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19 October 2020

John M. Vilas, P.G.
Project Manager
Texas Commission on Environmental Quality
VCP-CA Section, MC-221
PO Box 13087
Austin, Texas 78711-3087

Via E-Mail: mac.vilas@tceq.texas.gov

RE: Response to APAR Comments, TCEQ Letter Dated 29 June 2020
Block 251, 1150 La Branch Street, Houston, Harris County, Texas
VCP ID: 3038; RN110874294; CN605711878
SQE PN: 1134.001.006.02

Dear Mr. Vilas:

SQ Environmental, LLC (SQE) prepared this letter in response to the Texas Commission on Environmental Quality (TCEQ) letter dated 29 June 2020 regarding the Affected Property Assessment Report (APAR). The APAR was provided to TCEQ on 15 April 2020. This letter was prepared on behalf of SCD BLK 251 Houston LLC, who is listed as Applicant A in the Voluntary Cleanup Program (VCP) Application. This approximately 1.45-acre property was identified as Block 251 located at 1150 La Branch Street in downtown Houston, Texas, (subject property). The subject property was accepted into the TCEQ VCP in November 2019 and was assigned VCP ID 3038. A description of the recent field activities, along with the results of the additional analyses, are presented below, followed by responses to the TCEQ comments.

FIELD ACTIVITIES

Following submittal of the APAR, SQE conducted additional sampling activities at the subject property. These activities included the collection of off-site soil samples for pH analyses, installation of a permanent groundwater monitoring well, and collection of a groundwater sample for laboratory testing. The location of the recently installed permanent well, along with the locations of samples that were previously collected from this property, are provided on Figure 1.

Soil for pH Analysis. Three soil samples were collected from areas in the vicinity of the subject property. These samples were submitted to ALS Laboratory in Houston, Texas, and were analyzed for pH.

Soil Boring and Well Installation. On 4 September 2020, one soil boring was completed in the northern portion of the subject property by hollow-stem auger methods to a total depth of 41 feet (ft) below ground surface (bgs). The soil boring was continuously logged in general accordance with ASTM International Standard No. D2488-00. Soil cores were screened for organic vapors using a photoionization detector (PID).

The soil boring was converted into a permanent groundwater monitoring well (MW-251-1). The well was constructed with 2-inch diameter PVC pipe with 15 feet of screen. The well was developed on 4 September 2020 using a submersible pump. Approximately 45 gallons of groundwater were removed from the well during development activities.



A soil boring and well log is provided in Attachment A.

Groundwater Sampling by Low-Flow Methods. Two groundwater samples have now been collected from monitoring well MW-251-1. Groundwater samples were collected using low-flow sampling procedures, as outlined in the *Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures* dated in 1996. During low-flow sampling procedures, the temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were monitored. On 8 September 2020, SQE collected a sample from the groundwater monitoring well, MW-251-1. Prior to sampling, approximately 2.5 gallons of water were purged from the well. Based on the results of the 8 September 2020, SQE returned to the property on 16 September 2020, to re-sample the monitoring well MW-251-1. Prior to sampling, approximately 3 gallons of water were purged from the well.

The groundwater samples were placed in new, laboratory-supplied containers, which were labeled and placed on ice in a shipping container (i.e., cooler). The samples were named according to the convention MW-251-1-yyyymmdd, where yyyymmdd indicates the date the sample was collected. The groundwater samples were delivered to ALS Laboratory in Houston, Texas. The sample collected on 8 September 2020 was analyzed for TPH by Texas Method TX 1005, dissolved Resource Conservation and Recovery Act (RCRA) metals by Method 6020 and 7470, and VOCs by Method 8260. The groundwater that was collected for metals analysis was filtered through a 10-micron filter due to observed turbidity. The sample collected on 16 September 2020 was analyzed for VOCs by Method 8260.

Investigation-Derived Waste (IDW). The soil cuttings and purged groundwater were contained in four 55-gallon steel drums. No waste from the subject property has been disposed of.

RESULTS

The analytical results were compared to the TCEQ Texas Risk Reduction Program (TRRP) Protective Concentration Levels (PCLs), which were last revised on 8 November 2019. The analytical data for the recently collected samples, as well as the previous samples collected from the property, are summarized on Tables 1 and 2. Laboratory reports are provided in Attachment B for the recently collected samples.

Soil Samples. The results of the three soil samples are summarized on the table below:

Sample	pH Value (specific units)
251-pH-01	7.85
251-pH-02	7.99
251-pH-03	5.38

These values were used to calculate an average of 7.1 pH units. The average pH value was used to calculate Tier 2 PCLs for lead, selenium, and silver. Additional details regarding the Tier 2 calculations are provided below (Response to Comment 7). As shown on Table 1, no constituent was reported above the critical PCL in the soil samples collected from the subject property.

Groundwater Samples. Groundwater samples were collected from the permanent monitoring well installed on the subject property (MW-251-1). The results from the previous groundwater samples collected from



the property, along with the results from the recently installed well, are summarized on Table 2. The results were compared to TRRP Tier 1 PCLs for residential properties, assuming a source area of 0.5-acres.

- *TPH* – No TPH constituents have been detected in any of the groundwater sample collected at the subject property.
- *Metals* – The results of a groundwater sample collected from location B-1 in June 2019 indicated the presence of arsenic above the PCL for groundwater ingestion ($^{GW}GW_{Ing}$) of 0.010 milligrams per liter (mg/L). Permanent well MW-251-1 was installed at the same location and was sampled on 8 September 2020 and analyzed for RCRA metals. Arsenic and barium were detected in the groundwater sample collected on 8 September 2020. The reported concentrations of arsenic and barium were reported below their respective Residential $^{GW}GW_{Ing}$ PCLs. Chromium was estimated (“J flagged”) above the laboratory sample detection limit (SDL) but below the method quantitation limit (MQL). The estimated chromium concentration was reported below the Residential $^{GW}GW_{Ing}$ PCL of 0.010 mg/L. As noted above, due to observed turbidity, the sample for metals analysis was filtered through a 10-micron filter in the field.
- *VOCs* – Based on the installation and sampling of five temporary wells (B-1 through B-5) in June 2019, there were no VOC constituents in the groundwater in excess of the Residential $^{GW}GW_{Ing}$ PCLs. Two samples have been collected from a permanent well (MW-251-1), which was installed in the northern portion of the property. The results indicated the presence of degraded tetrachloroethene (PCE) along with the degradation products 1,1-dichloroethene; cis-1,2-dichloroethene; trans-1,2-dichloroethene; and trichloroethene (TCE). A low level (“J flagged”) of carbon disulfide was also reported in the groundwater sample collected on 16 September 2020. The concentrations of carbon disulfide; 1,1-dichloroethene; cis-1,2-dichloroethene; and trans-1,2-dichloroethene were reported above their laboratory MQLs and below their TRRP Tier 1 Residential $^{GW}GW_{Ing}$ PCLs. The concentrations of TCE and PCE were reported above their respective PCLs in the samples collected from the permanent groundwater monitoring well MW-251-1 on 8 and 16 September 2020. No other VOC constituents were detected in the two groundwater samples at concentrations above laboratory SDLs. Based on the ratio of PCE to TCE, the likely parent chemical was PCE, which appears to be approximately 30% degraded.

RESPONSE TO 29 JUNE 2020 COMMENTS

The TCEQ comments from the 29 June 2020 TCEQ letter are provided below in italics with the response following the comment.

Comment 1. Groundwater Resource Classification – *Section 2.5 of the APAR indicates the groundwater bearing unit (GWBU) is considered a Class 2 groundwater resource. The groundwater classification appears to be based solely on current use criteria relating to water well survey location data within 0.5 miles and a statement that the GWBU is not a reliable source of water and that the area surrounding the Site uses city-supplied water. In order to be a Class 2 groundwater resource, the GWBU must first be demonstrated to not be a Class 1 groundwater based on current use as well as potential use criteria defined by well yield and water quality (total dissolved solids (TDS) testing). Only a Class 1 designation can be assumed, a Class 2 or Class 3 designation requires an evaluation of potential use in addition to current use. Without applicable site-specific TDS and well yield data a Class 1 groundwater resource is assumed for the GWBU at the Site. If a lower groundwater classification is desired (Class 2 or Class 3), please submit additional information specified in the TRRP regulatory guidance, RG-366/TRRP-8 Groundwater*



Classification. *Based on the submitted information, the TCEQ assumes the GWBU at this VCP Site to be a Class 1 groundwater resource.*

Response to Comment 1. The uppermost groundwater-bearing unit (GWBU) was encountered at approximately 26 feet (ft) below ground surface (bgs) at the subject property. The uppermost GWBU is approximately 20 ft thick and is comprised of a clayey sand – sandy clay (SC). Using published values for the maximum hydraulic conductivity of clayey sand of 1.8×10^{-5} feet per second (ft/s), and assuming a 12-inch diameter well and an unconfined GWBU, the maximum rate that water could be removed is only 2,930 gallons per day (gpd), which is below the rate required for a Class 1 GWBU ($\geq 144,000$ gpd). This calculation is provided below:

$$Q = \frac{57,923 \times K \times b^2}{6.3 + \log(K \times b)}$$

Where K is the hydraulic conductivity, b is the saturated thickness (20 ft), and Q is the well yield.

An APAR dated 4 December 2000 for Block 95 (VCP 1282) in downtown Houston, which is approximately 1,000 ft north of the subject property, identified the groundwater as Class 3. This is the same shallow GWBU that is present on the subject property. Based on this information, the uppermost GWBU could not be a Class 1, and is either a Class 2 or Class 3. Currently, we are assuming that the zone is a Class 2 but may perform additional evaluation in the future if it appears likely that the zone is actually a Class 3.

It should be noted that the subject property is located in downtown Houston, which has many skyscraper buildings with subgrade parking structures, and the entire area is supplied with City water. Due to the depth of the shallow GWBU in downtown Houston, many of the buildings with subgrade parking require dewatering systems. Additionally, several tunnel systems are present in downtown Houston, and the closest section of these tunnels is within 600 ft northwest of the subject property. These tunnel systems also require dewatering systems to prevent flooding. The Toyota Arena, which is approximately 500 ft south of the subject property, has two basement levels that extend approximately 20 ft below the GWBU. This arena requires continuous dewatering. Pumping of groundwater for dewatering purposes impacts both the groundwater flowrate that can be sustained from a well and the flow direction.

Comment 2. Tier 1 Ecological Exclusion Criteria Checklist – *The Tier 1 exclusion criteria supporting documentation (Attachment 2B in Section 2) references Block 250 located at 118 Crawford St. in Houston instead of the subject VCP Site 3038 located at 1150 La Branch Street. Please correct and resubmit this information.*

Response to Comment 2. The reference to Block 250 located at 1118 Crawford St was a typo. The corrected Tier 1 exclusion criteria supporting documentation is provided as Attachment C to this letter.

Comment 3. Assessment Methods, Groundwater Sampling and Appendix 3 – *The Assessment Methods discussion in Section 3.2 of the APAR do not describe the well development and groundwater purging methods. The water quality stabilization parameters of the groundwater prior to sampling, purge rate and/or the amount of groundwater purged should be described and recorded. In addition, Appendix 3 (Monitoring Well Development and Purging Data) was not completed. Please provide monitor well development and purging data in a table or provide copies of field notes that specify water quality stabilization parameters, turbidity measurements, water level measurements and parameters measured during development and purging. Without well development and purging data, the TCEQ is not able to confirm the quality of the sample data and verify that the groundwater samples are representative of the groundwater. Without documentation of representative groundwater samples, installation and sampling of*



permanent groundwater monitoring wells will be required to address the *Recognized Environmental Conditions (RECs) documented in the Phase I ESA*.

Response to Comment 3. As requested, a permanent groundwater monitoring well MW-251-1 was installed then developed using a submersible pump on 4 September 2020. Approximately 45 gallons of groundwater were removed from the well during development. Prior to sampling on 8 September 2020 and 16 September 2020, the water quality parameters were measured during low-flow purging and sampling methods. The purging flow rate was maintained at approximately 150 milliliters per minute (mL/min) on 8 September 2020 and at approximately 200 mL/min on 16 September 2020. During purging, the following water quality parameters were measured: depth to water (DTW) in feet below the top of casing (ft BTOC); temperature in degrees Celsius (°C); dissolved oxygen (DO) in mg/L; specific conductivity in microSiemens per cubic centimeter (µS/cm³); pH in specific units; and oxidation reduction potential (ORP) in millivolts (mV). The three consecutive readings prior to collecting the groundwater samples are summarized on the tables below:

Water Quality Parameters on 8 September 2020

Time	DTW (ft BTOC)	Temp (°C)	DO (mg/L)	Spec Cond (µS/cm ³)	pH	ORP (mV)
0740	26.9	25.60	0.22	733	7.48	68.6
0745	27.0	25.64	0.19	739	7.41	69.3
0750	27.1	25.60	0.17	739	7.37	68.5

Water Quality Parameters on 16 September 2020

Time	DTW (ft BTOC)	Temp (°C)	DO (mg/L)	Spec Cond (µS/cm ³)	pH	ORP (mV)
1742	26.1	26.3	0.40	667	7.15	51.0
1747	26.1	26.3	0.35	672	7.07	51.6
1752	26.1	26.2	0.28	677	7.05	51.2

Comment 4. Cross-Section (Figure 4C) – The cross-section in the APAR only includes surface soil to a depth of 5 feet. Please include cross sections that represent the subsurface stratigraphy using at least three representative points and indicate the cross-section lines on Figure 1B. Please include the GWBU, potentiometric surface of the water table (assuming permanent wells are installed), monitor well screened intervals and other pertinent information as listed in the TCEQ Instructions for Completing an Affected Property Assessment Report for Figure 4C.

Response to Comment 4. Figure 4C has been revised to include the subsurface stratigraphy. The revised Figure 4C is provided in Attachment D.

Comment 5. Groundwater Assessment – One of the five of the groundwater samples (B-1) collected from the five temporary monitor wells exceeded the critical PCL for groundwater ingestion for arsenic. To address this PCL exceedance a permanent monitor well is proposed to be installed near the location of former temporary monitor well B-1 and sampled and analyzed. The TCEQ agrees that a permanent monitor well should be installed in the vicinity of the former temporary monitor well B-1 and sampled as indicated in response letter and Section 12.3 of the APAR. In addition, depending on the availability of data requested in comment 3 above, additional permanent monitor wells and sampling of all COCs may be needed to



obtain and document representative samples of the groundwater. If arsenic or other COCs are confirmed above the critical PCLs in the new monitor wells, the extent of plume should be delineated and included in an amended APAR and a Response Action Plan.

Response to Comment 5. As discussed above, a permanent groundwater monitoring well (MW-251-1) was installed in the vicinity of former temporary well B-1 on 4 September 2020. A groundwater sample was collected on 8 September 2020 and was analyzed for TPH, RCRA 8 metals, and VOCs. Arsenic was not reported in the groundwater sample collected on 8 September 2020 from the permanent groundwater monitoring well MW-251-1. Therefore, no further action appears warranted with regards to arsenic in the groundwater.

Chlorinated solvents (PCE and TCE) were reported in the groundwater sample collected on 8 September 2020. The concentrations of PCE and TCE were reported above the TRRP Tier 1 PCLs. A second groundwater sample was collected from the well MW-251-1 on 16 September 2020 to confirm the presence of PCE and TCE in the groundwater. Based on the results of the groundwater samples collected from the well MW-251-1, PCE and TCE appear to be present in the groundwater beneath the northern corner of the subject property. Chlorinated solvents were not reported to be present in any of the groundwater samples collected from the temporary wells (B-1 through B-5). The reason for this inconsistency is not obvious; however, it is possible that the presence of the solvents in the groundwater in September of 2020 was due to variations in the groundwater flow direction beneath the property caused by pumping in the vicinity of the subject property.

The subject property has been used as a surface parking lot since the mid-1970s, and no on-site source of these solvents has been identified. Previous soil sampling, including analyses of five samples for VOCs, have not detected any PCE (the most likely parent chemical) or TCE (a likely degradation product) in the soil. Further, soil vapor sampling, conducted as part of the Limited Phase II ESA in June 2019, did not indicate the presence of either PCE or TCE, with detection limits of around 2 to 3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). These borings and soil vapor samples were collected in the areas where historical use of VOCs was most likely and the lack of detectable PCE and TCE suggests that the most likely source of the solvents is off-site.

Comment 6. Monitor Well Records (Appendix 6) – Appendix 6 of the APAR is missing. State of Texas Well Reports completed by the driller for boring logs and monitor wells were requested by the TCEQ in the letter dated December 9, 2019 but were not provided. State of Texas Well Reports are required for soil borings and monitor well installation and plugging in Texas. Please submit copies of State of Texas Well Reports for all borings, plugged monitor wells and any additional monitor wells completed on the subject property.

Response to Comment 6. The State of Texas Well Reports for all soil borings and monitoring wells completed at the subject property are provided in Attachment E.

Comment 7. Tier 2 Soil to Groundwater PCL Development (Appendix 9) – The TCEQ does not agree with the Tier 2 PCLs calculations presented in Appendix 9 for lead, selenium and silver. A property-specific pH value is required to establish the pH dependent soil-water partition coefficient (K_d) as shown in the tables provide in 30 TAC §350.73(f)(1). The calculation uses a literature-based assumed pH of 7.2 cited from the Soil Survey of Harris County, Texas. A property specific pH value should be determined based on analytical results from on-site soil samples. Please collect and analyze soil samples at the Site for pH to establish the K_d value used in the Tier 2 calculations and resubmit revised Tier 2 calculations in an amended APAR.



Response to Comment 7. Site-specific Tier 2 soil-to-groundwater (^{GW}Soil) PCLs for lead, selenium, and silver were calculated in accordance with procedures described in 30 TAC §350.75. Default Tier 1 values were used for each of the calculated parameters with the exception of the following: estimated thickness of affected soil (L_1), the distance to the top of affected soil to the top of the water-bearing unit (L_2), and the soil-water partition coefficient (K_d).

The assumed thickness of affected soil (L_1) and the distance to the top of affected soil to the top of the water-bearing unit (L_2) were estimated for each analyte as discussed below.

The soil-water partition coefficients (K_d) were taken from pH-dependent tables provided in 30 TAC §350.73(f), using the average pH value of 7.1 specific units. The average pH value was calculated using the three analytical pH results, as discussed in the Results section of this letter.

▪ Lead – Non-Default Parameters

Default Tier 1 values were used for each of the calculated parameters with the exception of the following: estimated thickness of affected soil (L_1), the distance from the top of affected soil to the top of the water-bearing unit (L_2), and the soil-water partition coefficient (K_d).

The assumed thickness of affected soil (L_1) was estimated based on the thickness of affected soil with concentrations greater than the residential Tier 1 PCL and the Texas-Specific Background Concentration. The interval of affected soil, L_1 , was estimated to be 3 ft, based on samples collected from soil borings 251-8 and 251-11. Lead was reported at concentrations of 136 milligrams per kilogram (mg/kg) and 95.7 mg/kg in the 0 to 0.5 ft soil interval at soil borings 251-8 and 251-11, respectively. Lead was reported at 11.3 mg/kg and 13.9 mg/kg in the next interval of 2.5 to 3 ft in soil borings 251-8 and 251-11, respectively. The thickness of affected soil (L_1) of 3 ft is considered conservative.

The distance from the top of affected soil to the top of the shallow-most groundwater-bearing unit (L_2) was estimated to be 30 ft. This is based on the shallowest depth to the groundwater measured in temporary monitoring wells B-1 through B-5, as described in the Phase II ESA report (EFI, 2019b).

The soil-water distribution coefficient (K_d) for lead was taken from the 30 TAC §350.73(f)(1)(A) using a pH value of 7.1 specific units and a predominantly clayey soil, which is consistent with the observations in boring logs 251-8 and 251-11 and information provided in the *Soil Survey for Harris County*. The K_d value of 1,830 was selected for lead.

▪ Selenium – Non-Default Parameters

Default Tier 1 values for each of the calculated parameters, except for the soil-water partition coefficient (K_d), were used. The assumed thickness of affected soil (L_1) was conservatively assumed to be the same as the distance to the top of the uppermost groundwater bearing zone (L_2), which is approximately 30 ft. This is consistent with the Tier 1 default parameters $L_1 = L_2$; although, this is considered a conservative assumption.

The soil-water distribution coefficients (K_d) for selenium was taken from the 30 TAC §350.73(f)(1)(C) using a pH value of 7.1 specific units and a predominantly clayey soil. The K_d value of 4.1 for selenium was selected.



- Silver – Non-Default Parameters

Default Tier 1 values for each of the calculated parameters, except for the soil-water partition coefficient (K_d), were used. The assumed thickness of affected soil (L_1) was conservatively assumed to be the same as the distance to the top of the uppermost groundwater bearing zone (L_2), which is approximately 30 ft. This is consistent with the Tier 1 default parameters $L_1 = L_2$; although, this is considered a conservative assumption.

The soil-water distribution coefficients (K_d) for silver was taken from the 30 TAC §350.73(f)(1)(C) using a pH value of 7.1 specific units and a predominantly clayey soil. The K_d value of 16 for silver was selected.

The Tier 2 PCL calculations and assumptions are provided below:

From 30 TAC §350.75(b)(1):

$$^{GW}Soil = \frac{(^{GW}GW \cdot LDF)}{K_{sw}} \cdot \frac{L_2}{L_1}$$
$$K_{sw} \left[\frac{mg/L - H_2O}{mg/kg - soil} \right] = \frac{\rho_b}{\theta_{ws} + K_d \rho_b + H' \theta_{as}}$$

Default parameters used are summarized below:

Parameter	Value	Units	Basis
Soil bulk density (ρ_b)	1.67	g/cm ³	Tier 1 default value.
Volumetric water content (θ_{ws})	0.16	cm ³ /cm ³	Tier 1 default value.
Volumetric air content (θ_{as})	0.21	cm ³ /cm ³	Tier 1 default value.
Fraction organic carbon (foc)	0.002	g/g	Tier 1 default value.
Lateral dilution factor (LDF)	20	unitless	Source area of 0.5 acres.

Based on the previously discussed parameters, the calculated Tier 2 PCLs are provided below:

COC	^{GW} GW _{Ing} PCL (mg/L)	K_d (cm ³ -w/g-s)	K_{sw} (mg/L-w/mg/kg-s)	Tier 2 ^{GW} Soil PCL (mg/kg)
Lead	0.015	1830	0.0005	5,490
Selenium	0.050	4.1	0.2383	4.2
Silver	0.12	16	0.0621	39

As shown on Table 1, no soil concentrations were reported above soil critical PCLs.



Comment 8. Waste Characterization and Disposition (Appendix 12) – Appendix 12 was not included in the APAR. Please provide information regarding the final disposition of soil cuttings from soil borings and monitor well installation(s) and the purge water from well development and groundwater monitoring, if any of this type of waste has been shipped off-site to date.

Response to Comment 8. No wastes have been disposed of at the time of this letter report.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the recent sampling, our conclusions and recommendations are provided below:

- No constituent was reported above the critical PCLs in the soil samples collected at the subject property.
- One concentration of arsenic was reported above the Tier 1 PCL in the groundwater sample collected from temporary well B-1 in June 2019. A permanent groundwater monitoring well was installed in September 2020 in the vicinity of the former temporary well B-1. Arsenic was not reported above the Tier 1 PCL in the groundwater sample collected from the permanent groundwater monitoring well. Since the concentration of arsenic in the groundwater was not confirmed, further evaluation of arsenic in the groundwater does not appear to be warranted.
- Concentrations of PCE and TCE were reported in the groundwater samples collected from the permanent groundwater monitoring well. However, no on-site source of PCE or TCE has been identified. Additionally, none of the soil samples collected from the property, including a subsurface soil sample collected at a depth of 24 ft bgs from former soil boring B-1, have detected the presence of either PCE or TCE. And, neither chemical was reported in the soil vapor samples collected from the property, nor from groundwater samples collected from the five temporary groundwater monitoring wells in June 2019. Based on this information, it does not appear likely that the source of the PCE and/or TCE is on-site and that it appears that the chemicals have migrated beneath the subject property.
- We are planning to install two additional permanent groundwater monitoring wells at the subject property to obtain a flow direction and additional information regarding the productivity of the affected groundwater zone. Based on the results of this additional work, a plan of action will be prepared. This plan may include obtaining a Municipal Settings Designation (MSD) through the City of Houston.



CLOSING

Please contact us if you have any questions or would like to discuss this project. Samantha may be reached by phone at 512-695-9509 or email a [REDACTED] and Susan may be reached by phone at 512-656-9445 or email a [REDACTED]

Sincerely,
SQ Environmental, LLC

Samantha Litherland, P.E.
Project Engineer

Susan T. Litherland, P.E.
Principal

cc: Matthew Damborsky, SCD [REDACTED]
Benjamin Llana, Skanska [REDACTED]
Carlos Chacon, Skanska [REDACTED]

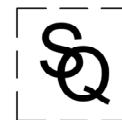
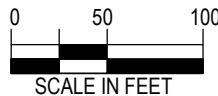
Attachments

- Figure 1 – Sample Location Map
- Table 1 – Summary of Soil Analytical Results
- Table 2 – Summary of Groundwater Analytical Results
- Attachment A – Boring and Well Log
- Attachment B – Analytical Data Packages
- Attachment C – Tier 1 Exclusion Criteria Supporting Documentation
- Attachment D – Revised Figure 4C
- Attachment E – State of Texas Well Reports



LEGEND

- SUBJECT PROPERTY BOUNDARY, APPROXIMATELY
- TEMPORARY WELL LOCATION, INSTALLED JUNE 2019 BY EFI
- ✦ PERMANENT WELL LOCATION, INSTALLED SEPTEMBER 2020 BY SQE
- SOIL BORING LOCATION, NOVEMBER 2019 BY SQE
- SURFACE SOIL SAMPLE LOCATION



SQ Environmental, LLC

SCALE: 1 IN = 100 FT

FIGURE 1

SAMPLE LOCATION MAP

BLOCK 251, VCP 3038
1150 LA BRANCH STREET
HOUSTON, TEXAS

DATE: SEPTEMBER 2020

PN: 1134.001.006.02

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹ 0.5-acre			Texas- Specific Background	Site-Specific Tier 2 PCLs	Sample ID Lab ID Date Depth Units	B-1 L1114463-01 06/28/2019 24 ft mg/kg-dry		B-2 L1114463-02 06/28/2019 24 ft mg/kg-dry		B-3 L1114463-03 06/28/2019 29 ft mg/kg-dry		B-4 L1114463-04 06/28/2019 24 ft mg/kg-dry		B-5 L1114463-05 06/28/2019 27 ft mg/kg-dry	
	TotSoil _{Comb}	GWSoil _{Ing}	AirSoil _{Inh-V}													
	mg/kg	mg/kg	mg/kg													
TPH (TX1005)																
C6-C12	1,600	65	3,100	--	--		22.8	J	<17.3	U	<17.5	U	<17.6	U	<17.9	U
C12-C28	2,300	200	15,000	--	--		<17.3	U	<17.3	U	<17.5	U	<17.6	U	<17.9	U
C28-C35	2,300	200	15,000	--	--		<17.3	U	<17.3	U	<17.5	U	<17.6	U	<17.9	U
total C6-C35	--	--	--	--	--		22.8	J	<17.3	U	<17.5	U	<17.6	U	<17.9	U
Metals (RCRA 8)																
Arsenic	24	5.0	--	5.9	--		<0.530	U	0.728	J	<0.536	U	<0.539	U	<0.548	U
Barium	8,100	440	--	300	--		22.0		23.9		97.9		15.0		64.9	
Cadmium	52	1.5	--	--	--		<0.0806	U	<0.0806	U	<0.0816	U	<0.0820	U	0.100	J
Chromium	33,000	2,400	--	30	--		7.45		8.55				4.53		10.4	
Lead	500	3.0	--	15	5,490		4.88		7.12		7.97		9.45		6.78	
Selenium	310	2.3	--	0.3	4.2		<0.714	U	<0.713	U	<0.723	U	<0.726	U	<0.739	U
Silver	97	0.48	--	--	39		<0.138	U	<0.138	U	<0.140	U	<0.141	U	<0.143	U
Mercury	8.3	2.1	16	0.04	--		<0.00322	U	0.00431	J	0.00468	J	<0.00328	U	<0.00334	U
VOCs² (SW8260B)																
Acetone	66,000	43	600,000	--	--		0.237		<0.0158	U	0.0222	J	0.0262	J	0.0254	J
Benzene	120	0.026	160	--	--		<0.00368	U	0.00863		0.00412		0.00187		0.00131	
Butylbenzene, n-	3,300	150	--	--	--		0.189	J3	<0.00442	U	<0.00448	U	<0.0045	U	0.0469	
Butylbenzene, sec-	3,300	85	--	--	--		0.335	J3	<0.00291	U	<0.00295	U	<0.00296	U	0.165	
Butylbenzene, tert-	3,300	100	--	--	--		0.0237	J J3	<0.00178	U	<0.00181	U	<0.00182	U	0.0196	
Ethylbenzene	6,400	7.6	29,000	--	--		<0.00488	U	0.0148		0.00857		0.00408		0.00390	
Isopropylbenzene	4,300	350	9,200	--	--		0.209	J	<0.000993	U	<0.00101	U	<0.00101	U	0.0293	
Isopropyltoluene, p-	8,200	230	--	--	--		0.0238	J J3	<0.00268	U	<0.00272	U	<0.00273	U	<0.00278	U
Methyl tert-butyl ether	800	0.62	1,400	--	--		<0.00272	U	0.00400		0.00195		0.000985	J	<0.000352	U
Naphthalene	220	31	270	--	--		<0.0287	U	0.0149		0.00786	J	0.00627	J	<0.00372	U
Propylbenzene, n-	2,200	45	6,300	--	--		0.313		<0.00136	U	<0.00138	U	<0.00138	U	0.0332	
Tetrachloroethene (PCE)	710	0.050	940	--	--		<0.00645	U	<0.000806	U	<0.000816	U	<0.00082	U	<0.000834	U
Toluene	5,900	8.2	63,000	--	--		<0.0115	U	0.0115		0.00646		0.00444	J	0.00439	J
Trichloroethene (TCE)	18	0.034	31	--	--		<0.00368	U	<0.00046	U	<0.000466	U	<0.000469	U	<0.000477	U
Trimethylbenzene, 1,2,4-	1,600	33	4,000	--	--		<0.0107	U	0.0151		0.00725		0.00498	J	0.00607	
Vinyl chloride	3.7	0.022	43	--	--		<0.00629	U	<0.000786	U	<0.000797	U	<0.0008	U	<0.000814	U
Xylenes, Total	6,000	120	9,400	--	--		<0.0440	U	0.0394		0.0204		0.0125		0.0103	
SVOCs (SW8270C)																
No COC detected above SDL.	--	--	--	--	--		<SDL	U	<SDL	U	<SDL	U	<SDL	U	<SDL	U

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹ 0.5-acre			Texas- Specific Background	Site-Specific Tier 2 PCLs	Sample ID Lab ID Date Depth Units	251-1-0		251-2-0		251-3-0		251-4-0		251-5-0	
	TotSoil _{Comb}	GWSoil _{Ing}	AirSoil _{Inh-V}				HS19110947-01 11/18/2019 0-0.5 ft mg/kg-dry	HS19110947-04 11/18/2019 0-0.5 ft mg/kg-dry	HS19110947-07 11/18/2019 0-0.5 ft mg/kg-dry	HS19110947-10 11/18/2019 0-0.5 ft mg/kg-dry	HS19110947-13 11/18/2019 0-0.5 ft mg/kg-dry					
TPH (TX1005)																
C6-C12	1,600	65	3,100	--	--		<7.5	U	<8.5	U	<7.1	U	<6.9	U	<6.7	U
C12-C28	2,300	200	15,000	--	--		<9.9	U	<11	U	<9.3	U	<9.1	U	<8.8	U
C28-C35	2,300	200	15,000	--	--		13	J	<11	U	<9.3	U	<9.1	U	<8.8	U
total C6-C35	--	--	--	--	--		13.0	J	<8.5	U	<7.1	U	<6.9	U	<6.7	U
Metals (RCRA 8)																
Arsenic	24	5.0	--	5.9	--		3.17		5.68		4.56		2.82		4.43	
Barium	8,100	440	--	300	--		150		327		105		84.8		99.3	
Cadmium	52	1.5	--	--	--		<0.0315	U	<0.0355	U	0.180	J	<0.0306	U	0.188	J
Chromium	33,000	2,400	--	30	--		18.1		24.3		21.3		10.5		20.4	
Lead	500	3.0	--	15	5,490		22.3		15.4		25.8		20.5		23.8	
Selenium	310	2.3	--	0.3	4.2		2.37		2.79		1.86		1.86		1.67	
Silver	97	0.48	--	--	39		0.0530	J	0.0538	J	0.0404	J	0.0499	J	0.0411	J
Mercury	8.3	2.1	16	0.04	--		0.00863		0.00785		0.0600		0.0545		0.0190	
VOCs ² (SW8260B)																
Acetone	66,000	43	600,000	--	--		....		....		....		....		....	
Benzene	120	0.026	160	--	--		....		....		....		....		....	
Butylbenzene, n-	3,300	150	--	--	--		....		....		....		....		....	
Butylbenzene, sec-	3,300	85	--	--	--		....		....		....		....		....	
Butylbenzene, tert-	3,300	100	--	--	--		....		....		....		....		....	
Ethylbenzene	6,400	7.6	29,000	--	--		....		....		....		....		....	
Isopropylbenzene	4,300	350	9,200	--	--		....		....		....		....		....	
Isopropyltoluene, p-	8,200	230	--	--	--		....		....		....		....		....	
Methyl tert-butyl ether	800	0.62	1,400	--	--		....		....		....		....		....	
Naphthalene	220	31	270	--	--		....		....		....		....		....	
Propylbenzene, n-	2,200	45	6,300	--	--		....		....		....		....		....	
Tetrachloroethene (PCE)	710	0.050	940	--	--		....		....		....		....		....	
Toluene	5,900	8.2	63,000	--	--		....		....		....		....		....	
Trichloroethene (TCE)	18	0.034	31	--	--		....		....		....		....		....	
Trimethylbenzene, 1,2,4-	1,600	33	4,000	--	--		....		....		....		....		....	
Vinyl chloride	3.7	0.022	43	--	--		....		....		....		....		....	
Xylenes, Total	6,000	120	9,400	--	--		....		....		....		....		....	
SVOCs (SW8270C)																
No COC detected above SDL.	--	--	--	--	--		....		....		....		....		....	

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹ 0.5-acre			Texas- Specific Background	Site-Specific Tier 2 PCLs	Sample ID Lab ID Date Depth Units	251-6-0		251-7-0		251-8-0		251-8-2.5		251-9-0	
	TotSoil _{Comb}	GW ¹ Soil _{Ing}	Air ¹ Soil _{Inh-V}				HS19111016-07 11/19/2019 0-0.5 ft mg/kg-dry	HS19111016-10 11/19/2019 0-0.5 ft mg/kg-dry	HS19110947-16 11/18/2019 0-0.5 ft mg/kg-dry	HS19120104-04 11/18/2019 2.5-3 ft mg/kg-dry	HS19110947-19 11/18/2019 0-0.5 ft mg/kg-dry					
TPH (TX1005)																
C6-C12	1,600	65	3,100	--	--		<8.0	U	<7.7	U	<13	U	....		<8.1	U
C12-C28	2,300	200	15,000	--	--		<11	U	<10	U	<18	U	....		<11	U
C28-C35	2,300	200	15,000	--	--		<11	U	<10	U	<18	U	....		<11	U
total C6-C35	--	--	--	--	--		<8.0	U	<7.7	U	<13	U	....		<8.1	U
Metals (RCRA 8)																
Arsenic	24	5.0	--	5.9	--		3.11		3.16		2.90		....		2.04	
Barium	8,100	440	--	300	--		108		125		192		....		224	
Cadmium	52	1.5	--	--	--		0.110	J	<0.0306	U	0.282	J	....		<0.0309	U
Chromium	33,000	2,400	--	30	--		21.2		16.3		17.6		....		23.1	
Lead	500	3.0	--	15	5,490		40.0		36.2		136		11.3		12.3	
Selenium	310	2.3	--	0.3	4.2		1.39		2.10		2.01		....		3.16	
Silver	97	0.48	--	--	39		0.0365	J	0.0509	J	0.204	J	....		0.0639	J
Mercury	8.3	2.1	16	0.04	--		0.0258		0.00748		0.236		....		0.00776	
VOCs ² (SW8260B)																
Acetone	66,000	43	600,000	--	--		....		....		....		....		....	
Benzene	120	0.026	160	--	--		....		....		....		....		....	
Butylbenzene, n-	3,300	150	--	--	--		....		....		....		....		....	
Butylbenzene, sec-	3,300	85	--	--	--		....		....		....		....		....	
Butylbenzene, tert-	3,300	100	--	--	--		....		....		....		....		....	
Ethylbenzene	6,400	7.6	29,000	--	--		....		....		....		....		....	
Isopropylbenzene	4,300	350	9,200	--	--		....		....		....		....		....	
Isopropyltoluene, p-	8,200	230	--	--	--		....		....		....		....		....	
Methyl tert-butyl ether	800	0.62	1,400	--	--		....		....		....		....		....	
Naphthalene	220	31	270	--	--		....		....		....		....		....	
Propylbenzene, n-	2,200	45	6,300	--	--		....		....		....		....		....	
Tetrachloroethene (PCE)	710	0.050	940	--	--		....		....		....		....		....	
Toluene	5,900	8.2	63,000	--	--		....		....		....		....		....	
Trichloroethene (TCE)	18	0.034	31	--	--		....		....		....		....		....	
Trimethylbenzene, 1,2,4-	1,600	33	4,000	--	--		....		....		....		....		....	
Vinyl chloride	3.7	0.022	43	--	--		....		....		....		....		....	
Xylenes, Total	6,000	120	9,400	--	--		....		....		....		....		....	
SVOCs (SW8270C)																
No COC detected above SDL	--	--	--	--	--		....		....		....		....		....	

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹ 0.5-acre			Texas- Specific Background	Site-Specific Tier 2 PCLs	Sample ID Lab ID Date Depth Units	251-11-0		251-11-2.5		251-12-0		251-12-2.5	
	TotSoil _{Comb}	GWSoil _{Ing}	AirSoil _{Inh-V}				HS19111016-01		HS19120104-06		HS19111016-04		HS19120104-07	
							11/19/2019		11/19/2019		11/19/2019		11/19/2019	
							0-0.5 ft		2.5-3 ft		0-0.5 ft		2.5-3 ft	
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg-dry		mg/kg-dry		mg/kg-dry		mg/kg-dry		
TPH (TX1005)														
C6-C12	1,600	65	3,100	--	--		<7.4	U	....		<9.5	U	....	
C12-C28	2,300	200	15,000	--	--		<9.7	U	....		<13	U	....	
C28-C35	2,300	200	15,000	--	--		<9.7	U	....		<13	U	....	
total C6-C35	--	--	--	--	--		<7.4	U	....		<9.5	U	....	
Metals (RCRA 8)														
Arsenic	24	5.0	--	5.9	--		3.54		....		1.91		....	
Barium	8,100	440	--	300	--		213		....		147		....	
Cadmium	52	1.5	--	--	--		0.172	J	....		0.0336	J	....	
Chromium	33,000	2,400	--	30	--		13.9		....		20.6		....	
Lead	500	3.0	--	15	5,490		95.7		13.9		14.2		....	
Selenium	310	2.3	--	0.3	4.2		2.49		....		3.39		3.33	
Silver	97	0.48	--	--	39		1.22		....		0.0541	J	....	
Mercury	8.3	2.1	16	0.04	--		0.172		....		0.00587		....	
VOCs ² (SW8260B)														
Acetone	66,000	43	600,000	--	--		....		....		....		....	
Benzene	120	0.026	160	--	--		....		....		....		....	
Butylbenzene, n-	3,300	150	--	--	--		....		....		....		....	
Butylbenzene, sec-	3,300	85	--	--	--		....		....		....		....	
Butylbenzene, tert-	3,300	100	--	--	--		....		....		....		....	
Ethylbenzene	6,400	7.6	29,000	--	--		....		....		....		....	
Isopropylbenzene	4,300	350	9,200	--	--		....		....		....		....	
Isopropyltoluene, p-	8,200	230	--	--	--		....		....		....		....	
Methyl tert-butyl ether	800	0.62	1,400	--	--		....		....		....		....	
Naphthalene	220	31	270	--	--		....		....		....		....	
Propylbenzene, n-	2,200	45	6,300	--	--		....		....		....		....	
Tetrachloroethene (PCE)	710	0.050	940	--	--		....		....		....		....	
Toluene	5,900	8.2	63,000	--	--		....		....		....		....	
Trichloroethene (TCE)	18	0.034	31	--	--		....		....		....		....	
Trimethylbenzene, 1,2,4-	1,600	33	4,000	--	--		....		....		....		....	
Vinyl chloride	3.7	0.022	43	--	--		....		....		....		....	
Xylenes, Total	6,000	120	9,400	--	--		....		....		....		....	
SVOCs (SW8270C)														
No COC detected above SDL.	--	--	--	--	--		....		....		....		....	

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

NOTES:

¹ Based on TRRP Tables dated 8 November 2019.

² Only detected VOCs summarized. For the full VOC list, see the laboratory reports.

Samples collected in June 2019 were obtained by EFI Global, Inc.

-- No value.

.... - Constituent was not analyzed.

< and U - Analyte not detected above Sample Detection Limit (SDL).

J - Analyte was identified above the SDL and below the Method Quantitation Limit (MQL).

J3 - Associated batch QC outside quality control range for precision.

mg/kg - milligrams per kilogram

TPH - Total Petroleum Hydrocarbons

VOCs - Volatile Organic Compounds

SVOCs - Semi-Volatile Organic Compounds

Grey shaded PCLs indicate critical PCL for the respective analyte.

Bold values indicate concentration reported above the MQL.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹		Well ID Sample ID Lab ID Date Units	B-1		B-2		B-3		B-4		B-5	
	GW _{Ing} mg/L	0.5-acre Air GW _{Inh-v} mg/L		B-1 L1114463-06 06/28/2019 mg/L		B-2 L1114463-07 06/28/2019 mg/L		B-3 L1114463-08 06/28/2019 mg/L		B-4 L1114463-09 06/28/2019 mg/L		B-5 L1114463-10 06/28/2019 mg/L	
TPH (TX1005)													
C6-C12	0.98	1,800		<0.600	U	<0.600	U	<0.600	U	<0.600	U	<0.600	U
C12-C28	0.98	7,500		<0.600	U	<0.600	U	<0.600	U	<0.600	U	<0.600	U
C28-C35	0.98	7,500		<0.600	U	<0.600	U	<0.600	U	<0.600	U	<0.600	U
total C6-C35	--	--		<0.600	U	<0.600	U	<0.600	U	<0.600	U	<0.600	U
Metals (SW6010/SW7470A)													
Arsenic	0.010	--		0.0990		<0.0065	U	<0.0065	U	<0.0065	U	<0.0065	U
Barium	2.0	--		0.110		0.0486		0.0541		0.240		0.218	
Cadmium	0.0050	--		<0.0007	U	<0.0007	U	<0.0007	U	<0.0007	U	<0.0007	U
Chromium	0.10	--		<0.0014	U	<0.0014	U	<0.0014	U	0.00163	J	0.00141	J
Lead	0.015	--		<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U	<0.0019	U
Selenium	0.050	--		<0.0074	U	0.0121		<0.0074	U	<0.0074	U	<0.0074	U
Silver	0.12	--		<0.0028	U	<0.0028	U	<0.0028	U	<0.0028	U	<0.0028	U
Mercury	0.0020	7.3		<0.000049	U	<0.000049	U	<0.000049	U	<0.000049	U	<0.000049	U
VOCs² (SW8260B)													
Butylbenzene, tert-	0.98	--		0.00178		<0.000399	U	<0.000399	U	<0.000399	U	<0.000399	U
Carbon disulfide	2.4	4,900		....		....		....		....		....	
Chloromethane	0.070	36		<0.000276	U	<0.000276	U	0.000438	J	<0.000276	U	<0.000276	U
Dichloroethene, 1,1-	0.0070	1,700		<0.000398	U	<0.000398	U	<0.000398	U	<0.000398	U	<0.000398	U
Dichloroethene, cis-1,2-	0.070	1,200		<0.00026	U	<0.00026	U	<0.00026	U	<0.00026	U	<0.00026	U
Dichloroethene, trans-1,2-	0.10	770		<0.000396	U	<0.000396	U	<0.000396	U	<0.000396	U	<0.000396	U
Tetrachloroethene (PCE)	0.0050	500		<0.000372	U	<0.000372	U	<0.000372	U	<0.000372	U	<0.000372	U
Trichloroethene (TCE)	0.0050	24		<0.000398	U	<0.000398	U	<0.000398	U	<0.000398	U	<0.000398	U
Vinyl chloride	0.0020	3.8		<0.000259	U	<0.000259	U	<0.000259	U	<0.000259	U	<0.000259	U
SVOCs² (SW8270C)													
Di-n-butyl phthalate	2.4	--		0.00124	J	0.00134	J	0.00153	J	0.00691		0.0113	
Diethyl phthalate	20	--		<0.000282	U	<0.000321	U	0.000488	J	0.000561	J	0.00164	J
Phenol	7.3	160,000		0.00114	J	0.00385	J	0.000707	J	0.000658	J	0.00178	J

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

Analyte	TRRP Tier 1 Residential PCLs ¹		Well ID Sample ID Lab ID Date Units	MW-251-1		MW-251-1	
	GW _{Ing} mg/L	0.5-acre Air GW _{Inh-v} mg/L		MW-251-1-20200908 HS20090382-01 09/08/2020 mg/L		MW-251-1-20200916 HS20090851-01 09/16/2020 mg/L	
TPH (TX1005)							
C6-C12	0.98	1,800		<0.19	U	....	
C12-C28	0.98	7,500		<0.19	U	....	
C28-C35	0.98	7,500		<0.19	U	....	
total C6-C35	--	--		<0.19	U	....	
Metals (SW6010/SW7470A)							
Arsenic	0.010	--		0.00235		....	
Barium	2.0	--		0.0859		....	
Cadmium	0.0050	--		<0.000200	U	....	
Chromium	0.10	--		0.00149	J	....	
Lead	0.015	--		<0.000600	U	....	
Selenium	0.050	--		<0.00110	U	....	
Silver	0.12	--		<0.000200	U	....	
Mercury	0.0020	7.3		<0.0000300	U	....	
VOCs² (SW8260B)							
Butylbenzene, tert-	0.98	--		....		....	
Carbon disulfide	2.4	4,900		<0.00060	U	0.0013	J
Chloromethane	0.070	36		<0.00020	U	<0.00020	U
Dichloroethene, 1,1-	0.0070	1,700		<0.00020	U	0.00065	J
Dichloroethene, cis-1,2-	0.070	1,200		0.016		0.023	
Dichloroethene, trans-1,2-	0.10	770		0.0011		0.0015	
Tetrachloroethene (PCE)	0.0050	500		0.070		0.096	
Trichloroethene (TCE)	0.0050	24		0.020		0.029	
Vinyl chloride	0.0020	3.8		<0.00020	U	<0.00020	U
SVOCs² (SW8270C)							
Di-n-butyl phthalate	2.4	--		....		....	
Diethyl phthalate	20	--		....		....	
Phenol	7.3	160,000		....		....	

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Block 251, VCP 3038
1150 La Branch Street
Houston, Texas 77010

NOTES:

¹ Based on TRRP Tables dated 8 November 2019.

² Only detected analytes summarized. For the full list, see the laboratory reports.

EFI collected samples from temporary monitoring wells in June 2019.

SQE collected samples from the permanent monitoring well by low-flow methods.

-- No value.

.... - Constituent was not analyzed.

< and U - Analyte not detected above Sample Detection Limit (SDL).

J - Analyte was identified above the SDL and below the Method Quantitation Limit (MQL).

mg/L - milligram per liter

TPH - Total Petroleum Hydrocarbons

VOCs - Volatile Organic Compounds

SVOCs - Semi-Volatile Organic Compounds

Grey shaded PCLs indicate critical PCL for the respective analyte.

Bold values indicate concentration reported above the MQL.

Yellow highlight value indicates sample result exceeds Tier 1 Protective Concentration Level (PCL).

ATTACHMENT A
BORING AND WELL LOG



**SQ ENVIRONMENTAL, LLC**

PO BOX 1991
AUSTIN, TX 78767-1991
(512) 900-7731

BORING/WELL LOG

PAGE 1 OF 1

BORING ID: MW-251-1

WELL ID: MW-251-1

PROJECT INFORMATION**PROJECT INFORMATION**

PROJECT: BLOCK 251
SITE LOCATION: HOUSTON, TEXAS
JOB NUMBER: 1134.001.006
PROJECT MANAGER: SAMANTHA LITHERLAND, P.E.
LOGGED BY: SAMANTHA LITHERLAND, P.E.
DATE DRILLED: 9/4/2020

DRILLING COMPANY: BEST DRILLING
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL DEPTH: 41 FT BGS
BORING DIAMETER: 8 IN WELL DIAMETER: 2 IN

TOP OF CASING ELEV: NOT MEASURED

N. LATITUDE:

W. LONGITUDE:

29.753867

-95.361998

REMARKS: Background PID READING: 0.1 PARTS PER MILLION (ppm).
WATER LEVEL RECORDED ON 8 SEPT 2020.

STATIC WATER LEVEL: 26.7 FT BTOC

DEPTH	LITHOLOGY	SCS	DESCRIPTION	SAMPLE ID	PID	WELL COMPLETION	INSTALLATION NOTES
0			0-4 inches: ASPHALT.				CONCRETE (0-2)
			4 inches-4.5 ft: SILTY CLAY, dark brown, medium soft.				FLUSH-MOUNT COMPLETION
5			4.5-8.5 ft: CLAY, tan, hard.				2-IN BLANK PVC CASING (0-26)
10		CH	8.5-24 ft: CLAY, red, medium hard.				BENTONITE SEAL (2-24)
15							
20							
25			24-34 ft: CLAYEY SAND, grey, dry (moisture increases with depth).				20/40 SILICA SAND PACK (24-41)
30							
35		SC	34-41 ft: CLAYEY SAND, saturated.				0.01 SLOTTED 2-IN PVC SCREEN (26-41)
40			TOTAL DEPTH: 41 FT BELOW GROUND SURFACE.				41 FT: WELL BOTTOM
45							
50							

NO SOIL
SAMPLE
COLLECTED

0.0

0.0

0.0

0.0

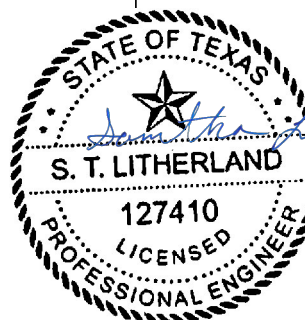
0.0

0.7

1.8

1.3

0.5



10/6/2020

ATTACHMENT B
ANALYTICAL DATA PACKAGES





10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

September 08, 2020

Samantha Litherland
SQ Environmental
PO Box 1991
Austin, TX 78767

Work Order: **HS20090239**

Laboratory Results for: **APA Sampling 1134.001.006**

Dear Samantha Litherland,

ALS Environmental received 3 sample(s) on Sep 04, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Dane J. Wacasey

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090239

**TRRP Laboratory Data
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits.
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 Other problems or anomalies.
The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090239

**TRRP Laboratory Data
Package Cover Page**

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory have been identified by the laboratory in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [NA] This laboratory meets an exception under 30 TAC §25.6 and was last inspected by [] TCEQ or [] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.



Dane J. Wacasey

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 09/08/2020			
Project Name: APA Sampling 1134.001.006 1134.001.006				Laboratory Job Number: HS20090239			
Reviewer Name: Dane Wacasey				Prep Batch Number: R368143			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?		X			1
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?			X		
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?			x		
		Are unadjusted MQLs and DCSs included in the laboratory data package?			X		
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SDL and minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				

Laboratory Review Checklist: Supporting Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 09/08/2020			
Project Name: APA Sampling 1134.001.006 1134.001.006				Laboratory Job Number: HS20090239			
Reviewer Name: Dane Wacasey				Prep Batch Number: R368143			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)					
		Was the CCV analyzed at the method-required frequency?			X		
		Were percent differences for each analyte within the method-required QC limits?			X		
		Was the ICAL curve verified for each analyte?			X		
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning:					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS):					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?			X		
S11	OI	Proficiency test reports:					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports	
Laboratory Name: ALS Laboratory Group	LRC Date: 09/08/2020
Project Name: APA Sampling 1134.001.006 1134.001.006	Laboratory Job Number: HS20090239
Reviewer Name: Dane Wacasey	Prep Batch Number: R368143
ER# ⁵	Description
1	Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier. The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 degrees C.
Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable); NA = Not Applicable; NR = Not Reviewed; R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).	

Client: SQ Environmental
Project: APA Sampling 1134.001.006
Work Order: HS20090239

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090239-01	251-pH-01	Soil		04-Sep-2020 07:00	04-Sep-2020 13:55	☐
HS20090239-02	251-pH-02	Soil		04-Sep-2020 07:05	04-Sep-2020 13:55	☐
HS20090239-03	251-pH-03	Soil		04-Sep-2020 07:10	04-Sep-2020 13:55	☐

Client: SQ Environmental
Project: APA Sampling 1134.001.006
Sample ID: 251-pH-01
Collection Date: 04-Sep-2020 07:00

ANALYTICAL REPORT

WorkOrder:HS20090239
Lab ID:HS20090239-01
Matrix:Soil

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
PH SOIL BY SW9045D		Method:SW9045D				Analyst: JAC	
pH	7.85	H	0.100	0.100	pH Units	1	08-Sep-2020 14:35
Temp Deg C @pH	22.1	H	0	0	°C	1	08-Sep-2020 14:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental
Project: APA Sampling 1134.001.006
Sample ID: 251-pH-02
Collection Date: 04-Sep-2020 07:05

ANALYTICAL REPORT

WorkOrder:HS20090239
Lab ID:HS20090239-02
Matrix:Soil

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
PH SOIL BY SW9045D	Method:SW9045D						Analyst: JAC
pH	7.99	H	0.100	0.100	pH Units	1	08-Sep-2020 14:35
Temp Deg C @pH	22.0	H	0	0	°C	1	08-Sep-2020 14:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental
Project: APA Sampling 1134.001.006
Sample ID: 251-pH-03
Collection Date: 04-Sep-2020 07:10

ANALYTICAL REPORT

WorkOrder:HS20090239
Lab ID:HS20090239-03
Matrix:Soil

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
PH SOIL BY SW9045D		Method:SW9045D				Analyst: JAC	
pH	5.38	H	0.100	0.100	pH Units	1	08-Sep-2020 14:35
Temp Deg C @pH	22.2	H	0	0	°C	1	08-Sep-2020 14:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental**Project:** APA Sampling 1134.001.006**WorkOrder:** HS20090239**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R368143 (0)		Test Name : PH SOIL BY SW9045D			Matrix: Soil	
HS20090239-01	251-pH-01	04 Sep 2020 07:00			08 Sep 2020 14:35	1
HS20090239-02	251-pH-02	04 Sep 2020 07:05			08 Sep 2020 14:35	1
HS20090239-03	251-pH-03	04 Sep 2020 07:10			08 Sep 2020 14:35	1

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090239

QC BATCH REPORT

Batch ID: R368143 (0)		Instrument: WetChem_HS		Method: PH SOIL BY SW9045D					
DUP	Sample ID: HS20090302-25DUP	Units: pH Units		Analysis Date: 08-Sep-2020 14:35					
Client ID:	Run ID: WetChem_HS_368143		SeqNo: 5729662		PrepDate:		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
pH	5.32	0.100					5.23	1.71	10
Temp Deg C @pH	21.8	0					22	0.913	10
The following samples were analyzed in this batch:									
HS20090239-01 HS20090239-02 HS20090239-03									

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090239

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
pH Units	

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

Sample Receipt Checklist

Work Order ID: HS20090239

Date/Time Received: 04-Sep-2020 13:55

Client Name: SQ ENVIRONMENTAL TX

Received by: Paresh M. Giga

Completed By: <u>/S/ Bernadette A. Fini</u>	04-Sep-2020 16:10	Reviewed by: <u>/S/ Dane J. Wacasey</u>	08-Sep-2020 17:57
eSignature	Date/Time	eSignature	Date/Time

Matrices: solidCarrier name: Client

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	COC IDs:145096
Samplers name present on COC?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	4.9°C/4.9°C uc/c IR 31		
Cooler(s)/Kit(s):	46231		
Date/Time sample(s) sent to storage:	9-4-20 17:00		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

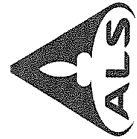
Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Houston, TX
+1 281 530 5656
Middletown, PA
+1 717 944 5541
Spring City, PA
+1 610 948 4903
Salt Lake City, UT
+1 801 266 7700
South Charleston, WV
+1 304 356 3168
York, PA
+1 717 505 5280

Page 1 of 1

COC ID: 145096

Customer Information		Project Information		ALS Project Manager:		ALS Work Order #:	
Purchase Order	1134.001.006	Project Name	APA Sampling	Parameter/Method Request for Analysis			
Work Order		Project Number	1134.001.006				
Company Name	SQ Env.	Bill To Company	SQ Env.				
Send Report To	Samatha I. Haddock	Invoice Attn					
Address	[Redacted]						
City/State/Zip	[Redacted]	City/State/Zip					
Phone		Phone					
Fax		Fax					
e-Mail Address		e-Mail Address					
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A B C D E F G H I J
1	251-PH-01	9.14.20	0700	soil	NEAT	1	X
2	251-PH-02	9.14.20	0705	soil	NEAT	1	X
3	251-PH-03	9.14.20	0710	soil	NEAT	1	X
4							
5							
6							
7							
8							
9							
10							

End of Chain

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Samatha I. Haddock	Drop Off			☒ 5 Wk Days	☐ 2 Wk Days	☐ 24 Hour	
Relinquished by:	Time: 9/14/20 1355	Received by:		Notes:			
Relinquished by:	Date: 9/14/20	Received by (Laboratory):	9/14/20 13:55				
Relinquished by:	Date:	Checked by (Laboratory):					
Logged by (Laboratory):	Date:						
Preservative Key:	1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035	Cooler Temp	5°C	Cooler ID	4231	QC Package: (Check One Box Below)	
						☒ Level II Std QC	☒ TRRP Checklist
						☐ Level III Std QC/Raw Date	☐ TRRP Level IV
						☐ Level IV SW846/CLP	
						☐ Other	

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2012 by ALS Environmental.



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

September 15, 2020

Samantha Litherland
SQ Environmental
PO Box 1991
Austin, TX 78767

Work Order: **HS20090382**

Laboratory Results for: **APA Sampling 1134.001.006**

Dear Samantha Litherland,

ALS Environmental received 1 sample(s) on Sep 08, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL

Dane J. Wacasey

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

**TRRP Laboratory Data
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
 - R2 Sample identification cross-reference;
 - R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
 - R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
 - R5 Test reports/summary forms for blank samples;
 - R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
 - R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits.
 - R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
 - R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
 - R10 Other problems or anomalies.
The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.
-

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

**TRRP Laboratory Data
Package Cover Page**

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory have been identified by the laboratory in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [NA] This laboratory meets an exception under 30 TAC §25.6 and was last inspected by [] TCEQ or [] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.



Dane J. Wacasey

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group

LRC Date: 09/15/2020

Project Name: APA Sampling 1134.001.006

Laboratory Job Number: HS20090382

Reviewer Name: Dane Wacasey

Prep Batch Number: 157118,157129,157222,R368284

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SDL and minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				1

Laboratory Review Checklist: Supporting Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 09/15/2020			
Project Name: APA Sampling 1134.001.006				Laboratory Job Number: HS20090382			
Reviewer Name: Dane Wacasey				Prep Batch Number: 157118,157129,157222,R368284			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning:					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS):					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports:					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);

NA = Not Applicable;

NR = Not Reviewed;

R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports	
Laboratory Name: ALS Laboratory Group	LRC Date: 09/15/2020
Project Name: APA Sampling 1134.001.006	Laboratory Job Number: HS20090382
Reviewer Name: Dane Wacasey	Prep Batch Number: 157118,157129,157222,R368284
ER# ⁵	Description
1	Volatile Organics Method SW8260: With the exception of cyclohexane, ALS is NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package. Because TCEQ does not offer accreditation for this compound, the results are flagged with n.
Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable); NA = Not Applicable; NR = Not Reviewed; R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).	

Client:

Project:

Work Order:

SQ Environmental
APA Sampling 1134.001.006
HS20090382

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090382-01	MW-251-1-2020908	Aqueous		08-Sep-2020 08:00	08-Sep-2020 08:55	☐

Client: SQ Environmental
 Project: APA Sampling 1134.001.006
 Sample ID: MW-251-1-2020908
 Collection Date: 08-Sep-2020 08:00

ANALYTICAL REPORT

WorkOrder:HS20090382
 Lab ID:HS20090382-01
 Matrix:Aqueous

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
1,1,1-Trichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
1,1,2,2-Tetrachloroethane	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
1,1,2-Trichloroethane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
1,1-Dichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
1,1-Dichloroethene	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
1,2,4-Trichlorobenzene	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
1,2-Dibromo-3-chloropropane	< 0.0010		0.0010	0.0010	mg/L	1	09-Sep-2020 20:48
1,2-Dibromoethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
1,2-Dichlorobenzene	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
1,2-Dichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
1,2-Dichloropropane	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
1,3-Dichlorobenzene	< 0.00040		0.00040	0.0010	mg/L	1	09-Sep-2020 20:48
1,4-Dichlorobenzene	< 0.00040		0.00040	0.0010	mg/L	1	09-Sep-2020 20:48
2-Butanone	< 0.00050		0.00050	0.0020	mg/L	1	09-Sep-2020 20:48
2-Hexanone	< 0.0010		0.0010	0.0020	mg/L	1	09-Sep-2020 20:48
4-Methyl-2-pentanone	< 0.00070		0.00070	0.0020	mg/L	1	09-Sep-2020 20:48
Acetone	< 0.0020		0.0020	0.0020	mg/L	1	09-Sep-2020 20:48
Benzene	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Bromodichloromethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Bromoform	< 0.00040		0.00040	0.0010	mg/L	1	09-Sep-2020 20:48
Bromomethane	< 0.00040		0.00040	0.0010	mg/L	1	09-Sep-2020 20:48
Carbon disulfide	< 0.00060		0.00060	0.0020	mg/L	1	09-Sep-2020 20:48
Carbon tetrachloride	< 0.00050		0.00050	0.0010	mg/L	1	09-Sep-2020 20:48
Chlorobenzene	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Chloroethane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Chloroform	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Chloromethane	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
cis-1,2-Dichloroethene	0.016		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
cis-1,3-Dichloropropene	< 0.00010		0.00010	0.0010	mg/L	1	09-Sep-2020 20:48
Cyclohexane	< 0.00030	n	0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Dibromochloromethane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Dichlorodifluoromethane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Ethylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Isopropylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
m,p-Xylene	< 0.00050		0.00050	0.0020	mg/L	1	09-Sep-2020 20:48
Methyl acetate	< 0.0010		0.0010	0.0010	mg/L	1	09-Sep-2020 20:48
Methyl tert-butyl ether	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Methylcyclohexane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental
 Project: APA Sampling 1134.001.006
 Sample ID: MW-251-1-2020908
 Collection Date: 08-Sep-2020 08:00

ANALYTICAL REPORT

WorkOrder:HS20090382
 Lab ID:HS20090382-01
 Matrix:Aqueous

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260				Analyst: AKP	
Methylene chloride	< 0.0010		0.0010	0.0020	mg/L	1	09-Sep-2020 20:48
o-Xylene	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Styrene	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Tetrachloroethene	0.070		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Toluene	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
trans-1,2-Dichloroethene	0.0011		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
trans-1,3-Dichloropropene	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Trichloroethene	0.020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Trichlorofluoromethane	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
Vinyl chloride	< 0.00020		0.00020	0.0010	mg/L	1	09-Sep-2020 20:48
Xylenes, Total	< 0.00030		0.00030	0.0010	mg/L	1	09-Sep-2020 20:48
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>96.7</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>09-Sep-2020 20:48</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>			<i>81-113</i>	<i>%REC</i>	<i>1</i>	<i>09-Sep-2020 20:48</i>
<i>Surr: Dibromofluoromethane</i>	<i>95.2</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>09-Sep-2020 20:48</i>
<i>Surr: Toluene-d8</i>	<i>101</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>09-Sep-2020 20:48</i>
LOW-LEVEL TEXAS TPH BY TX1005		Method:TX1005				Prep:TX1005PR / 10-Sep-2020	Analyst: MBG
nC6 to nC12	< 0.19		0.19	0.48	mg/L	1	11-Sep-2020 10:30
>nC12 to nC28	< 0.19		0.19	0.48	mg/L	1	11-Sep-2020 10:30
>nC28 to nC35	< 0.19		0.19	0.48	mg/L	1	11-Sep-2020 10:30
Total Petroleum Hydrocarbon	< 0.19		0.19	0.48	mg/L	1	11-Sep-2020 10:30
<i>Surr: 2-Fluorobiphenyl</i>	<i>71.9</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>11-Sep-2020 10:30</i>
<i>Surr: Trifluoromethyl benzene</i>	<i>96.1</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>11-Sep-2020 10:30</i>
DISSOLVED METALS BY SW6020A		Method:SW6020 (dissolved)				Prep:SW3010A / 09-Sep-2020	Analyst: JHD
Arsenic	0.00235		0.000400	0.00200	mg/L	1	10-Sep-2020 14:51
Barium	0.0859		0.00190	0.00400	mg/L	1	10-Sep-2020 14:51
Cadmium	< 0.000200		0.000200	0.00200	mg/L	1	10-Sep-2020 14:51
Chromium	0.00149	J	0.000400	0.00400	mg/L	1	10-Sep-2020 14:51
Lead	< 0.000600		0.000600	0.00200	mg/L	1	10-Sep-2020 14:51
Selenium	< 0.00110		0.00110	0.00200	mg/L	1	10-Sep-2020 14:51
Silver	< 0.000200		0.000200	0.00200	mg/L	1	10-Sep-2020 14:51
DISSOLVED MERCURY BY SW7470A		Method:SW7470 (dissolved)				Prep:SW7470 / 09-Sep-2020	Analyst: JC
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	09-Sep-2020 15:16

Weight / Prep Log

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

Batch ID: 157118	Start Date: 09 Sep 2020 11:00	End Date: 09 Sep 2020 15:00
Method: DISS METALS PREP - WATER - SW3010A		Prep Code: 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090382-01		10 (mL)	10 (mL)	1

Batch ID: 157129	Start Date: 09 Sep 2020 08:30	End Date: 09 Sep 2020 10:30
Method: MERCURY PREP BY 7470A - DISSOLVED		Prep Code: HG_W_DISSPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090382-01		10 (mL)	10 (mL)	1

Batch ID: 157222	Start Date: 10 Sep 2020 18:55	End Date: 10 Sep 2020 20:00
Method: TX 1005 PREP		Prep Code: TX 1005_W PR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20090382-01	1	31.19 (g)	3 (mL)	0.09618

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 157118 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Aqueous	
HS20090382-01	MW-251-1-2020908	08 Sep 2020 08:00		09 Sep 2020 15:00	10 Sep 2020 14:51	1
Batch ID: 157129 (0)		Test Name : DISSOLVED MERCURY BY SW7470A			Matrix: Aqueous	
HS20090382-01	MW-251-1-2020908	08 Sep 2020 08:00		09 Sep 2020 08:30	09 Sep 2020 15:16	1
Batch ID: 157222 (0)		Test Name : LOW-LEVEL TEXAS TPH BY TX1005			Matrix: Aqueous	
HS20090382-01	MW-251-1-2020908	08 Sep 2020 08:00		10 Sep 2020 18:55	11 Sep 2020 10:30	1
Batch ID: R368284 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Aqueous	
HS20090382-01	MW-251-1-2020908	08 Sep 2020 08:00			09 Sep 2020 20:48	1

WorkOrder: HS20090382

InstrumentID: FID-13

Test Code: TX1005_W_Low

Test Number: TX1005

Test Name: Low-level Texas TPH by TX1005

**METHOD DETECTION /
REPORTING LIMITS****Matrix:** Aqueous**Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	nC6 to nC12	TPH-1005-1	0.25	0.27	0.20	0.50
A	>nC12 to nC28	TPH-1005-2	0.25	0.26	0.20	0.50
A	>nC28 to nC35	TPH-1005-4	0.25	0.26	0.20	0.50
A	Total Petroleum Hydrocarbon	TPH	0.25	0.26	0.20	0.50
S	2-Fluorobiphenyl	321-60-8	0	0	0	0
S	Trifluoromethyl benzene	98-08-8	0	0	0	0

WorkOrder:	HS20090382	METHOD DETECTION / REPORTING LIMITS				
InstrumentID:	HG03					
Test Code:	HG_Diss					
Test Number:	SW7470 (dissolved)					
Test Name:	Dissolved Mercury by SW7470A	Matrix:	Aqueous	Units:	mg/L	
Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Mercury	7439-97-6	0.000100	0.000106	0.0000300	0.000200

WorkOrder: HS20090382		METHOD DETECTION / REPORTING LIMITS				
InstrumentID: ICPMS06						
Test Code: ICP_DISS						
Test Number: SW6020 (dissolved)						
Test Name: Dissolved Metals by SW6020A						
		Matrix: Aqueous		Units: mg/L		
Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Arsenic	7440-38-2	0.00100	0.000928	0.000400	0.00200
A	Barium	7440-39-3	0.00250	0.00265	0.00190	0.00400
A	Cadmium	7440-43-9	0.000500	0.000488	0.000200	0.00200
A	Chromium	7440-47-3	0.00100	0.000854	0.000400	0.00400
A	Lead	7439-92-1	0.00100	0.000946	0.000600	0.00200
A	Selenium	7782-49-2	0.00250	0.00253	0.00110	0.00200
A	Silver	7440-22-4	0.000500	0.000458	0.000200	0.00200

WorkOrder: HS20090382

InstrumentID: VOA4

Test Code: 8260_LL_W

Test Number: SW8260

Test Name: Low Level Volatiles by SW8260C

**METHOD DETECTION /
REPORTING LIMITS****Matrix:** Aqueous**Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	1,1,1-Trichloroethane	71-55-6	0.00050	0.00048	0.00020	0.0010
A	1,1,2,2-Tetrachloroethane	79-34-5	0.0010	0.00087	0.00050	0.0010
A	1,1,2-Trichlor-1,2,2-trifluoroethane	76-13-1	0.0010	0.00060	0.00050	0.0010
A	1,1,2-Trichloroethane	79-00-5	0.0010	0.0010	0.00030	0.0010
A	1,1-Dichloroethane	75-34-3	0.00050	0.00052	0.00020	0.0010
A	1,1-Dichloroethene	75-35-4	0.00050	0.00048	0.00020	0.0010
A	1,2,4-Trichlorobenzene	120-82-1	0.0010	0.00072	0.00050	0.0010
A	1,2-Dibromo-3-chloropropane	96-12-8	0.0020	0.00091	0.0010	0.0010
A	1,2-Dibromoethane	106-93-4	0.00050	0.00052	0.00020	0.0010
A	1,2-Dichlorobenzene	95-50-1	0.0010	0.00096	0.00050	0.0010
A	1,2-Dichloroethane	107-06-2	0.00050	0.00056	0.00020	0.0010
A	1,2-Dichloropropane	78-87-5	0.0010	0.0010	0.00050	0.0010
A	1,3-Dichlorobenzene	541-73-1	0.0010	0.00093	0.00040	0.0010
A	1,4-Dichlorobenzene	106-46-7	0.0010	0.0011	0.00040	0.0010
A	2-Butanone	78-93-3	0.0010	0.00078	0.00050	0.0020
A	2-Hexanone	591-78-6	0.0020	0.0011	0.0010	0.0020
A	4-Methyl-2-pentanone	108-10-1	0.0020	0.0013	0.00070	0.0020
A	Acetone	67-64-1	0.0020	0.0025	0.0020	0.0020
A	Benzene	71-43-2	0.00050	0.00052	0.00020	0.0010
A	Bromodichloromethane	75-27-4	0.00050	0.00052	0.00020	0.0010
A	Bromoform	75-25-2	0.0010	0.00073	0.00040	0.0010
A	Bromomethane	74-83-9	0.0010	0.0011	0.00040	0.0010
A	Carbon disulfide	75-15-0	0.0020	0.0015	0.00060	0.0020
A	Carbon tetrachloride	56-23-5	0.0010	0.00077	0.00050	0.0010
A	Chlorobenzene	108-90-7	0.0010	0.00097	0.00030	0.0010
A	Chloroethane	75-00-3	0.0010	0.0013	0.00030	0.0010
A	Chloroform	67-66-3	0.00050	0.00054	0.00020	0.0010
A	Chloromethane	74-87-3	0.00050	0.00067	0.00020	0.0010
A	cis-1,2-Dichloroethene	156-59-2	0.00050	0.00059	0.00020	0.0010
A	cis-1,3-Dichloropropene	10061-01-5	0.00040	0.00048	0.00010	0.0010
A	Cyclohexane	110-82-7	0.0010	0.00070	0.00030	0.0010
A	Dibromochloromethane	124-48-1	0.0010	0.00076	0.00030	0.0010
A	Dichlorodifluoromethane	75-71-8	0.0010	0.00042	0.00030	0.0010
A	Ethylbenzene	100-41-4	0.0010	0.00070	0.00030	0.0010
A	Isopropylbenzene	98-82-8	0.0010	0.00066	0.00030	0.0010
A	m,p-Xylene	179601-23-1	0.0010	0.00095	0.00050	0.0020
A	Methyl acetate	79-20-9	0.0010	0.0010	0.0010	0.0010
A	Methyl tert-butyl ether	1634-04-4	0.00050	0.00040	0.00020	0.0010
A	Methylcyclohexane	108-87-2	0.0010	0.00057	0.00030	0.0010
A	Methylene chloride	75-09-2	0.0020	0.00062	0.0010	0.0020

WorkOrder: HS20090382

InstrumentID: VOA4

Test Code: 8260_LL_W

Test Number: SW8260

Test Name: Low Level Volatiles by SW8260C

**METHOD DETECTION /
REPORTING LIMITS****Matrix:** Aqueous**Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	o-Xylene	95-47-6	0.0010	0.00085	0.00030	0.0010
A	Styrene	100-42-5	0.0010	0.00079	0.00030	0.0010
A	Tetrachloroethene	127-18-4	0.0010	0.00072	0.00030	0.0010
A	Toluene	108-88-3	0.00050	0.00060	0.00020	0.0010
A	trans-1,2-Dichloroethene	156-60-5	0.00050	0.00062	0.00020	0.0010
A	trans-1,3-Dichloropropene	10061-02-6	0.00050	0.00048	0.00020	0.0010
A	Trichloroethene	79-01-6	0.00050	0.00061	0.00020	0.0010
A	Trichlorofluoromethane	75-69-4	0.0010	0.00065	0.00030	0.0010
A	Vinyl chloride	75-01-4	0.00050	0.00046	0.00020	0.0010
A	Xylenes, Total	1330-20-7	0.0010	0.0024	0.00030	0.0010
S	1,2-Dichloroethane-d4	17060-07-0	0	0	0	0.0010
S	4-Bromofluorobenzene	460-00-4	0	0	0	0.0010
S	Dibromofluoromethane	1868-53-7	0	0	0	0.0010
S	Toluene-d8	2037-26-5	0	0	0	0.0010

Client: SQ Environmental
 Project: APA Sampling 1134.001.006
 WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: 157222 (0)		Instrument: FID-13		Method: LOW-LEVEL TEXAS TPH BY TX1005						
MBLK	Sample ID: MBLK-157222	Units: mg/L		Analysis Date: 11-Sep-2020 06:09						
Client ID:	Run ID: FID-13_368447	SeqNo: 5736517		PrepDate: 10-Sep-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	< 0.20	0.50								
>nC12 to nC28	< 0.20	0.50								
>nC28 to nC35	< 0.20	0.50								
Total Petroleum Hydrocarbon	< 0.20	0.50								
Surr: 2-Fluorobiphenyl	1.772	0	2.5	0	70.9	70 - 130				
Surr: Trifluoromethyl benzene	1.973	0	2.5	0	78.9	70 - 130				
LCS	Sample ID: LCS-157222	Units: mg/L		Analysis Date: 11-Sep-2020 06:38						
Client ID:	Run ID: FID-13_368447	SeqNo: 5736518		PrepDate: 10-Sep-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	24.68	0.50	25	0	98.7	75 - 125				
>nC12 to nC28	21.79	0.50	25	0	87.2	75 - 125				
Surr: 2-Fluorobiphenyl	2.069	0	2.5	0	82.7	70 - 130				
Surr: Trifluoromethyl benzene	2.164	0	2.5	0	86.6	70 - 130				
LCSD	Sample ID: LCSD-157222	Units: mg/L		Analysis Date: 11-Sep-2020 07:07						
Client ID:	Run ID: FID-13_368447	SeqNo: 5736519		PrepDate: 10-Sep-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	21.75	0.50	25	0	87.0	75 - 125	24.68	12.6	20	
>nC12 to nC28	19.84	0.50	25	0	79.4	75 - 125	21.79	9.37	20	
Surr: 2-Fluorobiphenyl	1.998	0	2.5	0	79.9	70 - 130	2.069	3.48	20	
Surr: Trifluoromethyl benzene	2.046	0	2.5	0	81.8	70 - 130	2.164	5.62	20	
MS	Sample ID: HS20090224-01MS	Units: mg/L		Analysis Date: 11-Sep-2020 08:05						
Client ID:	Run ID: FID-13_368447	SeqNo: 5736521		PrepDate: 10-Sep-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	22.6	0.46	22.87	0	98.9	75 - 125				
>nC12 to nC28	20.89	0.46	22.87	0	91.4	75 - 125				
Surr: 2-Fluorobiphenyl	1.929	0	2.287	0	84.4	70 - 130				
Surr: Trifluoromethyl benzene	1.916	0	2.287	0	83.8	70 - 130				

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: 157222 (0)		Instrument: FID-13		Method: LOW-LEVEL TEXAS TPH BY TX1005					
MSD		Sample ID: HS20090224-01MSD		Units: mg/L		Analysis Date: 11-Sep-2020 08:34			
Client ID:		Run ID: FID-13_368447		SeqNo: 5736522		PrepDate: 10-Sep-2020		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
nC6 to nC12	23.8	0.47	23.62	0	101	75 - 125	22.6	5.14	20
>nC12 to nC28	21.53	0.47	23.62	0	91.1	75 - 125	20.89	3	20
Surr: 2-Fluorobiphenyl	1.959	0	2.362	0	82.9	70 - 130	1.929	1.53	20
Surr: Trifluoromethyl benzene	1.973	0	2.362	0	83.5	70 - 130	1.916	2.95	20

The following samples were analyzed in this batch: HS20090382-01

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: 157118 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
MBLK	Sample ID: MBLKF1-157118	Units: mg/L		Analysis Date: 09-Sep-2020 23:25					
Client ID:	Run ID: ICPMS06_368189		SeqNo: 5732836		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Arsenic	< 0.000400	0.00200							
Barium	< 0.00190	0.00400							
Cadmium	< 0.000200	0.00200							
Chromium	< 0.000400	0.00400							
Lead	< 0.000600	0.00200							
Selenium	< 0.00110	0.00200							
Silver	< 0.000200	0.00200							

MBLK	Sample ID: MBLK-157118	Units: mg/L		Analysis Date: 09-Sep-2020 23:23					
Client ID:	Run ID: ICPMS06_368189		SeqNo: 5732835		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Arsenic	< 0.000400	0.00200							
Barium	< 0.00190	0.00400							
Cadmium	< 0.000200	0.00200							
Chromium	< 0.000400	0.00400							
Lead	< 0.000600	0.00200							
Selenium	< 0.00110	0.00200							
Silver	< 0.000200	0.00200							

LCS	Sample ID: LCS-157118	Units: mg/L		Analysis Date: 09-Sep-2020 23:27					
Client ID:	Run ID: ICPMS06_368189		SeqNo: 5732837		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Arsenic	0.05165	0.00200	0.05	0	103	80 - 120			
Barium	0.04808	0.00400	0.05	0	96.2	80 - 120			
Cadmium	0.05091	0.00200	0.05	0	102	80 - 120			
Chromium	0.05026	0.00400	0.05	0	101	80 - 120			
Lead	0.04921	0.00200	0.05	0	98.4	80 - 120			
Selenium	0.05429	0.00200	0.05	0	109	80 - 120			
Silver	0.05014	0.00200	0.05	0	100	80 - 120			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: 157118 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
MS	Sample ID: HS20090248-12MS	Units: mg/L			Analysis Date: 09-Sep-2020 23:33				
Client ID:	Run ID: ICPMS06_368189	SeqNo: 5732840		PrepDate: 09-Sep-2020		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.05575	0.00200	0.05	0.003691	104	75 - 125			
Barium	0.2287	0.00400	0.05	0.1731	111	75 - 125			
Cadmium	0.04953	0.00200	0.05	0.000016	99.0	75 - 125			
Chromium	0.05	0.00400	0.05	0.000135	99.7	75 - 125			
Lead	0.05061	0.00200	0.05	-0.000019	101	75 - 125			
Selenium	0.05066	0.00200	0.05	-0.000026	101	75 - 125			
Silver	0.0478	0.00200	0.05	0	95.6	75 - 125			

MSD	Sample ID: HS20090248-12MSD	Units: mg/L			Analysis Date: 09-Sep-2020 23:35				
Client ID:	Run ID: ICPMS06_368189	SeqNo: 5732841		PrepDate: 09-Sep-2020		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.05552	0.00200	0.05	0.003691	104	75 - 125	0.05575	0.413	20
Barium	0.2237	0.00400	0.05	0.1731	101	75 - 125	0.2287	2.2	20
Cadmium	0.04985	0.00200	0.05	0.000016	99.7	75 - 125	0.04953	0.638	20
Chromium	0.05035	0.00400	0.05	0.000135	100	75 - 125	0.05	0.7	20
Lead	0.05068	0.00200	0.05	-0.000019	101	75 - 125	0.05061	0.132	20
Selenium	0.05181	0.00200	0.05	-0.000026	104	75 - 125	0.05066	2.23	20
Silver	0.04778	0.00200	0.05	0	95.6	75 - 125	0.0478	0.0335	20

SD	Sample ID: HS20090248-12SD	Units: mg/L			Analysis Date: 09-Sep-2020 23:31				
Client ID:	Run ID: ICPMS06_368189	SeqNo: 5732839		PrepDate: 09-Sep-2020		DF: 5			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Arsenic	0.004665	0.0100					0.003691	0	10 J
Barium	0.1688	0.0200					0.1731	2.5	10
Cadmium	< 0.00100	0.0100					0.000016	0	10
Chromium	< 0.00200	0.0200					0.000135	0	10
Lead	< 0.00300	0.0100					-0.000019	0	10
Selenium	< 0.00550	0.0100					-0.000026	0	10
Silver	< 0.00100	0.0100					0	0	10

The following samples were analyzed in this batch: HS20090382-01

Client: SQ Environmental
 Project: APA Sampling 1134.001.006
 WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: 157129 (0)		Instrument: HG03		Method: DISSOLVED MERCURY BY SW7470A (DISSOLVED)					
MBLK	Sample ID: MBLK-F1-157129	Units: mg/L		Analysis Date: 09-Sep-2020 14:28					
Client ID:	Run ID: HG03_368225		SeqNo: 5732103		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	< 0.0000300	0.000200							
MBLK	Sample ID: MBLK-157129	Units: mg/L		Analysis Date: 09-Sep-2020 14:26					
Client ID:	Run ID: HG03_368225		SeqNo: 5732102		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	< 0.0000300	0.000200							
LCS	Sample ID: LCS-157129	Units: mg/L		Analysis Date: 09-Sep-2020 14:29					
Client ID:	Run ID: HG03_368225		SeqNo: 5732104		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	0.00484	0.000200	0.005	0	96.8	80 - 120			
MS	Sample ID: HS20090248-13MS	Units: mg/L		Analysis Date: 09-Sep-2020 14:44					
Client ID:	Run ID: HG03_368225		SeqNo: 5732107		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	0.00419	0.000200	0.005	-0.000026	84.3	80 - 120			
MSD	Sample ID: HS20090248-13MSD	Units: mg/L		Analysis Date: 09-Sep-2020 14:46					
Client ID:	Run ID: HG03_368225		SeqNo: 5732108		PrepDate: 09-Sep-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Mercury	0.00417	0.000200	0.005	-0.000026	83.9	80 - 120	0.00419	0.478	20

The following samples were analyzed in this batch: HS20090382-01

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-200818	Units: ug/L		Analysis Date: 09-Sep-2020 16:21					
Client ID:	Run ID: VOA4_368284	SeqNo: 5733186		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	< 0.20	1.0							
1,1,2,2-Tetrachloroethane	< 0.50	1.0							
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.50	1.0							
1,1,2-Trichloroethane	< 0.30	1.0							
1,1-Dichloroethane	< 0.20	1.0							
1,1-Dichloroethene	< 0.20	1.0							
1,2,4-Trichlorobenzene	< 0.50	1.0							
1,2-Dibromo-3-chloropropane	< 1.0	1.0							
1,2-Dibromoethane	< 0.20	1.0							
1,2-Dichlorobenzene	< 0.50	1.0							
1,2-Dichloroethane	< 0.20	1.0							
1,2-Dichloropropane	< 0.50	1.0							
1,3-Dichlorobenzene	< 0.40	1.0							
1,4-Dichlorobenzene	< 0.40	1.0							
2-Butanone	< 0.50	2.0							
2-Hexanone	< 1.0	2.0							
4-Methyl-2-pentanone	< 0.70	2.0							
Acetone	< 2.0	2.0							
Benzene	< 0.20	1.0							
Bromodichloromethane	< 0.20	1.0							
Bromoform	< 0.40	1.0							
Bromomethane	< 0.40	1.0							
Carbon disulfide	< 0.60	2.0							
Carbon tetrachloride	< 0.50	1.0							
Chlorobenzene	< 0.30	1.0							
Chloroethane	< 0.30	1.0							
Chloroform	< 0.20	1.0							
Chloromethane	< 0.20	1.0							
cis-1,2-Dichloroethene	< 0.20	1.0							
cis-1,3-Dichloropropene	< 0.10	1.0							
Cyclohexane	< 0.30	1.0							
Dibromochloromethane	< 0.30	1.0							
Dichlorodifluoromethane	< 0.30	1.0							
Ethylbenzene	< 0.30	1.0							

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-200818	Units: ug/L		Analysis Date: 09-Sep-2020 16:21					
Client ID:	Run ID: VOA4_368284	SeqNo: 5733186		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	< 0.30	1.0							
m,p-Xylene	< 0.50	2.0							
Methyl acetate	< 1.0	1.0							
Methyl tert-butyl ether	< 0.20	1.0							
Methylcyclohexane	< 0.30	1.0							
Methylene chloride	< 1.0	2.0							
o-Xylene	< 0.30	1.0							
Styrene	< 0.30	1.0							
Tetrachloroethene	< 0.30	1.0							
Toluene	< 0.20	1.0							
trans-1,2-Dichloroethene	< 0.20	1.0							
trans-1,3-Dichloropropene	< 0.20	1.0							
Trichloroethene	< 0.20	1.0							
Trichlorofluoromethane	< 0.30	1.0							
Vinyl chloride	< 0.20	1.0							
Xylenes, Total	< 0.30	1.0							
Surr: 1,2-Dichloroethane-d4	48.92	1.0	50	0	97.8	70 - 123			
Surr: 4-Bromofluorobenzene	49.53	1.0	50	0	99.1	82 - 115			
Surr: Dibromofluoromethane	48.89	1.0	50	0	97.8	73 - 126			
Surr: Toluene-d8	49.33	1.0	50	0	98.7	81 - 120			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
LCS		Sample ID: VLCSW-200818		Units: ug/L		Analysis Date: 09-Sep-2020 15:36			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733185		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	19.97	1.0	20	0	99.8	70 - 130			
1,1,2,2-Tetrachloroethane	19.37	1.0	20	0	96.8	70 - 120			
1,1,2-Trichlor-1,2,2-trifluoroethane	18.89	1.0	20	0	94.5	70 - 130			
1,1,2-Trichloroethane	19.15	1.0	20	0	95.8	77 - 113			
1,1-Dichloroethane	18.6	1.0	20	0	93.0	71 - 122			
1,1-Dichloroethene	20.21	1.0	20	0	101	70 - 130			
1,2,4-Trichlorobenzene	23	1.0	20	0	115	77 - 126			
1,2-Dibromo-3-chloropropane	21.43	1.0	20	0	107	70 - 130			
1,2-Dibromoethane	20.33	1.0	20	0	102	76 - 123			
1,2-Dichlorobenzene	20.4	1.0	20	0	102	77 - 113			
1,2-Dichloroethane	20.23	1.0	20	0	101	70 - 124			
1,2-Dichloropropane	19.36	1.0	20	0	96.8	72 - 119			
1,3-Dichlorobenzene	20.41	1.0	20	0	102	78 - 118			
1,4-Dichlorobenzene	19.71	1.0	20	0	98.6	79 - 113			
2-Butanone	38.29	2.0	40	0	95.7	70 - 130			
2-Hexanone	40.43	2.0	40	0	101	70 - 130			
4-Methyl-2-pentanone	37.86	2.0	40	0	94.6	70 - 130			
Acetone	41.8	2.0	40	0	105	70 - 130			
Benzene	19.16	1.0	20	0	95.8	74 - 120			
Bromodichloromethane	19.92	1.0	20	0	99.6	74 - 122			
Bromoform	18.85	1.0	20	0	94.2	73 - 128			
Bromomethane	19.59	1.0	20	0	98.0	70 - 130			
Carbon disulfide	41.1	2.0	40	0	103	70 - 130			
Carbon tetrachloride	21.72	1.0	20	0	109	71 - 125			
Chlorobenzene	18.72	1.0	20	0	93.6	76 - 113			
Chloroethane	20.31	1.0	20	0	102	70 - 130			
Chloroform	19.45	1.0	20	0	97.2	71 - 121			
Chloromethane	19.01	1.0	20	0	95.1	70 - 129			
cis-1,2-Dichloroethene	18.81	1.0	20	0	94.0	75 - 122			
cis-1,3-Dichloropropene	19.89	1.0	20	0	99.5	73 - 127			
Cyclohexane	19.72	1.0	20	0	98.6	70 - 130			
Dibromochloromethane	19.7	1.0	20	0	98.5	77 - 122			
Dichlorodifluoromethane	20.24	1.0	20	0	101	70 - 130			
Ethylbenzene	19.81	1.0	20	0	99.1	77 - 117			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
LCS		Sample ID: VLCSW-200818		Units: ug/L		Analysis Date: 09-Sep-2020 15:36			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733185		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	21.74	1.0	20	0	109	73 - 127			
m,p-Xylene	40.68	2.0	40	0	102	77 - 122			
Methyl acetate	19.46	1.0	20	0	97.3	76 - 122			
Methyl tert-butyl ether	19.98	1.0	20	0	99.9	70 - 130			
Methylcyclohexane	22.51	1.0	20	0	113	61 - 157			
Methylene chloride	20.09	2.0	20	0	100	70 - 127			
o-Xylene	19.24	1.0	20	0	96.2	75 - 119			
Styrene	21.05	1.0	20	0	105	72 - 126			
Tetrachloroethene	19.83	1.0	20	0	99.1	76 - 119			
Toluene	19.15	1.0	20	0	95.7	77 - 118			
trans-1,2-Dichloroethene	19.97	1.0	20	0	99.9	72 - 127			
trans-1,3-Dichloropropene	20.44	1.0	20	0	102	77 - 119			
Trichloroethene	19.85	1.0	20	0	99.2	77 - 121			
Trichlorofluoromethane	21.37	1.0	20	0	107	70 - 130			
Vinyl chloride	19.04	1.0	20	0	95.2	70 - 130			
Xylenes, Total	59.91	1.0	60	0	99.9	75 - 122			
Surr: 1,2-Dichloroethane-d4	49.07	1.0	50	0	98.1	70 - 130			
Surr: 4-Bromofluorobenzene	50.27	1.0	50	0	101	82 - 115			
Surr: Dibromofluoromethane	48.39	1.0	50	0	96.8	73 - 126			
Surr: Toluene-d8	49.76	1.0	50	0	99.5	81 - 120			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MS		Sample ID: HS20090315-12MS		Units: ug/L		Analysis Date: 09-Sep-2020 18:12			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733191		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	21.47	1.0	20	0	107	70 - 130			
1,1,2,2-Tetrachloroethane	18.5	1.0	20	0	92.5	70 - 123			
1,1,2-Trichlor-1,2,2-trifluoroethane	22.19	1.0	20	0	111	70 - 130			
1,1,2-Trichloroethane	18.93	1.0	20	0	94.7	70 - 117			
1,1-Dichloroethane	18.69	1.0	20	0	93.4	70 - 127			
1,1-Dichloroethene	20.8	1.0	20	0	104	70 - 130			
1,2,4-Trichlorobenzene	20.12	1.0	20	0	101	70 - 125			
1,2-Dibromo-3-chloropropane	17.73	1.0	20	0	88.6	70 - 130			
1,2-Dibromoethane	18.46	1.0	20	0	92.3	70 - 124			
1,2-Dichlorobenzene	18.71	1.0	20	0	93.5	70 - 115			
1,2-Dichloroethane	18.84	1.0	20	0	94.2	70 - 127			
1,2-Dichloropropane	18.6	1.0	20	0	93.0	70 - 122			
1,3-Dichlorobenzene	18.87	1.0	20	0	94.3	70 - 119			
1,4-Dichlorobenzene	19.11	1.0	20	0.6434	92.3	70 - 114			
2-Butanone	36.82	2.0	40	0	92.1	70 - 130			
2-Hexanone	38.96	2.0	40	0	97.4	70 - 130			
4-Methyl-2-pentanone	41.34	2.0	40	0	103	70 - 130			
Acetone	40.3	2.0	40	0	101	70 - 130			
Benzene	19.11	1.0	20	0	95.5	70 - 127			
Bromodichloromethane	18.54	1.0	20	0	92.7	70 - 124			
Bromoform	18.32	1.0	20	0	91.6	70 - 129			
Bromomethane	21.41	1.0	20	0	107	70 - 130			
Carbon disulfide	42.04	2.0	40	0	105	70 - 130			
Carbon tetrachloride	22.65	1.0	20	0	113	70 - 130			
Chlorobenzene	18.71	1.0	20	0	93.5	70 - 114			
Chloroethane	17.96	1.0	20	0	89.8	70 - 130			
Chloroform	19.55	1.0	20	0	97.8	70 - 125			
Chloromethane	19.67	1.0	20	0	98.3	70 - 130			
cis-1,2-Dichloroethene	18.62	1.0	20	0	93.1	70 - 128			
cis-1,3-Dichloropropene	19.03	1.0	20	0	95.1	70 - 125			
Cyclohexane	21.14	1.0	20	0	106	70 - 130			
Dibromochloromethane	18.59	1.0	20	0	92.9	70 - 124			
Dichlorodifluoromethane	24.58	1.0	20	0	123	70 - 130			
Ethylbenzene	20.23	1.0	20	0	101	70 - 124			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MS		Sample ID: HS20090315-12MS		Units: ug/L		Analysis Date: 09-Sep-2020 18:12			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733191		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	21.8	1.0	20	0	109	70 - 130			
m,p-Xylene	41.97	2.0	40	0	105	70 - 130			
Methyl acetate	19.42	1.0	20	0	97.1	76 - 122			
Methyl tert-butyl ether	18.66	1.0	20	0	93.3	70 - 130			
Methylcyclohexane	24.49	1.0	20	0	122	61 - 158			
Methylene chloride	19.16	2.0	20	0	95.8	70 - 128			
o-Xylene	19.87	1.0	20	0	99.3	70 - 124			
Styrene	21.06	1.0	20	0	105	70 - 130			
Tetrachloroethene	20.72	1.0	20	0	104	70 - 130			
Toluene	20.52	1.0	20	0.4521	100	70 - 123			
trans-1,2-Dichloroethene	20.09	1.0	20	0	100	70 - 130			
trans-1,3-Dichloropropene	18.84	1.0	20	0	94.2	70 - 121			
Trichloroethene	19.93	1.0	20	0	99.6	70 - 129			
Trichlorofluoromethane	22.83	1.0	20	0	114	70 - 130			
Vinyl chloride	21.48	1.0	20	0	107	70 - 130			
Xylenes, Total	61.84	1.0	60	0	103	70 - 130			
Surr: 1,2-Dichloroethane-d4	48.83	1.0	50	0	97.7	70 - 126			
Surr: 4-Bromofluorobenzene	52.15	1.0	50	0	104	81 - 113			
Surr: Dibromofluoromethane	50.19	1.0	50	0	100	77 - 123			
Surr: Toluene-d8	50.64	1.0	50	0	101	82 - 127			

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MSD		Sample ID: HS20090315-12MSD		Units: ug/L		Analysis Date: 09-Sep-2020 18:34			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733192		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	20.2	1.0	20	0	101	70 - 130	21.47	6.11	20
1,1,2,2-Tetrachloroethane	18.9	1.0	20	0	94.5	70 - 123	18.5	2.12	20
1,1,2-Trichlor-1,2,2-trifluoroethane	20.39	1.0	20	0	102	70 - 130	22.19	8.44	20
1,1,2-Trichloroethane	18.19	1.0	20	0	91.0	70 - 117	18.93	3.98	20
1,1-Dichloroethane	18.23	1.0	20	0	91.1	70 - 127	18.69	2.5	20
1,1-Dichloroethene	19.93	1.0	20	0	99.7	70 - 130	20.8	4.25	20
1,2,4-Trichlorobenzene	20.22	1.0	20	0	101	70 - 125	20.12	0.533	20
1,2-Dibromo-3-chloropropane	18.7	1.0	20	0	93.5	70 - 130	17.73	5.31	20
1,2-Dibromoethane	18.07	1.0	20	0	90.3	70 - 124	18.46	2.15	20
1,2-Dichlorobenzene	18	1.0	20	0	90.0	70 - 115	18.71	3.84	20
1,2-Dichloroethane	18.65	1.0	20	0	93.3	70 - 127	18.84	0.997	20
1,2-Dichloropropane	18.51	1.0	20	0	92.6	70 - 122	18.6	0.473	20
1,3-Dichlorobenzene	18.59	1.0	20	0	93.0	70 - 119	18.87	1.48	20
1,4-Dichlorobenzene	18.56	1.0	20	0.6434	89.6	70 - 114	19.11	2.93	20
2-Butanone	35.29	2.0	40	0	88.2	70 - 130	36.82	4.26	20
2-Hexanone	41.07	2.0	40	0	103	70 - 130	38.96	5.28	20
4-Methyl-2-pentanone	42.22	2.0	40	0	106	70 - 130	41.34	2.11	20
Acetone	42.92	2.0	40	0	107	70 - 130	40.3	6.3	20
Benzene	17.92	1.0	20	0	89.6	70 - 127	19.11	6.41	20
Bromodichloromethane	18.48	1.0	20	0	92.4	70 - 124	18.54	0.337	20
Bromoform	18.51	1.0	20	0	92.6	70 - 129	18.32	1.08	20
Bromomethane	20	1.0	20	0	100.0	70 - 130	21.41	6.79	20
Carbon disulfide	39.55	2.0	40	0	98.9	70 - 130	42.04	6.11	20
Carbon tetrachloride	22.09	1.0	20	0	110	70 - 130	22.65	2.48	20
Chlorobenzene	17.99	1.0	20	0	89.9	70 - 114	18.71	3.93	20
Chloroethane	20.02	1.0	20	0	100	70 - 130	17.96	10.8	20
Chloroform	18.19	1.0	20	0	91.0	70 - 125	19.55	7.21	20
Chloromethane	19	1.0	20	0	95.0	70 - 130	19.67	3.46	20
cis-1,2-Dichloroethene	18.6	1.0	20	0	93.0	70 - 128	18.62	0.0805	20
cis-1,3-Dichloropropene	18.6	1.0	20	0	93.0	70 - 125	19.03	2.26	20
Cyclohexane	19.67	1.0	20	0	98.3	70 - 130	21.14	7.23	20
Dibromochloromethane	18.09	1.0	20	0	90.4	70 - 124	18.59	2.73	20
Dichlorodifluoromethane	22.17	1.0	20	0	111	70 - 130	24.58	10.3	20
Ethylbenzene	19.36	1.0	20	0	96.8	70 - 124	20.23	4.38	20

Client: SQ Environmental
 Project: APA Sampling 1134.001.006
 WorkOrder: HS20090382

QC BATCH REPORT

Batch ID: R368284 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MSD		Sample ID: HS20090315-12MSD		Units: ug/L		Analysis Date: 09-Sep-2020 18:34			
Client ID:		Run ID: VOA4_368284		SeqNo: 5733192		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	21.29	1.0	20	0	106	70 - 130	21.8	2.36	20
m,p-Xylene	40.17	2.0	40	0	100	70 - 130	41.97	4.38	20
Methyl acetate	18.04	1.0	20	0	90.2	76 - 122	19.42	7.39	20
Methyl tert-butyl ether	18.05	1.0	20	0	90.3	70 - 130	18.66	3.31	20
Methylcyclohexane	21.93	1.0	20	0	110	61 - 158	24.49	11	20
Methylene chloride	18.18	2.0	20	0	90.9	70 - 128	19.16	5.23	20
o-Xylene	18.86	1.0	20	0	94.3	70 - 124	19.87	5.24	20
Styrene	19.46	1.0	20	0	97.3	70 - 130	21.06	7.87	20
Tetrachloroethene	20.13	1.0	20	0	101	70 - 130	20.72	2.87	20
Toluene	19.16	1.0	20	0.4521	93.6	70 - 123	20.52	6.86	20
trans-1,2-Dichloroethene	18.23	1.0	20	0	91.1	70 - 130	20.09	9.73	20
trans-1,3-Dichloropropene	18.49	1.0	20	0	92.4	70 - 121	18.84	1.89	20
Trichloroethene	18.93	1.0	20	0	94.6	70 - 129	19.93	5.14	20
Trichlorofluoromethane	21.72	1.0	20	0	109	70 - 130	22.83	4.98	20
Vinyl chloride	19.95	1.0	20	0	99.8	70 - 130	21.48	7.37	20
Xylenes, Total	59.03	1.0	60	0	98.4	70 - 130	61.84	4.65	20
Surr: 1,2-Dichloroethane-d4	49.26	1.0	50	0	98.5	70 - 126	48.83	0.868	20
Surr: 4-Bromofluorobenzene	50.39	1.0	50	0	101	81 - 113	52.15	3.43	20
Surr: Dibromofluoromethane	49.36	1.0	50	0	98.7	77 - 123	50.19	1.67	20
Surr: Toluene-d8	50.17	1.0	50	0	100	82 - 127	50.64	0.944	20

The following samples were analyzed in this batch: HS20090382-01

Client: SQ Environmental
Project: APA Sampling 1134.001.006
WorkOrder: HS20090382

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

Sample Receipt Checklist

Work Order ID: HS20090382

Date/Time Received: 08-Sep-2020 08:55

Client Name: SQ ENVIRONMENTAL TX

Received by: Paresh M. Giga

Completed By: /S/ Jared R. Makan	08-Sep-2020 19:34	Reviewed by: /S/ Dane J. Wacasey	09-Sep-2020 19:52
eSignature	Date/Time	eSignature	Date/Time

Matrices: WaterCarrier name: ALS Courier

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	COC IDs:145098
Samplers name present on COC?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☐	No ☒	
Temperature(s)/Thermometer(s):	7.9°C/7.9°C UC/C IR31		
Cooler(s)/Kit(s):	46242		
Date/Time sample(s) sent to storage:	09/08/2020 19:35		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			
Login Notes:	Received with sufficient ice; cooling incomplete due to recent sampling.		

Client Contacted:

Date Contacted:

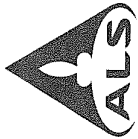
Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 145098

HS20090382

SQ Environmental
APA Sampling



Customer Information				Project Information													
Purchase Order	Project Name			ALS Project Manager:													
Work Order	Project Number																
Company Name	Bill To Company																
Send Report To	Invoice Attn																
Address	Address																
City/State/Zip	City/State/Zip																
Phone	Phone																
Fax	Fax																
e-Mail Address	e-Mail Address																
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-251-1-20200908	9.8.20	0800	Aqueous	1,8	10	X	X	X	X	X	X	X	X	X	X	X
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Sampler(s) Please Print & Sign				Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:									
Signature: [Signature]				Day Off		STD 10 Wk Days ☒ 2 Wk Days ☐ 24 Hour ☐ Other ☐											
Relinquished by:				Received by:		Notes:											
Date: 9.8.20				Time: 0855													
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Date:				Time:													
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10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

September 23, 2020

Samantha Litherland
SQ Environmental
PO Box 1991
Austin, TX 78767

Work Order: **HS20090851**

Laboratory Results for: **Block 251 1134.001.006.02**

Dear Samantha Litherland,

ALS Environmental received 1 sample(s) on Sep 17, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: **DAYNA.FISHER**

Dane J. Wacasey

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

**TRRP Laboratory Data
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
 - R2 Sample identification cross-reference;
 - R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
 - R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
 - R5 Test reports/summary forms for blank samples;
 - R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
 - R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits.
 - R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
 - R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
 - R10 Other problems or anomalies.
The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.
-

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

**TRRP Laboratory Data
Package Cover Page**

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory have been identified by the laboratory in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [NA] This laboratory meets an exception under 30 TAC §25.6 and was last inspected by [] TCEQ or [] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.



Dane J. Wacasey

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 09/23/2020			
Project Name: Block 251 1134.001.006.02				Laboratory Job Number: HS20090851			
Reviewer Name: Dane Wacasey				Prep Batch Number(s): R369068			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SDL and minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				1

Laboratory Review Checklist: Supporting Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 09/23/2020			
Project Name: Block 251 1134.001.006.02				Laboratory Job Number: HS20090851			
Reviewer Name: Dane Wacasey				Prep Batch Number(s): R369068			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning:					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS):					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports:					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);
NA = Not Applicable;
NR = Not Reviewed;
R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports	
Laboratory Name: ALS Laboratory Group	LRC Date: 09/23/2020
Project Name: Block 251 1134.001.006.02	Laboratory Job Number: HS20090851
Reviewer Name: Dane Wacasey	Prep Batch Number(s): R369068
ER# ⁵	Description
1	With the exception of cyclohexane, ALS is NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package. Because TCEQ does not offer accreditation for this compound, the results are flagged with n.
Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable); NA = Not Applicable; NR = Not Reviewed; R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).	

Client: SQ Environmental
Project: Block 251 1134.001.006.02
Work Order: HS20090851

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20090851-01	MW-251-1-20200916	Aqueous		16-Sep-2020 17:55	17-Sep-2020 09:00	☐

Client: SQ Environmental
 Project: Block 251 1134.001.006.02
 Sample ID: MW-251-1-20200916
 Collection Date: 16-Sep-2020 17:55

ANALYTICAL REPORT

WorkOrder:HS20090851
 Lab ID:HS20090851-01
 Matrix:Aqueous

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
1,1,1-Trichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
1,1,2,2-Tetrachloroethane	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
1,1,2-Trichloroethane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
1,1-Dichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
1,1-Dichloroethene	0.00065	J	0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
1,2,4-Trichlorobenzene	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
1,2-Dibromo-3-chloropropane	< 0.0010		0.0010	0.0010	mg/L	1	22-Sep-2020 13:32
1,2-Dibromoethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
1,2-Dichlorobenzene	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
1,2-Dichloroethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
1,2-Dichloropropane	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
1,3-Dichlorobenzene	< 0.00040		0.00040	0.0010	mg/L	1	22-Sep-2020 13:32
1,4-Dichlorobenzene	< 0.00040		0.00040	0.0010	mg/L	1	22-Sep-2020 13:32
2-Butanone	< 0.00050		0.00050	0.0020	mg/L	1	22-Sep-2020 13:32
2-Hexanone	< 0.0010		0.0010	0.0020	mg/L	1	22-Sep-2020 13:32
4-Methyl-2-pentanone	< 0.00070		0.00070	0.0020	mg/L	1	22-Sep-2020 13:32
Acetone	< 0.0020		0.0020	0.0020	mg/L	1	22-Sep-2020 13:32
Benzene	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Bromodichloromethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Bromoform	< 0.00040		0.00040	0.0010	mg/L	1	22-Sep-2020 13:32
Bromomethane	< 0.00040		0.00040	0.0010	mg/L	1	22-Sep-2020 13:32
Carbon disulfide	0.0013	J	0.00060	0.0020	mg/L	1	22-Sep-2020 13:32
Carbon tetrachloride	< 0.00050		0.00050	0.0010	mg/L	1	22-Sep-2020 13:32
Chlorobenzene	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Chloroethane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Chloroform	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Chloromethane	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
cis-1,2-Dichloroethene	0.023		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
cis-1,3-Dichloropropene	< 0.00010		0.00010	0.0010	mg/L	1	22-Sep-2020 13:32
Cyclohexane	< 0.00030	n	0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Dibromochloromethane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Dichlorodifluoromethane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Ethylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Isopropylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
m,p-Xylene	< 0.00050		0.00050	0.0020	mg/L	1	22-Sep-2020 13:32
Methyl acetate	< 0.0010		0.0010	0.0010	mg/L	1	22-Sep-2020 13:32
Methyl tert-butyl ether	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Methylcyclohexane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental
 Project: Block 251 1134.001.006.02
 Sample ID: MW-251-1-20200916
 Collection Date: 16-Sep-2020 17:55

ANALYTICAL REPORT

WorkOrder:HS20090851
 Lab ID:HS20090851-01
 Matrix:Aqueous

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260				Analyst: AKP	
Methylene chloride	< 0.0010		0.0010	0.0020	mg/L	1	22-Sep-2020 13:32
o-Xylene	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Styrene	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Tetrachloroethene	0.096		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Toluene	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
trans-1,2-Dichloroethene	0.0015		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
trans-1,3-Dichloropropene	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Trichloroethene	0.029		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Trichlorofluoromethane	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
Vinyl chloride	< 0.00020		0.00020	0.0010	mg/L	1	22-Sep-2020 13:32
Xylenes, Total	< 0.00030		0.00030	0.0010	mg/L	1	22-Sep-2020 13:32
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>101</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>22-Sep-2020 13:32</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>101</i>			<i>81-113</i>	<i>%REC</i>	<i>1</i>	<i>22-Sep-2020 13:32</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.1</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>22-Sep-2020 13:32</i>
<i>Surr: Toluene-d8</i>	<i>99.0</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>22-Sep-2020 13:32</i>

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R369068 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Aqueous	
HS20090851-01	MW-251-1-20200916	16 Sep 2020 17:55			22 Sep 2020 13:32	1

WorkOrder: HS20090851

InstrumentID: VOA4

Test Code: 8260_LL_W

Test Number: SW8260

Test Name: Low Level Volatiles by SW8260C

**METHOD DETECTION /
REPORTING LIMITS****Matrix:** Aqueous**Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	1,1,1-Trichloroethane	71-55-6	0.00050	0.00048	0.00020	0.0010
A	1,1,2,2-Tetrachloroethane	79-34-5	0.0010	0.00087	0.00050	0.0010
A	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.0010	0.00060	0.00050	0.0010
A	1,1,2-Trichloroethane	79-00-5	0.0010	0.0010	0.00030	0.0010
A	1,1-Dichloroethane	75-34-3	0.00050	0.00052	0.00020	0.0010
A	1,1-Dichloroethene	75-35-4	0.00050	0.00048	0.00020	0.0010
A	1,2,4-Trichlorobenzene	120-82-1	0.0010	0.00072	0.00050	0.0010
A	1,2-Dibromo-3-chloropropane	96-12-8	0.0020	0.00091	0.0010	0.0010
A	1,2-Dibromoethane	106-93-4	0.00050	0.00052	0.00020	0.0010
A	1,2-Dichlorobenzene	95-50-1	0.0010	0.00096	0.00050	0.0010
A	1,2-Dichloroethane	107-06-2	0.00050	0.00056	0.00020	0.0010
A	1,2-Dichloropropane	78-87-5	0.0010	0.0010	0.00050	0.0010
A	1,3-Dichlorobenzene	541-73-1	0.0010	0.00093	0.00040	0.0010
A	1,4-Dichlorobenzene	106-46-7	0.0010	0.0011	0.00040	0.0010
A	2-Butanone	78-93-3	0.0010	0.00078	0.00050	0.0020
A	2-Hexanone	591-78-6	0.0020	0.0011	0.0010	0.0020
A	4-Methyl-2-pentanone	108-10-1	0.0020	0.0013	0.00070	0.0020
A	Acetone	67-64-1	0.0020	0.0025	0.0020	0.0020
A	Benzene	71-43-2	0.00050	0.00052	0.00020	0.0010
A	Bromodichloromethane	75-27-4	0.00050	0.00052	0.00020	0.0010
A	Bromoform	75-25-2	0.0010	0.00073	0.00040	0.0010
A	Bromomethane	74-83-9	0.0010	0.0011	0.00040	0.0010
A	Carbon disulfide	75-15-0	0.0020	0.0015	0.00060	0.0020
A	Carbon tetrachloride	56-23-5	0.0010	0.00077	0.00050	0.0010
A	Chlorobenzene	108-90-7	0.0010	0.00097	0.00030	0.0010
A	Chloroethane	75-00-3	0.0010	0.0013	0.00030	0.0010
A	Chloroform	67-66-3	0.00050	0.00054	0.00020	0.0010
A	Chloromethane	74-87-3	0.00050	0.00067	0.00020	0.0010
A	cis-1,2-Dichloroethene	156-59-2	0.00050	0.00059	0.00020	0.0010
A	cis-1,3-Dichloropropene	10061-01-5	0.00040	0.00048	0.00010	0.0010
A	Cyclohexane	110-82-7	0.0010	0.00070	0.00030	0.0010
A	Dibromochloromethane	124-48-1	0.0010	0.00076	0.00030	0.0010
A	Dichlorodifluoromethane	75-71-8	0.0010	0.00042	0.00030	0.0010
A	Ethylbenzene	100-41-4	0.0010	0.00070	0.00030	0.0010
A	Isopropylbenzene	98-82-8	0.0010	0.00066	0.00030	0.0010
A	m,p-Xylene	179601-23-1	0.0010	0.00095	0.00050	0.0020
A	Methyl acetate	79-20-9	0.0010	0.0010	0.0010	0.0010
A	Methyl tert-butyl ether	1634-04-4	0.00050	0.00040	0.00020	0.0010
A	Methylcyclohexane	108-87-2	0.0010	0.00057	0.00030	0.0010
A	Methylene chloride	75-09-2	0.0020	0.00062	0.0010	0.0020

WorkOrder: HS20090851

InstrumentID: VOA4

Test Code: 8260_LL_W

Test Number: SW8260

Test Name: Low Level Volatiles by SW8260C

**METHOD DETECTION /
REPORTING LIMITS****Matrix:** Aqueous**Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	o-Xylene	95-47-6	0.0010	0.00085	0.00030	0.0010
A	Styrene	100-42-5	0.0010	0.00079	0.00030	0.0010
A	Tetrachloroethene	127-18-4	0.0010	0.00072	0.00030	0.0010
A	Toluene	108-88-3	0.00050	0.00060	0.00020	0.0010
A	trans-1,2-Dichloroethene	156-60-5	0.00050	0.00062	0.00020	0.0010
A	trans-1,3-Dichloropropene	10061-02-6	0.00050	0.00048	0.00020	0.0010
A	Trichloroethene	79-01-6	0.00050	0.00061	0.00020	0.0010
A	Trichlorofluoromethane	75-69-4	0.0010	0.00065	0.00030	0.0010
A	Vinyl chloride	75-01-4	0.00050	0.00046	0.00020	0.0010
A	Xylenes, Total	1330-20-7	0.0010	0.0024	0.00030	0.0010
S	1,2-Dichloroethane-d4	17060-07-0	0	0	0	0.0010
S	4-Bromofluorobenzene	460-00-4	0	0	0	0.0010
S	Dibromofluoromethane	1868-53-7	0	0	0	0.0010
S	Toluene-d8	2037-26-5	0	0	0	0.0010

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-200922	Units: ug/L		Analysis Date: 22-Sep-2020 12:49					
Client ID:	Run ID: VOA4_369068		SeqNo: 5748966		PrepDate:		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	< 0.20	1.0							
1,1,2,2-Tetrachloroethane	< 0.50	1.0							
1,1,2-Trichloro-1,2,2-trifluoroethane	< 0.50	1.0							
1,1,2-Trichloroethane	< 0.30	1.0							
1,1-Dichloroethane	< 0.20	1.0							
1,1-Dichloroethene	< 0.20	1.0							
1,2,4-Trichlorobenzene	< 0.50	1.0							
1,2-Dibromo-3-chloropropane	< 1.0	1.0							
1,2-Dibromoethane	< 0.20	1.0							
1,2-Dichlorobenzene	< 0.50	1.0							
1,2-Dichloroethane	< 0.20	1.0							
1,2-Dichloropropane	< 0.50	1.0							
1,3-Dichlorobenzene	< 0.40	1.0							
1,4-Dichlorobenzene	< 0.40	1.0							
2-Butanone	< 0.50	2.0							
2-Hexanone	< 1.0	2.0							
4-Methyl-2-pentanone	< 0.70	2.0							
Acetone	< 2.0	2.0							
Benzene	< 0.20	1.0							
Bromodichloromethane	< 0.20	1.0							
Bromoform	< 0.40	1.0							
Bromomethane	< 0.40	1.0							
Carbon disulfide	< 0.60	2.0							
Carbon tetrachloride	< 0.50	1.0							
Chlorobenzene	< 0.30	1.0							
Chloroethane	< 0.30	1.0							
Chloroform	< 0.20	1.0							
Chloromethane	< 0.20	1.0							
cis-1,2-Dichloroethene	< 0.20	1.0							
cis-1,3-Dichloropropene	< 0.10	1.0							
Cyclohexane	< 0.30	1.0							
Dibromochloromethane	< 0.30	1.0							
Dichlorodifluoromethane	< 0.30	1.0							
Ethylbenzene	< 0.30	1.0							

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-200922	Units: ug/L		Analysis Date: 22-Sep-2020 12:49					
Client ID:	Run ID: VOA4_369068	SeqNo: 5748966		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	< 0.30	1.0							
m,p-Xylene	< 0.50	2.0							
Methyl acetate	< 1.0	1.0							
Methyl tert-butyl ether	< 0.20	1.0							
Methylcyclohexane	< 0.30	1.0							
Methylene chloride	< 1.0	2.0							
o-Xylene	< 0.30	1.0							
Styrene	< 0.30	1.0							
Tetrachloroethene	< 0.30	1.0							
Toluene	< 0.20	1.0							
trans-1,2-Dichloroethene	< 0.20	1.0							
trans-1,3-Dichloropropene	< 0.20	1.0							
Trichloroethene	< 0.20	1.0							
Trichlorofluoromethane	< 0.30	1.0							
Vinyl chloride	< 0.20	1.0							
Xylenes, Total	< 0.30	1.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>51.41</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.44</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>82 - 115</i>			
<i>Surr: Dibromofluoromethane</i>	<i>50.66</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>49.59</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.2</i>	<i>81 - 120</i>			

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
LCS		Sample ID: VLCSW-200922		Units: ug/L		Analysis Date: 22-Sep-2020 12:07				
Client ID:		Run ID: VOA4_369068		SeqNo: 5748965		PrepDate:		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.09	1.0	20	0	105	70 - 130				
1,1,2,2-Tetrachloroethane	18.05	1.0	20	0	90.2	70 - 120				
1,1,2-Trichlor-1,2,2-trifluoroethane	21.46	1.0	20	0	107	70 - 130				
1,1,2-Trichloroethane	18.66	1.0	20	0	93.3	77 - 113				
1,1-Dichloroethane	19.06	1.0	20	0	95.3	71 - 122				
1,1-Dichloroethene	18.91	1.0	20	0	94.5	70 - 130				
1,2,4-Trichlorobenzene	16.68	1.0	20	0	83.4	77 - 126				
1,2-Dibromo-3-chloropropane	15.5	1.0	20	0	77.5	70 - 130				
1,2-Dibromoethane	17.39	1.0	20	0	86.9	76 - 123				
1,2-Dichlorobenzene	18.1	1.0	20	0	90.5	77 - 113				
1,2-Dichloroethane	19.9	1.0	20	0	99.5	70 - 124				
1,2-Dichloropropane	19.28	1.0	20	0	96.4	72 - 119				
1,3-Dichlorobenzene	19.34	1.0	20	0	96.7	78 - 118				
1,4-Dichlorobenzene	18.22	1.0	20	0	91.1	79 - 113				
2-Butanone	34.83	2.0	40	0	87.1	70 - 130				
2-Hexanone	35.12	2.0	40	0	87.8	70 - 130				
4-Methyl-2-pentanone	36.63	2.0	40	0	91.6	70 - 130				
Acetone	32.6	2.0	40	0	81.5	70 - 130				
Benzene	18.87	1.0	20	0	94.3	74 - 120				
Bromodichloromethane	19	1.0	20	0	95.0	74 - 122				
Bromoform	17.33	1.0	20	0	86.7	73 - 128				
Bromomethane	20.2	1.0	20	0	101	70 - 130				
Carbon disulfide	41.25	2.0	40	0	103	70 - 130				
Carbon tetrachloride	22.47	1.0	20	0	112	71 - 125				
Chlorobenzene	18.2	1.0	20	0	91.0	76 - 113				
Chloroethane	17.37	1.0	20	0	86.9	70 - 130				
Chloroform	20.05	1.0	20	0	100	71 - 121				
Chloromethane	20.84	1.0	20	0	104	70 - 129				
cis-1,2-Dichloroethene	19.94	1.0	20	0	99.7	75 - 122				
cis-1,3-Dichloropropene	18.78	1.0	20	0	93.9	73 - 127				
Cyclohexane	20.72	1.0	20	0	104	70 - 130				
Dibromochloromethane	18.82	1.0	20	0	94.1	77 - 122				
Dichlorodifluoromethane	18.98	1.0	20	0	94.9	70 - 130				
Ethylbenzene	18.66	1.0	20	0	93.3	77 - 117				

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
LCS		Sample ID: VLCSW-200922		Units: ug/L		Analysis Date: 22-Sep-2020 12:07			
Client ID:		Run ID: VOA4_369068		SeqNo: 5748965		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	21.16	1.0	20	0	106	73 - 127			
m,p-Xylene	39.25	2.0	40	0	98.1	77 - 122			
Methyl acetate	18.8	1.0	20	0	94.0	76 - 122			
Methyl tert-butyl ether	16.64	1.0	20	0	83.2	70 - 130			
Methylcyclohexane	20.47	1.0	20	0	102	61 - 157			
Methylene chloride	20.02	2.0	20	0	100	70 - 127			
o-Xylene	19.37	1.0	20	0	96.8	75 - 119			
Styrene	19.51	1.0	20	0	97.6	72 - 126			
Tetrachloroethene	20.16	1.0	20	0	101	76 - 119			
Toluene	19.28	1.0	20	0	96.4	77 - 118			
trans-1,2-Dichloroethene	19.06	1.0	20	0	95.3	72 - 127			
trans-1,3-Dichloropropene	19.12	1.0	20	0	95.6	77 - 119			
Trichloroethene	19.89	1.0	20	0	99.5	77 - 121			
Trichlorofluoromethane	22.93	1.0	20	0	115	70 - 130			
Vinyl chloride	20.48	1.0	20	0	102	70 - 130			
Xylenes, Total	58.62	1.0	60	0	97.7	75 - 122			
Surr: 1,2-Dichloroethane-d4	49.17	1.0	50	0	98.3	70 - 130			
Surr: 4-Bromofluorobenzene	47.97	1.0	50	0	95.9	82 - 115			
Surr: Dibromofluoromethane	49.93	1.0	50	0	99.9	73 - 126			
Surr: Toluene-d8	49.61	1.0	50	0	99.2	81 - 120			

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MS		Sample ID: HS20090851-01MS		Units: ug/L		Analysis Date: 22-Sep-2020 13:54			
Client ID: MW-251-1-20200916		Run ID: VOA4_369068		SeqNo: 5748969		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	20.92	1.0	20	0	105	70 - 130			
1,1,2,2-Tetrachloroethane	17.34	1.0	20	0	86.7	70 - 123			
1,1,2-Trichlor-1,2,2-trifluoroethane	22.22	1.0	20	0	111	70 - 130			
1,1,2-Trichloroethane	19.03	1.0	20	0	95.2	70 - 117			
1,1-Dichloroethane	18.82	1.0	20	0	94.1	70 - 127			
1,1-Dichloroethene	19.97	1.0	20	0.6505	96.6	70 - 130			
1,2,4-Trichlorobenzene	16.19	1.0	20	0	80.9	70 - 125			
1,2-Dibromo-3-chloropropane	15.32	1.0	20	0	76.6	70 - 130			
1,2-Dibromoethane	17.81	1.0	20	0	89.1	70 - 124			
1,2-Dichlorobenzene	19.62	1.0	20	0	98.1	70 - 115			
1,2-Dichloroethane	17.7	1.0	20	0	88.5	70 - 127			
1,2-Dichloropropane	19.62	1.0	20	0	98.1	70 - 122			
1,3-Dichlorobenzene	19.48	1.0	20	0	97.4	70 - 119			
1,4-Dichlorobenzene	19.14	1.0	20	0	95.7	70 - 114			
2-Butanone	34.82	2.0	40	0	87.0	70 - 130			
2-Hexanone	34.64	2.0	40	0	86.6	70 - 130			
4-Methyl-2-pentanone	35.07	2.0	40	0	87.7	70 - 130			
Acetone	33.83	2.0	40	0	84.6	70 - 130			
Benzene	19.47	1.0	20	0	97.4	70 - 127			
Bromodichloromethane	19.76	1.0	20	0	98.8	70 - 124			
Bromoform	18.12	1.0	20	0	90.6	70 - 129			
Bromomethane	19.01	1.0	20	0	95.0	70 - 130			
Carbon disulfide	42.61	2.0	40	1.29	103	70 - 130			
Carbon tetrachloride	23.31	1.0	20	0	117	70 - 130			
Chlorobenzene	18.5	1.0	20	0	92.5	70 - 114			
Chloroethane	18.09	1.0	20	0	90.4	70 - 130			
Chloroform	19.78	1.0	20	0	98.9	70 - 125			
Chloromethane	21.02	1.0	20	0	105	70 - 130			
cis-1,2-Dichloroethene	41.27	1.0	20	23.17	90.5	70 - 128			
cis-1,3-Dichloropropene	18.84	1.0	20	0	94.2	70 - 125			
Cyclohexane	21.81	1.0	20	0	109	70 - 130			
Dibromochloromethane	18.87	1.0	20	0	94.3	70 - 124			
Dichlorodifluoromethane	21.44	1.0	20	0	107	70 - 130			
Ethylbenzene	20.17	1.0	20	0	101	70 - 124			

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MS		Sample ID: HS20090851-01MS		Units: ug/L		Analysis Date: 22-Sep-2020 13:54			
Client ID: MW-251-1-20200916		Run ID: VOA4_369068		SeqNo: 5748969		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	22.03	1.0	20	0	110	70 - 130			
m,p-Xylene	41.45	2.0	40	0	104	70 - 130			
Methyl acetate	22.9	1.0	20	0	115	76 - 122			
Methyl tert-butyl ether	16.55	1.0	20	0	82.7	70 - 130			
Methylcyclohexane	22.4	1.0	20	0	112	61 - 158			
Methylene chloride	18.57	2.0	20	0	92.8	70 - 128			
o-Xylene	20.16	1.0	20	0	101	70 - 124			
Styrene	20.55	1.0	20	0	103	70 - 130			
Tetrachloroethene	115.8	1.0	20	96.27	97.7	70 - 130			O
Toluene	19.95	1.0	20	0	99.8	70 - 123			
trans-1,2-Dichloroethene	21.05	1.0	20	1.536	97.6	70 - 130			
trans-1,3-Dichloropropene	18.52	1.0	20	0	92.6	70 - 121			
Trichloroethene	50.08	1.0	20	29.41	103	70 - 129			
Trichlorofluoromethane	25.13	1.0	20	0	126	70 - 130			
Vinyl chloride	21.89	1.0	20	0	109	70 - 130			
Xylenes, Total	61.6	1.0	60	0	103	70 - 130			
Surr: 1,2-Dichloroethane-d4	48.39	1.0	50	0	96.8	70 - 126			
Surr: 4-Bromofluorobenzene	49.84	1.0	50	0	99.7	81 - 113			
Surr: Dibromofluoromethane	49.55	1.0	50	0	99.1	77 - 123			
Surr: Toluene-d8	50.02	1.0	50	0	100	82 - 127			

Client: SQ Environmental
 Project: Block 251 1134.001.006.02
 WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MSD		Sample ID: HS20090851-01MSD		Units: ug/L		Analysis Date: 22-Sep-2020 14:16			
Client ID: MW-251-1-20200916		Run ID: VOA4_369068		SeqNo: 5748970		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,1,1-Trichloroethane	21.36	1.0	20	0	107	70 - 130	20.92	2.09	20
1,1,2,2-Tetrachloroethane	18.43	1.0	20	0	92.2	70 - 123	17.34	6.12	20
1,1,2-Trichlor-1,2,2-trifluoroethane	22.22	1.0	20	0	111	70 - 130	22.22	0.00552	20
1,1,2-Trichloroethane	19.12	1.0	20	0	95.6	70 - 117	19.03	0.431	20
1,1-Dichloroethane	19.94	1.0	20	0	99.7	70 - 127	18.82	5.78	20
1,1-Dichloroethene	21.71	1.0	20	0.6505	105	70 - 130	19.97	8.31	20
1,2,4-Trichlorobenzene	17.19	1.0	20	0	85.9	70 - 125	16.19	5.99	20
1,2-Dibromo-3-chloropropane	17.05	1.0	20	0	85.2	70 - 130	15.32	10.6	20
1,2-Dibromoethane	18.94	1.0	20	0	94.7	70 - 124	17.81	6.15	20
1,2-Dichlorobenzene	19.62	1.0	20	0	98.1	70 - 115	19.62	0.0309	20
1,2-Dichloroethane	20.27	1.0	20	0	101	70 - 127	17.7	13.5	20
1,2-Dichloropropane	20.5	1.0	20	0	102	70 - 122	19.62	4.39	20
1,3-Dichlorobenzene	20.07	1.0	20	0	100	70 - 119	19.48	3	20
1,4-Dichlorobenzene	19.57	1.0	20	0	97.9	70 - 114	19.14	2.26	20
2-Butanone	33.79	2.0	40	0	84.5	70 - 130	34.82	2.99	20
2-Hexanone	36.98	2.0	40	0	92.4	70 - 130	34.64	6.54	20
4-Methyl-2-pentanone	36.03	2.0	40	0	90.1	70 - 130	35.07	2.7	20
Acetone	36.37	2.0	40	0	90.9	70 - 130	33.83	7.23	20
Benzene	20.23	1.0	20	0	101	70 - 127	19.47	3.79	20
Bromodichloromethane	19.85	1.0	20	0	99.3	70 - 124	19.76	0.439	20
Bromoform	18.47	1.0	20	0	92.3	70 - 129	18.12	1.93	20
Bromomethane	19.99	1.0	20	0	99.9	70 - 130	19.01	5.02	20
Carbon disulfide	44.28	2.0	40	1.29	107	70 - 130	42.61	3.84	20
Carbon tetrachloride	24.24	1.0	20	0	121	70 - 130	23.31	3.9	20
Chlorobenzene	18.8	1.0	20	0	94.0	70 - 114	18.5	1.64	20
Chloroethane	18.53	1.0	20	0	92.6	70 - 130	18.09	2.4	20
Chloroform	20.21	1.0	20	0	101	70 - 125	19.78	2.15	20
Chloromethane	21.46	1.0	20	0	107	70 - 130	21.02	2.1	20
cis-1,2-Dichloroethene	43.42	1.0	20	23.17	101	70 - 128	41.27	5.08	20
cis-1,3-Dichloropropene	19.41	1.0	20	0	97.1	70 - 125	18.84	3	20
Cyclohexane	22.44	1.0	20	0	112	70 - 130	21.81	2.84	20
Dibromochloromethane	19.59	1.0	20	0	97.9	70 - 124	18.87	3.76	20
Dichlorodifluoromethane	22.59	1.0	20	0	113	70 - 130	21.44	5.21	20
Ethylbenzene	20.59	1.0	20	0	103	70 - 124	20.17	2.05	20

Client: SQ Environmental
 Project: Block 251 1134.001.006.02
 WorkOrder: HS20090851

QC BATCH REPORT

Batch ID: R369068 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MSD		Sample ID: HS20090851-01MSD		Units: ug/L		Analysis Date: 22-Sep-2020 14:16			
Client ID: MW-251-1-20200916		Run ID: VOA4_369068		SeqNo: 5748970		PrepDate:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Isopropylbenzene	23.02	1.0	20	0	115	70 - 130	22.03	4.42	20
m,p-Xylene	41.44	2.0	40	0	104	70 - 130	41.45	0.0184	20
Methyl acetate	22.93	1.0	20	0	115	76 - 122	22.9	0.116	20
Methyl tert-butyl ether	16.24	1.0	20	0	81.2	70 - 130	16.55	1.89	20
Methylcyclohexane	21.1	1.0	20	0	105	61 - 158	22.4	5.99	20
Methylene chloride	19.7	2.0	20	0	98.5	70 - 128	18.57	5.92	20
o-Xylene	20.12	1.0	20	0	101	70 - 124	20.16	0.197	20
Styrene	20.8	1.0	20	0	104	70 - 130	20.55	1.23	20
Tetrachloroethene	122.1	1.0	20	96.27	129	70 - 130	115.8	5.3	20 O
Toluene	20.28	1.0	20	0	101	70 - 123	19.95	1.65	20
trans-1,2-Dichloroethene	21.5	1.0	20	1.536	99.8	70 - 130	21.05	2.13	20
trans-1,3-Dichloropropene	19.29	1.0	20	0	96.5	70 - 121	18.52	4.07	20
Trichloroethene	50.39	1.0	20	29.41	105	70 - 129	50.08	0.627	20
Trichlorofluoromethane	24.07	1.0	20	0	120	70 - 130	25.13	4.31	20
Vinyl chloride	22.66	1.0	20	0	113	70 - 130	21.89	3.45	20
Xylenes, Total	61.56	1.0	60	0	103	70 - 130	61.6	0.0769	20
Surr: 1,2-Dichloroethane-d4	49.85	1.0	50	0	99.7	70 - 126	48.39	2.97	20
Surr: 4-Bromofluorobenzene	49.37	1.0	50	0	98.7	81 - 113	49.84	0.948	20
Surr: Dibromofluoromethane	48.15	1.0	50	0	96.3	77 - 123	49.55	2.86	20
Surr: Toluene-d8	50.41	1.0	50	0	101	82 - 127	50.02	0.763	20

The following samples were analyzed in this batch: HS20090851-01

Client: SQ Environmental
Project: Block 251 1134.001.006.02
WorkOrder: HS20090851

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
Maryland	343, 2019-2020	30-Sep-2020
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

Client: SQ Environmental
Project: Block 251 1134.001.006.02
Work Order: HS20090851

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20090851-01	MW-251-1-20200916	Login	9/17/2020 7:03:37 PM	JRM	MET031
HS20090851-01	MW-251-1-20200916	Login	9/17/2020 7:03:37 PM	JRM	MET031
HS20090851-01	MW-251-1-20200916	Login	9/17/2020 7:03:37 PM	JRM	VOA252
HS20090851-01	MW-251-1-20200916	Login	9/17/2020 7:03:37 PM	JRM	TPH073
HS20090851-01	MW-251-1-20200916	Login	9/17/2020 7:03:37 PM	JRM	LVI025

Sample Receipt Checklist

Work Order ID: HS20090851

Date/Time Received: 17-Sep-2020 09:00

Client Name: SQ ENVIRONMENTAL TX

Received by: Jared R. Makan

Completed By: <u>/S/ Jared R. Makan</u>	17-Sep-2020 19:05	Reviewed by: <u>/S/ Dane J. Wacasey</u>	18-Sep-2020 13:41
eSignature	Date/Time	eSignature	Date/Time

Matrices: WaterCarrier name: Client

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	COC IDs:226065
Samplers name present on COC?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	1.4°C/1.4°C UC/C IR25		
Cooler(s)/Kit(s):	Foam		
Date/Time sample(s) sent to storage:	09/17/2020 19:05		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

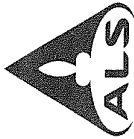
Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336
Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511
Holland, MI
+1 616 399 6070

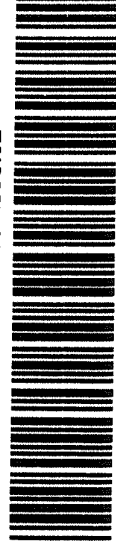
Chain of Custody Form

Page 1 of 1

HS20090851

SQ Environmental
Blk 251-1134.001.006.02

COC ID: 142407



Customer Information				Project Information													
Purchase Order		Project Name	Blk 251	A	B	C	D	E	F	G	H	I	J	Hold			
Work Order		Project Number	1134.001.006.02	B													
Company Name	SQ Env.	Bill To Company	SQ Env.	C													
Send Report To		Invoice Attn		D													
Address		Address		E													
City/State/Zip		City/State/Zip		F													
Phone		Phone		G													
Fax		Fax		H													
e-Mail Address		e-Mail Address		I													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-251-1-20200916	9/16/20	1755	Aqueous	1,8	3	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: *Samantha [Signature]*

Relinquished by: *[Signature]* Date: 9/17/20 Time: 0900

Relinquished by: *[Signature]* Date: 9/17/20 Time: 0900

Logged by (Laboratory): *[Signature]* Date: 9/17/20 Time: 0900

Received by (Laboratory): *[Signature]* Date: 9/17/20 Time: 0900

Shipment Method: *Prepaid*

Required Turnaround Time: (Check Box) ☒ 5 Wk Days ☐ 10 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date: _____

QC Package: (Check One Box Below) ☒ Level II Std OC ☐ Level III Std QC/Raw Date ☐ Level IV SW846/CLP ☐ Other _____

QC Package: (Check One Box Below) ☒ Level II Std OC ☐ Level III Std QC/Raw Date ☐ Level IV SW846/CLP ☐ Other _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

1425 CF0

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ATTACHMENT C

TIER 1 EXCLUSION CRITERIA SUPPORTING DOCUMENTATION



The subject property is comprised of approximately 1.45 acres, located at 1150 La Branch St in downtown Houston, Texas. The subject property currently operates as a surface parking lot and includes all of City Block 251. There are currently no structures on the subject property. City Block 251 is bounded by Lamar St to the northeast, Austin St to the northwest, Dallas St to the southwest, and La Branch St to the southeast. The surrounding land use is typical of an urban setting. Discovery Green Park is located adjacent east of the subject property, across the intersection of Lamar St and La Branch St.

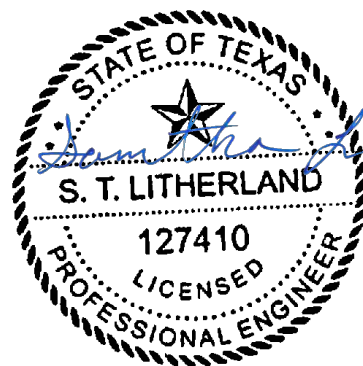
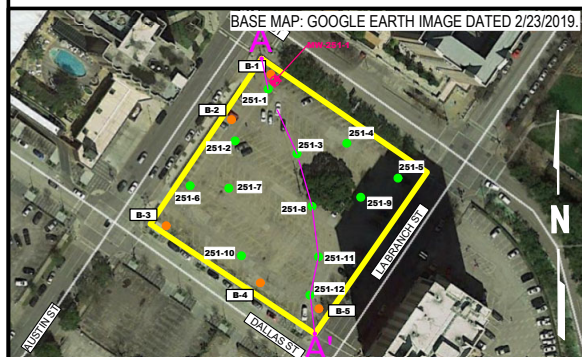
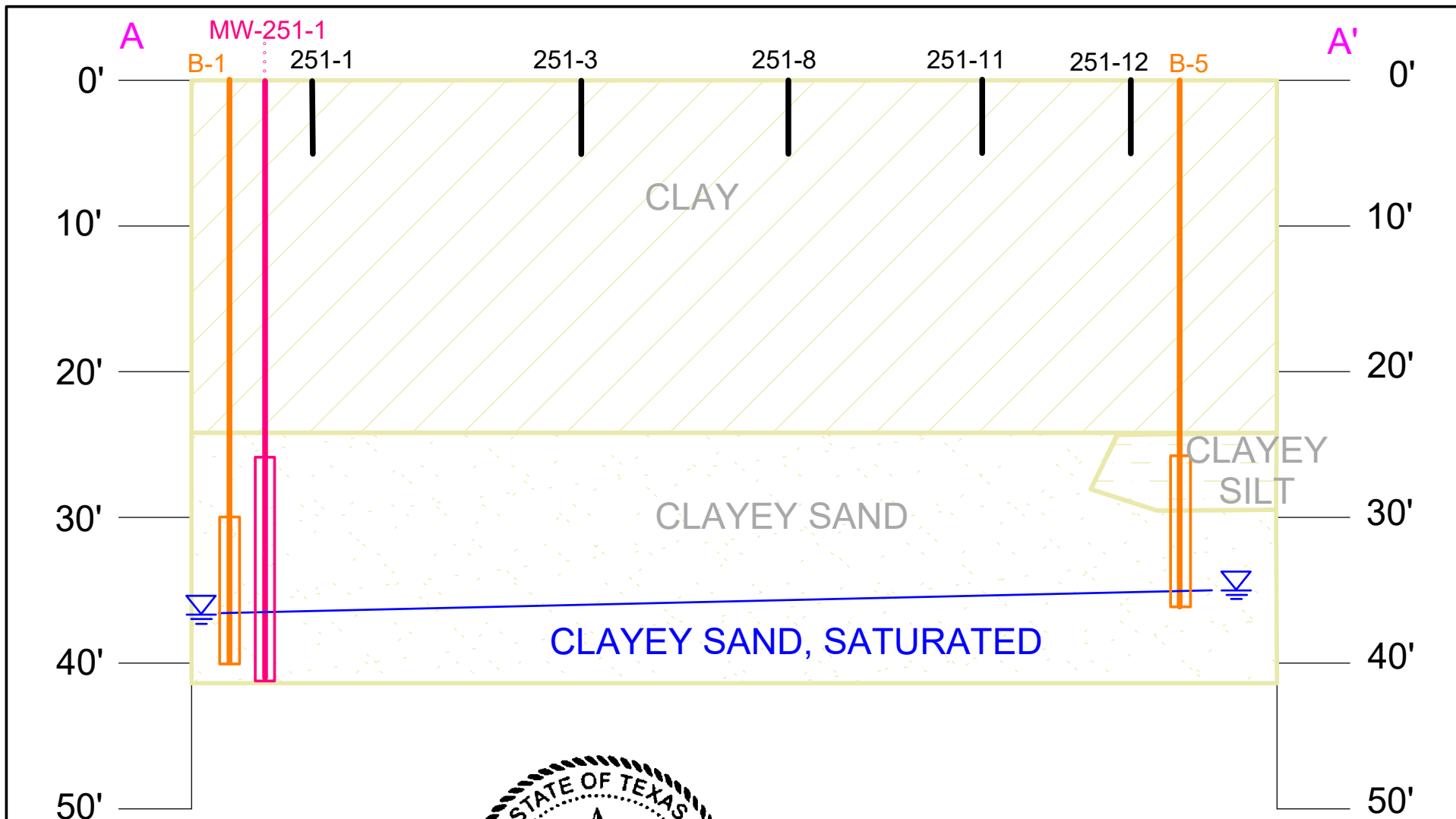
Based on the sampling conducted at the subject property, no COCs were identified above residential PCLs in surface or subsurface soil. Although concentrations of PCE and TCE were reported above their PCLs, no on-site source of these constituents were identified. No other COCs were reported above residential PCLs in surface soil at the subject property.

As described in the Tier 1 Ecological Exclusion Criteria Checklist, the affected property meets the exclusion criteria based on the following:

- There are no naturally occurring surface water or sediment features located on or near the subject property.
- The subject property is located in a heavily developed area of urban use and is completely covered by an asphalt surface.

ATTACHMENT D
REVISED FIGURE 4C

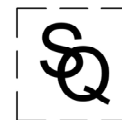




10/6/2020

NOTE: DETAILS PERTAINING TO BORINGS B-1 AND B-5 ARE NOT CERTIFIED BY SQE.

HORIZONTAL SCALE: 1 INCH = 50 FT (APPROX)
VERTICAL SCALE: 1 INCH = 10 FT



SQ Environmental, LLC

FIGURE 4C

CROSS SECTION A-A'

BLOCK 251, VCP 3038
1150 LA BRANCH STREET
HOUSTON, TEXAS

SCALE: AS SHOWN

DATE: SEPTEMBER 2020

PN: 1134.001.006.02

ATTACHMENT E
STATE OF TEXAS WELL REPORTS



STATE OF TEXAS WELL REPORT for Tracking #554965

Owner:	SDC Block 251 Houston	Owner Well #:	251-1
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 13.96" N
Well County:	Harris	Longitude:	095° 21' 43.31" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	5	Bentonite 1

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	5	CLAY, gray w/yellow and black mottling

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554968

Owner:	SDC Block 251 Houston	Owner Well #:	251-2
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 13.07" N
Well County:	Harris	Longitude:	095° 21' 43.77" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	5	CLAY, drk. gray

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554973

Owner:	SDC Block 251 Houston	Owner Well #:	251-3
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 13.19" N
Well County:	Harris	Longitude:	095° 21' 43.03" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, drk. gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554974

Owner:	SDC Block 251 Houston	Owner Well #:	251-4
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 13.28" N
Well County:	Harris	Longitude:	095° 21' 42.23" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	2	CLAY, drk. gray
2	4	gray
4	5	lt. gray

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554975

Owner:	SDC Block 251 Houston	Owner Well #:	251-5
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 12.84" N
Well County:	Harris	Longitude:	095° 21' 41.57" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	2	CLAY, drk. gray
2	4	gray
4	5	lt. gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #555039

Owner:	SDC Block 251 Houston	Owner Well #:	251-6
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 12.72" N
Well County:	Harris	Longitude:	095° 21' 44.5" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/19/2019** Drilling End Date: **11/19/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, drk. gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #555037

Owner:	SDC Block 251 Houston	Owner Well #:	251-7
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 12.6" N
Well County:	Harris	Longitude:	095° 21' 43.93" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/19/2019** Drilling End Date: **11/19/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	5	CLAY, drk. gray

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554978

Owner:	SDC Block 251 Houston	Owner Well #:	251-8
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 12.24" N
		Longitude:	095° 21' 42.4" W
Well County:	Harris	Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #554981

Owner:	SDC Block 251 Houston	Owner Well #:	251-9
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 12.5" N
Well County:	Harris	Longitude:	095° 21' 42" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/18/2019** Drilling End Date: **11/18/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #555028

Owner:	SDC Block 251 Houston	Owner Well #:	251-11
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 11.89" N
Well County:	Harris	Longitude:	095° 21' 42.57" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Environmental Soil Boring

Drilling Start Date: **11/19/2019** Drilling End Date: **11/19/2019**

	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #555034

Owner:	SDC Block 251 Houston	Owner Well #:	251-12
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	1150 La Branch St. Houston, TX 77010	Latitude:	29° 45' 11.17" N
		Longitude:	095° 21' 42.57" W
Well County:	Harris	Elevation:	No Data

Type of Work:	New Well	Proposed Use:	Environmental Soil Boring
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Drilling Start Date: **11/19/2019** Drilling End Date: **11/19/2019**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	2	0	5

Drilling Method: **Direct Push**

Borehole Completion: **Plugged**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	5	Bentonite 0.5

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **No Data** **Surface Completion by Driller**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

<i>Strata Depth (ft.)</i>	<i>Water Type</i>
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **Ali Firouzbakht**

License Number: **4997**

Apprentice Name: **Calistro Campozano**

Apprentice Number: **56591**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

<i>Top (ft.)</i>	<i>Bottom (ft.)</i>	<i>Description</i>
0	5	CLAY, drk. gray

<i>Dia. (in.)</i>	<i>New/Used</i>	<i>Type</i>	<i>Setting From/To (ft.)</i>
No Data			

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

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Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**

STATE OF TEXAS WELL REPORT for Tracking #553845

Owner:	SCD Block 251 Houston LLC	Owner Well #:	MW-251-1
Address:	800 Captial St., Suite 1210 Houston, TX 77002	Grid #:	65-14-7
Well Location:	Block 251 Houston, TX	Latitude:	29° 45' 13.93" N
Well County:	Harris	Longitude:	095° 21' 43.17" W
		Elevation:	No Data
Type of Work:	New Well	Proposed Use:	Monitor

Drilling Start Date: **9/4/2020**

Drilling End Date: **9/4/2020**

	<i>Diameter (in.)</i>	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>
Borehole:	8	0	41

Drilling Method: **Hollow Stem Auger**

Borehole Completion: **Filter Packed**

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Filter Material</i>	<i>Size</i>
Filter Pack Intervals:	24	41	Sand	20/40

	<i>Top Depth (ft.)</i>	<i>Bottom Depth (ft.)</i>	<i>Description (number of sacks & material)</i>
Annular Seal Data:	0	2	Concrete 1 Bags/Sacks
	2	24	Bentonite 1 Bags/Sacks

Seal Method: **Tremie**

Sealed By: **Driller**

Distance to Property Line (ft.): **No Data**

Distance to Septic Field or other
concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Surface Slab Installed**

Surface Completion by Driller

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which
contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **BEST DRILLING SERVICES, INC.**

**P.O. BOX 70822
Houston, TX 77270**

Driller Name: **L. Bruce Milton**

License Number: **4926**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	0.4	Asphalt
0.4	4.5	SILTY CLAY, drk. brown
4.5	8.5	CLAY, tan
8.5	24	CLAY, red
24	34	SAND, gray
34	41	SAND

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
2	Riser	New Plastic (PVC)	40	0	26
2	Screen	New Plastic (PVC)	40 0.010	26	41

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

**Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540**