

April 10, 2023

Ms. Hillary Young, P.E., Chief Engineer  
Land Protection Division  
Oklahoma Department of Environmental Quality  
707 N. Robinson  
P.O. Box 1677  
Oklahoma City, OK 73101

Re: Fourth Report to Monitor Progress of Semi-Annual CMA Sampling at Landfill CCR Unit  
Western Farmers Electric Cooperative (WFEC) - Hugo Power Station, Fort Towson, Oklahoma

Dear Ms. Young:

Enclosed, please find a copy of the above referenced report. The DEQ has approved a minimum two-year sample and evaluation period to establish the effectiveness of enhanced dewatering combined with monitored natural attenuation as a corrective measure alternative for molybdenum exceedances associated with WFEC'S Landfill CCR Unit. Data obtained during the two year semi-annual groundwater sampling is promising in that molybdenum concentrations have gone down for most of the wells sampled. Additionally, molybdenum concentrations at SSLs above the GWPSs are only identified at four wells proximate to the Landfill CCR Unit and the plume has not expanded beyond the groundwater monitoring system for the Landfill CCR Unit. Based on these, the proposed corrective action alternative as per the approved Assessment of Corrective Measures Report appears likely to be an effective remedy to achieve the standards listed in OAC 252:517-9-8 (b) and (c). It is recommended that WFEC extend the semi-annual sampling for an additional two years to further monitor the effectiveness and to obtain additional information needed to fully evaluate the proposed remedy as per factors contained in OAC 252:517-9-8(c).

A copy of this report will be placed in the facility's operating record and on the facility's publicly accessible internet web-site.

Please notify me at 405-247-4298 or at [k\\_fletcher@wfec.com](mailto:k_fletcher@wfec.com) if you have any questions.

Sincerely,



Kent Fletcher  
Environmental Coordinator

cc: John McCreight / Western Farmers Electric Cooperation  
Chris Schaefer and Bert Smith / Altamira-US, LLC

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April 10, 2023

Hillary Young, P.E.  
Chief Engineer  
Land Protection Division  
Oklahoma Department of Environmental Quality  
P.O. Box 1677  
Oklahoma City, OK 73162

Re: Fourth Report to Monitor Progress of Semi-Annual CMA Sampling at Landfill CCR Unit  
Western Farmers Electric Cooperative – Hugo Power Station, Fort Towson, Oklahoma

Dear Ms. Young:

Assessment Monitoring at Western Farmers Electric Cooperative's (WFEC's) Hugo Power Station (HPS) has indicated molybdenum at statistically significant levels (SSLs) above established groundwater protection standards (GWPSs) in 4 of 10 downgradient monitoring wells associated with its Landfill Coal Combustion Residuals (CCR) Unit. Molybdenum has been indicated at SSLs above the GWPSs at MW-15A, MW-16, MW-18, and MW-19S.

Laboratory testing has been provided to the Oklahoma Department of Environmental Quality (ODEQ) that shows the molybdenum adsorbs to the native rock material and does not leach from the native rock to groundwater. Furthermore, hydrogeologic characterization performed shows very slow groundwater movement with limited transport of molybdenum that has not, and probably will not, leave the HPS site property boundary at concentrations exceeding the GWPSs. A preliminary risk evaluation was performed and submitted to the ODEQ indicating the groundwater constituents do not pose a hazard to potential on-site or off-site human or ecological receptors.

An Assessment of Corrective Measures Report was submitted to ODEQ on October 27, 2020. Based on evaluations included in the Assessment of Corrective Measures Report, source control via enhanced dewatering combined with monitored natural attenuation (MNA) was proposed as a corrective measure alternative for the molybdenum. A minimum of two years of semi-annual sampling of monitoring wells downgradient of the Landfill CCR Unit was proposed to establish the effectiveness of this alternative prior to selection of a final remedy. The Assessment of Corrective Measures Report and the two-year sample and evaluation period were approved by ODEQ on December 29, 2020, contingent upon submittal of semi-annual reports to ODEQ to monitor progress. This submittal constitutes the second semi-annual report for the second year of monitoring (2022) and is the fourth semi-annual report to monitor progress of corrective measure assessment sampling at the Landfill CCR Unit.

Data obtained during the two year semi-annual groundwater sampling is encouraging in that molybdenum concentrations have gone down for most of the wells sampled. Additionally, molybdenum concentrations at SSLs above the GWPSs are only identified at four wells proximate to the Landfill CCR Unit and the plume has not expanded beyond the groundwater monitoring system for the Landfill CCR Unit. Based on these data, the proposed corrective action alternative as per the approved Assessment of Corrective Measures Report appears likely to be an effective remedy to achieve the standards listed in OAC 252:517-9(b) and (c). It is recommended that WFEC extend the semi-annual sampling for an additional two years to further monitor the effectiveness and to obtain additional information needed to fully evaluate the proposed remedy as per factors contained in OAC 252:517-9-8(c).

### ACTIVITIES COMPLETED

- 1) Dewatering of the Landfill CCR Unit was initiated in March 2020 and continues as water accumulates in the Landfill CCR Unit following rainfall events. Standing water that accumulates in the Landfill CCR Unit following rainfall is pumped from the north side of the CCR Unit as practicable and conveyed to Impoundment FO8 pursuant to OPDES permit (OK0035327). The Landfill CCR Unit does not contain sufficient standing water to pump during periods of little or no rainfall. Conversely, several consecutive days of pumping may be required to remove standing water from the Landfill CCR Unit after large rainfall events. From the start of dewatering through January 26, 2023, a total of 1,555.4 hours of pumping have been conducted to prevent standing water from accumulating in the Landfill CCR Unit. WFEC continues to maintain stormwater run-on controls to limit surface water entering into the Landfill CCR Unit.
- 2) The fourth semi-annual sampling of select monitoring wells as proposed in the approved Assessment of Corrective Measures Report was conducted in October 2022. Wells sampled include the 4 wells where molybdenum had been identified at SSLs above the GWPS (MW-15A, MW-16, MW-18, and MW-19S), and monitoring wells MW-5S, MW-7S, MW-15B, MW-17, MW-22A, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B. The approximate locations of monitoring wells sampled are shown on the figure in **Attachment A**. Monitoring well MW-14A was also sampled to evaluate background conditions.
- 3) Each of these wells was purged prior to sampling. Purging was accomplished using dedicated submersible pumps (MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-17, MW-18, MW-19S, and MW-22A), dedicated peristaltic pumps (CM-1A, CM-1B, and CM-2), and dedicated bailers (MW-15B, MW-22B, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B). Field readings of temperature, pH, and conductivity were maintained during

purging of the wells. Purging was continued until water was sufficiently clear and field readings stabilized (where using submersible and peristaltic pumps) or until a well was purged dry (when bailing).

- 4) Groundwater samples were collected after purging. The groundwater samples were collected using dedicated submersible pumps, dedicated peristaltic pumps, or dedicated bailers and placed directly into appropriately preserved laboratory-prepared containers. The samples were labeled as to sample location, placed under chain-of-custody control, packed in ice, and shipped to ALS Environmental Laboratories (Oklahoma Certification 2022-141).
- 5) Each of the wells was sampled and the samples analyzed for parameters listed in the approved Assessment of Corrective Measures Report. Sampling parameters included molybdenum, dissolved molybdenum, and CCR Appendix III parameters (boron, chloride, pH, TDS, calcium, fluoride, and sulfate). Additionally, wells were monitored for indicator parameters to evaluate monitored natural attenuation (MNA). These indicator parameters included oxidation reduction potential (ORP), pH, specific conductance, total dissolved solids, nitrate, sulfide, total and dissolved iron, total and dissolved ferrous iron (Fe(II)), total and dissolved ferric iron (Fe(III)), dissolved oxygen (DO), and alkalinity. Samples for TDS, sulfide, nitrate, alkalinity, and all of the iron species were analyzed at the laboratory. The ORP and DO for each well were measured in the field. Specific conductance and pH for each well were both measured in the field and analyzed at the laboratory.

## EVALUATION OF DATA

Laboratory reports from the October 2022 sampling are included in **Attachment B**. A running and updated tabulation of data to include results from the October 2022 sampling is contained in **Attachment C**. Oxidation-reduction reactions typically dictate molybdenum mobilization with molybdenum increasing in concentration as a result of reducing conditions, pH-induced desorption/dissolution, and microbial dissimilatory processes. Mineral co-precipitation/re-adsorption reactions typically dictate molybdenum immobilization. The data from the October 2022 sampling were compared to previously available data and evaluated to discern changes in molybdenum concentration and changes in the subsurface environment over time and distance. The following observations are made from these evaluations:

- 1) The October 2022 sampling was the thirteenth sampling event for molybdenum (dating to August 2017) at monitoring wells MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-17, MW-18, and MW-19S; the twelfth sampling event for molybdenum (dating to August 2017) at monitoring well MW-22A; the sixth sampling event for molybdenum (dating to July 2020) at monitoring wells MW-15B, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-4A,

CM-4B, CM-5A, and CM-5B; and the fifth sampling event for molybdenum at CM-3B (sufficient water was not available to sample CM-3B during the October 2021 sample event). From October 2022 sampling, molybdenum was identified at SSLs above GWPSs at MW-15A, MW-16, MW-18, and MW-19S. Reported molybdenum concentrations at these wells in decreasing order were 0.430 mg/L at MW-19S (east of the southern cell of the Landfill CCR Unit), 0.183 mg/L at MW-18 (east of the southern cell of the Landfill CCR Unit), 0.149 mg/L at MW-15A (north of the northern Landfill CCR Unit), and 0.113 mg/L at MW-16 (east of the northern Landfill CCR Unit). Molybdenum concentrations attenuate significantly with distance from the Landfill CCR Unit. These wells had historically seen molybdenum levels above the GWPSs, and no new exceedances of the GWPSs were identified in any of the other wells.

- 2) Charts showing changes in molybdenum concentration over sampling history for each of the monitoring wells evaluated are included in **Attachment D**. These charts include a line of best fit generated by the Excel Trend Function using the least squares method. In most cases, the molybdenum concentration in site monitoring wells appears to have gone down slightly over the sampling history. The only exception is at monitoring well MW-19S. At MW-19S, the reported molybdenum concentration for October 2022 sampling is slightly lower than that from the previous sampling event and is within historical range for molybdenum concentration at this well. At MW-15B, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-4A, CM-4B, CM-5A, and CM-5B interpretation of changes in molybdenum concentrations are based on only six sampling events conducted between July/August 2020 and October 2022 and at CM-3B interpretation of changes in molybdenum concentrations are based on only five sampling events conducted over this period (sufficient water was not available in October 2021 for sample collection).

For each of the monitoring wells the mean molybdenum concentration from the four most recent sampling events was compared to the mean molybdenum concentration from sampling prior to the four most recent sampling events. The laboratory reporting level was used for determining mean concentrations where molybdenum was not identified. A comparison of mean molybdenum concentration from the four most recent sample events to that for the prior sampling events for wells evaluated is included in **Attachment E**. At all wells evaluated, except at MW-19S, the mean of the four most recent sampling events for molybdenum is lower than the mean from the prior molybdenum data. At MW-19S the mean from the four most recent sampling events is slightly above but similar to that from the previous data.

- MW-5S: Molybdenum concentration from the October 2022 sampling event (0.0021 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. Over the sampling history, the molybdenum concentration at this well appears to have decreased from 0.00737 mg/L in August 2017 to current levels. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00272 mg/L) is approximately 39% lower than the mean molybdenum concentration reported from sampling at this well conducted between August 2017 and October 2020 (0.00449 mg/L).
- MW-7S: Molybdenum concentration from October April 2022 sampling (0.00103 mg/L) is slightly higher, but similar to, that reported from the previous sampling event and is on the low end of concentrations historically reported at this well. Over the sampling history, the molybdenum concentration at this well appears to have decreased from 0.00171 mg/L in August 2017 to current levels. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00098 mg/L) is approximately 53% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.00210 mg/L).
- MW-14A: This monitoring well is an up-gradient background well. Molybdenum was not observed from October 2022 sampling at a concentration above the Method Detection Level (<0.0006 mg/L). Over the sampling history, the molybdenum at this well has decreased from 0.00223 mg/L in August 2017 to <0.0006 mg/L. Molybdenum has not been identified above the Method Detection Level since June 2020 sampling. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00060 mg/L) is approximately 81% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.00312 mg/L).
- MW-15A: Molybdenum concentration from October 2022 sampling (0.149 mg/L) is lower than that reported from the previous sampling event and is equal to the lowest molybdenum concentration reported at this well to date. The highest molybdenum concentrations over the sampling history are 0.269 mg/L in June 2020 and 0.255 mg/L

in August 2017. Prior to October 2019 sampling, molybdenum concentrations were typically greater than 0.2 mg/L at this well. Molybdenum concentrations reported since that time have been below 0.2 mg/L with exception of that reported from June 2020 sampling. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.16175 mg/L) is approximately 24% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.21422 mg/L).

- MW-15B: The reported concentration from the October 2022 sampling event (0.00153 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Molybdenum concentrations through six sampling events are 0.0109 mg/L in July 2020, 0.00876 mg/L in October 2020, 0.00571 mg/L in March/April 2021, 0.00328 mg/L in October 2021, 0.0037 mg/L in March/April 2022, and 0.00153 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00356 mg/L) is approximately 64% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.00983 mg/L).
- MW-16: Molybdenum concentration from October 2022 sampling (0.113 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. The highest molybdenum concentration to date for this well (0.193 mg/L) occurred in April 2019. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). The mean molybdenum concentration over the past four sampling events at this well (0.14700 mg/L) is approximately 11% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.16578 mg/L).
- MW-17: Molybdenum was not observed above the laboratory reporting level (<0.0060) during October 2022 sampling and is not typically observed at concentrations above the laboratory reporting level at this well. Molybdenum was most recently observed above the laboratory reporting level during the March/April 2021 sampling event. A line of best fit over the sampling period indicates a negative

slope (apparent downward trend) and the mean molybdenum concentration over the past four sampling events at this well (0.00069 mg/L) is approximately 12% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.00079 mg/L). These differences are due primarily to a decrease in the laboratory reporting level.

- MW-18: Molybdenum concentration from October 2022 sampling (0.183 mg/L) is lower than that reported from the previous sampling event and is on the low end of those previously reported at this well. Over the sampling history, the molybdenum concentration at this well has decreased from 0.39 mg/L in August 2017 to current levels. Concentrations greater than 0.3 mg/L have not been observed since April 2019. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.19825 mg/L) is approximately 27% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020 (0.27311 mg/L).
- MW-19S: Molybdenum concentration from October 2022 sampling (0.430 mg/L) is slightly lower than that from the previous sampling event. Over the sampling history, the molybdenum concentration at this well has decreased from 0.472 mg/L in January 2019 to current levels. The mean molybdenum concentration over the past four sampling events at this well (0.42000 mg/L) is slightly above the mean molybdenum concentration from sampling conducted at this well between August 2017 and October 2020 (0.38711 mg/L). However, the current reported molybdenum concentration is lower than concentrations often observed at this well prior to October 2019.
- MW-22A: Molybdenum was not observed above the laboratory reporting level (<0.0060) during October 2022 sampling and is not typically observed at concentrations above the laboratory reporting level at this well. Molybdenum was previously observed above the laboratory reporting level during the September 2019 and during the March/April 2022 sampling events. A line of best fit over the sampling period indicates a negative slope (apparent downward trend) and the mean molybdenum concentration over the past four sampling events at this well (0.00074 mg/L) is approximately 5% lower than the mean molybdenum concentration reported from sampling conducted at this well between August 2017 and October 2020



(0.00077 mg/L). These differences are due primarily to a decrease in the laboratory reporting level.

- MW-22B: To date, this well has been sampled six times for molybdenum. Molybdenum concentrations through six sampling events have continually decreased at MW-22B (0.00878 mg/L in July 2020, 0.00866 mg/L in October 2020, 0.00753 in March/April 2021, 0.00446 mg/L in October 2021, 0.00357 mg/L in March/April 2022, and 0.00105 mg/L in October 2022). A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00415 mg/L) is approximately 52% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.00872 mg/L).
- CM-1A: Molybdenum was not observed above the laboratory reporting level (<0.0060) during October 2022 sampling. This well has been sampled six times for molybdenum and molybdenum concentrations have continually decreased (0.0088 mg/L in July 2020, 0.00198 mg/L in October 2020, 0.00132 mg/L in March/April 2021, 0.00127 mg/L in October 2021, less than 0.0006 mg/L in March/April 2022, and less than 0.0006 mg/L in October 2022). A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00095 mg/L) is approximately 82% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.00539 mg/L).
- CM-1B: The reported concentration from the October 2022 sampling event (0.00551 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Reported molybdenum concentrations through six sampling events are 0.0133 mg/L in July 2020, 0.0144 mg/L in October 2020, 0.0113 mg/L in March/April 2021, 0.00976 mg/L in October 2021, 0.00696 mg/L in March/April 2022, and 0.00551 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00838 mg/L) is approximately 39% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.01385 mg/L).

- CM-2: Molybdenum was not observed above the laboratory reporting level (<0.0060) during October 2022 sampling. This well has been sampled six times for molybdenum and molybdenum concentrations have continually decreased (0.00209 mg/L in July 2020, 0.00203 mg/L in October 2020, 0.00161 mg/L in March/April 2021, 0.0012 mg/L in October 2021, 0.00082 mg/L in March/April 2022), and less than 0.0006 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00106 mg/L) is approximately 49% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.00206 mg/L).
- CM-3A: The reported concentration from the October 2022 sampling event (0.00155 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Reported molybdenum concentrations through six sampling events are 0.0457 mg/L in July 2020, 0.0222 mg/L in October 2020, 0.0153 mg/L in March/April 2021, 0.00297 mg/L in October 2021, 0.00656 mg/L in March/April 2022, and 0.00155 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00660 mg/L) is approximately 81% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.03395 mg/L).
- CM-3B: The reported concentration from the October 2022 sampling event (0.00819 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has only been sampled five times for molybdenum but molybdenum concentrations appear to be decreasing. Molybdenum concentrations through five sampling events are 0.0327 mg/L in August 2020, 0.0318 mg/L in October 2020, 0.0353 mg/L in March/April 2021, 0.0174 mg/L in March/April 2022, and 0.00819 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.02317 mg/L) is approximately 29% lower than the molybdenum concentration reported from sampling conducted at this well in August 2020 (0.0327 mg/L).

- CM-4A: The reported concentration from the October 2022 sampling event (0.00449 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Reported molybdenum concentrations through six sampling events are 0.0269 mg/L in July 2020, 0.0271 mg/L in October 2020, 0.0212 mg/L in March/April 2021, 0.0105 mg/L in October 2021, 0.00455 mg/L in March/April 2022, and 0.00449 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.01019 mg/L) is approximately 62% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.02700 mg/L).
- CM-4B: The reported concentration from the October 2022 sampling event (0.00771 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Reported molybdenum concentrations through six sampling events are 0.0307 mg/L in July 2020, 0.0306 mg/L in October 2020, 0.0303 mg/L in March/April 2021, 0.0131 mg/L in October 2021, 0.0184 mg/L in March/April 2022, and 0.00771 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.01738 mg/L) is approximately 43% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.03065 mg/L).
- CM-5A: The reported concentration from the October 2022 sampling event (0.00317 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Molybdenum concentrations through six sampling events are 0.0205 mg/L in July 2020, 0.011 mg/L in October 2020, 0.0182 mg/L in March/April 2021, 0.0058 mg/L in October 2021, 0.00351 mg/L in March/April 2022, and 0.00317 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.00767 mg/L) is approximately 51% lower than the

mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.01575 mg/L).

- CM-5B: The reported concentration from the October 2022 sampling event (0.0102 mg/L) is lower than that reported from the previous sampling event and is the lowest molybdenum concentration reported at this well to date. This well has been sampled six times for molybdenum and molybdenum concentrations appear to be decreasing. Molybdenum concentrations through six sampling events are 0.04 mg/L in July 2020, 0.0394 mg/L in October 2020, 0.0536 mg/L in March/April 2021, 0.0448 mg/L in October 2021, 0.0361 mg/L in March/April 2022, and 0.0102 mg/L in October 2022. A line of best fit over the sampling period indicates a negative slope (apparent downward trend). Also, the mean molybdenum concentration over the past four sampling events at this well (0.03618 mg/L) is approximately 9% lower than the mean molybdenum concentration from the two sampling events conducted at this well prior to March/April 2021 (0.0397 mg/L).
- 3) The monitoring wells were sampled for CCR Appendix III parameters (boron, chloride, pH, TDS, calcium, fluoride, and sulfate). The October 2022 sampling was the thirteenth sampling event for these compounds when sampled concurrently with molybdenum (dating to August 2017) at monitoring wells MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-18, and MW-19S; the twelfth sampling event for these compounds when sampled concurrently with molybdenum (dating to August 2017) at monitoring well MW-22A; the sixth sampling event for these compounds when sampled concurrently with molybdenum (dating to July 2020) at monitoring wells MW-15B, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-4A, CM-4B, CM-5A, and CM-5B, and the fifth sampling event for these compounds when sampled concurrently with molybdenum (dating to July 2020) at CM-3B (sufficient water was not available to sample CM-3B during the October 2021 sample event). Because of limited water availability, field pH and/or lab pH could not be obtained during all sampling events at some of the wells (CM-1B, CM-3A, CM-4A, CM-4B, CM-5A, and CM-5B). Also, limited water availability at CM-1B precluded sampling of this well for pH, TDS, fluoride, and sulfate in March/April 2021. Charts comparing changes in concentration over time for CCR Appendix III parameters to changes in molybdenum concentration for each of the monitoring wells evaluated are included in **Attachment F**.

**Boron:** Boron concentration does not appear to correlate to higher or lower molybdenum concentration. The highest boron concentrations consistently occur at wells MW-15B, MW-18, MW-19S, CM-3B, CM-4B, CM-5A, and CM-5B. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at only MW-18 and MW-19S. The lowest boron concentrations consistently occur at wells that typically do not exhibit high molybdenum concentration (MW-17, CM-1A, and CM-1B).

At MW-14A, MW-15A, MW-18, CM-2, and CM-3A the mean boron concentration over the past four sampling events is more than 10% lower than the mean boron concentration from prior sampling (indicating a general overall decrease in boron concentration at these wells). At MW-22B, CM-1A, CM-5A, and CM-5B the mean boron concentration over the past four sampling events is more than 10% greater than the mean boron concentration from prior sampling (indicating an overall general increase in boron concentration at these wells). From **Attachment F**, possible correlations between changes in molybdenum and boron concentrations may exist at some of the wells (particularly at MW-14A, MW-15A, CM-2, CM-3A and CM-3B). Also, concentrations for both molybdenum and boron currently appear to be decreasing at CM-2. Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in boron concentration.

**Chloride:** Chloride concentration does not appear to correlate to higher or lower molybdenum concentration. The highest chloride concentrations consistently occur at wells away from the Landfill CCR Unit where molybdenum has not been indicated at SSLs above the GWPSs (CM-1B, CM-4A, CM-4B, CM-5A, and CM-5B). The lowest chloride concentrations typically occur at MW-22A, CM-2, MW-17, and MW-18. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at MW-18. Conversely, MW-22A, CM-2, and MW-17 typically do not exhibit high molybdenum concentration.

At MW-18 and CM-1A the mean chloride concentration over the past four sampling events is more than 10% lower than the mean chloride concentration from prior sampling (indicating a general overall decrease in chloride concentration at these wells). At CM-4B, CM-5A, and CM-5B the mean chloride concentration over the past four sampling events is more than 10% greater than the mean chloride concentration from prior sampling (indicating an overall general increase in chloride concentration at these wells). From **Attachment F**, possible correlations between changes in

molybdenum and chloride concentrations may exist at some of the wells (particularly at MW-5S, MW-15A, MW-15B, MW-18, MW-22A, CM-1A, CM-2, CM-3A, CM-3B, CM-4A, and CM-5A). Also, concentrations for both molybdenum and chloride currently appear to be decreasing at CM-2, CM-3A, CM-4A, CM-4B, and CM-5A. Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in chloride concentration.

**pH:** pH does appear to correlate to higher or lower molybdenum concentration. The monitoring wells exhibiting the highest concentrations for molybdenum also exhibit the highest pH (both as measured in the field and reported by the laboratory). Monitoring wells MW-18 and MW-19S consistently register pH above 10 Standard Units. From **Attachment F**, possible correlations between changes in molybdenum concentration and pH may exist at some of the wells (particularly at MW-5S, MW-15A, MW-15B, MW-16, MW-17, MW-18, MW-22A, MW-22B, CM-1B, CM-2, CM-3A, CM-4A, CM-4B, and CM-5B). In these, a decrease in pH generally appears to correlate with a decrease in molybdenum concentration. Concentrations for both molybdenum and pH currently appear to be decreasing at MW-15B, CM-2, CM-3A, and CM-4B. However, molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in pH.

**TDS:** High TDS concentration does not appear to correlate to high molybdenum concentration. The highest TDS concentrations consistently occur at wells MW-15B, MW-22A, MW-22B, CM-1A, CM-1B, CM-4B, and CM-5B. Most of these wells are located away from the Landfill CCR Unit, these wells typically do not exhibit high molybdenum concentration, and in none of these wells has molybdenum been indicated at SSLs above the GWPSs.

At MW-18 and CM-2 the mean TDS concentration over the past four sampling events is more than 10% lower than the mean TDS concentration from prior sampling (indicating a general overall decrease in TDS concentration at these wells). At MW-7S, MW-15B, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B the mean TDS concentration over the past four sampling events is more than 10% greater than the mean TDS concentration from prior sampling (indicating an overall general increase in TDS concentration at these wells). From **Attachment F**, possible correlations between changes in molybdenum and TDS concentrations may exist at some of the wells (particularly at MW-15A, MW-18, CM-2, CM-3B and CM-5A). Also, concentrations for both molybdenum and TDS currently appear to be decreasing at CM-2 and CM-5A.

Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in TDS concentration.

**Calcium:** In general, site monitoring wells with the highest concentrations for molybdenum exhibit lower concentrations of calcium than those at other wells. The lowest calcium concentrations consistently occur at MW-5S, MW-18, and MW-19S. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at MW-18 and MW-19S. At MW-5S, MW-14A, MW-15A, MW-16, MW-18, CM-1B, and CM-5B the mean calcium concentration over the past four sampling events is more than 10% lower than the mean calcium concentration from prior sampling (indicating a general overall decrease in calcium concentration at these wells). At MW-7S, MW-15B, MW-22B, CM-1A, CM-3B, CM-4A, CM-4B, and CM-5A the mean calcium concentration over the past four sampling events is more than 10% greater than the mean calcium concentration from prior sampling (indicating an overall general increase in calcium concentration at these wells). From **Attachment F**, possible correlations between changes in molybdenum and calcium concentrations may exist at some of the wells (particularly at MW-14A, MW-15A, MW-16, MW-18, and MW-19S). Conversely, a possible inverse correlation is suggested at some of the wells (particularly at MW-15B, MW-22B, CM-1A, CM-1B, CM-4A, CM-4B, CM-5A, and CM-5B). Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in calcium concentration.

**Fluoride:** In general, site monitoring wells with the highest concentrations for molybdenum also exhibit higher concentrations of fluoride than those at other wells. The highest fluoride concentrations consistently occur at MW-5S, MW-18, MW-19S, and CM-3B. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at MW-18 and MW-19S.

At MW-22A, CM-3B, and CM-5A the mean fluoride concentration over the past four sampling events is more than 10% lower than the mean fluoride concentration from prior sampling (indicating a general overall decrease in fluoride concentration at these wells). At MW-16, MW-18, MW-19S, MW-22B, CM-1B, CM-3A, CM-4A, CM-4B, and CM-5B the mean fluoride concentration over the past four sampling events is more than 10% greater than the mean fluoride concentration from prior sampling (indicating an overall general increase in fluoride concentration at these wells). From **Attachment F**, possible correlations between changes in molybdenum and fluoride concentrations may exist at some of the wells (particularly at MW-5S, MW-15A, and

MW-17). Conversely, a possible inverse correlation is suggested at some of the wells (particularly at MW-16 and CM-1B). Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in fluoride concentration.

**Sulfate:** Sulfate concentration does not appear to correlate to higher or lower molybdenum concentration. The highest sulfate concentrations consistently occur at wells MW-14A, MW-15A, MW-19S, MW-22A, MW-22B, CM-1A, CM-1B, and CM-4B. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at only MW-19S. The lowest sulfate concentrations consistently occur at wells MW-5S, MW-7S, MW-18, CM-3A and CM-3B. Of these, monitoring well MW-18 typically exhibits molybdenum concentration at SSLs above the GWPSs while monitoring wells MW-5S and MW-7S typically do not exhibit high molybdenum concentration.

At MW-18, CM-2, and CM-5B the mean sulfate concentration over the past four sampling events is more than 10% lower than the mean sulfate concentration from prior sampling (indicating a general overall decrease in sulfate concentration at these wells). At MW-5S, MW-15B, CM-3A, and CM-4B the mean sulfate concentration over the past four sampling events is more than 10% greater than the mean sulfate concentration from prior sampling (indicating an overall general increase in sulfate concentration at these wells). From **Attachment F**, possible correlations between changes in molybdenum and sulfate concentrations may exist at some of the wells (particularly at MW-16, MW-18, CM-3A, CM-3B, CM-4A, and CM-5A). Also, concentrations for both molybdenum and sulfate currently appear to be decreasing at MW-18, MW-22B, CM-1B, CM-2, CM-4A, and CM-5A. Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in sulfate concentration.

- 4) The monitoring wells were sampled for indicator parameters for MNA including ORP (field measured), DO (field measured), specific conductance (field measured and laboratory reported), nitrate, sulfide, and alkalinity. For ORP, DO, and specific conductance at monitoring wells MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-18, MW-19S, and MW-22A the October 2022 sampling was the thirteenth sampling event concurrent with sampling for molybdenum (dating to August 2017). For nitrate at monitoring wells MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-18, MW-19S, and MW-22A the October 2022 sampling was the tenth sampling event concurrent with sampling for molybdenum (dating to October 2018). For alkalinity at monitoring wells MW-5S, MW-7S, MW-14A,



MW-15A, MW-16, MW-18, MW-19S, and MW-22A the October 2022 sampling was either the seventh or eighth sampling event concurrent with sampling for molybdenum (dating to August 2017). For the other parameters at MW-15B, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B, the October 2022 sampling event was the sixth sampling concurrent with sampling for molybdenum (dating to July 2020). Because of limited water availability samples for ORP, DO, specific conductance, nitrate, sulfide, and/or alkalinity could not be obtained during all sampling events at some of the wells (CM-1B, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B). Charts comparing changes in concentration over time for these parameters to changes in molybdenum concentration for each of the monitoring wells evaluated are included in **Attachment G**.

- Data to date does not appear to suggest an overall correlation between changes in ORP and changes in molybdenum concentrations, but possible correlations may exist at some of the monitoring wells. The monitoring wells exhibiting the highest concentrations for molybdenum (MW-18 and MW-19S) appear to be more often associated with negative ORP (under reducing conditions) and wells away from the Landfill CCR Unit to the east appear to be more often associated with positive ORP.
- Data to date does not appear to suggest an overall correlation between changes in DO and changes in molybdenum concentration, but possible correlations may exist at some of the monitoring wells. The higher DO concentrations at some wells (MW-15B, CM-3A, CM-4A, CM-4B, CM-5A, and CM-5B) may be associated with the use of bailers for purging/sample collection.
- Data to date appears to suggest possible correlation at some wells between changes in specific conductance and changes in molybdenum concentration. Most notably, a decrease in molybdenum concentration at MW-18 appears to correlate to a similar decrease in specific conductance (both as measured in the field and at the laboratory).
- Data to date does not appear to suggest an overall correlation between changes in nitrate and changes in molybdenum concentrations. In many of the wells the nitrate is often not identified above the laboratory reporting levels. In general, higher nitrate concentrations are reported in the monitoring wells MW-15B (north of the Landfill CCR Unit) and at wells away from the Landfill CCR Unit to the east (CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B).

- Data to date does not appear to suggest an overall correlation between changes in sulfide and changes in molybdenum concentrations. Sulfide has been detected periodically in several of the monitoring wells, but is generally below laboratory reporting levels (1 mg/L). Sulfide is most frequently observed at MW-15B (north of the Landfill CCR Unit) and in wells CM-5A and CM-5B (southeast of the Landfill CCR Unit). Sulfide can be indicative of reducing conditions.
  - Data to date does not appear to suggest an overall correlation between changes in total alkalinity and molybdenum concentrations. However, whereas most of the monitoring wells contain alkalinity only in the bicarbonate form the monitoring wells exhibiting the highest concentrations for molybdenum (MW-18 and MW-19S) typically contain both carbonate and hydroxide alkalinity and do not contain alkalinity in the bicarbonate form. A mix of bicarbonate and carbonate alkalinity is typically identified at monitoring wells MW-15B and CM-3B. Also, carbonate alkalinity was reported at MW-16 and CM-1B from October 2022 sampling.
- 5) The wells were sampled for total and dissolved iron, total and dissolved ferrous iron (Fe(II)), and total and dissolved ferric iron (Fe(III)) to facilitate future evaluation of MNA. The October 2022 sampling was the sixth sampling event for total iron, dissolved iron, and total ferrous iron (dating to July 2020). The October 2022 sampling was the fourth sampling event for dissolved ferrous iron and total and dissolved ferric iron. Because of limited water availability, samples for ferrous and or ferric iron could not be obtained during all sampling events at some of the wells. A chart showing changes in iron concentrations over time for each of the monitoring wells evaluated is included in **Attachment H**. Observations from October 2022 sampling of iron are as follows:
- Reported iron concentrations (total and dissolved forms) are low or below laboratory reporting levels in samples collected from MW-5S, MW-17, MW-18, and MW-19S. Of these, molybdenum concentrations are typically indicated at SSLs above the GWPSs at MW-18 and MW-19S. Monitoring wells MW-5S and MW-17 typically do not exhibit high molybdenum concentration.
  - Less than 10% of iron reported in samples collected from MW-15B, MW-22B, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B was in dissolved form (indicating that the iron may be predominantly insoluble or associated with sediment entrained in these samples).

- For samples collected from MW-7S, MW-14A, MW-15A, MW-16, MW-22A, CM-1A, CM-1B, CM-2, and CM-3A more than 10% of the iron identified was in dissolved form, indicating that iron is partly soluble at these locations. Of these, most of the dissolved iron was ferrous iron at MW-14A, MW-15, MW-22A, CM-1A and CM-1B, indicative of possible reducing conditions at these locations. A strong mix of dissolved iron in both the ferrous and ferric forms were noted at CM-2 and CM-3A.

#### COMPARISON TO DRINKING WATER STANDARDS AND GROUNDWATER QUALITY

Of the constituents discussed herein, only fluoride has a published Federal Drinking Water Standard / Maximum Contaminant Level (MCL). The MCL for fluoride is 4 mg/L. Secondary MCLs have been published for chloride (250 mg/L), fluoride (2 mg/L), iron (0.3 mg/L), pH (6.5-8.5 Standard Units), sulfate (250 mg/L), and TDS (500 mg/L). The EPA has developed a health based groundwater protection standard for molybdenum (0.1 mg/L).

In none of the wells discussed herein did the reported fluoride concentration exceed the MCL or the Secondary MCL. Also, chloride was not identified in any of the monitoring wells at concentrations exceeding the Secondary MCL. Sulfate and TDS were above the Secondary MCLs in most of the HPS monitoring wells, including up-gradient background monitoring wells. Measured pH was above the range of the Secondary MCLs at MW-18 and MW-19S (both lab reported and field measured). Reported dissolved iron was at concentrations above the Secondary MCL at MW-14A, MW-15A, MW-22A, CM-3A, and CM-4B. Reported molybdenum was above the health-risk GWPS as established by EPA at MW-15A, MW-16, MW-18, and MW-19S.

Natural groundwater in the region of the HPS is of poor quality. From Hydrologic Atlas Number 9, Reconnaissance of the Water Resources of the McAlester and Texarkana Quadrangles, Southeastern Oklahoma (Marcher, V. Melvin Bergman, L. DeRoy, U.S. Geological Survey, 1983), results from chemical analysis of water from undifferentiated rocks of Cretaceous age in southeastern Oklahoma indicate that sulfate occurs naturally up to concentrations as high as 845 mg/L and that total dissolved solids (TDS) occur naturally up to concentrations of 1,900 mg/L. These naturally occurring levels for both sulfate and TDS exceed the Secondary Standards for these compounds as established by EPA (250 mg/L for sulfate and 500 mg/L for TDS). WFEC has been monitoring several wells for groundwater quality at its HPS facility as part of its CCR Program. This monitoring consistently yields sulfate at concentrations between 1,300 mg/L and 2,000 mg/L and TDS at concentrations between 2,100 mg/L and 2,700 mg/L in upgradient wells at the HPS. These sulfate and TDS levels are naturally occurring.

## GROUNDWATER FLOW AND RISK EVALUATION

As presented in the Assessment of Corrective Measures Report, soils/rock that underlie the HPS are predominantly tight clays and hard shale exhibiting very low horizontal hydraulic conductivities (geometric mean of  $3.43 \times 10^{-6}$  cm/second) and well yields of less than 0.01 gallons per minute. Based on the estimated well yields and hydraulic conductivities it appears that near-surface groundwater at the HPS are perched non-contiguous groundwater zones and well yields are such that formations containing shallow perched groundwater would not generally be considered a usable water bearing unit and not considered a major groundwater aquifer under Oklahoma Standards.

To the southeast, the nearest property boundary is more than 1,000 feet from identified molybdenum in groundwater over the GWPS. To the east and northeast, the nearest property boundaries are at least 7,500 feet from identified molybdenum in groundwater over the GWPS. From the Assessment of Corrective Measures Report, it would take approximately 498 years to reach the nearest property boundary to the southeast and it would take approximately 3,730 years to reach the property boundaries to the northeast and east.

A risk evaluation was previously submitted to the ODEQ (Risk Evaluation for Shallow Perched Groundwater; Planned Impoundment FO-08, Nancy Coleman, March 19, 2020). It concluded that the constituents present in shallow perched groundwater at designated wells downgradient of the Landfill CCR Unit do not pose a hazard to potential on-site or off-site human or ecological receptors.

## CONCLUSIONS/RECOMMENDATIONS

Based on evaluations included in the ODEQ approved Assessment of Corrective Measures Report, source control via enhanced dewatering combined with monitored natural attenuation was proposed as a corrective measure alternative for the molybdenum. A minimum of two years of semi-annual sampling of monitoring wells downgradient of the Landfill CCR Unit was proposed to establish the effectiveness of this alternative prior to selection of a final remedy. Dewatering of the Landfill CCR Unit was initiated in March 2020 and continues as water accumulates in the landfill following rainfall events. From the start of dewatering through January 26, 2023, a total of 1,555.4 hours of pumping have been conducted to prevent standing water from accumulating in the Landfill CCR Unit.

The fourth semi-annual sampling of select monitoring wells as proposed in the approved Assessment of Corrective Measures Report was conducted in October 2022. Wells sampled included MW-5S, MW-7S, MW-14A, MW-15A, MW-15B, MW-16, MW-17, MW-18, MW-19S, MW-22A, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-4A, CM-4B, CM-5A, and CM-5. Samples were collected from each of these wells for analysis of molybdenum. These wells were also sampled for (and/or measured in the field) parameters to facilitate future evaluation of MNA.

Conclusions from the October 2022 sampling are summarized below:

- 1) Molybdenum was identified at SSLs above GWPSs at four wells proximal to the Landfill CCR Unit (MW-15A, MW-16, MW-18, and MW-19S). This is consistent with previous sampling.
- 2) A comparison of October 2022 data to historic data suggests that molybdenum concentrations have gone down over the sampling history for most of the wells sampled (including MW-15A, MW-16, MW-18, and MW-19S).
- 3) It remains evident that molybdenum concentrations attenuate significantly with increased distance from the CCR Landfill.
- 4) The monitoring wells exhibiting the highest concentrations for molybdenum concentrations (MW-18 and MW-19S) also exhibit the highest pH (consistently above 10 Standard Units) and often exhibit negative ORP.
- 5) Higher concentrations for boron, chloride, TDS, calcium, fluoride, sulfate, and conductivity generally do not appear to correlate to higher or lower molybdenum concentration. However, comparison of October 2022 data to historic data does suggest possible correlations in some wells between changes in molybdenum concentration and changes in concentrations for these compounds. Molybdenum concentrations appear to be stable or decreasing in nearly all wells regardless of changes in concentration for these compounds.
- 6) No new exceedances of the GWPSs were identified in any of the other wells during this latest sampling event.
- 7) Natural groundwater in the region is of poor quality, with sulfate at concentrations between 1,300 mg/L and 2,000 mg/L and TDS at concentrations between 2,100 mg/L and 2,700 mg/L in upgradient wells at the HPS. These sulfate and TDS levels are naturally occurring.

- 8) It appears that near-surface groundwater at the HPS is perched non-contiguous groundwater zones, that it would take molybdenum in groundwater approximately 498 years to reach the nearest property boundary to the southeast and it would take approximately 3,730 years to reach the property boundaries to the northeast and east. and that constituents present in shallow perched groundwater downgradient of the Landfill CCR Unit do not pose a hazard to potential on-site or off-site human or ecological receptors.

Data obtained during the two year semi-annual groundwater sampling is encouraging in that molybdenum concentrations have gone down for most of the wells sampled. Additionally, molybdenum concentrations at SSLs above the GWPSs are only identified at four wells proximate to the Landfill CCR Unit and the plume has not expanded beyond the groundwater monitoring system for the Landfill CCR Unit. Based on these, the proposed corrective action alternative as per the approved Assessment of Corrective Measures Report appears likely to be an effective remedy to achieve the standards listed in OAC 252:517-9(b) and (c). It is recommended that WFEC extend the semi-annual sampling for an additional two years to further monitor the effectiveness and to obtain additional information needed to fully evaluate the proposed remedy as per factors contained in OAC 252:517-9-8(c).

During the two year sampling program, and/or until a remedy is selected, WFEC will in accordance with OAC 252:517-9-8(a) continue to prepare and submit to ODEQ for approval semi-annual reports describing the progress in selection and designing the remedy.

At least 30-days prior to selecting a remedy, WFEC will conduct a public meeting to discuss the results of the corrective measures assessment (as required by OAC 252:517-9-7(e)). The Corrective Measures Assessment, supplemental data obtained, and the input received during the public comment period will be used to identify a corrective measure for implementation at the HPS. Upon selection of a remedy, WFEC will prepare and submit to ODEQ for approval a final report as per OAC 252:517-9-8(a) describing the selected remedy and how it meets the standards specified in OAC 252:517-9-8 (b) and (c). The final report will include a certification from a qualified professional engineer that the remedy selected meets the requirements of the selection criteria and the final report will be placed in the operating record.

As required by OAC 252:517-9-87(d), WFEC will specify as part of the selected remedy a schedule for implementing and completing remedial activities. The schedule will require the completion of remedial activities within a reasonable period of time taking into consideration 1) the extent and nature of molybdenum, 2) reasonable probabilities of remedial technologies in achieving compliance with the GWPS, 3) availability of treatment or disposal capacity for CCR managed during implantation of the remedy, 4) potential risks to human health and the environment from exposure of constituents prior to remedy completion, and 5) resource value of the aquifer. Recordkeeping, notification, and internet requirements as per OAC 252:517 will be complied with during all aspects of this process.

It is recommended that the next semi-annual sampling be conducted concurrently with the next Assessment Monitoring event, scheduled to occur in April 2023. It is recommended that the data continue to be reviewed and evaluated to identify potential trends, correlations, and/or other information that could aid in determining the fate of molybdenum in the subsurface environment. A summary report be submitted to ODEQ following evaluation of the data. It is also recommended that WFEC continue with its dewatering of the Landfill CCR Unit as per the approved Assessment of Corrective Measures Report.

If you have any questions, please feel free to contact me at (405) 842-1066 or at [chris.schaefer@altamira-us.com](mailto:chris.schaefer@altamira-us.com)

Sincerely,  
**Altamira-US, LLC.**

A handwritten signature in blue ink, appearing to read "Chris Schaefer", is written over the typed name.

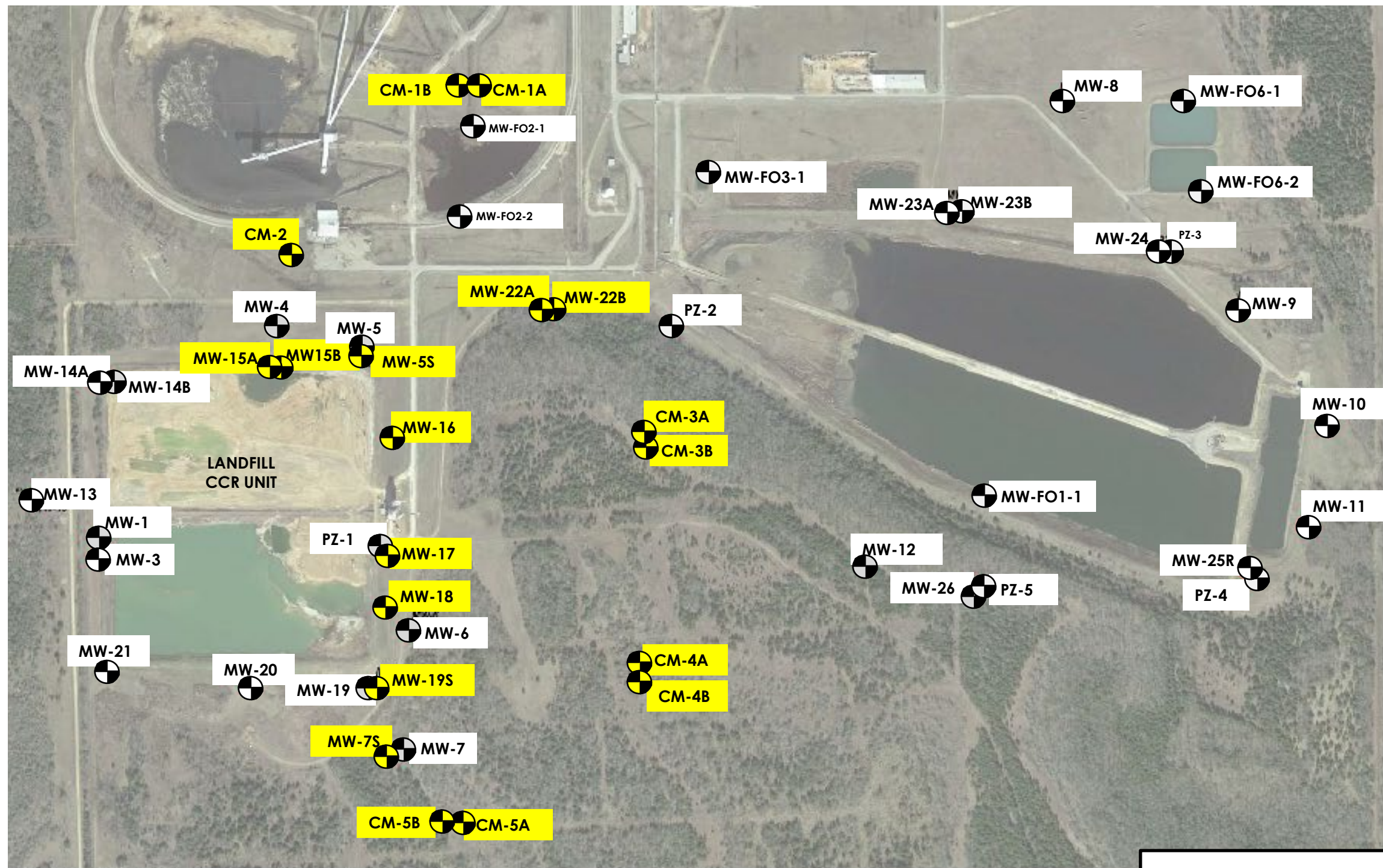
Christopher S. Schaefer, P.E.  
Project Engineer

cc: Kent Flethcer and John McCreight / Western Farmers Electric Cooperation  
Chris Schaefer and Bert Smith / Altamira-US, LLC

# **ATTACHMENT A**

MONITORING WELL LOCATION MAP





**PROJECT**  
 WESTERN FARMERS ELECTRIC COOPERATIVE

**LOCATION**  
 HUGO POWER STATION (HPS)

**PREPARED FOR**  
 WESTERN FARMERS ELECTRIC COOPERATIVE


**DRAWING TITLE**  
 ATTACHMENT A  
 LOCATIONS OF MONITORING WELLS SAMPLED TO MONITOR PROPOSED CORRECTIVE MEASURES ALTERNATIVE


Project No.	WFEE160019
Drawn By	CSS
Checked By	BS
Date:	9/7/21
Scale	1" - 500' (Approximate)
Issued For.	Western Farmers Elect. Coop.
Figure No.	


  
 525 Central Park Drive  
 Suite 500  
 Oklahoma City, OK 73105  
 Phone 405.842.1066 Fax 405.843.4687

Base Map: AERIAL PHOTOGRAPH DATED FEBRUARY 1, 2015, GEOREFERENCED SCREEN CAPTURE FROM GOOGLE EARTH PRO

**ATTACHMENT A – LOCATIONS OF MONITORING WELLS SAMPLED TO MONITOR PROPOSED CORRECTIVE MEASURES ALTERNATIVE**

 Location of monitoring wells sampled semi-annually to monitor proposed corrective measures alternative of source control via enhanced dewatering combined with monitored natural attenuation (Approximate)

 Location of other site monitoring wells/piezometers (Approximate)

  
 One inch approximately 500 ft

## ATTACHMENT B

### ANALYTICAL REPORTS (OCTOBER 2022 SAMPLING)

- Included is a condensed report for monitoring wells MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-17, MW-18, MW-19S, and MW-22A such to contain only those parameters sampled to evaluate monitored natural attenuation. The laboratory provided analytical report for these wells (which also contained monitoring wells and parameters associated with assessment monitoring) was provided in a previous submittal (Notification of Apparent Exceedances from Second 2022 Assessment Monitoring, January 18, 2023)
- Included is the laboratory provided analytical report for monitoring wells sampled to evaluate monitored natural attenuation outside of assessment monitoring CM-1A, CM-1B, CM-2, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, CM-5B, MW-15B, MW-22B).

Client:		Altamira			ANALYTICAL REPORT		
Project:		WFEC / MNA Program			Work Order:		
Sample ID:		MW-55			Lab ID: HS22100361-02		
Sample Date:		10/6/2022			Matrix: Water		
ANALYTE	RESULT	UNITS	DILUTION	RESULT REPORTED	MDL	RL	
Analysis : SPECIFIC CONDUCTIVITY by SM2540C				Method: M2540C			
Specific Conductivity	1,990	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
Analysis : SULFIDE by SM500 S2-F				Method: SM4500 S2-F			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
Analysis : pH by SM4500H+ B				Method: SM4500H+ B			
pH	7.89 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	20.5 H	pH Units	1	MDL	0	0	
Analysis : DISSOLVED SOLIDS by SM2540C				Method: M2540C			
Total Dissolved Solids (Residue, Filterable)	1,100	mg/L	1	MDL	5.00	10.0	
Analysis : ANIONS by E300.0				Method: E300			
Chloride	25.6	mg/L	1	MDL	0.200	0.500	
Fluoride	1.40	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.243	mg/L	1	MDL	0.0300	0.100	
Sulfate	482	mg/L	20	MDL	4.0	10.0	
Analysis : ALKALINITY by SM2320B				Method: SM2320B			
Alkalinity, Bicarbonate (As CaCO3)	430	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	430	mg/L	1	MDL	5.00	5.00	
Analysis : FERROUS IRON by SM3500 FE B				Method: SM3500FED			
Ferrous Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERROUS IRON by SM3500 FE D				Method: SM3500FED (dissolved)			
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED (dissolved)			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : ICP-MS METALS by SW6020A				Method: SW6020			
Boron	2.94	mg/L	10	MDL	0.110	0.200	
Sodium	387	mg/L	10	MDL	0.140	2.00	
Potassium	4.17	mg/L	1	MDL	0.0180	0.200	
Magnesium	4.79	mg/L	1	MDL	0.0100	0.200	
Molybdenum	0.00210 J	mg/L	1	MDL	0.000600	0.00500	
Iron	<0.0120	mg/L	1	MDL	0.0120	0.200	
Calcium	24.1	mg/L	1	MDL	0.0340	0.500	
Analysis : DISSOLVED METALS by SW6020A				Method: SW6020 (dissolved)			
Molybdenum, Dissolved	0.00232 J	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	<0.0120	mg/L	1	MDL	0.0120	0.200	

Client:		Altamira			ANALYTICAL REPORT		
Project:		WFEC / MNA Program			Work Order:		
Sample ID:		MW-7S			Lab ID: HS22100361-03		
Sample Date:		10/5/2022			Matrix: Water		
ANALYTE	RESULT	UNITS	DILUTION	RESULT REPORTED	MDL	RL	
Analysis : SPECIFIC CONDUCTIVITY by SM2540C				Method: M2540C			
Specific Conductivity	2,000 H	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
Analysis : SULFIDE by SM500 S2-F				Method: SM4500 S2-F			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
Analysis : pH by SM4500H+ B				Method: SM4500H+ B			
pH	7.81	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	20.8	pH Units	1	MDL	0	0	
Analysis : DISSOLVED SOLIDS by SM2540C				Method: M2540C			
Total Dissolved Solids (Residue, Filterable)	1,350 H	mg/L	1	MDL	5.00	10.0	
Analysis : ANIONS by E300.0				Method: E300			
Chloride	16.9	mg/L	1	MDL	0.200	0.500	
Fluoride	0.711	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.155	mg/L	1	MDL	0.0300	0.100	
Sulfate	687	mg/L	20	MDL	4.00	10.00	
Analysis : ALKALINITY by SM2320B				Method: SM2320B			
Alkalinity, Bicarbonate (As CaCO3)	326 H	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00 H	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00 H	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	326 H	mg/L	1	MDL	5.00	5.00	
Analysis : FERROUS IRON by SM3500 FE B				Method: SM3500FED			
Ferrous Iron	0.127	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERROUS IRON by SM3500 FE D				Method: SM3500FED (dissolved)			
Ferrous Iron, Dissolved	0.117	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED			
Ferric Iron	0.0310 J	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED (dissolved)			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : ICP-MS METALS by SW6020A				Method: SW6020			
Boron	2.70	mg/L	10	MDL	0.110	0.200	
Sodium	313	mg/L	10	MDL	0.140	2.00	
Potassium	5.34	mg/L	1	MDL	0.0180	0.200	
Magnesium	12.2	mg/L	1	MDL	0.0100	0.200	
Molybdenum	0.00103 J	mg/L	1	MDL	0.000600	0.00500	
Iron	0.158 J	mg/L	1	MDL	0.0120	0.200	
Calcium	100	mg/L	1	MDL	0.0340	0.500	
Analysis : DISSOLVED METALS by SW6020A				Method: SW6020 (dissolved)			
Molybdenum, Dissolved	0.00112 J	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	0.113 J	mg/L	1	MDL	0.0120	0.200	

<b>Client:</b>	<b>Altamira</b>	<b>ANALYTICAL REPORT</b>
<b>Project:</b>	<b>WFEC / MNA Program</b>	<b>Work Order:</b>

<b>Sample ID:</b>	<b>DUP 3</b>	<b>Lab ID: HS22100361-13</b>
<b>Sample Date:</b>	<b>10/5/2022</b>	<b>Matrix: Water</b>

ANALYTE	RESULT	UNITS	DILUTION	RESULT		
				REPORTED	MDL	RL
<b>Analysis : SPECIFIC CONDUCTIVITY by SM2540C</b>				<b>Method: M2540C</b>		
Specific Conductivity	<b>2,050</b>	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00
<b>Analysis : SULFIDE by SM500 S2-F</b>				<b>Method: SM4500 S2-F</b>		
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00
<b>Analysis : pH by SM4500H+ B</b>				<b>Method: SM4500H+ B</b>		
pH	<b>8.01</b>	pH Units	1	MDL	0.100	0.100
Temp Deg C @pH	<b>21.3</b>	pH Units	1	MDL	0	0
<b>Analysis : DISSOLVED SOLIDS by SM2540C</b>				<b>Method: M2540C</b>		
Total Dissolved Solids (Residue, Filterable)	<b>1,260 H</b>	mg/L	1	MDL	5.00	10.0
<b>Analysis : ANIONS by E300.0</b>				<b>Method: E300</b>		
Chloride	<b>16.7</b>	mg/L	1	MDL	0.200	0.500
Fluoride	<b>0.824</b>	mg/L	1	MDL	0.0500	0.100
Nitrogen, Nitrate (As N)	<b>0.147</b>	mg/L	1	MDL	0.0300	0.100
Sulfate	<b>687</b>	mg/L	20	MDL	4.00	10.0
<b>Analysis : ALKALINITY by SM2320B</b>				<b>Method: SM2320B</b>		
Alkalinity, Bicarbonate (As CaCO3)	<b>289</b>	mg/L	1	MDL	5.00	5.00
Alkalinity, Carbonate (As CaCO3)	<b>7.48</b>	mg/L	1	MDL	5.00	5.00
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00
Alkalinity, Total (As CaCO3)	<b>297</b>	mg/L	1	MDL	5.00	5.00
<b>Analysis : FERROUS IRON by SM3500 FE B</b>				<b>Method: SM3500FED</b>		
Ferrous Iron	<b>0.107</b>	mg/L	1	MDL	0.0200	0.0500
<b>Analysis : FERROUS IRON by SM3500 FE D</b>				<b>Method: SM3500FED (dissolved)</b>		
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED</b>		
Ferric Iron	<b>0.0790</b>	mg/L	1	MDL	0.0200	0.0500
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED (dissolved)</b>		
Ferric Iron, Dissolved	<b>0.0883</b>	mg/L	1	MDL	0.0200	0.0500
<b>Analysis : ICP-MS METALS by SW6020A</b>				<b>Method: SW6020</b>		
Boron	<b>3.07</b>	mg/L	10	MDL	0.110	0.200
Sodium	<b>352</b>	mg/L	10	MDL	0.140	2.00
Potassium	<b>6.00</b>	mg/L	1	MDL	0.0180	0.200
Magnesium	<b>13.8</b>	mg/L	1	MDL	0.0100	0.200
Molybdenum	<b>0.00134 J</b>	mg/L	1	MDL	0.000600	0.00500
Iron	<b>0.186 J</b>	mg/L	1	MDL	0.0120	0.200
Calcium	<b>111</b>	mg/L	1	MDL	0.0340	0.500
<b>Analysis : DISSOLVED METALS by SW6020A</b>				<b>Method: SW6020 (dissolved)</b>		
Molybdenum, Dissolved	<b>0.00108 J</b>	mg/L	1	MDL	0.000600	0.00500
Iron, Dissolved	<b>0.0883 J</b>	mg/L	1	MDL	0.0120	0.200

Client:		Altamira			ANALYTICAL REPORT		
Project:		WFEC / MNA Program			Work Order:		
Sample ID:		MW-14A			Lab ID: HS22100361-08		
Sample Date:		10/6/2022			Matrix: Water		
ANALYTE	RESULT	UNITS	DILUTION	RESULT REPORTED	MDL	RL	
Analysis : SPECIFIC CONDUCTIVITY by SM2540C				Method: M2540C			
Specific Conductivity	3,540	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
Analysis : SULFIDE by SM500 S2-F				Method: SM4500 S2-F			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
Analysis : pH by SM4500H+ B				Method: SM4500H+ B			
pH	7.06 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	20.8 H	pH Units	1	MDL	0	0	
Analysis : DISSOLVED SOLIDS by SM2540C				Method: M2540C			
Total Dissolved Solids (Residue, Filterable)	2,580	mg/L	1	MDL	5.00	10.0	
Analysis : ANIONS by E300.0				Method: E300			
Chloride	12.5	mg/L	1	MDL	0.200	0.500	
Fluoride	0.324	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.0777 J	mg/L	1	MDL	0.0300	0.100	
Sulfate	1,600	mg/L	20	MDL	4.00	10.0	
Analysis : ALKALINITY by SM2320B				Method: SM2320B			
Alkalinity, Bicarbonate (As CaCO3)	321	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	321	mg/L	1	MDL	5.00	5.00	
Analysis : FERROUS IRON by SM3500 FE B				Method: SM3500FED			
Ferrous Iron	0.578	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERROUS IRON by SM3500 FE D				Method: SM3500FED (dissolved)			
Ferrous Iron, Dissolved	0.489	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED			
Ferric Iron	0.225	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED (dissolved)			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : ICP-MS METALS by SW6020A				Method: SW6020			
Boron	1.01	mg/L	10	MDL	0.110	0.200	
Sodium	424	mg/L	10	MDL	0.140	2.00	
Potassium	7.80	mg/L	1	MDL	0.0180	0.200	
Magnesium	25.4	mg/L	1	MDL	0.0100	0.200	
Molybdenum	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron	0.803	mg/L	1	MDL	0.0120	0.200	
Calcium	313	mg/L	10	MDL	0.340	5.00	
Analysis : DISSOLVED METALS by SW6020A				Method: SW6020 (dissolved)			
Molybdenum, Dissolved	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	0.475	mg/L	1	MDL	0.0120	0.200	

<b>Client:</b>		<b>Altamira</b>			<b>ANALYTICAL REPORT</b>		
<b>Project:</b>		<b>WFEC / MNA Program</b>			<b>Work Order:</b>		
<b>Sample ID:</b>		<b>MW-15A</b>			<b>Lab ID: HS22100361-09</b>		
<b>Sample Date:</b>		<b>10/6/2022</b>			<b>Matrix: Water</b>		
<b>ANALYTE</b>	<b>RESULT</b>	<b>UNITS</b>	<b>DILUTION</b>	<b>RESULT REPORTED</b>	<b>MDL</b>	<b>RL</b>	
<b>Analysis : SPECIFIC CONDUCTIVITY by SM2540C</b>				<b>Method: M2540C</b>			
Specific Conductivity	3,590	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
<b>Analysis : SULFIDE by SM500 S2-F</b>				<b>Method: SM4500 S2-F</b>			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
<b>Analysis : pH by SM4500H+ B</b>				<b>Method: SM4500H+ B</b>			
pH	7.74 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	22.7 H	pH Units	1	MDL	0	0	
<b>Analysis : DISSOLVED SOLIDS by SM2540C</b>				<b>Method: M2540C</b>			
Total Dissolved Solids (Residue, Filterable)	2,370	mg/L	1	MDL	5.00	10.0	
<b>Analysis : ANIONS by E300.0</b>				<b>Method: E300</b>			
Chloride	26.2	mg/L	1	MDL	0.200	0.500	
Fluoride	1.31	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.246	mg/L	1	MDL	0.0300	0.100	
Sulfate	1,510	mg/L	20	MDL	4.00	10.0	
<b>Analysis : ALKALINITY by SM2320B</b>				<b>Method: SM2320B</b>			
Alkalinity, Bicarbonate (As CaCO3)	189	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	189	mg/L	1	MDL	5.00	5.00	
<b>Analysis : FERROUS IRON by SM3500 FE B</b>				<b>Method: SM3500FED</b>			
Ferrous Iron	0.0890	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERROUS IRON by SM3500 FE D</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferrous Iron, Dissolved	0.358	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED</b>			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : ICP-MS METALS by SW6020A</b>				<b>Method: SW6020</b>			
Boron	3.11	mg/L	10	MDL	0.110	0.200	
Sodium	609	mg/L	10	MDL	0.140	2.00	
Potassium	4.96	mg/L	1	MDL	0.0180	0.200	
Magnesium	10.3	mg/L	1	MDL	0.0100	0.200	
Molybdenum	0.149	mg/L	1	MDL	0.000600	0.00500	
Iron	0.208	mg/L	1	MDL	0.0120	0.200	
Calcium	113	mg/L	1	MDL	0.0340	0.500	
<b>Analysis : DISSOLVED METALS by SW6020A</b>				<b>Method: SW6020 (dissolved)</b>			
Molybdenum, Dissolved	0.149	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	0.367	mg/L	1	MDL	0.0120	0.200	

<b>Client:</b>		<b>Altamira</b>			<b>ANALYTICAL REPORT</b>		
<b>Project:</b>		<b>WFEC / MNA Program</b>			<b>Work Order:</b>		
<b>Sample ID:</b>		<b>MW-16</b>			<b>Lab ID: HS22100361-12</b>		
<b>Sample Date:</b>		<b>10/5/2022</b>			<b>Matrix: Water</b>		
<b>ANALYTE</b>	<b>RESULT</b>	<b>UNITS</b>	<b>DILUTION</b>	<b>RESULT REPORTED</b>	<b>MDL</b>	<b>RL</b>	
<b>Analysis : SPECIFIC CONDUCTIVITY by SM2540C</b>				<b>Method: M2540C</b>			
Specific Conductivity	2,650	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
<b>Analysis : SULFIDE by SM500 S2-F</b>				<b>Method: SM4500 S2-F</b>			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
<b>Analysis : pH by SM4500H+ B</b>				<b>Method: SM4500H+ B</b>			
pH	7.85 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	21.5 H	pH Units	1	MDL	0	0	
<b>Analysis : DISSOLVED SOLIDS by SM2540C</b>				<b>Method: M2540C</b>			
Total Dissolved Solids (Residue, Filterable)	1,690	mg/L	1	MDL	5.00	10.0	
<b>Analysis : ANIONS by E300.0</b>				<b>Method: E300</b>			
Chloride	25.8	mg/L	1	MDL	0.200	0.500	
Fluoride	1.25	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.127	mg/L	1	MDL	0.0300	0.100	
Sulfate	996	mg/L	20	MDL	4.00	10.0	
<b>Analysis : ALKALINITY by SM2320B</b>				<b>Method: SM2320B</b>			
Alkalinity, Bicarbonate (As CaCO3)	277	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	10.7	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	288	mg/L	1	MDL	5.00	5.00	
<b>Analysis : FERROUS IRON by SM3500 FE B</b>				<b>Method: SM3500FED</b>			
Ferrous Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERROUS IRON by SM3500 FE D</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED</b>			
Ferric Iron	0.0547	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferric Iron, Dissolved	0.0203 J	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : ICP-MS METALS by SW6020A</b>				<b>Method: SW6020</b>			
Boron	2.54	mg/L	10	MDL	0.110	0.200	
Sodium	415	mg/L	10	MDL	0.140	2.00	
Potassium	3.61	mg/L	1	MDL	0.0180	0.200	
Magnesium	7.24	mg/L	1	MDL	0.0100	0.200	
Molybdenum	0.113	mg/L	1	MDL	0.000600	0.00500	
Iron	0.0547 J	mg/L	1	MDL	0.0120	0.200	
Calcium	132	mg/L	1	MDL	0.0340	0.500	
<b>Analysis : DISSOLVED METALS by SW6020A</b>				<b>Method: SW6020 (dissolved)</b>			
Molybdenum, Dissolved	0.112	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	0.0203 J	mg/L	1	MDL	0.0120	0.200	



<b>Client:</b>		<b>Altamira</b>			<b>ANALYTICAL REPORT</b>		
<b>Project:</b>		<b>WFEC / MNA Program</b>			<b>Work Order:</b>		
<b>Sample ID:</b>		<b>MW-17</b>			<b>Lab ID: HS22100361-10</b>		
<b>Sample Date:</b>		<b>10/6/2022</b>			<b>Matrix: Water</b>		
<b>ANALYTE</b>	<b>RESULT</b>	<b>UNITS</b>	<b>DILUTION</b>	<b>RESULT REPORTED</b>	<b>MDL</b>	<b>RL</b>	
<b>Analysis : SPECIFIC CONDUCTIVITY by SM2540C</b>				<b>Method: M2540C</b>			
Specific Conductivity	2,570	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
<b>Analysis : SULFIDE by SM500 S2-F</b>				<b>Method: SM4500 S2-F</b>			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
<b>Analysis : pH by SM4500h+ B</b>				<b>Method: SM4500H+ B</b>			
pH	7.04 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	22.9 H	pH Units	1	MDL	0	0	
<b>Analysis : DISSOLVED SOLIDS by SM2540C</b>				<b>Method: M2540C</b>			
Total Dissolved Solids (Residue, Filterable)	2,170	mg/L	1	MDL	5.00	10.0	
<b>Analysis : ANIONS by E300.0</b>				<b>Method: E300</b>			
Chloride	4.25	mg/L	1	MDL	0.200	0.500	
Fluoride	0.340	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.0756 J	mg/L	1	MDL	0.0300	0.100	
Sulfate	1,320	mg/L	20	MDL	4.00	10.0	
<b>Analysis : ALKALINITY by SM2320B</b>				<b>Method: SM2320B</b>			
Alkalinity, Bicarbonate (As CaCO3)	276	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	276	mg/L	1	MDL	5.00	5.00	
<b>Analysis : FERROUS IRON by SM3500 FE B</b>				<b>Method: SM3500FED</b>			
Ferrous Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERROUS IRON by SM3500 FE D</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED</b>			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferric Iron, Dissolved	0.0581	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : ICP-MS METALS by SW6020A</b>				<b>Method: SW6020</b>			
Boron	0.902	mg/L	1	MDL	0.0110	0.020	
Sodium	32.8	mg/L	1	MDL	0.0140	0.200	
Potassium	4.99	mg/L	1	MDL	0.0180	0.200	
Magnesium	33.7	mg/L	1	MDL	0.0100	0.200	
Molybdenum	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron	<0.0120	mg/L	1	MDL	0.0120	0.200	
Calcium	541	mg/L	10	MDL	0.340	5.00	
<b>Analysis : DISSOLVED METALS by SW6020A</b>				<b>Method: SW6020 (dissolved)</b>			
Molybdenum, Dissolved	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	0.0581 J	mg/L	1	MDL	0.0120	0.200	

Client:		Altamira			ANALYTICAL REPORT		
Project:		WFEC / MNA Program			Work Order:		
Sample ID:		MW-18			Lab ID: HS22100361-11		
Sample Date:		10/6/2022			Matrix: Water		
ANALYTE	RESULT	UNITS	DILUTION	RESULT REPORTED	MDL	RL	
Analysis : SPECIFIC CONDUCTIVITY by SM2540C				Method: M2540C			
Specific Conductivity	2,090	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
Analysis : SULFIDE by SM500 S2-F				Method: SM4500 S2-F			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
Analysis : pH by SM4500H+ B				Method: SM4500H+ B			
pH	10.2 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	22.8 H	pH Units	1	MDL	0	0	
Analysis : DISSOLVED SOLIDS by SM2540C				Method: M2540C			
Total Dissolved Solids (Residue, Filterable)	1,250	mg/L	1	MDL	5.00	10.0	
Analysis : ANIONS by E300.0				Method: E300			
Chloride	3.88	mg/L	1	MDL	0.200	0.500	
Fluoride	1.84	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.0851 J	mg/L	1	MDL	0.0300	0.100	
Sulfate	804	mg/L	20	MDL	4.00	10.0	
Analysis : ALKALINITY by SM2320B				Method: SM2320B			
Alkalinity, Bicarbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	56.5	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	5.06	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	61.6	mg/L	1	MDL	5.00	5.00	
Analysis : FERROUS IRON by SM3500 FE B				Method: SM3500FED			
Ferrous Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERROUS IRON by SM3500 FE D				Method: SM3500FED (dissolved)			
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED (dissolved)			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : ICP-MS METALS by SW6020A				Method: SW6020			
Boron	5.20	mg/L	10	MDL	0.110	0.200	
Sodium	381	mg/L	10	MDL	0.140	2.00	
Potassium	14.5	mg/L	1	MDL	0.0180	0.200	
Magnesium	0.181 J	mg/L	1	MDL	0.0100	0.200	
Molybdenum	0.183	mg/L	1	MDL	0.000600	0.00500	
Iron	<0.0120	mg/L	1	MDL	0.0120	0.200	
Calcium	17.7	mg/L	1	MDL	0.0340	0.500	
Analysis : DISSOLVED METALS by SW6020A				Method: SW6020 (dissolved)			
Molybdenum, Dissolved	0.172	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	<0.0120	mg/L	1	MDL	0.0120	0.200	

<b>Client:</b>		<b>Altamira</b>			<b>ANALYTICAL REPORT</b>		
<b>Project:</b>		<b>WFEC / MNA Program</b>			<b>Work Order:</b>		
<b>Sample ID:</b>		<b>MW-19S</b>			<b>Lab ID: HS22100361-05</b>		
<b>Sample Date:</b>		<b>10/6/2022</b>			<b>Matrix: Water</b>		
<b>ANALYTE</b>	<b>RESULT</b>	<b>UNITS</b>	<b>DILUTION</b>	<b>RESULT REPORTED</b>	<b>MDL</b>	<b>RL</b>	
<b>Analysis : SPECIFIC CONDUCTIVITY by SM2540C</b>				<b>Method: M2540C</b>			
Specific Conductivity	<b>3,570</b>	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
<b>Analysis : SULFIDE by SM500 S2-F</b>				<b>Method: SM4500 S2-F</b>			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
<b>Analysis : pH by SM4500H+ B</b>				<b>Method: SM4500H+ B</b>			
pH	<b>10.8 H</b>	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	<b>20.2 H</b>	pH Units	1	MDL	0	0	
<b>Analysis : DISSOLVED SOLIDS by SM2540C</b>				<b>Method: M2540C</b>			
Total Dissolved Solids (Residue, Filterable)	<b>2,210</b>	mg/L	1	MDL	5.00	10.0	
<b>Analysis : ANIONS by E300.0</b>				<b>Method: E300</b>			
Chloride	<b>13.3</b>	mg/L	1	MDL	0.200	0.500	
Fluoride	<b>1.59</b>	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	<0.0300	mg/L	1	MDL	0.0300	0.100	
Sulfate	<b>1,480</b>	mg/L	50	MDL	10.0	25.0	
<b>Analysis : ALKALINITY by SM2320B</b>				<b>Method: SM2320B</b>			
Alkalinity, Bicarbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<b>61.0</b>	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<b>68.7</b>	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	<b>130</b>	mg/L	1	MDL	5.00	5.00	
<b>Analysis : FERROUS IRON by SM3500 FE B</b>				<b>Method: SM3500FED</b>			
Ferrous Iron	<b>0.0230 J</b>	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERROUS IRON by SM3500 FE D</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferrous Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED</b>			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : FERRIC IRON-BY CALCULATION by SM3500FED</b>				<b>Method: SM3500FED (dissolved)</b>			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
<b>Analysis : ICP-MS METALS by SW6020A</b>				<b>Method: SW6020</b>			
Boron	<b>8.43</b>	mg/L	20	MDL	0.220	0.400	
Sodium	<b>752</b>	mg/L	20	MDL	0.280	4.00	
Potassium	<b>37.7</b>	mg/L	1	MDL	0.0180	0.200	
Magnesium	<b>0.0228 J</b>	mg/L	1	MDL	0.0100	0.200	
Molybdenum	<b>0.430</b>	mg/L	1	MDL	0.000600	0.00500	
Iron	<0.0120	mg/L	1	MDL	0.0120	0.200	
Calcium	<b>40.7</b>	mg/L	1	MDL	0.0340	0.500	
<b>Analysis : DISSOLVED METALS by SW6020A</b>				<b>Method: SW6020 (dissolved)</b>			
Molybdenum, Dissolved	<b>0.413</b>	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	<0.0120	mg/L	1	MDL	0.0120	0.200	

Client:		Altamira			ANALYTICAL REPORT		
Project:		WFEC / MNA Program			Work Order:		
Sample ID:		MW-22A			Lab ID: HS22100191-07		
Sample Date:		10/4/2022			Matrix: Water		
ANALYTE	RESULT	UNITS	DILUTION	RESULT REPORTED	MDL	RL	
Analysis : SPECIFIC CONDUCTIVITY by SM2540C				Method: M2540C			
Specific Conductivity	3,770	umhos/cm @ 25.0 °C	1	MDL	5.00	5.00	
Analysis : SULFIDE by SM500 S2-F				Method: SM4500 S2-F			
Sulfide	<1.00	mg/L	1	MDL	1.00	1.00	
Analysis : pH by SM4500H+ B				Method: SM4500H+ B			
pH	7.18 H	pH Units	1	MDL	0.100	0.100	
Temp Deg C @pH	20.3 H	pH Units	1	MDL	0	0	
Analysis : DISSOLVED SOLIDS by SM2540C				Method: M2540C			
Total Dissolved Solids (Residue, Filterable)	3,230	mg/L	1	MDL	5.00	10.0	
Analysis : ANIONS by E300.0				Method: E300			
Chloride	2.46	mg/L	1	MDL	0.200	0.500	
Fluoride	0.354	mg/L	1	MDL	0.0500	0.100	
Nitrogen, Nitrate (As N)	0.171	mg/L	1	MDL	0.0300	0.100	
Sulfate	1,910	mg/L	40	MDL	8.00	20.0	
Analysis : ALKALINITY by SM2320B				Method: SM2320B			
Alkalinity, Bicarbonate (As CaCO3)	262	mg/L	1	MDL	5.00	5.00	
Alkalinity, Carbonate (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Hydroxide (As CaCO3)	<5.00	mg/L	1	MDL	5.00	5.00	
Alkalinity, Total (As CaCO3)	262	mg/L	1	MDL	5.00	5.00	
Analysis : FERROUS IRON by SM3500 FE B				Method: SM3500FED			
Ferrous Iron	1.02	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERROUS IRON by SM3500 FE D				Method: SM3500FED (dissolved)			
Ferrous Iron, Dissolved	1.16	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED			
Ferric Iron	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : FERRIC IRON-BY CALCULATION by SM3500FED				Method: SM3500FED (dissolved)			
Ferric Iron, Dissolved	<0.0200	mg/L	1	MDL	0.0200	0.0500	
Analysis : ICP-MS METALS by SW6020A				Method: SW6020			
Boron	1.84	mg/L	1	MDL	0.0110	0.020	
Sodium	150	mg/L	1	MDL	0.0140	0.200	
Potassium	14.5	mg/L	1	MDL	0.0180	0.200	
Magnesium	92.6	mg/L	1	MDL	0.0100	0.200	
Molybdenum	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron	0.375	mg/L	1	MDL	0.0120	0.200	
Calcium	574	mg/L	10	MDL	0.340	5.00	
Analysis : DISSOLVED METALS by SW6020A				Method: SW6020 (dissolved)			
Molybdenum, Dissolved	<0.000600	mg/L	1	MDL	0.000600	0.00500	
Iron, Dissolved	1.04	mg/L	1	MDL	0.0120	0.200	

Acronyms & Qualifiers

- H : Analyzed outside of holding time. pH is an immediate test.
- H : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- MDL : Method Detection Limit.
- RL : Reporting Limit.



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October 19, 2022

Heather Tiffany  
Altamira  
525 central park Dr  
Suite 500  
Oklahoma City, OK 73013

Work Order: **HS22100190**

Laboratory Results for: **WFEC / MNA**

Dear Heather Tiffany,

ALS Environmental received 11 sample(s) on Oct 05, 2022 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL

Anna Kinchen  
Project Manager

**Client:** Altamira  
**Project:** WFEC / MNA  
**Work Order:** HS22100190

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS22100190-01	CM-3A	Water		04-Oct-2022 12:04	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-02	CM-4A	Water		04-Oct-2022 11:10	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-03	CM-4B	Water		04-Oct-2022 10:55	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-04	CM-5A	Water		04-Oct-2022 10:23	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-05	CM-5B	Water		04-Oct-2022 10:00	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-06	MW-15B	Water		04-Oct-2022 13:00	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-07	MW-22B	Water		04-Oct-2022 12:35	05-Oct-2022 10:10	<input type="checkbox"/>
HS22100190-08	CM-1A	Water		04-Oct-2022 15:47	06-Oct-2022 09:45	<input type="checkbox"/>
HS22100190-09	CM-1B	Water		04-Oct-2022 17:00	06-Oct-2022 09:45	<input type="checkbox"/>
HS22100190-10	CM-2	Water		06-Oct-2022 10:21	07-Oct-2022 09:00	<input type="checkbox"/>
HS22100190-11	CM-3B	Water		07-Oct-2022 10:30	08-Oct-2022 09:00	<input type="checkbox"/>

**Client:** Altamira  
**Project:** WFEC / MNA  
**Work Order:** HS22100190

**CASE NARRATIVE**

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**Work Order Comments**

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.  
The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

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**Metals by Method SM3500FED**

**Batch ID: R419800,R419802,R418763,R418825,R418882,R418883,R418923,R418924**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**Metals by Method SW6020A**

**Batch ID: 184894**

**Sample ID: HS22100632-04MS**

- MS and MSD are for an unrelated sample (Calcium,Sodium)

**Sample ID: HS22100632-04PDS**

- PDS is for an unrelated sample (Calcium)

**Batch ID: 184932**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method SM2320B**

**Batch ID: R419512,R419661**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method M2510 B**

**Batch ID: R419689**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method M2540C**

**Batch ID: R419238,R419318,R419454**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method SM4500 S2-F**

**Batch ID: R419124,R419364**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method SM4500H+ B**

**Batch ID: R418714,R418718,R418848,R419091**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**Client:** Altamira  
**Project:** WFEC / MNA  
**Work Order:** HS22100190

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**CASE NARRATIVE**

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**WetChemistry by Method E300**

**Batch ID: R418696**

**Sample ID: HS22100187-01MS**

- MS and MSD are for an unrelated sample

**Sample ID: HS22100191-02MS**

- MS and MSD are for an unrelated sample

**Batch ID: R418776**

**Sample ID: CM-1A (HS22100190-08MS)**

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Sulfate)

**Sample ID: HS22100264-01MS**

- MS and MSD are for an unrelated sample

**Sample ID: HS22100260-04MS**

- MS and MSD are for an unrelated sample

**Batch ID: R418893**

**Sample ID: CM-2 (HS22100190-10MS)**

- The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Sulfate)

**Batch ID: R418914**

**Sample ID: HS22100361-12MS**

- MS and MSD are for an unrelated sample (Sulfate)
-



Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-3A  
 Collection Date: 04-Oct-2022 12:04

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	4.17		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	4.82		0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	3.00		0.0550	0.100	mg/L	5	18-Oct-2022 15:50
Calcium	72.8		0.170	2.50	mg/L	5	18-Oct-2022 15:50
Iron	12.9		0.0600	1.00	mg/L	5	18-Oct-2022 15:50
Magnesium	11.1		0.0500	1.00	mg/L	5	18-Oct-2022 15:50
Molybdenum	0.00155	J	0.000600	0.00500	mg/L	1	19-Oct-2022 14:05
Potassium	6.15		0.0900	1.00	mg/L	5	18-Oct-2022 15:50
Sodium	518		0.0700	1.00	mg/L	5	18-Oct-2022 15:50
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	5.32		0.0120	0.200	mg/L	1	17-Oct-2022 23:21
Molybdenum	0.00234	J	0.000600	0.00500	mg/L	1	17-Oct-2022 23:21
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	33.3		0.200	0.500	mg/L	1	05-Oct-2022 17:28
Fluoride	0.816		0.0500	0.100	mg/L	1	05-Oct-2022 17:28
Nitrogen, Nitrate (As N)	16.2		0.0300	0.100	mg/L	1	05-Oct-2022 17:28
Sulfate	600		2.00	5.00	mg/L	10	05-Oct-2022 17:33
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	2,390		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: CWG			
Total Dissolved Solids (Residue, Filterable)	1,720		5.00	10.0	mg/L	1	11-Oct-2022 17:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	589		5.00	5.00	mg/L	1	16-Oct-2022 13:17
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:17
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:17
Alkalinity, Total (As CaCO3)	589		5.00	5.00	mg/L	1	16-Oct-2022 13:17
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	8.73		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.501		0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	U		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-3A  
 Collection Date: 04-Oct-2022 12:04

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		Method:SM4500H+ B			Analyst: MZD		
pH	7.62	H	0.100	0.100	pH Units	1	06-Oct-2022 10:57
Temp Deg C @pH	21.8	H	0	0	°C	1	06-Oct-2022 10:57

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-4A  
 Collection Date: 04-Oct-2022 11:10

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-02  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	7.36		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	0.0436	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	4.12		0.220	0.400	mg/L	20	19-Oct-2022 12:23
Calcium	117		0.0340	0.500	mg/L	1	18-Oct-2022 15:53
Iron	14.2		0.0120	0.200	mg/L	1	18-Oct-2022 15:53
Magnesium	17.9		0.0100	0.200	mg/L	1	18-Oct-2022 15:53
Molybdenum	0.00449	J	0.000600	0.00500	mg/L	1	18-Oct-2022 15:53
Potassium	8.43		0.0180	0.200	mg/L	1	18-Oct-2022 15:53
Sodium	716		0.280	4.00	mg/L	20	19-Oct-2022 12:23
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	0.0782	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:08
Molybdenum	0.0170		0.000600	0.00500	mg/L	1	17-Oct-2022 23:08
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	77.1		0.400	1.00	mg/L	2	05-Oct-2022 17:38
Fluoride	0.795		0.100	0.200	mg/L	2	05-Oct-2022 17:38
Nitrogen, Nitrate (As N)	18.3		0.0600	0.200	mg/L	2	05-Oct-2022 17:38
Sulfate	1,100		4.00	10.0	mg/L	20	05-Oct-2022 17:44
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	4,080		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: CWG			
Total Dissolved Solids (Residue, Filterable)	2,420		5.00	10.0	mg/L	1	11-Oct-2022 17:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	616		5.00	5.00	mg/L	1	16-Oct-2022 13:33
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:33
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:33
Alkalinity, Total (As CaCO3)	616		5.00	5.00	mg/L	1	16-Oct-2022 13:33
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	6.84		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0350	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	2.08		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-4A  
 Collection Date: 04-Oct-2022 11:10

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-02  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>			Analyst: MZD		
pH	7.53	H	0.100	0.100	pH Units	1	06-Oct-2022 10:57
Temp Deg C @pH	21.3	H	0	0	°C	1	06-Oct-2022 10:57

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-4B  
 Collection Date: 04-Oct-2022 10:55

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-03  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	1.95		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	0.0416	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	4.89		0.220	0.400	mg/L	20	19-Oct-2022 12:30
Calcium	86.1		0.0340	0.500	mg/L	1	18-Oct-2022 17:02
Iron	8.11		0.0120	0.200	mg/L	1	18-Oct-2022 17:02
Magnesium	19.5		0.0100	0.200	mg/L	1	18-Oct-2022 17:02
Molybdenum	0.00771		0.000600	0.00500	mg/L	1	18-Oct-2022 17:02
Potassium	8.61		0.0180	0.200	mg/L	1	18-Oct-2022 17:02
Sodium	963		0.280	4.00	mg/L	20	19-Oct-2022 12:30
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	0.459		0.0120	0.200	mg/L	1	17-Oct-2022 23:23
Molybdenum	0.0147		0.000600	0.00500	mg/L	1	17-Oct-2022 23:23
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	109		0.400	1.00	mg/L	2	05-Oct-2022 18:15
Fluoride	1.23		0.100	0.200	mg/L	2	05-Oct-2022 18:15
Nitrogen, Nitrate (As N)	36.0		0.0600	0.200	mg/L	2	05-Oct-2022 18:15
Sulfate	1,560		4.00	10.0	mg/L	20	05-Oct-2022 18:21
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	5,260		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: CWG			
Total Dissolved Solids (Residue, Filterable)	3,240		5.00	10.0	mg/L	1	11-Oct-2022 17:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	583		5.00	5.00	mg/L	1	16-Oct-2022 13:41
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:41
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:41
Alkalinity, Total (As CaCO3)	587		5.00	5.00	mg/L	1	16-Oct-2022 13:41
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	6.16		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0430	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	5.68		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-4B  
 Collection Date: 04-Oct-2022 10:55

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-03  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>				Analyst: MZD		
pH	7.67	H	0.100	0.100	pH Units	1	06-Oct-2022 10:57	
Temp Deg C @pH	21.8	H	0	0	°C	1	06-Oct-2022 10:57	

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-5A  
 Collection Date: 04-Oct-2022 10:23

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-04  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	5.64		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	0.111		0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	5.44		0.220	0.400	mg/L	20	19-Oct-2022 12:32
Calcium	135		0.0340	0.500	mg/L	1	18-Oct-2022 17:20
Iron	12.3		0.0120	0.200	mg/L	1	18-Oct-2022 17:20
Magnesium	23.8		0.0100	0.200	mg/L	1	18-Oct-2022 17:20
Molybdenum	0.00317	J	0.000600	0.00500	mg/L	1	18-Oct-2022 17:20
Potassium	9.73		0.0180	0.200	mg/L	1	18-Oct-2022 17:20
Sodium	746		0.280	4.00	mg/L	20	19-Oct-2022 12:32
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	0.150	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:25
Molybdenum	0.0105		0.000600	0.00500	mg/L	1	17-Oct-2022 23:25
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	109		0.400	1.00	mg/L	2	05-Oct-2022 18:26
Fluoride	0.748		0.100	0.200	mg/L	2	05-Oct-2022 18:26
Nitrogen, Nitrate (As N)	18.6		0.0600	0.200	mg/L	2	05-Oct-2022 18:26
Sulfate	1,200		4.00	10.0	mg/L	20	05-Oct-2022 18:31
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	4,190		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: CWG			
Total Dissolved Solids (Residue, Filterable)	2,650		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	498		5.00	5.00	mg/L	1	16-Oct-2022 13:48
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:48
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:48
Alkalinity, Total (As CaCO3)	498		5.00	5.00	mg/L	1	16-Oct-2022 13:48
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	6.66		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0390	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	25.2		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-5A  
 Collection Date: 04-Oct-2022 10:23

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-04  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>			Analyst: MZD		
pH	7.67	H	0.100	0.100	pH Units	1	06-Oct-2022 11:16
Temp Deg C @pH	22.1	H	0	0	°C	1	06-Oct-2022 11:16

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



Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-5B  
 Collection Date: 04-Oct-2022 10:00

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-05  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.0800		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	0.0333	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A				Prep:SW3010A / 15-Oct-2022	Analyst: JHD
Boron	4.30		0.220	0.400	mg/L	20	19-Oct-2022 12:34
Calcium	92.7		0.0340	0.500	mg/L	1	18-Oct-2022 17:21
Iron	9.04		0.0120	0.200	mg/L	1	18-Oct-2022 17:21
Magnesium	20.3		0.0100	0.200	mg/L	1	18-Oct-2022 17:21
Molybdenum	0.0102		0.000600	0.00500	mg/L	1	18-Oct-2022 17:21
Potassium	8.45		0.0180	0.200	mg/L	1	18-Oct-2022 17:21
Sodium	718		0.280	4.00	mg/L	20	19-Oct-2022 12:34
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)				Prep:SW3010A / 17-Oct-2022	Analyst: JHD
Iron	0.0653	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:27
Molybdenum	0.0233		0.000600	0.00500	mg/L	1	17-Oct-2022 23:27
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300					Analyst: TH
Chloride	134		0.400	1.00	mg/L	2	05-Oct-2022 18:37
Fluoride	1.10		0.100	0.200	mg/L	2	05-Oct-2022 18:37
Nitrogen, Nitrate (As N)	76.7		0.600	2.00	mg/L	20	05-Oct-2022 18:42
Sulfate	1,230		4.00	10.0	mg/L	20	05-Oct-2022 18:42
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B					Analyst: TH
Specific Conductivity	5,030		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C					Analyst: CWG
Total Dissolved Solids (Residue, Filterable)	3,160		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	586		5.00	5.00	mg/L	1	16-Oct-2022 13:55
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:55
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 13:55
Alkalinity, Total (As CaCO3)	586		5.00	5.00	mg/L	1	16-Oct-2022 13:55
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED					Analyst: MZD
Ferrous Iron	8.96		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)					Analyst: MZD
Ferrous Iron, Dissolved	0.0320	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F					Analyst: MZD
Sulfide	U		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-5B  
 Collection Date: 04-Oct-2022 10:00

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-05  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>				Analyst: MZD		
pH	7.60	H	0.100	0.100	pH Units	1	07-Oct-2022 14:09	
Temp Deg C @pH	20.3	H	0	0	°C	1	07-Oct-2022 14:09	

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: MW-15B  
 Collection Date: 04-Oct-2022 13:00

**ANALYTICAL REPORT**  
 WorkOrder:HS22100190  
 Lab ID:HS22100190-06  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED					Analyst: JHD
Ferric Iron	6.30		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A				Prep:SW3010A / 15-Oct-2022	Analyst: JHD
Boron	5.58		0.220	0.400	mg/L	20	19-Oct-2022 12:45
Calcium	65.5		0.0340	0.500	mg/L	1	18-Oct-2022 17:23
Iron	12.6		0.0120	0.200	mg/L	1	18-Oct-2022 17:23
Magnesium	17.5		0.0100	0.200	mg/L	1	18-Oct-2022 17:23
Molybdenum	0.00153	J	0.000600	0.00500	mg/L	1	18-Oct-2022 17:23
Potassium	8.25		0.0180	0.200	mg/L	1	18-Oct-2022 17:23
Sodium	953		0.280	4.00	mg/L	20	19-Oct-2022 12:45
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)				Prep:SW3010A / 17-Oct-2022	Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	17-Oct-2022 23:28
Molybdenum	0.00501		0.000600	0.00500	mg/L	1	17-Oct-2022 23:28
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300					Analyst: TH
Chloride	56.8		0.400	1.00	mg/L	2	05-Oct-2022 18:47
Fluoride	1.00		0.100	0.200	mg/L	2	05-Oct-2022 18:47
Nitrogen, Nitrate (As N)	19.7		0.0600	0.200	mg/L	2	05-Oct-2022 18:47
Sulfate	1,530		4.00	10.0	mg/L	20	05-Oct-2022 18:52
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B					Analyst: TH
Specific Conductivity	5,230		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C					Analyst: CWG
Total Dissolved Solids (Residue, Filterable)	3,290		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	763		5.00	5.00	mg/L	1	16-Oct-2022 14:04
Alkalinity, Carbonate (As CaCO3)	13.1		5.00	5.00	mg/L	1	16-Oct-2022 14:04
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 14:04
Alkalinity, Total (As CaCO3)	776		5.00	5.00	mg/L	1	16-Oct-2022 14:04
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED					Analyst: MZD
Ferrous Iron	6.30		0.100	0.250	mg/L	5	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)					Analyst: MZD
Ferrous Iron, Dissolved	0.0260	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F					Analyst: MZD
Sulfide	U		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: MW-15B  
 Collection Date: 04-Oct-2022 13:00

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-06  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>			Analyst: MZD		
pH	7.62	H	0.100	0.100	pH Units	1	07-Oct-2022 14:09
Temp Deg C @pH	19.9	H	0	0	°C	1	07-Oct-2022 14:09

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: MW-22B  
 Collection Date: 04-Oct-2022 12:35

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-07  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	7.90		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	3.75		0.220	0.400	mg/L	20	19-Oct-2022 12:47
Calcium	161		0.0340	0.500	mg/L	1	18-Oct-2022 17:25
Iron	19.3		0.0120	0.200	mg/L	1	18-Oct-2022 17:25
Magnesium	31.2		0.0100	0.200	mg/L	1	18-Oct-2022 17:25
Molybdenum	0.00105	J	0.000600	0.00500	mg/L	1	18-Oct-2022 17:25
Potassium	9.87		0.0180	0.200	mg/L	1	18-Oct-2022 17:25
Sodium	918		0.280	4.00	mg/L	20	19-Oct-2022 12:47
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	U		0.0120	0.200	mg/L	1	17-Oct-2022 23:30
Molybdenum	0.00393	J	0.000600	0.00500	mg/L	1	17-Oct-2022 23:30
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	55.4		0.400	1.00	mg/L	2	05-Oct-2022 18:58
Fluoride	1.32		0.100	0.200	mg/L	2	05-Oct-2022 18:58
Nitrogen, Nitrate (As N)	2.15		0.0600	0.200	mg/L	2	05-Oct-2022 18:58
Sulfate	1,940		4.00	10.0	mg/L	20	05-Oct-2022 19:03
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	5,540		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: CWG			
Total Dissolved Solids (Residue, Filterable)	3,550		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	438		5.00	5.00	mg/L	1	16-Oct-2022 14:11
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 14:11
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2022 14:11
Alkalinity, Total (As CaCO3)	438		5.00	5.00	mg/L	1	16-Oct-2022 14:11
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	11.4		0.500	1.25	mg/L	25	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0260	J	0.0200	0.0500	mg/L	1	06-Oct-2022 08:53
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	U		1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: MW-22B  
 Collection Date: 04-Oct-2022 12:35

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-07  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>	<b>Method:SM4500H+ B</b>						Analyst: MZD
pH	7.55	H	0.100	0.100	pH Units	1	07-Oct-2022 14:09
Temp Deg C @pH	20.5	H	0	0	°C	1	07-Oct-2022 14:09

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-1A  
 Collection Date: 04-Oct-2022 15:47

**ANALYTICAL REPORT**  
 WorkOrder:HS22100190  
 Lab ID:HS22100190-08  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.0460	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved		U	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A				Prep:SW3010A / 15-Oct-2022	Analyst: JHD
Boron	0.843		0.0110	0.0200	mg/L	1	18-Oct-2022 17:27
Calcium	531		0.680	10.0	mg/L	20	19-Oct-2022 12:49
Iron	0.0460	J	0.0120	0.200	mg/L	1	18-Oct-2022 17:27
Magnesium	63.1		0.0100	0.200	mg/L	1	18-Oct-2022 17:27
Molybdenum		U	0.000600	0.00500	mg/L	1	18-Oct-2022 17:27
Potassium	8.87		0.0180	0.200	mg/L	1	18-Oct-2022 17:27
Sodium	184		0.280	4.00	mg/L	20	19-Oct-2022 12:49
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)				Prep:SW3010A / 17-Oct-2022	Analyst: JHD
Iron	0.0380	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:32
Molybdenum	0.000601	J	0.000600	0.00500	mg/L	1	17-Oct-2022 23:32
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300					Analyst: TH
Chloride	20.9		0.200	0.500	mg/L	1	06-Oct-2022 14:04
Fluoride	0.426		0.0500	0.100	mg/L	1	06-Oct-2022 14:04
Nitrogen, Nitrate (As N)		U	0.0300	0.100	mg/L	1	06-Oct-2022 14:04
Sulfate	1,810		8.00	20.0	mg/L	40	06-Oct-2022 15:45
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B					Analyst: TH
Specific Conductivity	3,790		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C					Analyst: CWG
Total Dissolved Solids (Residue, Filterable)	3,210		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	318		5.00	5.00	mg/L	1	16-Oct-2022 14:18
Alkalinity, Carbonate (As CaCO3)		U	5.00	5.00	mg/L	1	16-Oct-2022 14:18
Alkalinity, Hydroxide (As CaCO3)		U	5.00	5.00	mg/L	1	16-Oct-2022 14:18
Alkalinity, Total (As CaCO3)	318		5.00	5.00	mg/L	1	16-Oct-2022 14:18
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED					Analyst: MZD
Ferrous Iron		U	0.0200	0.0500	mg/L	1	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)					Analyst: MZD
Ferrous Iron, Dissolved	0.0760		0.0200	0.0500	mg/L	1	06-Oct-2022 12:34
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F					Analyst: MZD
Sulfide		U	1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-1A  
 Collection Date: 04-Oct-2022 15:47

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-08  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>			Analyst: MZD		
pH	6.91	H	0.100	0.100	pH Units	1	07-Oct-2022 14:09
Temp Deg C @pH	20.5	H	0	0	°C	1	07-Oct-2022 14:09

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



Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-1B  
 Collection Date: 04-Oct-2022 17:00

**ANALYTICAL REPORT**  
 WorkOrder:HS22100190  
 Lab ID:HS22100190-09  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.0480	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved		U	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A				Prep:SW3010A / 15-Oct-2022	Analyst: JHD
Boron	3.86		0.220	0.400	mg/L	20	19-Oct-2022 12:51
Calcium	130		0.0340	0.500	mg/L	1	18-Oct-2022 17:29
Iron	0.115	J	0.0120	0.200	mg/L	1	18-Oct-2022 17:29
Magnesium	43.7		0.0100	0.200	mg/L	1	18-Oct-2022 17:29
Molybdenum	0.00551		0.000600	0.00500	mg/L	1	18-Oct-2022 17:29
Potassium	11.9		0.0180	0.200	mg/L	1	18-Oct-2022 17:29
Sodium	990		0.280	4.00	mg/L	20	19-Oct-2022 12:51
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)				Prep:SW3010A / 17-Oct-2022	Analyst: JHD
Iron	0.0940	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:34
Molybdenum	0.00564		0.000600	0.00500	mg/L	1	17-Oct-2022 23:34
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300					Analyst: TH
Chloride	112		8.00	20.0	mg/L	40	06-Oct-2022 15:50
Fluoride	0.786		0.0500	0.100	mg/L	1	06-Oct-2022 14:20
Nitrogen, Nitrate (As N)		U	0.0300	0.100	mg/L	1	06-Oct-2022 14:20
Sulfate	2,200		8.00	20.0	mg/L	40	06-Oct-2022 15:50
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B					Analyst: TH
Specific Conductivity	5,830		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C					Analyst: CWG
Total Dissolved Solids (Residue, Filterable)	3,780		5.00	10.0	mg/L	1	11-Oct-2022 12:29
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	356		5.00	5.00	mg/L	1	16-Oct-2022 14:42
Alkalinity, Carbonate (As CaCO3)	6.12		5.00	5.00	mg/L	1	16-Oct-2022 14:42
Alkalinity, Hydroxide (As CaCO3)		U	5.00	5.00	mg/L	1	16-Oct-2022 14:42
Alkalinity, Total (As CaCO3)	362		5.00	5.00	mg/L	1	16-Oct-2022 14:42
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED					Analyst: MZD
Ferrous Iron	0.0670		0.0200	0.0500	mg/L	1	06-Oct-2022 08:44
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)					Analyst: MZD
Ferrous Iron, Dissolved	0.101		0.0200	0.0500	mg/L	1	06-Oct-2022 12:35
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F					Analyst: MZD
Sulfide		U	1.00	1.00	mg/L	1	11-Oct-2022 16:41

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-1B  
 Collection Date: 04-Oct-2022 17:00

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-09  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		Method:SM4500H+ B			Analyst: MZD		
pH	7.52	H	0.100	0.100	pH Units	1	07-Oct-2022 14:09
Temp Deg C @pH	20.4	H	0	0	°C	1	07-Oct-2022 14:09

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-2  
 Collection Date: 06-Oct-2022 10:21

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-10  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.135		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	0.0217	J	0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A				Prep:SW3010A / 15-Oct-2022	Analyst: JHD
Boron	0.596		0.0110	0.0200	mg/L	1	18-Oct-2022 17:31
Calcium	406		0.680	10.0	mg/L	20	19-Oct-2022 12:53
Iron	0.175	J	0.0120	0.200	mg/L	1	18-Oct-2022 17:31
Magnesium	19.6		0.0100	0.200	mg/L	1	18-Oct-2022 17:31
Molybdenum		U	0.000600	0.00500	mg/L	1	18-Oct-2022 17:31
Potassium	5.69		0.0180	0.200	mg/L	1	18-Oct-2022 17:31
Sodium	80.2		0.0140	0.200	mg/L	1	18-Oct-2022 17:31
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)				Prep:SW3010A / 17-Oct-2022	Analyst: JHD
Iron	0.0817	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:36
Molybdenum	0.00105	J	0.000600	0.00500	mg/L	1	17-Oct-2022 23:36
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300					Analyst: TH
Chloride	2.49		0.200	0.500	mg/L	1	07-Oct-2022 18:00
Fluoride	0.462		0.0500	0.100	mg/L	1	07-Oct-2022 18:00
Nitrogen, Nitrate (As N)	0.194		0.0300	0.100	mg/L	1	07-Oct-2022 18:00
Sulfate	982		4.00	10.0	mg/L	20	07-Oct-2022 18:16
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B					Analyst: TH
Specific Conductivity	2,420		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	1,720		5.00	10.0	mg/L	1	13-Oct-2022 17:25
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B					Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	337		5.00	5.00	mg/L	1	18-Oct-2022 11:22
Alkalinity, Carbonate (As CaCO3)		U	5.00	5.00	mg/L	1	18-Oct-2022 11:22
Alkalinity, Hydroxide (As CaCO3)		U	5.00	5.00	mg/L	1	18-Oct-2022 11:22
Alkalinity, Total (As CaCO3)	337		5.00	5.00	mg/L	1	18-Oct-2022 11:22
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED					Analyst: MZD
Ferrous Iron	0.0400	J	0.0200	0.0500	mg/L	1	07-Oct-2022 14:25
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)					Analyst: MZD
Ferrous Iron, Dissolved	0.0600		0.0200	0.0500	mg/L	1	07-Oct-2022 18:35
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F					Analyst: MZD
Sulfide		U	1.00	1.00	mg/L	1	13-Oct-2022 17:52

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-2  
 Collection Date: 06-Oct-2022 10:21

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-10  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>			Analyst: MZD		
pH	7.09	H	0.100	0.100	pH Units	1	11-Oct-2022 13:04
Temp Deg C @pH	20.7	H	0	0	°C	1	11-Oct-2022 13:04

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-3B  
 Collection Date: 07-Oct-2022 10:30

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-11  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>FERRIC IRON - BY CALCULATION BY SM3500FED</b>		Method:SM3500FED		Analyst: JHD			
Ferric Iron	16.9		0.0200	0.0500	mg/L	1	19-Oct-2022 16:47
<b>FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Oct-2022 16:50
<b>ICP-MS METALS BY SW6020A</b>		Method:SW6020A		Prep:SW3010A / 15-Oct-2022		Analyst: JHD	
Boron	3.30		0.220	0.400	mg/L	20	19-Oct-2022 12:55
Calcium	80.1		0.0340	0.500	mg/L	1	18-Oct-2022 17:33
Iron	22.6		0.0120	0.200	mg/L	1	18-Oct-2022 17:33
Magnesium	11.0		0.0100	0.200	mg/L	1	18-Oct-2022 17:33
Molybdenum	0.00819		0.000600	0.00500	mg/L	1	18-Oct-2022 17:33
Potassium	6.25		0.0180	0.200	mg/L	1	18-Oct-2022 17:33
Sodium	616		0.280	4.00	mg/L	20	19-Oct-2022 12:55
<b>DISSOLVED METALS BY SW6020A</b>		Method:SW6020A (dissolved)		Prep:SW3010A / 17-Oct-2022		Analyst: JHD	
Iron	0.0127	J	0.0120	0.200	mg/L	1	17-Oct-2022 23:38
Molybdenum	0.0204		0.000600	0.00500	mg/L	1	17-Oct-2022 23:38
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		Method:E300		Analyst: TH			
Chloride	50.5		0.200	0.500	mg/L	1	08-Oct-2022 12:26
Fluoride	1.68		0.0500	0.100	mg/L	1	08-Oct-2022 12:26
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	08-Oct-2022 12:26
Sulfate	684		4.00	10.0	mg/L	20	08-Oct-2022 12:31
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		Method:M2510 B		Analyst: TH			
Specific Conductivity	4,640		5.00	5.00	umhos/cm @ 25.0 °C	1	18-Oct-2022 15:30
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,810		5.00	10.0	mg/L	1	13-Oct-2022 17:25
<b>ALKALINITY BY SM 2320B-2011</b>		Method:SM2320B		Analyst: JAC			
Alkalinity, Bicarbonate (As CaCO3)	744		5.00	5.00	mg/L	1	18-Oct-2022 11:38
Alkalinity, Carbonate (As CaCO3)	25.0		5.00	5.00	mg/L	1	18-Oct-2022 11:38
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	18-Oct-2022 11:38
Alkalinity, Total (As CaCO3)	769		5.00	5.00	mg/L	1	18-Oct-2022 11:38
<b>FERROUS IRON BY SM3500 FE B</b>		Method:SM3500FED		Analyst: TH			
Ferrous Iron	5.68		0.500	1.25	mg/L	25	08-Oct-2022 11:00
<b>FERROUS IRON BY SM3500 FE D</b>		Method:SM3500FED (dissolved)		Analyst: TH			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	08-Oct-2022 10:30
<b>SULFIDE BY SM4500 S2-F-2011</b>		Method:SM4500 S2-F		Analyst: MZD			
Sulfide	U		1.00	1.00	mg/L	1	13-Oct-2022 17:52

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

Client: Altamira  
 Project: WFEC / MNA  
 Sample ID: CM-3B  
 Collection Date: 07-Oct-2022 10:30

**ANALYTICAL REPORT**

WorkOrder:HS22100190  
 Lab ID:HS22100190-11  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH BY SM4500H+ B-2011</b>		Method:SM4500H+ B			Analyst: MZD		
pH	8.23	H	0.100	0.100	pH Units	1	11-Oct-2022 13:04
Temp Deg C @pH	21.2	H	0	0	°C	1	11-Oct-2022 13:04

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

Weight / Prep Log

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**Batch ID:** 184894      **Start Date:** 15 Oct 2022 09:00      **End Date:** 15 Oct 2022 13:00  
**Method:** WATER - SW3010A      **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS22100190-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-11		10 (mL)	10 (mL)	1	120 plastic HNO3

**Batch ID:** 184932      **Start Date:** 17 Oct 2022 14:00      **End Date:** 17 Oct 2022 18:00  
**Method:** DISS METALS PREP - WATER - SW3010A      **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS22100190-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS22100190-11		10 (mL)	10 (mL)	1	120 plastic HNO3

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID:</b> 184894 ( 0 )		<b>Test Name :</b> ICP-MS METALS BY SW6020A			<b>Matrix:</b> Water	
HS22100190-01	CM-3A	04 Oct 2022 12:04		15 Oct 2022 09:00	19 Oct 2022 14:05	1
HS22100190-01	CM-3A	04 Oct 2022 12:04		15 Oct 2022 09:00	18 Oct 2022 15:50	5
HS22100190-02	CM-4A	04 Oct 2022 11:10		15 Oct 2022 09:00	19 Oct 2022 12:23	20
HS22100190-02	CM-4A	04 Oct 2022 11:10		15 Oct 2022 09:00	18 Oct 2022 15:53	1
HS22100190-03	CM-4B	04 Oct 2022 10:55		15 Oct 2022 09:00	19 Oct 2022 12:30	20
HS22100190-03	CM-4B	04 Oct 2022 10:55		15 Oct 2022 09:00	18 Oct 2022 17:02	1
HS22100190-04	CM-5A	04 Oct 2022 10:23		15 Oct 2022 09:00	19 Oct 2022 12:32	20
HS22100190-04	CM-5A	04 Oct 2022 10:23		15 Oct 2022 09:00	18 Oct 2022 17:20	1
HS22100190-05	CM-5B	04 Oct 2022 10:00		15 Oct 2022 09:00	19 Oct 2022 12:34	20
HS22100190-05	CM-5B	04 Oct 2022 10:00		15 Oct 2022 09:00	18 Oct 2022 17:21	1
HS22100190-06	MW-15B	04 Oct 2022 13:00		15 Oct 2022 09:00	19 Oct 2022 12:45	20
HS22100190-06	MW-15B	04 Oct 2022 13:00		15 Oct 2022 09:00	18 Oct 2022 17:23	1
HS22100190-07	MW-22B	04 Oct 2022 12:35		15 Oct 2022 09:00	19 Oct 2022 12:47	20
HS22100190-07	MW-22B	04 Oct 2022 12:35		15 Oct 2022 09:00	18 Oct 2022 17:25	1
HS22100190-08	CM-1A	04 Oct 2022 15:47		15 Oct 2022 09:00	19 Oct 2022 12:49	20
HS22100190-08	CM-1A	04 Oct 2022 15:47		15 Oct 2022 09:00	18 Oct 2022 17:27	1
HS22100190-09	CM-1B	04 Oct 2022 17:00		15 Oct 2022 09:00	19 Oct 2022 12:51	20
HS22100190-09	CM-1B	04 Oct 2022 17:00		15 Oct 2022 09:00	18 Oct 2022 17:29	1
HS22100190-10	CM-2	06 Oct 2022 10:21		15 Oct 2022 09:00	19 Oct 2022 12:53	20
HS22100190-10	CM-2	06 Oct 2022 10:21		15 Oct 2022 09:00	18 Oct 2022 17:31	1
HS22100190-11	CM-3B	07 Oct 2022 10:30		15 Oct 2022 09:00	19 Oct 2022 12:55	20
HS22100190-11	CM-3B	07 Oct 2022 10:30		15 Oct 2022 09:00	18 Oct 2022 17:33	1
<b>Batch ID:</b> 184932 ( 0 )		<b>Test Name :</b> DISSOLVED METALS BY SW6020A			<b>Matrix:</b> Water	
HS22100190-01	CM-3A	04 Oct 2022 12:04		17 Oct 2022 14:00	17 Oct 2022 23:21	1
HS22100190-02	CM-4A	04 Oct 2022 11:10		17 Oct 2022 14:00	17 Oct 2022 23:08	1
HS22100190-03	CM-4B	04 Oct 2022 10:55		17 Oct 2022 14:00	17 Oct 2022 23:23	1
HS22100190-04	CM-5A	04 Oct 2022 10:23		17 Oct 2022 14:00	17 Oct 2022 23:25	1
HS22100190-05	CM-5B	04 Oct 2022 10:00		17 Oct 2022 14:00	17 Oct 2022 23:27	1
HS22100190-06	MW-15B	04 Oct 2022 13:00		17 Oct 2022 14:00	17 Oct 2022 23:28	1
HS22100190-07	MW-22B	04 Oct 2022 12:35		17 Oct 2022 14:00	17 Oct 2022 23:30	1
HS22100190-08	CM-1A	04 Oct 2022 15:47		17 Oct 2022 14:00	17 Oct 2022 23:32	1
HS22100190-09	CM-1B	04 Oct 2022 17:00		17 Oct 2022 14:00	17 Oct 2022 23:34	1
HS22100190-10	CM-2	06 Oct 2022 10:21		17 Oct 2022 14:00	17 Oct 2022 23:36	1
HS22100190-11	CM-3B	07 Oct 2022 10:30		17 Oct 2022 14:00	17 Oct 2022 23:38	1



**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID: R418696 ( 0 )</b>		<b>Test Name : ANIONS BY E300.0, REV 2.1, 1993</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			05 Oct 2022 17:33	10
HS22100190-01	CM-3A	04 Oct 2022 12:04			05 Oct 2022 17:28	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			05 Oct 2022 17:44	20
HS22100190-02	CM-4A	04 Oct 2022 11:10			05 Oct 2022 17:38	2
HS22100190-03	CM-4B	04 Oct 2022 10:55			05 Oct 2022 18:21	20
HS22100190-03	CM-4B	04 Oct 2022 10:55			05 Oct 2022 18:15	2
HS22100190-04	CM-5A	04 Oct 2022 10:23			05 Oct 2022 18:31	20
HS22100190-04	CM-5A	04 Oct 2022 10:23			05 Oct 2022 18:26	2
HS22100190-05	CM-5B	04 Oct 2022 10:00			05 Oct 2022 18:42	20
HS22100190-05	CM-5B	04 Oct 2022 10:00			05 Oct 2022 18:37	2
HS22100190-06	MW-15B	04 Oct 2022 13:00			05 Oct 2022 18:52	20
HS22100190-06	MW-15B	04 Oct 2022 13:00			05 Oct 2022 18:47	2
HS22100190-07	MW-22B	04 Oct 2022 12:35			05 Oct 2022 19:03	20
HS22100190-07	MW-22B	04 Oct 2022 12:35			05 Oct 2022 18:58	2
<b>Batch ID: R418714 ( 0 )</b>		<b>Test Name : PH BY SM4500H+ B-2011</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			06 Oct 2022 10:57	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			06 Oct 2022 10:57	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			06 Oct 2022 10:57	1
<b>Batch ID: R418718 ( 0 )</b>		<b>Test Name : PH BY SM4500H+ B-2011</b>			<b>Matrix: Water</b>	
HS22100190-04	CM-5A	04 Oct 2022 10:23			06 Oct 2022 11:16	1
<b>Batch ID: R418763 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE B</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			06 Oct 2022 08:44	5
HS22100190-02	CM-4A	04 Oct 2022 11:10			06 Oct 2022 08:44	5
HS22100190-03	CM-4B	04 Oct 2022 10:55			06 Oct 2022 08:44	5
HS22100190-04	CM-5A	04 Oct 2022 10:23			06 Oct 2022 08:44	5
HS22100190-05	CM-5B	04 Oct 2022 10:00			06 Oct 2022 08:44	5
HS22100190-06	MW-15B	04 Oct 2022 13:00			06 Oct 2022 08:44	5
HS22100190-07	MW-22B	04 Oct 2022 12:35			06 Oct 2022 08:44	25
HS22100190-08	CM-1A	04 Oct 2022 15:47			06 Oct 2022 08:44	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			06 Oct 2022 08:44	1
<b>Batch ID: R418776 ( 0 )</b>		<b>Test Name : ANIONS BY E300.0, REV 2.1, 1993</b>			<b>Matrix: Water</b>	
HS22100190-08	CM-1A	04 Oct 2022 15:47			06 Oct 2022 15:45	40
HS22100190-08	CM-1A	04 Oct 2022 15:47			06 Oct 2022 14:04	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			06 Oct 2022 15:50	40
HS22100190-09	CM-1B	04 Oct 2022 17:00			06 Oct 2022 14:20	1

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID: R418825 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE D</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			06 Oct 2022 08:53	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			06 Oct 2022 08:53	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			06 Oct 2022 08:53	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			06 Oct 2022 08:53	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			06 Oct 2022 08:53	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			06 Oct 2022 08:53	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			06 Oct 2022 08:53	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			06 Oct 2022 12:34	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			06 Oct 2022 12:35	1
<b>Batch ID: R418848 ( 0 )</b>		<b>Test Name : PH BY SM4500H+ B-2011</b>			<b>Matrix: Water</b>	
HS22100190-05	CM-5B	04 Oct 2022 10:00			07 Oct 2022 14:09	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			07 Oct 2022 14:09	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			07 Oct 2022 14:09	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			07 Oct 2022 14:09	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			07 Oct 2022 14:09	1
<b>Batch ID: R418882 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE B</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			07 Oct 2022 14:25	1
<b>Batch ID: R418883 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE D</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			07 Oct 2022 18:35	1
<b>Batch ID: R418893 ( 0 )</b>		<b>Test Name : ANIONS BY E300.0, REV 2.1, 1993</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			07 Oct 2022 18:16	20
HS22100190-10	CM-2	06 Oct 2022 10:21			07 Oct 2022 18:00	1
<b>Batch ID: R418914 ( 0 )</b>		<b>Test Name : ANIONS BY E300.0, REV 2.1, 1993</b>			<b>Matrix: Water</b>	
HS22100190-11	CM-3B	07 Oct 2022 10:30			08 Oct 2022 12:31	20
HS22100190-11	CM-3B	07 Oct 2022 10:30			08 Oct 2022 12:26	1
<b>Batch ID: R418923 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE B</b>			<b>Matrix: Water</b>	
HS22100190-11	CM-3B	07 Oct 2022 10:30			08 Oct 2022 11:00	25
<b>Batch ID: R418924 ( 0 )</b>		<b>Test Name : FERROUS IRON BY SM3500 FE D</b>			<b>Matrix: Water</b>	
HS22100190-11	CM-3B	07 Oct 2022 10:30			08 Oct 2022 10:30	1
<b>Batch ID: R419091 ( 0 )</b>		<b>Test Name : PH BY SM4500H+ B-2011</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			11 Oct 2022 13:04	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			11 Oct 2022 13:04	1

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID: R419124 ( 0 )</b>		<b>Test Name : SULFIDE BY SM4500 S2-F-2011</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			11 Oct 2022 16:41	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			11 Oct 2022 16:41	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			11 Oct 2022 16:41	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			11 Oct 2022 16:41	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			11 Oct 2022 16:41	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			11 Oct 2022 16:41	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			11 Oct 2022 16:41	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			11 Oct 2022 16:41	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			11 Oct 2022 16:41	1
<b>Batch ID: R419238 ( 0 )</b>		<b>Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			11 Oct 2022 17:29	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			11 Oct 2022 17:29	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			11 Oct 2022 17:29	1
<b>Batch ID: R419318 ( 0 )</b>		<b>Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>			<b>Matrix: Water</b>	
HS22100190-04	CM-5A	04 Oct 2022 10:23			11 Oct 2022 12:29	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			11 Oct 2022 12:29	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			11 Oct 2022 12:29	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			11 Oct 2022 12:29	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			11 Oct 2022 12:29	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			11 Oct 2022 12:29	1
<b>Batch ID: R419364 ( 0 )</b>		<b>Test Name : SULFIDE BY SM4500 S2-F-2011</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			13 Oct 2022 17:52	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			13 Oct 2022 17:52	1
<b>Batch ID: R419454 ( 0 )</b>		<b>Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			13 Oct 2022 17:25	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			13 Oct 2022 17:25	1
<b>Batch ID: R419512 ( 0 )</b>		<b>Test Name : ALKALINITY BY SM 2320B-2011</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			16 Oct 2022 13:17	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			16 Oct 2022 13:33	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			16 Oct 2022 13:41	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			16 Oct 2022 13:48	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			16 Oct 2022 13:55	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			16 Oct 2022 14:04	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			16 Oct 2022 14:11	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			16 Oct 2022 14:18	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			16 Oct 2022 14:42	1

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID: R419661 ( 0 )</b>		<b>Test Name : ALKALINITY BY SM 2320B-2011</b>			<b>Matrix: Water</b>	
HS22100190-10	CM-2	06 Oct 2022 10:21			18 Oct 2022 11:22	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			18 Oct 2022 11:38	1
<b>Batch ID: R419689 ( 0 )</b>		<b>Test Name : SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			18 Oct 2022 15:30	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			18 Oct 2022 15:30	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			18 Oct 2022 15:30	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			18 Oct 2022 15:30	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			18 Oct 2022 15:30	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			18 Oct 2022 15:30	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			18 Oct 2022 15:30	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			18 Oct 2022 15:30	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			18 Oct 2022 15:30	1
HS22100190-10	CM-2	06 Oct 2022 10:21			18 Oct 2022 15:30	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			18 Oct 2022 15:30	1
<b>Batch ID: R419800 ( 0 )</b>		<b>Test Name : FERRIC IRON - BY CALCULATION BY SM3500FED</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			19 Oct 2022 16:47	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			19 Oct 2022 16:47	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			19 Oct 2022 16:47	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			19 Oct 2022 16:47	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			19 Oct 2022 16:47	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			19 Oct 2022 16:47	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			19 Oct 2022 16:47	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			19 Oct 2022 16:47	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			19 Oct 2022 16:47	1
HS22100190-10	CM-2	06 Oct 2022 10:21			19 Oct 2022 16:47	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			19 Oct 2022 16:47	1
<b>Batch ID: R419802 ( 0 )</b>		<b>Test Name : FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED</b>			<b>Matrix: Water</b>	
HS22100190-01	CM-3A	04 Oct 2022 12:04			19 Oct 2022 16:50	1
HS22100190-02	CM-4A	04 Oct 2022 11:10			19 Oct 2022 16:50	1
HS22100190-03	CM-4B	04 Oct 2022 10:55			19 Oct 2022 16:50	1
HS22100190-04	CM-5A	04 Oct 2022 10:23			19 Oct 2022 16:50	1
HS22100190-05	CM-5B	04 Oct 2022 10:00			19 Oct 2022 16:50	1
HS22100190-06	MW-15B	04 Oct 2022 13:00			19 Oct 2022 16:50	1
HS22100190-07	MW-22B	04 Oct 2022 12:35			19 Oct 2022 16:50	1
HS22100190-08	CM-1A	04 Oct 2022 15:47			19 Oct 2022 16:50	1
HS22100190-09	CM-1B	04 Oct 2022 17:00			19 Oct 2022 16:50	1
HS22100190-10	CM-2	06 Oct 2022 10:21			19 Oct 2022 16:50	1
HS22100190-11	CM-3B	07 Oct 2022 10:30			19 Oct 2022 16:50	1

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: 184894 ( 0 )		Instrument: ICPMS07		Method: ICP-MS METALS BY SW6020A						
<b>MBLK</b>	Sample ID: <b>MBLK-184894</b>	Units: <b>mg/L</b>			Analysis Date: <b>18-Oct-2022 15:43</b>					
Client ID:	Run ID: <b>ICPMS07_419665</b>	SeqNo: <b>6927173</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Boron	U	0.0200								
Calcium	U	0.500								
Iron	U	0.200								
Magnesium	0.01575	0.200							J	
Molybdenum	U	0.00500								
Potassium	U	0.200								
Sodium	U	0.200								
<b>LCS</b>	Sample ID: <b>LCS-184894</b>	Units: <b>mg/L</b>			Analysis Date: <b>18-Oct-2022 15:45</b>					
Client ID:	Run ID: <b>ICPMS07_419665</b>	SeqNo: <b>6927174</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Boron	0.4762	0.0200	0.5	0	95.2	80 - 120				
Calcium	5.377	0.500	5	0	108	80 - 120				
Iron	5.448	0.200	5	0	109	80 - 120				
Magnesium	5.791	0.200	5	0	116	80 - 120				
Molybdenum	0.0531	0.00500	0.05	0	106	80 - 120				
Potassium	5.714	0.200	5	0	114	80 - 120				
Sodium	5.714	0.200	5	0	114	80 - 120				
<b>MS</b>	Sample ID: <b>HS22100632-04MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>18-Oct-2022 16:56</b>					
Client ID:	Run ID: <b>ICPMS07_419665</b>	SeqNo: <b>6927323</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Boron	0.6537	0.0200	0.5	0.1507	101	80 - 120				
Calcium	101.9	0.500	5	99.2	54.7	80 - 120			SO	
Iron	10.97	0.200	5	5.955	100	80 - 120				
Magnesium	19.19	0.200	5	14.32	97.3	80 - 120				
Molybdenum	0.05312	0.00500	0.05	0.001424	103	80 - 120				
Potassium	6.435	0.200	5	0.9548	110	80 - 120				
Sodium	329	0.200	5	328.7	7.21	80 - 120			SEO	

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: 184894 ( 0 )		Instrument: ICPMS07		Method: ICP-MS METALS BY SW6020A						
<b>MSD</b>		Sample ID: <b>HS22100632-04MSD</b>		Units: <b>mg/L</b>		Analysis Date: <b>18-Oct-2022 16:58</b>				
Client ID:		Run ID: <b>ICPMS07_419665</b>		SeqNo: <b>6927324</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.7073	0.0200	0.5	0.1507	111	80 - 120	0.6537	7.88	20	
Calcium	106	0.500	5	99.2	136	80 - 120	101.9	3.91	20	SO
Iron	11.54	0.200	5	5.955	112	80 - 120	10.97	5.03	20	
Magnesium	20.26	0.200	5	14.32	119	80 - 120	19.19	5.43	20	
Molybdenum	0.05641	0.00500	0.05	0.001424	110	80 - 120	0.05312	6.02	20	
Potassium	6.828	0.200	5	0.9548	117	80 - 120	6.435	5.93	20	
Sodium	344.7	0.200	5	328.7	320	80 - 120	329	4.64	20	SEO
<b>PDS</b>		Sample ID: <b>HS22100632-04PDS</b>		Units: <b>mg/L</b>		Analysis Date: <b>18-Oct-2022 17:00</b>				
Client ID:		Run ID: <b>ICPMS07_419665</b>		SeqNo: <b>6927325</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.6509	0.0200	0.5	0.1507	100	75 - 125				
Calcium	106.3	0.500	10	99.2	71.4	75 - 125				SO
<b>PDS</b>		Sample ID: <b>HS22100632-04PDS</b>		Units: <b>mg/L</b>		Analysis Date: <b>19-Oct-2022 12:28</b>				
Client ID:		Run ID: <b>ICPMS07_419765</b>		SeqNo: <b>6928676</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>20</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	501.4	4.00	200	308.7	96.4	75 - 125				
<b>SD</b>		Sample ID: <b>HS22100632-04SD</b>		Units: <b>mg/L</b>		Analysis Date: <b>18-Oct-2022 16:54</b>				
Client ID:		Run ID: <b>ICPMS07_419665</b>		SeqNo: <b>6927322</b>		PrepDate: <b>15-Oct-2022</b>		DF: <b>5</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit	Qual
Boron	0.1474	0.100					0.1507	2.2	10	
Calcium	93.19	2.50					99.2	6.06	10	
Iron	6.156	1.00					5.955	3.38	10	
Magnesium	14.31	1.00					14.32	0.0966	10	
Molybdenum	U	0.0250					0.001424	0	10	
Potassium	0.9482	1.00					0.9548	0	10	J

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** 184894 ( 0 )      **Instrument:** ICPMS07      **Method:** ICP-MS METALS BY SW6020A

<b>SD</b>	Sample ID: <b>HS22100632-04SD</b>	Units: <b>mg/L</b>	Analysis Date: <b>19-Oct-2022 12:26</b>							
Client ID:	Run ID: <b>ICPMS07_419765</b>	SeqNo: <b>6928675</b>	PrepDate: <b>15-Oct-2022</b> DF: <b>100</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Sodium	326.5	20.0					308.7	5.76	10	

The following samples were analyzed in this batch:

HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
HS22100190-09	HS22100190-10	HS22100190-11	

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> 184932 ( 0 )	<b>Instrument:</b> ICPMS07	<b>Method:</b> DISSOLVED METALS BY SW6020A (DISSOLVED)
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<b>MBLK</b>	Sample ID: <b>MBLKF1-184932</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:04</b>							
Client ID:	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925741</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Iron	U	0.200								
Molybdenum	U	0.00500								

<b>MBLK</b>	Sample ID: <b>MBLK-184932</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:02</b>							
Client ID:	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925740</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Iron	U	0.200								
Molybdenum	U	0.00500								

<b>LCS</b>	Sample ID: <b>LCS-184932</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:06</b>							
Client ID:	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925742</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Iron	5.073	0.200	5	0	101	80 - 120				
Molybdenum	0.04936	0.00500	0.05	0	98.7	80 - 120				

<b>MS</b>	Sample ID: <b>HS22100190-02MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:12</b>							
Client ID: <b>CM-4A</b>	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925745</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Iron	5.227	0.200	5	0.07815	103	75 - 125				
Molybdenum	0.06845	0.00500	0.05	0.017	103	75 - 125				

<b>MSD</b>	Sample ID: <b>HS22100190-02MSD</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:14</b>							
Client ID: <b>CM-4A</b>	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925746</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Iron	5.22	0.200	5	0.07815	103	75 - 125	5.227	0.122	20	
Molybdenum	0.06954	0.00500	0.05	0.017	105	75 - 125	0.06845	1.58	20	



**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> 184932 ( 0 )	<b>Instrument:</b> ICPMS07	<b>Method:</b> DISSOLVED METALS BY SW6020A (DISSOLVED)								
<b>PDS</b>	Sample ID: <b>HS22100190-02PDS</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:15</b>							
Client ID: <b>CM-4A</b>	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925747</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Iron	10.71	0.200	10	0.07815	106	75 - 125				
Molybdenum	0.1256	0.00500	0.1	0.017	109	75 - 125				

<b>SD</b>	Sample ID: <b>HS22100190-02SD</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Oct-2022 23:10</b>							
Client ID: <b>CM-4A</b>	Run ID: <b>ICPMS07_419578</b>	SeqNo: <b>6925744</b>	PrepDate: <b>17-Oct-2022</b> DF: <b>5</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit	Qual

Iron	U	1.00					0.07815	0	10	
Molybdenum	0.003419	0.0250					0.017	0	10	J

The following samples were analyzed in this batch:

HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
HS22100190-09	HS22100190-10	HS22100190-11	

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418696 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993						
<b>MBLK</b>	Sample ID: <b>MBLK</b>	Units: <b>mg/L</b>			Analysis Date: <b>05-Oct-2022 14:33</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>	SeqNo: <b>6903036</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Chloride	U	0.500								
Fluoride	U	0.100								
Nitrogen, Nitrate (As N)	U	0.100								
Nitrogen, Nitrite (As N)	U	0.100								
Sulfate	U	0.500								
<b>LCS</b>	Sample ID: <b>LCS</b>	Units: <b>mg/L</b>			Analysis Date: <b>05-Oct-2022 14:38</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>	SeqNo: <b>6903037</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Chloride	20.05	0.500	20	0	100	90 - 110				
Fluoride	4.353	0.100	4	0	109	90 - 110				
Nitrogen, Nitrate (As N)	3.993	0.100	4	0	99.8	90 - 110				
Nitrogen, Nitrite (As N)	4.026	0.100	4	0	101	90 - 110				
Sulfate	19.96	0.500	20	0	99.8	90 - 110				
<b>MS</b>	Sample ID: <b>HS22100191-02MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>05-Oct-2022 14:49</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>	SeqNo: <b>6903039</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Chloride	66.31	0.500	10	57.64	86.7	80 - 120			O	
Fluoride	3.725	0.100	2	1.597	106	80 - 120				
Nitrogen, Nitrate (As N)	2.829	0.100	2	0.9016	96.4	80 - 120				
Nitrogen, Nitrite (As N)	1.508	0.100	2	0	75.4	80 - 120			S	
Sulfate	636.2	0.500	10	646.6	-104	80 - 120			SEO	

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418696 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993							
<b>MS</b>		Sample ID: <b>HS22100187-01MS</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Oct-2022 16:03</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>		SeqNo: <b>6903051</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	128.9	0.500	10	121.7	72.6	80 - 120				SEO	
Fluoride	2.361	0.100	2	0.2504	106	80 - 120					
Nitrogen, Nitrate (As N)	1.96	0.100	2	0.021	96.9	80 - 120					
Nitrogen, Nitrite (As N)	1.894	0.100	2	0	94.7	80 - 120					
Sulfate	9.888	0.500	10	0.1729	97.2	80 - 120					
<b>MSD</b>		Sample ID: <b>HS22100191-02MSD</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Oct-2022 14:54</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>		SeqNo: <b>6903040</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	66.66	0.500	10	57.64	90.2	80 - 120	66.31	0.525	20	O	
Fluoride	3.558	0.100	2	1.597	98.0	80 - 120	3.725	4.59	20		
Nitrogen, Nitrate (As N)	2.851	0.100	2	0.9016	97.5	80 - 120	2.829	0.785	20		
Nitrogen, Nitrite (As N)	1.514	0.100	2	0	75.7	80 - 120	1.508	0.43	20	S	
Sulfate	639.8	0.500	10	646.6	-67.8	80 - 120	636.2	0.56	20	SEO	
<b>MSD</b>		Sample ID: <b>HS22100187-01MSD</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Oct-2022 16:08</b>					
Client ID:		Run ID: <b>ICS-Integrion_418696</b>		SeqNo: <b>6903052</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	129.7	0.500	10	121.7	80.6	80 - 120	128.9	0.62	20	EO	
Fluoride	2.276	0.100	2	0.2504	101	80 - 120	2.361	3.65	20		
Nitrogen, Nitrate (As N)	1.977	0.100	2	0.021	97.8	80 - 120	1.96	0.884	20		
Nitrogen, Nitrite (As N)	1.902	0.100	2	0	95.1	80 - 120	1.894	0.416	20		
Sulfate	9.92	0.500	10	0.1729	97.5	80 - 120	9.888	0.322	20		
<b>The following samples were analyzed in this batch:</b>		HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04	HS22100190-05	HS22100190-06	HS22100190-07			

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418714 ( 0 )      **Instrument:** WetChem\_HS      **Method:** PH BY SM4500H+ B-2011

**DUP**      Sample ID: **HS22100190-01DUP**      Units: **pH Units**      Analysis Date: **06-Oct-2022 10:57**  
 Client ID: **CM-3A**      Run ID: **WetChem\_HS\_418714** SeqNo: **6903607**      PrepDate:      DF: **1**  
 Analyte      Result      PQL      SPK Val      SPK Ref Value      %REC      Control Limit      RPD Ref Value      %RPD      RPD Limit Qual

pH	7.65	0.100						7.62	0.393	10
Temp Deg C @pH	22.3	0						21.8	2.27	10

The following samples were analyzed in this batch: HS22100190-01      HS22100190-02      HS22100190-03

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R418718 ( 0 )		<b>Instrument:</b> WetChem_HS		<b>Method:</b> PH BY SM4500H+ B-2011						
<b>DUP</b>	Sample ID: <b>HS22100191-02DUP</b>	Units: <b>pH Units</b>			Analysis Date: <b>06-Oct-2022 11:16</b>					
Client ID:	Run ID: <b>WetChem_HS_418718</b>	SeqNo: <b>6903667</b>		PrepDate:		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.56	0.100					7.53	0.398	10	
Temp Deg C @pH	22.5	0					22.8	1.32	10	

The following samples were analyzed in this batch: HS22100190-04

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R418763 ( 0 )		<b>Instrument:</b> UV-2450		<b>Method:</b> FERROUS IRON BY SM3500 FE B					
<b>MBLK</b>	Sample ID: <b>MBLK-R418763</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 08:44</b>				
Client ID:	Run ID: <b>UV-2450_418763</b>	SeqNo: <b>6904829</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron U 0.0500 80 - 120

<b>LCS</b>	Sample ID: <b>LCS-R418763</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 08:44</b>				
Client ID:	Run ID: <b>UV-2450_418763</b>	SeqNo: <b>6904828</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 0.26 0.0500 0.25 0 104 80 - 120

<b>MS</b>	Sample ID: <b>HS22100193-03MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 08:44</b>				
Client ID:	Run ID: <b>UV-2450_418763</b>	SeqNo: <b>6904831</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 1.058 0.0500 0.25 0.839 87.6 75 - 125

<b>MSD</b>	Sample ID: <b>HS22100193-03MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 08:44</b>				
Client ID:	Run ID: <b>UV-2450_418763</b>	SeqNo: <b>6904830</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 1.061 0.0500 0.25 0.839 88.8 75 - 125 1.058 0.283 20

<b>The following samples were analyzed in this batch:</b>	HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
	HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
	HS22100190-09			

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R418776 ( 0 )	<b>Instrument:</b> ICS-Integrion	<b>Method:</b> ANIONS BY E300.0, REV 2.1, 1993
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<b>MBLK</b>	Sample ID: <b>MBLK</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 15:18</b>						
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905184</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	U	0.500							
Fluoride	U	0.100							
Nitrogen, Nitrate (As N)	U	0.100							
Nitrogen, Nitrite (As N)	U	0.100							
Sulfate	U	0.500							

<b>LCS</b>	Sample ID: <b>LCS</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 15:24</b>						
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905185</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	19.85	0.500	20	0	99.3	90 - 110			
Fluoride	4.282	0.100	4	0	107	90 - 110			
Nitrogen, Nitrate (As N)	3.986	0.100	4	0	99.6	90 - 110			
Nitrogen, Nitrite (As N)	3.986	0.100	4	0	99.7	90 - 110			
Sulfate	19.94	0.500	20	0	99.7	90 - 110			

<b>LCSD</b>	Sample ID: <b>LCSD</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 15:29</b>						
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905186</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Chloride	20.08	0.500	20	0	100	90 - 110	19.85	1.13	20
Fluoride	4.249	0.100	4	0	106	90 - 110	4.282	0.785	20
Nitrogen, Nitrate (As N)	4.035	0.100	4	0	101	90 - 110	3.986	1.23	20
Nitrogen, Nitrite (As N)	4.024	0.100	4	0	101	90 - 110	3.986	0.956	20
Sulfate	20.16	0.500	20	0	101	90 - 110	19.94	1.1	20

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418776 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993						
<b>MS</b>	Sample ID: <b>HS22100264-01MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 16:38</b>					
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905197</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	68.64	0.500	10	59.53	91.0	80 - 120				O
Fluoride	2.651	0.100	2	0.4831	108	80 - 120				
Nitrogen, Nitrate (As N)	2	0.100	2	0.0177	99.1	80 - 120				
Nitrogen, Nitrite (As N)	1.964	0.100	2	0.0342	96.5	80 - 120				
Sulfate	139.1	0.500	10	131.5	75.7	80 - 120				SEO
<b>MS</b>	Sample ID: <b>HS22100260-04MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 17:52</b>					
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905209</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	130.3	0.500	10	121.7	86.7	80 - 120				EO
Fluoride	2.436	0.100	2	0.3057	107	80 - 120				
Nitrogen, Nitrate (As N)	2.026	0.100	2	0.0187	100	80 - 120				
Nitrogen, Nitrite (As N)	1.943	0.100	2	0	97.2	80 - 120				
Sulfate	10.16	0.500	10	0.1046	101	80 - 120				
<b>MS</b>	Sample ID: <b>HS22100190-08MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 14:41</b>					
Client ID: <b>CM-1A</b>	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905180</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	30.85	0.500	10	20.88	99.7	80 - 120				
Fluoride	2.578	0.100	2	0.4263	108	80 - 120				
Nitrogen, Nitrate (As N)	1.98	0.100	2	0	99.0	80 - 120				
Nitrogen, Nitrite (As N)	U	0.100	2	0	0	80 - 120				S
Sulfate	1606	0.500	10	1639	-331	80 - 120				SEO



**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418776 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993							
<b>MSD</b>	Sample ID: <b>HS22100264-01MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 16:43</b>						
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905198</b>	PrepDate:	DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	68.6	0.500	10	59.53	90.6	80 - 120	68.64	0.0612	20	O	
Fluoride	2.566	0.100	2	0.4831	104	80 - 120	2.651	3.28	20		
Nitrogen, Nitrate (As N)	2.004	0.100	2	0.0177	99.3	80 - 120	2	0.215	20		
Nitrogen, Nitrite (As N)	1.965	0.100	2	0.0342	96.5	80 - 120	1.964	0.0611	20		
Sulfate	138.9	0.500	10	131.5	74.5	80 - 120	139.1	0.0854	20	SEO	
<b>MSD</b>	Sample ID: <b>HS22100260-04MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 17:57</b>						
Client ID:	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905210</b>	PrepDate:	DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	130.3	0.500	10	121.7	86.2	80 - 120	130.3	0.0391	20	EO	
Fluoride	2.364	0.100	2	0.3057	103	80 - 120	2.436	3	20		
Nitrogen, Nitrate (As N)	2.024	0.100	2	0.0187	100	80 - 120	2.026	0.109	20		
Nitrogen, Nitrite (As N)	1.948	0.100	2	0	97.4	80 - 120	1.943	0.252	20		
Sulfate	10.16	0.500	10	0.1046	101	80 - 120	10.16	0.0522	20		
<b>MSD</b>	Sample ID: <b>HS22100190-08MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>06-Oct-2022 14:47</b>						
Client ID: <b>CM-1A</b>	Run ID: <b>ICS-Integrion_418776</b>	SeqNo: <b>6905181</b>	PrepDate:	DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	30.66	0.500	10	20.88	97.9	80 - 120	30.85	0.589	20		
Fluoride	2.16	0.100	2	0.4263	86.7	80 - 120	2.578	17.7	20		
Nitrogen, Nitrate (As N)	1.975	0.100	2	0	98.8	80 - 120	1.98	0.233	20		
Nitrogen, Nitrite (As N)	U	0.100	2	0	0	80 - 120	0	0	20	S	
Sulfate	1593	0.500	10	1639	-466	80 - 120	1606	0.844	20	SEO	

The following samples were analyzed in this batch: HS22100190-08      HS22100190-09

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R418825 ( 0 )	<b>Instrument:</b> UV-2450	<b>Method:</b> FERROUS IRON BY SM3500 FE D (DISSOLVED)
<b>MBLK</b> Sample ID: <b>MBLK-R418825</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 08:53</b>
Client ID:	Run ID: <b>UV-2450_418825</b>	SeqNo: <b>6906218</b> PrepDate: DF: <b>1</b>
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Ferrous Iron, Dissolved U 0.0500

<b>LCS</b> Sample ID: <b>LCS-R418825</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 08:53</b>
Client ID:	Run ID: <b>UV-2450_418825</b>	SeqNo: <b>6906217</b> PrepDate: DF: <b>1</b>
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Ferrous Iron, Dissolved 0.264 0.0500 0.25 0 106 80 - 120

<b>MS</b> Sample ID: <b>HS22100190-07MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 08:53</b>
Client ID: <b>MW-22B</b>	Run ID: <b>UV-2450_418825</b>	SeqNo: <b>6906220</b> PrepDate: DF: <b>1</b>
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Ferrous Iron, Dissolved 0.277 0.0500 0.25 0.026 100 80 - 120

<b>MSD</b> Sample ID: <b>HS22100190-07MSD</b>	Units: <b>mg/L</b>	Analysis Date: <b>06-Oct-2022 08:53</b>
Client ID: <b>MW-22B</b>	Run ID: <b>UV-2450_418825</b>	SeqNo: <b>6906219</b> PrepDate: DF: <b>1</b>
Analyte	Result	PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Ferrous Iron, Dissolved 0.277 0.0500 0.25 0.026 100 80 - 120 0.277 0 20

<b>The following samples were analyzed in this batch:</b>	HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
	HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
	HS22100190-09			

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418848 ( 0 )      **Instrument:** WetChem\_HS      **Method:** PH BY SM4500H+ B-2011

**DUP**      Sample ID: **HS22100190-07DUP**      Units: **pH Units**      Analysis Date: **07-Oct-2022 14:09**  
 Client ID: **MW-22B**      Run ID: **WetChem\_HS\_418848** SeqNo: **6906793**      PrepDate:      DF: **1**  
 Analyte      Result      PQL      SPK Val      SPK Ref Value      %REC      Control Limit      RPD Ref Value      %RPD      RPD Limit Qual

pH	7.58	0.100						6.88	9.68	10
Temp Deg C @pH	20.6	0						20.7	0.484	10

The following samples were analyzed in this batch: 

HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
HS22100190-09			

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418882 ( 0 )      **Instrument:** UV-2450      **Method:** FERROUS IRON BY SM3500 FE B

<b>MBLK</b>	Sample ID: <b>MBLK-R418882</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 14:25</b>				
Client ID:	Run ID: <b>UV-2450_418882</b>	SeqNo: <b>6912622</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron      U      0.0500      80 - 120

<b>LCS</b>	Sample ID: <b>LCS-R418882</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 14:25</b>				
Client ID:	Run ID: <b>UV-2450_418882</b>	SeqNo: <b>6912621</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron      0.254      0.0500      0.25      0      102      80 - 120

<b>MS</b>	Sample ID: <b>HS22100361-05MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 14:25</b>				
Client ID:	Run ID: <b>UV-2450_418882</b>	SeqNo: <b>6912624</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron      0.297      0.0500      0.25      0.023      110      75 - 125

<b>MSD</b>	Sample ID: <b>HS22100361-05MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 14:25</b>				
Client ID:	Run ID: <b>UV-2450_418882</b>	SeqNo: <b>6912623</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron      0.295      0.0500      0.25      0.023      109      75 - 125      0.297      0.676      20

The following samples were analyzed in this batch: HS22100190-10

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418883 ( 0 )		Instrument: UV-2450		Method: FERROUS IRON BY SM3500 FE D (DISSOLVED)						
<b>MBLK</b>	Sample ID: <b>MBLK-R418883</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 18:35</b>					
Client ID:	Run ID: <b>UV-2450_418883</b>	SeqNo: <b>6912229</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	U	0.0500								
<b>LCS</b>	Sample ID: <b>LCS-R418883</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 18:35</b>					
Client ID:	Run ID: <b>UV-2450_418883</b>	SeqNo: <b>6912228</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.245	0.0500	0.25	0	98.0	80 - 120				
<b>MS</b>	Sample ID: <b>HS22100361-05MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 18:35</b>					
Client ID:	Run ID: <b>UV-2450_418883</b>	SeqNo: <b>6912231</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.242	0.0500	0.25	0.013	91.6	80 - 120				
<b>MSD</b>	Sample ID: <b>HS22100361-05MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>07-Oct-2022 18:35</b>					
Client ID:	Run ID: <b>UV-2450_418883</b>	SeqNo: <b>6912230</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.246	0.0500	0.25	0.013	93.2	80 - 120	0.242	1.64	20	

The following samples were analyzed in this batch: HS22100190-10

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418893 ( 0 )      **Instrument:** ICS-Integrion      **Method:** ANIONS BY E300.0, REV 2.1, 1993

MBLK		Sample ID: MBLK		Units: mg/L		Analysis Date: 07-Oct-2022 17:49			
Client ID:		Run ID: ICS-Integrion_418893		SeqNo: 6907855		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	U	0.500							
Fluoride	U	0.100							
Nitrogen, Nitrate (As N)	U	0.100							
Sulfate	U	0.500							

LCS		Sample ID: LCS		Units: mg/L		Analysis Date: 07-Oct-2022 17:55			
Client ID:		Run ID: ICS-Integrion_418893		SeqNo: 6907856		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	20.04	0.500	20	0	100	90 - 110			
Fluoride	4.339	0.100	4	0	108	90 - 110			
Nitrogen, Nitrate (As N)	4.03	0.100	4	0	101	90 - 110			
Sulfate	20	0.500	20	0	100.0	90 - 110			

MS		Sample ID: HS22100190-10MS		Units: mg/L		Analysis Date: 07-Oct-2022 18:05			
Client ID: CM-2		Run ID: ICS-Integrion_418893		SeqNo: 6907858		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	12.61	0.500	10	2.487	101	80 - 120			
Fluoride	2.635	0.100	2	0.4622	109	80 - 120			
Nitrogen, Nitrate (As N)	2.203	0.100	2	0.1941	100	80 - 120			
Sulfate	888.9	0.500	10	909.4	-205	80 - 120			SEO

MSD		Sample ID: HS22100190-10MSD		Units: mg/L		Analysis Date: 07-Oct-2022 18:10			
Client ID: CM-2		Run ID: ICS-Integrion_418893		SeqNo: 6907859		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	12.65	0.500	10	2.487	102	80 - 120	12.61	0.293	20
Fluoride	2.482	0.100	2	0.4622	101	80 - 120	2.635	5.97	20
Nitrogen, Nitrate (As N)	2.215	0.100	2	0.1941	101	80 - 120	2.203	0.516	20
Sulfate	891.7	0.500	10	909.4	-177	80 - 120	888.9	0.315	20 SEO

The following samples were analyzed in this batch: HS22100190-10

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418914 ( 0 )      **Instrument:** ICS-Integrion      **Method:** ANIONS BY E300.0, REV 2.1, 1993

MBLK		Sample ID: MBLK		Units: mg/L		Analysis Date: 08-Oct-2022 11:54			
Client ID:		Run ID: ICS-Integrion_418914		SeqNo: 6908300		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	U	0.500							
Fluoride	U	0.100							
Nitrogen, Nitrate (As N)	U	0.100							
Sulfate	U	0.500							

LCS		Sample ID: LCS		Units: mg/L		Analysis Date: 08-Oct-2022 11:59			
Client ID:		Run ID: ICS-Integrion_418914		SeqNo: 6908301		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	20.01	0.500	20	0	100	90 - 110			
Fluoride	4.36	0.100	4	0	109	90 - 110			
Nitrogen, Nitrate (As N)	4.023	0.100	4	0	101	90 - 110			
Sulfate	20.09	0.500	20	0	100	90 - 110			

MS		Sample ID: HS22100361-12MS		Units: mg/L		Analysis Date: 08-Oct-2022 12:10			
Client ID:		Run ID: ICS-Integrion_418914		SeqNo: 6908303		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	35.53	0.500	10	25.84	96.9	80 - 120			
Fluoride	3.381	0.100	2	1.252	106	80 - 120			
Nitrogen, Nitrate (As N)	2.149	0.100	2	0.1274	101	80 - 120			
Sulfate	882.7	0.500	10	905.9	-232	80 - 120			SEO

MSD		Sample ID: HS22100361-12MSD		Units: mg/L		Analysis Date: 08-Oct-2022 12:15			
Client ID:		Run ID: ICS-Integrion_418914		SeqNo: 6908304		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	35.59	0.500	10	25.84	97.5	80 - 120	35.53	0.169	20
Fluoride	3.306	0.100	2	1.252	103	80 - 120	3.381	2.24	20
Nitrogen, Nitrate (As N)	2.163	0.100	2	0.1274	102	80 - 120	2.149	0.626	20
Sulfate	885.3	0.500	10	905.9	-206	80 - 120	882.7	0.294	20 SEO

The following samples were analyzed in this batch: HS22100190-11

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R418923 ( 0 )      **Instrument:** UV-2450      **Method:** FERROUS IRON BY SM3500 FE B

<b>MBLK</b>	Sample ID: <b>MBLK-R418923</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 11:00</b>				
Client ID:	Run ID: <b>UV-2450_418923</b>	SeqNo: <b>6908550</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron      U      0.0500      80 - 120

<b>LCS</b>	Sample ID: <b>LCS-R418923</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 11:00</b>				
Client ID:	Run ID: <b>UV-2450_418923</b>	SeqNo: <b>6908549</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron      0.25      0.0500      0.25      0      100      80 - 120

<b>MS</b>	Sample ID: <b>HS22100361-12MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 11:00</b>				
Client ID:	Run ID: <b>UV-2450_418923</b>	SeqNo: <b>6908552</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron      0.255      0.0500      0.25      0.001      102      75 - 125

<b>MSD</b>	Sample ID: <b>HS22100361-12MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 11:00</b>				
Client ID:	Run ID: <b>UV-2450_418923</b>	SeqNo: <b>6908551</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron      0.258      0.0500      0.25      0.001      103      75 - 125      0.255      1.17      20

The following samples were analyzed in this batch: HS22100190-11



**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R418924 ( 0 )		Instrument: UV-2450		Method: FERROUS IRON BY SM3500 FE D (DISSOLVED)						
<b>MBLK</b>	Sample ID: <b>MBLK-R418924</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 10:30</b>					
Client ID:	Run ID: <b>UV-2450_418924</b>	SeqNo: <b>6908560</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	U	0.0500								
<b>LCS</b>	Sample ID: <b>LCS-R418924</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 10:30</b>					
Client ID:	Run ID: <b>UV-2450_418924</b>	SeqNo: <b>6908559</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.23	0.0500	0.25	0	92.0	80 - 120				
<b>MS</b>	Sample ID: <b>HS22100361-12MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 10:30</b>					
Client ID:	Run ID: <b>UV-2450_418924</b>	SeqNo: <b>6908562</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.25	0.0500	0.25	0.009	96.4	80 - 120				
<b>MSD</b>	Sample ID: <b>HS22100361-12MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Oct-2022 10:30</b>					
Client ID:	Run ID: <b>UV-2450_418924</b>	SeqNo: <b>6908561</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Ferrous Iron, Dissolved	0.248	0.0500	0.25	0.009	95.6	80 - 120	0.25	0.803	20	

The following samples were analyzed in this batch: HS22100190-11

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R419091 ( 0 )      **Instrument:** WetChem\_HS      **Method:** PH BY SM4500H+ B-2011

**DUP**      Sample ID: **HS22100361-05DUP**      Units: **pH Units**      Analysis Date: **11-Oct-2022 13:04**  
 Client ID:      Run ID: **WetChem\_HS\_419091**      SeqNo: **6912411**      PrepDate:      DF: **1**  
 Analyte      Result      PQL      SPK Val      SPK Ref Value      %REC      Control Limit      RPD Ref Value      %RPD      RPD Limit Qual

pH	10.8	0.100						10.76	0.371	10
Temp Deg C @pH	20.3	0						20.2	0.494	10

The following samples were analyzed in this batch: HS22100190-10      HS22100190-11

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R419124 ( 0 )	<b>Instrument:</b> WetChem_HS	<b>Method:</b> SULFIDE BY SM4500 S2-F-2011
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<b>MBLK</b>	Sample ID: <b>MBLK-R419124</b>	Units: <b>mg/L</b>	Analysis Date: <b>11-Oct-2022 16:41</b>							
Client ID:	Run ID: <b>WetChem_HS_419124</b>	SeqNo: <b>6913098</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 1.00

<b>LCS</b>	Sample ID: <b>LCS-R419124</b>	Units: <b>mg/L</b>	Analysis Date: <b>11-Oct-2022 16:41</b>							
Client ID:	Run ID: <b>WetChem_HS_419124</b>	SeqNo: <b>6913097</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.68 1.00 25 0 90.7 85 - 115

<b>LCSD</b>	Sample ID: <b>LCSD-R419124</b>	Units: <b>mg/L</b>	Analysis Date: <b>11-Oct-2022 16:41</b>							
Client ID:	Run ID: <b>WetChem_HS_419124</b>	SeqNo: <b>6913096</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.88 1.00 25 0 91.5 85 - 115 22.68 0.878 20

<b>MS</b>	Sample ID: <b>HS22100128-01MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>11-Oct-2022 16:41</b>							
Client ID:	Run ID: <b>WetChem_HS_419124</b>	SeqNo: <b>6913099</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.48 1.00 25 -1.52 96.0 80 - 120

<b>The following samples were analyzed in this batch:</b>	HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
	HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
	HS22100190-09			

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

Batch ID: R419238 ( 0 )		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011						
<b>MBLK</b>	Sample ID: <b>WBLK-101122</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Oct-2022 17:29</b>						
Client ID:	Run ID: <b>Balance1_419238</b>	SeqNo: <b>6916108</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		U	10.0							
<b>LCS</b>	Sample ID: <b>WLCS-101122</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Oct-2022 17:29</b>						
Client ID:	Run ID: <b>Balance1_419238</b>	SeqNo: <b>6916109</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		1048	10.0	1000	0	105	85 - 115			
<b>DUP</b>	Sample ID: <b>HS22100190-03DUP</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Oct-2022 17:29</b>						
Client ID: <b>CM-4B</b>	Run ID: <b>Balance1_419238</b>	SeqNo: <b>6916107</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		3240	10.0				3240	0	5	
<b>DUP</b>	Sample ID: <b>HS22100159-13DUP</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Oct-2022 17:29</b>						
Client ID:	Run ID: <b>Balance1_419238</b>	SeqNo: <b>6916087</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Total Dissolved Solids (Residue, Filterable)		740	10.0				740	0	5	
The following samples were analyzed in this batch:										
HS22100190-01      HS22100190-02      HS22100190-03										

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R419318 ( 0 )      **Instrument:** Balance1      **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

<b>MBLK</b>	Sample ID: <b>WBLK-101122</b>	Units: <b>mg/L</b>			Analysis Date: <b>11-Oct-2022 12:29</b>					
Client ID:	Run ID: <b>Balance1_419318</b>	SeqNo: <b>6918047</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable)      U      10.0

<b>LCS</b>	Sample ID: <b>WLCS-101122</b>	Units: <b>mg/L</b>			Analysis Date: <b>11-Oct-2022 12:29</b>					
Client ID:	Run ID: <b>Balance1_419318</b>	SeqNo: <b>6918048</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable)      1052      10.0      1000      0      105      85 - 115

<b>DUP</b>	Sample ID: <b>HS22100314-05DUP</b>	Units: <b>mg/L</b>			Analysis Date: <b>11-Oct-2022 12:29</b>					
Client ID:	Run ID: <b>Balance1_419318</b>	SeqNo: <b>6918046</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable)      1650      10.0                     1650      0      5

<b>DUP</b>	Sample ID: <b>HS22100190-04DUP</b>	Units: <b>mg/L</b>			Analysis Date: <b>11-Oct-2022 12:29</b>					
Client ID: <b>CM-5A</b>	Run ID: <b>Balance1_419318</b>	SeqNo: <b>6918019</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable)      2630      10.0                     2650      0.758      5

The following samples were analyzed in this batch:

HS22100190-04	HS22100190-05	HS22100190-06	HS22100190-07
HS22100190-08	HS22100190-09		

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R419364 ( 0 )	<b>Instrument:</b> WetChem_HS	<b>Method:</b> SULFIDE BY SM4500 S2-F-2011
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<b>MBLK</b>	Sample ID: <b>MBLK-R419364</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:52</b>							
Client ID:	Run ID: <b>WetChem_HS_419364</b>	SeqNo: <b>6918991</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 1.00

<b>LCS</b>	Sample ID: <b>LCS-R419364</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:52</b>							
Client ID:	Run ID: <b>WetChem_HS_419364</b>	SeqNo: <b>6918990</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 24 1.00 25 0 96.0 85 - 115

<b>LCSD</b>	Sample ID: <b>LCSD-R419364</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:52</b>							
Client ID:	Run ID: <b>WetChem_HS_419364</b>	SeqNo: <b>6918989</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 24.2 1.00 25 0 96.8 85 - 115 24 0.83 20

<b>MS</b>	Sample ID: <b>HS22100361-05MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:52</b>							
Client ID:	Run ID: <b>WetChem_HS_419364</b>	SeqNo: <b>6923112</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 24.6 1.00 25 -0.8 102 80 - 120

<b>MS</b>	Sample ID: <b>HS22100190-10MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:52</b>							
Client ID: <b>CM-2</b>	Run ID: <b>WetChem_HS_419364</b>	SeqNo: <b>6918992</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 24.6 1.00 25 -3.4 112 80 - 120

The following samples were analyzed in this batch: HS22100190-10 HS22100190-11

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R419454 ( 0 )	<b>Instrument:</b> Balance1	<b>Method:</b> TOTAL DISSOLVED SOLIDS BY SM2540C-2011
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<b>MBLK</b>	Sample ID: <b>WBLK-101322</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:25</b>							
Client ID:	Run ID: <b>Balance1_419454</b>	SeqNo: <b>6921052</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

<b>LCS</b>	Sample ID: <b>WLCS-101322</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:25</b>							
Client ID:	Run ID: <b>Balance1_419454</b>	SeqNo: <b>6921053</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1040 10.0 1000 0 104 85 - 115

<b>DUP</b>	Sample ID: <b>HS22100559-03DUP</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:25</b>							
Client ID:	Run ID: <b>Balance1_419454</b>	SeqNo: <b>6921051</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 368 10.0 368 0 5

<b>DUP</b>	Sample ID: <b>HS22100361-05DUP</b>	Units: <b>mg/L</b>	Analysis Date: <b>13-Oct-2022 17:25</b>							
Client ID:	Run ID: <b>Balance1_419454</b>	SeqNo: <b>6921034</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 2184 10.0 2212 1.27 5

The following samples were analyzed in this batch: HS22100190-10 HS22100190-11

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R419512 ( 0 )	<b>Instrument:</b> ManTech01	<b>Method:</b> ALKALINITY BY SM 2320B-2011
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<b>MBLK</b>	Sample ID: <b>WBLKW2-101622</b>	Units: <b>mg/L</b>	Analysis Date: <b>16-Oct-2022 13:10</b>							
Client ID:	Run ID: <b>ManTech01_419512</b>	SeqNo: <b>6922801</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.00								
Alkalinity, Carbonate (As CaCO3)	U	5.00								
Alkalinity, Hydroxide (As CaCO3)	U	5.00								
Alkalinity, Total (As CaCO3)	U	5.00								

<b>LCS</b>	Sample ID: <b>WLCS2-101622</b>	Units: <b>mg/L</b>	Analysis Date: <b>16-Oct-2022 12:39</b>							
Client ID:	Run ID: <b>ManTech01_419512</b>	SeqNo: <b>6922797</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	979.8	5.00	1000	0	98.0	85 - 115				
Alkalinity, Total (As CaCO3)	991.7	5.00	1000	0	99.2	85 - 115				

<b>LCS2</b>	Sample ID: <b>WLCS2-101622</b>	Units: <b>mg/L</b>	Analysis Date: <b>16-Oct-2022 12:48</b>							
Client ID:	Run ID: <b>ManTech01_419512</b>	SeqNo: <b>6922798</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	975.7	5.00	1000	0	97.6	85 - 115	979.8	0.416	20	
Alkalinity, Total (As CaCO3)	1012	5.00	1000	0	101	85 - 115	991.7	2.01	20	

<b>DUP</b>	Sample ID: <b>HS22100190-01DUP</b>	Units: <b>mg/L</b>	Analysis Date: <b>16-Oct-2022 13:25</b>							
Client ID: <b>CM-3A</b>	Run ID: <b>ManTech01_419512</b>	SeqNo: <b>6922803</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	589.9	5.00					588.7	0.202	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	589.9	5.00					588.7	0.202	20	

The following samples were analyzed in this batch:

HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
HS22100190-09			



**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

<b>Batch ID:</b> R419661 ( 0 )	<b>Instrument:</b> ManTech01	<b>Method:</b> ALKALINITY BY SM 2320B-2011
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<b>MBLK</b>	Sample ID: <b>WBLKW1-220218</b>	Units: <b>mg/L</b>	Analysis Date: <b>18-Oct-2022 10:59</b>							
Client ID:	Run ID: <b>ManTech01_419661</b>	SeqNo: <b>6926338</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.00								
Alkalinity, Carbonate (As CaCO3)	U	5.00								
Alkalinity, Hydroxide (As CaCO3)	U	5.00								
Alkalinity, Total (As CaCO3)	U	5.00								

<b>LCS</b>	Sample ID: <b>LCS1-221018</b>	Units: <b>mg/L</b>	Analysis Date: <b>18-Oct-2022 11:07</b>							
Client ID:	Run ID: <b>ManTech01_419661</b>	SeqNo: <b>6926339</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	965.5	5.00	1000	0	96.5	85 - 115				
Alkalinity, Total (As CaCO3)	990.4	5.00	1000	0	99.0	85 - 115				

<b>LCSD</b>	Sample ID: <b>LCSD1-221018</b>	Units: <b>mg/L</b>	Analysis Date: <b>18-Oct-2022 11:16</b>							
Client ID:	Run ID: <b>ManTech01_419661</b>	SeqNo: <b>6926340</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	960.4	5.00	1000	0	96.0	85 - 115	965.5	0.52	20	
Alkalinity, Total (As CaCO3)	983.5	5.00	1000	0	98.4	85 - 115	990.4	0.698	20	

<b>DUP</b>	Sample ID: <b>HS22100190-10DUP</b>	Units: <b>mg/L</b>	Analysis Date: <b>18-Oct-2022 11:30</b>							
Client ID: <b>CM-2</b>	Run ID: <b>ManTech01_419661</b>	SeqNo: <b>6926342</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	356.6	5.00					336.8	5.72	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	356.6	5.00					336.8	5.72	20	

The following samples were analyzed in this batch: 

HS22100190-10	HS22100190-11
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**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QC BATCH REPORT**

**Batch ID:** R419689 ( 0 )      **Instrument:** WetChem\_HS      **Method:** SPECIFIC CONDUCTANCE BY SM 2510B-2011

**MBLK**      Sample ID: **MBLK-R419689**      Units: **umhos/cm @ 25.0 °C**      Analysis Date: **18-Oct-2022 15:30**  
 Client ID:      Run ID: **WetChem\_HS\_419689**      SeqNo: **6926813**      PrepDate:      DF: **1**  

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Specific Conductivity      U      5.00

**LCS**      Sample ID: **LCS-R419689**      Units: **umhos/cm @ 25.0 °C**      Analysis Date: **18-Oct-2022 15:30**  
 Client ID:      Run ID: **WetChem\_HS\_419689**      SeqNo: **6926812**      PrepDate:      DF: **1**  

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Specific Conductivity      1390      5.00      1413      0      98.4      80 - 120

**DUP**      Sample ID: **HS22100190-01DUP**      Units: **umhos/cm @ 25.0 °C**      Analysis Date: **18-Oct-2022 15:30**  
 Client ID: **CM-3A**      Run ID: **WetChem\_HS\_419689**      SeqNo: **6926814**      PrepDate:      DF: **1**  

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
---------	--------	-----	---------	---------------	------	---------------	---------------	------	-----------	------

Specific Conductivity      2374      5.00                          2387      0.546      20

**The following samples were analyzed in this batch:**

HS22100190-01	HS22100190-02	HS22100190-03	HS22100190-04
HS22100190-05	HS22100190-06	HS22100190-07	HS22100190-08
HS22100190-09	HS22100190-10	HS22100190-11	

**Client:** Altamira  
**Project:** WFEC / MNA  
**WorkOrder:** HS22100190

**QUALIFIERS,  
ACRONYMS, UNITS**

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

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

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arkansas	22-041-0	27-Mar-2023
California	2919 2022-2023	30-Apr-2023
Dept of Defense	L21-682	31-Dec-2023
Florida	E87611-36	30-Jun-2023
Illinois	2000322022-9	09-May-2023
Kansas	E-10352; 2022-2023	31-Jul-2023
Kentucky	123043, 2022-2023	30-Apr-2023
Louisiana	03087, 2022-2023	30-Jun-2023
Maryland	343, 2022-2023	30-Jun-2023
North Carolina	624-2022	31-Dec-2022
North Dakota	R-193 2022-2023	30-Apr-2023
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-22-29	30-Apr-2023
Utah	TX026932022-13	31-Jul-2023

Sample Receipt Checklist

Work Order ID: HS22100190

Date/Time Received: **05-Oct-2022 10:10**

Client Name: Enviro Clean Services-Tulsa

Received by: **Corey Grandits**

Completed By: /S/ Nilesch D. Ranchod 06-Oct-2022 09:26 eSignature Date/Time  
 Reviewed by: /S/ Anna Kinchen 06-Oct-2022 14:24 eSignature Date/Time

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes  No  Not Present
- Chain of custody present? Yes  No  1 Page(s)
- Chain of custody signed when relinquished and received? Yes  No
- Samplers name present on COC? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No

Temperature(s)/Thermometer(s): 

3.4C/3.2C,4.1C/3.9C,3.3C/3.1C UC/C	IR #31
------------------------------------	--------

Cooler(s)/Kit(s): 

49102/Grey/49613
------------------

Date/Time sample(s) sent to storage: 

10/05/2022 12:00
------------------

- Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted
- Water - pH acceptable upon receipt? Yes  No  N/A
- pH adjusted? Yes  No  N/A

pH adjusted by: 

--

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments: 

--

Corrective Action: 

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Sample Receipt Checklist

Work Order ID: HS22100190

Date/Time Received: 05-Oct-2022 10:10

Client Name: Enviro Clean Services-Tulsa

Received by: Corey Grandits

Completed By: /S/ Corey Grandits 07-Oct-2022 15:17 Reviewed by: eSignature Date/Time eSignature Date/Time

Matrices: W Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Samplers name present on COC? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Temperature(s)/Thermometer(s): 1.2uc/1.0c , 3.6uc/3.4c , 1.8uc/1.6c , 1.5uc/1.3c , 2.2uc/2.0c , 3.3uc/3.1c IR31
Cooler(s)/Kit(s): 47641 , 47803 , 49643 , Lg Red , 49762 , Lg Blue
Date/Time sample(s) sent to storage: 10/7/2022

- Water - VOA vials have zero headspace? Yes [ ] No [ ] No VOA vials submitted [checked]
Water - pH acceptable upon receipt? Yes [checked] No [ ] N/A [ ]
pH adjusted? Yes [ ] No [checked] N/A [ ]
pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS22100190

Date/Time Received: 05-Oct-2022 10:10

Client Name: Enviro Clean Services-Tulsa

Received by: Corey Grandits

Completed By: /S/ Corey Grandits	08-Oct-2022 09:57	Reviewed by:		
eSignature	Date/Time	eSignature	Date/Time	

Matrices: **W**

Carrier name: **FedEx**

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes  No  Not Present
- Chain of custody present? Yes  No  1 Page(s)
- Chain of custody signed when relinquished and received? Yes  No
- Samplers name present on COC? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No

Temperature(s)/Thermometer(s):	1.9UC/1.7C	IR31
Cooler(s)/Kit(s):	48367	
Date/Time sample(s) sent to storage:	10/8/2022	
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/> No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments: [Empty text box]

Corrective Action: [Empty text box]

CHAIN OF CUSTODY RECORD



PROJECT NUMBER:  
WFEE/60022/0009

PROJECT NAME:  
WFEC/MNA

COC: 1 of X

CLIENT CONTACT:  
HEATHER TIFFANY

CLIENT EMAIL:  
HEATHER.TIFFANY@ALTAMIRA-LABDATA@US.COM

CLIENT PHONE:  
405.618.2021

LABORATORY / LAB PM:  
AUS/ANNA KINCHEN

CLIENT ADDRESS:  
500 CENTRAL PARK DR #500  
OKC, OK 73105

TAT:

LAB ADDRESS:  
10450 STANCLIFF RD  
#210  
HOUSTON, TX 77099

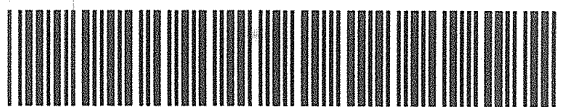
SPECIAL INSTRUCTIONS:

SHIPMENT METHOD:  
FedEx

TRACKING:

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	PARAMETERS													HOLD	
						NUMBER OF CONTAINERS	FIELD FILTERED (YES/NO)	APP A *	NITRATE (SHORT HOLD)	SEC COND	Fe & Mo, TOTAL	Fe FERROUS & FERRIC (SHORT HOLD)	DISS FERROUS (SHORT HOLD)	DISS Fe, Mo, FERRIC	K, Mg, Na	AMMONIUM NITROGEN	AMMONIUM HYDROXIDE	ALK		
1	<del>CM-1A</del>			W	1,2,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
2	<del>CM-1B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
3	<del>CM-2</del>							X	X	X	X	X	X	X	X	X	X	X	X	
4	CM-3A	10/4/22	1204			6	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	<del>CM-3B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
6	CM-4A	10/4/22	1110			6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
7	CM-4B	10/4/22	1055			6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
8	CM-5A	10/4/22	1023			6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
9	CM-5B	10/4/22	1000			6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
10	MW-15B	10/4/22	1300			6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
11	MW-22B	10/4/22	1235	W		6	Y	X	X	X	X	X	X	X	X	X	X	X	X	
12	Temp Blank																			
13																				
14																				
15																				

Altamira  
WFEC / MNA



HS22100190

SAMPLER(S) NAME:  
Bradley VanCleave

DATE: 10/4/22  
TIME: 1400

Total # of Containers:

SAMPLER(S) SIGNATURE:  
Bradley VanCleave

DATE: 10/4/22  
TIME: 1400

RELINQUISHED BY:  
Bradley VanCleave

DATE: 10/4/22  
TIME: 1400

RECEIVED BY:  
10204 W

DATE: 10/9/22  
TIME: 1010

LOGGED BY:

DATE:  
TIME:

COOLER TEMP:

PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7- 4 Degrees C 8-9035 9-Other:  
POINT OF ORIGIN:  Norman  Oklahoma City  Tulsa  Yukon  Midland  Other:

ALTAMIRA-US, LLC

44102 = 3.9  
66 6059 = 4.1

1/21  
6/2/22



CHAIN OF CUSTODY RECORD



PROJECT NUMBER:  
WFEE160022/0009

PROJECT NAME:  
WFEC, MNA

COC: 2 of X

CLIENT CONTACT:  
HEATHER TIFFANY

CLIENT EMAIL:  
HEATHER.TIFFANY@ALTAMIRA-LAB DATA@US.COM

CLIENT PHONE:  
405.618.2021

LABORATORY / LAB PM:  
ALS/ANNA KINCHEN

CLIENT ADDRESS:  
525 CENTRAL PARK DR #500  
OKC, OK 73105

TAT:

LAB ADDRESS:  
10450 STANCLIFF RD  
#210  
HOUSTON, TX 77099

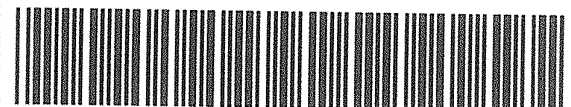
SPECIAL INSTRUCTIONS:

SHIPMENT METHOD:  
FEDEX

TRACKING:

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	PARAMETERS													HOLD	
						NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	APP A *	NITRATE (SHORT HOLD)	SPEC COND	Fe, Mn, TOTAL	Fe, FERRIC & FERRIC (SHORT HOLD)	DISS FERROUS (SHORT HOLD)	DISS Fe, Mn, FERRIC Fe	K, Mg, Na	SULFIDE	HCO3 CO3, HYDRONATE ALK			
1	CM-1A	10/4/22	1547	W	1,2,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
2	CM-1B	10/4/22	1700					X	X	X	X	X	X	X	X	X	X	X	X	
3	<del>CM-2</del>							X	X	X	X	X	X	X	X	X	X	X	X	
4	<del>CM-3A</del>							X	X	X	X	X	X	X	X	X	X	X	X	
5	<del>CM-3B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
6	<del>CM-4A</del>							X	X	X	X	X	X	X	X	X	X	X	X	
7	<del>CM-4B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
8	<del>CM-5A</del>							X	X	X	X	X	X	X	X	X	X	X	X	
9	<del>CM-5B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
10	<del>MW-15B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
11	<del>MW-22B</del>							X	X	X	X	X	X	X	X	X	X	X	X	
12	Temp Blank			W																
13																				
14																				
15																				

HS22100190



Altamira  
WFEC / MNA

SAMPLER(S) NAME: Bradley Van Cleave  
 DATE: 10/5/22  
 TIME: 1400  
 Total # of Containers:  
 SAMPLER(S) SIGNATURE: [Signature]  
 DATE: 10/5/22  
 TIME: 1400

RELINQUISHED BY: [Signature]  
 DATE: 10/5/22  
 TIME: 1400  
 RECEIVED BY: [Signature]  
 DATE: 10/06/2022  
 TIME: 0945  
 LOGGED BY:  
 DATE:  
 TIME:  
 COOLER TEMP:

PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-4 Degrees C 8-9035 9-Other:  
 POINT OF ORIGIN:  Norman  Oklahoma City  Tulsa  Yukon  Midland  Other:

49494-3.0 49675-2.00 +31C F=02

ALTAMIRA-US, LLC

CHAIN OF CUSTODY RECORD



PROJECT NUMBER: **WFEEL600 21/2001**

PROJECT NAME: **WFEC / MNA Monitoring Prog.**

COC: 3 of 3

CLIENT CONTACT: **Heather Tiffany  
Bert Smith**

CLIENT EMAIL: **Heather.N.Tiffany@Altamira-us.com  
lab@alt@Altamira-us.com**

CLIENT PHONE: **405-618-2021**

LABORATORY / LAB PM: **ALS**

CLIENT ADDRESS: **3700 West Robinson Street  
Suite 200  
Norman OK 73072**

TAT: **STND**

LAB ADDRESS: **10450 Stancliff Rd  
Suite 210  
Houston TX 77099**

SPECIAL INSTRUCTIONS:

SHIPMENT METHOD: **Fed Ex**

TRACKING:

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.
1	CM-2	10/6/22	1021	W	1,2,4,9
2	Temp Blank			W	
3					
4					
5					
6					
7	47641 v/c 1.2°				
8	47803 3.6°				
9	49643 1.8°				
10	R-1 1.5°				
11	4131				
12	CL-0.2°				
13					
14					
15					

NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS													HOLD
		App A *	Nitrate (Short Hold)	COD	SP. Cond	Fe, Total	Fe, Ferrous Fe (Short Hold)	Dissolved Ferrous Fe (Short Hold)	Dissolved Fe, Mn, Ferric Fe	Ca, Mg, Na	Sulfide	HCO <sub>3</sub> , CO <sub>3</sub> , Hydroxide Alkalinity			
6	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	
3															

**HS22100190**

Altamira  
WFEC / MNA



SAMPLER(S) NAME: **Brad VanCleave** DATE: **10/6/22** TIME: **1400** Total # of Containers: **6**

SAMPLER(S) SIGNATURE: \_\_\_\_\_ DATE: **10/6/22** TIME: **1400**

RELINQUISHED BY: **Brad VanCleave** DATE: **10/6/22** TIME: **1400** RECEIVED BY: \_\_\_\_\_ DATE: **10/7/22** TIME: **08:00**

LOGGED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ COOLER TEMP: \_\_\_\_\_

PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-4 Degrees C 8-9035 9-Other : \_\_\_\_\_

POINT OF ORIGIN:  Norman  Oklahoma City  Tulsa  Yukon  Midland  Other : \_\_\_\_\_

ALTAMIRA-US, LLC



CHAIN OF CUSTODY RECORD

		<b>PROJECT NUMBER:</b> WFE6 160024 / 2001	<b>PROJECT NAME:</b> WFE6 / MNA Monitoring	COC: <u>3</u> of <u>X</u>		
<b>CLIENT CONTACT:</b> Heather Tiffamy Bert Smith		<b>CLIENT EMAIL:</b> <u>labdata2@altamira-us.com</u> <b>CLIENT PHONE:</b> <u>405-618-2021</u>				
<b>CLIENT ADDRESS:</b> 525 Central Park Dr Ste 500 OKC, OK 73105		<b>TAT:</b> <u>Standard</u>				
<b>SPECIAL INSTRUCTIONS:</b> OK APP # : 6, Cr, Cl, F, PH, SO3, TDS + SHORT Hold: Nitrate & Ferrus Iron		<b>PARAMETERS</b>				
<b>LABORATORY / LAB PM:</b> ALS		Fe, Ferrus & Ferric Fe & Mn, Total Spec Ion Nitrate as N Appox # of #*				
<b>LAB ADDRESS:</b> 10450 Stanchfield Rd Ste 210 Houston, TX 77099		Dissolved: Fe, Mn, Ferric KI, Mg, Ni Su, H2O HCO3, CO3 Hydroxide Alkalinity				
<b>SHIPMENT METHOD:</b> FedEx		FIELD FILTERED ( YES / NO )				
<b>TRACKING:</b>		NUMBER OF CONTAINERS				
NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	HOLD
1	CM-36	10/17/22	1030	W	1,2,4,9	6
2	Temp blank			W		1
3						
4						
5						
6						
7						
8						
9						
10						
11	48367					
12	OK					
13	48367					
14	48367					
15	48367					

**HS22100190**  
 Altamira  
 WFE6 / MNA



DATE: 10/17/22  
 TIME: 1030  
 COOLER TEMP:

DATE: \_\_\_\_\_  
 TIME: \_\_\_\_\_

SAMPLER(S) SIGNATURE: [Signature]

LOGGED BY: \_\_\_\_\_  
 DATE: 10/18/22  
 TIME: 09:56

RECEIVED BY: [Signature]  
 DATE: 10/17/22  
 TIME: 1630

DATE: 10/17/22  
 TIME: 1630

RECEIVED BY: [Signature]  
 DATE: 10/17/22  
 TIME: 1630


POINT OF ORIGIN:  Norman  Oklahoma City  Tulsa  Yukon  Midland  Other

8-9035  9-Other: \_\_\_\_\_

7-4 Degrees C  6-NaHSO4  5-Na2S2O3  4-NaOH  3-H2SO4  2-HNO3  1-HCl


Total # of Containers: \_\_\_\_\_

ALTAMIRA-US, LLC

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281.530.5656 Fax. +1 281.530.5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/22	Time: 1630	<i>SM</i>
	Name: SETH BROWDER		Date: 10/08/22
	Company: ALTAMIRA		

48367

2022 08 120 OCT 08 2022

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281.530.5656 Fax. +1 281.530.5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/17/22	Time: 1630	<i>SM</i>
	Name: SETH BROWDER		Date: 10/08/22
	Company: ALTAMIRA		

48367



48367

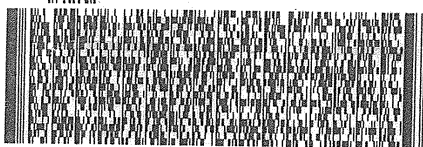
ORIGIN ID: SGRA (918) 794-7828  
 HEATHER TIFFANY  
 ALTAMIRA  
 2670 TRENTON RD  
 NORMAN, OK 73069  
 UNITED STATES US

SHIP DATE: 22SEP22  
 ACTWGT: 1.00 LB MAN  
 CAD: 0221247/CAFE3616  
 DIMS: 26x14x14 IN


TO SHIPPING DEPT  
 ALS LABORATORY GROUP  
 10450 STANCLIFF RD  
 SUITE 210  
 HOUSTON TX 77099

(281) 630-6656  
 REF: WFEC-CCR-IMPOUND-BO 87943-AK

RMA: ||| ||| |||



FedEx Express

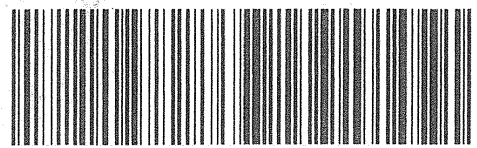



FedEx  
 TRK# 0221 5789 1998 3288

SATURDAY 12:00P  
 PRIORITY OVERNIGHT

XO SGRA

77099  
 TX-US IAH




	<b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: 10/6/22 Name: Company:
---	--	------------------------------------

<b>CUSTODY SEAL</b> Date: 10/6/22 Time: 1400		Broken By: Date: 10-1
---	--	--------------------------

RETURNS TO SENDER  
 FRI - 07 OCT  
 PRIORITY OVERNIGHT  
 7709 TX-US

TRK# 4809 7832 6800  
 0221

	<b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: 10/6/22 Name: Company:
---	--	------------------------------------

<b>CUSTODY SEAL</b> Time: 1400		Broken By: Date: 10-1
-----------------------------------	--	--------------------------

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

<b>CUSTODY SEAL</b>		Seal Broken By: 15
Date: 10/12/17	Time: 10:30A	Date: 10-1
Name: [Signature]	Company: [Signature]	

**FedEx**  
 TRK# 5789 1998 3510  
 0221

**FRI - 07 OCT 10:30A**  
**PRIORITY OVERNIGHT**  
 47641 77099  
 TX - US IAH

**AB SGRA**

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

<b>CUSTODY SEAL</b>		Seal Broken By: 14
Date: 10/10/17	Time: 7:00A	Date: 10-7
Name: [Signature]	Company: [Signature]	

**FedEx**  
 TRK# 5789 1998 3472  
 0221


**FRI - 07 OCT AA**  
**PRIORITY OVERNIGHT**

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

<b>CUSTODY SEAL</b>		Seal Broken By: 10
Date: 10/12/17	Time: [Signature]	Date: 10-1
Name: [Signature]	Company: [Signature]	

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

<b>CUSTODY SEAL</b>		Seal Broken By: 19
Date: 10/12/17	Time: 1:40P	Date: 10-1
Name: [Signature]	Company: [Signature]	


**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5337

**CUSTODY SEAL**  
 Date: 10/6/22 Time: 10:30  
 Name: [Signature]  
 Company:




Sent By: [Signature]  
 Date: 10/6/22




TRK# 5789 1998 3299 49762  
 FRI - 07 OCT 10:30  
**PRIORITY OVERNIGHT**


**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

**CUSTODY SEAL**  
 Date: 10/6/22 Time: 10:30  
 Name: [Signature]  
 Company:

B03  
 917  
 10:30  
 A  
 10/07/22

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/6/22	Time: 1400	
	Name:		Date:
	Company:		

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/6/22	Time: 1400	
	Name:		Date:
	Company:		



**FedEx**  
 TRK# 5789 1998 3440  
 @221




FRI - 07 OCT AA  
 PRIORITY OVERNIGHT


**AB SGRA** 49643 77099  
 US  
 AH

**FedEx** 47807  
 TRK# 5789 1998 3428  
 @221

FRI - 07 OCT  
 PRIORITY OVERNIGHT

Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/6/22	Time: 1400	
	Name:		Date:
	Company:		


 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/6/22	Time: 1400	
	Name:		Date:
	Company:		


 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By:
	Date: 10/6/22	Time: 1400	
	Name:		Date:
	Company:		




<b>CUSTODY SEAL</b>		Seal Broken By: <b>CG</b>
Time: <b>1400</b>	Date: <b>10/6</b>	

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CU</b> Date: <b>10/5/22</b> Name: _____ Company: _____
--	--


**TRK# 0221 5789 1998 3233**  
**THU - 06 OCT AA**  
**PRIORITY OVERNIGHT**

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: _____ Name: _____ Company: _____
--	--

<b>CUSTODY SEAL</b>		Seal Broken By: <b>CG</b>
Time: <b>1400</b>	Date: <b>10/6</b>	

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUS</b> Date: <b>10/5/22</b> Name: _____ Company: _____
---	---

<b>CUSTODY SEAL</b>		Seal Broken By: <b>CG</b>
Time: <b>1400</b>	Date: <b>10/6</b>	

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

**CUSTODY SEAL**  
 Date: 10/5/23 Time: 1400  
 Name: [Signature]  
 Company: [Signature]

Broken E.  
 Date: 10/5/23

**FedEx**  
 TRK# 0221 5789 1998 3461  
**AB SGRA**  
 THU - 06 OCT AA  
 PRIORITY OVERNIGHT  
 77099  
 TX-US  
 IAH


**CUSTODY SEAL**  
 Date: 10/5/23 Time: 1400  
 Name: [Signature]  
 Company: [Signature]


**ALS**  
 10450 Stancliff Rd.  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

**ALS**  
 10450 Stancliff Rd., Suite 210  
 Houston, Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887


**CUSTODY SEAL**  
 Date: 10/5/23 Time: 1400  
 Name: [Signature]  
 Company: [Signature]

**FedEx**  
 TRK# 0221 5789 1998 3520  
**AB SGRA**  
 THU - 06 OCT AA  
 PRIORITY OVERNIGHT  
 HT  
 19


 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Broken By: <b>CS</b>
	Date: <b>10/4/22</b>	Time: <b>1400</b>	Date: <b>10-9</b>
	Name: <i>[Signature]</i>	Company: <i>[Signature]</i>	

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Broken By: <b>CS</b>
	Date: <b>10/4/22</b>	Time: <b>1400</b>	Date: <b>10-9</b>
	Name: <i>[Signature]</i>	Company: <i>[Signature]</i>	





 <b>ALS</b> 10450 Stancliff Rd. Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Broken By: <b>CS</b>
	Date: <b>10/4/22</b>	Time: <b>1400</b>	Date: <b>10-9</b>
	Name: <i>[Signature]</i>	Company: <i>[Signature]</i>	

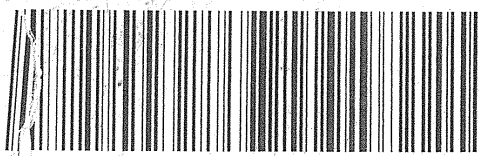
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 PRIORITY OVERNIGHT  
**AB SGRA**  
 77099  
 TX-US  
 IAH



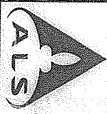
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 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By: 
	Date: 10/19/22	Time: 1400	Date: 10/19/22
Name: _____		Date: _____	
Company: _____		Date: _____	



FedEx  
 TRK# 5789 1998 3531  
 WED - 05 OCT AA  
 PRIORITY OVERNIGHT  
**AB SGRA**  
 77099  
 TX-US  
 IAH



747986 040c12022 SMIA 581G1/ACSF/C08B

  
**ALS**  
 10450 St  
 Houston,  
 Texas 77099  
 Tel. +1 281 530 5656  
 Fax. +1 281 530 5887

Date: _____	Company: _____	281 530 5887
Seal Broken By: _____	Name: _____	31 530 5656
Date: 10/19/22	Date: 10/19/22	Texas 77099
Time: 1400	Time: 1400	Suite 210

 <b>ALS</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY SEAL</b>		Seal Broken By: 
	Date: 10/19/22	Time: 1400	Date: 10/19/22
Name: _____		Date: _____	
Company: _____		Date: _____	

# **ATTACHMENT C**

TABULATION OF DATA

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING				
		MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S		MW-5S
		14-Aug-17	22-May-18	1-Aug-18	10-Aug-18	2-Oct-18	10-Jan-19	23-Apr-19	2-Oct-19	18-Jun-20	12-Oct-20	1-Apr-21	14-Oct-21	(SAMPLE)	(RESAMPLE)	6-Oct-22
Total Alkalinity as CaCO3	mg/L	418	---	---	---	---	---	---	---	412	444	405	470	<5.00 <sup>A</sup>	419	430
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	---	---	---	15	20.5	<5	9.52	<5.00 <sup>A</sup>	<5.00	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	418	---	---	---	---	---	---	---	397	424	405	460	<5.00 <sup>A</sup>	419	430
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	---	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5.00	<5.00
Boron	mg/L	1.29	1.05	1.06	3.09	2.82	2.73	1.87	2.49	0.811	2.57	2.04	1.82	1.64	---	2.94
Calcium	mg/L	46.6	74.7	59.1	24.9 J	25	27.7	57	22.5	68.2	19.6	33.4	21.0	53.8	---	24.1
Chloride	mg/L	18.7	25	18.7	26.1	28.3	30.5	21.8	25.1	19.5	25.6	23.9	26.4	23 <sup>A</sup>	24.1	25.6
Dissolved Oxygen (field)	mg/L	0.05	0.13	5.05	1.37	0.21	0.63	0.85	0.45	1.89	0.32	0.81	0.36	0.31	2.7	0.44
Fluoride	mg/L	1.17	1.38	1.02	1.5	1.54	1.54	1.11	1.54	0.824	1.51	1.24	1.57	3.24 <sup>A</sup>	1.41	1.4
Iron, Total	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	0.0170 J	0.0270 J	0.0435 J <sup>A</sup>	0.0311 J	<0.0120
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120 <sup>A</sup>	0.0138 J	<0.0120
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	<0.020	0.0270 J	0.0435 J <sup>A</sup>	0.0311 J	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.020	<0.0200	<0.0200 <sup>A</sup>	<0.02	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.0290 J	<0.0200	<0.020	<0.0200	<0.0200 <sup>A</sup>	<0.02	<0.0200
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.020	<0.0200 H	<0.0200 <sup>A</sup>	<0.02	<0.0200
Magnesium	mg/L	5.19	---	---	---	---	5.73	---	---	5.16	4.38	4.53	4.60	5.79	---	4.79
Molybdenum, Total	mg/L	0.00737	---	0.00497	0.00387	<0.005	0.00512	0.00485 J	0.00315 J	0.00361 J	0.00244 J	0.00234 J	0.00387 J	0.00257 J	---	0.00210 J
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.00335 J	---	---	0.00308 J	0.00244 J	0.00287 J	0.00296 J	0.00248 J	---	0.00232 J
Nitrate as N	mg/L	---	---	---	---	0.089 J	0.964	0.665	0.212	<0.0300	<0.0300	0.631	0.0984 J	705 <sup>A</sup>	0.0996 J,H	0.243
Oxidation-Reduction Potential (field)	mV	21.5	-104.7	142.8	-40.1	-125.1	-30.9	19.7	-54.1	-48.2	168.1	283.3	-59.9	46.2	20.5	-33.9
pH (laboratory)	S.U.	7.5	7.6	7.7	8	8.7	7.65	8.11	7.55	7.65	8.21	7.9	8.16	1.68 <sup>A</sup>	8.19	7.89
pH (field)	S.U.	7.79	7.85	7.19	7.62	7.61	7.56	7.95	7.91	7.9	7.83	7.74	7.85	7.77	7.9	7.73
Potassium	mg/L	4.14	---	---	---	---	4.49	---	---	3.48	3.94	3.25	3.96	3.74	---	4.17
Sodium	mg/L	307	---	---	---	---	405	---	---	277	335	312	243	341	---	387
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	1730	1870	---	---	---	1960	1770	1820	15600 <sup>A</sup>	2,280	1990
Specific Conductance (field)	umhos/cm	1760	1516	1516	1843	1871	1791	1669	1826	1665	1794	1745	1863	1372	1820	1884
Sulfate	mg/L	301	369	294	384	447	457	394	434	408	485	477	499	1540 <sup>A</sup>	503	482
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	<1.00	<1.00	<1.00	<1.00 <sup>A</sup>	<1	<1.00
Temperature (field)	°C	22.46	20.24	25.07	23.59	25.3	13.4	18.78	25.18	24.37	21.5	14.7	23.7	16.4	19.8	24.9
Total Dissolved Solids	mg/L	980	950	880	1150	1140	1120	1090	1180	904	1080	1140	1140	1540 <sup>A</sup>	1170	1100
Turbidity (field)	NTU	1.14	0.41	0.02	1.12	3.3	4.51	1.16	0.94	2.88	1.97	2.85	2.16	1.61	1.72	2.71
Filtered Turbidity (field)	NTU	---	---	---	---	---	1.27	---	---	---	1.97	1.19	1.91	0.61	3	0.93

- Notes:**
1. mg/L : milligrams per liter.
  2. S.U. : Standard Units.
  3. °C : degrees Celsius.
  4. umhos/cm : micromhos per centimeter.
  5. mV : millivolts.
  6. NTU : Nephelometric Turbidity Unit.
  7. < : Analyte not detected at the laboratory method detection limit (MDL).
  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
  9. --- : no analysis performed.
  10. H : Analyzed outside of holding time..
  11. \*\* : Insufficient sample volume for analysis due to well depletion.
  12. \*\*\* : Insufficient sample volume for field measurements.
  13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

**ATTACHMENT C  
TABULATION OF DATA  
SEMI-ANNUAL CMA SAMPLING  
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING						
		MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S		MW-7S	MW-7S	
		10-Aug-17	17-May-18	3-Aug-18	10-Aug-18	4-Oct-18	10-Jan-19	23-Apr-19	1-Oct-19	17-Jun-20	9-Oct-20	30-Mar-21	15-Oct-21	(SAMPLE) 31-Mar-22	(RESAMPLE) Jun-22	Oct-22		
Total Alkalinity as CaCO3	mg/L	311	---	---	---	---	222	---	---	264	315	180	343	205	---	326	297	
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5	7.48	
Bicarbonate Alkalinity as CaCO3	mg/L	311	---	---	---	---	222	---	---	264	315	180	343	205	---	326	289	
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5	<5.00	
Boron	mg/L	2.21	1.25	0.283	3.31	2.7	0.839	0.848	1.99	1.33	2.29	0.677	2.18	0.646	---	2.7	3.07	
Calcium	mg/L	80.6	178	90.3	142	76	277	271	142	81	160	90.2	254	97.1	---	100	111	
Chloride	mg/L	16.2	17.6	16.4	17	16.1	18.7	19.7	16.3	18	16.9	20.5	16.8	19.9	---	16.9	16.7	
Dissolved Oxygen (field)	mg/L	0.08	0.22	1.61	2.95	0.45	0.23	0.84	0.51	0.49	0.33	0.31	0.30	0.38	---	0.39	---	
Fluoride	mg/L	0.744	0.509	0.771	0.664	0.764	0.422	0.376	0.664	0.729	0.479	0.713	0.444	0.746	0.515	---	0.711	0.824
Iron, Total	mg/L	---	---	---	---	---	---	---	---	0.278	0.111 J	0.0145 J	0.310	<0.0120	---	0.158 J	0.186 J	
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	0.0340 J	0.235	0.0154 J	0.134 J	<0.0120	---	0.113 J	0.0883 J	
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	---	0.103	<0.0200	---	0.0310 J	0.079	
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	0.134	<0.0200	---	<0.0200	0.0883	
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.306	0.216	<0.02	0.207	<0.0200	---	0.127	0.107	
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	<0.0200 H	<0.0200	---	0.117	<0.02	
Magnesium	mg/L	10.7	---	---	---	---	19	---	---	17.1	12	16.9	12.2	20.0	---	12.2	13.8	
Molybdenum, Total	mg/L	0.00171 J	---	0.00127 J	<0.001	<0.01	0.00105 J	0.000952 J	0.000798 J	0.00105 J	0.00106 J	0.000755 J	0.00115 J	0.000973 J	---	0.00103 J	0.00134 J	
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.00107 J	---	---	0.000987 J	0.00103 J	0.000846 J	0.00121 J	0.000830 J	---	0.00112 J	0.00108 J	
Nitrate as N	mg/L	---	---	---	---	0.118	0.557	<0.03	<0.03	<0.0300	<0.0300	<0.06	0.0940 J	0.0613 J	---	0.155	0.147	
Oxidation-Reduction Potential (field)	mV	57.6	-58.8	-20.8	-30.7	-129.1	-6.3	-61.6	-133.8	-67.6	-90.1	83.3	-107.8	-30.3	---	-179.9	---	
pH (laboratory)	S.U.	7.4	7.6	7.6	7.7	8	7.34	7.82	7.39	7.55	7.79	7.32	7.84	7.88	---	7.81	8.01	
pH (field)	S.U.	7.22	7.4	6.92	7.22	7.35	7.08	7.42	7.53	7.37	7.52	7.24	7.47	7.32	---	7.37	---	
Potassium	mg/L	4.95	---	---	---	---	4.67	---	---	5.33	5.1	4.06	5.14	4.56	---	5.34	6	
Sodium	mg/L	273	---	---	---	---	274	---	---	313	272	230	261	272	---	313	352	
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	1610	2240	---	---	---	2110	2380	1860	2530	---	2,000	2050	
Specific Conductance (field)	umhos/cm	1680	2101	1822	1932	1887	2180	2326	1944	2097	1945	2377	1973	2385	---	2015	---	
Sulfate	mg/L	450	860	545	623	1600	1200	1040	633	970	759	1200	690	1190	---	687	687	
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	1.48	<1.00	<1.00	<1.00	---	<1.00	<1.00	
Temperature (field)	°C	24.46	19.6	29.34	25.21	25	12.8	17.92	25.27	21.95	23.1	16.8	22.5	14.2	---	26.8	---	
Total Dissolved Solids	mg/L	1120	1600	1210	1330	1230	1670	1890	1270	1680	1340	2060	1290	1920	---	1350	1260	
Turbidity (field)	NTU	3.45	2.29	3.37	1.76	8.01	0.67	0.71	0.88	2.49	0.85	5.81	3.15	2.42	---	2.91	---	
Filtered Turbidity (field)	NTU	---	---	---	---	---	0.64	---	---	---	0.85	---	1.83	2.24	---	1.08	---	

**Notes:**

1. mg/L : milligrams per liter.
2. S.U. : Standard Units.
3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING				
		MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A		MW-14A
		9-Aug-17	17-May-18	1-Aug-18	9-Aug-18	4-Oct-18	11-Jan-19	24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	(SAMPLE)	(RESAMPLE)	Oct-22
Total Alkalinity as CaCO3	mg/L	280	---	---	---	---	---	---	---	327	327	332	348	330	---	321
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	---	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	280	---	---	---	---	---	---	---	327	327	332	348	330	---	321
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	---	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5.00
Boron	mg/L	0.764	1.14	0.925	1.8	1.18	1.42	1.23	0.98	0.907	0.882	0.839	0.857	0.918	---	1.01
Calcium	mg/L	672	313	341	746	319	402	314	306	280	278	298	263	330	---	313
Chloride	mg/L	13.8	15.3	15	16	14.2	14	13.5	14.2	13.3	14.9	14.3	12.8	13.8	---	12.5
Dissolved Oxygen (field)	mg/L	0.1	0.24	252	1.65	0.31	0.19	1.45	0.62	0.79	0.59	0.34	0.40	0.66	---	0.57
Fluoride	mg/L	0.312	0.292	0.333	0.296	0.281	0.269	0.377 J	0.286	0.23	0.254 J	0.284	0.221	0.406 J	---	0.324
Iron, Total	mg/L	---	---	---	---	---	---	---	---	0.0771 J	0.236	0.162 J	1.22	0.249	---	0.803
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	<0.0120	0.169 J	0.150 J	0.357	0.189 J	---	0.475
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	0.107	0.935	0.119	---	0.225
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	0.116	0.357	0.0470 J	---	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.098	0.184	0.055	0.285	0.130	---	0.578
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	0.034 J	<0.0200 H	0.142	---	0.489
Magnesium	mg/L	24.4	---	---	---	---	---	---	---	26.6	26.2	25.9	26.5	29.2	---	25.4
Molybdenum, Total	mg/L	0.00223	---	<0.001	<0.01	<0.01	0.00170 J	0.00104 J	0.000709 J	0.000760 J	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.00143 J	---	---	0.000768 J	0.000621 J	0.00165 J	<0.000600	<0.000600	---	<0.000600
Nitrate as N	mg/L	---	---	---	---	0.087 J	0.478	1.64	<0.03	0.316	<0.150	<0.0600	<0.0600	0.484 J	---	0.0777 J
Oxidation-Reduction Potential (field)	mV	97.7	-48.5	0.2	68.3	13.1	19.5	4.6	27.7	-45.7	107.1	20.5	-128.9	35.2	---	-70
pH (laboratory)	S.U.	6.9	7.4	7.3	7.1	7.6	7.28	7.61	7.18	7.44	7.41	7.7	6.74	7.99	---	7.06
pH (field)	S.U.	6.75	7.1	6.82	6.47	6.93	6.9	7.28	7.1	7.04	7.1	7.33	7.00	7.17	---	6.90
Potassium	mg/L	7.88	---	---	---	---	8.64	---	---	7.66	7.94	7.87	7.84	8.73	---	7.8
Sodium	mg/L	518	---	---	---	---	516	---	---	382	388	413	388	503	---	424
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	3000	3270	---	---	---	3660	3260	3320	3490	---	3540
Specific Conductance (field)	umhos/cm	3186	3301	3415	3410	3491	3251	3386	3435	3107	3394	4453	2989	3300	---	3400
Sulfate	mg/L	1420	1790	1580	1600	1650	1660	1540	1580	1650	1770	1680	1690	1610	---	1600
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	<1.00	<1.00	3.08	<1.00	---	<1.00
Temperature (field)	°C	21.41	22.9	25.6	21.33	23.1	16.2	17.75	24.4	21	23.7	15.84	20.0	15.2	---	25.2
Total Dissolved Solids	mg/L	2680	2700	2700	2730	2710	2590	2680	2750	2780	2630	2680	2630	2690	---	2580
Turbidity (field)	NTU	0.71	0.37	1.53	0.02	3.17	4.89	2.06	3.88	4.71	2.96	3.52	9.38	2.40	---	1.24
Filtered Turbidity (field)	NTU	---	---	---	---	---	0.94	---	---	---	2.96	---	2.37	2.42	---	0.97

- Notes:**
1. mg/L : milligrams per liter.
  2. S.U. : Standard Units.
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  4. umhos/cm : micromhos per centimeter.
  5. mV : millivolts.
  6. NTU : Nephelometric Turbidity Unit.
  7. < : Analyte not detected at the laboratory method detection limit (MDL).
  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
  9. --- : no analysis performed.
  10. H : Analyzed outside of holding time..
  11. \*\* : Insufficient sample volume for analysis due to well depletion.
  12. \*\*\* : Insufficient sample volume for field measurements.
  13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING				
		MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A		MW-15A
		9-Aug-17	24-May-18	1-Aug-18	10-Aug-18	2-Oct-18	10-Jan-19	25-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	(SAMPLE)	(RESAMPLE)	Oct-22
Total Alkalinity as CaCO3	mg/L	160	---	---	---	---	149	---	---	209	204	196	226	193	---	189
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	130	---	---	---	---	149	---	---	209	204	196	226	193	---	189
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00	---	<5.00
Boron	mg/L	3.38	4.83	3.7	4.14	3.76	3.52	3.61	3.19	4.57	3.33	3.35	2.14	3.35	---	3.11
Calcium	mg/L	156	160	93.4	129	170	129	92	82.4	141	89.8	78.6	96.6	119	---	113
Chloride	mg/L	25.7	26.9	26.6	26.5	26.6	26.3	21.9	25.9	26.3	26.5	27.3	25.7	27.0	---	26.2
Dissolved Oxygen (field)	mg/L	0.06	0.14	1.62	1.23	0.21	0.41	1.24	0.71	1.39	0.28	4.47	0.38	0.51	---	0.4
Fluoride	mg/L	1.37	1.76	1.2	1.17	1.21	1.22	1.2	1.17	1.24	0.86	1.14	1.13	1.01	---	1.31
Iron, Total	mg/L	---	---	---	---	---	---	---	---	0.0535 J	0.0496 J	0.0492 J	0.368	0.236	---	0.208
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	<0.0120	0.165 J	0.133 J	0.590	0.234	---	0.367
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	0.0840	0.0360 J	---	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	0.101	0.590	<0.0200	---	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.0410 J	0.0210 J	0.054	0.284	0.200	---	0.089
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	0.032 J	<0.0200 H	0.243	---	0.358
Magnesium	mg/L	9.36	---	---	---	---	12.4	---	---	16.5	11	10.9	10.2	12.3	---	10.3
Molybdenum, Total	mg/L	0.255	---	0.202	0.182	0.233	0.205	0.219	0.196	0.269	0.167	0.168	0.149	0.181	---	0.149
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.244	---	---	0.168	0.153	0.159	0.181	0.159	---	0.149
Nitrate as N	mg/L	---	---	---	---	0.068 J	1.42	1.72	0.287	<0.0600	<0.150	1.14	0.0704 J	0.894	---	0.246
Oxidation-Reduction Potential (field)	mV	43.1	-101.3	133.1	140.8	-69.9	98	-22.1	-79.5	-50.3	167.2	13.8	-59.9	93.7	---	-85.1
pH (laboratory)	S.U.	7.5	7.6	7.8	7.8	8.2	7.02	8.02	7.58	7.68	7.77	7.93	7.45	8.08	---	7.74
pH (field)	S.U.	7.42	7.72	7.42	7.43	7.53	7.45	7.82	7.71	7.73	7.71	7.82	7.61	7.65	---	7.58
Potassium	mg/L	5.28	---	---	---	---	5.98	---	---	8.24	5.15	5.47	4.97	5.91	---	4.96
Sodium	mg/L	541	---	---	---	---	746	---	---	1040	627	594	421	680	---	609
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	3490	3540	---	---	---	3780	3400	3370	3620	---	3590
Specific Conductance (field)	umhos/cm	3524	3505	3548	3578	3563	3449	3544	3575	3337	3422	4645	3431	3386	---	3393
Sulfate	mg/L	1720	1690	1510	1490	1570	1610	1310	1510	1680	1650	1590	1580	1540	---	1510
Sulfide	mg/L	---	---	---	---	---	---	---	---	1.12	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	22.68	21.24	25.05	23.28	23.1	18.5	20.72	27.05	24.09	22.2	16.37	22.4	18.1	---	25.6
Total Dissolved Solids	mg/L	2710	2660	2490	2610	2650	2590	2570	2500	2520	2460	2420	2370	2450	---	2370
Turbidity (field)	NTU	1.31	0.39	5.5	1.68	4.11	1.13	0.55	0.84	2.6	1.73	0.88	3.34	2.38	---	0.9
Filtered Turbidity (field)	NTU	---	---	---	---	---	1.09	---	---	---	0.61	---	2.23	2.46	---	0.3

- Notes:**
1. mg/L : milligrams per liter.
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  6. NTU : Nephelometric Turbidity Unit.
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  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
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 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	PREVIOUS SAMPLING		CMA SAMPLING					
	Sample ID:	MW-15B	MW-15B	MW-15B	MW-15B	MW-15B		MW-15B
	Sample Date:	24-Jul-20	13-Oct-20	31-Mar-21	14-Oct-21	(SAMPLE) 30-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	680	724	771	802	768	---	776
Carbonate Alkalinity as CaCO3	mg/L	38.1	14.8	<5.00	<5.00	<5.00	---	13.1
Bicarbonate Alkalinity as CaCO3	mg/L	642	709	771	802	768	---	763
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	4.27	5.08	3.67	4.78	6.08	---	5.58
Calcium	mg/L	39.3	38.3	35.1	52.8	59.8	---	65.5
Chloride	mg/L	60.1	57	57.2	56.0	56.7	---	56.8
Dissolved Oxygen (field)	mg/L	4.21	5.04	2.4	9.52	3.81	---	3.35
Fluoride	mg/L	1.23	0.96	1.14	1.15	1.24	---	1
Iron, Total	mg/L	22.7	1.51	7.89	8.51	3.31	---	12.6
Iron, Dissolved	mg/L	2.11	<0.0120	0.0212 J	0.0794 J	0.172 J	---	<0.0120
Iron, Ferric	mg/L	---	---	7.21	6.69	2.86	---	6.30
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	0.0794	0.172	---	<0.0200
Iron, Ferrous	mg/L	2.67	7.52	0.68	1.82	0.451	---	6.3
Iron, Ferrous, Dissolved	mg/L	---	---	0.235	<0.0200 H	<0.0200	---	0.0260 J
Magnesium	mg/L	13.2	11.5	10.2	15.9	18.0	---	17.5
Molybdenum, Total	mg/L	0.0109	0.00876	0.00571	0.00328 J	0.00370 J	---	0.00153 J
Molybdenum, Dissolved	mg/L	0.016	0.00762	0.00814	0.00679	0.00519	---	0.00501
Nitrate as N	mg/L	---	36.2	29.4	18.3	23.2	---	19.7
Oxidation-Reduction Potential (field)	mV	224.1	236.6	211.3	240.1	85.2	---	218.2
pH (laboratory)	S.U.	7.66	7.87	7.66	7.59	7.99	---	7.62
pH (field)	S.U.	7.91	7.88	7.43	7.58	7.56	---	7.42
Potassium	mg/L	10.3	6.72	8.19	8.29	8.39	---	8.25
Sodium	mg/L	713	836	625	866	1220	---	953
Specific Conductance (laboratory)	umhos/cm	---	4520	4300	4410	4910	---	5230
Specific Conductance (field)	umhos/cm	3513	2486	4208	4285	4606	---	3927
Sulfate	mg/L	1280	1340	1560	1580	1590	---	1530
Sulfide	mg/L	3	5	<1.00	3.31	40.0	---	<1.00
Temperature (field)	°C	21.7	20.7	18	20.4	19.7	---	19.8
Total Dissolved Solids	mg/L	2390	2940	3080	2990	3380	---	3290
Turbidity (field)	NTU	568	80.1	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	0.72	1.69	0.72	22.4	3.16	---	0.87

**Notes:**

1. mg/L : milligrams per liter.
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 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING				
		MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16		MW-16
		11-Aug-17	22-May-18	1-Aug-18	10-Aug-18	2-Oct-18	16-Jan-19	23-Apr-19	3-Oct-19	18-Jun-20	13-Oct-20	1-Apr-21	14-Oct-21	(SAMPLE) 1-Apr-22	(RESAMPLE) 7-Jun-22	6-Oct-22
Total Alkalinity as CaCO3	mg/L	238	---	---	---	---	256	---	---	232	233	228	264	94 <sup>A</sup>	258.0	288.0
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	10.7
Bicarbonate Alkalinity as CaCO3	mg/L	238	---	---	---	---	256	---	---	232	233	228	264	94 <sup>A</sup>	258.0	277.0
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	<5.00
Boron	mg/L	1.79	1.95	1.9	2.39 J	2.05	2.23	1.85	1.53	1.43	1.78	1.57	1.61	1.85	---	2.54
Calcium	mg/L	238	122	159	185	221	215	192	185	149	186	166	140	153	---	132
Chloride	mg/L	18	21.3	20.6	29.6	18	19	15.8	23.8	14.7	14.8	14.4	16.2	16.6 <sup>A</sup>	15.0	25.8
Dissolved Oxygen (field)	mg/L	0.16	0.37	1.59	2.7	0.25	1.37	0.83	3.67	2.18	1.99	0.46	3.3	1.06	0.42	1.55
Fluoride	mg/L	0.817	1.01	0.963	1.17	0.832	1.01	0.82	0.741	1.07	0.694	0.893	0.916	0.964	1.3 <sup>A</sup>	1.25
Iron, Total	mg/L	---	---	---	---	---	---	---	---	0.0358 J	0.125 J	0.0536 J	0.369	0.0158 J <sup>A</sup>	0.0145 J	0.0547 J
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	0.0160 J	0.0694 J	0.0140 J	0.190 J	<0.0120 <sup>A</sup>	<0.0120	0.0203 J
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	0.0536	0.178	<0.0200 <sup>A</sup>	<0.02	0.0547
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	0.190	<0.0200 <sup>A</sup>	<0.02	0.0203 J
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.0380 J	0.0240 J	<0.02	0.191	<0.0200 <sup>A</sup>	<0.02	<0.0200
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	<0.0200 H	<0.0200 <sup>A</sup>	<0.02	<0.0200
Magnesium	mg/L	10.3	---	---	---	---	---	---	---	8.44	7.59	7.65	7.38	8.40	---	7.24
Molybdenum, Total	mg/L	0.181	---	0.145	0.154	0.169	0.18	0.193	0.149	0.172	0.149	0.166	0.163	0.146	---	0.113
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.18	---	---	0.173	0.16	0.18	0.189	0.131	---	0.112
Nitrate as N	mg/L	---	---	---	---	0.133	<0.03	0.854	<0.03	<0.0600	<0.0600	0.687	<0.0300	50.4 <sup>A</sup>	0.0630 J,H	0.127
Oxidation-Reduction Potential (field)	mV	60.3	-83.7	186.4	150.4	-131.8	278.9	28.7	-191.5	-56.9	60.2	57.7	-167.2	20.9	-25.9	-51.7
pH (laboratory)	S.U.	7.2	7.5	7.5	7.8	8.2	7.33	7.88	7.01	7.6	7.63	7.83	7.75	7.42 <sup>A</sup>	7.92	7.85
pH (field)	S.U.	7.09	7.57	7.11	7.3	7.53	7.21	7.56	7.82	7.66	7.69	8.12	7.74	7.67	7.74	7.36
Potassium	mg/L	3.33	---	---	---	---	4.18	---	---	2.85	3.09	3.12	3.18	3.58	---	3.61
Sodium	mg/L	272	---	---	---	---	405	---	---	309	316	325	295	389	---	415
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	2420	2340	---	---	---	2400	2420	2340	2500 <sup>A</sup>	2,910	2650
Specific Conductance (field)	umhos/cm	2330	2463	2436	2678	2816	2273	2330	2836	2438	2615	3178	2699	1865	2358	2412
Sulfate	mg/L	1020	933	938	998	959	1020	974	1020	1030	929	1070	1110	1100 <sup>A</sup>	1090	996
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	1.4	<1.00	<1.00	<1.00 <sup>A</sup>	<1	<1.00
Temperature (field)	°C	24.61	22.87	23.7	23.74	25.4	14.8	19.31	24.89	21.9	23.5	16.32	23	15.9	20	23.1
Total Dissolved Solids	mg/L	1710	1820	1810	1930	1780	1740	1740	1810	1610	1610	1790	1590	1670 <sup>A</sup>	1700	1690
Turbidity (field)	NTU	1.11	1.21	3.49	2.96	2.89	6.82	2.53	1.48	3.09	0.75	2.16	4.38	0.25	1.84	1.55
Filtered Turbidity (field)	NTU	---	---	---	---	---	1.03	---	---	---	0.75	---	2.21	0.16	1.97	---

- Notes:**
1. mg/L : milligrams per liter.
  2. S.U. : Standard Units.
  3. °C : degrees Celsius.
  4. umhos/cm : micromhos per centimeter.
  5. mV : millivolts.
  6. NTU : Nephelometric Turbidity Unit.
  7. < : Analyte not detected at the laboratory method detection limit (MDL).
  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
  9. --- : no analysis performed.
  10. H : Analyzed outside of holding time..
  11. \*\* : Insufficient sample volume for analysis due to well depletion.
  12. \*\*\* : Insufficient sample volume for field measurements.
  13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING				
		MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17		MW-17
		10-Aug-17	21-May-18	1-Aug-18	10-Aug-18	3-Oct-18	10-Jan-19	25-Apr-19	3-Oct-19	18-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	(SAMPLE)	(RESAMPLE)	6-Oct-22
Total Alkalinity as CaCO3	mg/L	260	---	---	---	---	280	---	---	284	273	269	288	<5.00 <sup>A</sup>	269	276
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	260	---	---	---	---	280	---	---	284	273	269	288	<5.00 <sup>A</sup>	269	276
Hydroxide Alkalinity	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	<5.00
Boron	mg/L	0.666	0.588	0.659	0.845 J	0.567	0.766	0.796	0.622	0.652	0.64	0.539	0.700	0.593	---	0.902
Calcium	mg/L	528	436	549	787	461	591	499	555	494	453	467	428	435	---	541
Chloride	mg/L	3.28	3.15	3.84	3.27	4.81	3.44	3.65	3.75	4.29	4.04	4.06	4.02	5.24 <sup>A</sup>	4.16	4.25
Dissolved Oxygen (field)	mg/L	0.29	0.21	5.57	4.59	0.44	0.51	1.8	0.8	1.35	0.41	0.45	0.52	1.86	0.8	1.94
Fluoride	mg/L	0.328	0.324	0.47	0.317	0.393	0.337	0.392 J	0.37	0.211	0.366	0.412	0.317	<0.250 <sup>A</sup>	0.371	0.34
Iron, Total	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	0.0541 J	<0.0120	0.0325 J <sup>A</sup>	<0.0120	<0.0120
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	<0.0120 <sup>#</sup>	0.0198 J	<0.0120 <sup>A</sup>	<0.0120	0.0581 J
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	0.0541 <sup>#</sup>	<0.0200	0.0325 J <sup>A</sup>	<0.02	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02 <sup>#</sup>	<0.0200	<0.0200 <sup>A</sup>	<0.02	0.0581
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.0200 J	<0.0200	<0.02 <sup>#</sup>	<0.0200	<0.0200 <sup>A</sup>	0.0220 J,H	<0.0200
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02 <sup>#</sup>	<0.0200 H	<0.0200 <sup>A</sup>	<0.02 H	<0.0200
Magnesium	mg/L	36.6	---	---	---	---	38.1	---	---	37.8	30.9	29.3	34.6	30.9	---	33.7
Molybdenum, Total	mg/L	<0.001	---	<0.001	<0.001	<0.001	<0.0006	0.000671 J	<0.0006	<0.000600	<0.000600	0.000950 J	<0.000600	<0.000600	---	<0.000600
Molybdenum, Dissolved	mg/L	---	---	---	---	---	<0.0006	---	---	0.00123 J	<0.000600	0.00292 J <sup>#</sup>	<0.000600	<0.000600	---	<0.000600
Nitrate as N	mg/L	---	---	---	---	0.276	<0.03	<0.150	<0.03	<0.0600	<0.0600	<0.0300	<0.0600	420 H <sup>A</sup>	0.0834 J,H	0.0756 J
Oxidation-Reduction Potential (field)	mV	65.7	-49.2	172.9	209.4	237.5	57.8	2.4	148.3	-28.1	129.9	37.4	61.7	103.6	81.5	37.8
pH (laboratory)	S.U.	6.9	6.9	7.2	7	7.5	6.59	7.53	6.37	7.38	7.51	7.34	7.12	1.87 <sup>A</sup>	7.67	7.04
pH (field)	S.U.	6.69	6.92	6.64	6.8	6.7	6.67	7.09	6.88	6.8	6.88	7.14	6.90	7.08	7.04	6.79
Potassium	mg/L	5.15	---	---	---	---	5.37	---	---	5.15	4.42	4.19	4.94	4.50	---	4.99
Sodium	mg/L	34.5	---	---	---	---	35.7	---	---	35.6	29.2	28.2	32.5	35.2	---	32.8
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	1920	2450	---	---	---	2610	2460	2390	11900 <sup>A</sup>	2,920	2570
Specific Conductance (field)	umhos/cm	2417	2416	2606	2569	2548	2416	2470	2458	2344	2393	3256	2467	1811	2369	2441
Sulfate	mg/L	1450	1140	1310	1340	821	1480	1100	1310	1390	1,220 H	1310	1390	1970 <sup>A</sup>	1,460	1320
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	<1.00	<1.00 <sup>#</sup>	1.12	<1.00 <sup>A</sup>	<1	<1.00
Temperature (field)	°C	21.98	20.98	25.04	22.3	23.3	15.9	19.26	23.63	21.2	23.2	18.75	22.9	18.3	22.5	25.9
Total Dissolved Solids	mg/L	2140	2360	2340	2380	1670	2300	2400	2160	2230	2160	2200	2210	2340 <sup>A</sup>	2,220	2170
Turbidity (field)	NTU	0.81	0.52	4.63	14.5	5.4	1.24	0.63	0.65	2.28	0.58	0.64	1.80	0.85	1.61	1.94
Filtered Turbidity (field)	NTU	---	---	---	---	---	0.69	---	---	---	0.58	---	---	0.75	---	---

- Notes:**
1. mg/L : milligrams per liter.
  2. S.U. : Standard Units.
  3. °C : degrees Celsius.
  4. umhos/cm : micromhos per centimeter.
  5. mV : millivolts.
  6. NTU : Nephelometric Turbidity Unit.
  7. < : Analyte not detected at the laboratory method detection limit (MDL).
  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
  9. --- : no analysis performed.
  10. H : Analyzed outside of holding time..
  11. \*\* : Insufficient sample volume for analysis due to well depletion.
  12. \*\*\* : Insufficient sample volume for field measurements.
  13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING										CMA SAMPLING					
		MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18			MW-18
		10-Aug-17	18-May-18	2-Aug-18	10-Aug-18	3-Oct-18	14-Jan-19	25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	(SAMPLE)	DUP 3	(RESAMPLE)	Oct-22
Total Alkalinity as CaCO3	mg/L	77.9	---	---	---	---	75.1	---	---	71	69.9	65.5	73.8	63.6	89.1	---	61.6
Carbonate Alkalinity as CaCO3	mg/L	52.6	---	---	---	---	42.2	---	---	60.6	64.3	46.8	55.8	58.6	64.7	---	56.5
Bicarbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00	24.4	---	<5.00
Hydroxide Alkalinity	mg/L	25.3	---	---	---	---	32.9	---	---	10.4	5.63	18.7	17.9	<5.00	<5.00	---	5.06
Boron	mg/L	6.51	6.71	4.86	6.65	5.77	6.89	6.05	5.29	5.49	5.43	4.32	4.61	4.65	5.06	---	5.2
Calcium	mg/L	28.7	28.1	36.1	31.1	25.1	31.8	36.1	33.1	25.6	21.6	20	19.3	23.9	25.3	---	17.7
Chloride	mg/L	6.1	5.19	8.04	5.33	5.5	5.59	4.79	5.07	4.06	4.22	4.2	4.39	4.86	4.60	---	3.88
Dissolved Oxygen (field)	mg/L	0.03	0.17	4.03	0.9	0.21	0.36	1.44	0.33	0.55	0.24	0.39	0.36	0.40	---	---	0.51
Fluoride	mg/L	1.38	1.37	1.26	1.35	1.37	1.32	1.25	1.47	1.28	1.66	1.71	1.90	2.10	1.92	---	1.84
Iron, Total	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	---	<0.0120
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	---	<0.0120
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	<0.0200	<0.0200	<0.0200	---	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	<0.0200	<0.0200	<0.0200	---	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	0.0200 J	<0.0200	<0.02	<0.0200	<0.0200	<0.0200	---	<0.0200
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	<0.02	<0.0200 H	<0.0200	<0.0200	---	<0.0200
Magnesium	mg/L	<0.220	---	---	---	---	---	---	---	0.141 J	0.27	0.426	0.152 J	0.559	0.587	---	0.181 J
Molybdenum, Total	mg/L	0.39	---	0.113	0.319	0.33	0.333	0.342	0.257	0.194	0.18	0.195	0.209	0.206	0.222	---	0.183
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.332	---	---	0.18	0.166	0.215	0.211	0.199	0.203	---	0.172
Nitrate as N	mg/L	---	---	---	---	0.053 J	0.075 J	<0.05	<0.03	<0.0600	<0.0300	<0.0300	0.0606 J	0.712	0.146 J	---	0.0851 J
Oxidation-Reduction Potential (field)	mV	28.2	-139.8	-65.1	-119.7	130.1	174.9	-152.8	-71.2	-140.3	-80.5	-49.7	-9.7	-0.8	---	---	-72.2
pH (laboratory)	S.U.	10.7	10.1	7.8	10.2	9.8	10.4	10.2	10.3	9.35	10.2	10.5	9.95	9.69	9.30	---	10.2
pH (field)	S.U.	10.54	10.74	9.71	10.41	10.45	10.47	10.93	10.4	10.65	10.4	10.39	10.46	9.97	---	---	9.96
Potassium	mg/L	22	---	---	---	---	22.3	---	---	15.9	14.6	13.6	15.0	14.6	15.3	---	14.5
Sodium	mg/L	523	---	---	---	---	603	---	---	376	348	324	329	391	406	---	381
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	2590	2520	---	---	---	2200	2090	2040	2070	2080	---	2090
Specific Conductance (field)	umhos/cm	2716	2530	2568	2658	2632	2442	2486	2350	1998	1986	1999	2041	1962	---	---	1976
Sulfate	mg/L	1070	1120	996	1030	1090	1110	933	1020	888	794	904	896	837	842	---	804
Sulfide	mg/L	---	---	---	---	---	---	---	---	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	22.11	21.12	24.1	22.37	23.6	14	17.89	24.8	22.45	23.5	17	20.7	17.6	---	---	26
Total Dissolved Solids	mg/L	1850	1740	1660	1730	1760	1630	1680	1550	1340	1270	1260	1320	1300	1310	---	1250
Turbidity (field)	NTU	1.21	0.22	0.02	0.02	2.04	2.79	0.49	0.92	2.43	0.34	1	1.99	2.53	---	---	2.26
Filtered Turbidity (field)	NTU	---	---	---	---	---	1.47	---	---	---	0.34	0.62	1.89	2.46	---	---	---

- Notes:**
1. mg/L : milligrams per liter.
  2. S.U. : Standard Units.
  3. °C : degrees Celsius.
  4. umhos/cm : micromhos per centimeter.
  5. mV : millivolts.
  6. NTU : Nephelometric Turbidity Unit.
  7. < : Analyte not detected at the laboratory method detection limit (MDL).
  8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
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  11. \*\* : Insufficient sample volume for analysis due to well depletion.
  12. \*\*\* : Insufficient sample volume for field measurements.
  13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

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 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING											CMA SAMPLING						
		MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	DUP 2	MW-19S	MW-19S		MW-19S		MW-19S
		10-Aug-17	18-May-18	2-Aug-18	10-Aug-18	3-Oct-18	15-Jan-19	25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21	DUP 3	15-Oct-21	(SAMPLE)	(RESAMPLE)	1-Apr-22	Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	132	---	---	---	---	141	---	---	---	128	130	132	135	133	150	136	---	130
Carbonate Alkalinity as CaCO3	mg/L	85.8	---	---	---	---	59.8	---	---	---	92.6	98.7	89.2	63.8	69	77.3	53.6	---	61
Bicarbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	---	<5	---	---	---	<5.00	<5.00	<5.00	<5	<5	<5.00	<5.00	---	<5.00
Hydroxide Alkalinity	mg/L	46.2	---	---	---	---	81.2	---	---	---	35.1	31.4	42.6	71.6	64.4	73.0	82.4	---	68.7
Boron	mg/L	7.64	8.43	8.64	3.78	10.2	9.79	8.57	6.64	6.8	7.18	6.88	6.86	8.41	5.88	9.73	---	---	8.43
Calcium	mg/L	41.3	45.7	35	24.8	35.3	50	52.4	40.4	43.6	42.1	40.7	42.3	35.3	41.6	44.2	---	---	40.7
Chloride	mg/L	15.7	14.5	15.1	14.9	14.8	14.2	13.7	14.4	13.8	14	14.1	13.7	14	13.6	14.6	---	---	13.3
Dissolved Oxygen (field)	mg/L	0.02	0.24	4.64	1.32	0.33	0.21	1.5	0.5	0.36	---	0.16	0.27	---	0.21	0.27	---	---	0.32
Fluoride	mg/L	1.32	1.3	1.34	1.3	1.24	1.27	1.13	1.37	1.15	1.04	1.38	1.46	1.54	1.57	1.66	---	---	1.59
Iron, Total	mg/L	---	---	---	---	---	---	---	---	---	0.0153 J	<0.0120	<0.0120	<0.0120	<0.0120	0.0509 J	0.0554 J	---	<0.0120
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	0.0210 J	<0.0120	---	---	<0.0120
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	---	---	<0.02	<0.02	<0.0200	0.0254 J	---	---	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	---	<0.02	<0.02	0.0210 J	<0.0200	---	---	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	---	---	0.0430 J	0.0330 J	0.0310 J	<0.02	<0.02	0.0450 J	0.0300 J	---	0.0230 J
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	---	---	<0.02	<0.02	<0.0200 H	0.0290 J	---	---	<0.0200
Magnesium	mg/L	<0.220	---	---	---	---	0.121 J	---	---	---	0.0553 J	0.0510 J	0.0346 J	0.0773 J	0.0681 J	0.0415 J	0.0836 J	---	0.0228 J
Molybdenum, Total	mg/L	0.469	---	0.384	0.112	0.439	0.472	0.462	0.377	0.402	0.394	0.367	0.398	0.351	0.407	0.445	---	---	0.43
Molybdenum, Dissolved	mg/L	---	---	---	---	---	0.463	---	---	---	0.373	0.383	0.37	0.457	0.398	0.440	0.406	---	0.413
Nitrate as N	mg/L	---	---	---	---	<0.049	<0.03	<0.150	<0.03	<0.0600	<0.0600	<0.150	<0.0600	<0.0600	<0.0600	0.102 J	---	---	<0.0300
Oxidation-Reduction Potential (field)	mV	-215.4	-312.1	-227.4	-249	172.1	-162	-281.7	-252.4	-588.1	---	209.2	-191.7	---	-237.2	-244.4	---	---	-249.1
pH (laboratory)	S.U.	10.8	10.5	9.7	10.5	9.9	10.4	10.5	10.6	10.2	9.88	10.9	10.8	10.6	10.8	10.8	---	---	10.8
pH (field)	S.U.	10.72	11.09	10.55	10.56	10.63	11.01	11.26	10.65	10.97	---	10.92	11.09	---	10.84	10.94	---	---	10.54
Potassium	mg/L	35.9	---	---	---	---	38.2	---	---	---	35.2	34.1	33.7	33.9	29	34.6	37.0	---	37.7
Sodium	mg/L	697	---	---	---	---	801	---	---	---	644	598	610	639	545	462	723	---	752
Specific Conductance (laboratory)	umhos/cm	---	---	---	---	2470	3530	---	---	---	---	---	3860	3500	3540	3370	3570	---	3570
Specific Conductance (field)	umhos/cm	3552	3530	3587	3563	3610	3438	3524	3552	3309	---	3433	3406	---	3342	3309	---	---	3277
Sulfate	mg/L	1650	1630	1520	1480	1950	1640	1520	1580	1490	1590	1640	1560	1560	1570	1420	---	---	1480
Sulfide	mg/L	---	---	---	---	---	---	---	---	1.52	<1.00	1.8	<1.00	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	24.37	20.38	26.67	24.71	25.4	13.4	17.92	25.86	22.99	---	23.8	18.3	---	21.8	17.2	---	---	23.5
Total Dissolved Solids	mg/L	2440	2560	2390	2440	2490	2500	2440	2460	2300	2290	2340	2360	2310	2290	2180	---	---	2210
Turbidity (field)	NTU	1.26	0.47	0.02	4.16	2.05	5.19	0.57	0.61	2.86	---	1.24	0.73	---	2.77	2.22	---	---	1.82
Filtered Turbidity (field)	NTU	---	---	---	---	---	2.24	---	---	---	---	---	1.24	0.59	---	1.88	2.33	---	--

**Notes:**

1. mg/L : milligrams per liter.
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5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING									CMA SAMPLING				
		MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A		MW-22A
		11-Aug-17	22-May-18	10-Aug-18	3-Oct-18	16-Jan-19	25-Apr-19	30-Sep-19	18-Jun-20	9-Oct-20	31-Mar-21	13-Oct-21	(SAMPLE) 1-Apr-22	(RESAMPLE) 6-Jun-22	4-Oct-22
Total Alkalinity as CaCO3	mg/L	231	---	---	---	256	---	---	249	249	232	315	<5.00 <sup>A</sup>	242	262
Carbonate Alkalinity as CaCO3	mg/L	<5	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	231	---	---	---	256	---	---	249	249	232	315	<5.00 <sup>A</sup>	242	262
Hydroxide Alkalinity	mg/L	<5	---	---	---	<5	---	---	<5.00	<5.00	<5	<5.00	<5.00 <sup>A</sup>	<5	<5.00
Boron	mg/L	1.77	1.74	2.18	1.45	1.78	1.88	1.49	2.82	1.84	1.6	1.76	2.16	---	1.84
Calcium	mg/L	559	636	697	702	643	507	481	754	507	529	515	581	---	574
Chloride	mg/L	2.28	2.6	2.41	2.4	2.24	2.56	2.39	2.34	2.05 J	2.17	2.06 J	2.94 J <sup>A</sup>	2.38	2.46
Dissolved Oxygen (field)	mg/L	0.43	2.18	2.72	0.44	0.9	4.05	1.23	3.35	0.68	2	0.26	0.19	0.38	0.39
Fluoride	mg/L	0.341	2.24	0.315	0.329	0.299	0.374 J	0.364	0.237	0.279 J	0.249	0.608	<0.500 <sup>A</sup>	0.329	0.354
Iron, Total	mg/L	---	---	---	---	---	---	---	0.0509 J	<0.0120	0.0536 J	0.660	0.75 <sup>A</sup>	1.020	0.375
Iron, Dissolved	mg/L	---	---	---	---	---	---	---	<0.0120	0.0121 J	0.0206 J	1.00	0.371 <sup>A</sup>	0.235	1.040
Iron, Ferric	mg/L	---	---	---	---	---	---	---	---	---	0.0536	<0.0200	0.188 <sup>A</sup>	0.785	<0.0200
Iron, Ferric, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	0.0206 J	<0.0200	0.699 <sup>A</sup>	0.108	<0.0200
Iron, Ferrous	mg/L	---	---	---	---	---	---	---	<0.0200	<0.0200	<0.02	0.904	0.051 <sup>A</sup>	0.1180	1.0200
Iron, Ferrous, Dissolved	mg/L	---	---	---	---	---	---	---	---	---	<0.02	<0.0200 H	0.253 <sup>A</sup>	0.127	1.16
Magnesium	mg/L	87.1	---	---	---	107	---	---	126	85	95	96.2	97.5	---	92.6
Molybdenum, Total	mg/L	<0.001	---	<0.001	<0.001	<0.0006	<0.0006	0.000787 J	<0.000600	<0.000600	<0.000600	<0.000600	0.00114 J	---	<0.000600
Molybdenum, Dissolved	mg/L	---	---	---	---	0.000822 J	---	---	0.000773 J	<0.000600	<0.000600	0.0328	0.000982 J	---	<0.000600
Nitrate as N	mg/L	---	---	---	0.458	<0.03	<0.150	0.198	<0.0600	<0.150	<0.0600	<0.150	773 <sup>A</sup>	0.0307 J	0.171
Oxidation-Reduction Potential (field)	mV	64.2	-14.8	-30.2	275.1	275.6	43.2	-110.1	-36.5	146.4	207.4	-251.1	-77.1	-105.5	-172.7
pH (laboratory)	S.U.	6.8	7	7.1	7.4	6.49	7.61	6.74	7.08	7.48	7.21	7.32	1.62 <sup>A</sup>	7.41	7.18
pH (field)	S.U.	6.76	7.01	7.02	6.75	6.75	7.19	7.02	6.97	6.97	7	7.00	7.16	6.91	6.87
Potassium	mg/L	14.4	---	---	---	17.8	---	---	21.7	13.7	15.2	16.7	16.1	---	14.5
Sodium	mg/L	140	---	---	---	169	---	---	202	135	147	158	153	---	150
Specific Conductance (laboratory)	umhos/cm	---	---	---	3180	3170	---	---	---	3450	3450	3250	21000 <sup>A</sup>	4010	3770
Specific Conductance (field)	umhos/cm	3218	3135	3244	3277	3181	3208	3236	3013	3165	3195	2975	2681	3206	2893
Sulfate	mg/L	2030	1940	1860	1830	1990	1740	1880	2160	2010	2020	1970	3760 <sup>A</sup>	1950	1910
Sulfide	mg/L	---	---	---	---	---	---	---	1.52	<1.00	<1.00	2.08	<1.00 <sup>A</sup>	<1	<1.00
Temperature (field)	°C	23.05	20.84	24.37	20.9	13.6	17.89	22.78	23.52	20.7	18.2	23.3	17.8	21.5	21
Total Dissolved Solids	mg/L	3030	3090	3050	1910	3000	3170	3030	3390	3160	3040	3010	2520 <sup>A</sup>	3090	3230
Turbidity (field)	NTU	5.72	2.09	3.67	2.71	51.5	3.81	1.89	9.49	2.92	18.3	7.88	5.90	13.50	3.10
Filtered Turbidity (field)	NTU	---	---	---	---	4.9	---	---	---	0.51	---	1.18	1.59	2.89	0.86

**Notes:**

1. mg/L : milligrams per liter.
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11. \*\* : Insufficient sample volume for analysis due to well depletion.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		MW-22B	MW-22B	MW-22B	MW-22B	MW-22B		MW-22B
		24-Jul-20	13-Oct-20	31-Mar-21	13-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	333	364	364	435	435	---	438
Carbonate Alkalinity as CaCO3	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	328	364	364	435	435	---	438
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	2.97	3.4	3.14	3.17	4.02	---	3.75
Calcium	mg/L	90.1	69.8	75.8	82.7	103	---	161
Chloride	mg/L	55.5	56.1	57.8	55.0	57.8	---	55.4
Dissolved Oxygen (field)	mg/L	5.05	1.23	5.4	9.27	5.16	---	4.36
Fluoride	mg/L	1.14	1.05	1.46	1.21	1.08	---	1.32
Iron, Total	mg/L	11.7	0.282	4.19	6.04	7.27	---	19.3
Iron, Dissolved	mg/L	<0.0120	<0.0120	<0.0120	0.0138 J	0.0136 J	---	<0.0120
Iron, Ferric	mg/L	---	---	3.23	4.22	5.61	---	7.90
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	<0.0200	---	<0.0200
Iron, Ferrous	mg/L	3.06	0.58	0.957	1.82	1.66	---	11.4
Iron, Ferrous, Dissolved	mg/L	---	---	0.53	<0.0200 H	<0.0200	---	0.0260 J
Magnesium	mg/L	24.1	21.7	23.4	26.0	28.4	---	31.2
Molybdenum, Total	mg/L	0.00878	0.00866	0.00753	0.00446 J	0.00357 J	---	0.00105 J
Molybdenum, Dissolved	mg/L	0.0111	0.00853	0.00841	0.00723	0.00554	---	0.00393 J
Nitrate as N	mg/L	---	<0.0600	1.03	0.958	1.38	---	2.15
Oxidation-Reduction Potential (field)	mV	180.5	235.6	37.4	259.2	132.3	---	99.4
pH (laboratory)	S.U.	7.57	7.77	7.75	7.59	7.99	---	7.55
pH (field)	S.U.	7.95	7.64	7.88	7.72	7.67	---	7.63
Potassium	mg/L	10.3	7.81	8.79	10.2	10.7	---	9.87
Sodium	mg/L	838	842	846	848	1110	---	918
Specific Conductance (laboratory)	umhos/cm	---	5100	4460	4690	5060	---	5540
Specific Conductance (field)	umhos/cm	4364	4400	6102	4547	4600	---	4113
Sulfate	mg/L	2180	2040	2080	2090	1980	---	1940
Sulfide	mg/L	4	<1.00	<1.00	<1.00	42.2	---	<1.00
Temperature (field)	°C	22.3	19.3	17.23	20.7	20.2	---	19.5
Total Dissolved Solids	mg/L	3000	3340	3280	3290	3430	---	3550
Turbidity (field)	NTU	926	8.67	>1,000	391	806	---	>1000
Filtered Turbidity (field)	NTU	1.21	0.21	1.41	2.05	2.78	---	1.23

**Notes:**

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9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-1A	CM-1A	CM-1A	CM-1A	CM-1A		CM-1A
		24-Jul-20	7-Oct-20	1-Apr-21	14-Oct-21	(SAMPLE) 31-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	326	346	337	356	353	---	318
Carbonate Alkalinity as CaCO3	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	326	346	337	356	353	---	318
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	0.748	0.612	0.664	0.883	0.733	---	0.843
Calcium	mg/L	452	480	464	531	551	---	531
Chloride	mg/L	49.5	28.4	26.3	21.2	26.4	---	20.9
Dissolved Oxygen (field)	mg/L	6	0.59	1.8	0.37	1.9	---	0.33
Fluoride	mg/L	0.382	<0.500	0.483	0.399	0.390 J	---	0.426
Iron, Total	mg/L	5.34	0.0215 J	0.0232 J	0.115 J	0.0770 J	---	0.0460 J
Iron, Dissolved	mg/L	<0.0120	<0.0120	0.0713 J	0.0382 J	0.0224 J	---	0.0380 J
Iron, Ferric	mg/L	---	---	0.0232 J	0.0640	0.0770	---	0.0460 J
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	0.0382 J	0.0220 J	---	<0.0200
Iron, Ferrous	mg/L	0.114	<0.0200	<0.0200	0.051	<0.0200	---	<0.0200
Iron, Ferrous, Dissolved	mg/L	---	---	<0.0200	<0.0200 H	<0.0200	---	0.076
Magnesium	mg/L	65.7	55.4	50.2	77.6	59.4	---	63.1
Molybdenum, Total	mg/L	0.0088	0.00198 J	0.00132 J	0.00127 J	<0.000600	---	<0.000600
Molybdenum, Dissolved	mg/L	0.00385 J	0.00169 J	0.00159 J	0.00121 J	0.000720 J	---	0.000601 J
Nitrate as N	mg/L	---	<0.300	<0.0600	<0.0300	0.294 J	---	<0.0300
Oxidation-Reduction Potential (field)	mV	301.9	170.1	175.7	-58.0	91.2	---	-7.9
pH (laboratory)	S.U.	6.52	7.69	7.61	7.73	7.77	---	6.91
pH (field)	S.U.	6.93	6.84	6.95	6.77	7.04	---	6.74
Potassium	mg/L	12.4	8.79	7.52	11.9	7.52	---	8.87
Sodium	mg/L	178	181	170	198	206	---	184
Specific Conductance (laboratory)	umhos/cm	---	3620	3180	3300	3410	---	3790
Specific Conductance (field)	umhos/cm	3105	3258	3225	3092	3163	---	3062
Sulfate	mg/L	1970	1810	1910	1940	1770	---	1810
Sulfide	mg/L	<1.00	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	23.7	22.7	18.7	21.8	17.9	---	22.3
Total Dissolved Solids	mg/L	2980	3130	3090	3030	2840	---	3210
Turbidity (field)	NTU	31.4	2.91	2.39	15.6	5.72	---	1.78
Filtered Turbidity (field)	NTU	0.67	0.65	1.1	1.23	2.05	---	0.99

**Notes:**

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Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-1B	CM-1B	CM-1B	CM-1B	CM-1B		CM-1B
		24-Jul-20	12-Oct-20	1-Apr-21	14-Oct-21	(SAMPLE) 31-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	432	439	---	424	394	---	362
Carbonate Alkalinity as CaCO3	mg/L	<5.00	<5.00	---	<5.00	<5.00	---	6.12
Bicarbonate Alkalinity as CaCO3	mg/L	432	439	---	424	394	---	356
Hydroxide Alkalinity	mg/L	<5.00	<5.00	---	<5.00	<5.00	---	<5.00
Boron	mg/L	3.86	3.84	3.44	3.48	4.06	---	3.86
Calcium	mg/L	233	128	127	119	123	---	130
Chloride	mg/L	107	110	---	113	116	---	112
Dissolved Oxygen (field)	mg/L	4.33	---	0.81	0.39	0.60	---	0.3
Fluoride	mg/L	0.626	0.599	---	0.789	0.828	---	0.786
Iron, Total	mg/L	47.5	3.89	0.194 J	0.0865 J	0.172 J	---	0.115 J
Iron, Dissolved	mg/L	0.0150 J	0.0164 J	0.0136 J	<0.0120	0.159 J	---	0.0940 J
Iron, Ferric	mg/L	---	---	0.112	0.0435 J	0.0870	---	0.0480 J
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	0.0480 J	---	<0.0200
Iron, Ferrous	mg/L	26	7.3	0.082	0.0430 J	0.0850	---	0.067
Iron, Ferrous, Dissolved	mg/L	---	---	0.0450 J	<0.0200 H	0.111	---	0.101
Magnesium	mg/L	50.8	41.7	43.3	45.1	45.2	---	43.7
Molybdenum, Total	mg/L	0.0133	0.0144	0.0113	0.00976	0.00696 J	---	0.00551
Molybdenum, Dissolved	mg/L	0.019	0.0155	0.0126	0.0108	0.00727	---	0.00564
Nitrate as N	mg/L	---	9.85	---	<0.0600	0.232 J	---	<0.0300
Oxidation-Reduction Potential (field)	mV	184.2	-80.5	189.3	-70.5	-45.5	---	-109.9
pH (laboratory)	S.U.	7.67	8.12	---	8.03	8.03	---	7.52
pH (field)	S.U.	7.62	10.4	7.45	7.43	7.62	---	7.46
Potassium	mg/L	19.7	12.3	12.4	13.6	13.1	---	11.9
Sodium	mg/L	877	881	899	951	1140	---	990
Specific Conductance (laboratory)	umhos/cm	---	5650	---	5110	5370	---	5830
Specific Conductance (field)	umhos/cm	4900	1986	5107	4662	4963	---	4518
Sulfate	mg/L	2490	2290	---	2300	2190	---	2200
Sulfide	mg/L	5	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	23.3	23.5	19.9	22.6	16.1	---	21.7
Total Dissolved Solids	mg/L	3490	3760	---	3670	3770	---	3780
Turbidity (field)	NTU	>1,000	0.34	14.8	18.2	3.93	---	3.18
Filtered Turbidity (field)	NTU	---	0.34	1.16	1.8	2.29	---	1.05

**Notes:**

1. mg/L : milligrams per liter.
2. S.U. : Standard Units.
3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
12. \*\*\* : Insufficient sample volume for field measurements.
13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conc

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING			CMA SAMPLING				
		CM-2	DUP 1	CM-2	CM-2	CM-2	CM-2		CM-2
		24-Jul-20	7-Oct-20	1-Apr-21	15-Oct-21	(SAMPLE) 31-Mar-22	(RESAMPLE) Jun-22	Oct-22	
Total Alkalinity as CaCO3	mg/L	337	347	329	328	353	318	---	337
Carbonate Alkalinity as CaCO3	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	337	347	329	328	353	318	---	337
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	0.93	0.941	0.845	0.679	0.744	0.480	---	0.596
Calcium	mg/L	492	533	491	466	487	467	---	406
Chloride	mg/L	3.79	3.12	2.84 J	3.49	3.15	2.87	---	2.49
Dissolved Oxygen (field)	mg/L	4.62	---	0.27	0.67	0.40	2.08	---	0.23
Fluoride	mg/L	0.558	0.565	<0.500	0.419	0.526	0.506	---	0.462
Iron, Total	mg/L	2.78	2.97	0.0482 J	0.132 J	0.232	0.115 J	---	0.175 J
Iron, Dissolved	mg/L	<0.0120	<0.0120	0.0139 J	0.0386 J	0.237	0.136 J	---	0.0817 J
Iron, Ferric	mg/L	---	---	---	0.132	0.0970	0.0820	---	0.135
Iron, Ferric, Dissolved	mg/L	---	---	---	<0.0200	0.237	0.0800	---	0.0217 J
Iron, Ferrous	mg/L	0.109	0.146	<0.0200	<0.0200	0.135	0.0330 J	---	0.0400 J
Iron, Ferrous, Dissolved	mg/L	---	---	---	<0.0200	<0.0200 H	0.0560	---	0.06
Magnesium	mg/L	31.6	32.8	28.7	24.4	29.5	18.8	---	19.6
Molybdenum, Total	mg/L	0.00209 J	0.00218 J	0.00203 J	0.00161 J	0.00120 J	0.000820 J	---	<0.000600
Molybdenum, Dissolved	mg/L	0.00158 J	0.00134 J	0.00177 J	0.00118 J	0.00136 J	0.000820 J	---	0.00105 J
Nitrate as N	mg/L	---	---	<0.300	0.529	0.0497 J	0.256	---	0.194
Oxidation-Reduction Potential (field)	mV	244.3	---	170.2	72.3	-27.8	44.3	---	-78.3
pH (laboratory)	S.U.	6.66	6.6	7.91	7.82	7.37	7.79	---	7.09
pH (field)	S.U.	7.02	---	6.89	6.8	6.80	7.05	---	6.79
Potassium	mg/L	8.78	8.74	7.09	6.88	7.56	5.01	---	5.69
Sodium	mg/L	111	116	110	94	107	73.2	---	80.2
Specific Conductance (laboratory)	umhos/cm	---	---	3020	2190	2500	2220	---	2420
Specific Conductance (field)	umhos/cm	2713	---	2872	2870	2182	2109	---	2131
Sulfate	mg/L	1680	1730	1590	1210	1370	1010	---	982
Sulfide	mg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	---	<1.00
Temperature (field)	°C	21	---	20.1	17.7	21.4	18.2	---	20.9
Total Dissolved Solids	mg/L	2490	2660	2690	2060	2210	1780	---	1720
Turbidity (field)	NTU	16	---	18.8	2.32	14.6	2.5	---	12.9
Filtered Turbidity (field)	NTU	0.47	---	3.91	0.82	2.82	2.71	---	1.37

**Notes:**

1. mg/L : milligrams per liter.
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5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
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8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
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10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
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13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 20

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-3A	CM-3A	CM-3A	CM-3A	CM-3A		CM-3A
		21-Aug-20	13-Oct-20	30-Mar-21	14-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	**	616	489	630	602	---	589
Carbonate Alkalinity as CaCO3	mg/L	**	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	**	616	489	630	602	---	589
Hydroxide Alkalinity	mg/L	**	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	4.84	3.8	2.82	2.72	3.26	---	3
Calcium	mg/L	50.9	70.3	64.3	67.6	49.9	---	72.8
Chloride	mg/L	52.9	36.1	54.8	42.5	37.0	---	33.3
Dissolved Oxygen (field)	mg/L	**	***	3.3	4.96	4.53	---	3.89
Fluoride	mg/L	0.425	0.699	0.858	0.801	0.870	---	0.816
Iron, Total	mg/L	2.78	8.53	0.0152 J	6.76	0.971	---	12.9
Iron, Dissolved	mg/L	<0.0120	<0.0120	0.794	0.0291 J	3.34	---	5.32
Iron, Ferric	mg/L	---	---	<0.0200	5.27	0.209	---	4.17
Iron, Ferric, Dissolved	mg/L	---	---	0.313	0.0291 J	3.28	---	4.82
Iron, Ferrous	mg/L	**	0.480 J	1.45	1.49	0.762	---	8.73
Iron, Ferrous, Dissolved	mg/L	---	---	0.481	<0.0200 H	0.0570	---	0.501
Magnesium	mg/L	6.26	10.4	13.3	10.7	10.4	---	11.1
Molybdenum, Total	mg/L	0.0457	0.0222	0.0153	0.00297 J	0.00656	---	0.00155 J
Molybdenum, Dissolved	mg/L	0.0445	0.0299	0.0157	0.0120	0.00844	---	0.00234 J
Nitrate as N	mg/L	1.67	7.55	19.9	7.07	17.1	---	16.2
Oxidation-Reduction Potential (field)	mV	**	***	212.5	281.8	127.2	---	219.9
pH (laboratory)	S.U.	8.76	7.82	7.95	7.73	7.82	---	7.62
pH (field)	S.U.	**	***	7.6	7.37	7.64	---	7.44
Potassium	mg/L	6.13	7.41	6.68	6.38	5.96	---	6.15
Sodium	mg/L	429	499	559	447	525	---	518
Specific Conductance (laboratory)	umhos/cm	---	2940	2910	2410	2790	---	2390
Specific Conductance (field)	umhos/cm	**	***	3015	2467	2609	---	2088
Sulfate	mg/L	554	749	971	635	677	---	600
Sulfide	mg/L	**	<1.00	<1.00	2.12	34.2	---	<1.00
Temperature (field)	°C	**	***	18.7	19.7	19.7	---	20.4
Total Dissolved Solids	mg/L	1700	1840	2330	1560	1710	---	1720
Turbidity (field)	NTU	**	***	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	**	***	0.44	1.84	2.00	---	---

**Notes:**

1. mg/L : milligrams per liter.
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3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
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10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-3B	CM-3B	CM-3B	CM-3B	CM-3B		
		21-Aug-20	15-Oct-20	2-Apr-21	11-Oct-21	(SAMPLE) 1-Apr-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	**	413	519	**	753	---	769
Carbonate Alkalinity as CaCO3	mg/L	**	16.5	17.6	**	102	---	25
Bicarbonate Alkalinity as CaCO3	mg/L	**	396	502	**	651	---	744
Hydroxide Alkalinity	mg/L	**	<5.00	<5.00	**	<5.00	---	<5.00
Boron	mg/L	3.82	3.44	4.73	**	5.14	---	3.3
Calcium	mg/L	70	62.7	100	**	70.1	---	80.1
Chloride	mg/L	48.9	28.8	40.2	**	53.0	---	50.5
Dissolved Oxygen (field)	mg/L	**	***	***	***	2.3	---	***
Fluoride	mg/L	1.9	1.14	1.52	**	1.51	---	1.68
Iron, Total	mg/L	23.5	22.8	55.6	**	16.7	---	22.6
Iron, Dissolved	mg/L	0.0140 J	0.0399 J	0.0419 J	**	46.7	---	0.0127 J
Iron, Ferric	mg/L	---	---	---	**	16.1	---	16.90
Iron, Ferric, Dissolved	mg/L	---	---	---	**	45.2	---	<0.0200
Iron, Ferrous	mg/L	**	**	---	**	0.636	---	5.68
Iron, Ferrous, Dissolved	mg/L	---	---	---	**	1.45	---	<0.0200
Magnesium	mg/L	13.6	11.2	23.2	**	13.6	---	11.0
Molybdenum, Total	mg/L	0.0327	0.0318	0.0353 J	**	0.0174	---	0.00819
Molybdenum, Dissolved	mg/L	0.0394	0.0355	0.0392	**	0.0256	---	0.0204
Nitrate as N	mg/L	<0.0300	4.64	31.3	**	65.6	---	<0.0300
Oxidation-Reduction Potential (field)	mV	**	***	***	***	86.7	---	***
pH (laboratory)	S.U.	8.11	8.65	8.24	**	8.51	---	8.23
pH (field)	S.U.	**	***	***	***	7.48	---	***
Potassium	mg/L	11.1	9.04	23.6	**	9.25	---	6.25
Sodium	mg/L	573	603	847	**	948	---	616
Specific Conductance (laboratory)	umhos/cm	---	2540	2930	**	4030	---	4640
Specific Conductance (field)	umhos/cm	**	***	***	***	3731	---	***
Sulfate	mg/L	1090	733	942	**	1070	---	684
Sulfide	mg/L	**	**	---	**	**	---	<1.00
Temperature (field)	°C	**	***	***	***	20.7	---	***
Total Dissolved Solids	mg/L	2240	1310	2340	**	3580	---	2810
Turbidity (field)	NTU	**	***	***	***	>1000	---	***
Filtered Turbidity (field)	NTU	**	***	***	***	---	---	***

**Notes:**

1. mg/L : milligrams per liter.
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3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
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6. NTU : Nephelometric Turbidity Unit.
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ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-4A	CM-4A	CM-4A	CM-4A	CM-4A		CM-4A
		24-Jul-20	8-Oct-20	30-Mar-21	13-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	470	557	510	605	619	---	616
Carbonate Alkalinity as CaCO3	mg/L	20	5.28	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	450	552	510	605	619	---	616
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	3.03	4.42	3.24	3.56	4.69	---	4.12
Calcium	mg/L	103	71.7	59.1	66.5	162	---	117
Chloride	mg/L	92.4	105	109	90.2	82.9	---	77.1
Dissolved Oxygen (field)	mg/L	2.68	***	3.93	5.31	4.31	---	4.15
Fluoride	mg/L	0.879	0.602	0.947	0.737	0.787	---	0.795
Iron, Total	mg/L	40	6.78	7.67	4.64	21.6	---	14.2
Iron, Dissolved	mg/L	0.0205 J	0.0162 J	0.0149 J	<0.0120	0.0901 J	---	0.0782 J
Iron, Ferric	mg/L	---	---	6.98	4.10	19.5	---	7.36
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	<0.0200	---	0.0436 J
Iron, Ferrous	mg/L	1.92	10.3	0.69	0.544	2.14	---	6.84
Iron, Ferrous, Dissolved	mg/L	---	---	0.278	<0.0200 H	0.0720	---	0.0350 J
Magnesium	mg/L	16.7	15.2	13.5	16.4	20.8	---	17.9
Molybdenum, Total	mg/L	0.0269	0.0271	0.0212	0.0105	0.00455 J	---	0.00449 J
Molybdenum, Dissolved	mg/L	0.0529	0.0391	0.0255	0.0194	0.0183	---	0.017
Nitrate as N	mg/L	---	27	20	21.6	16.4	---	18.3
Oxidation-Reduction Potential (field)	mV	238.4	***	210.6	111.4	154.2	---	219.8
pH (laboratory)	S.U.	7.82	7.98	7.64	8.14	7.84	---	7.53
pH (field)	S.U.	7.6	***	7.74	7.64	7.87	---	7.57
Potassium	mg/L	14.3	8.13	8.26	7.82	9.42	---	8.43
Sodium	mg/L	443	654	580	709	772	---	716
Specific Conductance (laboratory)	umhos/cm	---	4150	3630	4030	3700	---	4080
Specific Conductance (field)	umhos/cm	2939	***	3612	3240	3489	---	3035
Sulfate	mg/L	1050	1260	1300	1160	1070	---	1100
Sulfide	mg/L	4	<1.00	<1.00	<1.00	<1.00	---	2.08
Temperature (field)	°C	20.2	***	18.9	21.1	15.8	---	20.2
Total Dissolved Solids	mg/L	1900	2630	2660	2830	2420	---	2420
Turbidity (field)	NTU	692	***	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	0.4	***	0.54	2.13	6.74	---	3.32

**Notes:**

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 TABULATION OF DATA  
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 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	PREVIOUS SAMPLING		CMA SAMPLING					
	Sample ID:	CM-4B	CM-4B	CM-4B	CM-4B	CM-4B		CM-4B
	Sample Date:	24-Jul-20	8-Oct-20	30-Mar-21	13-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	436	520	448	589	565	---	587
Carbonate Alkalinity as CaCO3	mg/L	15.7	24.5	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	420	495	448	589	565	---	583
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	3.14	4.31	3.63	3.79	4.90	---	4.89
Calcium	mg/L	56.5	47.1	42.1	79.1	56.2	---	86.1
Chloride	mg/L	69.9	95.3	119	113	112	---	109
Dissolved Oxygen (field)	mg/L	2.88	***	5.52	7.70	2.87	---	5.19
Fluoride	mg/L	1.01	1.07	1.4	1.05	0.944	---	1.23
Iron, Total	mg/L	4.25	1.27	2.19	13.0	1.15	---	8.11
Iron, Dissolved	mg/L	0.0123 J	1.56	0.0156 J	0.0134 J	0.0421 J	---	0.459
Iron, Ferric	mg/L	---	---	1.03	11.4	1.02	---	1.95
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	<0.0200	---	0.0416 J
Iron, Ferrous	mg/L	19.2	5.17	1.16	1.64	0.134	---	6.16
Iron, Ferrous, Dissolved	mg/L	---	---	0.406	<0.0200 H	0.0750	---	0.0430 J
Magnesium	mg/L	14	12.1	13	17.8	17.5	---	19.5
Molybdenum, Total	mg/L	0.0307	0.0306	0.0303	0.0131	0.0184	---	0.00771
Molybdenum, Dissolved	mg/L	0.0354	0.0271	0.0344	0.0235	0.0194	---	0.0147
Nitrate as N	mg/L	---	7.22	17.8	22.2	34.0	---	36
Oxidation-Reduction Potential (field)	mV	292.1	***	214.4	63.6	154.2	---	247
pH (laboratory)	S.U.	7.78	8.32	7.84	8.04	8.01	---	7.67
pH (field)	S.U.	7.45	***	7.89	7.69	7.99	---	7.57
Potassium	mg/L	10.2	7.12	7.46	8.42	8.19	---	8.61
Sodium	mg/L	529	764	769	865	1140	---	963
Specific Conductance (laboratory)	umhos/cm	---	4260	4160	4400	4710	---	5260
Specific Conductance (field)	umhos/cm	3331	***	4107	3801	4207	---	3917
Sulfate	mg/L	1360	1460	1620	1590	1500	---	1560
Sulfide	mg/L	5	<1.00	<1.00	<1.00	<1.00	---	5.68
Temperature (field)	°C	20.7	***	19.2	21.2	16.7	---	20.7
Total Dissolved Solids	mg/L	2240	2750	3040	2980	3310	---	3240
Turbidity (field)	NTU	158	***	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	---	***	0.5	1.92	1.20	---	30.2

**Notes:**

1. mg/L : milligrams per liter.
2. S.U. : Standard Units.
3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
12. \*\*\* : Insufficient sample volume for field measurements.
13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conc

ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-5A	CM-5A	CM-5A	CM-5A	CM-5A		CM-5A
		24-Jul-20	8-Oct-20	30-Mar-21	13-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	451	541	445	538	515	---	498
Carbonate Alkalinity as CaCO3	mg/L	7.91	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	443	541	445	538	515	---	498
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	3.92	4.67	4.97	4.57	6.34	---	5.44
Calcium	mg/L	102	86.7	102	143	170	---	135
Chloride	mg/L	93.9	130	154	134	115	---	109
Dissolved Oxygen (field)	mg/L	3.81	***	3.36	6.35	3.21	---	5.33
Fluoride	mg/L	1.09	0.602	0.667	0.682	0.852	---	0.748
Iron, Total	mg/L	28.4	5.43	3.27	13.6	22.3	---	12.3
Iron, Dissolved	mg/L	<0.0120	<0.0120	0.0799 J	<0.0120	0.876	---	0.150 J
Iron, Ferric	mg/L	---	---	1.21	10.9	20.8	---	5.64
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	0.876	---	0.111
Iron, Ferrous	mg/L	0.561	4.63	2.06	2.72	1.45	---	6.66
Iron, Ferrous, Dissolved	mg/L	---	---	0.673	<0.0200 H	<0.0200	---	0.0390 J
Magnesium	mg/L	15.8	18.4	26	29.9	27.8	---	23.8
Molybdenum, Total	mg/L	0.0205	0.011	0.0182	0.00580	0.00351 J	---	0.00317 J
Molybdenum, Dissolved	mg/L	0.0352	0.0214	0.0192	0.0165	0.0129	---	0.0105
Nitrate as N	mg/L	---	27.4	27.2	24.4	20.2	---	18.6
Oxidation-Reduction Potential (field)	mV	270.1	***	217.6	126.0	123.3	---	223.9
pH (laboratory)	S.U.	7.7	7.96	7.46	7.75	7.92	---	7.67
pH (field)	S.U.	7.4	***	7.35	7.49	7.76	---	7.49
Potassium	mg/L	13.3	8.41	10.4	11.5	11.1	---	9.73
Sodium	mg/L	448	632	761	749	791	---	746
Specific Conductance (laboratory)	umhos/cm	---	4180	4180	4130	3980	---	4190
Specific Conductance (field)	umhos/cm	2617	***	4132	3626	3736	---	3167
Sulfate	mg/L	808	1290	1540	1480	1250	---	1200
Sulfide	mg/L	<1.00	1.36	1.36	<1.00	<1.00	---	25.2
Temperature (field)	°C	22.5	***	19.2	21.0	15.8	---	20.2
Total Dissolved Solids	mg/L	1840	2680	3260	2900	2620	---	2650
Turbidity (field)	NTU	204	***	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	0.61	***	0.86	36.8	4.77	---	2.28

**Notes:**

1. mg/L : milligrams per liter.
2. S.U. : Standard Units.
3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time..
11. \*\* : Insufficient sample volume for analysis due to well depletion.
12. \*\*\* : Insufficient sample volume for field measurements.
13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conc



ATTACHMENT C  
 TABULATION OF DATA  
 SEMI-ANNUAL CMA SAMPLING  
 WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	Sample ID: Sample Date:	PREVIOUS SAMPLING		CMA SAMPLING				
		CM-5B	CM-5B	CM-5B	CM-5B	CM-5B		CM-5B
		24-Jul-20	9-Oct-20	30-Mar-21	13-Oct-21	(SAMPLE) 28-Mar-22	(RESAMPLE) Jun-22	Oct-22
Total Alkalinity as CaCO3	mg/L	421	525	486	613	594	---	586
Carbonate Alkalinity as CaCO3	mg/L	22.6	<5.00	<5.00	<5.00	<5.00	---	<5.00
Bicarbonate Alkalinity as CaCO3	mg/L	398	520	486	613	594	---	586
Hydroxide Alkalinity	mg/L	<5.00	<5.00	<5.00	<5.00	<5.00	---	<5.00
Boron	mg/L	3.8	4.42	3.86	4.37	5.91	---	4.3
Calcium	mg/L	115	56.4	46	56.8	59.8	---	92.7
Chloride	mg/L	107	113	145	141	147	---	134
Dissolved Oxygen (field)	mg/L	3.35	***	4.46	3.41	5.38	---	4.66
Fluoride	mg/L	0.636	0.786	1.15	0.925	0.838	---	1.1
Iron, Total	mg/L	32.3	1.26	1.73	3.61	0.0358 J	---	9.04
Iron, Dissolved	mg/L	0.0246 J	1.87	0.214 J	<0.0120	3.16	---	0.0653 J
Iron, Ferric	mg/L	---	---	0.47	2.97	<0.0200	---	0.08
Iron, Ferric, Dissolved	mg/L	---	---	<0.0200	<0.0200	3.16	---	0.0333 J
Iron, Ferrous	mg/L	0.671	10.6	1.26	0.641	2.30	---	8.96
Iron, Ferrous, Dissolved	mg/L	---	---	0.206	<0.0200 H	<0.0200	---	0.0320 J
Magnesium	mg/L	22	15.8	14	18.8	19.5	---	20.3
Molybdenum, Total	mg/L	0.04	0.0394	0.0536	0.0448	0.0361	---	0.0102
Molybdenum, Dissolved	mg/L	0.0515	0.0359	0.0594	0.0418	0.0294	---	0.0233
Nitrate as N	mg/L	---	25.8	58.0 H	59.8	66.7	---	76.7
Oxidation-Reduction Potential (field)	mV	229	***	224.2	50.8	27.2	---	183.4
pH (laboratory)	S.U.	7.94	7.84	7.67	7.92	7.82	---	7.6
pH (field)	S.U.	7.53	***	7.8	7.56	7.72	---	7.44
Potassium	mg/L	15.2	7.73	8	10.1	8.55	---	8.45
Sodium	mg/L	587	762	671	836	986	---	718
Specific Conductance (laboratory)	umhos/cm	---	4570	4130	4250	4450	---	5030
Specific Conductance (field)	umhos/cm	3617	***	3914	3673	4126	---	3900
Sulfate	mg/L	1470	1430	1330	1310	1170	---	1230
Sulfide	mg/L	8	6.4	<1.00	1.28	39.8	---	<1.00
Temperature (field)	°C	21.7	***	18.8	21.0	15.5	---	21.7
Total Dissolved Solids	mg/L	2570	2910	3120	2910	3060	---	3160
Turbidity (field)	NTU	616	***	>1,000	>1000	>1000	---	>1000
Filtered Turbidity (field)	NTU	0.25	***	12.1	0.93	3.56	---	8.42

**Notes:**

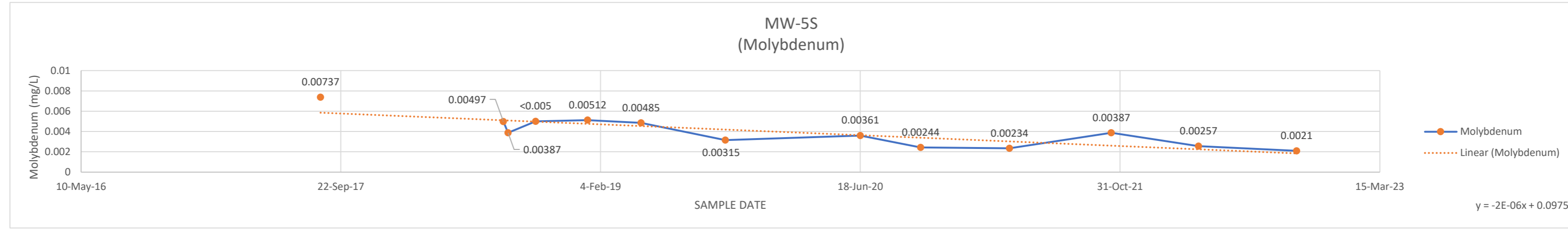
1. mg/L : milligrams per liter.
2. S.U. : Standard Units.
3. °C : degrees Celsius.
4. umhos/cm : micromhos per centimeter.
5. mV : millivolts.
6. NTU : Nephelometric Turbidity Unit.
7. < : Analyte not detected at the laboratory method detection limit (MDL).
8. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
9. --- : no analysis performed.
10. H : Analyzed outside of holding time.
11. \*\* : Insufficient sample volume for analysis due to well depletion.
12. \*\*\* : Insufficient sample volume for field measurements.
13. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For

# **ATTACHMENT D**

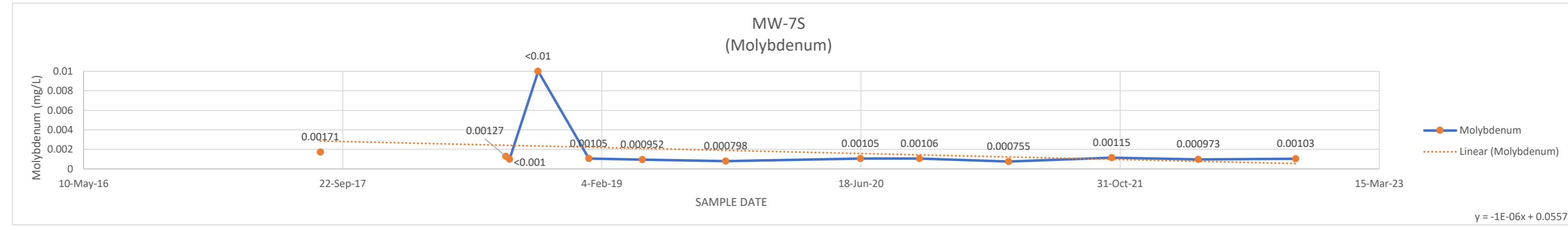
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

ATTACHMENT D  
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

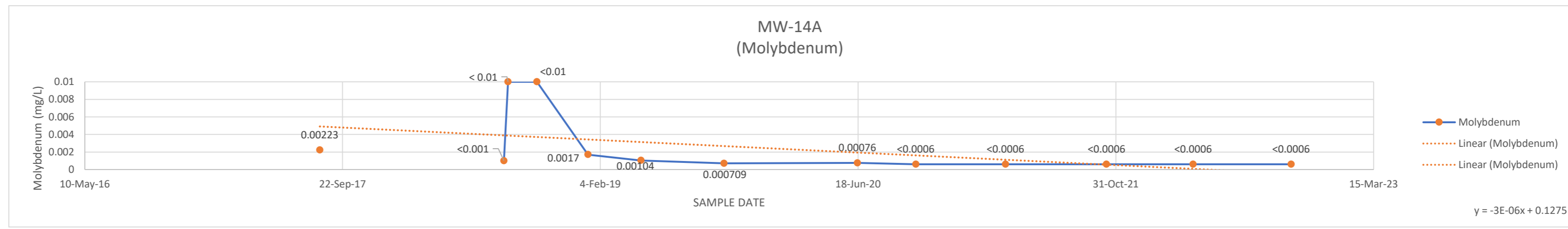
MW-5S	DATE	MOLYBDENUM
14-Aug-17		0.00737
22-May-18		
1-Aug-18		0.00497
10-Aug-18		0.00387
2-Oct-18		<b>0.005</b>
10-Jan-19		0.00512
23-Apr-19		0.00485
2-Oct-19		0.00315
18-Jun-20		0.00361
12-Oct-20		0.00244
1-Apr-21		0.00234
14-Oct-21		0.00387
31-Mar-22		0.00257
6-Oct-22		0.0021



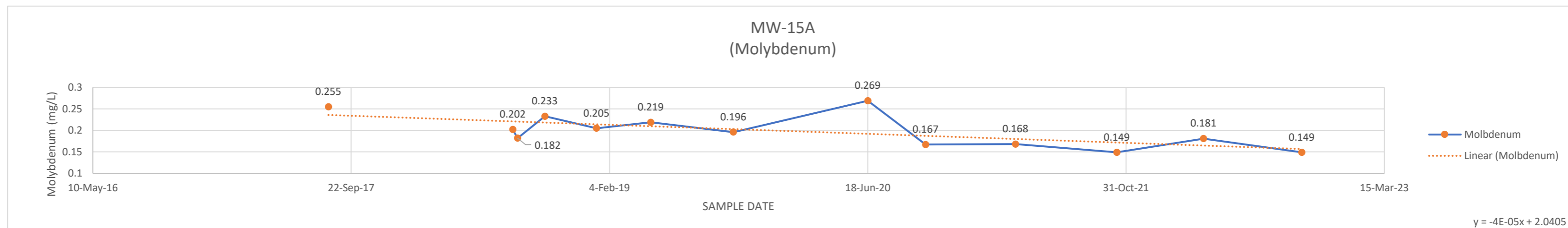
MW-7S	DATE	MOLYBDENUM
10-Aug-17		0.00171
17-May-18		
3-Aug-18		0.00127
10-Aug-18		<b>0.001</b>
4-Oct-18		<b>0.01</b>
10-Jan-19		0.00105
23-Apr-19		0.000952
1-Oct-19		0.000798
17-Jun-20		0.00105
9-Oct-20		0.00106
30-Mar-21		0.000755
15-Oct-21		0.00115
31-Mar-22		0.000973
5-Oct-22		0.00103



MW-14A	DATE	MOLYBDENUM
9-Aug-17		0.00223
17-May-18		
1-Aug-18		<b>0.001</b>
9-Aug-18		<b>0.01</b>
4-Oct-18		<b>0.01</b>
11-Jan-19		0.0017
24-Apr-19		0.00104
2-Oct-19		0.000709
17-Jun-20		0.00076
8-Oct-20		<b>0.0006</b>
31-Mar-21		<b>0.0006</b>
13-Oct-21		<b>0.0006</b>
30-Mar-22		<b>0.0006</b>
6-Oct-22		<b>0.0006</b>

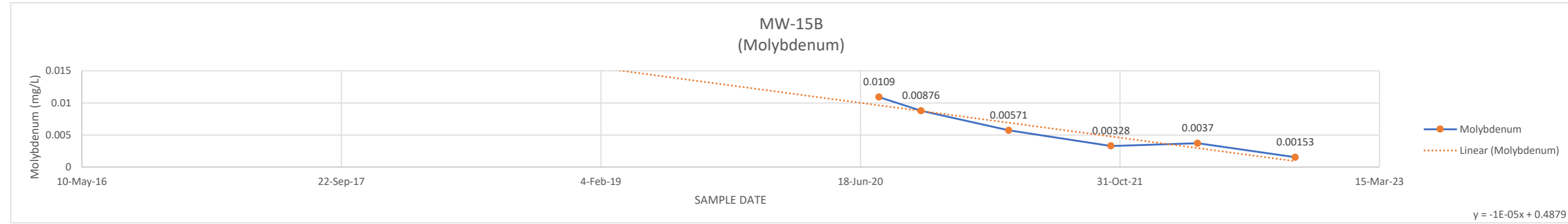


MW-15A	DATE	MOLYBDENUM
9-Aug-17		0.255
24-May-18		
1-Aug-18		0.202
10-Aug-18		0.182
2-Oct-18		0.233
10-Jan-19		0.205
25-Apr-19		0.219
2-Oct-19		0.196
18-Jun-20		0.269
8-Oct-20		0.167
31-Mar-21		0.168
13-Oct-21		0.149
30-Mar-22		0.181
6-Oct-22		0.149

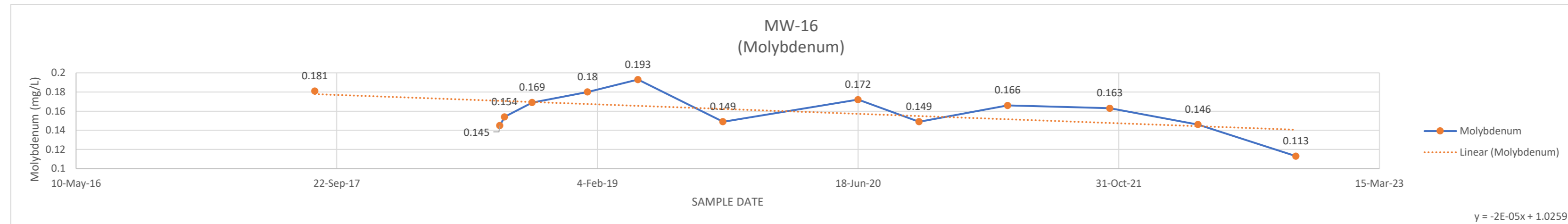


ATTACHMENT D  
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

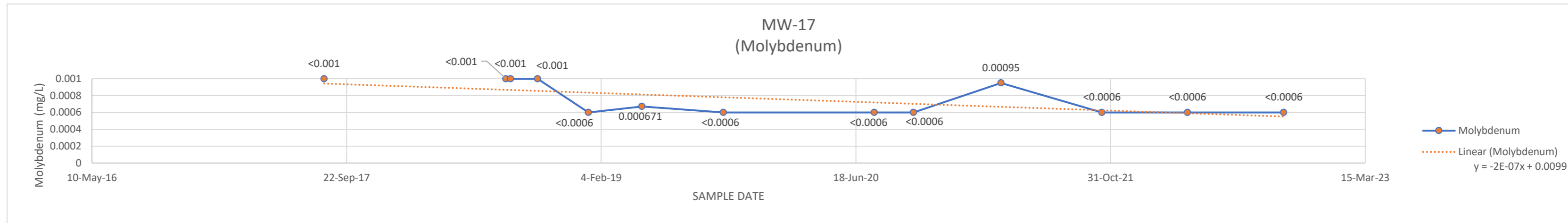
MW-15B	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0109
13-Oct-20	0.00876
31-Mar-21	0.00571
14-Oct-21	0.00328
30-Mar-22	0.0037
4-Oct-22	0.00153



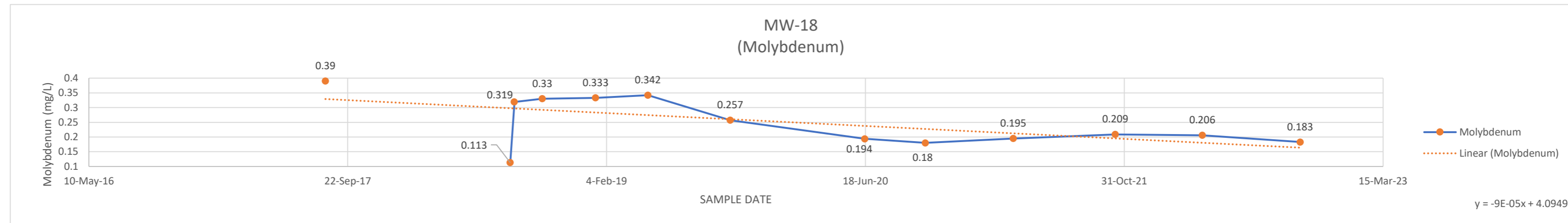
MW-16	MOLYBDENUM
DATE	
11-Aug-17	0.181
22-May-18	
1-Aug-18	0.145
10-Aug-18	0.154
2-Oct-18	0.169
16-Jan-19	0.18
23-Apr-19	0.193
3-Oct-19	0.149
18-Jun-20	0.172
13-Oct-20	0.149
1-Apr-21	0.166
14-Oct-21	0.163
1-Apr-22	0.146
1-Apr-22	0.146
6-Oct-22	0.113



MW-17	MOLYBDENUM
DATE	
9-Aug-17	0.001
24-May-18	
1-Aug-18	0.001
10-Aug-18	0.001
2-Oct-18	0.001
10-Jan-19	0.0006
25-Apr-19	0.000671
2-Oct-19	0.0006
24-Jul-20	0.0006
9-Oct-20	0.0006
30-Mar-21	0.00095
14-Oct-21	0.0006
31-Mar-22	0.0006
6-Oct-22	0.0006

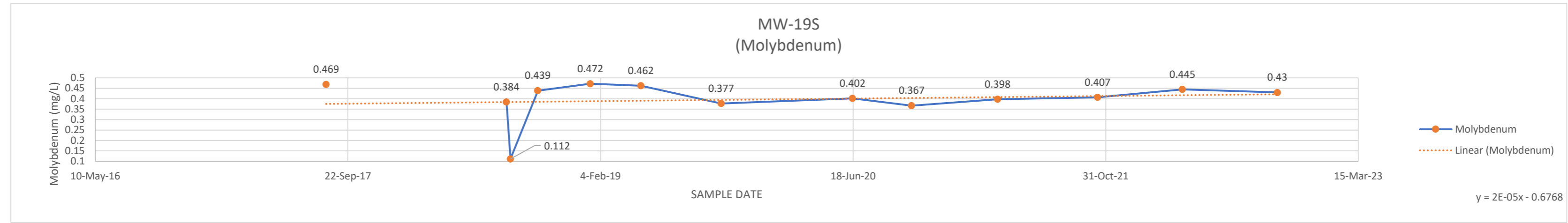


MW-18	MOLYBDENUM
DATE	
10-Aug-17	0.39
18-May-18	
2-Aug-18	0.113
10-Aug-18	0.319
3-Oct-18	0.33
14-Jan-19	0.333
25-Apr-19	0.342
1-Oct-19	0.257
17-Jun-20	0.194
12-Oct-20	0.18
31-Mar-21	0.195
14-Oct-21	0.209
31-Mar-22	0.206
6-Oct-22	0.183

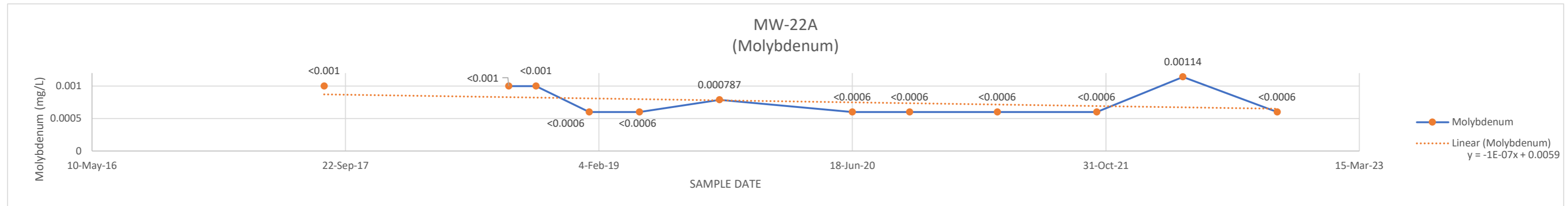


ATTACHMENT D  
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

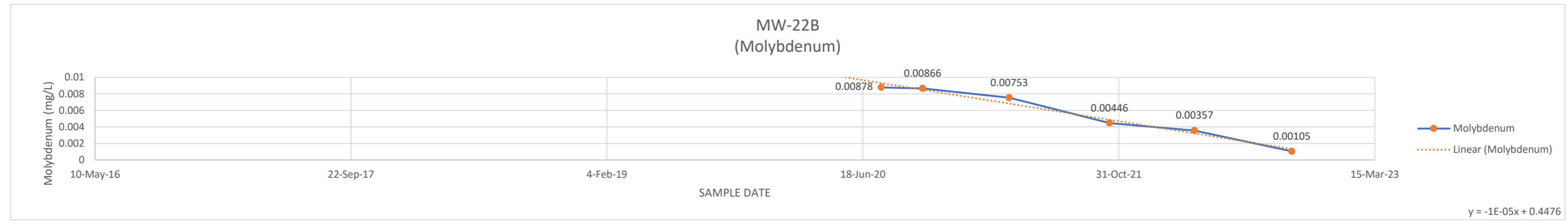
MW-19S	MOLYBDENUM
DATE	
10-Aug-17	0.469
18-May-18	
2-Aug-18	0.384
10-Aug-18	0.112
3-Oct-18	0.439
15-Jan-19	0.472
25-Apr-19	0.462
1-Oct-19	0.377
17-Jun-20	0.402
12-Oct-20	0.367
31-Mar-21	0.398
15-Oct-21	0.407
1-Apr-22	0.445
6-Oct-22	0.43



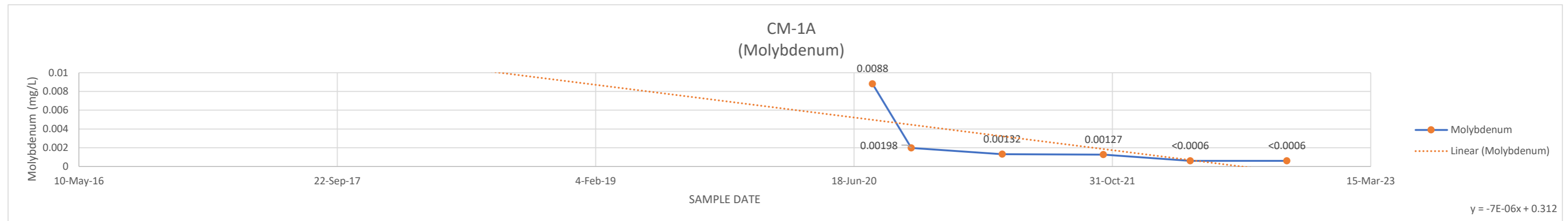
MW-22A	MOLYBDENUM
DATE	
11-Aug-17	0.001
22-May-18	
10-Aug-18	0.001
3-Oct-18	0.001
16-Jan-19	0.0006
25-Apr-19	0.0006
30-Sep-19	0.000787
18-Jun-20	0.0006
9-Oct-20	0.0006
31-Mar-21	0.0006
13-Oct-21	0.0006
1-Apr-22	0.00114
4-Oct-22	0.0006



MW-22B	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.00878
13-Oct-20	0.00866
31-Mar-21	0.00753
13-Oct-21	0.00446
28-Mar-22	0.00357
4-Oct-22	0.00105

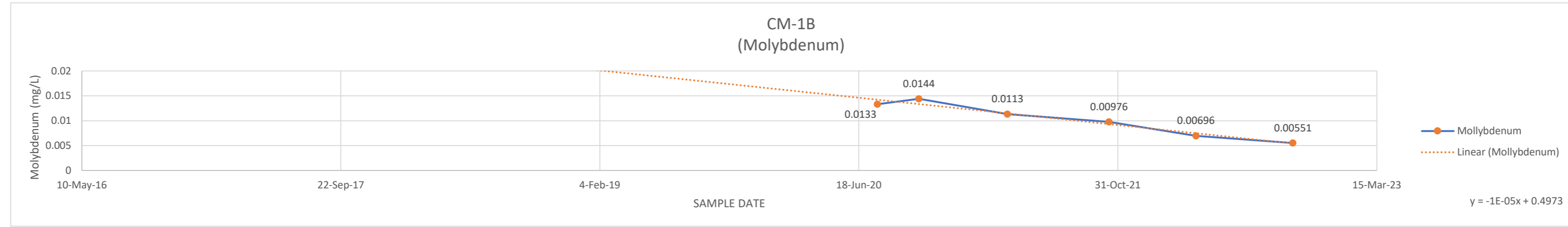


CM-1A	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0088
7-Oct-20	0.00198
1-Apr-21	0.00132
14-Oct-21	0.00127
31-Mar-22	0.0006
4-Oct-22	0.0006

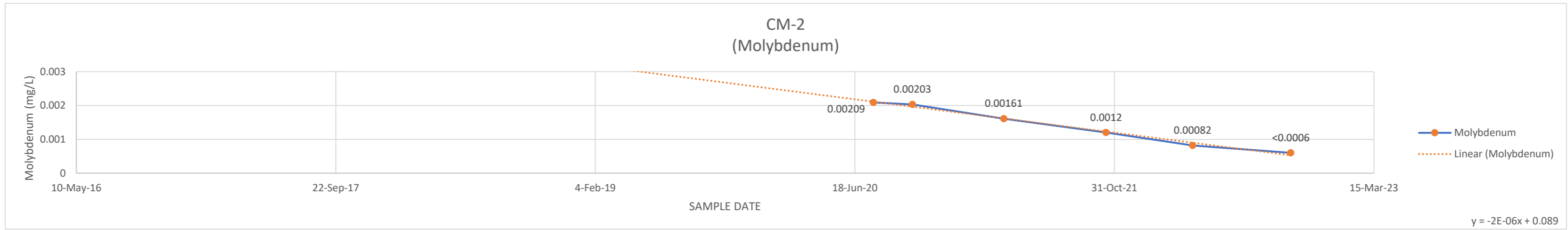


ATTACHMENT D  
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

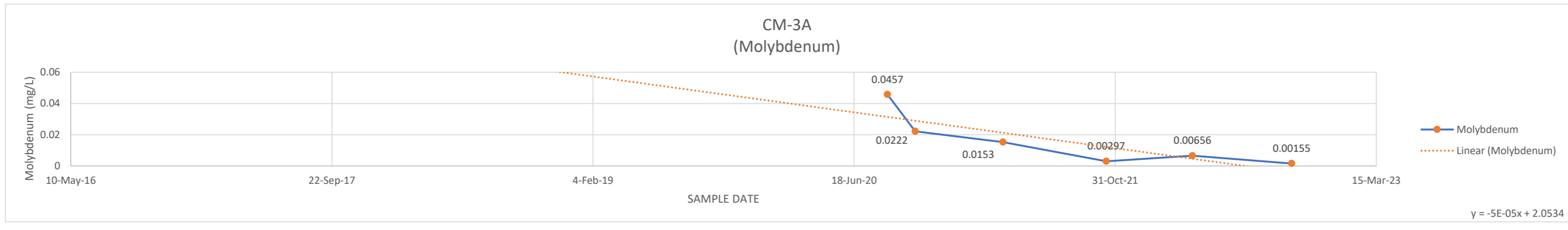
CM-1B DATE	MOLYBDENUM
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0133
12-Oct-20	0.0144
1-Apr-21	0.0113
14-Oct-21	0.00976
31-Mar-22	0.00696
4-Oct-22	0.00551



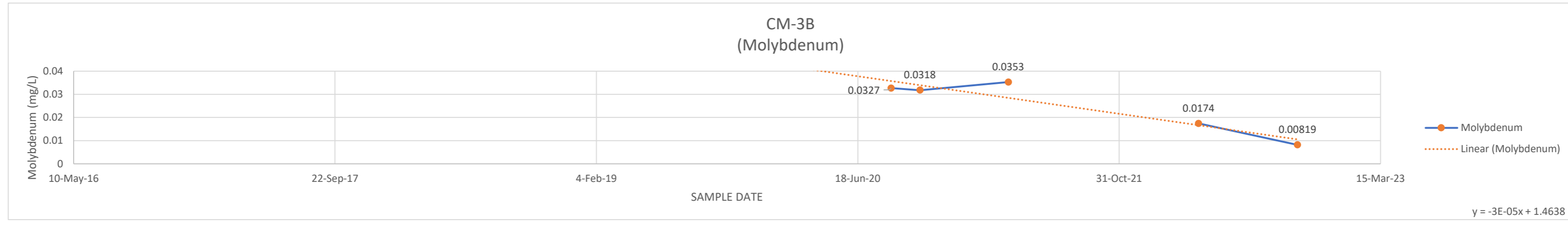
CM-2 DATE	MOLYBDENUM
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.00209
7-Oct-20	0.00203
1-Apr-21	0.00161
15-Oct-21	0.0012
31-Mar-22	0.00082
6-Oct-22	0.0006



CM-3A DATE	MOLYBDENUM
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
21-Aug-20	0.0457
13-Oct-20	0.0222
30-Mar-21	0.0153
14-Oct-21	0.00297
28-Mar-22	0.00656
4-Oct-22	0.00155

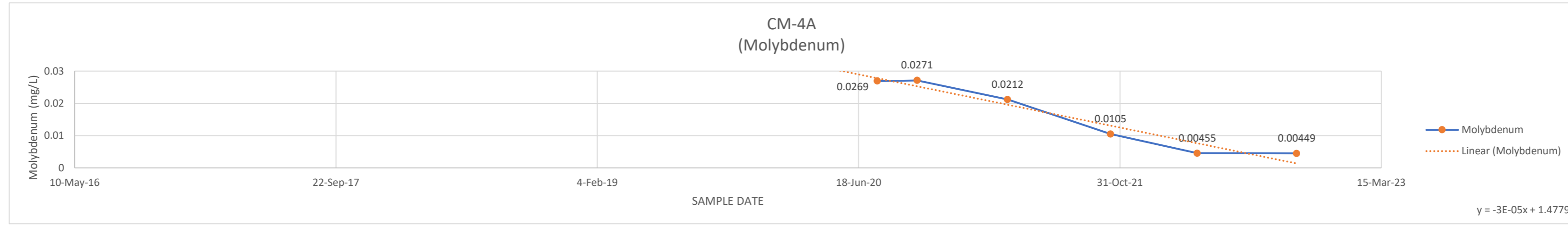


CM-3B DATE	MOLYBDENUM
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
21-Aug-20	0.0327
15-Oct-20	0.0318
2-Apr-21	0.0353
11-Oct-21	
1-Apr-22	0.0174
7-Oct-22	0.00819

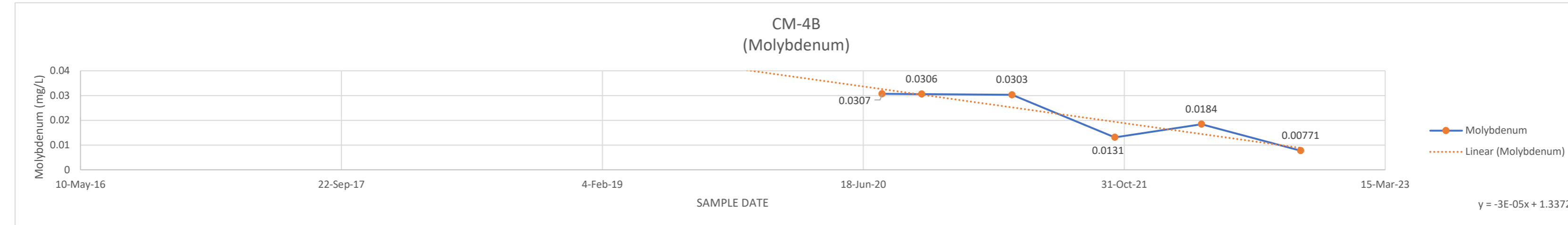


ATTACHMENT D  
CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

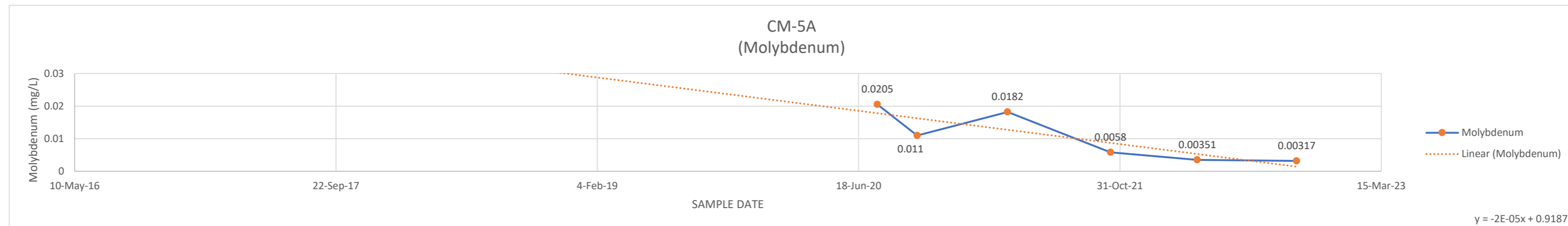
CM-4A	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0269
8-Oct-20	0.0271
30-Mar-21	0.0212
13-Oct-21	0.0105
28-Mar-22	0.00455
4-Oct-22	0.00449



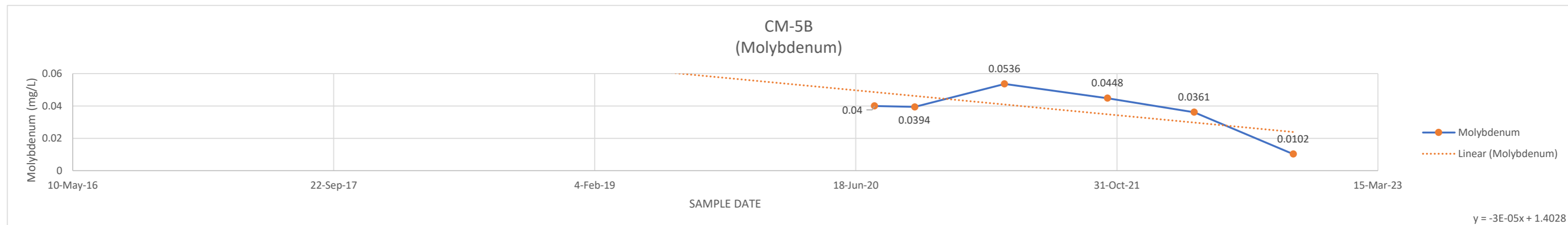
CM-4B	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0307
8-Oct-20	0.0306
30-Mar-21	0.0303
13-Oct-21	0.0131
28-Mar-22	0.0184
4-Oct-22	0.00771



CM-5A	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.0205
8-Oct-20	0.011
30-Mar-21	0.0182
13-Oct-21	0.0058
28-Mar-22	0.00351
4-Oct-22	0.00317



CM-5B	MOLYBDENUM
DATE	
9-Aug-17	
24-May-18	
1-Aug-18	
10-Aug-18	
2-Oct-18	
10-Jan-19	
25-Apr-19	
2-Oct-19	
24-Jul-20	0.04
9-Oct-20	0.0394
30-Mar-21	0.0536
13-Oct-21	0.0448
28-Mar-22	0.0361
4-Oct-22	0.0102



Yellow Indicates Reported Below shown value (MDL)

# **ATTACHMENT E**

COMPARISON OF CHANGES IN MEAN CONCENTRATION FOR MOLOYBDENUM



ATTACHMENT E  
COMPARISON OF CHANGES IN MEAN CONCENTRATION FOR MOLYBDENUM

	CONCENTRATION (ENTIRE SAMPLING HISTORY)	MEAN MOLYBDENUM CONCENTRATION (EXCEPT LAST FOUR) <sup>1, 2</sup>	CONCENTRATION (LAST FOUR) <sup>3</sup>	PERCENT DIFFERENCE <sup>4</sup>
MW-5S	0.00394	0.00449	0.00272	-39.38
MW-7S	0.00175	0.00210	0.00098	-53.45
MW-14A	0.00234	0.00312	0.00060	-80.74
MW-15A	0.19808	0.21422	0.16175	-24.49
MW-15B	0.00565	0.00983	0.00356	-63.84
MW-16	0.16000	0.16578	0.14700	-11.33
MW-17	0.00076	0.00079	0.00069	-12.49
MW-18	0.25008	0.27311	0.19825	-27.41
MW-19S	0.39723	0.38711	0.42000	8.50
MW-22A	0.00076	0.00077	0.00074	-4.96
MW-22B	0.00568	0.00872	0.00415	-52.38
CM-1A	0.00243	0.00539	0.00095	-82.42
CM-1B	0.01021	0.01385	0.00838	-39.48
CM-2	0.00139	0.00206	0.00106	-48.67
CM-3A	0.01571	0.03395	0.00660	-80.57
CM-3B	0.02508	0.03270	0.02317	-29.14
CM-4A	0.01579	0.02700	0.01019	-62.28
CM-4B	0.02180	0.03065	0.01738	-43.30
CM-5A	0.01036	0.01575	0.00767	-51.30
CM-5B	0.03735	0.03970	0.03618	-8.88

1) Mean Molybdenum Concentration (Except Last Four) is based on sampling conducted from August 2017 through October 2020. It is based on nine sampling events for MW-5S, MW-7S, MW-14A, MW-15A, MW-16, MW-17, MW-18, and MW-19S. It is based on eight sampling events for MW-22A.

2) MW-15B, MW-22B, CM-1A, CM-1B, CM-2, CM-3A, CM-3B, CM-4A, CM-4B, CM-5A, and CM-5B were not sampled for Molybdenum until June/July 2020. Mean Molybdenum Concentration (Except Last Four) for these is based on two sampling events (June/July 2020 and October 2020).

3) Mean Molybdenum Concentration (Last Four) for all wells is based on four sampling events conducted from March/April 2021 through October 2022.

4) Percent difference is the difference between Mean Molybdenum Concentration (Except Last Four) and the Mean Molybdenum Concentration (Last Four). A negative percent difference represents a decrease in Mean Molybdenum concentration from the last four sampling events over the Mean Molybdenum concentration from all previous sampling.

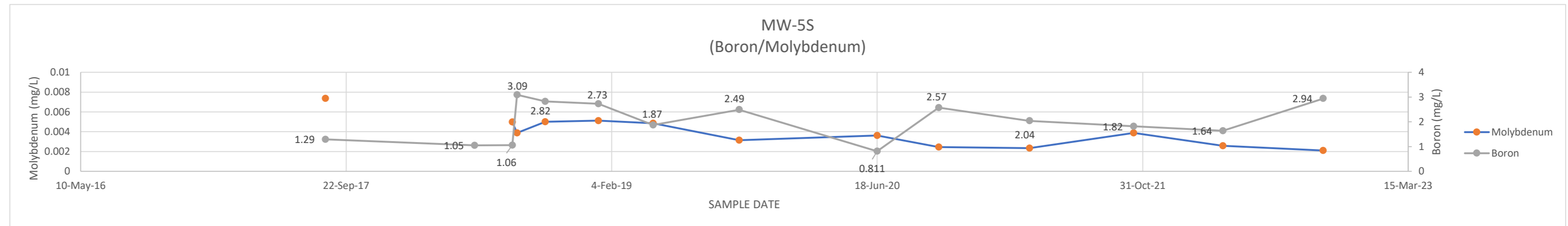
## **ATTACHMENT F**

### **CHANGES IN CONCENTRATION OF CCR APPENDIX III PARAMETERS COMPARED TO CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY**

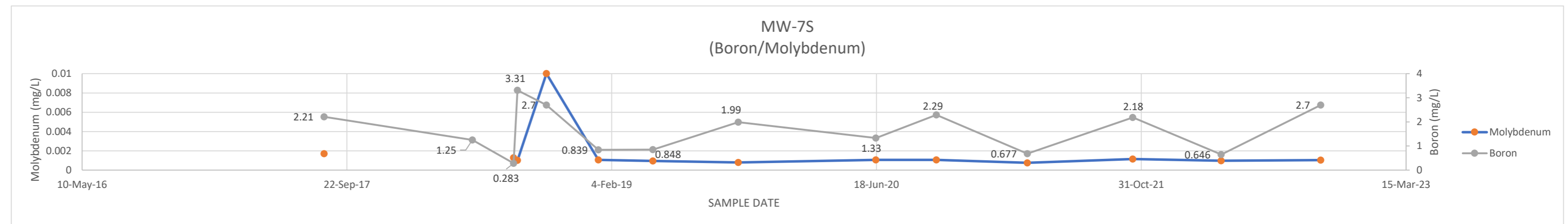
- F-1: CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS
- F-2: CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS
- F-3A: CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS
- F-3B: CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS
- F-4: CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS
- F-5: CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS
- F-6: CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS
- F-7: CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

ATTACHMENT F-1  
CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS

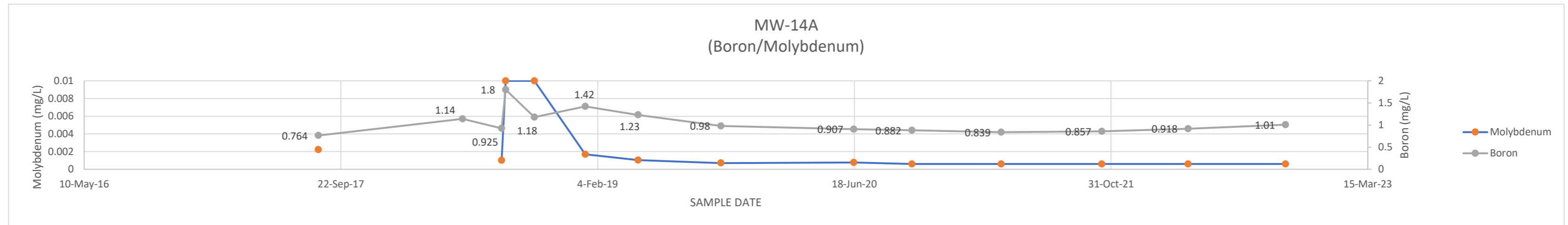
MW-5S	BORON	MOLYBDENUM
DATE		
14-Aug-17	1.29	0.00737
22-May-18	1.05	
1-Aug-18	1.06	0.00497
10-Aug-18	3.09	0.00387
2-Oct-18	2.82	0.005
10-Jan-19	2.73	0.00512
23-Apr-19	1.87	0.00485
2-Oct-19	2.49	0.00315
18-Jun-20	0.811	0.00361
12-Oct-20	2.57	0.00244
1-Apr-21	2.04	0.00234
14-Oct-21	1.82	0.00387
31-Mar-22	1.64	0.00257
6-Oct-22	2.94	0.0021



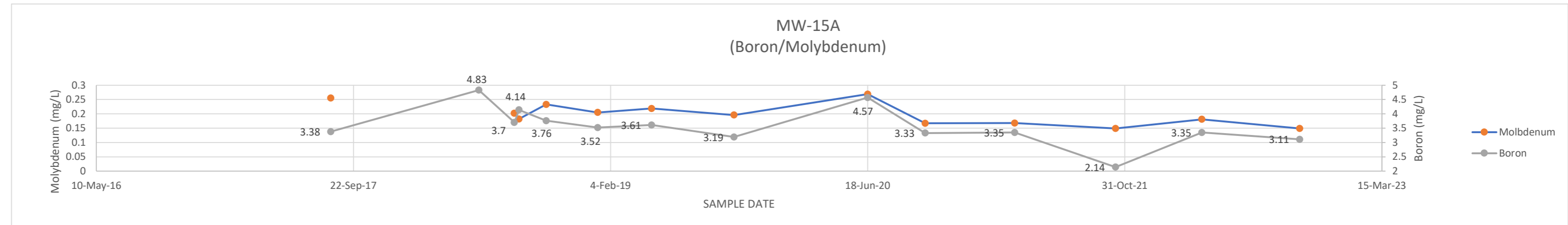
MW-7S	BORON	MOLYBDENUM
DATE		
10-Aug-17	2.21	0.00171
17-May-18	1.25	
3-Aug-18	0.283	0.00127
10-Aug-18	3.31	0.001
4-Oct-18	2.7	0.01
10-Jan-19	0.839	0.00105
23-Apr-19	0.848	0.000952
1-Oct-19	1.99	0.000798
17-Jun-20	1.33	0.00105
9-Oct-20	2.29	0.00106
30-Mar-21	0.677	0.000755
15-Oct-21	2.18	0.00115
31-Mar-22	0.646	0.000973
5-Oct-22	2.7	0.00103



MW-14A	BORON	MOLYBDENUM
DATE		
9-Aug-17	0.764	0.00223
17-May-18	1.14	
1-Aug-18	0.925	0.001
9-Aug-18	1.8	0.01
4-Oct-18	1.18	0.01
11-Jan-19	1.42	0.0017
24-Apr-19	1.23	0.00104
2-Oct-19	0.98	0.000709
17-Jun-20	0.907	0.00076
8-Oct-20	0.882	0.0006
31-Mar-21	0.839	0.0006
13-Oct-21	0.857	0.0006
30-Mar-22	0.918	0.0006
6-Oct-22	1.01	0.0006

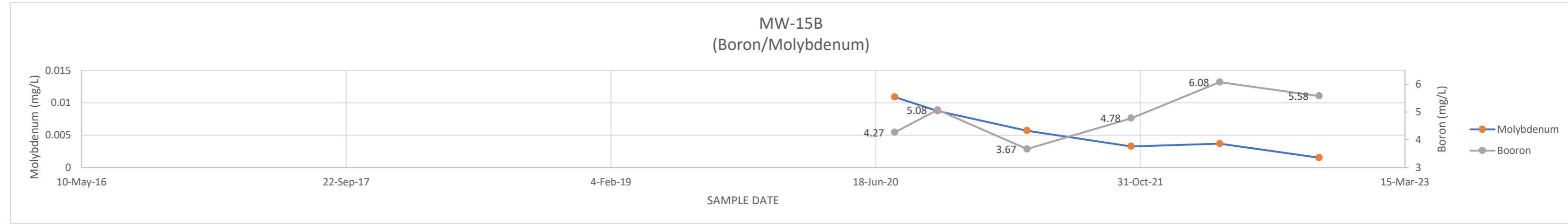


MW-15A	BORON	MOLYBDENUM
DATE		
9-Aug-17	3.38	0.255
24-May-18	4.83	
1-Aug-18	3.7	0.202
10-Aug-18	4.14	0.182
2-Oct-18	3.76	0.233
10-Jan-19	3.52	0.205
25-Apr-19	3.61	0.219
2-Oct-19	3.19	0.196
18-Jun-20	4.57	0.269
8-Oct-20	3.33	0.167
31-Mar-21	3.35	0.168
13-Oct-21	2.14	0.149
30-Mar-22	3.35	0.181
6-Oct-22	3.11	0.149

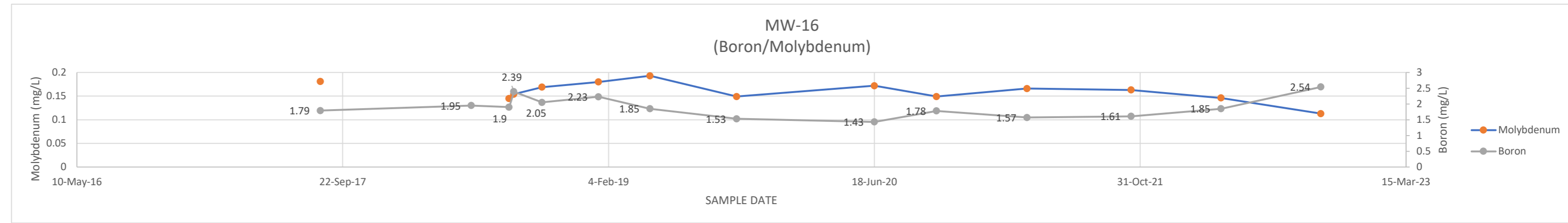


ATTACHMENT F-1  
CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS

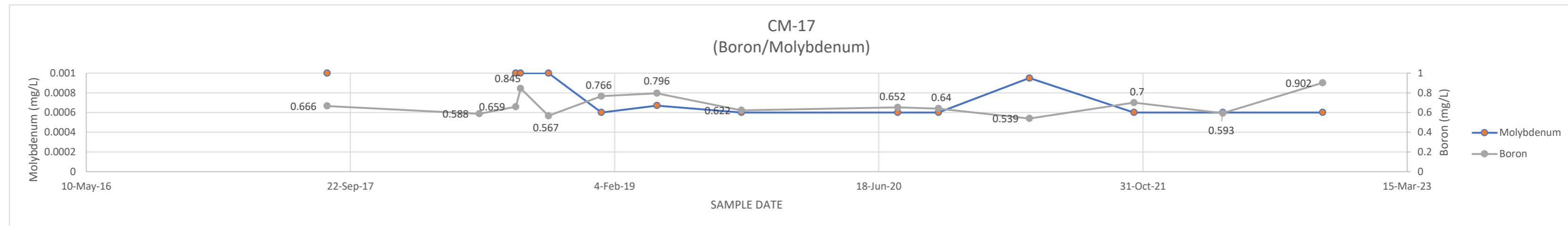
MW-15B DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4.27	0.0109
13-Oct-20	5.08	0.00876
31-Mar-21	3.67	0.00571
14-Oct-21	4.78	0.00328
30-Mar-22	6.08	0.0037
4-Oct-22	5.58	0.00153



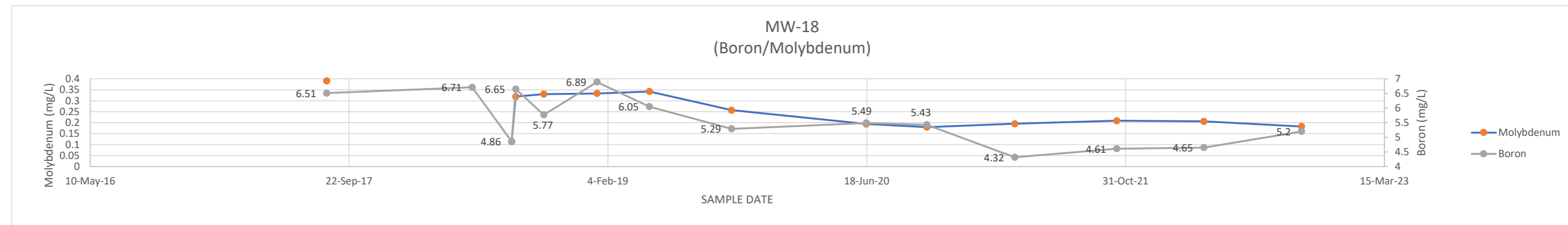
MW-16 DATE	BORON	MOLYBDENUM
11-Aug-17	1.79	0.181
22-May-18	1.95	
1-Aug-18	1.9	0.145
10-Aug-18	2.39	0.154
2-Oct-18	2.05	0.169
16-Jan-19	2.23	0.18
23-Apr-19	1.85	0.193
3-Oct-19	1.53	0.149
18-Jun-20	1.43	0.172
13-Oct-20	1.78	0.149
1-Apr-21	1.57	0.166
14-Oct-21	1.61	0.163
1-Apr-22	1.85	0.146
6-Oct-22	2.54	0.113



MW-17 DATE	BORON	MOLYBDENUM
9-Aug-17	0.666	0.001
24-May-18	0.588	
1-Aug-18	0.659	0.001
10-Aug-18	0.845	0.001
2-Oct-18	0.567	0.001
10-Jan-19	0.766	0.0006
25-Apr-19	0.796	0.000671
2-Oct-19	0.622	0.0006
24-Jul-20	0.652	0.0006
9-Oct-20	0.64	0.0006
30-Mar-21	0.539	0.00095
14-Oct-21	0.7	0.0006
31-Mar-22	0.593	0.0006
6-Oct-22	0.902	0.0006

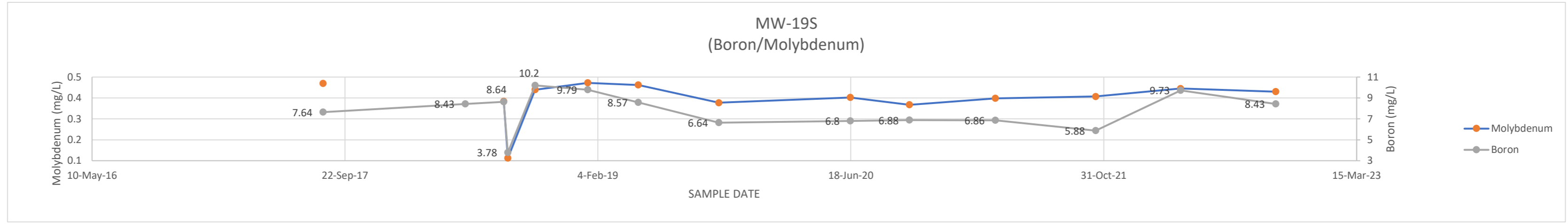


MW-18 DATE	BORON	MOLYBDENUM
10-Aug-17	6.51	0.39
18-May-18	6.71	
2-Aug-18	4.86	0.113
10-Aug-18	6.65	0.319
3-Oct-18	5.77	0.33
14-Jan-19	6.89	0.333
25-Apr-19	6.05	0.342
1-Oct-19	5.29	0.257
17-Jun-20	5.49	0.194
12-Oct-20	5.43	0.18
31-Mar-21	4.32	0.195
14-Oct-21	4.61	0.209
31-Mar-22	4.65	0.206
6-Oct-22	5.2	0.183

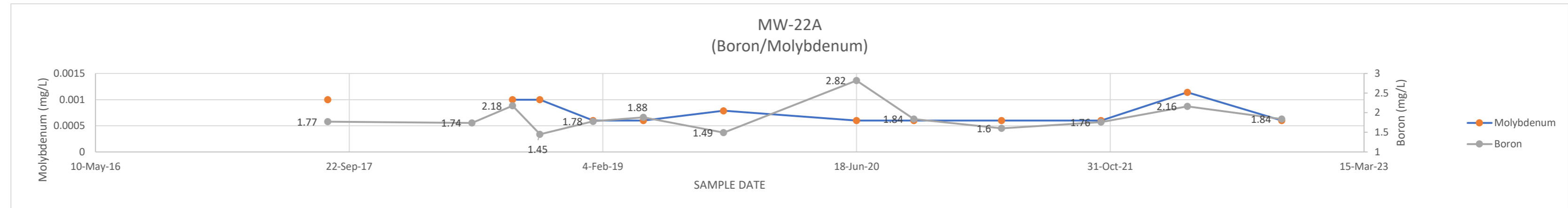


ATTACHMENT F-1  
CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS

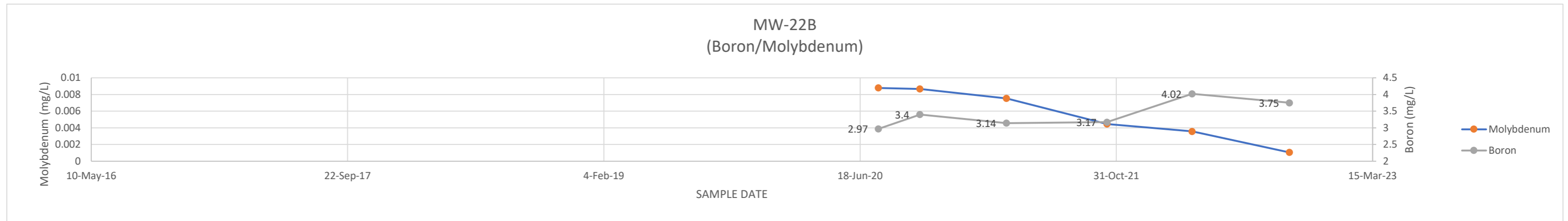
MW-19S	BORON	MOLYBDENUM
DATE		
10-Aug-17	7.64	0.469
18-May-18	8.43	
2-Aug-18	8.64	0.384
10-Aug-18	3.78	0.112
3-Oct-18	10.2	0.439
15-Jan-19	9.79	0.472
25-Apr-19	8.57	0.462
1-Oct-19	6.64	0.377
17-Jun-20	6.8	0.402
12-Oct-20	6.88	0.367
31-Mar-21	6.86	0.398
15-Oct-21	5.88	0.407
1-Apr-22	9.73	0.445
6-Oct-22	8.43	0.43



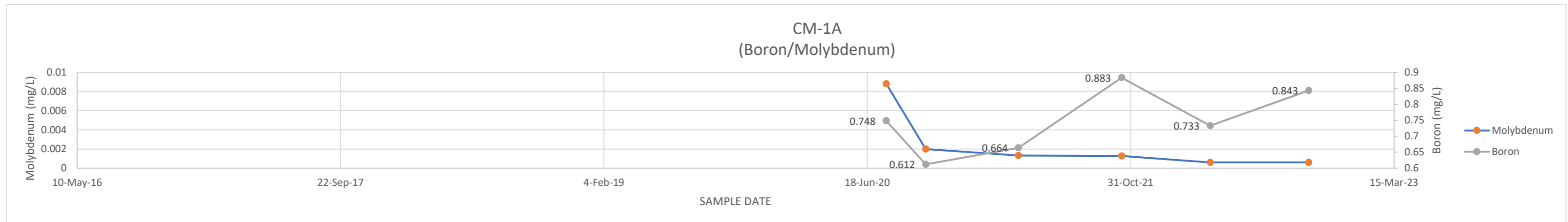
MW-22A	BORON	MOLYBDENUM
DATE		
11-Aug-17	1.77	0.001
22-May-18	1.74	
10-Aug-18	2.18	0.001
3-Oct-18	1.45	0.001
16-Jan-19	1.78	0.0006
25-Apr-19	1.88	0.0006
30-Sep-19	1.49	0.000787
18-Jun-20	2.82	0.0006
9-Oct-20	1.84	0.0006
31-Mar-21	1.6	0.0006
13-Oct-21	1.76	0.0006
1-Apr-22	2.16	0.00114
4-Oct-22	1.84	0.0006



MW-22B	BORON	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2.97	0.00878
13-Oct-20	3.4	0.00866
31-Mar-21	3.14	0.00753
13-Oct-21	3.17	0.00446
28-Mar-22	4.02	0.00357
4-Oct-22	3.75	0.00105

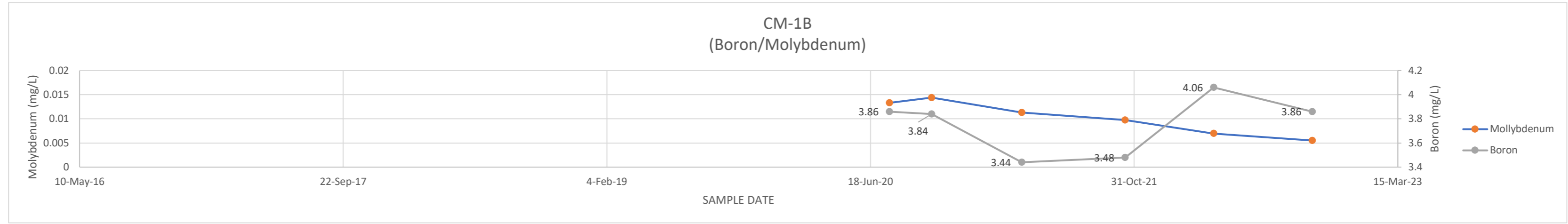


CM-1A	BORON	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.748	0.0088
7-Oct-20	0.612	0.00198
1-Apr-21	0.664	0.00132
14-Oct-21	0.883	0.00127
31-Mar-22	0.733	0.0006
4-Oct-22	0.843	0.0006

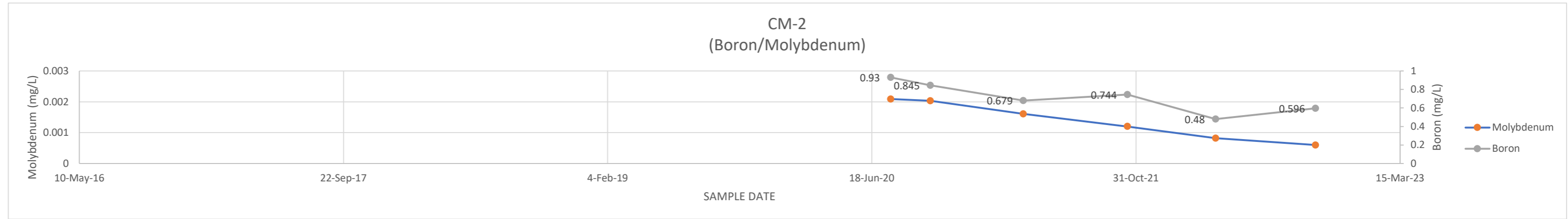


ATTACHMENT F-1  
CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS

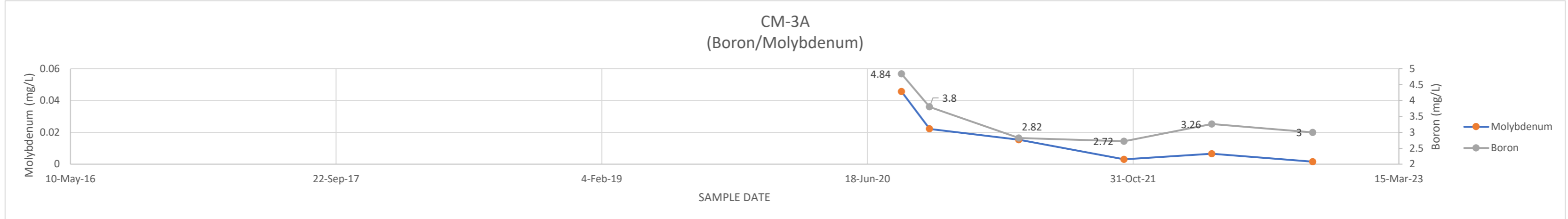
CM-1B DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.86	0.0133
12-Oct-20	3.84	0.0144
1-Apr-21	3.44	0.0113
14-Oct-21	3.48	0.00976
31-Mar-22	4.06	0.00696
4-Oct-22	3.86	0.00551



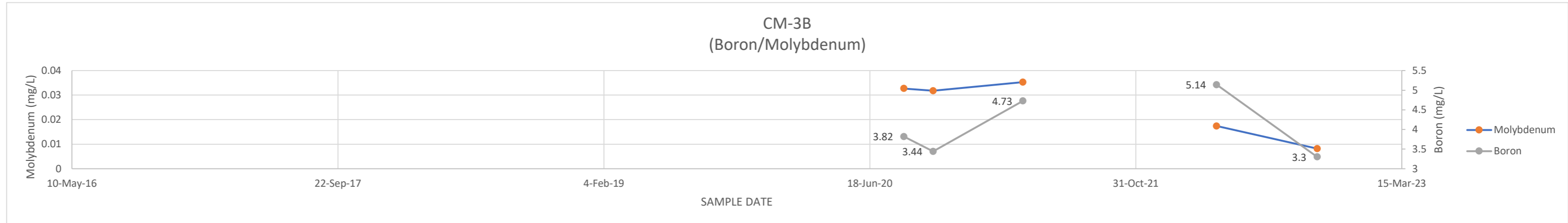
CM-2 DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.93	0.00209
7-Oct-20	0.845	0.00203
1-Apr-21	0.679	0.00161
15-Oct-21	0.744	0.0012
31-Mar-22	0.48	0.00082
6-Oct-22	0.596	0.0006



CM-3A DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	4.84	0.0457
13-Oct-20	3.8	0.0222
30-Mar-21	2.82	0.0153
14-Oct-21	2.72	0.00297
28-Mar-22	3.26	0.00656
4-Oct-22	3	0.00155

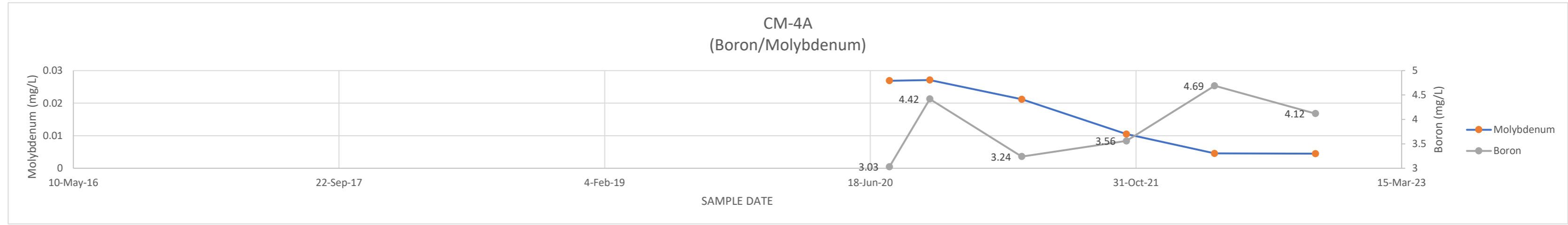


CM-3B DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	3.82	0.0327
15-Oct-20	3.44	0.0318
2-Apr-21	4.73	0.0353
11-Oct-21		
1-Apr-22	5.14	0.0174
7-Oct-22	3.3	0.00819

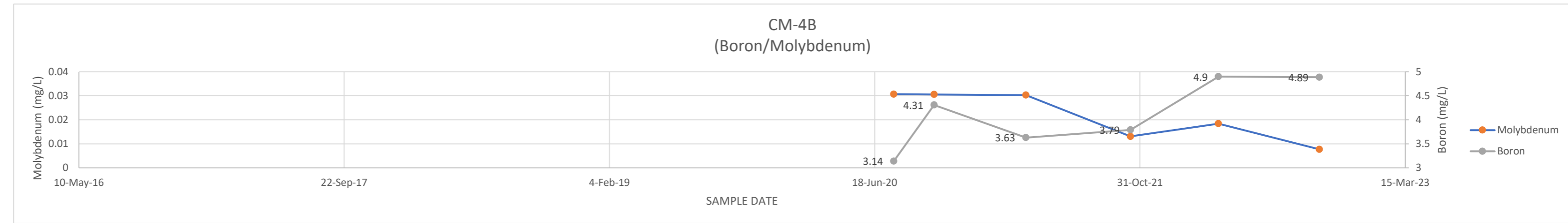


ATTACHMENT F-1  
CHANGES IN BORON AND MOLYBDENUM CONCENTRATIONS

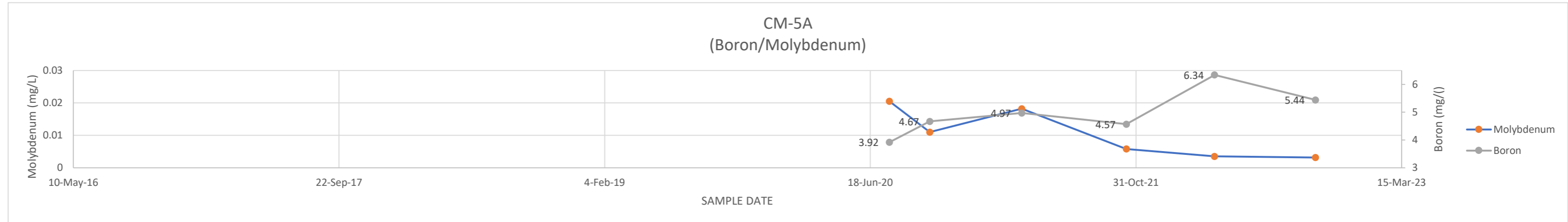
CM-4A DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.03	0.0269
8-Oct-20	4.42	0.0271
30-Mar-21	3.24	0.0212
13-Oct-21	3.56	0.0105
28-Mar-22	4.69	0.00455
4-Oct-22	4.12	0.00449



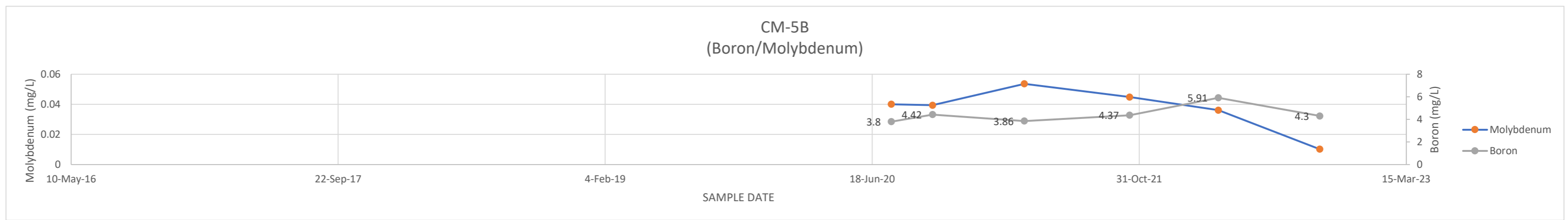
CM-4B DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.14	0.0307
8-Oct-20	4.31	0.0306
30-Mar-21	3.63	0.0303
13-Oct-21	3.79	0.0131
28-Mar-22	4.9	0.0184
4-Oct-22	4.89	0.00771



CM-5A DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.92	0.0205
8-Oct-20	4.67	0.011
30-Mar-21	4.97	0.0182
13-Oct-21	4.57	0.0058
28-Mar-22	6.34	0.00351
4-Oct-22	5.44	0.00317



CM-5B DATE	BORON	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.8	0.04
9-Oct-20	4.42	0.0394
30-Mar-21	3.86	0.0536
13-Oct-21	4.37	0.0448
28-Mar-22	5.91	0.0361
4-Oct-22	4.3	0.0102

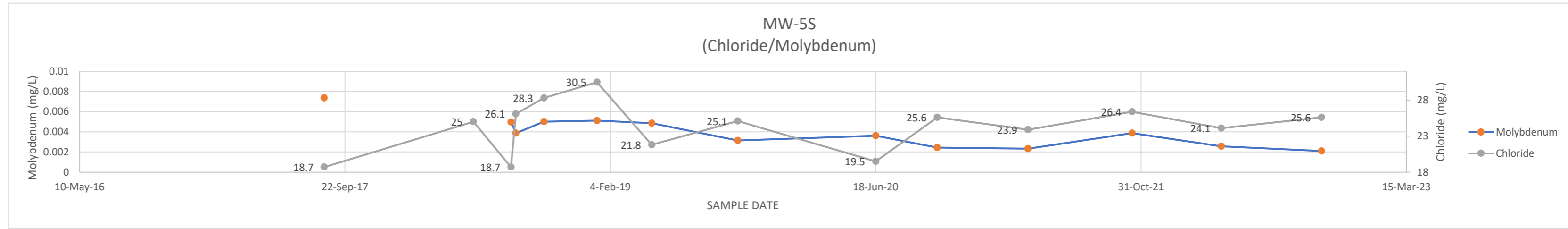


Yellow Indicates Reported Below shown value (MDL)

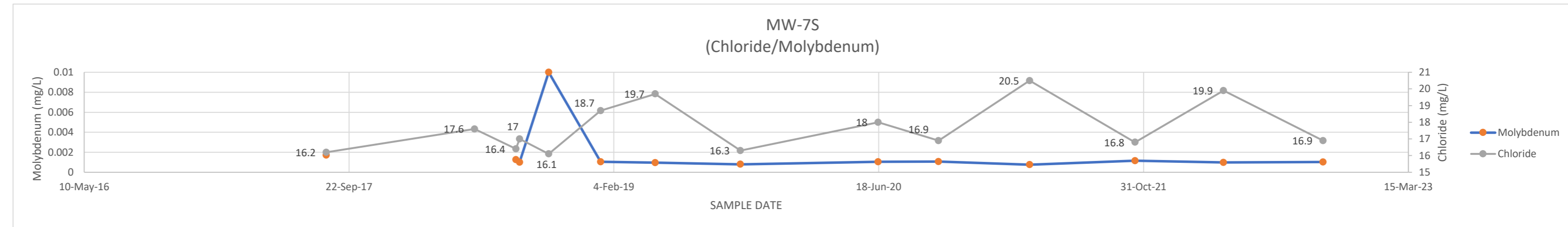
ATTACHMENT F-2  
CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	CHLORIDE	MOLYBDENUM
14-Aug-17	18.7	0.00737	
22-May-18	25		
1-Aug-18	18.7	0.00497	
10-Aug-18	26.1	0.00387	
2-Oct-18	28.3	0.005	
10-Jan-19	30.5	0.00512	
23-Apr-19	21.8	0.00485	
2-Oct-19	25.1	0.00315	
18-Jun-20	19.5	0.00361	
12-Oct-20	25.6	0.00244	
1-Apr-21	23.9	0.00234	
14-Oct-21	26.4	0.00387	
31-Mar-22	24.1	0.00257	
6-Oct-22	25.6	0.0021	

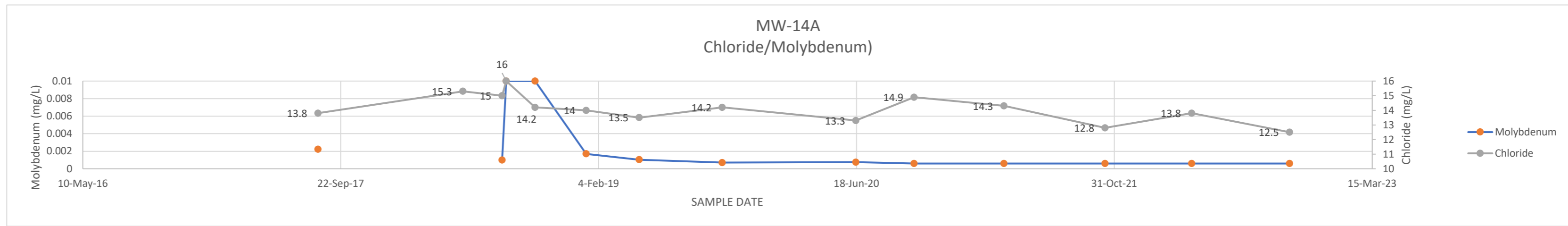
Value denoted in red from June 2022 resample



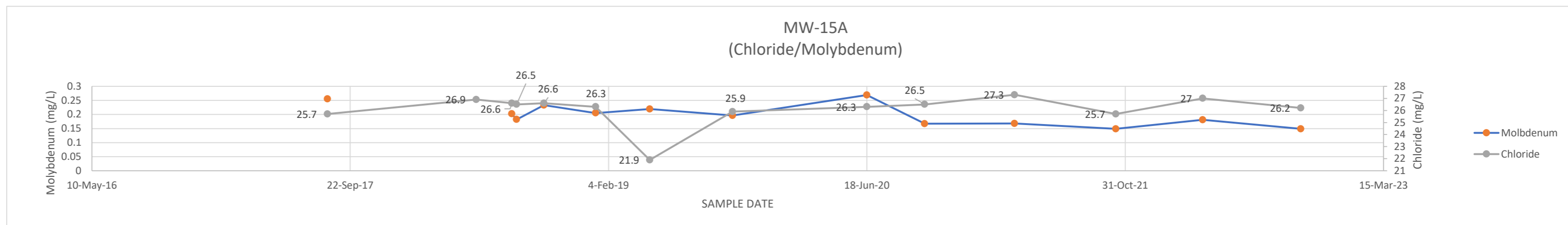
MW-7S	DATE	CHLORIDE	MOLYBDENUM
10-Aug-17	16.2	0.00171	
17-May-18	17.6		
3-Aug-18	16.4	0.00127	
10-Aug-18	17	0.001	
4-Oct-18	16.1	0.01	
10-Jan-19	18.7	0.00105	
23-Apr-19	19.7	0.000952	
1-Oct-19	16.3	0.000798	
17-Jun-20	18	0.00105	
9-Oct-20	16.9	0.00106	
30-Mar-21	20.5	0.000755	
15-Oct-21	16.8	0.00115	
31-Mar-22	19.9	0.000973	
5-Oct-22	16.9	0.00103	



MW-14A	DATE	CHLORIDE	MOLYBDENUM
9-Aug-17	13.8	0.00223	
17-May-18	15.3		
1-Aug-18	15	0.001	
9-Aug-18	16	0.01	
4-Oct-18	14.2	0.01	
11-Jan-19	14	0.0017	
24-Apr-19	13.5	0.00104	
2-Oct-19	14.2	0.000709	
17-Jun-20	13.3	0.00076	
8-Oct-20	14.9	0.0006	
31-Mar-21	14.3	0.0006	
13-Oct-21	12.8	0.0006	
30-Mar-22	13.8	0.0006	
6-Oct-22	12.5	0.0006	



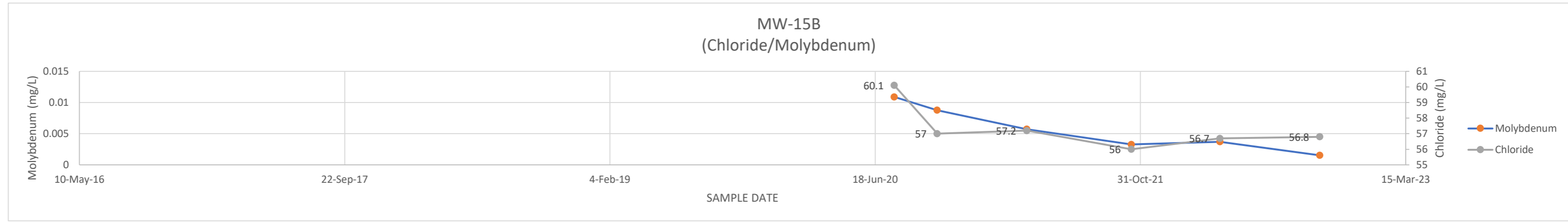
MW-15A	DATE	CHLORIDE	MOLYBDENUM
9-Aug-17	25.7	0.255	
24-May-18	26.9		
1-Aug-18	26.6	0.202	
10-Aug-18	26.5	0.182	
2-Oct-18	26.6	0.233	
10-Jan-19	26.3	0.205	
25-Apr-19	21.9	0.219	
2-Oct-19	25.9	0.196	
18-Jun-20	26.3	0.269	
8-Oct-20	26.5	0.167	
31-Mar-21	27.3	0.168	
13-Oct-21	25.7	0.149	
30-Mar-22	27	0.181	
6-Oct-22	26.2	0.149	



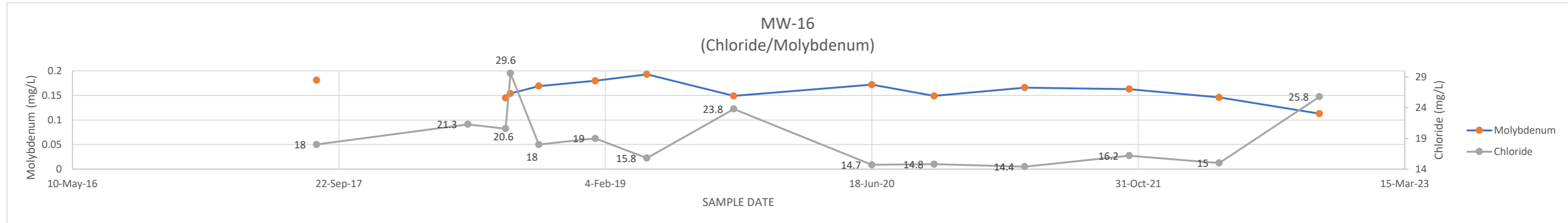


ATTACHMENT F-2  
CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS

MW-15B	DATE	CHLORIDE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	60.1	0.0109
	13-Oct-20	57	0.00876
	31-Mar-21	57.2	0.00571
	14-Oct-21	56	0.00328
	30-Mar-22	56.7	0.0037
	4-Oct-22	56.8	0.00153

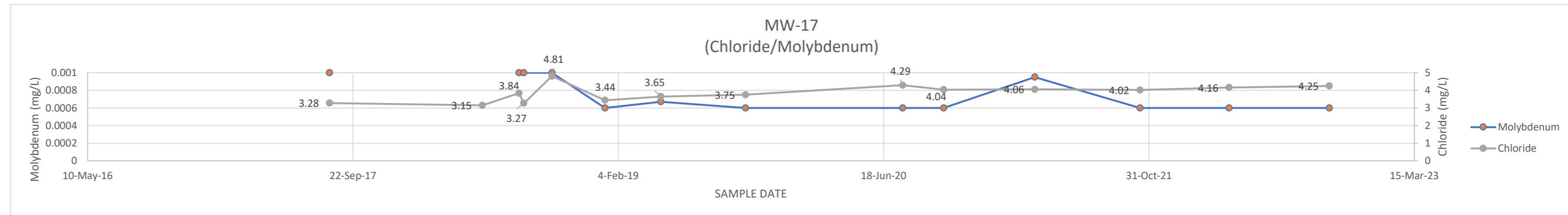


MW-16	DATE	CHLORIDE	MOLYBDENUM
	11-Aug-17	18	0.181
	22-May-18	21.3	
	1-Aug-18	20.6	0.145
	10-Aug-18	29.6	0.154
	2-Oct-18	18	0.169
	16-Jan-19	19	0.18
	23-Apr-19	15.8	0.193
	3-Oct-19	23.8	0.149
	18-Jun-20	14.7	0.172
	13-Oct-20	14.8	0.149
	1-Apr-21	14.4	0.166
	14-Oct-21	16.2	0.163
	1-Apr-22	15	0.146
	6-Oct-22	25.8	0.113



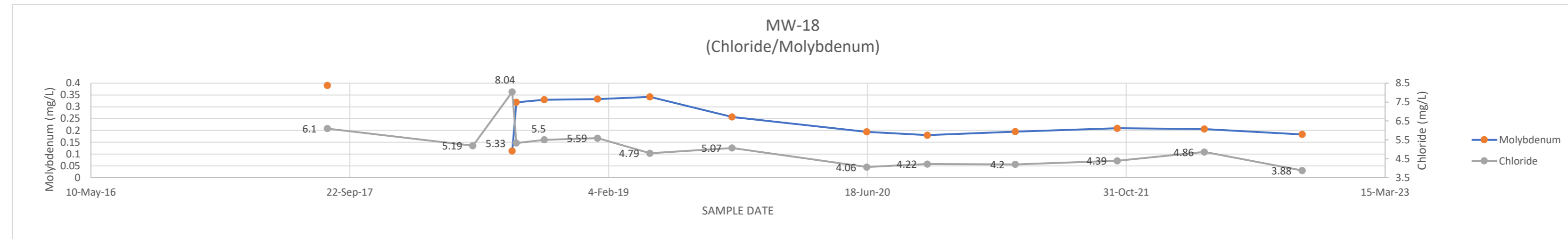
Value denoted in red from June 2022 resample

MW-17	DATE	CHLORIDE	MOLYBDENUM
	9-Aug-17	3.28	0.001
	24-May-18	3.15	
	1-Aug-18	3.84	0.001
	10-Aug-18	3.27	0.001
	2-Oct-18	4.81	0.001
	10-Jan-19	3.44	0.0006
	25-Apr-19	3.65	0.000671
	2-Oct-19	3.75	0.0006
	24-Jul-20	4.29	0.0006
	9-Oct-20	4.04	0.0006
	30-Mar-21	4.06	0.00095
	14-Oct-21	4.02	0.0006
	31-Mar-22	4.16	0.0006
	6-Oct-22	4.25	0.0006



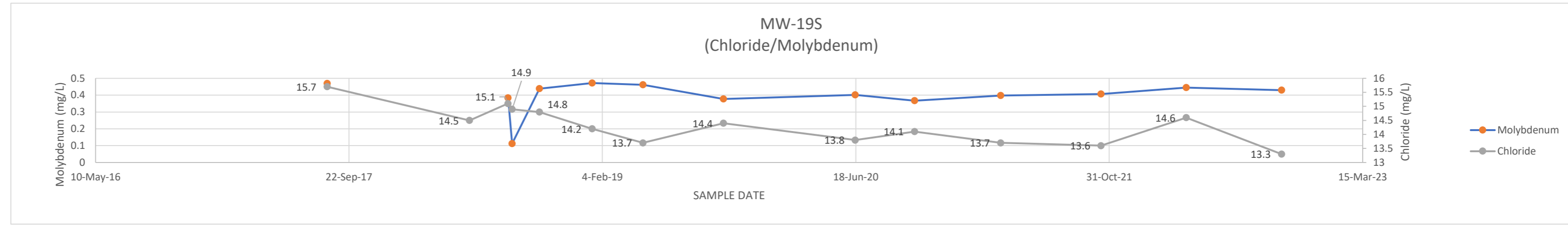
Value denoted in red from June 2022 resample

MW-18	DATE	CHLORIDE	MOLYBDENUM
	10-Aug-17	6.1	0.39
	18-May-18	5.19	
	2-Aug-18	8.04	0.113
	10-Aug-18	5.33	0.319
	3-Oct-18	5.5	0.33
	14-Jan-19	5.59	0.333
	25-Apr-19	4.79	0.342
	1-Oct-19	5.07	0.257
	17-Jun-20	4.06	0.194
	12-Oct-20	4.22	0.18
	31-Mar-21	4.2	0.195
	14-Oct-21	4.39	0.209
	31-Mar-22	4.86	0.206
	6-Oct-22	3.88	0.183

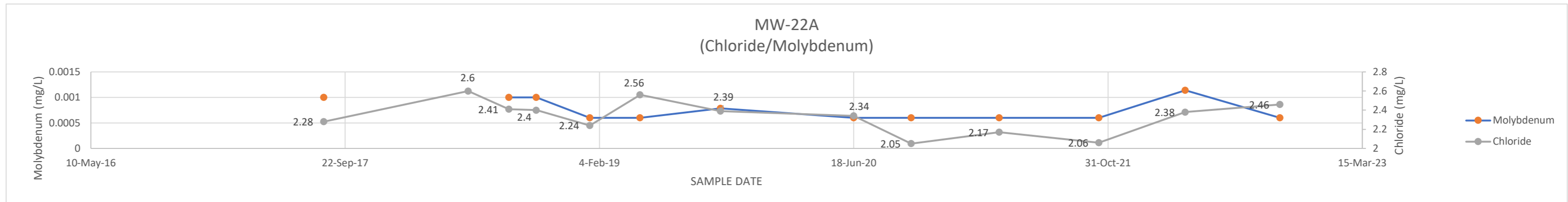


ATTACHMENT F-2  
CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	CHLORIDE	MOLYBDENUM
	10-Aug-17	15.7	0.469
	18-May-18	14.5	
	2-Aug-18	15.1	0.384
	10-Aug-18	14.9	0.112
	3-Oct-18	14.8	0.439
	15-Jan-19	14.2	0.472
	25-Apr-19	13.7	0.462
	1-Oct-19	14.4	0.377
	17-Jun-20	13.8	0.402
	12-Oct-20	14.1	0.367
	31-Mar-21	13.7	0.398
	15-Oct-21	13.6	0.407
	1-Apr-22	14.6	0.445
	6-Oct-22	13.3	0.43

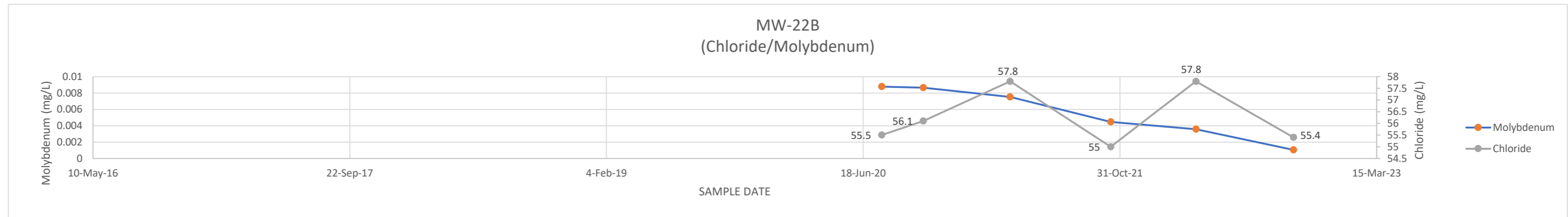


MW-22A	DATE	CHLORIDE	MOLYBDENUM
	11-Aug-17	2.28	0.001
	22-May-18	2.6	
	10-Aug-18	2.41	0.001
	3-Oct-18	2.4	0.001
	16-Jan-19	2.24	0.0006
	25-Apr-19	2.56	0.0006
	30-Sep-19	2.39	0.000787
	18-Jun-20	2.34	0.0006
	9-Oct-20	2.05	0.0006
	31-Mar-21	2.17	0.0006
	13-Oct-21	2.06	0.0006
	1-Apr-22	2.38	0.00114
	4-Oct-22	2.46	0.0006

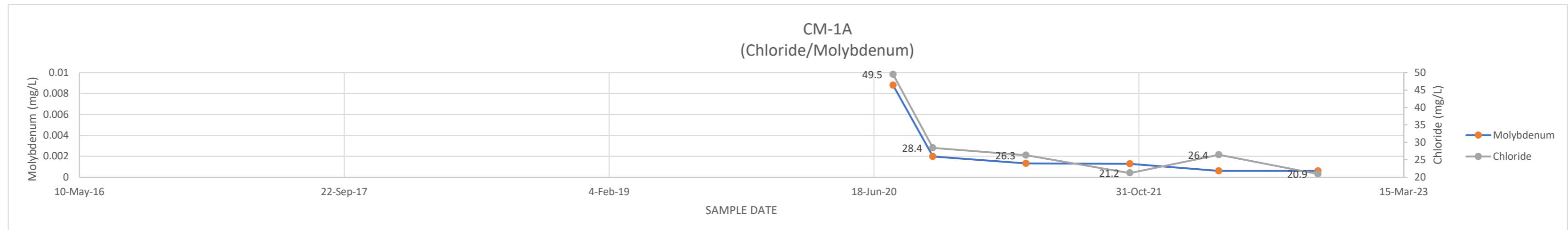


Value denoted in red from June 2022 resample

MW-22B	DATE	CHLORIDE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	55.5	0.00878
	13-Oct-20	56.1	0.00866
	31-Mar-21	57.8	0.00753
	13-Oct-21	55	0.00446
	28-Mar-22	57.8	0.00357
	4-Oct-22	55.4	0.00105

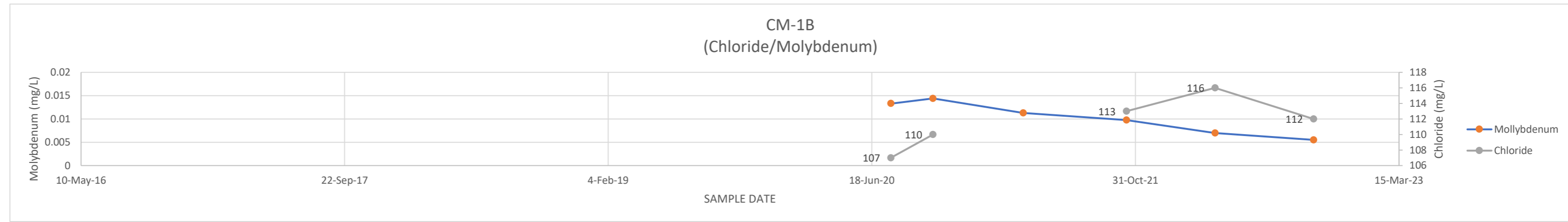


CM-1A	DATE	CHLORIDE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	49.5	0.0088
	7-Oct-20	28.4	0.00198
	1-Apr-21	26.3	0.00132
	14-Oct-21	21.2	0.00127
	31-Mar-22	26.4	0.0006
	4-Oct-22	20.9	0.0006

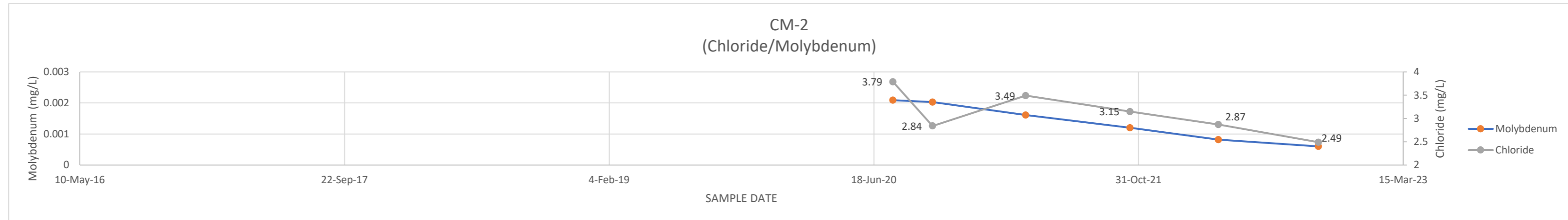


ATTACHMENT F-2  
CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS

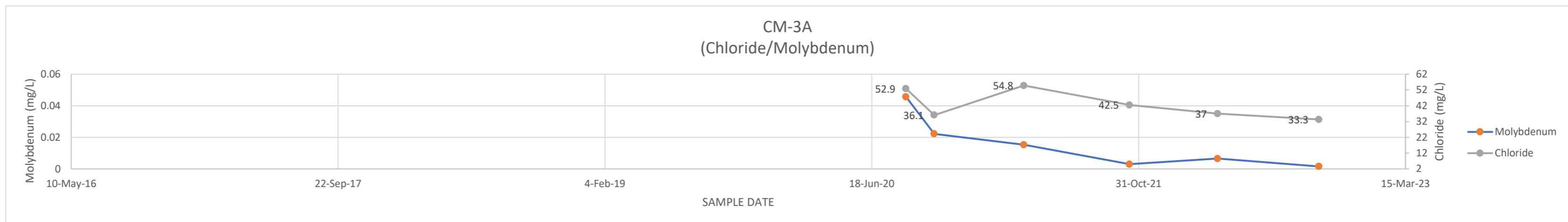
CM-1B DATE	CHLORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	107	0.0133
12-Oct-20	110	0.0144
1-Apr-21		0.0113
14-Oct-21	113	0.00976
31-Mar-22	116	0.00696
4-Oct-22	112	0.00551



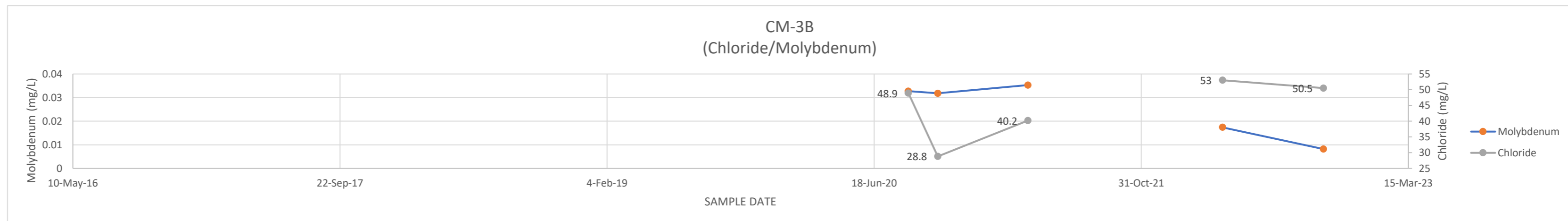
CM-2 DATE	CHLORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.79	0.00209
7-Oct-20	2.84	0.00203
1-Apr-21	3.49	0.00161
15-Oct-21	3.15	0.0012
31-Mar-22	2.87	0.00082
6-Oct-22	2.49	0.0006



CM-3A DATE	CHLORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	52.9	0.0457
13-Oct-20	36.1	0.0222
30-Mar-21	54.8	0.0153
14-Oct-21	42.5	0.00297
28-Mar-22	37	0.00656
4-Oct-22	33.3	0.00155

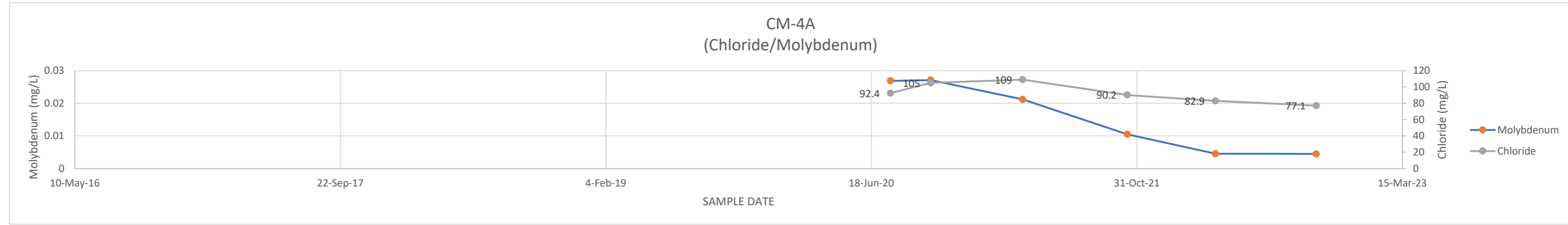


CM-3B DATE	CHLORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	48.9	0.0327
15-Oct-20	28.8	0.0318
2-Apr-21	40.2	0.0353
11-Oct-21		
1-Apr-22	53	0.0174
7-Oct-22	50.5	0.00819

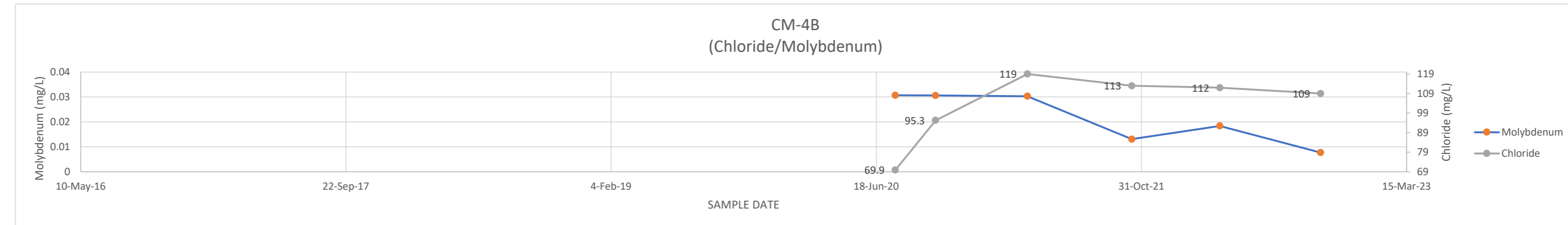


ATTACHMENT F-2  
CHANGES IN CHLORIDE AND MOLYBDENUM CONCENTRATIONS

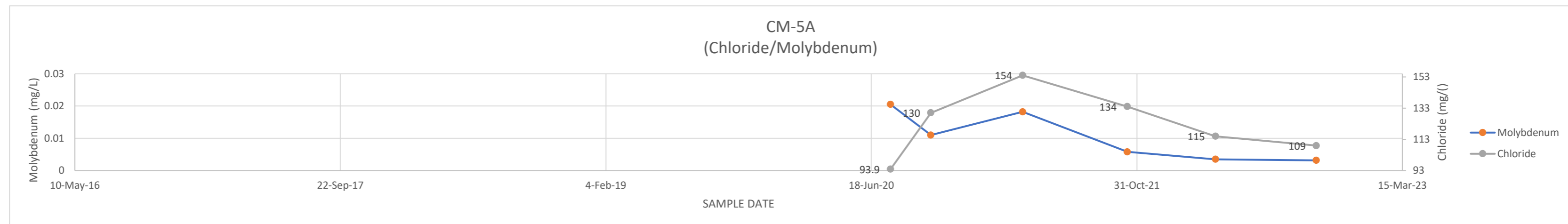
CM-4A	CHLORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	92.4	0.0269
8-Oct-20	105	0.0271
30-Mar-21	109	0.0212
13-Oct-21	90.2	0.0105
28-Mar-22	82.9	0.00455
4-Oct-22	77.1	0.00449



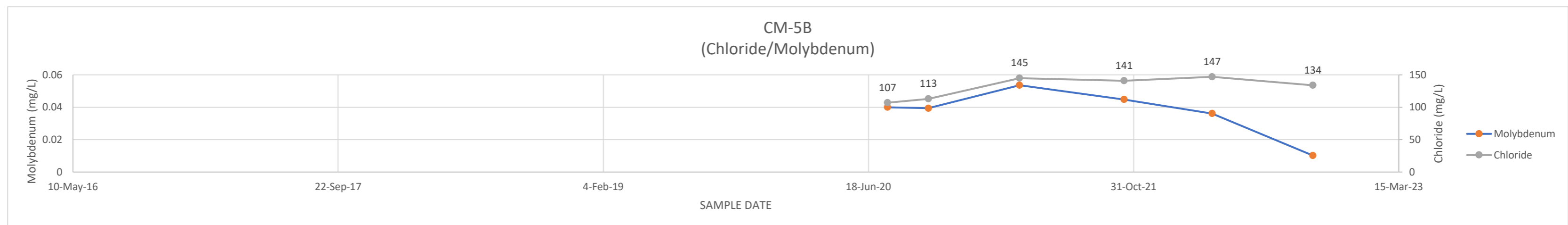
CM-4B	CHLORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	69.9	0.0307
8-Oct-20	95.3	0.0306
30-Mar-21	119	0.0303
13-Oct-21	113	0.0131
28-Mar-22	112	0.0184
4-Oct-22	109	0.00771



CM-5A	CHLORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	93.9	0.0205
8-Oct-20	130	0.011
30-Mar-21	154	0.0182
13-Oct-21	134	0.0058
28-Mar-22	115	0.00351
4-Oct-22	109	0.00317



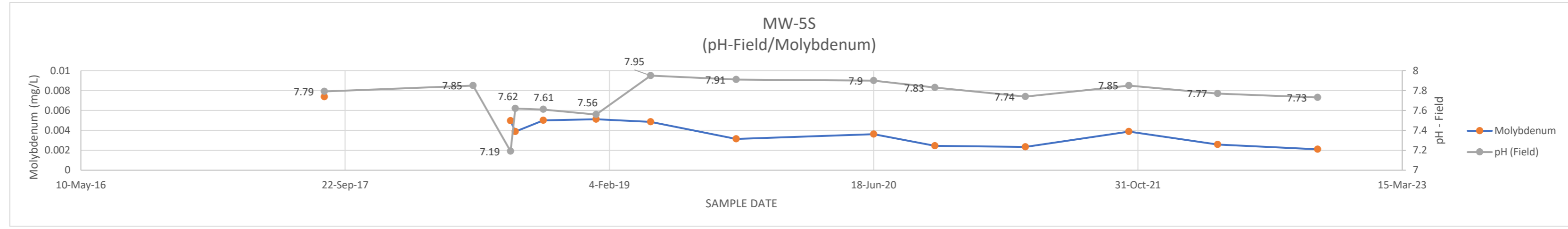
CM-5B	CHLORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	107	0.04
9-Oct-20	113	0.0394
30-Mar-21	145	0.0536
13-Oct-21	141	0.0448
28-Mar-22	147	0.0361
4-Oct-22	134	0.0102



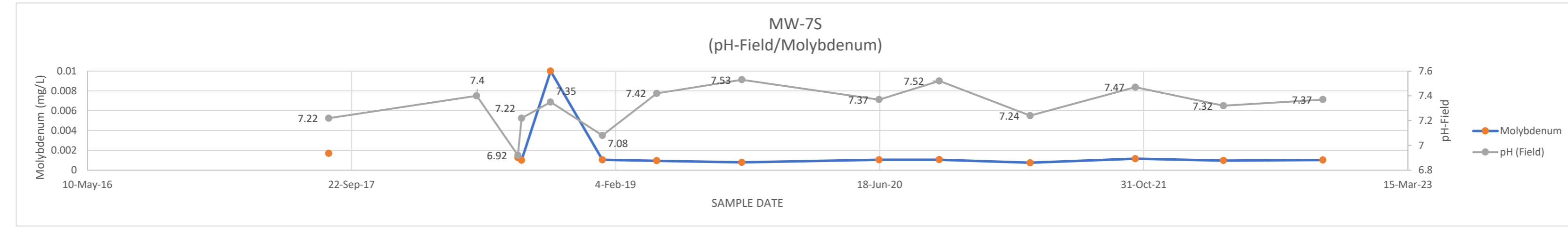
Yellow Indicates Reported Below shown value (MDL)

ATTACHMENT F-3A  
CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS

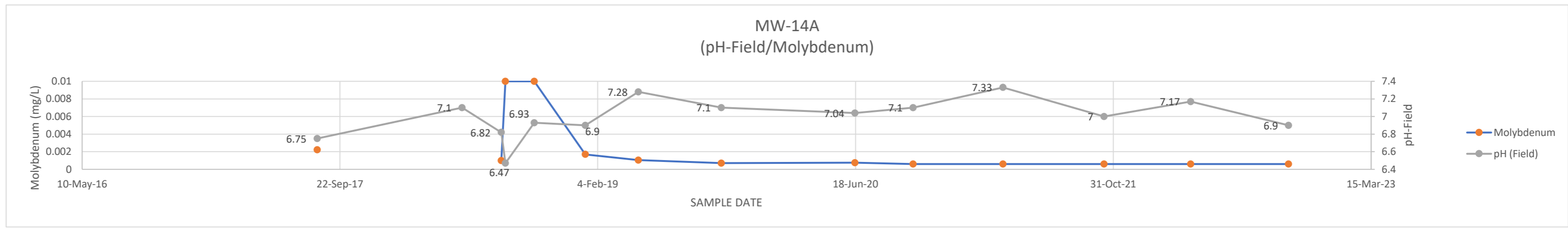
MW-5S	DATE	pH Field	MOLYBDENUM
14-Aug-17	7.79	0.00737	
22-May-18	7.85		
1-Aug-18	7.19	0.00497	
10-Aug-18	7.62	0.00387	
2-Oct-18	7.61	<b>0.005</b>	
10-Jan-19	7.56	0.00512	
23-Apr-19	7.95	0.00485	
2-Oct-19	7.91	0.00315	
18-Jun-20	7.9	0.00361	
12-Oct-20	7.83	0.00244	
1-Apr-21	7.74	0.00234	
14-Oct-21	7.85	0.00387	
31-Mar-22	7.77	0.00257	
6-Oct-22	7.73	0.0021	



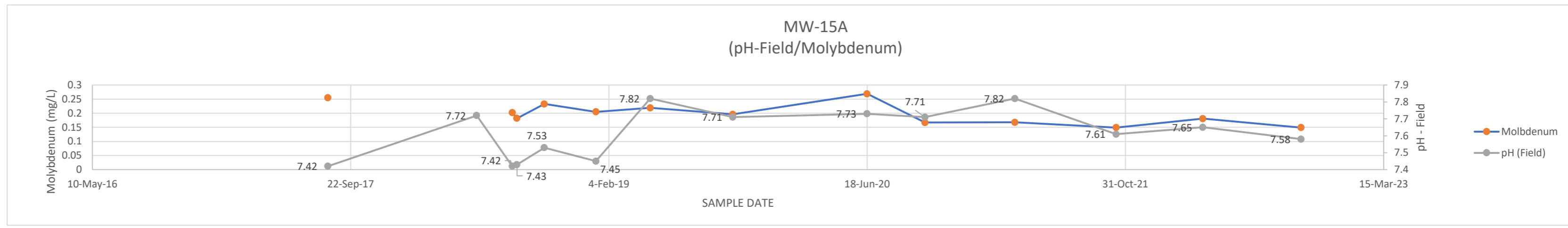
MW-7S	DATE	pH Field	MOLYBDENUM
10-Aug-17	7.22	0.00171	
17-May-18	7.4		
3-Aug-18	6.92	0.00127	
10-Aug-18	7.22	<b>0.001</b>	
4-Oct-18	7.35	<b>0.01</b>	
10-Jan-19	7.08	0.00105	
23-Apr-19	7.42	0.000952	
1-Oct-19	7.53	0.000798	
17-Jun-20	7.37	0.00105	
9-Oct-20	7.52	0.00106	
30-Mar-21	7.24	0.000755	
15-Oct-21	7.47	0.00115	
31-Mar-22	7.32	0.000973	
5-Oct-22	7.37	0.00103	



MW-14A	DATE	pH Field	MOLYBDENUM
9-Aug-17	6.75	0.00223	
17-May-18	7.1		
1-Aug-18	6.82	<b>0.001</b>	
9-Aug-18	6.47	<b>0.01</b>	
4-Oct-18	6.93	<b>0.01</b>	
11-Jan-19	6.9	0.0017	
24-Apr-19	7.28	0.00104	
2-Oct-19	7.1	0.000709	
17-Jun-20	7.04	0.00076	
8-Oct-20	7.1	<b>0.0006</b>	
31-Mar-21	7.33	<b>0.0006</b>	
13-Oct-21	7	<b>0.0006</b>	
30-Mar-22	7.17	<b>0.0006</b>	
6-Oct-22	6.9	<b>0.0006</b>	

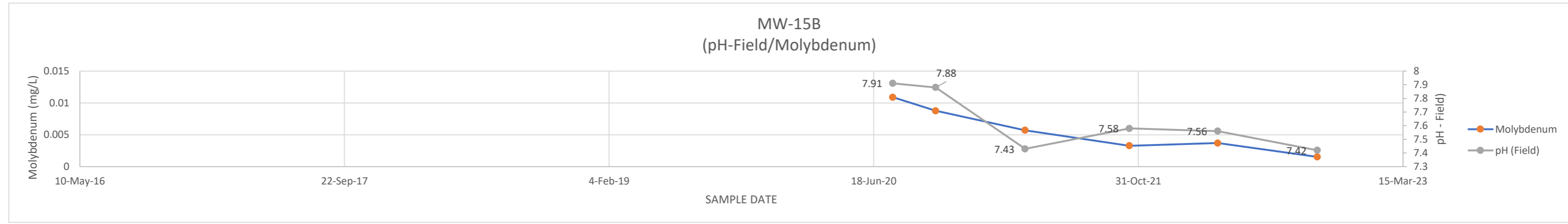


MW-15A	DATE	pH Field	MOLYBDENUM
9-Aug-17	7.42	0.255	
24-May-18	7.72		
1-Aug-18	7.42	0.202	
10-Aug-18	7.43	0.182	
2-Oct-18	7.53	0.233	
10-Jan-19	7.45	0.205	
25-Apr-19	7.82	0.219	
2-Oct-19	7.71	0.196	
18-Jun-20	7.73	0.269	
8-Oct-20	7.71	0.167	
31-Mar-21	7.82	0.168	
13-Oct-21	7.61	0.149	
30-Mar-22	7.65	0.181	
6-Oct-22	7.58	0.149	

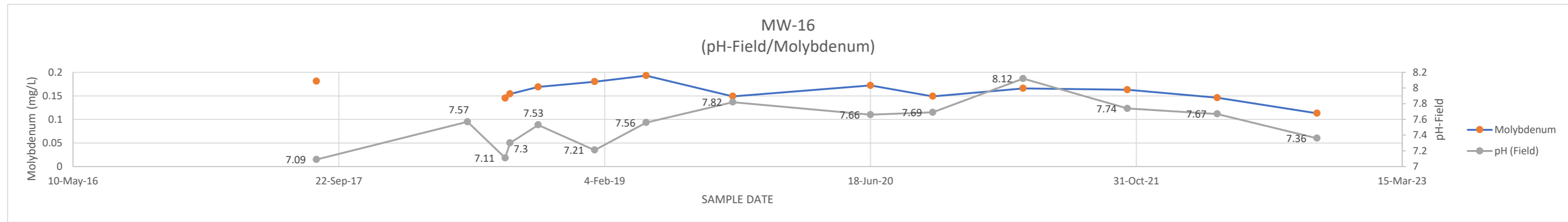


ATTACHMENT F-3A  
CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS

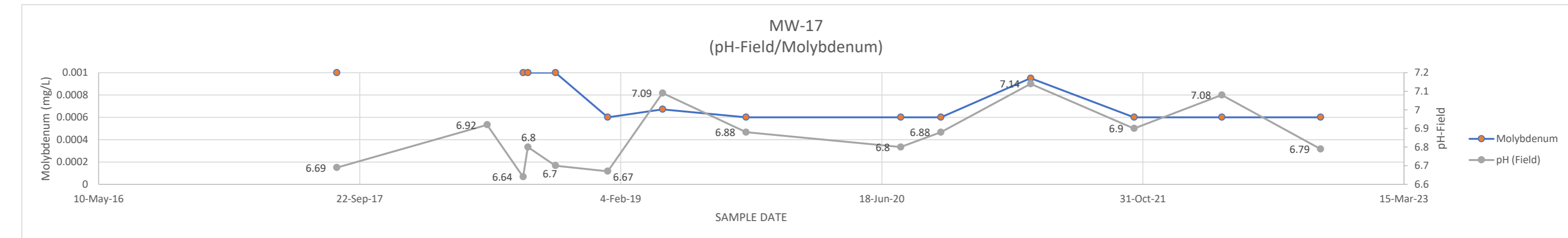
MW-15B	DATE	pH Field	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	7.91	0.0109
	13-Oct-20	7.88	0.00876
	31-Mar-21	7.43	0.00571
	14-Oct-21	7.58	0.00328
	30-Mar-22	7.56	0.0037
	4-Oct-22	7.42	0.00153



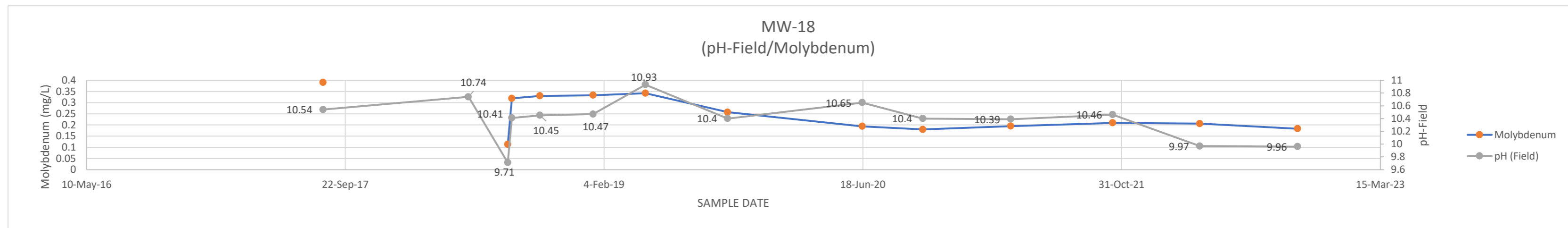
MW-16	DATE	pH Field	MOLYBDENUM
	11-Aug-17	7.09	0.181
	22-May-18	7.57	
	1-Aug-18	7.11	0.145
	10-Aug-18	7.3	0.154
	2-Oct-18	7.53	0.169
	16-Jan-19	7.21	0.18
	23-Apr-19	7.56	0.193
	3-Oct-19	7.82	0.149
	18-Jun-20	7.66	
	13-Oct-20	7.69	0.149
	1-Apr-21	8.12	0.166
	14-Oct-21	7.74	0.163
	1-Apr-22	7.67	0.146
	6-Oct-22	7.36	0.113



MW-17	DATE	pH Field	MOLYBDENUM
	9-Aug-17	6.69	0.001
	24-May-18	6.92	
	1-Aug-18	6.64	0.001
	10-Aug-18	6.8	0.001
	2-Oct-18	6.7	0.001
	10-Jan-19	6.67	0.0006
	25-Apr-19	7.09	0.000671
	2-Oct-19	6.88	0.0006
	24-Jul-20	6.8	0.0006
	9-Oct-20	6.88	0.0006
	30-Mar-21	7.14	0.00095
	14-Oct-21	6.9	0.0006
	31-Mar-22	7.08	0.0006
	6-Oct-22	6.79	0.0006

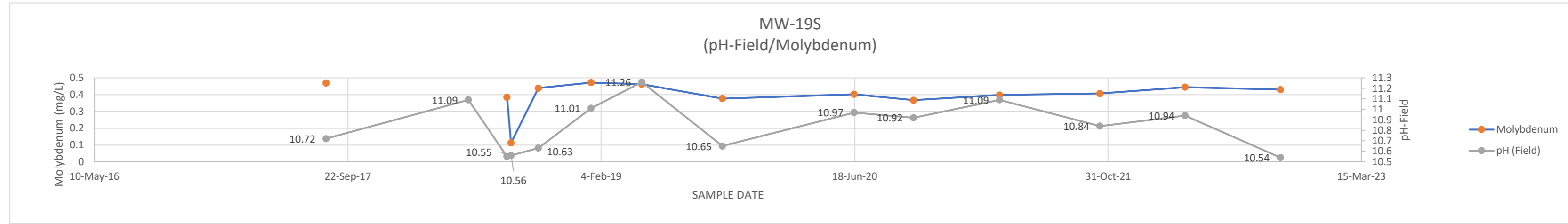


MW-18	DATE	pH Field	MOLYBDENUM
	10-Aug-17	10.54	0.39
	18-May-18	10.74	
	2-Aug-18	9.71	0.113
	10-Aug-18	10.41	0.319
	3-Oct-18	10.45	0.33
	14-Jan-19	10.47	0.333
	25-Apr-19	10.93	0.342
	1-Oct-19	10.4	0.257
	17-Jun-20	10.65	0.194
	12-Oct-20	10.4	0.18
	31-Mar-21	10.39	0.195
	14-Oct-21	10.46	0.209
	31-Mar-22	9.97	0.206
	6-Oct-22	9.96	0.183

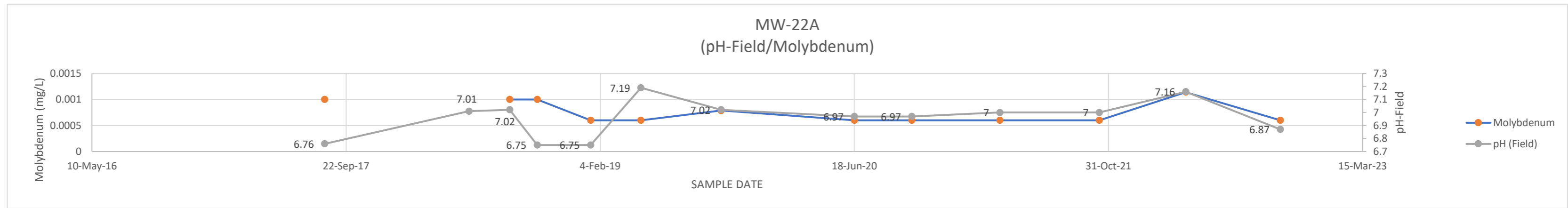


ATTACHMENT F-3A  
CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS

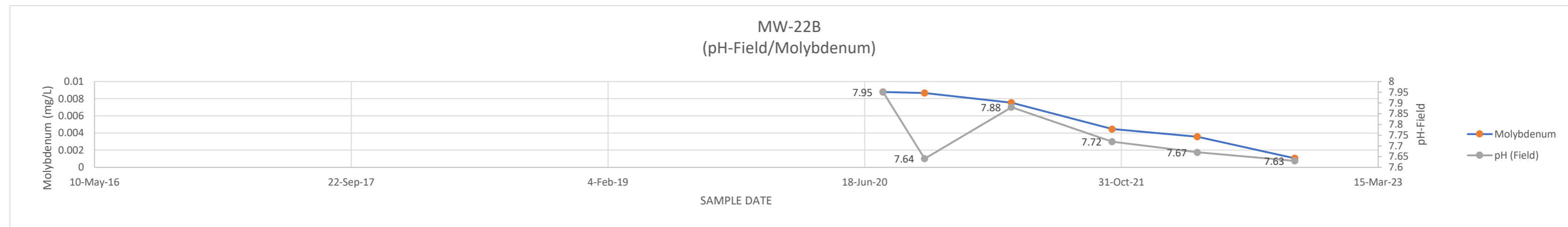
MW-19S	DATE	pH Field	MOLYBDENUM
	10-Aug-17	10.72	0.469
	18-May-18	11.09	
	2-Aug-18	10.55	0.384
	10-Aug-18	10.56	0.112
	3-Oct-18	10.63	0.439
	15-Jan-19	11.01	0.472
	25-Apr-19	11.26	0.462
	1-Oct-19	10.65	0.377
	17-Jun-20	10.97	0.402
	12-Oct-20	10.92	0.367
	31-Mar-21	11.09	0.398
	15-Oct-21	10.84	0.407
	1-Apr-22	10.94	0.445
	6-Oct-22	10.54	0.43



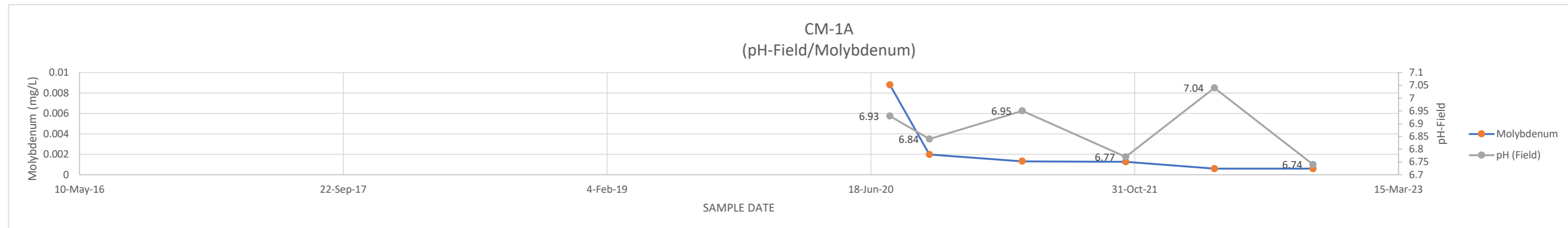
MW-22A	DATE	pH Field	MOLYBDENUM
	11-Aug-17	6.76	0.001
	22-May-18	7.01	
	10-Aug-18	7.02	0.001
	3-Oct-18	6.75	0.001
	16-Jan-19	6.75	0.0006
	25-Apr-19	7.19	0.0006
	30-Sep-19	7.02	0.000787
	18-Jun-20	6.97	0.0006
	9-Oct-20	6.97	0.0006
	31-Mar-21	7	0.0006
	13-Oct-21	7	0.0006
	1-Apr-22	7.16	0.00114
	4-Oct-22	6.87	0.0006



MW-22B	DATE	pH Field	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	7.95	0.00878
	13-Oct-20	7.64	0.00866
	31-Mar-21	7.88	0.00753
	13-Oct-21	7.72	0.00446
	28-Mar-22	7.67	0.00357
	4-Oct-22	7.63	0.00105

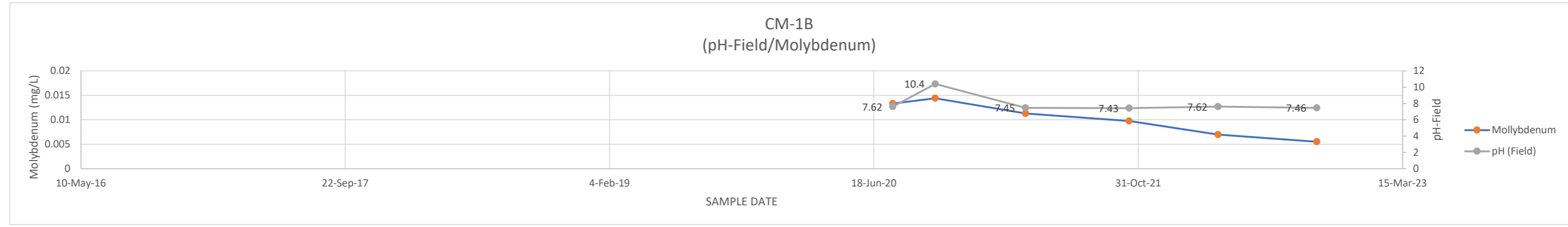


CM-1A	DATE	pH Field	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	6.93	0.0088
	7-Oct-20	6.84	0.00198
	1-Apr-21	6.95	0.00132
	14-Oct-21	6.77	0.00127
	31-Mar-22	7.04	0.0006
	4-Oct-22	6.74	0.0006

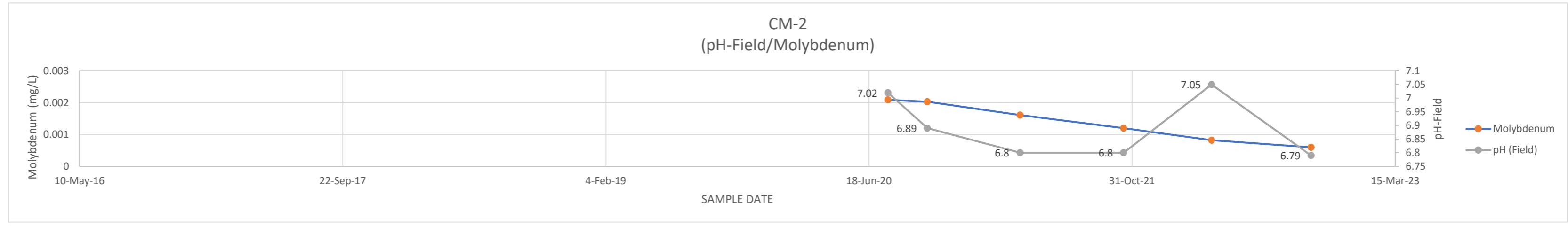


ATTACHMENT F-3A  
CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS

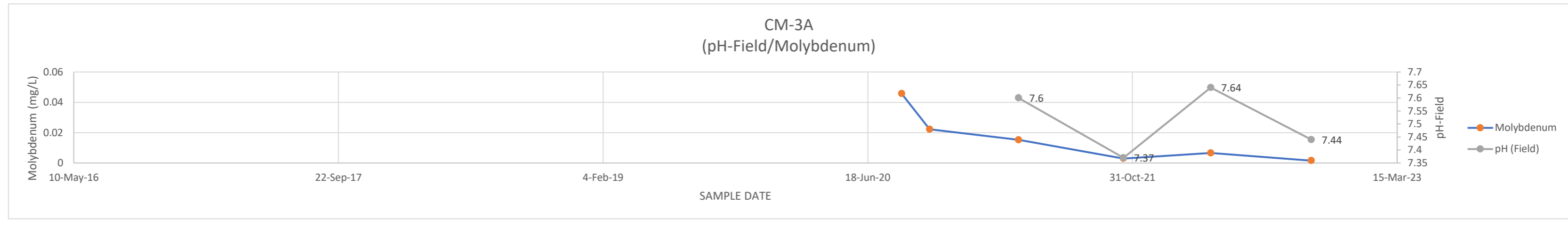
CM-1B	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.62	0.0133	
12-Oct-20	10.4	0.0144	
1-Apr-21	7.45	0.0113	
14-Oct-21	7.43	0.00976	
31-Mar-22	7.62	0.00696	
4-Oct-22	7.46	0.00551	



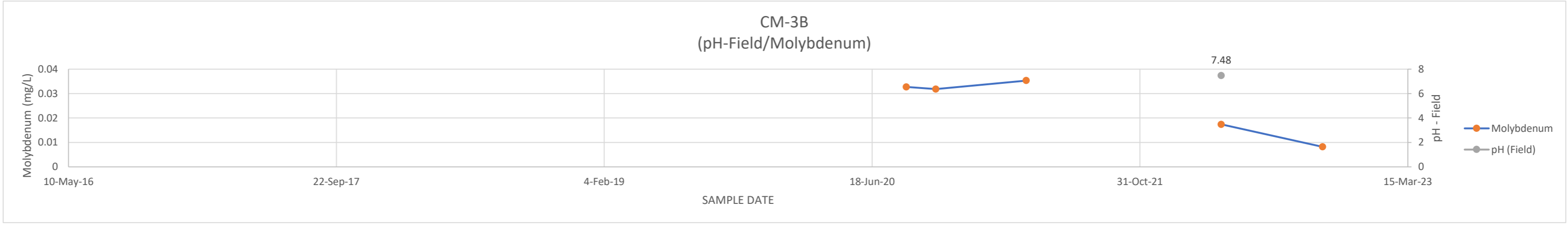
CM-2	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.02	0.00209	
7-Oct-20	6.89	0.00203	
1-Apr-21	6.8	0.00161	
15-Oct-21	6.8	0.0012	
31-Mar-22	7.05	0.00082	
6-Oct-22	6.79	0.0006	



CM-3A	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
21-Aug-20			0.0457
13-Oct-20			0.0222
30-Mar-21	7.6	0.0153	
14-Oct-21	7.37	0.00297	
28-Mar-22	7.64	0.00656	
4-Oct-22	7.44	0.00155	



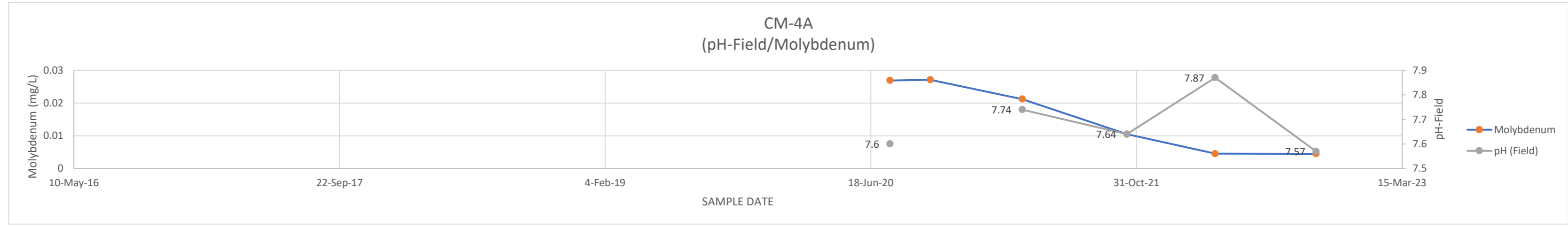
CM-3B	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
21-Aug-20			0.0327
15-Oct-20			0.0318
2-Apr-21			0.0353
11-Oct-21			
1-Apr-22	7.48	0.0174	
7-Oct-22		0.00819	



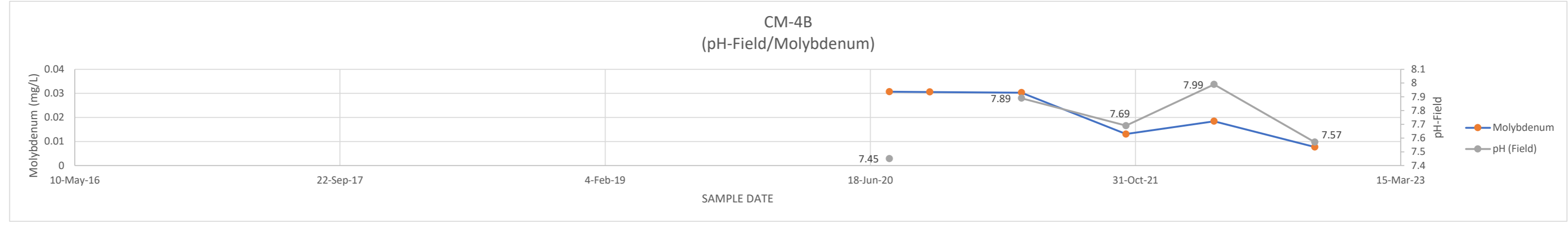


ATTACHMENT F-3A  
CHANGES IN PH (FIELD) AND MOLYBDENUM CONCENTRATIONS

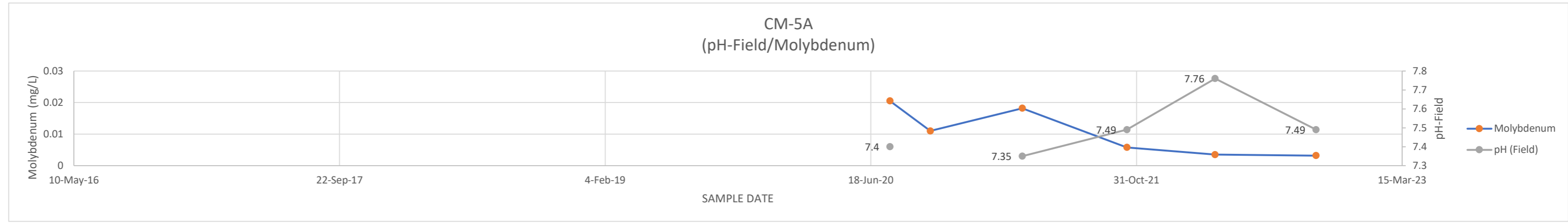
CM-4A	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.6	0.0269	
8-Oct-20		0.0271	
30-Mar-21	7.74	0.0212	
13-Oct-21	7.64	0.0105	
28-Mar-22	7.87	0.00455	
4-Oct-22	7.57	0.00449	



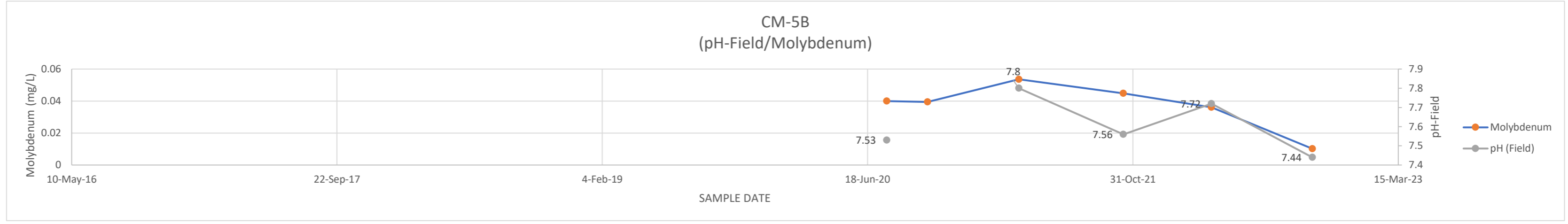
CM-4B	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.45	0.0307	
8-Oct-20		0.0306	
30-Mar-21	7.89	0.0303	
13-Oct-21	7.69	0.0131	
28-Mar-22	7.99	0.0184	
4-Oct-22	7.57	0.00771	



CM-5A	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.4	0.0205	
8-Oct-20		0.011	
30-Mar-21	7.35	0.0182	
13-Oct-21	7.49	0.0058	
28-Mar-22	7.76	0.00351	
4-Oct-22	7.49	0.00317	



CM-5B	DATE	pH Field	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.53	0.04	
9-Oct-20		0.0394	
30-Mar-21	7.8	0.0536	
13-Oct-21	7.56	0.0448	
28-Mar-22	7.72	0.0361	
4-Oct-22	7.44	0.0102	

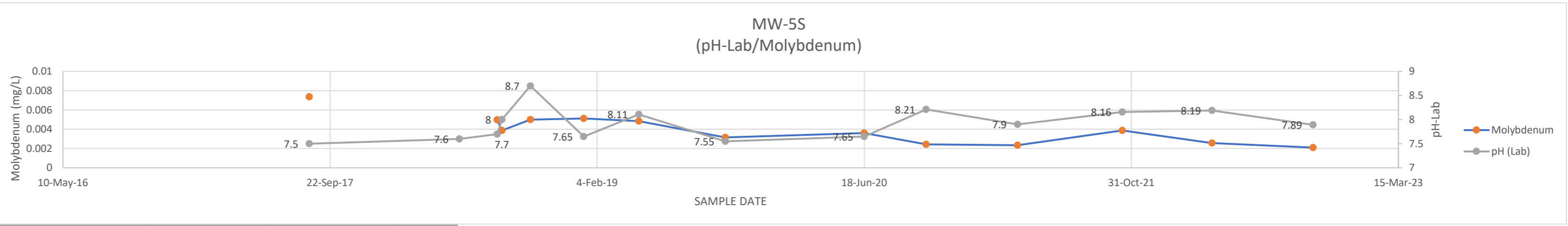


Yellow Indicates Reported Below shown value (MDL)

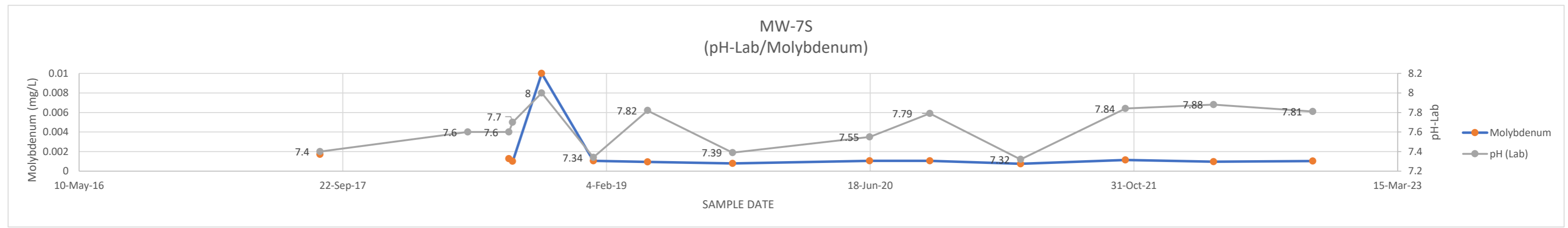
ATTACHMENT F-3B  
CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	pH Lab	MOLYBDENUM
14-Aug-17	7.5	0.00737	
22-May-18	7.6		
1-Aug-18	7.7	0.00497	
10-Aug-18	8	0.00387	
2-Oct-18	8.7	0.005	
10-Jan-19	7.65	0.00512	
23-Apr-19	8.11	0.00485	
2-Oct-19	7.55	0.00315	
18-Jun-20	7.65	0.00361	
12-Oct-20	8.21	0.00244	
1-Apr-21	7.9	0.00234	
14-Oct-21	8.16	0.00387	
31-Mar-22	8.19	0.00257	
6-Oct-22	7.89	0.0021	

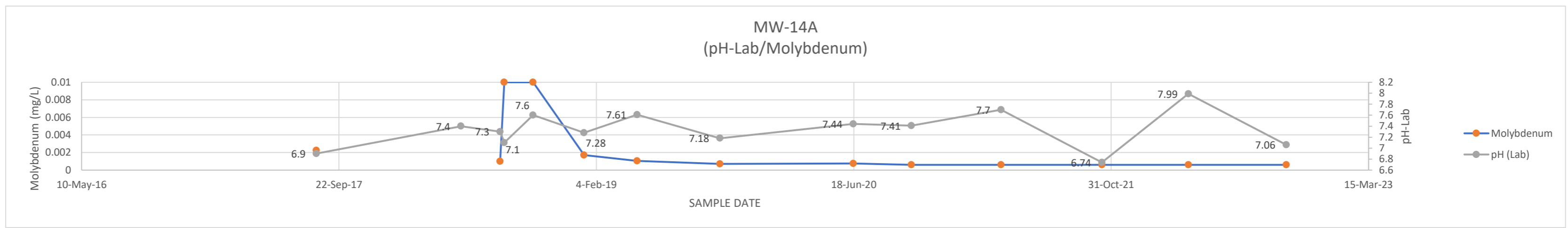
Value denoted in red from June 2022 resample



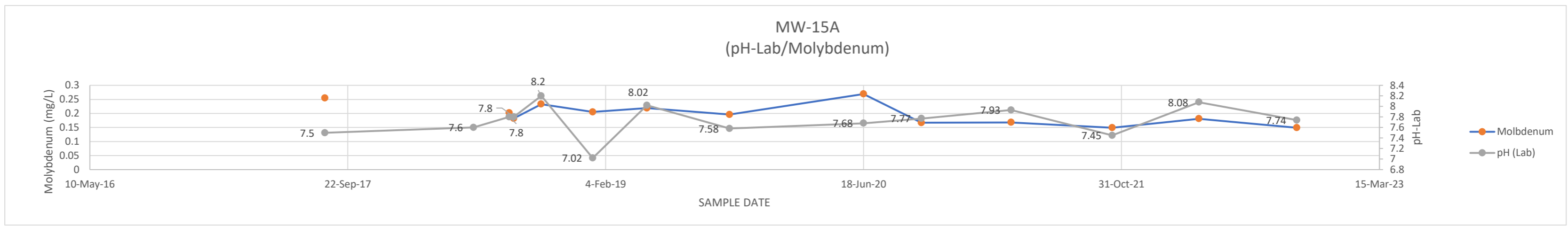
MW-7S	DATE	pH Lab	MOLYBDENUM
10-Aug-17	7.4	0.00171	
17-May-18	7.6		
3-Aug-18	7.6	0.00127	
10-Aug-18	7.7	0.001	
4-Oct-18	8	0.01	
10-Jan-19	7.34	0.00105	
23-Apr-19	7.82	0.000952	
1-Oct-19	7.39	0.000798	
17-Jun-20	7.55	0.00105	
9-Oct-20	7.79	0.00106	
30-Mar-21	7.32	0.000755	
15-Oct-21	7.84	0.00115	
31-Mar-22	7.88	0.000973	
5-Oct-22	7.81	0.00103	



MW-14A	DATE	pH Lab	MOLYBDENUM
9-Aug-17	6.9	0.00223	
17-May-18	7.4		
1-Aug-18	7.3	0.001	
9-Aug-18	7.1	0.01	
4-Oct-18	7.6	0.01	
11-Jan-19	7.28	0.0017	
24-Apr-19	7.61	0.00104	
2-Oct-19	7.18	0.000709	
17-Jun-20	7.44	0.00076	
8-Oct-20	7.41	0.0006	
31-Mar-21	7.7	0.0006	
13-Oct-21	6.74	0.0006	
30-Mar-22	7.99	0.0006	
6-Oct-22	7.06	0.0006	

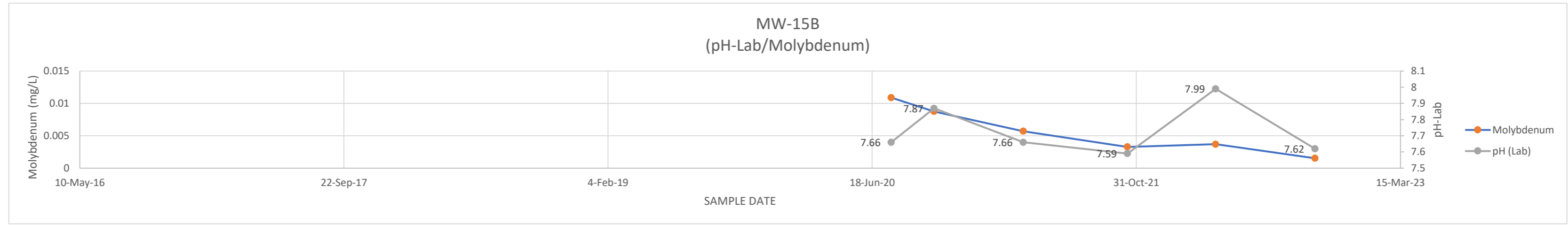


MW-15A	DATE	pH Lab	MOLYBDENUM
9-Aug-17	7.5	0.255	
24-May-18	7.6		
1-Aug-18	7.8	0.202	
10-Aug-18	7.8	0.182	
2-Oct-18	8.2	0.233	
10-Jan-19	7.02	0.205	
25-Apr-19	8.02	0.219	
2-Oct-19	7.58	0.196	
18-Jun-20	7.68	0.269	
8-Oct-20	7.77	0.167	
31-Mar-21	7.93	0.168	
13-Oct-21	7.45	0.149	
30-Mar-22	8.08	0.181	
6-Oct-22	7.74	0.149	

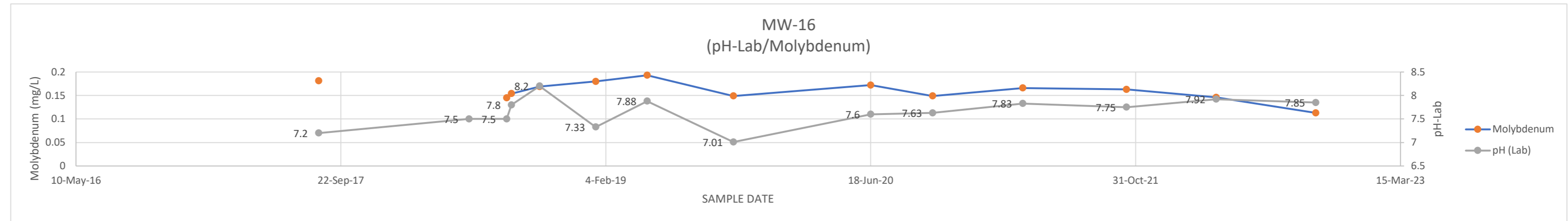


ATTACHMENT F-3B  
CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS

MW-15B			
DATE	pH Lab	MOLYBDENUM	
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.66	0.0109	
13-Oct-20	7.87	0.00876	
31-Mar-21	7.66	0.00571	
14-Oct-21	7.59	0.00328	
30-Mar-22	7.99	0.0037	
4-Oct-22	7.62	0.00153	

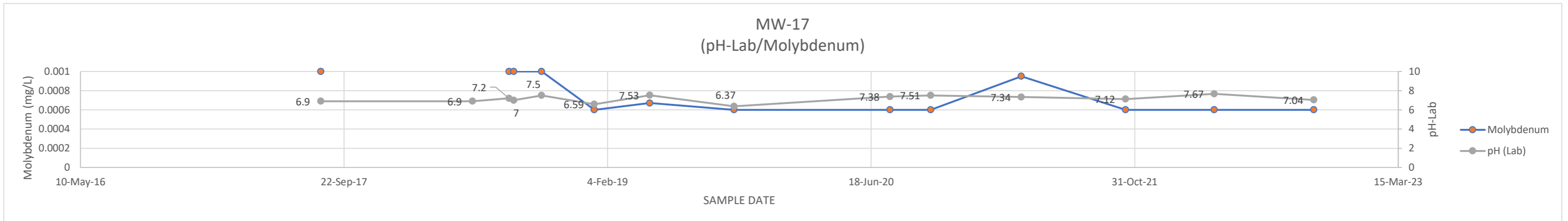


MW-16			
DATE	pH Lab	MOLYBDENUM	
11-Aug-17	7.2	0.181	
22-May-18	7.5		
1-Aug-18	7.5	0.145	
10-Aug-18	7.8	0.154	
2-Oct-18	8.2	0.169	
16-Jan-19	7.33	0.18	
23-Apr-19	7.88	0.193	
3-Oct-19	7.01	0.149	
18-Jun-20	7.6	0.172	
13-Oct-20	7.63	0.149	
1-Apr-21	7.83	0.166	
14-Oct-21	7.75	0.163	
1-Apr-22	7.92	0.146	
6-Oct-22	7.85	0.113	



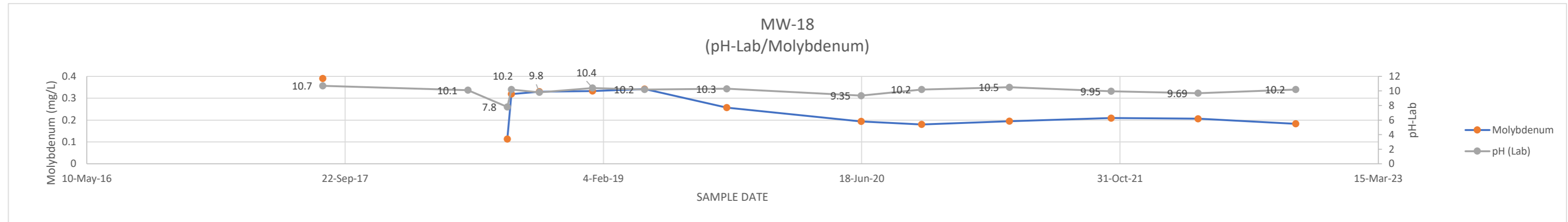
Value denoted in red from June 2022 resample

MW-17			
DATE	pH Lab	MOLYBDENUM	
9-Aug-17	6.9	0.001	
24-May-18	6.9		
1-Aug-18	7.2	0.001	
10-Aug-18	7	0.001	
2-Oct-18	7.5	0.001	
10-Jan-19	6.59	0.0006	
25-Apr-19	7.53	0.000671	
2-Oct-19	6.37	0.0006	
24-Jul-20	7.38	0.0006	
9-Oct-20	7.51	0.0006	
30-Mar-21	7.34	0.00095	
14-Oct-21	7.12	0.0006	
31-Mar-22	7.67	0.0006	
6-Oct-22	7.04	0.0006	



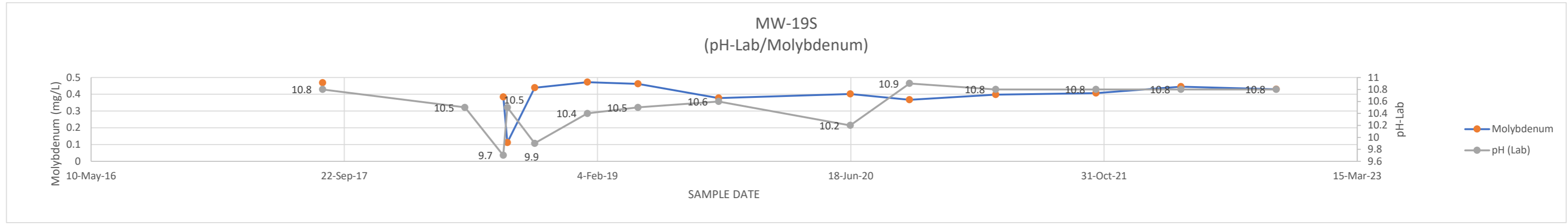
Value denoted in red from June 2022 resample

MW-18			
DATE	pH Lab	MOLYBDENUM	
10-Aug-17	10.7	0.39	
18-May-18	10.1		
2-Aug-18	7.8	0.113	
10-Aug-18	10.2	0.319	
3-Oct-18	9.8	0.33	
14-Jan-19	10.4	0.333	
25-Apr-19	10.2	0.342	
1-Oct-19	10.3	0.257	
17-Jun-20	9.35	0.194	
12-Oct-20	10.2	0.18	
31-Mar-21	10.5	0.195	
14-Oct-21	9.95	0.209	
31-Mar-22	9.69	0.206	
6-Oct-22	10.2	0.183	

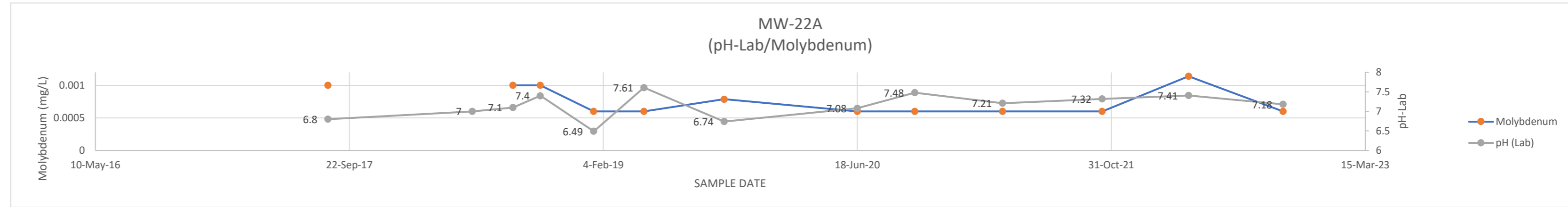


ATTACHMENT F-3B  
CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	pH Lab	MOLYBDENUM
10-Aug-17	10.8	10.8	0.469
18-May-18	10.5	10.5	0.384
2-Aug-18	9.7	9.7	0.112
10-Aug-18	10.5	10.5	0.439
3-Oct-18	9.9	9.9	0.472
15-Jan-19	10.4	10.4	0.367
25-Apr-19	10.5	10.5	0.377
1-Oct-19	10.6	10.6	0.402
17-Jun-20	10.2	10.2	0.367
12-Oct-20	10.9	10.9	0.398
31-Mar-21	10.8	10.8	0.407
15-Oct-21	10.8	10.8	0.445
1-Apr-22	10.8	10.8	0.43
6-Oct-22	10.8	10.8	0.43

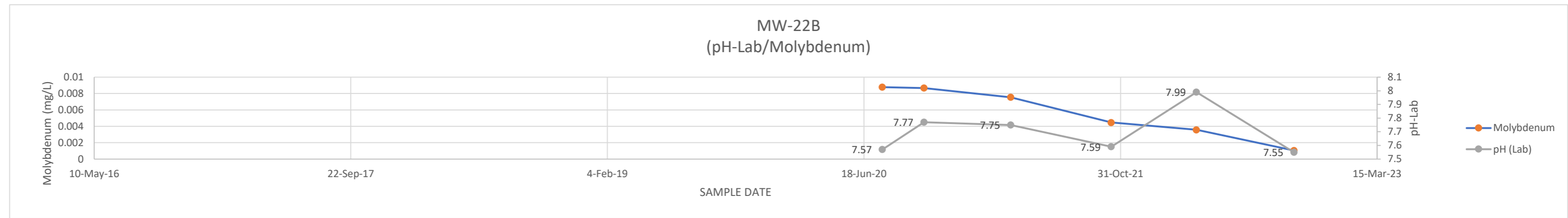


MW-22A	DATE	pH Lab	MOLYBDENUM
11-Aug-17	6.8	6.8	0.001
22-May-18	7	7	0.001
10-Aug-18	7.1	7.1	0.001
3-Oct-18	7.4	7.4	0.001
16-Jan-19	6.49	6.49	0.0006
25-Apr-19	7.61	7.61	0.0006
30-Sep-19	6.74	6.74	0.000787
18-Jun-20	7.08	7.08	0.0006
9-Oct-20	7.48	7.48	0.0006
31-Mar-21	7.21	7.21	0.0006
13-Oct-21	7.32	7.32	0.0006
1-Apr-22	7.41	7.41	0.00114
4-Oct-22	7.18	7.18	0.0006

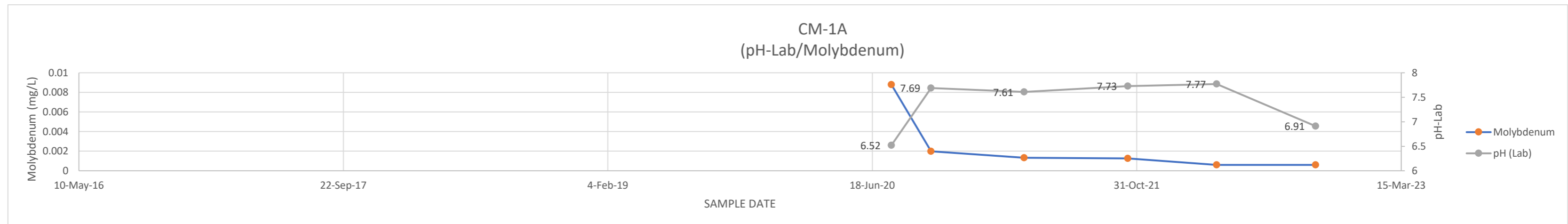


Value denoted in red from June 2022 resample

MW-22B	DATE	pH Lab	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	7.57	7.57	0.00878
13-Oct-20	7.77	7.77	0.00866
31-Mar-21	7.75	7.75	0.00753
13-Oct-21	7.59	7.59	0.00446
28-Mar-22	7.99	7.99	0.00357
4-Oct-22	7.55	7.55	0.00105

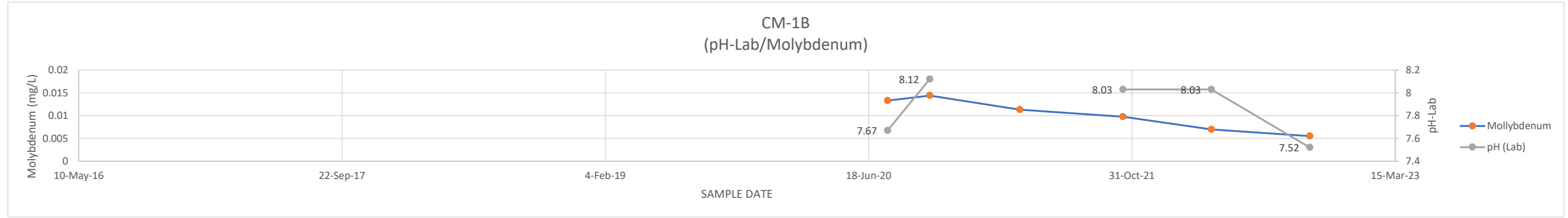


CM-1A	DATE	pH Lab	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20	6.52	6.52	0.0088
7-Oct-20	7.69	7.69	0.00198
1-Apr-21	7.61	7.61	0.00132
14-Oct-21	7.73	7.73	0.00127
31-Mar-22	7.77	7.77	0.0006
4-Oct-22	6.91	6.91	0.0006

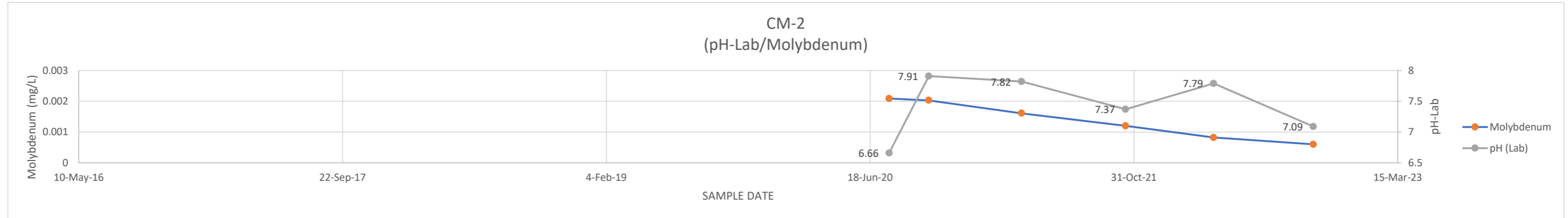


ATTACHMENT F-3B  
CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS

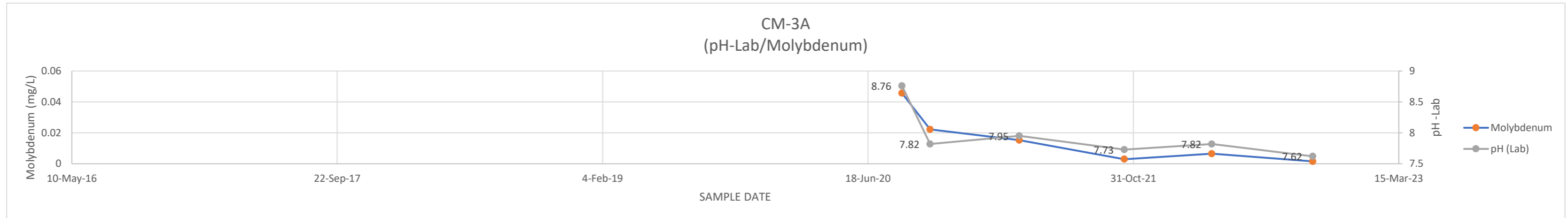
CM-1B DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	7.67	0.0133
12-Oct-20	8.12	0.0144
1-Apr-21		0.0113
14-Oct-21	8.03	0.00976
31-Mar-22	8.03	0.00696
4-Oct-22	7.52	0.00551



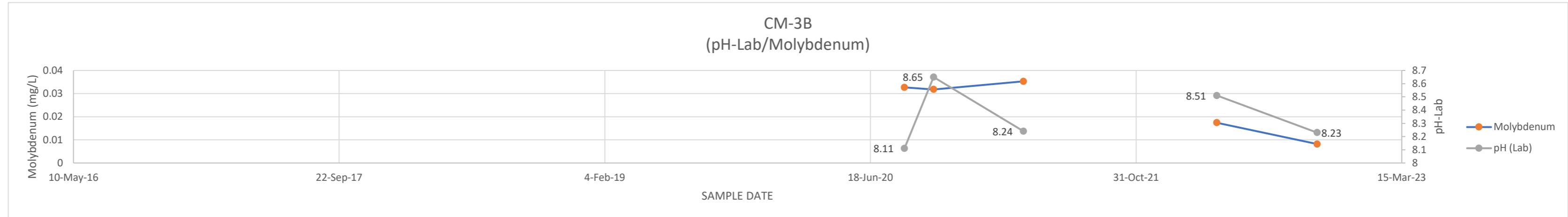
CM-2 DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	6.66	0.00209
7-Oct-20	7.91	0.00203
1-Apr-21	7.82	0.00161
15-Oct-21	7.37	0.0012
31-Mar-22	7.79	0.00082
6-Oct-22	7.09	0.0006



CM-3A DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	8.76	0.0457
13-Oct-20	7.82	0.0222
30-Mar-21	7.95	0.0153
14-Oct-21	7.73	0.00297
28-Mar-22	7.82	0.00656
4-Oct-22	7.62	0.00155

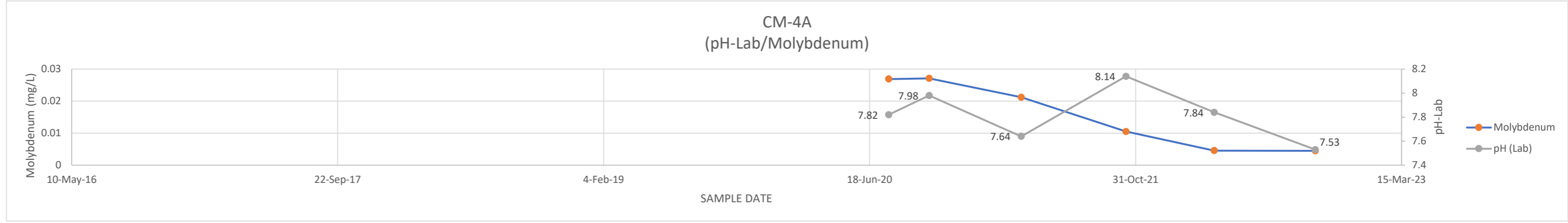


CM-3B DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	8.11	0.0327
15-Oct-20	8.65	0.0318
2-Apr-21	8.24	0.0353
11-Oct-21		
1-Apr-22	8.51	0.0174
7-Oct-22	8.23	0.00819

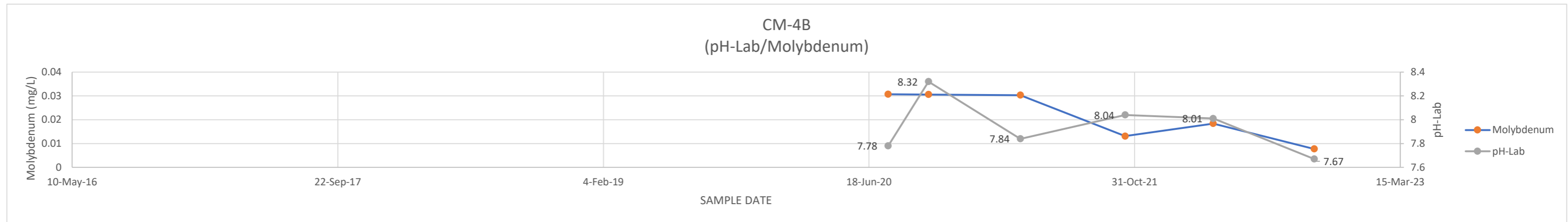


ATTACHMENT F-3B  
CHANGES IN PH (LAB) AND MOLYBDENUM CONCENTRATIONS

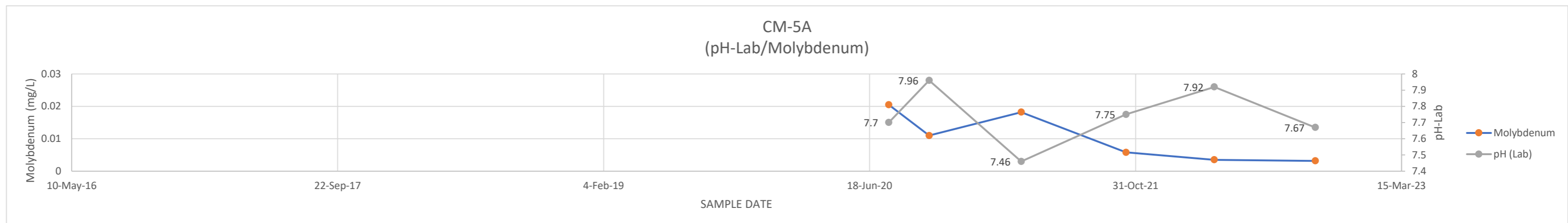
CM-4A DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	7.82	0.0269
8-Oct-20	7.98	0.0271
30-Mar-21	7.64	0.0212
13-Oct-21	8.14	0.0105
28-Mar-22	7.84	0.00455
4-Oct-22	7.53	0.00449



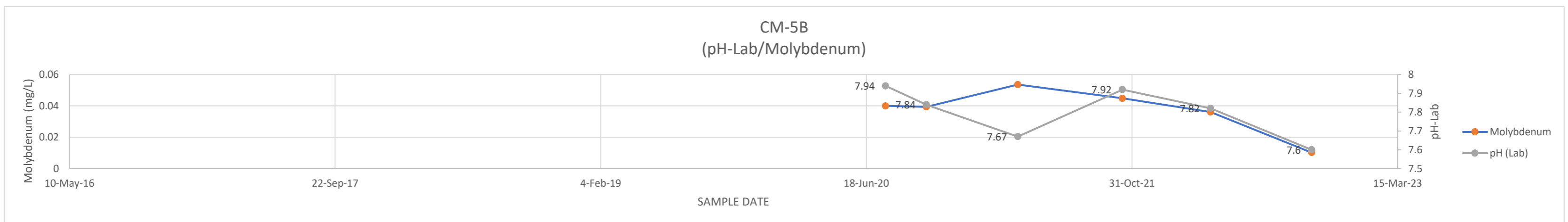
CM-4B DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	7.78	0.0307
8-Oct-20	8.32	0.0306
30-Mar-21	7.84	0.0303
13-Oct-21	8.04	0.0131
28-Mar-22	8.01	0.0184
4-Oct-22	7.67	0.00771



CM-5A DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	7.7	0.0205
8-Oct-20	7.96	0.011
30-Mar-21	7.46	0.0182
13-Oct-21	7.75	0.0058
28-Mar-22	7.92	0.00351
4-Oct-22	7.67	0.00317



CM-5B DATE	pH Lab	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	7.94	0.04
9-Oct-20	7.84	0.0394
30-Mar-21	7.67	0.0536
13-Oct-21	7.92	0.0448
28-Mar-22	7.82	0.0361
4-Oct-22	7.6	0.0102

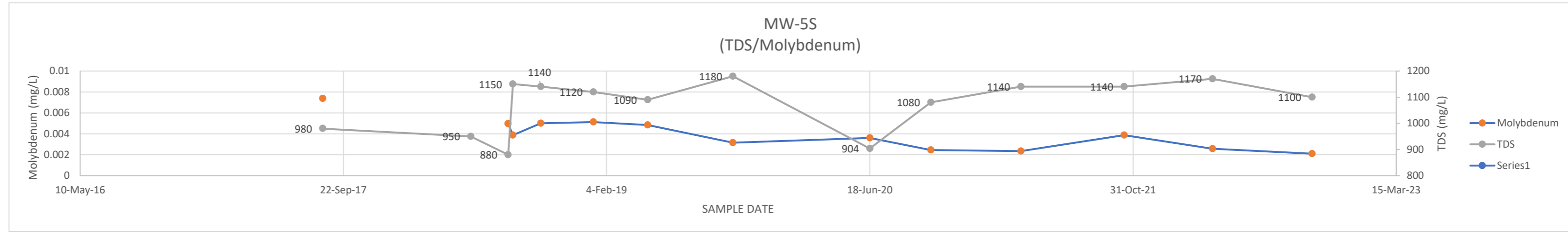


Yellow Indicates Reported Below shown value (MDL)

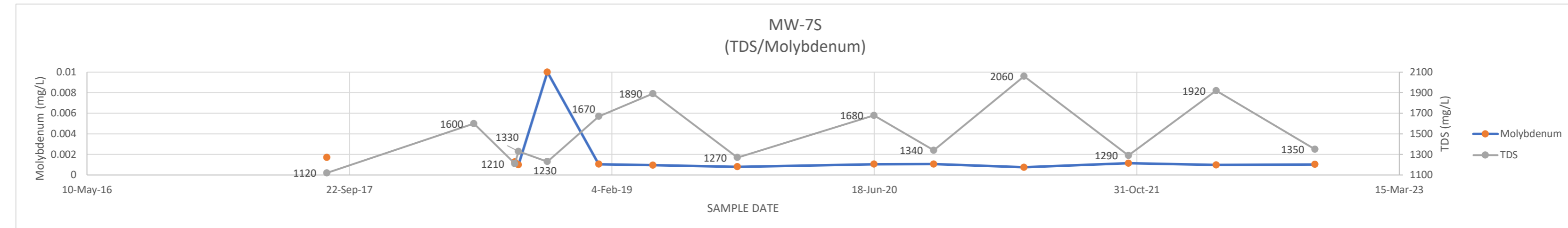
ATTACHMENT F-4  
CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS

MW-5S	TDS	MOLYBDENUM
DATE		
14-Aug-17	980	0.00737
22-May-18	950	
1-Aug-18	880	0.00497
10-Aug-18	1150	0.00387
2-Oct-18	1140	0.005
10-Jan-19	1120	0.00512
23-Apr-19	1090	0.00485
2-Oct-19	1180	0.00315
18-Jun-20	904	0.00361
12-Oct-20	1080	0.00244
1-Apr-21	1140	0.00234
14-Oct-21	1140	0.00387
31-Mar-22	1170	0.00257
6-Oct-22	1100	0.0021

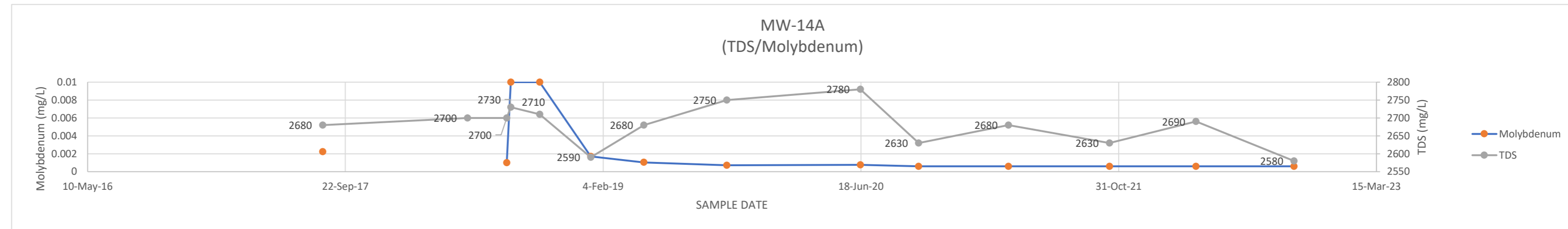
Value denoted in red from June 2022 resample



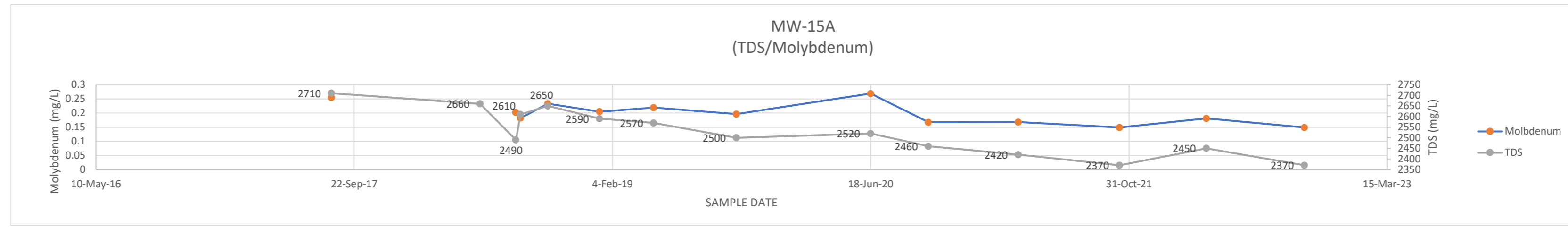
MW-7S	TDS	MOLYBDENUM
DATE		
10-Aug-17	1120	0.00171
17-May-18	1600	
3-Aug-18	1210	0.00127
10-Aug-18	1330	0.001
4-Oct-18	1230	0.01
10-Jan-19	1670	0.00105
23-Apr-19	1890	0.000952
1-Oct-19	1270	0.000798
17-Jun-20	1680	0.00105
9-Oct-20	1340	0.00106
30-Mar-21	2060	0.000755
15-Oct-21	1290	0.00115
31-Mar-22	1920	0.000973
5-Oct-22	1350	0.00103



MW-14A	TDS	MOLYBDENUM
DATE		
9-Aug-17	2680	0.00223
17-May-18	2700	
1-Aug-18	2700	0.001
9-Aug-18	2730	0.01
4-Oct-18	2710	0.01
11-Jan-19	2590	0.0017
24-Apr-19	2680	0.00104
2-Oct-19	2750	0.000709
17-Jun-20	2780	0.00076
8-Oct-20	2630	0.0006
31-Mar-21	2680	0.0006
13-Oct-21	2630	0.0006
30-Mar-22	2690	0.0006
6-Oct-22	2580	0.0006

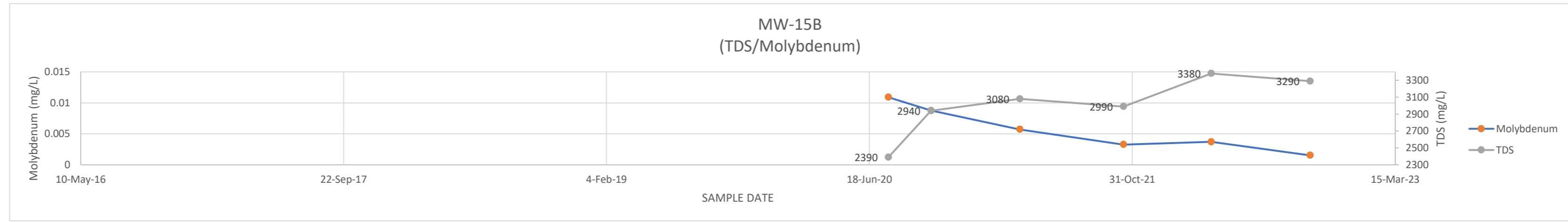


MW-15A	TDS	MOLYBDENUM
DATE		
9-Aug-17	2710	0.255
24-May-18	2660	
1-Aug-18	2490	0.202
10-Aug-18	2610	0.182
2-Oct-18	2650	0.233
10-Jan-19	2590	0.205
25-Apr-19	2570	0.219
2-Oct-19	2500	0.196
18-Jun-20	2520	0.269
8-Oct-20	2460	0.167
31-Mar-21	2420	0.168
13-Oct-21	2370	0.149
30-Mar-22	2450	0.181
6-Oct-22	2370	0.149

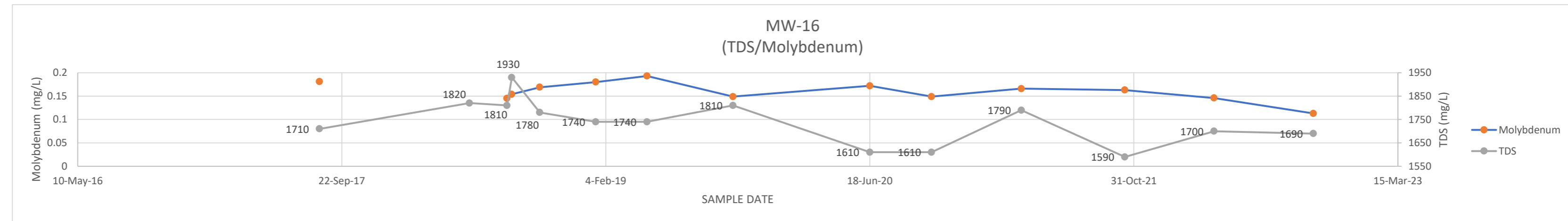


ATTACHMENT F-4  
CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS

MW-15B	TDS	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2390	0.0109
13-Oct-20	2940	0.00876
31-Mar-21	3080	0.00571
14-Oct-21	2990	0.00328
30-Mar-22	3380	0.0037
4-Oct-22	3290	0.00153

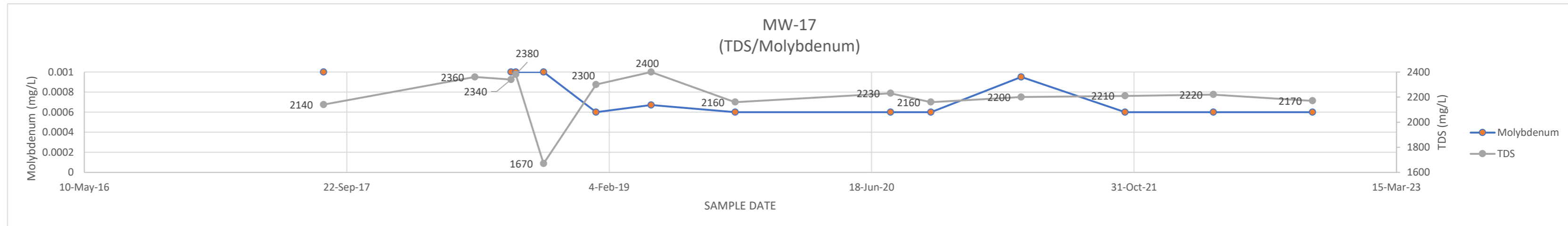


MW-16	TDS	MOLYBDENUM
DATE		
11-Aug-17	1710	0.181
22-May-18	1820	
1-Aug-18	1810	0.145
10-Aug-18	1930	0.154
2-Oct-18	1780	0.169
16-Jan-19	1740	0.18
23-Apr-19	1740	0.193
3-Oct-19	1810	0.149
18-Jun-20	1610	0.172
13-Oct-20	1610	0.149
1-Apr-21	1790	0.166
14-Oct-21	1590	0.163
1-Apr-22	1700	0.146
6-Oct-22	1690	0.113



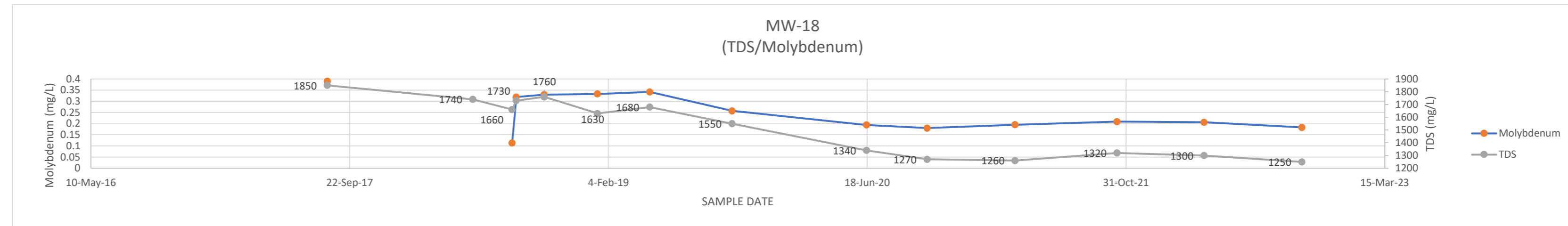
Value denoted in red from June 2022 resample

MW-17	TDS	MOLYBDENUM
DATE		
9-Aug-17	2140	0.001
24-May-18	2360	
1-Aug-18	2340	0.001
10-Aug-18	2380	0.001
2-Oct-18	1670	0.001
10-Jan-19	2300	0.0006
25-Apr-19	2400	0.000671
2-Oct-19	2160	0.0006
24-Jul-20	2230	0.0006
9-Oct-20	2160	0.0006
30-Mar-21	2200	0.00095
14-Oct-21	2210	0.0006
31-Mar-22	2220	0.0006
6-Oct-22	2170	0.0006



Value denoted in red from June 2022 resample

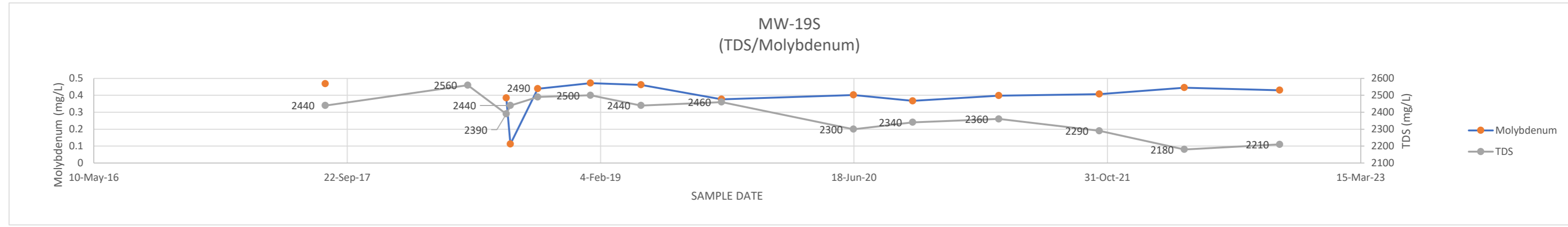
MW-18	TDS	MOLYBDENUM
DATE		
10-Aug-17	1850	0.39
18-May-18	1740	
2-Aug-18	1660	0.113
10-Aug-18	1730	0.319
3-Oct-18	1760	0.33
14-Jan-19	1630	0.333
25-Apr-19	1680	0.342
1-Oct-19	1550	0.257
17-Jun-20	1340	0.194
12-Oct-20	1270	0.18
31-Mar-21	1260	0.195
14-Oct-21	1320	0.209
31-Mar-22	1300	0.206
6-Oct-22	1250	0.183



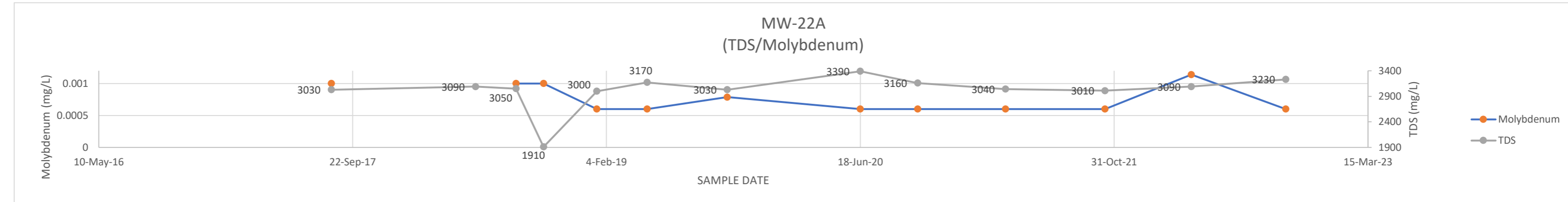


ATTACHMENT F-4  
CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS

MW-19S	TDS	MOLYBDENUM
DATE		
10-Aug-17	2440	0.469
18-May-18	2560	
2-Aug-18	2390	0.384
10-Aug-18	2440	0.112
3-Oct-18	2490	0.439
15-Jan-19	2500	0.472
25-Apr-19	2440	0.462
1-Oct-19	2460	0.377
17-Jun-20	2300	0.402
12-Oct-20	2340	0.367
31-Mar-21	2360	0.398
15-Oct-21	2290	0.407
1-Apr-22	2180	0.445
6-Oct-22	2210	0.43

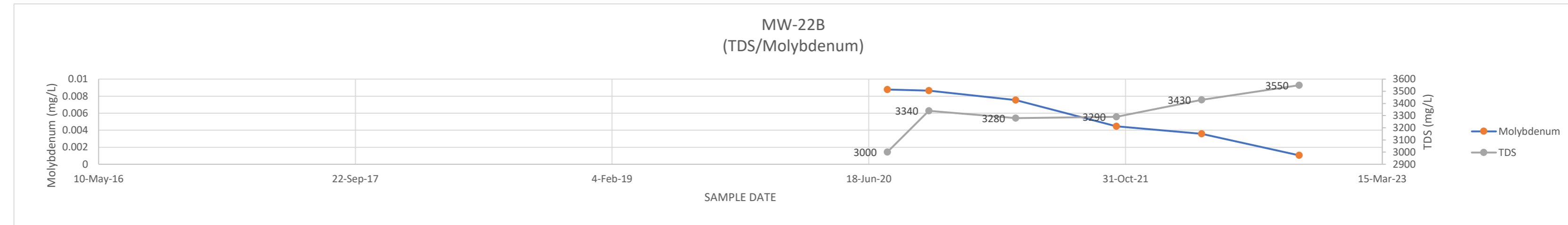


MW-22A	TDS	MOLYBDENUM
DATE		
11-Aug-17	3030	0.001
22-May-18	3090	
10-Aug-18	3050	0.001
3-Oct-18	1910	0.001
16-Jan-19	3000	0.0006
25-Apr-19	3170	0.0006
30-Sep-19	3030	0.000787
18-Jun-20	3390	0.0006
9-Oct-20	3160	0.0006
31-Mar-21	3040	0.0006
13-Oct-21	3010	0.0006
1-Apr-22	3090	0.00114
4-Oct-22	3230	0.0006

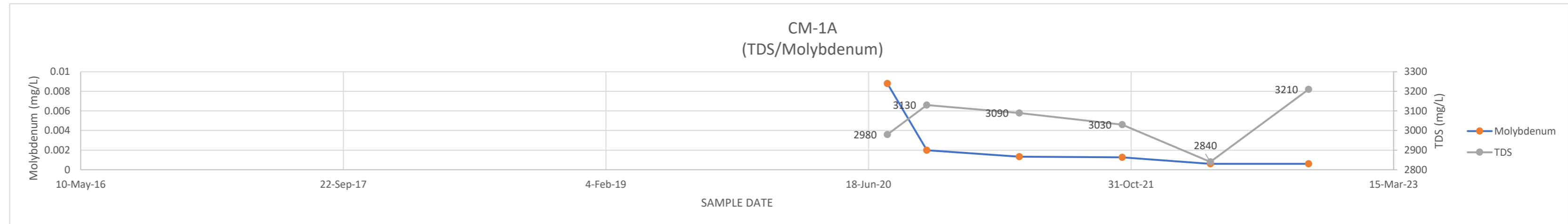


Value denoted in red from June 2022 resample

MW-22B	TDS	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3000	0.00878
13-Oct-20	3340	0.00866
31-Mar-21	3280	0.00753
13-Oct-21	3290	0.00446
28-Mar-22	3430	0.00357
4-Oct-22	3550	0.00105

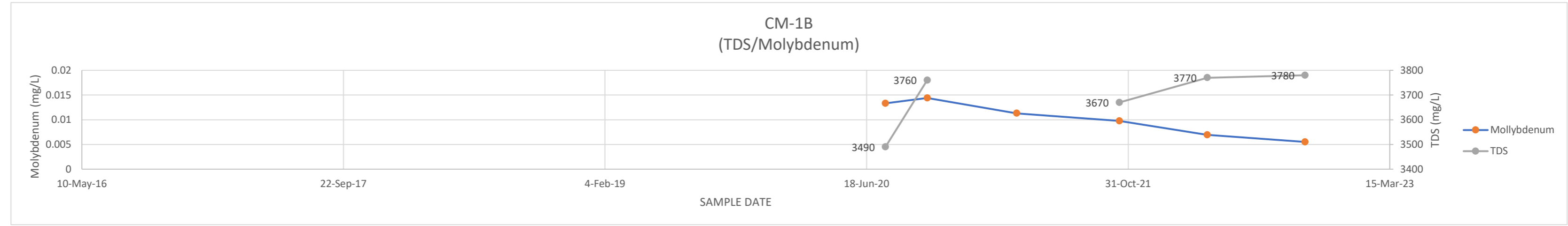


CM-1A	TDS	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2980	0.0088
7-Oct-20	3130	0.00198
1-Apr-21	3090	0.00132
14-Oct-21	3030	0.00127
31-Mar-22	2840	0.0006
4-Oct-22	3210	0.0006

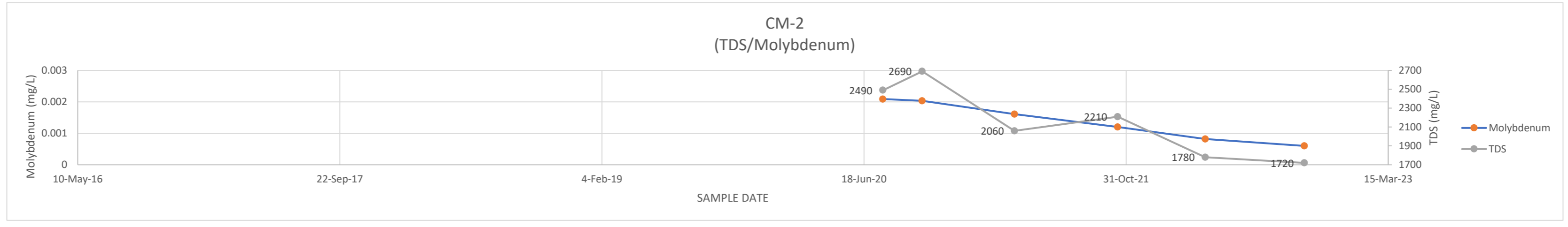


ATTACHMENT F-4  
CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS

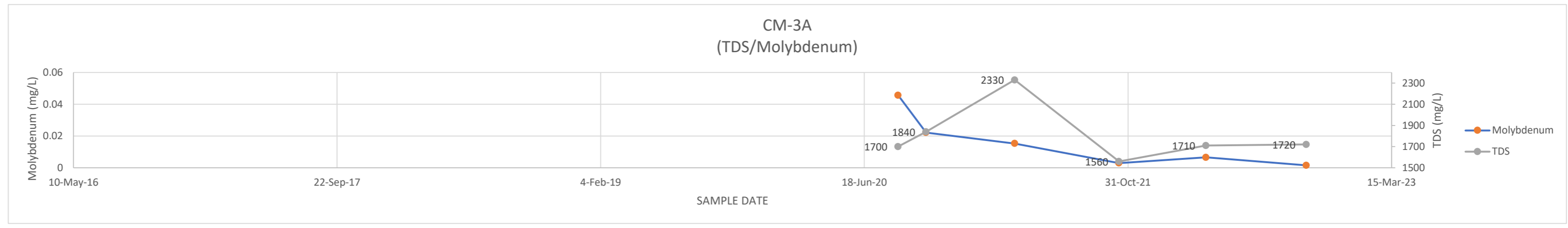
CM-1B DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3490	0.0133
12-Oct-20	3760	0.0144
1-Apr-21		0.0113
14-Oct-21	3670	0.00976
31-Mar-22	3770	0.00696
4-Oct-22	3780	0.00551



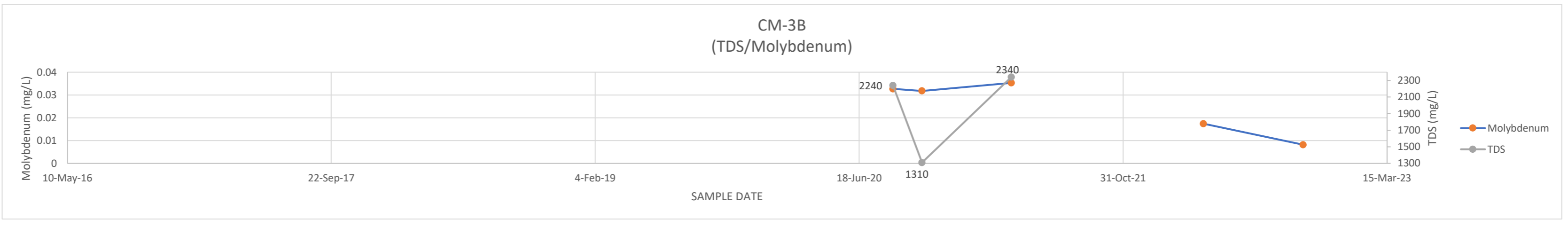
CM-2 DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2490	0.00209
7-Oct-20	2690	0.00203
1-Apr-21	2060	0.00161
15-Oct-21	2210	0.0012
31-Mar-22	1780	0.00082
6-Oct-22	1720	0.0006



CM-3A DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	1700	0.0457
13-Oct-20	1840	0.0222
30-Mar-21	2330	0.0153
14-Oct-21	1560	0.00297
28-Mar-22	1710	0.00656
4-Oct-22	1720	0.00155

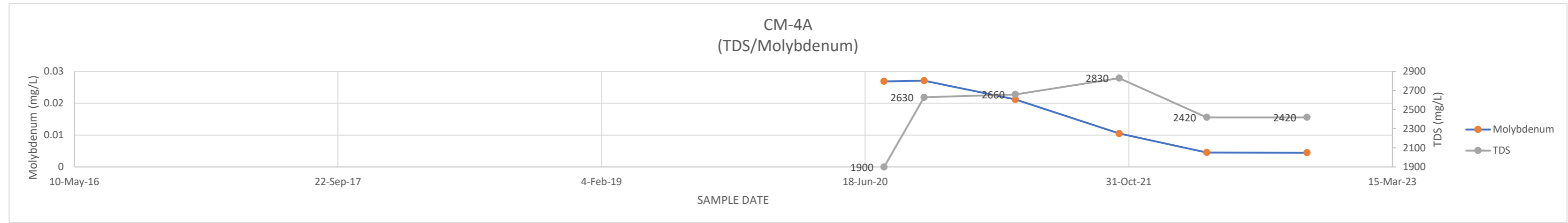


CM-3B DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	2240	0.0327
15-Oct-20	1310	0.0318
2-Apr-21	2340	0.0353
11-Oct-21		
1-Apr-22	3580	0.0174
7-Oct-22	2810	0.00819

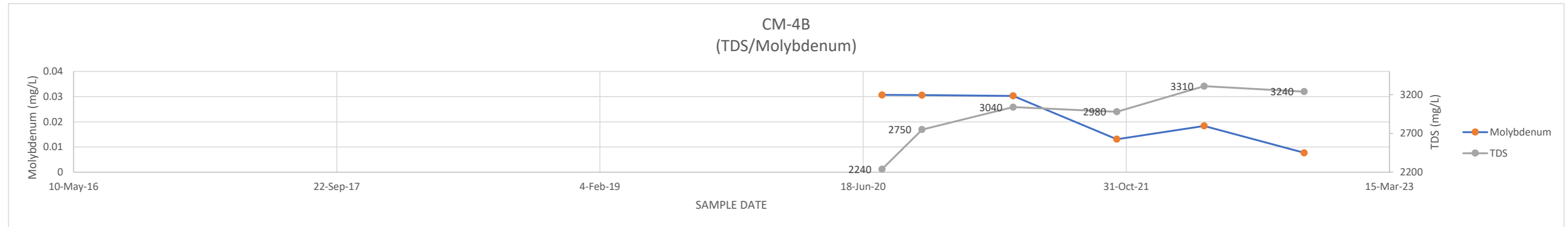


ATTACHMENT F-4  
CHANGES IN TDS AND MOLYBDENUM CONCENTRATIONS

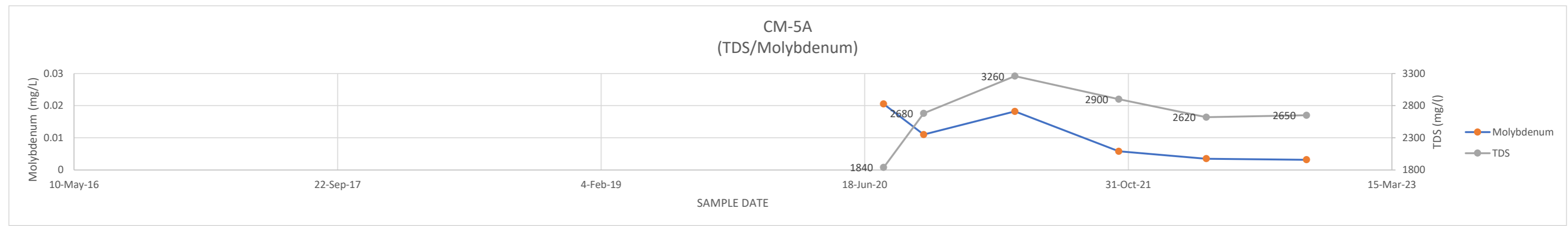
CM-4A DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1900	0.0269
8-Oct-20	2630	0.0271
30-Mar-21	2660	0.0212
13-Oct-21	2830	0.0105
28-Mar-22	2420	0.00455
4-Oct-22	2420	0.00449



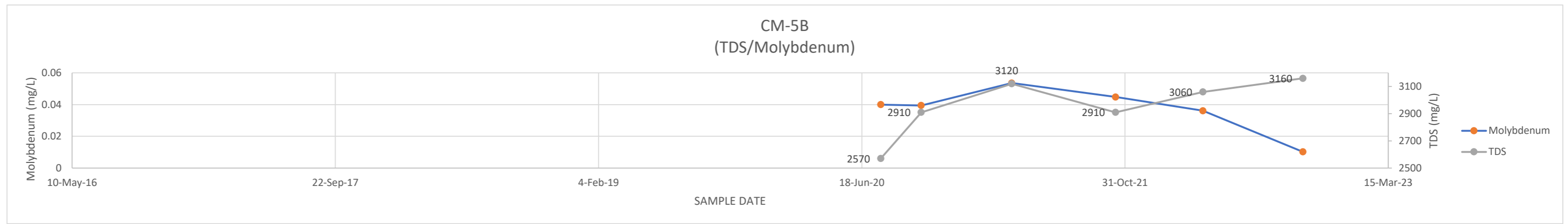
CM-4B DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2240	0.0307
8-Oct-20	2750	0.0306
30-Mar-21	3040	0.0303
13-Oct-21	2980	0.0131
28-Mar-22	3310	0.0184
4-Oct-22	3240	0.00771



CM-5A DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1840	0.0205
8-Oct-20	2680	0.011
30-Mar-21	3260	0.0182
13-Oct-21	2900	0.0058
28-Mar-22	2620	0.00351
4-Oct-22	2650	0.00317



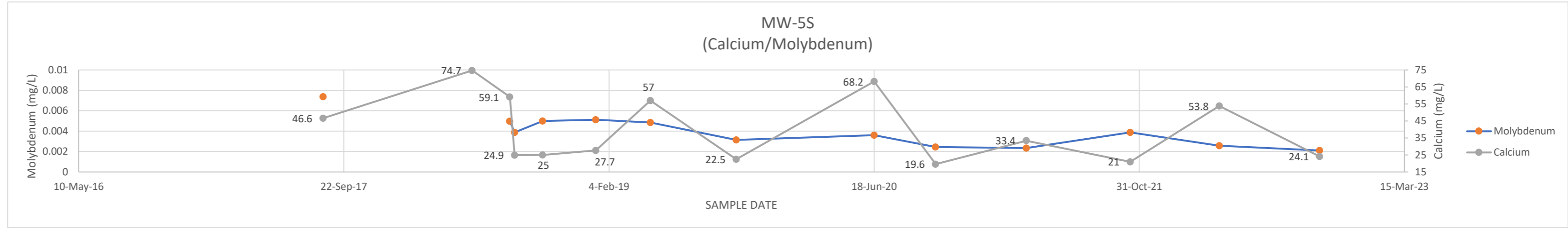
CM-5B DATE	TDS	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2570	0.04
9-Oct-20	2910	0.0394
30-Mar-21	3120	0.0536
13-Oct-21	2910	0.0448
28-Mar-22	3060	0.0361
4-Oct-22	3160	0.0102



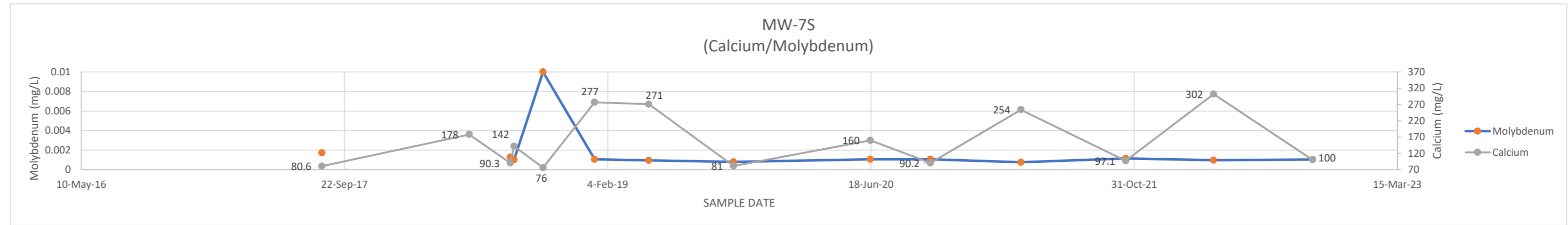
Yellow Indicates Reported Below shown value (MDL)

ATTACHMENT F-5  
CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS

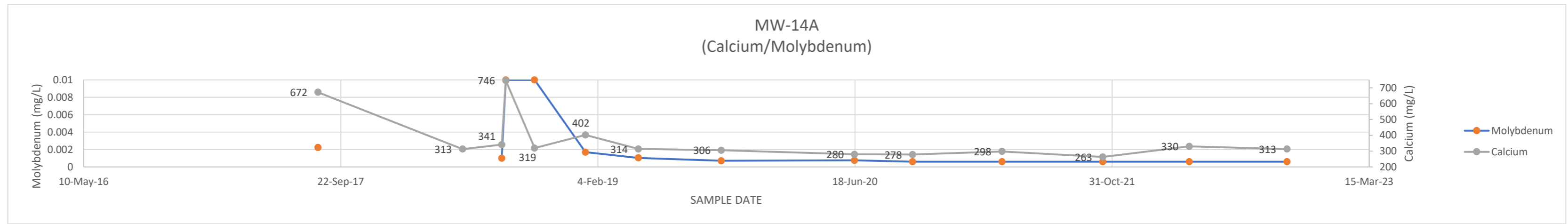
MW-5S DATE	CALCIUM	MOLYBDENUM
14-Aug-17	46.6	0.00737
22-May-18	74.7	
1-Aug-18	59.1	0.00497
10-Aug-18	24.9	0.00387
2-Oct-18	25	<b>0.005</b>
10-Jan-19	27.7	0.00512
23-Apr-19	57	0.00485
2-Oct-19	22.5	0.00315
18-Jun-20	68.2	0.00361
12-Oct-20	19.6	0.00244
1-Apr-21	33.4	0.00234
14-Oct-21	21	0.00387
31-Mar-22	53.8	0.00257
6-Oct-22	24.1	0.0021



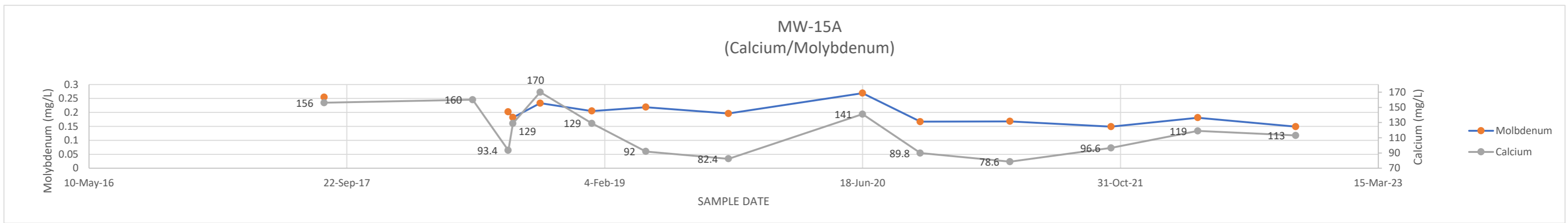
MW-7S DATE	CALCIUM	MOLYBDENUM
10-Aug-17	80.6	0.00171
17-May-18	178	
3-Aug-18	90.3	0.00127
10-Aug-18	142	<b>0.001</b>
4-Oct-18	76	<b>0.01</b>
10-Jan-19	277	0.00105
23-Apr-19	271	0.000952
1-Oct-19	81	0.000798
17-Jun-20	160	0.00105
9-Oct-20	90.2	0.00106
30-Mar-21	254	0.000755
15-Oct-21	97.1	0.00115
31-Mar-22	302	0.000973
5-Oct-22	100	0.00103



MW-14A DATE	CALCIUM	MOLYBDENUM
9-Aug-17	672	0.00223
17-May-18	313	
1-Aug-18	341	<b>0.001</b>
9-Aug-18	746	<b>0.01</b>
4-Oct-18	319	<b>0.01</b>
11-Jan-19	402	0.0017
24-Apr-19	314	0.00104
2-Oct-19	306	0.000709
17-Jun-20	280	0.00076
8-Oct-20	278	<b>0.0006</b>
31-Mar-21	298	<b>0.0006</b>
13-Oct-21	263	<b>0.0006</b>
30-Mar-22	330	<b>0.0006</b>
6-Oct-22	313	<b>0.0006</b>

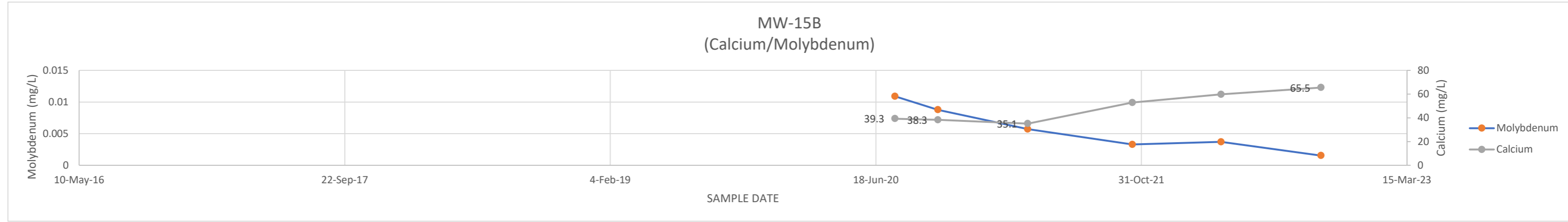


MW-15A DATE	CALCIUM	MOLYBDENUM
9-Aug-17	156	0.255
24-May-18	160	
1-Aug-18	93.4	0.202
10-Aug-18	129	0.182
2-Oct-18	170	0.233
10-Jan-19	129	0.205
25-Apr-19	92	0.219
2-Oct-19	82.4	0.196
18-Jun-20	141	0.269
8-Oct-20	89.8	0.167
31-Mar-21	78.6	0.168
13-Oct-21	96.6	0.149
30-Mar-22	119	0.181
6-Oct-22	113	0.149

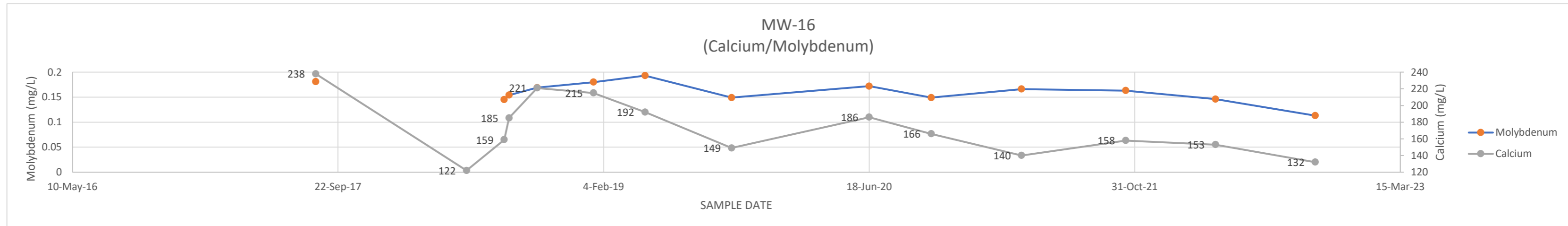


ATTACHMENT F-5  
CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS

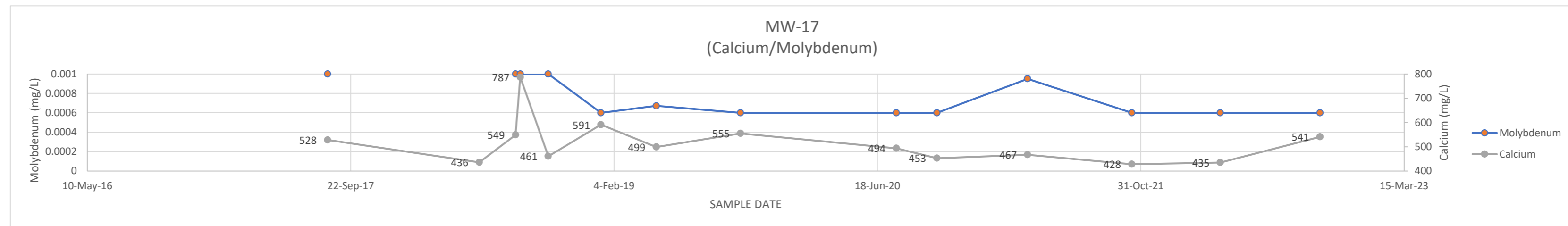
MW-15B	CALCIUM	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	39.3	0.0109
13-Oct-20	38.3	0.00876
31-Mar-21	35.1	0.00571
14-Oct-21	52.8	0.00328
30-Mar-22	59.8	0.0037
4-Oct-22	65.5	0.00153



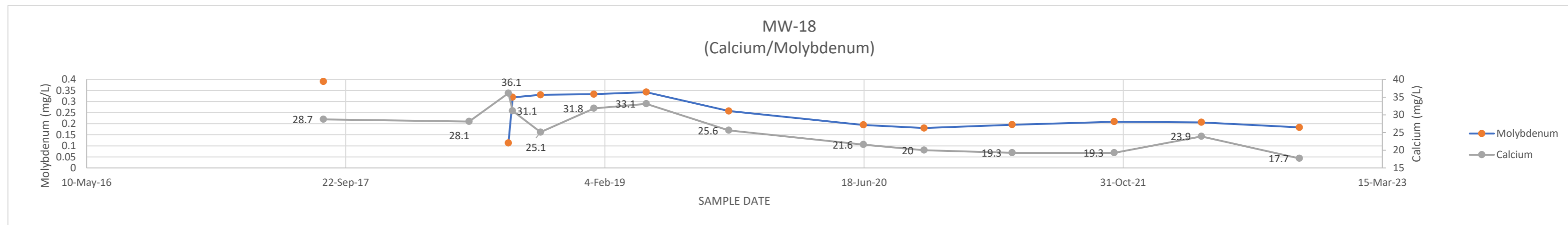
MW-16	CALCIUM	MOLYBDENUM
DATE		
11-Aug-17	238	0.181
22-May-18	122	
1-Aug-18	159	0.145
10-Aug-18	185	0.154
2-Oct-18	221	0.169
16-Jan-19	215	0.18
23-Apr-19	192	0.193
3-Oct-19	149	0.149
18-Jun-20	186	0.172
13-Oct-20	166	0.149
1-Apr-21	140	0.166
14-Oct-21	158	0.163
1-Apr-22	153	0.146
6-Oct-22	132	0.113



MW-17	CALCIUM	MOLYBDENUM
DATE		
9-Aug-17	528	0.001
24-May-18	436	
1-Aug-18	549	0.001
10-Aug-18	787	0.001
2-Oct-18	461	0.001
10-Jan-19	591	0.0006
25-Apr-19	499	0.000671
2-Oct-19	555	0.0006
24-Jul-20	494	0.0006
9-Oct-20	453	0.0006
30-Mar-21	467	0.00095
14-Oct-21	428	0.0006
31-Mar-22	435	0.0006
6-Oct-22	541	0.0006

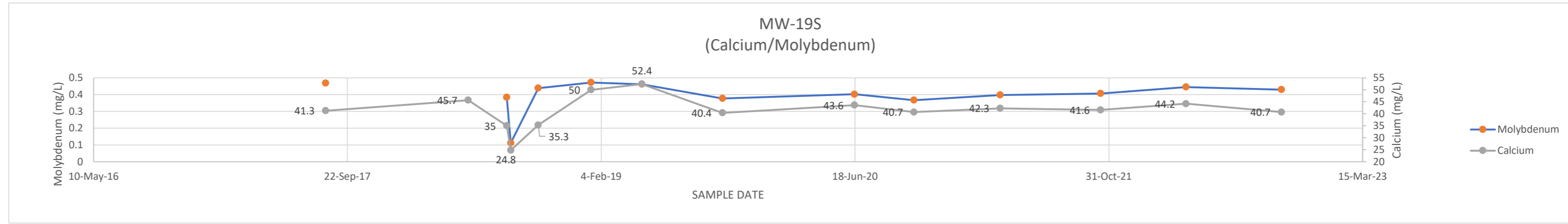


MW-18	CALCIUM	MOLYBDENUM
DATE		
10-Aug-17	28.7	0.39
18-May-18	28.1	
2-Aug-18	36.1	0.113
10-Aug-18	31.1	0.319
3-Oct-18	25.1	0.33
14-Jan-19	31.8	0.333
25-Apr-19	33.1	0.342
1-Oct-19	25.6	0.257
17-Jun-20	21.6	0.194
12-Oct-20	20	0.18
31-Mar-21	19.3	0.195
14-Oct-21	19.3	0.209
31-Mar-22	23.9	0.206
6-Oct-22	17.7	0.183

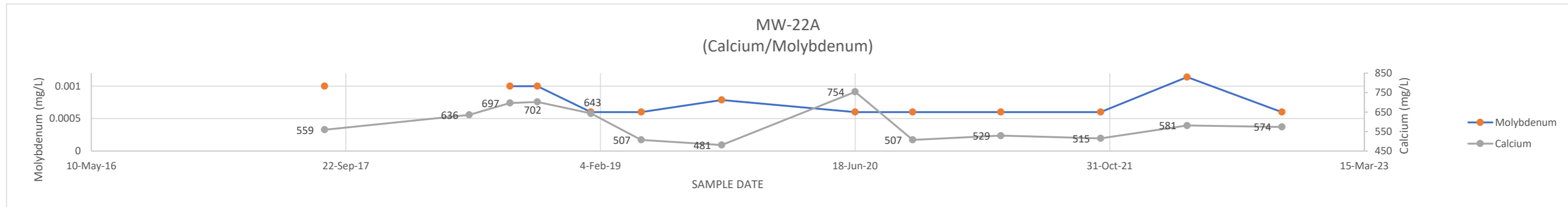


ATTACHMENT F-5  
CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS

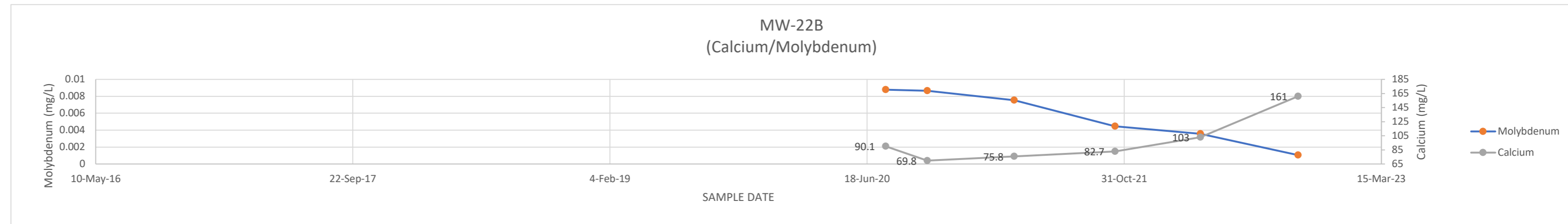
MW-19S		
DATE	CALCIUM	MOLYBDENUM
10-Aug-17	41.3	0.469
18-May-18	45.7	
2-Aug-18	35	0.384
10-Aug-18	24.8	0.112
3-Oct-18	35.3	0.439
15-Jan-19	50	0.472
25-Apr-19	52.4	0.462
1-Oct-19	40.4	0.377
17-Jun-20	43.6	0.402
12-Oct-20	40.7	0.367
31-Mar-21	42.3	0.398
15-Oct-21	41.6	0.407
1-Apr-22	44.2	0.445
6-Oct-22	40.7	0.43



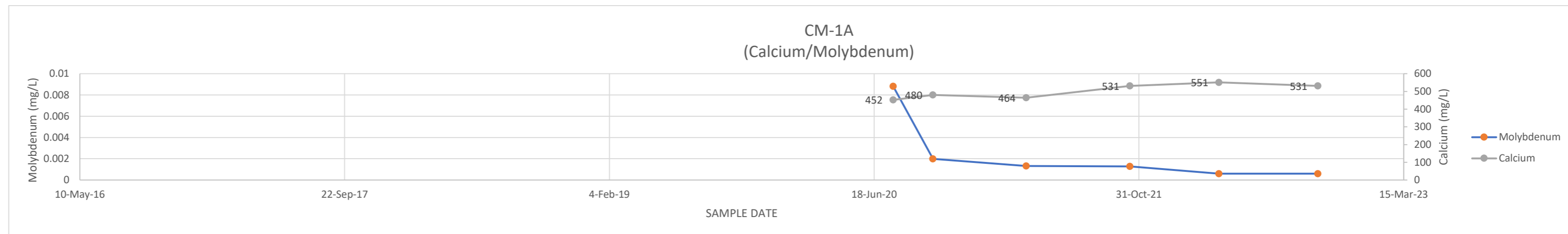
MW-22A		
DATE	CALCIUM	MOLYBDENUM
11-Aug-17	559	0.001
22-May-18	636	
10-Aug-18	697	0.001
3-Oct-18	702	0.001
16-Jan-19	643	0.0006
25-Apr-19	507	0.0006
30-Sep-19	481	0.000787
18-Jun-20	754	0.0006
9-Oct-20	507	0.0006
31-Mar-21	529	0.0006
13-Oct-21	515	0.0006
1-Apr-22	581	0.00114
4-Oct-22	574	0.0006



MW-22B		
DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	90.1	0.00878
13-Oct-20	69.8	0.00866
31-Mar-21	75.8	0.00753
13-Oct-21	82.7	0.00446
28-Mar-22	103	0.00357
4-Oct-22	161	0.00105

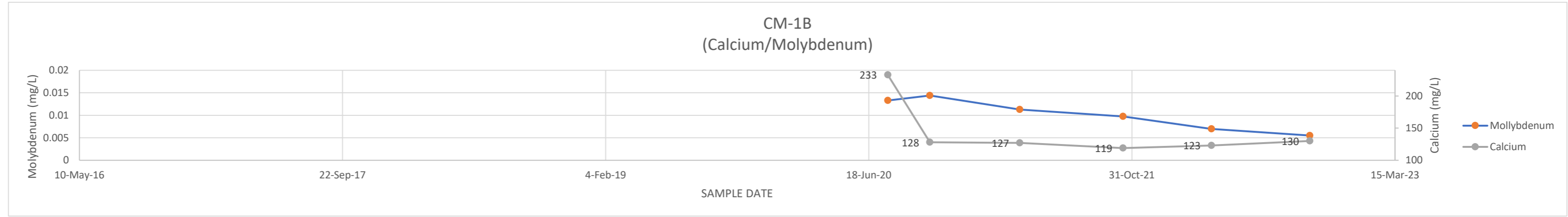


CM-1A		
DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	452	0.0088
7-Oct-20	480	0.00198
1-Apr-21	464	0.00132
14-Oct-21	531	0.00127
31-Mar-22	551	0.0006
4-Oct-22	531	0.0006

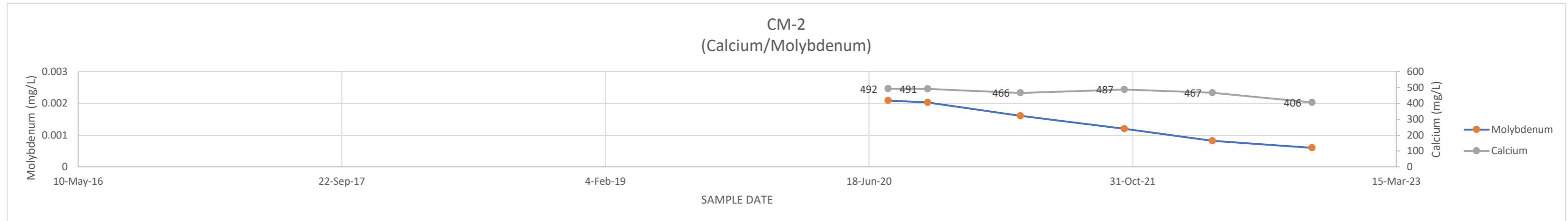


ATTACHMENT F-5  
CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS

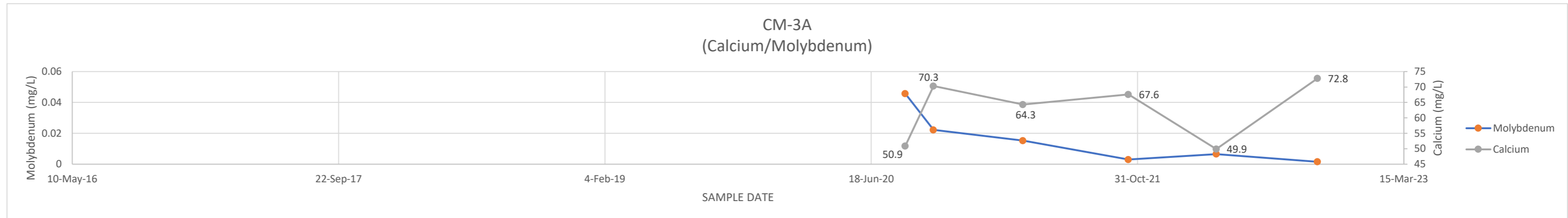
CM-1B DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	233	0.0133
12-Oct-20	128	0.0144
1-Apr-21	127	0.0113
14-Oct-21	119	0.00976
31-Mar-22	123	0.00696
4-Oct-22	130	0.00551



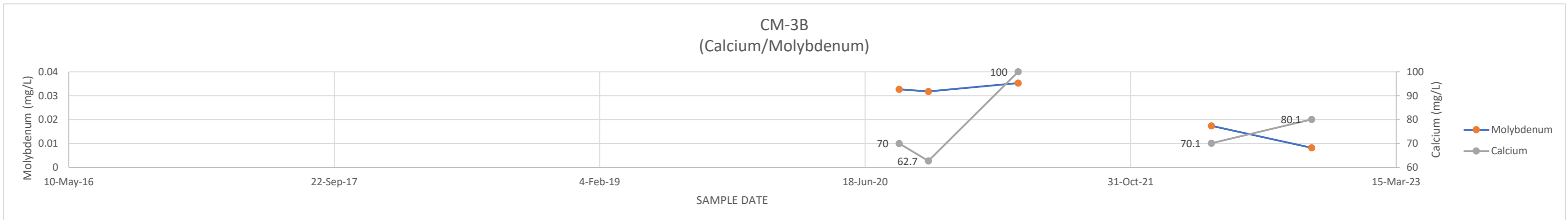
CM-2 DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	492	0.00209
7-Oct-20	491	0.00203
1-Apr-21	466	0.00161
15-Oct-21	487	0.0012
31-Mar-22	467	0.00082
6-Oct-22	406	0.0006



CM-3A DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	50.9	0.0457
13-Oct-20	70.3	0.0222
30-Mar-21	64.3	0.0153
14-Oct-21	67.6	0.00297
28-Mar-22	49.9	0.00656
4-Oct-22	72.8	0.00155

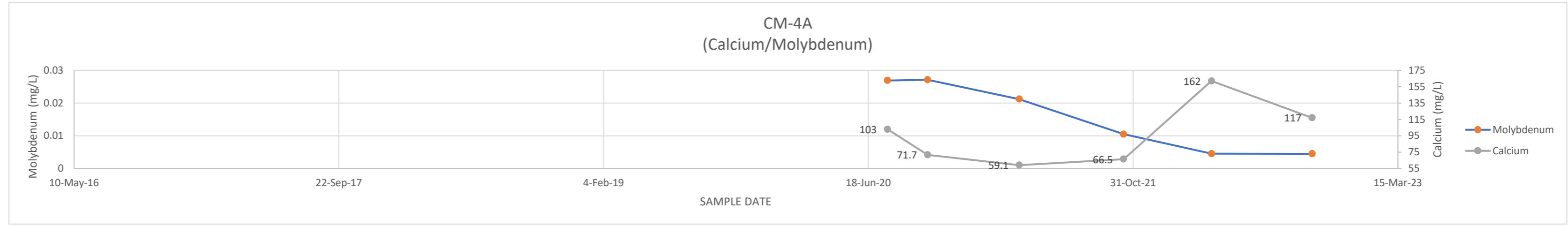


CM-3B DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	70	0.0327
15-Oct-20	62.7	0.0318
2-Apr-21	100	0.0353
11-Oct-21		
1-Apr-22	70.1	0.0174
7-Oct-22	80.1	0.00819

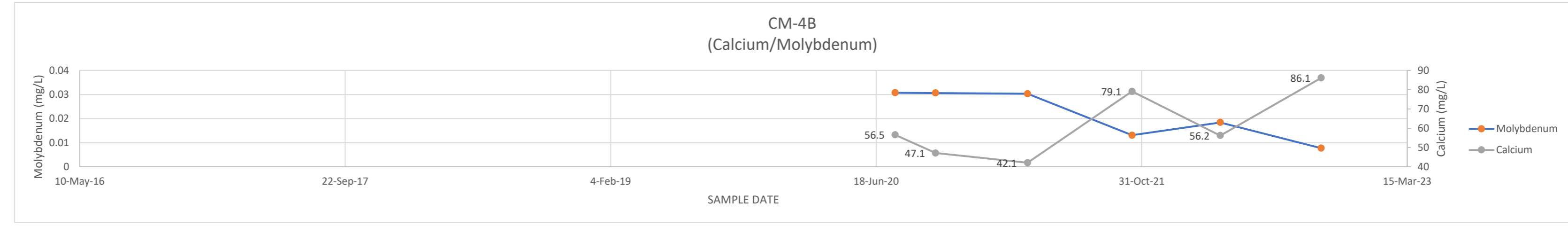


ATTACHMENT F-5  
CHANGES IN CALCIUM AND MOLYBDENUM CONCENTRATIONS

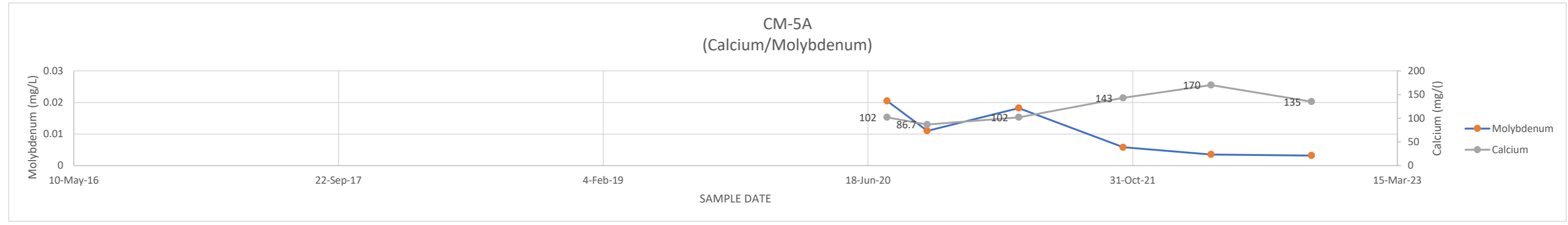
CM-4A DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	103	0.0269
8-Oct-20	71.7	0.0271
30-Mar-21	59.1	0.0212
13-Oct-21	66.5	0.0105
28-Mar-22	162	0.00455
4-Oct-22	117	0.00449



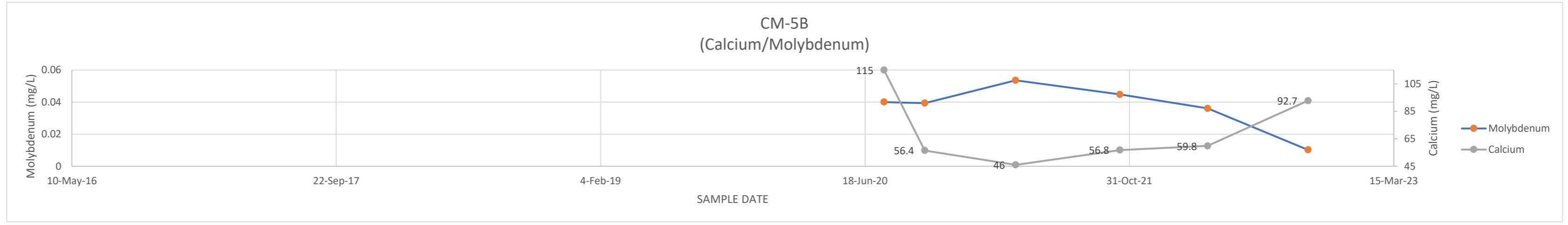
CM-4B DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	56.5	0.0307
8-Oct-20	47.1	0.0306
30-Mar-21	42.1	0.0303
13-Oct-21	79.1	0.0131
28-Mar-22	56.2	0.0184
4-Oct-22	86.1	0.00771



CM-5A DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	102	0.0205
8-Oct-20	86.7	0.011
30-Mar-21	102	0.0182
13-Oct-21	143	0.0058
28-Mar-22	170	0.00351
4-Oct-22	135	0.00317



CM-5B DATE	CALCIUM	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	115	0.04
9-Oct-20	56.4	0.0394
30-Mar-21	46	0.0536
13-Oct-21	56.8	0.0448
28-Mar-22	59.8	0.0361
4-Oct-22	92.7	0.0102



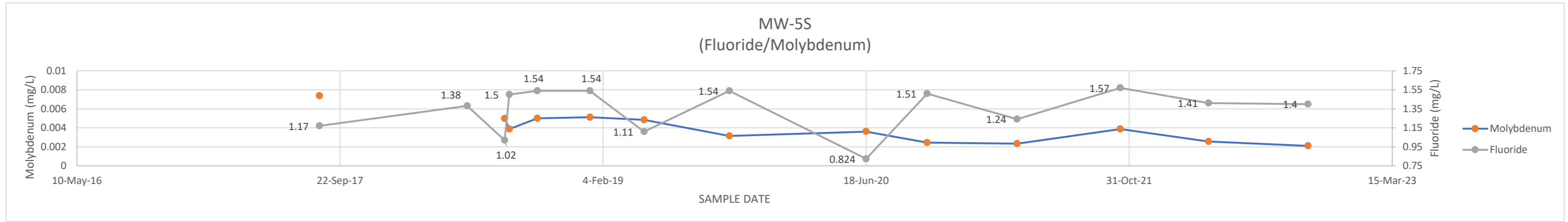
Yellow Indicates Reported Below shown value (MDL)



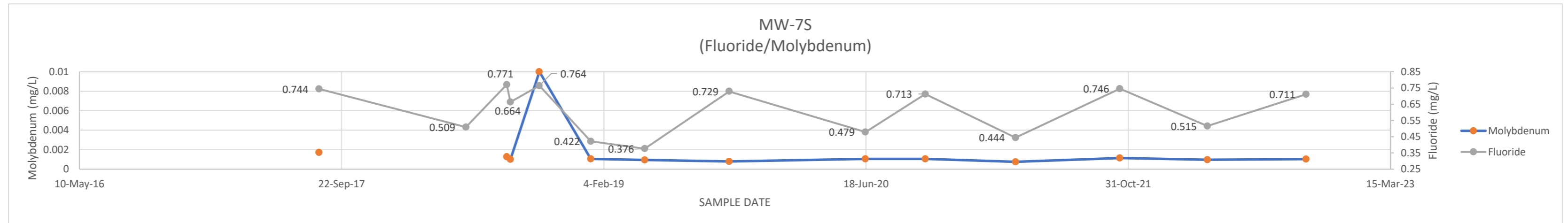
ATTACHMENT F-6  
CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	FLUORIDE	MOLYBDENUM
14-Aug-17	1.17	0.00737	
22-May-18	1.38		
1-Aug-18	1.02	0.00497	
10-Aug-18	1.5	0.00387	
2-Oct-18	1.54	0.005	
10-Jan-19	1.54	0.00512	
23-Apr-19	1.11	0.00485	
2-Oct-19	1.54	0.00315	
18-Jun-20	0.824	0.00361	
12-Oct-20	1.51	0.00244	
1-Apr-21	1.24	0.00234	
14-Oct-21	1.57	0.00387	
31-Mar-22	1.41	0.00257	
6-Oct-22	1.4	0.0021	

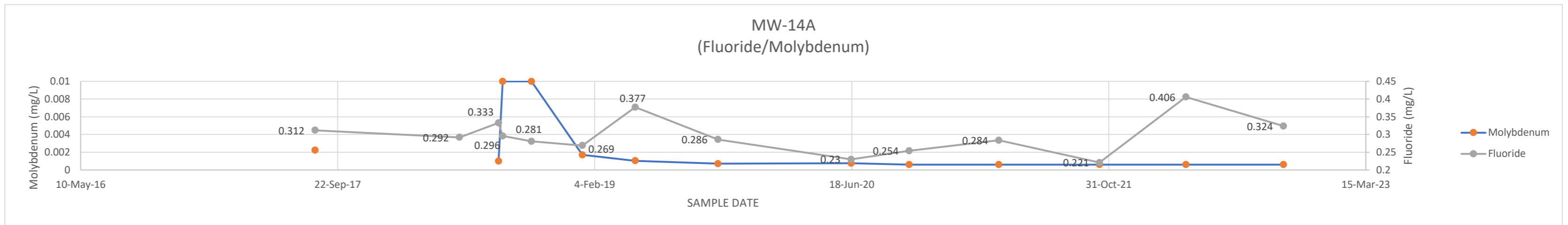
Value denoted in red from June 2022 resample



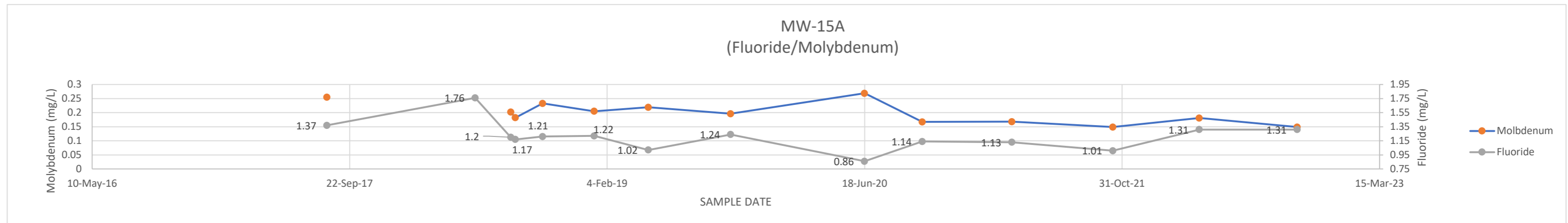
MW-7S	DATE	FLUORIDE	MOLYBDENUM
10-Aug-17	0.744	0.00171	
17-May-18	0.509		
3-Aug-18	0.771	0.00127	
10-Aug-18	0.664	0.001	
4-Oct-18	0.764	0.01	
10-Jan-19	0.422	0.00105	
23-Apr-19	0.376	0.000952	
1-Oct-19	0.729	0.000798	
17-Jun-20	0.479	0.00105	
9-Oct-20	0.713	0.00106	
30-Mar-21	0.444	0.000755	
15-Oct-21	0.746	0.00115	
31-Mar-22	0.515	0.000973	
5-Oct-22	0.711	0.00103	



MW-14A	DATE	FLUORIDE	MOLYBDENUM
9-Aug-17	0.312	0.00223	
17-May-18	0.292		
1-Aug-18	0.333	0.001	
9-Aug-18	0.296	0.01	
4-Oct-18	0.281	0.01	
11-Jan-19	0.269	0.0017	
24-Apr-19	0.377	0.00104	
2-Oct-19	0.286	0.000709	
17-Jun-20	0.23	0.00076	
8-Oct-20	0.254	0.0006	
31-Mar-21	0.284	0.0006	
13-Oct-21	0.221	0.0006	
30-Mar-22	0.406	0.0006	
6-Oct-22	0.324	0.0006	

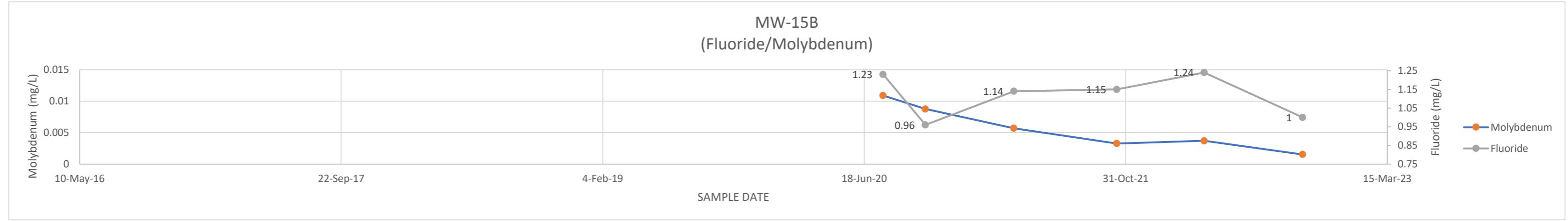


MW-15A	DATE	FLUORIDE	MOLYBDENUM
9-Aug-17	1.37	0.255	
24-May-18	1.76		
1-Aug-18	1.2	0.202	
10-Aug-18	1.17	0.182	
2-Oct-18	1.21	0.233	
10-Jan-19	1.22	0.205	
25-Apr-19	1.02	0.219	
2-Oct-19	1.24	0.196	
18-Jun-20	0.86	0.269	
8-Oct-20	1.14	0.167	
31-Mar-21	1.13	0.168	
13-Oct-21	1.01	0.149	
30-Mar-22	1.31	0.181	
6-Oct-22	1.31	0.149	

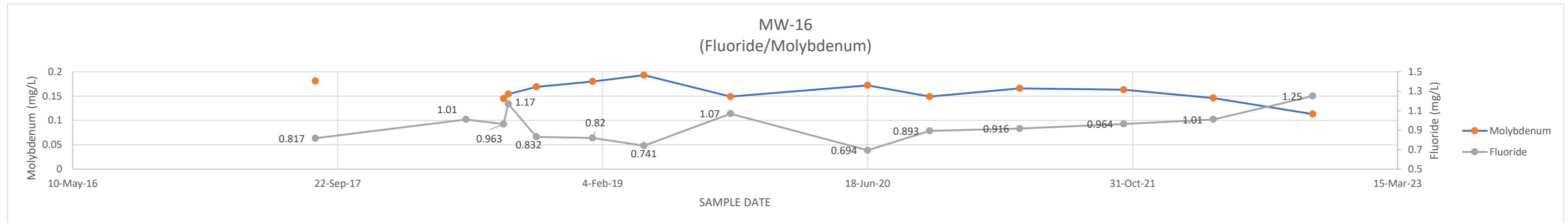


ATTACHMENT F-6  
CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS

MW-15B	FLUORID	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1.23	0.0109
13-Oct-20	0.96	0.00876
31-Mar-21	1.14	0.00571
14-Oct-21	1.15	0.00328
30-Mar-22	1.24	0.0037
4-Oct-22	1	0.00153

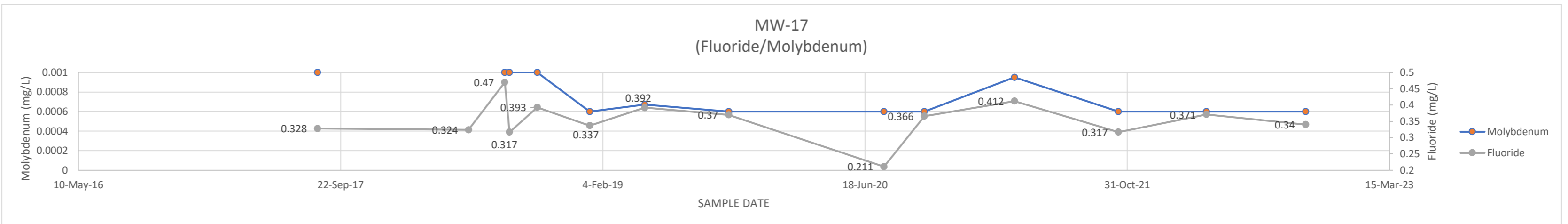


MW-16	FLUORIDE	MOLYBDENUM
DATE		
11-Aug-17	0.817	0.181
22-May-18	1.01	
1-Aug-18	0.963	0.145
10-Aug-18	1.17	0.154
2-Oct-18	0.832	0.169
16-Jan-19	0.82	0.18
23-Apr-19	0.741	0.193
3-Oct-19	1.07	0.149
18-Jun-20	0.694	0.172
13-Oct-20	0.893	0.149
1-Apr-21	0.916	0.166
14-Oct-21	0.964	0.163
1-Apr-22	1.01	0.146
6-Oct-22	1.25	0.113



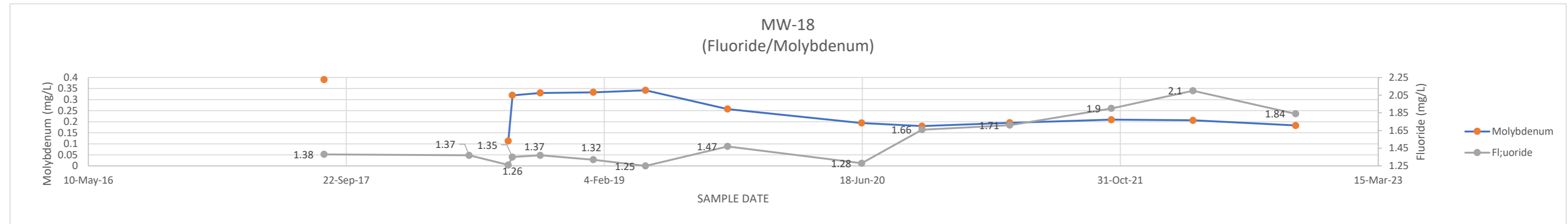
Value denoted in red from June 2022 resample

MW-17	FLUORIDE	MOLYBDENUM
DATE		
9-Aug-17	0.328	0.001
24-May-18	0.324	
1-Aug-18	0.47	0.001
10-Aug-18	0.317	0.001
2-Oct-18	0.393	0.001
10-Jan-19	0.337	0.0006
25-Apr-19	0.392	0.000671
2-Oct-19	0.37	0.0006
24-Jul-20	0.211	0.0006
9-Oct-20	0.366	0.0006
30-Mar-21	0.412	0.00095
14-Oct-21	0.317	0.0006
31-Mar-22	0.371	0.0006
6-Oct-22	0.34	0.0006



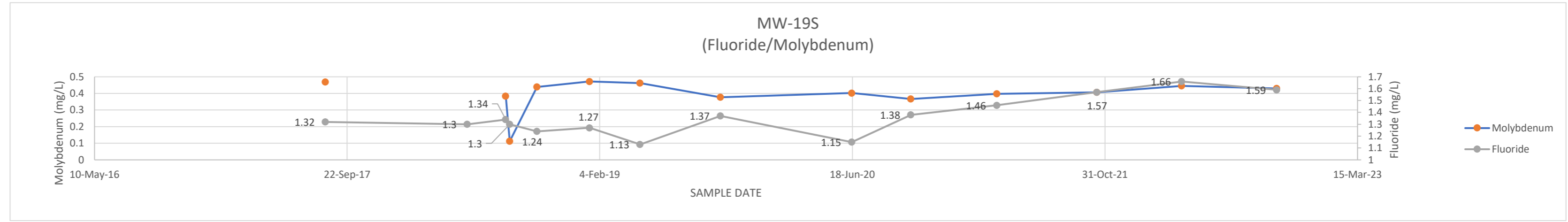
Value denoted in red from June 2022 resample

MW-18	FLUORIDE	MOLYBDENUM
DATE		
10-Aug-17	1.38	0.39
18-May-18	1.37	
2-Aug-18	1.26	0.113
10-Aug-18	1.35	0.319
3-Oct-18	1.37	0.33
14-Jan-19	1.32	0.333
25-Apr-19	1.25	0.342
1-Oct-19	1.47	0.257
17-Jun-20	1.28	0.194
12-Oct-20	1.66	0.18
31-Mar-21	1.71	0.195
14-Oct-21	1.9	0.209
21-Mar-22	2.1	0.206
6-Oct-22	1.84	0.183

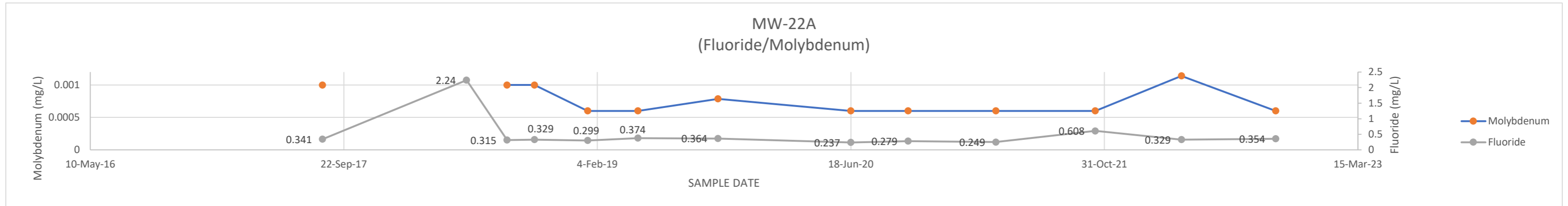


ATTACHMENT F-6  
CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS

MW-19S	FLUORIDE	MOLYBDENUM
DATE		
10-Aug-17	1.32	0.469
18-May-18	1.3	
2-Aug-18	1.34	0.384
10-Aug-18	1.3	0.112
3-Oct-18	1.24	0.439
15-Jan-19	1.27	0.472
25-Apr-19	1.13	0.462
1-Oct-19	1.37	0.377
17-Jun-20	1.15	0.402
12-Oct-20	1.38	0.367
31-Mar-21	1.46	0.398
15-Oct-21	1.57	0.407
1-Apr-22	1.66	0.445
6-Oct-22	1.59	0.43

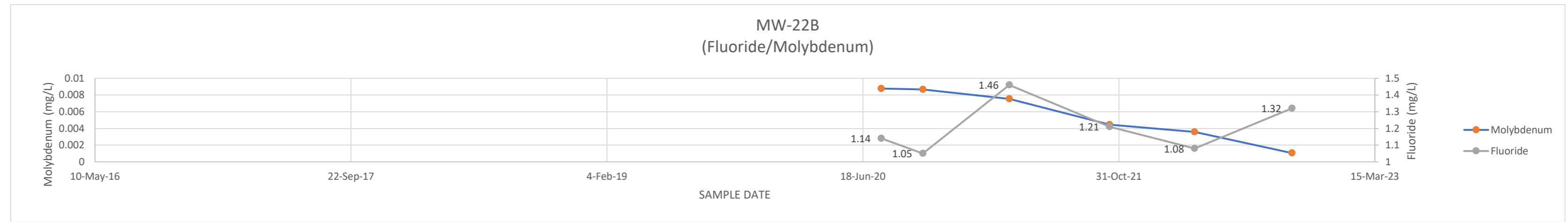


MW-22A	FLUROIDE	MOLYBDENUM
DATE		
11-Aug-17	0.341	0.001
22-May-18	2.24	
10-Aug-18	0.315	0.001
3-Oct-18	0.329	0.001
16-Jan-19	0.299	0.0006
25-Apr-19	0.374	0.0006
30-Sep-19	0.364	0.000787
18-Jun-20	0.237	0.0006
9-Oct-20	0.279	0.0006
31-Mar-21	0.249	0.0006
13-Oct-21	0.608	0.0006
1-Apr-22	0.329	0.00114
4-Oct-22	0.354	0.0006

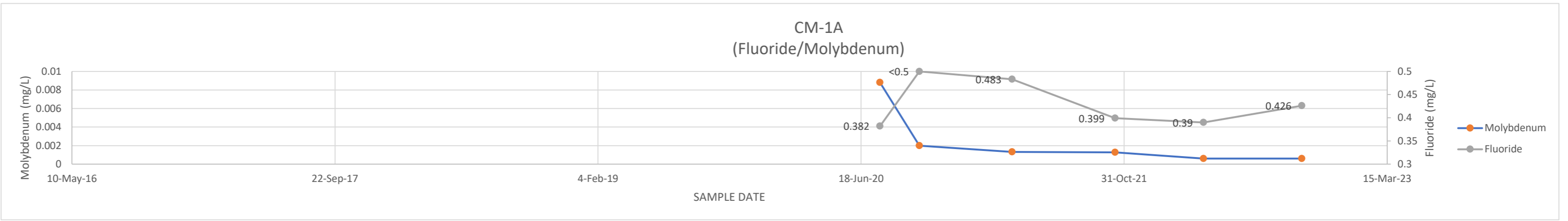


Value denoted in red from June 2022 resample

MW-22B	FLUORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1.14	0.00878
13-Oct-20	1.05	0.00866
31-Mar-21	1.46	0.00753
13-Oct-21	1.21	0.00446
28-Mar-22	1.08	0.00357
4-Oct-22	1.32	0.00105

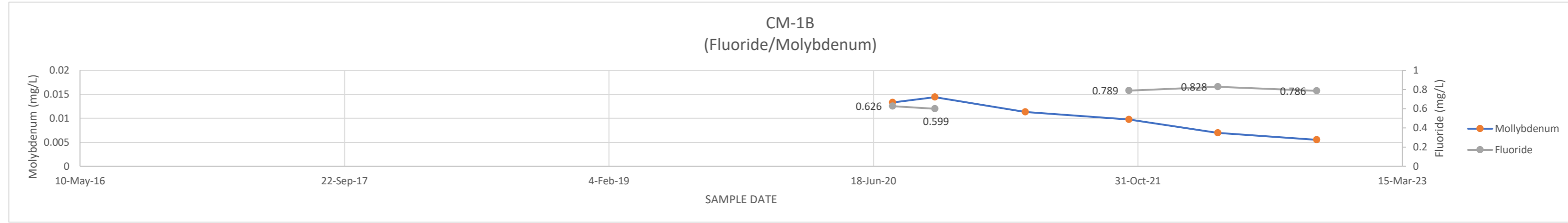


CM-1A	FLUORIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.382	0.0088
7-Oct-20	0.5	0.00198
1-Apr-21	0.483	0.00132
14-Oct-21	0.399	0.00127
31-Mar-22	0.39	0.0006
4-Oct-22	0.426	0.0006

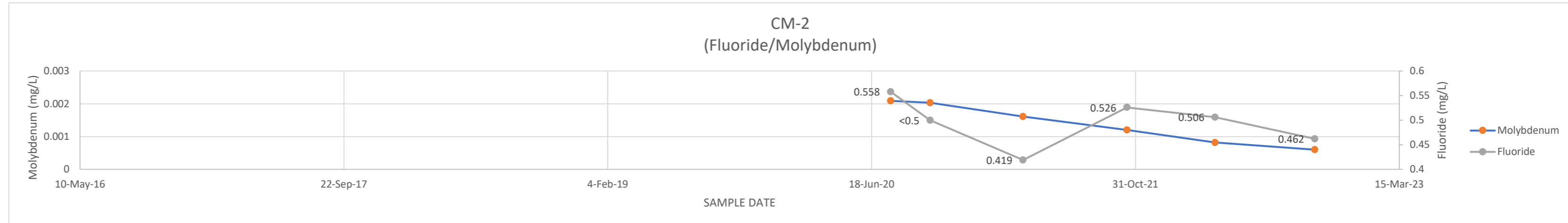


ATTACHMENT F-6  
CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS

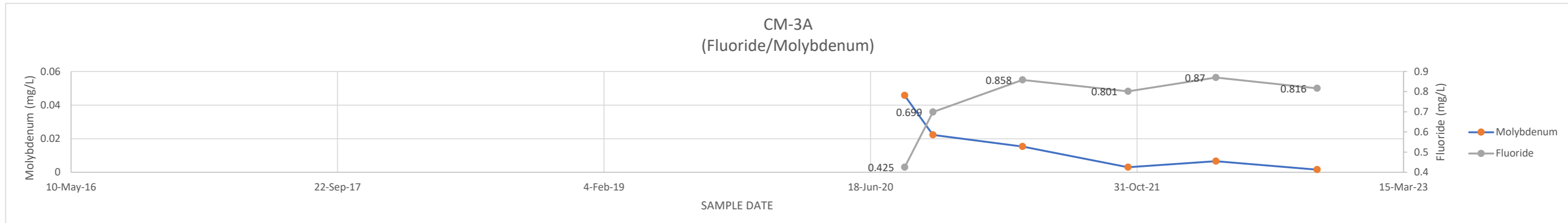
CM-1B DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.626	0.0133
12-Oct-20	0.599	0.0144
1-Apr-21		0.0113
14-Oct-21	0.789	0.00976
31-Mar-22	0.828	0.00696
4-Oct-22	0.786	0.00551



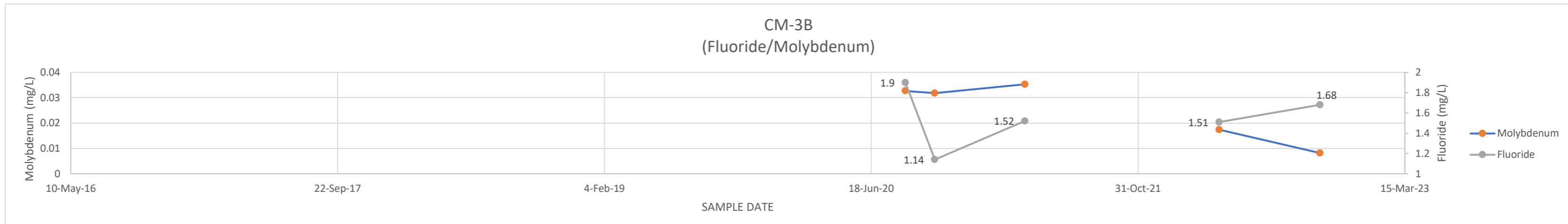
CM-2 DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.558	0.00209
7-Oct-20	0.5	0.00203
1-Apr-21	0.419	0.00161
15-Oct-21	0.526	0.0012
31-Mar-22	0.506	0.00082
6-Oct-22	0.462	0.0006



CM-3A DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	0.425	0.0457
13-Oct-20	0.699	0.0222
30-Mar-21	0.858	0.0153
14-Oct-21	0.801	0.00297
28-Mar-22	0.87	0.00656
4-Oct-22	0.816	0.00155

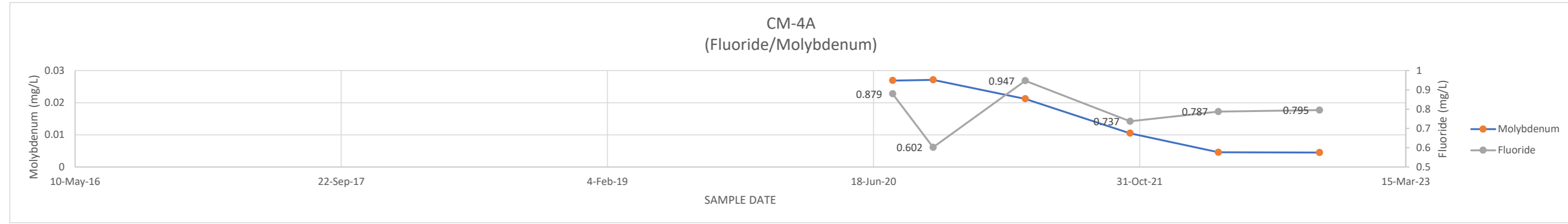


CM-3B DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	1.9	0.0327
15-Oct-20	1.14	0.0318
2-Apr-21	1.52	0.0353
11-Oct-21		
1-Apr-22	1.51	0.0174
7-Oct-22	1.68	0.00819

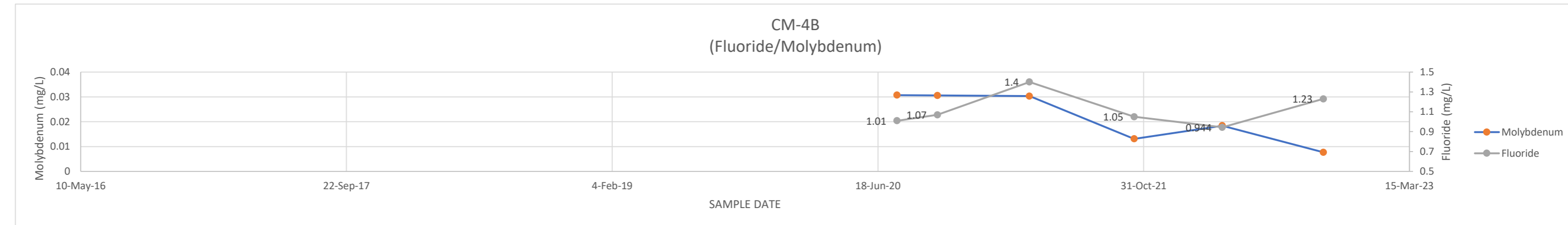


ATTACHMENT F-6  
CHANGES IN FLUORIDE AND MOLYBDENUM CONCENTRATIONS

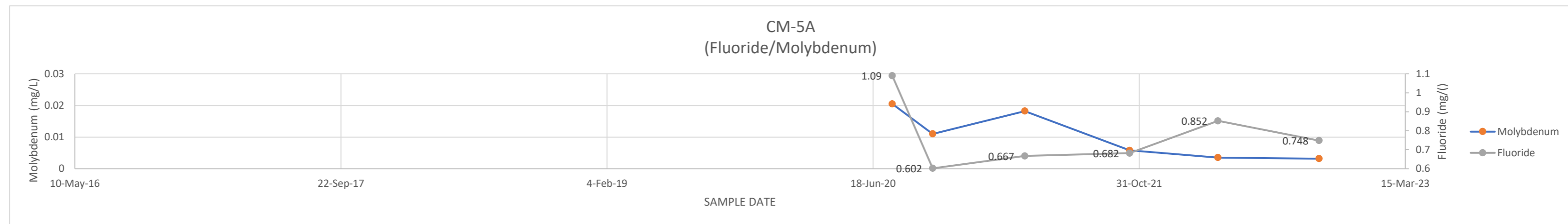
CM-4A DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.879	0.0269
8-Oct-20	0.602	0.0271
30-Mar-21	0.947	0.0212
13-Oct-21	0.737	0.0105
28-Mar-22	0.787	0.00455
4-Oct-22	0.795	0.00449



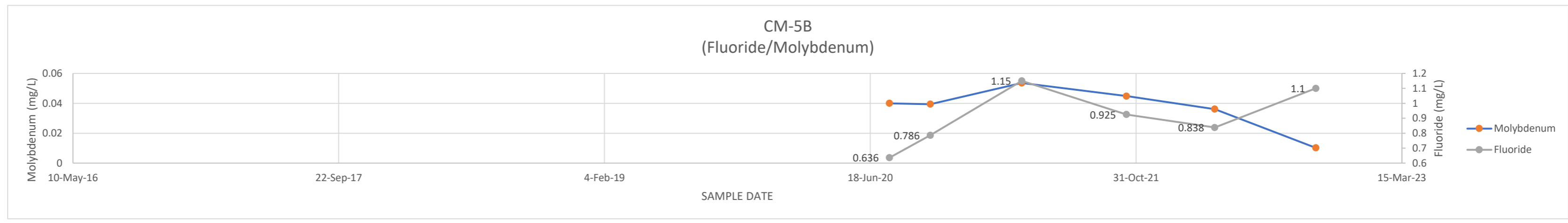
CM-4B DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1.01	0.0307
8-Oct-20	1.07	0.0306
30-Mar-21	1.4	0.0303
13-Oct-21	1.05	0.0131
28-Mar-22	0.944	0.0184
4-Oct-22	1.23	0.00771



CM-5A DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1.09	0.0205
8-Oct-20	0.602	0.011
30-Mar-21	0.667	0.0182
13-Oct-21	0.682	0.0058
28-Mar-22	0.852	0.00351
4-Oct-22	0.748	0.00317



CM-5B DATE	FLUORIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.636	0.04
9-Oct-20	0.786	0.0394
30-Mar-21	1.15	0.0536
13-Oct-21	0.925	0.0448
28-Mar-22	0.838	0.0361
4-Oct-22	1.1	0.0102

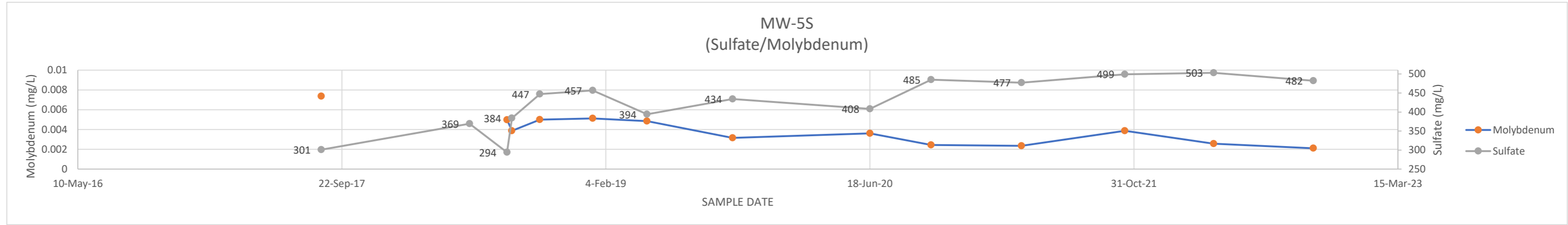


Yellow Indicates Reported Below shown value (MDL)

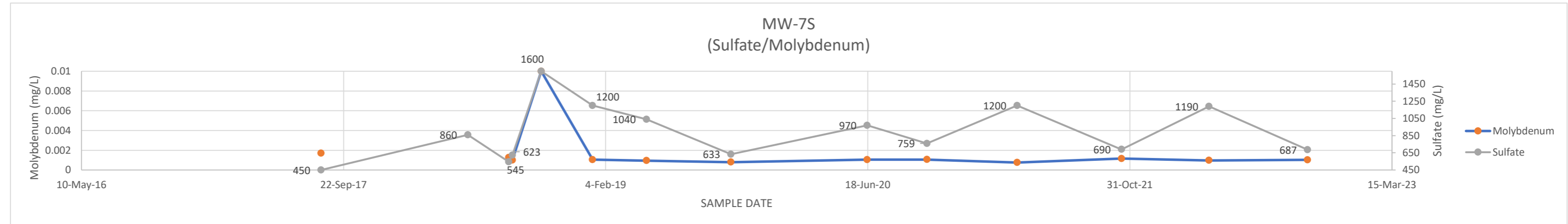
ATTACHMENT F-7  
CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

MW-5S	SULFATE	MOLYBDENUM
DATE		
14-Aug-17	301	0.00737
22-May-18	369	
1-Aug-18	294	0.00497
10-Aug-18	384	0.00387
2-Oct-18	447	0.005
10-Jan-19	457	0.00512
23-Apr-19	394	0.00485
2-Oct-19	434	0.00315
18-Jun-20	408	0.00361
12-Oct-20	485	0.00244
1-Apr-21	477	0.00234
14-Oct-21	499	0.00387
31-Mar-22	503	0.00257
6-Oct-22	482	0.0021

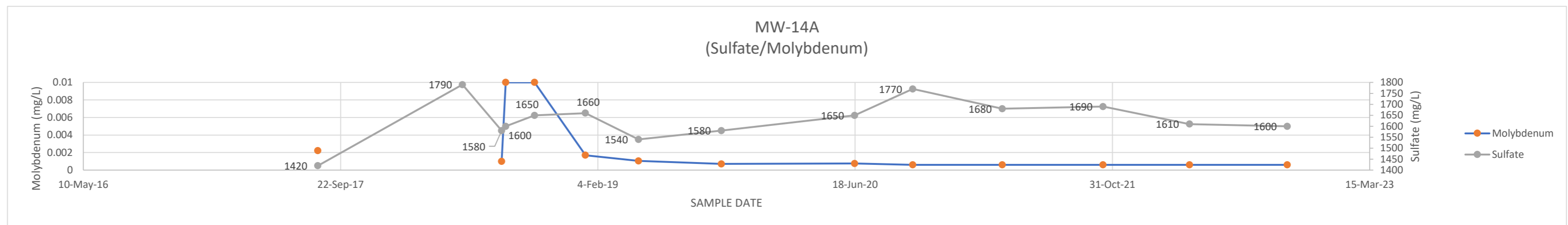
Value denoted in red from June 2022 resample



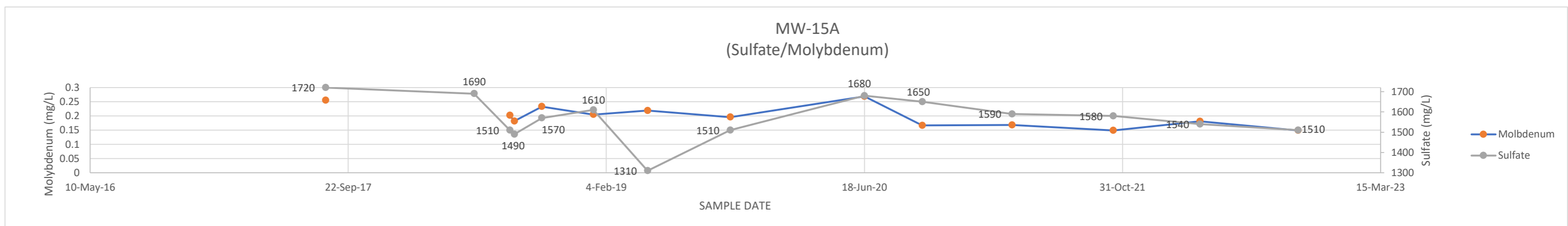
MW-7S	SULFATE	MOLYBDENUM
DATE		
10-Aug-17	450	0.00171
17-May-18	860	
3-Aug-18	545	0.00127
10-Aug-18	623	0.001
4-Oct-18	1600	0.01
10-Jan-19	1200	0.00105
23-Apr-19	1040	0.000952
1-Oct-19	633	0.000798
17-Jun-20	970	0.00105
9-Oct-20	759	0.00106
30-Mar-21	1200	0.000755
15-Oct-21	690	0.00115
31-Mar-22	1190	0.000973
5-Oct-22	687	0.00103



MW-14A	SULFATE	MOLYBDENUM
DATE		
9-Aug-17	1420	0.00223
17-May-18	1790	
1-Aug-18	1580	0.001
9-Aug-18	1600	0.01
4-Oct-18	1650	0.01
11-Jan-19	1660	0.0017
24-Apr-19	1540	0.00104
2-Oct-19	1580	0.000709
17-Jun-20	1650	0.00076
8-Oct-20	1770	0.0006
31-Mar-21	1680	0.0006
13-Oct-21	1690	0.0006
30-Mar-22	1610	0.0006
6-Oct-22	1600	0.0006

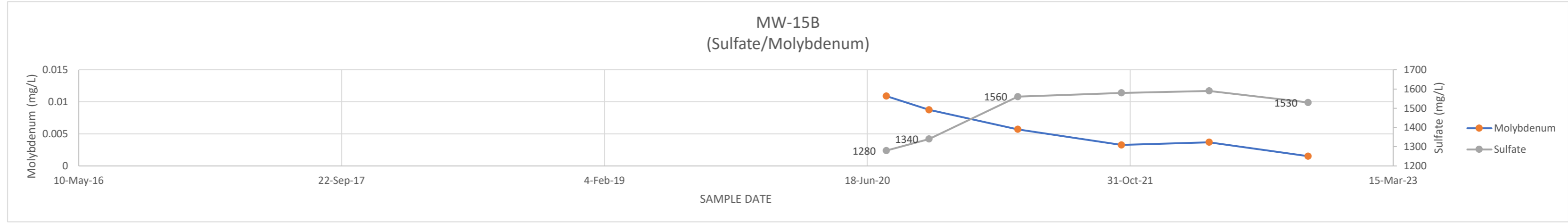


MW-15A	SULFATE	MOLYBDENUM
DATE		
9-Aug-17	1720	0.255
24-May-18	1690	
1-Aug-18	1510	0.202
10-Aug-18	1490	0.182
2-Oct-18	1570	0.233
10-Jan-19	1610	0.205
25-Apr-19	1310	0.219
2-Oct-19	1510	0.196
18-Jun-20	1680	0.269
8-Oct-20	1650	0.167
31-Mar-21	1590	0.168
13-Oct-21	1580	0.149
30-Mar-22	1540	0.181
6-Oct-22	1510	0.149

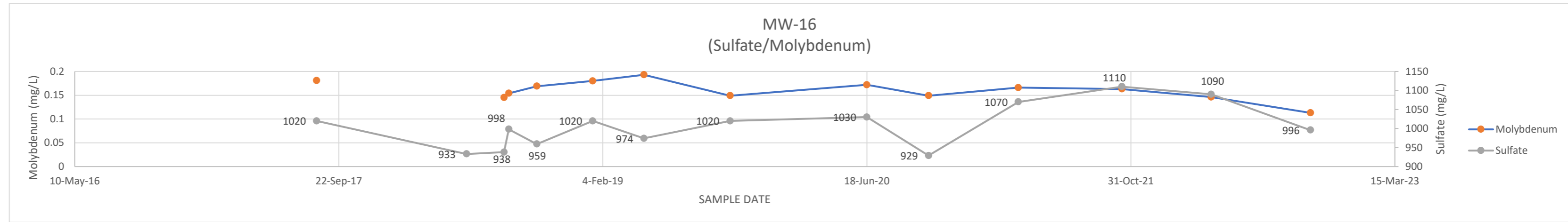


ATTACHMENT F-7  
CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

MW-15B	SULFATE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1280	0.0109
13-Oct-20	1340	0.00876
31-Mar-21	1560	0.00571
14-Oct-21	1580	0.00328
30-Mar-22	1590	0.0037
4-Oct-22	1530	0.00153

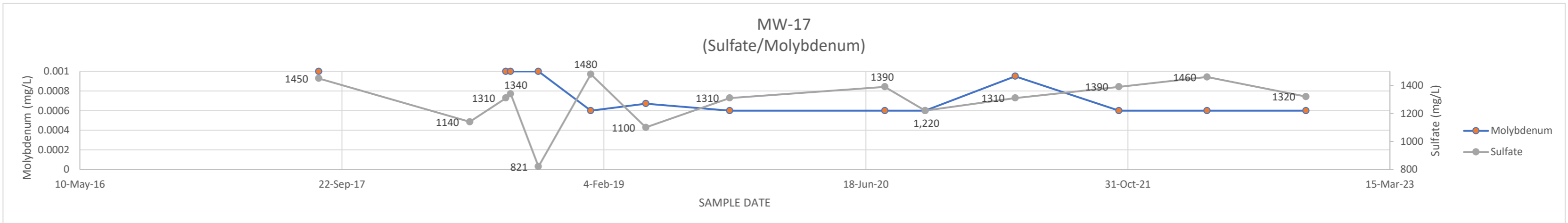


MW-16	SULFATE	MOLYBDENUM
DATE		
11-Aug-17	1020	0.181
22-May-18	933	
1-Aug-18	938	0.145
10-Aug-18	998	0.154
2-Oct-18	959	0.169
16-Jan-19	1020	0.18
23-Apr-19	974	0.193
3-Oct-19	1020	0.149
18-Jun-20	1030	0.172
13-Oct-20	929	0.149
1-Apr-21	1070	0.166
14-Oct-21	1110	0.163
1-Apr-22	1090	0.146
6-Oct-22	996	0.113



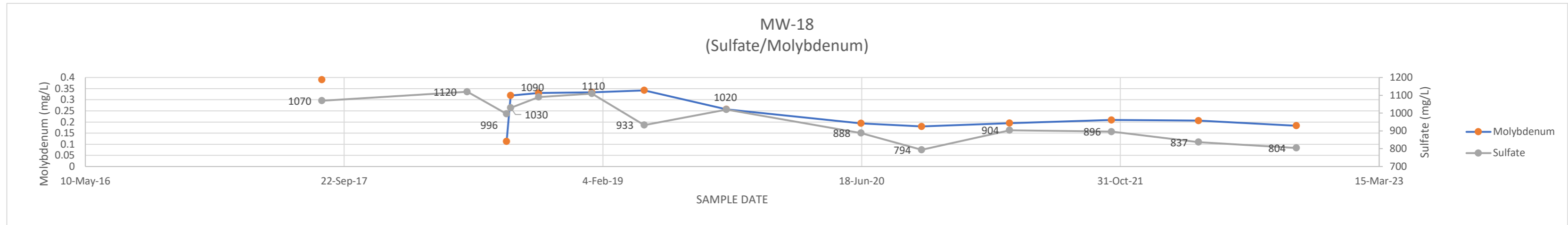
Value denoted in red from June 2022 resample

MW-17	SULFATE	MOLYBDENUM
DATE		
9-Aug-17	1450	0.001
24-May-18	1140	
1-Aug-18	1310	0.001
10-Aug-18	1340	0.001
2-Oct-18	821	0.001
10-Jan-19	1480	0.0006
25-Apr-19	1100	0.000671
2-Oct-19	1310	0.0006
24-Jul-20	1390	0.0006
9-Oct-20	1,220	0.0006
30-Mar-21	1310	0.00095
14-Oct-21	1390	0.0006
31-Mar-22	1460	0.0006
6-Oct-22	1320	0.0006



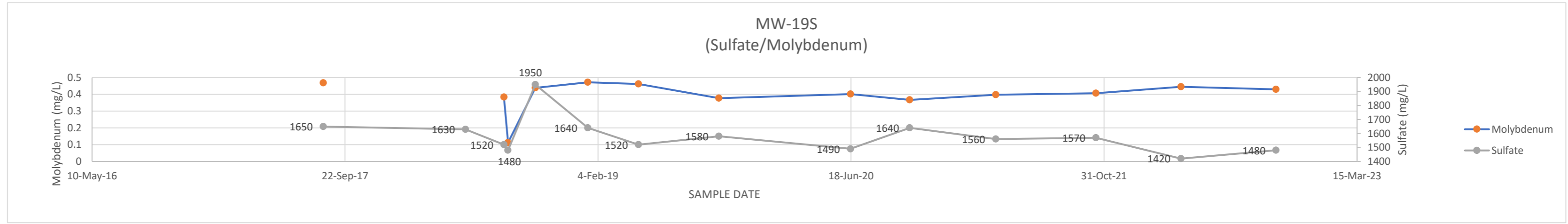
Value denoted in red from June 2022 resample

MW-18	SULFATE	MOLYBDENUM
DATE		
10-Aug-17	1070	0.39
18-May-18	1120	
2-Aug-18	996	0.113
10-Aug-18	1030	0.319
3-Oct-18	1090	0.33
14-Jan-19	1110	0.333
25-Apr-19	933	0.342
1-Oct-19	1020	0.257
17-Jun-20	888	0.194
12-Oct-20	794	0.18
31-Mar-21	904	0.195
14-Oct-21	896	0.209
31-Mar-22	837	0.206
6-Oct-22	804	0.183

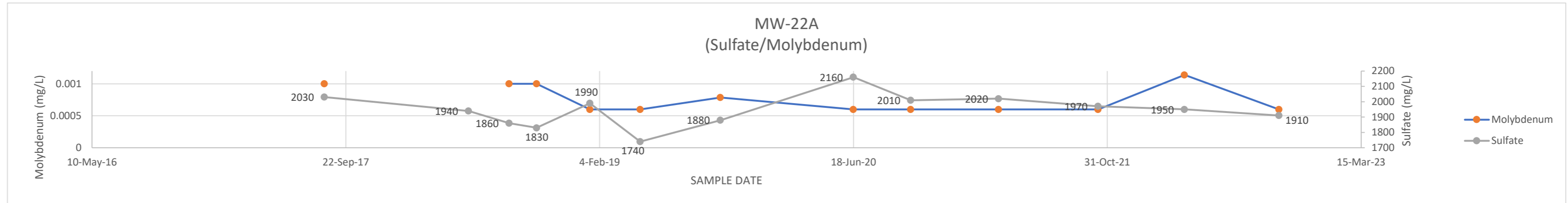


ATTACHMENT F-7  
CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

MW-19S	SULFATE	MOLYBDENUM
DATE		
10-Aug-17	1650	0.469
18-May-18	1630	
2-Aug-18	1520	0.384
10-Aug-18	1480	0.112
3-Oct-18	1950	0.439
15-Jan-19	1640	0.472
25-Apr-19	1520	0.462
1-Oct-19	1580	0.377
17-Jun-20	1490	0.402
12-Oct-20	1640	0.367
31-Mar-21	1560	0.398
15-Oct-21	1570	0.407
1-Apr-22	1420	0.445
6-Oct-22	1480	0.43

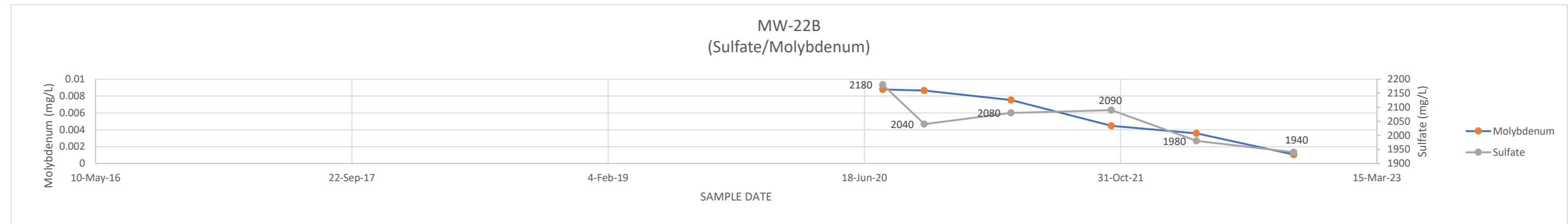


MW-22A	SULFATE	MOLYBDENUM
DATE		
11-Aug-17	2030	0.001
22-May-18	1940	
10-Aug-18	1860	0.001
3-Oct-18	1830	0.001
16-Jan-19	1990	0.0006
25-Apr-19	1740	0.0006
30-Sep-19	1880	0.000787
18-Jun-20	2160	0.0006
9-Oct-20	2010	0.0006
31-Mar-21	2020	0.0006
13-Oct-21	1970	0.0006
1-Apr-22	1950	0.00114
4-Oct-22	1910	0.0006

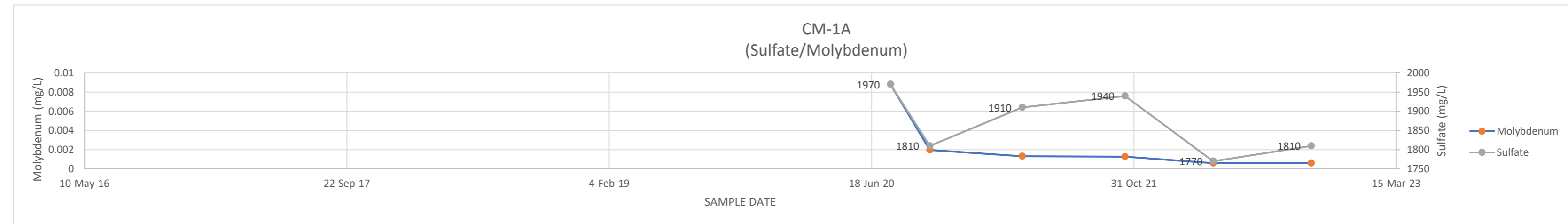


Value denoted in red from June 2022 resample

MW-22B	SULFATE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2180	0.00878
13-Oct-20	2040	0.00866
31-Mar-21	2080	0.00753
13-Oct-21	2090	0.00446
28-Mar-22	1980	0.00357
4-Oct-22	1940	0.00105



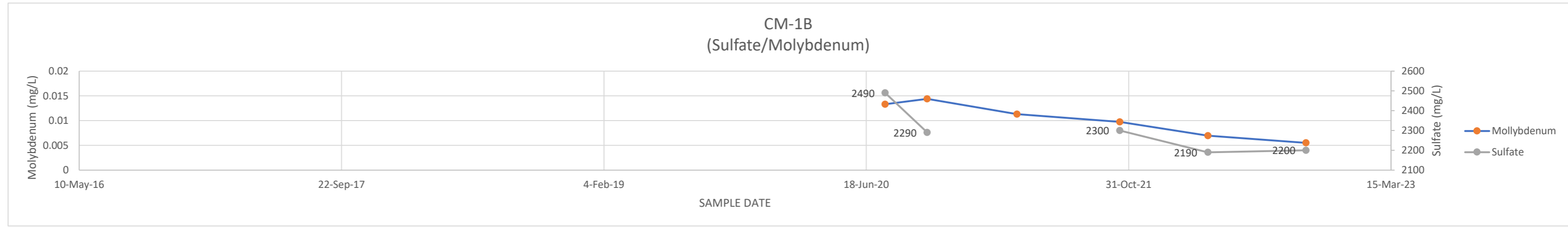
CM-1A	SULFATE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1970	0.0088
7-Oct-20	1810	0.00198
1-Apr-21	1910	0.00132
14-Oct-21	1940	0.00127
31-Mar-22	1770	0.0006
4-Oct-22	1810	0.0006



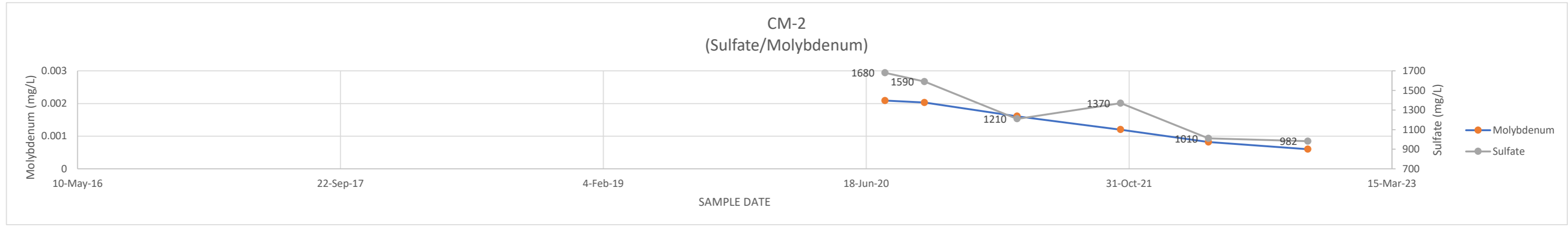


ATTACHMENT F-7  
CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

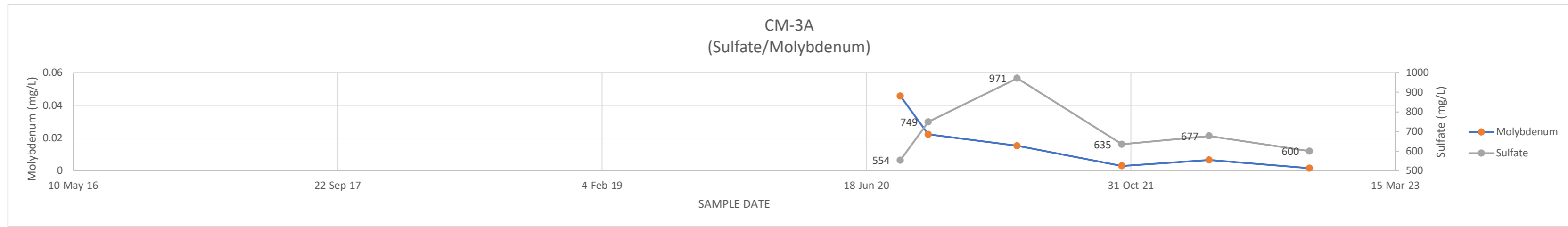
CM-1B DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2490	0.0133
12-Oct-20	2290	0.0144
1-Apr-21		0.0113
14-Oct-21	2300	0.00976
31-Mar-22	2190	0.00696
4-Oct-22	2200	0.00551



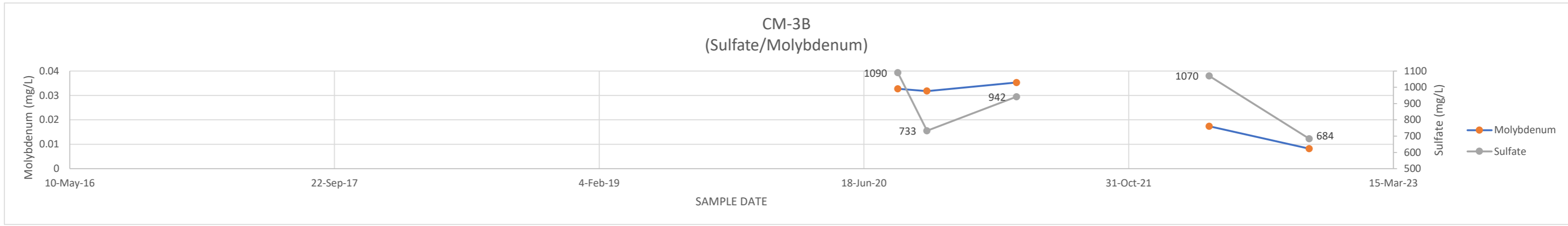
CM-2 DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1680	0.00209
7-Oct-20	1590	0.00203
1-Apr-21	1210	0.00161
15-Oct-21	1370	0.0012
31-Mar-22	1010	0.00082
6-Oct-22	982	0.0006



CM-3A DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	554	0.0457
13-Oct-20	749	0.0222
30-Mar-21	971	0.0153
14-Oct-21	635	0.00297
28-Mar-22	677	0.00656
4-Oct-22	600	0.00155

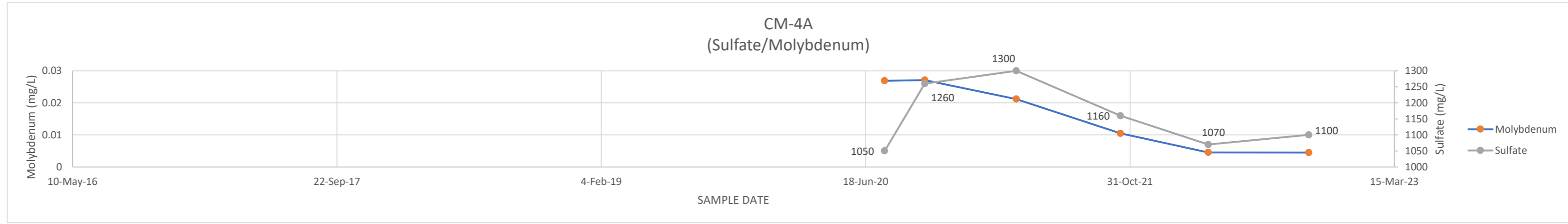


CM-3B DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	1090	0.0327
15-Oct-20	733	0.0318
2-Apr-21	942	0.0353
11-Oct-21		
1-Apr-22	1070	0.0174
7-Oct-22	684	0.00819

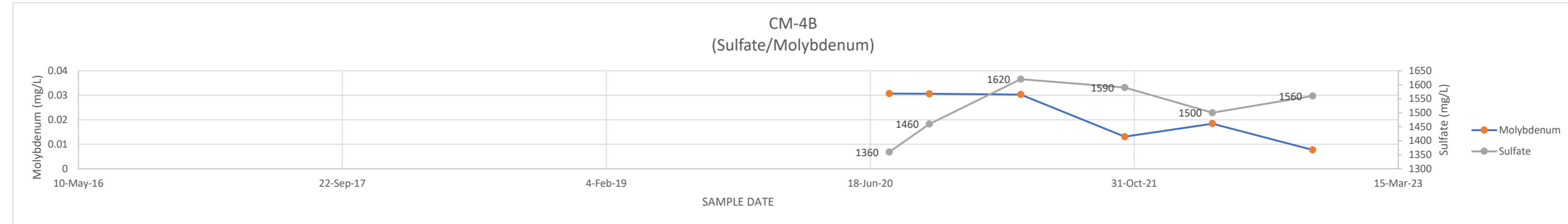


ATTACHMENT F-7  
CHANGES IN SULFATE AND MOLYBDENUM CONCENTRATIONS

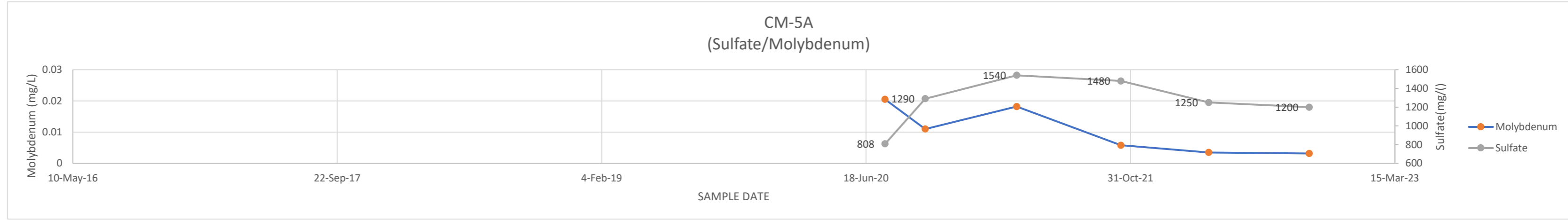
CM-4A DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1050	0.0269
8-Oct-20	1260	0.0271
30-Mar-21	1300	0.0212
13-Oct-21	1160	0.0105
28-Mar-22	1070	0.00455
4-Oct-22	1100	0.00449



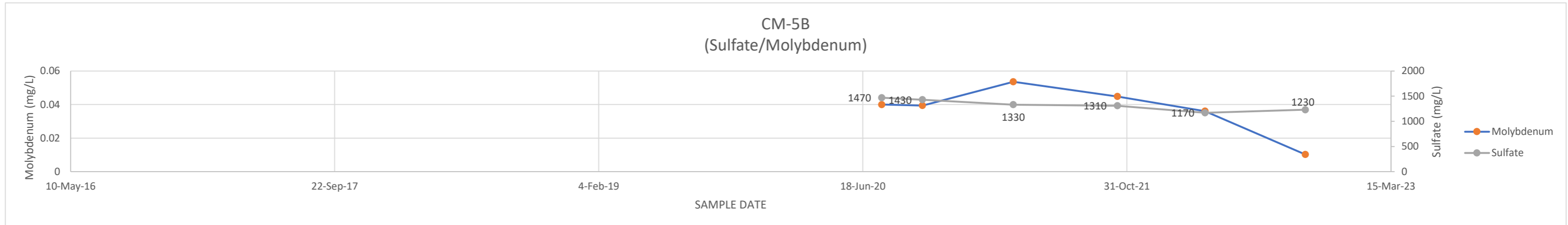
CM-4B DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1360	0.0307
8-Oct-20	1460	0.0306
30-Mar-21	1620	0.0303
13-Oct-21	1590	0.0131
28-Mar-22	1500	0.0184
4-Oct-22	1560	0.00771



CM-5A DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	808	0.0205
8-Oct-20	1290	0.011
30-Mar-21	1540	0.0182
13-Oct-21	1480	0.0058
28-Mar-22	1250	0.00351
4-Oct-22	1200	0.00317



CM-5B DATE	SULFATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1470	0.04
9-Oct-20	1430	0.0394
30-Mar-21	1330	0.0536
13-Oct-21	1310	0.0448
28-Mar-22	1170	0.0361
4-Oct-22	1230	0.0102



Yellow Indicates Reported Below shown value (MDL)

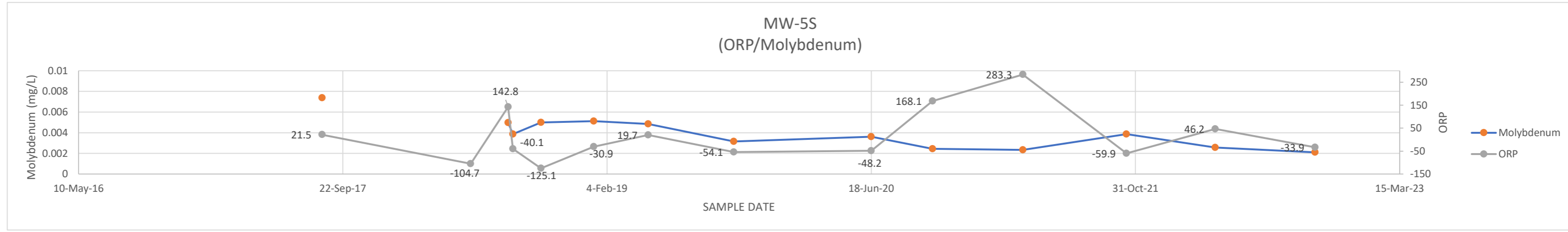
## **ATTACHMENT G**

CHANGES IN CONCENTRATION OF INDICATOR PARAMETERS FOR MNA COMPARED TO CHANGES IN MOLYBDENUM CONCENTRATION OVER SAMPLING HISTORY

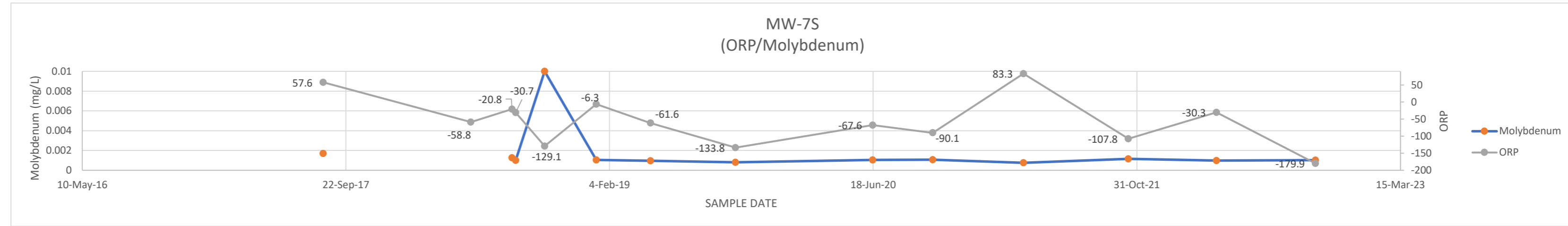
- G-1: CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS
- G-2: CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS
- G-3: CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS
- G-4: CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS
- G-5: CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS
- G-6: CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

ATTACHMENT G-1  
CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS

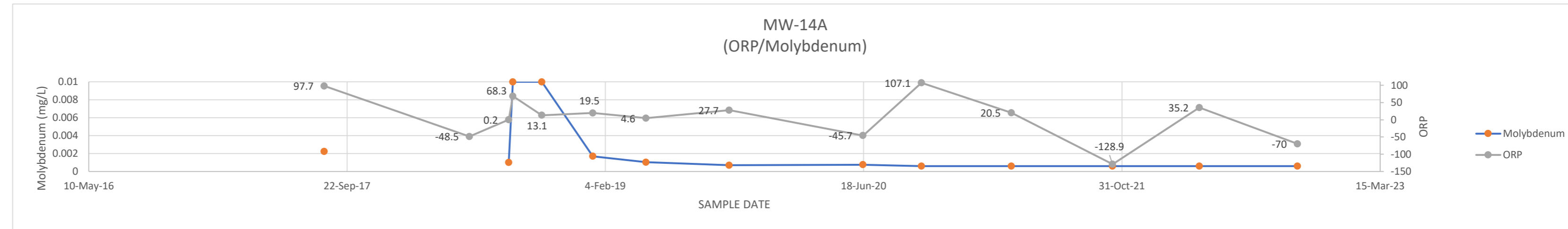
MW-5S	ORP	MOLYBDENUM
DATE		
14-Aug-17	21.5	0.00737
22-May-18	-104.7	
1-Aug-18	142.8	0.00497
10-Aug-18	-40.1	0.00387
2-Oct-18	-125.1	0.005
10-Jan-19	-30.9	0.00512
23-Apr-19	19.7	0.00485
2-Oct-19	-54.1	0.00315
18-Jun-20	-48.2	0.00361
12-Oct-20	168.1	0.00244
1-Apr-21	283.3	0.00234
14-Oct-21	-59.9	0.00387
31-Mar-22	46.2	0.00257
6-Oct-22	-33.9	0.0021



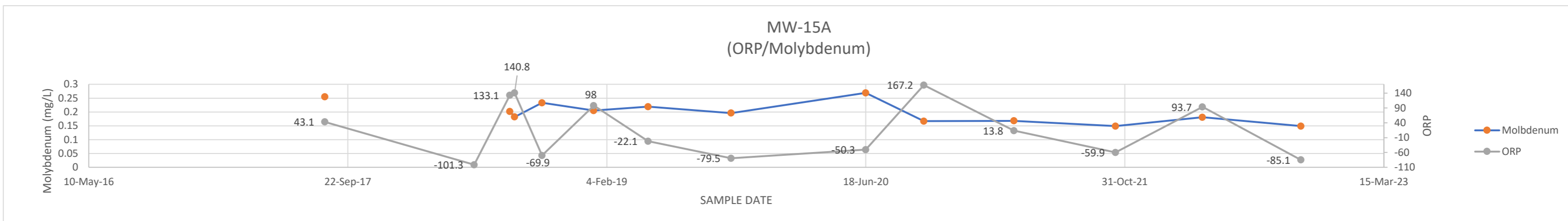
MW-7S	ORP	MOLYBDENUM
DATE		
10-Aug-17	57.6	0.00171
17-May-18	-58.8	
3-Aug-18	-20.8	0.00127
10-Aug-18	-30.7	0.001
4-Oct-18	-129.1	0.01
10-Jan-19	-6.3	0.00105
23-Apr-19	-61.6	0.000952
1-Oct-19	-133.8	0.000798
17-Jun-20	-67.6	0.00105
9-Oct-20	-90.1	0.00106
30-Mar-21	83.3	0.000755
15-Oct-21	-107.8	0.00115
31-Mar-22	-30.3	0.000973
5-Oct-22	-179.9	0.00103



MW-14A	ORP	MOLYBDENUM
DATE		
9-Aug-17	97.7	0.00223
17-May-18	-48.5	
1-Aug-18	0.2	0.001
9-Aug-18	68.3	0.01
4-Oct-18	13.1	0.01
11-Jan-19	19.5	0.0017
24-Apr-19	4.6	0.00104
2-Oct-19	27.7	0.000709
17-Jun-20	-45.7	0.00076
8-Oct-20	107.1	0.0006
31-Mar-21	20.5	0.0006
13-Oct-21	-128.9	0.0006
30-Mar-22	35.2	0.0006
6-Oct-22	-70	0.0006

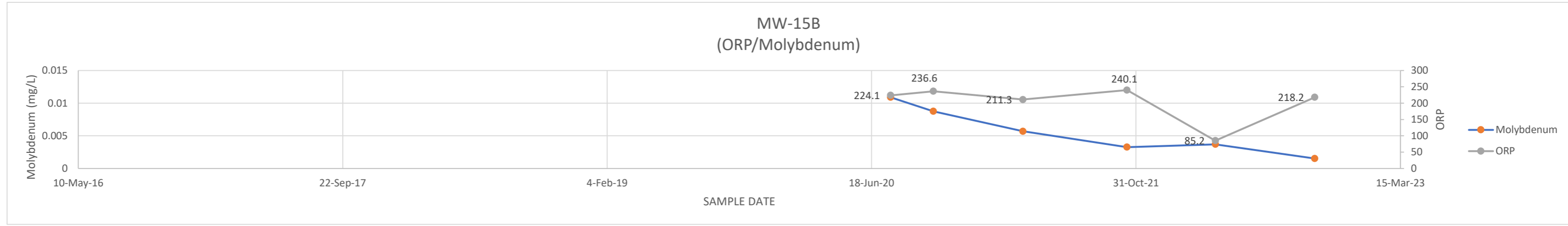


MW-15A	ORP	MOLYBDENUM
DATE		
9-Aug-17	43.1	0.255
24-May-18	-101.3	
1-Aug-18	133.1	0.202
10-Aug-18	140.8	0.182
2-Oct-18	-69.9	0.233
10-Jan-19	98	0.205
25-Apr-19	-22.1	0.219
2-Oct-19	-79.5	0.196
18-Jun-20	-50.3	0.269
8-Oct-20	167.2	0.167
31-Mar-21	13.8	0.168
13-Oct-21	-59.9	0.149
30-Mar-22	93.7	0.181
6-Oct-22	-85.1	0.149

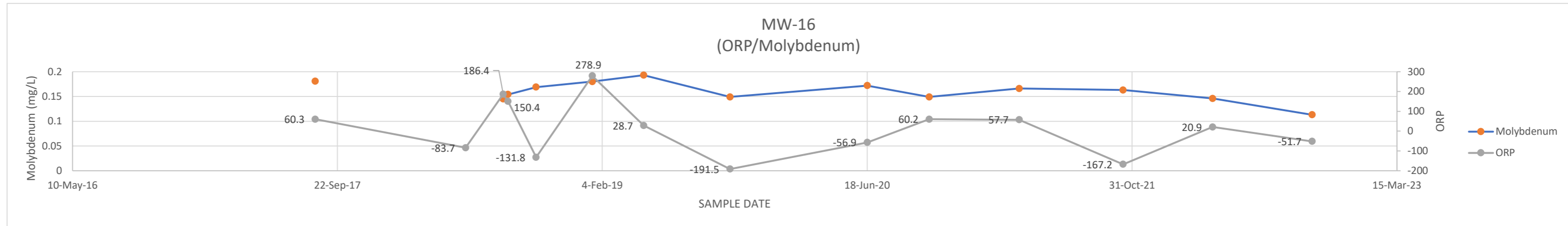


ATTACHMENT G-1  
CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS

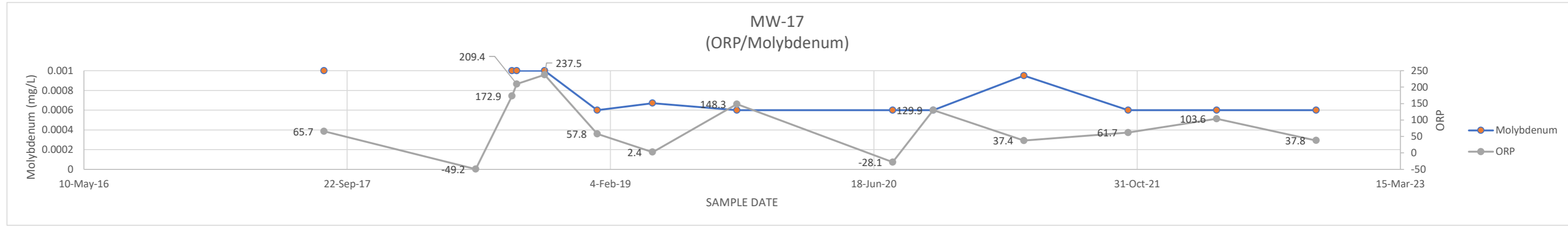
MW-15B	ORP	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	224.1	0.0109
13-Oct-20	236.6	0.00876
31-Mar-21	211.3	0.00571
14-Oct-21	240.1	0.00328
30-Mar-22	85.2	0.0037
4-Oct-22	218.2	0.00153



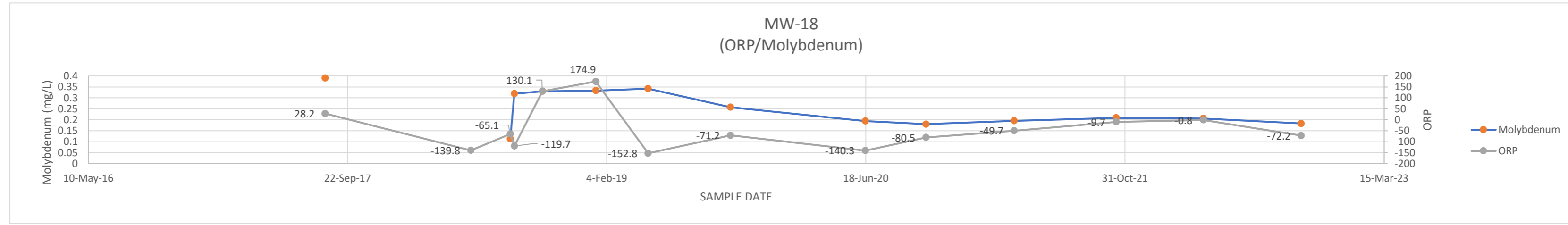
MW-16	ORP	MOLYBDENUM
DATE		
11-Aug-17	60.3	0.181
22-May-18	-83.7	
1-Aug-18	186.4	0.145
10-Aug-18	150.4	0.154
2-Oct-18	-131.8	0.169
16-Jan-19	278.9	0.18
23-Apr-19	28.7	0.193
3-Oct-19	-191.5	0.149
18-Jun-20	-56.9	0.172
13-Oct-20	60.2	0.149
1-Apr-21	57.7	0.166
14-Oct-21	-167.2	0.163
1-Apr-22	20.9	0.146
6-Oct-22	-51.7	0.113



MW-17	ORP	MOLYBDENUM
DATE		
9-Aug-17	65.7	0.001
24-May-18	-49.2	
1-Aug-18	172.9	0.001
10-Aug-18	209.4	0.001
2-Oct-18	237.5	0.001
10-Jan-19	57.8	0.0006
25-Apr-19	2.4	0.000671
2-Oct-19	148.3	0.0006
24-Jul-20	-28.1	0.0006
9-Oct-20	129.9	0.0006
30-Mar-21	37.4	0.00095
14-Oct-21	61.7	0.0006
31-Mar-22	103.6	0.0006
6-Oct-22	37.8	0.0006

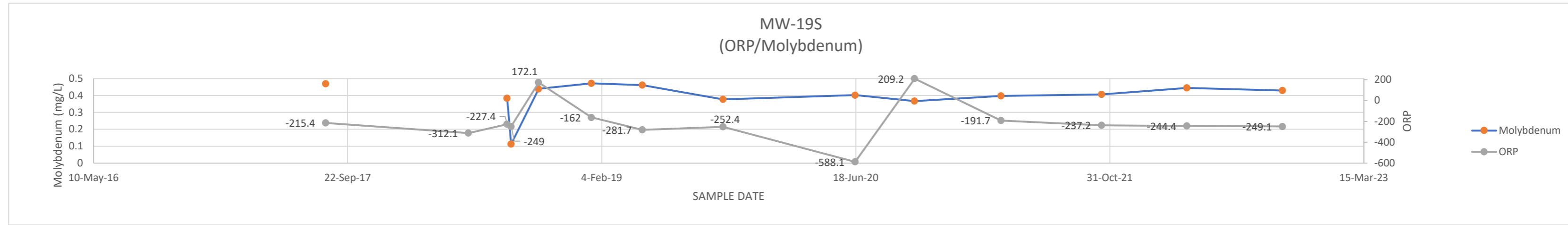


MW-18	ORP	MOLYBDENUM
DATE		
10-Aug-17	28.2	0.39
18-May-18	-139.8	
2-Aug-18	-65.1	0.113
10-Aug-18	-119.7	0.319
3-Oct-18	130.1	0.33
14-Jan-19	174.9	0.333
25-Apr-19	-152.8	0.342
1-Oct-19	-71.2	0.257
17-Jun-20	-140.3	0.194
12-Oct-20	-80.5	0.18
31-Mar-21	-49.7	0.195
14-Oct-21	-9.7	0.209
31-Mar-22	-0.8	0.206
6-Oct-22	-72.2	0.183

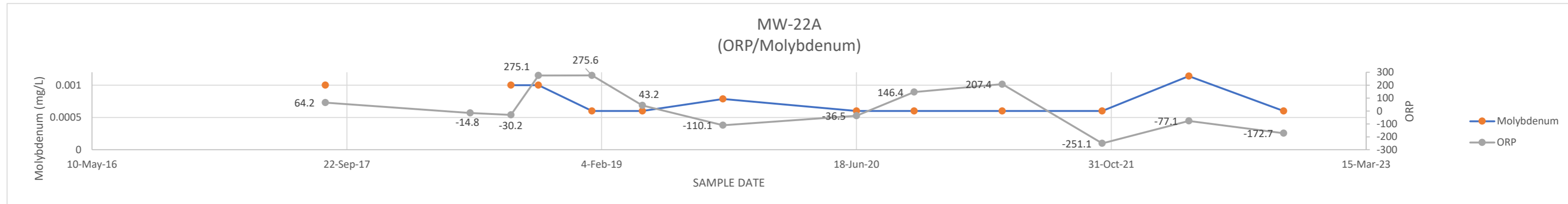


ATTACHMENT G-1  
CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS

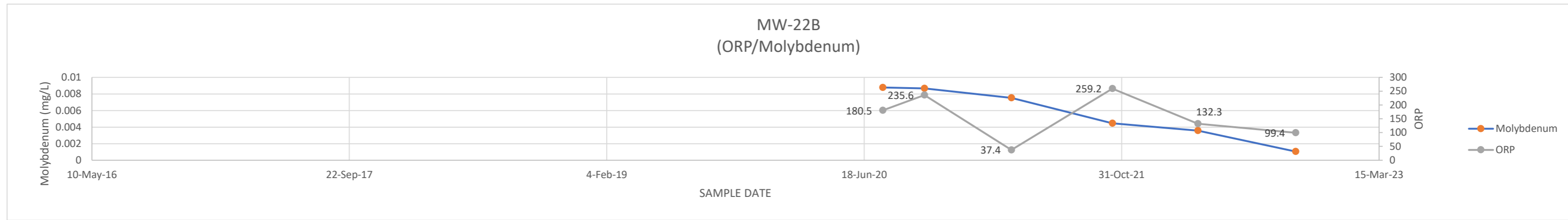
MW-19S	ORP	MOLYBDENUM
DATE		
10-Aug-17	-215.4	0.469
18-May-18	-312.1	
2-Aug-18	-227.4	0.384
10-Aug-18	-249	0.112
3-Oct-18	172.1	0.439
15-Jan-19	-162	0.472
25-Apr-19	-281.7	0.462
1-Oct-19	-252.4	0.377
17-Jun-20	-588.1	0.402
12-Oct-20	209.2	0.367
31-Mar-21	-191.7	0.398
15-Oct-21	-237.2	0.407
1-Apr-22	-244.4	0.445
6-Oct-22	-249.1	0.43



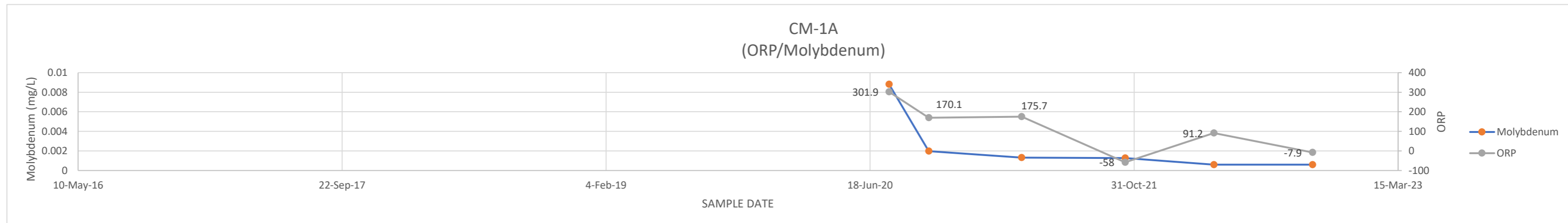
MW-22A	ORP	MOLYBDENUM
DATE		
11-Aug-17	64.2	0.001
22-May-18	-14.8	
10-Aug-18	-30.2	0.001
3-Oct-18	275.1	0.001
16-Jan-19	275.6	0.0006
25-Apr-19	43.2	0.0006
30-Sep-19	-110.1	0.000787
18-Jun-20	-36.5	0.0006
9-Oct-20	146.4	0.0006
31-Mar-21	207.4	0.0006
13-Oct-21	-251.1	0.0006
1-Apr-22	-77.1	0.00114
4-Oct-22	-172.7	0.0006



MW-22B	ORP	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	180.5	0.00878
13-Oct-20	235.6	0.00866
31-Mar-21	37.4	0.00753
13-Oct-21	259.2	0.00446
28-Mar-22	132.3	0.00357
4-Oct-22	99.4	0.00105

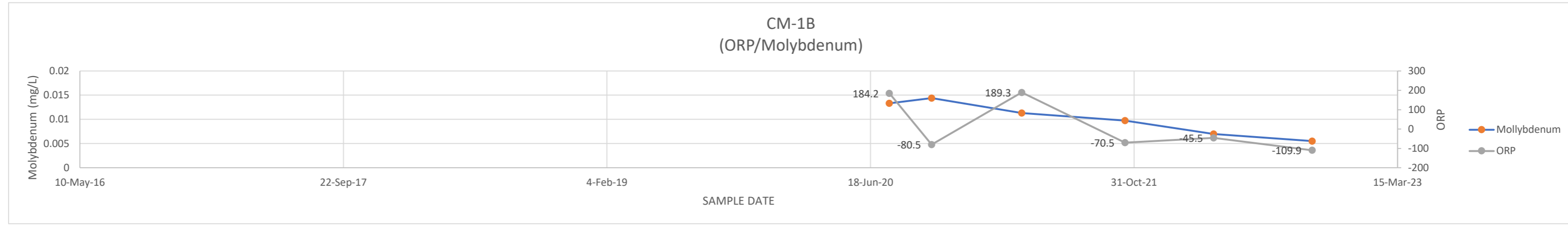


CM-1A	ORP	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	301.9	0.0088
7-Oct-20	170.1	0.00198
1-Apr-21	175.7	0.00132
14-Oct-21	-58	0.00127
31-Mar-22	91.2	0.0006
4-Oct-22	-7.9	0.0006

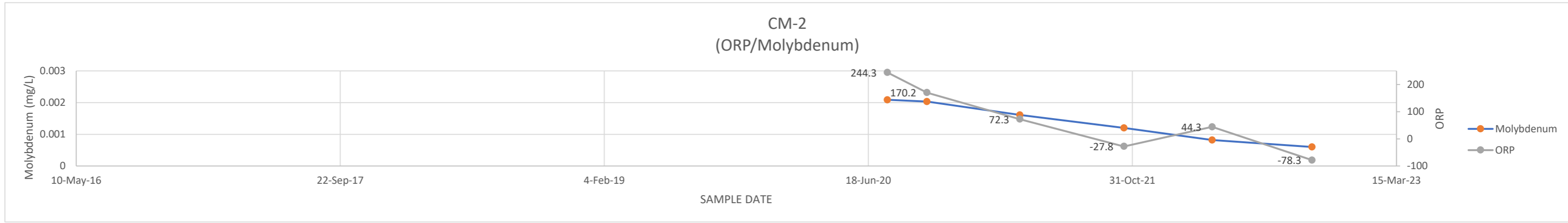


ATTACHMENT G-1  
CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS

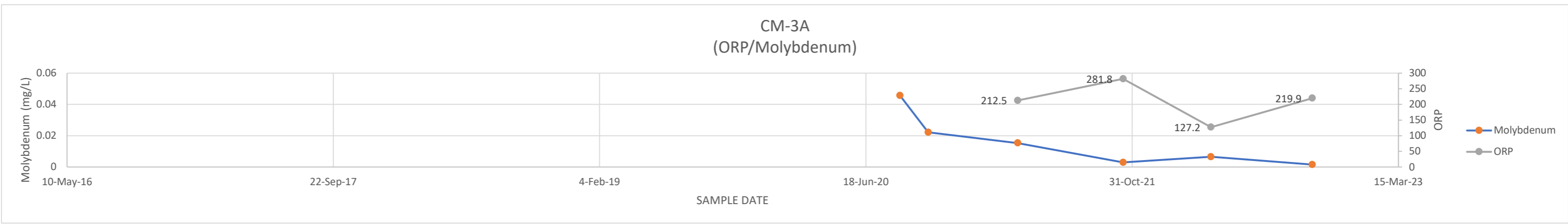
CM-1B DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	184.2	0.0133
12-Oct-20	-80.5	0.0144
1-Apr-21	189.3	0.0113
14-Oct-21	-70.5	0.00976
31-Mar-22	-45.5	0.00696
4-Oct-22	-109.9	0.00551



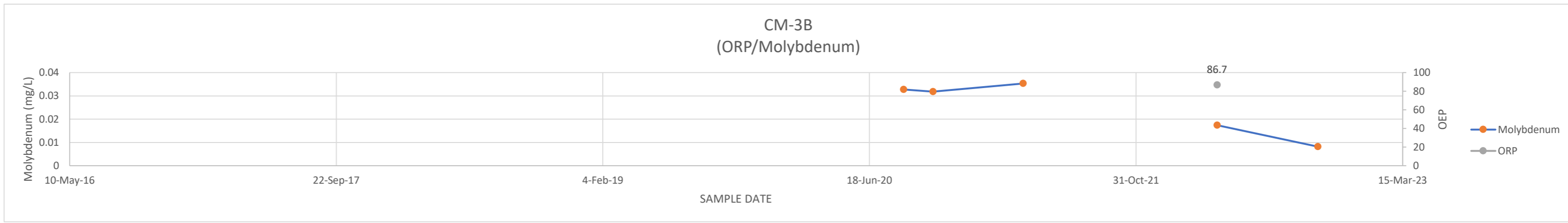
CM-2 DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	244.3	0.00209
7-Oct-20	170.2	0.00203
1-Apr-21	72.3	0.00161
15-Oct-21	-27.8	0.0012
31-Mar-22	44.3	0.00082
6-Oct-22	-78.3	0.0006



CM-3A DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20		0.0222
30-Mar-21	212.5	0.0153
14-Oct-21	281.8	0.00297
28-Mar-22	127.2	0.00656
4-Oct-22	219.9	0.00155

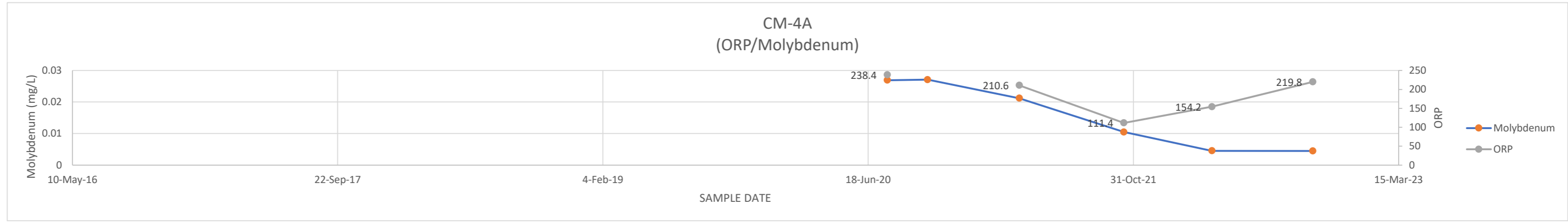


CM-3B DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22	86.7	0.0174
7-Oct-22		0.00819

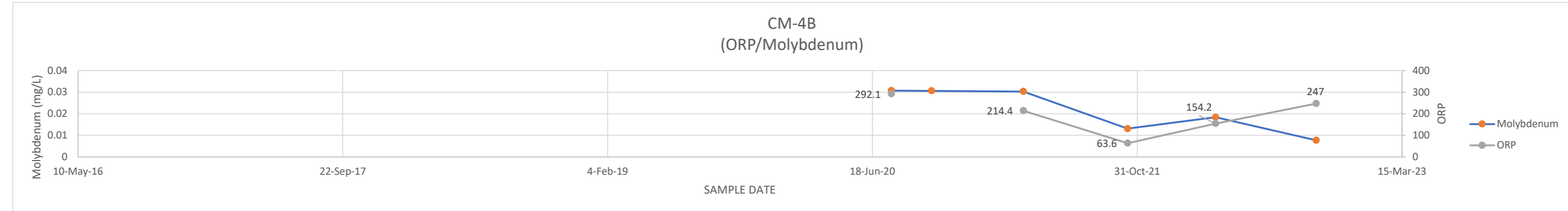


ATTACHMENT G-1  
CHANGES IN ORP AND MOLYBDENUM CONCENTRATIONS

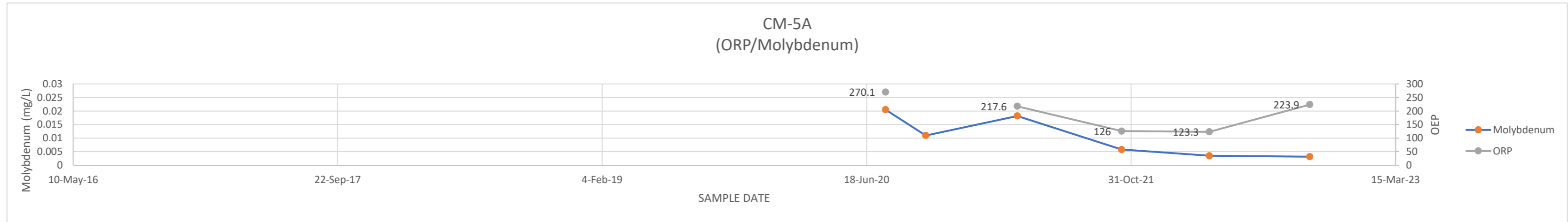
CM-4A DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	238.4	0.0269
8-Oct-20		0.0271
30-Mar-21	210.6	0.0212
13-Oct-21	111.4	0.0105
28-Mar-22	154.2	0.00455
4-Oct-22	219.8	0.00449



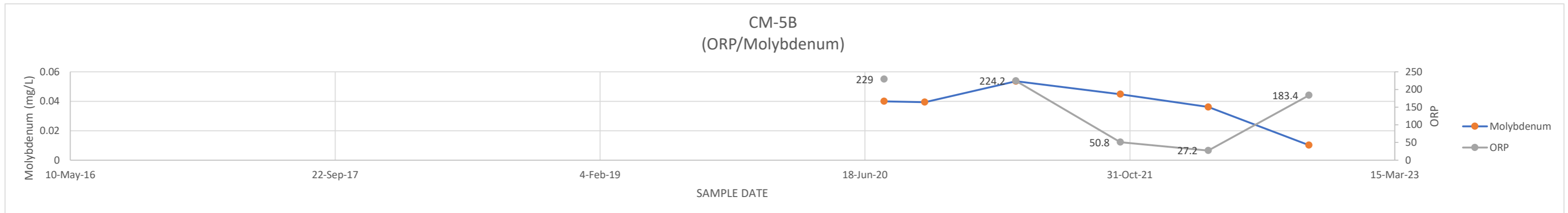
CM-4B DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	292.1	0.0307
8-Oct-20		0.0306
30-Mar-21	214.4	0.0303
13-Oct-21	63.6	0.0131
28-Mar-22	154.2	0.0184
4-Oct-22	247	0.00771



CM-5A DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	270.1	0.0205
8-Oct-20		0.011
30-Mar-21	217.6	0.0182
13-Oct-21	126	0.0058
28-Mar-22	123.3	0.00351
4-Oct-22	223.9	0.00317



CM-5B DATE	ORP	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	229	0.04
9-Oct-20		0.0394
30-Mar-21	224.2	0.0536
13-Oct-21	50.8	0.0448
28-Mar-22	27.2	0.0361
4-Oct-22	183.4	0.0102

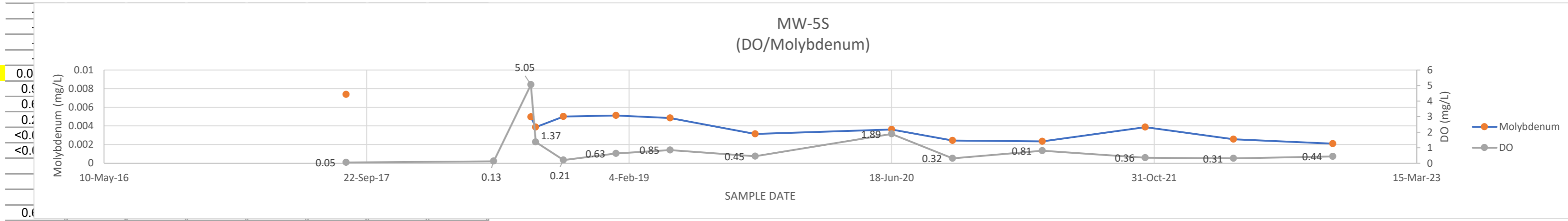


Yellow Indicates Reported Below shown value (MDL)

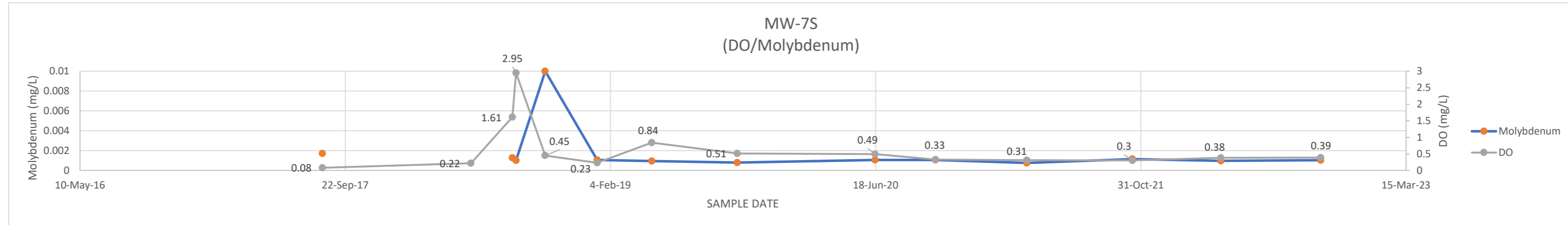


ATTACHMENT G-2  
CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS

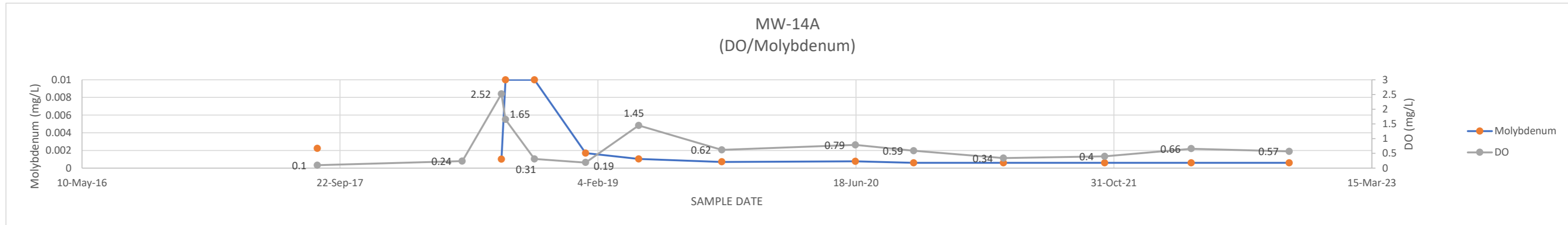
MW-5S	DO	MOLYBDENUM
DATE		
14-Aug-17	0.05	0.00737
22-May-18	0.13	
1-Aug-18	5.05	0.00497
10-Aug-18	1.37	0.00387
2-Oct-18	0.21	0.005
10-Jan-19	0.63	0.00512
23-Apr-19	0.85	0.00485
2-Oct-19	0.45	0.00315
18-Jun-20	1.89	0.00361
12-Oct-20	0.32	0.00244
1-Apr-21	0.81	0.00234
14-Oct-21	0.36	0.00387
31-Mar-22	0.31	0.00257
6-Oct-22	0.44	0.0021



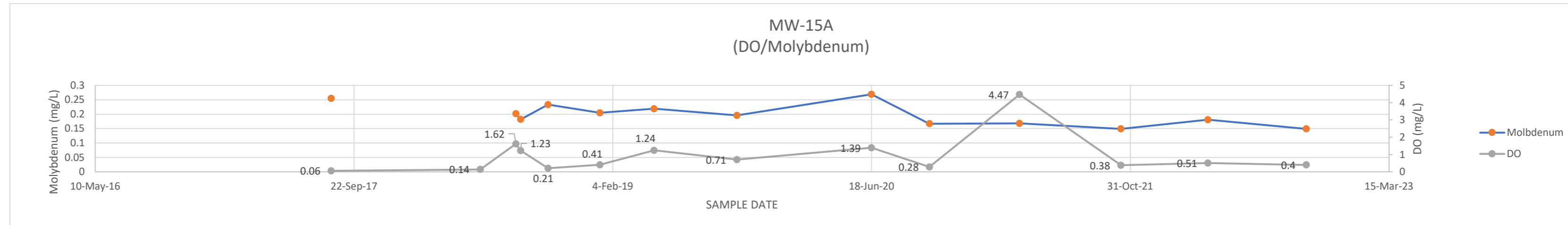
MW-7S	DO	MOLYBDENUM
DATE		
10-Aug-17	0.08	0.00171
17-May-18	0.22	
3-Aug-18	1.61	0.00127
10-Aug-18	2.95	0.001
4-Oct-18	0.45	0.01
10-Jan-19	0.23	0.00105
23-Apr-19	0.84	0.000952
1-Oct-19	0.51	0.000798
17-Jun-20	0.49	0.00105
9-Oct-20	0.33	0.00106
30-Mar-21	0.31	0.000755
15-Oct-21	0.3	0.00115
31-Mar-22	0.38	0.000973
5-Oct-22	0.39	0.00103



MW-14A	DO	MOLYBDENUM
DATE		
9-Aug-17	0.1	0.00223
17-May-18	0.24	
1-Aug-18	2.52	0.001
9-Aug-18	1.65	0.01
4-Oct-18	0.31	0.01
11-Jan-19	0.19	0.0017
24-Apr-19	1.45	0.00104
2-Oct-19	0.62	0.000709
17-Jun-20	0.79	0.00076
8-Oct-20	0.59	0.0006
31-Mar-21	0.34	0.0006
13-Oct-21	0.4	0.0006
30-Mar-22	0.66	0.0006
6-Oct-22	0.57	0.0006

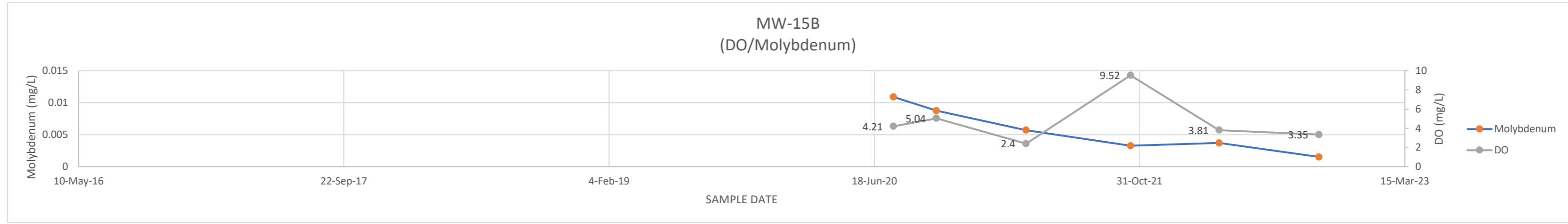


MW-15A	DO	MOLYBDENUM
DATE		
9-Aug-17	0.06	0.255
24-May-18	0.14	
1-Aug-18	1.62	0.202
10-Aug-18	1.23	0.182
2-Oct-18	0.21	0.233
10-Jan-19	0.41	0.205
25-Apr-19	1.24	0.219
2-Oct-19	0.71	0.196
18-Jun-20	1.39	0.269
8-Oct-20	0.28	0.167
31-Mar-21	4.47	0.168
13-Oct-21	0.38	0.149
30-Mar-22	0.51	0.181
6-Oct-22	0.4	0.149

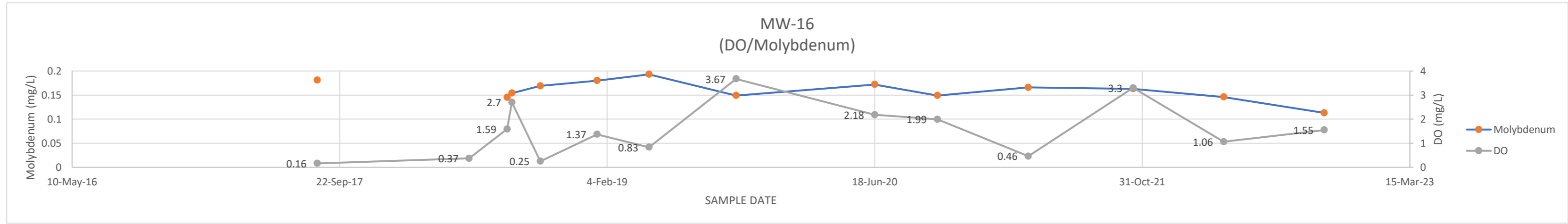


ATTACHMENT G-2  
CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS

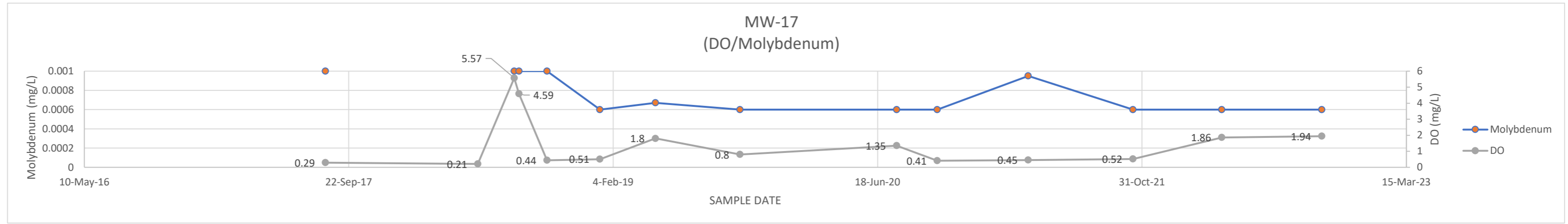
MW-15B	DO	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4.21	0.0109
13-Oct-20	5.04	0.00876
31-Mar-21	2.4	0.00571
14-Oct-21	9.52	0.00328
30-Mar-22	3.81	0.0037
4-Oct-22	3.35	0.00153



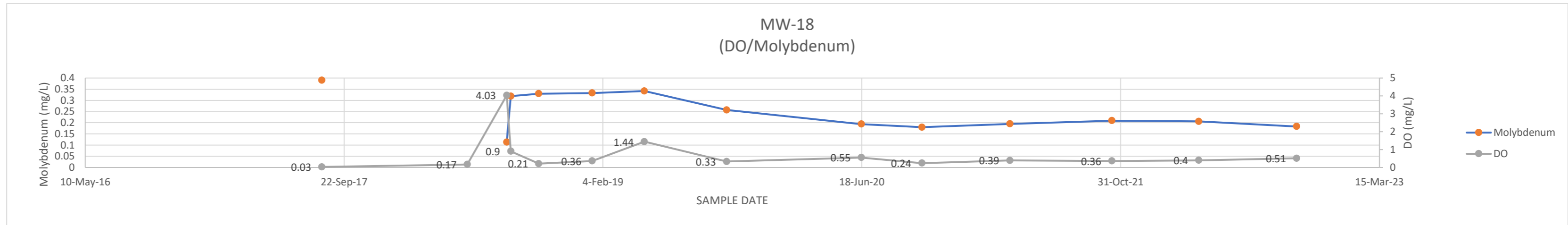
MW-16	DO	MOLYBDENUM
DATE		
11-Aug-17	0.16	0.181
22-May-18	0.37	
1-Aug-18	1.59	0.145
10-Aug-18	2.7	0.154
2-Oct-18	0.25	0.169
16-Jan-19	1.37	0.18
23-Apr-19	0.83	0.193
3-Oct-19	3.67	0.149
18-Jun-20	2.18	0.172
13-Oct-20	1.99	0.149
1-Apr-21	0.46	0.166
14-Oct-21	3.3	0.163
1-Apr-22	1.06	0.146
6-Oct-22	1.55	0.113



MW-17	DO	MOLYBDENUM
DATE		
9-Aug-17	0.29	0.001
24-May-18	0.21	
1-Aug-18	5.57	0.001
10-Aug-18	4.59	0.001
2-Oct-18	0.44	0.001
10-Jan-19	0.51	0.0006
25-Apr-19	1.8	0.000671
2-Oct-19	0.8	0.0006
24-Jul-20	1.35	0.0006
9-Oct-20	0.41	0.0006
30-Mar-21	0.45	0.00095
14-Oct-21	0.52	0.0006
31-Mar-22	1.86	0.0006
6-Oct-22	1.94	0.0006

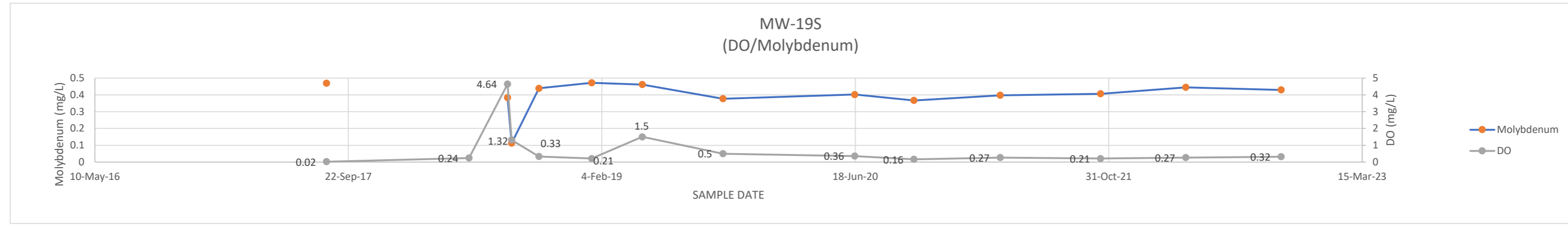


MW-18	ORP	MOLYBDENUM
DATE		
10-Aug-17	0.03	0.39
18-May-18	0.17	
2-Aug-18	4.03	0.113
10-Aug-18	0.9	0.319
3-Oct-18	0.21	0.33
14-Jan-19	0.36	0.333
25-Apr-19	1.44	0.342
1-Oct-19	0.33	0.257
17-Jun-20	0.55	0.194
12-Oct-20	0.24	0.18
31-Mar-21	0.39	0.195
14-Oct-21	0.36	0.209
31-Mar-22	0.4	0.206
6-Oct-22	0.51	0.183

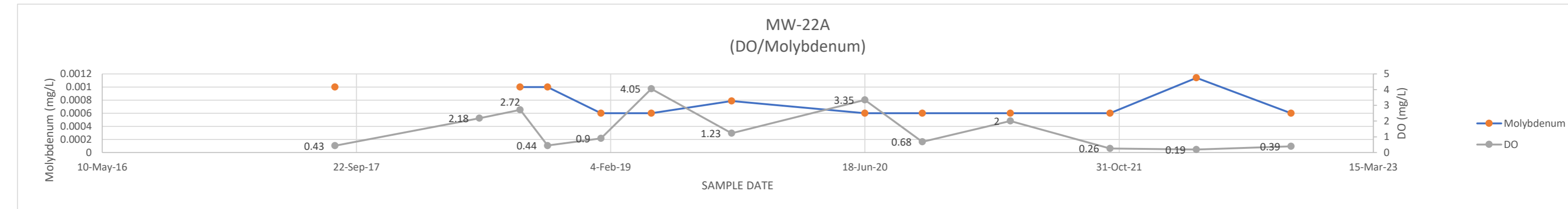


ATTACHMENT G-2  
CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS

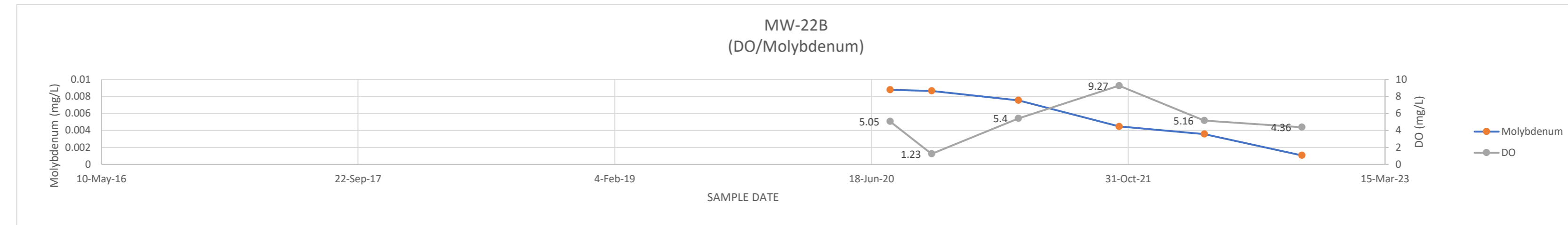
MW-19S	DO	MOLYBDENUM
DATE		
10-Aug-17	0.02	0.469
18-May-18	0.24	
2-Aug-18	4.64	0.384
10-Aug-18	1.32	0.112
3-Oct-18	0.33	0.439
15-Jan-19	0.21	0.472
25-Apr-19	1.5	0.462
1-Oct-19	0.5	0.377
17-Jun-20	0.36	0.402
12-Oct-20	0.16	0.367
31-Mar-21	0.27	0.398
15-Oct-21	0.21	0.407
1-Apr-22	0.27	0.445
6-Oct-22	0.32	0.43



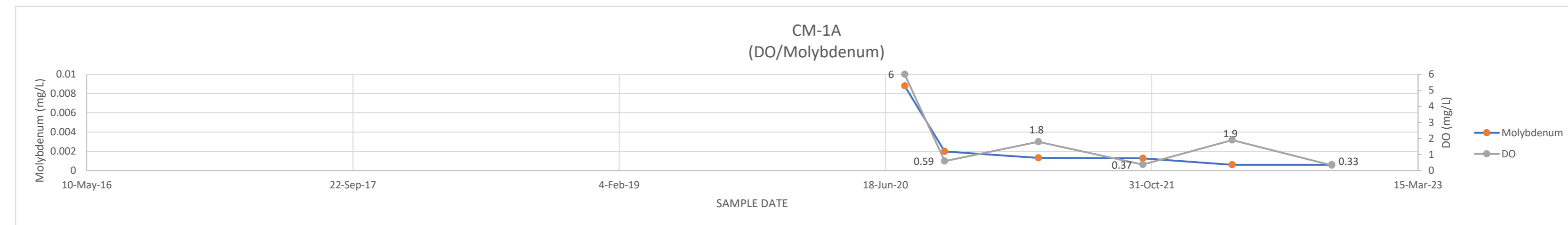
MW-22A	DO	MOLYBDENUM
DATE		
11-Aug-17	0.43	0.001
22-May-18	2.18	
10-Aug-18	2.72	0.001
3-Oct-18	0.44	0.001
16-Jan-19	0.9	0.0006
25-Apr-19	4.05	0.0006
30-Sep-19	1.23	0.000787
18-Jun-20	3.35	0.0006
9-Oct-20	0.68	0.0006
31-Mar-21	2	0.0006
13-Oct-21	0.26	0.0006
1-Apr-22	0.19	0.00114
4-Oct-22	0.39	0.0006



MW-22B	DO	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	5.05	0.00878
13-Oct-20	1.23	0.00866
31-Mar-21	5.4	0.00753
13-Oct-21	9.27	0.00446
28-Mar-22	5.16	0.00357
4-Oct-22	4.36	0.00105

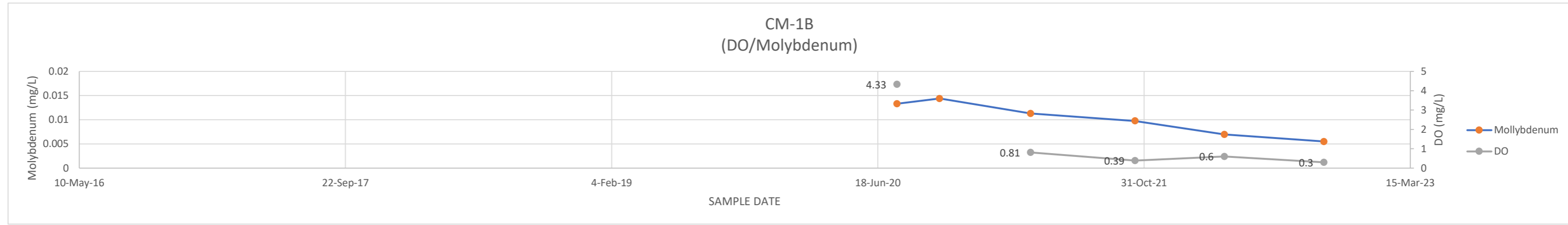


CM-1A	DO	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	6	0.0088
7-Oct-20	0.59	0.00198
1-Apr-21	1.8	0.00132
14-Oct-21	0.37	0.00127
31-Mar-22	1.9	0.0006
4-Oct-22	0.33	0.0006

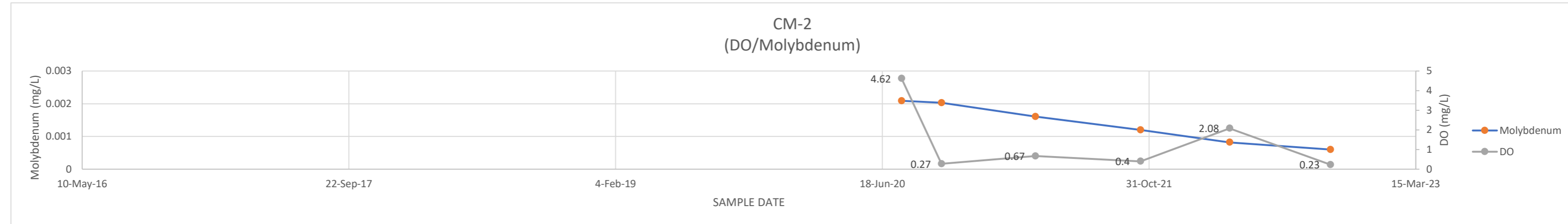


ATTACHMENT G-2  
CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS

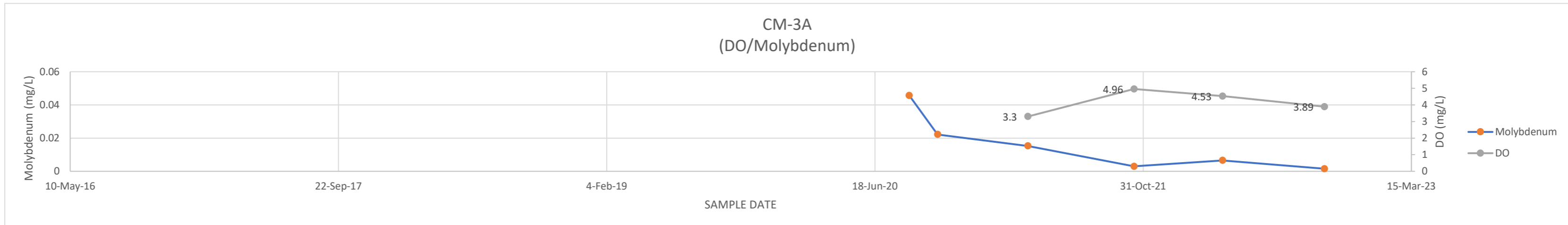
CM-1B DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4.33	0.0133
12-Oct-20		0.0144
1-Apr-21	0.81	0.0113
14-Oct-21	0.39	0.00976
31-Mar-22	0.6	0.00696
4-Oct-22	0.3	0.00551



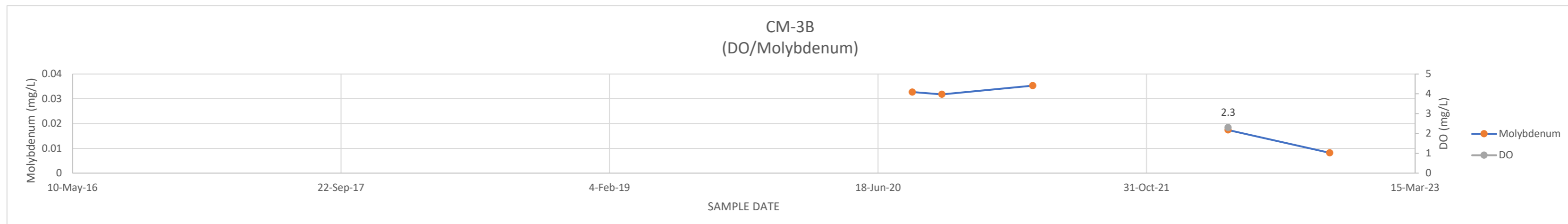
CM-2 DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4.62	0.00209
7-Oct-20	0.27	0.00203
1-Apr-21	0.67	0.00161
15-Oct-21	0.4	0.0012
31-Mar-22	2.08	0.00082
6-Oct-22	0.23	0.0006



CM-3A DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20		0.0222
30-Mar-21	3.3	0.0153
14-Oct-21	4.96	0.00297
28-Mar-22	4.53	0.00656
4-Oct-22	3.89	0.00155

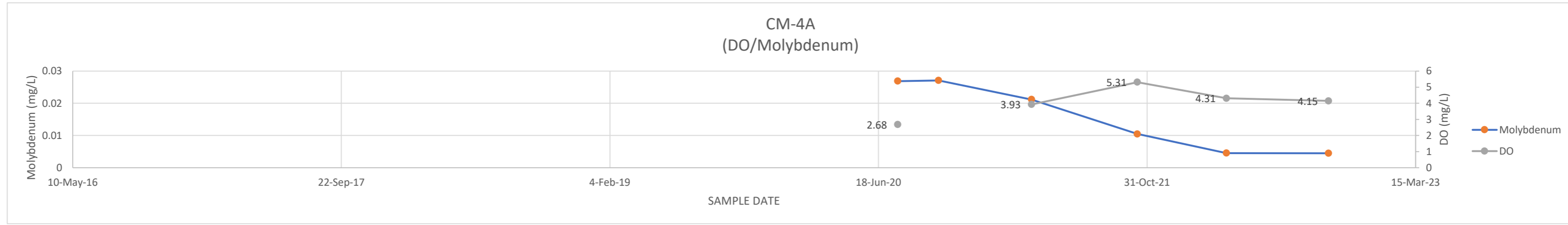


CM-3B DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22	2.3	0.0174
7-Oct-22		0.00819

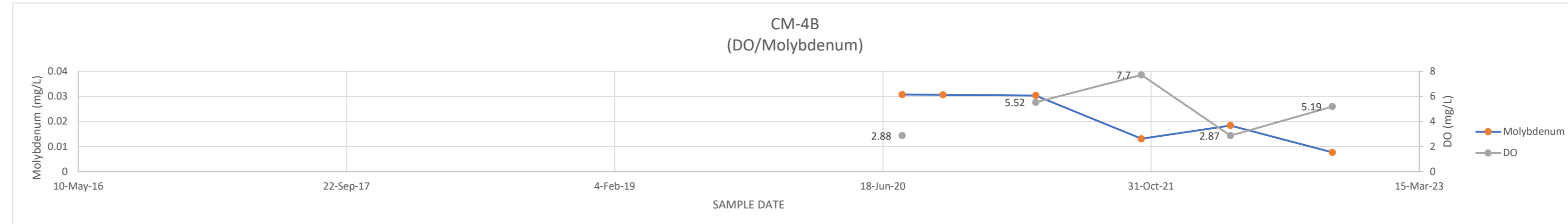


ATTACHMENT G-2  
CHANGES IN DO AND MOLYBDENUM CONCENTRATIONS

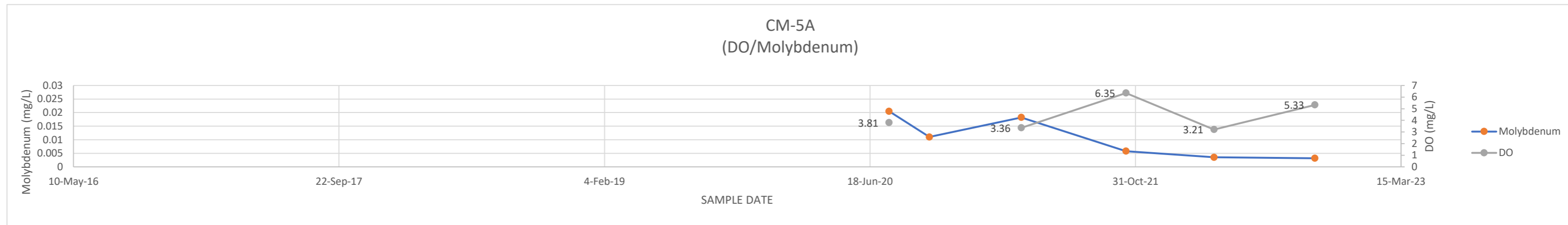
CM-4A DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2.68	0.0269
8-Oct-20		0.0271
30-Mar-21	3.93	0.0212
13-Oct-21	5.31	0.0105
28-Mar-22	4.31	0.00455
4-Oct-22	4.15	0.00449



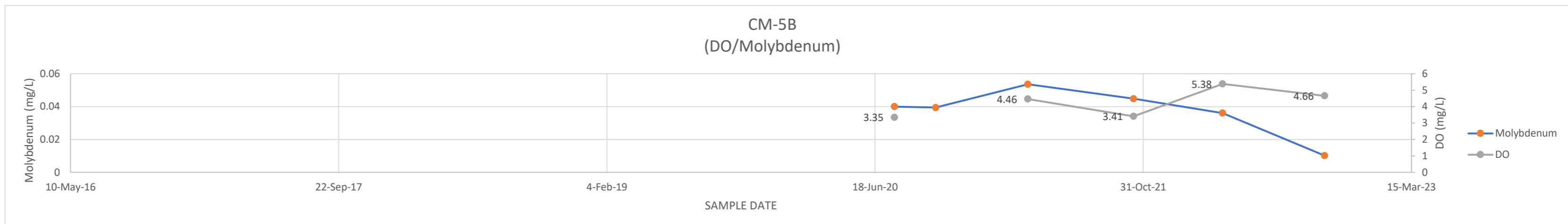
CM-4B DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2.88	0.0307
8-Oct-20		0.0306
30-Mar-21	5.52	0.0303
13-Oct-21	7.7	0.0131
28-Mar-22	2.87	0.0184
4-Oct-22	5.19	0.00771



CM-5A DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.81	0.0205
8-Oct-20		0.011
30-Mar-21	3.36	0.0182
13-Oct-21	6.35	0.0058
28-Mar-22	3.21	0.00351
4-Oct-22	5.33	0.00317



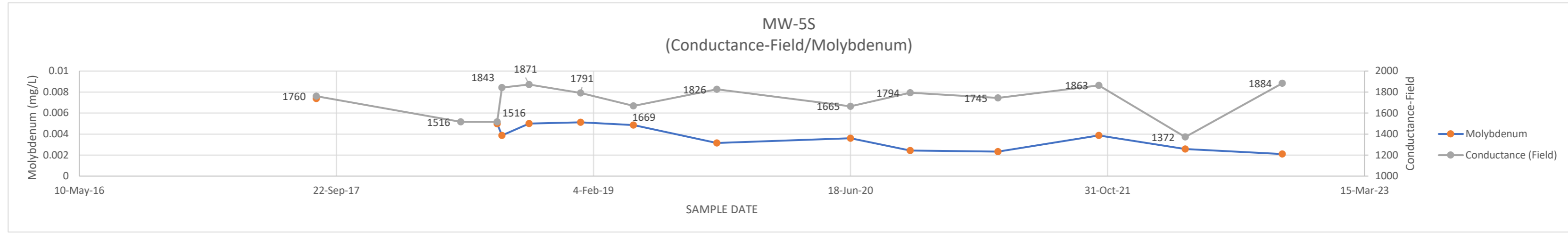
CM-5B DATE	DO	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3.35	0.04
9-Oct-20		0.0394
30-Mar-21	4.46	0.0536
13-Oct-21	3.41	0.0448
28-Mar-22	5.38	0.0361
4-Oct-22	4.66	0.0102



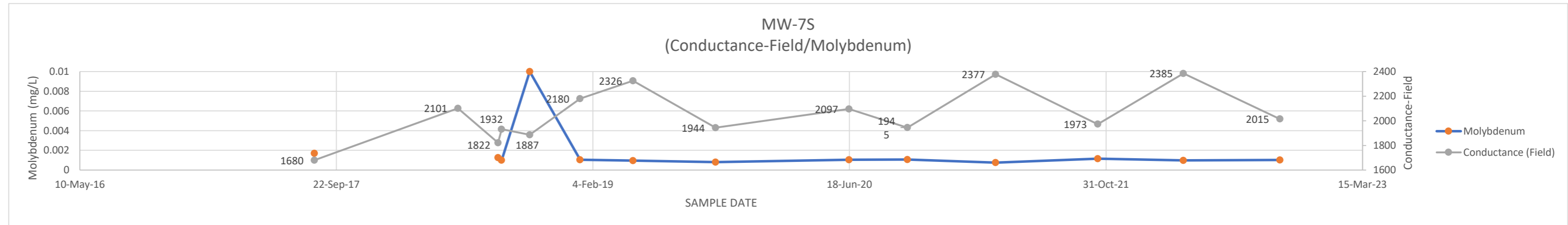
Yellow Indicates Reported Below shown value (MDL)

ATTACHMENT G-3  
CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS

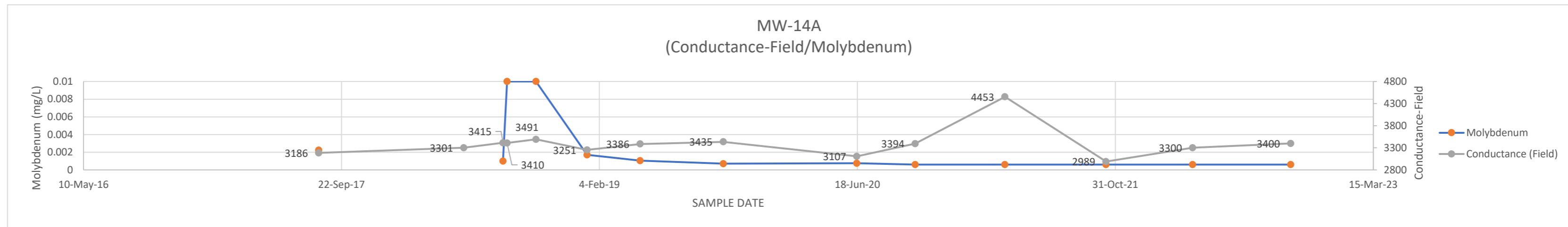
MW-5S	COND-Field	MOLYBDENUM
DATE		
14-Aug-17	1760	0.00737
22-May-18	1516	
1-Aug-18	1516	0.00497
10-Aug-18	1843	0.00387
2-Oct-18	1871	0.005
10-Jan-19	1791	0.00512
23-Apr-19	1669	0.00485
2-Oct-19	1826	0.00315
18-Jun-20	1665	0.00361
12-Oct-20	1794	0.00244
1-Apr-21	1745	0.00234
14-Oct-21	1863	0.00387
31-Mar-22	1372	0.00257
6-Oct-22	1884	0.0021



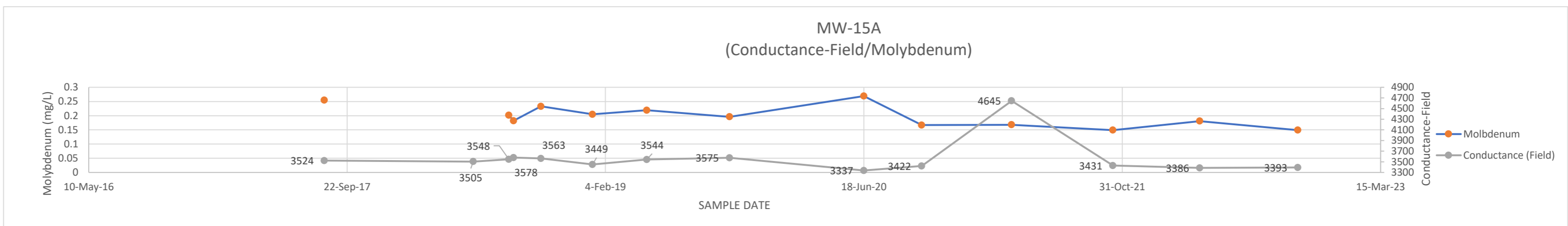
MW-7S	COND-Field	MOLYBDENUM
DATE		
10-Aug-17	1680	0.00171
17-May-18	2101	
3-Aug-18	1822	0.00127
10-Aug-18	1932	0.001
4-Oct-18	1887	0.01
10-Jan-19	2180	0.00105
23-Apr-19	2326	0.000952
1-Oct-19	1944	0.000798
17-Jun-20	2097	0.00105
9-Oct-20	1945	0.00106
30-Mar-21	2377	0.000755
15-Oct-21	1973	0.00115
31-Mar-22	2385	0.000973
5-Oct-22	2015	0.00103



MW-14A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17	3186	0.00223
17-May-18	3301	
1-Aug-18	3415	0.001
9-Aug-18	3410	0.01
4-Oct-18	3491	0.01
11-Jan-19	3251	0.0017
24-Apr-19	3386	0.00104
2-Oct-19	3435	0.000709
17-Jun-20	3107	0.00076
8-Oct-20	3394	0.0006
31-Mar-21	4453	0.0006
13-Oct-21	2989	0.0006
30-Mar-22	3300	0.0006
6-Oct-22	3400	0.0006

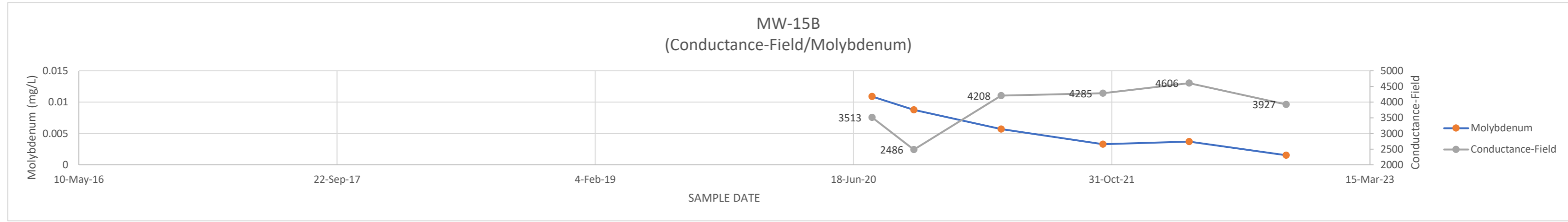


MW-15A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17	3524	0.255
24-May-18	3505	
1-Aug-18	3548	0.202
10-Aug-18	3578	0.182
2-Oct-18	3563	0.233
10-Jan-19	3449	0.205
25-Apr-19	3544	0.219
2-Oct-19	3575	0.196
18-Jun-20	3337	0.269
8-Oct-20	3422	0.167
31-Mar-21	4645	0.168
13-Oct-21	3431	0.149
30-Mar-22	3386	0.181
6-Oct-22	3393	0.149

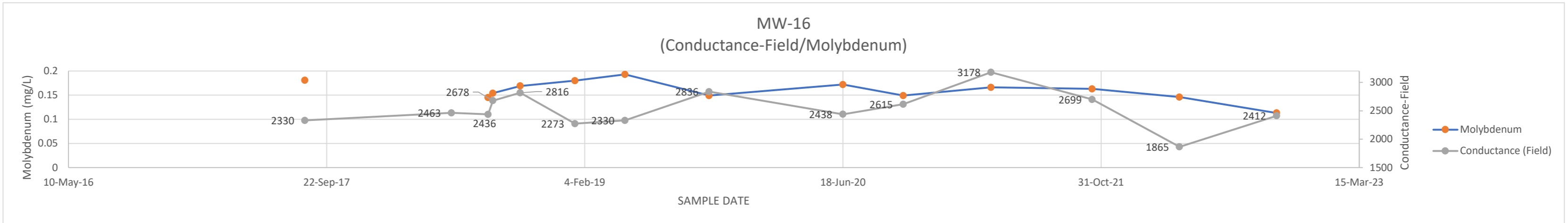


ATTACHMENT G-3  
CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS

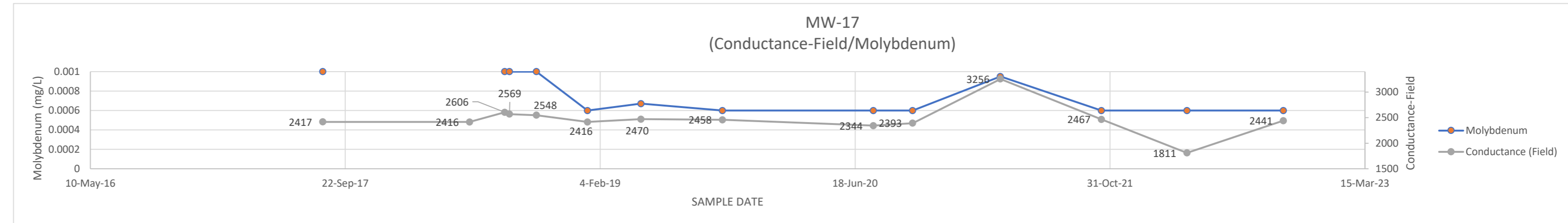
MW-15B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3513	0.0109
13-Oct-20	2486	0.00876
31-Mar-21	4208	0.00571
14-Oct-21	4285	0.00328
30-Mar-22	4606	0.0037
4-Oct-22	3927	0.00153



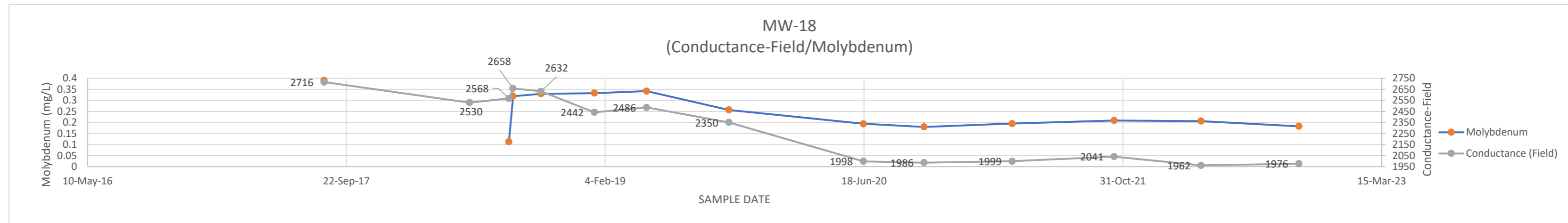
MW-16	COND-Field	MOLYBDENUM
DATE		
11-Aug-17	2330	0.181
22-May-18	2463	
1-Aug-18	2436	0.145
10-Aug-18	2678	0.154
2-Oct-18	2816	0.169
16-Jan-19	2273	0.18
23-Apr-19	2330	0.193
3-Oct-19	2836	0.149
18-Jun-20	2438	0.172
13-Oct-20	2615	0.149
1-Apr-21	3178	0.166
14-Oct-21	2699	0.163
1-Apr-22	1865	0.146
6-Oct-22	2412	0.113



MW-17	COND-Field	MOLYBDENUM
DATE		
9-Aug-17	2417	0.001
24-May-18	2416	
1-Aug-18	2606	0.001
10-Aug-18	2569	0.001
2-Oct-18	2548	0.001
10-Jan-19	2416	0.0006
25-Apr-19	2470	0.000671
2-Oct-19	2458	0.0006
24-Jul-20	2344	0.0006
9-Oct-20	2393	0.0006
30-Mar-21	3256	0.00095
14-Oct-21	2467	0.0006
31-Mar-22	1811	0.0006
6-Oct-22	2441	0.0006

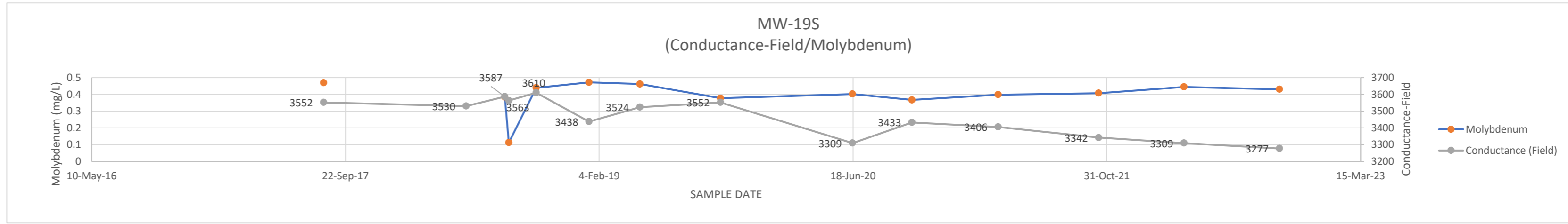


MW-18	COND-Field	MOLYBDENUM
DATE		
10-Aug-17	2716	0.39
18-May-18	2530	
2-Aug-18	2568	0.113
10-Aug-18	2658	0.319
3-Oct-18	2632	0.33
14-Jan-19	2442	0.333
25-Apr-19	2486	0.342
1-Oct-19	2350	0.257
17-Jun-20	1998	0.194
12-Oct-20	1986	0.18
31-Mar-21	1999	0.195
14-Oct-21	2041	0.209
31-Mar-22	1962	0.206
6-Oct-22	1976	0.183

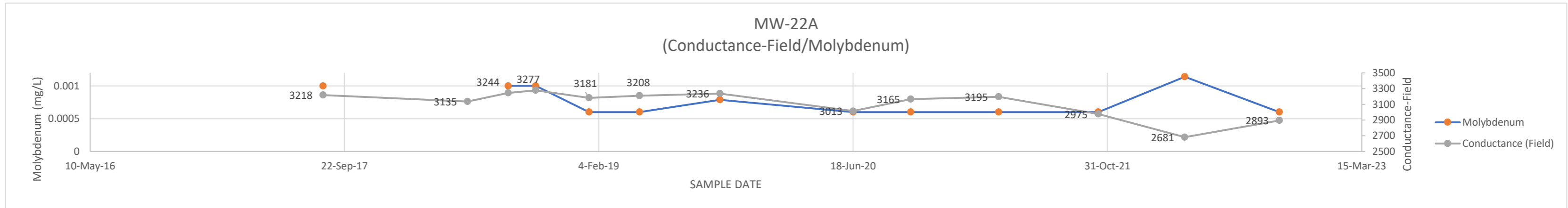


ATTACHMENT G-3  
CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS

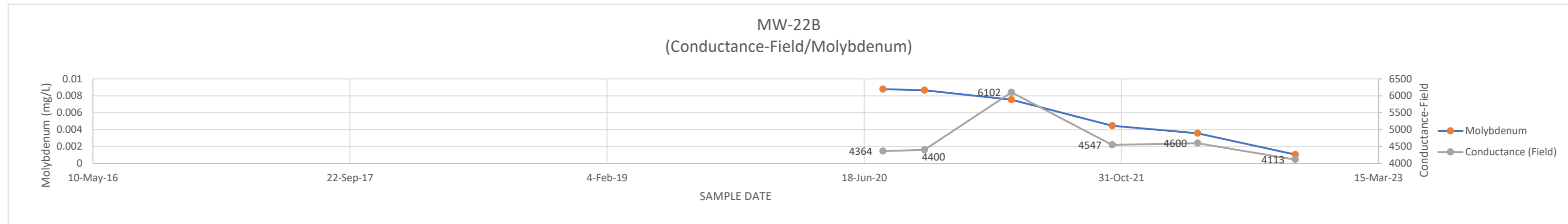
MW-19S	COND-Field	MOLYBDENUM
DATE		
10-Aug-17	3552	0.469
18-May-18	3530	
2-Aug-18	3587	0.384
10-Aug-18	3563	0.112
3-Oct-18	3610	0.439
15-Jan-19	3438	0.472
25-Apr-19	3524	0.462
1-Oct-19	3552	0.377
17-Jun-20	3309	0.402
12-Oct-20	3433	0.367
31-Mar-21	3406	0.398
15-Oct-21	3342	0.407
1-Apr-22	3309	0.445
6-Oct-22	3277	0.43



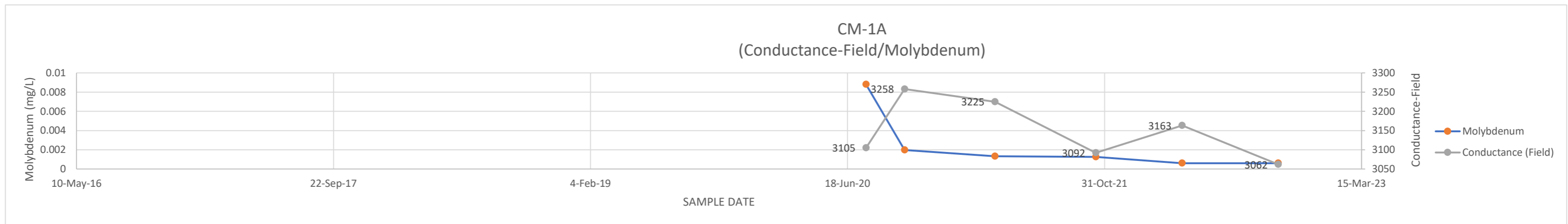
MW-22A	COND-Field	MOLYBDENUM
DATE		
11-Aug-17	3218	0.001
22-May-18	3135	
10-Aug-18	3244	0.001
3-Oct-18	3277	0.001
16-Jan-19	3181	0.0006
25-Apr-19	3208	0.0006
30-Sep-19	3236	0.000787
18-Jun-20	3013	0.0006
9-Oct-20	3165	0.0006
31-Mar-21	3195	0.0006
13-Oct-21	2975	0.0006
1-Apr-22	2681	0.00114
4-Oct-22	2893	0.0006



MW-22B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4364	0.00878
13-Oct-20	4400	0.00866
31-Mar-21	6102	0.00753
13-Oct-21	4547	0.00446
28-Mar-22	4600	0.00357
4-Oct-22	4113	0.00105



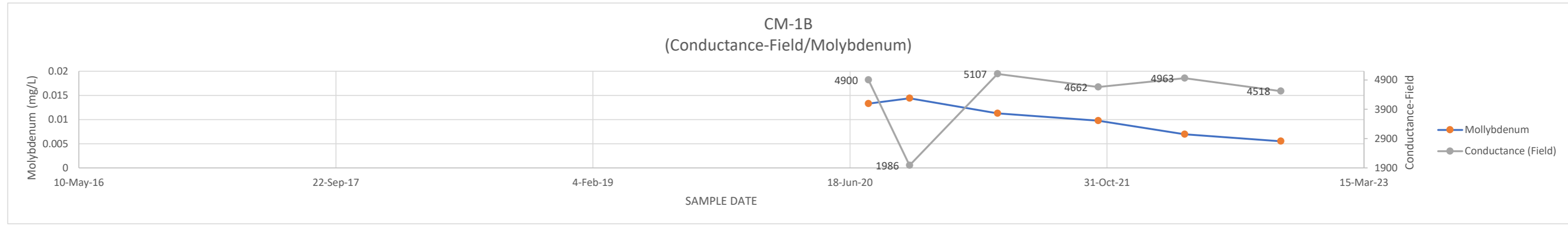
CM-1A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3105	0.0088
7-Oct-20	3258	0.00198
1-Apr-21	3225	0.00132
14-Oct-21	3092	0.00127
31-Mar-22	3163	0.0006
4-Oct-22	3062	0.0006



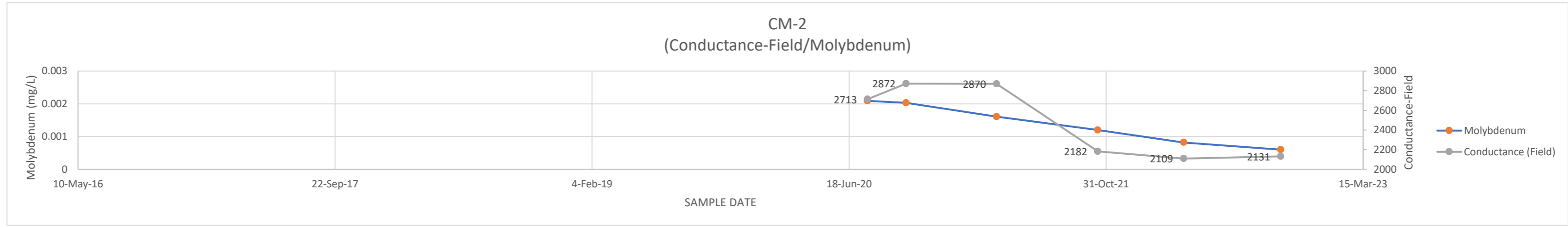


ATTACHMENT G-3  
CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS

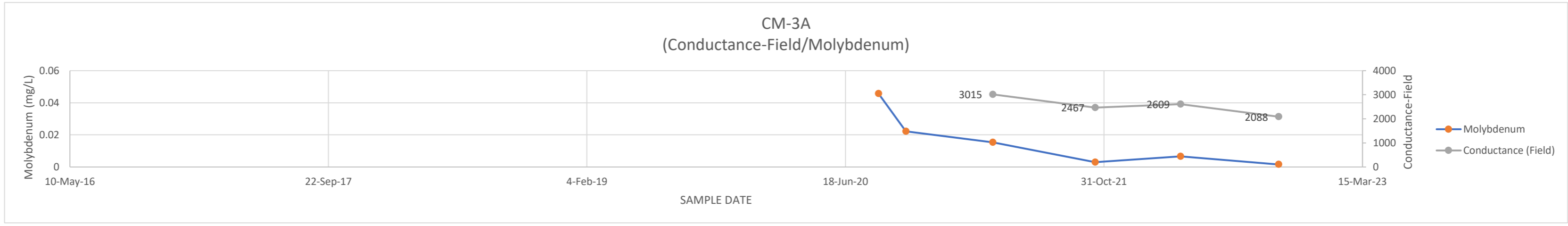
CM-1B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4900	0.0133
12-Oct-20	1986	0.0144
1-Apr-21	5107	0.0113
14-Oct-21	4662	0.00976
31-Mar-22	4963	0.00696
4-Oct-22	4518	0.00551



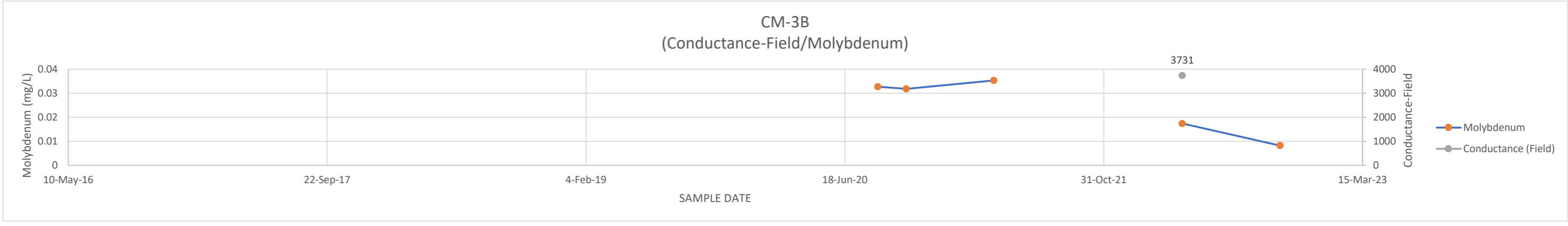
CM-2	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2713	0.00209
7-Oct-20	2872	0.00203
1-Apr-21	2870	0.00161
15-Oct-21	2182	0.0012
31-Mar-22	2109	0.00082
6-Oct-22	2131	0.0006



CM-3A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20		0.0222
30-Mar-21	3015	0.0153
14-Oct-21	2467	0.00297
28-Mar-22	2609	0.00656
4-Oct-22	2088	0.00155

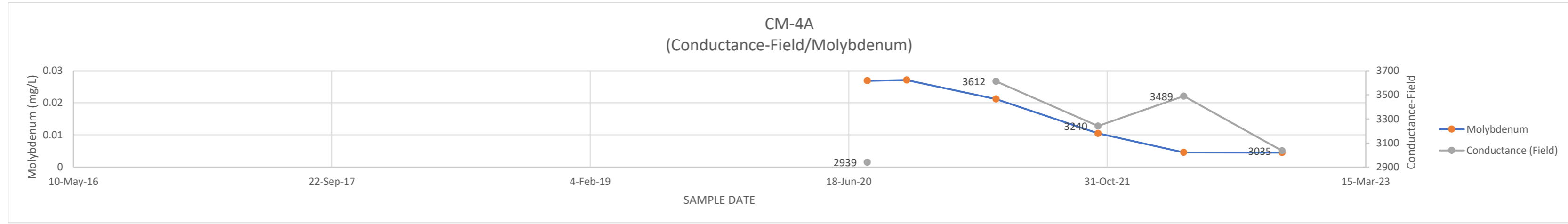


CM-3B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22	3731	0.0174
7-Oct-22		0.00819

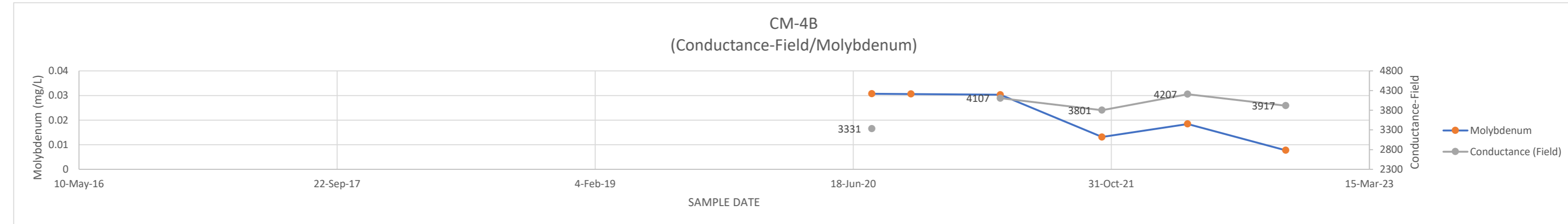


ATTACHMENT G-3  
CHANGES IN CONDUCTANCE (FIELD) AND MOLYBDENUM CONCENTRATIONS

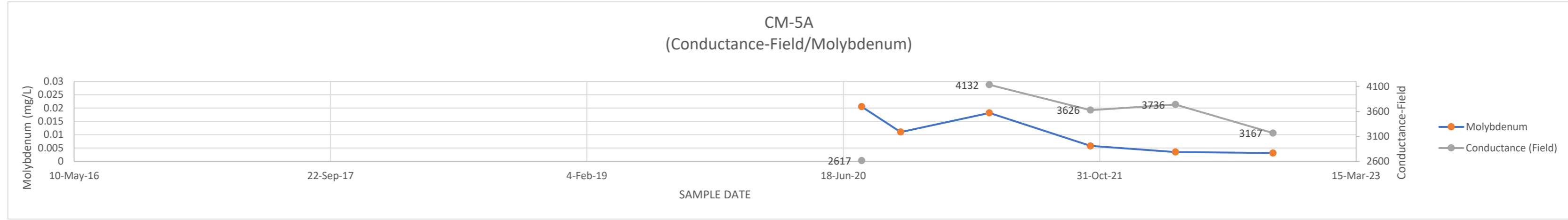
CM-4A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2939	0.0269
8-Oct-20		0.0271
30-Mar-21	3612	0.0212
13-Oct-21	3240	0.0105
28-Mar-22	3489	0.00455
4-Oct-22	3035	0.00449



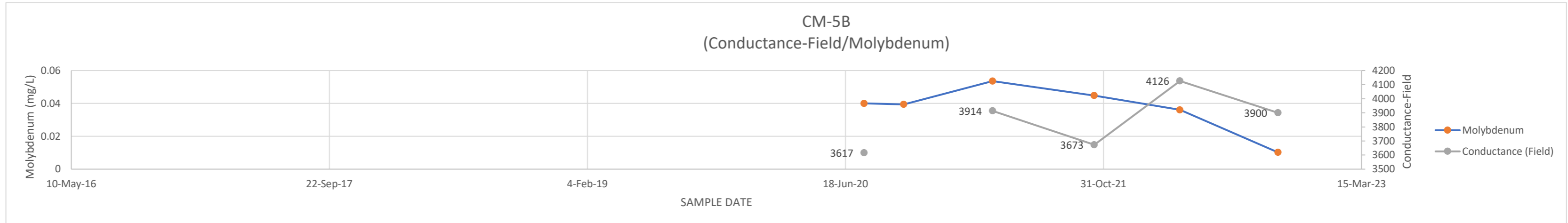
CM-4B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3331	0.0307
8-Oct-20		0.0306
30-Mar-21	4107	0.0303
13-Oct-21	3801	0.0131
28-Mar-22	4207	0.0184
4-Oct-22	3917	0.00771



CM-5A	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2617	0.0205
8-Oct-20		0.011
30-Mar-21	4132	0.0182
13-Oct-21	3626	0.0058
28-Mar-22	3736	0.00351
4-Oct-22	3167	0.00317



CM-5B	COND-Field	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3617	0.04
9-Oct-20		0.0394
30-Mar-21	3914	0.0536
13-Oct-21	3673	0.0448
28-Mar-22	4126	0.0361
4-Oct-22	3900	0.0102

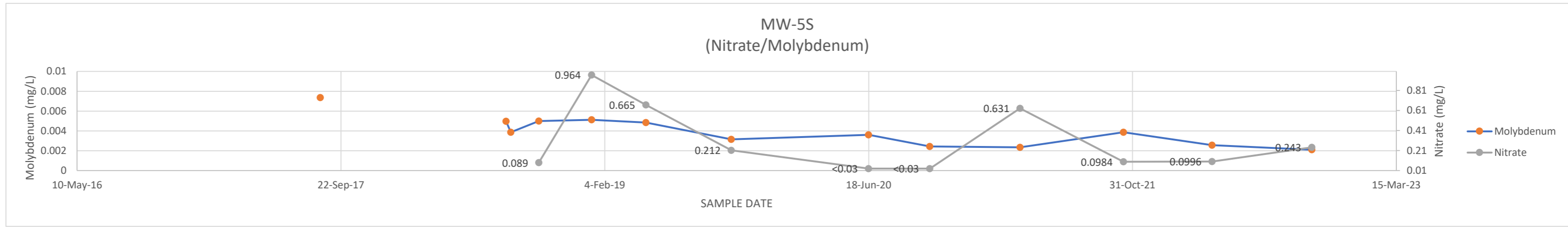


Yellow Indicates Reported Below shown value (MDL)

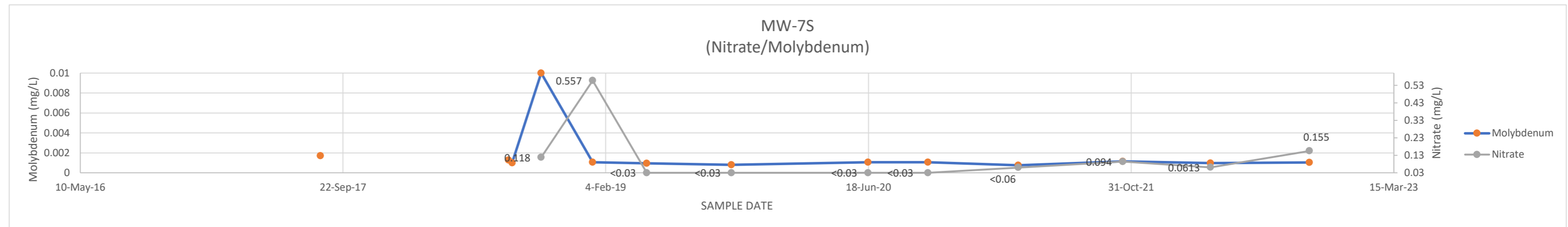
ATTACHMENT G-4  
CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS

MW-5S			
DATE	NITRATE	MOLYBDENUM	
14-Aug-17		0.00737	
22-May-18			
1-Aug-18		0.00497	
10-Aug-18		0.00387	
2-Oct-18	0.089	0.005	
10-Jan-19	0.964	0.00512	
23-Apr-19	0.665	0.00485	
2-Oct-19	0.212	0.00315	
18-Jun-20	0.03	0.00361	
12-Oct-20	0.03	0.00244	
1-Apr-21	0.631	0.00234	
14-Oct-21	0.0984	0.00387	
31-Mar-22	0.0996	0.00257	
6-Oct-22	0.243	0.0021	

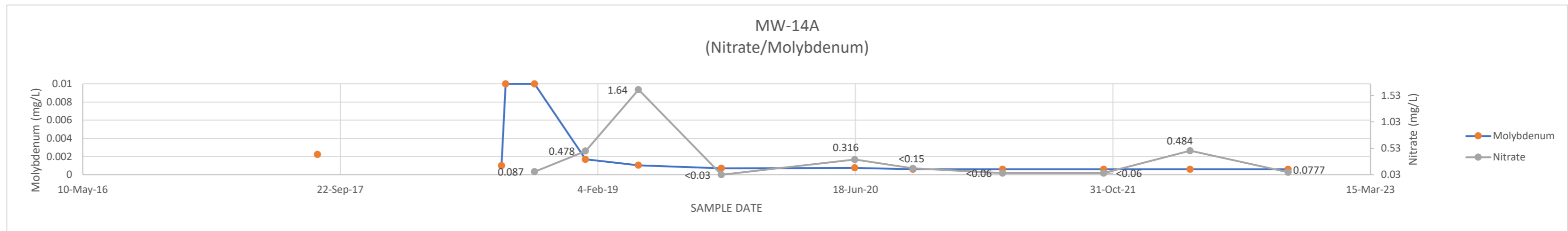
Value denoted in red from June 2022 resample



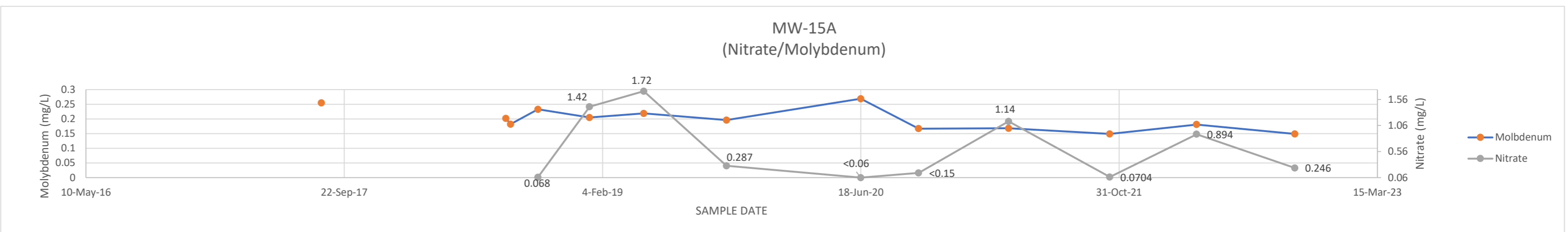
MW-7S			
DATE	NITRATE	MOLYBDENUM	
10-Aug-17		0.00171	
17-May-18			
3-Aug-18		0.00127	
10-Aug-18		0.001	
4-Oct-18	0.118	0.01	
10-Jan-19	0.557	0.00105	
23-Apr-19	0.03	0.000952	
1-Oct-19	0.03	0.000798	
17-Jun-20	0.03	0.00105	
9-Oct-20	0.03	0.00106	
30-Mar-21	0.06	0.000755	
15-Oct-21	0.094	0.00115	
31-Mar-22	0.0613	0.000973	
5-Oct-22	0.155	0.00103	



MW-14A			
DATE	NITRATE	MOLYBDENUM	
9-Aug-17		0.00223	
17-May-18			
1-Aug-18		0.001	
9-Aug-18		0.01	
4-Oct-18	0.087	0.01	
11-Jan-19	0.478	0.0017	
24-Apr-19	1.64	0.00104	
2-Oct-19	0.03	0.000709	
17-Jun-20	0.316	0.00076	
8-Oct-20	0.15	0.0006	
31-Mar-21	0.06	0.0006	
13-Oct-21	0.06	0.0006	
30-Mar-22	0.484	0.0006	
6-Oct-22	0.0777	0.0006	

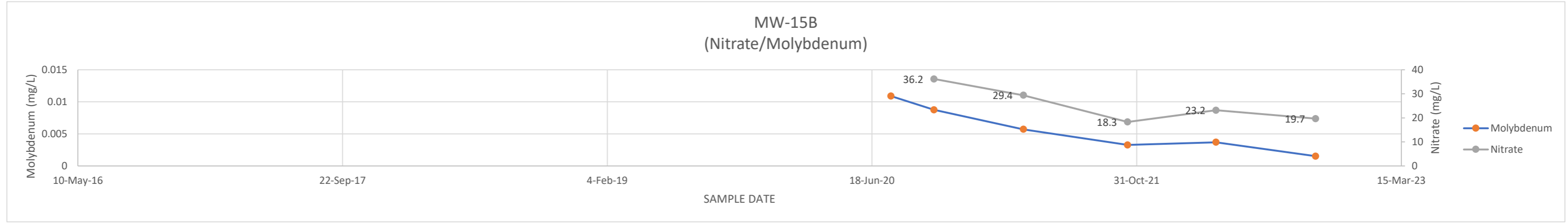


MW-15A			
DATE	NITRATE	MOLYBDENUM	
9-Aug-17		0.255	
24-May-18			
1-Aug-18		0.202	
10-Aug-18		0.182	
2-Oct-18	0.068	0.233	
10-Jan-19	1.42	0.205	
25-Apr-19	1.72	0.219	
2-Oct-19	0.287	0.196	
18-Jun-20	0.06	0.269	
8-Oct-20	0.15	0.167	
31-Mar-21	1.14	0.168	
13-Oct-21	0.0704	0.149	
30-Mar-22	0.894	0.181	
6-Oct-22	0.246	0.149	

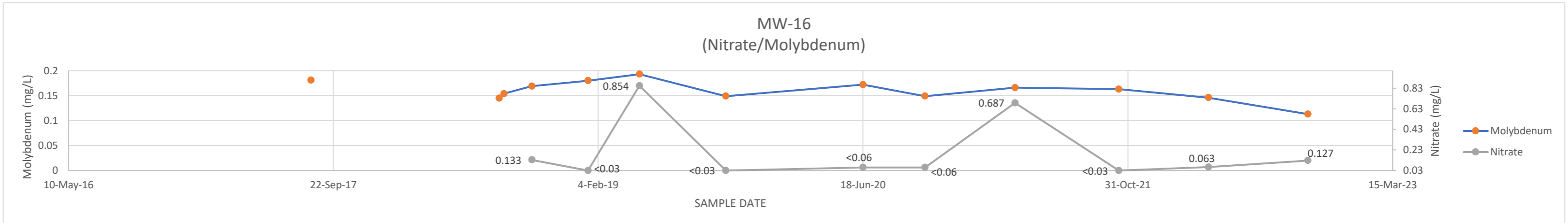


ATTACHMENT G-4  
CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS

MW-15B		
DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0109
13-Oct-20	36.2	0.00876
31-Mar-21	29.4	0.00571
14-Oct-21	18.3	0.00328
30-Mar-22	23.2	0.0037
4-Oct-22	19.7	0.00153

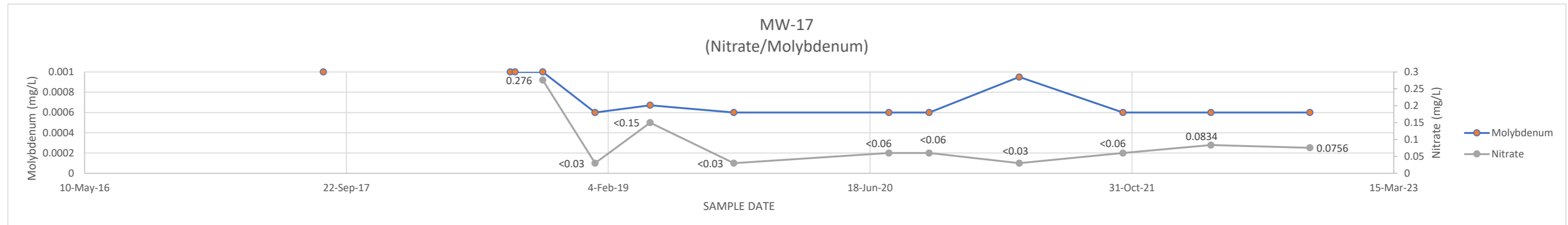


MW-16		
DATE	NITRATE	MOLYBDENUM
11-Aug-17		0.181
22-May-18		
1-Aug-18		0.145
10-Aug-18		0.154
2-Oct-18		0.169
16-Jan-19	0.133	0.18
23-Apr-19	0.854	0.193
3-Oct-19	0.03	0.149
18-Jun-20	0.06	0.172
13-Oct-20	0.06	0.149
1-Apr-21	0.687	0.166
14-Oct-21	0.03	0.163
1-Apr-22	0.063	0.146
6-Oct-22	0.127	0.113



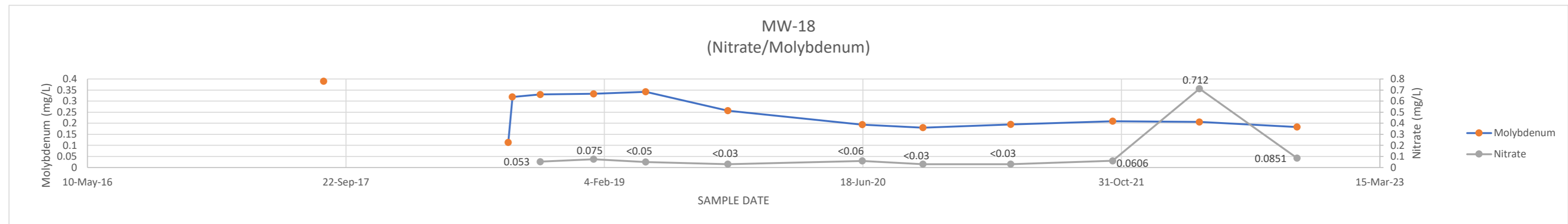
Value denoted in red from June 2022 resample

MW-17		
DATE	NITRATE	MOLYBDENUM
9-Aug-17		0.001
24-May-18		
1-Aug-18		0.001
10-Aug-18		0.001
2-Oct-18	0.276	0.001
10-Jan-19	0.03	0.0006
25-Apr-19	0.15	0.000671
2-Oct-19	0.03	0.0006
24-Jul-20	0.06	0.0006
9-Oct-20	0.06	0.0006
30-Mar-21	0.03	0.00095
14-Oct-21	0.06	0.0006
31-Mar-22	0.0834	0.0006
6-Oct-22	0.0756	0.0006



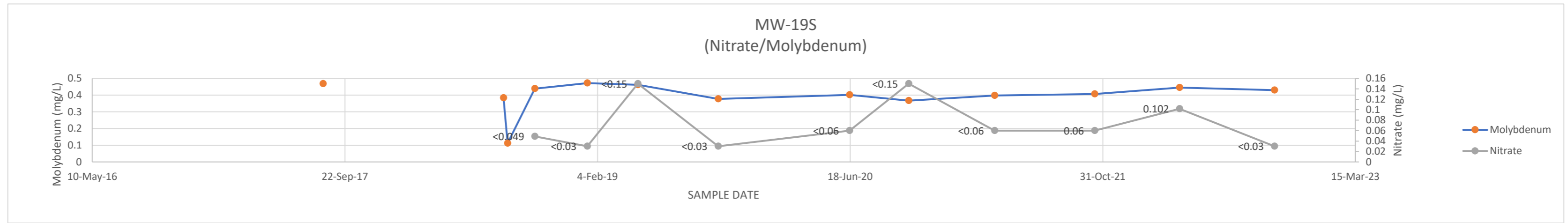
Value denoted in red from June 2022 resample

MW-18		
DATE	NITRATE	MOLYBDENUM
10-Aug-17		0.39
18-May-18		
2-Aug-18		0.113
10-Aug-18		0.319
3-Oct-18	0.053	0.33
14-Jan-19	0.075	0.333
25-Apr-19	0.05	0.342
1-Oct-19	0.03	0.257
17-Jun-20	0.06	0.194
12-Oct-20	0.03	0.18
31-Mar-21	0.03	0.195
14-Oct-21	0.0606	0.209
31-Mar-22	0.712	0.206
6-Oct-22	0.0851	0.183

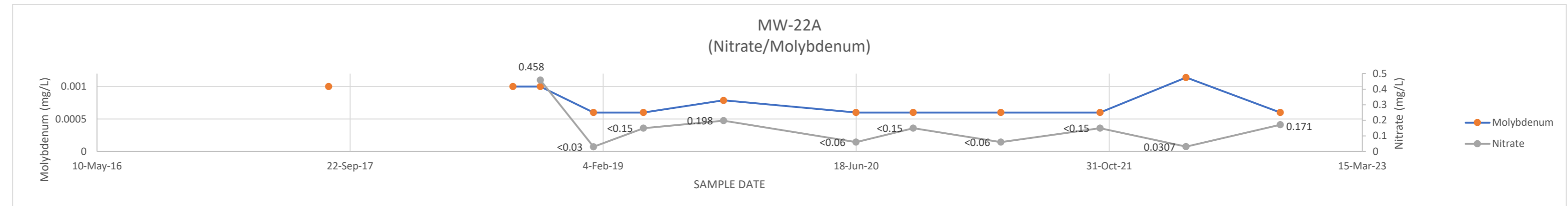


ATTACHMENT G-4  
CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS

MW-19S		
DATE	NITRATE	MOLYBDENUM
10-Aug-17		0.469
18-May-18		0.384
2-Aug-18		0.112
10-Aug-18		0.439
3-Oct-18	0.049	0.439
15-Jan-19	0.03	0.472
25-Apr-19	0.15	0.462
1-Oct-19	0.03	0.377
17-Jun-20	0.06	0.402
12-Oct-20	0.15	0.367
31-Mar-21	0.06	0.398
15-Oct-21	0.06	0.407
1-Apr-22	0.102	0.445
6-Oct-22	0.03	0.43

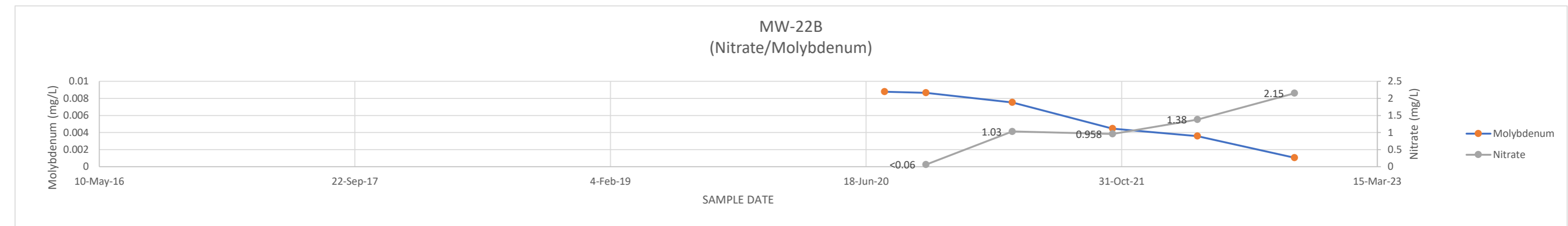


MW-22A		
DATE	NITRATE	MOLYBDENUM
11-Aug-17		0.001
22-May-18		0.001
10-Aug-18		0.001
3-Oct-18	0.458	0.001
16-Jan-19	0.03	0.0006
25-Apr-19	0.15	0.0006
30-Sep-19	0.198	0.000787
18-Jun-20	0.06	0.0006
9-Oct-20	0.15	0.0006
31-Mar-21	0.06	0.0006
13-Oct-21	0.15	0.0006
1-Apr-22	0.0307	0.00114
4-Oct-22	0.171	0.0006

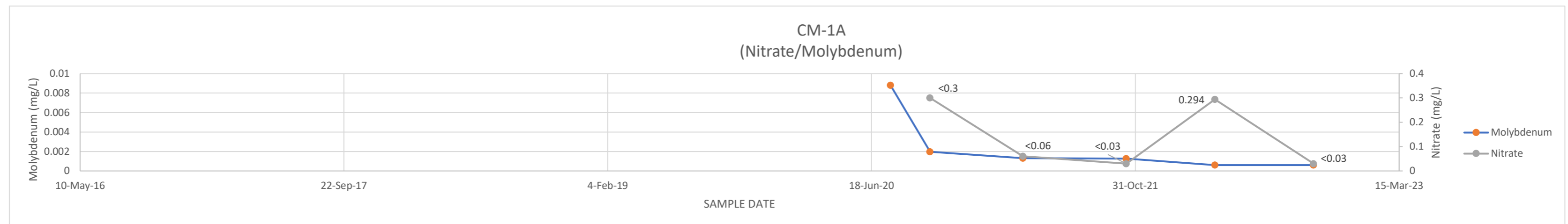


Value denoted in red from June 2022 resample

MW-22B		
DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.00878
13-Oct-20	0.06	0.00866
31-Mar-21	1.03	0.00753
13-Oct-21	0.958	0.00446
28-Mar-22	1.38	0.00357
4-Oct-22	2.15	0.00105

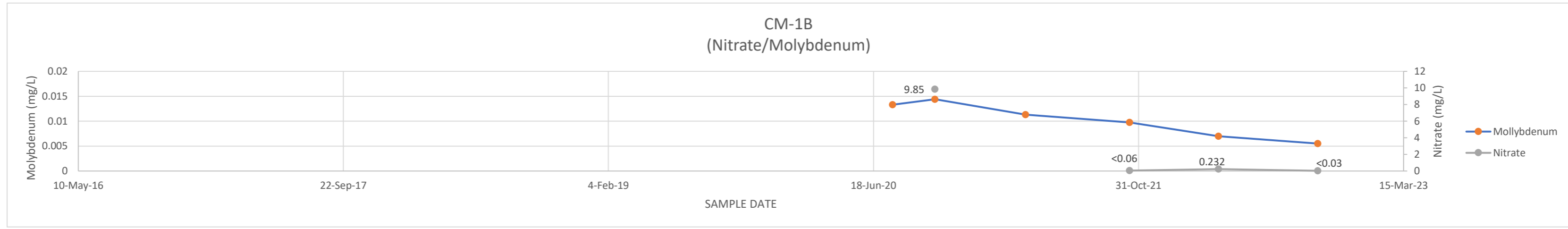


CM-1A		
DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0088
7-Oct-20	0.3	0.00198
1-Apr-21	0.06	0.00132
14-Oct-21	0.03	0.00127
31-Mar-22	0.294	0.0006
4-Oct-22	0.03	0.0006

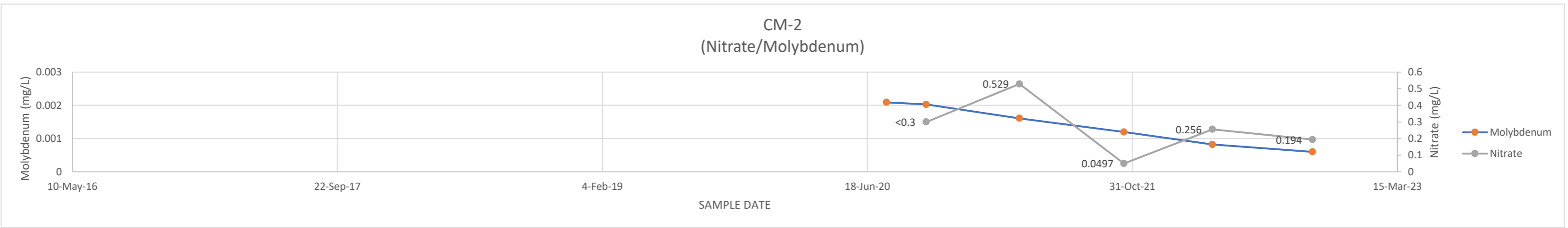


ATTACHMENT G-4  
CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS

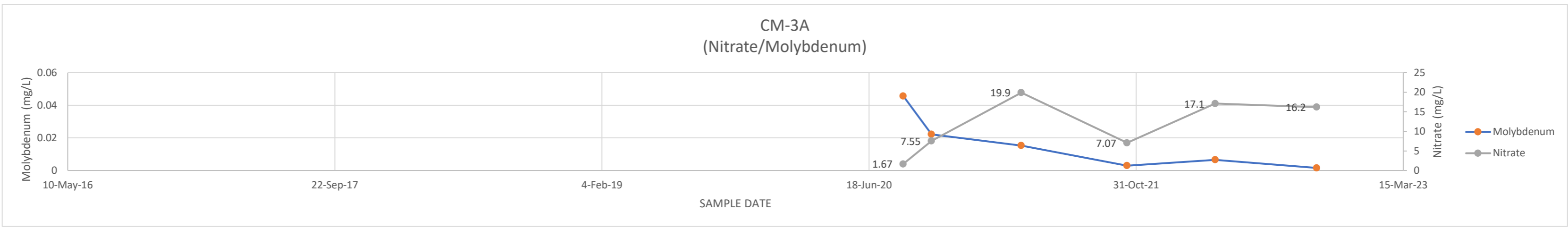
CM-1B DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0133
12-Oct-20	9.85	0.0144
1-Apr-21		0.0113
14-Oct-21	0.06	0.00976
31-Mar-22	0.232	0.00696
4-Oct-22	0.03	0.00551



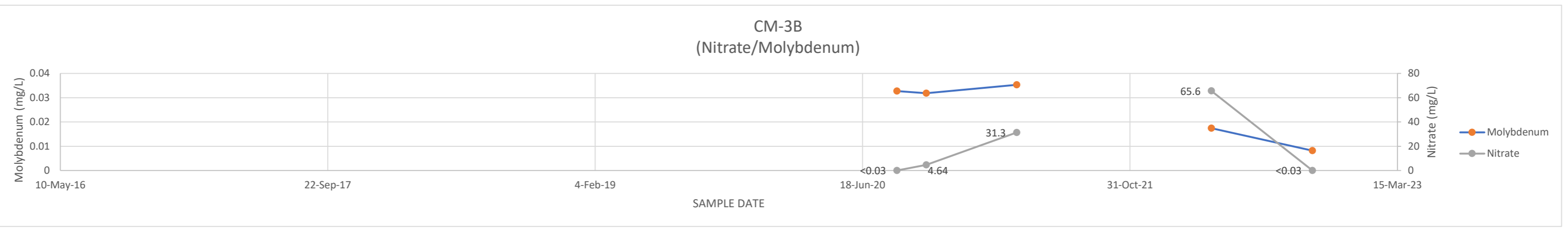
CM-2 DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.00209
7-Oct-20	0.3	0.00203
1-Apr-21	0.529	0.00161
15-Oct-21	0.0497	0.0012
31-Mar-22	0.256	0.00082
6-Oct-22	0.194	0.0006



CM-3A DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	1.67	0.0457
13-Oct-20	7.55	0.0222
30-Mar-21	19.9	0.0153
14-Oct-21	7.07	0.00297
28-Mar-22	17.1	0.00656
4-Oct-22	16.2	0.00155

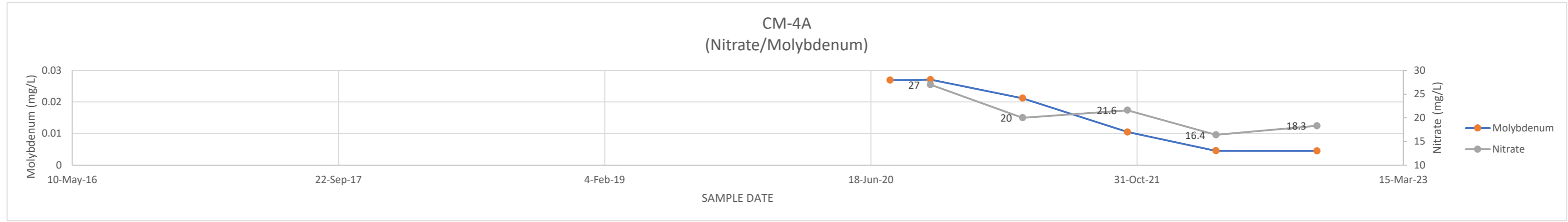


CM-3B DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	0.03	0.0327
15-Oct-20	4.64	0.0318
2-Apr-21	31.3	0.0353
11-Oct-21		
1-Apr-22	65.6	0.0174
7-Oct-22	0.03	0.00819

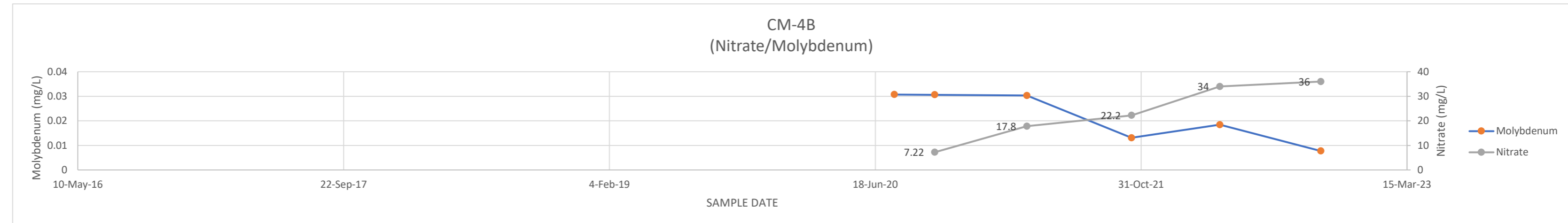


ATTACHMENT G-4  
CHANGES IN NITRATE AND MOLYBDENUM CONCENTRATIONS

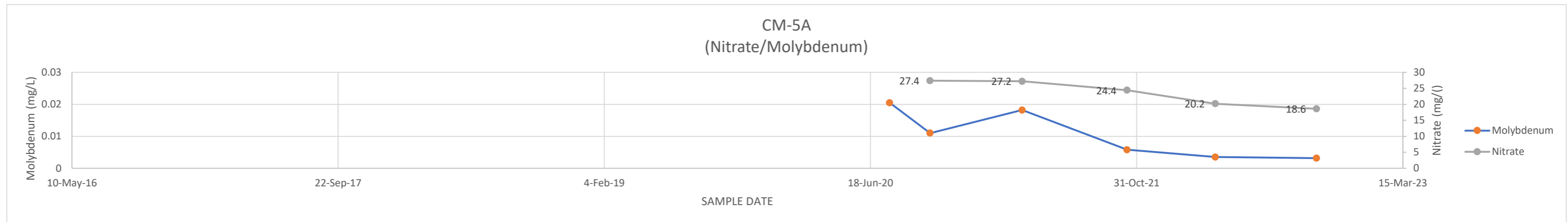
CM-4A DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0269
8-Oct-20	27	0.0271
30-Mar-21	20	0.0212
13-Oct-21	21.6	0.0105
28-Mar-22	16.4	0.00455
4-Oct-22	18.3	0.00449



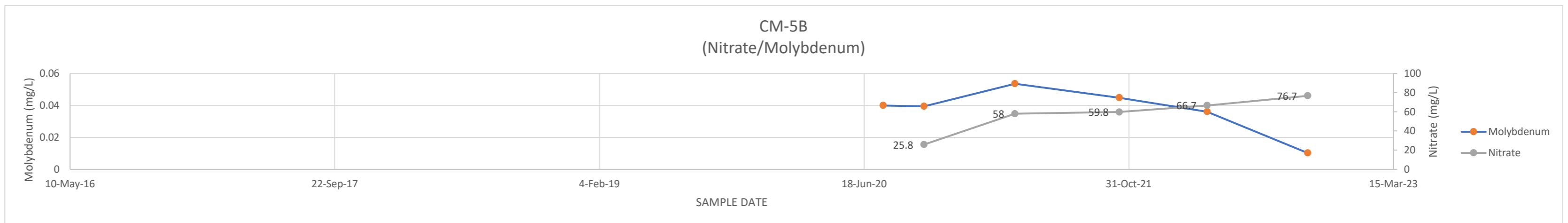
CM-4B DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0307
8-Oct-20	7.22	0.0306
30-Mar-21	17.8	0.0303
13-Oct-21	22.2	0.0131
28-Mar-22	34	0.0184
4-Oct-22	36	0.00771



CM-5A DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0205
8-Oct-20	27.4	0.011
30-Mar-21	27.2	0.0182
13-Oct-21	24.4	0.0058
28-Mar-22	20.2	0.00351
4-Oct-22	18.6	0.00317



CM-5B DATE	NITRATE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.04
9-Oct-20	25.8	0.0394
30-Mar-21	58	0.0536
13-Oct-21	59.8	0.0448
28-Mar-22	66.7	0.0361
4-Oct-22	76.7	0.0102

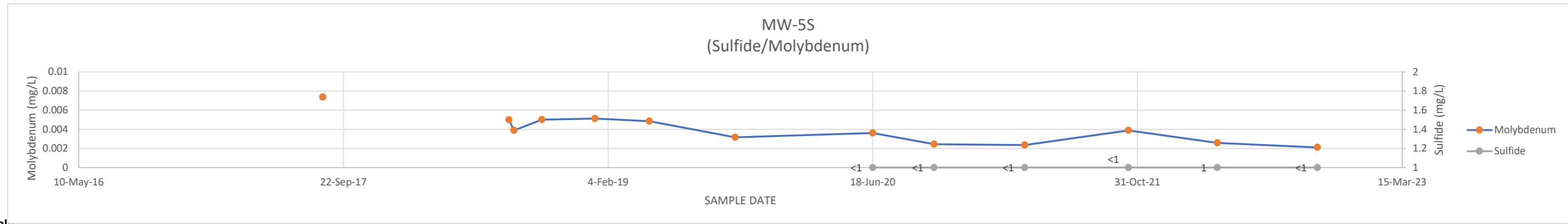


Yellow Indicates Reported Below shown value (MDL)

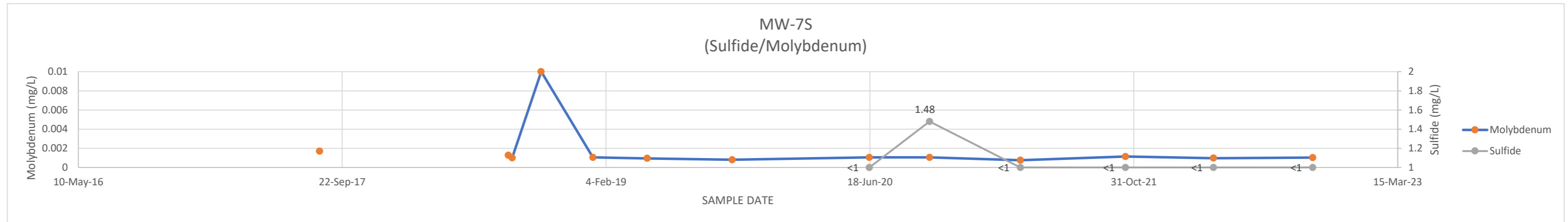
ATTACHMENT G-5  
CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	SULFIDE	MOLYBDENUM
	14-Aug-17		0.00737
	22-May-18		
	1-Aug-18		0.00497
	10-Aug-18		0.00387
	2-Oct-18		0.005
	10-Jan-19		0.00512
	23-Apr-19		0.00485
	2-Oct-19		0.00315
	18-Jun-20	1	0.00361
	12-Oct-20	1	0.00244
	1-Apr-21	1	0.00234
	14-Oct-21	1	0.00387
	31-Mar-22	1	0.00257
	6-Oct-22	1	0.0021

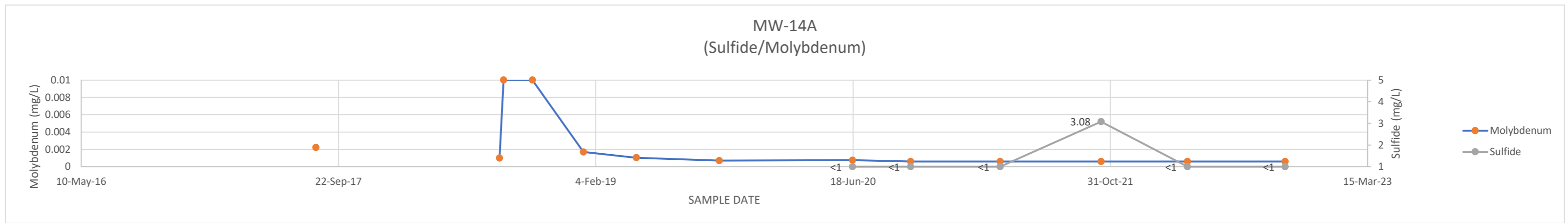
Value denoted in red from June 2022 resample



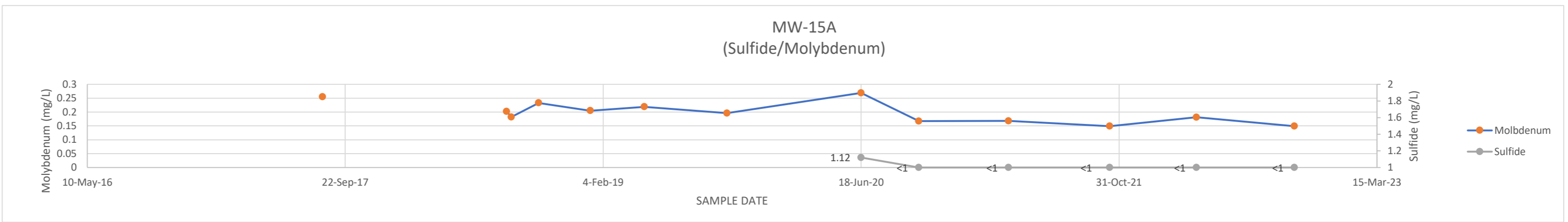
MW-7S	DATE	SULFIDE	MOLYBDENUM
	10-Aug-17		0.00171
	17-May-18		
	3-Aug-18		0.00127
	10-Aug-18		0.001
	4-Oct-18		0.01
	10-Jan-19		0.00105
	23-Apr-19		0.000952
	1-Oct-19		0.000798
	17-Jun-20	1	0.00105
	9-Oct-20	1.48	0.00106
	30-Mar-21	1	0.000755
	15-Oct-21	1	0.00115
	31-Mar-22	1	0.000973
	5-Oct-22	1	0.00103



MW-14A	DATE	SULFIDE	MOLYBDENUM
	9-Aug-17		0.00223
	17-May-18		
	1-Aug-18		0.001
	9-Aug-18		0.01
	4-Oct-18		0.01
	11-Jan-19		0.0017
	24-Apr-19		0.00104
	2-Oct-19		0.000709
	17-Jun-20	1	0.00076
	8-Oct-20	1	0.0006
	31-Mar-21	1	0.0006
	13-Oct-21	3.08	0.0006
	30-Mar-22	1	0.0006
	6-Oct-22	1	0.0006



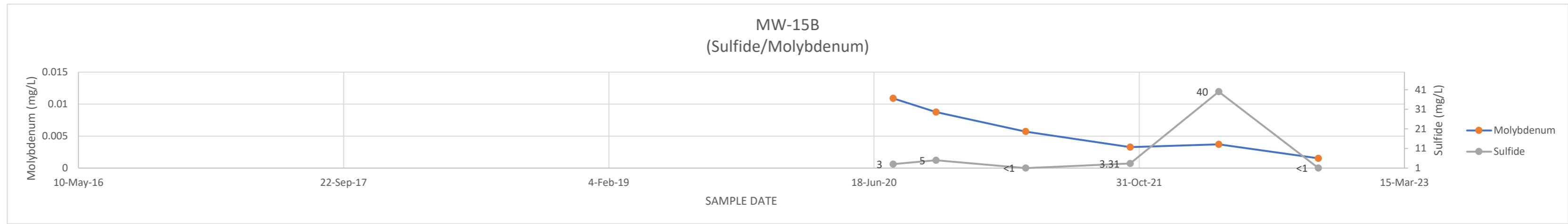
MW-15A	DATE	SULFIDE	MOLYBDENUM
	9-Aug-17		0.255
	24-May-18		
	1-Aug-18		0.202
	10-Aug-18		0.182
	2-Oct-18		0.233
	10-Jan-19		0.205
	25-Apr-19		0.219
	2-Oct-19		0.196
	18-Jun-20	1.12	0.269
	8-Oct-20	1	0.167
	31-Mar-21	1	0.168
	13-Oct-21	1	0.149
	30-Mar-22	1	0.181
	6-Oct-22	1	0.149



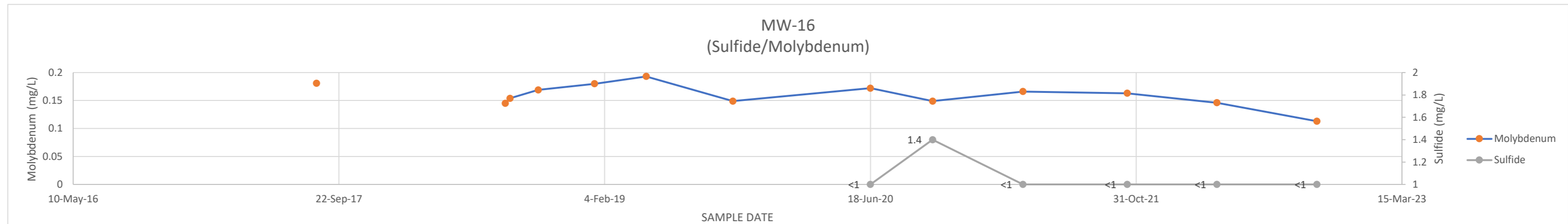


ATTACHMENT G-5  
CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS

MW-15B		
DATE	SULFIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	3	0.0109
13-Oct-20	5	0.00876
31-Mar-21	1	0.00571
14-Oct-21	3.31	0.00328
30-Mar-22	40	0.0037
4-Oct-22	1	0.00153

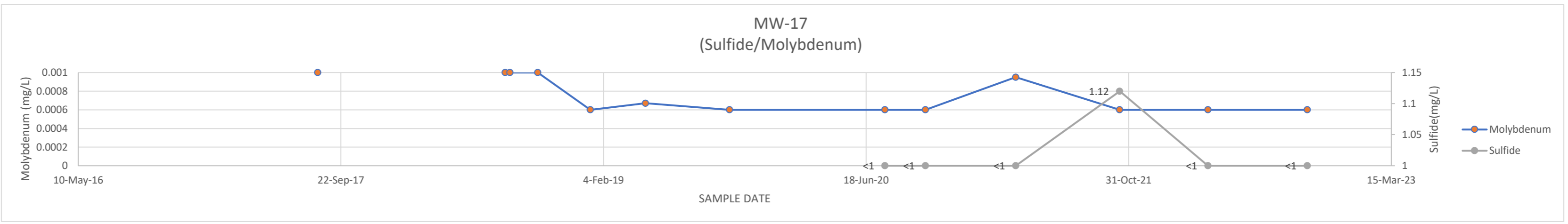


MW-16		
DATE	SULFIDE	MOLYBDENUM
11-Aug-17		0.181
22-May-18		
1-Aug-18		0.145
10-Aug-18		0.154
2-Oct-18		0.169
16-Jan-19		0.18
23-Apr-19		0.193
3-Oct-19		0.149
18-Jun-20	1	0.172
13-Oct-20	1.4	0.149
1-Apr-21	1	0.166
14-Oct-21	1	0.163
1-Apr-22	1	0.146
6-Oct-22	1	0.113



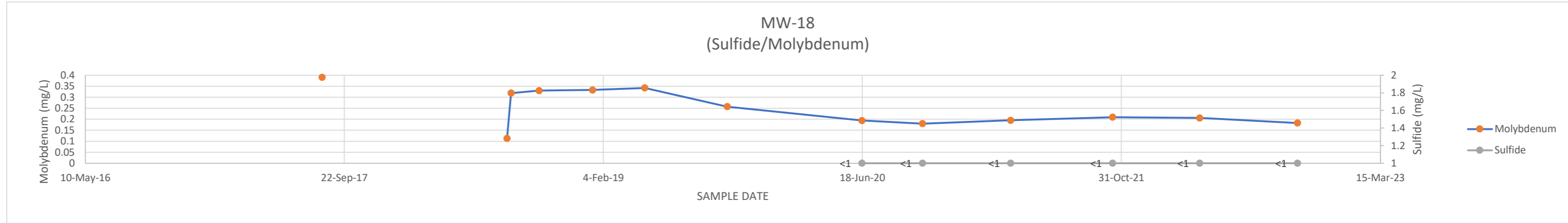
Value denoted in red from June 2022 resample

MW-17		
DATE	SULFIDE	MOLYBDENUM
9-Aug-17		0.001
24-May-18		
1-Aug-18		0.001
10-Aug-18		0.001
2-Oct-18		0.001
10-Jan-19		0.0006
25-Apr-19		0.000671
2-Oct-19		0.0006
24-Jul-20	1	0.0006
9-Oct-20	1	0.0006
30-Mar-21	1	0.00095
14-Oct-21	1.12	0.0006
31-Mar-22	1	0.0006
6-Oct-22	1	0.0006



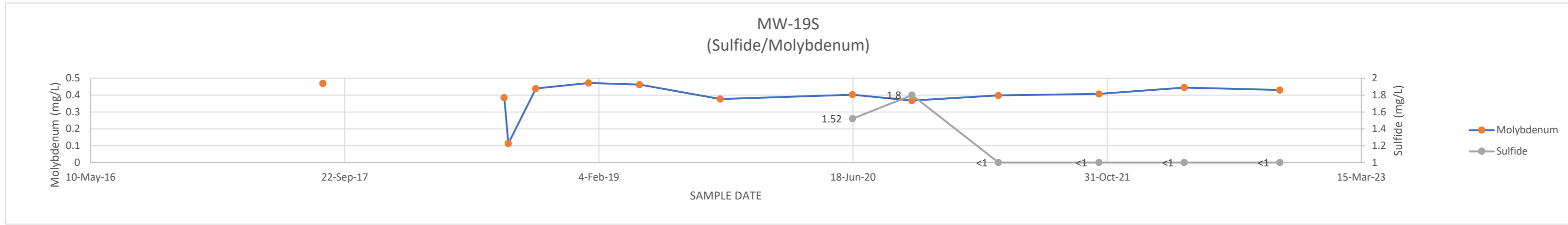
Value denoted in red from June 2022 resample

MW-18		
DATE	SULFIDE	MOLYBDENUM
10-Aug-17		0.39
18-May-18		
2-Aug-18		0.113
10-Aug-18		0.319
3-Oct-18		0.33
14-Jan-19		0.333
25-Apr-19		0.342
1-Oct-19		0.257
17-Jun-20	1	0.194
12-Oct-20	1	0.18
31-Mar-21	1	0.195
14-Oct-21	1	0.209
31-Mar-22	1	0.206
6-Oct-22	1	0.183

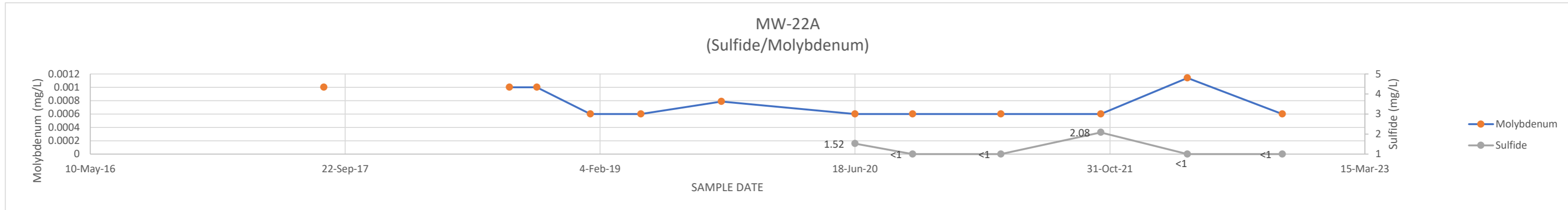


ATTACHMENT G-5  
CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	SULFIDE	MOLYBDENUM
	10-Aug-17		0.469
	18-May-18		
	2-Aug-18		0.384
	10-Aug-18		0.112
	3-Oct-18		0.439
	15-Jan-19		0.472
	25-Apr-19		0.462
	1-Oct-19		0.377
	17-Jun-20	1.52	0.402
	12-Oct-20	1.8	0.367
	31-Mar-21	1	0.398
	15-Oct-21	1	0.407
	1-Apr-22	1	0.445
	6-Oct-22	1	0.43

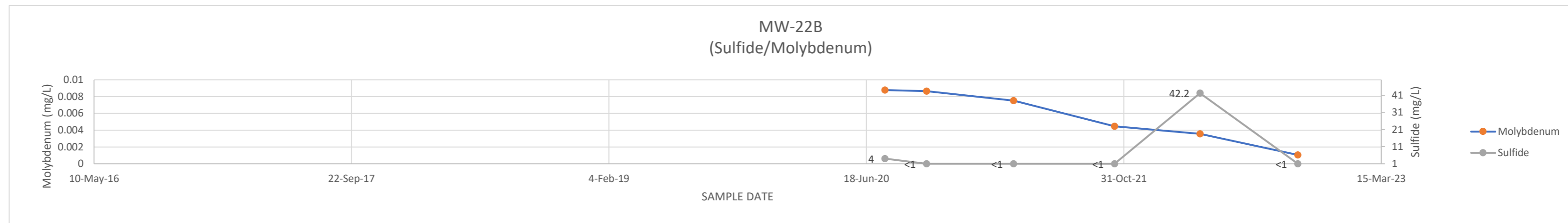


MW-22A	DATE	SULFIDE	MOLYBDENUM
	11-Aug-17		0.001
	22-May-18		
	10-Aug-18		0.001
	3-Oct-18		0.001
	16-Jan-19		0.0006
	25-Apr-19		0.0006
	30-Sep-19		0.000787
	18-Jun-20	1.52	0.0006
	9-Oct-20	1	0.0006
	31-Mar-21	1	0.0006
	13-Oct-21	2.08	0.0006
	1-Apr-22	1	0.00114
	4-Oct-22	1	0.0006

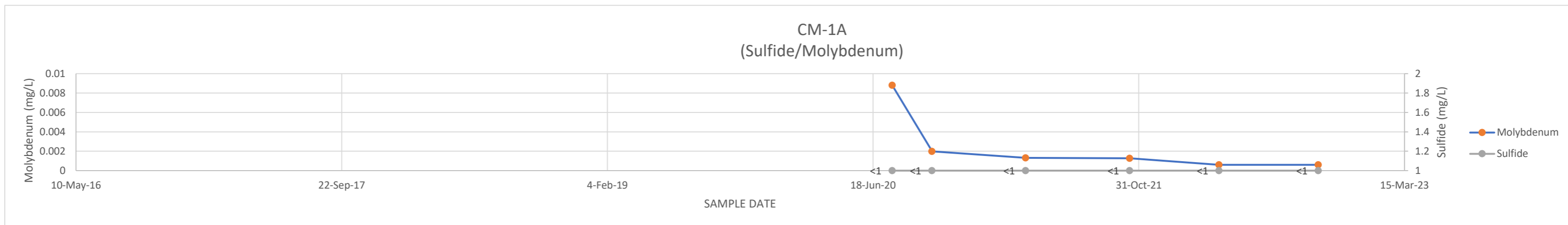


Value denoted in red from June 2022 resample

MW-22B	DATE	SULFIDE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	4	0.00878
	13-Oct-20	1	0.00866
	31-Mar-21	1	0.00753
	13-Oct-21	1	0.00446
	28-Mar-22	42.2	0.00357
	4-Oct-22	1	0.00105

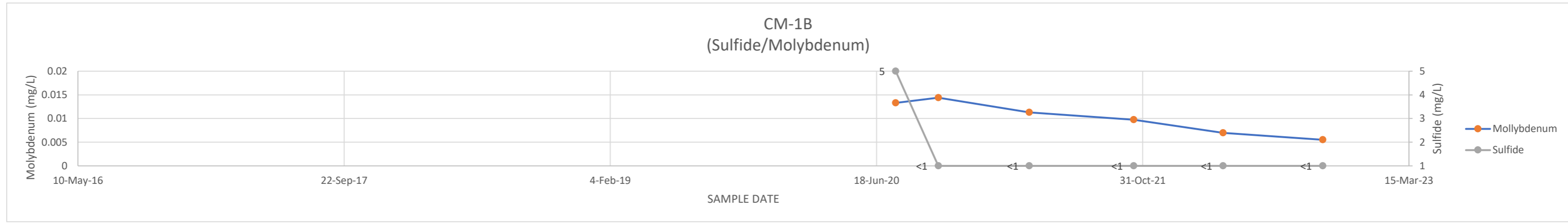


CM-1A	DATE	SULFIDE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	1	0.0088
	7-Oct-20	1	0.00198
	1-Apr-21	1	0.00132
	14-Oct-21	1	0.00127
	31-Mar-22	1	0.0006
	4-Oct-22	1	0.0006

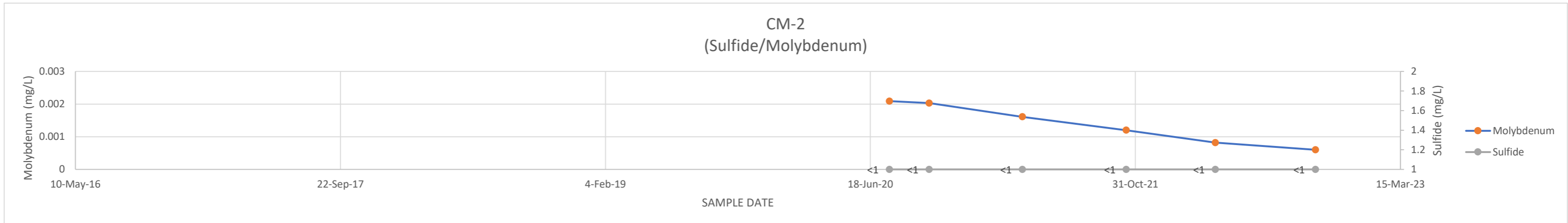


ATTACHMENT G-5  
CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS

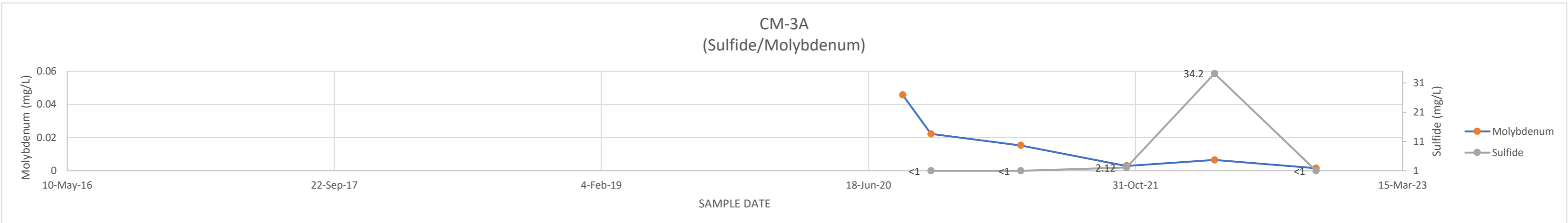
CM-1B DATE	SULFIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	5	0.0133
12-Oct-20	1	0.0144
1-Apr-21	1	0.0113
14-Oct-21	1	0.00976
31-Mar-22	1	0.00696
4-Oct-22	1	0.00551



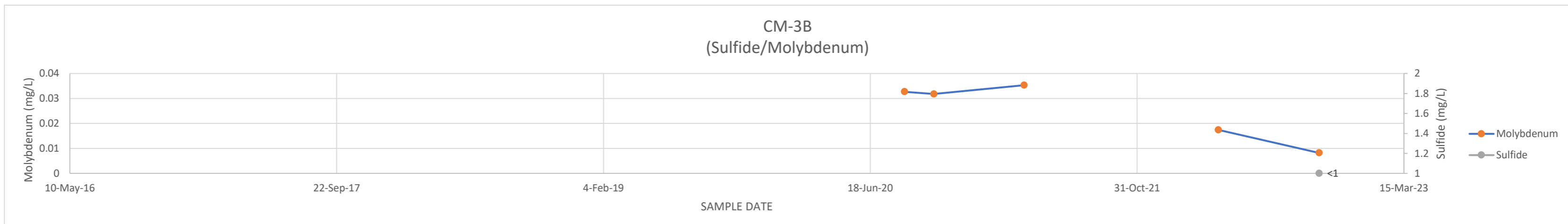
CM-2 DATE	SULFIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1	0.00209
7-Oct-20	1	0.00203
1-Apr-21	1	0.00161
14-Oct-21	1	0.0012
31-Mar-22	1	0.00082
6-Oct-22	1	0.0006



CM-3A DATE	SULFIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20	1	0.0222
30-Mar-21	1	0.0153
14-Oct-21	2.12	0.00297
28-Mar-22	34.2	0.00656
4-Oct-22	1	0.00155

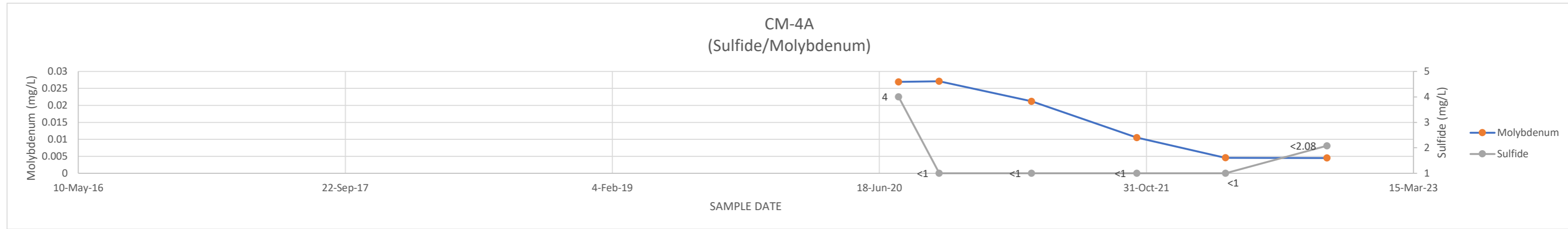


CM-3B DATE	SULFIDE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22		0.0174
7-Oct-22	1	0.00819

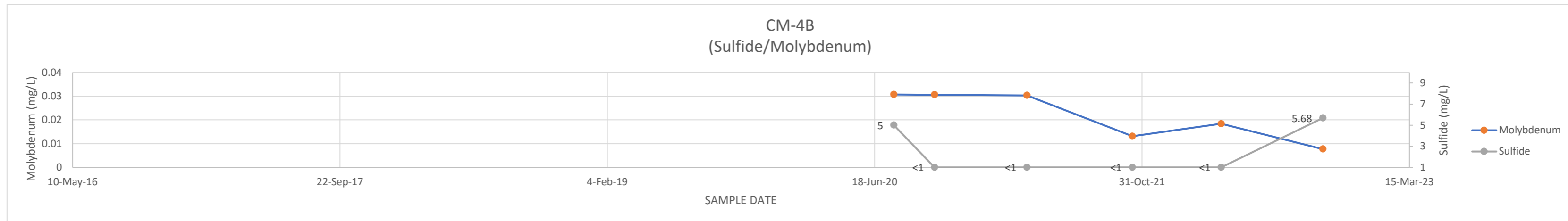


ATTACHMENT G-5  
CHANGES IN SULFIDE AND MOLYBDENUM CONCENTRATIONS

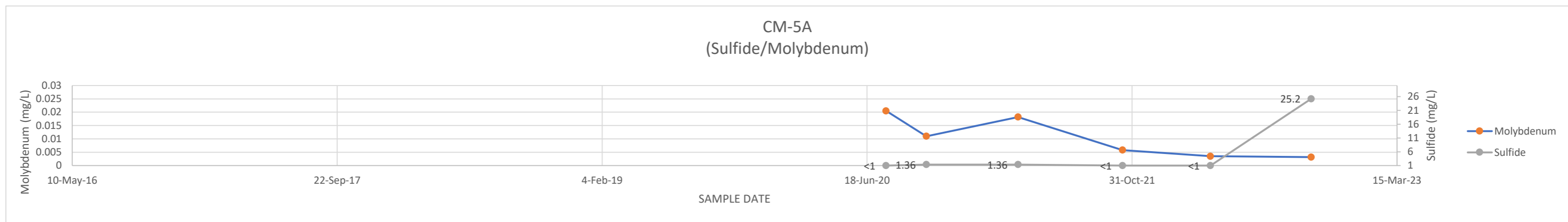
CM-4A	SULFLIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	4	0.0269
8-Oct-20	1	0.0271
30-Mar-21	1	0.0212
13-Oct-21	1	0.0105
28-Mar-22	1	0.00455
4-Oct-22	2.08	0.00449



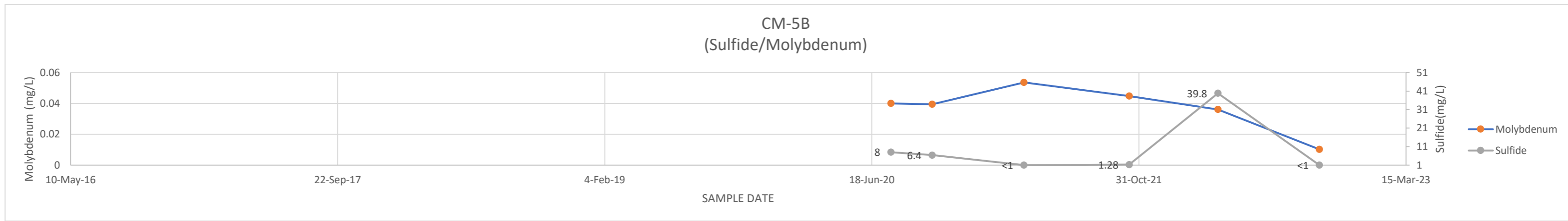
CM-4B	SULFLIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	5	0.0307
8-Oct-20	1	0.0306
30-Mar-21	1	0.0303
13-Oct-21	1	0.0131
28-Mar-22	1	0.0184
4-Oct-22	5.68	0.00771



CM-5A	SULFIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	1	0.0205
8-Oct-20	1.36	0.011
30-Mar-21	1.36	0.0182
13-Oct-21	1	0.0058
28-Mar-22	1	0.00351
4-Oct-22	25.2	0.00317



CM-5B	SULFIDE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	8	0.04
9-Oct-20	6.4	0.0394
30-Mar-21	1	0.0536
13-Oct-21	1.28	0.0448
28-Mar-22	39.8	0.0361
4-Oct-22	1	0.0102

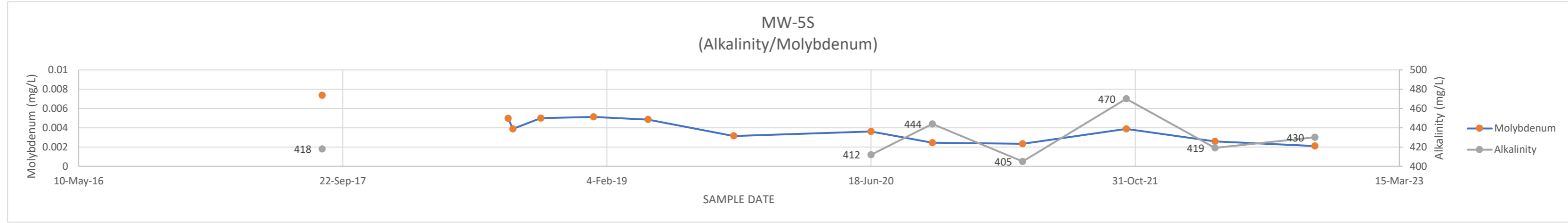


Yellow Indicates Reported Below shown value (MDL)

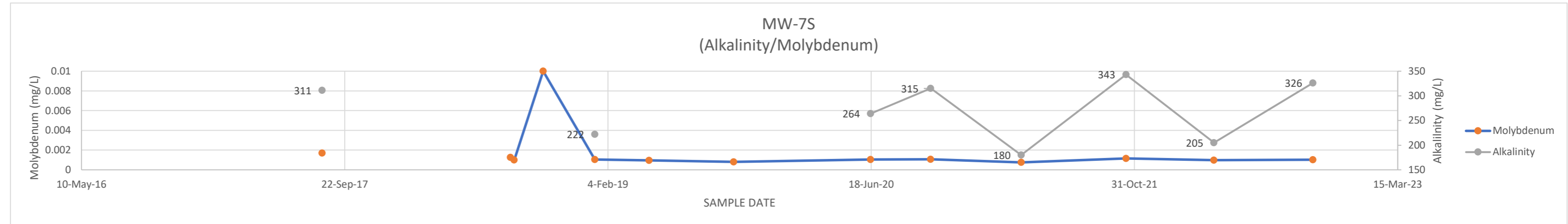
ATTACHMENT G-6  
CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	ALKALINITY	MOLYBDENUM
	14-Aug-17	418	0.00737
	22-May-18		
	1-Aug-18		0.00497
	10-Aug-18		0.00387
	2-Oct-18		0.005
	10-Jan-19		0.00512
	23-Apr-19		0.00485
	2-Oct-19		0.00315
	18-Jun-20	412	0.00361
	12-Oct-20	444	0.00244
	1-Apr-21	405	0.00234
	14-Oct-21	470	0.00387
	31-Mar-22	419	0.00257
	6-Oct-22	430	0.0021

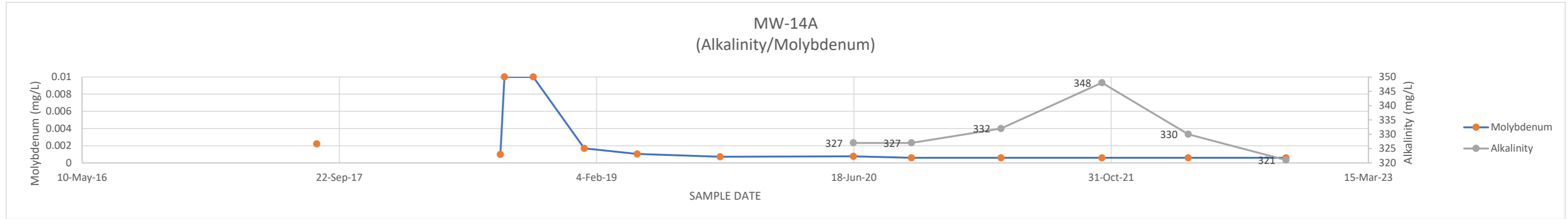
Value denoted in red from June 2022 resample



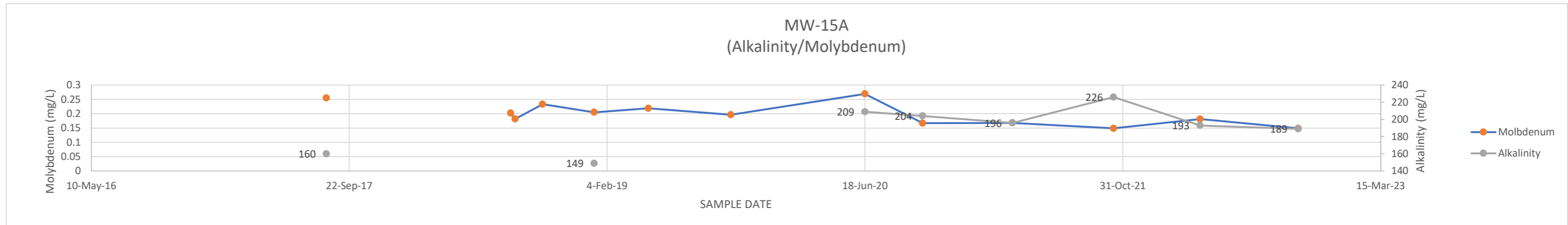
MW-7S	DATE	ALKALINITY	MOLYBDENUM
	10-Aug-17	311	0.00171
	17-May-18		
	3-Aug-18		0.00127
	10-Aug-18		0.001
	4-Oct-18		0.01
	10-Jan-19	222	0.00105
	23-Apr-19		0.000952
	1-Oct-19		0.000798
	17-Jun-20	264	0.00105
	9-Oct-20	315	0.00106
	30-Mar-21	180	0.000755
	15-Oct-21	343	0.00115
	31-Mar-22	205	0.000973
	5-Oct-22	326	0.00103



MW-14A	DATE	ALKALINITY	MOLYBDENUM
	9-Aug-17	280	0.00223
	17-May-18		
	1-Aug-18		0.001
	9-Aug-18		0.01
	4-Oct-18		0.01
	11-Jan-19		0.0017
	24-Apr-19		0.00104
	2-Oct-19		0.000709
	17-Jun-20	327	0.00076
	8-Oct-20	327	0.0006
	31-Mar-21	332	0.0006
	13-Oct-21	348	0.0006
	30-Mar-22	330	0.0006
	6-Oct-22	321	0.0006

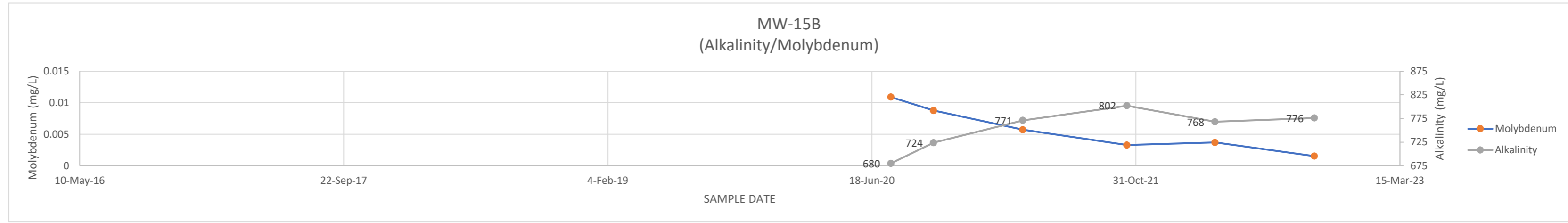


MW-15A	DATE	ALKALINITY	MOLYBDENUM
	9-Aug-17	160	0.255
	24-May-18		
	1-Aug-18		0.202
	10-Aug-18		0.182
	2-Oct-18		0.233
	10-Jan-19	149	0.205
	25-Apr-19		0.219
	2-Oct-19		0.196
	18-Jun-20	209	0.269
	8-Oct-20	204	0.167
	31-Mar-21	196	0.168
	13-Oct-21	226	0.149
	30-Mar-22	193	0.181
	6-Oct-22	189	0.149

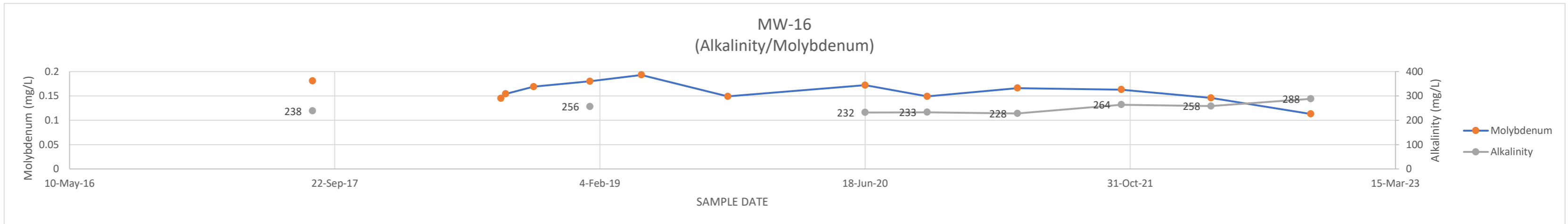


ATTACHMENT G-6  
CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

MW-15B	ALKALINITY	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	680	0.0109
13-Oct-20	724	0.00876
31-Mar-21	771	0.00571
14-Oct-21	802	0.00328
30-Mar-22	768	0.0037
4-Oct-22	776	0.00153

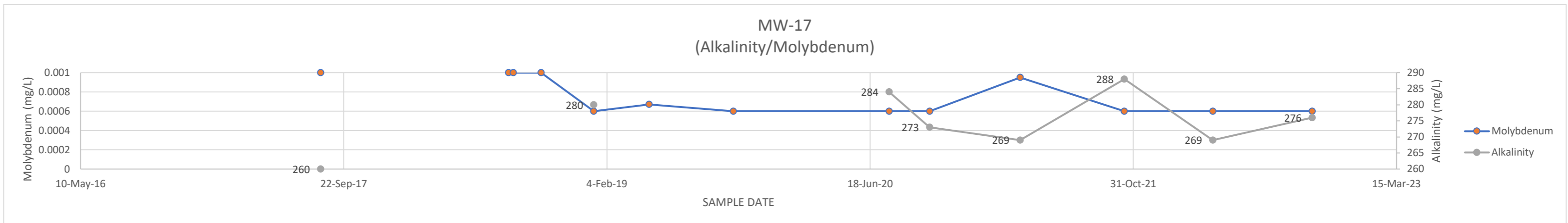


MW-16	ALKALINITY	MOLYBDENUM
DATE		
11-Aug-17	238	0.181
22-May-18		0.145
1-Aug-18		0.154
10-Aug-18		0.169
2-Oct-18		0.18
16-Jan-19	256	0.193
23-Apr-19		0.149
3-Oct-19		0.172
18-Jun-20	232	0.149
13-Oct-20	233	0.166
1-Apr-21	228	0.163
14-Oct-21	264	0.146
1-Apr-22	258	0.113
6-Oct-22	288	0.113



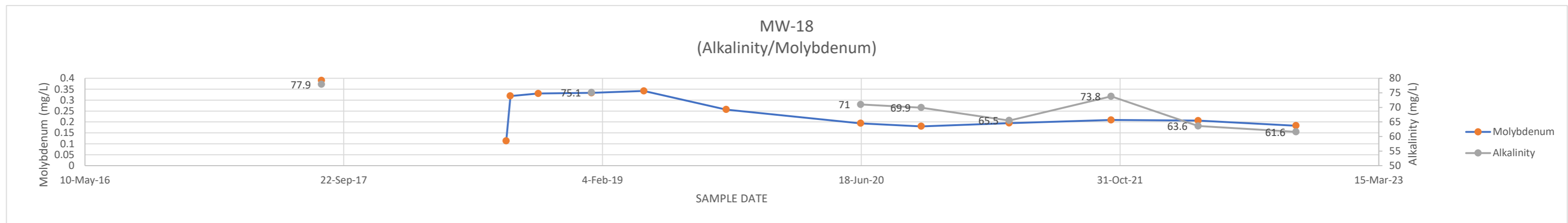
Value denoted in red from June 2022 resample

MW-17	ALKALINITY	MOLYBDENUM
DATE		
9-Aug-17	260	0.001
24-May-18		0.001
1-Aug-18		0.001
10-Aug-18		0.001
2-Oct-18		0.001
10-Jan-19	280	0.0006
25-Apr-19		0.000671
2-Oct-19		0.0006
24-Jul-20	284	0.0006
9-Oct-20	273	0.0006
30-Mar-21	269	0.00095
14-Oct-21	288	0.0006
31-Mar-22	269	0.0006
6-Oct-22	276	0.0006



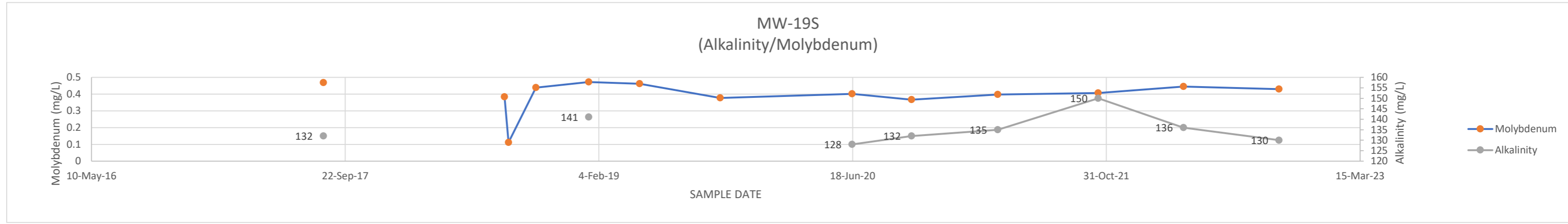
Value denoted in red from June 2022 resample

MW-18	ALKALINITY	MOLYBDENUM
DATE		
10-Aug-17	77.9	0.39
18-May-18		0.113
2-Aug-18		0.319
10-Aug-18		0.33
3-Oct-18		0.333
14-Jan-19	75.1	0.342
25-Apr-19		0.257
1-Oct-19		0.194
17-Jun-20	71	0.18
12-Oct-20	69.9	0.195
31-Mar-21	65.5	0.209
14-Oct-21	73.8	0.206
31-Mar-22	63.6	0.183
6-Oct-22	61.6	0.183

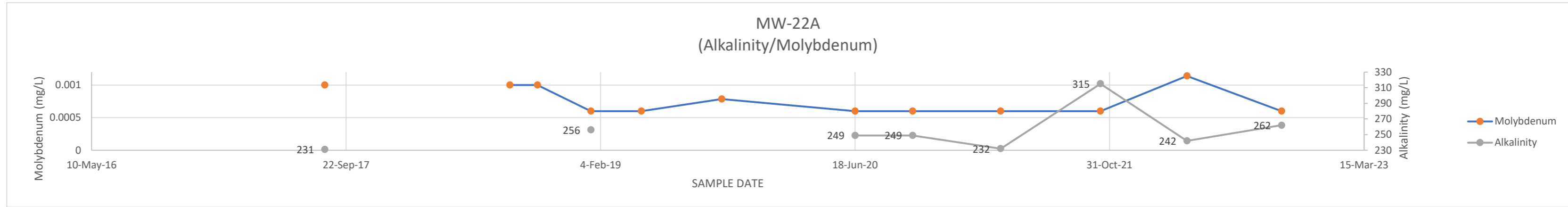


ATTACHMENT G-6  
CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

MW-19S DATE	ALKALINITY	MOLYBDENUM
10-Aug-17	132	0.469
18-May-18		
2-Aug-18		0.384
10-Aug-18		0.112
3-Oct-18		0.439
15-Jan-19	141	0.472
25-Apr-19		0.462
1-Oct-19		0.377
17-Jun-20	128	0.402
12-Oct-20	132	0.367
31-Mar-21	135	0.398
15-Oct-21	150	0.407
1-Apr-22	136	0.445
6-Oct-22	130	0.43

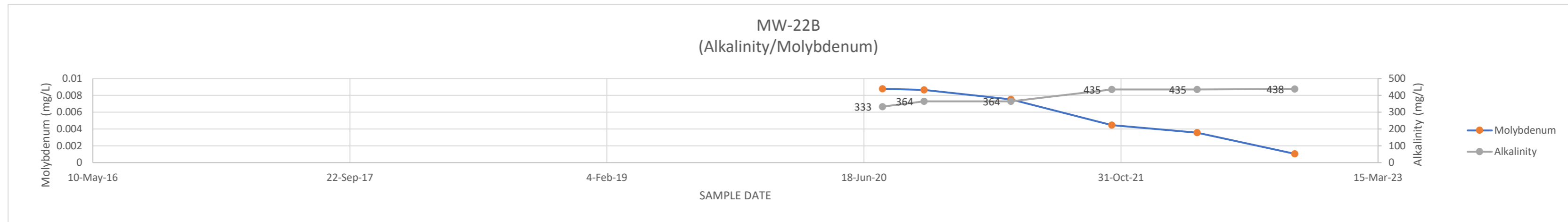


MW-22A DATE	ALKALINITY	MOLYBDENUM
11-Aug-17	231	0.001
22-May-18		
10-Aug-18		0.001
3-Oct-18		0.001
16-Jan-19	256	0.0006
25-Apr-19		0.0006
30-Sep-19		0.000787
18-Jun-20	249	0.0006
9-Oct-20	249	0.0006
31-Mar-21	232	0.0006
13-Oct-21	315	0.0006
1-Apr-22	242	0.00114
4-Oct-22	262	0.0006

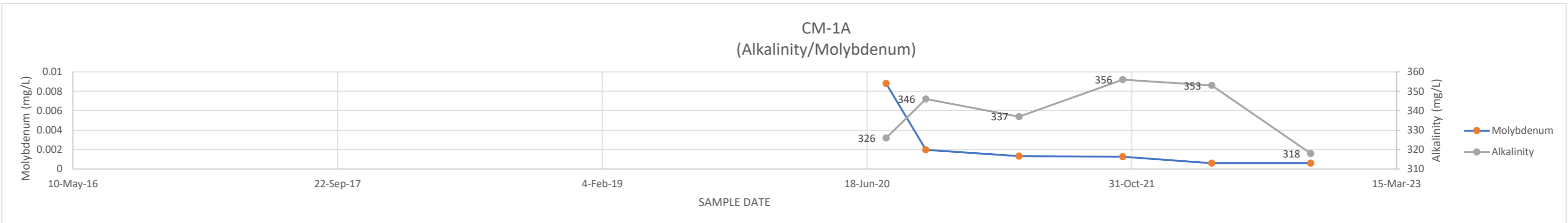


Value denoted in red from June 2022 resample

MW-22B DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	333	0.00878
13-Oct-20	364	0.00866
31-Mar-21	364	0.00753
13-Oct-21	435	0.00446
28-Mar-22	435	0.00357
4-Oct-22	438	0.00105

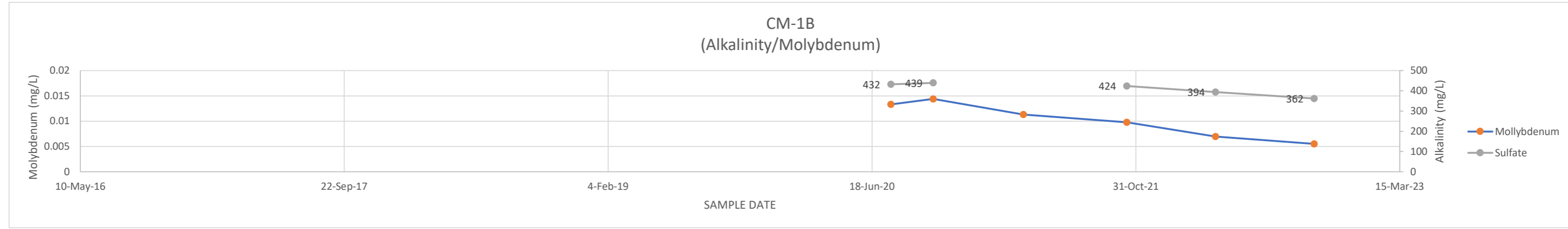


CM-1A DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	326	0.0088
7-Oct-20	346	0.00198
1-Apr-21	337	0.00132
14-Oct-21	356	0.00127
31-Mar-22	353	0.0006
4-Oct-22	318	0.0006

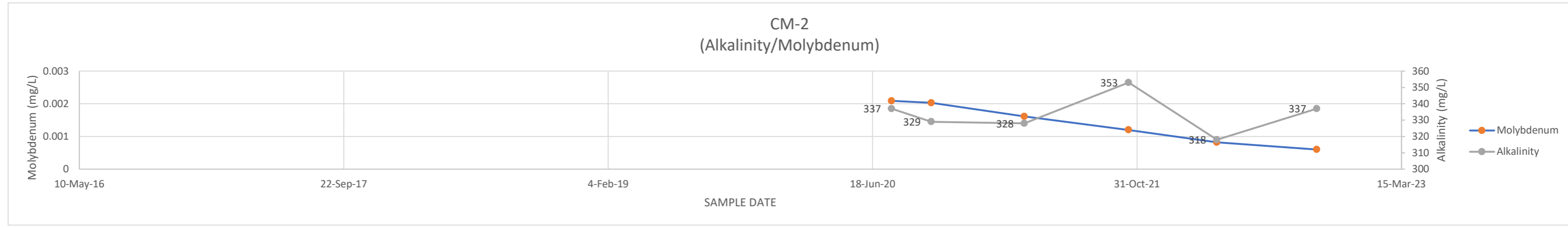


ATTACHMENT G-6  
CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

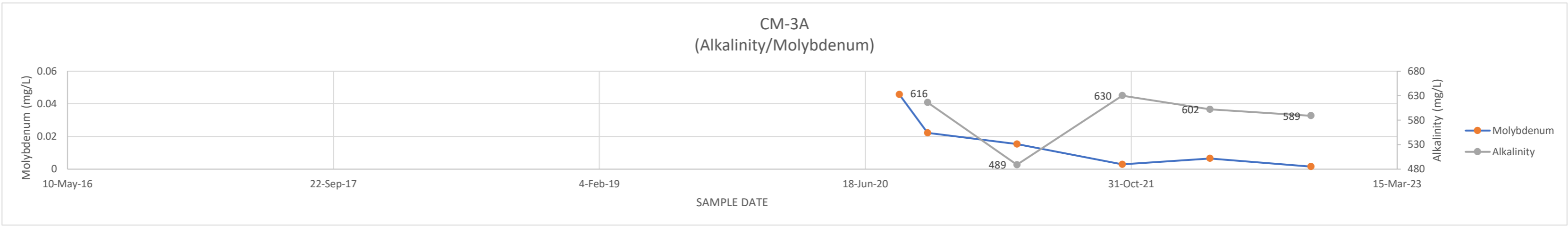
CM-1B DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	432	0.0133
12-Oct-20	439	0.0144
1-Apr-21		0.0113
14-Oct-21	424	0.00976
31-Mar-22	394	0.00696
4-Oct-22	362	0.00551



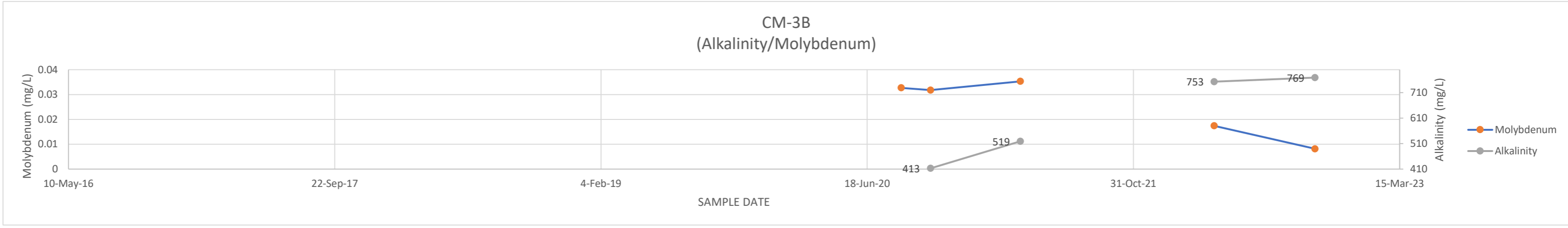
CM-2 DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	337	0.00209
7-Oct-20	329	0.00203
1-Apr-21	328	0.00161
15-Oct-21	353	0.0012
31-Mar-22	318	0.00082
6-Oct-22	337	0.0006



CM-3A DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20	616	0.0222
30-Mar-21	489	0.0153
14-Oct-21	630	0.00297
28-Mar-22	602	0.00656
4-Oct-22	589	0.00155



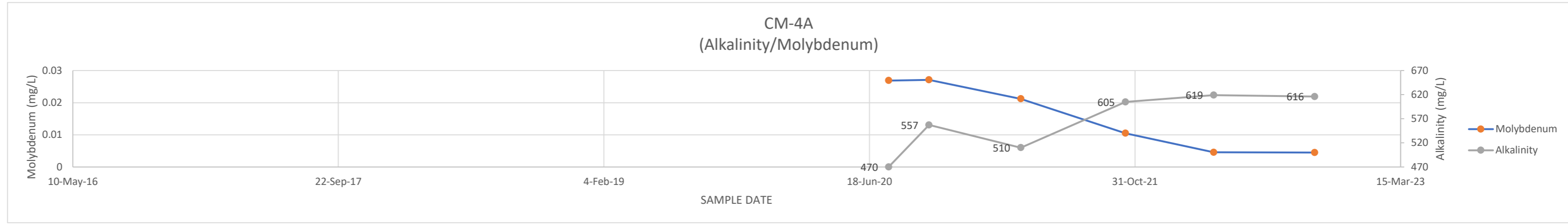
CM-3B DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20	413	0.0318
2-Apr-21	519	0.0353
11-Oct-21		
1-Apr-22	753	0.0174
7-Oct-22	769	0.00819



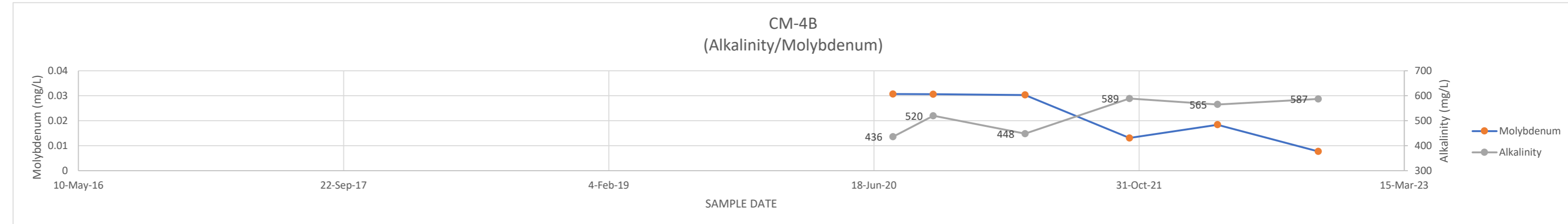


ATTACHMENT G-6  
CHANGES IN ALKALINITY AND MOLYBDENUM CONCENTRATIONS

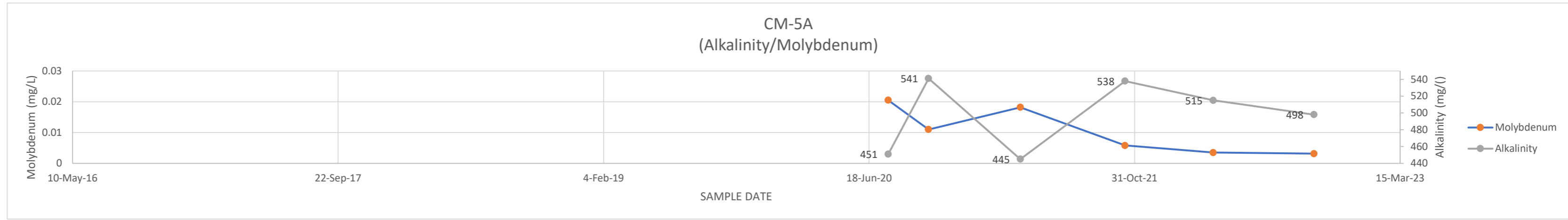
CM-4A DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	470	0.0269
8-Oct-20	557	0.0271
30-Mar-21	510	0.0212
13-Oct-21	605	0.0105
28-Mar-22	619	0.00455
4-Oct-22	616	0.00449



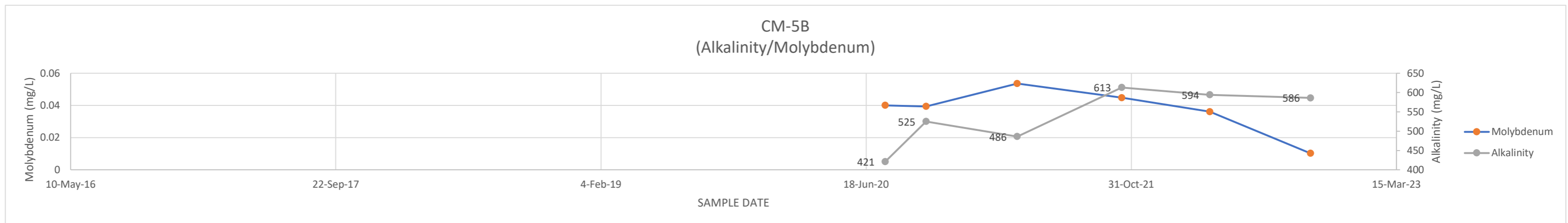
CM-4B DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	436	0.0307
8-Oct-20	520	0.0306
30-Mar-21	448	0.0303
13-Oct-21	589	0.0131
28-Mar-22	565	0.0184
4-Oct-22	587	0.00771



CM-5A DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	451	0.0205
8-Oct-20	541	0.011
30-Mar-21	445	0.0182
13-Oct-21	538	0.0058
28-Mar-22	515	0.00351
4-Oct-22	498	0.00317



CM-5B DATE	ALKALINITY	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	421	0.04
9-Oct-20	525	0.0394
30-Mar-21	486	0.0536
13-Oct-21	613	0.0448
28-Mar-22	594	0.0361
4-Oct-22	586	0.0102



Yellow Indicates Reported Below shown value (MDL)

## **ATTACHMENT H**

### **CHANGES IN IRON CONCENTRATION COMPARED TO CHANGES IN MONLYBDENUM CONCENTRATION OVER SAMPLING HISTORY**

H-1: CHANGES IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

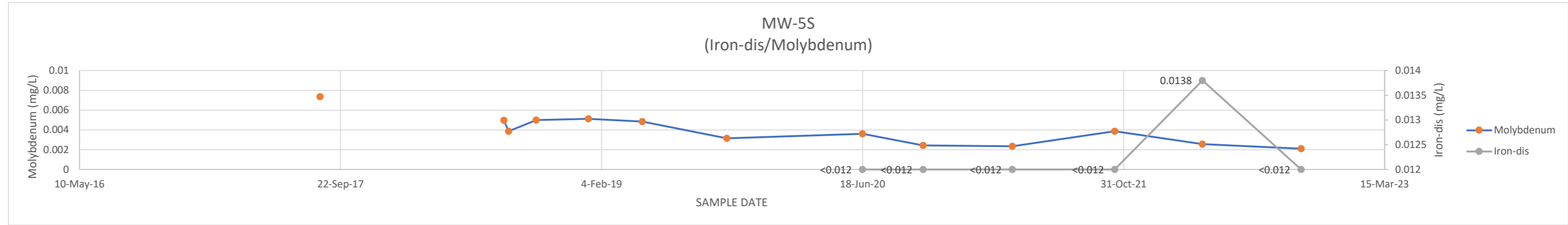
H-2: CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM  
CONCENTRATIONS

H-3: CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM  
CONCENTRATIONS

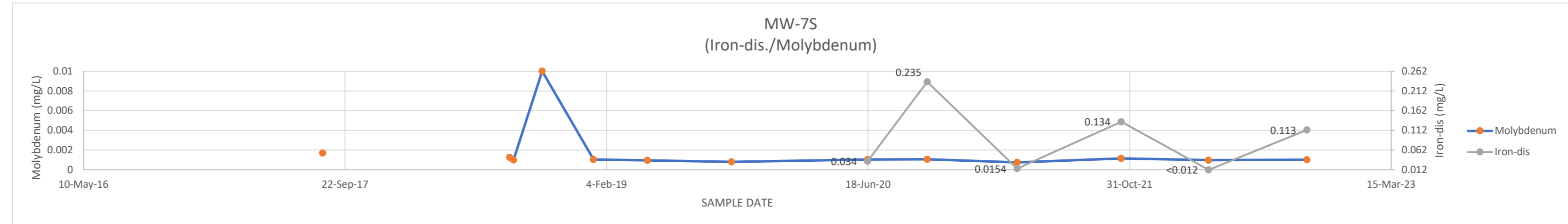
ATTACHMENT H-1  
CHANGES IN IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	DIS FE	MOLYBDENUM
	14-Aug-17		0.00737
	22-May-18		
	1-Aug-18		0.00497
	10-Aug-18		0.00387
	2-Oct-18		0.005
	10-Jan-19		0.00512
	23-Apr-19		0.00485
	2-Oct-19		0.00315
	18-Jun-20	0.012	0.00361
	12-Oct-20	0.012	0.00244
	1-Apr-21	0.012	0.00234
	14-Oct-21	0.012	0.00387
	31-Mar-22	0.0138	0.00257
	6-Oct-22	0.012	0.0021

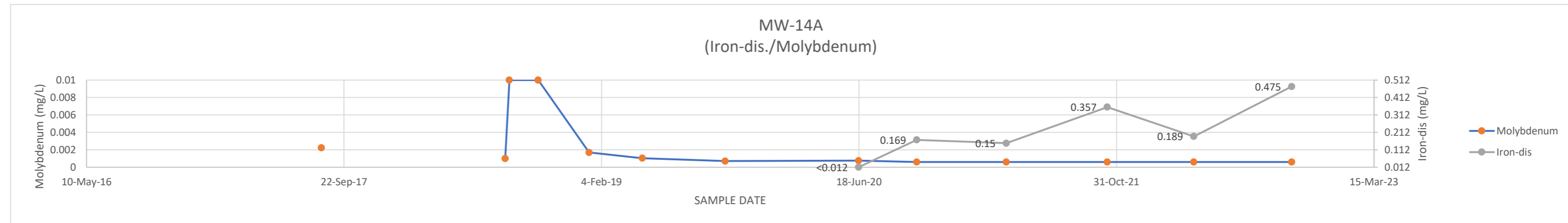
Value denoted in red from June 2022 resample



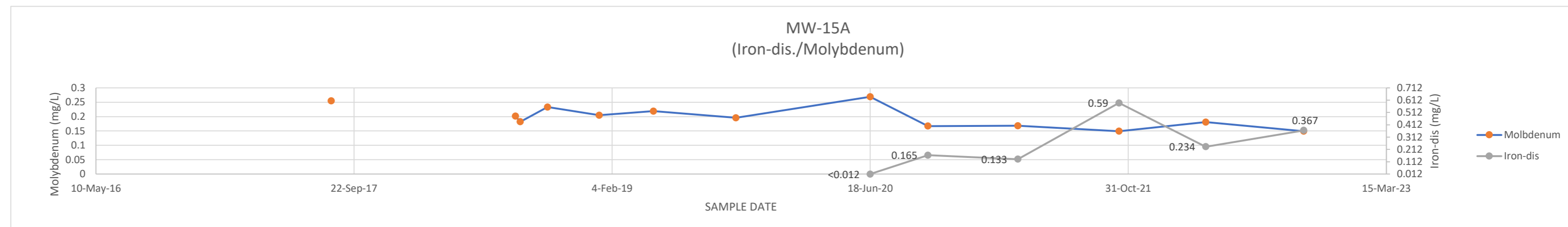
MW-7S	DATE	DIS FE	MOLYBDENUM
	10-Aug-17		0.00171
	17-May-18		
	3-Aug-18		0.00127
	10-Aug-18		0.001
	4-Oct-18		0.01
	10-Jan-19		0.00105
	23-Apr-19		0.000952
	1-Oct-19		0.000798
	17-Jun-20	0.034	0.00105
	9-Oct-20	0.235	0.00106
	30-Mar-21	0.0154	0.000755
	15-Oct-21	0.134	0.00115
	31-Mar-22	0.012	0.000973
	5-Oct-22	0.113	0.00103



MW-14A	DATE	DIS FE	MOLYBDENUM
	9-Aug-17		0.00223
	17-May-18		
	1-Aug-18		0.001
	9-Aug-18		0.01
	4-Oct-18		0.01
	11-Jan-19		0.0017
	24-Apr-19		0.00104
	2-Oct-19		0.000709
	17-Jun-20	0.012	0.00076
	8-Oct-20	0.169	0.0006
	31-Mar-21	0.15	0.0006
	13-Oct-21	0.357	0.0006
	30-Mar-22	0.189	0.0006
	6-Oct-22	0.475	0.0006

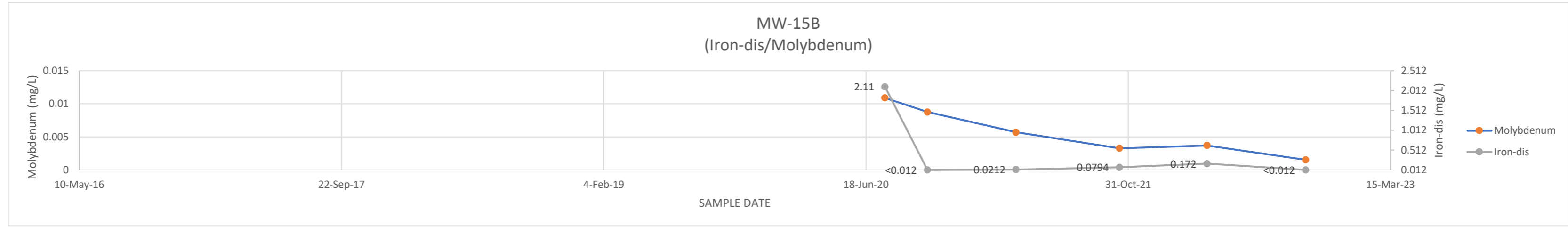


MW-15A	DATE	DIS FE	MOLYBDENUM
	9-Aug-17		0.255
	24-May-18		
	1-Aug-18		0.202
	10-Aug-18		0.182
	2-Oct-18		0.233
	10-Jan-19		0.205
	25-Apr-19		0.219
	2-Oct-19		0.196
	18-Jun-20	0.012	0.269
	8-Oct-20	0.165	0.167
	31-Mar-21	0.133	0.168
	13-Oct-21	0.59	0.149
	30-Mar-22	0.234	0.181
	6-Oct-22	0.367	0.149

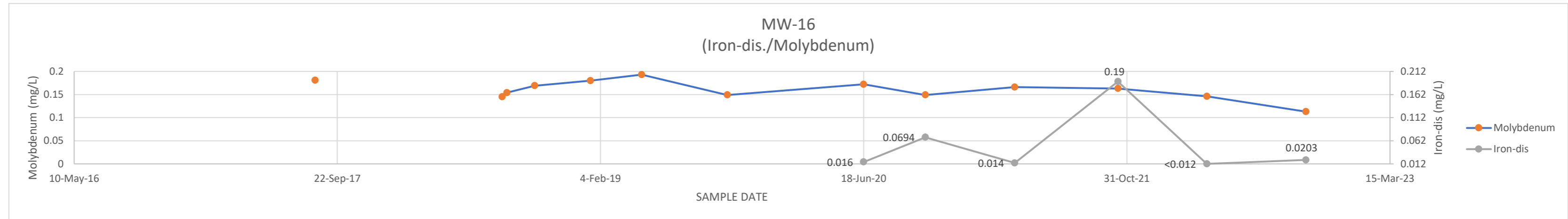


ATTACHMENT H-1  
CHANGES IN IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-15B	DIS FE	MOLYBDENUM
DATE		
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	2.11	0.0109
13-Oct-20	0.012	0.00876
31-Mar-21	0.0212	0.00571
14-Oct-21	0.0794	0.00328
30-Mar-22	0.172	0.0037
4-Oct-22	0.012	0.00153

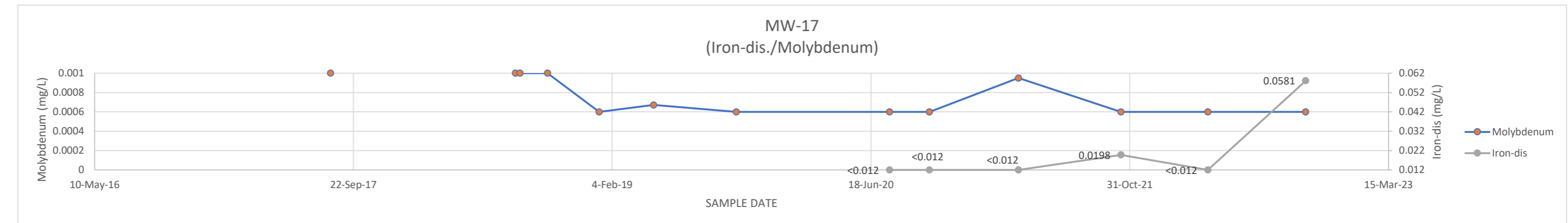


MW-16	DIS FE	MOLYBDENUM
DATE		
11-Aug-17		0.181
22-May-18		
1-Aug-18		0.145
10-Aug-18		0.154
2-Oct-18		0.169
16-Jan-19		0.18
23-Apr-19		0.193
3-Oct-19		0.149
18-Jun-20	0.016	0.172
13-Oct-20	0.0694	0.149
1-Apr-21	0.014	0.166
14-Oct-21	0.19	0.163
1-Apr-22	0.012	0.146
6-Oct-22	0.0203	0.113



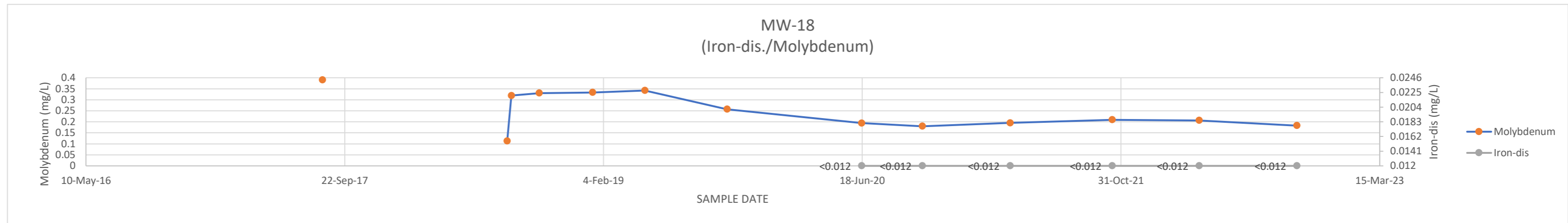
Value denoted in red from June 2022 resample

MW-17	DIS FE	MOLYBDENUM
DATE		
9-Aug-17		0.001
24-May-18		
1-Aug-18		0.001
10-Aug-18		0.001
2-Oct-18		0.001
10-Jan-19		0.0006
25-Apr-19		0.000671
2-Oct-19		0.0006
24-Jul-20	0.012	0.0006
9-Oct-20	0.012	0.0006
30-Mar-21	0.012	0.00095
14-Oct-21	0.0198	0.0006
31-Mar-22	0.012	0.0006
6-Oct-22	0.0581	0.0006



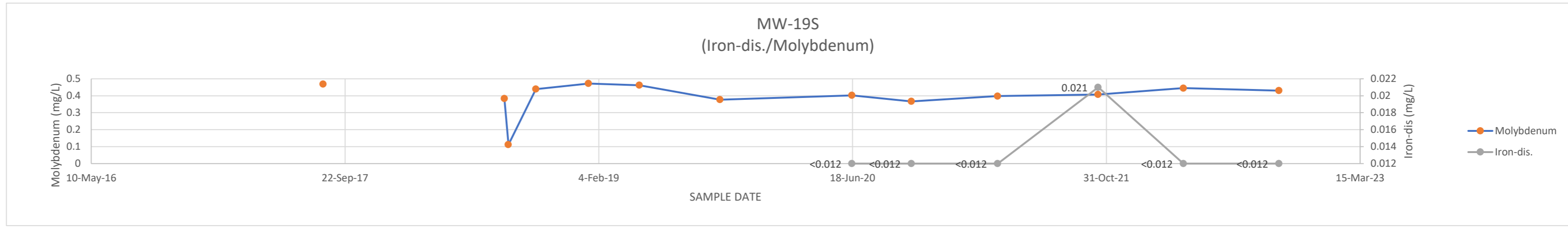
Value denoted in red from June 2022 resample

MW-18	DIS FE	MOLYBDENUM
DATE		
10-Aug-17		0.39
18-May-18		
2-Aug-18		0.113
10-Aug-18		0.319
3-Oct-18		0.33
14-Jan-19		0.333
25-Apr-19		0.342
1-Oct-19		0.257
17-Jun-20	0.012	0.194
12-Oct-20	0.012	0.18
31-Mar-21	0.012	0.195
14-Oct-21	0.012	0.209
31-Mar-22	0.012	0.206
6-Oct-22	0.012	0.183

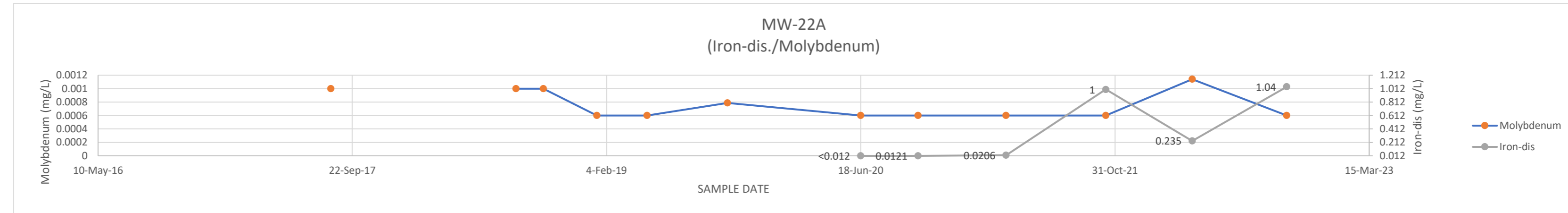


ATTACHMENT H-1  
CHANGES IN IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	DIS FE	MOLYBDENUM
	10-Aug-17		0.469
	18-May-18		
	2-Aug-18		0.384
	10-Aug-18		0.112
	3-Oct-18		0.439
	15-Jan-19		0.472
	25-Apr-19		0.462
	1-Oct-19		0.377
	17-Jun-20	0.012	0.402
	12-Oct-20	0.012	0.367
	31-Mar-21	0.012	0.398
	15-Oct-21	0.021	0.407
	1-Apr-22	0.012	0.445
	6-Oct-22	0.012	0.43

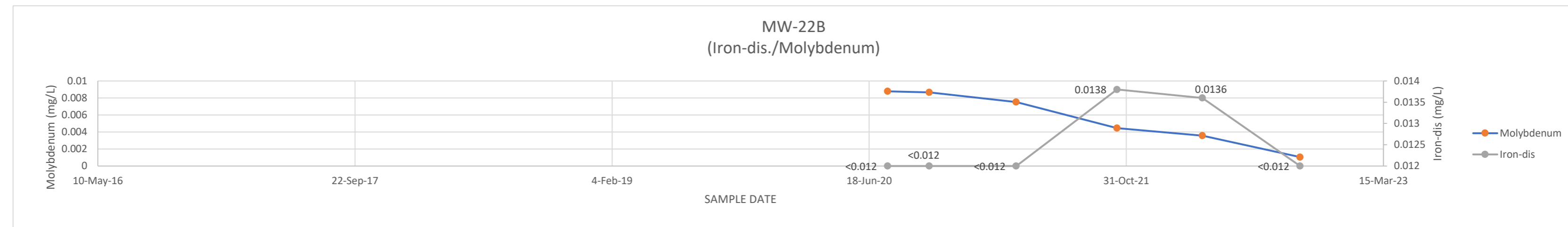


MW-22A	DATE	DIS FE	MOLYBDENUM
	11-Aug-17		0.001
	22-May-18		
	10-Aug-18		0.001
	3-Oct-18		0.001
	16-Jan-19		0.0006
	25-Apr-19		0.0006
	30-Sep-19		0.000787
	18-Jun-20	0.012	0.0006
	9-Oct-20	0.0121	0.0006
	31-Mar-21	0.0206	0.0006
	13-Oct-21	1	0.0006
	1-Apr-22	0.235	0.00114
	4-Oct-22	1.04	0.0006

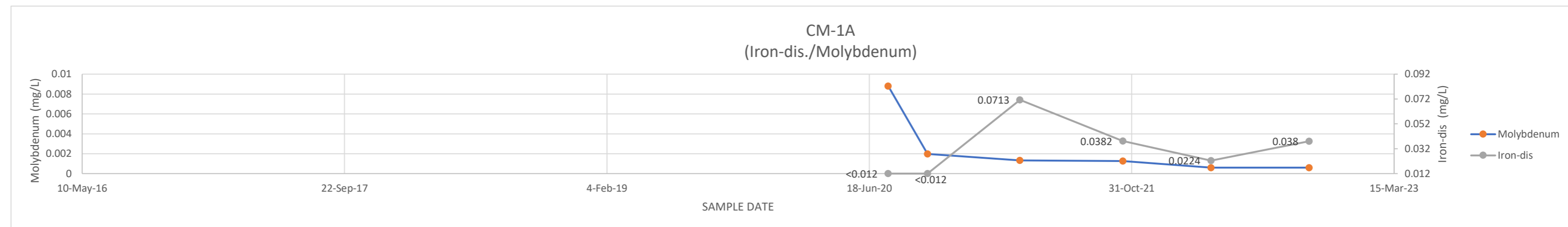


Value denoted in red from June 2022 resample

MW-22B	DATE	DIS FE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	0.012	0.00878
	13-Oct-20	0.012	0.00866
	31-Mar-21	0.012	0.00753
	13-Oct-21	0.0138	0.00446
	28-Mar-22	0.0136	0.00357
	4-Oct-22	0.012	0.00105

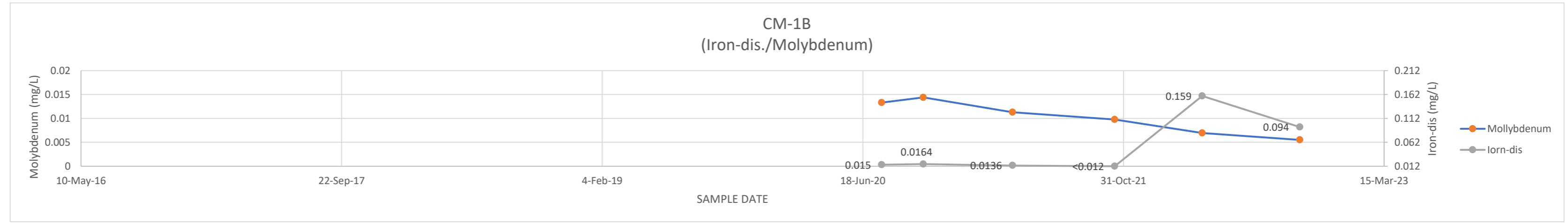


CM-1A	DATE	DIS FE	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20	0.012	0.0088
	7-Oct-20	0.012	0.00198
	1-Apr-21	0.0713	0.00132
	14-Oct-21	0.0382	0.00127
	31-Mar-22	0.0224	0.0006
	4-Oct-22	0.038	0.0006

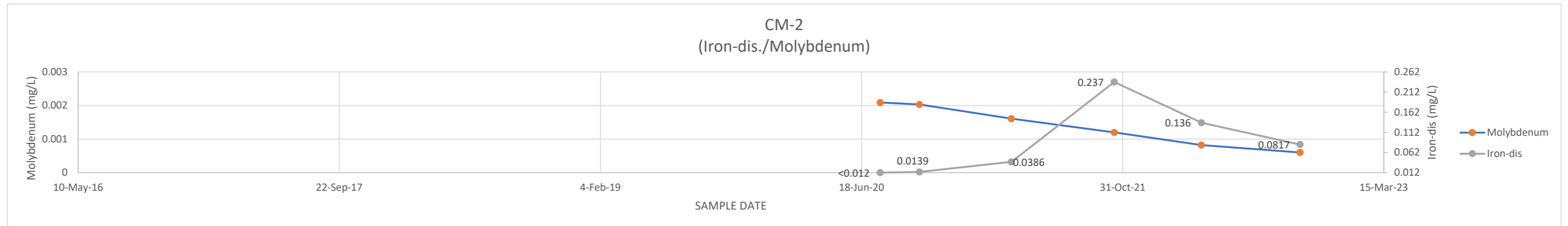


ATTACHMENT H-1  
CHANGES IN IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

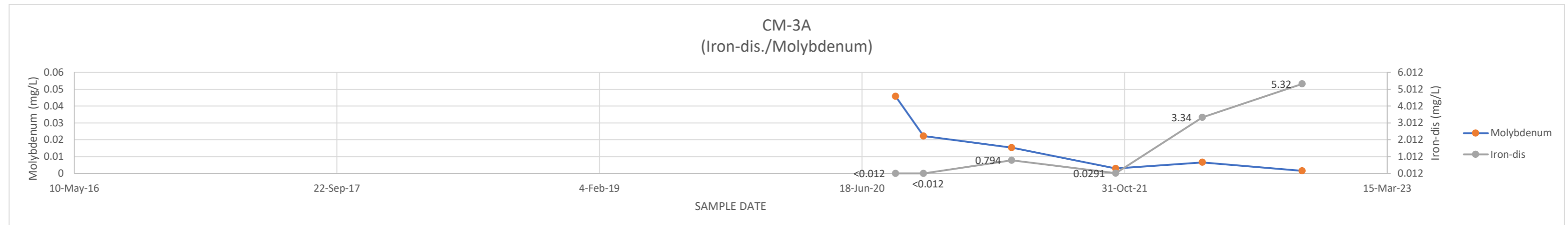
CM-1B DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.015	0.0133
12-Oct-20	0.0164	0.0144
1-Apr-21	0.0136	0.0113
14-Oct-21	0.012	0.00976
31-Mar-22	0.159	0.00696
4-Oct-22	0.094	0.00551



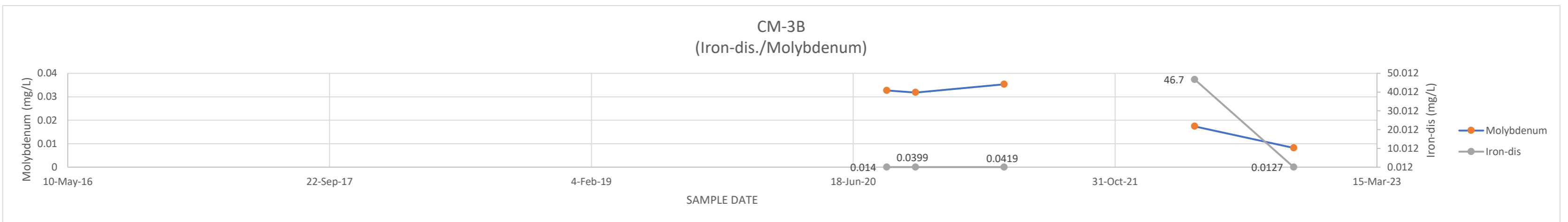
CM-2 DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.012	0.00209
7-Oct-20	0.0139	0.00203
1-Apr-21	0.0386	0.00161
15-Oct-21	0.237	0.0012
31-Mar-22	0.136	0.00082
6-Oct-22	0.0817	0.0006



CM-3A DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	0.012	0.0457
13-Oct-20	0.012	0.0222
30-Mar-21	0.794	0.0153
14-Oct-21	0.0291	0.00297
28-Mar-22	3.34	0.00656
4-Oct-22	5.32	0.00155

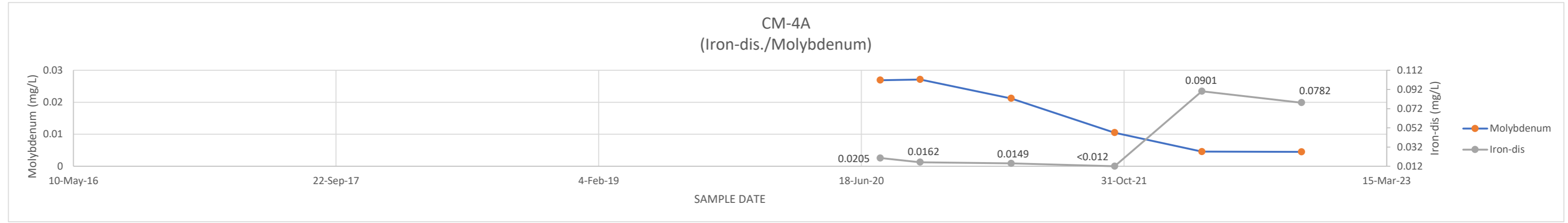


CM-3B DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20	0.014	0.0327
15-Oct-20	0.0399	0.0318
2-Apr-21	0.0419	0.0353
11-Oct-21		
1-Apr-22	46.7	0.0174
7-Oct-22	0.0127	0.00819

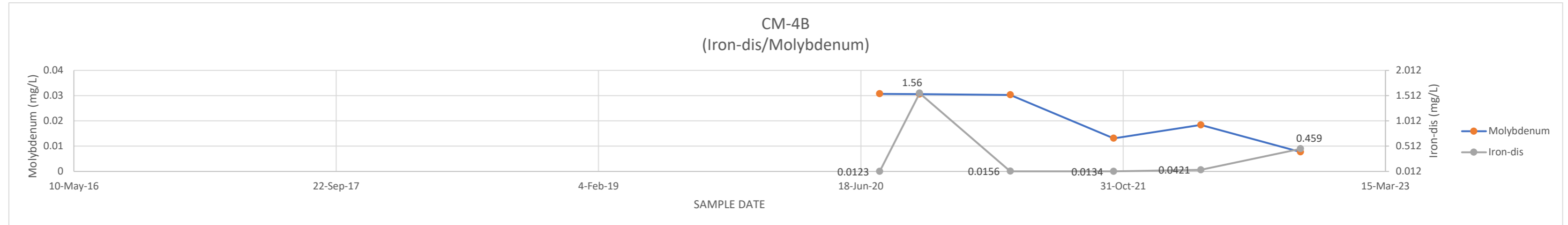


ATTACHMENT H-1  
CHANGES IN IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

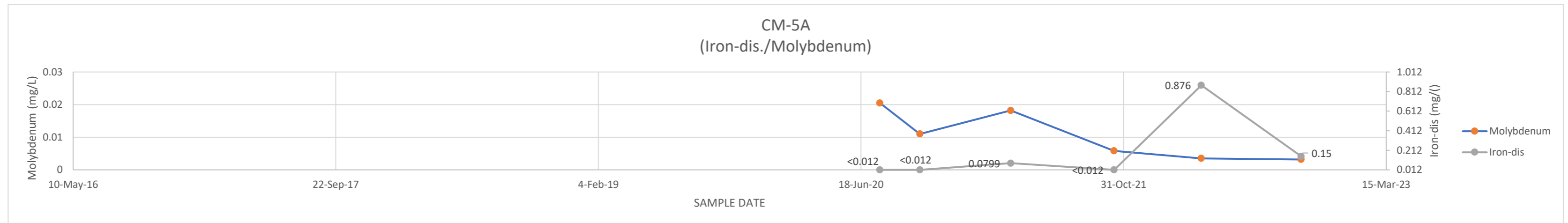
CM-4A DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.0205	0.0269
8-Oct-20	0.0162	0.0271
30-Mar-21	0.0149	0.0212
13-Oct-21	0.012	0.0105
28-Mar-22	0.0901	0.00455
4-Oct-22	0.0782	0.00449



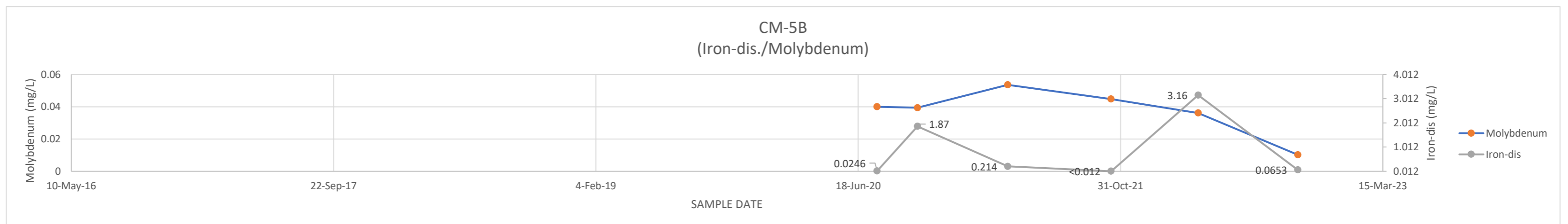
CM-4B DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.0123	0.0307
8-Oct-20	1.56	0.0306
30-Mar-21	0.0156	0.0303
13-Oct-21	0.0134	0.0131
28-Mar-22	0.0421	0.0184
4-Oct-22	0.459	0.00771



CM-5A DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.012	0.0205
8-Oct-20	0.012	0.011
30-Mar-21	0.0799	0.0182
13-Oct-21	0.012	0.0058
28-Mar-22	0.876	0.00351
4-Oct-22	0.15	0.00317



CM-5B DATE	DIS FE	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20	0.0246	0.04
9-Oct-20	1.87	0.0394
30-Mar-21	0.214	0.0536
13-Oct-21	0.012	0.0448
28-Mar-22	3.16	0.0361
4-Oct-22	0.0653	0.0102

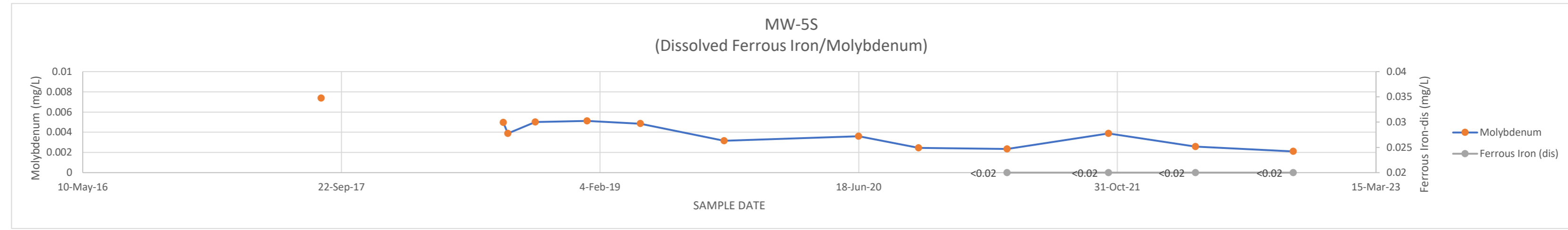


Yellow Indicates Reported Below shown value (MDL)

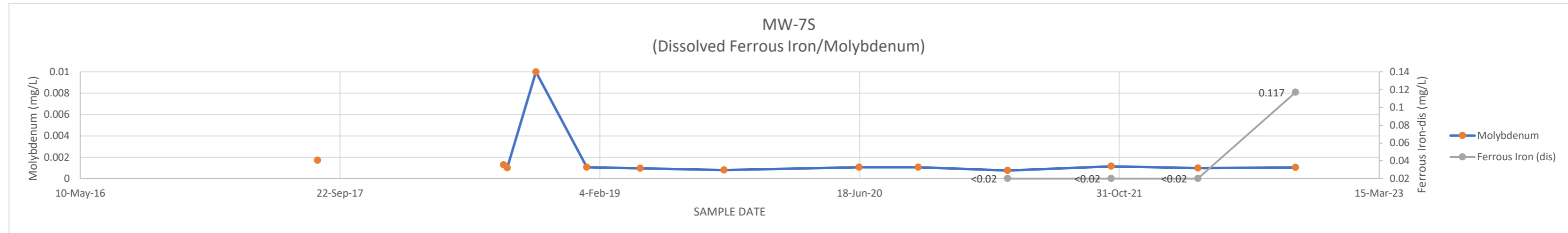
ATTACHMENT H-2  
CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	DIS FE(II)	MOLYBDENUM
	14-Aug-17		0.00737
	22-May-18		
	1-Aug-18		0.00497
	10-Aug-18		0.00387
	2-Oct-18		0.005
	10-Jan-19		0.00512
	23-Apr-19		0.00485
	2-Oct-19		0.00315
	18-Jun-20		0.00361
	12-Oct-20		0.00244
	1-Apr-21	0.02	0.00234
	14-Oct-21	0.02	0.00387
	31-Mar-22	0.02	0.00257
	6-Oct-22	0.02	0.0021

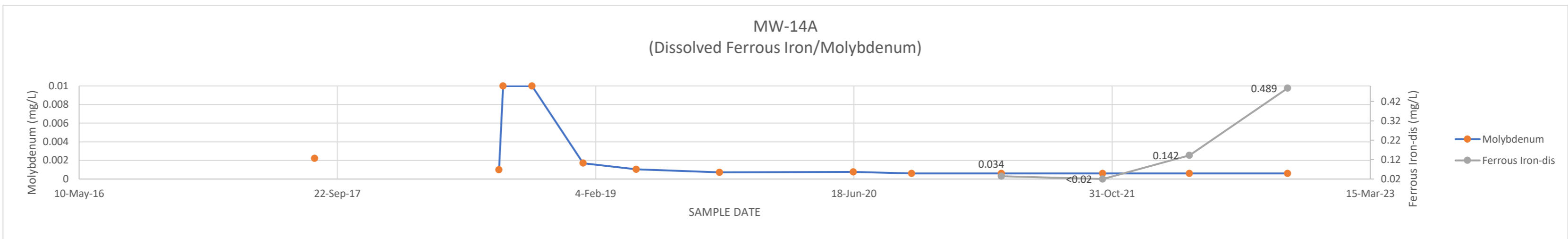
Value denoted in red from June 2022 resample



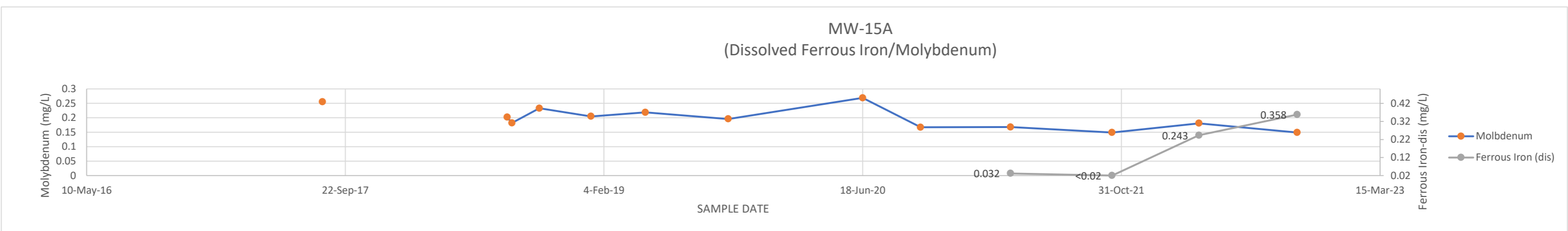
MW-7S	DATE	DIS FE(II)	MOLYBDENUM
	10-Aug-17		0.00171
	17-May-18		
	3-Aug-18		0.00127
	10-Aug-18		0.001
	4-Oct-18		0.01
	10-Jan-19		0.00105
	23-Apr-19		0.000952
	1-Oct-19		0.000798
	17-Jun-20		0.00105
	9-Oct-20		0.00106
	30-Mar-21	0.02	0.000755
	15-Oct-21	0.02	0.00115
	31-Mar-22	0.02	0.000973
	5-Oct-22	0.117	0.00103



MW-14A	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		0.00223
	17-May-18		
	1-Aug-18		0.001
	9-Aug-18		0.01
	4-Oct-18		0.01
	11-Jan-19		0.0017
	24-Apr-19		0.00104
	2-Oct-19		0.000709
	17-Jun-20		0.00076
	8-Oct-20		0.0006
	31-Mar-21	0.034	0.0006
	13-Oct-21	0.02	0.0006
	30-Mar-22	0.142	0.0006
	6-Oct-22	0.489	0.0006



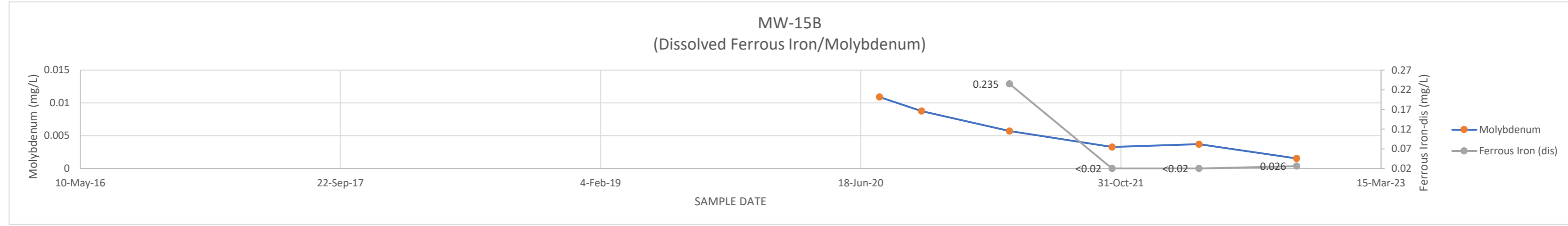
MW-15A	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		0.255
	24-May-18		
	1-Aug-18		0.202
	10-Aug-18		0.182
	2-Oct-18		0.233
	10-Jan-19		0.205
	25-Apr-19		0.219
	2-Oct-19		0.196
	18-Jun-20		0.269
	8-Oct-20		0.167
	31-Mar-21	0.032	0.168
	13-Oct-21	0.02	0.149
	30-Mar-22	0.243	0.181
	6-Oct-22	0.358	0.149



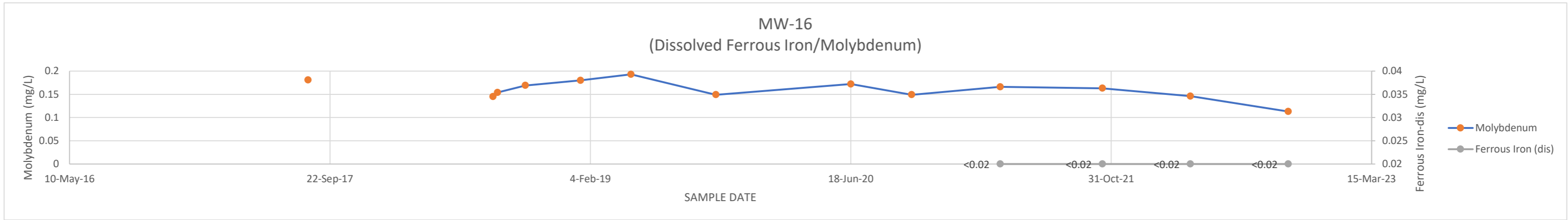


ATTACHMENT H-2  
CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-15B	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20		0.0109
	13-Oct-20		0.00876
	31-Mar-21	0.235	0.00571
	14-Oct-21	0.02	0.00328
	30-Mar-22	0.02	0.0037
	4-Oct-22	0.026	0.00153

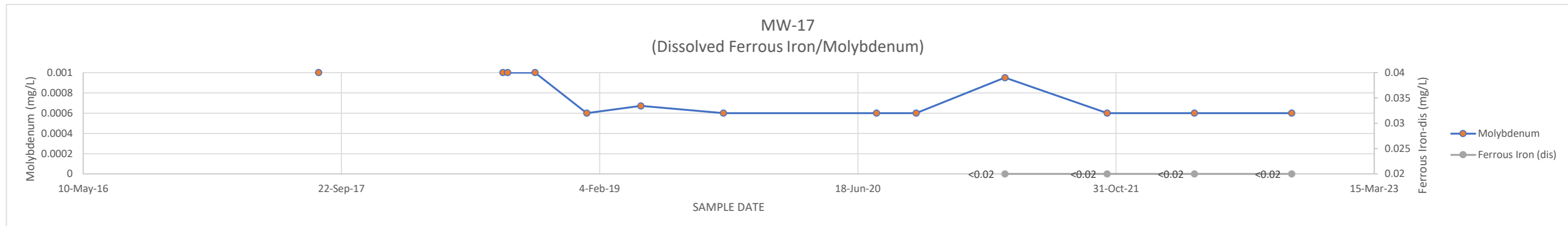


MW-16	DATE	DIS FE(II)	MOLYBDENUM
	11-Aug-17		0.181
	22-May-18		
	1-Aug-18		0.145
	10-Aug-18		0.154
	2-Oct-18		0.169
	16-Jan-19		0.18
	23-Apr-19		0.193
	3-Oct-19		0.149
	18-Jun-20		0.172
	13-Oct-20		0.149
	1-Apr-21	0.02	0.166
	14-Oct-21	0.02	0.163
	1-Apr-22	0.02	0.146
	6-Oct-22	0.02	0.113



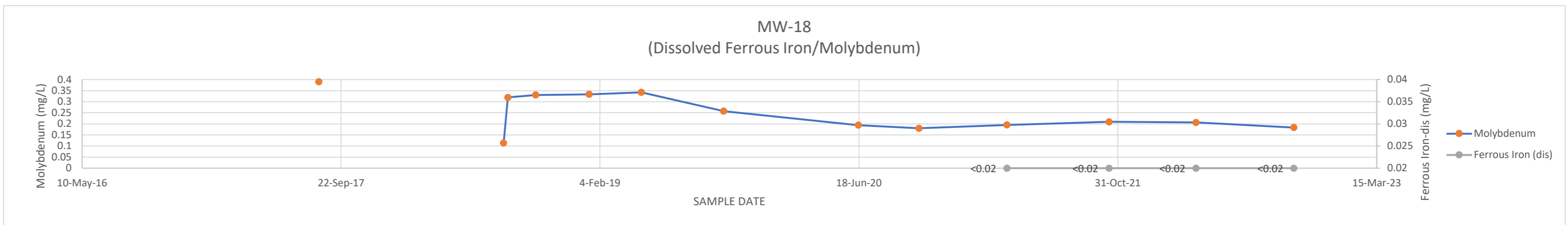
Value denoted in red from June 2022 resample

MW-17	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		0.001
	24-May-18		
	1-Aug-18		0.001
	10-Aug-18		0.001
	2-Oct-18		0.001
	10-Jan-19		0.0006
	25-Apr-19		0.000671
	2-Oct-19		0.0006
	24-Jul-20		0.0006
	9-Oct-20		0.0006
	30-Mar-21	0.02	0.00095
	14-Oct-21	0.02	0.0006
	1-Apr-22	0.02	0.0006
	6-Oct-22	0.02	0.0006



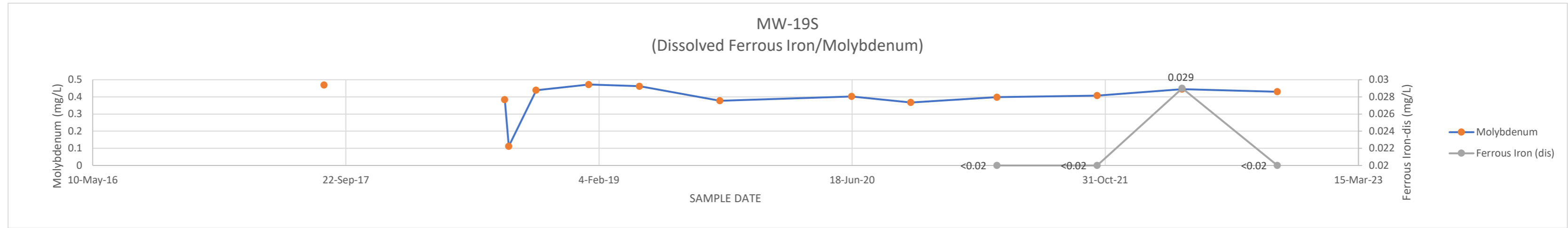
Value denoted in red from June 2022 resample

MW-18	DATE	DIS FE(II)	MOLYBDENUM
	10-Aug-17		0.39
	18-May-18		
	2-Aug-18		0.113
	10-Aug-18		0.319
	3-Oct-18		0.33
	14-Jan-19		0.333
	25-Apr-19		0.342
	1-Oct-19		0.257
	17-Jun-20		0.194
	12-Oct-20		0.18
	31-Mar-21	0.02	0.195
	14-Oct-21	0.02	0.209
	31-Mar-22	0.02	0.206
	6-Oct-22	0.02	0.183

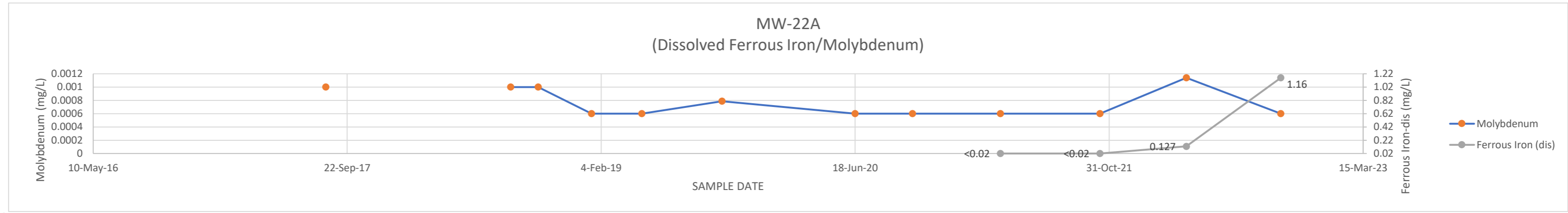


ATTACHMENT H-2  
CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	DIS FE(II)	MOLYBDENUM
	10-Aug-17		0.469
	18-May-18		
	2-Aug-18		0.384
	10-Aug-18		0.112
	3-Oct-18		0.439
	15-Jan-19		0.472
	25-Apr-19		0.462
	1-Oct-19		0.377
	17-Jun-20		0.402
	12-Oct-20		0.367
	31-Mar-21	0.02	0.398
	15-Oct-21	0.02	0.407
	1-Apr-22	0.029	0.445
	6-Oct-22	0.02	0.43

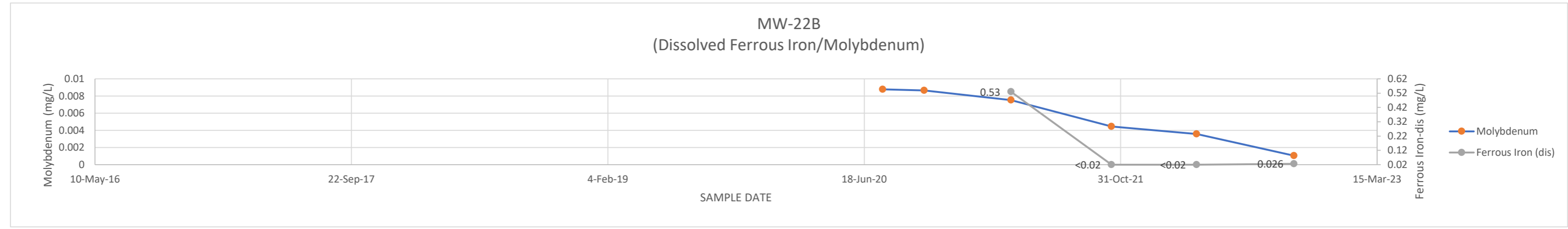


MW-22A	DATE	DIS FE(II)	MOLYBDENUM
	11-Aug-17		0.001
	22-May-18		
	10-Aug-18		0.001
	3-Oct-18		0.001
	16-Jan-19		0.0006
	25-Apr-19		0.0006
	30-Sep-19		0.000787
	18-Jun-20		0.0006
	9-Oct-20		0.0006
	31-Mar-21	0.02	0.0006
	13-Oct-21	0.02	0.0006
	1-Apr-22	0.127	0.00114
	4-Oct-22	1.16	0.0006

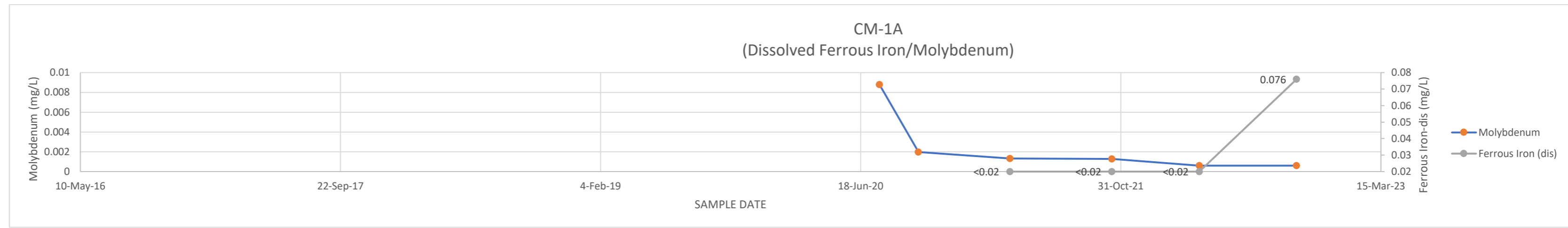


Value denoted in red from June 2022 resample

MW-22B	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20		0.00878
	13-Oct-20		0.00866
	31-Mar-21	0.53	0.00753
	13-Oct-21	0.02	0.00446
	28-Mar-22	0.02	0.00357
	4-Oct-22	0.026	0.00105

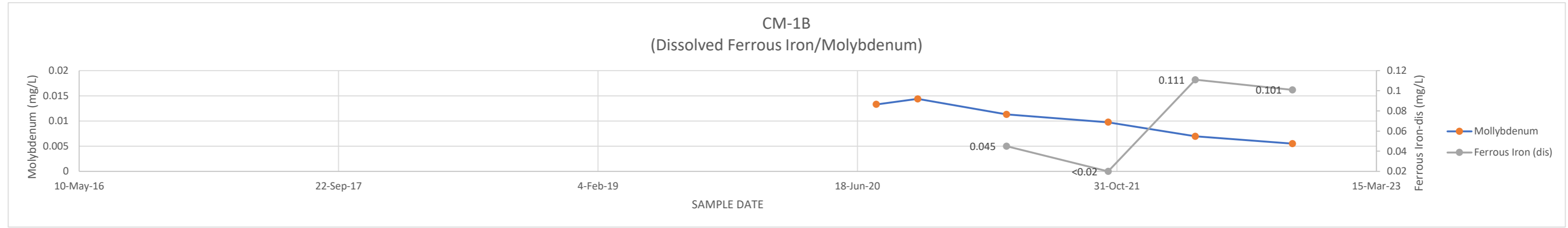


CM-1A	DATE	DIS FE(II)	MOLYBDENUM
	9-Aug-17		
	24-May-18		
	1-Aug-18		
	10-Aug-18		
	2-Oct-18		
	10-Jan-19		
	25-Apr-19		
	2-Oct-19		
	24-Jul-20		0.0088
	7-Oct-20		0.00198
	1-Apr-21	0.02	0.00132
	14-Oct-21	0.02	0.00127
	31-Mar-22	0.02	0.0006
	4-Oct-22	0.076	0.0006

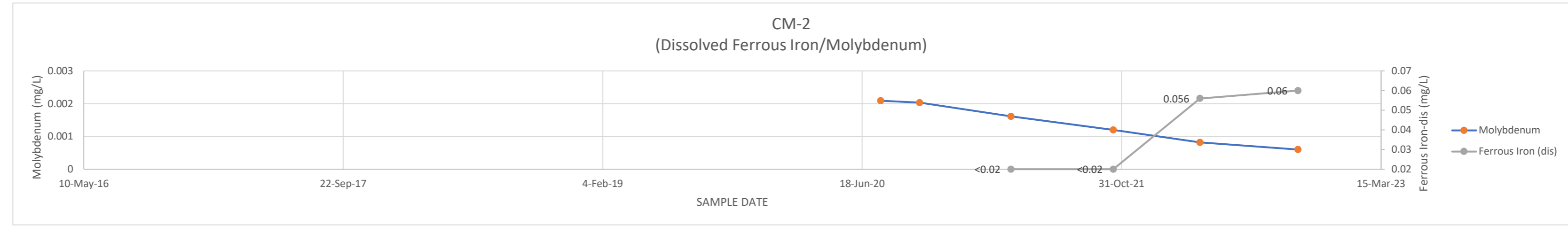


ATTACHMENT H-2  
CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

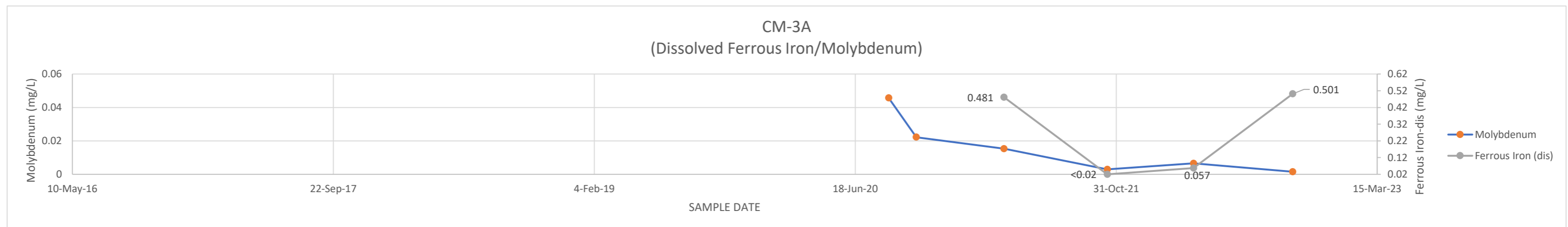
CM-1B DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0133
12-Oct-20		0.0144
1-Apr-21	0.045	0.0113
14-Oct-21	0.02	0.00976
31-Mar-22	0.111	0.00696
4-Oct-22	0.101	0.00551



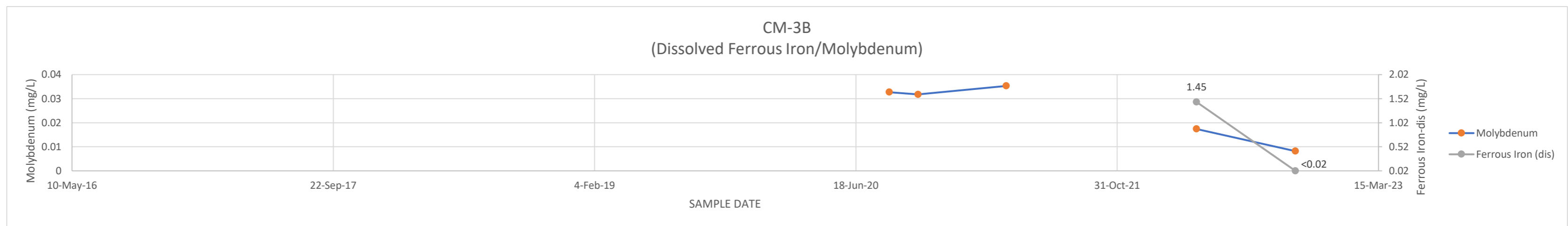
CM-2 DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.00209
7-Oct-20		0.00203
1-Apr-21	0.02	0.00161
15-Oct-21	0.02	0.0012
31-Mar-22	0.056	0.00082
6-Oct-22	0.06	0.0006



CM-3A DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20		0.0222
30-Mar-21	0.481	0.0153
14-Oct-21	0.02	0.00297
28-Mar-22	0.057	0.00656
4-Oct-22	0.501	0.00155

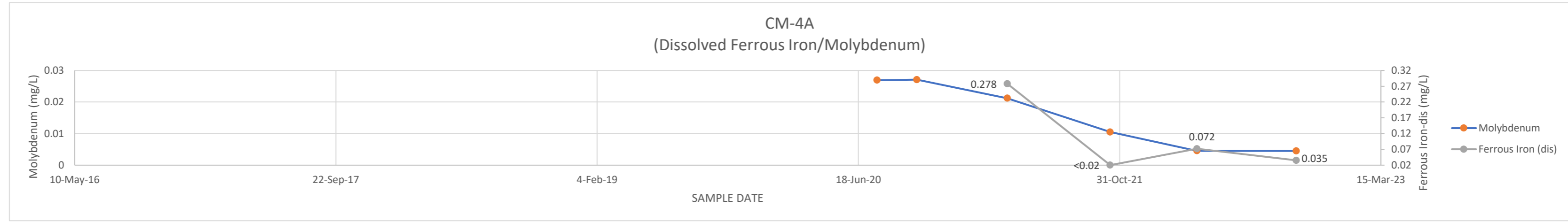


CM-3B DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22	1.45	0.0174
7-Oct-22	0.02	0.00819

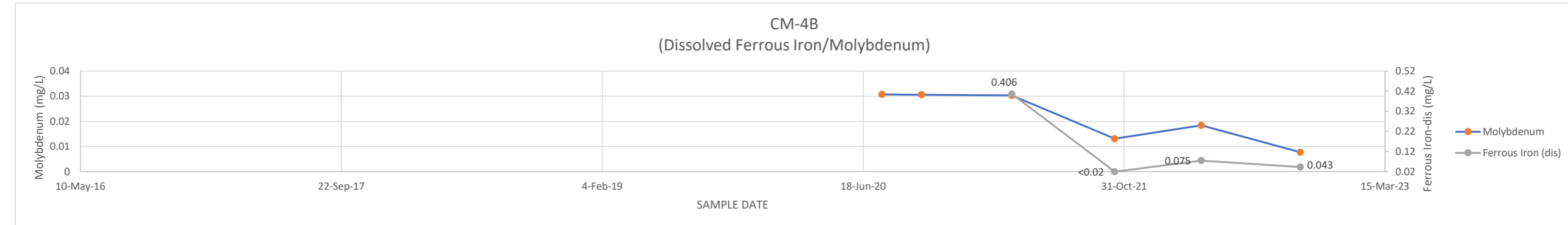


ATTACHMENT H-2  
CHANGES IN FERROUS IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

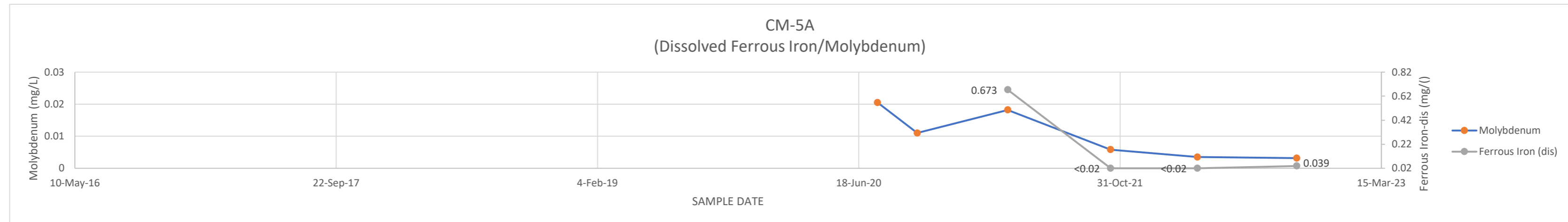
CM-4A	DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0269
8-Oct-20			0.0271
30-Mar-21	0.278		0.0212
13-Oct-21	0.02		0.0105
28-Mar-22	0.072		0.00455
4-Oct-22	0.035		0.00449



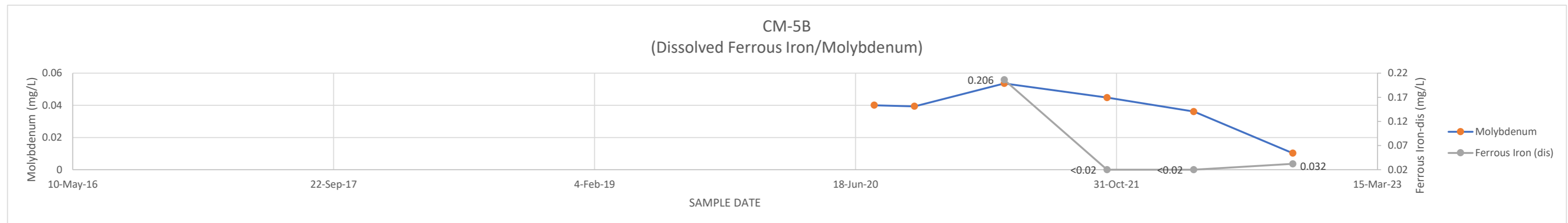
CM-4B	DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0307
8-Oct-20			0.0306
30-Mar-21	0.406		0.0303
13-Oct-21	0.02		0.0131
28-Mar-22	0.075		0.0184
4-Oct-22	0.043		0.00771



CM-5A	DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0205
8-Oct-20			0.011
30-Mar-21	0.673		0.0182
13-Oct-21	0.02		0.0058
28-Mar-22	0.02		0.00351
4-Oct-22	0.039		0.00317



CM-5B	DATE	DIS FE(II)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.04
9-Oct-20			0.0394
30-Mar-21	0.206		0.0536
13-Oct-21	0.02		0.0448
28-Mar-22	0.02		0.0361
4-Oct-22	0.032		0.0102

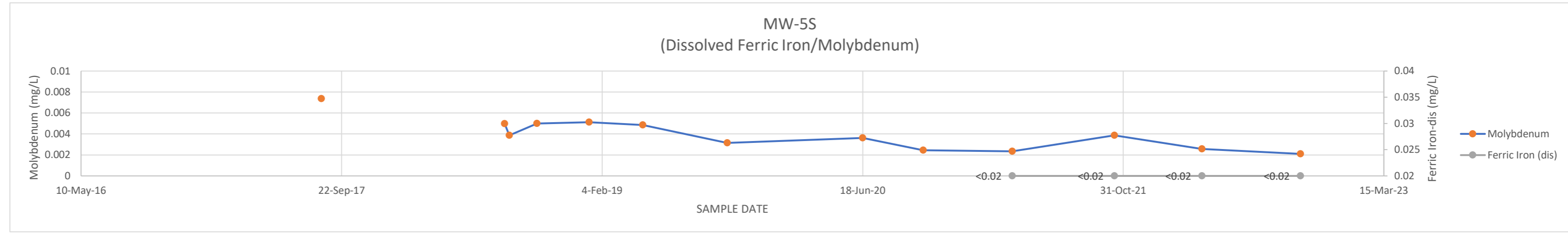


Yellow Indicates Reported Below shown value (MDL)

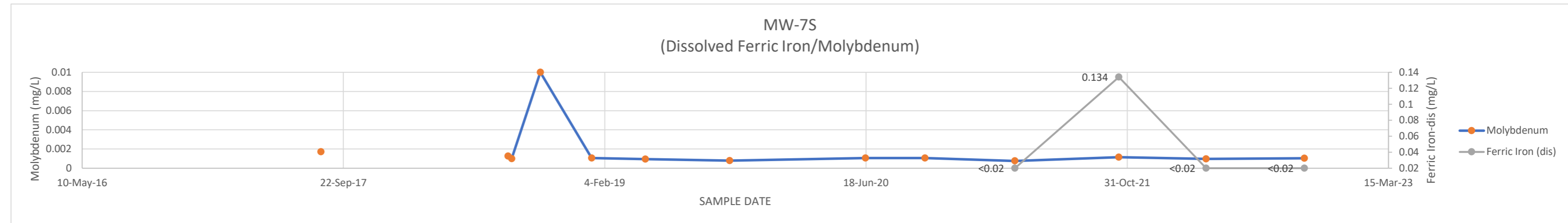
ATTACHMENT H-3  
CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-5S	DATE	DIS (III)	MOLYBDENUM
	14-Aug-17		0.00737
	22-May-18		
	1-Aug-18		0.00497
	10-Aug-18		0.00387
	2-Oct-18		0.005
	10-Jan-19		0.00512
	23-Apr-19		0.00485
	2-Oct-19		0.00315
	18-Jun-20		0.00361
	12-Oct-20		0.00244
	1-Apr-21	0.02	0.00234
	14-Oct-21	0.02	0.00387
	31-Mar-22	0.02	0.00257
	6-Oct-22	0.02	0.0021

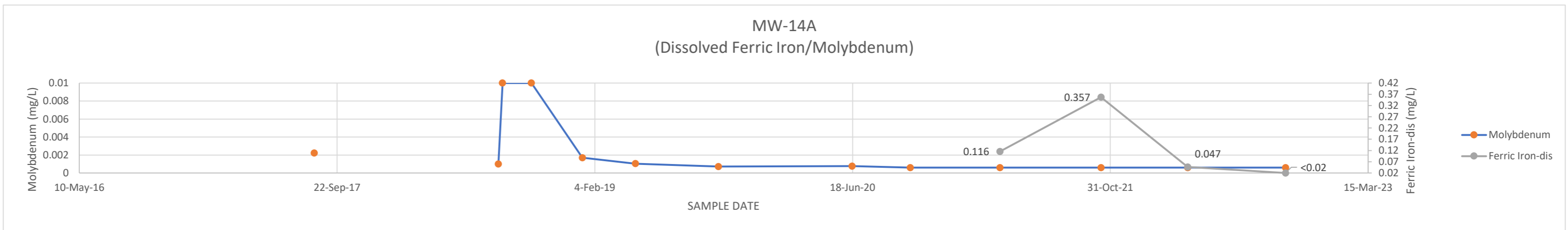
Value denoted in red from June 2022 resample



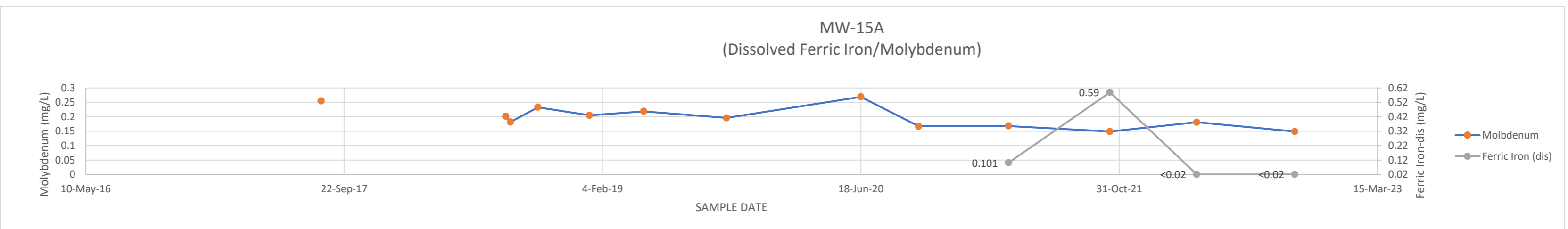
MW-7S	DATE	DIS (III)	MOLYBDENUM
	10-Aug-17		0.00171
	17-May-18		
	3-Aug-18		0.00127
	10-Aug-18		0.001
	4-Oct-18		0.01
	10-Jan-19		0.00105
	23-Apr-19		0.000952
	1-Oct-19		0.000798
	17-Jun-20		0.00105
	9-Oct-20		0.00106
	30-Mar-21	0.02	0.000755
	15-Oct-21	0.134	0.00115
	31-Mar-22	0.02	0.000973
	5-Oct-22	0.02	0.00103



MW-14A	DATE	DIS (III)	MOLYBDENUM
	9-Aug-17		0.00223
	17-May-18		
	1-Aug-18		0.001
	9-Aug-18		0.01
	4-Oct-18		0.01
	11-Jan-19		0.0017
	24-Apr-19		0.00104
	2-Oct-19		0.000709
	17-Jun-20		0.00076
	8-Oct-20		0.0006
	31-Mar-21	0.116	0.0006
	13-Oct-21	0.357	0.0006
	30-Mar-22	0.047	0.0006
	6-Oct-22	0.02	0.0006

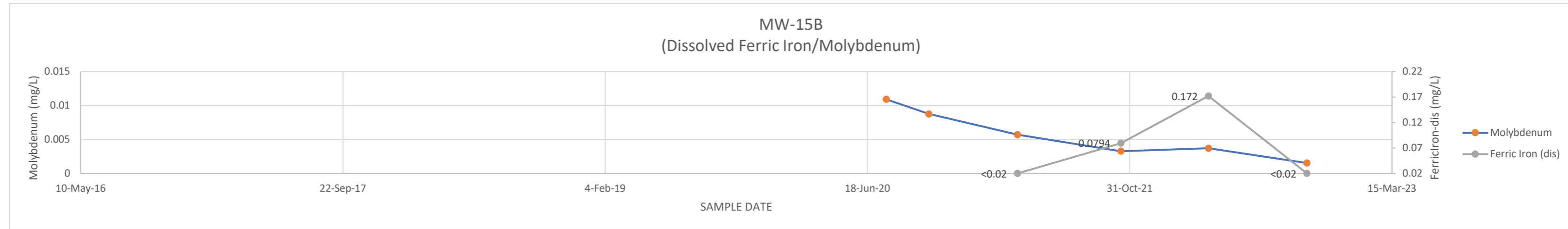


MW-15A	DATE	DIS (III)	MOLYBDENUM
	9-Aug-17		0.255
	24-May-18		
	1-Aug-18		0.202
	10-Aug-18		0.182
	2-Oct-18		0.233
	10-Jan-19		0.205
	25-Apr-19		0.219
	2-Oct-19		0.196
	18-Jun-20		0.269
	8-Oct-20		0.167
	31-Mar-21	0.101	0.168
	13-Oct-21	0.59	0.149
	30-Mar-22	0.02	0.181
	6-Oct-22	0.02	0.149

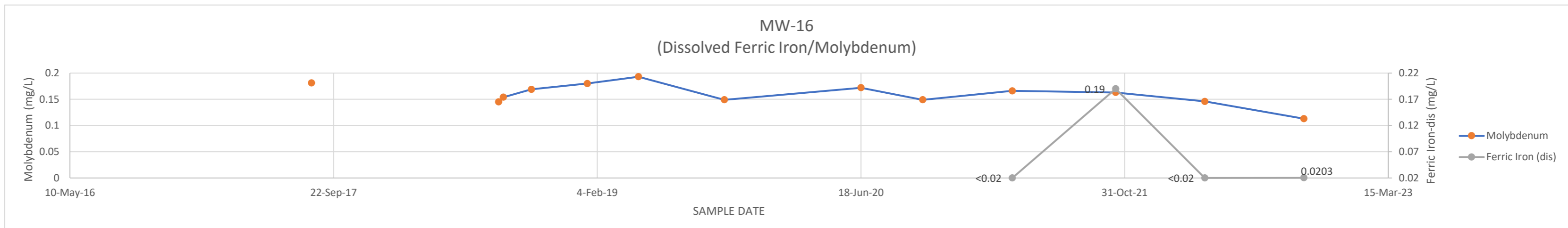


ATTACHMENT H-3  
CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-15B	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0109
13-Oct-20			0.00876
31-Mar-21		0.02	0.00571
14-Oct-21		0.0794	0.00328
30-Mar-22		0.172	0.0037
4-Oct-22		0.02	0.00153

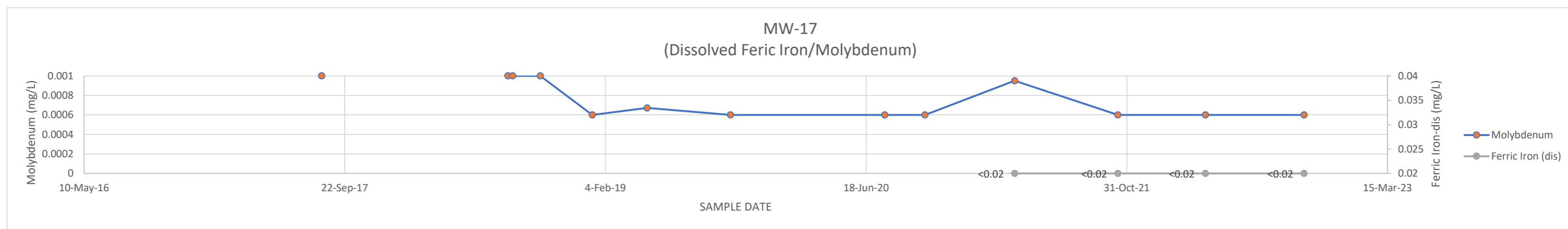


MW-16	DATE	DIS (III)	MOLYBDENUM
11-Aug-17			0.181
22-May-18			
1-Aug-18			0.145
10-Aug-18			0.154
2-Oct-18			0.169
16-Jan-19			0.18
23-Apr-19			0.193
3-Oct-19			0.149
18-Jun-20			0.172
13-Oct-20			0.149
1-Apr-21		0.02	0.166
14-Oct-21		0.19	0.163
1-Apr-22		0.02	0.146
6-Oct-22		0.0203	0.113



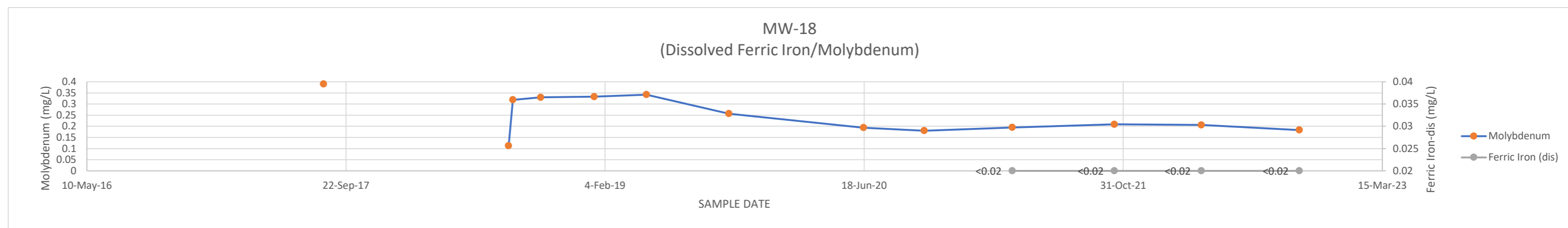
Value denoted in red from June 2022 resample

MW-17	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			0.001
24-May-18			
1-Aug-18			0.001
10-Aug-18			0.001
2-Oct-18			0.001
10-Jan-19			0.0006
25-Apr-19			0.000671
2-Oct-19			0.0006
24-Jul-20			0.0006
9-Oct-20			0.0006
30-Mar-21		0.02	0.00095
14-Oct-21		0.02	0.0006
31-Mar-22		0.02	0.0006
6-Oct-22		0.02	0.0006



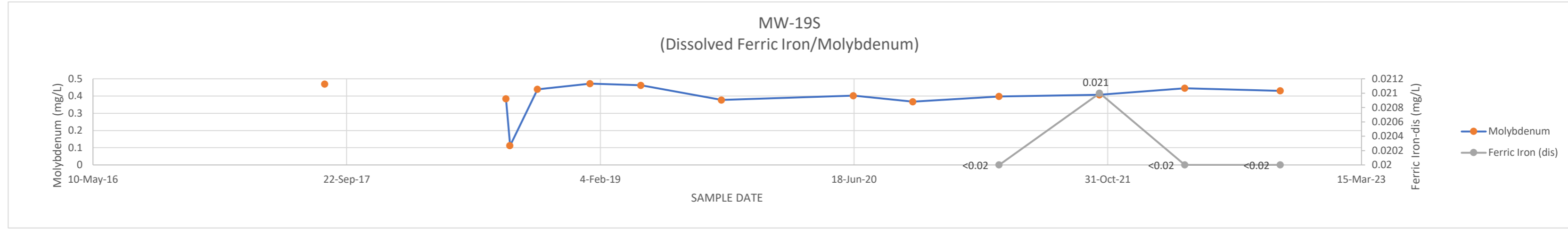
Value denoted in red from June 2022 resample

MW-18	DATE	DIS (III)	MOLYBDENUM
10-Aug-17			0.39
18-May-18			
2-Aug-18			0.113
10-Aug-18			0.319
3-Oct-18			0.33
14-Jan-19			0.333
25-Apr-19			0.342
1-Oct-19			0.257
17-Jun-20			0.194
12-Oct-20			0.18
31-Mar-21		0.02	0.195
14-Oct-21		0.02	0.209
31-Mar-22		0.02	0.206
6-Oct-22		0.02	0.183

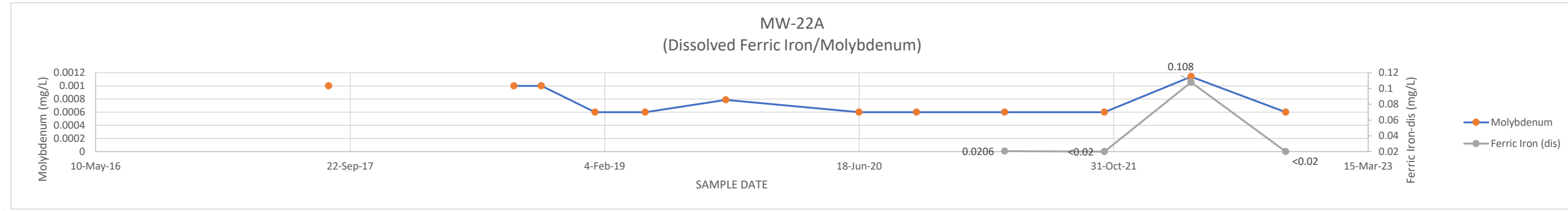


ATTACHMENT H-3  
CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

MW-19S	DATE	DIS (III)	MOLYBDENUM
10-Aug-17			0.469
18-May-18			
2-Aug-18			0.384
10-Aug-18			0.112
3-Oct-18			0.439
15-Jan-19			0.472
25-Apr-19			0.462
1-Oct-19			0.377
17-Jun-20			0.402
12-Oct-20			0.367
31-Mar-21		0.02	0.398
15-Oct-21		0.021	0.407
1-Apr-22		0.02	0.445
6-Oct-22		0.02	0.43

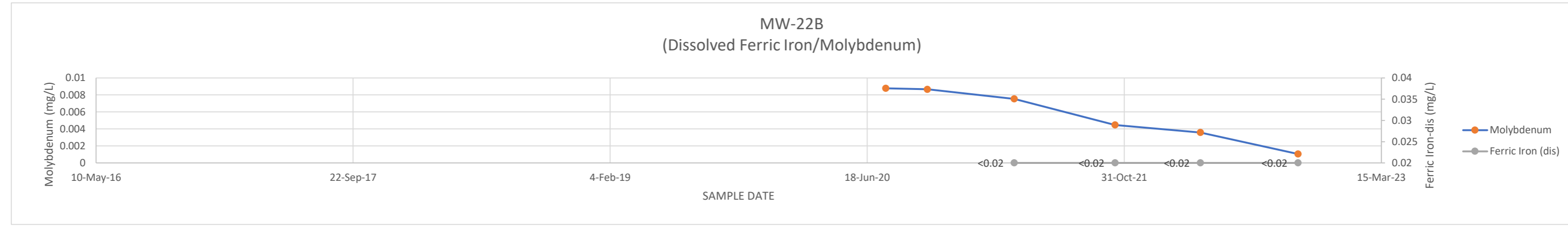


MW-22A	DATE	DIS (III)	MOLYBDENUM
11-Aug-17			0.001
22-May-18			
10-Aug-18			0.001
3-Oct-18			0.001
16-Jan-19			0.0006
25-Apr-19			0.0006
30-Sep-19			0.000787
18-Jun-20			0.0006
9-Oct-20			0.0006
31-Mar-21		0.0206	0.0006
13-Oct-21		0.02	0.0006
1-Apr-22		0.108	0.00114
4-Oct-22		0.02	0.0006

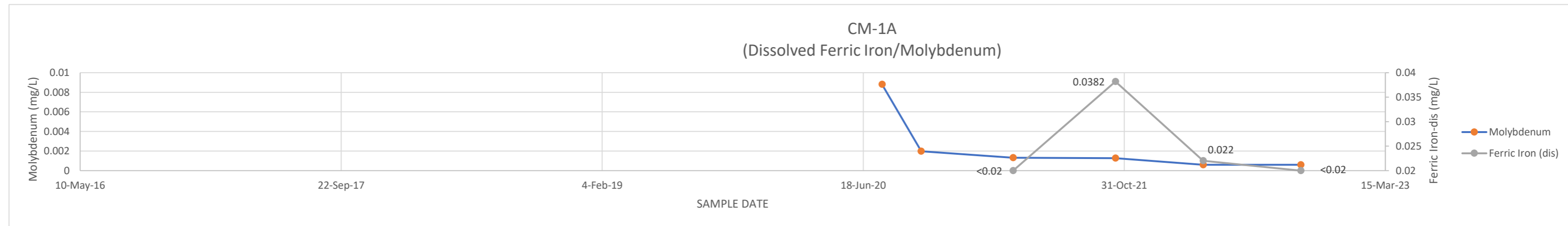


Value denoted in red from June 2022 resample

MW-22B	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.00878
13-Oct-20			0.00866
31-Mar-21		0.02	0.00753
13-Oct-21		0.02	0.00446
28-Mar-22		0.02	0.00357
4-Oct-22		0.02	0.00105

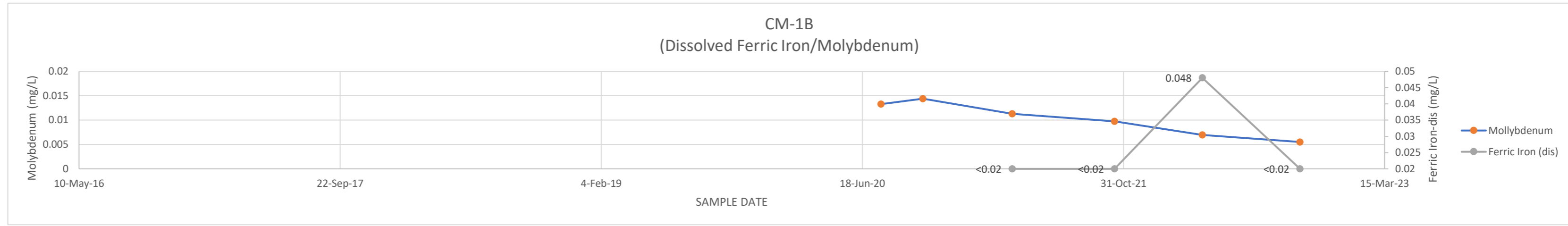


CM-1A	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0088
7-Oct-20			0.00198
1-Apr-21		0.02	0.00132
14-Oct-21		0.0382	0.00127
31-Mar-22		0.022	0.0006
4-Oct-22		0.02	0.0006

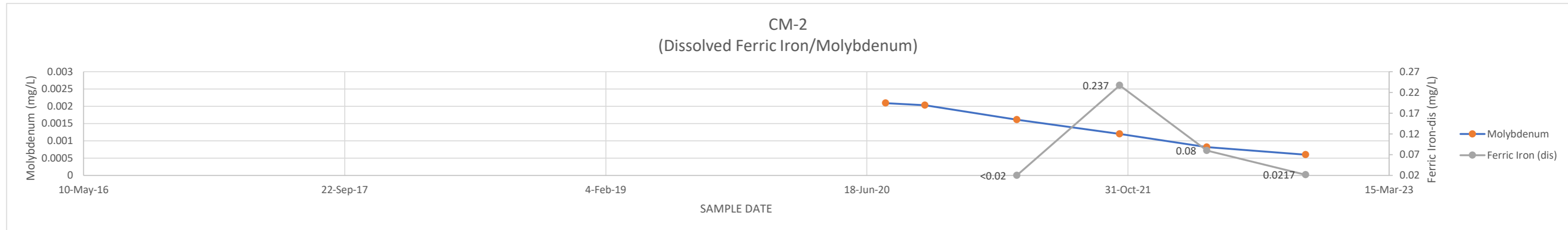


ATTACHMENT H-3  
CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

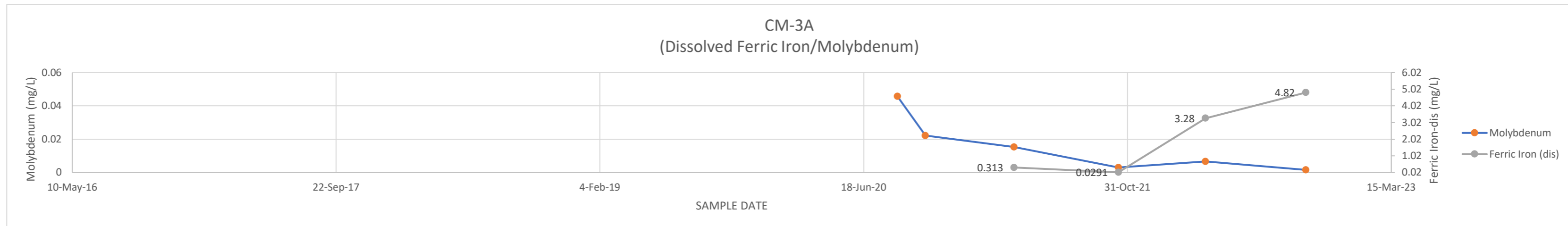
CM-1B DATE	DIS (III)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.0133
12-Oct-20		0.0144
1-Apr-21	0.02	0.0113
14-Oct-21	0.02	0.00976
31-Mar-22	0.048	0.00696
4-Oct-22	0.02	0.00551



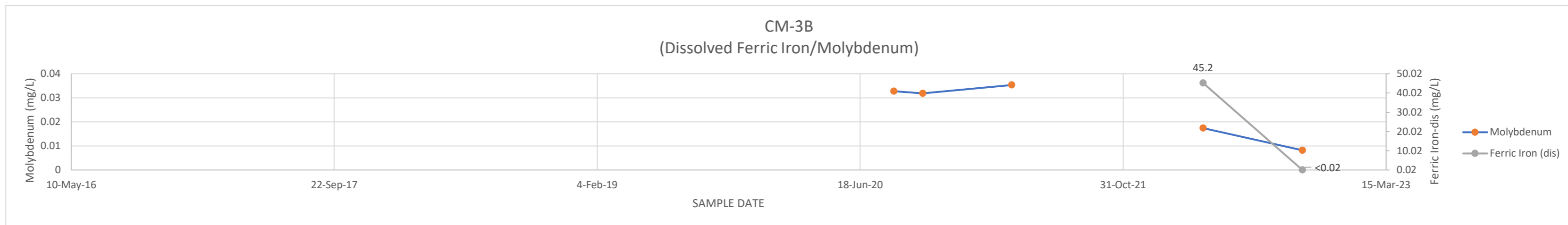
CM-2 DATE	DIS (III)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
24-Jul-20		0.00209
7-Oct-20		0.00203
1-Apr-21	0.02	0.00161
15-Oct-21	0.237	0.0012
31-Mar-22	0.08	0.00082
6-Oct-22	0.0217	0.0006



CM-3A DATE	DIS (III)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0457
13-Oct-20		0.0222
30-Mar-21	0.313	0.0153
14-Oct-21	0.0291	0.00297
28-Mar-22	3.28	0.00656
4-Oct-22	4.82	0.00155



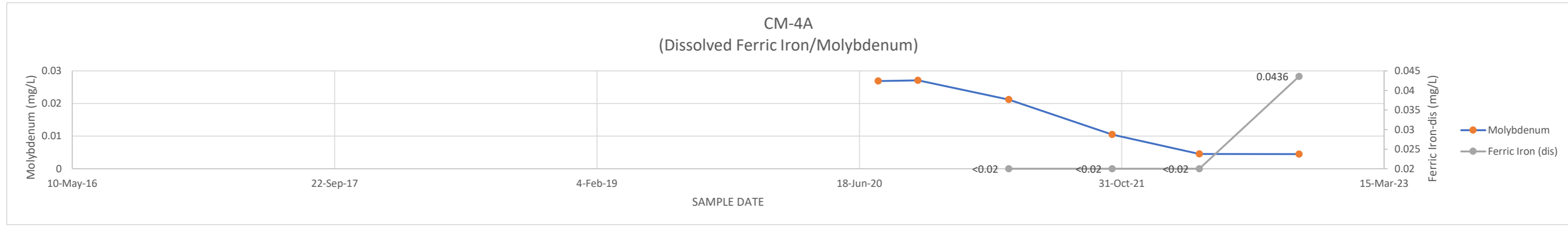
CM-3B DATE	DIS (III)	MOLYBDENUM
9-Aug-17		
24-May-18		
1-Aug-18		
10-Aug-18		
2-Oct-18		
10-Jan-19		
25-Apr-19		
2-Oct-19		
21-Aug-20		0.0327
15-Oct-20		0.0318
2-Apr-21		0.0353
11-Oct-21		
1-Apr-22	45.2	0.0174
7-Oct-22	0.02	0.00819



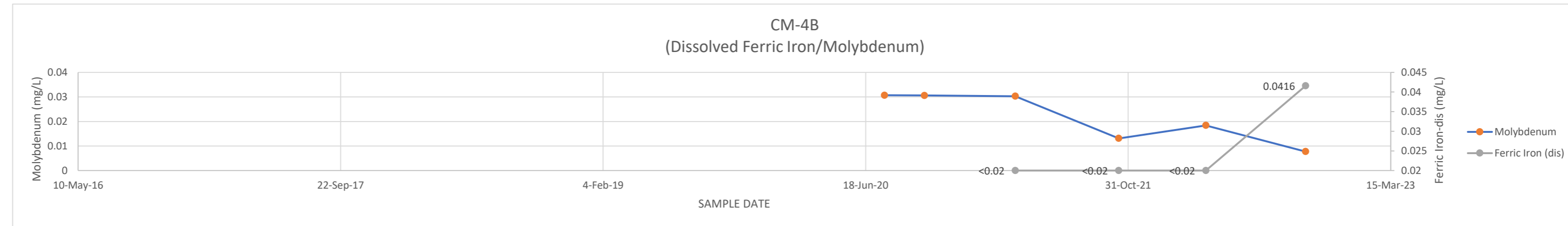


ATTACHMENT H-3  
CHANGES IN FERRIC IRON (DISSOLVED) AND MOLYBDENUM CONCENTRATIONS

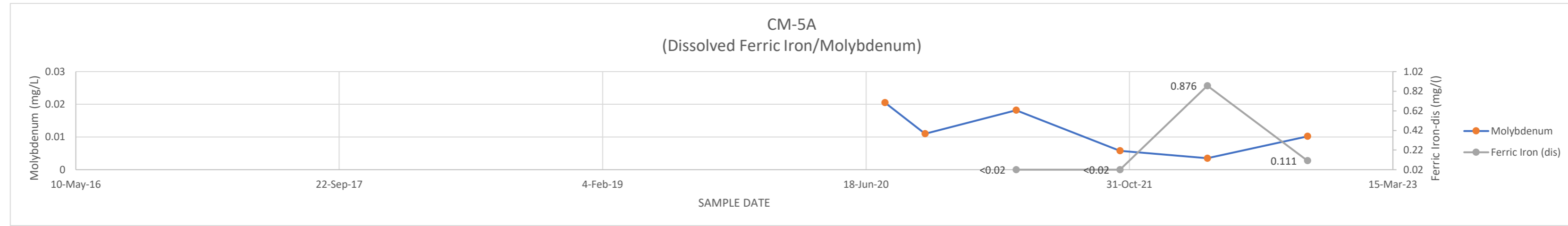
CM-4A	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0269
8-Oct-20			0.0271
30-Mar-21	0.02		0.0212
13-Oct-21	0.02		0.0105
28-Mar-22	0.02		0.00455
4-Oct-22	0.0436		0.00449



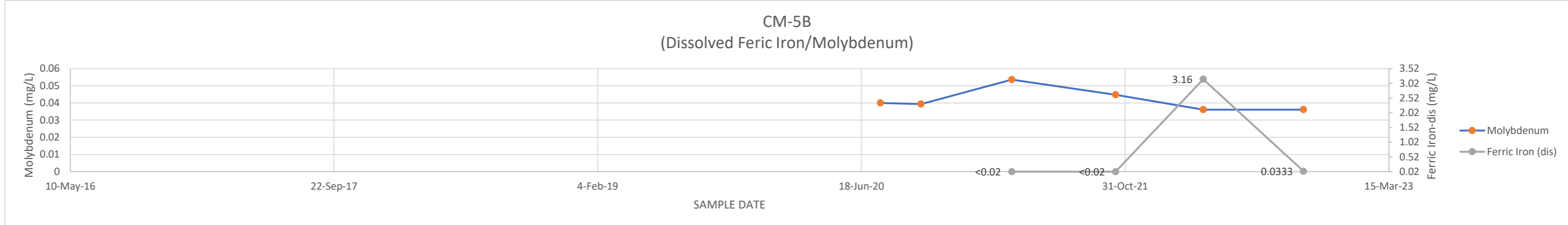
CM-4B	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0307
8-Oct-20			0.0306
30-Mar-21	0.02		0.0303
13-Oct-21	0.02		0.0131
28-Mar-22	0.02		0.0184
4-Oct-22	0.0416		0.00771



CM-5A	DATE	DIS(III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.0205
8-Oct-20			0.011
30-Mar-21	0.02		0.0182
13-Oct-21	0.02		0.0058
28-Mar-22	0.876		0.00351
4-Oct-22	0.111		0.0102



CM-5B	DATE	DIS (III)	MOLYBDENUM
9-Aug-17			
24-May-18			
1-Aug-18			
10-Aug-18			
2-Oct-18			
10-Jan-19			
25-Apr-19			
2-Oct-19			
24-Jul-20			0.04
9-Oct-20			0.0394
30-Mar-21	0.02		0.0536
13-Oct-21	0.02		0.0448
28-Mar-22	3.16		0.0361
4-Oct-22	0.0333		0.0361



Yellow Indicates Reported Below shown value (MDL)