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Numeric Protection Limit (NPL) Recommendation Report

Cripple Creek & Victor Gold Mine

Prepared for

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ACRONYMS AND ABBREVIATIONS

CC&V	Cripple Creek & Victor
DRMS	Division of Reclamation, Mining and Safety
ECOSA	East Cresson Overburden Storage Area
ft	Feet
ITRC	Interstate Technology and Regulatory Council
mg/L	Milligrams per liter
ND	Non-detect
NPL	Numeric Protection Limit
POC	Point of Compliance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
s.u.	Standard units
TR	Technical Revision
WQCC	Water Quality Control Commission
USEPA	United States Environmental Protection Agency
UTL	Upper Tolerance Limit
VLF	Valley Leach Facility

1. INTRODUCTION

The Cripple Creek and Victor (CC&V) gold mine (Site) is an open-pit gold mine located in central Colorado and has been in operation as an open-pit since 1994 when the Cresson Project began. The mine is currently operated by Newmont Mining Corporation's Cripple Creek and Victor Gold Mining Company (CC&V). Previously, the Site was home to extensive underground gold mining operations beginning in the early 1890s (USEPA, 1992). Due to the lack of environmental regulations and controls during the historical period prior to commencement of the Cresson Project, mineralized mine waste and ore processing residues were distributed within and adjacent to the current mining area in a manner that has caused them to undergo weathering and release soluble constituents. As a result, residual groundwater contamination exceeding the Table Values outlined in the Colorado Water Quality Control Commission's (WQCC) Regulation No. 41 – the Basic Standards for Groundwater (5 CCR 1002-41) exists in discrete areas of the current CC&V property where historical mining activities occurred. Detailed descriptions of historical mining activities are included in the Technical Revision (TR)-129 Second Adequacy Review Response previously submitted to the Division of Reclamation, Mining and Safety (DRMS) (May 9, 2022) as well as Demonstration of Compliance with WQCC Regulation No. 41 documentation previously submitted to DRMS (e.g., June 22, 2017 and November 15, 2018). Groundwater quality is also impacted by naturally elevated background levels of certain constituents (e.g., fluoride) observed throughout the region, which may also result in exceedances of Table Value standards at the Site (Shawe, 1976; Hawley & Wobus, 1977; Miller & Ortiz, 2007; Wallace, 2010).

The Site includes six separate drainages (Grassy Valley, Vindicator Valley, Wilson Creek, Arequa Gulch, Maize Gulch (formerly known as Rosebud Gulch and Squaw Gulch), and Poverty Gulch, each of which has its own monitoring well network and point of compliance (POC) well or wells to assess groundwater quality. Pursuant to Rule 3.1.7(2), CC&V is recommending numeric protection limits (NPLs) for POC wells established in TR-129. While NPLs for some POC wells and some analytes have been previously established, through discussions with DRMS, it was determined that further statistical evaluation of groundwater quality monitoring data was necessary to establish NPLs for each drainage at the Site. Geosyntec Consultants Inc. (Geosyntec) was retained to perform the statistical analysis of groundwater data and propose NPLs for the POC wells in each of the six drainages.

Groundwater at the Site has not yet been assigned a use classification according to Regulation No. 41 and is therefore subject to the "interim narrative standard" described in Section 41.5.C.6 (described in more detail in **Section 3**). The interim narrative standard states that groundwater quality shall be maintained to the Regulation 41 Table Value standards (Tables 1 through 4) or to existing ambient quality as of January 31, 1994, whichever is less restrictive. As described above, groundwater frequently exceeds the Table Values due to seepage from weathered historical mining wastes and due to naturally high background concentrations, both of which existed before January 31, 1994. The interim narrative standard further states that data generated subsequent to January 31, 1994 shall be presumed to be representative of existing quality as of January 31, 1994 if available information about the Site indicates that there have been no new or increased sources of

groundwater contamination. This report describes the CC&V groundwater monitoring dataset, the relative lack of pre-January 31, 1994 data, and the information gathered to determine if new or increased sources of groundwater contamination have been introduced at the Site. Natural causes, sampling anomalies, or related operations that did not cause a discharge of pollutants to groundwater were not considered to be new or increased sources of groundwater contamination.

The NPLs presented herein were calculated following the methodology described in the Interstate Technology and Regulatory Council (ITRC) guidance for Groundwater Statistics and Monitoring Compliance (ITRC, 2013) and United States Environmental Protection Agency (USEPA) guidance for Statistical Analysis of Groundwater Monitoring Data (USEPA, 2009). Each NPL is based on a statistical tolerance limit, which provides an upper confidence estimate for a dataset and represents a value below which most of the groundwater monitoring data are expected to fall. The datasets and the procedure for establishing tolerance limits for each constituent in each drainage are described in detail in this report. The report is structured as follows: POC locations for each drainage and the wells used to determine interim NPLs for those drainages where a new POC will be installed are described in **Section 2 - Points of Compliance**. The overall statistical approach and methodology applied to process CC&V groundwater monitoring data, identify outliers, identify increasing or decreasing trends in each POC dataset, and determine the tolerance limits and resulting NPLs are presented in **Section 3 - Methodology**. The results of the analysis and recommended NPLs for each drainage are described in **Section 4 - Results**, and an overall summary is provided in **Section 5 - Summary.**

2. POINTS OF COMPLIANCE

Pursuant to Rule 3.1.7(6), the POC wells will be used to assess groundwater compliance with the Regulation 41 Table standards or NPLs (where assigned). The POC wells for monitoring groundwater within each of the six drainages around the Site, as approved in TR-129, are:

- Grassy Valley: GVMW-26 (proposed new well, or wells if multiple water-bearing intervals are observed)
- Vindicator Valley: VIN-2B
- Wilson Creek: WCMW-6
- Arequa Gulch: CRMW-5B
- Maize Gulch: SGMW-8 (proposed new well)
- Poverty Gulch: PGMW-5 (proposed new well)

Also established in TR-129, new POC wells will be installed in Grassy Valley, Maize Gulch, and Poverty Gulch. The first quarterly sampling of these wells is anticipated for the second quarter of 2023. In order to perform the statistical analysis used to establish tolerance limits and subsequent NPLs (described in more detail in the following sections), at least eight data points, or two years of quarterly monitoring, are needed. Therefore, interim NPLs will be established in these drainages based on groundwater monitoring data collected from existing wells:

- Grassy Valley: GVMW-8A and GVMW-8B
- Maize Gulch: SGMW-6B
- Poverty Gulch: PGMW-3

GWMW-8 was selected over GVMW-25 in Grassy Valley due to known recent and seasonally variable impacts from the East Cresson Overburden Storage Area (ECOSA) facility observed in groundwater samples collected from GVMW-25. SGMW-6B is the only well that consistently produces sufficient groundwater for sampling in Maize Gulch, and likewise, PGMW-3 is the only well in Poverty Gulch that can be reliably sampled.

There are some instances where the first few sampling events at a well are not representative of actual aquifer conditions (e.g., higher silt or clay content in the screened interval, insufficient well development, and/or residual aquifer disturbance from well installation) (USEPA, 2009). This irregularity may produce statistical outliers in the water quality monitoring results that should be excluded from the statistical analysis and the need to conduct additional sampling to generate eight data points. To avoid extending the initial monitoring period before establishing a final NPL, the first quarterly sampling results will be reviewed in context with monitoring data from other wells in the drainage. Water quality from the new POC well(s) will be compared with water quality from existing wells in the drainage to determine if the first two to three samples may be unusual compared to interim POC values. Typically, quarterly sampling is scheduled in the first month of the quarter to allow sufficient time for re-sampling if necessary. If the first few samples are

identified as statistically different compared to historical data for a particular constituent, an additional sample can be collected during the same quarter to confirm these initial results.

3. METHODOLOGY

The following subsections describe the methodology used for the statistical evaluation of groundwater monitoring data. A graphical flow chart for the evaluation is shown in **Figure 2** and individual steps for the analysis are provided in **Appendix A**. The Sanitas Statistical Software program (version 9.6) was used to perform the tests and analyses described below (Sanitas Technologies, 2007).

3.1 Groundwater Data Summary

The constituents of concern for each drainage are shown in **Table 1**. The constituents identified as constituents of concern have exceeded the Regulation 41 Table Value standards at least once over the period of record for the POC well (following exclusion of outliers, described in **Section 3.4**).

Rule 3.1.7(2) states that permit conditions shall be established for an operation that may have a reasonable potential to adversely affect the quality of a specified area that has not been classified by the WQCC. Permit conditions may include practice-based conditions or numeric protection levels. Rule 3.1.7(2)(c) provides that permit conditions shall use the WQCC's groundwater Table Value standards as a guide, and also says, "Where ambient groundwater quality exceeds values for protection of existing and reasonably potential future uses of groundwater, such as groundwater Table Values or other numeric criteria, permit or NOI conditions shall be established to protect those uses against further lowering of groundwater quality."

The WQCC has not yet classified the groundwater at the Site. Therefore, the applicable water quality standard in WQCC Regulation 41 is the "Interim Narrative Standard" for unclassified groundwater in Section 41.5(C)(6)(b)(i):

> Until such time as use classifications and numerical standards are adopted for the groundwater on a site-specific basis throughout the state, and subject to the provisions of subsection (ii) below, ground-water quality shall be maintained for each parameter at whichever of the following levels is less restrictive:
>
> (A) existing ambient quality as of January 31, 1994, or
>
> (B) that quality which meets the most stringent criteria set forth in Tables 1 through 4 of "The Basic Standards for Groundwater."

Groundwater exceedances of Regulation No. 41 Table Value standards occur frequently due to seepage from weathered historical mining wastes and due to naturally high background concentrations, both of which existed before January 31, 1994. Also included in **Table 1** are constituents that occasionally exceed Table Value standards, often associated with large precipitation events (described in more detail in **Section 4.5.1**).

The CC&V groundwater monitoring dataset includes very few data points older than January 31, 1994 to establish ambient groundwater quality. **Table 2** shows the period of record for each of the POCs. Only one well (WCMW-6 in Wilson Creek) was installed prior to 1994 (June 1993). It is therefore not possible to establish existing ambient quality as of January 31, 1994 based on

sampling data from before that date alone. In some cases (e.g., Poverty Gulch), data from non-POC wells was incorporated into the statistical analyses and used to compare the water quality from more recent sampling with the water quality observed in older wells that were abandoned by prior operators of the mine (**Section 4.6.2**).

To address this data availability issue, Section 41.5(C)(6)(b(iii) further states that "data generated subsequent to January 31, 1994 shall be presumed to be representative of existing quality as of January 31,1994 *if the available information indicates that there have been no new or increased sources of groundwater contamination initiated in the area in question subsequent to that date*." The NPL calculation approach presented in this report used trend tests to determine if increasing or decreasing trends were observed in the groundwater data. The absence of any trend, or the presence of a decreasing trend, was used to indicate there are no new or increasing sources of contamination, and that the dataset of post-January 31, 1994 data should be presumed to be representative of existing quality to determine the tolerance limit-based NPLs. If an increasing trend was identified, field sampling data and the history of operations of the area were reviewed to elucidate the cause of the trend and to determine whether new or increased sources of groundwater contamination had been initiated in the area after January 31, 1994. As demonstrated below, this evaluation demonstrated that increasing trends at the Site are not related to new or increasing sources of contamination from CC&V, but due to increasing relative contributions from historical sources (e.g., sulfate concentrations are elevated in Poverty Gulch groundwater where a monitoring well is located in an area where substantial mining, milling, and mine waste disposal activity took place historically prior to January 31, 1994). Increasing trends also arose from individual unusual values that were not removed during outlier testing (e.g., iron in Vindicator Valley), or increasing trends have since stabilized to pre-trend levels (e.g., manganese in Wilson Creek). The methods used for trend testing as well as the explanations for increasing trends observed at the Site are described below. With the exception of Maize Gulch, NPLs for areas with increasing trends were based on post-January 31, 1994 data to determine the tolerance limit-based NPL (explained in more detail in **Section 4.5**)

3.2 Data Pre-Processing

An overview of the datasets available for each of the POC wells is provided in **Table 2** including the dates available and the number of points used for analysis. Data through Q2 of 2022 was available for the analysis. A review of the data indicated that a small percentage (typically less than 20%) of samples at POC wells were taken at inconsistent sampling intervals, including samples taken within days of each other or monthly. The ITRC and USEPA guidance recommends that sampling generally occur no more than quarterly to prevent time-dependency from biasing samples and to help promote the statistical independence of samples, which is a required assumption in many statistical techniques. Therefore, results from monthly samples (or samples collected on a more frequent basis) were averaged to quarterly values. This is a conservative approach that prevents a greater sampling frequency during unusual periods from influencing the final NPL determination. Additional pre-processing steps included setting negative values to positive (a database artifact representing non-detect values) and formatting for input into Sanitas.

3.3 Non-Detect Replacement

Analytical data that are not detected above laboratory reporting limits (i.e., non-detect or ND values) are known as "left-censored data" and can result in complications or potential biases in statistical calculations if managed inappropriately. Although there is no comprehensive guidance for how to handle ND values, our approach consisted of the following (as recommended by the ITRC):

- ND values were imputed as estimated, substitute values by dividing the reporting limit by two before input into Sanitas and additional statistical analysis.
- For datasets that contained greater than 15% ND values, non-parametric statistical methods were used to handle censored datasets.

3.4 Outlier Identification and Removal

Identification and removal of outliers is a key step in establishing a representative dataset used to determine NPLs for each POC. Outliers are defined as data that are outside of the range of generally expected values or otherwise appear anomalous. As described in the ITRC, outliers may arise from various conditions including "…unusual hydrological condition, sampling of unrelated groundwater, or the presence of locally controlled conditions" (ITRC, 2013). Outliers were screened using Dixon's or Rosner's test when the data were observed to come from a normal or transformed normal distribution. Tukey's non-parametric quantile-based method was used when data were not observed to follow a normal distribution. For the outliers identified through these tests, the ITRC guidance does not provide a clear recommendation for removal of outliers, but generally suggests that the Site and sample knowledge must be combined with the statistical results to establish a set of samples that are representative of background concentrations. For this application, outliers were generally retained as per the Unified Guidance unless there was additional Site information indicating a non-representative sample (USEPA, 2009). General reasons for outlier exclusion include:

- Values that at least were three standard deviations from the mean (both higher and lower)
- The first or second sample taken from a given well
- ND values identified as outliers where the reporting limit was considered to be abnormally higher than similar data (see Section 3.5).

Outliers were identified for individual constituents and therefore only the results observed to be an outlier for the given constituent tested were removed (rather than the entire sample for the well). A detailed list of outliers is presented in **Table 3** and outliers plots and a list of all observed outliers are included in **Appendix B**.

3.5 Data Quality Assurance/Quality Control (QA/QC)

The data used for this statistical evaluation were previously reported to DRMS pursuant to Rule 3.1.7(7). To CC&V's knowledge, all samples were analyzed at a USEPA certified laboratory using standard analytical procedures for the time period. More recent samples (i.e., those collected

starting in 2016, during CC&V's tenure) were collected in accordance with CC&V's Water Monitoring Quality Assurance Project Plan (QAPP).

For data that were identified as outliers and above the respective Regulation 41 Table Value standard, the laboratory reports were reviewed (included for reference in **Appendix C**). In a small number of instances, the concentration results for certain constituents were qualified as ND values but observed to have reporting limits above their respective Table Value standard (e.g., fluoride in VIN-2B and nitrite in SGMW-6B). These samples were removed where they had the potential to impact NPL determinations, as documented in **Table 2**. As a result, an NPL for fluoride at the Vindicator Valley POC well VIN-2B was determined not to be necessary, as concentrations in the historical dataset were consistently below the Regulation 41 Table Value.

3.6 Trend Testing

A key assumption pertaining to the application of tolerance limits is that samples are independent and arise from the same underlying distribution. If these assumptions are not met, the resultant tolerance limits may not have the expected statistical power. Data that exhibit trends are neither independent nor are they identically distributed; thus, it is important to identify and remove trends wherever possible. Therefore, trend testing was performed on POC well data after outliers were removed. When used in conjunction with one another, the Mann-Kendall test for temporal trends and the Sen's Slope estimate are two types of evaluation monitoring statistics useful in determining the significance of an apparent trend and to estimate the magnitude of that trend. The Mann-Kendall test is non-parametric, meaning that it does not depend on an assumption of a particular underlying distribution. The test uses only the relative magnitude of data points to each other rather than their absolute values. The Sen's Slope estimates a line through sample points by selecting the median of the slopes of all lines through pairs of points. The Sen's Slope/Mann-Kendall is performed on each parameter to determine whether a statistical trend is present.

If an increasing trend was observed, Site feedback was requested to determine a potential cause of the increase. Consistent with the interim narrative standard in Regulation 41, Section 41.5.C.6, the potential for new or increased sources of groundwater contamination was investigated. A new or increased source was considered to exist if there was any operation after January 1, 1994 that may cause a discharge of pollutants to groundwater. Natural causes, sampling anomalies, or Site operations that did not cause a discharge of pollutants to groundwater were not considered to be new or increased sources of groundwater contamination. Reduction in groundwater recharge as a result of reduced precipitation or presence of liner systems that intercept precipitation were not considered new or increased sources, because they do not cause a discharge of pollutants or increase the amount or load of pollutants in groundwater. When an increasing trend could be attributed to a cause unrelated to new or increasing sources (such as decreasing water levels), all of the points were retained in the dataset, and a non-parametric approach was used to determine tolerance limits. For other increasing trends identified (such as increasing manganese in Wilson Creek, which may be due to high variability in the dataset), points were removed starting from the most recent (with trend re-assessment after removing each datapoint) until no trend was observed. Decreasing trends were also observed in the dataset; however, because a decreasing trend represents improving water quality (with the exception of pH), it was determined that an

explanation for the trend was not necessary to establish an NPL. As with increasing trends, points were removed from the most recent to earlier until no trend was observed. A complete list of trends observed, and the action taken is provided in **Table 4**. The trend test results and outputs from Sanitas are provided in **Appendix B**. These plots include the results that show observed trends as well as those that show the absence of a trend following the removal of more recent data points.

3.7 Tolerance Limits

A tolerance limit defines a statistical range of data that is expected to fall within a specified percentage with a certain level of confidence (ITRC, 2013). At the upper end of this range, an upper tolerance limit (UTL) provides an estimate of the higher concentrations that may be observed in Site groundwater given no new or increased source of contamination. Tolerance limits consider both natural variability within the dataset as well as the size of the dataset, making UTLs well-suited to help establish NPL. Both ITRC and the Unified Guidance suggest that tolerance limits may function as an alternate compliance limit, especially when background levels exceed other published standards or criteria (ITRC, 2013; USEPA, 2009).

To establish NPLs, an UTL was used with alpha (α) = 0.01 for intra-well testing. Typical, α values are between 0.01 (1%) and 0.05 (5%), and an α of 0.01 was selected for this application due to the number of parameters and number of wells sampled every quarter. This value was selected to minimize the number of false positives due to testing a large number of analytes and wells, an issue known as the "multiple comparisons problem" (USEPA, 2009). In practice, this means that 99% of sample data are expected to fall below this value. An estimated 1% of samples can be expected to exceed the tolerance limit while still falling under the background distribution (e.g., exceed the upper tolerance limit without representing a new or increasing source of contamination). Tolerance limits outputs from Sanitas are provided in **Appendix B**.

3.8 NPL Determination

UTLs were used to determine the NPL for each POC in each drainage. For Grassy Valley, Maize Gulch, and Poverty Gulch, interim NPLs are recommended based on existing wells. These interim NPLs will be re-visited once sufficient data has been collected from the new POC wells (i.e., 8 data points or two years of monitoring). Recommended NPLs are shown in **Table 5**.

4. RESULTS

The results of the statistical analysis are described for each drainage in the following subsections.

4.1 Grassy Valley

As established in TR-129, a new POC well will be installed in Grassy Valley (GVMW-26). Interim NPLs will be established using groundwater monitoring data from GVMW-8A and GVMW-8B. The period of record for these wells used in this analysis is from June 1998 through April 2022.

4.1.1 Outliers

Six outliers were identified in the GVMW-8A and GVMW-8B datasets: one outlier for fluoride, and five outliers for pH. Four of the outliers were associated with the first or second sampling event for both GVMW-8A and GVMW-8B and were therefore removed from the dataset. Two outliers for pH were retained. These values were less than three standard deviations from the mean, and no explanation was found to justify removal.

4.1.2 Trends

Decreasing trends for fluoride and manganese were identified in the GVMW-8A dataset. Because these trends are decreasing and therefore indicate improving water quality, explanations for these trends are not necessary to determine if new or increasing sources of contamination are present.

A decreasing trend for manganese was also identified in the GVMW-8B dataset. Similarly, no explanation is provided for this parameter. GVMW-8A and GVMW-8B were installed and the onset of these decreasing trends occurred before overburden was placed on the ECOSA. This variation in fluoride and manganese concentrations is therefore due to another hydrogeological change in the catchment unrelated to the ECOSA.

4.1.3 NPLs

Three parameters exceed Regulation 41 Table Value standards in Grassy Valley. NPLs for Grassy Valley for fluoride, manganese, and pH are shown in **Table 5**. The NPL for fluoride is consistent with background fluoride levels in wells installed in the Pikes Peak Granite. Elevated levels of fluorine in this formation are well-documented, as are elevated fluoride concentrations in groundwater in the Pikes Peak vicinity (Wallace, 2010; Miller & Ortiz, 2007; Hawley & Wobus, 1977; Shawe, 1976). The elevated concentration of manganese is consistent with leaching from mine waste materials and is therefore likely associated with impacts from historical mine waste including tailings and waste rock that is known to exist in Grassy Valley (CC&V, May 29, 2022).

4.2 Vindicator Valley

The POC well for Vindicator Valley is VIN-2B. The period of record used for this analysis from May 2004 through July 2022.

4.2.1 Outliers

Four outliers were identified in the VIN-2B dataset. These included a high and low result for manganese (greater than three standard deviations from the mean) and a sulfate result associated with the first well sample. These outliers were removed from the dataset. In addition, a fluoride

outlier qualified as an ND value with a high reporting limit was removed. Removal of this fluoride outlier eliminated the need for a fluoride NPL for VIN-2B as all other results fell below the Regulation 41 Table Value standard.

4.2.2 Trends

An increasing trend for iron was identified in the VIN-2B dataset. However, Site information indicates that no new or increased sources of groundwater contamination were initiated after January 31, 1994 in this area. VIN-2B is constructed within Quaternary-aged unconsolidated sediments that overlay the diatreme, and these sediments may contain soluble species mobilized from historical waste rock in this area.

Vindicator Valley contains a number of historical mines, and significant volumes of waste rock from these mines were placed throughout the valley during their operation. Much of this material has since been removed, particularly with the mining and subsequent backfilling of the Altman Pit between 1997 and 2008 The Altman Pit is located upgradient of VIN-2B, and the backfill in the pit has higher vertical permeability than the surrounding alluvium, meaning that precipitation is more likely to infiltrate into the diatreme and that recharge from precipitation into the downgradient Vindicator Valley has been reduced. Due to this reduced groundwater flow, impacts to shallow groundwater from historical mining are likely to persist for some time due to the low groundwater flow rate in this area (see CC&V's TR-129 Second Adequacy Review Response and the references therein).

An increasing trend was no longer observed after removing the most recent iron data point for VIN-2B. The iron dataset for VIN-2B exhibited a high degree of variability in comparison to datasets for other constituents. Iron concentrations for VIN-2B were typically below 1.0 mg/L (Appendix B, page 5), and the standard deviation was 0.26 mg/L (Appendix B, page 27). The iron concentration measured in Q2 2022 was 1.36 mg/L, which is more than four standard deviations greater than the mean (0.23 mg/L). In other datasets, this point may be identified and removed as an outlier; however, in datasets with higher variability, it can be more difficult to identify outliers since it may be more difficult for a method to establish an upper bound on the variability expected in the dataset (ITRC, 2013). Therefore, it is likely that this data point represents an outlier value rather than an increasing trend in iron in Vindicator Valley.

4.2.3 NPLs

Three parameters exceed Regulation 41 Table Value standards in Vindicator Valley. NPLs for Vindicator Valley for iron, manganese, and sulfate are shown in **Table 5**. The elevated concentrations of sulfate, manganese, and iron are consistent with leaching from sulfidic mine waste materials and are therefore likely associated with impacts from historical mine waste including tailings and waste rock that are known to exist in Vindicator Valley prior to January 31, 1994 (CC&V, 2022).

4.3 Wilson Creek

The POC well for Wilson Creek is WCMW-6. The period of record used for NPL determination is from June 1993 to April 2022. Only two data points prior to January 31, 1994 are available.

Historical groundwater monitoring data for Wilson Creek submitted as part of Permit No. M-1980-244, Amendment 5 in 1992 is provided in **Appendix D**. This dataset was not included in the NPL calculations for Wilson Creek, because the POC well for Wilson Creek (WCMW-6-234) was not included in this dataset due to insufficient water available at the time of sampling. However, these data represent additional pre-January 31,1994 data for the drainage to serve as a comparison to the calculated NPLs in **Table 5**.

4.3.1 Outliers

Fifteen outliers were identified in the WCMW-6 dataset (**Table 3**). Four of these outliers were removed. These included a high result for iron, a low result for fluoride, and two fluoride outliers associated with the first two sampling events from the well.

Eleven outliers for iron (5), manganese (5), and fluoride (1) were retained as no explanation was available, and they were within three standard deviations of the mean. Several outliers for manganese, however, were removed during the trend removal step discussed in **Section 4.3.2**.

4.3.2 Trends

Increasing trends for iron and manganese were identified in the WCMW-6 dataset. The trend for manganese is understood to be the result a few points in 2020 that were not identified as outliers during the initial outlier screening. Trend testing is sensitive to outliers, and it is likely that these higher values are impacting trend identification.

Site information indicates that no new or increased sources of groundwater contamination were initiated after January 31, 1994 in this area. The slight (e.g., 0.006 mg/L increase per year) iron trend appears to reflect a change in the characteristics of the aquifer. **Figure 3** shows WCMW-6 dissolved iron concentrations with depth to water measurements coinciding with the approximate beginning of the increasing iron trend (2015). Iron concentrations are slightly correlated with an increase in the depth to water measurements, i.e., a decrease in the water level in the well. A decrease in water level implies that less infiltration is occurring upgradient of the monitoring well, and less oxygenated water is available in the aquifer. Iron is more soluble in conditions that are less oxidizing, which may explain the slight increase in iron concentrations (discussed in more detail in **Section 4.5.2**). Because the cause of the decreasing water levels has not been identified, our approach to establish the iron NPL in Wilson Creek is to remove data points from later to earlier until no trend was observed. Despite the trend, the maximum concentration observed for iron occurred in 1998, which is prior to the beginning of the increasing trend in 2014.

4.3.3 NPLs

Three parameters exceed Regulation 41 Table Value standards in Wilson Creek. NPLs for Wilson Creek for fluoride, iron, and manganese are shown in **Table 5**.

From the Amendment 5 (pre-January 31, 1994) dataset, concentrations of dissolved manganese ranged between 0.03 and 0.25 mg/L, and dissolved iron ranged from below the detection limit (< 0.01 mg/L) to 0.02 mg/L. The observed dissolved manganese concentrations are consistent with the proposed NPL (0.27 mg/L), although the observed dissolved iron concentrations are lower than the proposed NPL (1.1 mg/L). No field parameters or QA/QC information are available for these historical data to explain the discrepancy in dissolved iron; they are included here for transparency

and comparison, although these wells are generally significantly shallower than WCMW-6-234. The NPLs for iron and manganese at WCMW-6 include other pre-January 31,1994 data in their evaluation.

The NPL for fluoride is consistent with background fluoride levels in wells installed in the Pikes Peak Granite. Elevated levels of fluorine in this formation are well-documented as are elevated fluoride concentrations in groundwater in the Pikes Peak vicinity (Wallace, 2010; Miller & Ortiz, 2007; Shawe, 1976).

4.4 Arequa Gulch

The POC well for Arequa Gulch is CRMW-5B. The period of record used for this NPL determination is from April 2013 to July 2022.

4.4.1 Outliers

Two outliers for fluoride were identified in the CRMW-5B dataset. Both of these data were removed as they were collected during the first and second sampling events from this well. Both outliers were below the Regulation 31 standard of 2.0 mg/L.

4.4.2 Trends

An increasing trend was identified for iron in the CRMW-5B dataset. However, approximately 81% of the dataset are non-detect values, which were replaced with values equal to one-half of the detection limit (see **Section 3.3**). This increasing trend was only identified in relation to the non-detect results; detected concentrations exhibit a decreasing trend. Therefore, this trend related to an artifact in the statistical methodology and is not representative of Site conditions.

4.4.3 NPLs

Three parameters exceed Regulation 41 Table Value standards in Arequa Gulch. NPLs for Arequa Gulch for fluoride, iron, and manganese are shown in **Table 5**.

The NPL for fluoride is consistent with background fluoride levels in wells installed in the Pikes Peak Granite. Elevated levels of fluorine in this formation are well-documented as are elevated fluoride concentrations in groundwater in the Pikes Peak vicinity (Wallace, 2010; Miller & Ortiz, 2007; Shawe, 1976). The elevated concentrations of other parameters are likely associated with impacts from historical mine waste including tailings and waste rock that is known to exist in Arequa Gulch (CC&V, 2022).

4.5 Maize Gulch

As established in TR-129, a new POC well will be installed in Maize Gulch (SGMW-8). Interim NPLs will be established using groundwater monitoring data from SGMW-6B. The period of record used for this well is from June 2014 through April 2022.

4.5.1 Outliers

Nineteen outliers were identified for the SGMW-6B dataset (**Table 3** and **Appendix B**). Three outliers were removed: two outliers for manganese associated with the first and second sampling events, and one outlier for nitrite that was qualified as an ND value with a high reporting limit.

The remaining outliers were retained in the dataset for the following analytes: aluminum, beryllium, cadmium, cobalt, fluoride, manganese, nickel, pH, sulfate, uranium, and zinc. The majority of these outliers were higher than the rest of the distribution (with the exception of pH), exceeded the Regulation 41 Table Value standard once or twice, and many occurred during the same sampling events (e.g., August 9, 2017 and August 10, 2021).

Analysis of precipitation data for the Site indicated that these outliers were associated with large rain events (**Figure 4**). The occurrence of an outlier is temporally associated with periods of increased precipitation, especially during the summer monsoon. This suggests that Maize Gulch is sensitive to precipitation patterns and constituents associated with historic mining may impact Maize Gulch groundwater as a result of these rainfall events. Therefore, we recommend sampling in Q3 of 2023 and 2024, approximately one month after a major storm (> 4 inches of rain) if possible, to understand the effect of monsoon on new POC wells.

Like many of the drainages around the Site, historic mining and mine waste disposal activities took place in Maize Gulch (see TR-129 Second Adequacy Review Response). Soluble species mobilized from the historic waste rock, as well as from natural enrichment in the diatreme, are likely adsorbed to the shallow aquifer matrix in Maize Gulch and are then remobilized or flushed out during large rainfall events. Construction of the Valley Leach Facility 2 (VLF2), completed in 2014, has largely changed the hydrogeology of Maize Gulch in that groundwater recharge has decreased due to the VLF's synthetic liner. Because of overall less infiltration, oxidation products may continue to be generated within the historical waste but may not be mobilized and transported unless a large precipitation event results in sufficient infiltration downgradient of VLF2 to mobilize these constituents. Because these events are representative of natural processes, these outliers were retained as part of the dataset for NPL recommendation.

Figure 4 shows outliers in SGMW-6B for iron, manganese, and pH with precipitation data for the Site. Iron and manganese are geochemically similar in that both constituents are redox active and are generally more soluble in their reduced phases (Fe^{2+} and Mn^{2+}). However, as shown in **Figure 4**, iron and manganese exhibit opposite behavior in response to the precipitation events in Maize Gulch; iron concentrations decrease, while manganese concentrations increase. This behavior is likely due to differences in oxidation kinetics and pH-driven solubility. Following a precipitation event, oxygenated water infiltrates into the aquifer over a relatively short period of time and increases the water table, thus creating a transport mechanism for soluble species generated in the mine waste upgradient of SGMW-6B. Under oxidizing conditions, iron oxidizes to ferric iron (Fe^{3+}) very quickly to form less soluble iron oxide or iron oxyhydroxide minerals, resulting in a decrease in dissolved iron concentrations.

Conversely, manganese exhibits very slow oxidation kinetics under these pH conditions (Morgan, 2005). In this case, manganese mobilized from the historical mine waste (likely from the carbonate mineral rhodochrosite, $MnCO_3$) does not have enough time to oxidize to Mn^{3+} or Mn^{4+} and precipitate out of solution. Manganese is also more soluble than iron in the pH ranges observed in Maize Gulch, i.e., less than 7 standard units (s.u.) (Morgan, 2005; Farnsworth and Hering, 2011). Manganese would therefore behave like the other outlier metals and increase in concentration in groundwater following large precipitation events.

4.5.2 Trends

Increasing trends for cobalt, iron, and manganese were identified in the SGMW-6B dataset.

Site information indicates that no new or increased sources of groundwater contamination were initiated after January 31, 1994 in this area. As described above, the construction of the lined VLF2 has effectively eliminated groundwater recharge within the footprint of the facility and substantially reduced the amount of recharge into Maize Gulch. Thus, it is hypothesized that mass loading to groundwater from historical mining wastes has not necessarily changed in Maize Gulch, but the amount of dilution from groundwater recharge has. To determine the merit of this hypothesis, water levels in Maize Gulch were analyzed to assess the impact of decreased infiltration on constituent concentrations. **Figure 5** shows depth to water measurements from SGMW-6B averaged annually from 2014 through 2021. Over this timeframe, the average depth to water for 2014-2017 increases from 26.4 feet (ft) below top of casing to 29.9 ft below top of casing for 2018-2021. An increase in depth to water corresponds to a decreasing water level by approximately 3.5 ft. There is also the qualitative observation that other wells in the drainage (e.g., SGMW-7B) are more frequently dry or have insufficient water to sample since late 2017/2018.

A more quantitative calculation using areas presented in **Figure 6** shows that approximately 31% of the catchment area for the Maize Gulch drainage (excluding the area overlapping the diatreme) that has historically reported to the region surrounding SGMW-6B has been lined as part of VLF2 construction (as approximated using VLF2 as-built information and the USGS application StreamStats; USGS, 2017). Based on this decreased recharge area, we would expect an increase in concentration by approximately 45% based solely on a change in dilution and no change in the mass loading of the constituent. Over the period of record for SWMW-6B, iron concentrations have increased by approximately 53% (comparing the average 2014-2015 concentrations with Q2 2022 concentrations), and manganese concentrations have increase by approximately 32% (comparing average 2015 concentrations with Q2 2022 concentrations, first sample event outliers removed). These increases in concentrations are consistent in magnitude with reduced dilution associated with the construction of VLF2.

While this change in dilution is relevant to other constituents in Maize Gulch, iron and manganese are more likely to react and attenuate along the groundwater flow path, while conservative ions, such as fluoride and sulfate, are readily dissolved and flow downgradient. This implies that iron and manganese mobilized from weathered mine wastes may precipitate or adsorb onto aquifer solids. These constituents may remain in the solid phase, or they may later leach out due to infiltration, changes in water levels, and/or changes in geochemical conditions. As explained below, iron and manganese have a more complicated geochemical relationship with water level and redox conditions, which explains why increasing trends are primarily observed with these constituents in comparison to other constituents in Maize Gulch. Decreased infiltration into the drainage may also result in increased constituent concentrations through geochemical processes. **Figure 5** also shows dissolved oxygen concentrations from SGMW-6B over the same period. Averaged dissolved oxygen concentrations for 2014-2017 decrease from 2.3 mg/L to 1.2 mg/L. This decrease in dissolved oxygen concentrations may in part explain increasing trends for iron and manganese in Maize Gulch. Iron and manganese are both less soluble under oxidizing conditions and tend to form oxide or oxyhydroxide minerals in the presence of oxygen. Under

reducing conditions (i.e., conditions with little or no dissolved oxygen), these minerals are less stable and tend to dissolve.

Decreasing water levels and dissolved oxygen concentrations caused by the elimination of groundwater recharge are not new or increased sources of groundwater contamination initiated in the area, as defined in the Interim Narrative Standard, WQCC Reg. 41.5.C.6.b.iii. Therefore, the increasing trends associated with decreasing water levels in Maize Gulch were not removed before calculating tolerance limits and resulting NPLs.

4.5.3 NPLs

Twelve parameters exceed Regulation 41 Table Value standards in Maize Gulch. NPLs for Maize Gulch for aluminum, beryllium, cadmium, cobalt, fluoride, iron, manganese, nickel, pH (lower bound), sulfate, uranium, and zinc are shown in **Table 5**. The elevated concentrations of these constituents are likely associated with impacts from historical mine waste including tailings and waste rock that is known to exist in Maize Gulch as well as natural background (CC&V, 2022).

4.6 Poverty Gulch

As established in TR-129, a new POC will be installed in Poverty Gulch (PGMW-5). Interim NPLs will be established using groundwater monitoring data from PGMW-3. The period of record for this well is from December 2018 through May 2022. Other monitoring wells in the drainage were either consistently dry (PGMW-2) or were abandoned by the previous operator (PGMW-1A and PGMW-1B).

Due to the short period of record in PGMW-3, the need to set NPLs for a broad range of constituents (Table 1), and mining activity in the area associated with the Globe Hill pit (mining commenced 2016), it was determined that an additional line of evidence would help to support the established of NPLs in Poverty Gulch. PGMW-3 (56 feet deep) is co-located with historical wells PGMW-1A (200 feet deep) and PGMW-1B (55 feet deep), which have a period of record between March 2000 and July 2001. Although limited data are available to perform independent statistical tests or to establish background concentrations based on the PGMW-1 well pair, a comparison between PGMW-1 and PGMW-3 can broadly indicate whether the groundwater quality has changed during the period between data for PGWM-1 and for PGMW-3. In an attempt to extend the functional period of record for PGMW-3, Welch's T-Test was used to statistically compare PGMW-3 with PGMW-1A and 1B. Results suggest that PGMW-3 exhibits characteristics of both PGMW-1A and 1B and is statistically similar to one of these wells for multiple constituents (**Table 6**). Boxplots to compare concentrations for key constituents in PGMW-1A, PGMW-1B and PGMW-3 are included in **Figure 7** for visual comparison. When compared to PGMW-1B (similar depth to PGMW-3), PGMW-3 has lower cadmium concentrations, and higher pH values. Nitrate concentrations in PGMW-3 are higher than those in PGMW-1B, but do not exhibit an increasing trend since 2018. This statistical comparison suggests that no new or increasing sources of contamination have been introduced in Poverty Gulch since PGMW-1 was abandoned in 2001. The NPLs for Poverty Gulch recommended in this report are intended to serve as interim NPLs until water quality for a permanent POC is established.

4.6.1 Outliers

Six outliers were identified for the PGMW-3 dataset, all of which are either nitrate or nitrite + nitrate. Two of these outliers were removed as they were associated with the first sample from the well. Four of these outliers were retained. Two were deemed sufficiently similar to the rest of the dataset (within 3 standard deviations), and two were determined to be associated with a large rain event (similar release mechanism as in Maize Gulch).

4.6.2 Trends

An increasing trend for sulfate was identified in the PGMW-3 dataset. The t-test result found that PGMW-3 sulfate concentrations were not statistically different those in PGMW-1A. This provides a line of evidence that there has not been a new source of sulfate contamination between 2001 and current monitoring data. Sulfate in PGMW-3 and the future POC well PGMW-5 will be closely monitored to see if this trend continues.

While a statistical comparison between current and historical data is useful, it has limitations due to the spatial variability in Poverty Gulch. The variability is a result of the limited groundwater migration observed in the Gulch (i.e., low hydraulic gradient) and the heterogenous distribution of mine waste. Water quality in Poverty Gulch is very localized and dependent on the characteristics of the waste immediately nearby (see TR-129 Second Adequacy Review Responses and references therein).

The relationship between precipitation and sulfate concentrations was explored to understand if potential changes in local weather patterns are impacting sulfate concentrations in Poverty Gulch. **Figure 8** shows sulfate concentrations with monthly precipitation data measured at the Site. The increasing sulfate trend began in approximately 2021, a year with relatively high amounts of precipitation in comparison to 2018-2020. Q3 of 2022 also produced large storm events with relatively high precipitation. These recent increases in precipitation may have resulted in sulfate mobilization from the historical mine wastes in Poverty Gulch. Sulfate is generally highly soluble, which may explain why an increasing trend was only identified for sulfate (in comparison to other constituents in Poverty Gulch).

Because of the relatively short period of record for PGMW-3, additional data is needed to fully evaluate the relationship between precipitation and sulfate concentrations. For this reason, our approach to establish the sulfate NPL in Poverty Gulch is to remove data points from later to earlier until no trend was observed.

4.6.3 NPLs

Twelve parameters exceed Regulation 41 Table Value standards in Poverty Gulch. NPLs for Poverty Gulch for aluminum, cadmium, cobalt, copper, fluoride, iron, manganese, nickel, nitrate, nitrite + nitrate, pH (lower bound), and sulfate are shown in **Table 5**.

The NPL for fluoride is consistent with background fluoride levels in wells installed in the Pikes Peak Granite. Elevated levels of fluorine in this formation are well-documented as are elevated fluoride concentrations in groundwater in the Pikes Peak vicinity (Wallace, 2010; Miller & Ortiz, 2007; Shawe, 1976).

The elevated concentrations of other parameters are likely associated with impacts from historical mine waste including tailings and waste rock that is known to exist throughout Poverty Gulch (CC&V, 2022). In particular, elevated metals concentrations compared to other locations may be the result of the low pH observed in PGMW-3 that is a characteristic of leaching from sulfidic mine materials.

5. SUMMARY

Statistical methods were used to determine NPLs for each of the six drainages at CC&V, including interim NPLs in Grassy Valley, Maize Gulch, and Poverty Gulch where new POC wells will be installed. The methods employed are recommended by both the ITRC and the USEPA through the Unified Guidance (ITRC, 2013; USEPA, 2009). Because very little data prior to January 31, 1994 are available, statistical tests were used to evaluate the present of increasing trends. Where increasing trends were identified, information from CC&V was used to determine potential explanations for the increase, as shown in **Table 4**. For increasing trends that are not caused by new or increased sources of groundwater contamination, all of the data was retained and used to establish the NPL. For increasing trends due to increased variability in the dataset or more recent stabilization of the trend, data points were removed from the dataset beginning with more recent data until the trend is no longer observed. By removing higher concentration data, this approach results in a lower NPL. It was determined that none of these increasing trends are the result of new or increased sources of contamination at the Site. Proposed NPLs as determined from this statistical analysis are shown in **Table 5**.

Table 5 also displays Site-wide NPLs previously approved by DRMS to allow for comparison with the statistically derived NPLs proposed here. For iron and manganese, the updated NPLs are lower than the previously established NPL for Grassy Valley, Vindicator Valley, Wilson Creek, and Arequa Gulch. For the pH lower bound, the updated NPLs are higher than the previously established NPL for Grassy Valley, Vindicator Valley, Wilson Creek, and Arequa Gulch.

NPLs for fluoride for Grassy Valley, Wilson Creek, Arequa Gulch, and Poverty Gulch are consistent with background levels in wells installed in the Pikes Peak granite outside the area of the CC&V diatreme (Wilson, 2010; Hawley & Wobus, 2007: Shawe, 1976).

For unclassified groundwater, Regulation 41 identifies both domestic water supply Table Value standards and agricultural Table Value standards. The proposed NPLs for iron for Vindicator Valley, Wilson Creek, and Arequa Gulch exceed the domestic water supply Table Value standard (0.3 mg/L) but are less than the agricultural Table Value standard (5 mg/L). In addition, the NPL for manganese in Grassy Valley GVMW-8B exceeds domestic water supply Table Value standards (0.05 mg/L) but is less than the agricultural Table Value standards (0.2 mg/L). It should also be noted that the Regulation 41 Table Value standards for iron and sulfate are secondary drinking water standards and are not health-based values. In addition, there is no documented domestic use of this groundwater, nor is domestic use of this groundwater likely in the future.

The proposed NPLs for Maize Gulch and Poverty Gulch are generally higher than the previously established NPLs. These are based on the datasets for non-POC wells selected to determine an interim NPL prior to the installation of new POCs; these values will be revisited following eight quarters of sampling data from the new POC wells with the submission of a new TR. The interim NPLs for Grassy Valley may also be revised, if necessary, after eight quarters of sampling data from the new POC well.

6. REFERENCES

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TABLES

Table 1: Constituents of Concern by Drainage
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Wilson Creek	Arequa Gulch	Vindicator Valley	Grassy Valley	Poverty Gulch	Maize (formerly Rosebud) Gulch
Total Fluoride	Total Fluoride	Manganese	Total Fluoride	Aluminum	Beryllium
Manganese	Manganese	Iron	Manganese	Cadmium	Total Fluoride
Iron	Iron	Total Sulfate	pH Field	Cobalt	Iron
				Copper	Manganese
				Total Fluoride	pH Field
				Iron	Total Sulfate
				Manganese	Aluminum
				Nickel	Cadmium
				Nitrite Nitrate as Nitrogen	Cobalt
				Nitrate as Nitrogen	Nickel
				pH Field	Uranium
				Total Sulfate	Zinc

Notes

1. Constituents identified exceed Regulation 41 table value standards for at least one analysis.
2. Grey indicates constituents that exceeded Regulation 41 table value standard due to precipitation events.
3. Metals exceedances results are based on dissolved analyte results.

Table 2: Groundwater Data Summary
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Location	Well	Oldest Data	Most Recent Data	Max Monthly Number of Points*	Max Quarterly Number of Points*
Grassy Valley	GVMW-8A	June 1998	April 2022	114	89
	GVMW-8B	June 1998	February 2022	92	70
Vindicator Valley	VIN-2B	May 2004	July 2022	79	59
Wilson Creek	WCMW-6	June 1993	April 2022	112	103
Arequa Gulch	CRMW-5B	April 2013	July 2022	24	22
Maize (formerly Rosebud) Gulch	SGMW-6B	June 2014	April 2022	33	29
Poverty Gulch	PGMW-3	December 2018	May 2022	14	12

Notes

1. *For SGMW6B-60 uranium, beryllium and cobalt have fewer data points as monitoring for these constituents began in 2018.
2. The most recent data provided by CC&V to be used for the NPL evaluation is Q2 2022.

Table 3: Outlier Identification
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Location	Action	Well	Date Sampled	Constituent	Result	Reasoning
Grassy Valley	Removed	GVMW 8B-50	08/03/98	Fluoride - Total F (mg/L)	3.18	First sample from well
		GVMW 8B-50	08/03/98	pH Field (pH unit)	8.026	First sample from well
		GVMW 8A-250	08/03/98	pH Field (pH unit)	9.368	First sample from well
		GVMW 8A-250	12/01/98	pH Field (pH unit)	9.223	Second sample from well
	Retained	GVMW 8A-250	03/31/99	pH Field (pH unit)	7.512	Sufficiently similar to rest of dataset, no other reason to remove
		GVMW 8A-250	06/02/99	pH Field (pH unit)	7.52	Sufficiently similar to rest of dataset, no other reason to remove
Vindicator Valley	Removed	VIN 2B-140	4/1/2020	Fluoride - Total F (mg/L)	<2.50	Abnormally high analytical reporting limit
		VIN 2B-140	7/2/2004	Sulfate - Total (mg/L)	548	First sample from well
		VIN 2B-140	12/21/2017	Manganese - Dissolved (mg/L)	4.54	Greater than 3 standard deviations from mean[2]
		VIN 2B-140	7/19/2005	Manganese - Dissolved (mg/L)	0.781	Greater than 3 standard deviations from mean[2]
Wilson Creek	Removed	WCMW 6-234	05/18/98	Iron - Dissolved (mg/L)	6.84	Greater than 3 standard deviations from mean[2]
		WCMW 6-234	06/27/93	Fluoride - Total F (mg/L)	2.7	First sample from well
		WCMW 6-234	09/27/93	Fluoride - Total F (mg/L)	2.4	Second sample from well
		WCMW 6-234	08/28/16	Fluoride - Total F (mg/L)	1.352	Greater than 3 standard deviations from mean[2]
	Retained	WCMW 6-234	12/05/20	Iron - Dissolved (mg/L)	0.968	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	08/02/21	Iron - Dissolved (mg/L)	1.07	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	07/28/22	Iron - Dissolved (mg/L)	0.989	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	11/24/98	Iron - Dissolved (mg/L)	1.11	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	09/26/00	Iron - Dissolved (mg/L)	0.987	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	08/25/97	Manganese - Dissolved (mg/L)	0.268	Sufficiently similar to rest of dataset, no other reason to remove
		WCMW 6-234	12/11/19	Manganese - Dissolved (mg/L)	0.2055	Sufficiently similar to rest of dataset, removed with trend removal
		WCMW 6-234	04/09/20	Manganese - Dissolved (mg/L)	0.241	Sufficiently similar to rest of dataset, removed with trend removal
		WCMW 6-234	04/22/20	Manganese - Dissolved (mg/L)	0.245	Sufficiently similar to rest of dataset, removed with trend removal
		WCMW 6-234	12/05/20	Manganese - Dissolved (mg/L)	0.1935	Sufficiently similar to rest of dataset, removed with trend removal
		WCMW 6-234	11/09/94	Fluoride - Total F (mg/L)	1.7	Sufficiently similar to rest of dataset, no other reason to remove
Arequa Gulch	Removed	CRMW 5B-143	05/16/13	Fluoride - Total F (mg/L)	1.96	First sample from well
		CRMW 5B-143	06/20/13	Fluoride - Total F (mg/L)	0.529	Second sample from well
Maize (formerly Rosebud) Gulch	Removed	SGMW 6B-60	09/25/14	Manganese - Dissolved (mg/L)	2.78	First sample from well
		SGMW 6B-60	11/24/14	Manganese - Dissolved (mg/L)	2.81	Second sample from well
		SGMW 6B-60	12/11/19	Nitrite as Nitrogen (mg/L)	<2.50	Abnormally high analytical reporting limit
	Retained	SGMW 6B-60	08/23/17	Various constituents[1]	NA	Associated with rain event
		SGMW 6B-60	11/30/21	Various constituents[1]	NA	Associated with rain event
Poverty Gulch	Removed	PGMW-3	12/03/18	Nitrate as Nitrogen (mg/L)	7.54	First sample from well
		PGMW-3	12/03/18	Nitrite + Nitrate as Nitrogen (mg/L)	8.06	First sample from well
	Retained	PGMW-3	12/11/19	Nitrate as Nitrogen (mg/L)	16.4667	Sufficiently similar to rest of dataset, no other reason to remove
		PGMW-3	12/11/19	Nitrite + Nitrate as Nitrogen (mg/L)	16.4667	Sufficiently similar to rest of dataset, no other reason to remove
		PGMW-3	05/20/21	Nitrate as Nitrogen (mg/L)	3.19	Associated with rain event
		PGMW-3	05/20/21	Nitrite + Nitrate as Nitrogen (mg/L)	3.19	Associated with rain event

Notes

1. Refer to Sanitas output for outlier results.

2. Per ITRC guidance, user discretion is required to remove outliers based on weight-of-evidence reasoning and results removal have on conclusions drawn from remaining dataset.

Acronyms

NA - not applicable

mg/L - milligram per liter

NPL - numeric protection limit

Table 4: Trend Identification
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Location	Trend Type	Well	Constituent	Points Removed for no Trend to be Observed	Reason for Trend	Approach
Grassy Valley	Decreasing	GVMW 8A-250	Fluoride - Total F (mg/L)	After 4/8/20	NA, improving water quality	Remove points from later to earlier until no trend observed
		GVMW 8A-250	Manganese - Dissolved (mg/L)	After 1/26/06	NA, improving water quality	Remove points from later to earlier until no trend observed
		GVMW 8B-50	Manganese - Dissolved (mg/L)	After 10/26/04	NA, improving water quality	Remove points from later to earlier until no trend observed
Vindicator Valley	Increasing	VIN-2B	Iron - Dissolved (mg/L)	After 7/13/2022	High variability in dataset; trend associated with possible outlier	Remove points from later to earlier until no trend observed
Wilson Creek	Decreasing	WCMW 6-234	Fluoride - Total F (mg/L)	After 4/12/2010	NA, improving water quality	Remove points from later to earlier until no trend observed
	Increasing	WCMW 6-234	Iron - Dissolved (mg/L)	After 1/18/2012	Decreasing water levels	Remove points from later to earlier until no trend observed
		WCMW 6-234	Manganese - Dissolved (mg/L)	After 12/11/2019	High variability in dataset; trend associated with possible outliers	Remove points from later to earlier until no trend observed
Arequa Gulch	Increasing	CRMW 5B-143	Iron - Dissolved (mg/L)	After 7/29/2022	Trend identified in relation to non-detect values	Remove points from later to earlier until no trend observed
Maize (formerly Rosebud) Gulch	Increasing	SGMW 6B-60	Cobalt - Dissolved (mg/L)	After 4/27/2022	Decreasing water levels	Retain all points, use non-parametric approach
		SGMW 6B-60	Iron - Dissolved (mg/L)	After 4/20/2018	Decreasing water levels	Retain all points, use non-parametric approach
		SGMW 6B-60	Manganese - Dissolved (mg/L)	After 1/20/2020	Decreasing water levels	Retain all points, use non-parametric approach
Poverty Gulch	Increasing	PGMW-3	Sulfate - Total (mg/L)	After 11/30/21	Statistically similar to 2000-2001 data; relationship to increasing precipitation in drainage	Remove points from later to earlier until no trend observed

Notes

1. Refer to the Sanitas outputs for the statistical results including magnitude and confidence in the trend.
2. Trends were tested after outliers were removed.

Acronyms

mg/L - milligrams per liter
NA - not applicable

Table 5: Recommended and Historical NPLs
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	Existing NPLS - will be superceded by proposed NPLs						Reg 41 Table Value	Proposed NPLs						
Basin Name and Point of Compliance	**GVMW 8A-250**	**CRMW-3B-63**	**VIN 2B**	**WCMW 3-134**	**WCMW 6-234**	**Sitewide Standard (Existing)**		**Grassy Valley***		**Vindicator Valley**	**Wilson Creek**	**Arequa Gulch**	**Maize Gulch***	**Poverty Gulch***
Depth Interval	A	B	B			NA	NA	A	B	B	A	B	B	A
Aluminum (dis) (mg/L)						7	5						**18.5**	**29**
Beryllium (dis) (mg/L)							0.004						**0.13**	
Cadmium (dis) (mg/L)						0.005	0.005						**0.014**	**0.021**
Cobalt (dis) (mg/L)							0.05						**0.17**	**0.1**
Copper (dis) (mg/L)						0.2	0.2							**5.4**
Total Fluoride (mg/L)						2	2	**3.2**	**3.0**		**2.2**	**4.2**	**15**	**3.9**
Iron (dis) (mg/L)						14	0.3			**0.91**	**1.1**	**0.39**	**15**	**1.2**
Manganese (dis) (mg/L)	1	8.1	4	0.5	0.2	3	0.05	**0.95**	**0.14**	**3.7**	**0.27**	**0.86**	**16**	**20**
Nickel (dis) (mg/L)						0.2	0.1						**0.28**	**0.21**
Nitrate as Nitrogen (mg/L)						10	10							**19**
Nitrite Nitrate as Nitrogen (mg/L)						11	10							**19**
pH Field - upper	8.5	9	8.5	9	8.5	8.5	8.5							
pH Field - lower	6.5	6	6.5	6	6.5	6	6.5	**6.45**	**6.44**				**4.6**	**3.1**
Selenium (dis) (mg/L)						0.024	0.02							
Total Sulfate (mg/L)	250	1070	800	250	250		250			**780**			**1380**	**714**
Uranium (dis) (mg/L)							0.0168						**0.41**	
Zinc (dis) (mg/L)						2	2						**3.5**	

Notes

*Indicates that the final point of compliance well is yet to be drilled and existing well data is used to establish the NPL

1. Where NPLs are equal to Reg. 41 Table Standards NPLs are equal to sitewide standards (e.g., copper, fluoride, nitrate, pH and zinc), the sitewide standards were originally set below Reg. 41 Table standards and were increased October 24, 2019 to equal Table Standards. NPLs presented here are the most recent versions.

2. Numbers are rounded to minimize significant figures (5+ is rounded up).

3. Only constituents that have proposed NPLs are included in this table, if not included in this table the application Regulation 41 standard is used.

Grey Indicates that Regulation 41 Table values are used in basin and no basin-specific NPL is proposed

Acronyms

dis - dissolved

mg/L - milligram per liter

NA - Not Applicable

Table 6: PGMW-3 Comparison to Historical Wells
NPL Recommendation Report
Cripple Creek and Victor Gold Mine

	PGMW-1A	PGMW-1B	PGMW-1A	PGMW-1B
Constituent	**p-value**		**Statistically Different from PGMW-3?**	
Aluminium - Dissolved (mg/L)	1.3E-05	9.4E-01	Yes	No
Cadmium - Dissolved (mg/L)	NA	3.6E-02	**ND**	**Yes**
Cobalt - Dissolved (mg/L)	NA	NA	---	---
Copper - Dissolved (mg/L)	NA	1.2E-01	UR	No
Fluoride - Total F (mg/L)	8.3E-01	1.4E-02	No	Yes
Manganese - Dissolved (mg/L)	9.3E-01	6.0E-06	No	Yes
Nickel - Dissolved (mg/L)	3.2E-01	4.5E-01	No	No
Nitrate as Nitrogen (mg/L)	NA	7.1E-07	**ND**	**Yes**
pH Field (pH unit)	8.7E-03	8.6E-05	**Yes**	**Yes**
Sulfate - Total (mg/L)	7.2E-02	6.3E-05	No	Yes

Notes

*Use a p of 0.05 and a Welch's t-test to determine if wells are different

Suggest to use older data where both 1A and 1B are statistically different.

Acronyms

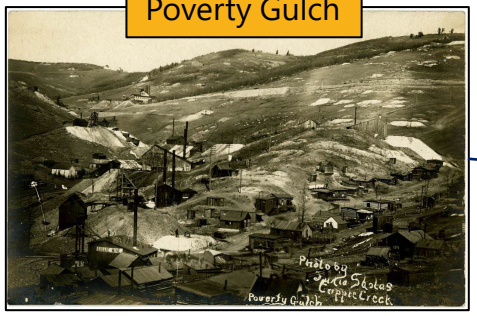
ND - Not detected above reporting limits for the PGMW-1A or PGMW 1B dataset

--- - Consituent was not previously sampled

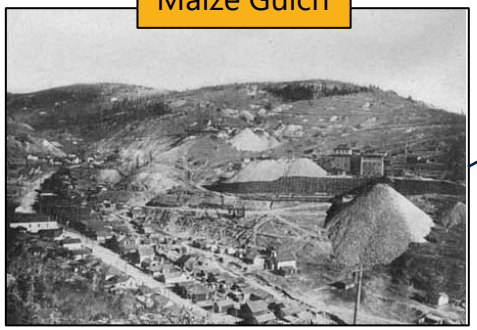
mg/L - milligram per liter

FIGURES

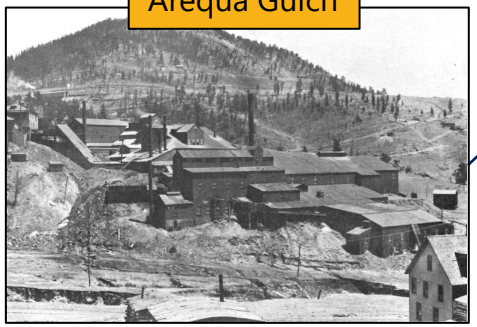
Poverty Gulch

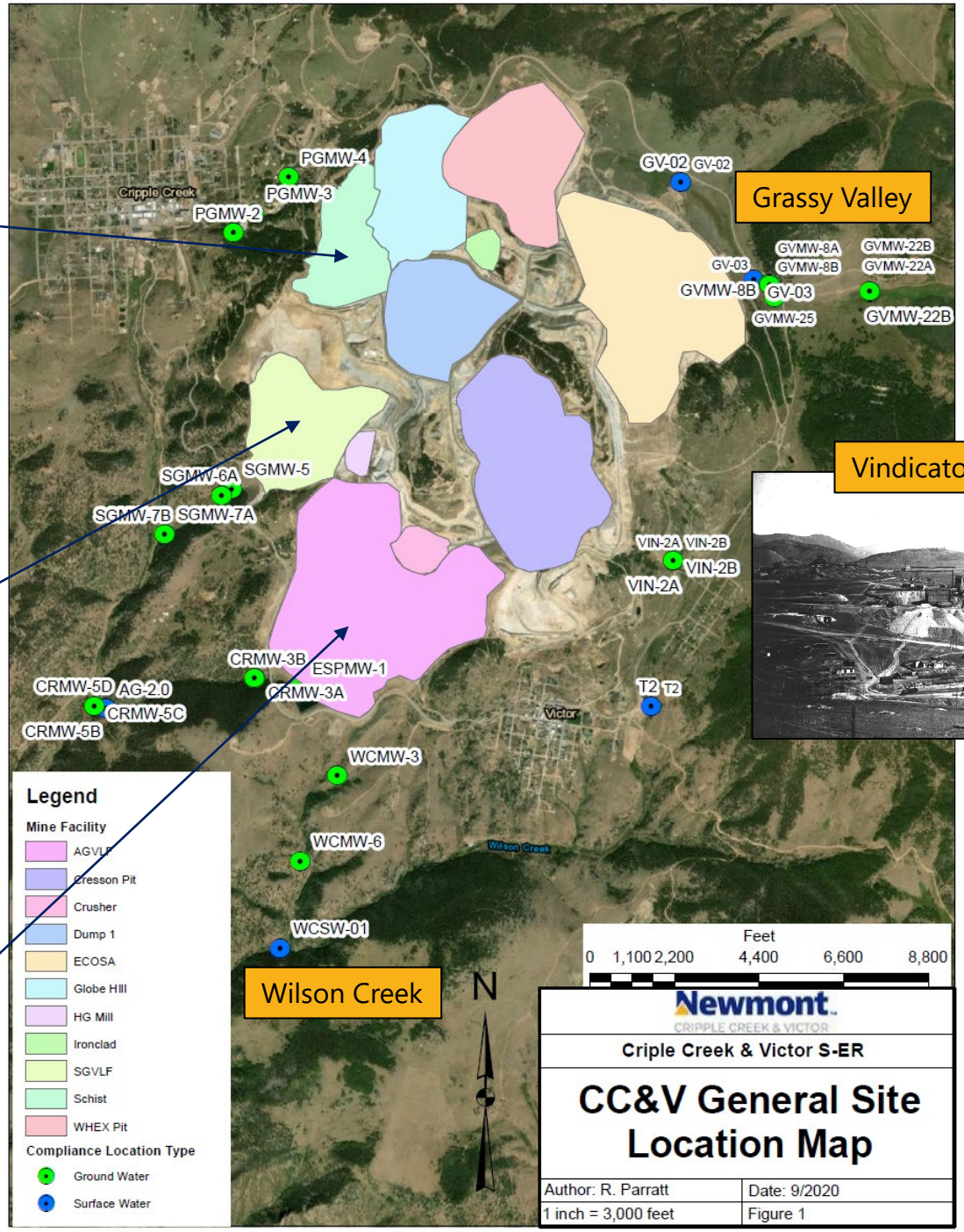


Maize Gulch



Arequa Gulch





Notes:
1. Poverty Gulch well PGMW-3 is co-located with historical wells PGMW-1A and PGMW-1B.

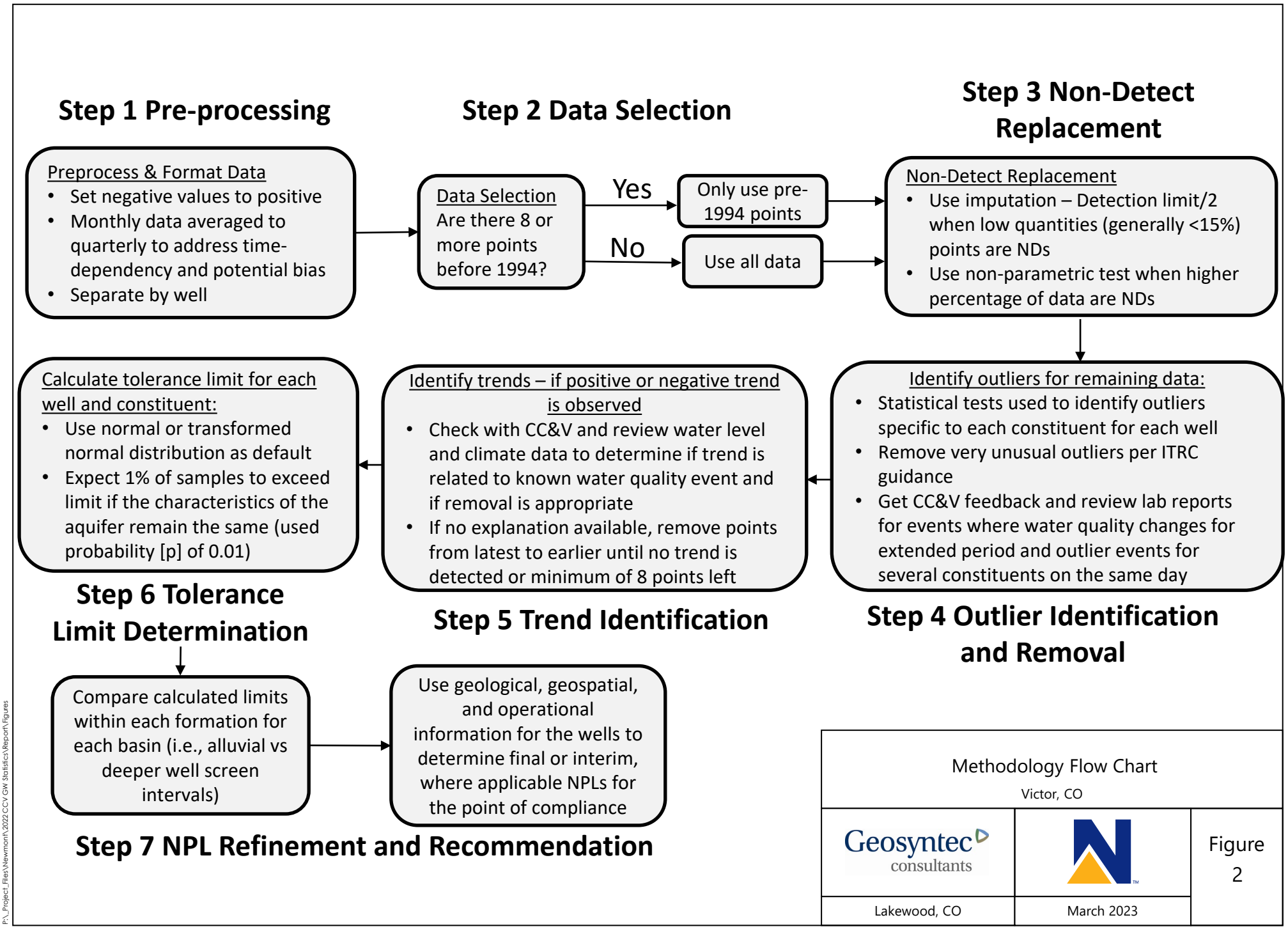
Newmont
CRIPPLE CREEK & VICTOR

Criple Creek & Victor S-ER

CC&V General Site Location Map

Author: R. Parratt	Date: 9/2020
1 inch = 3,000 feet	Figure 1

P:_Project_Files\Newmont\2022 CCV GW Statistics\Report\Figures



Methodology Flow Chart

Victor, CO

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Lakewood, CO

March 2023

Figure 2

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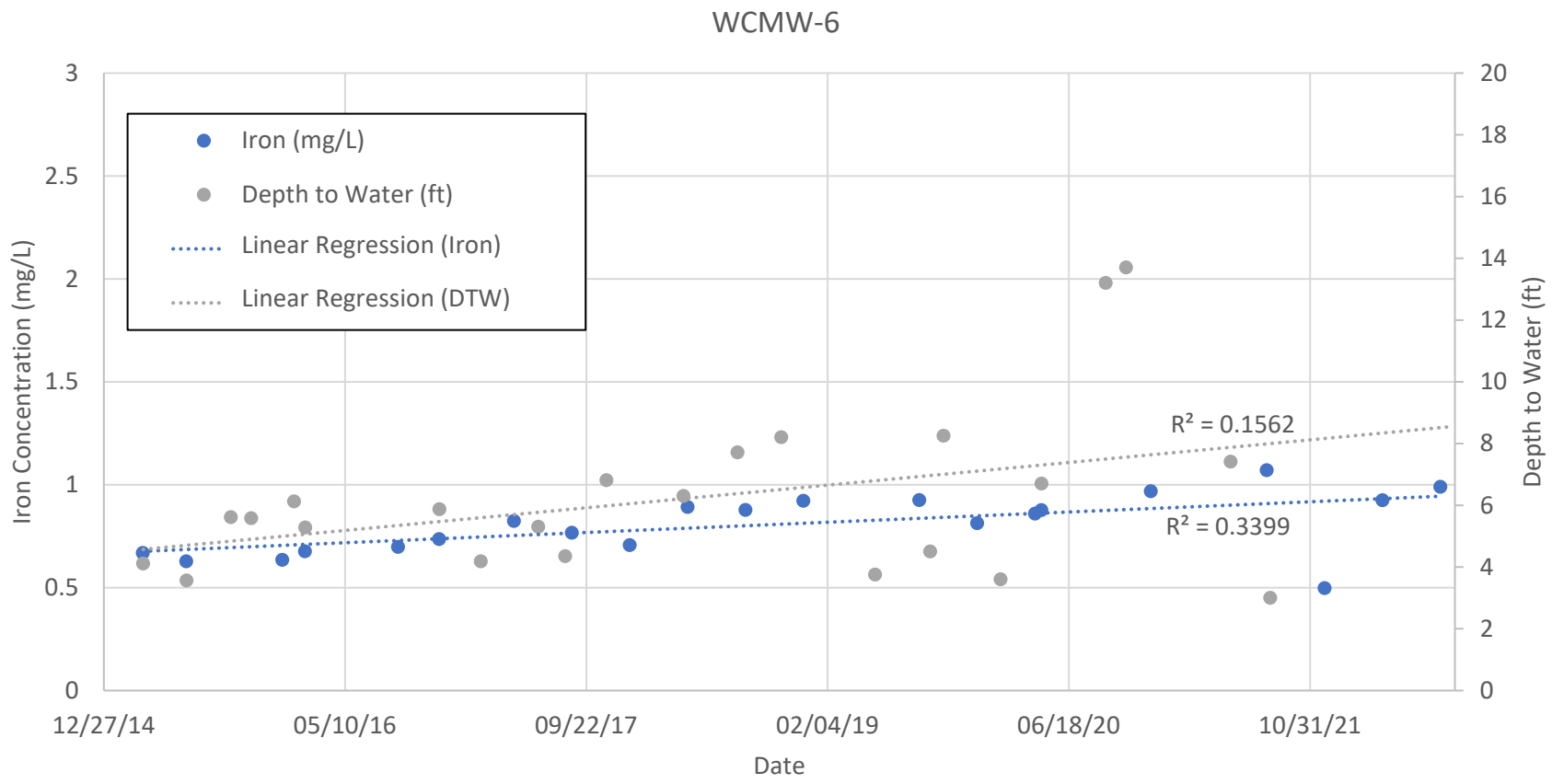

Notes:
1. Analytical data for iron for Wilson Creek point of compliance well WCMW-6 with depth to water measurements (with iron outliers removed).
2. mg/L = milligrams per liter; ft = feet;; DTW = depth to water

Wilson Creek Iron Concentrations and Water Levels

Victor, CO

Geosyntec consultants

Lakewood, CO

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Figure 3

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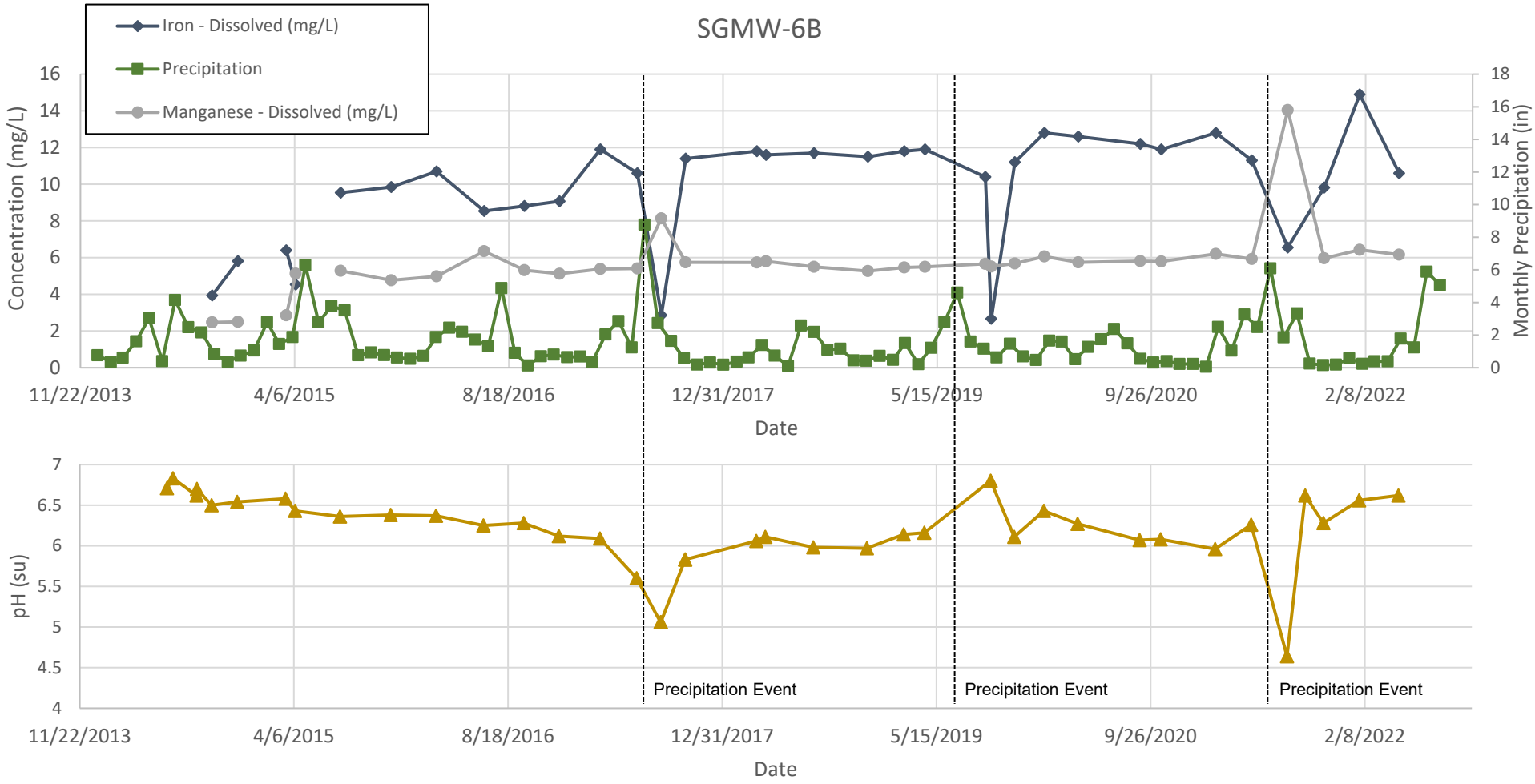

Notes:
1. Analytical data for iron and manganese for Maize Gulch point of compliance well SGMW-6B with monthly precipitation data.
2. mg/L = milligrams per liter; in = inches, s.u. = standard units

Maize Gulch Outliers and Precipitation Events

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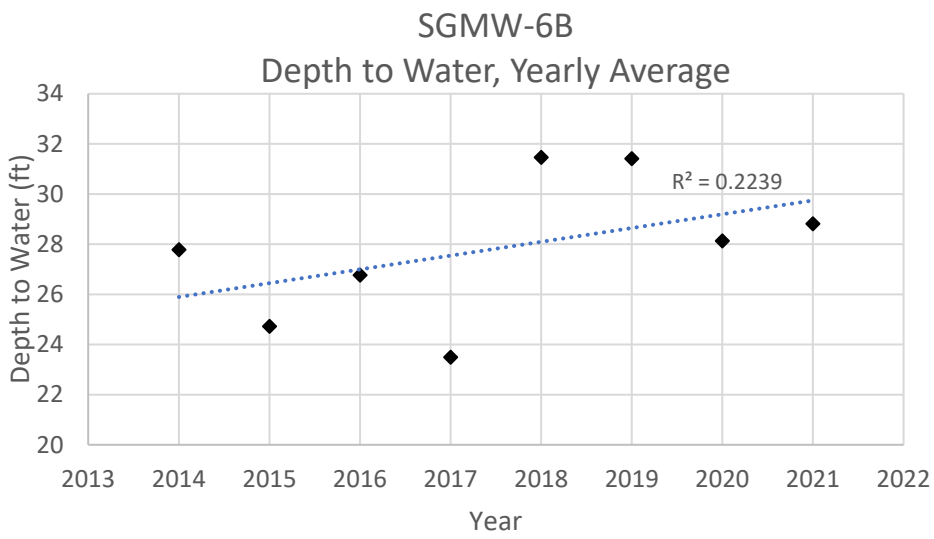
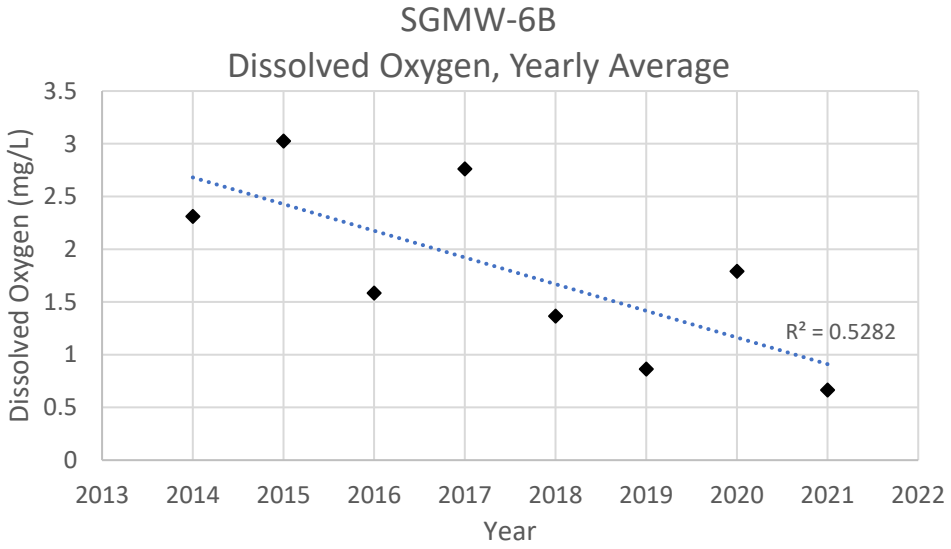
Figure 4

P:_Project_Files\Newmont\2022 CCV GW Statistics\Report\Figures





Notes
1. Depth to water and dissolved oxygen measurements (averaged annually for each point displayed) for Maize Gulch point of compliance well SGMW-6B with monthly precipitation data.
2. ft = feet; mg/L = milligrams per liter
3. The first month of depth to water and dissolved oxygen data after well development is removed as it may be impacted by well development activities and not representative of underlying aquifer conditions

Maize Gulch Water Levels and Dissolved Oxygen

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Lakewood, CO

March 2023

Figure 5

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Diatreme Boundary

Current VLF Extent

Unlined Maize – Outside diatreme

Lined by VLF – Outside diatreme

Unlined Maize – Inside diatreme, not included in recharge calculation

Notes

1. Precipitation on the diatreme is assumed to infiltrate into the diatreme and not into surrounding, shallow groundwater.

SGMW-6 Reduced Recharge Map

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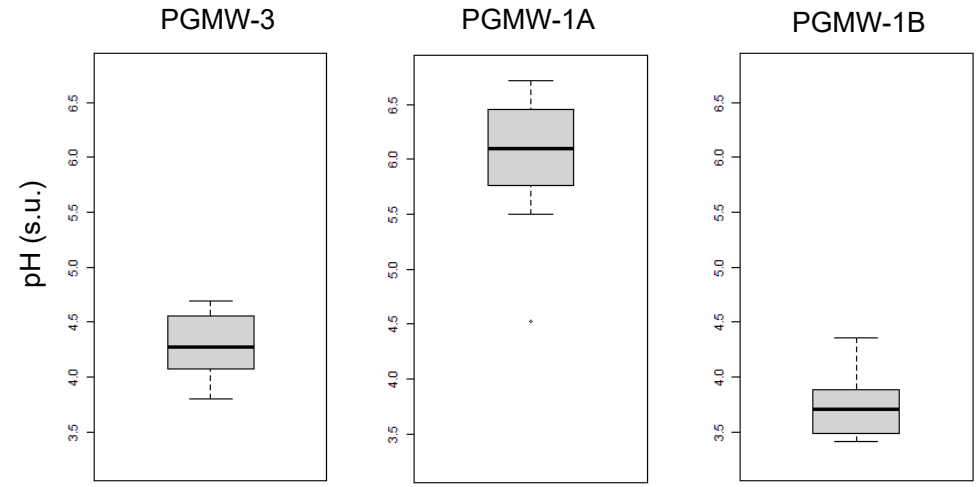
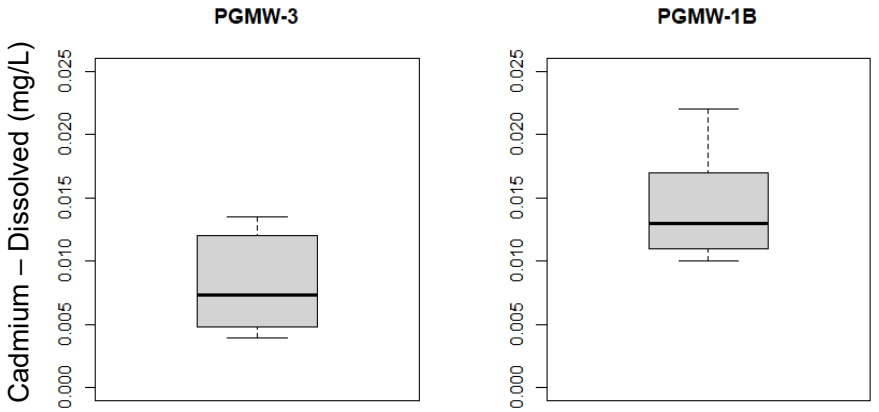
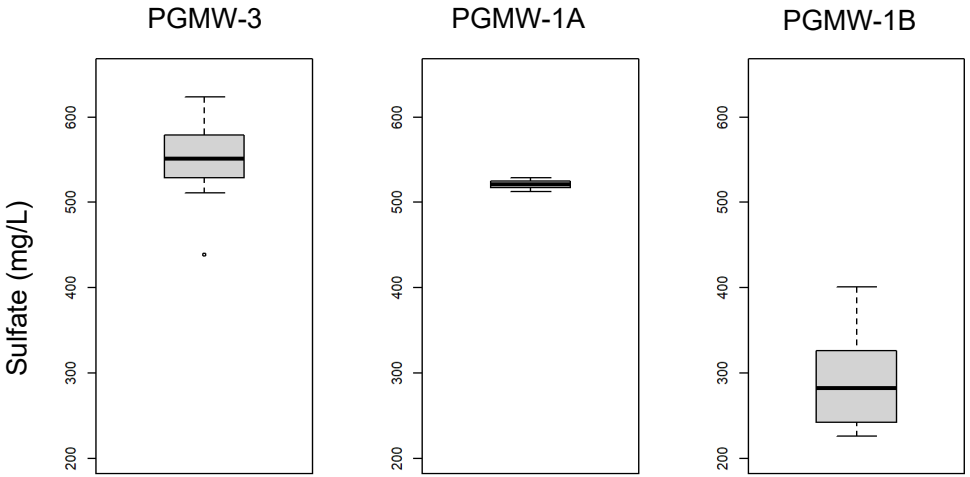
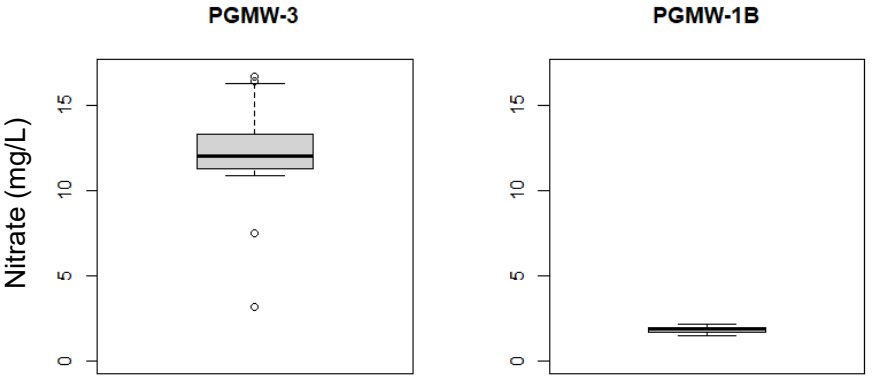
Figure 6

P:_Project_Files\Newmont\2022 CCV GW Statistics\Report\Figures









Notes
1. Dissolved cadmium was not detected in PGMW-1A.
2. PGMW 1A and 1B are collocated with PGMW-3
3. Nitrate concentrations in PGMW-1A were consistently below the detection limit.
4. mg/L = milligrams per liter; s.u. = standard unit

Poverty Gulch PGMW-1A/1B Comparison to PGMW-3

Victor, CO

Geosyntec consultants

Lakewood, CO

March 2023

Figure 7

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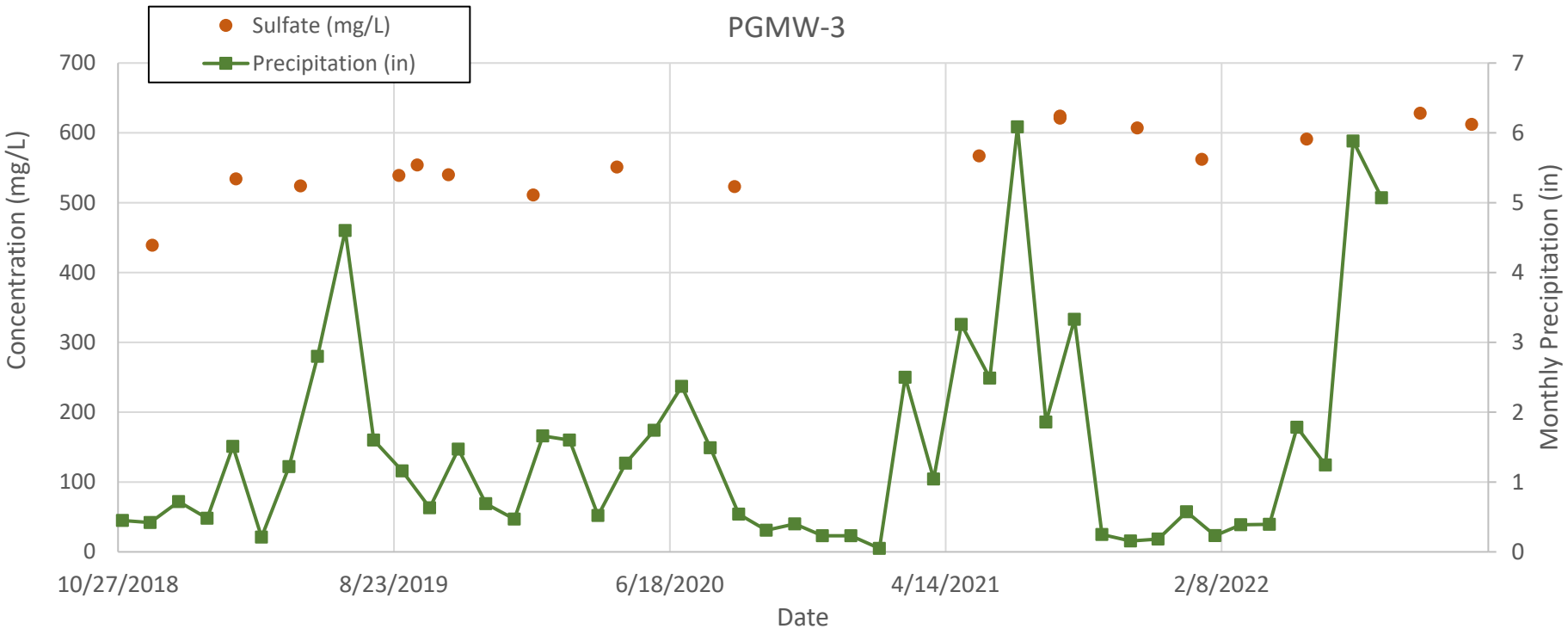

Notes
1 mg/L = milligrams per liter; in = inches

Poverty Gulch Sulfate and Precipitation Events

Victor, CO

Geosyntec consultants

Lakewood, CO

March 2023

Figure 8

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APPENDIX A
Detailed Methodology

This attachment included the methods used to establish numeric protection limits (NPLs) for the Cripple Creek and Victor Gold Mine (CC&V) groundwater in the Grassy Valley, Vindicator Valley, Wilson Creek, Arequa Gulch, Maize Gulch, and Poverty Gulch. The documentation in this attachment, in conjunction with the tables in the report, should provide necessary information to reproduce the NPLs included in the report.

1. Pre-process and format data file provided by CC&V.
    a. Negative values are related to a database error that causes non detects to be registered as negative values. Set these values to positive version and log as a non-detect.
    b. Separate data by drainage, well, and analyte.
    c. Average inconsistent sampling frequency data to quarterly. Data was typically averaged within each calendar quarter (e.g., average data taken in January, February and March together). Understanding that quarterly samples are not always taken exactly based on the calendar quarter, data was not averaged if samples exceeded two months of separation during a quarter.
2. Perform exploratory data analysis on data. Exploratory data analysis was performed in Microsoft's Excel data analysis program and in the open-source software R.
    a. Screen preprocessed data using general statistics and boxplots to establish period of record, size of dataset, which constituents exceed 5 CCR 1002-41 (Regulation 41) Table Values, and the frequency of exceedances.
    b. Perform preliminary data quality assurance and quality control. Document gaps in sampling record and investigate samples where detection limits exceed Regulation 41 standards.
    c. For locations that violated a given constituent, time-series plots were created to establish if the location exceeds limit on a regular basis, the exceedance was isolated, or an external event appeared to cause exceedance.
    d. Present observed water quality events to CC&V for feedback on inclusion or removal of data in NPL calculation. Remove unusual values as necessary (e.g., analytical results where detection limit exceeded Regulation 41 standard). Any excluded data is documented in the tables of this report.
    e. Only constituents and well locations that exceeded Regulation 41 standards at least once after initial screening of data were further analyzed in following steps for recommendation of an NPL.
    f. Non-detects are imputed to be the detection limit divided by two prior to additional analysis.
3. Identify outliers. Outlier screening is an important step to identify, explain, and if deemed appropriate, remove anomalous results that have the potential to skew trend or NPL determination results. Outlier detection was performed in Sanitas.
    a. Test each analyte for each well for normality using the Shapiro-Wilk or Shapiro–Francia (depending on number of points, n), at $\alpha = 0.01$.
        i. If data is observed to be normal: Outlier tests using Dixon's test ($\alpha = 0.05$); Rosner's test ($\alpha = 0.01$) if $n > 22$. We use default Sanitas α values,

with lower α for Rosner's which will have larger confidence with larger sample sizes.

ii. If data is observed to be non-normal, use a Tukey's w/IQR multiplier of 3.

b. Outliers should not be removed solely based on their identification. Rather, outliers are not removed, unless there is a reason to do so based on evidence-based decision-making. Below is the description of outlier removal or retention methodology.

i. If outliers appear to be related in time (e.g., several unusual points in a row), consult with CC&V about potential natural or anthropogenic water events that may have caused increase and remove or retain accordingly.

ii. If outliers are the result of changing detection limits or small percentage of detections (<10%), retain outliers.

iii. If multivariate outliers are observed (e.g. multiple unusual constituents for a given sample), discuss with CC&V to determine cause of unusual event and retain if associated with a natural event (e.g. precipitation event).

iv. If the outlier occurs in the first two samples from a new well, remove outlier.

v. If a result is identified as an outlier and exceeds three standard deviations from the mean, it is removed.

vi. If the outlier is similar the rest of distribution within three standard deviations of mean, and there is no other line of evidence to remove, there is not enough justification to remove the outlier, and it was retained

4. After removal of outliers, perform trend testing using Sen's Slope/Mann Kendall Slope. This is a non-parametric method, so the same analysis is performed for all data sets. Trend detection was performed in Sanitas.

a. If no slope identified

i. Skip to Step 5

b. If positive slope is observed

i. If slope is caused by detection limit changes, skip to Step 5.

ii. Consult with CC&V and additional available data about potential causes of increase including potential natural and anthropogenic causes. Select appropriate dataset based on the result of this analysis.

iii. If no other reason is available for increase, remove points from latest to earlier until a positive slope is no longer observed.

c. If negative slope is observed, this indicates an improvement of water quality.

i. If slope is caused by detection limit changes, skip to Step 5.

ii. Otherwise, remove points from latest to earlier until a negative slope is no longer observed.

5. Different strategies are employed to establish the tolerance limit based on the percentage of censored (non-detect values).

a. Impute the detection limit divided by two when <15% points are NDs. Test if data is normal or transform normal using the Shapiro-Wilk or Shapiro–Francia

(depending on number of points, n), at $\alpha = 0.01$. The ladder of powers is used to establish whether a dataset is transformed normal.

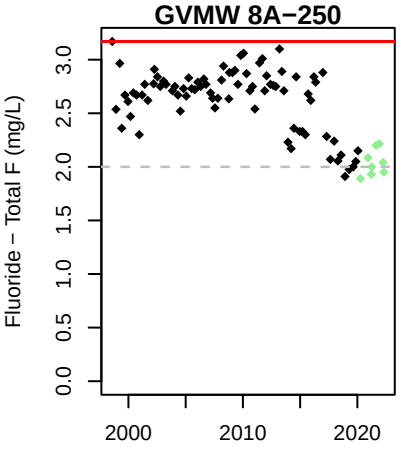
b. Use Kaplan-Meier method to transform data when 15-50% values are NDs. Test if transformed data is normal or transform normal using the Shapiro-Wilk or Shapiro–Francia (depending on number of points, n), at $\alpha = 0.01$. The ladder of powers is used to establish whether a dataset is transformed normal.
c. Use non-parametric test when >50% are NDs or if data is not observed to be normal or transform normal.

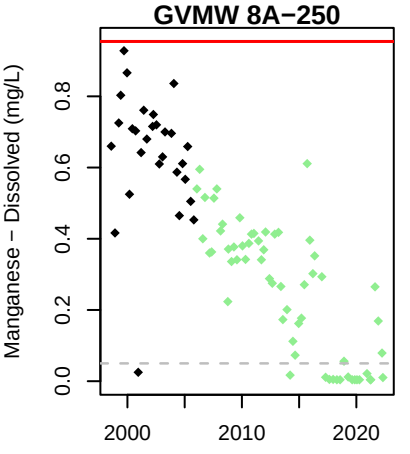
6. Calculate tolerance limit. An α of 0.01 is used for these calculations. Tolerance limit determination was performed in Sanitas.

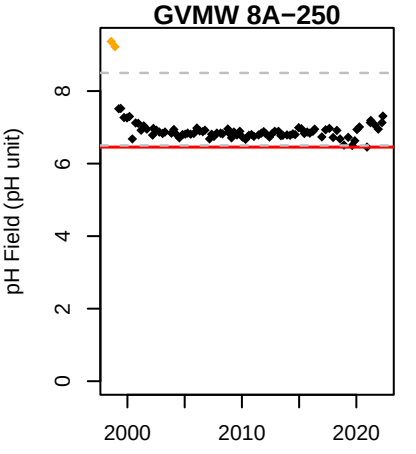
7. Use geological and spatial information for the wells to determine interim NPLs for the point of compliance. Otherwise use the point of compliance location data to establish the NPL.

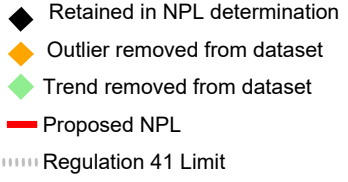
APPENDIX B
Supporting Sanitas Documentation

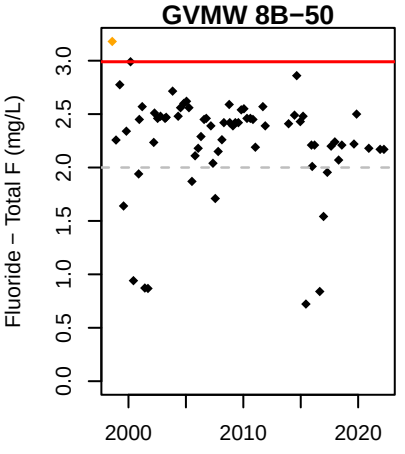
NPL Summary Plots

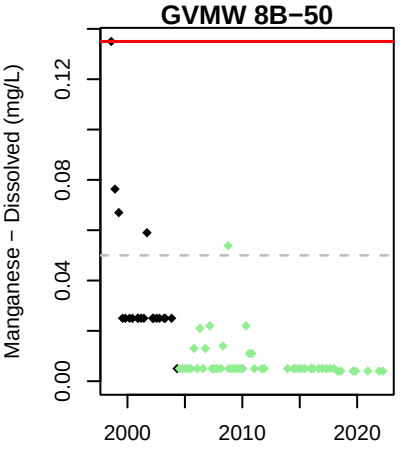

GVMW 8A-250
Fluoride – Total F (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
2000
2010
2020

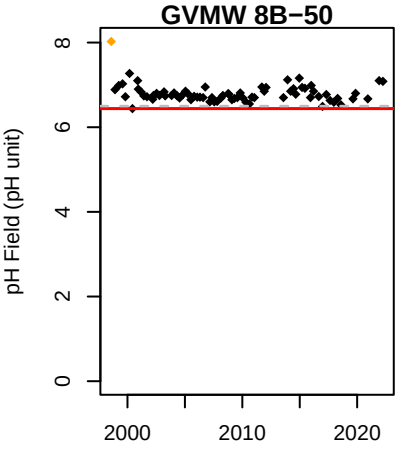

GVMW 8A-250
Manganese – Dissolved (mg/L)
0.0
0.2
0.4
0.6
0.8
2000
2010
2020

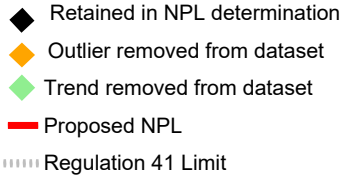

GVMW 8A-250
pH Field (pH unit)
0
2
4
6
8
2000
2010
2020

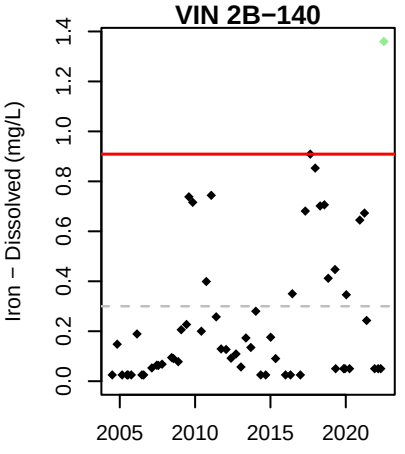

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

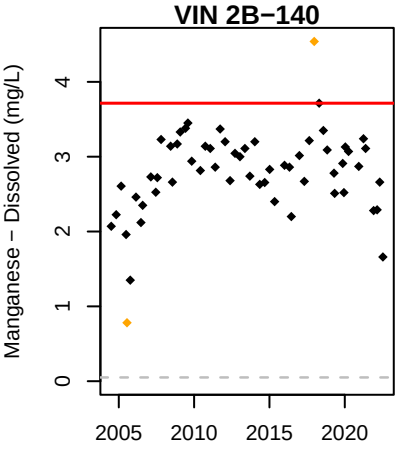

GVMW 8B−50
Fluoride − Total F (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
2000
2010
2020

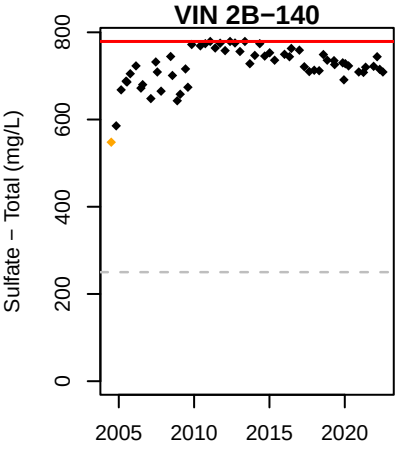

GVMW 8B−50
Manganese − Dissolved (mg/L)
0.00
0.04
0.08
0.12
2000
2010
2020

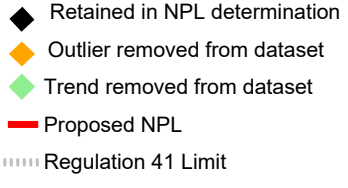

GVMW 8B−50
pH Field (pH unit)
0
2
4
6
8
2000
2010
2020

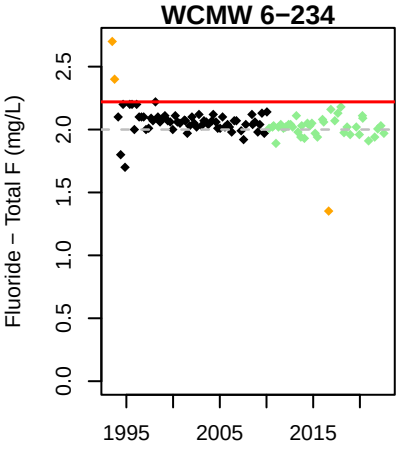

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

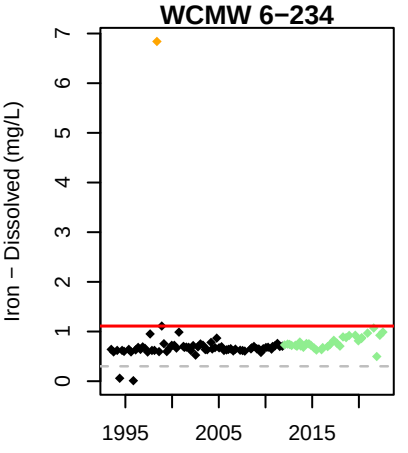

VIN 2B-140
Iron – Dissolved (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
2005
2010
2015
2020

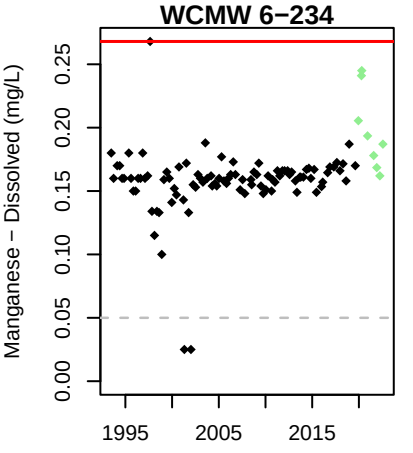

VIN 2B-140
Manganese – Dissolved (mg/L)
0
1
2
3
4
2005
2010
2015
2020

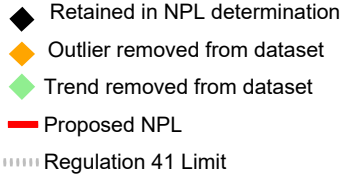

VIN 2B-140
Sulfate – Total (mg/L)
0
200
400
600
800
2005
2010
2015
2020

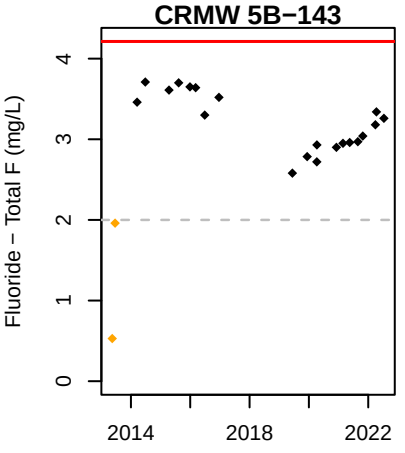

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

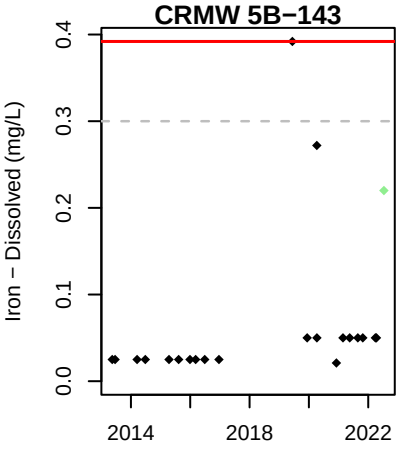

WCMW 6-234
Fluoride – Total F (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
1995
2005
2015

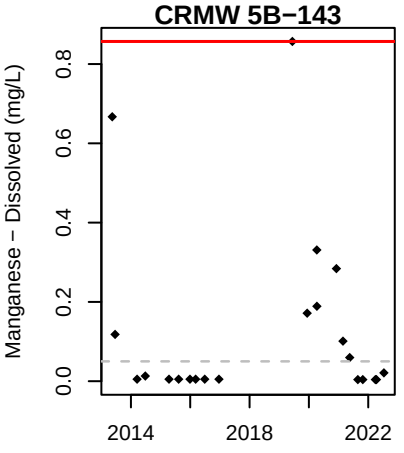

WCMW 6-234
Iron – Dissolved (mg/L)
0
1
2
3
4
5
6
7
1995
2005
2015

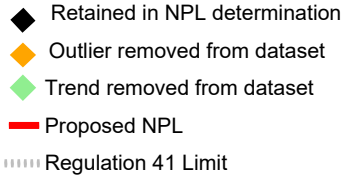

WCMW 6-234
Manganese – Dissolved (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
1995
2005
2015

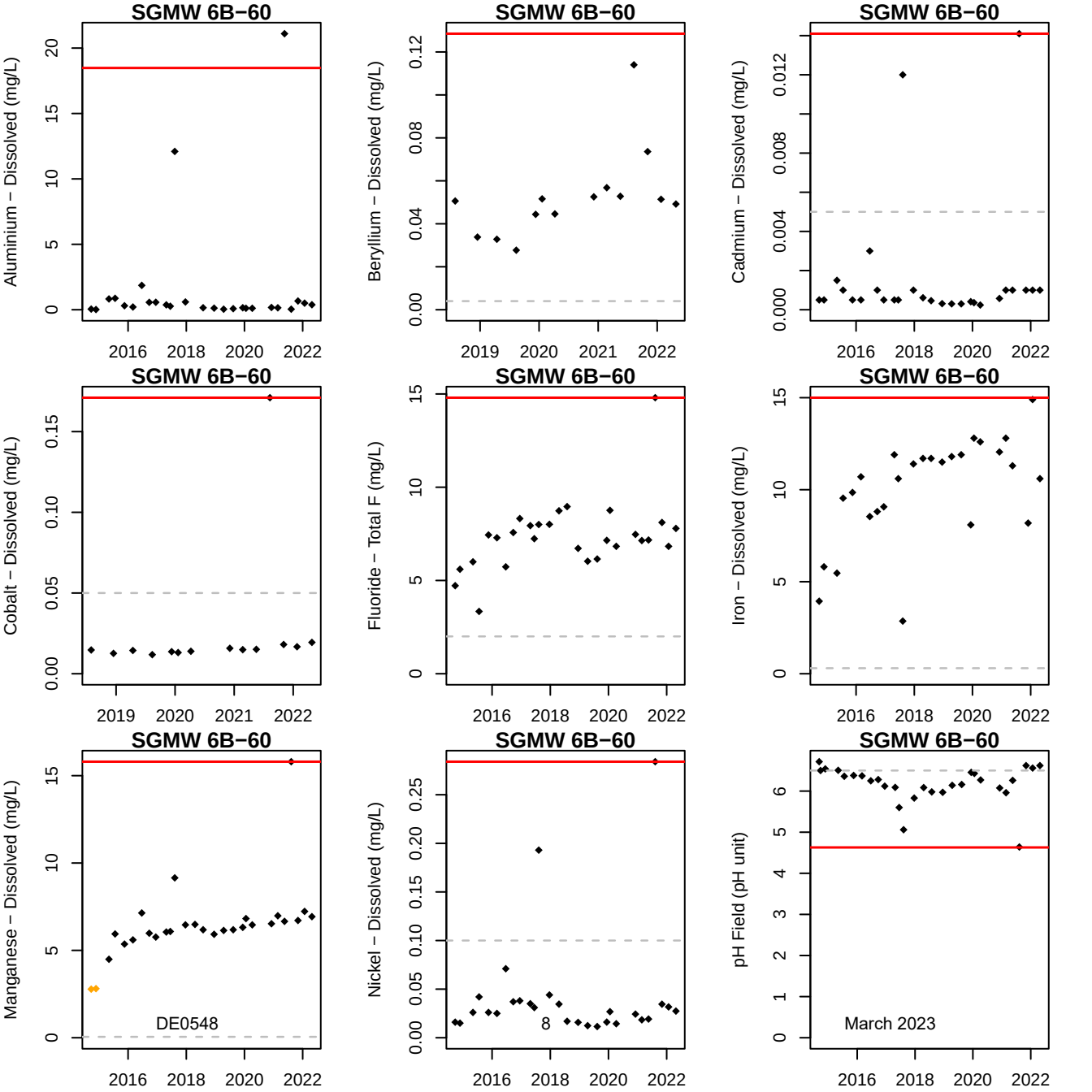

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

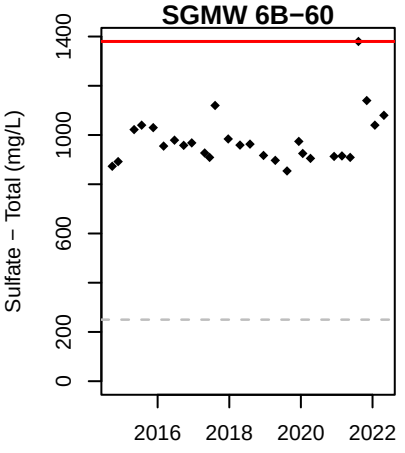

CRMW 5B−143
Fluoride − Total F (mg/L)
0
1
2
3
4
2014
2018
2022

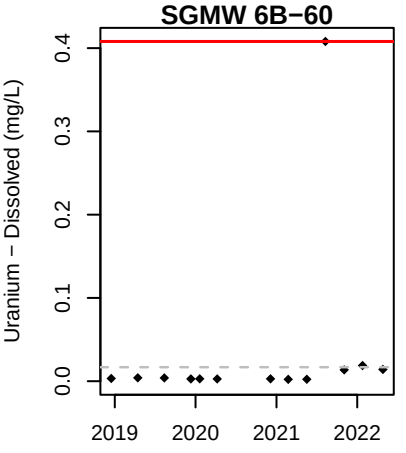

CRMW 5B−143
Iron − Dissolved (mg/L)
0.0
0.1
0.2
0.3
0.4
2014
2018
2022

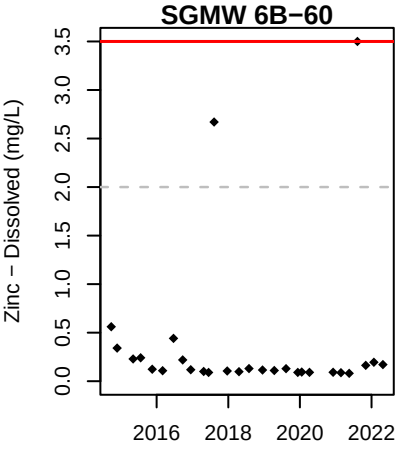

CRMW 5B−143
Manganese − Dissolved (mg/L)
0.0
0.2
0.4
0.6
0.8
2014
2018
2022

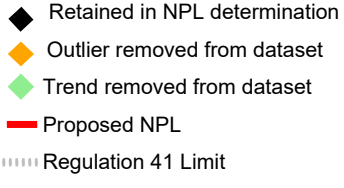

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

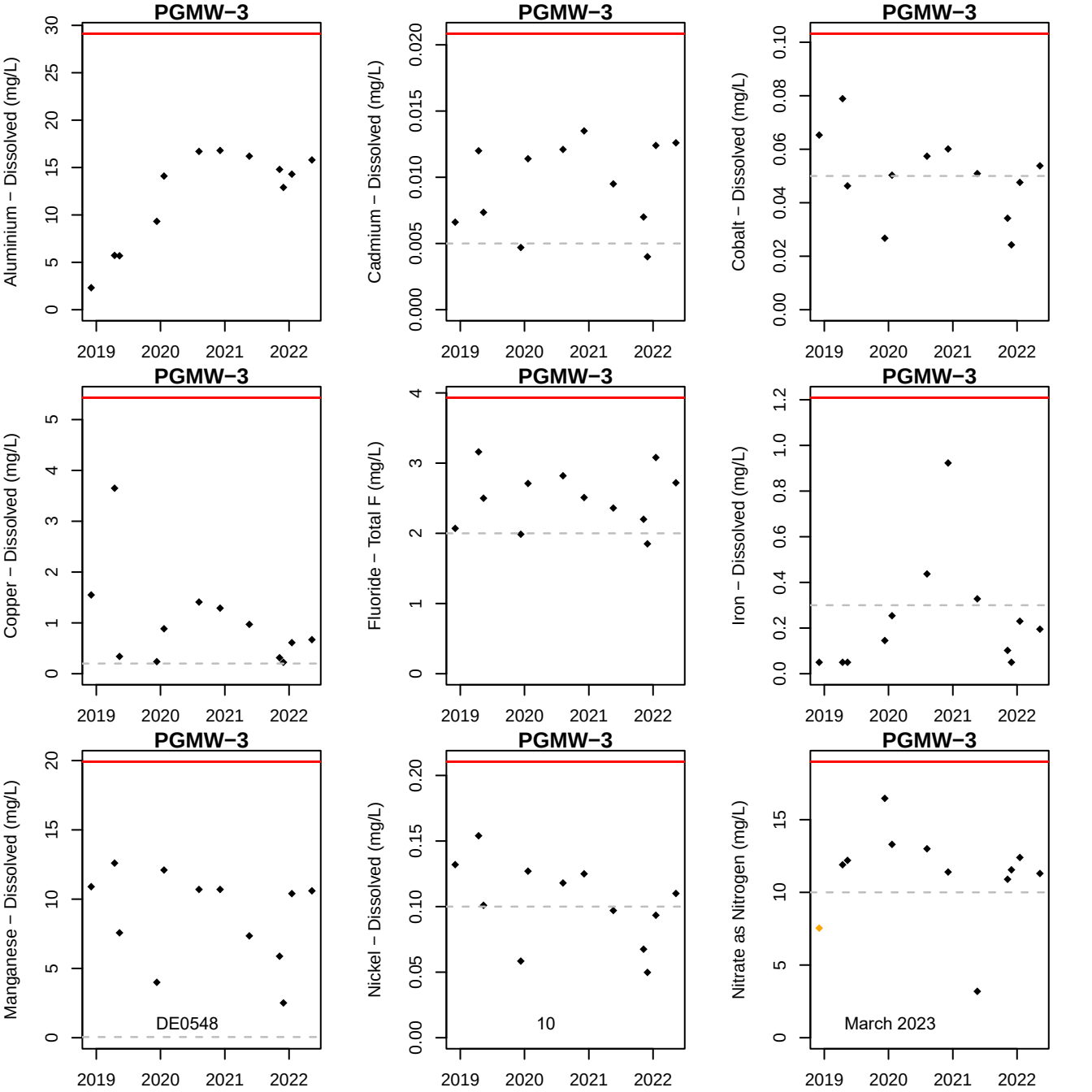

SGMW 6B−60
Aluminium − Dissolved (mg/L)
0
5
10
15
20
2016
2018
2020
2022
SGMW 6B−60
Beryllium − Dissolved (mg/L)
0.00
0.04
0.08
0.12
2019
2020
2021
2022
SGMW 6B−60
Cadmium − Dissolved (mg/L)
0.000
0.004
0.008
0.012
2016
2018
2020
2022
SGMW 6B−60
Cobalt − Dissolved (mg/L)
0.00
0.05
0.10
0.15
2019
2020
2021
2022
SGMW 6B−60
Fluoride − Total F (mg/L)
0
5
10
15
2016
2018
2020
2022
SGMW 6B−60
Iron − Dissolved (mg/L)
0
5
10
15
2016
2018
2020
2022
SGMW 6B−60
Manganese − Dissolved (mg/L)
0
5
10
15
DE0548
2016
2018
2020
2022
SGMW 6B−60
Nickel − Dissolved (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
8
2016
2018
2020
2022
SGMW 6B−60
pH Field (pH unit)
0
1
2
3
4
5
6
March 2023
2016
2018
2020
2022

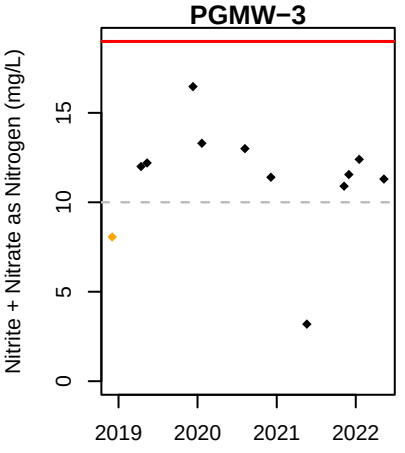

SGMW 6B−60
Sulfate − Total (mg/L)
0
200
600
1000
1400
2016
2018
2020
2022

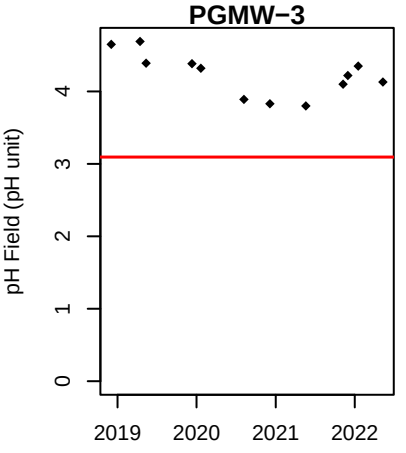

SGMW 6B−60
Uranium − Dissolved (mg/L)
0.0
0.1
0.2
0.3
0.4
2019
2020
2021
2022

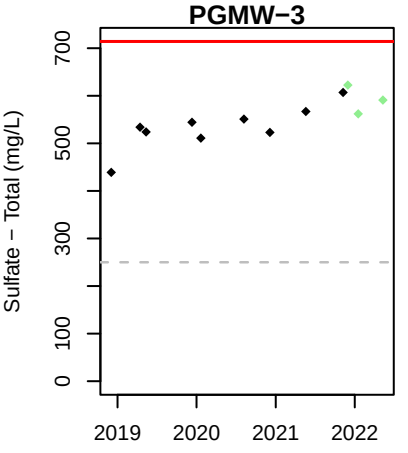

SGMW 6B−60
Zinc − Dissolved (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
2016
2018
2020
2022

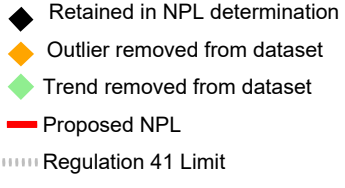

Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit


PGMW−3
Aluminium − Dissolved (mg/L)
0
5
10
15
20
25
30
2019
2020
2021
2022
PGMW−3
Cadmium − Dissolved (mg/L)
0.000
0.005
0.010
0.015
0.020
2019
2020
2021
2022
PGMW−3
Cobalt − Dissolved (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
2019
2020
2021
2022
PGMW−3
Copper − Dissolved (mg/L)
0
1
2
3
4
5
2019
2020
2021
2022
PGMW−3
Fluoride − Total F (mg/L)
0
1
2
3
4
2019
2020
2021
2022
PGMW−3
Iron − Dissolved (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
2019
2020
2021
2022
PGMW−3
Manganese − Dissolved (mg/L)
0
5
10
15
20
DE0548
2019
2020
2021
2022
PGMW−3
Nickel − Dissolved (mg/L)
0.00
0.05
0.10
0.15
0.20
10
2019
2020
2021
2022
PGMW−3
Nitrate as Nitrogen (mg/L)
0
5
10
15
March 2023
2019
2020
2021
2022


PGMW-3
Nitrite + Nitrate as Nitrogen (mg/L)
0
5
10
15
2019
2020
2021
2022


PGMW-3
pH Field (pH unit)
0
1
2
3
4
2019
2020
2021
2022


PGMW-3
Sulfate - Total (mg/L)
0
100
300
500
700
2019
2020
2021
2022


Retained in NPL determination
Outlier removed from dataset
Trend removed from dataset
Proposed NPL
Regulation 41 Limit

Grassy Valley
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf Printed 10/12/2022, 11:05 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev	Distribution	Normality Test
Fluoride - Total F [mg/L] (mg/L)	GVMW8A-250	No	n/a	n/a	NP (nrm)	NaN	89	2.586	0.3242	unknown	ShapiroFrancia
Fluoride - Total F [mg/L] (mg/L)	**GVMW8B-50**	**Yes**	**3.18**	**8/3/1998**	**NP (nrm)**	**NaN**	**70**	**2.247**	**0.4776**	**unknown**	**ShapiroFrancia**
Manganese - Dissolved [mg/L] (mg/L)	GVMW8A-250	No	n/a	n/a	EPA 1989	0.05	89	0.3783	0.2537	normal	ShapiroFrancia
Manganese - Dissolved [mg/L] (mg/L)	GVMW8B-50	No	n/a	n/a	NP (nrm)	0.05	70	0.011556	0.2096	unknown	ShapiroFrancia
pH Field [pH unit] (su)	**GVMW8A-250**	**Yes**	**9.368,9.223,7.512,7.52**	**8/3/1998,12/1/1998,3/31/1999,6/2/1999**	**NP (nrm)**	**NaN**	**89**	**6.937**	**0.4044**	**unknown**	**ShapiroFrancia**
pH Field [pH unit] (su)	**GVMW8B-50**	**Yes**	**8.026**	**8/3/1998**	**NP (nrm)**	**NaN**	**74**	**6.798**	**0.2147**	**unknown**	**ShapiroFrancia**

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/12/2022, 12:49 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	**GVMW8A-250**	**-0.02588**	**-4.049**	**-2.33**	**Yes**	**89**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride - Total F [mg/L] (mg/L)	GVMW8B-50	-0.00...	-1.778	-2.33	No	69	0	n/a	n/a	0.02	NP
Manganese - Dissolved [mg/L] (m...	**GVMW8A-250**	**-0.03385**	**-9.622**	**-2.33**	**Yes**	**89**	**12.36**	**n/a**	**n/a**	**0.02**	**NP**
Manganese - Dissolved [mg/L] (m...	**GVMW8B-50**	**-0.00...**	**-7.65**	**-2.33**	**Yes**	**70**	**81.43**	**n/a**	**n/a**	**0.02**	**NP**
pH Field [pH unit] (su)	GVMW8A-250	-0.00...	-1.625	-2.33	No	87	0	n/a	n/a	0.02	NP
pH Field [pH unit] (su)	GVMW8B-50	-0.00...	-1.087	-2.33	No	73	0	n/a	n/a	0.02	NP

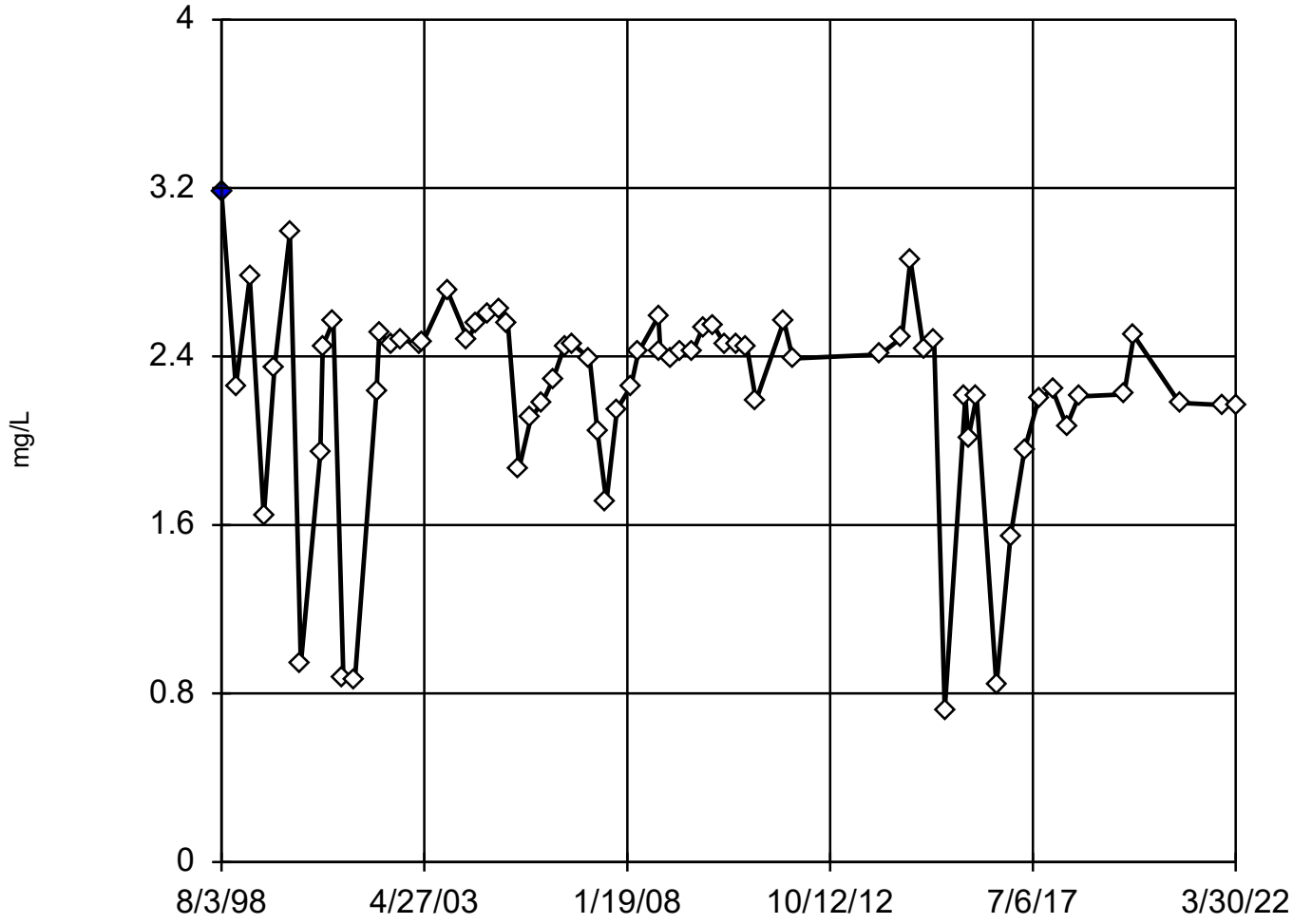
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem Printed 10/13/2022, 8:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	GVMW8A-250	3.17	n/a	n/a	n/a	n/a	81	0	n/a	0.01569	NP Intra(n>table)
Fluoride - Total F [mg/L] (mg/L)	GVMW8B-50	2.99	n/a	n/a	n/a	n/a	69	0	n/a	0.02904	NP Intra(n>table)
Manganese - Dissolved [mg/L] (m...	GVMW8A-250	0.9541	n/a	n/a	n/a	n/a	28	3.571	x^2	0.01	Intra
Manganese - Dissolved [mg/L] (m...	GVMW8B-50	.135	n/a	n/a	n/a	n/a	20	80	n/a	.3585	NP Intra(NDs)
pH Field [pH unit] (su)	GVMW8A-250	7.52	6.455	n/a	n/a	n/a	87	0	n/a	0.06434	NP Intra(normal...
pH Field [pH unit] (su)	GVMW8B-50	7.27	6.44	n/a	n/a	n/a	73	0	n/a	0.1145	NP Intra(normal...

Tukey's Outlier Screening

GVMW8B-50



n = 70

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

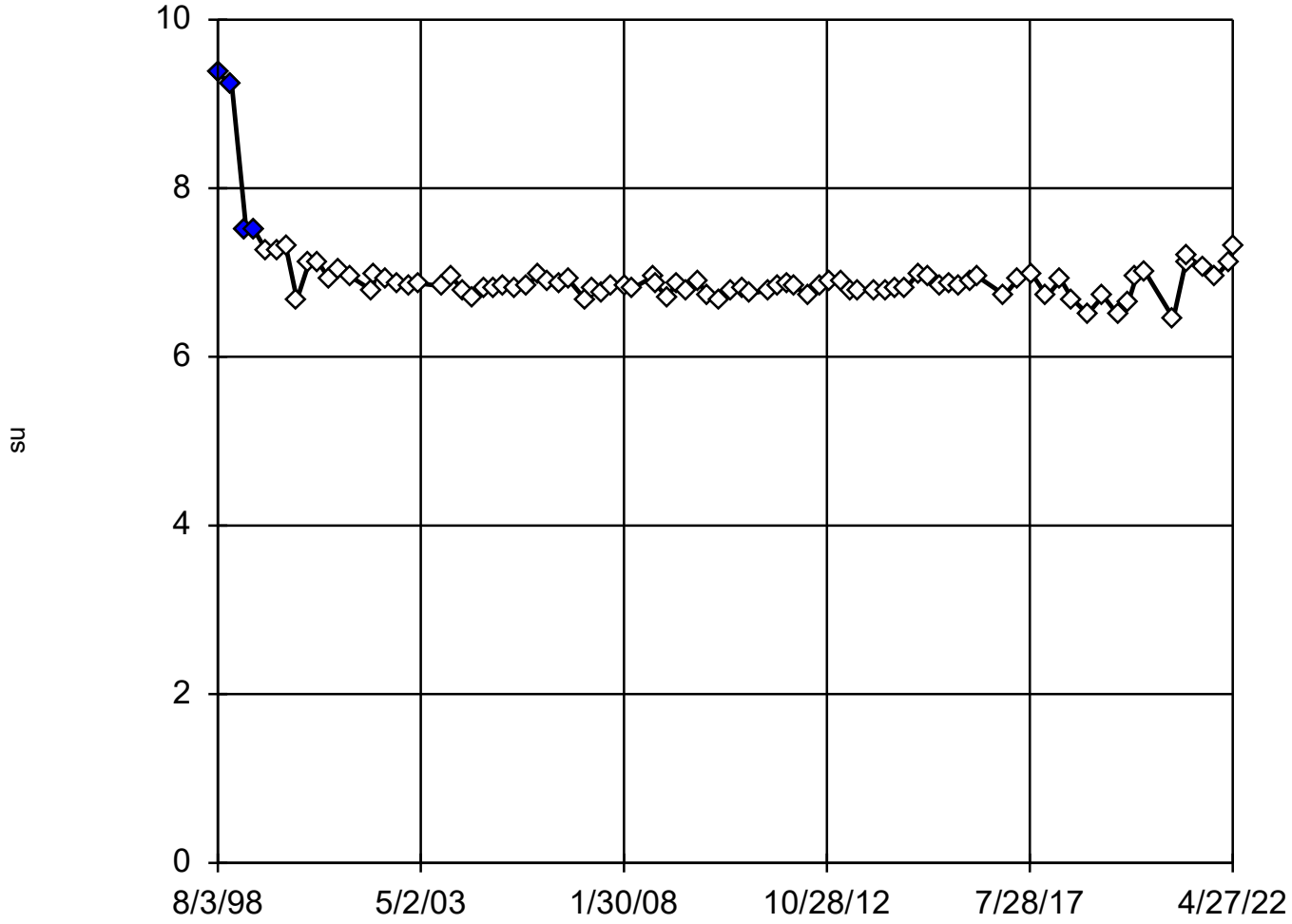
High cutoff = 3.132, low cutoff = -1.728, based on IQR multiplier of 3.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/12/2022 11:04 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Tukey's Outlier Screening

GVMW8A-250



n = 89

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

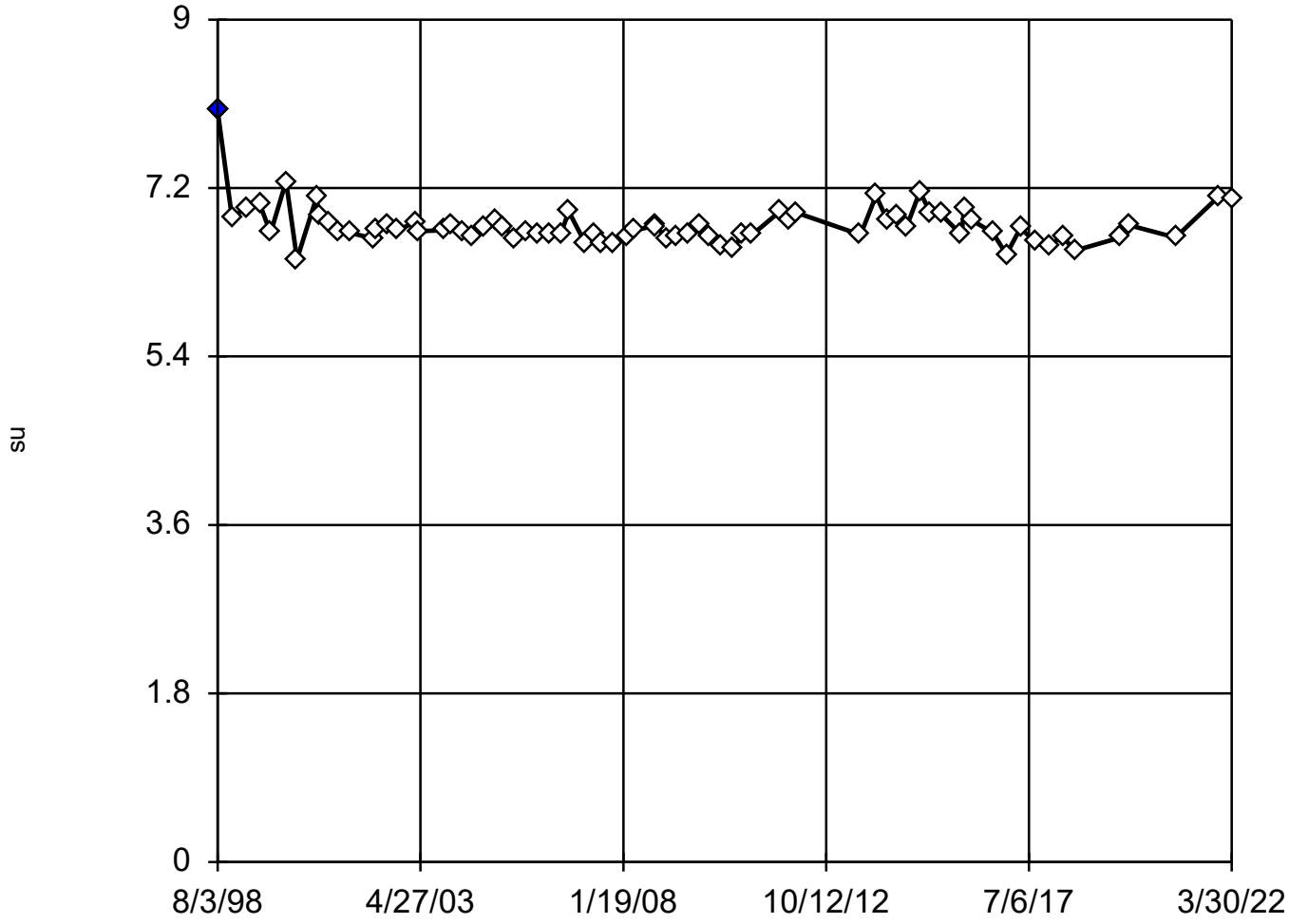
High cutoff = 7.472, low cutoff = 6.316, based on IQR multiplier of 3.

Constituent: pH Field [pH unit] Analysis Run 10/12/2022 11:04 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Tukey's Outlier Screening

GVMW8B-50



n = 74

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

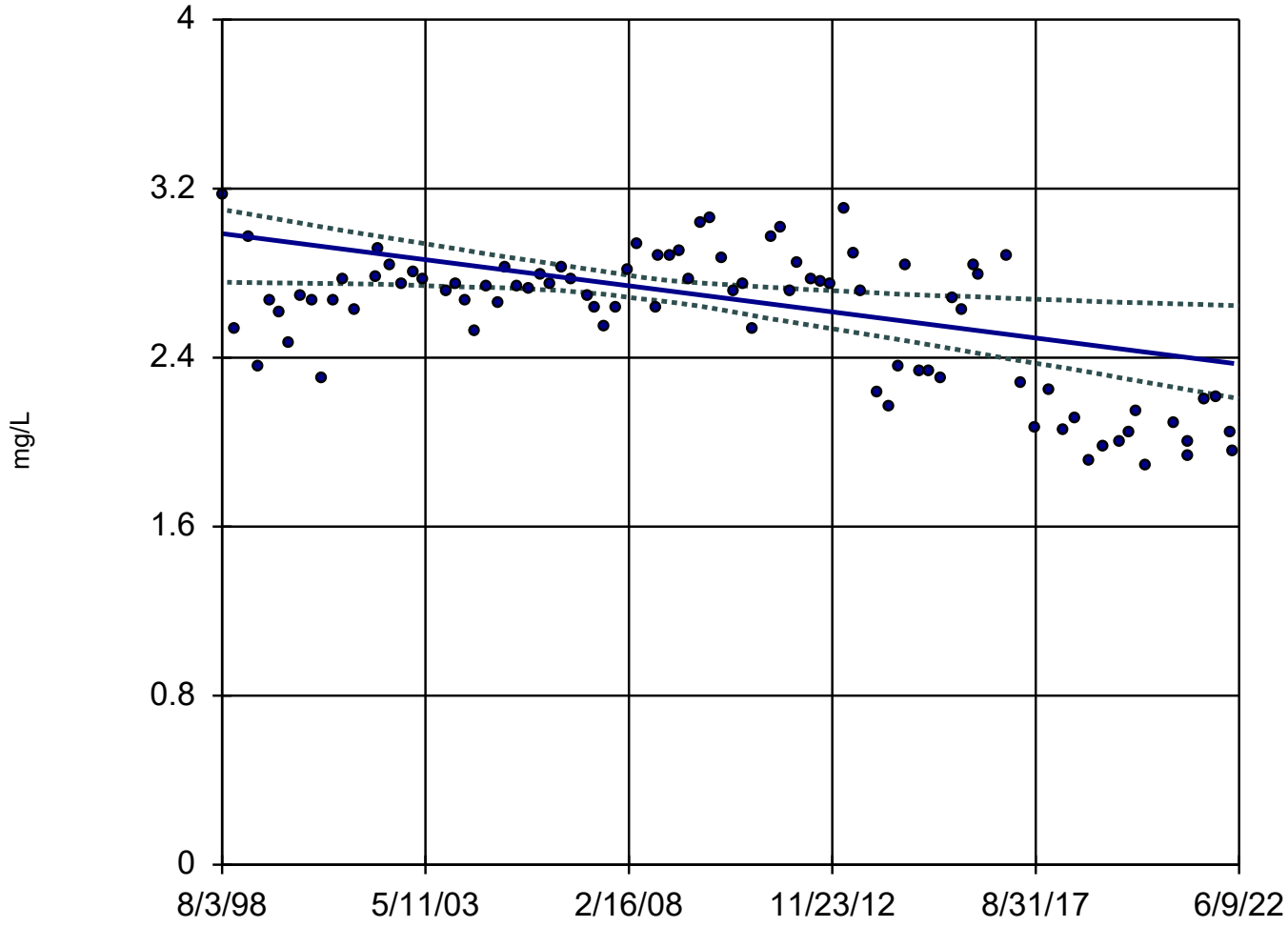
High cutoff = 7.432, low cutoff = 6.182, based on IQR multiplier of 3.

Constituent: pH Field [pH unit] Analysis Run 10/12/2022 11:04 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Sen's Slope Estimator

GVMW8A-250



n = 89

Slope = -0.02588 units per year.

Mann-Kendall normal approx. = -4.049
critical = -2.33

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

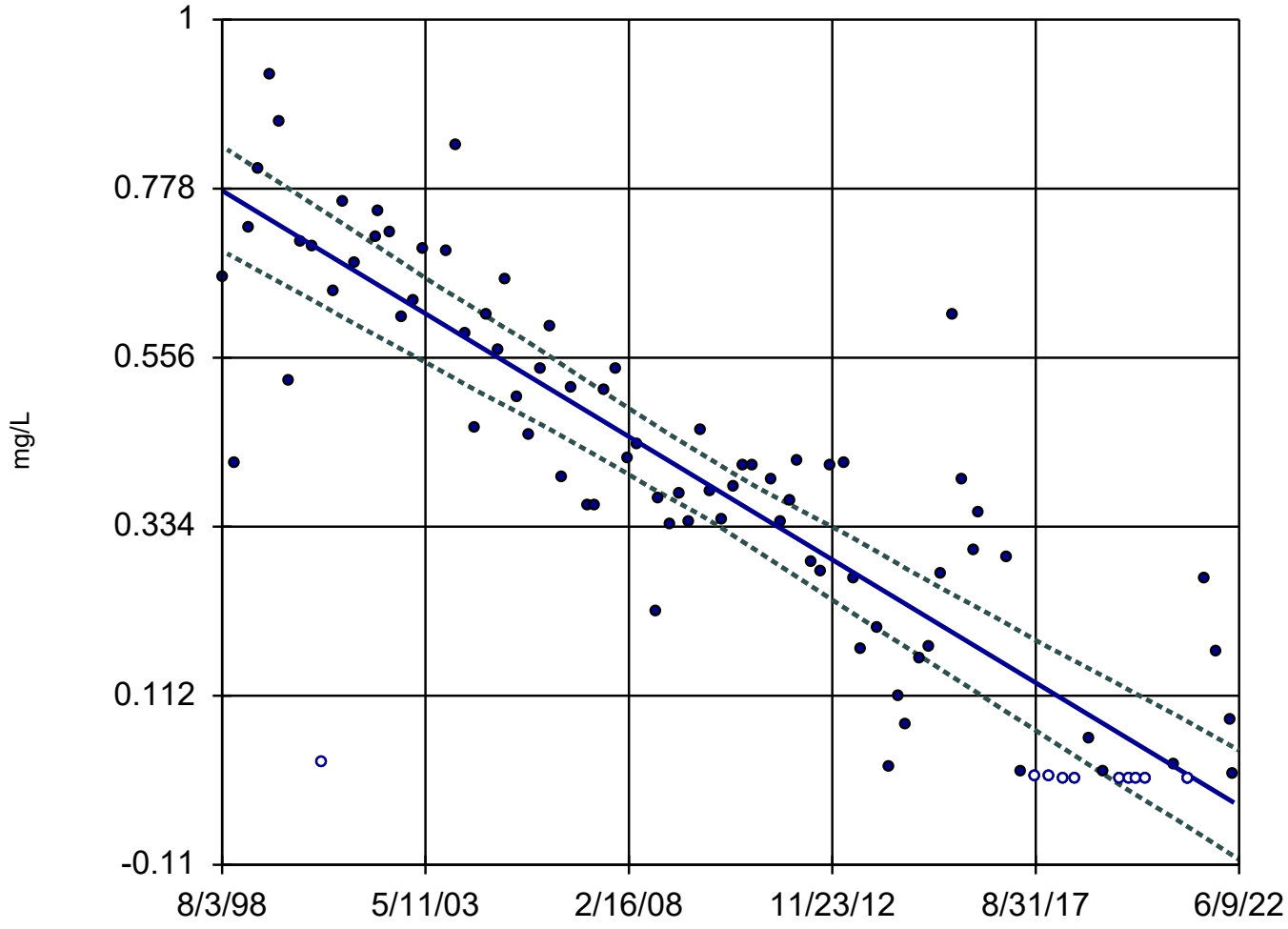
Constituent: Fluoride - Total F [mg/L] Analysis Run 10/12/2022 12:48 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

GVMW8A-250



n = 89

Slope = -0.03385 units per year.

Mann-Kendall normal approx. = -9.622
critical = -2.33

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

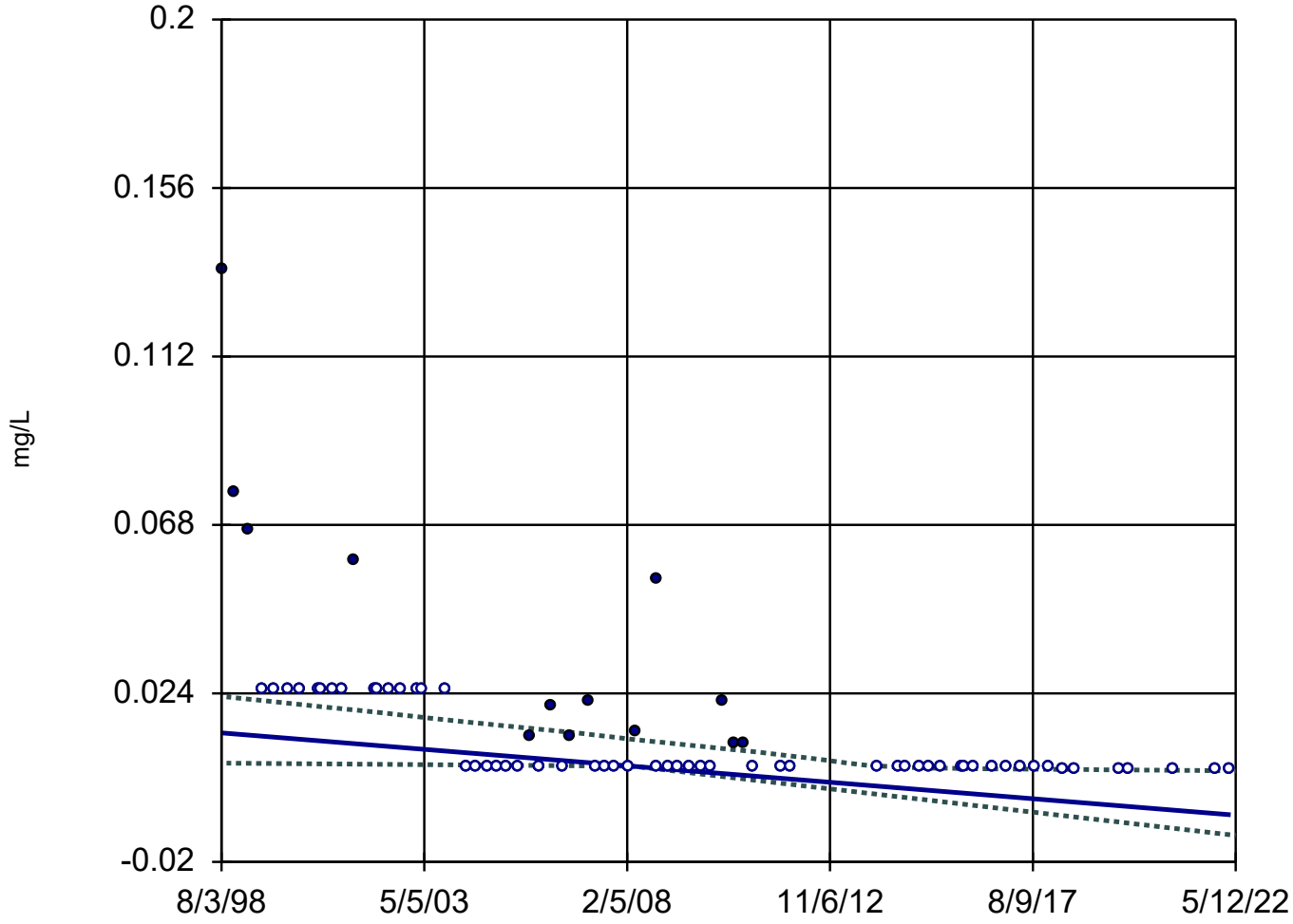
Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/12/2022 12:48 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

GVMW8B-50



n = 70

Slope = -0.0009038 units per year.

Mann-Kendall normal approx. = -7.65
critical = -2.33

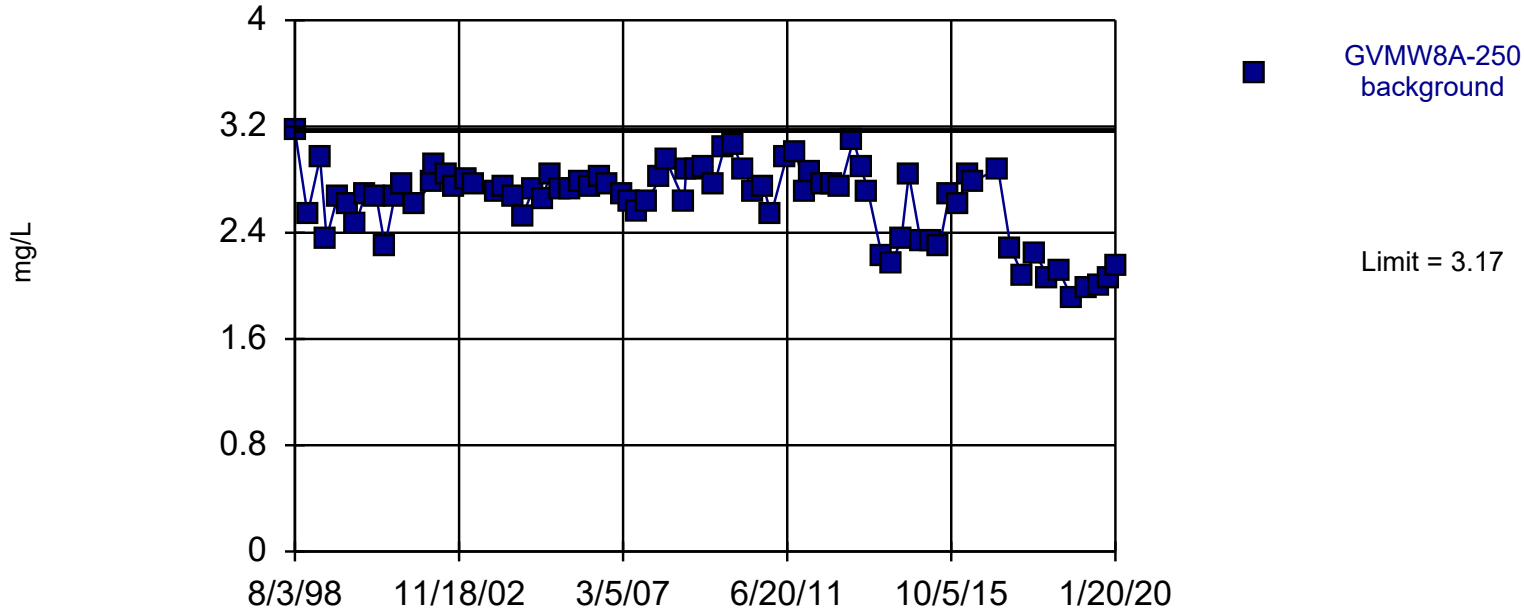
Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/21/2022 10:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Non-parametric, GVMW8A-250



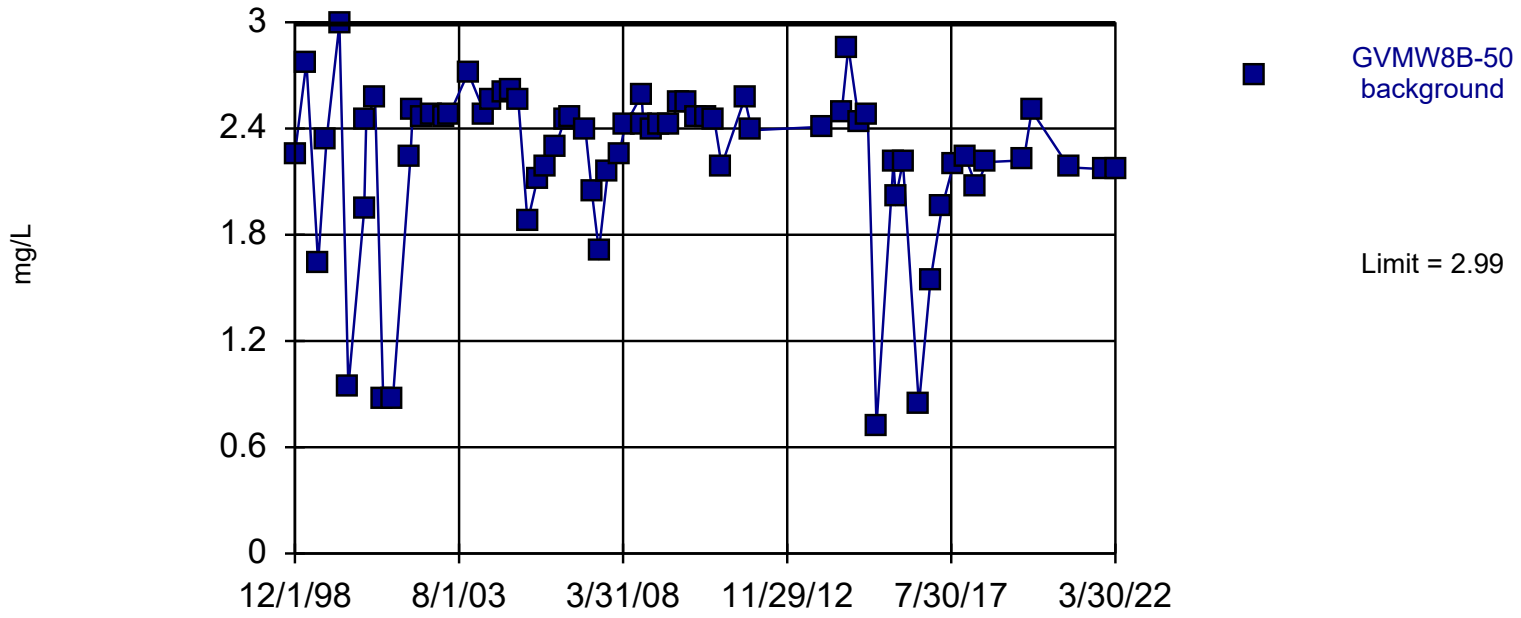
Non-parametric test used in lieu of parametric tolerance limit because no value exists in the tolerance factor table for n = 81, alpha = 0.01, one-tailed. Limit is highest of 81 background values. 94.34% coverage at alpha=0.01; 96.29% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.01569.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 8:57 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Non-parametric, GVMW8B-50



Non-parametric test used in lieu of parametric tolerance limit because no value exists in the tolerance factor table for n = 69, alpha = 0.01, one-tailed. Limit is highest of 69 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

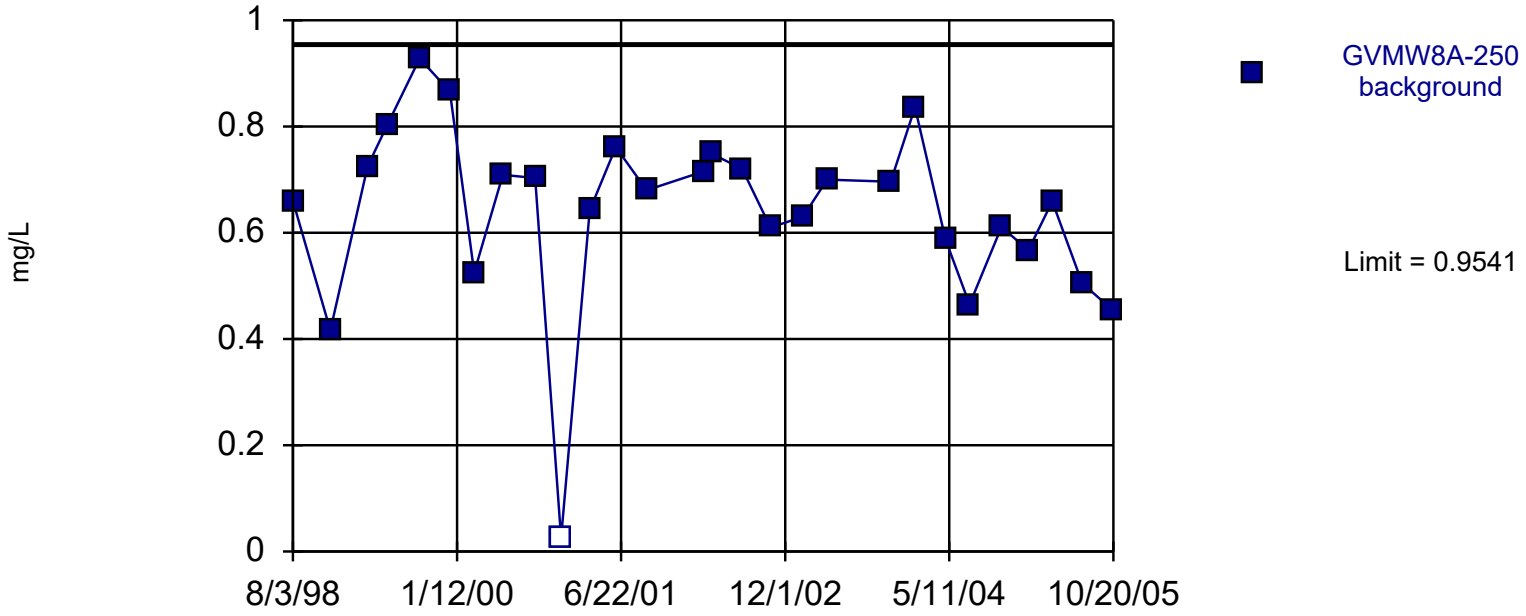
Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 8:57 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Parametric, GVMW8A-250



95% coverage. Background Data Summary (based on square transformation): Mean=0.4393, Std. Dev.=0.1838, n=28, 3.571% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9878, critical = 0.896. Report alpha = 0.01.

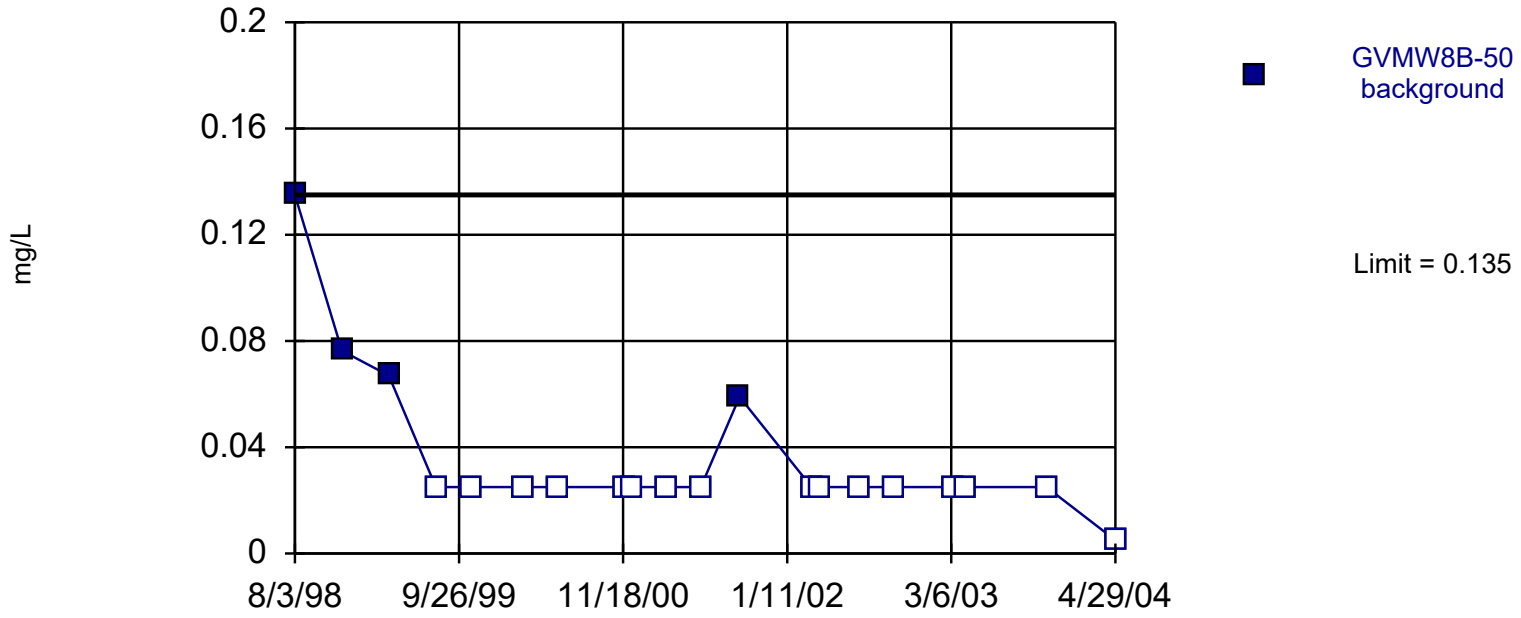
Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/13/2022 8:57 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, GVMW8B-50



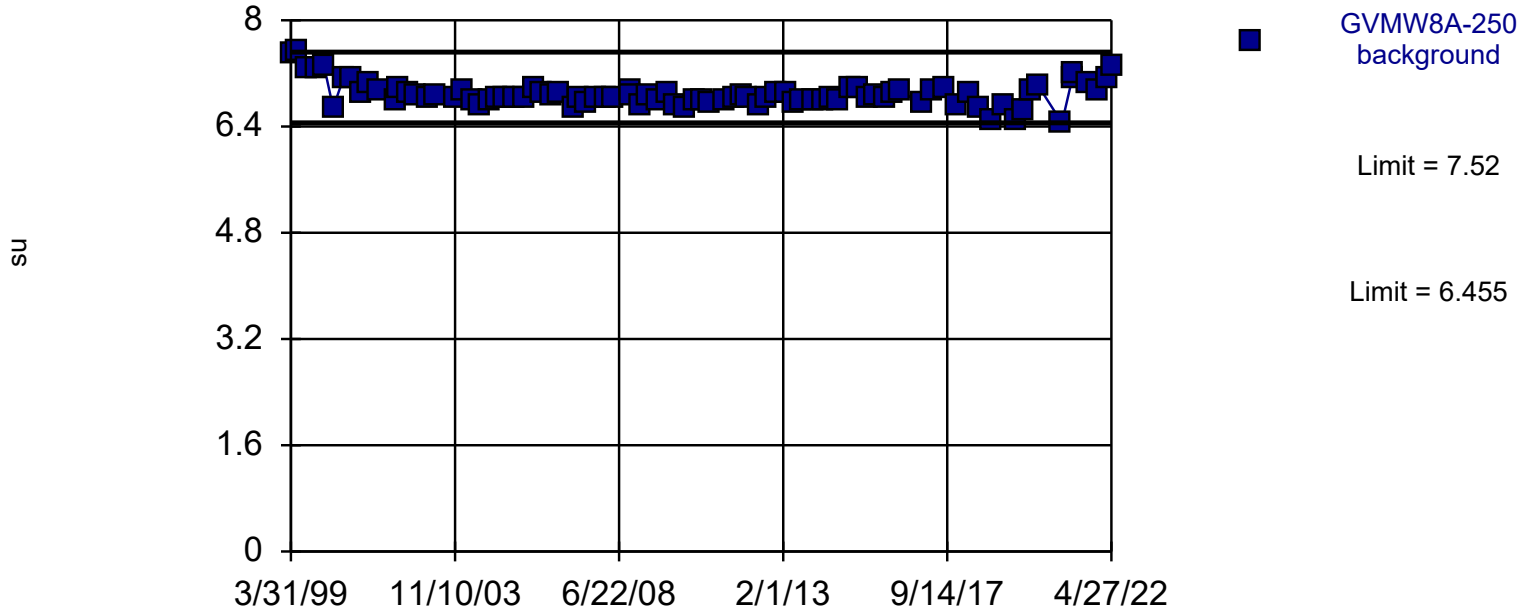
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 20 background values. 80% NDs. 79.49% coverage at alpha=0.01; 86.13% coverage at alpha=0.05; 96.68% coverage at alpha=0.5. Report alpha = 0.3585.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/21/2022 12:02 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Non-parametric, GVMW8A-250



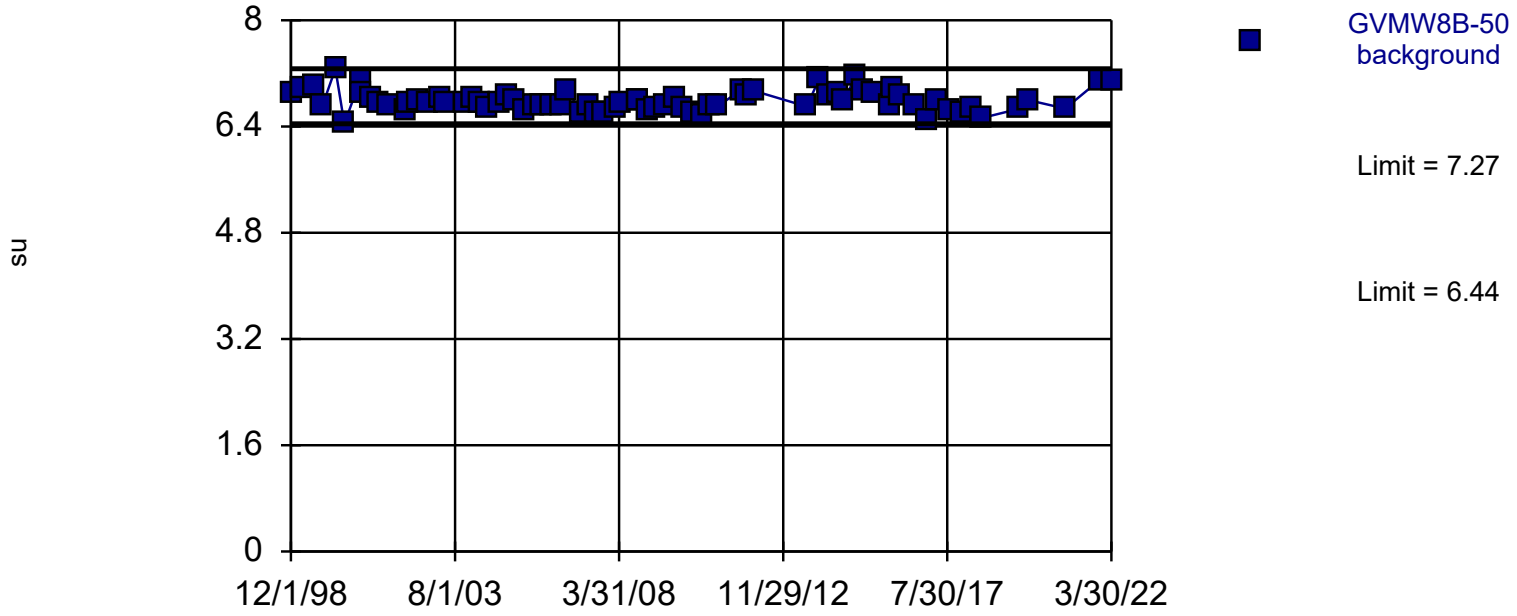
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 87 background values. 92.77% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.24% coverage at alpha=0.5. Report alpha = 0.06434 (0.03217 per tail).

Constituent: pH Field [pH unit] Analysis Run 12/22/2022 1:56 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Non-parametric, GVMW8B-50



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 73 background values. 91.21% coverage at alpha=0.01; 93.55% coverage at alpha=0.05; 97.85% coverage at alpha=0.5. Report alpha = 0.1145 (0.05726 per tail).

Constituent: pH Field [pH unit] Analysis Run 10/13/2022 8:58 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Vindicator Valley
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf Printed 10/10/2022, 1:42 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Iron - Dissolved [mg/L] (mg/L)	VIN2B-270	No	n/a	n/a	NP (nrm)	NaN	58	.2297	.2583	unknown	ShapiroWilk
Manganese - Dissolved [mg/L] (m...	**VIN2B-140**	**Yes**	**0.781,4.54**	**7/19/2005...**	**Rosner`s**	**0.01**	**59**	**2.789**	**0.5694**	**normal**	**ShapiroFrancia**
Sulfate - Total [mg/L] (mg/L)	**VIN2B-140**	**Yes**	**548**	**7/2/2004**	**NP (nrm)**	**NaN**	**59**	**720.8**	**45.74**	**unknown**	**ShapiroFrancia**

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/10/2022, 2:39 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Iron - Dissolved [mg/L] (mg/L)	**VIN2B-270**	**0.01692**	**2.849**	**2.102**	**Yes**	**59**	**32.2**	**Yes**	**square...**	**0.02**	**Param.**
Manganese - Dissolved [mg/L] (m...	VIN2B-140	0.01797	1.432	2.33	No	59	0	n/a	n/a	0.02	NP
Sulfate - Total [mg/L] (mg/L)	VIN2B-140	1.175	0.905	2.33	No	58	0	n/a	n/a	0.02	NP

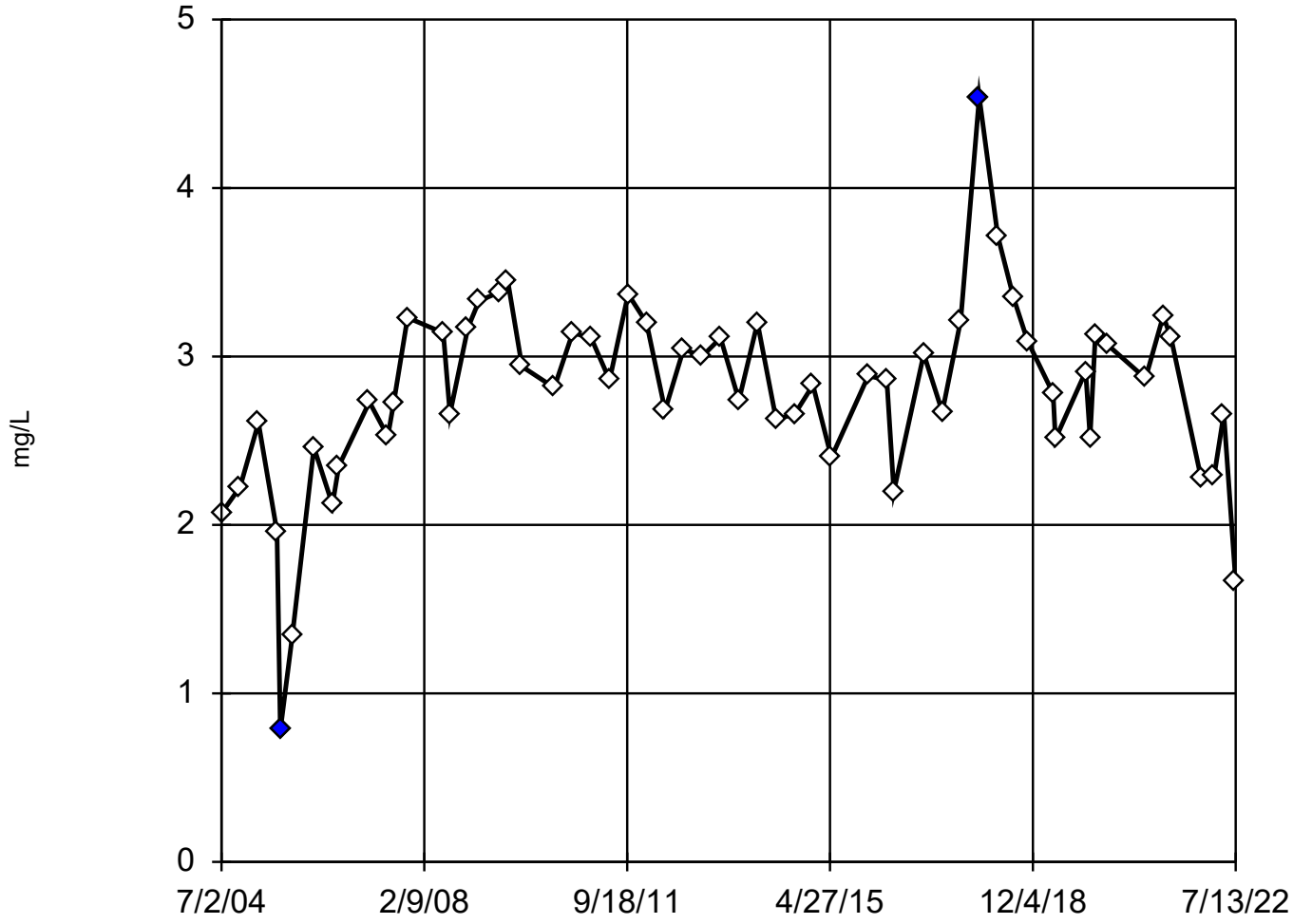
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/10/2022, 3:13 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Iron - Dissolved [mg/L] (mg/L)	VIN2B-140	.909	n/a	n/a	n/a	58	32.76	n/a	0.05105	NP Intra(normal...
Manganese - Dissolved [mg/L] (m...	VIN2B-140	3.715	n/a	n/a	n/a	57	0	n/a	0.05373	NP Intra(normal...
Sulfate - Total [mg/L] (mg/L)	VIN2B-140	779	n/a	n/a	n/a	58	0	n/a	0.05105	NP Intra(n>table)

Rosner's Outlier Test

VIN2B-140



n = 59

Statistical outliers are drawn as solid.

k = 4
r = 3.379
Tabulated value = 2.965
Alpha = 0.01

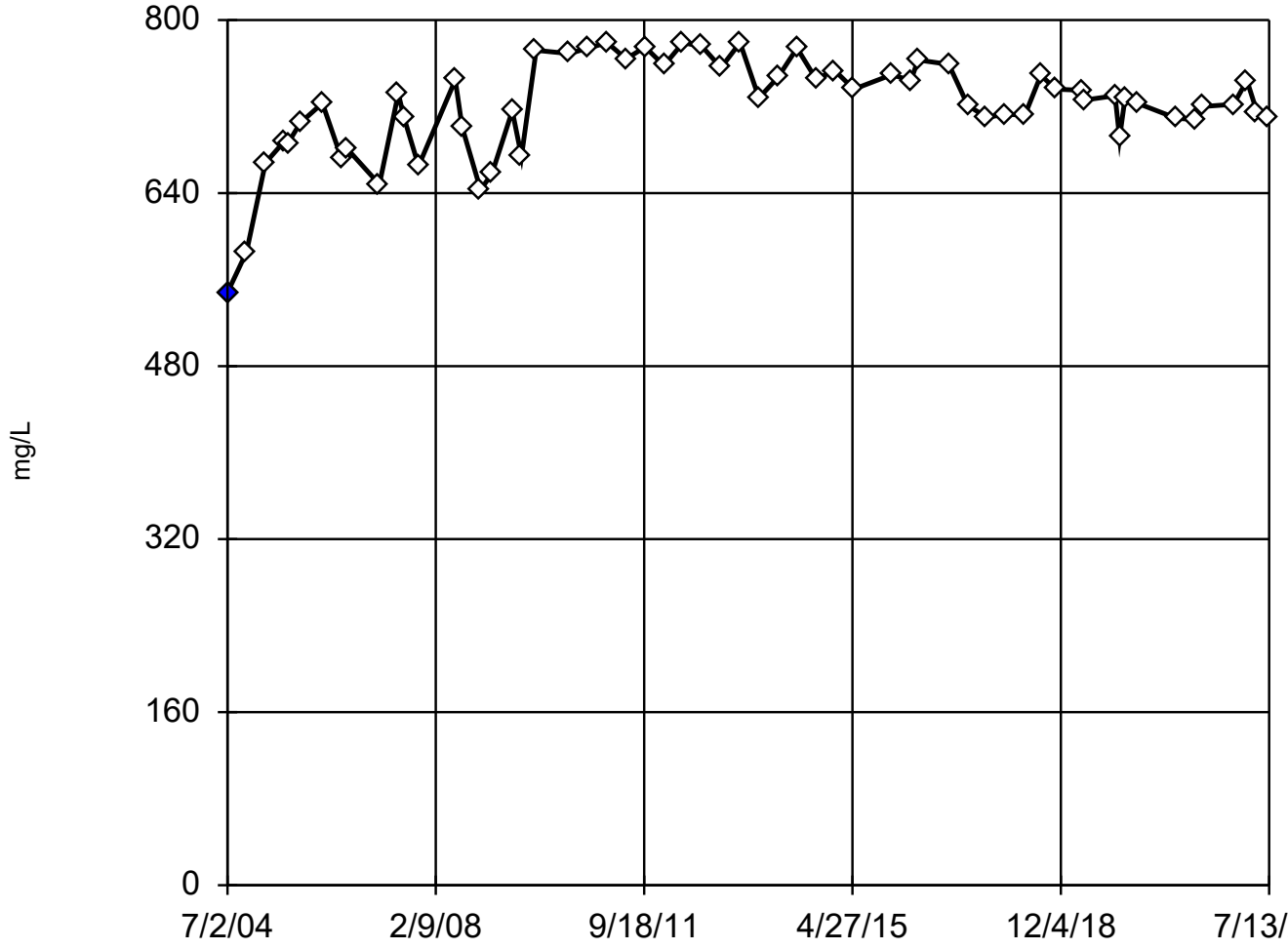
Normality test used:
Shapiro Francia@alpha = 0.01
Calculated = 0.9547
Critical = 0.944
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/10/2022 1:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Tukey's Outlier Screening

VIN2B-140



n = 59

Outlier is drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.01 alpha level.

High cutoff = 897, low cutoff = 561, based on IQR multiplier of 3.

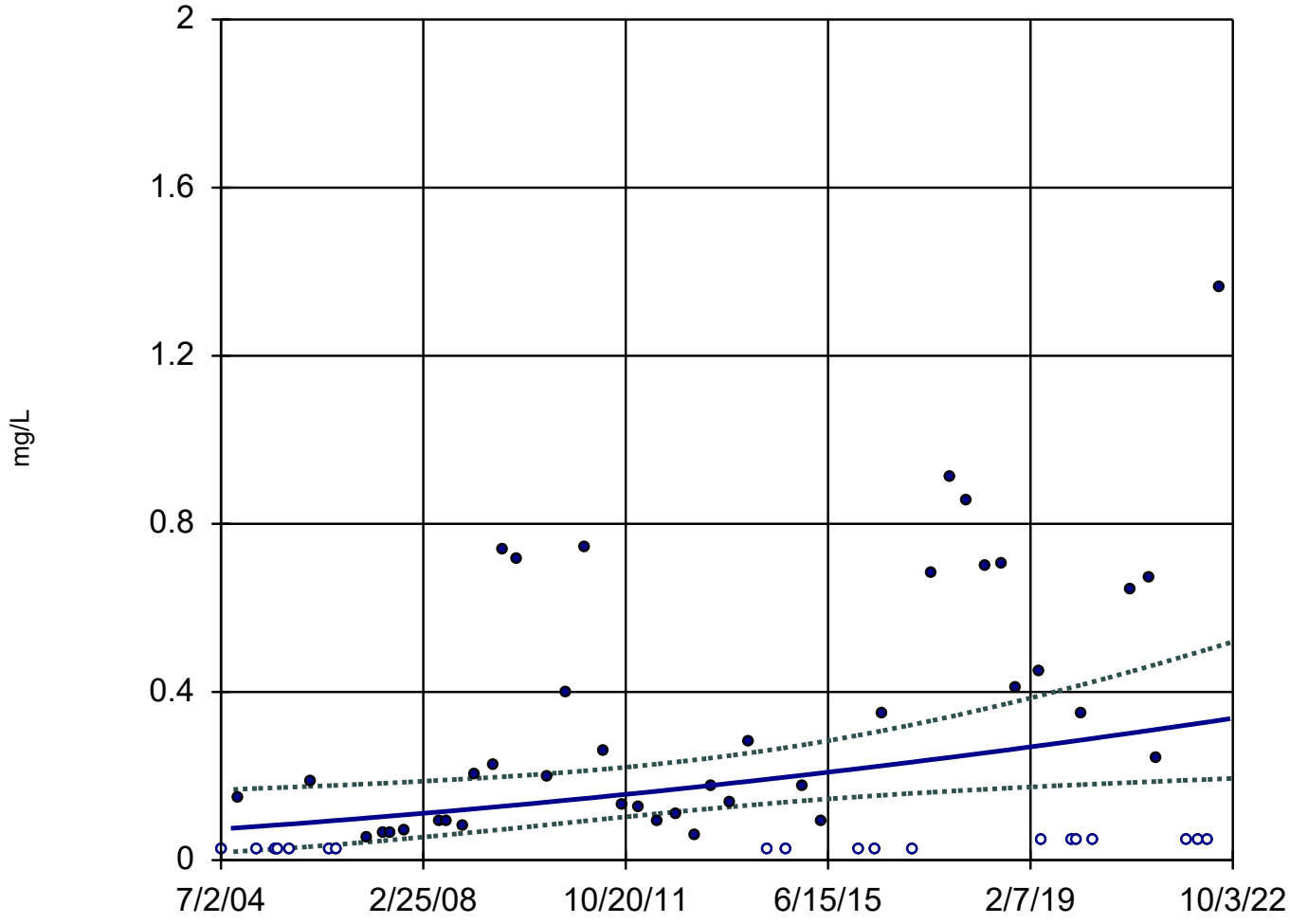
Constituent: Sulfate - Total [mg/L] Analysis Run 10/10/2022 1:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Hollow symbols indicate censored values.

Linear Regression and 95% Confidence Band

VIN2B-140



n = 59
32.2% NDs

Slope = 0.01692
square root units/year.

alpha = 0.02
t = 2.849
critical = 2.102

Significant increasing trend.

Normality test on residuals:
Shapiro Francia @alpha
= 0.01, calculated
= 0.95 after square
root transformation,
critical = 0.945.

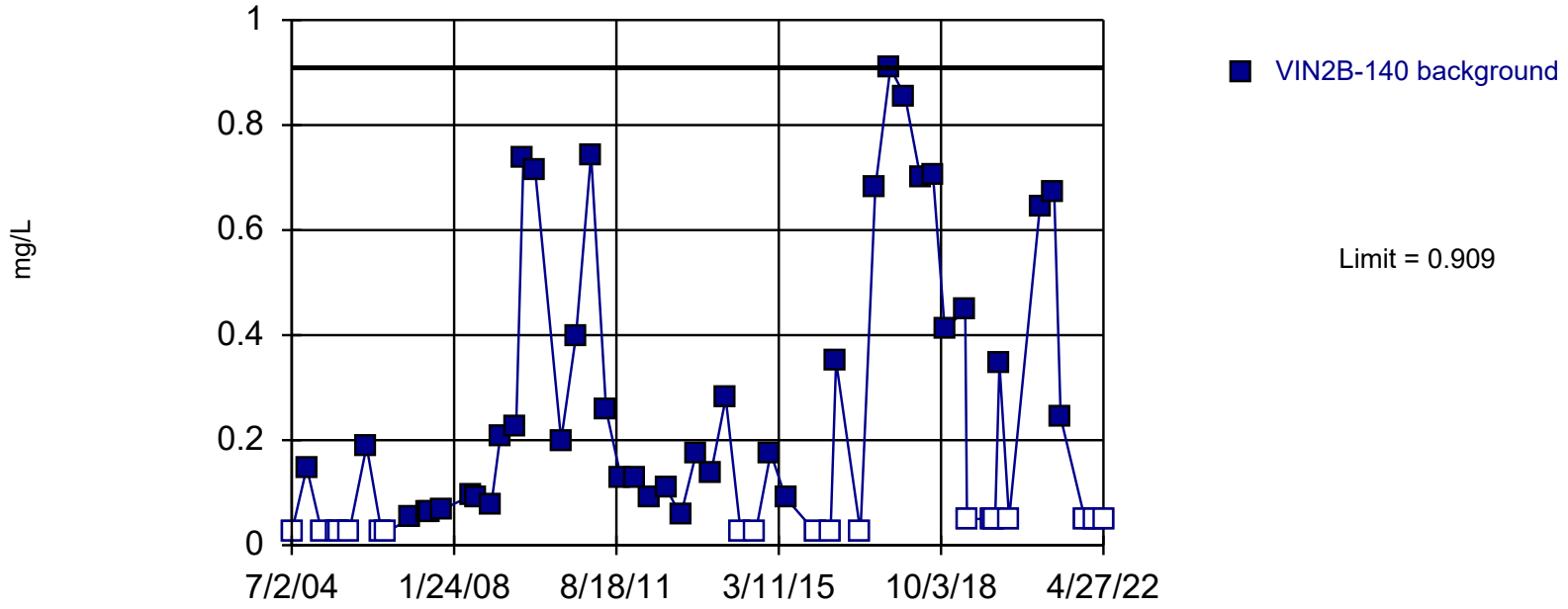
Constituent: Iron - Dissolved [mg/L] Analysis Run 12/21/2022 12:33 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, VIN2B-140



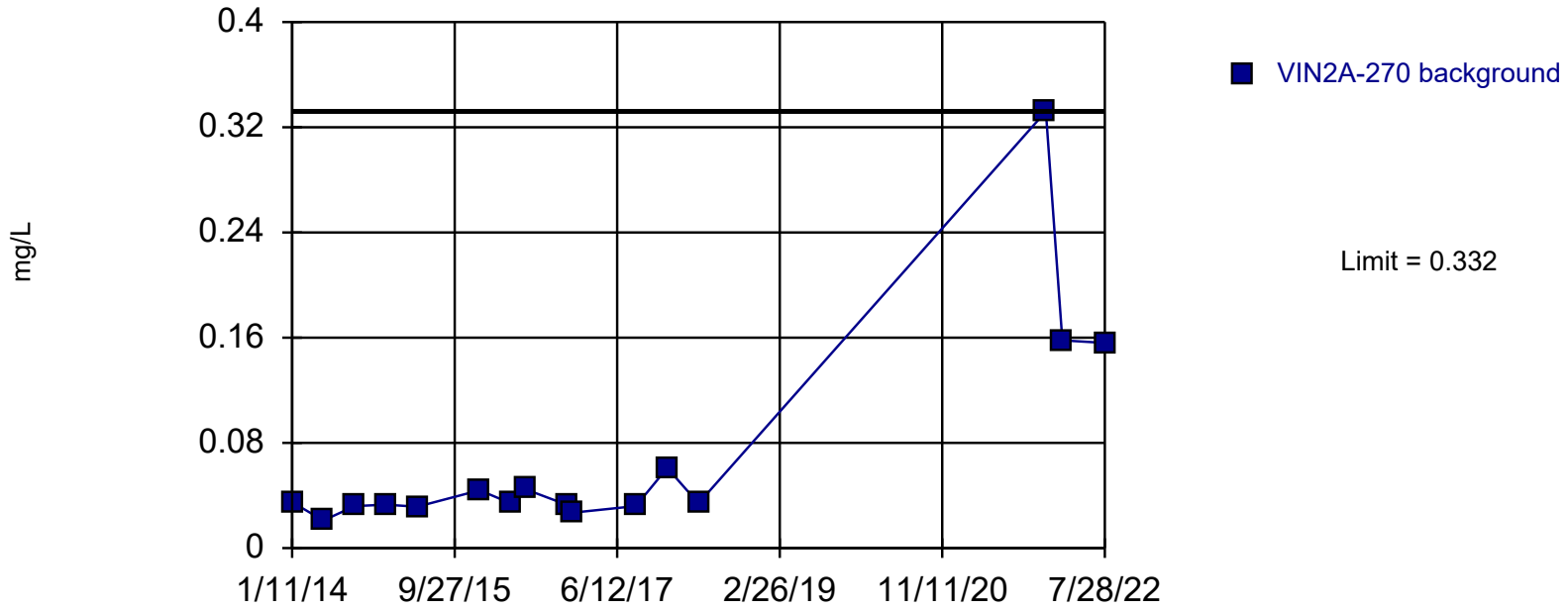
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 58 background values. 32.76% NDs. 92.38% coverage at alpha=0.01; 95.12% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05105.

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/21/2022 12:36 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Tolerance Limit

Intrawell Non-parametric, VIN2A-270



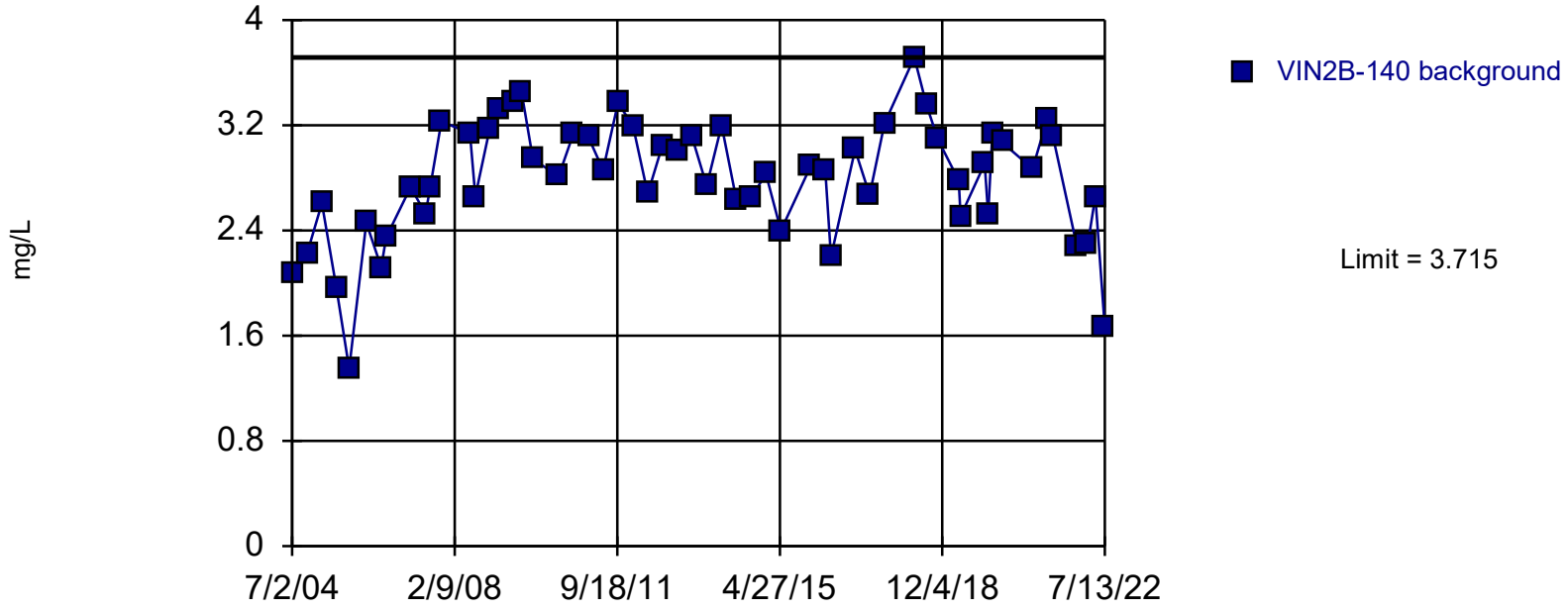
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. 74.8% coverage at alpha=0.01; 83.01% coverage at alpha=0.05; 95.9% coverage at alpha=0.5. Report alpha = 0.4401.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/10/2022 3:12 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Non-parametric, VIN2B-140



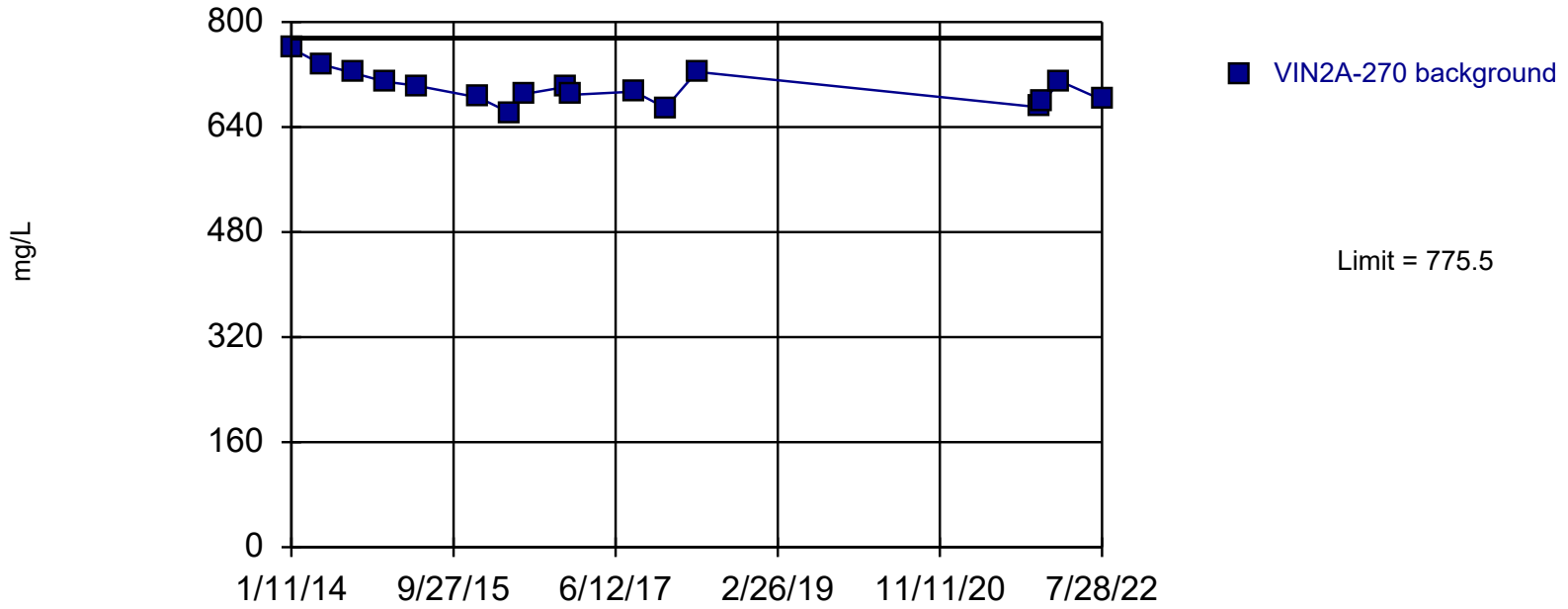
Non-parametric test used in lieu of parametric tolerance limit because no value exists in the tolerance factor table for n = 57, alpha = 0.01, one-tailed. Limit is highest of 57 background values. 92.38% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05373.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/25/2022 9:34 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Parametric, VIN2A-270



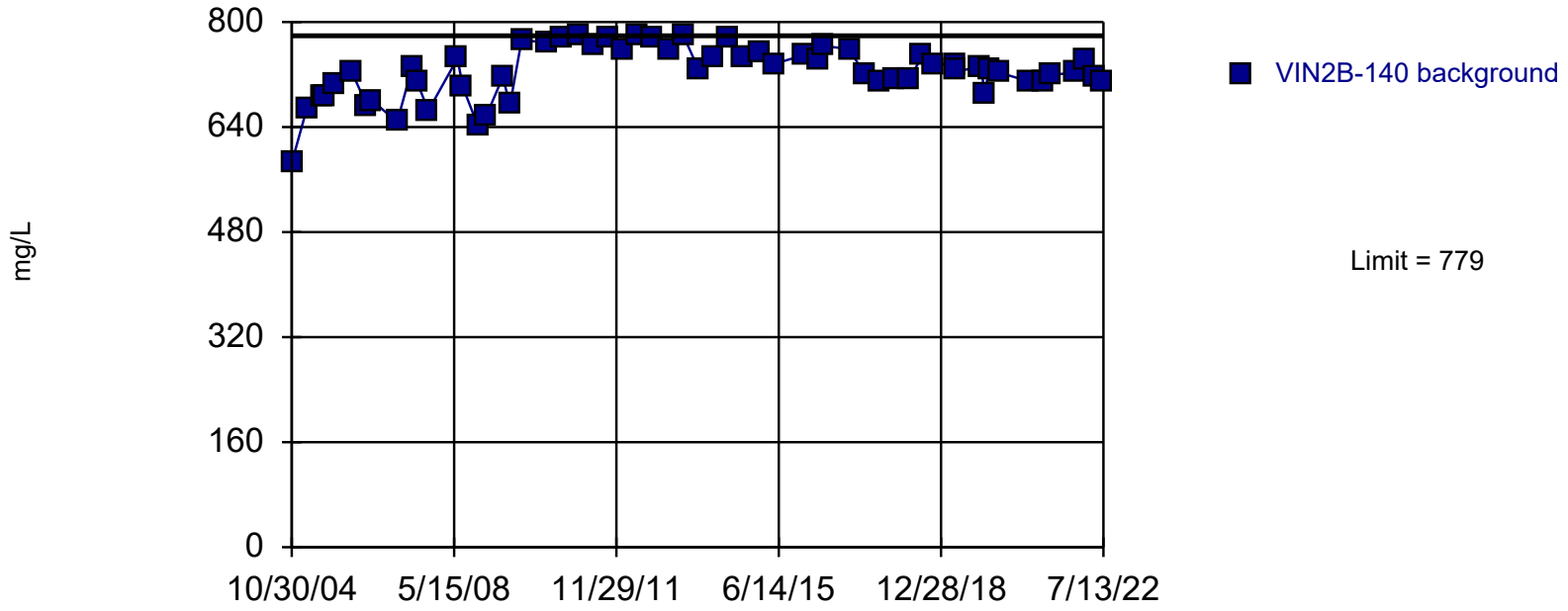
95% coverage. Background Data Summary: Mean=699, Std. Dev.=25.83, n=17. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9591, critical = 0.851. Report alpha = 0.01.

Constituent: Sulfate - Total [mg/L] Analysis Run 10/10/2022 3:12 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Non-parametric, VIN2B-140



Non-parametric test used in lieu of parametric tolerance limit because no value exists in the tolerance factor table for n = 58, alpha = 0.01, one-tailed. Limit is highest of 58 background values. 92.38% coverage at alpha=0.01; 95.12% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05105.

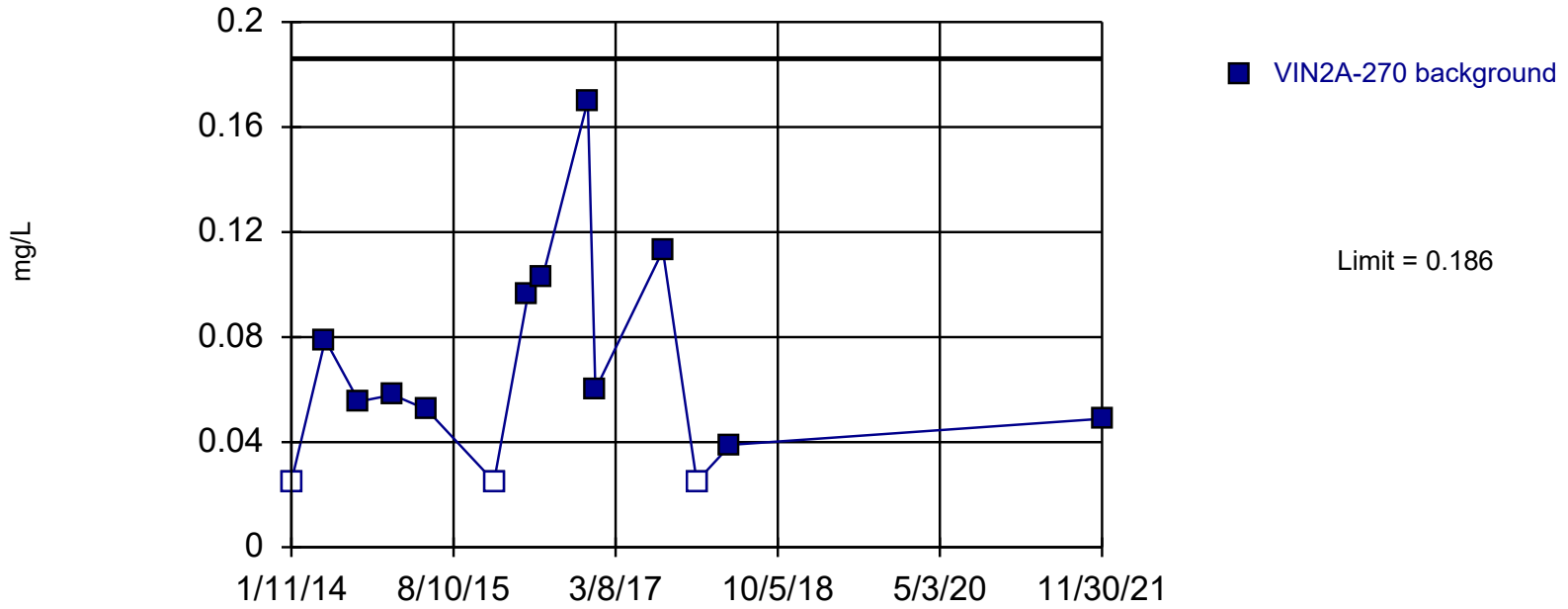
Constituent: Sulfate - Total [mg/L] Analysis Run 10/10/2022 3:12 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Parametric, VIN2A-270



95% coverage. Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.07191, Std. Dev.=0.03578, n=14, 21.43% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8851, critical = 0.825. Report alpha = 0.01.

Constituent: Zinc - Dissolved [mg/L] Analysis Run 10/10/2022 3:12 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Wilson Creek
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf Printed 10/12/2022, 10:07 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev	Distribution	Normality Test
Fluoride - Total F [mg/L] (mg/L)	**WCMW6-234**	**Yes**	**2.7,2.4,1...**	**6/27/1993...**	**NP**	**NaN**	**103**	**2.046**	**0.1271**	**normal**	**ShapiroFrancia**
Iron - Dissolved [mg/L] (mg/L)	**WCMW6-234**	**Yes**	**6.84,1.11,0.987,0.968,1.07,0.989**	**5/18/1998,11/24/1998,9/26/2000,12/1...**	**NP (nrm)**	**NaN**	**103**	**0.7571**	**0.6225**	**unknown**	**ChiSquared**
Manganese - Dissolved [mg/L] (mg/L)	**WCMW6-234**	**Yes**	**0.268,0.2055,0.241,0.245,0.1935**	**8/25/1997,12/11/2019,4/9/2020,4/22/2...**	**NP (nrm)**	**NaN**	**103**	**0.1605**	**0.02829**	**unknown**	**ChiSquared**

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/12/2022, 12:30 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	**WCMW6-234**	**-0.00...**	**-4.122**	**-2.33**	**Yes**	**103**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Iron - Dissolved [mg/L] (mg/L)	**WCMW6-234**	**0.006439**	**5.954**	**2.33**	**Yes**	**102**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Manganese - Dissolved [mg/L] (m...	**WCMW6-234**	**0.000524**	**3.727**	**2.33**	**Yes**	**103**	**1.942**	**n/a**	**n/a**	**0.02**	**NP**

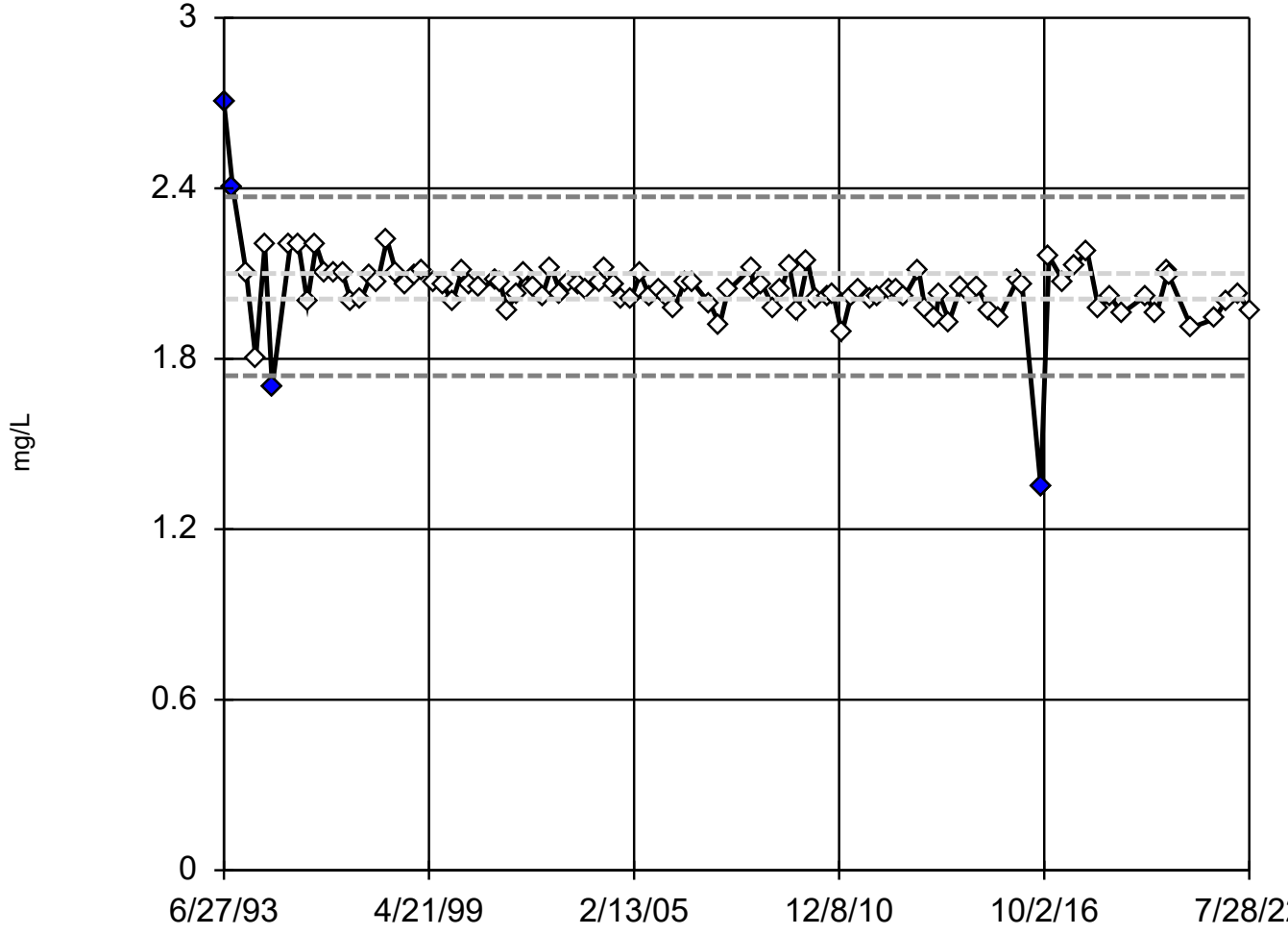
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem Printed 10/13/2022, 8:55 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	WCMW6-234	2.22	n/a	n/a	n/a	n/a	61	0	n/a	0.04377	NP Intra(normal...
Iron - Dissolved [mg/L] (mg/L)	WCMW6-234	1.11	n/a	n/a	n/a	n/a	69	0	n/a	0.02904	NP Intra(normal...
Manganese - Dissolved [mg/L] (m...	WCMW6-234	0.268	n/a	n/a	n/a	n/a	95	2.105	n/a	0.007651	NP Intra(normal...

Tukey's Outlier Screening

WCMW6-234



n = 103

Outliers are drawn as solid.
Tukey's method selected by user.

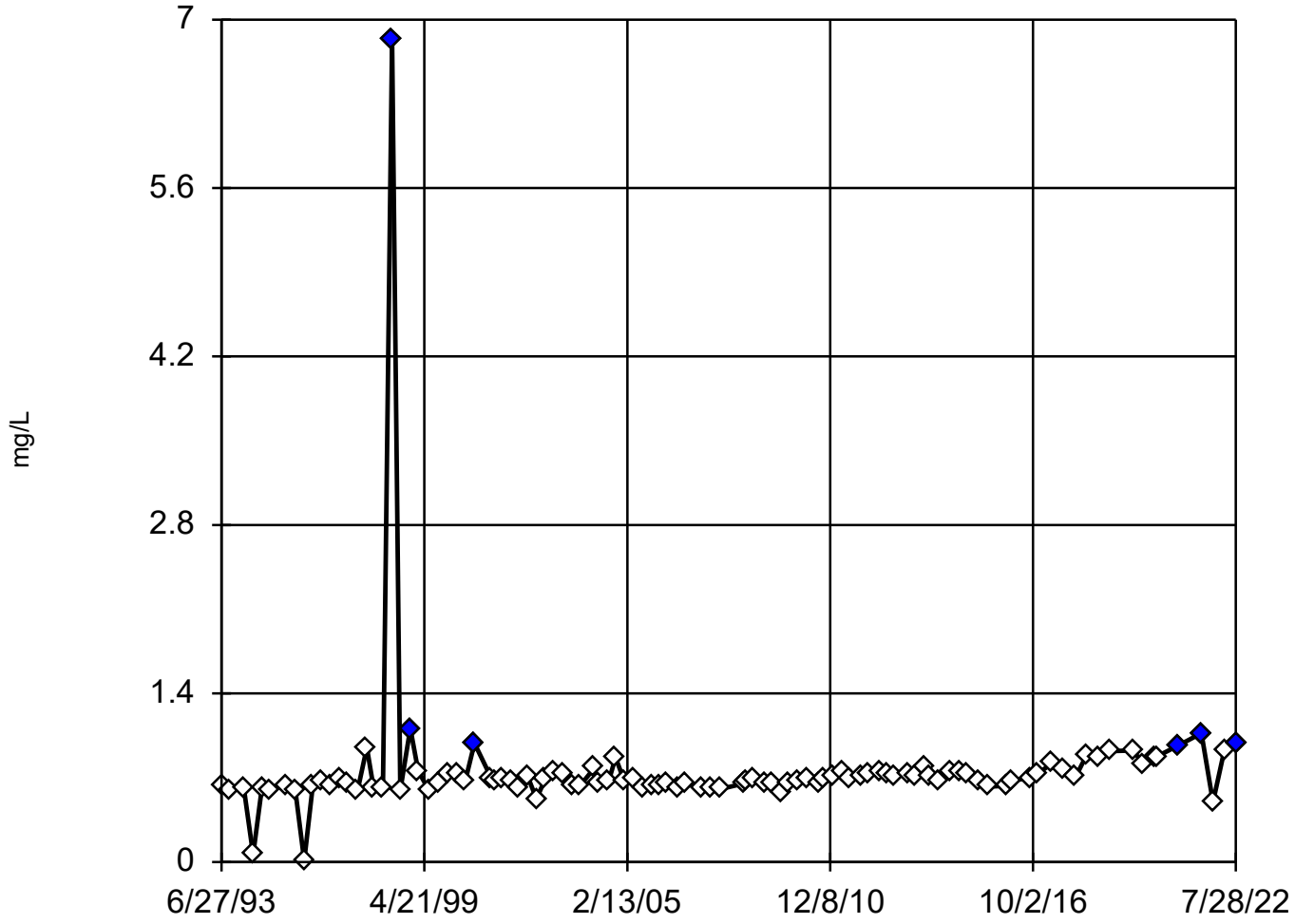
High cutoff = 2.37, low cutoff = 1.74, based on IQR multiplier of 3.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/12/2022 1:57 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tukey's Outlier Screening

WCMW6-234



n = 103

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Chi Squared normality test failed at the 0.01 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

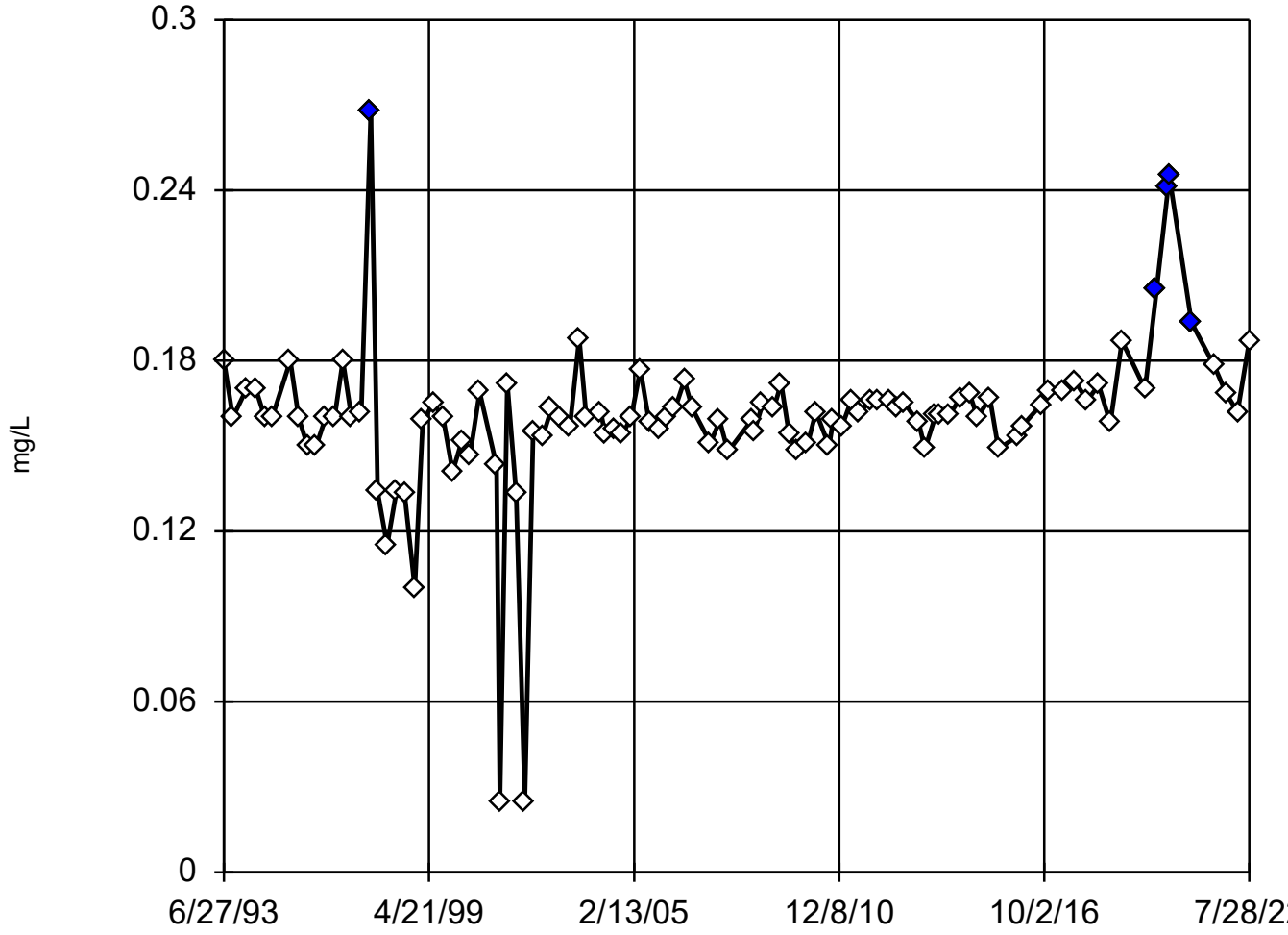
High cutoff = 0.9658, low cutoff = -0.6116, based on IQR multiplier of 3.

Constituent: Iron - Dissolved [mg/L] Analysis Run 10/12/2022 10:02 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Tukey's Outlier Screening

WCMW6-234



n = 103

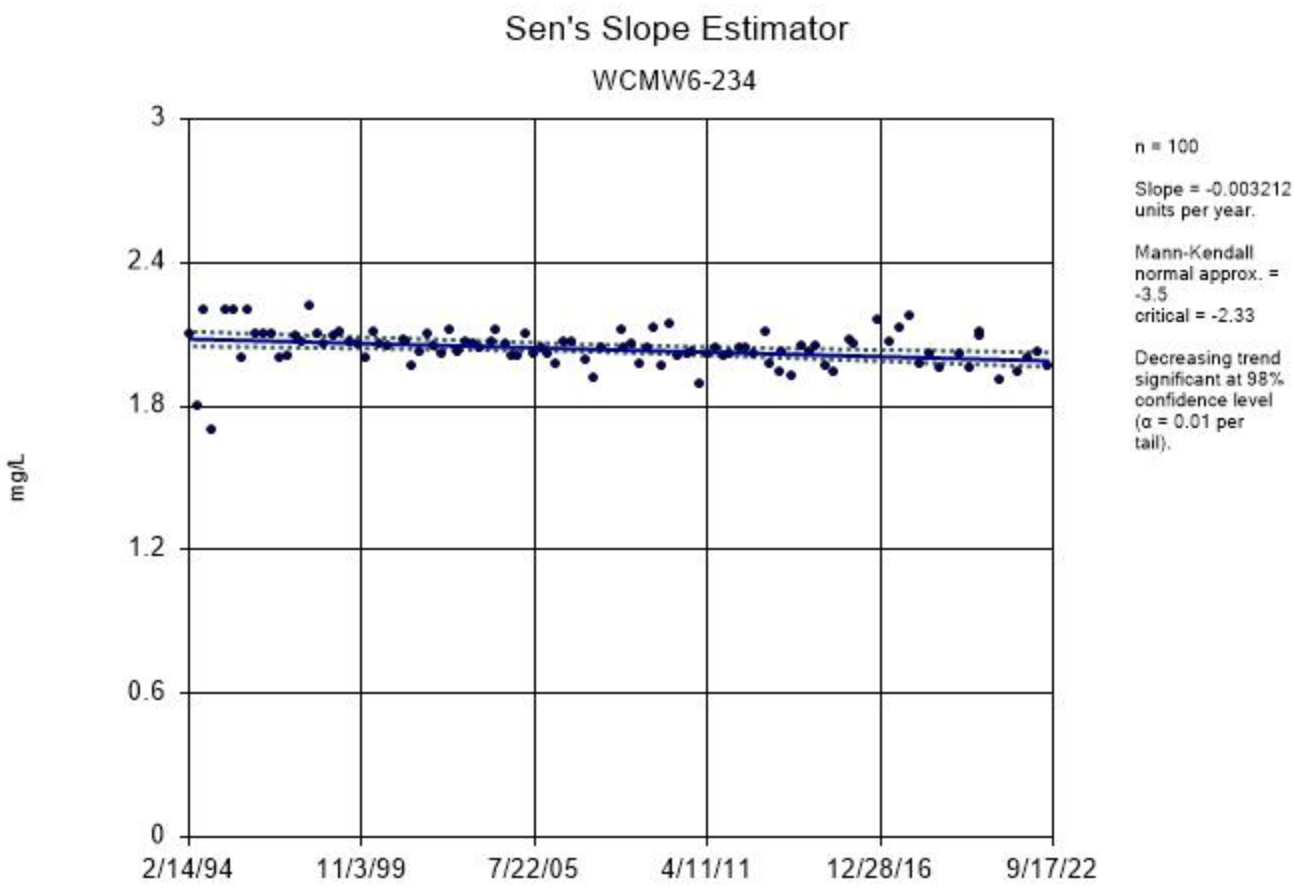
Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Francia normality test failed at the 0.01 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.1919, low cutoff = -0.1554, based on IQR multiplier of 3.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/12/2022 10:02 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

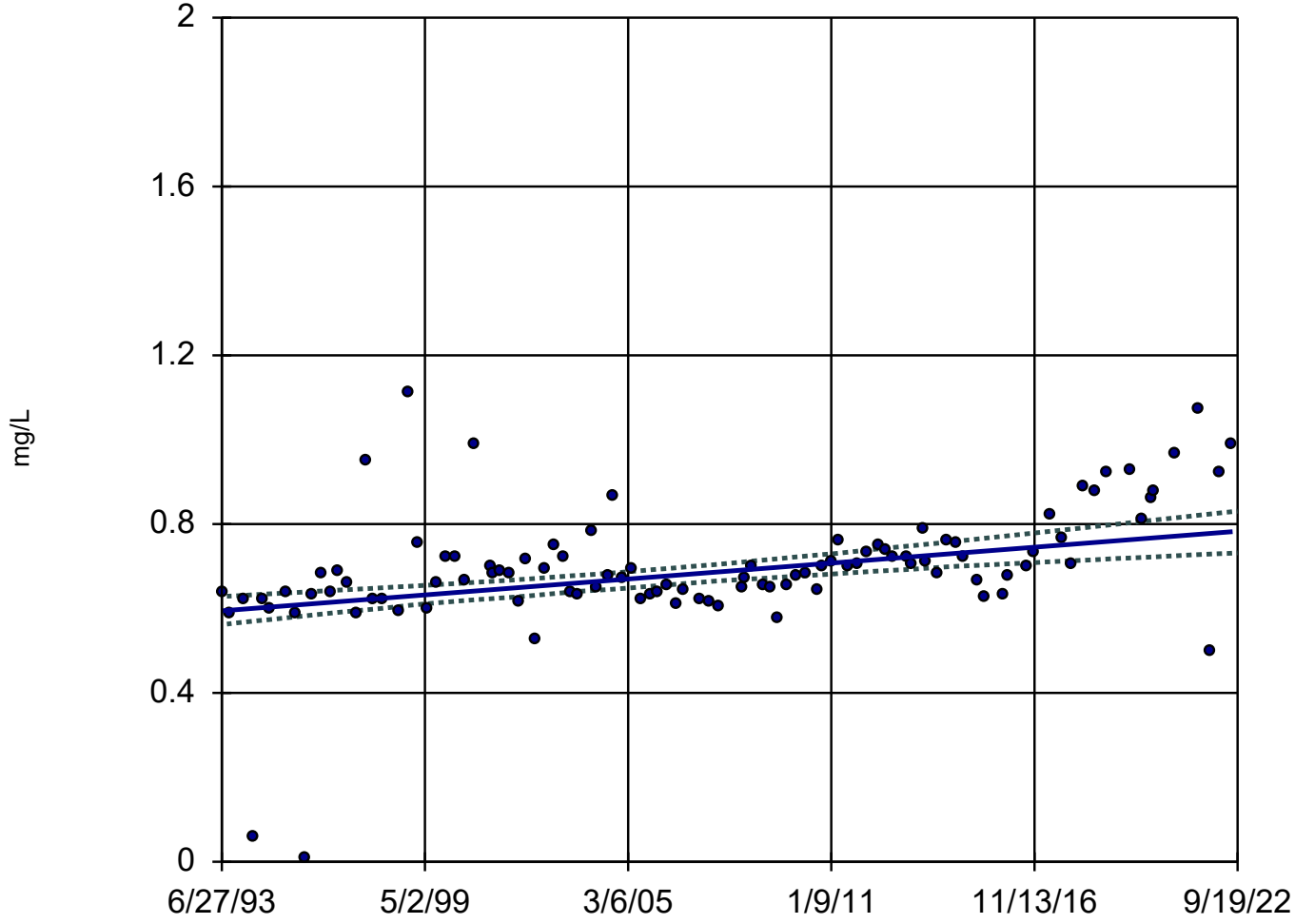


Constituent: Fluoride - Total F [mg/L] Analysis Run 10/12/2022 2:13 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Sen's Slope Estimator

WCMW6-234



n = 102

Slope = 0.006439 units per year.

Mann-Kendall normal approx. = 5.954
critical = 2.33

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

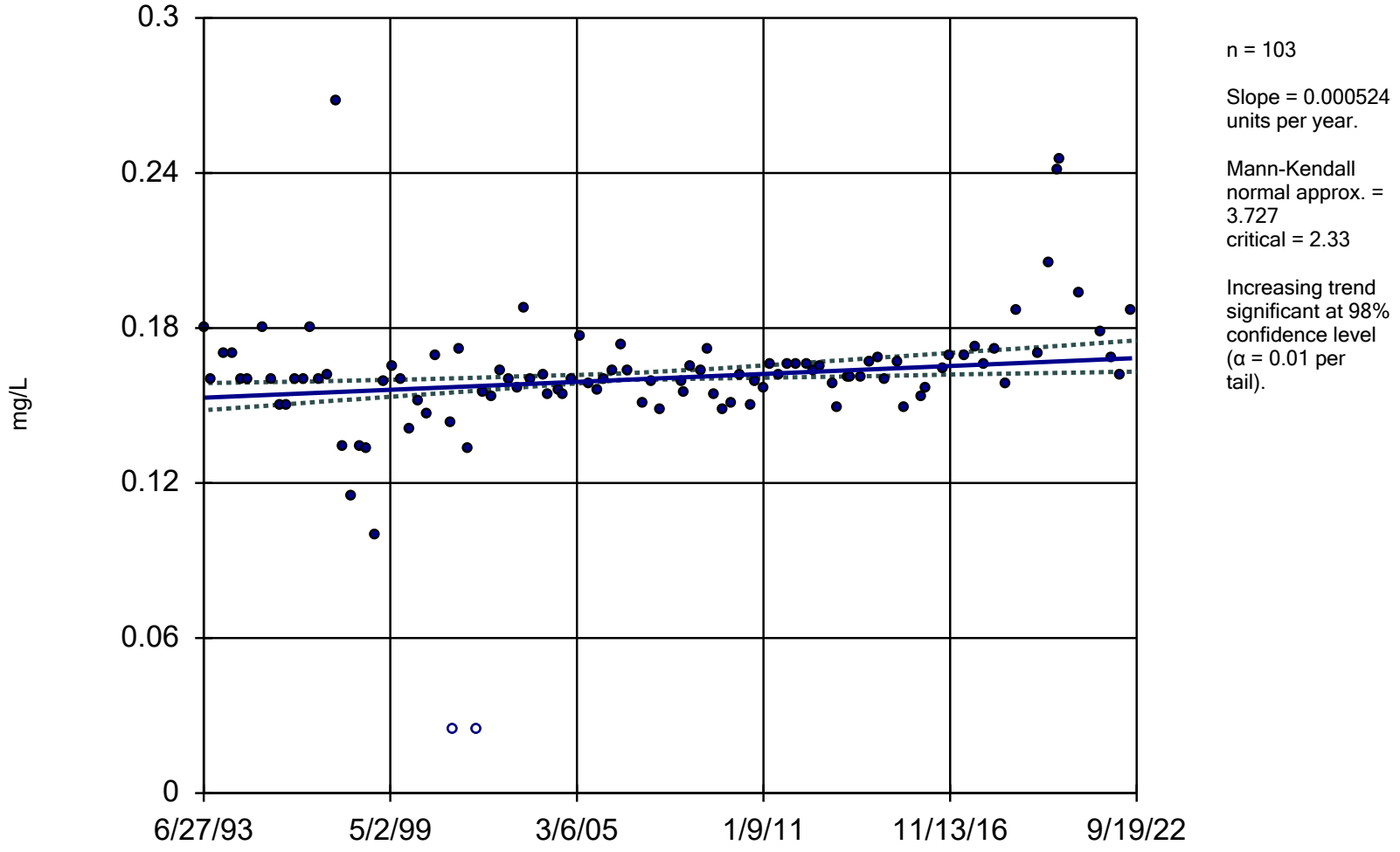
Constituent: Iron - Dissolved [mg/L] Analysis Run 10/12/2022 12:29 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

WCMW6-234



n = 103

Slope = 0.000524 units per year.

Mann-Kendall normal approx. = 3.727
critical = 2.33

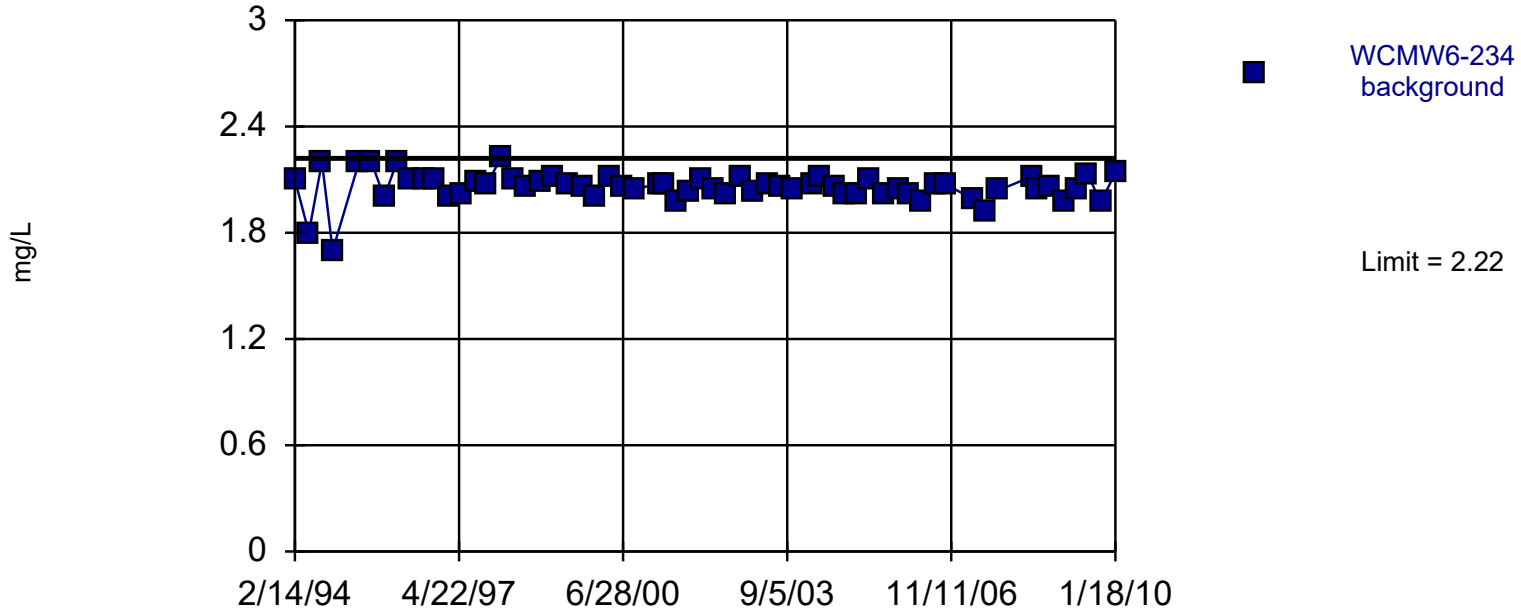
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/12/2022 12:29 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Non-parametric, WCMW6-234



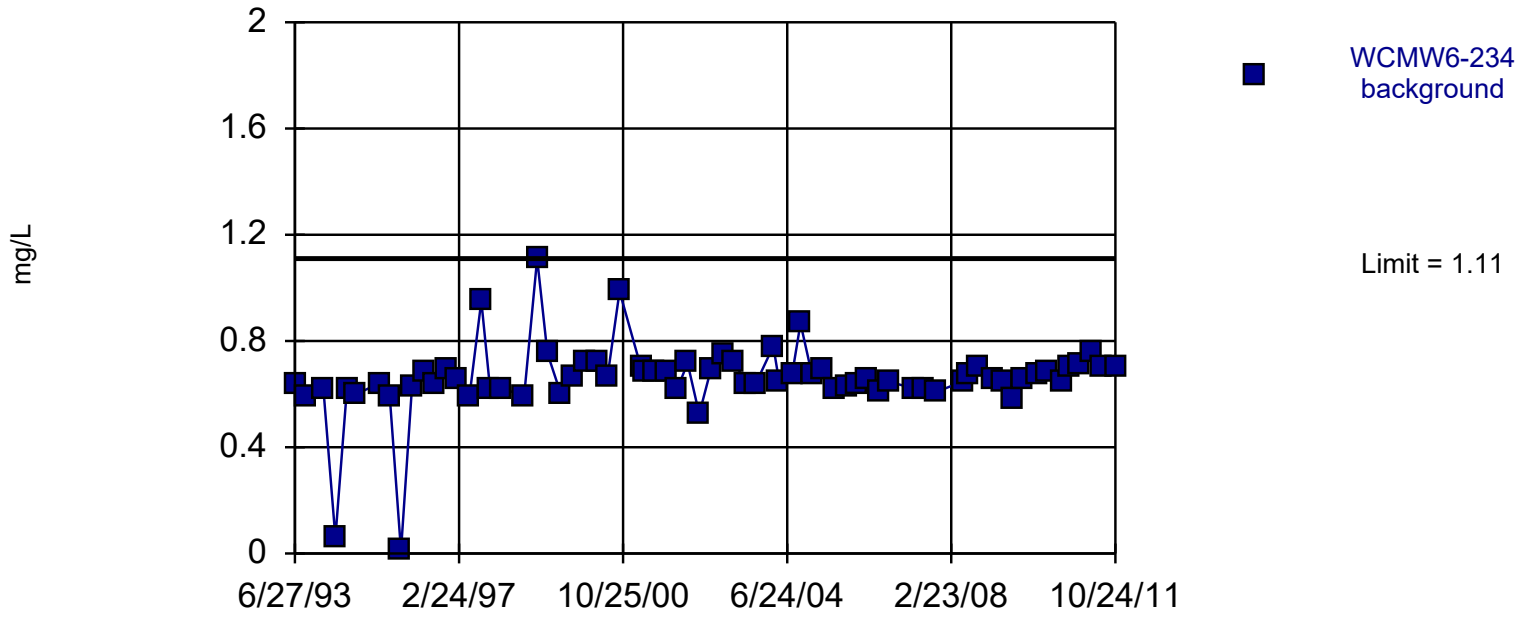
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 61 background values. 92.77% coverage at alpha=0.01; 95.12% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.04377.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 8:53 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Non-parametric, WCMW6-234



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 69 background values. 93.55% coverage at alpha=0.01; 95.9% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.02904.

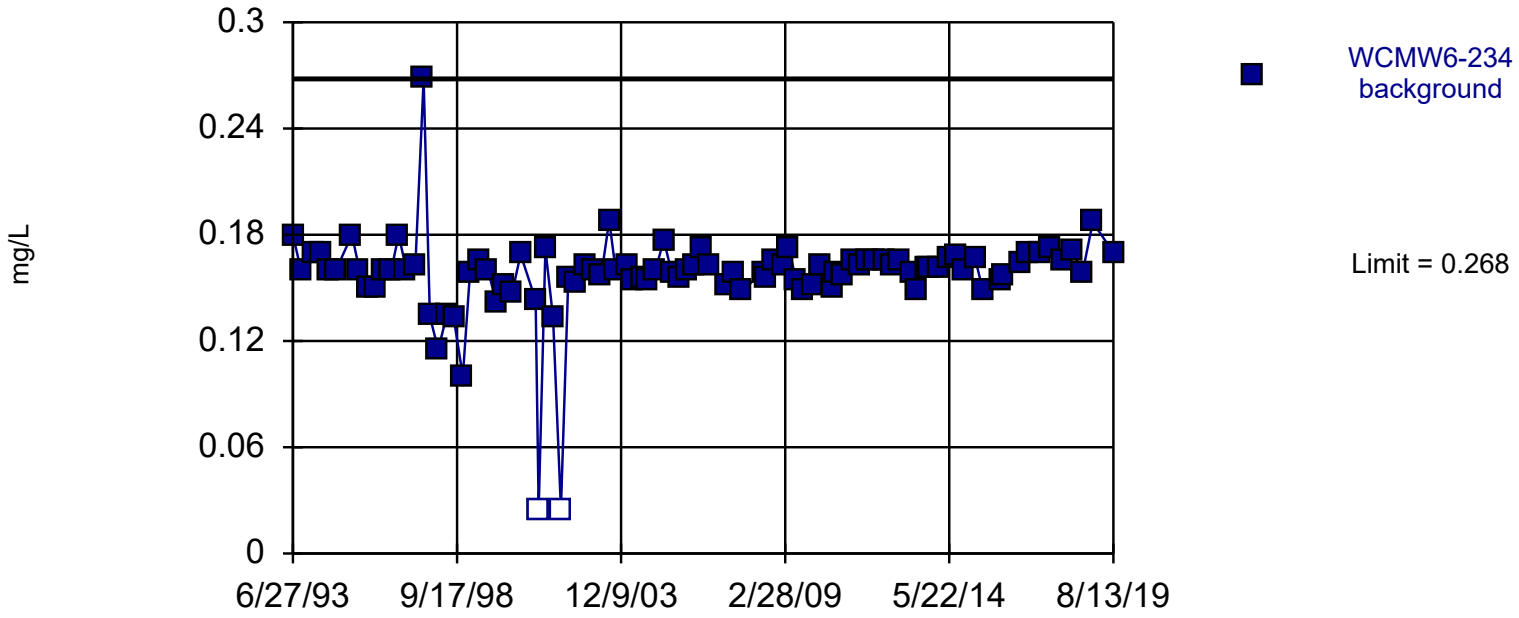
Constituent: Iron - Dissolved [mg/L] Analysis Run 10/13/2022 8:53 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, WCMW6-234



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 95 background values. 2.105% NDs. 95.12% coverage at alpha=0.01; 97.07% coverage at alpha=0.05; 99.41% coverage at alpha=0.5. Report alpha = 0.007651.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/13/2022 8:53 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Arequa Gulch
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf Printed 10/12/2022, 11:43 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev	Distribution	Normality Test
Fluoride - Total F [mg/L] (mg/L)	**CRMW5B-143**	**Yes**	**1.96,0.529**	**6/20/2013,5/16/2013**	**Dixon`s**	**0.05**	**22**	**3.032**	**0.7062**	**normal**	**ShapiroWilk**
Iron - Dissolved [mg/L] (mg/L)	CRMW5B-143	No	n/a	n/a	NP (nrm)	NaN	22	0.7068	0.09582	unknown	ShapiroWilk
Manganese - Dissolved [mg/L] (mg/L	CRMW5B-143	No	n/a	n/a	NP (nrm)	NaN	22	0.1301	0.2279	unknown	ShapiroWilk

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/12/2022, 1:00 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	CRMW5B-143	-0.00...	-1	-84	No	22	0	n/a	n/a	0.02	NP
Iron - Dissolved [mg/L] (mg/L)	C**RMW5B-143**	**0.003121**	**94**	84	**Yes**	**22**	**81.82**	n/a	**n/a**	**0.02**	**NP**
Manganese - Dissolved [mg/L] (m...	CRMW5B-143	-0.00...	-46	-84	No	22	50	n/a	n/a	0.02	NP

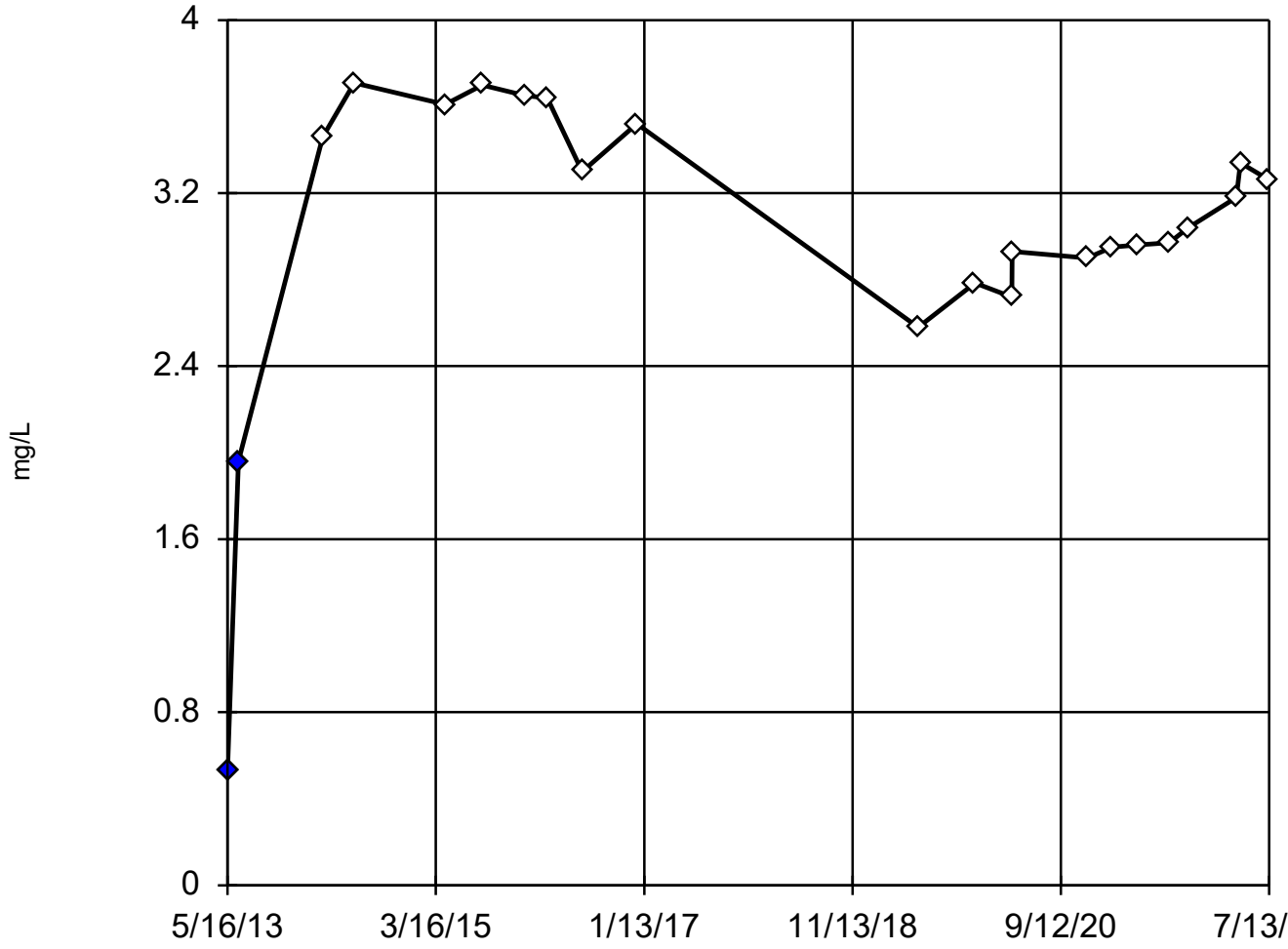
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem Printed 10/13/2022, 9:24 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Fluoride - Total F [mg/L] (mg/L)	CRMW5B-143	4.213	n/a	n/a	n/a	n/a	20	0	No	0.01	Intra
Iron - Dissolved [mg/L] (mg/L)	CRMW5B-143	0.392	n/a	n/a	n/a	n/a	21	50	n/a	0.3406	NP Intra(normal...
Manganese - Dissolved [mg/L] (m...	CRMW5B-143	n/a	n/a	n/a	n/a	n/a	22	50	n/a	0.3235	NP Intra(normal...

Dixon's Outlier Test

CRMW5B-143



n = 22

Statistical outliers are drawn as solid.
Testing for 2 low outliers.
Mean = 3.032.
Std. Dev. = 0.7062.
1.96: c = 0.4497
tabl = 0.43.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9349
Critical = 0.868
The distribution, after removal of suspect values, was found to be normally distributed.

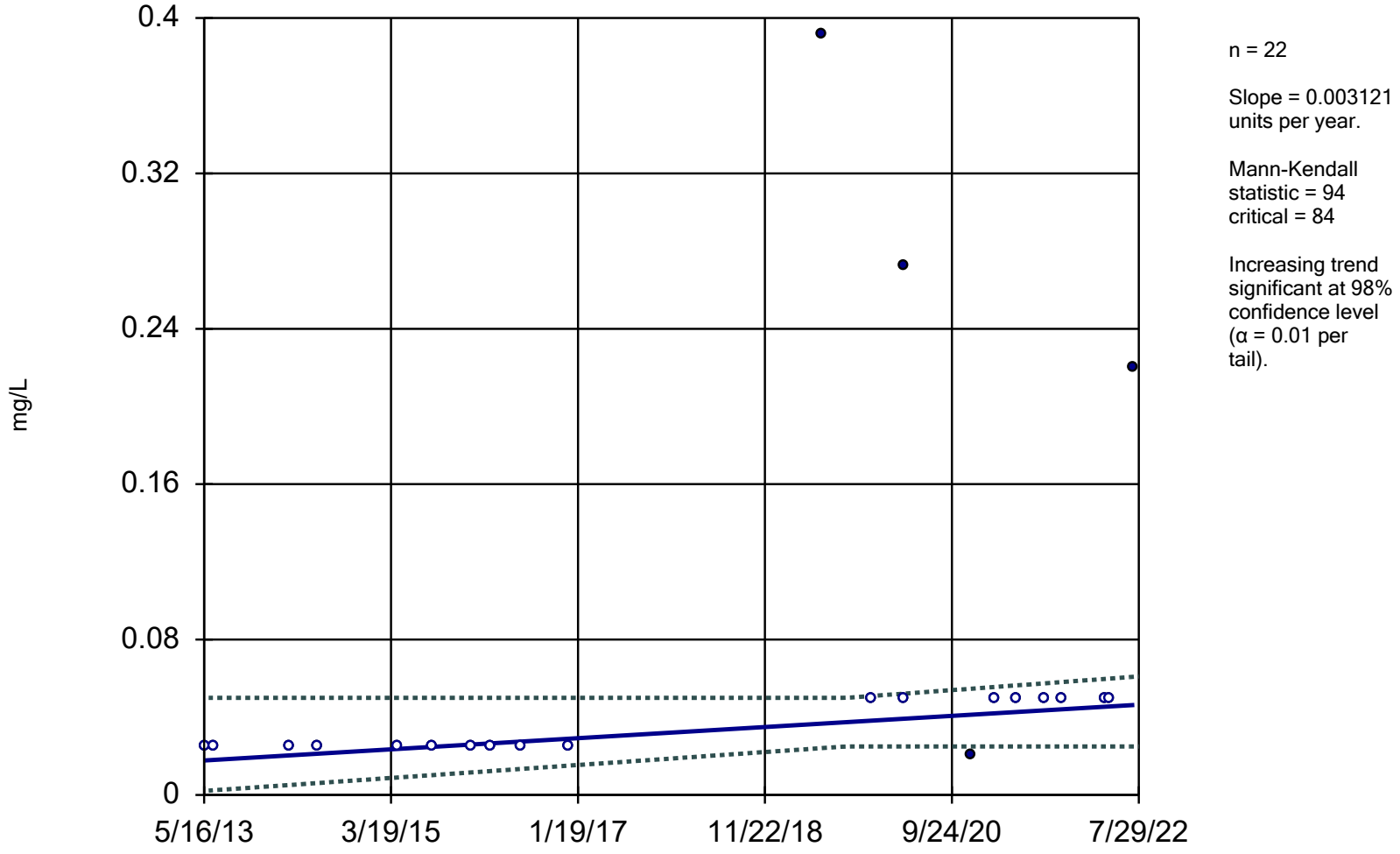
Constituent: Fluoride - Total F [mg/L] Analysis Run 10/12/2022 11:41 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Hollow symbols indicate censored values.

Sen's Slope Estimator

CRMW5B-143



n = 22

Slope = 0.003121 units per year.

Mann-Kendall statistic = 94
critical = 84

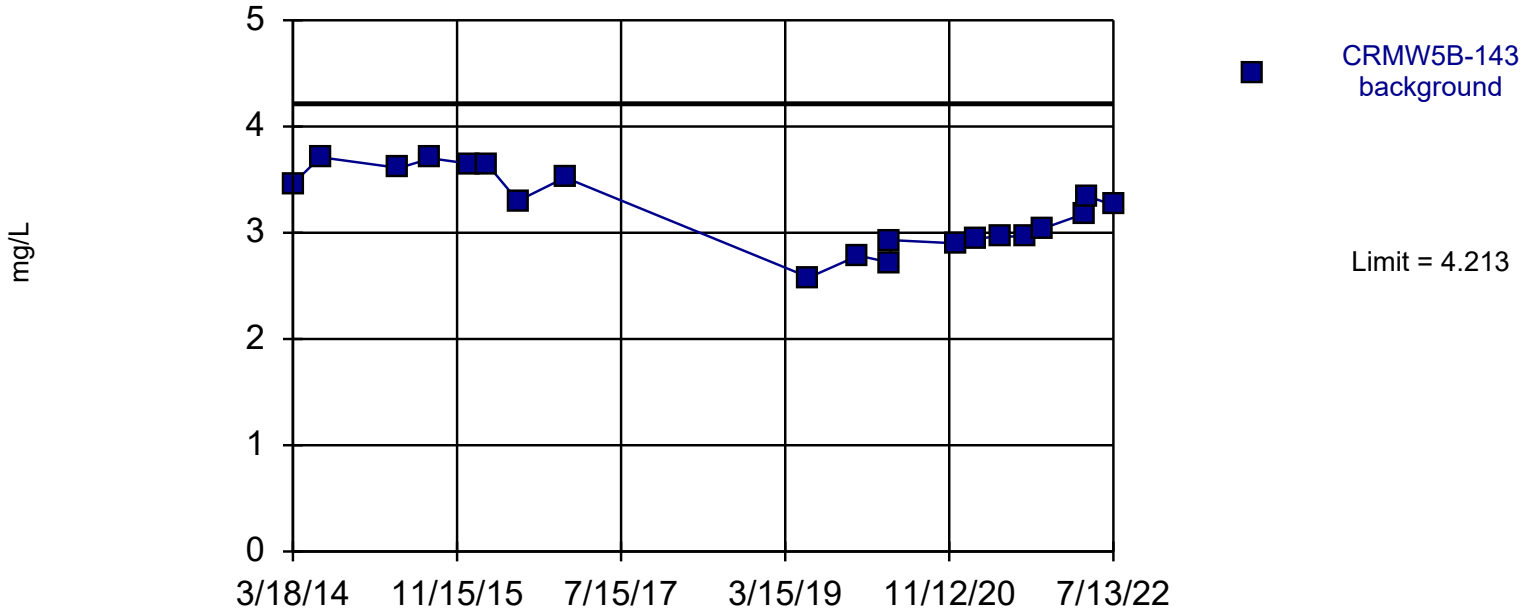
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/24/2022 9:18 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Tolerance Limit

Intrawell Parametric, CRMW5B-143



95% coverage. Background Data Summary: Mean=3.21, Std. Dev.=0.3572, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9349, critical = 0.868. Report alpha = 0.01.

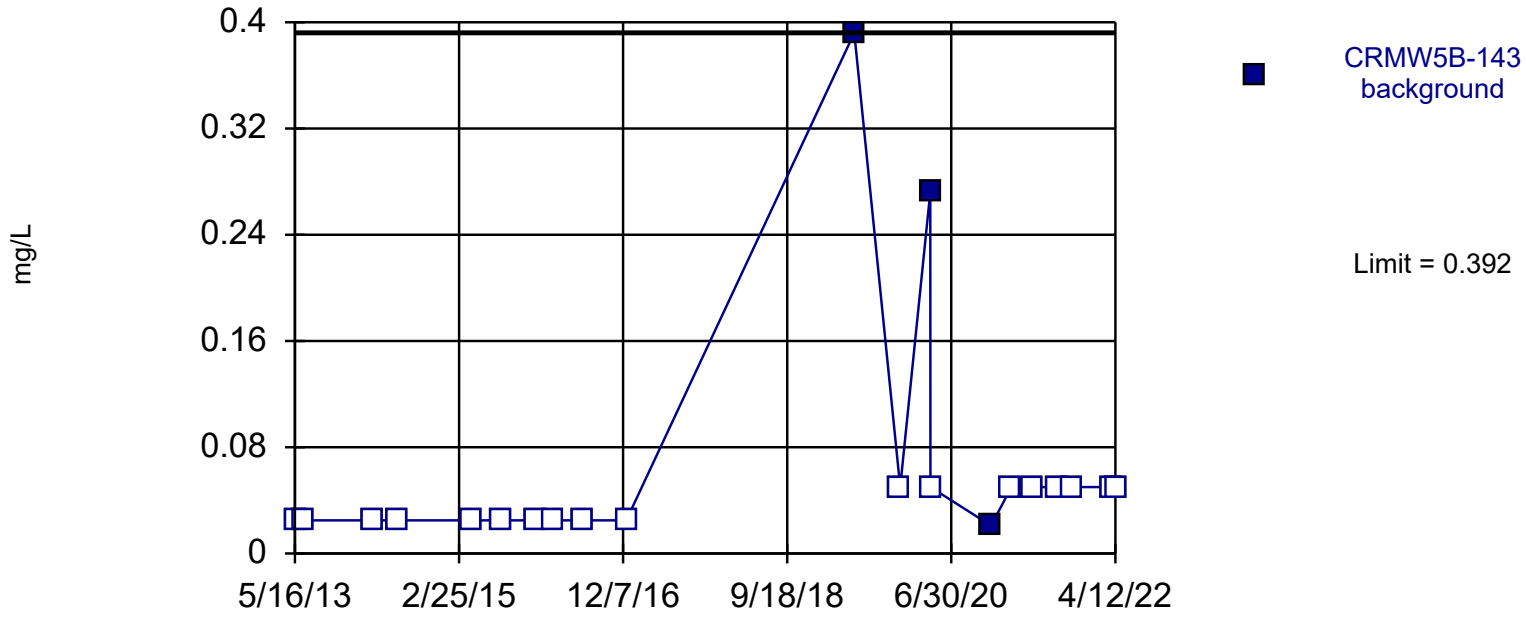
Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 9:22 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, CRMW5B-143



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 21 background values. 85.71% NDs. 80.27% coverage at alpha=0.01; 86.52% coverage at alpha=0.05; 96.68% coverage at alpha=0.5. Report alpha = 0.3406.

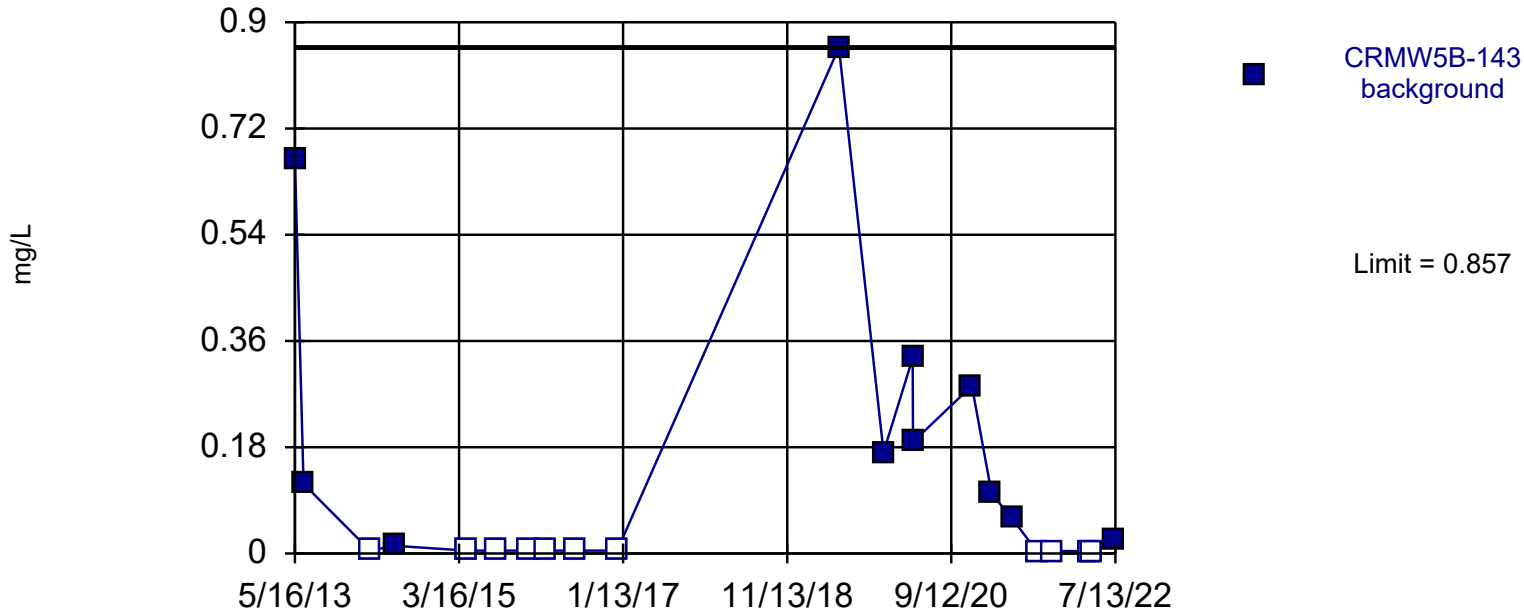
Constituent: Iron - Dissolved [mg/L] Analysis Run 12/24/2022 9:26 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, CRMW5B-143



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 22 background values. 50% NDs. 81.05% coverage at alpha=0.01; 87.3% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.3235.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/13/2022 9:22 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Maize Gulch
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s Printed 10/13/2022, 4:40 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Aluminium - Dissolved [mg/L] (m...	**SGMW6B-60**	**Yes**	**12.1,21.1**	**8/9/2017,...**	**NP**	**NaN**	**27**	**1.569**	**4.525**	**normal**	**ShapiroWilk**
Beryllium - Dissolved [mg/L] (m...	**SGMW6B-60**	**Yes**	**0.114**	**8/10/2021**	**NP**	**NaN**	**14**	**0.05256**	**0.02102**	**normal**	**ShapiroWilk**
Cadmium - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**0.003,0.0...**	**6/21/2016...**	**NP**	**NaN**	**28**	**0.001631**	**0.003282**	**normal**	**ShapiroWilk**
Cobalt - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**0.171**	**8/10/2021**	**NP**	**NaN**	**14**	**0.02608**	**0.04176**	**normal**	**ShapiroWilk**
Fluoride - Total F [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**14.8**	**8/10/2021**	**NP**	**NaN**	**28**	**7.352**	**1.922**	**normal**	**ShapiroWilk**
Iron - Dissolved [mg/L] (mg/L)	SGMW6B-60	No	n/a	n/a	NP	NaN	28	9.95	2.854	normal	ShapiroWilk
Manganese - Dissolved [mg/L] (m...	**SGMW6B-60**	**Yes**	**15.8,2.78,2.81...**	**8/10/2021,...**	**Rosner's**	**0.01**	**28**	**6.464**	**2.201**	**normal**	**ShapiroWilk**
Nickel - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**0.193,0.284**	**8/9/2017,...**	**NP**	**NaN**	**28**	**0.04239**	**0.05813**	**normal**	**ShapiroWilk**
Nitrite as Nitrogen [mg/L] (mg/L)	SGMW6B-60	n/a	n/a	n/a	NP	NaN	24	0.06461	0.174	unknown	ShapiroWilk
pH Field [pH unit] (su)	**SGMW6B-60**	**Yes**	**4.64**	**8/10/2021**	**NP**	**NaN**	**29**	**6.166**	**0.4503**	**normal**	**ShapiroWilk**
Sulfate - Total [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**1380**	**8/10/2021**	**NP**	**NaN**	**28**	**979.6**	**106.3**	**normal**	**ShapiroWilk**
Uranium - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**0.408**	**8/10/2021**	**NP**	**NaN**	**13**	**0.03703**	**0.1116**	**normal**	**ShapiroWilk**
Zinc - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**Yes**	**2.67,3.5**	**8/9/2017,...**	**NP**	**NaN**	**28**	**0.3747**	**0.782**	**normal**	**ShapiroWilk**

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s2 Printed 10/13/2022, 4:59 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Aluminium - Dissolved [mg/L] (m...	SGMW6B-60	-0.01518	-25	-112	No	27	7.407	n/a	n/a	0.02	NP
Beryllium - Dissolved [mg/L] (m...	SGMW6B-60	0.00739	41	44	No	14	0	n/a	n/a	0.02	NP
Cadmium - Dissolved [mg/L] (mg/L)	SGMW6B-60	0	-2	-119	No	28	42.86	n/a	n/a	0.02	NP
Cobalt - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**0.001597**	**55**	**44**	**Yes**	**14**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Fluoride - Total F [mg/L] (mg/L)	SGMW6B-60	0.2885	109	119	No	28	0	n/a	n/a	0.02	NP
Iron - Dissolved [mg/L] (mg/L)	**SGMW6B-60**	**0.6029**	**162**	**125**	**Yes**	**29**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Manganese - Dissolved [mg/L] (m...	**SGMW6B-60**	**0.2112**	**193**	**106**	**Yes**	**26**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Nickel - Dissolved [mg/L] (mg/L)	SGMW6B-60	-0.00...	-19	-119	No	28	0	n/a	n/a	0.02	NP
Nitrite as Nitrogen [mg/L] (mg/L)	SGMW6B-60	0	27	95	No	24	95.83	n/a	n/a	0.02	NP
pH Field [pH unit] (su)	SGMW6B-60	-0.03859	-63	-125	No	29	0	n/a	n/a	0.02	NP
Sulfate - Total [mg/L] (mg/L)	SGMW6B-60	2.212	16	119	No	28	0	n/a	n/a	0.02	NP
Uranium - Dissolved [mg/L] (mg/L)	SGMW6B-60	0.001031	10	39	No	13	0	n/a	n/a	0.02	NP
Zinc - Dissolved [mg/L] (mg/L)	SGMW6B-60	-0.00...	-110	-119	No	28	0	n/a	n/a	0.02	NP

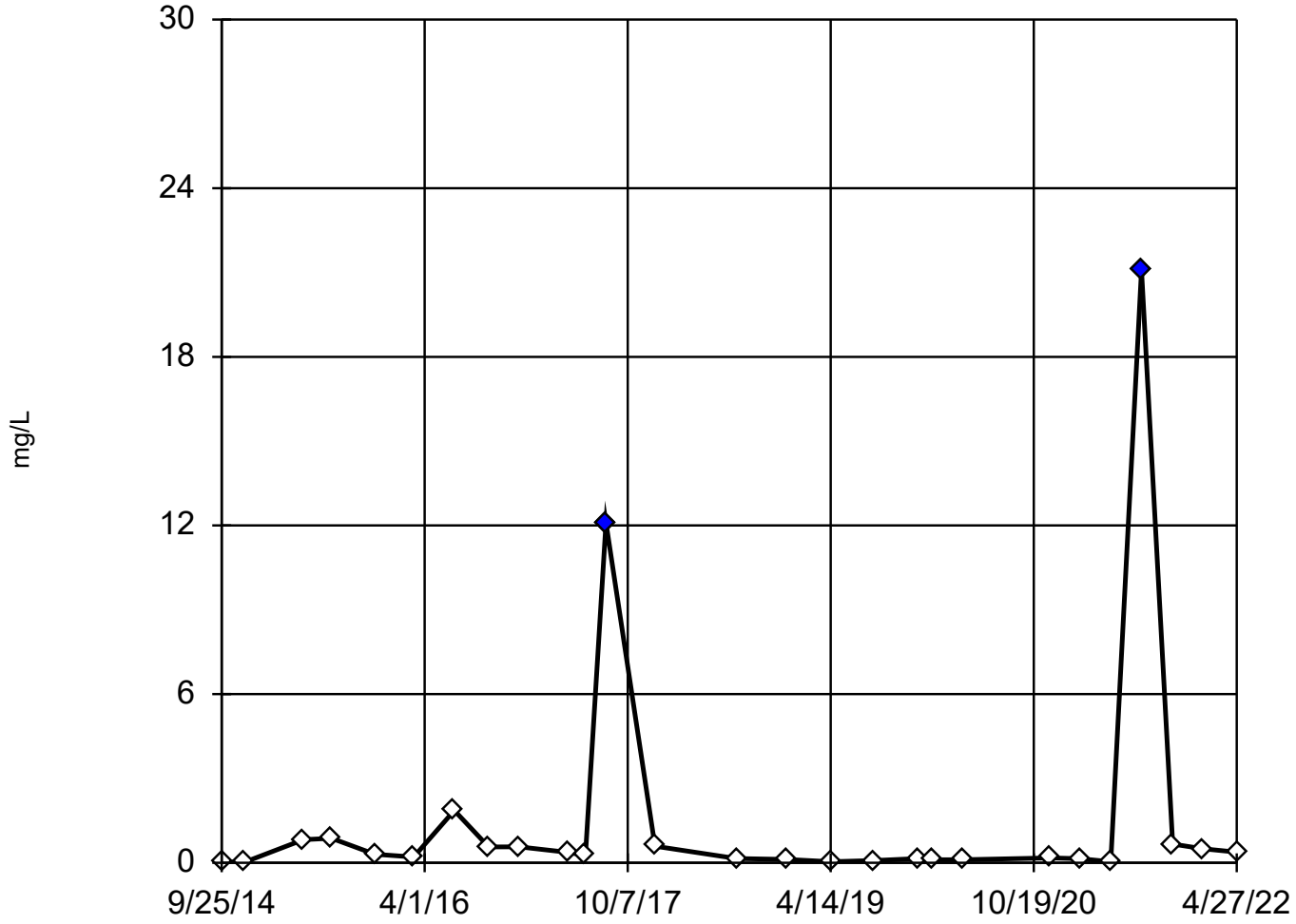
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s Printed 10/13/2022, 5:13 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Aluminium - Dissolved [mg/L] (m...	SGMW6B-60	18.48	n/a	n/a	n/a	n/a	27	7.407	ln(x)	0.01	Intra
Beryllium - Dissolved [mg/L] (m...	SGMW6B-60	0.1285	n/a	n/a	n/a	n/a	14	0	sqrt(x)	0.01	Intra
Cadmium - Dissolved [mg/L] (mg/L)	SGMW6B-60	0.0141	n/a	n/a	n/a	n/a	28	42.86	n/a	0.2378	NP Intra(normal...
Fluoride - Total F [mg/L] (mg/L)	SGMW6B-60	14.8	n/a	n/a	n/a	n/a	28	0	n/a	0.2378	NP Intra(normal...
Iron - Dissolved [mg/L] (mg/L)	SGMW6B-60	14.9	n/a	n/a	n/a	n/a	28	0	n/a	0.2378	NP Intra
Manganese - Dissolved [mg/L] (m...	SGMW6B-60	15.8	n/a	n/a	n/a	n/a	17	0	n/a	0.4181	NP Intra(normal...
Nickel - Dissolved [mg/L] (mg/L)	SGMW6B-60	0.284	n/a	n/a	n/a	n/a	28	0	n/a	0.2378	NP Intra(normal...
Nitrite as Nitrogen [mg/L] (mg/L) pH	SGMW6B-60	0.8757	n/a	n/a	n/a	n/a	24	95.83	n/a	0.292	NP Intra(NDs)
Field [pH unit] (su)	SGMW6B-60	7.081	4.629	n/a	n/a	n/a	29	0	x^4	0.01	Intra
Sulfate - Total [mg/L] (mg/L)	SGMW6B-60	1380	n/a	n/a	n/a	n/a	28	0	n/a	0.2378	NP Intra(normal...
Zinc - Dissolved [mg/L] (mg/L)	SGMW6B-60	3.5	n/a	n/a	n/a	n/a	28	0	n/a	0.2378	NP Intra(normal...
Cobalt - Dissolved [mg/L] (mg/L)	SGMW6B-60	0.171	n/a	n/a	n/a	n/a	14	0	n/a	0.4877	NP Intra(normal...
Uranium - Dissolved [mg/L] (mg/L)	SGMW6B-60	0.408	n/a	n/a	n/a	n/a	13	0	n/a	0.5133	NP Intra(normal...

Tukey's Outlier Screening

SGMW6B-60



n = 27

Outliers are drawn as solid.
Tukey's method selected by user.

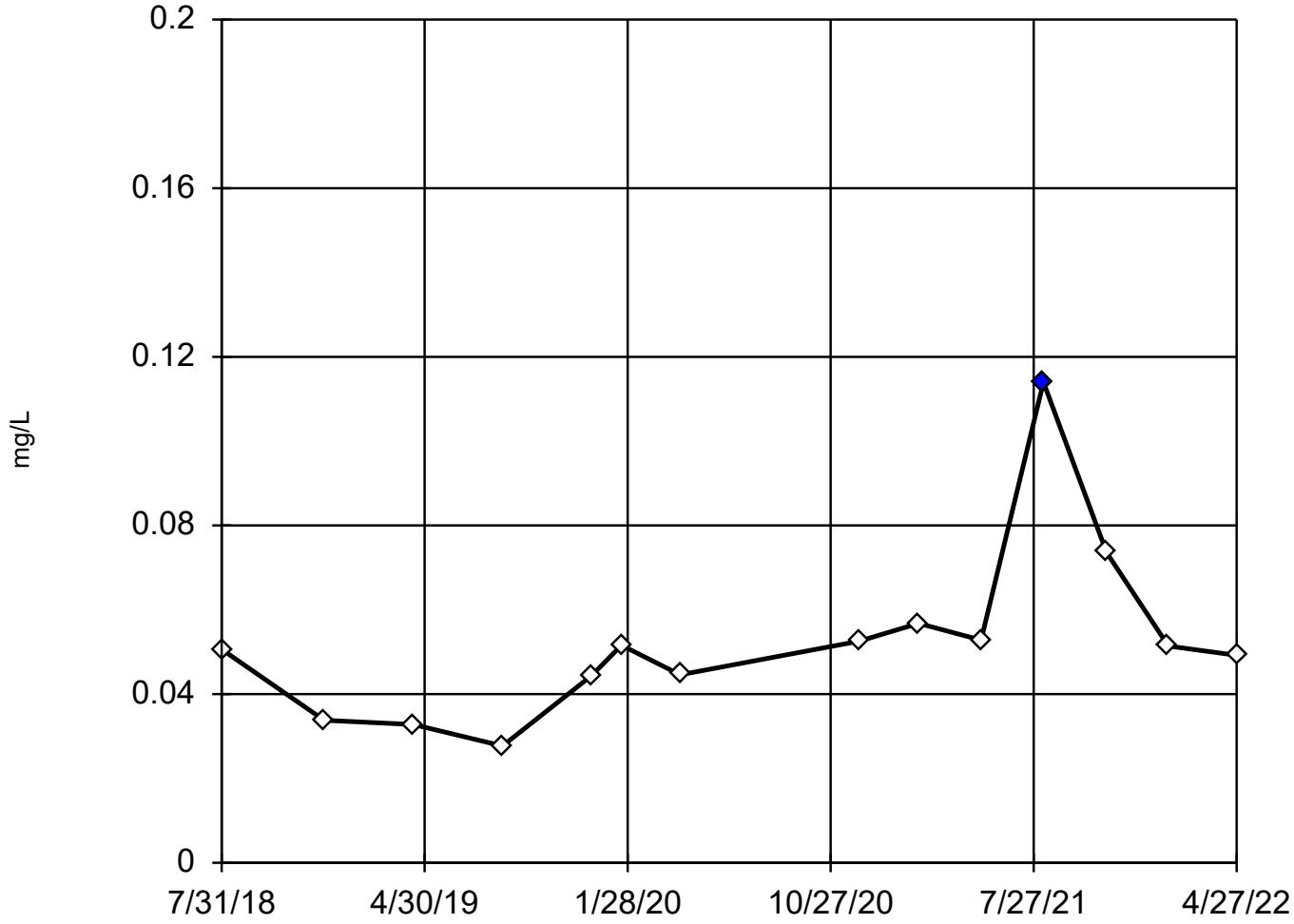
High cutoff = 2.038, low cutoff = -1.336, based on IQR multiplier of 3.

Constituent: Aluminium - Dissolved [mg/L] Analysis Run 10/13/2022 4:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 14

Outlier is drawn as solid. Tukey's method select-ed by user.

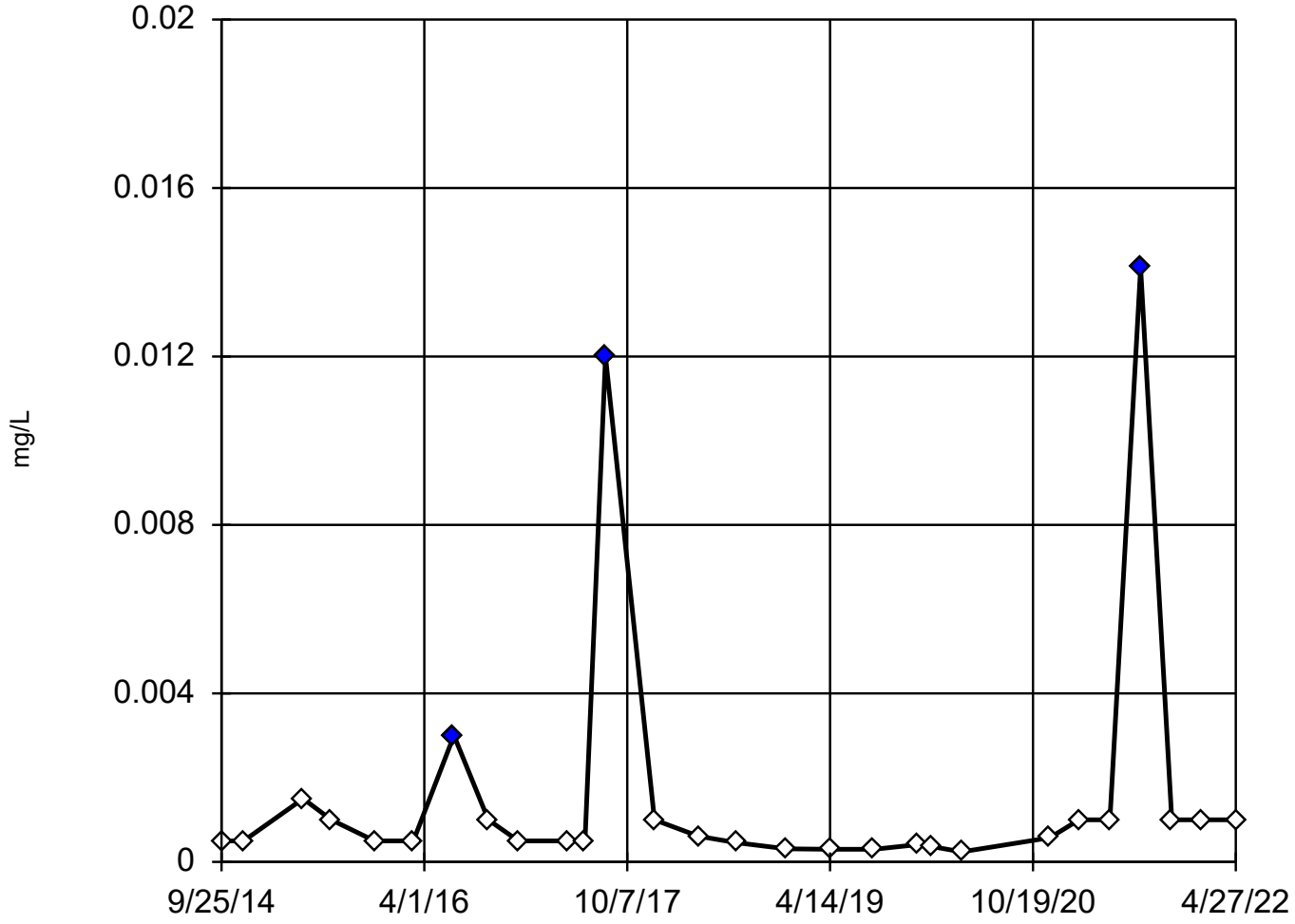
High cutoff = 0.1019, low cutoff = -0.008, based on IQR multiplier of 3.

Constituent: Beryllium - Dissolved [mg/L] Analysis Run 10/13/2022 4:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 28

Outliers are drawn as solid.
Tukey's method selected by user.

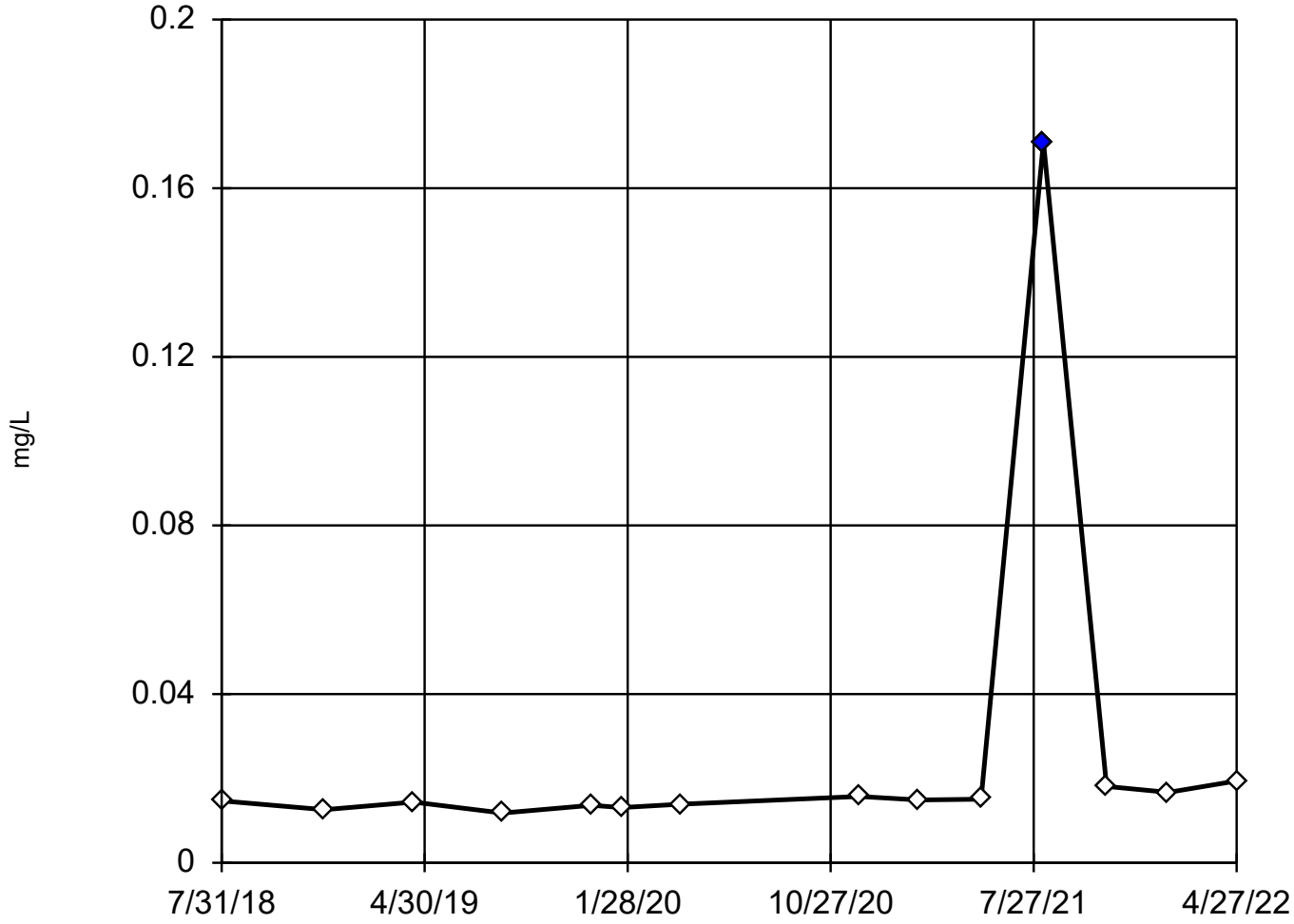
High cutoff = 0.00256, low cutoff = -0.00108, based on IQR multiplier of 3.

Constituent: Cadmium - Dissolved [mg/L] Analysis Run 10/13/2022 4:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 14

Outlier is drawn as solid. Tukey's method select-ed by user.

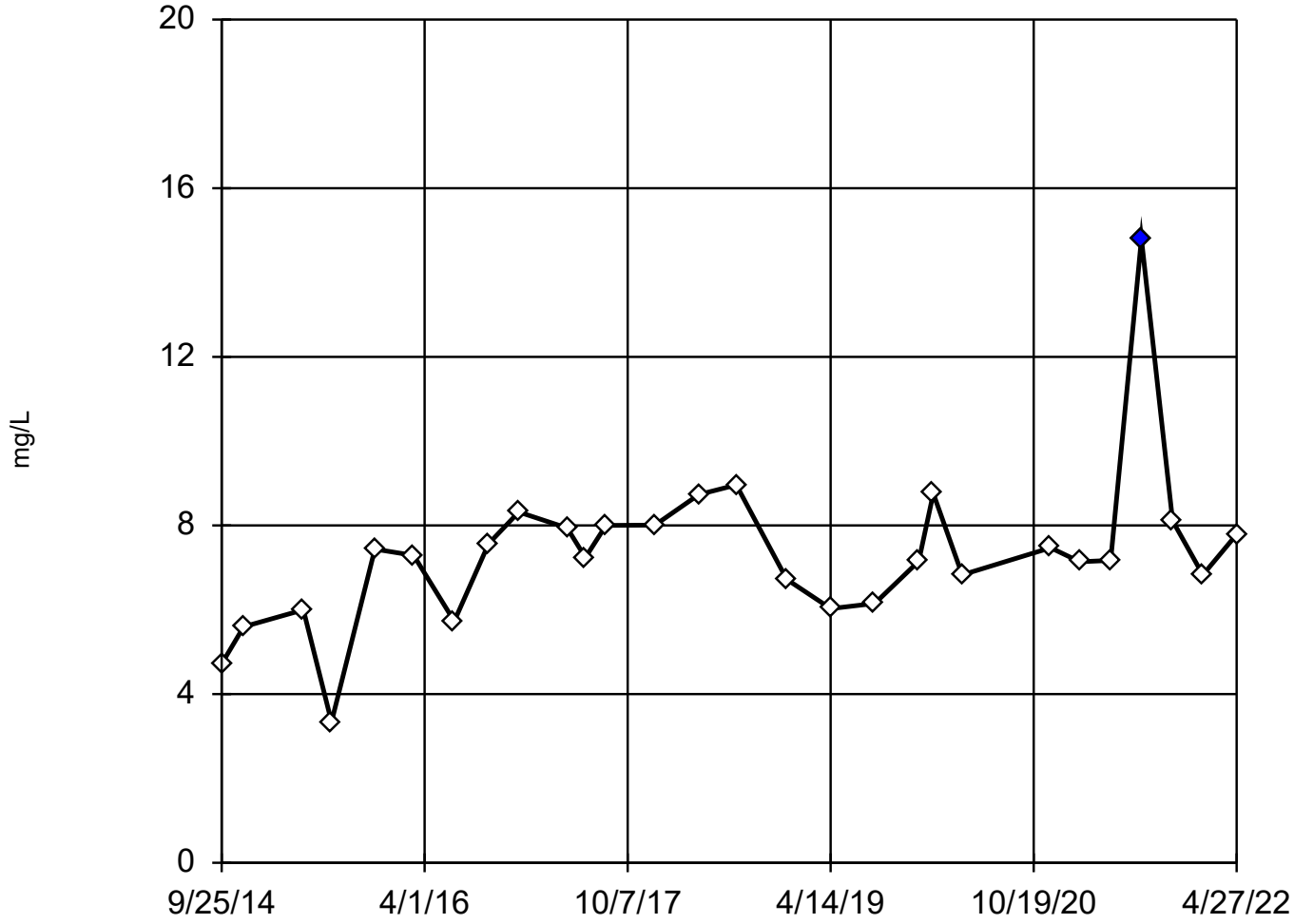
High cutoff = 0.02948, low cutoff = 0.0013, based on IQR multiplier of 3.

Constituent: Cobalt - Dissolved [mg/L] Analysis Run 10/13/2022 4:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 28

Outlier is drawn as solid. Tukey's method selected by user.

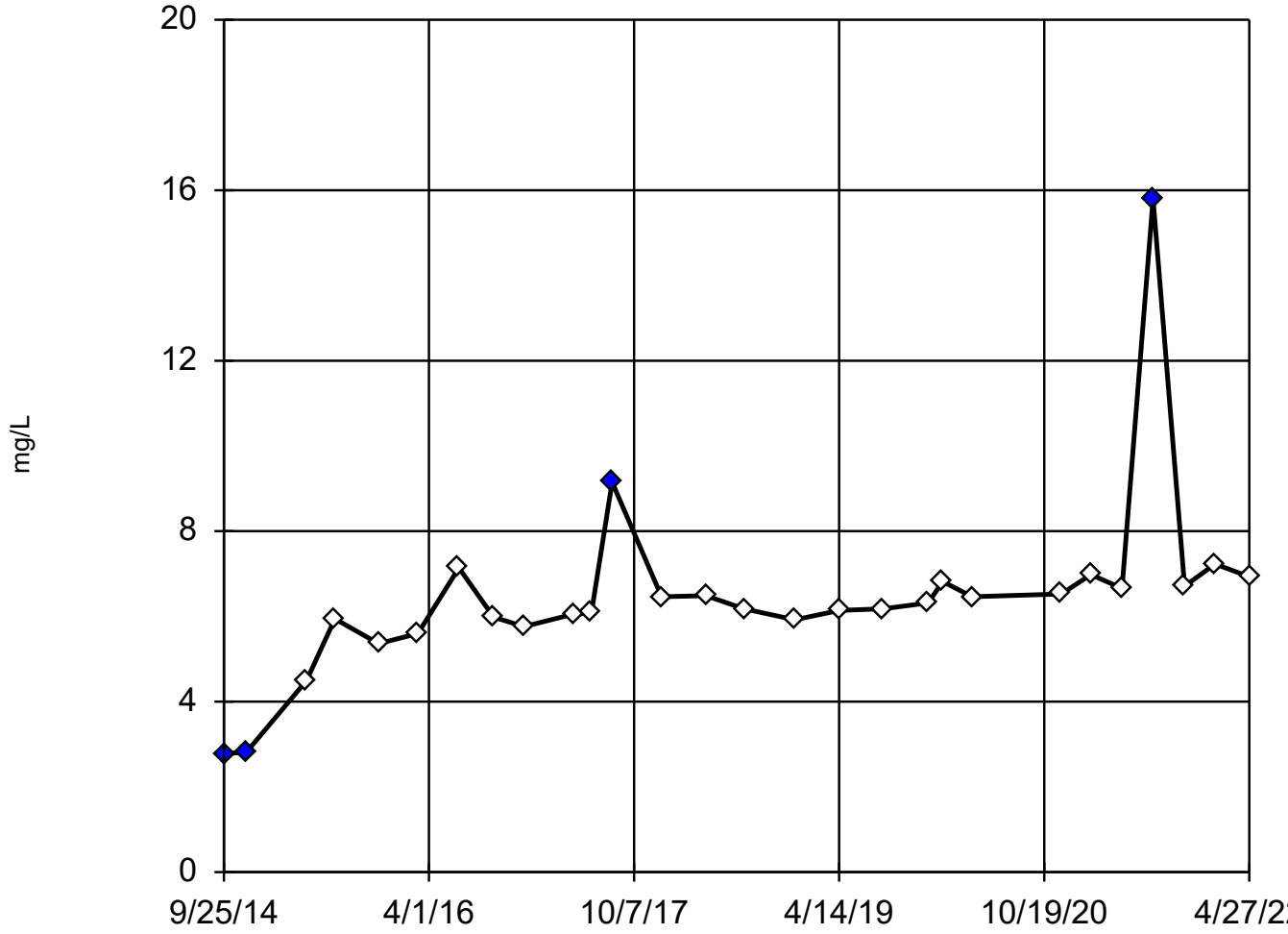
High cutoff = 12.72, low cutoff = 1.725, based on IQR multiplier of 3.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 4:38 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Rosner's Outlier Test

SGMW6B-60



n = 28

Statistical outliers are drawn as solid.

k = 5
r = 3.331
Tabulated value = 3.002
Alpha = 0.01

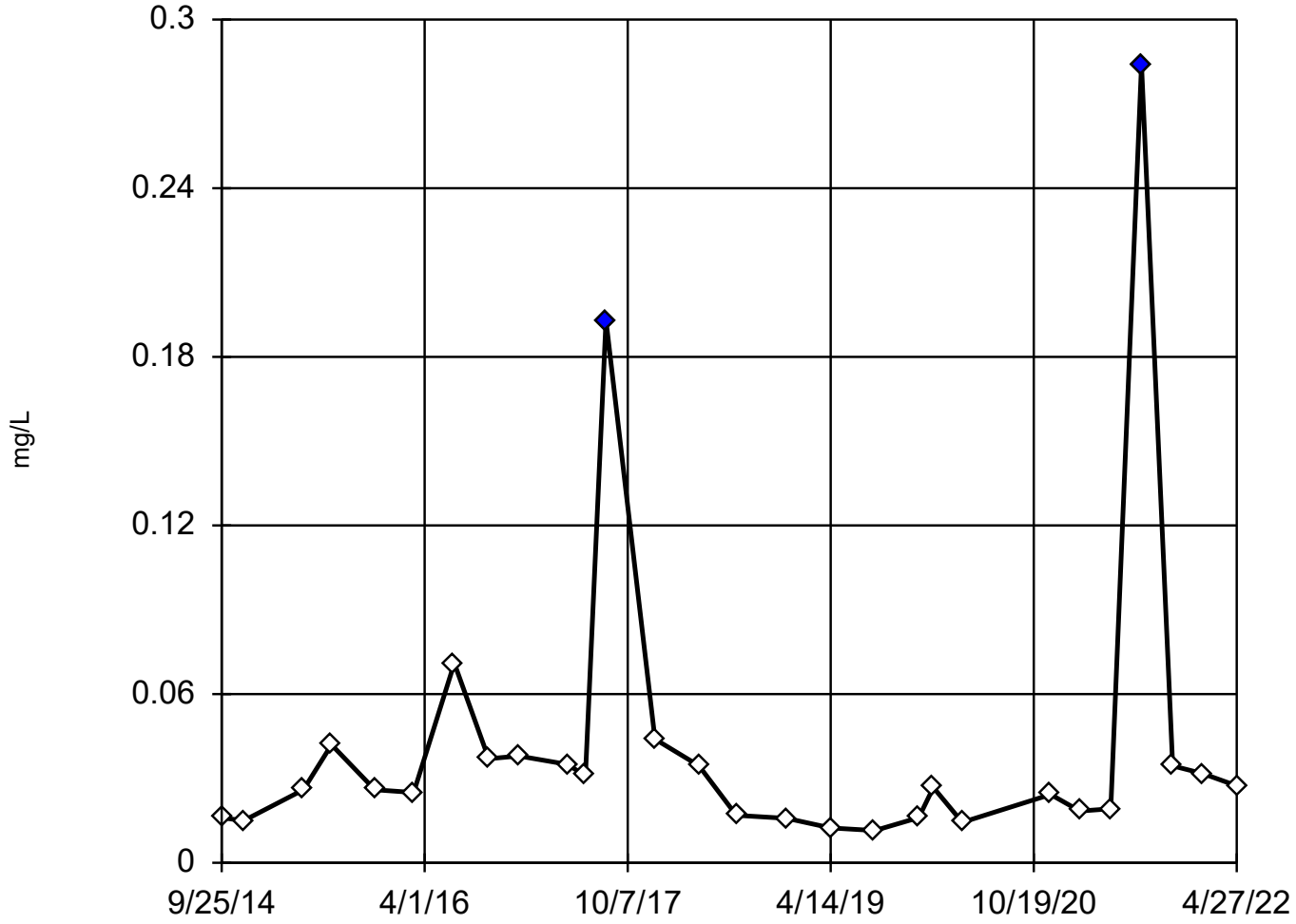
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9493
Critical = 0.884
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/24/2022 9:31 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Tukey's Outlier Screening

SGMW6B-60



n = 28

Outliers are drawn as solid.
Tukey's method selected by user.

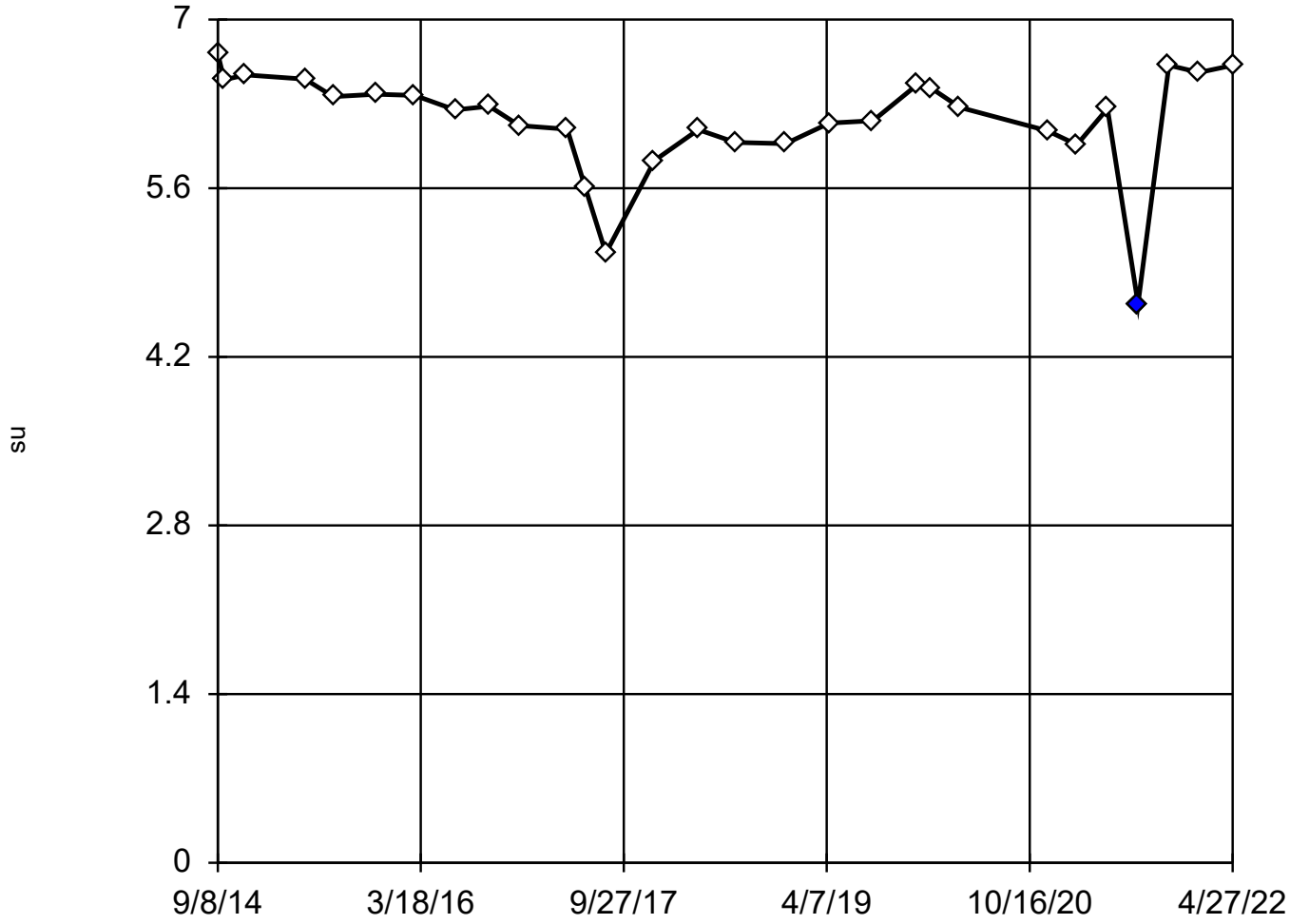
High cutoff = 0.09455, low cutoff = -0.04207, based on IQR multiplier of 3.

Constituent: Nickel - Dissolved [mg/L] Analysis Run 10/13/2022 4:39 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 29

Outlier is drawn as solid. Tukey's method selected by user.

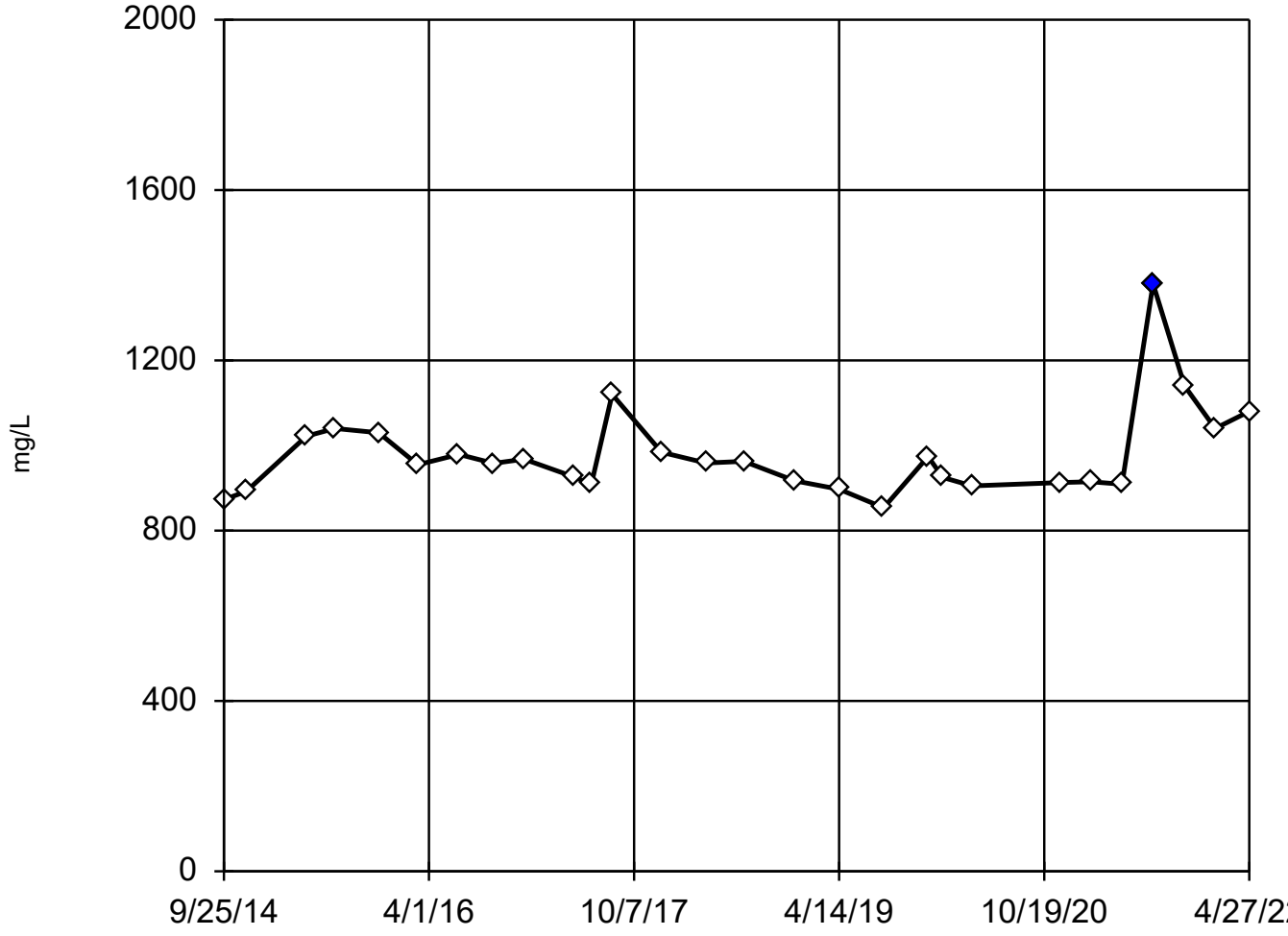
High cutoff = 7.828, low cutoff = 4.678, based on IQR multiplier of 3.

Constituent: pH Field [pH unit] Analysis Run 10/13/2022 4:39 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 28

Outlier is drawn as solid. Tukey's method selected by user.

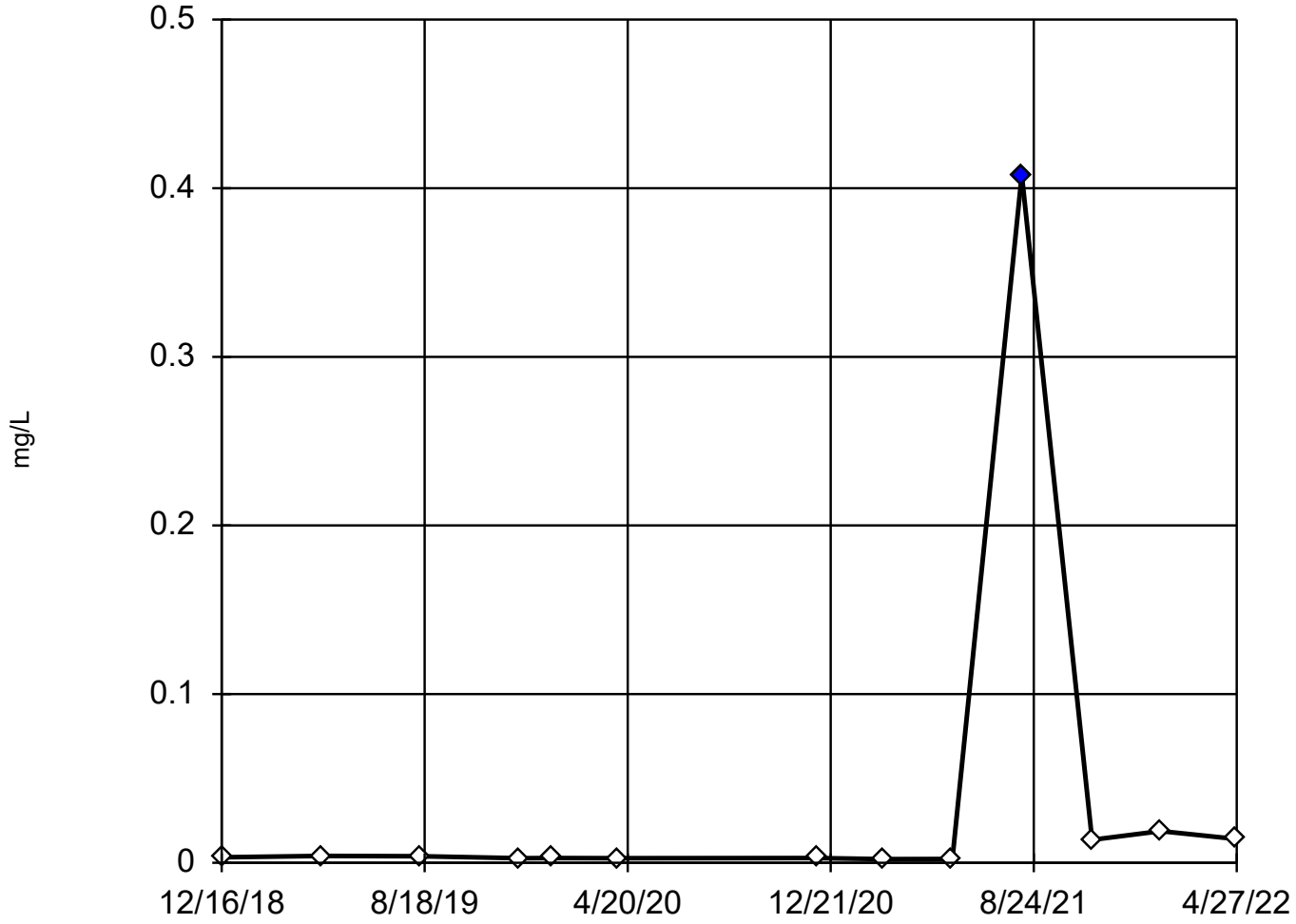
High cutoff = 1371, low cutoff = 566, based on IQR multiplier of 3.

Constituent: Sulfate - Total [mg/L] Analysis Run 10/13/2022 4:39 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 13

Outlier is drawn as solid. Tukey's method selected by user.

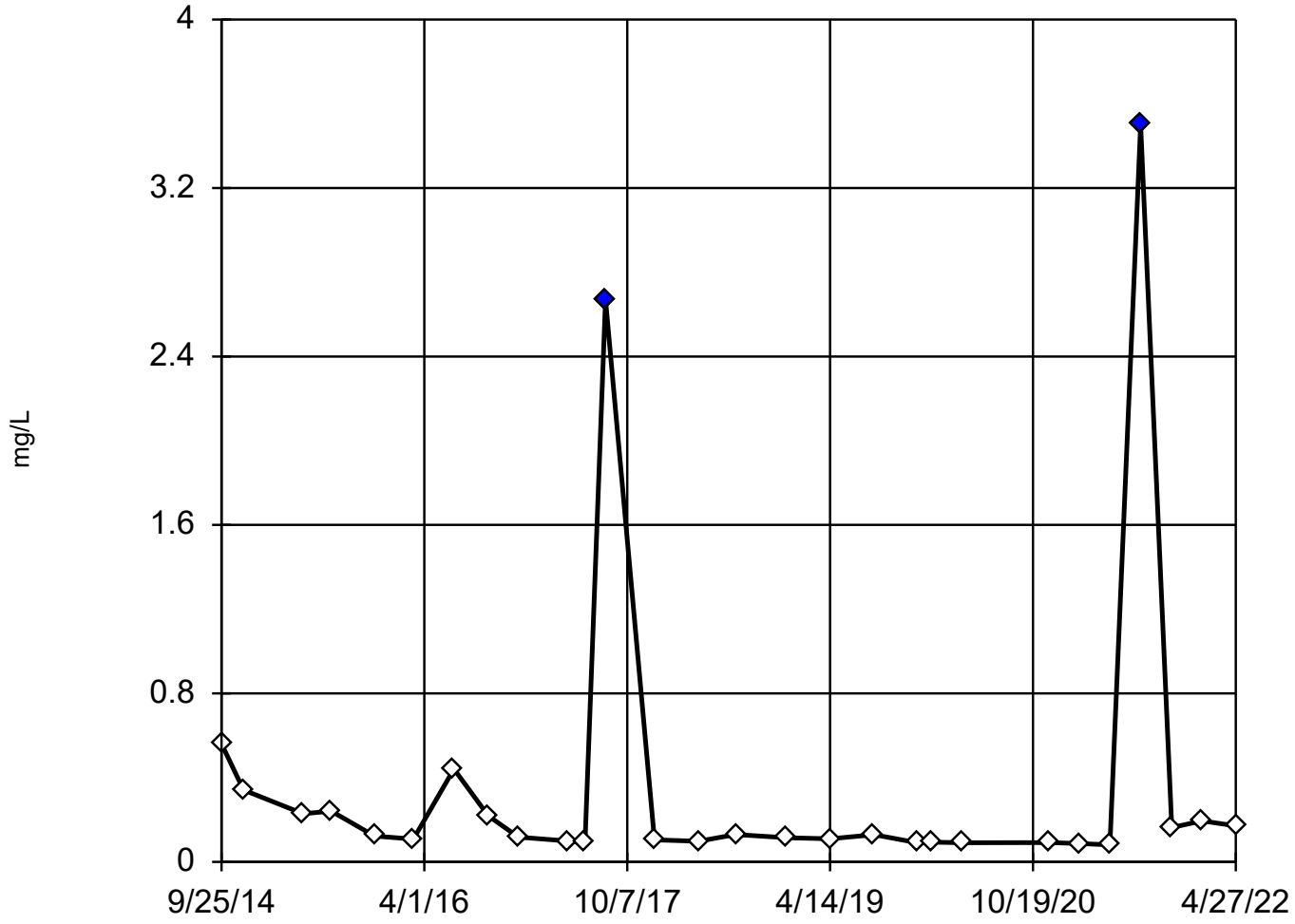
High cutoff = 0.04724, low cutoff = -0.03068, based on IQR multiplier of 3.

Constituent: Uranium - Dissolved [mg/L] Analysis Run 10/13/2022 4:39 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tukey's Outlier Screening

SGMW6B-60



n = 28

Outliers are drawn as solid.
Tukey's method selected by user.

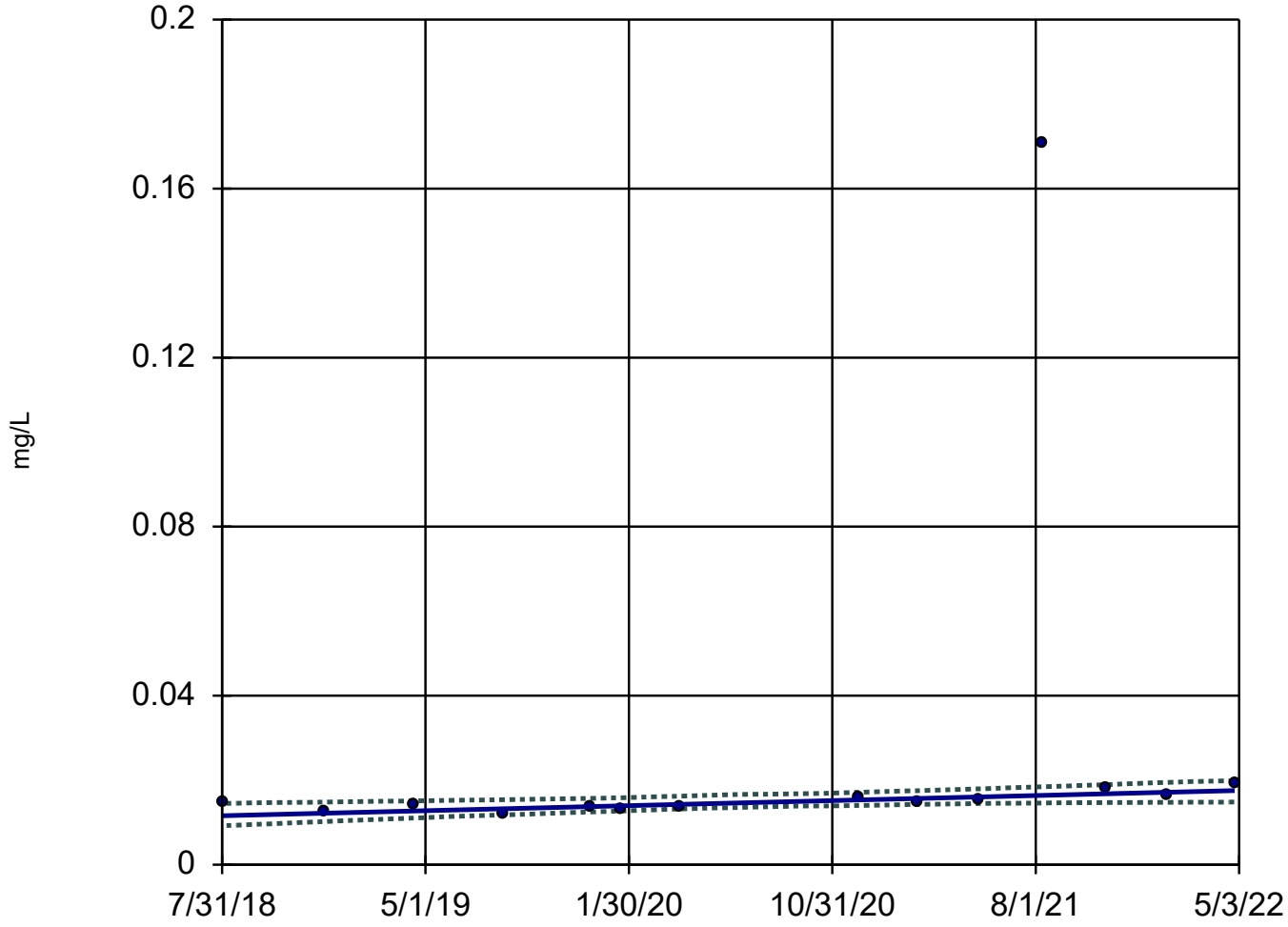
High cutoff = 0.608, low cutoff = -0.288, based on IQR multiplier of 3.

Constituent: Zinc - Dissolved [mg/L] Analysis Run 10/13/2022 4:39 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Sen's Slope Estimator

SGMW6B-60



n = 14

Slope = 0.001597 units per year.

Mann-Kendall statistic = 55
critical = 44

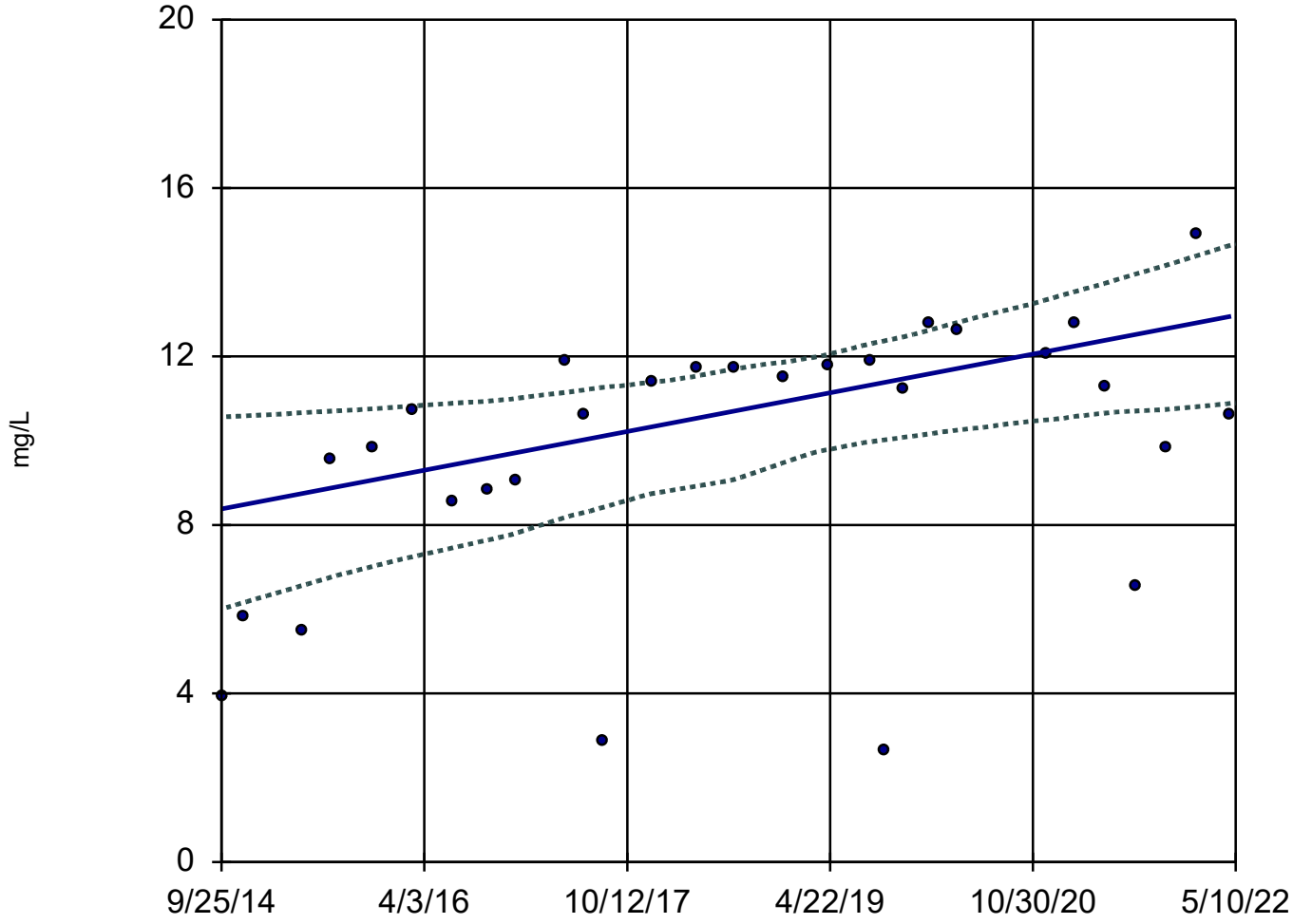
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Cobalt - Dissolved [mg/L] Analysis Run 10/13/2022 4:56 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s2

Sen's Slope Estimator

SGMW6B-60



n = 29

Slope = 0.6029 units per year.

Mann-Kendall statistic = 162
critical = 125

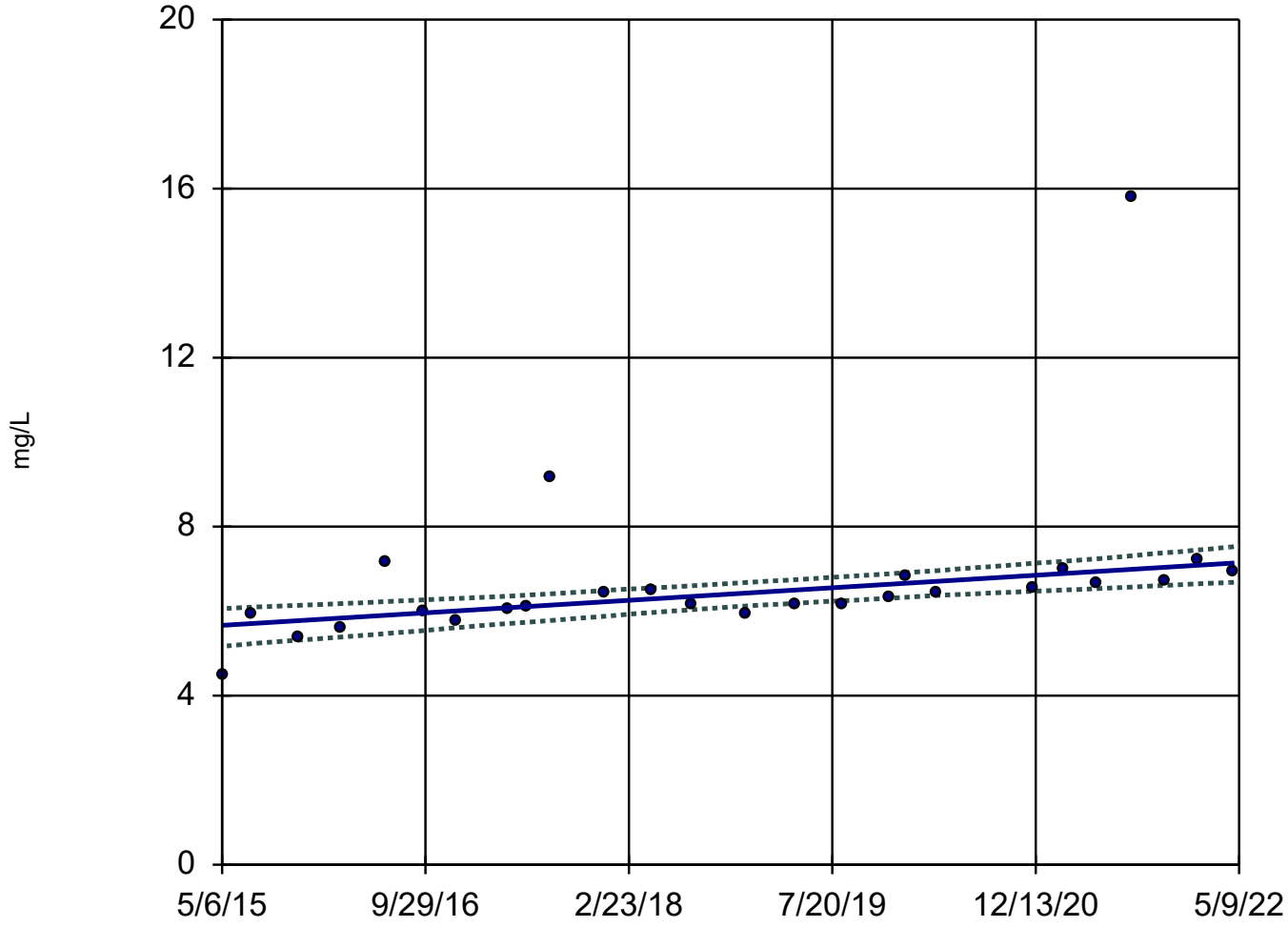
Increasing trend significant at 98% confidence level (α = 0.01 per tail).

Constituent: Iron - Dissolved [mg/L] Analysis Run 10/21/2022 8:21 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Sen's Slope Estimator

SGMW6B-60



n = 26

Slope = 0.2112 units per year.

Mann-Kendall statistic = 193
critical = 106

Increasing trend significant at 98% confidence level (α = 0.01 per tail).

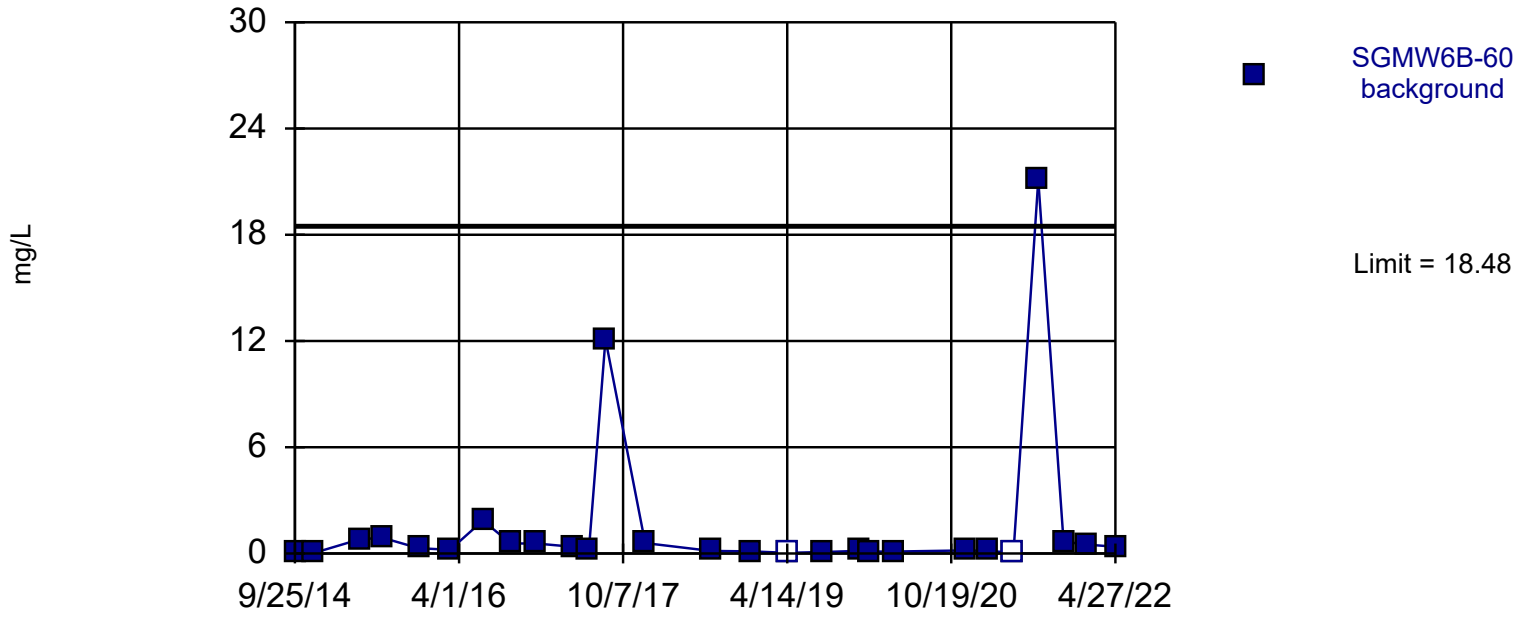
Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/13/2022 4:56 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s2

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Parametric, SGMW6B-60



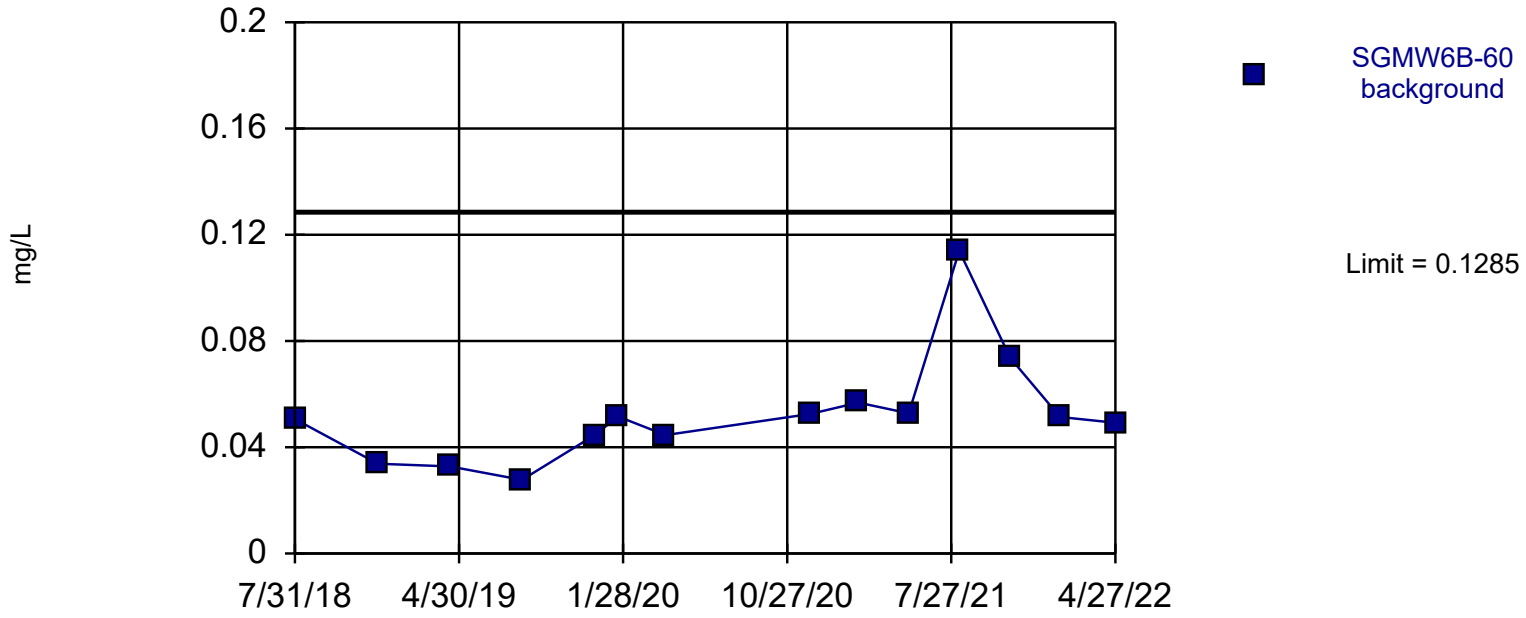
95% coverage. Background Data Summary (based on natural log transformation): Mean=-1.232, Std. Dev.=1.604, n=27, 7.407% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9391, critical = 0.894. Report alpha = 0.01.

Constituent: Aluminium - Dissolved [mg/L] Analysis Run 10/13/2022 5:02 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Parametric, SGMW6B-60



95% coverage. Background Data Summary (based on square root transformation): Mean=0.2257, Std. Dev.=0.04161, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8626, critical = 0.825. Report alpha = 0.01.

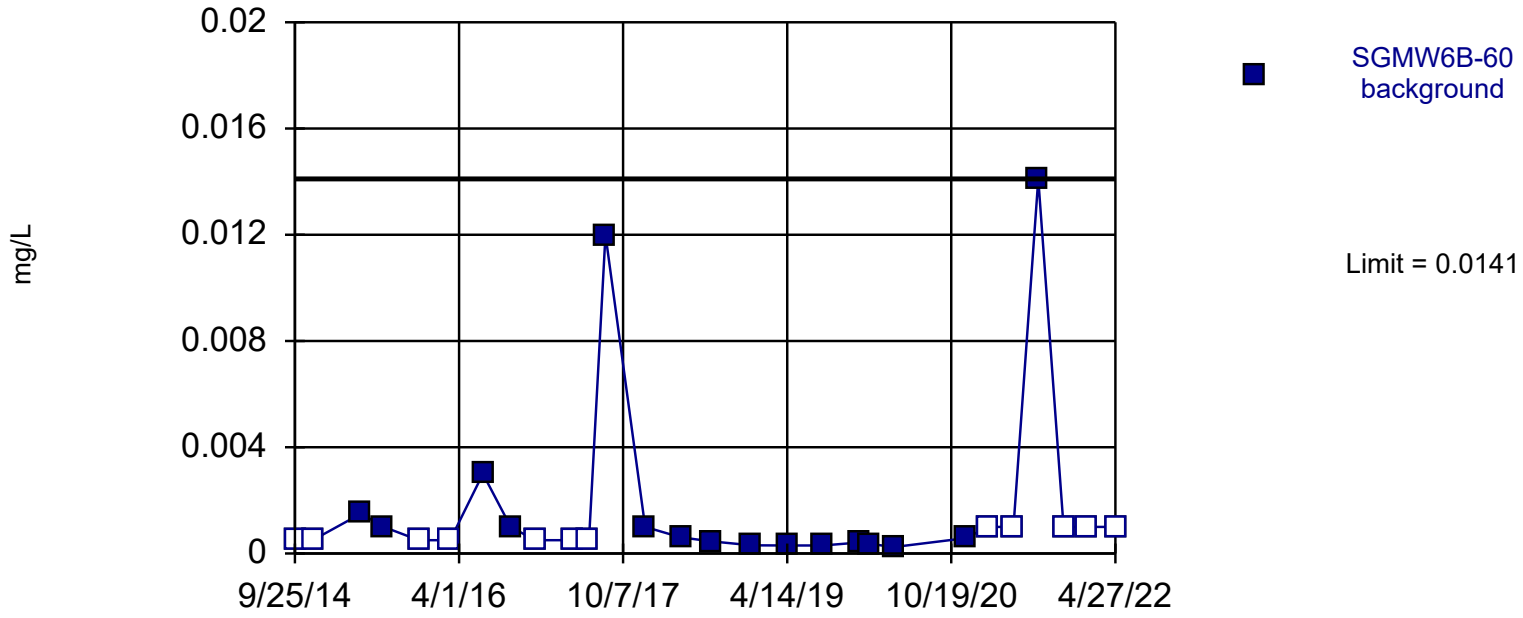
Constituent: Beryllium - Dissolved [mg/L] Analysis Run 10/13/2022 5:02 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



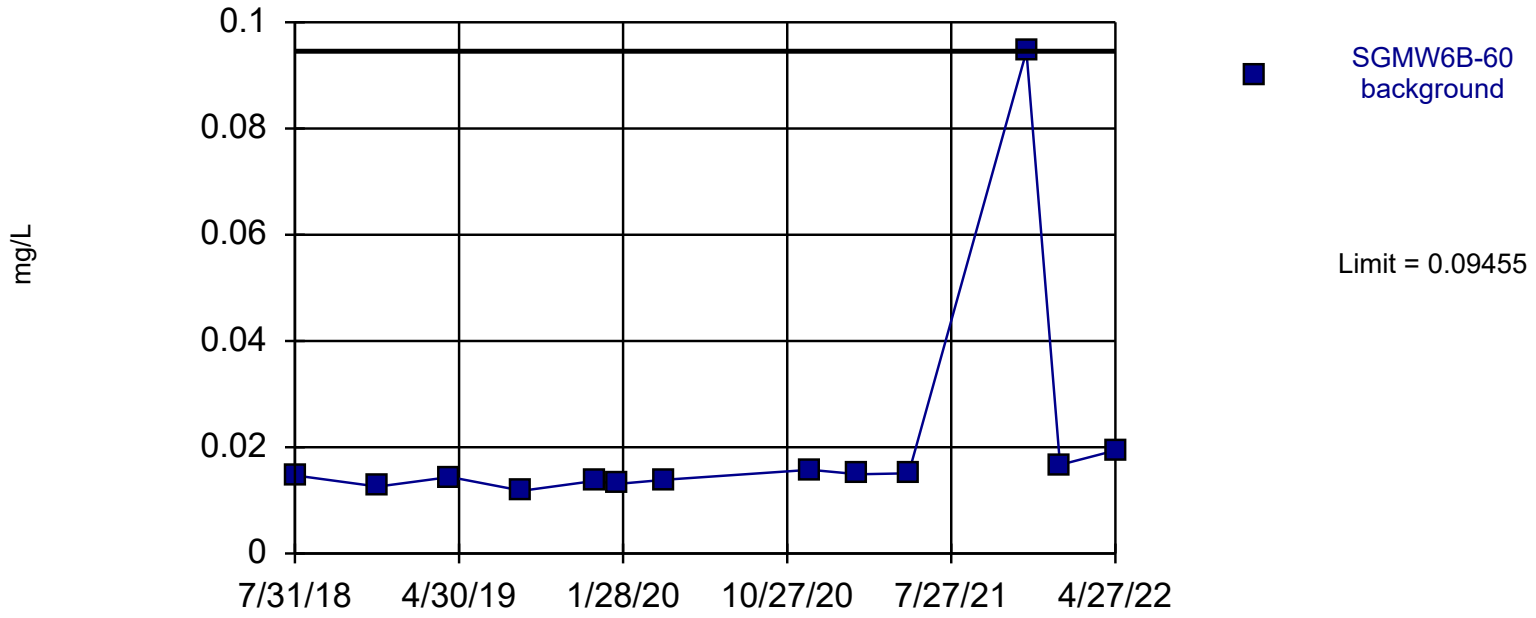
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 42.86% NDs. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

Constituent: Cadmium - Dissolved [mg/L] Analysis Run 10/13/2022 5:02 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



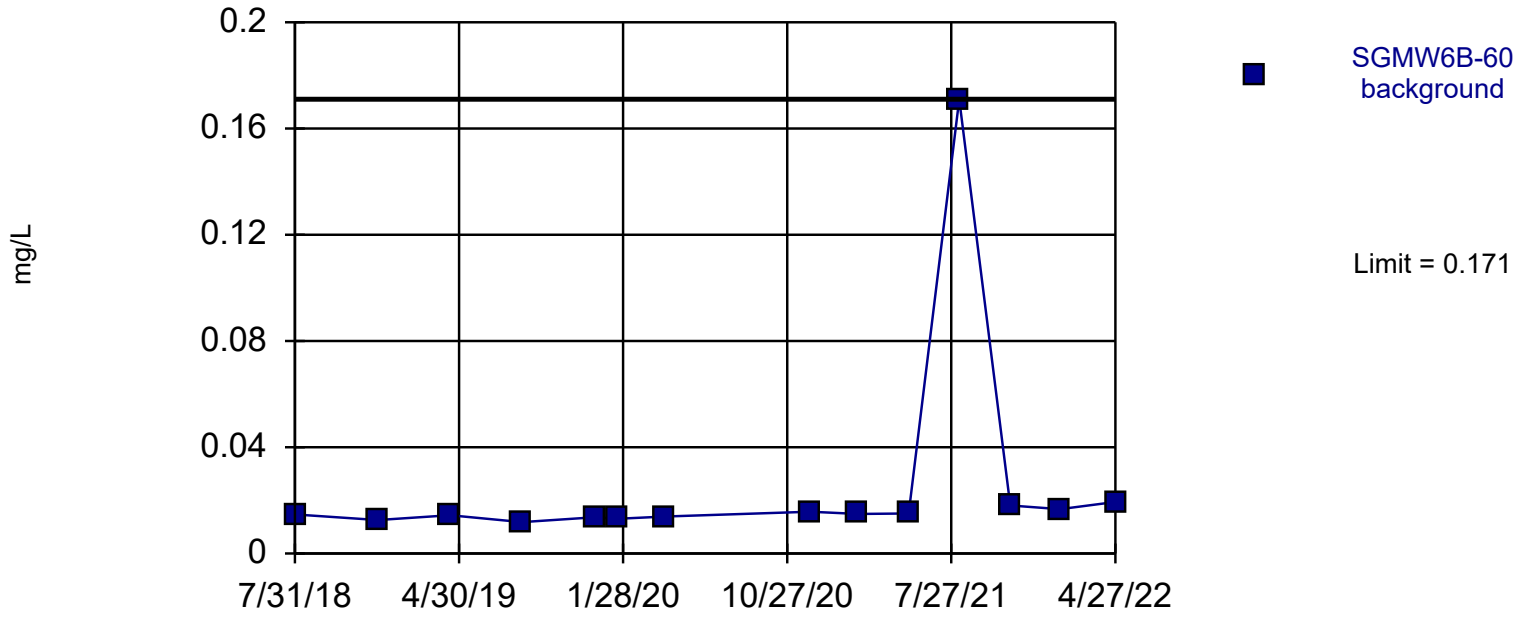
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 13 background values. 70.12% coverage at alpha=0.01; 79.49% coverage at alpha=0.05; 94.73% coverage at alpha=0.5. Report alpha = 0.5133.

Constituent: Cobalt - Dissolved [mg/L] Analysis Run 12/24/2022 9:47 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



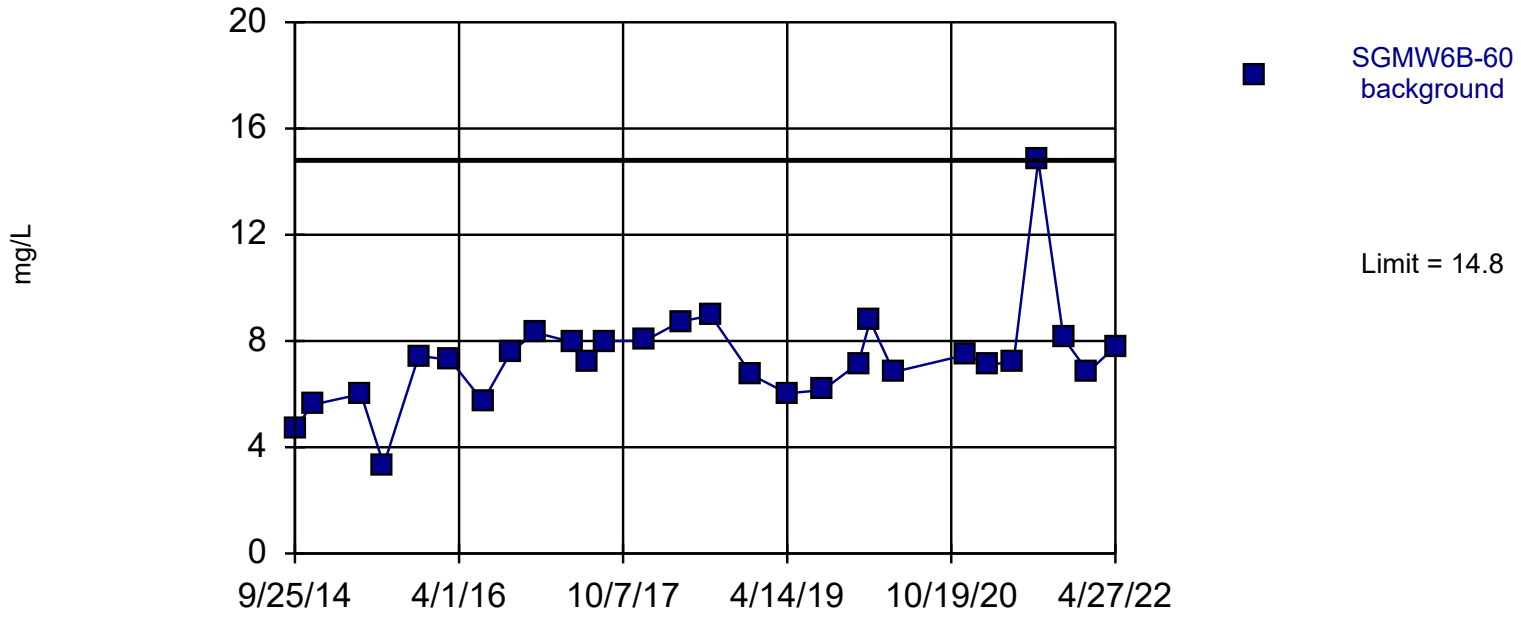
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 14 background values. 72.07% coverage at alpha=0.01; 80.66% coverage at alpha=0.05; 95.12% coverage at alpha=0.5. Report alpha = 0.4877.

Constituent: Cobalt - Dissolved [mg/L] Analysis Run 12/24/2022 9:57 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_up

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



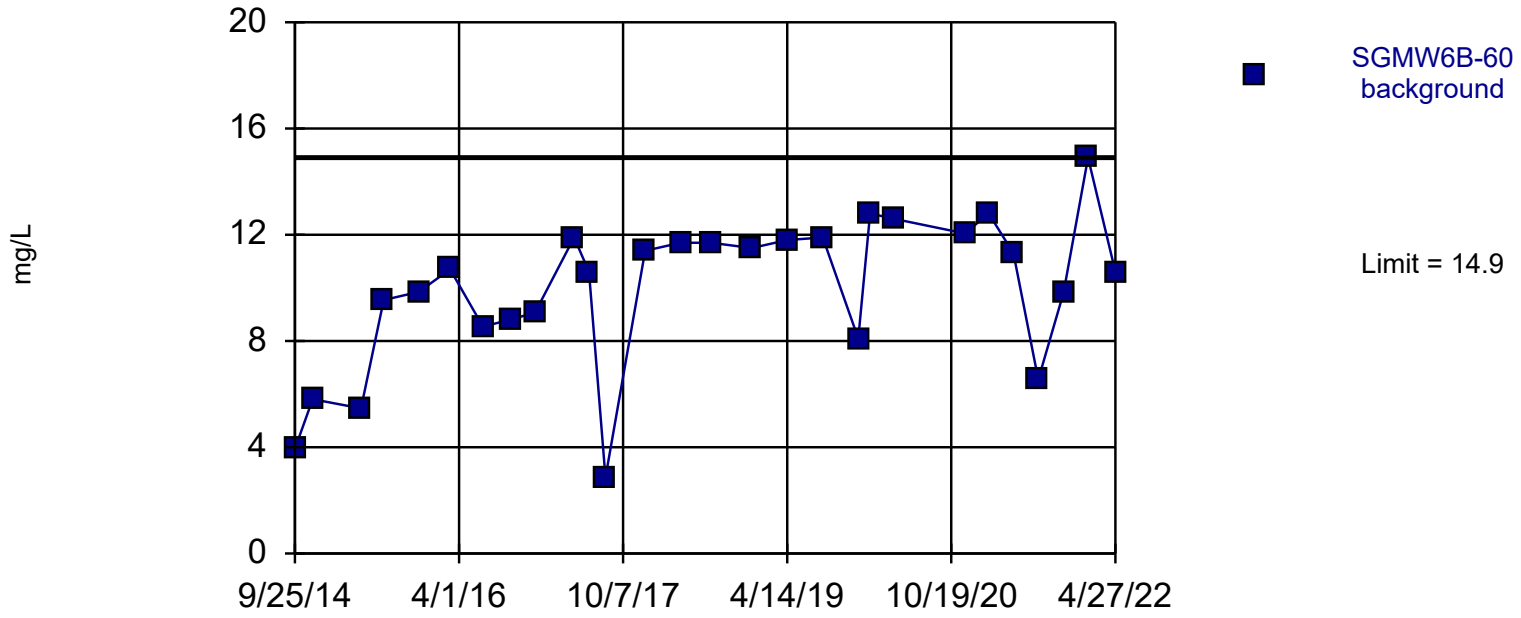
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 5:02 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



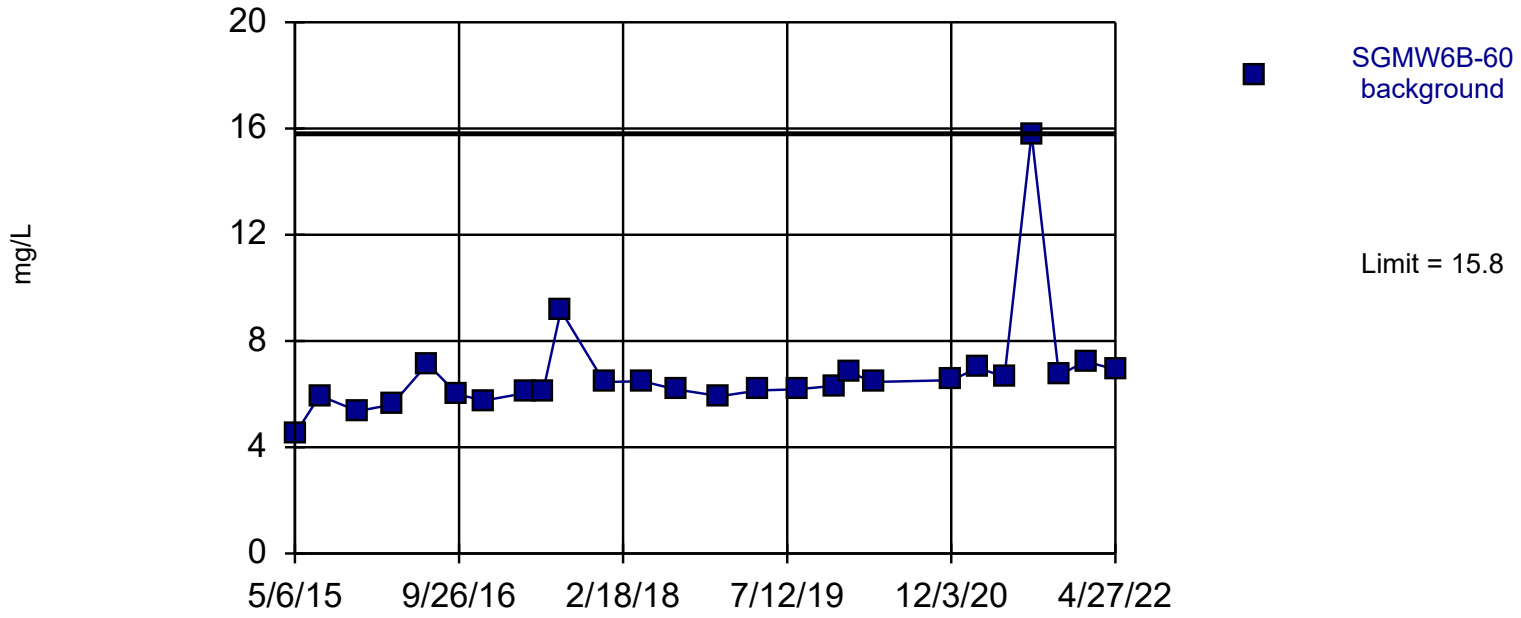
NP test selected by user. Limit is highest of 28 background values. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/23/2022 8:12 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



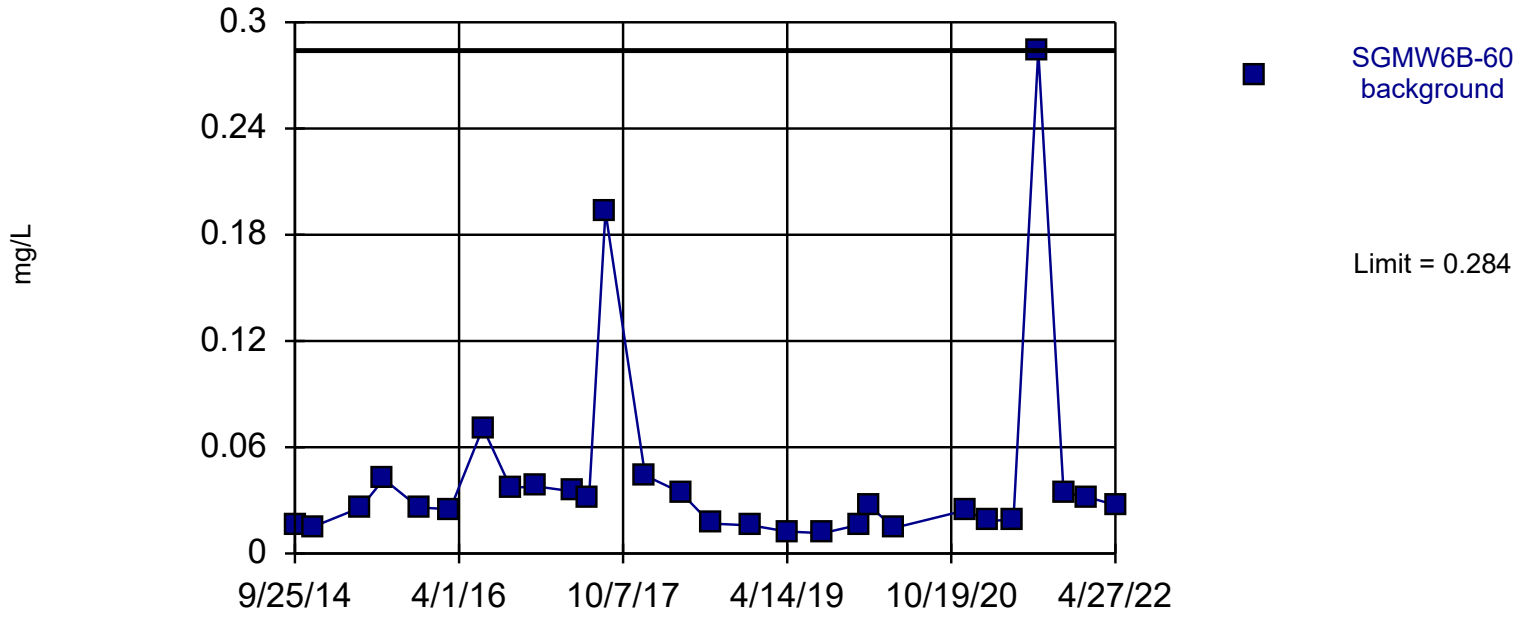
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 26 background values. 83.79% coverage at alpha=0.01; 89.26% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2635.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/1/2022 11:08 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

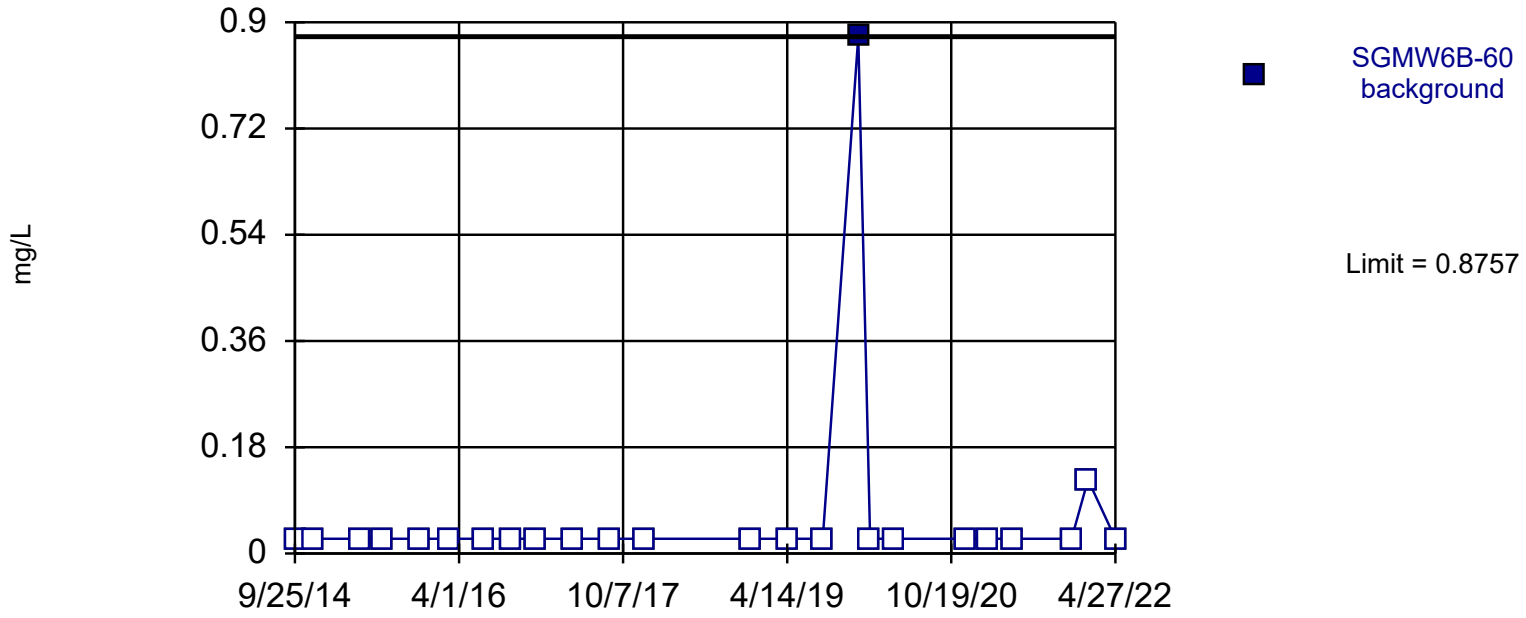
Constituent: Nickel - Dissolved [mg/L] Analysis Run 10/13/2022 5:03 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



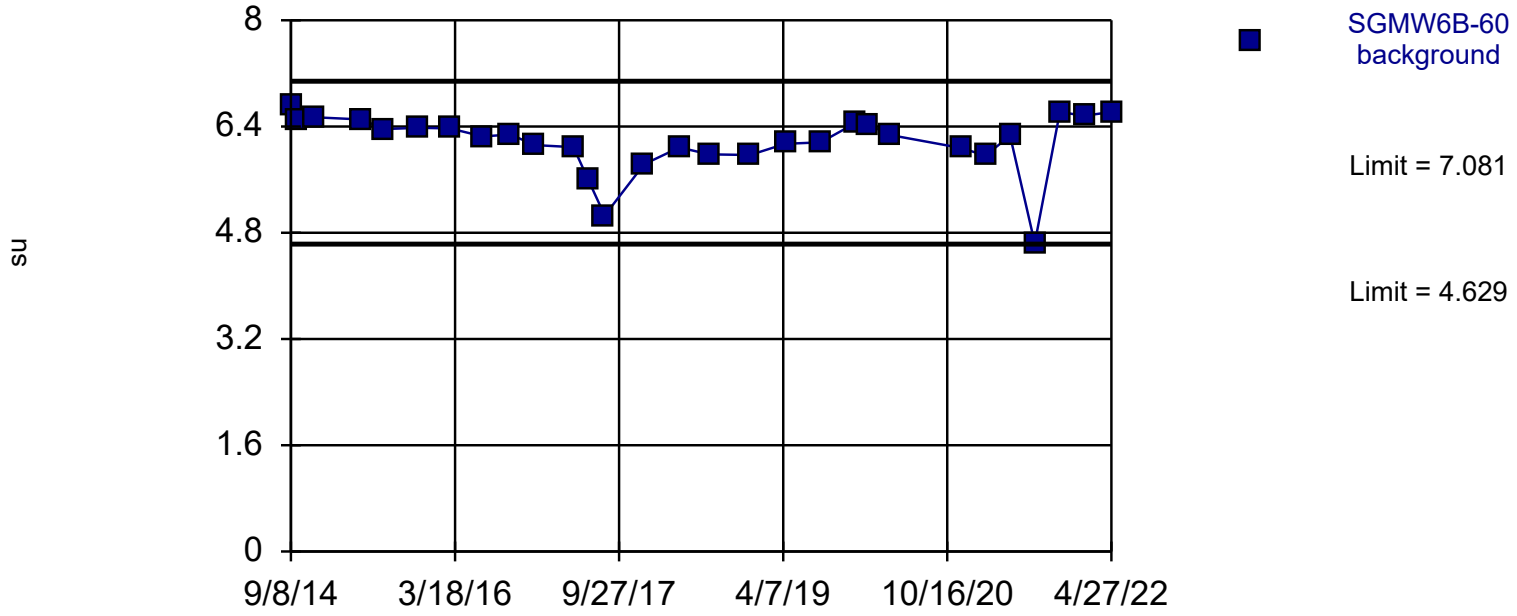
Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 24 background values. 95.83% NDs. 82.62% coverage at alpha=0.01; 88.09% coverage at alpha=0.05; 97.07% coverage at alpha=0.5. Report alpha = 0.292.

Constituent: Nitrite as Nitrogen [mg/L] Analysis Run 10/13/2022 5:03 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Parametric, SGMW6B-60



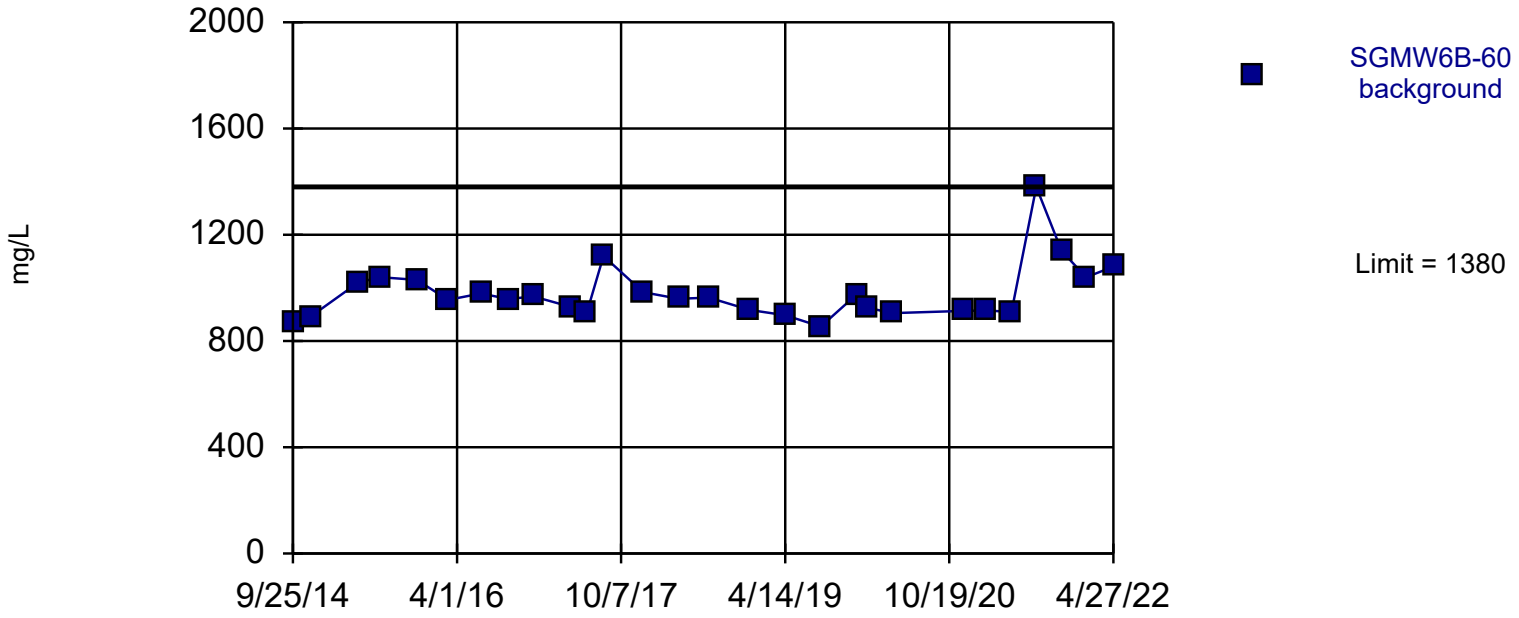
95% coverage. Background Data Summary (based on x^4 transformation): Mean=1487, Std. Dev.=358.8, n=29.
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9244, critical = 0.898. Report alpha = 0.005 per tail.

Constituent: pH Field [pH unit] Analysis Run 10/13/2022 5:03 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



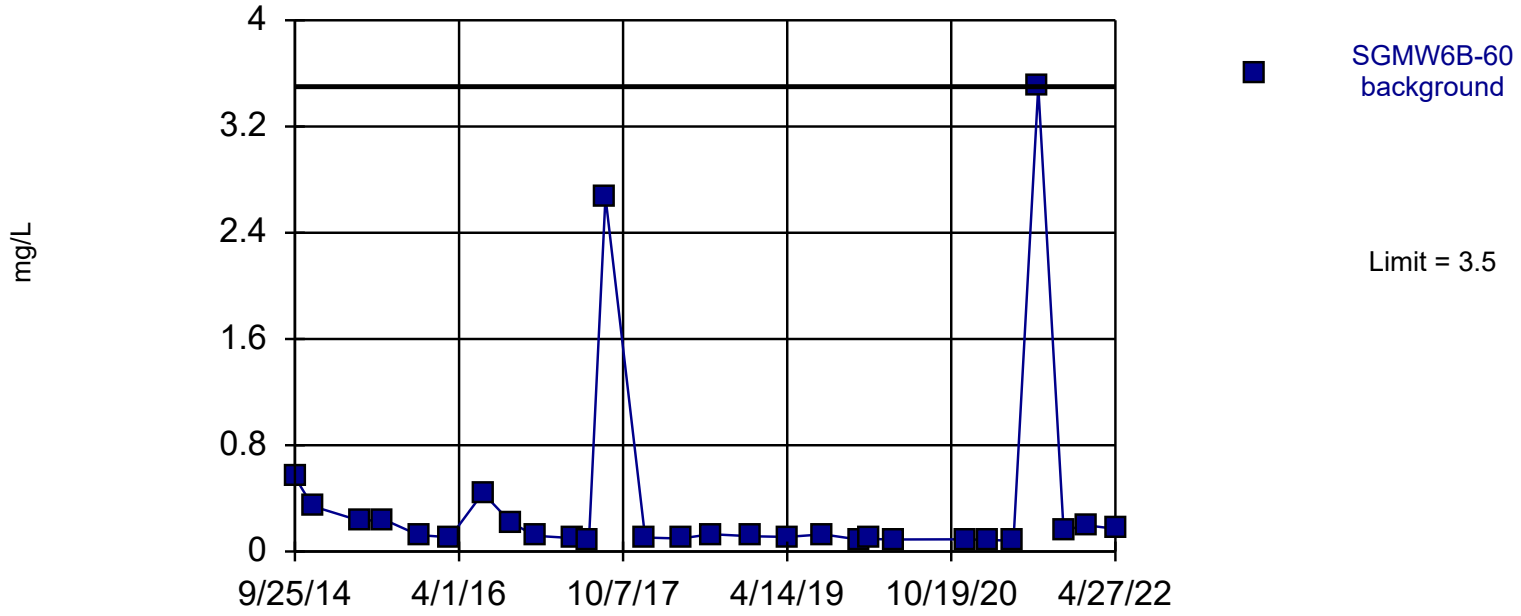
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

Constituent: Sulfate - Total [mg/L] Analysis Run 10/13/2022 5:03 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



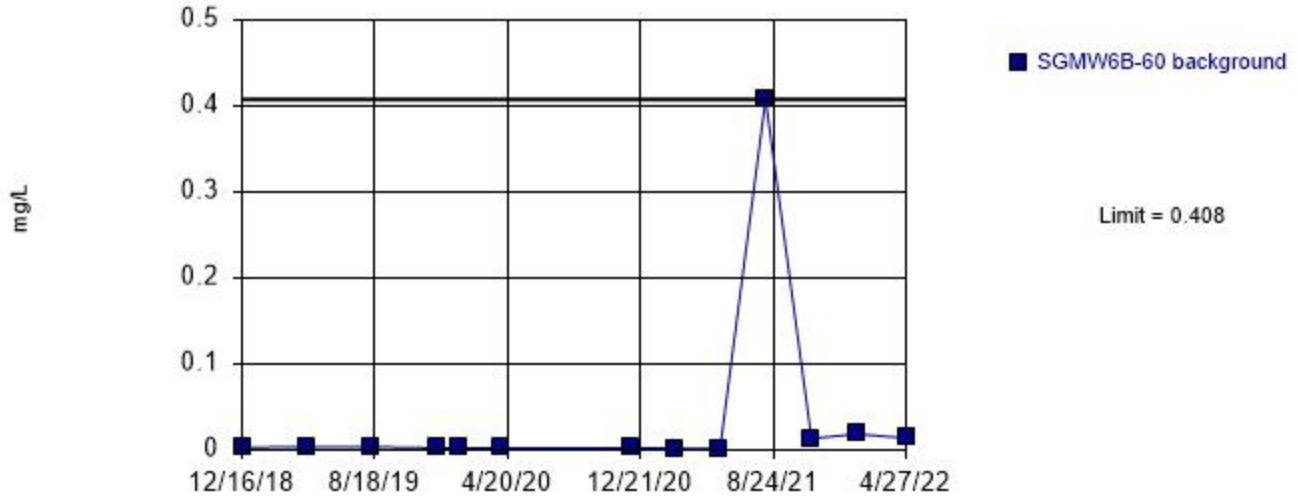
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 28 background values. 84.96% coverage at alpha=0.01; 90.04% coverage at alpha=0.05; 97.46% coverage at alpha=0.5. Report alpha = 0.2378.

Constituent: Zinc - Dissolved [mg/L] Analysis Run 10/13/2022 5:03 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Tolerance Limit

Intrawell Non-parametric, SGMW6B-60



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 13 background values. 70.12% coverage at alpha=0.01; 79.49% coverage at alpha=0.05; 94.73% coverage at alpha=0.5. Report alpha = 0.5133.

Constituent: Uranium - Dissolved [mg/L] Analysis Run 10/13/2022 5:13 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem_s

Poverty Gulch
Cripple Creek and Victor Gold Mine
NPL Recommendation

Sanitas Outputs

Outlier Analysis

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf Printed 10/12/2022, 10:26 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev	Distribution	Normality Test
Aluminum - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	Dixon`s	0.05	12	12.06	5.005	normal	ShapiroWilk
Cadmium - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	0.00943	0.003346	normal	ShapiroWilk
Cobalt - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	0.04965	0.01571	normal	ShapiroWilk
Copper - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	1.013	0.9504	ln(x)	ShapiroWilk
Fluoride - Total F [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	2.497	0.4208	normal	ShapiroWilk
Iron - Dissolved []mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	.2345	.25	ln(x)	ShapiroWilk
Manganese - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	Dixon`s	0.05	12	8.776	3.269	normal	ShapiroWilk
Nickel - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	0.1028	0.0316	normal	ShapiroWilk
Nitrate as Nitrogen [mg/L] (mg/L)	**PGMW-3**	**Yes**	**16.47,7.54,3.19**	**12/11/2019,12/3/2018,5/20/2021**	**Dixon`s**	**0.05**	**12**	**11.26**	**3.249**	**normal**	**ShapiroWilk**
Nitrite + Nitrate as Nitrogen [mg/L] (mg/L) pH Field [pH unit] (su)	**PGMW-3**	**Yes**	**16.47,8.06,3.19**	**12/11/2019,12/3/2018,5/20/2021**	**Dixon`s**	**0.05**	**12**	**11.31**	**3.199**	**normal**	**ShapiroWilk**
Sulfate - Total [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	4.229	0.2934	normal	ShapiroWilk
Zinc - Dissolved [mg/L] (mg/L)	PGMW-3	No	n/a	n/a	Dixon`s	0.05	12	548	48.72	normal	ShapiroWilk
	PGMW-3	No	n/a	n/a	EPA 1989	0.05	12	1.171	0.447	normal	ShapiroWilk

Trend Test

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem Printed 10/12/2022, 12:33 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Aluminum - Dissolved [mg/L] (m...	PGMW-3	3.241	30	35	No	12	0	n/a	n/a	0.02	NP
Cadmium - Dissolved [mg/L] (mg/L)	PGMW-3	0.000...	14	35	No	12	0	n/a	n/a	0.02	NP
Cobalt - Dissolved [mg/L] (mg/L)	PGMW-3	-0.00...	-16	-35	No	12	0	n/a	n/a	0.02	NP
Copper - Dissolved [mg/L] (mg/L)	PGMW-3	-0.3045	-22	-35	No	12	0	n/a	n/a	0.02	NP
Fluoride - Total F [mg/L] (mg/L)	PGMW-3	-0.01231	0	35	No	12	0	n/a	n/a	0.02	NP
Iron - Dissolved []mg/L] (mg/L)	PGMW-3	0.04121	16	-2.359	No	12	33.33	n/a	n/a	0.02	NP
Manganese - Dissolved [mg/L] (m...	PGMW-3	-0.6508	-23	-35	No	12	0	n/a	n/a	0.02	NP
Nickel - Dissolved [mg/L] (mg/L)	PGMW-3	-0.01382	-28	-35	No	12	0	n/a	n/a	0.02	NP
Nitrate as Nitrogen [mg/L] (mg/L)	PGMW-3	-0.4519	-17	-31	No	11	0	n/a	n/a	0.02	NP
Nitrite + Nitrate as Nitrogen [...	PGMW-3	-0.4519	-17	-31	No	11	0	n/a	n/a	0.02	NP
pH Field [pH unit] (su)	PGMW-3	-0.1227	-30	-35	No	12	0	n/a	n/a	0.02	NP
Sulfate - Total [mg/L] (mg/L)	**PGMW-3**	**30.59**	**40**	**35**	**Yes**	**12**	**0**	**n/a**	**n/a**	**0.02**	**NP**
Zinc - Dissolved [mg/L] (mg/L)	PGMW-3	-0.07332	-14	-35	No	12	0	n/a	n/a	0.02	NP

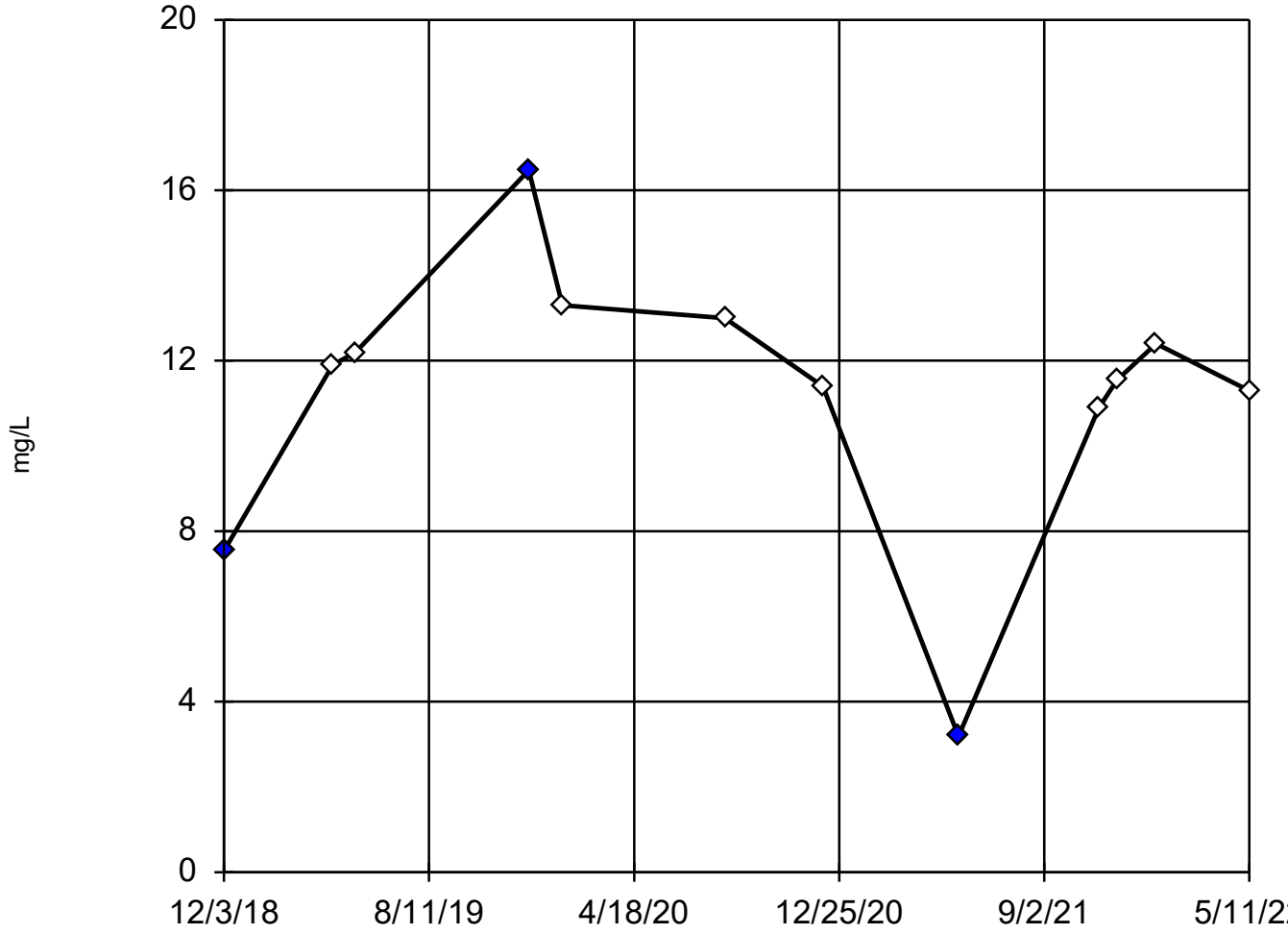
Tolerance Limit

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem Printed 10/13/2022, 8:45 AM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Aluminum - Dissolved [mg/L] (m...	PGMW-3	29.12	n/a	n/a	n/a	12	0	No	0.01	Intra
Cadmium - Dissolved [mg/L] (mg/L)	PGMW-3	0.02084	n/a	n/a	n/a	12	0	No	0.01	Intra
Cobalt - Dissolved [mg/L] (mg/L)	PGMW-3	0.1032	n/a	n/a	n/a	12	0	No	0.01	Intra
Copper - Dissolved [mg/L] (mg/L)	PGMW-3	5.431	n/a	n/a	n/a	12	0	sqrt(x)	0.01	Intra
Fluoride - Total F [mg/L] (mg/L)	PGMW-3	3.932	n/a	n/a	n/a	12	0	No	0.01	Intra
Iron - Dissolved []mg/L] (mg/L)	PGMW-3	1.209	n/a	n/a	n/a	12	33.33	sqrt(x)	0.01	Intra
Manganese - Dissolved [mg/L] (m...	PGMW-3	19.92	n/a	n/a	n/a	12	0	No	0.01	Intra
Nickel - Dissolved [mg/L] (mg/L)	PGMW-3	0.2105	n/a	n/a	n/a	12	0	No	0.01	Intra
Nitrate as Nitrogen [mg/L] (mg/L)	PGMW-3	18.99	n/a	n/a	n/a	11	0	x^2	0.01	Intra
Nitrite + Nitrate as Nitrogen [...	PGMW-3	18.99	n/a	n/a	n/a	11	0	x^2	0.01	Intra
pH Field [pH unit] (su)	PGMW-3	5.365	n/a	n/a	n/a	12	0	No	0.01	Intra
Sulfate - Total [mg/L] (mg/L)	PGMW-3	714.2	n/a	n/a	n/a	9	0	No	0.01	Intra
Zinc - Dissolved [mg/L] (mg/L)	PGMW-3	2.693	n/a	n/a	n/a	12	0	No	0.01	Intra

Dixon's Outlier Test

PGMW-3



n = 12

Statistical outliers are drawn as solid.
Testing for 1 high and 2 low outliers.
Mean = 11.26.
Std. Dev. = 3.249.
13.3: c = 0.6228
tabl = 0.546.
7.54: c = 0.6528
tabl = 0.546.
Alpha = 0.05.

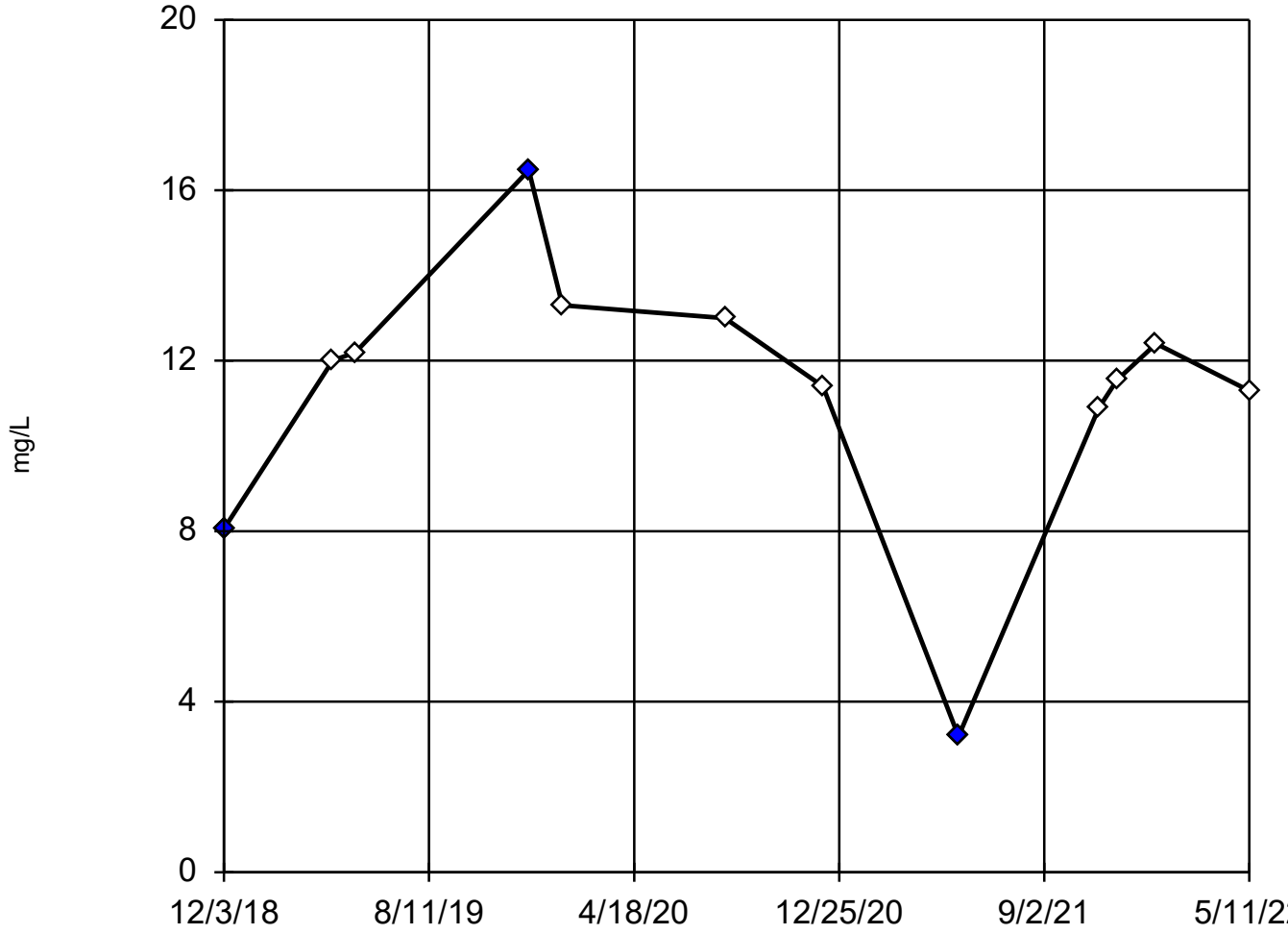
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9579
Critical = 0.764
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Nitrate as Nitrogen [mg/L] Analysis Run 10/12/2022 10:25 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Dixon's Outlier Test

PGMW-3



n = 12

Statistical outliers are drawn as solid.
Testing for 1 high and 2 low outliers.
Mean = 11.31.
Std. Dev. = 3.199.
13.3: c = 0.6228
tabl = 0.546.
8.06: c = 0.6183
tabl = 0.546.
Alpha = 0.05.

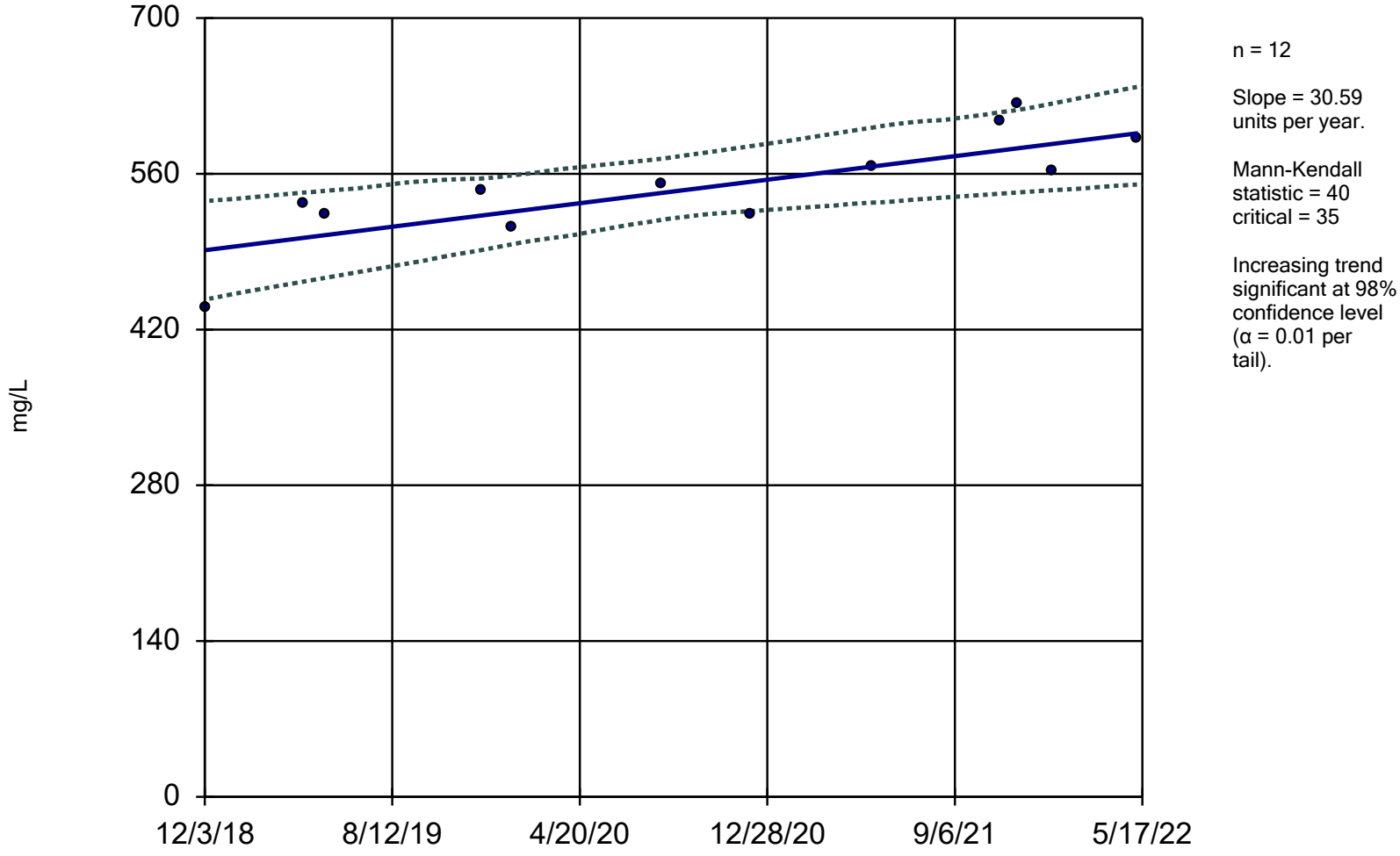
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9598
Critical = 0.764
The distribution, after removal of suspect values, was found to be normally distributed.

Constituent: Nitrite + Nitrate as Nitrogen [mg/L] Analysis Run 10/12/2022 10:26 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf

Sen's Slope Estimator

PGMW-3

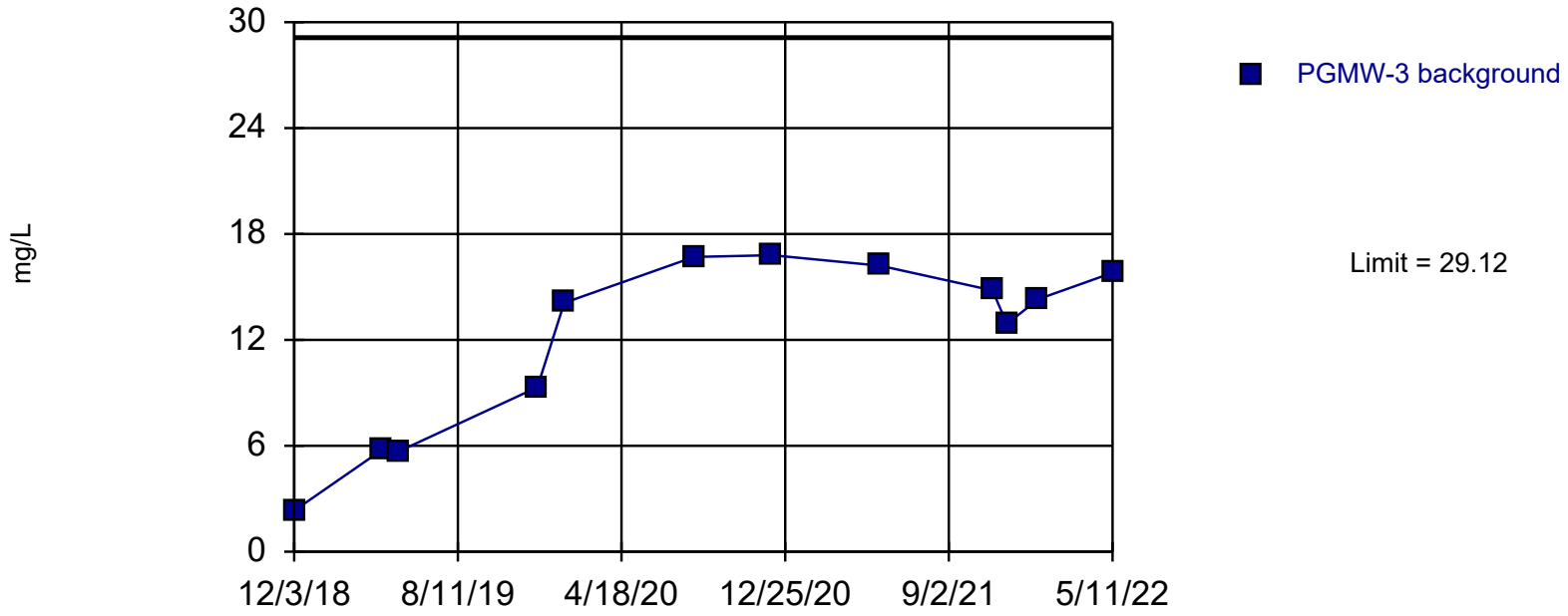


Constituent: Sulfate - Total [mg/L] Analysis Run 10/12/2022 12:32 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_out_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



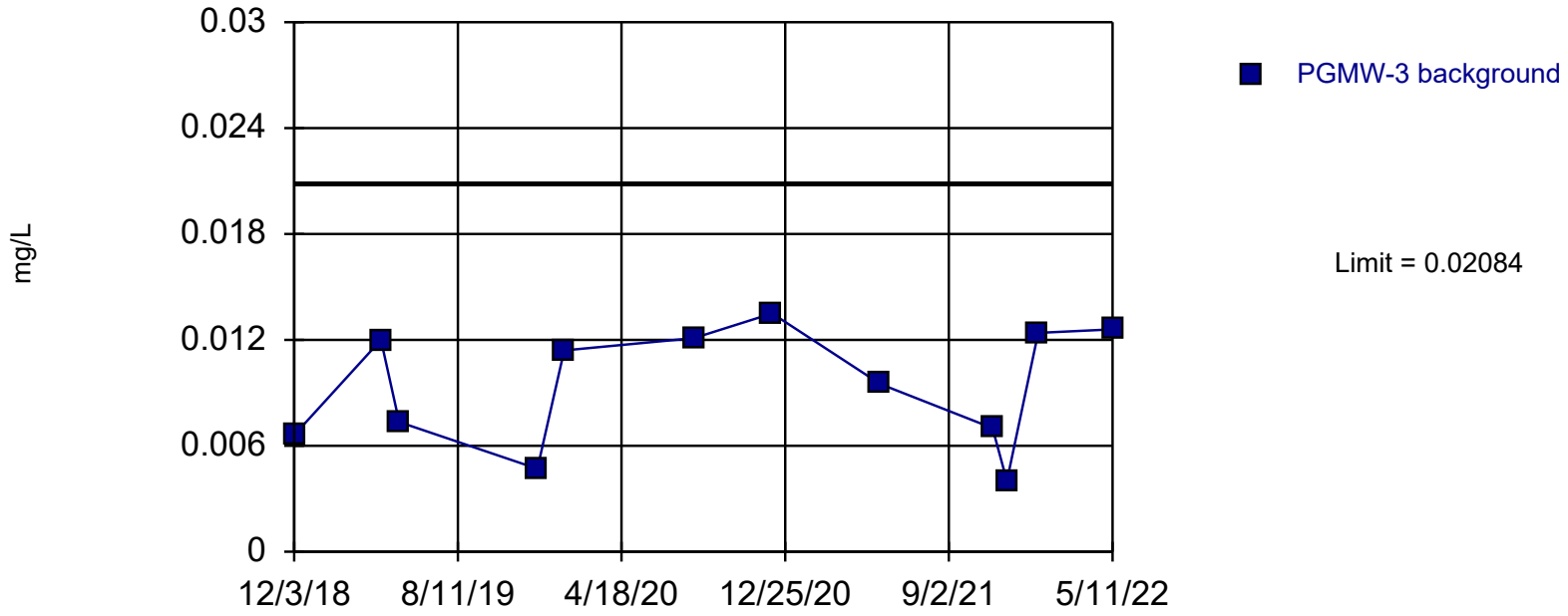
95% coverage. Background Data Summary: Mean=12.06, Std. Dev.=5.005, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8446, critical = 0.805. Report alpha = 0.01.

Constituent: Aluminium - Dissolved [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



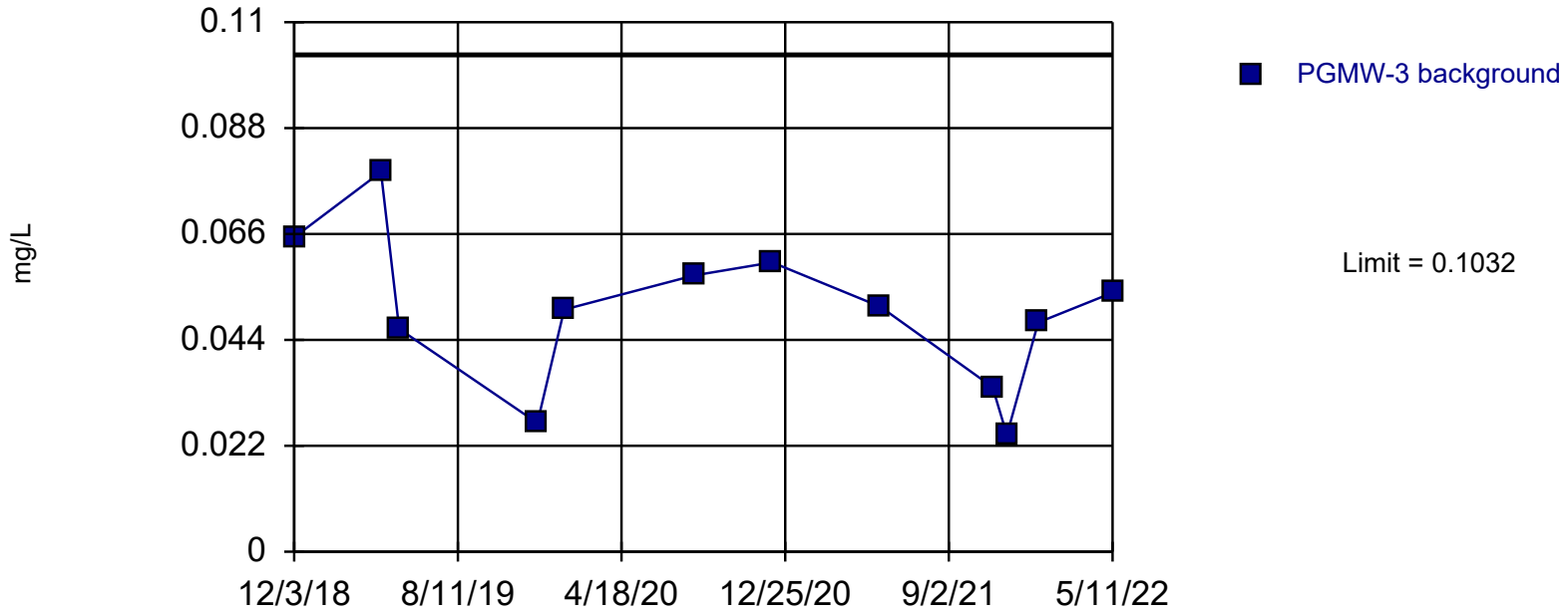
95% coverage. Background Data Summary: Mean=0.00943, Std. Dev.=0.003346, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8925, critical = 0.805. Report alpha = 0.01.

Constituent: Cadmium - Dissolved [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



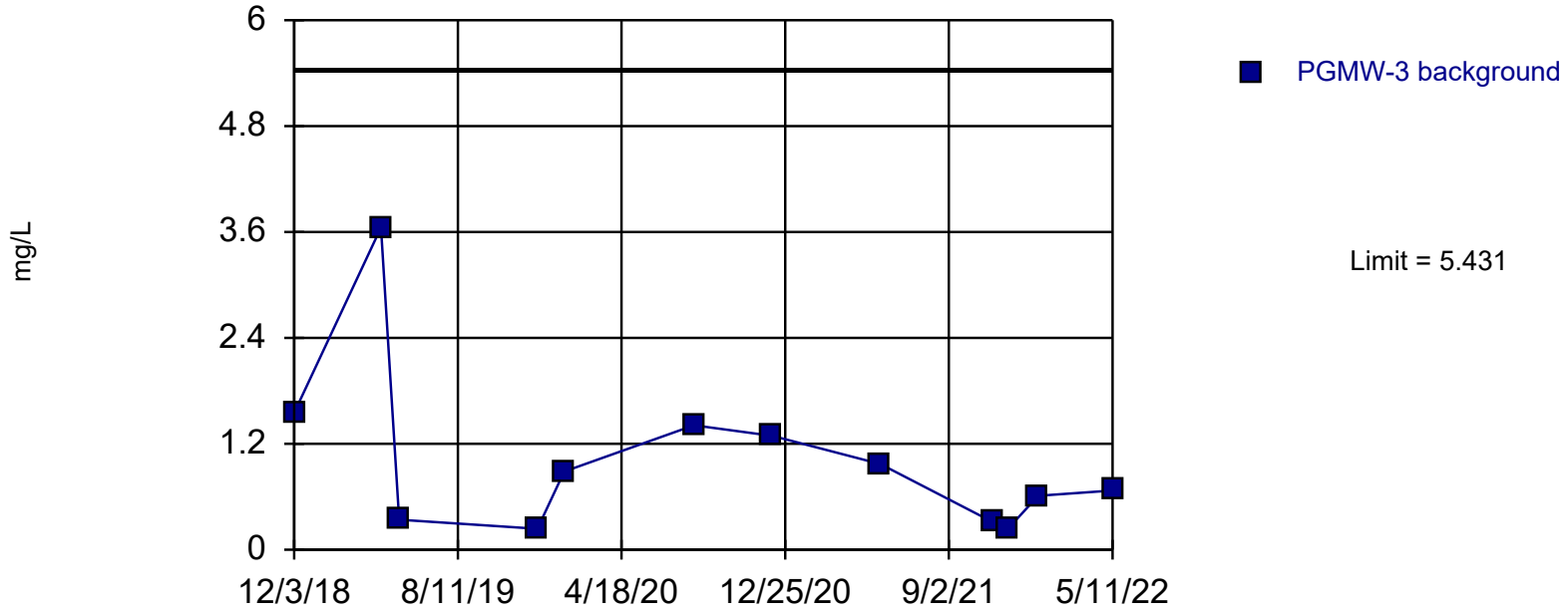
95% coverage. Background Data Summary: Mean=0.04965, Std. Dev.=0.01571, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9651, critical = 0.805. Report alpha = 0.01.

Constituent: Cobalt - Dissolved [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



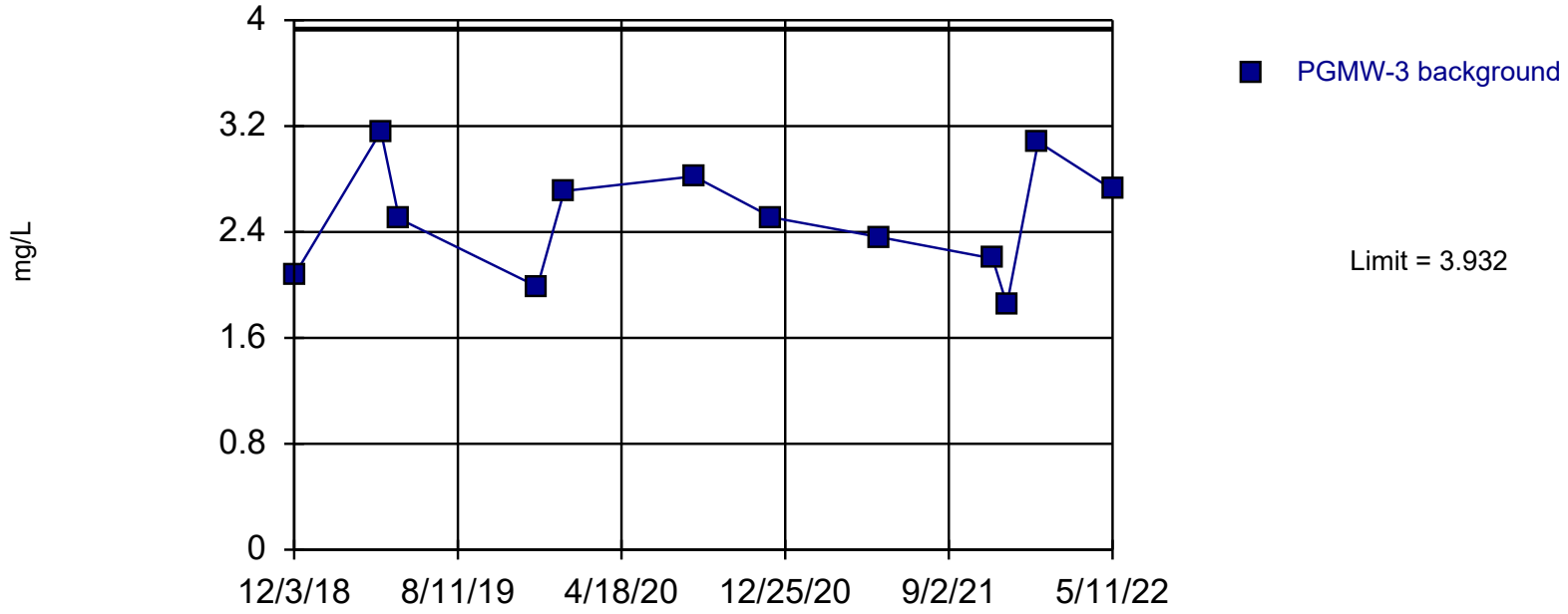
95% coverage. Background Data Summary (based on square root transformation): Mean=0.9259, Std. Dev.=0.4119, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8989, critical = 0.805. Report alpha = 0.01.

Constituent: Copper - Dissolved [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



95% coverage. Background Data Summary: Mean=2.497, Std. Dev.=0.4208, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9664, critical = 0.805. Report alpha = 0.01.

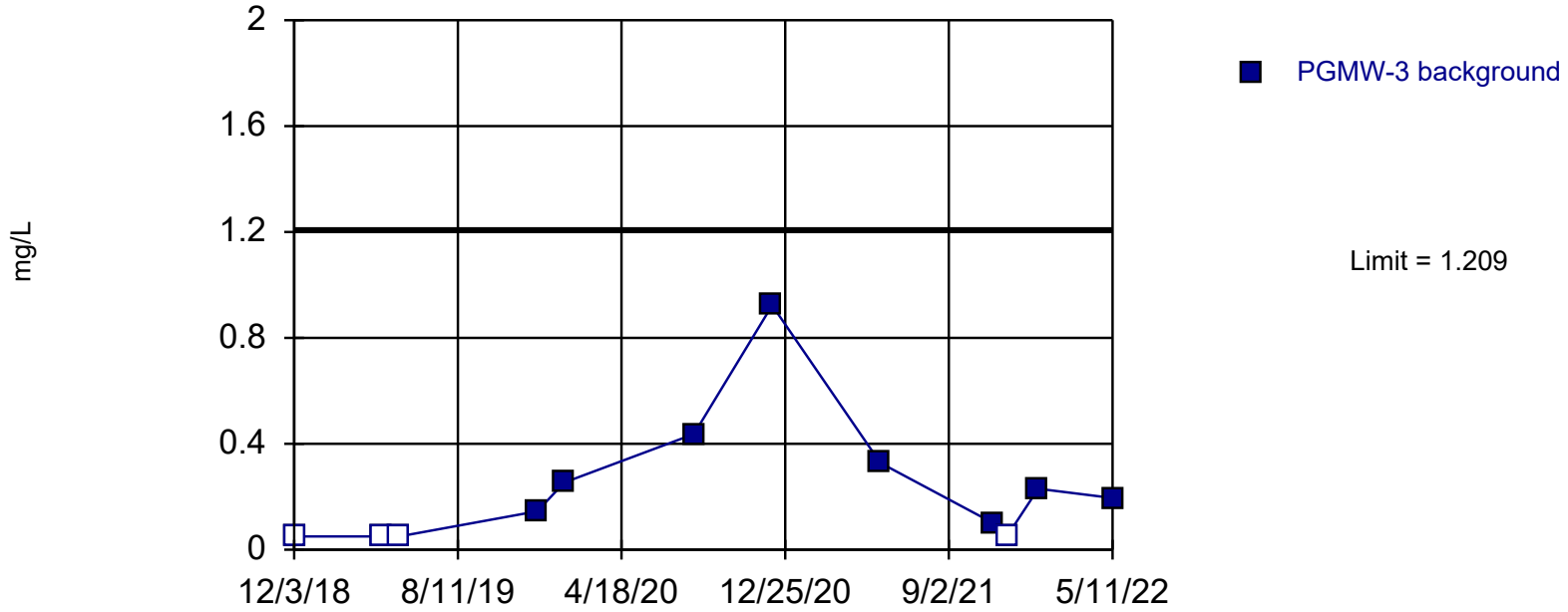
Constituent: Fluoride - Total F [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Tolerance Limit

Intrawell Parametric, PGMW-3



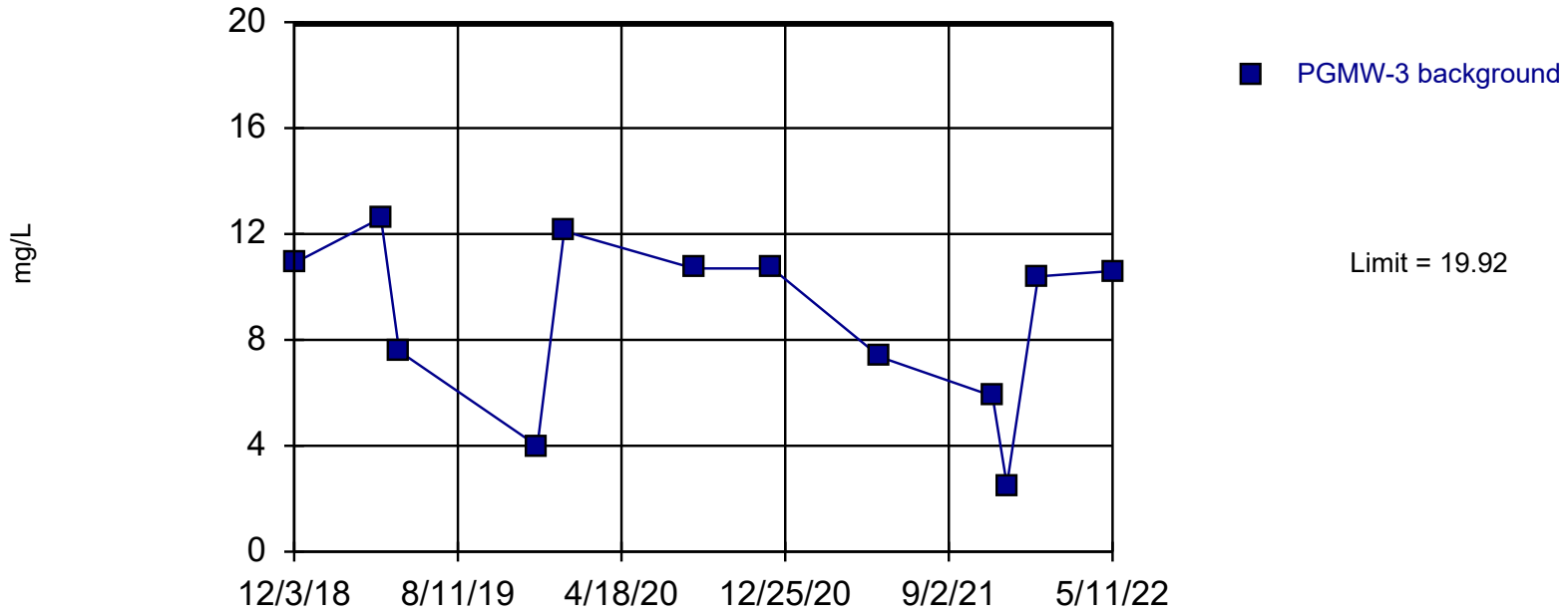
95% coverage. Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.4654, Std. Dev.=0.1859, n=12, 33.33% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8735, critical = 0.805. Report alpha = 0.01.

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/21/2022 12:11 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



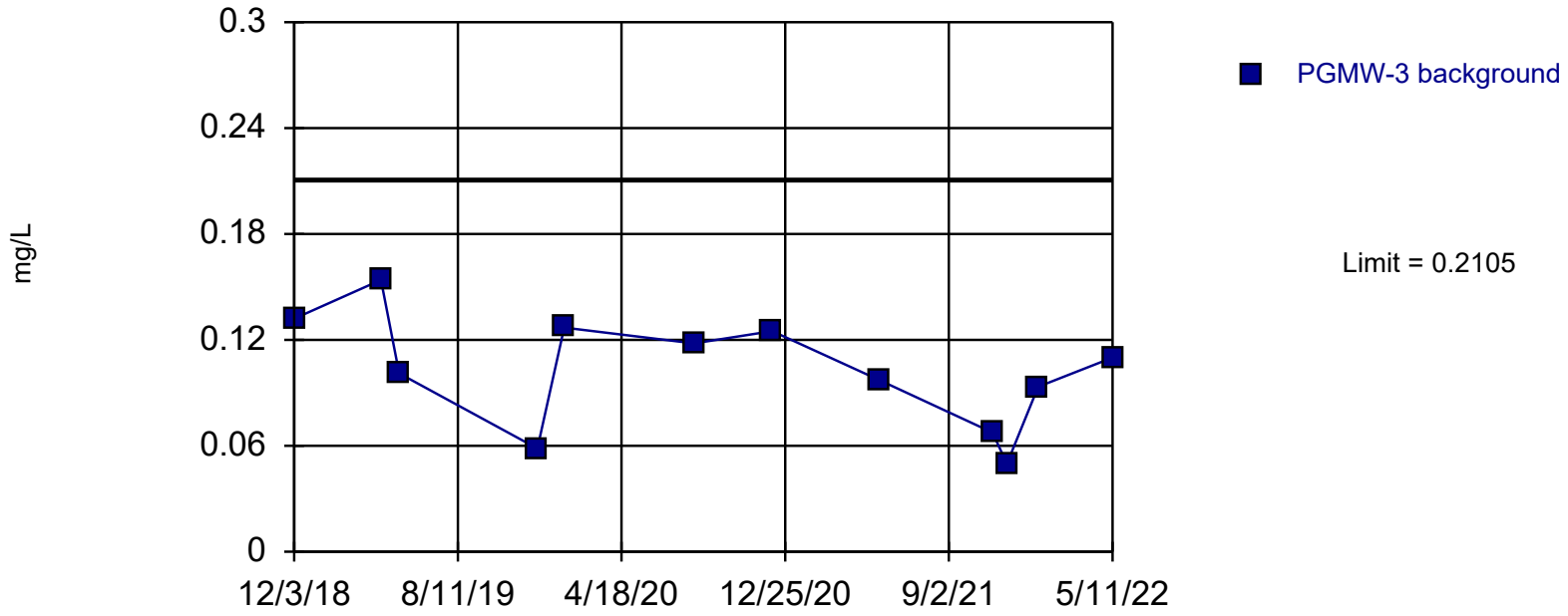
95% coverage. Background Data Summary: Mean=8.776, Std. Dev.=3.269, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8892, critical = 0.805. Report alpha = 0.01.

Constituent: Manganese - Dissolved [mg/L] Analysis Run 10/13/2022 8:42 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



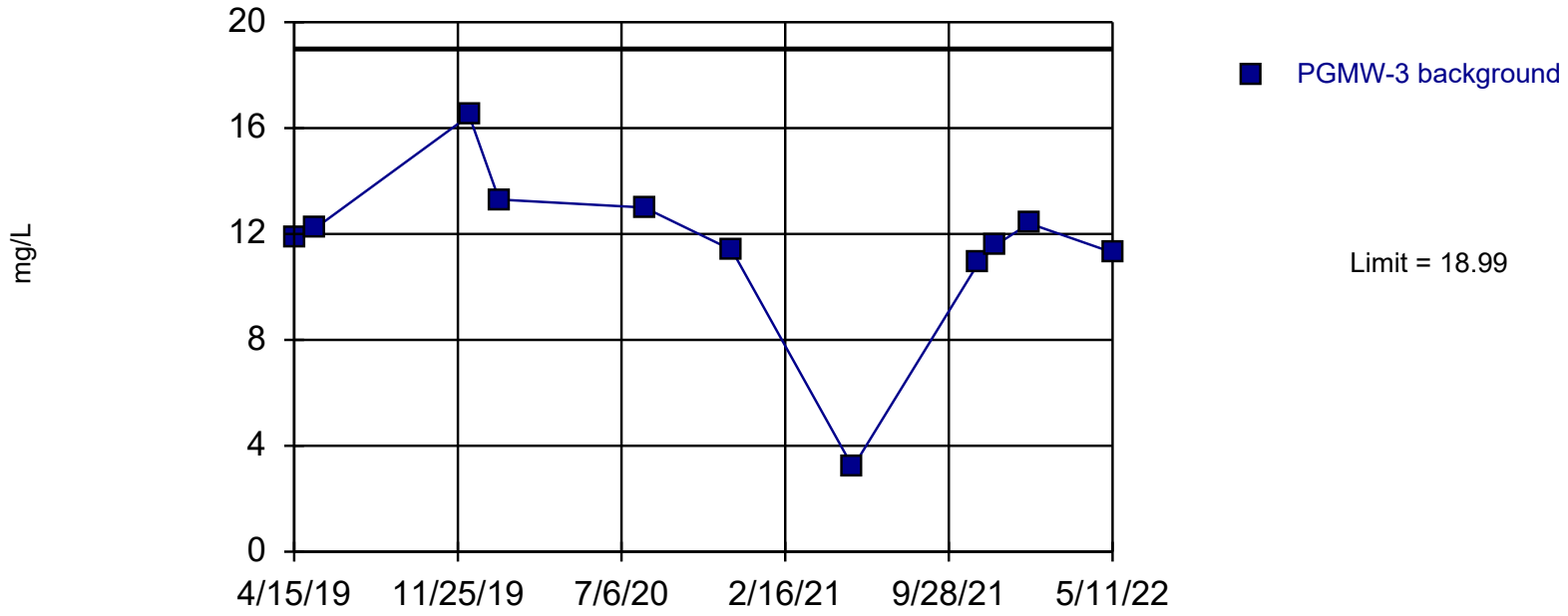
95% coverage. Background Data Summary: Mean=0.1028, Std. Dev.=0.0316, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9601, critical = 0.805. Report alpha = 0.01.

Constituent: Nickel - Dissolved [mg/L] Analysis Run 10/13/2022 8:43 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



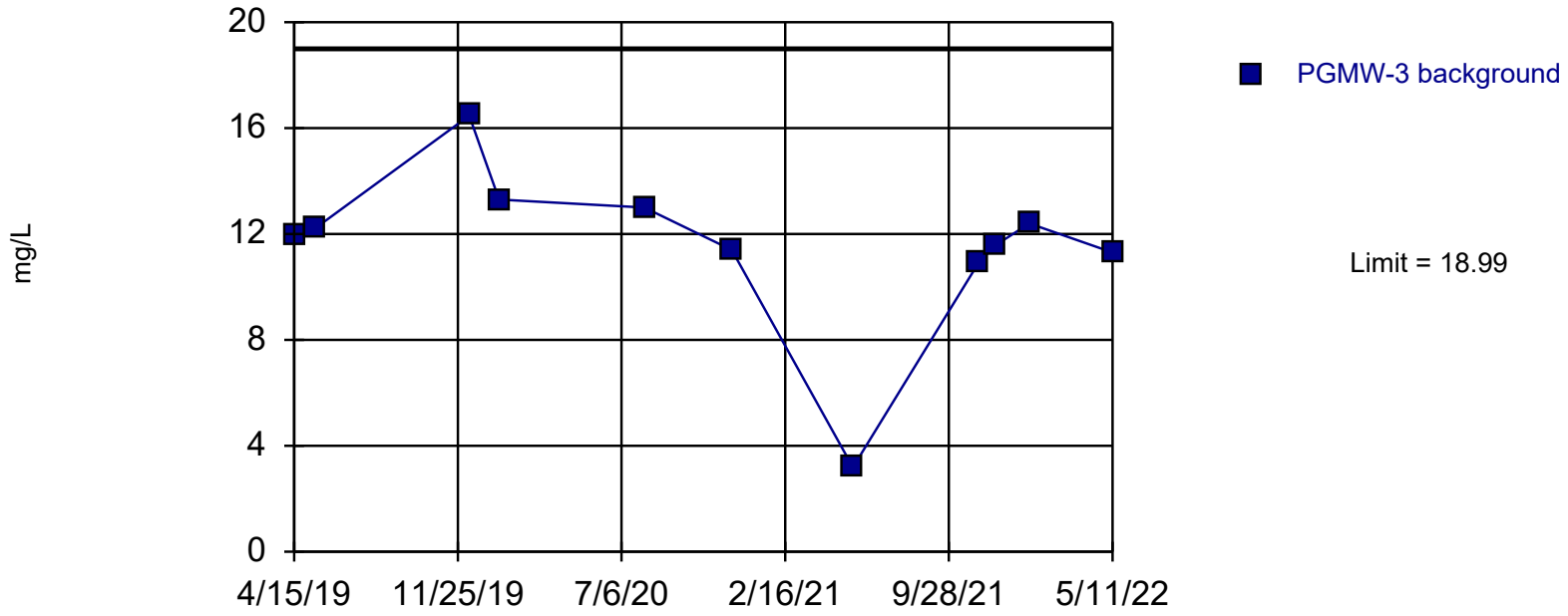
95% coverage. Background Data Summary (based on square transformation): Mean=143.8, Std. Dev.=60.92, n=11.
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8655, critical = 0.792. Report alpha = 0.01.

Constituent: Nitrate as Nitrogen [mg/L] Analysis Run 10/13/2022 8:43 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



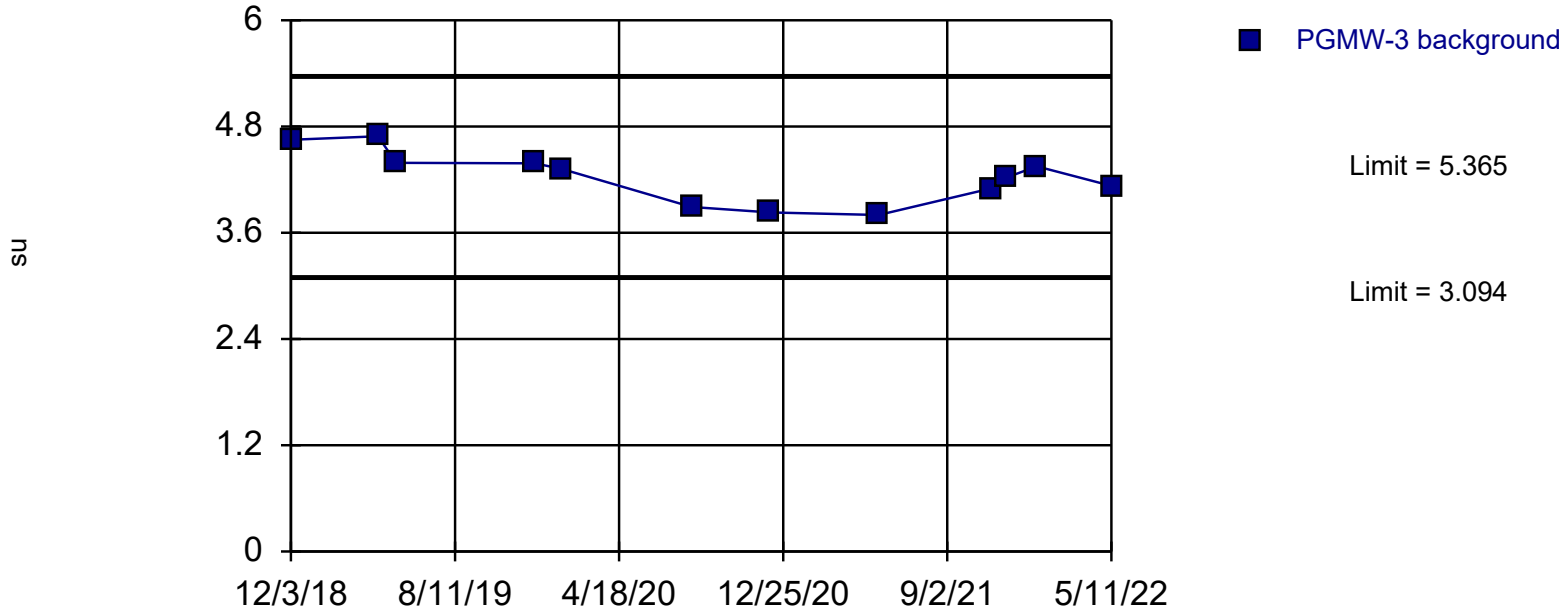
95% coverage. Background Data Summary (based on square transformation): Mean=144, Std. Dev.=60.92, n=11.
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8656, critical = 0.792. Report alpha = 0.01.

Constituent: Nitrite + Nitrate as Nitrogen [mg/L] Analysis Run 10/13/2022 8:43 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



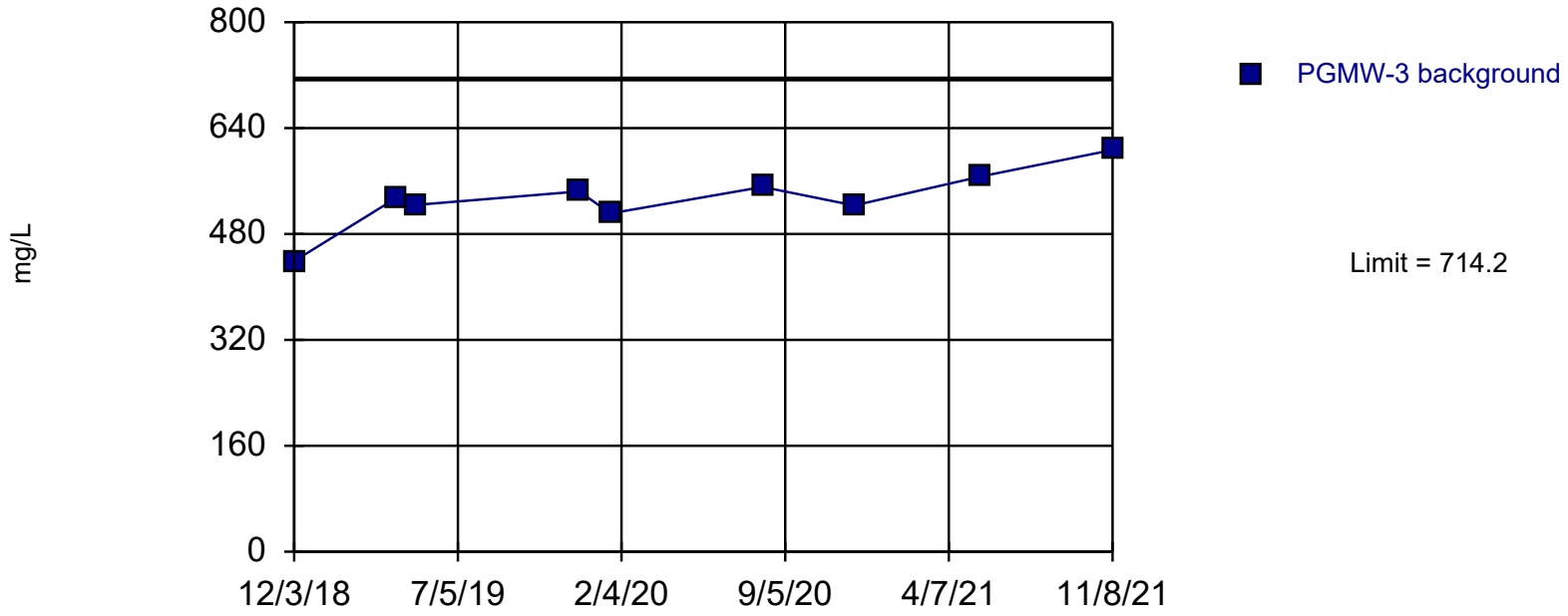
95% coverage. Background Data Summary: Mean=4.229, Std. Dev.=0.2934, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9439, critical = 0.805. Report alpha = 0.005 per tail.

Constituent: pH Field [pH unit] Analysis Run 10/13/2022 8:43 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



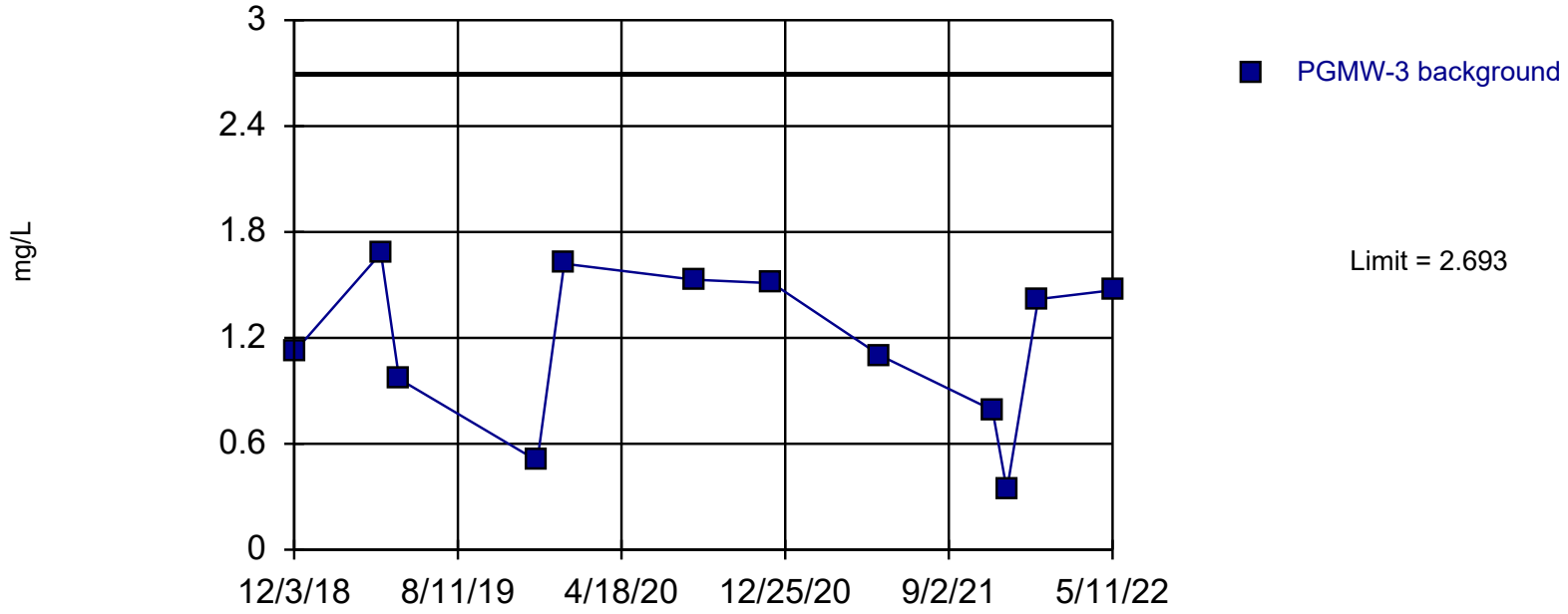
95% coverage. Background Data Summary: Mean=533.4, Std. Dev.=45.53, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9352, critical = 0.764. Report alpha = 0.01.

Constituent: Sulfate - Total [mg/L] Analysis Run 10/13/2022 8:43 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Tolerance Limit

Intrawell Parametric, PGMW-3



95% coverage. Background Data Summary: Mean=1.171, Std. Dev.=0.4466, n=12. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9067, critical = 0.805. Report alpha = 0.01.

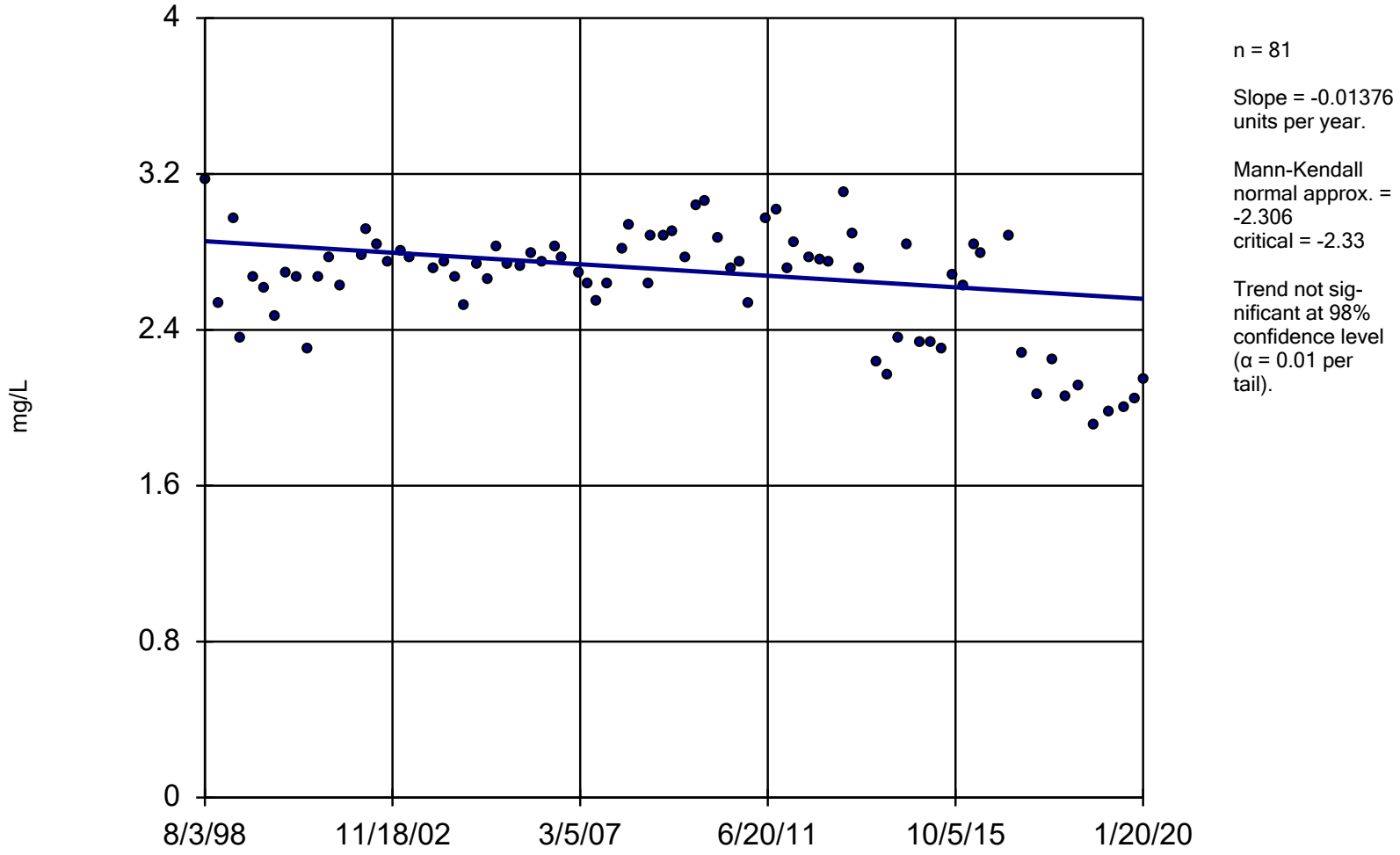
Constituent: Zinc - Dissolved [mg/L] Analysis Run 10/17/2022 2:01 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved_trend_rem_UR41

Sanitas Outputs with Trend Removal

Sen's Slope Estimator

GVMW8A-250



n = 81

Slope = -0.01376 units per year.

Mann-Kendall normal approx. = -2.306
critical = -2.33

Trend not significant at 98% confidence level (α = 0.01 per tail).

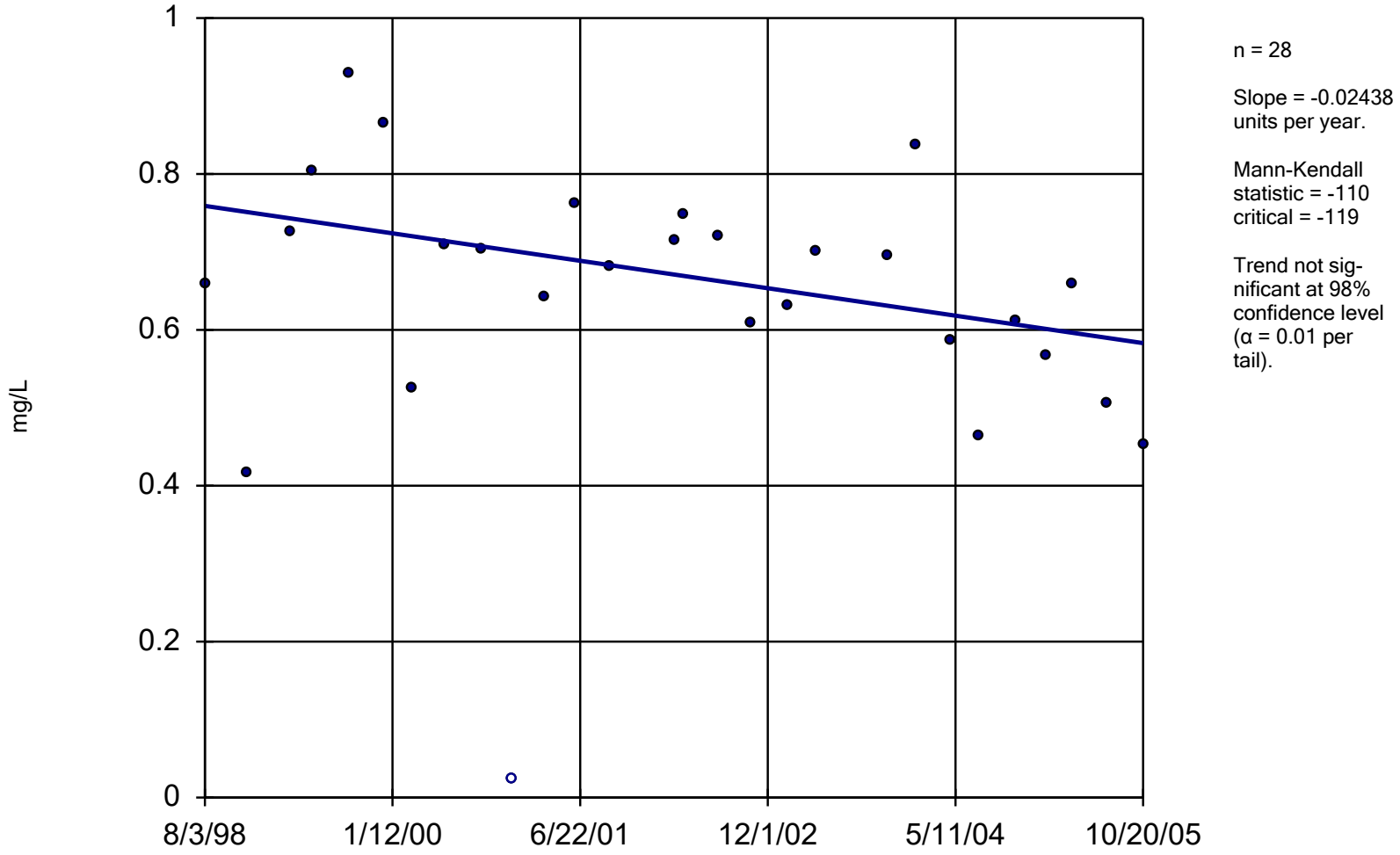
Constituent: Fluoride - Total F [mg/L] Analysis Run 12/21/2022 1:09 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

GVMW8A-250



n = 28

Slope = -0.02438 units per year.

Mann-Kendall statistic = -110
critical = -119

Trend not significant at 98% confidence level (α = 0.01 per tail).

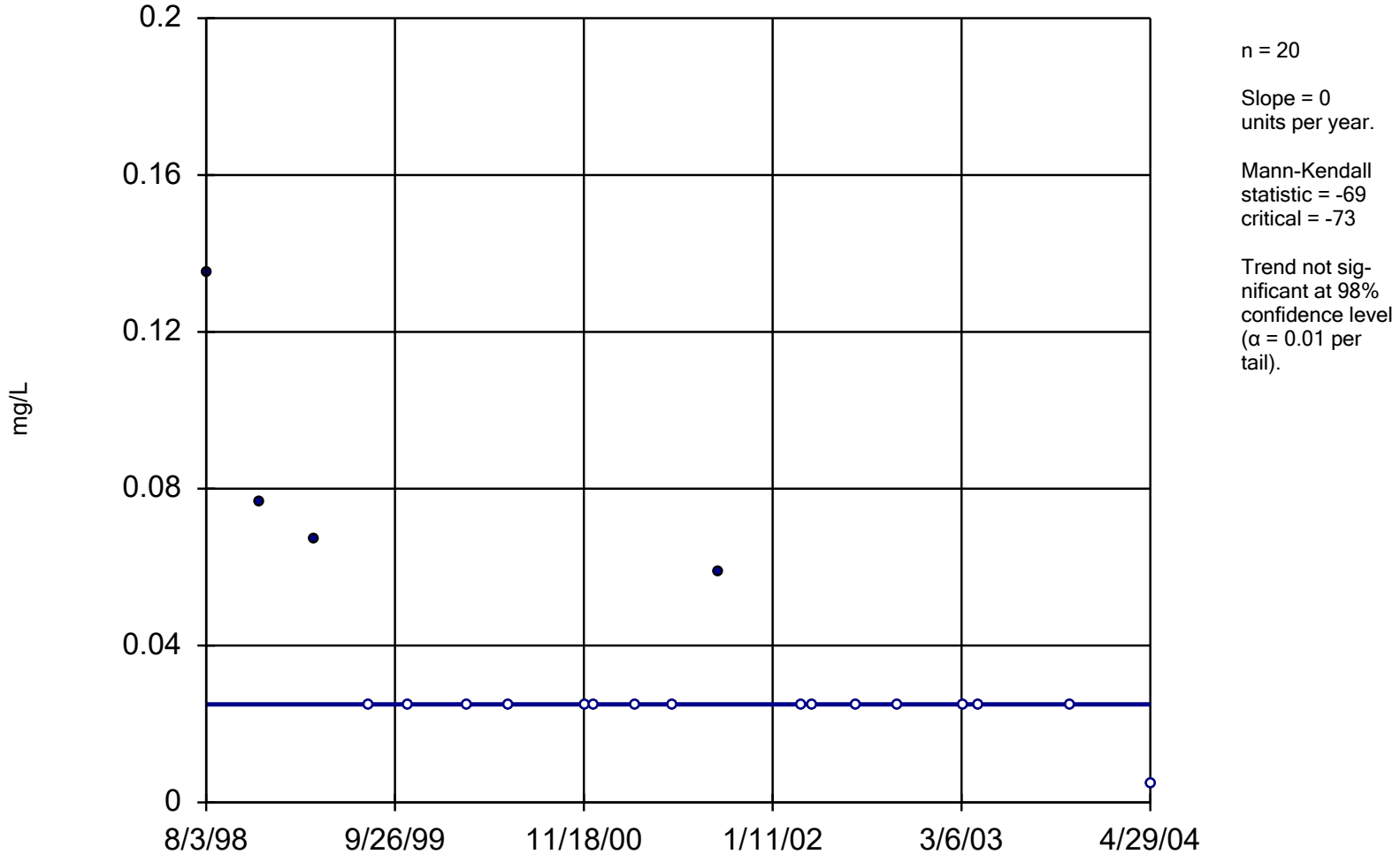
Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/21/2022 1:09 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

GVMW8B-50



n = 20

Slope = 0
units per year.

Mann-Kendall
statistic = -69
critical = -73

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

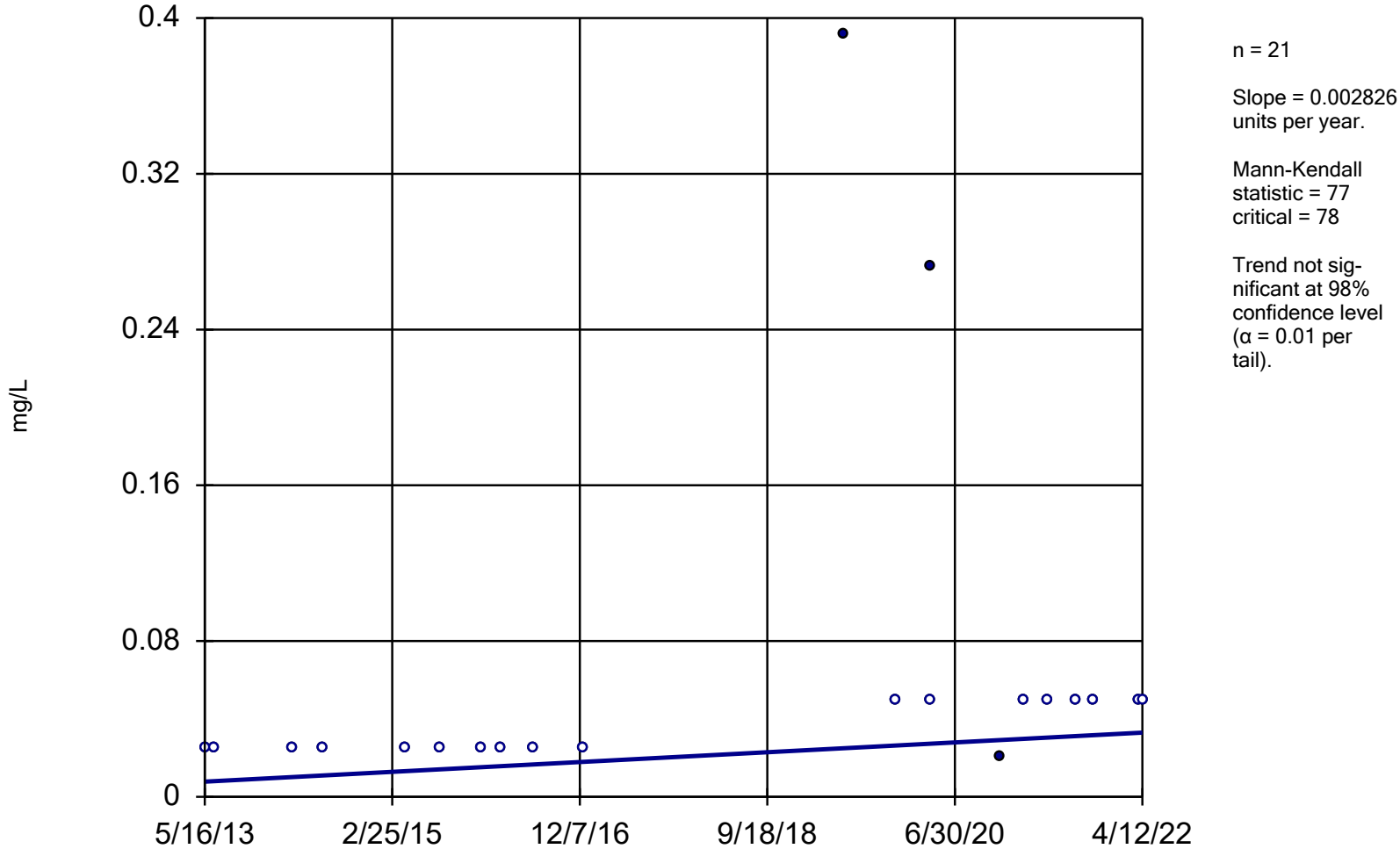
Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/21/2022 1:09 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

CRMW5B-143



n = 21

Slope = 0.002826 units per year.

Mann-Kendall statistic = 77
critical = 78

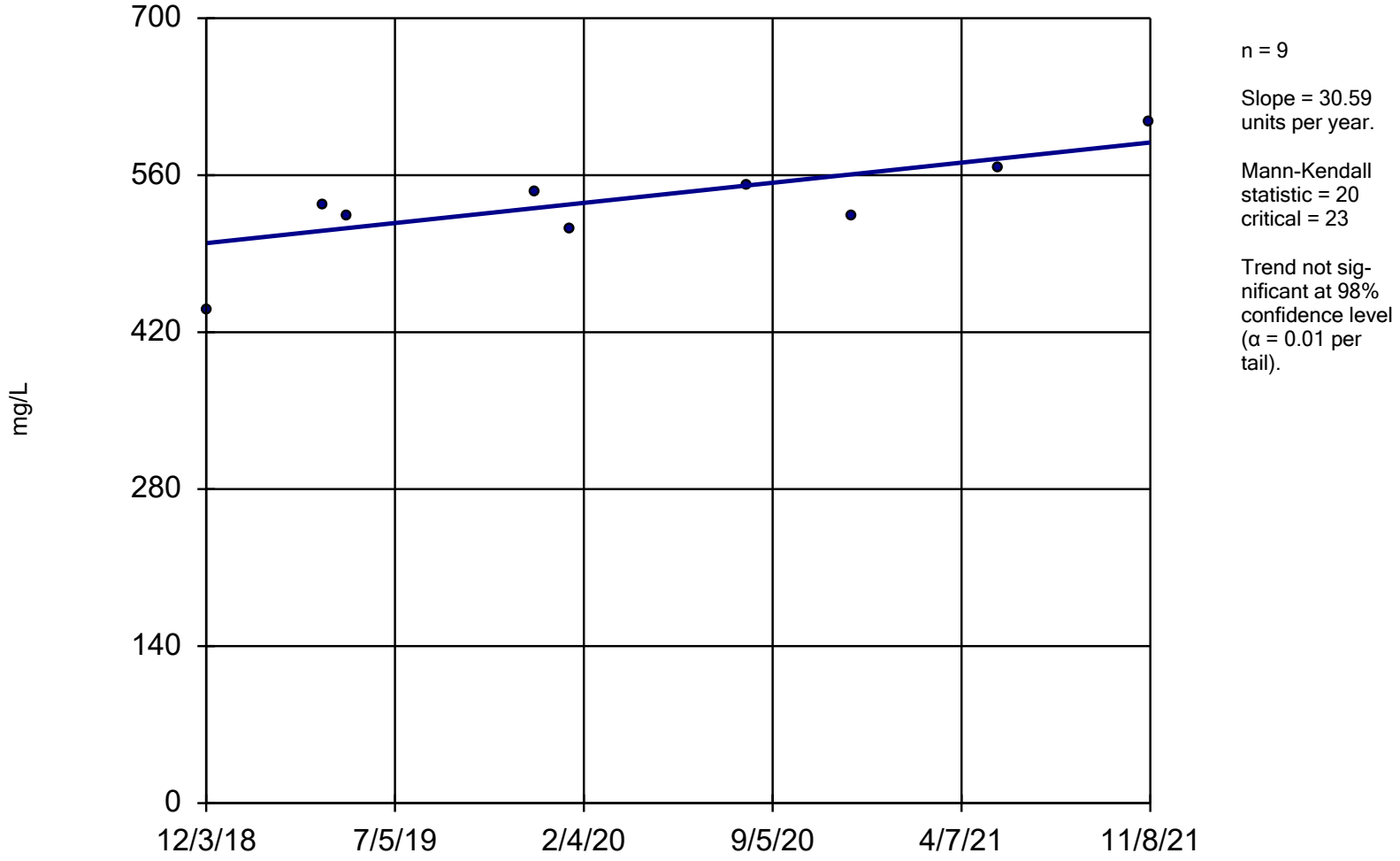
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/24/2022 9:25 AM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Sen's Slope Estimator

PGMW-3



n = 9

Slope = 30.59 units per year.

Mann-Kendall statistic = 20
critical = 23

Trend not significant at 98% confidence level (α = 0.01 per tail).

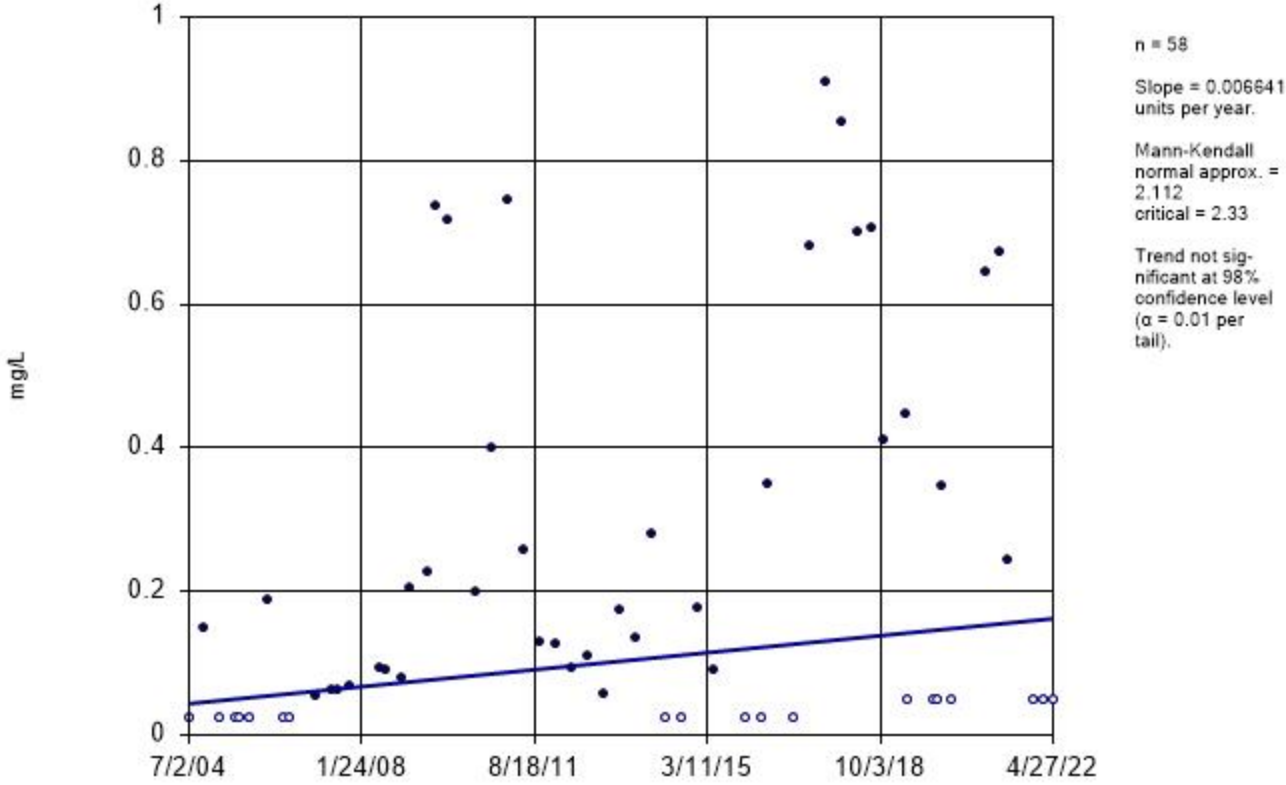
Constituent: Sulfate - Total [mg/L] Analysis Run 12/21/2022 1:16 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

VIN2B-140



n = 58

Slope = 0.006641 units per year.

Mann-Kendall normal approx. = 2.112
critical = 2.33

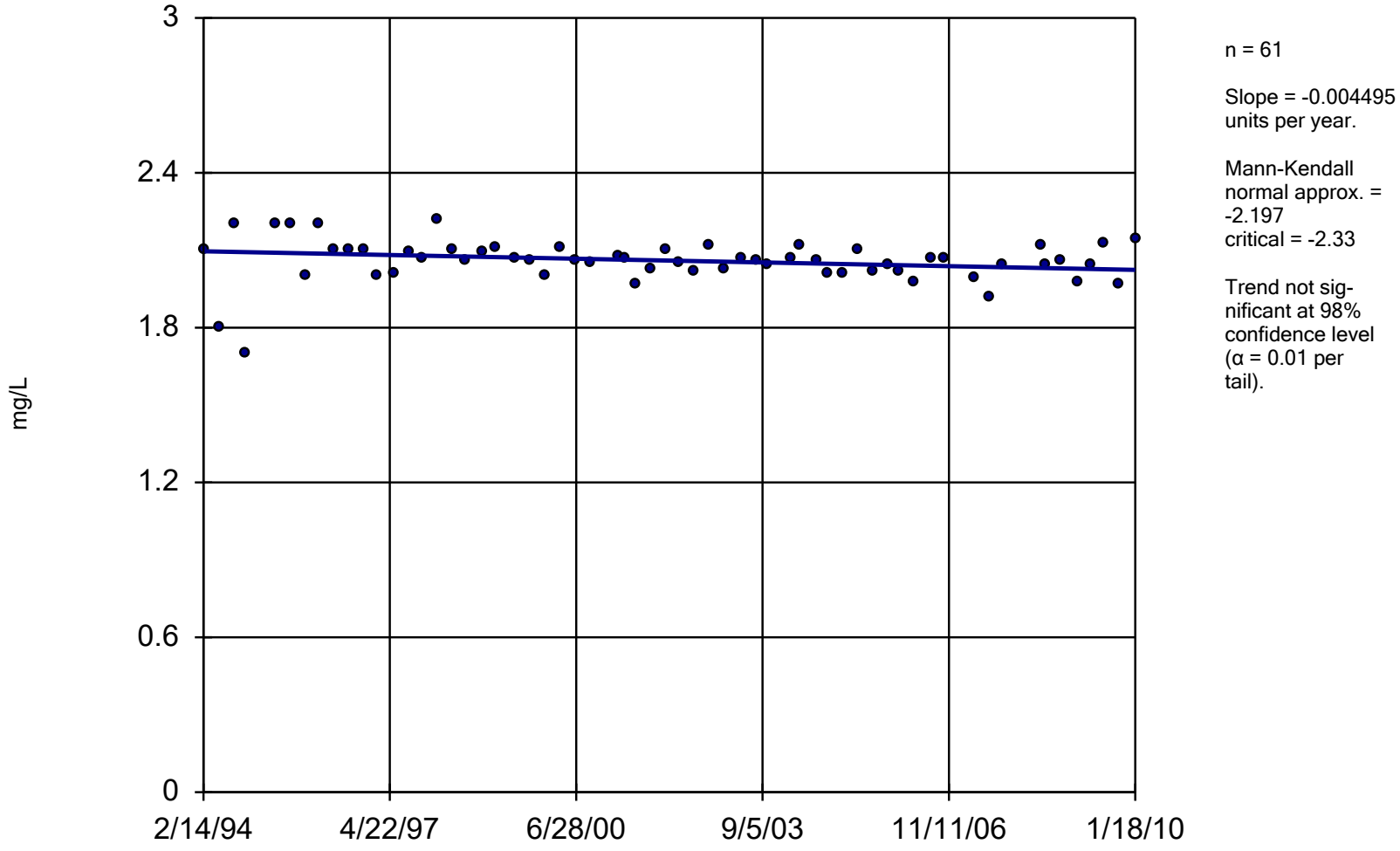
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Iron - Dissolved [mg/L] Analysis Run 12/21/2022 12:35 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_approved

Sen's Slope Estimator

WCMW6-234



n = 61

Slope = -0.004495 units per year.

Mann-Kendall normal approx. = -2.197
critical = -2.33

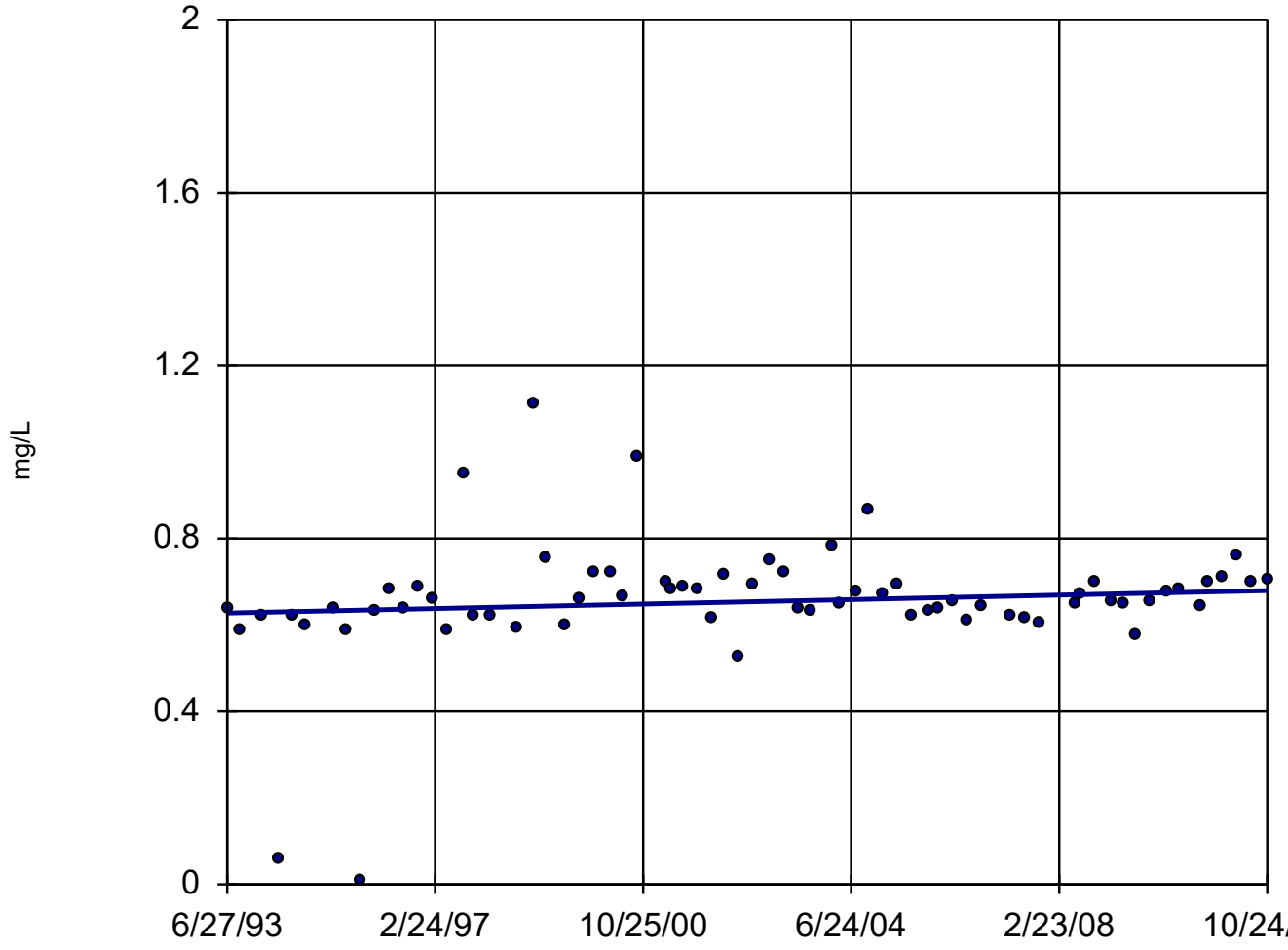
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Fluoride - Total F [mg/L] Analysis Run 12/21/2022 1:19 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Sen's Slope Estimator

WCMW6-234



n = 69

Slope = 0.002825 units per year.

Mann-Kendall normal approx. = 2.166
critical = 2.33

Trend not significant at 98% confidence level (α = 0.01 per tail).

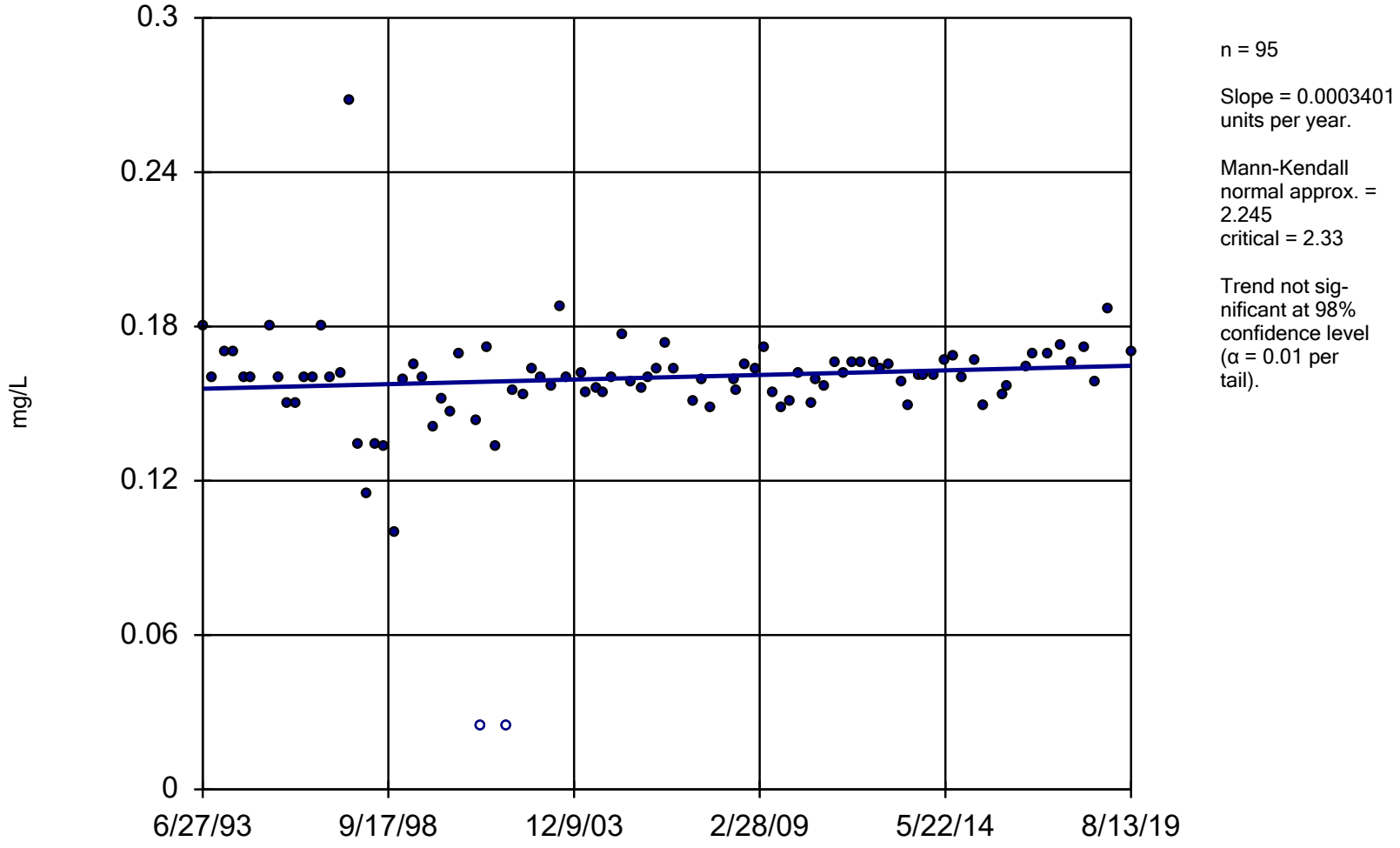
Constituent: Iron - Dissolved [mg/L] Analysis Run 12/21/2022 1:19 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

Hollow symbols indicate censored values.

Sen's Slope Estimator

WCMW6-234



n = 95

Slope = 0.0003401 units per year.

Mann-Kendall normal approx. = 2.245
critical = 2.33

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Manganese - Dissolved [mg/L] Analysis Run 12/21/2022 1:19 PM

Cripple Creek & Victor Gold Mine Client: Newmont Data: CCVunlisted_same_sf_out_trend_rem

APPENDIX C
Select Laboratory Reports

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2020**
Post Office Box 191	Work Order: **X0A0447**
Victor, CO 80860	Reported: 06-Feb-20 12:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
WCMW-6	X0A0447-01	Ground Water	28-Jan-20 11:30	GH	29-Jan-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X0A0447

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
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www.svl.net

Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0A0447-01 (Ground Water)**

Sampled: 28-Jan-20 11:30
Received: 29-Jan-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	151	mg/L	2.31	0.510		N/A		02/03/20 15:11	
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X005138	KH	02/03/20 14:25	5
EPA 200.7	**Barium**	0.0415	mg/L	0.0020	0.0019		X005138	KH	02/03/20 15:11	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X005138	KH	02/03/20 14:25	0.75
EPA 200.7	**Calcium**	41.1	mg/L	0.100	0.069		X005138	KH	02/03/20 15:11	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X005138	KH	02/03/20 15:11	0.1
EPA 200.7	**Iron**	0.859	mg/L	0.100	0.056		X005138	KH	02/03/20 15:11	5
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X005138	KH	02/03/20 14:25	2.5
EPA 200.7	**Magnesium**	11.8	mg/L	0.50	0.08		X005138	KH	02/03/20 14:25	
EPA 200.7	**Manganese**	0.241	mg/L	0.0080	0.0034		X005138	KH	02/03/20 15:11	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X005138	KH	02/03/20 14:25	0.2
EPA 200.7	**Potassium**	2.43	mg/L	0.50	0.18		X005138	KH	02/03/20 14:25	
EPA 200.7	**Sodium**	16.4	mg/L	0.50	0.12		X005138	KH	02/03/20 14:25	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X005138	KH	02/03/20 14:25	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X005138	KH	02/03/20 14:25	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X005079	AS	01/31/20 12:47	0.006
EPA 200.8	**Arsenic**	0.00332	mg/L	0.00300	0.00021		X005079	AS	01/31/20 12:47	0.1
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X005079	AS	01/31/20 12:47	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X005079	AS	01/31/20 12:47	0.01
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X005079	AS	01/31/20 12:47	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X005079	AS	01/31/20 12:47	0.2
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X005079	AS	01/31/20 12:47	0.05
EPA 200.8	**Molybdenum**	0.00467	mg/L	0.00100	0.000098		X005079	AS	01/31/20 12:47	
EPA 200.8	**Selenium**	0.0084	mg/L	0.0030	0.0002		X005079	AS	01/31/20 12:47	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061	2	X005211	AS	02/04/20 10:35	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X005079	AS	01/31/20 12:47	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X005079	AS	01/31/20 12:47	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X005065	JFB	01/30/20 11:06	0.01
Classical Chemistry Parameters										
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X005083	SLH	01/30/20 15:47	
EPA 350.1	**Ammonia as N**	0.084	mg/L	0.030	0.013		X005145	SLH	01/31/20 17:04	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X005189	KAG	01/31/20 14:45	
SM 2320 B	**Total Alkalinity**	131	mg/L as CaCO3	1.0			X005097	KAG	01/30/20 10:23	
SM 2320 B	**Bicarbonate**	131	mg/L as CaCO3	1.0			X005097	KAG	01/30/20 10:23	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X005097	KAG	01/30/20 10:23	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X005097	KAG	01/30/20 10:23	
SM 2540 C	**Total Diss. Solids**	251	mg/L	10			X005109	dks	01/30/20 10:10	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X005103	dks	01/31/20 10:10	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X005082	SLH	01/30/20 15:04	
SM 4500 H B	**pH @18.0°C**	7.5	pH Units				X005097	KAG	01/30/20 10:23	H5

One Government Gulch - PO Box 929
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www.svl.net

Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0A0447-01 (Ground Water)**

CO GW Monitoring
Sampled: 28-Jan-20 11:30
Received: 29-Jan-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	2.44	mg/L	0.20	0.14		X005085	RS	01/29/20 12:00	250
EPA 300.0	**Fluoride**	2.11	mg/L	0.100	0.062		X005085	RS	01/29/20 12:00	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X005085	RS	01/29/20 12:00	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X005085	RS	01/29/20 12:04	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X005085	RS	01/29/20 12:00	1
EPA 300.0	**Sulfate as SO4**	49.0	mg/L	3.00	1.80	10	X005085	RS	01/29/20 12:18	D2 250

Cation/Anion Balance and TDS Ratios

Cation Sum: 3.85 meq/L Anion Sum: 3.82 meq/L C/A Balance: 0.40 % Calculated TDS: 204 TDS/cTDS: 1.23

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X005138	03-Feb-20	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X005138	03-Feb-20	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X005138	03-Feb-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X005138	03-Feb-20	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X005138	03-Feb-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X005138	03-Feb-20	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X005138	03-Feb-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X005138	03-Feb-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X005138	03-Feb-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X005138	03-Feb-20	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X005138	03-Feb-20	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X005138	03-Feb-20	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X005138	03-Feb-20	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X005138	03-Feb-20	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X005079	31-Jan-20	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X005079	31-Jan-20	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X005079	31-Jan-20	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X005079	31-Jan-20	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X005079	31-Jan-20	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X005079	31-Jan-20	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X005079	31-Jan-20	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X005079	31-Jan-20	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X005079	31-Jan-20	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X005211	04-Feb-20	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X005079	31-Jan-20	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X005079	31-Jan-20	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X005065	30-Jan-20	
Classical Chemistry Parameters								
EPA 335.4	Cyanide (total)	mg/L	<0.0100	0.0038	0.0100	X005083	30-Jan-20	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X005145	31-Jan-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X005189	31-Jan-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X005097	30-Jan-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X005097	30-Jan-20	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X005097	30-Jan-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0		1.0	X005097	30-Jan-20	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X005109	30-Jan-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X005103	31-Jan-20	
SM 4500 CN I	Cyanide (WAD)	mg/L	<0.0100	0.0040	0.0100	X005082	30-Jan-20	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X005085	29-Jan-20	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X005085	29-Jan-20	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X005085	29-Jan-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X005085	29-Jan-20	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X005085	29-Jan-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X005085	29-Jan-20	

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Newmont - Cripple Creek & Victor
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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.04	1.00	104	85 - 115	X005138	03-Feb-20	
EPA 200.7	Barium	mg/L	0.979	1.00	97.9	85 - 115	X005138	03-Feb-20	
EPA 200.7	Boron	mg/L	1.01	1.00	101	85 - 115	X005138	03-Feb-20	
EPA 200.7	Calcium	mg/L	19.4	20.0	97.0	85 - 115	X005138	03-Feb-20	
EPA 200.7	Chromium	mg/L	0.976	1.00	97.6	85 - 115	X005138	03-Feb-20	
EPA 200.7	Iron	mg/L	9.68	10.0	96.8	85 - 115	X005138	03-Feb-20	
EPA 200.7	Lithium	mg/L	0.987	1.00	98.7	85 - 115	X005138	03-Feb-20	
EPA 200.7	Magnesium	mg/L	21.0	20.0	105	85 - 115	X005138	03-Feb-20	
EPA 200.7	Manganese	mg/L	1.00	1.00	100	85 - 115	X005138	03-Feb-20	
EPA 200.7	Nickel	mg/L	1.00	1.00	100	85 - 115	X005138	03-Feb-20	
EPA 200.7	Potassium	mg/L	20.6	20.0	103	85 - 115	X005138	03-Feb-20	
EPA 200.7	Sodium	mg/L	18.9	19.0	99.3	85 - 115	X005138	03-Feb-20	
EPA 200.7	Vanadium	mg/L	1.00	1.00	100	85 - 115	X005138	03-Feb-20	
EPA 200.7	Zinc	mg/L	1.07	1.00	107	85 - 115	X005138	03-Feb-20	
EPA 200.8	Antimony	mg/L	0.0249	0.0250	99.4	85 - 115	X005079	31-Jan-20	
EPA 200.8	Arsenic	mg/L	0.0235	0.0250	94.1	85 - 115	X005079	31-Jan-20	
EPA 200.8	Beryllium	mg/L	0.0238	0.0250	95.1	85 - 115	X005079	31-Jan-20	
EPA 200.8	Cadmium	mg/L	0.0239	0.0250	95.5	85 - 115	X005079	31-Jan-20	
EPA 200.8	Cobalt	mg/L	0.0243	0.0250	97.4	85 - 115	X005079	31-Jan-20	
EPA 200.8	Copper	mg/L	0.0241	0.0250	96.3	85 - 115	X005079	31-Jan-20	
EPA 200.8	Lead	mg/L	0.0243	0.0250	97.2	85 - 115	X005079	31-Jan-20	
EPA 200.8	Molybdenum	mg/L	0.0243	0.0250	97.2	85 - 115	X005079	31-Jan-20	
EPA 200.8	Selenium	mg/L	0.0231	0.0250	92.3	85 - 115	X005079	31-Jan-20	
EPA 200.8	Silver	mg/L	0.0222	0.0250	88.7	85 - 115	X005211	04-Feb-20	
EPA 200.8	Thallium	mg/L	0.0243	0.0250	97.4	85 - 115	X005079	31-Jan-20	
EPA 200.8	Uranium	mg/L	0.0248	0.0250	99.2	85 - 115	X005079	31-Jan-20	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00526	0.00500	105	85 - 115	X005065	30-Jan-20	
Classical Chemistry Parameters									
EPA 335.4	Cyanide (total)	mg/L	0.153	0.150	102	90 - 110	X005083	30-Jan-20	
EPA 350.1	Ammonia as N	mg/L	1.02	1.00	102	90 - 110	X005145	31-Jan-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1630	1680	96.8	92.1 - 110	X005189	31-Jan-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	103	99.3	104	94.3 - 106	X005097	30-Jan-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	103	99.3	104	95.1 - 106	X005097	30-Jan-20	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.152	0.150	101	90 - 110	X005082	30-Jan-20	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	3.17	3.00	106	90 - 110	X005085	29-Jan-20	
EPA 300.0	Fluoride	mg/L	2.08	2.00	104	90 - 110	X005085	29-Jan-20	
EPA 300.0	Nitrate as N	mg/L	2.17	2.00	108	90 - 110	X005085	29-Jan-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.85	4.50	108	90 - 110	X005085	29-Jan-20	
EPA 300.0	Nitrite as N	mg/L	2.68	2.50	107	90 - 110	X005085	29-Jan-20	
EPA 300.0	Sulfate as SO4	mg/L	10.2	10.0	102	90 - 110	X005085	29-Jan-20	

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Newmont - Cripple Creek & Victor
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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X005189	31-Jan-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	131	131	0.3	20	X005097	30-Jan-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	131	131	0.3	20	X005097	30-Jan-20	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X005097	30-Jan-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0	<1.0	UDL	20	X005097	30-Jan-20	
SM 2540 C	Total Diss. Solids	mg/L	236	251	6.2	10	X005109	30-Jan-20	
SM 2540 C	Total Diss. Solids	mg/L	303	311	2.6	10	X005109	30-Jan-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X005103	31-Jan-20	
SM 4500 H B	pH @17.0°C	pH Units	7.5	7.5	0.3	20	X005097	30-Jan-20	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.05	<0.08	1.00	105	70 - 130	X005138	03-Feb-20	
EPA 200.7	Barium	mg/L	1.00	0.0070	1.00	99.8	70 - 130	X005138	03-Feb-20	
EPA 200.7	Boron	mg/L	1.06	<0.040	1.00	103	70 - 130	X005138	03-Feb-20	
EPA 200.7	Calcium	mg/L	49.5	30.1	20.0	96.9	70 - 130	X005138	03-Feb-20	
EPA 200.7	Chromium	mg/L	0.994	<0.0060	1.00	99.4	70 - 130	X005138	03-Feb-20	
EPA 200.7	Iron	mg/L	9.74	<0.100	10.0	97.4	70 - 130	X005138	03-Feb-20	
EPA 200.7	Lithium	mg/L	0.991	<0.040	1.00	99.1	70 - 130	X005138	03-Feb-20	
EPA 200.7	Magnesium	mg/L	26.6	5.89	20.0	103	70 - 130	X005138	03-Feb-20	
EPA 200.7	Manganese	mg/L	1.02	<0.0080	1.00	102	70 - 130	X005138	03-Feb-20	
EPA 200.7	Nickel	mg/L	1.02	<0.0100	1.00	102	70 - 130	X005138	03-Feb-20	
EPA 200.7	Potassium	mg/L	24.2	3.36	20.0	104	70 - 130	X005138	03-Feb-20	
EPA 200.7	Sodium	mg/L	29.2	10.1	19.0	100	70 - 130	X005138	03-Feb-20	
EPA 200.7	Vanadium	mg/L	1.02	<0.0050	1.00	102	70 - 130	X005138	03-Feb-20	
EPA 200.7	Zinc	mg/L	1.11	<0.010	1.00	111	70 - 130	X005138	03-Feb-20	
EPA 200.8	Antimony	mg/L	0.0255	<0.00300	0.0250	102	70 - 130	X005079	31-Jan-20	
EPA 200.8	Arsenic	mg/L	0.0253	<0.00300	0.0250	101	70 - 130	X005079	31-Jan-20	
EPA 200.8	Beryllium	mg/L	0.0253	<0.00020	0.0250	101	70 - 130	X005079	31-Jan-20	
EPA 200.8	Cadmium	mg/L	0.0250	<0.00020	0.0250	100	70 - 130	X005079	31-Jan-20	
EPA 200.8	Cobalt	mg/L	0.0255	<0.00100	0.0250	98.4	70 - 130	X005079	31-Jan-20	
EPA 200.8	Copper	mg/L	0.0248	<0.00100	0.0250	97.7	70 - 130	X005079	31-Jan-20	
EPA 200.8	Lead	mg/L	0.0247	<0.00300	0.0250	98.8	70 - 130	X005079	31-Jan-20	
EPA 200.8	Molybdenum	mg/L	0.0244	<0.00100	0.0250	96.4	70 - 130	X005079	31-Jan-20	
EPA 200.8	Selenium	mg/L	0.0271	<0.0030	0.0250	104	70 - 130	X005079	31-Jan-20	
EPA 200.8	Silver	mg/L	0.0230	<0.000100	0.0250	92.0	70 - 130	X005211	04-Feb-20	
EPA 200.8	Thallium	mg/L	0.0248	<0.00100	0.0250	99.3	70 - 130	X005079	31-Jan-20	
EPA 200.8	Uranium	mg/L	0.0263	<0.00100	0.0250	102	70 - 130	X005079	31-Jan-20	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00098	<0.00020	0.00100	98.4	70 - 130	X005065	30-Jan-20	
Classical Chemistry Parameters										
EPA 335.4	Cyanide (total)	mg/L	0.108	<0.0100	0.100	108	90 - 110	X005083	30-Jan-20	
EPA 350.1	Ammonia as N	mg/L	1.03	<0.030	1.00	103	90 - 110	X005145	31-Jan-20	
EPA 350.1	Ammonia as N	mg/L	1.09	<0.030	1.00	109	90 - 110	X005145	31-Jan-20	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.107	<0.0100	0.100	107	75 - 125	X005082	30-Jan-20	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	5.68	2.44	3.00	108	90 - 110	X005085	29-Jan-20	
EPA 300.0	Fluoride	mg/L	4.22	2.11	2.00	105	90 - 110	X005085	29-Jan-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion Chromatography (Continued)										
EPA 300.0	Nitrate as N	mg/L	2.19	<0.050	2.00	110	90 - 110	X005085	29-Jan-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.38	<0.100	4.00	110	90 - 110	X005085	29-Jan-20	
EPA 300.0	Nitrite as N	mg/L	2.19	<0.050	2.00	109	90 - 110	X005085	29-Jan-20	
EPA 300.0	Sulfate as SO4	mg/L	59.6	49.0	10.0	106	90 - 110	X005085	29-Jan-20	D2

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved)											
EPA 200.7	Aluminum	mg/L	1.06	1.05	1.00	106	1.4	20	X005138	03-Feb-20	
EPA 200.7	Barium	mg/L	1.01	1.00	1.00	101	0.8	20	X005138	03-Feb-20	
EPA 200.7	Boron	mg/L	1.07	1.06	1.00	104	1.1	20	X005138	03-Feb-20	
EPA 200.7	Calcium	mg/L	49.4	49.5	20.0	96.7	0.1	20	X005138	03-Feb-20	
EPA 200.7	Chromium	mg/L	0.996	0.994	1.00	99.6	0.2	20	X005138	03-Feb-20	
EPA 200.7	Iron	mg/L	9.76	9.74	10.0	97.6	0.3	20	X005138	03-Feb-20	
EPA 200.7	Lithium	mg/L	0.995	0.991	1.00	99.5	0.4	20	X005138	03-Feb-20	
EPA 200.7	Magnesium	mg/L	26.6	26.6	20.0	104	0.3	20	X005138	03-Feb-20	
EPA 200.7	Manganese	mg/L	1.02	1.02	1.00	102	0.2	20	X005138	03-Feb-20	
EPA 200.7	Nickel	mg/L	1.03	1.02	1.00	103	0.6	20	X005138	03-Feb-20	
EPA 200.7	Potassium	mg/L	24.3	24.2	20.0	105	0.2	20	X005138	03-Feb-20	
EPA 200.7	Sodium	mg/L	29.2	29.2	19.0	101	0.1	20	X005138	03-Feb-20	
EPA 200.7	Vanadium	mg/L	1.02	1.02	1.00	102	0.7	20	X005138	03-Feb-20	
EPA 200.7	Zinc	mg/L	1.12	1.11	1.00	112	0.7	20	X005138	03-Feb-20	
EPA 200.8	Antimony	mg/L	0.0242	0.0255	0.0250	96.8	5.2	20	X005079	31-Jan-20	
EPA 200.8	Arsenic	mg/L	0.0236	0.0253	0.0250	94.5	6.8	20	X005079	31-Jan-20	
EPA 200.8	Beryllium	mg/L	0.0242	0.0253	0.0250	96.4	4.3	20	X005079	31-Jan-20	
EPA 200.8	Cadmium	mg/L	0.0235	0.0250	0.0250	94.2	6.2	20	X005079	31-Jan-20	
EPA 200.8	Cobalt	mg/L	0.0239	0.0255	0.0250	92.0	6.5	20	X005079	31-Jan-20	
EPA 200.8	Copper	mg/L	0.0231	0.0248	0.0250	90.8	7.2	20	X005079	31-Jan-20	
EPA 200.8	Lead	mg/L	0.0235	0.0247	0.0250	93.8	5.1	20	X005079	31-Jan-20	
EPA 200.8	Molybdenum	mg/L	0.0237	0.0244	0.0250	93.5	3.0	20	X005079	31-Jan-20	
EPA 200.8	Selenium	mg/L	0.0249	0.0271	0.0250	95.6	8.4	20	X005079	31-Jan-20	
EPA 200.8	Silver	mg/L	0.0222	0.0230	0.0250	88.8	3.6	20	X005211	04-Feb-20	
EPA 200.8	Thallium	mg/L	0.0237	0.0248	0.0250	94.9	4.5	20	X005079	31-Jan-20	
EPA 200.8	Uranium	mg/L	0.0250	0.0263	0.0250	96.9	5.3	20	X005079	31-Jan-20	
Metals (Filtered)											
EPA 245.1	Mercury	mg/L	0.00099	0.00098	0.00100	99.3	0.9	20	X005065	30-Jan-20	
Classical Chemistry Parameters											
EPA 335.4	Cyanide (total)	mg/L	0.109	0.108	0.100	109	0.9	20	X005083	30-Jan-20	
EPA 350.1	Ammonia as N	mg/L	1.04	1.03	1.00	104	0.4	20	X005145	31-Jan-20	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.108	0.107	0.100	108	0.9	20	X005082	30-Jan-20	
Anions by Ion Chromatography											
EPA 300.0	Chloride	mg/L	5.69	5.68	3.00	108	0.3	20	X005085	29-Jan-20	
EPA 300.0	Fluoride	mg/L	4.22	4.22	2.00	105	0.1	20	X005085	29-Jan-20	
EPA 300.0	Nitrate as N	mg/L	2.20	2.19	2.00	110	0.3	20	X005085	29-Jan-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.41	4.38	4.00	110	0.6	20	X005085	29-Jan-20	
EPA 300.0	Nitrite as N	mg/L	2.21	2.19	2.00	110	0.9	20	X005085	29-Jan-20	
EPA 300.0	Sulfate as SO4	mg/L	59.6	59.6	10.0	105	0.0	20	X005085	29-Jan-20	D2

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2020**
Post Office Box 191	Work Order: **X0A0447**
Victor, CO 80860	Reported: 06-Feb-20 12:20

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0A0447**
Reported: 06-Feb-20 12:20

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0A0447-01 (Ground Water)**

Sampled: **28-Jan-20 11:30**
Received: **29-Jan-20**
Sampled By: **GH**
Field pH : **7.3**
Field Temp : **7.1 / 7.1C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **151** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	10	0.33	**3.32**	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	100	0.03	**3.32**	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**41.5**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**2440**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
EPA 300.0	**Fluoride**	2000	**1.06**	**2110**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.53	**2110**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	**2.86**	**859**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.17	**859**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.20**	**241**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**4.82**	**241**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	**D Selenium**	20	0.42	**8.40**	µg/L	3	0.2	GW AG
EPA 200.8	**D Selenium**	50	0.17	**8.40**	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.20	**49000**	µg/L	3000	1,800	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2020**
Post Office Box 191	Work Order: **X0D0372**
Victor, CO 80860	Reported: 06-May-20 12:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
GVMW-6A	X0D0372-01	Ground Water	22-Apr-20 11:45	GH	23-Apr-2020	
WCMW-3	X0D0372-02	Ground Water	22-Apr-20 13:00	GH	23-Apr-2020	
WCMW-6	X0D0372-03	Ground Water	22-Apr-20 13:20	GH	23-Apr-2020	
WCSW-1	X0D0372-04	Surface Water	22-Apr-20 14:05	GH	23-Apr-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.
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Case Narrative: X0D0372

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

The state of origin only accredits for drinking water analyses.

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Newmont - Cripple Creek & Victor
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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X0D0372-01 (Ground Water)**

Sampled: 22-Apr-20 11:45
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	12.9	mg/L	2.31	0.510		N/A		04/27/20 14:23	
EPA 200.7	**Aluminum**	0.12	mg/L	0.08	0.05		X017156	JFB	04/27/20 14:23	5
EPA 200.7	**Barium**	0.0620	mg/L	0.0020	0.0019		X017156	JFB	04/27/20 14:23	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X017156	JFB	04/27/20 14:23	0.75
EPA 200.7	**Calcium**	5.18	mg/L	0.100	0.069		X017156	JFB	04/27/20 14:23	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X017156	JFB	04/27/20 14:23	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X017156	JFB	04/27/20 14:23	5
EPA 200.7	**Lithium**	0.048	mg/L	0.040	0.025		X017156	JFB	04/27/20 14:23	2.5
EPA 200.7	Magnesium	< 0.50	mg/L	0.50	0.08		X017156	JFB	04/27/20 14:23	
EPA 200.7	**Manganese**	0.0339	mg/L	0.0080	0.0034		X017156	JFB	04/27/20 14:23	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X017156	JFB	04/27/20 14:23	0.2
EPA 200.7	**Potassium**	2.78	mg/L	0.50	0.18		X017156	JFB	04/27/20 14:23	
EPA 200.7	**Sodium**	25.9	mg/L	0.50	0.12		X017156	JFB	04/27/20 14:23	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X017156	JFB	04/27/20 14:23	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X017156	JFB	04/27/20 14:23	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X017178	JFB	04/24/20 13:45	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X017178	JFB	04/24/20 13:45	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X017178	JFB	04/24/20 13:45	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X017178	JFB	04/24/20 13:45	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X017178	JFB	04/24/20 13:45	0.05
EPA 200.8	**Copper**	0.00778	mg/L	0.00100	0.00036		X017178	JFB	04/24/20 13:45	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X017178	JFB	04/24/20 13:45	0.05
EPA 200.8	**Molybdenum**	0.00799	mg/L	0.00100	0.000098		X017178	JFB	04/24/20 13:45	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X017178	JFB	04/24/20 13:45	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X017178	JFB	04/24/20 13:45	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X017178	JFB	04/24/20 13:45	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X017178	JFB	04/24/20 13:45	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X018013	MEH	04/30/20 14:16	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X018121	SLH	05/01/20 10:27	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X017139	SLH	04/29/20 10:16	
EPA 350.1	**Ammonia as N**	0.034	mg/L	0.030	0.013		X017141	SLH	04/28/20 15:03	M1
SM 2310 B	**Acidity to pH 8.3**	141	mg/L as CaCO3	10.0			X017159	DKS	04/28/20 09:30	
SM 2320 B	**Total Alkalinity**	46.2	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:10	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:10	
SM 2320 B	**Carbonate**	23.7	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:10	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:10	
SM 2540 C	**Total Diss. Solids**	103	mg/L	10			X017160	KAG	04/23/20 14:25	
SM 2540 D	**Total Susp. Solids**	8.0	mg/L	5.0			X017161	KAG	04/23/20 14:25	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X017138	SLH	04/29/20 12:54	
SM 4500 H B	**pH**	10.8	pH Units				X017158	KAG	04/23/20 14:10	H5

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X0D0372-01 (Ground Water)**

CO GW Monitoring

Sampled: 22-Apr-20 11:45
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	1.46	mg/L	0.20	0.14		X017152	RS	04/23/20 13:23	250
EPA 300.0	**Fluoride**	1.44	mg/L	0.100	0.062		X017152	RS	04/23/20 13:23	2
EPA 300.0	**Nitrate as N**	0.189	mg/L	0.050	0.043		X017152	RS	04/23/20 13:23	10
EPA 300.0	**Nitrate/Nitrite as N**	0.197	mg/L	0.100	0.074		X017152	RS	04/23/20 11:45	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X017152	RS	04/23/20 13:23	1
EPA 300.0	**Sulfate as SO4**	25.8	mg/L	0.30	0.18		X017152	RS	04/23/20 13:23	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 1.49 meq/L Anion Sum: 1.59 meq/L C/A Balance: -3.28 % Calculated TDS: 91 TDS/cTDS: 1.13

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-3**
SVL Sample ID: **X0D0372-02 (Ground Water)**

Sampled: 22-Apr-20 13:00
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	207	mg/L	2.31	0.510		N/A		04/27/20 14:27	
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X017156	JFB	04/27/20 14:27	5
EPA 200.7	**Barium**	0.0723	mg/L	0.0020	0.0019		X017156	JFB	04/27/20 14:27	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X017156	JFB	04/27/20 14:27	0.75
EPA 200.7	**Calcium**	58.9	mg/L	0.100	0.069		X017156	JFB	04/27/20 14:27	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X017156	JFB	04/27/20 14:27	0.1
EPA 200.7	**Iron**	0.166	mg/L	0.100	0.056		X017156	JFB	04/27/20 14:27	5
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X017156	JFB	04/27/20 14:27	2.5
EPA 200.7	**Magnesium**	14.5	mg/L	0.50	0.08		X017156	JFB	04/27/20 14:27	
EPA 200.7	**Manganese**	0.312	mg/L	0.0080	0.0034		X017156	JFB	04/27/20 14:27	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X017156	JFB	04/27/20 14:27	0.2
EPA 200.7	**Potassium**	1.65	mg/L	0.50	0.18		X017156	JFB	04/27/20 14:27	
EPA 200.7	**Sodium**	11.1	mg/L	0.50	0.12		X017156	JFB	04/27/20 14:27	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X017156	JFB	04/27/20 14:27	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X017156	JFB	04/27/20 14:27	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X017178	JFB	04/24/20 13:47	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X017178	JFB	04/24/20 13:47	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X017178	JFB	04/24/20 13:47	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X017178	JFB	04/24/20 13:47	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X017178	JFB	04/24/20 13:47	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X017178	JFB	04/24/20 13:47	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X017178	JFB	04/24/20 13:47	0.05
EPA 200.8	**Molybdenum**	0.00413	mg/L	0.00100	0.000098		X017178	JFB	04/24/20 13:47	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X017178	JFB	04/24/20 13:47	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X017178	JFB	04/24/20 13:47	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X017178	JFB	04/24/20 13:47	0.002
EPA 200.8	**Uranium**	0.00625	mg/L	0.00100	0.000052		X017178	JFB	04/24/20 13:47	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X018013	MEH	04/30/20 14:18	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X018121	SLH	05/01/20 10:29	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X017139	SLH	04/29/20 10:18	
EPA 350.1	**Ammonia as N**	0.051	mg/L	0.030	0.013		X017141	SLH	04/28/20 15:06	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X017159	DKS	04/28/20 09:30	
SM 2320 B	**Total Alkalinity**	210	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:14	
SM 2320 B	**Bicarbonate**	210	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:14	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:14	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:14	
SM 2540 C	**Total Diss. Solids**	267	mg/L	10			X017160	KAG	04/23/20 14:25	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X017161	KAG	04/23/20 14:25	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X017138	SLH	04/29/20 12:56	
SM 4500 H B	**pH**	7.9	pH Units				X017158	KAG	04/23/20 14:14	H5

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-3**
SVL Sample ID: **X0D0372-02 (Ground Water)**

CO GW Monitoring

Sampled: 22-Apr-20 13:00
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	1.30	mg/L	0.20	0.14		X017152	RS	04/23/20 15:03	250
EPA 300.0	**Fluoride**	0.804	mg/L	0.100	0.062		X017152	RS	04/23/20 15:03	4
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X017152	RS	04/23/20 15:03	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X017152	RS	04/23/20 11:45	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X017152	RS	04/23/20 15:03	1
EPA 300.0	**Sulfate as SO4**	24.8	mg/L	0.30	0.18		X017152	RS	04/23/20 15:03	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 4.69 meq/L Anion Sum: 4.80 meq/L C/A Balance: -1.13 % Calculated TDS: 239 TDS/cTDS: 1.12

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Manager

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Newmont - Cripple Creek & Victor
Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0D0372-03 (Ground Water)**

Sampled: 22-Apr-20 13:20
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	150	mg/L	2.31	0.510		N/A		04/27/20 14:30	
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X017156	JFB	04/27/20 14:30	5
EPA 200.7	**Barium**	0.0437	mg/L	0.0020	0.0019		X017156	JFB	04/27/20 14:30	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X017156	JFB	04/27/20 14:30	0.75
EPA 200.7	**Calcium**	41.9	mg/L	0.100	0.069		X017156	JFB	04/27/20 14:30	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X017156	JFB	04/27/20 14:30	0.1
EPA 200.7	**Iron**	0.876	mg/L	0.100	0.056		X017156	JFB	04/27/20 14:30	5
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X017156	JFB	04/27/20 14:30	2.5
EPA 200.7	**Magnesium**	11.0	mg/L	0.50	0.08		X017156	JFB	04/27/20 14:30	
EPA 200.7	**Manganese**	0.245	mg/L	0.0080	0.0034		X017156	JFB	04/27/20 14:30	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X017156	JFB	04/27/20 14:30	0.2
EPA 200.7	**Potassium**	2.13	mg/L	0.50	0.18		X017156	JFB	04/27/20 14:30	
EPA 200.7	**Sodium**	16.1	mg/L	0.50	0.12		X017156	JFB	04/27/20 14:30	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X017156	JFB	04/27/20 14:30	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X017156	JFB	04/27/20 14:30	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X017178	JFB	04/24/20 13:50	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X017178	JFB	04/24/20 13:50	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X017178	JFB	04/24/20 13:50	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X017178	JFB	04/24/20 13:50	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X017178	JFB	04/24/20 13:50	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X017178	JFB	04/24/20 13:50	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X017178	JFB	04/24/20 13:50	0.05
EPA 200.8	**Molybdenum**	0.00479	mg/L	0.00100	0.000098		X017178	JFB	04/24/20 13:50	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X017178	JFB	04/24/20 13:50	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X017178	JFB	04/24/20 13:50	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X017178	JFB	04/24/20 13:50	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X017178	JFB	04/24/20 13:50	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X018013	MEH	04/30/20 14:20	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X018121	SLH	05/01/20 10:30	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X017139	SLH	04/29/20 10:20	
EPA 350.1	**Ammonia as N**	0.090	mg/L	0.030	0.013		X017141	SLH	04/28/20 15:09	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X017159	DKS	04/28/20 09:30	
SM 2320 B	**Total Alkalinity**	131	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:18	
SM 2320 B	**Bicarbonate**	131	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:18	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:18	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:18	
SM 2540 C	**Total Diss. Solids**	263	mg/L	10			X017160	KAG	04/23/20 14:25	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X017161	KAG	04/23/20 14:25	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X017138	SLH	04/29/20 13:06	
SM 4500 H B	**pH**	7.5	pH Units				X017158	KAG	04/23/20 14:18	H5

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0D0372-03 (Ground Water)**

CO GW Monitoring

Sampled: 22-Apr-20 13:20
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	2.36	mg/L	0.20	0.14		X017152	RS	04/23/20 15:19	250
EPA 300.0	**Fluoride**	2.09	mg/L	0.100	0.062		X017152	RS	04/23/20 15:19	4
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X017152	RS	04/23/20 15:19	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X017152	RS	04/23/20 11:45	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X017152	RS	04/23/20 15:19	1
EPA 300.0	**Sulfate as SO4**	52.7	mg/L	3.00	1.80	10	X017152	RS	04/23/20 16:24	D2 250

Cation/Anion Balance and TDS Ratios

Cation Sum: 3.81 meq/L Anion Sum: 3.90 meq/L C/A Balance: -1.15 % Calculated TDS: 207 TDS/cTDS: 1.27

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCSW-1**
SVL Sample ID: **X0D0372-04 (Surface Water)**

CO SW Monitoring

Sampled: 22-Apr-20 14:05
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Arsenic	< 0.025	mg/L	0.025	0.003		X017173	KH	04/30/20 12:11	0.15
EPA 200.7	**Boron**	0.088	mg/L	0.040	0.004		X017173	KH	04/30/20 12:11	
EPA 200.7	**Calcium**	44.1	mg/L	0.100	0.035		X017173	KH	04/30/20 12:11	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0010		X017173	KH	04/30/20 12:11	0.011
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.028		X017173	KH	04/30/20 12:11	1
EPA 200.7	**Magnesium**	12.9	mg/L	0.50	0.04		X017173	KH	04/30/20 12:11	
EPA 200.7	**Phosphorus**	0.38	mg/L	0.05	0.007		X017173	KH	04/30/20 12:11	
EPA 200.7	**Potassium**	4.72	mg/L	0.50	0.09		X017173	KH	04/30/20 12:11	
EPA 200.7	**Sodium**	41.2	mg/L	0.50	0.06		X017173	KH	04/30/20 12:11	
SM 2340 B	**Hardness (as CaCO3)**	163	mg/L	2.31	0.255		N/A		04/30/20 12:11	
Metals (Dissolved)										
EPA 200.7	**Barium**	0.0334	mg/L	0.0020	0.0019		X017156	JFB	04/27/20 14:33	0.49
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X017156	JFB	04/27/20 14:33	0.011
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X017156	JFB	04/27/20 14:33	1
EPA 200.7	**Manganese**	0.0083	mg/L	0.0080	0.0034		X017156	JFB	04/27/20 14:33	1.94
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X017156	JFB	04/27/20 14:33	0.21
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X017156	JFB	04/27/20 14:33	0.0786
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0019		X017156	JFB	04/27/20 14:33	0.000174
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X017156	JFB	04/27/20 14:33	NA
EPA 200.8	Aluminum	< 0.0100	mg/L	0.0100	0.0040		X017178	JFB	04/24/20 13:53	0.953
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X017178	JFB	04/24/20 13:53	0.0056
EPA 200.8	**Arsenic**	0.00323	mg/L	0.00300	0.00021		X017178	JFB	04/24/20 13:53	0.15
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X017178	JFB	04/24/20 13:53	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X017178	JFB	04/24/20 13:53	0.000609
EPA 200.8	**Copper**	0.00259	mg/L	0.00100	0.00036		X017178	JFB	04/24/20 13:53	0.0136
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X017178	JFB	04/24/20 13:53	0.00427
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X017178	JFB	04/24/20 13:53	0.0046
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X017178	JFB	04/24/20 13:53	0.015
EPA 200.8	**Uranium**	0.00253	mg/L	0.00100	0.000052		X017178	JFB	04/24/20 13:53	2.57
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X018013	MEH	04/30/20 14:26	0.00001
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X018121	SLH	05/01/20 10:32	0.005
Calculation	**Nitrogen, Total as N**	3.23	mg/L	0.600	0.381		N/A		04/29/20 12:31	
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X017139	SLH	04/29/20 10:22	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X017141	SLH	04/28/20 15:12	2.75
EPA 351.2	TKN	< 0.50	mg/L	0.50	0.31		X017183	AC	04/29/20 12:31	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X017159	DKS	04/28/20 09:30	
SM 2320 B	**Total Alkalinity**	108	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:24	
SM 2320 B	**Bicarbonate**	108	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:24	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:24	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X017158	KAG	04/23/20 14:24	
SM 2540 C	**Total Diss. Solids**	347	mg/L	10			X017160	KAG	04/23/20 14:25	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X017161	KAG	04/23/20 14:25	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X017138	SLH	04/29/20 13:08	
SM 4500 H B	**pH**	8.2	pH Units				X017158	KAG	04/23/20 14:24	H5

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCSW-1**
SVL Sample ID: **X0D0372-04 (Surface Water)**

Sampled: 22-Apr-20 14:05
Received: 23-Apr-20
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	19.6	mg/L	2.00	1.40	10	X017152	RS	04/23/20 17:00	D2
EPA 300.0	**Fluoride**	1.21	mg/L	0.100	0.062		X017152	RS	04/23/20 16:40	
EPA 300.0	**Nitrate as N**	3.23	mg/L	0.050	0.043		X017152	RS	04/23/20 16:40	
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X017152	RS	04/23/20 16:40	
EPA 300.0	**Sulfate as SO4**	117	mg/L	3.00	1.80	10	X017152	RS	04/23/20 17:00	D2

Cation/Anion Balance and TDS Ratios

Cation Sum: 5.18 meq/L Anion Sum: 5.45 meq/L C/A Balance: -2.51 % Calculated TDS: 320 TDS/cTDS: 1.08

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.7	Arsenic	mg/L	<0.025	0.003	0.025	X017173	30-Apr-20	
EPA 200.7	Boron	mg/L	<0.040	0.004	0.040	X017173	30-Apr-20	
EPA 200.7	Calcium	mg/L	<0.100	0.035	0.100	X017173	30-Apr-20	
EPA 200.7	Chromium	mg/L	<0.0060	0.0010	0.0060	X017173	30-Apr-20	
EPA 200.7	Iron	mg/L	<0.100	0.028	0.100	X017173	30-Apr-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.04	0.50	X017173	30-Apr-20	
EPA 200.7	Phosphorus	mg/L	<0.05	0.007	0.05	X017173	30-Apr-20	
EPA 200.7	Potassium	mg/L	<0.50	0.09	0.50	X017173	30-Apr-20	
EPA 200.7	Sodium	mg/L	<0.50	0.06	0.50	X017173	30-Apr-20	
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X017156	27-Apr-20	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X017156	27-Apr-20	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X017156	27-Apr-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X017156	27-Apr-20	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X017156	27-Apr-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X017156	27-Apr-20	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X017156	27-Apr-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X017156	27-Apr-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X017156	27-Apr-20	
EPA 200.7	Molybdenum	mg/L	<0.008	0.003	0.008	X017156	27-Apr-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X017156	27-Apr-20	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X017156	27-Apr-20	
EPA 200.7	Silver	mg/L	<0.0050	0.0019	0.0050	X017156	27-Apr-20	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X017156	27-Apr-20	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X017156	27-Apr-20	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X017156	27-Apr-20	
EPA 200.8	Aluminum	mg/L	<0.0100	0.0040	0.0100	X017178	24-Apr-20	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X017178	24-Apr-20	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X017178	24-Apr-20	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X017178	24-Apr-20	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X017178	24-Apr-20	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X017178	24-Apr-20	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X017178	24-Apr-20	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X017178	24-Apr-20	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X017178	24-Apr-20	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X017178	24-Apr-20	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X017178	24-Apr-20	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X017178	24-Apr-20	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X017178	24-Apr-20	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X018013	30-Apr-20	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0013	0.0050	X018121	01-May-20	
EPA 335.4	Cyanide (total)	mg/L	<0.0100	0.0038	0.0100	X017139	29-Apr-20	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X017141	28-Apr-20	
EPA 351.2	TKN	mg/L	<0.50	0.31	0.50	X017183	29-Apr-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X017159	28-Apr-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X017158	23-Apr-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X017158	23-Apr-20	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X017158	23-Apr-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0		1.0	X017158	23-Apr-20	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X017160	23-Apr-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X017161	23-Apr-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - BLANK Data (Continued)

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Classical Chemistry Parameters (Continued)								
SM 4500 CN I	Cyanide (WAD)	mg/L	<0.0100	0.0040	0.0100	X017138	29-Apr-20	
SM 4500 H B	pH	pH Units	5.9			X017158	23-Apr-20	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X017152	23-Apr-20	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X017152	23-Apr-20	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X017152	23-Apr-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X017152	23-Apr-20	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X017152	23-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X017152	23-Apr-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.7	Arsenic	mg/L	0.985	1.00	98.5	85 - 115	X017173	30-Apr-20	
EPA 200.7	Boron	mg/L	0.975	1.00	97.5	85 - 115	X017173	30-Apr-20	
EPA 200.7	Calcium	mg/L	18.5	20.0	92.7	85 - 115	X017173	30-Apr-20	
EPA 200.7	Chromium	mg/L	0.958	1.00	95.8	85 - 115	X017173	30-Apr-20	
EPA 200.7	Iron	mg/L	9.11	10.0	91.1	85 - 115	X017173	30-Apr-20	
EPA 200.7	Magnesium	mg/L	18.8	20.0	93.9	85 - 115	X017173	30-Apr-20	
EPA 200.7	Phosphorus	mg/L	0.99	1.00	99.3	85 - 115	X017173	30-Apr-20	
EPA 200.7	Potassium	mg/L	19.5	20.0	97.7	85 - 115	X017173	30-Apr-20	
EPA 200.7	Sodium	mg/L	18.0	19.0	94.8	85 - 115	X017173	30-Apr-20	
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	0.98	1.00	98.3	85 - 115	X017156	27-Apr-20	
EPA 200.7	Barium	mg/L	0.979	1.00	97.9	85 - 115	X017156	27-Apr-20	
EPA 200.7	Boron	mg/L	0.990	1.00	99.0	85 - 115	X017156	27-Apr-20	
EPA 200.7	Calcium	mg/L	19.5	20.0	97.6	85 - 115	X017156	27-Apr-20	
EPA 200.7	Chromium	mg/L	0.986	1.00	98.6	85 - 115	X017156	27-Apr-20	
EPA 200.7	Iron	mg/L	9.66	10.0	96.6	85 - 115	X017156	27-Apr-20	
EPA 200.7	Lithium	mg/L	0.967	1.00	96.7	85 - 115	X017156	27-Apr-20	
EPA 200.7	Magnesium	mg/L	19.4	20.0	97.0	85 - 115	X017156	27-Apr-20	
EPA 200.7	Manganese	mg/L	0.991	1.00	99.1	85 - 115	X017156	27-Apr-20	
EPA 200.7	Molybdenum	mg/L	1.01	1.00	101	85 - 115	X017156	27-Apr-20	
EPA 200.7	Nickel	mg/L	0.972	1.00	97.2	85 - 115	X017156	27-Apr-20	
EPA 200.7	Potassium	mg/L	19.8	20.0	99.2	85 - 115	X017156	27-Apr-20	
EPA 200.7	Silver	mg/L	0.0442	0.0500	88.5	85 - 115	X017156	27-Apr-20	
EPA 200.7	Sodium	mg/L	18.8	19.0	98.9	85 - 115	X017156	27-Apr-20	
EPA 200.7	Vanadium	mg/L	1.00	1.00	100	85 - 115	X017156	27-Apr-20	
EPA 200.7	Zinc	mg/L	0.995	1.00	99.5	85 - 115	X017156	27-Apr-20	
EPA 200.8	Aluminum	mg/L	0.207	0.195	106	85 - 115	X017178	24-Apr-20	
EPA 200.8	Antimony	mg/L	0.0241	0.0250	96.4	85 - 115	X017178	24-Apr-20	
EPA 200.8	Arsenic	mg/L	0.0252	0.0250	101	85 - 115	X017178	24-Apr-20	
EPA 200.8	Beryllium	mg/L	0.0241	0.0250	96.4	85 - 115	X017178	24-Apr-20	
EPA 200.8	Cadmium	mg/L	0.0245	0.0250	98.1	85 - 115	X017178	24-Apr-20	
EPA 200.8	Cobalt	mg/L	0.0255	0.0250	102	85 - 115	X017178	24-Apr-20	
EPA 200.8	Copper	mg/L	0.0255	0.0250	102	85 - 115	X017178	24-Apr-20	
EPA 200.8	Lead	mg/L	0.0245	0.0250	98.0	85 - 115	X017178	24-Apr-20	
EPA 200.8	Molybdenum	mg/L	0.0246	0.0250	98.2	85 - 115	X017178	24-Apr-20	
EPA 200.8	Selenium	mg/L	0.0247	0.0250	98.7	85 - 115	X017178	24-Apr-20	
EPA 200.8	Silver	mg/L	0.0246	0.0250	98.3	85 - 115	X017178	24-Apr-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)									
EPA 200.8	Thallium	mg/L	0.0244	0.0250	97.5	85 - 115	X017178	24-Apr-20	
EPA 200.8	Uranium	mg/L	0.0252	0.0250	101	85 - 115	X017178	24-Apr-20	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00507	0.00500	101	85 - 115	X018013	30-Apr-20	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.147	0.150	98.0	90 - 110	X018121	01-May-20	
EPA 335.4	Cyanide (total)	mg/L	0.157	0.150	105	90 - 110	X017139	29-Apr-20	
EPA 350.1	Ammonia as N	mg/L	1.00	1.00	100	90 - 110	X017141	28-Apr-20	
EPA 351.2	TKN	mg/L	8.07	8.00	101	90 - 110	X017183	29-Apr-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1040	1010	102	92.1 - 110	X017159	28-Apr-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	99.8	99.3	100	94.3 - 106	X017158	23-Apr-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	102	99.3	103	94.3 - 106	X017158	23-Apr-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.8	99.3	100	95.1 - 106	X017158	23-Apr-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	102	99.3	103	95.1 - 106	X017158	23-Apr-20	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.155	0.150	103	90 - 110	X017138	29-Apr-20	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	3.01	3.00	100	90 - 110	X017152	23-Apr-20	
EPA 300.0	Fluoride	mg/L	2.11	2.00	106	90 - 110	X017152	23-Apr-20	
EPA 300.0	Nitrate as N	mg/L	2.04	2.00	102	90 - 110	X017152	23-Apr-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.75	4.50	105	90 - 110	X017152	23-Apr-20	
EPA 300.0	Nitrite as N	mg/L	2.70	2.50	108	90 - 110	X017152	23-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	10.5	10.0	105	90 - 110	X017152	23-Apr-20	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X017159 - X0D0333-01	28-Apr-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	44.6	46.2	3.5	20	X017158 - X0D0372-01	23-Apr-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X017158 - X0D0372-01	23-Apr-20	
SM 2320 B	Carbonate	mg/L as CaCO3	21.7	23.7	8.7	20	X017158 - X0D0372-01	23-Apr-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0	<1.0	UDL	20	X017158 - X0D0372-01	23-Apr-20	
SM 2540 C	Total Diss. Solids	mg/L	263	267	1.5	10	X017160 - X0D0372-02	23-Apr-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X017161 - X0D0372-02	23-Apr-20	
SM 4500 H B	pH	pH Units	10.8	10.8	0.0	20	X017158 - X0D0372-01	23-Apr-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Arsenic	mg/L	0.993	<0.025	1.00	98.7	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Boron	mg/L	1.04	0.088	1.00	95.5	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Calcium	mg/L	60.7	44.1	20.0	83.0	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Chromium	mg/L	0.945	<0.0060	1.00	94.4	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Iron	mg/L	9.09	<0.100	10.0	90.4	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Magnesium	mg/L	31.0	12.9	20.0	90.9	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Phosphorus	mg/L	1.37	0.38	1.00	98.5	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Potassium	mg/L	24.9	4.72	20.0	101	70 - 130	X017173 - X0D0372-04	30-Apr-20	
EPA 200.7	Sodium	mg/L	57.5	41.2	19.0	85.7	70 - 130	X017173 - X0D0372-04	30-Apr-20	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.00	<0.08	1.00	99.8	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Barium	mg/L	1.03	0.0529	1.00	97.9	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Boron	mg/L	1.03	<0.040	1.00	101	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Calcium	mg/L	88.6	69.1	20.0	97.4	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Chromium	mg/L	0.978	<0.0060	1.00	97.8	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Iron	mg/L	9.61	<0.100	10.0	96.1	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Lithium	mg/L	0.948	<0.040	1.00	94.8	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Magnesium	mg/L	38.8	19.3	20.0	97.4	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Manganese	mg/L	0.980	<0.0080	1.00	97.4	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Molybdenum	mg/L	1.00	<0.008	1.00	100	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Nickel	mg/L	0.936	<0.0100	1.00	93.6	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Potassium	mg/L	26.9	6.99	20.0	99.5	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Silver	mg/L	0.0441	<0.0050	0.0500	88.1	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Sodium	mg/L	39.9	21.3	19.0	97.9	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Vanadium	mg/L	1.01	<0.0050	1.00	101	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.7	Zinc	mg/L	0.990	<0.010	1.00	99.0	70 - 130	X017156 - X0D0333-01	27-Apr-20	
EPA 200.8	Aluminum	mg/L	0.200	<0.0100	0.195	98.6	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Antimony	mg/L	0.0245	<0.00300	0.0250	96.9	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Arsenic	mg/L	0.0252	<0.00300	0.0250	98.0	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Beryllium	mg/L	0.0235	<0.00020	0.0250	94.1	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Cadmium	mg/L	0.0242	<0.00020	0.0250	96.7	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Cobalt	mg/L	0.0263	0.00213	0.0250	96.6	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Copper	mg/L	0.0244	<0.00100	0.0250	95.4	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Lead	mg/L	0.0241	<0.00300	0.0250	96.2	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Molybdenum	mg/L	0.0271	0.00266	0.0250	97.7	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Selenium	mg/L	0.0262	<0.0030	0.0250	102	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Silver	mg/L	0.0239	<0.000100	0.0250	95.7	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Thallium	mg/L	0.0239	<0.00100	0.0250	95.8	70 - 130	X017178 - X0D0333-01	24-Apr-20	
EPA 200.8	Uranium	mg/L	0.0276	0.00266	0.0250	99.8	70 - 130	X017178 - X0D0333-01	24-Apr-20	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00102	<0.00020	0.00100	102	70 - 130	X018013 - X0D0372-04	30-Apr-20	
EPA 245.1	Mercury	mg/L	0.00105	<0.00020	0.00100	105	70 - 130	X018013 - X0D0407-05	30-Apr-20	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.0990	<0.0050	0.100	99.0	79 - 121	X018121 - X0D0372-01	01-May-20	
EPA 335.4	Cyanide (total)	mg/L	0.101	<0.0100	0.100	96.0	90 - 110	X017139 - X0D0333-01	29-Apr-20	
EPA 335.4	Cyanide (total)	mg/L	0.103	<0.0100	0.100	103	90 - 110	X017139 - X0D0333-02	29-Apr-20	
EPA 350.1	Ammonia as N	mg/L	1.09	0.034	1.00	106	90 - 110	X017141 - X0D0372-01	28-Apr-20	
EPA 350.1	Ammonia as N	mg/L	1.08	0.051	1.00	103	90 - 110	X017141 - X0D0372-02	28-Apr-20	
EPA 351.2	TKN	mg/L	8.99	0.67	8.00	104	90 - 110	X017183 - X0D0313-02	29-Apr-20	
EPA 351.2	TKN	mg/L	6.30	<0.50	8.00	78.8	90 - 110	X017183 - X0D0362-01	29-Apr-20	M2
SM 4500 CN I	Cyanide (WAD)	mg/L	0.107	<0.0100	0.100	107	75 - 125	X017138 - X0D0333-01	29-Apr-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.78	0.67	3.00	104	90 - 110	X017152 - X0D0345-02	23-Apr-20	
EPA 300.0	Chloride	mg/L	4.55	1.46	3.00	103	90 - 110	X017152 - X0D0372-01	23-Apr-20	
EPA 300.0	Fluoride	mg/L	2.20	0.130	2.00	104	90 - 110	X017152 - X0D0345-02	23-Apr-20	
EPA 300.0	Fluoride	mg/L	3.61	1.44	2.00	108	90 - 110	X017152 - X0D0372-01	23-Apr-20	
EPA 300.0	Nitrate as N	mg/L	2.05	<0.050	2.00	103	90 - 110	X017152 - X0D0345-02	23-Apr-20	
EPA 300.0	Nitrate as N	mg/L	2.25	0.189	2.00	103	90 - 110	X017152 - X0D0372-01	23-Apr-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.42	0.197	4.00	106	90 - 110	X017152 - X0D0372-01	23-Apr-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.22	<0.100	4.00	105	90 - 110	X017152 - X0D0345-02	23-Apr-20	
EPA 300.0	Nitrite as N	mg/L	2.16	<0.050	2.00	108	90 - 110	X017152 - X0D0345-02	23-Apr-20	
EPA 300.0	Nitrite as N	mg/L	2.18	<0.050	2.00	109	90 - 110	X017152 - X0D0372-01	23-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	59.1	49.2	10.0	98.3	90 - 110	X017152 - X0D0345-02	23-Apr-20	D2
EPA 300.0	Sulfate as SO4	mg/L	36.4	25.8	10.0	106	90 - 110	X017152 - X0D0372-01	23-Apr-20	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Arsenic	mg/L	1.02	0.993	1.00	2.3	20	101	X017173 - X0D0372-04	
EPA 200.7	Boron	mg/L	1.07	1.04	1.00	2.4	20	98.0	X017173 - X0D0372-04	
EPA 200.7	Calcium	mg/L	62.5	60.7	20.0	3.0	20	92.2	X017173 - X0D0372-04	
EPA 200.7	Chromium	mg/L	0.977	0.945	1.00	3.3	20	97.6	X017173 - X0D0372-04	
EPA 200.7	Iron	mg/L	9.42	9.09	10.0	3.6	20	93.7	X017173 - X0D0372-04	
EPA 200.7	Magnesium	mg/L	32.0	31.0	20.0	3.0	20	95.6	X017173 - X0D0372-04	
EPA 200.7	Phosphorus	mg/L	1.40	1.37	1.00	2.4	20	102	X017173 - X0D0372-04	
EPA 200.7	Potassium	mg/L	25.8	24.9	20.0	3.6	20	105	X017173 - X0D0372-04	
EPA 200.7	Sodium	mg/L	59.2	57.5	19.0	2.8	20	94.4	X017173 - X0D0372-04	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.00	1.00	1.00	0.0	20	99.8	X017156 - X0D0333-01	
EPA 200.7	Barium	mg/L	1.03	1.03	1.00	0.5	20	97.4	X017156 - X0D0333-01	
EPA 200.7	Boron	mg/L	1.03	1.03	1.00	0.6	20	102	X017156 - X0D0333-01	
EPA 200.7	Calcium	mg/L	88.3	88.6	20.0	0.3	20	95.9	X017156 - X0D0333-01	
EPA 200.7	Chromium	mg/L	0.984	0.978	1.00	0.6	20	98.4	X017156 - X0D0333-01	
EPA 200.7	Iron	mg/L	9.59	9.61	10.0	0.2	20	95.9	X017156 - X0D0333-01	
EPA 200.7	Lithium	mg/L	0.954	0.948	1.00	0.6	20	95.4	X017156 - X0D0333-01	
EPA 200.7	Magnesium	mg/L	38.7	38.8	20.0	0.3	20	96.9	X017156 - X0D0333-01	
EPA 200.7	Manganese	mg/L	0.996	0.980	1.00	1.6	20	99.0	X017156 - X0D0333-01	
EPA 200.7	Molybdenum	mg/L	1.01	1.00	1.00	0.8	20	101	X017156 - X0D0333-01	
EPA 200.7	Nickel	mg/L	0.939	0.936	1.00	0.2	20	93.9	X017156 - X0D0333-01	
EPA 200.7	Potassium	mg/L	26.8	26.9	20.0	0.4	20	99.0	X017156 - X0D0333-01	
EPA 200.7	Silver	mg/L	0.0441	0.0441	0.0500	0.1	20	88.2	X017156 - X0D0333-01	
EPA 200.7	Sodium	mg/L	39.8	39.9	19.0	0.3	20	97.4	X017156 - X0D0333-01	
EPA 200.7	Vanadium	mg/L	1.02	1.01	1.00	0.7	20	102	X017156 - X0D0333-01	
EPA 200.7	Zinc	mg/L	0.997	0.990	1.00	0.7	20	99.7	X017156 - X0D0333-01	
EPA 200.8	Aluminum	mg/L	0.198	0.200	0.195	0.7	20	97.9	X017178 - X0D0333-01	
EPA 200.8	Antimony	mg/L	0.0241	0.0245	0.0250	1.4	20	95.5	X017178 - X0D0333-01	
EPA 200.8	Arsenic	mg/L	0.0254	0.0252	0.0250	1.1	20	99.0	X017178 - X0D0333-01	
EPA 200.8	Beryllium	mg/L	0.0237	0.0235	0.0250	0.8	20	94.8	X017178 - X0D0333-01	
EPA 200.8	Cadmium	mg/L	0.0243	0.0242	0.0250	0.4	20	97.0	X017178 - X0D0333-01	
EPA 200.8	Cobalt	mg/L	0.0262	0.0263	0.0250	0.5	20	96.1	X017178 - X0D0333-01	
EPA 200.8	Copper	mg/L	0.0243	0.0244	0.0250	0.5	20	94.9	X017178 - X0D0333-01	
EPA 200.8	Lead	mg/L	0.0242	0.0241	0.0250	0.5	20	96.7	X017178 - X0D0333-01	
EPA 200.8	Molybdenum	mg/L	0.0271	0.0271	0.0250	0.2	20	97.9	X017178 - X0D0333-01	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Dissolved) (Continued)										
EPA 200.8	Selenium	mg/L	0.0265	0.0262	0.0250	1.3	20	103	X017178 - X0D0333-01	
EPA 200.8	Silver	mg/L	0.0238	0.0239	0.0250	0.6	20	95.2	X017178 - X0D0333-01	
EPA 200.8	Thallium	mg/L	0.0241	0.0239	0.0250	0.9	20	96.6	X017178 - X0D0333-01	
EPA 200.8	Uranium	mg/L	0.0278	0.0276	0.0250	0.8	20	101	X017178 - X0D0333-01	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00121	0.00102	0.00100	17.4	20	121	X018013 - X0D0372-04	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.102	0.0990	0.100	3.0	11	102	X018121 - X0D0372-01	
EPA 335.4	Cyanide (total)	mg/L	0.103	0.101	0.100	2.0	20	98.0	X017139 - X0D0333-01	
EPA 350.1	Ammonia as N	mg/L	1.15	1.09	1.00	5.4	20	112	X017141 - X0D0372-01	M1
EPA 351.2	TKN	mg/L	8.90	8.99	8.00	1.0	20	103	X017183 - X0D0313-02	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.102	0.107	0.100	4.8	20	102	X017138 - X0D0333-01	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.81	3.78	3.00	0.8	20	105	X017152 - X0D0345-02	
EPA 300.0	Fluoride	mg/L	2.21	2.20	2.00	0.3	20	104	X017152 - X0D0345-02	
EPA 300.0	Nitrate as N	mg/L	2.06	2.05	2.00	0.4	20	103	X017152 - X0D0345-02	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.23	4.22	4.00	0.4	20	106	X017152 - X0D0345-02	
EPA 300.0	Nitrite as N	mg/L	2.17	2.16	2.00	0.4	20	109	X017152 - X0D0345-02	
EPA 300.0	Sulfate as SO4	mg/L	58.9	59.1	10.0	0.3	20	96.3	X017152 - X0D0345-02	D2

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X0D0372-01 (Ground Water)**

Sampled: **22-Apr-20 11:45**
Received: **23-Apr-20**
Sampled By: **GH**
Field pH : **11.26**
Field Temp : **6.0 / 6.0C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **14** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	5000	0.02	**121**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.03	**62.0**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**1460**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.01	**7.78**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	0.04	**7.78**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.72	**1440**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.36	**1440**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.02	**48.1**	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	0.17	**33.9**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	0.68	**33.9**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	0.02	**189**	µg/L	50	43	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	0.02	**197**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.10	**25800**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-3**
SVL Sample ID: **X0D0372-02 (Ground Water)**

Sampled: **22-Apr-20 13:00**
Received: **23-Apr-20**
Sampled By: **GH**
Field pH : **7.72**
Field Temp : **8 / 8.0C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **207** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.04	**72.3**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**1300**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.40	**804**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.20	**804**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	0.55	**166**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.03	**166**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.56**	**312**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**6.24**	**312**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.10	**24800**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.37	**6.25**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCMW-6**
SVL Sample ID: **X0D0372-03 (Ground Water)**

Sampled: **22-Apr-20 13:20**
Received: **23-Apr-20**
Sampled By: **GH**
Field pH : **7.09**
Field Temp : **7.6 / 7.6C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **150** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**43.7**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**2360**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	**1.04**	**2090**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.52	**2090**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	**2.92**	**876**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.18	**876**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.22**	**245**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**4.89**	**245**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.21	**52700**	µg/L	3000	1,800	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0D0372**
Reported: 06-May-20 12:16

Client Sample ID: **WCSW-1**
SVL Sample ID: **X0D0372-04 (Surface Water)**

Sampled: **22-Apr-20 14:05**
Received: **23-Apr-20**
Sampled By: **GH**
Field pH : **8.37**
Field Temp : **4.3 / 4.3C**

Results Compared to CO SW Monitoring Limits
With Sample Hardness = **163** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.8	D Aluminum	953	<0.01	< 10	µg/L	10	4	AQL Chronic
EPA 350.1	Ammonia as N	1360	<0.02	< 30	µg/L	30	13	CO-SW TBL II C elsp
EPA 350.1	Ammonia as N	2750	<0.01	< 30	µg/L	30	13	CO-SW TBL II A sp
EPA 200.8	D Antimony	5.6	<0.54	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.7	T Arsenic	150	<0.17	< 25	µg/L	25	3	AQL Chronic
EPA 200.8	**D Arsenic**	150	0.02	**3.23**	µg/L	3	0.2	AQL Chronic
EPA 200.7	**D Barium**	490	0.07	**33.4**	µg/L	2	2	AQL Chronic
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	AQL Chronic
EPA 200.8	D Cadmium	0.609	<0.33	< 0.2	µg/L	0.2	0.06	AQL Chronic
EPA 200.7	D Chromium	11	<0.55	< 6	µg/L	6	2	AQL Chronic
EPA 200.7	T Chromium	11	<0.55	< 6	µg/L	6	1.0	AQL Chronic
EPA 200.8	**D Copper**	13.6	0.19	**2.59**	µg/L	1	0.4	AQL Chronic
ASTM D7237	Cyanide (free) @ pH 6	5	<1.00	< 5	µg/L	5	1	AQL Chronic
EPA 200.7	D Iron	1000	<0.10	< 100	µg/L	100	56	AQL Chronic
EPA 200.7	T Iron	1000	<0.10	< 100	µg/L	100	28	AQL Chronic
EPA 200.8	D Lead	4.27	<0.70	< 3	µg/L	3	0.1	AQL Chronic
EPA 200.7	**D Manganese**	1940	0.00	**8.28**	µg/L	8	3	AQL Chronic
EPA 245.1	Mercury	0.01	**<20.00**	< 0.2	µg/L	0.2	0.09	AQL Chronic
EPA 200.7	D Molybdenum	210	<0.04	< 8	µg/L	8	3	AQL Chronic
EPA 200.7	D Nickel	78.6	<0.13	< 10	µg/L	10	2	AQL Chronic
EPA 200.8	D Selenium	4.6	<0.65	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.7	D Silver	0.174	**<28.74**	< 5	µg/L	5	2	AQL Chronic (trout)
EPA 200.7	D Silver	0.742	**<6.74**	< 5	µg/L	5	2	AQL Chronic
EPA 200.8	D Thallium	15	<0.07	< 1	µg/L	1	0.08	AQL Chronic
EPA 200.8	**D Uranium**	2570	0.00	**2.53**	µg/L	1	0.05	AQL Chronic
EPA 200.7	D Zinc	189	<0.05	< 10	µg/L	10	5	AQL Chronic
EPA 200.7	D Zinc	NA		< 10	µg/L	10	5	AQL Chronic Sculpin

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2020**
Post Office Box 191	Work Order: **X0J0315**
Victor, CO 80860	Reported: 29-Oct-20 14:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
WCMW-06	X0J0315-01	Ground Water	14-Oct-20 11:55	GM	15-Oct-2020	
WCMW-03	X0J0315-02	Ground Water	14-Oct-20 13:10	GM	15-Oct-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X0J0315

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

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Newmont - Cripple Creek & Victor
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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-06**
SVL Sample ID: **X0J0315-01 (Ground Water)**

Sampled: 14-Oct-20 11:55
Received: 15-Oct-20
Sampled By: GM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	153	mg/L	2.31	0.543		N/A		10/22/20 12:51	
EPA 200.7	Aluminum	< 0.080	mg/L	0.080	0.054		X043017	AS	10/22/20 12:51	0.087
EPA 200.7	**Barium**	0.0401	mg/L	0.0020	0.0019		X043017	AS	10/22/20 12:51	2
EPA 200.7	Boron	< 0.0400	mg/L	0.0400	0.0078		X043017	AS	10/22/20 12:51	0.75
EPA 200.7	**Calcium**	43.2	mg/L	0.100	0.069		X043017	AS	10/22/20 12:51	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X043017	AS	10/22/20 12:51	0.1
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X043017	AS	10/22/20 12:51	2.5
EPA 200.7	**Magnesium**	11.1	mg/L	0.500	0.090		X043017	AS	10/22/20 12:51	
EPA 200.7	**Manganese**	0.206	mg/L	0.0080	0.0034		X043017	AS	10/22/20 12:51	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0048		X043017	KH	10/22/20 13:47	0.1
EPA 200.7	**Potassium**	2.06	mg/L	0.50	0.18		X043017	AS	10/22/20 12:51	
EPA 200.7	**Sodium**	16.4	mg/L	0.50	0.12		X043017	AS	10/22/20 12:51	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X043017	AS	10/22/20 12:51	0.1
EPA 200.7	Zinc	< 0.0100	mg/L	0.0100	0.0054		X043017	AS	10/22/20 12:51	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00072		X042205	JFB	10/22/20 19:10	0.006
EPA 200.8	**Arsenic**	0.00363	mg/L	0.00300	0.00021		X042205	JFB	10/22/20 18:17	0.1
EPA 200.8	Beryllium	< 0.000200	mg/L	0.000200	0.000065		X042205	JFB	10/22/20 18:17	0.004
EPA 200.8	Cadmium	< 0.000200	mg/L	0.000200	0.000063		X042205	JFB	10/22/20 19:10	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X042205	JFB	10/22/20 18:17	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X042205	JFB	10/22/20 18:17	0.2
EPA 200.8	**Iron**	0.886	mg/L	0.020	0.012		X042205	JFB	10/22/20 18:17	5
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X042205	JFB	10/22/20 19:10	0.05
EPA 200.8	**Molybdenum**	0.00636	mg/L	0.00100	0.000098		X042205	JFB	10/22/20 19:10	
EPA 200.8	Selenium	< 0.00300	mg/L	0.00300	0.00024		X042205	JFB	10/22/20 18:17	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X042205	JFB	10/22/20 19:10	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X042205	JFB	10/22/20 19:10	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X042205	JFB	10/22/20 19:10	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.000200	mg/L	0.000200	0.000093		X043003	KH	10/21/20 12:37	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X042222	SLH	10/16/20 11:57	0.2
EPA 335.4	Cyanide (total)	< 0.0050	mg/L	0.0050	0.0038		X043052	SLH	10/20/20 14:36	
EPA 350.1	**Ammonia as N**	0.077	mg/L	0.030	0.013		X043230	SLH	10/23/20 12:16	
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X043116	SLH	10/20/20 17:06	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X043044	KAG	10/19/20 14:19	
SM 2320 B	**Total Alkalinity**	129	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:54	
SM 2320 B	**Bicarbonate**	129	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:54	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:54	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:54	
SM 2540 C	**Total Diss. Solids**	246	mg/L	10			X042197	TL	10/16/20 12:00	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X042198	TL	10/16/20 12:00	
SM 4500 H B	**pH @15.0°C**	7.3	pH Units				X042240	KAG	10/19/20 10:54	H5

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Newmont - Cripple Creek & Victor
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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-06**
SVL Sample ID: **X0J0315-01 (Ground Water)**

CO GW Monitoring

Sampled: 14-Oct-20 11:55
Received: 15-Oct-20
Sampled By: GM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	2.23	mg/L	0.20	0.14		X042200	ZR	10/15/20 19:55	250
EPA 300.0	**Fluoride**	1.96	mg/L	0.100	0.062		X042200	ZR	10/15/20 19:55	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X042200	ZR	10/15/20 19:55	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X042200	ZR	10/15/20 19:55	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X042200	ZR	10/15/20 19:55	10
EPA 300.0	**Sulfate as SO4**	49.9	mg/L	3.00	1.80	10	X042200	ZR	10/15/20 20:12	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 3.89 meq/L Anion Sum: 3.79 meq/L C/A Balance: 1.34 % Calculated TDS: 204 TDS/cTDS: 1.20

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-03**
SVL Sample ID: **X0J0315-02 (Ground Water)**

Sampled: 14-Oct-20 13:10
Received: 15-Oct-20
Sampled By: GM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
[CALC]	**Hardness (as CaCO3)**	180	mg/L	2.31	0.543		N/A		10/22/20 13:02	
EPA 200.7	Aluminum	< 0.080	mg/L	0.080	0.054		X043017	AS	10/22/20 13:02	5
EPA 200.7	**Barium**	0.0579	mg/L	0.0020	0.0019		X043017	AS	10/22/20 13:02	2
EPA 200.7	Boron	< 0.0400	mg/L	0.0400	0.0078		X043017	AS	10/22/20 13:02	0.75
EPA 200.7	**Calcium**	51.1	mg/L	0.100	0.069		X043017	AS	10/22/20 13:02	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X043017	AS	10/22/20 13:02	0.1
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X043017	AS	10/22/20 13:02	2.5
EPA 200.7	**Magnesium**	12.7	mg/L	0.500	0.090		X043017	AS	10/22/20 13:02	
EPA 200.7	**Manganese**	0.0758	mg/L	0.0080	0.0034		X043017	AS	10/22/20 13:02	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0048		X043017	KH	10/22/20 13:58	0.2
EPA 200.7	**Potassium**	1.41	mg/L	0.50	0.18		X043017	AS	10/22/20 13:02	
EPA 200.7	**Sodium**	14.3	mg/L	0.50	0.12		X043017	AS	10/22/20 13:02	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X043017	AS	10/22/20 13:02	0.1
EPA 200.7	**Zinc**	0.0128	mg/L	0.0100	0.0054		X043017	AS	10/22/20 13:02	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00072		X042205	JFB	10/22/20 19:12	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X042205	JFB	10/22/20 18:19	0.01
EPA 200.8	Beryllium	< 0.000200	mg/L	0.000200	0.000065		X042205	JFB	10/22/20 18:19	0.004
EPA 200.8	**Cadmium**	0.000234	mg/L	0.000200	0.000063		X042205	JFB	10/22/20 19:12	0.01
EPA 200.8	**Cobalt**	0.00136	mg/L	0.00100	0.000027		X042205	JFB	10/22/20 18:19	0.05
EPA 200.8	**Copper**	0.00182	mg/L	0.00100	0.00036		X042205	JFB	10/22/20 18:19	1
EPA 200.8	**Iron**	0.070	mg/L	0.020	0.012		X042205	JFB	10/22/20 18:19	0.3
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X042205	JFB	10/22/20 19:12	0.05
EPA 200.8	**Molybdenum**	0.00344	mg/L	0.00100	0.000098		X042205	JFB	10/22/20 19:12	
EPA 200.8	Selenium	< 0.00300	mg/L	0.00300	0.00024		X042205	JFB	10/22/20 18:19	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X042205	JFB	10/22/20 19:12	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X042205	JFB	10/22/20 19:12	0.002
EPA 200.8	**Uranium**	0.00513	mg/L	0.00100	0.000052		X042205	JFB	10/22/20 19:12	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.000200	mg/L	0.000200	0.000093		X043003	KH	10/21/20 12:39	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X042222	SLH	10/16/20 11:58	0.2
EPA 335.4	Cyanide (total)	< 0.0050	mg/L	0.0050	0.0038		X043052	SLH	10/20/20 14:47	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X043230	SLH	10/23/20 12:18	
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X043116	SLH	10/20/20 17:08	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X043044	KAG	10/19/20 14:19	
SM 2320 B	**Total Alkalinity**	207	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:59	
SM 2320 B	**Bicarbonate**	207	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:59	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:59	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X042240	KAG	10/19/20 10:59	
SM 2540 C	**Total Diss. Solids**	244	mg/L	10			X042197	TL	10/16/20 12:00	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X042198	TL	10/16/20 12:00	
SM 4500 H B	**pH @15.0°C**	7.8	pH Units				X042240	KAG	10/19/20 10:59	H5

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-03**
SVL Sample ID: **X0J0315-02 (Ground Water)**

CO GW Monitoring

Sampled: 14-Oct-20 13:10
Received: 15-Oct-20
Sampled By: GM

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	1.17	mg/L	0.20	0.14		X042200	ZR	10/15/20 20:30	250
EPA 300.0	**Fluoride**	0.756	mg/L	0.100	0.062		X042200	ZR	10/15/20 20:30	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X042200	ZR	10/15/20 20:30	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X042200	ZR	10/15/20 20:30	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X042200	ZR	10/15/20 20:30	1
EPA 300.0	**Sulfate as SO4**	23.7	mg/L	0.30	0.18		X042200	ZR	10/15/20 20:30	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 4.27 meq/L Anion Sum: 4.71 meq/L C/A Balance: -4.87 % Calculated TDS: 229 TDS/cTDS: 1.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.080	0.054	0.080	X043017	22-Oct-20	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X043017	22-Oct-20	
EPA 200.7	Boron	mg/L	<0.0400	0.0078	0.0400	X043017	22-Oct-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X043017	22-Oct-20	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X043017	22-Oct-20	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X043017	22-Oct-20	
EPA 200.7	Magnesium	mg/L	<0.500	0.090	0.500	X043017	22-Oct-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X043017	22-Oct-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0048	0.0100	X043017	22-Oct-20	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X043017	22-Oct-20	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X043017	22-Oct-20	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X043017	22-Oct-20	
EPA 200.7	Zinc	mg/L	<0.0100	0.0054	0.0100	X043017	22-Oct-20	
EPA 200.8	Antimony	mg/L	<0.00300	0.00072	0.00300	X042205	22-Oct-20	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X042205	22-Oct-20	
EPA 200.8	Beryllium	mg/L	<0.000200	0.000065	0.000200	X042205	22-Oct-20	
EPA 200.8	Cadmium	mg/L	<0.000200	0.000063	0.000200	X042205	22-Oct-20	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X042205	22-Oct-20	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X042205	22-Oct-20	
EPA 200.8	Iron	mg/L	<0.020	0.012	0.020	X042205	22-Oct-20	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X042205	22-Oct-20	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X042205	22-Oct-20	
EPA 200.8	Selenium	mg/L	<0.00300	0.00024	0.00300	X042205	22-Oct-20	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X042205	22-Oct-20	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X042205	22-Oct-20	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X042205	22-Oct-20	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.000200	0.000093	0.000200	X043003	21-Oct-20	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0013	0.0050	X042222	16-Oct-20	
EPA 335.4	Cyanide (total)	mg/L	<0.0050	0.0038	0.0050	X043052	20-Oct-20	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X043230	23-Oct-20	
OIA 1677	Cyanide (WAD)	mg/L	<0.0100	0.0010	0.0100	X043116	20-Oct-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X043044	19-Oct-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X042240	19-Oct-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X042240	19-Oct-20	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X042240	19-Oct-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0		1.0	X042240	19-Oct-20	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X042197	16-Oct-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X042198	16-Oct-20	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X042200	15-Oct-20	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X042200	15-Oct-20	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X042200	15-Oct-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X042200	15-Oct-20	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X042200	15-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X042200	15-Oct-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	0.944	1.00	94.4	85 - 115	X043017	22-Oct-20	
EPA 200.7	Barium	mg/L	0.945	1.00	94.5	85 - 115	X043017	22-Oct-20	
EPA 200.7	Boron	mg/L	0.942	1.00	94.2	85 - 115	X043017	22-Oct-20	
EPA 200.7	Calcium	mg/L	20.1	20.0	100	85 - 115	X043017	22-Oct-20	
EPA 200.7	Chromium	mg/L	0.952	1.00	95.2	85 - 115	X043017	22-Oct-20	
EPA 200.7	Lithium	mg/L	0.923	1.00	92.3	85 - 115	X043017	22-Oct-20	
EPA 200.7	Magnesium	mg/L	19.8	20.0	98.9	85 - 115	X043017	22-Oct-20	
EPA 200.7	Manganese	mg/L	0.951	1.00	95.1	85 - 115	X043017	22-Oct-20	
EPA 200.7	Nickel	mg/L	0.969	1.00	96.9	85 - 115	X043017	22-Oct-20	
EPA 200.7	Potassium	mg/L	19.3	20.0	96.4	85 - 115	X043017	22-Oct-20	
EPA 200.7	Sodium	mg/L	19.1	19.0	100	85 - 115	X043017	22-Oct-20	
EPA 200.7	Vanadium	mg/L	0.964	1.00	96.4	85 - 115	X043017	22-Oct-20	
EPA 200.7	Zinc	mg/L	0.948	1.00	94.8	85 - 115	X043017	22-Oct-20	
EPA 200.8	Antimony	mg/L	0.0256	0.0250	103	85 - 115	X042205	22-Oct-20	
EPA 200.8	Arsenic	mg/L	0.0265	0.0250	106	85 - 115	X042205	22-Oct-20	
EPA 200.8	Beryllium	mg/L	0.0247	0.0250	99.0	85 - 115	X042205	22-Oct-20	
EPA 200.8	Cadmium	mg/L	0.0246	0.0250	98.6	85 - 115	X042205	22-Oct-20	
EPA 200.8	Cobalt	mg/L	0.0259	0.0250	104	85 - 115	X042205	22-Oct-20	
EPA 200.8	Copper	mg/L	0.0261	0.0250	105	85 - 115	X042205	22-Oct-20	
EPA 200.8	Iron	mg/L	0.191	0.195	98.0	85 - 115	X042205	22-Oct-20	
EPA 200.8	Lead	mg/L	0.0250	0.0250	100	85 - 115	X042205	22-Oct-20	
EPA 200.8	Molybdenum	mg/L	0.0239	0.0250	95.7	85 - 115	X042205	22-Oct-20	
EPA 200.8	Selenium	mg/L	0.0260	0.0250	104	85 - 115	X042205	22-Oct-20	
EPA 200.8	Silver	mg/L	0.0245	0.0250	97.9	85 - 115	X042205	22-Oct-20	
EPA 200.8	Thallium	mg/L	0.0250	0.0250	100	85 - 115	X042205	22-Oct-20	
EPA 200.8	Uranium	mg/L	0.0252	0.0250	101	85 - 115	X042205	22-Oct-20	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00516	0.00500	103	85 - 115	X043003	21-Oct-20	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.0930	0.100	93.0	90 - 110	X042222	16-Oct-20	
EPA 335.4	Cyanide (total)	mg/L	0.0968	0.100	96.8	90 - 110	X043052	20-Oct-20	
EPA 350.1	Ammonia as N	mg/L	1.05	1.00	105	90 - 110	X043230	23-Oct-20	
OIA 1677	Cyanide (WAD)	mg/L	0.104	0.100	104	82 - 118	X043116	20-Oct-20	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	724	704	103	92.1 - 110	X043044	19-Oct-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	98.3	99.3	98.9	94.3 - 106	X042240	19-Oct-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	100	99.3	101	94.3 - 106	X042240	19-Oct-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	98.3	99.3	98.9	95.1 - 106	X042240	19-Oct-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	100	99.3	101	95.1 - 106	X042240	19-Oct-20	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	2.87	3.00	95.8	90 - 110	X042200	15-Oct-20	
EPA 300.0	Fluoride	mg/L	1.98	2.00	99.1	90 - 110	X042200	15-Oct-20	
EPA 300.0	Nitrate as N	mg/L	1.99	2.00	99.3	90 - 110	X042200	15-Oct-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.47	4.50	99.3	90 - 110	X042200	15-Oct-20	
EPA 300.0	Nitrite as N	mg/L	2.48	2.50	99.2	90 - 110	X042200	15-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	9.94	10.0	99.4	90 - 110	X042200	15-Oct-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X043044 - X0J0248-01	19-Oct-20	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	127	129	1.4	20	X042240 - X0J0315-01	19-Oct-20	
SM 2320 B	Bicarbonate	mg/L as CaCO3	127	129	1.4	20	X042240 - X0J0315-01	19-Oct-20	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X042240 - X0J0315-01	19-Oct-20	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0	<1.0	UDL	20	X042240 - X0J0315-01	19-Oct-20	
SM 2540 C	Total Diss. Solids	mg/L	244	246	0.8	10	X042197 - X0J0318-02	16-Oct-20	
SM 2540 C	Total Diss. Solids	mg/L	387	391	1.0	10	X042197 - X0J0288-02	16-Oct-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	UDL	10	X042198 - X0J0318-02	16-Oct-20	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	UDL	10	X042198 - X0J0288-01	16-Oct-20	
SM 4500 H B	pH @15.0°C	pH Units	7.3	7.3	0.1	20	X042240 - X0J0315-01	19-Oct-20	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	0.934	<0.080	1.00	93.4	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Barium	mg/L	0.960	0.0401	1.00	92.0	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Boron	mg/L	0.961	<0.0400	1.00	93.8	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Calcium	mg/L	62.8	43.2	20.0	97.9	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Chromium	mg/L	0.939	<0.0060	1.00	93.9	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Lithium	mg/L	0.916	<0.040	1.00	91.6	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Magnesium	mg/L	30.1	11.1	20.0	95.3	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Manganese	mg/L	1.15	0.206	1.00	94.1	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Nickel	mg/L	0.942	<0.0100	1.00	94.2	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Potassium	mg/L	20.9	2.06	20.0	94.4	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Sodium	mg/L	34.9	16.4	19.0	97.2	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Vanadium	mg/L	0.958	<0.0050	1.00	95.8	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.7	Zinc	mg/L	0.923	<0.0100	1.00	92.3	70 - 130	X043017 - X0J0315-01	22-Oct-20	
EPA 200.8	Antimony	mg/L	0.0266	<0.00300	0.0250	106	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Arsenic	mg/L	0.0271	<0.00300	0.0250	106	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Beryllium	mg/L	0.0249	<0.000200	0.0250	99.6	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Cadmium	mg/L	0.0247	<0.000200	0.0250	99.0	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Cobalt	mg/L	0.0245	<0.00100	0.0250	96.0	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Copper	mg/L	0.0247	<0.00100	0.0250	96.0	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Iron	mg/L	0.208	0.070	0.195	70.5	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Lead	mg/L	0.0244	<0.00300	0.0250	97.6	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Molybdenum	mg/L	0.0346	0.00973	0.0250	99.4	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Selenium	mg/L	0.0277	<0.00300	0.0250	111	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Silver	mg/L	0.0242	<0.000100	0.0250	96.7	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Thallium	mg/L	0.0246	<0.00100	0.0250	98.3	70 - 130	X042205 - X0J0248-01	22-Oct-20	
EPA 200.8	Uranium	mg/L	0.0286	0.00340	0.0250	101	70 - 130	X042205 - X0J0248-01	22-Oct-20	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00105	<0.000200	0.00100	105	70 - 130	X043003 - X0J0248-02	21-Oct-20	
EPA 245.1	Mercury	mg/L	0.00106	<0.000200	0.00100	106	70 - 130	X043003 - X0J0330-07	21-Oct-20	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.0980	<0.0050	0.100	98.0	79 - 121	X042222 - X0J0248-01	16-Oct-20	
EPA 335.4	Cyanide (total)	mg/L	0.0987	<0.0050	0.100	98.7	90 - 110	X043052 - X0J0282-01	20-Oct-20	
EPA 350.1	Ammonia as N	mg/L	1.04	<0.030	1.00	104	90 - 110	X043230 - X0J0288-01	23-Oct-20	
EPA 350.1	Ammonia as N	mg/L	1.04	<0.030	1.00	104	90 - 110	X043230 - X0J0288-02	23-Oct-20	
OIA 1677	Cyanide (WAD)	mg/L	0.109	<0.0100	0.100	109	82 - 118	X043116 - X0J0248-01	20-Oct-20	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.18	0.28	3.00	96.9	90 - 110	X042200 - X0J0289-01	15-Oct-20	
EPA 300.0	Fluoride	mg/L	2.06	<0.100	2.00	103	90 - 110	X042200 - X0J0289-01	15-Oct-20	
EPA 300.0	Nitrate as N	mg/L	1.96	<0.050	2.00	98.1	90 - 110	X042200 - X0J0289-01	15-Oct-20	
EPA 300.0	Nitrate/Nitrite as N	mg/L	3.94	<0.100	4.00	98.4	90 - 110	X042200 - X0J0289-01	15-Oct-20	
EPA 300.0	Nitrite as N	mg/L	1.97	<0.050	2.00	98.7	90 - 110	X042200 - X0J0289-01	15-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	11.3	1.53	10.0	97.9	90 - 110	X042200 - X0J0289-01	15-Oct-20	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	0.943	0.934	1.00	1.1	20	94.3	X043017 - X0J0315-01	
EPA 200.7	Barium	mg/L	0.990	0.960	1.00	3.0	20	94.9	X043017 - X0J0315-01	
EPA 200.7	Boron	mg/L	0.969	0.961	1.00	0.9	20	94.6	X043017 - X0J0315-01	
EPA 200.7	Calcium	mg/L	64.4	62.8	20.0	2.6	20	106	X043017 - X0J0315-01	
EPA 200.7	Chromium	mg/L	0.957	0.939	1.00	1.8	20	95.7	X043017 - X0J0315-01	
EPA 200.7	Lithium	mg/L	0.908	0.916	1.00	0.9	20	90.8	X043017 - X0J0315-01	
EPA 200.7	Magnesium	mg/L	31.3	30.1	20.0	3.8	20	101	X043017 - X0J0315-01	
EPA 200.7	Manganese	mg/L	1.14	1.15	1.00	0.8	20	93.1	X043017 - X0J0315-01	
EPA 200.7	Nickel	mg/L	0.967	0.942	1.00	2.6	20	96.7	X043017 - X0J0315-01	
EPA 200.7	Potassium	mg/L	21.7	20.9	20.0	3.6	20	98.2	X043017 - X0J0315-01	
EPA 200.7	Sodium	mg/L	35.9	34.9	19.0	2.9	20	103	X043017 - X0J0315-01	
EPA 200.7	Vanadium	mg/L	0.987	0.958	1.00	3.0	20	98.7	X043017 - X0J0315-01	
EPA 200.7	Zinc	mg/L	0.950	0.923	1.00	2.8	20	95.0	X043017 - X0J0315-01	
EPA 200.8	Antimony	mg/L	0.0264	0.0266	0.0250	0.4	20	106	X042205 - X0J0248-01	
EPA 200.8	Arsenic	mg/L	0.0291	0.0271	0.0250	7.5	20	114	X042205 - X0J0248-01	
EPA 200.8	Beryllium	mg/L	0.0244	0.0249	0.0250	2.1	20	97.6	X042205 - X0J0248-01	
EPA 200.8	Cadmium	mg/L	0.0247	0.0247	0.0250	0.2	20	98.8	X042205 - X0J0248-01	
EPA 200.8	Cobalt	mg/L	0.0265	0.0245	0.0250	8.0	20	104	X042205 - X0J0248-01	
EPA 200.8	Copper	mg/L	0.0268	0.0247	0.0250	8.4	20	105	X042205 - X0J0248-01	
EPA 200.8	Iron	mg/L	0.224	0.208	0.195	7.7	20	79.0	X042205 - X0J0248-01	
EPA 200.8	Lead	mg/L	0.0244	0.0244	0.0250	0.2	20	97.4	X042205 - X0J0248-01	
EPA 200.8	Molybdenum	mg/L	0.0343	0.0346	0.0250	0.7	20	98.4	X042205 - X0J0248-01	
EPA 200.8	Selenium	mg/L	0.0280	0.0277	0.0250	0.9	20	112	X042205 - X0J0248-01	
EPA 200.8	Silver	mg/L	0.0239	0.0242	0.0250	1.4	20	95.4	X042205 - X0J0248-01	
EPA 200.8	Thallium	mg/L	0.0243	0.0246	0.0250	1.0	20	97.3	X042205 - X0J0248-01	
EPA 200.8	Uranium	mg/L	0.0282	0.0286	0.0250	1.2	20	99.4	X042205 - X0J0248-01	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00103	0.00105	0.00100	2.2	20	103	X043003 - X0J0248-02	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.0970	0.0980	0.100	1.0	11	97.0	X042222 - X0J0248-01	
EPA 335.4	Cyanide (total)	mg/L	0.0995	0.0987	0.100	0.8	20	99.5	X043052 - X0J0282-01	
EPA 350.1	Ammonia as N	mg/L	1.06	1.04	1.00	1.3	20	106	X043230 - X0J0288-01	
OIA 1677	Cyanide (WAD)	mg/L	0.112	0.109	0.100	2.7	11	112	X043116 - X0J0248-01	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.22	3.18	3.00	1.3	20	98.3	X042200 - X0J0289-01	
EPA 300.0	Fluoride	mg/L	2.07	2.06	2.00	0.6	20	104	X042200 - X0J0289-01	
EPA 300.0	Nitrate as N	mg/L	1.98	1.96	2.00	0.7	20	98.8	X042200 - X0J0289-01	
EPA 300.0	Nitrate/Nitrite as N	mg/L	3.97	3.94	4.00	0.7	20	99.2	X042200 - X0J0289-01	

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Anions by Ion Chromatography (Continued)										
EPA 300.0	Nitrite as N	mg/L	1.99	1.97	2.00	0.8	20	99.5	X042200 - X0J0289-01	
EPA 300.0	Sulfate as SO4	mg/L	11.4	11.3	10.0	0.8	20	98.8	X042200 - X0J0289-01	

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2020**
Post Office Box 191	Work Order: **X0J0315**
Victor, CO 80860	Reported: 29-Oct-20 14:07

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-06**
SVL Sample ID: **X0J0315-01 (Ground Water)**

Sampled: **14-Oct-20 11:55**
Received: **15-Oct-20**
Sampled By: **GM**
Field pH : **6.74**
Field Temp : **12.1 / 12.1C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **153** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	87	<0.92	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.7	GW DWS
EPA 200.8	**D Arsenic**	10	0.36	**3.63**	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	100	0.04	**3.63**	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**40.1**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**2230**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.98	**1960**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.49	**1960**	µg/L	100	62	GW DWS
EPA 200.8	**D Iron**	300	**2.95**	**886**	µg/L	20	12	GW DWS
EPA 200.8	**D Iron**	5000	0.18	**886**	µg/L	20	12	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.03**	**206**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**4.12**	**206**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	5	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	5	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.20	**49900**	µg/L	3000	1,800	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2020
Work Order: **X0J0315**
Reported: 29-Oct-20 14:07

Client Sample ID: **WCMW-03**
SVL Sample ID: **X0J0315-02 (Ground Water)**

Sampled: **14-Oct-20 13:10**
Received: **15-Oct-20**
Sampled By: **GM**
Field pH : **7.43**
Field Temp : **10.6 / 10.6C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **180** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.7	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.03	**57.9**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	**D Cadmium**	10	0.02	**0.23**	µg/L	0.2	0.06	GW AG
EPA 200.8	**D Cadmium**	5	0.05	**0.23**	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.00	**1170**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.03	**1.36**	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.00	**1.82**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	0.01	**1.82**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.38	**756**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.19	**756**	µg/L	100	62	GW DWS
EPA 200.8	**D Iron**	300	0.23	**69.9**	µg/L	20	12	GW DWS
EPA 200.8	**D Iron**	5000	0.01	**69.9**	µg/L	20	12	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	0.38	**75.8**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**1.52**	**75.8**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	5	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	5	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.09	**23700**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.31	**5.13**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	**D Zinc**	2000	0.01	**12.8**	µg/L	10	5	GW AG
EPA 200.7	**D Zinc**	5000	0.00	**12.8**	µg/L	10	5	GW DWS

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2021**
Post Office Box 191	Work Order: **X1H0190**
Victor, CO 80860	Reported: 26-Aug-21 15:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
AG-2	X1H0190-01	Surface Water	10-Aug-21 09:30	BOD	11-Aug-2021	
SGMW-6B	X1H0190-02	Ground Water	10-Aug-21 11:45	BOD	11-Aug-2021	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X1H0190

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

Significant pH shift noted in sample -02 (confirmed with pH strip) vs. historical data affecting pH, Alkalinity & Acidity: client label matched SVL label.

NO3: Sample -02 NO3 reanalysis performed outside of holding time yet confirmed initial result; the original value is thus reported.

Due to mechanical issues and multiple efforts to calibrate CN instrumentation; Free CN 7237 was performed outside (~1-day) of holding time expiration and has been crediterd on this work order.

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Client Sample ID: **AG-2**
SVL Sample ID: **X1H0190-01 (Surface Water)**

Sampled: 10-Aug-21 09:30
Received: 11-Aug-21
Sampled By: BOD

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	< 0.0400	mg/L	0.0400	0.0039		X133215	ATM	08/20/21 08:04	
EPA 200.7	**Calcium**	20.1	mg/L	0.100	0.035		X133215	ATM	08/20/21 08:04	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0010		X133215	ATM	08/20/21 08:04	
EPA 200.7	**Iron**	0.375	mg/L	0.100	0.028		X133215	ATM	08/20/21 08:04	
EPA 200.7	**Magnesium**	3.92	mg/L	0.500	0.045		X133215	ATM	08/20/21 08:04	
EPA 200.7	Phosphorus	< 0.050	mg/L	0.050	0.007		X133215	ATM	08/20/21 10:32	
EPA 200.7	**Potassium**	2.36	mg/L	0.50	0.09		X133215	ATM	08/20/21 08:04	
EPA 200.7	**Sodium**	8.24	mg/L	0.50	0.06		X133215	ATM	08/20/21 08:04	
EPA 200.8	**Arsenic**	0.00117	mg/L	0.00100	0.00021	2	X133276	KAH	08/19/21 11:26	
SM 2340 B	**Hardness (as CaCO3)**	66.2	mg/L	2.31	0.271		N/A		08/20/21 08:04	
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.080	mg/L	0.080	0.054		X133219	ATM	08/19/21 10:36	
EPA 200.7	**Barium**	0.0372	mg/L	0.0020	0.0019		X133219	ATM	08/19/21 10:36	
EPA 200.7	Beryllium	< 0.00200	mg/L	0.00200	0.00080		X133219	ATM	08/19/21 10:36	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0016		X133219	ATM	08/19/21 10:36	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X133219	ATM	08/19/21 10:36	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X133219	ATM	08/19/21 10:36	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X133219	ATM	08/19/21 10:36	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X133219	ATM	08/19/21 10:36	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0034		X133219	ATM	08/19/21 10:36	
EPA 200.7	**Molybdenum**	0.0125	mg/L	0.0080	0.0034		X133219	ATM	08/19/21 10:36	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0048		X133219	ATM	08/19/21 10:36	
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0019		X133219	ATM	08/19/21 10:36	
EPA 200.7	Zinc	< 0.0100	mg/L	0.0100	0.0054		X133219	ATM	08/19/21 10:36	
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00072		X133230	KAH	08/19/21 11:54	
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X133230	KAH	08/19/21 11:54	
EPA 200.8	Selenium	< 0.00300	mg/L	0.00300	0.00024		X133230	KAH	08/19/21 11:54	
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X133230	KAH	08/19/21 11:54	
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X133230	KAH	08/19/21 11:54	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.000200	mg/L	0.000200	0.000093		X133293	KAH	08/17/21 12:14	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0048		X134081	HJL	08/25/21 10:10	H1
Calculation	**Nitrogen, Total as N**	0.730	mg/L	0.600	0.381		N/A		08/23/21 12:30	
EPA 335.4	Cyanide (total)	< 0.0050	mg/L	0.0050	0.0038		X133174	KJR	08/12/21 19:14	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X133285	KJR	08/17/21 17:57	
EPA 351.2	**TKN**	0.73	mg/L	0.50	0.31		X134030	KAG	08/23/21 12:30	
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X134080	HJL	08/24/21 14:58	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X133196	DMP	08/12/21 13:15	
SM 2320 B	**Total Alkalinity**	24.6	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:17	
SM 2320 B	**Bicarbonate**	24.6	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:17	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:17	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:17	
SM 2540 C	**Total Diss. Solids**	101	mg/L	10			X133202	TJL	08/12/21 14:45	
SM 2540 D	**Total Susp. Solids**	7.0	mg/L	5.0			X133203	tjl	08/12/21 14:45	
SM 4500 H B	**pH @14.0°C**	7.5	pH Units				X133210	DMP	08/12/21 09:17	H5

SVL holds the following certifications:
AZ:0538, **ID**:ID00019 & ID00965 (Microbiology), **NV**:ID000192007A, **SC**:58004001, **UT**(**TNI**):ID000192015-1, **WA**:C573

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Client Sample ID: **AG-2**
SVL Sample ID: **X1H0190-01 (Surface Water)**

Sampled: 10-Aug-21 09:30
Received: 11-Aug-21
Sampled By: BOD

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	13.1	mg/L	2.00	1.40	10	X133186	RS	08/11/21 15:56	D2
EPA 300.0	**Fluoride**	3.14	mg/L	0.100	0.062		X133186	RS	08/11/21 15:37	
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X133186	RS	08/11/21 15:37	
EPA 300.0	Nitrate+Nitrite as N	< 0.100	mg/L	0.100	0.074		X133186	RS	08/11/21 13:00	
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X133186	RS	08/11/21 15:37	
EPA 300.0	**Sulfate as SO4**	31.5	mg/L	0.30	0.18		X133186	RS	08/11/21 15:37	

Cation/Anion Balance and TDS Ratios

Cation Sum: 1.75 meq/L Anion Sum: 1.69 meq/L C/A Balance: 1.78 % Calculated TDS: 97 TDS/cTDS: 1.04

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Newmont - Cripple Creek & Victor
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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Client Sample ID: **SGMW-6B**
SVL Sample ID: **X1H0190-02 (Ground Water)**

Sampled: 10-Aug-21 11:45
Received: 11-Aug-21
Sampled By: BOD

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	**Calcium**	387	mg/L	0.100	0.035		X133215	ATM	08/20/21 08:08	
EPA 200.7	**Magnesium**	97.9	mg/L	0.500	0.045		X133215	ATM	08/20/21 08:08	
EPA 200.7	**Potassium**	7.66	mg/L	0.50	0.09		X133215	ATM	08/20/21 08:08	
SM 2340 B	**Hardness (as CaCO3)**	1370	mg/L	2.31	0.271		N/A		08/20/21 08:08	
Metals (Dissolved)										
EPA 200.7	**Aluminum**	21.1	mg/L	0.080	0.054		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Barium**	0.0116	mg/L	0.0020	0.0019		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Beryllium**	0.114	mg/L	0.00200	0.00080		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Boron**	0.0909	mg/L	0.0400	0.0078		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Cadmium**	0.0141	mg/L	0.0020	0.0016		X133219	ATM	08/19/21 10:40	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Cobalt**	0.171	mg/L	0.0060	0.0046		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Copper**	0.116	mg/L	0.0100	0.0027		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Iron**	6.55	mg/L	0.100	0.056		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Lead**	0.0153	mg/L	0.0075	0.0049		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Lithium**	0.090	mg/L	0.040	0.025		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Manganese**	15.8	mg/L	0.0080	0.0034		X133219	ATM	08/19/21 10:40	
EPA 200.7	Molybdenum	< 0.0080	mg/L	0.0080	0.0034		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Nickel**	0.284	mg/L	0.0100	0.0048		X133219	ATM	08/19/21 10:40	
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0019		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Sodium**	57.8	mg/L	0.50	0.12		X133219	ATM	08/19/21 10:40	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X133219	ATM	08/19/21 10:40	
EPA 200.7	**Zinc**	3.50	mg/L	0.0100	0.0054		X133219	ATM	08/19/21 10:40	
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00072		X133230	KAH	08/19/21 12:02	
EPA 200.8	**Arsenic**	0.00501	mg/L	0.00300	0.00021		X133230	KAH	08/19/21 12:02	
EPA 200.8	**Selenium**	0.0153	mg/L	0.00300	0.00024		X133230	KAH	08/19/21 12:02	
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X133230	KAH	08/19/21 12:02	
EPA 200.8	**Uranium**	0.408	mg/L	0.00100	0.000052		X133230	KAH	08/19/21 12:02	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.000200	mg/L	0.000200	0.000093		X133293	KAH	08/17/21 12:15	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0048		X134081	HJL	08/25/21 10:11	H1
EPA 335.4	Cyanide (total)	< 0.0050	mg/L	0.0050	0.0038		X133174	KJR	08/12/21 19:28	
EPA 350.1	**Ammonia as N**	0.963	mg/L	0.030	0.013		X133285	KJR	08/17/21 18:00	
OIA 1677	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0010		X134080	HJL	08/24/21 15:00	
SM 2310 B	**Acidity to pH 8.3**	145	mg/L as CaCO3	10.0			X133196	DMP	08/12/21 13:15	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:21	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:21	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:21	
SM 2320 B	Hydroxide	< 1.0	mg/L as CaCO3	1.0			X133210	DMP	08/12/21 09:21	
SM 2540 C	**Total Diss. Solids**	2080	mg/L	40			X133202	TJL	08/12/21 14:45	D2
SM 2540 D	**Total Susp. Solids**	6.0	mg/L	5.0			X133203	tjl	08/12/21 14:45	
SM 4500 H B	**pH @15.0°C**	4.7	pH Units				X133210	DMP	08/12/21 09:21	H5

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Client Sample ID: **SGMW-6B**
SVL Sample ID: **X1H0190-02 (Ground Water)**

Sampled: 10-Aug-21 11:45
Received: 11-Aug-21
Sampled By: BOD

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	111	mg/L	10.0	7.00	50	X133186	RS	08/11/21 17:14	D2
EPA 300.0	**Fluoride**	14.8	mg/L	5.00	3.10	50	X133186	RS	08/11/21 17:14	D2
EPA 300.0	**Nitrate as N**	9.29	mg/L	2.50	2.15	50	X133186	RS	08/11/21 17:14	D2,N1
EPA 300.0	**Nitrate+Nitrite as N**	9.31	mg/L	0.100	0.074		X133186	RS	08/11/21 13:00	D2
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X133186	RS	08/11/21 16:54	
EPA 300.0	**Sulfate as SO4**	1380	mg/L	15.0	9.00	50	X133186	RS	08/11/21 17:14	D2
Cation/Anion Balance and TDS Ratios										

Cation Sum: 33.4 meq/L Anion Sum: 34.0 meq/L C/A Balance: -0.84 % Calculated TDS: 2138 TDS/cTDS: 0.97

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.7	Boron	mg/L	<0.0400	0.0039	0.0400	X133215	20-Aug-21	
EPA 200.7	Calcium	mg/L	<0.100	0.035	0.100	X133215	20-Aug-21	
EPA 200.7	Chromium	mg/L	<0.0060	0.0010	0.0060	X133215	20-Aug-21	
EPA 200.7	Iron	mg/L	<0.100	0.028	0.100	X133215	20-Aug-21	
EPA 200.7	Magnesium	mg/L	<0.500	0.045	0.500	X133215	20-Aug-21	
EPA 200.7	Phosphorus	mg/L	<0.050	0.007	0.050	X133215	20-Aug-21	
EPA 200.7	Potassium	mg/L	<0.50	0.09	0.50	X133215	20-Aug-21	
EPA 200.7	Sodium	mg/L	<0.06	0.06	0.50	X133215	20-Aug-21	
EPA 200.8	Arsenic	mg/L	<0.00100	0.00021	0.00100	X133276	19-Aug-21	
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.080	0.054	0.080	X133219	19-Aug-21	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X133219	19-Aug-21	
EPA 200.7	Beryllium	mg/L	<0.00200	0.00080	0.00200	X133219	19-Aug-21	
EPA 200.7	Boron	mg/L	<0.0400	0.0078	0.0400	X133219	19-Aug-21	
EPA 200.7	Cadmium	mg/L	<0.0020	0.0016	0.0020	X133219	19-Aug-21	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X133219	19-Aug-21	
EPA 200.7	Cobalt	mg/L	<0.0060	0.0046	0.0060	X133219	19-Aug-21	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X133219	19-Aug-21	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X133219	19-Aug-21	
EPA 200.7	Lead	mg/L	<0.0075	0.0049	0.0075	X133219	19-Aug-21	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X133219	19-Aug-21	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X133219	19-Aug-21	
EPA 200.7	Molybdenum	mg/L	<0.0080	0.0034	0.0080	X133219	19-Aug-21	
EPA 200.7	Nickel	mg/L	<0.0100	0.0048	0.0100	X133219	19-Aug-21	
EPA 200.7	Silver	mg/L	<0.0050	0.0019	0.0050	X133219	19-Aug-21	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X133219	19-Aug-21	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X133219	19-Aug-21	
EPA 200.7	Zinc	mg/L	<0.0100	0.0054	0.0100	X133219	19-Aug-21	
EPA 200.8	Antimony	mg/L	<0.00300	0.00072	0.00300	X133230	19-Aug-21	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X133230	19-Aug-21	
EPA 200.8	Selenium	mg/L	<0.00300	0.00024	0.00300	X133230	19-Aug-21	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X133230	19-Aug-21	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X133230	19-Aug-21	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.000200	0.000093	0.000200	X133293	17-Aug-21	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0048	0.0050	X134081	25-Aug-21	
EPA 335.4	Cyanide (total)	mg/L	<0.0050	0.0038	0.0050	X133174	12-Aug-21	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X133285	17-Aug-21	
EPA 351.2	TKN	mg/L	<0.50	0.31	0.50	X134030	23-Aug-21	
OIA 1677	Cyanide (WAD)	mg/L	<0.0100	0.0010	0.0100	X134080	24-Aug-21	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X133196	12-Aug-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X133210	12-Aug-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X133210	12-Aug-21	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X133210	12-Aug-21	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0		1.0	X133210	12-Aug-21	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X133202	12-Aug-21	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X133203	12-Aug-21	
SM 4500 H B	pH @21.0°C	pH Units	5.7			X133210	12-Aug-21	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X133186	11-Aug-21	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X133186	11-Aug-21	

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Quality Control - BLANK Data (Continued)

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Anions by Ion Chromatography (Continued)								
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X133186	11-Aug-21	
EPA 300.0	Nitrate+Nitrite as N	mg/L	<0.100	0.074	0.100	X133186	11-Aug-21	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X133186	11-Aug-21	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X133186	11-Aug-21	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.7	Boron	mg/L	1.03	1.00	103	85 - 115	X133215	20-Aug-21	
EPA 200.7	Calcium	mg/L	21.5	20.0	107	85 - 115	X133215	20-Aug-21	
EPA 200.7	Chromium	mg/L	0.995	1.00	99.5	85 - 115	X133215	20-Aug-21	
EPA 200.7	Iron	mg/L	10.6	10.0	106	85 - 115	X133215	20-Aug-21	
EPA 200.7	Magnesium	mg/L	21.3	20.0	107	85 - 115	X133215	20-Aug-21	
EPA 200.7	Phosphorus	mg/L	1.10	1.00	110	85 - 115	X133215	20-Aug-21	
EPA 200.7	Potassium	mg/L	21.2	20.0	106	85 - 115	X133215	20-Aug-21	
EPA 200.7	Sodium	mg/L	20.5	19.0	108	85 - 115	X133215	20-Aug-21	
EPA 200.8	Arsenic	mg/L	0.0243	0.0250	97.4	85 - 115	X133276	19-Aug-21	
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.02	1.00	102	85 - 115	X133219	19-Aug-21	
EPA 200.7	Barium	mg/L	0.922	1.00	92.2	85 - 115	X133219	19-Aug-21	
EPA 200.7	Beryllium	mg/L	0.938	1.00	93.8	85 - 115	X133219	19-Aug-21	
EPA 200.7	Boron	mg/L	0.924	1.00	92.4	85 - 115	X133219	19-Aug-21	
EPA 200.7	Cadmium	mg/L	0.941	1.00	94.1	85 - 115	X133219	19-Aug-21	
EPA 200.7	Chromium	mg/L	0.930	1.00	93.0	85 - 115	X133219	19-Aug-21	
EPA 200.7	Cobalt	mg/L	0.924	1.00	92.4	85 - 115	X133219	19-Aug-21	
EPA 200.7	Copper	mg/L	0.916	1.00	91.6	85 - 115	X133219	19-Aug-21	
EPA 200.7	Iron	mg/L	9.82	10.0	98.2	85 - 115	X133219	19-Aug-21	
EPA 200.7	Lead	mg/L	0.923	1.00	92.3	85 - 115	X133219	19-Aug-21	
EPA 200.7	Lithium	mg/L	0.948	1.00	94.8	85 - 115	X133219	19-Aug-21	
EPA 200.7	Manganese	mg/L	0.912	1.00	91.2	85 - 115	X133219	19-Aug-21	
EPA 200.7	Molybdenum	mg/L	0.934	1.00	93.4	85 - 115	X133219	19-Aug-21	
EPA 200.7	Nickel	mg/L	0.918	1.00	91.8	85 - 115	X133219	19-Aug-21	
EPA 200.7	Silver	mg/L	0.0490	0.0500	98.1	85 - 115	X133219	19-Aug-21	
EPA 200.7	Sodium	mg/L	18.1	19.0	95.4	85 - 115	X133219	19-Aug-21	
EPA 200.7	Vanadium	mg/L	0.927	1.00	92.7	85 - 115	X133219	19-Aug-21	
EPA 200.7	Zinc	mg/L	0.922	1.00	92.2	85 - 115	X133219	19-Aug-21	
EPA 200.8	Antimony	mg/L	0.0243	0.0250	97.3	85 - 115	X133230	19-Aug-21	
EPA 200.8	Arsenic	mg/L	0.0248	0.0250	99.2	85 - 115	X133230	19-Aug-21	
EPA 200.8	Selenium	mg/L	0.0258	0.0250	103	85 - 115	X133230	19-Aug-21	
EPA 200.8	Thallium	mg/L	0.0254	0.0250	101	85 - 115	X133230	19-Aug-21	
EPA 200.8	Uranium	mg/L	0.0262	0.0250	105	85 - 115	X133230	19-Aug-21	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00468	0.00500	93.6	85 - 115	X133293	17-Aug-21	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.104	0.100	104	90 - 110	X134081	25-Aug-21	
EPA 335.4	Cyanide (total)	mg/L	0.106	0.100	106	90 - 110	X133174	12-Aug-21	
EPA 350.1	Ammonia as N	mg/L	0.973	1.00	97.3	90 - 110	X133285	17-Aug-21	
EPA 351.2	TKN	mg/L	8.14	8.00	102	90 - 110	X134030	23-Aug-21	

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Classical Chemistry Parameters (Continued)									
OIA 1677	Cyanide (WAD)	mg/L	0.0920	0.100	92.0	82 - 118	X134080	24-Aug-21	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	745	759	98.2	92.1 - 110	X133196	12-Aug-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	102	99.3	102	94.3 - 106	X133210	12-Aug-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	103	99.3	104	94.3 - 106	X133210	12-Aug-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.9	99.3	101	95.1 - 106	X133210	12-Aug-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.4	99.3	100	95.1 - 106	X133210	12-Aug-21	
SM 2540 D	Total Susp. Solids	mg/L	9.0	10.0	90.0	85 - 115	X133203	12-Aug-21	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	3.06	3.00	102	90 - 110	X133186	11-Aug-21	
EPA 300.0	Fluoride	mg/L	2.01	2.00	101	90 - 110	X133186	11-Aug-21	
EPA 300.0	Nitrate as N	mg/L	2.07	2.00	103	90 - 110	X133186	11-Aug-21	
EPA 300.0	Nitrate+Nitrite as N	mg/L	4.66	4.50	103	90 - 110	X133186	11-Aug-21	
EPA 300.0	Nitrite as N	mg/L	2.59	2.50	104	90 - 110	X133186	11-Aug-21	
EPA 300.0	Sulfate as SO4	mg/L	10.4	10.0	104	90 - 110	X133186	11-Aug-21	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	9470	9640	1.8	20	X133196 - X1H0102-03	12-Aug-21	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	24.8	24.6	0.9	20	X133210 - X1H0190-01	12-Aug-21	
SM 2320 B	Bicarbonate	mg/L as CaCO3	24.8	24.6	0.9	20	X133210 - X1H0190-01	12-Aug-21	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X133210 - X1H0190-01	12-Aug-21	
SM 2320 B	Hydroxide	mg/L as CaCO3	<1.0	<1.0	UDL	20	X133210 - X1H0190-01	12-Aug-21	
SM 2540 C	Total Diss. Solids	mg/L	399	391	2.0	10	X133202 - X1H0151-01	12-Aug-21	
SM 2540 C	Total Diss. Solids	mg/L	520	521	0.2	10	X133202 - X1H0151-02	12-Aug-21	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X133203 - X1H0151-01	12-Aug-21	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X133203 - X1H0151-02	12-Aug-21	
SM 4500 H B	pH @11.0°C	pH Units	7.5	7.5	0.4	20	X133210 - X1H0190-01	12-Aug-21	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	mg/L	1.11	<0.0400	1.00	108	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Boron	mg/L	1.05	<0.0400	1.00	105	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Calcium	mg/L	250	229	20.0	107	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Calcium	mg/L	26.7	5.59	20.0	106	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Chromium	mg/L	0.996	<0.0060	1.00	99.6	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Chromium	mg/L	1.01	<0.0060	1.00	101	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Iron	mg/L	19.4	9.48	10.0	99.4	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Iron	mg/L	10.4	<0.100	10.0	104	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Magnesium	mg/L	171	149	20.0	108	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Magnesium	mg/L	21.7	<0.500	20.0	106	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Phosphorus	mg/L	1.14	<0.050	1.00	111	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Phosphorus	mg/L	1.12	<0.050	1.00	112	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.7	Potassium	mg/L	39.6	17.1	20.0	112	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Potassium	mg/L	21.3	<0.50	20.0	105	70 - 130	X133215 - X1H0194-04	20-Aug-21	

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Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136) (Continued)										
EPA 200.7	Sodium	mg/L	52.3	31.0	19.0	112	70 - 130	X133215 - X1H0162-01	20-Aug-21	
EPA 200.7	Sodium	mg/L	20.9	0.64	19.0	107	70 - 130	X133215 - X1H0194-04	20-Aug-21	
EPA 200.8	Arsenic	mg/L	0.0275	<0.00300	0.0250	108	70 - 130	X133276 - X1H0247-01	19-Aug-21	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.08	<0.080	1.00	108	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Barium	mg/L	1.05	0.0674	1.00	98.2	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Beryllium	mg/L	1.01	<0.00200	1.00	101	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Boron	mg/L	1.01	<0.0400	1.00	101	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Cadmium	mg/L	1.01	<0.0020	1.00	101	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Chromium	mg/L	0.987	<0.0060	1.00	98.7	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Cobalt	mg/L	0.980	<0.0060	1.00	98.0	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Copper	mg/L	0.973	<0.0100	1.00	97.3	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Iron	mg/L	10.9	0.474	10.0	104	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Lead	mg/L	0.979	<0.0075	1.00	97.9	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Lithium	mg/L	1.03	<0.040	1.00	103	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Manganese	mg/L	1.08	0.113	1.00	96.4	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Molybdenum	mg/L	1.01	<0.0080	1.00	101	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Nickel	mg/L	0.974	<0.0100	1.00	97.4	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Silver	mg/L	0.0510	<0.0050	0.0500	102	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Sodium	mg/L	30.8	11.4	19.0	102	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Vanadium	mg/L	0.989	<0.0050	1.00	98.9	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.7	Zinc	mg/L	0.989	<0.0100	1.00	98.9	70 - 130	X133219 - X1H0154-02	19-Aug-21	
EPA 200.8	Antimony	mg/L	0.0247	<0.00300	0.0250	98.8	70 - 130	X133230 - X1H0190-01	19-Aug-21	
EPA 200.8	Arsenic	mg/L	0.0256	<0.00300	0.0250	98.8	70 - 130	X133230 - X1H0190-01	19-Aug-21	
EPA 200.8	Selenium	mg/L	0.0247	<0.00300	0.0250	98.8	70 - 130	X133230 - X1H0190-01	19-Aug-21	
EPA 200.8	Thallium	mg/L	0.0249	<0.00100	0.0250	99.7	70 - 130	X133230 - X1H0190-01	19-Aug-21	
EPA 200.8	Uranium	mg/L	0.0268	<0.00100	0.0250	107	70 - 130	X133230 - X1H0190-01	19-Aug-21	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.000943	<0.000200	0.00100	94.3	70 - 130	X133293 - X1H0102-06	17-Aug-21	
EPA 245.1	Mercury	mg/L	0.000935	<0.000200	0.00100	93.5	70 - 130	X133293 - X1H0125-03	17-Aug-21	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.120	<0.0050	0.100	120	79 - 121	X134081 - X1H0190-01	25-Aug-21	
EPA 335.4	Cyanide (total)	mg/L	0.109	<0.0050	0.100	105	90 - 110	X133174 - X1H0144-01	12-Aug-21	
EPA 350.1	Ammonia as N	mg/L	1.02	<0.030	1.00	102	90 - 110	X133285 - X1H0231-01	17-Aug-21	
EPA 350.1	Ammonia as N	mg/L	12.3	11.6	1.00	0.30R>S	90 - 110	X133285 - X1H0144-01	17-Aug-21	D2,M4
EPA 351.2	TKN	mg/L	8.12	0.73	8.00	92.4	90 - 110	X134030 - X1H0190-01	23-Aug-21	
EPA 351.2	TKN	mg/L	7.87	0.53	8.00	91.8	90 - 110	X134030 - X1H0283-01	23-Aug-21	
OIA 1677	Cyanide (WAD)	mg/L	0.107	<0.0100	0.100	107	82 - 118	X134080 - X1H0190-01	24-Aug-21	
OIA 1677	Cyanide (WAD)	mg/L	0.102	<0.0100	0.100	101	82 - 118	X134080 - X1H0392-01	24-Aug-21	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	5.53	2.26	3.00	109	90 - 110	X133186 - X1H0177-02	11-Aug-21	
EPA 300.0	Chloride	mg/L	3.43	0.36	3.00	102	90 - 110	X133186 - X1H0192-01	11-Aug-21	
EPA 300.0	Fluoride	mg/L	2.24	0.108	2.00	106	90 - 110	X133186 - X1H0177-02	11-Aug-21	
EPA 300.0	Fluoride	mg/L	2.02	<0.100	2.00	101	90 - 110	X133186 - X1H0192-01	11-Aug-21	
EPA 300.0	Nitrate as N	mg/L	2.16	0.060	2.00	105	90 - 110	X133186 - X1H0177-02	11-Aug-21	
EPA 300.0	Nitrate as N	mg/L	2.11	0.082	2.00	101	90 - 110	X133186 - X1H0192-01	11-Aug-21	
EPA 300.0	Nitrate+Nitrite as N	mg/L	4.14	<0.100	4.00	101	90 - 110	X133186 - X1H0192-01	11-Aug-21	
EPA 300.0	Nitrate+Nitrite as N	mg/L	4.20	<0.100	4.00	105	90 - 110	X133186 - X1H0177-02	11-Aug-21	
EPA 300.0	Nitrite as N	mg/L	2.04	<0.050	2.00	102	90 - 110	X133186 - X1H0177-02	11-Aug-21	
EPA 300.0	Nitrite as N	mg/L	2.03	<0.050	2.00	101	90 - 110	X133186 - X1H0192-01	11-Aug-21	
EPA 300.0	Sulfate as SO4	mg/L	24.9	13.8	10.0	111	90 - 110	X133186 - X1H0177-02	11-Aug-21	M1
EPA 300.0	Sulfate as SO4	mg/L	12.2	1.60	10.0	106	90 - 110	X133186 - X1H0192-01	11-Aug-21	

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2021
Work Order: **X1H0190**
Reported: 26-Aug-21 15:36

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	mg/L	1.10	1.11	1.00	1.4	20	107	X133215 - X1H0162-01	
EPA 200.7	Calcium	mg/L	245	250	20.0	2.0	20	82.4	X133215 - X1H0162-01	
EPA 200.7	Chromium	mg/L	0.987	0.996	1.00	0.9	20	98.7	X133215 - X1H0162-01	
EPA 200.7	Iron	mg/L	19.0	19.4	10.0	2.2	20	95.2	X133215 - X1H0162-01	
EPA 200.7	Magnesium	mg/L	168	171	20.0	1.4	20	96.7	X133215 - X1H0162-01	
EPA 200.7	Phosphorus	mg/L	1.10	1.14	1.00	3.4	20	107	X133215 - X1H0162-01	
EPA 200.7	Potassium	mg/L	38.7	39.6	20.0	2.4	20	108	X133215 - X1H0162-01	
EPA 200.7	Sodium	mg/L	51.1	52.3	19.0	2.4	20	106	X133215 - X1H0162-01	
EPA 200.8	Arsenic	mg/L	0.0273	0.0275	0.0250	0.8	20	107	X133276 - X1H0247-01	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.06	1.08	1.00	1.5	20	106	X133219 - X1H0154-02	
EPA 200.7	Barium	mg/L	1.02	1.05	1.00	3.3	20	94.8	X133219 - X1H0154-02	
EPA 200.7	Beryllium	mg/L	0.977	1.01	1.00	3.0	20	97.7	X133219 - X1H0154-02	
EPA 200.7	Boron	mg/L	0.968	1.01	1.00	4.1	20	96.8	X133219 - X1H0154-02	
EPA 200.7	Cadmium	mg/L	0.979	1.01	1.00	3.5	20	97.9	X133219 - X1H0154-02	
EPA 200.7	Chromium	mg/L	0.957	0.987	1.00	3.1	20	95.7	X133219 - X1H0154-02	
EPA 200.7	Cobalt	mg/L	0.951	0.980	1.00	2.9	20	95.1	X133219 - X1H0154-02	
EPA 200.7	Copper	mg/L	0.946	0.973	1.00	2.8	20	94.6	X133219 - X1H0154-02	
EPA 200.7	Iron	mg/L	10.6	10.9	10.0	3.0	20	101	X133219 - X1H0154-02	
EPA 200.7	Lead	mg/L	0.951	0.979	1.00	2.9	20	95.1	X133219 - X1H0154-02	
EPA 200.7	Lithium	mg/L	1.00	1.03	1.00	3.0	20	100	X133219 - X1H0154-02	
EPA 200.7	Manganese	mg/L	1.05	1.08	1.00	3.0	20	93.2	X133219 - X1H0154-02	
EPA 200.7	Molybdenum	mg/L	0.986	1.01	1.00	2.5	20	98.1	X133219 - X1H0154-02	
EPA 200.7	Nickel	mg/L	0.945	0.974	1.00	3.0	20	94.5	X133219 - X1H0154-02	
EPA 200.7	Silver	mg/L	0.0503	0.0510	0.0500	1.4	20	101	X133219 - X1H0154-02	
EPA 200.7	Sodium	mg/L	29.9	30.8	19.0	3.1	20	97.4	X133219 - X1H0154-02	
EPA 200.7	Vanadium	mg/L	0.961	0.989	1.00	2.9	20	96.1	X133219 - X1H0154-02	
EPA 200.7	Zinc	mg/L	0.957	0.989	1.00	3.3	20	95.7	X133219 - X1H0154-02	
EPA 200.8	Antimony	mg/L	0.0242	0.0247	0.0250	2.0	20	96.8	X133230 - X1H0190-01	
EPA 200.8	Arsenic	mg/L	0.0255	0.0256	0.0250	0.6	20	98.2	X133230 - X1H0190-01	
EPA 200.8	Selenium	mg/L	0.0248	0.0247	0.0250	0.3	20	99.0	X133230 - X1H0190-01	
EPA 200.8	Thallium	mg/L	0.0245	0.0249	0.0250	1.6	20	98.1	X133230 - X1H0190-01	
EPA 200.8	Uranium	mg/L	0.0255	0.0268	0.0250	5.1	20	102	X133230 - X1H0190-01	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.000930	0.000943	0.00100	1.4	20	93.0	X133293 - X1H0102-06	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.111	0.120	0.100	7.8	11	111	X134081 - X1H0190-01	
EPA 335.4	Cyanide (total)	mg/L	0.108	0.109	0.100	0.9	20	104	X133174 - X1H0144-01	
EPA 350.1	Ammonia as N	mg/L	12.5	12.3	1.00	1.3	20	0.30R>S	X133285 - X1H0144-01	D2,M4
EPA 351.2	TKN	mg/L	8.42	8.12	8.00	3.6	20	96.1	X134030 - X1H0190-01	
OIA 1677	Cyanide (WAD)	mg/L	0.0980	0.107	0.100	8.8	11	98.0	X134080 - X1H0190-01	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	5.54	5.53	3.00	0.1	20	109	X133186 - X1H0177-02	
EPA 300.0	Fluoride	mg/L	2.24	2.24	2.00	0.2	20	107	X133186 - X1H0177-02	
EPA 300.0	Nitrate as N	mg/L	2.17	2.16	2.00	0.3	20	105	X133186 - X1H0177-02	
EPA 300.0	Nitrate+Nitrite as N	mg/L	4.19	4.20	4.00	0.2	20	105	X133186 - X1H0177-02	
EPA 300.0	Nitrite as N	mg/L	2.02	2.04	2.00	0.8	20	101	X133186 - X1H0177-02	
EPA 300.0	Sulfate as SO4	mg/L	24.9	24.9	10.0	0.1	20	111	X133186 - X1H0177-02	M1

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2021**
Post Office Box 191	Work Order: **X1H0190**
Victor, CO 80860	Reported: 26-Aug-21 15:36

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H1	Sample analysis performed past holding time.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M1	Matrix spike recovery was high, but the LCS recovery was acceptable.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
N1	See case narrative.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9H0666**
Victor, CO 80860	Reported: 16-Sep-19 16:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
PGMW-3	X9H0666-01	Ground Water	28-Aug-19 12:40	29-Aug-2019	Q5
CRMW-3B	X9H0666-02	Ground Water	28-Aug-19 15:50	29-Aug-2019	Q5
CRMW-3C	X9H0666-03	Ground Water	28-Aug-19 14:30	29-Aug-2019	Q5
ESPMW-1	X9H0666-04	Ground Water	28-Aug-19 14:50	29-Aug-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9H0666

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

The client cancelled Free CN as it was out of hold time.

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9H0666-01 (Ground Water)**

Sampled: 28-Aug-19 12:40
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
SM 2340 B	**Hardness (as CaCO3)**	575	mg/L	2.31	0.510		N/A		09/06/19 09:51	
Metals (Dissolved)										
EPA 200.7	**Aluminum**	7.66	mg/L	0.08	0.05		X936011	AS	09/06/19 09:51	5
EPA 200.7	**Barium**	0.0415	mg/L	0.0020	0.0019		X936011	AS	09/06/19 09:51	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X936011	AS	09/06/19 09:51	0.75
EPA 200.7	**Calcium**	160	mg/L	0.100	0.069		X936011	AS	09/06/19 09:51	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X936011	AS	09/06/19 09:51	0.1
EPA 200.7	**Iron**	0.236	mg/L	0.100	0.056		X936011	AS	09/06/19 09:51	0.3
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X936011	AS	09/06/19 09:51	2.5
EPA 200.7	**Magnesium**	42.8	mg/L	0.50	0.08		X936011	AS	09/06/19 09:51	
EPA 200.7	**Manganese**	4.13	mg/L	0.0080	0.0034		X936011	AS	09/06/19 09:51	0.05
EPA 200.7	**Nickel**	0.0641	mg/L	0.0100	0.0023		X936011	AS	09/06/19 09:51	0.1
EPA 200.7	**Potassium**	6.25	mg/L	0.50	0.18		X936011	AS	09/06/19 09:51	
EPA 200.7	**Sodium**	22.5	mg/L	0.50	0.12		X936011	AS	09/06/19 09:51	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X936011	AS	09/06/19 09:51	0.1
EPA 200.7	**Zinc**	0.501	mg/L	0.010	0.005		X936011	AS	09/06/19 09:51	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X935222	DJS	09/10/19 05:43	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X935222	DJS	09/10/19 05:43	0.01
EPA 200.8	**Beryllium**	0.00098	mg/L	0.00020	0.000065		X935222	DJS	09/10/19 05:43	0.004
EPA 200.8	**Cadmium**	0.00462	mg/L	0.00020	0.000063		X935222	DJS	09/10/19 05:43	0.01
EPA 200.8	**Cobalt**	0.0286	mg/L	0.00100	0.000027		X935222	DJS	09/10/19 05:43	0.05
EPA 200.8	**Copper**	0.252	mg/L	0.00100	0.00036		X935222	DJS	09/10/19 05:43	0.2
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X935222	DJS	09/10/19 05:43	0.05
EPA 200.8	Molybdenum	< 0.00100	mg/L	0.00100	0.000098		X935222	DJS	09/10/19 05:43	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X935222	DJS	09/10/19 05:43	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X935222	DJS	09/10/19 05:43	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X935222	DJS	09/10/19 05:43	0.002
EPA 200.8	**Uranium**	0.00150	mg/L	0.00100	0.000052		X935222	DJS	09/10/19 05:43	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X936148	MWD	09/06/19 14:56	0.01
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X936118	DT	09/06/19 15:01	
SM 2310 B	**Acidity to pH 8.3**	38.4	mg/L as CaCO3	10.0			X936102	KAG	09/04/19 14:29	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:10	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:10	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:10	
SM 2540 C	**Total Diss. Solids**	940	mg/L	10			X935257	dks	08/30/19 11:40	
SM 2540 D	**Total Susp. Solids**	14.0	mg/L	5.0			X935258	dks	08/30/19 11:40	
SM 4500 H B	**pH @20.0°C**	4.4	pH Units				X935278	KAG	08/30/19 12:10	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9H0666-01 (Ground Water)**

CO GW Monitoring

Sampled: 28-Aug-19 12:40
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	39.4	mg/L	5.00	3.50	25	X935243	RS	08/29/19 23:16	D2 250
EPA 300.0	**Fluoride**	1.89	mg/L	0.100	0.062		X935243	RS	08/29/19 23:00	4
EPA 300.0	**Nitrate as N**	16.3	mg/L	1.25	1.08	25	X935243	RS	08/29/19 23:16	D2,M4 10
EPA 300.0	**Nitrate/Nitrite as N**	16.3	mg/L	0.100	0.074		X935243	RS	08/29/19 23:00	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X935243	RS	08/29/19 23:00	1
EPA 300.0	**Sulfate as SO4**	539	mg/L	7.50	4.50	25	X935243	RS	08/29/19 23:16	D2,M4 250

Cation/Anion Balance and TDS Ratios

Cation Sum: 13.7 meq/L Anion Sum: 13.6 meq/L C/A Balance: 0.25 % Calculated TDS: 884 TDS/cTDS: 1.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Newmont - Cripple Creek & Victor
Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9H0666-02 (Ground Water)**

Sampled: 28-Aug-19 15:50
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
SM 2340 B	**Hardness (as CaCO3)**	1290	mg/L	2.31	0.510		N/A		09/06/19 10:03	
Metals (Dissolved)										
EPA 200.7	**Aluminum**	0.10	mg/L	0.08	0.05		X936011	AS	09/06/19 10:03	5
EPA 200.7	**Barium**	0.0045	mg/L	0.0020	0.0019		X936011	AS	09/06/19 10:03	2
EPA 200.7	**Boron**	0.068	mg/L	0.040	0.008		X936011	AS	09/06/19 10:03	0.75
EPA 200.7	**Calcium**	399	mg/L	0.100	0.069		X936011	AS	09/06/19 10:03	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X936011	AS	09/06/19 10:03	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X936011	AS	09/06/19 10:03	5
EPA 200.7	**Lithium**	0.109	mg/L	0.040	0.025		X936011	JFB	09/06/19 15:26	2.5
EPA 200.7	**Magnesium**	72.0	mg/L	0.50	0.08		X936011	AS	09/06/19 10:03	
EPA 200.7	**Manganese**	15.9	mg/L	0.0080	0.0034		X936011	AS	09/06/19 10:03	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X936011	AS	09/06/19 10:03	0.1
EPA 200.7	**Potassium**	9.66	mg/L	0.50	0.18		X936011	JFB	09/06/19 13:40	
EPA 200.7	**Sodium**	86.8	mg/L	0.50	0.12		X936011	AS	09/06/19 10:03	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X936011	AS	09/06/19 10:03	0.1
EPA 200.7	**Zinc**	0.020	mg/L	0.010	0.005		X936011	AS	09/06/19 10:03	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X935222	DJS	09/10/19 05:45	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X935222	DJS	09/10/19 05:45	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X935222	DJS	09/10/19 05:45	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X935222	DJS	09/10/19 05:45	0.005
EPA 200.8	**Cobalt**	0.00794	mg/L	0.00100	0.000027		X935222	DJS	09/10/19 05:45	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X935222	DJS	09/10/19 05:45	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X935222	DJS	09/10/19 05:45	0.05
EPA 200.8	Molybdenum	< 0.00100	mg/L	0.00100	0.000098		X935222	DJS	09/10/19 05:45	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X935222	DJS	09/10/19 05:45	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X935222	DJS	09/10/19 05:45	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X935222	DJS	09/10/19 05:45	0.002
EPA 200.8	**Uranium**	0.00595	mg/L	0.00100	0.000052		X935222	DJS	09/10/19 05:45	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X936148	MWD	09/06/19 14:58	0.002
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	1.70	mg/L	0.030	0.013		X936118	DT	09/06/19 15:04	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X936102	KAG	09/04/19 14:29	
SM 2320 B	**Total Alkalinity**	215	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:12	
SM 2320 B	**Bicarbonate**	215	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:12	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:12	
SM 2540 C	**Total Diss. Solids**	1800	mg/L	40			X935257	dks	08/30/19 11:40	D2
SM 2540 D	**Total Susp. Solids**	6.0	mg/L	5.0			X935258	dks	08/30/19 11:40	
SM 4500 H B	**pH @20.0°C**	7.6	pH Units				X935278	KAG	08/30/19 12:12	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9H0666-02 (Ground Water)**

CO GW Monitoring

Sampled: 28-Aug-19 15:50
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	293	mg/L	10.0	7.00	50	X935243	RS	08/30/19 00:52	D2 250
EPA 300.0	**Fluoride**	2.09	mg/L	0.100	0.062		X935243	RS	08/30/19 00:36	2
EPA 300.0	**Nitrate as N**	0.082	mg/L	0.050	0.043		X935243	RS	08/30/19 00:36	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X935243	RS	08/30/19 00:36	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X935243	RS	08/30/19 00:36	10
EPA 300.0	**Sulfate as SO4**	908	mg/L	15.0	9.00	50	X935243	RS	08/30/19 00:52	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 30.6 meq/L Anion Sum: 31.6 meq/L C/A Balance: -1.60 % Calculated TDS: 1900 TDS/cTDS: 0.95

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3C**
SVL Sample ID: **X9H0666-03 (Ground Water)**

Sampled: 28-Aug-19 14:30
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
SM 2340 B	**Hardness (as CaCO3)**	1060	mg/L	2.31	0.510		N/A		09/06/19 10:07	
Metals (Dissolved)										
EPA 200.7	**Aluminum**	0.08	mg/L	0.08	0.05		X936011	AS	09/06/19 10:07	5
EPA 200.7	**Barium**	0.0238	mg/L	0.0020	0.0019		X936011	AS	09/06/19 10:07	2
EPA 200.7	**Boron**	0.041	mg/L	0.040	0.008		X936011	AS	09/06/19 10:07	0.75
EPA 200.7	**Calcium**	316	mg/L	0.100	0.069		X936011	AS	09/06/19 10:07	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X936011	AS	09/06/19 10:07	0.1
EPA 200.7	**Iron**	5.53	mg/L	0.100	0.056		X936011	AS	09/06/19 10:07	5
EPA 200.7	**Lithium**	0.065	mg/L	0.040	0.025		X936011	JFB	09/06/19 15:29	2.5
EPA 200.7	**Magnesium**	65.1	mg/L	0.50	0.08		X936011	AS	09/06/19 10:07	
EPA 200.7	**Manganese**	1.41	mg/L	0.0080	0.0034		X936011	AS	09/06/19 10:07	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X936011	AS	09/06/19 10:07	0.1
EPA 200.7	**Potassium**	5.30	mg/L	0.50	0.18		X936011	JFB	09/06/19 13:43	
EPA 200.7	**Sodium**	44.8	mg/L	0.50	0.12		X936011	AS	09/06/19 10:07	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X936011	AS	09/06/19 10:07	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X936011	AS	09/06/19 10:07	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X935222	DJS	09/10/19 05:53	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X935222	DJS	09/10/19 05:53	0.01
EPA 200.8	**Beryllium**	0.00037	mg/L	0.00020	0.000065		X935222	DJS	09/10/19 05:53	0.1
EPA 200.8	**Cadmium**	0.00054	mg/L	0.00020	0.000063		X935222	DJS	09/10/19 05:53	0.005
EPA 200.8	**Cobalt**	0.0314	mg/L	0.00100	0.000027		X935222	DJS	09/10/19 05:53	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X935222	DJS	09/10/19 05:53	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X935222	DJS	09/10/19 05:53	0.05
EPA 200.8	**Molybdenum**	0.108	mg/L	0.00100	0.000098		X935222	DJS	09/10/19 05:53	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X935222	DJS	09/10/19 05:53	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X935222	DJS	09/10/19 05:53	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X935222	DJS	09/10/19 05:53	0.002
EPA 200.8	**Uranium**	0.0173	mg/L	0.00100	0.000052		X935222	DJS	09/10/19 05:53	0.0168
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X936148	MWD	09/06/19 14:59	0.002
Classical Chemistry Parameters										
EPA 350.1	**Ammonia as N**	0.393	mg/L	0.030	0.013		X936118	DT	09/06/19 15:07	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X936102	KAG	09/04/19 14:29	
SM 2320 B	**Total Alkalinity**	154	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:17	
SM 2320 B	**Bicarbonate**	154	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:17	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X935278	KAG	08/30/19 12:17	
SM 2540 C	**Total Diss. Solids**	1530	mg/L	40			X935257	dks	08/30/19 11:40	D2
SM 2540 D	**Total Susp. Solids**	20.0	mg/L	5.0			X935258	dks	08/30/19 11:40	
SM 4500 H B	**pH @20.0°C**	7.3	pH Units				X935278	KAG	08/30/19 12:17	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3C**
SVL Sample ID: **X9H0666-03 (Ground Water)**

CO GW Monitoring

Sampled: 28-Aug-19 14:30
Received: 29-Aug-19
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	221	mg/L	10.0	7.00	50	X935243	RS	08/30/19 01:56	D2 250
EPA 300.0	**Fluoride**	1.28	mg/L	0.100	0.062		X935243	RS	08/30/19 01:40	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X935243	RS	08/30/19 01:40	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X935243	RS	08/30/19 01:40	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X935243	RS	08/30/19 01:40	10
EPA 300.0	**Sulfate as SO4**	739	mg/L	15.0	9.00	50	X935243	RS	08/30/19 01:56	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 23.5 meq/L Anion Sum: 24.8 meq/L C/A Balance: -2.62 % Calculated TDS: 1485 TDS/cTDS: 1.03

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X936011	06-Sep-19	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X936011	06-Sep-19	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X936011	06-Sep-19	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X936011	06-Sep-19	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X936011	06-Sep-19	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X936011	06-Sep-19	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X936011	06-Sep-19	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X936011	06-Sep-19	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X936011	06-Sep-19	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X936011	06-Sep-19	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X936011	06-Sep-19	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X936011	06-Sep-19	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X936011	06-Sep-19	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X936011	06-Sep-19	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X935222	10-Sep-19	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X935222	10-Sep-19	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X935222	10-Sep-19	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X935222	10-Sep-19	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X935222	10-Sep-19	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X935222	10-Sep-19	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X935222	10-Sep-19	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X935222	10-Sep-19	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X935222	10-Sep-19	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X935222	10-Sep-19	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X935222	10-Sep-19	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X935222	10-Sep-19	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X936148	06-Sep-19	
Classical Chemistry Parameters								
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X936118	06-Sep-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X936102	04-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X935278	30-Aug-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X935278	30-Aug-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X935278	30-Aug-19	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X935257	30-Aug-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X935258	30-Aug-19	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X935243	29-Aug-19	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X935243	29-Aug-19	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X935243	29-Aug-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X935243	29-Aug-19	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X935243	29-Aug-19	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X935243	29-Aug-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.08	1.00	108	85 - 115	X936011	06-Sep-19	
EPA 200.7	Barium	mg/L	1.03	1.00	103	85 - 115	X936011	06-Sep-19	
EPA 200.7	Boron	mg/L	1.00	1.00	100	85 - 115	X936011	06-Sep-19	
EPA 200.7	Calcium	mg/L	19.7	20.0	98.3	85 - 115	X936011	06-Sep-19	
EPA 200.7	Chromium	mg/L	1.02	1.00	102	85 - 115	X936011	06-Sep-19	
EPA 200.7	Iron	mg/L	9.21	10.0	92.1	85 - 115	X936011	06-Sep-19	
EPA 200.7	Lithium	mg/L	1.06	1.00	106	85 - 115	X936011	06-Sep-19	
EPA 200.7	Magnesium	mg/L	18.9	20.0	94.4	85 - 115	X936011	06-Sep-19	
EPA 200.7	Manganese	mg/L	0.973	1.00	97.3	85 - 115	X936011	06-Sep-19	
EPA 200.7	Nickel	mg/L	0.966	1.00	96.6	85 - 115	X936011	06-Sep-19	
EPA 200.7	Potassium	mg/L	20.9	20.0	105	85 - 115	X936011	06-Sep-19	
EPA 200.7	Sodium	mg/L	18.9	19.0	99.7	85 - 115	X936011	06-Sep-19	
EPA 200.7	Vanadium	mg/L	1.01	1.00	101	85 - 115	X936011	06-Sep-19	
EPA 200.7	Zinc	mg/L	0.995	1.00	99.5	85 - 115	X936011	06-Sep-19	
EPA 200.8	Antimony	mg/L	0.0249	0.0250	99.6	85 - 115	X935222	10-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0255	0.0250	102	85 - 115	X935222	10-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0250	0.0250	100	85 - 115	X935222	10-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0251	0.0250	101	85 - 115	X935222	10-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0252	0.0250	101	85 - 115	X935222	10-Sep-19	
EPA 200.8	Copper	mg/L	0.0251	0.0250	101	85 - 115	X935222	10-Sep-19	
EPA 200.8	Lead	mg/L	0.0254	0.0250	102	85 - 115	X935222	10-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0245	0.0250	97.9	85 - 115	X935222	10-Sep-19	
EPA 200.8	Selenium	mg/L	0.0257	0.0250	103	85 - 115	X935222	10-Sep-19	
EPA 200.8	Silver	mg/L	0.0249	0.0250	99.4	85 - 115	X935222	10-Sep-19	
EPA 200.8	Thallium	mg/L	0.0255	0.0250	102	85 - 115	X935222	10-Sep-19	
EPA 200.8	Uranium	mg/L	0.0251	0.0250	100	85 - 115	X935222	10-Sep-19	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00544	0.00500	109	85 - 115	X936148	06-Sep-19	
Classical Chemistry Parameters									
EPA 350.1	Ammonia as N	mg/L	0.990	1.00	99.0	90 - 110	X936118	06-Sep-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1280	1360	94.0	92.1 - 110	X936102	04-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	101	99.3	102	94.3 - 106	X935278	30-Aug-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	103	99.3	104	94.3 - 106	X935278	30-Aug-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.0	99.3	99.7	95.1 - 106	X935278	30-Aug-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	96.1	99.3	96.7	95.1 - 106	X935278	30-Aug-19	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	2.98	3.00	99.2	90 - 110	X935243	29-Aug-19	
EPA 300.0	Fluoride	mg/L	2.00	2.00	99.8	90 - 110	X935243	29-Aug-19	
EPA 300.0	Nitrate as N	mg/L	1.94	2.00	97.2	90 - 110	X935243	29-Aug-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.47	4.50	99.3	90 - 110	X935243	29-Aug-19	
EPA 300.0	Nitrite as N	mg/L	2.53	2.50	101	90 - 110	X935243	29-Aug-19	
EPA 300.0	Sulfate as SO4	mg/L	10.1	10.0	101	90 - 110	X935243	29-Aug-19	

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Newmont - Cripple Creek & Victor
Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X936102	04-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	333	335	0.5	20	X935278	30-Aug-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	333	335	0.5	20	X935278	30-Aug-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X935278	30-Aug-19	
SM 2540 C	Total Diss. Solids	mg/L	2490	2700	8.2	10	X935257	30-Aug-19	D2
SM 2540 C	Total Diss. Solids	mg/L	929	940	1.2	10	X935257	30-Aug-19	
SM 2540 D	Total Susp. Solids	mg/L	15.0	14.0	6.9	10	X935258	30-Aug-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X935258	30-Aug-19	
SM 4500 H B	pH @17.0°C	pH Units	8.0	8.0	0.3	20	X935278	30-Aug-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.11	<0.08	1.00	111	70 - 130	X936011	06-Sep-19	
EPA 200.7	Aluminum	mg/L	1.14	<0.08	1.00	114	70 - 130	X936011	06-Sep-19	
EPA 200.7	Barium	mg/L	1.15	0.112	1.00	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Barium	mg/L	1.24	0.149	1.00	109	70 - 130	X936011	06-Sep-19	
EPA 200.7	Boron	mg/L	1.04	<0.040	1.00	101	70 - 130	X936011	06-Sep-19	
EPA 200.7	Boron	mg/L	1.05	0.041	1.00	101	70 - 130	X936011	06-Sep-19	
EPA 200.7	Calcium	mg/L	49.0	29.3	20.0	98.6	70 - 130	X936011	06-Sep-19	
EPA 200.7	Calcium	mg/L	99.3	78.4	20.0	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Chromium	mg/L	1.04	<0.0060	1.00	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Chromium	mg/L	1.04	<0.0060	1.00	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Iron	mg/L	9.49	<0.100	10.0	94.9	70 - 130	X936011	06-Sep-19	
EPA 200.7	Iron	mg/L	9.26	<0.100	10.0	92.6	70 - 130	X936011	06-Sep-19	
EPA 200.7	Lithium	mg/L	1.09	<0.040	1.00	109	70 - 130	X936011	06-Sep-19	
EPA 200.7	Lithium	mg/L	1.09	<0.040	1.00	109	70 - 130	X936011	06-Sep-19	
EPA 200.7	Magnesium	mg/L	30.3	11.2	20.0	95.6	70 - 130	X936011	06-Sep-19	
EPA 200.7	Magnesium	mg/L	31.7	13.0	20.0	93.5	70 - 130	X936011	06-Sep-19	
EPA 200.7	Manganese	mg/L	1.03	0.0397	1.00	98.9	70 - 130	X936011	06-Sep-19	
EPA 200.7	Manganese	mg/L	0.968	<0.0080	1.00	96.8	70 - 130	X936011	06-Sep-19	
EPA 200.7	Nickel	mg/L	0.993	<0.0100	1.00	99.3	70 - 130	X936011	06-Sep-19	
EPA 200.7	Nickel	mg/L	0.982	<0.0100	1.00	98.2	70 - 130	X936011	06-Sep-19	
EPA 200.7	Potassium	mg/L	22.7	1.34	20.0	107	70 - 130	X936011	06-Sep-19	
EPA 200.7	Potassium	mg/L	25.1	2.13	20.0	115	70 - 130	X936011	06-Sep-19	
EPA 200.7	Sodium	mg/L	56.9	38.0	19.0	99.9	70 - 130	X936011	06-Sep-19	
EPA 200.7	Sodium	mg/L	44.0	23.4	19.0	108	70 - 130	X936011	06-Sep-19	
EPA 200.7	Vanadium	mg/L	1.03	<0.0050	1.00	103	70 - 130	X936011	06-Sep-19	
EPA 200.7	Vanadium	mg/L	1.04	<0.0050	1.00	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Zinc	mg/L	1.04	<0.010	1.00	104	70 - 130	X936011	06-Sep-19	
EPA 200.7	Zinc	mg/L	1.01	<0.010	1.00	101	70 - 130	X936011	06-Sep-19	
EPA 200.8	Antimony	mg/L	0.0251	<0.00300	0.0250	101	70 - 130	X935222	10-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0268	<0.00300	0.0250	104	70 - 130	X935222	10-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0255	<0.00020	0.0250	102	70 - 130	X935222	10-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0251	<0.00020	0.0250	100	70 - 130	X935222	10-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0251	<0.00100	0.0250	99.3	70 - 130	X935222	10-Sep-19	
EPA 200.8	Copper	mg/L	0.0253	<0.00100	0.0250	101	70 - 130	X935222	10-Sep-19	
EPA 200.8	Lead	mg/L	0.0251	<0.00300	0.0250	100	70 - 130	X935222	10-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0351	0.00976	0.0250	101	70 - 130	X935222	10-Sep-19	
EPA 200.8	Selenium	mg/L	0.0272	<0.0030	0.0250	109	70 - 130	X935222	10-Sep-19	
EPA 200.8	Silver	mg/L	0.0242	<0.000100	0.0250	96.9	70 - 130	X935222	10-Sep-19	
EPA 200.8	Thallium	mg/L	0.0256	<0.00100	0.0250	102	70 - 130	X935222	10-Sep-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)										
EPA 200.8	Uranium	mg/L	0.0292	0.00379	0.0250	102	70 - 130	X935222	10-Sep-19	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00100	<0.00020	0.00100	100	70 - 130	X936148	06-Sep-19	
EPA 245.1	Mercury	mg/L	0.00095	<0.00020	0.00100	95.3	70 - 130	X936148	06-Sep-19	
Classical Chemistry Parameters										
EPA 350.1	Ammonia as N	mg/L	1.00	<0.030	1.00	100	90 - 110	X936118	06-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.00	<0.030	1.00	100	90 - 110	X936118	06-Sep-19	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	42.1	39.4	3.00	90.2	90 - 110	X935243	29-Aug-19	D2
EPA 300.0	Fluoride	mg/L	3.76	1.89	2.00	93.5	90 - 110	X935243	29-Aug-19	
EPA 300.0	Nitrate as N	mg/L	17.9	16.3	2.00	0.30R>S	90 - 110	X935243	29-Aug-19	D2,M4
EPA 300.0	Nitrate/Nitrite as N	mg/L	19.9	16.3	4.00	90.5	90 - 110	X935243	29-Aug-19	
EPA 300.0	Nitrite as N	mg/L	1.99	<0.050	2.00	99.5	90 - 110	X935243	29-Aug-19	
EPA 300.0	Sulfate as SO4	mg/L	548	539	10.0	95.4	90 - 110	X935243	29-Aug-19	D2,M4

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved)											
EPA 200.7	Aluminum	mg/L	1.11	1.11	1.00	111	0.1	20	X936011	06-Sep-19	
EPA 200.7	Barium	mg/L	1.17	1.15	1.00	105	1.0	20	X936011	06-Sep-19	
EPA 200.7	Boron	mg/L	1.06	1.04	1.00	103	1.9	20	X936011	06-Sep-19	
EPA 200.7	Calcium	mg/L	49.7	49.0	20.0	102	1.3	20	X936011	06-Sep-19	
EPA 200.7	Chromium	mg/L	1.05	1.04	1.00	105	1.5	20	X936011	06-Sep-19	
EPA 200.7	Iron	mg/L	9.51	9.49	10.0	95.1	0.2	20	X936011	06-Sep-19	
EPA 200.7	Lithium	mg/L	1.10	1.09	1.00	110	1.1	20	X936011	06-Sep-19	
EPA 200.7	Magnesium	mg/L	30.7	30.3	20.0	97.4	1.2	20	X936011	06-Sep-19	
EPA 200.7	Manganese	mg/L	1.04	1.03	1.00	99.6	0.7	20	X936011	06-Sep-19	
EPA 200.7	Nickel	mg/L	1.01	0.993	1.00	101	1.5	20	X936011	06-Sep-19	
EPA 200.7	Potassium	mg/L	23.0	22.7	20.0	108	1.1	20	X936011	06-Sep-19	
EPA 200.7	Sodium	mg/L	57.6	56.9	19.0	103	1.2	20	X936011	06-Sep-19	
EPA 200.7	Vanadium	mg/L	1.04	1.03	1.00	104	1.1	20	X936011	06-Sep-19	
EPA 200.7	Zinc	mg/L	1.06	1.04	1.00	106	2.0	20	X936011	06-Sep-19	
EPA 200.8	Antimony	mg/L	0.0253	0.0251	0.0250	101	0.6	20	X935222	10-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0261	0.0268	0.0250	102	2.7	20	X935222	10-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0253	0.0255	0.0250	101	0.6	20	X935222	10-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0250	0.0251	0.0250	100	0.2	20	X935222	10-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0245	0.0251	0.0250	97.0	2.3	20	X935222	10-Sep-19	
EPA 200.8	Copper	mg/L	0.0244	0.0253	0.0250	97.5	3.9	20	X935222	10-Sep-19	
EPA 200.8	Lead	mg/L	0.0250	0.0251	0.0250	100	0.4	20	X935222	10-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0349	0.0351	0.0250	100	0.7	20	X935222	10-Sep-19	
EPA 200.8	Selenium	mg/L	0.0268	0.0272	0.0250	107	1.6	20	X935222	10-Sep-19	
EPA 200.8	Silver	mg/L	0.0244	0.0242	0.0250	97.7	0.8	20	X935222	10-Sep-19	
EPA 200.8	Thallium	mg/L	0.0252	0.0256	0.0250	101	1.5	20	X935222	10-Sep-19	
EPA 200.8	Uranium	mg/L	0.0289	0.0292	0.0250	100	1.2	20	X935222	10-Sep-19	
Metals (Filtered)											
EPA 245.1	Mercury	mg/L	0.00105	0.00100	0.00100	105	4.9	20	X936148	06-Sep-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters											
EPA 350.1	Ammonia as N	mg/L	0.999	1.00	1.00	99.9	0.5	20	X936118	06-Sep-19	
Anions by Ion Chromatography											
EPA 300.0	Chloride	mg/L	42.2	42.1	3.00	94.0	0.3	20	X935243	30-Aug-19	D2
EPA 300.0	Fluoride	mg/L	3.78	3.76	2.00	94.3	0.4	20	X935243	30-Aug-19	
EPA 300.0	Nitrate as N	mg/L	18.3	17.9	2.00	100	2.1	20	X935243	30-Aug-19	D2
EPA 300.0	Nitrate/Nitrite as N	mg/L	20.3	19.9	4.00	101	2.0	20	X935243	30-Aug-19	
EPA 300.0	Nitrite as N	mg/L	2.02	1.99	2.00	101	1.6	20	X935243	30-Aug-19	
EPA 300.0	Sulfate as SO4	mg/L	547	548	10.0	0.30R>S	0.2	20	X935243	30-Aug-19	D2,M4

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
Q5	Sample was received with inadequate preservation, but preserved by the laboratory.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9H0666-01 (Ground Water)**

Sampled: **28-Aug-19 12:40**
Received: **29-Aug-19**
Sampled By:
Field pH : **9.47**
Field Temp : **8.6 / 8.6C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **575** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	5000	**1.53**	**7660**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**41.5**	µg/L	2	2	GW DWS
EPA 200.8	**D Beryllium**	100	0.01	**0.98**	µg/L	0.2	0.07	GW AG
EPA 200.8	**D Beryllium**	4	0.24	**0.98**	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	**D Cadmium**	10	0.46	**4.62**	µg/L	0.2	0.06	GW AG
EPA 200.8	**D Cadmium**	5	0.92	**4.62**	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.16	**39400**	µg/L	5000	3,500	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.57	**28.6**	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.25	**252**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	**1.26**	**252**	µg/L	1	0.4	GW AG
EPA 300.0	**Fluoride**	2000	0.95	**1890**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.47	**1890**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	0.79	**236**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.05	**236**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**20.65**	**4130**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**82.58**	**4130**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	**D Nickel**	100	0.64	**64.1**	µg/L	10	2	GW DWS
EPA 200.7	**D Nickel**	200	0.32	**64.1**	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	**1.63**	**16300**	µg/L	1250	1,075	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	**1.63**	**16300**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**2.15**	**539000**	µg/L	7500	4,500	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.09	**1.50**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	**D Zinc**	2000	0.25	**501**	µg/L	10	5	GW AG
EPA 200.7	**D Zinc**	5000	0.10	**501**	µg/L	10	5	GW DWS

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Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9H0666-02 (Ground Water)**

Sampled: **28-Aug-19 15:50**
Received: **29-Aug-19**
Sampled By:
Field pH : **7.5**
Field Temp : **11.5 / 11.5C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **1294** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	5000	0.02	**97.0**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.00	**4.46**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	**D Boron**	750	0.09	**67.6**	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	**1.17**	**293000**	µg/L	10000	7,000	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.16	**7.94**	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
EPA 300.0	**Fluoride**	2000	**1.04**	**2090**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.52	**2090**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.04	**109**	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**79.75**	**15900**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**319.00**	**15900**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	0.01	**82.4**	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**3.63**	**908000**	µg/L	15000	9,000	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.35	**5.95**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	**D Zinc**	2000	0.01	**20.1**	µg/L	10	5	GW AG
EPA 200.7	**D Zinc**	5000	0.00	**20.1**	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9H0666**
Reported: 16-Sep-19 16:57

Client Sample ID: **CRMW-3C**
SVL Sample ID: **X9H0666-03 (Ground Water)**

Sampled: **28-Aug-19 14:30**
Received: **29-Aug-19**
Sampled By:
Field pH : **7.07**
Field Temp : **21.1 / 21.1C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **1058** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	5000	0.02	**78.8**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.01	**23.8**	µg/L	2	2	GW DWS
EPA 200.8	**D Beryllium**	100	0.00	**0.37**	µg/L	0.2	0.07	GW AG
EPA 200.8	**D Beryllium**	4	0.09	**0.37**	µg/L	0.2	0.07	GW DWS
EPA 200.7	**D Boron**	750	0.05	**40.9**	µg/L	40	8	GW AG
EPA 200.8	**D Cadmium**	10	0.05	**0.54**	µg/L	0.2	0.06	GW AG
EPA 200.8	**D Cadmium**	5	0.11	**0.54**	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.88	**221000**	µg/L	10000	7,000	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.63	**31.4**	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
EPA 300.0	**Fluoride**	2000	0.64	**1280**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.32	**1280**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	**18.45**	**5530**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	**1.11**	**5530**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.03	**64.7**	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**7.03**	**1410**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**28.13**	**1410**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**2.96**	**739000**	µg/L	15000	9,000	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	**1.03**	**17.3**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9I0404**
Victor, CO 80860	Reported: 30-Sep-19 12:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
LDS-6	X9I0404-01	Ground Water	17-Sep-19 07:40	GH	18-Sep-2019	
GVMW-25	X9I0404-02	Ground Water	17-Sep-19 11:35	GH	18-Sep-2019	
PGMW-3	X9I0404-03	Ground Water	17-Sep-19 12:25	GH	18-Sep-2019	
CRMW-3B	X9I0404-04	Ground Water	17-Sep-19 13:35	GH	18-Sep-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9I0404

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

The state of origin only accredits for drinking water analyses.

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **LDS-6**
SVL Sample ID: **X9I0404-01 (Ground Water)**

Sampled: 17-Sep-19 07:40
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Classical Chemistry Parameters										
EPA 335.4	**Cyanide (total)**	0.0130	mg/L	0.0100	0.0038		X938276	DT	09/24/19 11:40	
SM 4500 CN I	**Cyanide (WAD)**	0.0130	mg/L	0.0100	0.0040		X938277	DT	09/24/19 11:40	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **GVMW-25**
SVL Sample ID: **X9I0404-02 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 11:35
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X938231	AS	09/23/19 13:26	5
EPA 200.7	**Barium**	0.0837	mg/L	0.0020	0.0019		X938231	AS	09/23/19 09:47	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X938231	AS	09/23/19 09:47	0.75
EPA 200.7	**Calcium**	113	mg/L	0.100	0.069		X938231	AS	09/23/19 13:26	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X938231	AS	09/23/19 09:47	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X938231	AS	09/23/19 09:47	0.3
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X938231	AS	09/23/19 09:47	2.5
EPA 200.7	**Magnesium**	30.6	mg/L	0.50	0.08		X938231	AS	09/23/19 09:47	
EPA 200.7	**Manganese**	0.0523	mg/L	0.0080	0.0034		X938231	AS	09/23/19 13:26	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X938231	AS	09/23/19 09:47	0.2
EPA 200.7	**Potassium**	9.21	mg/L	0.50	0.18		X938231	AS	09/23/19 09:47	
EPA 200.7	**Sodium**	27.5	mg/L	0.50	0.12		X938231	AS	09/23/19 09:47	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X938231	AS	09/23/19 09:47	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X938231	AS	09/23/19 09:47	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X938250	KWH	09/27/19 08:07	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X938250	KWH	09/27/19 08:07	0.1
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X938250	KWH	09/27/19 08:07	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X938250	KWH	09/27/19 08:07	0.01
EPA 200.8	**Cobalt**	0.00318	mg/L	0.00100	0.000027		X938250	KWH	09/27/19 08:07	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X938250	KWH	09/27/19 08:07	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X938250	KWH	09/27/19 08:07	0.05
EPA 200.8	**Molybdenum**	0.00661	mg/L	0.00100	0.000098		X938250	KWH	09/27/19 08:07	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X938250	KWH	09/27/19 08:07	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X938250	KWH	09/27/19 08:07	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X938250	KWH	09/27/19 08:07	0.002
EPA 200.8	**Uranium**	0.00335	mg/L	0.00100	0.000052		X938250	KWH	09/27/19 08:07	0.0168
SM 2340 B	**Hardness (as CaCO3)**	409	mg/L	2.31	0.510		N/A		09/23/19 13:26	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X939095	MWD	09/25/19 15:37	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X938239	DT	09/25/19 13:38	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X938276	DT	09/24/19 11:42	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X938270	SLH	09/23/19 15:36	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X939087	KAG	09/24/19 15:26	
SM 2320 B	**Total Alkalinity**	94.6	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:21	
SM 2320 B	**Bicarbonate**	94.6	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:21	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:21	
SM 2540 C	**Total Diss. Solids**	604	mg/L	10			X938208	TL	09/19/19 12:15	
SM 2540 D	**Total Susp. Solids**	25.0	mg/L	5.0			X938210	TL	09/19/19 12:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X938277	DT	09/24/19 11:42	
SM 4500 H B	**pH @11.0°C**	8.1	pH Units				X938248	KAG	09/20/19 10:21	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **GVMW-25**
SVL Sample ID: **X9I0404-02 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 11:35
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	18.7	mg/L	2.00	1.40	10	X938204	RS	09/19/19 00:18	D2 250
EPA 300.0	**Fluoride**	0.514	mg/L	0.100	0.062		X938204	RS	09/19/19 00:04	4
EPA 300.0	**Nitrate as N**	2.77	mg/L	0.050	0.043		X938204	RS	09/19/19 00:04	10
EPA 300.0	**Nitrate/Nitrite as N**	2.77	mg/L	0.100	0.074		X938204	RS	09/19/19 00:04	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X938204	RS	09/19/19 00:04	10
EPA 300.0	**Sulfate as SO4**	332	mg/L	3.00	1.80	10	X938204	RS	09/19/19 00:18	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 9.60 meq/L Anion Sum: 9.55 meq/L C/A Balance: 0.26 % Calculated TDS: 601 TDS/cTDS: 1.01

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9I0404-03 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 12:25
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	**Aluminum**	9.10	mg/L	0.08	0.05		X938231	AS	09/23/19 13:35	0.087
EPA 200.7	**Barium**	0.0346	mg/L	0.0020	0.0019		X938231	AS	09/23/19 09:56	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X938231	AS	09/23/19 09:56	0.75
EPA 200.7	**Calcium**	154	mg/L	0.100	0.069		X938231	AS	09/23/19 13:35	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X938231	AS	09/23/19 09:56	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X938231	AS	09/23/19 09:56	5
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X938231	AS	09/23/19 09:56	2.5
EPA 200.7	**Magnesium**	44.2	mg/L	0.50	0.08		X938231	AS	09/23/19 09:56	
EPA 200.7	**Manganese**	3.99	mg/L	0.0080	0.0034		X938231	AS	09/23/19 13:35	0.2
EPA 200.7	**Nickel**	0.0555	mg/L	0.0100	0.0023		X938231	AS	09/23/19 09:56	0.1
EPA 200.7	**Potassium**	5.76	mg/L	0.50	0.18		X938231	AS	09/23/19 09:56	
EPA 200.7	**Sodium**	19.3	mg/L	0.50	0.12		X938231	AS	09/23/19 09:56	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X938231	AS	09/23/19 09:56	0.1
EPA 200.7	**Zinc**	0.501	mg/L	0.010	0.005		X938231	AS	09/23/19 09:56	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X938250	KWH	09/27/19 08:15	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X938250	KWH	09/27/19 08:15	0.01
EPA 200.8	**Beryllium**	0.00095	mg/L	0.00020	0.000065		X938250	KWH	09/27/19 08:15	0.1
EPA 200.8	**Cadmium**	0.00490	mg/L	0.00020	0.000063		X938250	KWH	09/27/19 08:15	0.005
EPA 200.8	**Cobalt**	0.0263	mg/L	0.00100	0.000027		X938250	KWH	09/27/19 08:15	0.05
EPA 200.8	**Copper**	0.239	mg/L	0.00100	0.00036		X938250	KWH	09/27/19 08:15	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X938250	KWH	09/27/19 08:15	0.05
EPA 200.8	Molybdenum	< 0.00100	mg/L	0.00100	0.000098		X938250	KWH	09/27/19 08:15	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X938250	KWH	09/27/19 08:15	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X938250	KWH	09/27/19 08:15	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X938250	KWH	09/27/19 08:15	0.002
EPA 200.8	**Uranium**	0.00176	mg/L	0.00100	0.000052		X938250	KWH	09/27/19 08:15	0.0168
SM 2340 B	**Hardness (as CaCO3)**	567	mg/L	2.31	0.510		N/A		09/23/19 13:35	
Metals (Filtered)										
EPA 245.1	**Mercury**	0.00020	mg/L	0.00020	0.000093		X939095	MWD	09/25/19 15:39	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X938239	DT	09/25/19 13:40	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X938276	DT	09/24/19 11:44	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X938270	SLH	09/23/19 15:39	
SM 2310 B	**Acidity to pH 8.3**	57.6	mg/L as CaCO3	10.0			X939087	KAG	09/24/19 15:26	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:25	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:25	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:25	
SM 2540 C	**Total Diss. Solids**	927	mg/L	10			X938208	TL	09/19/19 12:15	
SM 2540 D	**Total Susp. Solids**	9.0	mg/L	5.0			X938210	TL	09/19/19 12:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X938277	DT	09/24/19 11:44	
SM 4500 H B	**pH @13.0°C**	4.4	pH Units				X938248	KAG	09/20/19 10:25	H5

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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9I0404-03 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 12:25
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	44.3	mg/L	5.00	3.50	25	X938204	RS	09/19/19 00:48	D2 250
EPA 300.0	**Fluoride**	2.03	mg/L	0.100	0.062		X938204	RS	09/19/19 00:33	2
EPA 300.0	**Nitrate as N**	16.4	mg/L	1.25	1.08	25	X938204	RS	09/19/19 00:48	D2 10
EPA 300.0	**Nitrate/Nitrite as N**	16.4	mg/L	0.100	0.074		X938204	RS	09/19/19 00:33	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X938204	RS	09/19/19 00:33	10
EPA 300.0	**Sulfate as SO4**	554	mg/L	7.50	4.50	25	X938204	RS	09/19/19 00:48	D2 250

Cation/Anion Balance and TDS Ratios

Cation Sum: 13.5 meq/L Anion Sum: 14.1 meq/L C/A Balance: -2.12 % Calculated TDS: 896 TDS/cTDS: 1.03

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9I0404-04 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 13:35
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X938231	AS	09/23/19 13:38	5
EPA 200.7	**Barium**	0.0077	mg/L	0.0020	0.0019		X938231	AS	09/23/19 10:00	2
EPA 200.7	**Boron**	0.048	mg/L	0.040	0.008		X938231	AS	09/23/19 10:00	0.75
EPA 200.7	**Calcium**	421	mg/L	0.100	0.069		X938231	AS	09/23/19 13:38	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X938231	AS	09/23/19 10:00	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X938231	AS	09/23/19 10:00	5
EPA 200.7	**Lithium**	0.128	mg/L	0.040	0.025		X938231	AS	09/23/19 10:00	2.5
EPA 200.7	**Magnesium**	75.1	mg/L	0.50	0.08		X938231	AS	09/23/19 10:00	
EPA 200.7	**Manganese**	30.3	mg/L	0.0080	0.0034		X938231	AS	09/23/19 13:38	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X938231	AS	09/23/19 10:00	0.1
EPA 200.7	**Potassium**	10.6	mg/L	0.50	0.18		X938231	AS	09/23/19 10:00	
EPA 200.7	**Sodium**	87.1	mg/L	0.50	0.12		X938231	AS	09/23/19 10:00	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X938231	AS	09/23/19 10:00	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X938231	AS	09/23/19 10:00	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X938250	KWH	09/27/19 08:18	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X938250	KWH	09/27/19 08:18	0.1
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X938250	KWH	09/27/19 08:18	0.1
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X938250	KWH	09/27/19 08:18	0.01
EPA 200.8	**Cobalt**	0.0387	mg/L	0.00100	0.000027		X938250	KWH	09/27/19 08:18	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X938250	KWH	09/27/19 08:18	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X938250	KWH	09/27/19 08:18	0.1
EPA 200.8	**Molybdenum**	0.474	mg/L	0.00100	0.000098		X938250	KWH	09/27/19 08:18	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X938250	KWH	09/27/19 08:18	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X938250	KWH	09/27/19 08:18	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X938250	KWH	09/27/19 08:18	0.002
EPA 200.8	**Uranium**	0.0271	mg/L	0.00100	0.000052		X938250	KWH	09/27/19 08:18	0.0168
SM 2340 B	**Hardness (as CaCO3)**	1360	mg/L	2.31	0.510		N/A		09/23/19 13:38	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X939095	MWD	09/25/19 15:45	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X938239	DT	09/25/19 13:42	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X938276	DT	09/24/19 11:46	
EPA 350.1	**Ammonia as N**	4.36	mg/L	0.120	0.051	4	X938271	SLH	09/26/19 14:12	D2
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X939087	KAG	09/24/19 15:26	
SM 2320 B	**Total Alkalinity**	254	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:27	
SM 2320 B	**Bicarbonate**	254	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:27	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X938248	KAG	09/20/19 10:27	
SM 2540 C	**Total Diss. Solids**	1910	mg/L	40			X938208	TL	09/19/19 12:15	D2
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X938210	TL	09/19/19 12:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X938277	DT	09/24/19 11:46	
SM 4500 H B	**pH @13.0°C**	7.7	pH Units				X938248	KAG	09/20/19 10:27	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9I0404-04 (Ground Water)**

CO GW Monitoring

Sampled: 17-Sep-19 13:35
Received: 18-Sep-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	304	mg/L	10.0	7.00	50	X938204	RS	09/19/19 01:18	D2 250
EPA 300.0	**Fluoride**	2.14	mg/L	0.100	0.062		X938204	RS	09/19/19 01:03	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X938204	RS	09/19/19 01:03	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X938204	RS	09/19/19 01:03	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X938204	RS	09/19/19 01:03	1
EPA 300.0	**Sulfate as SO4**	937	mg/L	15.0	9.00	50	X938204	RS	09/19/19 01:18	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 32.7 meq/L Anion Sum: 33.3 meq/L C/A Balance: -0.89 % Calculated TDS: 1989 TDS/cTDS: 0.96

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X938231	23-Sep-19	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X938231	23-Sep-19	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X938231	23-Sep-19	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X938231	23-Sep-19	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X938231	23-Sep-19	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X938231	23-Sep-19	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X938231	23-Sep-19	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X938231	23-Sep-19	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X938231	23-Sep-19	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X938231	23-Sep-19	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X938231	23-Sep-19	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X938231	23-Sep-19	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X938231	23-Sep-19	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X938231	23-Sep-19	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X938250	27-Sep-19	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X938250	27-Sep-19	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X938250	27-Sep-19	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X938250	27-Sep-19	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X938250	27-Sep-19	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X938250	27-Sep-19	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X938250	27-Sep-19	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X938250	27-Sep-19	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X938250	27-Sep-19	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X938250	27-Sep-19	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X938250	27-Sep-19	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X938250	27-Sep-19	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X939095	25-Sep-19	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0013	0.0050	X938239	25-Sep-19	
EPA 335.4	Cyanide (total)	mg/L	<0.0100	0.0038	0.0100	X938276	24-Sep-19	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X938270	23-Sep-19	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X938271	26-Sep-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X939087	24-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X938248	20-Sep-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X938248	20-Sep-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X938248	20-Sep-19	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X938208	19-Sep-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X938210	19-Sep-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	<0.0100	0.0040	0.0100	X938277	24-Sep-19	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X938204	18-Sep-19	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X938204	18-Sep-19	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X938204	18-Sep-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X938204	18-Sep-19	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X938204	18-Sep-19	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X938204	18-Sep-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X910404**
Reported: 30-Sep-19 12:06

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.03	1.00	103	85 - 115	X938231	23-Sep-19	
EPA 200.7	Barium	mg/L	1.05	1.00	105	85 - 115	X938231	23-Sep-19	
EPA 200.7	Boron	mg/L	1.03	1.00	103	85 - 115	X938231	23-Sep-19	
EPA 200.7	Calcium	mg/L	20.6	20.0	103	85 - 115	X938231	23-Sep-19	
EPA 200.7	Chromium	mg/L	1.05	1.00	105	85 - 115	X938231	23-Sep-19	
EPA 200.7	Iron	mg/L	10.2	10.0	102	85 - 115	X938231	23-Sep-19	
EPA 200.7	Lithium	mg/L	1.08	1.00	108	85 - 115	X938231	23-Sep-19	
EPA 200.7	Magnesium	mg/L	20.9	20.0	104	85 - 115	X938231	23-Sep-19	
EPA 200.7	Manganese	mg/L	1.06	1.00	106	85 - 115	X938231	23-Sep-19	
EPA 200.7	Nickel	mg/L	1.01	1.00	101	85 - 115	X938231	23-Sep-19	
EPA 200.7	Potassium	mg/L	20.5	20.0	102	85 - 115	X938231	23-Sep-19	
EPA 200.7	Sodium	mg/L	19.4	19.0	102	85 - 115	X938231	23-Sep-19	
EPA 200.7	Vanadium	mg/L	1.04	1.00	104	85 - 115	X938231	23-Sep-19	
EPA 200.7	Zinc	mg/L	1.01	1.00	101	85 - 115	X938231	23-Sep-19	
EPA 200.8	Antimony	mg/L	0.0264	0.0250	106	85 - 115	X938250	27-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0266	0.0250	106	85 - 115	X938250	27-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0247	0.0250	98.8	85 - 115	X938250	27-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0271	0.0250	109	85 - 115	X938250	27-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0269	0.0250	107	85 - 115	X938250	27-Sep-19	
EPA 200.8	Copper	mg/L	0.0275	0.0250	110	85 - 115	X938250	27-Sep-19	
EPA 200.8	Lead	mg/L	0.0268	0.0250	107	85 - 115	X938250	27-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0261	0.0250	104	85 - 115	X938250	27-Sep-19	
EPA 200.8	Selenium	mg/L	0.0280	0.0250	112	85 - 115	X938250	27-Sep-19	
EPA 200.8	Silver	mg/L	0.0247	0.0250	98.9	85 - 115	X938250	27-Sep-19	
EPA 200.8	Thallium	mg/L	0.0270	0.0250	108	85 - 115	X938250	27-Sep-19	
EPA 200.8	Uranium	mg/L	0.0270	0.0250	108	85 - 115	X938250	27-Sep-19	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00527	0.00500	105	85 - 115	X939095	25-Sep-19	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.160	0.155	104	90 - 110	X938239	25-Sep-19	
EPA 335.4	Cyanide (total)	mg/L	0.155	0.155	100	90 - 110	X938276	24-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.02	1.00	102	90 - 110	X938270	23-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.01	1.00	101	90 - 110	X938271	26-Sep-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1340	1360	98.2	92.1 - 110	X939087	24-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	100	99.3	101	94.3 - 106	X938248	20-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	102	99.3	102	94.3 - 106	X938248	20-Sep-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.2	99.3	99.9	95.1 - 106	X938248	20-Sep-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	102	99.3	102	95.1 - 106	X938248	20-Sep-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.158	0.155	102	90 - 110	X938277	24-Sep-19	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	3.06	3.00	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Fluoride	mg/L	2.00	2.00	99.9	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate as N	mg/L	2.02	2.00	101	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.59	4.50	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrite as N	mg/L	2.57	2.50	103	90 - 110	X938204	18-Sep-19	
EPA 300.0	Sulfate as SO4	mg/L	10.3	10.0	103	90 - 110	X938204	18-Sep-19	

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Newmont - Cripple Creek & Victor
Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X910404**
Reported: 30-Sep-19 12:06

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X939087	24-Sep-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	95.2	94.6	0.6	20	X938248	20-Sep-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	95.2	94.6	0.6	20	X938248	20-Sep-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X938248	20-Sep-19	
SM 2540 C	Total Diss. Solids	mg/L	1110	1010	8.9	10	X938208	19-Sep-19	
SM 2540 C	Total Diss. Solids	mg/L	3760	3770	0.1	10	X938208	19-Sep-19	D2
SM 2540 D	Total Susp. Solids	mg/L	6.0	6.0	0.0	10	X938210	19-Sep-19	
SM 4500 H B	pH @12.0°C	pH Units	8.0	8.1	0.2	20	X938248	20-Sep-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.02	<0.08	1.00	102	70 - 130	X938231	23-Sep-19	
EPA 200.7	Barium	mg/L	1.12	0.0837	1.00	103	70 - 130	X938231	23-Sep-19	
EPA 200.7	Boron	mg/L	1.03	<0.040	1.00	102	70 - 130	X938231	23-Sep-19	
EPA 200.7	Calcium	mg/L	134	113	20.0	103	70 - 130	X938231	23-Sep-19	
EPA 200.7	Chromium	mg/L	1.03	<0.0060	1.00	103	70 - 130	X938231	23-Sep-19	
EPA 200.7	Iron	mg/L	9.88	<0.100	10.0	98.8	70 - 130	X938231	23-Sep-19	
EPA 200.7	Lithium	mg/L	1.07	<0.040	1.00	107	70 - 130	X938231	23-Sep-19	
EPA 200.7	Magnesium	mg/L	50.4	30.6	20.0	98.9	70 - 130	X938231	23-Sep-19	
EPA 200.7	Manganese	mg/L	1.09	0.0523	1.00	104	70 - 130	X938231	23-Sep-19	
EPA 200.7	Nickel	mg/L	0.992	<0.0100	1.00	99.2	70 - 130	X938231	23-Sep-19	
EPA 200.7	Potassium	mg/L	28.7	9.21	20.0	97.4	70 - 130	X938231	23-Sep-19	
EPA 200.7	Sodium	mg/L	45.8	27.5	19.0	96.7	70 - 130	X938231	23-Sep-19	
EPA 200.7	Vanadium	mg/L	1.04	<0.0050	1.00	104	70 - 130	X938231	23-Sep-19	
EPA 200.7	Zinc	mg/L	1.01	<0.010	1.00	101	70 - 130	X938231	23-Sep-19	
EPA 200.8	Antimony	mg/L	0.0256	<0.00300	0.0250	102	70 - 130	X938250	27-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0275	<0.00300	0.0250	107	70 - 130	X938250	27-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0239	<0.00020	0.0250	95.8	70 - 130	X938250	27-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0267	<0.00020	0.0250	106	70 - 130	X938250	27-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0292	0.00318	0.0250	104	70 - 130	X938250	27-Sep-19	
EPA 200.8	Copper	mg/L	0.0268	<0.00100	0.0250	105	70 - 130	X938250	27-Sep-19	
EPA 200.8	Lead	mg/L	0.0264	<0.00300	0.0250	106	70 - 130	X938250	27-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0334	0.00661	0.0250	107	70 - 130	X938250	27-Sep-19	
EPA 200.8	Selenium	mg/L	0.0312	<0.0030	0.0250	115	70 - 130	X938250	27-Sep-19	
EPA 200.8	Silver	mg/L	0.0244	<0.000100	0.0250	97.6	70 - 130	X938250	27-Sep-19	
EPA 200.8	Thallium	mg/L	0.0266	<0.00100	0.0250	106	70 - 130	X938250	27-Sep-19	
EPA 200.8	Uranium	mg/L	0.0304	0.00335	0.0250	108	70 - 130	X938250	27-Sep-19	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00105	0.00020	0.00100	84.6	70 - 130	X939095	25-Sep-19	
EPA 245.1	Mercury	mg/L	0.00563	0.00456	0.00100	107	70 - 130	X939095	25-Sep-19	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.112	0.0110	0.103	98.1	79 - 121	X938239	25-Sep-19	
EPA 335.4	Cyanide (total)	mg/L	0.108	<0.0100	0.103	105	90 - 110	X938276	24-Sep-19	
EPA 335.4	Cyanide (total)	mg/L	0.110	<0.0100	0.103	100	90 - 110	X938276	24-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.05	<0.030	1.00	105	90 - 110	X938270	23-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.04	<0.030	1.00	104	90 - 110	X938270	23-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.06	0.073	1.00	98.3	90 - 110	X938271	26-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.01	<0.030	1.00	101	90 - 110	X938271	26-Sep-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Classical Chemistry Parameters (Continued)										
SM 4500 CN I	Cyanide (WAD)	mg/L	0.105	<0.0100	0.103	102	75 - 125	X938277	24-Sep-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.109	<0.0100	0.103	99.0	75 - 125	X938277	24-Sep-19	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.67	0.52	3.00	105	90 - 110	X938204	18-Sep-19	
EPA 300.0	Chloride	mg/L	3.53	0.41	3.00	104	90 - 110	X938204	18-Sep-19	
EPA 300.0	Fluoride	mg/L	2.22	0.244	2.00	99.0	90 - 110	X938204	18-Sep-19	
EPA 300.0	Fluoride	mg/L	2.19	0.210	2.00	99.1	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate as N	mg/L	2.03	<0.050	2.00	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate as N	mg/L	2.06	<0.050	2.00	103	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.09	<0.100	4.00	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.10	<0.100	4.00	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrite as N	mg/L	2.05	<0.050	2.00	103	90 - 110	X938204	18-Sep-19	
EPA 300.0	Nitrite as N	mg/L	2.04	<0.050	2.00	102	90 - 110	X938204	18-Sep-19	
EPA 300.0	Sulfate as SO4	mg/L	38.4	28.4	10.0	100	90 - 110	X938204	18-Sep-19	
EPA 300.0	Sulfate as SO4	mg/L	20.2	10.1	10.0	102	90 - 110	X938204	18-Sep-19	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved)											
EPA 200.7	Aluminum	mg/L	1.04	1.02	1.00	104	1.9	20	X938231	23-Sep-19	
EPA 200.7	Barium	mg/L	1.12	1.12	1.00	103	0.0	20	X938231	23-Sep-19	
EPA 200.7	Boron	mg/L	1.03	1.03	1.00	102	0.0	20	X938231	23-Sep-19	
EPA 200.7	Calcium	mg/L	134	134	20.0	105	0.4	20	X938231	23-Sep-19	
EPA 200.7	Chromium	mg/L	1.02	1.03	1.00	102	1.0	20	X938231	23-Sep-19	
EPA 200.7	Iron	mg/L	10.1	9.88	10.0	101	2.7	20	X938231	23-Sep-19	
EPA 200.7	Lithium	mg/L	1.07	1.07	1.00	107	0.6	20	X938231	23-Sep-19	
EPA 200.7	Magnesium	mg/L	51.4	50.4	20.0	104	1.9	20	X938231	23-Sep-19	
EPA 200.7	Manganese	mg/L	1.10	1.09	1.00	105	0.8	20	X938231	23-Sep-19	
EPA 200.7	Nickel	mg/L	0.988	0.992	1.00	98.8	0.4	20	X938231	23-Sep-19	
EPA 200.7	Potassium	mg/L	29.2	28.7	20.0	99.7	1.6	20	X938231	23-Sep-19	
EPA 200.7	Sodium	mg/L	46.1	45.8	19.0	97.9	0.5	20	X938231	23-Sep-19	
EPA 200.7	Vanadium	mg/L	1.04	1.04	1.00	104	0.5	20	X938231	23-Sep-19	
EPA 200.7	Zinc	mg/L	1.00	1.01	1.00	100	0.3	20	X938231	23-Sep-19	
EPA 200.8	Antimony	mg/L	0.0260	0.0256	0.0250	103	1.3	20	X938250	27-Sep-19	
EPA 200.8	Arsenic	mg/L	0.0274	0.0275	0.0250	107	0.3	20	X938250	27-Sep-19	
EPA 200.8	Beryllium	mg/L	0.0229	0.0239	0.0250	91.5	4.6	20	X938250	27-Sep-19	
EPA 200.8	Cadmium	mg/L	0.0265	0.0267	0.0250	106	0.8	20	X938250	27-Sep-19	
EPA 200.8	Cobalt	mg/L	0.0292	0.0292	0.0250	104	0.2	20	X938250	27-Sep-19	
EPA 200.8	Copper	mg/L	0.0268	0.0268	0.0250	105	0.1	20	X938250	27-Sep-19	
EPA 200.8	Lead	mg/L	0.0263	0.0264	0.0250	105	0.6	20	X938250	27-Sep-19	
EPA 200.8	Molybdenum	mg/L	0.0333	0.0334	0.0250	107	0.4	20	X938250	27-Sep-19	
EPA 200.8	Selenium	mg/L	0.0311	0.0312	0.0250	115	0.4	20	X938250	27-Sep-19	
EPA 200.8	Silver	mg/L	0.0241	0.0244	0.0250	96.5	1.2	20	X938250	27-Sep-19	
EPA 200.8	Thallium	mg/L	0.0266	0.0266	0.0250	106	0.1	20	X938250	27-Sep-19	
EPA 200.8	Uranium	mg/L	0.0305	0.0304	0.0250	109	0.3	20	X938250	27-Sep-19	
Metals (Filtered)											
EPA 245.1	Mercury	mg/L	0.00107	0.00105	0.00100	86.7	1.9	20	X939095	25-Sep-19	

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9I0404**
Victor, CO 80860	Reported: 30-Sep-19 12:06

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters											
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.114	0.112	0.103	100	1.8	11	X938239	25-Sep-19	
EPA 335.4	Cyanide (total)	mg/L	0.106	0.108	0.103	103	1.9	20	X938276	24-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.08	1.05	1.00	108	3.1	20	X938270	23-Sep-19	
EPA 350.1	Ammonia as N	mg/L	1.09	1.06	1.00	101	2.9	20	X938271	26-Sep-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.113	0.105	0.103	110	7.3	20	X938277	24-Sep-19	
Anions by Ion Chromatography											
EPA 300.0	Chloride	mg/L	3.68	3.67	3.00	105	0.2	20	X938204	18-Sep-19	
EPA 300.0	Fluoride	mg/L	2.22	2.22	2.00	98.8	0.2	20	X938204	18-Sep-19	
EPA 300.0	Nitrate as N	mg/L	2.06	2.03	2.00	103	1.2	20	X938204	18-Sep-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.12	4.09	4.00	103	0.8	20	X938204	18-Sep-19	
EPA 300.0	Nitrite as N	mg/L	2.06	2.05	2.00	103	0.5	20	X938204	18-Sep-19	
EPA 300.0	Sulfate as SO4	mg/L	38.3	38.4	10.0	99.2	0.2	20	X938204	18-Sep-19	

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **GVMW-25**
SVL Sample ID: **X9I0404-02 (Ground Water)**

Sampled: **17-Sep-19 11:35**
Received: **18-Sep-19**
Sampled By: **GH**
Field pH : **9.16**
Field Temp : **7.0 / 7.0C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **409** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.04	**83.7**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.07	**18700**	µg/L	2000	1,400	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.06	**3.18**	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.26	**514**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.13	**514**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	0.26	**52.3**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**1.05**	**52.3**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	0.28	**2770**	µg/L	50	43	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	0.28	**2770**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**1.33**	**332000**	µg/L	3000	1,800	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.20	**3.35**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9I0404-03 (Ground Water)**

Sampled: **17-Sep-19 12:25**
Received: **18-Sep-19**
Sampled By: **GH**
Field pH : **4.64**
Field Temp : **8.9 / 8.9C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **567** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	87	**104.54**	**9100**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**34.6**	µg/L	2	2	GW DWS
EPA 200.8	**D Beryllium**	100	0.01	**0.95**	µg/L	0.2	0.07	GW AG
EPA 200.8	**D Beryllium**	4	0.24	**0.95**	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	**D Cadmium**	10	0.49	**4.90**	µg/L	0.2	0.06	GW AG
EPA 200.8	**D Cadmium**	5	0.98	**4.90**	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.18	**44300**	µg/L	5000	3,500	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.53	**26.3**	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.24	**239**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	**1.19**	**239**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	**1.01**	**2030**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.51	**2030**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**19.93**	**3990**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**79.71**	**3990**	µg/L	8	3	GW DWS
EPA 245.1	**Mercury**	10	0.02	**0.20**	µg/L	0.2	0.09	GW AG
EPA 245.1	**Mercury**	2	0.10	**0.20**	µg/L	0.2	0.09	GW DWS
EPA 200.7	**D Nickel**	100	0.56	**55.5**	µg/L	10	2	GW DWS
EPA 200.7	**D Nickel**	200	0.28	**55.5**	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	**1.64**	**16400**	µg/L	1250	1,075	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	**1.64**	**16400**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**2.21**	**554000**	µg/L	7500	4,500	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.10	**1.76**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	**D Zinc**	2000	0.25	**501**	µg/L	10	5	GW AG
EPA 200.7	**D Zinc**	5000	0.10	**501**	µg/L	10	5	GW DWS

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9I0404**
Reported: 30-Sep-19 12:06

Client Sample ID: **CRMW-3B**
SVL Sample ID: **X9I0404-04 (Ground Water)**

Sampled: **17-Sep-19 13:35**
Received: **18-Sep-19**
Sampled By: **GH**
Field pH : **7.75**
Field Temp : **9.2 / 9.2C**

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **1361** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.00	**7.72**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	**D Boron**	750	0.06	**48.2**	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	**1.21**	**304000**	µg/L	10000	7,000	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.77	**38.7**	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	**1.07**	**2140**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.54	**2140**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.05	**128**	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**151.33**	**30300**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**605.33**	**30300**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**3.75**	**937000**	µg/L	15000	9,000	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	**1.61**	**27.1**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9J0110**
Victor, CO 80860	Reported: 21-Oct-19 12:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
WCMW-6	X9J0110-01	Ground Water	02-Oct-19 12:15	GH	03-Oct-2019	
WCSW-1	X9J0110-02	Surface Water	02-Oct-19 12:45	GH	03-Oct-2019	
WCMW-3	X9J0110-03	Ground Water	02-Oct-19 13:45	GH	03-Oct-2019	
AG-2.0	X9J0110-04	Surface Water	02-Oct-19 14:55	GH	03-Oct-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.
Notes column on report pages contains Aquatic Life Standards adjusted for Hardness in the same units as the result per Permit: CO SW Monitoring

Case Narrative: X9J0110

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

Sample -03 (WCMW-3) re-analyzed for 200.7 metals as B, K & Na ~5X higher than historical. Re-analysis confirmed initial results.

Samples -01, -02 & -04 re-analyzed for acidity and did not confirm. Inital acidity performed within holding time, however reanalysis ordered past holding time.

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-6**
SVL Sample ID: **X9J0110-01 (Ground Water)**

CO GW Monitoring

Sampled: 02-Oct-19 12:15
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X940291	JFB	10/11/19 14:54	0.087
EPA 200.7	**Barium**	0.0424	mg/L	0.0020	0.0019		X940291	JFB	10/11/19 14:54	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X940291	JFB	10/11/19 14:54	0.75
EPA 200.7	**Calcium**	40.6	mg/L	0.100	0.069		X940291	JFB	10/11/19 14:54	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X940291	JFB	10/11/19 14:54	0.1
EPA 200.7	**Iron**	0.854	mg/L	0.100	0.056		X940291	JFB	10/11/19 14:54	5
EPA 200.7	**Lithium**	0.049	mg/L	0.040	0.025		X940291	JFB	10/11/19 14:54	2.5
EPA 200.7	**Magnesium**	11.1	mg/L	0.50	0.08		X940291	JFB	10/11/19 14:54	
EPA 200.7	**Manganese**	0.225	mg/L	0.0080	0.0034		X940291	JFB	10/11/19 14:54	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X940291	JFB	10/11/19 14:54	0.1
EPA 200.7	**Potassium**	1.96	mg/L	0.50	0.18		X940291	JFB	10/11/19 14:54	
EPA 200.7	**Sodium**	15.5	mg/L	0.50	0.12		X940291	JFB	10/11/19 14:54	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X940291	JFB	10/11/19 14:54	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X940291	JFB	10/11/19 14:54	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X940288	DJS	10/11/19 06:46	0.006
EPA 200.8	**Arsenic**	0.00437	mg/L	0.00300	0.00021		X940288	DJS	10/11/19 06:46	0.1
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X940288	DJS	10/11/19 06:46	0.1
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X940288	DJS	10/11/19 06:46	0.01
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X940288	DJS	10/11/19 06:46	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X940288	DJS	10/11/19 06:46	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X940288	DJS	10/11/19 06:46	0.1
EPA 200.8	**Molybdenum**	0.00772	mg/L	0.00100	0.000098		X940288	DJS	10/11/19 06:46	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X940288	DJS	10/11/19 06:46	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X940288	DJS	10/11/19 06:46	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X940288	DJS	10/11/19 06:46	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X940288	DJS	10/11/19 06:46	0.0168
SM 2340 B	**Hardness (as CaCO3)**	147	mg/L	2.31	0.510		N/A		10/11/19 14:54	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X940315	JFB	10/09/19 15:44	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X941017	DT	10/08/19 11:13	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X941169	DT	10/11/19 09:12	
EPA 350.1	**Ammonia as N**	0.059	mg/L	0.030	0.013		X941125	SLH	10/09/19 15:04	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X942296	KAG	10/18/19 12:28	H1
SM 2320 B	**Total Alkalinity**	130	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 10:56	
SM 2320 B	**Bicarbonate**	130	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 10:56	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 10:56	
SM 2540 C	**Total Diss. Solids**	260	mg/L	10			X940290	dks	10/04/19 10:55	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X940293	dks	10/04/19 10:55	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X941056	DT	10/09/19 12:09	
SM 4500 H B	**pH @17.0°C**	7.5	pH Units				X940300	KAG	10/04/19 10:56	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-6**
SVL Sample ID: **X9J0110-01 (Ground Water)**

CO GW Monitoring

Sampled: 02-Oct-19 12:15
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	2.20	mg/L	0.20	0.14		X940265	RS	10/03/19 19:36	250
EPA 300.0	**Fluoride**	1.95	mg/L	0.100	0.062		X940265	RS	10/03/19 19:36	4
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X940265	RS	10/03/19 19:36	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X940265	RS	10/03/19 19:36	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X940265	RS	10/03/19 19:36	1
EPA 300.0	**Sulfate as SO4**	49.7	mg/L	0.30	0.18		X940265	RS	10/03/19 19:36	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 3.72 meq/L Anion Sum: 3.80 meq/L C/A Balance: -1.08 % Calculated TDS: 201 TDS/cTDS: 1.29

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCSW-1**
SVL Sample ID: **X9J0110-02 (Surface Water)**

Sampled: 02-Oct-19 12:45
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	**Boron**	0.120	mg/L	0.040	0.004		X940292	AS	10/14/19 09:49	
EPA 200.7	**Calcium**	59.0	mg/L	0.100	0.035		X940292	AS	10/14/19 09:49	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0010		X940292	AS	10/14/19 09:49	0.011
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.028		X940292	AS	10/14/19 09:49	1
EPA 200.7	**Magnesium**	18.4	mg/L	0.50	0.04		X940292	AS	10/14/19 09:49	
EPA 200.7	**Phosphorus**	0.53	mg/L	0.05	0.007		X940292	AS	10/14/19 09:49	
EPA 200.7	**Potassium**	5.45	mg/L	0.50	0.09		X940292	AS	10/14/19 09:49	
EPA 200.7	**Sodium**	65.5	mg/L	0.50	0.06		X940292	AS	10/14/19 09:49	
EPA 200.8	**Arsenic**	0.00410	mg/L	0.00300	0.00021	2	X940286	DJS	10/09/19 12:41	0.15
SM 2340 B	**Hardness (as CaCO3)**	223	mg/L	2.31	0.255		N/A		10/14/19 09:49	
Metals (Dissolved)										
EPA 200.7	**Barium**	0.0711	mg/L	0.0020	0.0019		X940291	JFB	10/11/19 14:57	0.49
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X940291	JFB	10/11/19 14:57	0.011
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X940291	JFB	10/11/19 14:57	0.0178
EPA 200.7	**Iron**	0.137	mg/L	0.100	0.056		X940291	JFB	10/11/19 14:57	1
EPA 200.7	**Manganese**	0.677	mg/L	0.0080	0.0034		X940291	JFB	10/11/19 14:57	2.15
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X940291	JFB	10/11/19 14:57	0.21
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X940291	JFB	10/11/19 14:57	0.103
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0019		X940291	JFB	10/11/19 14:57	0.00127
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X940291	JFB	10/11/19 14:57	0.251
EPA 200.8	Aluminum	< 0.0100	mg/L	0.0100	0.0040		X940288	DJS	10/11/19 06:55	1.44
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X940288	DJS	10/11/19 06:55	0.0056
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X940288	DJS	10/11/19 06:55	0.15
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X940288	DJS	10/11/19 06:55	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X940288	DJS	10/11/19 06:55	0.000772
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X940288	DJS	10/11/19 06:55	0.00595
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X940288	DJS	10/11/19 06:55	0.0046
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X940288	DJS	10/11/19 06:55	0.015
EPA 200.8	**Uranium**	0.00553	mg/L	0.00100	0.000052		X940288	DJS	10/11/19 06:55	3.63
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X940315	JFB	10/09/19 15:46	0.00001
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X941017	DT	10/08/19 11:15	0.005
Calculation	**Nitrogen, Total as N**	7.19	mg/L	1.05	0.77		N/A		10/08/19 14:44	
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X941169	DT	10/11/19 09:14	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X941125	SLH	10/09/19 15:07	2.75
EPA 351.2	TKN	< 0.50	mg/L	0.50	0.31		X941042	SM	10/08/19 14:44	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X942296	KAG	10/18/19 12:28	H1
SM 2320 B	**Total Alkalinity**	161	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:02	
SM 2320 B	**Bicarbonate**	161	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:02	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:02	
SM 2540 C	**Total Diss. Solids**	478	mg/L	10			X940290	dks	10/04/19 10:55	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X940293	dks	10/04/19 10:55	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X941056	DT	10/09/19 12:11	
SM 4500 H B	**pH @17.0°C**	8.2	pH Units				X940300	KAG	10/04/19 11:02	H5

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Newmont - Cripple Creek & Victor
Post Office Box 191
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCSW-1**
SVL Sample ID: **X9J0110-02 (Surface Water)**

Sampled: 02-Oct-19 12:45
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	24.6	mg/L	2.00	1.40	10	X940265	RS	10/03/19 20:31	D2
EPA 300.0	**Fluoride**	1.26	mg/L	0.100	0.062		X940265	RS	10/03/19 20:13	
EPA 300.0	**Nitrate as N**	7.19	mg/L	0.500	0.430	10	X940265	RS	10/03/19 20:31	D2
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X940265	RS	10/03/19 20:13	
EPA 300.0	**Sulfate as SO4**	150	mg/L	3.00	1.80	10	X940265	RS	10/03/19 20:31	D2
Cation/Anion Balance and TDS Ratios										

Cation Sum: 7.48 meq/L Anion Sum: 7.62 meq/L C/A Balance: -0.95 % Calculated TDS: 453 TDS/cTDS: 1.06

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-3**
SVL Sample ID: **X9J0110-03 (Ground Water)**

CO GW Monitoring

Sampled: 02-Oct-19 13:45
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X940291	JFB	10/11/19 15:06	5
EPA 200.7	**Barium**	0.0504	mg/L	0.0020	0.0019		X940291	JFB	10/11/19 15:06	2
EPA 200.7	**Boron**	0.119	mg/L	0.040	0.008		X940291	JFB	10/11/19 15:06	0.75
EPA 200.7	**Calcium**	59.9	mg/L	0.100	0.069		X940291	JFB	10/11/19 15:06	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X940291	JFB	10/11/19 15:06	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X940291	JFB	10/11/19 15:06	5
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X940291	JFB	10/11/19 15:06	2.5
EPA 200.7	**Magnesium**	18.9	mg/L	0.50	0.08		X940291	JFB	10/11/19 15:06	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0034		X940291	JFB	10/11/19 15:06	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X940291	JFB	10/11/19 15:06	0.1
EPA 200.7	**Potassium**	5.42	mg/L	0.50	0.18		X940291	JFB	10/11/19 15:06	
EPA 200.7	**Sodium**	65.7	mg/L	0.50	0.12		X940291	JFB	10/11/19 15:06	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X940291	JFB	10/11/19 15:06	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X940291	JFB	10/11/19 15:06	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X940288	DJS	10/11/19 06:58	0.006
EPA 200.8	**Arsenic**	0.00398	mg/L	0.00300	0.00021		X940288	DJS	10/11/19 06:58	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X940288	DJS	10/11/19 06:58	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X940288	DJS	10/11/19 06:58	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X940288	DJS	10/11/19 06:58	0.05
EPA 200.8	**Copper**	0.00409	mg/L	0.00100	0.00036		X940288	DJS	10/11/19 06:58	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X940288	DJS	10/11/19 06:58	0.1
EPA 200.8	**Molybdenum**	0.00502	mg/L	0.00100	0.000098		X940288	DJS	10/11/19 06:58	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X940288	DJS	10/11/19 06:58	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X940288	DJS	10/11/19 06:58	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X940288	DJS	10/11/19 06:58	0.002
EPA 200.8	**Uranium**	0.00372	mg/L	0.00100	0.000052		X940288	DJS	10/11/19 06:58	0.0168
SM 2340 B	**Hardness (as CaCO3)**	227	mg/L	2.31	0.510		N/A		10/11/19 15:06	
SM 2340 B	**Hardness (as CaCO3)**	231	mg/L	2.31	0.510		N/A		10/21/19 09:14	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X940315	JFB	10/09/19 15:48	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X941017	DT	10/08/19 11:17	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X941169	DT	10/11/19 09:16	
EPA 350.1	**Ammonia as N**	0.101	mg/L	0.030	0.013		X941125	SLH	10/09/19 15:10	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X941051	KAG	10/08/19 12:06	
SM 2320 B	**Total Alkalinity**	207	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:08	
SM 2320 B	**Bicarbonate**	207	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:08	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:08	
SM 2540 C	**Total Diss. Solids**	273	mg/L	10			X940290	dks	10/04/19 10:55	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X940293	dks	10/04/19 10:55	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X941056	DT	10/09/19 12:13	
SM 4500 H B	**pH @18.0°C**	7.9	pH Units				X940300	KAG	10/04/19 11:08	H5

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9J0110**
Victor, CO 80860	Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-3** **CO GW Monitoring**
SVL Sample ID: **X9J0110-03 (Ground Water)**

Sampled: 02-Oct-19 13:45
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	1.35	mg/L	0.20	0.14		X940265	RS	10/03/19 20:50	250
EPA 300.0	**Fluoride**	0.754	mg/L	0.100	0.062		X940265	RS	10/03/19 20:50	2
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X940265	RS	10/03/19 20:50	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X940265	RS	10/03/19 20:50	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X940265	RS	10/03/19 20:50	10
EPA 300.0	**Sulfate as SO4**	23.2	mg/L	0.30	0.18		X940265	RS	10/03/19 20:50	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 7.56 meq/L Anion Sum: 4.70 meq/L C/A Balance: 23.29 % Calculated TDS: 299 TDS/cTDS: 0.91

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **AG-2.0**
SVL Sample ID: **X9J0110-04 (Surface Water)**

Sampled: 02-Oct-19 14:55
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.004		X940292	AS	10/14/19 09:52	
EPA 200.7	**Calcium**	12.1	mg/L	0.100	0.035		X940292	AS	10/14/19 09:52	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0010		X940292	AS	10/14/19 09:52	0.011
EPA 200.7	**Iron**	0.485	mg/L	0.100	0.028		X940292	AS	10/14/19 09:52	1
EPA 200.7	**Magnesium**	2.26	mg/L	0.50	0.04		X940292	AS	10/14/19 09:52	
EPA 200.7	Phosphorus	< 0.05	mg/L	0.05	0.007		X940292	AS	10/14/19 09:52	
EPA 200.7	**Potassium**	1.75	mg/L	0.50	0.09		X940292	AS	10/14/19 09:52	
EPA 200.7	**Sodium**	5.36	mg/L	0.50	0.06		X940292	AS	10/14/19 09:52	
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021	2	X940286	DJS	10/09/19 12:44	0.15
SM 2340 B	**Hardness (as CaCO3)**	39.4	mg/L	2.31	0.255		N/A		10/14/19 09:52	
Metals (Dissolved)										
EPA 200.7	**Barium**	0.0292	mg/L	0.0020	0.0019		X940291	JFB	10/11/19 15:09	0.49
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X940291	JFB	10/11/19 15:09	0.011
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X940291	JFB	10/11/19 15:09	0.00401
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X940291	JFB	10/11/19 15:09	1
EPA 200.7	**Manganese**	0.0120	mg/L	0.0080	0.0034		X940291	JFB	10/11/19 15:09	1.21
EPA 200.7	**Molybdenum**	0.012	mg/L	0.008	0.003		X940291	JFB	10/11/19 15:09	0.21
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X940291	JFB	10/11/19 15:09	0.0234
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0019		X940291	JFB	10/11/19 15:09	0.0000634
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X940291	JFB	10/11/19 15:09	0.0515
EPA 200.8	**Aluminum**	0.0718	mg/L	0.0100	0.0040		X940288	DJS	10/11/19 07:01	0.134
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X940288	DJS	10/11/19 07:01	0.0056
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X940288	DJS	10/11/19 07:01	0.15
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X940288	DJS	10/11/19 07:01	0.004
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X940288	DJS	10/11/19 07:01	0.000207
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X940288	DJS	10/11/19 07:01	0.000891
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X940288	DJS	10/11/19 07:01	0.0046
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X940288	DJS	10/11/19 07:01	0.015
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X940288	DJS	10/11/19 07:01	0.532
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X940315	JFB	10/09/19 15:50	0.00001
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X941017	DT	10/08/19 11:19	0.005
Calculation	Nitrogen, Total as N	< 0.60	mg/L	0.60	0.38		N/A		10/08/19 14:45	
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X941169	DT	10/11/19 09:18	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X941125	SLH	10/09/19 15:13	5.33
EPA 351.2	TKN	< 0.50	mg/L	0.50	0.31		X941042	SM	10/08/19 14:45	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X942296	KAG	10/18/19 12:28	H1
SM 2320 B	**Total Alkalinity**	21.8	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:14	
SM 2320 B	**Bicarbonate**	21.8	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:14	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X940300	KAG	10/04/19 11:14	
SM 2540 C	**Total Diss. Solids**	87	mg/L	10			X940290	dks	10/04/19 10:55	
SM 2540 D	**Total Susp. Solids**	16.0	mg/L	5.0			X940293	dks	10/04/19 10:55	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X941056	DT	10/09/19 12:15	
SM 4500 H B	**pH @18.0°C**	7.4	pH Units				X940300	KAG	10/04/19 11:14	H5

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Newmont - Cripple Creek & Victor
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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **AG-2.0**
SVL Sample ID: **X9J0110-04 (Surface Water)**

Sampled: 02-Oct-19 14:55
Received: 03-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	7.16	mg/L	0.20	0.14		X940265	RS	10/03/19 21:08	
EPA 300.0	**Fluoride**	3.26	mg/L	0.100	0.062		X940265	RS	10/03/19 21:08	
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X940265	RS	10/03/19 21:08	
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X940265	RS	10/03/19 21:08	
EPA 300.0	**Sulfate as SO4**	15.1	mg/L	0.30	0.18		X940265	RS	10/03/19 21:08	

Cation/Anion Balance and TDS Ratios

Cation Sum: 1.08 meq/L Anion Sum: 1.13 meq/L C/A Balance: -2.23 % Calculated TDS: 60 TDS/cTDS: 1.45

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

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Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)								
EPA 200.7	Boron	mg/L	<0.040	0.004	0.040	X940292	14-Oct-19	
EPA 200.7	Calcium	mg/L	<0.100	0.035	0.100	X940292	14-Oct-19	
EPA 200.7	Chromium	mg/L	<0.0060	0.0010	0.0060	X940292	14-Oct-19	
EPA 200.7	Iron	mg/L	<0.100	0.028	0.100	X940292	14-Oct-19	
EPA 200.7	Magnesium	mg/L	<0.50	0.04	0.50	X940292	14-Oct-19	
EPA 200.7	Phosphorus	mg/L	<0.05	0.007	0.05	X940292	14-Oct-19	
EPA 200.7	Potassium	mg/L	<0.50	0.09	0.50	X940292	14-Oct-19	
EPA 200.7	Sodium	mg/L	<0.50	0.06	0.50	X940292	14-Oct-19	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X940286	09-Oct-19	
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X940291	11-Oct-19	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X940291	11-Oct-19	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X940291	11-Oct-19	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X940291	11-Oct-19	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X940291	11-Oct-19	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X940291	11-Oct-19	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X940291	11-Oct-19	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X940291	11-Oct-19	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X940291	11-Oct-19	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X940291	11-Oct-19	
EPA 200.7	Molybdenum	mg/L	<0.008	0.003	0.008	X940291	11-Oct-19	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X940291	11-Oct-19	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X940291	11-Oct-19	
EPA 200.7	Silver	mg/L	<0.0050	0.0019	0.0050	X940291	11-Oct-19	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X940291	11-Oct-19	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X940291	11-Oct-19	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X940291	11-Oct-19	
EPA 200.8	Aluminum	mg/L	<0.0100	0.0040	0.0100	X940288	11-Oct-19	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X940288	11-Oct-19	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X940288	11-Oct-19	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X940288	11-Oct-19	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X940288	11-Oct-19	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X940288	11-Oct-19	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X940288	11-Oct-19	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X940288	11-Oct-19	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X940288	11-Oct-19	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X940288	11-Oct-19	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X940288	11-Oct-19	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X940288	11-Oct-19	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X940288	11-Oct-19	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X940315	09-Oct-19	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0013	0.0050	X941017	08-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.0050	0.0038	0.0100	X941169	11-Oct-19	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X941125	09-Oct-19	
EPA 351.2	TKN	mg/L	<0.50	0.31	0.50	X941042	08-Oct-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X941051	08-Oct-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X942296	18-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X940300	04-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X940300	04-Oct-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X940300	04-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X940290	04-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - BLANK Data (Continued)

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Classical Chemistry Parameters (Continued)								
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X940293	04-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	<0.0100	0.0040	0.0100	X941056	09-Oct-19	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X940265	03-Oct-19	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X940265	03-Oct-19	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X940265	03-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X940265	03-Oct-19	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X940265	03-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X940265	03-Oct-19	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)									
EPA 200.7	Boron	mg/L	1.03	1.00	103	85 - 115	X940292	14-Oct-19	
EPA 200.7	Calcium	mg/L	20.2	20.0	101	85 - 115	X940292	14-Oct-19	
EPA 200.7	Chromium	mg/L	1.01	1.00	101	85 - 115	X940292	14-Oct-19	
EPA 200.7	Iron	mg/L	9.79	10.0	97.9	85 - 115	X940292	14-Oct-19	
EPA 200.7	Magnesium	mg/L	20.2	20.0	101	85 - 115	X940292	14-Oct-19	
EPA 200.7	Phosphorus	mg/L	1.02	1.00	102	85 - 115	X940292	14-Oct-19	
EPA 200.7	Potassium	mg/L	19.8	20.0	99.0	85 - 115	X940292	14-Oct-19	
EPA 200.7	Sodium	mg/L	19.0	19.0	99.8	85 - 115	X940292	14-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0251	0.0250	101	85 - 115	X940286	09-Oct-19	
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	0.99	1.00	98.6	85 - 115	X940291	11-Oct-19	
EPA 200.7	Barium	mg/L	1.06	1.00	106	85 - 115	X940291	11-Oct-19	
EPA 200.7	Boron	mg/L	0.992	1.00	99.2	85 - 115	X940291	11-Oct-19	
EPA 200.7	Calcium	mg/L	20.3	20.0	102	85 - 115	X940291	11-Oct-19	
EPA 200.7	Chromium	mg/L	0.999	1.00	99.9	85 - 115	X940291	11-Oct-19	
EPA 200.7	Copper	mg/L	0.991	1.00	99.1	85 - 115	X940291	11-Oct-19	
EPA 200.7	Iron	mg/L	9.89	10.0	98.9	85 - 115	X940291	11-Oct-19	
EPA 200.7	Lithium	mg/L	1.02	1.00	102	85 - 115	X940291	11-Oct-19	
EPA 200.7	Magnesium	mg/L	20.7	20.0	103	85 - 115	X940291	11-Oct-19	
EPA 200.7	Manganese	mg/L	0.987	1.00	98.7	85 - 115	X940291	11-Oct-19	
EPA 200.7	Molybdenum	mg/L	1.03	1.00	103	85 - 115	X940291	11-Oct-19	
EPA 200.7	Nickel	mg/L	0.964	1.00	96.4	85 - 115	X940291	11-Oct-19	
EPA 200.7	Potassium	mg/L	19.9	20.0	99.5	85 - 115	X940291	11-Oct-19	
EPA 200.7	Silver	mg/L	0.0484	0.0500	96.8	85 - 115	X940291	11-Oct-19	
EPA 200.7	Sodium	mg/L	19.0	19.0	100	85 - 115	X940291	11-Oct-19	
EPA 200.7	Vanadium	mg/L	1.02	1.00	102	85 - 115	X940291	11-Oct-19	
EPA 200.7	Zinc	mg/L	0.986	1.00	98.6	85 - 115	X940291	11-Oct-19	
EPA 200.8	Aluminum	mg/L	0.202	0.195	103	85 - 115	X940288	11-Oct-19	
EPA 200.8	Antimony	mg/L	0.0240	0.0250	96.0	85 - 115	X940288	11-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0246	0.0250	98.2	85 - 115	X940288	11-Oct-19	
EPA 200.8	Beryllium	mg/L	0.0245	0.0250	98.0	85 - 115	X940288	11-Oct-19	
EPA 200.8	Cadmium	mg/L	0.0240	0.0250	96.1	85 - 115	X940288	11-Oct-19	
EPA 200.8	Cobalt	mg/L	0.0248	0.0250	99.2	85 - 115	X940288	11-Oct-19	
EPA 200.8	Copper	mg/L	0.0250	0.0250	99.8	85 - 115	X940288	11-Oct-19	
EPA 200.8	Lead	mg/L	0.0236	0.0250	94.4	85 - 115	X940288	11-Oct-19	
EPA 200.8	Molybdenum	mg/L	0.0240	0.0250	96.1	85 - 115	X940288	11-Oct-19	
EPA 200.8	Selenium	mg/L	0.0249	0.0250	99.5	85 - 115	X940288	11-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)									
EPA 200.8	Silver	mg/L	0.0248	0.0250	99.3	85 - 115	X940288	11-Oct-19	
EPA 200.8	Thallium	mg/L	0.0253	0.0250	101	85 - 115	X940288	11-Oct-19	
EPA 200.8	Uranium	mg/L	0.0256	0.0250	102	85 - 115	X940288	11-Oct-19	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00492	0.00500	98.4	85 - 115	X940315	09-Oct-19	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.150	0.155	97.1	90 - 110	X941017	08-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.150	0.155	97.1	90 - 110	X941169	11-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.02	1.00	102	90 - 110	X941125	09-Oct-19	
EPA 351.2	TKN	mg/L	7.70	8.00	96.3	90 - 110	X941042	08-Oct-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1390	1360	102	92.1 - 110	X941051	08-Oct-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1390	1360	102	92.1 - 110	X942296	18-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	98.0	99.3	98.7	94.3 - 106	X940300	04-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	99.3	99.3	100	94.3 - 106	X940300	04-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	98.0	99.3	98.7	95.1 - 106	X940300	04-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.3	99.3	100	95.1 - 106	X940300	04-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.156	0.155	101	90 - 110	X941056	09-Oct-19	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	2.94	3.00	98.0	90 - 110	X940265	03-Oct-19	
EPA 300.0	Fluoride	mg/L	1.97	2.00	98.4	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrate as N	mg/L	1.95	2.00	97.5	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.59	4.50	102	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.64	2.50	106	90 - 110	X940265	03-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	9.79	10.0	97.9	90 - 110	X940265	03-Oct-19	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	147	147	0.0	20	X941051	08-Oct-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0	<10.0	UDL	20	X942296	18-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	154	156	0.8	20	X940300	04-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	154	156	0.8	20	X940300	04-Oct-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X940300	04-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	376	385	2.4	10	X940290	04-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	469	478	1.9	10	X940290	04-Oct-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X940293	04-Oct-19	
SM 4500 H B	pH @14.0°C	pH Units	7.8	7.8	0.0	20	X940300	04-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)										
EPA 200.7	Boron	mg/L	1.18	0.156	1.00	102	70 - 130	X940292	14-Oct-19	
EPA 200.7	Boron	mg/L	1.14	0.125	1.00	102	70 - 130	X940292	14-Oct-19	
EPA 200.7	Calcium	mg/L	81.4	65.6	20.0	79.0	70 - 130	X940292	14-Oct-19	
EPA 200.7	Calcium	mg/L	40.9	22.6	20.0	91.7	70 - 130	X940292	14-Oct-19	
EPA 200.7	Chromium	mg/L	1.00	<0.0060	1.00	100	70 - 130	X940292	14-Oct-19	
EPA 200.7	Chromium	mg/L	1.00	<0.0060	1.00	100	70 - 130	X940292	14-Oct-19	
EPA 200.7	Iron	mg/L	9.96	0.167	10.0	97.9	70 - 130	X940292	14-Oct-19	
EPA 200.7	Iron	mg/L	10.2	0.401	10.0	98.1	70 - 130	X940292	14-Oct-19	
EPA 200.7	Magnesium	mg/L	41.0	21.2	20.0	99.2	70 - 130	X940292	14-Oct-19	
EPA 200.7	Magnesium	mg/L	25.3	4.97	20.0	101	70 - 130	X940292	14-Oct-19	
EPA 200.7	Phosphorus	mg/L	1.15	0.13	1.00	102	70 - 130	X940292	14-Oct-19	
EPA 200.7	Phosphorus	mg/L	6.50	5.65	1.00	84.3	70 - 130	X940292	14-Oct-19	
EPA 200.7	Potassium	mg/L	22.9	3.79	20.0	95.7	70 - 130	X940292	14-Oct-19	
EPA 200.7	Potassium	mg/L	32.5	14.2	20.0	91.6	70 - 130	X940292	14-Oct-19	
EPA 200.7	Sodium	mg/L	52.6	36.5	19.0	84.7	70 - 130	X940292	14-Oct-19	
EPA 200.7	Sodium	mg/L	51.1	35.5	19.0	82.1	70 - 130	X940292	14-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0306	0.00557	0.0250	100	70 - 130	X940286	09-Oct-19	
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	1.06	<0.08	1.00	106	70 - 130	X940291	11-Oct-19	
EPA 200.7	Barium	mg/L	1.10	0.0263	1.00	108	70 - 130	X940291	11-Oct-19	
EPA 200.7	Boron	mg/L	1.21	0.141	1.00	107	70 - 130	X940291	11-Oct-19	
EPA 200.7	Calcium	mg/L	120	97.3	20.0	111	70 - 130	X940291	11-Oct-19	
EPA 200.7	Chromium	mg/L	1.05	<0.0060	1.00	105	70 - 130	X940291	11-Oct-19	
EPA 200.7	Copper	mg/L	1.04	<0.0100	1.00	104	70 - 130	X940291	11-Oct-19	
EPA 200.7	Iron	mg/L	10.2	<0.100	10.0	102	70 - 130	X940291	11-Oct-19	
EPA 200.7	Lithium	mg/L	1.12	0.081	1.00	104	70 - 130	X940291	11-Oct-19	
EPA 200.7	Magnesium	mg/L	43.8	21.6	20.0	111	70 - 130	X940291	11-Oct-19	
EPA 200.7	Manganese	mg/L	1.03	<0.0080	1.00	103	70 - 130	X940291	11-Oct-19	
EPA 200.7	Molybdenum	mg/L	1.07	<0.008	1.00	107	70 - 130	X940291	11-Oct-19	
EPA 200.7	Nickel	mg/L	0.971	<0.0100	1.00	97.1	70 - 130	X940291	11-Oct-19	
EPA 200.7	Potassium	mg/L	32.2	11.6	20.0	103	70 - 130	X940291	11-Oct-19	
EPA 200.7	Silver	mg/L	0.0507	<0.0050	0.0500	101	70 - 130	X940291	11-Oct-19	
EPA 200.7	Sodium	mg/L	97.3	77.9	19.0	102	70 - 130	X940291	11-Oct-19	
EPA 200.7	Vanadium	mg/L	1.10	0.0172	1.00	108	70 - 130	X940291	11-Oct-19	
EPA 200.7	Zinc	mg/L	1.04	<0.010	1.00	104	70 - 130	X940291	11-Oct-19	
EPA 200.8	Aluminum	mg/L	0.190	<0.0100	0.195	97.7	70 - 130	X940288	11-Oct-19	
EPA 200.8	Antimony	mg/L	0.0223	<0.00300	0.0250	89.2	70 - 130	X940288	11-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0284	0.00437	0.0250	96.3	70 - 130	X940288	11-Oct-19	
EPA 200.8	Beryllium	mg/L	0.0222	<0.00020	0.0250	88.8	70 - 130	X940288	11-Oct-19	
EPA 200.8	Cadmium	mg/L	0.0217	<0.00020	0.0250	86.7	70 - 130	X940288	11-Oct-19	
EPA 200.8	Cobalt	mg/L	0.0235	<0.00100	0.0250	92.0	70 - 130	X940288	11-Oct-19	
EPA 200.8	Copper	mg/L	0.0228	<0.00100	0.0250	91.1	70 - 130	X940288	11-Oct-19	
EPA 200.8	Lead	mg/L	0.0215	<0.00300	0.0250	86.1	70 - 130	X940288	11-Oct-19	
EPA 200.8	Molybdenum	mg/L	0.0301	0.00772	0.0250	89.6	70 - 130	X940288	11-Oct-19	
EPA 200.8	Selenium	mg/L	0.0242	<0.0030	0.0250	96.7	70 - 130	X940288	11-Oct-19	
EPA 200.8	Silver	mg/L	0.0220	<0.000100	0.0250	88.1	70 - 130	X940288	11-Oct-19	
EPA 200.8	Thallium	mg/L	0.0235	<0.00100	0.0250	94.1	70 - 130	X940288	11-Oct-19	
EPA 200.8	Uranium	mg/L	0.0253	<0.00100	0.0250	98.7	70 - 130	X940288	11-Oct-19	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.00099	<0.00020	0.00100	98.9	70 - 130	X940315	09-Oct-19	
EPA 245.1	Mercury	mg/L	0.00096	<0.00020	0.00100	95.7	70 - 130	X940315	09-Oct-19	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.106	<0.0050	0.103	103	79 - 121	X941017	08-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Classical Chemistry Parameters (Continued)										
EPA 335.4	Cyanide (total)	mg/L	0.0990	<0.0100	0.103	91.3	90 - 110	X941169	11-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.106	<0.0100	0.103	99.0	90 - 110	X941169	11-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.08	0.059	1.00	102	90 - 110	X941125	09-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.04	<0.030	1.00	104	90 - 110	X941125	09-Oct-19	
EPA 351.2	TKN	mg/L	7.90	<0.50	8.00	98.7	90 - 110	X941042	08-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.116	<0.0100	0.103	113	75 - 125	X941056	09-Oct-19	
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	32.7	30.1	3.00	0.30R>S	90 - 110	X940265	03-Oct-19	D2,M4
EPA 300.0	Fluoride	mg/L	2.26	0.357	2.00	94.9	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrate as N	mg/L	2.02	<0.050	2.00	101	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.14	<0.100	4.00	104	90 - 110	X940265	03-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.12	<0.050	2.00	106	90 - 110	X940265	03-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	72.2	63.5	10.0	0.30R>S	90 - 110	X940265	03-Oct-19	D2,M4

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total Recoverable--reportable as Total per 40 CFR 136)											
EPA 200.7	Boron	mg/L	1.19	1.18	1.00	104	1.2	20	X940292	14-Oct-19	
EPA 200.7	Calcium	mg/L	84.9	81.4	20.0	96.2	4.1	20	X940292	14-Oct-19	
EPA 200.7	Chromium	mg/L	1.01	1.00	1.00	101	0.8	20	X940292	14-Oct-19	
EPA 200.7	Iron	mg/L	9.87	9.96	10.0	97.1	0.8	20	X940292	14-Oct-19	
EPA 200.7	Magnesium	mg/L	42.5	41.0	20.0	106	3.5	20	X940292	14-Oct-19	
EPA 200.7	Phosphorus	mg/L	1.16	1.15	1.00	103	0.8	20	X940292	14-Oct-19	
EPA 200.7	Potassium	mg/L	23.8	22.9	20.0	99.8	3.6	20	X940292	14-Oct-19	
EPA 200.7	Sodium	mg/L	54.8	52.6	19.0	96.3	4.1	20	X940292	14-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0306	0.0306	0.0250	100	0.0	20	X940286	09-Oct-19	
Metals (Dissolved)											
EPA 200.7	Aluminum	mg/L	1.06	1.06	1.00	106	0.4	20	X940291	11-Oct-19	
EPA 200.7	Barium	mg/L	1.13	1.10	1.00	111	2.6	20	X940291	11-Oct-19	
EPA 200.7	Boron	mg/L	1.22	1.21	1.00	108	1.1	20	X940291	11-Oct-19	
EPA 200.7	Calcium	mg/L	120	120	20.0	112	0.1	20	X940291	11-Oct-19	
EPA 200.7	Chromium	mg/L	1.07	1.05	1.00	107	1.7	20	X940291	11-Oct-19	
EPA 200.7	Copper	mg/L	1.06	1.04	1.00	105	1.6	20	X940291	11-Oct-19	
EPA 200.7	Iron	mg/L	10.3	10.2	10.0	103	1.2	20	X940291	11-Oct-19	
EPA 200.7	Lithium	mg/L	1.12	1.12	1.00	104	0.1	20	X940291	11-Oct-19	
EPA 200.7	Magnesium	mg/L	44.2	43.8	20.0	113	1.1	20	X940291	11-Oct-19	
EPA 200.7	Manganese	mg/L	1.05	1.03	1.00	105	1.2	20	X940291	11-Oct-19	
EPA 200.7	Molybdenum	mg/L	1.09	1.07	1.00	109	1.9	20	X940291	11-Oct-19	
EPA 200.7	Nickel	mg/L	0.990	0.971	1.00	99.0	2.0	20	X940291	11-Oct-19	
EPA 200.7	Potassium	mg/L	32.4	32.2	20.0	104	0.7	20	X940291	11-Oct-19	
EPA 200.7	Silver	mg/L	0.0520	0.0507	0.0500	104	2.5	20	X940291	11-Oct-19	
EPA 200.7	Sodium	mg/L	97.9	97.3	19.0	105	0.5	20	X940291	11-Oct-19	
EPA 200.7	Vanadium	mg/L	1.11	1.10	1.00	109	1.1	20	X940291	11-Oct-19	
EPA 200.7	Zinc	mg/L	1.06	1.04	1.00	106	1.9	20	X940291	11-Oct-19	
EPA 200.8	Aluminum	mg/L	0.202	0.190	0.195	103	5.7	20	X940288	11-Oct-19	
EPA 200.8	Antimony	mg/L	0.0240	0.0223	0.0250	96.1	7.4	20	X940288	11-Oct-19	
EPA 200.8	Arsenic	mg/L	0.0297	0.0284	0.0250	101	4.3	20	X940288	11-Oct-19	
EPA 200.8	Beryllium	mg/L	0.0238	0.0222	0.0250	95.2	6.9	20	X940288	11-Oct-19	
EPA 200.8	Cadmium	mg/L	0.0236	0.0217	0.0250	94.4	8.5	20	X940288	11-Oct-19	
EPA 200.8	Cobalt	mg/L	0.0248	0.0235	0.0250	97.2	5.4	20	X940288	11-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)											
EPA 200.8	Copper	mg/L	0.0243	0.0228	0.0250	97.0	6.3	20	X940288	11-Oct-19	
EPA 200.8	Lead	mg/L	0.0228	0.0215	0.0250	91.2	5.7	20	X940288	11-Oct-19	
EPA 200.8	Molybdenum	mg/L	0.0323	0.0301	0.0250	98.4	7.0	20	X940288	11-Oct-19	
EPA 200.8	Selenium	mg/L	0.0259	0.0242	0.0250	103	6.7	20	X940288	11-Oct-19	
EPA 200.8	Silver	mg/L	0.0241	0.0220	0.0250	96.4	9.0	20	X940288	11-Oct-19	
EPA 200.8	Thallium	mg/L	0.0247	0.0235	0.0250	98.8	4.8	20	X940288	11-Oct-19	
EPA 200.8	Uranium	mg/L	0.0257	0.0253	0.0250	100	1.6	20	X940288	11-Oct-19	
Metals (Filtered)											
EPA 245.1	Mercury	mg/L	0.00095	0.00099	0.00100	94.9	4.1	20	X940315	09-Oct-19	
Classical Chemistry Parameters											
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.105	0.106	0.103	102	0.9	11	X941017	08-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.105	0.0990	0.103	97.1	5.9	20	X941169	11-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.09	1.08	1.00	103	0.7	20	X941125	09-Oct-19	
EPA 351.2	TKN	mg/L	7.90	7.90	8.00	98.8	0.1	20	X941042	08-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.116	0.116	0.103	113	0.0	20	X941056	09-Oct-19	
Anions by Ion Chromatography											
EPA 300.0	Chloride	mg/L	32.0	32.7	3.00	0.30R>S	1.9	20	X940265	03-Oct-19	D2,M4
EPA 300.0	Fluoride	mg/L	2.23	2.26	2.00	93.7	1.1	20	X940265	03-Oct-19	
EPA 300.0	Nitrate as N	mg/L	1.99	2.02	2.00	99.7	1.4	20	X940265	03-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.13	4.14	4.00	103	0.2	20	X940265	03-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.14	2.12	2.00	107	0.9	20	X940265	03-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	71.4	72.2	10.0	0.30R>S	1.2	20	X940265	03-Oct-19	D2,M4

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H1	Sample analysis performed past holding time.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

Notes column on report pages contains Aquatic Life Standards adjusted for Hardness in the same units as the result per Permit: CO SW Monitoring

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-6**
SVL Sample ID: **X9J0110-01 (Ground Water)**

Sampled: **02-Oct-19 12:15**
Received: **03-Oct-19**
Sampled By: **GH**
Field pH : **6.9**
Field Temp : **9.3 / 9.3C**

Results Compared to CO SW Monitoring Limits
With Sample Hardness = **147** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	87	<0.92	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	10	0.44	**4.37**	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	100	0.04	**4.37**	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.02	**42.4**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**2200**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.98	**1950**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.49	**1950**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	**2.85**	**854**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.17	**854**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.02	**48.5**	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.13**	**225**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**4.51**	**225**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.20	**49700**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCSW-1**
SVL Sample ID: **X9J0110-02 (Surface Water)**

Sampled: **02-Oct-19 12:45**
Received: **03-Oct-19**
Sampled By: **GH**
Field pH : **8.37**
Field Temp : **7.6 / 7.6C**

Results Compared to CO SW Monitoring Limits
With Sample Hardness = **223** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.8	D Aluminum	1440	<0.01	< 10	µg/L	10	4	AQL Chronic
EPA 350.1	Ammonia as N	1360	<0.02	< 30	µg/L	30	13	CO-SW TBL II C elsp
EPA 350.1	Ammonia as N	2750	<0.01	< 30	µg/L	30	13	CO-SW TBL II A sp
EPA 200.8	D Antimony	5.6	<0.54	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.8	D Arsenic	150	<0.02	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.8	**T Arsenic**	150	0.03	**4.10**	µg/L	3	0.2	AQL Chronic
EPA 200.7	**D Barium**	490	0.15	**71.1**	µg/L	2	2	AQL Chronic
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	AQL Chronic
EPA 200.8	D Cadmium	0.772	<0.26	< 0.2	µg/L	0.2	0.06	AQL Chronic
EPA 200.7	D Chromium	11	<0.55	< 6	µg/L	6	2	AQL Chronic
EPA 200.7	T Chromium	11	<0.55	< 6	µg/L	6	1.0	AQL Chronic
EPA 200.7	D Copper	17.8	<0.56	< 10	µg/L	10	3	AQL Chronic
ASTM D7237	Cyanide (free) @ pH 6	5	<1.00	< 5	µg/L	5	1	AQL Chronic
EPA 200.7	**D Iron**	1000	0.14	**137**	µg/L	100	56	AQL Chronic
EPA 200.7	T Iron	1000	<0.10	< 100	µg/L	100	28	AQL Chronic
EPA 200.8	D Lead	5.95	<0.50	< 3	µg/L	3	0.1	AQL Chronic
EPA 200.7	**D Manganese**	2150	0.31	**677**	µg/L	8	3	AQL Chronic
EPA 245.1	Mercury	0.01	**<20.00**	< 0.2	µg/L	0.2	0.09	AQL Chronic
EPA 200.7	D Molybdenum	210	<0.04	< 8	µg/L	8	3	AQL Chronic
EPA 200.7	D Nickel	103	<0.10	< 10	µg/L	10	2	AQL Chronic
EPA 200.8	D Selenium	4.6	<0.65	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.7	D Silver	0.298	**<16.78**	< 5	µg/L	5	2	AQL Chronic (trout)
EPA 200.7	D Silver	1.27	**<3.94**	< 5	µg/L	5	2	AQL Chronic
EPA 200.8	D Thallium	15	<0.07	< 1	µg/L	1	0.08	AQL Chronic
EPA 200.8	**D Uranium**	3630	0.00	**5.53**	µg/L	1	0.05	AQL Chronic
EPA 200.7	D Zinc	251	<0.04	< 10	µg/L	10	5	AQL Chronic
EPA 200.7	D Zinc	NA		< 10	µg/L	10	5	AQL Chronic Sculpin

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **WCMW-3**
SVL Sample ID: **X9J0110-03 (Ground Water)**

Sampled: **02-Oct-19 13:45**
Received: **03-Oct-19**
Sampled By: **GH**
Field pH : **7.85**
Field Temp : **8.8 / 8.8C**

Results Compared to CO SW Monitoring Limits
With Sample Hardness = **227** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	10	0.40	**3.98**	µg/L	3	0.2	GW DWS
EPA 200.8	**D Arsenic**	100	0.04	**3.98**	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.03	**50.4**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	**D Boron**	750	0.16	**119**	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**1350**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.00	**4.09**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	0.02	**4.09**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.38	**754**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.19	**754**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	D Manganese	200	<0.04	< 8	µg/L	8	3	GW AG
EPA 200.7	D Manganese	50	<0.16	< 8	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.09	**23200**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.22	**3.72**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0110**
Reported: 21-Oct-19 12:50

Client Sample ID: **AG-2.0**
SVL Sample ID: **X9J0110-04 (Surface Water)**

Sampled: **02-Oct-19 14:55**
Received: **03-Oct-19**
Sampled By: **GH**
Field pH : **7.22**
Field Temp : **11.2 / 11.2C**

Results Compared to CO SW Monitoring Limits
With Sample Hardness = **39** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.8	**D Aluminum**	134	0.54	**71.8**	µg/L	10	4	AQL Chronic
EPA 350.1	Ammonia as N	19300	<0.00	< 30	µg/L	30	13	CO-SW TBL II A sp
EPA 350.1	Ammonia as N	5330	<0.01	< 30	µg/L	30	13	CO-SW TBL II C elsp
EPA 200.8	D Antimony	5.6	<0.54	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.8	D Arsenic	150	<0.02	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.8	T Arsenic	150	<0.02	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.7	**D Barium**	490	0.06	**29.2**	µg/L	2	2	AQL Chronic
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	AQL Chronic
EPA 200.8	D Cadmium	0.207	<0.97	< 0.2	µg/L	0.2	0.06	AQL Chronic
EPA 200.7	D Chromium	11	<0.55	< 6	µg/L	6	2	AQL Chronic
EPA 200.7	T Chromium	11	<0.55	< 6	µg/L	6	1.0	AQL Chronic
EPA 200.7	D Copper	4.01	**<2.49**	< 10	µg/L	10	3	AQL Chronic
ASTM D7237	Cyanide (free) @ pH 6	5	<1.00	< 5	µg/L	5	1	AQL Chronic
EPA 200.7	D Iron	1000	<0.10	< 100	µg/L	100	56	AQL Chronic
EPA 200.7	**T Iron**	1000	0.49	**485**	µg/L	100	28	AQL Chronic
EPA 200.8	D Lead	0.891	**<3.37**	< 3	µg/L	3	0.1	AQL Chronic
EPA 200.7	**D Manganese**	1210	0.01	**12.0**	µg/L	8	3	AQL Chronic
EPA 245.1	Mercury	0.01	**<20.00**	< 0.2	µg/L	0.2	0.09	AQL Chronic
EPA 200.7	**D Molybdenum**	210	0.06	**11.6**	µg/L	8	3	AQL Chronic
EPA 200.7	D Nickel	23.4	<0.43	< 10	µg/L	10	2	AQL Chronic
EPA 200.8	D Selenium	4.6	<0.65	< 3	µg/L	3	0.2	AQL Chronic
EPA 200.7	D Silver	0.0149	**<335.57**	< 5	µg/L	5	2	AQL Chronic (trout)
EPA 200.7	D Silver	0.0634	**<78.86**	< 5	µg/L	5	2	AQL Chronic
EPA 200.8	D Thallium	15	<0.07	< 1	µg/L	1	0.08	AQL Chronic
EPA 200.8	D Uranium	532	<0.00	< 1	µg/L	1	0.05	AQL Chronic
EPA 200.7	D Zinc	15.7	<0.64	< 10	µg/L	10	5	AQL Chronic Sculpin
EPA 200.7	D Zinc	51.5	<0.19	< 10	µg/L	10	5	AQL Chronic

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9J0489**
Victor, CO 80860	Reported: 08-Nov-19 13:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
PGMW-3	X9J0489-01	Ground Water	21-Oct-19 12:20	GH	22-Oct-2019	
GVMW-6A	X9J0489-02	Ground Water	21-Oct-19 14:05	GH	22-Oct-2019	
GVMW-7A	X9J0489-03	Ground Water	21-Oct-19 14:55	GH	22-Oct-2019	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

Case Narrative: X9J0489

The state of origin only accredits for drinking water analyses.

Samples treated with CdCO3 before CN analysis for sulfide interference at client request.

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9J0489-01 (Ground Water)**

CO GW Monitoring

Sampled: 21-Oct-19 12:20
Received: 22-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	**Aluminum**	11.2	mg/L	0.08	0.05		X943245	JFB	11/05/19 15:24	5
EPA 200.7	**Barium**	0.0273	mg/L	0.0020	0.0019		X943245	JFB	11/05/19 15:24	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X943245	KH	11/05/19 13:42	0.75
EPA 200.7	**Calcium**	157	mg/L	0.100	0.069		X943245	KH	11/05/19 13:42	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X943245	KH	11/05/19 13:42	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X943245	JFB	11/05/19 15:24	0.3
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X943245	KH	11/05/19 13:42	2.5
EPA 200.7	**Magnesium**	43.4	mg/L	0.50	0.08		X943245	KH	11/05/19 13:42	
EPA 200.7	**Manganese**	3.87	mg/L	0.0080	0.0034		X943245	JFB	11/05/19 15:24	0.2
EPA 200.7	**Nickel**	0.0557	mg/L	0.0100	0.0023		X943245	KH	11/05/19 13:42	0.1
EPA 200.7	**Potassium**	5.71	mg/L	0.50	0.18		X943245	KH	11/05/19 13:42	
EPA 200.7	**Sodium**	18.3	mg/L	0.50	0.12		X943245	JFB	11/05/19 15:24	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X943245	KH	11/05/19 13:42	0.1
EPA 200.7	**Zinc**	0.509	mg/L	0.010	0.005		X943245	KH	11/05/19 13:42	2
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X943141	AS	11/07/19 13:08	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X943141	AS	11/07/19 13:08	0.1
EPA 200.8	**Beryllium**	0.00099	mg/L	0.00020	0.000065		X943141	AS	11/07/19 13:08	0.1
EPA 200.8	**Cadmium**	0.00457	mg/L	0.00020	0.000063		X943141	AS	11/07/19 13:08	0.01
EPA 200.8	**Cobalt**	0.0253	mg/L	0.00100	0.000027		X943141	AS	11/07/19 13:08	0.05
EPA 200.8	**Copper**	0.222	mg/L	0.00100	0.00036		X943141	AS	11/07/19 13:08	1
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X943141	AS	11/07/19 13:08	0.1
EPA 200.8	Molybdenum	< 0.00100	mg/L	0.00100	0.000098		X943141	AS	11/07/19 13:08	
EPA 200.8	**Selenium**	0.0044	mg/L	0.0030	0.0002		X943141	AS	11/07/19 13:08	0.02
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X943141	AS	11/07/19 13:08	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X943141	AS	11/07/19 13:08	0.002
EPA 200.8	**Uranium**	0.00141	mg/L	0.00100	0.000052		X943141	AS	11/07/19 13:08	0.0168
SM 2340 B	**Hardness (as CaCO3)**	570	mg/L	2.31	0.510		N/A		11/05/19 13:42	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X944093	JFB	11/01/19 15:37	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X943142	SLH	10/24/19 13:09	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X944055	SLH	10/29/19 16:27	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X944135	SLH	11/05/19 14:51	
SM 2310 B	**Acidity to pH 8.3**	57.2	mg/L as CaCO3	10.0			X943185	KAG	10/24/19 12:03	
SM 2320 B	Total Alkalinity	< 1.0	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:06	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:06	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:06	
SM 2540 C	**Total Diss. Solids**	928	mg/L	10			X943136	TL	10/23/19 11:15	
SM 2540 D	**Total Susp. Solids**	29.0	mg/L	5.0			X943137	TL	10/23/19 11:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X943078	SLH	10/23/19 14:57	
SM 4500 H B	**pH @19.0°C**	4.3	pH Units				X943143	KAG	10/23/19 12:06	H5

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9J0489**
Victor, CO 80860	Reported: 08-Nov-19 13:34

Client Sample ID: **PGMW-3** **CO GW Monitoring** Sampled: 21-Oct-19 12:20
SVL Sample ID: **X9J0489-01 (Ground Water)** Received: 22-Oct-19
 Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	42.0	mg/L	5.00	3.50	25	X943117	RS	10/22/19 15:13	D2 250
EPA 300.0	**Fluoride**	2.04	mg/L	0.100	0.062		X943117	RS	10/22/19 14:57	4
EPA 300.0	**Nitrate as N**	16.7	mg/L	1.25	1.08	25	X943117	RS	10/22/19 15:13	D2 10
EPA 300.0	**Nitrate/Nitrite as N**	16.7	mg/L	0.100	0.074		X943117	RS	10/22/19 14:57	D2 10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X943117	RS	10/22/19 14:57	1
EPA 300.0	**Sulfate as SO4**	540	mg/L	7.50	4.50	25	X943117	RS	10/22/19 15:13	D2 250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 13.8 meq/L Anion Sum: 13.7 meq/L C/A Balance: 0.06 % Calculated TDS: 882 TDS/cTDS: 1.05

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X9J0489-02 (Ground Water)**

CO GW Monitoring

Sampled: 21-Oct-19 14:05
Received: 22-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X943245	JFB	11/05/19 15:33	5
EPA 200.7	**Barium**	0.0667	mg/L	0.0020	0.0019		X943245	JFB	11/05/19 15:33	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X943245	KH	11/05/19 13:54	0.75
EPA 200.7	**Calcium**	3.54	mg/L	0.100	0.069		X943245	KH	11/05/19 13:54	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X943245	KH	11/05/19 13:54	0.1
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X943245	JFB	11/05/19 15:33	5
EPA 200.7	**Lithium**	0.044	mg/L	0.040	0.025		X943245	KH	11/05/19 13:54	2.5
EPA 200.7	Magnesium	< 0.50	mg/L	0.50	0.08		X943245	KH	11/05/19 13:54	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0034		X943245	JFB	11/05/19 15:33	0.2
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X943245	KH	11/05/19 13:54	0.1
EPA 200.7	**Potassium**	3.07	mg/L	0.50	0.18		X943245	KH	11/05/19 13:54	
EPA 200.7	**Sodium**	25.8	mg/L	0.50	0.12		X943245	JFB	11/05/19 15:33	
EPA 200.7	**Vanadium**	0.0057	mg/L	0.0050	0.0019		X943245	KH	11/05/19 13:54	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X943245	KH	11/05/19 13:54	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X943141	AS	11/07/19 13:17	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X943141	AS	11/07/19 13:17	0.1
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X943141	AS	11/07/19 13:17	0.1
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X943141	AS	11/07/19 13:17	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X943141	AS	11/07/19 13:17	0.05
EPA 200.8	**Copper**	0.00119	mg/L	0.00100	0.00036		X943141	AS	11/07/19 13:17	0.2
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X943141	AS	11/07/19 13:17	0.1
EPA 200.8	**Molybdenum**	0.00756	mg/L	0.00100	0.000098		X943141	AS	11/07/19 13:17	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X943141	AS	11/07/19 13:17	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X943141	AS	11/07/19 13:17	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X943141	AS	11/07/19 13:17	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X943141	AS	11/07/19 13:17	0.0168
SM 2340 B	**Hardness (as CaCO3)**	8.84	mg/L	2.31	0.510		N/A		11/05/19 13:54	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X944093	JFB	11/01/19 15:39	0.002
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X943142	SLH	10/24/19 13:11	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X944055	SLH	10/29/19 16:35	
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.013		X944135	SLH	11/05/19 14:54	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X943185	KAG	10/24/19 12:03	
SM 2320 B	**Total Alkalinity**	45.3	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:07	
SM 2320 B	Bicarbonate	< 1.0	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:07	
SM 2320 B	**Carbonate**	36.4	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:07	
SM 2540 C	**Total Diss. Solids**	75	mg/L	10			X943136	TL	10/23/19 11:15	
SM 2540 D	**Total Susp. Solids**	6.0	mg/L	5.0			X943137	TL	10/23/19 11:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X943078	SLH	10/23/19 14:59	
SM 4500 H B	**pH @18.0°C**	10.7	pH Units				X943143	KAG	10/23/19 12:07	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X9J0489-02 (Ground Water)**

CO GW Monitoring

Sampled: 21-Oct-19 14:05
Received: 22-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	1.30	mg/L	0.20	0.14		X943117	RS	10/22/19 15:29	250
EPA 300.0	**Fluoride**	1.36	mg/L	0.100	0.062		X943117	RS	10/22/19 15:29	2
EPA 300.0	**Nitrate as N**	0.135	mg/L	0.050	0.043		X943117	RS	10/22/19 15:29	10
EPA 300.0	**Nitrate/Nitrite as N**	0.140	mg/L	0.100	0.074		X943117	RS	10/22/19 15:29	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X943117	RS	10/22/19 15:29	1
EPA 300.0	**Sulfate as SO4**	23.9	mg/L	0.30	0.18		X943117	RS	10/22/19 15:29	250
Cation/Anion Balance and TDS Ratios										

Cation Sum: 1.40 meq/L Anion Sum: 1.52 meq/L C/A Balance: -4.12 % Calculated TDS: 87 TDS/cTDS: 0.86

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-7A**
SVL Sample ID: **X9J0489-03 (Ground Water)**

CO GW Monitoring

Sampled: 21-Oct-19 14:55
Received: 22-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	< 0.08	mg/L	0.08	0.05		X943245	JFB	11/05/19 15:36	5
EPA 200.7	**Barium**	0.167	mg/L	0.0020	0.0019		X943245	JFB	11/05/19 15:36	2
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.008		X943245	KH	11/05/19 13:58	0.75
EPA 200.7	**Calcium**	39.2	mg/L	0.100	0.069		X943245	KH	11/05/19 13:58	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0020		X943245	KH	11/05/19 13:58	0.1
EPA 200.7	**Iron**	0.969	mg/L	0.100	0.056		X943245	JFB	11/05/19 15:36	0.3
EPA 200.7	Lithium	< 0.040	mg/L	0.040	0.025		X943245	KH	11/05/19 13:58	2.5
EPA 200.7	**Magnesium**	17.6	mg/L	0.50	0.08		X943245	KH	11/05/19 13:58	
EPA 200.7	**Manganese**	0.239	mg/L	0.0080	0.0034		X943245	JFB	11/05/19 15:36	0.05
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X943245	KH	11/05/19 13:58	0.2
EPA 200.7	**Potassium**	1.07	mg/L	0.50	0.18		X943245	KH	11/05/19 13:58	
EPA 200.7	**Sodium**	10.5	mg/L	0.50	0.12		X943245	JFB	11/05/19 15:36	
EPA 200.7	Vanadium	< 0.0050	mg/L	0.0050	0.0019		X943245	KH	11/05/19 13:58	0.1
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.005		X943245	KH	11/05/19 13:58	5
EPA 200.8	Antimony	< 0.00300	mg/L	0.00300	0.00023		X943141	AS	11/07/19 13:21	0.006
EPA 200.8	Arsenic	< 0.00300	mg/L	0.00300	0.00021		X943141	AS	11/07/19 13:21	0.01
EPA 200.8	Beryllium	< 0.00020	mg/L	0.00020	0.000065		X943141	AS	11/07/19 13:21	0.1
EPA 200.8	Cadmium	< 0.00020	mg/L	0.00020	0.000063		X943141	AS	11/07/19 13:21	0.005
EPA 200.8	Cobalt	< 0.00100	mg/L	0.00100	0.000027		X943141	AS	11/07/19 13:21	0.05
EPA 200.8	Copper	< 0.00100	mg/L	0.00100	0.00036		X943141	AS	11/07/19 13:21	0.2
EPA 200.8	Lead	< 0.00300	mg/L	0.00300	0.00014		X943141	AS	11/07/19 13:21	0.05
EPA 200.8	**Molybdenum**	0.00114	mg/L	0.00100	0.000098		X943141	AS	11/07/19 13:21	
EPA 200.8	Selenium	< 0.0030	mg/L	0.0030	0.0002		X943141	AS	11/07/19 13:21	0.05
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000061		X943141	AS	11/07/19 13:21	0.05
EPA 200.8	Thallium	< 0.00100	mg/L	0.00100	0.00008		X943141	AS	11/07/19 13:21	0.002
EPA 200.8	Uranium	< 0.00100	mg/L	0.00100	0.000052		X943141	AS	11/07/19 13:21	0.0168
SM 2340 B	**Hardness (as CaCO3)**	170	mg/L	2.31	0.510		N/A		11/05/19 13:58	
Metals (Filtered)										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000093		X944093	JFB	11/01/19 15:40	0.01
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	< 0.0050	mg/L	0.0050	0.0013		X943142	SLH	10/24/19 13:13	0.2
EPA 335.4	Cyanide (total)	< 0.0100	mg/L	0.0100	0.0038		X944055	SLH	10/29/19 16:37	
EPA 350.1	**Ammonia as N**	0.053	mg/L	0.030	0.013		X944135	SLH	11/05/19 14:57	
SM 2310 B	Acidity to pH 8.3	< 10.0	mg/L as CaCO3	10.0			X943185	KAG	10/24/19 12:03	
SM 2320 B	**Total Alkalinity**	152	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:16	
SM 2320 B	**Bicarbonate**	152	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:16	
SM 2320 B	Carbonate	< 1.0	mg/L as CaCO3	1.0			X943143	KAG	10/23/19 12:16	
SM 2540 C	**Total Diss. Solids**	196	mg/L	10			X943136	TL	10/23/19 11:15	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X943137	TL	10/23/19 11:15	
SM 4500 CN I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0040		X943078	SLH	10/23/19 15:01	
SM 4500 H B	**pH @19.0°C**	7.7	pH Units				X943143	KAG	10/23/19 12:16	H5

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-7A**
SVL Sample ID: **X9J0489-03 (Ground Water)**

CO GW Monitoring

Sampled: 21-Oct-19 14:55
Received: 22-Oct-19
Sampled By: GH

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	**Chloride**	6.18	mg/L	0.20	0.14		X943117	RS	10/22/19 16:00	250
EPA 300.0	**Fluoride**	0.532	mg/L	0.100	0.062		X943117	RS	10/22/19 16:00	4
EPA 300.0	Nitrate as N	< 0.050	mg/L	0.050	0.043		X943117	RS	10/22/19 16:00	10
EPA 300.0	Nitrate/Nitrite as N	< 0.100	mg/L	0.100	0.074		X943117	RS	10/22/19 16:00	10
EPA 300.0	Nitrite as N	< 0.050	mg/L	0.050	0.031		X943117	RS	10/22/19 16:00	1
EPA 300.0	**Sulfate as SO4**	23.9	mg/L	0.30	0.18		X943117	RS	10/22/19 16:00	250

Cation/Anion Balance and TDS Ratios

Cation Sum: 3.95 meq/L Anion Sum: 3.74 meq/L C/A Balance: 2.68 % Calculated TDS: 190 TDS/cTDS: 1.03

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Herman J. Haring
Project Manager

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Aluminum	mg/L	<0.08	0.05	0.08	X943245	05-Nov-19	
EPA 200.7	Barium	mg/L	<0.0020	0.0019	0.0020	X943245	05-Nov-19	
EPA 200.7	Boron	mg/L	<0.040	0.008	0.040	X943245	05-Nov-19	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X943245	05-Nov-19	
EPA 200.7	Chromium	mg/L	<0.0060	0.0020	0.0060	X943245	05-Nov-19	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X943245	05-Nov-19	
EPA 200.7	Lithium	mg/L	<0.040	0.025	0.040	X943245	05-Nov-19	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X943245	05-Nov-19	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X943245	05-Nov-19	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X943245	05-Nov-19	
EPA 200.7	Potassium	mg/L	<0.50	0.18	0.50	X943245	05-Nov-19	
EPA 200.7	Sodium	mg/L	<0.50	0.12	0.50	X943245	05-Nov-19	
EPA 200.7	Vanadium	mg/L	<0.0050	0.0019	0.0050	X943245	05-Nov-19	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X943245	05-Nov-19	
EPA 200.8	Antimony	mg/L	<0.00300	0.00023	0.00300	X943141	07-Nov-19	
EPA 200.8	Arsenic	mg/L	<0.00300	0.00021	0.00300	X943141	07-Nov-19	
EPA 200.8	Beryllium	mg/L	<0.00020	0.000065	0.00020	X943141	07-Nov-19	
EPA 200.8	Cadmium	mg/L	<0.00020	0.000063	0.00020	X943141	07-Nov-19	
EPA 200.8	Cobalt	mg/L	<0.00100	0.000027	0.00100	X943141	07-Nov-19	
EPA 200.8	Copper	mg/L	<0.00100	0.00036	0.00100	X943141	07-Nov-19	
EPA 200.8	Lead	mg/L	<0.00300	0.00014	0.00300	X943141	07-Nov-19	
EPA 200.8	Molybdenum	mg/L	<0.00100	0.000098	0.00100	X943141	07-Nov-19	
EPA 200.8	Selenium	mg/L	<0.0030	0.0002	0.0030	X943141	07-Nov-19	
EPA 200.8	Silver	mg/L	<0.000100	0.000061	0.000100	X943141	07-Nov-19	
EPA 200.8	Thallium	mg/L	<0.00100	0.00008	0.00100	X943141	07-Nov-19	
EPA 200.8	Uranium	mg/L	<0.00100	0.000052	0.00100	X943141	07-Nov-19	
Metals (Filtered)								
EPA 245.1	Mercury	mg/L	<0.00020	0.000093	0.00020	X944093	01-Nov-19	
Classical Chemistry Parameters								
ASTM D7237	Cyanide (free) @ pH 6	mg/L	<0.0050	0.0013	0.0050	X943142	24-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	<0.0100	0.0038	0.0100	X944055	29-Oct-19	
EPA 350.1	Ammonia as N	mg/L	<0.030	0.013	0.030	X944135	05-Nov-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	<10.0		10.0	X943185	24-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	<1.0		1.0	X943143	23-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	<1.0		1.0	X943143	23-Oct-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0		1.0	X943143	23-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X943136	23-Oct-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0		5.0	X943137	23-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	<0.0100	0.0040	0.0100	X943078	23-Oct-19	
Anions by Ion Chromatography								
EPA 300.0	Chloride	mg/L	<0.20	0.14	0.20	X943117	22-Oct-19	
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X943117	22-Oct-19	
EPA 300.0	Nitrate as N	mg/L	<0.050	0.043	0.050	X943117	22-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	<0.100	0.074	0.100	X943117	22-Oct-19	
EPA 300.0	Nitrite as N	mg/L	<0.050	0.031	0.050	X943117	22-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X943117	22-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Aluminum	mg/L	1.02	1.00	102	85 - 115	X943245	05-Nov-19	
EPA 200.7	Barium	mg/L	1.00	1.00	100	85 - 115	X943245	05-Nov-19	
EPA 200.7	Boron	mg/L	1.03	1.00	103	85 - 115	X943245	05-Nov-19	
EPA 200.7	Calcium	mg/L	20.4	20.0	102	85 - 115	X943245	05-Nov-19	
EPA 200.7	Chromium	mg/L	1.04	1.00	104	85 - 115	X943245	05-Nov-19	
EPA 200.7	Iron	mg/L	9.83	10.0	98.3	85 - 115	X943245	05-Nov-19	
EPA 200.7	Lithium	mg/L	1.09	1.00	109	85 - 115	X943245	05-Nov-19	
EPA 200.7	Magnesium	mg/L	20.8	20.0	104	85 - 115	X943245	05-Nov-19	
EPA 200.7	Manganese	mg/L	1.01	1.00	101	85 - 115	X943245	05-Nov-19	
EPA 200.7	Nickel	mg/L	0.993	1.00	99.3	85 - 115	X943245	05-Nov-19	
EPA 200.7	Potassium	mg/L	20.6	20.0	103	85 - 115	X943245	05-Nov-19	
EPA 200.7	Sodium	mg/L	18.7	19.0	98.5	85 - 115	X943245	05-Nov-19	
EPA 200.7	Vanadium	mg/L	1.03	1.00	103	85 - 115	X943245	05-Nov-19	
EPA 200.7	Zinc	mg/L	1.01	1.00	101	85 - 115	X943245	05-Nov-19	
EPA 200.8	Antimony	mg/L	0.0247	0.0250	99.0	85 - 115	X943141	08-Nov-19	
EPA 200.8	Arsenic	mg/L	0.0243	0.0250	97.0	85 - 115	X943141	08-Nov-19	
EPA 200.8	Beryllium	mg/L	0.0238	0.0250	95.0	85 - 115	X943141	08-Nov-19	
EPA 200.8	Cadmium	mg/L	0.0245	0.0250	98.0	85 - 115	X943141	08-Nov-19	
EPA 200.8	Cobalt	mg/L	0.0249	0.0250	99.5	85 - 115	X943141	08-Nov-19	
EPA 200.8	Copper	mg/L	0.0245	0.0250	98.2	85 - 115	X943141	08-Nov-19	
EPA 200.8	Lead	mg/L	0.0247	0.0250	98.7	85 - 115	X943141	08-Nov-19	
EPA 200.8	Molybdenum	mg/L	0.0241	0.0250	96.5	85 - 115	X943141	08-Nov-19	
EPA 200.8	Selenium	mg/L	0.0245	0.0250	98.0	85 - 115	X943141	08-Nov-19	
EPA 200.8	Silver	mg/L	0.0250	0.0250	100	85 - 115	X943141	08-Nov-19	
EPA 200.8	Thallium	mg/L	0.0249	0.0250	99.4	85 - 115	X943141	08-Nov-19	
EPA 200.8	Uranium	mg/L	0.0253	0.0250	101	85 - 115	X943141	08-Nov-19	
Metals (Filtered)									
EPA 245.1	Mercury	mg/L	0.00557	0.00500	111	85 - 115	X944093	01-Nov-19	
Classical Chemistry Parameters									
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.156	0.150	104	90 - 110	X943142	24-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.155	0.150	103	90 - 110	X944055	29-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.04	1.00	104	90 - 110	X944135	05-Nov-19	
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	1360	1360	100	92.1 - 110	X943185	24-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	99.6	99.3	100	94.3 - 106	X943143	23-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	101	99.3	101	94.3 - 106	X943143	23-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	99.6	99.3	100	95.1 - 106	X943143	23-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	101	99.3	101	95.1 - 106	X943143	23-Oct-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.155	0.150	103	90 - 110	X943078	23-Oct-19	
Anions by Ion Chromatography									
EPA 300.0	Chloride	mg/L	2.99	3.00	99.5	90 - 110	X943117	22-Oct-19	
EPA 300.0	Fluoride	mg/L	2.04	2.00	102	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate as N	mg/L	1.99	2.00	99.6	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.55	4.50	101	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.56	2.50	102	90 - 110	X943117	22-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	10.2	10.0	102	90 - 110	X943117	22-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2310 B	Acidity to pH 8.3	mg/L as CaCO3	229	229	0.0	20	X943185	24-Oct-19	
SM 2320 B	Total Alkalinity	mg/L as CaCO3	51.4	51.5	0.2	20	X943143	23-Oct-19	
SM 2320 B	Bicarbonate	mg/L as CaCO3	51.4	51.5	0.2	20	X943143	23-Oct-19	
SM 2320 B	Carbonate	mg/L as CaCO3	<1.0	<1.0	UDL	20	X943143	23-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	260	258	0.8	10	X943136	23-Oct-19	
SM 2540 C	Total Diss. Solids	mg/L	582	577	0.9	10	X943136	23-Oct-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X943137	23-Oct-19	
SM 2540 D	Total Susp. Solids	mg/L	<5.0	<5.0	<RL	10	X943137	23-Oct-19	
SM 4500 H B	pH @18.0°C	pH Units	7.4	7.3	0.1	20	X943143	23-Oct-19	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Aluminum	mg/L	12.2	11.2	1.00	98.9	70 - 130	X943245	05-Nov-19	
EPA 200.7	Barium	mg/L	1.10	0.0273	1.00	108	70 - 130	X943245	05-Nov-19	
EPA 200.7	Boron	mg/L	1.09	<0.040	1.00	108	70 - 130	X943245	05-Nov-19	
EPA 200.7	Calcium	mg/L	176	157	20.0	97.1	70 - 130	X943245	05-Nov-19	
EPA 200.7	Chromium	mg/L	1.02	<0.0060	1.00	102	70 - 130	X943245	05-Nov-19	
EPA 200.7	Iron	mg/L	10.3	<0.100	10.0	102	70 - 130	X943245	05-Nov-19	
EPA 200.7	Lithium	mg/L	1.13	<0.040	1.00	113	70 - 130	X943245	05-Nov-19	
EPA 200.7	Magnesium	mg/L	62.8	43.4	20.0	96.8	70 - 130	X943245	05-Nov-19	
EPA 200.7	Manganese	mg/L	4.85	3.87	1.00	97.8	70 - 130	X943245	05-Nov-19	
EPA 200.7	Nickel	mg/L	1.02	0.0557	1.00	96.6	70 - 130	X943245	05-Nov-19	
EPA 200.7	Potassium	mg/L	26.9	5.71	20.0	106	70 - 130	X943245	05-Nov-19	
EPA 200.7	Sodium	mg/L	37.9	18.3	19.0	103	70 - 130	X943245	05-Nov-19	
EPA 200.7	Vanadium	mg/L	1.03	<0.0050	1.00	103	70 - 130	X943245	05-Nov-19	
EPA 200.7	Zinc	mg/L	1.51	0.509	1.00	100	70 - 130	X943245	05-Nov-19	
EPA 200.8	Antimony	mg/L	0.0294	<0.00300	0.0250	117	70 - 130	X943141	07-Nov-19	
EPA 200.8	Arsenic	mg/L	0.0302	<0.00300	0.0250	118	70 - 130	X943141	07-Nov-19	
EPA 200.8	Beryllium	mg/L	0.0277	0.00099	0.0250	107	70 - 130	X943141	07-Nov-19	
EPA 200.8	Cadmium	mg/L	0.0334	0.00457	0.0250	115	70 - 130	X943141	07-Nov-19	
EPA 200.8	Cobalt	mg/L	0.0526	0.0253	0.0250	109	70 - 130	X943141	07-Nov-19	
EPA 200.8	Copper	mg/L	0.249	0.222	0.0250	109	70 - 130	X943141	07-Nov-19	
EPA 200.8	Lead	mg/L	0.0265	<0.00300	0.0250	105	70 - 130	X943141	07-Nov-19	
EPA 200.8	Molybdenum	mg/L	0.0297	<0.00100	0.0250	118	70 - 130	X943141	07-Nov-19	
EPA 200.8	Selenium	mg/L	0.0347	0.0044	0.0250	121	70 - 130	X943141	07-Nov-19	
EPA 200.8	Silver	mg/L	0.0303	<0.000100	0.0250	121	70 - 130	X943141	07-Nov-19	
EPA 200.8	Thallium	mg/L	0.0284	<0.00100	0.0250	113	70 - 130	X943141	07-Nov-19	
EPA 200.8	Uranium	mg/L	0.0307	0.00141	0.0250	117	70 - 130	X943141	07-Nov-19	
Metals (Filtered)										
EPA 245.1	Mercury	mg/L	0.425	0.435	0.00100	0.30R>S	70 - 130	X944093	01-Nov-19	D2,M4
EPA 245.1	Mercury	mg/L	0.00103	<0.00020	0.00100	103	70 - 130	X944093	01-Nov-19	
Classical Chemistry Parameters										
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.109	<0.0050	0.103	106	79 - 121	X943142	24-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.104	<0.0100	0.103	101	90 - 110	X944055	29-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.06	<0.030	1.00	106	90 - 110	X944135	05-Nov-19	
EPA 350.1	Ammonia as N	mg/L	1.07	<0.030	1.00	105	90 - 110	X944135	05-Nov-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.108	<0.0100	0.103	99.0	75 - 125	X943078	23-Oct-19	

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Recovery	Acceptance Limits	Batch ID	Analyzed	Notes
Anions by Ion Chromatography										
EPA 300.0	Chloride	mg/L	3.27	0.21	3.00	102	90 - 110	X943117	22-Oct-19	
EPA 300.0	Chloride	mg/L	3.39	0.27	3.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Fluoride	mg/L	2.09	<0.100	2.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Fluoride	mg/L	2.11	<0.100	2.00	106	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate as N	mg/L	2.09	<0.050	2.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate as N	mg/L	2.09	<0.050	2.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.15	<0.100	4.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.18	<0.100	4.00	104	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.06	<0.050	2.00	103	90 - 110	X943117	22-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.09	<0.050	2.00	105	90 - 110	X943117	22-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	12.0	1.85	10.0	102	90 - 110	X943117	22-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	12.6	2.18	10.0	105	90 - 110	X943117	22-Oct-19	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved)											
EPA 200.7	Aluminum	mg/L	12.1	12.2	1.00	81.2	1.5	20	X943245	05-Nov-19	
EPA 200.7	Barium	mg/L	1.04	1.10	1.00	101	6.3	20	X943245	05-Nov-19	
EPA 200.7	Boron	mg/L	1.04	1.09	1.00	103	4.3	20	X943245	05-Nov-19	
EPA 200.7	Calcium	mg/L	177	176	20.0	99.9	0.3	20	X943245	05-Nov-19	
EPA 200.7	Chromium	mg/L	1.01	1.02	1.00	101	1.7	20	X943245	05-Nov-19	
EPA 200.7	Iron	mg/L	10.0	10.3	10.0	99.3	2.6	20	X943245	05-Nov-19	
EPA 200.7	Lithium	mg/L	1.08	1.13	1.00	108	4.7	20	X943245	05-Nov-19	
EPA 200.7	Magnesium	mg/L	63.0	62.8	20.0	97.5	0.2	20	X943245	05-Nov-19	
EPA 200.7	Manganese	mg/L	4.80	4.85	1.00	92.7	1.1	20	X943245	05-Nov-19	
EPA 200.7	Nickel	mg/L	1.02	1.02	1.00	96.3	0.3	20	X943245	05-Nov-19	
EPA 200.7	Potassium	mg/L	26.8	26.9	20.0	105	0.3	20	X943245	05-Nov-19	
EPA 200.7	Sodium	mg/L	37.2	37.9	19.0	99.9	1.7	20	X943245	05-Nov-19	
EPA 200.7	Vanadium	mg/L	1.02	1.03	1.00	102	1.0	20	X943245	05-Nov-19	
EPA 200.7	Zinc	mg/L	1.51	1.51	1.00	100	0.2	20	X943245	05-Nov-19	
EPA 200.8	Antimony	mg/L	0.0289	0.0294	0.0250	116	1.7	20	X943141	07-Nov-19	
EPA 200.8	Arsenic	mg/L	0.0296	0.0302	0.0250	115	2.0	20	X943141	07-Nov-19	
EPA 200.8	Beryllium	mg/L	0.0268	0.0277	0.0250	103	3.1	20	X943141	07-Nov-19	
EPA 200.8	Cadmium	mg/L	0.0326	0.0334	0.0250	112	2.2	20	X943141	07-Nov-19	
EPA 200.8	Cobalt	mg/L	0.0524	0.0526	0.0250	109	0.4	20	X943141	07-Nov-19	
EPA 200.8	Copper	mg/L	0.249	0.249	0.0250	106	0.3	20	X943141	07-Nov-19	
EPA 200.8	Lead	mg/L	0.0263	0.0265	0.0250	105	0.8	20	X943141	07-Nov-19	
EPA 200.8	Molybdenum	mg/L	0.0291	0.0297	0.0250	116	2.0	20	X943141	07-Nov-19	
EPA 200.8	Selenium	mg/L	0.0343	0.0347	0.0250	119	1.4	20	X943141	07-Nov-19	
EPA 200.8	Silver	mg/L	0.0296	0.0303	0.0250	118	2.5	20	X943141	07-Nov-19	
EPA 200.8	Thallium	mg/L	0.0279	0.0284	0.0250	111	1.7	20	X943141	07-Nov-19	
EPA 200.8	Uranium	mg/L	0.0302	0.0307	0.0250	115	1.5	20	X943141	07-Nov-19	
Metals (Filtered)											
EPA 245.1	Mercury	mg/L	0.428	0.425	0.00100	0.30R>S	0.7	20	X944093	01-Nov-19	D2,M4
Classical Chemistry Parameters											
ASTM D7237	Cyanide (free) @ pH 6	mg/L	0.108	0.109	0.103	105	0.9	11	X943142	24-Oct-19	
EPA 335.4	Cyanide (total)	mg/L	0.108	0.104	0.103	105	3.8	20	X944055	29-Oct-19	
EPA 350.1	Ammonia as N	mg/L	1.07	1.06	1.00	107	1.1	20	X944135	05-Nov-19	
SM 4500 CN I	Cyanide (WAD)	mg/L	0.107	0.108	0.103	98.1	0.9	20	X943078	23-Oct-19	

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Newmont - Cripple Creek & Victor	**Project Name: Cripple Creek/Victor Water and Soil 2019**
Post Office Box 191	Work Order: **X9J0489**
Victor, CO 80860	Reported: 08-Nov-19 13:34

Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	% Rec.	RPD	RPD Limit	Batch ID	Analyzed	Notes
Anions by Ion Chromatography											
EPA 300.0	Chloride	mg/L	3.29	3.27	3.00	103	0.6	20	X943117	22-Oct-19	
EPA 300.0	Fluoride	mg/L	2.08	2.09	2.00	104	0.5	20	X943117	22-Oct-19	
EPA 300.0	Nitrate as N	mg/L	2.10	2.09	2.00	105	0.6	20	X943117	22-Oct-19	
EPA 300.0	Nitrate/Nitrite as N	mg/L	4.19	4.15	4.00	105	0.8	20	X943117	22-Oct-19	
EPA 300.0	Nitrite as N	mg/L	2.09	2.06	2.00	104	1.0	20	X943117	22-Oct-19	
EPA 300.0	Sulfate as SO4	mg/L	12.1	12.0	10.0	102	0.4	20	X943117	22-Oct-19	

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

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Newmont - Cripple Creek & Victor
Post Office Box 191
Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **PGMW-3**
SVL Sample ID: **X9J0489-01 (Ground Water)**

Sampled: **21-Oct-19 12:20**
Received: **22-Oct-19**
Sampled By: **GH**
Field pH *Estimated*: *7*
Field Temp *Estimated*: */ 20.0C*

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **570** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	**D Aluminum**	5000	**2.25**	**11200**	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.01	**27.3**	µg/L	2	2	GW DWS
EPA 200.8	**D Beryllium**	100	0.01	**0.99**	µg/L	0.2	0.07	GW AG
EPA 200.8	**D Beryllium**	4	0.25	**0.99**	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	**D Cadmium**	10	0.46	**4.57**	µg/L	0.2	0.06	GW AG
EPA 200.8	**D Cadmium**	5	0.91	**4.57**	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.17	**42000**	µg/L	5000	3,500	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	**D Cobalt**	50	0.51	**25.3**	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.22	**222**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	**1.11**	**222**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	**1.02**	**2040**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.51	**2040**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**19.36**	**3870**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**77.46**	**3870**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	**D Nickel**	100	0.56	**55.7**	µg/L	10	2	GW DWS
EPA 200.7	**D Nickel**	200	0.28	**55.7**	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	**1.67**	**16700**	µg/L	1250	1,075	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	**1.67**	**16700**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	**D Selenium**	20	0.22	**4.43**	µg/L	3	0.2	GW AG
EPA 200.8	**D Selenium**	50	0.09	**4.43**	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	**2.16**	**540000**	µg/L	7500	4,500	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	**D Uranium**	16.8	0.08	**1.41**	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	**D Zinc**	2000	0.25	**509**	µg/L	10	5	GW AG
EPA 200.7	**D Zinc**	5000	0.10	**509**	µg/L	10	5	GW DWS

Nominal pH 7 and 20 C Temperature used for estimating Total Ammonia Reference Value when Field pH and Field Temp are not available and Ammonia is reported.

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Victor, CO 80860

Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-6A**
SVL Sample ID: **X9J0489-02 (Ground Water)**

Sampled: **21-Oct-19 14:05**
Received: **22-Oct-19**
Sampled By: **GH**
Field pH *Estimated*: *7*
Field Temp *Estimated*: */ 20.0C*

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **9** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.03	**66.7**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.01	**1300**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	**D Copper**	1000	0.00	**1.19**	µg/L	1	0.4	GW DWS
EPA 200.8	**D Copper**	200	0.01	**1.19**	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.68	**1360**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.34	**1360**	µg/L	100	62	GW DWS
EPA 200.7	D Iron	300	<0.33	< 100	µg/L	100	56	GW DWS
EPA 200.7	D Iron	5000	<0.02	< 100	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	**D Lithium**	2500	0.02	**43.7**	µg/L	40	25	GW AG
EPA 200.7	D Manganese	200	<0.04	< 8	µg/L	8	3	GW AG
EPA 200.7	D Manganese	50	<0.16	< 8	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	**Nitrate as N**	10000	0.01	**135**	µg/L	50	43	GW DWS
EPA 300.0	**Nitrate/Nitrite as N**	10000	0.01	**140**	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.10	**23900**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	**D Vanadium**	100	0.06	**5.66**	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

Nominal pH 7 and 20 C Temperature used for estimating Total Ammonia Reference Value when Field pH and Field Temp are not available and Ammonia is reported.

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Project Name: Cripple Creek/Victor Water and Soil 2019
Work Order: **X9J0489**
Reported: 08-Nov-19 13:34

Client Sample ID: **GVMW-7A**
SVL Sample ID: **X9J0489-03 (Ground Water)**

Sampled: **21-Oct-19 14:55**
Received: **22-Oct-19**
Sampled By: **GH**
Field pH *Estimated*: *7*
Field Temp *Estimated*: */ 20.0C*

Results Compared to CO GW Monitoring Limits
With Sample Hardness = **170** mg/L CaCO3

Method	Analyte	Ref Value	Impact Ratio	Result	Units	RL	MDL	Limit
EPA 200.7	D Aluminum	5000	<0.02	< 80	µg/L	80	54	GW AG
EPA 200.8	D Antimony	6	<0.50	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	10	<0.30	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Arsenic	100	<0.03	< 3	µg/L	3	0.2	GW AG
EPA 200.7	**D Barium**	2000	0.08	**167**	µg/L	2	2	GW DWS
EPA 200.8	D Beryllium	100	<0.00	< 0.2	µg/L	0.2	0.07	GW AG
EPA 200.8	D Beryllium	4	<0.05	< 0.2	µg/L	0.2	0.07	GW DWS
EPA 200.7	D Boron	750	<0.05	< 40	µg/L	40	8	GW AG
EPA 200.8	D Cadmium	10	<0.02	< 0.2	µg/L	0.2	0.06	GW AG
EPA 200.8	D Cadmium	5	<0.04	< 0.2	µg/L	0.2	0.06	GW DWS
EPA 300.0	**Chloride**	250000	0.02	**6180**	µg/L	200	140	GW DWS
EPA 200.7	D Chromium	100	<0.06	< 6	µg/L	6	2	GW DWS
EPA 200.8	D Cobalt	50	<0.02	< 1	µg/L	1	0.03	GW AG
EPA 200.8	D Copper	1000	<0.00	< 1	µg/L	1	0.4	GW DWS
EPA 200.8	D Copper	200	<0.01	< 1	µg/L	1	0.4	GW AG
ASTM D7237	Cyanide (free) @ pH 6	200	<0.02	< 5	µg/L	5	1	GW DWS
EPA 300.0	**Fluoride**	2000	0.27	**532**	µg/L	100	62	GW AG
EPA 300.0	**Fluoride**	4000	0.13	**532**	µg/L	100	62	GW DWS
EPA 200.7	**D Iron**	300	**3.23**	**969**	µg/L	100	56	GW DWS
EPA 200.7	**D Iron**	5000	0.19	**969**	µg/L	100	56	GW AG
EPA 200.8	D Lead	100	<0.03	< 3	µg/L	3	0.1	GW AG
EPA 200.8	D Lead	50	<0.06	< 3	µg/L	3	0.1	GW DWS
EPA 200.7	D Lithium	2500	<0.02	< 40	µg/L	40	25	GW AG
EPA 200.7	**D Manganese**	200	**1.20**	**239**	µg/L	8	3	GW AG
EPA 200.7	**D Manganese**	50	**4.78**	**239**	µg/L	8	3	GW DWS
EPA 245.1	Mercury	10	<0.02	< 0.2	µg/L	0.2	0.09	GW AG
EPA 245.1	Mercury	2	<0.10	< 0.2	µg/L	0.2	0.09	GW DWS
EPA 200.7	D Nickel	100	<0.10	< 10	µg/L	10	2	GW DWS
EPA 200.7	D Nickel	200	<0.05	< 10	µg/L	10	2	GW AG
EPA 300.0	Nitrate as N	10000	<0.01	< 50	µg/L	50	43	GW DWS
EPA 300.0	Nitrate/Nitrite as N	10000	<0.01	< 100	µg/L	100	74	GW DWS
EPA 300.0	Nitrite as N	1000	<0.05	< 50	µg/L	50	31	GW DWS
EPA 300.0	Nitrite as N	10000	<0.01	< 50	µg/L	50	31	GW AG
EPA 200.8	D Selenium	20	<0.15	< 3	µg/L	3	0.2	GW AG
EPA 200.8	D Selenium	50	<0.06	< 3	µg/L	3	0.2	GW DWS
EPA 200.8	D Silver	50	<0.00	< 0.10	µg/L	0.10	0.06	GW DWS
EPA 300.0	**Sulfate as SO4**	250000	0.10	**23900**	µg/L	300	180	GW DWS
EPA 200.8	D Thallium	2	<0.50	< 1	µg/L	1	0.08	GW DWS
EPA 200.8	D Uranium	16.8	<0.06	< 1	µg/L	1	0.05	GW DWS
EPA 200.7	D Vanadium	100	<0.05	< 5	µg/L	5	2	GW AG
EPA 200.7	D Zinc	2000	<0.00	< 10	µg/L	10	5	GW AG
EPA 200.7	D Zinc	5000	<0.00	< 10	µg/L	10	5	GW DWS

Nominal pH 7 and 20 C Temperature used for estimating Total Ammonia Reference Value when Field pH and Field Temp are not available and Ammonia is reported.

APPENDIX D
Wilson Creek Supplemental Data

EXHIBIT G
WATER INFORMATION

(a) The operation is not expected to directly affect surface or ground water systems, as it is a closed system. Precipitation falling within the lined leach pad area is retained and recycled through the heap and process systems. Precipitation falling outside the lined leach pad area is diverted to ensure it does not enter the closed system.

Please see Drawing D2 for locations of diversion ditches.

(b) not applicable.

(c) Project water requirements:

Water balance:

Annual water balance calculations are based on worst case analysis, using a maximum yearly precipitation of about 33 inches of water (the maximum recorded value), the 100 yr/24 hr precipitation event, no evaporation, working volumes, and heap draindown.

Maximum solution capacity is designed based on the following sequence of events:

Day 1-6:	Steady precipitation at 0.1"/day No evaporation achieved by heap spraying
Day 7:	100 yr/24 hr. maximum precipitation event No evaporation achieved by heap spraying
Day 8-11:	No precipitation Pumps down - no evaporation Complete de-saturation (draindown)

The total overall capacity required includes the components itemized below:

	Total Volume Required
Working Pond Inventory:	
working volume[1]	10,000,000 gal
one-day spray requirement[2]	5,760,000 gal

---

[1] Rick Moritz, Process Superintendent - "Startup Volume"

[2] Surface area under leach = 800,000 sq. ft.; Application rate = 0.005 gal/min/sq. ft.; One day = 1440 min. (p. 25, June, 1992 Vector report)

Solution Surge Capacity:

Precipitation	
Day 1-6[3]	2,069,289 gal
Day 7 (100yr/24hr)[4]	12,070,855 gal
Heap draindown[5]	5,000,000 gal
Total Capacity Required: (US gallons)	34,900,144 gal

Available sump capacity:

volume (cu.ft.) to 9360 elevation	35,690,416 cu. ft.
volume (gallons)	267,000,000 gal

267,000,000 x .33 porosity factor =

88,110,000 gallons, the storage capacity available after ore has been stacked to the 9360 elevation.

Please see the June, 1992 Vector Engineering report for a thorough discussion of the water balance.

(d) The source of water for this operation is water purchased under contract from the City of Victor. A water augmentation plan for the Ironclad/Globe Hill facilities has been developed and approved of by the State Water Engineer. A similar plan will be developed for this area. Augmentation water is also purchased from the City of Victor. The City of Victor holds well-established water rights from the west flank of Pikes Peak.

(e) The Company has acquired a five-year renewal of NPDES permit CO-0024562 from the Water Quality Control Division of the Colorado Department of Health. This permit covers discharge from the Carlton Tunnel which drains most of the southern part of the mining district.

---

[3] (127 acres) (6 days @ 0.1")
$5,532,120\ ft^3 \times (.6/12) \times 7.481 = 2,069,289$ gal.

[4] $5,532,120\ ft^3 \times (3.5/12) \times 7.481 = 12,070,855$ gal.

[5] (p. 36, June, 1992 Vector report)

Monitoring Plans

Leak detection, water quality and water level monitoring will be performed on the heap leach system as discussed below. Additional monitoring will be performed as necessary to meet the requirements of the Carlton Tunnel NPDES discharge permit and stormwater permits.

Leak Detection:

The Leak Detection System will be a layer of geonet (or drainage sand) between the inner geomembrane and the outer composite liner. This will drain by gravity to a collection sump located near the inside toe of the buttress. A small diameter pipe (pump casing) will be installed in the sump and exit up the groin of the buttress. Solution detected will be pumped out and back into the process system. The pump will be set on a roller cart to allow easy removal and replacement. See casing detail in Vector Dwg. 006.

Pond level monitoring:

Water levels in the valley fill heap leach pond will be monitored at least weekly, if not more frequently.

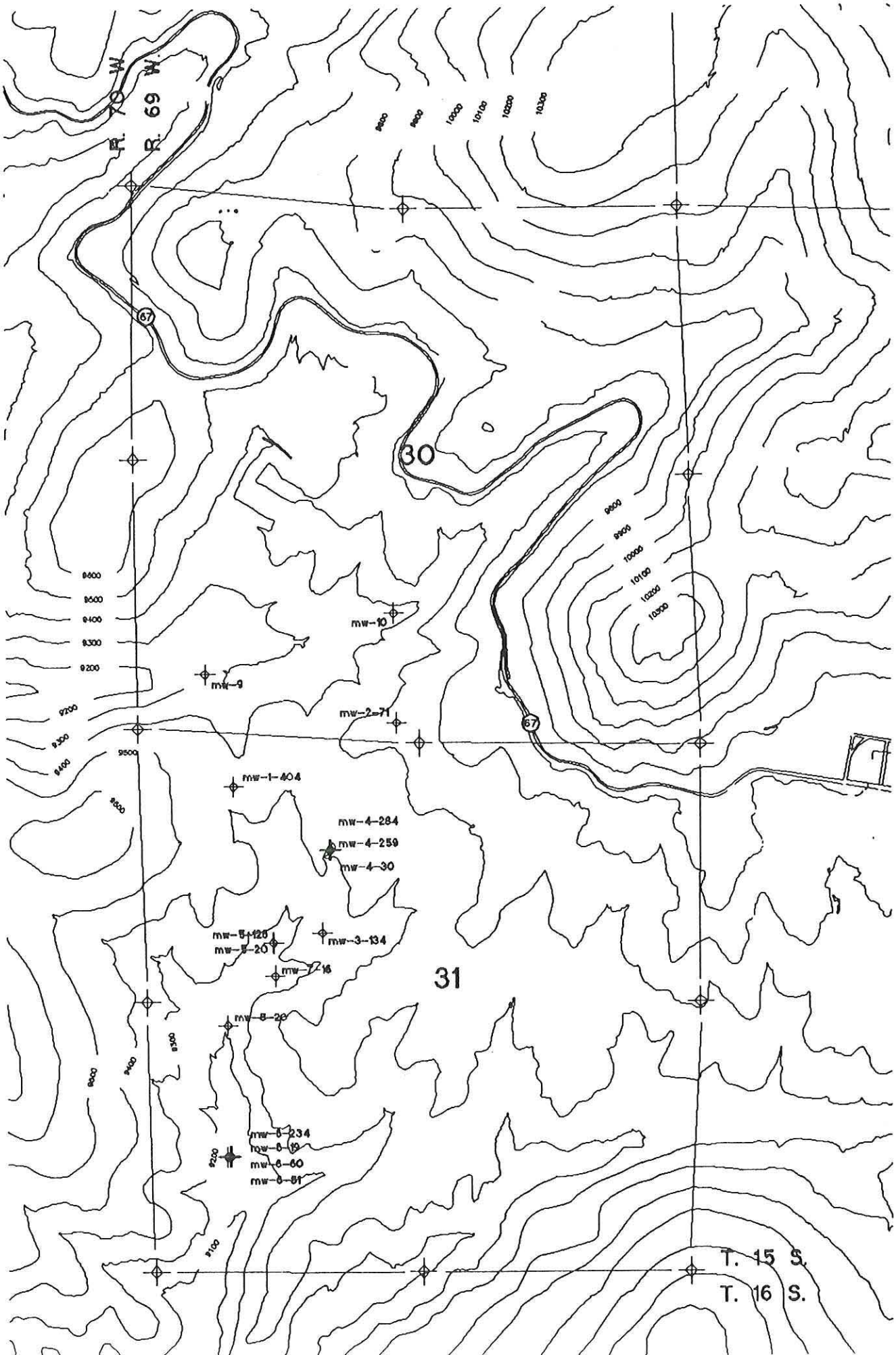
Water Monitoring:

Water quality monitoring will be performed on the pregnant solution, monitoring wells, and surface waters on the frequency shown on Table G1. Parameters to be monitored are shown in Table G2. Surface water flows will be measured each time a water sample is collected. Well water levels will be monitored prior to collecting a sample. Each well will contain a dedicated sampling pump which will be capable of removing 3 casing volumes of water prior to sample collection.

Please see the June 1992 Vector Engineering report for a thorough discussion of water quality monitoring.

WATER MONITORING WELLS:

Hole Number	Analysis Reported
MW-1-404	no, dry hole
MW-2-71	yes
MW-3-134	yes
MW-4-30	yes
MW-4-259	yes
MW-4-284	no, insufficient sample
MW-5-20	yes
MW-5-126	yes
MW-6-19	yes
MW-6-60	yes
MW-6-81	yes
MW-6-234	no, insufficient sample
MW-7-16	yes
MW-8-20	yes
MW-9	no, insufficient sample
MW-10	no, dry hole


R. 70 W.
R. 69 W.
67
30
31
mw-10
mw-9
mw-2-71
mw-1-404
mw-4-284
mw-4-259
mw-4-30
mw-5-120
mw-5-20
mw-3-134
mw-7-16
mw-8-20
mw-6-234
mw-6-19
mw-6-60
mw-6-61
T. 15 S.
T. 16 S.

Accu-Labs Research, Inc.

ANALYSIS REPORT

DATE: 04/06/92 PAGE 5

Lab Job Number 2182-42099-11

These samples to be disposed of 30 days after the date of this report.

ALR Designation -	2182-42099-11-9	2182-42099-11-10	2182-42099-11-11
Sponsor Designation -	MW-5-20	MW-5-126	MW-3-134
Date Collected -	03/14/92	03/15/92	03/15/92
Determinations in mg/L unless noted			
Aluminum - dissolved	<0.1	<0.1	<0.1
Aluminum - total	1.2	20	3.2
Barium - dissolved	0.06	0.06	0.06
Barium - total	<0.05	0.32	0.09
Cadmium - dissolved	<0.005	<0.005	<0.005
Cadmium - total	<0.005	<0.005	<0.005
Chromium - dissolved	<0.005	<0.005	<0.005
Chromium - total	<0.005	0.007	<0.005
Copper - dissolved	<0.005	<0.005	<0.005
Copper - total	<0.005	0.013	<0.005
Iron - dissolved	<0.01	<0.01	<0.01
Iron - total	2.4	31	2.4
Manganese - dissolved	0.030	0.081	0.017
Manganese - total	0.083	0.95	0.067
Molybdenum - dissolved	<0.005	0.021	0.006
Molybdenum - total	0.006	0.015	0.007
Nickel - dissolved	<0.01	<0.01	<0.01
Nickel - total	<0.01	<0.01	<0.01
Silver - dissolved	<0.005	<0.005	<0.005
Silver - total	<0.005	<0.005	<0.005
Zinc - dissolved	0.042	<0.005	<0.005
Zinc - total	0.055	0.21	0.036
pH			
(pH Units)	6.7	8.2	7.8
Arsenic - dissolved	<0.005	<0.005	<0.005
Arsenic - total	<0.005	<0.005	<0.005
Mercury - dissolved	<0.0001	<0.0001	<0.0001
Mercury - total	<0.0001	<0.0001	<0.0001
Lead - dissolved	<0.005	<0.005	<0.005
Lead - total	<0.005	0.028	0.008
Selenium - dissolved	<0.005	<0.005	<0.005

Accu-Labs Research, Inc.

ANALYSIS REPORT

DATE: 04/06/92 PAGE 6

Lab Job Number 2182-42099-11

These samples to be disposed of 30 days after the date of this report.

	ALR Designation -	2182-42099-11-9	2182-42099-11-10	2182-42099-11-11
	Sponsor Designation -	MW-5-20	MW-5-126	MW-3-134
	Date Collected -	03/14/92	03/15/92	03/15/92
Determinations in mg/L unless noted				
Selenium - total		<0.005	<0.005	<0.005
Nitrite (as N)		<0.05	0.05	<0.05
Nitrate (as N)		0.96	1.2	0.21
Cyanide, Free		----	----	<0.1
Cyanide, Total		----	----	<0.005
Cyanide, Weak Acid Dissociable		----	----	<0.005
Sulfate (as SO4)		31	53	37

By: Eyda Hergenreder

Eyda Hergenreder
Water Laboratory Supervisor

EH/cp

Accu-Labs Research, Inc.

4669 Table Mountain Drive Golden, Colorado 80403-1650
(303) 277-9514 FAX (303) 277-9512

ANALYSIS REPORT

DATE: 04/06/92 PAGE 1

DON POOLTER
D P ENGINEERING
2 WEST DRY CREEK CIRCLE
SUITE 250
LITTLETON, CO 80120

Lab Job Number: 2182-42099-11
Date Samples Received: 03/16/92
Customer PO Number: 5241392031

These samples to be disposed of 30 days after the date of this report.

	ALR Designation -	2182-42099-11-1	2182-42099-11-2	2182-42099-11-3	2182-42099-11-4
	Sponsor Designation -	MW-6-60	MW-2-71 ✓	MW-4-30 ✓	MW-4-259 ✓
	Date Collected -	03/08/92	03/10/92	03/11/92	03/12/92
Determinations in mg/L unless noted					
Aluminum - dissolved		<0.1	<0.1	<0.1	<0.1
Aluminum - total		0.2	0.7	5.7	<0.1
Barium - dissolved		<0.05	<0.05	<0.05	<0.05
Barium - total		<0.05	<0.05	0.09	<0.05
Cadmium - dissolved		<0.005	<0.005	<0.005	<0.005
Cadmium - total		<0.005	<0.005	<0.005	<0.005
Chromium - dissolved		<0.005	<0.005	<0.005	<0.005
Chromium - total		<0.005	<0.005	<0.005	<0.005
Copper - dissolved		<0.005	0.006	0.006	<0.005
Copper - total		<0.005	<0.005	0.005	<0.005
Iron - dissolved		<0.01	<0.01	0.01	<0.01
Iron - total		1.3	1.0	6.6	0.58
Manganese - dissolved		0.26	0.041	0.18	0.30
Manganese - total		0.27	0.085	0.32	0.32
Molybdenum - dissolved		0.011	0.009	0.006	<0.005
Molybdenum - total		0.008	0.009	0.005	<0.005
Nickel - dissolved		<0.01	<0.01	<0.01	<0.01
Nickel - total		<0.01	<0.01	<0.01	<0.01
Silver - dissolved		<0.005	<0.005	<0.005	<0.005
Silver - total		<0.005	<0.005	<0.005	<0.005
Zinc - dissolved		0.009	0.036	0.043	<0.005
Zinc - total		0.012	0.062	0.17	0.009
Acidity					
(meq/L)		0.08	----	----	----
pH					
(pH Units)		7.4	7.5	7.0	8.1

Accu-Labs Research, Inc.

ANALYSIS REPORT
DATE: 04/06/92 PAGE 2
Lab Job Number 2182-42099-11

These samples to be disposed of 30 days after the date of this report.

	ALR Designation -	2182-42099-11-1	2182-42099-11-2	2182-42099-11-3	2182-42099-11-4
	Sponsor Designation -	MW-6-60	MW-2-71	MW-4-30	MW-4-259
	Date Collected -	03/08/92	03/10/92	03/11/92	03/12/92
Determinations in Mg/L unless noted					
Arsenic - dissolved		<0.005	<0.005	<0.005	<0.005
Arsenic - total		<0.005	<0.005	<0.005	<0.005
Mercury - dissolved		<0.0001	<0.0001	<0.0001	<0.0001
Mercury - total		<0.0001	<0.0001	<0.0001	<0.0001
Lead - dissolved		<0.005	<0.005	<0.005	<0.005
Lead - total		<0.005	<0.005	0.005	<0.005
Selenium - dissolved		<0.005	<0.005	<0.005	<0.005
Selenium - total		<0.005	<0.005	<0.005	<0.005
Nitrite (as N)		<0.05	<0.05	----	----
Nitrate (as N)		<0.05	0.71	----	----
Cyanide, Free		<0.1	<0.1	----	----
Cyanide, Total		<0.005	<0.005	----	----
Cyanide, Weak Acid Dissociable		<0.005	<0.005	----	----
Sulfate (as SO4)		75	37	----	----

ANALYSIS REPORT
DATE: 04/06/92 PAGE 3
Lab Job Number 2182-42099-11

These samples to be disposed of 30 days after the date of this report.

ALR Designation -	2182-42099-11-5	2182-42099-11-6	2182-42099-11-7	2182-42099-11-8
Sponsor Designation -	MW-6-19 ✓	MW-6-81 ✓	MW-8-20 ✓	MW-7-16
Date Collected -	03/13/92	03/13/92	03/14/92	03/14/92
Determinations in mg/L unless noted				
Aluminum - dissolved	<0.1	<0.1	<0.1	<0.1
Aluminum - total	8.3	0.2	23	69
Barium - dissolved	0.07	<0.05	<0.05	0.05
Barium - total	0.14	<0.05	0.33	0.58
Cadmium - dissolved	<0.005	<0.005	<0.005	<0.005
Cadmium - total	<0.005	<0.005	<0.005	<0.005
Chromium - dissolved	<0.005	<0.005	<0.005	<0.005
Chromium - total	0.005	<0.005	0.012	0.038
Copper - dissolved	0.006	<0.005	<0.005	<0.005
Copper - total	0.013	<0.005	0.020	0.050
Iron - dissolved	0.02	<0.01	<0.01	<0.01
Iron - total	25	0.67	60	98
Manganese - dissolved	0.053	0.28	0.64	0.30
Manganese - total	0.34	0.35	2.1	2.3
Molybdenum - dissolved	0.014	0.19	<0.005	<0.005
Molybdenum - total	0.018	0.20	0.010	0.010
Nickel - dissolved	<0.01	<0.01	<0.01	<0.01
Nickel - total	<0.01	<0.01	0.02	0.03
Silver - dissolved	<0.005	<0.005	<0.005	<0.005
Silver - total	<0.005	<0.005	<0.005	<0.005
Zinc - dissolved	0.005	0.020	0.020	0.009
Zinc - total	0.062	0.030	0.23	0.31
Acidity (meq/L)	0.14	0.08	0.48	0.24
pH (pH Units)	7.5	7.4	6.7	7.1
Arsenic - dissolved	<0.005	0.016	<0.005	<0.005
Arsenic - total	0.023	0.022	0.009	0.010
Mercury - dissolved	<0.0001	<0.0001	<0.0001	<0.0001
Mercury - total	<0.0001	<0.0001	<0.0001	0.0001
Lead - dissolved	<0.005	<0.005	<0.005	<0.005
Lead - total	0.011	<0.005	0.015	0.036

Accu-Labs Research, Inc.

ANALYSIS REPORT

DATE: 04/06/92 PAGE 4

Lab Job Number 2182-42099-11

These samples to be disposed of 30 days after the date of this report.

	ALR Designation -	2182-42099-11-5	2182-42099-11-6	2182-42099-11-7	2182-42099-11-8
	Sponsor Designation -	MW-6-19	MW-6-81	MW-8-20	MW-7-16
	Date Collected -	03/13/92	03/13/92	03/14/92	03/14/92
Determinations in mg/L unless noted					
Selenium - dissolved		<0.005	<0.005	<0.005	<0.005
Selenium - total		<0.005	<0.005	<0.005	<0.005
Nitrite (as N)		<0.05	<0.05	<0.05	<0.05
Nitrate (as N)		0.73	<0.05	12	5.2
Cyanide, Free		<0.1	<0.1	----	----
Cyanide, Total		<0.005	<0.005	----	----
Cyanide, Weak Acid Dissociable		<0.005	<0.005	----	----
Sulfate (as SO4)		70	100	220	90

Table G1
Water Quality Monitoring Sites

Site Number	Location	Monitoring Frequency
Surface Water		
AG-1	Arequa Gulch Upstream	Quarterly
AG-2	Arequa Gulch Downstream	Quarterly
Groundwater	(see June 1992 Vector Engineering Report)	Quarterly
Pregnant Solution		Quarterly

Table G2
Water Quality Monitoring Parameters

Field Parameters

Sample Data
Discharge, gpm or Water Level, ftmsl
Temperature, °C

General Parameters

pH, units
Conductivity, umhos/cm
Total Dissolved Solids, measured
Total Dissolved Solids, calculated
Acidity, mg/l
Alkalinity, mg/l as $CaCO_3$
Ammonia, mg/l
Hardness, mg/l as $CaCO_3$
Suspended Solids, mg/l
Turbidity, NTU

Special Parameters

Total Cyanide, mg/l
Free Cyanide, mg/l
WAD Cyanide, mg/l

Major Anions

Bicarbonate, mg/l as $CaCO_3$
Carbonate, mg/l as $CaCO_3$
Chloride, mg/l
Fluoride, mg/l
Nitrate, mg/l
Sulfate, mg/l

Major Cations

Calcium, mg/l
Magnesium, mg/l
Potassium, mg/l
Sodium, mg/l

Trace Metals, Dissolved

Aluminum, mg/l
Arsenic, mg/l
Barium, mg/l
Cadmium, mg/l
Chromium, mg/l
Copper, mg/l
Iron, mg/l
Lead, mg/l
Manganese, mg/l
Mercury, mg/l
Molybdenum, mg/l
Nickel, mg/l
Selenium, mg/l
Silver, mg/l
Zinc, mg/l222