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2022 L-Bar Site Compliance Monitoring Program Data Summary Report and Five-Year Review

*Prepared for:
Alcoa and the Washington State Department of Ecology*

March 2023



Client Commitment



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Quality Solutions

2022 L-Bar Site Compliance Monitoring Program Data Report and Five-Year Review

**Prepared for Alcoa Corporation and the Washington State
Department of Ecology**

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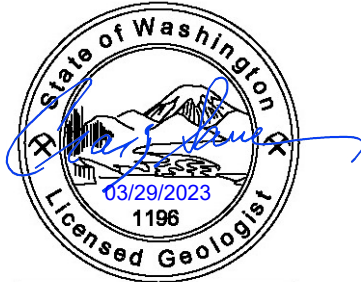
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Certification

This report was prepared by a Professional Geologist licensed in the State of Washington and employed by Great West Engineering, Inc.



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Acronyms and Abbreviations

cfs	cubic feet per second
CMP	compliance monitoring program
CSM	conceptual site model
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ET	evapotranspiration
FD	field duplicate
FS	feasibility study
gpm	gallons per minute
HDPE	high-density polyethylene
lbs	pounds
mg/L	milligram per Liter
MRP	magnesite residue pile
MTCA	Model Toxics Control Act
NTU	Nephelometric Turbidity unit
PW	Production Well
QC	Quality Control
RI	remedial investigation
RPD	relative percent difference
SC	Specific Conductance
SCCD	Stevens County Conservation District
SWBU	shallow water bearing unit
TDS	total dissolved solids

1.0 Introduction

This section describes the document purpose, objectives, document organization, and the site background.

1.1 Purpose and Objectives

This report summarizes results from the compliance monitoring program (CMP) performed at the L-Bar site, which was initiated in the mid 1990's and includes the latest CMP monitoring data up through fall 2022 monitoring event. This report is intended to support Alcoa's obligations to conduct site monitoring and reporting of remedial progress in groundwater as outlined in the current *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan, 2020 Revision* (Jacobs 2020), and the related *L-Bar Site 2021 Addendum to the 2020 Compliance Monitoring Plan* (Great West 2021). This document is intended to support the L-Bar periodic review process (for example, the "Five Year Review") administered by the Washington State Department of Ecology (Ecology) as required under Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 Washington Administrative Code.

This report includes the following:

- A brief description of the site background, including property ownership, regulatory applicability, feasibility study, cleanup levels, remedial actions, and recent supplemental activities/data collection.
- A brief description of the current status of the CMP groundwater and surface water monitoring programs.
- A summary of the hydrologic conditions with respect to surface water flows in Colville River, and groundwater flow characteristics in the uppermost shallow water bearing unit (SWBU) system to provide context for the surface water and groundwater quality results presented in this report.
- An evaluation of current groundwater quality conditions with respect to the preliminary cleanup levels.
- A focused trend analysis of groundwater quality conditions to assess recent and relative changes in groundwater concentration to document progress towards achievement of cleanup levels.
- A focused recent analysis of surface water monitoring data
- Additional site work performed to support long-term monitoring objectives for the CMP.

To support Ecology's periodic reviews, the CMP groundwater and surface water data are combined into a single submittal as presented herein. This report provides the third successive periodic review since source removal actions were completed in approximately the 2004 timeframe, and is an update on site conditions as presented in prior five-year review reports, submitted to Ecology in 2011 and most recently in 2017.

1.1.1 Document Organization

Below is a brief summary of the content provided in each of the sections to support the objectives of this report.

- **Section 1 – Introduction.** Presents the document purpose and objectives, site background/site history, and the document organization.
- **Section 2 – Compliance Monitoring Program.** Presents the CMP with respect to site activities, the groundwater monitoring program, the surface water monitoring program, and identifies activities completed since the latest 2017-2018 five-year review was completed.
- **Section 3 – Hydrologic Conditions.** Presents the hydrologic conditions for the site with respect to surface water flows and groundwater flow characteristics in the uppermost shallow water bearing unit (SWBU) system to provide context for the groundwater quality results presented in subsequent sections.

- **Section 4 – Data Analysis Methods and Results.** Presents the data analysis methods and results for groundwater and surface water media per the monitoring requirements of the CMP; a more thorough discussion of the results is presented in Section 5.
- **Section 5 – Discussion of Groundwater Results and Supplemental Activities.** Presents a discussion of the groundwater results presented in Section 4 with respect to data quality review, current status (comparison of groundwater quality results to cleanup levels), and statistically-significant trends to evaluate progress towards achievement of cleanup levels. This section also provides a summary of additional site activities, including well re-development and site survey.
- **Section 6 - Summary.** Presents a summary of key findings to support the five-year review process.
- **Section 7 – References.**

1.2 Site Background

This section describes the site background, property ownership, regulatory applicability, selected remedy, cleanup levels, cleanup actions, and supplemental recent activities.

1.2.1 Site Setting and Property Ownership

The L-Bar site is located approximately 2 miles south of Chewelah, Washington, on the east side of US Highway 395 (**Figure 1**). The site occupies approximately 67 acres of industrial and agricultural land in the Colville River Valley. The site is bordered by agriculture parcels to the north, east and west, and by an active aggregate supply operation immediately south along Logan Road. Major existing site features include miscellaneous plant buildings and storage warehouse, two high-density polyethylene (HDPE) lined ponds (Evaporation Pond and Stormwater Holding Pond), a sanitary lagoon, and a large magnesite residue pile (MRP) that covers much of the southwest portion of the site. The Colville River passes along the northern margins of the site, and a Burlington Northern railroad line is located on the eastern edge of the site.

Until 2005, the site was under the ownership and control of Northwest Alloys. In late 2005, Northwest Alloys sold the facility to a private interest. As part of the sales agreement, Northwest Alloys (currently Alcoa) and its representatives retain access rights to the facility for CMP monitoring in support of MTCA cleanup activities until cleanup requirements have been satisfied.

1.2.2 Regulatory Applicability

Releases of hazardous substances to onsite environmental media prompted Ecology to require that site investigation and cleanup actions be undertaken at the L-Bar site pursuant to MTCA, Chapter 173-340 of the Washington Administrative Code. In 1994, Ecology issued an enforcement order requiring Northwest Alloys to control discharge of contaminated water from an onsite ditch (West Ditch) to the Colville River. In conformance with the requirements of the Agreed Order (DE 94TC-E104), Northwest Alloys completed a remedial investigation (RI) of the facility and completed a site-wide risk assessment.

The RI determined the nature and extent of the chemicals of interest present at the L-Bar site. The RI report that submitted to Ecology in August 1998 details the results of the investigation activities performed from 1995 to 1996. Public review and comment on the RI document were completed on October 22, 1998. Results of the RI are presented in the L-Bar Phase I Remedial Investigation Report (CH2M, 1998).

1.2.3 Feasibility Study, Selected Remedy, and Development of Cleanup Levels

In accordance with the Agreed Order requirements, results from the RI and site-specific risk assessment served as the technical basis for selecting a site-wide cleanup remedy that effectively mitigates chemical impacts to site media (soil, surface water, and groundwater).

Information from the RI, MTCA pilot studies, interim-actions, and the risk assessment were used in the feasibility study (FS) process to screen remedial technologies and remedial action (RA) alternatives. Results from the FS are detailed in a report titled L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M, 1999).

As described in the FS report and accepted by Ecology, Northwest Alloy recommended Alternative 2 (Source Removal with Natural Attenuation and Monitoring) as the preferred cleanup action alternative for the L-Bar site. Groundwater cleanup levels for the L-Bar site (CH2M and SCCD, 2011) were also developed in the L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M, 1999); the analyte specific groundwater cleanup levels are presented in Section 2. Pursuant to the cleanup actions recommended in the FS, source removal activities were guided by the L-Bar Material Removal and Compliance Monitoring Work Plan (CH2M, 2001a). Cleanup actions and site monitoring requirements are outlined in Ecology's Final Cleanup Action Plan (Ecology, 2000).

1.2.4 Remedial Actions

Table 1 presents a timeline of significant site activities (including remedial actions/source removal actions) performed at the L-Bar site from 1996 through spring 2022. The primary remedial actions/source removal activities included the following (as annotated in **Figure 1**):

- Removal of Flux Bar and Flux Bar Residue piles from atop the MRP from May 1997 through December 1999.
- Removal of the Covered Flux Bar Residue Pile (hereafter referred to as Covered Pile) and source materials stored in onsite plant buildings between July 2000 and February 2004.
- Closure of the Main Ditch and removal of the HDPE barrier wall along the western and northern perimeter of the Covered Pile in the summer of 2003.

The details of these and other remedial actions were documented in two previous reports: *Interim Action Source Removal Summary Report – Magnesite Residue Pile, L-Bar Site* (CH2M, 2001b), and *Source Removal Summary Report – Covered Pile and Plant Buildings, L-Bar Site* (CH2M, 2004). The primary objective of the CMP is to evaluate changes in the surface water and groundwater in response to these remedial actions. For this report, the remedial action period is assumed to be from approximately 1999 to 2004. The post-remedy monitoring period assumes at least 20-30 years, and thus the five-year reviews and long-term monitoring are expected to continue into at least the 2024 to 2034 timeframe.

1.2.5 Prior Site Investigations and Data Collection

Since the initial 1996 to 2010 data summary report (CH2M and SCCD, 2011) was issued, Alcoa has been proactive in conducting supplemental work in coordination with Ecology, which is beyond the minimum requirements as specified in Ecology's *Final Cleanup Action Plan* (Ecology, 2000) and/or as required per the *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan Addendum No. 1* (CH2M, 2012a). These supplemental efforts (identified in **Table 1**) have been conducted by Alcoa (or their designated consultants) to support an enhanced understanding of site conditions to support Ecology's period review of evaluating remedy performance.

Prior site investigation work was performed in two successive phases over the 2012 to 2013 timeframe, and was conducted to determine if potential residual source material could be identified in areas where former source removal actions had been conducted. The field activities, investigation methods, data summaries, and key findings from these source area investigations have been documented in reports submitted to and discussed with Ecology; details are documented in the *Data Summary Report for the Supplemental Geophysical Survey Work Conducted at the L-Bar Site near Chewelah, Washington* (CH2M, 2012b), and subsequently in the *Focused Site Investigation Data Summary Report for the L-Bar Site near Chewelah, Washington* (CH2M, 2014).

In addition to these focused field investigations, the supplemental groundwater level measurements obtained monthly by Alcoa's subcontractor from January 2015 through December 2016 provided more frequent groundwater level data to assess hydraulic interconnection of CMP wells and the inferred influences on seasonal groundwater flow characteristics/flow direction. These groundwater level measurements focused on wells in the vicinity of the former source areas atop the MRP and also the periphery wells/piezometers adjacent to the pile completed in the SWBU, and ultimately led to an enhanced understanding of groundwater flow characteristics as presented in the *2017 CMP*

Data Summary and Five-Year Review Report (Jacobs 2017) and were discussed with Ecology in a meeting on April 17, 2017.

1.2.6 Additional Activities Completed Since the 2017 Five-Year Review

As shown in **Table 1**, several recent activities have been completed at the site as follow-up to recommendations generated from the most recent five-year review report (Jacobs 2017). These activities included the following:

- Development of a revised and updated CMP, which was presented in the *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan, 2020 Revision* (Jacobs 2020).
- Performing well maintenance and rehabilitation work in July 2021 (Jacobs 2021) to refurbish the protective monuments and bollards at several of the wells for continued long-term monitoring.
- Submittal of an addendum to the 2020 Revision (Great West 2021), which was necessary to: (1) provide Ecology and update on the well rehabilitation activities, which included adjustments (cutting) of the top-of-PVC casings which have relevance for water-level and groundwater elevation data, (2) updated set of CMP monitoring tables, to reflect updated method-specific laboratory reporting levels to support evaluation of concentrations down to the established CMP cleanup levels.
- Conducting a site survey on March 1, 2023 by a licensed surveyor to confirm the top-of-casing elevations considering that selected wells were adjusted (cut down) during the July 2021 well maintenance activities.
- Performing a round of well re-development activities on March 2, 2023 given observations of elevated turbidity at selected CMP wells from recent sampling events.

A summary of these additional field activities and data from the re-development and re-survey effort are presented in Section 5 of this report.

2.0 Compliance Monitoring Program

This section describes the current CMP as described in the *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan, 2020 Revision* (Jacobs 2020), and the related *L-Bar Site 2021 Addendum to the 2020 Compliance Monitoring Plan* (Great West 2021). In April of 2006, Ecology approved termination of the National Pollutant Discharge Elimination System (NPDES) discharge-limit monitoring, which is not described herein.

2.1 Compliance Groundwater Monitoring Program

As shown in **Figure 1** and summarized in **Table 2**, the current CMP groundwater monitoring network consists of 13 sampling locations, including 12 shallow resource-protection groundwater monitoring wells, and one deep production well. Groundwater monitoring is conducted semi-annually as initiated in 2001 the *L-Bar Material Removal and Compliance Monitoring Work Plan* (CH2M, 2001a) and as updated in the current *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan, 2020 Revision* (Jacobs 2020), and the related *L-Bar Site 2021 Addendum to the 2020 Compliance Monitoring Plan* (Great West 2021). The 12 resource-protection groundwater monitoring wells were installed to monitor the uppermost unconfined SWBU at the site; the groundwater production well at the site obtains groundwater from a deeper, confined, intermediate alluvial water-bearing zone which is hydraulically separate from the SWBU. Given the general northward groundwater flow direction of the SWBU toward the Colville River (as presented in Section 3) and considering site activities such as source removal actions, the wells are grouped into the following categories:

- Site Background: P-12 and Production Well (PW)
- Former Source Areas/ and Source Removal Areas (MRP): P-13, SA-10, SA-11, SA-14
- Site Interior: P-09
- North Field: P-05, P-06, P-19, P-20B, P-25, and P-27

Based on the RI, the conceptual site model (CSM), and CMP results, the site background well (P-12) is upgradient of the site. As such, well P-12 is effectively considered background as a comparative condition to the downgradient wells in former source areas, site interior, and the north field, which have been influenced to varying degrees from former source materials as demonstrated in the RI and in previously submitted data summary reports.

Table 3 summarizes the current CMP groundwater monitoring analytical suite, test methods, and the cleanup levels. Per the current CMP (Jacobs 2020; and Great West 2021), the primary indicator parameters are ammonia, chloride, and total dissolved solids (TDS), which are consistently sampled twice per year, while the secondary parameters are sampled twice per year every other year (during even numbered years). Thus, the most recent groundwater data for this report are the primary and secondary parameters collected in the respective spring and fall events in 2022. Additional details on groundwater sampling procedures, quality control, and data management are presented in the current CMP and are not reiterated herein.

2.2 Compliance Surface Water Monitoring Program

The primary objective of the surface water monitoring program for the L-Bar site is to document surface water quality in the L-Bar ditches and the adjacent Colville River stations following site cleanup actions completed during the 1999 to 2004 period. On behalf of Alcoa, the SCCD administers and performs the routine compliance surface water monitoring as outlined in the CMP. A total of four surface water monitoring stations are included as part of the current CMP surface water monitoring program (shown in **Figure 1** and listed in **Table 4**):

- Station D3 – upstream in the West Ditch (upstream of station D2)

- Station D2 – mouth of the West Ditch (direct discharge to Colville River)
- Station CR1 – Colville River at the Highway 395 Bridge (upstream of site and West Ditch mouth)
- Station CR3 – Colville River (approximately 300 feet downstream from the West Ditch mouth)

Similar to groundwater, the routine field sampling methods, quality control, and data management for the compliance surface water monitoring program are presented in the current CMP and are not reiterated herein.

3.0 Hydrologic Conditions

This section provides a summary of the hydrologic conditions at the L-Bar site to provide a context for the water quality data and associated changes presented in subsequent sections of this report. A more detailed discussion of the hydrogeologic setting and the CSM is presented in Section 2 (Site Background) of the *L-Bar Cleanup Levels Development and Feasibility Study Report* (CH2M, 1999) and is not reiterated herein.

3.1 Surface Water

The following is a summary of discharge monitoring from the Colville River and West Ditch sampling stations.

3.1.1 Colville River Discharge

As noted in previous Five-Year Review Reports, the discharge at the Colville River stations typically ranges from seasonal low of approximately 20 to 30 cfs (typically July through August), and peaks in the range of 250 to 450 cfs during spring seasonal highs (typically late March through early May). In 2006, the NPDES monthly monitoring requirements were terminated, which transitioned the sampling intervals from monthly to semi-annual. Surface water discharge data from 2006 onward represents semi-annual sampling in accordance with the current CMP, and is generally synoptic with the groundwater monitoring program sampling events. Section 4.2 presents recent discharge collected at the Colville River stations over the latest period 2018 to 2022.

3.1.2 West Ditch Discharge

As noted in previous reports, discharge in the West Ditch (mouth, Station D2) typically ranges from seasonal lows of no discharge (i.e., dry), typically during the summer to early fall, and peaks generally in the range of 50 to 80 gpm during the spring seasonal highs. The discharge at the mouth of West Ditch is influenced and driven by relatively rapid precipitation events and influx from shallow groundwater along its length, which don't necessarily align with the seasonal discharge characteristics of the Colville River. As above, recent discharge data for West Ditch stations from 2018 to 2022 is presented in Section 4.2.

3.2 Groundwater

This section presents the groundwater elevations and updated site hydrograph(s) over the monitoring period from spring 2001 through fall 2022, along with groundwater flow maps for the most recent spring and fall monitoring events completed in 2022.

3.2.1 Groundwater Elevations and Site Hydrograph

Figure 2 presents the groundwater elevations and updated site hydrograph for the CMP monitoring network, including data from spring 2001 through fall 2022. These groundwater elevations show the inferred seasonal high (April) and seasonal low (October) groundwater levels. Groundwater elevations generally range from approximately 1642 to 1644 feet above mean sea level at upgradient locations in the vicinity of the MRP to approximately 1634 to 1636 feet above mean sea level at downgradient wells completed in the North Field area, just prior to discharge from the SWBU into the Colville River.

Seasonal fluctuations for source area wells (P-13, P-09, SA-10, SA-11, SA-14) generally fluctuate on the order of 1 foot between seasonal extremes (except for P-12, which exhibits upwards of 6 feet of seasonal change). Wells in the north field (P-05, P-06, P-19, P-20B, P-25, and P-27) generally fluctuate on the order of 2 to 4 feet between seasonal high and low events. Seasonal changes manifest in a similar timeframe for all the wells, suggesting a common hydraulic recharge mechanism and associated interconnectivity within the 'shallow water bearing unit' (referred to as the SWBU in the CSM [CH2M,

1999]). The seasonal changes are generally cyclic, and there do not appear to be any substantive long-term temporal trends in groundwater elevations for the period of record (which might influence changes in water quality, as discussed in subsequent sections).

3.2.2 Groundwater Elevation Contours and Groundwater Flow Maps

Figure 3 presents the spring 2022 groundwater elevations, inferred contour lines, and the inferred groundwater flow direction. The inferred groundwater elevation contours and flow arrows support a generalized groundwater flow direction to the north, consistent with previously reported conditions. Groundwater flow from the SWBU generally flows northward and ultimately discharges into the adjacent Colville River, which is the localized groundwater discharge zone for the SWBU.

Figure 4 is the fall 2022 groundwater elevations, inferred contour lines, and the inferred groundwater flow direction. Overall, the fall groundwater flow map is similar to spring flow conditions in that groundwater generally flows to the north, and discharges into the nearby Colville River. As discussed in the latest *2017 CMP Data Summary Report and Five-Year Review* (Jacobs 2017), in localized areas beneath or near the southeast corner of the MRP, which is the former source removal areas, there are recurring seasonal periods of limited flux (flow), and even relatively short-duration 1- to 2-month periods of radial flow away from former source areas within the MRP. In addition, in the north field, during the fall period groundwater levels may respond to summertime evapotranspiration (ET) effects, which appear to influence groundwater levels in the fall period. These characteristics of limited flux beneath the former source area MRP and ET influences in the north field were supported from monthly water-level monitoring over a two-year period in 2015-2016, and were presented in the most-recent *2017 CMP Data Summary Report and Five-Year Review*.

4.0 Data Analysis Methods and Results

This section describes the data analysis methods and presents the results for the groundwater and surface water data to support the reporting objectives described in Section 1.

4.1 Groundwater Analysis Methods and Results

The groundwater data analyses included the following evaluation methods as described below.

4.1.1 Data Quality Review

The data quality review consisted of:

- (1) a qualitative review of data quality control as presented in the laboratory reports, including, but not limited to, a check for completeness, sample condition record, sample handling, transport, trip-blanks, chain-of-custody report, hold time, instrument calibration, surrogate recovery, quality control (QC) sample(s), and method blanks; and
- (2) calculation of the relative percent difference (RPD) between parent samples and field duplicate results.

The analytical results from the parent sample and the respective field duplicate (FD) sample were compared, and the RPD was calculated for detected results using the following formula (from Ecology, 2016):

$$RPD = \frac{|P - FD|}{(P + FD)/2} \cdot 100\%$$

Appendix A contains copies of the laboratory reports to support the qualitative data review. **Appendix B** presents the results from the RPD calculation performed on detected values for the semi-annual groundwater data evaluated from the past five years over the period 2018 through 2022; data quality reviews for data prior to 2018 have been evaluated and included in prior five-year review reports.

4.1.2 Time-Series Concentration Plots

Time-series concentration plots are useful graphics to display the temporal and spatial variability of groundwater concentration over time, assist with identification of apparent/potential outliers and reveal potential seasonal or temporal trends, and are used to cross-check or corroborate statistical evaluation results (statistically based trends are presented in subsequent sections).

Appendix C presents the time-series concentration plots constructed with CMP monitoring wells (excluding the deep production well) and parameters over the period 1996 (inception) through fall 2022 (most recent data). These plots are useful graphics to identify potential outliers, assess apparent trends or changing conditions, and to corroborate with other data summaries as presented in subsequent sections. Note that the plots for some constituents have been split into different scales (for example, low and high) to view the concentration changes more precisely but are otherwise the same graphic/same dataset.

4.1.3 Descriptive Statistics

Descriptive statistics include a summary of mean concentration, number of observations, standard deviation, standard error (variance), maximum, minimum, and the percentage (frequency) of non-detects. The plots graphically locate the median, 25th and 75th percentiles; the “whiskers” extend to the minimum and maximum values. These graphics are a quick screening tool which illustrates the homogeneity or variance across multiple wells and can be used to identify potential outliers. Descriptive statistics can also be used to compare or corroborate against other data analysis and results as presented in subsequent sections.

Appendix D includes descriptive statistics in tabular form, and the Box and Whiskers Plots. For the primary parameters, the descriptive statistics were calculated for the period of data following source removal actions which consists of data from 2004 to 2022; for the secondary parameters, the descriptive statistics were calculated for the period 2013 through 2022, which represents the period where sampling frequency was changed to every other year (thus, over the latest 10- year period, there are 10 observations for the secondary parameters).

4.1.4 Recent Groundwater Quality and Comparison to Cleanup Levels

Table 5 presents the field-measured parameters for recent semi-annual sampling in 2022. The field measured parameters include static water levels (converted to groundwater elevations), temperature, pH, and specific conductance (SC). The static water-levels are used to update the site hydrograph and develop the groundwater flow maps (as discussed in Section 3); the field parameters provide an in-situ reading of water quality (pH, SC), and support with sampling of the ‘low-flow’ method per the CMP.

Table 6 presents the CMP semi-annual groundwater quality results, and compares the most-recent 2022 data to the cleanup levels to provide a summary of the current status of remedy progress toward achievement of the established cleanup goals for groundwater. Bold values in **Table 6** indicate groundwater concentrations which exceed the respective cleanup levels. Note that italic-font values are results which were reported as ‘non-detect’, however, the laboratory could not achieve the project-specific cleanup level concentrations for thallium.

Table 7 presents a calculated metric referred to as the ‘cleanup level ratio’, which is a calculated value that represents the mean of the two semi-annual 2022 groundwater quality data, divided by respective cleanup levels for the primary indicator parameters. This metric was provided in the latest 2017 CMP Data Summary Report (Jacobs) and is carried forward in this report to normalize results relative to the cleanup levels, and to provide a context for the values which exceed cleanup levels. For example, hypothetically speaking, if the recent mean 2022 groundwater concentration was 100 milligrams per Liter (mg/L), and the cleanup level for this hypothetical case was 50 mg/L, then the cleanup level ratio would be 2 (that is, the mean current concentration is twice that of the cleanup goal). This metric helps to characterize the data considering the wide range of significant digits in cleanup level values (for example, cleanup levels range from 0.0002 mg/L for thallium to a high value of 1,092.4 mg/L for TDS, and concentrations vary substantially between parameters). Note that ratios equal to or less than 1 are cases where the mean 2022 concentration has achieved or is below the cleanup level, whereas all ratios above 1 are cases which exceed cleanup levels.

4.1.5 Trend Analyses

Trend analyses are a common analytical technique to provide statistical evidence of relative or apparent changes in groundwater concentration over time. Trend results are expressed in relative terms in three categories, including increasing, decreasing, or not statistically significant at some level of confidence (that is, alpha). Trend analyses for the L-Bar groundwater quality data have been performed in prior reports to assess relative changes (improvements) in groundwater quality following source removal actions to provide scientific evidence towards achieving cleanup levels. For this report, trends were tested with Mann-Kendall Method on the primary indicator parameters, including the most recent 5 years of data 2018 through 2022. For primary parameters which are consistently detected, this period represents 10 observations (semi-annual sampling over a 5-year period), and is deemed a sufficient number of datapoints and recent period, considering that the U.S. Environmental Protection Agency (EPA) Unified Guidance (2009) recommends a minimum of seven to eight observations for statistical significance. Trends were not performed on secondary parameters considering the inconsistency in detects and relatively low concentrations, and in many instances, concentrations are near or below cleanup levels; the secondary suite can be evaluated via time-series plots and a direct comparison to cleanup levels (via **Table 6**). With the Mann-Kendall Method in *Santias* (software program), the confidence level (or alpha) was set to 95 percent; this essentially means that there is a 5 percent chance of identifying a statistically-significant trend when in reality none exists.

Table 8 presents the trend results from the Mann-Kendall method, for primary parameters, over the recent period from 2018 to 2022 as described above. **Appendix E** provides statistical results from Mann-

Kendall trend method, such as verification of all cases tested, the number of observations over period tested, the Mann-Kendall 'z-score', the statistical significance (minimum of 95 percent confidence or higher considered as the threshold for statistical significance), and plots for significant cases. Note that **Appendix C** (time-series plots) provides the graphical plots illustrating concentration changes over time for all CMP parameters and wells; as noted above, the Mann-Kendall trends included primary parameters for the most recent five years of groundwater quality data from 2018 to 2022 to quantify recent changing conditions.

4.2 Surface Water Analysis Methods and Results

Methods for surface water analysis are a simple compilation of the event-specific flow and the related surface water concentration for ammonia and chloride. Loading estimates are also calculated as the event-specific concentration multiplied by discharge, with appropriate unit conversions to yield loading estimates in pounds per day (lbs/day). The period of data included in this report for surface water was sampling results 2018 to 2022; surface water summaries for data prior to 2018 are included and evaluated in prior reports. Note that the fall surface water sample was not collected, which was an oversight of the sampling team and was not intentional, nor was it due to any equipment or weather complications.

Table 9 is a summary of surface water results for ammonia and chloride, including discharge, concentration, and estimated load (in pounds per day) for the period 2018 to 2022. **Appendix F** is an electronic submission (e-copy available upon request) of the surface water master database including data from approximately 2000 through 2022; discharge, concentration, and loading data prior to 2018 has been presented and evaluated in the *2017 CMP Data Summary and Five-Year Review Report* (Jacobs 2020). As discussed in Section 3.1.1, there are inherent challenges with obtaining representative surface discharge readings in the Colville River stations given the depth profile, high-flow conditions, and other factors; as such, the load estimates should be considered approximate at the time of sampling. The current CMP does not specify any threshold values or criteria in which to evaluate load estimates.

5.0 Discussion of Results

This section provides a discussion of CMP results for groundwater and surface water from the methods and analyses presented in Section 4. As noted in Section 1, the primary objective of the CMP is to evaluate changes in groundwater quality for primary and secondary parameters in response to the remedial actions/source removal activities and to provide an assessment of current status and progress towards achievement of cleanup levels in groundwater. Surface water data are also monitored and evaluated to assess potential long-term changes in surface water conditions, given that groundwater discharges from the SWBU into the Colville River.

5.1 Groundwater Results

The groundwater results focus on the primary indicator parameters (ammonia, chloride, and TDS), and are grouped/discussed according to key areas:

- **Site Background:** Represented by well P-12 completed in the uppermost SWBU of interest, and the PW completed in the deeper, confined aquifer.
- **Source Removal Areas:** Represented by well P-13, located immediately south of the MRP, and wells SA-10, SA-11, and SA-14 located atop the MRP and in locations where former source removal actions have been completed.
- **Site Interior:** Represented by well P-09, which is a flush-mount well completed beneath asphalt.
- **North Field:** Represented by wells P-05, P-06, P-19, P-20B, P-25, and P-27.

The discussion below is developed from the data quality review, updated time-series plots, updated current status with respect to comparison to cleanup levels (and cleanup level ratios), and trend results to evaluate or corroborate apparent recent changing conditions and inferred progress towards achievement of cleanup goals.

5.1.1 Groundwater Data Quality Review

A focused data quality review was performed on the groundwater quality data collected from 2018 through 2022 (included in **Appendix A**), which represents data since the preceding data quality review as presented in the *2017 CMP Data Summary Report and Five-Year Review* (Jacobs, 2017). Findings from the data review are summarized below:

- **Completeness.** All CMP groundwater data were collected and analyzed per the *CMP 2020 Revision* (Jacobs 2020) and the *CMP 2021 Addendum* (Great West 2021). The only exception or deviation was that the laboratory could not achieve the required PQLs per the CMP for thallium (as listed in Table 6).
- The *Sample Condition Record* did not identify any issues with sample handling, transport, as-received temperature, trip blanks, or chain-of-custody.
- The method blanks and trip blanks did not have any detections.
- The *Quality Control Report* showed that percent recoveries fell within the target ranges for each analyte.
- Analyses were conducted within respective hold times and performed in accordance with the analyte-specific test methods.

Appendix B provides a summary of the RPD results calculated between the parent sample (P) and the duplicates (FDs) collected during each semi-annual event from 2018 through 2022. Over this period, a total of 53 cases had detected values for both parent and FD samples; of these, only 8 results (cases) exceeded the RPD of 20 percent. Several of these cases exceed 20 percent, however, are not deemed

significant with respect to evaluating remedy progress; examples include turbidity at SA-10 2020 spring event (99% RPD is from turbidity values of 4 and 12.5 NTU), chloride at PW fall 2021 (90% RPD for values of 0.9 and 2.6 mg/L), and barium at PW spring 2022 event (160% RPD for values of 0.008 and 0.07 mg/L, both of which are well below the cleanup level of 1 mg/L for barium). Overall, based on the qualitative and quantitative data quality review, the results obtained from 2018 through 2022 are deemed suitable to assess long-term groundwater quality conditions as presented in subsequent sections of this report.

5.1.2 Current Status Compared to Cleanup Levels

This section discusses the current status of the most recent 2022 data relative to the cleanup levels. As presented earlier, **Table 6** is the most recent 2022 groundwater quality data and identifies values that exceed cleanup levels via **BOLD FONT**; **Table 7** summarizes the 'cleanup level ratios' for the primary indicator parameters.

Site Background: the 2022 concentrations for background well P-12 and the PW are below cleanup levels for the primary indicator parameters of ammonia, chloride, and TDS; these cleanup ratios are below 1. The 2022 concentrations for the secondary parameters for these background wells are also below cleanup levels (cleanup ratios below 1). These conditions are consistent with previously reported conditions for 'site background' wells, and support the use of these wells as background conditions as a comparative condition to other areas as described below.

Source Removal Areas (wells atop or near the MRP):

2022 concentrations for primary indicator parameters:

Ammonia: Concentrations for P-13, SA-10, SA-11, and SA-14 are significantly above cleanup levels, with cleanup ratios of 200, 4480, 608, and 106, respectively.

Chloride: Concentrations for P-13, SA-10, SA-11, and SA-14 are significantly above cleanup levels, with cleanup ratios of 4.6, 36, 33, and 1.4, respectively.

TDS: Concentrations for P-13, SA-10, SA-11, and SA-14 are significantly above cleanup levels, with cleanup ratios of 4.2, 19, 8, and 2.8, respectively.

2022 concentrations for secondary indicator parameters: All are below cleanup levels, except for the following:

Manganese: Concentrations for P-13, SA-10, and SA-11 exceed cleanup levels.

Selenium: Concentrations for SA-14 (fall event only) exceed cleanup levels.

Thallium: Concentrations for P-13, SA-10, and SA-11 (spring events only) exceed cleanup levels.

Site Interior Wells: 2022 concentrations at P-09 for indicator parameters ammonia, chloride, and TDS are above cleanup levels, with cleanup ratios of 8.8, 3.3, and 1.3, respectively. For the secondary parameters, the 2022 concentrations are all below cleanup levels, except for manganese (spring event only).

North Field Wells:

2022 concentrations for primary indicator parameters are below cleanup levels, except for the following:

Ammonia: Wells P-06, P-19, P-20B and P-25 are above cleanup levels, with cleanup ratios of 2.9, 4.6, 84, and 3.9, respectively.

Chloride: Wells P-05, P-19, P-20B, P-25, and P-27 are above cleanup levels, with cleanup ratios of 6, 21, 3, 3.7, and 27, respectively.

TDS: Wells P-05, P-20B, P-25, and P-27 are above cleanup levels, with cleanup ratios of 3, 3.5, 1.8, and 5, respectively.

2022 concentrations for secondary indicator parameters: All are below cleanup levels, except for the following:

Nitrate: Concentrations for P-20B exceed cleanup levels.

Manganese: Concentrations for P06, P19, P20B, and P-25 exceed cleanup levels.

Barium: Concentrations for P-27 exceed cleanup levels.

5.1.3 Trend Results

Table 8 presents trend results from Mann-Kendall method including primary indicator parameters (ammonia, chloride, and TDS) data from spring 2018 through fall 2022; trends were identified as statistically significant at a 95 percent (or higher) confidence level. The trend results confirmed a total of 6 statistically-significant cases (either increasing or decreasing); the remaining well-constituent pairs were not significant (neither increasing or decreasing). Of the 6 significant results, a total of 5 are decreasing and only 1 case was identified as a statistically-significant increasing trend (chloride at SA-11). **Appendix E** are the trend results output in tabular form, showing all cases were tested; and time-series plots are included for the 6 significant cases.

For the sole increasing trend (chloride at SA-11), a time-series plot was generated for the entire period of record and included adjacent source-area wells for comparison of concentration values and changing conditions (included at the end of Appendix E). When viewing this time-series plot for chloride including the source area wells and data since 1995, it shows that well SA-10 has consistently exhibited higher concentrations of chloride in comparison to both SA-11 and SA-14. Recent chloride concentrations for SA-10 and SA-11 are comparable in recent years with concentrations merging toward and comparable in the range of approximately 7,000-9,000 mg/L, which is markedly lower than peak concentrations observed during source removal actions in the early 2000's with values above 40,000 mg/L. As described in the 2017 five-year review report, it is inferred that concentrations at SA-11 are equilibrating with and becoming comparable with the concentrations of nearby SA-10 which have been consistently higher, but in recent years the concentrations are becoming comparable. This phenomenon would be expected considering the limited flux during seasonal periods (as described in Section 3), and considering other factors like chemical diffusion. Decreasing conditions for both wells are expected to manifest in the future as a result of continued natural attenuation from the former source areas. Future long-term changes in the former source area wells may be expected to occur relatively slowly considering the seasonal phenomenon of limited groundwater flux (flow) in this area.

Other than the sole increasing trend described above, the other recent trend results support decreasing trends and demonstrated indicators towards natural attenuation and progress towards achievement of cleanup levels. Examples include both chloride and ammonia at the former source area wells (P-13 and SA-14), and similarly both decreasing trends are occurring for chloride and ammonia in the north field (P-19 and P-20B).

5.2 Surface Water Results

Table 9 presents the surface water results from 2018 to 20122 for the Mouth of West Ditch (station D2), and the Colville River stations upstream (CR1) and downstream (CR3). Ammonia concentrations in the Colville River stations are relatively low, ranging from non-detect to 0.12 mg/L (highest observed over this period for both stations); ammonia concentrations at D2 are substantially higher than Colville River, ranging from non-detect to 4.96 mg/L. Similarly, chloride concentrations in Colville River stations are relatively low, ranging from 2.15 to 6.01 mg/L in contrast to the higher concentrations observed at D2 which range from 184 to 610 mg/L.

Appendix F includes the master database of surface water including data from 2000 onward, and allows for a general evaluation of surface water quality changes over time. Temporal characteristics since 2011 demonstrate substantial concentration decreases at station D2, which would suggest that improvements in groundwater condition are occurring given that the SWBU is inferred to discharge to the West Ditch. For example, the ammonia concentration at D2 has decreased from values of 30-35 mg/L in 2011-2012 timeframe, to more recent concentrations of less than 1 or non-detect in 2021-2022. Similar declines are demonstrated for chloride with concentrations of 1,090 to 2,360 mg/L observed in 2011-2012, compared

to more recent lower concentrations in the range of 327 to 401 mg/L reported in 2021-2022. These decreases of surface water concentration observed in the West Ditch occurring over the past 10 years are positive indicators of continued progress in groundwater towards achievement of cleanup levels.

5.3 Supplemental Field Activities

This section discusses the supplemental field activities completed as requested by Ecology as a follow-up to the most-recent 2017 five-year review report.

5.3.1 Well Re-Development

A site visit was performed by Great West staff on March 2, 2023 to do a focused round of well re-development, given some elevated readings of turbidity in selected wells.

Appendix G.1 presents a summary table of well development activities, which included static water-levels (depth to groundwater), depth to well bottom (and assessment of whether the well bottom was tagged as 'hard' or 'soft', which could give indication of sediment accumulation in the well bottom), purge volume, water clarity or turbidity, and other visual observations. Well development efforts focused on the north field wells based on moderately elevated turbidity from previous events, along with limited development (bailing) at upgradient wells P-12 and P-13. Well development was not completed at P-06 or P-19 due to frozen conditions (plug of ice inside PVC casing); the SA-wells were also not developed considering that during CMP sampling events these wells are effectively 'developed' by purging with the 12-volt DC pumps placed at the bottom of screen zone for collection of groundwater quality samples.

The development method consisted of using a decontaminated and weighted 1.6-inch diameter Polyethylene bailer, used initially to surge or agitate the saturated interval of well screen, and then used to bail (purge) groundwater and accumulated debris (such as organic matter, or sediment). After bailing at selected locations, a submersible 12-volt direct-current (DC) pump was subsequently used to continue with purging to improve water clarity (or remove small debris or fines). The main goal was to remove-evacuate as much debris and groundwater as possible, to enhance the hydraulic connection and improve water clarity (i.e., turbidity). The data table shows the total volume purged, and then the visual clarity or field-measured turbidity obtained at the end of purging activities via Hach 2100 Turbidimeter.

Key observations from the well development activities are summarized below:

- **Wells P-12 and P-13.** Initial water clarity was relatively clear and no debris was evacuated from initial bailing activities; neither of these wells had turbidity issues in prior events and development checks at these wells was performed to verify low turbidity and confirm no debris had accumulated at the bottom of the well. Final turbidity at P-12 was recorded at 9.6 NTU; and final purge water at P-13 was visually noted as 'clear'.
- **Well P-05.** Initial purge water was very grey (from visual inspection) with trace of very fine sand; purge water substantially improved during successive purge cycles to final turbidity reading of 35.5 NTU after removal of 18 gallons of water.
- **Well P-20B.** Initial bailing removed substantial dark organic matter (inferred to be bee carcass and mouse hair) mixed with clear water; after initial bailing/ purging the well dry and removal of debris, the purge water was clear and final turbidity reading of 3.3 NTU after removal of 5 gallons of water.
- **Well P-25.** Initial purge water dark orange to dark brown color and very fine sand; substantially improved clarity with successive purge cycles and with final turbidity reading of 9.4 NTU after removal of 25 gallons of water.
- **Well P-27.** Initial purge water grey with trace fine sand, improved clarity with successive purge cycles with final turbidity reading of 8.8 NTU after removal of 20 gallons of water.

Overall, the well development activities were deemed successful at key locations to remove debris and/or fines, improve hydraulic connection, and to maintain the wells for ongoing collection of representative

samples throughout the life of CMP monitoring activities. As noted above, future re-development may be needed periodically. Well development at wells P-06 and P-19 which were found to be frozen during the early March 2023 field visit, will be performed later in 2023 when the ice plugs thaw out.

5.3.2 Site Survey

Well maintenance was completed in July 2021, as included as an attachment by Jacobs and included in the *L-Bar Site 2021 Addendum to the 2020 Compliance Monitoring Plan* (Great West 2021). The well maintenance activities required adjustment (cutting) and resultantly lowering the PVC casing measurement point at five well locations (SA-10, SA-14, P-06, P-19, P-25, and P-27). The initial elevation correction as presented in the addendum letter to Ecology subtracted off the field-measured PVC cut-off length, to adjust the top-of-casing measurement point. Ecology requested the top-of-PVC casings be re-surveyed to verify the elevation measurement points for long-term CMP monitoring.

Appendix G.2 is the survey report from Montoya Land Surveying LLC. The survey included checking the vertical (elevation) at wells which were adjusted, including survey of the SA-area wells, and the north field wells. For the source area wells, the method included using SA-11 (center of pile, which was not modified) as the control elevation and re-surveying the adjacent SA-wells; for the north field area, the method included using P-20B (which was not modified in July 2021) as the control elevation, and then re-surveying the elevations of the adjacent north field wells. The recent survey data are reflected in the data tables (Table 2 and 5), site hydrograph (Figure 2), and the latest 2022 groundwater flow maps (Figures 3 and 4). The horizontal survey (control) from the March 2023 re-survey was not required as the location of wells did not change.

6.0 Summary

This section provides a summary of the key findings for the CMP to support the five-year review process.

6.1 Groundwater

Below are the key findings focusing on the most-recent data from 2018 through 2022.

Data Quality Review. The CMP data collected from 2018 to 2022 was deemed representative to support the CMP goals and objectives; the only deviations from plan were that for surface water the fall 2022 surface water event was not collected, and for groundwater the desired PQLs for thallium were slightly above the project-specific cleanup levels, and although reported as non-detect, were not low enough to verify concentrations below cleanup levels. Overall these two issues are relatively minor, can be addressed or mitigated in future sampling/reporting efforts, and are not deemed a substantive limitation to evaluating overall progress of the remedy.

Groundwater Flow Conditions. The most-recent five-year review report (Jacobs 2017) concluded from focused groundwater level monitoring performed monthly from January 2015 to December 2016 (roughly 2 years) that the seasonal high flow map (spring period) supports a generalized consistent gradient and flow direction to the north; however, during the seasonal low flow period (summer through early fall), there is an inferred localized radial flow pattern generally away from, and/or a zone of limited flux in the vicinity of wells SA-10 and SA-11. This phenomenon is inferred to occur each year, however, the semi-annual CMP frequency of groundwater level monitoring is insufficient to monitor seasonal characteristics occurring between the seasonal high and low monitoring events. When evaluating the site hydrograph with over 20 years of semi-annual monitoring data, supports that groundwater levels do not appear to be changing substantially (i.e., neither increasing or decreasing over time). The latest spring and fall groundwater flow maps from 2022 monitoring support groundwater flow conditions as previously characterized, with a generalized and inferred groundwater flow direction to the north, discharging from the SWBU into the Colville River.

Comparison to Cleanup Levels. As described in Section 5.1.2 and illustrated in Tables 6 and 7, current status of groundwater quality concentrations in former source areas for primary indicator parameters remains significantly elevated above cleanup levels. The most extreme (elevated) concentrations occur for ammonia at wells SA-10, SA-11, and P-20B with cleanup level ratios of 4458, 509, and 327, respectively; for chloride, the concentration levels are more moderate in comparison to ammonia, with the most elevated chloride conditions occurring at SA-10, SA-11, P-19, and P-27, with cleanup level ratios of 36, 23, 31, and 31, respectively. For secondary parameters, however, many of the wells are currently approaching or are below cleanup levels. Additional time and continued CMP monitoring is needed for natural attenuation to continue to improve groundwater conditions.

Trend Results. Statistically-based trend results corroborate the overall changes in groundwater quality observed from visual assessment via the time-series plots. In the former source area locations, recent trend results demonstrate that the primary indicator constituents for ammonia (at P-13) and chloride (at SA-14) are decreasing, with the only exception being chloride in SA-11 exhibiting an increasing trend in the most-recent 5-year period. As noted in Section 5.1.3, conditions at well SA-11 are believed to be equilibrating with nearby conditions at SA-10, and decreasing conditions for both wells are expected to manifest in the future as a result of continued natural attenuation from the former source areas. For the North Field wells, the most pronounced decreasing trends are demonstrated for chloride in P-19 and ammonia at P-20B, which supports that natural attenuation is occurring and is a positive indicator of progress towards attainment of cleanup levels. As the former source areas continue to improve groundwater conditions beneath the MRP, the relatively lower concentrations observed in the North Field area wells are also expected to respond to the overall improvement from areas upgradient.

6.2 Surface Water

The recent CMP surface water results demonstrate relatively low concentrations of ammonia and chloride at both the Colville River stations, and limited differences in concentration between upstream (CR1) and downstream (CR3) stations. Since 2011, substantial concentration decreases for ammonia and chloride are occurring at the mouth of West Ditch (station D2, discharge to Colville River), which supports that improvements in groundwater condition are occurring, given that the SWBU (i.e., shallow groundwater) is inferred to discharge into the West Ditch.

6.3 Future Activities

Ecology's Final Cleanup Action Plan (Ecology 2000) noted that the time to achieve cleanup levels could be upwards of 30 years following completion of source removal actions, as such continued CMP activities and reporting into the 2034 timeframe is anticipated. The data evaluations and results herein are intended to provide Ecology with information to support their third successive periodic review, which is follow-on to the initial review as documented in the 2012 Periodic Review of L-Bar site (Ecology, 2012), and the second review from the 2017 CMP Data Summary Report (Jacobs 2017). Continued monitoring and reporting of CMP groundwater and surface water will be performed as outlined in the CMP to track continued progress towards achievement of cleanup levels in groundwater.

7.0 References

- CH2M HILL Engineers, Inc. (CH2M). 1998. *L-Bar Phase I Remedial Investigation Final Report*.
- CH2M HILL Engineers, Inc. (CH2M). 1999. *L-Bar Cleanup Levels Development and Feasibility Study Report*.
- CH2M HILL Engineers, Inc. (CH2M). 2001a. *L-Bar Material Removal and Compliance Monitoring Work Plan*.
- CH2M HILL Engineers, Inc. (CH2M). 2001b. *Interim Action Source Removal Summary Report – Magnesite Residue Pile, L-Bar Site*.
- CH2M HILL Engineers, Inc. (CH2M). 2004. *Source Removal Summary Report – Covered Pile and Plant Buildings, L-Bar Site*.
- CH2M HILL Engineers, Inc. (CH2M) and Stevens County Conservation District (SCCD). 2011. *L-Bar Site Compliance Monitoring and Data Evaluation Report, 1996-2010*.
- CH2M HILL Engineers, Inc. (CH2M). 2012a. *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan Addendum No. 1*. May.
- CH2M HILL Engineers, Inc. (CH2M). 2012b. *Data Summary Report for the Supplemental Geophysical Survey Work Conducted at the L-Bar Site near Chewelah, Washington*.
- CH2M HILL Engineers, Inc. (CH2M). 2014. *Focused Site Investigation Data Summary Report for the L-Bar Site near Chewelah, Washington*.
- Jacobs Engineering (Jacobs). 2017. *2017 L-Bar Site Compliance Monitoring Program Data Summary Report and Five-Year Review*.
- Jacobs Engineering (Jacobs). 2020. *L-Bar Site Compliance Monitoring Program Sampling and Analysis Work Plan, 2020 Revision*.
- Great West Engineering (Great West). 2021. *L-Bar Site 2021 Addendum to the 2020 Compliance Monitoring Plan*.
- Washington State Department of Ecology (Ecology). 2000. *Final Cleanup Action Plan*.
- Washington State Department of Ecology (Ecology). 2012. *Periodic Review of L-Bar Site*.
- Washington State Department of Ecology (Ecology). 2016. *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies*.
- U.S. Environmental Protection Agency (EPA). 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*, EPA 350/R-09-007.

Tables

TABLE 1

Timeline of Significant Activities

2022 L-Bar Site Compliance Monitoring Program Five-Year Review Report

<i>Period</i>	<i>Activity</i>
circa 1996	Main Ditch Dam and New Lined Stormwater Ditch installed
1996	North Field Land Application Pilot Study
May 1997 - Jul 1997	FB/FBR removal from south perimeter of Mag. Pile
May 1997 - Dec 1999	FB/FBR removal from Mag. Pile
Dec 1997 - Jul 1998	FB removal from Butler Bldg.
1998	North Field land application
fall/winter 1999	Covered Pile removal pilot test
Jul 2000 - Dec 2003	Covered Pile removal
2001 - Feb 2004	FB/FBR removal from plant buildings
summer 2003	Main Ditch closure
Aug 2003	HDPE Barrier Wall removal
Nov 2003	26 monitoring wells and 16 piezometers decommissioned
2006	L-Bar Site sold to E. Smith Estate
Oct 2006	Surface water monitoring frequency reduced from twice/month to twice/year
Sep 2007	Compliance Monitoring and Data Evaluation Report for 1996-2006 (CH2M 2007)
Feb 2011	Compliance Monitoring and Data Evaluation Report for 2007-2010 (CH2M 2011)
May 2012	L-Bar CMP Sampling and Analysis Workplan Addendum No.1 (CH2M 2012)
Jun 2012	L-Bar Site Periodic Review (Ecology 2012)
Jun 2012	Focused Geophysical Investigation Work Plan (CH2M 2012)
Jul 2012	Geophysical Investigation (EM Survey) by Zonge (formerly NW Geophysics)
Oct 2012	Data Summary Report for Supplemental Geophysical Investigation (CH2M 2012)
Apr 2013	Site Investigation Workplan (CH2M 2013)
May 2013	Focused Site Investigation (CH2M 2013)
Jan 2014	Data Summary Report for Focused Site Investigation (CH2M 2014)
Aug 2014	Letter from Ecology RE: Approval of Focused Site Investigation and Misc Items
Jan 2015 through Dec 2016	Collection of supplemental monthly groundwater levels (via Alcoa subcontractor)
Mar 2017	Submittal of the DRAFT 2017 L-Bar Site CMP Data Report and Five-Year Review
Apr 2017	Meeting at Ecology's Eastern Regional Office (Ecology, Alcoa, and CH2M HILL)
Mar 2018	Submittal of the FINAL 2017 L-Bar Site CMP Data Report and Five-Year Review
Activities/items below completed since submittal of the FINAL 2017 CMP Data Report & Five Year Review	
May 2020	2020 Revision, L-Bar Site CMP SAP Work Plan (Jacobs 2020)
Jul 2021	Well Rehabilitation Site Work (Jacobs 2021)
Sep 2021	2021 Addendum to 2020 Revision L-Bar Site CMP SAP
Mar 2023	Well Re-development Activities
Mar 2023	Well Re-survey (verify/check top-of-casing elev. on selected wells)

TABLE 2
Groundwater Monitoring Well Network and Construction Details
2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Location	Well	TOC Elev. (ft)	Total Depth (ft bgs*)	Screened Interval Depth	Screen Length (ft)	Water-Bearing Formation
<i>Background</i>	P-12	1649.43	14	7 - 12	5	swbu**
	Prod. Well	not surveyed	80	70 - 80	10	confined alluvial sand/gravel
<i>Former Source Area / Magnesite Residue Pile</i>	P-13	1645.98	7.5	3.5 - 5.5	2	swbu
	SA-10	1671.69	41	35.5 - 40.5	5	swbu, near mag. pile/native silt interface
	SA-11	1668.27	42	36 - 41	5	swbu, near mag. pile/native silt interface
	SA-14	1666.31	37	31 - 36	5	swbu, near mag. pile/native silt interface
<i>Site Interior</i>	P-09	1643.81	10	4 - 6	2	swbu
<i>North Field</i>	P-05	1642.99	12.5	6 - 11	5	swbu
	P-06	1642.23	12.5	4.5 - 9.5	5	swbu
	P-19	1639.71	8	2.5 - 4	1.5	swbu
	P-20B	1642.25	9	4 - 6	2	swbu
	P-25	1639.25	12.5	6 - 11	5	swbu
	P-27	1641.70	12.5	4 - 9	5	swbu

Notes:

TOC = Top of Casing

Well construction details approximate

*bgs = below ground surface

**swbu = shallow water-bearing unit

Wells were re-surveyed on March 2, 2023 to verify top-of-casing following top-of-casing height adjustments in July 2021.

TABLE 3

Groundwater Analytical Suite, Test Methods, and Preliminary Cleanup Levels

2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Wells ^(a)	Analytical Parameter	Method	MRL ^(b)	Cleanup Level ^(c)	Sampling Frequency ^(d)
All Wells: P-05, P06, P-09, P-12, P-13, P-20B, P-25, P-27, SA-10, SA-11, SA-14, and PW (Refer to Fig. 1)	Primary Indicator Parameters:				
	Ammonia (NH ₄ as N)	EPA 350.1	0.05 mg/L	0.13 mg/L	Semi-Annual (2x/year)
	Chloride (Cl)	EPA 300.0	0.2 mg/L	230 mg/L	Semi-Annual (2x/year)
	Total Dissolved Solids (TDS)	SM 2540C	5 mg/L	1092 mg/L	Semi-Annual (2x/year)
	Secondary Parameters:				
	Nitrate (as N)	EPA 353.2	0.05 mg/L	10 mg/L	Every other year (2x/year)
	Nitrite (as N)	SM 4500B	0.05 mg/L	1 mg/L	Every other year (2x/year)
	Barium (total)	EPA 200.7	0.02 mg/L	1 mg/L	Every other year (2x/year)
	Manganese (total)	EPA 200.7	0.0006 mg/L	0.44 mg/L	Every other year (2x/year)
	Selenium (total)	EPA 200.8	0.001 mg/L	0.0082 mg/L	Every other year (2x/year)
	Thallium (total)	EPA 200.8	0.0002 mg/L	0.00112 mg/L	Every other year (2x/year)

Notes:

(a) Well network shown in Figure 1.

(b) MRL = method reporting limit.

(c) Cleanup Levels from Table 4-14 of *L-Bar Cleanup Levels Development and Feasibility Report* (CH2M HILL 1999).

(d) Primary indicator parameters are sampled consistently twice per year (semi-annually); secondary parameters are sampled twice per year every other year. Secondary parameters typically sampled during even years, for example, 2012, 2014, 2016, etc.

TABLE 4.

Surface Water Monitoring Program

2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Stations ^(a)	Parameter	Measurement Type	Method	Units	MRL ^(b)	Sampling Frequency
D3, D2 (see note c)	Discharge	Field Measurement	Bucket and stopwatch; a weir is constructed at D2 to facilitate discharge	Gallons per minute (gpm); converted to cubic feet per second (cfs)	Not applicable; best professional judgement via visual observations estimated to nearest tenth of gallon and second.	Semi-Annually; sampling typically performed in April and October
CR1, CR3 (see note d)	Discharge	Field Measurement	In-stream measurements via Marsh-McBirney Model 2000 (see note d)	Cubic feet per second (cfs)	Up to 19.99 fps; +/- 2%	
D3, D2, CR1, and CR3 (see note e)	Temperature	Field Measurement	YSI Model 63 or equivalent	Celcius (C)	-5 to 45 °C; +/- 0.4 °C	
	pH	Field Measurement	YSI Model 63 or equivalent	unitless	+/- 0.005 pH units	
	Sp. Conductance	Field Measurement	YSI Model 63 or equivalent	µS/cm	0 to 9,990 µS/cm	
	Ammonia-N	Laboratory Analyzed	EPA 350.1	mg/L	0.05 mg/L	
	Chloride	Laboratory Analyzed	EPA 300.0	mg/L	0.2 mg/L	
CR1, CR3	Dissolved oxygen	Field Measurement	YSI or equivalent	% or mg/L	0 to 20 mg/L; +/- 0.3 mg/L	

Footnotes:

(a) Station locations (refer to Figure 1):

CR1: Colville River at Highway 395, River Mile 40.3

CR3: Colville River 300 feet downstream of West Ditch, River Mile 40 (flow measured at CR1)

D2: Mouth of West Ditch

D3: Upper West Ditch

(b) For field parameters, MRL represents the field equipment measurement range and/or accuracy.

(c) As described in Section 2.2.2, conditions at station D2 (upper West Ditch) are often stagnant or frozen which precludes a discharge reading.

(d) As described in Section 2.2.2, discharge is estimated at station CR3 during high-flow events based on the sum of discharge measured from CR1 and D2.

(e) As described in Section 2.2.2, water quality samples are collected via **EWI method** where in-stream sampling can be performed safely under fall low flow conditions at Colville River stations CR1 and CR3; whereas **grab samples** are collected during high flow conditions at CR1 and CR3, and during all flow conditions at West Ditch stations D2 and D3.

TABLE 5.

Groundwater Monitoring Field Parameters for 2022

2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Location	Well	TOC Elev. (ft)	Depth to Water (ft bgs)		Elevations (ft msl)		pH		Spec. Cond. (us/cm)	
			Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
<i>Background</i>	P-12	1649.43	4.98	8.25	1644.45	1641.18	7.8	7.93	1,102	1,103
	Prod. Well	not surveyed	--	--	--	--	8.32	8.2	531	486
<i>Former Source Area / Magnesite Residue Pile</i>	P-13	1645.98	4.46	4.72	1641.52	1641.26	8.75	7.86	6,220	6,790
	SA-10	1671.69	27.85	28.92	1643.84	1642.77	7.86	8.36	34,850	26,910
	SA-11	1668.27	25.31	25.91	1642.96	1642.36	8.57	8.63	23,550	24,720
	SA-14	1666.31	25.28	25.56	1641.03	1640.75	10.49	10.87	4,800	4,910
<i>Site Interior</i>	P-09	1643.81	1.89	2.79	1641.92	1641.02	7.81	8.64	3,500	2,835
<i>North Field</i>	P-05	1642.99	6.6	8.23	1636.39	1634.76	7.52	7.58	6,510	6,780
	P-06	1642.23	4.07	6.72	1638.16	1635.51	7.51	7.66	1,003	992
	P-19	1639.71	2.6	5.29	1637.11	1634.42	6.84	7.02	15,730	11,480
	P-20B	1642.25	4.68	6.08	1637.57	1636.17	7.57	7.51	5,470	6,200
	P-25	1639.25	3.23	4.18	1636.02	1635.07	7.04	7.18	3,434	4,025
	P-27	1641.70	3.66	7.63	1638.04	1634.07	7.31	7.22	16,360	16,260

Notes:

TOC = Top of Casing

Well construction details approximate

*bgs = below ground surface

**swbu = shallow water-bearing unit

-- = Not Available

TABLE 6.
Groundwater Quality Data Summary for 2022
2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Analyte ^a	Date	Units	Cleanup Level ^b	Site Background		Former Source Area / Magnesite Residue Pile				Site Interior	North Field					
				P-12	PW	P-13	SA-10	SA-11	SA-14	P-09	P-05	P-06	P-19	P-20B	P-25	P-27
Ammonia-N*	May 12, 2022	mg/L	0.13	< 0.0200	< 0.0200	24.6	539	78.6	14.5	1.94	< 0.0200	0.462	0.846	11.6	0.477	< 0.02
	October 27, 2022			< 0.0200	< 0.0200	27.4	626	79.6	13	0.35	< 0.0200	0.29	0.357	10.3	0.525	< 0.02
Chloride*	May 12, 2022	mg/L	230	6.54	1.1	1,140	7,440	7,330	53.8	1,030	901	70.2	6,060	15.8	849	5,840
	October 27, 2022			5.55	0.799	996	9,110	7,620	584	495	1,890	48.2	3,450	1,370	849	6,380
TDS*	May 12, 2022	mg/L	1,092.4	601	253	4,240	19,700	1,780	3,150	1,790	3,340	494	1,320	4,040	1,820	1,230
	October 27, 2022			718	231	5,010	21,600	15,000	2,940	1,120	3,190	475	437	3,640	2,220	9,040
Turbidity	May 12, 2022	NTU	--	0.137	1.08	2.03	1.2	1.06	0.272	4.37	0.29	68	16.7	1.23	84.6	0.327
	October 27, 2022			0.115	1.47	0.342	14.2	1.05	0.227	0.251	0.147	68.7	0.66	0.334	135	0.643
Nitrate-N	May 12, 2022	mg/L	10	1.33	< 0.100	2.38	1.27	0.24	< 0.100	0.38	0.19	0.251	0.253	12.7	0.108	0.796
	October 27, 2022			1.44	< 0.100	6.21	0.96	0.784	0.132	0.148	< 0.100	< 0.1	< 0.100	12.8	< 0.100	< 0.100
Nitrite-N	May 12, 2022	mg/L	1	< 0.100	< 0.100	< 0.1	<0.1	< 0.100	< 0.100	< 0.100	0.979	< 0.100	< 0.100	0.821	< 0.100	0.958
	October 27, 2022			< 0.100	< 0.100	< 0.1	< 0.1	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Barium	May 12, 2022	mg/L	1	0.0424	0.00823	0.0841	0.0472	0.0508	0.0197	0.296	0.0823	0.185	0.164	0.0506	0.0391	1.99
	October 27, 2022			0.0272	0.0629	0.0662	0.0402	0.0425	0.0124	0.135	0.597	0.154	0.058	0.0638	0.0604	1.45
Manganese	May 12, 2022	mg/L	0.44	0.0299	0.00274	1.54	2.81	0.474	0.00246	1.53	0.221	1.55	1.89	0.496	7.68	0.115
	October 27, 2022			0.00234	0.0033	2.65	1.78	0.418	0.00463	0.121	0.216	1.12	1.6	0.832	8.02	0.112
Selenium	May 12, 2022	mg/L	0.0082	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00453	<0.001	<0.001	<0.001	<0.001	<0.001
	October 27, 2022			0.00105	<0.001	0.00223	0.00301	0.00589	0.00962	<0.001	0.00116	<0.001	0.00211	0.00288	<0.001	0.00268
Thallium	May 12, 2022	mg/L	0.0002	< 0.001	<0.001	0.005	0.004	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	October 27, 2022			< 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Notes:
^a Primary indicator parameters indicated with '*'.
^b Cleanup Levels as listed in the *L-Bar Cleanup Levels Development and Feasibility Report* (CH2M HILL 1999).
Values with "<" are non detect
TDS = Total Dissolved Solids
BOLD font are values which exceed respective cleanup levels.
PW = Production Well
Italic-font indicates laboratory PQLs which were reported as 'non-detect' but the laboratory could not achieve the project-specific cleanup levels.

TABLE 7.

Groundwater Quality Data - Cleanup Level Ratios FOR 2022

2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Analyte ^a	Cleanup Level ^b	Units	Cleanup Level Ratios ^c												
			Site Background		Former Source Area / Magnesite Residue Pile				Site Interior	North Field					
			P-12	PROD. WELL	P-13	SA-10	SA-11	SA-14	P-09	P-05	P-06	P-19	P-20B	P-25	P-27
Ammonia-N*	0.13	mg/L	0.08	0.08	200	4481	608	106	8.8	0.077	2.9	4.6	84	3.9	0.077
Chloride*	230	mg/L	0.03	0.0041	4.6	36	33	1.4	3.3	6	0.26	21	3.0	3.7	27
TDS*	1,092.4	mg/L	0.60	0.22	4.2	19	8	2.8	1.3	3.0	0.44	0.8	3.5	1.8	5

Notes:

^a Primary indicator parameters indicated with '*'.^b Cleanup Levels as listed in the *L-Bar Cleanup Levels Development and Feasibility Report* (CH2M HILL 1999).^c Cleanup Level Ratio = (mean 2022 concentration)/(cleanup level)**BOLD** font are cleanup level ratios > 1

TDS = Total Dissolved Solids

Non-detect results replaced with one-half the quantitation limit - for ammonia the quantitation limit was 0.02 mg/L

TABLE 8.

Groundwater Trend Results from Mann-Kendall Method

2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Area	Well	Constituent Name	No. of Datapoints	% Detects	Slope	Trend Direction
Background	P-12	Chloride (mg/L)	10	100	-0.763	Decreasing
Former Source Area	P-13	Ammonia (mg/L)	10	100	-3.401	Decreasing
Former Source Area/ MRP	SA-11	Chloride (mg/L)	10	100	714.400	Increasing
Former Source Area/ MRP	SA-14	Chloride (mg/L)	10	100	-105.200	Decreasing
North Field	P-19	Chloride (mg/L)	10	100	-1243.000	Decreasing
North Field	P-20B	Ammonia (mg/L)	10	100	-2.773	Decreasing

Notes:

Trend results for primary parameters over recent period 2018 through 2022 at 95% confidence.

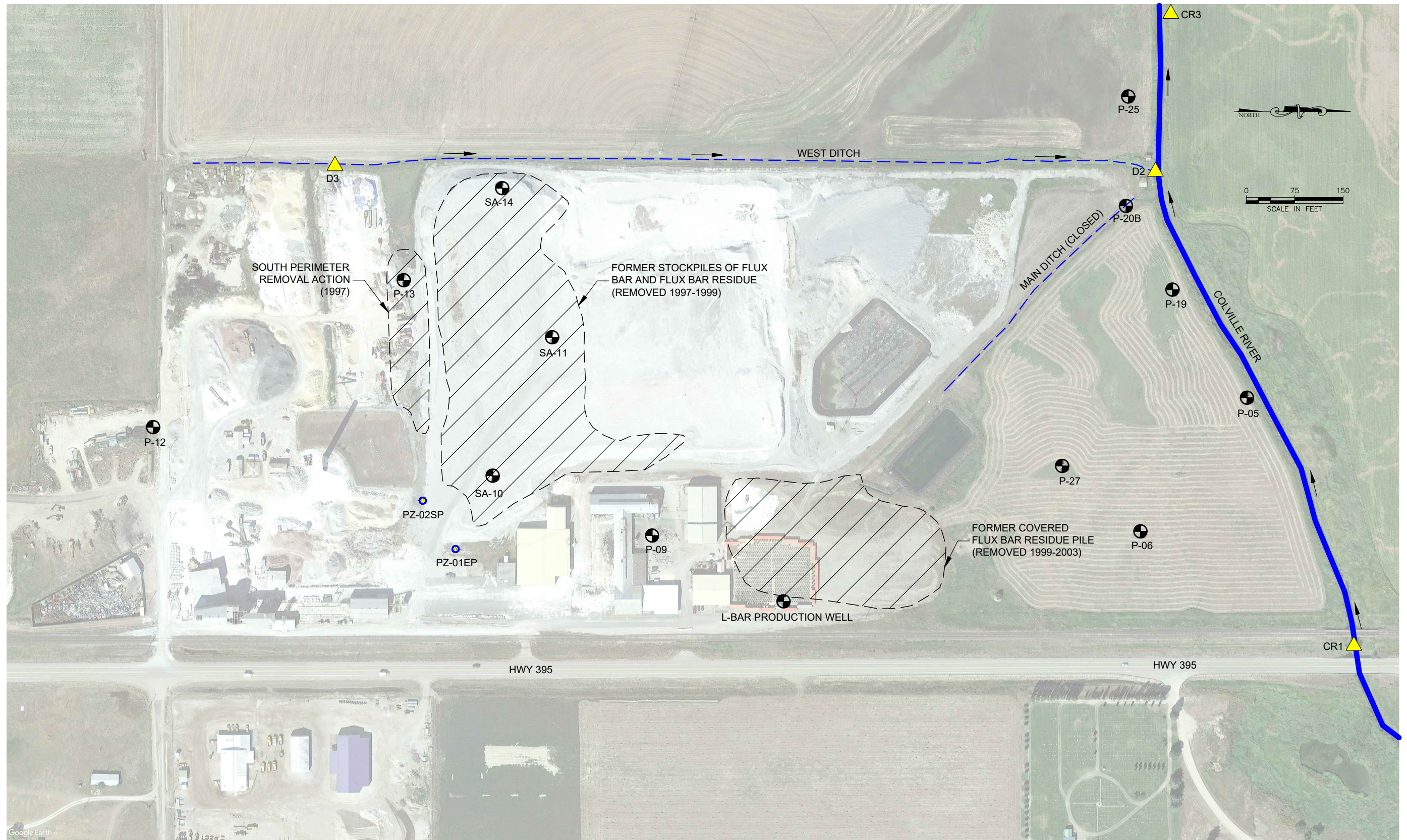
Refer to Appendix C for time-series and Appendix D for full output of trend test showing all cases tested.

TABLE 9.
Surface Water Data Summary
2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Date	Station CR1 - Upstream Colville River					Station D2 - Mouth of West Ditch					Station CR3 - Downstream Colville River				
	Flow (cfs)	NH3 Conc. (mg/L)	Chloride Conc. (mg/L)	NH3 Load (lb/day)	Chloride Load (lb/day)	Flow (gpm)	NH3 Conc. (mg/L)	Chloride Conc. (mg/L)	NH3 Load (lb/day)	Chloride Load (lb/day)	Flow (cfs)	NH3 Conc. (mg/L)	Chloride Conc. (mg/L)	NH3 Load (lb/day)	Chloride Load (lb/day)
5/30/2018	126.2	0.01	2.4	7	1634	13	4.96	610	0.8	95	126.2	0.01	2.83	7	1927
11/29/2018	58.7	0.0675	3.83	21	1213	47.6	3.68	184	2.1	105	58.8	0.115	5.88	36	1865
5/23/2019	69.5	0.01	2.15	4	806	28.8	0.155	453	0.1	157	69.6	0.01	2.81	4	1054
10/31/2019	29.5	0.01	3.37	2	536	20.8	3.38	509	0.8	127	29.5	0.0341	4.84	5	771
6/11/2020	104.5	0.0278	3.11	16	1753	24.2	0.139	432	0.0	126	104.6	0.01	3.81	6	2149
11/4/2020	31.1	0.0567	5.96	10	1000	16.7	1.07	497	0.2	100	31.1	0.01	4.57	2	768
6/8/2021	30.7	0.01	2.65	2	439	7.1	0.01	327	0.0	28	30.8	0.01	3.08	2	512
11/12/2021	32.8	0.01	5.58	2	987	10.3	0.0401	327	0.0	40	32.8	0.01	6.01	2	1064
6/1/2022	79.8	0.01	6.63	4	2854	20	0.01	401	0.0	96	79.8	0.01	3.1	4.3	1335

Load calculations performed for dates with measured flow and constituent concentration results at all three stations; non-detect results replaced by 1/2 the reported detection limit (non as *grey italics*).

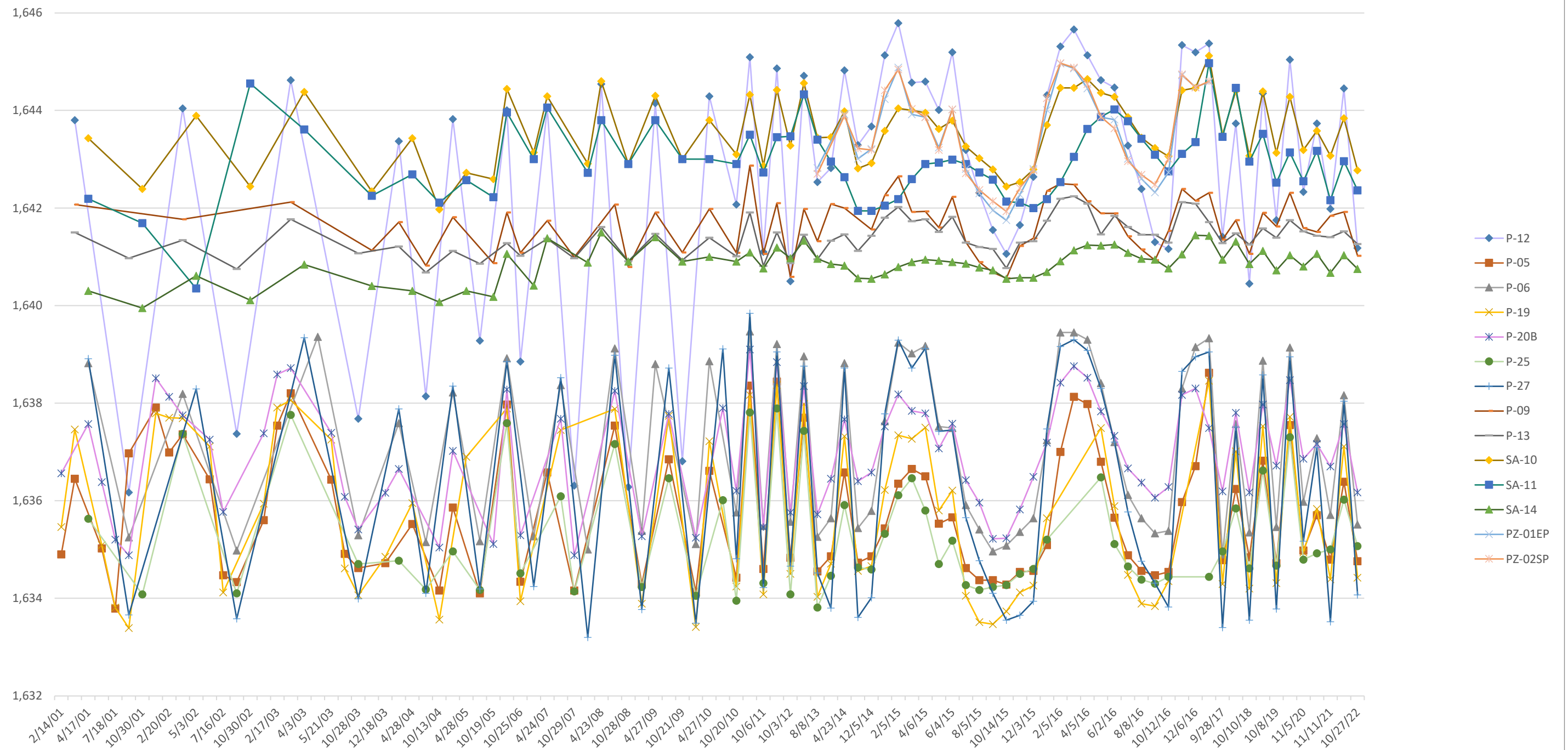
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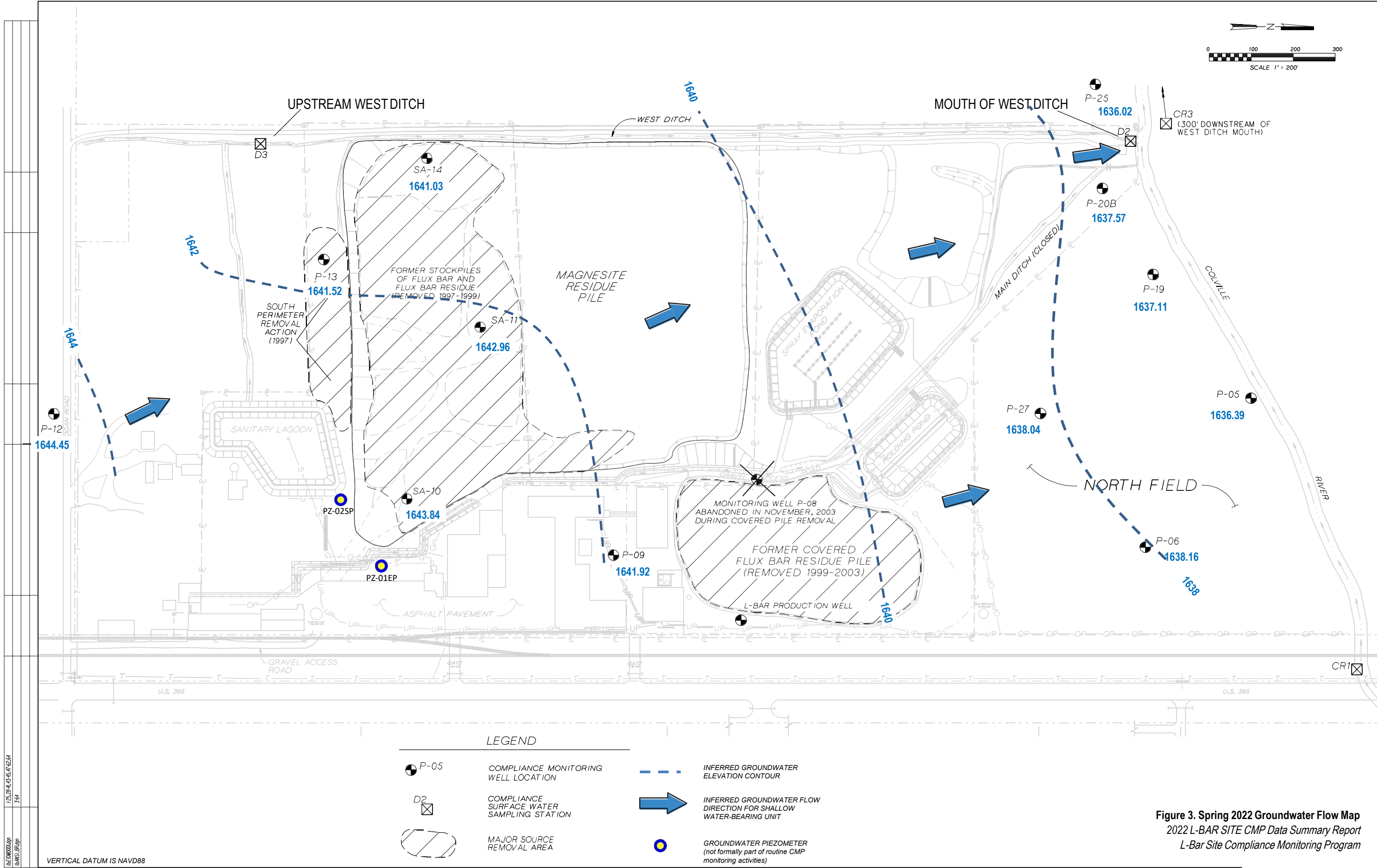


LEGEND

- COMPLIANCE GROUNDWATER MONITORING WELL
- GROUNDWATER PIEZOMETER
- COMPLIANCE SURFACE WATER SAMPLING STATION
- MAJOR SOURCE REMOVAL AREA

Figure 1. Site Map and CMP Monitoring Network
 2022 L-BAR SITE CMP Data Summary Report
 L-Bar Site Compliance Monitoring Program





1:25, 28, 44, 45, 47, 62, 64
364
1640000000
1640000000

VERTICAL DATUM IS NAVD88

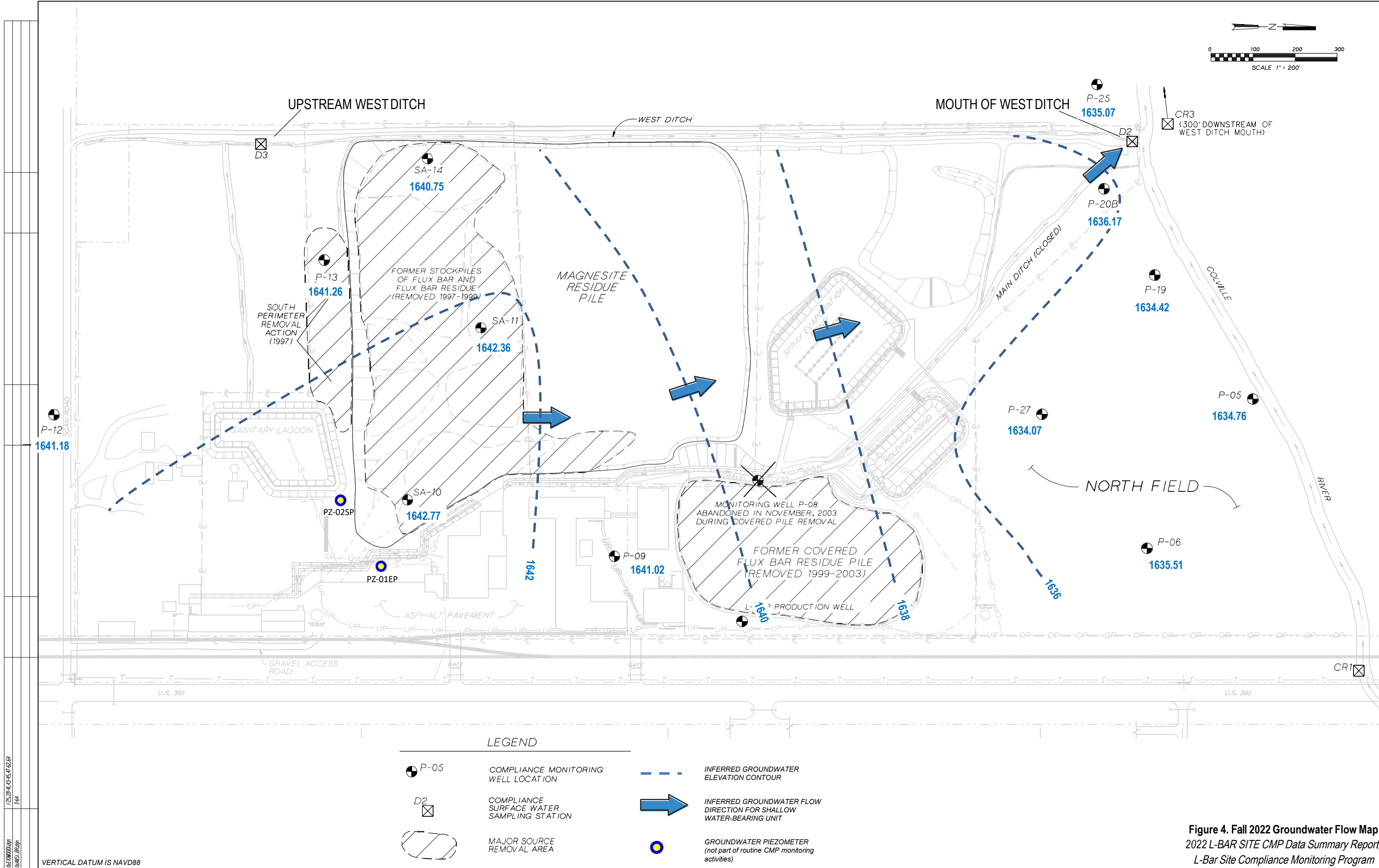


Figure 4. Fall 2022 Groundwater Flow Map
2022 L-BAR SITE CMP Data Summary Report
L-Bar Site Compliance Monitoring Program

Appendix A

Groundwater Analytical Lab Reports (2018 through 2022)

CASE NARRATIVE

July 13, 2018

Lab Name: Anatek Labs, Inc.

Project Tracking No.: LBAR-NWA

Anatek Batch: 180607016 & 180607018

Project Summary: Fourteen water samples were received 6/7/18 for analysis of ammonia, chloride, conductivity, pH, nitrate, nitrite, barium, selenium, manganese, thallium, and TDS.

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	Y	See Comments Section
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	Y	NA
Comments	Y	See Comments Section

1. Holding Time Requirements

Initial analysis of all samples performed within holding time requirements. Nitrate and Nitrite confirmations were analyzed out of holding time.

2. Calibration Requirements

No problems encountered.

3. Surrogate Recovery Requirements

No problems encountered.

4. QC Sample (LSC/MS/MSD) Recovery Requirements

No problems were encountered.

5. Method Blank Requirements

The method blanks were non-detect for all analytes. No problems encountered.

7. Internal Standard(s) Response Requirements

No problems encountered.

8. Comments

**I certify that this data package is in compliance with the terms and conditions of the contract.
Release of the data contained in this data package has been authorized by the Laboratory
Manager or his designee.**

Approved by: Kathleen A. Sattler

Anatek Labs, Inc.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

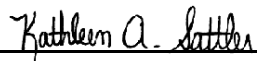
Batch #: 180607016
Project Name: LBAR

Analytical Results Report

Sample Number	180607016-001	Sampling Date	6/6/2018	Date/Time Received	6/7/2018 8:45 AM
Client Sample ID	1806LBARFD	Sampling Time	4:00 PM	Extraction Date	
Matrix	Water	Sample Location	LBARFD		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	19.1	mg/L	0.4	6/19/2018 11:09:00 AM	TLM	SM4500NH3G	
Barium	0.0157	mg/L	0.001	6/13/2018 1:59:00 PM	KNP	EPA 200.8	
Chloride	1110	mg/L	10	6/7/2018 10:14:00 PM	BAG	EPA 300.0	
Conductivity	5660	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00513	mg/L	0.001	6/13/2018 1:59:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/15/2018 11:39:00 AM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 11:39:00 AM	BAG	EPA 300.0	C4
pH	9.82	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.0254	mg/L	0.001	6/13/2018 1:59:00 PM	KNP	EPA 200.8	
TDS	3486	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	
Thallium	ND	mg/L	0.001	6/13/2018 1:59:00 PM	KNP	EPA 200.8	

Authorized Signature


Kathleen A. Sattler, Lab Manager

C4 Confirmatory analysis was past holding time.
MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Monday, June 25, 2018

Page 1 of 1

Anatek Labs, Inc.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-001	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP19	Sampling Time	8:30 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP19				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.654	mg/L	0.02	6/19/2018 11:10:00 AM	TLM	SM4500NH3G	
Barium	0.182	mg/L	0.001	6/13/2018 6:06:00 PM	KNP	EPA 200.8	
Chloride	5550	mg/L	50	6/7/2018 10:32:00 PM	BAG	EPA 300.0	
Conductivity	16000	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	1.95	mg/L	0.005	6/14/2018 4:54:00 PM	KNP	EPA 200.8	
NO3/N	0.477	mg/L	0.1	6/15/2018 11:56:00 AM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 11:56:00 AM	BAG	EPA 300.0	C4
pH	6.94	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00543	mg/L	0.001	6/13/2018 6:06:00 PM	KNP	EPA 200.8	
TDS	9590	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:06:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-002	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP05	Sampling Time	9:15 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP05				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	6/19/2018 11:11:00 AM	TLM	SM4500NH3G	
Barium	0.465	mg/L	0.001	6/13/2018 6:09:00 PM	KNP	EPA 200.8	
Chloride	2190	mg/L	10	6/7/2018 10:51:00 PM	BAG	EPA 300.0	
Conductivity	6890	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00662	mg/L	0.001	6/13/2018 6:09:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/15/2018 12:12:00 PM	BAG	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	6/15/2018 12:12:00 PM	BAG	EPA 300.0	
pH	7.46	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00310	mg/L	0.001	6/13/2018 6:09:00 PM	KNP	EPA 200.8	
TDS	3625	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:09:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-003	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM
Client Sample ID	1806LBARP06	Sampling Time	9:40 AM	Extraction Date		
Matrix	Water	Sample Location	LBARP06			
Comments						

Anatek Labs, Inc.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-004	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP27	Sampling Time	10:20 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP27				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.0459	mg/L	0.02	6/19/2018 11:14:00 AM	TLM	SM4500NH3G	
Barium	1.81	mg/L	0.005	6/14/2018 4:58:00 PM	KNP	EPA 200.8	
Chloride	5900	mg/L	100	6/7/2018 11:28:00 PM	BAG	EPA 300.0	
Conductivity	15500	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00217	mg/L	0.001	6/13/2018 6:14:00 PM	KNP	EPA 200.8	
NO3/N	<1.0	mg/L	1	6/15/2018 1:02:00 PM	BAG	EPA 300.0	C4, D1
NO2/N	<1.0	mg/L	1	6/15/2018 1:02:00 PM	BAG	EPA 300.0	C4, D1
pH	7.37	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00791	mg/L	0.001	6/13/2018 6:14:00 PM	KNP	EPA 200.8	
TDS	8467	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:14:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-005	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP20B	Sampling Time	11:00 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP20B				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	20.5	mg/L	0.4	6/19/2018 11:16:00 AM	TLM	SM4500NH3G	
Barium	0.126	mg/L	0.001	6/13/2018 6:16:00 PM	KNP	EPA 200.8	
Chloride	1530	mg/L	5	6/7/2018 11:46:00 PM	BAG	EPA 300.0	
Conductivity	6820	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	2.12	mg/L	0.005	6/14/2018 5:01:00 PM	KNP	EPA 200.8	
NO3/N	2.18	mg/L	0.1	6/15/2018 1:19:00 PM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 1:19:00 PM	BAG	EPA 300.0	C4
pH	7.28	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00262	mg/L	0.001	6/13/2018 6:16:00 PM	KNP	EPA 200.8	
TDS	4343	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:16:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-006	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP12	Sampling Time	11:50 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP12				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	6/19/2018 11:18:00 AM	TLM	SM4500NH3G	
Barium	0.0359	mg/L	0.001	6/13/2018 6:18:00 PM	KNP	EPA 200.8	
Chloride	9.73	mg/L	0.1	6/8/2018 12:42:00 AM	BAG	EPA 300.0	
Conductivity	1240	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00224	mg/L	0.001	6/13/2018 6:18:00 PM	KNP	EPA 200.8	
NO3/N	1.65	mg/L	0.1	6/8/2018 12:42:00 AM	BAG	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	6/8/2018 12:42:00 AM	BAG	EPA 300.0	
pH	7.86	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	6/13/2018 6:18:00 PM	KNP	EPA 200.8	
TDS	782	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:18:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-007	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP25	Sampling Time	12:45 PM	Extraction Date			
Matrix	Water	Sample Location	LBARP25				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.504	mg/L	0.02	6/19/2018 11:19:00 AM	TLM	SM4500NH3G	
Barium	0.0476	mg/L	0.001	6/13/2018 6:20:00 PM	KNP	EPA 200.8	
Chloride	520	mg/L	2	6/8/2018 1:01:00 AM	BAG	EPA 300.0	
Conductivity	3010	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	10.7	mg/L	0.02	6/14/2018 5:06:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/15/2018 1:35:00 PM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 1:35:00 PM	BAG	EPA 300.0	C4
pH	7.13	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00102	mg/L	0.001	6/13/2018 6:20:00 PM	KNP	EPA 200.8	
TDS	1694	mg/L	10	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:20:00 PM	KNP	EPA 200.8	

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Client: JACOBS
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SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-008	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP13	Sampling Time	1:30 PM	Extraction Date			
Matrix	Water	Sample Location	LBARP13				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	38.0	mg/L	0.4	6/19/2018 11:21:00 AM	TLM	SM4500NH3G	
Barium	0.0506	mg/L	0.001	6/13/2018 6:23:00 PM	KNP	EPA 200.8	
Chloride	1200	mg/L	5	6/8/2018 1:20:00 AM	BAG	EPA 300.0	
Conductivity	7360	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	4.46	mg/L	0.005	6/14/2018 5:09:00 PM	KNP	EPA 200.8	
NO3/N	0.425	mg/L	0.1	6/15/2018 1:52:00 PM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 1:52:00 PM	BAG	EPA 300.0	C4
pH	7.40	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00365	mg/L	0.001	6/13/2018 6:23:00 PM	KNP	EPA 200.8	
TDS	4896	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:23:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-009	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARSA14	Sampling Time	2:10 PM	Extraction Date			
Matrix	Water	Sample Location	LBARSA14				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	19.0	mg/L	0.4	6/19/2018 11:24:00 AM	TLM	SM4500NH3G	
Barium	0.0162	mg/L	0.001	6/13/2018 6:25:00 PM	KNP	EPA 200.8	
Chloride	1130	mg/L	5	6/8/2018 1:38:00 AM	BAG	EPA 300.0	
Conductivity	5630	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00563	mg/L	0.001	6/13/2018 6:25:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/15/2018 2:08:00 PM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 2:08:00 PM	BAG	EPA 300.0	C4
pH	9.86	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.0262	mg/L	0.001	6/13/2018 6:25:00 PM	KNP	EPA 200.8	
TDS	3735	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:25:00 PM	KNP	EPA 200.8	

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Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-010	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM
Client Sample ID	1806LBARSA11	Sampling Time	2:30 PM	Extraction Date		
Matrix	Water	Sample Location	LBARSA11			
Comments						

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
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Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-011	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARSA10	Sampling Time	2:55 PM	Extraction Date			
Matrix	Water	Sample Location	LBARSA10				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	551	mg/L	8	6/19/2018 1:01:00 PM	TLM	SM4500NH3G	
Barium	0.0564	mg/L	0.005	6/14/2018 5:18:00 PM	KNP	EPA 200.8	
Chloride	6770	mg/L	25	6/8/2018 2:15:00 AM	BAG	EPA 300.0	
Conductivity	28700	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	4.51	mg/L	0.005	6/14/2018 5:18:00 PM	KNP	EPA 200.8	
NO3/N	<1.0	mg/L	1	6/15/2018 4:38:00 PM	BAG	EPA 300.0	C4, D1
NO2/N	<1.0	mg/L	1	6/15/2018 4:38:00 PM	BAG	EPA 300.0	C4, D1
pH	7.85	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00321	mg/L	0.005	6/14/2018 5:18:00 PM	KNP	EPA 200.8	
TDS	17323	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.005	6/14/2018 5:18:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-012	Sampling Date	6/6/2018	Date/Time Received	6/7/2018	8:45 AM	
Client Sample ID	1806LBARP09	Sampling Time	3:40 PM	Extraction Date			
Matrix	Water	Sample Location	LBARP09				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	1.31	mg/L	0.4	6/19/2018 11:32:00 AM	TLM	SM4500NH3G	
Barium	0.162	mg/L	0.001	6/13/2018 6:45:00 PM	KNP	EPA 200.8	
Chloride	522	mg/L	2	6/8/2018 2:34:00 AM	BAG	EPA 300.0	
Conductivity	2500	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.585	mg/L	0.001	6/13/2018 6:45:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/15/2018 4:55:00 PM	BAG	EPA 300.0	C4
NO2/N	<0.1	mg/L	0.1	6/15/2018 4:55:00 PM	BAG	EPA 300.0	C4
pH	8.12	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	0.00121	mg/L	0.001	6/13/2018 6:45:00 PM	KNP	EPA 200.8	
TDS	1419	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:45:00 PM	KNP	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
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Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report

Sample Number	180607018-013	Sampling Date	6/6/2018	Date/Time Received	6/7/2018 8:45 AM
Client Sample ID	1806LBARPW	Sampling Time	3:50 PM	Extraction Date	
Matrix	Water	Sample Location	LBARPW		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	6/19/2018 11:40:00 AM	TLM	SM4500NH3G	
Barium	0.0772	mg/L	0.001	6/13/2018 6:47:00 PM	KNP	EPA 200.8	
Chloride	0.924	mg/L	0.1	6/8/2018 2:52:00 AM	BAG	EPA 300.0	
Conductivity	451	µmhos/cm	10	6/12/2018 12:10:00 PM	KAE	SM2510B	
Manganese	0.00208	mg/L	0.001	6/13/2018 6:47:00 PM	KNP	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	6/8/2018 2:52:00 AM	BAG	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	6/8/2018 2:52:00 AM	BAG	EPA 300.0	
pH	7.91	ph Units		6/7/2018 4:10:00 PM	KAE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	6/13/2018 6:47:00 PM	KNP	EPA 200.8	
TDS	<5	mg/L	5	6/11/2018 9:00:00 AM	HMD	SM 2540C	M3
Thallium	ND	mg/L	0.001	6/13/2018 6:47:00 PM	KNP	EPA 200.8	

Authorized Signature


Kathleen A. Sattler, Lab Manager

C4 Confirmatory analysis was past holding time.
D1 Sample required dilution due to matrix
M3 Spike recovery value is unusable. Analyte concentration disproportionate to the spike level. Blank spike recovery acceptable.
MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607016
Project Name: LBAR

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
AMMONIA-NITROGEN	0.199	mg/L	0.2	99.5	90-110	6/19/2018	6/19/2018
NO3/N	4.06	mg/L	4	101.5	90-110	6/15/2018	6/15/2018
NO2/N	4.05	mg/L	4	101.3	90-110	6/15/2018	6/15/2018
Thallium	0.0494	mg/L	0.05	98.8	85-115	6/13/2018	6/13/2018
Selenium	0.0497	mg/L	0.05	99.4	85-115	6/13/2018	6/13/2018
Manganese	0.0539	mg/L	0.05	107.8	85-115	6/13/2018	6/13/2018
Barium	0.0490	mg/L	0.05	98.0	85-115	6/13/2018	6/13/2018
Conductivity	693	µohms/cm	700	99.0	90-110	6/12/2018	6/12/2018
TDS	504	mg/L	500	100.8	80-120	6/11/2018	6/11/2018
Chloride	4.12	mg/L	4	103.0	90-110	6/7/2018	6/7/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180611004-001A	Thallium	ND	0.0490	mg/L	0.05	98.0	70-130	6/13/2018	6/13/2018
180607018-010	TDS	12828		mg/L	500		80-120	6/11/2018	6/11/2018
180611004-001A	Selenium	ND	0.0509	mg/L	0.05	101.8	70-130	6/13/2018	6/13/2018
180601032-003B	NO2/N	<0.1	4.07	mg/L	4	101.8	80-120	6/15/2018	6/15/2018
180601032-003B	NO3/N	<0.1	4.05	mg/L	4	101.3	80-120	6/15/2018	6/15/2018
180611004-001A	Manganese	ND	0.0555	mg/L	0.05	111.0	70-130	6/13/2018	6/13/2018
180607018-013	Chloride	0.924	5.06	mg/L	4	103.4	80-120	6/7/2018	6/7/2018
180611004-001A	Barium	0.0110	0.0610	mg/L	0.05	100.0	70-130	6/13/2018	6/13/2018
180607073-002	AMMONIA-NITROGEN	0.588	0.764	mg/L	0.2	88.0	80-120	6/19/2018	6/19/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Thallium	0.0467	mg/L	0.05	93.4	4.8	0-20	6/13/2018	6/13/2018
Selenium	0.0485	mg/L	0.05	97.0	4.8	0-20	6/13/2018	6/13/2018
NO2/N	4.18	mg/L	4	104.5	2.7	0-20	6/15/2018	6/15/2018
NO3/N	4.14	mg/L	4	103.5	2.2	0-20	6/15/2018	6/15/2018
Manganese	0.0521	mg/L	0.05	104.2	6.3	0-20	6/13/2018	6/13/2018
Chloride	5.15	mg/L	4	105.7	1.8	0-20	6/7/2018	6/7/2018
Barium	0.0592	mg/L	0.05	96.4	3.0	0-20	6/13/2018	6/13/2018

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607016
Project Name: LBAR

Analytical Results Report Quality Control Data

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
AMMONIA-NITROGEN	0.779	mg/L	0.2	95.5	1.9	0-25	6/19/2018	6/19/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Ammonia-nitrogen	<0.02	mg/L	0.02	6/19/2018	6/19/2018
Barium	ND	mg/L	0.001	6/13/2018	6/13/2018
Chloride	ND	mg/L	0.1	6/7/2018	6/7/2018
Conductivity	<1	µmhos/cm	10	6/12/2018	6/12/2018
Manganese	ND	mg/L	0.001	6/13/2018	6/13/2018
NO2/N	ND	mg/L	0.1	6/15/2018	6/15/2018
Selenium	ND	mg/L	0.001	6/13/2018	6/13/2018
TDS	<5	mg/L	5	6/11/2018	6/11/2018
Thallium	ND	mg/L	0.001	6/13/2018	6/13/2018

Duplicate

Sample Number	Parameter	Sample Result	Duplicate Result	Units	%RPD	AR %RPD	Prep Date	Analysis Date
180607018-011	Conductivity	28700	28700	µmhos/cm	0.0	0-20	6/12/2018	6/12/2018

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Thallium	0.0516	mg/L	0.05	103.2	85-115	6/13/2018	6/13/2018
NO2/N	4.03	mg/L	4	100.8	90-110	6/7/2018	6/7/2018
NO3/N	4.11	mg/L	4	102.8	90-110	6/7/2018	6/7/2018
TDS	504	mg/L	500	100.8	80-120	6/11/2018	6/11/2018
Conductivity	693	µohms/cm	700	99.0	90-110	6/12/2018	6/12/2018
Barium	0.0490	mg/L	0.05	98.0	85-115	6/13/2018	6/13/2018
Chloride	4.12	mg/L	4	103.0	90-110	6/7/2018	6/7/2018
Selenium	0.0513	mg/L	0.05	102.6	85-115	6/13/2018	6/13/2018
AMMONIA-NITROGEN	0.205	mg/L	0.2	102.5	90-110	6/20/2018	6/20/2018
Barium	0.0467	mg/L	0.05	93.4	85-115	6/13/2018	6/14/2018
Manganese	0.0504	mg/L	0.05	100.8	85-115	6/13/2018	6/14/2018
Selenium	0.0496	mg/L	0.05	99.2	85-115	6/13/2018	6/14/2018
NO2/N	4.05	mg/L	4	101.3	90-110	6/15/2018	6/15/2018
NO3/N	4.06	mg/L	4	101.5	90-110	6/15/2018	6/15/2018
AMMONIA-NITROGEN	0.199	mg/L	0.2	99.5	90-110	6/19/2018	6/19/2018
Manganese	0.0531	mg/L	0.05	106.2	85-115	6/13/2018	6/13/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
180608006-002A	Thallium	ND	0.0488	mg/L	0.05	97.6	70-130	6/13/2018	6/13/2018
180607018-010	TDS	12828	12930	mg/L	500	20.4	80-120	6/11/2018	6/11/2018
180608006-002A	Selenium	ND	0.0514	mg/L	0.05	102.8	70-130	6/13/2018	6/13/2018
180608006-002B	Selenium	ND	0.0484	mg/L	0.05	96.8	70-130	6/13/2018	6/14/2018
180601032-003B	NO2/N	<0.1	4.07	mg/L	4	101.8	80-120	6/15/2018	6/15/2018
180607018-013	NO2/N	<0.1	4.00	mg/L	4	100.0	80-120	6/7/2018	6/7/2018
180607018-013	NO3/N	<0.1	4.20	mg/L	4	105.0	80-120	6/7/2018	6/7/2018
180601032-003B	NO3/N	<0.1	4.05	mg/L	4	101.3	80-120	6/15/2018	6/15/2018
180608006-002B	Manganese	0.0190	0.0685	mg/L	0.05	99.0	70-130	6/13/2018	6/14/2018
180608006-002A	Manganese	0.0197	0.0707	mg/L	0.05	102.0	70-130	6/13/2018	6/13/2018
180607018-013	Chloride	0.924	5.06	mg/L	4	103.4	80-120	6/7/2018	6/7/2018
180608006-002A	Barium	0.0321	0.0847	mg/L	0.05	105.2	70-130	6/13/2018	6/13/2018
180608006-002B	Barium	0.0293	0.0758	mg/L	0.05	93.0	70-130	6/13/2018	6/14/2018
180608008-002	AMMONIA-NITROGEN	0.375	0.552	mg/L	0.2	88.5	80-120	6/20/2018	6/20/2018
180607073-002	AMMONIA-NITROGEN	0.588	0.764	mg/L	0.2	88.0	80-120	6/19/2018	6/19/2018

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report Quality Control Data

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Thallium	0.0487	mg/L	0.05	97.4	0.2	0-20	6/13/2018	6/13/2018
TDS	12900	mg/L	500	14.4	0.2	0-20	6/11/2018	6/11/2018
Selenium	0.0516	mg/L	0.05	103.2	0.4	0-20	6/13/2018	6/13/2018
Selenium	0.0474	mg/L	0.05	94.8	2.1	0-20	6/13/2018	6/14/2018
NO2/N	4.18	mg/L	4	104.5	2.7	0-20	6/15/2018	6/15/2018
NO2/N	4.04	mg/L	4	101.0	1.0	0-20	6/7/2018	6/7/2018
NO3/N	4.21	mg/L	4	105.3	0.2	0-20	6/7/2018	6/7/2018
NO3/N	4.14	mg/L	4	103.5	2.2	0-20	6/15/2018	6/15/2018
Manganese	0.0682	mg/L	0.05	98.4	0.4	0-20	6/13/2018	6/14/2018
Manganese	0.0702	mg/L	0.05	101.0	0.7	0-20	6/13/2018	6/13/2018
Chloride	5.15	mg/L	4	105.7	1.8	0-20	6/7/2018	6/7/2018
Barium	0.0834	mg/L	0.05	102.6	1.5	0-20	6/13/2018	6/13/2018
Barium	0.0753	mg/L	0.05	92.0	0.7	0-20	6/13/2018	6/14/2018
AMMONIA-NITROGEN	0.538	mg/L	0.2	81.5	2.6	0-25	6/20/2018	6/20/2018
AMMONIA-NITROGEN	0.779	mg/L	0.2	95.5	1.9	0-25	6/19/2018	6/19/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Ammonia-nitrogen	<0.02	mg/L	0.02	6/20/2018	6/20/2018
Ammonia-nitrogen	<0.02	mg/L	0.02	6/19/2018	6/19/2018
Barium	ND	mg/L	0.001	6/13/2018	6/14/2018
Barium	ND	mg/L	0.001	6/13/2018	6/13/2018
Chloride	ND	mg/L	0.1	6/7/2018	6/7/2018
Conductivity	<1	µmhos/cm	10	6/12/2018	6/12/2018
Manganese	ND	mg/L	0.001	6/13/2018	6/14/2018
Manganese	ND	mg/L	0.001	6/13/2018	6/13/2018
NO2/N	ND	mg/L	0.1	6/15/2018	6/15/2018
NO2/N	ND	mg/L	0.1	6/7/2018	6/7/2018
NO3/N	ND	mg/L	0.1	6/7/2018	6/7/2018
Selenium	ND	mg/L	0.001	6/13/2018	6/14/2018
Selenium	ND	mg/L	0.001	6/13/2018	6/13/2018
TDS	<5	mg/L	5	6/11/2018	6/11/2018
Thallium	ND	mg/L	0.001	6/13/2018	6/13/2018

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 180607018
Project Name: LBAR

Analytical Results Report Quality Control Data

Duplicate

Sample Number	Parameter	Sample Result	Duplicate Result	Units	%RPD	AR %RPD	Prep Date	Analysis Date
180607018-011	Conductivity	28700	28700	µmhos/cm	0.0	0-20	6/12/2018	6/12/2018

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Login Report

Customer Name: JACOBS

Order ID: 180607016

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

Sample #: 180607016-001 **Customer Sample #:** 1806LBARFD

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 4:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

999 W RIVERSIDE AVE #500

SPOKANE

WA

99201

Order ID: 180607016

Order Date: 6/7/2018

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	5.3/5.4
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Labels and chain agree?	Yes
Total number of containers?	3

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Login Report

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

Sample #: 180607018-001 **Customer Sample #:** 1806LBARP19

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 8:30 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-002 **Customer Sample #:** 1806LBARP05

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 9:15 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-003 **Customer Sample #:** 1806LBARP06

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 9:40 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-004 **Customer Sample #:** 1806LBARP27

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 10:20 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-005 **Customer Sample #:** 1806LBARP20B

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018
Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 11:00 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-006 **Customer Sample #:** 1806LBARP12

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018
Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 11:50 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-007 **Customer Sample #:** 1806LBARP25

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 12:45 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-008 **Customer Sample #:** 1806LBARP13

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 1:30 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-009 **Customer Sample #:** 1806LBARSA14

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 2:10 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-010 **Customer Sample #:** 1806LBARSA11

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM **Time Collected:** 2:30 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-010A Customer Sample #: 1806LBARSA11 MS

Recv'd: ☒ Matrix: Water Collector: REUBEN GREER Date Collected: 6/6/2018
Quantity: 3 Date Received: 6/7/2018 8:45:00 AM Time Collected: 2:30 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-010B Customer Sample #: 1806LBARSA11 MSD

Recv'd: ☒ Matrix: Water Collector: REUBEN GREER Date Collected: 6/6/2018
Quantity: 3 Date Received: 6/7/2018 8:45:00 AM Time Collected: 2:30 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

THALLIUM SPO

S

EPA 200.8

6/19/2018

Normal (~10 Days)

Sample #: 180607018-011 **Customer Sample #:** 1806LBARSA10

Recv'd:



Matrix: Water

Collector: REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3

Date Received: 6/7/2018 8:45:00 AM

Time Collected: 2:55 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Sample #: 180607018-012 **Customer Sample #:** 1806LBARP09

Recv'd:



Matrix: Water

Collector: REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3

Date Received: 6/7/2018 8:45:00 AM

Time Collected: 3:40 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 180607018

999 W RIVERSIDE AVE #500

Order Date: 6/7/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

Sample #: 180607018-013 **Customer Sample #:** 1806LBARPW

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER

Date Collected: 6/6/2018

Quantity: 3 **Date Received:** 6/7/2018 8:45:00 AM

Time Collected: 3:50 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	6/19/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	6/19/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	6/19/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	6/19/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	6/19/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	6/19/2018	<u>Normal (~10 Days)</u>

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	5.3/5.4
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Labels and chain agree?	Yes
Total number of containers?	45



Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

30607 016 **CH2R** Last Due 6/19/2018

1st SAMP 6/6/2018 1st RCVD 6/7/2018

LEBAR

Turn Around Time & Reporting

Please refer to our normal turn around times at:
<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal
☐ Next Day*
☐ 2nd Day*
☐ Other* _____

*All rush order requests must be prior approved.

Phone _____
 Mail _____
 Fax _____
 Email _____

Company Name: Jacobs	Project Manager: Craig Sauer
Address: 999 W. Riverside #500	Project Name & #: LBAR
City: Spokane State: WA Zip: 99201	Email Address: Craig.Sauer@ch2m.com
Phone: 504-464-7200	Purchase Order #:
Fax:	Sampler Name & phone: RGREER 504-464-7215

Provide Sample Description

List Analyses Requested

Note Special Instructions/Comments

[illegible]

Inspection Checklist

Received Intact?	<u>Y</u>	N
Labels & Chains Agree?	<u>Y</u>	N
Containers Sealed?	<u>Y</u>	N
VOC Head Space?	<u>Y</u>	N

	Printed Name	Signature	Company	Date	Time
Relinquished by	REUBEN GROSS		JACOBS	6-18	845
Received by	Wendy OZ		Anatuk	6-18	084
Relinquished by					
Received by					
Relinquished by					
Received by					

h/c/i
Temperature (°C) 5.3/5.4 104
Preservative: A2504 R329-2 <2
PH 11.6230-7M
Date & Time: 6-7-18 1500
Inspected By: M/az

30607 018 CH2R Last Due 6/19/2018
1st SAMP 6/6/2018 1st RCVD 6/7/2018

LEBAR

Chain of Custody Record

Anatek
Labs,
Inc.

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Company Name: JACOBS				Project Manager: CRAIG SAYER				Turn Around Time & Reporting				
Address: 999 W RIVERSIDE AVE SUITE 500				Project Name & #: LBAR				Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp				
City: SPOKANE WA				Email Address: craig.sayer@anatek.com				*All rush order requests must be prior approved.				
State: 99201				Purchase Order #:				Phone: _____ Mail: _____ Fax: _____ Email: _____				
Zip: 504-464-7200				Sampler Name & phone: CRAIG 509-464-7215				Note Special Instructions/Comments				
Fax: 504-464-7200				List Analyses Requested				SWBS				
Provide Sample Description				Preservative				Inspection Checklist				
Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Company	Date	Time	Received Intact?	Labels & Chains Agree?	Containers Sealed?	VOC Head Space?
1	1806LBAR-P19	6/6/18/1330	W	3	X	JACOBS	6/18	845	Y	Y	Y	Y
2	1806LBAR-P05	6/6/18/1915	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
3	1806LBAR-P06	6/6/18/0940	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
4	1806LBAR-P27	6/6/18/1020	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
5	1806LBAR-P08	6/6/18/1100	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
6	1806LBAR-P12	6/6/18/1150	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
7	1806LBAR-P25	6/6/18/1245	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
8	1806LBAR-P13	6/6/18/1330	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
9	1806LBAR-SAM	6/6/18/1410	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
10	1806LBAR-SAM	6/6/18/1430	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
11	1806LBAR-SAM	6/6/18/1455	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
12	1806LBAR-P04	6/6/18/1540	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
13	1806LBAR-P02	6/6/18/1550	W	3	X	JACOBS	6/18	085	Y	Y	Y	Y
Relinquished by: BENJAMIN GORR				Signature: [Signature]				Temperature (°C): 5.3/5.4				
Received by: Wendy Oz				Signature: [Signature]				Preservative: H2SO4/R329-2-2				
Relinquished by:				Signature:				pH: 9.16/230-7M				
Received by:				Signature:				Date & Time: 6-7-18 1500				
Relinquished by:				Signature:				Inspected By: [Signature]				
Received by:				Signature:				Inspected By: [Signature]				

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-001	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM
Client Sample ID	1810-LBAR-P09	Sampling Time	8:45 AM	Extraction Date	
Matrix	Water	Sample Location	P09		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.678	mg/L	0.02	10/18/2018 11:39:00 AM	TLM	SM4500NH3G	
Barium	0.122	mg/L	0.001	10/30/2018 2:57:00 PM	BAG	EPA 200.8	
Chloride	523	mg/L	2	10/14/2018 2:01:00 AM	LMD	EPA 300.0	
Conductivity	2750	µmhos/cm	10	10/12/2018 5:00:00 PM	NDE	SM2510B	
Manganese	0.148	mg/L	0.001	10/30/2018 2:57:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 6:11:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 6:11:00 PM	LMD	EPA 300.0	
pH	8.25	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 2:57:00 PM	BAG	EPA 200.8	
TDS	1190	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 2:57:00 PM	BAG	EPA 200.8	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-002	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-PW	Sampling Time	9:00 AM	Extraction Date			
Matrix	Water	Sample Location	PW				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018 11:40:00 AM	TLM	SM4500NH3G	
Barium	0.0684	mg/L	0.001	10/30/2018 2:34:00 PM	BAG	EPA 200.8	
Chloride	0.966	mg/L	0.1	10/12/2018 12:55:00 AM	LMD	EPA 300.0	
Conductivity	483	µmhos/cm	10	10/12/2018 5:00:00 PM	NDE	SM2510B	
Manganese	0.00128	mg/L	0.001	10/30/2018 2:34:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 12:55:00 AM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 12:55:00 AM	LMD	EPA 300.0	
pH	7.67	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 2:34:00 PM	BAG	EPA 200.8	
TDS	196	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 2:34:00 PM	BAG	EPA 200.8	

Anatek Labs, Inc.

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-003	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P12	Sampling Time	9:45 AM	Extraction Date			
Matrix	Water	Sample Location	P12				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018 11:41:00 AM	TLM	SM4500NH3G	
Barium	0.0357	mg/L	0.001	10/30/2018 2:37:00 PM	BAG	EPA 200.8	
Chloride	8.64	mg/L	0.1	10/12/2018 1:11:00 AM	LMD	EPA 300.0	
Conductivity	1330	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.0154	mg/L	0.001	10/30/2018 2:37:00 PM	BAG	EPA 200.8	
NO3/N	1.43	mg/L	0.1	10/12/2018 1:11:00 AM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 1:11:00 AM	LMD	EPA 300.0	
pH	7.61	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 2:37:00 PM	BAG	EPA 200.8	
TDS	669	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 2:37:00 PM	BAG	EPA 200.8	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-004	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P13	Sampling Time	10:30 AM	Extraction Date			
Matrix	Water	Sample Location	P13				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	40.5	mg/L	0.8	10/25/2018 1:17:00 PM	TLM	SM4500NH3G	
Barium	0.0505	mg/L	0.001	10/30/2018 2:39:00 PM	BAG	EPA 200.8	
Chloride	1150	mg/L	5	10/15/2018 2:18:00 PM	LMD	EPA 300.0	
Conductivity	8800	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	4.55	mg/L	0.02	10/30/2018 2:45:00 PM	BAG	EPA 200.8	
NO3/N	2.70	mg/L	0.1	10/12/2018 2:35:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 2:35:00 PM	LMD	EPA 300.0	
pH	7.26	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 2:39:00 PM	BAG	EPA 200.8	
TDS	4570	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 2:39:00 PM	BAG	EPA 200.8	

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Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-005	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-SA14	Sampling Time	10:45 AM	Extraction Date			
Matrix	Water	Sample Location	SA14				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	19.9	mg/L	0.8	10/25/2018 1:18:00 PM	TLM	SM4500NH3G	
Barium	0.0145	mg/L	0.001	10/30/2018 2:42:00 PM	BAG	EPA 200.8	
Chloride	1010	mg/L	5	10/15/2018 4:48:00 PM	LMD	EPA 300.0	
Conductivity	6480	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.00510	mg/L	0.001	10/30/2018 2:42:00 PM	BAG	EPA 200.8	
NO3/N	<1.0	mg/L	1	10/12/2018 4:32:00 PM	LMD	EPA 300.0	
NO2/N	<1.0	mg/L	1	10/12/2018 4:32:00 PM	LMD	EPA 300.0	
pH	9.81	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.0207	mg/L	0.001	10/30/2018 2:42:00 PM	BAG	EPA 200.8	
TDS	3590	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 2:42:00 PM	BAG	EPA 200.8	

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Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-006	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-SA11	Sampling Time	11:30 AM	Extraction Date			
Matrix	Water	Sample Location	SA11				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	57.4	mg/L	0.8	10/25/2018 1:19:00 PM	TLM	SM4500NH3G	
Barium	0.0308	mg/L	0.001	10/30/2018 3:05:00 PM	BAG	EPA 200.8	
Chloride	4760	mg/L	20	10/15/2018 5:05:00 PM	LMD	EPA 300.0	
Conductivity	19900	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.201	mg/L	0.001	10/30/2018 3:05:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 5:21:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 5:21:00 PM	LMD	EPA 300.0	
pH	8.27	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.0128	mg/L	0.001	10/30/2018 3:05:00 PM	BAG	EPA 200.8	
TDS	11800	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:05:00 PM	BAG	EPA 200.8	

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Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-007	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-SA10	Sampling Time	11:45 AM	Extraction Date			
Matrix	Water	Sample Location	SA10				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	587	mg/L	20	10/25/2018 3:43:00 PM	TLM	SM4500NH3G	
Barium	0.0471	mg/L	0.001	10/30/2018 3:08:00 PM	BAG	EPA 200.8	
Chloride	5360	mg/L	20	10/15/2018 5:38:00 PM	LMD	EPA 300.0	
Conductivity	31600	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	3.42	mg/L	0.02	10/30/2018 3:33:00 PM	BAG	EPA 200.8	
NO3/N	1.60	mg/L	0.1	10/12/2018 5:55:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 5:55:00 PM	LMD	EPA 300.0	
pH	7.41	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.00222	mg/L	0.001	10/30/2018 3:08:00 PM	BAG	EPA 200.8	
TDS	19700	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:08:00 PM	BAG	EPA 200.8	

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Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-008	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P25	Sampling Time	12:00 PM	Extraction Date			
Matrix	Water	Sample Location	P25				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.687	mg/L	0.02	10/25/2018 3:42:00 PM	TLM	SM4500NH3G	
Barium	0.168	mg/L	0.001	10/30/2018 3:10:00 PM	BAG	EPA 200.8	
Chloride	900	mg/L	5	10/15/2018 2:02:00 PM	LMD	EPA 300.0	
Conductivity	4600	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	10.0	mg/L	0.02	10/30/2018 3:35:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 12:34:00 AM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 12:34:00 AM	LMD	EPA 300.0	
pH	6.95	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 3:10:00 PM	BAG	EPA 200.8	
TDS	2892	mg/L	10	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:10:00 PM	BAG	EPA 200.8	

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Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-009	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P19	Sampling Time	12:45 PM	Extraction Date			
Matrix	Water	Sample Location	P19				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.425	mg/L	0.02	10/18/2018 11:48:00 AM	TLM	SM4500NH3G	
Barium	0.0923	mg/L	0.001	10/30/2018 3:13:00 PM	BAG	EPA 200.8	
Chloride	3190	mg/L	50	10/15/2018 11:18:00 AM	LMD	EPA 300.0	
Conductivity	13900	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	1.96	mg/L	0.02	10/30/2018 3:39:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 3:08:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 3:08:00 PM	LMD	EPA 300.0	
pH	6.76	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.00165	mg/L	0.001	10/30/2018 3:13:00 PM	BAG	EPA 200.8	
TDS	6830	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:13:00 PM	BAG	EPA 200.8	

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SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-010	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P05	Sampling Time	1:15 PM	Extraction Date			
Matrix	Water	Sample Location	P05				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018 11:50:00 AM	TLM	SM4500NH3G	
Barium	0.545	mg/L	0.001	10/30/2018 3:16:00 PM	BAG	EPA 200.8	
Chloride	1980	mg/L	10	10/18/2018 1:38:00 PM	LMD	EPA 300.0	
Conductivity	8530	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.647	mg/L	0.001	10/30/2018 3:16:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 11:34:00 AM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 11:34:00 AM	LMD	EPA 300.0	
pH	7.15	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 3:16:00 PM	BAG	EPA 200.8	
TDS	3780	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:16:00 PM	BAG	EPA 200.8	

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Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-011	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P06	Sampling Time	1:45 PM	Extraction Date			
Matrix	Water	Sample Location	P06				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.508	mg/L	0.02	10/18/2018 11:51:00 AM	TLM	SM4500NH3G	
Barium	0.177	mg/L	0.001	10/30/2018 3:18:00 PM	BAG	EPA 200.8	
Chloride	37.1	mg/L	0.2	10/15/2018 1:45:00 PM	LMD	EPA 300.0	
Conductivity	926	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	1.25	mg/L	0.02	10/30/2018 3:42:00 PM	BAG	EPA 200.8	
NO3/N	<0.2	mg/L	0.2	10/12/2018 1:45:00 PM	LMD	EPA 300.0	
NO2/N	<0.2	mg/L	0.2	10/12/2018 1:45:00 PM	LMD	EPA 300.0	
pH	7.26	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 3:18:00 PM	BAG	EPA 200.8	
TDS	390	mg/L	5	10/18/2018 2:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:18:00 PM	BAG	EPA 200.8	

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Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-012	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-P27	Sampling Time	2:30 PM	Extraction Date			
Matrix	Water	Sample Location	P27				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018 11:52:00 AM	TLM	SM4500NH3G	
Barium	2.17	mg/L	0.02	10/30/2018 3:44:00 PM	BAG	EPA 200.8	
Chloride	6670	mg/L	100	10/13/2018 12:24:00 PM	LMD	EPA 300.0	
Conductivity	22000	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.333	mg/L	0.001	10/30/2018 3:21:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 6:28:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 6:28:00 PM	LMD	EPA 300.0	
pH	7.04	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.00101	mg/L	0.001	10/30/2018 3:21:00 PM	BAG	EPA 200.8	
TDS	10700	mg/L	5	10/19/2018 3:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:21:00 PM	BAG	EPA 200.8	

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Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-013	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM
Client Sample ID	1810-LBAR-P20B	Sampling Time	3:00 PM	Extraction Date	
Matrix	Water	Sample Location	P20B		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	37.0	mg/L	0.8	10/25/2018 1:22:00 PM	TLM	SM4500NH3G	
Barium	0.148	mg/L	0.001	10/30/2018 3:24:00 PM	BAG	EPA 200.8	
Chloride	1980	mg/L	10	10/13/2018 10:26:00 PM	LMD	EPA 300.0	
Conductivity	8770	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	2.45	mg/L	0.02	10/30/2018 3:47:00 PM	BAG	EPA 200.8	
NO3/N	7.44	mg/L	5	10/12/2018 12:57:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 12:17:00 AM	LMD	EPA 300.0	
pH	6.98	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	ND	mg/L	0.001	10/30/2018 3:24:00 PM	BAG	EPA 200.8	
TDS	4370	mg/L	5	10/19/2018 3:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:24:00 PM	BAG	EPA 200.8	

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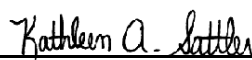
Client: JACOBS
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Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report

Sample Number	181011036-014	Sampling Date	10/10/2018	Date/Time Received	10/11/2018 9:20 AM		
Client Sample ID	1810-LBAR-SAFD	Sampling Time	5:00 PM	Extraction Date			
Matrix	Water	Sample Location	SAFD				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	64.1	mg/L	0.8	10/25/2018 1:24:00 PM	TLM	SM4500NH3G	
Barium	0.0339	mg/L	0.001	10/30/2018 3:26:00 PM	BAG	EPA 200.8	
Chloride	1890	mg/L	10	10/13/2018 10:59:00 PM	LMD	EPA 300.0	
Conductivity	18300	µmhos/cm	10	10/15/2018 2:20:00 PM	NDE	SM2510B	
Manganese	0.208	mg/L	0.001	10/30/2018 3:26:00 PM	BAG	EPA 200.8	
NO3/N	<0.1	mg/L	0.1	10/12/2018 1:14:00 PM	LMD	EPA 300.0	
NO2/N	<0.1	mg/L	0.1	10/12/2018 1:14:00 PM	LMD	EPA 300.0	
pH	8.41	ph Units		10/11/2018 4:30:00 PM	NDE	SM 4500pH-B	
Selenium	0.0119	mg/L	0.001	10/30/2018 3:26:00 PM	BAG	EPA 200.8	
TDS	11300	mg/L	5	10/19/2018 3:00:00 PM	BAS	SM 2540C	
Thallium	ND	mg/L	0.001	10/30/2018 3:26:00 PM	BAG	EPA 200.8	

Authorized Signature


Kathleen A. Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

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The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Batch #: 181011036
Project Name: LBAR

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Manganese	0.0487	mg/L	0.05	97.4	85-115	10/25/2018	10/30/2018
AMMONIA-NITROGEN	0.191	mg/L	0.2	95.5	90-110	10/18/2018	10/18/2018
AMMONIA-NITROGEN	0.193	mg/L	0.2	96.5	90-110	10/25/2018	10/25/2018
AMMONIA-NITROGEN	0.199	mg/L	0.2	99.5	90-110	10/25/2018	10/25/2018
Chloride	4.12	mg/L	4	103.0	90-110	10/12/2018	10/12/2018
Chloride	4.12	mg/L	4	103.0	90-110	10/15/2018	10/15/2018
Chloride	3.96	mg/L	4	99.0	90-110	10/18/2018	10/18/2018
AMMONIA-NITROGEN	0.195	mg/L	0.2	97.5	90-110	10/18/2018	10/18/2018
Conductivity	724	µohms/cm	700	103.4	90-110	10/15/2018	10/15/2018
Thallium	0.0507	mg/L	0.05	101.4	85-115	10/25/2018	10/30/2018
NO2/N	3.97	mg/L	4	99.3	90-110	10/12/2018	10/12/2018
NO2/N	3.92	mg/L	4	98.0	90-110	10/15/2018	10/15/2018
NO3/N	3.99	mg/L	4	99.8	90-110	10/12/2018	10/12/2018
NO3/N	4.07	mg/L	4	101.8	90-110	10/15/2018	10/15/2018
Selenium	0.0442	mg/L	0.05	88.4	85-115	10/25/2018	10/30/2018
TDS	503	mg/L	500	100.6	80-120	10/18/2018	10/18/2018
TDS	498	mg/L	500	99.6	80-120	10/19/2018	10/19/2018
Conductivity	735	µohms/cm	700	105.0	90-110	10/12/2018	10/12/2018

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
181009021-001A	NO3/N	<0.1	3.62	mg/L	4	90.5	80-120	10/12/2018	10/12/2018
181011015-002	AMMONIA-NITROGEN	0.464	0.651	mg/L	0.2	93.5	80-120	10/18/2018	10/18/2018
181017010-002	AMMONIA-NITROGEN	0.418	0.596	mg/L	0.2	89.0	80-120	10/25/2018	10/25/2018
181022011-002	AMMONIA-NITROGEN	0.882	1.06	mg/L	0.2	89.0	80-120	10/25/2018	10/25/2018
181018021-001	Chloride	0.806	5.20	mg/L	4	109.9	80-120	10/18/2018	10/18/2018
181009021-001A	Chloride	3.50	7.15	mg/L	4	91.3	80-120	10/12/2018	10/12/2018
181015022-002	AMMONIA-NITROGEN	0.752	0.945	mg/L	0.2	96.5	80-120	10/18/2018	10/18/2018
181011036-001A	Manganese	0.0296	0.0827	mg/L	0.05	106.2	70-130	10/25/2018	10/30/2018
181011036-001A	Thallium	ND	0.0513	mg/L	0.05	102.6	70-130	10/25/2018	10/30/2018
181009038-001A	NO3/N	1.55	5.58	mg/L	4	100.8	80-120	10/15/2018	10/15/2018
181009038-001A	NO2/N	<0.1	3.97	mg/L	4	99.3	80-120	10/15/2018	10/15/2018
181009021-001A	NO2/N	<0.1	3.70	mg/L	4	92.5	80-120	10/12/2018	10/12/2018
181011036-001A	Selenium	ND	0.0482	mg/L	0.05	96.4	70-130	10/25/2018	10/30/2018

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:Cert0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report Quality Control Data

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
181011036-005	TDS	3590	4166	mg/L	500	115.2	80-120	10/18/2018	10/18/2018
181011053-001	TDS	138	618	mg/L	500	96.0	80-120	10/19/2018	10/19/2018
181009038-001A	Chloride	0.978	4.77	mg/L	4	94.8	80-120	10/15/2018	10/15/2018

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
NO3/N	3.66	mg/L	4	91.5	1.1	0-20	10/12/2018	10/12/2018
AMMONIA-NITROGEN	0.644	mg/L	0.2	90.0	1.1	0-25	10/18/2018	10/18/2018
AMMONIA-NITROGEN	0.594	mg/L	0.2	88.0	0.3	0-25	10/25/2018	10/25/2018
AMMONIA-NITROGEN	1.05	mg/L	0.2	84.0	0.9	0-25	10/25/2018	10/25/2018
Chloride	5.09	mg/L	4	107.1	2.1	0-20	10/18/2018	10/18/2018
Chloride	7.20	mg/L	4	92.5	0.7	0-20	10/12/2018	10/12/2018
AMMONIA-NITROGEN	0.951	mg/L	0.2	99.5	0.6	0-25	10/18/2018	10/18/2018
Manganese	0.0822	mg/L	0.05	105.2	0.6	0-20	10/25/2018	10/30/2018
Thallium	0.0506	mg/L	0.05	101.2	1.4	0-20	10/25/2018	10/30/2018
NO3/N	5.30	mg/L	4	93.8	5.1	0-20	10/15/2018	10/15/2018
NO2/N	3.72	mg/L	4	93.0	6.5	0-20	10/15/2018	10/15/2018
NO2/N	3.77	mg/L	4	94.3	1.9	0-20	10/12/2018	10/12/2018
Selenium	0.0541	mg/L	0.05	108.2	11.5	0-20	10/25/2018	10/30/2018
TDS	4130	mg/L	500	108.0	6.5	0-20	10/18/2018	10/18/2018
TDS	558	mg/L	500	84.0	13.3	0-20	10/19/2018	10/19/2018
Chloride	4.54	mg/L	4	89.1	4.9	0-20	10/15/2018	10/15/2018

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018	10/18/2018
Ammonia-nitrogen	<0.02	mg/L	0.02	10/25/2018	10/25/2018
Ammonia-nitrogen	<0.02	mg/L	0.02	10/25/2018	10/25/2018
Ammonia-nitrogen	<0.02	mg/L	0.02	10/18/2018	10/18/2018
Chloride	ND	mg/L	0.1	10/12/2018	10/12/2018
Chloride	ND	mg/L	0.1	10/15/2018	10/15/2018
Chloride	ND	mg/L	0.1	10/18/2018	10/18/2018
Conductivity	ND	µmhos/cm	10	10/15/2018	10/15/2018
Conductivity	<1	µmhos/cm	10	10/12/2018	10/12/2018
Manganese	ND	mg/L	0.001	10/25/2018	10/30/2018

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: CRAIG SAUER

Batch #: 181011036
Project Name: LBAR

Analytical Results Report Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
NO2/N	ND	mg/L	0.1	10/12/2018	10/12/2018
NO2/N	ND	mg/L	0.1	10/15/2018	10/15/2018
NO3/N	ND	mg/L	0.1	10/12/2018	10/12/2018
NO3/N	ND	mg/L	0.1	10/15/2018	10/15/2018
Selenium	ND	mg/L	0.001	10/25/2018	10/30/2018
TDS	<5	mg/L	5	10/18/2018	10/18/2018
TDS	<5	mg/L	5	10/19/2018	10/19/2018
Thallium	ND	mg/L	0.001	10/25/2018	10/30/2018

Duplicate

Sample Number	Parameter	Sample Result	Duplicate Result	Units	%RPD	AR %RPD	Prep Date	Analysis Date
181011036-006	Conductivity	19900	19900	µmhos/cm	0.0	0-20	10/15/2018	10/15/2018
181010073-003	Conductivity	883	888	µmhos/cm	0.6	0-20	10/12/2018	10/12/2018

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Login Report

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

Sample #: 181011036-001 **Customer Sample #:** 1810-LBAR-P09

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 8:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-002 **Customer Sample #:** 1810-LBAR-PW

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 9:00 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

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Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-003 **Customer Sample #:** 1810-LBAR-P12

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 9:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-004 **Customer Sample #:** 1810-LBAR-P13

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 10:30 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

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Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-005 **Customer Sample #:** 1810-LBAR-SA14

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 10:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-005A **Customer Sample #:** 1810-LBAR-SA14MS

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 10:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

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99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-005B **Customer Sample #:** 1810-LBAR-SA14MSD

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 10:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-006 **Customer Sample #:** 1810-LBAR-SA11

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 11:30 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

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WA

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Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-007 **Customer Sample #:** 1810-LBAR-SA10

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 11:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-008 **Customer Sample #:** 1810-LBAR-P25

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 12:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-009 **Customer Sample #:** 1810-LBAR-P19

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 12:45 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-010 **Customer Sample #:** 1810-LBAR-P05

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 1:15 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

THALLIUM SPO

S

EPA 200.8

10/23/2018

Normal (~10 Days)

Sample #: 181011036-011 **Customer Sample #:** 1810-LBAR-P06

Recv'd:



Matrix: Water

Collector: JONATHAN ESPINOZA

Date Collected: 10/10/2018

Quantity: 3

Date Received: 10/11/2018 9:20:00 AM

Time Collected: 1:45 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-012 **Customer Sample #:** 1810-LBAR-P27

Recv'd:



Matrix: Water

Collector: JONATHAN ESPINOZA

Date Collected: 10/10/2018

Quantity: 3

Date Received: 10/11/2018 9:20:00 AM

Time Collected: 2:30 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 181011036

999 W RIVERSIDE AVE #500

Order Date: 10/11/2018

SPOKANE

WA

99201

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

Sample #: 181011036-013 **Customer Sample #:** 1810-LBAR-P20B

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 3:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Sample #: 181011036-014 **Customer Sample #:** 1810-LBAR-SAFD

Recv'd: ☒ **Matrix:** Water **Collector:** JONATHAN ESPINOZA **Date Collected:** 10/10/2018

Quantity: 3 **Date Received:** 10/11/2018 9:20:00 AM **Time Collected:** 5:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/23/2018	<u>Normal (~10 Days)</u>
BARIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
CONDUCTIVITY	S	SM2510B	10/23/2018	<u>Normal (~10 Days)</u>
MANGANESE SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
NITRATE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
NITRITE/N	S	EPA 300.0	10/23/2018	<u>Normal (~10 Days)</u>
pH	S	SM 4500pH-B	10/23/2018	<u>Normal (~10 Days)</u>
SELENIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/23/2018	<u>Normal (~10 Days)</u>
THALLIUM SPO	S	EPA 200.8	10/23/2018	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

999 W RIVERSIDE AVE #500

SPOKANE

WA

99201

Order ID: 181011036

Order Date: 10/11/2018

Contact Name: CRAIG SAUER

Project Name: LBAR

Comment:

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	0.8/0.9
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Labels and chain agree?	Yes
Total number of containers?	48



Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

31011 036 CH2R Last Due 10/23/2018

1st SAMP 10/10/201 1st RCVD 10/11/2018

L BAR

Company Name: Jacobs Project Manager: Craig Sauer
Address: 999 W Riverside Ave #500 Project Name & #: LBAR
City: Spokane State: WA Zip: 99201 Email Address: craig.sauer@jacobs.com
Phone: 509-464-7200 Purchase Order #:
Fax: Sampler Name & phone: Jon Espinoza 734-363-4587

Turn Around Time & Reporting

Please refer to our normal turn around times at:
<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal ☐ All rush order requests must be prior approved. ☐ Phone
☐ Next Day* ☐ Mail
☐ 2nd Day* ☐ Fax
☐ Other* ☐ Email

Provide Sample Description				List Analyses Requested										Note Special Instructions/Comments												
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative	# of Containers	Sample Volume	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1810-LBAR-P09	10/10/18 845	Water		3		X	X	X																	
2	1810-LBAR-PW	10/10/18 900			3		X	X	X																	
3	1810-LBAR-P12	10/10/18 945			3		X	X	X																	
4	1810-LBAR-P13	10/10/18 1030			3		X	X	X																	
5	1810-LBAR-SA14	10/10/18 1045			9		X	X	X																	
6	1810-LBAR-SA11	10/10/18 1130			3		X	X	X																	
7	1810-LBAR-SA10	10/10/18 1145			3		X	X	X																	
8	1810-LBAR-P25	10/10/18 1200			3		X	X	X																	
9	1810-LBAR-P19	10/10/18 1245			3		X	X	X																	
10	1810-LBAR-P05	10/10/18 1315			3		X	X	X																	
11	1810-LBAR-P20	10/10/18 1345			3		X	X	X																	
12	1810-LBAR-P27	10/10/18 1430			3		X	X	X																	
13	1810-LBAR-P208	10/10/18 1500			3		X	X	X																	

Relinquished by	Printed Name	Signature	Company	Date	Time
Relinquished by	Jonathan Espinoza	<i>[Signature]</i>	Jacobs	10/11/18	920
Received by	Anatek	<i>[Signature]</i>	Anatek	10/11/18	9:20
Relinquished by					
Received by					
Relinquished by					
Received by					

SWBS

MS/MSD

Inspection Checklist

Received Intact? ☒ Y ☐ N
Labels & Chains Agree? ☒ Y ☐ N
Containers Sealed? ☒ Y ☐ N
VOC Head Space? ☒ Y ☐ N

W/I/C

Temperature (°C) 0.8/0.9 IF#1
Preservative: H2SO4 R369-342
pH P18285-3N
Date & Time: 10-11-18 1500
Inspected By: W/I/C

pg 1 of 2



Chain of Custody Record

1st SAMP	10/10/201	1st RCVD	Last Due	10/23/2018
31011 036	CH2R			
10/11/2018				

Company Name:

Jacobs

Address: 999 W Riverside Ave #500

City: Spokane State: WA Zip: 99201

Phone: 509-464-7200

Fax:

Sampler Name & phone:

one: Espinoza 734-363-4587

Project Manager:

Craig Sauer

Project Name & #: LBAR

Email Address: Craig.Sauer@jacobs.com

Purchase Order #:

Provide Sample Description

List Analyses Requested

Note Special Instructions/Comments

[illegible]

Inspection Checklist	
Received Intact?	Y N
Labels & Chains Agree?	Y N
Containers Sealed?	Y N
VOC Head Space?	Y N
Temperature (°C)	0.8/0.9 14.1
Preservative:	<i>Yes</i>
Date & Time:	
Inspected By:	<i>na 2012</i>

CASE NARRATIVE

June 6, 2019

Lab Name: Anatek Labs, Inc.

Project Tracking No.: NWA—LBAR

Anatek Batch: 190501026

Project Summary: Fourteen water samples were received 5/1/19 for analysis of ammonia, chloride and TDS.

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	Y	NA
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	Y	NA
Comments	Y	See Comments Section

1. Holding Time Requirements

No problems encountered.

2. Calibration Requirements

No problems encountered.

3. Surrogate Recovery Requirements

No problems encountered.

4. QC Sample (LSC/MS/MSD) Recovery Requirements

No problems were encountered.

5. Method Blank Requirements

The method blanks were non-detect for all analytes. No problems encountered.

7. Internal Standard(s) Response Requirements

No problems encountered.

8. Comments

**I certify that this data package is in compliance with the terms and conditions of the contract.
Release of the data contained in this data package has been authorized by the Laboratory
Manager or his designee.**

Approved by: Kathleen A. Sattler

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	190501026-001	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP20B	Sampling Time	7:30 AM	Extraction Date			
Matrix	Water	Sample Location	P20B				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	16.6	mg/L	0.2	5/6/2019 12:48:00 PM	KAS	SM4500NH3G	
Chloride	1670	mg/L	10	5/14/2019 1:05:00 PM	LMC	EPA 300.0	
TDS	4450	mg/L	10	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-002	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP19	Sampling Time	7:50 AM	Extraction Date			
Matrix	Water	Sample Location	P19				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.792	mg/L	0.02	5/6/2019 11:46:00 AM	KAS	SM4500NH3G	
Chloride	6200	mg/L	50	5/14/2019 1:22:00 PM	LMC	EPA 300.0	
TDS	10400	mg/L	10	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-003	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP25	Sampling Time	8:25 AM	Extraction Date			
Matrix	Water	Sample Location	P25				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.703	mg/L	0.02	5/6/2019 11:51:00 AM	KAS	SM4500NH3G	
Chloride	645	mg/L	5	5/14/2019 1:55:00 PM	LMC	EPA 300.0	
TDS	2190	mg/L	10	5/6/2019 5:00:00 PM	NDE	SM 2540C	

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	190501026-004	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP05	Sampling Time	9:20 AM	Extraction Date			
Matrix	Water	Sample Location	P05				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	5/6/2019 11:52:00 AM	KAS	SM4500NH3G	
Chloride	1890	mg/L	10	5/14/2019 2:11:00 PM	LMC	EPA 300.0	
TDS	3340	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-005	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP06	Sampling Time	9:40 AM	Extraction Date			
Matrix	Water	Sample Location	P06				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.630	mg/L	0.02	5/6/2019 11:53:00 AM	KAS	SM4500NH3G	
Chloride	100	mg/L	0.4	5/14/2019 9:06:00 PM	LMC	EPA 300.0	
TDS	450	mg/L	10	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-006	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP27	Sampling Time	10:00 AM	Extraction Date			
Matrix	Water	Sample Location	P27				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.218	mg/L	0.02	5/6/2019 11:55:00 AM	KAS	SM4500NH3G	
Chloride	6920	mg/L	100	5/14/2019 2:44:00 PM	LMC	EPA 300.0	
TDS	11800	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Anatek Labs, Inc.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	190501026-007	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP12	Sampling Time	10:45 AM	Extraction Date			
Matrix	Water	Sample Location	P12				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	5/6/2019 11:56:00 AM	KAS	SM4500NH3G	
Chloride	8.26	mg/L	0.1	5/14/2019 3:01:00 PM	LMC	EPA 300.0	
TDS	764	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-008	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARP13	Sampling Time	11:20 AM	Extraction Date			
Matrix	Water	Sample Location	P13				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	36.7	mg/L	0.2	5/6/2019 12:51:00 PM	KAS	SM4500NH3G	
Chloride	1150	mg/L	5	5/14/2019 3:17:00 PM	LMC	EPA 300.0	
TDS	5150	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-009	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARSA14	Sampling Time	11:50 AM	Extraction Date			
Matrix	Water	Sample Location	SA14				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	18.2	mg/L	0.2	5/6/2019 12:53:00 PM	KAS	SM4500NH3G	
Chloride	952	mg/L	0.1	5/14/2019 4:24:00 PM	LMC	EPA 300.0	
TDS	3550	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

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504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	190501026-010	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARSA11	Sampling Time	12:05 PM	Extraction Date			
Matrix	Water	Sample Location	SA11				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	47.0	mg/L	0.2	5/6/2019 12:56:00 PM	KAS	SM4500NH3G	
Chloride	6120	mg/L	20	5/14/2019 4:14:00 PM	LMC	EPA 300.0	
TDS	15400	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-011	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARSA10	Sampling Time	12:20 PM	Extraction Date			
Matrix	Water	Sample Location	SA10				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	110	mg/L	0.2	5/6/2019 12:58:00 PM	KAS	SM4500NH3G	
Chloride	6440	mg/L	20	5/14/2019 4:57:00 PM	LMC	EPA 300.0	
TDS	17500	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-012	Sampling Date	4/30/2019	Date/Time Received	5/1/2019	10:45 AM	
Client Sample ID	1904LBARPW	Sampling Time	12:40 PM	Extraction Date			
Matrix	Water	Sample Location	PW				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.166	mg/L	0.02	5/6/2019 12:02:00 PM	KAS	SM4500NH3G	
Chloride	0.794	mg/L	0.1	5/14/2019 5:14:00 PM	LMC	EPA 300.0	
TDS	205	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

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Client: JACOBS **Batch #:** 190501026
Address: 999 W RIVERSIDE AVE #500 **Project Name:** ALCOA - NWA LBAR
SPOKANE, WA 99201
Attn: REUBEN GREER

Analytical Results Report

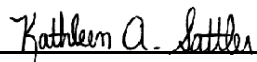
Sample Number	190501026-013	Sampling Date	4/30/2019	Date/Time Received	5/1/2019 10:45 AM
Client Sample ID	1904LBARP09	Sampling Time	1:15 PM	Extraction Date	
Matrix	Water	Sample Location	P09		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	1.60	mg/L	0.02	5/6/2019 12:03:00 PM	KAS	SM4500NH3G	
Chloride	588	mg/L	2	5/15/2019 12:37:00 PM	LMC	EPA 300.0	
TDS	1440	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Sample Number	190501026-014	Sampling Date	4/30/2019	Date/Time Received	5/1/2019 10:45 AM
Client Sample ID	1904LBARSADF	Sampling Time	2:00 PM	Extraction Date	
Matrix	Water	Sample Location	SAFD		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	17.3	mg/L	0.2	5/6/2019 1:01:00 PM	KAS	SM4500NH3G	
Chloride	961	mg/L	5	5/17/2019 11:54:00 AM	LMC	EPA 300.0	
TDS	3440	mg/L	5	5/6/2019 5:00:00 PM	NDE	SM 2540C	

Authorized Signature


Kathleen A. Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
TDS	501	mg/L	500	100.2	80-120	5/6/2019	5/6/2019
Chloride	3.85	mg/L	4	96.3	90-110	5/17/2019	5/17/2019
Chloride	3.83	mg/L	4	95.8	90-110	5/15/2019	5/15/2019
Chloride	3.65	mg/L	4	91.3	90-110	5/14/2019	5/14/2019
AMMONIA-NITROGEN	0.208	mg/L	0.2	104.0	90-110	5/6/2019	5/6/2019

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Chloride	3.84	mg/L	4	96.0	0.3	0-20	5/17/2019	5/17/2019
Chloride	3.66	mg/L	4	91.5	0.3	0-20	5/14/2019	5/14/2019
TDS	531	mg/L	500	106.2	5.8	0-20	5/6/2019	5/6/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
190501026-014	TDS	3440	3900	mg/L	500	92.0	80-120	5/6/2019	5/6/2019
190502038-006A	Chloride	ND	3.45	mg/L	4	86.3	80-120	5/15/2019	5/15/2019
190430005-002	AMMONIA-NITROGEN	<0.02	0.204	mg/L	0.2	102.0	80-120	5/6/2019	5/6/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
TDS	3860	mg/L	500	84.0	9.1	0-20	5/6/2019	5/6/2019
Chloride	3.78	mg/L	4	94.5	9.1	0-20	5/15/2019	5/15/2019
AMMONIA-NITROGEN	0.197	mg/L	0.2	98.5	3.5	0-25	5/6/2019	5/6/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Ammonia-nitrogen	<0.02	mg/L	0.02	5/6/2019	5/6/2019
Chloride	ND	mg/L	0.1	5/17/2019	5/17/2019
Chloride	ND	mg/L	0.1	5/15/2019	5/15/2019
Chloride	ND	mg/L	0.1	5/14/2019	5/14/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 190501026
Project Name: ALCOA - NWA LBAR

Analytical Results Report Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
TDS	<5	mg/L	5	5/6/2019	5/6/2019

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Login Report

Customer Name: JACOBS

Order ID: 190501026

999 W RIVERSIDE AVE #500

Order Date: 5/1/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 190501026-001 **Customer Sample #:** 1904LBARP20B

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 7:30 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-002 **Customer Sample #:** 1904LBARP19

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 7:50 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-003 **Customer Sample #:** 1904LBARP25

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 8:25 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 190501026

999 W RIVERSIDE AVE #500

Order Date: 5/1/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 190501026-004 **Customer Sample #:** 1904LBARP05

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 9:20 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-005 **Customer Sample #:** 1904LBARP06

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 9:40 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-006 **Customer Sample #:** 1904LBARP27

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 10:00 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-007 **Customer Sample #:** 1904LBARP12

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 10:45 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 190501026

999 W RIVERSIDE AVE #500

Order Date: 5/1/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-008 **Customer Sample #:** 1904LBARP13

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019
Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 11:20 AM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-009 **Customer Sample #:** 1904LBARSA14

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019
Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 11:50 AM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-010 **Customer Sample #:** 1904LBARSA11

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019
Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 12:05 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 190501026

999 W RIVERSIDE AVE #500

Order Date: 5/1/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 190501026-010A **Customer Sample #:** 1904LBARSA11 MS

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 12:05 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-010B **Customer Sample #:** 1904LBARSA11 MSD

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 12:05 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-011 **Customer Sample #:** 1904LBARSA10

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 12:20 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-012 **Customer Sample #:** 1904LBARPW

Recv'd: ☒ **Matrix:** Water **Collector:** REUBEN GREER **Date Collected:** 4/30/2019

Quantity: 2 **Date Received:** 5/1/2019 10:45:00 AM **Time Collected:** 12:40 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 190501026

999 W RIVERSIDE AVE #500

Order Date: 5/1/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-013 Customer Sample #: 1904LBARP09

Recv'd: ☒ Matrix: Water Collector: REUBEN GREER Date Collected: 4/30/2019

Quantity: 2 Date Received: 5/1/2019 10:45:00 AM Time Collected: 1:15 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

Sample #: 190501026-014 Customer Sample #: 1904LBARSADF

Recv'd: ☒ Matrix: Water Collector: REUBEN GREER Date Collected: 4/30/2019

Quantity: 2 Date Received: 5/1/2019 10:45:00 AM Time Collected: 2:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	5/13/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	5/13/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	5/13/2019	<u>Normal (~10 Days)</u>

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	3.7
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Labels and chain agree?	Yes
Total number of containers?	32



Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

90501 026 **CH2R** Last Due **5/13/2019**
st SAMP 4/30/2019 1st RCVD 5/1/2019
L.COA - NWA LBAR

PAGE 1 OF 2

Company Name: JACOBS
Address: 999 W RIVERSIDE AVE SUITE 500
City: SPOKANE State: WA Zip: 99201
Phone: 509-464-7215
Fax: _____

Project Manager: REUBEN GREER
Project Name & #: L.COA - NWA LBAR
Email Address: reuben.greer@jacobs.com
Purchase Order #: _____
Sampler Name & phone: [Signature]

Please refer to our normal turn around times at:
<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal
☐ Next Day*
☐ 2nd Day*
☐ Other* _____

*All rush order requests must be prior approved.

Phone _____
Mail _____
Fax _____
Email _____

Provide Sample Description				List Analyses Requested										Note Special Instructions/Comments		
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative: # of Containers	Sample Volume	NH3-N	TDS, CI									
1	1904LBARP20B	43019/7:30	W	2		X	X									
2	1904LBARP19	43019/7:50		1		X	X									
3	1904LBARP25	43019/8:25				X	X									
4	1904LBARP05	43019/9:20				X	X									
5	1904LBARP06	43019/9:40				X	X									
6	1904LBARP27	43019/10:00				X	X									
7	1904LBARP12	43019/10:45				X	X									
8	1904LBARP13	43019/11:20				X	X									
9	1904LBARSA14	43019/11:50		✓		X	X									
10	1904LBARSA11	43019/12:05		6		X	X									
11	1904LBARSA10	43019/12:20		2		X	X									
12	1904LBARPW	43019/12:40				X	X									
13	1904LBARP09	43019/13:15		✓		X	X									

MS/MSD

SWBS

Inspection Checklist	
Received Intact?	☒ Y ☐ N
Labels & Chains Agree?	☒ Y ☐ N
Containers Sealed?	☒ Y ☐ N
VOC Head Space?	☒ Y ☐ N
Temperature (°C): <u>3.7 deg-04</u>	
Preservative: <u>H2SO4 R379-1 <2</u>	
pH <u>P18285-3H</u>	
Date & Time: <u>5-1-19 1330</u>	
Inspected By: <u>[Signature]</u>	

	Printed Name	Signature	Company	Date	Time
Relinquished by	REUBEN GREER	[Signature]	JACOBS	5-1-19	1045
Received by	ANNE LOCK	[Signature]	ANATEK	5-1-19	1045
Relinquished by					
Received by					
Relinquished by					
Received by					



Chain of Custody Record

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504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

90501 026 CH2R Last Due 5/13/2019
1st SAMP 4/30/2019 1st RCVD 5/1/2019
LCOA - NWA LBAR

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[illegible]

CASE NARRATIVE

November 7, 2019

Lab Name: Anatek Labs, Inc.

Project Tracking No.: LBAR-NWA

Anatek Batch: 191008076

Project Summary: Fourteen water samples were received 10/8/19 for analysis of ammonia, chloride, and TDS.

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	Y	NA
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	Y	NA
Comments	Y	See Comments Section

1. Holding Time Requirements

Initial analysis of all samples performed within holding time requirements. No problems encountered.

2. Calibration Requirements

No problems encountered.

3. Surrogate Recovery Requirements

No problems encountered.

4. QC Sample (LSC/MS/MSD) Recovery Requirements

No problems were encountered.

5. Method Blank Requirements

The method blanks were non-detect for all analytes. No problems encountered.

7. Internal Standard(s) Response Requirements

No problems encountered.

8. Comments

**I certify that this data package is in compliance with the terms and conditions of the contract.
Release of the data contained in this data package has been authorized by the Laboratory
Manager or his designee.**

Approved by: Kathleen A. Sattler

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Client: JACOBS
Address: 999 W RIVERSIDE AVE #500
SPOKANE, WA 99201
Attn: REUBEN GREER

Batch #: 191008076
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	191008076-001	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM
Client Sample ID	1910LBARP20B	Sampling Time	8:20 AM	Extraction Date		
Matrix	Water	Sample Location	LBARP20B			
Comments						

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Batch #: 191008076
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	191008076-004	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARP06	Sampling Time	10:15 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP06				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.147	mg/L	0.02	10/16/2019 2:52:00 PM	TLM	SM4500NH3G	
Chloride	35.5	mg/L	0.4	10/16/2019 8:49:00 PM	LMC	EPA 300.0	
TDS	526	mg/L	10	10/14/2019 3:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-005	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARP27	Sampling Time	10:50 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP27				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.0266	mg/L	0.02	10/16/2019 2:54:00 PM	TLM	SM4500NH3G	
Chloride	6850	mg/L	50	10/16/2019 3:34:00 PM	LMC	EPA 300.0	
TDS	10600	mg/L	5	10/14/2019 2:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-006	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARP25	Sampling Time	11:20 AM	Extraction Date			
Matrix	Water	Sample Location	LBARP25				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.687	mg/L	0.02	10/16/2019 2:55:00 PM	TLM	SM4500NH3G	
Chloride	837	mg/L	5	10/16/2019 3:50:00 PM	LMC	EPA 300.0	
TDS	1580	mg/L	10	10/14/2019 2:00:00 PM	NDE	SM 2540C	

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Batch #: 191008076
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	191008076-007	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARP09	Sampling Time	12:20 PM	Extraction Date			
Matrix	Water	Sample Location	LBARP09				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	0.387	mg/L	0.02	10/16/2019 2:56:00 PM	TLM	SM4500NH3G	
Chloride	494	mg/L	2.5	10/16/2019 4:07:00 PM	LMC	EPA 300.0	
TDS	1070	mg/L	5	10/14/2019 2:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-008	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARPW	Sampling Time	12:30 PM	Extraction Date			
Matrix	Water	Sample Location	LBARPW				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	<0.02	mg/L	0.02	10/16/2019 2:57:00 PM	TLM	SM4500NH3G	
Chloride	1.16	mg/L	0.1	10/16/2019 6:53:00 PM	LMC	EPA 300.0	
TDS	241	mg/L	5	10/14/2019 3:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-009	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARSA10	Sampling Time	12:50 PM	Extraction Date			
Matrix	Water	Sample Location	LBARSA10				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	514	mg/L	10	10/16/2019 4:06:00 PM	TLM	SM4500NH3G	
Chloride	5660	mg/L	25	10/16/2019 9:38:00 PM	LMC	EPA 300.0	
TDS	17500	mg/L	5	10/14/2019 2:00:00 PM	NDE	SM 2540C	

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Batch #: 191008076
Project Name: ALCOA - NWA LBAR

Analytical Results Report

Sample Number	191008076-010	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARSA11	Sampling Time	1:05 PM	Extraction Date			
Matrix	Water	Sample Location	LBARSA11				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	105	mg/L	1	10/16/2019 3:54:00 PM	TLM	SM4500NH3G	
Chloride	5150	mg/L	20	10/16/2019 9:05:00 PM	LMC	EPA 300.0	
TDS	12500	mg/L	5	10/14/2019 3:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-011	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARSA14	Sampling Time	1:40 PM	Extraction Date			
Matrix	Water	Sample Location	LBARSA14				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	19.2	mg/L	1	10/16/2019 3:56:00 PM	TLM	SM4500NH3G	
Chloride	868	mg/L	5	10/16/2019 4:23:00 PM	LMC	EPA 300.0	
TDS	3370	mg/L	5	10/14/2019 3:00:00 PM	NDE	SM 2540C	

Sample Number	191008076-012	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM	
Client Sample ID	1910LBARP13	Sampling Time	2:00 PM	Extraction Date			
Matrix	Water	Sample Location	LBARP13				
Comments							
Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Ammonia-nitrogen	43.3	mg/L	1	10/16/2019 3:59:00 PM	TLM	SM4500NH3G	
Chloride	1170	mg/L	5	10/16/2019 4:40:00 PM	LMC	EPA 300.0	
TDS	5370	mg/L	5	10/14/2019 3:00:00 PM	NDE	SM 2540C	

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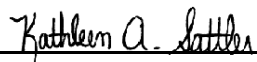
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Client: JACOBS **Batch #:** 191008076
Address: 999 W RIVERSIDE AVE #500 **Project Name:** ALCOA - NWA LBAR
SPOKANE, WA 99201
Attn: REUBEN GREER

Analytical Results Report

Sample Number	191008076-013	Sampling Date	10/8/2019	Date/Time Received	10/8/2019	4:10 PM
Client Sample ID	1910LBARSFDF	Sampling Time	3:00 PM	Extraction Date		
Matrix	Water	Sample Location	LBARSFDF			
Comments						

Authorized Signature


Kathleen A. Sattler, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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Batch #: 191008076
Project Name: ALCOA - NWA LBAR

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Chloride	4.24	mg/L	4	106.0	90-110	10/18/2019	10/18/2019
AMMONIA-NITROGEN	0.206	mg/L	0.2	103.0	90-110	10/16/2019	10/16/2019
Chloride	4.02	mg/L	4	100.5	90-110	10/16/2019	10/16/2019
TDS	498	mg/L	500	99.6	80-120	10/14/2019	10/14/2019

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
TDS	505	mg/L	500	101.0	1.4	0-20	10/14/2019	10/14/2019

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
191008076-013	TDS	14600	15200	mg/L	500	120.0	80-120	10/14/2019	10/14/2019
191008076-008BA	Chloride	1.16	4.76	mg/L	4	90.0	80-120	10/16/2019	10/16/2019
191018033-001	Chloride	0.695	4.15	mg/L	4	86.4	80-120	10/18/2019	10/18/2019
191009035-002	AMMONIA-NITROGEN	0.0810	0.302	mg/L	0.2	110.5	80-120	10/16/2019	10/16/2019

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
TDS	15200	mg/L	500	120.0	0.0	0-20	10/14/2019	10/14/2019
Chloride	4.94	mg/L	4	94.5	3.7	0-20	10/16/2019	10/16/2019
Chloride	4.39	mg/L	4	92.4	5.6	0-20	10/18/2019	10/18/2019
AMMONIA-NITROGEN	0.300	mg/L	0.2	109.5	0.7	0-25	10/16/2019	10/16/2019

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Ammonia-nitrogen	<0.02	mg/L	0.02	10/16/2019	10/16/2019
Chloride	ND	mg/L	0.1	10/18/2019	10/18/2019
Chloride	ND	mg/L	0.1	10/16/2019	10/16/2019
TDS	<5	mg/L	5	10/14/2019	10/14/2019

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Batch #: 191008076

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SPOKANE, WA 99201

Project Name: ALCOA - NWA LBAR

Attn: REUBEN GREER

Analytical Results Report Quality Control Data

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; NV:ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

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Login Report

Customer Name: JACOBS

Order ID: 191008076

999 W RIVERSIDE AVE #500

Order Date: 10/8/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 191008076-001 **Customer Sample #:** 1910LBARP20B

Recv'd:



Matrix: Water

Collector:

Date Collected: 10/8/2019

Quantity: 2

Date Received: 10/8/2019 4:10:00 PM

Time Collected: 8:20 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-002 **Customer Sample #:** 1910LBARP19

Recv'd:



Matrix: Water

Collector:

Date Collected: 10/8/2019

Quantity: 2

Date Received: 10/8/2019 4:10:00 PM

Time Collected: 9:00 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-003 **Customer Sample #:** 1910LBARP05

Recv'd:



Matrix: Water

Collector:

Date Collected: 10/8/2019

Quantity: 2

Date Received: 10/8/2019 4:10:00 PM

Time Collected: 9:30 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 191008076

999 W RIVERSIDE AVE #500

Order Date: 10/8/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 191008076-004 **Customer Sample #:** 1910LBARP06

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 10:15 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-005 **Customer Sample #:** 1910LBARP27

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 10:50 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-006 **Customer Sample #:** 1910LBARP25

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 11:20 AM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-007 **Customer Sample #:** 1910LBARP09

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 12:20 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 191008076

999 W RIVERSIDE AVE #500

Order Date: 10/8/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-008 Customer Sample #: 1910LBARPW

Recv'd: ☒ Matrix: Water Collector: Date Collected: 10/8/2019
Quantity: 2 Date Received: 10/8/2019 4:10:00 PM Time Collected: 12:30 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-008A Customer Sample #: 1910LBARPW MS

Recv'd: ☒ Matrix: Water Collector: Date Collected: 10/8/2019
Quantity: 2 Date Received: 10/8/2019 4:10:00 PM Time Collected: 12:30 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-008B Customer Sample #: 1910LBARPW MSD

Recv'd: ☒ Matrix: Water Collector: Date Collected: 10/8/2019
Quantity: 2 Date Received: 10/8/2019 4:10:00 PM Time Collected: 12:30 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 191008076

999 W RIVERSIDE AVE #500

Order Date: 10/8/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

Sample #: 191008076-009 **Customer Sample #:** 1910LBARSA10

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 12:50 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-010 **Customer Sample #:** 1910LBARSA11

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 1:05 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-011 **Customer Sample #:** 1910LBARSA14

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 1:40 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-012 **Customer Sample #:** 1910LBARP13

Recv'd: ☒ **Matrix:** Water **Collector:** **Date Collected:** 10/8/2019

Quantity: 2 **Date Received:** 10/8/2019 4:10:00 PM **Time Collected:** 2:00 PM

Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>

Customer Name: JACOBS

Order ID: 191008076

999 W RIVERSIDE AVE #500

Order Date: 10/8/2019

SPOKANE

WA

99201

Contact Name: REUBEN GREER

Project Name: ALCOA - NWA LBAR

Comment:

CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-013 Customer Sample #: 1910LBARSADF

Recv'd: ☒ Matrix: Water Collector: Date Collected: 10/8/2019
Quantity: 2 Date Received: 10/8/2019 4:10:00 PM Time Collected: 3:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

Sample #: 191008076-014 Customer Sample #: 1910LBARP12

Recv'd: ☒ Matrix: Water Collector: Date Collected: 10/8/2019
Quantity: 2 Date Received: 10/8/2019 4:10:00 PM Time Collected: 2:25 PM
Comment:

Test	Lab	Method	Due Date	Priority
AMMONIA-NITROGEN SPOA	S	SM4500NH3G	10/18/2019	<u>Normal (~10 Days)</u>
CHLORIDE	S	EPA 300.0	10/18/2019	<u>Normal (~10 Days)</u>
SOLIDS-TDS SPO	S	SM 2540C	10/18/2019	<u>Normal (~10 Days)</u>

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature of the sample(s)? (°C)	4.6
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Labels and chain agree?	Yes
Total number of containers?	32

Chain of Custody Record



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91008 076 CH2R Last Due 10/18/2019
1st SAMP 10/8/2019 1st RCVD 10/8/2019
FLCOA - NWA LBAR

Company Name: <u>Jacobs</u>		Project Manager: <u>Reuben Greer</u>	
Address: <u>999 W. Riverside Ave Ste 500</u>		Project Name & #: <u>ALCOA - NWA LBar</u>	
City: <u>Spokane</u>	State: <u>WA</u> Zip: <u>99201</u>	Email Address: <u>reuben.greer@jacobs.com</u>	
Phone: <u>509-464-7215</u>		Purchase Order #: _____	
Fax: _____		Sampler Name & phone: _____	

Provide Sample Description			List Analyses Requested										Note Special Instructions/Comments			
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative	Sample Volume	# of Containers	Company	Date	Time							
1	1910LBAR P203	10/8/19 0820	W		2	2	MS/MSD	10/8/19	1610							
2	1910LBAR P19	10/8/19 0900	W		2	2		10/8/19	1610							
3	1910LBAR P05	10/8/19 0930	W		2	2										
4	1910LBAR P06	10/8/19 1015	W		2	2										
5	1910LBAR P27	10/8/19 1050	W		2	2										
6	1910LBAR P25	10/8/19 1120	W		2	2										
7	1910LBAR P09	10/8/19 1220	W		2	2										
8	1910LBAR P01	10/8/19 1230	W		2	2										
9	1910LBAR SA10	10/8/19 1250	W		2	2										
10	1910LBAR SA11	10/8/19 1305	W		2	2										
11	1910LBAR SA14	10/8/19 1340	W		2	2										
12	1910LBAR P13	10/8/19 1400	W		2	2										
13	1910LBAR SA10	10/8/19 1500	W		2	2										

Relinquished by	<u>Kaila Savage</u>	Signature	<u>KES</u>
Received by	<u>Anna Young</u>	Signature	<u>AY</u>
Relinquished by		Signature	
Received by		Signature	
Relinquished by		Signature	
Received by		Signature	

Inspection Checklist	
Received Intact?	<u>Y</u> N
Labels & Chains Agree?	<u>Y</u> N
Containers Sealed?	<u>Y</u> N
VOC Head Space?	<u>Y</u> N
h/p/c	
Temperature (°C):	<u>4.6</u> Dia-04
Preservative:	<u>HgSA R386-3<2</u>
<u>PA P18285-300</u>	
Date & Time:	<u>10-8-19 1730</u>
Inspected By:	<u>mg</u>



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91008 076 **CH2R** Last Due 10/18/2019
1st SAMP 10/8/2019 1st RCVD 10/8/2019
ALCOA - NWA LBAR

Company Name:	Refer to Page 1	Project Manager:	Reuben Greer
Address:		Project Name & #:	
City:	State:	Zip:	Email Address :
Phone:	509-464-7215	Purchase Order #:	
Fax:		Sampler Name & phone:	

<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal ☐ *All rush order requests must be prior approved. ☐ Phone
☐ Next Day* ☐ Mail
☐ 2nd Day* ☐ Fax
☐ Other* ☐ Email

[illegible]

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WAE0919
Project: Alcoa L-Bar
Reported: 4/26/2021 16:02

Case Narrative

<u>Laboratory ID</u>	<u>Sample Name</u>
WAE0919-01	2005P12
WAE0919-02	2005P13
WAE0919-03	2005SA10
WAE0919-04	2005SA11
WAE0919-05	2005SA14
WAE0919-06	2005P09
WAE0919-07	2005PW
WAE0919-08	2005P05
WAE0919-09	2005P06
WAE0919-10	2005P19
WAE0919-11	2005P20B
WAE0919-12	2005P25
WAE0919-13	2005P27
WAE0919-14	2005FD

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	N	See Comments Section
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	Y	NA
Comments	N	See Comments Section

1. Holding Time Requirements

The turbidity analysis was analyzed out of holding time for all samples.

2. Calibration Requirements

No problems encountered.

3. Surrogate Recovery Requirements

No problems encountered.

4. QC Sample (LCS/MS/MSD) Recovery Requirements

No problems encountered.

5. Method Blank Requirements

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The method blanks were non-detect for all analytes.

6. Internal Standard(s) Response Requirements

No problems encountered

7. Comments

I certify that this data package is in compliance with the terms and conditions of the contract.

Release of the data contained in this data package has been authorized by the Laboratory Manager or his or her designee.

Kathleen A. Sattler, Lab Manager

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Analytical Results Report

Sample Location: 2005P12
Lab/Sample Number: WAE0919-01 Collect Date: 05/28/20 08:15
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	<0.02	mg/L	0.0200	6/12/20 11:02	TLM	SM 4500-NH3 H	
Chloride	8.11	mg/L	0.100	6/16/20 0:04	ARC	EPA 300.0	
Nitrate-N	1.08	mg/L	0.100	5/29/20 18:04	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 18:04	ARC	EPA 300.0	
TDS	648	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	0.200	NTU	0.100	6/2/20 16:44	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0298	mg/L	0.00100	6/19/20 13:47	TRC	EPA 200.8	
Manganese	<0.001	mg/L	0.00100	6/19/20 13:47	TRC	EPA 200.8	
Selenium	<0.001	mg/L	0.00100	6/19/20 13:47	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 13:47	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P13
Lab/Sample Number: WAE0919-02 Collect Date: 05/28/20 08:50
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	39.9	mg/L	0.600	6/12/20 11:30	TLM	SM 4500-NH3 H	
Chloride	1200	mg/L	5.00	6/16/20 0:21	ARC	EPA 300.0	
Nitrate-N	0.155	mg/L	0.100	5/29/20 18:20	ARC	EPA 300.0	
Nitrite-N	0.310	mg/L	0.100	5/29/20 18:20	ARC	EPA 300.0	
TDS	4470	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	0.393	NTU	0.100	6/2/20 16:47	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0437	mg/L	0.00100	6/19/20 13:50	TRC	EPA 200.8	
Manganese	4.62	mg/L	0.100	6/19/20 15:14	TRC	EPA 200.8	
Selenium	0.00299	mg/L	0.00100	6/19/20 13:50	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 13:50	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005SA10
Lab/Sample Number: WAE0919-03 Collect Date: 05/28/20 14:05
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	662	mg/L	10.0	6/12/20 12:21	TLM	SM 4500-NH3 H	
Chloride	8240	mg/L	50.0	6/17/20 2:23	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 18:37	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 18:37	ARC	EPA 300.0	
TDS	20700	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	12.5	NTU	0.100	6/2/20 16:49	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0550	mg/L	0.00100	6/19/20 13:52	TRC	EPA 200.8	
Manganese	4.95	mg/L	0.100	6/19/20 15:17	TRC	EPA 200.8	M2
Selenium	0.0100	mg/L	0.00100	6/19/20 13:52	TRC	EPA 200.8	M1
Thallium	<0.001	mg/L	0.00100	6/19/20 13:52	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005SA11
Lab/Sample Number: WAE0919-04 Collect Date: 05/28/20 13:30
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	77.0	mg/L	3.00	6/12/20 12:02	TLM	SM 4500-NH3 H	
Chloride	6220	mg/L	50.0	6/17/20 2:40	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 18:53	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 18:53	ARC	EPA 300.0	
TDS	14100	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	1.60	NTU	0.100	6/2/20 16:52	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0363	mg/L	0.00100	6/19/20 13:59	TRC	EPA 200.8	
Manganese	0.312	mg/L	0.00100	6/19/20 13:59	TRC	EPA 200.8	
Selenium	0.0157	mg/L	0.00100	6/19/20 13:59	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 13:59	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005SA14
Lab/Sample Number: WAE0919-05 Collect Date: 05/28/20 14:35
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	9.90	mg/L	0.0200	6/12/20 11:07	TLM	SM 4500-NH3 H	
Chloride	1070	mg/L	5.00	6/16/20 1:10	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 19:10	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 19:10	ARC	EPA 300.0	
TDS	3760	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	0.263	NTU	0.100	6/2/20 16:55	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0157	mg/L	0.00100	6/19/20 14:07	TRC	EPA 200.8	
Manganese	0.00460	mg/L	0.00100	6/19/20 14:07	TRC	EPA 200.8	
Selenium	0.0188	mg/L	0.00100	6/19/20 14:07	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:07	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P09
Lab/Sample Number: WAE0919-06 Collect Date: 05/28/20 12:55
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	2.68	mg/L	0.600	6/12/20 11:41	TLM	SM 4500-NH3 H	
Chloride	850	mg/L	5.00	6/16/20 1:27	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 19:26	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 19:26	ARC	EPA 300.0	
TDS	1800	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	9.22	NTU	0.100	6/2/20 17:36	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.293	mg/L	0.00100	6/19/20 14:09	TRC	EPA 200.8	
Manganese	1.51	mg/L	0.100	6/19/20 15:19	TRC	EPA 200.8	
Selenium	<0.001	mg/L	0.00100	6/19/20 14:09	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:09	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005PW
Lab/Sample Number: WAE0919-07 Collect Date: 05/28/20 12:30
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.287	mg/L	0.0200	6/12/20 11:09	TLM	SM 4500-NH3 H	
Chloride	1.15	mg/L	0.100	6/15/20 21:51	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 19:43	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 19:43	ARC	EPA 300.0	
TDS	236	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	0.445	NTU	0.100	6/2/20 17:38	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0746	mg/L	0.00100	6/19/20 14:12	TRC	EPA 200.8	
Manganese	0.00113	mg/L	0.00100	6/19/20 14:12	TRC	EPA 200.8	
Selenium	<0.001	mg/L	0.00100	6/19/20 14:12	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:12	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P05
Lab/Sample Number: WAE0919-08 Collect Date: 05/28/20 10:45
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	<0.02	mg/L	0.0200	6/12/20 11:10	TLM	SM 4500-NH3 H	
Chloride	2080	mg/L	20.0	6/17/20 2:57	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 19:59	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 19:59	ARC	EPA 300.0	
TDS	3260	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	0.375	NTU	0.100	6/2/20 17:42	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.401	mg/L	0.00100	6/19/20 14:14	TRC	EPA 200.8	
Manganese	0.0862	mg/L	0.00100	6/19/20 14:14	TRC	EPA 200.8	
Selenium	0.00223	mg/L	0.00100	6/19/20 14:14	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:14	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P06
Lab/Sample Number: WAE0919-09 Collect Date: 05/28/20 11:15
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.654	mg/L	0.0200	6/12/20 11:12	TLM	SM 4500-NH3 H	
Chloride	136	mg/L	1.00	6/16/20 2:00	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 20:16	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 20:16	ARC	EPA 300.0	
TDS	636	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	112	NTU	0.300	6/2/20 17:49	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.229	mg/L	0.00100	6/19/20 14:16	TRC	EPA 200.8	
Manganese	1.91	mg/L	0.100	6/19/20 15:21	TRC	EPA 200.8	
Selenium	<0.001	mg/L	0.00100	6/19/20 14:16	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:16	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P19
Lab/Sample Number: WAE0919-10 Collect Date: 05/28/20 10:05
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.870	mg/L	0.400	6/12/20 11:14	TLM	SM 4500-NH3 H	
Chloride	6210	mg/L	50.0	6/17/20 3:13	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 23:02	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 23:02	ARC	EPA 300.0	
TDS	9040	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	25.5	NTU	0.300	6/2/20 17:51	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.165	mg/L	0.00100	6/19/20 14:19	TRC	EPA 200.8	
Manganese	2.18	mg/L	0.100	6/19/20 15:24	TRC	EPA 200.8	
Selenium	0.00598	mg/L	0.00100	6/19/20 14:19	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:19	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P20B
Lab/Sample Number: WAE0919-11 Collect Date: 05/28/20 12:05
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	17.0	mg/L	0.600	6/12/20 11:48	TLM	SM 4500-NH3 H	
Chloride	1590	mg/L	5.00	6/16/20 2:33	ARC	EPA 300.0	
Nitrate-N	12.0	mg/L	0.100	5/29/20 23:19	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 23:19	ARC	EPA 300.0	
TDS	3550	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	11.2	NTU	0.100	6/2/20 17:53	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0482	mg/L	0.00100	6/19/20 14:29	TRC	EPA 200.8	
Manganese	0.366	mg/L	0.00100	6/19/20 14:29	TRC	EPA 200.8	
Selenium	0.00398	mg/L	0.00100	6/19/20 14:29	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:29	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P25
Lab/Sample Number: WAE0919-12 Collect Date: 05/28/20 09:30
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.559	mg/L	0.0200	6/12/20 11:17	TLM	SM 4500-NH3 H	
Chloride	720	mg/L	5.00	6/16/20 4:14	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 23:35	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 23:35	ARC	EPA 300.0	
TDS	2110	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	217	NTU	0.600	6/2/20 17:58	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0449	mg/L	0.00100	6/19/20 14:34	TRC	EPA 200.8	
Manganese	11.5	mg/L	0.100	6/19/20 15:26	TRC	EPA 200.8	
Selenium	<0.001	mg/L	0.00100	6/19/20 14:34	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:34	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 2005P27
Lab/Sample Number: WAE0919-13 Collect Date: 05/28/20 11:40
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	<0.02	mg/L	0.0200	6/12/20 11:18	TLM	SM 4500-NH3 H	
Chloride	7600	mg/L	50.0	6/17/20 3:30	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/29/20 23:52	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/29/20 23:52	ARC	EPA 300.0	
TDS	10900	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	1.39	NTU	0.100	6/2/20 18:01	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	2.14	mg/L	0.100	6/19/20 15:28	TRC	EPA 200.8	
Manganese	0.00451	mg/L	0.00100	6/19/20 14:37	TRC	EPA 200.8	
Selenium	0.0103	mg/L	0.00100	6/19/20 14:37	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:37	TRC	EPA 200.8	

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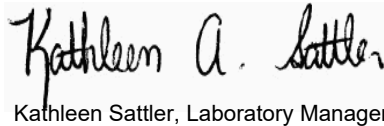
Analytical Results Report

(Continued)

Sample Location: 2005FD
Lab/Sample Number: WAE0919-14 Collect Date: 05/28/20 16:30
Date Received: 05/28/20 16:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	669	mg/L	10.0	6/12/20 12:17	TLM	SM 4500-NH3 H	
Chloride	6990	mg/L	50.0	6/17/20 3:46	ARC	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	5/30/20 0:08	ARC	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	5/30/20 0:08	ARC	EPA 300.0	
TDS	19600	mg/L	5.00	6/3/20 8:40	BAS	SM 2540 C	M3
Turbidity	4.20	NTU	0.100	6/2/20 18:03	MMS	EPA 180.1	H3
Metals by ICP-MS							
Barium	0.0578	mg/L	0.00100	6/19/20 14:39	TRC	EPA 200.8	M2
Manganese	4.89	mg/L	0.100	6/19/20 15:31	TRC	EPA 200.8	M2
Selenium	0.0139	mg/L	0.00100	6/19/20 14:39	TRC	EPA 200.8	
Thallium	<0.001	mg/L	0.00100	6/19/20 14:39	TRC	EPA 200.8	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

H3	Sample was received past holding time.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable. Potential matrix effect
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
M3	Spike recovery value is unusable. Analyte concentration disproportionate to the spike level. Blank spike recovery acceptable.
PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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The results reported related only to the samples indicated.

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Certifications

Code	Description	Facility	Number
W WA DOE	Washington Department of Ecology	Anatek-Spokane, WA	C585

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAF0028 - W Ions										
Blank (BAF0028-BLK1)					Prepared & Analyzed: 5/29/2020					
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
Blank (BAF0028-BLK2)					Prepared & Analyzed: 5/29/2020					
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
LCS (BAF0028-BS1)					Prepared & Analyzed: 5/29/2020					
Nitrite-N	4.12			mg/L	4.00		103	90-110		
Nitrate-N	4.01			mg/L	4.00		100	90-110		
LCS (BAF0028-BS2)					Prepared & Analyzed: 5/29/2020					
Nitrite-N	4.00			mg/L	4.00		100	90-110		
Nitrate-N	3.92			mg/L	4.00		98.0	90-110		
Matrix Spike (BAF0028-MS1)					Source: WAE0894-01		Prepared & Analyzed: 5/29/2020			
Nitrite-N	3.95		0.100	mg/L	4.02	ND	98.3	80-120		
Nitrate-N	4.24		0.100	mg/L	4.02	0.329	97.5	80-120		
Matrix Spike Dup (BAF0028-MSD1)					Source: WAE0894-01		Prepared & Analyzed: 5/29/2020			
Nitrite-N	4.17		0.100	mg/L	4.02	ND	104	80-120	5.64	20
Nitrate-N	4.45		0.100	mg/L	4.02	0.329	103	80-120	4.83	20
Batch: BAF0100 - W Wet Chem										
Blank (BAF0100-BLK1)					Prepared & Analyzed: 6/2/2020					
Turbidity	ND		0.100	NTU						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAF0227 - W Wet Chem										
Blank (BAF0227-BLK1)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 6/3/2020					
Blank (BAF0227-BLK2)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 6/3/2020					
LCS (BAF0227-BS1)										
TDS	484			mg/L	500		96.8	80-120		
LCS Dup (BAF0227-BSD1)										
TDS	522			mg/L	500		104	80-120	7.55	20
Duplicate (BAF0227-DUP1)										
TDS	946		5.00	mg/L	Prepared & Analyzed: 6/3/2020					
					926				2.14	20
Matrix Spike (BAF0227-MS1)										
TDS	21400	M3	5.00	mg/L	500	20700	140	80-120		
Matrix Spike Dup (BAF0227-MSD1)										
TDS	21200	M3	5.00	mg/L	500	20700	100	80-120	0.939	20
Batch: BAF0435 - W FIA										
Blank (BAF0435-BLK1)										
Ammonia/N	ND		0.0200	mg/L	Prepared & Analyzed: 6/12/2020					
Blank (BAF0435-BLK2)										
Ammonia/N	ND		0.0200	mg/L	Prepared & Analyzed: 6/12/2020					

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAF0435 - W FIA (Continued)										
Blank (BAF0435-BLK3)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	ND		0.0200	mg/L						
Blank (BAF0435-BLK4)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	ND		0.0200	mg/L						
LCS (BAF0435-BS1)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.203		0.0200	mg/L	0.200		101	90-110		
LCS (BAF0435-BS2)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.206		0.0200	mg/L	0.200		103	90-110		
Matrix Spike (BAF0435-MS1)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.516		0.0200	mg/L	0.200	0.315	100	80-120		
Matrix Spike (BAF0435-MS2)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.784		0.0200	mg/L	0.200	0.582	101	80-120		
Matrix Spike Dup (BAF0435-MSD1)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.513		0.0200	mg/L	0.200	0.315	98.7	80-120	0.564	20
Matrix Spike Dup (BAF0435-MSD2)					Prepared & Analyzed: 6/12/2020					
Ammonia/N	0.782		0.0200	mg/L	0.200	0.582	100	80-120	0.294	20
Batch: BAF0522 - W Ions										
Blank (BAF0522-BLK1)					Prepared & Analyzed: 6/15/2020					
Chloride	ND		0.100	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAF0522 - W Ions (Continued)										
LCS (BAF0522-BS1)					Prepared & Analyzed: 6/15/2020					
Chloride	3.91			mg/L	4.00		97.8	90-110		
Matrix Spike (BAF0522-MS1)					Prepared & Analyzed: 6/15/2020					
Chloride	4.26		0.100	mg/L	4.02	0.0664	104	80-120		
Matrix Spike Dup (BAF0522-MSD1)					Prepared & Analyzed: 6/15/2020					
Chloride	4.18		0.100	mg/L	4.02	0.0664	102	80-120	1.76	20

Batch: BAF0580 - W Ions

Blank (BAF0580-BLK1)					Prepared & Analyzed: 6/16/2020					
Chloride	ND		0.100	mg/L						
LCS (BAF0580-BS1)					Prepared & Analyzed: 6/16/2020					
Chloride	3.92			mg/L	4.00		98.1	90-110		
Matrix Spike (BAF0580-MS1)					Prepared & Analyzed: 6/16/2020					
Chloride	6.64		0.100	mg/L	4.02	3.33	82.6	80-120		
Matrix Spike Dup (BAF0580-MSD1)					Prepared & Analyzed: 6/16/2020					
Chloride	6.85		0.100	mg/L	4.02	3.33	87.8	80-120	3.10	20

Quality Control Data (Continued)

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAF0120 - W 3010 Digest										
Blank (BAF0120-BLK1)					Prepared: 6/3/2020 Analyzed: 6/19/2020					
Manganese	ND		0.00100	mg/L						
Selenium	ND		0.00100	mg/L						
Barium	ND		0.00100	mg/L						
Thallium	ND		0.00100	mg/L						
LCS (BAF0120-BS1)					Prepared: 6/3/2020 Analyzed: 6/19/2020					
Thallium	0.0525		0.00100	mg/L	0.0500		105	85-115		
Manganese	0.0519		0.00100	mg/L	0.0500		104	85-115		
Selenium	0.0477		0.00100	mg/L	0.0500		95.4	85-115		
Barium	0.0509		0.00100	mg/L	0.0500		102	85-115		
Matrix Spike (BAF0120-MS1)					Prepared: 6/3/2020 Analyzed: 6/19/2020					
Manganese	4.77	M2	0.00100	mg/L	0.0500	4.95	NR	70-130		
Selenium	0.0728		0.00100	mg/L	0.0500	0.0100	126	70-130		
Thallium	0.0416		0.00100	mg/L	0.0500	<0.001	83.1	70-130		
Barium	0.106		0.00100	mg/L	0.0500	0.0550	101	70-130		
Matrix Spike (BAF0120-MS2)					Prepared: 6/3/2020 Analyzed: 6/19/2020					
Barium	0.0616	M2	0.00100	mg/L	0.0500	0.0578	7.43	70-130		
Manganese	0.995	M2	0.00100	mg/L	0.0500	4.89	NR	70-130		
Selenium	0.0537		0.00100	mg/L	0.0500	0.0139	79.6	70-130		
Thallium	0.0452		0.00100	mg/L	0.0500	<0.001	90.3	70-130		

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Quality Control Data (Continued)

Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BAF0120 - W 3010 Digest (Continued)

Matrix Spike Dup (BAF0120-MSD1)

Source: WAE0919-03

Prepared: 6/3/2020 Analyzed: 6/19/2020

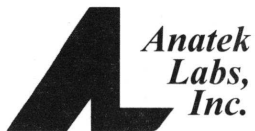
Selenium	0.0781	M1	0.00100	mg/L	0.0500	0.0100	136	70-130	6.97	20
Thallium	0.0435		0.00100	mg/L	0.0500	<0.001	87.0	70-130	4.63	20
Manganese	5.08	M2	0.00100	mg/L	0.0500	4.95	271	70-130	6.46	20
Barium	0.116		0.00100	mg/L	0.0500	0.0550	123	70-130	9.67	20

Matrix Spike Dup (BAF0120-MSD2)

Source: WAE0919-14

Prepared: 6/3/2020 Analyzed: 6/19/2020

Selenium	0.0543		0.00100	mg/L	0.0500	0.0139	80.8	70-130	1.12	20
Manganese	1.02	M2	0.00100	mg/L	0.0500	4.89	NR	70-130	2.88	20
Barium	0.0635	M2	0.00100	mg/L	0.0500	0.0578	11.4	70-130	3.16	20
Thallium	0.0452		0.00100	mg/L	0.0500	<0.001	90.4	70-130	0.0952	20



L-Bar Q2

Chain of Custody Record

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Anatek
Log-In #

WAE0919



Due: 06/12/20

Company Name: <u>GreatWest</u>	Project Manager: <u>Craig Sauer</u>
Address: <u>9221 N. Division St.</u>	Project Name & #: <u>Alcoa L-Bar</u>
City: <u>Spokane</u> State: <u>WA</u> Zip: <u>99021</u>	Email Address: <u>csauer@greatwesteng.com</u>
Phone: <u>509-994-9938</u>	Purchase Order #: <u>Alcoa</u>
Fax:	Sampler Name & phone: <u>Craig Sauer 509-994-9938</u>

Turn Around

Please refer to

<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal
☐ Next Day*
☐ 2nd Day*
☐ Other*

*All rush order requests must be prior approved.

Phone
 Mail
 Fax
 Email

Provide Sample Description					List Analyses Requested										Note Special Instructions/Comments		
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative:	# of Containers	Sample Volume	NH3, Cl, TDS	Nitrate, Nitrite	Total Metals (Pb, Mn, Se, Th)	Turbidity							
1	2005 P12	5/28 0815	W		3		X	X	X	X							SWBS #14 DB Field duplicate taken (2005FD) 2005FD (sample date 5/28, sample time 1630). Same matrix and analytes. MS/MSD @ 2005 SA10 (1405)
2	2005 P13	5/28 0850	W		3		X	X	X	X							
3	2005 SA10	5/28 1405	W		3		X	X	X	X							
4	2005 SA11	5/28 1330	W		3		X	X	X	X							
5	2005 SA14	5/28 1435	W		3		X	X	X	X							
6	2005 P09	5/28 1255	W		3		X	X	X	X							
7	2005 PW	5/28 1230	W		3		X	X	X	X							
8	2005 P05	5/28 1045	W		3		X	X	X	X							
9	2005 P06	5/28 1115	W		3		X	X	X	X							
10	2005 P19	5/28 1005	W		3		X	X	X	X							
11	2005 P20B	5/28 1205	W		3		X	X	X	X							
12	2005 P25	5/28 0930	W		3		X	X	X	X							
13	2005 P27	5/28 1140	W		3		X	X	X	X							

Inspection Checklist			
Received Intact?	☒	N	
Labels & Chains Agree?	☒	N	
Containers Sealed?	☒	N	
VOC Head Space?	☒	N	
Cooler?	☒	N	
Ice/Ice Packs Present?	☒	N	
Temperature (°C):	9.8° Dig-7		
Preservative:	H2SO4 2001181 <2		
	HNO3 2000994 <2 pH 2001015		
Date & Time:	5-28-20 1715		
Inspected By:	W/g		

	Printed Name	Signature	Company	Date	Time
Relinquished by	Craig Sauer		GWE	5/28/20	16:18
Received by	Brook Berger		Anatek	5-28-20	1620
Relinquished by					
Received by					
Relinquished by					
Received by					

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WAK0214
Project: Alcoa Q4 L-Bar
Reported: 4/26/2021 15:44

Case Narrative

<u>Laboratory ID</u>	<u>Sample Name</u>
WAK0214-01	110520P12
WAK0214-02	110520P13
WAK0214-03	110520SA10
WAK0214-04	110520SA11
WAK0214-05	110520SA14
WAK0214-06	110520P09
WAK0214-07	110520PW
WAK0214-08	110520P05
WAK0214-09	110520P06
WAK0214-10	110520P19
WAK0214-11	110520P20B
WAK0214-12	110520P25
WAK0214-13	110520P27
WAK0214-14	110520FD3

QA/QC Checks

<u>Parameters</u>	<u>Yes / No</u>	<u>Exceptions / Deviations</u>
Sample Holding Time Valid?	N	See Comment Section
Surrogate Recoveries Valid?	Y	NA
QC Sample(s) Recoveries Valid?	Y	NA
Method Blank(s) Valid?	N	See Comment Section
Comments	N	See Comment Section

1. Holding Time Requirements

110520P12, 110520P13, 110520SA10, 110520SA11, 110520SA14, 110520P09, 110520PW, 110520P05, 110520P06, 110520P19, 110520P20B, 110520P25, and 110520P27 pH's were all analyzed out of holding time. 110520SA11, 110520SA14, 110520P27 and 110520FD3 chlorides were initially analyzed within holding time and were then re-analyzed outside of holding time to achieve more accurate results with better dilutions.

2. Calibration Requirements

No problems encountered.

3. Surrogate Recovery Requirements

No problems encountered.

4. QC Sample (LCS/MS/MSD) Recovery Requirements

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No problems encountered.

5. Method Blank Requirements

The method blanks were non-detect for all analytes. The thallium, selenium and bariums were analyzed at a dilution of 1:10 to get the maganese within calibration. The samples are normally analyzed without a dilution after a 1:10 dilution. The analyst did not analyze them without a dilution. The samples in the future will be analyzed without a dilution and with an appropriate dilution to get all analytes within the calibration range.

6. Internal Standard(s) Response Requirements

No problems encountered

7. Comments

I certify that this data package is in compliance with the terms and conditions of the contract.

Release of the data contained in this data package has been authorized by the Laboratory Manager or his or her designee.

Kathleen A. Sattler, Lab Manager

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Analytical Results Report

Sample Location: 110520P12
Lab/Sample Number: WAK0214-01 Collect Date: 11/05/20 07:45
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	<0.02	mg/L	0.0200	11/24/20 10:46	SAG	SM 4500-NH3 H	
Chloride	7.11	mg/L	0.100	12/1/20 18:08	BAS	EPA 300.0	
Nitrate-N	1.24	mg/L	0.100	11/6/20 13:53	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 13:53	BAS	EPA 300.0	
pH	7.77	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	562	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	0.256	NTU	0.100	11/6/20 18:03	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0336	mg/L	0.0100	11/20/20 15:07	TRC	EPA 200.8	
Manganese	<0.01	mg/L	0.0100	11/20/20 15:07	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:07	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:07	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P13
Lab/Sample Number: WAK0214-02 Collect Date: 11/05/20 08:20
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	38.4	mg/L	0.400	11/20/20 15:00	SAG	SM 4500-NH3 H	
Chloride	1190	mg/L	5.00	12/1/20 18:57	BAS	EPA 300.0	
Nitrate-N	3.67	mg/L	0.100	11/6/20 14:09	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 14:09	BAS	EPA 300.0	
pH	7.13	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	4110	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	0.447	NTU	0.100	11/6/20 18:05	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0521	mg/L	0.0100	11/20/20 15:09	TRC	EPA 200.8	
Manganese	4.55	mg/L	0.0100	11/20/20 15:09	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:09	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:09	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520SA10
Lab/Sample Number: WAK0214-03 Collect Date: 11/05/20 09:25
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	676	mg/L	10.0	11/20/20 15:47	SAG	SM 4500-NH3 H	
Chloride	7590	mg/L	50.0	12/4/20 11:32	BAS	EPA 300.0	H2
Nitrate-N	0.401	mg/L	0.100	11/6/20 14:26	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 14:26	BAS	EPA 300.0	
pH	7.53	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	16400	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	12.3	NTU	0.100	11/6/20 18:06	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0513	mg/L	0.0100	11/20/20 15:11	TRC	EPA 200.8	
Manganese	2.63	mg/L	0.0100	11/20/20 15:11	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:11	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:11	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520SA11
Lab/Sample Number: WAK0214-04 Collect Date: 11/05/20 09:05
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	97.4	mg/L	1.00	11/20/20 15:05	SAG	SM 4500-NH3 H	
Chloride	8340	mg/L	50.0	12/4/20 11:49	BAS	EPA 300.0	H2
Nitrate-N	0.627	mg/L	0.100	11/6/20 14:42	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 14:42	BAS	EPA 300.0	
pH	7.81	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	14300	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	16.5	NTU	0.100	11/6/20 18:07	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0620	mg/L	0.0100	11/20/20 15:18	TRC	EPA 200.8	
Manganese	0.560	mg/L	0.0100	11/20/20 15:18	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:18	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:18	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520SA14
Lab/Sample Number: WAK0214-05 Collect Date: 11/05/20 08:45
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	19.1	mg/L	0.400	11/20/20 15:08	SAG	SM 4500-NH3 H	
Chloride	1000	mg/L	5.00	12/1/20 19:47	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 17:11	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 17:11	BAS	EPA 300.0	
pH	9.76	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	2940	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	0.743	NTU	0.100	11/6/20 18:09	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0168	mg/L	0.0100	11/20/20 15:36	TRC	EPA 200.8	
Manganese	0.0104	mg/L	0.0100	11/20/20 15:36	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:36	TRC	EPA 200.8	
Thallium	ND	mg/L	0.0100	11/20/20 15:36	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P09
Lab/Sample Number: WAK0214-06 Collect Date: 11/05/20 11:55
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.365	mg/L	0.0200	11/20/20 15:09	SAG	SM 4500-NH3 H	
Chloride	514	mg/L	2.50	12/1/20 20:04	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 17:28	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 17:28	BAS	EPA 300.0	
pH	8.47	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	1210	mg/L	5.00	11/10/20 14:15	BAS	SM 2540 C	
Turbidity	0.472	NTU	0.100	11/6/20 18:11	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0831	mg/L	0.0100	11/20/20 15:39	TRC	EPA 200.8	
Manganese	0.0934	mg/L	0.0100	11/20/20 15:39	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:39	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:39	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520PW
Lab/Sample Number: WAK0214-07 Collect Date: 11/05/20 11:35
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	11/20/20 15:10	SAG	SM 4500-NH3 H	
Chloride	1.02	mg/L	0.100	12/1/20 20:20	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 17:44	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 17:44	BAS	EPA 300.0	
pH	7.84	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	286	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	0.768	NTU	0.100	11/6/20 18:12	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0775	mg/L	0.0100	11/20/20 15:41	TRC	EPA 200.8	
Manganese	<0.01	mg/L	0.0100	11/20/20 15:41	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:41	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:41	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P05
Lab/Sample Number: WAK0214-08 Collect Date: 11/05/20 13:05
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	11/20/20 15:19	SAG	SM 4500-NH3 H	
Chloride	2460	mg/L	10.0	12/1/20 20:37	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 18:01	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 18:01	BAS	EPA 300.0	
pH	7.25	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	2860	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	1.46	NTU	0.100	11/6/20 18:14	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.742	mg/L	0.0100	11/20/20 15:43	TRC	EPA 200.8	
Manganese	0.511	mg/L	0.0100	11/20/20 15:43	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:43	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:43	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P06
Lab/Sample Number: WAK0214-09 Collect Date: 11/05/20 13:25
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.484	mg/L	0.400	11/20/20 15:21	SAG	SM 4500-NH3 H	
Chloride	73.8	mg/L	0.400	12/1/20 20:53	BAS	EPA 300.0	
Nitrate-N	0.149	mg/L	0.100	11/6/20 18:17	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 18:17	BAS	EPA 300.0	
pH	7.31	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	840	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	151	NTU	1.00	11/6/20 18:16	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.361	mg/L	0.0100	11/20/20 15:46	TRC	EPA 200.8	
Manganese	1.74	mg/L	0.0100	11/20/20 15:46	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:46	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:46	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P19
Lab/Sample Number: WAK0214-10 Collect Date: 11/05/20 11:10
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.722	mg/L	0.400	11/20/20 15:24	SAG	SM 4500-NH3 H	
Chloride	4810	mg/L	20.0	12/1/20 21:10	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 18:34	BAS	EPA 300.0	
Nitrite-N	ND	mg/L	0.100	11/6/20 18:34	BAS	EPA 300.0	
pH	6.84	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	7320	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	1.70	NTU	0.100	11/6/20 18:18	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0935	mg/L	0.0100	11/20/20 15:48	TRC	EPA 200.8	
Manganese	2.38	mg/L	0.0100	11/20/20 15:48	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:48	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:48	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P20B
Lab/Sample Number: WAK0214-11 Collect Date: 11/05/20 10:40
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	21.2	mg/L	0.400	11/20/20 15:26	SAG	SM 4500-NH3 H	
Chloride	1610	mg/L	10.0	12/1/20 21:26	BAS	EPA 300.0	
Nitrate-N	18.1	mg/L	0.100	11/6/20 18:50	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 18:50	BAS	EPA 300.0	
pH	7.13	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	3160	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	1.32	NTU	0.100	11/6/20 18:20	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0828	mg/L	0.0100	11/20/20 15:50	TRC	EPA 200.8	
Manganese	0.635	mg/L	0.0100	11/20/20 15:50	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:50	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:50	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P25
Lab/Sample Number: WAK0214-12 Collect Date: 11/05/20 10:10
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.924	mg/L	0.400	11/20/20 15:29	SAG	SM 4500-NH3 H	
Chloride	340	mg/L	2.50	12/1/20 21:43	BAS	EPA 300.0	
Nitrate-N	<0.1	mg/L	0.100	11/6/20 19:07	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 19:07	BAS	EPA 300.0	
pH	7.03	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	1890	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	107	NTU	1.00	11/6/20 18:23	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0651	mg/L	0.0100	11/20/20 15:53	TRC	EPA 200.8	
Manganese	10.7	mg/L	0.0100	11/20/20 15:53	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:53	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:53	TRC	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 110520P27
Lab/Sample Number: WAK0214-13 Collect Date: 11/05/20 11:00
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.0281	mg/L	0.0200	11/20/20 15:35	SAG	SM 4500-NH3 H	
Chloride	7200	mg/L	50.0	12/4/20 12:05	BAS	EPA 300.0	H2
Nitrate-N	<0.1	mg/L	0.100	11/6/20 19:23	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 19:23	BAS	EPA 300.0	
pH	7.11	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	8650	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	2.00	NTU	0.100	11/6/20 18:25	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	1.87	mg/L	0.0100	11/20/20 15:55	TRC	EPA 200.8	
Manganese	<0.01	mg/L	0.0100	11/20/20 15:55	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:55	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:55	TRC	EPA 200.8	

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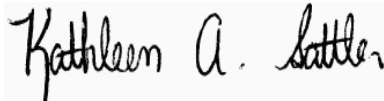
Analytical Results Report

(Continued)

Sample Location: 110520FD3
Lab/Sample Number: WAK0214-14 Collect Date: 11/05/20 17:00
Date Received: 11/05/20 15:48 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	797	mg/L	10.0	11/23/20 11:17	SAG	SM 4500-NH3 H	
Chloride	9520	mg/L	50.0	12/4/20 12:22	BAS	EPA 300.0	H2
Nitrate-N	<0.1	mg/L	0.100	11/6/20 19:40	BAS	EPA 300.0	
Nitrite-N	<0.1	mg/L	0.100	11/6/20 19:40	BAS	EPA 300.0	
pH	7.54	pH Units	1.00	11/12/20 15:45	GES	SM 4500-H-B	H8
TDS	16800	mg/L	5.00	11/10/20 10:05	BAS	SM 2540 C	
Turbidity	10.3	NTU	0.100	11/6/20 18:26	MMS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0552	mg/L	0.0100	11/20/20 15:57	TRC	EPA 200.8	
Manganese	3.16	mg/L	0.0100	11/20/20 15:57	TRC	EPA 200.8	M2
Selenium	<0.01	mg/L	0.0100	11/20/20 15:57	TRC	EPA 200.8	
Thallium	<0.01	mg/L	0.0100	11/20/20 15:57	TRC	EPA 200.8	

Authorized Signature,


Kathleen Sattler, Laboratory Manager

H2 Initial analysis within holding time, Reanalysis for the required dilution was past holding time.
H8 Analysis performed past the recommended method holding time as per client instructions
M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

RPD Relative Percent Difference
%REC Percent Recovery
Source Sample that was spiked or duplicated.

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The results reported related only to the samples indicated.

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Certifications

Code	Description	Facility	Number
W WA DOE	Washington Department of Ecology	Anatek-Spokane, WA	C585

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAK0224 - W Ions										
Blank (BAK0224-BLK1)					Prepared & Analyzed: 11/6/2020					
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
LCS (BAK0224-BS1)										
					Prepared & Analyzed: 11/6/2020					
Nitrite-N	4.21			mg/L	4.00		105	90-110		
Nitrate-N	4.27			mg/L	4.00		107	90-110		
Matrix Spike (BAK0224-MS1)										
					Source: WAK0152-05		Prepared & Analyzed: 11/7/2020			
Nitrite-N	17.0		0.400	mg/L	16.0		106	80-120		
Nitrate-N	92.8		0.400	mg/L	16.0	72.1	130	80-120		
Matrix Spike Dup (BAK0224-MSD1)										
					Source: WAK0152-05		Prepared & Analyzed: 11/7/2020			
Nitrite-N	16.4		0.400	mg/L	16.0		102	80-120	3.85	20
Nitrate-N	93.1		0.400	mg/L	16.0	72.1	131	80-120	0.327	20
Batch: BAK0323 - W Wet Chem										
Blank (BAK0323-BLK1)					Prepared & Analyzed: 11/6/2020					
Turbidity	ND		0.100	NTU						
Batch: BAK0493 - W Wet Chem										
Blank (BAK0493-BLK1)					Prepared & Analyzed: 11/10/2020					
TDS	ND		5.00	mg/L						
Blank (BAK0493-BLK2)					Prepared & Analyzed: 11/10/2020					
TDS	ND		5.00	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAK0493 - W Wet Chem (Continued)										
LCS (BAK0493-BS1)										
TDS	499			mg/L	500		99.8	80-120		
LCS Dup (BAK0493-BSD1)										
TDS	468			mg/L	500		93.6	80-120	6.41	20
Duplicate (BAK0493-DUP1)										
TDS	329		5.00	mg/L		352			6.75	20
Matrix Spike (BAK0493-MS1)										
TDS	906		5.00	mg/L	500	430	95.2	80-120		
Matrix Spike Dup (BAK0493-MSD1)										
TDS	972		5.00	mg/L	500	430	108	80-120	7.03	20
Batch: BAK0637 - W FIA										
Blank (BAK0637-BLK1)										
Ammonia/N	ND		0.0200	mg/L						
Blank (BAK0637-BLK2)										
Ammonia/N	ND		0.0200	mg/L						
LCS (BAK0637-BS1)										
Ammonia/N	0.183		0.0200	mg/L	0.200		91.4	90-110		
Matrix Spike (BAK0637-MS1)										
Ammonia/N	0.297		0.0200	mg/L	0.200	0.111	93.1	80-120		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAK0637 - W FIA (Continued)										
Matrix Spike Dup (BAK0637-MSD1)			Source: WAK0223-02		Prepared & Analyzed: 11/20/2020					
Ammonia/N	0.303		0.0200	mg/L	0.200	0.111	96.0	80-120	1.93	20
Batch: BAK0675 - W Wet Chem										
Blank (BAK0675-BLK1)					Prepared & Analyzed: 11/10/2020					
TDS	ND		5.00	mg/L						
Blank (BAK0675-BLK2)					Prepared & Analyzed: 11/10/2020					
TDS	ND		5.00	mg/L						
LCS (BAK0675-BS1)					Prepared & Analyzed: 11/10/2020					
TDS	482			mg/L	500		96.4	80-120		
LCS Dup (BAK0675-BSD1)					Prepared & Analyzed: 11/10/2020					
TDS	484			mg/L	500		96.8	80-120	0.414	20
Duplicate (BAK0675-DUP1)			Source: WAK0239-04		Prepared & Analyzed: 11/10/2020					
TDS	521		5.00	mg/L	535				2.65	20
Matrix Spike (BAK0675-MS1)			Source: WAK0281-02		Prepared & Analyzed: 11/10/2020					
TDS	644		5.00	mg/L	500	193	90.2	80-120		
Matrix Spike Dup (BAK0675-MSD1)			Source: WAK0281-02		Prepared & Analyzed: 11/10/2020					
TDS	636		5.00	mg/L	500	193	88.6	80-120	1.25	20
Batch: BAK0682 - W FIA										
Blank (BAK0682-BLK1)					Prepared & Analyzed: 11/23/2020					
Ammonia/N	ND		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAK0682 - W FIA (Continued)										
Blank (BAK0682-BLK2)					Prepared & Analyzed: 11/23/2020					
Ammonia/N	ND		0.0200	mg/L						
LCS (BAK0682-BS1)					Prepared & Analyzed: 11/23/2020					
Ammonia/N	0.206		0.0200	mg/L	0.200		103	90-110		
Matrix Spike (BAK0682-MS1)					Prepared & Analyzed: 11/23/2020					
Ammonia/N	0.308		0.0200	mg/L	0.200	0.0896	109	80-120		
Matrix Spike Dup (BAK0682-MSD1)					Prepared & Analyzed: 11/23/2020					
Ammonia/N	0.314		0.0200	mg/L	0.200	0.0896	112	80-120	2.19	20
Batch: BAL0053 - W Ions										
Blank (BAL0053-BLK1)					Prepared & Analyzed: 12/1/2020					
Chloride	ND		0.100	mg/L						
LCS (BAL0053-BS1)					Prepared & Analyzed: 12/1/2020					
Chloride	3.91			mg/L	4.00		97.7	90-110		
Matrix Spike (BAL0053-MS1)					Prepared & Analyzed: 12/1/2020					
Chloride	11.1		0.100	mg/L	4.02	7.11	100	80-120		
Matrix Spike Dup (BAL0053-MSD1)					Prepared & Analyzed: 12/1/2020					
Chloride	11.1		0.100	mg/L	4.02	7.11	98.3	80-120	0.720	20
Batch: BAL0144 - W Ions										
Blank (BAL0144-BLK1)					Prepared & Analyzed: 12/3/2020					
Chloride	ND		0.100	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAL0144 - W Ions (Continued)										
LCS (BAL0144-BS1)										
Chloride	3.97			mg/L	4.00		99.3	90-110		
Matrix Spike (BAL0144-MS1)										
Chloride	5.08		0.100	mg/L	4.02	0.897	104	80-120		
Matrix Spike Dup (BAL0144-MSD1)										
Chloride	5.02		0.100	mg/L	4.02	0.897	103	80-120	1.08	20

Quality Control Data (Continued)

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAK0509 - W 3010 Digest										
Blank (BAK0509-BLK1)										
Barium	ND		0.00100	mg/L						
Manganese	ND		0.00100	mg/L						
Selenium	ND		0.00100	mg/L						
Thallium	ND		0.00100	mg/L						
LCS (BAK0509-BS1)										
Thallium	0.0490		0.00100	mg/L	0.0500		98.0	85-115		
Manganese	0.0465		0.00100	mg/L	0.0500		93.0	85-115		
Selenium	0.0489		0.00100	mg/L	0.0500		97.7	85-115		
Barium	0.0485		0.00100	mg/L	0.0500		97.1	85-115		
Matrix Spike (BAK0509-MS1)										
Barium	0.0908		0.00100	mg/L	0.0500	0.0513	79.2	70-130		
Thallium	0.0448		0.00100	mg/L	0.0500	<0.01	89.3	70-130		
Selenium	0.0502		0.00100	mg/L	0.0500	<0.01	94.9	70-130		
Manganese	2.15	M2	0.00100	mg/L	0.0500	2.63	NR	70-130		
Matrix Spike (BAK0509-MS2)										
Thallium	0.0435		0.00100	mg/L	0.0500	<0.01	86.7	70-130		
Barium	0.0969		0.00100	mg/L	0.0500	0.0552	83.5	70-130		
Manganese	2.74	M2	0.00100	mg/L	0.0500	3.16	NR	70-130		
Selenium	0.0554		0.00100	mg/L	0.0500	<0.01	99.8	70-130		
Matrix Spike Dup (BAK0509-MSD1)										
Selenium	0.0482		0.00100	mg/L	0.0500	<0.01	90.9	70-130	4.06	20
Manganese	2.23	M2	0.00100	mg/L	0.0500	2.63	NR	70-130	3.36	20
Barium	0.0940		0.00100	mg/L	0.0500	0.0513	85.4	70-130	3.37	20
Thallium	0.0450		0.00100	mg/L	0.0500	<0.01	89.8	70-130	0.490	20

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Quality Control Data (Continued)

Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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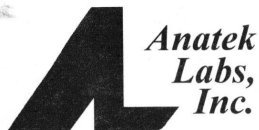
Batch: BAK0509 - W 3010 Digest (Continued)

Matrix Spike Dup (BAK0509-MSD2)

Source: WAK0214-14

Prepared: 11/18/2020 Analyzed: 11/20/2020

Selenium	0.0513		0.00100	mg/L	0.0500	<0.01	91.6	70-130	7.75	20
Thallium	0.0424		0.00100	mg/L	0.0500	<0.01	84.6	70-130	2.47	20
Manganese	2.78	M2	0.00100	mg/L	0.0500	3.16	NR	70-130	1.43	20
Barium	0.0952		0.00100	mg/L	0.0500	0.0552	80.0	70-130	1.85	20



Chain of Custody Record

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Log-In #

WAK0214



Due: 11/20/20

Company Name: Great West Engineering	Project Manager: Craig Sauer
Address: 9221 N Division St	Project Name & #: Alcoa Q4 L-Bar
City: Spokane State: WA Zip: 99021	Email Address: csauer@greatwesteng.com
Phone: 509-994-9938	Purchase Order #: Alcoa
Fax:	Sampler Name & phone: C Sauer 509-994-9938

Turn Around

Please refer to our normal turn around times at:
<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal	*All rush order requests must be prior approved.	Phone
☐ Next Day*		Mail
☐ 2nd Day*		Fax
☐ Other*		Email

Provide Sample Description				List Analyses Requested								Note Special Instructions/Comments	
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative: # of Containers	Sample Volume	NH3, Cl, FDS	Nitrate + Nitrite	Total Metals	Ba, Mn, Se, Ti	Turbidity			
2	110520 P12	11/05 745	w	3	-	X	X	X	X				
2	110520 P13	11/05 820	w	3	-	X	X	X	X				
+1	110520 SA10	11/05 925	w	3	-	X	X	X	X				
+1	110520 SA11	11/05 905	w	3	-	X	X	X	X				
2	110520 SA14	11/05 845	w	3	-	X	X	X	X				
2	110520 P09	11/05 1155	w	3	-	X	X	X	X				
+1	110520 PW	11/05 1135	w	3	-	X	X	X	X				
2	110520 P05	11/05 1305	w	3	-	X	X	X	X				
2	110520 P06	11/05 1325	w	3	-	X	X	X	X				
2	110520 P19	11/05 1110	w	3	-	X	X	X	X				
2	110520 P20B	11/05 1040	w	3	-	X	X	X	X				
2	110520 P25	11/05 1010	w	3	-	X	X	X	X				
2	110520 P27	11/05 1400	w	3	-	X	X	X	X				

Printed Name	Signature	Company	Date	Time
Craig Sauer		GWE	11/5	15:45
Brock Genger		Anatek	11-5-20	1548

Inspection Checklist	
Received Intact?	☒ N
Labels & Chains Agree?	☒ N
Containers Sealed?	☒ N
VOC Head Space?	☒ N
Cooler?	☒ N
Ice/Ice Packs Present?	☒ N
Temperature (°C):	See below hel
Preservative:	#204 2002883-2
	HN03 2002880-2 pH 2001015
Date & Time:	11-5-20 1715
Inspected By:	Weg

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

+ cooler 1: 14.1°/13.9° DRI
* cooler 2: 11.2°/11.0°

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WBE0835
Project: Alcoa Q2 L-Bar
Reported: 7/26/2021 14:36

Analytical Results Report

Sample Location: 052021P12
Lab/Sample Number: WBE0835-01 **Collect Date:** 05/20/21 07:50
Date Received: 05/20/21 16:25 **Collected By:** Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	6/7/21 15:49	TLM	SM 4500-NH3 H	
Chloride	7.05	mg/L	0.100	6/7/21 19:46	BAS	EPA 300.0	
pH	7.33	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	679	mg/L	5.00	5/24/21 15:50	BAS	SM 2540 C	
Turbidity	0.485	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P13
Lab/Sample Number: WBE0835-02 Collect Date: 05/20/21 08:20
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	31.2	mg/L	0.400	6/7/21 18:43	TLM	SM 4500-NH3 H	
Chloride	1050	mg/L	5.00	6/7/21 20:36	BAS	EPA 300.0	
pH	7.98	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	4970	mg/L	5.00	5/24/21 15:50	BAS	SM 2540 C	
Turbidity	0.401	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021SA10
Lab/Sample Number: WBE0835-03 Collect Date: 05/20/21 08:50
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	721	mg/L	20.0	6/15/21 14:50	TLM	SM 4500-NH3 H	
Chloride	12200	mg/L	50.0	6/7/21 20:53	BAS	EPA 300.0	
pH	7.32	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	27500	mg/L	5.00	5/24/21 15:50	BAS	SM 2540 C	
Turbidity	1.38	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021SA11
Lab/Sample Number: WBE0835-04 Collect Date: 05/20/21 09:10
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	71.5	mg/L	2.00	6/15/21 14:25	TLM	SM 4500-NH3 H	
Chloride	7590	mg/L	50.0	6/7/21 21:09	BAS	EPA 300.0	
pH	7.97	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	21100	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	1.41	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021SA14
Lab/Sample Number: WBE0835-05 Collect Date: 05/20/21 09:25
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	16.4	mg/L	0.400	6/7/21 18:51	TLM	SM 4500-NH3 H	
Chloride	921	mg/L	5.00	6/7/21 21:26	BAS	EPA 300.0	
pH	9.93	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	4200	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	0.189	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P09
Lab/Sample Number: WBE0835-06 Collect Date: 05/20/21 12:45
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.153	mg/L	0.0200	6/7/21 15:58	TLM	SM 4500-NH3 H	
Chloride	595	mg/L	2.50	6/7/21 21:42	BAS	EPA 300.0	
pH	8.44	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	2260	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	0.316	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021PW
Lab/Sample Number: WBE0835-07 Collect Date: 05/20/21 12:20
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	6/7/21 15:59	TLM	SM 4500-NH3 H	
Chloride	0.942	mg/L	0.100	6/7/21 21:59	BAS	EPA 300.0	
pH	7.49	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	275	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	2.18	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P05
Lab/Sample Number: WBE0835-08 Collect Date: 05/20/21 11:05
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	6/7/21 16:00	TLM	SM 4500-NH3 H	
Chloride	2040	mg/L	10.0	6/7/21 23:38	BAS	EPA 300.0	
pH	7.02	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	5340	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	0.978	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P06
Lab/Sample Number: WBE0835-09 Collect Date: 05/20/21 11:25
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.493	mg/L	0.0200	6/7/21 16:02	TLM	SM 4500-NH3 H	
Chloride	94.9	mg/L	0.400	6/7/21 23:54	BAS	EPA 300.0	
pH	7.05	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	745	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	85.8	NTU	0.250	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P19
Lab/Sample Number: WBE0835-10 Collect Date: 05/20/21 10:50
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.0512	mg/L	0.0200	6/7/21 16:03	TLM	SM 4500-NH3 H	
Chloride	5680	mg/L	25.0	6/14/21 16:41	BAS	EPA 300.0	
pH	6.57	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	14000	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	0.665	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P20B
Lab/Sample Number: WBE0835-11 Collect Date: 05/20/21 10:25
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	12.7	mg/L	0.400	6/7/21 18:53	TLM	SM 4500-NH3 H	
Chloride	1400	mg/L	10.0	6/8/21 0:27	BAS	EPA 300.0	
pH	7.32	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	4630	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	13.8	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P25
Lab/Sample Number: WBE0835-12 Collect Date: 05/20/21 10:05
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.566	mg/L	0.0200	6/7/21 16:05	TLM	SM 4500-NH3 H	
Chloride	748	mg/L	2.50	6/8/21 0:44	BAS	EPA 300.0	
pH	6.81	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	3180	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	111	NTU	0.400	5/21/21 9:08	CME	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 052021P27
Lab/Sample Number: WBE0835-13 Collect Date: 05/20/21 11:50
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.0397	mg/L	0.0200	6/7/21 16:06	TLM	SM 4500-NH3 H	
Chloride	5390	mg/L	50.0	6/8/21 1:00	BAS	EPA 300.0	
pH	7.12	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	11400	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	0.674	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

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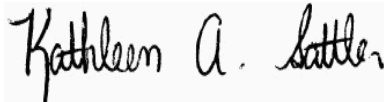
Analytical Results Report

(Continued)

Sample Location: 052021FD3
Lab/Sample Number: WBE0835-14 Collect Date: 05/20/21 14:30
Date Received: 05/20/21 16:25 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	6/7/21 16:14	TLM	SM 4500-NH3 H	
Chloride	1.07	mg/L	0.100	6/14/21 16:57	BAS	EPA 300.0	
pH	7.82	pH Units	1.00	5/21/21 6:30	KAS	SM 4500-H-B	
TDS	452	mg/L	5.00	5/26/21 8:55	BAS	SM 2540 C	
Turbidity	1.80	NTU	0.100	5/21/21 9:08	CME	EPA 180.1	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

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Certifications

Code	Description	Facility	Number
W WA DOE	Washington Department of Ecology	Anatek-Spokane, WA	C585

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBE0704 - W Wet Chem										
Blank (BBE0704-BLK1)										
Turbidity	ND		0.100	NTU	Prepared & Analyzed: 5/21/2021					
Batch: BBE0771 - W Wet Chem										
Blank (BBE0771-BLK1)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 5/24/2021					
LCS (BBE0771-BS1)										
TDS	479			mg/L	500		95.8	80-120		
LCS Dup (BBE0771-BSD1)										
TDS	488			mg/L	500		97.6	80-120	1.86	20
Duplicate (BBE0771-DUP1)										
TDS	704		5.00	mg/L	Source: WBE0835-01		Prepared & Analyzed: 5/24/2021			
					679				3.62	20
Matrix Spike (BBE0771-MS1)										
TDS	1060		5.00	mg/L	500	549	102	80-120		
Matrix Spike Dup (BBE0771-MSD1)										
TDS	1050		5.00	mg/L	500	549	101	80-120	0.568	20
Batch: BBE0866 - W Wet Chem										
Blank (BBE0866-BLK1)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 5/26/2021					

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBE0866 - W Wet Chem (Continued)										
Blank (BBE0866-BLK2)										
TDS	ND		5.00	mg/L						Prepared & Analyzed: 5/26/2021
LCS (BBE0866-BS1)										
TDS	472			mg/L	500		94.4	80-120		Prepared & Analyzed: 5/26/2021
LCS Dup (BBE0866-BSD1)										
TDS	486			mg/L	500		97.2	80-120	2.92	20
Duplicate (BBE0866-DUP1)										
TDS	789		5.00	mg/L		805			2.01	20
Matrix Spike (BBE0866-MS1)										
TDS	716		5.00	mg/L	500	275	88.2	80-120		Prepared & Analyzed: 5/26/2021
Matrix Spike Dup (BBE0866-MSD1)										
TDS	774		5.00	mg/L	500	275	99.8	80-120	7.79	20
Batch: BBF0265 - W Ions										
Blank (BBF0265-BLK1)										
Chloride	ND		0.100	mg/L						Prepared & Analyzed: 6/7/2021
LCS (BBF0265-BS1)										
Chloride	4.06			mg/L	4.00		102	90-110		Prepared & Analyzed: 6/7/2021
Matrix Spike (BBF0265-MS1)										
Chloride	5.24			mg/L	4.00	0.942	108	80-120		Prepared & Analyzed: 6/7/2021

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBF0265 - W Ions (Continued)										
Matrix Spike Dup (BBF0265-MSD1)			Source: WBE0835-07		Prepared & Analyzed: 6/7/2021					
Chloride	4.80			mg/L	4.00	0.942	96.5	80-120	8.77	20
Batch: BBF0279 - W FIA										
Blank (BBF0279-BLK1)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK2)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK3)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK4)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK5)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK6)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK7)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
Blank (BBF0279-BLK8)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBF0279 - W FIA (Continued)										
Blank (BBF0279-BLK9)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	ND		0.0200	mg/L						
LCS (BBF0279-BS1)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.198		0.0200	mg/L	0.200		99.0	90-110		
LCS (BBF0279-BS2)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.204		0.0200	mg/L	0.200		102	90-110		
LCS (BBF0279-BS3)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.201		0.0200	mg/L	0.200		101	90-110		
LCS (BBF0279-BS4)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.205		0.0200	mg/L	0.200		103	90-110		
LCS (BBF0279-BS5)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.210		0.0200	mg/L	0.200		105	90-110		
Matrix Spike (BBF0279-MS1)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.333	Source: WBE0799-02	0.0200	mg/L	0.200	0.141	95.8	80-120		
Matrix Spike (BBF0279-MS2)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.457	Source: WBE0850-02	0.0200	mg/L	0.200	0.269	94.1	80-120		
Matrix Spike (BBF0279-MS3)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.247	Source: WBE0904-02	0.0200	mg/L	0.200	0.0608	93.3	80-120		
Matrix Spike (BBF0279-MS4)					Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.226	Source: WBE1136-02	0.0200	mg/L	0.200	0.0372	94.6	80-120		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBF0279 - W FIA (Continued)										
Matrix Spike Dup (BBF0279-MSD1)			Source: WBE0799-02		Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.323		0.0200	mg/L	0.200	0.141	91.1	80-120	2.83	20
Matrix Spike Dup (BBF0279-MSD2)			Source: WBE0850-02		Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.465		0.0200	mg/L	0.200	0.269	97.8	80-120	1.61	20
Matrix Spike Dup (BBF0279-MSD3)			Source: WBE0904-02		Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.248		0.0200	mg/L	0.200	0.0608	93.6	80-120	0.242	20
Matrix Spike Dup (BBF0279-MSD4)			Source: WBE1136-02		Prepared & Analyzed: 6/7/2021					
Ammonia/N	0.225		0.0200	mg/L	0.200	0.0372	93.8	80-120	0.665	20
Batch: BBF0527 - W Ions										
Blank (BBF0527-BLK1)					Prepared & Analyzed: 6/14/2021					
Chloride	ND		0.100	mg/L						
LCS (BBF0527-BS1)					Prepared & Analyzed: 6/14/2021					
Chloride	3.99			mg/L	4.00		99.8	90-110		
Matrix Spike (BBF0527-MS1)			Source: WBF0459-07RE1		Prepared & Analyzed: 6/14/2021					
Chloride	28.1			mg/L	4.00	24.1	101	80-120		
Matrix Spike Dup (BBF0527-MSD1)			Source: WBF0459-07RE1		Prepared & Analyzed: 6/14/2021					
Chloride	28.1			mg/L	4.00	24.1	99.5	80-120	0.183	20
Batch: BBF0552 - W FIA										
Blank (BBF0552-BLK1)					Prepared & Analyzed: 6/15/2021					
Ammonia/N	ND		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBF0552 - W FIA (Continued)										
Blank (BBF0552-BLK2)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 6/15/2021
Blank (BBF0552-BLK3)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 6/15/2021
Blank (BBF0552-BLK4)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 6/15/2021
Blank (BBF0552-BLK5)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 6/15/2021
Blank (BBF0552-BLK6)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 6/15/2021
LCS (BBF0552-BS1)										
Ammonia/N	0.201		0.0200	mg/L	0.200		101	90-110		Prepared & Analyzed: 6/15/2021
LCS (BBF0552-BS2)										
Ammonia/N	0.199		0.0200	mg/L	0.200		99.6	90-110		Prepared & Analyzed: 6/15/2021
LCS (BBF0552-BS3)										
Ammonia/N	0.200		0.0200	mg/L	0.200		100	90-110		Prepared & Analyzed: 6/15/2021
Matrix Spike (BBF0552-MS1)										
Ammonia/N	0.346		0.0200	mg/L	0.200	0.132	107	80-120		Source: WBF0079-02 Prepared & Analyzed: 6/15/2021
Matrix Spike (BBF0552-MS2)										
Ammonia/N	0.267		0.0200	mg/L	0.200	0.0643	101	80-120		Source: WBF0208-02 Prepared & Analyzed: 6/15/2021

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBF0552 - W FIA (Continued)										
Matrix Spike (BBF0552-MS3)										
Ammonia/N	0.192		0.0200	mg/L	0.200	ND	96.0	80-120		
Source: WBF0287-02										
Prepared & Analyzed: 6/15/2021										
Matrix Spike Dup (BBF0552-MSD1)										
Ammonia/N	0.330		0.0200	mg/L	0.200	0.132	99.2	80-120	4.79	20
Source: WBF0079-02										
Prepared & Analyzed: 6/15/2021										
Matrix Spike Dup (BBF0552-MSD2)										
Ammonia/N	0.260		0.0200	mg/L	0.200	0.0643	97.6	80-120	2.74	20
Source: WBF0208-02										
Prepared & Analyzed: 6/15/2021										
Matrix Spike Dup (BBF0552-MSD3)										
Ammonia/N	0.183		0.0200	mg/L	0.200	ND	91.4	80-120	4.86	20
Source: WBF0287-02										
Prepared & Analyzed: 6/15/2021										



Chain of Custody Record

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Log-In #

WBE0835



Due: 06/07/21

Company Name: <u>Great West Engineering</u>	Project Manager: <u>Craig Sauer</u>
Address: <u>9221 N Division St</u>	Project Name & #: <u>Alcoa Q2 L-Bar</u>
City: <u>Spokane</u> State: <u>WA</u> Zip: <u>99021</u>	Email Address: <u>csauer@greatwesteng.com</u>
Phone: <u>509-994-9938</u>	Purchase Order #: <u>Alcoa</u>
Fax:	Sampler Name & phone: <u>craig sauer / 509-994-9938</u>

Please refer to our normal turn around times at:
<http://www.anateklabs.com/services/guidelines/reporting.asp>

☒ Normal ☐ Next Day* ☐ 2nd Day* ☐ Other*
*All rush order requests must be prior approved.
Phone _____ Mail _____ Fax _____ Email _____

Provide Sample Description				List Analyses Requested										Note Special Instructions/Comments	
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative: # of Containers	Sample Volume	NH3, Cl, TDS	Ammonia Nitrate, NO3	Ammonium Nitrite, NO2	Ammonium Nitrate, NO3	Turbidity	pH			*Analyses requested only NH3, Cl, TDS, and turbidity. Additional samples: MS/MSD: 052021PW (5/20, 1220) FD: 052021FD3 (5/20, 1430)	
	052021P12	5/20 0750	W	2		X	X	X	X	X					
	052021P13	5/20 0820	W	2		X	X	X	X	X					
	052021SA10	5/20 0850	W	2		X	X	X	X	X					
	052021SA11	5/20 0910	W	2		X	X	X	X	X					
	052021SA14	5/20 0925	W	2		X	X	X	X	X					
	052021P09	5/20 1245	W	2		X	X	X	X	X					
	052021PW	5/20 1220	W	2		X	X	X	X	X					
	052021P05	5/20 1105	W	2		X	X	X	X	X					
	052021P06	5/20 1125	W	2		X	X	X	X	X					
	052021P19	5/20 1050	W	2		X	X	X	X	X					
	052021P20B	5/20 1025	W	2		X	X	X	X	X					
	052021P25	5/20 1005	W	2		X	X	X	X	X					
	052021P27	5/20 1150	W	2		X	X	X	X	X					

	Printed Name	Signature	Company	Date	Time
Relinquished by	<u>Craig Sauer</u>	<u>[Signature]</u>	<u>Great West</u>	<u>5/20</u>	<u>1625</u>
Received by	<u>KScoff</u>	<u>[Signature]</u>	<u>Anatek</u>	<u>5/20/21</u>	<u>1625</u>
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist		
Received Intact?	☒	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
VOC Head Space?	Y	N
Cooler?	☒	N
Ice/Ice Packs Present?	☒	N
Temperature (°C):	<u>7.8° IR#1</u>	
Preservative:	<u>H2SO4 < 2004/162</u>	
	<u>P2001015</u>	
Date & Time:	<u>5/20/21</u>	
Inspected By:	<u>hd/c/i 30pcu</u>	

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WBK0468
Project: Alcoa Q4 L-Bar
Reported: 3/23/2022 17:26

Analytical Results Report

Sample Location: 111121 P12
Lab/Sample Number: WBK0468-01 **Collect Date:** 11/11/21 07:50
Date Received: 11/11/21 15:20 **Collected By:** Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:30	TLM	SM 4500-NH3 H	
Chloride	6.49	mg/L	0.100	11/12/21 22:35	ZML	EPA 300.0	
pH	7.81	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	681	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	0.576	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P13
Lab/Sample Number: WBK0468-02 Collect Date: 11/11/21 08:25
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	32.5	mg/L	0.400	12/1/21 16:08	TLM	SM 4500-NH3 H	
Chloride	1100	mg/L	5.00	11/15/21 15:36	ZML	EPA 300.0	
pH	7.51	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	6070	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	1.65	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 SA10
Lab/Sample Number: WBK0468-03 Collect Date: 11/11/21 09:20
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	704	mg/L	10.0	12/1/21 16:27	TLM	SM 4500-NH3 H	
Chloride	16600	mg/L	50.0	11/19/21 13:14	ZML	EPA 300.0	
pH	7.37	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	14300	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	0.502	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 SA11
Lab/Sample Number: WBK0468-04 Collect Date: 11/11/21 09:05
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	53.9	mg/L	0.800	12/1/21 16:30	TLM	SM 4500-NH3 H	
Chloride	5370	mg/L	50.0	11/29/21 16:55	ZML	EPA 300.0	
pH	8.08	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	10900	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	0.408	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 SA14
Lab/Sample Number: WBK0468-05 Collect Date: 11/11/21 08:50
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	16.6	mg/L	0.400	12/1/21 16:16	TLM	SM 4500-NH3 H	
Chloride	960	mg/L	5.00	11/16/21 17:50	ZML	EPA 300.0	
pH	9.85	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	3170	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	0.409	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P09
Lab/Sample Number: WBK0468-06 Collect Date: 11/11/21 13:10
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	1.12	mg/L	0.0200	12/1/21 14:39	TLM	SM 4500-NH3 H	
Chloride	421	mg/L	5.00	11/16/21 18:22	ZML	EPA 300.0	
pH	7.97	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	1640	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	0.239	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 PW
Lab/Sample Number: WBK0468-07 Collect Date: 11/11/21 13:20
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:40	TLM	SM 4500-NH3 H	
Chloride	2.56	mg/L	0.100	11/13/21 1:03	ZML	EPA 300.0	
pH	7.87	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	254	mg/L	5.00	11/12/21 14:27	KAS	SM 2540 C	
Turbidity	67.4	NTU	0.200	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P05
Lab/Sample Number: WBK0468-08 Collect Date: 11/11/21 11:20
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:41	TLM	SM 4500-NH3 H	
Chloride	1980	mg/L	10.0	11/16/21 18:22	ZML	EPA 300.0	
pH	7.31	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	3720	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	15.0	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P06
Lab/Sample Number: WBK0468-09 Collect Date: 11/11/21 11:50
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.0958	mg/L	0.0200	12/1/21 14:42	TLM	SM 4500-NH3 H	
Chloride	177	mg/L	20.0	11/19/21 12:24	ZML	EPA 300.0	
pH	7.81	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	457	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	0.215	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P19
Lab/Sample Number: WBK0468-10 Collect Date: 11/11/21 11:00
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:44	TLM	SM 4500-NH3 H	
Chloride	5320	mg/L	20.0	11/13/21 2:10	ZML	EPA 300.0	
pH	6.91	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	6230	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	0.728	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P20B
Lab/Sample Number: WBK0468-11 Collect Date: 11/11/21 10:30
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	19.2	mg/L	1.00	12/1/21 16:23	TLM	SM 4500-NH3 H	
Chloride	2100	mg/L	10.0	11/16/21 18:56	ZML	EPA 300.0	
pH	7.33	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	4600	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	1.51	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P25
Lab/Sample Number: WBK0468-12 Collect Date: 11/11/21 09:55
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.184	mg/L	0.0200	12/1/21 14:49	TLM	SM 4500-NH3 H	
Chloride	820	mg/L	25.0	11/19/21 14:04	ZML	EPA 300.0	
pH	7.42	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	1640	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	2.62	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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Analytical Results Report

(Continued)

Sample Location: 111121 P27
Lab/Sample Number: WBK0468-13 Collect Date: 11/11/21 12:10
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:50	TLM	SM 4500-NH3 H	
Chloride	6250	mg/L	20.0	11/16/21 18:39	ZML	EPA 300.0	
pH	7.09	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	10900	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	0.571	NTU	0.100	11/11/21 16:15	ARY	EPA 180.1	

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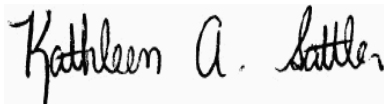
Analytical Results Report

(Continued)

Sample Location: 111121 FD3
Lab/Sample Number: WBK0468-14 Collect Date: 11/11/21 14:00
Date Received: 11/11/21 15:20 Collected By: Craig Sauer
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	12/1/21 14:51	TLM	SM 4500-NH3 H	
Chloride	0.968	mg/L	0.100	11/23/21 22:31	ZML	EPA 300.0	
pH	7.88	pH Units	1.00	11/11/21 15:00	ARY	SM 4500-H-B	
TDS	279	mg/L	5.00	11/17/21 13:40	KAS	SM 2540 C	M3
Turbidity	1.51	NTU	0.100	11/11/21 16:15	KAS	EPA 180.1	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

M3 Spike recovery value is unusable. Analyte concentration disproportionate to the spike level. Blank spike recovery acceptable.
PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

RPD Relative Percent Difference
%REC Percent Recovery
Source Sample that was spiked or duplicated.

This report shall not be reproduced except in full, without the written approval of the laboratory
The results reported related only to the samples indicated.

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Certifications

Code	Description	Facility	Number
W WA DOE	Washington Department of Ecology	Anatek-Spokane, WA	C585

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBK0436 - W Wet Chem										
Blank (BBK0436-BLK1)										
Turbidity	ND		0.100	NTU	Prepared & Analyzed: 11/11/2021					
Batch: BBK0449 - W Wet Chem										
Blank (BBK0449-BLK1)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 11/12/2021					
Blank (BBK0449-BLK2)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 11/12/2021					
LCS (BBK0449-BS1)										
TDS	466			mg/L	Prepared & Analyzed: 11/12/2021 500		93.2	80-120		
LCS (BBK0449-BS2)										
TDS	481			mg/L	Prepared & Analyzed: 11/12/2021 500		96.2	80-120		
Matrix Spike (BBK0449-MS1)										
TDS	1590		5.00	mg/L	Prepared & Analyzed: 11/12/2021 500		986	120	80-120	
Matrix Spike Dup (BBK0449-MSD1)										
TDS	1470		5.00	mg/L	Prepared & Analyzed: 11/12/2021 500		986	96.8	80-120	7.72 20
Batch: BBK0471 - W Ions										
Blank (BBK0471-BLK1)										
Chloride	ND		0.100	mg/L	Prepared & Analyzed: 11/13/2021					

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBK0471 - W Ions (Continued)										
Blank (BBK0471-BLK2)										
Chloride	ND		0.100	mg/L						Prepared & Analyzed: 11/12/2021
LCS (BBK0471-BS1)										
Chloride	3.78			mg/L	4.00		94.5	90-110		Prepared & Analyzed: 11/12/2021
LCS (BBK0471-BS2)										
Chloride	3.86			mg/L	4.00		96.5	90-110		Prepared & Analyzed: 11/13/2021
Batch: BBK0562 - W Ions										
Blank (BBK0562-BLK1)										
Chloride	ND		0.100	mg/L						Prepared & Analyzed: 11/16/2021
LCS (BBK0562-BS1)										
Chloride	3.74			mg/L	4.00		93.4	90-110		Prepared & Analyzed: 11/16/2021
Batch: BBK0569 - W Wet Chem										
Blank (BBK0569-BLK1)										
TDS	ND	M3	5.00	mg/L						Prepared & Analyzed: 11/17/2021
LCS (BBK0569-BS1)										
TDS	474	M3		mg/L	500		94.8	80-120		Prepared & Analyzed: 11/17/2021
LCS Dup (BBK0569-BSD1)										
TDS	505	M3		mg/L	500		101	80-120	6.33	20

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBK0569 - W Wet Chem (Continued)										
Duplicate (BBK0569-DUP1)		Source: WBK0468-09				Prepared & Analyzed: 11/17/2021				
TDS	459	M3	5.00	mg/L		457			0.437	20
Matrix Spike (BBK0569-MS1)		Source: WBK0468-13				Prepared & Analyzed: 11/17/2021				
TDS	10200	M3	5.00	mg/L	500	10900	NR	80-120		
Matrix Spike Dup (BBK0569-MSD1)		Source: WBK0468-13				Prepared & Analyzed: 11/17/2021				
TDS	10100	M3	5.00	mg/L	500	10900	NR	80-120	1.06	20
Batch: BBK0687 - W Ions										
Blank (BBK0687-BLK1)						Prepared & Analyzed: 11/19/2021				
Chloride	ND		0.100	mg/L						
LCS (BBK0687-BS1)						Prepared & Analyzed: 11/19/2021				
Chloride	4.00			mg/L	4.00		99.9	90-110		
Batch: BBK0689 - W Ions										
Blank (BBK0689-BLK1)						Prepared & Analyzed: 11/19/2021				
Chloride	ND		0.100	mg/L						
LCS (BBK0689-BS1)						Prepared & Analyzed: 11/19/2021				
Chloride	4.00			mg/L	4.00		99.9	90-110		
Matrix Spike (BBK0689-MS1)		Source: WBK0736-02				Prepared & Analyzed: 11/19/2021				
Chloride	7.52			mg/L	4.00	2.90	115	80-120		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBK0689 - W Ions (Continued)										
Matrix Spike Dup (BBK0689-MSD1)			Source: WBK0736-02		Prepared & Analyzed: 11/19/2021					
Chloride	7.71			mg/L	4.00	2.90	120	80-120	2.51	20
Batch: BBK0781 - W Ions										
Blank (BBK0781-BLK1)					Prepared & Analyzed: 11/23/2021					
Chloride	ND		0.100	mg/L						
Blank (BBK0781-BLK2)					Prepared & Analyzed: 11/24/2021					
Chloride	ND		0.100	mg/L						
LCS (BBK0781-BS1)					Prepared & Analyzed: 11/23/2021					
Chloride	3.82			mg/L	4.00		95.5	90-110		
LCS (BBK0781-BS2)					Prepared & Analyzed: 11/24/2021					
Chloride	3.81			mg/L	4.00		95.2	90-110		
Matrix Spike (BBK0781-MS1)			Source: WBK0812-03		Prepared & Analyzed: 11/24/2021					
Chloride	6.08			mg/L	4.00	2.31	94.3	80-120		
Matrix Spike Dup (BBK0781-MSD1)			Source: WBK0812-03		Prepared & Analyzed: 11/24/2021					
Chloride	6.25			mg/L	4.00	2.31	98.3	80-120	2.61	20
Batch: BBK0882 - W Ions										
Blank (BBK0882-BLK1)					Prepared & Analyzed: 11/29/2021					
Chloride	ND		0.100	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBK0882 - W Ions (Continued)										
Blank (BBK0882-BLK2)										
Chloride	ND		0.100	mg/L						Prepared & Analyzed: 11/29/2021
LCS (BBK0882-BS1)										
Chloride	3.70			mg/L	4.00		92.5	90-110		Prepared & Analyzed: 11/30/2021
LCS (BBK0882-BS2)										
Chloride	3.62			mg/L	4.00		90.5	90-110		Prepared & Analyzed: 11/29/2021
Batch: BBL0031 - W FIA										
Blank (BBL0031-BLK1)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021
Blank (BBL0031-BLK2)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021
Blank (BBL0031-BLK3)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021
Blank (BBL0031-BLK4)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021
Blank (BBL0031-BLK5)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021
Blank (BBL0031-BLK6)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 12/1/2021

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBL0031 - W FIA (Continued)										
Blank (BBL0031-BLK7)										
Ammonia/N	ND		0.0200	mg/L	Prepared & Analyzed: 12/1/2021					
LCS (BBL0031-BS1)										
Ammonia/N	0.185		0.0200	mg/L	0.200		92.6	90-110		
LCS (BBL0031-BS2)										
Ammonia/N	0.191		0.0200	mg/L	0.200		95.6	90-110		
LCS (BBL0031-BS3)										
Ammonia/N	0.186		0.0200	mg/L	0.200		93.2	90-110		
LCS (BBL0031-BS4)										
Ammonia/N	0.203		0.0200	mg/L	0.200		101	90-110		
LCS (BBL0031-BS5)										
Ammonia/N	0.210		0.0200	mg/L	0.200		105	90-110		
Matrix Spike (BBL0031-MS1)										
Ammonia/N	1.53		Source: WBK0318-02 0.0200	mg/L	0.200	1.36	86.5	80-120		
Matrix Spike (BBL0031-MS2)										
Ammonia/N	1.07		Source: WBK0485-02 0.0200	mg/L	0.200	0.859	105	80-120		
Matrix Spike (BBL0031-MS3)										
Ammonia/N	0.361		Source: WBK0513-02 0.0200	mg/L	0.200	0.187	86.7	80-120		
Matrix Spike (BBL0031-MS4)										
Ammonia/N	0.364		Source: WBK0769-02 0.0200	mg/L	0.200	0.158	103	80-120		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BBL0031 - W FIA (Continued)										
Matrix Spike Dup (BBL0031-MSD1)		Source: WBK0318-02			Prepared & Analyzed: 12/1/2021					
Ammonia/N	1.55		0.0200	mg/L	0.200	1.36	96.9	80-120	1.36	20
Matrix Spike Dup (BBL0031-MSD2)		Source: WBK0485-02			Prepared & Analyzed: 12/1/2021					
Ammonia/N	1.08		0.0200	mg/L	0.200	0.859	110	80-120	0.838	20
Matrix Spike Dup (BBL0031-MSD3)		Source: WBK0513-02			Prepared & Analyzed: 12/1/2021					
Ammonia/N	0.366		0.0200	mg/L	0.200	0.187	89.5	80-120	1.57	20
Matrix Spike Dup (BBL0031-MSD4)		Source: WBK0769-02			Prepared & Analyzed: 12/1/2021					
Ammonia/N	0.329		0.0200	mg/L	0.200	0.158	85.5	80-120	9.84	20
Batch: BCC0552 - W Ions										
Blank (BCC0552-BLK1)		Prepared & Analyzed: 11/15/2021								
Chloride	ND		0.100	mg/L						



Chain of Custody Record

Anatek Labs
1282 Alturas Drive, Moscow
504 E Sprague Ste D, Spokane

WBK0468



Due: 11/30/21

Company Name: <u>Great West Engineering</u>		Project Manager: <u>Craig Sauer</u>	
Address: <u>9221 N Division St</u>		Project Name & #: <u>Alcoa Q4 L-Bar</u>	
City: <u>Spokane</u>	State: <u>WA</u>	Zip: <u>99021</u>	Purchase Order #: <u>Alcoa</u>
Phone: <u>509-994-9938</u>		Sampler Name & Phone: <u>Craig Sauer / 509-994-9938</u>	
Email Address(es): <u>csauer@greatwesteng.com</u>			

Turn Around

Please refer to our normal turn around times at www.anateklabs.com/pricing-lists

☒ Normal
☐ Next Day*
☐ 2nd Day*
☐ Other*

Phone _____
 Email _____
 *All rush order requests must have prior approval

				List Analyses Requested										Note Special Instructions/Comments																																												
				Preservative:																																																						
Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	NH3, CI, TDS	Turbidity	PH																																																		
	111121 P12	11/11 0750	W	2		X	X	X								Additional samples: ms/msd: 111121PW (11/11, 1320) FD: 111121FD3 (11/11, 1400)																																										
	111121 P13	11/11 0825	W	2		X	X	X																																																		
	111121 SA10	11/11 0920	W	2		X	X	X																																																		
	111121 SA11	11/11 0905	W	2		X	X	X																																																		
	111121 SA14	11/11 0850	W	2		X	X	X																																																		
	111121 P09	11/11 1310	W	2		X	X	X																																																		
	111121 PW	11/11 1320	W	2		X	X	X																																																		
	111121 P05	11/11 1120	W	2		X	X	X																																																		
	111121 P06	11/11 1150	W	2		X	X	X																																																		
	111121 P19	11/11 1100	W	2		X	X	X																																																		
	111121 P20B	11/11 1030	W	2		X	X	X																																																		
	111121 P25	11/11 0955	W	2		X	X	X																																																		
	111121 P27	11/11 1210	W	2		X	X	X																																																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Printed Name</th> <th>Signature</th> <th>Company</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>Relinquished by</td> <td><u>Duncan Broedlow</u></td> <td><u>[Signature]</u></td> <td><u>Great West Eng</u></td> <td><u>11/11/21</u></td> <td><u>1520</u></td> </tr> <tr> <td>Received by</td> <td><u>Broek Geyr</u></td> <td><u>[Signature]</u></td> <td><u>Anatek</u></td> <td><u>11-11-21</u></td> <td><u>1520</u></td> </tr> <tr> <td>Relinquished by</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Received by</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Relinquished by</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Received by</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>																		Printed Name	Signature	Company	Date	Time	Relinquished by	<u>Duncan Broedlow</u>	<u>[Signature]</u>	<u>Great West Eng</u>	<u>11/11/21</u>	<u>1520</u>	Received by	<u>Broek Geyr</u>	<u>[Signature]</u>	<u>Anatek</u>	<u>11-11-21</u>	<u>1520</u>	Relinquished by						Received by						Relinquished by						Received by					
	Printed Name	Signature	Company	Date	Time																																																					
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Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	<u>Y</u>	N
Ice/Ice Packs Present?	<u>Y</u>	N

Temperature (°C): 8-8.8-7.0 IR1

Number of Containers: _____

Shipped Via: _____

Preservative: _____

Date & Time: _____

Inspected By: See Attached

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.



Sample Receipt and Preservation Form

WBK0468



Due: 11/30/21

Client Name: Great West Engineering Project: _____ (apply Anatek sample label here)

TAT: Normal RUSH: _____ days

Samples Received From: FedEx UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 1 Type of Ice: Ice/Ice Packs Blue Ice Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts None Other: _____

Cooler Temp As Read (°C): 8.8 Cooler Temp Corrected (°C): 8.7 Thermometer Used: 1127^H

				Comments:
Samples Received Intact?	<u>Yes</u>	No	N/A	
Chain of Custody Present?	<u>Yes</u>	No	N/A	
Samples Received Within Hold Time?	<u>Yes</u>	No	N/A	
Samples Properly Preserved?	<u>Yes</u>	No	N/A	
VOC Vials Free of Headspace (<6mm)?	Yes	No	<u>N/A</u>	
VOC Trip Blanks Present?	Yes	No	<u>N/A</u>	
Labels and Chains Agree?	<u>Yes</u>	No	N/A	
Total Number of Sample Bottles Received:	<u>26</u>			
Chain of Custody Fully Completed?	<u>Yes</u>	No	N/A	
Correct Containers Received?	<u>Yes</u>	No	N/A	
Anatek Bottles Used?	<u>Yes</u>	No	Unknown	

Record preservatives (and lot numbers, if known) for containers below:

H2SO4 2102389-2
Ph2001015

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: [Signature] Date/Time: 1533 11/11/21

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WCE0483
Project: NWA L-Bar Q2
Reported: 3/5/2023 21:55

Analytical Results Report

Sample Location: 051222 P12
Lab/Sample Number: WCE0483-01 **Collect Date:** 05/12/22 07:25
Date Received: 05/12/22 14:15 **Collected By:** Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	5/17/22 15:45	TLM	SM 4500-NH3 H	
Chloride	6.54	mg/L	0.100	5/13/22 11:08	ZML	EPA 300.0	
Nitrate/N	1.33	mg/L	0.100	5/13/22 11:08	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 11:08	ZML	EPA 300.0	
TDS	601	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	0.137	NTU	0.100	5/13/22 9:10	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0424	mg/L	0.00100	6/2/22 15:57	JLG	EPA 200.8	
Manganese	0.0299	mg/L	0.00100	6/1/22 17:00	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 15:57	JLG	EPA 200.8	
Thallium	0.00290	mg/L	0.00100	6/1/22 17:00	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P13
Lab/Sample Number: WCE0483-02 Collect Date: 05/12/22 07:55
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	24.6	mg/L	0.400	5/17/22 16:47	TLM	SM 4500-NH3 H	
Chloride	1140	mg/L	5.00	5/17/22 4:01	ZML	EPA 300.0	
Nitrate/N	2.38	mg/L	0.100	5/13/22 11:25	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 11:25	ZML	EPA 300.0	
TDS	4240	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	2.03	NTU	0.100	5/13/22 9:13	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0841	mg/L	0.00100	6/2/22 16:00	JLG	EPA 200.8	
Manganese	1.54	mg/L	0.00100	6/1/22 17:04	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:00	JLG	EPA 200.8	
Thallium	0.00500	mg/L	0.00100	6/1/22 17:04	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 SA10
Lab/Sample Number: WCE0483-03 Collect Date: 05/12/22 09:05
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	539	mg/L	10.0	5/23/22 13:45	TLM	SM 4500-NH3 H	
Chloride	7440	mg/L	25.0	5/24/22 21:17	ZML	EPA 300.0	
Nitrate/N	1.27	mg/L	0.100	5/13/22 11:41	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 11:41	ZML	EPA 300.0	
TDS	19700	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	1.20	NTU	0.100	5/13/22 9:14	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0472	mg/L	0.00100	6/2/22 16:04	JLG	EPA 200.8	
Manganese	2.81	mg/L	0.00100	6/1/22 17:07	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:04	JLG	EPA 200.8	
Thallium	0.00400	mg/L	0.00100	6/1/22 17:07	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 SA11
Lab/Sample Number: WCE0483-04 Collect Date: 05/12/22 08:45
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	78.6	mg/L	0.400	5/17/22 16:52	TLM	SM 4500-NH3 H	
Chloride	7330	mg/L	25.0	5/24/22 21:33	ZML	EPA 300.0	
Nitrate/N	0.240	mg/L	0.100	5/13/22 11:58	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 11:58	ZML	EPA 300.0	
TDS	15800	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	1.06	NTU	0.100	5/13/22 9:19	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0508	mg/L	0.00100	6/2/22 16:07	JLG	EPA 200.8	
Manganese	0.474	mg/L	0.00100	6/1/22 17:10	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:07	JLG	EPA 200.8	
Thallium	0.00500	mg/L	0.00100	6/1/22 17:10	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 SA14
Lab/Sample Number: WCE0483-05 Collect Date: 05/12/22 08:35
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	14.5	mg/L	0.400	5/17/22 16:55	TLM	SM 4500-NH3 H	
Chloride	425	mg/L	0.100	5/16/22 15:19	ZML	EPA 300.0	
Nitrate/N	ND	mg/L	0.100	5/13/22 12:14	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 12:14	ZML	EPA 300.0	
TDS	3150	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	0.272	NTU	0.100	5/13/22 9:22	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0197	mg/L	0.00100	6/2/22 16:10	JLG	EPA 200.8	
Manganese	0.00246	mg/L	0.00100	6/1/22 17:13	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:10	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:13	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P09
Lab/Sample Number: WCE0483-06 Collect Date: 05/12/22 09:40
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	1.94	mg/L	0.0200	5/17/22 15:51	TLM	SM 4500-NH3 H	
Chloride	1030	mg/L	5.00	5/17/22 21:33	ZML	EPA 300.0	
Nitrate/N	0.380	mg/L	0.100	5/13/22 12:31	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 12:31	ZML	EPA 300.0	
TDS	1790	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	4.37	NTU	0.100	5/13/22 9:35	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.296	mg/L	0.00100	6/2/22 16:14	JLG	EPA 200.8	
Manganese	0.153	mg/L	0.00100	6/1/22 17:17	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:14	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:17	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 PW
Lab/Sample Number: WCE0483-07 Collect Date: 05/12/22 09:50
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	5/17/22 15:52	TLM	SM 4500-NH3 H	
Chloride	1.10	mg/L	0.100	5/13/22 12:47	ZML	EPA 300.0	
Nitrate/N	ND	mg/L	0.100	5/13/22 12:47	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 12:47	ZML	EPA 300.0	
TDS	253	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	1.08	NTU	0.100	5/13/22 9:37	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.00823	mg/L	0.00100	6/2/22 16:17	JLG	EPA 200.8	
Manganese	0.00274	mg/L	0.00100	6/1/22 17:20	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:17	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:20	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P05
Lab/Sample Number: WCE0483-08 Collect Date: 05/12/22 11:15
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	5/17/22 15:54	TLM	SM 4500-NH3 H	
Chloride	901	mg/L	10.0	5/17/22 21:49	ZML	EPA 300.0	
Nitrate/N	0.190	mg/L	0.100	5/13/22 13:37	ZML	EPA 300.0	
Nitrite/N	0.979	mg/L	0.100	5/13/22 13:37	ZML	EPA 300.0	
TDS	3340	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	0.290	NTU	0.100	5/13/22 9:45	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0823	mg/L	0.00100	6/2/22 16:33	JLG	EPA 200.8	
Manganese	0.221	mg/L	0.00100	6/1/22 17:29	JLG	EPA 200.8	
Selenium	0.00453	mg/L	0.00100	6/2/22 16:33	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:29	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P06
Lab/Sample Number: WCE0483-09 Collect Date: 05/12/22 11:35
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.462	mg/L	0.0200	5/17/22 15:57	TLM	SM 4500-NH3 H	
Chloride	70.2	mg/L	0.500	5/16/22 16:09	ZML	EPA 300.0	
Nitrate/N	0.251	mg/L	0.100	5/13/22 13:54	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 13:54	ZML	EPA 300.0	
TDS	494	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	68.0	NTU	0.200	5/13/22 9:52	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.185	mg/L	0.00100	6/2/22 16:37	JLG	EPA 200.8	
Manganese	1.15	mg/L	0.00100	6/1/22 17:33	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:37	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:33	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P19
Lab/Sample Number: WCE0483-10 Collect Date: 05/12/22 10:50
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.846	mg/L	0.0200	5/17/22 15:58	TLM	SM 4500-NH3 H	
Chloride	6060	mg/L	25.0	5/24/22 21:50	ZML	EPA 300.0	
Nitrate/N	0.253	mg/L	0.100	5/13/22 14:10	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 14:10	ZML	EPA 300.0	
TDS	1320	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	16.7	NTU	0.100	5/13/22 9:55	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.164	mg/L	0.00100	6/2/22 16:40	JLG	EPA 200.8	
Manganese	1.89	mg/L	0.00100	6/1/22 17:36	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:40	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:36	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P20B
Lab/Sample Number: WCE0483-11 Collect Date: 05/12/22 10:20
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	11.6	mg/L	0.300	5/17/22 16:58	TLM	SM 4500-NH3 H	
Chloride	15.8	mg/L	0.100	5/18/22 0:18	ZML	EPA 300.0	
Nitrate/N	12.7	mg/L	0.100	5/14/22 0:39	ZML	EPA 300.0	
Nitrite/N	0.821	mg/L	0.100	5/14/22 0:39	ZML	EPA 300.0	
TDS	4040	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	1.23	NTU	0.100	5/13/22 9:56	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0506	mg/L	0.00100	6/2/22 16:56	JLG	EPA 200.8	
Manganese	0.496	mg/L	0.00100	6/1/22 17:52	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 16:56	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:52	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P25
Lab/Sample Number: WCE0483-12 Collect Date: 05/12/22 08:20
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	0.477	mg/L	0.0200	5/17/22 16:01	TLM	SM 4500-NH3 H	
Chloride	849	mg/L	5.00	5/18/22 1:24	ZML	EPA 300.0	
Nitrate/N	0.108	mg/L	0.100	5/13/22 21:53	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 21:53	ZML	EPA 300.0	
TDS	1820	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	84.6	NTU	0.300	5/13/22 10:02	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0391	mg/L	0.00100	6/2/22 17:00	JLG	EPA 200.8	
Manganese	7.68	mg/L	0.00100	6/1/22 17:55	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 17:00	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:55	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 051222 P27
Lab/Sample Number: WCE0483-13 Collect Date: 05/12/22 12:05
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	5/17/22 16:02	TLM	SM 4500-NH3 H	
Chloride	5840	mg/L	20.0	5/25/22 17:21	ZML	EPA 300.0	
Nitrate/N	0.796	mg/L	0.100	5/13/22 22:09	ZML	EPA 300.0	
Nitrite/N	0.958	mg/L	0.100	5/13/22 22:09	ZML	EPA 300.0	
TDS	8940	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	0.327	NTU	0.100	5/13/22 10:06	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	1.99	mg/L	0.00100	6/2/22 17:03	JLG	EPA 200.8	
Manganese	0.115	mg/L	0.00100	6/1/22 17:59	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 17:03	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 17:59	JLG	EPA 200.8	

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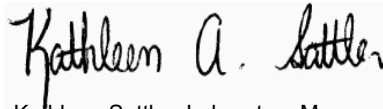
Analytical Results Report

(Continued)

Sample Location: 051222 FD3
Lab/Sample Number: WCE0483-14 Collect Date: 05/12/22 06:00
Date Received: 05/12/22 14:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Ammonia/N	ND	mg/L	0.0200	5/17/22 16:03	TLM	SM 4500-NH3 H	
Chloride	1.13	mg/L	0.100	5/21/22 0:34	ZML	EPA 300.0	
Nitrate/N	ND	mg/L	0.100	5/13/22 22:26	ZML	EPA 300.0	
Nitrite/N	ND	mg/L	0.100	5/13/22 22:26	ZML	EPA 300.0	
TDS	284	mg/L	5.00	5/17/22 14:03	EMG	SM 2540 C	
Turbidity	1.11	NTU	0.100	5/13/22 10:07	SBS	EPA 180.1	
Metals by ICP-MS							
Barium	0.0750	mg/L	0.00100	6/2/22 17:06	JLG	EPA 200.8	
Manganese	0.00299	mg/L	0.00100	6/1/22 18:02	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	6/2/22 17:06	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	6/1/22 18:02	JLG	EPA 200.8	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable. Potential matrix effect
PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

RPD Relative Percent Difference
%REC Percent Recovery
Source Sample that was spiked or duplicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0412 - W Ions										
Blank (BCE0412-BLK1)					Prepared & Analyzed: 5/13/2022					
Chloride	ND		0.100	mg/L						
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
Blank (BCE0412-BLK2)					Prepared & Analyzed: 5/13/2022					
Chloride	ND		0.100	mg/L						
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
LCS (BCE0412-BS1)					Prepared & Analyzed: 5/13/2022					
Chloride	4.02			mg/L	4.00		100	90-110		
Nitrite-N	3.98			mg/L	4.00		99.5	90-110		
Nitrate-N	3.84			mg/L	4.00		95.9	90-110		
LCS (BCE0412-BS2)					Prepared & Analyzed: 5/13/2022					
Chloride	4.05			mg/L	4.00		101	90-110		
Nitrite-N	4.19			mg/L	4.00		105	90-110		
Nitrate-N	3.92			mg/L	4.00		98.0	90-110		
Matrix Spike (BCE0412-MS1)					Source: WCE0483-07		Prepared & Analyzed: 5/13/2022			
Chloride	5.04			mg/L	4.00	1.10	98.4	80-120		
Nitrite-N	4.15			mg/L	4.00	0.0171	103	80-120		
Nitrate-N	4.14			mg/L	4.00	0.0940	101	80-120		
Matrix Spike (BCE0412-MS2)					Source: WCE0483-14		Prepared & Analyzed: 5/13/2022			
Nitrite-N	4.14			mg/L	4.00	0.00	104	80-120		
Nitrate-N	3.96			mg/L	4.00	0.00	98.9	80-120		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0412 - W Ions (Continued)										
Matrix Spike Dup (BCE0412-MSD1)		Source: WCE0483-07			Prepared & Analyzed: 5/13/2022					
Chloride	4.99			mg/L	4.00	1.10	97.2	80-120	0.993	20
Nitrite-N	4.07			mg/L	4.00	0.0171	101	80-120	1.92	20
Nitrate-N	4.05			mg/L	4.00	0.0940	98.9	80-120	2.25	20
Matrix Spike Dup (BCE0412-MSD2)		Source: WCE0483-14			Prepared & Analyzed: 5/13/2022					
Nitrite-N	4.37			mg/L	4.00	0.00	109	80-120	5.29	20
Nitrate-N	4.08			mg/L	4.00	0.00	102	80-120	3.06	20
Batch: BCE0445 - W Wet Chem										
Blank (BCE0445-BLK1)		Prepared & Analyzed: 5/13/2022								
Turbidity	ND		0.100	NTU						
Batch: BCE0476 - W Ions										
Blank (BCE0476-BLK1)		Prepared & Analyzed: 5/16/2022								
Chloride	ND		0.100	mg/L						
Blank (BCE0476-BLK2)		Prepared & Analyzed: 5/16/2022								
Chloride	ND		0.100	mg/L						
LCS (BCE0476-BS1)		Prepared & Analyzed: 5/16/2022								
Chloride	4.08			mg/L	4.00		102	90-110		
LCS (BCE0476-BS2)		Prepared & Analyzed: 5/16/2022								
Chloride	4.11			mg/L	4.00		103	90-110		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0476 - W Ions (Continued)										
Matrix Spike (BCE0476-MS1)					Source: WCE0551-07		Prepared & Analyzed: 5/17/2022			
Chloride	4.63			mg/L	4.00	0.655	99.5	80-120		
Matrix Spike (BCE0476-MS2)					Source: WCE0552-05		Prepared & Analyzed: 5/17/2022			
Chloride	4.05			mg/L	4.00	0.301	93.8	80-120		
Matrix Spike Dup (BCE0476-MSD1)					Source: WCE0551-07		Prepared & Analyzed: 5/17/2022			
Chloride	4.60			mg/L	4.00	0.655	98.7	80-120	0.669	20
Matrix Spike Dup (BCE0476-MSD2)					Source: WCE0552-05		Prepared & Analyzed: 5/17/2022			
Chloride	4.08			mg/L	4.00	0.301	94.5	80-120	0.694	20
Batch: BCE0490 - W Wet Chem										
Blank (BCE0490-BLK1)					Prepared & Analyzed: 5/17/2022					
TDS	ND		5.00	mg/L						
Blank (BCE0490-BLK2)					Prepared & Analyzed: 5/17/2022					
TDS	ND		5.00	mg/L						
LCS (BCE0490-BS1)					Prepared & Analyzed: 5/17/2022					
TDS	434			mg/L	500		86.8	80-120		
LCS (BCE0490-BS2)					Prepared & Analyzed: 5/17/2022					
TDS	422			mg/L	500		84.4	80-120		
LCS Dup (BCE0490-BSD1)					Prepared & Analyzed: 5/17/2022					
TDS	512			mg/L	500		102	80-120	16.5	20

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0490 - W Wet Chem (Continued)										
LCS Dup (BCE0490-BSD2)					Prepared & Analyzed: 5/17/2022					
TDS	473			mg/L	500		94.6	80-120	11.4	20
Duplicate (BCE0490-DUP2)					Source: WCE0483-07 Prepared & Analyzed: 5/17/2022					
TDS	260		5.00	mg/L		253			2.73	20
Matrix Spike (BCE0490-MS2)					Source: WCE0450-07 Prepared & Analyzed: 5/17/2022					
TDS	872		10.0	mg/L	500	394	95.6	80-120		
Matrix Spike Dup (BCE0490-MSD2)					Source: WCE0450-07 Prepared & Analyzed: 5/17/2022					
TDS	892		10.0	mg/L	500	394	99.6	80-120	2.27	20
Batch: BCE0511 - W FIA										
Blank (BCE0511-BLK1)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK2)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK3)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK4)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK5)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0511 - W FIA (Continued)										
Blank (BCE0511-BLK6)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK7)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0511-BLK8)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	ND		0.0200	mg/L						
LCS (BCE0511-BS1)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.193		0.0200	mg/L						
LCS (BCE0511-BS2)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.196		0.0200	mg/L						
LCS (BCE0511-BS3)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.193		0.0200	mg/L						
LCS (BCE0511-BS4)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.206		0.0200	mg/L						
Matrix Spike (BCE0511-MS1)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.461		0.0200	mg/L						
Matrix Spike (BCE0511-MS2)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.670		0.0200	mg/L						
Matrix Spike (BCE0511-MS3)					Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.300		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0511 - W FIA (Continued)										
Matrix Spike Dup (BCE0511-MSD1)			Source: WCE0290-02		Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.455		0.0200	mg/L	0.200	0.281	87.0	80-120	1.31	20
Matrix Spike Dup (BCE0511-MSD2)			Source: WCE0411-02		Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.663		0.0200	mg/L	0.200	0.493	84.8	80-120	1.11	20
Matrix Spike Dup (BCE0511-MSD3)			Source: WCE0511-02		Prepared & Analyzed: 5/17/2022					
Ammonia/N	0.331		0.0200	mg/L	0.200	0.109	111	80-120	9.76	20
Batch: BCE0531 - W Ions										
Blank (BCE0531-BLK1)					Prepared & Analyzed: 5/17/2022					
Chloride	ND		0.100	mg/L						
Blank (BCE0531-BLK2)					Prepared & Analyzed: 5/17/2022					
Chloride	ND		0.100	mg/L						
LCS (BCE0531-BS1)					Prepared & Analyzed: 5/17/2022					
Chloride	4.11			mg/L	4.00		103	90-110		
LCS (BCE0531-BS2)					Prepared & Analyzed: 5/18/2022					
Chloride	3.99			mg/L	4.00		99.7	90-110		
Matrix Spike (BCE0531-MS1)			Source: WCE0483-11		Prepared & Analyzed: 5/18/2022					
Chloride	19.5			mg/L	4.00	15.8	93.7	80-120		
Matrix Spike Dup (BCE0531-MSD1)			Source: WCE0483-11		Prepared & Analyzed: 5/18/2022					
Chloride	19.2			mg/L	4.00	15.8	85.4	80-120	1.71	20

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0596 - W Ions										
Blank (BCE0596-BLK1)					Prepared & Analyzed: 5/18/2022					
Chloride	ND		0.100	mg/L						
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
Blank (BCE0596-BLK2)										
					Prepared & Analyzed: 5/19/2022					
Chloride	ND		0.100	mg/L						
Nitrite-N	ND		0.100	mg/L						
Nitrate-N	ND		0.100	mg/L						
Matrix Spike (BCE0596-MS1)					Source: WCE0483-13		Prepared & Analyzed: 5/19/2022			
Nitrite-N	4.12			mg/L	4.00	0.00	103	80-120		
Nitrate-N	3.90			mg/L	4.00	0.00	97.5	80-120		
Batch: BCE0679 - W Ions										
Blank (BCE0679-BLK1)					Prepared & Analyzed: 5/20/2022					
Chloride	ND		0.100	mg/L						
Blank (BCE0679-BLK2)										
					Prepared & Analyzed: 5/20/2022					
Chloride	ND		0.100	mg/L						
LCS (BCE0679-BS1)					Prepared & Analyzed: 5/20/2022					
Chloride	4.07			mg/L	4.00		102	90-110		
LCS (BCE0679-BS2)					Prepared & Analyzed: 5/20/2022					
Chloride	4.00			mg/L	4.00		100	90-110		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0679 - W Ions (Continued)										
Matrix Spike (BCE0679-MS1)					Source: WCE0794-01		Prepared & Analyzed: 5/20/2022			
Chloride	7.99			mg/L	4.00	4.05	98.6	80-120		
Matrix Spike (BCE0679-MS2)					Source: WCE0483-14		Prepared & Analyzed: 5/21/2022			
Chloride	5.12			mg/L	4.00	1.13	99.6	80-120		
Matrix Spike Dup (BCE0679-MSD1)					Source: WCE0794-01		Prepared & Analyzed: 5/20/2022			
Chloride	7.96			mg/L	4.00	4.05	97.9	80-120	0.338	20
Matrix Spike Dup (BCE0679-MSD2)					Source: WCE0483-14		Prepared & Analyzed: 5/21/2022			
Chloride	5.18			mg/L	4.00	1.13	101	80-120	1.26	20
Batch: BCE0698 - W FIA										
Blank (BCE0698-BLK1)					Prepared & Analyzed: 5/23/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0698-BLK2)					Prepared & Analyzed: 5/23/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0698-BLK3)					Prepared & Analyzed: 5/23/2022					
Ammonia/N	ND		0.0200	mg/L						
Blank (BCE0698-BLK4)					Prepared & Analyzed: 5/23/2022					
Ammonia/N	ND		0.0200	mg/L						
LCS (BCE0698-BS1)					Prepared & Analyzed: 5/23/2022					
Ammonia/N	0.199		0.0200	mg/L	0.200		99.5	90-110		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0698 - W FIA (Continued)										
LCS (BCE0698-BS2)										
Ammonia/N	0.200		0.0200	mg/L	0.200		99.9	90-110		
Matrix Spike (BCE0698-MS1) Source: WCE0591-02										
Ammonia/N	0.286		0.0200	mg/L	0.200	0.0937	95.9	80-120		
Matrix Spike (BCE0698-MS2) Source: WCE0692-02										
Ammonia/N	0.255		0.0200	mg/L	0.200	0.0528	101	80-120		
Matrix Spike Dup (BCE0698-MSD1) Source: WCE0591-02										
Ammonia/N	0.287		0.0200	mg/L	0.200	0.0937	96.6	80-120	0.489	20
Matrix Spike Dup (BCE0698-MSD2) Source: WCE0692-02										
Ammonia/N	0.252		0.0200	mg/L	0.200	0.0528	99.6	80-120	1.18	20
Batch: BCE0761 - W Ions										
Blank (BCE0761-BLK1)										
Chloride	ND		0.100	mg/L						
Blank (BCE0761-BLK2)										
Chloride	ND		0.100	mg/L						
LCS (BCE0761-BS1)										
Chloride	4.07			mg/L	4.00		102	90-110		
LCS (BCE0761-BS2)										
Chloride	4.17			mg/L	4.00		104	90-110		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0761 - W Ions (Continued)										
Matrix Spike (BCE0761-MS1)					Source: WCE0822-02		Prepared & Analyzed: 5/25/2022			
Chloride	4.12			mg/L	4.00	0.132	99.6	80-120		
Matrix Spike Dup (BCE0761-MSD1)					Source: WCE0822-02		Prepared & Analyzed: 5/25/2022			
Chloride	4.18			mg/L	4.00	0.132	101	80-120	1.47	20
Batch: BCE0826 - W Ions										
Blank (BCE0826-BLK1)					Prepared & Analyzed: 5/25/2022					
Chloride	ND		0.100	mg/L						
Blank (BCE0826-BLK2)					Prepared & Analyzed: 5/25/2022					
Chloride	ND		0.100	mg/L						
LCS (BCE0826-BS1)					Prepared & Analyzed: 5/25/2022					
Chloride	4.28			mg/L	4.00		107	90-110		
LCS (BCE0826-BS2)					Prepared & Analyzed: 5/25/2022					
Chloride	4.08			mg/L	4.00		102	90-110		
Matrix Spike (BCE0826-MS1)					Source: WCE0943-01		Prepared & Analyzed: 5/26/2022			
Chloride	72.8			mg/L	4.00	68.8	101	80-120		
Matrix Spike Dup (BCE0826-MSD1)					Source: WCE0943-01		Prepared & Analyzed: 5/26/2022			
Chloride	72.7			mg/L	4.00	68.8	98.5	80-120	0.165	20

Quality Control Data (Continued)

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0420 - W 3010 Digest										
Blank (BCE0420-BLK1)					Prepared: 5/16/2022 Analyzed: 6/1/2022					
Manganese	ND		0.00100	mg/L						
Selenium	ND		0.00100	mg/L						
Barium	ND		0.00100	mg/L						
Thallium	ND		0.00100	mg/L						
LCS (BCE0420-BS1)					Prepared: 5/16/2022 Analyzed: 6/1/2022					
Manganese	0.0496		0.00100	mg/L	0.0500		99.1	85-115		
Thallium	0.0520		0.00100	mg/L	0.0500		104	85-115		
Selenium	0.0577		0.00100	mg/L	0.0500		115	85-115		
Barium	0.0534		0.00100	mg/L	0.0500		107	85-115		
Matrix Spike (BCE0420-MS1)					Source: WCE0483-07		Prepared: 5/16/2022 Analyzed: 6/1/2022			
Manganese	0.0402		0.00100	mg/L	0.0500	0.00274	74.9	70-130		
Matrix Spike (BCE0420-MS2)					Source: WCE0483-14		Prepared: 5/16/2022 Analyzed: 6/2/2022			
Selenium	0.0676	M1	0.00100	mg/L	0.0500	ND	135	70-130		
Thallium	0.0564		0.00100	mg/L	0.0500	ND	113	70-130		
Matrix Spike (BCE0420-MS3)					Source: WCE0483-07		Prepared: 5/16/2022 Analyzed: 6/2/2022			
Selenium	5.75		0.100	mg/L	5.00	ND	115	70-130		

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Quality Control Data (Continued)

Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCE0420 - W 3010 Digest (Continued)										
Matrix Spike (BCE0420-MS3)		Source: WCE0483-07		Prepared: 5/16/2022 Analyzed: 6/2/2022						
Barium	4.52		0.100	mg/L	5.00	0.00823	90.3	70-130		
Matrix Spike (BCE0420-MS4)		Source: WCE0483-14		Prepared: 5/16/2022 Analyzed: 6/2/2022						
Barium	4.43		0.100	mg/L	5.00	0.0750	87.1	70-130		
Selenium	5.65		0.100	mg/L	5.00	ND	113	70-130		
Matrix Spike Dup (BCE0420-MSD1)		Source: WCE0483-07		Prepared: 5/16/2022 Analyzed: 6/1/2022						
Manganese	0.0360		0.00100	mg/L	0.0500	0.00274	66.5	70-130	11.0	20
Matrix Spike Dup (BCE0420-MSD2)		Source: WCE0483-14		Prepared: 5/16/2022 Analyzed: 6/1/2022						
Thallium	0.0539		0.00100	mg/L	0.0500	ND	108	70-130	4.53	20
Matrix Spike Dup (BCE0420-MSD3)		Source: WCE0483-07		Prepared: 5/16/2022 Analyzed: 6/2/2022						
Barium	4.31		0.100	mg/L	5.00	0.00823	86.1	70-130	4.76	20
Selenium	5.40		0.100	mg/L	5.00	ND	108	70-130	6.17	20
Matrix Spike Dup (BCE0420-MSD4)		Source: WCE0483-14		Prepared: 5/16/2022 Analyzed: 6/2/2022						
Selenium	5.47		0.100	mg/L	5.00	ND	109	70-130	3.26	20
Barium	4.80		0.100	mg/L	5.00	0.0750	94.5	70-130	8.06	20



Chain of Custody Record

Anatek Labs
1282 Alturas Drive, Moscow
504 E Sprague Ste D, Spokane

WCE0483



Due: 05/27/22

Company Name: Great West Engineering			Project Manager: Craig Sauer		
Address: 9221 N Division St			Project Name & #: NWA L-Bar Q2		
City: Spokane	State: WA	Zip: 99021	Purchase Order #: Alcoa		
Phone: 509-994-9938			Sampler Name & Phone: Duncan Breedlove 916-969-4834		
Email Address(es): csauer@greatwesteng.com, dbreedlove@greatwesteng.com					

Turn Ar

Please refer to

www.anateklabs.com/pricing-lists

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☐ Next Day*	Email
☐ 2nd Day*	
☐ Other*	

*All rush order requests must have prior approval

				List Analyses Requested										Note Special Instructions/Comments	
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative: # of Containers	Sample Volume	NH3, Cl, TDS	Nitrate + Nitrite	Total Metals Ba, Mn, Se, Ti	Turbidity						
1	051222 P12	5/12/22 0725	w	23		X	X	X	X						
2	051222 P13	5/12/22 0755	w	23		X	X	X	X						
3	051222 SA10	5/12/22 0905	w	23		X	X	X	X						
4	051222 SA11	5/12/22 0845	w	23		X	X	X	X						
5	051222 SA14	5/12/22 0835	w	23		X	X	X	X						
6	051222 P09	5/12/22 0940	w	23		X	X	X	X						
7	051222 PW	5/12/22 0950	w	23		X	X	X	X						
8	051222 P05	5/12/22 1115	w	23		X	X	X	X						
9	051222 P06	5/12/22 1135	w	21		X	X	X	X						
10	051222 P19	5/12/22 1050	w	23		X	X	X	X						
11	051222 P20B	5/12/22 1020	w	23		X	X	X	X						
12	051222 P25	5/12/22 0820	w	23		X	X	X	X						
13	051222 P27	5/12/22 1205	w	23		X	X	X	X						
14	051222 FD3	5/12/22 0600	w	23		X	X	X	X						

Inspection Checklist		
Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
No VOC Head Space?	Y	N
Cooler?	Y	N
Ice/Ice Packs Present?	Y	N
Temperature (°C):	8.4° IR-2	

	Printed Name	Signature	Company	Date	Time
Relinquished by	Duncan Breedlove	<i>Duncan Breedlove</i>	Great West	5/12/22	1415
Received by	KS6H	<i>KS6H</i>	Anatek	5/12/22	1415
Relinquished by					
Received by					
Relinquished by					
Received by					

ms/msd @ PW @ 0950

Number of Containers: 45

Shipped Via: Ice

Preservative: H2SO4 2103226

Ice

Date & Time: 5/12/22

Inspected By: KS6H

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.

Form COC01.02 - Eff 1 Mar 2021

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Anatek Labs, Inc.

Sample Receipt and Preservation Form

WCE0483



Due: 05/27/22

Client Name: Great West Eng. Project: NWA L-Bar (apply Anatek sample label here)

TAT: Normal RUSH: Q2 days

Samples Received From: FedEx UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 1 Type of Ice: Ice/Ice Packs Blue Ice Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts None Other: _____

Cooler Temp As Read (°C): 8.4 Cooler Temp Corrected (°C): _____ Thermometer Used: IR-2

Comments:

Samples Received Intact?	<u>Yes</u>	No	N/A
Chain of Custody Present?	<u>Yes</u>	No	N/A
Samples Received Within Hold Time?	<u>Yes</u>	No	N/A
Samples Properly Preserved?	<u>Yes</u>	No	N/A
VOC Vials Free of Headspace (<6mm)?	Yes	No	<u>N/A</u>
VOC Trip Blanks Present?	Yes	No	<u>N/A</u>
Labels and Chains Agree?	<u>Yes</u>	No	N/A
Total Number of Sample Bottles Received:	<u>45</u>		

<u>H2SO4, Ice</u>
<u>40m/v, 250P, 500P</u>

Chain of Custody Fully Completed?	<u>Yes</u>	No	N/A
Correct Containers Received?	<u>Yes</u>	No	N/A
Anatek Bottles Used?	<u>Yes</u>	No	Unknown

Record preservatives (and lot numbers, if known) for containers below:

<u>H2SO4 2103226 <2 P2102558</u> <u>Ice</u>

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

--

Received/Inspected By: [Signature] Date/Time: 5-12-22 1442

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Client: Great West Engineering, Inc.
Address: 9221 N. Division St., Suite F
Spokane, WA 99218
Attn: Craig Sauer

Work Order: WCJ1185
Project: NWA L-Bar Q4
Reported: 3/5/2023 21:21

Analytical Results Report

Sample Location: 102722 P12
Lab/Sample Number: WCJ1185-01 **Collect Date:** 10/27/22 07:40
Date Received: 10/27/22 16:15 **Collected By:** Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	5.55	mg/L	0.100	11/8/22 3:51	BKP	EPA 300.0	
Ammonia/N	ND	mg/L	0.0200	10/31/22 14:46	TLM	SM 4500-NH3 H	
Nitrate/N	1.44	mg/L	0.100	10/28/22 11:51	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:26	TLM	SM 4500-NO3 F	
TDS	718	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.115	NTU	0.100	10/28/22 11:22	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0272	mg/L	0.0100	11/10/22 16:21	JLG	EPA 200.8	
Manganese	0.00234	mg/L	0.00100	3/1/23 19:12	JLG	EPA 200.8	
Selenium	0.00105	mg/L	0.00100	3/1/23 19:12	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 19:12	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P13
Lab/Sample Number: WCJ1185-02 Collect Date: 10/27/22 08:05
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	996	mg/L	10.0	11/8/22 4:13	BKP	EPA 300.0	
Ammonia/N	27.4	mg/L	0.400	10/31/22 15:18	TLM	SM 4500-NH3 H	
Nitrate/N	6.21	mg/L	0.500	10/28/22 12:39	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:28	TLM	SM 4500-NO3 F	
TDS	5010	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.342	NTU	0.100	10/28/22 11:30	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0662	mg/L	0.00100	3/1/23 19:09	JLG	EPA 200.8	
Manganese	2.65	mg/L	0.100	11/10/22 20:15	JLG	EPA 200.8	
Selenium	0.00223	mg/L	0.00100	3/1/23 19:09	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 19:09	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 SA10
Lab/Sample Number: WCJ1185-03 Collect Date: 10/27/22 12:45
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	9110	mg/L	50.0	11/8/22 4:34	BKP	EPA 300.0	
Ammonia/N	626	mg/L	6.00	10/31/22 15:27	TLM	SM 4500-NH3 H	
Nitrate/N	0.960	mg/L	0.100	10/28/22 12:01	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:29	TLM	SM 4500-NO3 F	
TDS	21600	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	14.2	NTU	0.100	10/28/22 11:33	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0402	mg/L	0.00100	3/1/23 19:06	JLG	EPA 200.8	
Manganese	1.78	mg/L	0.100	11/10/22 20:12	JLG	EPA 200.8	
Selenium	0.00301	mg/L	0.00100	3/1/23 19:06	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 19:06	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 SA11
Lab/Sample Number: WCJ1185-04 Collect Date: 10/27/22 12:25
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	7620	mg/L	50.0	11/8/22 4:56	BKP	EPA 300.0	
Ammonia/N	79.6	mg/L	1.20	10/31/22 16:01	TLM	SM 4500-NH3 H	
Nitrate/N	0.784	mg/L	0.100	10/28/22 12:02	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:30	TLM	SM 4500-NO3 F	
TDS	15000	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	1.05	NTU	0.100	10/28/22 11:36	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0425	mg/L	0.00100	3/1/23 19:03	JLG	EPA 200.8	
Manganese	0.418	mg/L	0.100	11/10/22 20:09	JLG	EPA 200.8	
Selenium	0.00589	mg/L	0.00100	3/1/23 19:03	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 19:03	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 SA14
Lab/Sample Number: WCJ1185-05 Collect Date: 10/27/22 12:15
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	584	mg/L	10.0	11/8/22 21:02	BKP	EPA 300.0	
Ammonia/N	13.0	mg/L	0.400	10/31/22 15:30	TLM	SM 4500-NH3 H	
Nitrate/N	0.132	mg/L	0.100	10/28/22 12:04	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:31	TLM	SM 4500-NO3 F	
TDS	2940	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.227	NTU	0.100	10/28/22 11:44	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0124	mg/L	0.00100	3/1/23 19:00	JLG	EPA 200.8	
Manganese	0.00463	mg/L	0.00100	3/1/23 19:00	JLG	EPA 200.8	
Selenium	0.00962	mg/L	0.00100	3/1/23 19:00	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 19:00	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P09
Lab/Sample Number: WCJ1185-06 Collect Date: 10/27/22 13:15
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	495	mg/L	10.0	11/8/22 6:22	BKP	EPA 300.0	
Ammonia/N	0.350	mg/L	0.0200	10/31/22 14:52	TLM	SM 4500-NH3 H	
Nitrate/N	0.148	mg/L	0.100	10/28/22 12:05	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:32	TLM	SM 4500-NO3 F	
TDS	1120	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.251	NTU	0.100	10/28/22 11:50	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.135	mg/L	0.00100	3/1/23 18:56	JLG	EPA 200.8	
Manganese	0.121	mg/L	0.00100	3/1/23 18:56	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	3/1/23 18:56	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:56	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 PW
Lab/Sample Number: WCJ1185-07 Collect Date: 10/27/22 13:30
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	0.799	mg/L	0.100	11/8/22 7:26	BKP	EPA 300.0	
Ammonia/N	ND	mg/L	0.0200	10/31/22 14:53	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:06	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:06	TLM	SM 4500-NO3 F	
TDS	231	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	1.47	NTU	0.100	10/28/22 11:52	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0692	mg/L	0.00100	3/1/23 18:47	JLG	EPA 200.8	
Manganese	0.00330	mg/L	0.00100	3/1/23 18:47	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	3/1/23 18:47	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:47	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P05
Lab/Sample Number: WCJ1185-08 Collect Date: 10/27/22 11:00
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	1890	mg/L	10.0	11/8/22 7:48	BKP	EPA 300.0	
Ammonia/N	ND	mg/L	0.0200	10/31/22 14:54	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:07	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:07	TLM	SM 4500-NO3 F	
TDS	3190	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.147	NTU	0.100	10/28/22 11:57	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.597	mg/L	0.100	11/10/22 19:46	JLG	EPA 200.8	
Manganese	0.216	mg/L	0.100	11/10/22 19:46	JLG	EPA 200.8	
Selenium	0.00116	mg/L	0.00100	3/1/23 18:44	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:44	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P06
Lab/Sample Number: WCJ1185-09 Collect Date: 10/27/22 11:30
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	48.2	mg/L	1.00	11/8/22 8:09	BKP	EPA 300.0	
Ammonia/N	0.290	mg/L	0.0200	10/31/22 14:59	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:08	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:08	TLM	SM 4500-NO3 F	
TDS	475	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	68.7	NTU	0.300	10/28/22 12:10	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.154	mg/L	0.100	11/10/22 19:43	JLG	EPA 200.8	
Manganese	1.12	mg/L	0.100	11/10/22 19:43	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	3/1/23 18:41	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:41	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P19
Lab/Sample Number: WCJ1185-10 Collect Date: 10/27/22 09:50
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	3450	mg/L	20.0	11/8/22 8:30	BKP	EPA 300.0	
Ammonia/N	0.357	mg/L	0.0200	10/31/22 15:00	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:10	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:10	TLM	SM 4500-NO3 F	
TDS	6780	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.660	NTU	0.100	10/28/22 12:15	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0580	mg/L	0.00100	3/1/23 18:37	JLG	EPA 200.8	
Manganese	1.60	mg/L	0.100	11/10/22 19:41	JLG	EPA 200.8	
Selenium	0.00211	mg/L	0.00100	3/1/23 18:37	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:37	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P20B
Lab/Sample Number: WCJ1185-11 Collect Date: 10/27/22 09:10
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	1370	mg/L	5.00	11/8/22 21:23	BKP	EPA 300.0	
Ammonia/N	10.3	mg/L	0.400	10/31/22 15:33	TLM	SM 4500-NH3 H	
Nitrate/N	12.8	mg/L	2.00	10/28/22 12:51	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 15:34	TLM	SM 4500-NO3 F	
TDS	3640	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.334	NTU	0.100	10/28/22 12:28	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0638	mg/L	0.00100	3/1/23 18:21	JLG	EPA 200.8	
Manganese	0.832	mg/L	0.100	11/10/22 19:38	JLG	EPA 200.8	
Selenium	0.00288	mg/L	0.00100	3/1/23 18:21	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:21	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P25
Lab/Sample Number: WCJ1185-12 Collect Date: 10/27/22 08:40
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	849	mg/L	10.0	11/8/22 9:13	BKP	EPA 300.0	
Ammonia/N	0.525	mg/L	0.0200	10/31/22 15:03	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:12	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:12	TLM	SM 4500-NO3 F	
TDS	2220	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	135	NTU	0.600	10/28/22 12:33	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0604	mg/L	0.00100	3/1/23 18:18	JLG	EPA 200.8	
Manganese	8.02	mg/L	0.100	11/10/22 19:35	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	3/1/23 18:18	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:18	JLG	EPA 200.8	

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Analytical Results Report

(Continued)

Sample Location: 102722 P27
Lab/Sample Number: WCJ1185-13 Collect Date: 10/27/22 11:55
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	6380	mg/L	100	11/8/22 9:35	BKP	EPA 300.0	
Ammonia/N	ND	mg/L	0.0200	10/31/22 15:04	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:16	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:16	TLM	SM 4500-NO3 F	
TDS	9040	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	0.643	NTU	0.100	10/28/22 12:39	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	1.45	mg/L	0.100	11/10/22 19:32	JLG	EPA 200.8	
Manganese	0.112	mg/L	0.100	11/10/22 19:32	JLG	EPA 200.8	
Selenium	0.00268	mg/L	0.00100	3/1/23 18:15	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:15	JLG	EPA 200.8	

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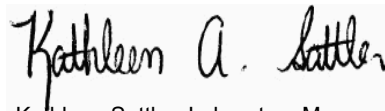
Analytical Results Report

(Continued)

Sample Location: 102722 FD3
Lab/Sample Number: WCJ1185-14 Collect Date: 10/27/22 06:00
Date Received: 10/27/22 16:15 Collected By: Duncan Breedlove
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics							
Chloride	0.800	mg/L	0.100	11/8/22 9:56	BKP	EPA 300.0	
Ammonia/N	ND	mg/L	0.0200	10/31/22 15:05	TLM	SM 4500-NH3 H	
Nitrate/N	ND	mg/L	0.100	10/28/22 12:17	TLM	SM 4500-NO3 F	
Nitrite/N	ND	mg/L	0.100	10/28/22 12:17	TLM	SM 4500-NO3 F	
TDS	337	mg/L	5.00	10/28/22 15:04	EMG	SM 2540 C	
Turbidity	1.38	NTU	0.100	10/28/22 12:41	ILG	EPA 180.1	
Metals by ICP-MS							
Barium	0.0714	mg/L	0.00100	3/1/23 18:12	JLG	EPA 200.8	
Manganese	0.00335	mg/L	0.00100	3/1/23 18:12	JLG	EPA 200.8	
Selenium	ND	mg/L	0.00100	3/1/23 18:12	JLG	EPA 200.8	
Thallium	ND	mg/L	0.00100	3/1/23 18:12	JLG	EPA 200.8	

Authorized Signature,



Kathleen Sattler, Laboratory Manager

PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

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The results reported related only to the samples indicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCJ1033 - W Wet Chem										
Blank (BCJ1033-BLK1)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 10/28/2022					
Blank (BCJ1033-BLK2)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 10/28/2022					
Blank (BCJ1033-BLK3)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 10/28/2022					
Blank (BCJ1033-BLK4)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 10/28/2022					
Blank (BCJ1033-BLK5)										
TDS	ND		5.00	mg/L	Prepared & Analyzed: 10/28/2022					
LCS (BCJ1033-BS1)										
TDS	489			mg/L	500		97.8	80-120		
LCS (BCJ1033-BS2)										
TDS	486			mg/L	500		97.2	80-120		
LCS (BCJ1033-BS3)										
TDS	482			mg/L	500		96.4	80-120		
LCS Dup (BCJ1033-BSD1)										
TDS	460			mg/L	500		92.0	80-120	6.11	20
LCS Dup (BCJ1033-BSD2)										
TDS	459			mg/L	500		91.8	80-120	5.71	20

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCJ1033 - W Wet Chem (Continued)										
LCS Dup (BCJ1033-BSD3)					Prepared & Analyzed: 10/28/2022					
TDS	450			mg/L	500		90.0	80-120	6.87	20
Duplicate (BCJ1033-DUP1)					Source: WCJ1044-01 Prepared & Analyzed: 10/28/2022					
TDS	654		5.00	mg/L		639			2.32	20
Duplicate (BCJ1033-DUP2)					Source: WCJ1047-01 Prepared & Analyzed: 10/28/2022					
TDS	952		5.00	mg/L		920			3.42	20
Duplicate (BCJ1033-DUP3)					Source: WCJ1047-02 Prepared & Analyzed: 10/28/2022					
TDS	956		5.00	mg/L		925			3.30	20
Matrix Spike (BCJ1033-MS2)					Source: WCJ1085-05 Prepared & Analyzed: 10/28/2022					
TDS	1020		5.00	mg/L	500	464	111	80-120		
Matrix Spike Dup (BCJ1033-MSD2)					Source: WCJ1085-05 Prepared & Analyzed: 10/28/2022					
TDS	946		5.00	mg/L	500	464	96.4	80-120	7.53	20
Batch: BCJ1060 - W Wet Chem										
Blank (BCJ1060-BLK1)					Prepared & Analyzed: 10/28/2022					
Turbidity	ND		0.100	NTU						
Duplicate (BCJ1060-DUP1)					Source: WCJ1185-03 Prepared & Analyzed: 10/28/2022					
Turbidity	15.3		0.100	NTU		14.2			7.46	200
Batch: BCK0009 - W FIA										
Blank (BCK0009-BLK1)					Prepared & Analyzed: 10/31/2022					
Ammonia/N	ND		0.0200	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCK0009 - W FIA (Continued)										
Blank (BCK0009-BLK2)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK3)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK4)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK5)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK6)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK7)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK8)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLK9)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
Blank (BCK0009-BLKA)										
Ammonia/N	ND		0.0200	mg/L						Prepared & Analyzed: 10/31/2022
LCS (BCK0009-BS1)										
Ammonia/N	0.186		0.0200	mg/L	0.200		93.1	90-110		

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCK0009 - W FIA (Continued)										
LCS (BCK0009-BS2)					Prepared & Analyzed: 10/31/2022					
Ammonia/N	0.204		0.0200	mg/L	0.200		102	90-110		
LCS (BCK0009-BS3)					Prepared & Analyzed: 10/31/2022					
Ammonia/N	0.207		0.0200	mg/L	0.200		103	90-110		
LCS (BCK0009-BS4)					Prepared & Analyzed: 10/31/2022					
Ammonia/N	0.207		0.0200	mg/L	0.200		104	90-110		
LCS (BCK0009-BS5)					Prepared & Analyzed: 10/31/2022					
Ammonia/N	0.209		0.0200	mg/L	0.200		105	90-110		
Matrix Spike (BCK0009-MS1)					Source: WCJ1207-01		Prepared & Analyzed: 10/31/2022			
Ammonia/N	0.205		0.0200	mg/L	0.200	0.0100	97.6	80-120		
Matrix Spike (BCK0009-MS2)					Source: WCJ1047-07		Prepared & Analyzed: 10/31/2022			
Ammonia/N	0.196		0.0200	mg/L	0.200	ND	98.1	80-120		
Matrix Spike Dup (BCK0009-MSD1)					Source: WCJ1207-01		Prepared & Analyzed: 10/31/2022			
Ammonia/N	0.199		0.0200	mg/L	0.200	0.0100	94.6	80-120	2.97	20
Matrix Spike Dup (BCK0009-MSD2)					Source: WCJ1047-07		Prepared & Analyzed: 10/31/2022			
Ammonia/N	0.181		0.0200	mg/L	0.200	ND	90.5	80-120	8.06	20
Batch: BCK0018 - W FIA										
Blank (BCK0018-BLK1)					Prepared & Analyzed: 10/20/2022					
Nitrate-N	ND		0.100	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCK0018 - W FIA (Continued)										
Blank (BCK0018-BLK2)					Prepared & Analyzed: 10/20/2022					
Nitrate-N	ND		0.100	mg/L						
LCS (BCK0018-BS1)					Prepared & Analyzed: 10/20/2022					
Nitrate-N	0.407		0.100	mg/L	0.400		102	90-110		
LCS Dup (BCK0018-BSD1)					Prepared & Analyzed: 10/20/2022					
Nitrate-N	0.419		0.100	mg/L	0.400		105	90-110	2.86	20
Batch: BCK0020 - W FIA										
Blank (BCK0020-BLK1)					Prepared & Analyzed: 10/28/2022					
Nitrite-N	ND		0.100	mg/L						
LCS (BCK0020-BS1)					Prepared & Analyzed: 10/28/2022					
Nitrite-N	0.211		0.100	mg/L	0.200		105	90-110		
LCS Dup (BCK0020-BSD1)					Prepared & Analyzed: 10/28/2022					
Nitrite-N	0.201		0.100	mg/L	0.200		100	90-110	4.81	20
Batch: BCK0204 - Anions										
Blank (BCK0204-BLK1)					Prepared & Analyzed: 11/7/2022					
Chloride	ND		0.100	mg/L						
Blank (BCK0204-BLK2)					Prepared & Analyzed: 11/8/2022					
Chloride	ND		0.100	mg/L						

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCK0204 - Anions (Continued)										
LCS (BCK0204-BS1)										
Chloride	3.98		0.100	mg/L	4.00		99.5	90-110		
Prepared & Analyzed: 11/7/2022										
LCS (BCK0204-BS2)										
Chloride	3.91		0.100	mg/L	4.00		97.9	90-110		
Prepared & Analyzed: 11/8/2022										
Matrix Spike (BCK0204-MS1)										
Chloride	118		1.00	mg/L	40.0	77.4	103	90-110		
Source: WCJ1164-01RE1 Prepared & Analyzed: 11/7/2022										
Matrix Spike (BCK0204-MS2)										
Chloride	148		1.00	mg/L	40.0	108	102	90-110		
Source: WCJ0991-02 Prepared & Analyzed: 11/8/2022										
Matrix Spike (BCK0204-MS3)										
Chloride	930		10.0	mg/L	400	495	109	90-110		
Source: WCJ1185-06 Prepared & Analyzed: 11/8/2022										
Matrix Spike (BCK0204-MS4)										
Chloride	86.1		1.00	mg/L	40.0	44.4	104	90-110		
Source: WCK0109-03 Prepared & Analyzed: 11/8/2022										
Matrix Spike (BCK0204-MS5)										
Chloride	81.0		1.00	mg/L	40.0	37.6	108	90-110		
Source: MCK0241-01RE1 Prepared & Analyzed: 11/10/2022										
Matrix Spike Dup (BCK0204-MSD1)										
Chloride	115		1.00	mg/L	40.0	77.4	95.1	90-110	2.60	20
Source: WCJ1164-01RE1 Prepared & Analyzed: 11/7/2022										
Matrix Spike Dup (BCK0204-MSD2)										
Chloride	149		1.00	mg/L	40.0	108	103	90-110	0.289	20
Source: WCJ0991-02 Prepared & Analyzed: 11/8/2022										
Matrix Spike Dup (BCK0204-MSD4)										
Chloride	86.5		1.00	mg/L	40.0	44.4	105	90-110	0.406	20
Source: WCK0109-03 Prepared & Analyzed: 11/8/2022										

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Quality Control Data (Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCK0204 - Anions (Continued)										
Matrix Spike Dup (BCK0204-MSD5)			Source: MCK0241-01RE1			Prepared & Analyzed: 11/10/2022				
Chloride	81.2		1.00	mg/L	40.0	37.6	109	90-110	0.321	20

Quality Control Data (Continued)

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCJ1076 - W 3010 Digest										
Blank (BCJ1076-BLK1)			Prepared: 10/31/2022 Analyzed: 11/10/2022							
Manganese	ND		0.00100	mg/L						
Thallium	ND		0.00100	mg/L						
Selenium	ND		0.00100	mg/L						
Barium	ND		0.00100	mg/L						
LCS (BCJ1076-BS1)			Prepared: 10/31/2022 Analyzed: 11/10/2022							
Thallium	0.0518		0.00100	mg/L	0.0500		104	85-115		
Selenium	0.0518		0.00100	mg/L	0.0500		104	85-115		
Manganese	0.0512		0.00100	mg/L	0.0500		102	85-115		
Barium	0.0507		0.00100	mg/L	0.0500		101	85-115		
LCS (BCJ1076-BS2)			Prepared: 10/31/2022 Analyzed: 3/1/2023							
Selenium	0.0473		0.00100	mg/L				85-115		
Barium	0.0485		0.00100	mg/L				85-115		
Thallium	0.0483		0.00100	mg/L				85-115		
Manganese	0.0458		0.00100	mg/L				85-115		
Matrix Spike (BCJ1076-MS1)			Source: WCJ1185-01			Prepared: 10/31/2022 Analyzed: 11/10/2022				
Manganese	0.0474		0.0100	mg/L	0.0500	ND	94.7	70-130		
Selenium	0.0556		0.0100	mg/L	0.0500	ND	111	70-130		
Thallium	0.0556		0.0100	mg/L	0.0500	ND	111	70-130		
Barium	0.0829		0.0100	mg/L	0.0500	0.0272	111	70-130		
Matrix Spike (BCJ1076-MS2)			Source: WCJ1185-07			Prepared: 10/31/2022 Analyzed: 11/10/2022				
Thallium	0.0583		0.0100	mg/L	0.0500	ND	117	70-130		
Selenium	0.0592		0.0100	mg/L	0.0500	ND	118	70-130		
Matrix Spike Dup (BCJ1076-MSD1)			Source: WCJ1185-01			Prepared: 10/31/2022 Analyzed: 11/10/2022				
Manganese	0.0494		0.0100	mg/L	0.0500	ND	98.8	70-130	4.18	20
Selenium	0.0584		0.0100	mg/L	0.0500	ND	117	70-130	4.91	20
Barium	0.0867		0.0100	mg/L	0.0500	0.0272	119	70-130	4.45	20
Thallium	0.0548		0.0100	mg/L	0.0500	ND	110	70-130	1.36	20

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Quality Control Data (Continued)

Metals by ICP-MS (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ1076 - W 3010 Digest (Continued)

Matrix Spike Dup (BCJ1076-MSD2)

Source: WCJ1185-07

Prepared: 10/31/2022 Analyzed: 11/10/2022

Thallium	0.0535		0.0100	mg/L	0.0500	ND	107	70-130	8.53	20
Selenium	0.0589		0.0100	mg/L	0.0500	ND	118	70-130	0.356	20



Chain of Custody Record

Anatek
1282 Alturas Drive, Mo
504 E Sprague Ste D, Spo

WCJ1185



Due: 11/11/22

Company Name: Great West Engineering			Project Manager: Craig Sauer		
Address: 9221 N Division St			Project Name & #: NWA L-Bar Q4		
City: Spokane	State: WA	Zip: 99021	Purchase Order #: Alcoa		
Phone: 509-994-9938			Sampler Name & Phone: Duncan Breedlove 916-969-4834		
Email Address(es): csauer@greatwesteng.com, dbreedlove@greatwesteng.com					

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☐ 2nd Day*
☐ Other*
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 Email
 *All rush order requests must have prior approval

				List Analyses Requested										Note Special Instructions/Comments	
Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	NH ₃ , Cl, TDS	Nitrate + Nitrite	Total Metals Ba, Mn, Se, Ti	Turbidity						
1	102722 P12	10/27 740	w	2		X	X	X	X						
2	102722 P13	10/27 805	w	2		X	X	X	X						
3	102722 SA10	10/27 1245	w	2		X	X	X	X						
4	102722 SA11	10/27 1225	w	2		X	X	X	X						
5	102722 SA14	10/27 1215	w	2		X	X	X	X						
6	102722 P09	10/27 1315	w	2		X	X	X	X						
7	102722 PW	10/27 1330	w	2		X	X	X	X						
8	102722 P05	10/27 1100	w	2		X	X	X	X						
9	102722 P06	10/27 1130	w	2		X	X	X	X						
10	102722 P19	10/27 950	w	2		X	X	X	X						
11	102722 P20B	10/27 910	w	2		X	X	X	X						
12	102722 P25	10/27 840	w	2		X	X	X	X						
13	102722 P27	10/27 1155	w	2		X	X	X	X						
	102722 FD3	10/27 600	w	2		X	X	X	X						

Inspection Checklist	
Received Intact?	☒ Y ☐ N
Labels & Chains Agree?	☒ Y ☐ N
Containers Sealed?	☒ Y ☐ N
No VOC Head Space?	☒ Y ☐ N
Cooler?	☒ Y ☐ N
Ice/Ice Packs Present?	☒ Y ☐ N
Temperature (°C):	8.8°F R2

Printed Name	Signature	Company	Date	Time
Relinquished by: Duncan Breedlove	<i>[Signature]</i>	Great West	10/27	16:17
Received by: Brock Grey	<i>[Signature]</i>	Anatek	10-27-22	1615
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Number of Containers:	
Shipped Via:	410/6/1
Preservative:	H2SO4 2207226902
Date & Time:	10/27/22
Inspected By:	<i>[Signature]</i>

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report.
Form COC01.02 - Eff 1 Mar 2021



Chain of Custody Record

Anatek
1282 Alturas Drive, Mo
504 E Sprague Ste D, Spo

WCJ1185



Due: 11/11/22

Company Name: Great West Engineering	Project Manager: Craig Sauer
Address: 9221 N Division St	Project Name & #: NWA L-Bar Q4
City: Spokane State: WA Zip: 99021	Purchase Order #: Alcoa
Phone: 509-994-9938	Sampler Name & Phone: Duncan Breedlove 916-969-4834
Email Address(es): csauer@greatwesteng.com, dbreedlove@greatwesteng.com	

Turn

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☐ Next Day* ☐ Email
☐ 2nd Day* ☐
☐ Other* ☐ *All rush order requests must have prior approval

				List Analyses Requested								Note Special Instructions/Comments							
Lab ID	Sample Identification	Sampling Date/Time	Matrix	Preservative:		NH ₃ , Cl, TDS	Nitrate + Nitrite	Total Metals Ba, Mn, Se, Ti	Turbidity										
				# of Containers	Sample Volume														
1	102722 P12	10/27 740	w	2		X	X	X	X										
2	102722 P13	10/27 805	w	2		X	X	X	X										
3	102722 SA10	10/27 1245	w	2		X	X	X	X										
4	102722 SA11	10/27 1225	w	2		X	X	X	X										
5	102722 SA14	10/27 1215	w	2		X	X	X	X										
6	102722 P09	10/27 1315	w	2		X	X	X	X										
7	102722 PW	10/27 1330	w	2		X	X	X	X										
8	102722 P05	10/27 1100	w	2		X	X	X	X										
9	102722 P06	10/27 1130	w	2		X	X	X	X										
10	102722 P19	10/27 950	w	2		X	X	X	X										
11	102722 P20B	10/27 910	w	2		X	X	X	X										
12	102722 P25	10/27 840	w	2		X	X	X	X										
13	102722 P27	10/27 1155	w	2		X	X	X	X										
	102722 FD3	10/27 600	w	2		X	X	X	X										

Printed Name		Signature		Company		Date		Time	
Relinquished by	Duncan Breedlove			Great West		10/27		16:17	
Received by	Duncan Breedlove			Anatek		10/27		16:15	
Relinquished by									
Received by									
Relinquished by									
Received by									

Inspection Checklist	
Received Intact?	☒ N
Labels & Chains Agree?	☒ N
Containers Sealed?	☒ N
No VOC Head Space?	☒ N
Cooler?	☒ N
Ice/Ice Packs Present?	☒ N
Temperature (°C):	8.8°F R2

Number of Containers:	
Shipped Via: 410/6/1	
Preservative: 187509 220726902	
Date & Time: 10/27/22	
Inspected By: [Signature]	

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Subcontracted analyses will be clearly noted on the analytical report. Form COC01.02 - Eff 1 Mar 2021

Page 1 of 1

Appendix B

Groundwater Data Quality Review - Relative Percent Difference (2018 through 2022)

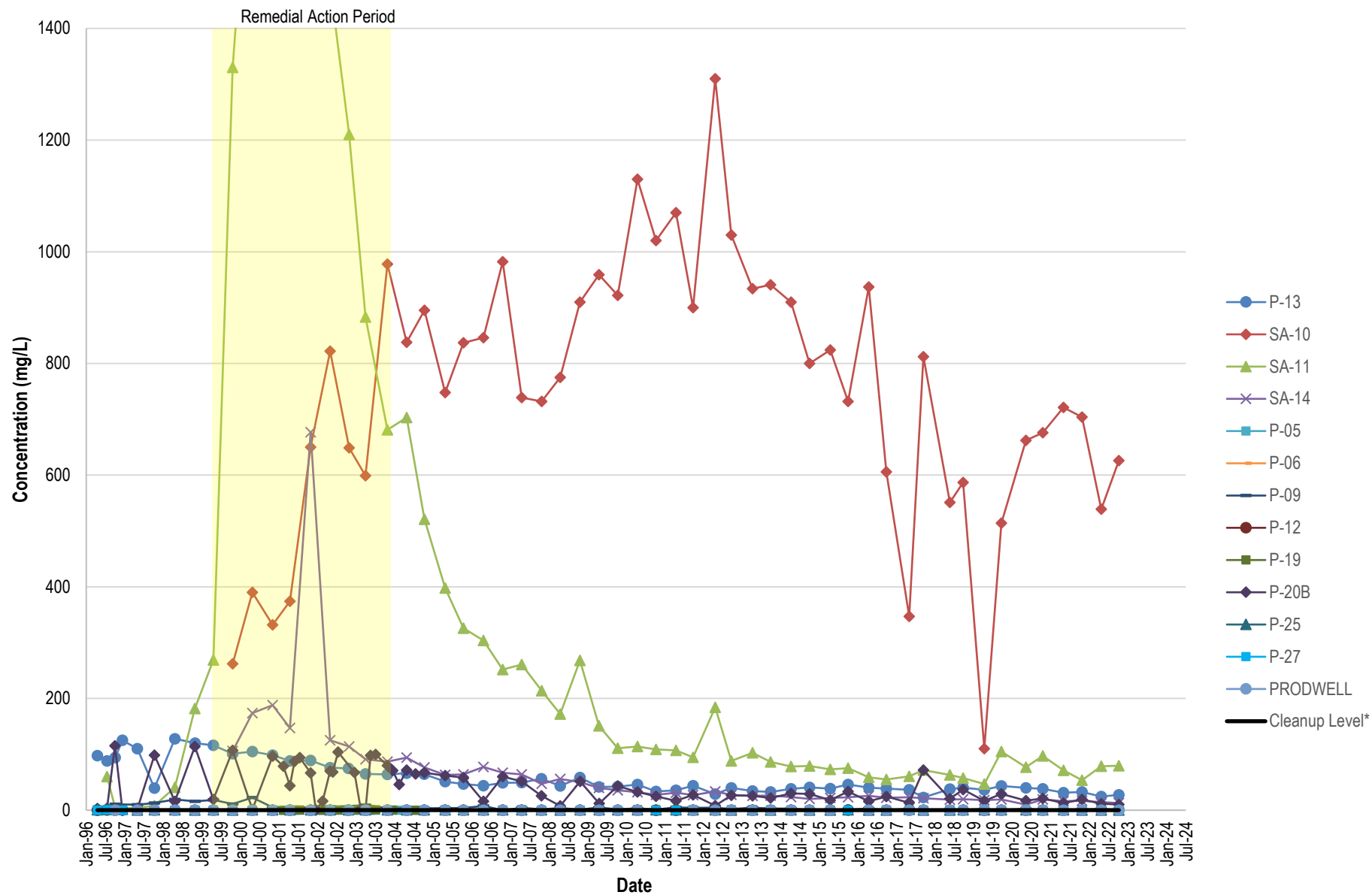
Appendix B. Percent Difference Calculations for Groundwater Sampling 2018 through 2022
2022 L-Bar Site Compliance Monitoring Program Data Summary Report

Event Sampled Station Result Type	2018 Spring SA-14			2018 Fall SA-11			2019 Spring SA-14			2019 Fall SA-11			2020 Spring SA-10			2020 Fall SA-10			2021 Spring PW			2021 Fall PW			2022 Spring PW			2022 Fall PW		
	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD	P	FD	PD
Ammonia-N	19.0	19.1	0.5%	57.4	64.1	11.0%	18.2	17.3	5.1%	105	106	0.9%	662.0	669.0	1.1%	676.0	797.0	16.4%	NA	NA	--	NA	NA	--	NA	NA	--	NA	NA	--
Chloride	1,130	1,110	1.8%	4,760	1,890	86.3%	952	961	0.9%	5,150	6,270	19.6%	8,240	6,990	16.4%	7,590	9,520	22.6%	0.942	1.070	12.7%	2.560	0.968	90.2%	1.100	1.130	2.7%	0.799	0.800	0.1%
Total Dissolved Solids	3,735	3,486	6.9%	11,800	11,300	4.3%	3,550	3,440	3.1%	12,500	14,600	15.5%	20,700	19,600	5.5%	16,400	16,800	2.4%	275	452	48.7%	254	279	9.4%	253	284	11.5%	231	337	37.3%
Nitrate-N	NA	NA	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	0.401	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--
Nitrite-N	NA	NA	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--
Barium	0.0162	0.0157	3.1%	0.0308	0.0339	9.6%	--	--	--	--	--	--	0.0550	0.0578	5.0%	0.0513	0.0552	7.3%	--	--	--	--	--	--	0.00823	0.0750	160.4%	0.0629	0.0714	12.7%
Manganese	0.00563	0.00513	9.3%	0.201	0.208	3.4%	--	--	--	--	--	--	4.950	4.890	1.2%	2.630	3.160	18.3%	--	--	--	--	--	--	0.00274	0.003	8.7%	0.0033	0.003	1.5%
Selenium	0.0262	0.0254	3.1%	0.0128	0.0119	7.3%	--	--	--	--	--	--	NA	0.0139	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--
Thallium	NA	NA	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--	--	--	--	--	--	--	NA	NA	--	NA	NA	--
pH	9.86	9.82	0.4%	8.27	8.41	1.7%	--	--	--	--	--	--	--	--	--	7.53	7.54	0.1%	7.49	7.82	4.3%	7.87	7.88	0.1%	--	--	--	--	--	--
Conductivity	5,630	5,660	0.5%	19,900	18,300	8.4%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Turbidity	--	--	--	--	--	--	--	--	--	--	--	--	12.50	4.20	99.4%	12.300	10.300	17.7%	2.180	1.80	19.1%	67.400	1.510	191.2%	1.08	1.11	2.7%	1.47	1.38	6.3%

Notes:
P = primary or parent sample; FD = duplicate sample; PD = relative percent difference.
-- = not analyzed/PD not able to be calculated
"NA" Indicates non-detect value at the lab reporting limit (PD calculation not performed).
Units:
pH = standard units
Conductivity = μmhos/cm
Turbidity = NTU
All others = mg/L
Talley:
Total of 53 RPD calculations; 8 results exceeded 20 percent. Exceedences are bolded.

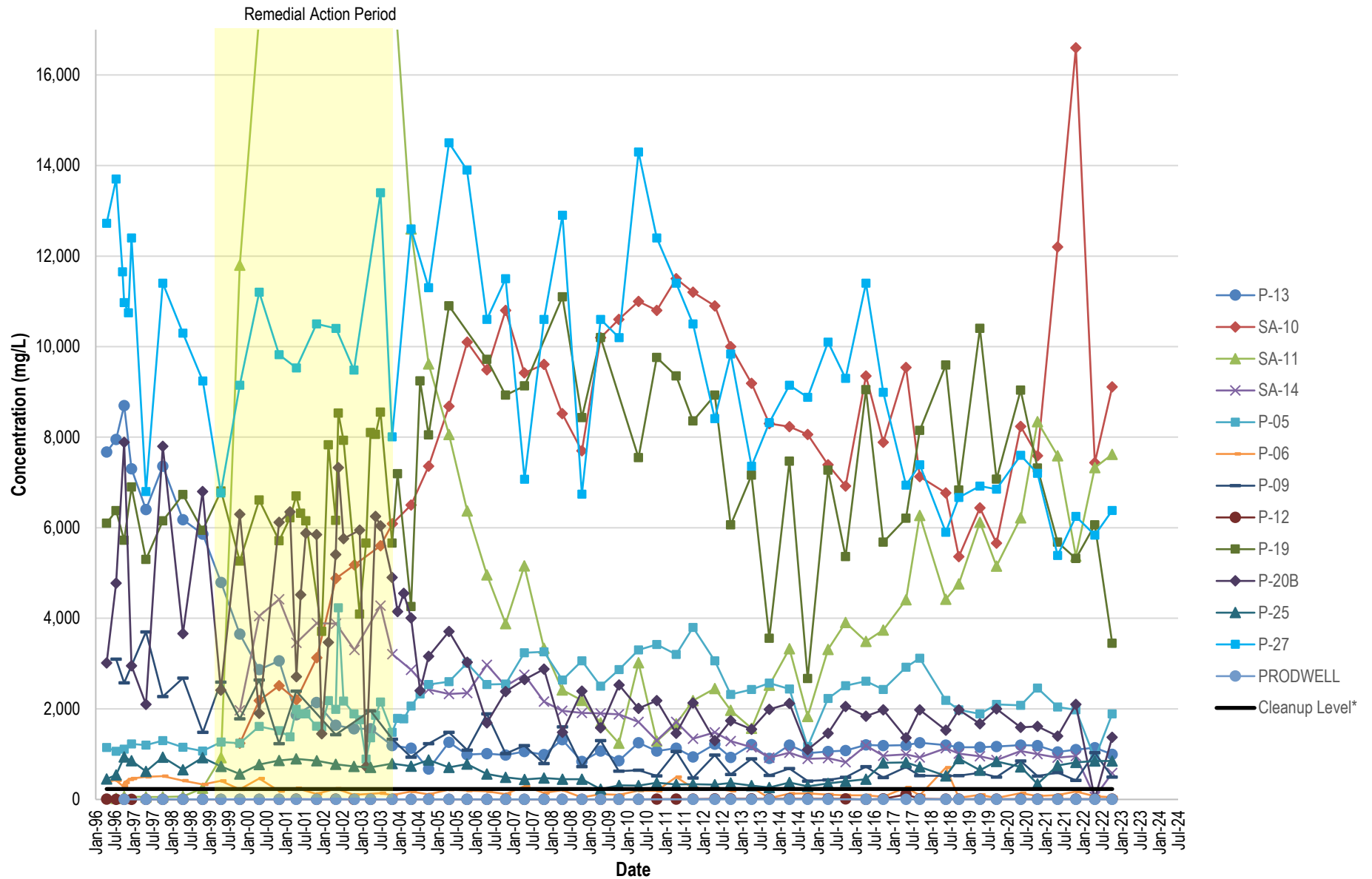
Appendix C

Groundwater Time-Series Plots



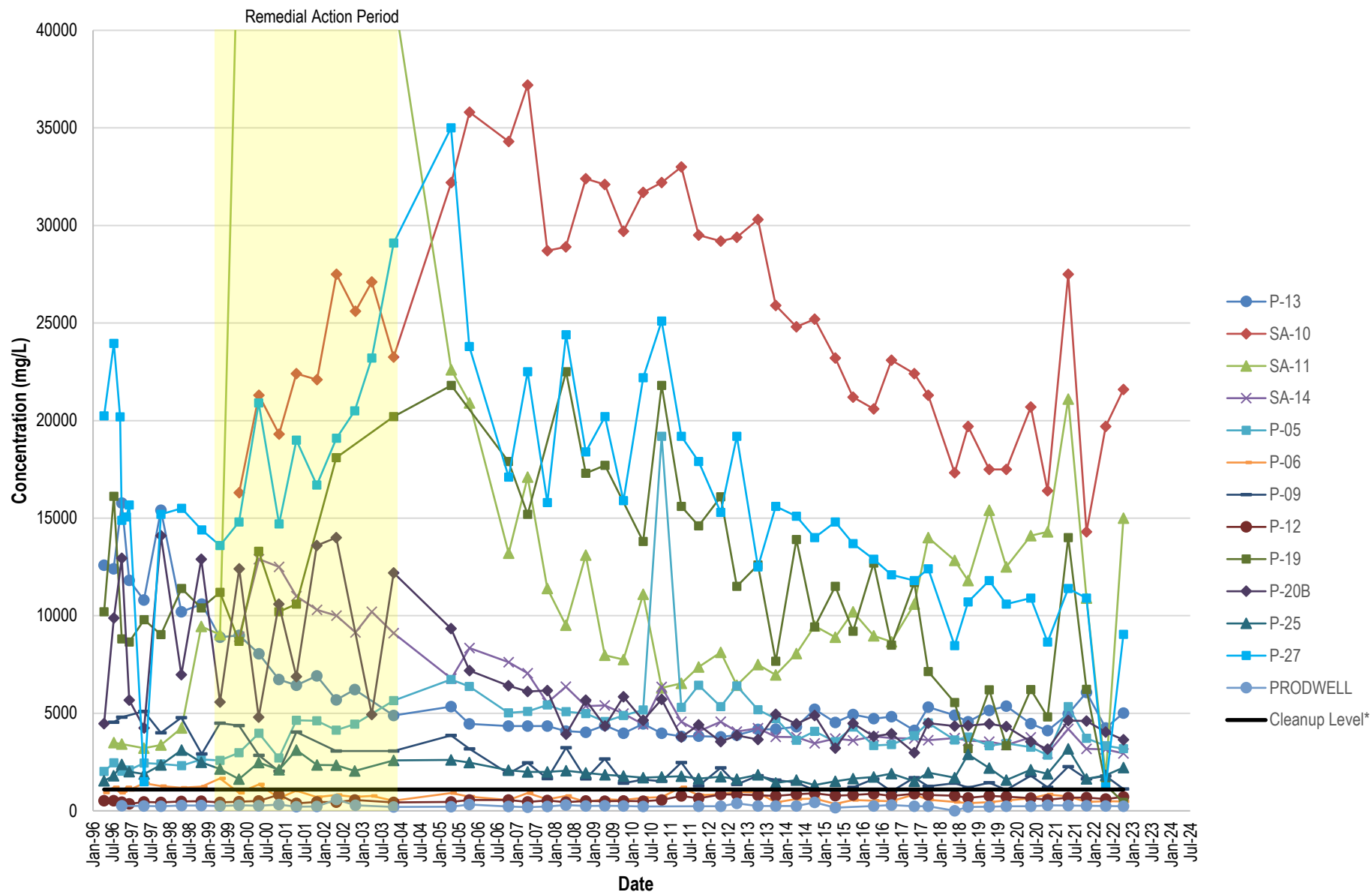
Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - some high values not shown for well SA-11.
3. *Site-Specific Cleanup Level for Ammonia is 0.13 mg/L; reference *L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999)*.



Notes:

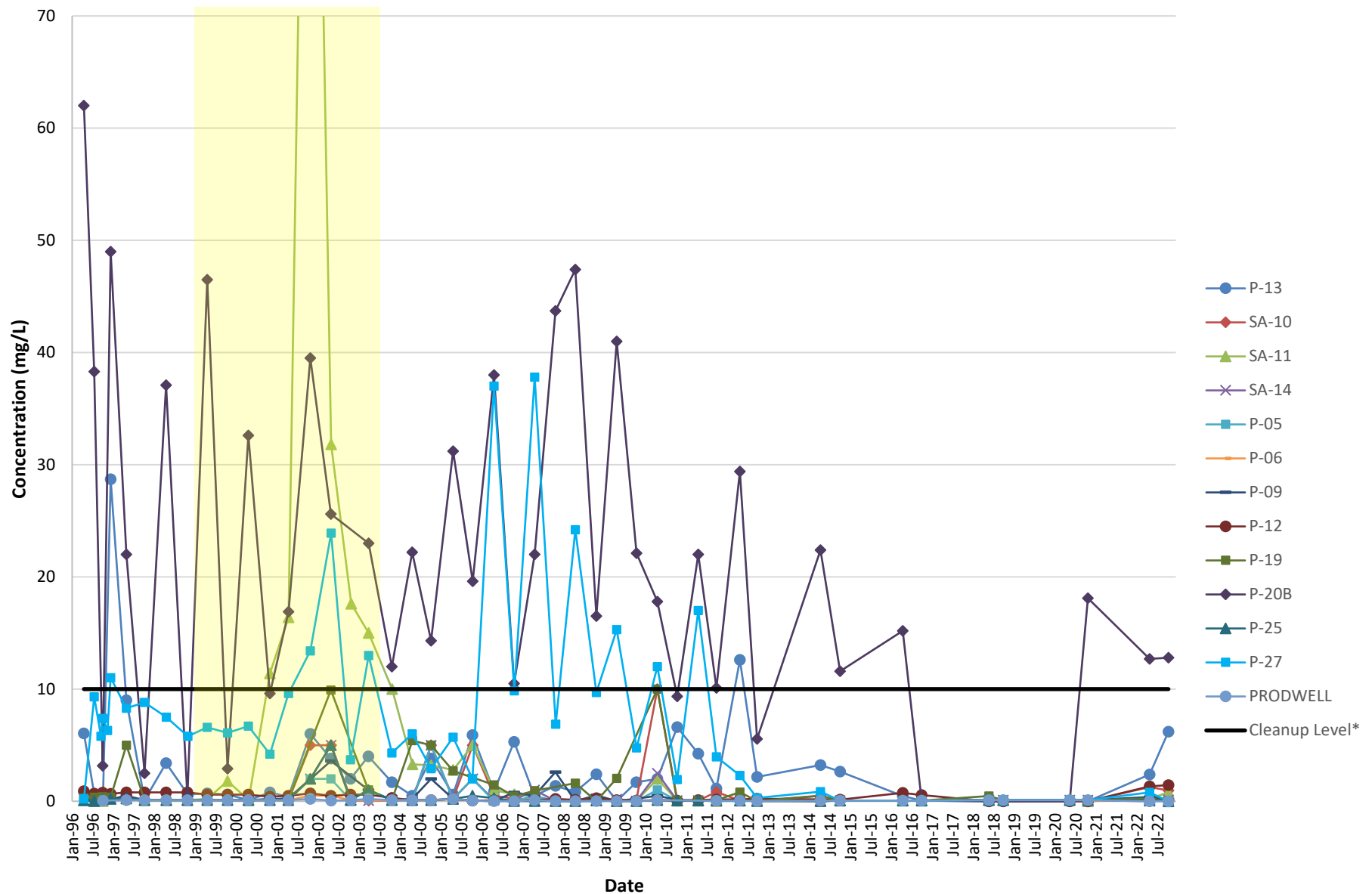
1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - some high values not shown for well SA-11.
3. *Site-Specific Cleanup Level for Chloride is 230 mg/L; reference *L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999)*.



Notes:

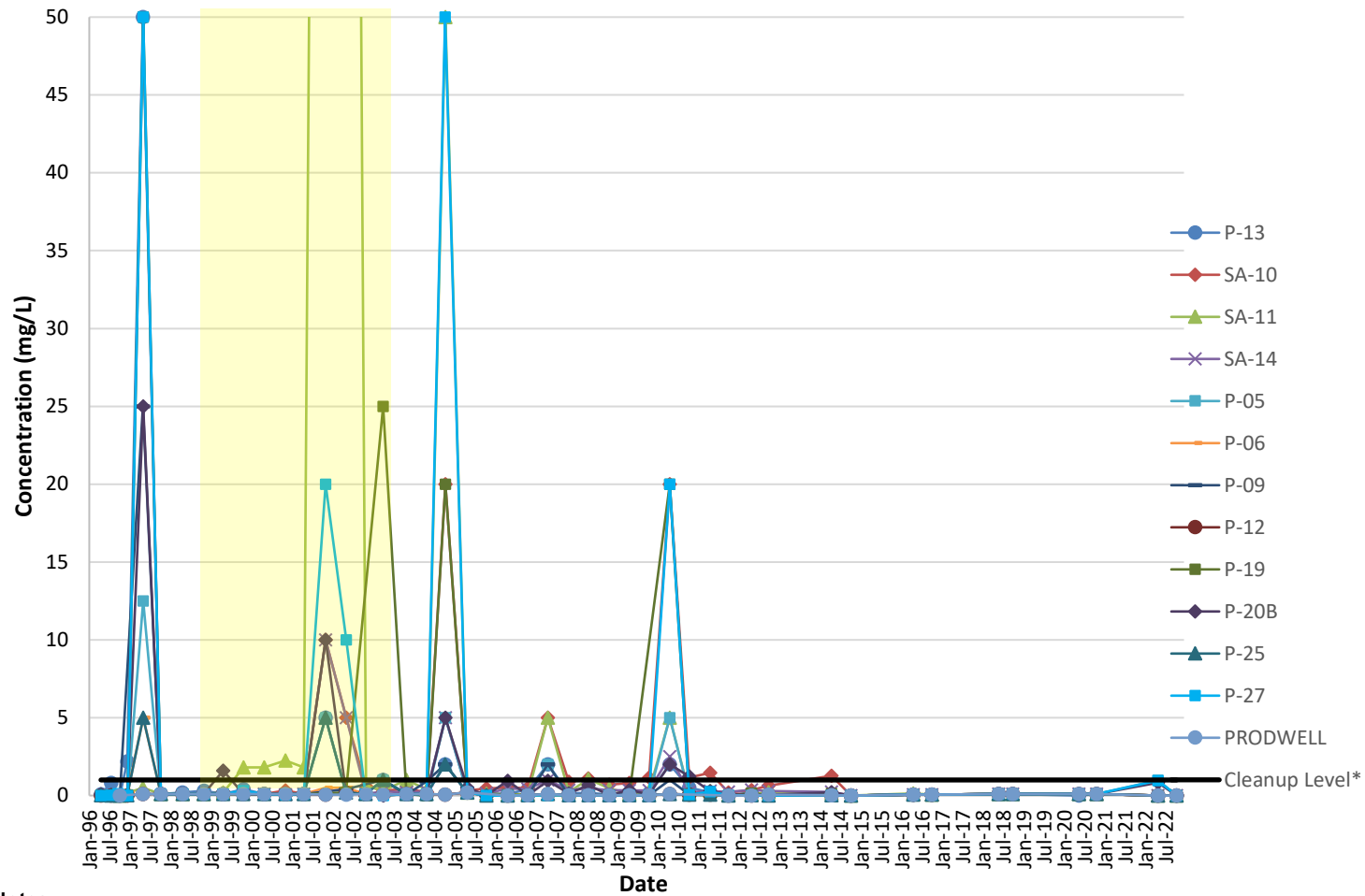
1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - some high values not shown for SA-11.
3. *Site-Specific Cleanup Level for TDS is 1092.4 mg/L; reference *L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999)*.

Attachment C-3. Total Dissolved Solids Concentrations
 2022 L-Bar Site Compliance Monitoring Program Data Summary
 Report



Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - one high value not shown for well SA-11.
3. *Site-Specific Cleanup Level for Nitrate is 10 mg/L; reference *L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999)*.

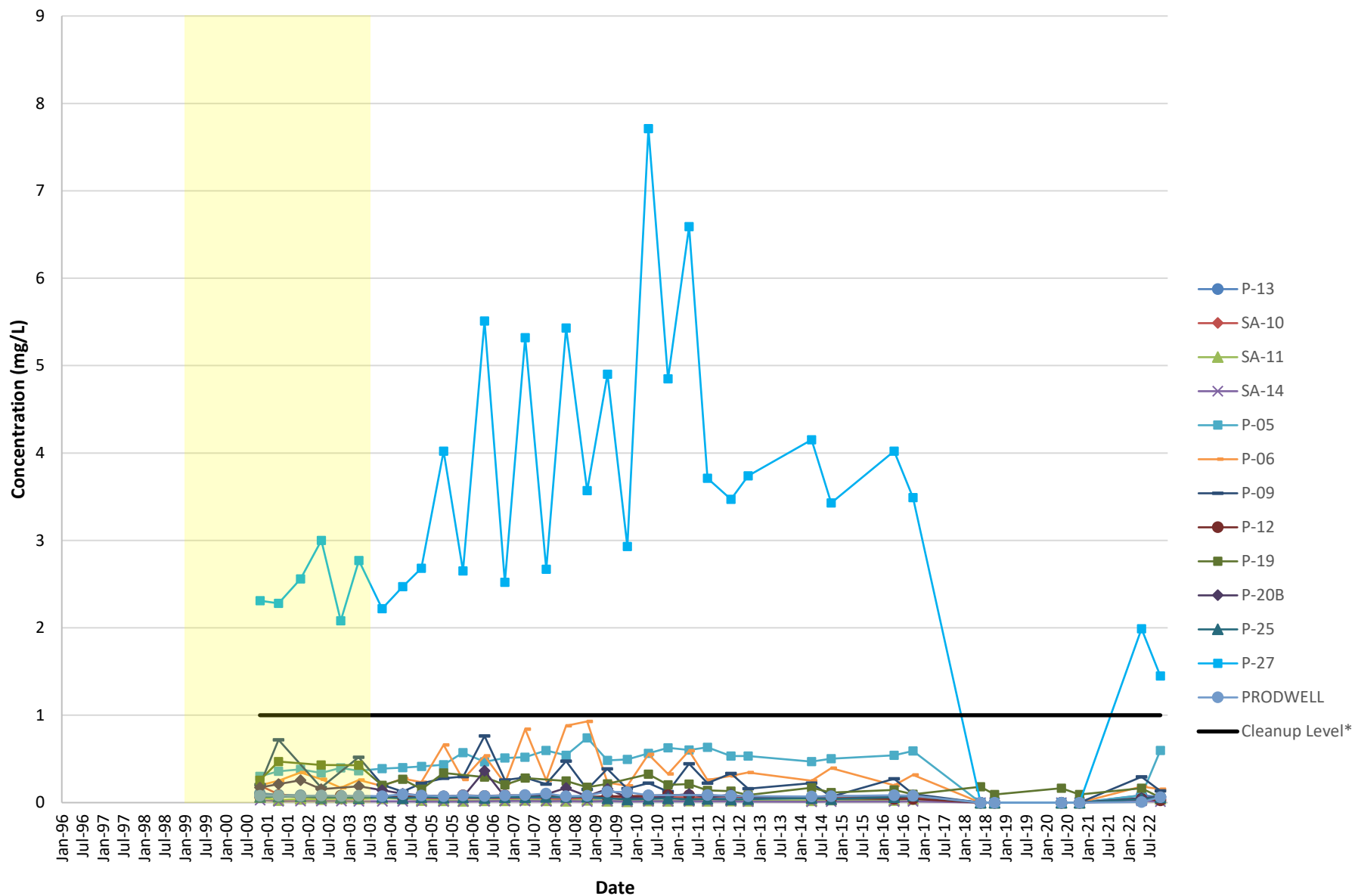


Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - two high values not shown for well SA-11.
3. *Site-Specific Cleanup Level for Nitrite is 1.0 mg/L; reference *L-Bar Cleanup Levels Development and Possibility Study Report (CH2M Hill, 1999)*

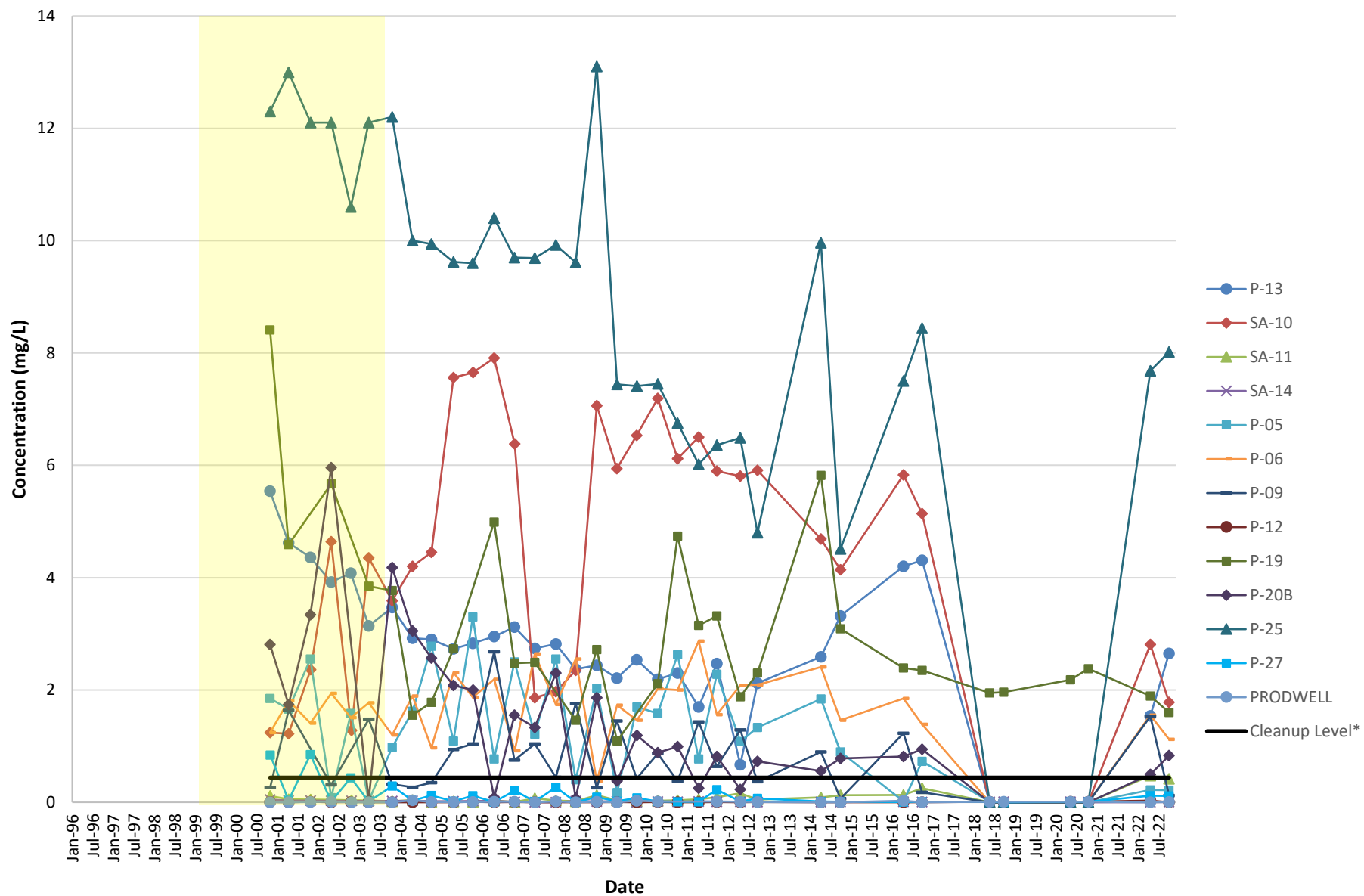
Attachment C-6. Nitrate Concentrations

2022 L-Bar Site Compliance Monitoring Program Data Summary Report



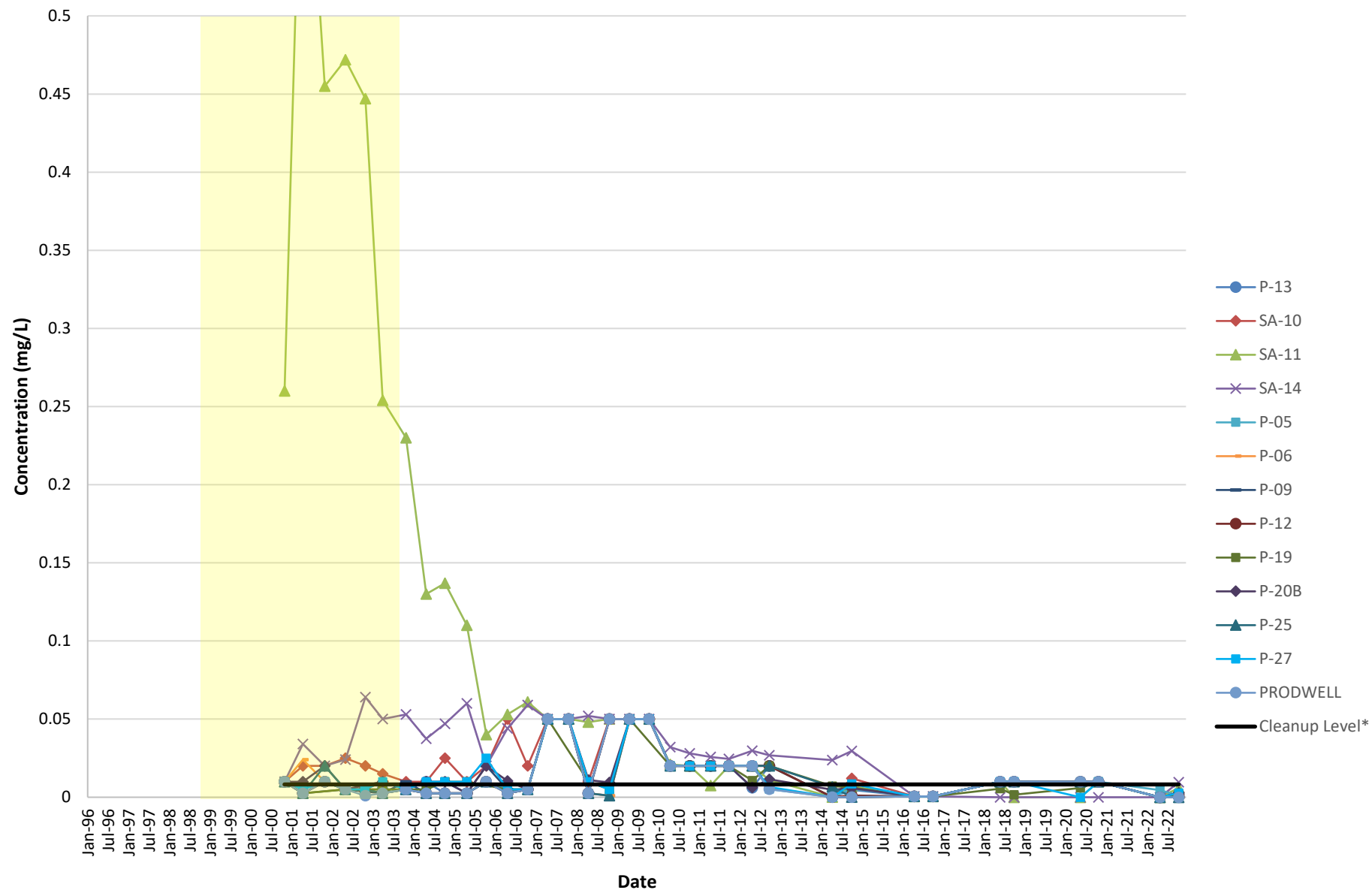
Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. *Site-Specific Cleanup Level for barium is 1.0 mg/L; reference L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999).



Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. *Site-Specific Cleanup Level for manganese is 0.44 mg/L; reference L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999).



Notes:

1. Remedial Action Period 1999-2003; Magnesite Residue Pile Removal in 1999, Covered Pile Removal in 2003, and Main Ditch Closure in 2003.
2. Concentration scale truncated - one high value not shown for well SA-11.
3. *Site-Specific Cleanup Level for selenium is 0.001 mg/L; reference L-Bar Cleanup Levels Development and Feasibility Study Report (CH2M HILL, 1999).

Appendix D

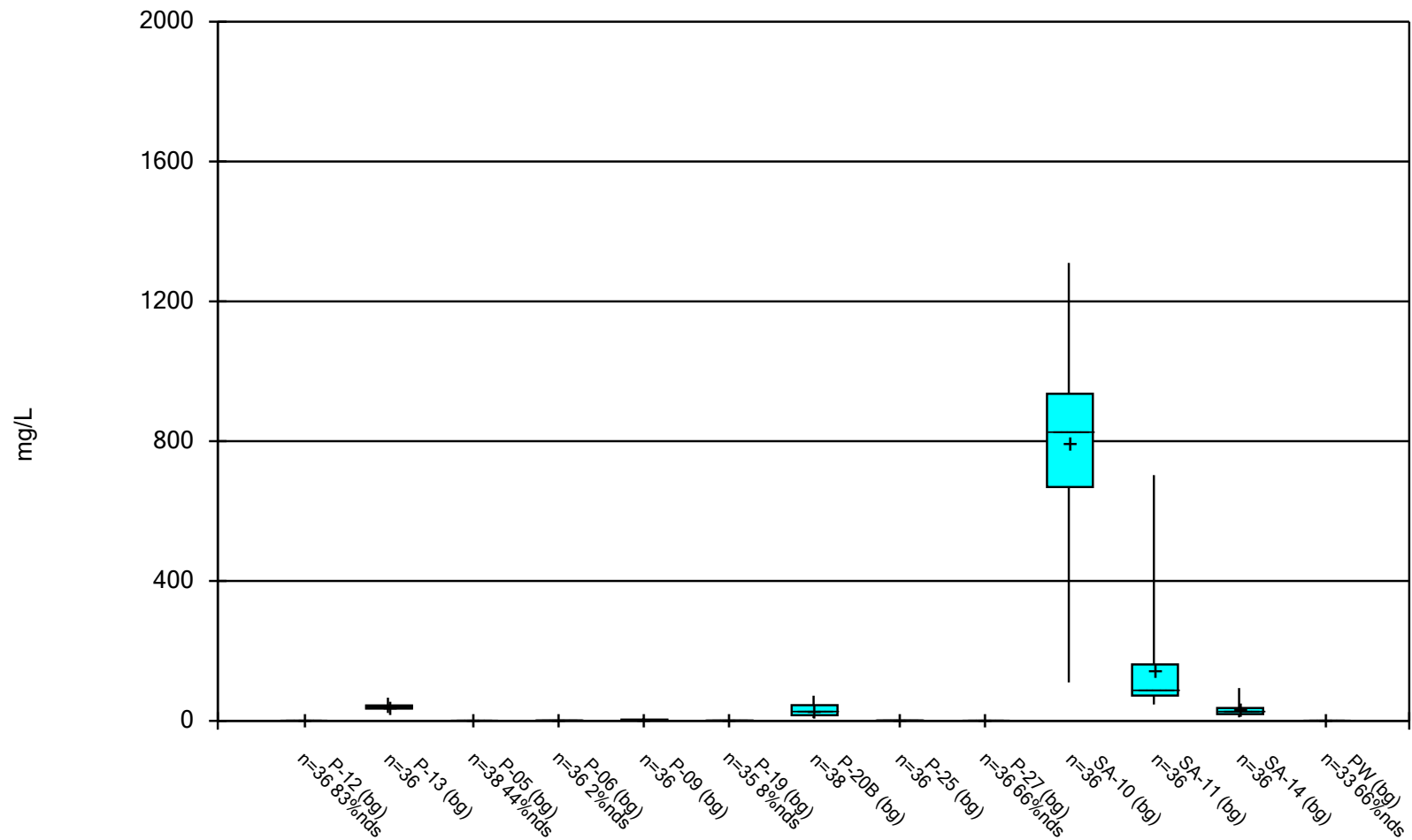
Groundwater Descriptive Statistics (tabular form, and Box and Whiskers Plots)

Appendix D-1. Descriptive Statistics for Primary Suite
L-Bar Site 2022 Five-Year Review Report

Constituent Name	Well	Obs.	Mean	Std. Dev.	Variance	Median	Minimum	Maximum	% Non-Detects
Ammonia (mg/L)	P-12 (bg)	36	0.01751	0.01218	0.00203	0.01	0.0005	0.058	83.3
Ammonia (mg/L)	P-13 (bg)	36	40.45	9.47	1.578	39.95	22.8	66.2	0.0
Ammonia (mg/L)	P-05 (bg)	38	0.04407	0.03888	0.006307	0.02865	0.01	0.137	44.7
Ammonia (mg/L)	P-06 (bg)	36	0.5871	0.2323	0.03871	0.642	0.025	0.911	2.8
Ammonia (mg/L)	P-09 (bg)	36	2.26	1.801	0.3002	1.96	0.022	7.7	0.0
Ammonia (mg/L)	P-19 (bg)	35	0.4739	0.3832	0.06477	0.425	0.01	1.38	8.6
Ammonia (mg/L)	P-20B (bg)	38	30.99	19.37	3.142	25.35	7.84	72	0.0
Ammonia (mg/L)	P-25 (bg)	36	0.6272	0.2371	0.03952	0.6245	0.184	1.7	0.0
Ammonia (mg/L)	P-27 (bg)	36	0.03226	0.04351	0.007252	0.025	0.001	0.218	66.7
Ammonia (mg/L)	SA-10 (bg)	36	797.4	225.9	37.65	830.5	110	1310	0.0
Ammonia (mg/L)	SA-11 (bg)	36	149.2	143.3	23.89	91.25	47	703	0.0
Ammonia (mg/L)	SA-14 (bg)	36	33.24	20.91	3.484	25.9	9.9	94	0.0
Ammonia (mg/L)	PW (bg)	33	0.03575	0.05603	0.009754	0.025	0.0005	0.287	66.7
Chloride (mg/L)	P-12 (bg)	38	9.547	17.06	2.767	7.08	0.758	110	0.0
Chloride (mg/L)	P-13 (bg)	38	1089	137.7	22.33	1115	669	1320	0.0
Chloride (mg/L)	P-05 (bg)	40	2501	589.3	93.18	2505	901	3800	0.0
Chloride (mg/L)	P-06 (bg)	38	163.5	128.2	20.8	131.5	30	703	0.0
Chloride (mg/L)	P-09 (bg)	38	777.8	377.4	61.22	663.5	43.6	1890	0.0
Chloride (mg/L)	P-19 (bg)	32	11903	5095	900.6	11500	3450	22500	0.0
Chloride (mg/L)	P-20B (bg)	40	2049	820.6	129.8	1980	15.8	4550	0.0
Chloride (mg/L)	P-25 (bg)	38	541.2	216.4	35.1	462.5	227	900	0.0
Chloride (mg/L)	P-27 (bg)	38	9268	2555	414.5	9070	5390	14500	0.0
Chloride (mg/L)	SA-10 (bg)	38	8994	2119	343.8	8895	5360	16600	0.0
Chloride (mg/L)	SA-11 (bg)	38	4287	2482	402.6	3685	18.7	9620	0.0
Chloride (mg/L)	SA-14 (bg)	38	1450	666.2	108.1	1170	425	2970	0.0
Chloride (mg/L)	PW (bg)	35	0.9246	0.3859	0.06522	0.9	0.5	2.56	0.0
Total Dissolved Solids (mg/L)	P-12 (bg)	35	676.9	142.6	24.1	681	443	898	0.0
Total Dissolved Solids (mg/L)	P-13 (bg)	35	4520	541.7	91.56	4380	3790	6070	0.0
Total Dissolved Solids (mg/L)	P-05 (bg)	35	4928	2697	455.8	4580	2860	19200	0.0
Total Dissolved Solids (mg/L)	P-06 (bg)	35	647.8	196.3	33.18	593	356	1210	0.0
Total Dissolved Solids (mg/L)	P-09 (bg)	35	1745	677.2	114.5	1600	997	3860	0.0
Total Dissolved Solids (mg/L)	P-19 (bg)	36	7227	2678	446.4	7370	1320	14000	0.0
Total Dissolved Solids (mg/L)	P-20B (bg)	35	4654	1275	215.6	4400	2980	9340	0.0
Total Dissolved Solids (mg/L)	P-25 (bg)	35	1906	394.9	66.76	1820	1320	3180	0.0
Total Dissolved Solids (mg/L)	P-27 (bg)	35	15666	5785	977.8	14800	8467	35000	0.0
Total Dissolved Solids (mg/L)	SA-10 (bg)	35	25901	6164	1042	25900	14300	37200	0.0
Total Dissolved Solids (mg/L)	SA-11 (bg)	35	11602	4255	719.2	10900	6300	22600	0.0
Total Dissolved Solids (mg/L)	SA-14 (bg)	35	4465	1323	223.6	3820	2940	8340	0.0
Total Dissolved Solids (mg/L)	PW (bg)	32	245	68.82	12.17	243	2.5	432	3.1

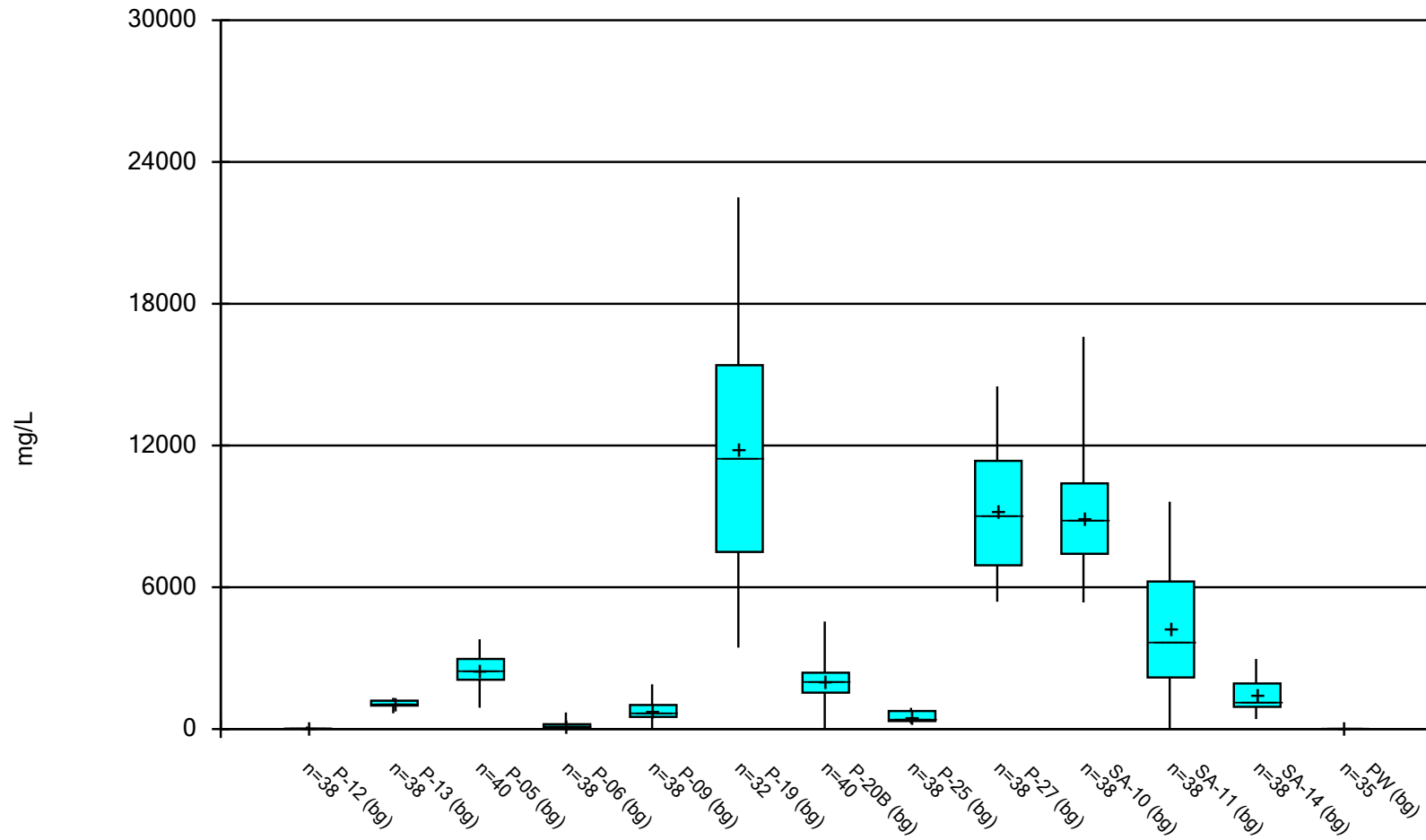
Note:
Descriptive statistics calculated for primary parameters over period 2004 to 2022.

Box & Whiskers Plot



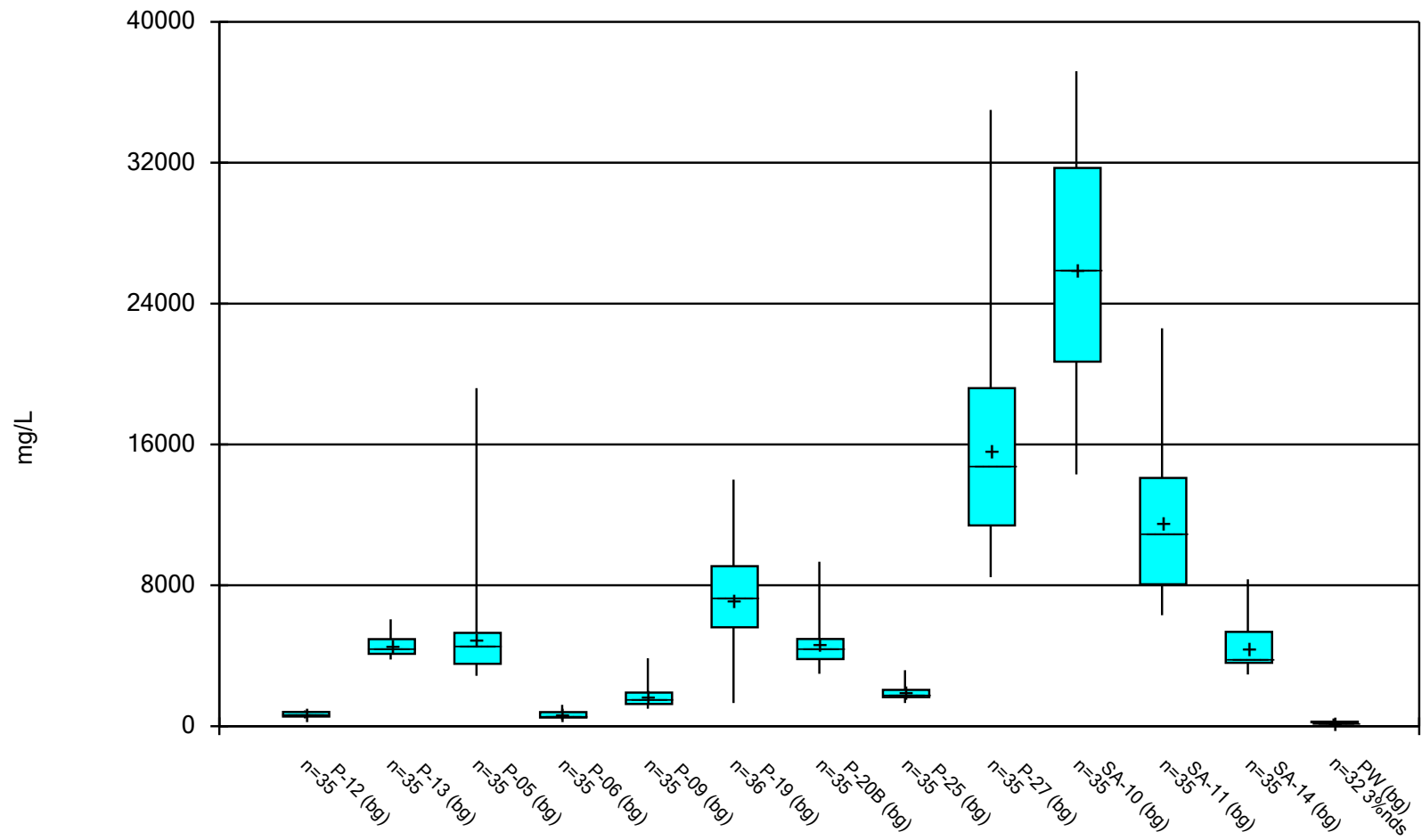
Constituent: Ammonia Analysis Run 2/24/2023 8:19 AM
Alcoa - Northwest Alloys Client: Great West Data: Book1

Box & Whiskers Plot



Constituent: Chloride Analysis Run 2/24/2023 8:19 AM
Alcoa - Northwest Alloys Client: Great West Data: Book1

Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 2/24/2023 8:19 AM

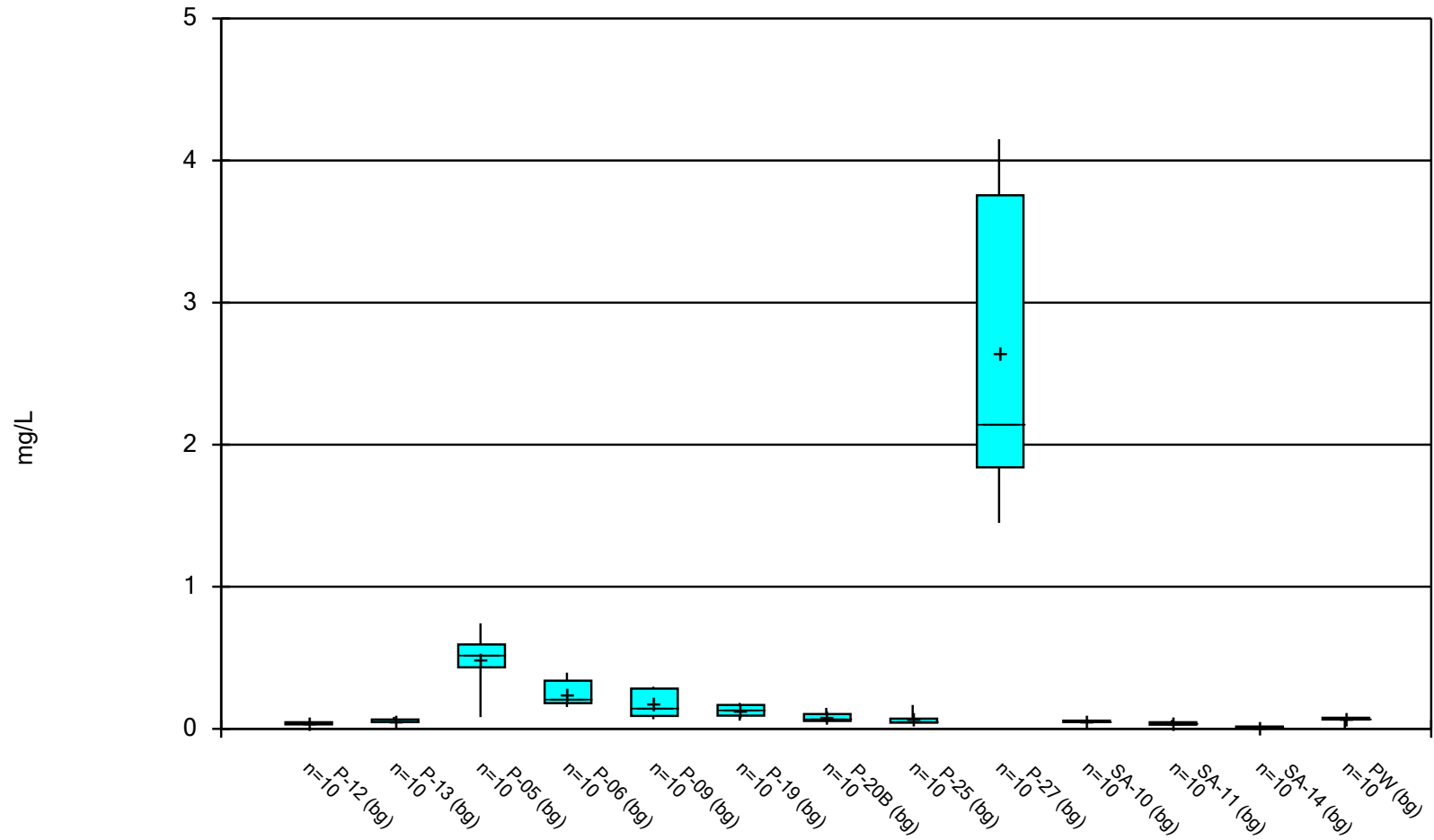
Alcoa - Northwest Alloys Client: Great West Data: Book1

Appendix D-2 Descriptive Statistics for Secondary Suite
L-Bar Site 2022 Five-Year Review Report

Constituent Name	Well	Observations	Mean	Std. Dev.	Variance	Median	Minimum	Maximum	% Non-Detect
Barium (mg/L)	P-12 (bg)	10	0.03892	0.007588	0.002399	0.03915	0.0272	0.0489	0
Barium (mg/L)	P-13 (bg)	10	0.05761	0.01224	0.003872	0.0536	0.0437	0.0841	0
Barium (mg/L)	P-05 (bg)	10	0.4937	0.1719	0.05435	0.5225	0.0823	0.742	0
Barium (mg/L)	P-06 (bg)	10	0.2451	0.08415	0.02661	0.2135	0.154	0.395	0
Barium (mg/L)	P-09 (bg)	10	0.1754	0.08885	0.0281	0.1485	0.0679	0.296	0
Barium (mg/L)	P-19 (bg)	10	0.1282	0.04242	0.01342	0.13	0.058	0.182	0
Barium (mg/L)	P-20B (bg)	10	0.08016	0.03258	0.0103	0.07075	0.0482	0.148	0
Barium (mg/L)	P-25 (bg)	10	0.06563	0.03793	0.012	0.0555	0.0391	0.168	0
Barium (mg/L)	P-27 (bg)	10	2.652	1.007	0.3183	2.155	1.45	4.15	0
Barium (mg/L)	SA-10 (bg)	10	0.05236	0.006097	0.001928	0.0533	0.0402	0.0593	0
Barium (mg/L)	SA-11 (bg)	10	0.03888	0.01099	0.003475	0.0379	0.0253	0.062	0
Barium (mg/L)	SA-14 (bg)	10	0.01456	0.00264	0.0008348	0.01425	0.0109	0.0197	0
Barium (mg/L)	PW (bg)	10	0.06774	0.02169	0.006859	0.0746	0.00823	0.0839	0
Manganese (mg/L)	P-12 (bg)	10	0.006267	0.009364	0.002961	0.002385	0.0005	0.0299	30
Manganese (mg/L)	P-13 (bg)	10	3.679	1.087	0.3437	4.255	1.54	4.62	0
Manganese (mg/L)	P-05 (bg)	10	0.5171	0.5606	0.1773	0.366	0.00662	1.84	0
Manganese (mg/L)	P-06 (bg)	10	1.651	0.3772	0.1193	1.645	1.12	2.41	0
Manganese (mg/L)	P-09 (bg)	10	0.636	0.607	0.192	0.382	0.0673	1.53	0
Manganese (mg/L)	P-19 (bg)	10	2.561	1.214	0.3839	2.265	1.6	5.82	0
Manganese (mg/L)	P-20B (bg)	10	0.9998	0.7036	0.2225	0.799	0.366	2.45	0
Manganese (mg/L)	P-25 (bg)	10	8.901	2.089	0.6606	9.2	4.51	11.5	0
Manganese (mg/L)	P-27 (bg)	10	0.06053	0.1056	0.0334	0.008805	0.00217	0.333	10
Manganese (mg/L)	SA-10 (bg)	10	3.99	1.285	0.4064	4.325	1.78	5.83	0
Manganese (mg/L)	SA-11 (bg)	10	0.2877	0.159	0.05029	0.2815	0.0859	0.56	0
Manganese (mg/L)	SA-14 (bg)	10	0.005898	0.002396	0.0007577	0.005365	0.00246	0.0104	0
Manganese (mg/L)	PW (bg)	10	0.004783	0.008478	0.002681	0.00229	0.0005	0.0286	30
Nitrate-N (mg/L)	P-12 (bg)	10	0.9781	0.5445	0.1722	1.16	0.14	1.65	0
Nitrate-N (mg/L)	P-13 (bg)	10	2.82	2.1	0.6639	2.67	0.155	6.21	10
Nitrate-N (mg/L)	P-05 (bg)	10	0.5571	1.562	0.4939	0.05	0.031	5	80
Nitrate-N (mg/L)	P-06 (bg)	10	0.128	0.1471	0.04652	0.05	0.03	0.5	70
Nitrate-N (mg/L)	P-09 (bg)	10	0.3348	0.7682	0.2429	0.05	0.02	2.5	70
Nitrate-N (mg/L)	P-19 (bg)	10	2.152	6.274	1.984	0.05	0.05	20	70
Nitrate-N (mg/L)	P-20B (bg)	10	11.94	5.992	1.895	12.35	2.18	22.4	10
Nitrate-N (mg/L)	P-25 (bg)	10	0.2983	0.7739	0.2447	0.05	0.025	2.5	90
Nitrate-N (mg/L)	P-27 (bg)	10	5.201	15.74	4.979	0.05	0.05	50	80
Nitrate-N (mg/L)	SA-10 (bg)	10	3.037	7.735	2.446	0.495	0.05	25	50
Nitrate-N (mg/L)	SA-11 (bg)	10	0.2426	0.2867	0.09067	0.05	0.025	0.784	70
Nitrate-N (mg/L)	SA-14 (bg)	10	0.5957	1.554	0.4914	0.05	0.025	5	90
Nitrate-N (mg/L)	PW (bg)	10	0.0509	0.002846	0.0009	0.05	0.05	0.059	90
Nitrite-N (mg/L)	P-12 (bg)	10	0.0468	0.01012	0.0032	0.05	0.018	0.05	90
Nitrite-N (mg/L)	P-13 (bg)	10	1.344	2.731	0.8635	0.05	0.05	7.75	70
Nitrite-N (mg/L)	P-05 (bg)	10	0.6344	1.562	0.4939	0.05	0.015	5	80
Nitrite-N (mg/L)	P-06 (bg)	10	0.0968	0.143	0.04523	0.05	0.018	0.5	90
Nitrite-N (mg/L)	P-09 (bg)	10	0.2954	0.7746	0.245	0.05	0.05	2.5	90
Nitrite-N (mg/L)	P-19 (bg)	10	2.054	6.306	1.994	0.05	0.05	20	90
Nitrite-N (mg/L)	P-20B (bg)	10	0.6385	1.551	0.4906	0.05	0.05	5	80
Nitrite-N (mg/L)	P-25 (bg)	10	0.2919	0.7759	0.2454	0.05	0.019	2.5	90
Nitrite-N (mg/L)	P-27 (bg)	10	93.83	279.1	88.27	0.05	0.018	887	70
Nitrite-N (mg/L)	SA-10 (bg)	10	2.711	7.841	2.48	0.05	0.05	25	90
Nitrite-N (mg/L)	SA-11 (bg)	10	97.01	306.4	96.89	0.05	0.05	969	70
Nitrite-N (mg/L)	SA-14 (bg)	10	0.608	1.55	0.4902	0.05	0.05	5	90
Nitrite-N (mg/L)	PW (bg)	10	0.0464	0.01138	0.0036	0.05	0.014	0.05	90
Selenium (mg/L)	P-12 (bg)	10	0.002224	0.003083	0.000975	0.000775	0.0005	0.01	80
Selenium (mg/L)	P-13 (bg)	10	0.003639	0.002799	0.000885	0.00332	0.0005	0.01	50
Selenium (mg/L)	P-05 (bg)	10	0.003642	0.002777	0.000878	0.0028	0.0005	0.01	40
Selenium (mg/L)	P-06 (bg)	10	0.0021	0.003143	0.0009939	0.0005	0.0005	0.01	100
Selenium (mg/L)	P-09 (bg)	10	0.002171	0.003111	0.0009837	0.0005	0.0005	0.01	90
Selenium (mg/L)	P-19 (bg)	10	0.004149	0.002256	0.0007134	0.005015	0.0005	0.0071	30
Selenium (mg/L)	P-20B (bg)	10	0.003205	0.001789	0.0005657	0.00317	0.0005	0.00581	40
Selenium (mg/L)	P-25 (bg)	10	0.002062	0.00244	0.0007716	0.0005	0.0005	0.0066	80
Selenium (mg/L)	P-27 (bg)	10	0.005095	0.003778	0.001195	0.00384	0.0005	0.0103	40
Selenium (mg/L)	SA-10 (bg)	10	0.006804	0.005239	0.001657	0.005	0.0005	0.017	40
Selenium (mg/L)	SA-11 (bg)	10	0.009312	0.00565	0.001787	0.008495	0.0005	0.0195	30
Selenium (mg/L)	SA-14 (bg)	10	0.02084	0.009136	0.002889	0.02485	0.0005	0.0296	10
Selenium (mg/L)	PW (bg)	10	0.0021	0.003143	0.0009939	0.0005	0.0005	0.01	100
Thallium (mg/L)	P-12 (bg)	10	0.01145	0.0204	0.006451	0.0015	0.000025	0.05	100
Thallium (mg/L)	P-13 (bg)	10	0.002252	0.002369	0.0007492	0.0005	0.000025	0.005	90
Thallium (mg/L)	P-05 (bg)	10	0.001552	0.001934	0.0006114	0.0005	0.000025	0.005	100
Thallium (mg/L)	P-06 (bg)	10	0.001552	0.001934	0.0006114	0.0005	0.000025	0.005	100
Thallium (mg/L)	P-09 (bg)	10	0.001552	0.001934	0.0006114	0.0005	0.000025	0.005	100
Thallium (mg/L)	P-19 (bg)	10	0.001762	0.001935	0.0006119	0.0005	0.000025	0.0051	90
Thallium (mg/L)	P-20B (bg)	10	0.0016	0.001897	0.0006	0.0005	0.0005	0.005	100
Thallium (mg/L)	P-25 (bg)	10	0.002122	0.002861	0.0009049	0.0005	0.000025	0.0082	90
Thallium (mg/L)	P-27 (bg)	10	0.001752	0.001916	0.0006059	0.0005	0.000025	0.005	100
Thallium (mg/L)	SA-10 (bg)	10	0.002802	0.002223	0.0007029	0.00325	0.000025	0.005	90
Thallium (mg/L)	SA-11 (bg)	10	0.002002	0.002171	0.0006864	0.0005	0.000025	0.005	90
Thallium (mg/L)	SA-14 (bg)	10	0.0016	0.001897	0.0006	0.0005	0.0005	0.005	100
Thallium (mg/L)	PW (bg)	10	0.001552	0.001934	0.0006114	0.0005	0.000025	0.005	100

Notes:
Descriptive statistics calculated for secondary parameters over period 2013 to 2022 (every other year monitoring frequency).

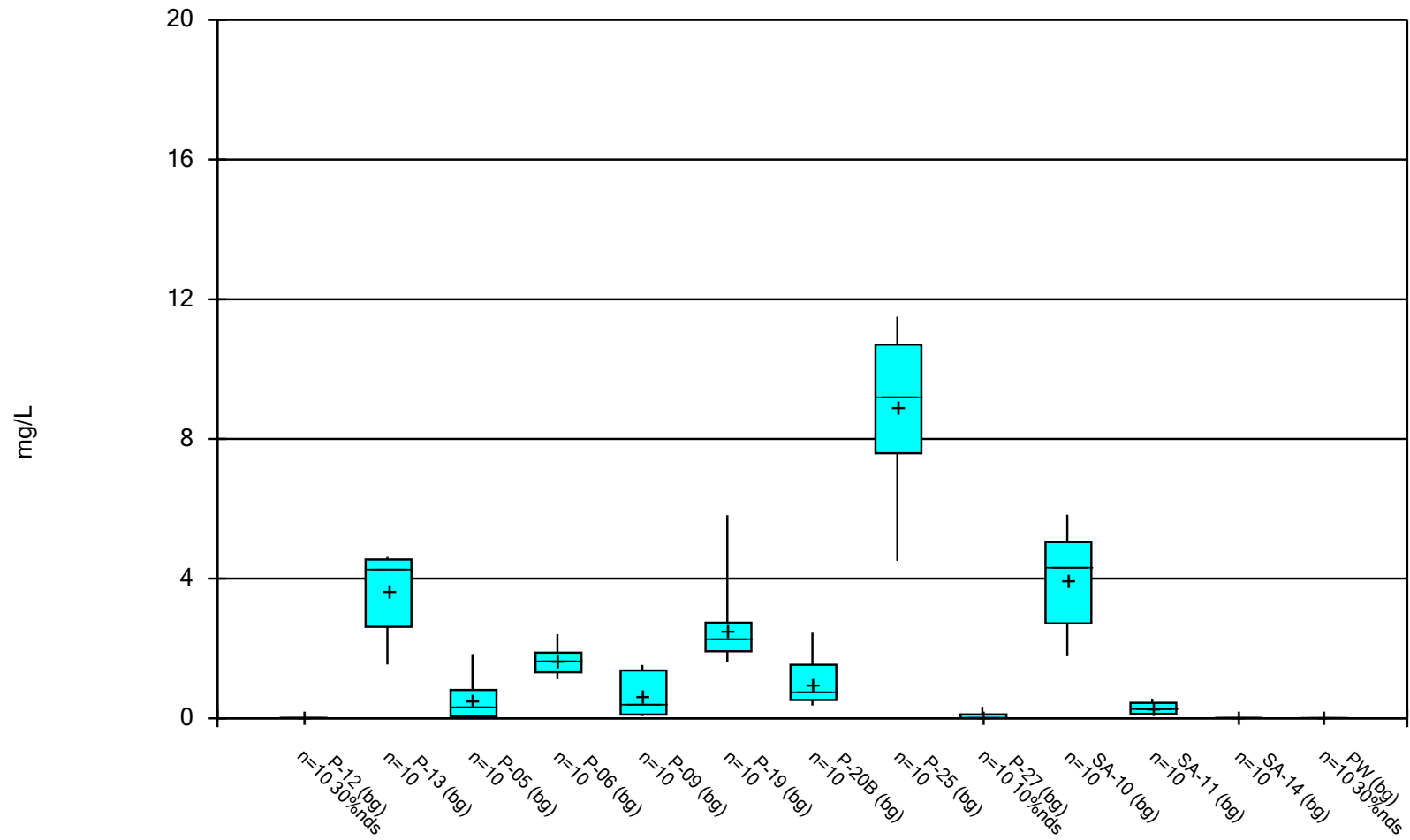
Box & Whiskers Plot



Constituent: Barium Analysis Run 3/6/2023 10:25 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

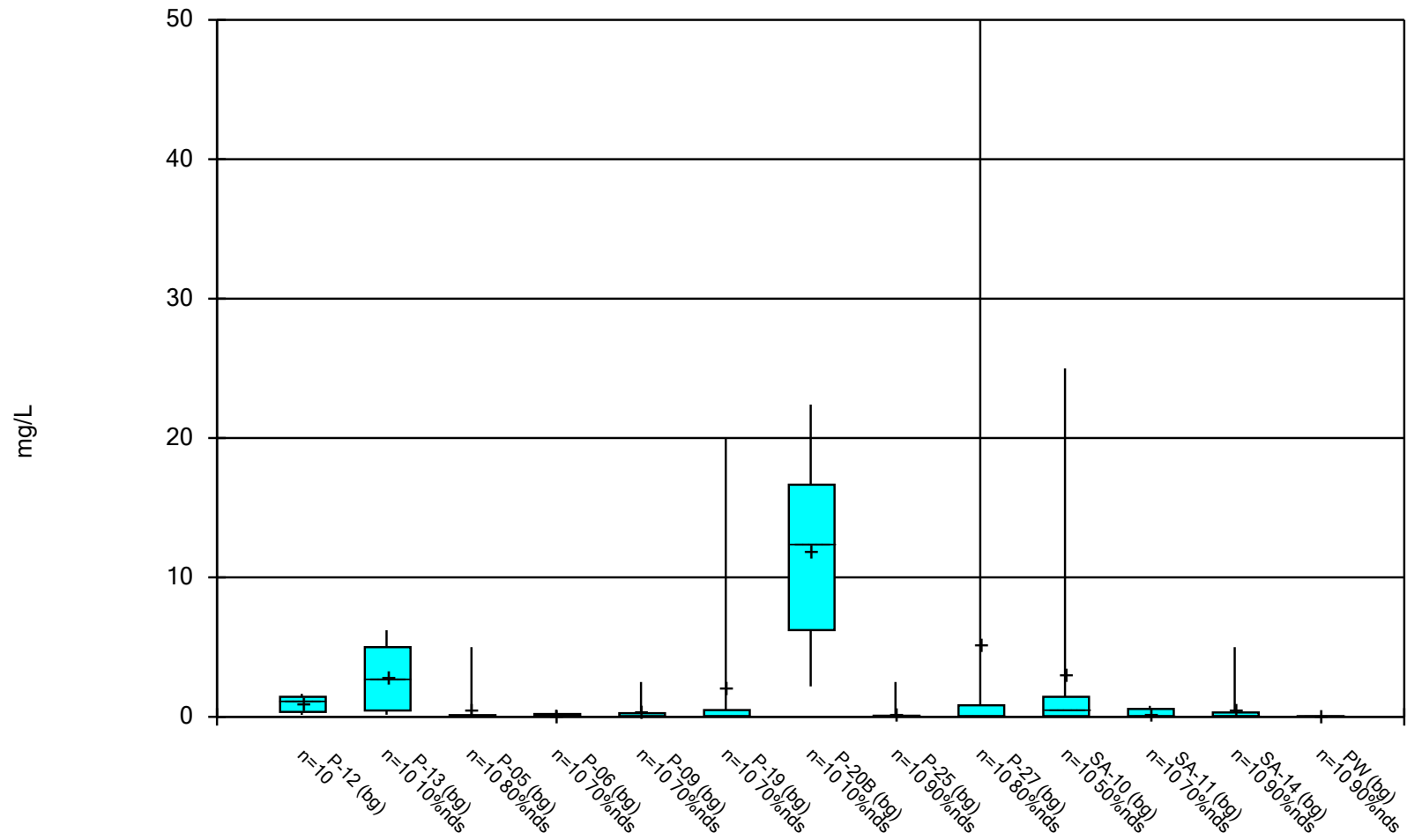
Box & Whiskers Plot



Constituent: Manganese Analysis Run 3/6/2023 10:25 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

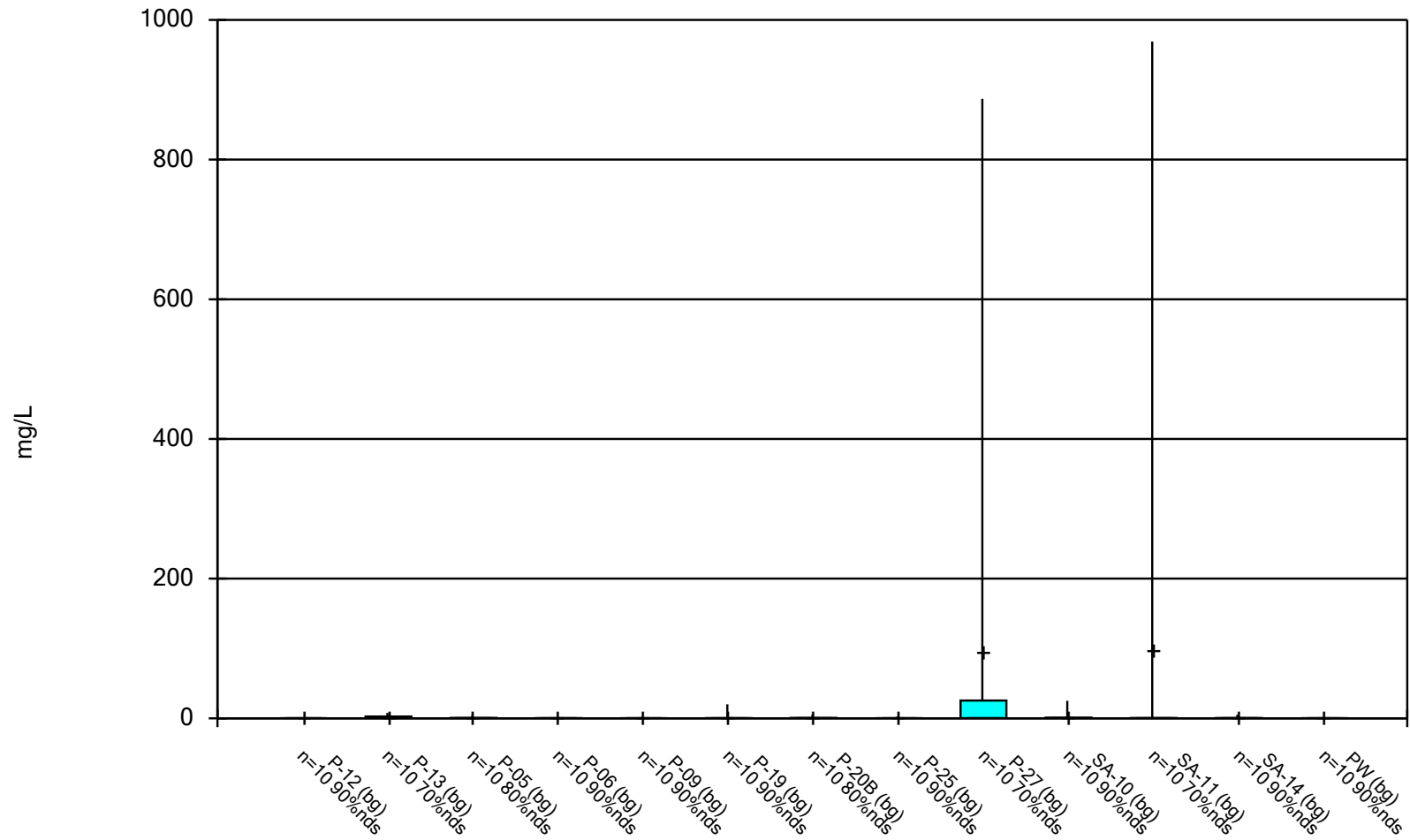
Box & Whiskers Plot



Constituent: Nitrate-N Analysis Run 3/6/2023 10:25 AM

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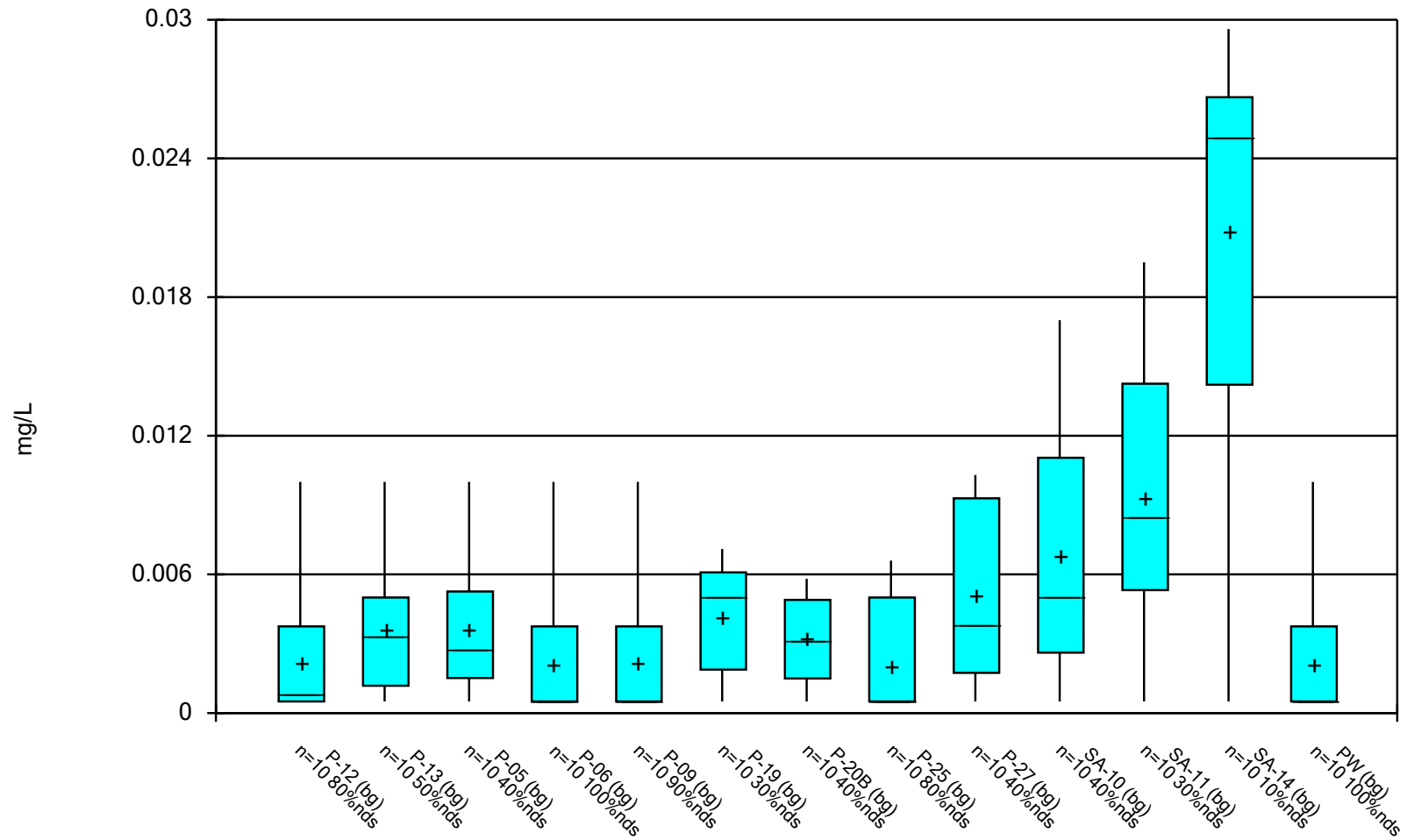
Box & Whiskers Plot



Constituent: Nitrite-N Analysis Run 3/6/2023 10:25 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

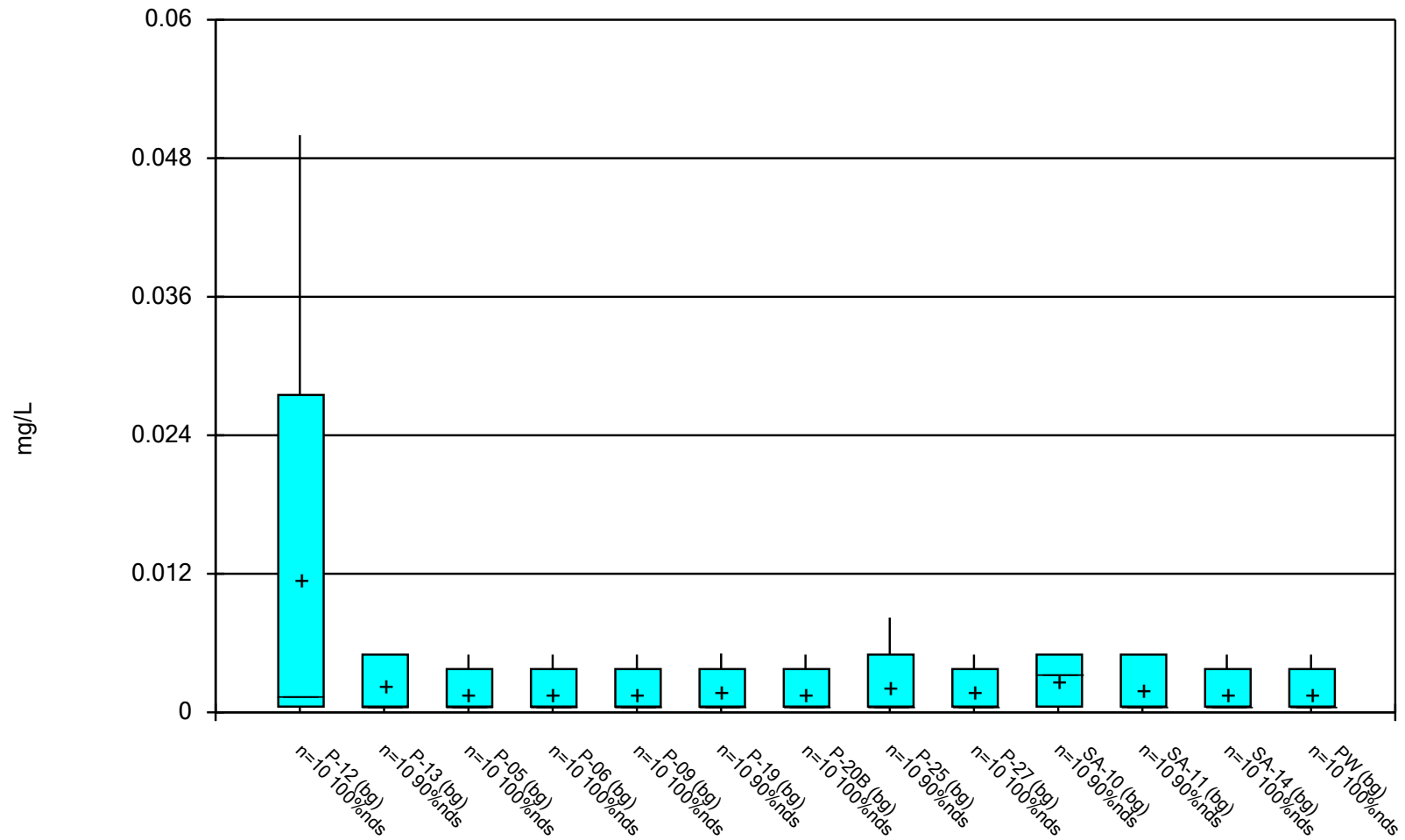
Box & Whiskers Plot



Constituent: Selenium Analysis Run 3/6/2023 10:25 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

Box & Whiskers Plot



Constituent: Thallium Analysis Run 3/6/2023 10:25 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

Appendix E

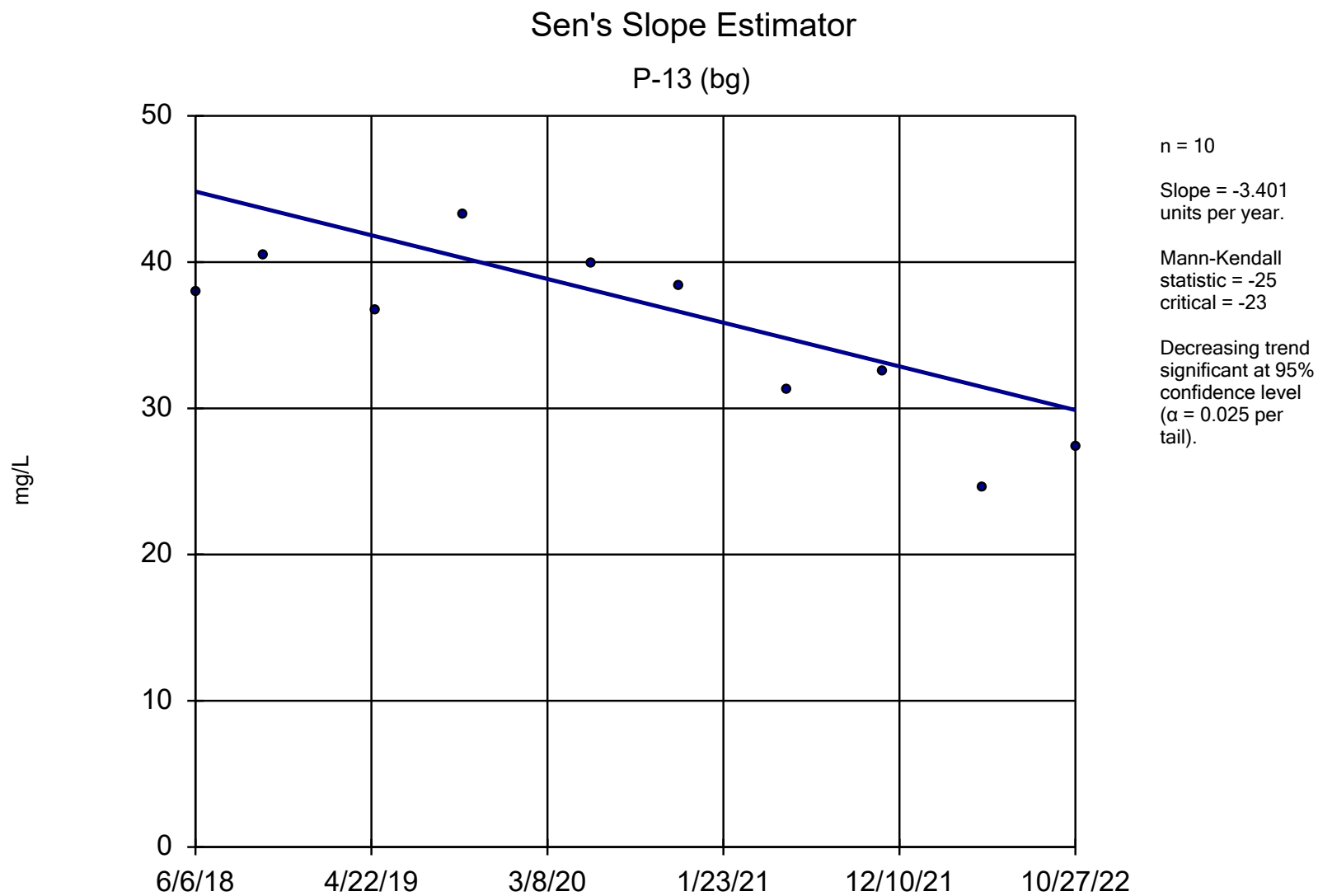
Groundwater Trend Results from Mann-Kendall Method

Appendix E. Trend Results from Mann-Kendall Method - Primary Parameters
L-Bar Site 2022 Five-Year Review Report

Constituent Name	Well	Slope	Std Dev.	Critical Value	Trend	Obs.	% Non-detects	Alpha	Method
Ammonia (mg/L)	P-12 (bg)	0.000	-3	-23	No	10	90	0.05	NP
Ammonia (mg/L)	P-13 (bg)	-3.401	-25	-23	Yes	10	0	0.05	NP
Ammonia (mg/L)	P-05 (bg)	0.000	-3	-23	No	10	90	0.05	NP
Ammonia (mg/L)	P-06 (bg)	-0.032	-19	-23	No	10	0	0.05	NP
Ammonia (mg/L)	P-09 (bg)	-0.081	-9	-23	No	10	0	0.05	NP
Ammonia (mg/L)	P-19 (bg)	-0.068	-7	-23	No	10	10	0.05	NP
Ammonia (mg/L)	P-20B (bg)	-2.773	-25	-23	Yes	10	0	0.05	NP
Ammonia (mg/L)	P-25 (bg)	-0.042	-12	-23	No	10	0	0.05	NP
Ammonia (mg/L)	P-27 (bg)	-0.006	-15	-23	No	10	50	0.05	NP
Ammonia (mg/L)	SA-10 (bg)	37.860	15	23	No	10	0	0.05	NP
Ammonia (mg/L)	SA-11 (bg)	2.740	9	23	No	10	0	0.05	NP
Ammonia (mg/L)	SA-14 (bg)	-1.241	-23	-23	No	10	0	0.05	NP
Chloride (mg/L)	P-12 (bg)	-0.763	-41	-23	Yes	10	0	0.05	NP
Chloride (mg/L)	P-13 (bg)	-29.110	-21	-23	No	10	0	0.05	NP
Chloride (mg/L)	P-05 (bg)	-61.120	-17	-23	No	10	0	0.05	NP
Chloride (mg/L)	P-06 (bg)	-9.817	-7	-23	No	10	0	0.05	NP
Chloride (mg/L)	P-09 (bg)	0.327	1	23	No	10	0	0.05	NP
Chloride (mg/L)	P-19 (bg)	-1243.000	-27	-23	Yes	10	0	0.05	NP
Chloride (mg/L)	P-20B (bg)	-91.040	-13	-23	No	10	0	0.05	NP
Chloride (mg/L)	P-25 (bg)	58.160	14	23	No	10	0	0.05	NP
Chloride (mg/L)	P-27 (bg)	-135.900	-5	-23	No	10	0	0.05	NP
Chloride (mg/L)	SA-10 (bg)	769.500	23	23	No	10	0	0.05	NP
Chloride (mg/L)	SA-11 (bg)	714.400	27	23	Yes	10	0	0.05	NP
Chloride (mg/L)	SA-14 (bg)	-105.200	-25	-23	Yes	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-12 (bg)	-20.520	-13	-23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-13 (bg)	25.030	1	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-05 (bg)	-74.110	-12	-23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-06 (bg)	18.770	13	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-09 (bg)	64.330	7	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-19 (bg)	235.900	13	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-20B (bg)	-77.020	-7	-23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-25 (bg)	8.582	1	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	P-27 (bg)	0.000	0	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	SA-10 (bg)	469.200	9	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	SA-11 (bg)	643.000	13	23	No	10	0	0.05	NP
Total Dissolved Solids (mg/L)	SA-14 (bg)	-149.800	-20	-23	No	10	0	0.05	NP

Note:

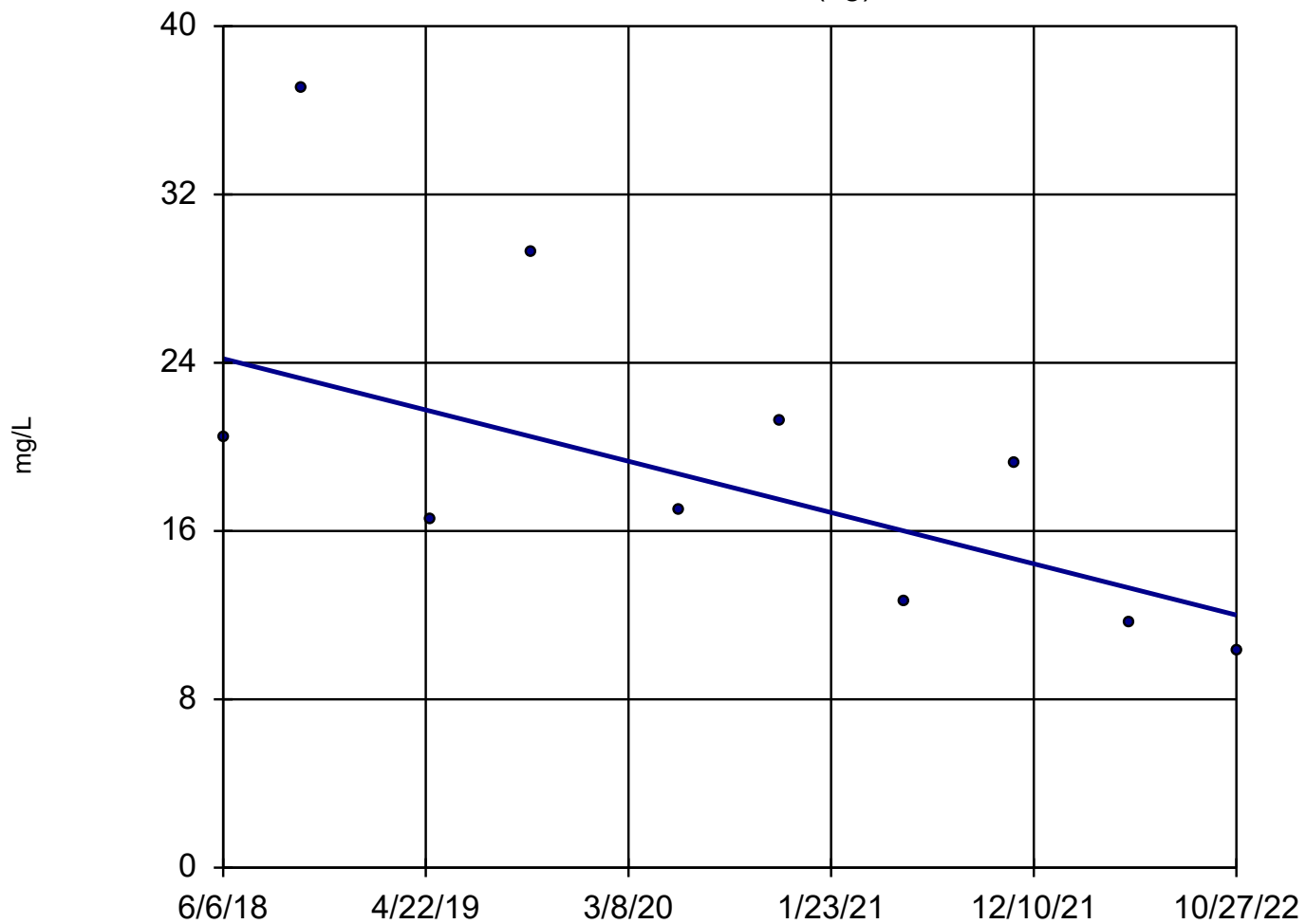
Trend results tested on primary suite from data over 2018 to 2022 (past 5 years).
Refer to Table 8 for a summary of significant cases and designation of trend direction (slope).



Constituent: Ammonia Analysis Run 2/23/2023 3:29 PM
Alcoa - Northwest Alloys Client: Great West Data: Book1

Sen's Slope Estimator

P-20B (bg)



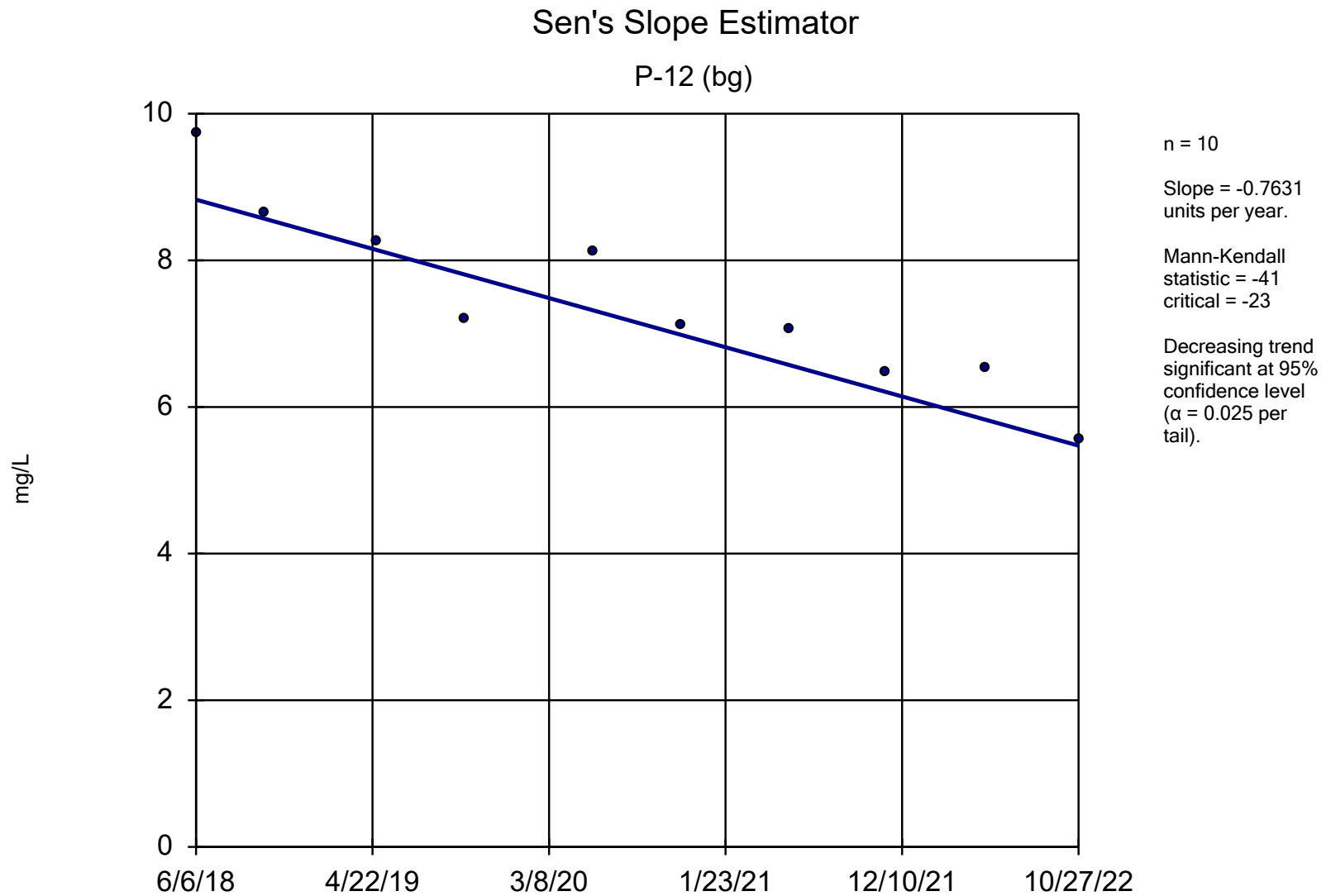
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Slope = -2.773
units per year.

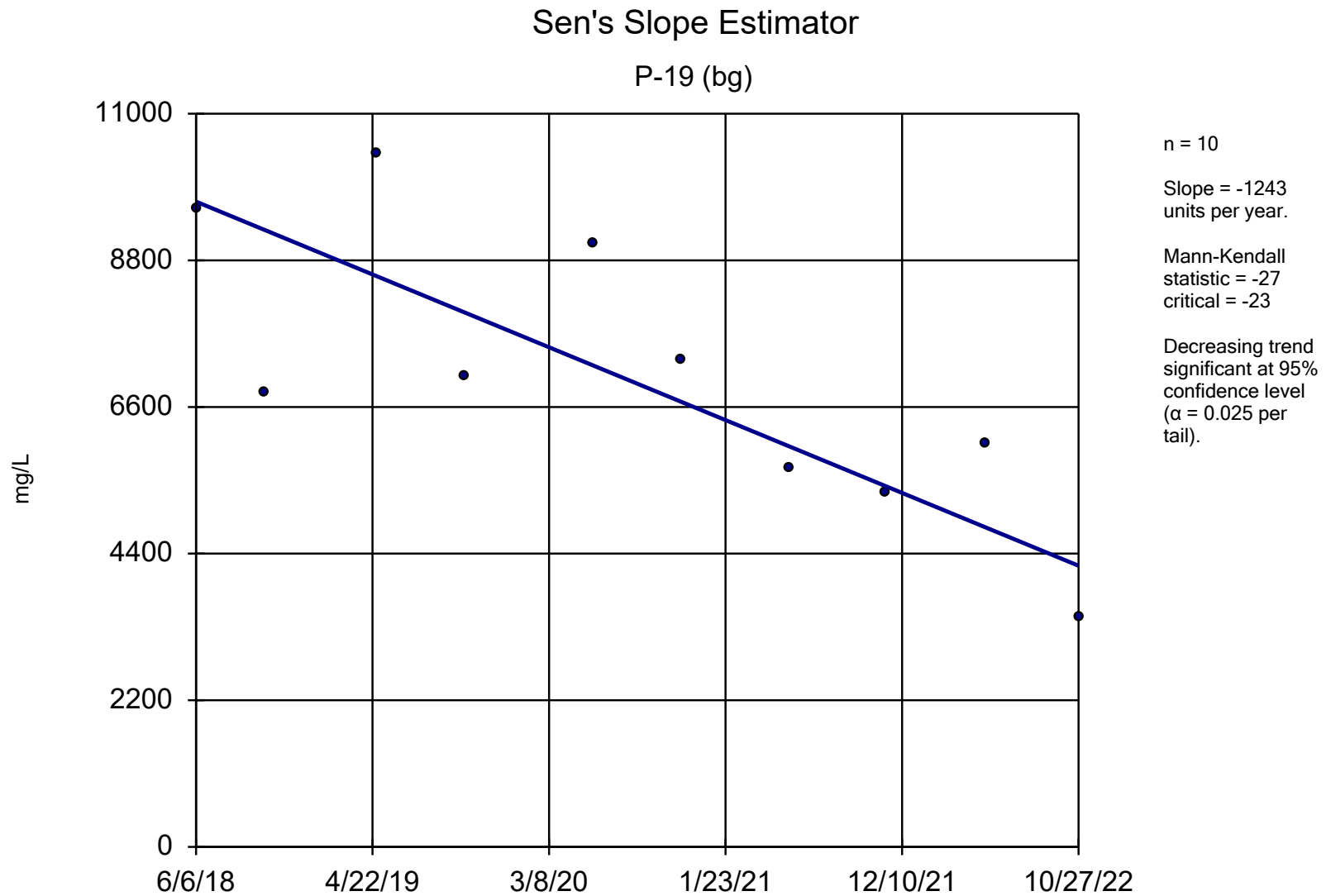
Mann-Kendall
statistic = -25
critical = -23

Decreasing trend
significant at 95%
confidence level
($\alpha = 0.025$ per
tail).

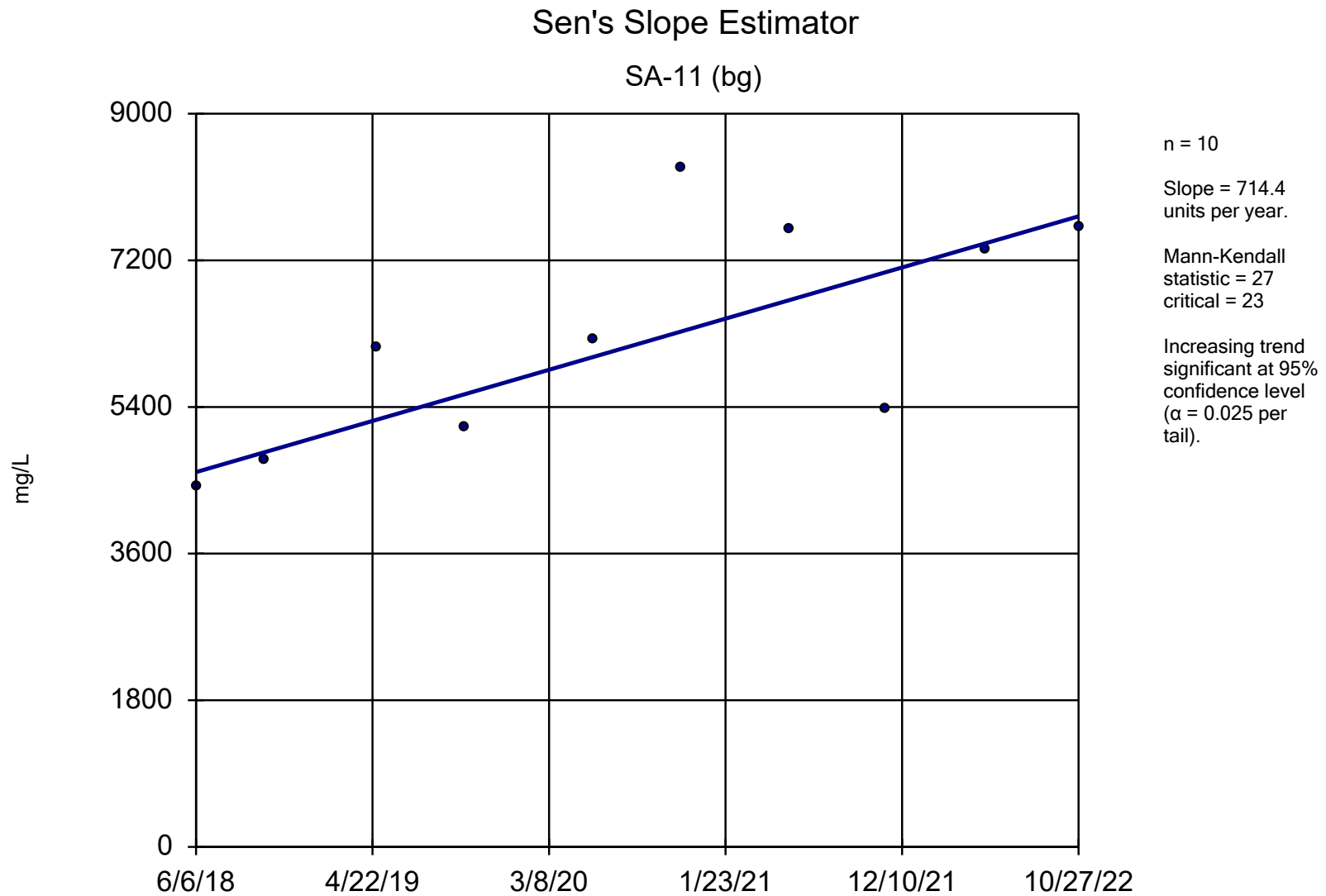
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Alcoa - Northwest Alloys Client: Great West Data: Book1



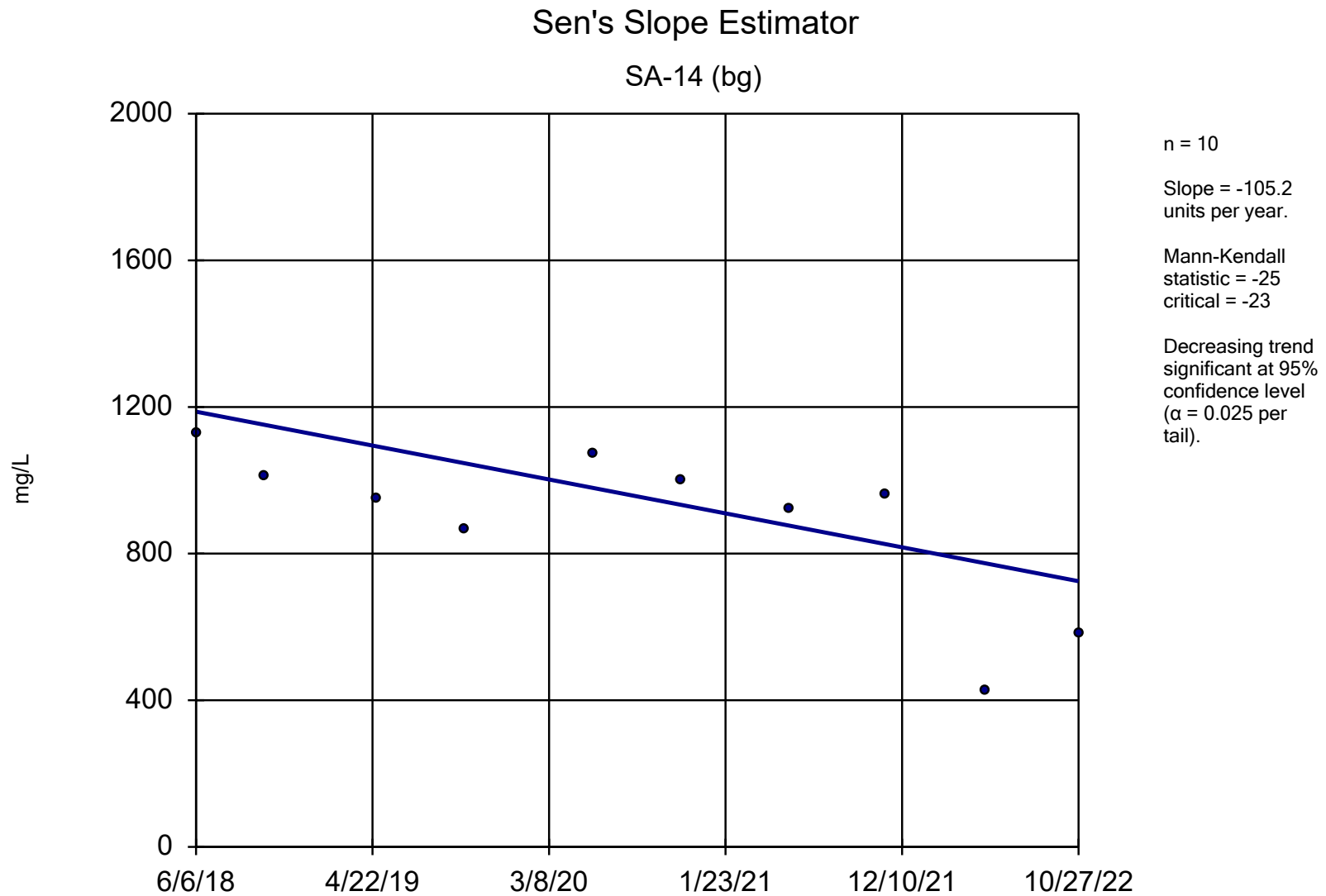
Constituent: Chloride Analysis Run 2/23/2023 3:29 PM
Alcoa - Northwest Alloys Client: Great West Data: Book1



Constituent: Chloride Analysis Run 2/23/2023 3:29 PM
Alcoa - Northwest Alloys Client: Great West Data: Book1

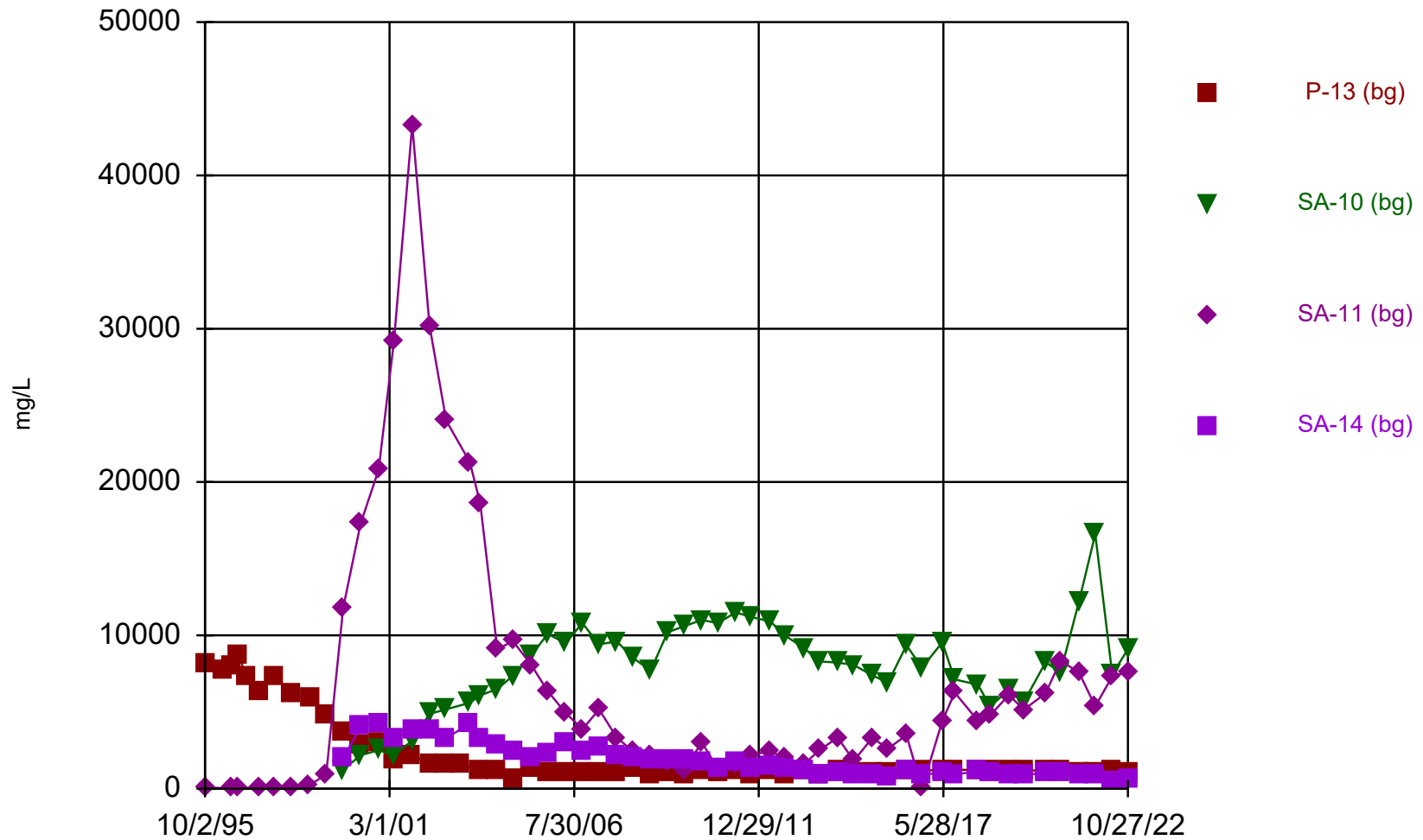


Constituent: Chloride Analysis Run 2/23/2023 3:29 PM
Alcoa - Northwest Alloys Client: Great West Data: Book1



Constituent: Chloride Analysis Run 2/23/2023 3:29 PM
Alcoa - Northwest Alloys Client: Great West Data: Book1

Supplemental Time Series Plot of Chloride SA-area Wells



Constituent: Chloride Analysis Run 3/6/2023 11:23 AM

Alcoa - Northwest Alloys Client: Great West Data: 01_LBAR_Sanitas_Fall 2022_craig FINAL v5

Appendix F

Surface Water Monitoring Data

(Master Database through 2022)

Electronic submittal - Hard copy available upon request

Appendix G

Additional Site Work

Appendix G.1

Well Re-development Data Summary

Appendix G.1. Well Re-Development Summary
L-Bar 2022 Five-Year Review Report

Well ID	Static Water Level (DTW FT BTC)	Well Bott. (FT BGS; SOFT or HARD)	Bailing Volume (gallons)	Pump Volume (gallons)	Total Purge Vol (gallons)	Final Turbidity Reading (NTUs)	Final Clarity/ Water Color (visual observation)	Comments/Observations
P-12	4.90	15.50 (HARD)	12	NA	12	9.6 (HACH)	Slightly turbid to clear	Bailed approx. dry; let recover & collect turbidity reading.
P-13	4.31	8.95 (HARD)	2.5	NA	2.5	NA	Clear	Purge water slightly turbid (visual assessment).
P-05	6.05	13.69 (HARD)	18	NA	18	35.5 (HACH)	Grey to sl. Turbid	Initial purge water very turbid grey, cleared substantially during bailing cycles.
P-06	NA (see comments)*	NA	NA	NA	NA	NA	NA	Ice plug in 2" casing at ground surface, tried to remove but unsuccessful.
P-19	NA (see comments)*	NA	NA	NA	NA	NA	NA	Ponded conditions surface water frozen around stick-up; ice plug inside 2" casing could not develop.
P-20B	4.19	8.39 (HARD)	5	NA	5	3.3 (HACH)	Clear	Initial bails removed significant dark brown organic matter (bee carcasses) and mouse fur; purge water cleared substantially during process. Purged dry 5 different cycles.
P-25	1.95	13.80 (HARD)	10	15	25	9.4 (HACH)	Clear	Initial purge water orange-brown and turbid, cleared substantially when low-flow pumping to clear.
P-27	2.91	10.90 (HARD)	5	15	20	8.8 (HACH)	Clear	Initial purge water grey sl. Turbid, cleared up substantially with low-flow purging.

Notes:
DTW Depth to groundwater
FT Feet
BTC Below top of casing
NTUs Turbidimetric turbidity unit (measure of suspended particles in water); measured in-situ with a Hach 2100 Turbidimeter
* Frozen ice plug inside of 2" PVC casing at ground surface, tried to punch out with bailer and add water to thaw but could not remove plug to develop.

Appendix G.2

Survey Report by Montoya Land Surveying LLC



Jamey Montoya
Montoya Land Surveying LLC
P.O. Box 7350
Spokane, Washington
541-221-2427
jamey@montoyalandsurveying.com

March 1, 2023

Craig Sauer, LG
Great West Engineering
9221 N Division Street Ste F
Spokane, WA 99218

Dear Craig,

On Wednesday March 1, 2023 I met you at the L-Bar site near Chewelah, Washington to walk the site and see the location of monitoring wells that needed elevations verified. I used existing well casings for vertical control. My results are as follows:

Holding an elevation of 1668.27 for SA-11 I determined these elevations:

- SA-10 EL = 1671.69
- SA-14 EL = 1666.29

Holding an elevation of 1642.25 for P-20B I determined these elevations:

- P-25 EL = 1639.25

Holding an elevation of 1642.99 for P-05 I determined these elevations:

- P-27 EL = 1641.70
- P-06 (north) EL = 1642.23
- P-19 EL = 1639.71

Sincerely,


Jamey Montoya
Owner
Montoya Land Surveying LLC

