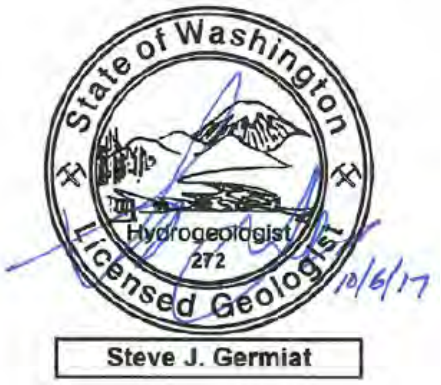
MEMORANDUM

Project No.: 110207-007-02

October 6, 2017

To: Andy Kallus, Department of Ecology

cc: Cindy Jernigan and Bryan Lust, Kimberly-Clark



From: Steve Germiat. LHG, CGWP

Re: **Data from March 2017 Wet Season Groundwater Monitoring, and July and September 2017 Groundwater pH Monitoring**
K-C Upland Area, Everett, Washington

This memorandum describes results from the March 2017 site-wide groundwater monitoring event and from the July and September 2017 groundwater pH monitoring events conducted for the K-C Worldwide Site Upland Area (Site). The March 2017 groundwater monitoring was conducted, in accordance with the Ecology-approved Addendum to the RI/FS Work Plan Addendum (Aspect, 2017), to assess wet season groundwater quality conditions with a focus on assessing contaminants associated with the Crushed Material (CM) on Site. Therefore, this memorandum presents the groundwater data, and assesses those data relative to the CM as a potential influence on them. This memorandum does not specifically discuss the 2017 data collected from the Log Pond area of the Site; that information is transmitted separately. In this memorandum, the groundwater pH data are presented first, followed by data for other constituents from the March 2017 groundwater monitoring. The final section discusses the quality of groundwater entering the East Waterway based on the Site data collected to date.

Groundwater pH

The CM, like all non-weathered cement-based materials, is a source of leachable calcium hydroxide which readily disassociates into calcium ions and hydroxide ions in water. The released hydroxide is the source of increased pH observed in groundwater within the CM footprint. Shortly after the CM placement in mid-2013, the groundwater pH increased in areas where the CM is closest to the water table, notably on the eastern side of the Site and at well LP-MW-1 within the footprint of the Log Pond, as described in the draft RI/FS (Aspect, 2016) and in more detail below. While pH has its own surface water quality standard for aquatic protection, a related concern is the potential for high pH to geochemically mobilize certain metals from soil to groundwater.

This section describes the three rounds of groundwater pH monitoring conducted in 2017, then assesses trends in groundwater pH over time. For reference, Table 1 includes the complete Site groundwater dataset for field parameters including pH, and for metals, to date.

March 2017

The March 2017 wet season groundwater monitoring data demonstrate no pH values greater than 8.5 measured at shoreline wells, but elevated pH values at inland wells within the CM footprint. Figure 1 depicts the March 2017 groundwater pH data. Based on the March 2017 measurements, groundwater pH greater than 11 occurs in the central portion of the Site encompassing the former Tissue Mill and Log Pond areas, and to the south in the former Pulp Mill area including part of the Boiler-Baghouse area (well BBH-MW-103).

The likely explanation for the highest groundwater pH occurring beneath the former Tissue Mill and Log Pond is that those areas have the greatest thicknesses of CM and that, in some areas within them, the CM is in contact with seasonally high groundwater levels[1].

As described in the draft RI/FS, the water table has risen across the Site since the pavement was removed from most of the former mill, and the groundwater level within the central portion of the former Log Pond (well LP-MW-1) is a few feet higher (mounded) than groundwater levels outside it throughout much of the year. As a result, the CM within the central portion of the Log Pond is in contact with the water table during wet season conditions. We infer that some CM in the Tissue Mill area is also likely beneath the seasonally high water table.

In March 2017, Pulp Mill area wells PM-4 and PM-5 also had pH readings above 11, which is a substantial rise from when last measured in February 2014 (7.5 and 8.2, respectively; Table 1). In the former Boiler-Baghouse area, pH 12.8 was measured at well BBH-MW-103, with near-neutral pH measured at BBH-MW-104 located about 40 feet to the southwest, both of which are consistent with prior data (Table 1). To the west (downgradient) of BBH-MW-103, pH values of 9.7 and 10.0 were measured at wells BBH-MW-101 and UST-MW-103 respectively in March 2017.

The water year starting October 1, 2016, was the wettest on record for the Puget Sound region, and the early March 2017 monitoring followed the second-wettest February on record for the Seattle

[1] The current understanding of CM thickness is presented on Figure 6-R4 in the draft RI/FS, which will be updated using the recent Log Pond drilling data. Additional delineation of CM beneath seasonally high groundwater is a component of remedial alternatives involving removal of CM from groundwater and on-site containment of CM.

area. Consequently, inland groundwater elevations were higher (0.5 feet on average[2]) in March 2017 than measured in the February 2016 wet season monitoring event. The groundwater monitoring data collected over the past two years indicate a pronounced seasonality to groundwater pH, with highest pH measured during the wet season (February 2016 and March 2017) and lower pH measured in the dry season (August 2016 and September 2017). For reference, Figures 2 and 3 depict the July and September 2017 groundwater pH data discussed below, and Figures 4, 5, and 6 present the corresponding data from 2016 (February, May, and August, respectively). Based on the observed seasonal pattern, discussed further below, the March 2017 data, representing anomalously wet conditions, likely represents a worst-case snapshot of groundwater pH (and thus dissolved metals mobilized by high pH).

July 2017

Site-wide monitoring of groundwater pH was again conducted on July 10-11, 2017, to assess pH in drier-season conditions, as a point of comparison with the March 2017 data and to continue tracking longer-term changes in pH. Figure 5 presents the July 2017 groundwater pH data, and they are also tabulated in Table 1. Comparing July 2017 versus August 2016 water levels at 23 inland wells that were measured during both events, the average water level in July 2017 was about 0.6 feet higher than measured in August 2016, which is expected given the extremely wet winter and spring of 2017 described above.

The July 2017 groundwater pH measurements at the shoreline wells remained below pH 8.5, except at the southernmost shoreline well REC7-MW-4 (pH 8.67). Given that well's location adjacent to the south property boundary, away from the majority of the CM, and the lower pH readings within the CM footprint upgradient of it (wells BCT-MW-104 and -105 to the northeast), the pH above 8.5 does not appear to be related to the CM. The pH in that well did not exceed 8.5 prior to or after the July reading (Table 1).

Inland from the shoreline, the July 2017 groundwater pH remained greater than 11 at several wells, with two wells (LP-MW-1 in Log Pond and TM-MW-4 in Tissue Mill area) exceeding pH 12.

Note that the July 2017 pH map (Figure 2) includes the newly installed wells in the Log Pond (LP-MW-3, -4, -5, -6, and -7), which are relatively deep compared to all other wells in the Upland Area[3]. As described above, the Log Pond area has some of the thickest CM accumulation on the Site, and the previously installed Log Pond shallow well LP-MW-1 commonly has the highest pH measured in Upland Area groundwater. The contrast in groundwater pH between shallow well LP-MW-1 (12.1) vs the adjacent deeper well LP-MW-3 (7.1) in the July 2017 data indicates that the pH impacts are limited to the relatively shallow portion of the groundwater system. This is logical because where the CM is below seasonally high groundwater (including in the Log Pond) it is only into the uppermost part of the groundwater, and because precipitation infiltrating through the CM mixes first into the uppermost portion of the groundwater.

[2] Excluding shoreline wells since their water level differences can reflect tidal fluctuations that obscure seasonal changes.
[3] The new Log Pond wells except LP-MW-4 are screened to intercept the sawdust layer encountered below the Log Pond fill at depths ranging from approximately 30 to 45 feet.

September 2017

Site-wide monitoring of groundwater pH was also conducted on September 18-19, 2017, to assess pH in what was expected to be peak dry-season conditions prior to onset of the rainy season. Figure 3 presents the September 2017 groundwater pH data.

The September 2017 groundwater pH measurements at the shoreline wells remain below pH 8.5. Inland from the shoreline, the September 2017 groundwater pH was above 12 at well TM-MW-4, and was above 11 at wells TM-MW-3, GF-MW-2, BBH-MW-103, and PM-MW-5.

Time Trends in Groundwater pH

As described in the draft RI/FS (Aspect, 2016), abundant literature documents that fresh cement surfaces in the presence of carbon dioxide gradually mineralize with calcium carbonate (termed carbonation), which reduces the surfaces' leaching of calcium hydroxide and thus high pH. If this phenomenon did not occur, all cement surfaces would leach high pH long-term, which is not the case. While there clearly is seasonality in the groundwater pH measurements, whether a longer-term decline in pH is occurring— e.g. from one year's wet season to the next—is important to understand for assessing actions to address the high pH as part of the FS.

Figure 7 depicts the measured groundwater pH trends over time for selected groups of wells (updated from that presented in draft RI/FS). The top plot shows the eastern wells, where the water table is shallow and which showed the quickest pH rise following CM placement. Groundwater pH trends are variable across those wells, with declines observed in some wells but stable trends and persistent high pH observed at Tissue Mill Area wells TM-MW-3 and TM-MW-4, as discussed above. Within the center of the Log Pond, a general decline in pH and distinct seasonality is observed in well LP-MW-1 (second plot on Figure 7), which is further discussed on its own below. Generally stable trends remain for the shoreline wells (bottom two plots on Figure 7), although anomalously higher readings were observed in the February 2016 monitoring event, as described in the draft RI/FS.

Given the inter-well variability, we also track the average site-wide pH over the past two years to assess more general trends.

Of the 59 wells measured across the Site in March 2017, 35 were also measured in February 2016 (22 inland, 13 shoreline wells). Of the 22 inland wells with both sets of wet season measurements, eight wells had a higher pH and 14 had a lower pH, and the average pH for the 22 inland wells declined 0.9 pH unit[4]. The pH measured at ten of 13 shoreline wells also declined between the two monitoring events, with an average decline of 0.8 pH unit. Table 2 presents that evaluation.

Of the 26 inland wells with pH measurements in August 2016 and September 2017 (dry season), ten wells had a higher pH and 16 wells had a lower pH, in September 2017 than in August 2016. The magnitude of pH declines was generally larger than the pH increases at individual wells, such that the average pH for the 26 inland wells declined approximately 0.2 pH units over the year

[4] Because pH is a logarithmic term, the pH values were converted to hydrogen ion concentration (= 10^[-pH]), the geometric mean calculated (data span orders of magnitude), and then that mean value converted back to log space to represent in pH units.

period. The average pH in the 13 shoreline wells measured in both events declined 0.3 pH units (Table 2).

The data indicate that, despite the record-setting amount of precipitation falling in the 2016-2017 water year, the average groundwater pH across the Site is slowly declining.

Data from Log Pond Well LP-MW-1

As illustrated on Figure 7, the monitoring data collected in 2016 and 2017 demonstrate a strong seasonality in groundwater levels and groundwater pH at Log Pond well LP-MW-1, which has had some of the highest pH measurements to date. Between February and August 2016, the groundwater level at well LP-MW-1 dropped approximately 3.5 feet, to below the bottom of the CM at that location, with a corresponding groundwater pH drop from 11.2 to 8.6[5] in that well. By March 2017, the groundwater level at LP-MW-1 rose nearly 4 feet relative to August 2016, and was 0.4 feet higher than that measured in February 2016. In the peak dry-season conditions of September 2017, the water level was again below the bottom of the CM and the groundwater pH was 8.15—the same phenomenon observed in dry season 2016. Figure 8 illustrates the relationship of groundwater level and pH measured at well LP-MW-1 over time. Well LP-MW-1 is screened into the CM itself, and the monitoring data illustrate the influence of shallow groundwater being in direct contact with, and then out of direct contact with, CM. These data, in combination with low pH measured in the new deeper wells within the Log Pond described above, indicate that the elevated groundwater pH is limited to a shallow depth interval adjacent to the CM veneer. The data also indicate that peak wet season pH is declining in this well over the 4-year period of monitoring.

Conclusions Regarding Groundwater pH

Based on the groundwater pH monitoring data to date, we conclude the following:

- Substantial seasonal variation occurs in groundwater pH. We infer that the wells showing less seasonality represent areas where CM occurs beneath the water table throughout the year in those areas;
- A longer-term gradual decline in groundwater pH is occurring in areas where the CM is out of contact with groundwater;
- The groundwater pH impacts are limited to the uppermost portion of the groundwater system, in closest proximity to the CM veneer. This indicates that the porewater/seep sampling completed on the intertidal beach should represent the “worst-case” in terms of potential pH/metals impacts to the Waterway, because the groundwater discharging there is from the shallowest portion of the groundwater system.
- In the 4 years of monitoring since placement of the CM, shoreline groundwater has not been impacted by pH attributable to the CM.

[5] Following the pH 8.6 measurement in LP-MW-1 on August 18, 2016, pH 8.2 was measured in that well on August 31, 2016, for verification of the prior measurement.

Other Constituent Data from March 2017 Monitoring

Dissolved Metals

Consistent with prior sampling, one or more dissolved metals were detected at concentrations greater than PCLs in each March 2017 groundwater sample that had a groundwater pH greater than 9.5. Arsenic, copper, and mercury are the metals most commonly detected above PCLs, but one or more wells have exceedances detected for lead, nickel, and zinc. Exceedances for some dissolved metals are also detected in wells with pH at or below 8.5, because of reducing groundwater conditions rather than pH, as described below. In addition, dissolved nickel exceedances were again detected in some shoreline wells with near-neutral pH, which appear to be attributable to nearshore geochemical interactions, as opposed to inland sources, as described in Section 6.4.1.2 of the draft RI/FS (Aspect, 2016). Table 1 presents the collective groundwater metals and pH data to date.

For the highest pH wells discussed above, the March 2017 dissolved metals concentrations relative to prior data are briefly summarized as follows, with reference to specific monitoring wells shown on Figure 4:

- BBH-MW-103 (at the Boiler/Baghouse area, in the southwest portion of the Site) has arsenic, copper, and mercury concentrations in the range of 2016 detections, with variability in trends for individual metals, but higher than detected at the start of monitoring at this location in May 2014.

- HB-MW-1R (at the former Hydraulic Barker Building, in the east-central portion of the Site) has lower concentrations of arsenic, copper, mercury, and nickel than detected in 2014.

- LP-MW-1 (in the center of the Log Pond, near the center of the Site) has a higher copper concentration and lower mercury and nickel concentrations than detected in 2014.

- TM-MW-3 (within the Tissue Mill, in the northeast portion of the Site) has lower concentrations of arsenic, copper, and mercury than detected in 2014, and has no metals exceedances in the current round.

- TM-MW-4 (within the Tissue Mill, in the northeast portion of the Site and south of TM-MW-3) has lower concentrations of copper and nickel than detected in 2014, with nickel not exceeding its PCL in the current round.

While not monitored for pH in 2016, high pH well PM-4 within the Pulp Mill area had higher detected concentrations of arsenic, copper, and mercury relative to 2014 data. The March 2017 concentrations of those three metals also increased at Pulp Mill well PM-5 relative to 2014, but the increases are smaller than observed at PM-4 (Table 1).

When evaluating the current data, it is worth recalling that metals were detected in Site groundwater at concentrations exceeding PCLs prior to placement of the CM - during three rounds of groundwater monitoring during the 2012 Phase 2 Environmental Site Assessment for the Site (Aspect, 2013). As an example, the upper plots on Figures 9, 10, and 11 depict wells (as red

symbols) where groundwater metals concentrations (arsenic, copper, and nickel, respectively) detected in 2012 (pre-CM) exceeded respective groundwater cleanup levels; wells with green symbols had no detected exceedances. Mercury is not depicted because its 2012 analytical reporting limit (0.1 µg/L) was above the 0.025 µg/L PCL. The 2012 metals exceedances at inland and shoreline wells, which were relatively low in magnitude and inconsistent over time, are attributable to geochemically reducing (low dissolved oxygen) groundwater within the Site's dredge fill soils, conditions that are typical at nearshore dredge fill sites throughout Puget Sound. For that reason, such metals exceedances continue to be detected at monitoring wells without elevated pH, including in the most recent (March 2017) monitoring data. For comparison with the 2012 data, which reflect conditions before placement of the CM, the lower plots on Figures 9, 10, and 11 depict wells with and without exceedances of the respective metals during the March 2017 wet season monitoring event.

While the dredge fill geochemistry generates low-level dissolved metals exceedances, the high pH water increases the leachability of some metals. This phenomenon likely results in the higher groundwater metals detections observed in association with high pH following placement of the CM. The pH-enhanced mobilization of metals is a reversible process. As the elevated pH reduces to more neutral levels, previously mobilized metals precipitate in mineral form on the aquifer soils and are thus removed from solution. This tendency is routinely used in groundwater cleanups, where, for example, pH-buffering media are added to alkaline pH groundwater to precipitate metals by controlling the pH.

Source of Dissolved Metals in Groundwater

In our professional judgement, the elevated metals associated with elevated pH in groundwater are attributable to leaching of metals from Site soils, not leaching of metals from the CM itself. Because Site groundwater PCLs are based on surface water quality standards, which for metals are more stringent than drinking water criteria, the high pH can elevate metals concentrations above groundwater PCLs even in the absence of high concentrations of metals in soil. For example, a concentration of copper in soil attributable to natural mineral content, without anthropogenic influence ("natural background" under MTCA), is 36 parts per million (ppm or mg/kg), or 36,000 parts per billion (ppb or µg/kg). The Site groundwater PCL for copper is 3 ppb (µg/L), which is only 0.0055 percent[6] of the total copper content of uncontaminated soils. In other words, leaching even a minute fraction of metals from soils can create exceedances of the stringent groundwater metals PCLs applied at the Site.

There is low likelihood that contaminants within the CM itself will leach at concentrations posing a risk to the East Waterway, in our professional judgement. For example, a primary hazardous substance present within the CM, arsenic, has been demonstrated through Synthetic Precipitation Leaching Procedure (SPLP) laboratory testing to not be leachable from the CM (Aspect, 2016). In fact, cement is commonly added to contaminated soil to reduce leachability of contaminants (most commonly metals), whether for *in situ* remediation or *ex situ* treatment prior to landfill disposal.

[6] Converting µg/kg to µg/L of soil, to achieve equal units, by multiplying ug/kg by the MTCA-default soil bulk density of 1.5 kg/L, results in 54,000 µg copper per L soil (ug/L) as a natural background concentration.

cPAHs and PCBs

In addition to metals, the CM contains polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) exceeding MTCA-default calculated soil screening levels based on leaching to groundwater (Aspect, 2016). The cement matrix of the CM is completely different, physically and chemically, from that of soil, such that MTCA-default partition coefficients for soil, and thus leaching-based screening levels derived for soil, are not necessarily accurate if applied to the CM. The fact that a relatively mobile constituent like arsenic did not leach from the CM in SPLP tests, which are designed to enhance leaching, suggests that highly immobile, hydrophobic compounds like cPAHs and PCBs will not leach at concentrations of concern. The groundwater monitoring data to date empirically support that conclusion, as outlined below.

cPAHs

Groundwater monitoring has been conducted for PAHs in varying numbers of wells several times since the mid-2013 placement of the CM, including most recently in March 2017. The March 2017 monitoring event specifically targeted six well locations in areas where the highest total cPAH[7] concentrations were detected in the CM itself (Aspect, 2017). Table 3 presents the groundwater pH data to date from wells monitored in March 2017.

There were no cPAH exceedances detected in any of those six groundwater samples in the March 2017 sampling event. In fact, very few individual cPAHs were even detected, consistent with the prior groundwater monitoring data. The March 2017 total cPAH (TEQ) measurements[8] for the six wells are as follows (locations called out on Figure 12):

- AP-MW-1R: No cPAH detections;
- GF9-MW-3: 0.0076 µg/L (chrysene only detection, and not replicated in field duplicate sample);
- HB-MW-1R: 0.0076 µg/L (chrysene only detection);
- HBV-MW-101: No cPAH detections;
- UG-MW-2: No cPAH detections; and
- UST29-MW-103: 0.0084 µg/L (chrysene only detection).

For reference, Figure 12 depicts the numbers of groundwater PAH analyses to date at wells conducted in the 4 years since the placement of the CM was completed in July 2013 (data from November 2013 through March 2017). That figure also shows wells with groundwater cPAH exceedances of the 0.015 µg/L PCL based on marine surface water (red symbols), indicating that some wells within the CM footprint have cPAH exceedances (low-level and typically not replicated

[7] Calculated as total toxic equivalent concentration (TEQ) of benzo(a)pyrene in accordance with MTCA (WAC 173-340-708(8)(e)).
[8] Assuming non-detect values are present at one-half the 0.01 ug/L analytical detection limit in accordance with MTCA.

at a location), but many do not. There are also wells located outside the CM footprint with and without cPAH exceedances (Figure 12).

Over the 4 years of monitoring since CM placement, no cPAH exceedances have been detected in any of the groundwater samples collected from wells located within or at the downgradient edge of the four CM grid-sampling blocks with highest total cPAH (TEQ) concentrations (10.5 to 16.5 mg/kg[9]) detected in the powder fraction of the CM (Figure 9):

- HB-MW-1R (3 samples including March 2017), located within CM grid block RM-E5 (10.5 mg/kg total cPAH (TEQ)). This is also an area of large CM thickness (4 feet at HB-MW-1R) and relatively shallow groundwater depth beneath the bottom of the CM.
- HBV-MW-101 (5 samples including March 2017), located within CM grid block RM-D5 (11.0 mg/kg total cPAH (TEQ)). This is also an area of large CM thickness (4.5 feet at HBV-MW-101) and relatively shallow groundwater depth beneath the bottom of the CM.
- UG-MW-2 (3 samples including March 2017), located within CM grid block RM-F5 (11.4 mg/kg total cPAH (TEQ)). This is also an area with relatively shallow groundwater depth beneath the bottom of the CM.
- AP-MW-1R (2 samples including March 2017) and BA-MW-2 (2 samples), both located within CM grid block RM-F3 with the highest detected total cPAH (TEQ) concentration (16.5 mg/kg).

The CM total cPAH concentrations in grid blocks containing the other two wells monitored in March 2017 (GF9-MW-3 and UST29-MW-103) are also depicted on Figure 12.

There is low probability that PAHs would leach at concentrations of concern from the CM matrix, and this is supported by the fact that, in 4 years of monitoring, there are no groundwater cPAH exceedances detected in locations where the highest detected cPAH concentrations in the CM occur. In our judgement, PAH detections in groundwater at the Site are attributable to the Site fill conditions, not the CM.

PCBs

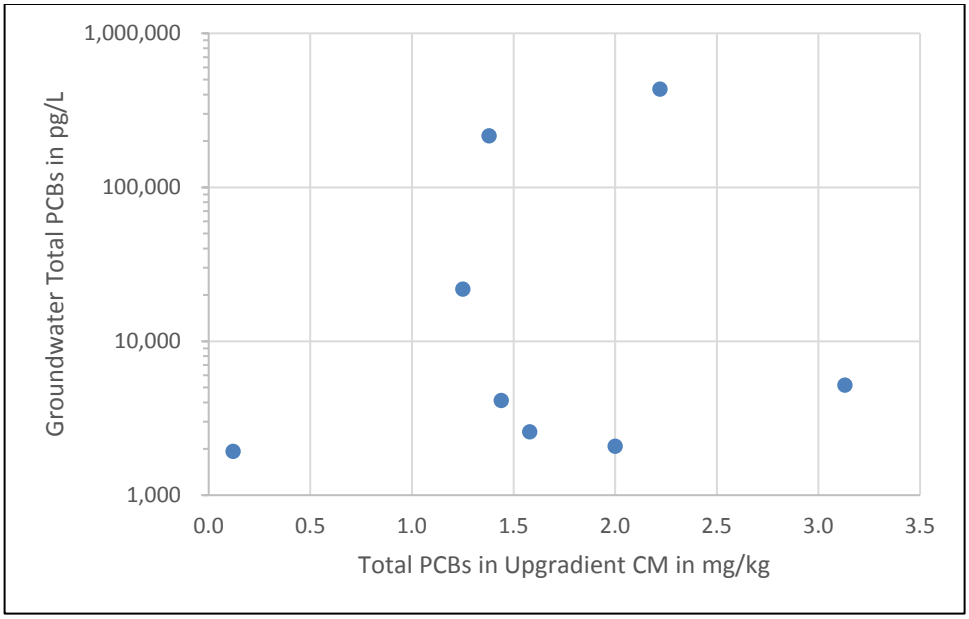
In the March 2017 groundwater sampling event, PCB congeners were detected in each of the eight wells with samples[10] analyzed for PCB congeners and in both laboratory method blanks[11] associated with the samples. Three of the wells, DAST-MW-101, CMS-MW-1R, and HB-MW-1R, had detected Total PCB concentrations (sum of 209 congeners) exceeding the PCL[12]. Of those wells, HB-MW-1R also had a detected Total Dioxin-Like PCB Congener (TEQ) concentration exceeding the PCL. Table 4 presents the PCB congener data from the March 2017 groundwater

[9] i.e., up to approximately 5 times the MTCA-default 3.2 mg/kg soil screening level based on leaching.
[10] Each groundwater sample was centrifuged prior to PCB congener analysis.
[11] Distilled water prepared by laboratory to be “analyte free”.
[12] The groundwater PCLs for Total PCBs and for Total Dioxin-Like PCBs (TEQ) are surface water quality standards based on human ingestion of marine organisms, which are concentrations below analytical PQLs; therefore, the PCLs are established as the PQLs in accordance with MTCA. Note that the PCL for Total Dioxin-Like PCBs (TEQ) is the PCL for dioxins/furans (Total 2,3,7,8-TCDD [TEQ]).

samples in units of picograms per liter (pg/L)[13]. Figure 13 depicts locations of wells with detected groundwater Total PCB congener concentrations greater than and less than the PCL. Because surface water criteria for Total PCB congeners and for Total Dioxin-Like PCB Congeners (TEQ)[14] are below respective analytical practical quantitation limits (PQLs), the PCLs are established as the PQLs based on the Site sample data.

Soil total PCB concentrations detected in the area of wells CMS-MW-1R and DAST-MW-101 (near each other) are greater than MTCA-default soil screening levels based on leaching to groundwater. Detected soil PCB concentrations in the area around well HB-MW-1R are below those screening levels (refer to PCB soil data tables in draft RI/FS).

PCBs are more highly hydrophobic on average than cPAHs and, based on general contaminant transport considerations, leachability of PCBs from the CM is expected to be negligible. Consistent with that, there is no apparent correlation between the groundwater PCB concentrations and PCB concentrations in the CM adjacent to/upgradient of the well. This is illustrated by the graph below, which plots detected Total PCB concentrations in groundwater as a function of detected Total PCBs in the CM immediately adjacent to/upgradient of each well sampled.



Graph 1. Total PCBs in Groundwater vs Total PCBs in Immediately Upgradient CM

The detected Total PCB concentrations in the powder fraction of the CM adjacent to the wells with PCB congener data are also depicted on Figure 13 for reference. Notably, wells UST-MW-103 and UG-MW-2R had no groundwater PCB exceedances despite being located within or on the

[13] 1 pg/L is one one-millionth of a part per billion, or one part per quadrillion (ppq).
[14] Equal to surface water criterion for dioxins/furans, i.e. Total 2,3,7,8-TCDD (TEQ).

downgradient edge of two CM sample grid blocks within the highest detected Total PCB concentrations in the powder fraction of CM.

Based on the collective information, in our professional judgement, the groundwater PCB detections are attributable to the fill soil, not the CM.

As depicted on Figure 13, the three wells with groundwater PCB exceedances are located in the eastern portion of the site, 600 feet or more from the East Waterway where the groundwater PCLs apply. The five wells located closer to the East Waterway, but not necessarily downgradient of the exceeding wells, have Total PCB concentrations below PCLs. This fact, coupled with the fact that the Site fill soil is organic-rich[15], indicates negligible chance that the trace-level PCB concentrations in groundwater on the east side of the Site would migrate to the East Waterway.

Groundwater Quality Entering East Waterway

The discussion above focuses on groundwater quality as measured at inland wells, inland from the shoreline. K-C has also monitored the quality of groundwater discharging to the East Waterway by sampling seeps and sediment porewater on the Site's intertidal beach, including a comprehensive monitoring event for intertidal seeps and other water discharges in October 2016, after submittal of the draft RI/FS.

No dissolved metals have been detected in intertidal seep or porewater samples at concentrations exceeding groundwater PCLs based on marine water quality during the three rounds of monitoring conducted since placement of the CM. Table 5 presents the collective pH and metals data for shoreline monitoring wells (located several tens of feet inland from the point of groundwater discharge) and for the intertidal seeps/porewater representing groundwater discharge, along with East Waterway surface water monitoring conducted for reference purposes. Figure 14 depicts the collective shoreline water monitoring locations.

Of the 34 pH measurements collected from 20 intertidal discharge locations between February 2014 and October 2016, one location had a measured pH slightly above 8.5: pH 8.60 and 8.56 in the February and August 2014 measurements collected from porewater sample location PW-5, located on the north side of the barge unloading dock (Figure 14). Although the pH was above 8.5 at the PW-5 location, dissolved metals concentrations were below PCLs during both monitoring events (e.g., dissolved copper was below 0.1 µg/L; Table 5). For reference, the pH measured at five East Waterway surface water monitoring locations along the Site shoreline between February 2014 and July 2017 ranged from 7.80 to 8.37 (Table 5), with an average of 8.16.

The PW-5 porewater sample location is downgradient of the south edge of the former Log Pond area (filled in early 1980s). The shoreline monitoring well LP-MW-2 located inside the Log Pond and closest to PW-5 had a measured pH of 9.2 at the time pH 8.56 was measured at the PW-5 location in February 2014. The pH at well LP-MW-2 was subsequently measured at 8.6 in February 2016, and then below 8.5 five times between May 2016 and September 2017 (Table 5). Study of the Site groundwater flow system indicates that groundwater conditions within the Log Pond fill are

[15] Therefore, over the long groundwater flow path, a substantial reservoir of organic carbon exists to sorb (remove from solution) highly hydrophobic PCBs.

distinctly different than those outside of it due to the low permeability of the Log Pond fill relative to the permeability of the older dredge fill outside of it. During the 2012 tidal study measuring Site groundwater response to tidal changes, shoreline well MW-6 within the Log Pond fill showed no tidal response, in direct contrast to measurements from all other shoreline wells (outside Log Pond) during that study (refer to Section 2.4.4.2 of Aspect, 2016). The difference in groundwater response is attributable to the low average permeability of the Log Pond fill soil. Drilling of the Log Pond fill confirms that it is largely silt and silty sand with very low permeability, and the low average permeability has been confirmed with slug testing conducted in Summer 2017. The low permeability of the silty fill inhibits flow of groundwater generally, thereby limiting the rate and quantity of groundwater discharging from the Log Pond fill to the East Waterway. The slightly elevated pH measured at PW-5 in 2014 could have various causes but, based on the Site hydrogeologic conditions, it appears unrelated to groundwater discharge from the Log Pond area upgradient of it.

In short, there is no evidence that the CM has impacted groundwater discharging to the East Waterway. Implementation of measures to control the CM as a pH source, combined with continued groundwater monitoring, will be proposed in revised alternatives to the FS, to ensure this condition persists.

References

Aspect Consulting, LLC (Aspect), 2013, Data Report for Phase 2 Environmental Site Assessment, Kimberly-Clark Worldwide Site Upland Area, Everett, Washington, March 15, 2013.

Aspect Consulting, LLC (Aspect), 2016, Draft Remedial Investigation and Feasibility Study, Kimberly-Clark Worldwide Site Upland Area, Everett, Washington, Chapters 1-7 (Remedial Investigation) dated March 16, 2016, and Chapters 8-12 (Feasibility Study) dated April 18, 2016.

Aspect Consulting, LLC (Aspect), 2017, RI/FS Work Plan Addendum: Wet Season 2017 Groundwater Monitoring, Kimberly-Clark Worldwide Site Upland Area RI/FS, Everett, Washington, March 6, 2017.

Limitations

Work for this project was performed for the Kimberly-Clark Worldwide Inc. (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

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Attachments

Table 1—Groundwater Metals and Field Parameter Data through September 2017

Table 2—Comparing Average Site Groundwater pH for Wet and Dry Seasons, 2016 vs 2017

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TABLES

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
AP-MW-1	B	07/03/12	1 U	1 DU	1.2	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	1.85	1.80 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.39	1.68 D
	B	07/03/12 FD	1 U	1 DU	1.22	1.11 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.04	2.02 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.74	1.82 D
	B	08/31/12	1 U	1 DU	1 U	1 DUJ	1 U	1 DU	1 U	1.12 D	7.12	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.41	1.97 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	5.63	9.51 D
AP-MW-1R	B	11/13/13																								
	B	02/23/14				0.3						1.28		0.033		0.00115		4.54								1.4
	B	03/07/17			1.98						36.2		3.3		0.0949		5.45								7.1	
	B	07/11/17																								
	B	09/18/17																								
BA6-MW-101	B	05/13/14																								
	B	08/11/14																								
	B	11/05/14																								
	B	02/18/15																								
	B	03/09/17			2.03						1.91		0.141		0.00544		3.6								1.8 J	
	B	07/11/17																								
	B	09/18/17																								
BA-MW-1	B	11/04/13			8.25	7.73 D						2.20		0.078	0.0168 J	0.0227 DJ	20.1	24.5 D								4.19
	B	02/27/14				2.9					8	8.95 D		0.571	0.05	0.0576 D	9.09	9.57 D								4.4
BA-MW-2	B	11/15/13				0.6						0.96		0.209 J		0.00635		3.70								4.3 J
	B	02/25/14				1.5						2.31		6.860		0.0135		5.41								4.1
	B	09/19/17																								
BA-MW-3	B	11/05/13				3.13						3.02		0.221	0.00329 J	0.00714 DJ	1.38	9.12 D								9.51
	B	02/25/14				1.8					3.00	5.40 D		0.527		0.0122		5.70								7.1
	B	03/09/17			6.33						3.64		0.027		0.00976		1.26								1.4 J	
	B	07/11/17																								
	B	09/19/17																								
BA-MW-4	B	11/05/13				3.93						1.29		0.066 J	0.001 U	0.0029 DJ	0.79	8.61 D								1.40
	B	02/25/14				5.0					3.4	10.8 D		3.780	0.0255	0.098 D	7.61	8.91 D								13.4
BA-MW-5	B	11/05/13				0.53						1.190		0.091	0.00974 J	0.00642 DJ		1.30 J								0.95
	B	02/24/14				2.6						1.70		0.150		0.00214		3.85								1.8
	B	03/09/17			2.27						1.42		0.962		0.0015		0.97								0.6 J	
	B	07/11/17																								
	B	09/18/17																								
BA-MW-7	B	11/04/13				1.39						1.040		0.147	0.00137 J	0.0018 DJ	2.79	8.66 D								8.44
	B	02/23/14				4.50					5.38	8.37 D		0.59		0.0133		7.42								7.0

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
	B	05/12/14			4.4	6 D					1.41	3.88 D		1.25		0.0107										6.6
	B	08/12/14			4.5						1.23		0.011 J		0.00205										1.7	
	B	11/03/14			5.8						78.4		0.156		0.011										0.6	
	B	02/18/15			3.4						20.9		0.207		0.0145										0.6	
	B	11/16/15			21.5						37.5		0.333		0.0497										1.8	
BBH-MW-101	B	02/09/16			13.8						16.4		0.559		0.0326										2.6	
	B	05/23/16			4.1						4.89		0.233		0.00549										0.9 J	
	B	08/18/16			4.36						2.83		0.085		0.0173										1.14 J	
	B	03/08/17			15.1						23.3		0.761		0.0396		3.51								1.9 J	
	B	07/11/17																								
	B	09/19/17																								
	B	05/12/14				2.1					1.31	3.5 D		2.49		0.0188										5.1
	B	08/12/14			2.7						1.57		0.049		0.00196										4.5	
	B	11/03/14			1						0.96		0.116		0.00387										4.8	
	B	02/17/15			1.6						1.11		0.166		0.00333										5.9	
	B	11/16/15			1.8						3.08		0.245		0.00259										7.3	
BBH-MW-102	B	02/09/16			0.7						1.35		0.174		0.00164										6.0	
	B	05/23/16			0.3 J						0.59		0.026 J		0.00145 J										1.8 J	
	B	08/18/16			0.73						1.10		0.034		0.00083 J										2.84 J	
	B	03/08/17			0.9						0.75		0.093		0.00163		3.75								8.7	
	B	07/11/17																								
	B	09/19/17																								
	B	05/13/14			9.1	10.1 D					4.69	34.8 D		1.36	0.0749	0.861 D										7.4
	B	08/13/14			4.7						1.87		0.013 J		0.00577										2.6	
	B	11/03/14			17.6						49.1		2.23		3.86										1.3	
	B	02/17/15			32.7						269		102		4.24										2.5	
	B	04/20/15			12						15.6		1.46		0.288										1.28	
	B	11/16/15 FD			24.9						104		6.000 J		0.914										1.4 J	
	B	11/16/15			24.3						95.7		3.380 J		0.971										0.8 J	
	B	02/08/16 FD			10						93.5		3.83 J		0.922										0.3 J	
BBH-MW-103	B	02/08/16			10.5						103		5.40 J		0.99										0.5	
	B	05/23/16			114						116 J		9.48		2.09										1.1 J	
	B	05/23/16 FD			94.5						59.8 J		7.66		2.06										1.6 J	
	B	08/17/16			75.1						68		9.77		3.32										1.29 J	
	B	08/17/16 FD			71.3						55.3		8.00		4.04										1.31 J	
	B	03/09/17			21.5						118		13.3		2.15		4.54								0.6 J	
	B	07/11/17																								
	B	09/19/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
BBH-MW-104	B	05/13/14			11.7	15.5 D					1.18	4.31 D		0.307		0.0034									240	246 D
	B	08/13/14			0.6						1.78		0.026		0.00131										83.1	
	B	11/03/14			1.1						1.29		0.277		0.00069										356	
	B	02/17/15			1.3						1.12		0.023		0.0035										204	
	B	11/16/15			0.5 J						24.6		0.211		0.00064 J										322	
	B	02/08/16			1.4						1.94		0.016 J		0.00097										128	
	B	05/24/16			0.5 J						0.56		0.005 J		0.001417 J										15.1 J	
	B	08/18/16			1.98						0.62		0.135		0.00222 J										5.48 J	
	B	03/09/17			0.39 J						0.77		0.008 J		0.00071		33.4								81.2	
	B	07/11/17																								
	B	09/19/17																								
BCT-MW-101	A	05/13/14										1.47		0.166		0.00162										
	A	05/13/14 FD										1.32		0.183		0.00171										
	A	08/14/14									1.16		0.037		0.00134											
	A	08/14/14 FD									0.97		0.042		0.00102											
	A	11/03/14									1.21		0.045		0.00111											
	A	11/03/14 FD									0.91		0.049		0.00106											
	A	02/19/15									0.90		0.051		0.00132											
	A	02/19/15 FD									0.67		0.054		0.00121											
BCT-MW-102	A	05/15/14										1.69		0.596		0.00174										
	A	08/14/14									0.43		0.011 J		0.00107											
	A	11/03/14									0.18		0.056		0.00034 J											
	A	02/19/15									0.80		0.167		0.00048 J											
	A	03/07/17																								
	A	07/11/17																								
	A	09/18/17																								
BCT-MW-103	A	05/15/14										0.86		0.419		0.00169										
	A	08/12/14									0.22		0.338		0.001											
	A	11/03/14									3.96		0.516		0.00548											
	A	02/19/15									5.43		1.13		0.00818											
	A	11/17/15																								
	A	02/08/16																								
	A	05/23/16																								
	A	08/17/16																								
	A	03/07/17			9.61						2.82		0.114		0.00479		0.97								1.2 J	
	A	07/11/17																								
	A	09/18/17																								

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		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
BCT-MW-104	A	05/13/14										2.01		0.48		0.00547										
	A	08/12/14									0.51		0.137		0.0018											
	A	11/03/14									0.72		0.084		0.00205											
	A	02/17/15									1.43		0.286		0.00601											
	A	11/17/15																								
	A	02/08/16																								
	A	05/24/16																								
	A	08/18/16																								
	A	03/08/17			6.58						1.75		0.098		0.00386		0.71								0.8 J	
	A	07/11/17																								
	A	09/18/17																								
BCT-MW-105	A	05/14/14										1.6		0.504		0.00171										
	A	08/13/14									2.16		0.116		0.00534											
	A	11/04/14									2.92		0.73		0.0255											
	A	02/17/15									2.43		0.403		0.00481											
	A	11/17/15																								
	A	02/08/16																								
	A	05/24/16																								
	A	08/18/16																								
	A	03/08/17		2.78							2.76		0.052		0.00618		1.94								1 J	
	A	07/11/17																								
	A	09/18/17																								
BCT-MW-106	A	05/14/14									1.42	4.83 D		1.45		0.00768										
	A	08/13/14									1.77		0.071		0.00234											
	A	11/04/14									13.3		2.22		0.00582											
	A	02/18/15									5.48		0.140		0.00402											
	A	11/17/15																								
	A	02/09/16																								
	A	05/23/16																								
	A	08/18/16																								

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K-C Worldwide Site Upland Area

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		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
	A	05/15/14										2.46		0.896		0.00374										
	A	08/14/14									2.16		0.277		0.0046											
	A	11/04/14									5.38		1.38		0.0043											
	A	02/19/15									4.39		1.55		0.00568											
	A	11/17/15																								
BCT-MW-107	A	02/09/16																								
	A	05/24/16																								
	A	08/18/16																								
	A	03/08/17			0.73						13.8		1.24		0.00277		1.94								1.7 J	
	A	07/11/17			0.73						13.8		1.24		0.00277		1.94								1.7 J	
	A	09/18/17																								
	A	05/15/14									0.89	5.09 D		3.03		0.0159										
	A	08/14/14									1.15		0.232		0.00773											
	A	11/04/14									1.61		1.29		0.00337											
	A	02/19/15									2.80		1.37		0.0041											
	A	11/16/15																								
BCT-MW-108	A	02/09/16																								
	A	05/24/16																								
	A	08/18/16																								
	A	03/07/17			9.41						5.6		0.469		0.00711		1.5								1.1 J	
	A	07/11/17																								
	A	09/18/17																								
	B	07/02/12		1 U		1 U		1 U		1.61		1 U		1 U		0.1 U		1.11		1 U		1 U		1 U		1.65
CMS-MW-1	B	07/03/12	1 U		1.26		1 U		1.59		1 U		1 U		0.1 U		7.18		1 U		1 U		1 U		2.73	
	B	08/29/12	1 U	1 DU	1.22	1.5 D	1 U	1 DU	1.42	1.66 D	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	1.54	1.9 D	1 U	1.01 D	1 U	1 DU	1 U	1 DU	1.09	1.87 DJ
	B	11/13/13																								
	B	02/21/14																								
	B	02/10/16																								
CMS-MW-1R	B	05/23/16																								
	B	08/17/16																								
	B	03/07/17			0.73						2.96		0.299		0.00179		1.07								0.8 J	
	B	07/11/17																								
	B	09/19/17																								
	B	11/07/13																								
	B	02/21/14																								
CMS-MW-2	B	02/08/16																								
	B	05/24/16																								
	B	08/17/16																								
	B	09/19/17																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
CN-MW-1	E	11/04/13				0.5 U						0.48 J		0.103	0.00179 J	0.00103 DJ		2.06								0.95
	E	02/25/14				0.2 J						0.63		0.124		0.00063 J		1.28								1.6
CN-MW-2	E	11/05/13				0.5 U						0.63		0.123	0.0019 J	0.001 DU		1.01								1.00
	E	02/27/14				2.6						1.08		0.328		0.00157		2.22								5.1
CN-MW-3	E	11/04/13				0.5 U						0.53 J		0.221	0.00332 J	0.00135 DJ		1.21								4.24
	E	02/25/14				0.3 J						0.39		0.113		0.00097 J		1.04								0.7
CN-MW-101	D	05/14/14				4.5					2.74	3.48 D		7.22												
	D	08/12/14			5.1						2.85		4.19													
	D	11/06/14			1.2						0.53		0.909													
	D	02/19/15			3.4						1.93		3.43													
	D	11/18/15			1.6																					
	D	02/09/16			0.8																					
	D	05/23/16			1.8																					
	D	08/17/16			1.98																					
CN-MW-102	D	05/14/14				0.9						1.58		0.34												
	D	08/12/14			1.4						1.2		0.135													
	D	11/06/14			0.6						0.73		0.153													
	D	02/19/15			0.9						1.20		0.278													
CN-MW-103	D	05/14/14				0.9						0.83		0.332												
	D	08/12/14			0.9						0.54		0.028													
	D	11/06/14			0.4 J						0.44		0.037													
	D	02/19/15			0.5 J						0.59		0.034													
	D	03/07/17																								
	D	07/11/17																								
	D	09/18/17																								
CN-MW-104	D	05/14/14				2.3					2.82	3.9 D		4.37												
	D	08/12/14			1.9						2.13		0.056													
	D	11/06/14			2.2						2.72		0.036													
	D	02/19/15			4.8						2.54		0.148													
DA-MW-1	B	09/13/12																								
DAST-MW-101	B	05/14/14										0.98				0.00437										
	B	08/13/14									0.47				0.00178											
	B	11/05/14									0.3				0.00189											
	B	02/19/15									0.77				0.00207											
	B	09/30/15																								
	B	10/08/15																								
	B	03/07/17																								
	B	07/11/17																								
	B	09/19/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
	B	05/14/14										2.48		2.98		0.0161										
	B	08/13/14									1.69		1.12		0.0101											
	B	11/03/14									1.86		3.86		0.0289											
	B	02/18/15									2.22		3.82		0.0442											
	B	11/17/15													0.0848											
GF11-MW-101	B	02/09/16													0.0527											
	B	05/24/16													0.0492											
	B	08/17/16													0.0189											
	B	03/08/17			5.76						6.85		10.8		0.0334		2.61								2	
	B	07/11/17																								
	B	09/19/17																								
	C	09/14/12																								
GF9-MW-1	C	11/07/13																								
	C	02/19/14																								
	C	11/07/13																								
	C	02/19/14																								
	C	05/23/16																								
GF9-MW-2	C	08/18/16																								
	C	03/07/17			11.5						42.5		2.24		0.281		4.61								0.8 J	
	C	07/11/17																								
	C	09/18/17																								
	C	11/06/13																								
	C	02/19/14																								
	C	02/08/16																								
	C	05/24/16																								
GF9-MW-3	C	08/18/16																								
	C	03/07/17			15.1						3.12		2.96		0.011		4.4								2.3	
	C	03/07/17 FD			20.4						5.83		6.44		0.0106		6								6.5	
	C	07/11/17																								
	C	09/18/17																								
	C	09/30/15																								
GF9-MW-4	C	07/11/17																								
	C	09/18/17																								
HB-MW-1	C	09/14/12	1 U	4.37	1 U	1 U	1 U	1 U	0.1 U	2.95	1 U	1 U	1 U	1 U												

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
HB-MW-1R	C	11/13/13																								
	C	02/25/14			76.1	79.7 D					133	143 D	1.03	12.6 D		0.408	29.4	37.0 D								14.0
	C	11/04/14			96.9						152		7.74		0.152		32.8								10.4	
	C	02/08/16																								
	C	05/24/16																								
	C	08/17/16																								
	C	03/07/17			15.6						32.2		2.2		0.0821		3								1.5 J	
	C	07/11/17																								
	C	09/18/17																								
HBV-MW-101	D	05/14/14																								
	D	08/13/14																								
	D	11/04/14																								
	D	02/18/15																								
	D	03/07/17																								
	D	07/11/17																								
	D	09/18/17																								
HW-MW-1	C	07/03/12	1.04	3.51 D	14.9	14.9 D	1 U	1 DU	2.96	6.86 D	3.37	8.28 D	1 U	6.81 D	0.1 U	0.1 DU	18	30.1 D	20	10.5 D	1 U	1 DU	1 U	1 DU	4.04	21.9 D
	C	08/28/12	1 U		25.9		1 U		5.8		1.47		1 U		0.1 U		7.84		4.71		1 U		1 U		2.07 J	
LP-MW-1	C	11/06/13				1.41 J					19	59.9 D	0.568	26.4 D	0.0921	0.0734 D	22.5	27.9 D								11.0
	C	02/24/14				0.68 J					12	34.1 DJ	0.24	10.7 D	0.0906	0.0627 D	19.3 J	27.8 D								6.4 J
	C	02/24/14 FD				0.38 J					13.2	30.9 D	0.26	10.6 D	0.0831	0.0895 D	30.5 J	25.3 D								4.0 J
	C	02/08/16																								
	C	05/23/16																								
	C	08/18/16																								
	C	08/31/16																								
	C	03/08/17			1.62						31.6		2.02		0.0129		2.82								1.1 J	
	C	07/10/17	11.4		2.88		0.012 J		1.02		24.4		4.44		0.0325		6.6		0.2 J		0.007 J		0.011 J		2.3	
	C	09/18/17																								
LP-MW-2	C	11/05/13				1.05						4.5		1.810	0.111 J	0.132 DJ		0.20 U								3.36
	C	02/24/14			16.2	15.6 D					22	23.6 D	11.1	15.3 D	0.248	0.456 D		8.10								19.7
	C	02/08/16																								
	C	05/24/16																								
	C	08/17/16																								
	C	03/08/17			15.3						5.74		1.14		0.0177		6.45								28.7	
	C	07/10/17	29.6		40.5		0.020 U		2.71		2.28		0.96		0.00855		17.8		1.0 U		0.007 J		0.020 U		16.4	
	C	09/18/17																								
LP-MW-3	C	07/10/17	0.081		0.33 J		0.02 U		0.65		0.52		0.032		0.00162		0.92		1.0 U		0.020 U		0.020 U		0.5 J	
	C	09/18/17																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL		180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
LP-MW-4	C	07/10/17		1.0 U		2.00		0.004 J		0.67		0.36		0.092		0.00335		1.38		1.0 U		0.020 U		0.020 U		0.89	
	C	09/18/17																									
LP-MW-5	C	07/10/17		0.038 J		0.26 J		0.02 U		0.56		0.33		0.157		0.02 U		1.04		1.0 U		0.020 U		0.020 U		0.7 J	
	C	07/10/17	FD	0.045 J		0.28 J		0.02 U		0.49		0.22		0.094		0.00153		1.13		1.0 U		0.020 U		0.020 U		27.9	
	C	09/18/17																									
LP-MW-6	C	07/10/17		1.0 U		0.79		0.02 U		1.39		0.16		0.016 J		0.02 U		0.82		1.0 U		0.020 U		0.020 U		0.42 J	
	C	09/18/17																									
LP-MW-7	C	07/10/17		1.0 U		0.19 J		0.02 U		1.66		0.38		0.059		0.00248		1.82		1.0 U		0.020 U		0.020 U		0.30 J	
	C	09/18/17																									
MW-1	A	02/17/12												5 U													
	A	06/06/12		1 U		0.95		0.096		0.34		2.56		0.097		0.1 U		2.65		1 U		0.009 J		0.02 U		8.84	
	A	08/27/12		1.00 U		0.68 J		0.228		4.32		4.35		0.088		0.1 U		23		1.0 U		0.031 J		0.050 U		21.1	
	A	11/07/13					1.26					3.030	4.510 D		2.910		0.00221		6.76							20.5
	A	02/23/14					1.40					2.70	3.43 D		0.30		0.00152		1.42							10.8
	A	11/18/15										2.650															
	A	02/09/16										1.85															
	A	05/24/16										1.85															
	A	08/17/16										2.81															
MW-2	A	02/17/12												1 U													
	A	06/06/12		0.69 J	0.57 DJ	1.35	1.33 D	0.077	0.035 D	1.13	0.38 D	1.36	0.718 D	6.42	0.198 D	0.1 U	0.1 DU	12.3	13.1 D	1 U	1 DU	0.013 J	0.02 DU	0.02 U	0.02 DU	2.31	1.7 D
	A	08/27/12		1.00 U	1.00 DU	1.57	1.44 D	0.022 J	0.049 D	0.33 J	0.76 D	1.020	1.800 D	0.280	4.490 D	0.1 U	0.1 DU	6.80	6.70 D	1.0 U	1.0 DU	0.050 U	0.005 DJ	0.050 U	0.022 DU	1.07 J	1.24 D
	A	11/14/13				1.10						1.150		0.352			0.00127	2.60								2.04	
	A	02/23/14					1.30						2.11		2.84		0.00165		1.68								2.0
	A	11/18/15										1.620															
	A	02/09/16										2.76															
	A	05/24/16										0.854															
	A	08/17/16										1.23															
	A	03/07/17				1.3						1.2		0.511		0.00123		1.07								3.58	
	A	07/11/17																									
	A	09/18/17																									
MW-5	D	02/17/12				4.68		1 U		1.92		7.09		1 U		0.1 U		3.48		15.3		1 U				1.61	
	D	06/05/12		1 U		3.92		1 U		1.58		5.21		1 U		0.1 U		3.38		13.8 J		1 U		1 U		1 U	
	D	08/31/12		1 U		6.67		1 U		1.42		15.9		1 U		0.1 U		4.87		25.6		1 U		1 U		5.67	
	D	11/06/13					0.22 J						0.155		0.032	0.0014 J	0.00108 DJ		0.72 J								0.27 J
	D	02/25/14					1.1						0.344		0.05		0.00045 J		3.76								2.9

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		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
MW-6	C	02/17/12			5.2		1 U		4.28		4.14		1 U		0.1 U		5.95		12.4		1 U				1.49	
	C	06/07/12	1 U	1 DU	6.38	5.88 D	1 U	1 DU	5.26	6.62 D	3.29	3.85 D	1 U	1 DU	0.1 U	0.1 DU	7.81	7.82 D	16.3	14.6 D	1 U	1 DU	1 U	1 DU	13	3.96 D
	C	08/29/12	1 U	1 DU	7.8	6.07 D	1 U	1 DU	5.32	6.95 D	5.29	4.85 D	1 U	1.41 D	0.1 U	0.1 DU	10.5	9.59 D	24.9	17 D	1 U	1 DU	1 U	1 DU	3.16	12.9 D
	C	11/06/13				0.90						1.450		2.170	0.00272 J	0.00983 DJ		3.61								16.8
	C	02/23/14				1.10						1.97 J		2.82 J		0.00741 J		3.36 J								23.3 J
	C	02/23/14 FD				1.00						1.48 J		1.83 J		0.00448 J		1.86 J								18.6 J
	C	02/10/16																								
	C	05/24/16																								
	C	08/17/16																								
	C	03/08/17			0.75						0.16		0.015 J		0.00033 J		1.82								0.47 J	
	C	07/10/17	1.0 U		0.44 J		0.003 J		1.51		0.23		0.015 J		0.00203		1.26		1.0 U		0.020 U		0.020 U		0.34 J	
	C	09/18/17																								
NRP-MW-2	D	06/05/12	1 U		1 U		1 U		1 U		1 U		1 U		0.1 U		2.12		1.11 J		1 U		1 U		4.44	
	D	08/31/12	1 U		2.18		1 U		1 U		1 U		1 U		0.1 U		4.08		8.26		1 U		1 U		2.45 J	
	D	11/06/13				1.44 J						0.68		0.025 J	0.00152 J	0.0014 DJ		3.22								1.34
	D	02/25/14				2.0						0.68		0.049 J		0.00109		5.36								2.6
	D	05/13/14																								
	D	08/12/14																								
	D	11/05/14																								
	D	02/17/15																								
	D	02/22/16																								
	D	05/23/16																								
	D	08/17/16																								
NRP-MW-3	D	06/05/12	1 U		2.11		1 U		5.48		1.84		1 U		0.1 U		2.31		4.49 J		1 U		1 U		3.57	
	D	08/30/12	1 U		2.6		1 U		4.54		3.55		1 U		0.1 U		2.18		4.42		1 U		1 U		2.78	
	D	11/05/13				4.60					0.63 J	12.0 D		3.36	0.00227 J	0.0271 DJ	1.09	14.4 D								21.0
	D	02/25/14				3.8					0.53	14.9 D		4.880	0.00253 J	0.0259 D	1.19	19.4 D								33.0
NRP-MW-4	D	07/03/12	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.09	9.2 D	1 U	1 DU	0.1 U	0.1 DU	2.69	3.64 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	3.54	6.16 D
	D	08/30/12	1 U	1 DU	1 U	1 DUJ	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	3.18	2.67 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.58	4.53 DJ
NRP-MW-5	D	07/03/12	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	3.65	3.28 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	2.77	2.34 D
	D	08/30/12	1 U	1 DU	1 U	1 DUJ	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	4.15	3.94 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	2.7 DJ
NRS-MW-101	D	05/13/14																								
	D	08/12/14																								
	D	11/04/14																								
	D	02/17/15																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
NRS-MW-102	D	05/13/14																								
	D	08/12/14																								
	D	11/04/14																								
	D	02/17/15																								
	D	03/08/17			0.04 J						0.13		0.007 J		0.00014 J		3.14								0.8	
	D	07/11/17																								
	D	09/18/17																								
NRU-MW-101	D	05/13/14																								
	D	08/12/14																								
	D	11/05/14																								
	D	02/17/15																								
NRU-MW-102	D	05/13/14																								
	D	08/12/14																								
	D	11/05/14																								
	D	02/17/15																								
	D	03/08/17			3.55						2.32		0.698		0.00348		1.3								2.2	
	D	07/11/17																								
	D	09/18/17																								
OMS-MW-1	A	06/06/12	1.1		0.76		0.079		0.35		1.07		0.056		0.1 U		6.75		0.8 J		0.005 J		0.026		3.99	
	A	08/28/12	0.51 J		0.64		0.009 J		3.11		0.557		0.058 J		0.1 U		18.6		1.0 U		0.006 J		0.022 U		6.31	
	A	11/07/13				0.75						1.110		0.119		0.00221		5.38 J								2.31
	A	02/24/14				1.30					0.428	3.96 D		0.15		0.00337		4.87								11.2
	A	03/07/17			1.45						3.26		0.024		0.00504		2.96								3.35	
	A	07/11/17																								
	A	09/18/17																								
OMS-MW-2	A	09/30/15			1.44						1.420		0.160		0.00255		4.74								6.76	
OPS-MW-1	B	11/07/13																								
	B	02/24/14																								
	B	02/08/16																								
	B	05/23/16																								
	B	08/17/16																								
	B	03/07/17			17.3						29.5		121		0.111		10.5								10	
	B	07/11/17																								
	B	09/19/17																								
PM-MW-1	B	11/06/13				3.4						0.98		0.735	0.0164	0.048 D		4.81								3.2 J
	B	02/24/14				3.1					1.14	3.70 D	1.13	26.0 D	0.059	0.089 D	36.5	39.6 D							150 J	268 D
	B	09/19/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
Groundwater PCL			180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
PM-MW-2	B	11/15/13				3.9					0.69	4.13 D		1.240		0.0138		3.78								6.8
	B	02/25/14				2.3					1.16	4.96 D		1.260		0.0126		4.05								4.5
PM-MW-3	B	11/13/13				3.6					14.1	12.9 D	14.8	12.2 D	0.25	0.176 D		4.11								18.7
	B	02/25/14				4.5					3.45	4.90 D	3.80	8.420 D	0.0231	0.108 D		3.90								2.7
	B	09/19/17																								
PM-MW-4	B	11/18/13				0.85						0.85		0.143		0.00378		2.28								0.72
	B	02/23/14				3.2					4	8.92 D		0.676	0.013	0.044 D		3.06								1.9
	B	03/08/17			86.1						68.6		5.28		0.286		6.83								6.3	
	B	03/08/17 FD			88.7						78.5		4.69		0.317		6.2								4.9	
	B	07/11/17																								
	B	09/19/17																								
PM-MW-5	B	11/06/13			8.63	10.6 D					1.06 J	5.80 D		4.33	0.00906	0.0274 D	7.90	13.2 D								9.47 J
	B	02/25/14			9	10.8 D					2.81	7.88 D		4.810		0.0378	8.13	9.15 D								2.7
	B	09/30/15																								
	B	03/09/17			15						21.4		4.26		0.0706		2.47								5.8	
	B	07/11/17																								
	B	09/19/17																								
PM-MW-6	B	11/05/13		3.27						1.59			0.020 U	0.00597 J	0.00425 DJ		0.77	9.40 D								1.42
	B	02/23/14		0.4						1.18			0.014		0.00197			5.34								0.7
	B	03/09/17	0.54						0.67			0.009 J		0.00068			3.71							1 J		
	B	07/11/17																								
	B	09/19/17																								
PM-MW-7	B	11/07/13		1.73						1.060			0.054		0.00022 J		10.4	10.5 D								6.43
	B	11/07/13 FD		1.94						1.070			0.056		0.00231 J			10.5								6.34
	B	02/24/14		0.80						1.52			0.12		0.00143			6.78								6.1
	B	02/22/16																								
	B	05/23/16																								
	B	08/17/16																								
	B	03/07/17	0.39 J						1.06			0.028		0.0009			18.5							3.61		
	B	07/11/17																								
	B	09/18/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
PM-MW-8	B	11/05/13				1.77						1.080		0.174	0.0041 J	0.00469 DJ		3.34								2.72
	B	02/24/14				1.10						2.42		0.45		0.00344		7.42								2.3
	B	11/18/15			0.70					2.370			0.075		0.00413										1.88	
	B	02/10/16			0.66					1.80			0.057		0.00361										0.64	
	B	05/23/16			0.51					1.17			0.023 J		0.00135 J										1.99	
	B	08/18/16			0.66					1.50			0.088		0.00228 J										3.18 J	
	B	03/07/17			1.09					1.85			0.087		0.00203		3.59								1.08	
	B	03/07/17 FD			1.11					1.79			0.036		0.00234		3.14								0.87	
	B	07/11/17																								
	B	09/18/17																								
RCD-MW-101	B	05/12/14				0.68				2.07	2.6 D					0.00162	92.4	93.9 D								
	B	08/11/14			0.99					4.52					0.0027		159									
	B	11/04/14			1.1					1.55					0.00083		85.4									
	B	02/18/15			1.11					1.080					0.00079		19									
	B	11/17/15								2.350							57.5									
	B	02/08/16								0.754							36.7									
	B	05/23/16								1.18							20.3									
	B	08/18/16								1.76							55.2									
	B	03/08/17		1.15						0.82		0.011 J			0.00044 J		6.86								1.54	
	B	07/11/17																								
	B	09/18/17																								
REC1-MW-1	A	09/13/12																								
	A	11/14/13																								
	A	02/20/14																								
REC1-MW-2	A	09/13/12																								
	A	11/14/13																								
	A	02/20/14																								
REC1-MW-3	A	09/13/12																								
	A	11/14/13																								
	A	02/20/14																								
REC1-MW-4	A	09/13/12																								
	A	11/18/13				2.74				0.38	4.18 D			0.247		0.0108		5.82								0.96
	A	02/25/14				2.9					0.37			0.164		0.00038 J		2.02								4.0
REC1-MW-5	A	09/13/12																								
	A	11/06/13		3.92	10.3 D					0.27 J	4.23 D			1.76	0.00118 J	0.00636 DJ		2.06								4.99
	A	02/23/14			4.8					3.28	4.63 D			0.194		0.00301		3.65								1.9
	A	07/11/17																								
REC1-MW-6	A	09/13/12																								
	A	11/14/13				2.5					0.32			0.812		0.00305		0.54								1.3
	A	02/20/14																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
REC1-MW-7	A	09/13/12																								
	A	11/14/13																								
	A	02/20/14																								
REC1-MW-8	A	09/13/12																								
	A	11/07/13				1.82						2.030		4.940		0.0053		2.02								8.90
	A	02/23/14				0.74						0.899		2.12		0.00161		0.50								2.2
	A	09/30/15																								
REC1-MW-9	A	09/13/12																								
	A	11/08/13				1.87						1.250		2.080		0.00526		3.17								7.87
	A	02/24/14				1.90						1.30		1.24		0.00253		1.79								8.1
REC1-MW-10	A	11/14/13																								
	A	02/20/14																								
REC1-MW-11	A	11/14/13																								
	A	02/20/14																								
REC1-MW-12	A	11/14/13																								
	A	02/20/14																								
REC1-MW-14	A	11/14/13				0.2 J						0.21		0.506		0.00094 J		0.57								0.8
	A	02/20/14			1.3	6.4 D						0.69		0.502		0.001 U		0.75								1.2
REC1-MW-15	A	11/18/13																								
	A	02/25/14																								
REC3-MW-1	B	06/07/12	1.2		2.22		0.776		0.09 J		0.568		0.022		0.1 U		4.95		1 U		0.02 U		0.02 U		2.4	
	B	08/29/12	1.00 U		1.91		0.286		0.20 J		0.300		0.050 U		0.1 U		83.3		1.0 U		0.050 U		0.050 U		2.07	
REC3-MW-1R	B	11/14/13			5.8	6.6 D						2.00		0.361		0.008		5.52								2.3
	B	02/24/14				2.30					3.3	3.28 D		0.28		0.00541	46.9	57.6 D								4.6
	B	11/17/15			1.59						4.95		0.018 J		0.0035										1.53	
	B	02/09/16			4.7						3.06		0.018 J		0.00697										1.1	
	B	05/23/16			1.79						4.26		0.014 J		0.00315										1.57	
	B	08/18/16			1.34						3.41		0.035		0.00335										2.48 J	
	B	03/07/17			2.08						1.83		0.008 J		0.00217		43.5								0.68	
	B	07/11/17																								
	B	09/18/17																								
REC5-MW-1	B	06/08/12	3.96	9.02 D	201	218 D	1 U	5.22 D	52	83.8 D	44.9 J	226 D	37.3 J	234 D	0.12 J	0.57 D	3.37	14.8 D	1 U	1.51 D	1 U	1 DU	1 U	1 DU	42.3 J	274 D
	B	06/08/12 FD	8.95	9.86 D	235	236 D	3.87	5.26 D	72.7	84.8 D	167 J	225 D	174 J	242 D	0.41 J	0.55 D	10.8	14.7 D	1.11	1.68 D	1 U	1 DU	1 U	1 DU	203 J	274 D
	B	08/29/12	3.65 J	5.94 D	202	213 D	1 U	1 DU	19.6	26.7 D	12.8 J	62.2 D	12.2 J	88.7 D	0.1 U	0.16 D	2.5	4.69 D	2.62	1.58 D	1 U	1 DU	1 U	1 DU	7.73 J	42.6 DJ
	B	08/29/12 FD	2.3 J	6.02 D	173	204 D	1 U	1 DU	18.5	26.3 D	4.29 J	63 D	2.08 J	88.5 D	0.1 U	0.17 D	2.49	4.05 D	2.23	1.35 D	1 U	1 DU	1 U	1 DU	4.49 J	66.8 DJ
REC5-MW-1R	B	11/13/13			28.9	32.6 D					0.68	6.88 D		7.130	0.00344	0.0289 D		2.84								9.9
	B	02/27/14			22.3	20.9 D					1.13	3.50 D		1.55		0.00442		1.61								3.1
	B	03/09/17			9.13						13.1		0.435		0.0117		6.55								4	
	B	09/19/17																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
REC6-MW-2	D	06/05/12	1 U		3.44		1 U		4.03		2.56		1 U		0.1 U		4.08		4.54 J		1 U		1 U		1 U	
	D	08/30/12	1 U		3.89		1 U		3.47		6.52		1 U		0.1 U		3.58		5.07		1 U		1 U		4.3	
	D	11/07/13			4.63	5.91 D					0.24	0.45 D		0.137		0.00296	1.79	3.33 D								1.24 J
	D	02/24/14				2.8						0.40		0.072		0.00021 J		2.00								1.5
	D	02/22/16																								
	D	05/23/16																								
	D	08/17/16																								
	D	03/08/17			1.63						0.2		0.076		0.00045 J		0.9								7.9	
	D	07/10/17	1.0 U		1.56		0.003 J		1.05		0.2		0.04		0.00202		1.44		1.0 U		0.020 U		0.020 U		0.36 J	
	D	09/18/17																								
REC7-MW-1	E	06/05/12	1 U		2.52		1 U		1.74		4.41		1 U		0.1 U		4.55		8.59 J		1 U		1 U		17	
	E	08/30/12	1 U		1.12		1 U		1.94		2.49		1 U		0.1 U		5.13		3.77		1 U		1 U		9.1	
	E	11/04/13				0.56 J						0.88		0.014 J	0.00181 J	0.001 DU		3.87								1.00
	E	02/25/14				0.3 J						0.73		0.030 J		0.00037 J		2.00								3.8
	E	02/22/16																								
	E	05/23/16																								
	E	08/17/16																								
REC7-MW-2	D	06/05/12	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.02	1.06 D	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.97	2.62 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU
	D	08/30/12	1 U	1 DU	1 U	1 DUJ	1 U	1 DU	1 U	1.11 D	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.75	2.71 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.63	1.82 DJ
	D	11/06/13				0.69 J						0.87		0.008 J		0.00156		6.35								0.77 J
	D	02/25/14				0.3 J						0.86		0.021 J		0.00265		2.81								0.4 J
	D	02/22/16																								
	D	05/23/16																								
	D	08/17/16																								
	D	03/08/17			0.92						0.45		0.049		0.0017		1.74								0.7 J	
	D	07/11/17																								
	D	09/18/17																								
REC7-MW-3	A	06/06/12	0.93 J		1.9		0.094		0.31		1.48		0.045		0.1 U		0.73		1 U		0.013 J		0.02 U		2.58	
	A	08/28/12	3.88		1.84		0.129		0.73		1.920		0.060 J		0.1 U		19.4		1.0 U		0.016 J		0.022 U		3.85	
	A	11/06/13				1.84						1.610		0.338		0.0245		3.11 J								5.38
	A	02/24/14				1.60					1.41	6.87 D		0.45	0.0127	0.0313 D		1.06								4.1
	A	02/22/16																								
	A	05/23/16																								
	A	08/17/16																								
	A	03/07/17			1.9						2.52		0.648		0.0225		1.26								4.22	
	A	07/11/17																								
	A	09/18/17																								

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
REC7-MW-4	A	06/06/12	1.8	2.06 D	2.64	2.66 D	0.118	0.105 D	0.15 J	0.08 DJ	0.311	0.212 D	1.49	0.421 D	0.1 U	0.1 DU	6.22	6.25 D	1 U	1 DU	0.03	0.004 DJ	0.02 U	0.02 DU	8.3	7.58 D
	A	08/28/12	1.00 U	1.16 D	1.57	1.54 D	0.422	0.432 D	0.19 J	1.12 D	0.536	1.360 D	0.086	0.597 D	0.1 U	0.1 DU	40	39.3 D	1.0 U	1.0 DU	0.022 U	0.035 D	0.022 U	0.025 DU	19.9	19.8 D
	A	11/08/13				1.24						1.830		2.760		0.00877		7.56								17.6
	A	02/23/14				0.96						1.22		0.95		0.00322		2.65								14.0
	A	05/23/16																								
	A	08/17/16																								
	A	03/07/17			0.79						0.67		0.211		0.00172		1.93								4.12	
	A	07/11/17																								
	A	09/18/17																								
SHB-MW-2	C	11/07/13				3.86						0.161		0.342		0.00122		0.61 J								1.07
	C	02/23/14				3.80						0.628		0.06		0.00079 J		1.36								3.1
	C	02/22/16																								
	C	05/23/16																								
	C	08/17/16																								
	C	03/08/17			1.46						3.34		0.441		0.00822		1.53								2.6	
	C	07/11/17																								
	C	09/18/17																								
SHB-MW-101	C	05/12/14									3.5	16.1 D			0.0637	0.0832 D										
	C	08/11/14									1.19				0.00253											
	C	11/05/14									1.49				0.0253											
	C	02/18/15									0.51				0.00528											
	C	11/18/15									28.6				0.0852											
	C	02/09/16									0.97				0.00554											
	C	05/23/16									0.56				0.00224											
	C	08/17/16									0.73				0.0016 J											
	C	03/08/17		10.6							4.57		0.824		0.00996		4.22								8.8	
	C	07/11/17																								
	C	09/18/17																								
SHB-MW-102	C	05/12/14										1.6				0.00264										
	C	08/11/14									0.65				0.00302											
	C	11/05/14									0.67				0.0018											
	C	02/18/15									0.70				0.00315											
	C	07/11/17																								
TM-MW-1	D	11/06/13		0.59 J								1.15		0.790		0.00172		2.73								3.60 J
	D	02/26/14		0.4								2.04		0.579		0.00148		1.81								1.3

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
TM-MW-2	D	11/05/13				1.35 J						1.86		0.525	0.0013 J	0.00192 DJ		4.40								3.17
	D	02/26/14				2.7					0.63	3.54 D		0.550		0.00476		2.97								1.4
	D	02/26/14 FD				2.7					0.55	3.43 D		0.576				3.17								1.1
	D	05/23/16																								
	D	08/17/16																								
	D	03/08/17			13.6						5.04		6.59		0.00331		39.6								3.4	
	D	07/11/17																								
	D	09/18/17																								
TM-MW-3	D	11/05/13			12.7	14.7 D					1.26	3.79 D		0.171	0.00875 J	0.0202 DJ		3.84								1.99
	D	02/25/14			7.7	6.5 D					10.4	24.0 D		0.427		0.0868		6.64								1.1
	D	02/08/16																								
	D	05/23/16																								
	D	08/17/16																								
	D	03/07/17			3.83						3.85		0.217		0.00673		2.49								1.6 J	
	D	07/11/17																								
	D	09/18/17																								
TM-MW-4	D	11/06/13			7.54	8.66 D					0.44	2.44 D		0.042		0.00434	2.46	4.18 D								2.67 J
	D	02/25/14				1.6					57.6	88.1 D		1.63		0.0245	16.9	16.6 D								1.5
	D	02/10/16																								
	D	05/23/16																								
	D	08/18/16																								
	D	03/08/17			0.74						27		0.866		0.0022		4.69								0.4 J	
	D	07/11/17																								
	D	09/18/17																								
TM-MW-5	D	11/06/13				0.56 J						0.96		1.20		0.00145		1.52								2.61 J
	D	02/26/14				0.4					0.32	4.91 D		0.917		1.0 U		1.02								1.2
	D	03/08/17			0.63						1.31		0.378		0.00198		1.01								0.7 J	
	D	07/11/17																								
	D	09/18/17																								
TM-MW-6	D	11/07/13				0.50 U						0.58		0.102		0.00086 J		2.39								1.24 J
	D	02/24/14				0.3 J						0.96		0.100		0.00124		1.13								1.9
	D	03/08/17			0.28 J						0.16		0.035		0.00012 J		0.39								1.7 J	
	D	07/11/17																								
	D	09/18/17																								
UG-MW-1	D	07/03/12	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.05	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	5.04	4.79 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.75	2.42 D
	D	08/30/12	1 U	1 DU	1	1.07 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	3.96	3.65 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.26	3.36 DJ
	D	11/05/13																								
	D	02/25/14				1.0						0.67		0.075		0.00056 J		4.64								0.9
UG-MW-2	B	07/03/12	1 U		1 U		1 U		1 U		1 U		1 U		0.1 U		2.31		1 U		1 U		1 U		5.03	
	B	08/29/12	1 U		1 U		1 U		1 U		1 U		1 U		0.1 U		2.54		1 U		1 U		1 U		1.94	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
UG-MW-2R	B	11/07/13																								
	B	02/24/14				0.4 J						1.38		0.043				1.22								0.7
	B	03/07/17			0.5 U					0.16			0.014 J		0.00014 J		0.84								1 J	
	B	07/11/17																								
	B	09/19/17																								
UST29-MW-101	D	05/14/14																								
	D	08/13/14																								
	D	11/05/14																								
	D	02/18/15																								
	D	11/18/15																								
	D	02/10/16																								
	D	05/24/16																								
	D	08/18/16																								
	D	03/08/17			93					185			5.83		0.199		12.2								5	
	D	07/11/17																								
	D	09/18/17																								
UST29-MW-102	D	05/14/14																								
	D	08/13/14																								
	D	11/06/14																								
	D	02/18/15																								
	D	07/11/17																								
UST29-MW-103	D	05/14/14																								
	D	08/13/14																								
	D	11/06/14																								
	D	02/18/15																								
	D	05/23/16																								
	D	08/18/16																								
	D	03/07/17			4.23					10.4			0.047		0.0123		5.79								0.8 J	
	D	07/11/17																								
	D	09/18/17																								
UST68-MW-1	B	06/06/12																								
	B	08/27/12																								
UST68-MW-2	A	06/06/12																								
	A	08/27/12																								
UST68-MW-4	A	06/06/12																								
	A	08/27/12																								
UST68-MW-5	A	06/06/12																								
	A	08/28/12																								
	A	09/18/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
UST69-MW-1	D	06/08/12											1 U	1 DU												
	D	08/28/12											1 U	1 DU												
	B	06/07/12	2.27		5.23		0.135		0.18 J		1.09		0.125		0.1 U		2.01		1 U		0.02 U		0.02 U		116	
	B	08/29/12	1.21		1.11 J		0.284		110		0.741		0.050 U		0.1 U		308		1.0 U		0.050 U		0.050 U		12.2	
	B	11/07/13				0.74					4.56	3.390 D		0.041		0.00127	110	55.5 D								10.2
	B	02/23/14				0.87					4.09	4.81 D		0.05		0.00111	20.8	21.3 D								14.5
	B	05/12/14				1.2						7.11						19.2								12.3
	B	08/11/14			0.76						2.66						19.1								51.5	
	B	11/04/14			1.5						11.9						35.4								8.9	
UST70-MW-2	B	02/19/15			1.25						7.64						6.85								31.3	
	B	11/17/15									9.19						24.6									
	B	02/08/16									6.98						5.00									
	B	05/24/16									5.16						5.43									
	B	08/18/16									6.19						12.6									
	B	03/08/17			1.45						6.03		0.036		0.00154		5.25								29.5	
	B	07/11/17																								
	B	09/18/17																								
UST70-MW-101	B	05/12/14		2.2				2.59										4.23								3.7
	B	08/11/14		2.4				1.21										4.8								6.9
	B	11/04/14		1.9				6.47										3.92								7.3
	B	02/18/15		1.1				3.05										3.40								4.1
	B	11/17/15						7.06																		
	B	02/08/16						3.69																		
	B	05/23/16						3.05																		
	B	08/17/16						2.52																		
UST70-MW-102	B	05/12/14		2.4				0.82										3.21								1.6
	B	08/11/14		2.8				9.35										3.44								6.5
	B	11/04/14		3.6				0.59										2.24								0.9
	B	02/18/15		3.1				0.67										1.92								0.9
	B	11/17/15						1.19																		
	B	02/08/16						0.57																		
	B	05/24/16						0.44																		
	B	08/17/16						0.69																		
	B	03/07/17		2.36				0.5					0.027		0.00017 J			1.56								1 J	
	B	07/11/17																								
	B	09/18/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Antimony - Dissolved (ug/L)	Antimony - Total (ug/L)	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL	180	180	5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
	B	05/12/14										8.73														2.6
	B	08/12/14									0.579														2.8	
	B	11/05/14									1.04														1.7	
	B	02/17/15									0.89														3.0	
	B	11/17/15									3.11				0.00395											
UST71-MW-101	B	02/09/16									0.73				0.00144											
	B	05/23/16									1.27				0.0023											
	B	08/17/16									0.33				0.00187 J											
	B	03/09/17			6.19						0.7		0.117		0.00209		1.88								1.3 J	
	B	07/11/17																								
	B	09/18/17																								
	B	05/12/14										20.2														12
	B	08/11/14									4.99														4.7	
	B	11/04/14									3.9														2.4	
	B	02/17/15									6.86														4.8	
UST71-MW-102	B	11/17/15									8.65				0.0416											
	B	02/10/16									5.91				0.0135											
	B	05/23/16													0.0555											
	B	05/24/16									21.4															
	B	08/18/16																								
	B	05/13/14									9.76	56.9 D													18.4	97.7 D
	B	08/12/14									31.9														39.6	
	B	11/05/14									47.4														25.5	
	B	02/18/15									6.31														7.7	
	B	11/18/15									66.5				0.0386											
UST71-MW-103	B	02/09/16									43.2				0.119											
	B	05/23/16																								
	B	05/24/16									32.4				0.00946											
	B	08/18/16									10				0.0217											
	B	03/08/17			17.5						29.9		20.9		0.0621		8.9								10.8	
	B	07/11/17																								
	B	09/18/17																								
	B	05/12/14										1.65														1.4
	B	08/11/14									1.06														3.5	
	B	08/11/14 FD									1.12														2.5	
	B	11/05/14									3.23														2.1	
	B	11/05/14 FD									3.16														1.8	
UST71-MW-104	B	02/18/15									6.2														1.9	
	B	02/18/15 FD									7.62														2.4	
	B	03/09/17			14.7						4.97		1.25		0.0204		2.28								1.4 J	
	B	07/11/17																								
	B	09/19/17																								

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
AP-MW-1	B	07/03/12	0.4	-90	7.2	661	14.5	
	B	07/03/12 FD						
	B	08/31/12	4.8	-94	7.2	541	15.9	3
AP-MW-1R	B	11/13/13	1.8	-211	7.5	691	13.4	4
	B	02/23/14	0.7	-177	7.4	1792	10.1	1
	B	03/07/17	0.08	31.9	8.03	980	9.8	4.83
	B	07/11/17	0.02	-26.8	10.11	484.9	14.5	24.9
	B	09/18/17	0.16	-40	8.27	554	15.0	
BA6-MW-101	B	05/13/14	0.11	-60.3	6.81	2145	13.3	4.15
	B	08/11/14	0.32	-3.7	6.75	2357	19.1	2.98
	B	11/05/14	0.05	-54.5	7.03	1767	17.7	13.2
	B	02/18/15	0.09	9.0	7.07	1570	12.6	7.07
	B	03/09/17	0.33	-34.6	7.01	879	10.3	5.77
	B	07/11/17	0.18	-53.6	7.05	1335	17.5	12.9
	B	09/18/17	0.90	3	6.92	970	18.2	
BA-MW-1	B	11/04/13	0.5	-13	6.6	2425	15.9	1
	B	02/27/14	0.4	42	6.9	1408	12.1	41
BA-MW-2	B	11/15/13	0.2	-138	7.3	2986	15.0	1
	B	02/25/14	0.3	46	7.5	2167	11.2	5
	B	09/19/17	0.19	-144	8.82	708	15.4	
BA-MW-3	B	11/05/13	0.7	-137	7.0	2959	16.5	4
	B	02/25/14	1.1	92	7.2	2231	12.0	14
	B	03/09/17	5.26	22.4	7.82	982	8.9	>1000
	B	07/11/17	0.27	44	7.22	1276	15.2	49.7
	B	09/19/17	0.46	-21	6.95	1345	15.6	
BA-MW-4	B	11/05/13	0.4	-268	7.0	2432	15.7	2
	B	02/25/14	1.9	101	7.4	1774	11.3	14
BA-MW-5	B	11/05/13	0.4	-123	7.0	5252	16.2	1
	B	02/24/14	0.1	-90	6.7	3167	11.2	3
	B	03/09/17	0.27	45.3	7.31	821	10.3	13.1
	B	07/11/17	0.08	-16.8	6.82	3056	16	2.75
	B	09/18/17	0.06	-55	6.76	2448	17.5	
BA-MW-7	B	11/04/13	0.32	52	7.2	43031	11.7	1
	B	02/23/14	0.3	44	7.2	21113	12.0	7

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Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
BBH-MW-101	B	05/12/14	0.23	-40.0	7.53	1713	14.8	11.4
	B	08/12/14	1.16	203.5	7.20	2150	15.5	4.02
	B	11/03/14	1.89	0.5	12.08	1698	15.9	1.14
	B	02/18/15	1.98	-103.1	9.45	1126	12.1	17.8
	B	11/16/15	5.92	104.11	9.05	624.2	13.9	34.2
	B	02/09/16	3.96	-13.3	10.51	690	11.9	65.3
	B	05/23/16	2.58	72.1	7.99	1277	13.6	49.8
	B	08/18/16	7.5	-21.7	7.93	1418	18.2	19.1
	B	03/08/17	7.84	43	9.73	376.8	9.84	58.9
	B	07/11/17	1.05	8.2	7.42	1120	15.4	23.6
	B	09/19/17	1.13	-25	7.51	1000	15.3	
BBH-MW-102	B	05/12/14	0.11	-79.9	5.84	3013	13.9	10.2
	B	08/12/14	206	204.3	5.52	2754	16.1	38.7
	B	11/03/14	0.09	26.7	6.05	3448	15.8	7.24
	B	02/17/15	0.43	-33.4	6.06	2909	11.4	29.8
	B	11/16/15	1.97	128.7	6.25	3007	14.1	9.31
	B	02/09/16	0.37	-35.3	11.07	2178	11	38
	B	05/23/16	0.17	-66.5	6.34	1818	13.1	112
	B	08/18/16	0.19	41.3	6.68	2000	17.5	13.9
	B	03/08/17	0.81	-1.6	6.43	2198	8.7	95.3
	B	07/11/17	0.21	17.8	6.37	1579	15.1	>1000
	B	09/19/17	0.64	37	5.86	1250	16.1	
BBH-MW-103	B	05/13/14	0.32	20.9	6.88	2663	12.7	3.59
	B	08/13/14	0.52	-23.2	6.78	1807	15.6	3.08
	B	11/03/14	0.09	37.6	7.10	1582	15.5	2.34
	B	02/17/15	0.13	-76.1	9.25	1021	11.6	25.7
	B	04/20/15	0.30	78.1	8.43	1397	12.6	12.7
	B	11/16/15 FD						
	B	11/16/15	2.09	11	11.69	1390	14.7	15.8
	B	02/08/16 FD						
	B	02/08/16	0.64	-130.2	10.76	1556	10.6	11.1
	B	05/23/16	0.39	-78.8	11.23	1179	13	22.7
	B	05/23/16 FD						
	B	08/17/16	1.5	-140.8	10.5	750	16.1	9.9
	B	08/17/16 FD						
	B	03/09/17	3.41	124.7	12.78	1070	9.2	11.3
	B	07/11/17	0.17	-167.3	11.49	1103	14.1	8.81
	B	09/19/17	0.35	-96	11.15	847	15.6	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Field Parameters								
Groundwater PCL					6.5-8.5			
BBH-MW-104	B	05/13/14	0.49	88.6	6.05	2735	12.1	12.6
	B	08/13/14	0.48	62.3	6.00	2365	15.9	16.0
	B	11/03/14	0.09	70.9	5.35	2390	15.5	3.03
	B	02/17/15	0.13	-0.4	5.86	2499	11.2	431
	B	11/16/15	1.26	123	5.54	2038	14.3	222
	B	02/08/16	0.67	-95.9	7.5	1311	9.7	24.8
	B	05/24/16	0.66	-4.2	7.76	1467	13.6	68.9
	B	08/18/16	0.6	-120.2	7.28	1230	16.8	28.2
	B	03/09/17	0.55	110.9	6.88	996	8.7	7.9
	B	07/11/17	0.46	6.2	6.41	1020	14.9	156
	B	09/19/17	0.56	-33	6.23	830	15.9	
BCT-MW-101	A	05/13/14	0.04	-6.8	6.79	388.9	10.8	8.90
	A	05/13/14 FD						
	A	08/14/14	0.19	-5.1	6.61	828	15.9	1.59
	A	08/14/14 FD						
	A	11/03/14	0.24	38.4	7.12	405.2	15.2	1.74
	A	11/03/14 FD						
	A	02/19/15	0.05	-19.8	6.98	408.6	9.9	1.42
	A	02/19/15 FD						
BCT-MW-102	A	05/15/14	0.07	-108.0	6.97	328.0	11.4	8.05
	A	08/14/14	0.23	-46.1	6.78	420.6	14.2	4.45
	A	11/03/14	0.27	-105.3	7.23	424.2	13.8	1.11
	A	02/19/15	0.08	89.1	6.75	379.6	11.5	0.92
	A	03/07/17	0.1	112.1	6.63	379	9.4	58.7
	A	07/11/17	0.06	-108.1	7.17	418	13.7	4.94
	A	09/18/17	0.15	-9	6.80	4097	13.9	
BCT-MW-103	A	05/15/14	0.06	-33.9	7.82	299.0	11.4	7.55
	A	08/12/14	0.13	-100.4	7.24	659	14.4	1.21
	A	11/03/14	3.44	-64.0	8.52	346.4	11.8	3.79
	A	02/19/15	0.1	120.4	7.12	321.1	9.4	11.2
	A	11/17/15	9.55	111.5	8.11	262.8	8.4	3.4
	A	02/08/16	0.15	-44.6	10.9	473.1	7	102
	A	05/23/16	0.18	68.4	7.19	395.2	11.2	4.41
	A	08/17/16	0.84	-185.5	7.32	407.7	14.4	5.42
	A	03/07/17	11.09	106.6	7.8	272.1	4.9	11.8
	A	07/11/17	0.11	-38.2	7.07	434	13.4	17
	A	09/18/17	1.02	-71	6.55	435	13.7	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
BCT-MW-104	A	05/13/14	0.27	-63.8	7.29	736	11.1	1.27
	A	08/12/14	0.25	-93.7	7.27	685	16.0	2.89
	A	11/03/14	0.30	-79.8	7.71	585.2	14.6	5.02
	A	02/17/15	0.18	76.3	7.20	403.8	8.8	3.25
	A	11/17/15	2.2	120.1	7.3	533.6	12.9	2.93
	A	02/08/16	0.56	-43.4	11.08	422.1	7.4	203
	A	05/24/16	0.14	41.4	7.43	501.1	12.3	0.98
	A	08/18/16	0.32	-64.7	7.18	524.6	17.4	2.34
	A	03/08/17	2.15	50.6	8.08	311.7	6.5	6.52
	A	07/11/17	0.78	-97.1	7.55	492	14.6	16.3
	A	09/18/17	0.46	-37	6.88	447	16.1	
BCT-MW-105	A	05/14/14	0.06	-137.2	7.77	389.8	11.8	7.56
	A	08/13/14	0.79	-21.6	8.10	479.8	17.1	8.01
	A	11/04/14	0.61	119.7	7.90	532.7	13.8	5.04
	A	02/17/15	0.72	53.8	7.43	410.7	9.1	9.76
	A	11/17/15	1.26	85	7.35	516.6	13.4	3.6
	A	02/08/16	0.22	-40.9	10.93	1238	8.2	41.2
	A	05/24/16	0.12	-99.2	9.27	492.6	12.4	8.12
	A	08/18/16	0.25	-120.3	7.57	422.3	16.8	4.94
	A	03/08/17	1.13	-81.2	7.31	444.6	6.5	8.09
	A	07/11/17	0.17	-248.9	7.83	402.3	14.4	8.85
	A	09/18/17	0.21	-83	7.11	433	16.2	
BCT-MW-106	A	05/14/14	0.04	-85.0	7.45	1123	12.0	7.96
	A	08/13/14	0.54	80.5	7.06	691	16.7	3.97
	A	11/04/14	0.17	-84.1	7.36	1431	15.6	8.65
	A	02/18/15	0.66	-50.9	7.38	1029	9.9	1.68
	A	11/17/15	0.27	5.1	7.1	1511	14.2	3.31
	A	02/09/16	1.35	25.9	7.27	803	9	2.54
	A	05/23/16	0.33	76.2	9.34	908	12.5	2.08
	A	08/18/16	0.51	-24	7.05	1198	18	1.74

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
BCT-MW-107	A	05/15/14	0.05	-171.7	10.44	1492	12.4	7.77
	A	08/14/14	0.14	-86.7	10.57	1371	16.5	4.01
	A	11/04/14	0.16	-24.0	10.93	148.5	16.1	3.54
	A	02/19/15	0.21	15.4	10.64	1136	11.7	2.49
	A	11/17/15	0.32	1.9	10.18	814	15.1	4.02
	A	02/09/16	0.54	-92.4	10.15	689	10.8	3.2
	A	05/24/16	0.6	76.1	10.18	627	13.4	1.87
	A	08/18/16	0.09	-166.4	10.05	965	18.6	2.01
	A	03/08/17	0.16	-13.5	9.86	528.3	9.6	1.9
	A	07/11/17	0.09	-243.2	10.20	595	15.1	6.13
	A	09/18/17	0.17	-128	9.04	489	16.8	
BCT-MW-108	A	05/15/14	0.07	-200.8	9.87	848	12.4	
	A	08/14/14	0.21	-48.0	10.16	880	15.7	18.9
	A	11/04/14	0.11	-352.9	10.62	837	15.0	8.11
	A	02/19/15	0.36	25	10.57	732	11.6	7.52
	A	11/16/15	0.4	-1.7	9.73	748	14.4	5.58
	A	02/09/16	0.5	-120.4	10.11	656.5	11.4	6.98
	A	05/24/16	0.06	-148.6	10.81	643.7	13.2	5.7
	A	08/18/16	0.19	-161.6	9.58	739	16.8	3.89
	A	03/07/17	0.2	-26.7	9.66	580.4	9.5	3.52
	A	07/11/17	0.09	-255.2	10.07	646	14.1	7.19
	A	09/18/17	0.48	-120	10.53	613	16.1	
CMS-MW-1	B	07/02/12	0.4	-118	6.9	434	16.8	
	B	07/03/12						
	B	08/29/12	3.7	-139	7.0	381	18.5	2
CMS-MW-1R	B	11/13/13	0.3	-89	7.0	526	14.2	7
	B	02/21/14	1.8	60	9.6	702	10.0	20
	B	02/10/16			7.55			
	B	05/23/16	0.1	-103.1	7.29	449.3	13.4	
	B	08/17/16	0.92	-42.7	6.92	437.4	15.9	
	B	03/07/17	0.76	59.9	8.28	467.5	8.8	7.53
	B	07/11/17	0.51	-10.1	7.06	583	14.8	8.8
	B	09/19/17	0.15	-120	7.72	450.3	15.1	
CMS-MW-2	B	11/07/13	2.8	-1627	6.7	456	14.8	4
	B	02/21/14	5.9	82	12.0	2554	8.7	12
	B	02/08/16			10.75			
	B	05/24/16	0.06	-85.6	7.06	693	13.3	
	B	08/17/16	0.42	-65.4	6.79	657	16.4	
	B	09/19/17	0.15	-169	7.67	659	15.8	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
		Groundwater PCL	6.5-8.5					
CN-MW-1	E	11/04/13	0.1	-34	6.4	528	15.3	6
	E	02/25/14	0.2	-58	6.2	537	11.4	3
CN-MW-2	E	11/05/13	0.1	39	5.9	524	15.8	2
	E	02/27/14	0.3	94	5.8	780	13.0	48
CN-MW-3	E	11/04/13	0.1	-1	6.3	596	16.5	4
	E	02/25/14	0.2	-53	6.2	650	10.4	3
CN-MW-101	D	05/14/14	0.04	-98.7	6.36	2147	13.4	8.50
	D	08/12/14	0.16	-80.2	6.25	2040	15.8	7.77
	D	11/06/14	0.15	-44.7	6.64	918	15.2	2.20
	D	02/19/15	0.5	18.4	6.51	1468	12.1	1.99
	D	11/18/15	0.68	46.8	6.68	829	14.6	3.67
	D	02/09/16	0.49	-89.7	7.34	938	11.6	5.9
	D	05/23/16	0.06	-183	6.7	1077	13.3	4.84
	D	08/17/16	0.11	-126.6	7.49	1083	16	3.33
CN-MW-102	D	05/14/14	0.24	-72.3	6.81	1130	13.0	4.19
	D	08/12/14	0.51	188.5	6.36	1344	16.1	8.23
	D	11/06/14	0.05	-116.6	6.58	1005	14.6	7.10
	D	02/19/15	0.07	-79.5	6.48	1309	11.7	4.22
CN-MW-103	D	05/14/14	0.19	-83.4	6.94	1071	12.8	4.42
	D	08/12/14	0.13	-96.0	6.60	1360	15.9	3.23
	D	11/06/14	0.07	-111.1	7.17	723	14.2	3.88
	D	02/19/15	0.04	-132.6	7.24	677.3	10.8	2.22
	D	03/07/17	0.09	-27.9	7.52	551.2	7.9	1.55
	D	07/11/17	0.24	-4.3	7.04	664	15.1	6.62
	D	09/18/17	0.63	-141	7.06	697	17.0	
CN-MW-104	D	05/14/14	4.75	-4.6	6.65	862	14.1	6.63
	D	08/12/14	0.86	196.1	7.07	746	20.3	2.35
	D	11/06/14	0.79	-42.1	7.35	479.4	13.6	7.49
	D	02/19/15	3.71	-48.0	7.54	128.1	10.0	63.7
DA-MW-1	B	09/13/12	1.1	-119	7.1	322	16.1	4
DAST-MW-101	B	05/14/14	0.23	-127.9	7.40	557.5	12.2	12.0
	B	08/13/14	0.16	-124.5	7.10	612	15.0	2.97
	B	11/05/14	0.15	-138.6	7.32	444.6	13.7	8.73
	B	02/19/15	0.46	39.2	7.49	440.1	11.1	1.80
	B	09/30/15	0.09	-110.3	7.56	437.2	15.0	3.97
	B	10/08/15	0.85	39.0	7.14	446.8	15.0	2.80
	B	03/07/17	0.08	-129.7	7.41	440.5	9.9	1.39
	B	07/11/17	0.52	23.6	6.77	461.7	14.1	3.14
	B	09/19/17	0.17	-120	8.26	408.7	15.3	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Field Parameters: Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
	B	05/14/14	0.27	-203.1	7.17	1659	11.9	12.2
	B	08/13/14	0.24	-122.0	7.04	1336	14.8	2.76
	B	11/03/14	0.07	-204.8	7.38	1330	14.9	4.74
	B	02/18/15	0.11	-230.1	7.06	1326	11.4	3.33
	B	11/17/15	0.26	-42.5	7.38	925	14.2	7.3
GF11-MW-101	B	02/09/16	0.11	-112.1	11.86	964	10.8	9.44
	B	05/24/16	0.09	-140.2	8.68	944	12.7	7.07
	B	08/17/16	0.26	-239.4	7.4	964	16.3	7.32
	B	03/08/17	0.1	-128.8	7.57	846	9	3.29
	B	07/11/17	0.26	-72.7	7.64	970	13.5	3.38
	B	09/19/17	0.22	-131	8.22	871	15.2	
	C	09/14/12	0.1	-176	7.4	657	16.1	14
GF9-MW-1	C	11/07/13	0.2	-180	7.6	697	15.3	8
	C	02/19/14	1.4	-30	7.0	1869	12.1	9
	C	11/07/13	0.6	-156	9.6	659	15.1	6
	C	02/19/14	0.7	-6	10.9	1073	11.7	4
	C	05/23/16	0.05	-106.5	12.48	1445	12.7	
GF9-MW-2	C	08/18/16	0.04	-131.1	11.86	1827	16.2	19.3
	C	03/07/17	0.97	137.7	13.28	1482	10	6.54
	C	07/11/17	0.11	-142.2	11.77	1386	14.2	7.78
	C	09/18/17	0.17	-162	11.52	1080	15.0	
	C	11/06/13	0.1	-86	8.2	2181	14.8	25
	C	02/19/14	0.6	-135	8.9	2187	11.2	12
	C	02/08/16			8.6			
	C	05/24/16	0.01	-135.7	9.41	1423	13.5	0
GF9-MW-3	C	08/18/16	0.16	-125.9	7.16	4795	17.5	3.41
	C	03/07/17	0.45	70.6	7.36	2038	9.4	3.89
	C	03/07/17 FD						
	C	07/11/17	0.33	0.3	6.95	2846	14.6	3.29
	C	09/18/17	0.16	8	6.93	3439	15.8	
	C	09/30/15	0.09	-107.8	9.31	1166	15.7	2.14
GF9-MW-4	C	07/11/17	0.1	-204	10.11	853	13.5	3.37
	C	09/18/17	0.67	-140	9.94	875	15.5	
HB-MW-1	C	09/14/12	0.2	-104	7.1	470	16.8	3

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
HB-MW-1R	C	11/13/13	0.4	-296	7.1	549	15.4	4
	C	02/25/14	0.8	-156	11.5	2871	11.5	45
	C	11/04/14	0.12	-314.4	10.76	2501	15.3	105
	C	02/08/16			9.84			
	C	05/24/16	0.36	-15.1	10.39	1150	13.2	
	C	08/17/16	0.63	-199.5	8.68	997	15.9	
	C	03/07/17	6.96	-60	11.31	1260	9.5	7.32
	C	07/11/17	0.17	-272.5	9.81	1000	13.7	22.5
	C	09/18/17	0.63	-155	9.05	927	15.0	
HBV-MW-101	D	05/14/14	0.21	-41.2	6.50	907	11.7	16.6
	D	08/13/14	0.69	88.9	6.14	826	14.2	85.9
	D	11/04/14	0.20	19.6	6.58	869	14.7	70.6
	D	02/18/15	0.25	24.7	6.32	1120	11.6	46.8
	D	03/07/17	0.45	-55.7	6.60	1249	9.6	36.1
	D	07/11/17	0.27	-191.71	6.92	1365	13.5	94.4
	D	09/18/17	1.83	-44	6.60	1076	14.7	
HW-MW-1	C	07/03/12	1.1	-78	7.0	3857	17.2	51
	C	08/28/12	2.6	-166	7.0	2360	18.5	36
LP-MW-1	C	11/06/13	0.1	-314	13.0	8574	14.2	18
	C	02/24/14	0.1	-90	12.8	7978	9.2	1
	C	02/24/14 FD						
	C	02/08/16			11.2			
	C	05/23/16	0.12	-126.9	12.66	2140	14.5	
	C	08/18/16	2.97	-155	8.60	4247	17.6	32.6
	C	08/31/16			8.16			
	C	03/08/17	1.85	89.8	12.08	1903	9.7	4.98
	C	07/10/17	0.17	-245.7	12.09	1880	17.1	2.41
	C	09/18/17	0.60	-155	8.15	2851	17.4	
LP-MW-2	C	11/05/13	0.2	-234	6.8	1983	15.4	24
	C	02/24/14	0.0	-209	9.2	1044	9.8	10
	C	02/08/16			8.6			
	C	05/24/16	0.4	-30.8	6.85	867	15.4	
	C	08/17/16	0.39	0.7	7.02	1295	17.5	
	C	03/08/17	0.53	40.6	7.85	561.6	10.4	3.25
	C	07/10/17	0.21	2.5	6.64	761	16.2	15.6
	C	09/18/17	0.23	-60	6.53	862	17.2	
LP-MW-3	C	07/10/17	0.26	55	7.1	759	16.3	15.2
	C	09/18/17	0.21	-115	6.98	767	16.4	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
LP-MW-4	C	07/10/17	0.06	-101	7.31	5955	16.5	19.6
	C	09/18/17	1.33	-59	7.00	7420	14.8	
LP-MW-5	C	07/10/17	0.06	-211.9	7.26	933	16	2.45
	C	07/10/17 FD						
	C	09/18/17	0.14	-150	7.19	706	15.7	
LP-MW-6	C	07/10/17	0.17	-32.3	6.79	2454	16.2	25.3
	C	09/18/17	0.21	-16	6.44	2117	15.8	25.3
LP-MW-7	C	07/10/17	0.09	-190.6	7.03	6029	21.2	24
	C	09/18/17	1.62	-63	6.99	4230	18.9	24
MW-1	A	02/17/12	6.3	118	7.4	36646	8.3	5
	A	06/06/12	7.0	114	7.6	19290	14.6	2
	A	08/27/12	5.2	136	7.0	43088	18.4	4
	A	11/07/13	5.8	20	7.4	44613	11.5	2
	A	02/23/14	7.8	68	7.5	30494	7.3	1
	A	11/18/15	6.43	51.4	7.59	29680	11.8	3.96
	A	02/09/16	8.44	12.5	7.72	24968	8.9	2.92
	A	05/24/16	5.86	164.6	7.63	33902	14.6	0.95
	A	08/17/16	9.46	73.2	7.15	40589	19.7	1.39
MW-2	A	02/17/12	6.6	-102	8.8	9109	10.4	79
	A	06/06/12	1.4	88	8.0	19510	14.7	2
	A	08/27/12	1.0	13	8.2	22874	17.6	6
	A	11/14/13	2.2	-3	8.1	27670	12.3	1
	A	02/23/14	3.2	-102	8.4	16078	8.7	1
	A	11/18/15	5.43	22.3	8.13	21222	12.3	1.84
	A	02/09/16	5.58	-0.9	8.18	20115	9.4	1.7
	A	05/24/16	3.18	145.5	8.17	19981	14.2	0.81
	A	08/17/16	10.08	46.4	7.53	33772	19.2	3.15
	A	03/07/17	6.06	34.7	8.27	20430	7.94	1.42
	A	07/11/17	3.28	3.8	8.30	22513	17.4	5.63
	A	09/18/17	5.69	39	7.66	37518	16.0	
MW-5	D	02/17/12	1.5	-222	6.7	5773	11.0	70
	D	06/05/12	0.1	-78	5.8	3554	12.9	1
	D	08/31/12	5.4	-189	6.7	6538	16.1	2
	D	11/06/13	0.1	-57	6.7	4660	15.1	1
	D	02/25/14	0.3	-19	6.6	9850	10.3	86

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
MW-6	C	02/17/12	5.0	-141	7.4	3809	17.2	26
	C	06/07/12	0.2	-40	7.3	3347	17.7	22
	C	08/29/12	1.7	-144	7.1	3856	18.6	13
	C	11/06/13	0.2	-230	7.4	3934	18.1	35
	C	02/23/14	0.1	-125	7.2	3889	17.0	40
	C	02/23/14 FD						
	C	02/10/16			9.16			
	C	05/24/16	0.03	-92.6	7.6	3972	18.5	
	C	08/17/16	0.29	-134.5	7.71	4299	19.7	
	C	03/08/17	0.08	-132.9	7.55	4261	16.1	6.01
	C	07/10/17	0.06	-120.2	7.61	4427	19.7	38.1
	C	09/18/17	1.30	-69	7.42	4290	18.8	
NRP-MW-2	D	06/05/12	0.4	-1	6.1	770	13.4	2
	D	08/31/12	6.5	-149	6.6	1197	17.0	2
	D	11/06/13	0.1	-84	6.7	1143	15.6	1
	D	02/25/14	1.3	-1	6.5	1755	11.2	32
	D	05/13/14	0.28	15.6	6.56	4595	12.0	0.86
	D	08/12/14	0.54	199.0	6.54	14937	16.2	1.29
	D	11/05/14	0.20	-36.4	6.61	6435	16.7	
	D	02/17/15	0.10	-109.6	6.82	3328	10.7	1.00
	D	02/22/16			6.51			
	D	05/23/16	0.11		7.08	4681.6	13.11	
	D	08/17/16	0.12	-151.9	7.21	13804	17.1	1.09
NRP-MW-3	D	06/05/12	2.0	-99	6.5	1410	12.6	37
	D	08/30/12	6.4	-242	6.4	1522	15.5	377
	D	11/05/13	0.1	-42	6.5	1614	15.1	266
	D	02/25/14	0.3	5	6.4	1571	12.4	240
NRP-MW-4	D	07/03/12	0.4	-102	7.2	717	14.0	3
	D	08/30/12	4.9	-222	7.2	600	17.0	4
NRP-MW-5	D	07/03/12	0.4	-111	7.1	736	14.4	3
	D	08/30/12	5.2	-222	7.1	708	16.5	4
NRS-MW-101	D	05/13/14	0.18	-98.9	6.52	9021	12.3	5.36
	D	08/12/14	0.18	-34.0	6.16	19547	16.9	25.2
	D	11/04/14	0.15	-71.5	6.48	14564	15.9	41.5
	D	02/17/15	0.55	45.7	6.65	6721	10.8	316

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K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
NRS-MW-102	D	05/13/14	0.08	-88.2	7.00	1829	12.1	7.47
	D	08/12/14	0.18	-86.4	6.71	1995	16.4	1.61
	D	11/04/14	0.11	-66.6	6.94	2279	16.3	1.57
	D	02/17/15	0.59	-16.8	7.20	1176	10.7	2.35
	D	03/08/17	0.35	-14.9	7.07	4730	9.4	31.1
	D	07/11/17	0.08	-70.8	7.13	1209	14.4	65.3
	D	09/18/17	1.42	-185	7.38	3167	16.3	
NRU-MW-101	D	05/13/14	0.74	21.0	6.53	4631	12.3	1.79
	D	08/12/14	0.24	-32.1	6.37	16023	16.7	12.5
	D	11/05/14	0.19	23.3	6.87	10880	16.7	6.21
	D	02/17/15	0.17	-42.9	7.01	3988	10.7	12.2
NRU-MW-102	D	05/13/14	0.29	9.5	6.87	7905	12.2	1.84
	D	08/12/14	0.55	196.1	6.73	15609	17.1	3.03
	D	11/05/14	0.08	-121.2	7.62	966	15.9	25.7
	D	02/17/15	0.12	-124.2	7.30	1430	9.8	2.31
	D	03/08/17	0.15	-4.6	7.18	771	8.9	6.42
	D	07/11/17	0.06	-48.1	6.88	5279	15.2	1.56
	D	09/18/17	0.50	-94	7.67	10995	16.5	
OMS-MW-1	A	06/06/12	4.7	115	7.2	19300	14.5	16
	A	08/28/12	2.4	-55	6.9	25177	18.2	2
	A	11/07/13	1.8	-89	7.5	20805	14.9	
	A	02/24/14	5.9	11	7.0	16939	9.4	5
	A	03/07/17	7.28	54.7	7.75	11423	8.6	0.6
	A	07/11/17	5.98	-29.4	7.3	22520	17.3	17
	A	09/18/17	6.75	139	6.85	44895	17.3	
OMS-MW-2	A	09/30/15	2.65	33.9	7.59	37653	17.2	0.68
OPS-MW-1	B	11/07/13	2.8	-212	10.1	848	14.8	9
	B	02/24/14	0.4	-111	11.5	1537	10.0	9
	B	02/08/16			10			
	B	05/23/16	0.01	-149.4	11.46	937	13.1	
	B	08/17/16	0.44	-137	10.4	754	17.3	
	B	03/07/17	0.08	-109.7	10.52	986	8.8	7.28
	B	07/11/17	0.22	-107.7	10.64	883	14.5	3.75
	B	09/19/17	0.11	-175	10.46	659	16.4	
PM-MW-1	B	11/06/13	0.6	-85	5.8	1403	15.7	5
	B	02/24/14	0.5	34	3.2	1929	10.9	64
	B	09/19/17	0.77	3	5.52	1027	15.0	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
PM-MW-2	B	11/15/13	0.1	-159	7.4	1701	15.4	2
	B	02/25/14	0.1	-2	6.8	2346	12.3	6
PM-MW-3	B	11/13/13	0.6	-108	6.2	808	15.0	14
	B	02/25/14	0.2	-75	6.1	1013	10.7	8
	B	09/19/17	0.44	-148	7.55	792	14.0	
PM-MW-4	B	11/18/13	0.1	-174	7.7	810	15.7	1
	B	02/23/14	0.9	-39	7.5	1151	11.0	5
	B	03/08/17	2.68	-39.2	11.62	517.7	9.1	94.2
	B	03/08/17 FD						
	B	07/11/17	0.44	-22.1	10.84	653	14	42.4
	B	09/19/17	0.16	-139	10.19	523	15.0	
PM-MW-5	B	11/06/13	2.7	-3	8.0	1911	16.5	14
	B	02/25/14	0.2	-170	8.2	2035	11.5	11
	B	09/30/15	0.07	-29.3	10.05	1338	16.9	4.71
	B	03/09/17	0.56	79.2	11.3	695.1	8.7	3.97
	B	07/11/17	0.31	-24	11.06	814	15.1	8.45
	B	09/19/17	0.15	-98	10.91	780	16.1	
PM-MW-6	B	11/05/13	0.2	-8	6.8	2515	15.7	2
	B	02/23/14	0.1	-57	6.6	2735	11.8	12
	B	03/09/17	0.79	61.1	7.28	2058	10.5	13.5
	B	07/11/17	0.51	4.9	7.42	1769	13.9	149
	B	09/19/17	0.61	12	6.70	2234	14.6	
PM-MW-7	B	11/07/13	3.6	146	7.0	38184		11
	B	11/07/13 FD						
	B	02/24/14	4.8	63	7.1	34709	10.2	12
	B	02/22/16			7.33			
	B	05/23/16	4.91	180.3	7.33	30718	13.1	
	B	08/17/16	1.01	80	7.24	39215	17.1	
	B	03/07/17	6.37	62	7.02	25941	8.24	39.2
	B	07/11/17	4.99	20.3	7.59	31555	15.1	22
	B	09/18/17	0.94	3	6.95	40871	17.6	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
PM-MW-8	B	11/05/13	3.0	-66	6.8	36501	15.4	3
	B	02/24/14	3.3	39	7.2	24465	9.9	4
	B	11/18/15	1.88	37.3	7.05	32357	15.3	57.9
	B	02/10/16	1.68	22.4	9.42	6766	11.1	4.04
	B	05/23/16	3.86	98.1	7.03	30091	13.6	1.73
	B	08/18/16	4.6	99.4	6.84	39859	17.9	10.4
	B	03/07/17	6.48	-11.1	7.84	11252	9.1	0.96
	B	03/07/17 FD						
	B	07/11/17	3.34	12.5	7.17	29900	15.3	5.78
	B	09/18/17	2.32	103	6.80	42550	17.5	
RCD-MW-101	B	05/12/14	7.92	68.9	7.01	27189	12.2	5.14
	B	08/11/14	5.75	89.1	6.94	36189	19.5	5.34
	B	11/04/14	7.15	64.9	7.17	36302	13.9	28.7
	B	02/18/15	9.80	58.8	7.26	25430	9.0	30.2
	B	11/17/15	11.13	157.2	7.19	35122	12.5	23.5
	B	02/08/16	9.56	-8.6	7.61	30835	8	20.1
	B	05/23/16	8.06	119.7	7.28	32725	14.6	33.7
	B	08/18/16	4.69	49.5	7.5	41040	20.5	6.6
	B	03/08/17	10.76	77	8.35	32349	6.8	7.15
	B	07/11/17	5.66	-22.3	7.05	30918	17.5	28.7
	B	09/18/17	5.44	31	6.79	44925	17.8	
REC1-MW-1	A	09/13/12	1.5	-81	6.6	284	16.5	14
	A	11/14/13	0.2	-50	6.7	385	14.2	4
	A	02/20/14	0.9	28	6.6	331	10.8	4
REC1-MW-2	A	09/13/12	1.1	-95	7.0	336	16.8	210
	A	11/14/13	1.1	-11	6.9	579	15.1	10
	A	02/20/14	0.5	32	6.6	477	12.1	2
REC1-MW-3	A	09/13/12	1.2	-107	7.1	292	17.0	78
	A	11/14/13	0.6	-143	7.0	456	14.6	8
	A	02/20/14	3.9	85	6.3	357	10.4	4
REC1-MW-4	A	09/13/12	0.9	-144	6.7	551	18.3	1
	A	11/18/13	0.2	3	6.8	661	13.8	7
	A	02/25/14	0.2	-52	6.7	497	11.4	2
REC1-MW-5	A	09/13/12	0.6	-172	6.5	337	19.3	6
	A	11/06/13	0.1	-71	6.8	420	15.3	14
	A	02/23/14	1.4	-43	6.9	529	9.0	5
	A	07/11/17	0.39	-46.3	7.03	498.6	17.4	4.32
REC1-MW-6	A	09/13/12	0.7	-185	7.2	330	19.1	7
	A	11/14/13	0.1	23	7.2	462	14.4	14
	A	02/20/14	0.6	-36	7.0	602	8.9	2

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Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
REC1-MW-7	A	09/13/12	1.8	-134	6.7	487	17.8	36
	A	11/14/13	0.2	-13	6.7	570	15.5	42
	A	02/20/14	0.4	-28	6.6	544	12.0	32
REC1-MW-8	A	09/13/12	0.7	-123	7.4	26879	17.2	1
	A	11/07/13	1.7	-6	7.3	27756	13.9	6
	A	02/23/14	0.3	-206	7.0	1315	11.6	7
	A	09/30/15	0.09	-38.1	7.07	11866	16.1	2.58
REC1-MW-9	A	09/13/12	0.1	-350	9.0	24753	16.2	2
	A	11/08/13	0.4	-40	7.6	41067	14.1	3
	A	02/24/14	1.8	18	7.3	24088	9.3	2
REC1-MW-10	A	11/14/13	0.6	-35	6.7	378	14.0	13
	A	02/20/14	0.5	-15	6.8	374	12.2	13
REC1-MW-11	A	11/14/13	0.3	-57	7.2	377	13.0	2
	A	02/20/14	0.4	-43	7.0	317	10.6	3
REC1-MW-12	A	11/14/13	0.2	-82	6.4	464	14.7	9
	A	02/20/14	0.4	50	6.3	374	10.8	2
REC1-MW-14	A	11/14/13	0.3	-151	6.9	367	15.3	4
	A	02/20/14	0.5	38	6.7	353	11.7	27
REC1-MW-15	A	11/18/13	1.4	-51	7.0	602	13.5	2
	A	02/25/14	0.2	61	6.7	449	9.6	5
REC3-MW-1	B	06/07/12	0.3	23	7.8	17829	13.1	7
	B	08/29/12	0.3	36	6.9	25071	16.3	44
REC3-MW-1R	B	11/14/13	0.4	-36	7.1	10710	17.6	2
	B	02/24/14	1.2	16	7.2	17280	12.3	9
	B	11/17/15	2.82	31.6	7.17	9538	17	5.89
	B	02/09/16	0.7	11.1	9.23	6943	11.5	6.71
	B	05/23/16	1.04	87.1	7.19	12347	14	1.32
	B	08/18/16	1.83	62.4	7.09	26877	18.2	41.5
	B	03/07/17	6.73	-14.8	7.34	2669	10.1	8.45
	B	07/11/17	1.96	7	7.26	9274	15.8	10.5
	B	09/18/17	2.00	111	6.89	19360	18.3	
REC5-MW-1	B	06/08/12	0.0	-114	8.5	384	23.2	97
	B	06/08/12 FD						
	B	08/29/12	0.5	-325	8.9	1150	22.7	64
	B	08/29/12 FD						
REC5-MW-1R	B	11/13/13	0.2	-278	9.5	1580	16.8	20
	B	02/27/14	0.2	-2	7.8	1972	12.1	6
	B	03/09/17	0.2	43.2	6.97	890	10.9	18.5
	B	09/19/17	1.30	46	6.69	1230	15.7	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL			6.5-8.5					
REC6-MW-2	D	06/05/12	0.0	-233	7.0	1935	14.8	5
	D	08/30/12	4.3	-453	7.6	2280	17.7	8
	D	11/07/13	0.0	-389	7.9	2218	16.7	2
	D	02/24/14	0.0	486	6.9	2047	13.6	6
	D	02/22/16			6.96			
	D	05/23/16			7.44	2115	16.9	
	D	08/17/16	0.04	-319.2	8.01	2116	20	2.33
	D	03/08/17	0.12	-52.1	6.74	1641	11.22	9.65
	D	07/10/17	0.07	-361.8	7.96	2086	17.3	2.43
	D	09/18/17	0.14	-427	7.43	2211	19.7	
REC7-MW-1	E	06/05/12	0.4	-89	6.6	3340	12.6	1
	E	08/30/12	5.4	-241	6.5	1920	17.5	3
	E	11/04/13	0.1	-31	6.7	1253	15.2	1
	E	02/25/14	0.3	-25	6.5	1343	10.3	1
	E	02/22/16			6.7			
	E	05/23/16	0.6		6.74	1052.9	14.12	
	E	08/17/16	0.17	-0.8	6.95	1552	18.4	0.87
REC7-MW-2	D	06/05/12	1.0	-128	6.9	872	14.0	1
	D	08/30/12	4.3	-247	6.8	770	19.3	3
	D	11/06/13	0.1	-90	6.9	1589	16.0	4
	D	02/25/14	0.1	-78	6.9	1522	10.5	6
	D	02/22/16			7.46			
	D	05/23/16	0.05		7.26	2943.5	13.9	
	D	08/17/16	0.13	-53.5	7.55	6206	17.9	1.6
	D	03/08/17	0.38	35.1	8.21	682.1	9.2	2.44
	D	07/11/17	0.12	-48.4	7.22	5882	16.4	10.8
	D	09/18/17	0.11	-76	7.25	6082	17.7	
REC7-MW-3	A	06/06/12	6.9	101	7.8	21420	13.8	1
	A	08/28/12	6.1	80	7.3	34071	17.5	3
	A	11/06/13	5.5	187	7.3	43739	11.9	1
	A	02/24/14	7.4	20	7.4	24572	7.9	4
	A	02/22/16			7.53			
	A	05/23/16	5.06	182.7	7.53	35237	15.1	
	A	08/17/16	5.38	88.6	7.52	42348	18.7	
	A	03/07/17	7.17	-2.8	7.4	31473	9	3.73
	A	07/11/17	4.77	2.7	7.96	33541	18	1.65
	A	09/18/17	7.25	78	7.37	44018	16.7	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
REC7-MW-4	A	06/06/12	0.2	-155	8.1	21882	13.2	2
	A	08/28/12	0.4	67	7.8	23311	16.6	6
	A	11/08/13	0.4	0	8.0	31021	13.9	7
	A	02/23/14	3.7	-11	8.0	24283	9.2	2
	A	05/23/16	2.24	176.1	7.88	28191	14	
	A	08/17/16		109.1	7.83	33428	17.5	
	A	03/07/17	0.47	13.6	8.16	24707	8.6	2.73
	A	07/11/17	0.44	-14.7	8.67	23407	16	11.4
	A	09/18/17	0.63	-2	7.76	32347	16.3	
SHB-MW-2	C	11/07/13	0.1	-244	6.8	10560	16.9	2
	C	02/23/14	0.6	-42	6.8	6226	11.2	5
	C	02/22/16			7.12			
	C	05/23/16	0.24	-17.2	7.34	4737	13.5	
	C	08/17/16	0.29	7.2	6.85	27703	16.7	
	C	03/08/17	1.84	41.2	7.06	666	10.17	18.2
	C	07/11/17	0.3	-27	6.87	6669	15.3	15.7
	C	09/18/17	0.34	-68	6.83	20727	17.4	
SHB-MW-101	C	05/12/14	0.07	-191.6	11.71	1535	13.9	11.2
	C	08/11/14	0.21	-1400	7.35	1159	17.5	3.82
	C	11/05/14	0.07	-144.7	8.39	1005	16.4	83.3
	C	02/18/15	0.48	-80.1	7.59	752	13.5	1.42
	C	11/18/15	3.85	21.7	7.28	707	13.8	7.27
	C	02/09/16	0.37	-108.8	7.38	694	12.8	3.36
	C	05/23/16	0.22	-164.2	7.57	672	14.1	1.96
	C	08/17/16	0.28	-78.3	7.19	704	16.5	4.66
	C	03/08/17	0.43	36.2	6.86	435.7	10.7	7.4
	C	07/11/17	0.1	-42.2	6.83	735	16.1	5.24
	C	09/18/17	0.04	-60	7.09	6.74	16.4	
SHB-MW-102	C	05/12/14	0.65	34.1	6.83	1319	12.5	6.36
	C	08/11/14	0.71	59.6	6.84	989	16.2	4.23
	C	11/05/14	0.10	66.4	6.90	711	16.4	3.38
	C	02/18/15	0.89	19.5	6.97	722	12.2	4.09
	C	07/11/17	0.03	-45.4	6.99	992	15.6	>1000
TM-MW-1	D	11/06/13	0.1	-23	6.4	716	14.9	8
	D	02/26/14	0.4	-7	6.4	875	12.0	5

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
TM-MW-2	D	11/05/13	0.1	-98	6.8	1319	14.8	13
	D	02/26/14	0.4	-1	6.8	1716	10.8	7
	D	02/26/14 FD						
	D	05/23/16			9.13	1541	12.88	
	D	08/17/16	0.09	-287.6	8.91	1267	16.1	7.58
	D	03/08/17	0.07	-170.6	10.74	1323	8.9	13.7
	D	07/11/17	0.22	61.6	8.22	1274	13.7	86.2
	D	09/18/17	0.08	-143	7.37	1008	15.7	
TM-MW-3	D	11/05/13	0.2	10	9.2	491	13.7	8
	D	02/25/14	0.8	-13	11.9	1288	8.3	28
	D	02/08/16			11.65			
	D	05/23/16	0.03		11.32	827.1	13.63	
	D	08/17/16	0.11	-355.2	11.88	768	18.8	7.7
	D	03/07/17	26.4	28.6	11.8	1251	7.6	22.2
	D	07/11/17	0.18	-6.9	10.21	451.9	14.7	42.2
	D	09/18/17	0.30	-81	11.05	454	17.1	
TM-MW-4	D	11/06/13	0.1	-85	6.7	795	15.0	4
	D	02/25/14	10.7	-130	12.9	9141	8.5	15
	D	02/10/16			13.05			
	D	05/23/16	0.28		12	3063.7	13.13	
	D	08/18/16	0.09	-124.2	12.4	3576	15.3	9.36
	D	03/08/17	9.56	90	12.27	3865	7.6	2.42
	D	07/11/17	0.27	-79	12.26	3039	13.3	24.2
	D	09/18/17	0.26	-119	12.43	2330	15.7	
TM-MW-5	D	11/06/13	0.1	-94	7.3	1343	16.3	2
	D	02/26/14	0.4	18	7.8	1416	13.7	1
	D	03/08/17	0.11	-3.3	7.76	656.3	10	7.44
	D	07/11/17	0.28	58.8	7.99	1028	13	12.2
	D	09/18/17	0.09	-163	7.69	902	14.0	
TM-MW-6	D	11/07/13	0.1	-2	7.2	982	16.8	3
	D	02/24/14	0.1	-271	7.0	1082	11.4	1
	D	03/08/17	0.27	32	6.98	869	10.5	5.43
	D	07/11/17	0.14	-63.6	7.27	1536	17.2	3.94
	D	09/18/17	0.01	-56	7.14	997	17.6	
UG-MW-1	D	07/03/12	3.9	54	6.8	401	13.0	
	D	08/30/12	8.0	80	6.6	347	14.7	5
	D	11/05/13	2.9	52	6.7	366	14.2	2
	D	02/25/14	2.6	-7	6.7	421	10.1	6
UG-MW-2	B	07/03/12	0.3	-37	7.0	556	14.5	3
	B	08/29/12	4.2	-57	7.0	452	17.5	8

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Field Parameters / Groundwater PCL			6.5-8.5					
UG-MW-2R	B	11/07/13	1.8	-117	6.7	456	14.9	2
	B	02/24/14	0.4	-21	6.8	473	9.6	2
	B	03/07/17	0.24	6.2	7.58	454.2	9.3	0.89
	B	07/11/17	0.03	-92.2	7.34	439.7	13.9	1.46
	B	09/19/17	0.14	-136	7.89	418	15.9	
UST29-MW-101	D	05/14/14	0.03	9.2	9.23	1027	13.5	28.7
	D	08/13/14	0.64	93.7	7.75	1078	16.6	9.52
	D	11/05/14	0.09	-31.6	8.31	831	15.6	70.6
	D	02/18/15	0.52	-146.6	10.59	992	11.2	45.9
	D	11/18/15	0.35	2.5	8.9	1333	14.3	32
	D	02/10/16	0.5	-125	9.9	1208	9.7	34.4
	D	05/24/16	0.44	99.2	11.45	982	13.6	28.4
	D	08/18/16	0.4	-4.3	9.54	717	16.8	7.22
	D	03/08/17	1.58	27.8	12.01	1019.5	9.03	23.2
	D	07/11/17	0.12	-120.3	11.63	925	14.6	19.7
	D	09/18/17	0.17	-124	10.58	931	16.6	
UST29-MW-102	D	05/14/14	0.07	-92.8	6.80	1152	13.6	7.47
	D	08/13/14	0.74	89.5	6.52	826	15.4	2.28
	D	11/06/14	0.11	-39.4	7.11	665	15.2	2.23
	D	02/18/15	0.46	-56.3	6.95	654.8	12.2	2.97
	D	07/11/17	0.17	-7.7	9.19	369.5	13.7	8.98
UST29-MW-103	D	05/14/14	0.09	-174.1	9.28	642.4	11.6	10.7
	D	08/13/14	0.78	96.2	8.99	802	15.1	2.21
	D	11/06/14	0.17	29.8	10.33	708	15.1	7.02
	D	02/18/15	0.35	-153.2	10.87	728	11.0	1.03
	D	05/23/16	0.16		11.24	683.9	12.58	
	D	08/18/16	0.2	-123.9	10.95	1004	15.5	1.28
	D	03/07/17	3.08	22.8	12.2	1051	8.84	2.71
	D	07/11/17	0.4	-47.9	11.14	576.1	13.6	7.01
	D	09/18/17	0.29	-131	11.23	734	15.9	
UST68-MW-1	B	06/06/12	0.4	-19	7.3	434	14.8	4
	B	08/27/12	1.2	-68	7.2	845	18.2	4
UST68-MW-2	A	06/06/12	1.1	-13	6.8	229	15.0	2
	A	08/27/12	1.7	-68	6.7	527	17.3	5
UST68-MW-4	A	06/06/12	0.6	-124	6.7	409	14.4	10
	A	08/27/12	1.1	-142	7.1	1054	17.0	8
UST68-MW-5	A	06/06/12	0.3	-77	7.2	20253	15.9	2
	A	08/28/12	0.8	-273	8.6	2535	18.6	1
	A	09/18/17	0.07	-96	8.13	2414	15.7	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Field Parameters								
Groundwater PCL					6.5-8.5			
UST69-MW-1	D	06/08/12	0.2	-105	7.1	292	15.9	5
	D	08/28/12	1.1	-126	7.1	321	19.2	5
UST70-MW-2	B	06/07/12	0.5	-62	7.3	8768	23.2	1
	B	08/29/12	2.1	43	6.9	21365	26.3	292
	B	11/07/13	0.3	209	7.1	28426	17.5	34
	B	02/23/14	2.3	13	7.2	17667	11.4	2
	B	05/12/14	1.65	1.1	7.25	11812	13.3	24.1
	B	08/11/14	0.61	33	6.93	26580	19.5	6.95
	B	11/04/14	2.56	77.1	7.38	8234	16.9	14.5
	B	02/19/15	1.71	33.6	7.37	15307	11.9	9.36
	B	11/17/15	6.67	132.2	7.24	19856	14.9	10.2
	B	02/08/16	1.91	-31.8	11.19	26724	10.4	7.81
	B	05/24/16	1.07	-12.8	8.91	17532	14.4	8.64
	B	08/18/16	0.5	-15.8	7.82	34467	18.8	29.2
	B	03/08/17	4.29	33	7.49	12466	9.2	8.32
	B	07/11/17	0.57	20	7.3	19111	15.7	38.9
	B	09/18/17	1.22	16	7.08	33878	17.4	
UST70-MW-101	B	05/12/14	0.23	25.8	7.14	1705	14.4	10.6
	B	08/11/14	0.71	39.5	7.08	2234	18.8	5.4
	B	11/04/14	1.36	99.2	6.94	2044	17.9	2.19
	B	02/18/15	0.19	73.9	7.15	1401	13.0	3.84
	B	11/17/15	3.88	103.6	7.22	3078	15.6	6.28
	B	02/08/16	1.24	-44.3	7.29	1210	11.5	6.34
	B	05/23/16	0.1	-38	7.37	1326	14.2	4.1
	B	08/17/16	0.11	-40.4	7.78	2062	17.8	3.53
UST70-MW-102	B	05/12/14	0.35	-141.5	7.49	1717	14.5	1.89
	B	08/11/14	0.63	55.9	7.23	1970	19.2	3.61
	B	11/04/14	0.16	37.7	7.49	2019	18.4	6.47
	B	02/18/15	0.52	-53.5	7.49	1394	13.4	2.96
	B	11/17/15	0.4	9.1	7.05	1658	16.9	9.03
	B	02/08/16	0.15	-5.6	9.59	2092	12	15.3
	B	05/24/16	0.08	-101.1	8.91	1125	14.6	5.27
	B	08/17/16	0.07	-127	7.94	1379	18.2	5.8
	B	03/07/17	0.3	77.4	7.59	1143	10.6	22.2
	B	07/11/17	0.45	-28.1	7.56	1370	15.7	25.2
	B	09/18/17	0.24	-121	7.19	1239	18.1	

Table 1 - Groundwater Metals and Field Parameter Data through September 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
		Groundwater PCL			6.5-8.5			
UST71-MW-101	B	05/12/14	0.29	-6.5	6.53	1792	13.5	35.8
	B	08/12/14	0.66	204.9	6.59	11535	17.3	2.75
	B	11/05/14	0.15	87.4	6.95	1982	17.0	4.51
	B	02/17/15	0.64	115.2	7.06	1405	13.1	3.50
	B	11/17/15	0.98	126.8	7.23	1251	16.2	7.24
	B	02/09/16	0.09	-46	11.09	2025	12.7	7.09
	B	05/23/16	0.12	101.3	6.95	2502	14.2	4.39
	B	08/17/16	0.22	-81.7	7.65	18848	17.9	1.92
	B	03/09/17	0.08	-61.4	7.31	763	11	2.21
	B	07/11/17	0.09	-61.7	6.99	5295	16.9	7.88
	B	09/18/17	0.17	-25	6.65	15669	17.9	
UST71-MW-102	B	05/12/14	0.27	42.8	6.74	3118	14.3	12.7
	B	08/11/14	1.9	68.4	6.79	3381	18.4	7.44
	B	11/04/14	0.55	-16.1	7.18	259.4	14.8	56.7
	B	02/17/15	0.30	50.8	6.35	193.7	11.7	95.1
	B	11/17/15	7.5	14.7	6.96	89.1	12.3	102
	B	02/10/16	5.5	-50.4	6.75	124.1	10.2	44
	B	05/23/16						
	B	05/24/16	0.91	39.2	6.65	915	14.6	
	B	08/18/16	0.53	-41.7	7.07	2629	18.8	
UST71-MW-103	B	05/13/14	0.16	-232	8.31	3189	15.0	134
	B	08/12/14	0.52	61.9	7.69	3205	19.5	
	B	11/05/14	0.17	36.0	9.83	2423	17.6	28.5
	B	02/18/15	0.68	43.9	8.45	2184	13.1	74.8
	B	11/18/15	2.33	-3.7	12.11	1836	16.1	186
	B	02/09/16	2.07	-93	11.83	1714	12.1	156
	B	05/23/16	0.09	111.3	8.55	1761	14.6	
	B	05/24/16						
	B	08/18/16	0.09	-90	8.1	2883	19.2	21.2
	B	03/08/17	1.47	-69.8	10.0	635.6	10	11.1
	B	07/11/17	0.49	-66.6	7.7	2728	17.7	13
	B	09/18/17	0.19	-50	7.53	3061	17.1	
UST71-MW-104	B	05/12/14	0.22	-19.4	7.74	1549	12.7	16.4
	B	08/11/14	0.19	24.4	7.61	2174	17.5	4.78
	B	08/11/14 FD						
	B	11/05/14	0.13	123.2	7.46	1143	16.8	1.70
	B	11/05/14 FD						
	B	02/18/15	0.07	-194.1	8.64	806	12.3	6.09
	B	02/18/15 FD						
	B	03/09/17	1.06	-40.2	8.52	559.6	9.4	34.6
	B	07/11/17	0.06	-173.8	8.65	617	15.1	28.1
	B	09/19/17	0.30	-234	8.93	768	15.7	

Table 2 - Comparing Average Site Groundwater pH for Wet and Dry Seasons, 2016 vs 2017

Wet Season Comparison, 2016 vs 2017

Feb-16				Mar-17			
Well ID	Sample Date	pH	H+ concen.	Well ID	Sample Date	pH	H+ concen.
Inland Wells (N = 22)							
BBH-MW-101	09-Feb-16	10.51	3.09E-11	BBH-MW-101	08-Mar-17	9.73	1.86E-10
BBH-MW-102	09-Feb-16	11.07	8.51E-12	BBH-MW-102	08-Mar-17	6.43	3.72E-07
BBH-MW-103	08-Feb-16	10.76	1.74E-11	BBH-MW-103	09-Mar-17	12.78	1.66E-13
BBH-MW-104	08-Feb-16	7.50	3.16E-08	BBH-MW-104	09-Mar-17	6.88	1.32E-07
BCT-MW-103	08-Feb-16	10.90	1.26E-11	BCT-MW-103	07-Mar-17	7.80	1.58E-08
BCT-MW-104	08-Feb-16	11.08	8.32E-12	BCT-MW-104	08-Mar-17	8.08	8.32E-09
BCT-MW-105	08-Feb-16	10.93	1.17E-11	BCT-MW-105	08-Mar-17	7.31	4.90E-08
BCT-MW-107	09-Feb-16	10.15	7.08E-11	BCT-MW-107	08-Mar-17	9.86	1.38E-10
BCT-MW-108	09-Feb-16	10.11	7.76E-11	BCT-MW-108	07-Mar-17	9.66	2.19E-10
CMS-MW-1R	10-Feb-16	7.55	2.82E-08	CMS-MW-1R	07-Mar-17	8.28	5.25E-09
GF11-MW-101	09-Feb-16	11.86	1.38E-12	GF11-MW-101	08-Mar-17	7.57	2.69E-08
GF9-MW-3	08-Feb-16	8.60	2.51E-09	GF9-MW-3	07-Mar-17	7.36	4.37E-08
HB-MW-1R	08-Feb-16	9.84	1.45E-10	HB-MW-1R	07-Mar-17	11.31	4.90E-12
LP-MW-1	08-Feb-16	11.20	6.31E-12	LP-MW-1	08-Mar-17	12.08	8.32E-13
OPS-MW-1	08-Feb-16	10.00	1.00E-10	OPS-MW-1	07-Mar-17	10.52	3.02E-11
SHB-MW-101	09-Feb-16	7.38	4.17E-08	SHB-MW-101	08-Mar-17	6.86	1.38E-07
TM-MW-3	08-Feb-16	11.65	2.24E-12	TM-MW-3	07-Mar-17	11.80	1.58E-12
TM-MW-4	10-Feb-16	13.05	8.91E-14	TM-MW-4	08-Mar-17	12.27	5.37E-13
UST29-MW-101	10-Feb-16	9.90	1.26E-10	UST29-MW-101	08-Mar-17	12.01	9.77E-13
UST71-MW-101	09-Feb-16	11.09	8.13E-12	UST71-MW-101	09-Mar-17	7.31	4.90E-08
UST71-MW-102	10-Feb-16	6.75	1.78E-07	UST71-MW-103	08-Mar-17	10.00	1.00E-10
UST71-MW-103	09-Feb-16	11.83	1.48E-12	UST71-MW-104	09-Mar-17	8.52	3.02E-09
	Average (geomean) [H]:		6.78E-11		Average (geomean) [H]:		5.11E-10
Average Inland pH, 2016:		**10.2**		**Average Inland pH, 2017:**		**9.3**	
Shoreline Wells (N = 13)							
LP-MW-2	08-Feb-16	8.60	2.51E-09	LP-MW-2	08-Mar-17	7.85	1.41E-08
MW-2	09-Feb-16	8.18	6.61E-09	MW-2	07-Mar-17	8.27	5.37E-09
MW-6	10-Feb-16	9.16	6.92E-10	MW-6	08-Mar-17	7.55	2.82E-08
PM-MW-7	22-Feb-16	7.33	4.68E-08	PM-MW-7	07-Mar-17	7.02	9.55E-08
PM-MW-8	10-Feb-16	9.42	3.80E-10	PM-MW-8	07-Mar-17	7.84	1.45E-08
RCD-MW-101	08-Feb-16	7.61	2.45E-08	RCD-MW-101	08-Mar-17	8.35	4.47E-09
REC3-MW-1R	09-Feb-16	9.23	5.89E-10	REC3-MW-1R	07-Mar-17	7.34	4.57E-08
REC6-MW-2	22-Feb-16	6.96	1.10E-07	REC6-MW-2	08-Mar-17	6.74	1.82E-07
REC7-MW-2	22-Feb-16	7.46	3.47E-08	REC7-MW-2	08-Mar-17	8.21	6.17E-09
REC7-MW-3	22-Feb-16	7.53	2.95E-08	REC7-MW-3	07-Mar-17	7.40	3.98E-08
SHB-MW-2	22-Feb-16	7.12	7.59E-08	SHB-MW-2	08-Mar-17	7.06	8.71E-08
UST70-MW-102	08-Feb-16	9.59	2.57E-10	UST70-MW-102	07-Mar-17	7.59	2.57E-08
UST70-MW-2	08-Feb-16	11.19	6.46E-12	UST70-MW-2	08-Mar-17	7.49	3.24E-08
	Average (geomean) [H]:		3.86E-09		Average (geomean) [H]:		2.55E-08
Average Shoreline pH, 2016:		**8.4**		**Average Shoreline pH, 2017:**		**7.6**	

Dry Season Comparison, 2016 vs 2017

Aug-16				Sep-17			
Well ID	Sample Date	pH	H+ concen.	Well ID	Sample Date	pH	H+ concen.
Inland Wells (N = 26)							
BBH-MW-101	18-Aug-16	7.93	1.17E-08	BBH-MW-101	19-Sep-17	7.51	3.09E-08
BBH-MW-102	18-Aug-16	6.68	2.09E-07	BBH-MW-102	19-Sep-17	5.86	1.38E-06
BBH-MW-103	17-Aug-16	10.50	3.16E-11	BBH-MW-103	19-Sep-17	11.15	7.08E-12
BBH-MW-104	18-Aug-16	7.28	5.25E-08	BBH-MW-104	19-Sep-17	6.23	5.89E-07
BCT-MW-103	17-Aug-16	7.32	4.79E-08	BCT-MW-103	18-Sep-17	6.55	2.82E-07
BCT-MW-104	18-Aug-16	7.18	6.61E-08	BCT-MW-104	18-Sep-17	6.88	1.32E-07
BCT-MW-105	18-Aug-16	7.57	2.69E-08	BCT-MW-105	18-Sep-17	7.11	7.76E-08
BCT-MW-107	18-Aug-16	10.05	8.91E-11	BCT-MW-107	18-Sep-17	9.04	9.12E-10
BCT-MW-108	18-Aug-16	9.58	2.63E-10	BCT-MW-108	19-Sep-17	10.53	2.95E-11
CMS-MW-1R	17-Aug-16	6.92	1.20E-07	CMS-MW-1R	19-Sep-17	7.72	1.91E-08
CMS-MW-2	17-Aug-16	6.79	1.62E-07	CMS-MW-2	19-Sep-17	7.67	2.14E-08
GF11-MW-101	17-Aug-16	7.40	3.98E-08	GF11-MW-101	19-Sep-17	8.22	6.03E-09
GF9-MW-2	18-Aug-16	11.86	1.38E-12	GF9-MW-2	18-Sep-17	11.52	3.02E-12
GF9-MW-3	18-Aug-16	7.16	6.92E-08	GF9-MW-3	18-Sep-17	6.93	1.17E-07
HB-MW-1R	17-Aug-16	8.68	2.09E-09	HB-MW-1R	18-Sep-17	9.05	8.91E-10
LP-MW-1	18-Aug-16	8.60	2.51E-09	LP-MW-1	18-Sep-17	8.15	7.08E-09
OPS-MW-1	17-Aug-16	10.40	3.98E-11	OPS-MW-1	19-Sep-17	10.46	3.47E-11
SHB-MW-101	17-Aug-16	7.19	6.46E-08	SHB-MW-101	18-Sep-17	7.09	8.13E-08
TM-MW-2	17-Aug-16	8.91	1.23E-09	TM-MW-2	18-Sep-17	7.37	4.27E-08
TM-MW-3	17-Aug-16	11.88	1.32E-12	TM-MW-3	18-Sep-17	11.05	8.91E-12
TM-MW-4	18-Aug-16	12.40	3.98E-13	TM-MW-4	18-Sep-17	12.43	3.72E-13
UST29-MW-101	18-Aug-16	9.54	2.88E-10	UST29-MW-101	18-Sep-17	10.58	2.63E-11
UST29-MW-103	18-Aug-16	10.95	1.12E-11	UST29-MW-103	18-Sep-17	11.23	5.89E-12
UST70-MW-2	18-Aug-16	7.82	1.51E-08	UST70-MW-2	18-Sep-17	7.08	8.32E-08
UST71-MW-101	17-Aug-16	7.65	2.24E-08	UST71-MW-101	18-Sep-17	6.65	2.24E-07
UST71-MW-103	18-Aug-16	8.10	7.94E-09	UST71-MW-103	18-Sep-17	7.53	2.95E-08
	Average (geomean) [H]:		1.97E-09		Average (geomean) [H]:		3.00E-09
Average Inland pH, 2016:		**8.7**		**Average Inland pH, 2017:**		**8.5**	
Shoreline Wells (N = 13)							
LP-MW-2	17-Aug-16	7.02	9.55E-08	LP-MW-2	18-Sep-17	6.53	2.95E-07
MW-2	17-Aug-16	7.53	2.95E-08	MW-2	18-Sep-17	7.66	2.19E-08
MW-6	17-Aug-16	7.71	1.95E-08	MW-6	18-Sep-17	7.42	3.80E-08
PM-MW-7	17-Aug-16	7.24	5.75E-08	PM-MW-7	18-Sep-17	6.95	1.12E-07
PM-MW-8	18-Aug-16	6.84	1.45E-07	PM-MW-8	18-Sep-17	6.80	1.58E-07
RCD-MW-101	18-Aug-16	7.50	3.16E-08	RCD-MW-101	18-Sep-17	6.79	1.62E-07
REC3-MW-1R	18-Aug-16	7.09	8.13E-08	REC3-MW-1R	18-Sep-17	6.89	1.29E-07
REC6-MW-2	17-Aug-16	8.01	9.77E-09	REC6-MW-2	18-Sep-17	7.43	3.72E-08
REC7-MW-2	17-Aug-16	7.55	2.82E-08	REC7-MW-2	18-Sep-17	7.25	5.62E-08
REC7-MW-3	17-Aug-16	7.52	3.02E-08	REC7-MW-3	18-Sep-17	7.37	4.27E-08
REC7-MW-4	17-Aug-16	7.83	1.48E-08	REC7-MW-4	18-Sep-17	7.76	1.74E-08
SHB-MW-2	17-Aug-16	6.85	1.41E-07	SHB-MW-2	18-Sep-17	6.83	1.48E-07
UST70-MW-102	17-Aug-16	7.94	1.15E-08	UST70-MW-102	18-Sep-17	7.19	6.46E-08
	Average (geomean) [H]:		3.69E-08		Average (geomean) [H]:		7.18E-08
Average Shoreline pH, 2016:		**7.4**		**Average Shoreline pH, 2017:**		**7.1**	

Note: Only wells measured in each pair of monitoring events are used. Because pH is a logarithmic term, each well's pH value was converted to its hydrogen ion concentration ([H+] = 10^(-pH)). The geometric mean [H+] was calculated for each monitoring event, and then its inverse log calculated to represent average pH value for that event (pH = -log[H+]).

Table 3 - Groundwater PAH Data To Date for Wells Monitored in March 2017

Project No. 110207, K-C Worldwide Site Upland Area, Everett, Washington

Chemical Name	Ground-water PCL	AP-MW-1R		GF9-MW-3			GF9-MW-3 FD	HB-MW-1R			HBV-MW-101		UG-MW-2R			UST29-MW-103				
		11/13/13	03/07/17	11/06/13	02/19/14	03/07/17	03/07/17	11/13/13	02/25/14	03/07/17	05/14/14	03/07/17	11/07/13	02/24/14	03/07/17	05/14/14	08/13/14	11/06/14	02/18/15	03/07/17
Polycyclic Aromatic Hydrocarbons (PAHs)																				
Acenaphthene (ug/L)	90	0.071	0.099	2.8	6.5	2.8	2.3	0.12	0.06	0.052	0.19	0.022	4.7	1.7	0.92	0.55	0.26	0.32	0.45	0.087
Acenaphthylene (ug/L)	90	0.012 U	0.01 U	0.077	0.17	0.024	0.022	0.012 U	0.05 U	0.01 U	0.05 U	0.01 U	0.012 U	0.05 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U
Anthracene (ug/L)	400	0.014	0.01 U	0.012 U	0.38	0.039	0.034	0.031	0.05 U	0.01 U	0.05 U	0.01 U	0.031	0.05 U	0.01 U	0.16	0.093	0.12	0.13	0.01 U
Benzo(g,h,i)perylene (ug/L)	30	0.012 U	0.01 U	0.012 U	0.05 U	0.01 U	0.01 U	0.012 U	0.05 U	0.01 U	0.05 U	0.01 U	0.012 U	0.05 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.01 U
Fluoranthene (ug/L)	16	0.038	0.01 U	0.11	0.071	0.059	0.054	0.06	0.11	0.021	0.05 U	0.01 U	0.18	0.065	0.24	0.21	0.12	0.15	0.24	0.081
Fluorene (ug/L)	70	0.012 U	0.01 U	0.7	2	0.75	0.61	0.048	0.05 U	0.01 U	0.088	0.01	0.81	0.38	0.01 U	0.21	0.14	0.22	0.22	0.02
Phenanthrene (ug/L)	400	0.059	0.01 U	0.33	0.73	0.21	0.17	0.074	0.05 U	0.01 U	0.11	0.022	0.021	0.05 U	0.01 U	0.13	0.37	0.49	0.52	0.01 U
Pyrene (ug/L)	30	0.043	0.012	0.11	0.12	0.052	0.046	0.061	0.063	0.045	0.05 U	0.01 U	0.091	0.05 U	0.12	0.21	0.13	0.21	0.26	0.24
Naphthalene (ug/L)	89	0.026	0.01 U	150	210	0.71	0.11	0.019	0.05 U	0.013	0.35	0.01 U	0.025	0.05 U	0.01 U	0.22	0.14	0.13	0.14	0.019
Benz(a)anthracene (ug/L)		0.012 U	0.01 U	0.012 U	0.02	0.01 U	0.01 U	0.015	0.012	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.022	0.01 U	0.01 U	0.015	0.013
Benzo(a)pyrene (ug/L)		0.012 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(b)fluoranthene (ug/L)		0.012 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzo(k)fluoranthene (ug/L)		0.012 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Chrysene (ug/L)		0.012 U	0.01 U	0.012 U	0.022	0.01	0.01 U	0.016	0.012	0.012	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.027	0.01	0.016	0.017	0.014
Dibenzo(a,h)anthracene (ug/L)		0.012 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Indeno(1,2,3-cd)pyrene (ug/L)		0.012 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.012 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Total cPAHs TEQ (ug/L)	0.015	ND	ND	ND	0.00922	0.0076	ND	0.0101	0.00832	0.00762	ND	ND	ND	ND	ND	0.00947	0.0076	0.0077	0.0087	0.00844

Notes

Highlighted cell exceeds respective preliminary cleanup level (PCL).

J - Analyte was positively identified. The reported result is an estimate.

U - Analyte was not detected at or above the reported result.

FD - Field duplicate sample.

Table 4 - PCB Congener Data from March 2017 Groundwater Samples

Chemical Name	Ground-water PCL	BCT-MW-102	BCT-MW-108	CMS-MW-1R	CN-MW-103	DAST-MW-101	HB-MW-1R	UG-MW-2R	UST-29-MW-103
PCB Congeners in pg/L									
Total PCB Congeners	9,100	2,271	4,829	21,802	2,468	216,343	435,040	3,188	5,918
Total Dioxin-Like PCB Congeners (TEQ)	2.7	0.0035	0.0053	0.0095	0.0046	1.33	8.52	0.0042	0.0043
PCB 1		12.4 J	3.61 U	111	10.9 U	97.6	129	3.81 U	22.6
PCB 2		6.18 J	3.83 U	3.35 U	10.6 U	14.3 U	6.36 U	3.99 U	2.53 U
PCB 3		6.03 J	4.18 U	16.4 J	10.6 U	36.4 J	6.93 U	4.29 U	2.75 U
PCB 4		18.9 J	598	5300	202	412	7290	11.1 J	1310
PCB 10		3.83 J	24.5 J	205	11.8 J	18.8 J	360	1.29 J	44.8 J
PCB 9		4.22 J	3.06 U	164	13.7 J	32.1	133	2.42 U	34.4
PCB 7		3.32 J	2.75 U	58.1	4.93 U	35.4	44.3	2.17 U	7.41 J
PCB 6		5.76 J	29.9	549	33.2	58.5	440	2.42 U	92.4
PCB 5		1.83 J	2.95 U	1.63 U	5.29 U	31.4	3.28 U	2.33 U	0.936 U
PCB 8		18.8 J	99.2	2290	103	304	1890	6.23 J	377
PCB 14		2.37 J	2.92 U	1.61 U	5.23 U	36.2	3.2 U	2.3 U	0.924 U
PCB 11		1.01 U	3.04 U	1.68 U	5.44 U	53.1 J	3.26 U	2.4 U	0.963 U
PCBs 12 + 13		5.26 J	2.89 U	42.6 J	5.18 U	80.2	45.9 J	2.28 U	7.94 J
PCB 15		8.48 J	38.1	479	13.6 J	65.7	558	2.51 U	104
PCB 19		8.12 U	60.3	471	40.8 J	1200	990	9.92 U	141
PCBs 18 + 30		26.2 J	249	1950	145	2010	2420	12.3 J	500
PCB 17		24.7	93.7	697	47.5	2990	846	8.42 U	179
PCB 27		5.14 U	21.8 J	134	13 U	121	257	6.08 U	36.1
PCB 24		4.84 U	6.82 U	5.27 U	12.2 U	23.7 J	24.7	5.72 U	4.24 U
PCB 16		11.2 J	139	929	61.7 J	422	1270	9.47 U	255
PCB 32		9.24 J	60	338	34.3	10900	604	5.46 U	103
PCB 34		6.18 U	9.6 U	10.4 U	15.7 U	43.5 U	25.4 U	11.2 U	5.32 U
PCB 23		5.84 U	9.08 U	9.78 U	14.9 U	41.1 U	25.6 U	10.6 U	5.03 U
PCBs 26 + 29		5.68 U	16.9 J	150	14.5 U	74.6 J	227	10.3 U	39.9 J
PCB 25		4.17 U	6.49 U	35.6	10.6 U	514	53.4 J	7.52 U	10.2 J
PCB 31		13.7 J	94.6	737	18.3 J	3640	858	10.2 U	201
PCBs 20 + 28		20.9 J	76.2	627	19.6 J	8010	1000	9.79 U	165
PCBs 21 + 33		8.88 J	63.9	372	16.2 J	392	442	9.07 U	104
PCB 22		5.49 U	34.3 J	208	14 U	587	301	9.88 U	66.7
PCB 36		5.22 U	8.12 U	8.74 U	13.3 U	36.7 U	22.5 U	9.4 U	4.5 U
PCB 39		4.81 U	7.48 U	8.06 U	12.3 U	33.8 U	23 U	8.66 U	4.14 U
PCB 38		5.53 U	8.6 U	9.27 U	14.1 U	38.9 U	26.1 U	9.96 U	4.77 U
PCB 35		5.87 U	9.12 U	9.83 U	14.9 U	41.3 U	26.4 U	10.6 U	5.06 U
PCB 37		5.94 U	9.49 U	88.4	14.3 U	40.9 U	165	10.5 U	23
PCB 54		4.86 J	6.18 U	7.68 J	11.7 U	1280	13.1 J	6.25 U	3.57 U
PCBs 50 + 53		11.2 J	20 J	116	8.54 U	22300	408	6.79 U	33 J
PCBs 45 + 51		35.6 J	30.3 J	161	47.1 J	11100	581	12.4 J	55.5
PCB 46		4.55 U	10.1 U	53.7	10.4 U	5310	216	8.25 U	12.9 J
PCB 52		3.71 U	103	478	8.46 U	14200	2540	6.73 U	174
PCBs 43 + 73		3.29 U	7.31 U	4.9 U	7.5 U	358	4.93 U	5.97 U	2.78 U
PCBs 49 + 69		17 J	28.5 J	204	6.69 J	22800	822	5.07 U	44.3 J
PCB 48		3.4 U	15.1 J	84.4	7.75 U	15.4 U	276	6.17 U	19.8 J
PCBs 44 + 47 + 65		2.97 U	79 J	364	6.76 U	26300	1580	5.38 U	130
PCBs 59 + 62 + 75		8.46 J	8.75 J	46.2 J	7.99 J	592	162	4.85 U	10.4 J
PCB 42		6.42 J	6.64 U	73.8 J	6.82 U	5010	419	5.42 U	17.3 J
PCBs 41 + 71 + 40		14.1 J	33.5 J	202	10.5 J	11700	738	6.26 U	51.6 J
PCB 64		6.33 J	17.7 J	92.9	4.6 U	1100	483	3.66 U	27 J
PCB 72		3.88 J	5.63 U	6.49 J	5.77 U	351	4.05 U	4.59 U	2.14 U
PCB 68		10.6 J	12.9 J	23.8 J	30.2 J	410	12.3 J	5.91 J	21.8 J
PCB 57		2.77 J	5.9 U	8.3 J	6.05 U	12 U	4.26 U	4.81 U	2.24 U
PCB 58		2.5 J	5.34 U	6.7 J	5.48 U	76.3	351	4.36 U	2.03 U
PCB 67		2.49 U	5.54 U	11.1 J	5.68 U	11.3 U	10.3 J	4.52 U	2.1 U
PCB 63		2.88 J	5.59 U	10.1 J	5.74 U	420	7.22 J	4.57 U	2.13 U
PCBs 70 + 61 + 74 + 76		24.7 J	37.7 J	166 J	5.19 U	3140	410	6.85 J	50.1 J
PCB 66		7.77 J	12.1 J	58	5.84 U	5970	178	4.65 U	17.5 J
PCB 55		2.79 J	5.43 U	9.26 J	5.57 U	11.1 U	4.16 U	4.43 U	2.06 U
PCB 56		7.25 J	6.75 U	21.7 J	15 U	217	32.2 J	7.48 U	4.86 U
PCB 60		5.33 J	6.43 U	9.47 U	14.3 U	30 U	13.7 U	7.12 U	4.62 U
PCB 80		6.47 J	5.93 U	8.73 U	13.2 U	32.8 J	12 U	6.57 U	4.26 U
PCB 79		6.02 J	5.71 U	8.42 U	12.7 U	26.6 U	12.3 U	6.33 U	4.11 U
PCB 78		7.62 J	6.55 U	9.65 U	14.5 U	30.5 U	13.5 U	7.26 U	4.71 U
PCB 81		10.7 J	6.69 U	9.86 U	14.8 U	32.5 U	13.6 U	7.14 U	4.57 U
PCB 77		11.6 J	7.17 J	12.9 J	15.3 U	39.5 J	13.4 U	7.15 U	4.6 U

Table 4 - PCB Congener Data from March 2017 Groundwater Samples

Chemical Name	Ground-water PCL	BCT-MW-102	BCT-MW-108	CMS-MW-1R	CN-MW-103	DAST-MW-101	HB-MW-1R	UG-MW-2R	UST-29-MW-103
PCB 104		2.6 J	3.61 U	5.05 J	7.36 U	73.3	4.52 U	4.06 U	2.33 U
PCB 96		4.54 J	3.13 U	2.93 U	5.39 U	710	3.29 U	3.1 U	1.62 U
PCB 103		5.62 J	3.63 U	12.8 J	6.25 U	609	3.76 U	3.59 U	1.88 U
PCB 94		3.51 J	3.99 U	4.92 J	6.87 U	729	4.4 U	3.95 U	2.06 U
PCBs 95 + 93 + 100		68.1 J	78 J	236	16.5 J	4000	14800	10.6 J	76.6 J
PCBs 98 + 102		4.74 J	3.22 U	17.4 J	5.54 U	642	38.6 J	3.19 U	1.66 U
PCBs 88 + 91		19.6 J	5.01 J	63.5	6.35 U	4940	130	3.65 U	4.44 J
PCB 84		21.9 J	24.5 J	70.5	7.41 U	1740	656	4.26 U	24.7
PCB 89		2.43 U	4.08 U	7.15 J	7.02 U	23.8 J	4.45 U	4.04 U	2.11 U
PCB 121		4.59 J	3.15 U	8.26 J	7.09 U	30 J	6.3 U	2.68 U	1.89 U
PCB 92		16.9 J	12.2 J	44.8 J	10.3 U	2300	1490	3.86 U	9.55 J
PCBs 90 + 101 + 113		2 U	68.7 J	196 J	8.38 U	3700	13600	3.17 U	2.23 U
PCBs 83 + 99		30.4 J	31.9 J	127	9.25 U	3340	445	9.71 J	23.2 J
PCB 112		6.39 J	3.13 U	8.66 J	7.03 U	15 U	5.85 U	2.77 J	1.87 U
PCBs 86 + 87 + 97 + 109 + 11		1.8 U	3.36 U	138 J	7.56 U	1740	1630	2.86 U	2.01 U
PCBs 85 + 116 + 117		25.1 J	20.8 J	49.5 J	7.38 U	520	6 U	8.52 J	9.99 J
PCBs 110 + 115		40.7 J	81 J	159	17.3 J	3930	5690	13.5 J	49.9 J
PCB 82		10.2 J	9.27 J	21.9 J	10.6 U	102	103	3.99 U	5.15 J
PCB 111		7.38 J	2.79 U	10.9 J	6.27 U	36.9 J	5.26 U	3.17 J	1.67 U
PCB 120		10.7 J	2.88 U	11.9 J	6.48 U	50.4 J	4.99 U	2.45 U	1.73 U
PCBs 108 + 124		18.2 J	9.37 J	28 J	9.94 J	76.4 J	28.2 J	6.51 J	3.35 J
PCB 107		11.6 J	7.29 J	18.4 J	6.71 U	385	30.8 J	5.24 J	2.2 J
PCB 123		10.8 J	3.97 U	15.1 J	7.1 U	21.2 U	27.4 U	4.55 J	1.69 U
PCB 106		10.6 J	4.98 J	13.8 J	6.89 U	19.6 U	28.4 U	2.91 U	1.75 U
PCB 118		24.6	40.4	84.6	17.7 J	1670	1370	15.5 J	24.4
PCB 122		10.8 J	4 U	17.2 J	7.22 U	20.5 U	30.7 U	4.16 J	2.08 J
PCB 114		11.1 J	8.05 J	18.1 J	7.01 U	20.3 U	28.2 U	5.36 J	2.44 J
PCB 105		17.4 J	19.4 J	42	12.6 J	257	319	12.4 J	13.1 J
PCB 127		13.8 J	3.92 J	13.3 J	6.36 U	18 U	28.8 U	4.76 J	2.39 J
PCB 126		15.5 J	11.2 J	21.7	9.12 J	20.4 U	65.1 J	5.63 J	2.18 J
PCB 155		6.53 J	1.88 U	10.3 J	4.05 J	31.3 J	3.97 U	2.14 J	1.15 J
PCB 152		7.77 J	2.67 J	11.4 J	2.45 U	78.8 J	3.01 U	2.51 J	0.769 U
PCB 150		5.43 J	3.69 J	9.78 J	2.25 U	98.9	3.6 U	2.21 J	1.12 J
PCB 136		21.4 J	16.4 J	46.5 J	5.11 J	781	6810	6 J	9.61 J
PCB 145		8.67 J	3.41 J	12 J	3.62 J	15.4 J	3.34 U	2.93 J	1.91 J
PCB 148		11 J	5.6 J	14.5 J	4.42 J	52.8 J	4.42 U	3.9 J	2.15 J
PCBs 135 + 151 + 154		57.3 J	43.7 J	95.6 J	20.5 J	1900	18400	22.8 J	19.7 J
PCB 144		15.2 J	10.9 J	22.3 J	7.62 J	86	2660	3.58 J	3.38 J
PCBs 147 + 149		77.2 J	90.6 J	161	23.1 J	2970	37200	32 J	32.9 J
PCB 134		8.56 J	8.7 J	16.5 J	5.32 J	260	1430	5.2 U	2.53 U
PCB 143		12.5 J	4.8 J	15.5 J	5.49 J	8.46 U	43.5 U	6.69 U	3.25 U
PCBs 139 + 140		21.2 J	12.3 J	25.6 J	9.89 J	64.7 J	41.4 U	5.48 U	2.67 U
PCB 131		8.22 J	4.46 J	11.2 J	4.17 J	26.6 J	157	4.95 U	2.41 U
PCB 142		9.72 J	5.48 J	13.8 J	5.19 J	13.8 J	49.1 U	6.71 U	3.26 U
PCB 132		32.6 J	42.8 J	49.2 J	10.2 J	482	9880	18.8 J	13.9 J
PCB 133		15.1 J	7.48 J	17.8 J	7.1 J	119	312	6.29 U	3.06 U
PCB 165		11.8 J	6.15 J	12.3 J	4.06 J	29.3 J	83.5	4.3 U	2.09 U
PCB 146		23.6 J	20.2 J	37.3 J	8.05 J	420	4250	7.28 J	5.88 J
PCB 161		13.8 J	7.09 J	17.2 J	7.74 J	5.52 U	34.3 U	4.36 U	2.12 U
PCBs 153 + 168		96.3 J	90.6 J	131	33.5 J	1990	30000	93.3 J	27.9 J
PCB 141		28.8 J	30.2 J	33.5 J	13.6 J	298	9720	28.7 J	9.88 J
PCB 130		19.1 J	13.7 J	20 J	5.88 J	138	734	8.02 J	3.04 U
PCB 137		13.9 J	7.79 J	18.8 J	8.22 J	95.6	42 U	5.03 U	2.45 U
PCB 164		19.2 J	13.6 J	23.7 J	9.81 J	213	2490	13.5 J	4.42 J
PCBs 129 + 138 + 163		113 J	142 J	148 J	2.62 U	2530	39400	146 J	2.28 U
PCB 160		8.3 J	1.6 U	13.1 J	8.13 J	3.94 U	22.5 U	3.11 U	1.52 U
PCB 158		21 J	20 J	25.9 J	9.26 J	166	2480	16.9 J	5.26 J
PCBs 128 + 166		34 J	31.4 J	45.8 J	18.5 J	278	1950	23.6 J	9.34 J
PCB 159		16.4 J	10.8 J	19.5 J	9.4 J	40 J	497	9.52 J	3.14 J
PCB 162		15.2 J	5.44 J	17.6 J	9.06 J	21.9 J	21.7 J	5.64 J	1.8 J
PCB 167		20.4	13.8 J	24.2	10.2 J	90.3	629	13.7 J	4.71 J
PCBs 156 + 157		3.23 U	4.25 U	3.19 U	3.82 U	205	1280	3.39 U	1.5 U
PCB 169		19.4 J	11.6 J	22.4 J	9.71 J	20.6 J	62.7 B	9.74 J	3.56 J
PCB 188		13 J	6.11 J	16.2 J	7.09 J	30.3	3.28 U	4.93 J	2.02 J
PCB 179		27.4 J	23.7 J	35.3 J	11.3 J	357	8590	17.9 J	7.73 J
PCB 184		11.6 J	6.37 J	15.4 J	5.63 J	15.6 J	2.46 U	6.22 J	2.28 J
PCB 176		18.8 J	14.1 J	18.7 J	7.42 J	85.4	2280	10.2 J	3.64 J
PCB 186		11.5 J	7.51 J	16.2 J	5.04 J	12 J	2.78 U	4.74 J	1.46 J
PCB 178		22.7 J	17.4 J	25.7 J	9.85 J	203	3810	20.3 J	5.22 J

Table 4 - PCB Congener Data from March 2017 Groundwater Samples

Chemical Name	Ground-water PCL	BCT-MW-102	BCT-MW-108	CMS-MW-1R	CN-MW-103	DAST-MW-101	HB-MW-1R	UG-MW-2R	UST-29-MW-103
PCB 175		19.1 J	8.95 J	21.6 J	7.86 J	29.7 J	758	9.64 J	3.27 J
PCB 187		46.6 J	53.3 J	52.5	23.4 J	684	21600	88.7	17 J
PCB 182		16.2 J	9.43 J	16.2 J	9.2 J	21.3 J	3.77 U	6.63 J	2.78 J
PCBs 183 + 185		37 J	44 J	57.8 J	22.5 J	361	13400	69.5 J	13.8 J
PCB 174		47.2 J	58.5 J	47.5 J	22.9 J	508	21500	103	15.9 J
PCB 177		33.4 J	32.1 J	31.1 J	17.3 J	316	10400	64.2	9.97 J
PCB 181		14 J	6.14 J	14.7 J	8.18 J	16.2 J	14.7 U	5.77 J	2.29 J
PCBs 171 + 173		39.2 J	29.1 J	43.2 J	23.3 J	200	5000	42.3 J	8.74 J
PCB 172		21.8 J	18.6 J	25 J	14.2 J	108	3120	29.2 J	4.68 J
PCB 192		13.4 J	6.98 J	15.8 J	7.01 J	11.4 J	13.5 U	6.72 J	2.46 J
PCBs 180 + 193		90.8 J	120 J	73.6 J	3.57 U	1020	40600	269	0.983 U
PCB 191		16.3 J	11.5 J	17.4 J	11.4 J	40.6 J	663	12.2 J	4.05 J
PCB 170		46.4 J	71.1	39.5 J	27.8 J	524	15700	152	21.1 J
PCB 190		23.8 J	17.6 J	22.5 J	15.1 J	108	3330	31.8 J	4.89 J
PCB 189		21.4	14.7 J	24.9	10.4 J	32.8 J	473	17.3 J	3.95 J
PCB 202		25.3	20.3 J	32.4	16.4 J	51.2 J	1790	17 J	6.73 J
PCB 201		28.2 J	14.8 J	36.6 J	14.2 J	45.9 J	1260	17.9 J	5.08 J
PCB 204		26.2 J	16.2 J	33.2 J	10.2 J	18 J	5.69 U	10 J	3.16 J
PCB 197		25.5 J	11.8 J	29.2 J	9.58 J	29.1 J	334	11.3 J	3.52 J
PCB 200		29.6 J	18.3 J	32.8 J	13.1 J	54.4 J	1270	18.6 J	6.28 J
PCBs 198 + 199		1.26 U	2.62 U	2.16 U	2.22 U	238	10100	1.89 U	1.31 U
PCB 196		33.5 J	28.7 J	38.8 J	19.5 J	145	4870	49.7 J	8.17 J
PCB 203		32.5 J	32.3 J	37.9 J	18.4 J	135	5810	47.9 J	9.95 J
PCB 195		33.2 J	24.8 J	37.2 J	15.5 J	112	3400	43.7 J	6.89 J
PCB 194		1.15 U	2.4 U	1.98 U	2.03 J	226	8480	1.74 U	1.2 U
PCB 205		27.2	12.2 J	37.7	14.3 J	33	381	17.2 J	6.02 J
PCB 208		3.07 U	6.41 U	4.42 U	5.6 U	9.22 U	736	4.92 U	2.46 U
PCB 207		30.1 J	7.25 U	34.9 J	13.8 J	31.2 J	393	16.8 J	5.18 J
PCB 206		9.21 U	21.1 U	17.8 U	14.1 U	26.1 U	3170	11.2 U	9.26 U
PCB 209		1.64 U	3.48 U	2.81 U	2.34 U	6.09 U	232	2.58 U	1.41 U

Notes

Preliminary cleanup levels (PCL) are analytical practical quantitation limits (PQLs) derived from this data set including method blanks. Toxicity equivalency factors (TEFs) are incorporated into the PQL for Total Dioxcin-Like PCB Congeners (TEQ).

Highlighted cell exceeds respective preliminary cleanup level.

J - Analyte was positively identified. The reported result is an estimate.

U - Analyte was not detected at or above the reported result.

1 picogram per liter (pg/L) = 1/1 millionth of a microgram per liter (ug/L) = 1 part per quadrillion.

For reference, surface water standards (below PQLs) are 64 pgL Total PCB Congeners and 0.0051 pg/L Total Dioxin-Like PCB Congeners (TEQ).

Samples collected March 7, 2017.

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
Groundwater PCL			5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
BA-MW-7	B	11/04/13		1.39						1.040		0.147	0.00137 J	0.0018 DJ	2.79	8.66 D								8.44
	B	02/23/14		4.50					5.38	8.37 D		0.59		0.0133		7.42								7.0
CN-MW-1	E	11/04/13		0.5 U						0.48 J		0.103	0.00179 J	0.00103 DJ		2.06								0.95
	E	02/25/14		0.2 J						0.63		0.124		0.00063 J		1.28								1.6
LP-MW-2	C	11/05/13		1.05						4.5		1.810	0.111 J	0.132 DJ		0.20 U								3.36
	C	02/24/14	16.2	15.6 D					22	23.6 D	11.1	15.3 D	0.248	0.456 D		8.10								19.7
	C	02/08/16																						
	C	05/24/16																						
	C	08/17/16																						
	C	03/08/17	15.3						5.74		1.14		0.0177		6.45								28.7	
	C	07/10/17																						
	C	09/18/17																						
LP-MW-7	C	07/10/17	0.19 J		0.02 U		1.66		0.38		0.059		0.00248		1.82		1.0 U		0.020 U		0.020 U		0.30 J	
	C	09/18/17																						
MW-1	A	02/17/12									5 U													
	A	06/06/12	0.95		0.096		0.34		2.56		0.097		0.1 U		2.65		1 U		0.009 J		0.02 U		8.84	
	A	08/27/12	0.68 J		0.228		4.32		4.35		0.088		0.1 U		23		1.0 U		0.031 J		0.050 U		21.1	
	A	11/07/13		1.26					3.030	4.510 D		2.910		0.00221		6.76								20.5
	A	02/23/14		1.40					2.70	3.43 D		0.30		0.00152		1.42								10.8
	A	11/18/15							2.650															
	A	02/09/16							1.85															
	A	05/24/16							1.85															
	A	08/17/16							2.81															
MW-2	A	02/17/12									1 U													
	A	06/06/12	1.35	1.33 D	0.077	0.035 D	1.13	0.38 D	1.36	0.718 D	6.42	0.198 D	0.1 U	0.1 DU	12.3	13.1 D	1 U	1 DU	0.013 J	0.02 DU	0.02 U	0.02 DU	2.31	1.7 D
	A	08/27/12	1.57	1.44 D	0.022 J	0.049 D	0.33 J	0.76 D	1.020	1.800 D	0.280	4.490 D	0.1 U	0.1 DU	6.80	6.70 D	1.0 U	1.0 DU	0.050 U	0.005 DJ	0.050 U	0.022 DU	1.07 J	1.24 D
	A	11/14/13	1.10						1.150		0.352			0.00127	2.60								2.04	
	A	02/23/14		1.30						2.11		2.84		0.00165		1.68								2.0
	A	11/18/15							1.620															
	A	02/09/16							2.76															
	A	05/24/16							0.854															
	A	08/17/16							1.23															
	A	03/07/17	1.3						1.2		0.511		0.00123		1.07								3.58	
	A	07/11/17																						
	A	09/18/17																						
MW-5	D	02/17/12	4.68		1 U		1.92		7.09		1 U		0.1 U		3.48		15.3		1 U				1.61	
	D	06/05/12	3.92		1 U		1.58		5.21		1 U		0.1 U		3.38		13.8 J		1 U		1 U		1 U	
	D	08/31/12	6.67		1 U		1.42		15.9		1 U		0.1 U		4.87		25.6		1 U		1 U		5.67	
	D	11/06/13		0.22 J						0.155		0.032	0.0014 J	0.00108 DJ		0.72 J								0.27 J
	D	02/25/14		1.1						0.344		0.05		0.00045 J		3.76								2.9

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL		5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
MW-6	C	02/17/12		5.2		1 U		4.28		4.14		1 U		0.1 U		5.95		12.4		1 U				1.49	
	C	06/07/12		6.38	5.88 D	1 U	1 DU	5.26	6.62 D	3.29	3.85 D	1 U	1 DU	0.1 U	0.1 DU	7.81	7.82 D	16.3	14.6 D	1 U	1 DU	1 U	1 DU	13	3.96 D
	C	08/29/12		7.8	6.07 D	1 U	1 DU	5.32	6.95 D	5.29	4.85 D	1 U	1.41 D	0.1 U	0.1 DU	10.5	9.59 D	24.9	17 D	1 U	1 DU	1 U	1 DU	3.16	12.9 D
	C	11/06/13			0.90						1.450		2.170	0.00272 J	0.00983 DJ		3.61								16.8
	C	02/23/14			1.10						1.97 J		2.82 J		0.00741 J		3.36 J								23.3 J
	C	02/23/14	FD		1.00						1.48 J		1.83 J		0.00448 J		1.86 J								18.6 J
	C	02/10/16																							
	C	05/24/16																							
	C	08/17/16																							
	C	03/08/17		0.75						0.16		0.015 J		0.00033 J		1.82								0.47 J	
	C	07/10/17																							
	C	09/18/17																							
NRP-MW-2	D	06/05/12		1 U		1 U		1 U		1 U		1 U		0.1 U		2.12		1.11 J		1 U		1 U		4.44	
	D	08/31/12		2.18		1 U		1 U		1 U		1 U		0.1 U		4.08		8.26		1 U		1 U		2.45 J	
	D	11/06/13			1.44 J						0.68		0.025 J	0.00152 J	0.0014 DJ		3.22								1.34
	D	02/25/14			2.0						0.68		0.049 J		0.00109		5.36								2.6
	D	05/13/14																							
	D	08/12/14																							
	D	11/05/14																							
	D	02/17/15																							
	D	02/22/16																							
	D	05/23/16																							
	D	08/17/16																							
NRP-MW-3	D	06/05/12		2.11		1 U		5.48		1.84		1 U		0.1 U		2.31		4.49 J		1 U		1 U		3.57	
	D	06/05/12	FD																						
	D	08/30/12		2.6		1 U		4.54		3.55		1 U		0.1 U		2.18		4.42		1 U		1 U		2.78	
	D	11/05/13			4.60					0.63 J	12.0 D		3.36	0.00227 J	0.0271 DJ	1.09	14.4 D								21.0
	D	02/25/14			3.8					0.53	14.9 D		4.880	0.00253 J	0.0259 D	1.19	19.4 D								33.0
NRS-MW-101	D	05/13/14																							
	D	08/12/14																							
	D	11/04/14																							
	D	02/17/15																							
NRS-MW-102	D	05/13/14																							
	D	08/12/14																							
	D	11/04/14																							
	D	02/17/15																							
	D	03/08/17		0.04 J						0.13		0.007 J		0.00014 J		3.14								0.8	
	D	07/11/17																							
	D	09/18/17																							

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL		5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
NRU-MW-101	D	05/13/14																							
	D	08/12/14																							
	D	11/05/14																							
	D	02/17/15																							
NRU-MW-102	D	05/13/14																							
	D	08/12/14																							
	D	11/05/14																							
	D	02/17/15																							
	D	03/08/17		3.55					2.32		0.698		0.00348		1.3									2.2	
	D	07/11/17																							
	D	09/18/17																							
OMS-MW-1	A	06/06/12		0.76		0.079		0.35	1.07		0.056		0.1 U		6.75		0.8 J		0.005 J		0.026			3.99	
	A	08/28/12		0.64		0.009 J		3.11	0.557		0.058 J		0.1 U		18.6		1.0 U		0.006 J		0.022 U			6.31	
	A	11/07/13			0.75					1.110		0.119		0.00221		5.38 J									2.31
	A	02/24/14			1.30				0.428	3.96 D		0.15		0.00337		4.87									11.2
	A	03/07/17		1.45					3.26		0.024		0.00504		2.96									3.35	
	A	07/11/17																							
	A	09/18/17																							
OMS-MW-2	A	09/30/15		1.44					1.420		0.160		0.00255		4.74									6.76	
PM-MW-7	B	11/07/13			1.73					1.060		0.054		0.00022 J	10.4	10.5 D									6.43
	B	11/07/13	FD		1.94					1.070		0.056		0.00231 J		10.5									6.34
	B	02/24/14			0.80					1.52		0.12		0.00143		6.78									6.1
	B	02/22/16																							
	B	05/23/16																							
	B	08/17/16																							
	B	03/07/17		0.39 J					1.06		0.028		0.0009		18.5									3.61	
	B	07/11/17																							
	B	09/18/17																							
PM-MW-8	B	11/05/13			1.77					1.080		0.174	0.0041 J	0.00469 DJ		3.34									2.72
	B	02/24/14			1.10					2.42		0.45		0.00344		7.42									2.3
	B	11/18/15		0.70					2.370		0.075		0.00413											1.88	
	B	02/10/16		0.66					1.80		0.057		0.00361											0.64	
	B	05/23/16		0.51					1.17		0.023 J		0.00135 J											1.99	
	B	08/18/16		0.66					1.50		0.088		0.00228 J											3.18 J	
	B	03/07/17		1.09					1.85		0.087		0.00203		3.59									1.08	
	B	03/07/17	FD	1.11					1.79		0.036		0.00234		3.14									0.87	
	B	07/11/17																							
	B	09/18/17																							

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Arsenic - Dissolved (ug/L)	Arsenic - Total (ug/L)	Cadmium - Dissolved (ug/L)	Cadmium - Total (ug/L)	Chromium (Total) - Dissolved (ug/L)	Chromium (Total) - Total (ug/L)	Copper - Dissolved (ug/L)	Copper - Total (ug/L)	Lead - Dissolved (ug/L)	Lead - Total (ug/L)	Mercury - Dissolved (ug/L)	Mercury - Total (ug/L)	Nickel - Dissolved (ug/L)	Nickel - Total (ug/L)	Selenium - Dissolved (ug/L)	Selenium - Total (ug/L)	Silver - Dissolved (ug/L)	Silver - Total (ug/L)	Thallium - Dissolved (ug/L)	Thallium - Total (ug/L)	Zinc - Dissolved (ug/L)	Zinc - Total (ug/L)
		Groundwater PCL		5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
RCD-MW-101	B	05/12/14			0.68					2.07	2.6 D				0.00162	92.4	93.9 D								
	B	08/11/14		0.99						4.52				0.0027		159									
	B	11/04/14		1.1						1.55				0.00083		85.4									
	B	02/18/15		1.11						1.080				0.00079		19									
	B	11/17/15								2.350						57.5									
	B	02/08/16								0.754						36.7									
	B	05/23/16								1.18						20.3									
	B	08/18/16								1.76						55.2									
	B	03/08/17		1.15						0.82		0.011 J		0.00044 J		6.86								1.54	
	B	07/11/17																							
	B	09/18/17																							
REC1-MW-9	A	09/13/12																							
	A	09/13/12	FD																						
	A	11/08/13			1.87						1.250		2.080		0.00526		3.17								7.87
	A	02/24/14			1.90						1.30		1.24		0.00253		1.79								8.1
REC3-MW-1	B	06/07/12		2.22		0.776		0.09 J		0.568		0.022		0.1 U		4.95		1 U		0.02 U		0.02 U		2.4	
	B	08/29/12		1.91		0.286		0.20 J		0.300		0.050 U		0.1 U		83.3		1.0 U		0.050 U		0.050 U		2.07	
REC3-MW-1R	B	11/14/13		5.8	6.6 D						2.00		0.361		0.008		5.52								2.3
	B	02/24/14			2.30					3.3	3.28 D		0.28		0.00541	46.9	57.6 D								4.6
	B	11/17/15		1.59						4.95		0.018 J		0.0035										1.53	
	B	02/09/16		4.7						3.06		0.018 J		0.00697										1.1	
	B	05/23/16		1.79						4.26		0.014 J		0.00315										1.57	
	B	08/18/16		1.34						3.41		0.035		0.00335										2.48 J	
	B	03/07/17		2.08						1.83		0.008 J		0.00217		43.5								0.68	
	B	07/11/17																							
	B	09/18/17																							
REC6-MW-2	D	06/05/12		3.44		1 U		4.03		2.56		1 U		0.1 U		4.08		4.54 J		1 U		1 U		1 U	
	D	08/30/12		3.89		1 U		3.47		6.52		1 U		0.1 U		3.58		5.07		1 U		1 U		4.3	
	D	08/30/12	FD																						
	D	11/07/13		4.63	5.91 D					0.24	0.45 D		0.137		0.00296	1.79	3.33 D								1.24 J
	D	02/24/14			2.8						0.40		0.072		0.00021 J		2.00								1.5
	D	02/22/16																							
	D	05/23/16																							
	D	08/17/16																							
	D	03/08/17		1.63						0.2		0.076		0.00045 J		0.9								7.9	
	D	07/11/17																							
	D	09/18/17																							

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

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Groundwater PCL			5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
REC7-MW-1	E	06/05/12	2.52		1 U		1.74		4.41		1 U		0.1 U		4.55		8.59 J		1 U		1 U		17	
	E	08/30/12	1.12		1 U		1.94		2.49		1 U		0.1 U		5.13		3.77		1 U		1 U		9.1	
	E	11/04/13		0.56 J						0.88		0.014 J	0.00181 J	0.001 DU		3.87								1.00
	E	02/25/14		0.3 J						0.73		0.030 J		0.00037 J		2.00								3.8
	E	02/22/16																						
	E	05/23/16																						
	E	08/17/16																						
REC7-MW-2	D	06/05/12	1 U	1 DU	1 U	1 DU	1.02	1.06 D	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.97	2.62 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1 U	1 DU
	D	08/30/12	1 U	1 DUJ	1 U	1 DU	1 U	1.11 D	1 U	1 DU	1 U	1 DU	0.1 U	0.1 DU	2.75	2.71 D	1 U	1 DU	1 U	1 DU	1 U	1 DU	1.63	1.82 DJ
	D	11/06/13		0.69 J						0.87		0.008 J		0.00156		6.35								0.77 J
	D	02/25/14		0.3 J						0.86		0.021 J		0.00265		2.81								0.4 J
	D	02/22/16																						
	D	05/23/16																						
	D	08/17/16																						
	D	03/08/17	0.92						0.45		0.049		0.0017		1.74								0.7 J	
	D	07/11/17																						
	D	09/18/17																						
REC7-MW-3	A	06/06/12	1.9		0.094		0.31		1.48		0.045		0.1 U		0.73		1 U		0.013 J		0.02 U		2.58	
	A	08/28/12	1.84		0.129		0.73		1.920		0.060 J		0.1 U		19.4		1.0 U		0.016 J		0.022 U		3.85	
	A	11/06/13		1.84						1.610		0.338		0.0245		3.11 J								5.38
	A	02/24/14		1.60					1.41	6.87 D		0.45	0.0127	0.0313 D		1.06								4.1
	A	02/22/16																						
	A	05/23/16																						
	A	08/17/16																						
	A	03/07/17	1.9						2.52		0.648		0.0225		1.26								4.22	
	A	07/11/17																						
	A	09/18/17																						
REC7-MW-4	A	06/06/12	2.64	2.66 D	0.118	0.105 D	0.15 J	0.08 DJ	0.311	0.212 D	1.49	0.421 D	0.1 U	0.1 DU	6.22	6.25 D	1 U	1 DU	0.03	0.004 DJ	0.02 U	0.02 DU	8.3	7.58 D
	A	08/28/12	1.57	1.54 D	0.422	0.432 D	0.19 J	1.12 D	0.536	1.360 D	0.086	0.597 D	0.1 U	0.1 DU	40	39.3 D	1.0 U	1.0 DU	0.022 U	0.035 D	0.022 U	0.025 DU	19.9	19.8 D
	A	11/08/13		1.24						1.830		2.760		0.00877		7.56								17.6
	A	02/23/14		0.96						1.22		0.95		0.00322		2.65								14.0
	A	05/23/16																						
	A	08/17/16																						
	A	03/07/17	0.79						0.67		0.211		0.00172		1.93								4.12	
	A	07/11/17																						
	A	09/18/17																						

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Groundwater PCL			5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
SHB-MW-2	C	11/07/13		3.86						0.161		0.342		0.00122		0.61 J								1.07
	C	02/23/14		3.80						0.628		0.06		0.00079 J		1.36								3.1
	C	02/22/16																						
	C	05/23/16																						
	C	08/17/16																						
	C	03/08/17	1.46					3.34			0.441		0.00822		1.53							2.6		
	C	07/11/17																						
	C	09/18/17																						
TM-MW-6	D	11/07/13		0.50 U						0.58		0.102		0.00086 J		2.39								1.24 J
	D	02/24/14		0.3 J						0.96		0.100		0.00124		1.13								1.9
	D	03/08/17	0.28 J					0.16			0.035		0.00012 J		0.39							1.7 J		
	C	07/11/17																						
	D	09/18/17																						
UST70-MW-2	B	06/07/12	5.23		0.135		0.18 J	1.09			0.125		0.1 U		2.01		1 U		0.02 U		0.02 U	116		
	B	08/29/12	1.11 J		0.284		110	0.741			0.050 U		0.1 U		308		1.0 U		0.050 U		0.050 U	12.2		
	B	11/07/13		0.74				4.56	3.390 D		0.041		0.00127		110	55.5 D								10.2
	B	02/23/14		0.87				4.09	4.81 D		0.05		0.00111		20.8	21.3 D								14.5
	B	05/12/14		1.2					7.11							19.2								12.3
	B	08/11/14	0.76					2.66							19.1							51.5		
	B	11/04/14	1.5					11.9							35.4							8.9		
	B	02/19/15	1.25					7.64							6.85							31.3		
	B	11/17/15						9.19							24.6									
	B	02/08/16						6.98							5.00									
	B	05/24/16						5.16							5.43									
	B	08/18/16						6.19							12.6									
	B	03/08/17	1.45					6.03			0.036		0.00154		5.25							29.5		
	B	07/11/17																						
	B	09/18/17																						

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Groundwater PCL				5	5	8.8	8.8	240000	240000	3.1	3.1	8.1	8.1	0.025	0.025	8.2	8.2	71	71	1.9	1.9	0.22	0.22	81	81
Intertidal Seeps and Porewater																									
DISCHARGE-1A	D	08/31/16																							
DISCHARGE-4A	B	08/31/16																							
PW-3	B	02/27/14		0.71	3.10 D					0.095 J	15.8 D			0.00067 J	0.00015 DJ	0.22	5.01 D								
	B	08/11/14		0.56						0.109		0.011 J		0.00137		0.29								0.4 J	
	B	08/11/14	FD	0.54						0.108		0.011 J		0.00123		0.29								0.7	
	B	02/19/15																							
	B	02/19/15	FD																						
PW-4	B	02/27/14		0.81	0.96 D					1.72	1.83 D			0.00179	0.00156 D	1.65	1.66 D								
	B	08/11/14		0.18 J						0.095 J		0.015 J		0.001		0.21								0.8	
	B	02/19/15																							
PW-5	C	02/27/14		2.20	2.50 D					0.091 J	1.63 D			0.00009 J	0.00023 DJ	0.93	0.98 D								
	C	08/11/14		1.6						0.057 J		0.013 J		0.00126		0.66								0.6	
	C	02/19/15																							
PW-7	D	02/27/14		2.20	3.50 D					0.114	9.41 D			0.00027 J	0.001 DU	1.19	8.04 D								
	D	08/11/14		0.44 J						0.118		0.008 J		0.00043 J		0.94								0.5	
	D	02/19/15																							
SEEP-1	A	02/26/14		2.10	2.10 D					1.24	2.65 D			0.00108	0.00444 D	0.73	0.81 D								
	A	08/11/14		1.9						1.51		0.475		0.00156		0.68								7.5	
	A	10/18/16																							
SEEP-2	C	10/17/16																							
SEEP-3	C	10/20/16	FD	2.06 J						2.41		0.369		0.00365		1.26								1.71	
	C	10/20/16		2.04 J						2.32		0.358		0.00399		1.26								1.83	
SEEP-4	C	10/18/16																							
SEEP-5	C	10/18/16																							
SEEP-6	B	10/18/16																							
SEEP-7	C	10/18/16																							
SEEP-8	B	10/18/16																							
SEEP-9	B	10/18/16																							
SEEP-10	D	08/31/16																							
	D	10/20/16		0.20 J						0.18		0.039		0.0005 J		1.56								1.17	
SEEP-11	D	10/20/16		0.06 J						0.17		0.018 J		0.00023 J		1.03								0.29 J	
SEEP-12	D	10/20/16		1.29 J						0.14		0.037		0.00192		1.10								1.10	
SEEP-13	D	10/20/16		0.21 J						0.14		0.025			0.0162	2.70								1.51	
SEEP-14	B	10/20/16																							
Surface Water																									
EWW-1	C	02/27/14		1.00	1.00 D					1.07	1.07 D			0.00038 J	0.00041 DJ	0.56	0.60 D								
	C	08/11/14		1						0.74		0.036		0.00079		0.46								6.3	
	C	07/26/17																							
EWW-2	A	10/18/16																							
LP-SW-01	C	07/26/17																							
LP-SW-02	C	07/26/17																							
LP-SW-03	C	07/26/17																							

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
BA-MW-7	B	11/04/13	0.32	52	7.2	43031	11.7	1
	B	02/23/14	0.3	44	7.2	21113	12.0	7
CN-MW-1	E	11/04/13	0.1	-34	6.4	528	15.3	6
	E	02/25/14	0.2	-58	6.2	537	11.4	3
LP-MW-2	C	11/05/13	0.2	-234	6.8	1983	15.4	24
	C	02/24/14	0.0	-209	9.2	1044	9.8	10
	C	02/08/16			8.6			
	C	05/24/16	0.4	-30.8	6.85	867	15.4	
	C	08/17/16	0.39	0.7	7.02	1295	17.5	
	C	03/08/17	0.53	40.6	7.85	561.6	10.4	3.25
	C	07/10/17	0.21	2.5	6.64	761	16.2	15.6
	C	09/18/17	0.23	-60	6.53	862	17.2	
LP-MW-7	C	07/10/17	0.09	-190.6	7.03	6029	21.2	24
	C	09/18/17	1.62	-63	6.99	4230	18.9	24
MW-1	A	02/17/12	6.3	118	7.4	36646	8.3	5
	A	06/06/12	7.0	114	7.6	19290	14.6	2
	A	08/27/12	5.2	136	7.0	43088	18.4	4
	A	11/07/13	5.8	20	7.4	44613	11.5	2
	A	02/23/14	7.8	68	7.5	30494	7.3	1
	A	11/18/15	6.43	51.4	7.59	29680	11.8	3.96
	A	02/09/16	8.44	12.5	7.72	24968	8.9	2.92
	A	05/24/16	5.86	164.6	7.63	33902	14.6	0.95
	A	08/17/16	9.46	73.2	7.15	40589	19.7	1.39
MW-2	A	02/17/12	6.6	-102	8.8	9109	10.4	79
	A	06/06/12	1.4	88	8.0	19510	14.7	2
	A	08/27/12	1.0	13	8.2	22874	17.6	6
	A	11/14/13	2.2	-3	8.1	27670	12.3	1
	A	02/23/14	3.2	-102	8.4	16078	8.7	1
	A	11/18/15	5.43	22.3	8.13	21222	12.3	1.84
	A	02/09/16	5.58	-0.9	8.18	20115	9.4	1.7
	A	05/24/16	3.18	145.5	8.17	19981	14.2	0.81
	A	08/17/16	10.08	46.4	7.53	33772	19.2	3.15
	A	03/07/17	6.06	34.7	8.27	20430	7.94	1.42
	A	07/11/17	3.28	3.8	8.30	22513	17.4	5.63
	A	09/18/17	5.69	39	7.66	37518	16.0	
MW-5	D	02/17/12	1.5	-222	6.7	5773	11.0	70
	D	06/05/12	0.1	-78	5.8	3554	12.9	1
	D	08/31/12	5.4	-189	6.7	6538	16.1	2
	D	11/06/13	0.1	-57	6.7	4660	15.1	1
	D	02/25/14	0.3	-19	6.6	9850	10.3	86

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL						6.5-8.5			
MW-6	C	02/17/12		5.0	-141	7.4	3809	17.2	26
	C	06/07/12		0.2	-40	7.3	3347	17.7	22
	C	08/29/12		1.7	-144	7.1	3856	18.6	13
	C	11/06/13		0.2	-230	7.4	3934	18.1	35
	C	02/23/14		0.1	-125	7.2	3889	17.0	40
	C	02/23/14	FD						
	C	02/10/16				9.16			
	C	05/24/16		0.03	-92.6	7.6	3972	18.5	
	C	08/17/16		0.29	-134.5	7.71	4299	19.7	
	C	03/08/17		4261	-132.9	7.55	16.1	13.4	6.01
	C	07/10/17		0.06	-120.2	7.61	4427	19.7	38.1
	C	09/18/17		1.30	-69	7.42	4290	18.8	
NRP-MW-2	D	06/05/12		0.4	-1	6.1	770	13.4	2
	D	08/31/12		6.5	-149	6.6	1197	17.0	2
	D	11/06/13		0.1	-84	6.7	1143	15.6	1
	D	02/25/14		1.3	-1	6.5	1755	11.2	32
	D	05/13/14		0.28	15.6	6.56	4595	12.0	0.86
	D	08/12/14		0.54	199.0	6.54	14937	16.2	1.29
	D	11/05/14		0.20	-36.4	6.61	6435	16.7	
	D	02/17/15		0.10	-109.6	6.82	3328	10.7	1.00
	D	02/22/16				6.51			
	D	05/23/16		0.11		7.08	4681.6	13.1	
	D	08/17/16		0.12	-151.9	7.21	13804	17.1	1.09
NRP-MW-3	D	06/05/12		2.0	-99	6.5	1410	12.6	37
	D	06/05/12	FD						
	D	08/30/12		6.4	-242	6.4	1522	15.5	377
	D	11/05/13		0.1	-42	6.5	1614	15.1	266
	D	02/25/14		0.3	5	6.4	1571	12.4	240
NRS-MW-101	D	05/13/14		0.18	-98.9	6.52	9021	12.3	5.36
	D	08/12/14		0.18	-34.0	6.16	19547	16.9	25.2
	D	11/04/14		0.15	-71.5	6.48	14564	15.9	41.5
	D	02/17/15		0.55	45.7	6.65	6721	10.8	316
NRS-MW-102	D	05/13/14		0.08	-88.2	7.00	1829	12.1	7.47
	D	08/12/14		0.18	-86.4	6.71	1995	16.4	1.61
	D	11/04/14		0.11	-66.6	6.94	2279	16.3	1.57
	D	02/17/15		0.59	-16.8	7.20	1176	10.7	2.35
	D	03/08/17		0.35	-14.9	7.07	4730	9.4	31.1
	D	07/11/17		0.08	-70.8	7.13	1209	14.4	65.3
	D	09/18/17		1.42	-185	7.38	3167	16.3	

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL				6.5-8.5					
NRU-MW-101	D	05/13/14		0.74	21.0	6.53	4631	12.3	1.79
	D	08/12/14		0.24	-32.1	6.37	16023	16.7	12.5
	D	11/05/14		0.19	23.3	6.87	10880	16.7	6.21
	D	02/17/15		0.17	-42.9	7.01	3988	10.7	12.2
NRU-MW-102	D	05/13/14		0.29	9.5	6.87	7905	12.2	1.84
	D	08/12/14		0.55	196.1	6.73	15609	17.1	3.03
	D	11/05/14		0.08	-121.2	7.62	966	15.9	25.7
	D	02/17/15		0.12	-124.2	7.30	1430	9.8	2.31
	D	03/08/17		0.15	-4.6	7.18	771	8.9	6.42
	D	07/11/17		0.06	-48.1	6.88	5279	15.2	1.56
	D	09/18/17		0.50	-94	7.67	10995	16.5	
OMS-MW-1	A	06/06/12		4.7	115	7.2	19300	14.5	16
	A	08/28/12		2.4	-55	6.9	25177	18.2	2
	A	11/07/13		1.8	-89	7.5	20805	14.9	
	A	02/24/14		5.9	11	7.0	16939	9.4	5
	A	03/07/17		7.28	54.7	7.75	11423	8.6	0.6
	A	07/11/17		5.98	-29.4	7.3	22520	17.3	17
	A	09/18/17		6.75	139	6.85	44895	17.3	
OMS-MW-2	A	09/30/15		2.65	33.9	7.59	37653	17.2	0.68
PM-MW-7	B	11/07/13		3.6	146	7.0	38184		11
	B	11/07/13	FD						
	B	02/24/14		4.8	63	7.1	34709	10.2	12
	B	02/22/16				7.33			
	B	05/23/16		4.91	180.3	7.33	30718	13.1	
	B	08/17/16		1.01	80	7.24	39215	17.1	
	B	03/07/17		6.37	62	7.02	25941	8.24	39.2
	B	07/11/17		4.99	20.3	7.59	31555	15.1	22
	B	09/18/17		0.94	3	6.95	40871	17.6	
PM-MW-8	B	11/05/13		3.0	-66	6.8	36501	15.4	3
	B	02/24/14		3.3	39	7.2	24465	9.9	4
	B	11/18/15		1.88	37.3	7.05	32357	15.3	57.9
	B	02/10/16		1.68	22.4	9.42	6766	11.1	4.04
	B	05/23/16		3.86	98.1	7.03	30091	13.6	1.73
	B	08/18/16		4.6	99.4	6.84	39859	17.9	10.4
	B	03/07/17		6.48	-11.1	7.84	11252	9.1	0.96
	B	03/07/17	FD						
	B	07/11/17		3.34	12.5	7.17	29900	15.3	5.78
	B	09/18/17		2.32	103	6.80	42550	17.5	

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL				6.5-8.5					
RCD-MW-101	B	05/12/14		7.92	68.9	7.01	27189	12.2	5.14
	B	08/11/14		5.75	89.1	6.94	36189	19.5	5.34
	B	11/04/14		7.15	64.9	7.17	36302	13.9	28.7
	B	02/18/15		9.80	58.8	7.26	25430	9.0	30.2
	B	11/17/15		11.13	157.2	7.19	35122	12.5	23.5
	B	02/08/16		9.56	-8.6	7.61	30835	8.0	20.1
	B	05/23/16		8.06	119.7	7.28	32725	14.6	33.7
	B	08/18/16		4.69	49.5	7.5	41040	20.5	6.6
	B	03/08/17		10.76	77	8.35	32349	6.8	7.15
	B	07/11/17		5.66	-22.3	7.05	30918	17.5	28.7
	B	09/18/17		5.44	31	6.79	44925	17.8	
REC1-MW-9	A	09/13/12		0.1	-350	9.0	24753	16.2	2
	A	09/13/12	FD						
	A	11/08/13		0.4	-40	7.6	41067	14.1	3
	A	02/24/14		1.8	18	7.3	24088	9.3	2
REC3-MW-1	B	06/07/12		0.3	23	7.8	17829	13.1	7
	B	08/29/12		0.3	36	6.9	25071	16.3	44
REC3-MW-1R	B	11/14/13		0.4	-36	7.1	10710	17.6	2
	B	02/24/14		1.2	16	7.2	17280	12.3	9
	B	11/17/15		2.82	31.6	7.17	9538	17.0	5.89
	B	02/09/16		0.7	11.1	9.23	6943	11.5	6.71
	B	05/23/16		1.04	87.1	7.19	12347	14.0	1.32
	B	08/18/16		1.83	62.4	7.09	26877	18.2	41.5
	B	03/07/17		6.73	-14.8	7.34	2669	10.1	8.45
	B	07/11/17		1.96	7	7.26	9274	15.8	10.5
	B	09/18/17		2.00	111	6.89	19360	18.3	
REC6-MW-2	D	06/05/12		0.0	-233	7.0	1935	14.8	5
	D	08/30/12		4.3	-453	7.6	2280	17.7	8
	D	08/30/12	FD						
	D	11/07/13		0.0	-389	7.9	2218	16.7	2
	D	02/24/14		0.0	486	6.9	2047	13.6	6
	D	02/22/16				6.96			
	D	05/23/16				7.44	2115	16.9	
	D	08/17/16		0.04	-319.2	8.01	2116	20.0	2.33
	D	03/08/17		0.12	-52.1	6.74	1641	11.22	9.65
	D	07/11/17		0.07	-361.8	7.96	2086	17.3	2.43
	D	09/18/17		0.14	-427	7.43	2211	19.7	

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
REC7-MW-1	E	06/05/12	0.4	-89	6.6	3340	12.6	1
	E	08/30/12	5.4	-241	6.5	1920	17.5	3
	E	11/04/13	0.1	-31	6.7	1253	15.2	1
	E	02/25/14	0.3	-25	6.5	1343	10.3	1
	E	02/22/16			6.7			
	E	05/23/16	0.6		6.74	1052.9	14.1	
	E	08/17/16	0.17	-0.8	6.95	1552	18.4	0.87
REC7-MW-2	D	06/05/12	1.0	-128	6.9	872	14.0	1
	D	08/30/12	4.3	-247	6.8	770	19.3	3
	D	11/06/13	0.1	-90	6.9	1589	16.0	4
	D	02/25/14	0.1	-78	6.9	1522	10.5	6
	D	02/22/16			7.46			
	D	05/23/16	0.05		7.26	2943.5	13.9	
	D	08/17/16	0.13	-53.5	7.55	6206	17.9	1.6
	D	03/08/17	0.38	35.1	8.21	682.1	9.2	2.44
	D	07/11/17	0.12	-48.4	7.22	5882	16.4	10.8
	D	09/18/17	0.11	-76	7.25	6082	17.7	
REC7-MW-3	A	06/06/12	6.9	101	7.8	21420	13.8	1
	A	08/28/12	6.1	80	7.3	34071	17.5	3
	A	11/06/13	5.5	187	7.3	43739	11.9	1
	A	02/24/14	7.4	20	7.4	24572	7.9	4
	A	02/22/16			7.53			
	A	05/23/16	5.06	182.7	7.53	35237	15.1	
	A	08/17/16	5.38	88.6	7.52	42348	18.7	
	A	03/07/17	7.17	-2.8	7.4	31473	9.0	3.73
	A	07/11/17	4.77	2.7	7.96	33541	18	1.65
	A	09/18/17	7.25	78	7.37	44018	16.7	
REC7-MW-4	A	06/06/12	0.2	-155	8.1	21882	13.2	2
	A	08/28/12	0.4	67	7.8	23311	16.6	6
	A	11/08/13	0.4	0	8.0	31021	13.9	7
	A	02/23/14	3.7	-11	8.0	24283	9.2	2
	A	05/23/16	2.24	176.1	7.88	28191	14.0	
	A	08/17/16		109.1	7.83	33428	17.5	
	A	03/07/17	0.47	13.6	8.16	24707	8.6	2.73
	A	07/11/17	0.44	-14.7	8.67	23407	16	11.4
	A	09/18/17	0.63	-2	7.76	32347	16.3	

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date	Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL					6.5-8.5			
SHB-MW-2	C	11/07/13	0.1	-244	6.8	10560	16.9	2
	C	02/23/14	0.6	-42	6.8	6226	11.2	5
	C	02/22/16			7.12			
	C	05/23/16	0.24	-17.2	7.34	4737	13.5	
	C	08/17/16	0.29	7.2	6.85	27703	16.7	
	C	03/08/17	1.84	41.2	7.06	666	10.2	18.2
	C	07/11/17	0.3	-27	6.87	6669	15.3	15.7
	C	09/18/17	0.34	-68	6.83	20727	17.4	
TM-MW-6	D	11/07/13	0.1	-2	7.2	982	16.8	3
	D	02/24/14	0.1	-271	7.0	1082	11.4	1
	D	03/08/17	0.27	32	6.98	869	10.5	5.43
	C	07/11/17	0.14	-63.6	7.27	1536	17.2	3.94
	D	09/18/17	0.01	-56	7.14	997	17.6	
UST70-MW-2	B	06/07/12	0.5	-62	7.3	8768	23.2	1
	B	08/29/12	2.1	43	6.9	21365	26.3	292
	B	11/07/13	0.3	209	7.1	28426	17.5	34
	B	02/23/14	2.3	13	7.2	17667	11.4	2
	B	05/12/14	1.65	1.1	7.25	11812	13.3	24.1
	B	08/11/14	0.61	33	6.93	26580	19.5	6.95
	B	11/04/14	2.56	77.1	7.38	8234	16.9	14.5
	B	02/19/15	1.71	33.6	7.37	15307	11.9	9.36
	B	11/17/15	6.67	132.2	7.24	19856	14.9	10.2
	B	02/08/16	1.91	-31.8	11.19	26724	10.4	7.81
	B	05/24/16	1.07	-12.8	8.91	17532	14.4	8.64
	B	08/18/16	0.5	-15.8	7.82	34467	18.8	29.2
	B	03/08/17	4.29	33	7.49	12466	9.2	8.32
	B	07/11/17	0.57	20	7.3	19111	15.7	38.9
	B	09/18/17	1.22	16	7.08	33878	17.4	

Table 5 - Shoreline Groundwater and Seep/Porewater Metals and Field Parameter Data through Sept. 2017

K-C Worldwide Site Upland Area

Location	Site Unit	Sample Date		Dissolved Oxygen (mg/L)	ORP (mVolts)	pH (pH Units)	Specific Conductance (us/cm)	Temperature (deg C)	Turbidity (NTU)
Groundwater PCL						6.5-8.5			
Intertidal Seeps and Porewater									
DISCHARGE-1A	D	08/31/16				7.33	26800	17.1	
DISCHARGE-4A	B	08/31/16				7.69	31200	17.3	
PW-3	B	02/27/14		1.3	-31	7.90	12155	12.8	
	B	08/11/14		2.4	-187.9	7.79	15539	16.7	
	B	08/11/14	FD						
	B	02/19/15							
	B	02/19/15	FD						
PW-4	B	02/27/14		2.6	-101	7.40	22780	8.4	
	B	08/11/14		0.21	-205	7.31	31326	16.5	
	B	02/19/15							
PW-5	C	02/27/14		0.7	64	8.60	6953	12.9	
	C	08/11/14		0.58	-234.1	8.56	11019	16.7	
	C	02/19/15							
PW-7	D	02/27/14		1.9	44	7.40	18466	7.6	
	D	08/11/14		1.55	-126	6.88	14488	15.7	
	D	02/19/15							
SEEP-1	A	02/26/14		8.9	61	7.80	27570	7.7	
	A	08/11/14		5.73	-76.9	7.66	30602	19.0	
	A	10/18/16		8.18	-33	7.52	29200	13.9	
SEEP-2	C	10/17/16		2.2	-47	7.50	28200	14.4	
SEEP-3	C	10/20/16	FD						
	C	10/20/16		5.37	36	7.76	18230	13.4	
SEEP-4	C	10/18/16		4.95	1	7.48	33170	14.4	
SEEP-5	C	10/18/16		0.41	-70	7.99	33880	13.9	
SEEP-6	B	10/18/16		7.71	-47	7.43	34310	13.6	
SEEP-7	C	10/18/16		9.05	-23	7.41	27090	14.1	
SEEP-8	B	10/18/16		7.95	2	7.10	32740	14.2	
SEEP-9	B	10/18/16		10.04	11	7.38	30370	12.8	
SEEP-10	D	08/31/16				7.33	12900	16.0	
	D	10/20/16		2.54	-158	6.76	11890	13.9	
SEEP-11	D	10/20/16		1.62	-93	6.93	11750	14.4	
SEEP-12	D	10/20/16		1.54	-67	6.98	18230	13.0	
SEEP-13	D	10/20/16		9.14	-29	6.71	10370	13.8	
SEEP-14	B	10/20/16		9.32	22	7.83	34880	12.5	
Surface Water									
EWW-1	C	02/27/14		9.30	125	7.80	30106	7.2	
	C	08/11/14		9.72	20.5	8.37	37888	18.0	
	C	07/26/17		9.52	123.1	8.27	40845	18.3	
EWW-2	A	10/18/16		9.08	-31	7.67	31250	12.2	
LP-SW-01	C	07/26/17		8.86	64.3	8.27	40043	19.7	1.86
LP-SW-02	C	07/26/17		9.58	78.6	8.27	39735	19.6	1.75
LP-SW-03	C	07/26/17		8.57	84.5	8.17	39859	18.8	4.7

FIGURES

N

CN-MW-3
CN-MW-2
CN-MW-1
REC7-MW-1
EXISTING CLARIFIER
EXISTING SECONDARY AERATION BASINS
NRU-MW-102 7.18
NRP-MW-3
MW-5
NRP-MW-2
NRU-MW-101
NRS-MW-102 7.07
NRS-MW-101
UG-MW-1
CONVERTING ADDITION
PARENT ROLL STORAGE
CN-MW-101
CN-MW-104
TM-MW-1
CN-MW-102
REC7-MW-2 8.21
CN-MW-103 7.52
TM-MW-2 10.74
TM-MW-3 11.80
TM-MW-5 7.76
TISSUE MANUFACTURING
TM-MW-6 6.98
EXISTING PUD ELECTRICAL SUBSTATION
TM-MW-4 12.27
CONVERTING/FINISHING
PULP PREP
REC6-MW-2 6.74
UST29-MW-101 12.01
UST29-MW-103 12.20
UST29-MW-102
MW-6 7.55
HBV-MW-101 6.60
WOOD CHIPS PILE
LP-MW-2 7.85
LP-MW-1 12.08
WOOD CHIPS PILE
HYDRAULIC BARKER BUILDING
HB-MW-1R 11.31
SHB-MW-101 6.86
SHB-MW-102
CHIP SILOS
GF9-MW-3 7.36
GF9-MW-4
SHB-MW-2 7.06
COLD STORAGE (PROPOSED)
GF9-MW-2 13.28
RCD-MW-101 8.35
BA-MW-5 7.31
REC5-MW-1R 6.97
AP-MW-1R 8.03
UG-MW-2R 7.58
BA6-MW-101 7.01
BA-MW-1
BA-MW-2
ACID PLANT
PRIMARY CLARIFIERS
UST70-MW-2 7.49
UST70-MW-101
UST71-MW-101 7.31
UST70-MW-102 7.59
UST71-MW-104 8.52
NO. 14 BOILER
FILTER PLANT
UST71-MW-102
UST71-MW-103 10.00
BA-MW-4
BA-MW-3 7.82
BBH-MW-103 12.78
GF11-MW-101 7.57
REC3-MW-1R 7.34
BBH-MW-104 6.88
PM-MW-3
OPS-MW-1 10.52
PM-MW-6 7.28
DIGESTER BUILDING
PM-MW-8 7.84
PM-MW-1
BBH-MW-101 9.73
BLOW PIT BUILDING
WASHER BUILDING
CMS-MW-2
BBH-MW-102 6.43
PM-MW-2
PULP STORAGE BUILDING
PULP DRYING BUILDING
PM-MW-5 11.30
CMS-MW-1R 8.28
PM-MW-7 7.02
SCREEN AND BLEACH 1
PM-MW-4 11.62
SCREEN AND BLEACH 2
DAST-MW-101 7.41
TRAIN SHED
BCT-MW-108 9.66
REC7-MW-3 7.40
OLD MACHINE SHOP
BCT-MW-107 9.86
BCT-MW-103 7.80
OMS-MW-2
UST68-MW-5
BCT-MW-106
BCT-MW-105 7.31
BCT-MW-102 6.63
OMS-MW-1R 7.75
MW-1
BCT-MW-101
BCT-MW-104 8.08
MW-2 8.27
REC1-MW-3
REC1-MW-4
REC1-MW-1
REC1-MW-14
REC7-MW-4 8.16
REC1-MW-15
REC1-MW-12
REC1-MW-2
REC1-MW-9
REC1-MW-10
EXISTING DISTRIBUTION WAREHOUSE
REC1-MW-5
REC1-MW-8
REC1-MW-7
REC1-MW-6
REC1-MW-11
EVERETT AVENUE EASEMENT

Well Groundwater pH
- ≤ 8.5
- > 8.5 to 11.0
- > 11.0
- Well (No Data)
- 200' Shoreline Buffer

- Former Log Pond
- Crushed Material Boundary
- Site Unit Dividers
- Upland Area Boundary
- Interim Action Excavation Extent
- Historical Site Features

0 100 200
Feet

Groundwater pH
March 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	MAR-2017	BY: SJG / RAP	FIGURE NO. 1
	PROJECT NO. 110207-006	REVISED BY: CEB / RAP	

CN-MW-3
CN-MW-2
CN-MW-1
REC7-MW-1
EXISTING CLARIFIER
EXISTING SECONDARY AERATION BASINS
NRP-MW-3
MW-5
NRU-MW-102 6.88
NRP-MW-2
NRU-MW-101
NRS-MW-101
NRS-MW-102 7.13
UG-MW-1
CONVERTING ADDITION
PARENT ROLL STORAGE
CN-MW-101
TM-MW-1
REC7-MW-2 7.22
CN-MW-102
CN-MW-104
CN-MW-103 7.04
TM-MW-2 8.22
TM-MW-3 10.21
TM-MW-6 7.27
TM-MW-5 7.99
TISSUE MANUFACTURING
EXISTING PUD ELECTRICAL SUBSTATION
REC6-MW-2 7.96
PULP PREP
TM-MW-4 12.26
UST29-MW-101 11.63
CONVERTING/FINISHING
LP-MW-7 7.03
UST29-MW-103 11.14
MW-6 7.61
UST29-MW-102
HBV-MW-101 6.92
LP-MW-5 7.26
WOOD CHIPS PILE
LP-MW-4 7.31
HYDRAULIC HARDWOOD BUILDING
HB-MW-1R 9.81
LP-MW-1 12.09
WOOD CHIPS PILE
LP-MW-2 6.64
LP-MW-3 7.10
LP-MW-6 6.79
GF9-MW-3 6.95
SHB-MW-101
SHB-MW-102
CHIP SILOS
GF9-MW-4
SHB-MW-2 6.87
COLD STORAGE (PROPOSED)
GF9-MW-1
GF9-MW-2 11.77
BA-MW-5 7.03
RCD-MW-101 7.05
BA6-MW-101 7.05
AP-MW-1R 10.11
UG-MW-2R 7.34
BA-MW-1
BA-MW-2
UST70-MW-101
UST70-MW-2 7.30
UST71-MW-101 6.99
PRIMARY CLARIFIERS
UST70-MW-102
UST71-MW-104 8.65
BA-MW-3 7.22
NO. 14 BOILER
BA-MW-4
UST71-MW-102
FILTER PLANT
UST71-MW-103 7.70
BBH-MW-101 7.42
BBH-MW-103 11.49
PM-MW-3
GF11-MW-101 7.64
REC3-MW-1R 7.26
BBH-MW-104 6.41
PM-MW-6 7.42
DIGESTER BUILDING
OPS-MW-1 10.64
PM-MW-8 7.17
PM-MW-1
WASHER BUILDING
CMS-MW-1R 7.06
BBH-MW-102 6.37
BLOW PIT BUILDING
CMS-MW-2
PM-MW-2
PULP STORAGE BUILDING
PULP DRYING BUILDING
PM-MW-5 11.06
PM-MW-7 7.59
SCREEN AND BLEACH 1
PM-MW-4 10.84
SCREEN AND BLEACH 2
DAST-MW-101 6.77
TRAIN SHED
BCT-MW-108 10.07
REC7-MW-3 7.96
OLD MACHINE SHOP
BCT-MW-107 10.20
UST68-MW-5
BCT-MW-106
BCT-MW-103 7.07
OMS-MW-2
BCT-MW-105 7.83
BCT-MW-102 7.17
OMS-MW-1 7.30
MW-2 8.30
BCT-MW-104 7.55
BCT-MW-101
REC1-MW-4
REC1-MW-3
REC1-MW-12
REC1-MW-1
REC7-MW-4 8.67
REC1-MW-14
REC1-MW-2
REC1-MW-9
KC-02
REC1-MW-10
EXISTING DISTRIBUTION WAREHOUSE
REC1-MW-8
KC-01
REC1-MW-5
REC1-MW-6
REC1-MW-11
REC1-MW-7
EVERETT AVENUE EASEMENT

Well Groundwater pH
- ≤ 8.5
- > 8.5 to 11.0
- > 11.0
- Well (No Data)
- 200' Shoreline Buffer

- Former Log Pond
- Crushed Material Boundary
- Site Unit Dividers
- Upland Area Boundary
- Interim Action Excavation Extent
- Historical Site Feature

0 100 200
Feet

Groundwater pH
July 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	JUL-2017	BY: SJG / RAP	FIGURE NO. 2
	PROJECT NO. 110207-006	REVISED BY: CEB / RAP	

Groundwater pH
September 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	OCT-2017	BY: SJG / RAP	FIGURE NO. 3
	PROJECT NO. 110207-006	REVISED BY: ---	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\RIFS\6-R8 Groundwater pH - Sept 2017.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/4/2017 || User: rpepin || Print Date: 10/4/2017

REC7-MW1 6.7
NRP-MW2 6.5
CN-MW-101 7.3
REC7-MW2 7.5
TM-MW-2 10.6
TM-MW-3 10.9
REC6-MW2 7.0
UST29-MW-101 9.9
TM-MW-4 13.1
UST29-MW-103 10.9
MW-6 9.2
LP-MW-2 8.6
LP-MW-1 11.2
HB-MW-1R 9.7
SHB-MW-101 7.4
GF9-MW-3 8.6
SHB-MW2 7.1
GF9-MW-2 10.6
RCD-MW-101 7.6
UST70-MW-101 7.3
UST70-MW-2 11.2
UST71-MW-101 11.1
UST70-MW-102 9.6
UST71-MW-102 6.8
REC3-MW-1R 9.2
BBH-MW-101 10.5
BBH-MW-103 10.8
UST71-MW-103 11.8
BBH-MW-104 7.5
PM-MW-8 9.4
BBH-MW-102 11.1
GF11-MW-101 11.9
OPS-MW-1R 10.0
CMS-MW-1R 7.5
CMS-MW-2 10.8
PM-MW7 7.3
BCT-MW-108 10.1
REC7-MW3 7.5
BCT-MW-107 10.2
MW-1 7.7
BCT-MW-106 7.3
BCT-MW-105 10.9
MW-2 8.2
BCT-MW-103 10.9
BCT-MW-104 11.1
REC7-MW4 8.1

EXISTING CLARIFIER
EXISTING SECONDARY AERATION BASINS
CONVERTING ADDITION
PARENT ROLL STORAGE
CONVERTING/FINISHING
TISSUE MANUFACTURING
EXISTING PUD ELECTRICAL SUBSTATION
PULP PREP
HYDRAULIC BARKER BUILDING
ACID PLANT
PRIMARY CLARIFIERS
NO. 14 BOILER
FILTER PLANT
COOLING TOWER
REPULPER STORAGE BUILDING
BLOW PIT BUILDING
PULP STORAGE BUILDING
PULP DRYING BUILDING
SCREEN AND BLEACH 1
SCREEN AND BLEACH 2
TRAIN SHED
OLD MACHINE SHOP
EXISTING DISTRIBUTION WAREHOUSE
EVERETT AVENUE EASEMENT

Former Log Pond
Recycled Material Boundary

Groundwater pH

- ≤ 8.5
- 8.6 to 11.0
- ≥ 11.1

N

0 100 200
Feet

Groundwater pH Site-Wide, February 2016

RIFS Report
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	MAR-2016	BY: CEB / RMB	FIGURE NO. 4
	PROJECT NO. 070188-001-08	REVISED BY: RMB / EAC / PPW	

N

REC7-MW-1 6.7
NRP-MW-2 7.1
CN-MW-101 6.7
REC7-MW-2 7.3
REC6-MW-2 7.4
UST29-MW-101 11.4
MW-6 7.6
LP-MW-2 6.8
SHB-MW-101 7.6
SHB-MW-2 7.3
RCD-MW-101 7.3
UST70-MW-101 7.4
UST70-MW-2 8.9
UST70-MW-102 8.9
UST71-MW-101 7.0
UST71-MW-102 6.7
UST71-MW-103 8.6
REC3-MW-1R 7.2
PM-MW-8 7.0
PM-MW-7 7.3
REC7-MW-3 7.5
MW-1 7.6
MW-2 8.2
REC7-MW-4 7.9
BBH-MW-101 8.0
BBH-MW-102 6.3
BBH-MW-103 11.2
BBH-MW-104 7.8
TM-MW-2 9.1
TM-MW-3 11.3
TM-MW-4 12.0
UST29-MW-103 11.2
LP-MW-1 12.7
GF9-MW-2 12.5
GF9-MW-3 9.4
HB-MW-1R 10.4
GF11-MW-101 8.7
OPS-MW-1R 11.5
CMS-MW-1R 7.3
CMS-MW-2 7.1
BCT-MW-107 10.2
BCT-MW-108 10.8
BCT-MW-106 9.3
BCT-MW-105 9.3
BCT-MW-103 7.2
BCT-MW-104 7.4

EXISTING CLARIFIER
EXISTING SECONDARY AERATION BASINS
CONVERTING ADDITION
PARENT ROLL STORAGE
CONVERTING/FINISHING
TISSUE MANUFACTURING
EXISTING PUD ELECTRICAL SUBSTATION
PULP PREP
WOOD CHIPS PILE
WOOD CHIPS PILE
HYDRAULIC BARKER BUILDING
CHIP SILOS
ACID PLANT
PRIMARY CLARIFIERS
FLY ASH CLARIFIER
NO. 14 BOILER
FILTER PLANT
COOLING TOWER
BAGHOUSE
REPULPER STORAGE BUILDING
DIGESTER BUILDING
BLOW PIT BUILDING
WASHER BUILDING
PULP STORAGE BUILDING
PULP DRYING BUILDING
SCREEN AND BLEACH 1
SCREEN AND BLEACH 2
TREY ST
TRAIN SHED
OLD MACHINE SHOP
EXISTING DISTRIBUTION WAREHOUSE
EVERETT AVENUE EASEMENT

Groundwater pH
- ≤ 8.5
- 8.6 to 11.0
- ≥ 11.1
- Former Log Pond
- Recycled Material Boundary
- Site Unit Dividers
- Upland Area Boundary
- Interim Action Excavation Extent
- Historical Site Features

0 100 200
Feet

Groundwater pH Site-Wide May 2016

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	JUN-2016	BY: CEB / RMB	FIGURE NO. 5
	PROJECT NO. 070188-001-08	REVISED BY: RAP	

N

REC7-MW-1 6.95
NRP-MW-2 7.21
REC7-MW-2 7.55
CN-MW-101 7.49
TM-MW-3 11.88
TM-MW-2 8.91
REC6-MW-2 8.01
UST29-MW-101 9.54
TM-MW-4 12.4
UST29-MW-103 10.95
MW-6 7.71
LP-MW-1 8.60
LP-MW-2 7.02
HB-MW-1R 8.68
SHB-MW-101 7.19
GF9-MW-3 7.16
SHB-MW-2 6.85
GF9-MW-2 11.86
RCD-MW-101 7.50
UST71-MW-101 7.65
UST70-MW-101 7.78
UST71-MW-102 7.07
UST70-MW-2 7.82
UST70-MW-102 7.94
UST71-MW-103 8.10
REC3-MW-1R 7.94
BBH-MW-103 10.5
GF11-MW-101 7.40
BBH-MW-104 7.28
OPS-MW-1R 10.4
PM-MW-8 7.94
BBH-MW-101 6.68
CMS-MW-2 6.79
BBH-MW-102 6.68
CMS-MW-1R 6.92
PM-MW-7 7.24
REC7-MW-3 7.52
BCT-MW-108 9.58
BCT-MW-107 10.05
BCT-MW-106 7.05
BCT-MW-105 7.94
MW-1 7.15
BCT-MW-104 7.18
MW-2 7.53
BCT-MW-103 7.32
REC7-MW-4 7.83

EXISTING CLARIFIER
EXISTING SECONDARY AERATION BASINS
CONVERTING ADDITION
PARENT ROLL STORAGE
CONVERTING/FINISHING
EXISTING PUD ELECTRICAL SUBSTATION
TISSUE MANUFACTURING
PULP PREP
WOOD CHIPS PILE
WOOD CHIPS PILE
HYDRAULIC BARKER BUILDING
CHIP SILOS
ACID PLANT
PRIMARY CLARIFIERS
FLY ASH CLARIFIER
NO. 14 BOILER
FILTER PLANT
COOLING TOWER
BAGHOUSE
REPULPER STORAGE BUILDING
DIGESTER BUILDING
WASHER BUILDING
BLOW PIT BUILDING
PULP STORAGE BUILDING
PULP DRYING BUILDING
SCREEN AND BLEACH 1
SCREEN AND BLEACH 2
TRAIN SHED
OLD MACHINE SHOP
EXISTING DISTRIBUTION WAREHOUSE
EVERETT AVENUE EASEMENT

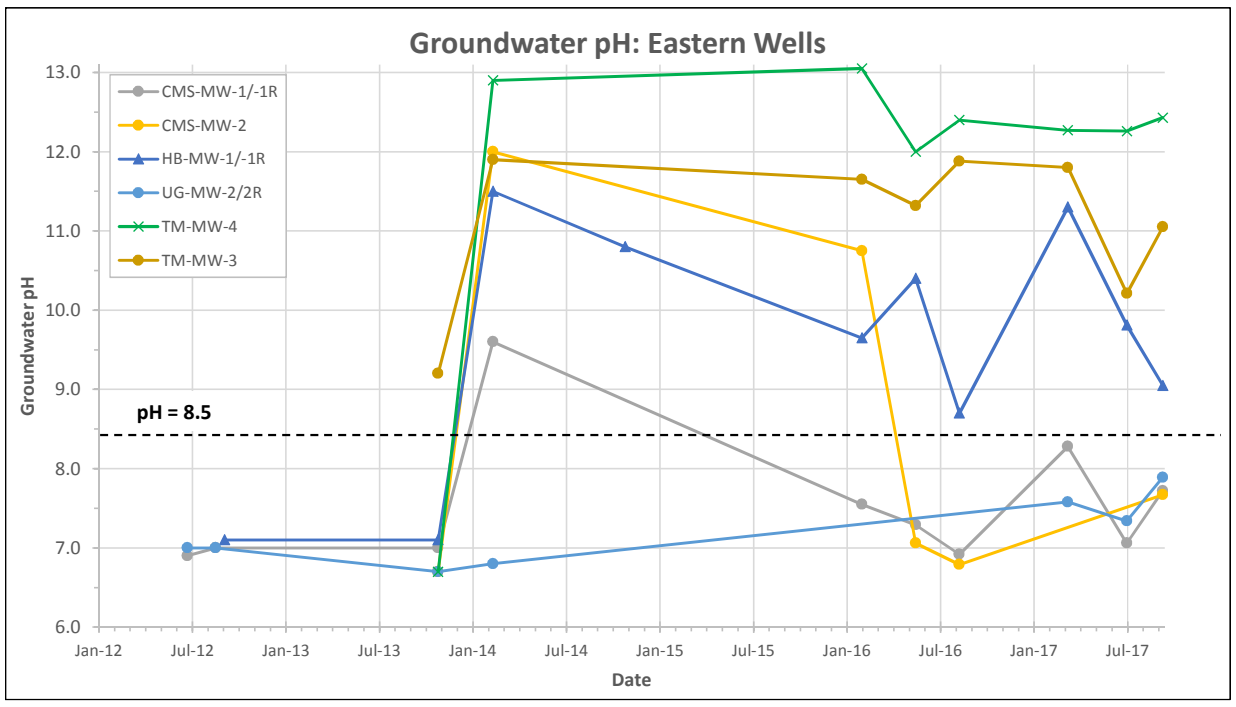
Groundwater pH
- ≤ 8.5
- 8.6 to 11.0
- ≥ 11.1
- Former Log Pond
- Recycled Material Boundary
- Site Unit Dividers
- Upland Area Boundary
- Interim Action Excavation Extent
- Historical Site Features

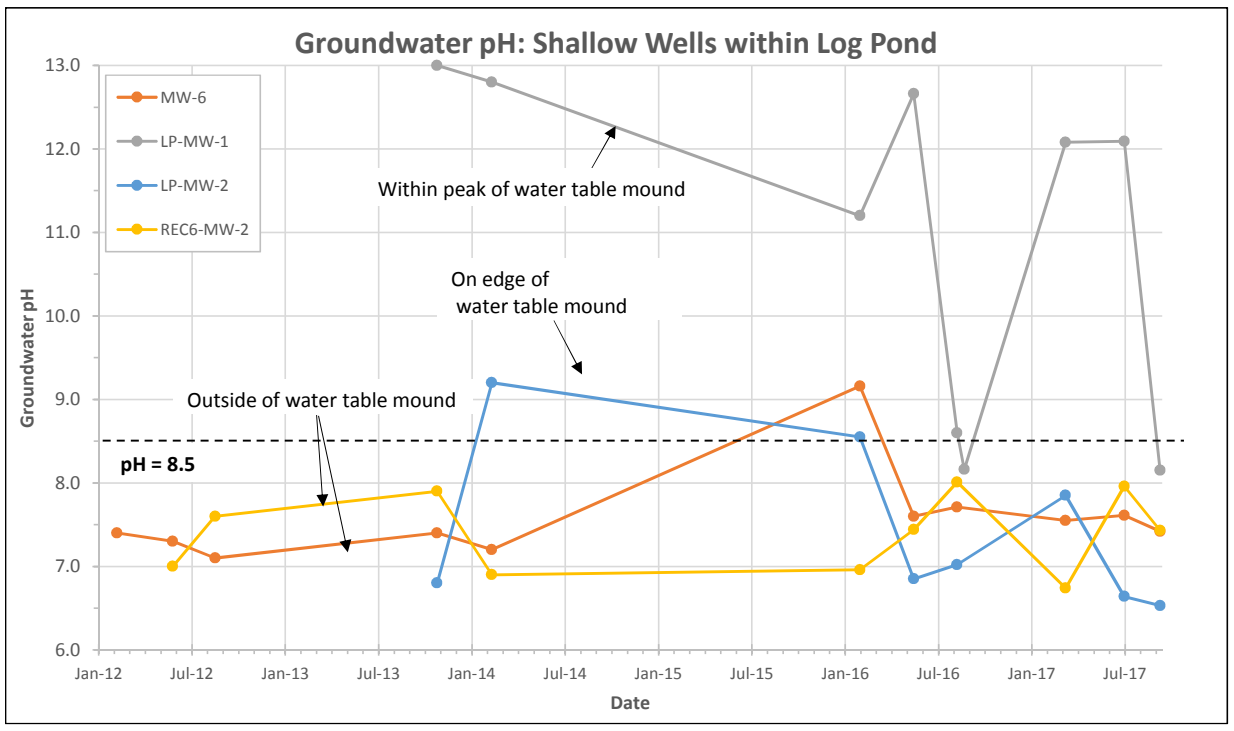
0 100 200
Feet

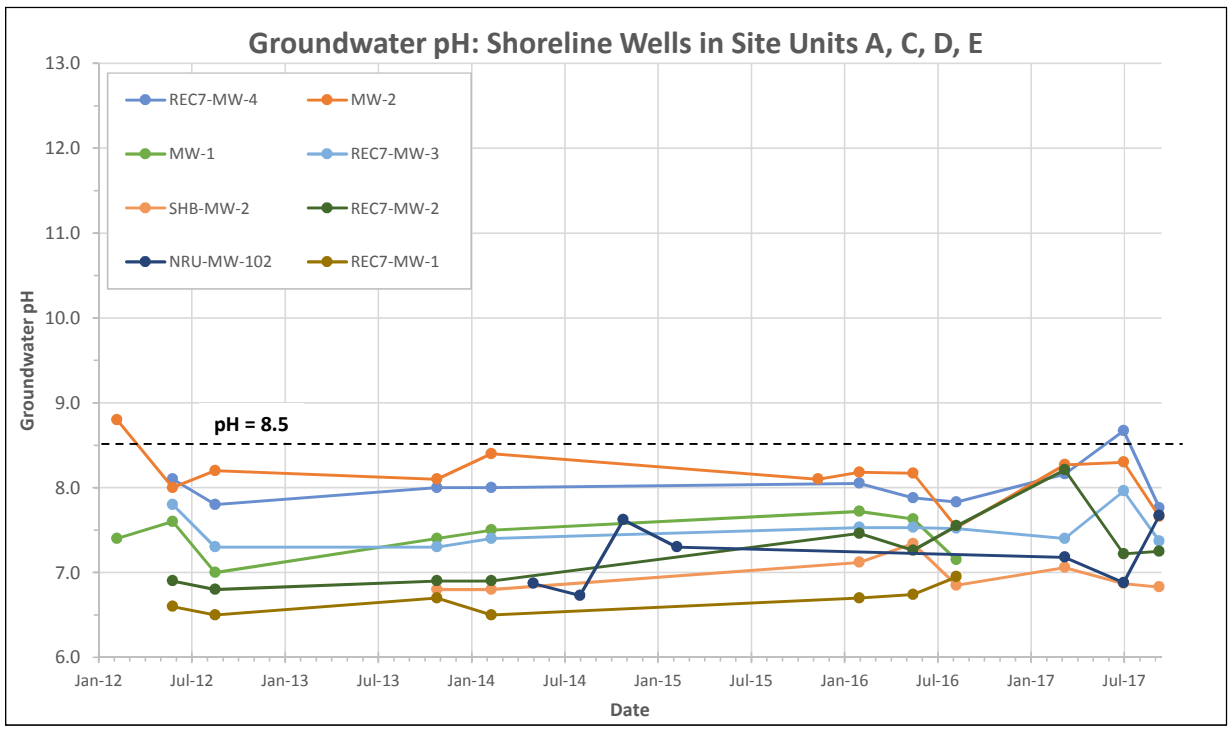
Groundwater pH Site-Wide August 2016

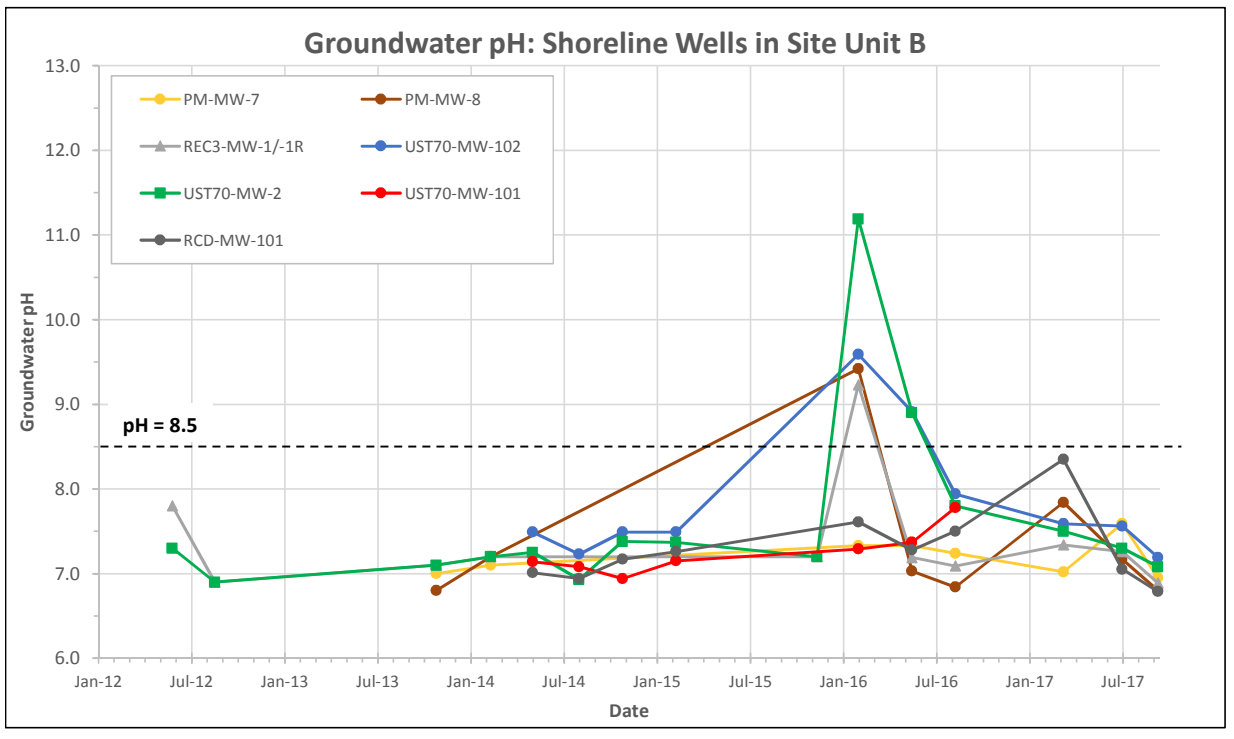
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	DEC-2016	BY: CEB / RMB	FIGURE NO. 6
	PROJECT NO. 070188-001-08	REVISED BY: RMB	



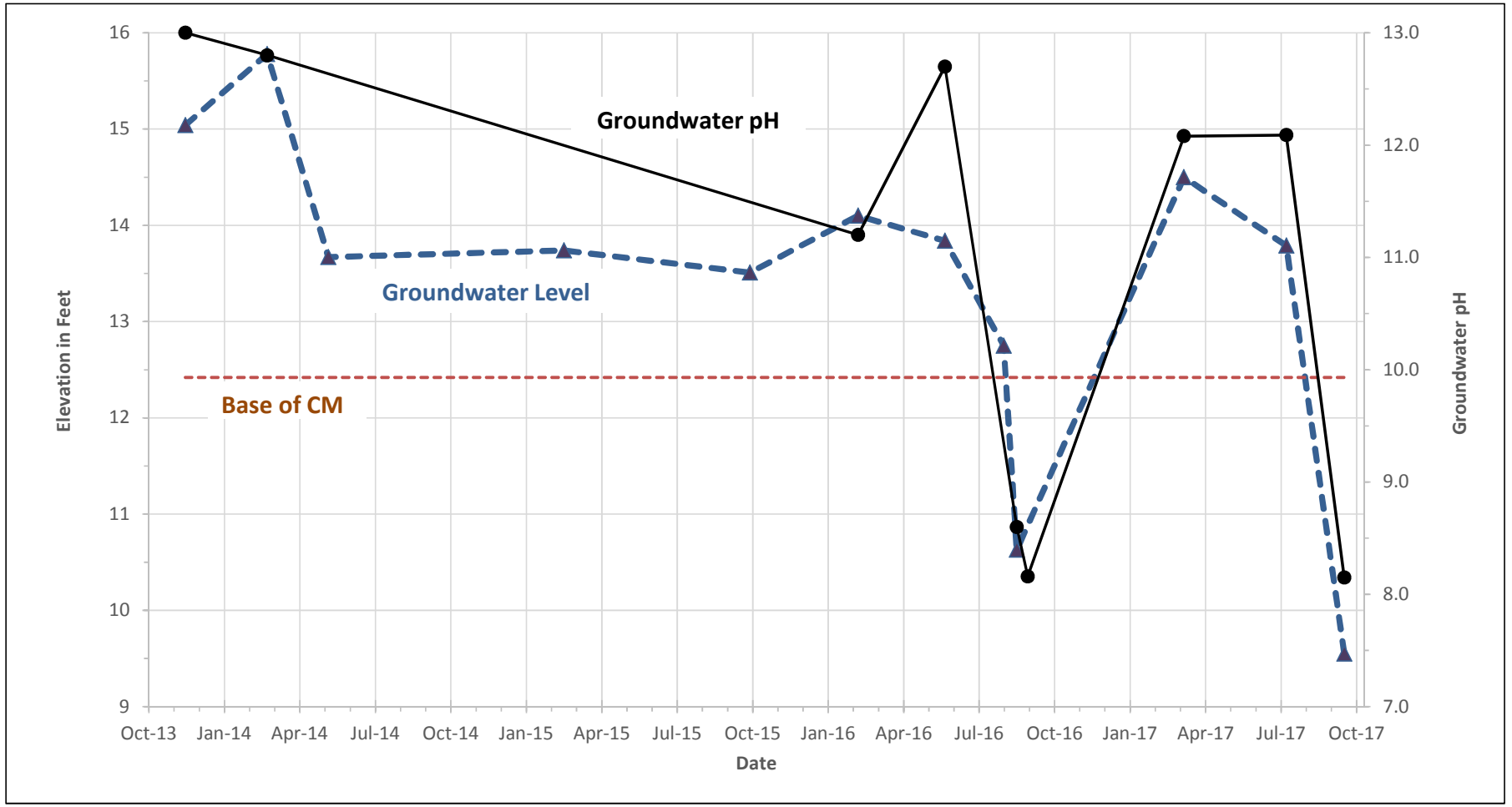






Aspect Consulting
9/22/17
S:\Kimberly Clark\Everett Mill 110207\Draft Deliverables\Mar 2017 GW data memo\Fig 7 pH in GW over time_thru Sept 2017.xlsx

Figure 7
Groundwater pH Trends Over Time
K-C Worldwide Site Upland Area, Everett, Washington



Aspect Consulting
9/26/17
S:\Kimberly Clark\Everett Mill 110207\Draft Deliverables\Mar 2017 GW data memo\Fig 8 LP-MW01 pH WL analysis.xlsx

Figure 8
Log Pond Well LP-MW01 Groundwater Levels and pH Over Time
K-C Upland Area RI/FS

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Working\GW_Metals_2012v2017\GW_Arsenic_2012v2017.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 4/3/2017 || User: pwittman || Print Date: 4/3/2017

2012 data are combined from February, June/July, and August 2012.

2017 data are from March 2017.

Former Log Pond
Crushed Material Boundary
Site Unit Dividers
Upland Area Boundary
Historical Site Features

Arsenic in Groundwater

- Well Location with Screening Level Exceedance
- Well Location without Screeing Level Exceedance

Groundwater Arsenic Exceedances 2012 and 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	APR-2017	BY: PPW	FIGURE NO. 9
	PROJECT NO. 110207	REVISED BY: ---	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Working\GW_Metals_2012v2017\GW_Copper_2012v2017.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 4/3/2017 || User: pwittman || Print Date: 4/3/2017

2012 data are combined from February, June/July, and August 2012.

2017 data are from March 2017.

Former Log Pond
Crushed Material Boundary
Site Unit Dividers
Upland Area Boundary
Historical Site Features

Copper in Groundwater

Well Location with Screening Level Exceedance
Well Location without Screeing Level Exceedance

Groundwater Copper Exceedances 2012 and 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	APR-2017	BY: PPW	FIGURE NO. 10
	PROJECT NO. 110207	REVISED BY: ---	

GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Working\GW_Metals_2012v2017\GW_Nickel_2012v2017.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 4/3/2017 || User: pwittman || Print Date: 4/3/2017

2012 data are combined from February, June/July, and August 2012.

2017 data are from March 2017.

Former Log Pond
Crushed Material Boundary
Site Unit Dividers
Upland Area Boundary
Historical Site Features

Nickel in Groundwater

- Well Location with Screening Level Exceedance
- Well Location without Screeing Level Exceedance

Groundwater Nickel Exceedances 2012 and 2017

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	APR-2017	BY: PPW	FIGURE NO. 11
	PROJECT NO. 110207	REVISED BY: ---	

CN-MW-2 (2)
CN-MW-1 (2)
REC7-MW-1 (2)
NRP-MW-2 (4)
NRU-MW-102 (4)
NRU-MW-101 (4)
NRS-MW-101 (4)
NRS-MW-102 (4)
UG-MW-1 (2)
CN-MW-101 (4)
CN-MW-104 (4)
TM-MW-1 (2)
REC7-MW-2 (2)
CN-MW-102 (4)
CN-MW-103 (4)
TM-MW-2 (2)
TM-MW-3 (2)
TM-MW-5 (2)
TM-MW-6 (2)
UST29-MW-103
5 rounds with no exceedances for cPAHs (5/14-3/17), after CM placement
HBV-MW-101
5 rounds with no exceedances for cPAHs (5/14-3/17), after CM placement
TM-MW-4 (2)
REC6-MW-2 (2)
UST29-MW-101 (8)
UST29-MW-103 (5)
UST29-MW-102 (4)
RM-D4: 6.4 mg/kg Total cPAH (TEQ)
HBV-MW-101 (5)
RM-D3: 6.9 mg/kg Total cPAH (TEQ)
RM-D5: 11.0 mg/kg Total cPAH (TEQ)
LP-MW-2 (2)
LP-MW-1 (2)
HB-MW-1R (3)
HB-MW-1R
3 rounds with no exceedances for cPAHs (11/13-3/17), after CM placement
GF9-MW-3
3 rounds with no exceedances for cPAHs (11/13-3/17), after CM placement
RM-E4: 6.2 mg/kg Total cPAH (TEQ)
RM-E5: 10.5 mg/kg Total cPAH (TEQ)
SHB-MW-101 (8)
SHB-MW-102 (4)
GF9-MW-4 (1)
GF9-MW-1 (2)
GF9-MW-3 (3)
GF9-MW-2 (2)
SHB-MW-2 (2)
RM-F3: 16.5 mg/kg Total cPAH (TEQ)
RM-F5: 11.4 mg/kg Total cPAH (TEQ)
RCD-MW-101 (4)
BA-MW-5 (2)
AP-MW-1R (2)
UG-MW-2R (3)
UG-MW-2R
3 rounds with no exceedances for cPAHs (11/13-3/17), after CM placement
BA6-MW-101 (4)
REC5-MW-1R (2)
BA-MW-1 (2)
BA-MW-2 (2)
BA-MW-7 (2)
AP-MW-1R
2 rounds with no exceedances for cPAHs (11/13-3/17), after CM placement
UST70-MW-101 (4)
UST70-MW-2 (4)
UST71-MW-104 (4)
UST70-MW-102 (4)
BA-MW-2
2 rounds with no exceedances for cPAHs (11/13-5/14), after CM placement
UST71-MW-101 (8)
UST71-MW-102 (7)
BA-MW-4 (2)
BA-MW-3 (2)
UST71-MW-103 (8)
REC3-MW-1R (4)
PM-MW-3 (2)
PM-MW-6 (2)
PM-MW-8 (3)
PM-MW-1 (2)
CMS-MW-2 (2)
PM-MW-2 (2)
CMS-MW-1R (2)
PM-MW-5 (3)
PM-MW-7 (2)
PM-MW-4 (2)
DAST-MW-101 (4)
REC7-MW-3 (2)
BCT-MW-108 (8)
BCT-MW-107 (8)
OMS-MW-2 (1)
BCT-MW-106 (8)
BCT-MW-103 (7)
MW-1 (4)
BCT-MW-105 (8)
BCT-MW-102 (4)
MW-2 (4)
BCT-MW-104 (8)
BCT-MW-101 (4)
REC1-MW-12 (2)
REC1-MW-4 (2)
REC1-MW-3 (2)
REC1-MW-1 (2)
REC7-MW-4 (2)
REC1-MW-15 (2)
REC1-MW-14 (2)
REC1-MW-2 (2)
REC1-MW-9 (2)
REC1-MW-10 (2)
REC1-MW-5 (2)
REC1-MW-8 (3)
REC1-MW-6 (2)
REC1-MW-7 (2)
REC1-MW-11 (2)

Well with no exceedances of Total cPAH (TEQ) Screening Level (0.0151 µg/L) since Nov. 2013

Well one or more exceedances of Total cPAH (TEQ) Screening Level (0.0151 µg/L) since Nov. 2013

Former Log Pond

Crushed Material Boundary

Note: Placement of Crushed Material was complete by July 2013.

200ft x200ft Crushed Material Sampling Grid
Grid blocks depicted are areas covered by 5-point composite samples of material

Well Name
REC1-MW-8 (3)
Total number of PAH analyses/results for given well since November 2013

N
0 100 200
Feet

Numbers of Groundwater PAH Analyses Conducted Following Crushed Material Placement (November 2013- March 2017)

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	APR-2017	BY: PPW	FIGURE NO. 12
	PROJECT NO. 110207-006-02	REVISED BY: ---	

CN-MW-2
CN-MW-1
REC7-MW-1
NRU-MW-102
NRP-MW-2
NRU-MW-101
NRS-MW-101
NRS-MW-102
UG-MW-1
RM-B3 NW: 2.4 mg/kg Total PCBs
RM-B3 E: Non-Detect Total PCBs
CN-MW-101
CN-MW-104
CN-MW-102
TM-MW-1
TM-MW-3
REC7-MW-2
CN-MW-103
RM-B3 SW: 0.12 mg/kg Total PCBs
TM-MW-2
TM-MW-6
TM-MW-5
TM-MW-4
REC6-MW-2
UST29-MW-101
UST29-MW-102
UST29-MW-103
RM-D4: 3.1 mg/kg Total PCBs
HBV-MW-101
RM-D3: 0.5 mg/kg Total PCBs
LP-MW-1
LP-MW-2
HB-MW-1R
RM-E4: 0.7 mg/kg Total PCBs
RM-E5: 2.2 mg/kg Total PCBs
SHB-MW-101
SHB-MW-102
GF9-MW-1
GF9-MW-3
GF9-MW-2
GF9-MW-4
SHB-MW-2
RM-F5: 2.4 mg/kg Total PCBs
RCD-MW-101
BA-MW-5
AP-MW-1R
UG-MW-2R
BA-MW-1
BA-MW-2
BA-MW-7
BA6-MW-101
REC5-MW-1R
UST70-MW-101
UST70-MW-2
UST70-MW-102
UST71-MW-101
UST71-MW-104
BA-MW-3
BA-MW-4
UST71-MW-102
REC3-MW-1R
UST71-MW-103
PM-MW-3
PM-MW-6
PM-MW-8
PM-MW-1
RM-H5: 1.3 mg/kg Total PCBs
RM-H4: 0.5 mg/kg Total PCBs
CMS-MW-1R
CMS-MW-2
PM-MW-2
PM-MW-5
PM-MW-7
PM-MW-4
RM-I4: 1.4 mg/kg Total PCBs
DAST-MW-101
RM-I3: 2.4 mg/kg Total PCBs
BCT-MW-108
REC7-MW-3
BCT-MW-107
RM-I5: 1.4 mg/kg Total PCBs
OMS-MW-2
CONC-1 through -7: 0.07-1.7 mg/kg Total PCBs
MW-1
BCT-MW-106
BCT-MW-105
MW-2
BCT-MW-103
BCT-MW-102
BCT-MW-104
BCT-MW-101
REC1-MW-4
REC1-MW-3
REC1-MW-1
REC1-MW-12
REC7-MW-4
REC1-MW-15
REC1-MW-14
REC1-MW-9
REC1-MW-2
REC1-MW-10
REC1-MW-8
REC1-MW-5
REC1-MW-7
REC1-MW-6
REC1-MW-11

Well withTotal PCB Exceedance
March 2017

Well without Total PCB Exceedance
March 2017

Well

Former Log Pond

Crushed Material Boundary

200ft x200ft Crushed Material Sampling Grid
Grid blocks depicted are areas covered by 5-point composite samples of material

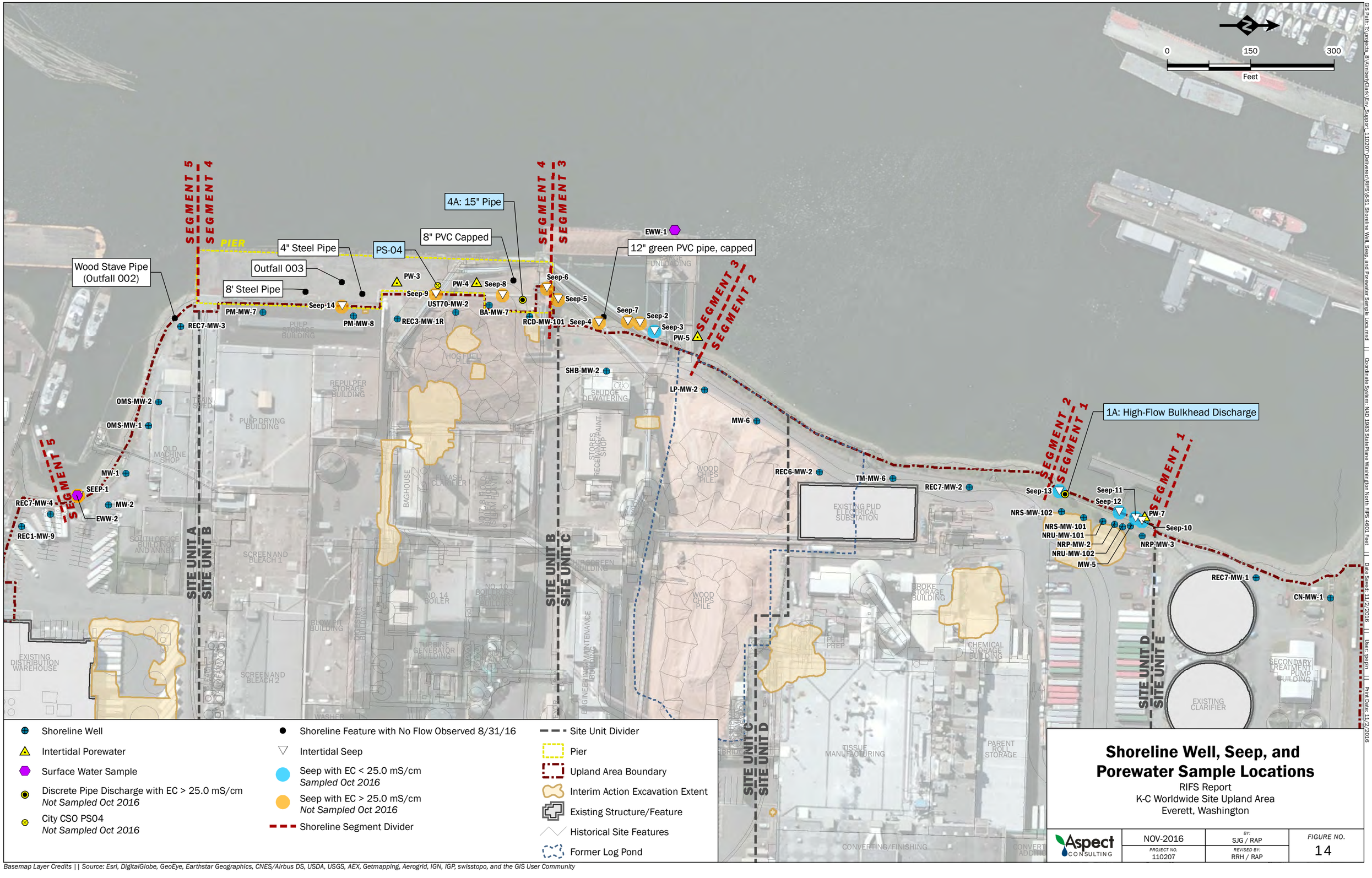
0 100 200
Feet

Note: Placement of Crushed Material was complete by July 2013.

Locations of Groundwater PCB Exceedances Relative to PCBs in Crushed Material

K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	MAY-2017	BY: PPW	FIGURE NO. 13
	PROJECT NO. 110207-006-02	REVISED BY: SJG / RAP	



Shoreline Well, Seep, and Porewater Sample Locations

RIFS Report
K-C Worldwide Site Upland Area
Everett, Washington

Aspect CONSULTING	NOV-2016	BY: SJG / RAP	FIGURE NO. 14
	PROJECT NO. 110207	REVISED BY: RRH / RAP	

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GIS Path: T:\projects_8\KimberlyClark\Env_Support_110207\Delivered\RIFS\G-S1 Shoreline Well, Seep, and Porewater Sample Locs.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 11/2/2016 || User: jpapin || Print Date: 11/2/2016