIRE ZONE	GROUP	TYPE CONST.	DATE REC'D.
2		CONC	10-10-74

ZONE: CH

SPECIAL CONDITIONS: 20X50 Cement. Slab For Steam Cleaner Small Shed. To Cover. Steam-Cleaner. 275 ft From Lincoln.

PLANNING DEP'T. APPROVAL: By B Hawley DATE 10/1/74

ENGINEERING DIV. APPROVAL: DATE

CONSTRUCTION LENDER — CCP: Rack Emptys

NAME: Into 4000 storage tank. &

ADDRESS: Will Be Disposed By Vacumn Truck — BY

LOT SIZE:

NO. BLDGS. NOW ON LOT:

USE OF EXISTING BUILDINGS:

TRAILER: ZONE:

INSPECTION FOR OCCUPANCY AS:

LIMITED TIME USE: FROM TO

AREA SQ. FT.	NO. STORIES	ROOF COVERING
1000		

FENCING-LIN. FT.:

	INTERIOR	EXTERIOR
WALL COVERING		

MISC.:

SIGNATURE OF APPLICANT:

ADDRESS:

VALUATION $ 750.00

S.B. 1374 $ .50

PLAN CHECK FEE $

PERMIT FEE $ 8.00

JOB ADDRESS: 4622 LINCOLN.

LOT	TRACT	BLD'G. PERMIT NO.
	M&B	16333

PROPOSED USE: Cement Slabe.

NEW	ADD	ALTER	REPAIR	DEMOLISH	SPECIAL

OWNER: Powell & Walthall Inc

MAILING ADDRESS: 4622 Lincoln -

CITY: City - TEL. NO. 827-0258.

CONTRACTOR: SELF

MAILING ADDRESS:

CITY: TEL. NO.

STATE LIC. NO.: CITY BUS. LIC. NO.:

ARCHITECT OR ENGINEER:

STATE LIC. NO.: TEL. NO.

APPROVALS	DATE	INSPECTOR'S SIGNATURE
FOUNDATION LOCATION FORMS - MATERIALS		
SLAB FLOOR JOISTS		
FRAMING		
LATH OR GYPSUM INTERIOR		
LATH EXTERIOR		
STUCCO-SCRATCH		
STUCCO-BROWN		
ROOF SHEATHING		
RELOCATION WORK COMPLETED		
HOUSE NUMBER CORRECT & POSTED		
FINAL APPROVAL	12-9-74	[illegible]

I acknowledge that I have read this application and state that the above is correct and agree to comply with all City ordinance and State laws regulating building construction.

SIGNATURE OF PERMITTEE: Ray Fawcett

ADDRESS:

PAID 0562 OCT 10 D 8.00CK

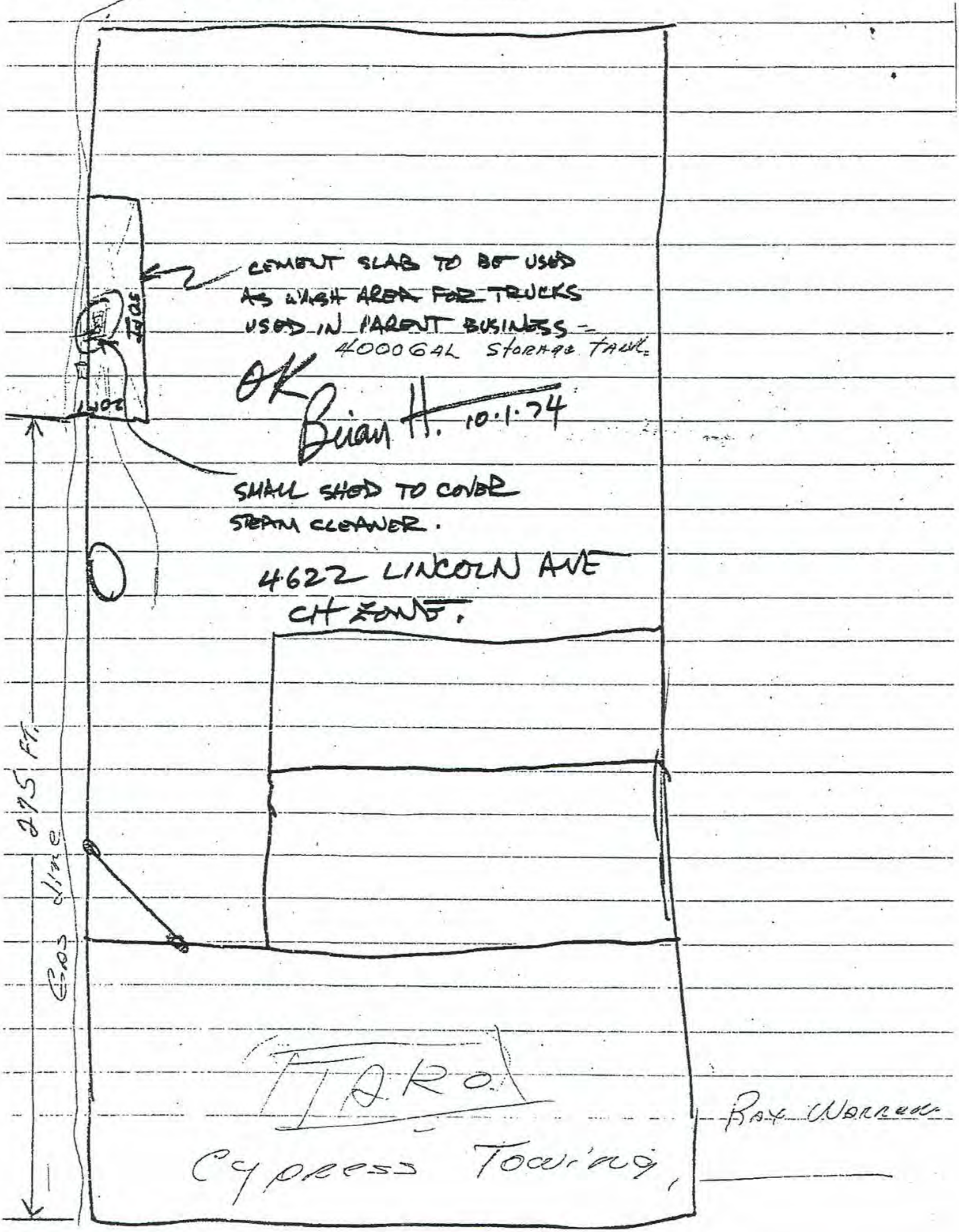
PAID 0563 OCT 10 D .50CK

THIS RECEIPT IS VALID ONLY WHEN TRANSACTION NUMBER, DATE, AND RECEIPT AMOUNT ARE IMPRINTED ABOVE.

PLAN CHECK VALIDATION ▲ PERMIT VALIDATION ▲ Kelarue

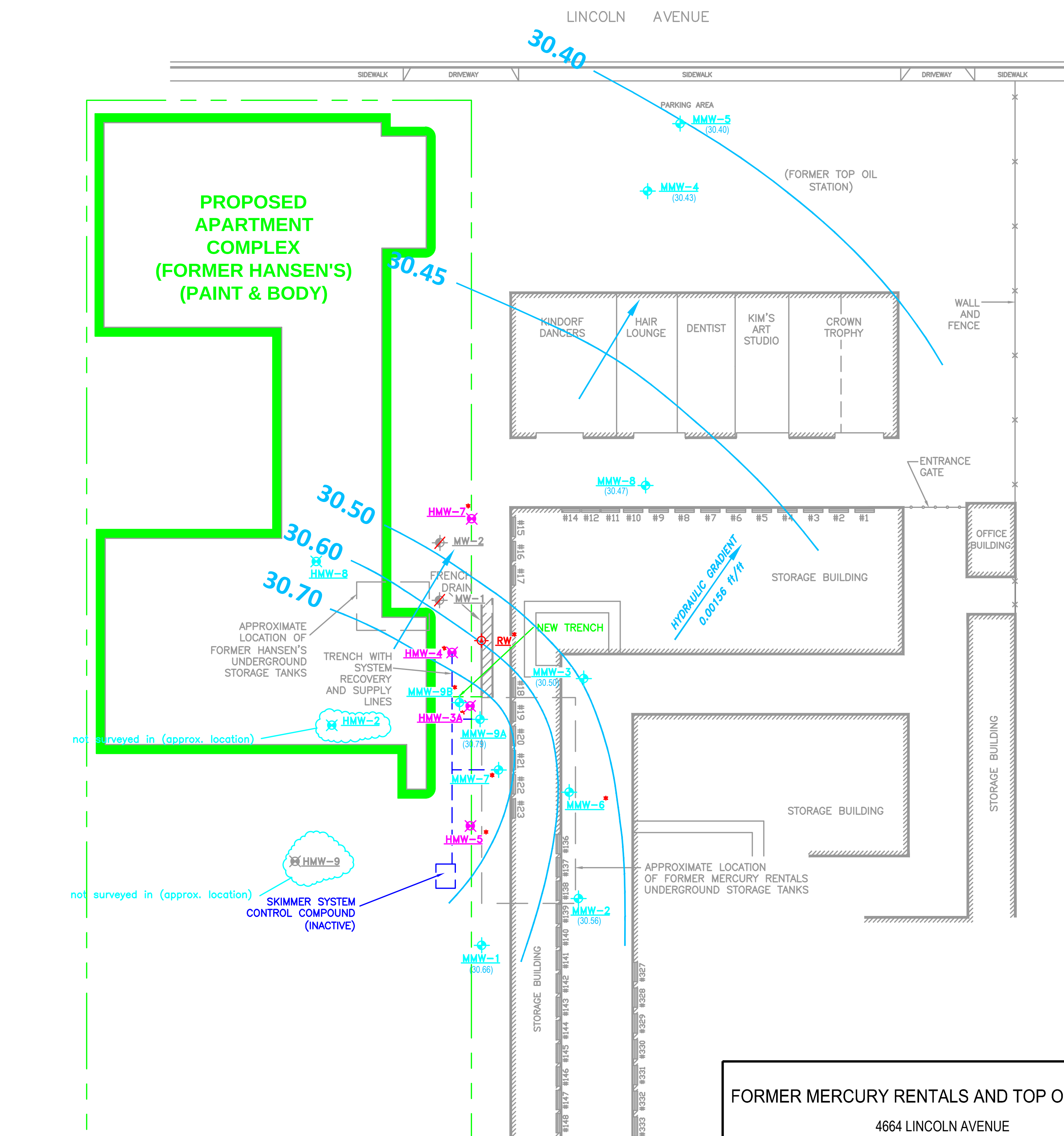
16333

INSPECTOR'S COPY



CEMENT SLAB TO BE USED
AS WASH AREA FOR TRUCKS
USED IN PARENT BUSINESS -
4000 GAL Storage tank.
OK Brian H. 10.1.74
SMALL SHED TO COVER
STEAM CLEANER.
4622 LINCOLN AVE
CH ZONE.
275 FT.
Gas line
TARO
Ray Warren
Cypress Towing

Appendix B
Former Mercury Rental Site Figures (EarthCon)



LEGEND

MMW-8	GROUNDWATER MONITORING WELL (MERCURY RENTALS)
MW-1	ABANDONED GROUNDWATER MONITORING WELL (JUNE 2012)
HMW-7	GROUNDWATER MONITORING WELL (HANSEN'S)
RW	12" RECOVERY WELL (MERCURY RENTALS)
HMW-9	GROUNDWATER MONITORING WELL (HANSEN'S); WELL NOT INCLUDED IN MONITORING PROGRAM
	REMEDIATION SYSTEM PIPING
	APPROXIMATE PROPERTY BOUNDARY OF FORMER HANSEN'S AUTO TOW
	APPROXIMATE PROPOSED APARTMENT COMPLEX BUILDING BOUNDARY
(30.56)	GROUNDWATER ELEVATION IN FEET (RELATIVE TO MEAN SEA LEVEL)
30.50'	GROUNDWATER ELEVATION CONTOUR
	APPROXIMATE DIRECTION OF GROUNDWATER FLOW

NOTES:

1) CONTOUR LINES ARE INTERPRETIVE BASED ON FLUID LEVELS MEASURED IN MONITORING WELLS IN JUNE 2018

2) * = NOT USED FOR CONTOURING DUE TO THE PRESENCE OF SEPARATE-PHASE HYDROCARBONS OR SHEEN AT THE TIME OF MEASUREMENTS

3) ON JULY 31, 2018, FIELD STAFF WERE UNABLE TO LOCATE WELLS HMW-2 AND HMW-8 AND COULD NOT BE GAUGED. WELLS APPEAR TO HAVE BEEN DESTROYED DURING THE RECENT GRADING ACTIVITIES ON FORMER HANSEN'S

0 50 Feet
SCALE

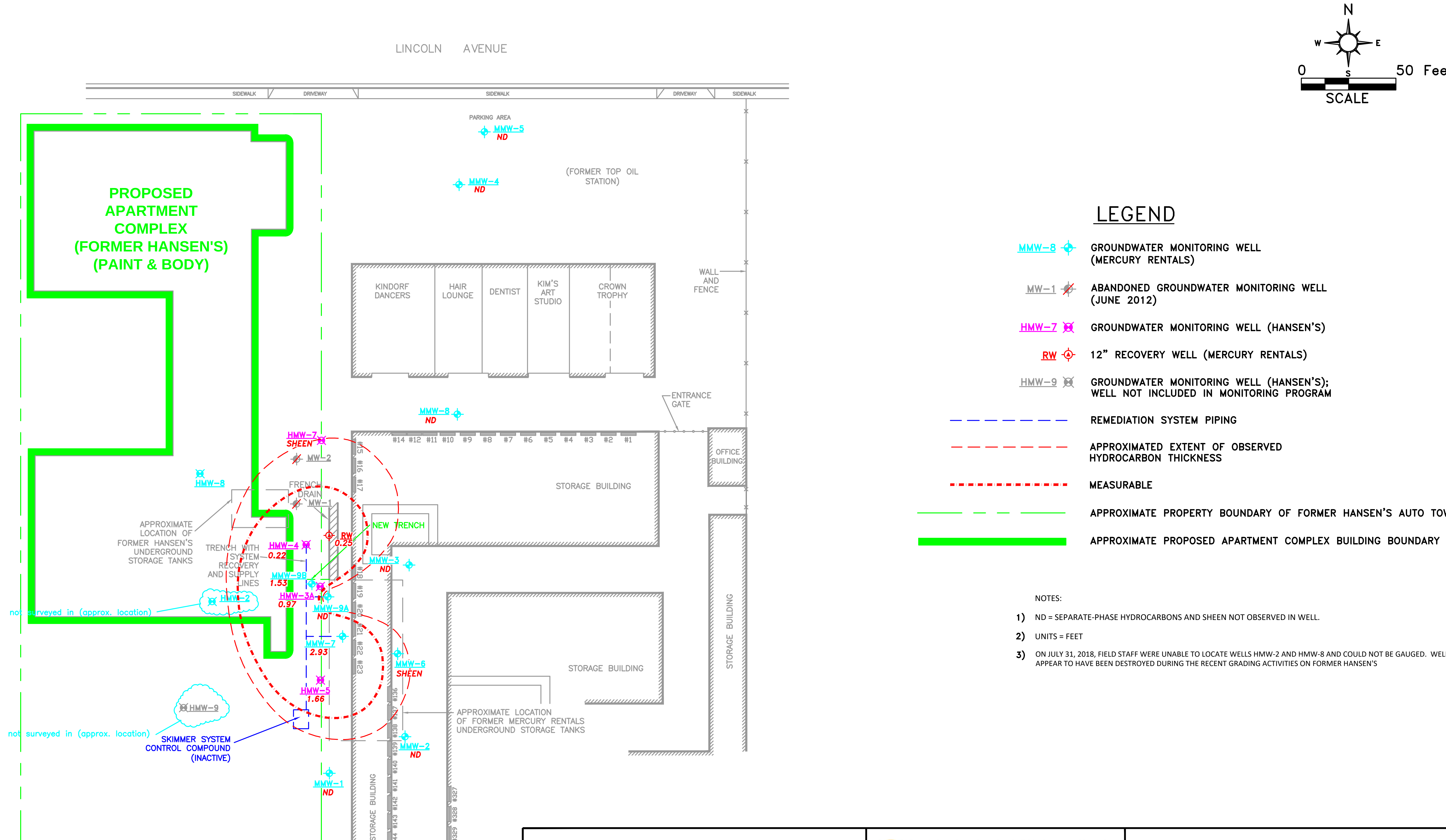
FORMER MERCURY RENTALS AND TOP OIL STATION
4664 LINCOLN AVENUE
CYPRESS, CA
PROJECT NO. 04.20090444.00

EARTHCON®
EARTHCON CONSULTANTS CA, INC
1914 W. ORANGEWOOD AVENUE, SUITE 102, ORANGE, CA 92868

GROUNDWATER ELEVATION CONTOUR MAP
JULY 2018

DRAWN: HVP | CHECKED: JB | DATE: 08/07/2018 | FIGURE: 2

FILENAME: S:\Common\OrangeCADProjects\04.20090444_Kennis Trust (4664 Lincoln avenue, Cypress)\Groundwater June 2018_RV.dwg (F2-POST REM) 08/08/18 09:42 - hphan



LEGEND

MMW-8	GROUNDWATER MONITORING WELL (MERCURY RENTALS)
MW-1	ABANDONED GROUNDWATER MONITORING WELL (JUNE 2012)
HMW-7	GROUNDWATER MONITORING WELL (HANSEN'S)
RW	12" RECOVERY WELL (MERCURY RENTALS)
HMW-9	GROUNDWATER MONITORING WELL (HANSEN'S); WELL NOT INCLUDED IN MONITORING PROGRAM
	REMEDIATION SYSTEM PIPING
	APPROXIMATED EXTENT OF OBSERVED HYDROCARBON THICKNESS
	MEASURABLE
	APPROXIMATE PROPERTY BOUNDARY OF FORMER HANSEN'S AUTO TOW
	APPROXIMATE PROPOSED APARTMENT COMPLEX BUILDING BOUNDARY

NOTES:

1) ND = SEPARATE-PHASE HYDROCARBONS AND SHEEN NOT OBSERVED IN WELL.
2) UNITS = FEET
3) ON JULY 31, 2018, FIELD STAFF WERE UNABLE TO LOCATE WELLS HMW-2 AND HMW-8 AND COULD NOT BE GAUGED. WELLS APPEAR TO HAVE BEEN DESTROYED DURING THE RECENT GRADING ACTIVITIES ON FORMER HANSEN'S

FORMER MERCURY RENTALS AND TOP OIL STATION

4664 LINCOLN AVENUE
CYPRESS, CA

PROJECT NO. 04.20090444.00

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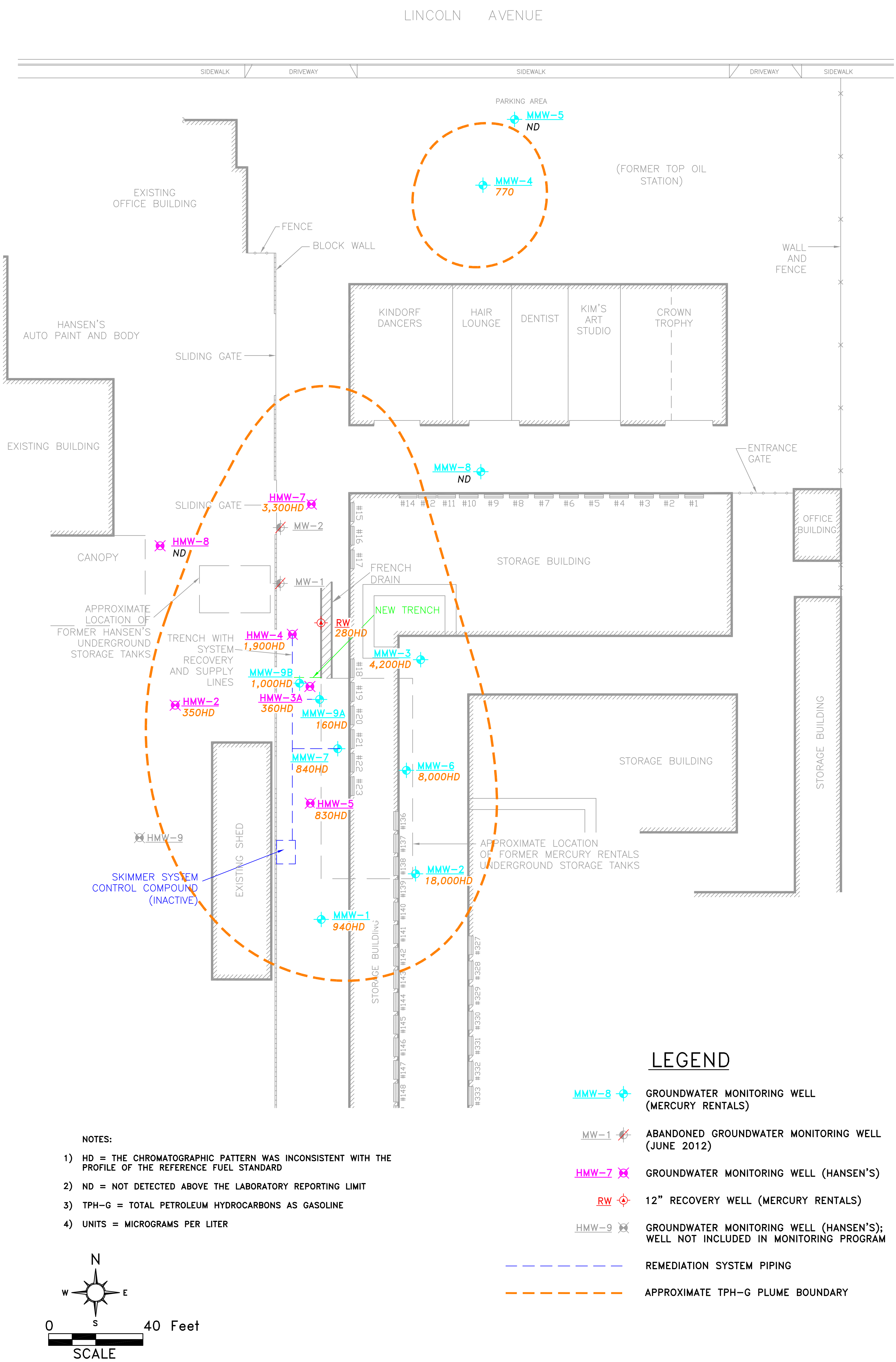
SEPARATE-PHASE HYDROCARBON THICKNESS
JULY 2018

DRAWN:	CHECKED:	DATE:	FIGURE:
HVP	JB	08/07/2018	3

FILENAME: S:\Common\OrangeCADProjects\04.20090444_Kennis Trust (4664 Lincoln avenue, Cypress)\Groundwater June 2018_RV.dwg (F3-POST REM) 08/08/18 0942 - hphan



NOTES:

1) HD = THE CHROMATOGRAPHIC PATTERN WAS INCONSISTENT WITH THE PROFILE OF THE REFERENCE FUEL STANDARD
2) ND = NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT
3) TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
4) UNITS = MICROGRAMS PER LITER

LEGEND

- MMW-8 — GROUNDWATER MONITORING WELL (MERCURY RENTALS)
- MW-1 — ABANDONED GROUNDWATER MONITORING WELL (JUNE 2012)
- HMW-7 — GROUNDWATER MONITORING WELL (HANSEN'S)
- RW — 12" RECOVERY WELL (MERCURY RENTALS)
- HMW-9 — GROUNDWATER MONITORING WELL (HANSEN'S); WELL NOT INCLUDED IN MONITORING PROGRAM
- REMEDIATION SYSTEM PIPING
- APPROXIMATE TPH-G PLUME BOUNDARY

FILENAME: S:\CAD\KEMMIS TRUST\GROUNDWATER MONITORING SEPTEMBER 2016

FORMER MERCURY RENTALS AND TOP OIL STATION
4664 LINCOLN AVENUE
CYPRESS, CA
PROJECT NO. 04.20090444.00

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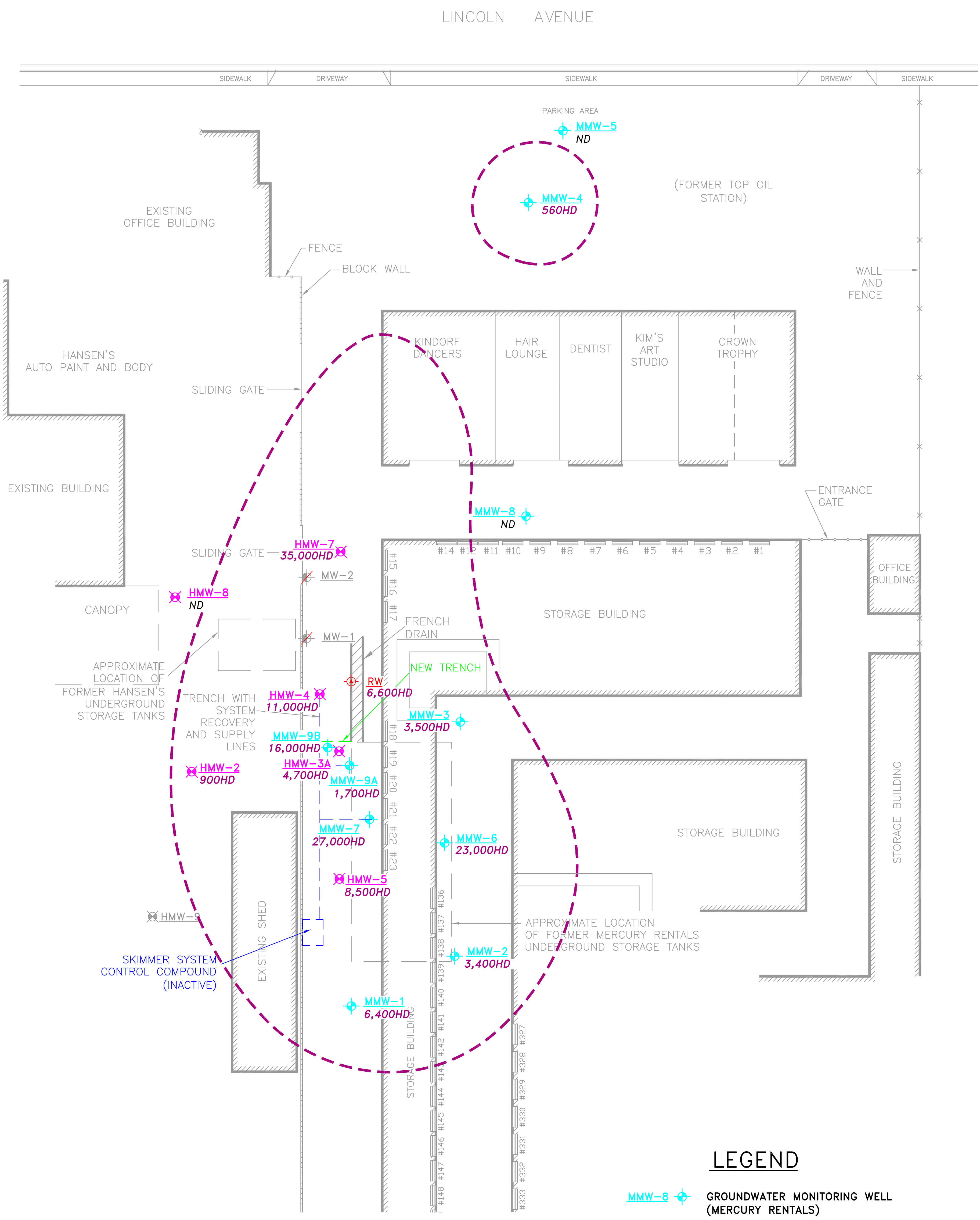
GROUNDWATER TPH-G RESULTS
SEPTEMBER 2016

DRAWN:	CHECKED:	DATE:	FIGURE:
DCN	JB	10/14/16	4



LEGEND

MMW-8	GROUNDWATER MONITORING WELL (MERCURY RENTALS)
MW-1	ABANDONED GROUNDWATER MONITORING WELL (JUNE 2012)
HMW-7	GROUNDWATER MONITORING WELL (HANSEN'S)
RW	12" RECOVERY WELL (MERCURY RENTALS)
HMW-9	GROUNDWATER MONITORING WELL (HANSEN'S); WELL NOT INCLUDED IN MONITORING PROGRAM
	REMEDIATION SYSTEM PIPING
	APPROXIMATE TPH-D PLUME BOUNDARY

NOTES:

1) HD = THE CHROMATOGRAPHIC PATTERN WAS INCONSISTENT WITH THE PROFILE OF THE REFERENCE FUEL STANDARD
2) ND = NOT DETECTED ABOVE THE LABORATORY REPORTING LIMIT
3) TPH-D = TOTAL PETROLEUM HYDROCARBONS AS DIESEL
4) UNITS = MICROGRAMS PER LITER

N
W E
S

0 40 Feet

SCALE

FILENAME: S:\CAD\KEMMIS TRUST\GROUNDWATER MONITORING SEPTEMBER 2016

FORMER MERCURY RENTALS AND TOP OIL STATION

4664 LINCOLN AVENUE
CYPRESS, CA

PROJECT NO. 04.20090444.00

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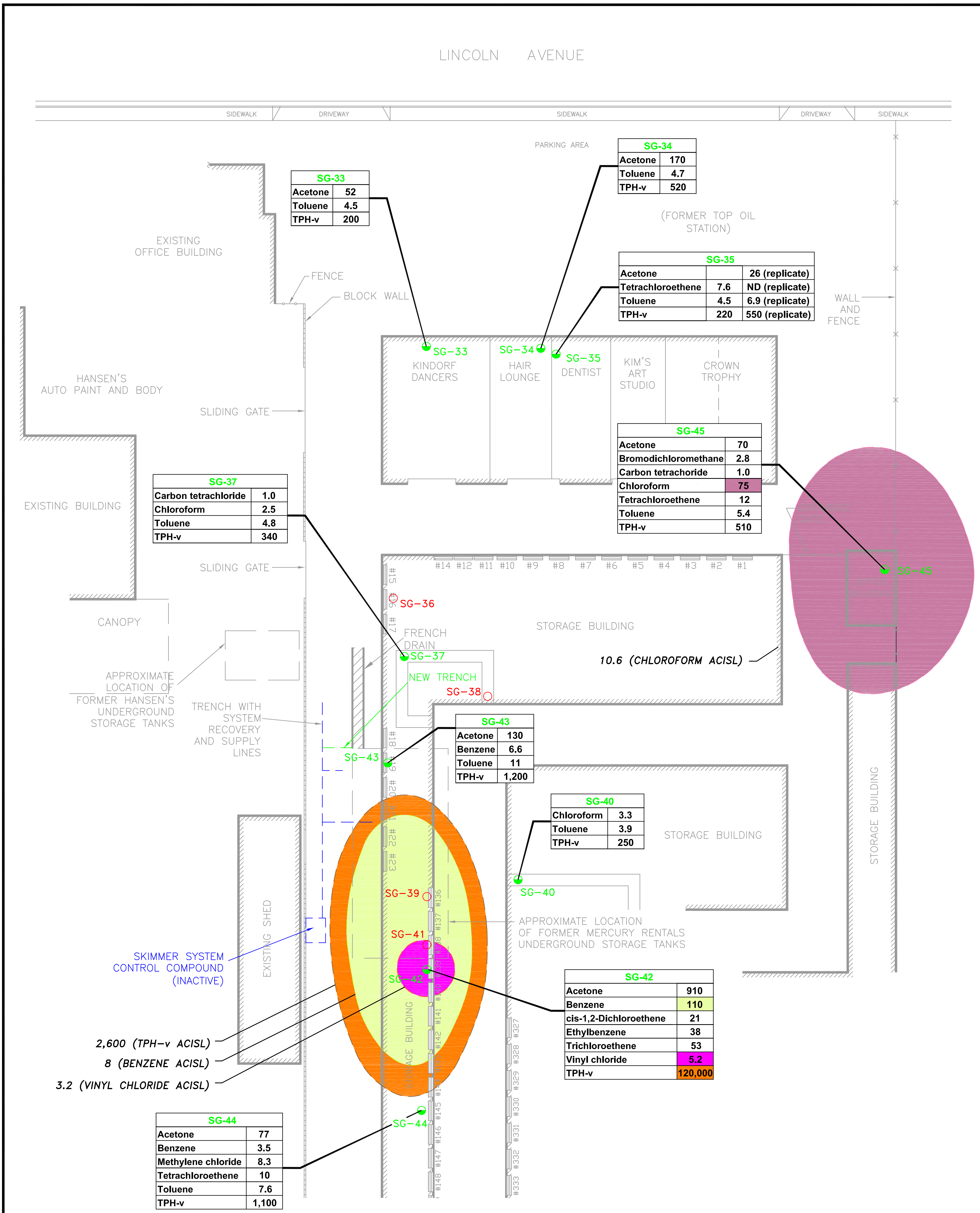
GROUNDWATER TPH-D RESULTS
SEPTEMBER 2016

DRAWN:	CHECKED:	DATE:	FIGURE:
DCN	JB	10/14/16	5



SG-33

Acetone	52
Toluene	4.5
TPH-v	200

SG-34

Acetone	170
Toluene	4.7
TPH-v	520

SG-35

Acetone		26 (replicate)
Tetrachloroethene	7.6	ND (replicate)
Toluene	4.5	6.9 (replicate)
TPH-v	220	550 (replicate)

SG-45

Acetone	70
Bromodichloromethane	2.8
Carbon tetrachloride	1.0
Chloroform	75
Tetrachloroethene	12
Toluene	5.4
TPH-v	510

SG-37

Carbon tetrachloride	1.0
Chloroform	2.5
Toluene	4.8
TPH-v	340

SG-43

Acetone	130
Benzene	6.6
Toluene	11
TPH-v	1,200

SG-40

Chloroform	3.3
Toluene	3.9
TPH-v	250

SG-42

Acetone	910
Benzene	110
cis-1,2-Dichloroethene	21
Ethylbenzene	38
Trichloroethene	53
Vinyl chloride	5.2
TPH-v	120,000

SG-44

Acetone	77
Benzene	3.5
Methylene chloride	8.3
Tetrachloroethene	10
Toluene	7.6
TPH-v	1,100

LEGEND

APPROXIMATE BENZENE ACISL ISOCONCENTRATION CONTOUR

APPROXIMATE CHLOROFORM ACISL ISOCONCENTRATION CONTOUR

APPROXIMATE TPH-v ACISL ISOCONCENTRATION CONTOUR

APPROXIMATE VINYL CHLORIDE ACISL ISOCONCENTRATION CONTOUR

SG-45 PROBE SAMPLED

SG-38 PROBE NOT SAMPLED

ACISL = ATTENUATED COMMERCIAL INDUSTRIAL SCREENING LEVEL (BENZENE = 8 ug/m³, CHLOROFORM = 10.6 ug/m³ TPH-v = 2,600 ug/m³, VINYL CHLORIDE = 3.2 ug/m³)

TPH-v = TOTAL PETROLEUM HYDROCARBONS-VOLATILE (C5-C12)

UNITS = MICROGRAMS PER CUBIC METER (ug/m³)

75 5.2 110 120,000 REPORTED CONCENTRATION IS HIGHER THAN THE ATTENUATED SCREENING LEVEL FOR COMMERCIAL - INDUSTRIAL AIR

FORMER MERCURY RENTALS AND TOP OIL STATION

4664 LINCOLN AVENUE
CYPRESS, CA

PROJECT NO. 04.20090444.00

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1914 W. ORANGEWOOD AVENUE, SUITE 102, ORANGE, CA 92868

SUBSLAB SOIL GAS RESULTS
SEPTEMBER 2016

DRAWN:	CHECKED:	DATE:	FIGURE:
DCN	JB	10/20/16	7

FILENAME: S:\CAD\KEMMIS TRUST\GROUNDWATER MONITORING SEPTEMBER 2016

Appendix C
Historical Soil and Groundwater Analytical Data and LNAPL Removal Summary (Atlas)
(Available Upon Request)

Appendix D
Historical Site Figures (Atlas)
(Available Upon Request)

Appendix E
Historical Soil and Soil Vapor Analytical Data (Paloma)

TABLE 1

SOIL VAPOR ANALYTICAL DATA
FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CA

Sample ID	*Date Sampled*	*Purge Volume*	*Sample Depth (fbg)*	*TPHg (µg/m³)*	*Benzene (µg/m³)*	*Toluene (µg/m³)*	*Ethyl-Benzene (µg/m³)*	*Total Xylenes (µg/m³)*	*PCE (µg/m³)*	*TCE (µg/m³)*	*1,1-DCE (µg/m³)*	*1,1-DCA (µg/m³)*	*Vinyl Chloride (µg/m³)*	*Freon-11 (µg/m³)*	*Isobutane (Tracer) (µg/m³)*
SV-1-2.5	6/5/2018	3	2.5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-1-5	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-2-2.5	6/5/2018	3	2.5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-2-5	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-3-2.5	6/5/2018	3	2.5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-3-5	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-4-2.5	6/5/2018	3	2.5	<10,000	<30	<1,000	<500	<2,000	**270**	**180**	<1,000	<800	<4.0	**2,450**	<1,000
SV-4-5	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	**140**	**100**	<1,000	<800	<4.0	**1,900**	<1,000
SV-5-2.5	6/5/2018	3	2.5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-5-5	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SV-5-5 Dup	6/5/2018	3	5	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
BLANK-1	6/5/2018	NA	NA	<10,000	<30	<1,000	<500	<2,000	<100	<100	<1,000	<800	<4.0	<1,000	<1,000
SWRCB LTCP Residential RLs for Soil at 5 fbg (mg/kg)*					**85**	--	**1,100**	--	--	--	--	--	--	--	--
Target Concentration (µg/m³) [Screening Levels adjusted by Attenuation Factor for Future Residential Construction]**				--	**97**	**310,000**	--	--	**460**	--	**73,000**	**1,800**	**9.5**	**1,300,000**	--
Screening Levels for Residential Indoor Air (µg/m³)***				--	0.097	310	--	--	0.46	--	73	1.8	0.0095	1,300	--

Abbreviations and Notes:

fbg = feet below grade
µg/m³ = micrograms per cubic meter
NA = not applicable
< = Below detection limit (not detected)
TPHg and VOCs analyzed by Modified EPA Method 8260B.
Bold concentrations detected above the laboratory reporting limit

TPHg = Total petroleum hydrocarbons as gasoline
PCE = Tetrachloroethene
TCE = Trichloroethene
1,1-DCE = 1,1-Dichloroethene
1,1-DCE = 1,1-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
Freon-11 = Trichlorofluoromethane

* - State Water Regioanl Control Board (SWRCB) Low Threat Closure Policy (LTCP) Residential Soil Gas Criteria Risk Levels (RLs) at 5 fbg (No Bioattentuation Zone), November, 2012

** - DTSC/CalEPA Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Table 2, attenuation factor for future residential construction measured at the contaminant source (0.001), October, 2011

*** - California DTSC HERO Note Number 3, DTSC-modified Screening Levels (DTSC-SLs), January, 2018

TABLE 2

SOIL ANALYTICAL DATA
FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CA

Sample ID	Date Sampled	Sample Depth (fbg)	TPHd (mg/kg)	TPHg (mg/kg)	TPHo (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	Naphthalene (µg/kg)	Tetrachloroethene (µg/kg)	Trichloroethene (µg/kg)	1,1-Dichloroethene (µg/kg)	1,1-Dichloroethane (µg/kg)	1,2-Dichloroethane (µg/kg)	Trichlorofluoromethane (µg/kg)
SV-1	6/5/2018	2.5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-1	6/5/2018	5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-2	6/5/2018	2.5	<10.0	<0.50	**255**	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-2	6/5/2018	5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-3	6/5/2018	2.5	<10.0	<0.50	**150**	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-3	6/5/2018	5	<10.0	<0.50	**398**	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-4	6/5/2018	2.5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-4	6/5/2018	5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-5	6/5/2018	2.5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SV-5	6/5/2018	5	<10.0	<0.50	<50.0	<2.0	<2.0	<2.0	<6.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
SWRCB LTCP Residential RLs for Soil 0-5 fbg (mg/kg)*			**--**	**--**	**--**	**1,900**	**--**	**21,000**	**--**	**9,700**	**--**	**--**	**--**	**--**	**--**	**--**
SFRWQCB Residential RLs for Soil (mg/kg)**			**230**	**740**	**11,000**	**230**	**970,000**	**5,100**	**560,000**	**3,300**	**600**	**1,200**	**94,000**	**3,800**	**370**	**--**

Abbreviations and Notes:

fbg = Feet below grade
mg/kg = Milligrams per kilogram or parts per million
µg/kg = Micrograms per kilogram or parts per billion
< = Not detected above reporting limit
Bold concentrations detected above the laboratory reporting limit

TPHg = total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TPHo = Total petroleum hydrocarbons as oil
TPH analyzed using EPA Method 8015B
VOCs analyzed using EPA Method 8260B

* - State Water Regioanl Control Board (SWRCB) Low Threat Closure Policy (LTCP) Residential Soil Exposure Human Health Risk Levels (RLs) for 0 to 5 fbg, November, 2012
** - San Francisco Regional Water Quality Control Board (SFRWQCB) Residential Shallow Soil Exposure Human Health Risk Levels (RLs) (Table S-1), February, 2016

TABLE 2

SOIL VAPOR ANALYTICAL DATA
FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CA

Sample ID	Date Sampled	Purge Volume	Sample Depth (fbg)	Benzene (μg/m³)	Toluene (μg/m³)	Ethyl benzene (μg/m³)	Total Xylenes (μg/m³)	TBA (μg/m³)	Naphthalene (μg/m³)	PCE (μg/m³)	TCE (μg/m³)	1,1-DCE (μg/m³)	1,1-DCA (μg/m³)	Vinyl Chloride (μg/m³)	Freon-11 (μg/m³)	Freon-12 (μg/m³)	Acrolein (μg/m³)
SV-4A-2.5	11/8/2018	3	2.5	2.7	9.3	2.9	15.3	<4.8	<2.0	41	8.0	<2.2	<2.1	<2.1	430	<2.1	<4.1
SV-4A-2.5 Dup	11/8/2018	3	5	2.3	7.9	<2.2	7.1a	<4.8	<2.0	37	7.3	<2.3	<2.2	<2.3	430	<2.2	<4.3
SV-4A-5	11/8/2018	3	5	<2.2	5.3	<2.2	8.4	<4.7	<2.0	90	22	<2.3	<2.2	<2.3	990	<2.2	<4.3
SV-4B-2.5	11/8/2018	3	2.5	6.6	9.8	<2.1	8.5	<4.5	<2.0	18	13	<2.2	<2.1	<2.2	120	<2.1	<4.1
SV-4B-5	11/8/2018	3	5	3.9	8.1	<2.2	6.7a	<4.8	<2.0	32	43	<2.3	<2.2	<2.3	980	<2.2	<4.3
SV-5A-2.5	11/8/2018	3	2.5	5.0	11	3.7	16.9	6.8	<2.0	5.7	<2.3	<2.3	<2.2	<2.3	7.6	3.3	<4.3
SV-5A-5	11/8/2018	3	5	<2.1	7.7	2.3	12.1	8.9	<2.0	7.5	<2.2	<2.2	<2.1	<2.2	16	<2.1	6.5
SV-5B-2.5	11/8/2018	3	2.5	3.7	14	3.9	19.3	8.9	<2.0	3.8	<2.2	<2.2	<2.1	<2.2	16	<2.1	6.5
SV-5B-5	11/8/2018	3	5	4.6	16	4.3	20.6	<4.5	<2.0	<2.2	<2.2	<2.2	<2.1	<2.2	27	<2.1	<4.1
EB-1	11/8/2018	NA	NA	6.5	22	4.3	20.3	<4.4	<2.0	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<4.0
SWRCB LTCP Residential RLs for Soil at 5 fbg (mg/kg)*				**85**	--	**1,100**	--	--	**93**	--	--	--	--	--	--	--	--
2.5 fbg Target Concentration (μg/m³) [Screening Levels adjusted by Site-Specific Attenuation Factor]**				**210**	**714,590**	**2,610**	**236,880**	--	**200**	**1,210**	**1,130**	**162,000**	**3,920**	**10.0**	**3,015,070**	**229,940**	**40**
5 fbg Target Concentration (μg/m³) [Screening Levels adjusted by Attenuation Factor for Future Residential Construction]***				**97**	**310,000**	**1,100**	**100,000**	--	**83**	**460**	**480**	**73,000**	**1,750**	**9.5**	**1,250,000**	**100,000**	**21**
Screening Levels for Residential Indoor Air (μg/m³)****				0.097	310	1.1	100	--	0.083	0.46	0.48	73	1.75	0.0095	1,250	100	0.021

Sample ID	Acetone (μg/m³)	Carbon Disulfide (μg/m³)	Chloroform (μg/m³)	Ethanol (μg/m³)	Ethyl Acetate (μg/m³)	Isopropyl Alcohol (μg/m³)	MEK (μg/m³)	n-Hexane (μg/m³)	n-Heptane (μg/m³)	n-Nonane (μg/m³)	Propene (μg/m³)	1-Butanol (μg/m³)	4-methyl-2-pentanone (μg/m³)	1,2,4-Trimethyl benzene (μg/m³)	1,1-DFA (Tracer) (μg/m³)	Oxygen^ (% v)	Nitrogen (% v)	Carbon Dioxide (% v)
SV-4A-2.5	42	6.4	<2.2	<21	7.3	10	6.3	<2.2	<2.2	<2.2	3.8	11	<2.1	4.1	560	20.3	77.8	1.92
SV-4A-2.5 Dup	<23	<4.8	<2.3	<22	6.8	<9.1	<4.3	<2.3	<2.3	<2.3	2.6	<4.3	<2.3	<2.3	340	20.3	77.8	1.92
SV-4A-5	<23	<4.7	<2.3	<22	<4.7	<8.9	<4.3	<2.3	<2.3	<2.3	<2.2	7.2	<2.3	<2.3	220	17.1	78.0	4.89
SV-4B-2.5	81	13	<2.2	<21	5.7	12	15	<2.2	<2.2	2.9	30	5.3	<2.2	<2.2	3,300	20.0	78.2	1.77
SV-4B-5	34	8.6	<2.3	<22	8.1	12	5.6	<2.3	<2.3	<2.3	4.9	5.6	<2.3	<2.3	320	11.4	80.1	8.46
SV-5A-2.5	26	12	3.1	24	16	23	<4.3	<2.3	<2.3	<2.3	5.5	9.0	<2.3	4.5	7,700	20.5	77.9	1.50
SV-5A-5	49	<4.5	2.8	36	9.9	31	<4.1	<2.2	<2.2	<2.2	4.6	6.9	<2.2	3.0	3,000	19.5	78.0	2.48
SV-5B-2.5	49	120	2.9	36	12	31	22	<2.2	<2.2	<2.2	4.6	130	2.8	4.1	720	19.9	78.1	2.02
SV-5B-5	<22	<4.5	5.2	36	16	38	<4.1	<2.2	<2.2	<2.2	3.4	6.1	<2.2	3.7	2,800	18.5	78.4	3.06
EB-1	35	<4.4	<2.1	63	17	49	<4.0	3.6	2.4	<2.1	4.3	8.2	<2.1	3.0	3.3	22.2	77.8	<0.16
SWRCB LTCP Residential RLs for Soil at 5 fbg (mg/kg)*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.5 fbg Target Concentration (μg/m³) [Screening Levels adjusted by Site-Specific Attenuation Factor]**	**67,499,830**	**1,538,170**	**270**	--	**164,100**	**445,550**	**11,366,850**	**1,698,220**	**1,129,120**	**56,450**	**8,334,030**	**1,121,440**	**7,314,890**	**155,590**	--	--	--	--
5 fbg Target Concentration (μg/m³) [Screening Levels adjusted by Attenuation Factor for Future Residential Construction]***	**32,000,000**	**730,000**	**120**	--	**73,000**	**210,000**	**5,200,000**	**730,000**	**420,000**	**21,000**	**3,100,000**	**417,000**	**3,100,000**	**63,000**	--	--	--	--
Screening Levels for Residential Indoor Air (μg/m³)****	32,000	730	0.12	--	73	210	5,200	730	420	21	3,100	417	3,100	63	--	--	--	--

Abbreviations and Notes:

fbg = feet below grade
μg/m³ = micrograms per cubic meter
% v = percent by volume
NA = not applicable
< = Below detection limit (not detected)

TPHg = Total petroleum hydrocarbons as gasoline
PCE = Tetrachloroethene
TCE = Trichloroethene
1,1-DCE = 1,1-Dichloroethene
1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1-Dichloroethane
Freon-11 = Trichlorofluoromethane
Freon-12 = Dichlorofluoromethane
MEK = Methyl ethyl ketone
1,1-DFA = 1,1-Difluoroethane

Bold concentrations detected above either the SWRCB LTCP and/or DTSC/CalEPA RLs
^ = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.
* - State Water Regioanl Control Board (SWRCB) Low Threat Closure Policy (LTCP) Residential Soil Gas Criteria Risk Levels (RLs) at 5 fbg (No Bioattentuation Zone), November, 2012
** - Using Site-Specific Attenuation Factors Derived Using the DTSC-Modified version of U.S. EPA's Johnson and Ettinger Model (DTSC, 2014)
*** - DTSC/CalEPA Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Table 2, attenuation factor for future residential construction measured at the contaminant source (0.001), October, 2011
**** - California DTSC HERO Note Number 3, DTSC-modified Screening Levels (DTSC-SLs), June, 2018, or if not available, U.S. EPA Regional Screening Level, November, 2018
a = Since m,p-xylenes had a detection and o-xylene did not, half of the non-detect value was assumed for o-xylene
Full suite VOCs analyzed by Modified EPA Method TO-15
Naphthalene analyzed by EPA Method TO-17
Oxygen, carbon dioxide, and nitrogen analyzed by American Society for Testing a Materials (ASTM) Method D-1946 GC/TCD

TABLE 1

SOIL VAPOR ANALYTICAL DATA
FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CA

Sample ID	Date Sampled	Purge Volume (mL)	Sample Depth (fbg)	Benzene (µg/m³)	Toluene (µg/m³)	Ethyl benzene (µg/m³)	Total Xylenes (µg/m³)	TBA (µg/m³)	Naphthalene (µg/m³)	PCE (µg/m³)	TCE (µg/m³)	1,1-DCE (µg/m³)	1,1-DCA (µg/m³)	Vinyl Chloride (µg/m³)	4-Ethyltoluene (µg/m³)	Freon-11 (µg/m³)	Freon-12 (µg/m³)	Acetone (µg/m³)
SV-4A-2.5	6/27/2019	300	2.5	7.3	8.0	41	18.2a	<31	13	110	8.9	<4.0	<4.1	<2.6	11	360	<5.0	30
SV-4A-5	6/27/2019	300	5	6.1	3.9	54	17.2a	<31	13	160	18	<4.0	<4.1	<2.6	13	870	<5.0	67
SV-4B-2.5	6/27/2019	300	2.5	5.3	6.0	53	17.2a	<31	20	49	6.5	<4.0	<4.1	<2.6	12	18	<5.0	34
SV-4B-5	6/27/2019	300	5	8.4	8.2	110	30.8	<31	20	290	83	<4.0	<4.1	<2.6	25	600	<5.0	50
SV-5A-2.5	6/27/2019	300	2.5	6.5	6.3	120	33.4	<31	22	14	<5.5	<4.0	<4.1	<2.6	28	<5.6	<5.0	27
SV-5A-5	6/27/2019	300	5	3.3	5.7	48	16.2a	<31	20	17	<5.5	<4.0	<4.1	<2.6	11	<5.6	<5.0	<24
SV-5B-2.5	6/27/2019	300	2.5	9.3	5.9	330	70.9	<31	33	16	<5.5	<4.0	<4.1	<2.6	61	<5.6	<5.0	<24
SV-5B-5	6/27/2019	300	5	<3.2	5.3	41	14.2a	<31	20	18	<5.5	<4.0	<4.1	<2.6	14	<5.6	<5.0	<24
SV-5B-5 Dup	6/27/2019	300	5	<3.2	4.8	47	15.2a	<31	24	18	<5.5	<4.0	<4.1	<2.6	16	<5.6	<5.0	<24
SWRCB LTCP Residential RLs for Soil Vapor at 5 fbg (µg/m³)*				**85**	--	**1,100**	--	--	**93**	--	--	--	--	--	--	--	--	--
2.5 fbg Target Concentration (µg/m³) [Screening Levels adjusted by Site-Specific Attenuation Factor]**				**54**	**182,353**	**655**	**59,172**	--	**52**	**307**	**286**	**40,556**	**1,006**	**5.0**	--	**783,133**	**58,824**	**16,931,217**
5 fbg Target Concentration (µg/m³) [Screening Levels adjusted by Attenuation Factor for Future Residential Construction]***				**97**	**310,000**	**1,100**	**100,000**	--	**83**	**460**	**480**	**73,000**	**1,800**	**9.5**	--	**1,300,000**	**100,000**	**32,000,000**
Screening Levels for Residential Indoor Air (µg/m³)****				0.097	310	1.1	100	--	0.083	0.46	0.48	73	1.8	0.0095	--	1,300	100	32,000

Sample ID	Carbon Disulfide (µg/m³)	Chloroform (µg/m³)	Ethanol (µg/m³)	Ethyl Acetate (µg/m³)	Isopropyl Alcohol (µg/m³)	2-Hexanone (MBK) (µg/m³)	MEK (µg/m³)	n-Hexane (µg/m³)	n-Heptane (µg/m³)	Propene (µg/m³)	4-methyl-2-pentanone (µg/m³)	1,3,5-Trimethyl benzene (µg/m³)	1,2,4-Trimethyl benzene (µg/m³)	Helium (Tracer) (% v)	Oxygen^ (% v)	Nitrogen (% v)	Carbon Dioxide (% v)
SV-4A-2.5	<6.3	<4.9	25	<18	<25	<8.3	<4.3	3.7	6.8	<8.7	<8.3	13	47	<0.10	18	79	2.4
SV-4A-5	<6.3	<4.9	<19	<18	<25	<8.3	<4.3	<3.6	12	<8.7	<8.3	15	53	0.51	16	80	3.4
SV-4B-2.5	<6.3	<4.9	25	<18	<25	<8.3	<2.7	4.6	11	<8.7	<8.3	14	46	0.39	11	84	5.6
SV-4B-5	<6.3	<4.9	28	<18	<25	<8.3	<2.7	6.9	18	<8.7	<8.3	31	100	<0.10	18	79	2.5
SV-5A-2.5	<6.3	<4.9	<19	<18	<25	9.4	<4.3	12	32	<8.7	<8.3	33	110	<0.10	19	78	2.3
SV-5A-5	<6.3	<4.9	21	<18	<25	<8.3	<4.1	4.5	9.4	<8.7	<8.3	12	42	<0.10	19	78	2.5
SV-5B-2.5	<6.3	<4.9	20	<18	<25	<8.3	<30	26	74	<8.7	<8.3	71	200	<0.10	19	78	3.0
SV-5B-5	<6.3	7.4	22	<18	<25	<8.3	<30	4.5	7.9	<8.7	<8.3	17	59	<0.10	18	78	4.2
SV-5B-5 Dup	<6.3	7.6	22	<18	<25	<8.3	<4.3	4.6	8.8	<8.7	<8.3	20	69	<0.10	18	78	4.4
SWRCB LTCP Residential RLs for Soil Vapor at 5 fbg (µg/m³)*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.5 fbg Target Concentration (µg/m³) [Screening Levels adjusted by Site-Specific Attenuation Factor]**	**384,211**	**71**	--	**42,941**	**123,529**	**18,235**	**3,741,007**	**429,412**	**247,059**	**1,823,529**	**1,834,320**	**39,375**	**39,375**	**5.0**	--	--	--
5 fbg Target Concentration (µg/m³) [Screening Levels adjusted by Attenuation Factor for Future Residential Construction]***	**730,000**	**120**	--	**73,000**	**210,000**	**31,000**	**5,200,000**	**730,000**	**420,000**	**3,100,000**	**3,100,000**	**63,000**	**63,000**	**5.0**	--	--	--
Screening Levels for Residential Indoor Air (µg/m³)****	730	0.12	--	73	210	31	5,200	730	420	3,100	3,100	63	63	**5.0**	--	--	--

Abbreviations and Notes:

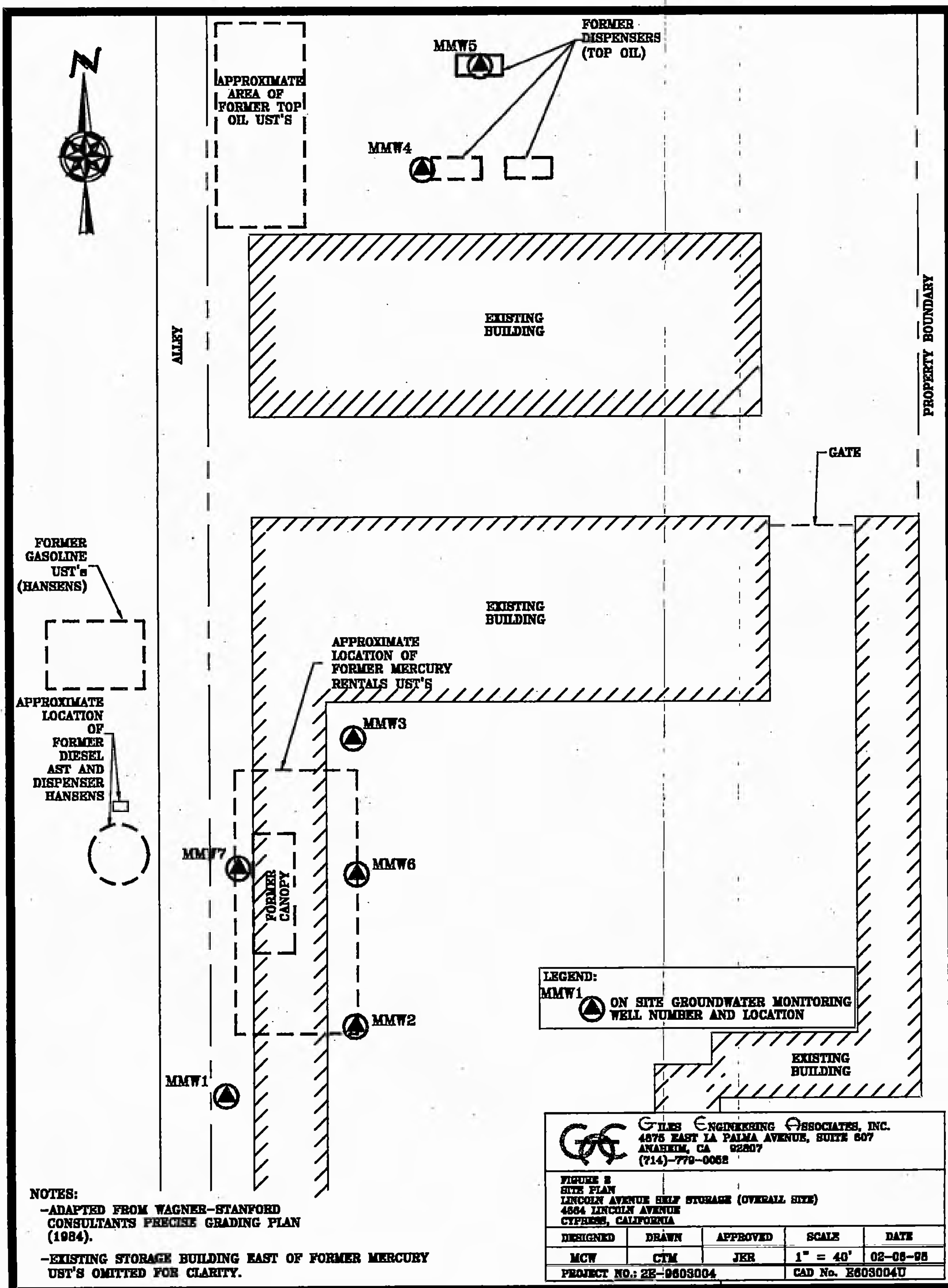
fbg = feet below grade
µg/m³ = micrograms per cubic meter
% v = percent by volume
NA = not analyzed
< = Below detection limit (not detected)

TPHg = Total petroleum hydrocarbons as gasoline
PCE = Tetrachloroethene
TCE = Trichloroethene
1,1-DCE = 1,1-Dichloroethene
1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1-Dichloroethane
Freon-11 = Trichlorofluoromethane
Freon-12 = Dichlorofluoromethane
MEK = Methyl ethyl ketone
1,1-DFA = 1,1-Difluoroethane

Bold concentrations detected above either the SWRCB LTCP and/or DTSC/CalEPA RLs
^ = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.
* - State Water Regioanl Control Board (SWRCB) Low Threat Closure Policy (LTCP) Residential Soil Gas Criteria Risk Levels (RLs) at 5 fbg (No Bioattentuation Zone), November, 2012
** - Using site-specific attenuation factors derived from the U.S. EPA's version of Johnson and Ettinger Model (EPA, 2017)
*** - DTSC/CalEPA Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, Table 2, attenuation factor for future residential construction measured at the contaminant source (0.001), October, 2011
**** - California DTSC HERO Note Number 3, DTSC-modified Screening Levels (DTSC-SLs), April 2019, or if not available, U.S. EPA Regional Screening Level, May, 2019
a = Since m,p-xylenes had a detection and o-xylene did not, half of the non-detect value was assumed for o-xylene
Full suite VOCs analyzed by Modified EPA Method TO-15
Naphthalene analyzed by EPA Method TO-17
Oxygen, carbon dioxide, and nitrogen analyzed by American Society for Testing a Materials (ASTM) Method D-1946 GC/TCD

Appendix F
Former Top Oil Service Station Figure (GEA)


N
ALLEY
APPROXIMATE AREA OF FORMER TOP OIL UST'S
MMW5
FORMER DISPENSERS (TOP OIL)
MMW4
EXISTING BUILDING
PROPERTY BOUNDARY
GATE
FORMER GASOLINE UST's (HANSENS)
EXISTING BUILDING
APPROXIMATE LOCATION OF FORMER MERCURY RENTALS UST'S
APPROXIMATE LOCATION OF FORMER DIESEL AST AND DISPENSER HANSENS
MMW3
MMW7
FORMER CANOPY
MMW6
LEGEND:
MMW1 ON SITE GROUNDWATER MONITORING WELL NUMBER AND LOCATION
MMW2
EXISTING BUILDING
MMW1
GILES ENGINEERING ASSOCIATES, INC.
4675 EAST LA PALMA AVENUE, SUITE 607
ANAHEIM, CA 92807
(714)-779-0052
FIGURE 2
SITE PLAN
LINCOLN AVENUE SELF STORAGE (OVERALL SITE)
4564 LINCOLN AVENUE
CYPRESS, CALIFORNIA
DESIGNED MCW
DRAWN CTM
APPROVED JER
SCALE 1" = 40'
DATE 02-06-96
PROJECT NO.: 2E-9603004
CAD No. E603004U
NOTES:
-ADAPTED FROM WAGNER-STANFORD CONSULTANTS PRECISE GRADING PLAN (1984).
-EXISTING STORAGE BUILDING EAST OF FORMER MERCURY UST'S OMITTED FOR CLARITY.

Appendix G
Former Mercury Rentals Site Soil Vapor Analytical Data (EarthCon)

Table 4
Subslab Soil Gas Analytical Results
Former Mercury Rentals and Top Oil Station
4664 Lincoln Ave
Cypress, California

SAMPLE ID			SG-33	SG-34	SG-35	SG-35 REP	SG-37	SG-40	SG-42	SG-43	SG-44	SG-45	Commercial-Industrial Screening Level	Attenuated Commercial-Industrial Screening Level
Analyte	Unit	Analysis	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16		
TPH-v (C5- C12) aliphatic	µg/m3	TO-15	200	520	220	550	340	250	120,000	1,200	1,100	510	130	2,600
1,1,1,2-Tetrachloroethane	µg/m3	TO-15	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 35	< 7.0	< 7.0	< 7.0	1.7	34
1,1,1-Trichloroethane	µg/m3	TO-15	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	< 28	< 5.5	< 5.5	< 5.5	4,400	88,000
1,1,2,2-Tetrachloroethane	µg/m3	TO-15	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 35	< 7.0	< 7.0	< 7.0	0.21	4.2
1,1,2-Trichloroethane	µg/m3	TO-15	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	< 28	< 5.5	< 5.5	< 5.5	0.77	15.4
1,1,2-Trichlorotrifluoroethane (F113)	µg/m3	TO-15	< 7.7	< 7.7	< 7.7	< 7.7	< 7.7	< 7.7	< 39	< 7.7	< 7.7	< 7.7	130,000	2,600,000
1,1-Dichloroethane	µg/m3	TO-15	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 21	< 4.1	< 4.1	< 4.1	7.7	154
1,1-Dichloroethene	µg/m3	TO-15	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 20	< 4.0	< 4.0	< 4.0	310	6,200
1,2,4-Trichlorobenzene	µg/m3	TO-15	< 38	< 38	< 38	< 38	< 38	< 38	< 190	< 38	< 38	< 38	1.7	34
1,2,4-Trimethylbenzene	µg/m3	TO-15	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	31	620
1,2-Dibromoethane (EDB)	µg/m3	TO-15	< 7.8	< 7.8	< 7.8	< 7.8	< 7.8	< 7.8	< 39	< 7.8	< 7.8	< 7.8	0.02	0.4
1,2-Dichlorobenzene	µg/m3	TO-15	< 12	< 12	< 12	< 12	< 12	< 12	< 61	< 12	< 12	< 12	880	17,600
1,2-Dichloroethane (EDC)	µg/m3	TO-15	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 21	< 4.1	< 4.1	< 4.1	0.47	9.4
1,2-Dichloropropane	µg/m3	TO-15	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 9.4	< 47	< 9.4	< 9.4	< 9.4	1.2	24
1,3,5-Trimethylbenzene	µg/m3	TO-15	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	180	3,600
1,3-Dichlorobenzene	µg/m3	TO-15	< 12	< 12	< 12	< 12	< 12	< 12	< 61	< 12	< 12	< 12	--	--
1,4-Dichlorobenzene	µg/m3	TO-15	< 12	< 12	< 12	< 12	< 12	< 12	< 61	< 12	< 12	< 12	1.1	22
2-Butanone (MEK)	µg/m3	TO-15	< 30	< 30	< 30	< 30	< 30	< 30	< 150	< 30	< 30	< 30	22,000	440,000
2-Hexanone (MBK)	µg/m3	TO-15	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3	< 41	< 8.3	< 8.3	< 8.3	130	2,600
4-Ethyltoluene	µg/m3	TO-15	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	--	--
4-Methyl-2-pentanone (MIBK)	µg/m3	TO-15	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3	< 41	< 8.3	< 8.3	< 8.3	13,000	260,000
Acetone	µg/m3	TO-15	52	170	< 24	26	< 24	< 24	910	130	77	70	140,000	2,800,000
Benzene	µg/m3	TO-15	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	< 3.2	110	6.6	3.5	< 3.2	0.42	8
Bromodichloromethane	µg/m3	TO-15	< 6.8	< 6.8	< 6.8	< 6.8	< 6.8	< 6.8	< 34	< 6.8	< 6.8	2.8	0.33	7
Bromoform	µg/m3	TO-15	< 10	< 10	< 10	< 10	< 10	< 10	< 52	< 10	< 10	< 10	11	220
Bromomethane	µg/m3	TO-15	< 16	< 16	< 16	< 16	< 16	< 16	< 79	< 16	< 16	< 16	22	440
Carbon disulfide	µg/m3	TO-15	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 32	< 6.3	< 6.3	< 6.3	3,100	62,000
Carbon tetrachloride	µg/m3	TO-15	1.1	< 6.4	< 6.4	< 6.4	1.0	< 6.4	< 32	< 6.4	< 6.4	1.0	0.29	6
Chlorobenzene	µg/m3	TO-15	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 23	< 4.7	< 4.7	< 4.7	220	4,400
Chloroethane	µg/m3	TO-15	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 40	< 8.0	< 8.0	< 8.0	10	200
Chloroform	µg/m3	TO-15	< 4.9	< 4.9	< 4.9	< 4.9	2.5	3.3	< 25	< 4.9	< 4.9	75	0.53	10.6
Chloromethane	µg/m3	TO-15	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 10	< 2.1	< 2.1	< 2.1	390	7,800
cis-1,2-Dichloroethene	µg/m3	TO-15	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	21	< 4.0	< 4.0	< 4.0	35	700
cis-1,3-Dichloropropene	µg/m3	TO-15	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 23	< 4.6	< 4.6	< 4.6	0.77	15.4
Dibromochloromethane	µg/m3	TO-15	< 8.6	< 8.6	< 8.6	< 8.6	< 8.6	< 8.6	< 43	< 8.6	< 8.6	< 8.6	0.45	9
Dichlorodifluoromethane (F12)	µg/m3	TO-15	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	440	8,800
Dichlorotetrafluoroethane (F114)	µg/m3	TO-15	< 7.1	< 7.1	< 7.1	< 7.1	< 7.1	< 7.1	< 35	< 7.1	< 7.1	< 7.1	--	--
Ethylbenzene	µg/m3	TO-15	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	38	< 4.4	< 4.4	< 4.4	4.9	98
Hexachlorobutadiene	µg/m3	TO-15	< 54	< 54	< 54	< 54	< 54	< 54	< 270	< 54	< 54	< 54	0.56	11.2
m,p-Xylene	µg/m3	TO-15	< 8.8	< 8.8	< 8.8	< 8.8	< 8.8	< 8.8	< 44	< 8.8	< 8.8	< 8.8	440	8,800
Methylene chloride (Dichloromethane)	µg/m3	TO-15	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 3.5	< 18	< 3.5	8.3	< 3.5	12	240
Naphthalene	µg/m3	TO-15	< 5.3	< 5.3	< 5.3	< 5.3	< 5.3	< 5.3	< 27	< 5.3	< 5.3	< 5.3	0.36	7.2
o-Xylene	µg/m3	TO-15	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 22	< 4.4	< 4.4	< 4.4	440	8,800
Styrene	µg/m3	TO-15	< 4.3	< 4.3	< 4.3	< 4.3	< 4.3	< 4.3	< 22	< 4.3	< 4.3	< 4.3	3,900	78,000
Tetrachloroethene	µg/m3	TO-15	< 6.9	< 6.9	7.6	< 6.9	< 6.9	< 6.9	< 34	< 6.9	10	12	2.10	42
Toluene	µg/m3	TO-15	4.5	4.7	4.5	6.9	4.8	3.9	< 19	11	7.6	5.4	1,300	26,000
trans-1,2-Dichloroethene	µg/m3	TO-15	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 40	< 8.0	< 8.0	< 8.0	350	7,000

Table 4
Subslab Soil Gas Analytical Results
Former Mercury Rentals and Top Oil Station
4664 Lincoln Ave
Cypress, California

SAMPLE ID			SG-33	SG-34	SG-35	SG-35 REP	SG-37	SG-40	SG-42	SG-43	SG-44	SG-45	Commercial-Industrial Screening Level	Attenuated Commercial-Industrial Screening Level
Analyte	**Unit**	**Analysis**	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16	9/7/16		
trans-1,3-Dichloropropene	**µg/m3**	**TO-15**	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 23	< 4.6	< 4.6	< 4.6	**0.77**	**15.4**
Trichloroethene	**µg/m3**	**TO-15**	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	< 5.5	**53**	< 5.5	< 5.5	< 5.5	**3**	**60**
Trichlorofluoromethane (F11)	**µg/m3**	**TO-15**	< 5.6	< 5.6	< 5.6	< 5.6	< 5.6	< 5.6	< 28	< 5.6	< 5.6	< 5.6	**3,100**	**62,000**
Vinyl chloride	**µg/m3**	**TO-15**	< 2.6	< 2.6	< 2.6	< 2.6	< 2.6	< 2.6	**5.2**	< 2.6	< 2.6	< 2.6	**0.16**	**3.2**
Helium*	**%**	**ASTM D1945M**	< 0.10	**0.30**	< 0.10	< 0.10	**0.32**	< 0.10	< 0.10	< 0.10	**1.56**	**0.22**	n/a	n/a

Notes: Analyzed by H & P Mobile Geochemistry in Carlsbad, CA

*	Helium was used as a tracer compound during leak checks. According to DTSC's Advisory - Active Soil Gas Investigations, an ambient leak of up to 5% is acceptable when using a shroud.
n/a	Not applicable
TPH-v	Total Petroleum Hydrocarbon - volatiles
µg/m^3	Micrograms per cubic meter
<	Not detected above laboratory detection limits
0.93	Detected result
5.2	Value exceeds the attenuated commercial-industrial screening level for air as defined by Department of Toxic Substances Control Human Health Risk Assessment Note Number: 3. An attenuation factor of 0.05 was used for the evaluation as instructed in the *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air.*
--	No screening level available.

Created by: FAH 9/29/16

Reviewed by: DN 9/30/16

Appendix H

Well and Boring Installation Permits

(Available Upon Request)

Appendix I

HMW-10R and HydroPunch™ Boring Logs

(Available Upon Request)

Appendix J
Advanced Technology Laboratories – Soil and Grab Groundwater Laboratory Analytical Reports
(Available Upon Request)

Appendix K
Blaine Tech Services, Inc. – Groundwater Monitoring and Development Field Notes

WELL GAUGING DATA

Project # 190611-MS1 Date 6/11/19 Client Paloma

Site 4620 Lincoln Ave Cypress

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MMW-2	0804	2					6.64	16.53		~~Sock cage~~
MMW-6	0810	2					6.79	19.68		Sock Cage
MMW-3	0815	2					7.06	19.39		Sock Cage
MMW-1	0830	2	Sheen				6.55	19.57		
HMW-5	0842	2		6.45	1.09		7.54	—		
MMW-7	0855	2		6.26	0.61		6.87	—		
MMW-5	0730	2					7.12	19.62		
MMW-4 ~~MMW-4A~~	0738	2					7.12	19.40		
HMW-7	0755	2					6.00	17.83		Sock Cage
HMW-4	0804	2		5.96	0.12		6.08	—		
RW	0811	12		5.89	0.03		5.92	—		
MMW-9B	0817	4		6.29	2.72		9.01	—		Skimmer
HMW-3A	0823	4		7.70	1.11		8.81	—		Skimmer
MMW-9A	0842	4					6.20	19.53		
MMW-8	0915	4	Sheen				7.79	19.50		
HMW-10R	1100 ~~1433~~	4					8.42	22.37		

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: HMW-3A	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): —	Depth to Water (DTW): 8.81
Depth to Free Product: 7.70	Thickness of Free Product (feet): 1.11
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other___________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___________

___________(Gals.) X ___________ = ___________ Gals.
1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius^2 * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
	Finger	print		Sample	Taken	3 VOAs

Did well dewater? Yes No	Gallons actually evacuated: —	
Sampling Date: 6/11/19	Sampling Time: 1400	Depth to Water: 8.11
Sample I.D.: HMW-3A	Laboratory: See COC	
Analyzed for: See COC	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Palona
Sampler: MS	Date: 6/11/19
Well I.D.: HMW-4	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): 6.08
Depth to Free Product: 5.96	Thickness of Free Product (feet): 0.12
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____________

__________(Gals.) X ____________ = ____________ Gals.
1 Case Volume   Specified Volumes   Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$radius^2 * 0.163$

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
	Fingerprint			Sample	taken	
						1 VOA

Did well dewater? Yes No	Gallons actually evacuated: —	
Sampling Date: 6/11/19	Sampling Time: 1330	Depth to Water: 6.08
Sample I.D.: HMW-4	Laboratory: See COC	
Analyzed for:	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: HMW-5	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): 7.54
Depth to Free Product: 6.45	Thickness of Free Product (feet): 1.09
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____________

__________(Gals.) X ____________ = ____________ Gals.
1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
	Fingerprint		Sample		taken	3VOAS

Did well dewater? Yes No	Gallons actually evacuated: —	
Sampling Date: 6/11/19	Sampling Time: 1500	Depth to Water: 7.54
Sample I.D.: HMW-5	Laboratory: See COC	
Analyzed for: See COC	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: HMW-7	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 17.83	Depth to Water (DTW): 6.00
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.37

11.83

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other: RF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

1.89 (Gals.) X 3 = 5.67 Gals.
1 Case Volume × Specified Volumes = Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1122	23.2	7.99	5015	483	2	Brown
1125	23.4	7.92	5320	559	3.5	
~~1130~~	— Well dewatered @ 5 gallons —					
1420	25.1	8.17	4727	91	—	

Did well dewater? Yes No   Gallons actually evacuated: 5 gallons

Sampling Date: 6-11-19   Sampling Time: 1420   Depth to Water: 6.00

Sample I.D.: HMW-7   Laboratory: See COC

Analyzed for: Other: See COC

EB I.D. (if applicable): @ Time   Duplicate I.D. (if applicable):

Analyzed for: Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: HMW-10R	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): ~~21.37~~ 22.37	Depth to Water (DTW): 8.42
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.21	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other RF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ____

9.06 (Gals.) X 3 = 27.20 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$radius^2 * 0.163$

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1225	23.0	7.89	7952	14	9	
1234	22.8	7.73	8566	47	18	
— Well dewatered @ 23 gallons						
1449	25.6	7.79	8430	31	—	

Did well dewater? Yes No — Gallons actually evacuated: 23

Sampling Date: 6-11-19 — Sampling Time: 1449 — Depth to Water: 8.42

Sample I.D.: HMW-10R — Laboratory: See COC

Analyzed for: — Other: See COC

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

Analyzed for: — Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: MMW-1	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 19.57	Depth to Water (DTW): 6.55
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.15	

13.02

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other: RF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

3.08 (Gals.) X 3 = 6.24 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$radius^2 * 0.163$

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1151	24.0	7.82	7249	10	2.0	Light brown
1154	23.8	7.85	7302	7	4.0	Light brown
1157	23.7	7.86	7241	6	6.5	
NMM						

Did well dewater? Yes **No** Gallons actually evacuated: 6.5 gallons

Sampling Date: 6-11-19 Sampling Time: 1440 Depth to Water: 6.55

Sample I.D.: MMW-1 Laboratory: See COC

Analyzed for: Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: PAloms
Sampler: MS	Date: 6/11/15
Well I.D.: MMW-2	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): 16.53	Depth to Water (DTW): 6.64
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.62	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other AF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

9.89

1.6 (Gals.) X 3 = 4.8 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1026	74.9	7.25	7667	13	1.6	Sheen
1032	73.4	7.46	9273	9	3.2	
1038	72.9	7.51	9126	8	4.8	

Did well dewater? Yes No		Gallons actually evacuated: 4.8	
Sampling Date: 6/11/15	Sampling Time: 1041	Depth to Water: 8.60	
Sample I.D.: MMW-2		Laboratory: See COC	
Analyzed for: See COC		Other:	
EB I.D. (if applicable):	@ Time	Duplicate I.D. (if applicable):	
Analyzed for:		Other:	
D.O. (if req'd):	Pre-purge: mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge: mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: MMW-3	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): 19.39	Depth to Water (DTW): 7.06
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.53	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ________

12.33

2.0 (Gals.) X 3 = 6 Gals.
1 Case Volume · Specified Volumes · Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1143	74.2	7.36	7838	11	2	
1149	73.5	7.40	7385	9	4	
1153	73.3	7.4	7041	8	6	

Did well dewater? Yes No	Gallons actually evacuated: 6	
Sampling Date: 6/11/19	Sampling Time: 1211	Depth to Water: 9.04
Sample I.D.: MMW-3	Laboratory: See COC	
Analyzed for: See COC	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: MMW-4	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 19.40	Depth to Water (DTW): 7.12
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.57	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other RF2

12.28

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing

Other: ___

1.96 (Gals.) X 3 = 5.89 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$radius^2 * 0.163$

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1013	24.3	7.87	3242	21	2	Amber color
1016	24.1	7.88	3305	24	4	
	— Well dewatered @ 4 gallons —				~~6~~	
1339	26.0	7.95	3219	18	—	

Did well dewater? Yes No | Gallons actually evacuated: 4 gallons

Sampling Date: 6-11-19 | Sampling Time: 1339 | Depth to Water: 7.26

Sample I.D.: MMW-4 | Laboratory: See COC

Analyzed for: | Other: See COC

EB I.D. (if applicable): @ Time | Duplicate I.D. (if applicable):

Analyzed for: | Other:

D.O. (if req'd): Pre-purge: mg/L | Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV | Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: MMW-5	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 19.62	Depth to Water (DTW): 7.12
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.62

12.50

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other RF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___

2 (Gals.) X 3 = 6 Gals.
1 Case Volume, Specified Volumes, Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
0946	22.8	7.41	1587	12	2	
0951	22.9	7.47	1982	11	4	
0956	23.3	7.46	2095	11	6	

Did well dewater? Yes No — Gallons actually evacuated: 6.0 gallons

Sampling Date: 6-11-19 — Sampling Time: 1320 — Depth to Water: 7.19

Sample I.D.: MMW-5 — Laboratory: See COC

Analyzed for: Other: See COC

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

Analyzed for: Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 190611-MS	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: MMW-6	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): 19.68	Depth to Water (DTW): 6.79
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 9.37	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other______

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

12.89

2.1 (Gals.) X 3 = 6.3 Gals.
1 Case Volume, Specified Volumes, Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1116	73.5	7.71	5691	17	2.1	Sheen
1120	72.7	7.58	5992	19	4.2	
1124	72.4	7.52	6241	18	6.3	

Did well dewater? Yes No   Gallons actually evacuated: 6.3

Sampling Date: 6/11/19   Sampling Time: 1059   Depth to Water: 8.48

Sample I.D.: MMW-6   Laboratory: See COC

Analyzed for: See COC   Other:

EB I.D. (if applicable): @ Time   Duplicate I.D. (if applicable):

Analyzed for: Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: MMW-7	Well Diameter: 2 3 4 6 8 ____
Total Well Depth (TD): —	Depth to Water (DTW): 6.87
Depth to Free Product: ~~[illegible]~~ 6.26	Thickness of Free Product (feet): 0.61
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing

Other: ____

____(Gals.) X ____ = ____ Gals.
1 Case Volume   Specified Volumes   Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
Fingerprint Sample taken						3 VOA

Did well dewater? Yes No	Gallons actually evacuated: —
Sampling Date: 6/11/19 Sampling Time: 1435	Depth to Water: 6.87
Sample I.D.: MMW-7	Laboratory: See COC
Analyzed for: See COC	Other:
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):
Analyzed for:	Other:
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: MMW-8	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): ~~19.90~~ 19.50	Depth to Water (DTW): ~~7.80~~ 7.79
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH

DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.22

12.10

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other RFL

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

7.86 (Gals.) X 3 = 23.59 Gals.
1 Case Volume / Specified Volumes / Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1043	21.7	7.68	~~556~~ 15861	4	8	Amber-Yellow
1049	21.6	7.72	8340	7	16	
— Well dewatered			@ ~~16.5~~	17.0 gallons —		
1353	24.5	7.77	8551	9	—	

Did well dewater? Yes No — Gallons actually evacuated: 17.0 gallons

Sampling Date: 6-11-19 Sampling Time: 1353 Depth to Water: 7.87

Sample I.D.: MMW-8 Laboratory: See COC

Analyzed for: Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MT	Date: 6-11-19
Well I.D.: MMU-9A	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 19.53	Depth to Water (DTW): 6.20
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.87	

13.33

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other RF2

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ______

8.66 (Gals.) X 3 = 25.99 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	$radius^2 * 0.163$

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1302	24.3	7.02	1659	8	9	
— Well dewatered @ 17 gallons —						
1520	26.9	7.27	5820	67	—	

Did well dewater? Yes No	Gallons actually evacuated: 17.0 gallons	
Sampling Date: 6-11-19	Sampling Time: 1520	Depth to Water: 16.42 (>2 hrs)
Sample I.D.: MMW-9A	Laboratory: See COC	
Analyzed for:	Other: See COC	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: MMW-9B	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): —	Depth to Water (DTW): 9.01
Depth to Free Product: 6.29	Thickness of Free Product (feet): 2.72
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing

Other: ____________

__________(Gals.) X ____________ = ____________ Gals.
1 Case Volume   Specified Volumes   Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
	Fingerprint		Sample		Taken	3 VOAS

Did well dewater? Yes No	Gallons actually evacuated: ~~9.01~~ 0	
Sampling Date: 6/11/19	Sampling Time: 1615	Depth to Water: ~~See COC~~ 9.01
Sample I.D.: MMW-9B	Laboratory: See COC	
Analyzed for: See COC	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

WELL MONITORING DATA SHEET

Project #: 190611-MS1	Client: Paloma
Sampler: MS	Date: 6/11/19
Well I.D.: RW	Well Diameter: 2 3 4 6 8 12
Total Well Depth (TD):	Depth to Water (DTW): 5.92
Depth to Free Product: 5.89	Thickness of Free Product (feet): 0.03
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other____________

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing

Other: ____________

____________(Gals.) X ____________ = ____________ Gals.
1 Case Volume   Specified Volumes   Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
	Grab		Sample		Taken	

Did well dewater? Yes **No**	Gallons actually evacuated: —	
Sampling Date: 6/11/19	Sampling Time: 1310	Depth to Water: 5.92
Sample I.D.: RW	Laboratory: See COC	
Analyzed for: See COC	Other:	
EB I.D. (if applicable): @ Time	Duplicate I.D. (if applicable):	
Analyzed for:	Other:	
D.O. (if req'd): Pre-purge: mg/L	Post-purge: mg/L	
O.R.P. (if req'd): Pre-purge: mV	Post-purge: mV	

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF COUSTODY

ESS Lab #

Turn Time: Rush: See comment*

Regulatory State: California

Is this project for any of the following?: ☐ MA-MCP ☐ CT-RCP ☐ RGP ☐ Remediation

Reporting Limits

Electonic Deliverables ☐ Limit Checker ☐ Excel ☐ Other (Please Specifiy) →

Company Name	Project #	Project Name
Paloma Environmental Services, Inc.	20180515	Former Hauser Auto Tow

Contact Person	Address
Matt Smith	52 El Presidio

City	State	Zip Code	PO #
RSM	CA	92688	

Telephone Number	FAX Number	Email Address
949-246-9336	–	msmith@palomaenv.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	GC/FID	PAHs	PIANO	Total Lead	Organic Lead	Total Sulfur	Simulated Distillation	API Gravity
	6/11/19	1500	LNAPL	Aqueous	HMW-5	X							
	6/11/19	1435	LNAPL	Aqueous	~~AA~~ MMW-7	X							
	6/11/19	1330	LNAPL	Aqueous	HMW-4	X							
					~~RW~~ MC 6/11/19								
	6/11/19	1415	LNAPL	Aqueous	MMW-9B	X							
	6/11/19	1400	LNAPL	Aqueous	HMW-3A	X							

Container Type: AG-Amber Glass B-BOD Bottle G-Glass P-Poly S-Sterile V-Vial O-Other — ag ag

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers: 13

Laboratory Use Only

Cooler Present: ______

Seals Intact: ______

Cooler Temperature: °C

Sampled by :

Comments: Please specify "Other" preservative and containers types in this space

* Send prelim. chromatograms for further analysis verification

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
6/11/19 1600	1600 6/11/19	6/12/19	Fed Ex BTS Ship 6/12/19

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
BTS Fed Ex			

WELLHEAD INSPECTION CHECKLIST

Client: Paloma　　Date:

Site Address: 4670 Lincoln Ave Cypress

Job Number: ~~[illegible]~~ 190611-MS1　　Technician: MS

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MMW-2		✓	✓							
MMW-6		✓	✓							
MMW-3		✓	✓							
MMW-1		✓	✓							
HMW-5		✓	✓							
MMW-5		✓	✓	0/2	Bolts	Present				
MMW-4		✓	✓	0/2	Bolts	Present; 1	Tab	broken		
MMW-8		✓	✓	2/2	Tabs	Stripped				
HMW-7		✓	✓	3/3	Tabs	broken				
HMW-4	✓	Vault								
RW	✓	Vault								
MMW-9B		✓	✓	2/2	Tabs	broken;	Bolts	missing		
HMW-3A		✓	✓	1/2	Tabs	broken	1/2	Bolts	missing	
MMW-9A	✓	Vault		✓	No	bolts				
HMW-10R		PVC	Pipe							

NOTES: MMW-2 2/2 Tabs Broken, MMW-6 2/2 tabs Broken
MMW-3 2/2 tabs missing Bolts, MMW-1 2/2 Bolts missing
HMW-5 3/3 Bolts Missing

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Paloma @ Cypress

PROJECT NUMBER ~~19060~~ 190611-MS1

EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
Ultrameter II	6214212	6/11/19 0935	4/7/10 ~~3900~~	3.98/7.02 10.03	Y	75.1	MS
			3900	3897	Y		

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Paloma Env. Services Inc @ Cypress				PROJECT NUMBER ~~1906 MSI~~ 190611-MSI			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI ProPlus	10E102050	0855 6-11-19	pH 7,10,4 Cond 3900	6.86, 10.00, 4.05 4012	✓✓✓ ✓	24.8	MT
			~~ORP 240~~ ~~DO 100%~~		~~✓~~ ~~✓~~		

WELL GAUGING DATA

Project # 190607-ER1 Date 6/7/19 Client Palomar

Site 4620 Lincoln. Ave

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
Hmw-1	1045	4					8.33	22.28	TOC	

WELLHEAD INSPECTION CHECKLIST

Client Paloma Date 6/7/19

Site Address 4621 Lincoln Ave

Job Number 190607-EM1 Technician EM

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
HWMW-10R	✓	✓	✓							

NOTES:

WELL DEVELOPMENT DATA SHEET

Project #: 190607-ER1	Client: Paloma
Developer: ER	Date Developed: 6/7/19
Well I.D. HMW-10R	Well Diameter: (circle one) 2 3 4 6 __
Total Well Depth: Before 22.28 After 22.30	Depth to Water: Before 8.33 After 14.60
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
$\{12 \times (d^2/4) \times \pi\} / 231$
where
12 = in / foot
d = diameter (in.)
$\pi = 3.1416$
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

1 Case Volume	X	Specified Volumes	=	gallons
10	X	9	=	90

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☐ Electric Submersible
- ☑ Positive Air Displacement

Type of Installed Pump: PAD
Other equipment used: 4" Swab

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1108	Swab well for 15 min with 4' swab					
1125	Put PAD pump down				0	(dark brown water)
1130	73.8	7.47	9152	71000	9	(not muddy water)
1145	73.0	7.34	8862	71000	18	Hard bottom
1208	73.8	8.04	8757	71000	27	
1225	73.9	8.60	8727	71000	36	light brown water
1322	77.3	9.71	8824	755	45	Becoming less turbid
1332	74.4	9.23	8690	403	54	
1342	74.3	9.07	8560	470	63	Very Hard Bottom
1353	73.9	8.43	8574	302	72	
1405	73.0	8.15	8641	186	81	
1420	73.0	7.99	8671	102	90	
1436	73.3	8.67	8578	90	99	

Did Well Dewater?	If yes, note above.	Gallons Actually Evacuated:	126

WELL DEVELOPMENT DATA SHEET

Well I.D. HMW-10R	PAGE 2 OF 2
Project #: 190607-EH	Client: Paloma

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1452	72.0	8.30	8559	68	108	
1508	72.7	8.24	8527	64	117	
1525	71.9	8.21	8534	64	126	TD= 22.30
						DTW= 14.60

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Paloma @ Cypress

PROJECT NUMBER 190607-ER1

EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °F	INITIALS
Ultrameter II	07DEC12	6/7/10 1006	pH 7	7.05	Y	72	ER
			10	10.05	Y	72	ER
			4	3.98	Y	72	ER
			Conductivity 3900	3852	Y	72	ER

Appendix L
Advanced Technology Laboratories – Groundwater Laboratory Analytical Reports

ADVANCED TECHNOLOGY LABORATORIES

June 24, 2019

Matt Smith
Paloma Environmental Services, Inc.
52 El Prisma
Rancho Santa Margarita, CA 92688
Tel: (949) 246-9336
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1902325

Client Reference : Former Hansen Auto Tow, 20180515

Enclosed are the results for sample(s) received on June 11, 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Edgar Caballero
President & Laboratory Director

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MMW-2	1902325-01	Water	6/11/19 10:41	6/11/19 16:05
MMW-6	1902325-02	Water	6/11/19 10:59	6/11/19 16:05
MMW-3	1902325-03	Water	6/11/19 12:11	6/11/19 16:05
MMW-1	1902325-04	Water	6/11/19 14:40	6/11/19 16:05
MMW-5	1902325-05	Water	6/11/19 13:20	6/11/19 16:05
MMW-4	1902325-06	Water	6/11/19 13:39	6/11/19 16:05
HMW-7	1902325-07	Water	6/11/19 14:20	6/11/19 16:05
MMW-9A	1902325-08	Water	6/11/19 15:20	6/11/19 16:05
MMW-8	1902325-09	Water	6/11/19 13:53	6/11/19 16:05
HMW-10R	1902325-10	Water	6/11/19 14:49	6/11/19 16:05
RW	1902325-11	Water	6/11/19 13:10	6/11/19 16:05

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-2
Lab ID: 1902325-01

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**5.3**	1.0	5	B9F0604	06/21/2019	06/21/19 14:41	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 14:41*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**2.7**	0.20	1	B9F0417	06/14/2019	06/14/19 23:55	
ORO		**2.6**	0.20	1	B9F0417	06/14/2019	06/14/19 23:55	
Surrogate: p-Terphenyl	*50.7 %*		*32 - 169*		B9F0417	06/14/2019	*06/14/19 23:55*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-2

Lab ID: 1902325-01

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 15:09	D7
MTBE	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Naphthalene	**26**	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-2

Lab ID: 1902325-01

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0433	06/16/2019	06/16/19 15:09	D7
tert-Butylbenzene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Tetrachloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Toluene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
trans-1,2-Dichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
trans-1,3-Dichloropropene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Trichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Trichlorofluoromethane		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Vinyl acetate		ND	100	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Vinyl chloride		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:09	D7
Surrogate: 1,2-Dichloroethane-d4	*120 %*		*57 - 152*		B9F0433	06/16/2019	*06/16/19 15:09*	
Surrogate: 4-Bromofluorobenzene	*98.5 %*		*62 - 134*		B9F0433	06/16/2019	*06/16/19 15:09*	
Surrogate: Dibromofluoromethane	*115 %*		*56 - 167*		B9F0433	06/16/2019	*06/16/19 15:09*	
Surrogate: Toluene-d8	*118 %*		*33 - 170*		B9F0433	06/16/2019	*06/16/19 15:09*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-6
Lab ID: 1902325-02

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2.1**	0.40	2	B9F0604	06/21/2019	06/21/19 15:05	
Surrogate: 4-Bromofluorobenzene	*103 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 15:05*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**19**	1.0	5	B9F0417	06/14/2019	06/15/19 02:12	
ORO		**14**	1.0	5	B9F0417	06/14/2019	06/15/19 02:12	
Surrogate: p-Terphenyl	*74.9 %*		*32 - 169*		B9F0417	06/14/2019	*06/15/19 02:12*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-6
Lab ID: 1902325-02

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 15:33	D7
MTBE	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Naphthalene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-6
Lab ID: 1902325-02

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0433	06/16/2019	06/16/19 15:33	D7
tert-Butylbenzene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Tetrachloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Toluene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
trans-1,2-Dichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
trans-1,3-Dichloropropene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Trichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Trichlorofluoromethane		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Vinyl acetate		ND	100	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Vinyl chloride		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:33	D7
Surrogate: 1,2-Dichloroethane-d4	*121 %*		*57 - 152*		B9F0433	06/16/2019	*06/16/19 15:33*	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*62 - 134*		B9F0433	06/16/2019	*06/16/19 15:33*	
Surrogate: Dibromofluoromethane	*117 %*		*56 - 167*		B9F0433	06/16/2019	*06/16/19 15:33*	
Surrogate: Toluene-d8	*117 %*		*33 - 170*		B9F0433	06/16/2019	*06/16/19 15:33*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-3
Lab ID: 1902325-03

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1.6**	0.40	2	B9F0604	06/21/2019	06/21/19 16:46	
Surrogate: 4-Bromofluorobenzene	*109 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 16:46*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**8.0**	1.0	5	B9F0417	06/14/2019	06/17/19 13:02	
ORO		**7.8**	1.0	5	B9F0417	06/14/2019	06/17/19 13:02	
Surrogate: p-Terphenyl	*69.6 %*		*32 - 169*		B9F0417	06/14/2019	*06/17/19 13:02*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-3

Lab ID: 1902325-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 15:57	D7
MTBE	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Naphthalene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-3
Lab ID: 1902325-03

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0433	06/16/2019	06/16/19 15:57	D7
tert-Butylbenzene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Tetrachloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Toluene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
trans-1,2-Dichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
trans-1,3-Dichloropropene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Trichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Trichlorofluoromethane		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Vinyl acetate		ND	100	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Vinyl chloride		ND	5.0	10	B9F0433	06/16/2019	06/16/19 15:57	D7
Surrogate: 1,2-Dichloroethane-d4	*124 %*		*57 - 152*		B9F0433	06/16/2019	*06/16/19 15:57*	
Surrogate: 4-Bromofluorobenzene	*98.4 %*		*62 - 134*		B9F0433	06/16/2019	*06/16/19 15:57*	
Surrogate: Dibromofluoromethane	*116 %*		*56 - 167*		B9F0433	06/16/2019	*06/16/19 15:57*	
Surrogate: Toluene-d8	*117 %*		*33 - 170*		B9F0433	06/16/2019	*06/16/19 15:57*	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-1

Lab ID: 1902325-04

Gasoline Range Organics by EPA 8015B (Modified) **Analyst: JBL**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**7.6**	4.0	20	B9F0377	06/14/2019	06/14/19 01:37	
Surrogate: 4-Bromofluorobenzene	*93.2 %*		*70 - 130*		B9F0377	06/14/2019	*06/14/19 01:37*	

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**5.0**	0.20	1	B9F0417	06/14/2019	06/15/19 00:47	
ORO		**4.0**	0.20	1	B9F0417	06/14/2019	06/15/19 00:47	
Surrogate: p-Terphenyl	*76.9 %*		*32 - 169*		B9F0417	06/14/2019	*06/15/19 00:47*	

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1,1-Trichloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1,2,2-Tetrachloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1,2-Trichloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1-Dichloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1-Dichloroethene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,1-Dichloropropene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2,3-Trichloropropane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2,3-Trichlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2,4-Trichlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2,4-Trimethylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2-Dibromo-3-chloropropane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2-Dibromoethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2-Dichlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2-Dichloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,2-Dichloropropane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,3,5-Trimethylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,3-Dichlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,3-Dichloropropane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
1,4-Dichlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
2,2-Dichloropropane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
2-Chlorotoluene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-1
Lab ID: 1902325-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
4-Isopropyltoluene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Benzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Bromobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Bromochloromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Bromodichloromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Bromoform	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Bromomethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Carbon disulfide	ND	200	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Carbon tetrachloride	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Chlorobenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Chloroethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Chloroform	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Chloromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
cis-1,2-Dichloroethene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
cis-1,3-Dichloropropene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Di-isopropyl ether	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Dibromochloromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Dibromomethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Dichlorodifluoromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Ethyl Acetate	ND	2000	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Ethyl Ether	ND	2000	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Ethyl tert-butyl ether	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Ethylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Freon-113	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Hexachlorobutadiene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Isopropylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
m,p-Xylene	ND	200	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Methylene chloride	ND	200	200	B9F0433	06/16/2019	06/16/19 17:59	D7
MTBE	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
n-Butylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
n-Propylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Naphthalene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
o-Xylene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
sec-Butylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Styrene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
tert-Amyl methyl ether	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-1
Lab ID: 1902325-04

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	2000	200	B9F0433	06/16/2019	06/16/19 17:59	D7
tert-Butylbenzene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Tetrachloroethene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Toluene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
trans-1,2-Dichloroethene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
trans-1,3-Dichloropropene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Trichloroethene	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Trichlorofluoromethane	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Vinyl acetate	ND	2000	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Vinyl chloride	ND	100	200	B9F0433	06/16/2019	06/16/19 17:59	D7
Surrogate: 1,2-Dichloroethane-d4	*123 %*	*57 - 152*		B9F0433	06/16/2019	*06/16/19 17:59*	
Surrogate: 4-Bromofluorobenzene	*95.5 %*	*62 - 134*		B9F0433	06/16/2019	*06/16/19 17:59*	
Surrogate: Dibromofluoromethane	*118 %*	*56 - 167*		B9F0433	06/16/2019	*06/16/19 17:59*	
Surrogate: Toluene-d8	*116 %*	*33 - 170*		B9F0433	06/16/2019	*06/16/19 17:59*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-5
Lab ID: 1902325-05

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**0.66**	0.20	1	B9F0377	06/13/2019	06/13/19 23:36	
Surrogate: 4-Bromofluorobenzene	*128 %*		*70 - 130*		B9F0377	06/13/2019	*06/13/19 23:36*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**0.65**	0.20	1	B9F0417	06/14/2019	06/14/19 23:04	
ORO		**0.22**	0.20	1	B9F0417	06/14/2019	06/14/19 23:04	
Surrogate: p-Terphenyl	*83.8 %*		*32 - 169*		B9F0417	06/14/2019	*06/14/19 23:04*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1,1-Trichloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1,2,2-Tetrachloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1,2-Trichloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1-Dichloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1-Dichloroethene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,1-Dichloropropene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2,3-Trichloropropane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2,3-Trichlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2,4-Trichlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2,4-Trimethylbenzene	**38**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2-Dibromo-3-chloropropane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2-Dibromoethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2-Dichlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2-Dichloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,2-Dichloropropane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,3,5-Trimethylbenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,3-Dichlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,3-Dichloropropane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
1,4-Dichlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
2,2-Dichloropropane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
2-Chlorotoluene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-5
Lab ID: 1902325-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
4-Isopropyltoluene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Benzene	**75**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Bromobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Bromochloromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Bromodichloromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Bromoform	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Bromomethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Carbon disulfide	ND	1.0	1	B9F0433	06/16/2019	06/16/19 14:45	
Carbon tetrachloride	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Chlorobenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Chloroethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Chloroform	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Chloromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
cis-1,2-Dichloroethene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
cis-1,3-Dichloropropene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Di-isopropyl ether	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Dibromochloromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Dibromomethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Dichlorodifluoromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Ethyl Acetate	ND	10	1	B9F0433	06/16/2019	06/16/19 14:45	
Ethyl Ether	ND	10	1	B9F0433	06/16/2019	06/16/19 14:45	
Ethyl tert-butyl ether	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Ethylbenzene	**94**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Freon-113	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Hexachlorobutadiene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Isopropylbenzene	**15**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
m,p-Xylene	**14**	1.0	1	B9F0433	06/16/2019	06/16/19 14:45	
Methylene chloride	ND	1.0	1	B9F0433	06/16/2019	06/16/19 14:45	
MTBE	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
n-Butylbenzene	**3.6**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
n-Propylbenzene	**36**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Naphthalene	**44**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
o-Xylene	**0.90**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
sec-Butylbenzene	**3.5**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Styrene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
tert-Amyl methyl ether	**2.6**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-5
Lab ID: 1902325-05

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	10	1	B9F0433	06/16/2019	06/16/19 14:45	
tert-Butylbenzene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Tetrachloroethene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Toluene	**2.6**	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
trans-1,2-Dichloroethene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
trans-1,3-Dichloropropene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Trichloroethene	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Trichlorofluoromethane	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Vinyl acetate	ND	10	1	B9F0433	06/16/2019	06/16/19 14:45	
Vinyl chloride	ND	0.50	1	B9F0433	06/16/2019	06/16/19 14:45	
Surrogate: 1,2-Dichloroethane-d4	*114 %*	*57 - 152*		B9F0433	06/16/2019	*06/16/19 14:45*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*62 - 134*		B9F0433	06/16/2019	*06/16/19 14:45*	
Surrogate: Dibromofluoromethane	*109 %*	*56 - 167*		B9F0433	06/16/2019	*06/16/19 14:45*	
Surrogate: Toluene-d8	*114 %*	*33 - 170*		B9F0433	06/16/2019	*06/16/19 14:45*	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-4
Lab ID: 1902325-06

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**12**	2.0	10	B9F0604	06/21/2019	06/21/19 19:13	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 19:13*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**1.5**	0.20	1	B9F0417	06/14/2019	06/14/19 23:38	
ORO		**0.29**	0.20	1	B9F0417	06/14/2019	06/14/19 23:38	
Surrogate: p-Terphenyl	*81.3 %*		*32 - 169*		B9F0417	06/14/2019	*06/14/19 23:38*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1-Dichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1-Dichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,1-Dichloropropene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2,4-Trimethylbenzene	**380**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2-Dibromoethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2-Dichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,2-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,3,5-Trimethylbenzene	**19**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,3-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
2,2-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
2-Chlorotoluene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-4
Lab ID: 1902325-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
4-Isopropyltoluene	**5.6**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Benzene	**540**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Bromobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Bromochloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Bromodichloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Bromoform	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Bromomethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Carbon disulfide	ND	10	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Carbon tetrachloride	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Chlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Chloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Chloroform	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Chloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Di-isopropyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Dibromochloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Dibromomethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Ethyl Acetate	ND	100	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Ethyl Ether	ND	100	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Ethylbenzene	**450**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Freon-113	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Hexachlorobutadiene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Isopropylbenzene	**30**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
m,p-Xylene	**280**	10	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Methylene chloride	ND	10	10	B9F0443	06/17/2019	06/17/19 19:13	D7
MTBE	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
n-Butylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
n-Propylbenzene	**64**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Naphthalene	**76**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
o-Xylene	**120**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
sec-Butylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Styrene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-4

Lab ID: 1902325-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	100	10	B9F0443	06/17/2019	06/17/19 19:13	D7
tert-Butylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Tetrachloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Toluene	**440**	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
trans-1,2-Dichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
trans-1,3-Dichloropropene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Trichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Trichlorofluoromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Vinyl acetate	ND	100	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Vinyl chloride	ND	5.0	10	B9F0443	06/17/2019	06/17/19 19:13	D7
Surrogate: 1,2-Dichloroethane-d4	*112 %*	*57 - 152*		B9F0443	06/17/2019	*06/17/19 19:13*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*62 - 134*		B9F0443	06/17/2019	*06/17/19 19:13*	
Surrogate: Dibromofluoromethane	*109 %*	*56 - 167*		B9F0443	06/17/2019	*06/17/19 19:13*	
Surrogate: Toluene-d8	*117 %*	*33 - 170*		B9F0443	06/17/2019	*06/17/19 19:13*	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID HMW-7

Lab ID: 1902325-07

Gasoline Range Organics by EPA 8015B (Modified) **Analyst: JBL**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1.5**	0.40	2	B9F0604	06/21/2019	06/21/19 17:11	
Surrogate: 4-Bromofluorobenzene	*98.0 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 17:11*	

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**6.6**	2.0	10	B9F0417	06/14/2019	06/17/19 13:18	
ORO		**4.5**	2.0	10	B9F0417	06/14/2019	06/17/19 13:18	
Surrogate: p-Terphenyl	*63.8 %*		*32 - 169*		B9F0417	06/14/2019	*06/17/19 13:18*	

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID HMW-7
Lab ID: 1902325-07

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 16:22	D7
MTBE	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Naphthalene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID HMW-7

Lab ID: 1902325-07

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	100	10	B9F0433	06/16/2019	06/16/19 16:22	D7
tert-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Tetrachloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Toluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
trans-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
trans-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Trichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Trichlorofluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Vinyl acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Vinyl chloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:22	D7
Surrogate: 1,2-Dichloroethane-d4	*118 %*	*57 - 152*		B9F0433	06/16/2019	*06/16/19 16:22*	
Surrogate: 4-Bromofluorobenzene	*96.9 %*	*62 - 134*		B9F0433	06/16/2019	*06/16/19 16:22*	
Surrogate: Dibromofluoromethane	*114 %*	*56 - 167*		B9F0433	06/16/2019	*06/16/19 16:22*	
Surrogate: Toluene-d8	*121 %*	*33 - 170*		B9F0433	06/16/2019	*06/16/19 16:22*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-9A

Lab ID: 1902325-08

Gasoline Range Organics by EPA 8015B (Modified) **Analyst: JBL**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**0.90**	0.20	1	B9F0604	06/21/2019	06/21/19 17:35	
Surrogate: 4-Bromofluorobenzene	*97.9 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 17:35*	

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**3.6**	1.0	5	B9F0417	06/14/2019	06/17/19 12:45	
ORO		**3.5**	1.0	5	B9F0417	06/14/2019	06/17/19 12:45	
Surrogate: p-Terphenyl	*62.9 %*		*32 - 169*		B9F0417	06/14/2019	*06/17/19 12:45*	

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-9A

Lab ID: 1902325-08

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 16:46	D7
MTBE	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Naphthalene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-9A

Lab ID: 1902325-08

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0433	06/16/2019	06/16/19 16:46	D7
tert-Butylbenzene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Tetrachloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Toluene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
trans-1,2-Dichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
trans-1,3-Dichloropropene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Trichloroethene		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Trichlorofluoromethane		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Vinyl acetate		ND	100	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Vinyl chloride		ND	5.0	10	B9F0433	06/16/2019	06/16/19 16:46	D7
Surrogate: 1,2-Dichloroethane-d4	*122 %*		*57 - 152*		B9F0433	06/16/2019	*06/16/19 16:46*	
Surrogate: 4-Bromofluorobenzene	*98.0 %*		*62 - 134*		B9F0433	06/16/2019	*06/16/19 16:46*	
Surrogate: Dibromofluoromethane	*116 %*		*56 - 167*		B9F0433	06/16/2019	*06/16/19 16:46*	
Surrogate: Toluene-d8	*122 %*		*33 - 170*		B9F0433	06/16/2019	*06/16/19 16:46*	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID MMW-8
Lab ID: 1902325-09

Gasoline Range Organics by EPA 8015B (Modified)
Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1.3**	0.40	2	B9F0604	06/21/2019	06/21/19 17:59	
Surrogate: 4-Bromofluorobenzene	*99.1 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 17:59*	

Diesel Range Organics by EPA 8015B
Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**2.3**	0.20	1	B9F0417	06/14/2019	06/15/19 00:30	
ORO		**2.4**	0.20	1	B9F0417	06/14/2019	06/15/19 00:30	
Surrogate: p-Terphenyl	*69.4 %*		*32 - 169*		B9F0417	06/14/2019	*06/15/19 00:30*	

Volatile Organic Compounds by EPA 8260B
Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,1-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2-Dibromoethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2-Dichloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,3-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
2,2-Dichloropropane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
2-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-8
Lab ID: 1902325-09

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
4-Isopropyltoluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Benzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Bromobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Bromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Bromodichloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Bromoform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Bromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Carbon disulfide	ND	10	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Carbon tetrachloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Chlorobenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Chloroethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Chloroform	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Chloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Di-isopropyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Dibromochloromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Dibromomethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Ethyl Acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Ethyl Ether	ND	100	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Ethylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Freon-113	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Hexachlorobutadiene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Isopropylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
m,p-Xylene	ND	10	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Methylene chloride	ND	10	10	B9F0433	06/16/2019	06/16/19 17:10	D7
MTBE	**16**	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
n-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
n-Propylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Naphthalene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
o-Xylene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
sec-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Styrene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID MMW-8
Lab ID: 1902325-09

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	100	10	B9F0433	06/16/2019	06/16/19 17:10	D7
tert-Butylbenzene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Tetrachloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Toluene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
trans-1,2-Dichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
trans-1,3-Dichloropropene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Trichloroethene	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Trichlorofluoromethane	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Vinyl acetate	ND	100	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Vinyl chloride	ND	5.0	10	B9F0433	06/16/2019	06/16/19 17:10	D7
Surrogate: 1,2-Dichloroethane-d4	*123 %*	*57 - 152*		B9F0433	06/16/2019	*06/16/19 17:10*	
Surrogate: 4-Bromofluorobenzene	*98.0 %*	*62 - 134*		B9F0433	06/16/2019	*06/16/19 17:10*	
Surrogate: Dibromofluoromethane	*120 %*	*56 - 167*		B9F0433	06/16/2019	*06/16/19 17:10*	
Surrogate: Toluene-d8	*118 %*	*33 - 170*		B9F0433	06/16/2019	*06/16/19 17:10*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID HMW-10R
Lab ID: 1902325-10

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**1.2**	0.40	2	B9F0604	06/21/2019	06/21/19 18:24	
Surrogate: 4-Bromofluorobenzene	*103 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 18:24*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**3.4**	0.20	1	B9F0417	06/14/2019	06/15/19 00:12	
ORO		**3.5**	0.20	1	B9F0417	06/14/2019	06/15/19 00:12	
Surrogate: p-Terphenyl	*76.2 %*		*32 - 169*		B9F0417	06/14/2019	*06/15/19 00:12*	

Volatile Organic Compounds by EPA 8260B

Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1,1-Trichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1,2-Trichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1-Dichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1-Dichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,1-Dichloropropene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2,3-Trichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2,4-Trimethylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2-Dibromoethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2-Dichloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,2-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,3,5-Trimethylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,3-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,3-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
1,4-Dichlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
2,2-Dichloropropane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
2-Chlorotoluene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Client Sample ID HMW-10R

Lab ID: 1902325-10

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
4-Isopropyltoluene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Benzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Bromobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Bromochloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Bromodichloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Bromoform	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Bromomethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Carbon disulfide	ND	10	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Carbon tetrachloride	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Chlorobenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Chloroethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Chloroform	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Chloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
cis-1,2-Dichloroethene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
cis-1,3-Dichloropropene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Di-isopropyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Dibromochloromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Dibromomethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Dichlorodifluoromethane	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Ethyl Acetate	ND	100	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Ethyl Ether	ND	100	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Ethyl tert-butyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Ethylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Freon-113	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Hexachlorobutadiene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Isopropylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
m,p-Xylene	ND	10	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Methylene chloride	ND	10	10	B9F0443	06/17/2019	06/17/19 15:59	D7
MTBE	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
n-Butylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
n-Propylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Naphthalene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
o-Xylene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
sec-Butylbenzene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Styrene	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
tert-Amyl methyl ether	ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID HMW-10R
Lab ID: 1902325-10

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0443	06/17/2019	06/17/19 15:59	D7
tert-Butylbenzene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Tetrachloroethene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Toluene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
trans-1,2-Dichloroethene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
trans-1,3-Dichloropropene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Trichloroethene		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Trichlorofluoromethane		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Vinyl acetate		ND	100	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Vinyl chloride		ND	5.0	10	B9F0443	06/17/2019	06/17/19 15:59	D7
Surrogate: 1,2-Dichloroethane-d4	*128 %*		*57 - 152*		B9F0443	06/17/2019	*06/17/19 15:59*	
Surrogate: 4-Bromofluorobenzene	*97.4 %*		*62 - 134*		B9F0443	06/17/2019	*06/17/19 15:59*	
Surrogate: Dibromofluoromethane	*123 %*		*56 - 167*		B9F0443	06/17/2019	*06/17/19 15:59*	
Surrogate: Toluene-d8	*121 %*		*33 - 170*		B9F0443	06/17/2019	*06/17/19 15:59*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID RW
Lab ID: 1902325-11

Gasoline Range Organics by EPA 8015B (Modified)
Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2.1**	0.40	2	B9F0604	06/21/2019	06/21/19 18:48	
Surrogate: 4-Bromofluorobenzene	*103 %*		*70 - 130*		B9F0604	06/21/2019	*06/21/19 18:48*	

Diesel Range Organics by EPA 8015B
Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**17**	5.0	25	B9F0417	06/14/2019	06/17/19 13:35	
ORO		**12**	5.0	25	B9F0417	06/14/2019	06/17/19 13:35	
Surrogate: p-Terphenyl	*51.2 %*		*32 - 169*		B9F0417	06/14/2019	*06/17/19 13:35*	

Volatile Organic Compounds by EPA 8260B
Analyst: QP

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1,1-Trichloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1,2,2-Tetrachloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1,2-Trichloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1-Dichloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1-Dichloroethene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,1-Dichloropropene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2,3-Trichloropropane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2,3-Trichlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2,4-Trichlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2,4-Trimethylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2-Dibromo-3-chloropropane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2-Dibromoethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2-Dichlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2-Dichloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,2-Dichloropropane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,3,5-Trimethylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,3-Dichlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,3-Dichloropropane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
1,4-Dichlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
2,2-Dichloropropane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
2-Chlorotoluene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID RW
Lab ID: 1902325-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
4-Isopropyltoluene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Benzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Bromobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Bromochloromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Bromodichloromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Bromoform	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Bromomethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Carbon disulfide	ND	20	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Carbon tetrachloride	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Chlorobenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Chloroethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Chloroform	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Chloromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
cis-1,2-Dichloroethene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
cis-1,3-Dichloropropene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Di-isopropyl ether	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Dibromochloromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Dibromomethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Dichlorodifluoromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Ethyl Acetate	ND	200	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Ethyl Ether	ND	200	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Ethyl tert-butyl ether	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Ethylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Freon-113	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Hexachlorobutadiene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Isopropylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
m,p-Xylene	ND	20	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Methylene chloride	ND	20	20	B9F0443	06/17/2019	06/17/19 16:24	D7
MTBE	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
n-Butylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
n-Propylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Naphthalene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
o-Xylene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
sec-Butylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Styrene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
tert-Amyl methyl ether	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Client Sample ID RW
Lab ID: 1902325-11

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	200	20	B9F0443	06/17/2019	06/17/19 16:24	D7
tert-Butylbenzene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Tetrachloroethene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Toluene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
trans-1,2-Dichloroethene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
trans-1,3-Dichloropropene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Trichloroethene	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Trichlorofluoromethane	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Vinyl acetate	ND	200	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Vinyl chloride	ND	10	20	B9F0443	06/17/2019	06/17/19 16:24	D7
Surrogate: 1,2-Dichloroethane-d4	*126 %*	*57 - 152*		B9F0443	06/17/2019	*06/17/19 16:24*	
Surrogate: 4-Bromofluorobenzene	*98.7 %*	*62 - 134*		B9F0443	06/17/2019	*06/17/19 16:24*	
Surrogate: Dibromofluoromethane	*123 %*	*56 - 167*		B9F0443	06/17/2019	*06/17/19 16:24*	
Surrogate: Toluene-d8	*124 %*	*33 - 170*		B9F0443	06/17/2019	*06/17/19 16:24*	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

QUALITY CONTROL SECTION

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0377 - GCVOA_W										
Blank (B9F0377-BLK1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	*0.1059*			*0.100000*		*106*	*70 - 130*			
LCS (B9F0377-BS1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	1.02600	0.20	0.05	1.00000		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1026*			*0.100000*		*103*	*70 - 130*			
LCS Dup (B9F0377-BSD1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	1.02000	0.20	0.05	1.00000		102	70 - 130	0.587	20	
Surrogate: 4-Bromofluorobenzene	*0.1033*			*0.100000*		*103*	*70 - 130*			
Duplicate (B9F0377-DUP1)			**Source: 1902301-82**		Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	0.053	0.20	0.05		ND			NR	20	
Surrogate: 4-Bromofluorobenzene	*0.1043*			*0.100000*		*104*	*70 - 130*			

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Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0604 - GCVOA_W										
Blank (B9F0604-BLK1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	*0.1088*			*0.100000*		*109*	*70 - 130*			
LCS (B9F0604-BS1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.739000	0.20	0.05	1.00000		73.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1099*			*0.100000*		*110*	*70 - 130*			
LCS Dup (B9F0604-BSD1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.737000	0.20	0.05	1.00000		73.7	70 - 130	0.271	20	
Surrogate: 4-Bromofluorobenzene	*0.1054*			*0.100000*		*105*	*70 - 130*			
Duplicate (B9F0604-DUP1)			**Source: 1902328-95**		Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.053	0.20	0.05		0.061			14.0	20	
Surrogate: 4-Bromofluorobenzene	*0.1085*			*0.100000*		*109*	*70 - 130*			

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52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	06/24/2019

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0417 - GCSEMI_DRO_W										
Blank (B9F0417-BLK1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	ND	0.20	0.20							
ORO	ND	0.20	0.20							
Surrogate: p-Terphenyl	*0.06002*			*8.00000E-2*		*75.0*	*32 - 169*			
LCS (B9F0417-BS1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	0.870050	0.20	0.20	1.00000		87.0	45 - 161			
Surrogate: p-Terphenyl	*0.05609*			*8.00000E-2*		*70.1*	*32 - 169*			
LCS Dup (B9F0417-BSD1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	0.903010	0.20	0.20	1.00000		90.3	45 - 161	3.72	20	
Surrogate: p-Terphenyl	*0.06047*			*8.00000E-2*		*75.6*	*32 - 169*			

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Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0433 - MSVOA_W										
Blank (B9F0433-BLK1)					Prepared: 6/16/2019 Analyzed: 6/16/2019					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.07							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromochloromethane	ND	0.50	0.16							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.17							
Carbon disulfide	ND	1.0	0.07							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Di-isopropyl ether	ND	0.50	0.15							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							

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Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0433 - MSVOA_W (continued)										
Blank (B9F0433-BLK1) - Continued					Prepared: 6/16/2019 Analyzed: 6/16/2019					
Dichlorodifluoromethane	ND	0.50	0.05							
Ethyl Acetate	ND	10	3.1							
Ethyl Ether	ND	10	2.0							
Ethyl tert-butyl ether	ND	0.50	0.21							
Ethylbenzene	ND	0.50	0.13							
Freon-113	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
MTBE	ND	0.50	0.26							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Amyl methyl ether	ND	0.50	0.41							
tert-Butanol	ND	10	2.4							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
trans-1,3-Dichloropropene	ND	0.50	0.23							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.10							
Vinyl acetate	ND	10	1.7							
Vinyl chloride	ND	0.50	0.05							
Surrogate: 1,2-Dichloroethane-d4	*29.93*			*25.0000*		*120*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*24.05*			*25.0000*		*96.2*	*62 - 134*			
Surrogate: Dibromofluoromethan	*29.04*			*25.0000*		*116*	*56 - 167*			
Surrogate: Toluene-d8	*29.23*			*25.0000*		*117*	*33 - 170*			
LCS (B9F0433-BS1)					Prepared: 6/16/2019 Analyzed: 6/16/2019					
1,1,1,2-Tetrachloroethane	21.3500	0.50	0.11	20.0000		107	80 - 137			
1,1,1-Trichloroethane	21.2700	0.50	0.07	20.0000		106	75 - 148			
1,1,2,2-Tetrachloroethane	21.3400	0.50	0.36	20.0000		107	64 - 118			
1,1,2-Trichloroethane	21.0000	0.50	0.25	20.0000		105	77 - 113			
1,1-Dichloroethane	17.4300	0.50	0.09	20.0000		87.2	72 - 131			
1,1-Dichloroethene	21.1000	0.50	0.13	20.0000		106	75 - 132			
1,1-Dichloropropene	22.3200	0.50	0.13	20.0000		112	84 - 141			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Batch B9F0433 - MSVOA_W (continued)

LCS (B9F0433-BS1) - Continued Prepared: 6/16/2019 Analyzed: 6/16/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,2,3-Trichloropropane	19.5400	0.50	0.39	20.0000		97.7	65 - 111			
1,2,3-Trichlorobenzene	22.0100	0.50	0.18	20.0000		110	79 - 117			
1,2,4-Trichlorobenzene	21.9500	0.50	0.16	20.0000		110	78 - 121			
1,2,4-Trimethylbenzene	20.0500	0.50	0.14	20.0000		100	83 - 125			
1,2-Dibromo-3-chloropropane	20.9900	0.50	0.41	20.0000		105	54 - 116			
1,2-Dibromoethane	22.7100	0.50	0.24	20.0000		114	79 - 118			
1,2-Dichlorobenzene	20.7500	0.50	0.20	20.0000		104	82 - 115			
1,2-Dichloroethane	19.6800	0.50	0.20	20.0000		98.4	76 - 115			
1,2-Dichloropropane	19.8400	0.50	0.15	20.0000		99.2	74 - 113			
1,3,5-Trimethylbenzene	20.2400	0.50	0.13	20.0000		101	83 - 126			
1,3-Dichlorobenzene	20.5600	0.50	0.16	20.0000		103	84 - 118			
1,3-Dichloropropane	21.5500	0.50	0.21	20.0000		108	72 - 116			
1,4-Dichlorobenzene	19.7000	0.50	0.17	20.0000		98.5	83 - 112			
2,2-Dichloropropane	19.3300	0.50	0.38	20.0000		96.6	72 - 150			
2-Chlorotoluene	21.4800	0.50	0.11	20.0000		107	82 - 120			
4-Chlorotoluene	21.0900	0.50	0.12	20.0000		105	81 - 121			
4-Isopropyltoluene	19.8400	0.50	0.11	20.0000		99.2	86 - 124			
Benzene	43.2100	0.50	0.13	40.0000		108	81 - 118			
Bromobenzene	20.3800	0.50	0.21	20.0000		102	82 - 117			
Bromochloromethane	21.5200	0.50	0.16	20.0000		108	70 - 136			
Bromodichloromethane	20.4600	0.50	0.14	20.0000		102	80 - 122			
Bromoform	22.9800	0.50	0.20	20.0000		115	53 - 145			
Bromomethane	22.3400	0.50	0.17	20.0000		112	30 - 204			
Carbon disulfide	20.2900	1.0	0.07	20.0000		101	85 - 131			
Carbon tetrachloride	20.8700	0.50	0.09	20.0000		104	77 - 157			
Chlorobenzene	20.3600	0.50	0.13	20.0000		102	86 - 113			
Chloroethane	19.6100	0.50	0.15	20.0000		98.0	70 - 160			
Chloroform	19.9100	0.50	0.11	20.0000		99.6	66 - 136			
Chloromethane	18.4900	0.50	0.12	20.0000		92.4	52 - 138			
cis-1,2-Dichloroethene	21.5100	0.50	0.14	20.0000		108	71 - 128			
cis-1,3-Dichloropropene	24.8700	0.50	0.13	20.0000		124	71 - 123			L3
Di-isopropyl ether	18.7900	0.50	0.15	20.0000		94.0	64 - 123			
Dibromochloromethane	22.0100	0.50	0.16	20.0000		110	78 - 140			
Dibromomethane	20.7400	0.50	0.19	20.0000		104	78 - 109			
Dichlorodifluoromethane	11.7800	0.50	0.05	20.0000		58.9	64 - 144			L4
Ethyl Acetate	218.820	10	3.1	200.000		109	55 - 123			
Ethyl Ether	205.080	10	2.0	200.000		103	74 - 122			
Ethyl tert-butyl ether	18.7300	0.50	0.21	20.0000		93.6	72 - 120			
Ethylbenzene	41.2900	0.50	0.13	40.0000		103	90 - 116			
Freon-113	18.3300	0.50	0.13	20.0000		91.6	76 - 143			
Hexachlorobutadiene	20.6500	0.50	0.15	20.0000		103	81 - 129			
Isopropylbenzene	21.6100	0.50	0.10	20.0000		108	83 - 129			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0433 - MSVOA_W (continued)										
LCS (B9F0433-BS1) - Continued						Prepared: 6/16/2019 Analyzed: 6/16/2019				
m,p-Xylene	42.8700	1.0	0.19	40.0000		107	88 - 124			
Methylene chloride	22.4500	1.0	0.71	20.0000		112	76 - 137			
MTBE	19.5200	0.50	0.26	20.0000		97.6	67 - 121			
n-Butylbenzene	21.6500	0.50	0.11	20.0000		108	83 - 129			
n-Propylbenzene	21.6900	0.50	0.10	20.0000		108	85 - 124			
Naphthalene	18.8300	0.50	0.41	20.0000		94.2	67 - 113			
o-Xylene	40.8600	0.50	0.13	40.0000		102	82 - 129			
sec-Butylbenzene	21.9200	0.50	0.09	20.0000		110	86 - 127			
Styrene	19.8500	0.50	0.13	20.0000		99.2	83 - 122			
tert-Amyl methyl ether	20.2100	0.50	0.41	20.0000		101	61 - 114			
tert-Butanol	107.380	10	2.4	100.000		107	45 - 121			
tert-Butylbenzene	22.3200	0.50	0.09	20.0000		112	84 - 130			
Tetrachloroethene	21.4400	0.50	0.10	20.0000		107	87 - 123			
Toluene	44.8000	0.50	0.12	40.0000		112	84 - 115			
trans-1,2-Dichloroethene	16.7700	0.50	0.09	20.0000		83.8	60 - 148			
trans-1,3-Dichloropropene	19.6200	0.50	0.23	20.0000		98.1	77 - 118			
Trichloroethene	20.1400	0.50	0.10	20.0000		101	79 - 129			
Trichlorofluoromethane	19.7700	0.50	0.10	20.0000		98.8	68 - 162			
Vinyl acetate	225.660	10	1.7	200.000		113	65 - 134			
Vinyl chloride	16.3600	0.50	0.05	20.0000		81.8	73 - 128			
Surrogate: 1,2-Dichloroethane-d4	*27.72*			*25.0000*		*111*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*27.50*			*25.0000*		*110*	*62 - 134*			
Surrogate: Dibromofluoromethan	*28.10*			*25.0000*		*112*	*56 - 167*			
Surrogate: Toluene-d8	*29.75*			*25.0000*		*119*	*33 - 170*			
LCS Dup (B9F0433-BSD1)						Prepared: 6/16/2019 Analyzed: 6/16/2019				
1,1,1,2-Tetrachloroethane	21.7200	0.50	0.11	20.0000		109	80 - 137	1.72	20	
1,1,1-Trichloroethane	21.2600	0.50	0.07	20.0000		106	75 - 148	0.0470	20	
1,1,2,2-Tetrachloroethane	21.5000	0.50	0.36	20.0000		108	64 - 118	0.747	20	
1,1,2-Trichloroethane	21.5800	0.50	0.25	20.0000		108	77 - 113	2.72	20	
1,1-Dichloroethane	17.2600	0.50	0.09	20.0000		86.3	72 - 131	0.980	20	
1,1-Dichloroethene	21.0000	0.50	0.13	20.0000		105	75 - 132	0.475	20	
1,1-Dichloropropene	23.0200	0.50	0.13	20.0000		115	84 - 141	3.09	20	
1,2,3-Trichloropropane	19.7100	0.50	0.39	20.0000		98.6	65 - 111	0.866	20	
1,2,3-Trichlorobenzene	22.4800	0.50	0.18	20.0000		112	79 - 117	2.11	20	
1,2,4-Trichlorobenzene	22.1200	0.50	0.16	20.0000		111	78 - 121	0.772	20	
1,2,4-Trimethylbenzene	19.9900	0.50	0.14	20.0000		100	83 - 125	0.300	20	
1,2-Dibromo-3-chloropropane	22.0200	0.50	0.41	20.0000		110	54 - 116	4.79	20	
1,2-Dibromoethane	22.9400	0.50	0.24	20.0000		115	79 - 118	1.01	20	
1,2-Dichlorobenzene	20.8100	0.50	0.20	20.0000		104	82 - 115	0.289	20	
1,2-Dichloroethane	20.5200	0.50	0.20	20.0000		103	76 - 115	4.18	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0433 - MSVOA_W (continued)										
LCS Dup (B9F0433-BSD1) - Continued					Prepared: 6/16/2019 Analyzed: 6/16/2019					
1,2-Dichloropropane	20.5400	0.50	0.15	20.0000		103	74 - 113	3.47	20	
1,3,5-Trimethylbenzene	20.2600	0.50	0.13	20.0000		101	83 - 126	0.0988	20	
1,3-Dichlorobenzene	20.5300	0.50	0.16	20.0000		103	84 - 118	0.146	20	
1,3-Dichloropropane	21.8100	0.50	0.21	20.0000		109	72 - 116	1.20	20	
1,4-Dichlorobenzene	19.7300	0.50	0.17	20.0000		98.6	83 - 112	0.152	20	
2,2-Dichloropropane	19.0700	0.50	0.38	20.0000		95.4	72 - 150	1.35	20	
2-Chlorotoluene	21.3400	0.50	0.11	20.0000		107	82 - 120	0.654	20	
4-Chlorotoluene	21.2500	0.50	0.12	20.0000		106	81 - 121	0.756	20	
4-Isopropyltoluene	19.8200	0.50	0.11	20.0000		99.1	86 - 124	0.101	20	
Benzene	44.6100	0.50	0.13	40.0000		112	81 - 118	3.19	20	
Bromobenzene	20.5600	0.50	0.21	20.0000		103	82 - 117	0.879	20	
Bromochloromethane	21.0800	0.50	0.16	20.0000		105	70 - 136	2.07	20	
Bromodichloromethane	20.9900	0.50	0.14	20.0000		105	80 - 122	2.56	20	
Bromoform	22.8000	0.50	0.20	20.0000		114	53 - 145	0.786	20	
Bromomethane	22.2700	0.50	0.17	20.0000		111	30 - 204	0.314	20	
Carbon disulfide	19.7200	1.0	0.07	20.0000		98.6	85 - 131	2.85	20	
Carbon tetrachloride	21.3500	0.50	0.09	20.0000		107	77 - 157	2.27	20	
Chlorobenzene	20.5200	0.50	0.13	20.0000		103	86 - 113	0.783	20	
Chloroethane	18.8500	0.50	0.15	20.0000		94.2	70 - 160	3.95	20	
Chloroform	19.8200	0.50	0.11	20.0000		99.1	66 - 136	0.453	20	
Chloromethane	16.9700	0.50	0.12	20.0000		84.8	52 - 138	8.57	20	
cis-1,2-Dichloroethene	21.1800	0.50	0.14	20.0000		106	71 - 128	1.55	20	
cis-1,3-Dichloropropene	25.0600	0.50	0.13	20.0000		125	71 - 123	0.761	20	L3
Di-isopropyl ether	18.4900	0.50	0.15	20.0000		92.4	64 - 123	1.61	20	
Dibromochloromethane	22.2700	0.50	0.16	20.0000		111	78 - 140	1.17	20	
Dibromomethane	21.4300	0.50	0.19	20.0000		107	78 - 109	3.27	20	
Dichlorodifluoromethane	11.4000	0.50	0.05	20.0000		57.0	64 - 144	3.28	20	L4
Ethyl Acetate	219.370	10	3.1	200.000		110	55 - 123	0.251	20	
Ethyl Ether	204.120	10	2.0	200.000		102	74 - 122	0.469	20	
Ethyl tert-butyl ether	18.5100	0.50	0.21	20.0000		92.6	72 - 120	1.18	20	
Ethylbenzene	41.7600	0.50	0.13	40.0000		104	90 - 116	1.13	20	
Freon-113	18.4000	0.50	0.13	20.0000		92.0	76 - 143	0.381	20	
Hexachlorobutadiene	20.9500	0.50	0.15	20.0000		105	81 - 129	1.44	20	
Isopropylbenzene	21.8200	0.50	0.10	20.0000		109	83 - 129	0.967	20	
m,p-Xylene	43.0300	1.0	0.19	40.0000		108	88 - 124	0.373	20	
Methylene chloride	21.7100	1.0	0.71	20.0000		109	76 - 137	3.35	20	
MTBE	19.4300	0.50	0.26	20.0000		97.2	67 - 121	0.462	20	
n-Butylbenzene	21.5800	0.50	0.11	20.0000		108	83 - 129	0.324	20	
n-Propylbenzene	21.6800	0.50	0.10	20.0000		108	85 - 124	0.0461	20	
Naphthalene	19.0100	0.50	0.41	20.0000		95.0	67 - 113	0.951	20	
o-Xylene	41.2200	0.50	0.13	40.0000		103	82 - 129	0.877	20	
sec-Butylbenzene	21.8800	0.50	0.09	20.0000		109	86 - 127	0.183	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0433 - MSVOA_W (continued)										
LCS Dup (B9F0433-BSD1) - Continued					Prepared: 6/16/2019 Analyzed: 6/16/2019					
Styrene	19.9800	0.50	0.13	20.0000		99.9	83 - 122	0.653	20	
tert-Amyl methyl ether	19.9700	0.50	0.41	20.0000		99.8	61 - 114	1.19	20	
tert-Butanol	110.480	10	2.4	100.000		110	45 - 121	2.85	20	
tert-Butylbenzene	22.3900	0.50	0.09	20.0000		112	84 - 130	0.313	20	
Tetrachloroethene	21.8400	0.50	0.10	20.0000		109	87 - 123	1.85	20	
Toluene	45.9100	0.50	0.12	40.0000		115	84 - 115	2.45	20	
trans-1,2-Dichloroethene	16.9100	0.50	0.09	20.0000		84.6	60 - 148	0.831	20	
trans-1,3-Dichloropropene	19.5900	0.50	0.23	20.0000		98.0	77 - 118	0.153	20	
Trichloroethene	20.5500	0.50	0.10	20.0000		103	79 - 129	2.02	20	
Trichlorofluoromethane	19.7600	0.50	0.10	20.0000		98.8	68 - 162	0.0506	20	
Vinyl acetate	224.480	10	1.7	200.000		112	65 - 134	0.524	20	
Vinyl chloride	15.9400	0.50	0.05	20.0000		79.7	73 - 128	2.60	20	
Surrogate: 1,2-Dichloroethane-d4	*27.56*			*25.0000*		*110*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*27.64*			*25.0000*		*111*	*62 - 134*			
Surrogate: Dibromofluoromethan	*27.60*			*25.0000*		*110*	*56 - 167*			
Surrogate: Toluene-d8	*30.07*			*25.0000*		*120*	*33 - 170*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0443 - MSVOA_W										
Blank (B9F0443-BLK1)					Prepared: 6/17/2019 Analyzed: 6/17/2019					
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.07							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromochloromethane	ND	0.50	0.16							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.17							
Carbon disulfide	ND	1.0	0.07							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Di-isopropyl ether	ND	0.50	0.15							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0443 - MSVOA_W (continued)										
Blank (B9F0443-BLK1) - Continued					Prepared: 6/17/2019 Analyzed: 6/17/2019					
Dichlorodifluoromethane	ND	0.50	0.05							
Ethyl Acetate	ND	10	3.1							
Ethyl Ether	ND	10	2.0							
Ethyl tert-butyl ether	ND	0.50	0.21							
Ethylbenzene	ND	0.50	0.13							
Freon-113	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
MTBE	ND	0.50	0.26							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Amyl methyl ether	ND	0.50	0.41							
tert-Butanol	ND	10	2.4							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
trans-1,3-Dichloropropene	ND	0.50	0.23							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.10							
Vinyl acetate	ND	10	1.7							
Vinyl chloride	ND	0.50	0.05							
Surrogate: 1,2-Dichloroethane-d4	*28.65*			*25.0000*		*115*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*24.11*			*25.0000*		*96.4*	*62 - 134*			
Surrogate: Dibromofluoromethan	*28.75*			*25.0000*		*115*	*56 - 167*			
Surrogate: Toluene-d8	*28.94*			*25.0000*		*116*	*33 - 170*			
LCS (B9F0443-BS1)					Prepared: 6/17/2019 Analyzed: 6/17/2019					
1,1,1,2-Tetrachloroethane	22.0600	0.50	0.11	20.0000		110	80 - 137			
1,1,1-Trichloroethane	21.5000	0.50	0.07	20.0000		108	75 - 148			
1,1,2,2-Tetrachloroethane	21.8100	0.50	0.36	20.0000		109	64 - 118			
1,1,2-Trichloroethane	21.5800	0.50	0.25	20.0000		108	77 - 113			
1,1-Dichloroethane	17.2900	0.50	0.09	20.0000		86.4	72 - 131			
1,1-Dichloroethene	21.7900	0.50	0.13	20.0000		109	75 - 132			
1,1-Dichloropropene	22.6800	0.50	0.13	20.0000		113	84 - 141			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0443 - MSVOA_W (continued)										
LCS (B9F0443-BS1) - Continued						Prepared: 6/17/2019 Analyzed: 6/17/2019				
1,2,3-Trichloropropane	19.9400	0.50	0.39	20.0000		99.7	65 - 111			
1,2,3-Trichlorobenzene	22.4700	0.50	0.18	20.0000		112	79 - 117			
1,2,4-Trichlorobenzene	22.0200	0.50	0.16	20.0000		110	78 - 121			
1,2,4-Trimethylbenzene	20.2400	0.50	0.14	20.0000		101	83 - 125			
1,2-Dibromo-3-chloropropane	21.9000	0.50	0.41	20.0000		110	54 - 116			
1,2-Dibromoethane	23.1400	0.50	0.24	20.0000		116	79 - 118			
1,2-Dichlorobenzene	21.0500	0.50	0.20	20.0000		105	82 - 115			
1,2-Dichloroethane	20.2400	0.50	0.20	20.0000		101	76 - 115			
1,2-Dichloropropane	20.0000	0.50	0.15	20.0000		100	74 - 113			
1,3,5-Trimethylbenzene	20.5500	0.50	0.13	20.0000		103	83 - 126			
1,3-Dichlorobenzene	20.9200	0.50	0.16	20.0000		105	84 - 118			
1,3-Dichloropropane	21.7900	0.50	0.21	20.0000		109	72 - 116			
1,4-Dichlorobenzene	20.0100	0.50	0.17	20.0000		100	83 - 112			
2,2-Dichloropropane	19.8400	0.50	0.38	20.0000		99.2	72 - 150			
2-Chlorotoluene	21.7900	0.50	0.11	20.0000		109	82 - 120			
4-Chlorotoluene	21.5500	0.50	0.12	20.0000		108	81 - 121			
4-Isopropyltoluene	19.9700	0.50	0.11	20.0000		99.8	86 - 124			
Benzene	44.4100	0.50	0.13	40.0000		111	81 - 118			
Bromobenzene	20.8200	0.50	0.21	20.0000		104	82 - 117			
Bromochloromethane	21.3300	0.50	0.16	20.0000		107	70 - 136			
Bromodichloromethane	21.0300	0.50	0.14	20.0000		105	80 - 122			
Bromoform	24.4800	0.50	0.20	20.0000		122	53 - 145			
Bromomethane	24.0300	0.50	0.17	20.0000		120	30 - 204			
Carbon disulfide	21.6700	1.0	0.07	20.0000		108	85 - 131			
Carbon tetrachloride	21.6900	0.50	0.09	20.0000		108	77 - 157			
Chlorobenzene	20.6300	0.50	0.13	20.0000		103	86 - 113			
Chloroethane	20.8900	0.50	0.15	20.0000		104	70 - 160			
Chloroform	19.7400	0.50	0.11	20.0000		98.7	66 - 136			
Chloromethane	26.4900	0.50	0.12	20.0000		132	52 - 138			
cis-1,2-Dichloroethene	21.3000	0.50	0.14	20.0000		106	71 - 128			
cis-1,3-Dichloropropene	25.2300	0.50	0.13	20.0000		126	71 - 123			L3
Di-isopropyl ether	18.2600	0.50	0.15	20.0000		91.3	64 - 123			
Dibromochloromethane	23.1500	0.50	0.16	20.0000		116	78 - 140			
Dibromomethane	20.9000	0.50	0.19	20.0000		104	78 - 109			
Dichlorodifluoromethane	32.4500	0.50	0.05	20.0000		162	64 - 144			L5
Ethyl Acetate	219.440	10	3.1	200.000		110	55 - 123			
Ethyl Ether	204.640	10	2.0	200.000		102	74 - 122			
Ethyl tert-butyl ether	18.2400	0.50	0.21	20.0000		91.2	72 - 120			
Ethylbenzene	42.3300	0.50	0.13	40.0000		106	90 - 116			
Freon-113	18.9500	0.50	0.13	20.0000		94.8	76 - 143			
Hexachlorobutadiene	21.1000	0.50	0.15	20.0000		106	81 - 129			
Isopropylbenzene	21.9500	0.50	0.10	20.0000		110	83 - 129			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0443 - MSVOA_W (continued)										
LCS (B9F0443-BS1) - Continued						Prepared: 6/17/2019 Analyzed: 6/17/2019				
m,p-Xylene	43.5700	1.0	0.19	40.0000		109	88 - 124			
Methylene chloride	21.4800	1.0	0.71	20.0000		107	76 - 137			
MTBE	19.2800	0.50	0.26	20.0000		96.4	67 - 121			
n-Butylbenzene	21.7600	0.50	0.11	20.0000		109	83 - 129			
n-Propylbenzene	21.9000	0.50	0.10	20.0000		110	85 - 124			
Naphthalene	18.9600	0.50	0.41	20.0000		94.8	67 - 113			
o-Xylene	41.7900	0.50	0.13	40.0000		104	82 - 129			
sec-Butylbenzene	22.2700	0.50	0.09	20.0000		111	86 - 127			
Styrene	20.3100	0.50	0.13	20.0000		102	83 - 122			
tert-Amyl methyl ether	19.8500	0.50	0.41	20.0000		99.2	61 - 114			
tert-Butanol	113.580	10	2.4	100.000		114	45 - 121			
tert-Butylbenzene	22.7000	0.50	0.09	20.0000		114	84 - 130			
Tetrachloroethene	21.9200	0.50	0.10	20.0000		110	87 - 123			
Toluene	46.2100	0.50	0.12	40.0000		116	84 - 115			L3
trans-1,2-Dichloroethene	16.9000	0.50	0.09	20.0000		84.5	60 - 148			
trans-1,3-Dichloropropene	19.9800	0.50	0.23	20.0000		99.9	77 - 118			
Trichloroethene	20.3700	0.50	0.10	20.0000		102	79 - 129			
Trichlorofluoromethane	21.2000	0.50	0.10	20.0000		106	68 - 162			
Vinyl acetate	222.200	10	1.7	200.000		111	65 - 134			
Vinyl chloride	20.1500	0.50	0.05	20.0000		101	73 - 128			
Surrogate: 1,2-Dichloroethane-d4	*28.10*			*25.0000*		*112*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*28.12*			*25.0000*		*112*	*62 - 134*			
Surrogate: Dibromofluoromethan	*28.46*			*25.0000*		*114*	*56 - 167*			
Surrogate: Toluene-d8	*30.32*			*25.0000*		*121*	*33 - 170*			
LCS Dup (B9F0443-BSD1)						Prepared: 6/17/2019 Analyzed: 6/17/2019				
1,1,1,2-Tetrachloroethane	22.3600	0.50	0.11	20.0000		112	80 - 137	1.35	20	
1,1,1-Trichloroethane	21.1700	0.50	0.07	20.0000		106	75 - 148	1.55	20	
1,1,2,2-Tetrachloroethane	22.4500	0.50	0.36	20.0000		112	64 - 118	2.89	20	
1,1,2-Trichloroethane	21.6500	0.50	0.25	20.0000		108	77 - 113	0.324	20	
1,1-Dichloroethane	16.7400	0.50	0.09	20.0000		83.7	72 - 131	3.23	20	
1,1-Dichloroethene	21.3700	0.50	0.13	20.0000		107	75 - 132	1.95	20	
1,1-Dichloropropene	23.5600	0.50	0.13	20.0000		118	84 - 141	3.81	20	
1,2,3-Trichloropropane	20.4400	0.50	0.39	20.0000		102	65 - 111	2.48	20	
1,2,3-Trichlorobenzene	23.3500	0.50	0.18	20.0000		117	79 - 117	3.84	20	
1,2,4-Trichlorobenzene	22.7600	0.50	0.16	20.0000		114	78 - 121	3.31	20	
1,2,4-Trimethylbenzene	20.6700	0.50	0.14	20.0000		103	83 - 125	2.10	20	
1,2-Dibromo-3-chloropropane	22.3500	0.50	0.41	20.0000		112	54 - 116	2.03	20	
1,2-Dibromoethane	23.3000	0.50	0.24	20.0000		116	79 - 118	0.689	20	
1,2-Dichlorobenzene	21.6900	0.50	0.20	20.0000		108	82 - 115	2.99	20	
1,2-Dichloroethane	20.3700	0.50	0.20	20.0000		102	76 - 115	0.640	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Batch B9F0443 - MSVOA_W (continued)

LCS Dup (B9F0443-BSD1) - Continued Prepared: 6/17/2019 Analyzed: 6/17/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,2-Dichloropropane	20.7200	0.50	0.15	20.0000		104	74 - 113	3.54	20	
1,3,5-Trimethylbenzene	21.0700	0.50	0.13	20.0000		105	83 - 126	2.50	20	
1,3-Dichlorobenzene	21.4300	0.50	0.16	20.0000		107	84 - 118	2.41	20	
1,3-Dichloropropane	21.9600	0.50	0.21	20.0000		110	72 - 116	0.777	20	
1,4-Dichlorobenzene	20.6500	0.50	0.17	20.0000		103	83 - 112	3.15	20	
2,2-Dichloropropane	18.9800	0.50	0.38	20.0000		94.9	72 - 150	4.43	20	
2-Chlorotoluene	22.1900	0.50	0.11	20.0000		111	82 - 120	1.82	20	
4-Chlorotoluene	22.0100	0.50	0.12	20.0000		110	81 - 121	2.11	20	
4-Isopropyltoluene	20.6100	0.50	0.11	20.0000		103	86 - 124	3.15	20	
Benzene	45.3200	0.50	0.13	40.0000		113	81 - 118	2.03	20	
Bromobenzene	21.5000	0.50	0.21	20.0000		108	82 - 117	3.21	20	
Bromochloromethane	20.5900	0.50	0.16	20.0000		103	70 - 136	3.53	20	
Bromodichloromethane	21.4900	0.50	0.14	20.0000		107	80 - 122	2.16	20	
Bromoform	24.5500	0.50	0.20	20.0000		123	53 - 145	0.286	20	
Bromomethane	23.3400	0.50	0.17	20.0000		117	30 - 204	2.91	20	
Carbon disulfide	20.7800	1.0	0.07	20.0000		104	85 - 131	4.19	20	
Carbon tetrachloride	22.2900	0.50	0.09	20.0000		111	77 - 157	2.73	20	
Chlorobenzene	21.0600	0.50	0.13	20.0000		105	86 - 113	2.06	20	
Chloroethane	20.4900	0.50	0.15	20.0000		102	70 - 160	1.93	20	
Chloroform	19.3700	0.50	0.11	20.0000		96.8	66 - 136	1.89	20	
Chloromethane	25.7700	0.50	0.12	20.0000		129	52 - 138	2.76	20	
cis-1,2-Dichloroethene	20.4700	0.50	0.14	20.0000		102	71 - 128	3.97	20	
cis-1,3-Dichloropropene	25.7800	0.50	0.13	20.0000		129	71 - 123	2.16	20	L3
Di-isopropyl ether	18.0800	0.50	0.15	20.0000		90.4	64 - 123	0.991	20	
Dibromochloromethane	23.0900	0.50	0.16	20.0000		115	78 - 140	0.260	20	
Dibromomethane	21.4100	0.50	0.19	20.0000		107	78 - 109	2.41	20	
Dichlorodifluoromethane	31.2600	0.50	0.05	20.0000		156	64 - 144	3.74	20	L5
Ethyl Acetate	216.060	10	3.1	200.000		108	55 - 123	1.55	20	
Ethyl Ether	199.320	10	2.0	200.000		99.7	74 - 122	2.63	20	
Ethyl tert-butyl ether	18.0800	0.50	0.21	20.0000		90.4	72 - 120	0.881	20	
Ethylbenzene	43.1200	0.50	0.13	40.0000		108	90 - 116	1.85	20	
Freon-113	18.5200	0.50	0.13	20.0000		92.6	76 - 143	2.30	20	
Hexachlorobutadiene	21.6800	0.50	0.15	20.0000		108	81 - 129	2.71	20	
Isopropylbenzene	22.4600	0.50	0.10	20.0000		112	83 - 129	2.30	20	
m,p-Xylene	44.6000	1.0	0.19	40.0000		112	88 - 124	2.34	20	
Methylene chloride	20.4900	1.0	0.71	20.0000		102	76 - 137	4.72	20	
MTBE	19.2100	0.50	0.26	20.0000		96.0	67 - 121	0.364	20	
n-Butylbenzene	22.5700	0.50	0.11	20.0000		113	83 - 129	3.65	20	
n-Propylbenzene	22.5600	0.50	0.10	20.0000		113	85 - 124	2.97	20	
Naphthalene	19.5700	0.50	0.41	20.0000		97.8	67 - 113	3.17	20	
o-Xylene	42.2500	0.50	0.13	40.0000		106	82 - 129	1.09	20	
sec-Butylbenzene	22.8000	0.50	0.09	20.0000		114	86 - 127	2.35	20	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0443 - MSVOA_W (continued)										
LCS Dup (B9F0443-BSD1) - Continued					Prepared: 6/17/2019 Analyzed: 6/17/2019					
Styrene	20.6200	0.50	0.13	20.0000		103	83 - 122	1.51	20	
tert-Amyl methyl ether	20.0600	0.50	0.41	20.0000		100	61 - 114	1.05	20	
tert-Butanol	112.750	10	2.4	100.000		113	45 - 121	0.733	20	
tert-Butylbenzene	23.2800	0.50	0.09	20.0000		116	84 - 130	2.52	20	
Tetrachloroethene	22.3800	0.50	0.10	20.0000		112	87 - 123	2.08	20	
Toluene	46.4500	0.50	0.12	40.0000		116	84 - 115	0.518	20	L3
trans-1,2-Dichloroethene	16.3900	0.50	0.09	20.0000		82.0	60 - 148	3.06	20	
trans-1,3-Dichloropropene	20.1300	0.50	0.23	20.0000		101	77 - 118	0.748	20	
Trichloroethene	20.6100	0.50	0.10	20.0000		103	79 - 129	1.17	20	
Trichlorofluoromethane	20.7800	0.50	0.10	20.0000		104	68 - 162	2.00	20	
Vinyl acetate	215.690	10	1.7	200.000		108	65 - 134	2.97	20	
Vinyl chloride	19.3600	0.50	0.05	20.0000		96.8	73 - 128	4.00	20	
Surrogate: 1,2-Dichloroethane-d4	*26.24*			*25.0000*		*105*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*27.04*			*25.0000*		*108*	*62 - 134*			
Surrogate: Dibromofluoromethan	*26.65*			*25.0000*		*107*	*56 - 167*			
Surrogate: Toluene-d8	*29.37*			*25.0000*		*117*	*33 - 170*			

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	06/24/2019

Notes and Definitions

L5	Laboratory Control Sample high biased. Sample result/s was non-detect (ND) for the target analyte; therefore reanalysis was not necessary.
L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
L3	Laboratory control sample outside in-house established limits but within method criteria.
D7	A lesser amount of sample was analyzed due to matrix.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver:20190413

Method of Transport	Condition	Y	N	Condition	Y	N
☑ Client ☐ ATL	1. CHILLED	☑	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx ☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO	3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C: 0.9		
☐ Other:	4. SEALED	☐	☐			

CUSTOMER

Company: Borani Development
Address: 4620 Lincoln Ave, ~~Cypress~~
City: Cypress State: CA Zip: 0
Tel:
Fax:

SEND REPORT TO:
Attn: Matt Smith Email: msmith@palomaenv.com
Company: Paloma Environmental Services, Inc.
Address: 52 El Prisma
City: RSM State: CA Zip: 92688

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Same Email:
Company:
Address:
City: State: Zip:

EDD: ○ Excel ○ EDF ○ Equis ○ ____
QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV ☐ ____

PROJECT SAMPLES

Project Name: Former Hansen Auto Tow
Project No.: 20180515
Sampler: Todd Murdock, Matt Tonnotti
Quote #:
PO #:
Special Instructions/Comments:

ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	~~Select Analysis~~ 8260B (Full VOC)	~~Select Analysis~~ 8015 (GRO)	~~Select Analysis~~ 8015 (DRO/ORO)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Select Soil Matrix	Select Solid Matrix	Select Water Matrix	Select Wastewater Matrix	Select Non-aqueous Matrix	Enter Custom Matrix	Turnaround Time (TAT)	Quantity	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7=Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4=4C; 5=Zn(Ac)2; 6=NaOH; 7=NA2S2O3	Remarks
1	1902325-01	MMW-2	6/11/19	1041	X	X	X																						STD	7	2/3	1	1	
2	-02	MMW-6	6/11/19	1059	X	X	X																						STD	7	2/3	1	1	
3	-03	MMW-3	6/11/19	1211	X	X	X																						STD	7	2/3	1	1	
4	-04	MMW-1	6/11/19	1440	X	X	X																						STD	7	2/3	1	1	
5	-05	MMW-5	6/11/19	1320	X	X	X																						STD	7	2/3	1	1	
6	-06	MMW-4	6/11/19	1339	X	X	X																						STD	7	2/3	1	1	
7	-07	HMW-7	6/11/19	1420	X	X	X																						STD	7	2/3	1	1	
8	-08	MMW-9A	6/11/19	1520	X	X	X																						STD	7	2/3	1	1	
9	-09	MMW-8	6/11/19	1353	X	X	X																						STD	7	2/3	1	1	
10	-10	HMW-10R	6/11/19	1449	X	X	X																						STD	5	2/3	1	1	

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples submitted AFTER 5:00 PM are considered received the following business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work --- ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20 sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.
12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Todd Murdock	6/11/19	1530	Roland Acuna	6/11/19	1551
Roland Acuna	6-11-19	1605	PJ Dunn	6/11/19	1605

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Printed Name ____________ Signature ____________

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 2 of 2

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver:20190413

Method of Transport: ☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☐ GSO ☐ Other: ______

Sample Conditions Upon Receipt

Condition	Y	N	Condition	Y	N
1. CHILLED	☐	☐	5. # OF SAMPLES MATCH COC	☐	☐
2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C:		
4. SEALED	☐	☐			

CUSTOMER

Company: Bonanni Development
Address: 4620 Lincoln Ave
City: Cypress State: CA Zip:
Tel:
Fax:

SEND REPORT TO:
Attn: Matt Smith Email: msmith@palomaenv.com
Company: Paloma Environmental Services, Inc.
Address: 82 B Palma
City: RSM State: CA Zip: 92688

SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: Same Email:
Company:
Address:
City: State: Zip:

EDD: Excel / EDF / Equis / ______

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV ☐ ______

PROJECT SAMPLES

Project Name: Former Hauser Auto Tow
Project No.: 2018055
Sampler: Todd Murdock, Matt
Quote #:
PO #:
Special Instructions/Comments:

ITEM	Laboratory ID (For Lab Use Only)	Sample ID / Location	Date	Time	8260B (EPA VOC)	8015 (GRO)	8015 (DRO/ORO)	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Select Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Enter Custom Analysis	Select Soil Matrix	Select Solid Matrix	Select Water Matrix	Select Wastewater Matrix	Select Non-aqueous Matrix	Enter Custom Matrix	Turnaround Time (TAT)	Quantity	Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister	Material: 1=Glass; 2=Plastic; 3=Metal	Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 =4C; 5=Zn(Ac)2; 6=NaOH; 7=NA2S2O3	Remarks
1	1902325-1	RW	6/11/19	1310	X	X	X																						STD	7	2/3	1	1	
2																																		
3																																		
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
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   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
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5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
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7. Electronic records maintained for five (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-five (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20 sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reformatted report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.
12. The laboratory will randomly select from all QC samples received the sample to spike for Matrix Spike/Matrix Spike Duplicate (MS/MSD) at no cost. However, if you want the laboratory to additionally perform MS/MSD on your sample, a charge will be assessed for the specific sample used.

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Todd Murdock	6/11/19	1530	Roland Agan	6/11/19	1551
Roland Acuña	6/11/19	1605	E. Burns	6/11/19	1605

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Printed Name ______ Signature ______

July 01, 2019

Matt Smith
Paloma Environmental Services, Inc.
52 El Prisma
Rancho Santa Margarita, CA 92688
Tel: (949) 246-9336
Fax:

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003

Re: ATL Work Order Number : 1902325

Client Reference : Former Hansen Auto Tow, 20180515

Enclosed are the results for sample(s) received on June 11, 2019 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

for

Edgar Caballero
President & Laboratory Director

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MMW-5	1902325-05	Water	6/11/19 13:20	6/11/19 16:05
MMW-4	1902325-06	Water	6/11/19 13:39	6/11/19 16:05

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Client Sample ID MMW-5

Lab ID: 1902325-05

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: JBL

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**2.0**	1.0	5	B9F0781	06/28/2019	06/28/19 07:37	H4
Surrogate: 4-Bromofluorobenzene	*118 %*		*70 - 130*		B9F0781	06/28/2019	*06/28/19 07:37*	

Diesel Range Organics by EPA 8015B

Analyst: HT

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**0.93**	0.20	1	B9F0417	06/14/2019	06/28/19 14:56	
ORO		**0.55**	0.20	1	B9F0417	06/14/2019	06/28/19 14:56	
Surrogate: p-Terphenyl	*106 %*		*32 - 169*		B9F0417	06/14/2019	*06/28/19 14:56*	

Volatile Organic Compounds by EPA 8260B

Analyst: VW

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1,1-Trichloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1,2,2-Tetrachloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1,2-Trichloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1-Dichloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1-Dichloroethene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,1-Dichloropropene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2,3-Trichloropropane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2,3-Trichlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2,4-Trichlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2,4-Trimethylbenzene	**1.1**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2-Dibromo-3-chloropropane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2-Dibromoethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2-Dichlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2-Dichloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,2-Dichloropropane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,3,5-Trimethylbenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,3-Dichlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,3-Dichloropropane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
1,4-Dichlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
2,2-Dichloropropane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
2-Chlorotoluene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Client Sample ID MMW-5
Lab ID: 1902325-05

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
4-Isopropyltoluene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Benzene	**11**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Bromobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Bromochloromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Bromodichloromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Bromoform	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Bromomethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Carbon disulfide	ND	1.0	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Carbon tetrachloride	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Chlorobenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Chloroethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Chloroform	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Chloromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
cis-1,2-Dichloroethene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
cis-1,3-Dichloropropene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Di-isopropyl ether	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Dibromochloromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Dibromomethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Dichlorodifluoromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Ethyl Acetate	ND	10	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Ethyl Ether	ND	10	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Ethyl tert-butyl ether	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Ethylbenzene	**3.7**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Freon-113	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Hexachlorobutadiene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Isopropylbenzene	**0.94**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
m,p-Xylene	ND	1.0	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Methylene chloride	ND	1.0	1	B9F0785	06/28/2019	06/28/19 10:22	H4
MTBE	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
n-Butylbenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
n-Propylbenzene	**0.50**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Naphthalene	**6.5**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
o-Xylene	**0.98**	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
sec-Butylbenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Styrene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
tert-Amyl methyl ether	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Client Sample ID MMW-5
Lab ID: 1902325-05

Volatile Organic Compounds by EPA 8260B **Analyst: VW**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol	ND	10	1	B9F0785	06/28/2019	06/28/19 10:22	H4
tert-Butylbenzene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Tetrachloroethene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Toluene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
trans-1,2-Dichloroethene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
trans-1,3-Dichloropropene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Trichloroethene	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Trichlorofluoromethane	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Vinyl acetate	ND	10	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Vinyl chloride	ND	0.50	1	B9F0785	06/28/2019	06/28/19 10:22	H4
Surrogate: 1,2-Dichloroethane-d4	*129 %*	*57 - 152*		B9F0785	06/28/2019	*06/28/19 10:22*	
Surrogate: 4-Bromofluorobenzene	*112 %*	*62 - 134*		B9F0785	06/28/2019	*06/28/19 10:22*	
Surrogate: Dibromofluoromethane	*107 %*	*56 - 167*		B9F0785	06/28/2019	*06/28/19 10:22*	
Surrogate: Toluene-d8	*111 %*	*33 - 170*		B9F0785	06/28/2019	*06/28/19 10:22*	

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Client Sample ID MMW-4

Lab ID: 1902325-06

Gasoline Range Organics by EPA 8015B (Modified) **Analyst: JBL**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Gasoline Range Organics		**3.5**	2.0	10	B9F0781	06/27/2019	06/28/19 08:01	H4
Surrogate: 4-Bromofluorobenzene	*109 %*		*70 - 130*		B9F0781	06/27/2019	*06/28/19 08:01*	

Diesel Range Organics by EPA 8015B **Analyst: HT**

Analyte		Result (mg/L)	PQL (mg/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
DRO		**1.9**	0.20	1	B9F0417	06/14/2019	06/28/19 15:13	
ORO		**0.43**	0.20	1	B9F0417	06/14/2019	06/28/19 15:13	
Surrogate: p-Terphenyl	*96.9 %*		*32 - 169*		B9F0417	06/14/2019	*06/28/19 15:13*	

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,1,1,2-Tetrachloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1,1-Trichloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1,2,2-Tetrachloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1,2-Trichloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1-Dichloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1-Dichloroethene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,1-Dichloropropene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2,3-Trichloropropane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2,3-Trichlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2,4-Trichlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2,4-Trimethylbenzene	**330**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2-Dibromo-3-chloropropane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2-Dibromoethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2-Dichlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2-Dichloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,2-Dichloropropane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,3,5-Trimethylbenzene	**19**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,3-Dichlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,3-Dichloropropane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
1,4-Dichlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
2,2-Dichloropropane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
2-Chlorotoluene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Client Sample ID MMW-4
Lab ID: 1902325-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte	Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
4-Chlorotoluene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
4-Isopropyltoluene	**8.2**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Benzene	**440**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Bromobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Bromochloromethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Bromodichloromethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Bromoform	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Bromomethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Carbon disulfide	ND	10	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Carbon tetrachloride	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Chlorobenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Chloroethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Chloroform	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Chloromethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
cis-1,2-Dichloroethene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
cis-1,3-Dichloropropene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Di-isopropyl ether	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Dibromochloromethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Dibromomethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Dichlorodifluoromethane	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Ethyl Acetate	ND	100	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Ethyl Ether	ND	100	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Ethyl tert-butyl ether	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Ethylbenzene	**440**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Freon-113	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Hexachlorobutadiene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Isopropylbenzene	**32**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
m,p-Xylene	**270**	10	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Methylene chloride	ND	10	10	B9F0757	06/27/2019	06/27/19 14:11	H4
MTBE	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
n-Butylbenzene	**12**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
n-Propylbenzene	**58**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Naphthalene	**85**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
o-Xylene	**120**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
sec-Butylbenzene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Styrene	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
tert-Amyl methyl ether	ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Client Sample ID MMW-4

Lab ID: 1902325-06

Volatile Organic Compounds by EPA 8260B **Analyst: QP**

Analyte		Result (ug/L)	PQL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
tert-Butanol		ND	100	10	B9F0757	06/27/2019	06/27/19 14:11	H4
tert-Butylbenzene		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Tetrachloroethene		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Toluene		**320**	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
trans-1,2-Dichloroethene		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
trans-1,3-Dichloropropene		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Trichloroethene		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Trichlorofluoromethane		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Vinyl acetate		ND	100	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Vinyl chloride		ND	5.0	10	B9F0757	06/27/2019	06/27/19 14:11	H4
Surrogate: 1,2-Dichloroethane-d4	*98.2 %*		*57 - 152*		B9F0757	06/27/2019	*06/27/19 14:11*	
Surrogate: 4-Bromofluorobenzene	*111 %*		*62 - 134*		B9F0757	06/27/2019	*06/27/19 14:11*	
Surrogate: Dibromofluoromethane	*96.6 %*		*56 - 167*		B9F0757	06/27/2019	*06/27/19 14:11*	
Surrogate: Toluene-d8	*107 %*		*33 - 170*		B9F0757	06/27/2019	*06/27/19 14:11*	

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Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

QUALITY CONTROL SECTION

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0377 - GCVOA_W										
Blank (B9F0377-BLK1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	*0.1059*			*0.100000*		*106*	*70 - 130*			
LCS (B9F0377-BS1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	1.02600	0.20	0.05	1.00000		103	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1026*			*0.100000*		*103*	*70 - 130*			
LCS Dup (B9F0377-BSD1)					Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	1.02000	0.20	0.05	1.00000		102	70 - 130	0.587	20	
Surrogate: 4-Bromofluorobenzene	*0.1033*			*0.100000*		*103*	*70 - 130*			
Duplicate (B9F0377-DUP1)			**Source: 1902301-82**		Prepared: 6/13/2019 Analyzed: 6/13/2019					
Gasoline Range Organics	0.053	0.20	0.05		ND			NR	20	
Surrogate: 4-Bromofluorobenzene	*0.1043*			*0.100000*		*104*	*70 - 130*			

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Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0604 - GCVOA_W										
Blank (B9F0604-BLK1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	*0.1088*			*0.100000*		*109*	*70 - 130*			
LCS (B9F0604-BS1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.739000	0.20	0.05	1.00000		73.9	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1099*			*0.100000*		*110*	*70 - 130*			
LCS Dup (B9F0604-BSD1)					Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.737000	0.20	0.05	1.00000		73.7	70 - 130	0.271	20	
Surrogate: 4-Bromofluorobenzene	*0.1054*			*0.100000*		*105*	*70 - 130*			
Duplicate (B9F0604-DUP1)			**Source: 1902328-95**		Prepared: 6/21/2019 Analyzed: 6/21/2019					
Gasoline Range Organics	0.053	0.20	0.05		0.061			14.0	20	
Surrogate: 4-Bromofluorobenzene	*0.1085*			*0.100000*		*109*	*70 - 130*			

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Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0781 - GCVOA_W										
Blank (B9F0781-BLK1)					Prepared: 6/27/2019 Analyzed: 6/27/2019					
Gasoline Range Organics	ND	0.20	0.05							
Surrogate: 4-Bromofluorobenzene	*0.1051*			*0.100000*		*105*	*70 - 130*			
LCS (B9F0781-BS1)					Prepared: 6/27/2019 Analyzed: 6/27/2019					
Gasoline Range Organics	0.852000	0.20	0.05	1.00000		85.2	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.1011*			*0.100000*		*101*	*70 - 130*			
LCS Dup (B9F0781-BSD1)					Prepared: 6/27/2019 Analyzed: 6/27/2019					
Gasoline Range Organics	0.891000	0.20	0.05	1.00000		89.1	70 - 130	4.48	20	
Surrogate: 4-Bromofluorobenzene	*0.1009*			*0.100000*		*101*	*70 - 130*			

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Diesel Range Organics by EPA 8015B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	MDL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0417 - GCSEMI_DRO_W										
Blank (B9F0417-BLK1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	ND	0.20	0.20							
ORO	ND	0.20	0.20							
Surrogate: p-Terphenyl	*0.06002*			*8.00000E-2*		*75.0*	*32 - 169*			
LCS (B9F0417-BS1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	0.870050	0.20	0.20	1.00000		87.0	45 - 161			
Surrogate: p-Terphenyl	*0.05609*			*8.00000E-2*		*70.1*	*32 - 169*			
LCS Dup (B9F0417-BSD1)					Prepared: 6/14/2019 Analyzed: 6/14/2019					
DRO	0.903010	0.20	0.20	1.00000		90.3	45 - 161	3.72	20	
Surrogate: p-Terphenyl	*0.06047*			*8.00000E-2*		*75.6*	*32 - 169*			

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Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Volatile Organic Compounds by EPA 8260B - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes

Batch B9F0757 - MSVOA_W

Blank (B9F0757-BLK1) Prepared: 6/27/2019 Analyzed: 6/27/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.07							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromochloromethane	ND	0.50	0.16							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.17							
Carbon disulfide	ND	1.0	0.07							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Di-isopropyl ether	ND	0.50	0.15							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0757 - MSVOA_W (continued)										
Blank (B9F0757-BLK1) - Continued					Prepared: 6/27/2019 Analyzed: 6/27/2019					
Dichlorodifluoromethane	ND	0.50	0.05							
Ethyl Acetate	ND	10	3.1							
Ethyl Ether	ND	10	2.0							
Ethyl tert-butyl ether	ND	0.50	0.21							
Ethylbenzene	ND	0.50	0.13							
Freon-113	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
MTBE	ND	0.50	0.26							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Amyl methyl ether	ND	0.50	0.41							
tert-Butanol	ND	10	2.4							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
trans-1,3-Dichloropropene	ND	0.50	0.23							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.10							
Vinyl acetate	ND	10	1.7							
Vinyl chloride	ND	0.50	0.05							
Surrogate: 1,2-Dichloroethane-d4	*25.61*			*25.0000*		*102*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*26.22*			*25.0000*		*105*	*62 - 134*			
Surrogate: Dibromofluoromethan	*25.45*			*25.0000*		*102*	*56 - 167*			
Surrogate: Toluene-d8	*28.01*			*25.0000*		*112*	*33 - 170*			
LCS (B9F0757-BS1)					Prepared: 6/27/2019 Analyzed: 6/27/2019					
1,1,1,2-Tetrachloroethane	22.3700	0.50	0.11	20.0000		112	80 - 137			
1,1,1-Trichloroethane	21.0400	0.50	0.07	20.0000		105	75 - 148			
1,1,2,2-Tetrachloroethane	21.6200	0.50	0.36	20.0000		108	64 - 118			
1,1,2-Trichloroethane	20.8300	0.50	0.25	20.0000		104	77 - 113			
1,1-Dichloroethane	19.9100	0.50	0.09	20.0000		99.6	72 - 131			
1,1-Dichloroethene	19.4700	0.50	0.13	20.0000		97.4	75 - 132			
1,1-Dichloropropene	22.3200	0.50	0.13	20.0000		112	84 - 141			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0757 - MSVOA_W (continued)										
LCS (B9F0757-BS1) - Continued						Prepared: 6/27/2019 Analyzed: 6/27/2019				
1,2,3-Trichloropropane	21.3600	0.50	0.39	20.0000		107	65 - 111			
1,2,3-Trichlorobenzene	21.1200	0.50	0.18	20.0000		106	79 - 117			
1,2,4-Trichlorobenzene	20.6900	0.50	0.16	20.0000		103	78 - 121			
1,2,4-Trimethylbenzene	21.5000	0.50	0.14	20.0000		108	83 - 125			
1,2-Dibromo-3-chloropropane	24.4800	0.50	0.41	20.0000		122	54 - 116			L3
1,2-Dibromoethane	21.9100	0.50	0.24	20.0000		110	79 - 118			
1,2-Dichlorobenzene	21.6600	0.50	0.20	20.0000		108	82 - 115			
1,2-Dichloroethane	21.2700	0.50	0.20	20.0000		106	76 - 115			
1,2-Dichloropropane	21.0000	0.50	0.15	20.0000		105	74 - 113			
1,3,5-Trimethylbenzene	21.5900	0.50	0.13	20.0000		108	83 - 126			
1,3-Dichlorobenzene	21.7700	0.50	0.16	20.0000		109	84 - 118			
1,3-Dichloropropane	22.3000	0.50	0.21	20.0000		112	72 - 116			
1,4-Dichlorobenzene	20.1800	0.50	0.17	20.0000		101	83 - 112			
2,2-Dichloropropane	20.4200	0.50	0.38	20.0000		102	72 - 150			
2-Chlorotoluene	23.0600	0.50	0.11	20.0000		115	82 - 120			
4-Chlorotoluene	22.8500	0.50	0.12	20.0000		114	81 - 121			
4-Isopropyltoluene	21.3800	0.50	0.11	20.0000		107	86 - 124			
Benzene	42.9600	0.50	0.13	40.0000		107	81 - 118			
Bromobenzene	22.2000	0.50	0.21	20.0000		111	82 - 117			
Bromochloromethane	19.0600	0.50	0.16	20.0000		95.3	70 - 136			
Bromodichloromethane	20.6700	0.50	0.14	20.0000		103	80 - 122			
Bromoform	21.4400	0.50	0.20	20.0000		107	53 - 145			
Bromomethane	28.0900	0.50	0.17	20.0000		140	30 - 204			
Carbon disulfide	18.7200	1.0	0.07	20.0000		93.6	85 - 131			
Carbon tetrachloride	20.6800	0.50	0.09	20.0000		103	77 - 157			
Chlorobenzene	20.5300	0.50	0.13	20.0000		103	86 - 113			
Chloroethane	20.2700	0.50	0.15	20.0000		101	70 - 160			
Chloroform	19.5400	0.50	0.11	20.0000		97.7	66 - 136			
Chloromethane	19.8100	0.50	0.12	20.0000		99.0	52 - 138			
cis-1,2-Dichloroethene	19.5900	0.50	0.14	20.0000		98.0	71 - 128			
cis-1,3-Dichloropropene	22.4800	0.50	0.13	20.0000		112	71 - 123			
Di-isopropyl ether	19.6900	0.50	0.15	20.0000		98.4	64 - 123			
Dibromochloromethane	22.2200	0.50	0.16	20.0000		111	78 - 140			
Dibromomethane	20.4000	0.50	0.19	20.0000		102	78 - 109			
Dichlorodifluoromethane	20.3300	0.50	0.05	20.0000		102	64 - 144			
Ethyl Acetate	220.900	10	3.1	200.000		110	55 - 123			
Ethyl Ether	207.990	10	2.0	200.000		104	74 - 122			
Ethyl tert-butyl ether	20.5700	0.50	0.21	20.0000		103	72 - 120			
Ethylbenzene	42.8700	0.50	0.13	40.0000		107	90 - 116			
Freon-113	20.3700	0.50	0.13	20.0000		102	76 - 143			
Hexachlorobutadiene	21.3000	0.50	0.15	20.0000		106	81 - 129			
Isopropylbenzene	23.4400	0.50	0.10	20.0000		117	83 - 129			

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0757 - MSVOA_W (continued)										
LCS (B9F0757-BS1) - Continued					Prepared: 6/27/2019 Analyzed: 6/27/2019					
m,p-Xylene	45.7400	1.0	0.19	40.0000		114	88 - 124			
Methylene chloride	20.1400	1.0	0.71	20.0000		101	76 - 137			
MTBE	20.5000	0.50	0.26	20.0000		102	67 - 121			
n-Butylbenzene	20.9300	0.50	0.11	20.0000		105	83 - 129			
n-Propylbenzene	23.7500	0.50	0.10	20.0000		119	85 - 124			
Naphthalene	19.8900	0.50	0.41	20.0000		99.4	67 - 113			
o-Xylene	42.2600	0.50	0.13	40.0000		106	82 - 129			
sec-Butylbenzene	21.6500	0.50	0.09	20.0000		108	86 - 127			
Styrene	21.2600	0.50	0.13	20.0000		106	83 - 122			
tert-Amyl methyl ether	22.4400	0.50	0.41	20.0000		112	61 - 114			
tert-Butanol	127.990	10	2.4	100.000		128	45 - 121			L3
tert-Butylbenzene	21.7300	0.50	0.09	20.0000		109	84 - 130			
Tetrachloroethene	21.6400	0.50	0.10	20.0000		108	87 - 123			
Toluene	43.9800	0.50	0.12	40.0000		110	84 - 115			
trans-1,2-Dichloroethene	19.2100	0.50	0.09	20.0000		96.0	60 - 148			
trans-1,3-Dichloropropene	23.2400	0.50	0.23	20.0000		116	77 - 118			
Trichloroethene	20.9600	0.50	0.10	20.0000		105	79 - 129			
Trichlorofluoromethane	18.8200	0.50	0.10	20.0000		94.1	68 - 162			
Vinyl acetate	231.460	10	1.7	200.000		116	65 - 134			
Vinyl chloride	18.9200	0.50	0.05	20.0000		94.6	73 - 128			
Surrogate: 1,2-Dichloroethane-d4	*24.87*			*25.0000*		*99.5*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*26.67*			*25.0000*		*107*	*62 - 134*			
Surrogate: Dibromofluoromethan	*25.04*			*25.0000*		*100*	*56 - 167*			
Surrogate: Toluene-d8	*27.47*			*25.0000*		*110*	*33 - 170*			
LCS Dup (B9F0757-BSD1)					Prepared: 6/27/2019 Analyzed: 6/27/2019					
1,1,1,2-Tetrachloroethane	21.2500	0.50	0.11	20.0000		106	80 - 137	5.14	20	
1,1,1-Trichloroethane	20.8500	0.50	0.07	20.0000		104	75 - 148	0.907	20	
1,1,2,2-Tetrachloroethane	20.9800	0.50	0.36	20.0000		105	64 - 118	3.00	20	
1,1,2-Trichloroethane	20.6500	0.50	0.25	20.0000		103	77 - 113	0.868	20	
1,1-Dichloroethane	19.8800	0.50	0.09	20.0000		99.4	72 - 131	0.151	20	
1,1-Dichloroethene	19.3900	0.50	0.13	20.0000		97.0	75 - 132	0.412	20	
1,1-Dichloropropene	21.6600	0.50	0.13	20.0000		108	84 - 141	3.00	20	
1,2,3-Trichloropropane	20.9400	0.50	0.39	20.0000		105	65 - 111	1.99	20	
1,2,3-Trichlorobenzene	20.8800	0.50	0.18	20.0000		104	79 - 117	1.14	20	
1,2,4-Trichlorobenzene	20.7400	0.50	0.16	20.0000		104	78 - 121	0.241	20	
1,2,4-Trimethylbenzene	21.2000	0.50	0.14	20.0000		106	83 - 125	1.41	20	
1,2-Dibromo-3-chloropropane	24.3000	0.50	0.41	20.0000		122	54 - 116	0.738	20	L3
1,2-Dibromoethane	21.5700	0.50	0.24	20.0000		108	79 - 118	1.56	20	
1,2-Dichlorobenzene	21.7200	0.50	0.20	20.0000		109	82 - 115	0.277	20	
1,2-Dichloroethane	20.9100	0.50	0.20	20.0000		105	76 - 115	1.71	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Batch B9F0757 - MSVOA_W (continued)

LCS Dup (B9F0757-BSD1) - Continued Prepared: 6/27/2019 Analyzed: 6/27/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,2-Dichloropropane	20.6800	0.50	0.15	20.0000		103	74 - 113	1.54	20	
1,3,5-Trimethylbenzene	21.3000	0.50	0.13	20.0000		106	83 - 126	1.35	20	
1,3-Dichlorobenzene	21.6100	0.50	0.16	20.0000		108	84 - 118	0.738	20	
1,3-Dichloropropane	21.6600	0.50	0.21	20.0000		108	72 - 116	2.91	20	
1,4-Dichlorobenzene	19.9700	0.50	0.17	20.0000		99.8	83 - 112	1.05	20	
2,2-Dichloropropane	20.0700	0.50	0.38	20.0000		100	72 - 150	1.73	20	
2-Chlorotoluene	22.8100	0.50	0.11	20.0000		114	82 - 120	1.09	20	
4-Chlorotoluene	22.6300	0.50	0.12	20.0000		113	81 - 121	0.967	20	
4-Isopropyltoluene	21.0600	0.50	0.11	20.0000		105	86 - 124	1.51	20	
Benzene	42.2800	0.50	0.13	40.0000		106	81 - 118	1.60	20	
Bromobenzene	22.1200	0.50	0.21	20.0000		111	82 - 117	0.361	20	
Bromochloromethane	19.3700	0.50	0.16	20.0000		96.8	70 - 136	1.61	20	
Bromodichloromethane	20.3400	0.50	0.14	20.0000		102	80 - 122	1.61	20	
Bromoform	21.2000	0.50	0.20	20.0000		106	53 - 145	1.13	20	
Bromomethane	27.0100	0.50	0.17	20.0000		135	30 - 204	3.92	20	
Carbon disulfide	19.4600	1.0	0.07	20.0000		97.3	85 - 131	3.88	20	
Carbon tetrachloride	20.4600	0.50	0.09	20.0000		102	77 - 157	1.07	20	
Chlorobenzene	20.2700	0.50	0.13	20.0000		101	86 - 113	1.27	20	
Chloroethane	21.3200	0.50	0.15	20.0000		107	70 - 160	5.05	20	
Chloroform	19.2400	0.50	0.11	20.0000		96.2	66 - 136	1.55	20	
Chloromethane	20.3000	0.50	0.12	20.0000		102	52 - 138	2.44	20	
cis-1,2-Dichloroethene	19.4800	0.50	0.14	20.0000		97.4	71 - 128	0.563	20	
cis-1,3-Dichloropropene	21.9800	0.50	0.13	20.0000		110	71 - 123	2.25	20	
Di-isopropyl ether	19.1400	0.50	0.15	20.0000		95.7	64 - 123	2.83	20	
Dibromochloromethane	21.5200	0.50	0.16	20.0000		108	78 - 140	3.20	20	
Dibromomethane	20.7500	0.50	0.19	20.0000		104	78 - 109	1.70	20	
Dichlorodifluoromethane	21.2500	0.50	0.05	20.0000		106	64 - 144	4.43	20	
Ethyl Acetate	216.750	10	3.1	200.000		108	55 - 123	1.90	20	
Ethyl Ether	204.360	10	2.0	200.000		102	74 - 122	1.76	20	
Ethyl tert-butyl ether	19.7500	0.50	0.21	20.0000		98.8	72 - 120	4.07	20	
Ethylbenzene	42.0500	0.50	0.13	40.0000		105	90 - 116	1.93	20	
Freon-113	20.2500	0.50	0.13	20.0000		101	76 - 143	0.591	20	
Hexachlorobutadiene	21.6300	0.50	0.15	20.0000		108	81 - 129	1.54	20	
Isopropylbenzene	22.9800	0.50	0.10	20.0000		115	83 - 129	1.98	20	
m,p-Xylene	45.5200	1.0	0.19	40.0000		114	88 - 124	0.482	20	
Methylene chloride	20.9700	1.0	0.71	20.0000		105	76 - 137	4.04	20	
MTBE	19.7700	0.50	0.26	20.0000		98.8	67 - 121	3.63	20	
n-Butylbenzene	20.8400	0.50	0.11	20.0000		104	83 - 129	0.431	20	
n-Propylbenzene	23.4000	0.50	0.10	20.0000		117	85 - 124	1.48	20	
Naphthalene	19.7700	0.50	0.41	20.0000		98.8	67 - 113	0.605	20	
o-Xylene	41.8500	0.50	0.13	40.0000		105	82 - 129	0.975	20	
sec-Butylbenzene	21.4200	0.50	0.09	20.0000		107	86 - 127	1.07	20	

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Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0757 - MSVOA_W (continued)										
LCS Dup (B9F0757-BSD1) - Continued					Prepared: 6/27/2019 Analyzed: 6/27/2019					
Styrene	21.2200	0.50	0.13	20.0000		106	83 - 122	0.188	20	
tert-Amyl methyl ether	21.6800	0.50	0.41	20.0000		108	61 - 114	3.45	20	
tert-Butanol	128.790	10	2.4	100.000		129	45 - 121	0.623	20	L3
tert-Butylbenzene	21.3900	0.50	0.09	20.0000		107	84 - 130	1.58	20	
Tetrachloroethene	21.0900	0.50	0.10	20.0000		105	87 - 123	2.57	20	
Toluene	44.0500	0.50	0.12	40.0000		110	84 - 115	0.159	20	
trans-1,2-Dichloroethene	19.0700	0.50	0.09	20.0000		95.4	60 - 148	0.731	20	
trans-1,3-Dichloropropene	23.0200	0.50	0.23	20.0000		115	77 - 118	0.951	20	
Trichloroethene	20.6800	0.50	0.10	20.0000		103	79 - 129	1.34	20	
Trichlorofluoromethane	19.0800	0.50	0.10	20.0000		95.4	68 - 162	1.37	20	
Vinyl acetate	219.190	10	1.7	200.000		110	65 - 134	5.45	20	
Vinyl chloride	19.8400	0.50	0.05	20.0000		99.2	73 - 128	4.75	20	
Surrogate: 1,2-Dichloroethane-d4	*24.88*			*25.0000*		*99.5*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*27.29*			*25.0000*		*109*	*62 - 134*			
Surrogate: Dibromofluoromethan	*25.33*			*25.0000*		*101*	*56 - 167*			
Surrogate: Toluene-d8	*27.87*			*25.0000*		*111*	*33 - 170*			

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Volatile Organic Compounds by EPA 8260B - Quality Control

Batch B9F0785 - MSVOA_W

Blank (B9F0785-BLK1) Prepared: 6/28/2019 Analyzed: 6/28/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	ND	0.50	0.11							
1,1,1-Trichloroethane	ND	0.50	0.07							
1,1,2,2-Tetrachloroethane	ND	0.50	0.36							
1,1,2-Trichloroethane	ND	0.50	0.25							
1,1-Dichloroethane	ND	0.50	0.09							
1,1-Dichloroethene	ND	0.50	0.13							
1,1-Dichloropropene	ND	0.50	0.13							
1,2,3-Trichloropropane	ND	0.50	0.39							
1,2,3-Trichlorobenzene	ND	0.50	0.18							
1,2,4-Trichlorobenzene	ND	0.50	0.16							
1,2,4-Trimethylbenzene	ND	0.50	0.14							
1,2-Dibromo-3-chloropropane	ND	0.50	0.41							
1,2-Dibromoethane	ND	0.50	0.24							
1,2-Dichlorobenzene	ND	0.50	0.20							
1,2-Dichloroethane	ND	0.50	0.20							
1,2-Dichloropropane	ND	0.50	0.15							
1,3,5-Trimethylbenzene	ND	0.50	0.13							
1,3-Dichlorobenzene	ND	0.50	0.16							
1,3-Dichloropropane	ND	0.50	0.21							
1,4-Dichlorobenzene	ND	0.50	0.17							
2,2-Dichloropropane	ND	0.50	0.38							
2-Chlorotoluene	ND	0.50	0.11							
4-Chlorotoluene	ND	0.50	0.12							
4-Isopropyltoluene	ND	0.50	0.11							
Benzene	ND	0.50	0.13							
Bromobenzene	ND	0.50	0.21							
Bromochloromethane	ND	0.50	0.16							
Bromodichloromethane	ND	0.50	0.14							
Bromoform	ND	0.50	0.20							
Bromomethane	ND	0.50	0.17							
Carbon disulfide	ND	1.0	0.07							
Carbon tetrachloride	ND	0.50	0.09							
Chlorobenzene	ND	0.50	0.13							
Chloroethane	ND	0.50	0.15							
Chloroform	ND	0.50	0.11							
Chloromethane	ND	0.50	0.12							
cis-1,2-Dichloroethene	ND	0.50	0.14							
cis-1,3-Dichloropropene	ND	0.50	0.13							
Di-isopropyl ether	ND	0.50	0.15							
Dibromochloromethane	ND	0.50	0.16							
Dibromomethane	ND	0.50	0.19							

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0785 - MSVOA_W (continued)										
Blank (B9F0785-BLK1) - Continued						Prepared: 6/28/2019 Analyzed: 6/28/2019				
Dichlorodifluoromethane	ND	0.50	0.05							
Ethyl Acetate	ND	10	3.1							
Ethyl Ether	ND	10	2.0							
Ethyl tert-butyl ether	ND	0.50	0.21							
Ethylbenzene	ND	0.50	0.13							
Freon-113	ND	0.50	0.13							
Hexachlorobutadiene	ND	0.50	0.15							
Isopropylbenzene	ND	0.50	0.10							
m,p-Xylene	ND	1.0	0.19							
Methylene chloride	ND	1.0	0.71							
MTBE	ND	0.50	0.26							
n-Butylbenzene	ND	0.50	0.11							
n-Propylbenzene	ND	0.50	0.10							
Naphthalene	ND	0.50	0.41							
o-Xylene	ND	0.50	0.13							
sec-Butylbenzene	ND	0.50	0.09							
Styrene	ND	0.50	0.13							
tert-Amyl methyl ether	ND	0.50	0.41							
tert-Butanol	ND	10	2.4							
tert-Butylbenzene	ND	0.50	0.09							
Tetrachloroethene	ND	0.50	0.10							
Toluene	ND	0.50	0.12							
trans-1,2-Dichloroethene	ND	0.50	0.09							
trans-1,3-Dichloropropene	ND	0.50	0.23							
Trichloroethene	ND	0.50	0.10							
Trichlorofluoromethane	ND	0.50	0.10							
Vinyl acetate	ND	10	1.7							
Vinyl chloride	ND	0.50	0.05							
Surrogate: 1,2-Dichloroethane-d4	*25.77*			*25.0000*		*103*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*25.50*			*25.0000*		*102*	*62 - 134*			
Surrogate: Dibromofluoromethan	*25.74*			*25.0000*		*103*	*56 - 167*			
Surrogate: Toluene-d8	*27.46*			*25.0000*		*110*	*33 - 170*			
LCS (B9F0785-BS1)						Prepared: 6/28/2019 Analyzed: 6/28/2019				
1,1,1,2-Tetrachloroethane	22.1200	0.50	0.11	20.0000		111	80 - 137			
1,1,1-Trichloroethane	20.7200	0.50	0.07	20.0000		104	75 - 148			
1,1,2,2-Tetrachloroethane	20.2000	0.50	0.36	20.0000		101	64 - 118			
1,1,2-Trichloroethane	19.7800	0.50	0.25	20.0000		98.9	77 - 113			
1,1-Dichloroethane	19.1100	0.50	0.09	20.0000		95.6	72 - 131			
1,1-Dichloroethene	18.6100	0.50	0.13	20.0000		93.0	75 - 132			
1,1-Dichloropropene	22.3000	0.50	0.13	20.0000		112	84 - 141			

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Batch B9F0785 - MSVOA_W (continued)

LCS (B9F0785-BS1) - Continued Prepared: 6/28/2019 Analyzed: 6/28/2019

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
1,2,3-Trichloropropane	19.9400	0.50	0.39	20.0000		99.7	65 - 111			
1,2,3-Trichlorobenzene	20.6500	0.50	0.18	20.0000		103	79 - 117			
1,2,4-Trichlorobenzene	20.7200	0.50	0.16	20.0000		104	78 - 121			
1,2,4-Trimethylbenzene	21.6900	0.50	0.14	20.0000		108	83 - 125			
1,2-Dibromo-3-chloropropane	21.5100	0.50	0.41	20.0000		108	54 - 116			
1,2-Dibromoethane	20.2000	0.50	0.24	20.0000		101	79 - 118			
1,2-Dichlorobenzene	21.3800	0.50	0.20	20.0000		107	82 - 115			
1,2-Dichloroethane	20.1300	0.50	0.20	20.0000		101	76 - 115			
1,2-Dichloropropane	20.3800	0.50	0.15	20.0000		102	74 - 113			
1,3,5-Trimethylbenzene	21.9100	0.50	0.13	20.0000		110	83 - 126			
1,3-Dichlorobenzene	21.7800	0.50	0.16	20.0000		109	84 - 118			
1,3-Dichloropropane	21.5200	0.50	0.21	20.0000		108	72 - 116			
1,4-Dichlorobenzene	20.3200	0.50	0.17	20.0000		102	83 - 112			
2,2-Dichloropropane	20.5300	0.50	0.38	20.0000		103	72 - 150			
2-Chlorotoluene	23.0800	0.50	0.11	20.0000		115	82 - 120			
4-Chlorotoluene	23.1000	0.50	0.12	20.0000		116	81 - 121			
4-Isopropyltoluene	21.9100	0.50	0.11	20.0000		110	86 - 124			
Benzene	42.2800	0.50	0.13	40.0000		106	81 - 118			
Bromobenzene	22.0200	0.50	0.21	20.0000		110	82 - 117			
Bromochloromethane	17.8300	0.50	0.16	20.0000		89.2	70 - 136			
Bromodichloromethane	19.5200	0.50	0.14	20.0000		97.6	80 - 122			
Bromoform	19.7600	0.50	0.20	20.0000		98.8	53 - 145			
Bromomethane	25.0200	0.50	0.17	20.0000		125	30 - 204			
Carbon disulfide	18.0700	1.0	0.07	20.0000		90.4	85 - 131			
Carbon tetrachloride	20.4800	0.50	0.09	20.0000		102	77 - 157			
Chlorobenzene	20.4300	0.50	0.13	20.0000		102	86 - 113			
Chloroethane	19.4900	0.50	0.15	20.0000		97.4	70 - 160			
Chloroform	18.9900	0.50	0.11	20.0000		95.0	66 - 136			
Chloromethane	19.4400	0.50	0.12	20.0000		97.2	52 - 138			
cis-1,2-Dichloroethene	18.9100	0.50	0.14	20.0000		94.6	71 - 128			
cis-1,3-Dichloropropene	21.4500	0.50	0.13	20.0000		107	71 - 123			
Di-isopropyl ether	19.0700	0.50	0.15	20.0000		95.4	64 - 123			
Dibromochloromethane	21.2000	0.50	0.16	20.0000		106	78 - 140			
Dibromomethane	19.2100	0.50	0.19	20.0000		96.0	78 - 109			
Dichlorodifluoromethane	19.9200	0.50	0.05	20.0000		99.6	64 - 144			
Ethyl Acetate	192.120	10	3.1	200.000		96.1	55 - 123			
Ethyl Ether	195.980	10	2.0	200.000		98.0	74 - 122			
Ethyl tert-butyl ether	19.4500	0.50	0.21	20.0000		97.2	72 - 120			
Ethylbenzene	42.6900	0.50	0.13	40.0000		107	90 - 116			
Freon-113	20.5400	0.50	0.13	20.0000		103	76 - 143			
Hexachlorobutadiene	22.6500	0.50	0.15	20.0000		113	81 - 129			
Isopropylbenzene	23.6100	0.50	0.10	20.0000		118	83 - 129			

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0785 - MSVOA_W (continued)										
LCS (B9F0785-BS1) - Continued						Prepared: 6/28/2019 Analyzed: 6/28/2019				
m,p-Xylene	45.8900	1.0	0.19	40.0000		115	88 - 124			
Methylene chloride	18.3000	1.0	0.71	20.0000		91.5	76 - 137			
MTBE	19.1000	0.50	0.26	20.0000		95.5	67 - 121			
n-Butylbenzene	21.6400	0.50	0.11	20.0000		108	83 - 129			
n-Propylbenzene	24.1300	0.50	0.10	20.0000		121	85 - 124			
Naphthalene	18.2400	0.50	0.41	20.0000		91.2	67 - 113			
o-Xylene	41.7200	0.50	0.13	40.0000		104	82 - 129			
sec-Butylbenzene	22.1200	0.50	0.09	20.0000		111	86 - 127			
Styrene	20.8500	0.50	0.13	20.0000		104	83 - 122			
tert-Amyl methyl ether	20.3600	0.50	0.41	20.0000		102	61 - 114			
tert-Butanol	116.640	10	2.4	100.000		117	45 - 121			
tert-Butylbenzene	21.9200	0.50	0.09	20.0000		110	84 - 130			
Tetrachloroethene	22.2600	0.50	0.10	20.0000		111	87 - 123			
Toluene	43.0400	0.50	0.12	40.0000		108	84 - 115			
trans-1,2-Dichloroethene	18.7300	0.50	0.09	20.0000		93.6	60 - 148			
trans-1,3-Dichloropropene	21.4900	0.50	0.23	20.0000		107	77 - 118			
Trichloroethene	20.7400	0.50	0.10	20.0000		104	79 - 129			
Trichlorofluoromethane	18.4100	0.50	0.10	20.0000		92.0	68 - 162			
Vinyl acetate	218.930	10	1.7	200.000		109	65 - 134			
Vinyl chloride	18.1000	0.50	0.05	20.0000		90.5	73 - 128			
Surrogate: 1,2-Dichloroethane-d4	*23.26*			*25.0000*		*93.0*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*25.74*			*25.0000*		*103*	*62 - 134*			
Surrogate: Dibromofluoromethan	*24.18*			*25.0000*		*96.7*	*56 - 167*			
Surrogate: Toluene-d8	*26.73*			*25.0000*		*107*	*33 - 170*			
LCS Dup (B9F0785-BSD1)						Prepared: 6/28/2019 Analyzed: 6/28/2019				
1,1,1,2-Tetrachloroethane	21.8800	0.50	0.11	20.0000		109	80 - 137	1.09	20	
1,1,1-Trichloroethane	20.7400	0.50	0.07	20.0000		104	75 - 148	0.0965	20	
1,1,2,2-Tetrachloroethane	21.2600	0.50	0.36	20.0000		106	64 - 118	5.11	20	
1,1,2-Trichloroethane	20.4700	0.50	0.25	20.0000		102	77 - 113	3.43	20	
1,1-Dichloroethane	19.8900	0.50	0.09	20.0000		99.4	72 - 131	4.00	20	
1,1-Dichloroethene	19.2100	0.50	0.13	20.0000		96.0	75 - 132	3.17	20	
1,1-Dichloropropene	22.0500	0.50	0.13	20.0000		110	84 - 141	1.13	20	
1,2,3-Trichloropropane	21.3000	0.50	0.39	20.0000		106	65 - 111	6.60	20	
1,2,3-Trichlorobenzene	20.9500	0.50	0.18	20.0000		105	79 - 117	1.44	20	
1,2,4-Trichlorobenzene	20.5100	0.50	0.16	20.0000		103	78 - 121	1.02	20	
1,2,4-Trimethylbenzene	21.4400	0.50	0.14	20.0000		107	83 - 125	1.16	20	
1,2-Dibromo-3-chloropropane	23.1600	0.50	0.41	20.0000		116	54 - 116	7.39	20	
1,2-Dibromoethane	21.5200	0.50	0.24	20.0000		108	79 - 118	6.33	20	
1,2-Dichlorobenzene	21.7500	0.50	0.20	20.0000		109	82 - 115	1.72	20	
1,2-Dichloroethane	20.9500	0.50	0.20	20.0000		105	76 - 115	3.99	20	

Certificate of Analysis

Paloma Environmental Services, Inc.	Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma	Report To :	Matt Smith
Rancho Santa Margarita , CA 92688	Reported :	07/01/2019

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0785 - MSVOA_W (continued)										
LCS Dup (B9F0785-BSD1) - Continued					Prepared: 6/28/2019 Analyzed: 6/28/2019					
1,2-Dichloropropane	20.4000	0.50	0.15	20.0000		102	74 - 113	0.0981	20	
1,3,5-Trimethylbenzene	21.6600	0.50	0.13	20.0000		108	83 - 126	1.15	20	
1,3-Dichlorobenzene	21.8700	0.50	0.16	20.0000		109	84 - 118	0.412	20	
1,3-Dichloropropane	21.8900	0.50	0.21	20.0000		109	72 - 116	1.70	20	
1,4-Dichlorobenzene	20.5100	0.50	0.17	20.0000		103	83 - 112	0.931	20	
2,2-Dichloropropane	20.5600	0.50	0.38	20.0000		103	72 - 150	0.146	20	
2-Chlorotoluene	23.2300	0.50	0.11	20.0000		116	82 - 120	0.648	20	
4-Chlorotoluene	23.0800	0.50	0.12	20.0000		115	81 - 121	0.0866	20	
4-Isopropyltoluene	21.5800	0.50	0.11	20.0000		108	86 - 124	1.52	20	
Benzene	42.4500	0.50	0.13	40.0000		106	81 - 118	0.401	20	
Bromobenzene	22.4100	0.50	0.21	20.0000		112	82 - 117	1.76	20	
Bromochloromethane	18.9400	0.50	0.16	20.0000		94.7	70 - 136	6.04	20	
Bromodichloromethane	20.0800	0.50	0.14	20.0000		100	80 - 122	2.83	20	
Bromoform	20.9600	0.50	0.20	20.0000		105	53 - 145	5.89	20	
Bromomethane	26.2700	0.50	0.17	20.0000		131	30 - 204	4.87	20	
Carbon disulfide	18.9400	1.0	0.07	20.0000		94.7	85 - 131	4.70	20	
Carbon tetrachloride	20.9000	0.50	0.09	20.0000		104	77 - 157	2.03	20	
Chlorobenzene	20.2600	0.50	0.13	20.0000		101	86 - 113	0.836	20	
Chloroethane	20.4700	0.50	0.15	20.0000		102	70 - 160	4.90	20	
Chloroform	19.3600	0.50	0.11	20.0000		96.8	66 - 136	1.93	20	
Chloromethane	19.7700	0.50	0.12	20.0000		98.8	52 - 138	1.68	20	
cis-1,2-Dichloroethene	19.3300	0.50	0.14	20.0000		96.6	71 - 128	2.20	20	
cis-1,3-Dichloropropene	22.0300	0.50	0.13	20.0000		110	71 - 123	2.67	20	
Di-isopropyl ether	18.8800	0.50	0.15	20.0000		94.4	64 - 123	1.00	20	
Dibromochloromethane	21.4500	0.50	0.16	20.0000		107	78 - 140	1.17	20	
Dibromomethane	20.4400	0.50	0.19	20.0000		102	78 - 109	6.20	20	
Dichlorodifluoromethane	20.3600	0.50	0.05	20.0000		102	64 - 144	2.18	20	
Ethyl Acetate	212.790	10	3.1	200.000		106	55 - 123	10.2	20	
Ethyl Ether	202.230	10	2.0	200.000		101	74 - 122	3.14	20	
Ethyl tert-butyl ether	19.4800	0.50	0.21	20.0000		97.4	72 - 120	0.154	20	
Ethylbenzene	42.6000	0.50	0.13	40.0000		106	90 - 116	0.211	20	
Freon-113	20.6500	0.50	0.13	20.0000		103	76 - 143	0.534	20	
Hexachlorobutadiene	21.7400	0.50	0.15	20.0000		109	81 - 129	4.10	20	
Isopropylbenzene	23.4000	0.50	0.10	20.0000		117	83 - 129	0.893	20	
m,p-Xylene	45.8600	1.0	0.19	40.0000		115	88 - 124	0.0654	20	
Methylene chloride	19.4700	1.0	0.71	20.0000		97.4	76 - 137	6.20	20	
MTBE	19.4300	0.50	0.26	20.0000		97.2	67 - 121	1.71	20	
n-Butylbenzene	21.1200	0.50	0.11	20.0000		106	83 - 129	2.43	20	
n-Propylbenzene	23.9700	0.50	0.10	20.0000		120	85 - 124	0.665	20	
Naphthalene	19.3300	0.50	0.41	20.0000		96.6	67 - 113	5.80	20	
o-Xylene	41.8100	0.50	0.13	40.0000		105	82 - 129	0.215	20	
sec-Butylbenzene	21.8300	0.50	0.09	20.0000		109	86 - 127	1.32	20	

Volatile Organic Compounds by EPA 8260B - Quality Control (cont'd)

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B9F0785 - MSVOA_W (continued)										
LCS Dup (B9F0785-BSD1) - Continued					Prepared: 6/28/2019 Analyzed: 6/28/2019					
Styrene	21.0700	0.50	0.13	20.0000		105	83 - 122	1.05	20	
tert-Amyl methyl ether	20.7300	0.50	0.41	20.0000		104	61 - 114	1.80	20	
tert-Butanol	129.030	10	2.4	100.000		129	45 - 121	10.1	20	L4
tert-Butylbenzene	21.7100	0.50	0.09	20.0000		109	84 - 130	0.963	20	
Tetrachloroethene	21.6800	0.50	0.10	20.0000		108	87 - 123	2.64	20	
Toluene	44.1100	0.50	0.12	40.0000		110	84 - 115	2.46	20	
trans-1,2-Dichloroethene	19.0300	0.50	0.09	20.0000		95.2	60 - 148	1.59	20	
trans-1,3-Dichloropropene	22.7300	0.50	0.23	20.0000		114	77 - 118	5.61	20	
Trichloroethene	20.8300	0.50	0.10	20.0000		104	79 - 129	0.433	20	
Trichlorofluoromethane	19.0900	0.50	0.10	20.0000		95.4	68 - 162	3.63	20	
Vinyl acetate	224.710	10	1.7	200.000		112	65 - 134	2.61	20	
Vinyl chloride	18.6800	0.50	0.05	20.0000		93.4	73 - 128	3.15	20	
Surrogate: 1,2-Dichloroethane-d4	*25.04*			*25.0000*		*100*	*57 - 152*			
Surrogate: 4-Bromofluorobenzene	*27.03*			*25.0000*		*108*	*62 - 134*			
Surrogate: Dibromofluoromethan	*25.17*			*25.0000*		*101*	*56 - 167*			
Surrogate: Toluene-d8	*27.84*			*25.0000*		*111*	*33 - 170*			

Certificate of Analysis

Paloma Environmental Services, Inc.		Project Number :	Former Hansen Auto Tow, 20180515
52 El Prisma		Report To :	Matt Smith
Rancho Santa Margarita , CA 92688		Reported :	07/01/2019

Notes and Definitions

L4	Laboratory Control Sample outside of control limit but within Marginal Exceedance (ME) limit.
L3	Laboratory control sample outside in-house established limits but within method criteria.
H4	Change order analysis requested past the sample holding time.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Carmen Aguila

From: msmith@palomaenv.com
Sent: Tuesday, June 25, 2019 9:23 PM
To: Carmen Aguila
Cc: customer.relations@atlglobal.com
Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325

Understood. Thank you for your understanding.

> -------- Original Message --------
> Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL#
> 1902325
> From: Carmen Aguila <Carmen.Aguila@atlglobal.com>
> Date: Tue, June 25, 2019 5:18 pm
> To: msmith <msmith@palomaenv.com>
> Cc: "customer.relations@atlglobal.com"
> <customer.relations@atlglobal.com>
>
> Hi Matt,
>
> Thanks, reanalysis has been scheduled. Please note that the these analysis will be flagged that the samples were analyzed passed hold time. The samples already exceeded the 14 days hold time.
>
> Thank you,
> Carmen
>
> ---
>
> **From:** msmith <msmith@palomaenv.com>
> **Sent:** Tuesday, June 25, 2019 5:09 PM
> **To:** Carmen Aguila <Carmen.Aguila@atlglobal.com>
> **Cc:** customer.relations@atlglobal.com
> **Subject:** RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325
>
> Correct. Also, please include 8015_oro.
>
> Thanks,
>
> Matt
>
> Sent from my Verizon, Samsung Galaxy smartphone
>
> -------- Original message --------
> From: Carmen Aguila <Carmen.Aguila@atlglobal.com>
> Date: 6/25/19 12:07 PM (GMT-08:00)
> To: msmith@palomaenv.com

Cc: customer.relations@atlglobal.com
Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325

Hi Matt,

Just to confirm, for the 3 GW samples, you need it rerun for all test, 8260, 8015_gro and 8015_dro?

Thank you,

Carmen

From: msmith@palomaenv.com <msmith@palomaenv.com>
Sent: Tuesday, June 25, 2019 11:27 AM
To: Carmen Aguila <Carmen.Aguila@atlglobal.com>
Cc: customer.relations@atlglobal.com
Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325

Carmen,

Having looked through all the data again, I wanted to see if we can rerun the following samples:

MMW-4 (groundwater)

MMW-5 (groundwater)

HP-3 (groundwater)

HP-3-5 for TPHd and TPHo only (soil)

I understand if these are going to incur additional costs, but these results do not seem in line with either historical concentrations or were not expected to result in high concentrations. This is not to say that your data is not correct, but I just need to confirm since these will likely change the outcome of the project.

Thanks,

Matt

-------- Original Message --------
Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325
From: Carmen Aguila <Carmen.Aguila@atlglobal.com>
Date: Mon, June 24, 2019 9:07 am
To: "msmith@palomaenv.com" <msmith@palomaenv.com>

Cc: "customer.relations@atlglobal.com"
<customer.relations@atlglobal.com>

Good morning Matt,

The results are in review right now, I will sent final report today.

Thank you,

Carmen

From: msmith@palomaenv.com <msmith@palomaenv.com>
Sent: Sunday, June 23, 2019 10:58 PM
To: Carmen Aguila <Carmen.Aguila@atlglobal.com>
Cc: customer.relations@atlglobal.com
Subject: RE: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325

Carmen,

Thank you for providing this report.

Please let me know when you will be able to submit the final report with the GRO results.

Thanks,

Matt

-------- Original Message --------
Subject: Partial Results- Former Hansen Auto Tow, 20180515, ATL# 1902325
From: Carmen Aguila <Carmen.Aguila@atlglobal.com>
Date: Thu, June 20, 2019 4:56 pm
To: "msmith@palomaenv.com" <msmith@palomaenv.com>
Cc: "customer.relations@atlglobal.com"
<customer.relations@atlglobal.com>

Good afternoon Matt,

Please find you results for the above project attached. Pending 8015 GRO analysis results to follow. If I can further assist, please let me know.

Thank you,

Carmen Aguila | Project Manager
ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Avenue, Signal Hill CA 90755
O: 562.989.4045 ext 245 |F: 562.989-6348 |M: 562.715.8770
http://www.atlglobal.com

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Advanced Technology Laboratories is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and hazardous waste samples. ATL is accredited by the State of California, NELAP and State of Oregon (Air) and holds various SBE, DBE and MBE certificates and a USDA soil permit. ATL takes pride in providing our customers with quick turnaround time, excellent customer service and defensible data while offering very competitive rates. *Advanced Technology Labs - Your Partner for Quality Environmental Testing*

Appendix M
Degradation Calculations and Trend Graphs

TABLE 1: SUMMARY OF DEGRADATION CALCULATIONS

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

Well	Analyte	Maximum Concentration (µg/L)	Current Concentration (µg/L)	Maximum SPH Thickness (ft)	Current SPH Thickness (ft)	WQO (µg/L)	Half Life (years)	Date to Reach WQO	Years to Reach WQO
MMW-1	TPHg	7,600	7,600	0.01	0.01	760	N/A	Increasing	Increasing
	TPHd	8,300	5,000			200	N/A	Stable	Stable
MMW-2	TPHg	18,000	5,300	0.03	N/A	760	N/A	Increasing	Increasing
	TPHd	13,000	2,700			200	6.33	May 2032	13
MMW-3	TPHg	89,000	1,600	0.92	N/A	760	4.74	Jun 2035	16
	TPHd	25,000	8,000			200	9.49	Aug 2057	38
MMW-4	TPHg	12,000	12,000	0.06	N/A	760	N/A	Increasing	Increasing
	TPHd	4,900	1,500			200	N/A	WQO Previously Met	WQO Previously Met
MMW-6	TPHg	46,000	2,100	0.70	N/A	760	4.74	Mar 2012	WQO Previously Met
	TPHd	150,000	19,000			200	1.90	Sep 2055	36
MMW-7	TPHg	840	SPH	2.93	0.61	760	N/A	SPH Present	SPH Present
	TPHd	27,000	SPH			200	N/A	SPH Present	SPH Present
MMW-9A	TPHg	900	900	0.02	N/A	760	N/A	Increasing	Increasing
	TPHd	8,900	3,600			200	N/A	Stable	Stable
MMW-9B	TPHg	6,900	SPH	2.72	2.72	760	N/A	SPH Present	SPH Present
	TPHd	19,000	SPH			200	N/A	SPH Present	SPH Present
HMW-2	TPHg	350	Abandoned	N/A	N/A	760	N/A	WQO Met	WQO Met
	TPHd	5,000	Abandoned			200	1.90	May 2032	13
HMW-3A	TPHg	360	SPH	3.41	1.11	760	N/A	SPH Present	SPH Present
	TPHd	4,700	SPH			200	N/A	SPH Present	SPH Present
HMW-4	TPHg	1,900	SPH	3.78	0.12	760	N/A	SPH Present	SPH Present
	TPHd	11,000	SPH			200	N/A	SPH Present	SPH Present
HMW-5	TPHg	2,200	SPH	1.84	1.09	760	31.63	May 1994	WQO Previously Met
	TPHd	43,000	SPH			200	9.49	Feb 2070	51
HMW-7	TPHg	36,000	1,500	0.13	N/A	760	3.80	May 2031	12
	TPHd	140,000	6,600			200	0.95	Feb 2025	6

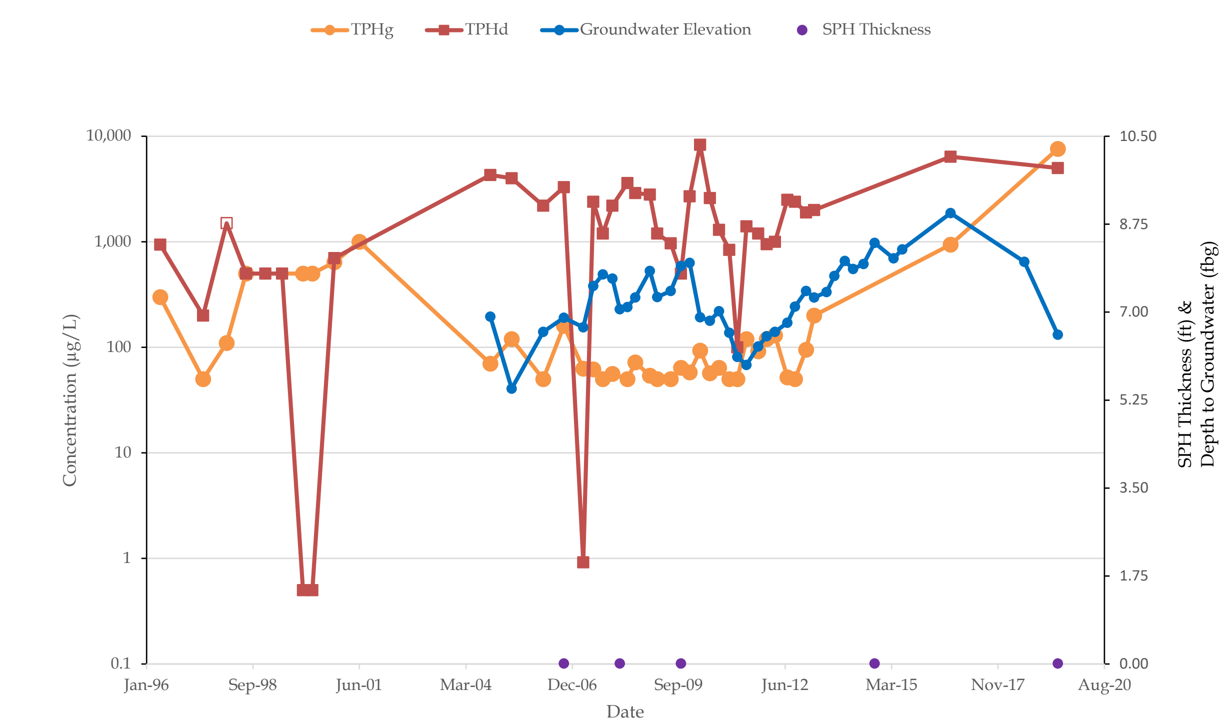
Predicted Time to Water Quality Objectives in Well MMW-1

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Increasing	Stable



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-1: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

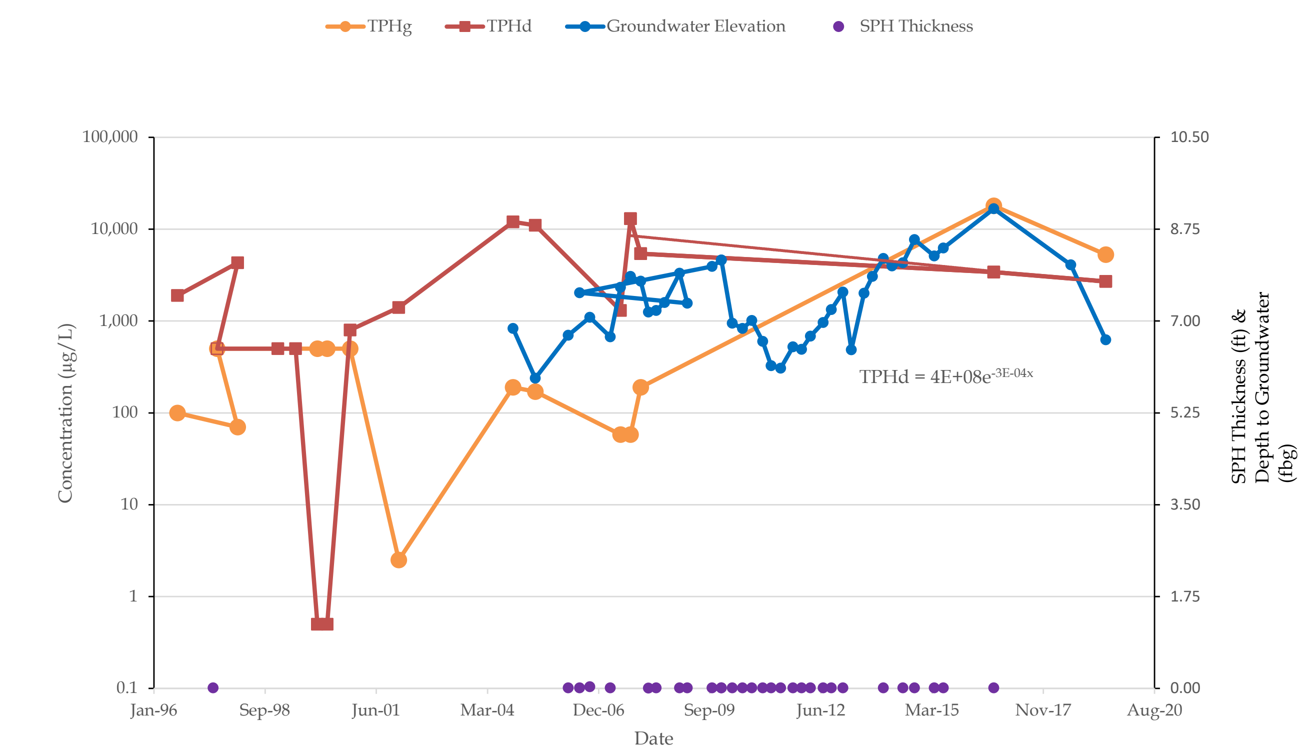
Predicted Time to Water Quality Objectives in Well MMW-2

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$y = b\,e^{ax}$ ===> $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	4.00E+08
Constant:	a	N/A	-3.00E-04
Starting date for current trend:		N/A	9/27/2007
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	6.33
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Increasing	May 2032



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-2: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

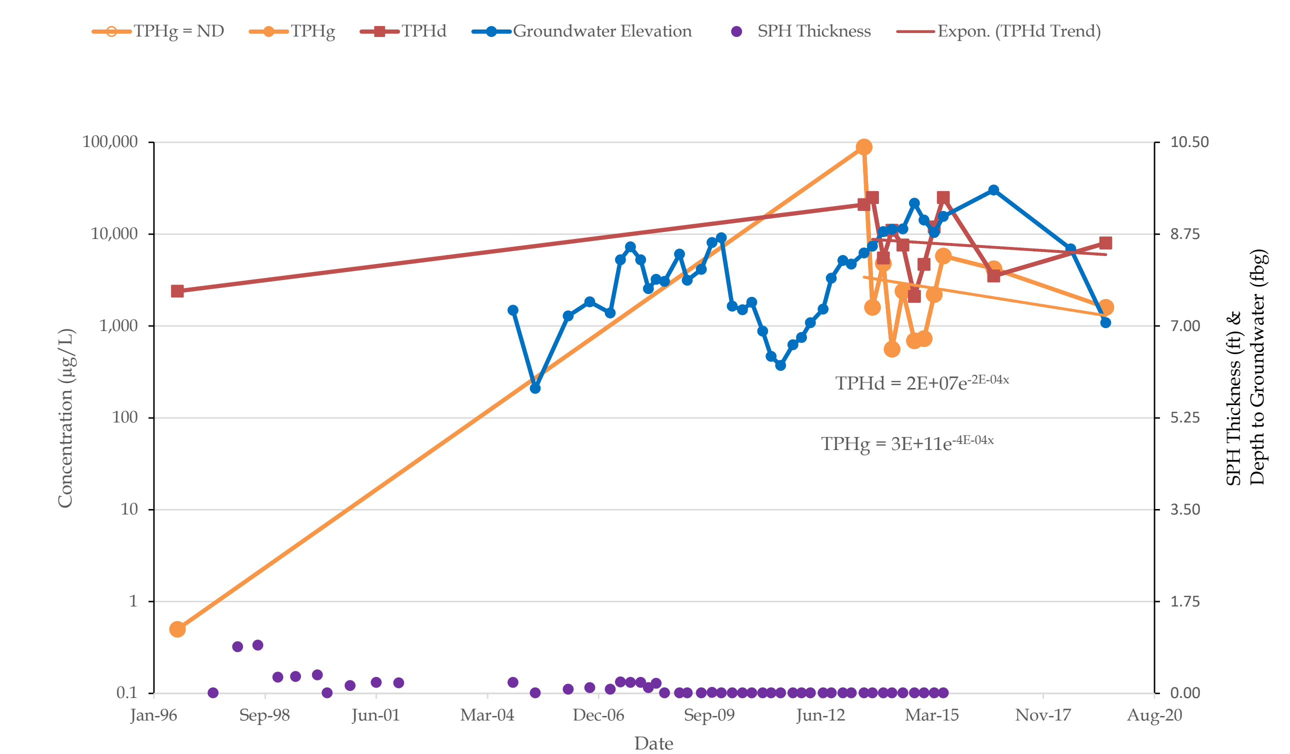
Predicted Time to Water Quality Objectives in Well MMW-3

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	3.00E+11	2.00E+07
Constant:	a	-4.00E-04	-2.00E-04
Starting date for current trend:		6/28/2013	9/11/2013
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.74	9.49
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Jun 2035	Aug 2057



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-3: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

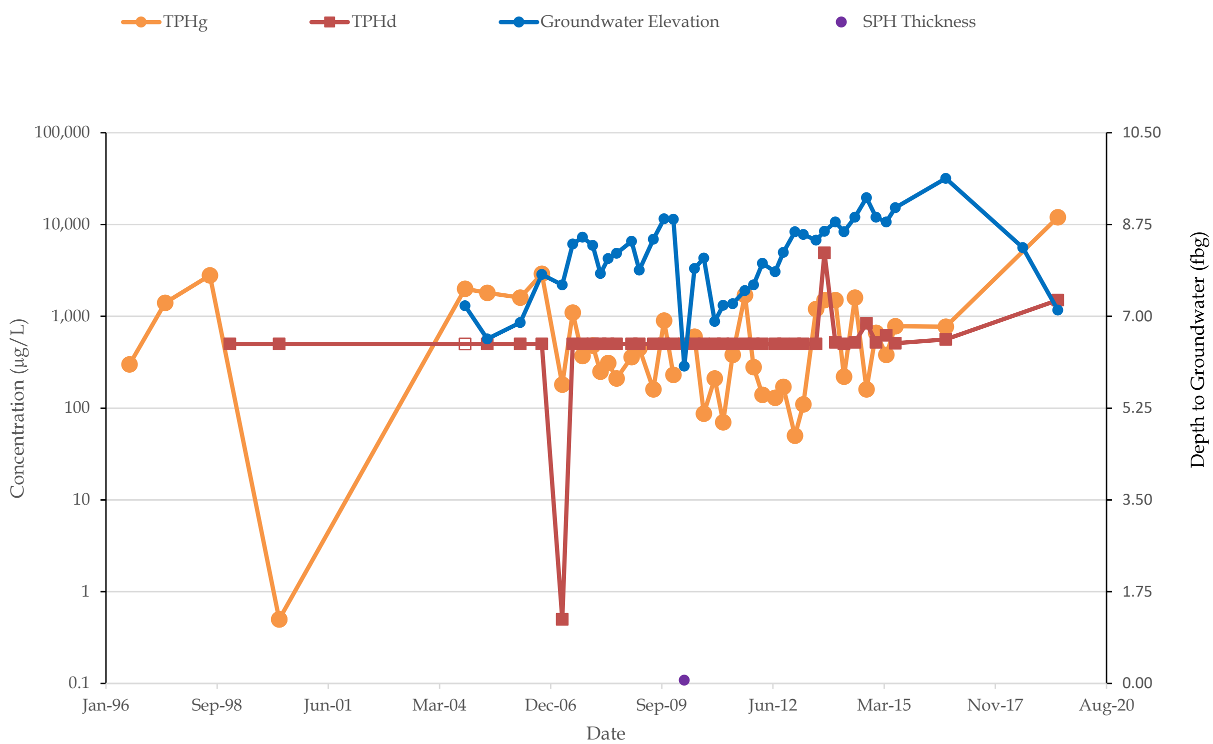
Predicted Time to Water Quality Objectives in Well MMW-4

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$y = b e^{ax}$ ===> $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Stable	WQO Met



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-4: TPHg AND TPHd
CONCENTRATIONS AND GROUNDWATER
ELEVATION

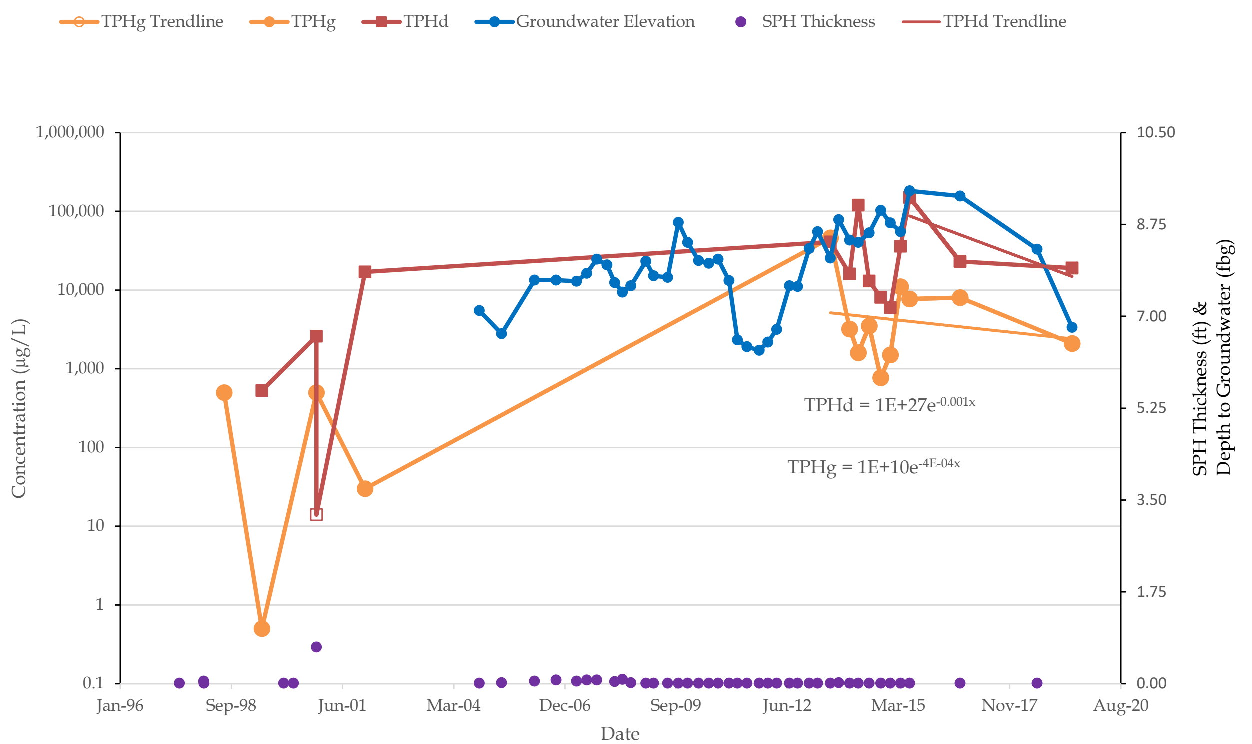
Predicted Time to Water Quality Objectives in Well MMW-6

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L; b = concentration at time (x); a = decay constant; x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	1.00E+10	1.00E+27
Constant:	a	-4.00E-04	-1.00E-03
Starting date for current trend:		3/5/2013	6/20/2015
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.74	1.90
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Mar 2012	Sep 2055



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-6: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

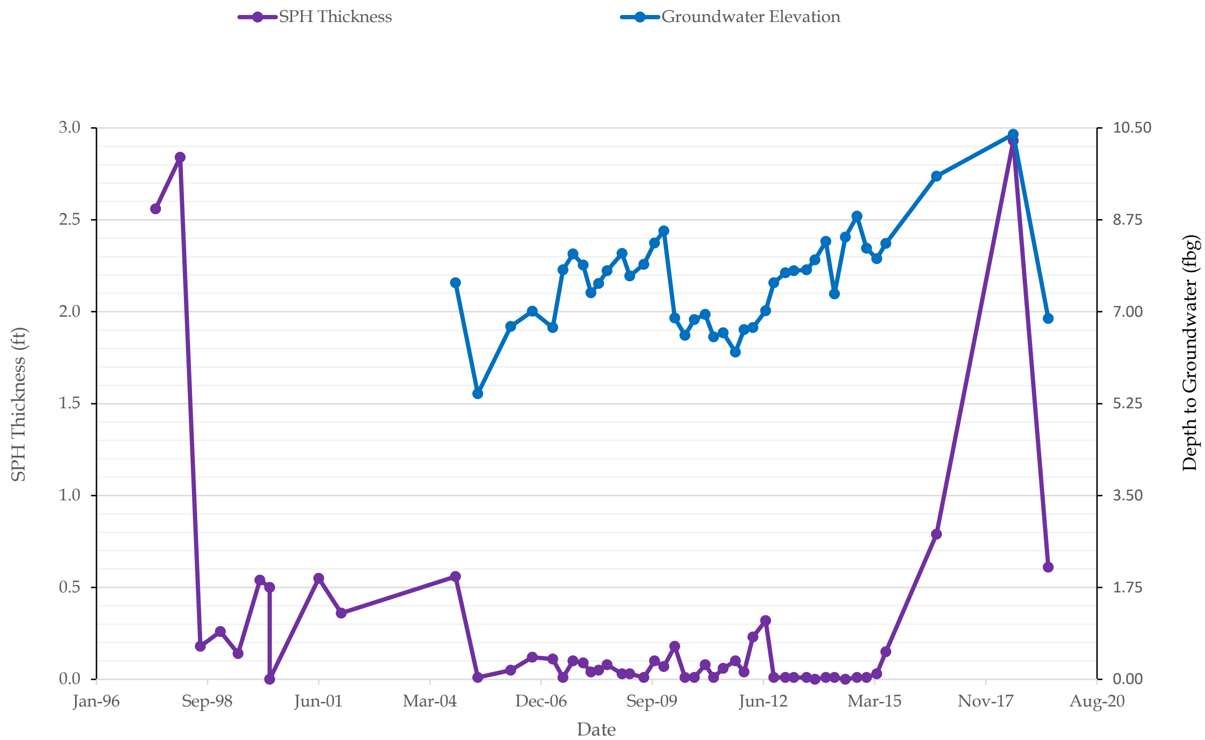
Predicted Time to Water Quality Objectives in Well MMW-7

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$y = b\,e^{ax}$ ===> $x = \ln(y/b) / a$

where: y = concentration in µg/L | a = decay constant
b = concentration at time (x) | x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	SPH	SPH



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-7: SPH THICKNESS AND GROUNDWATER ELEVATION

Predicted Time to Water Quality Objectives in Well MMW-9A

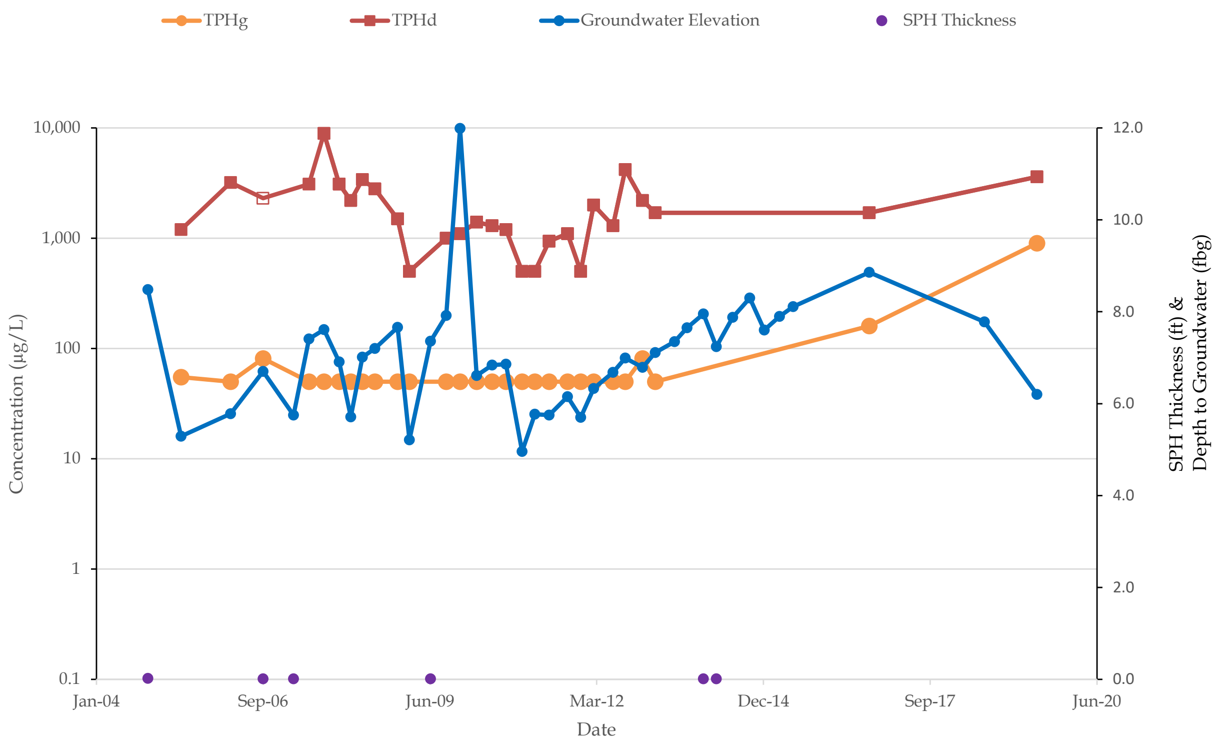
Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L — a = decay constant

b = concentration at time (x) — x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	Increasing	Stable



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-9A: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

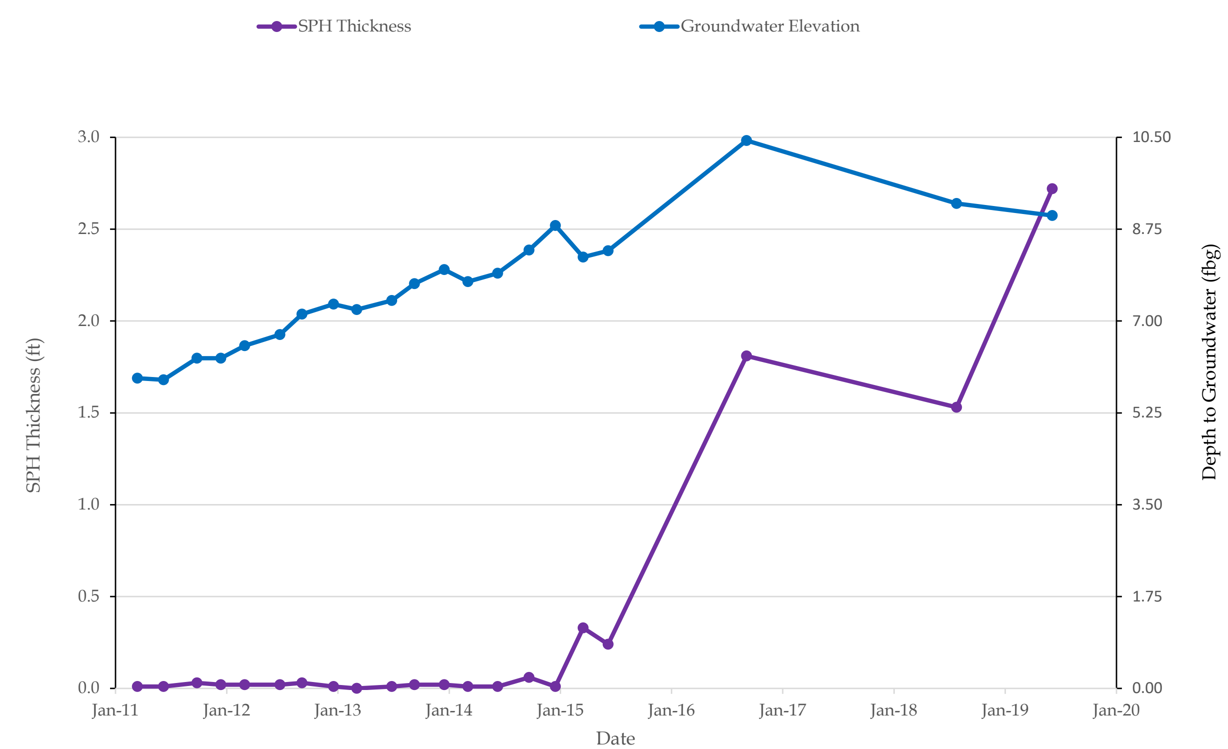
Predicted Time to Water Quality Objectives in Well MMW-9B

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L | a = decay constant
b = concentration at time (x) | x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	SPH	SPH



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

MMW-9B: SPH THICKNESS AND
GROUNDWATER ELEVATION

Predicted Time to Water Quality Objectives in Well HMW-2

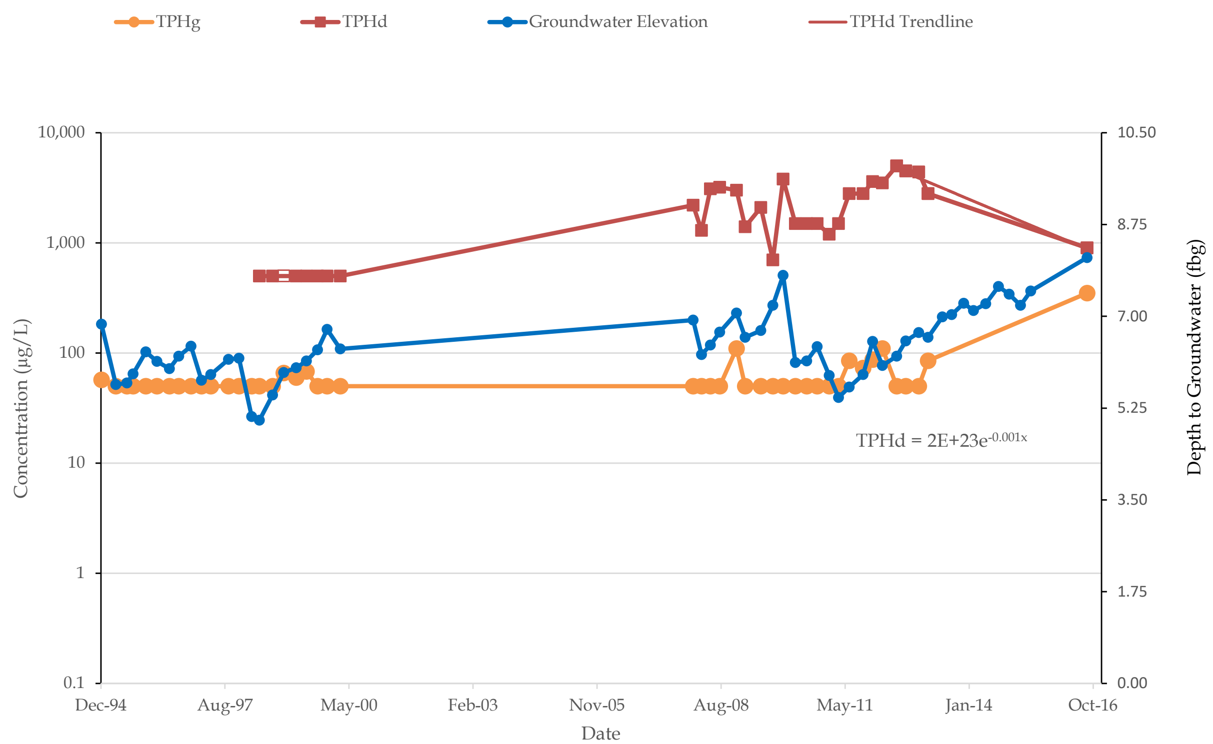
Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$y = b e^{ax}$ ===> $x = \ln(y/b) / a$

where: y = concentration in µg/L; a = decay constant

b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	2.00E+23
Constant:	a	N/A	-1.00E-03
Starting date for current trend:		N/A	6/25/2012
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	1.90
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	WQO Met	May 2032



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

HMW-2: TPHg AND TPHd
CONCENTRATIONS AND GROUNDWATER
ELEVATION

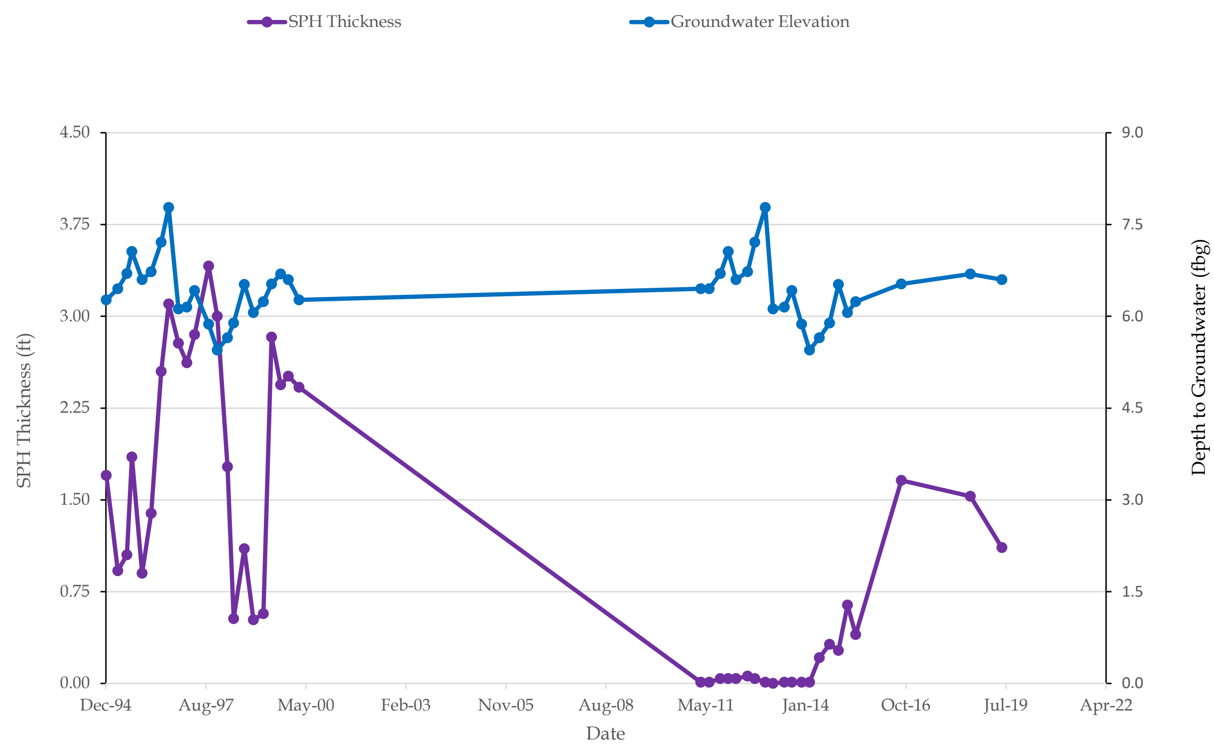
Predicted Time to Water Quality Objectives in Well HMW-3A

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b\,e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	SPH	SPH



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

HMW-3A: SPH THICKNESS AND GROUNDWATER ELEVATION

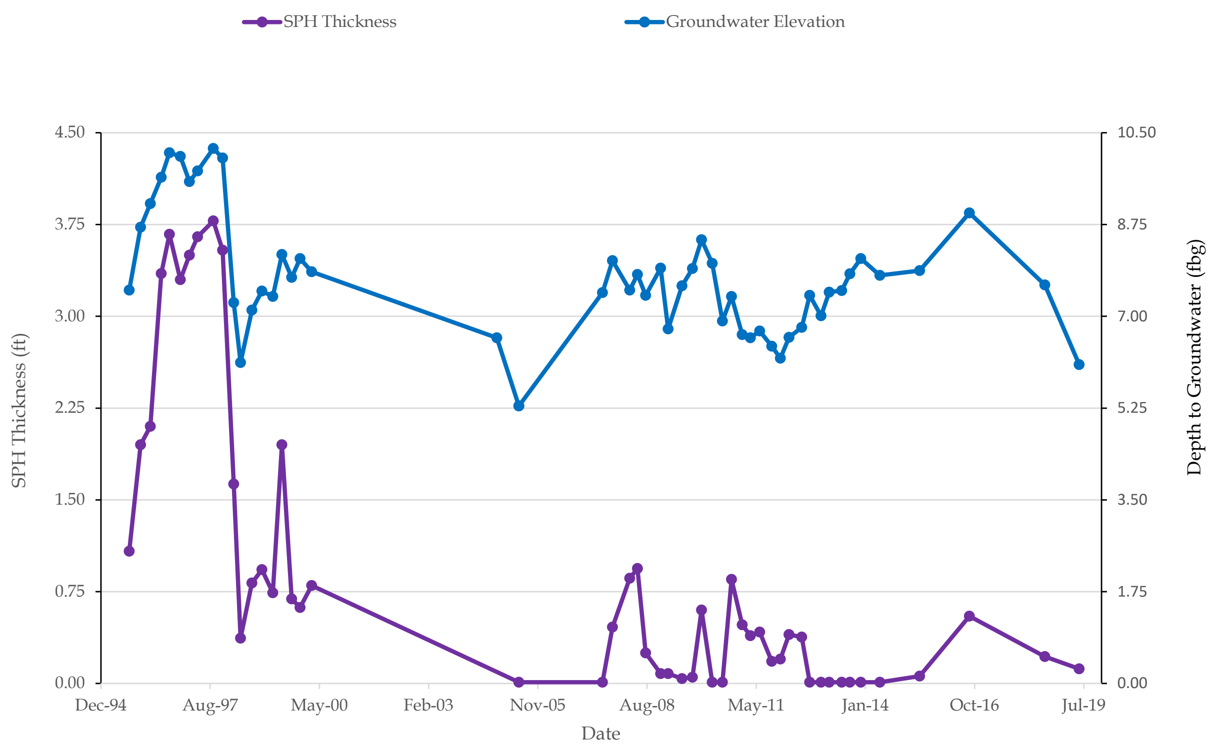
Predicted Time to Water Quality Objectives in Well HMW-4

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b\,e^{ax} \implies x = \ln(y/b) / a$$

where: y = concentration in µg/L; a = decay constant
b = concentration at time (x); x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	N/A	N/A
Constant:	a	N/A	N/A
Starting date for current trend:		N/A	N/A
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	N/A	N/A
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	SPH	SPH



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

HMW-4: SPH THICKNESS AND GROUNDWATER ELEVATION

Predicted Time to Water Quality Objectives in Well HMW-5

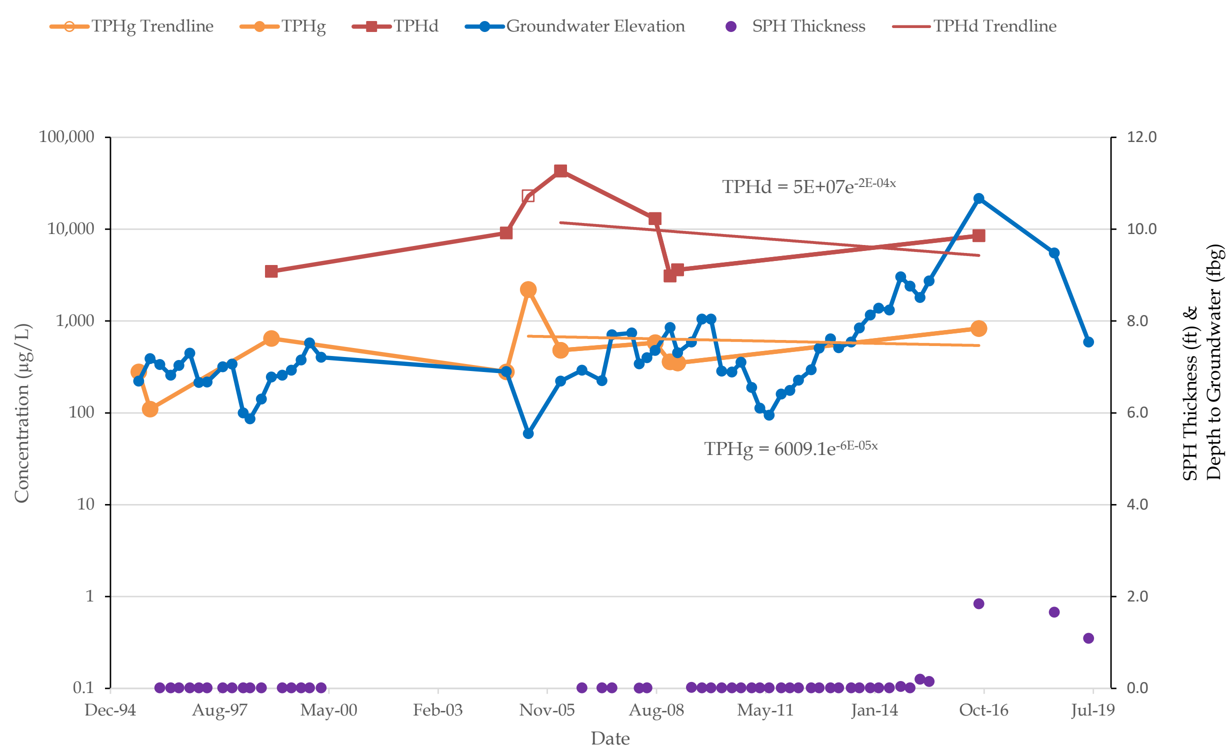
Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b\,e^{ax} \quad ===> \quad x = \ln(y/b) / a$$

where: y = concentration in µg/L; a = decay constant; b = concentration at time (x); x = time (x) in days

Given	Consituent	TPHg	TPHd
Water Quality Objective (WQO):	y	760	200
Constant:	b	6.01E+03	5.00E+07
Constant:	a	-6.00E-05	-2.00E-04
Starting date for current trend:		5/23/2005	3/15/2006

Calculate		TPHg	TPHd
Attenuation Half Life (years):	(-ln(2)/a)/365.25	31.63	9.49
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	May 1994	Feb 2070



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

HMW-5: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

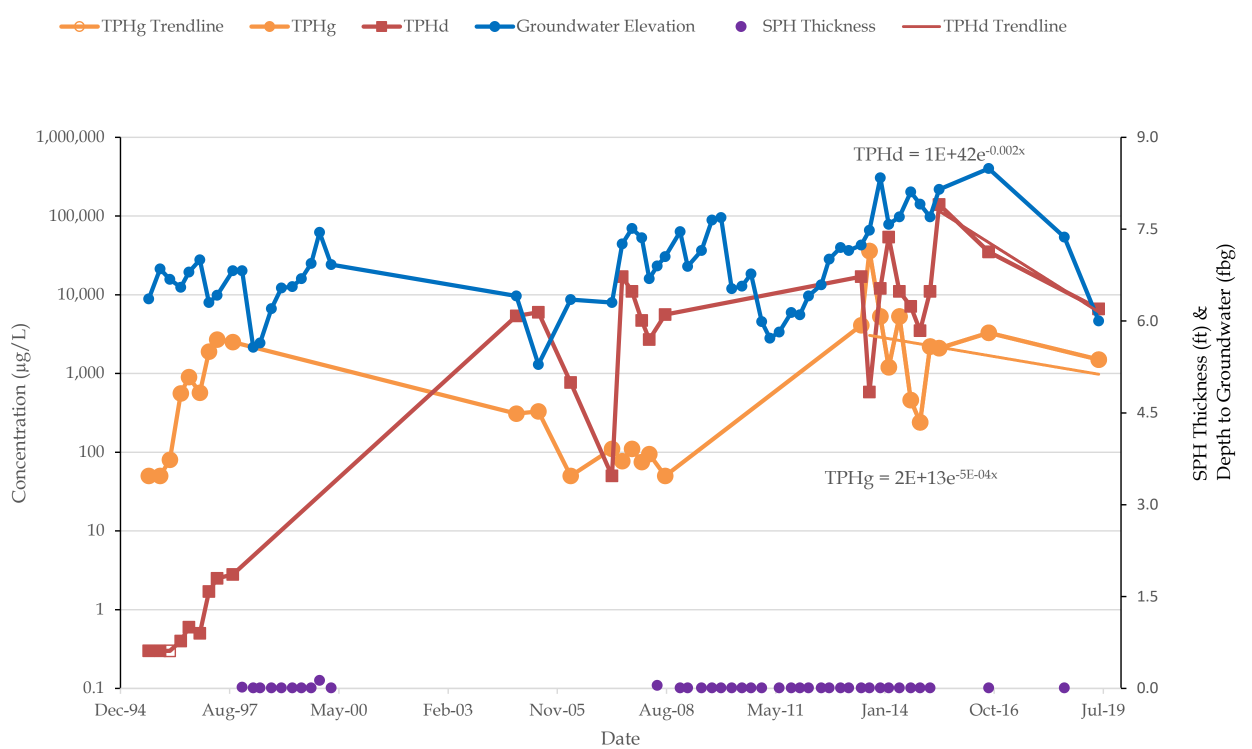
Predicted Time to Water Quality Objectives in Well HMW-7

Former Hansen Auto Tow, 4620 Lincoln Avenue, Cypress, California

$$y = b\,e^{ax} \quad ===> \quad x = \ln(y/b)\,/\,a$$

where: y = concentration in µg/L — a = decay constant
b = concentration at time (x) — x = time (x) in days

	Consituent	TPHg	TPHd
Given			
Water Quality Objective (WQO):	y	760	200
Constant:	b	2.00E+13	1.00E+42
Constant:	a	-5.00E-04	-2.00E-03
Starting date for current trend:		6/28/2013	6/10/2015
Calculate			
Attenuation Half Life (years):	(-ln(2)/a)/365.25	3.80	0.95
Estimated Date to Reach WQO:	(x = ln(y/b) / a)	May 2031	Feb 2025



FORMER HANSEN AUTO TOW
4620 LINCOLN AVENUE
CYPRESS, CALIFORNIA

HMW-7: TPHg AND TPHd
CONCENTRATIONS, SPH THICKNESS AND
GROUNDWATER ELEVATION

Appendix O
META Environmental, Inc. – Environmental Forensic Report

Environmental Forensic Report

Former Hansen Auto Tow

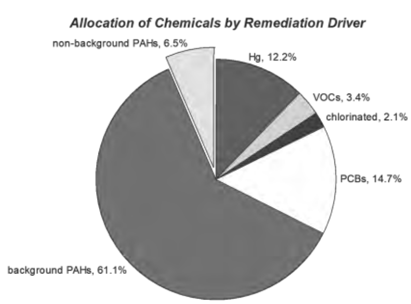
SDG: F190032

Report To:

Paloma Environmental Services, Inc.
52 El Prisma
Rancho Santa Margarita, CA 92668

Report By:

META Environmental, Inc.
1000 Turk Hill Road
Fairport, NY 14450



July 2, 2019

Identifying and allocating sources of pollutants in complex environments.

Executive Summary

Five non-aqueous phase liquid (NAPL) samples were received by ESS Laboratory for META Environmental, Inc. on June 19, 2019 from the Former Hansen Auto Tow site (Site). The samples were analyzed for hydrocarbon fingerprint and for forensic PAHs.

Based on the GC/FID and GC/MS data, all five samples were moderately weathered diesel fuel or No. 2 fuel oil. The relative amounts of several weathering-resistant compounds were nearly identical, indicating that the samples were the same product.

Small differences observed in the composition of the samples were attributed to variations in delivery batches over time and differences in the degree of weathering.

Table of Contents

Introduction

Five non-aqueous phase liquid (NAPL) samples were received by ESS Laboratory for META Environmental, Inc. on June 19, 2019 from the Former Hansen Auto Tow site (Site). The samples were analyzed for hydrocarbon fingerprint and total petroleum hydrocarbons, and for forensic PAHs.

This report summarizes the findings and compares the samples.

Sample Delivery Group

Project:	Former Hansen Auto Tow
Client	Paloma Environmental Services, Inc.
	52 El Prisma
	Rancho Santa Margarita, CA 92668
Report Contact:	Matthew Smith, Ph.D.
Dates of Receipt:	6/19/2019
META Project Number:	P21001
SDG No.:	F190032

Chain of Custody

Chain of custody documentation is included in the ESS Laboratory report (Appendix C).

Methods

The NAPL samples were prepared by solvent dilution (EPA 3580) using dichloromethane (DCM). The extracts were spiked with internal standard and analyzed by GC/FID (EPA 8015M) for fingerprinting and by GC/MS/SIM (EPA 8270M) for mono- and polycyclic aromatic hydrocarbons (MAHs and PAHs), alkyl PAH homologues and other selected compounds.

Results

Sample results are presented in several appendices which follow this narrative.

Appendix A: GC/FID Fingerprints
Appendix B: Bar Plots
Appendix C: Extracted Ion Current Profiles (EICPs)
Appendix D: ESS Laboratory Report

Discussion

Sample-Specific Observations

HMW-5

NAPL sample HMW-5 contained petrogenic material (see Definitions). The petrogenic material was characterized by an unresolved complex mixture (UCM) that eluted from about nonane (n-C9) to about tetracosane (n-C24) in the GC/FID chromatogram (Appendix A). No normal alkanes were detected; however, isoprenoid hydrocarbons, including pristane and phytane, were clearly present. These features are consistent with weathered[1] No. 2 fuel oils and diesel fuels.

The EICPs clearly showed isoprenoid hydrocarbons, alkylcyclohexanes, and sesquiterpane biomarker compounds (App C). The presence of these compounds confirms that the material was petrogenic.

The TPH concentration was 781,000 mg/kg (78.1%).

Heptadecane was not detected, so the n-C17/pristane ratio was 0. Using the method of Christensen and Larsen, the diesel-range fuel oil was in the subsurface for at least 20 years (with the qualifications described below)[2].

MMW-7

NAPL sample MMW-7 was similar to HMW-5.

The TPH concentration was 829,000 mg/kg (82.9%).

HMW-4

NAPL sample HMW-4 was similar to HMW-5; except that it appeared to be more evaporatively weathered.

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[1] Weathering is the combined effect of evaporation, dissolution into water, and biodegradation on the composition of petroleum products following release into the environment.

[2] The Christensen and Larsen method of dating petroleum products released into the environment is based on the relative weathering rates of various components of the product. This method involves the comparison of n-heptadecane (C17) to the isoprenoid pristane. It has been shown that this ratio can be used to date single release diesel oil spills between five and twenty years since release with a margin of error of two years at the 95% confidence level. Kaplan et al. (1996) took the model one step further and generated an equation where the n-C17 to pristane ratio directly correlates to an estimated age with a maximum of 19.8 years.

The accuracy of this dating technique is subject to known variability in the C17/pristane ratio of fresh petroleum products and to variable rates of weathering in the environment. The precision estimate of 2 years is based on the data given in C&L 1993 utilizing 12 samples. However, some fresh petroleum products exhibit C17/pristane ratios that don't fit the relationship, and thus the age of their degraded forms cannot be predicted using the derived relationship. Also, certain environmental conditions can accelerate or delay weathering effects.

The C&L model is valid for soil samples from diesel fuel releases in the vadose zone under very specific conditions; it was not developed for NAPL samples. The age estimate presented here for NAPL should be considered qualitative.

No sample of unaltered fuel oil from the site was available, so META could not determine whether there was a C17/pristane bias from the fresh fuel oil. Finally, META did not conduct a site-specific evaluation of the weathering conditions at the site; consequently, the applicability of the model is assumed without confirmation.

The TPH concentration was 919,000 mg/kg (91.9%).

MMW-9B

NAPL sample MMW-9B was similar to HMW-5.

The TPH concentration was 785,000 mg/kg (78.5%).

HMW-3A

NAPL sample HMW-3A was similar to HMW-5.

The TPH concentration was 830,000 mg/kg (83.0%).

Summary

All five NAPL samples contained moderately weathered diesel or No. 2 fuel oil. They were qualitatively the same. Several source and weathering ratios are shown in Table 1 and they also are similar. The relative standard deviation (RSD) of the pristane/phytane ratios was only 1.2% indicating that the five NAPL samples were likely the same product. The higher variability of the C3D, C2D, C3PA, and C2PA ratios is likely due to their low concentration in the samples.

The NAPL samples also were compared using sesquiterpane biomarker compounds. Biomarkers are chemicals found in petroleum that are unchanged or little changed from their natural plant or animal precursors. Biomarker compounds are usually present at detectable levels using modern GC/MS techniques and tend to be resistant to degradation. Further, the distribution of biomarker compounds vary from petroleum source to petroleum source, making them one of the most important hydrocarbon groups used for petroleum fingerprinting.

The distribution of sesquiterpane biomarker compounds in the NAPL samples is shown graphically in Appendix B. Several No. 2 fuel oil and diesel fuel samples from META's archive are included for comparison. Similarly the ratios of selected sesquiterpane biomarker compounds in the NAPL samples are shown in double ratio plots (Figures 1 and 2).

The difference between samples HMW-3A and the laboratory duplicate of HMW-3A can be used as an estimate of the natural variability of the same product and the variability contributed by the laboratory procedures. Examination of Figures 1 and 2 indicates that there is little difference among the NAPL samples when compared to the laboratory duplicate precision.

Further, it is not unusual for the composition of the same fuel oil released to the subsurface to vary somewhat resulting from batch to batch variations and differences in the degree of weathering.

Table 1. Selected Source and Weathering Ratios

			Pri/Phy	C3D/C3PA	C2D/C2PA
HMW-5	F190032-01		1.42	0.83	0.66
MMW-7	F190032-02		1.45	0.78	0.61
HMW-4	F190032-03		1.45	1.07	0.81
MMW-9B	F190032-04		1.44	1.05	0.79
HMW-3A	F190032-05		1.42	1.03	0.80
HMW-3A dup	FF92101-DUP1		1.46	1.05	0.79
		RSD (%)	1.2%	13.4%	11.6%

RSD – relative standard deviation
Pri/Phy – pristane/phytane
C3D/C3PA – trialkylated dibenzothiophenes/trialkylated phenanthrenes
C2D/C2PA – dialkylated dibenzothiophenes/dialkylated phenanthrenes

Quality Control

The quality control measures, criteria, and results are provided in the ESS Laboratory report.

Qualifications

The interpretation and conclusions in this report are based on the analysis of 5 NAPL samples. No site-specific reference samples of suspected source materials were available for analysis. Source identification was based on compositional trends in the published literature and comparison to reference samples in META's database. META's interpretation could change with additional data.

Definitions

The following terms and definitions are used throughout this report for consistency and clarity.

Pyrogenic PAHs are generated at relatively high temperature in the absence of oxygen. This includes coal tar, oil tar, their refined products, and the products of incomplete combustion.

Petrogenic PAHs are generated at relatively low temperatures and high pressures over many years. This includes petroleum, refined petroleum products, and coal.

Oil is a mixture of hydrocarbons consisting of crude oil or refined crude oil products such as No.2 fuel oil, No. 6 fuel oil and various lubricating, insulating, and hydraulic oils. Oils are usually less dense than water.

UCM – unresolved complex mixture: a feature frequently observed in gas chromatographic (GC) data of crude oils and refined petroleum products. The reason for the UCM (or hump in the baseline) appearance is that GC cannot resolve a significant portion of the hundreds of hydrocarbon compounds in the sample. The resolved components appear as peaks while the UCM appears as a Gaussian-shaped hump or irregularly-shaped background in the chromatogram.

References

"Chemical Fingerprinting of Hydrocarbons," in: Introduction to Environmental Forensics. B.L. Murphy and R.D. Morrison editors, Academic Press, San Diego, CA 2002.

Stout, S., Wang, Z. "Standard Handbook Oil Spill Environmental Forensics, Fingerprinting and Source Identification" Second Edition, Academic Press, New York 2016.

Christensen, L.B. and T.H. Larsen. "Method for determining the age of diesel oil spills in the soil." Ground Water Monitoring and Remediation, 13(4): 142-149, 1993.

Oudijk, G. 2012. Age Dating of Middle-Distillate Fuels Released to the Subsurface Environment," In: Earth Sciences, Dr. Imran Ahmad Dar (Ed.), InTech, Rijeka, Croatia.

Certification

This certifies that this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed herein. The results included in this data report relate only to the samples as received and analyzed by the laboratory.

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David M. Mauro   July 2, 2019

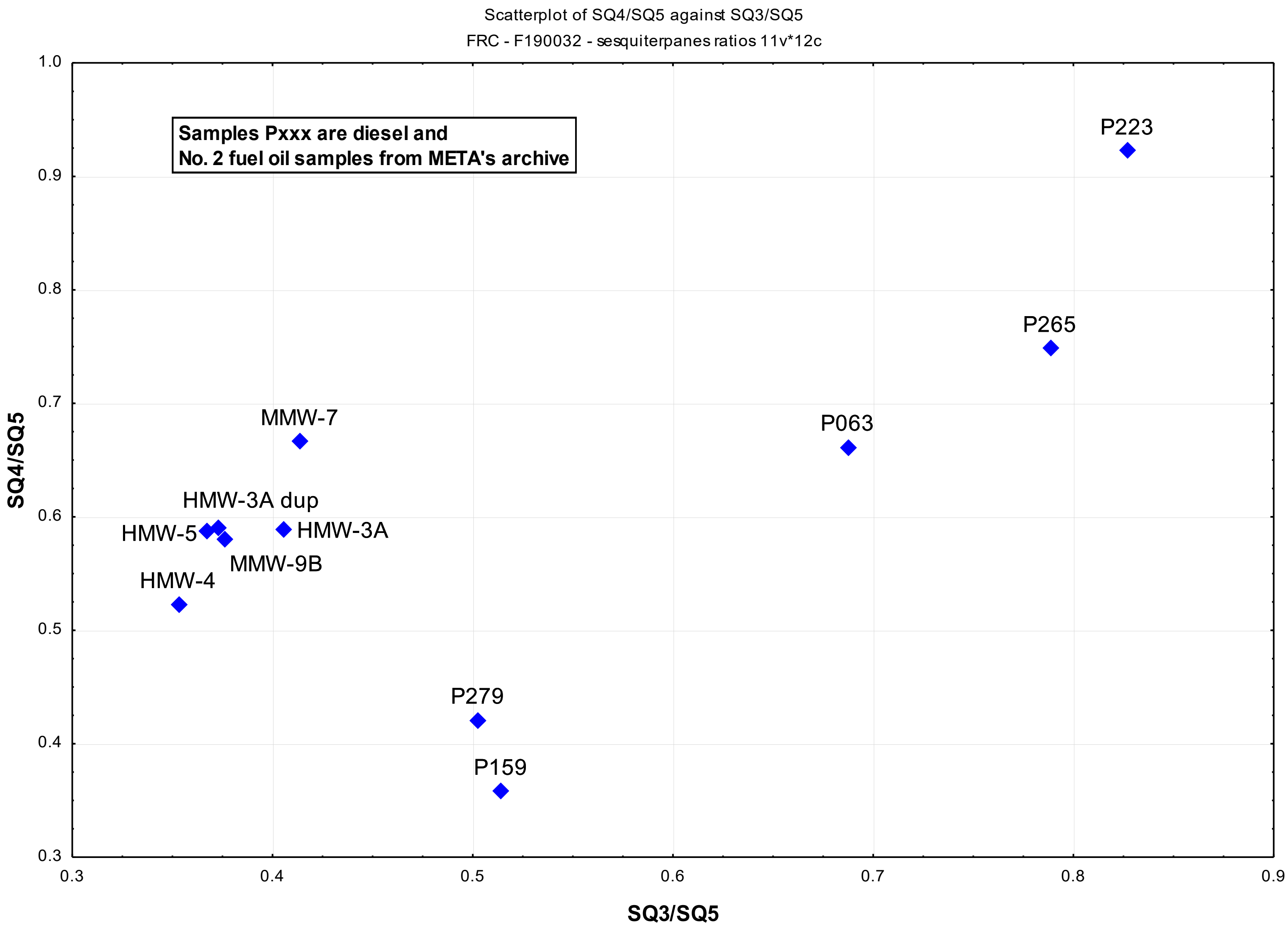
David M. Mauro
President, Senior Scientist

META Environmental, Inc.
1000 Turk Hill Road
Fairport, NY 14450

Date

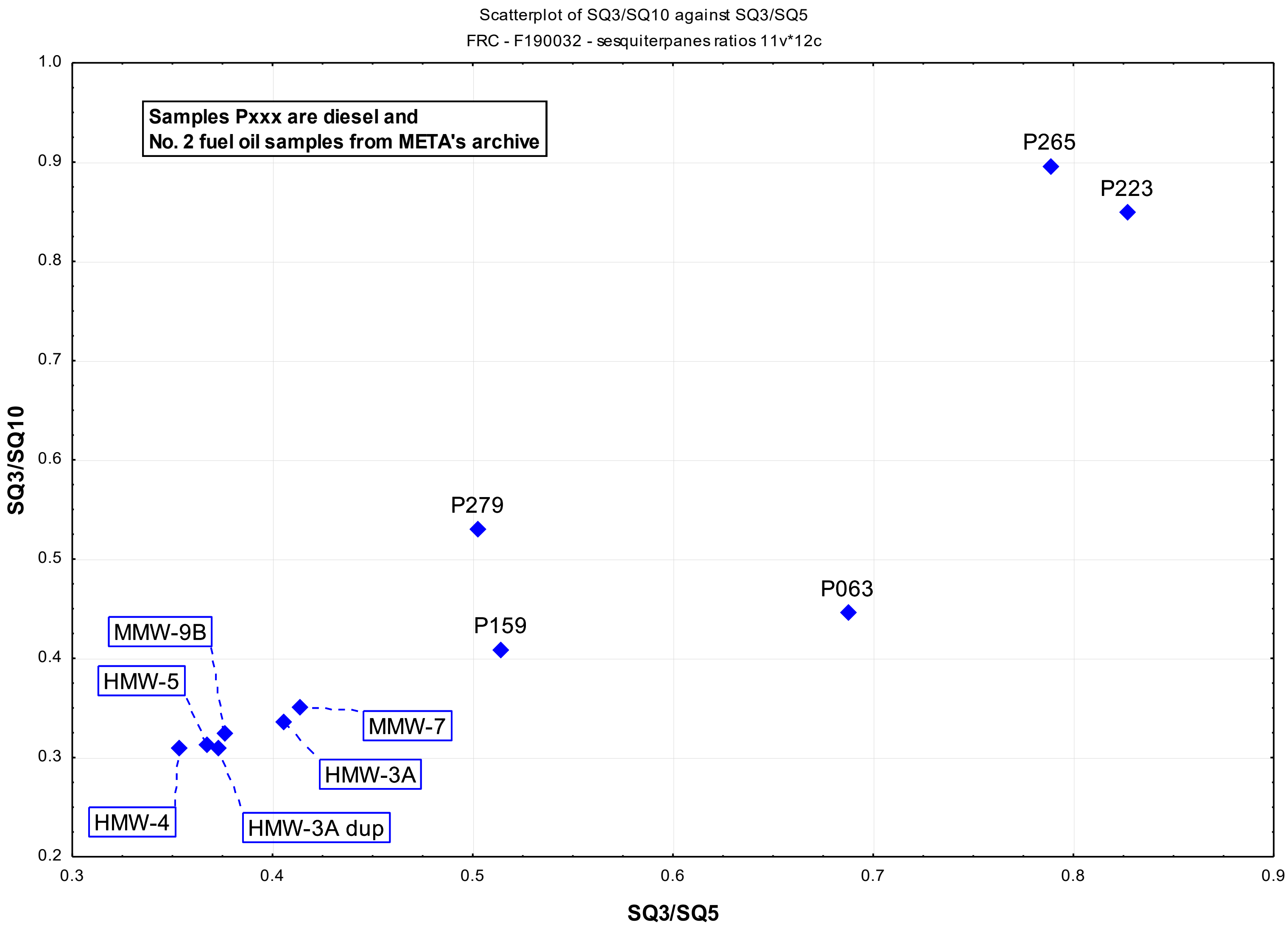
Figures

Figure 1. Sesquiterpane Double Ratio Plot (within group)



META

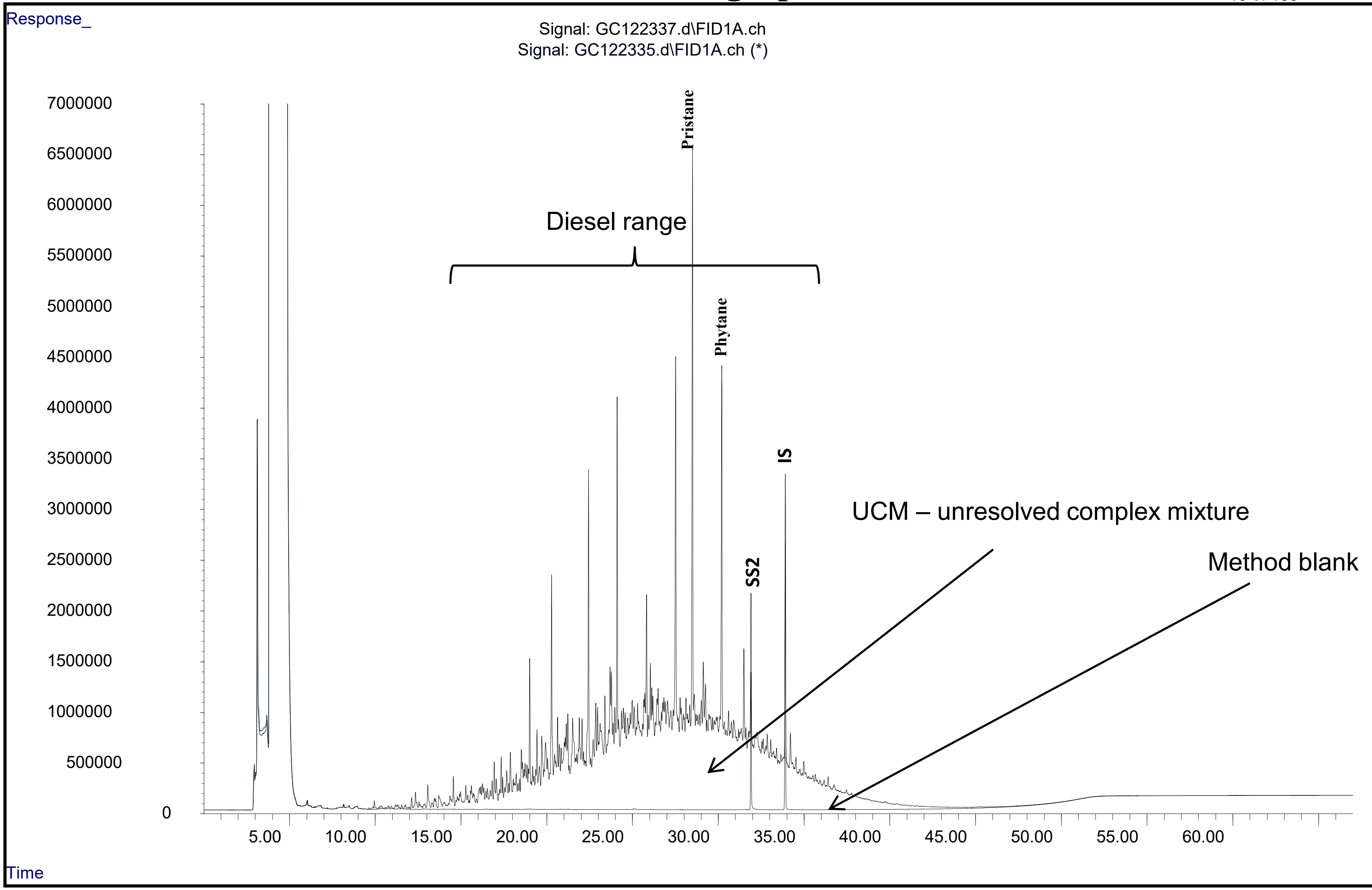
Figure 2. Sesquiterpane Double Ratio Plot (intergroup)



Appendix A

GC/FID Fingerprints

GC/FID Fingerprint

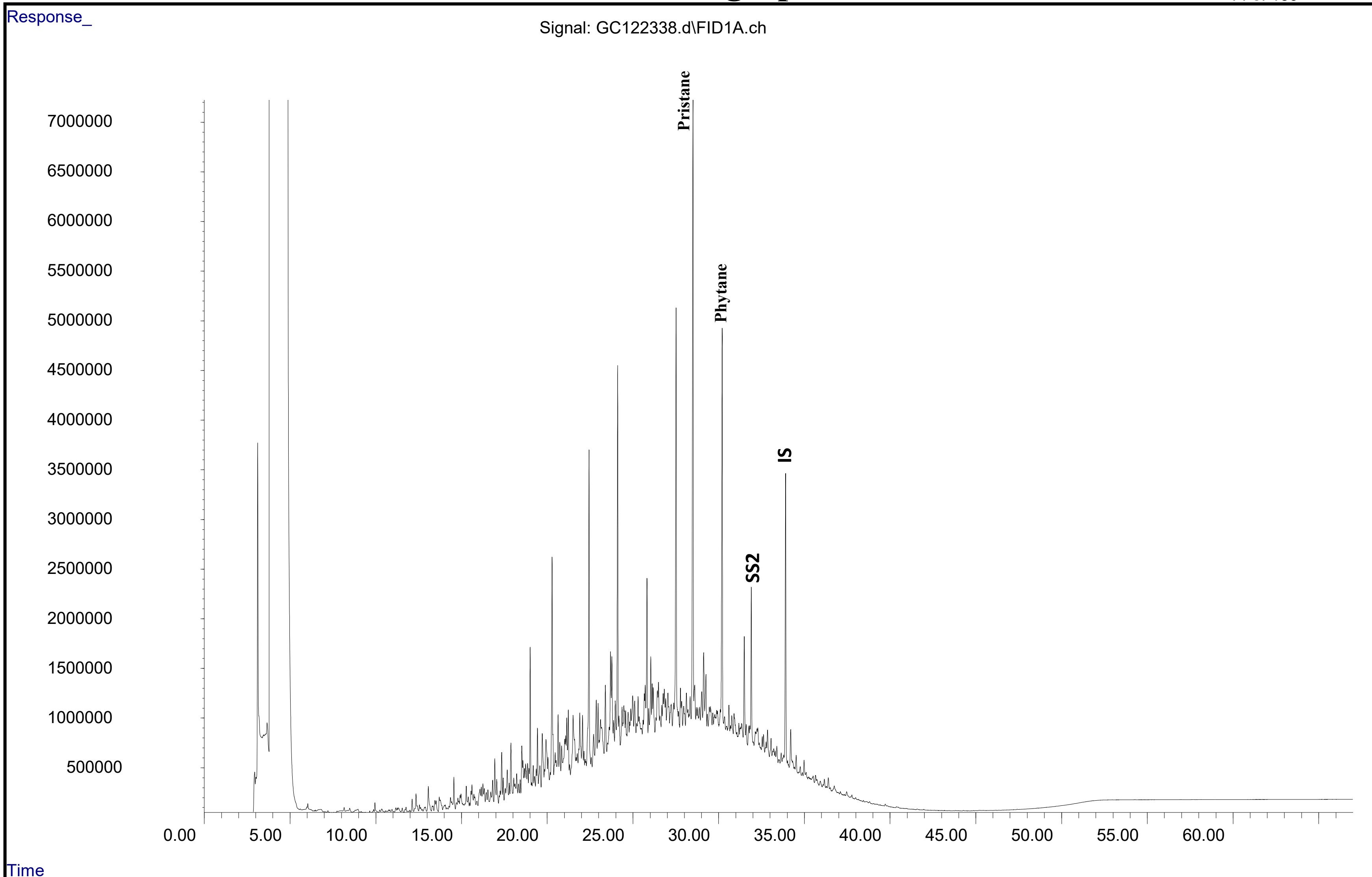


Analysis Date: 06/22/2019

IS – 5a-androstane
SS2 – o-terphenyl

Field ID:	**HMW-5**
Laboratory ID:	F190032-01
Method:	EPA 8015M

GC/FID Fingerprint

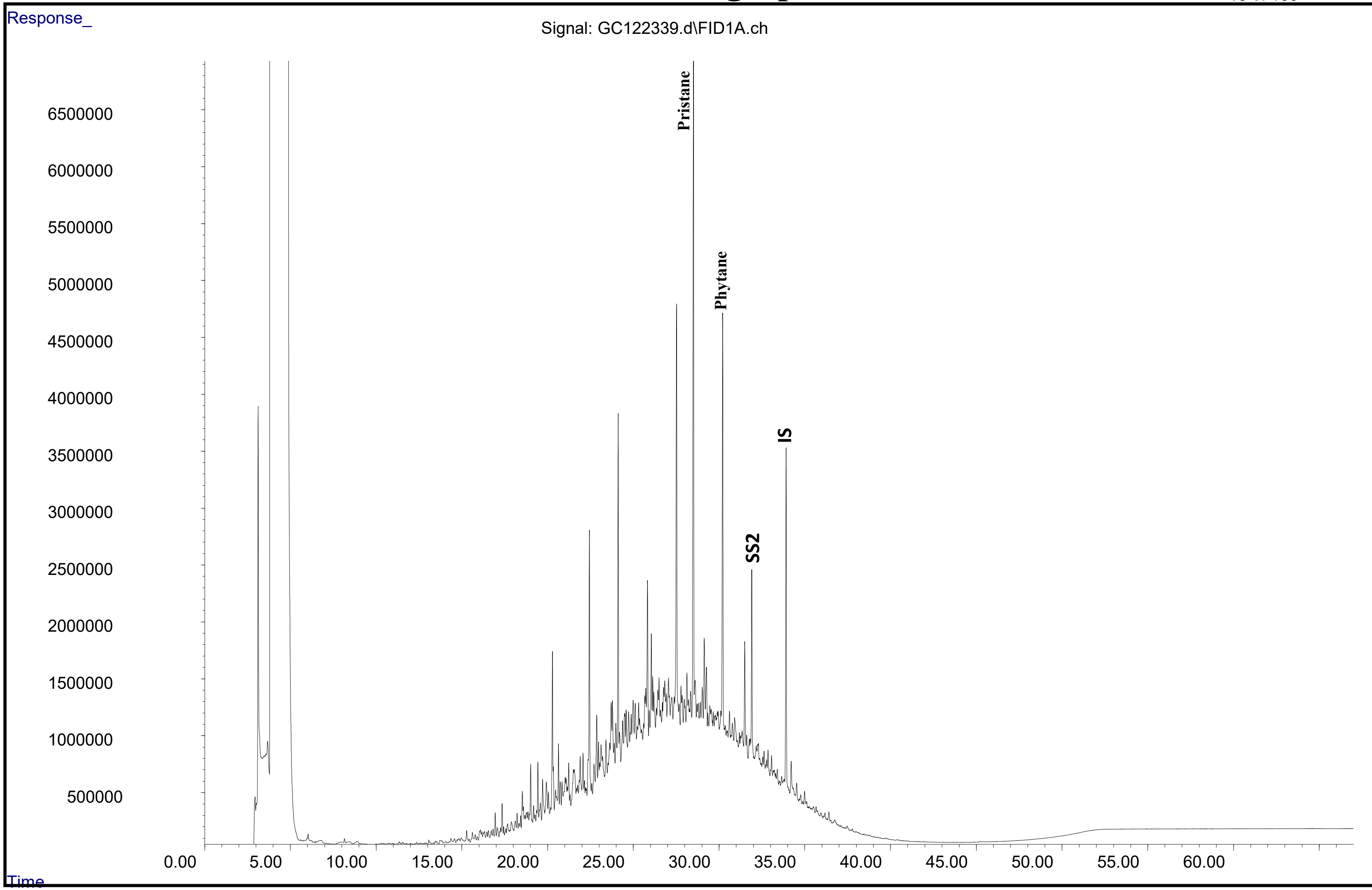


Analysis Date: 06/22/2019

IS – 5a-androstane
SS2 – o-terphenyl

Field ID: **MMW-7**
Laboratory ID: F190032-02
Method: EPA 8015M

GC/FID Fingerprint

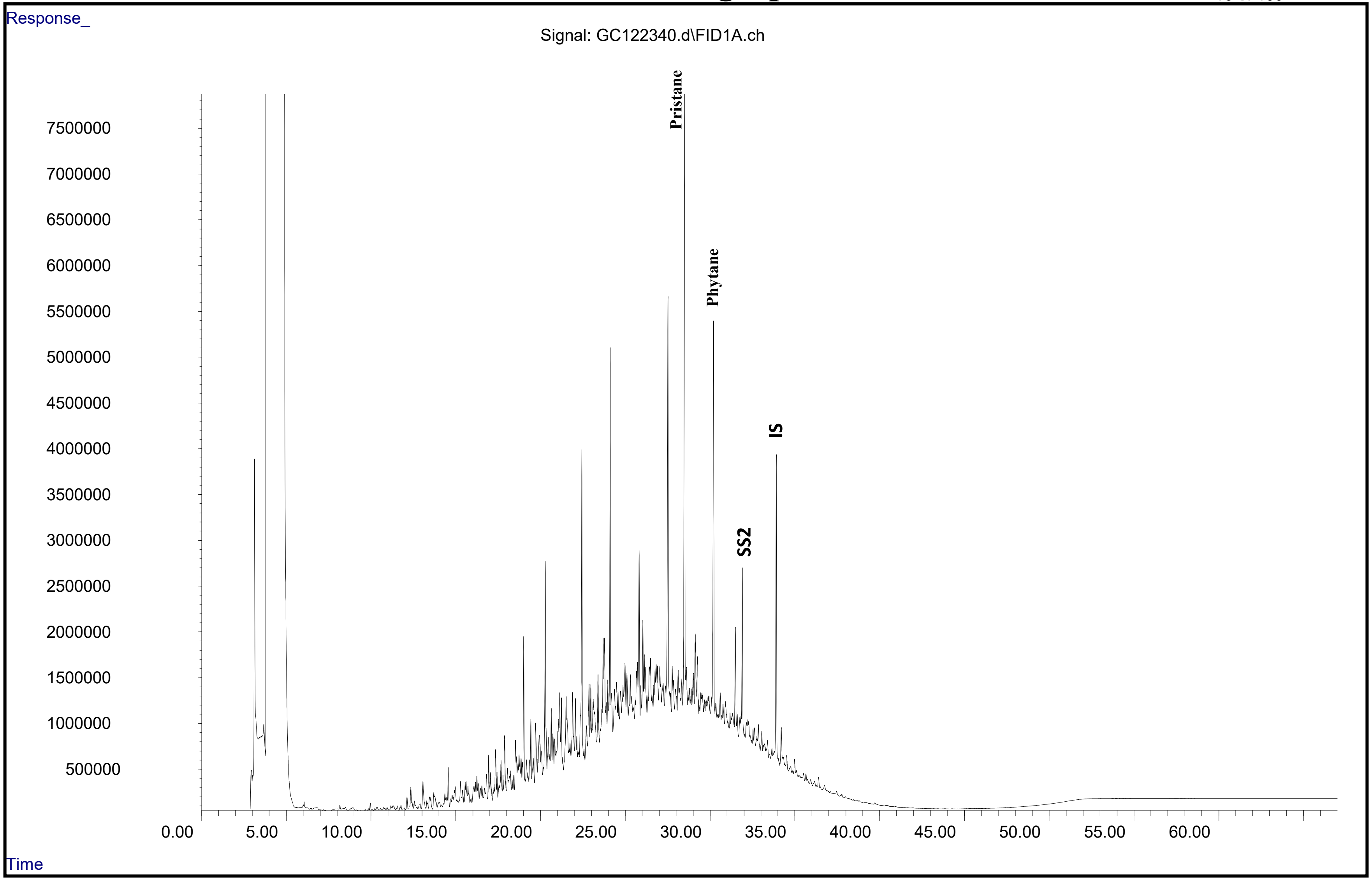


Analysis Date: 06/22/2019

IS – 5a-androstane
SS2 – o-terphenyl

Field ID: **HMW-4**
Laboratory ID: F190032-03
Method: EPA 8015M

GC/FID Fingerprint

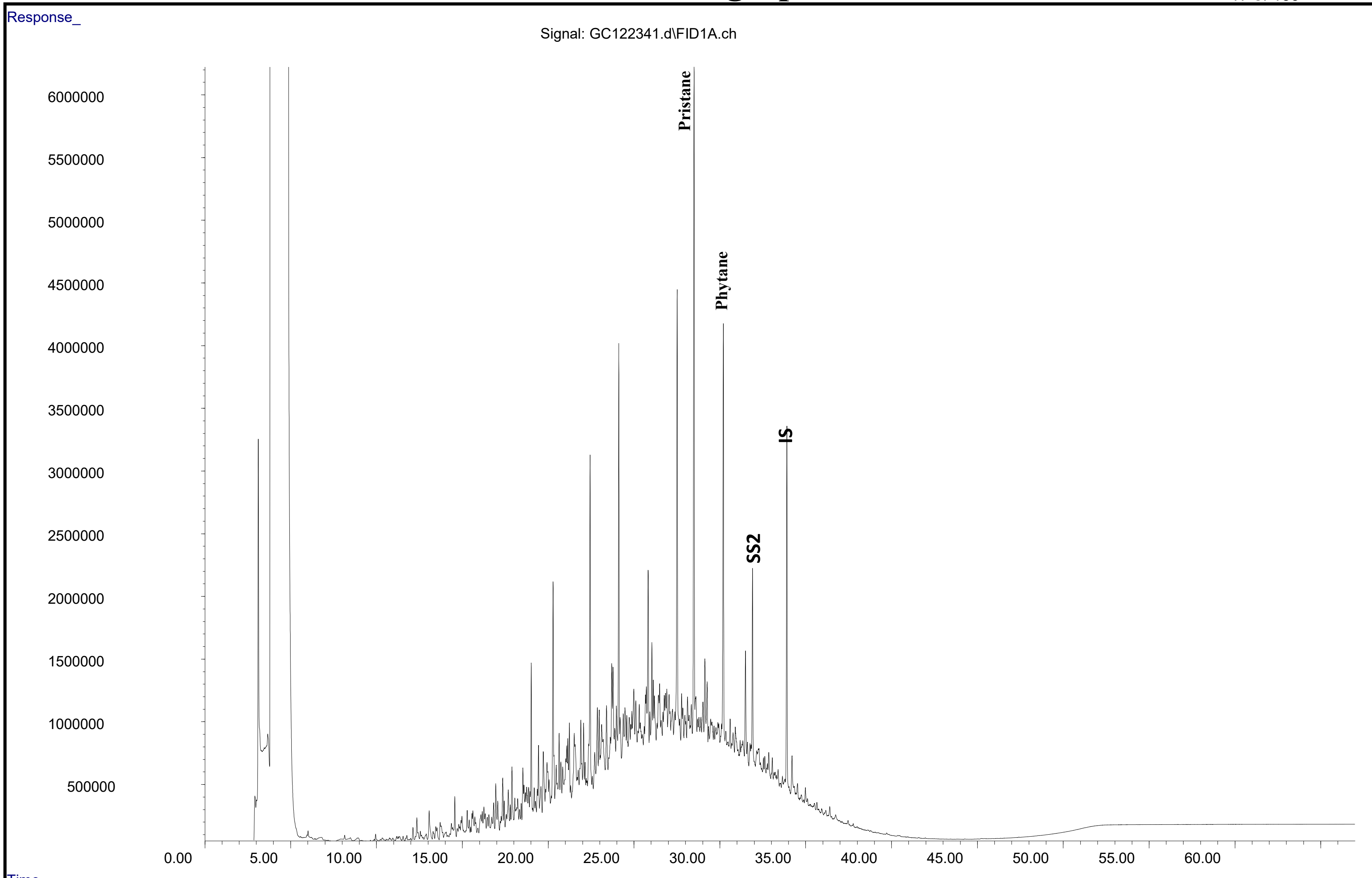


Analysis Date: 06/22/2019

IS – 5a-androstane
SS2 – o-terphenyl

Field ID:	**MMW-9B**
Laboratory ID:	F190032-04
Method:	EPA 8015M

GC/FID Fingerprint



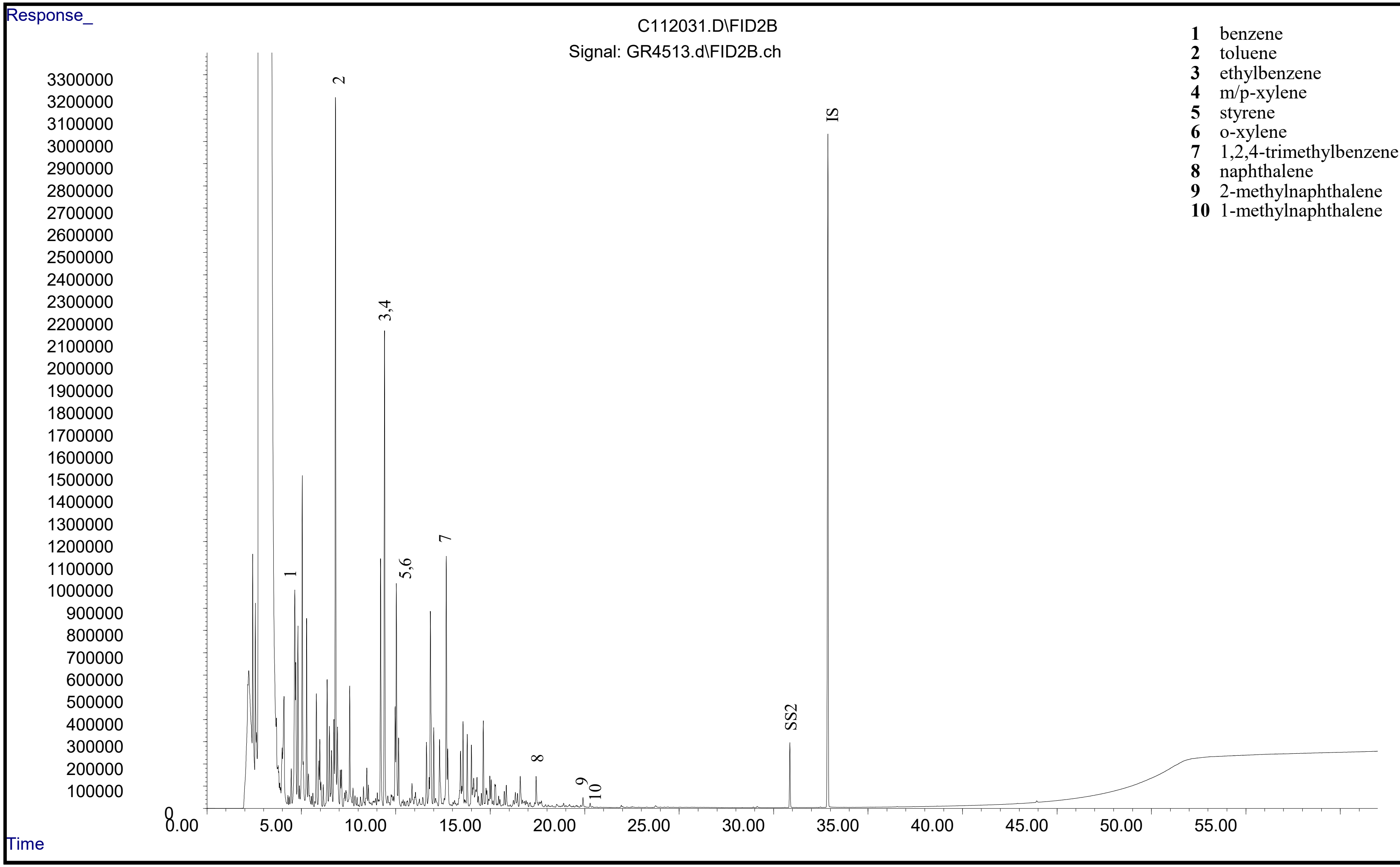
Analysis Date: 06/22/2019

IS – 5a-androstane
SS2 – o-terphenyl

Field ID:	**HMW-3A**
Laboratory ID:	F190032-05
Method:	EPA 8015M

Reference Chromatograms

GC/FID Fingerprint



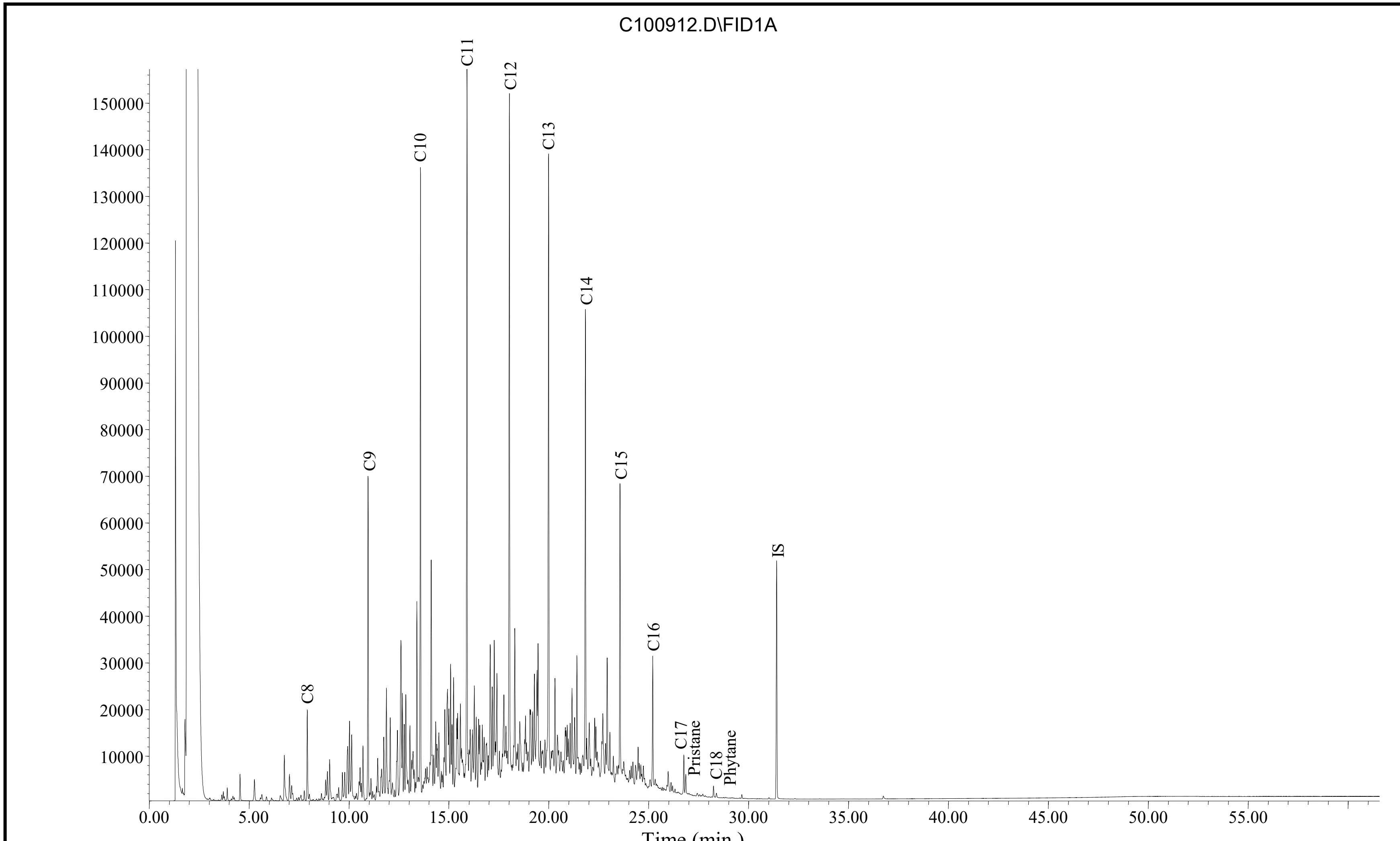
Analysis Date: 12/5/2015

IS – 5a-androstane
SS2 – o-terphenyl

Field ID:	**Sunoco 87 Octane Regular Unleaded**
Laboratory ID:	P156
Method:	EPA 8015M

META

GC/FID Fingerprint



Analysis Date: 10/10/2007

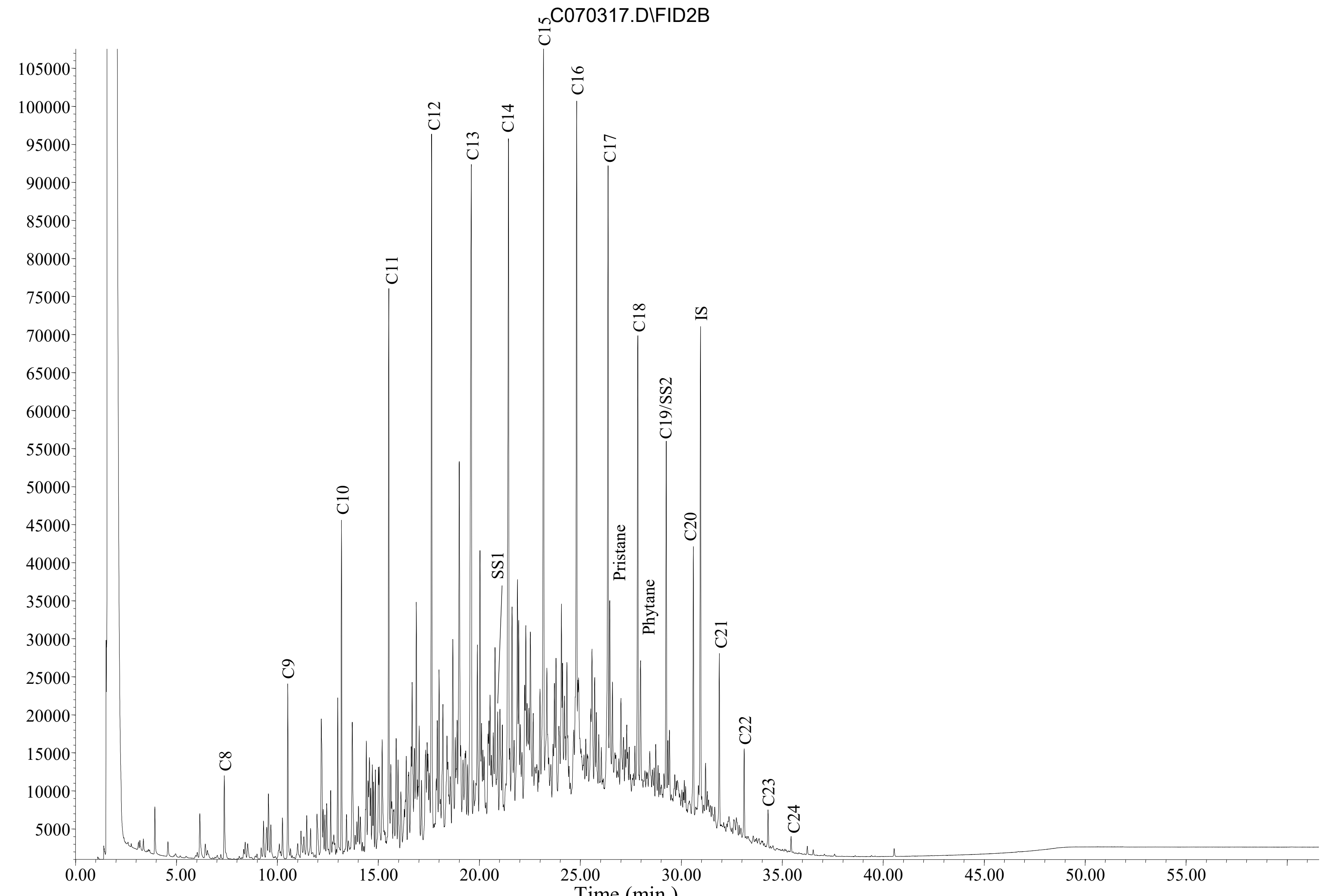
IS – 5a-androstane
SS2 – o-terphenyl

Field ID: Jet Fuel A Reference Sample

Laboratory ID: A558

Method: EPA 8015M

GC/FID Fingerprint



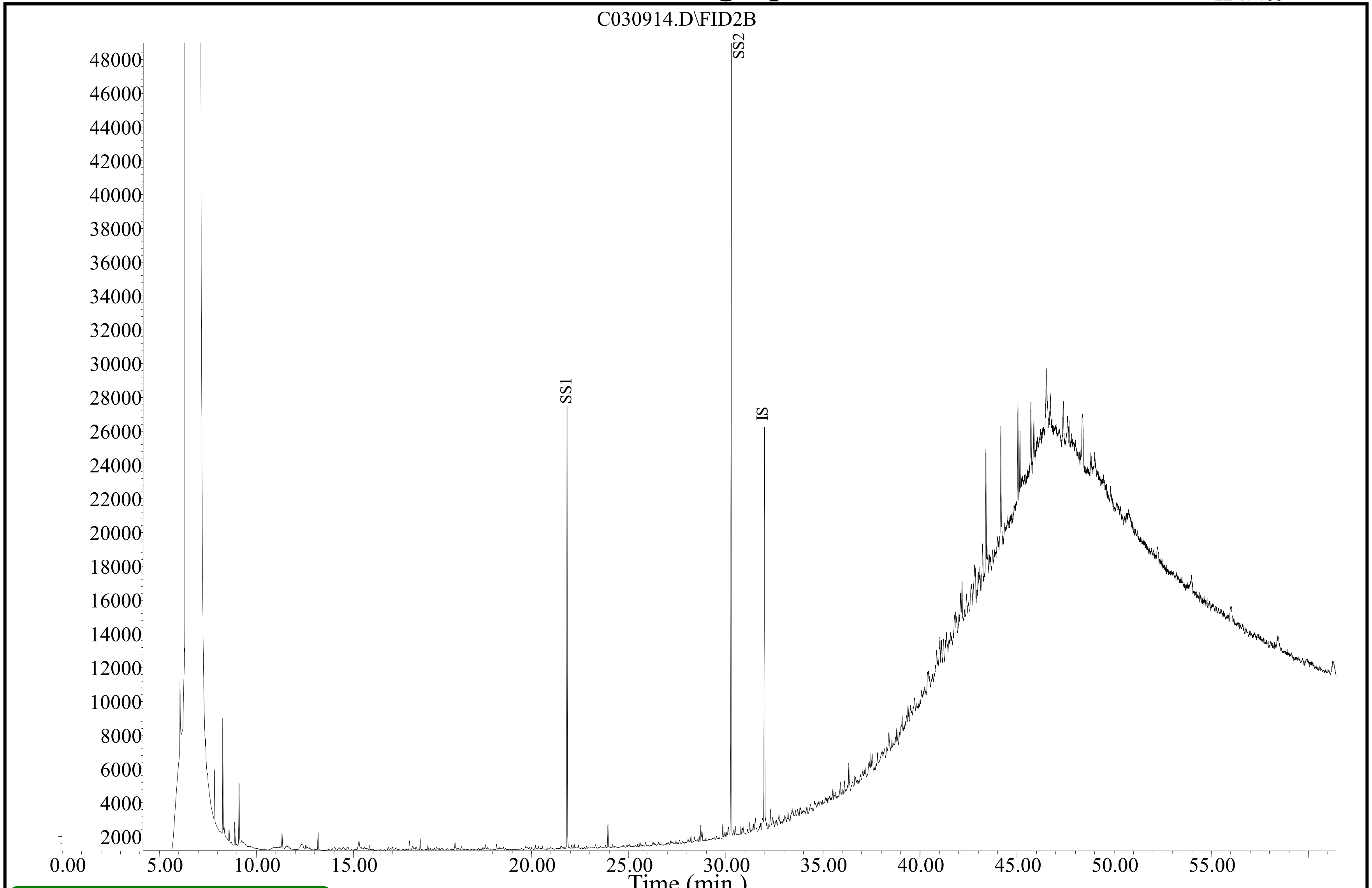
Analysis Date: 07/04/2007

Field ID:	**#2 Fuel Oil Reference Sample**
Laboratory ID:	A175
Method:	EPA 8100M

IS – 5a-androstane
SS1 – 2-fluorobiphenyl
SS2 – o-terphenyl

META

GC/FID Fingerprint



Analysis Date: 03/09/2006

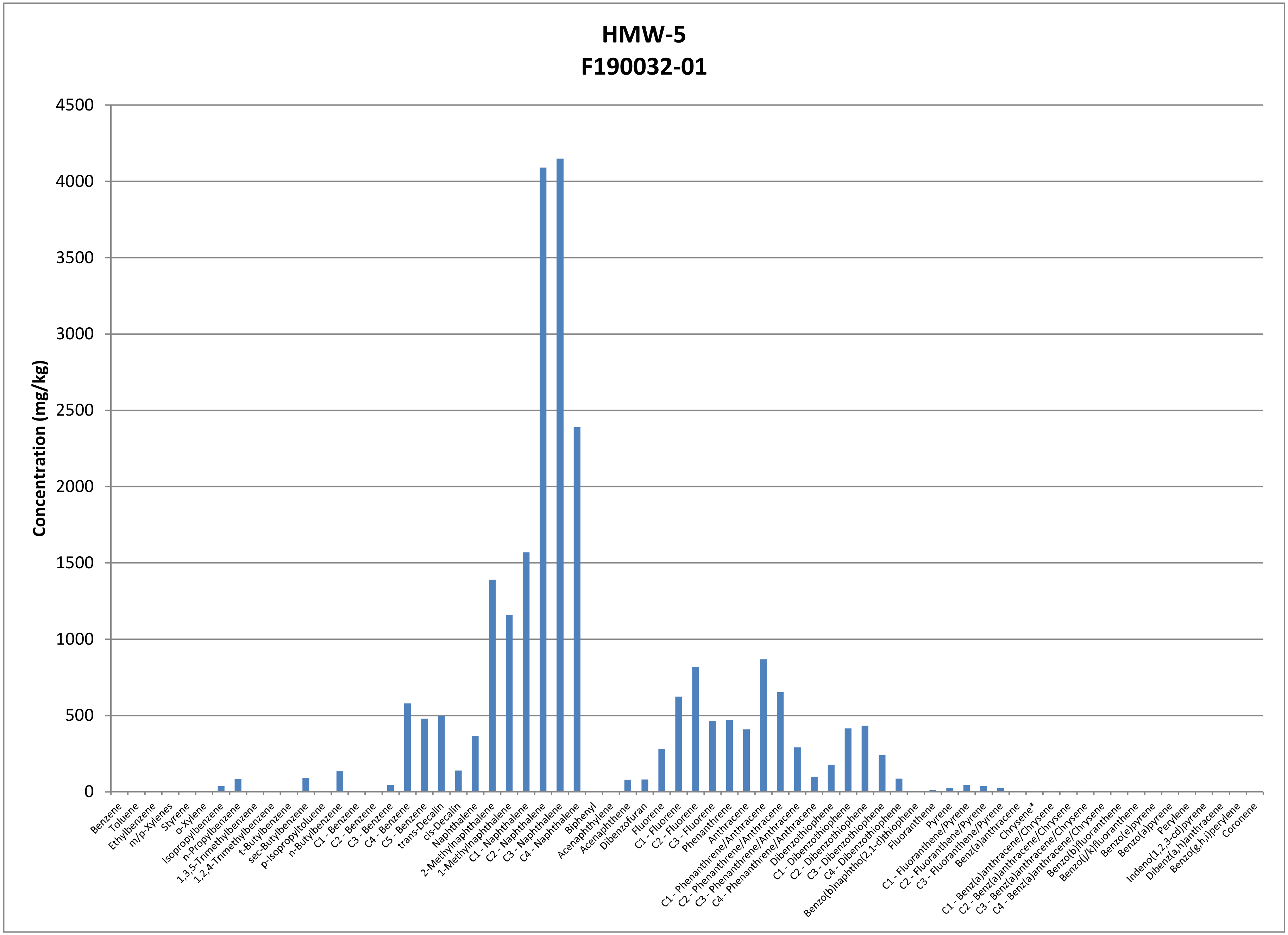
IS – 5a-androstane
SS1 – 2-fluorobiphenyl
SS2 – o-terphenyl

Field ID: **Asphalt #1**
Laboratory ID: P069
Method: EPA 8100 mod.

META

Appendix B

Bar Graphs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F190032-01
Concentration (mg/kg)
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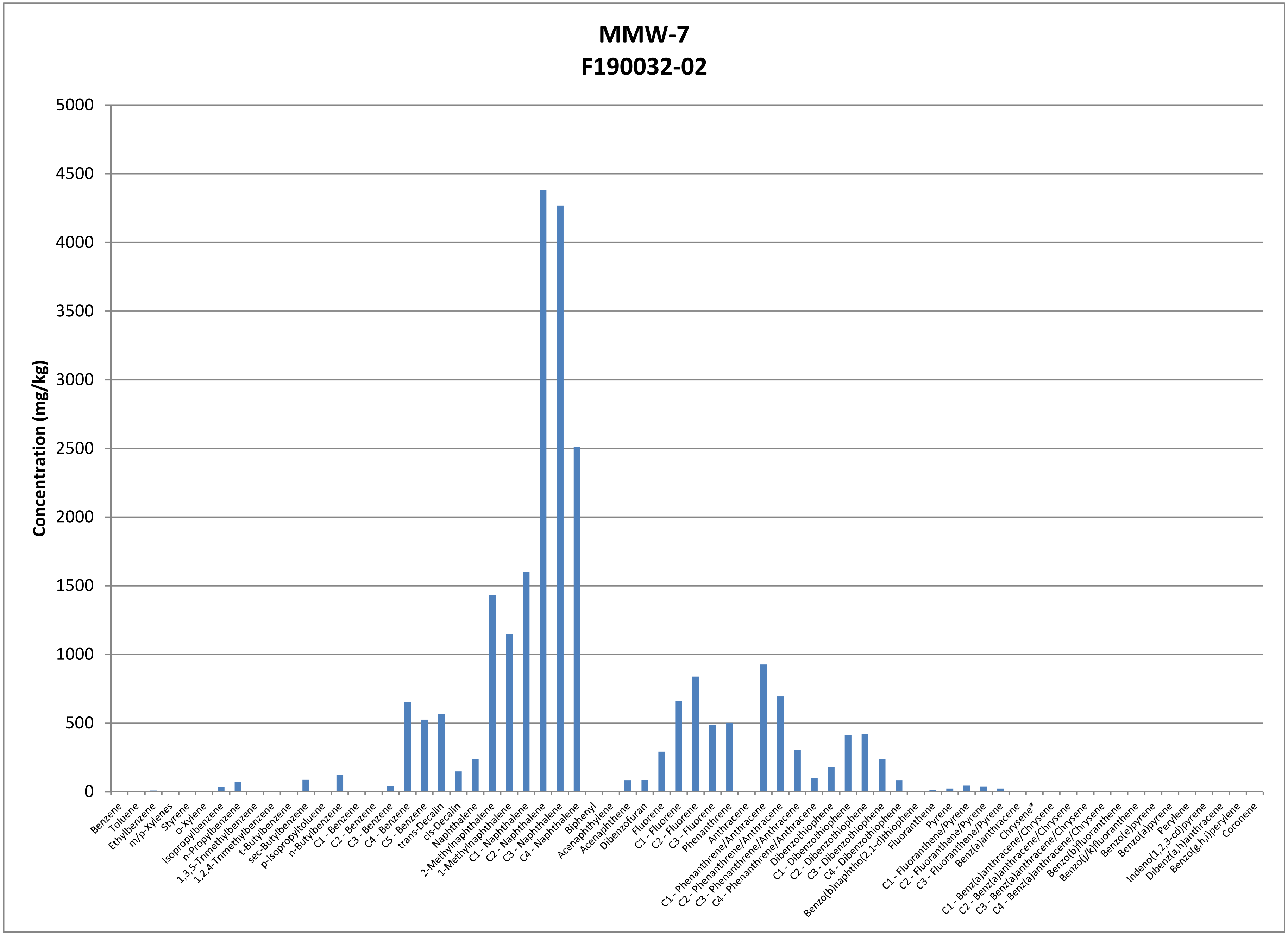
4000
3500
3000
2500
2000
1500
1000
500
0
Benzene
Toluene
Ethylbenzene
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene


MMW-7
F190032-02
Concentration (mg/kg)
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1000
1500
2000
2500
3000
3500
4000
4500
5000
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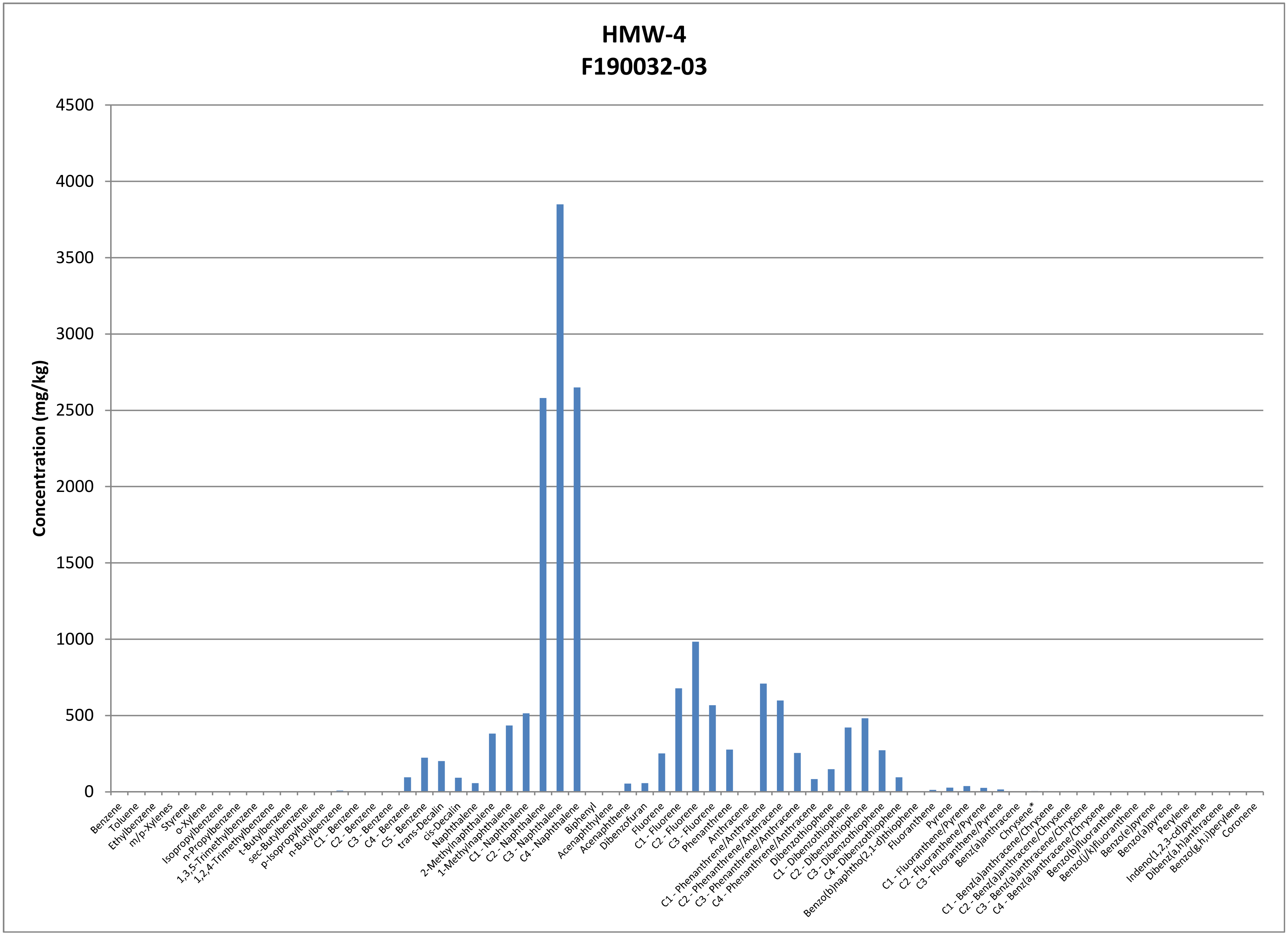
Toluene
Ethylbenzene
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene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F190032-03
Concentration (mg/kg)
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2500
2000
1500
1000
500
0
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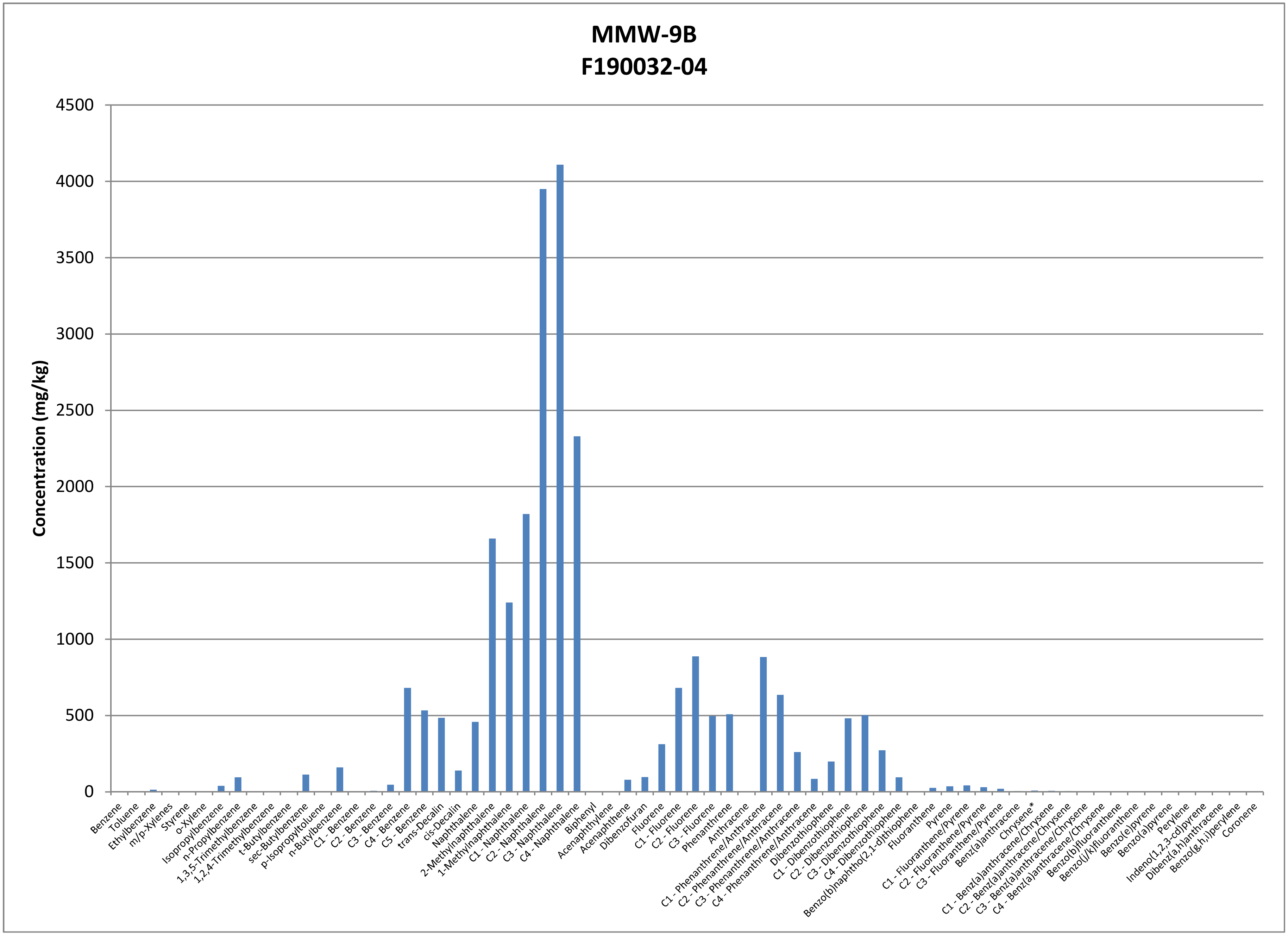
Toluene
Ethylbenzene
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene



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Concentration (mg/kg)
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1000
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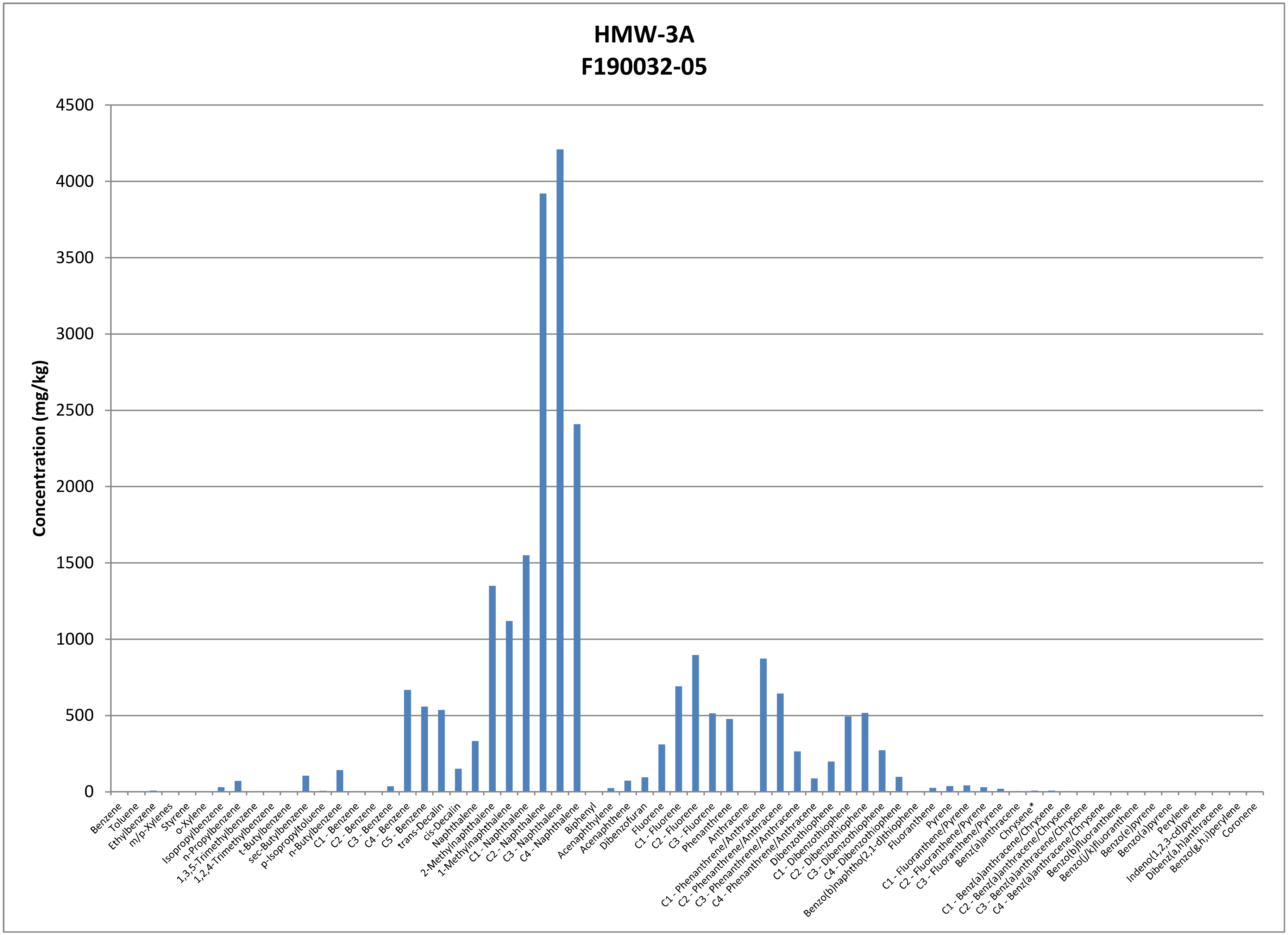
Toluene
Ethylbenzene
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene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F190032-05
Concentration (mg/kg)
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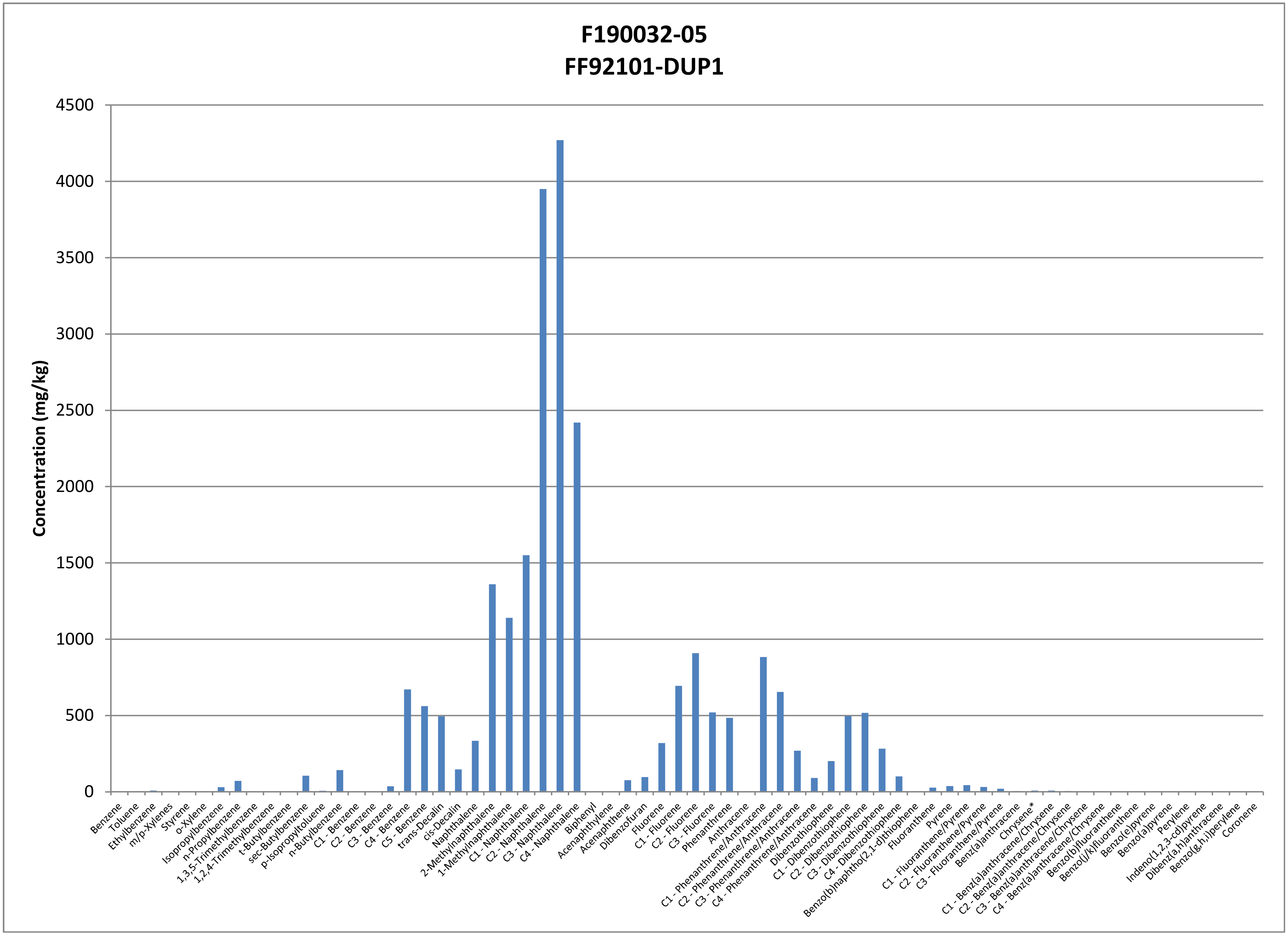
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene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FF92101-DUP1
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2500
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3500
4000
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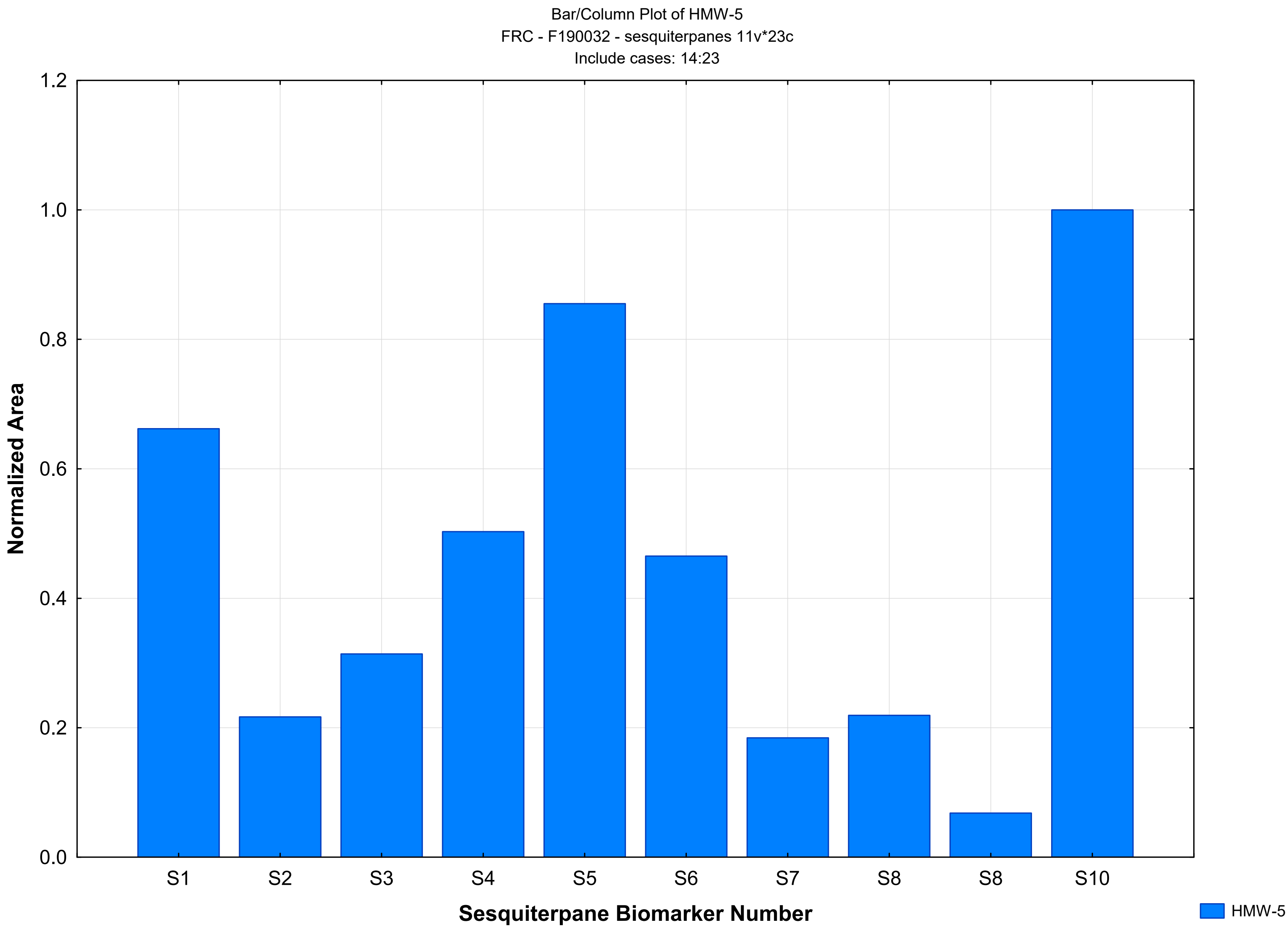
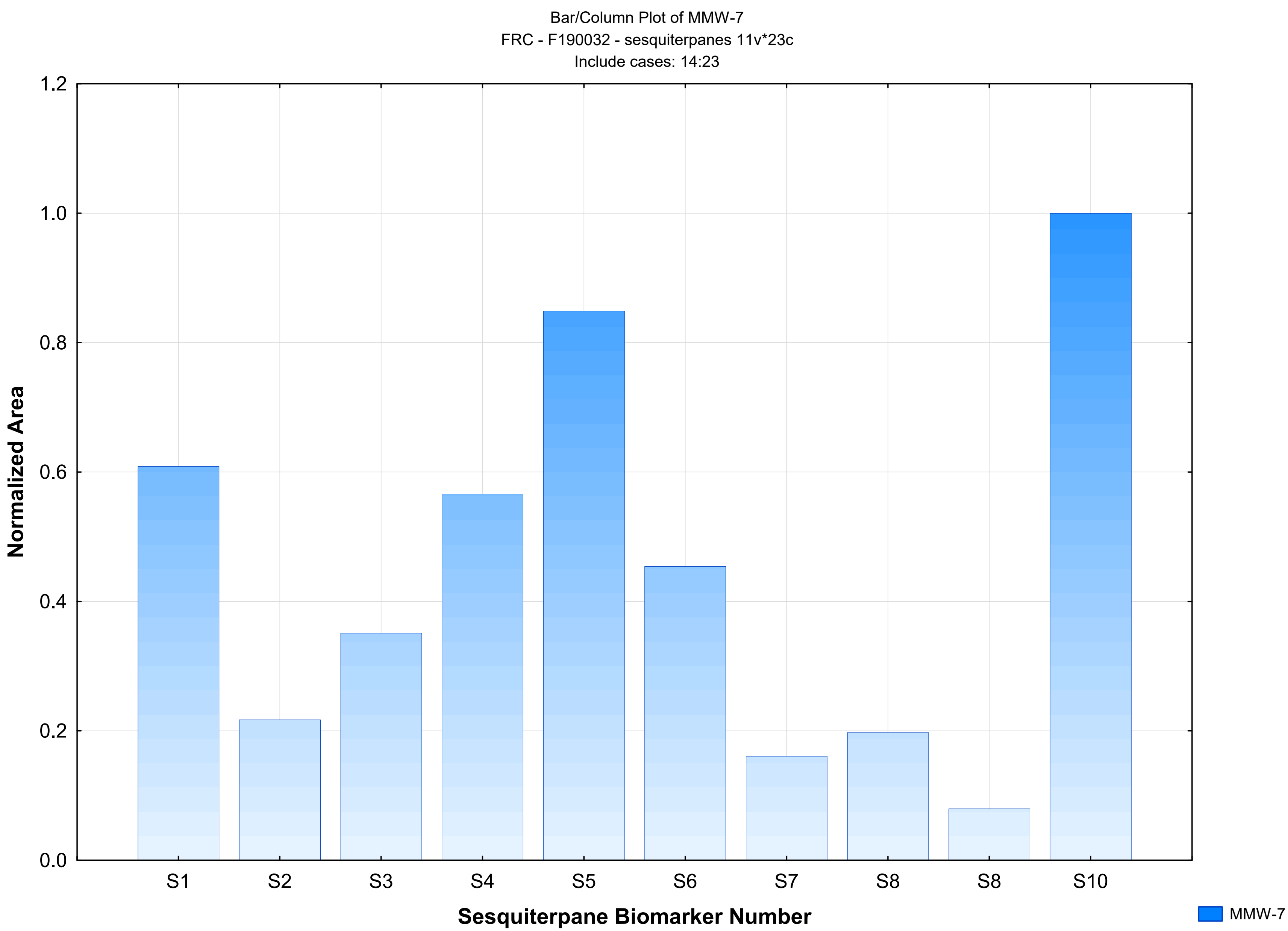
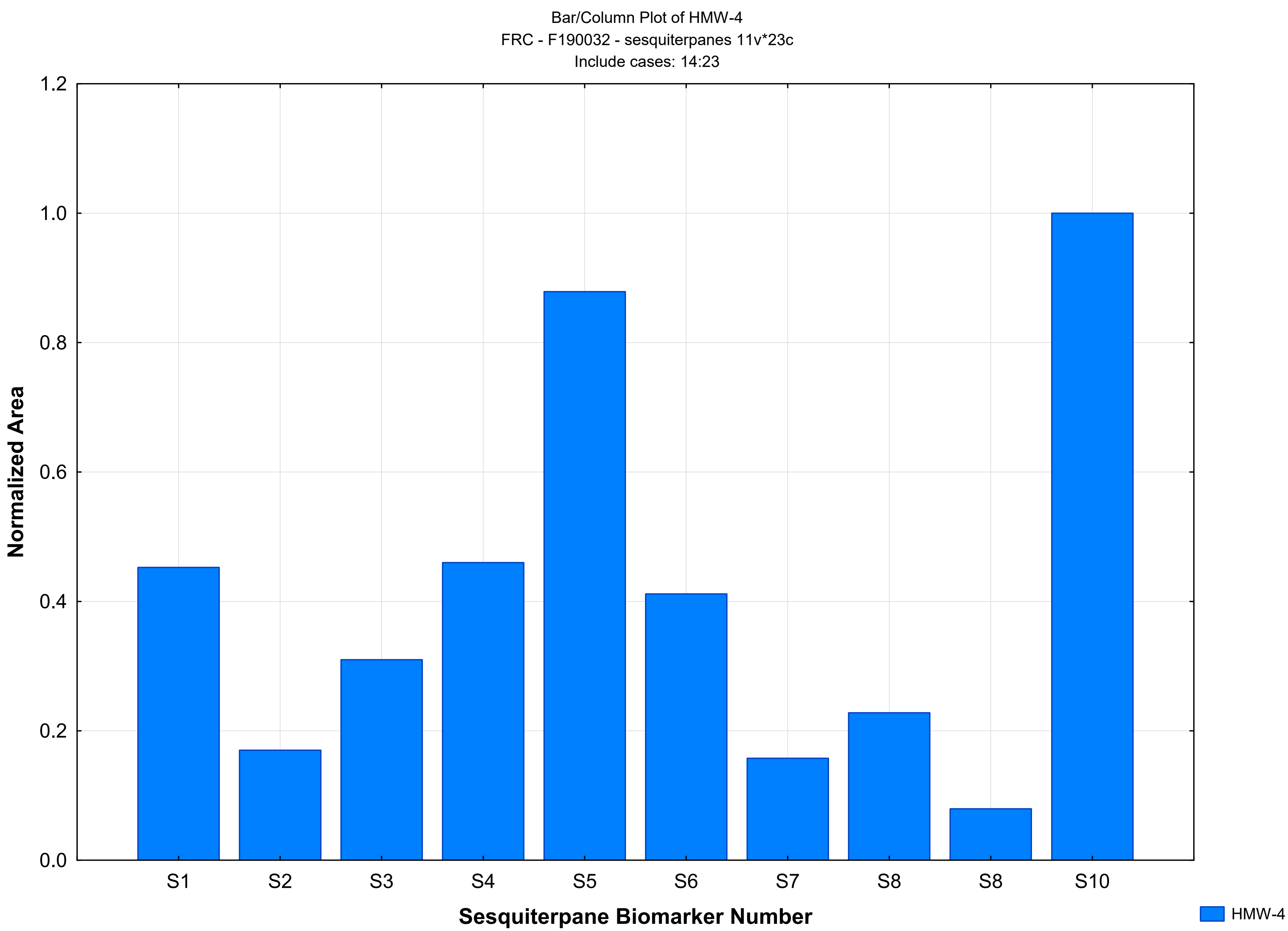
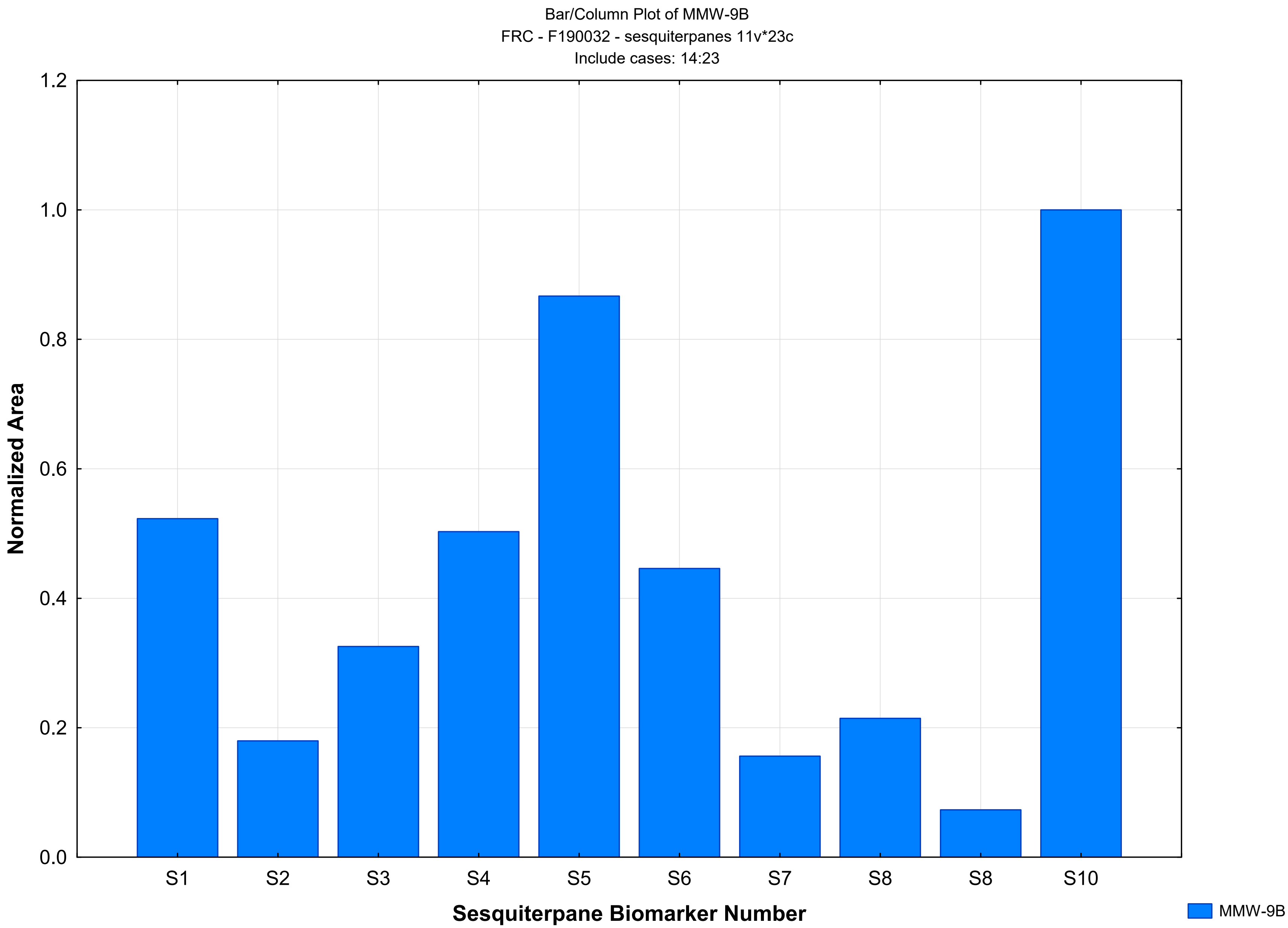
m/p-Xylenes
Styrene
o-Xylene
Isopropylbenzene
n-Propylbenzene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
t-Butylbenzene
sec-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
C1 - Benzene
C2 - Benzene
C3 - Benzene
C4 - Benzene
C5 - Benzene
trans-Decalin
cis-Decalin
Naphthalene
2-Methylnaphthalene
1-Methylnaphthalene
C1 - Naphthalene
C2 - Naphthalene
C3 - Naphthalene
C4 - Naphthalene
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1 - Fluorene
C2 - Fluorene
C3 - Fluorene
Phenanthrene
Anthracene
C1 - Phenanthrene/Anthracene
C2 - Phenanthrene/Anthracene
C3 - Phenanthrene/Anthracene
C4 - Phenanthrene/Anthracene
Dibenzothiophene
C1 - Dibenzothiophene
C2 - Dibenzothiophene
C3 - Dibenzothiophene
C4 - Dibenzothiophene
Benzo(b)naphtho(2,1-d)thiophene
Fluoranthene
Pyrene
C1 - Fluoranthene/Pyrene
C2 - Fluoranthene/Pyrene
C3 - Fluoranthene/Pyrene
Benz(a)anthracene
Chrysene*
C1 - Benz(a)anthracene/Chrysene
C2 - Benz(a)anthracene/Chrysene
C3 - Benz(a)anthracene/Chrysene
C4 - Benz(a)anthracene/Chrysene
Benzo(b)fluoranthene
Benzo(j/k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene
Coronene

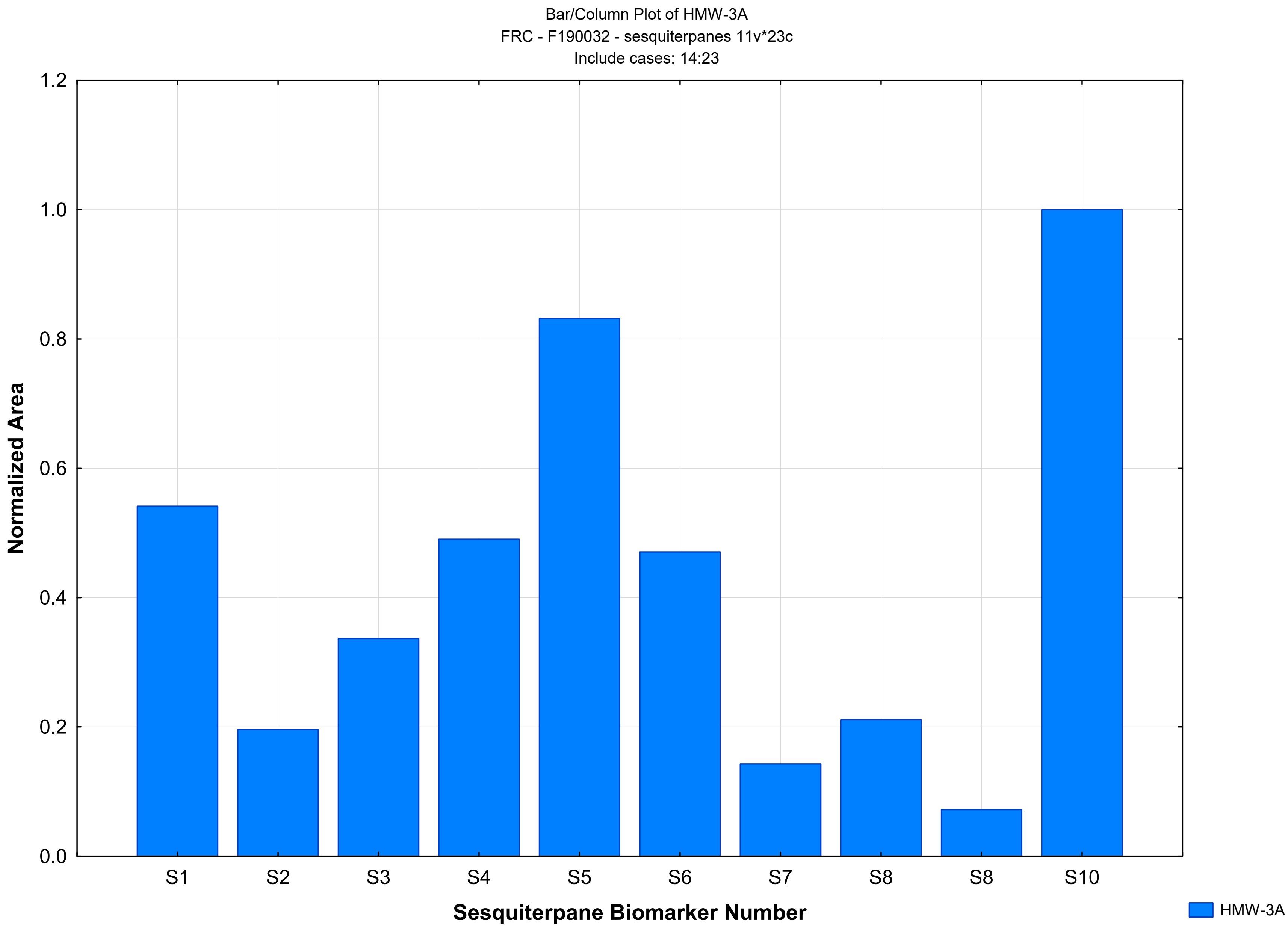


Bar/Column Plot of HMW-5
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
HMW-5

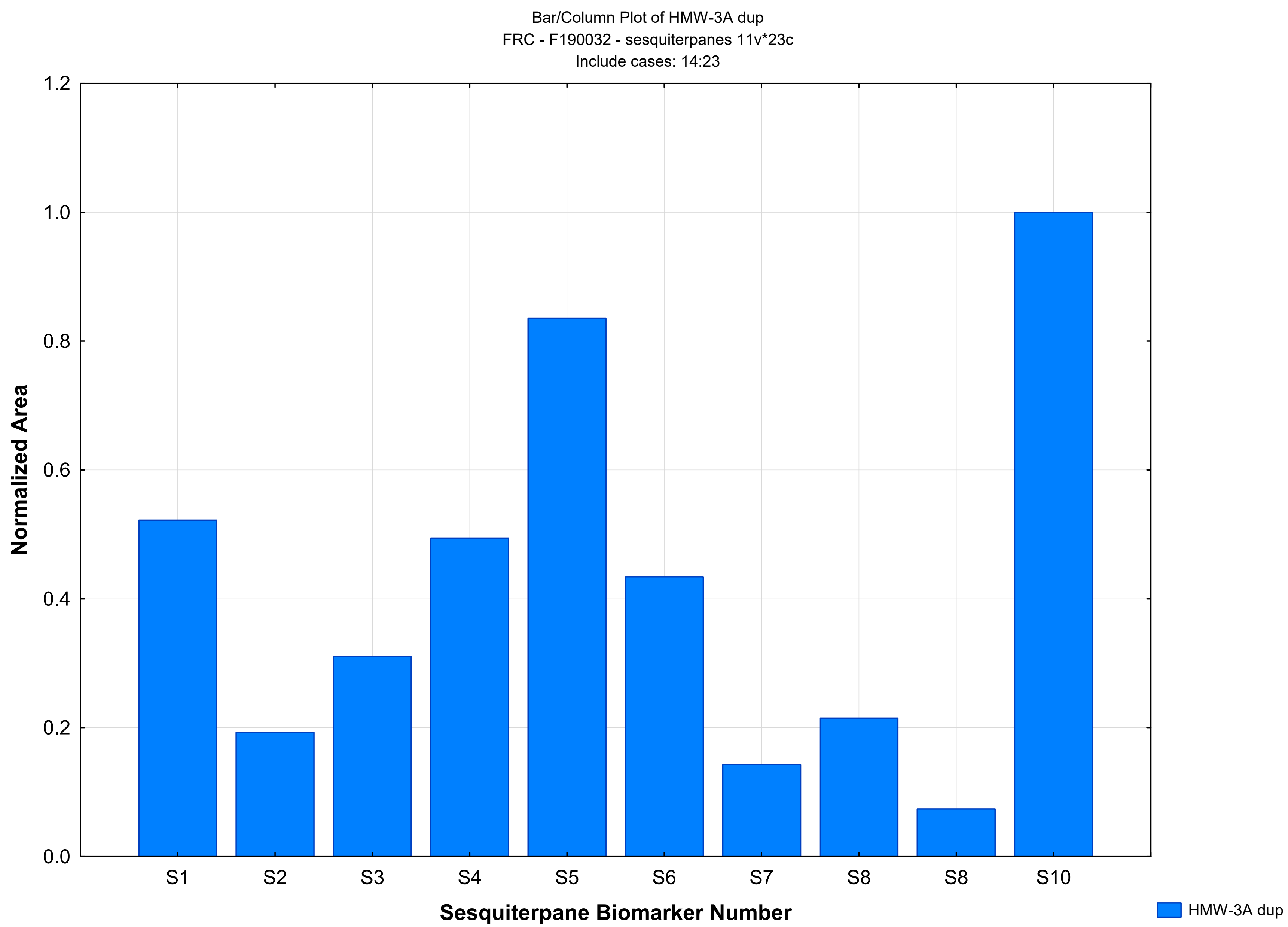

Bar/Column Plot of MMW-7
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
MMW-7

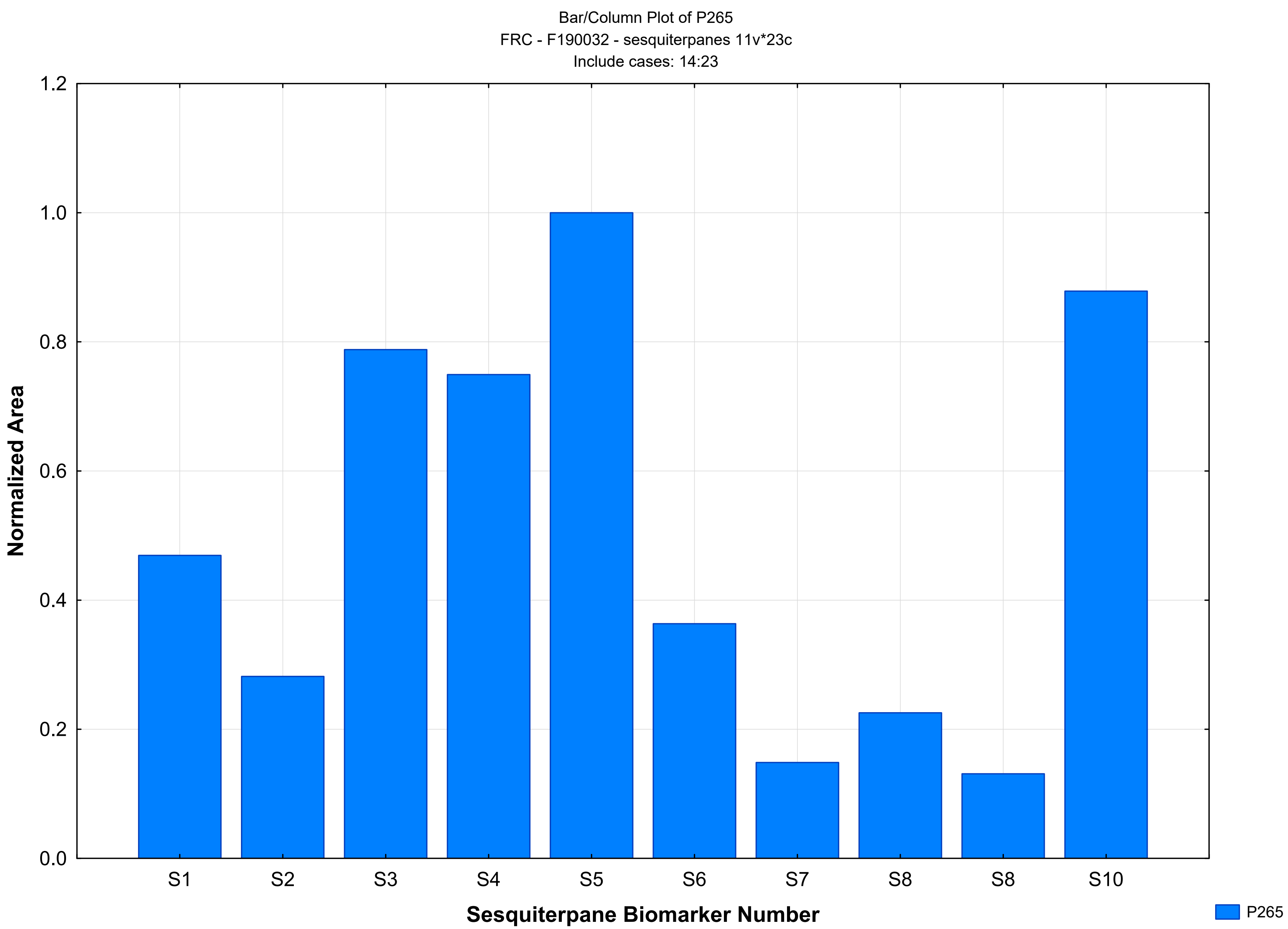

Bar/Column Plot of HMW-4
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
HMW-4

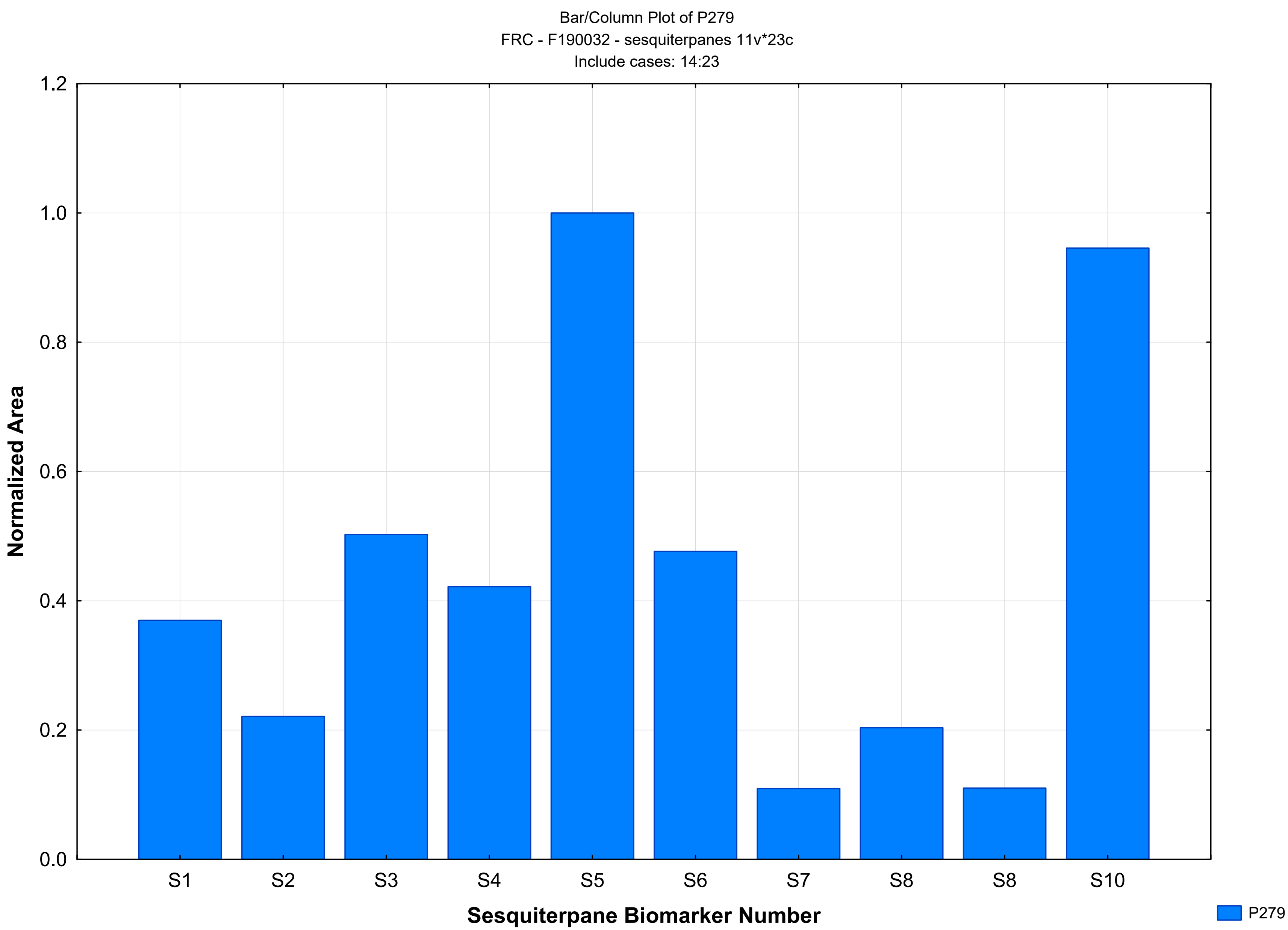

Bar/Column Plot of MMW-9B
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
MMW-9B

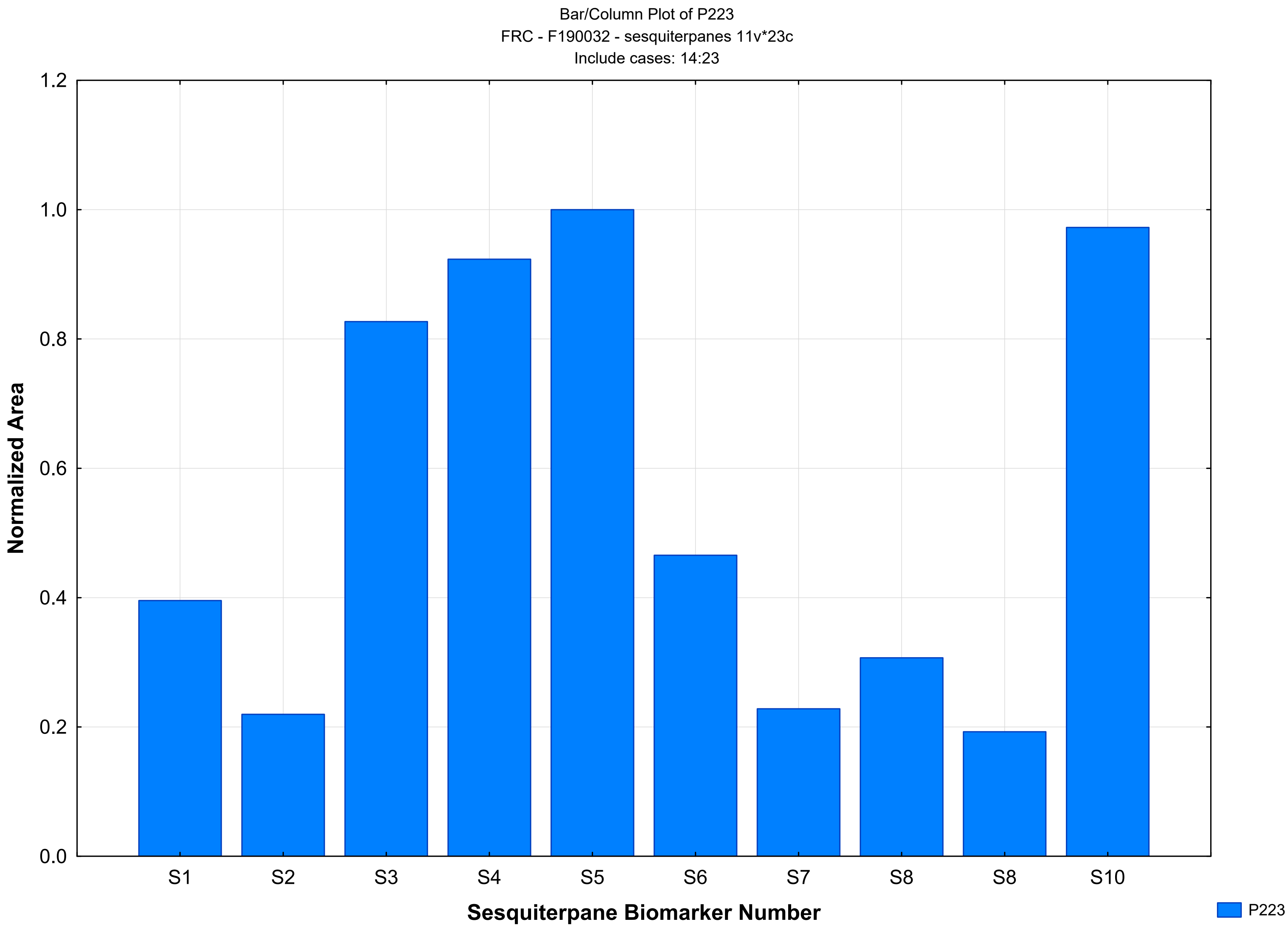


Bar/Column Plot of HMW-3A
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
HMW-3A

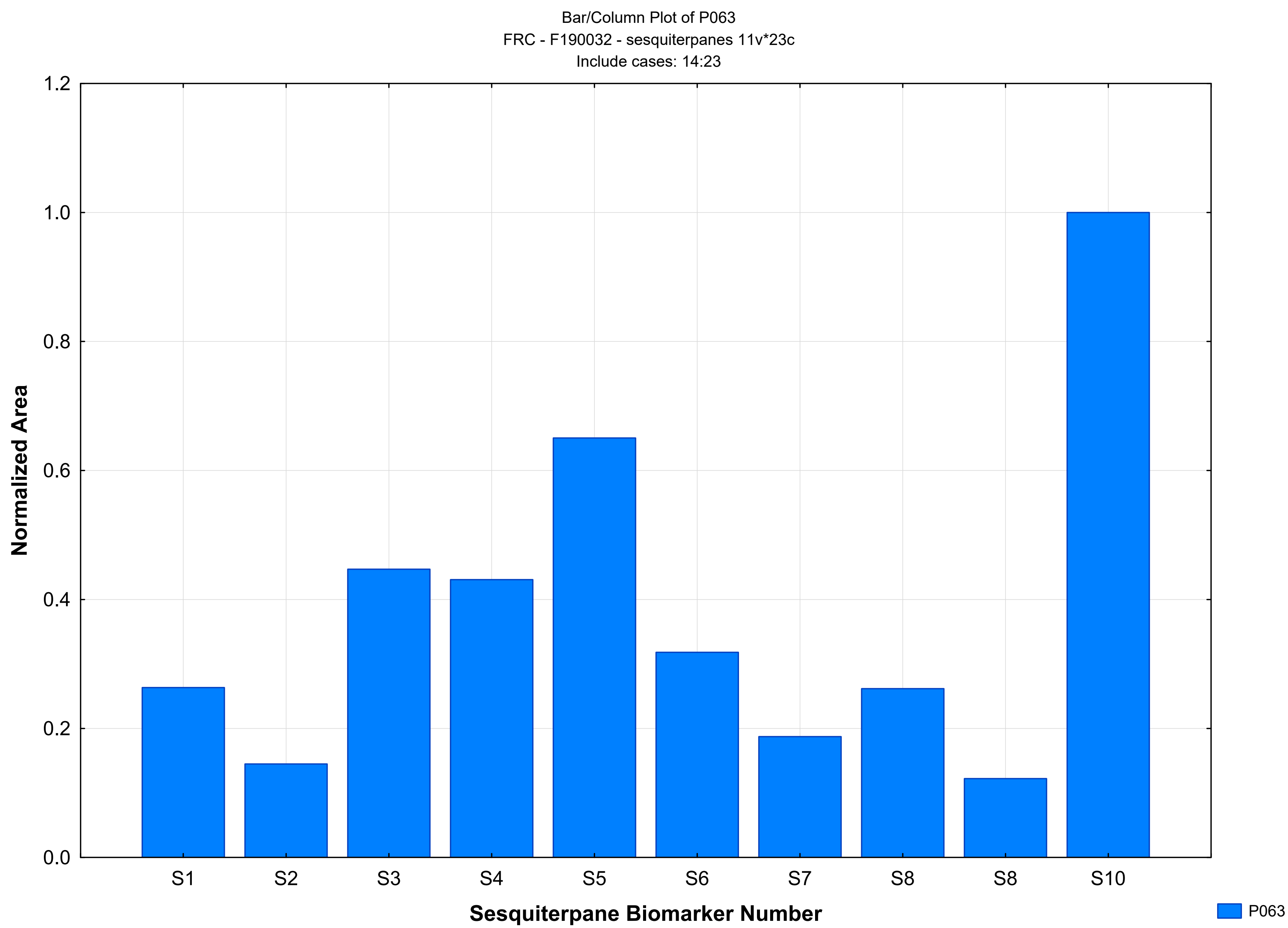

Bar/Column Plot of HMW-3A dup
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
HMW-3A dup

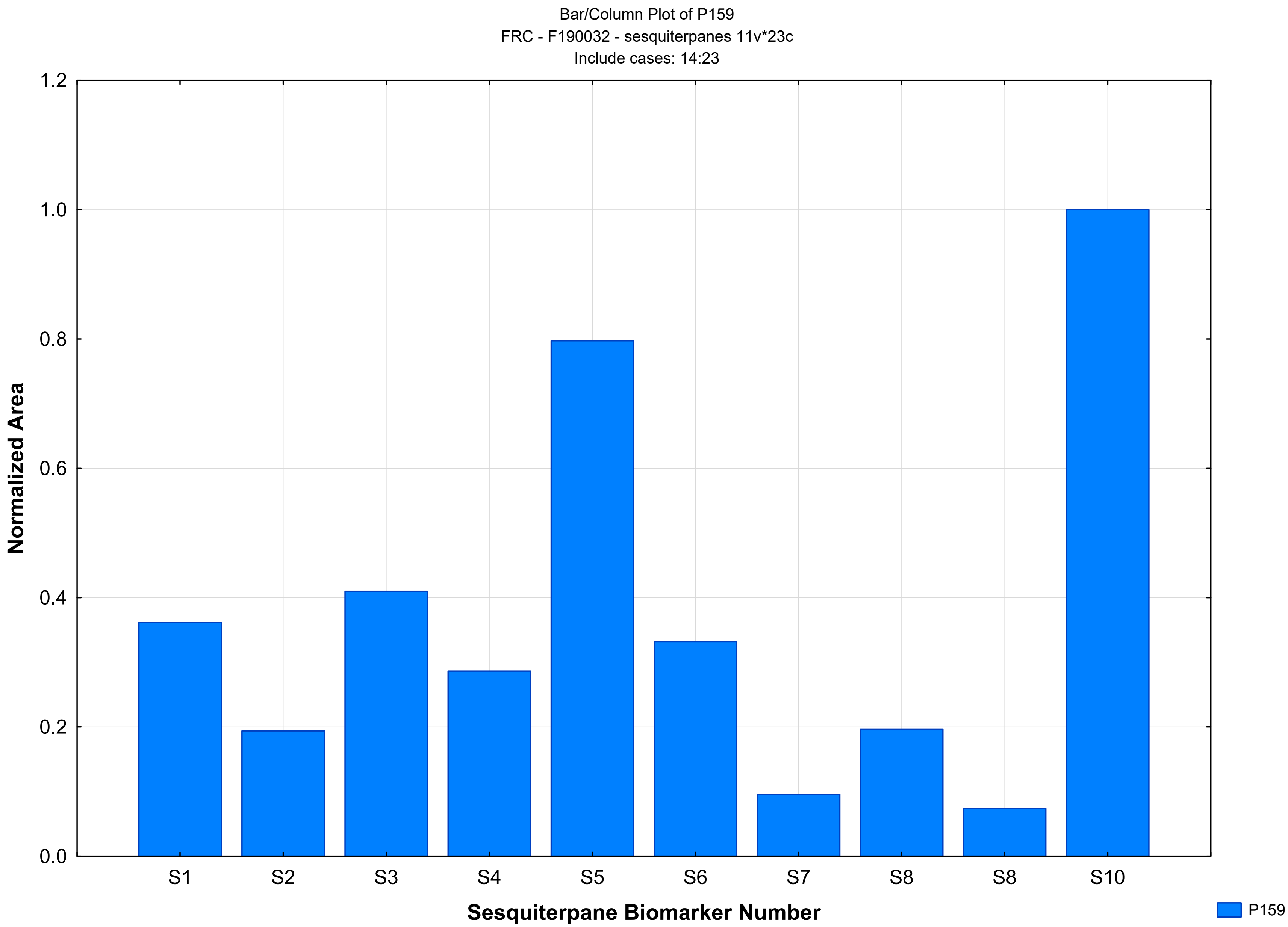

Bar/Column Plot of P265
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
P265


Bar/Column Plot of P279
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
P279



Bar/Column Plot of P223
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
P223


Bar/Column Plot of P063
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
P063


Bar/Column Plot of P159
FRC - F190032 - sesquiterpanes 11v*23c
Include cases: 14:23
Normalized Area
1.2
1.0
0.8
0.6
0.4
0.2
0.0
S1
S2
S3
S4
S5
S6
S7
S8
S8
S10
Sesquiterpane Biomarker Number
P159

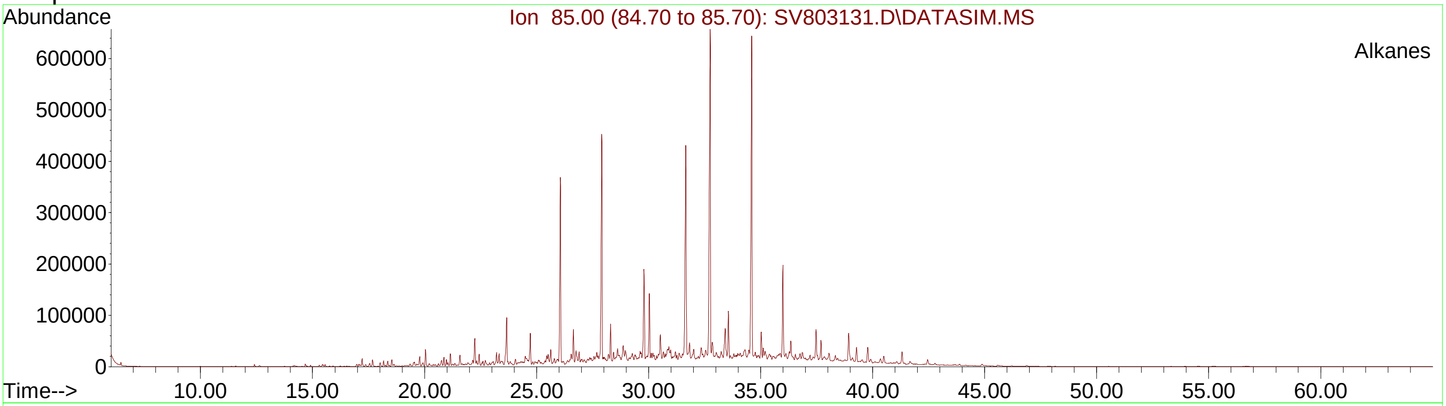
Appendix C

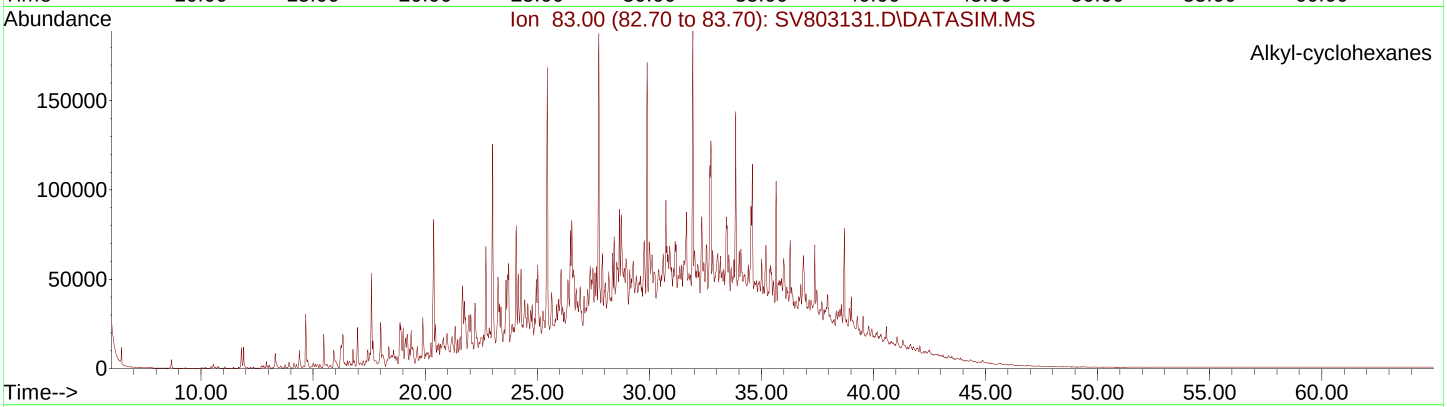
Extracted Ion Current Profiles (EICPs)

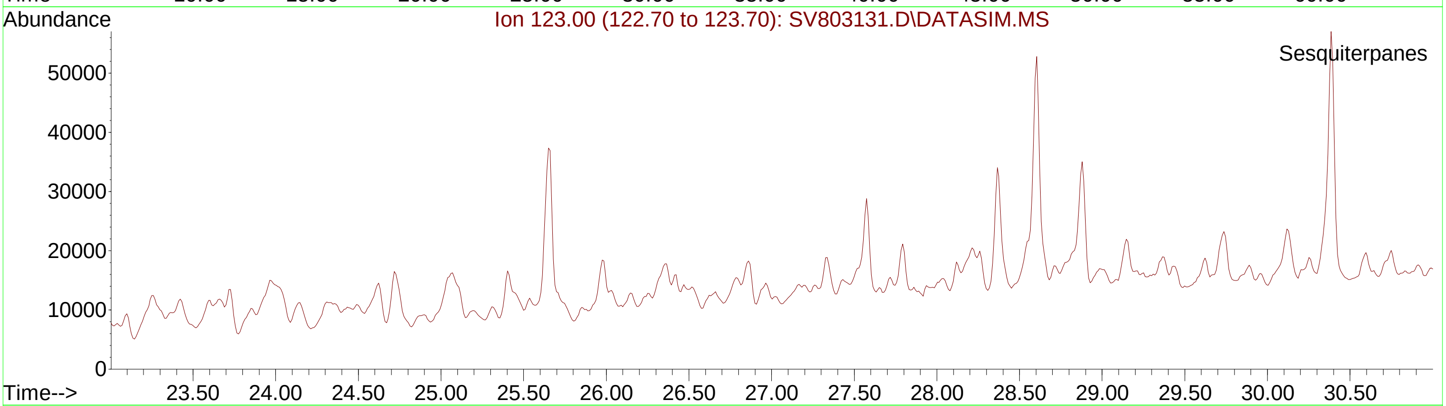
ESS LABORATORY

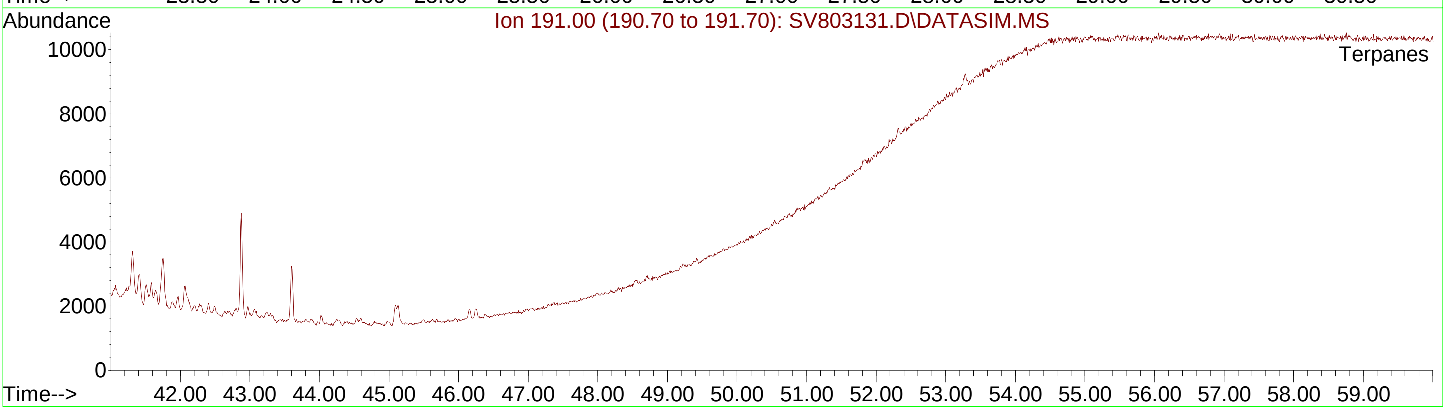
GC/MS EXTRACTED ION CHROMATOGRAM

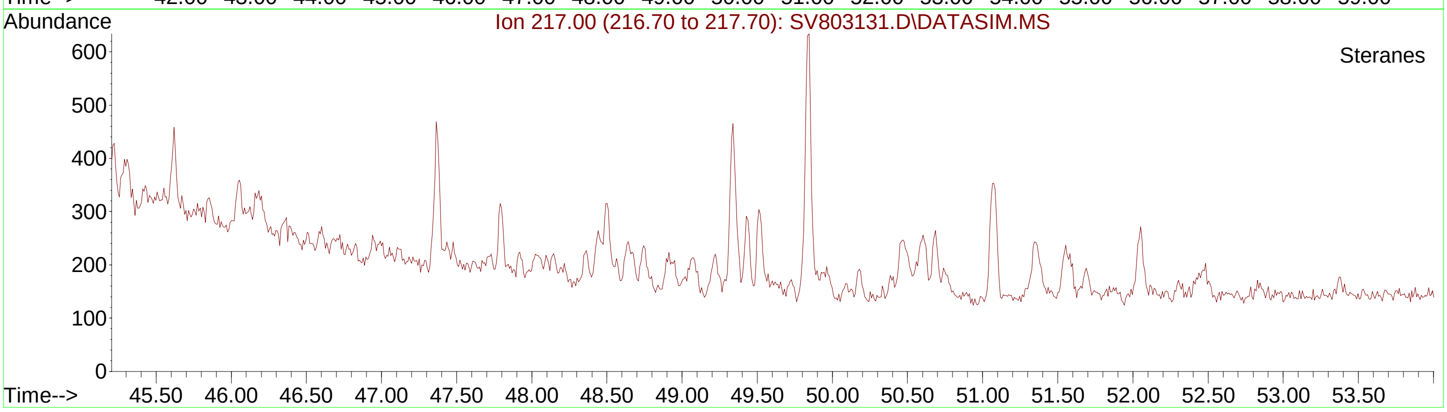
File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803131.D
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01







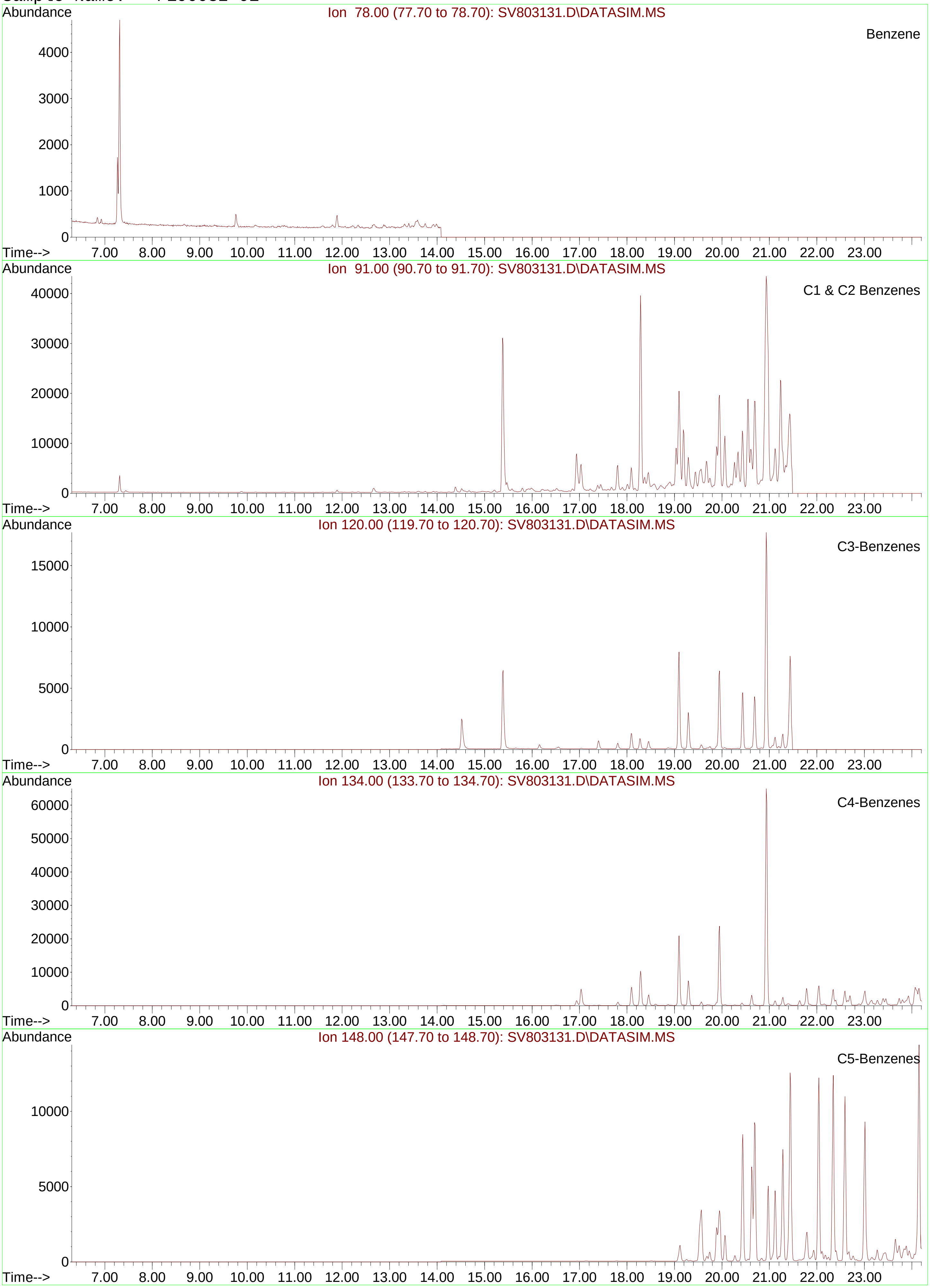




ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803131.D
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01



ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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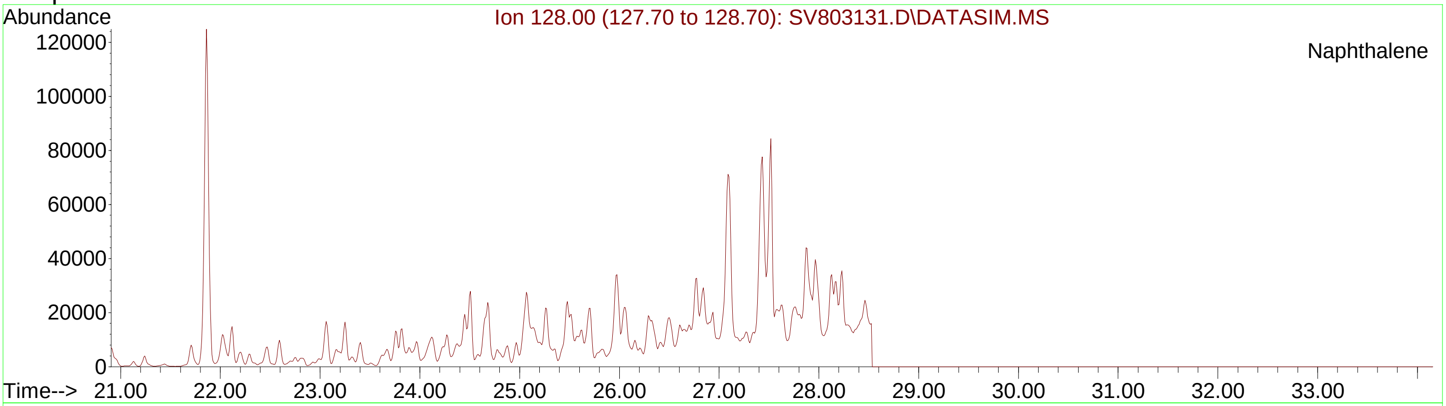
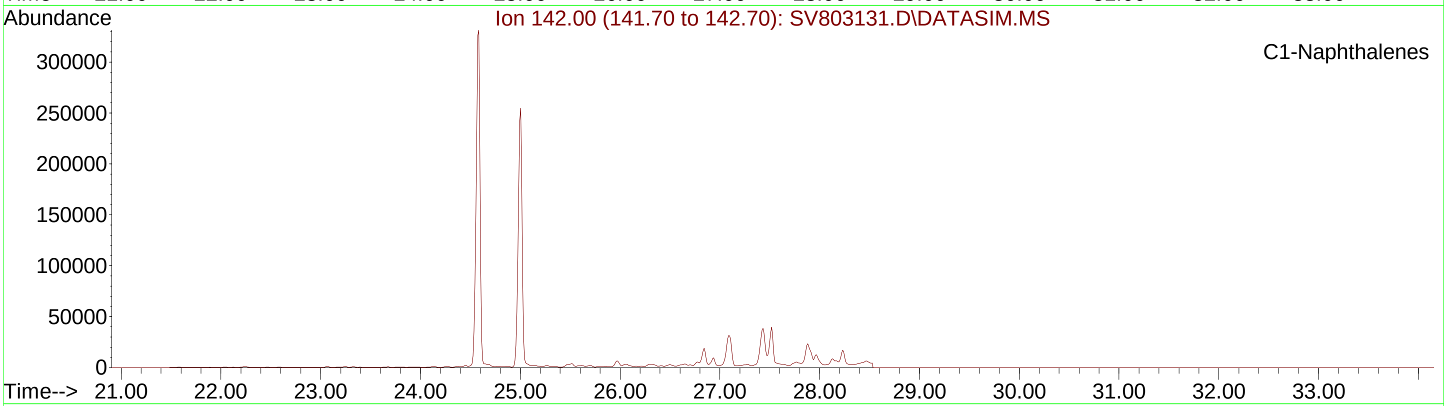
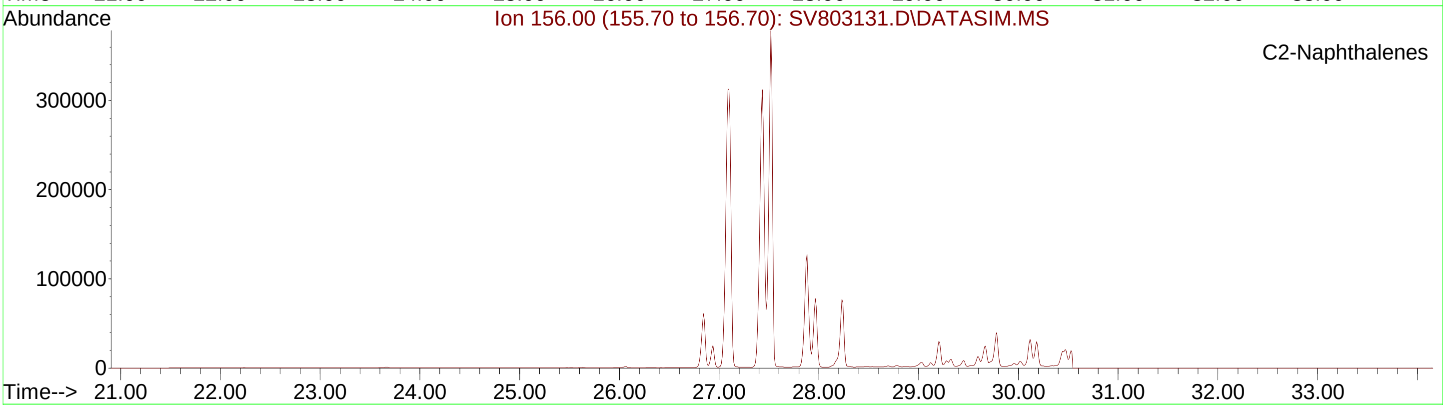
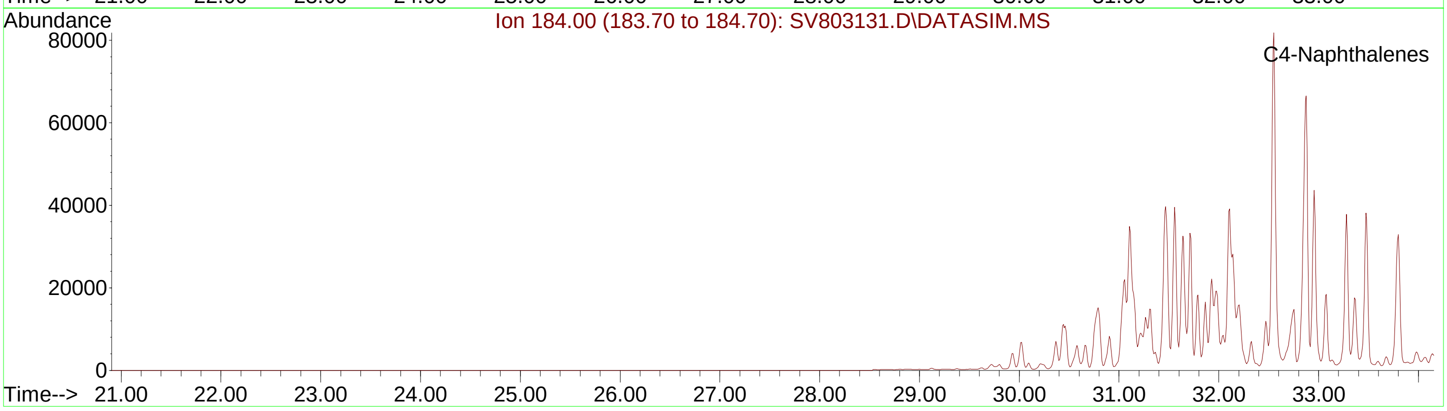
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01









ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803131.D
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01

ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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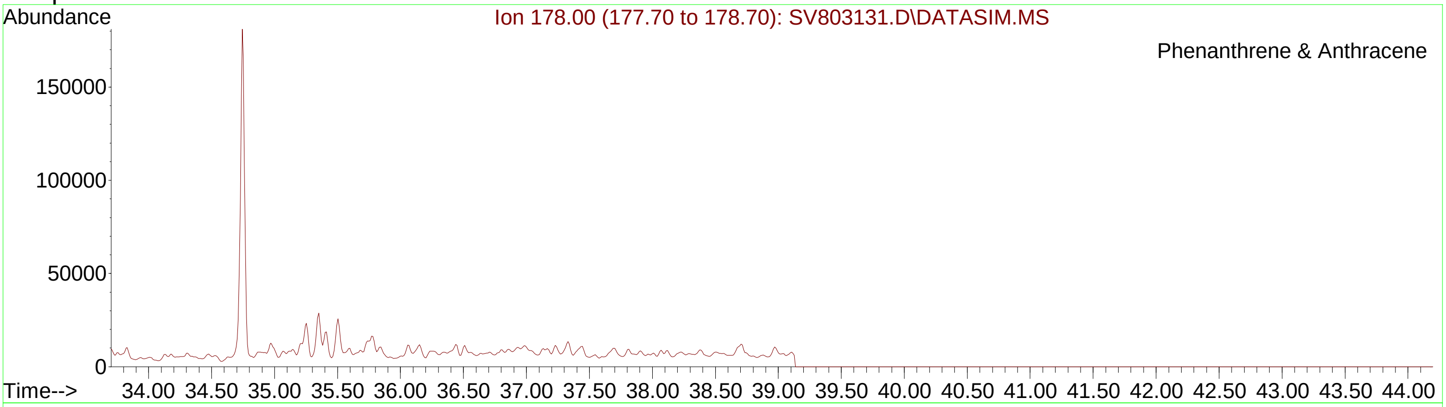
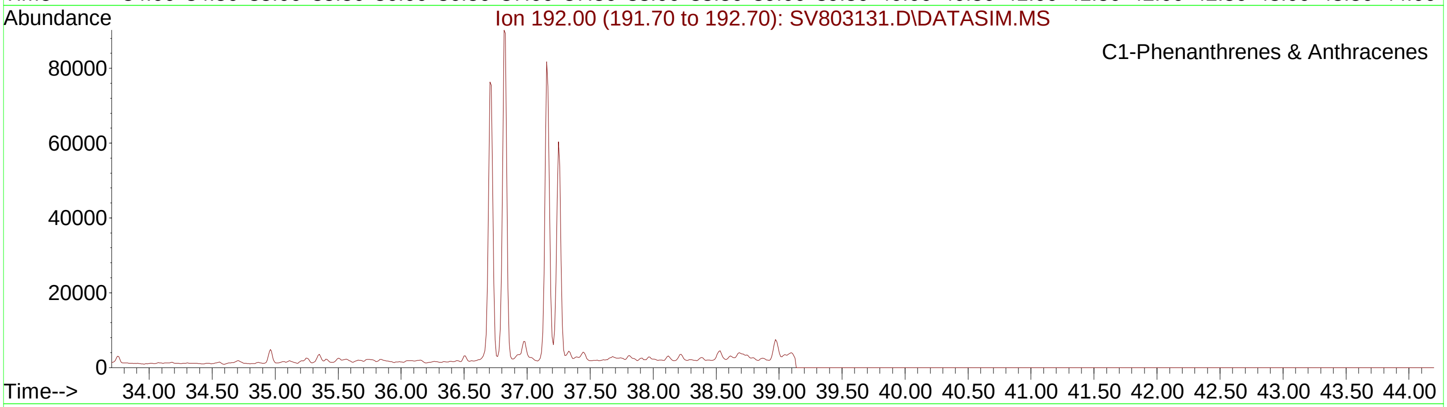
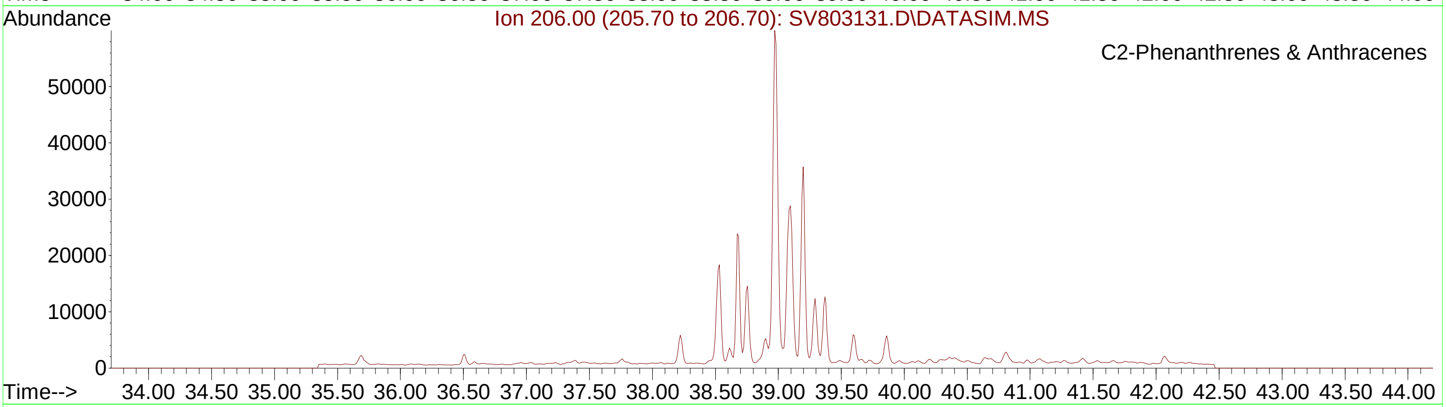
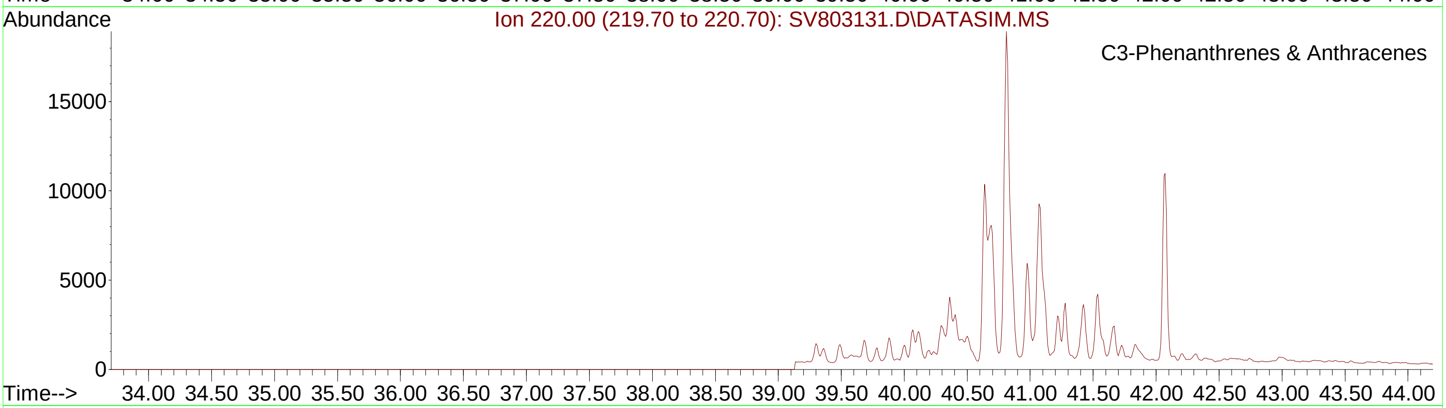
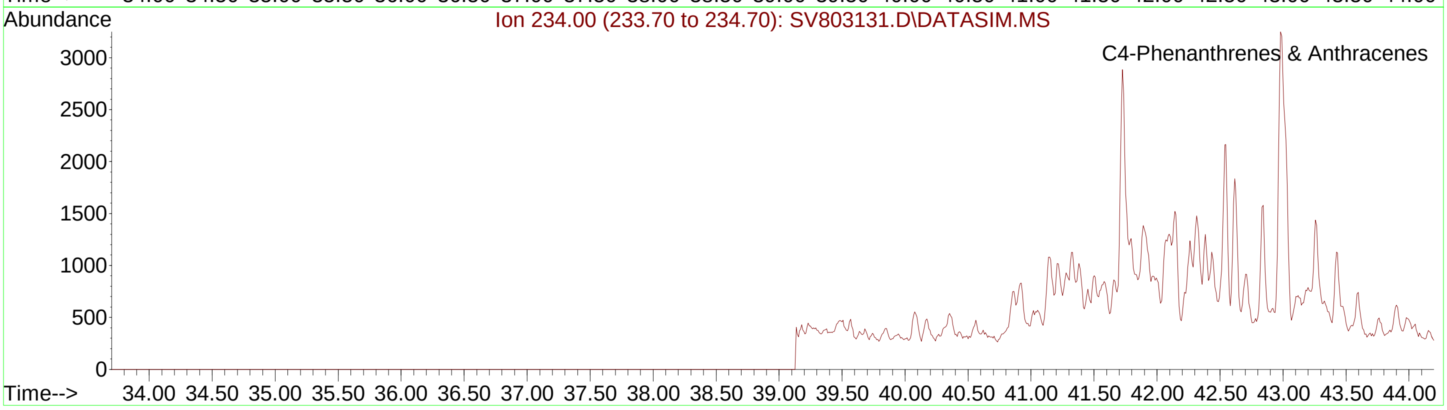
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01











ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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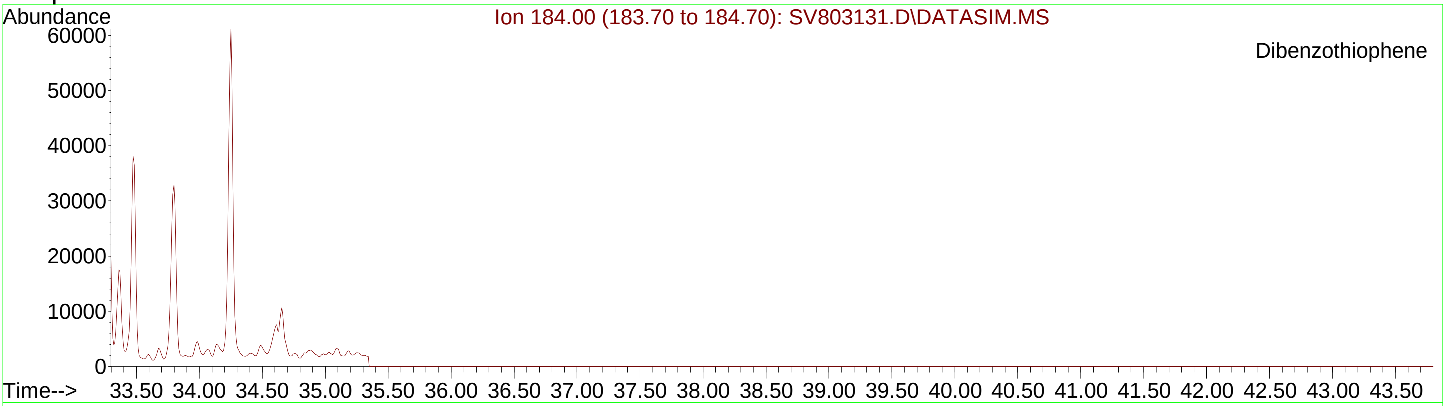
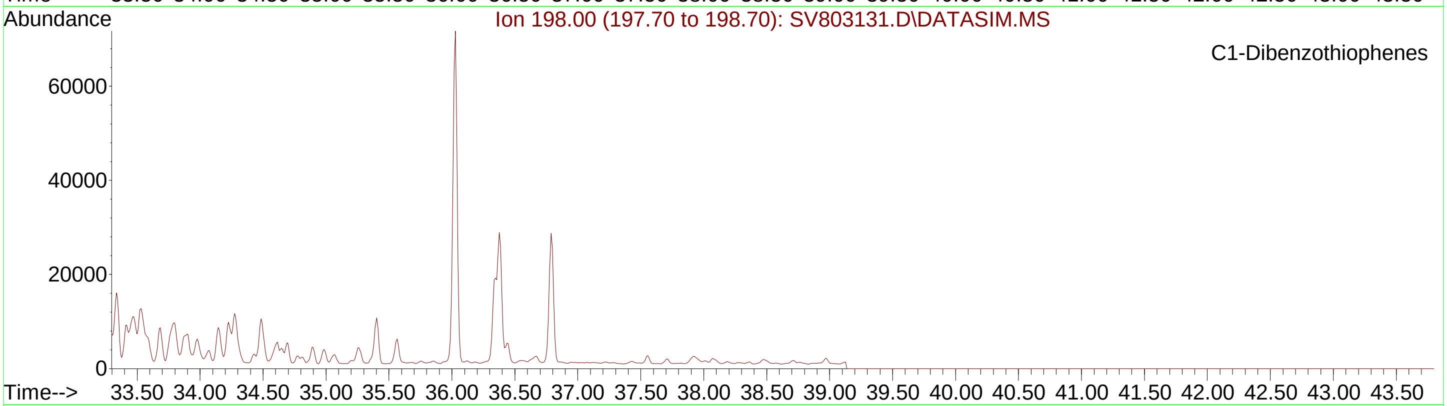
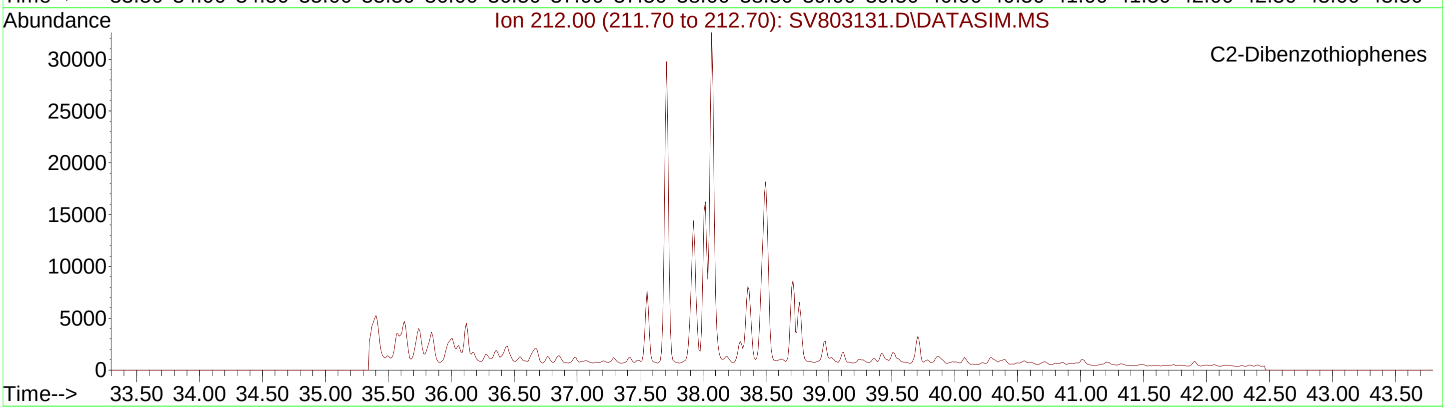
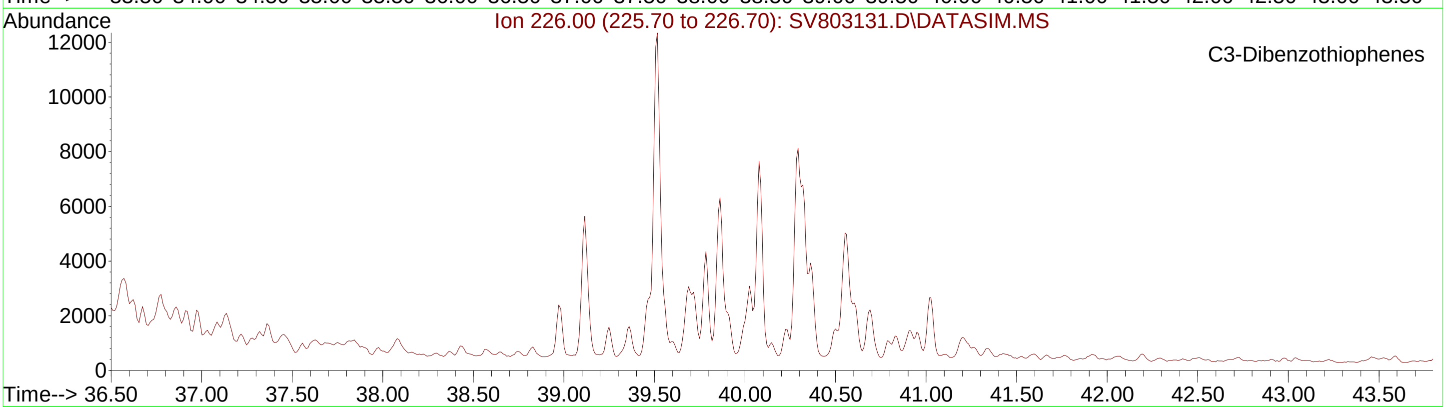
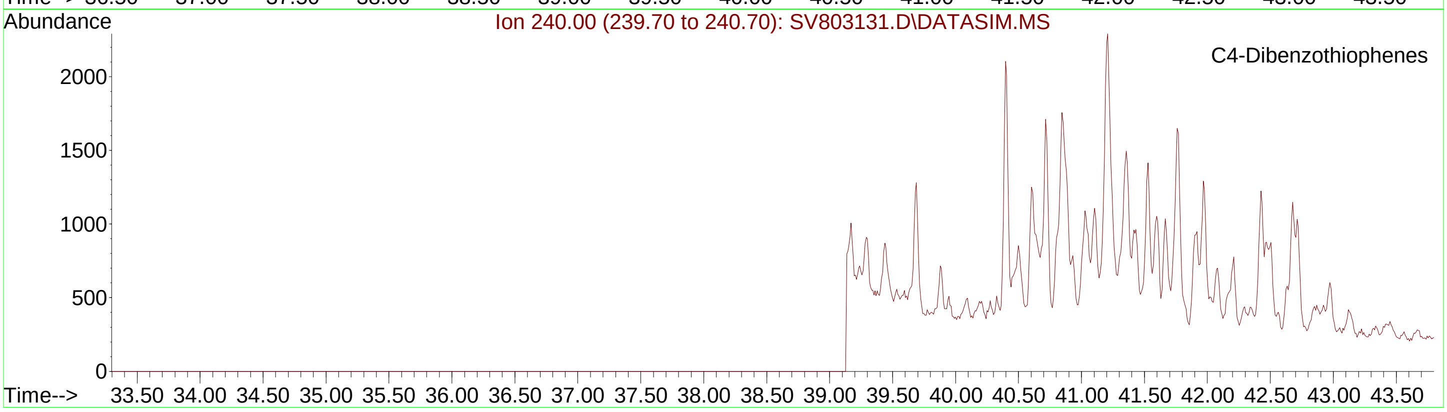
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01











ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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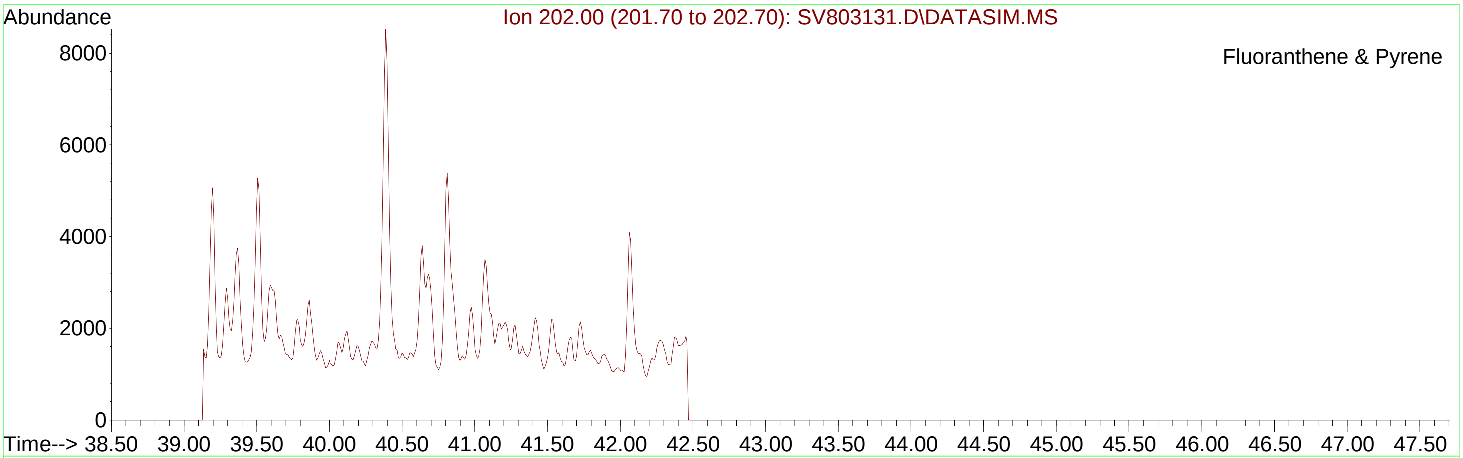
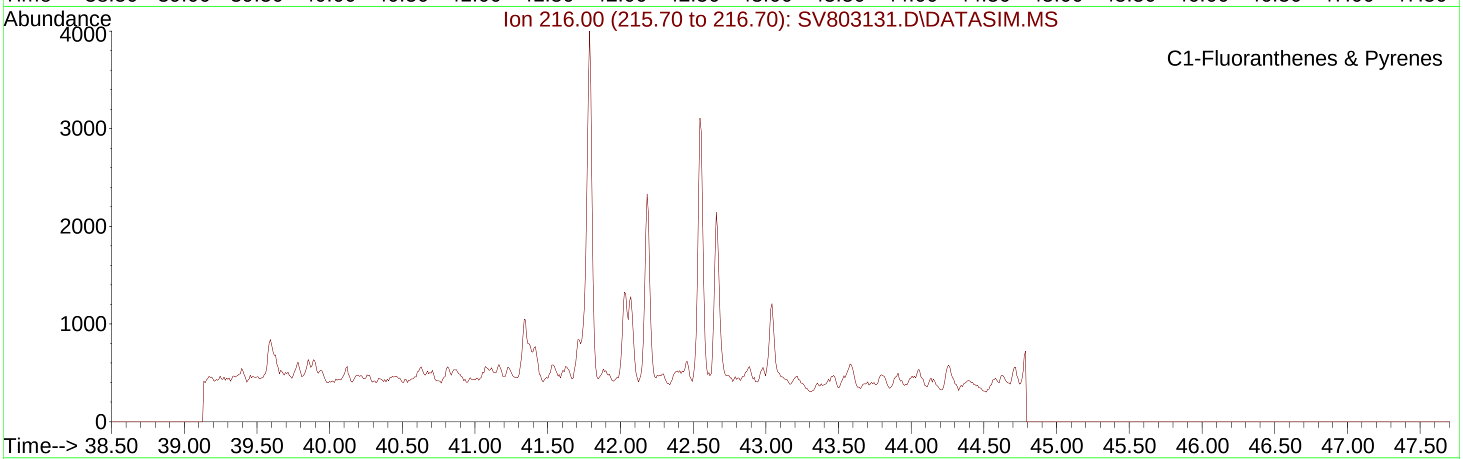
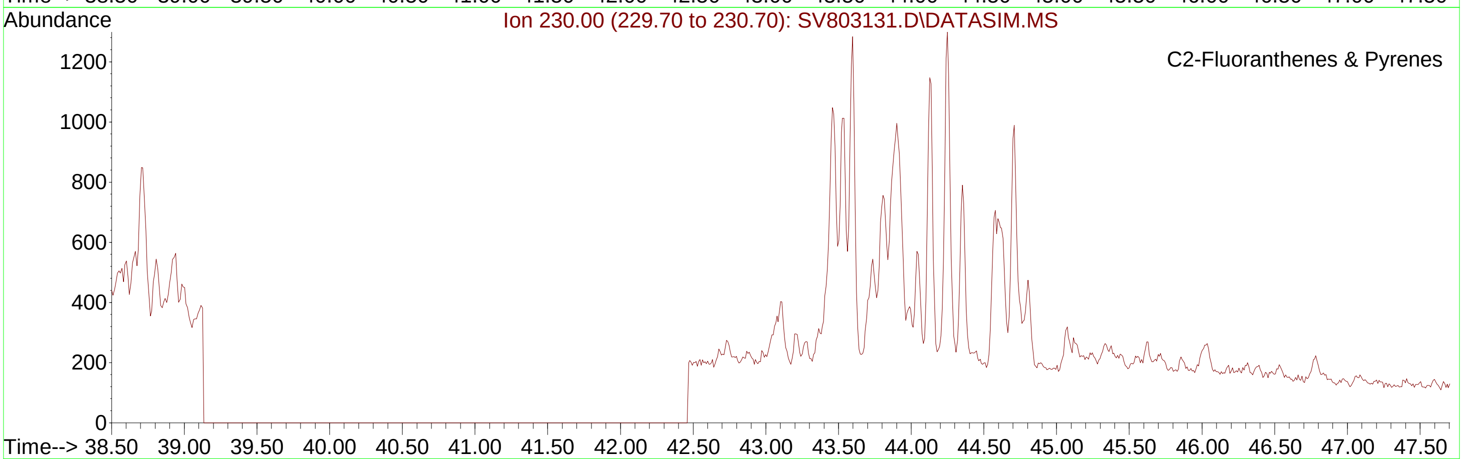
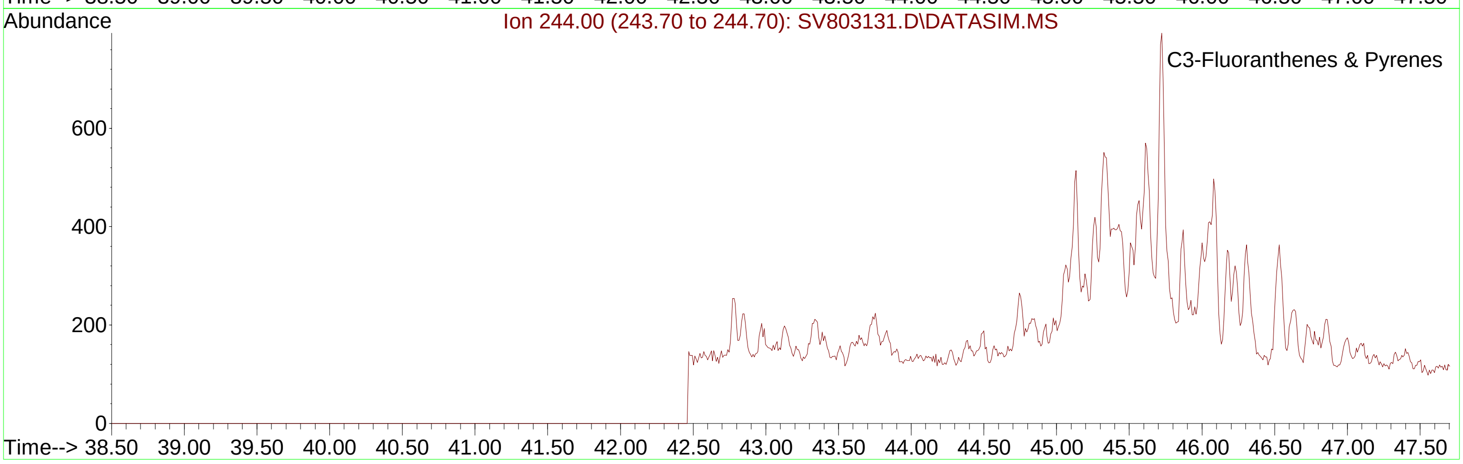
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01
Misc Info:









ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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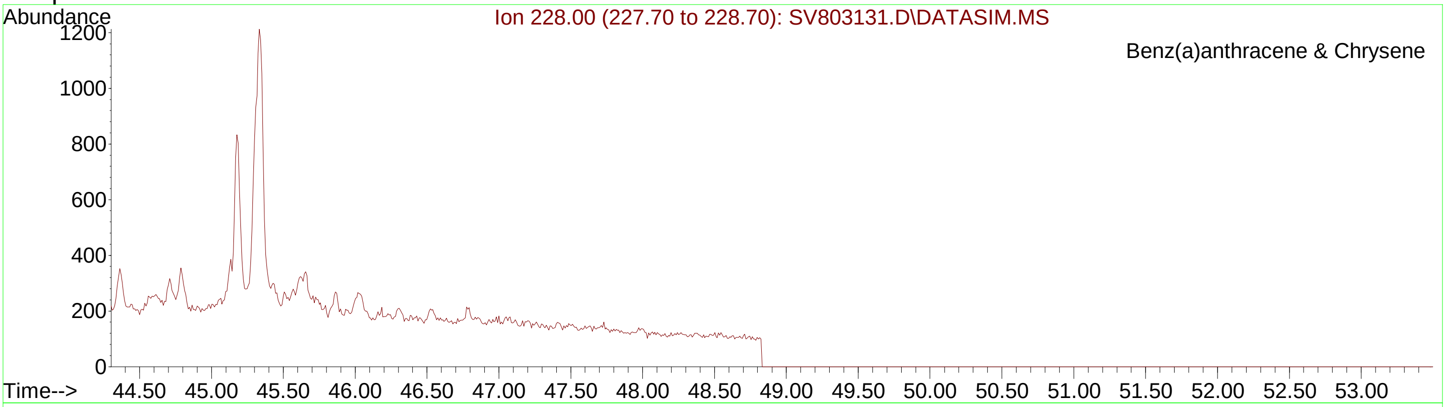
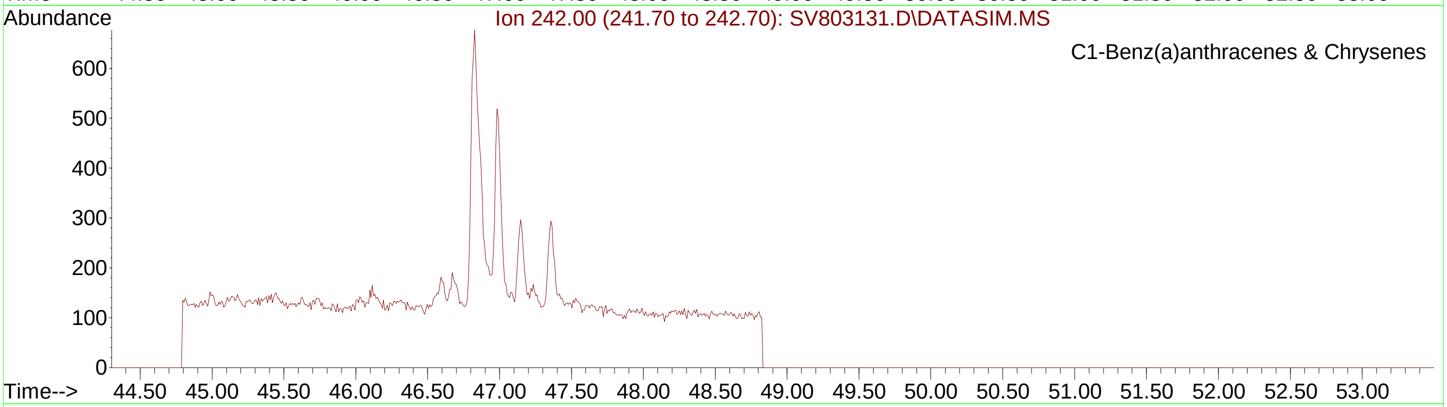
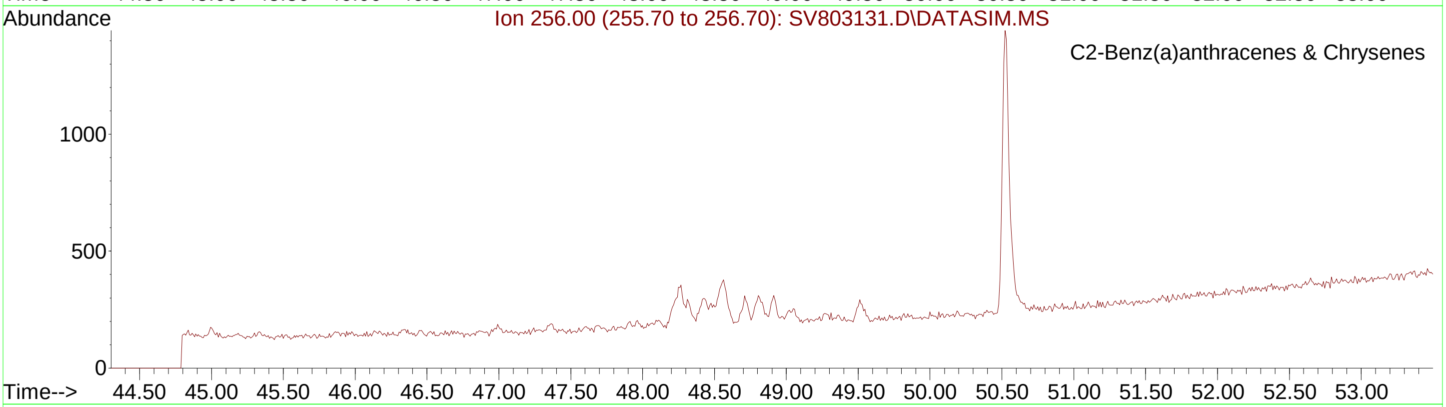
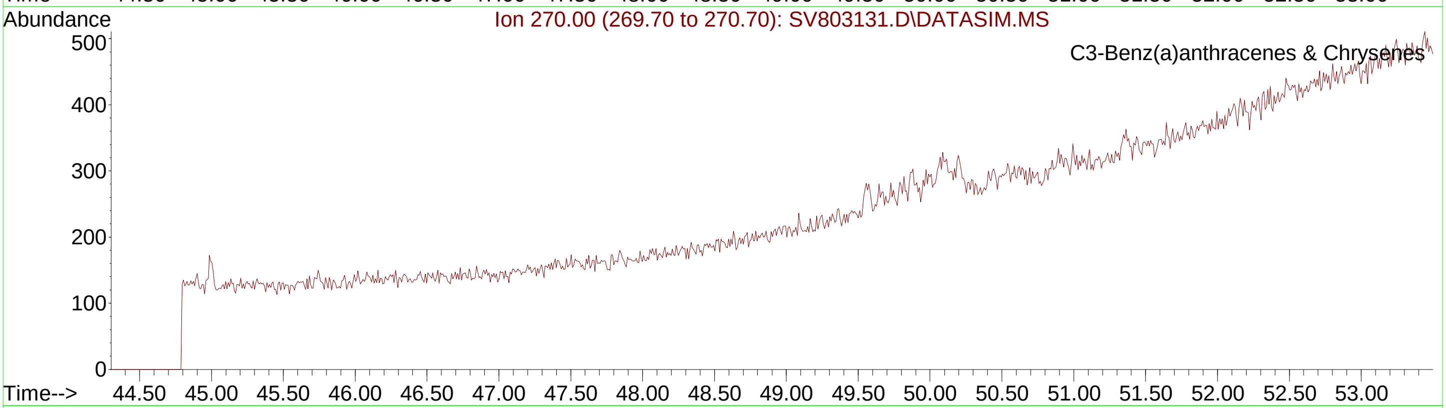
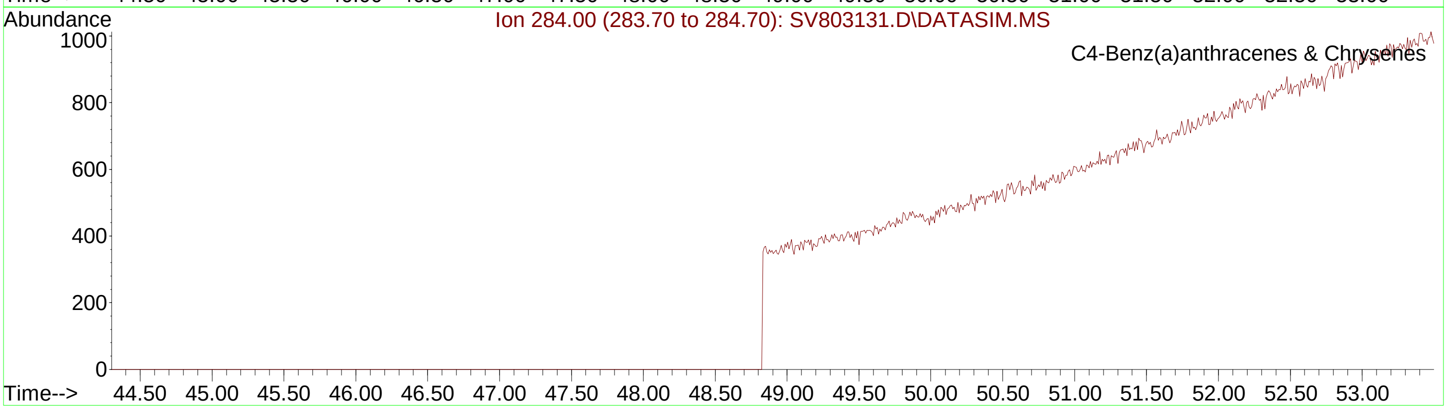
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01











ESS LABORATORY

GC/MS TOTAL ION CHROMATOGRAM

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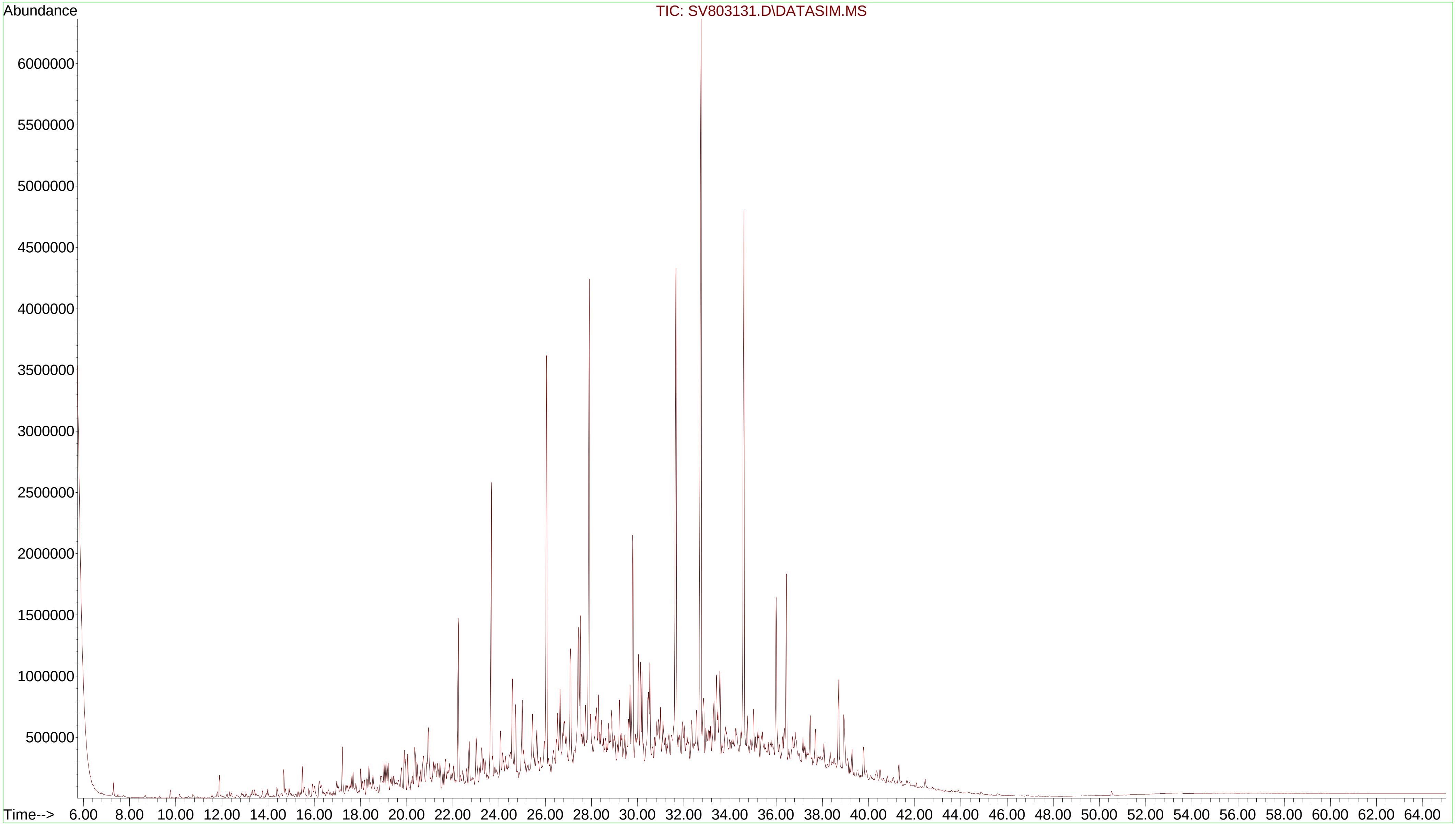
Date Acquired: 24 Jun 2019 10:45 pm
Sample Name: F190032-01
Misc Info:



ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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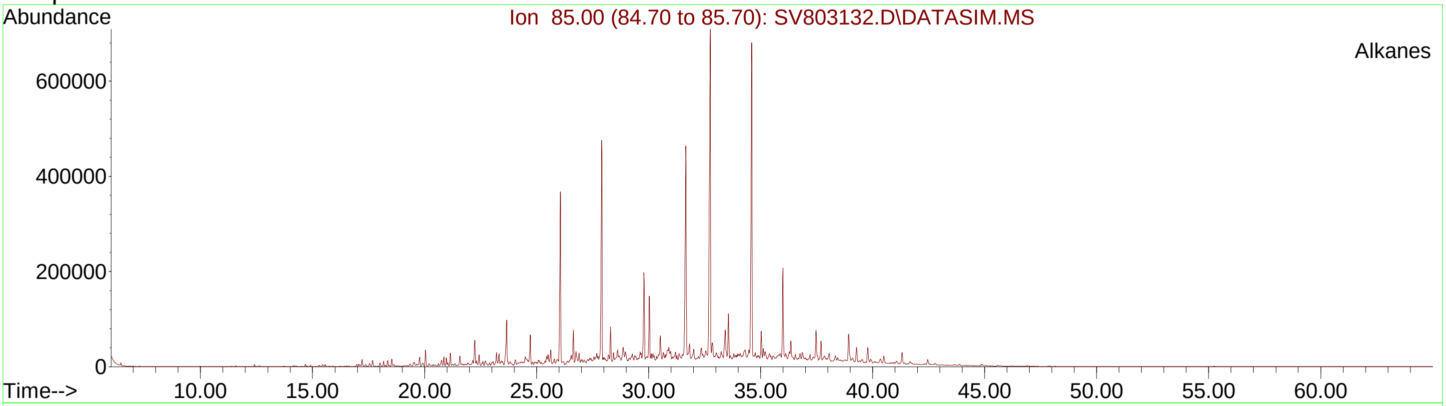
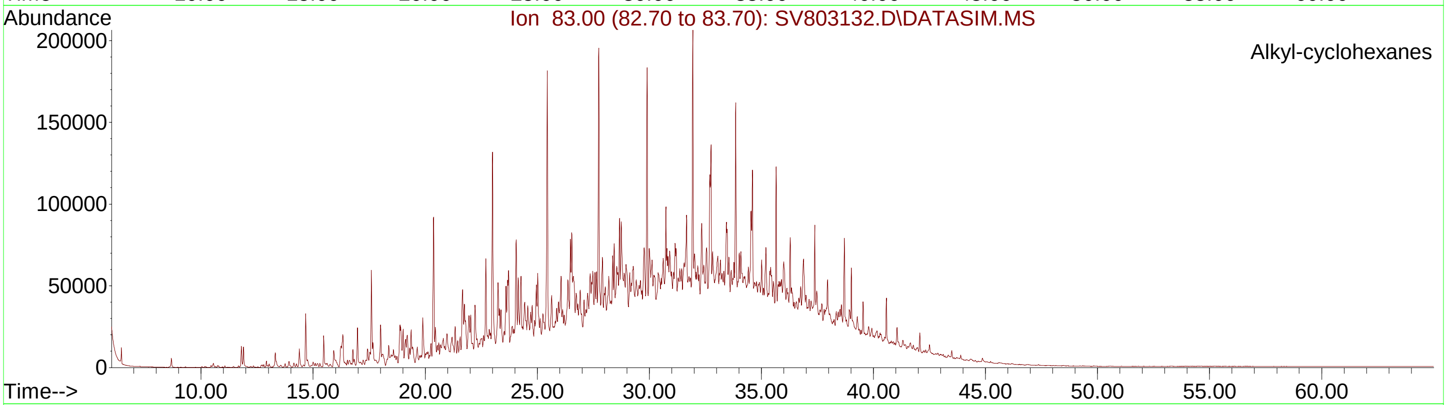
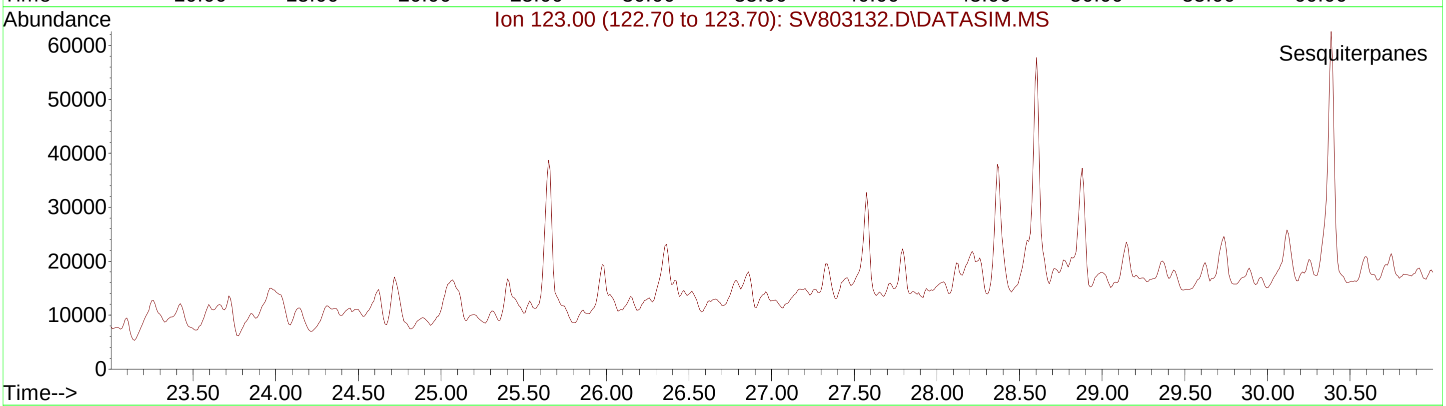
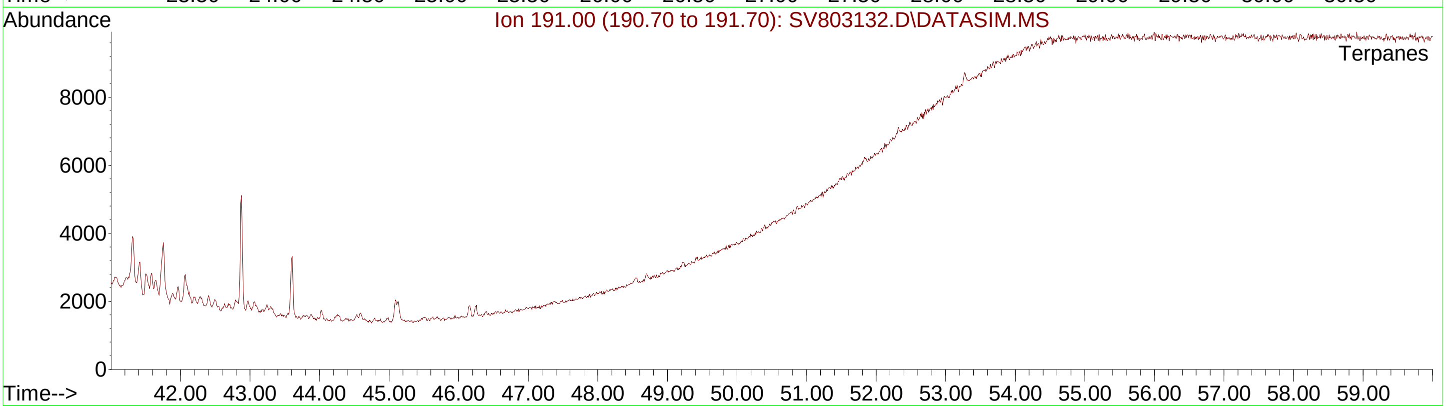
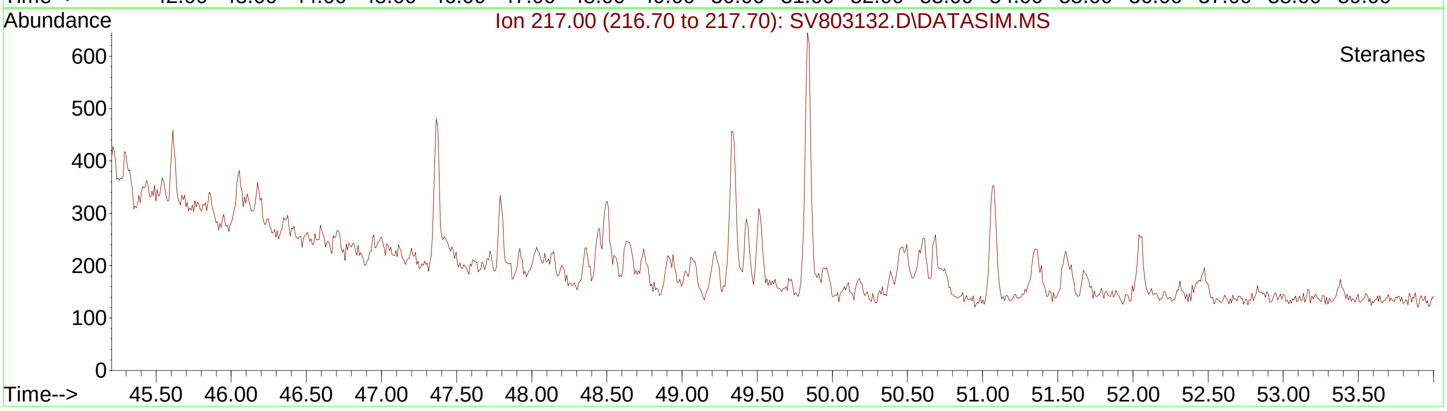
Date Acquired: 25 Jun 2019 12:09 am
Sample Name: F190032-02











ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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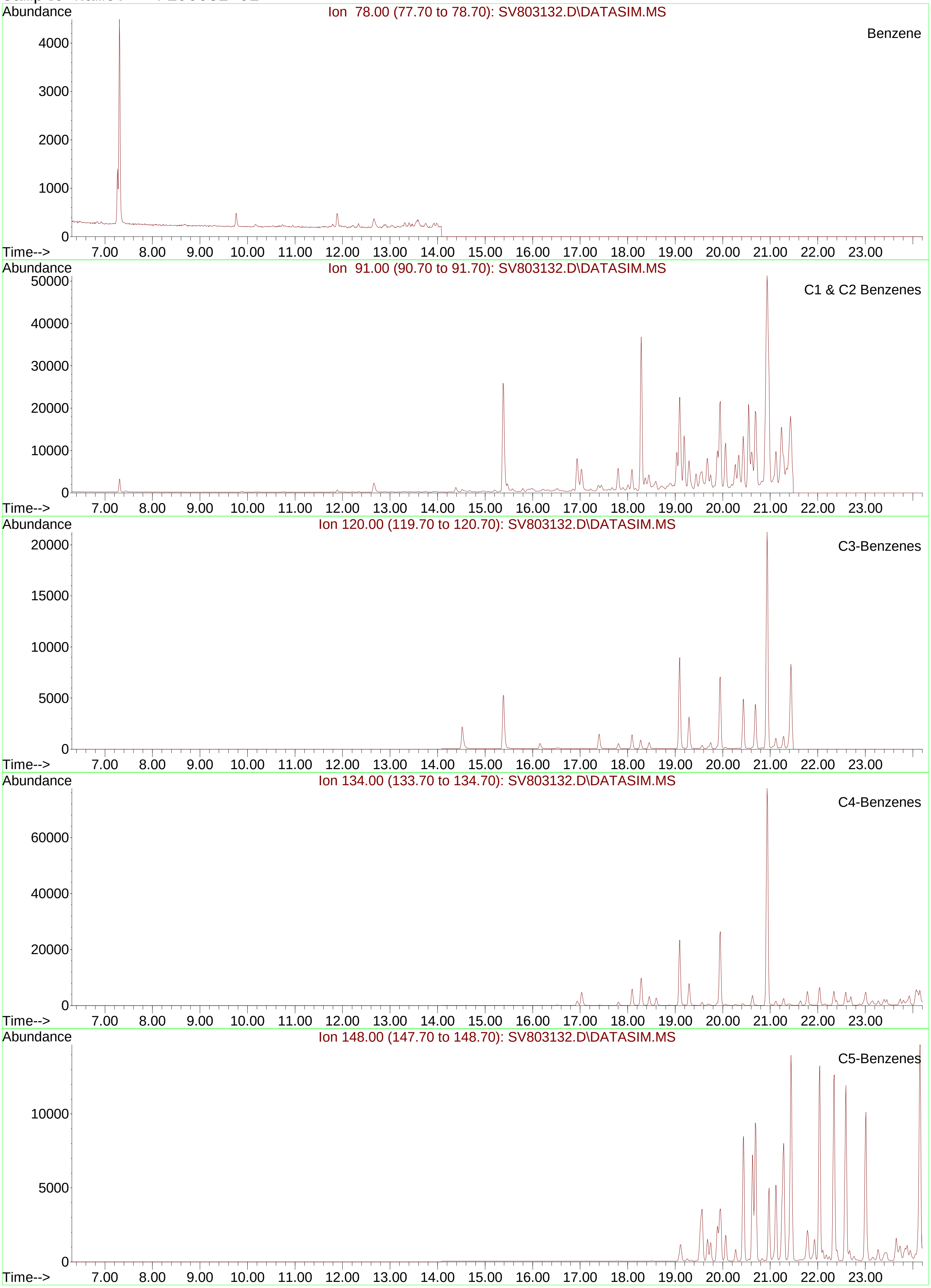
Date Acquired: 25 Jun 2019 12:09 am
Sample Name: F190032-02



ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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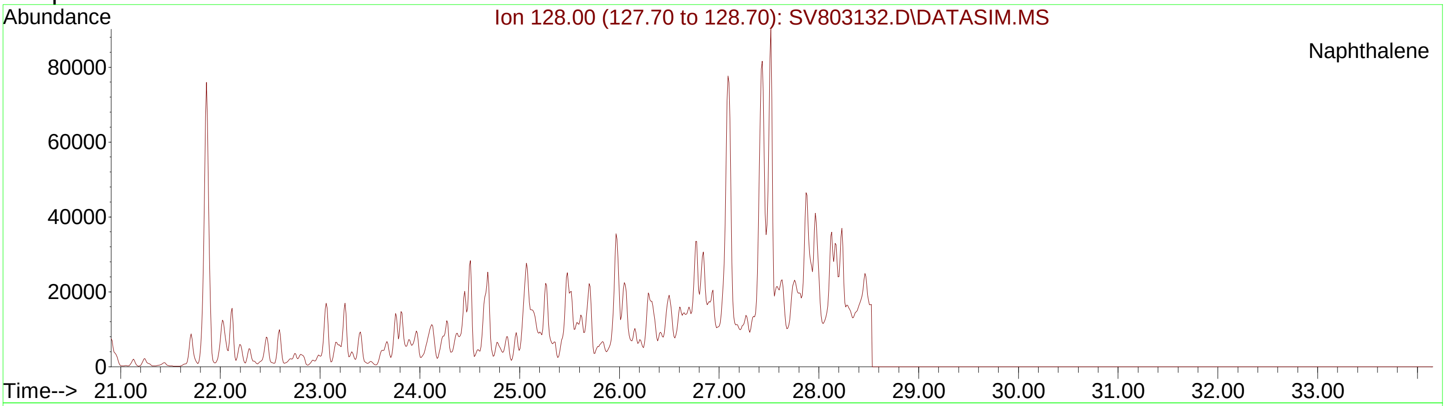
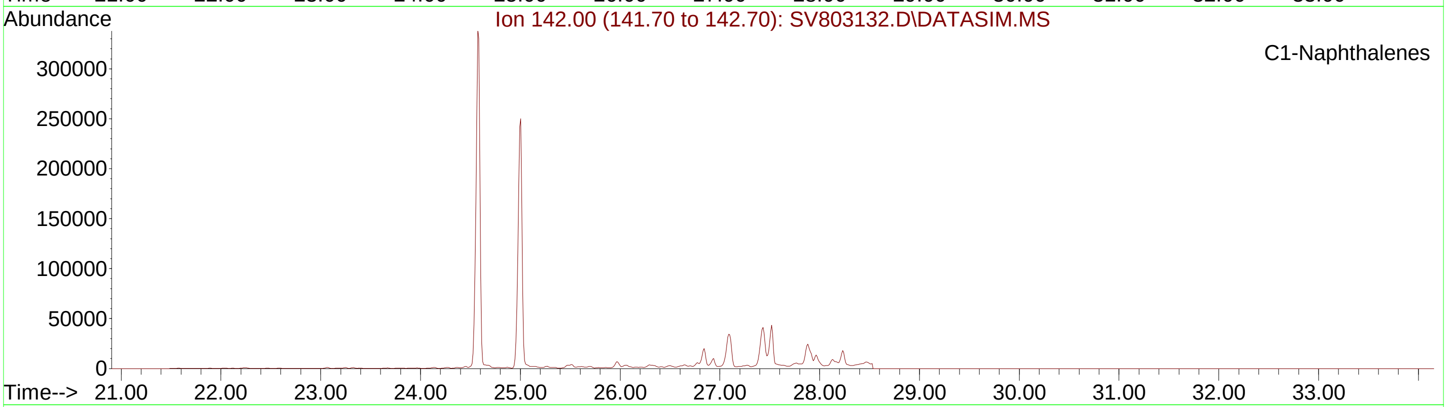
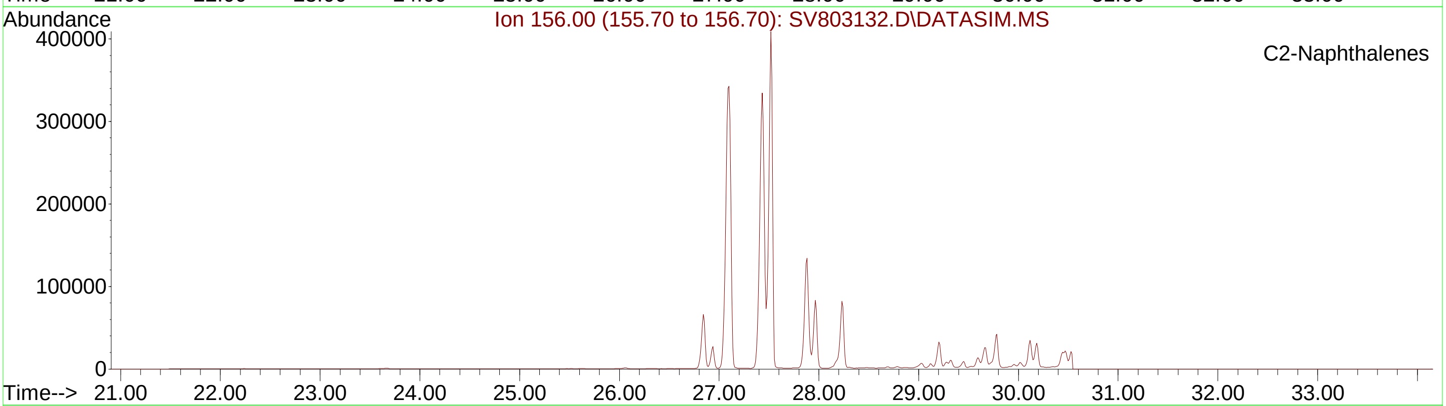
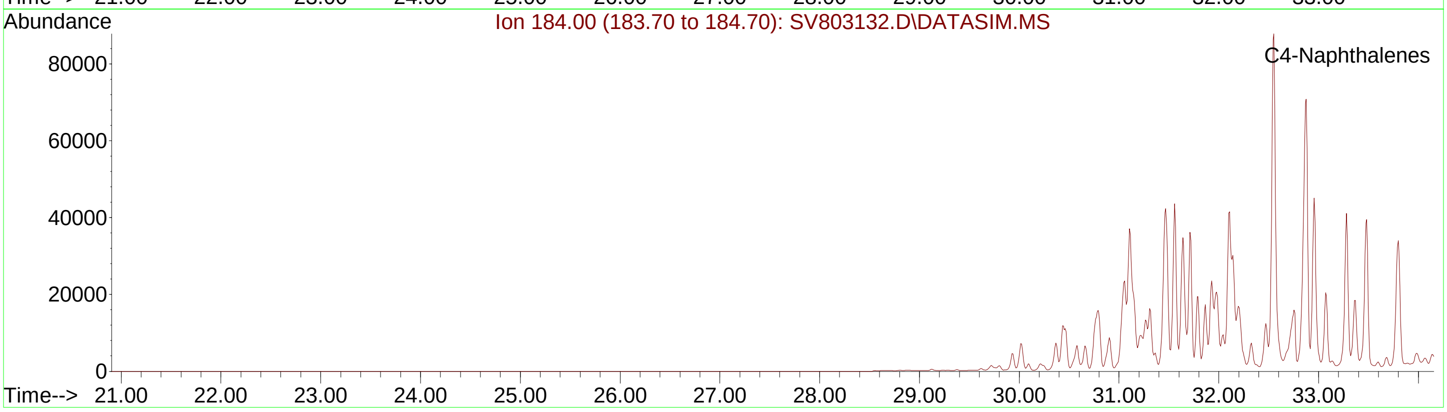
Date Acquired: 25 Jun 2019 12:09 am
Sample Name: F190032-02









ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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Date Acquired: 25 Jun 2019 12:09 am
Sample Name: F190032-02

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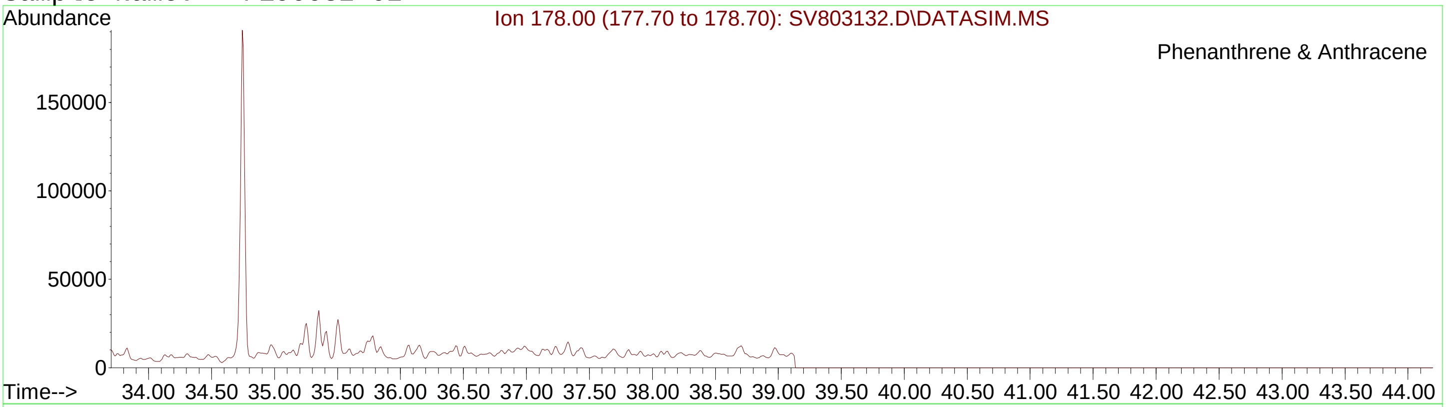
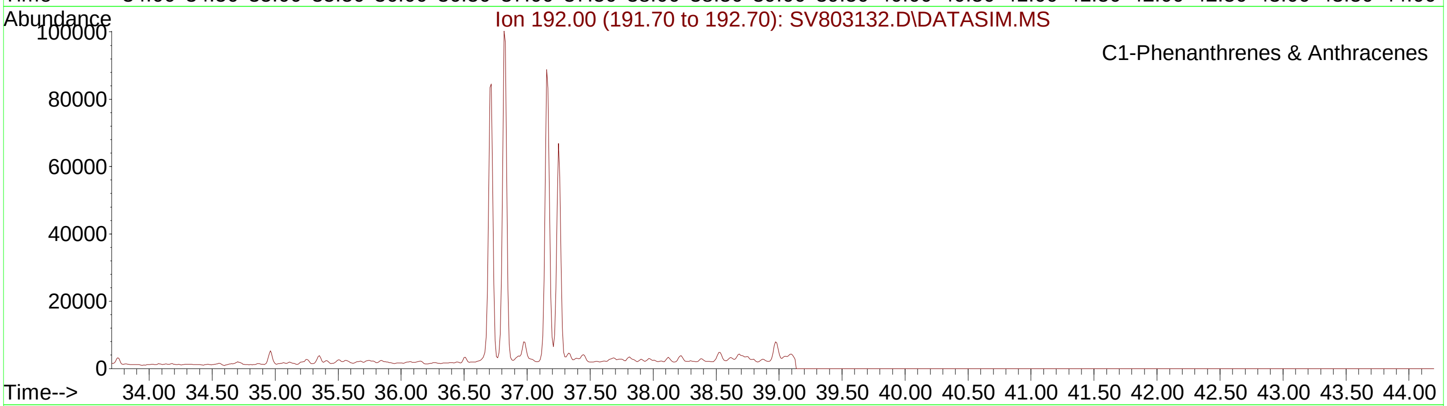
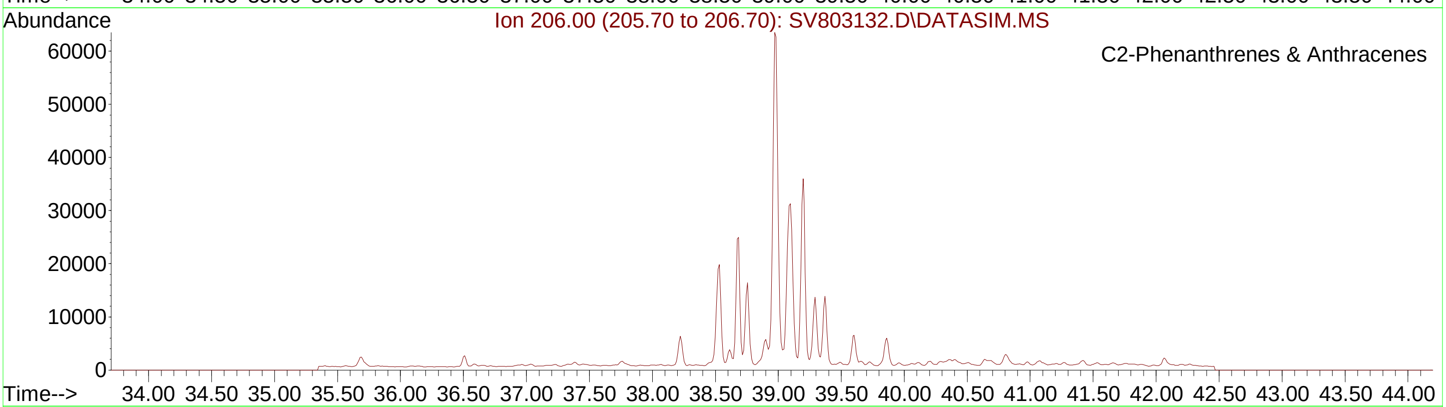
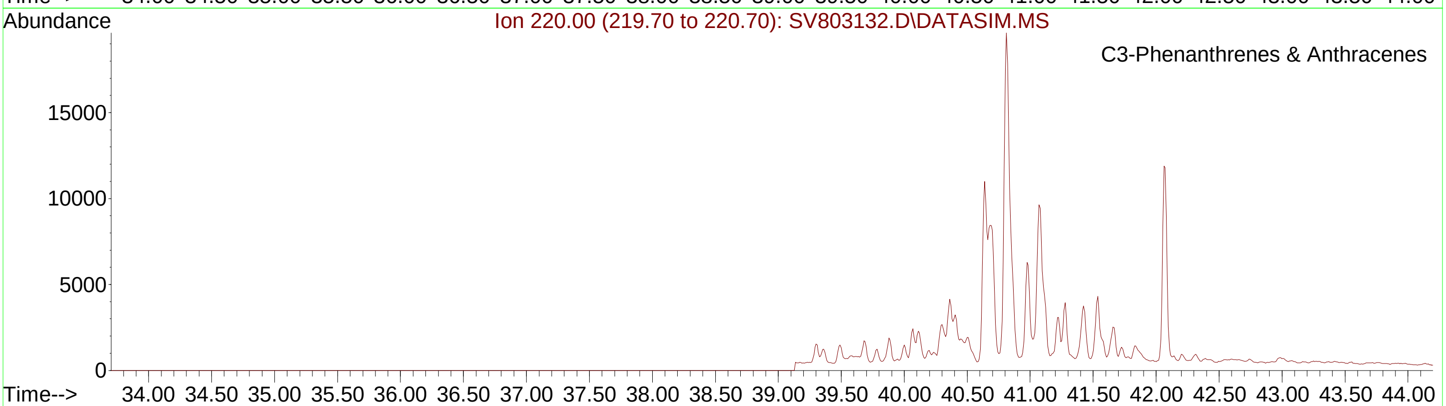
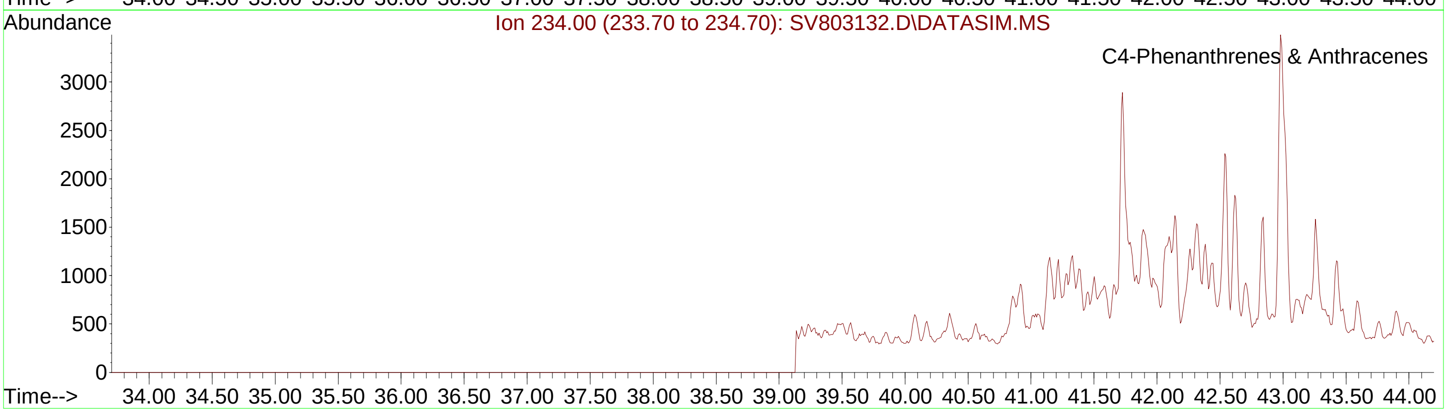
Sample Name: F190032-02











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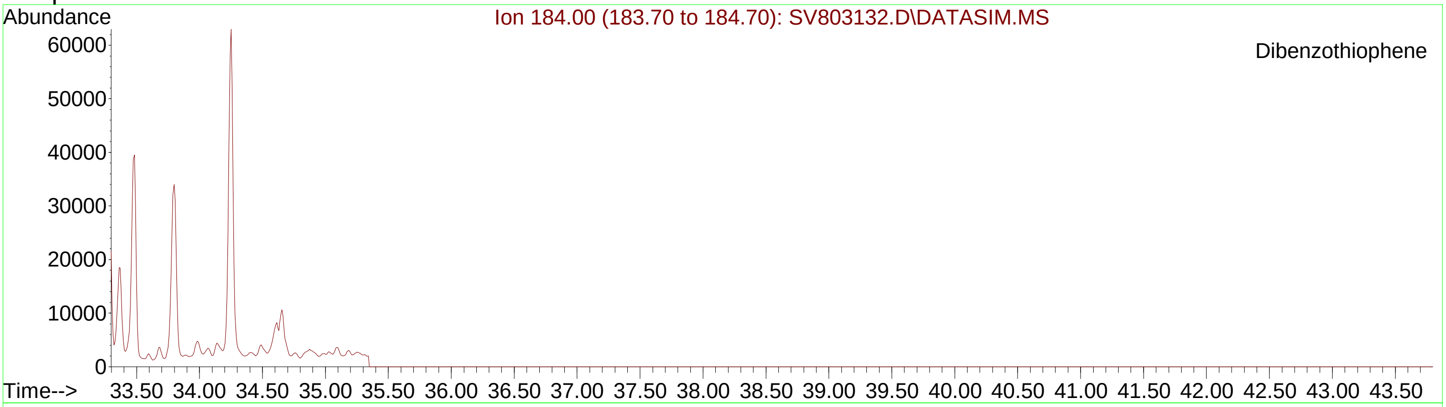

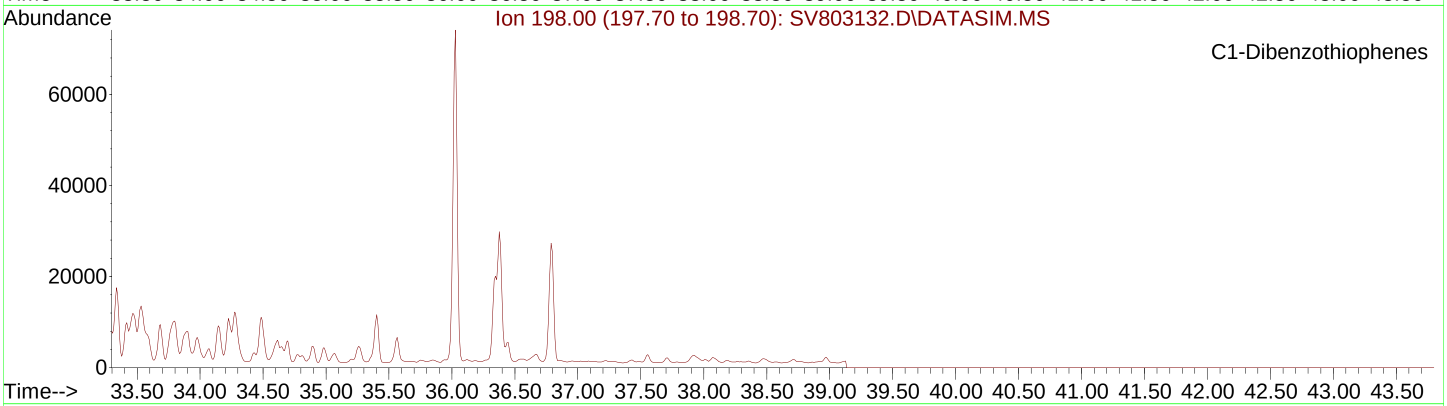

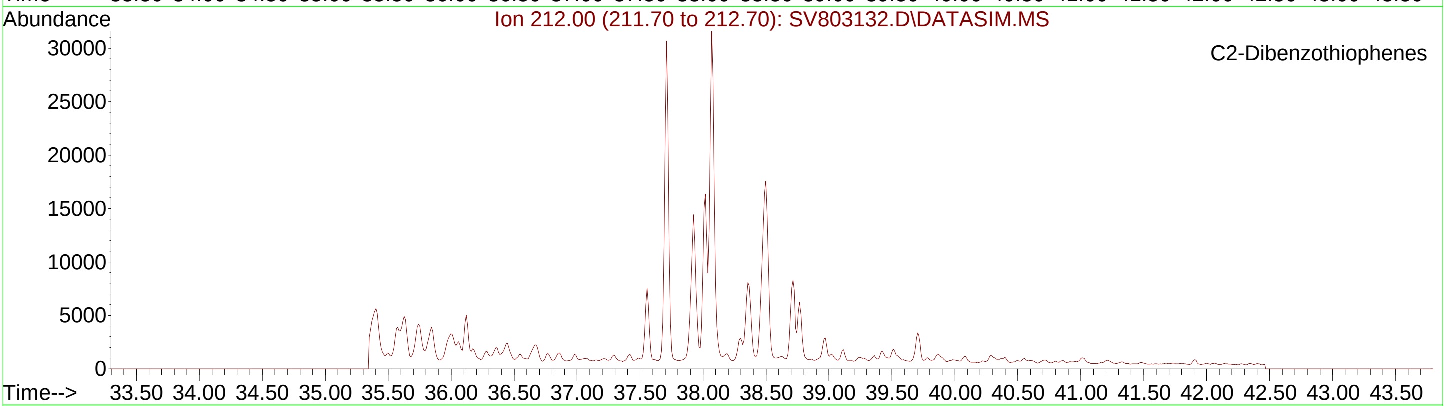

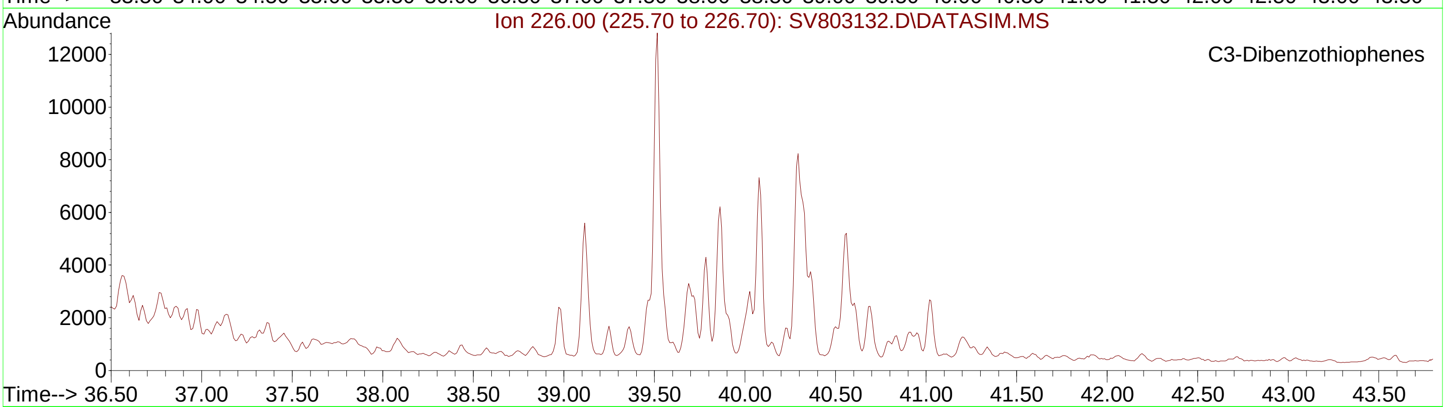

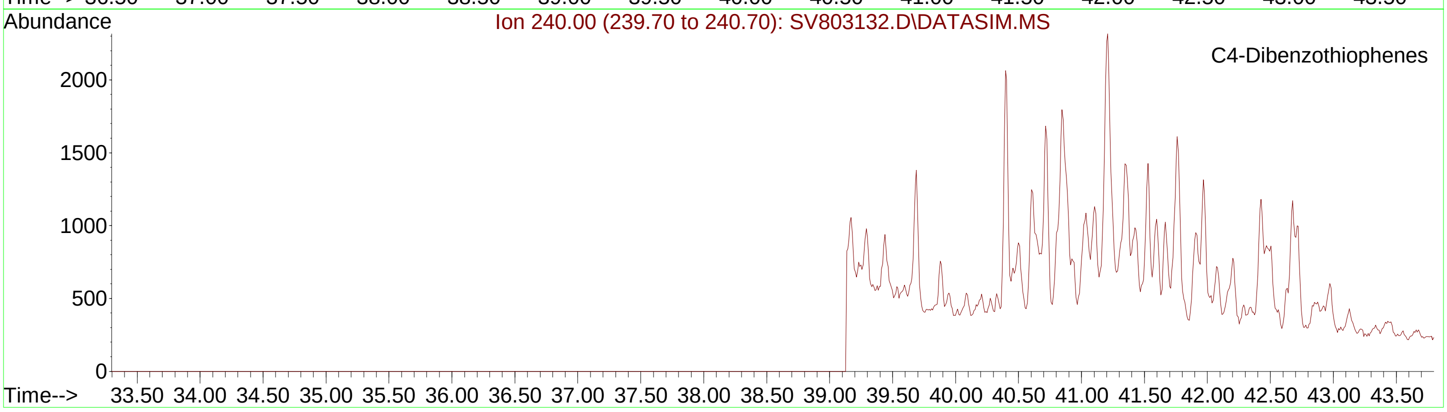

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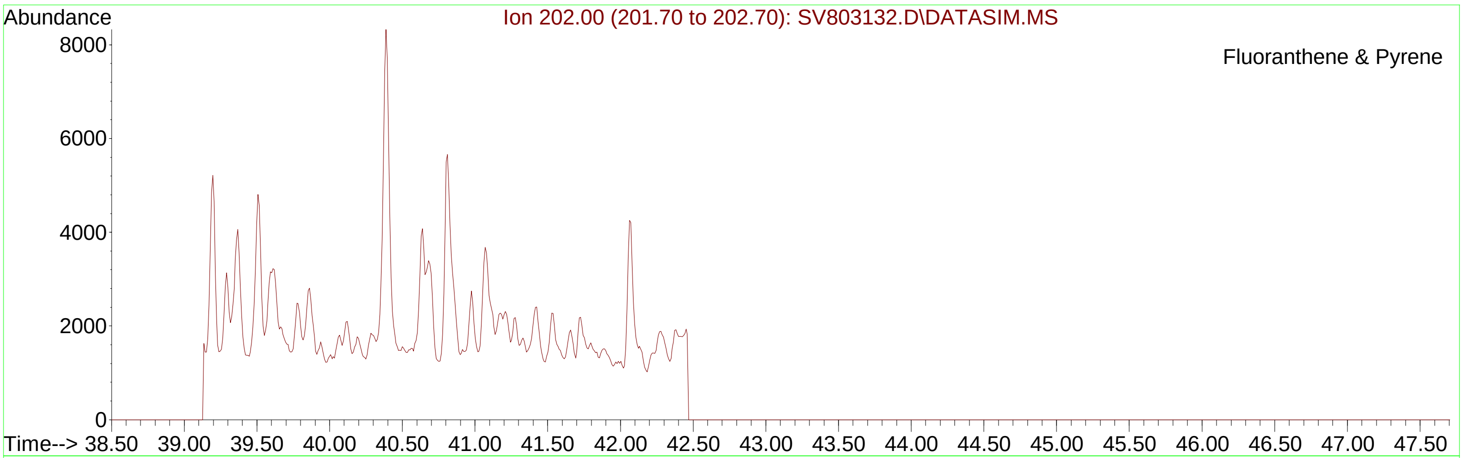

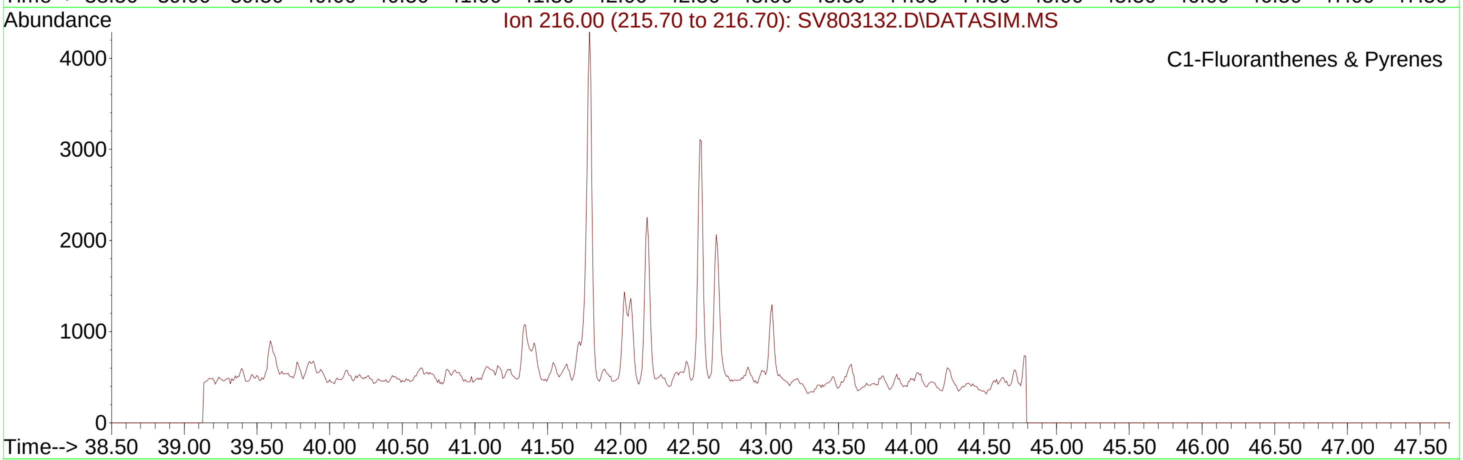

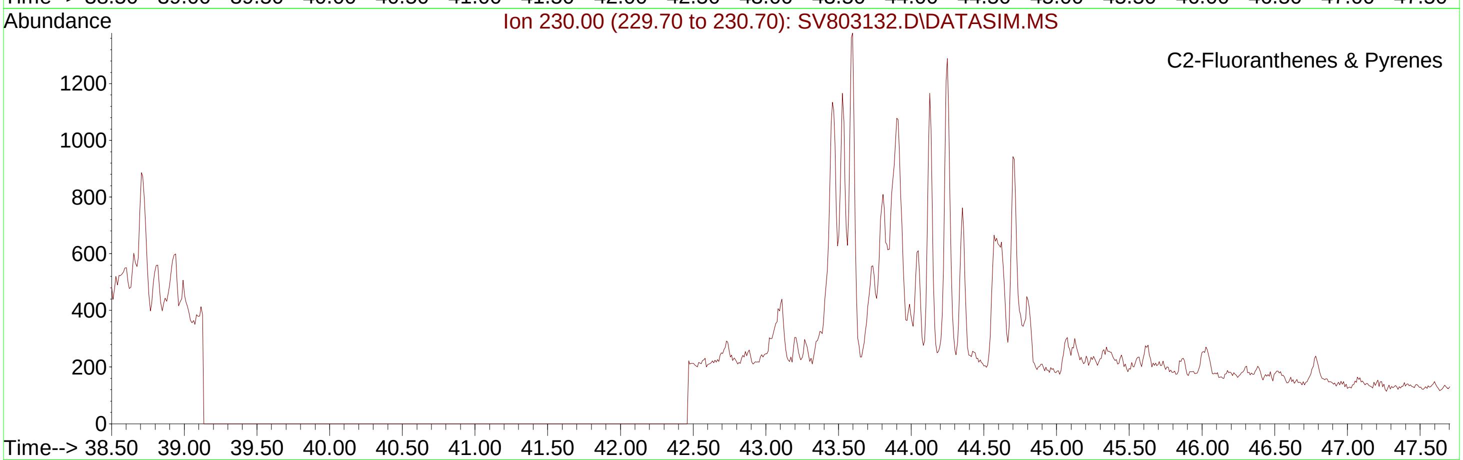

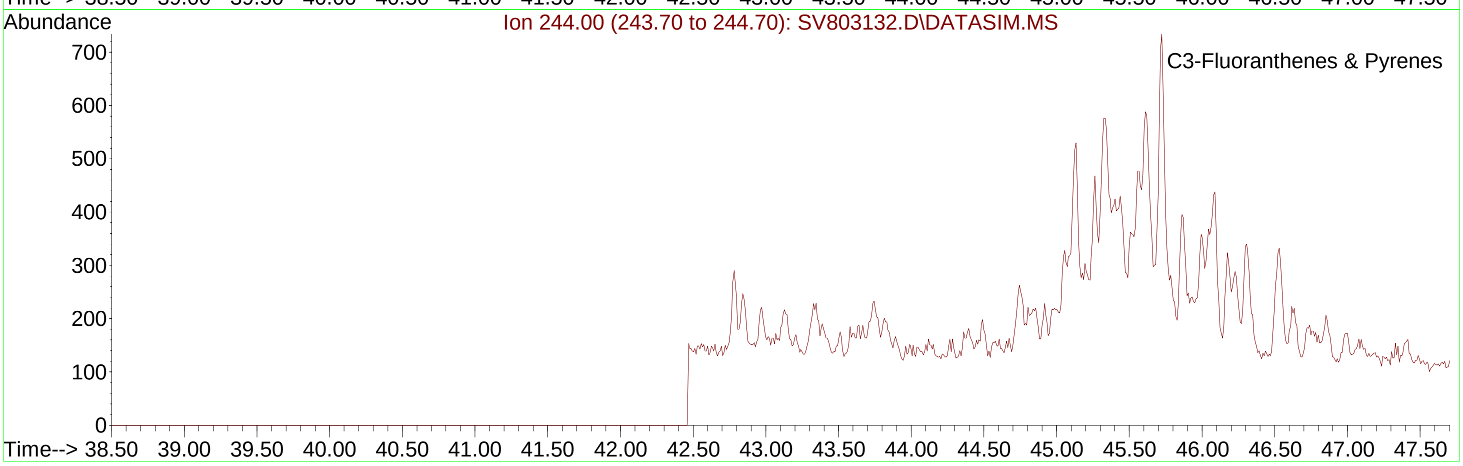

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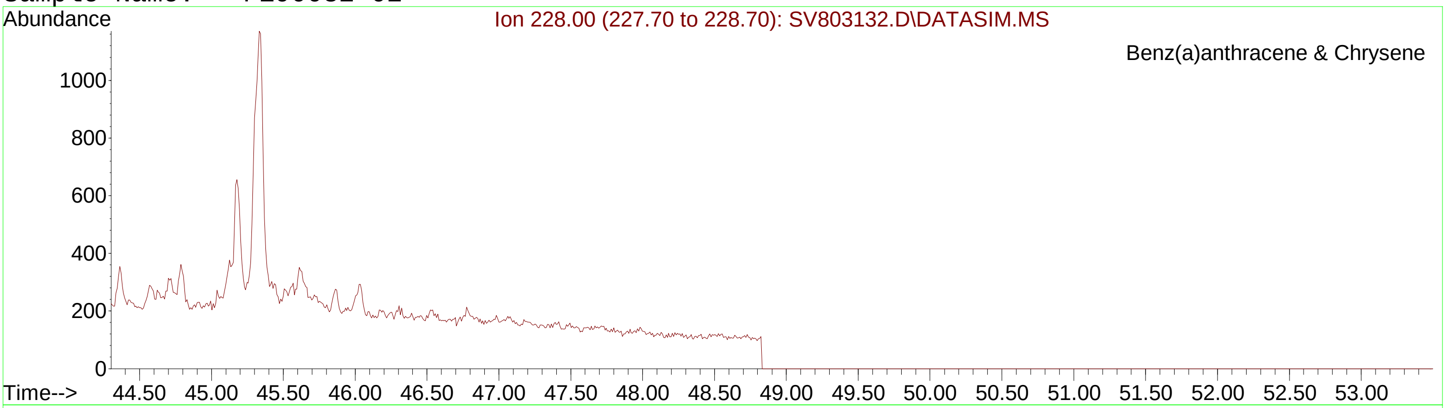

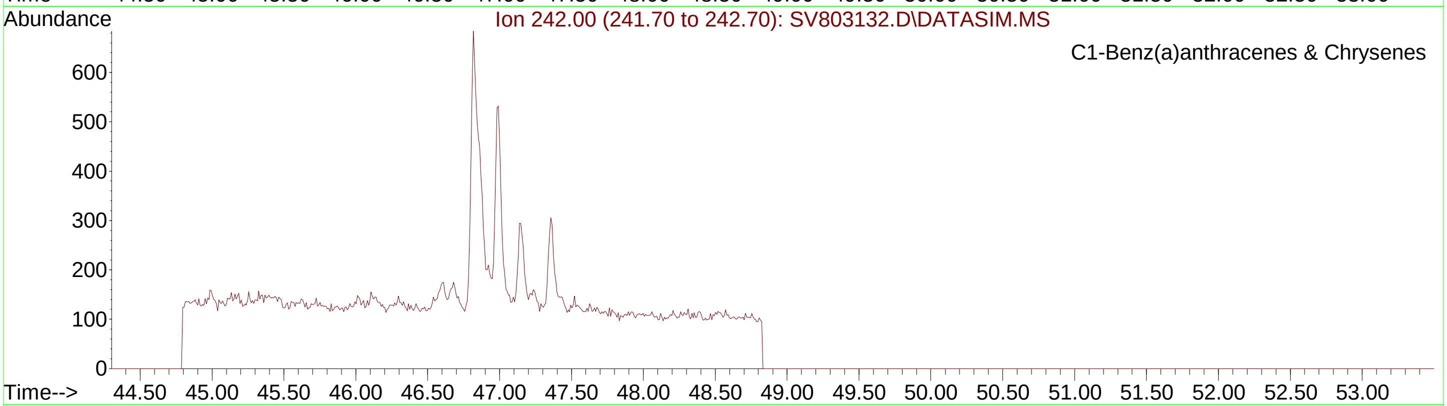

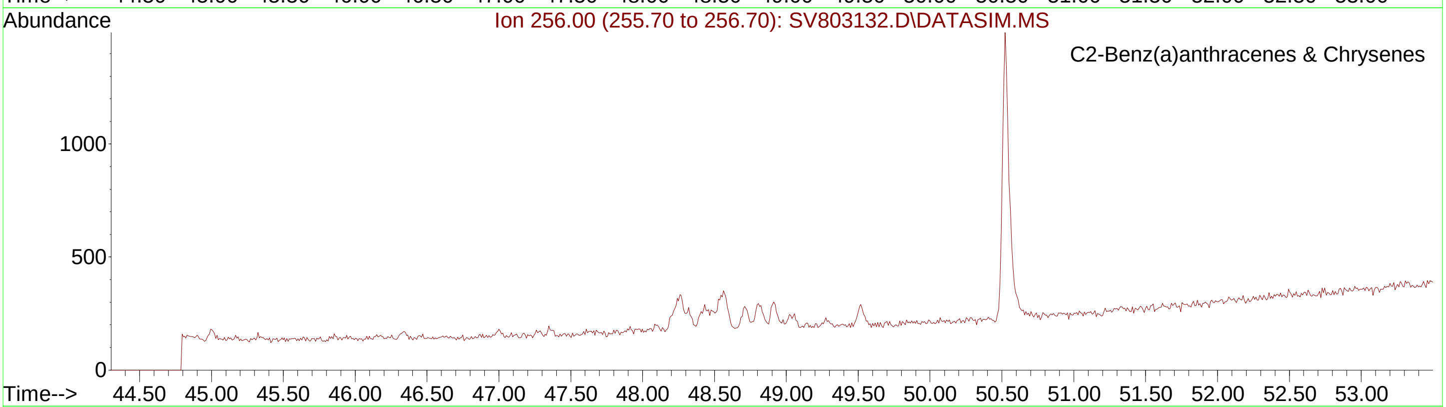

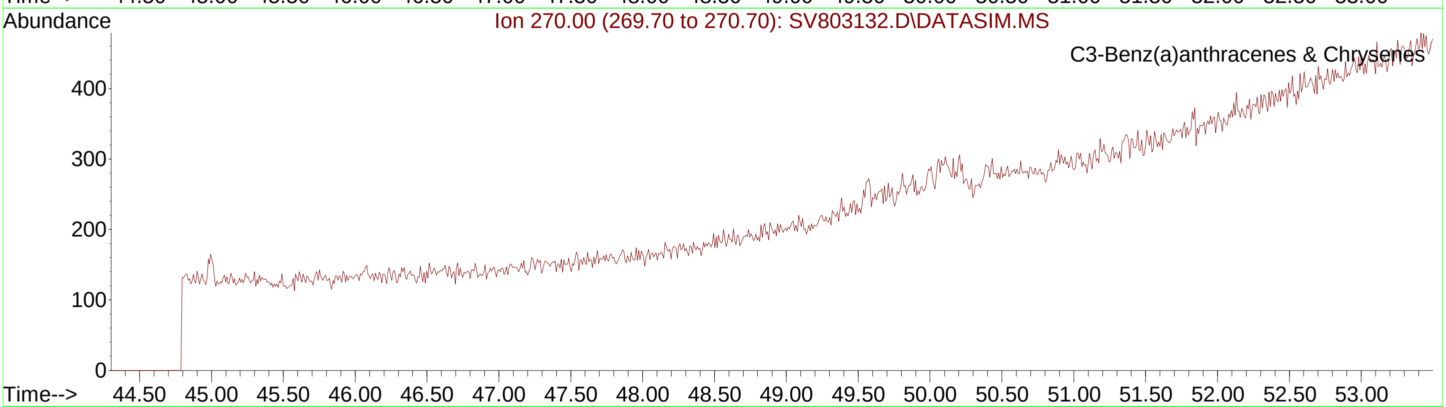

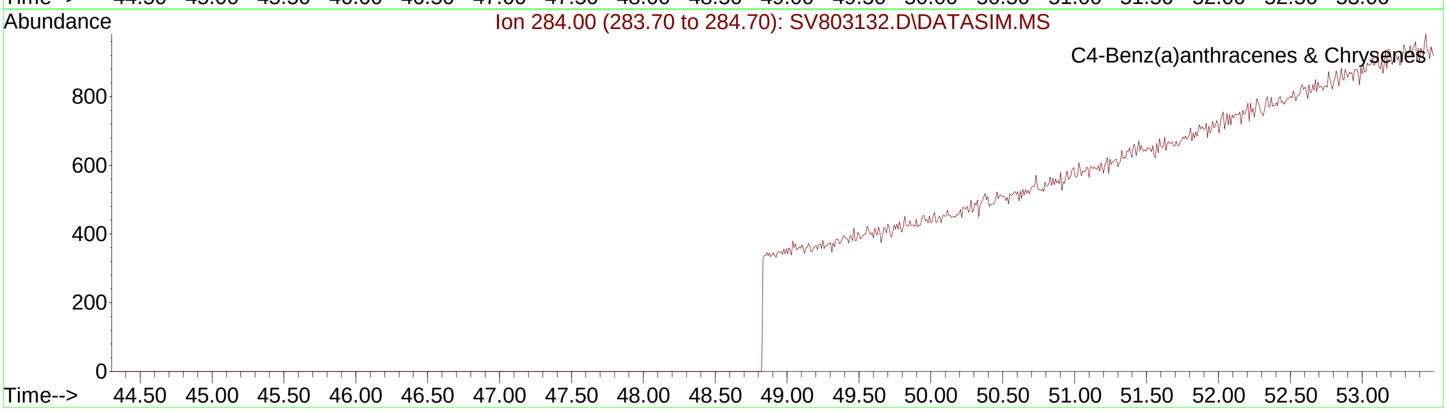

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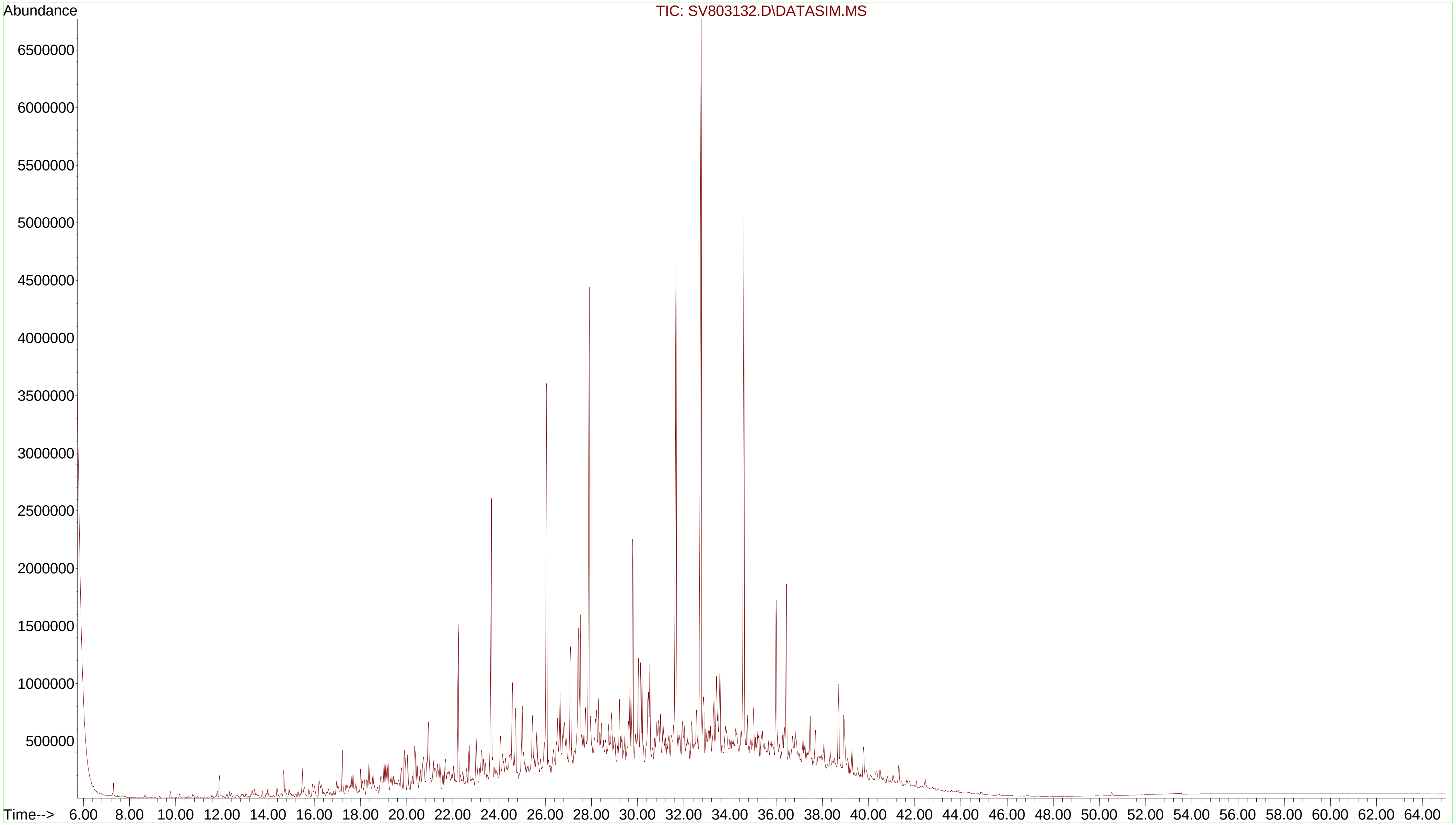

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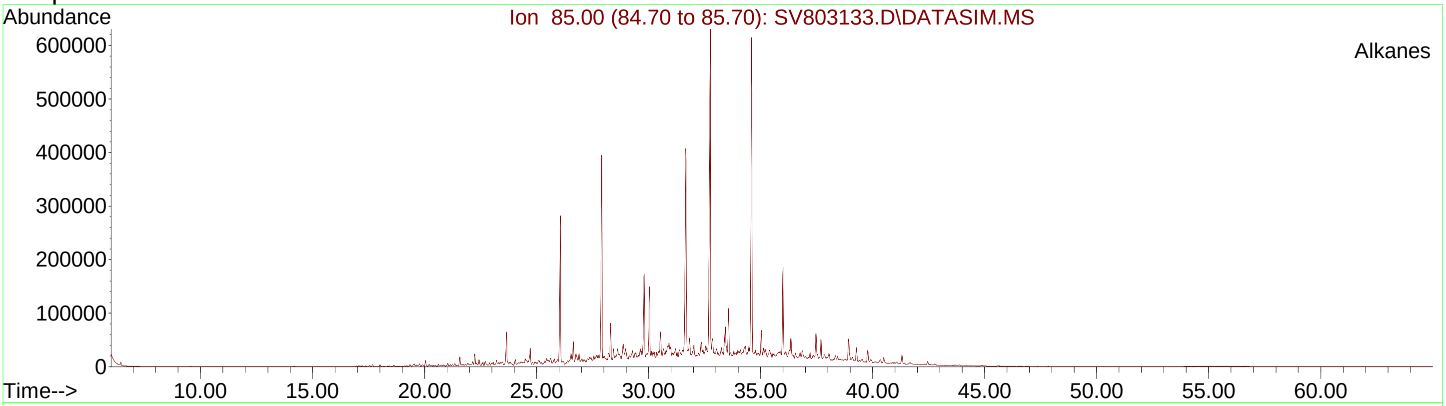

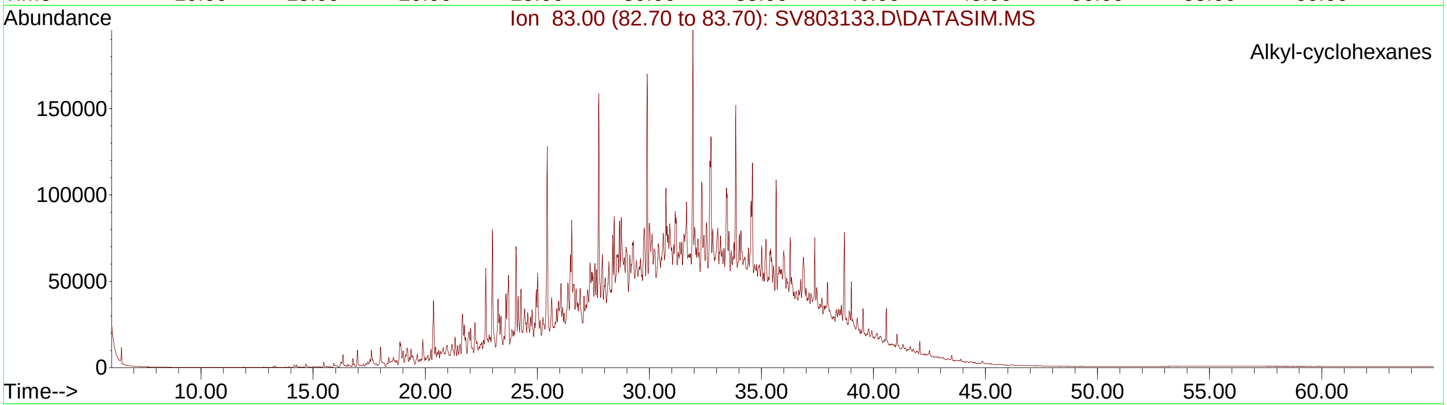

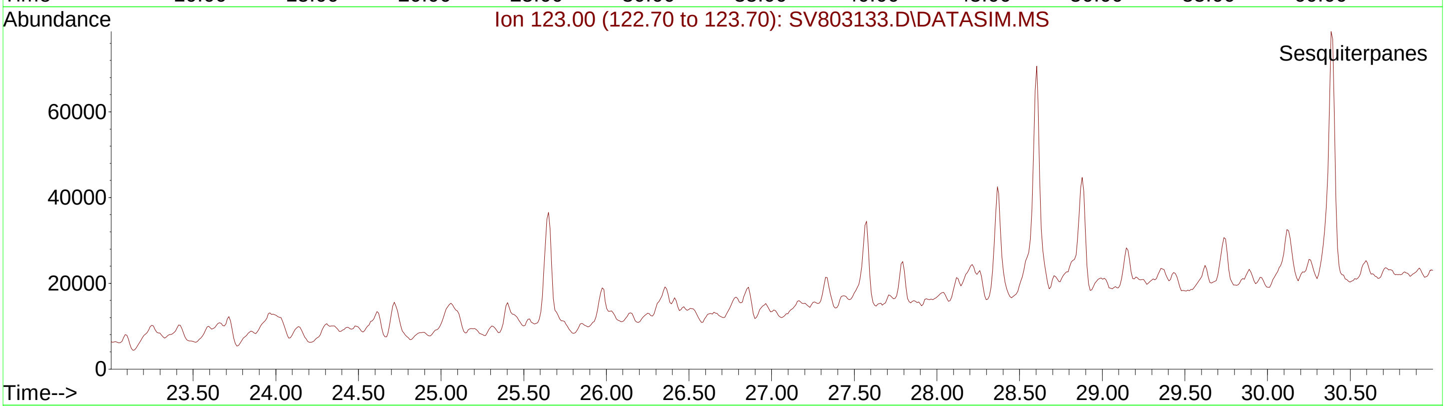

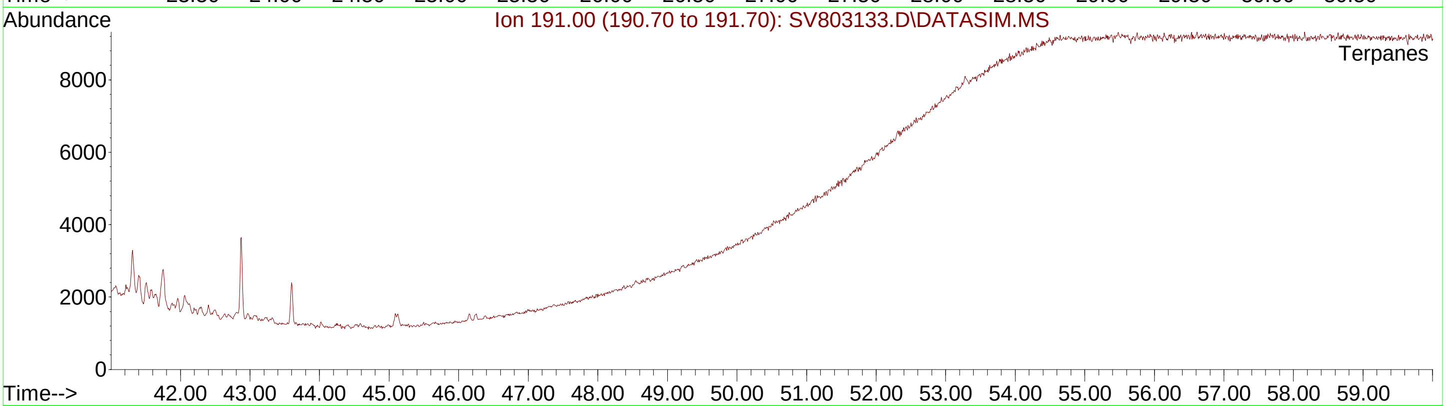

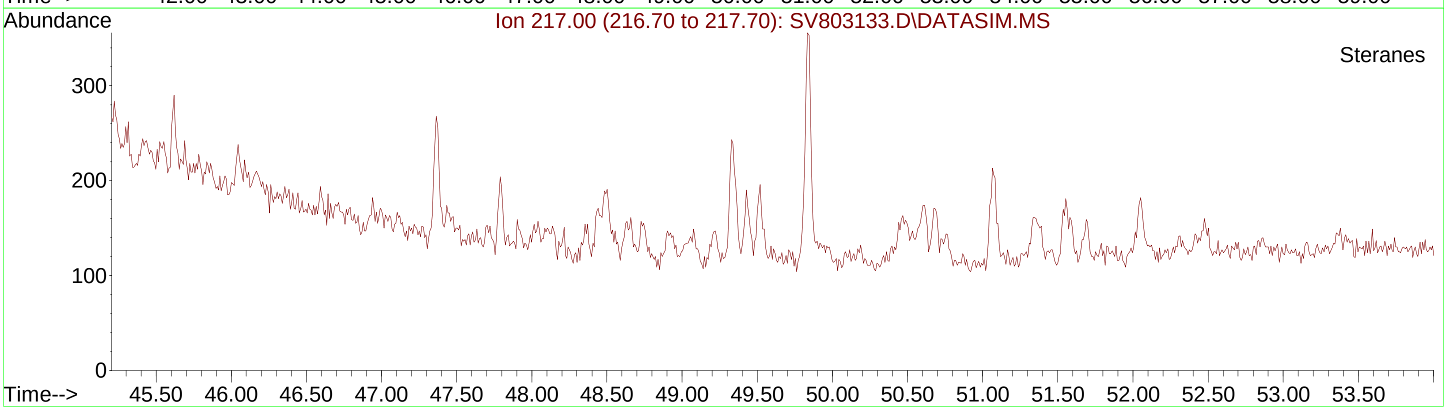

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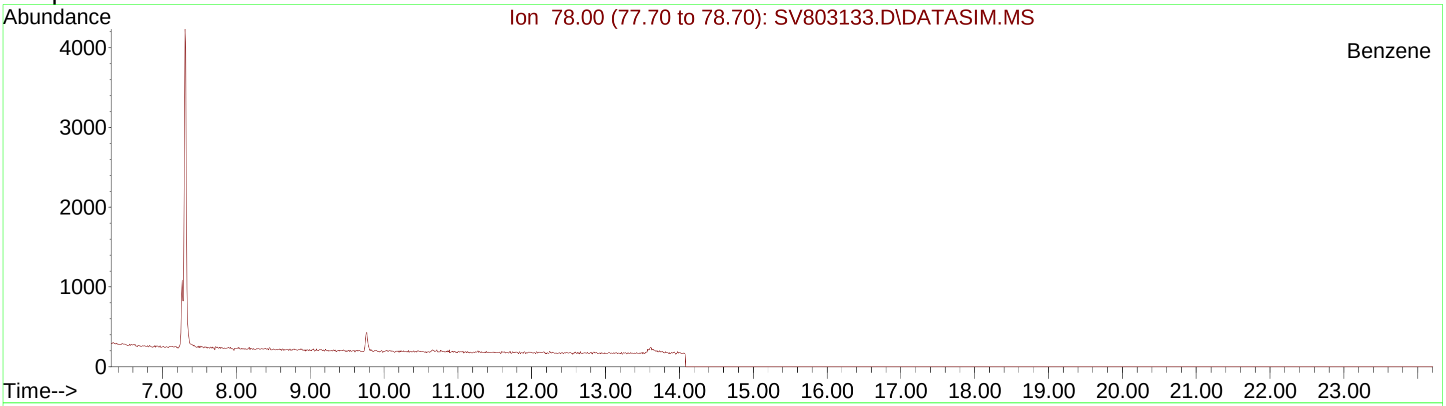

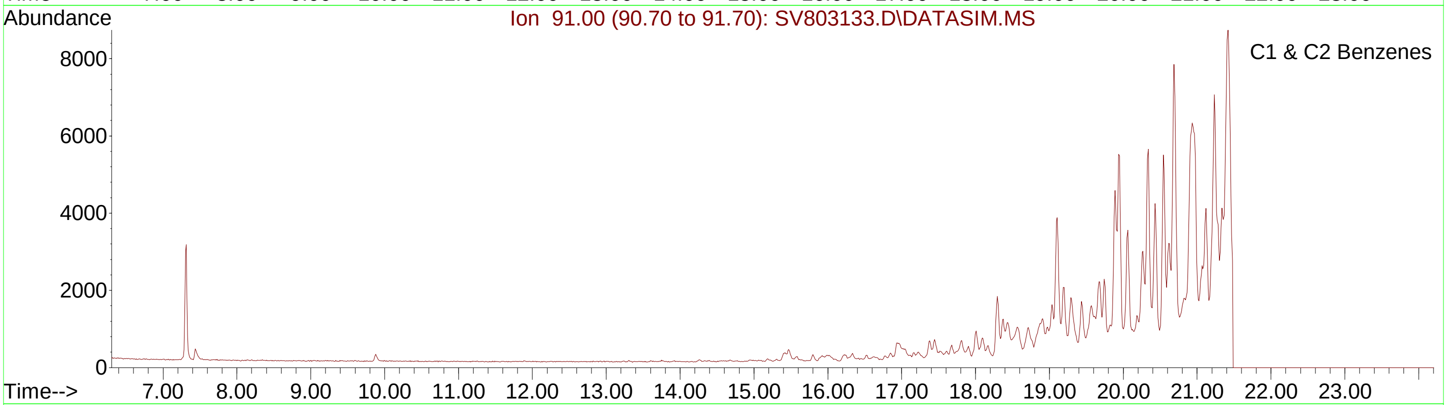

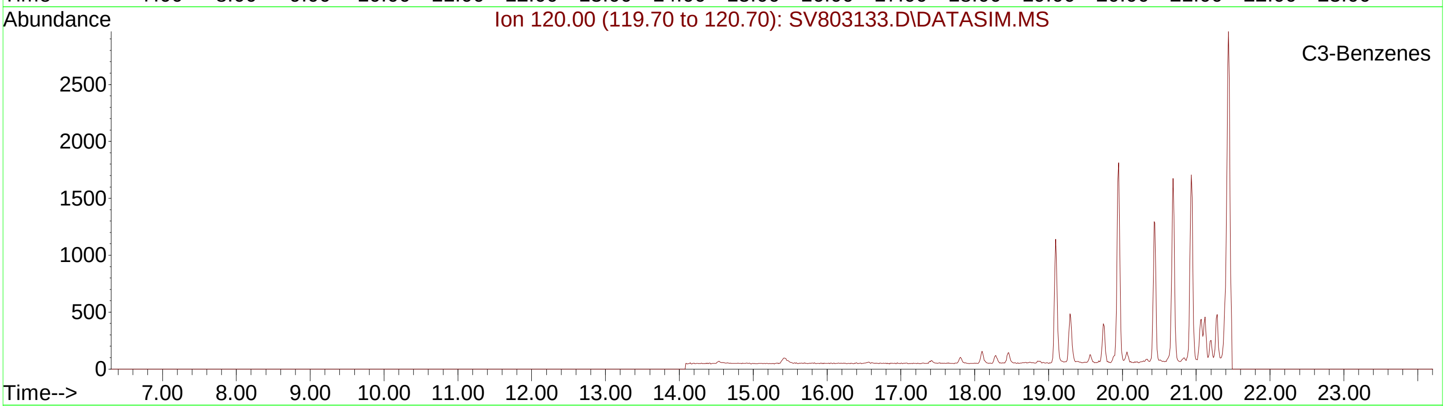

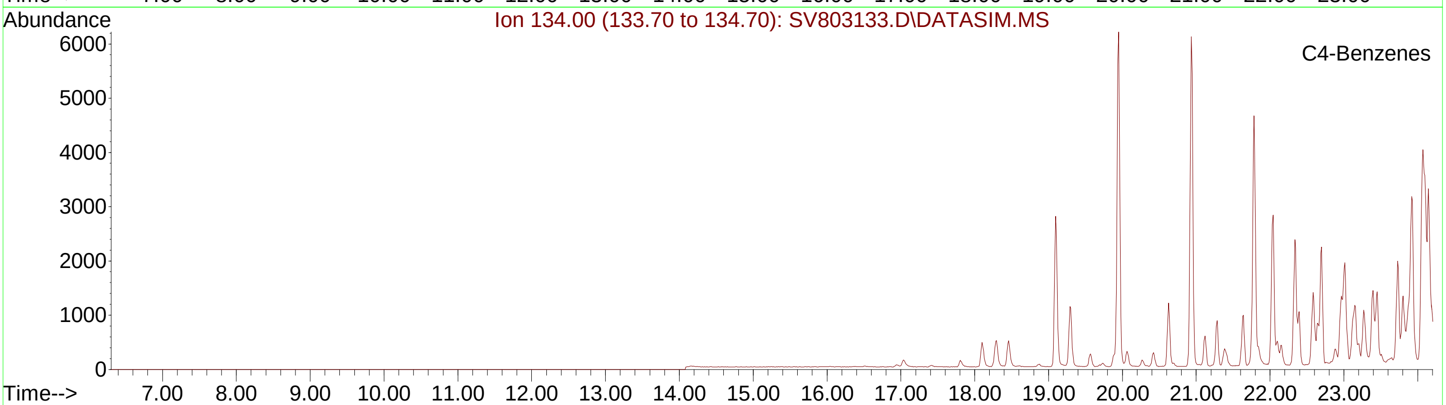

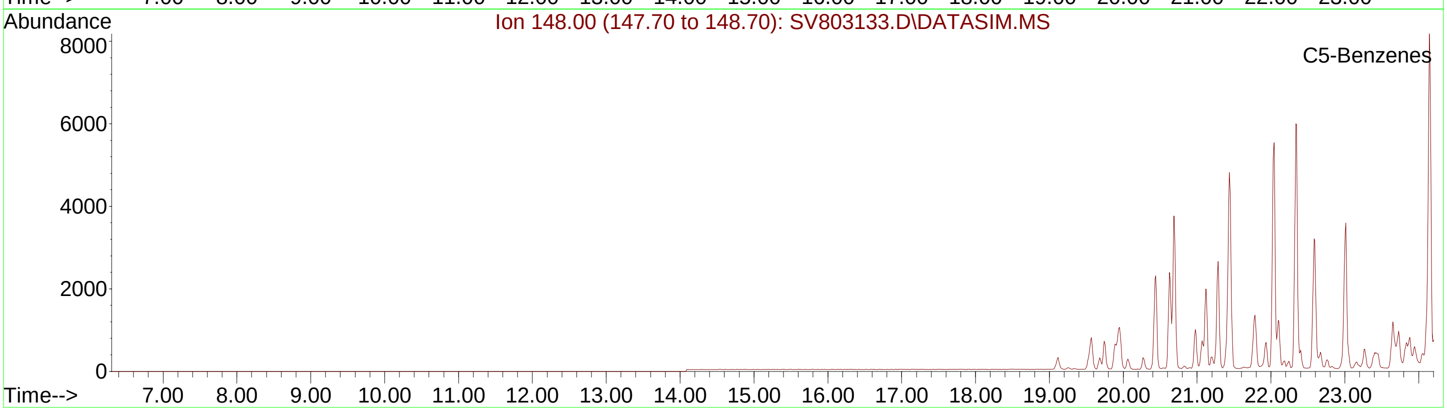

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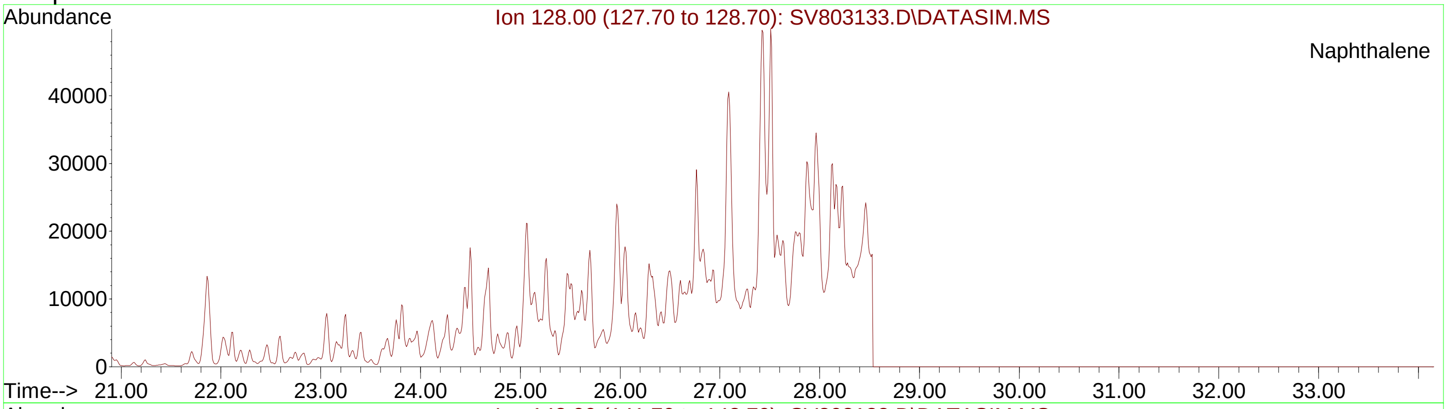

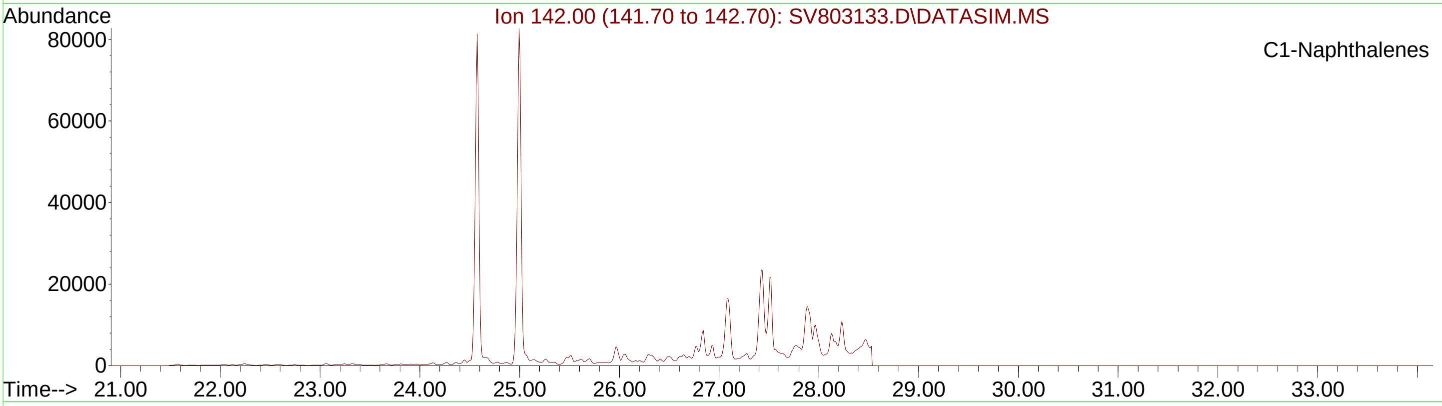

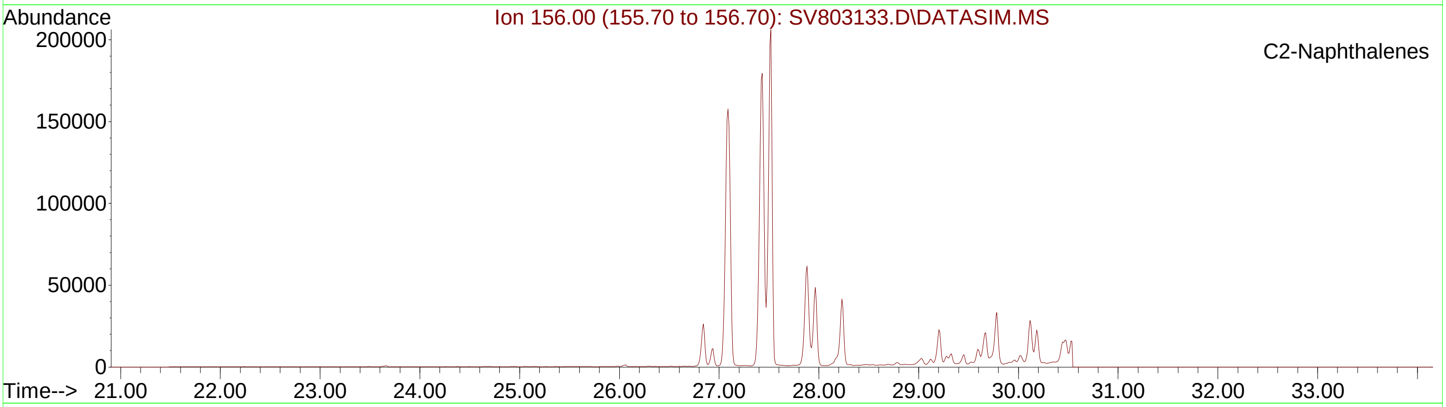

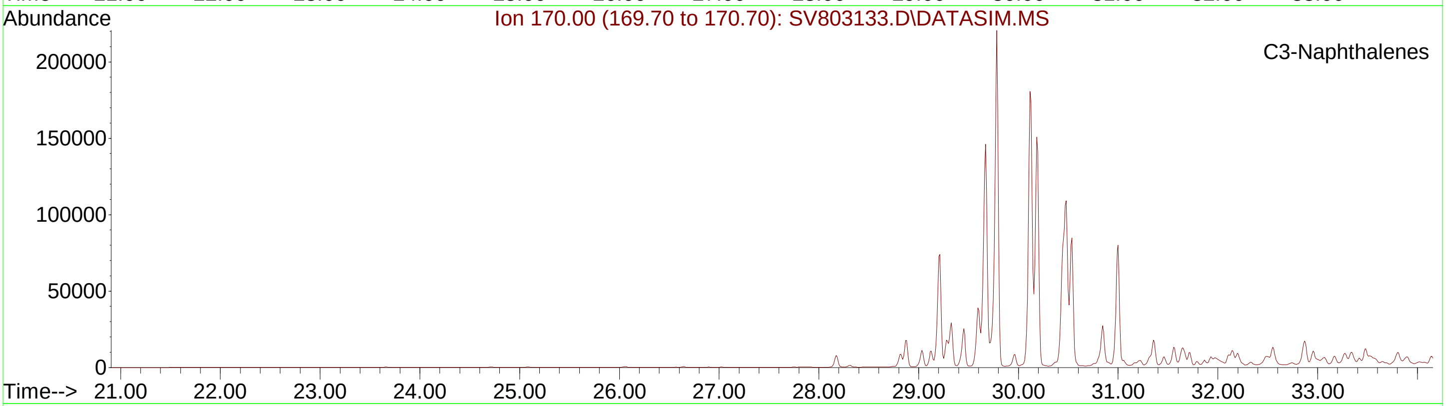

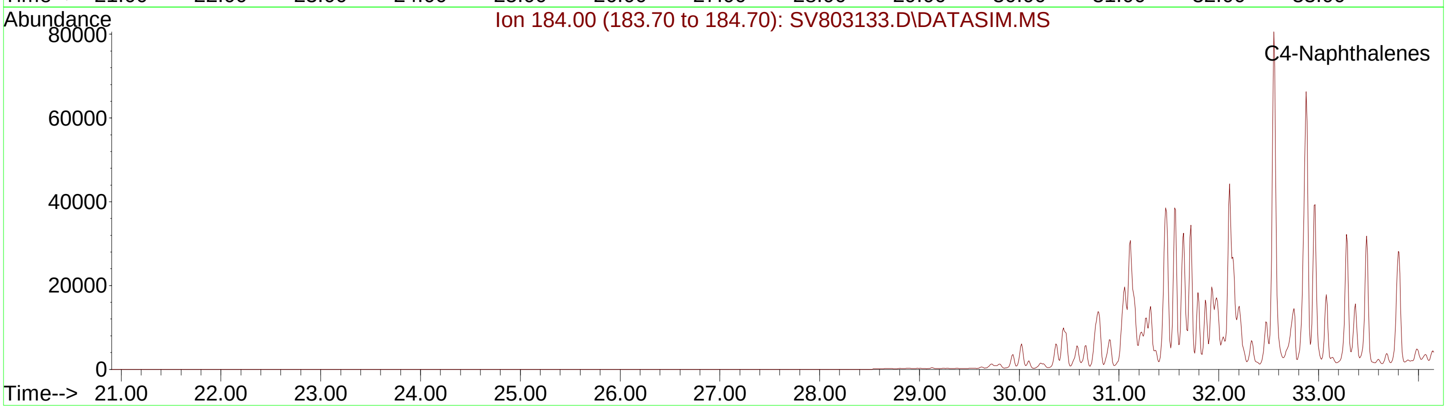

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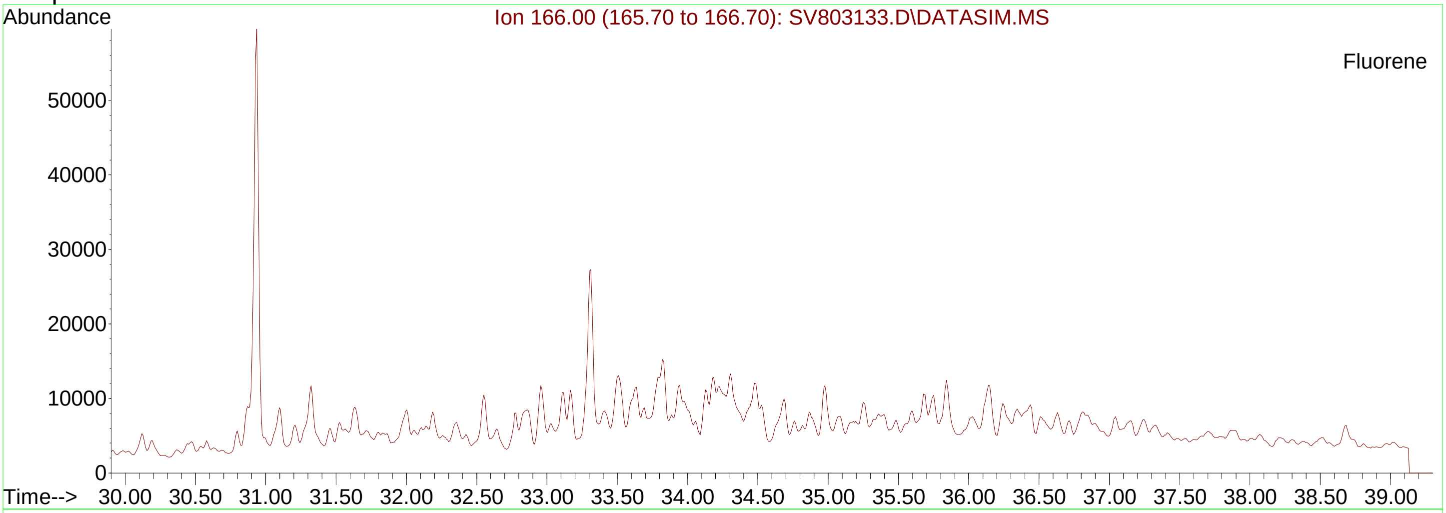

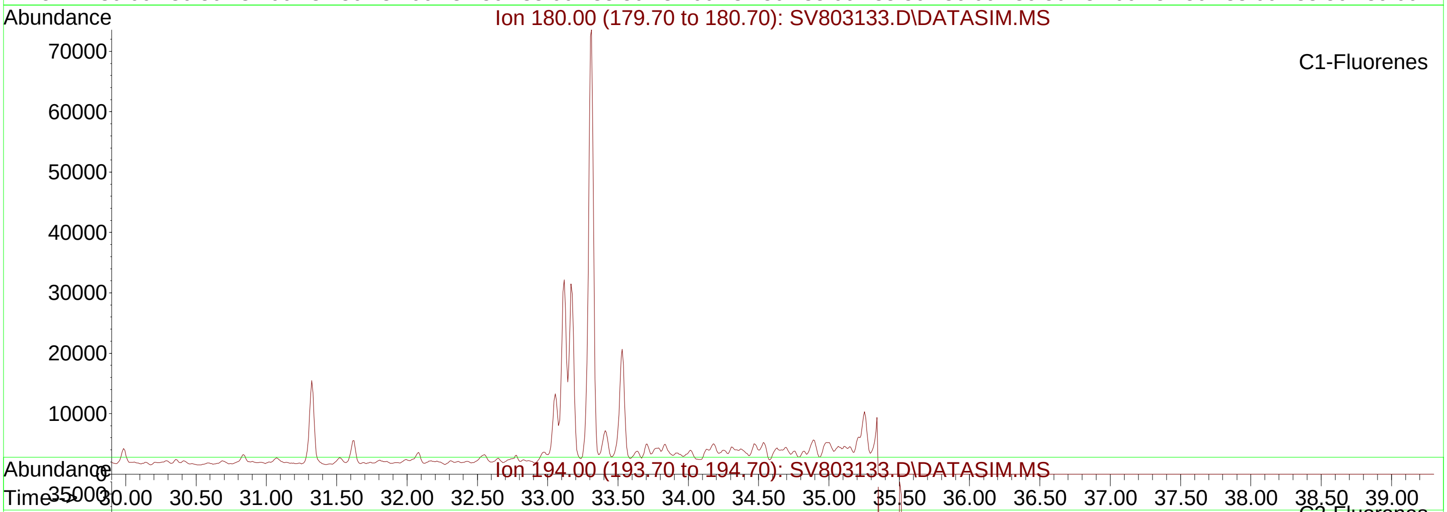

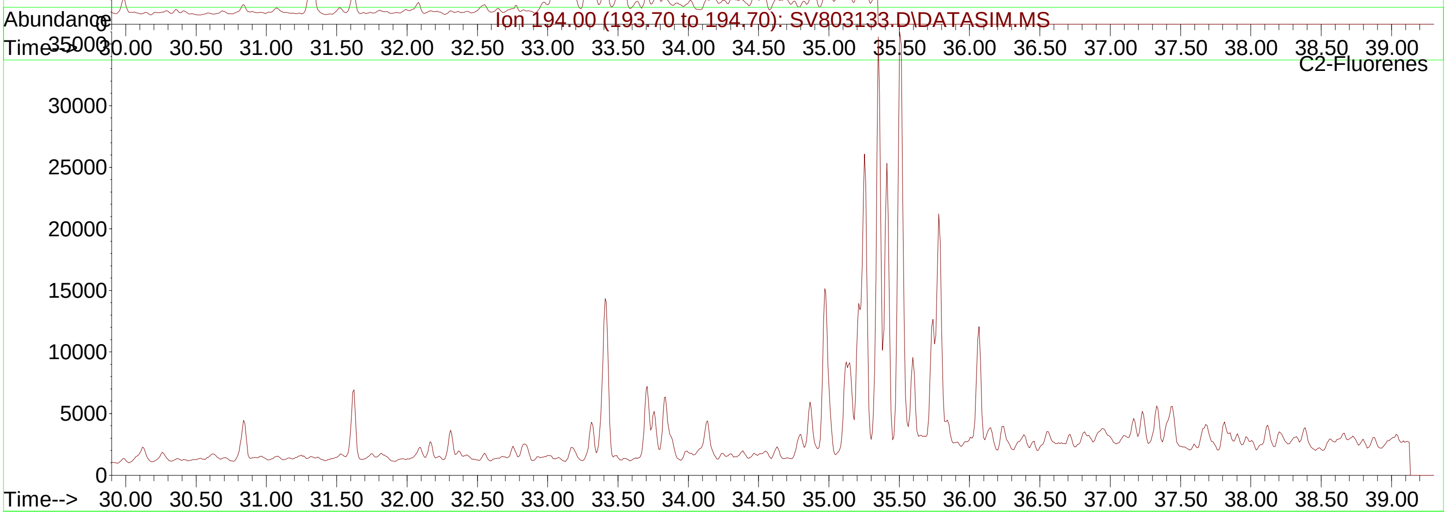

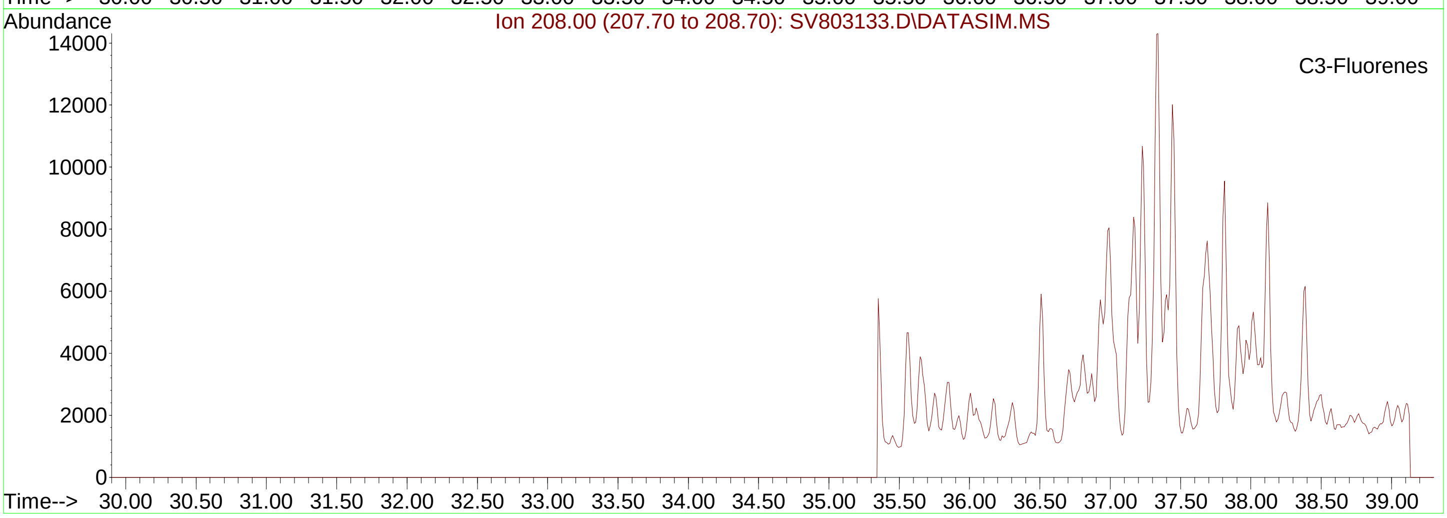

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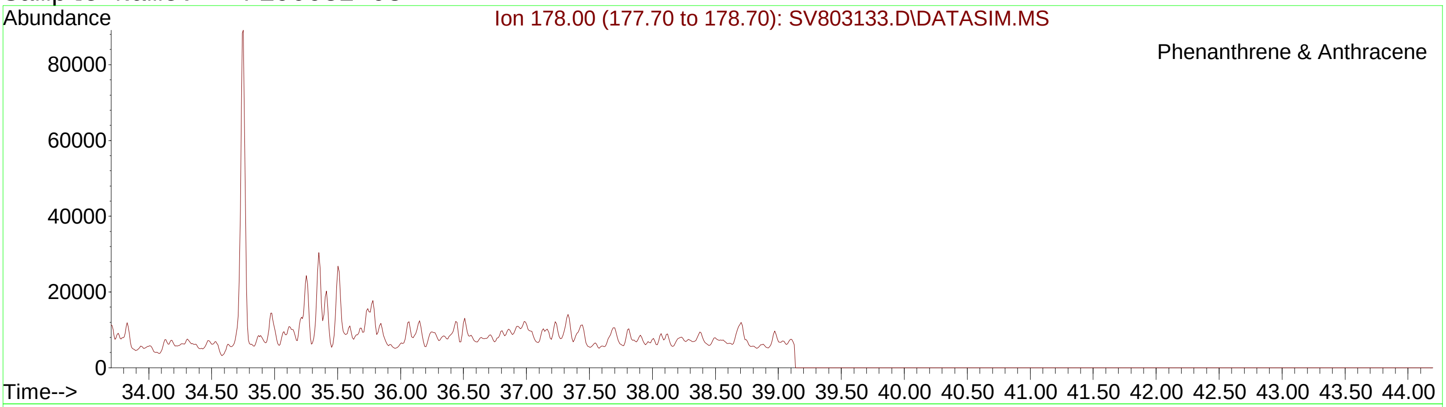

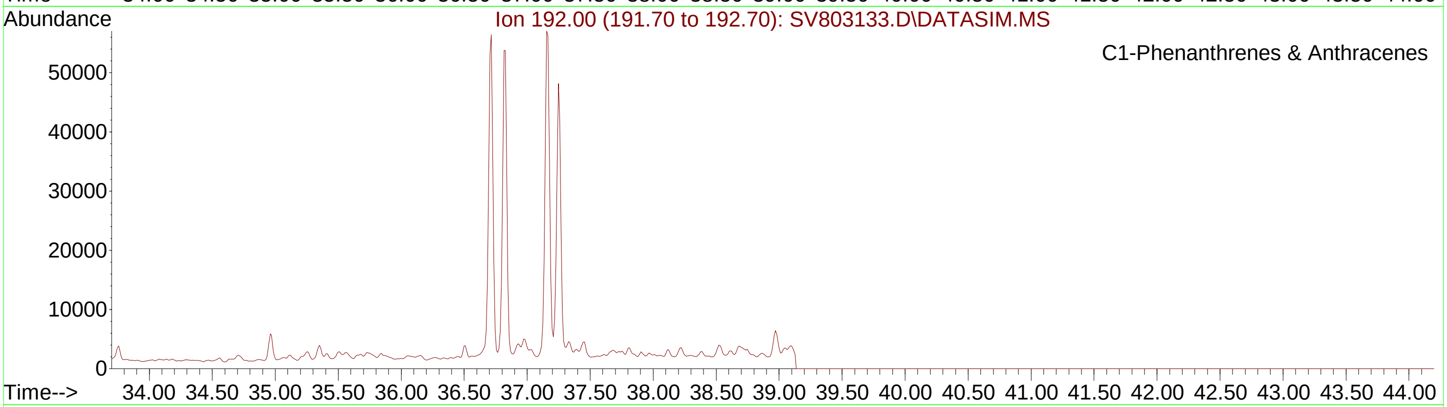

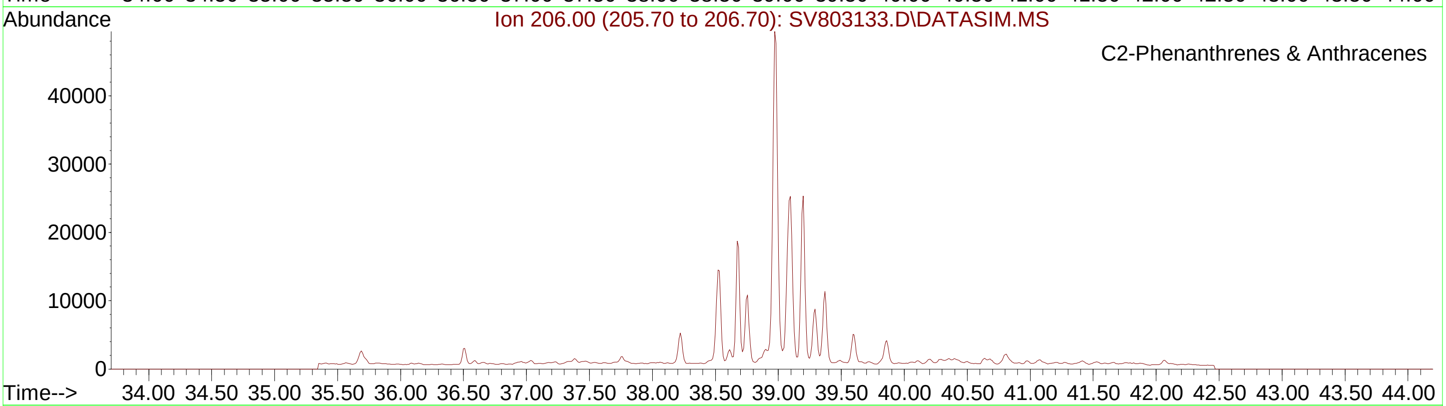

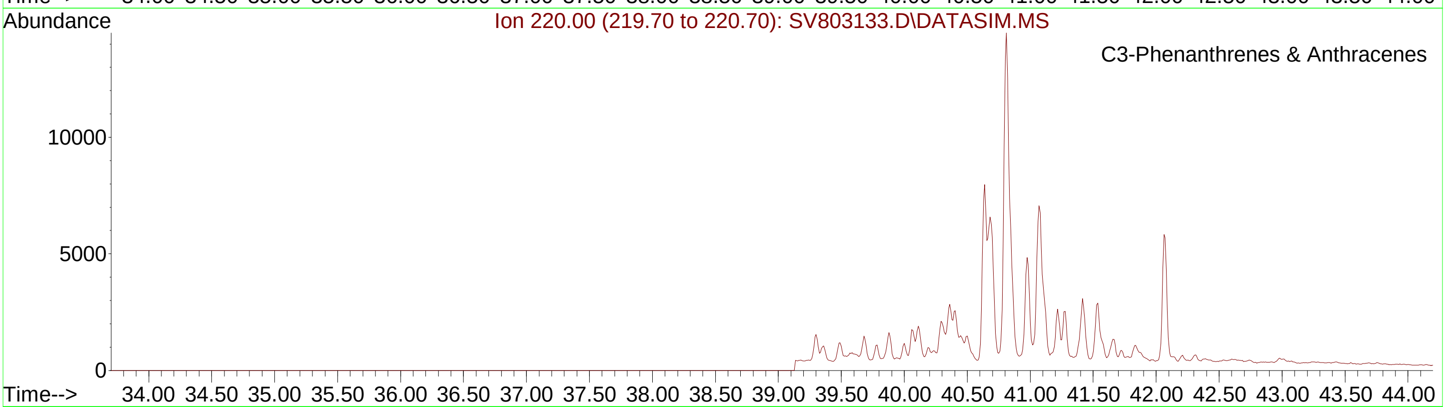

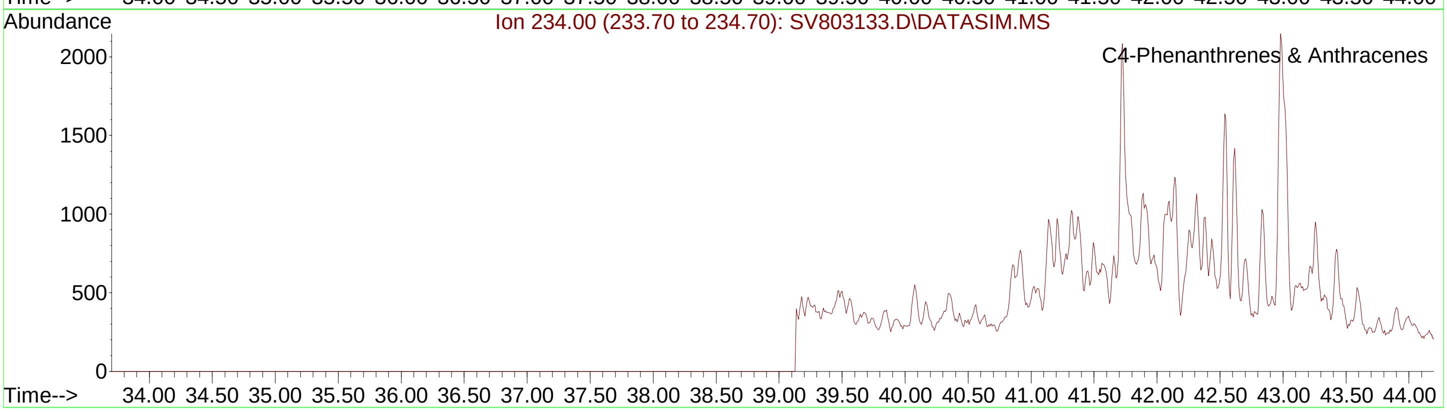

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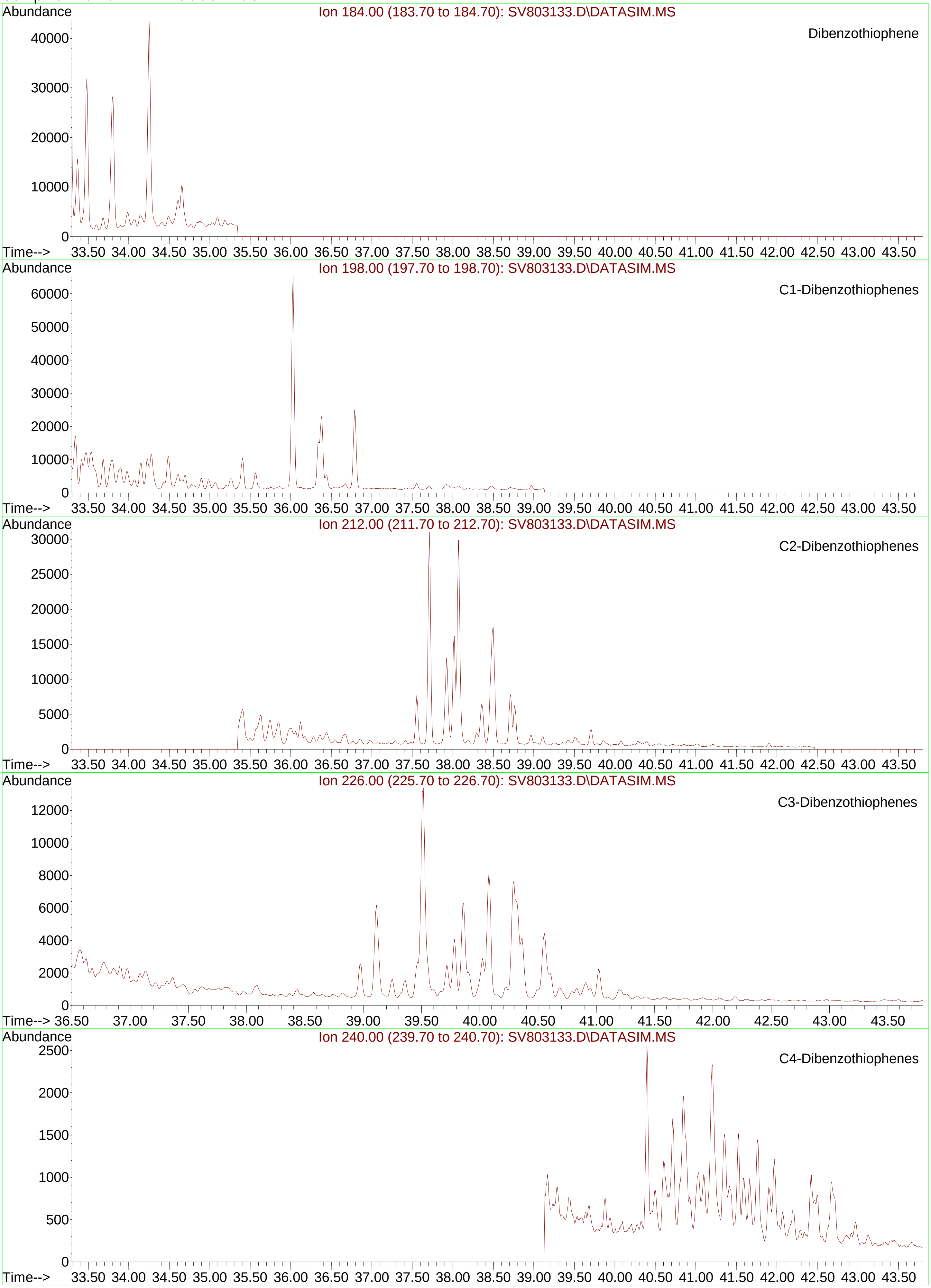

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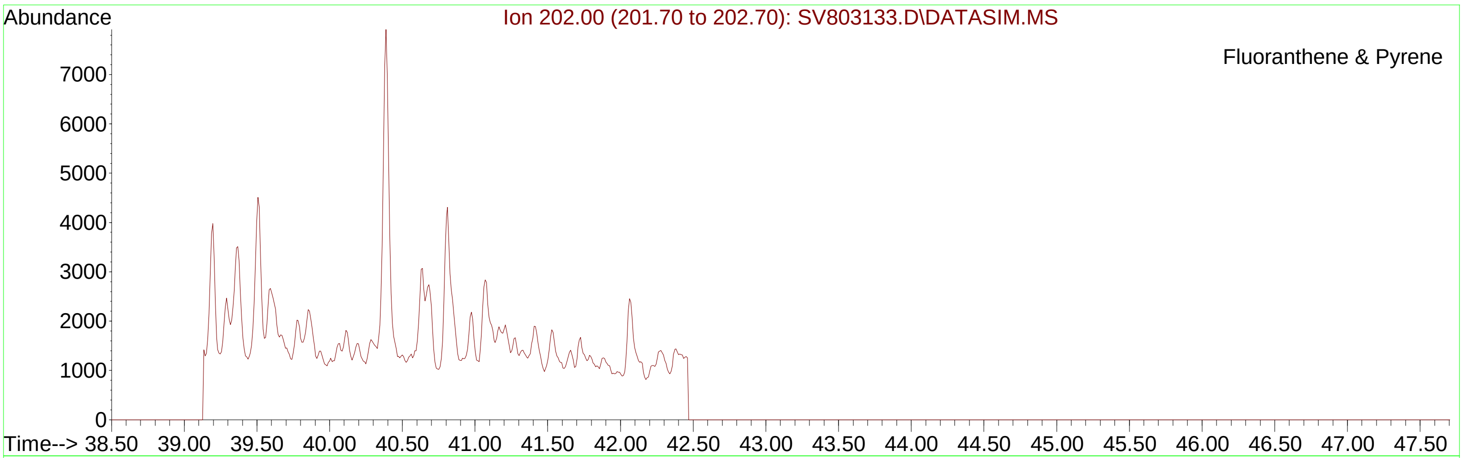

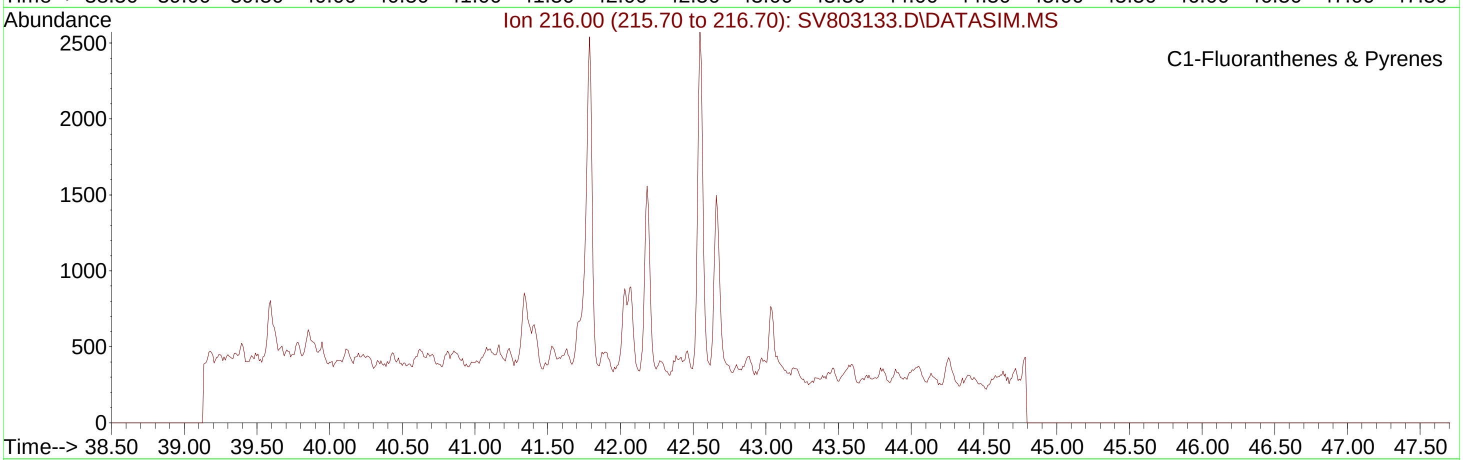

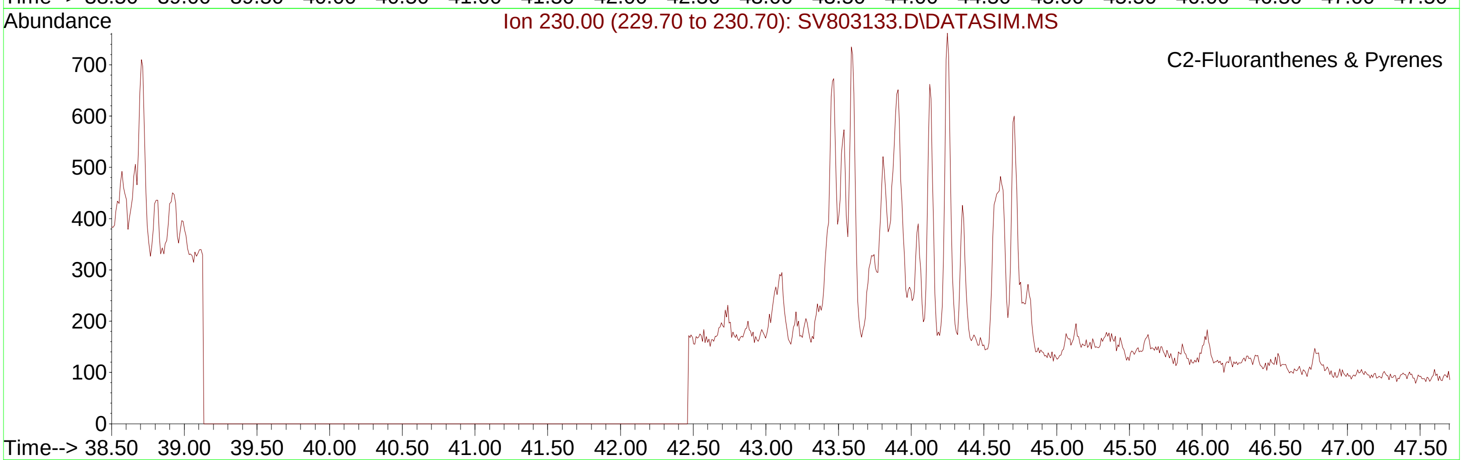

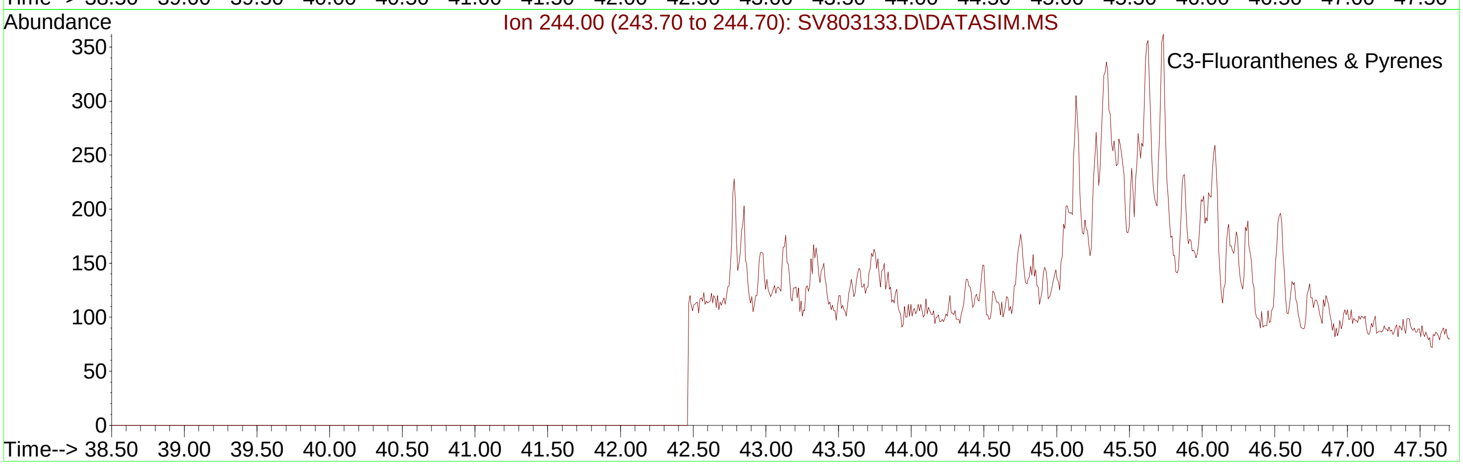

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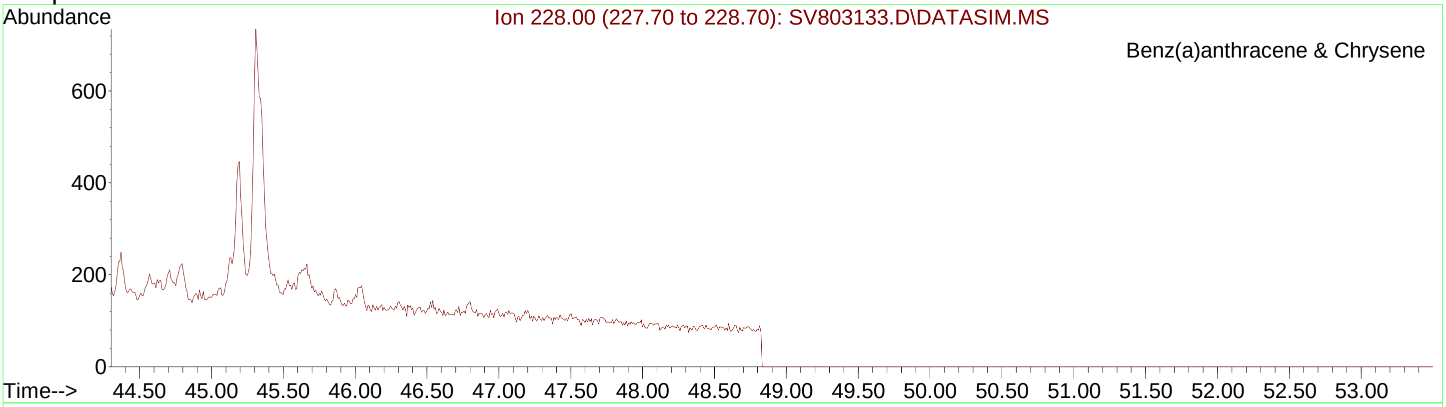

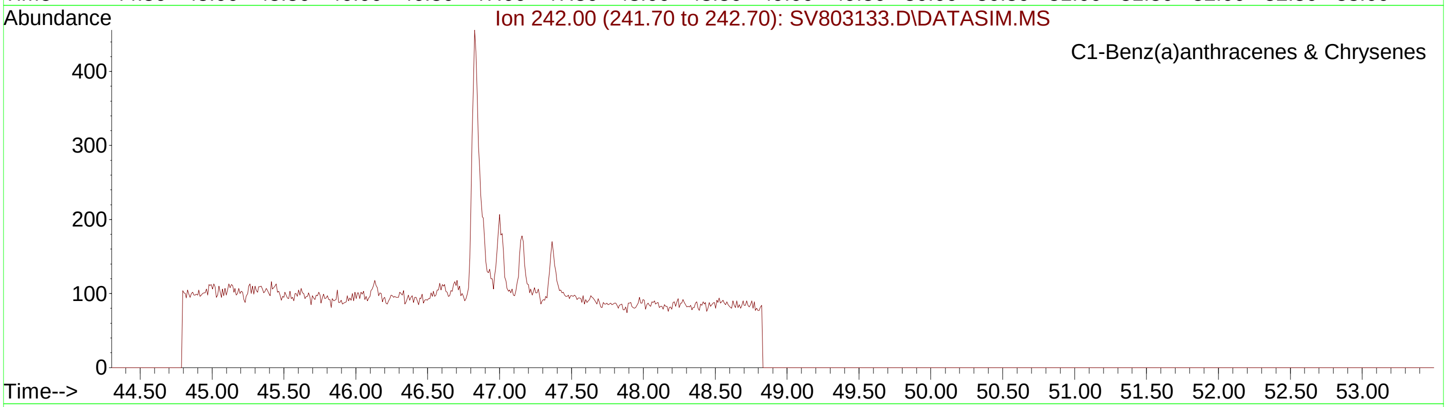

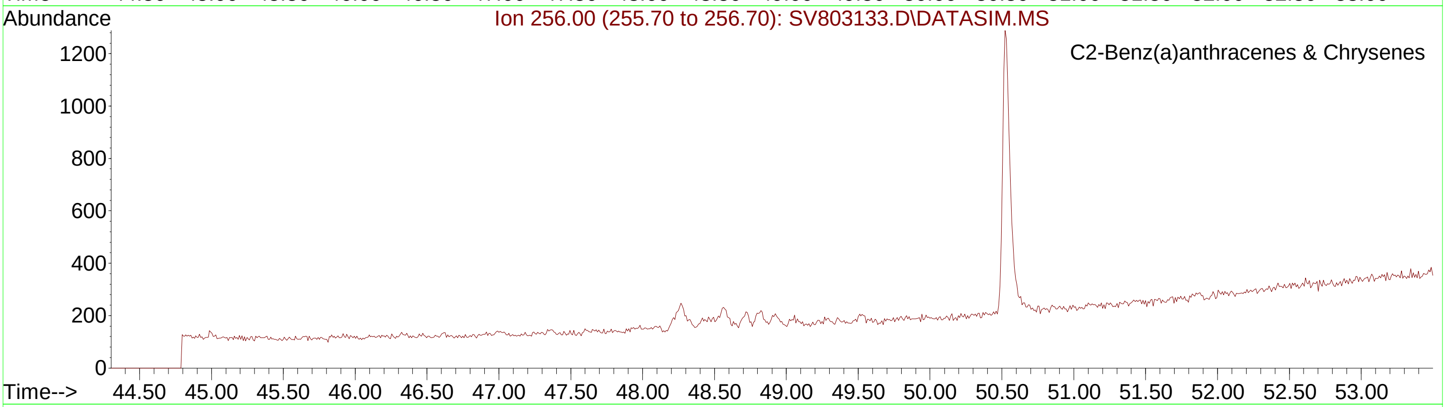

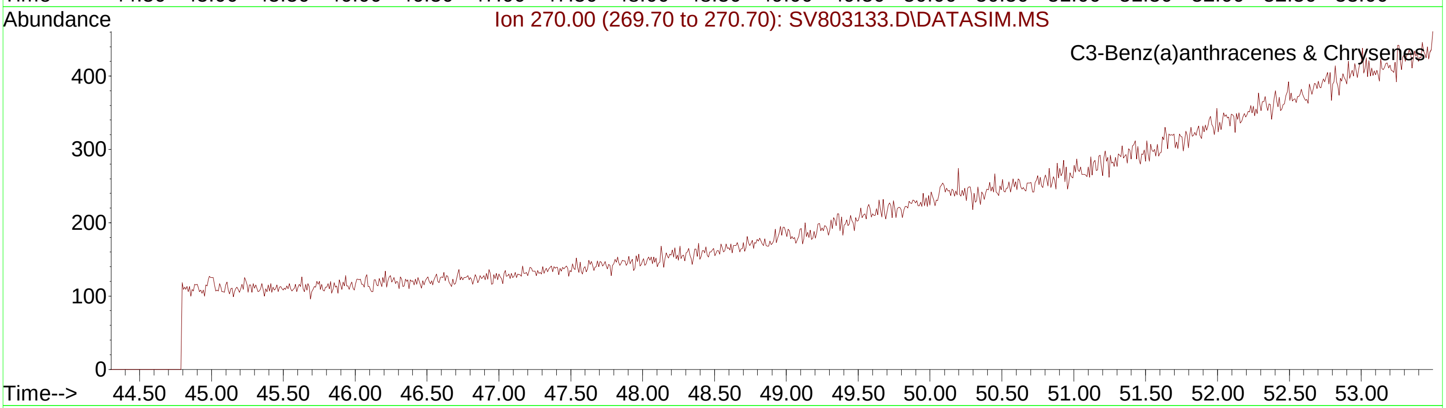

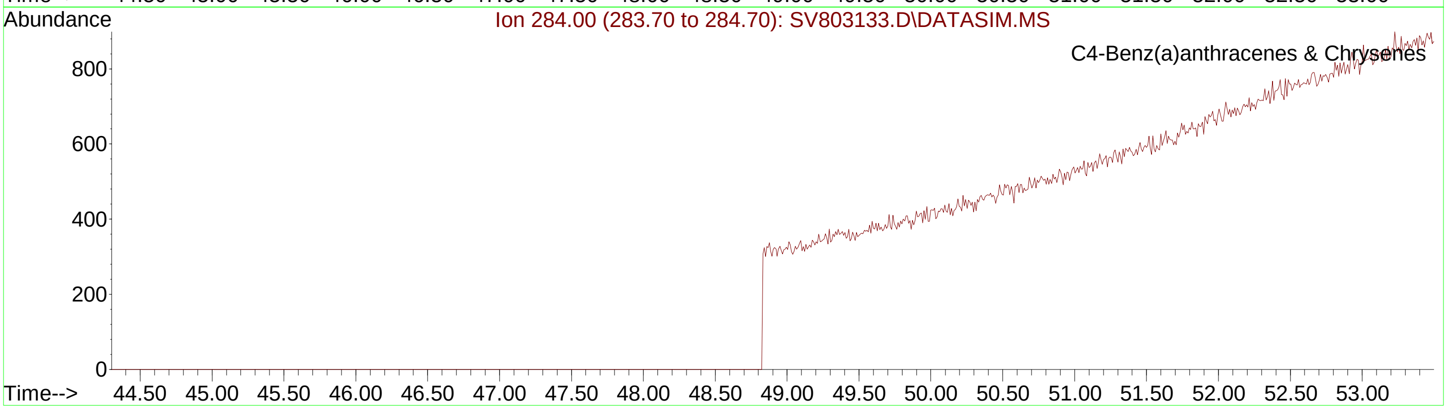

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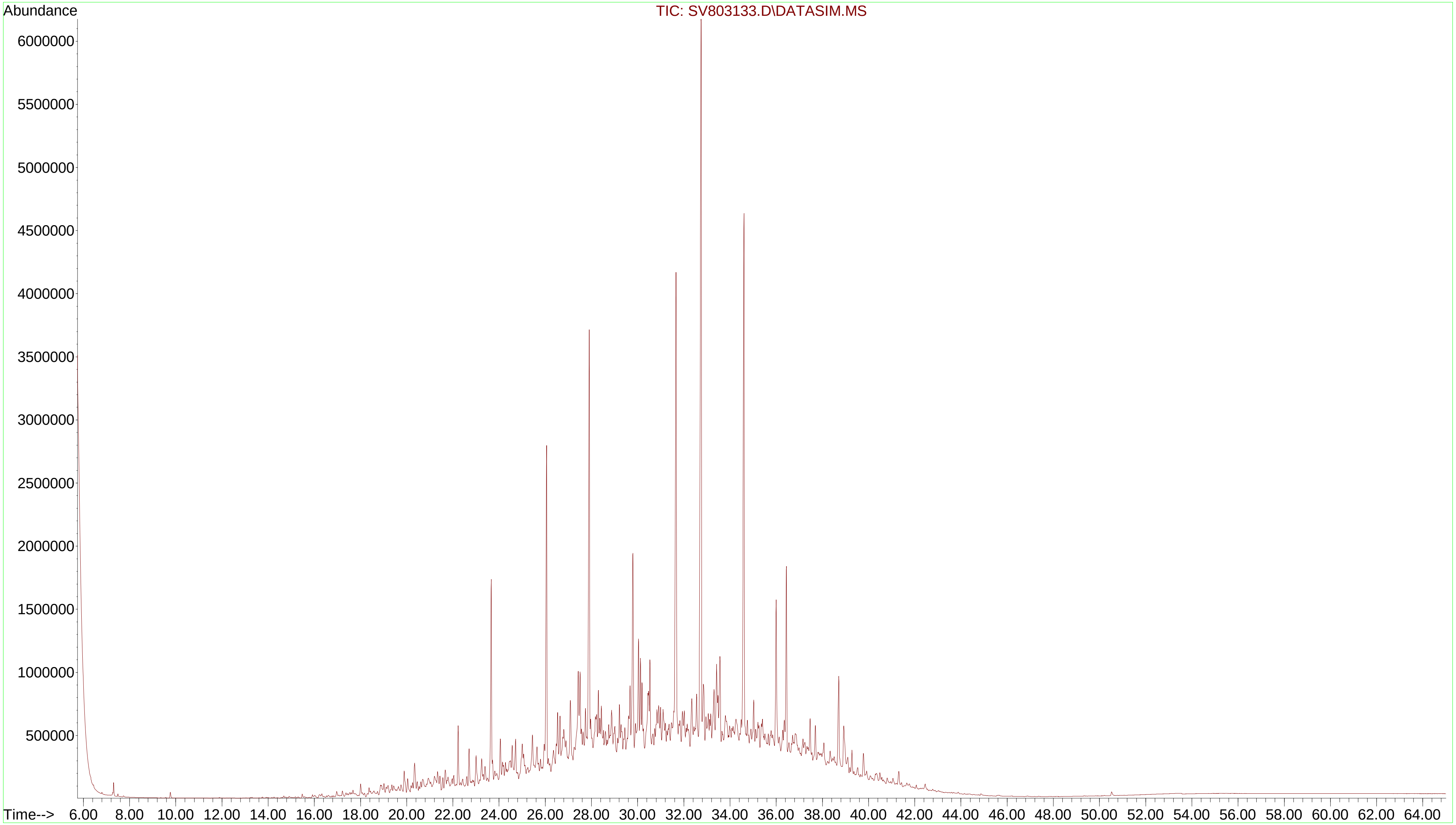

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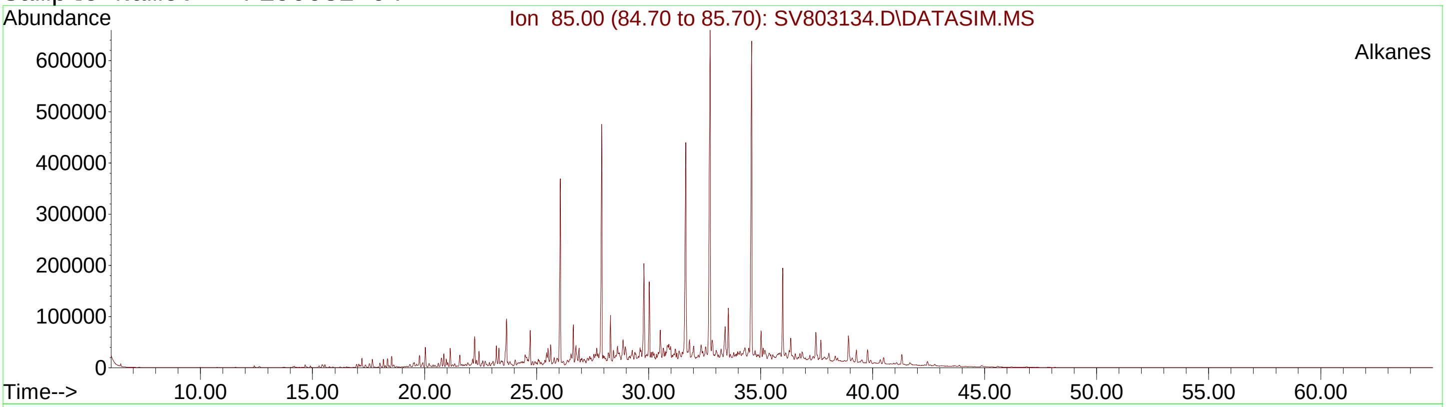

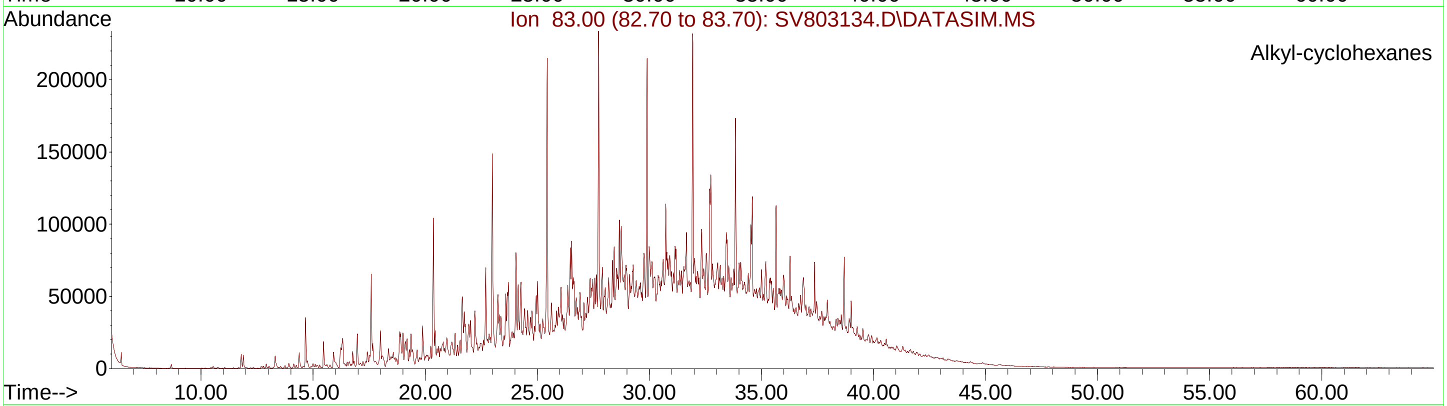

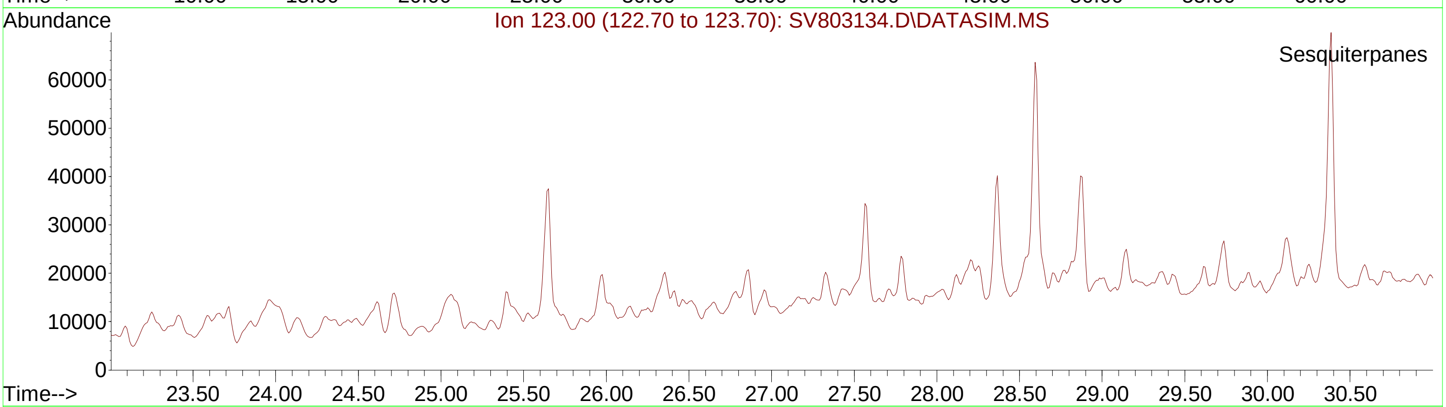

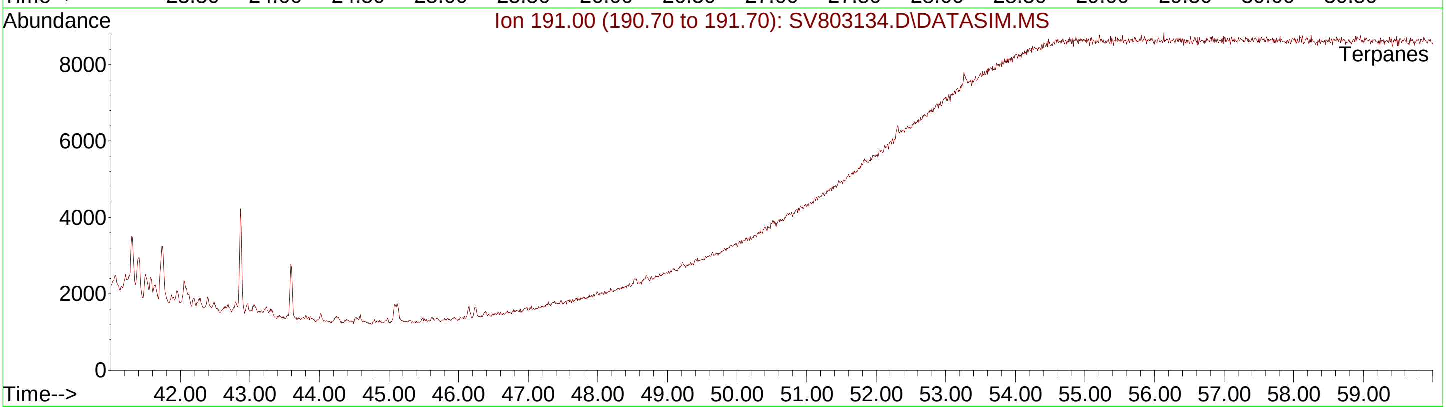

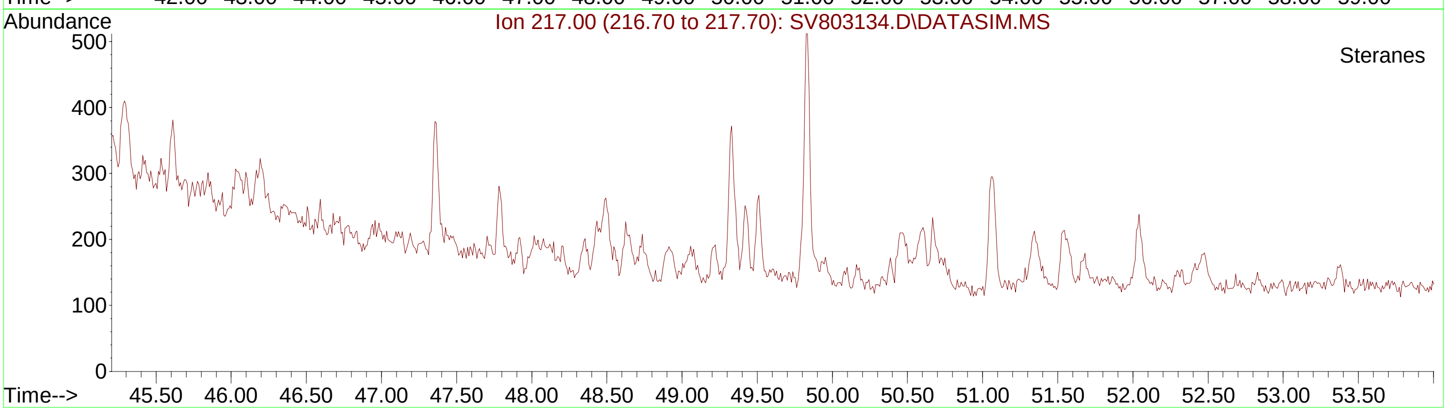

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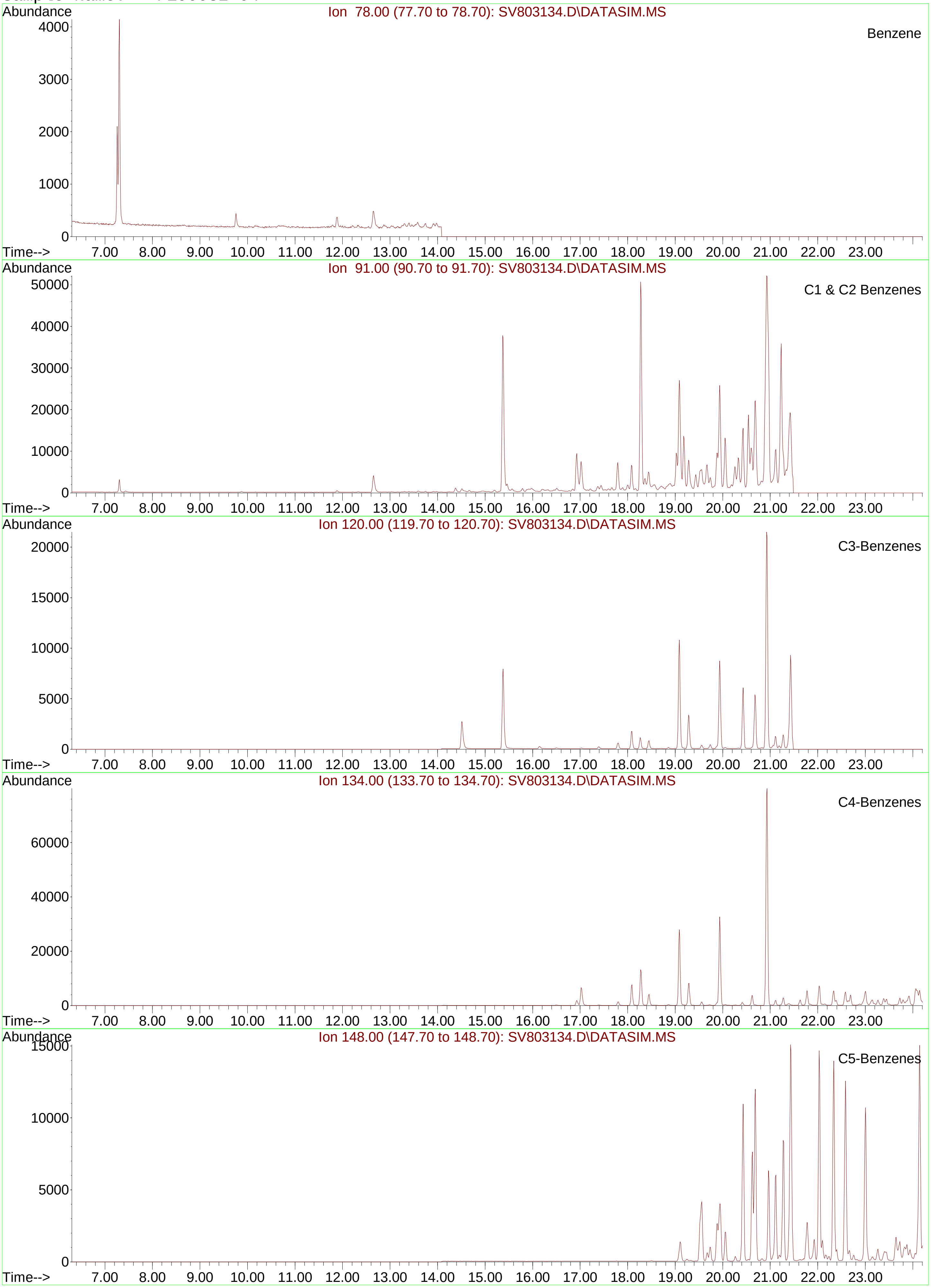

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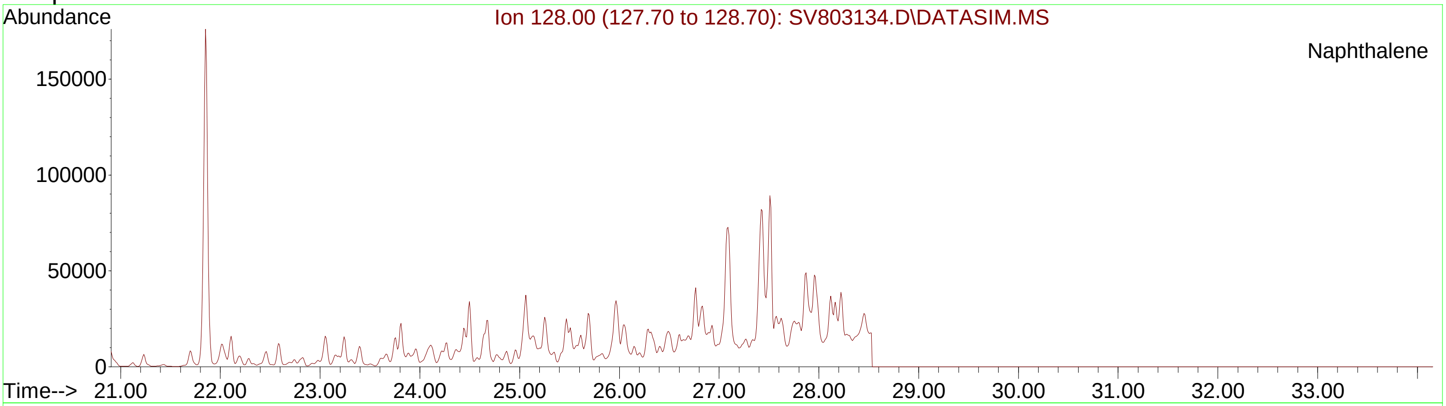

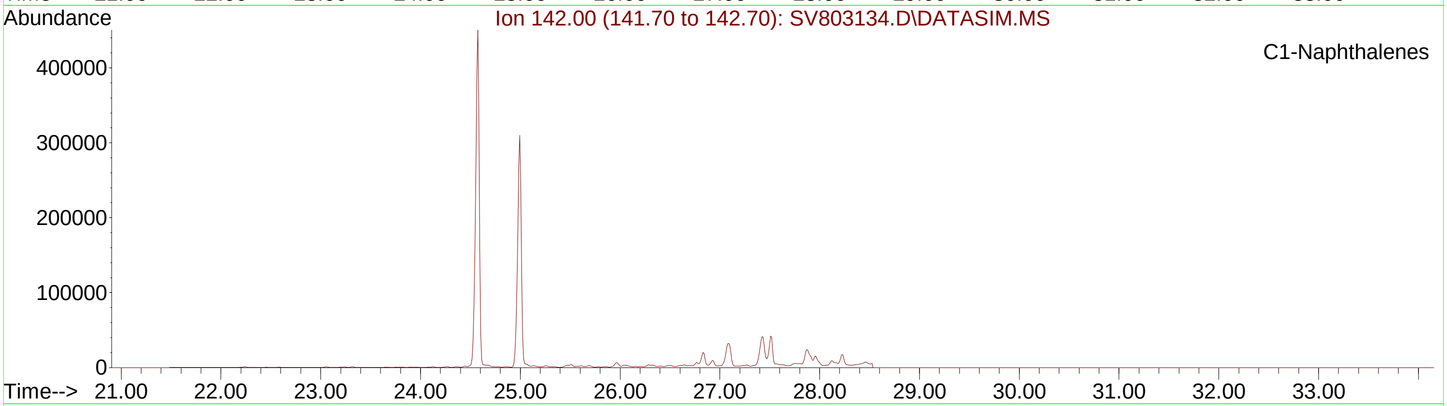

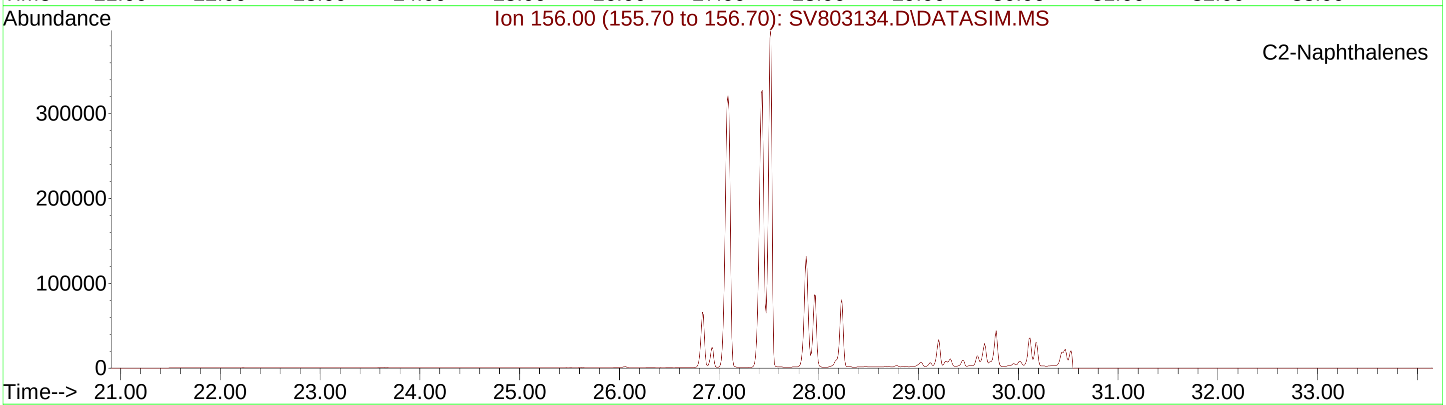

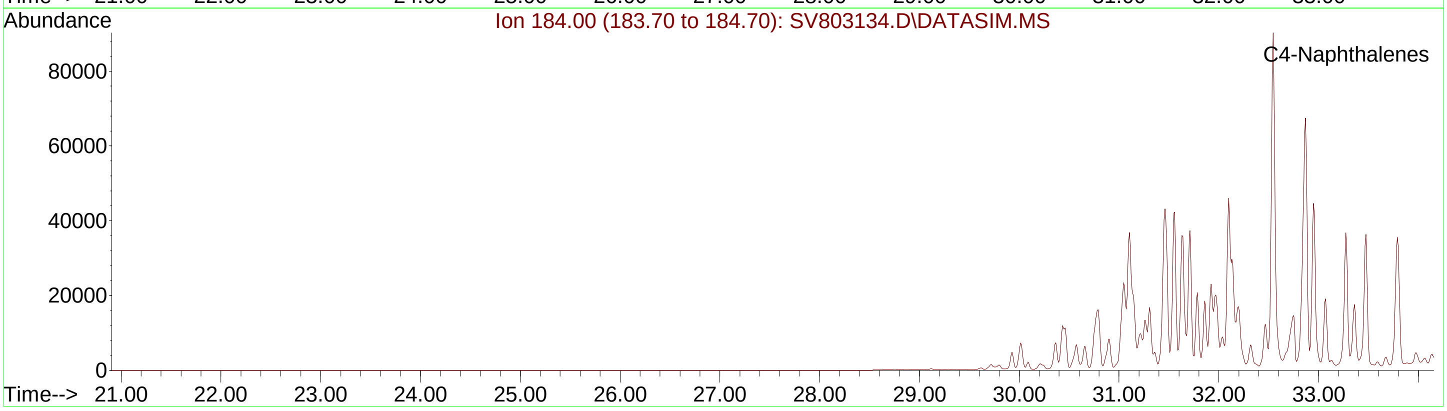

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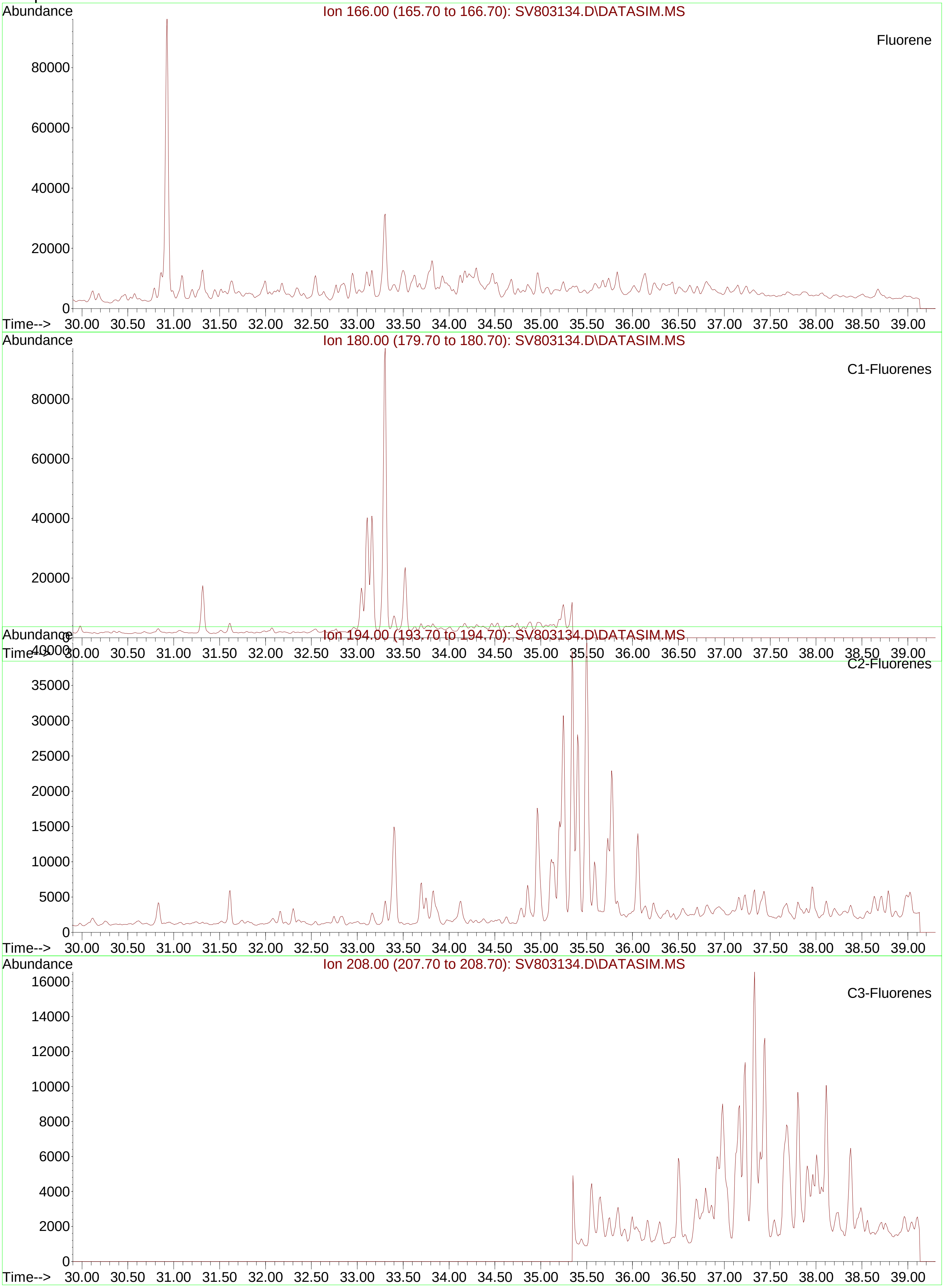

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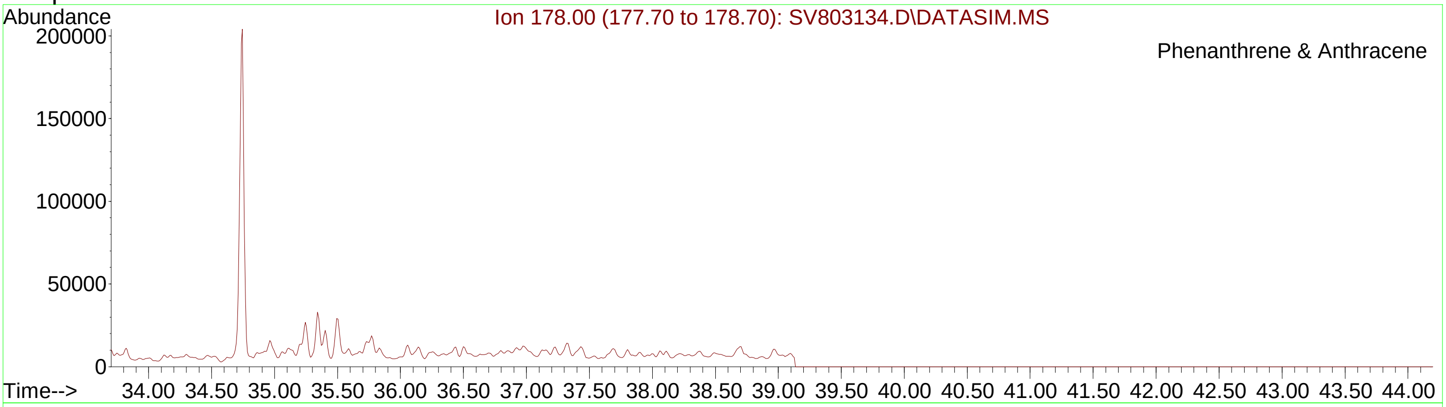

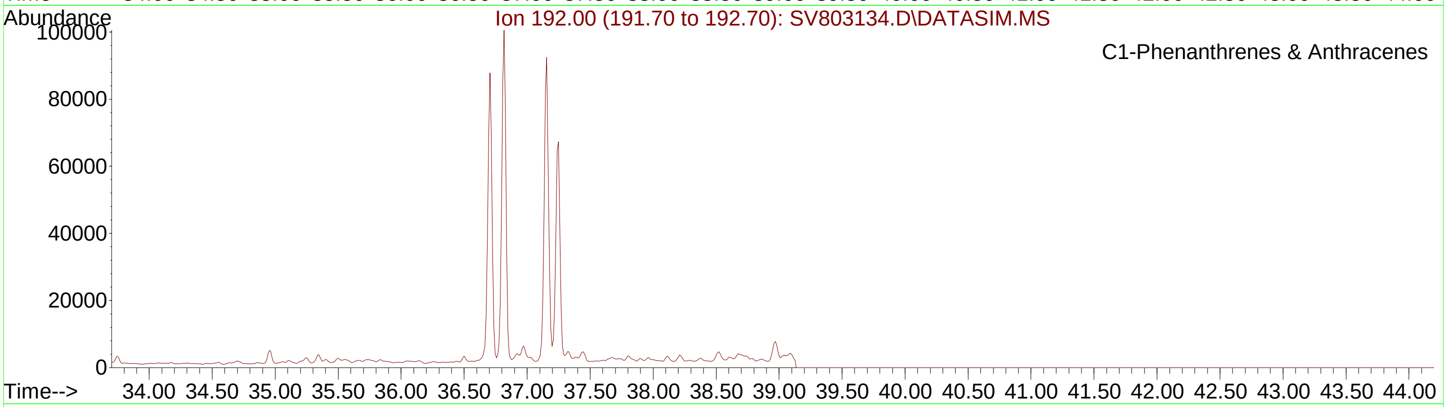

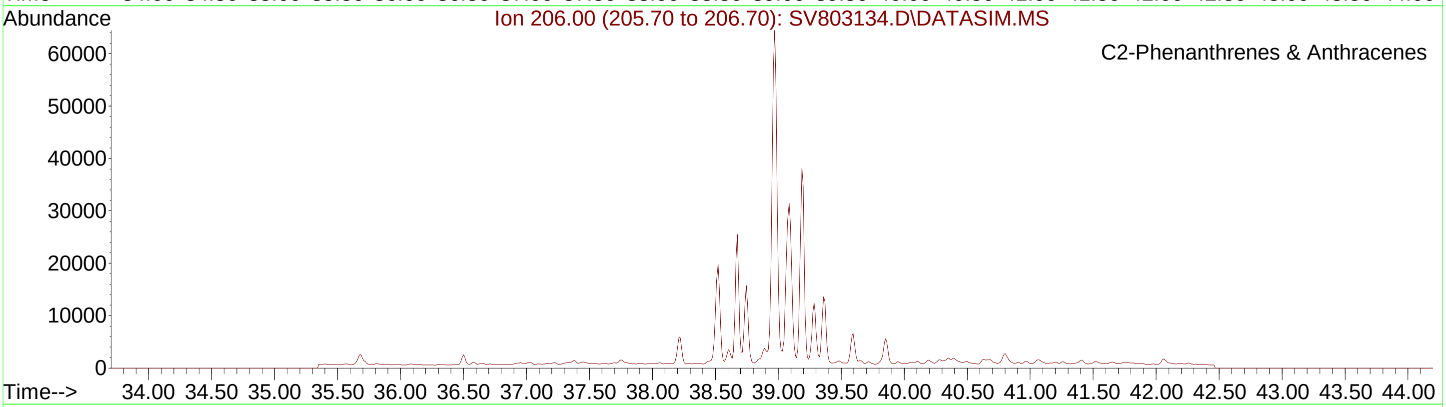

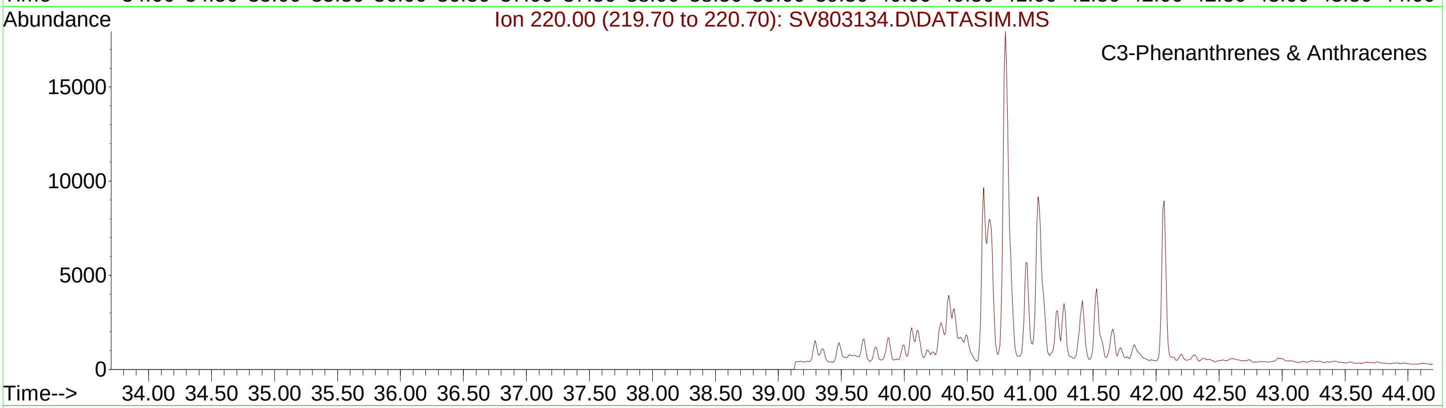

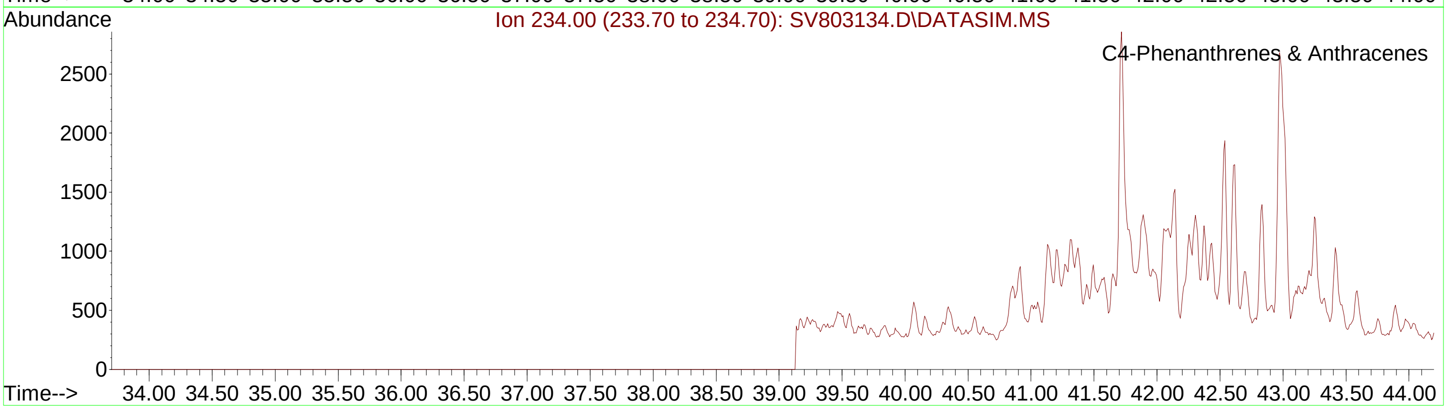

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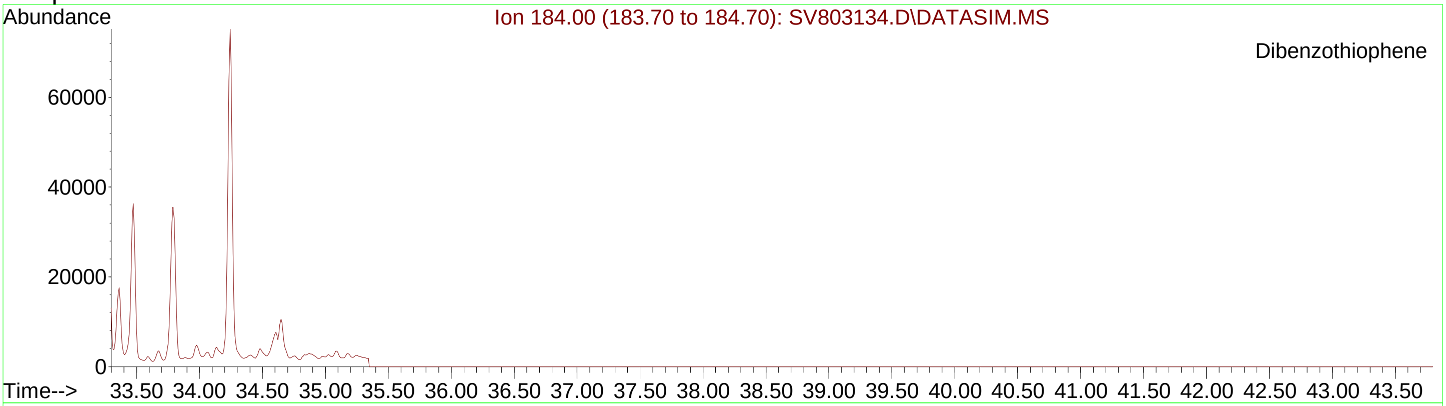

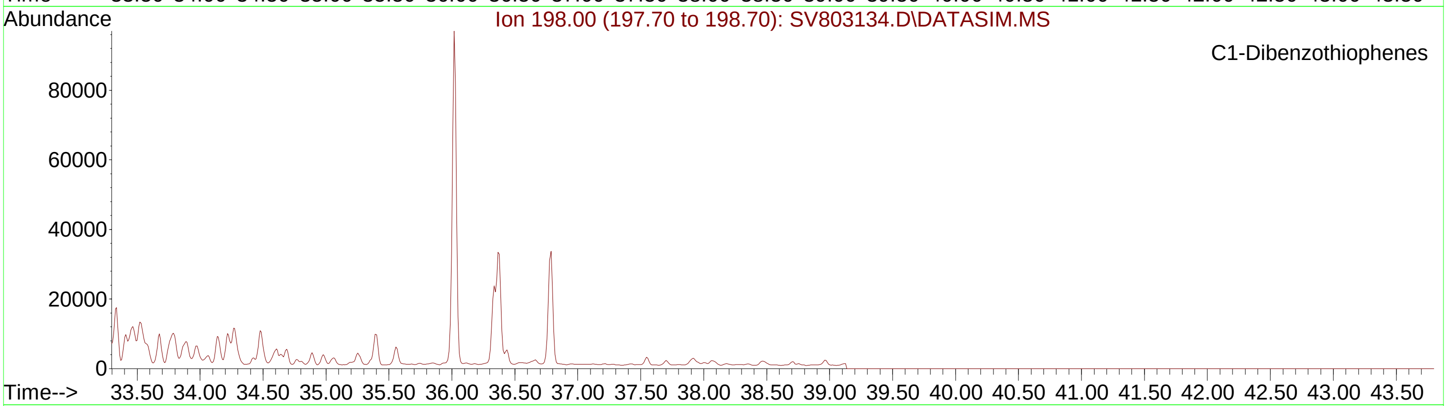

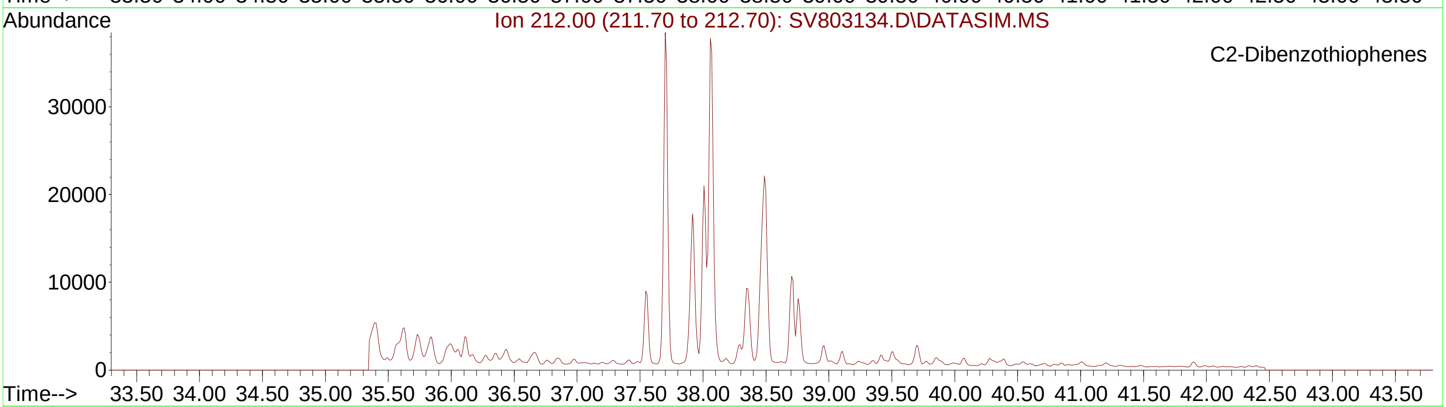

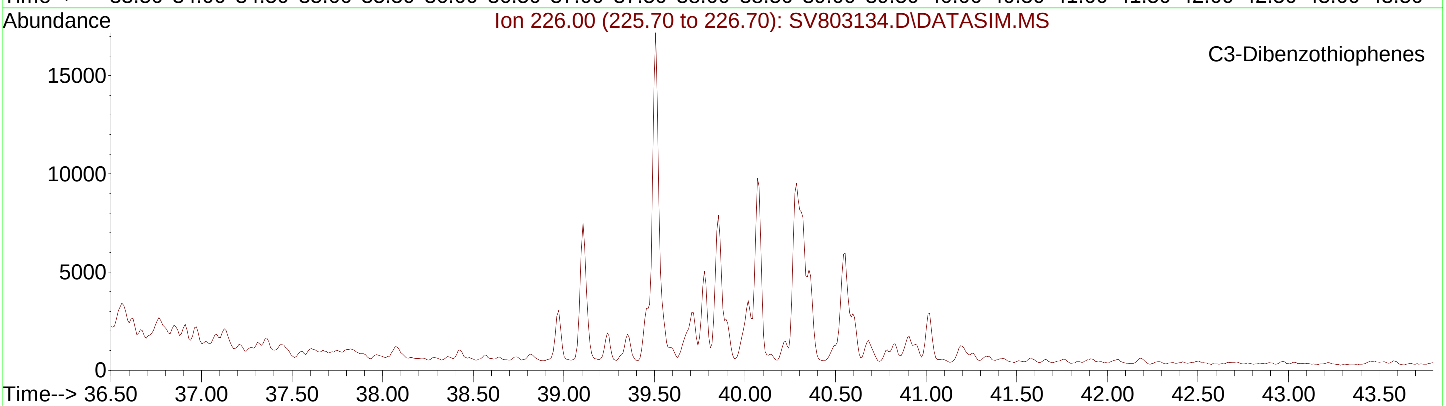

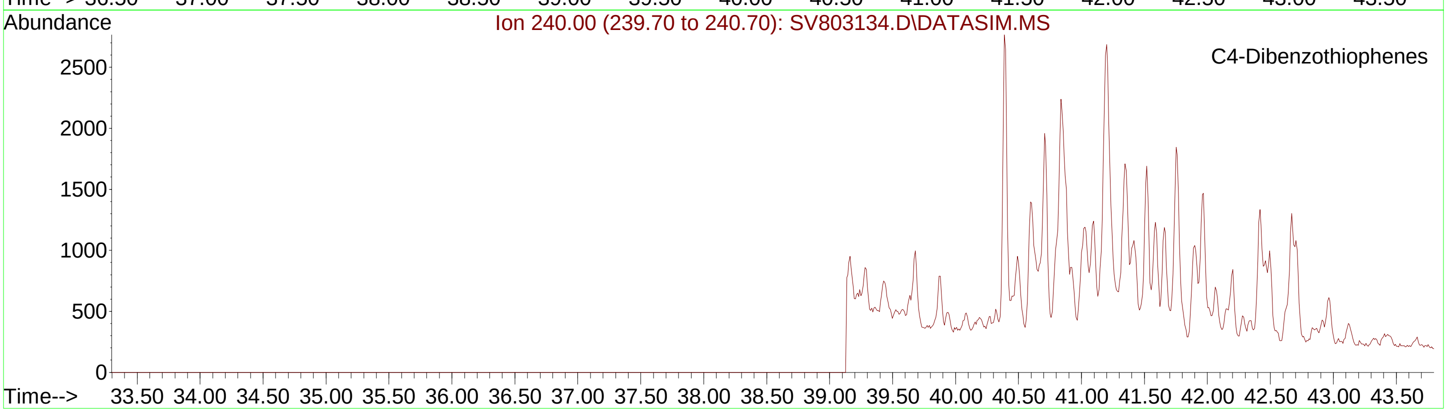

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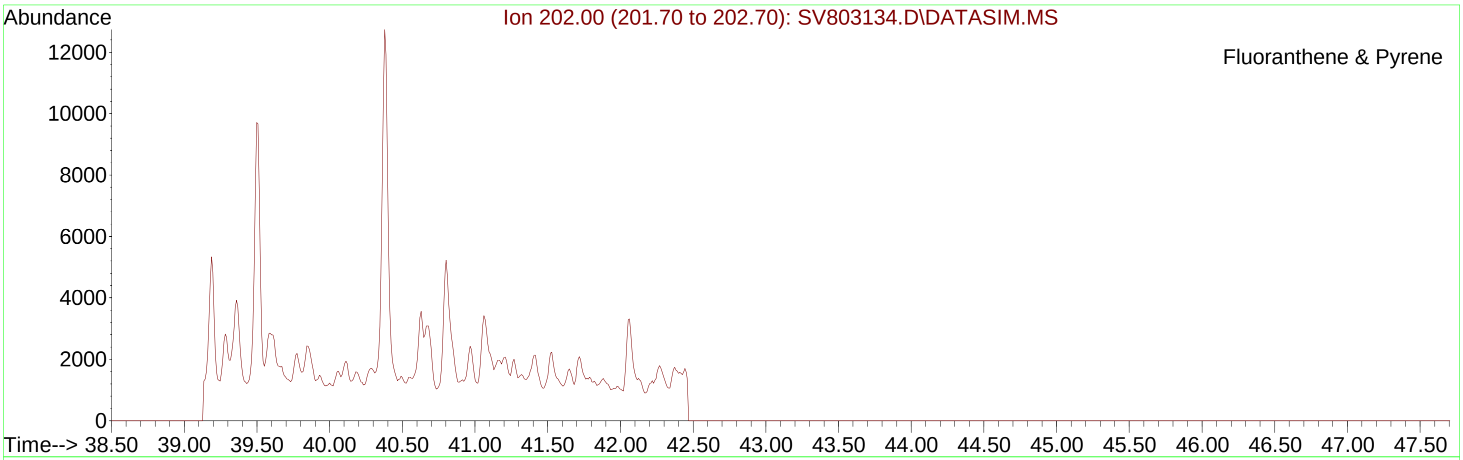

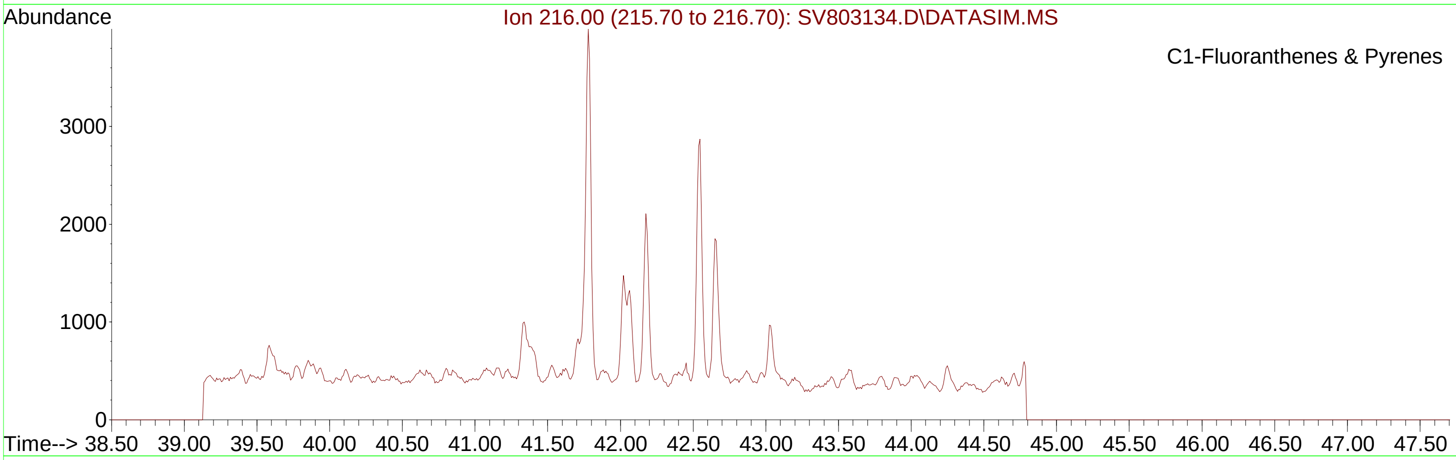

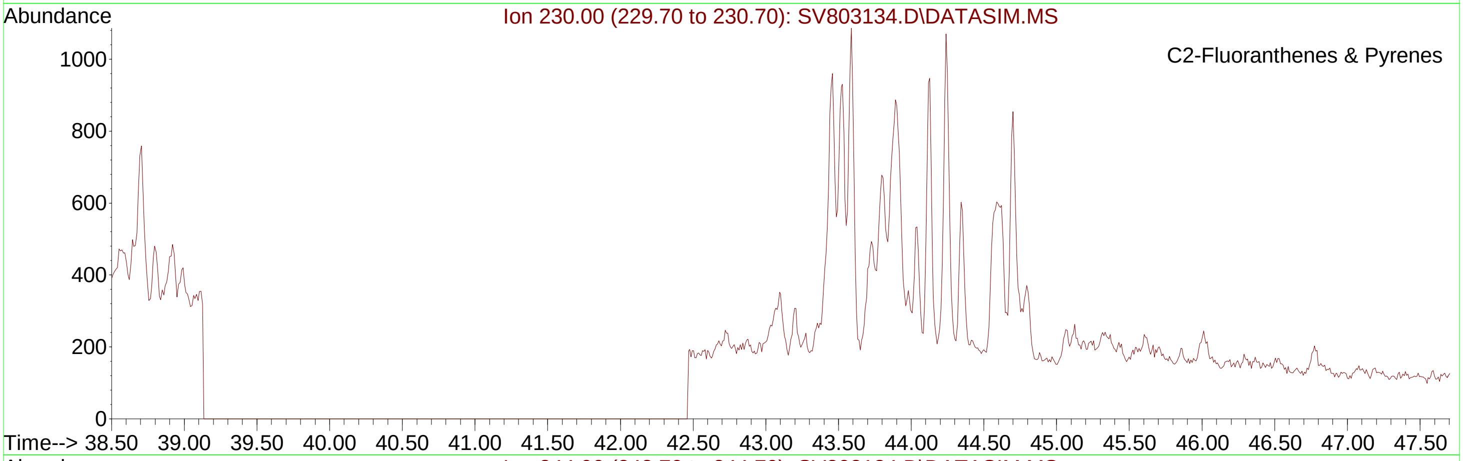

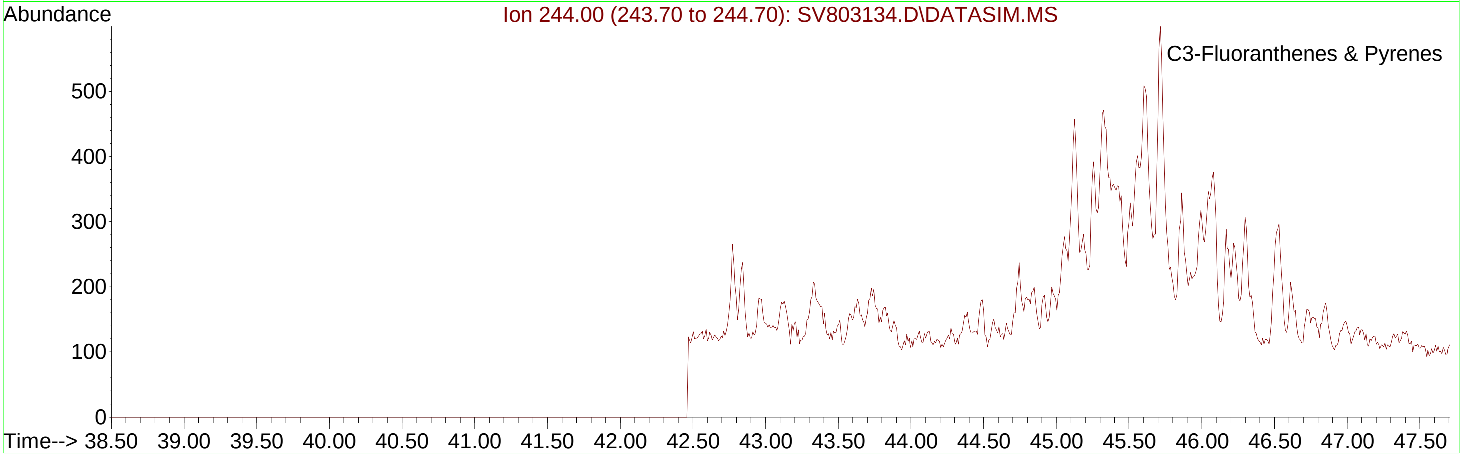

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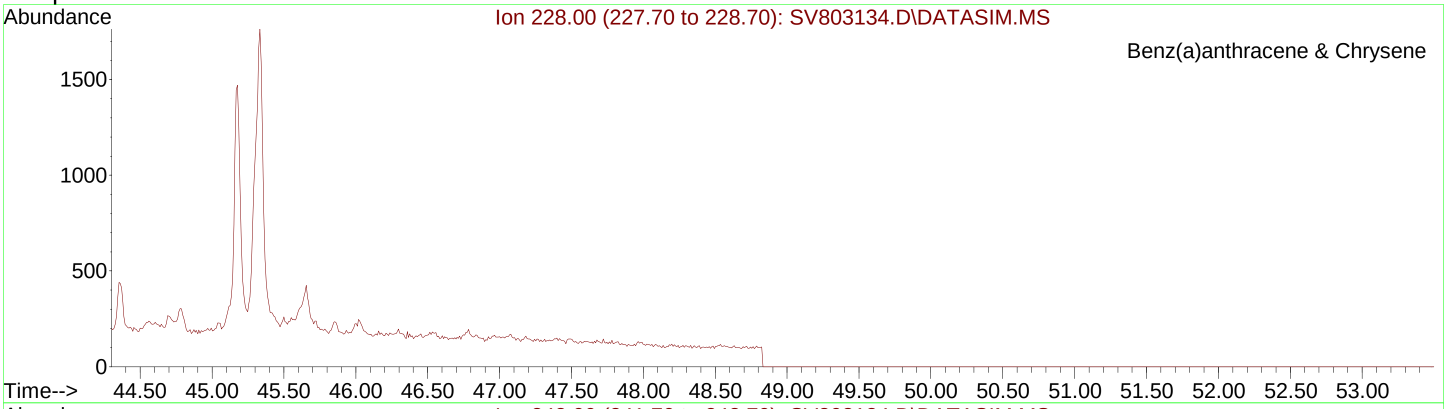

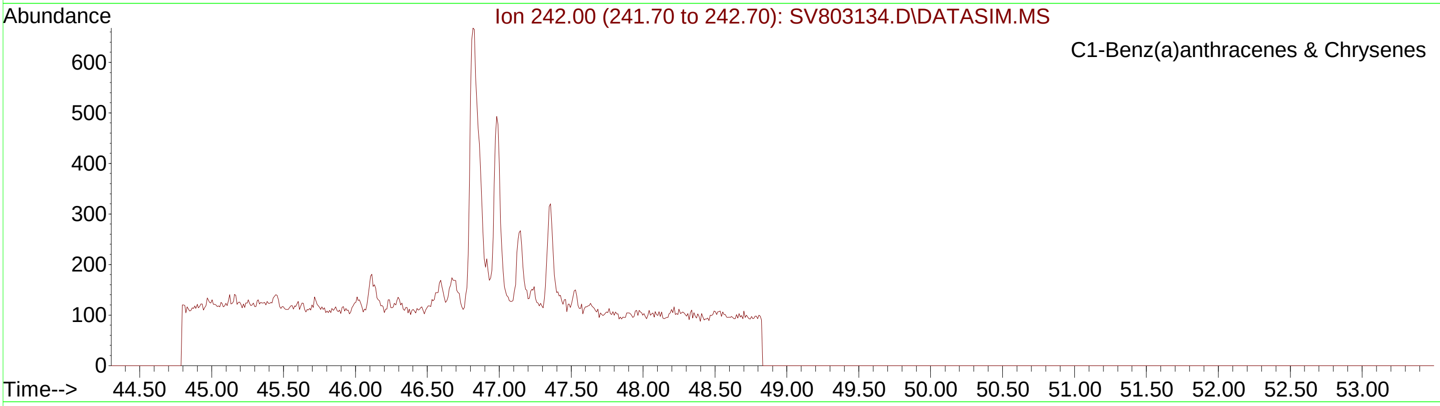

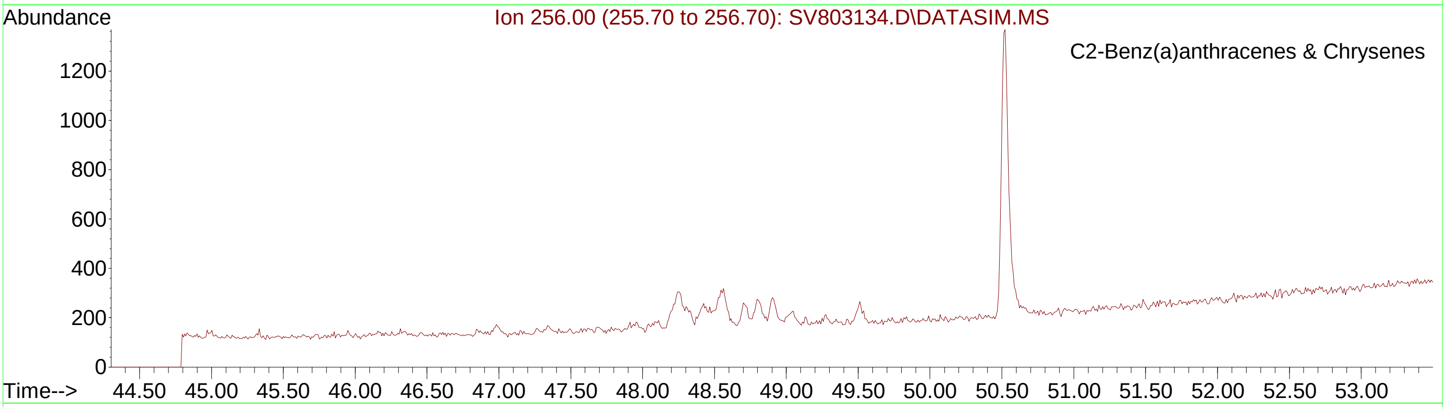

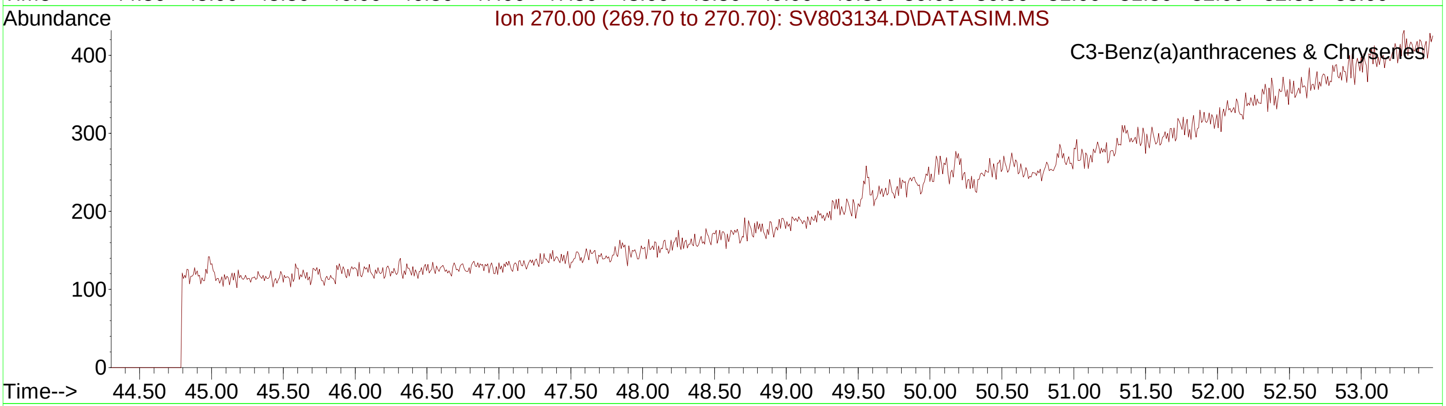

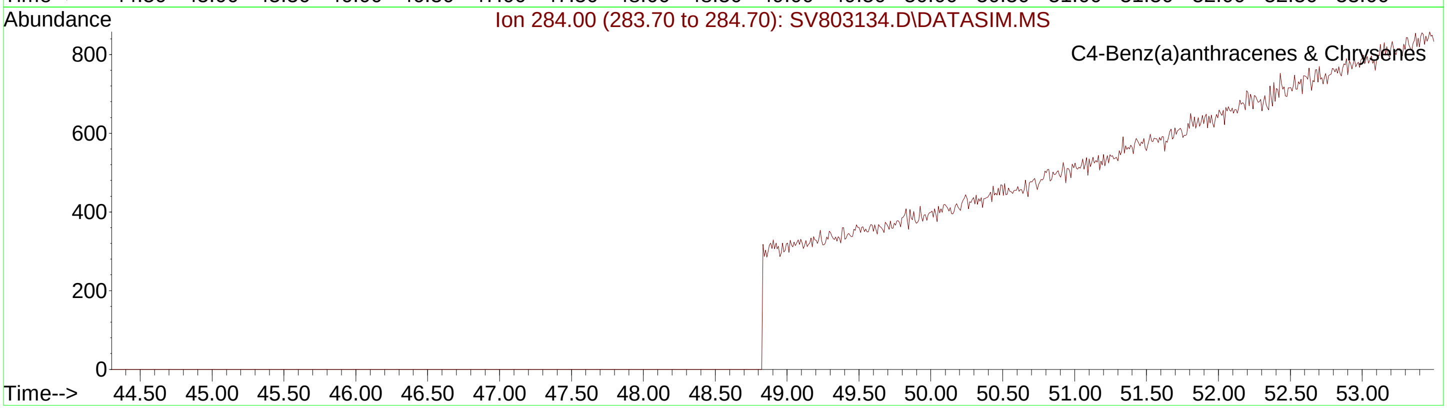

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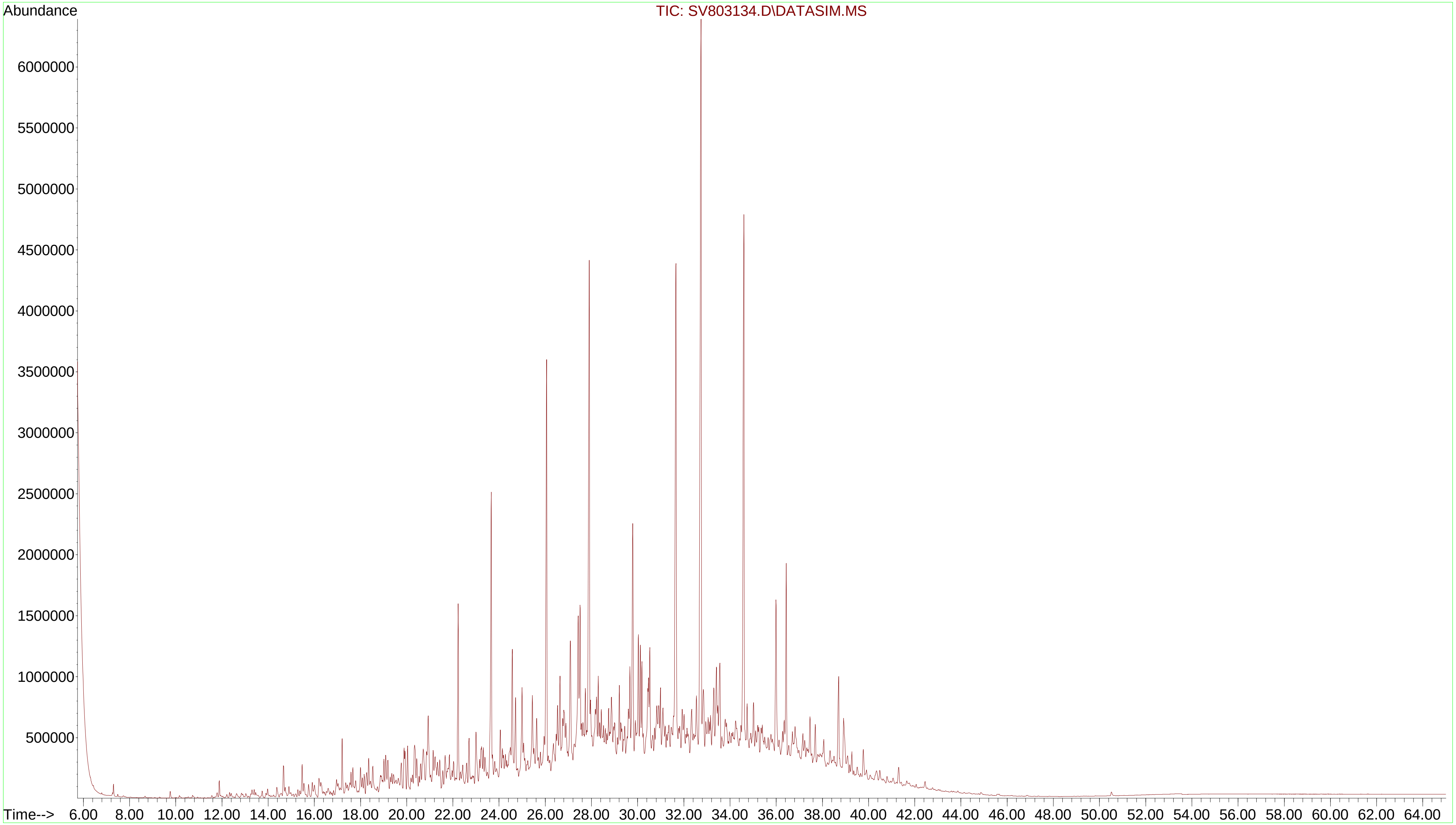

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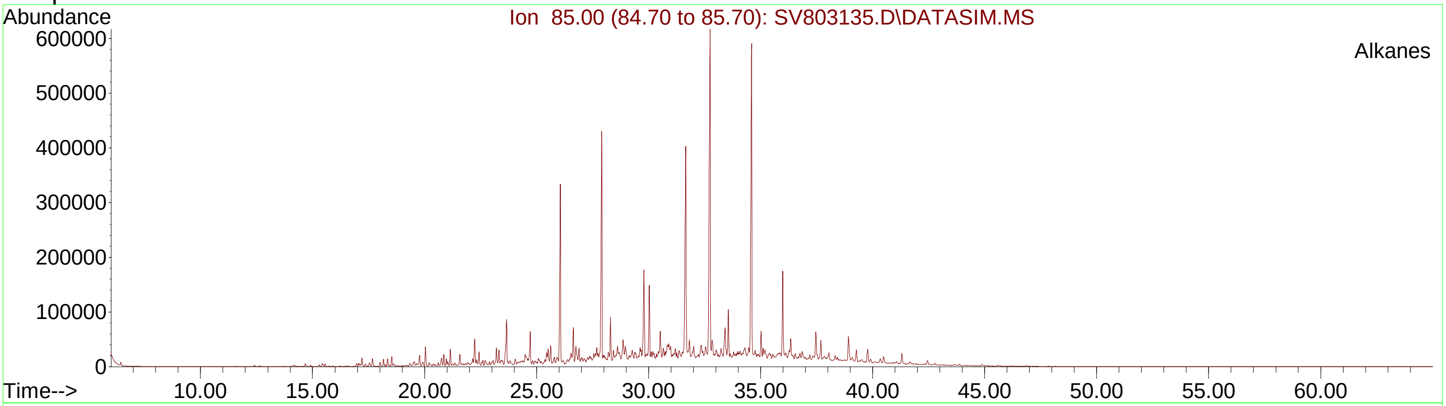

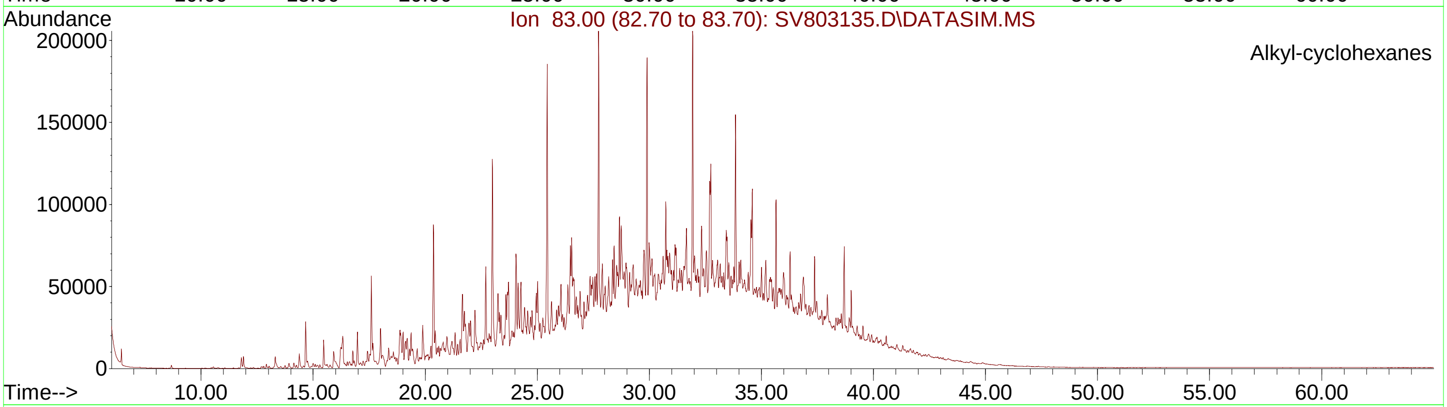

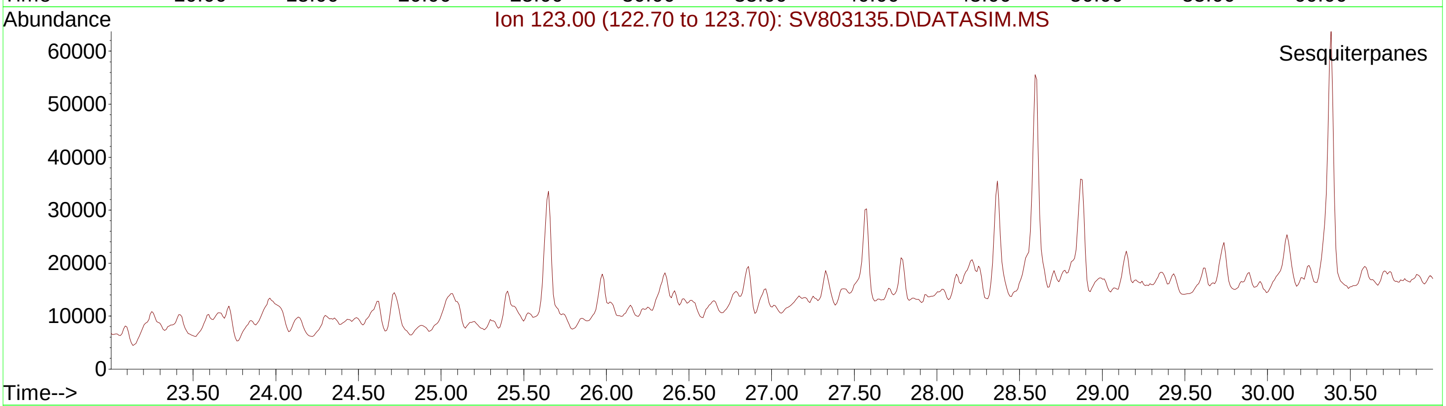

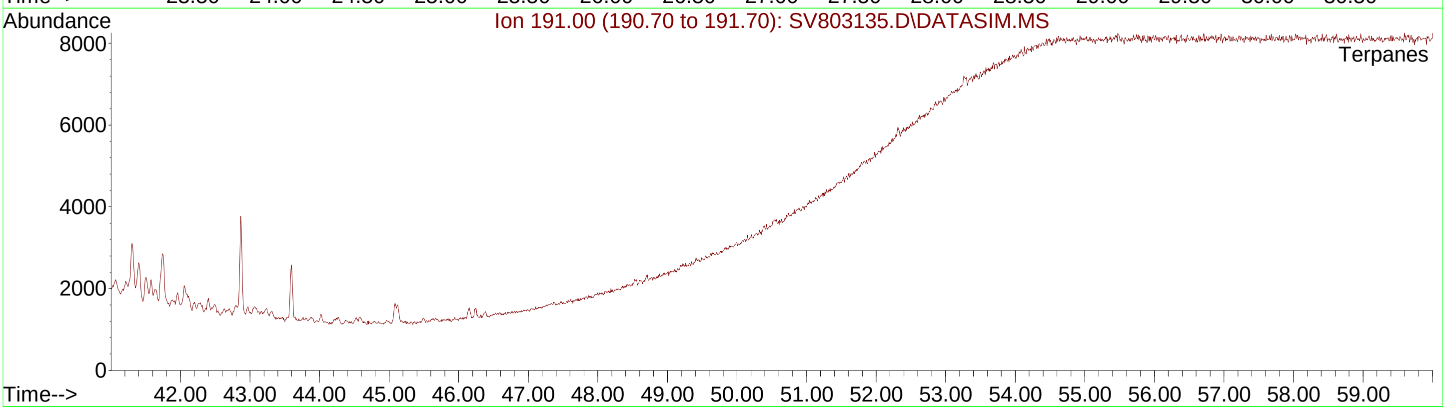

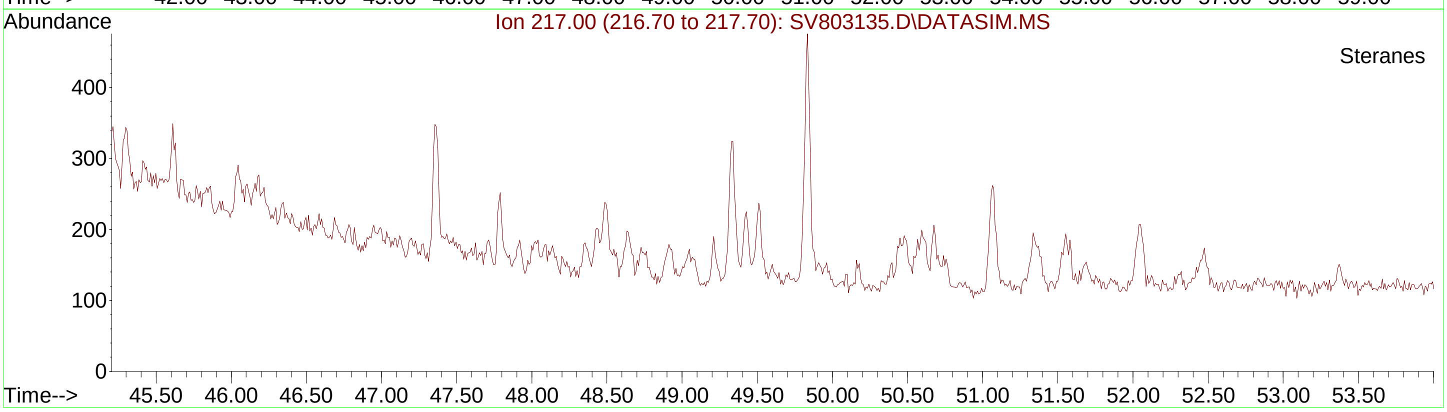

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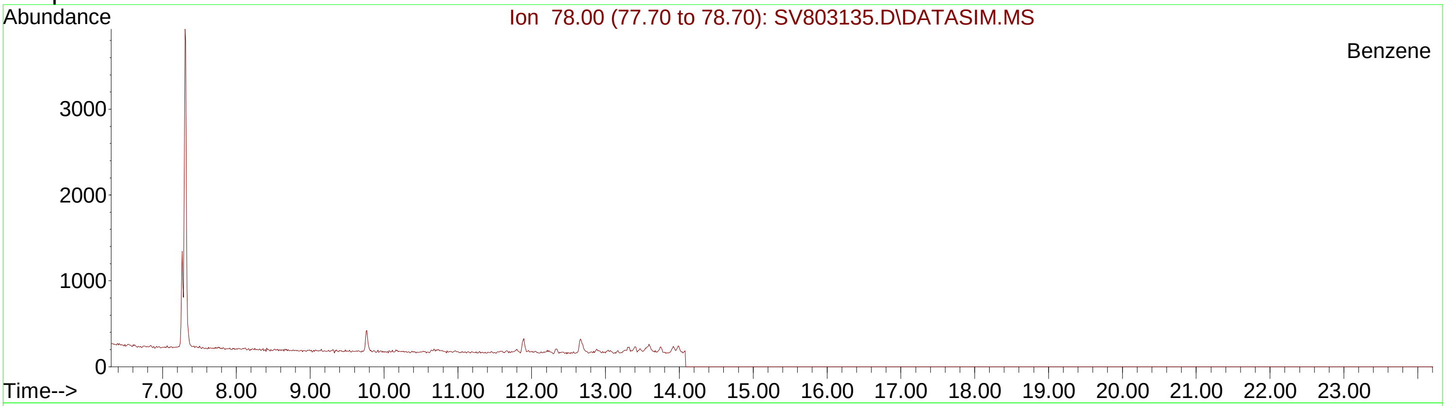

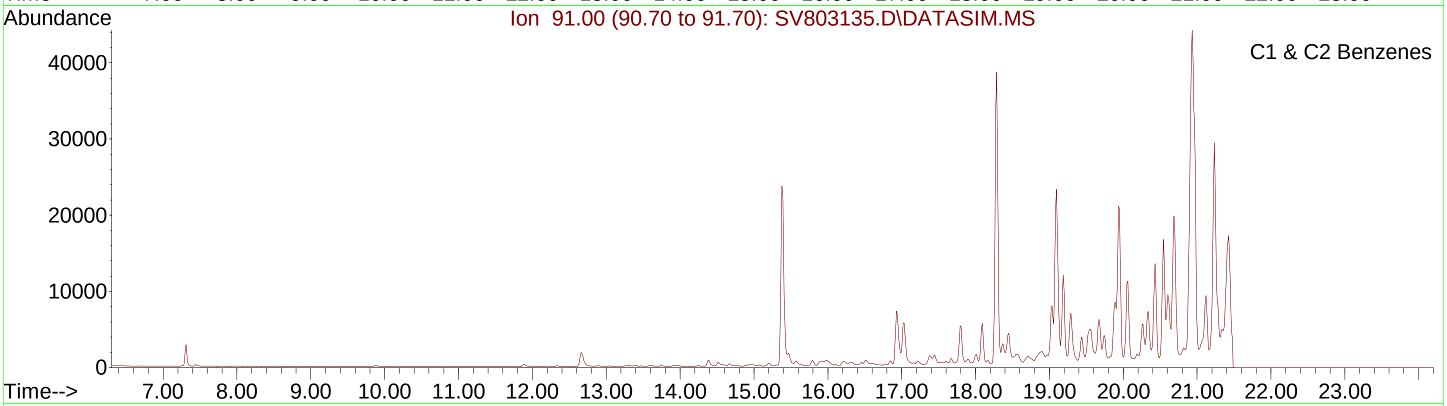

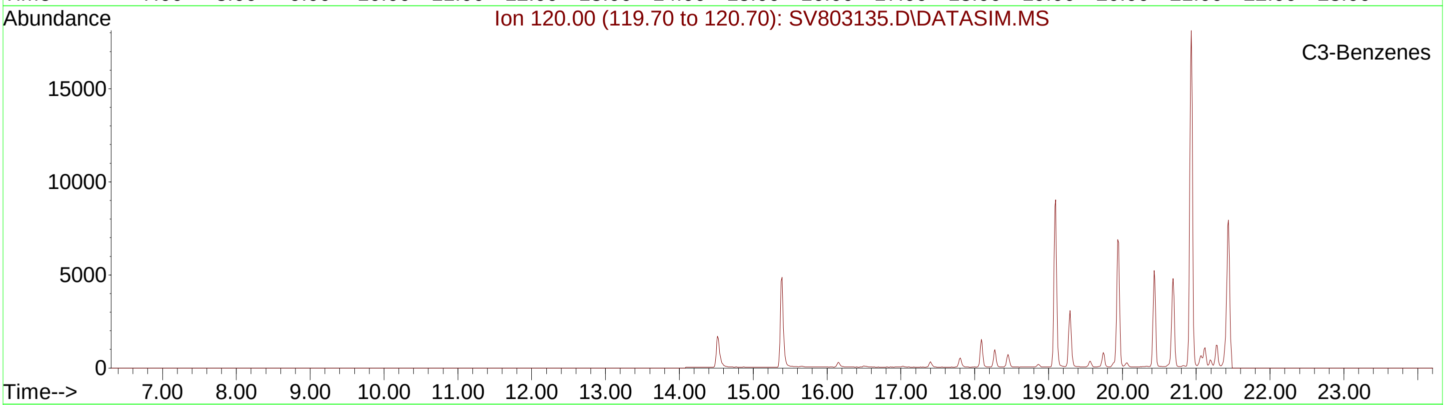

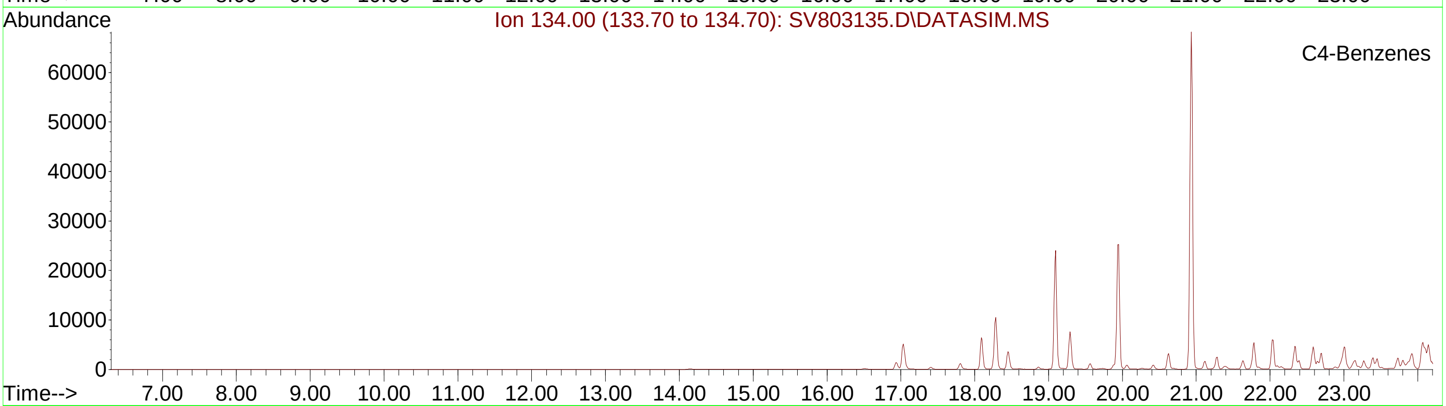

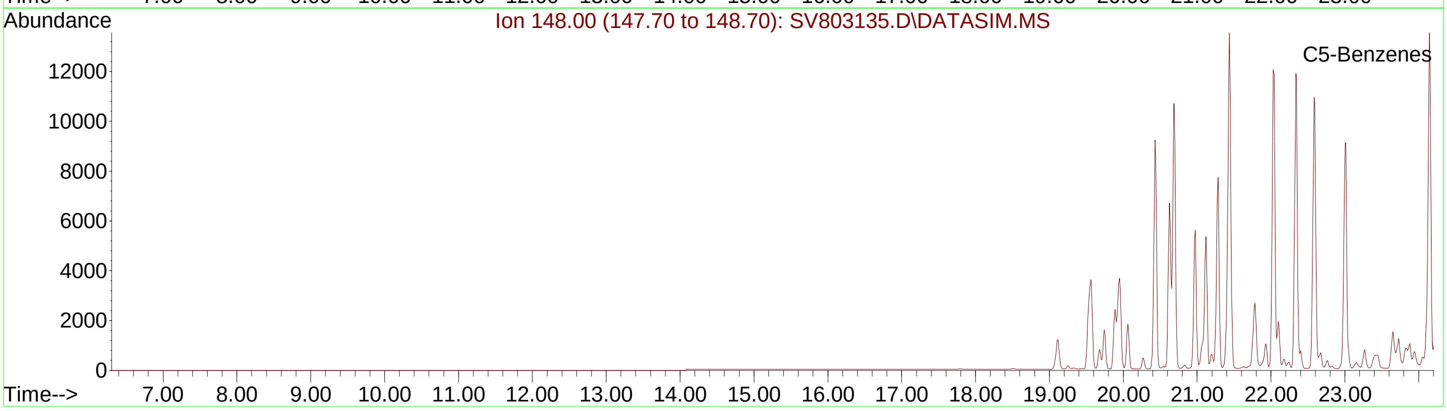

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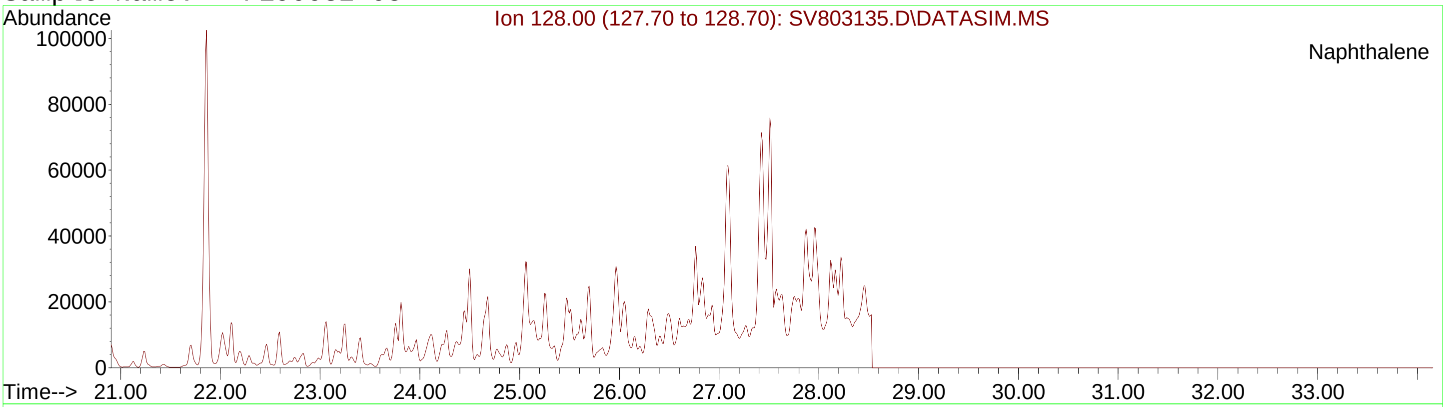

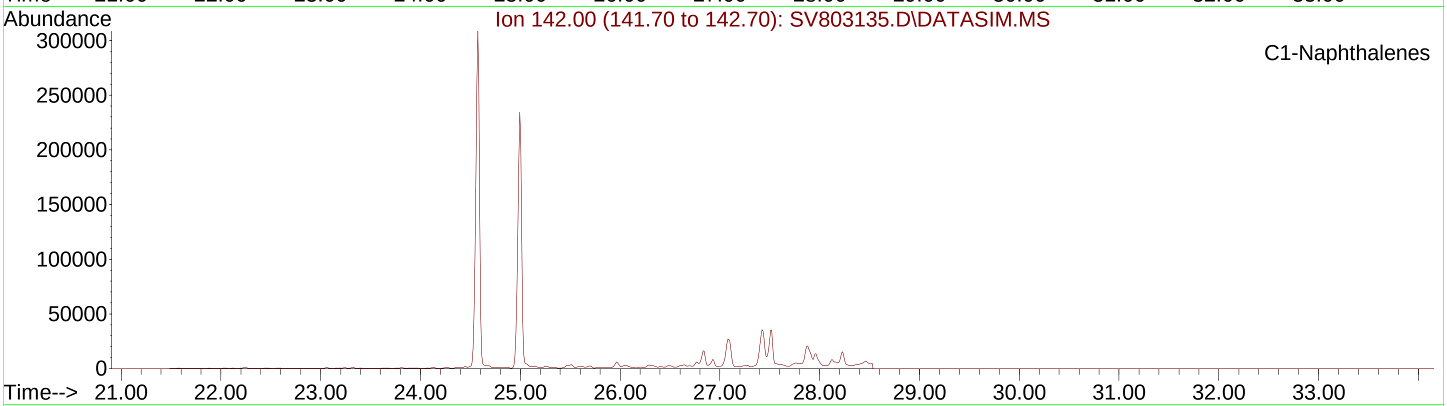

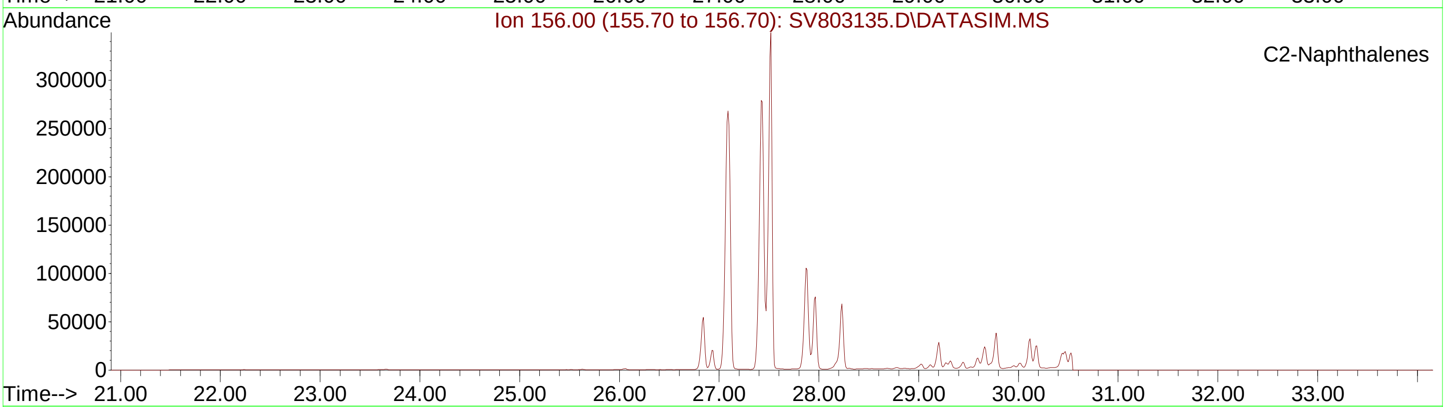

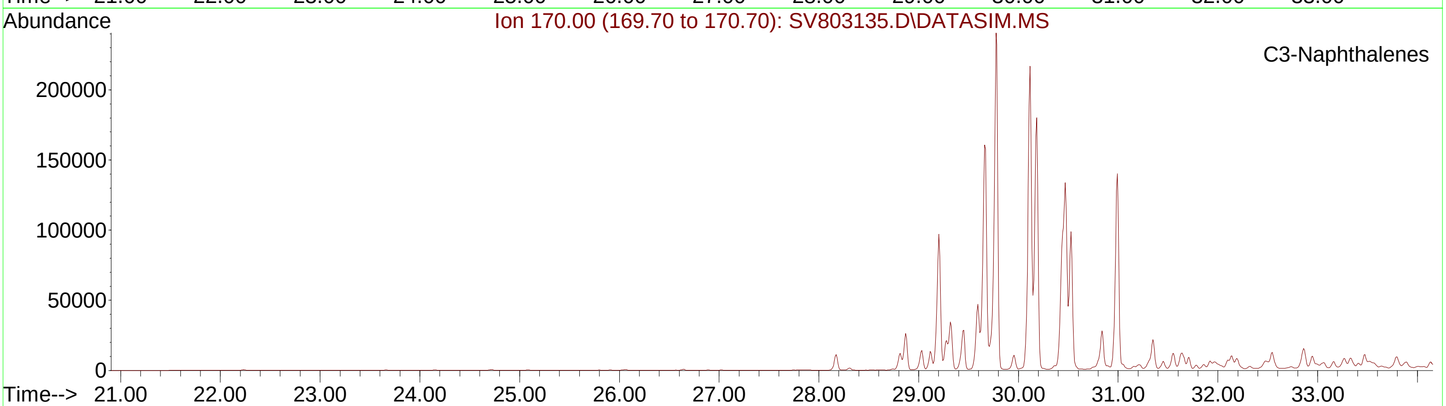

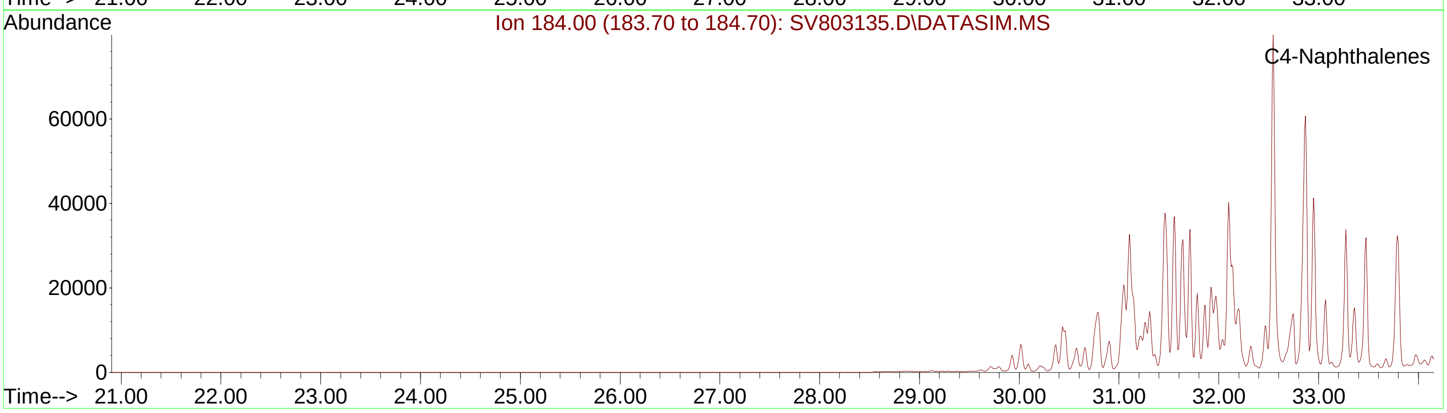

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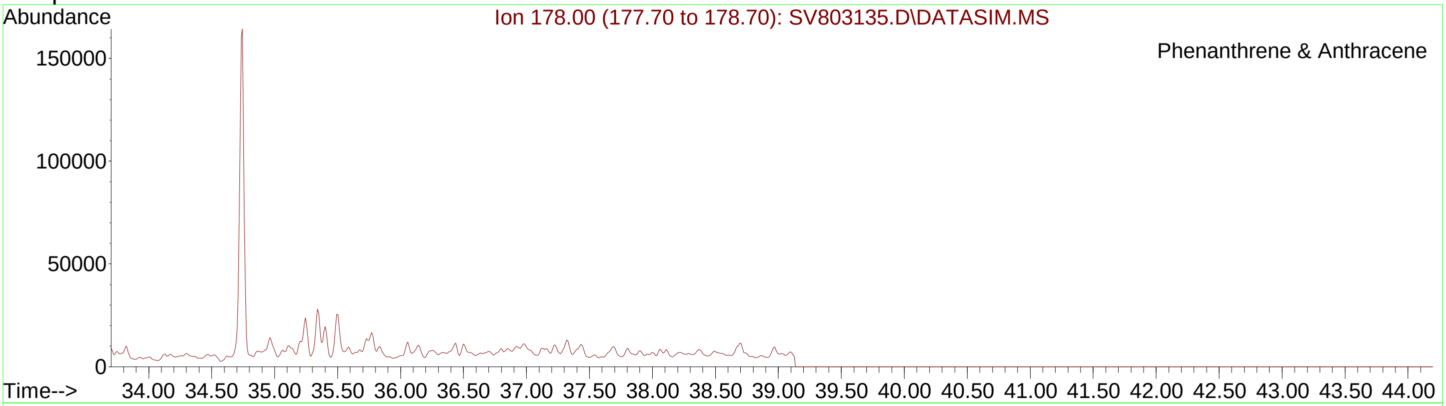

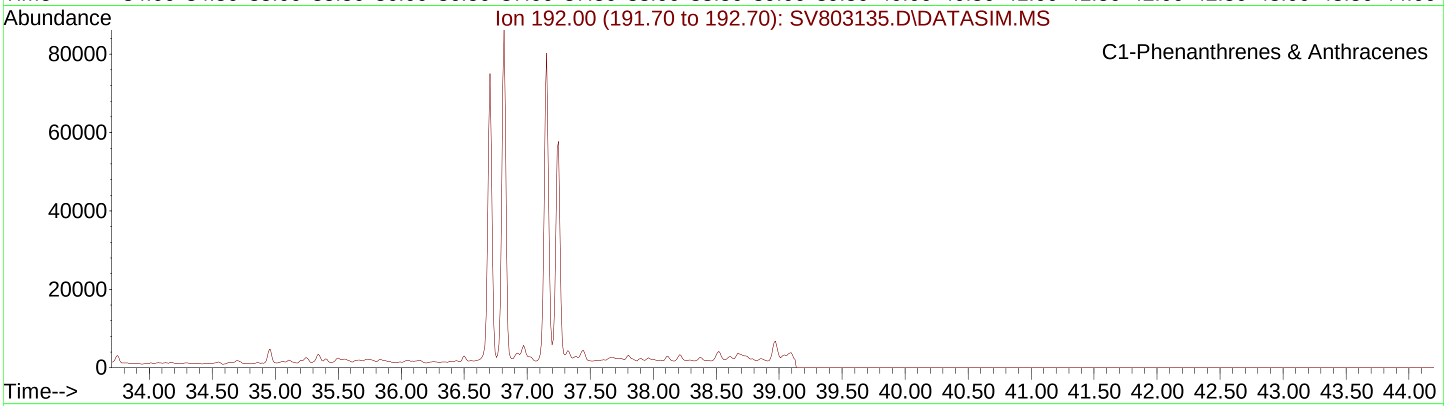

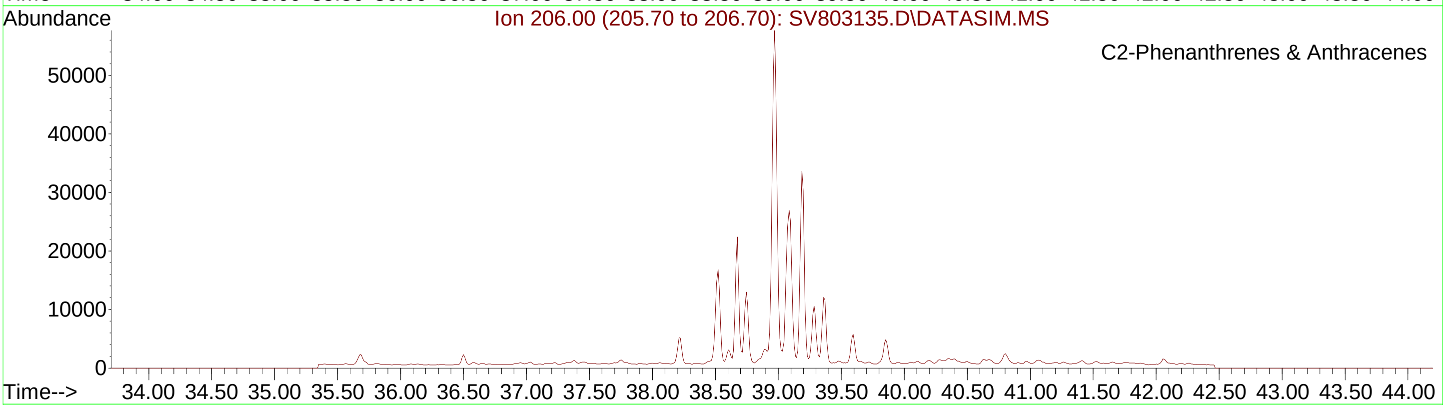

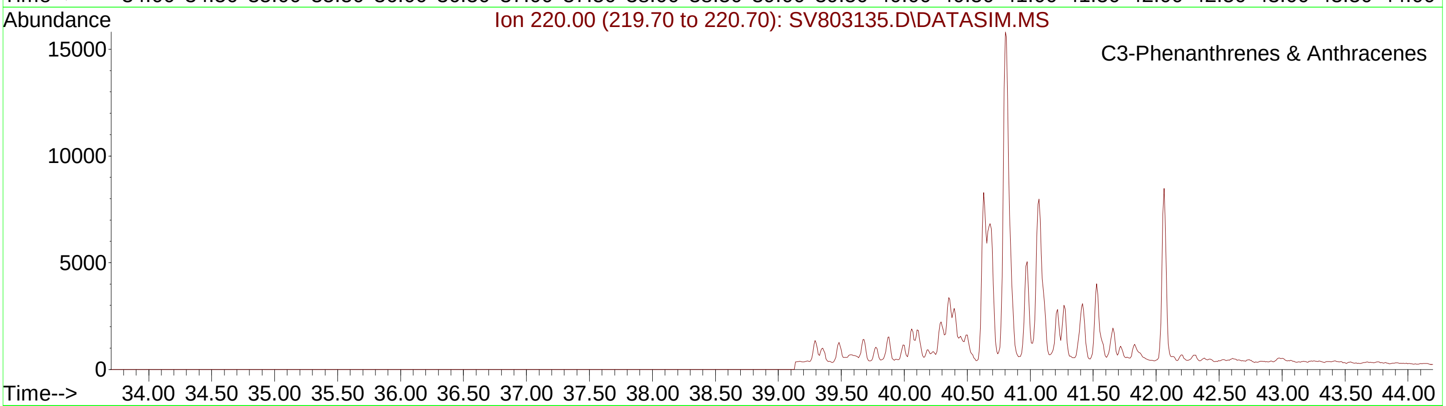

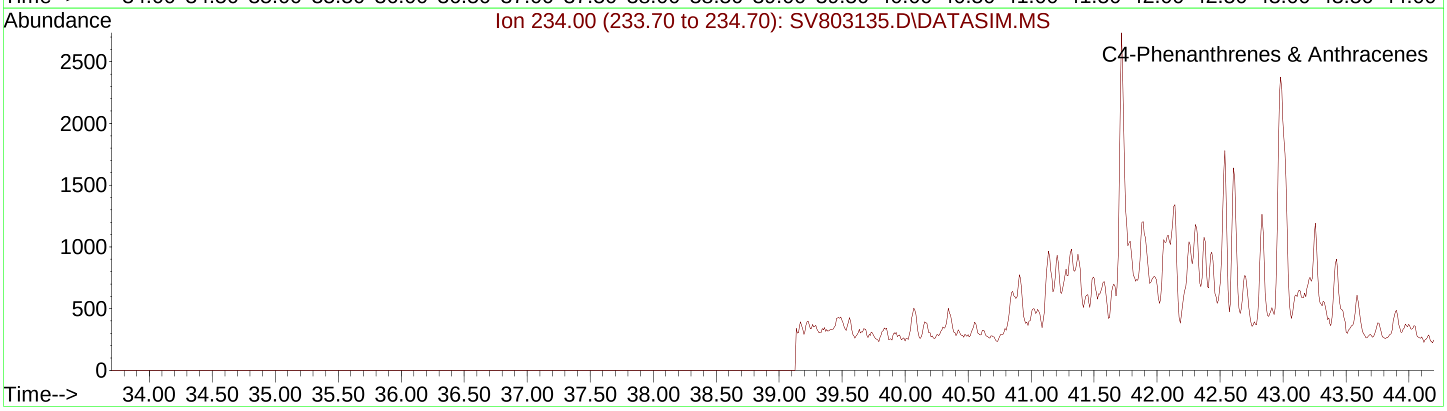

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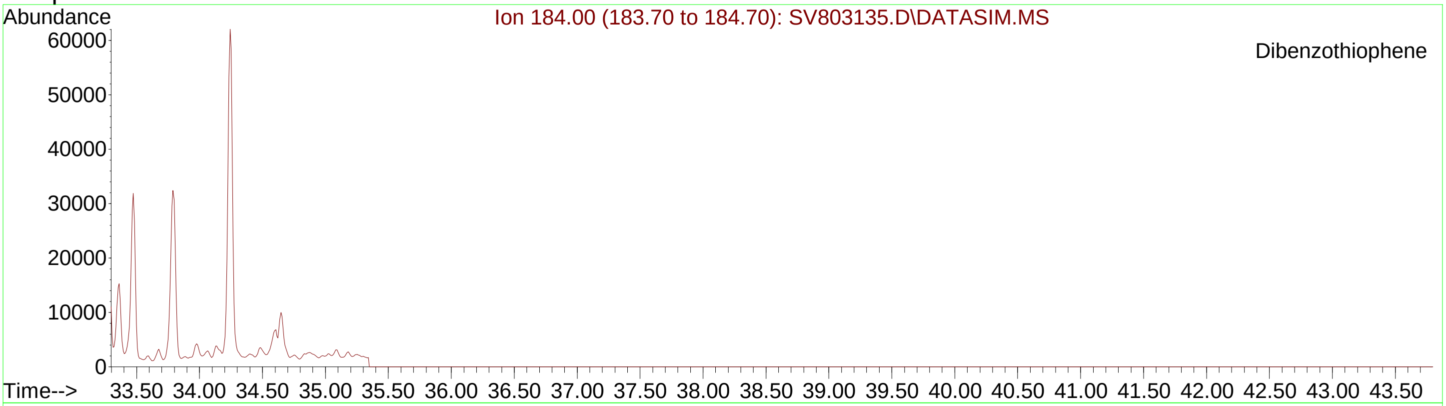

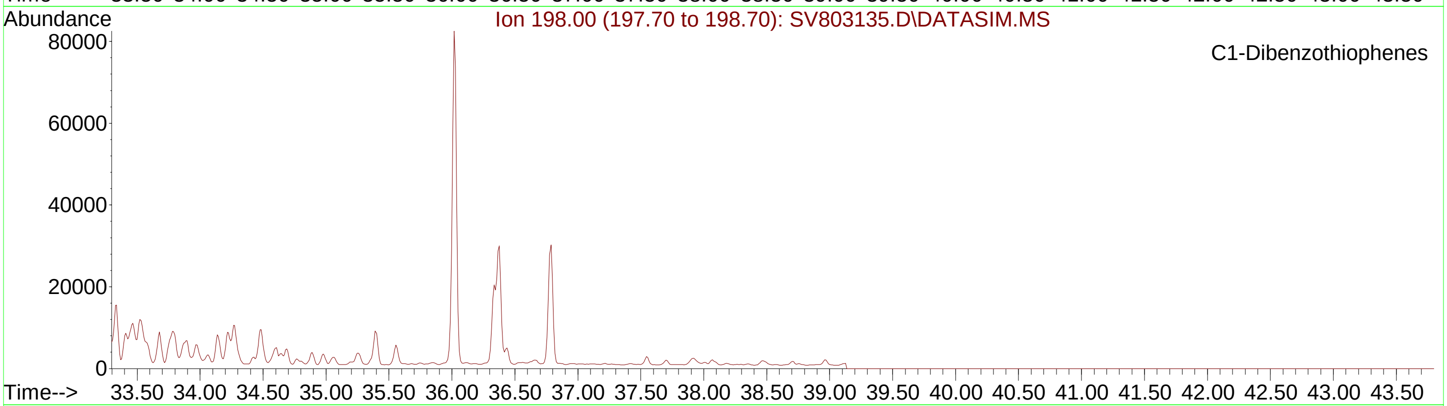

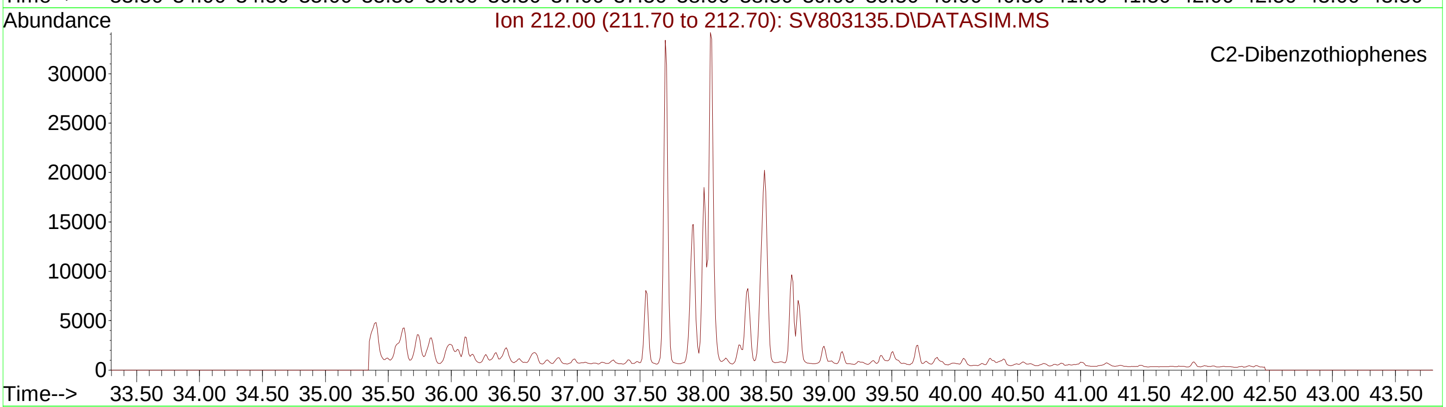

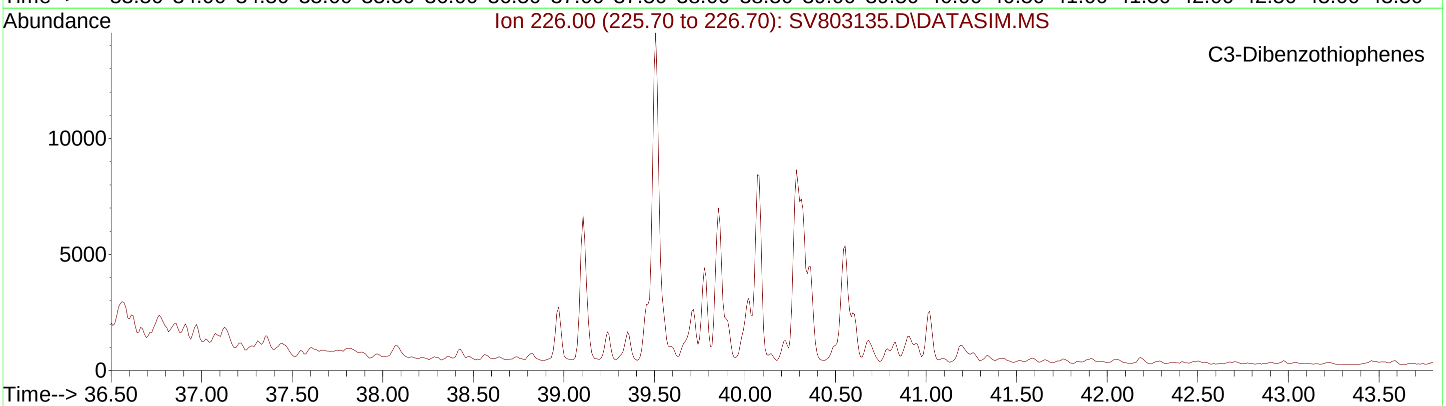

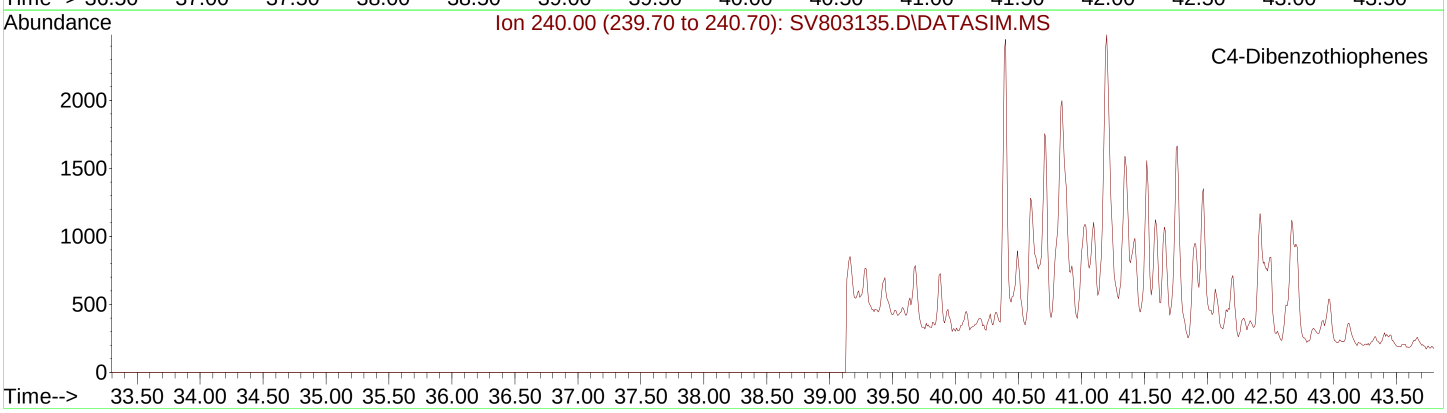

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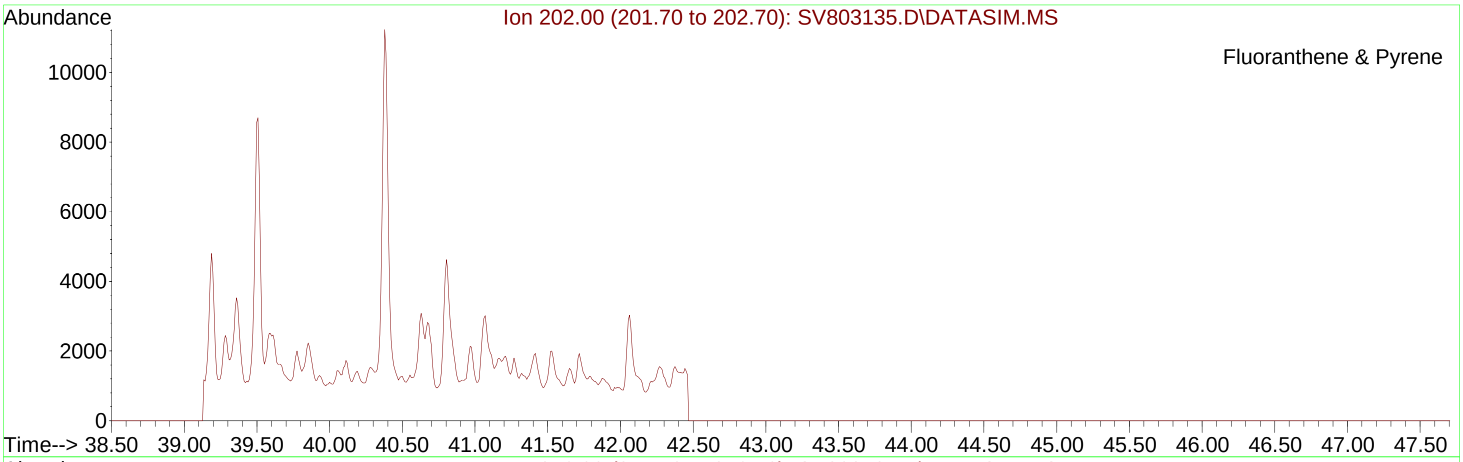

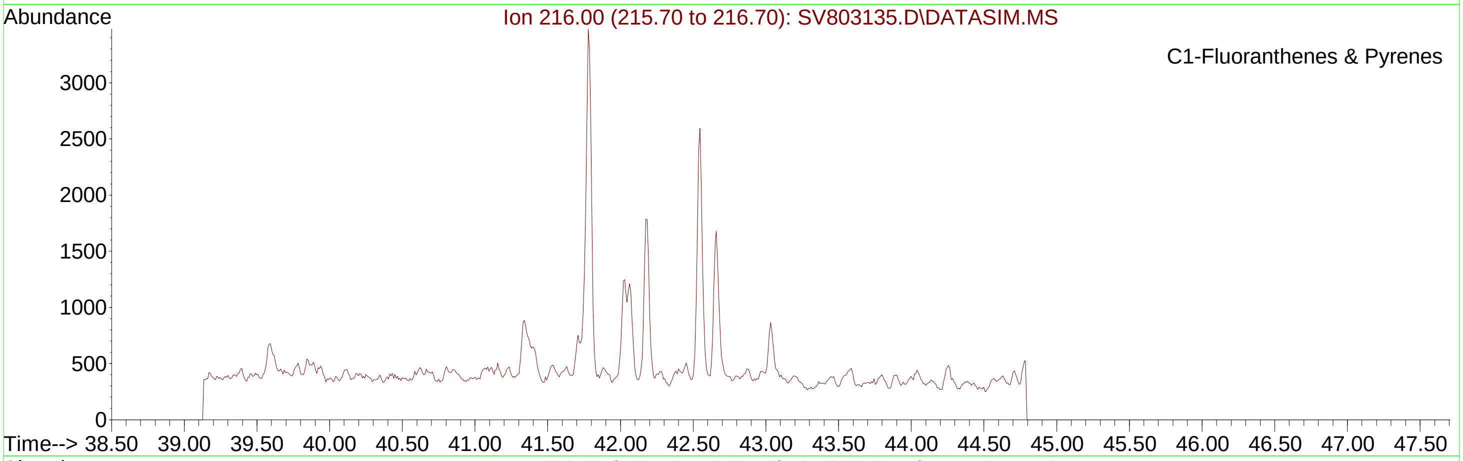

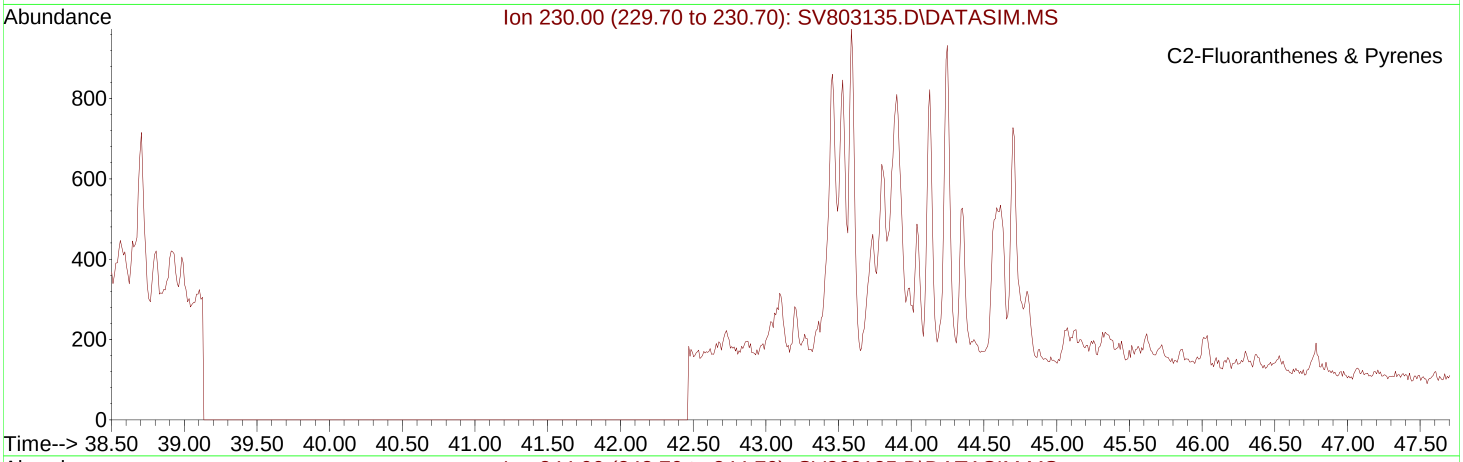

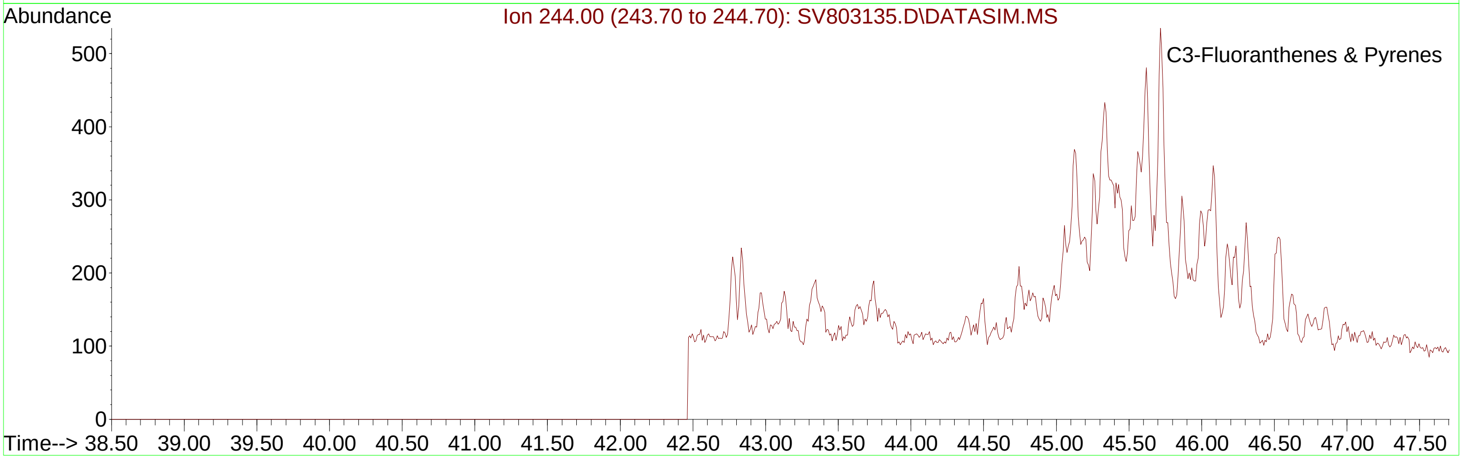

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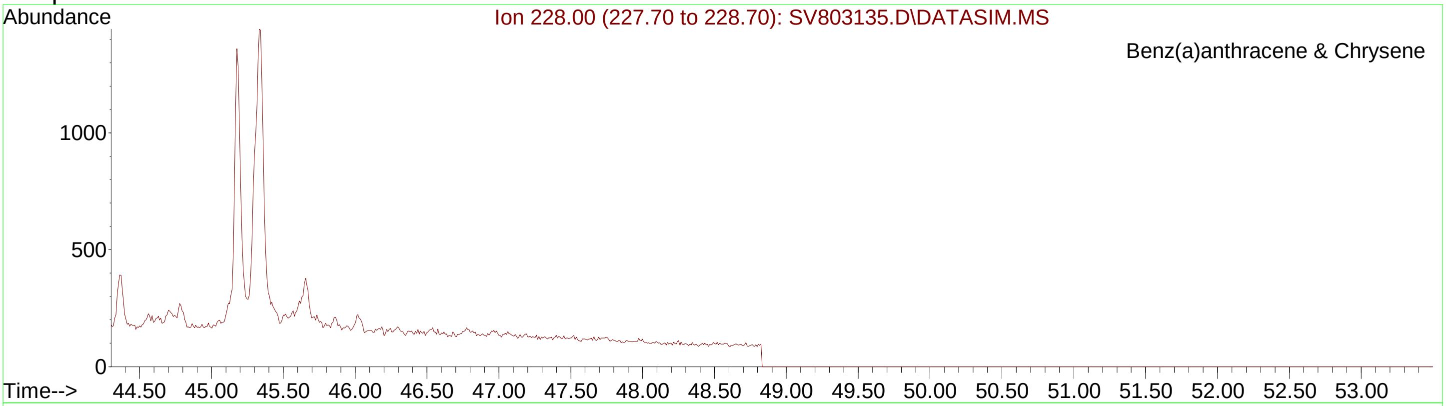

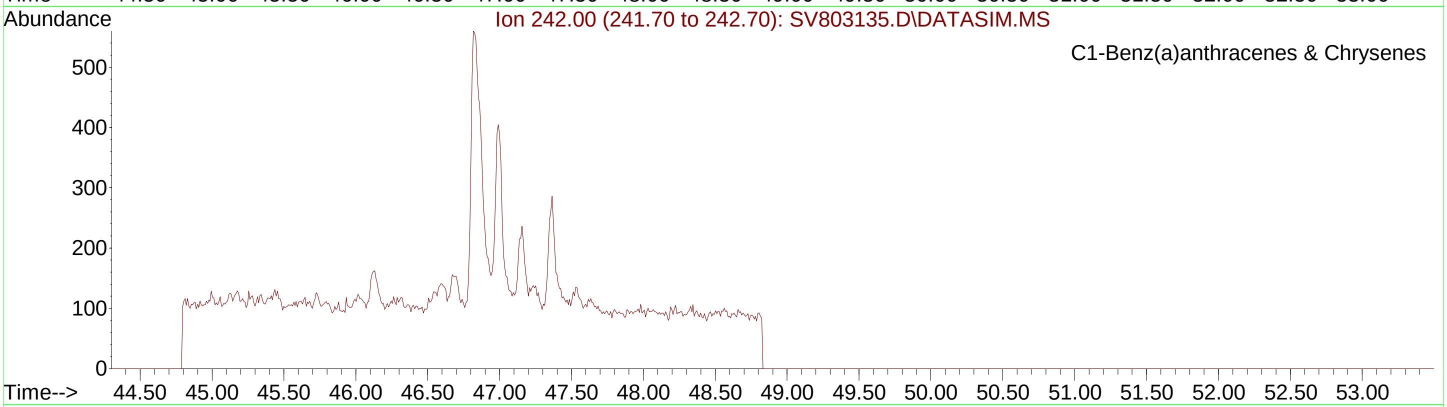

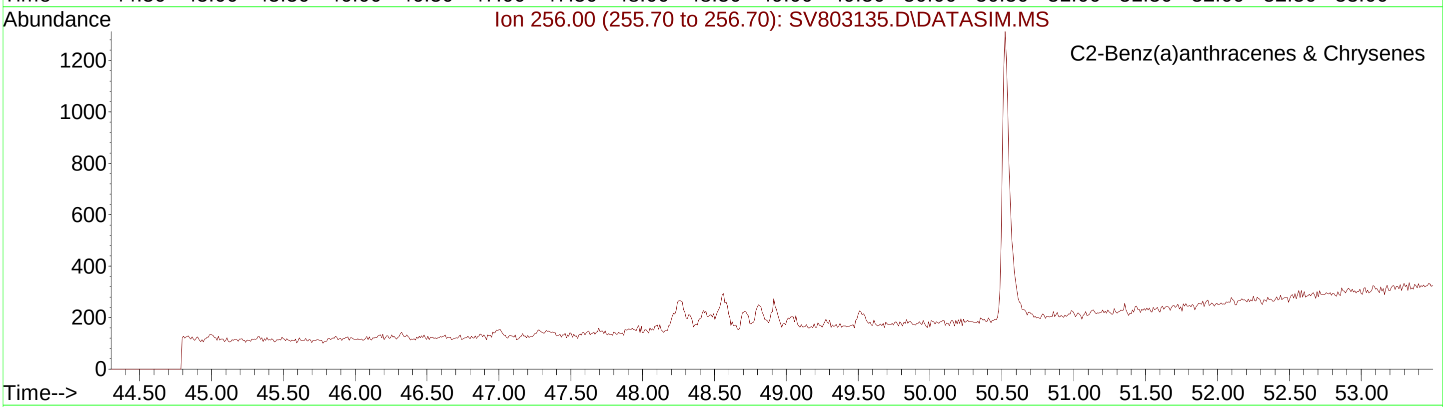

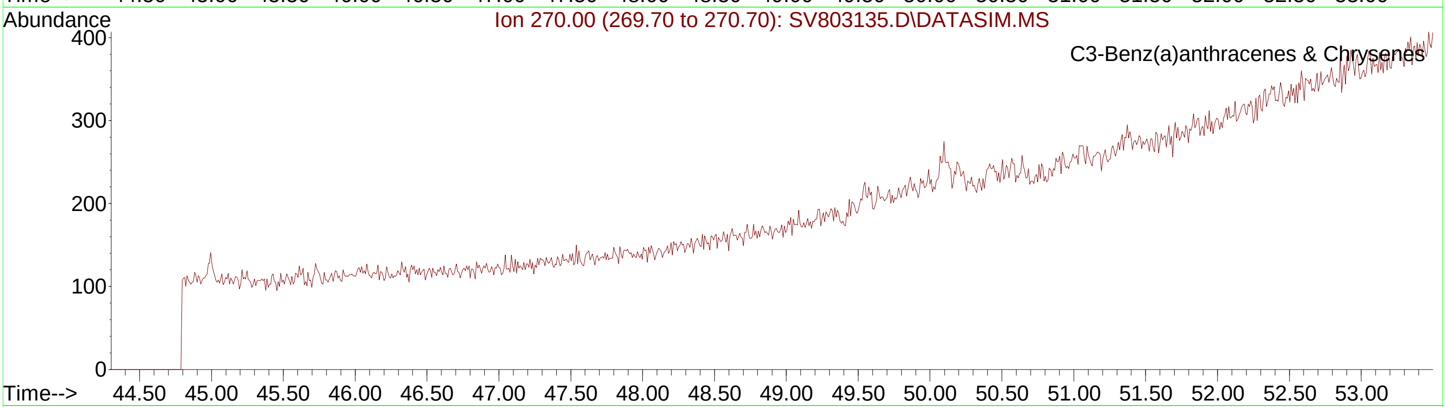

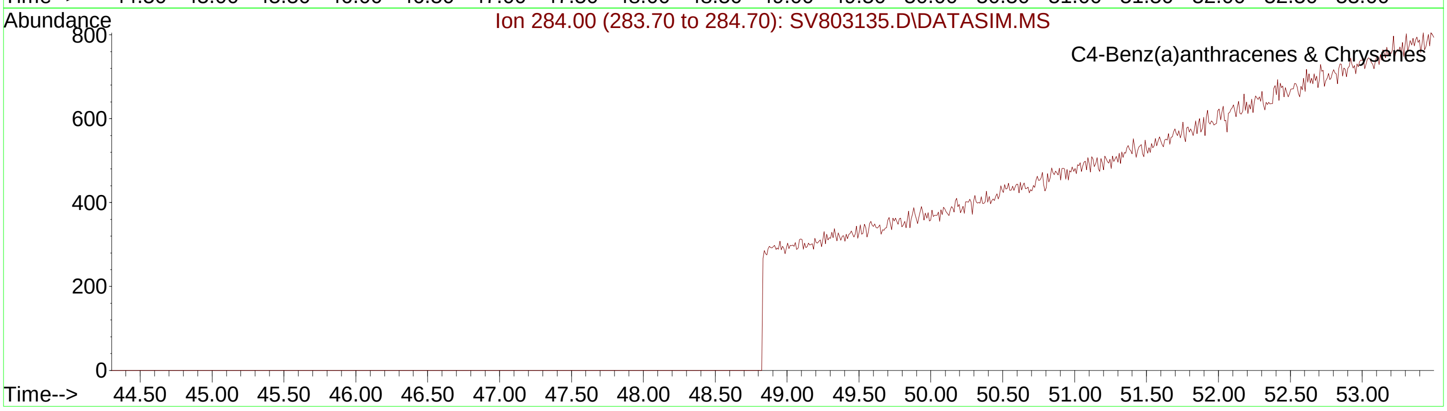

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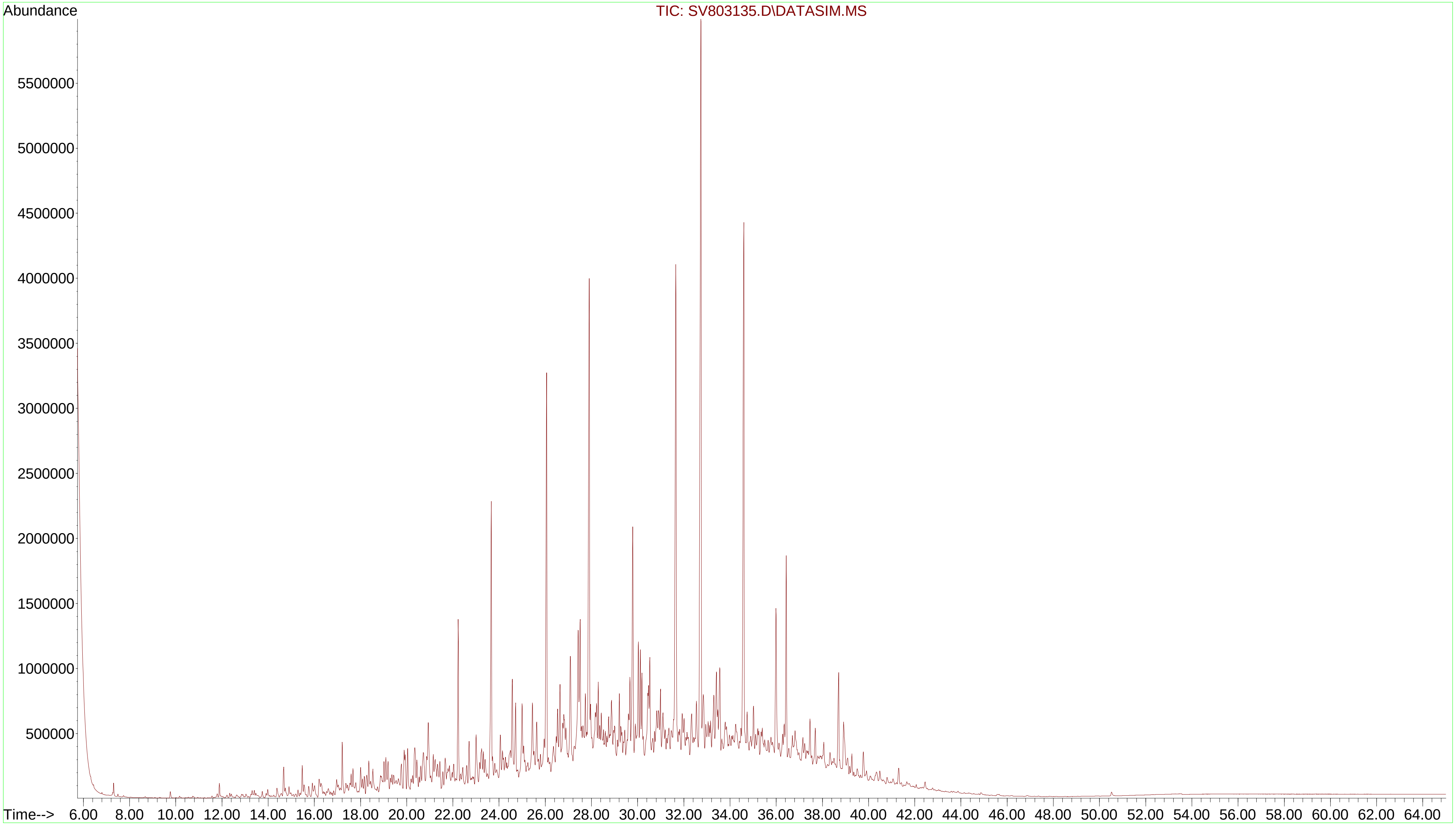

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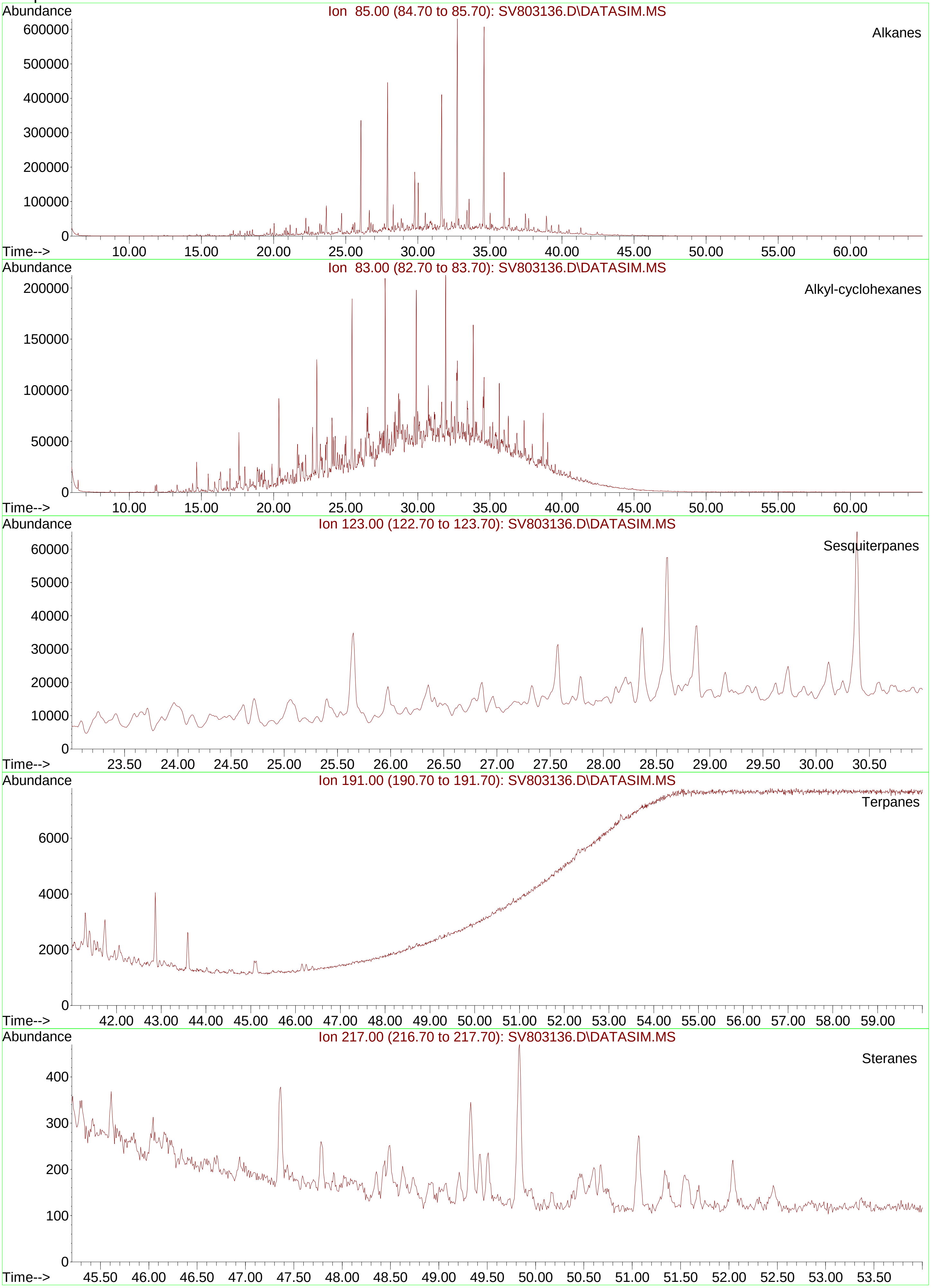

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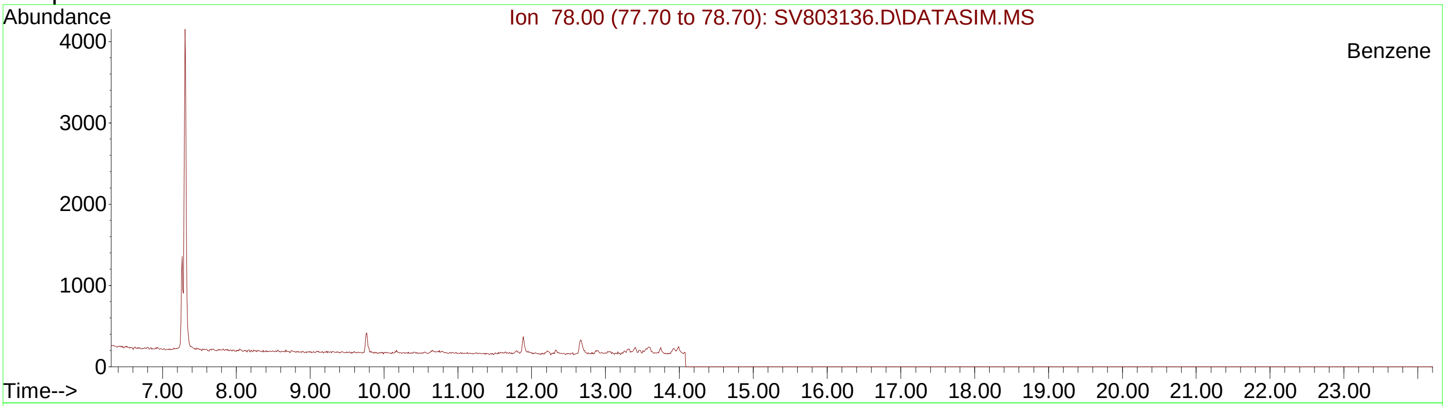

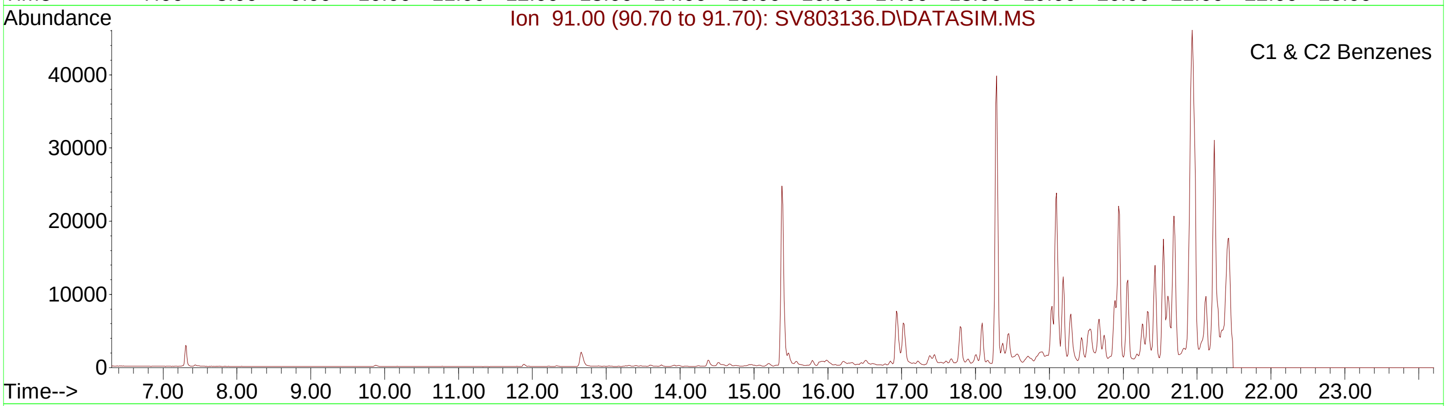

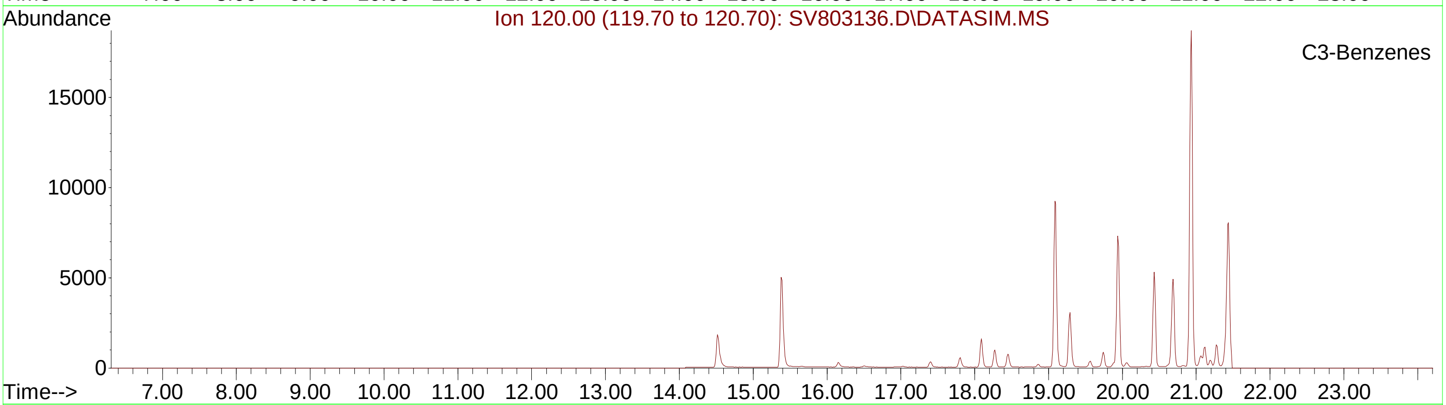

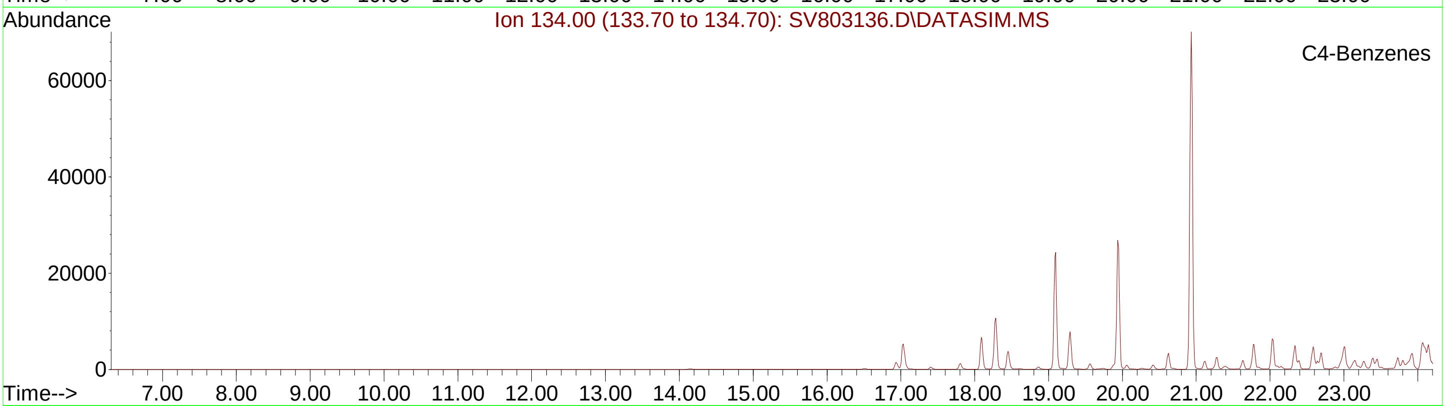

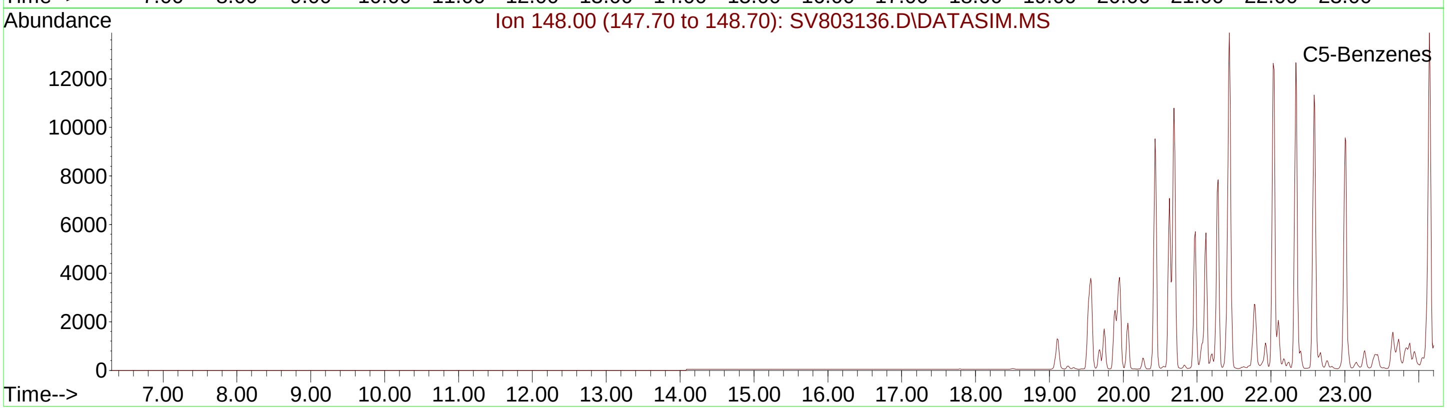

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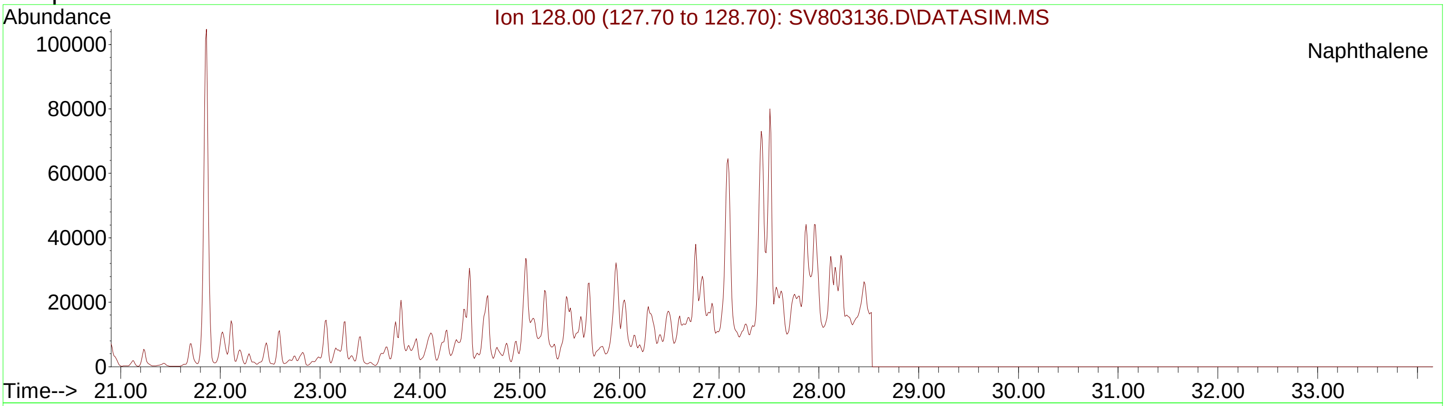
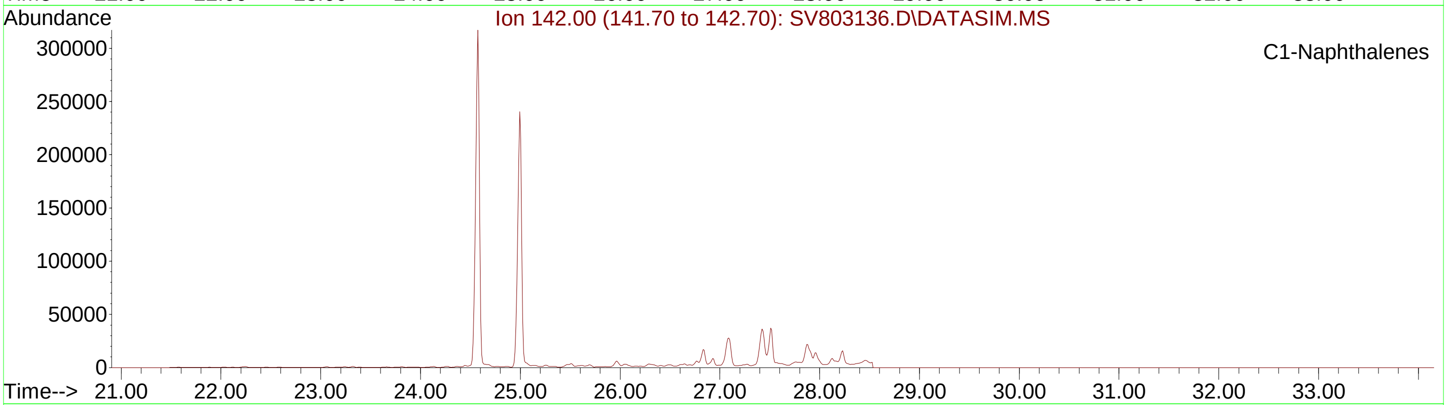
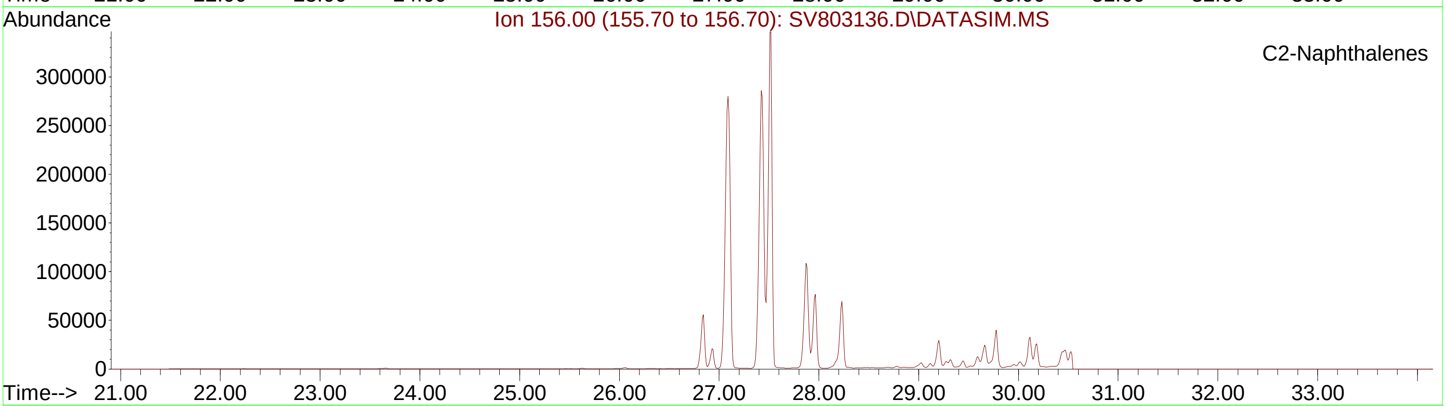
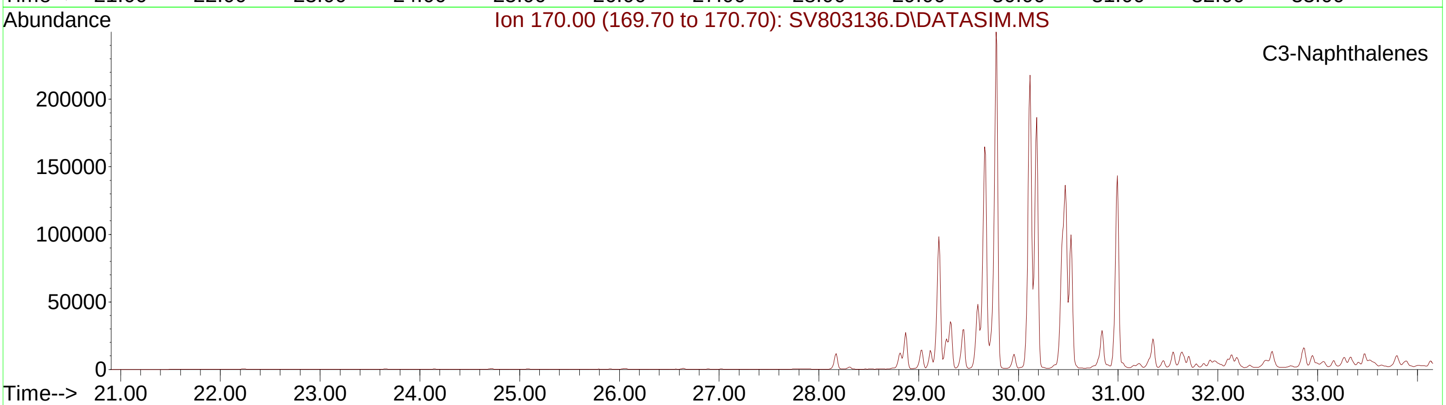
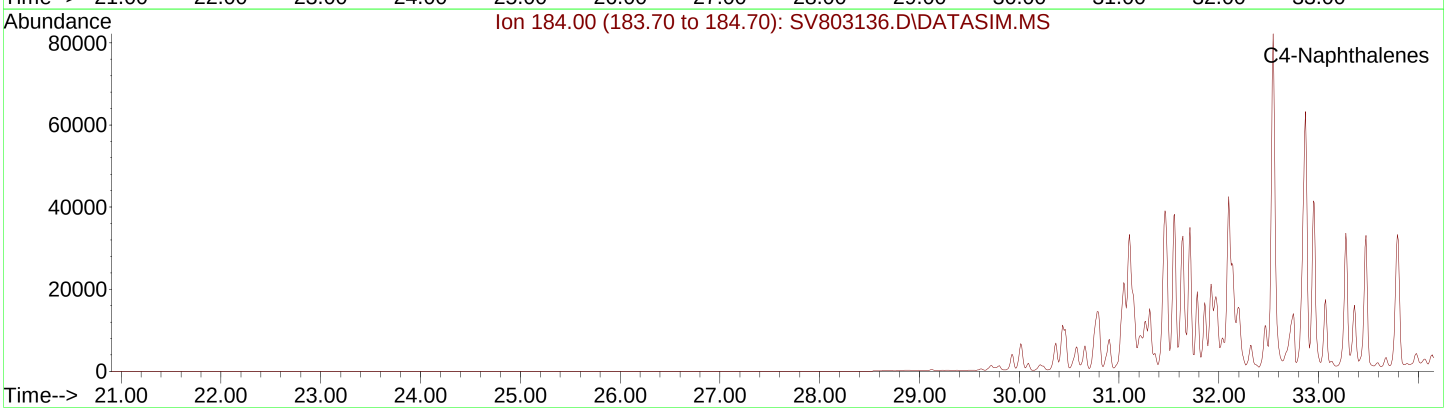






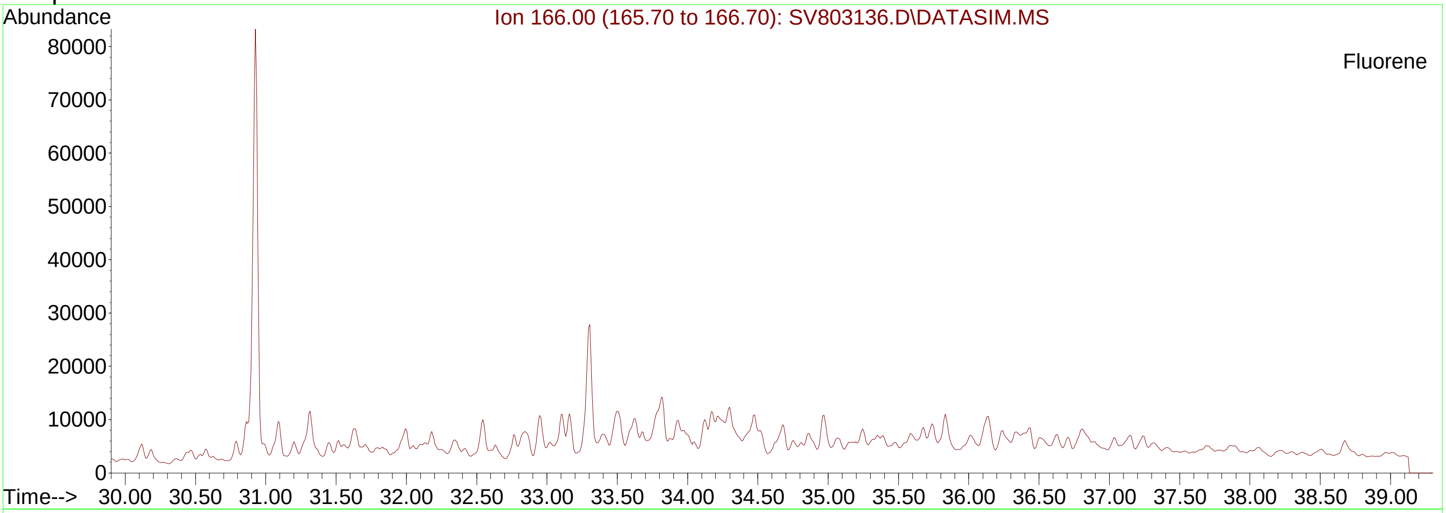


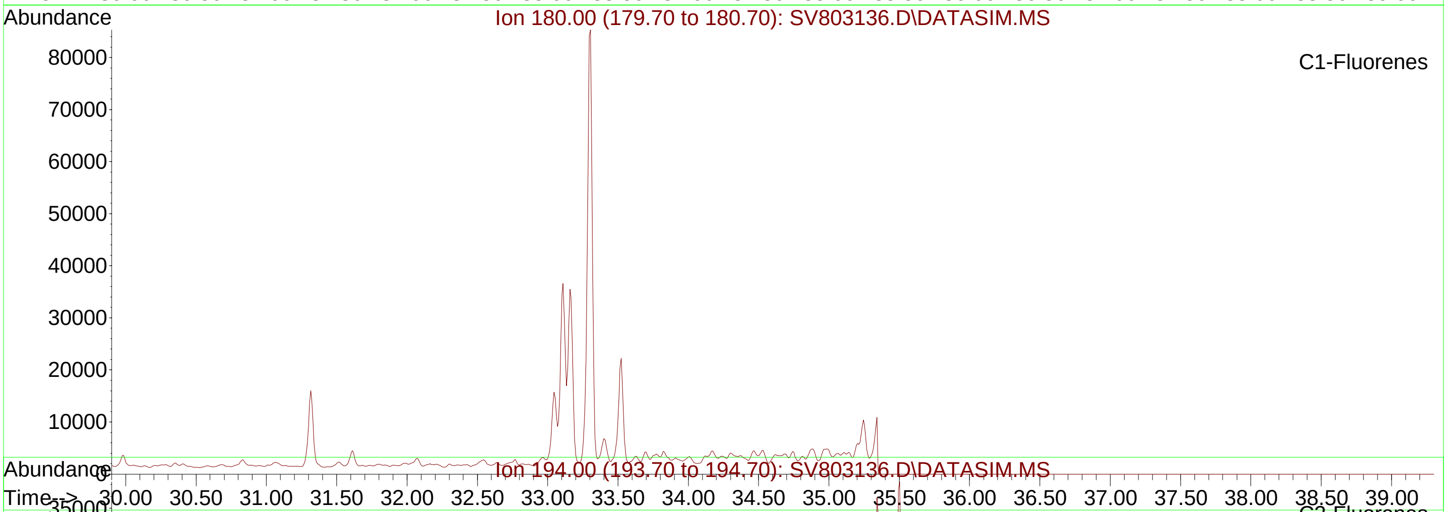


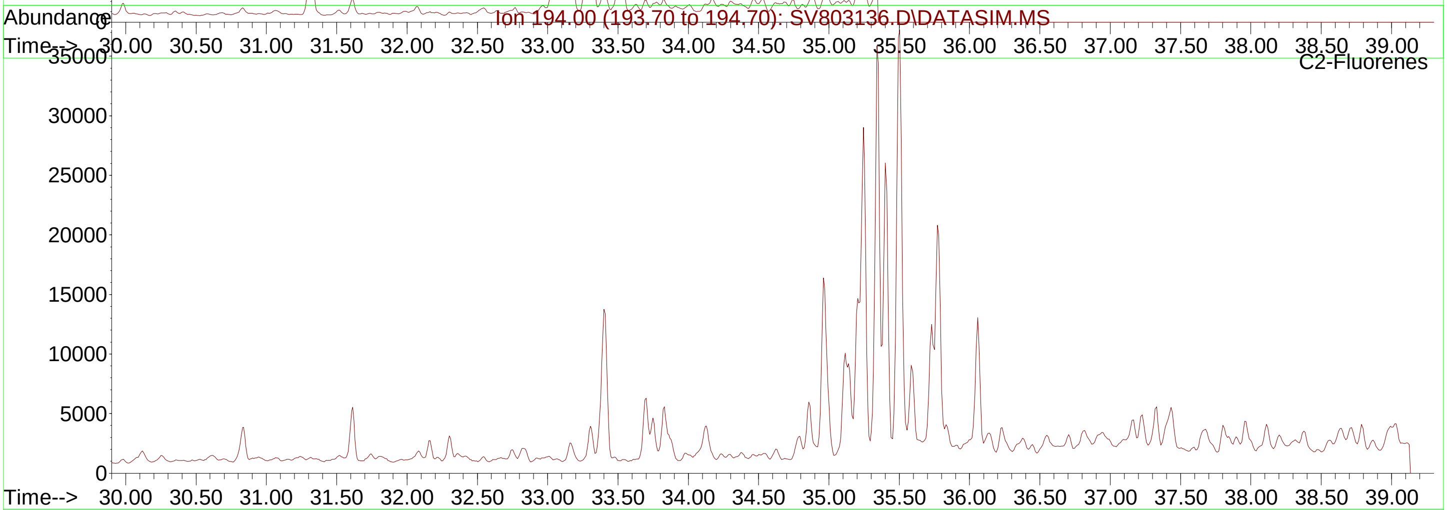
ESS LABORATORY

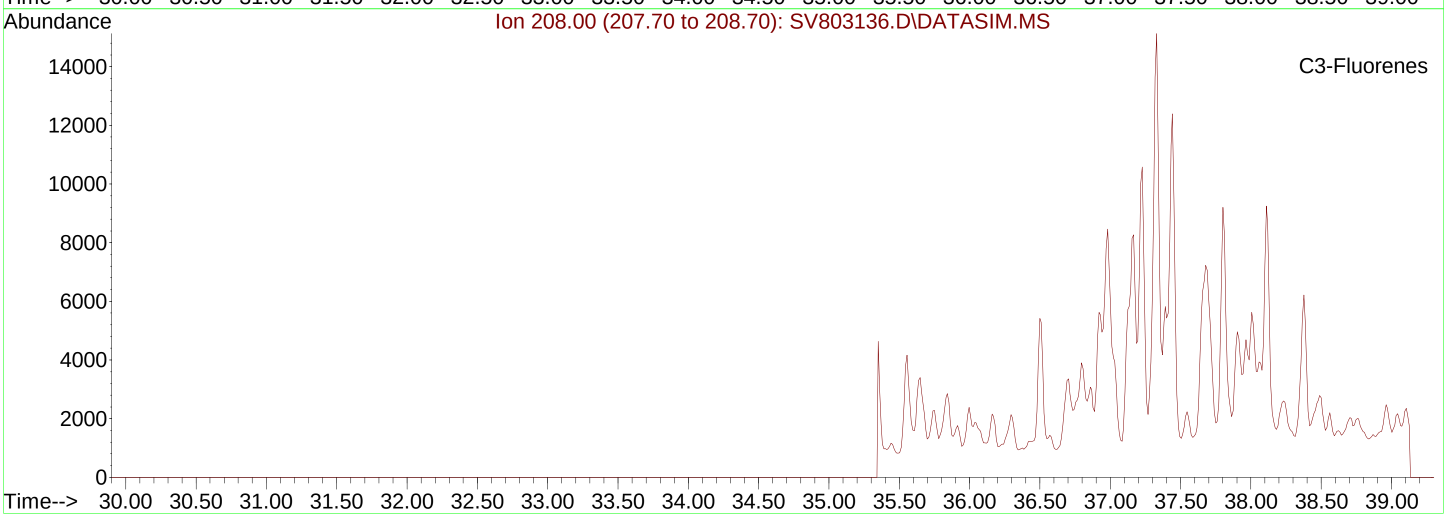
GC/MS EXTRACTED ION CHROMATOGRAM

File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803136.D
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP









ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

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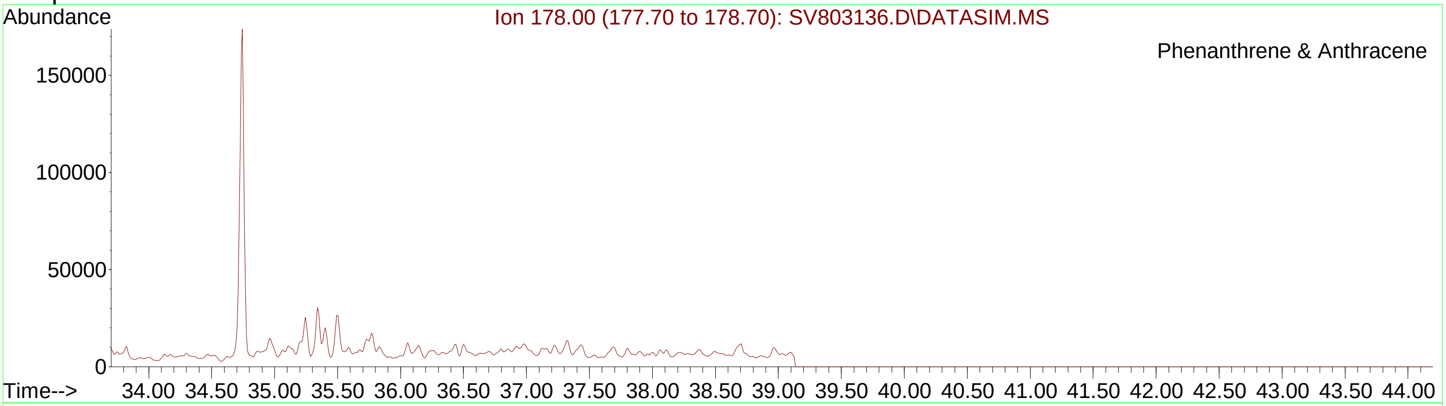
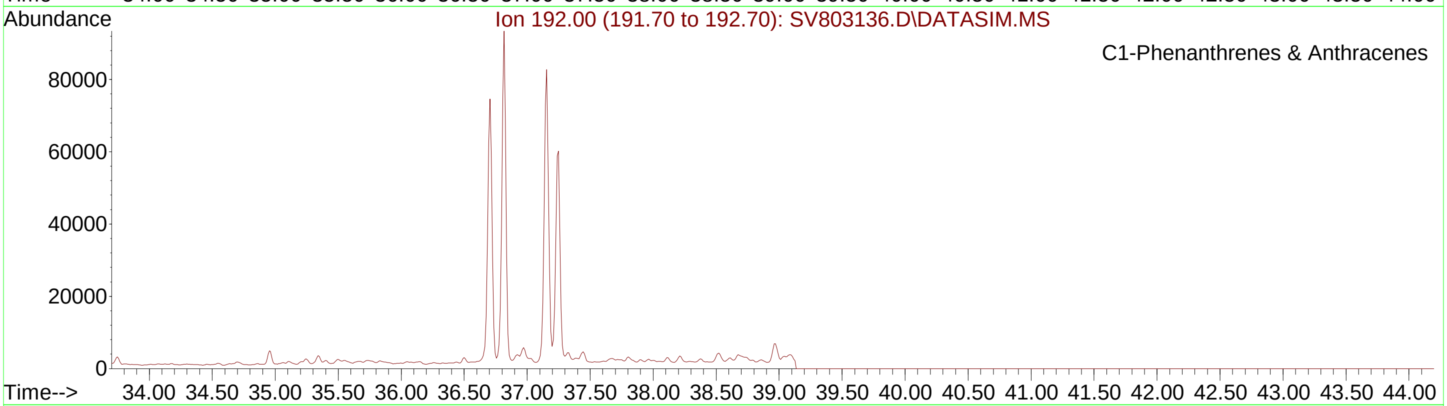
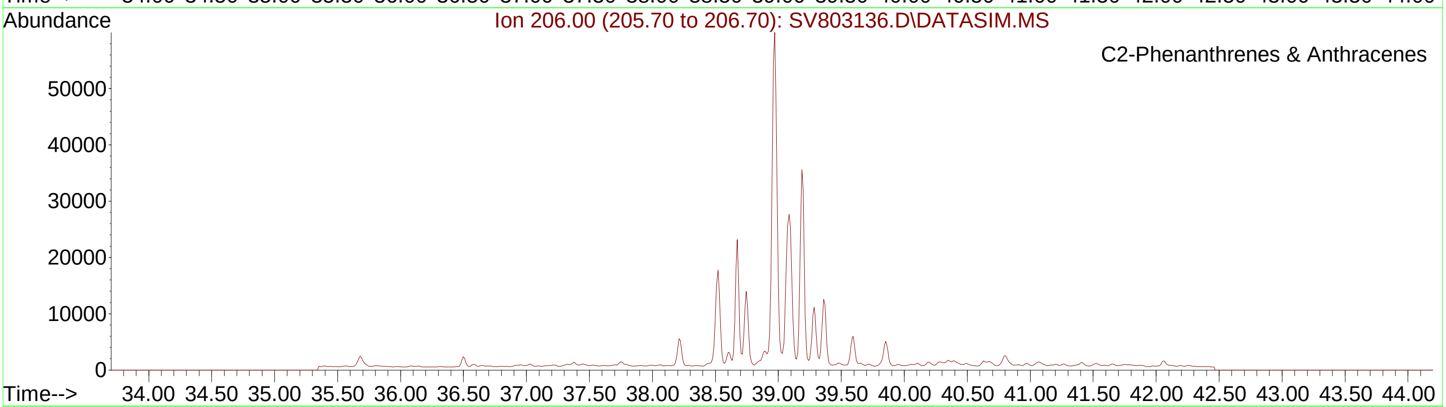
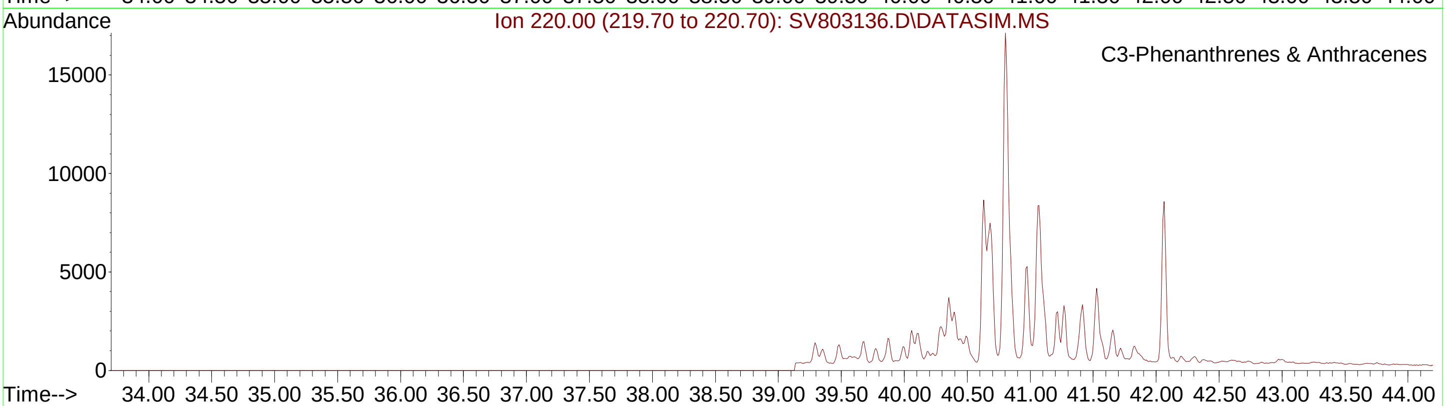
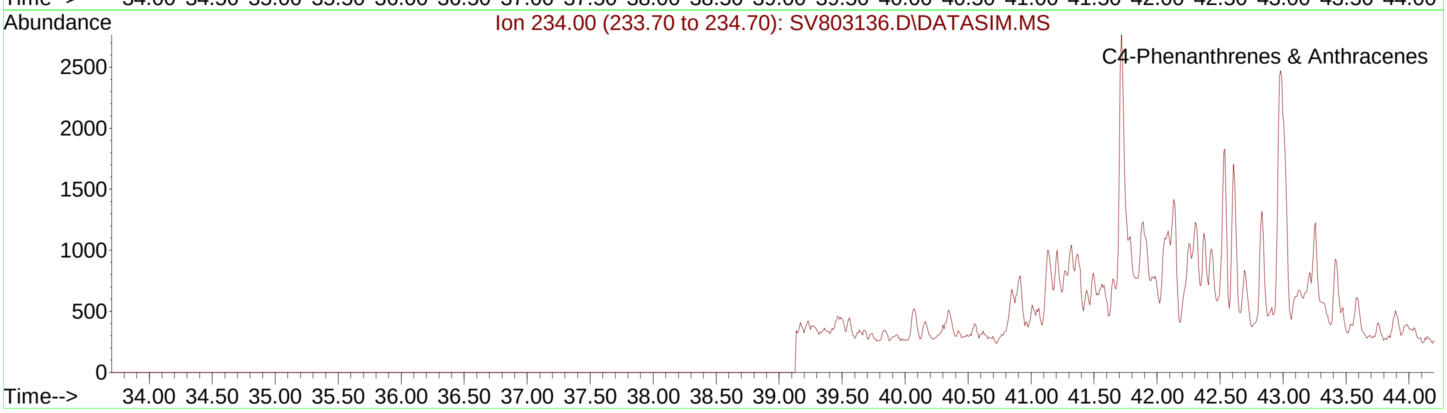
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP







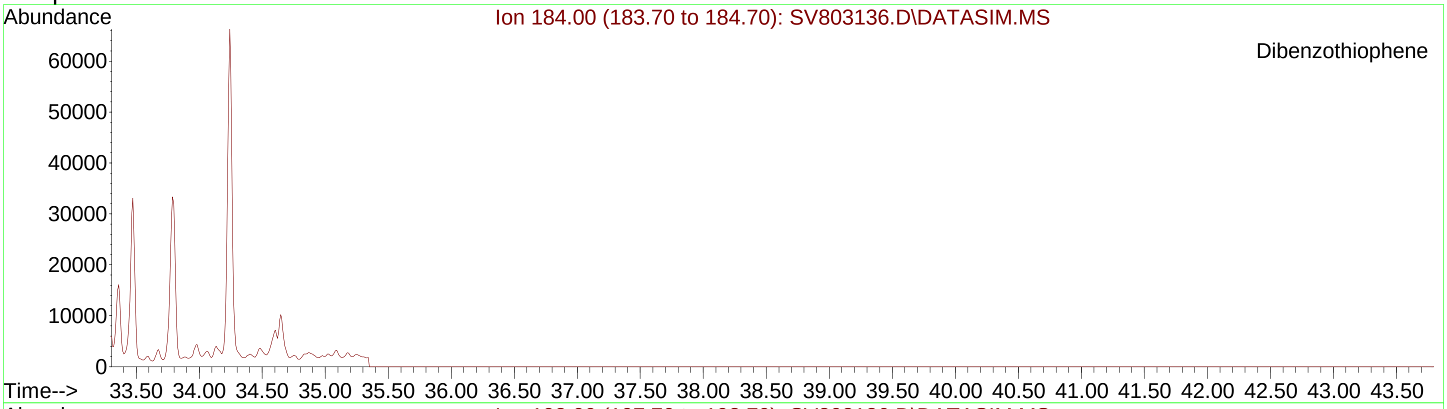


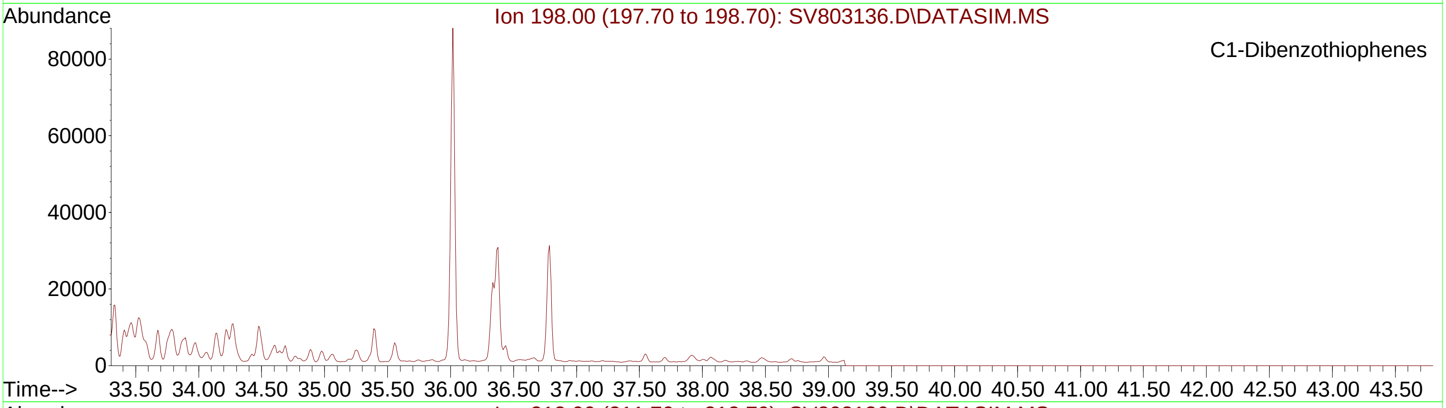


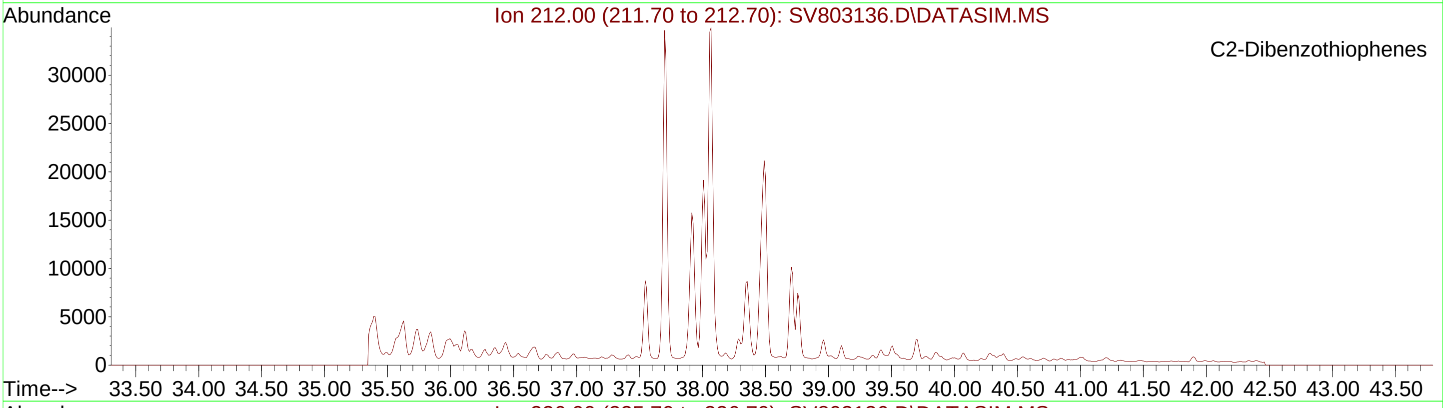
ESS LABORATORY

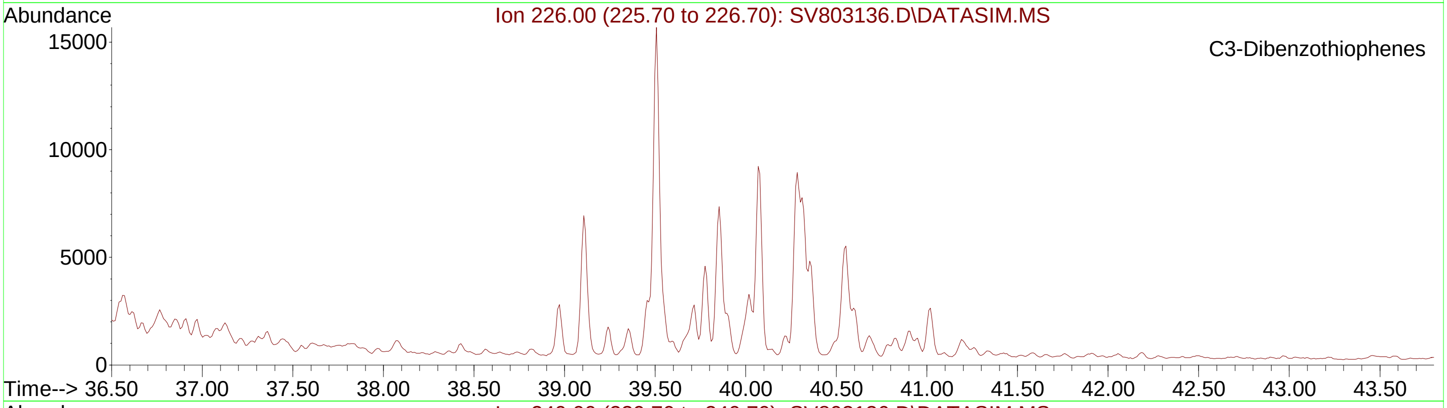
GC/MS EXTRACTED ION CHROMATOGRAM

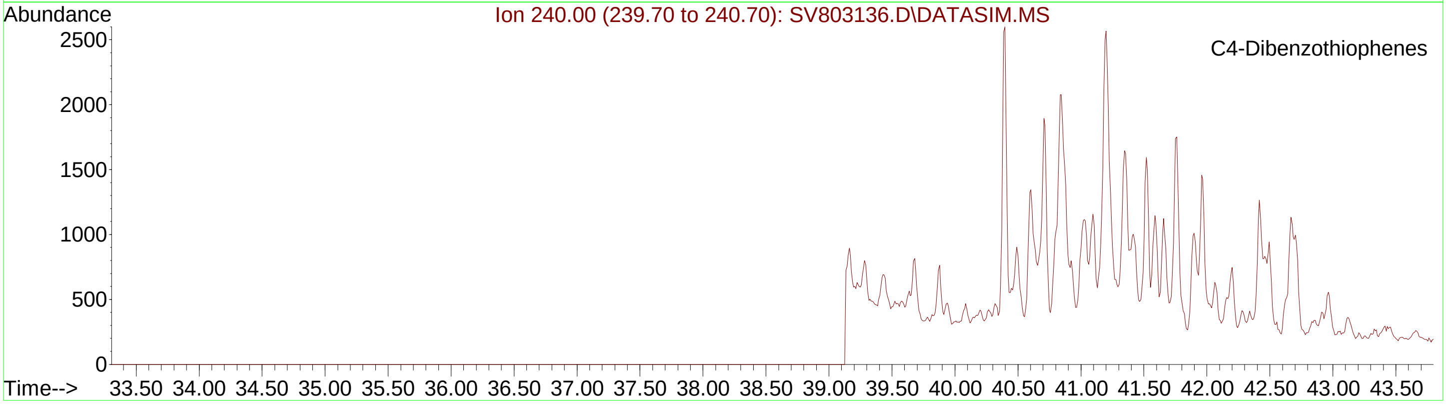
File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803136.D
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP







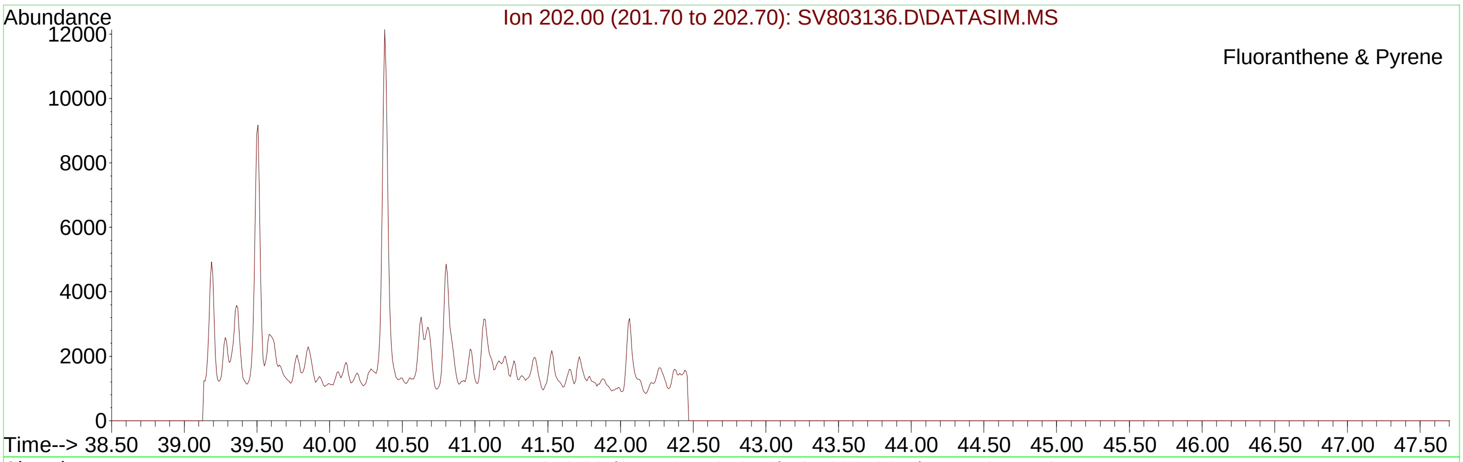


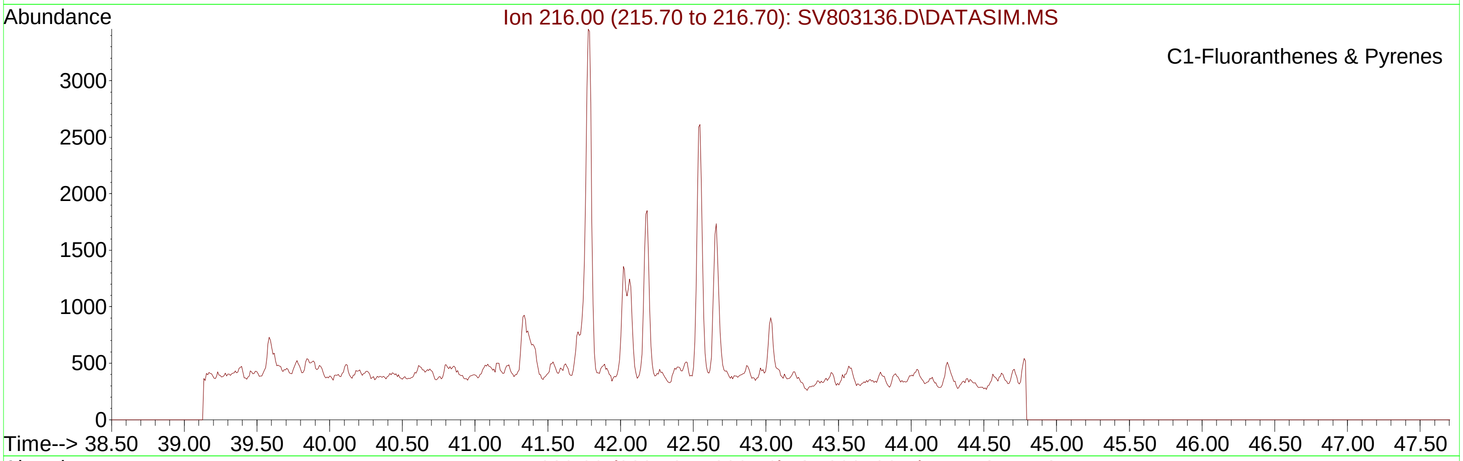


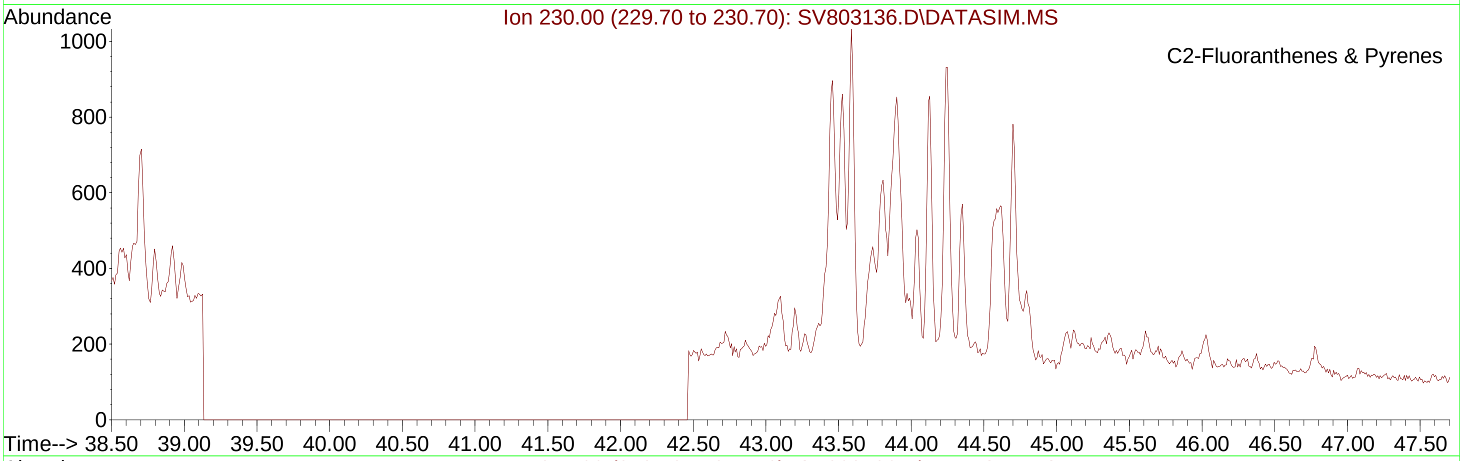
ESS LABORATORY

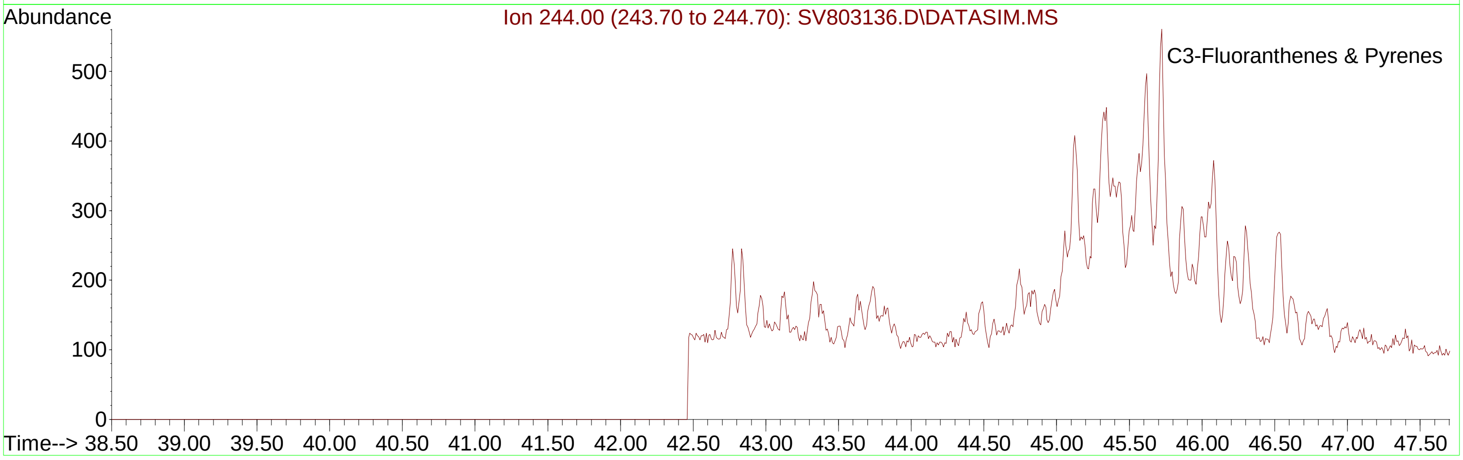
GC/MS EXTRACTED ION CHROMATOGRAM

File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803136.D
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP
Misc Info:





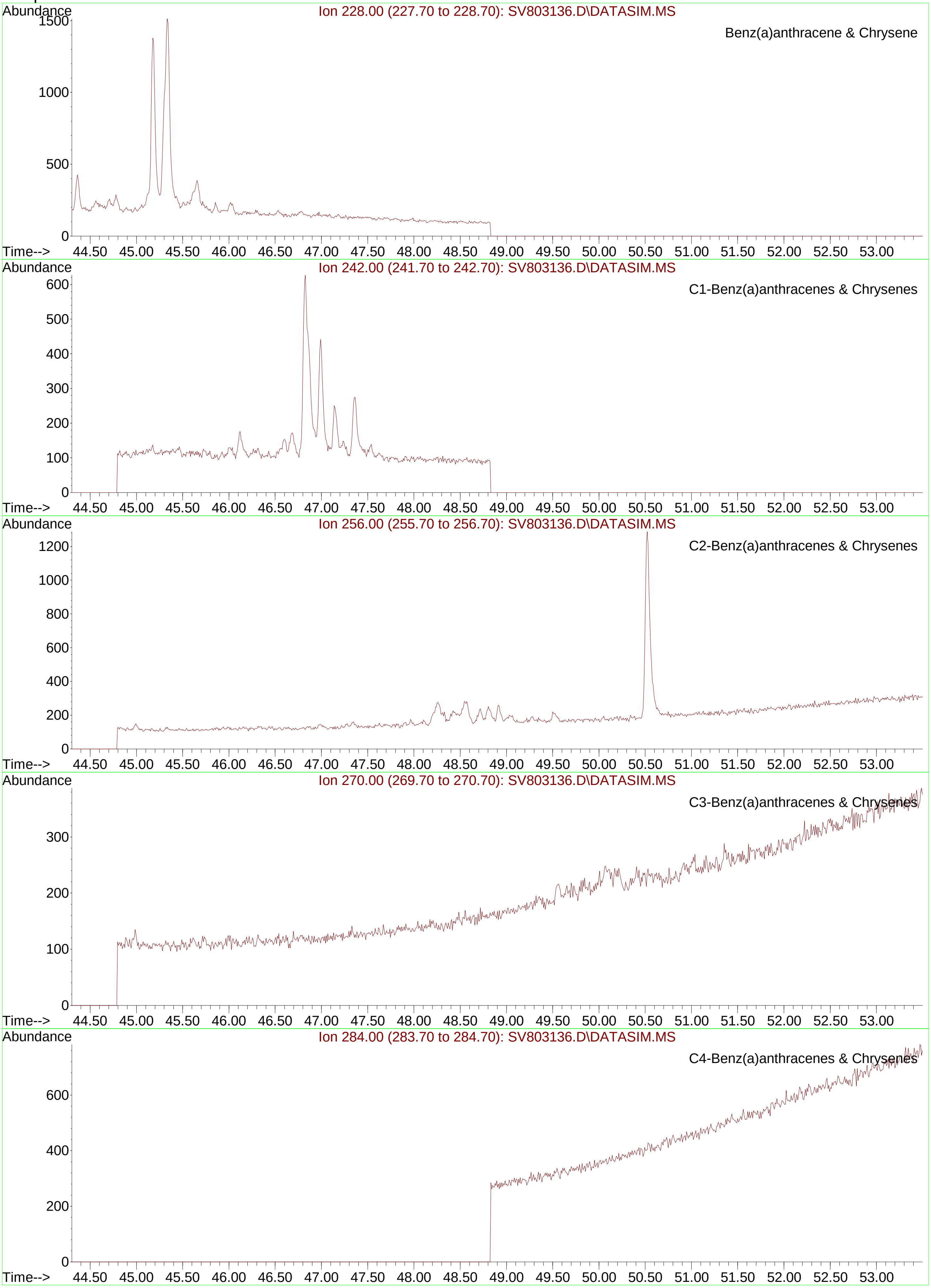




ESS LABORATORY

GC/MS EXTRACTED ION CHROMATOGRAM

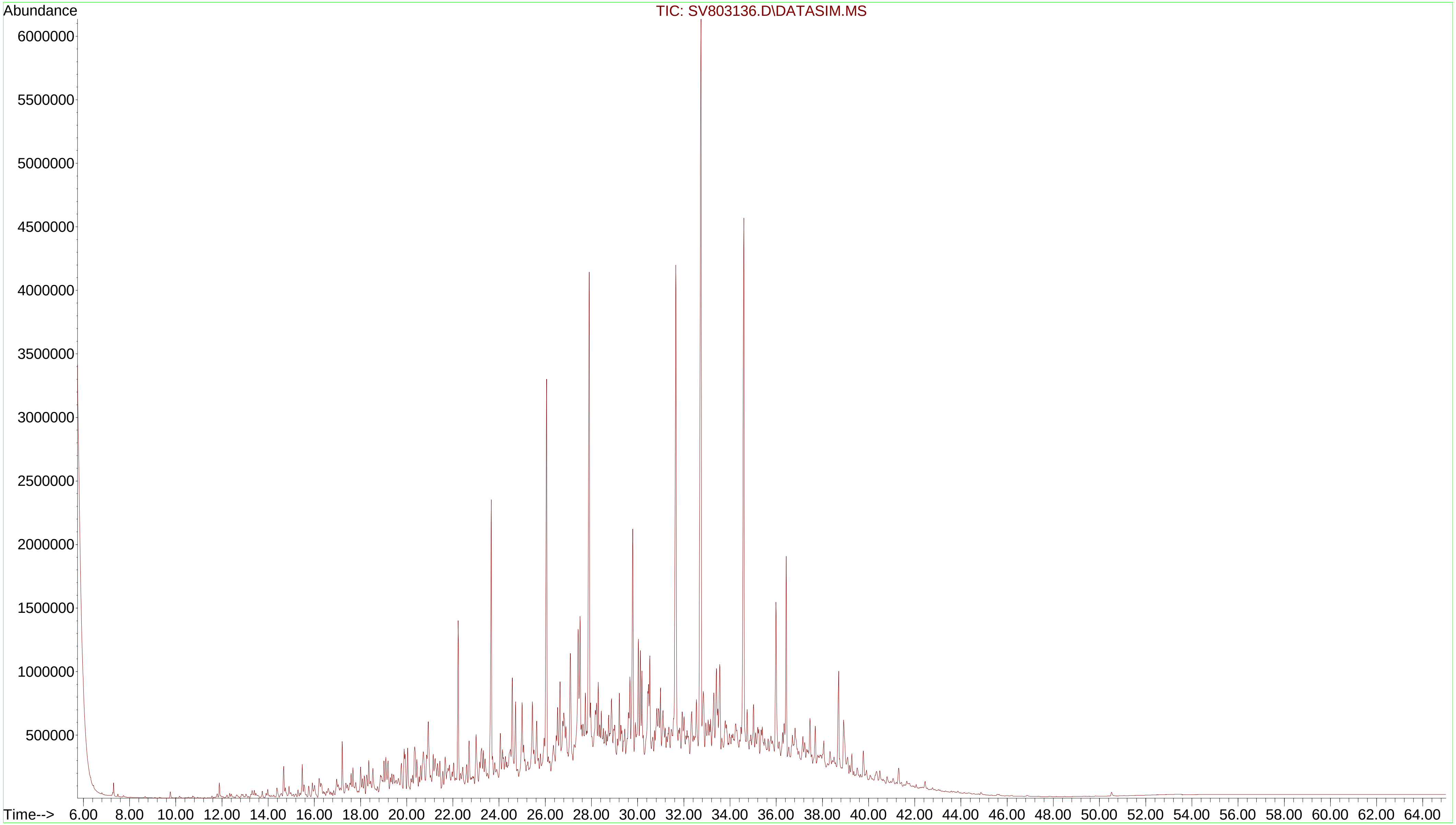
File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803136.D
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP



ESS LABORATORY

GC/MS TOTAL ION CHROMATOGRAM

File: Q:\SVOA\MS8\DATA\MS8-0619\062419\SV803136.D
Date Acquired: 25 Jun 2019 10:02 am
Sample Name: F190032-05DUP
Misc Info:



Appendix D

ESS Laboratory Report – F190032

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Paloma Environmental Services, Inc.
Paloma Evn Svr
52 El Prisma
Rancho Santa Margarita, CA 92688

RE: Former Harser Auto Tow (20180515)
ESS Laboratory Work Order Number: F190032

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 11:26 am, Jul 01, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division
of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow

ESS Laboratory Work Order: F190032

SAMPLE RECEIPT

The following samples were received on June 19, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
F190032-01	HMW-5	Oil	8015 Mod, 8270 Mod
F190032-02	MMW-7	Oil	8015 Mod, 8270 Mod
F190032-03	HMW-4	Oil	8015 Mod, 8270 Mod
F190032-04	MMW-9B	Oil	8015 Mod, 8270 Mod
F190032-05	HMW-3A	Oil	8015 Mod, 8270 Mod

ESS Laboratory
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BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow

ESS Laboratory Work Order: F190032

PROJECT NARRATIVE

Alkylated PAHs and Benzenes

F190032-01	**Present in Method Blank (B).**
	Benzene
F190032-02	**Present in Method Blank (B).**
	Benzene
F190032-03	**Present in Method Blank (B).**
	Benzene
F190032-04	**Present in Method Blank (B).**
	Benzene
F190032-05	**Present in Method Blank (B).**
	Benzene
FF92101-DUP2	**Relative percent difference for duplicate is outside of criteria (D+).**
	Benzo(j/k)fluoranthene (21% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow

ESS Laboratory Work Order: F190032

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015B Mod - TPH by GCFID
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D Mod - Alkylated PAHs and Benzenes
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3511 - Microsolvent Extraction Aqueous
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3570 - Microsolvent Extraction Soild
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-5
Date Sampled: 06/11/19 15:00
Percent Solids: N/A
Initial Volume: 0.0127
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-01
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-8	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-9	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-10	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-11	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-12	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-13	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
2,6,10-trimethyldodecane (1380)	**7940** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-14	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
2,6,10-trimethyltridecane (1470)	**8750** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-15	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-16	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
2,6,10-trimethylpentadecane (1650)	**11500** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-17	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
Pristane	**15900** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-18	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
Phytane	**11200** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-19	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-20	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-21	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-22	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-23	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-24	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-25	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-26	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-27	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-28	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-29	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-30	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-31	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-32	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-33	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-34	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101

ESS Laboratory
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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-5
Date Sampled: 06/11/19 15:00
Percent Solids: N/A
Initial Volume: 0.0127
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-01
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-35	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-36	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-37	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-38	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-39	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
C-40	ND (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101
TPH (C8-C40)	**781000** (157)	78.7	8015 Mod		1	NL	06/22/19 1:00	F9F0010	FF92101

	%Recovery	Qualifier	Limits
Surrogate: o-Terphenyl	*93 %*		*50-120*

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-5
Date Sampled: 06/11/19 15:00
Percent Solids: N/A
Initial Volume: 0.0127
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-01
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Benzene	B **3.51** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Benzene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Benzenes	**2.14** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Benzenes	**45.7** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C4-Benzenes	**580** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C5-Benzenes	**479** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Toluene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Ethylbenzene	**3.58** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
m,p-Xylene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Styrene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
o-Xylene	J **1.17** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Isopropylbenzene	**37.5** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
n-Propylbenzene	**83.9** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
1,3,5-Trimethylbenzene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
1,2,3-Trimethylbenzene	**7.32** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
1,2,4-Trimethylbenzene	**1.58** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
t-Butylbenzene	**2.90** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
sec-Butylbenzene	**92.0** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
p-Isopropyltoluene	**2.10** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
n-Butylbenzene	**135** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
trans-Decalin	**496** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
cis-Decalin	**139** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(b)thiophene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Naphthalene	**367** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
2-Methylnaphthalene	**1390** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
1-Methylnaphthalene	**1160** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Naphthalenes	**1570** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Naphthalenes	**4090** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Naphthalenes	**4150** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C4-Naphthalenes	**2390** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Biphenyl	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Acenaphthylene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101

ESS Laboratory
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BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-5
Date Sampled: 06/11/19 15:00
Percent Solids: N/A
Initial Volume: 0.0127
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-01
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Acenaphthene	**79.2** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Dibenzofuran	**80.6** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Fluorene	**281** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Fluorenes	**624** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Fluorenes	**819** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Fluorenes	**466** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Dibenzothiophene	**178** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Dibenzothiophenes	**416** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Dibenzothiophenes	**433** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Dibenzothiophenes	**241** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C4-Dibenzothiophenes	**86.8** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Phenanthrene	**470** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Anthracene	**409** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Phenanthrenes/Anthracenes	**868** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Phenanthrenes/Anthracenes	**653** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Phenanthrenes/Anthracenes	**291** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C4-Phenanthrenes/Anthracenes	**98.9** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Retene	**33.3** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(b)naphtho(2,1-d)thiophene	**2.74** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Fluoranthene	**13.3** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Pyrene	**26.1** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Fluoranthenes/Pyrenes	**44.8** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C2-Fluoranthenes/Pyrenes	**37.1** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Fluoranthenes/Pyrenes	**23.8** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(b)fluorene	**3.05** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(c)fluorene	**2.11** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
2-Methylpyrene	**5.47** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
4-Methylpyrene	**7.71** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
1-Methylpyrene	**5.13** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benz(a)anthracene	**2.74** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Chrysene/triphenylene	**6.07** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C1-Benzo(a)anthracenes/Chrysenes	**7.31** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101

ESS Laboratory

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-5
Date Sampled: 06/11/19 15:00
Percent Solids: N/A
Initial Volume: 0.0127
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-01
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C2-Benzo(a)anthracenes/Chrysenes	**6.76** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C3-Benzo(a)anthracenes/Chrysenes	**5.07** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
C4-Benzo(a)anthracenes/Chrysenes	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(b)fluoranthene	**J 0.868** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(j/k)fluoranthene	**J 0.858** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(e)pyrene	**J 0.936** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(a)pyrene	**J 1.04** (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Perylene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Indeno(1,2,3-cd)pyrene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Dibenzo(a,h)anthracene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Benzo(g,h,i)perylene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101
Coronene	ND (1.57)	0.787	8270 Mod		1	IBM	06/24/19 22:45	F9F0011	FF92101

	%Recovery	Qualifier	Limits
Surrogate: Naphthalene-d8	*90 %*		*50-120*
Surrogate: Perylene-d12	*90 %*		*50-120*
Surrogate: Phenanthrene-d10	*110 %*		*50-120*
Surrogate: Toluene-D8	*96 %*		*50-120*

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-7
Date Sampled: 06/11/19 14:35
Percent Solids: N/A
Initial Volume: 0.0131
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-02
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-8	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-9	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-10	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-11	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-12	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-13	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
2,6,10-trimethyldodecane (1380)	**8470** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-14	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
2,6,10-trimethyltridecane (1470)	**9330** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-15	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-16	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
2,6,10-trimethylpentadecane (1650)	**12000** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-17	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
Pristane	**17500** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-18	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
Phytane	**12100** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-19	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-20	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-21	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-22	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-23	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-24	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-25	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-26	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-27	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-28	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-29	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-30	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-31	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-32	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-33	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-34	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
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of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-7
Date Sampled: 06/11/19 14:35
Percent Solids: N/A
Initial Volume: 0.0131
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-02
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-35	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-36	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-37	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-38	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-39	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
C-40	ND (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101
TPH (C8-C40)	**829000** (153)	76.3	8015 Mod		1	NL	06/22/19 2:20	F9F0010	FF92101

	%Recovery	Qualifier	Limits
Surrogate: o-Terphenyl	*97 %*		*50-120*

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-7
Date Sampled: 06/11/19 14:35
Percent Solids: N/A
Initial Volume: 0.0131
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-02
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Benzene	B **2.66** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Benzene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Benzenes	**3.63** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Benzenes	**43.1** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C4-Benzenes	**653** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C5-Benzenes	**526** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Toluene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Ethylbenzene	**8.53** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
m,p-Xylene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Styrene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
o-Xylene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Isopropylbenzene	**33.3** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
n-Propylbenzene	**71.0** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
1,3,5-Trimethylbenzene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
1,2,3-Trimethylbenzene	**15.3** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
1,2,4-Trimethylbenzene	J **0.810** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
t-Butylbenzene	**3.17** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
sec-Butylbenzene	**88.1** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
p-Isopropyltoluene	**3.07** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
n-Butylbenzene	**125** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
trans-Decalin	**565** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
cis-Decalin	**149** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(b)thiophene	**19.3** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Naphthalene	**241** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
2-Methylnaphthalene	**1430** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
1-Methylnaphthalene	**1150** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Naphthalenes	**1600** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Naphthalenes	**4380** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Naphthalenes	**4270** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C4-Naphthalenes	**2510** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Biphenyl	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Acenaphthylene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-7
Date Sampled: 06/11/19 14:35
Percent Solids: N/A
Initial Volume: 0.0131
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-02
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Acenaphthene	**84.1** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Dibenzofuran	**86.4** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Fluorene	**292** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Fluorenes	**662** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Fluorenes	**839** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Fluorenes	**485** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Dibenzothiophene	**180** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Dibenzothiophenes	**413** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Dibenzothiophenes	**421** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Dibenzothiophenes	**238** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C4-Dibenzothiophenes	**84.9** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Phenanthrene	**503** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Anthracene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Phenanthrenes/Anthracenes	**928** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Phenanthrenes/Anthracenes	**695** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Phenanthrenes/Anthracenes	**307** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C4-Phenanthrenes/Anthracenes	**99.8** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Retene	**31.3** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(b)naphtho(2,1-d)thiophene	**3.09** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Fluoranthene	**11.5** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Pyrene	**24.2** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Fluoranthenes/Pyrenes	**45.6** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C2-Fluoranthenes/Pyrenes	**36.9** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Fluoranthenes/Pyrenes	**23.4** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(b)fluorene	**3.24** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(c)fluorene	**2.17** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
2-Methylpyrene	**5.43** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
4-Methylpyrene	**7.83** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
1-Methylpyrene	**5.08** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benz(a)anthracene	**1.95** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Chrysene/triphenylene	**5.85** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C1-Benzo(a)anthracenes/Chrysenes	**7.44** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101

ESS Laboratory
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BAL Laboratory
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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-7
Date Sampled: 06/11/19 14:35
Percent Solids: N/A
Initial Volume: 0.0131
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-02
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C2-Benzo(a)anthracenes/Chrysenes	**6.27** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C3-Benzo(a)anthracenes/Chrysenes	**3.57** (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
C4-Benzo(a)anthracenes/Chrysenes	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(b)fluoranthene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(j/k)fluoranthene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(e)pyrene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(a)pyrene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Perylene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Indeno(1,2,3-cd)pyrene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Dibenzo(a,h)anthracene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Benzo(g,h,i)perylene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101
Coronene	ND (1.53)	0.763	8270 Mod		1	IBM	06/25/19 0:09	F9F0011	FF92101

	%Recovery	Qualifier	Limits
Surrogate: Naphthalene-d8	*91 %*		*50-120*
Surrogate: Perylene-d12	*91 %*		*50-120*
Surrogate: Phenanthrene-d10	*110 %*		*50-120*
Surrogate: Toluene-D8	*95 %*		*50-120*

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-4
Date Sampled: 06/19/19 13:30
Percent Solids: N/A
Initial Volume: 0.0113
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-03
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-8	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-9	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-10	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-11	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-12	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-13	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
2,6,10-trimethyldodecane (1380)	**6840** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-14	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
2,6,10-trimethyltridecane (1470)	**8310** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-15	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-16	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
2,6,10-trimethylpentadecane (1650)	**12500** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-17	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
Pristane	**17600** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-18	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
Phytane	**12100** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-19	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-20	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-21	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-22	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-23	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-24	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-25	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-26	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-27	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-28	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-29	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-30	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-31	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-32	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-33	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-34	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101

ESS Laboratory
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BAL Laboratory
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of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-4
Date Sampled: 06/19/19 13:30
Percent Solids: N/A
Initial Volume: 0.0113
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-03
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-35	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-36	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-37	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-38	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-39	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
C-40	ND (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101
TPH (C8-C40)	**919000** (177)	88.5	8015 Mod		1	NL	06/22/19 3:39	F9F0010	FF92101

	%Recovery	Qualifier	Limits
Surrogate: o-Terphenyl	*98 %*		*50-120*

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-4
Date Sampled: 06/19/19 13:30
Percent Solids: N/A
Initial Volume: 0.0113
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-03
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Benzene	B **2.22** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Benzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Benzenes	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Benzenes	J **1.37** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C4-Benzenes	**94.7** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C5-Benzenes	**224** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Toluene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Ethylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
m,p-Xylene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Styrene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
o-Xylene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Isopropylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
n-Propylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
1,3,5-Trimethylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
1,2,3-Trimethylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
1,2,4-Trimethylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
t-Butylbenzene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
sec-Butylbenzene	**3.31** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
p-Isopropyltoluene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
n-Butylbenzene	**7.47** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
trans-Decalin	**201** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
cis-Decalin	**92.0** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(b)thiophene	**10.1** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Naphthalene	**57.0** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
2-Methylnaphthalene	**382** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
1-Methylnaphthalene	**435** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Naphthalenes	**514** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Naphthalenes	**2580** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Naphthalenes	**3850** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C4-Naphthalenes	**2650** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Biphenyl	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Acenaphthylene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-4
Date Sampled: 06/19/19 13:30
Percent Solids: N/A
Initial Volume: 0.0113
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-03
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Acenaphthene	**53.3** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Dibenzofuran	**57.2** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Fluorene	**252** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Fluorenes	**678** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Fluorenes	**983** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Fluorenes	**568** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Dibenzothiophene	**148** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Dibenzothiophenes	**422** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Dibenzothiophenes	**482** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Dibenzothiophenes	**272** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C4-Dibenzothiophenes	**95.6** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Phenanthrene	**277** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Anthracene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Phenanthrenes/Anthracenes	**709** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Phenanthrenes/Anthracenes	**598** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Phenanthrenes/Anthracenes	**255** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C4-Phenanthrenes/Anthracenes	**84.0** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Retene	**26.4** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(b)naphtho(2,1-d)thiophene	**J 1.74** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Fluoranthene	**13.3** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Pyrene	**27.9** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Fluoranthenes/Pyrenes	**38.1** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C2-Fluoranthenes/Pyrenes	**25.5** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Fluoranthenes/Pyrenes	**15.7** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(b)fluorene	**1.86** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(c)fluorene	**1.82** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
2-Methylpyrene	**4.35** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
4-Methylpyrene	**8.01** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
1-Methylpyrene	**4.58** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benz(a)anthracene	**J 1.75** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Chrysene/triphenylene	**4.55** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C1-Benzo(a)anthracenes/Chrysenes	**4.15** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101

ESS Laboratory
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BAL Laboratory
The Microbiology Division
of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-4
Date Sampled: 06/19/19 13:30
Percent Solids: N/A
Initial Volume: 0.0113
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-03
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C2-Benzo(a)anthracenes/Chrysenes	**4.21** (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C3-Benzo(a)anthracenes/Chrysenes	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
C4-Benzo(a)anthracenes/Chrysenes	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(b)fluoranthene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(j/k)fluoranthene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(e)pyrene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(a)pyrene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Perylene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Indeno(1,2,3-cd)pyrene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Dibenzo(a,h)anthracene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Benzo(g,h,i)perylene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101
Coronene	ND (1.77)	0.885	8270 Mod		1	IBM	06/25/19 1:34	F9F0011	FF92101

	%Recovery	Qualifier	Limits
Surrogate: Naphthalene-d8	*88 %*		*50-120*
Surrogate: Perylene-d12	*92 %*		*50-120*
Surrogate: Phenanthrene-d10	*111 %*		*50-120*
Surrogate: Toluene-D8	*94 %*		*50-120*

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-9B
Date Sampled: 06/19/19 14:15
Percent Solids: N/A
Initial Volume: 0.0142
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-04
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-8	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-9	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-10	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-11	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-12	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-13	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
2,6,10-trimethyldodecane (1380)	**7360** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-14	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
2,6,10-trimethyltridecane (1470)	**8490** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-15	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-16	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
2,6,10-trimethylpentadecane (1650)	**10600** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-17	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
Pristane	**14800** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-18	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
Phytane	**10300** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-19	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-20	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-21	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-22	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-23	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-24	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-25	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-26	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-27	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-28	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-29	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-30	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-31	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-32	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-33	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-34	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101

ESS Laboratory
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BAL Laboratory
The Microbiology Division
of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-9B
Date Sampled: 06/19/19 14:15
Percent Solids: N/A
Initial Volume: 0.0142
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-04
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-35	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-36	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-37	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-38	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-39	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
C-40	ND (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101
TPH (C8-C40)	**785000** (141)	70.4	8015 Mod		1	NL	06/22/19 4:59	F9F0010	FF92101

	%Recovery	Qualifier	Limits
Surrogate: o-Terphenyl	*97 %*		*50-120*

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-9B
Date Sampled: 06/19/19 14:15
Percent Solids: N/A
Initial Volume: 0.0142
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-04
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Benzene	B **4.14** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Benzene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Benzenes	**6.00** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Benzenes	**46.0** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C4-Benzenes	**681** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C5-Benzenes	**534** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Toluene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Ethylbenzene	**14.1** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
m,p-Xylene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Styrene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
o-Xylene	J **0.971** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Isopropylbenzene	**39.1** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
n-Propylbenzene	**95.7** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
1,3,5-Trimethylbenzene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
1,2,3-Trimethylbenzene	**2.02** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
1,2,4-Trimethylbenzene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
t-Butylbenzene	**3.08** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
sec-Butylbenzene	**113** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
p-Isopropyltoluene	**1.74** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
n-Butylbenzene	**160** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
trans-Decalin	**485** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
cis-Decalin	**140** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(b)thiophene	**19.9** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Naphthalene	**459** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
2-Methylnaphthalene	**1660** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
1-Methylnaphthalene	**1240** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Naphthalenes	**1820** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Naphthalenes	**3950** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Naphthalenes	**4110** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C4-Naphthalenes	**2330** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Biphenyl	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Acenaphthylene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101

ESS Laboratory
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BAL Laboratory
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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-9B
Date Sampled: 06/19/19 14:15
Percent Solids: N/A
Initial Volume: 0.0142
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-04
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Acenaphthene	**79.1** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Dibenzofuran	**97.0** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Fluorene	**312** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Fluorenes	**681** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Fluorenes	**888** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Fluorenes	**496** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Dibenzothiophene	**199** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Dibenzothiophenes	**482** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Dibenzothiophenes	**503** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Dibenzothiophenes	**273** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C4-Dibenzothiophenes	**95.2** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Phenanthrene	**508** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Anthracene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Phenanthrenes/Anthracenes	**884** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Phenanthrenes/Anthracenes	**635** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Phenanthrenes/Anthracenes	**260** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C4-Phenanthrenes/Anthracenes	**84.4** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Retene	**27.6** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(b)naphtho(2,1-d)thiophene	**3.11** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Fluoranthene	**25.7** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Pyrene	**36.5** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Fluoranthenes/Pyrenes	**41.7** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C2-Fluoranthenes/Pyrenes	**29.9** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Fluoranthenes/Pyrenes	**19.4** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(b)fluorene	**3.24** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(c)fluorene	**2.07** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
2-Methylpyrene	**4.69** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
4-Methylpyrene	**7.14** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
1-Methylpyrene	**4.44** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benz(a)anthracene	**5.59** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Chrysene/triphenylene	**8.46** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C1-Benzo(a)anthracenes/Chrysenes	**7.25** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101

ESS Laboratory
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BAL Laboratory
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of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: MMW-9B
Date Sampled: 06/19/19 14:15
Percent Solids: N/A
Initial Volume: 0.0142
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-04
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C2-Benzo(a)anthracenes/Chrysenes	**5.96** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C3-Benzo(a)anthracenes/Chrysenes	**3.13** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
C4-Benzo(a)anthracenes/Chrysenes	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(b)fluoranthene	**1.54** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(j/k)fluoranthene	**2.45** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(e)pyrene	**1.60** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(a)pyrene	**2.36** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Perylene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Indeno(1,2,3-cd)pyrene	**J 0.808** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Dibenzo(a,h)anthracene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Benzo(g,h,i)perylene	**J 0.764** (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101
Coronene	ND (1.41)	0.704	8270 Mod		1	IBM	06/25/19 7:14	F9F0011	FF92101

	%Recovery	Qualifier	Limits
Surrogate: Naphthalene-d8	*92 %*		*50-120*
Surrogate: Perylene-d12	*93 %*		*50-120*
Surrogate: Phenanthrene-d10	*112 %*		*50-120*
Surrogate: Toluene-D8	*96 %*		*50-120*

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-3A
Date Sampled: 06/11/19 14:00
Percent Solids: N/A
Initial Volume: 0.0125
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-05
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-8	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-9	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-10	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-11	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-12	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-13	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
2,6,10-trimethyldodecane (1380)	**7630** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-14	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
2,6,10-trimethyltridecane (1470)	**8800** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-15	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-16	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
2,6,10-trimethylpentadecane (1650)	**11000** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-17	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
Pristane	**15700** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-18	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
Phytane	**11000** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-19	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-20	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-21	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-22	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-23	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-24	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-25	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-26	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-27	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-28	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-29	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-30	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-31	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-32	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-33	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-34	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division
of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-3A
Date Sampled: 06/11/19 14:00
Percent Solids: N/A
Initial Volume: 0.0125
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-05
Sample Matrix: Oil
Units: mg/Kg
Analyst: NL
Prepared: 6/21/19 12:47

Saturated Hydrocarbons by GC/FID

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C-35	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-36	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-37	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-38	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-39	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
C-40	ND (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101
TPH (C8-C40)	**830000** (160)	80.0	8015 Mod		1	NL	06/22/19 6:19	F9F0010	FF92101

	%Recovery	Qualifier	Limits
Surrogate: o-Terphenyl	*99 %*		*50-120*

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-3A
Date Sampled: 06/11/19 14:00
Percent Solids: N/A
Initial Volume: 0.0125
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-05
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Benzene	B **3.14** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Benzene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Benzenes	**3.70** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Benzenes	**36.6** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C4-Benzenes	**668** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C5-Benzenes	**558** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Toluene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Ethylbenzene	**8.55** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
m,p-Xylene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Styrene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
o-Xylene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Isopropylbenzene	**29.8** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
n-Propylbenzene	**71.5** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
1,3,5-Trimethylbenzene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
1,2,3-Trimethylbenzene	**2.17** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
1,2,4-Trimethylbenzene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
t-Butylbenzene	**3.26** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
sec-Butylbenzene	**105** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
p-Isopropyltoluene	**6.40** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
n-Butylbenzene	**143** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
trans-Decalin	**537** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
cis-Decalin	**151** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(b)thiophene	**20.3** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Naphthalene	**333** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
2-Methylnaphthalene	**1350** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
1-Methylnaphthalene	**1120** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Naphthalenes	**1550** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Naphthalenes	**3920** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Naphthalenes	**4210** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C4-Naphthalenes	**2410** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Biphenyl	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Acenaphthylene	**24.5** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-3A
Date Sampled: 06/11/19 14:00
Percent Solids: N/A
Initial Volume: 0.0125
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-05
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Acenaphthene	**73.3** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Dibenzofuran	**95.0** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Fluorene	**311** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Fluorenes	**691** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Fluorenes	**896** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Fluorenes	**515** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Dibenzothiophene	**199** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Dibenzothiophenes	**493** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Dibenzothiophenes	**517** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Dibenzothiophenes	**273** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C4-Dibenzothiophenes	**97.5** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Phenanthrene	**478** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Anthracene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Phenanthrenes/Anthracenes	**873** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Phenanthrenes/Anthracenes	**644** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Phenanthrenes/Anthracenes	**265** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C4-Phenanthrenes/Anthracenes	**88.0** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Retene	**30.7** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(b)naphtho(2,1-d)thiophene	**3.14** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Fluoranthene	**26.4** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Pyrene	**37.5** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Fluoranthenes/Pyrenes	**41.9** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C2-Fluoranthenes/Pyrenes	**30.3** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Fluoranthenes/Pyrenes	**20.0** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(b)fluorene	**3.01** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(c)fluorene	**2.38** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
2-Methylpyrene	**4.79** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
4-Methylpyrene	**7.16** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
1-Methylpyrene	**4.55** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benz(a)anthracene	**5.65** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Chrysene/triphenylene	**8.60** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C1-Benzo(a)anthracenes/Chrysenes	**7.62** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
Client Sample ID: HMW-3A
Date Sampled: 06/11/19 14:00
Percent Solids: N/A
Initial Volume: 0.0125
Final Volume: 2
Extraction Method: 3580

ESS Laboratory Work Order: F190032
ESS Laboratory Sample ID: F190032-05
Sample Matrix: Oil
Units: mg/Kg
Analyst: IBM
Prepared: 6/21/19 12:47

Alkylated PAHs and Benzenes

Analyte	Results (RL)	EDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
C2-Benzo(a)anthracenes/Chrysenes	**5.31** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C3-Benzo(a)anthracenes/Chrysenes	**3.36** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
C4-Benzo(a)anthracenes/Chrysenes	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(b)fluoranthene	**1.94** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(j/k)fluoranthene	**2.30** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(e)pyrene	**1.60** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(a)pyrene	**2.47** (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Perylene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Indeno(1,2,3-cd)pyrene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Dibenzo(a,h)anthracene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Benzo(g,h,i)perylene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101
Coronene	ND (1.60)	0.800	8270 Mod		1	IBM	06/25/19 8:38	F9F0011	FF92101

	%Recovery	Qualifier	Limits
Surrogate: Naphthalene-d8	*93 %*		*50-120*
Surrogate: Perylene-d12	*94 %*		*50-120*
Surrogate: Phenanthrene-d10	*115 %*		*50-120*
Surrogate: Toluene-D8	*97 %*		*50-120*

ESS Laboratory
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BAL Laboratory
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of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Saturated Hydrocarbons by GC/FID

Batch FF92101 - 3580

Blank

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
2,6,10-trimethyldodecane (1380)	ND	200	mg/Kg							
2,6,10-trimethylpentadecane (1650)	ND	200	mg/Kg							
2,6,10-trimethyltridecane (1470)	ND	200	mg/Kg							
C-10	ND	200	mg/Kg							
C-11	ND	200	mg/Kg							
C-12	ND	200	mg/Kg							
C-13	ND	200	mg/Kg							
C-14	ND	200	mg/Kg							
C-15	ND	200	mg/Kg							
C-16	ND	200	mg/Kg							
C-17	ND	200	mg/Kg							
C-18	ND	200	mg/Kg							
C-19	ND	200	mg/Kg							
C-20	ND	200	mg/Kg							
C-21	ND	200	mg/Kg							
C-22	ND	200	mg/Kg							
C-23	ND	200	mg/Kg							
C-24	ND	200	mg/Kg							
C-25	ND	200	mg/Kg							
C-26	ND	200	mg/Kg							
C-27	ND	200	mg/Kg							
C-28	ND	200	mg/Kg							
C-29	ND	200	mg/Kg							
C-30	ND	200	mg/Kg							
C-31	ND	200	mg/Kg							
C-32	ND	200	mg/Kg							
C-33	ND	200	mg/Kg							
C-34	ND	200	mg/Kg							
C-35	ND	200	mg/Kg							
C-36	ND	200	mg/Kg							
C-37	ND	200	mg/Kg							
C-38	ND	200	mg/Kg							
C-39	ND	200	mg/Kg							
C-40	ND	200	mg/Kg							
C-8	ND	200	mg/Kg							
C-9	ND	200	mg/Kg							
Phytane	ND	200	mg/Kg							
Pristane	ND	200	mg/Kg							
Surrogate: o-Terphenyl	*4560*		mg/Kg	*5000*		*91*	*50-120*			
TPH (C8-C40)	ND	200	mg/Kg							

ESS Laboratory
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BAL Laboratory
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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Saturated Hydrocarbons by GC/FID

Batch FF92101 - 3580

LCS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
C-10	3850	200	mg/Kg	5000		77	60-130			
C-11	3800	200	mg/Kg	5000		76	60-130			
C-12	4130	200	mg/Kg	5000		83	60-130			
C-13	4320	200	mg/Kg	5000		86	60-130			
C-14	4360	200	mg/Kg	5000		87	60-130			
C-15	4220	200	mg/Kg	5000		84	60-130			
C-16	4410	200	mg/Kg	5000		88	60-130			
C-17	4080	200	mg/Kg	5000		82	60-130			
C-18	4290	200	mg/Kg	5000		86	60-130			
C-19	4460	200	mg/Kg	5000		89	60-130			
C-20	4400	200	mg/Kg	5000		88	60-130			
C-21	4470	200	mg/Kg	5000		89	60-130			
C-22	4320	200	mg/Kg	5000		86	60-130			
C-23	4440	200	mg/Kg	5000		89	60-130			
C-24	4440	200	mg/Kg	5000		89	60-130			
C-25	4470	200	mg/Kg	5000		89	60-130			
C-26	4440	200	mg/Kg	5000		89	60-130			
C-27	4390	200	mg/Kg	5000		88	60-130			
C-28	4200	200	mg/Kg	5000		84	60-130			
C-29	4380	200	mg/Kg	5000		88	60-130			
C-30	4390	200	mg/Kg	5000		88	60-130			
C-31	4340	200	mg/Kg	5000		87	60-130			
C-32	4320	200	mg/Kg	5000		86	60-130			
C-33	4290	200	mg/Kg	5000		86	60-130			
C-34	4270	200	mg/Kg	5000		85	60-130			
C-35	4270	200	mg/Kg	5000		85	60-130			
C-36	4270	200	mg/Kg	5000		85	60-130			
C-37	4210	200	mg/Kg	5000		84	60-130			
C-38	4350	200	mg/Kg	5000		87	60-130			
C-39	4180	200	mg/Kg	5000		84	60-130			
C-40	4240	200	mg/Kg	5000		85	60-130			
C-8	4550	200	mg/Kg	5000		91	60-130			
C-9	4110	200	mg/Kg	5000		82	60-130			
Phytane	4730	200	mg/Kg	5000		95	60-130			
Pristane	4880	200	mg/Kg	5000		98	60-130			
Surrogate: o-Terphenyl	*4690*		mg/Kg	*5000*		*94*	*50-120*			

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Saturated Hydrocarbons by GC/FID

Batch FF92101 - 3580

Duplicate **Source: F190032-05**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
2,6,10-trimethyldodecane (1380)	7810	161	mg/Kg		7630			2	20	
2,6,10-trimethylpentadecane (1650)	11500	161	mg/Kg		11000			4	20	
2,6,10-trimethyltridecane (1470)	9130	161	mg/Kg		8800			4	20	
C-10	ND	161	mg/Kg		ND				20	
C-11	ND	161	mg/Kg		ND				20	
C-12	ND	161	mg/Kg		ND				20	
C-13	ND	161	mg/Kg		ND				20	
C-14	ND	161	mg/Kg		ND				20	
C-15	ND	161	mg/Kg		ND				20	
C-16	ND	161	mg/Kg		ND				20	
C-17	ND	161	mg/Kg		ND				20	
C-18	ND	161	mg/Kg		ND				20	
C-19	ND	161	mg/Kg		ND				20	
C-20	ND	161	mg/Kg		ND				20	
C-21	ND	161	mg/Kg		ND				20	
C-22	ND	161	mg/Kg		ND				20	
C-23	ND	161	mg/Kg		ND				20	
C-24	ND	161	mg/Kg		ND				20	
C-25	ND	161	mg/Kg		ND				20	
C-26	ND	161	mg/Kg		ND				20	
C-27	ND	161	mg/Kg		ND				20	
C-28	ND	161	mg/Kg		ND				20	
C-29	ND	161	mg/Kg		ND				20	
C-30	ND	161	mg/Kg		ND				20	
C-31	ND	161	mg/Kg		ND				20	
C-32	ND	161	mg/Kg		ND				20	
C-33	ND	161	mg/Kg		ND				20	
C-34	ND	161	mg/Kg		ND				20	
C-35	ND	161	mg/Kg		ND				20	
C-36	ND	161	mg/Kg		ND				20	
C-37	ND	161	mg/Kg		ND				20	
C-38	ND	161	mg/Kg		ND				20	
C-39	ND	161	mg/Kg		ND				20	
C-40	ND	161	mg/Kg		ND				20	
C-8	ND	161	mg/Kg		ND				20	
C-9	ND	161	mg/Kg		ND				20	
Phytane	11100	161	mg/Kg		11000			1	20	
Pristane	16200	161	mg/Kg		15700			3	20	
Surrogate: o-Terphenyl	*3930*		mg/Kg	*4032*		*97*	*50-120*			
TPH (C8-C40)	856000	161	mg/Kg		830000			3	20	

ESS Laboratory
Division of Thielsch Engineering, Inc.

BAL Laboratory
The Microbiology Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580

Blank

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,2,3-Trimethylbenzene	ND	2.00	mg/Kg							
1,2,4-Trimethylbenzene	ND	2.00	mg/Kg							
1,3,5-Trimethylbenzene	ND	2.00	mg/Kg							
1-Methylnaphthalene	ND	2.00	mg/Kg							
1-Methylpyrene	ND	2.00	mg/Kg							
2-Methylnaphthalene	ND	2.00	mg/Kg							
2-Methylpyrene	ND	2.00	mg/Kg							
4-Methylpyrene	ND	2.00	mg/Kg							
Acenaphthene	ND	2.00	mg/Kg							
Acenaphthylene	ND	2.00	mg/Kg							
Anthracene	ND	2.00	mg/Kg							
Benz(a)anthracene	ND	2.00	mg/Kg							
Benzene	3.17	2.00	mg/Kg							
Benzo(a)pyrene	ND	2.00	mg/Kg							
Benzo(b)fluoranthene	ND	2.00	mg/Kg							
Benzo(b)fluorene	ND	2.00	mg/Kg							
Benzo(b)naphtho(2,1-d)thiophene	ND	2.00	mg/Kg							
Benzo(b)thiophene	ND	2.00	mg/Kg							
Benzo(c)fluorene	ND	2.00	mg/Kg							
Benzo(e)pyrene	ND	2.00	mg/Kg							
Benzo(g,h,i)perylene	ND	2.00	mg/Kg							
Benzo(j/k)fluoranthene	ND	2.00	mg/Kg							
Biphenyl	ND	2.00	mg/Kg							
C1-Benzene	ND	2.00	mg/Kg							
C1-Benzo(a)anthracenes/Chrysenes	ND	2.00	mg/Kg							
C1-Dibenzothiophenes	ND	2.00	mg/Kg							
C1-Fluoranthenes/Pyrenes	ND	2.00	mg/Kg							
C1-Fluorenes	ND	2.00	mg/Kg							
C1-Naphthalenes	ND	2.00	mg/Kg							
C1-Phenanthrenes/Anthracenes	ND	2.00	mg/Kg							
C2-Benzenes	ND	2.00	mg/Kg							
C2-Benzo(a)anthracenes/Chrysenes	ND	2.00	mg/Kg							
C2-Dibenzothiophenes	ND	2.00	mg/Kg							
C2-Fluoranthenes/Pyrenes	ND	2.00	mg/Kg							
C2-Fluorenes	ND	2.00	mg/Kg							
C2-Naphthalenes	ND	2.00	mg/Kg							
C2-Phenanthrenes/Anthracenes	ND	2.00	mg/Kg							
C3-Benzenes	ND	2.00	mg/Kg							
C3-Benzo(a)anthracenes/Chrysenes	ND	2.00	mg/Kg							
C3-Dibenzothiophenes	ND	2.00	mg/Kg							
C3-Fluoranthenes/Pyrenes	ND	2.00	mg/Kg							
C3-Fluorenes	ND	2.00	mg/Kg							
C3-Naphthalenes	ND	2.00	mg/Kg							
C3-Phenanthrenes/Anthracenes	ND	2.00	mg/Kg							

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
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ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580							
C4-Benzenes	ND	2.00	mg/Kg				
C4-Benzo(a)anthracenes/Chrysenes	ND	2.00	mg/Kg				
C4-Dibenzothiophenes	ND	2.00	mg/Kg				
C4-Naphthalenes	ND	2.00	mg/Kg				
C4-Phenanthrenes/Anthracenes	ND	2.00	mg/Kg				
C5-Benzenes	ND	2.00	mg/Kg				
Chrysene/triphenylene	ND	2.00	mg/Kg				
cis-Decalin	ND	2.00	mg/Kg				
Coronene	ND	2.00	mg/Kg				
Dibenzo(a,h)anthracene	ND	2.00	mg/Kg				
Dibenzofuran	ND	2.00	mg/Kg				
Dibenzothiophene	ND	2.00	mg/Kg				
Ethylbenzene	ND	2.00	mg/Kg				
Fluoranthene	ND	2.00	mg/Kg				
Fluorene	ND	2.00	mg/Kg				
Indeno(1,2,3-cd)pyrene	ND	2.00	mg/Kg				
Isopropylbenzene	ND	2.00	mg/Kg				
m,p-Xylene	ND	2.00	mg/Kg				
Naphthalene	ND	2.00	mg/Kg				
n-Butylbenzene	ND	2.00	mg/Kg				
n-Propylbenzene	ND	2.00	mg/Kg				
o-Xylene	ND	2.00	mg/Kg				
Perylene	ND	2.00	mg/Kg				
Phenanthrene	ND	2.00	mg/Kg				
p-Isopropyltoluene	ND	2.00	mg/Kg				
Pyrene	ND	2.00	mg/Kg				
Retene	ND	2.00	mg/Kg				
sec-Butylbenzene	ND	2.00	mg/Kg				
Styrene	ND	2.00	mg/Kg				
Surrogate: Naphthalene-d8	*194*		mg/Kg	*200.0*		*97*	*50-120*
Surrogate: Perylene-d12	*184*		mg/Kg	*200.0*		*92*	*50-120*
Surrogate: Phenanthrene-d10	*218*		mg/Kg	*200.0*		*109*	*50-120*
Surrogate: Toluene-D8	*220*		mg/Kg	*200.0*		*110*	*50-120*
t-Butylbenzene	ND	2.00	mg/Kg				
Toluene	ND	2.00	mg/Kg				
trans-Decalin	ND	2.00	mg/Kg				

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580

LCS

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,2,3-Trimethylbenzene	216	2.00	mg/Kg	200.0		108	60-130			
1,2,4-Trimethylbenzene	217	2.00	mg/Kg	200.0		108	60-130			
1,3,5-Trimethylbenzene	212	2.00	mg/Kg	200.0		106	60-130			
1-Methylnaphthalene	206	2.00	mg/Kg	200.0		103	60-130			
2-Methylnaphthalene	208	2.00	mg/Kg	200.0		104	60-130			
Acenaphthene	221	2.00	mg/Kg	200.0		111	60-130			
Acenaphthylene	216	2.00	mg/Kg	200.0		108	60-130			
Anthracene	207	2.00	mg/Kg	200.0		103	60-130			
Benz(a)anthracene	245	2.00	mg/Kg	200.0		122	60-130			
Benzene	230	2.00	mg/Kg	200.0		115	50-130			
Benzo(a)pyrene	235	2.00	mg/Kg	200.0		118	60-130			
Benzo(b)fluoranthene	244	2.00	mg/Kg	200.0		122	60-130			
Benzo(b)naphtho(2,1-d)thiophene	239	2.00	mg/Kg	200.0		120	60-130			
Benzo(b)thiophene	206	2.00	mg/Kg	200.0		103	60-130			
Benzo(e)pyrene	234	2.00	mg/Kg	200.0		117	60-130			
Benzo(g,h,i)perylene	219	2.00	mg/Kg	200.0		109	60-130			
Benzo(j/k)fluoranthene	234	2.00	mg/Kg	200.0		117	60-130			
Biphenyl	214	2.00	mg/Kg	200.0		107	60-130			
Chrysene/triphenylene	243	2.00	mg/Kg	200.0		121	60-130			
cis-Decalin	200	2.00	mg/Kg	200.0		100	60-130			
Coronene	199	2.00	mg/Kg	200.0		100	60-130			
Dibenzo(a,h)anthracene	225	2.00	mg/Kg	200.0		113	60-130			
Dibenzofuran	211	2.00	mg/Kg	200.0		106	60-130			
Dibenzothiophene	234	2.00	mg/Kg	200.0		117	60-130			
Ethylbenzene	219	2.00	mg/Kg	200.0		110	60-130			
Fluoranthene	250	2.00	mg/Kg	200.0		125	60-130			
Fluorene	221	2.00	mg/Kg	200.0		111	60-130			
Indeno(1,2,3-cd)pyrene	205	2.00	mg/Kg	200.0		103	60-130			
Isopropylbenzene	218	2.00	mg/Kg	200.0		109	60-130			
m,p-Xylene	216	2.00	mg/Kg	200.0		108	60-130			
Naphthalene	220	2.00	mg/Kg	200.0		110	60-130			
n-Butylbenzene	221	2.00	mg/Kg	200.0		110	60-130			
n-Propylbenzene	216	2.00	mg/Kg	200.0		108	60-130			
o-Xylene	219	2.00	mg/Kg	200.0		110	60-130			
Perylene	228	2.00	mg/Kg	200.0		114	60-130			
Phenanthrene	231	2.00	mg/Kg	200.0		115	60-130			
p-Isopropyltoluene	221	2.00	mg/Kg	200.0		110	60-130			
Pyrene	248	2.00	mg/Kg	200.0		124	60-130			
Retene	229	2.00	mg/Kg	200.0		114	60-130			
sec-Butylbenzene	212	2.00	mg/Kg	200.0		106	60-130			
Styrene	177	2.00	mg/Kg	200.0		88	60-130			
Surrogate: Naphthalene-d8	*201*		mg/Kg	*200.0*		*101*	*50-120*			
Surrogate: Perylene-d12	*187*		mg/Kg	*200.0*		*94*	*50-120*			
Surrogate: Phenanthrene-d10	*234*		mg/Kg	*200.0*		*117*	*50-120*			

CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580						
Surrogate: Toluene-D8	*221*		mg/Kg	*200.0*	*111*	*50-120*
t-Butylbenzene	216	2.00	mg/Kg	200.0	108	60-130
Toluene	220	2.00	mg/Kg	200.0	110	60-130
trans-Decalin	197	2.00	mg/Kg	200.0	98	60-130

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CERTIFICATE OF ANALYSIS

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ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580

Duplicate **Source: F190032-05**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,2,3-Trimethylbenzene	2.19	1.61	mg/Kg		2.17			1	20	
1,2,4-Trimethylbenzene	ND	1.61	mg/Kg		ND				20	
1,3,5-Trimethylbenzene	ND	1.61	mg/Kg		ND				20	
1-Methylnaphthalene	1140	1.61	mg/Kg		1120			2	20	
1-Methylpyrene	4.42	1.61	mg/Kg		4.55			3	20	
2-Methylnaphthalene	1360	1.61	mg/Kg		1350			0.6	20	
2-Methylpyrene	4.70	1.61	mg/Kg		4.79			2	20	
4-Methylpyrene	7.07	1.61	mg/Kg		7.16			1	20	
Acenaphthene	76.8	1.61	mg/Kg		73.3			5	20	
Acenaphthylene	ND	1.61	mg/Kg		24.5				20	
Anthracene	ND	1.61	mg/Kg		ND				20	
Benz(a)anthracene	5.89	1.61	mg/Kg		5.65			4	20	
Benzene	3.25	1.61	mg/Kg		3.14			3	20	
Benzo(a)pyrene	2.45	1.61	mg/Kg		2.47			0.8	20	
Benzo(b)fluoranthene	1.79	1.61	mg/Kg		1.94			8	20	
Benzo(b)fluorene	3.15	1.61	mg/Kg		3.01			4	20	
Benzo(b)naphtho(2,1-d)thiophene	3.16	1.61	mg/Kg		3.14			0.7	20	
Benzo(b)thiophene	ND	1.61	mg/Kg		20.3				20	
Benzo(c)fluorene	2.23	1.61	mg/Kg		2.38			6	20	
Benzo(e)pyrene	1.71	1.61	mg/Kg		1.60			7	20	
Benzo(g,h,i)perylene	ND	1.61	mg/Kg		ND				20	
Benzo(j/k)fluoranthene	2.82	1.61	mg/Kg		2.30			21	20	D+
Biphenyl	ND	1.61	mg/Kg		ND				20	
C1-Benzene	ND	1.61	mg/Kg		ND				20	
C1-Benzo(a)anthracenes/Chrysenes	7.51	1.61	mg/Kg		7.62			1	20	
C1-Dibenzothiophenes	497	1.61	mg/Kg		493			0.7	20	
C1-Fluoranthenes/Pyrenes	43.9	1.61	mg/Kg		41.9			5	20	
C1-Fluorenes	695	1.61	mg/Kg		691			0.7	20	
C1-Naphthalenes	1550	1.61	mg/Kg		1550			0.6	20	
C1-Phenanthrenes/Anthracenes	884	1.61	mg/Kg		873			1	20	
C2-Benzenes	3.80	1.61	mg/Kg		3.70			3	20	
C2-Benzo(a)anthracenes/Chrysenes	5.36	1.61	mg/Kg		5.31			0.9	20	
C2-Dibenzothiophenes	518	1.61	mg/Kg		517			0.3	20	
C2-Fluoranthenes/Pyrenes	31.1	1.61	mg/Kg		30.3			3	20	
C2-Fluorenes	909	1.61	mg/Kg		896			1	20	
C2-Naphthalenes	3950	1.61	mg/Kg		3920			0.9	20	
C2-Phenanthrenes/Anthracenes	655	1.61	mg/Kg		644			2	20	
C3-Benzenes	36.5	1.61	mg/Kg		36.6			0.3	20	
C3-Benzo(a)anthracenes/Chrysenes	3.54	1.61	mg/Kg		3.36			5	20	
C3-Dibenzothiophenes	283	1.61	mg/Kg		273			3	20	
C3-Fluoranthenes/Pyrenes	19.7	1.61	mg/Kg		20.0			1	20	
C3-Fluorenes	520	1.61	mg/Kg		515			1	20	
C3-Naphthalenes	4270	1.61	mg/Kg		4210			1	20	
C3-Phenanthrenes/Anthracenes	270	1.61	mg/Kg		265			2	20	

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow
ESS Laboratory Work Order: F190032

Quality Control Data

Alkylated PAHs and Benzenes

Batch FF92101 - 3580										
C4-Benzenes	671	1.61	mg/Kg		668			0.6	20	
C4-Benzo(a)anthracenes/Chrysenes	ND	1.61	mg/Kg		ND				20	
C4-Dibenzothiophenes	101	1.61	mg/Kg		97.5			3	20	
C4-Naphthalenes	2420	1.61	mg/Kg		2410			0.7	20	
C4-Phenanthrenes/Anthracenes	90.5	1.61	mg/Kg		88.0			3	20	
C5-Benzenes	562	1.61	mg/Kg		558			0.7	20	
Chrysene/triphenylene	8.41	1.61	mg/Kg		8.60			2	20	
cis-Decalin	147	1.61	mg/Kg		151			2	20	
Coronene	ND	1.61	mg/Kg		ND				20	
Dibenzo(a,h)anthracene	ND	1.61	mg/Kg		ND				20	
Dibenzofuran	96.4	1.61	mg/Kg		95.0			1	20	
Dibenzothiophene	201	1.61	mg/Kg		199			0.9	20	
Ethylbenzene	8.63	1.61	mg/Kg		8.55			0.9	20	
Fluoranthene	26.7	1.61	mg/Kg		26.4			1	20	
Fluorene	319	1.61	mg/Kg		311			2	20	
Indeno(1,2,3-cd)pyrene	ND	1.61	mg/Kg		ND				20	
Isopropylbenzene	30.1	1.61	mg/Kg		29.8			1	20	
m,p-Xylene	ND	1.61	mg/Kg		ND				20	
Naphthalene	335	1.61	mg/Kg		333			0.7	20	
n-Butylbenzene	143	1.61	mg/Kg		143			0.4	20	
n-Propylbenzene	71.8	1.61	mg/Kg		71.5			0.5	20	
o-Xylene	0.823	1.61	mg/Kg		ND				20	J
Perylene	0.859	1.61	mg/Kg		ND				20	J
Phenanthrene	485	1.61	mg/Kg		478			1	20	
p-Isopropyltoluene	6.51	1.61	mg/Kg		6.40			2	20	
Pyrene	37.6	1.61	mg/Kg		37.5			0.5	20	
Retene	34.6	1.61	mg/Kg		30.7			12	20	
sec-Butylbenzene	106	1.61	mg/Kg		105			0.7	20	
Styrene	ND	1.61	mg/Kg		ND				20	
Surrogate: Naphthalene-d8	*147*		mg/Kg	*161.3*		*91*	*50-120*			
Surrogate: Perylene-d12	*147*		mg/Kg	*161.3*		*91*	*50-120*			
Surrogate: Phenanthrene-d10	*179*		mg/Kg	*161.3*		*111*	*50-120*			
Surrogate: Toluene-D8	*150*		mg/Kg	*161.3*		*93*	*50-120*			
t-Butylbenzene	3.27	1.61	mg/Kg		3.26			0.1	20	
Toluene	ND	1.61	mg/Kg		ND				20	
trans-Decalin	495	1.61	mg/Kg		537			8	20	

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CERTIFICATE OF ANALYSIS

Client Name: Paloma Evn Svr
Client Project ID: Former Harser Auto Tow

ESS Laboratory Work Order: F190032

Notes and Definitions

U	Analyte included in the analysis, but not detected
J	Reported between MDL and MRL
D+	Relative percent difference for duplicate is outside of criteria (D+).
B	Present in Method Blank (B).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit

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ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # F190032

Turn Time: | Rush: See comment*
Regulatory State: California
Reporting Limits
Is this project for any of the following?: ☐ MA-MCP ☐ CT-RCP ☐ RGP ☐ Remediation
Electonic Deliverables ☐ Limit Checker ☐ Excel ☐ Other (Please Specifiy) →

Company Name	Project #	Project Name
Paloma Environmental Services, Inc	20180515	Former Hauser Auto Tow

Contact Person: Matt Smith
Address: 52 El Prisma

City	State	Zip Code	PO #
RSM	CA	92688	

Telephone Number	FAX Number	Email Address
949-246-9336	—	msmith@palomaenv.com

Analysis: GC/FID; *PAHs; PEANO; Total Lead; Organic Lead; Total Sulfur; Simulated Distillation; API Gravity

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	GC/FID	*PAHs	PEANO	Total Lead	Organic Lead	Total Sulfur	Simulated Distillation	API Gravity
1	6/11/19	1500	LNAPL	Aqueous	HMW-5	X	X						
2	6/11/19	1435	LNAPL	Aqueous	~~M~~MMW-7	X	X						
3	6/11/19	1330	LNAPL	Aqueous	HMW-4	X	X						
					~~RW~~ MS 6/11/19								
4	6/11/19	1~~4~~415	LNAPL	Aqueous	MMW-9B	X	X						
5	6/11/19	1400	LNAPL	Aqueous	HMW-3A	X	X						

* added 06/24/19 per D. Mauro

Container Type: AG-Amber Glass B-BOD Bottle G-Glass P-Poly S-Sterile V-Vial O-Other — ag, ag
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*
Number of Containers: 13

Laboratory Use Only
Cooler Present: —
Seals Intact: —
Cooler Temperature: no Ice 19.2°C

Sampled by :
Comments: Please specify "Other" preservative and containers types in this space
* Send prelim. chromatograms for further analysis verification

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
[signature] 6/11/19 1600	[signature] 1600 6/11/19	[signature] 6/12/19	Fed Ex BTS Ship > 6/12/19
BTS Fed Ex	[signature] 9:59 6/19/19		

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Paloma Env. Sevices

Shipped/Delivered Via: FedEx

ESS Project ID: F190032
Date Received: 6/19/2019
Project Due Date: 6/26/2019
Days for Project: 5 Day

1. Air bill manifest present? Yes
   Air No.: 775454794733
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 19.6 Iced with: None
5. Was COC signed and dated by client? Yes

6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:

12. Were VOAs received? Yes / No
a. Air bubbles in aqueous VOAs? Yes / No NA
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
a. If metals preserved upon receipt: Date: Time: By:
b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
a. Was there a need to contact the client? Yes / No
Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	357896	Yes	NA	Yes	VOA Vial - Unpres	NP	
01	357897	Yes	NA	Yes	VOA Vial - Unpres	NP	
01	357898	Yes	NA	Yes	VOA Vial - Unpres	NP	
02	357893	Yes	NA	Yes	VOA Vial - Unpres	NP	
02	357894	Yes	NA	Yes	VOA Vial - Unpres	NP	
02	357895	Yes	NA	Yes	VOA Vial - Unpres	NP	
03	357890	Yes	NA	Yes	VOA Vial - Unpres	NP	
04	357887	Yes	NA	Yes	VOA Vial - Unpres	NP	
04	357888	Yes	NA	Yes	VOA Vial - Unpres	NP	
04	357889	Yes	NA	Yes	VOA Vial - Unpres	NP	
05	357884	Yes	NA	Yes	VOA Vial - Unpres	NP	
05	357885	Yes	NA	Yes	VOA Vial - Unpres	NP	
05	357886	Yes	NA	Yes	VOA Vial - Unpres	NP	

2nd Review
Were all containers scanned into storage/lab? Initials NA
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client:	Paloma Env. Sevices	ESS Project ID:	F190032
		Date Received:	6/19/2019

Completed By:		Date & Time:	6/19/19	10:12
Reviewed By:	Jmoreno	Date & Time:	062719	0830
Delivered By:				