FINAL – Rev 2

Mine Plan Operational Update: Water and Load Balance Model

Hope Bay Project, Cambridge Bay, NU, Canada

Agnico Eagle Mines Limited

SRK Consulting (Canada) Inc. ▪ CAPR003305 ▪ July 2025

FINAL – Rev 2

Mine Plan Operational Update: Water and Load Balance Model

Hope Bay Project, Cambridge Bay, NU, Canada

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Cover Image(s):
Looking across Roberts Bay (southeastward perspective) towards the Hope Bay Project.

Contents

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Useful Definitions

This list contains definitions of symbols, units, abbreviations, and terminology that may be unfamiliar to the reader.

CWP	Contact Water Pond
LOM	Life-of-Mine
MDMER	Metal and Diamond Mining Effluent Regulation
MN	Madrid Mine North
MS	Madrid Mine South
SP1	Saline Pond 1
SP2	Saline Pond 2
SSP	Shared Socioeconomic Pathway
TIA	Tailings Impoundment Area
WLB	Water and Load Balance

1 Introduction

1.1 Overview

SRK Consulting (Canada) Inc. (SRK) was retained by Agnico Eagle Mines Limited (Agnico) to complete an update of the water and load balance (WLB) model for the Hope Bay Project in Nunavut, Canada. The content herein is intended to provide a Mine Plan Operational Update that will be included as part of Agnico's proposal to the Nunavut Impact Review Board (NIRB) and Nunavut Water Board (NWB) to restart this project.

1.2 Scope of Work

The objectives of this scope of work were to update the Hope Bay WLB model to reflect proposed changes to the Life-of-Mine (LOM) and closure plans, and after completing the model update, perform simulations to estimate the quantity and quality of discharge that is expected to be released to the receiving environment. SRK understands that the results of these WLB simulations will help Agnico assess whether end-of-pipe effluent chemistry is expected to comply with applicable water quality criteria.

The current WLB model simulates the exchange of water and mass between water management facilities for the LOM, closure, and post-closure phases of the mine. The model is designed to both evaluate water management needs and forecast water quality across the project site and within downstream receptors.

2 Project Description

2.1 Overview

Agnico owns the Hope Bay Project, a formerly operational underground gold mine located in the West Kitikmeot Region of Nunavut, approximately 700 km northeast of Yellowknife, NT, and 150 km southwest of Cambridge Bay, NU, east of Bathurst Inlet. The mine is currently accessible by air, though the property includes a sea dock that is accessible during ice-free conditions.

Mining operations at the Hope Bay property were previously conducted between 2007 and 2021 under various ownerships. Construction of the project began in June 2007 by the original owner, Miramar Mining Corporation, under its subsidiary Miramar Hope Bay Mining Ltd. In March 2008, Newmont Mining Corporation (Newmont) purchased the project and continued construction activities under their wholly owned subsidiary, Hope Bay Mining Ltd. Newmont ceased construction in January 2012 and placed the project in temporary closure. In January 2013, Newmont sold the project to TMAC Resources Inc. (TMAC) who re-commenced exploration activities in June 2013, completed construction, and achieved the site's first gold pour in February 2017.

In February 2021, TMAC sold the Hope Bay Project to Agnico who continued production until September 2021. Since that time, mining activities have been suspended while Agnico prioritizes exploration to better define underground conditions and expand mineral resources.

2.2 Current Project Layout

The Hope Bay Project footprint currently occupies portions of the adjacent watersheds of Doris Lake, Patch Lake, Windy Lake, and Wolverine Lake. Figure 2-1 and Figure 2-2 illustrate a general site layout of the current mine facilities.

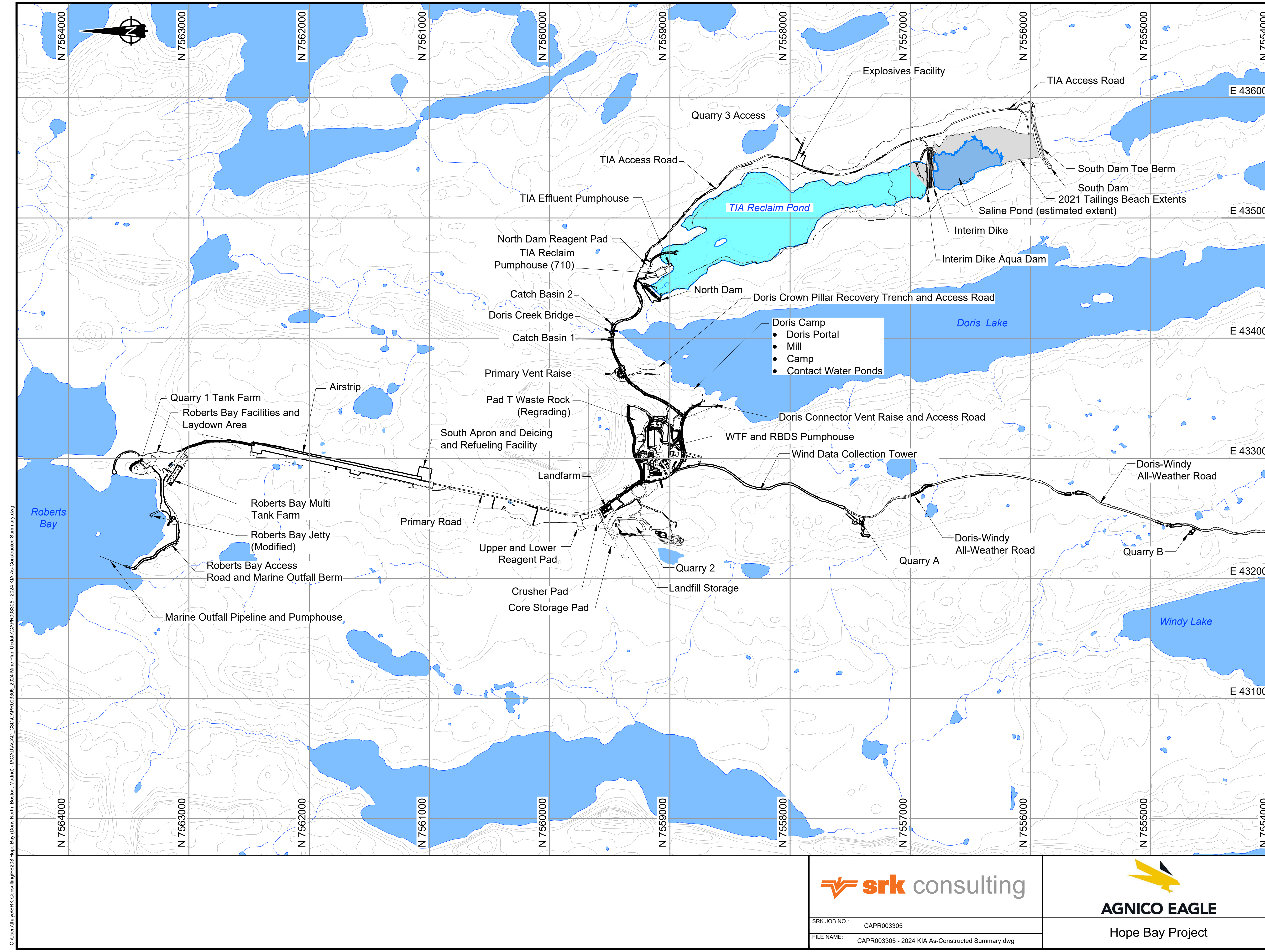
Current mine facilities include:

Doris

- Doris Portal
- Doris Process Plant
- Doris Camp
- Sediment Control Pond
- Tailings Impoundment Area
- Various Quarries
- Saline Water Storage
- Local Collection Sumps
- Pad U Contact Water Pond
- Ancillary Facilities
- Pad T Waste Rock Pads
- Doris Ore Pads
- Water Treatment Facility
- Sewage Treatment Facility
- Effluent Treatment Facilities
- Discharge Infrastructure

Madrid North

- Madrid North Portal
- Madrid North Waste Rock Pile
- Naartok East Overburden Pile
- Legacy Naartok Pit
- Contact Water Pond 2
- Local Collection Sumps
- Quarry D



LEGEND

Existing As-Constructed Infrastructure
2021 Tailings Beach Extents
TIA Reclaim Pond

NOTES

1. All units are in meters unless otherwise specified.
2. Contours are shown at 10.0 m intervals.

REFERENCES

NAD83 CSRS UTM Zone 13.
2022 As-Constructed linework delineated from client's Site Complied As-Builts provided January 20, 2023.

0m 300 600 900 1200

srk consulting

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FILE NAME: CAPR003305 - 2024 KIA As-Constructed Summary.dwg

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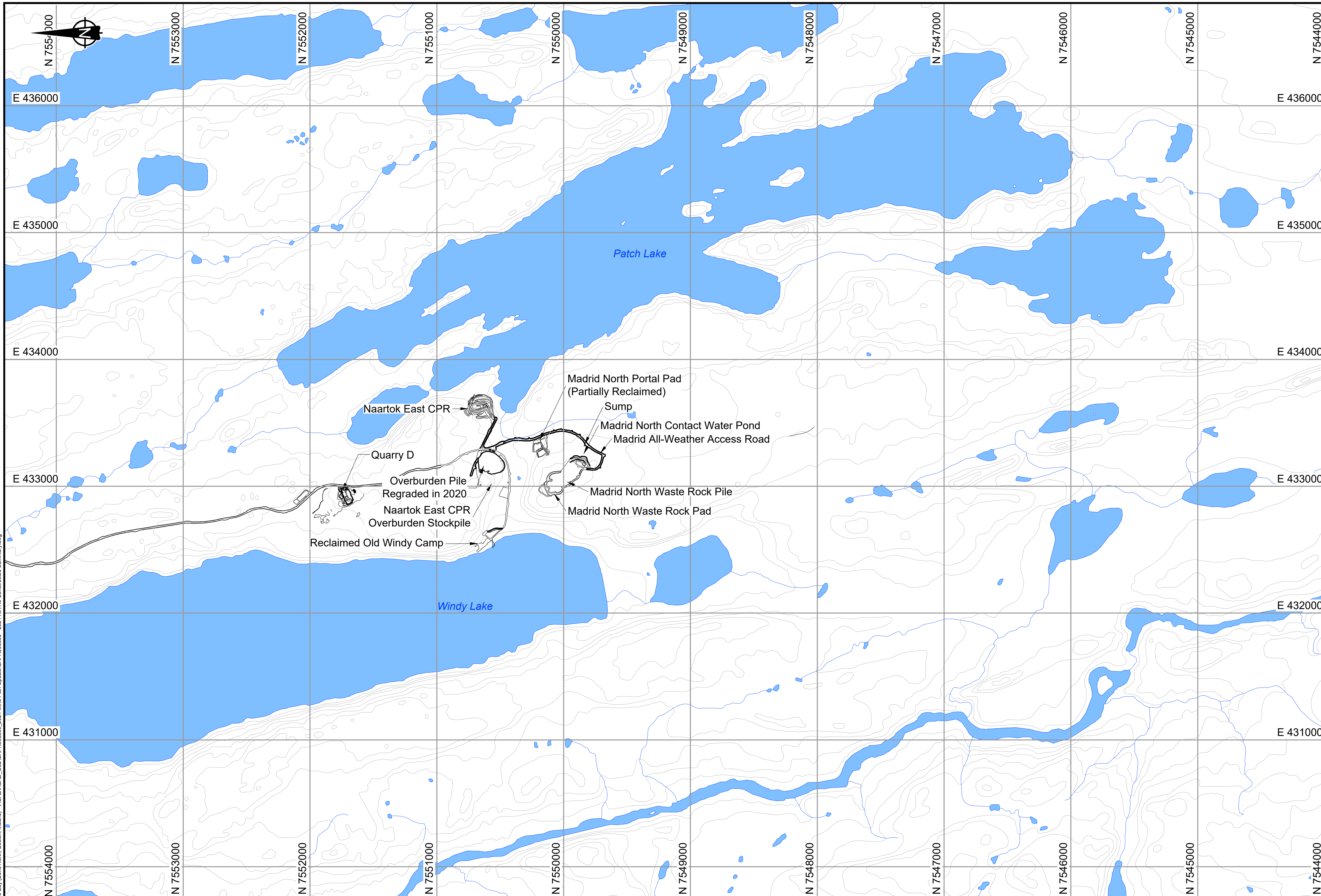
Hope Bay Project

2024 Mine Plan Operational Update

General Site Layout: Doris Area

DATE:	APPROVED:	FIGURE:
December 2024	BRS	2-1



LEGEND

Existing As-Constructed Infrastructure

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AGNICO EAGLE

Hope Bay Project

2024 Mine Plan Operational Update

General Site Layout : Madrid Area

DATE: December 2024

APPROVED: BRS

FIGURE: 2-2

3 Mine Plan Operational Update

3.1 Overview

The following sections summarize SRK's understanding of the mine activities associated with each stage of the proposed Mine Plan Operational Update. The proposed model scenario has been constructed to align with the staging described below.

Including historical conditions (i.e., Stage 0), the WLB model incorporates five stages of the mine life. Process flow diagrams (PFDs) for Stage 1, 2, and 3-4 (i.e., Figures 1 – 3) are provided as Appendix A.

In this report, mine year (Y) refers to the timeline relative to the planned re-start of operations, which is designated as Year 0 (Y0). Subsequent years are labeled as Y1, Y2, etc., and prior years are labeled as Y-1, Y-2, etc.

A project Gantt chart is also included within the design basis provided as Appendix B.

3.2 Stage 1: Ramp Development

The first stage of the Mine Plan Operational Update is the intended period of site construction and ramp development between the present time (i.e., Y-4) and the resumption of operations (Y0).

During this stage, the following activities are proposed:

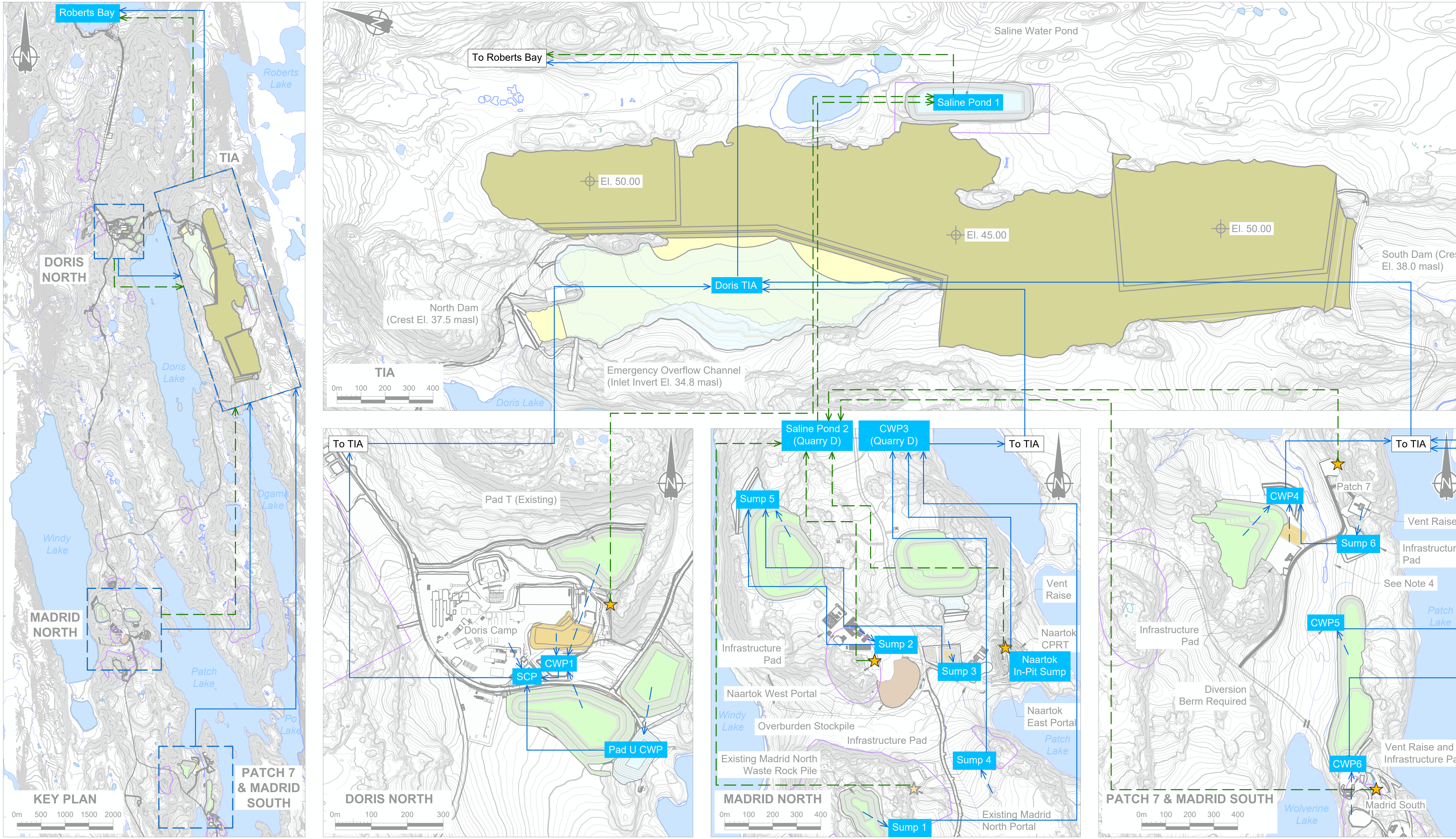
- Pre-construction and early works (Y-4 to Y-2).
- Advancement of the Doris and Madrid portals leading to waste rock being stockpiled at surface (Y-4 to Y0).
- Site construction (Y-1 to Y0), including:
  - Doris camp expansion from 400 to 800 people.
  - Construction of a 250-person camp at Madrid.
  - Construction of planned surface water management infrastructure (e.g., contact water ponds, local collection sumps, saline water ponds, pumps, and pipelines).
- Water management activities will include:
  - Contact water from waste rock stockpiles, quarries, and other surface disturbances will be collected and pumped to the Doris Tailings Impoundment Area (TIA).
  - Underground dewatering will be pumped to Saline Pond 2 (SP2) at Quarry D.
  - Surplus inventory in the TIA and SP2 will be discharged to Roberts Bay.
  - When water quality is compliant with applicable criteria, direct discharge to the tundra from certain surface water collection points is permitted (this option is not modelled as part of this scope).

3.3 Stage 2: Full-Scale Production

The second stage of the Mine Plan Operational Update is the planned production period between the beginning of Y0 and the end of Y13. Figure 3-1 illustrates the proposed water management strategy for this stage of the mine life.

During this stage, the following activities are proposed:

- Advancement of two additional portals (Y1, Y2) at Madrid leading to waste rock being stockpiled at surface.
- Mill production being initiated at 1,250 tonnes per day (tpd) in Y0 and increasing to a planned maximum of 8,000 tpd by Y4.
  - Production will be sustained by ore extracted from Doris and Madrid beginning Y0. Ore from Doris will be depleted by Y9 and at Madrid by Y13.
- Underground rock backfill, as follows:
  - At Doris between Y0 and Y9.
  - At Madrid between Y0 and Y13.
- Tailings management activities, as follows:
  - Conventional tailings slurry deposition between Y0 and Y4.
  - Dry stack tailings between Y5 and Y13.
- Water management activities will include:
  - Contact water from surface disturbances (e.g., waste rock stockpiles, ore stockpiles, in-pit sumps, etc.) at Doris and Madrid will be collected and pumped to the Doris TIA.
  - Underground dewatering will be pumped as follows:
    - Madrid saline water pumped to SP2 on route to SP1, adjacent to the Doris TIA.
    - Doris saline water pumped directly to SP1.
  - Surplus process water (i.e., Doris TIA) and saline water will both be discharged to Roberts Bay via separate discharge lines.



LEGEND

- ★ Portal Location (Proposed and Existing)
- Local Runoff
- Freshwater Pumping
- Saline Water Pumping

NOTES

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals inside design area and 10.0m intervals outside design area.
3. TIA Reclaim Pond shown at maximum water level (indicative), this does not represent the intended normal operating water level.
4. A minimum 31.0 m setback from streams and shorelines is required.

REFERENCES

NAD83 UTM Zone 13.

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Hope Bay Project

2024 Mine Plan Operational Update

Water Management Strategy : Full-Scale Production

DATE:	APPROVED:	FIGURE:
December 2024	BRS	3-1

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3.4 Stage 3: Closure

The third stage of the Mine Plan Operational Update is the planned mine closure period, between the beginning of Y13 and the end of Y14.

During this stage, the following activities are planned:

- Dry stack tailings and tailings beaches within the Doris TIA will be covered with a 1-m rockfill cover, geomembrane liner, a final overburden cover that will be seeded and reclaimed.
- A closure spillway will be constructed at the TIA to promote passive surface drainage to Doris Lake in post-closure.
- Waste rock remaining on surface at closure will be covered and reclaimed.
- Underground portal dewatering will be halted, and stopes will be permitted to flood with regional groundwater.
- Various surface infrastructure including berms and collection ponds will be decommissioned and natural drainage will be restored.
- Camp facilities, including potable water usage, are expected to be maintained in closure. Wastewater biosolids will be sent to the TIA while treated water will be discharged to the tundra.
- Water management will continue in closure as per Stage 2 (i.e., Full-Scale Production), with surplus process water being discharged to Roberts Bay, as required.

3.5 Stage 4: Post-Closure

The fourth and final stage of the Mine Plan Operational Update is the planned post-closure period, extending beyond the end of Y14. For the purposes of this modelling effort, three years of post-closure were simulated (i.e., Y15 to Y17).

During this stage, the following activities are planned:

- The quality of contact water generated by the mine footprint is expected to be suitable for passive drainage to the downstream environment due to reclamation activities implemented in Phase 3.
- Any remaining mine facilities that were maintained during closure will be decommissioned in post-closure.
- Reclaimed areas previously associated with mine disturbance will return to the natural drainage of the watershed.
- Surface drainage from the reclaimed TIA will passively flow via the closure spillway to Doris Lake.

4 Modelling Overview

Details pertaining to the structure, settings, updates, inputs, and assumptions applied by SRK to the Hope Bay WLB model are summarized in the model design basis (Appendix B). The following sections are intended to provide a high-level summary of this information.

4.1 Objectives

The primary objectives of this Mine Plan Operational Update study were:

- To update the Hope Bay Project WLB model to reflect the proposed mine plan.
- To estimate the requirements for discharge of both process water and saline water to Roberts Bay.
- To estimate effluent chemistry of both discharge streams and compare to applicable criteria (i.e., MDMER 2021).

4.2 Model Framework

- Predictive model simulations period was from the beginning of Y-4 to the end of Y17.
- Model simulations were performed on a daily timestep.
- Reported water quantity and water chemistry results are monthly averaged values.

4.3 Climate

- Model simulations were performed by applying a precipitation and daily mean temperature time series corresponding to an SSP2-4.5 climate change projection (SRK 2024a) for the Hope Bay Project.

4.4 Water Quality Modelling

- Mixing at each model node was assumed to be instantaneous and complete.
- The TIA and saline ponds were modelled as fully mixed systems.
- Dissolved components of species remain in solution; no solubility limits were applied, except during the re-flooding of the underground in closure for metals, major anions and cations, and phosphorus.
- No chemical reactions occur along flow paths.
- Loading attributed to surface runoff originating from undisturbed and reclaimed surfaces were represented by a composite background water chemistry term.

4.5 Load Balance Source Terms

- Model simulations were performed by applying “Base Case” geochemical and water quality source terms (SRK 2024b).
- Total metals concentrations were calculated by multiplying the TSS concentration by the solids composition of each source (in mg/kg TSS) and then added to the concentration of the dissolved fraction.

4.6 Model Simulations

The WLB model was simulated under a Base Case scenario only, defined by:

- Base case climate (Appendix B).
- Base case water quality source terms (Appendix B).
- Base case geochemical source terms (SRK 2024b).
- Base case groundwater inflow rates (SRK 2024c).

5 Model Results

5.1 Overview

This section summarizes the Hope Bay WLB model results for the Mine Plan Operational Update.

Monthly estimates of discharge to Roberts Bay are summarized in Appendix C. Calculated end-of-pipe water quality results are presented graphically in Appendix D with comparison to MDMER (2021).

5.2 Water Balance

Annual discharge volumes, estimated using the Hope Bay WLB model, are summarized in Table 5-1.

Table 5-1: Estimated annual Robert Bay Discharge (m^3).

Year	Stage	Process Water	Saline Water
Y0	Operations	1,588,300	713,800
Y1		1,581,700	766,500
Y2		2,011,300	845,500
Y3		2,373,100	827,500
Y4		2,277,500	899,500
Y5		1,928,400	910,000
Y6		1,815,500	953,100
Y7		1,572,900	947,800
Y8		1,080,100	980,500
Y9		1,052,800	1,025,500
Y10		1,025,100	253,300
Y11		1,015,700	287,400
Y12		1,006,500	285,400
Y13		988,000	283,900
Y14	Closure	960,000	42,500
Y15		997,100	-
Y16	Post-Closure	969,200	-
Y17		969,200	-

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

As these results indicate, process water discharge is generally expected to be less during dry stack tailings operations than during thickened tailings deposition in earlier years. Once the closure stage is initiated, the TIA is expected to passively drain towards Roberts Bay, via Doris Creek.

As for the saline discharge stream, annual discharge is projected to remain relatively consistent from year to year until the decrease in discharge beginning in Y10, which coincides with the end of mining at Doris. From Y10 onward, saline discharge is only required for Madrid mining operations.

5.3 Load Balance

Estimated end-of-pipe water chemistry concentrations are summarized in Table 5-2 (process water) and Table 5-3 (saline water). The reported maximum concentrations are the highest values estimated by the WLB model within the modelled period (i.e., Y-4 to Y17).

Table 5-2: Monthly maximum estimated process effluent chemistry (mg/L).

Species	Units	MDMER (2021)	Maximum Monthly Concentration (mg/L)	Date of Occurrence
Arsenic (As-T)	mg/L	0.3	**0.95**	Jun Y8
Copper (Cu-T)	mg/L	0.3	0.1	Jan Y7
Cyanide (Total)	mg-N/L	0.5	**0.67**	Jun Y13
Lead (Pb-T)	mg/L	0.1	0.0008	Oct Y13
Nickel (Ni-T)	mg/L	0.5	0.07	Jun Y8
Zinc (Zn-T)	mg/L	0.5	0.2	Feb Y0
Total Suspended Solids	mg/L	15.0	**100**	Feb Y0
Total Ammonia	mg-N/L	N/A	38	Jun Y8

Sources: Compiled in text.

Note: **Bold** values are in exceedance of the stated criteria.

Table 5-3: Monthly maximum estimated saline effluent chemistry (mg/L).

Species	Units	MDMER (2021)	Maximum Monthly Concentration (mg/L)	Date of Occurrence
Arsenic (As-T)	mg/L	0.3	0.04	Aug Y2
Copper (Cu-T)	mg/L	0.3	0.006	Sep Y3
Cyanide (Total)	mg-N/L	0.5	0.001	Aug Y10
Lead (Pb-T)	mg/L	0.1	0.0004	Sep Y3
Nickel (Ni-T)	mg/L	0.5	0.01	Sep Y3
Zinc (Zn-T)	mg/L	0.5	0.2	Sep Y3
Total Suspended Solids[1]	mg/L	15.0	**94**	Sep Y3
Total Ammonia	mg-N/L	N/A	45	Jun Y1

Sources: Compiled in text.

Note: **Bold** values are in exceedance of the stated criteria.

The load balance model results indicate that three analytes are estimated to exceed MDMER (2021) criteria within the process water stream, namely arsenic, total cyanide, and TSS.

Within the saline water discharge stream, TSS is also estimated to exceed MDMER (2021).

Analytes estimated to exceed the respective criteria are all readily treatable with commercially available water treatment technologies.

6 Summary and Conclusions

6.1 Overview

6.1.1 Water Balance Summary

Estimates of annual discharge to Roberts Bay are summarized in Table 6-1.

Table 6-1: Estimated annual discharge to Roberts Bay (m^3).

Effluent Stream	Mean	Minimum	Maximum
Process Water	1,381,200	948,500	2,334,700
Saline Water	556,800	42,500	1,025,500

Sources: Compiled in text.

6.1.2 Load Balance Summary

Estimated end-of-pipe exceedances are summarized in Table 6-2.

Table 6-2: Estimated analyte exceedances in Roberts Bay Discharge.

Effluent Stream	Exceedance
Process Water	As_T, CN_T, TSS
Saline Water	TSS

Sources: Compiled in text.

- Treatment of process-affected water will continue to be required before discharging to Roberts Bay to ensure compliance with MDMER (2021).
- As_T and CN_T are readily treatable using a simple oxidative step, plus lime and ferric precipitation, followed by polymer addition.
- Currently the Hope Bay project successfully treats for TSS prior to discharging from the Doris TIA to Roberts Bay. This system is expected to continue to operate effectively for the remainder of the Life-of-Mine.

6.2 Limitations

6.2.1 Climate Change Modelling

The climate change projections applied in this scope are inherently uncertain, and any such assessments should be continually revised as new data becomes available.

6.2.2 Load Balance Model

Modelling completed using the Hope Bay WLB model was done so under the assumption of mass balance and mass conservatism within a fully mixed system, thereby excluding several naturally occurring processes that tend to attenuate constituents along flow paths.

Furthermore, physio-chemical factors that are known to affect the composition of surface water were not explicitly modelled. These include:

- Modelled of suspended sediments in the water column.
- Oxidation and reduction processes.
- Dissolution and precipitation.
- Adsorption and desorption.
- Incomplete mixing between combined flows and within reservoirs.

Closure

This report, Mine Plan Operational Update: Water and Load Balance Model, was prepared by

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Consultant (Water Management)

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Principal Consultant (Water Management)

and reviewed by

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Christina James
Principal Consultant, Practice Lead (Water Management)

SRK Consulting (Canada) Inc. Engineers and Geoscientists BC Permit to Practice No: 1003655

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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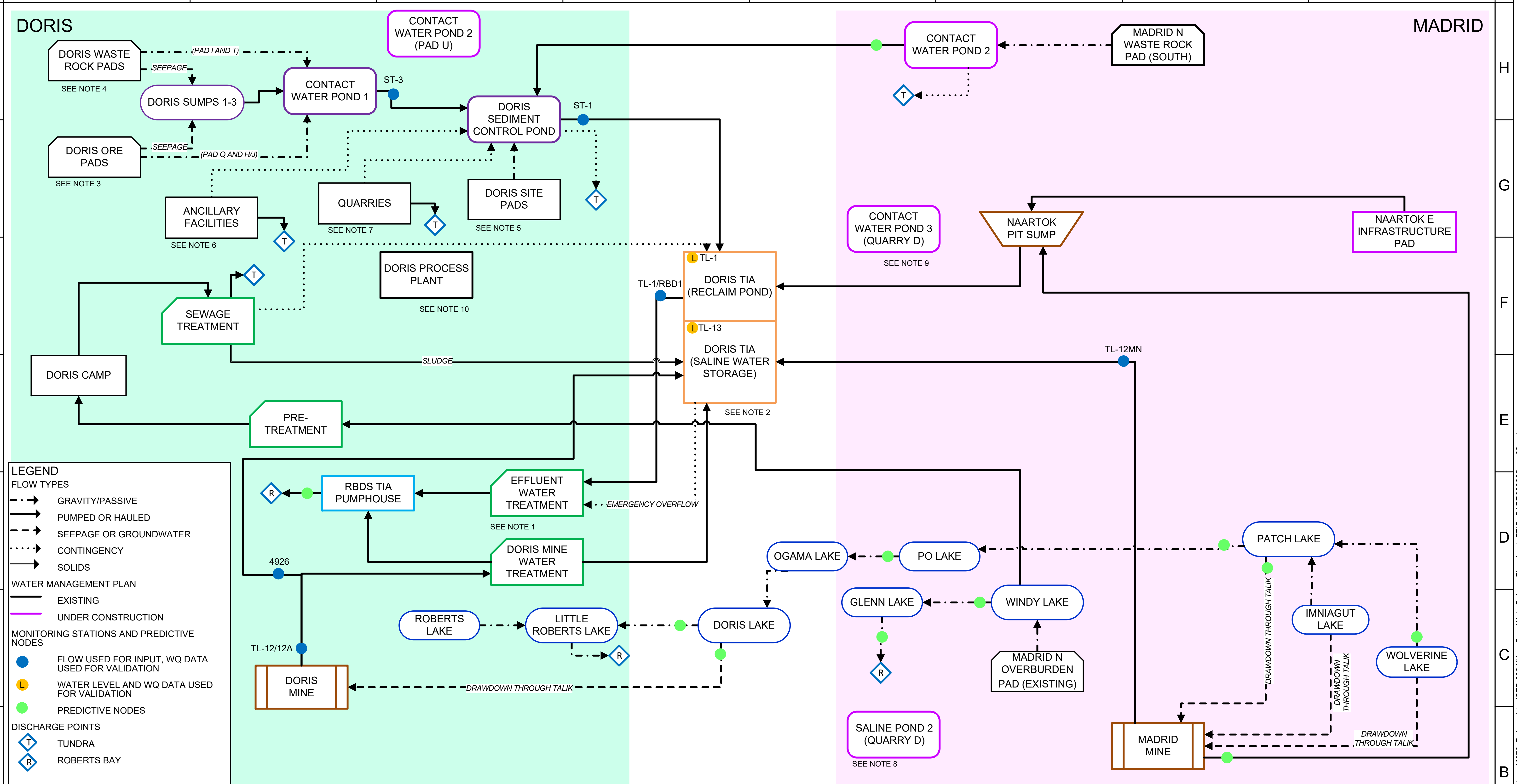
Appendix A Process Flow Diagrams



NOTES

GENERAL NOTES: ALL CATCHMENT AREAS, PONDS, AND SUMPS RECEIVE INFLOWS FROM UP-GRADIENT LOCAL CATCHMENTS. ALL POND AND LAKE SURFACES ARE SUBJECT TO DIRECT PRECIPITATION AND EVAPORATION. DISCHARGE TO TUNDRA AND ROBERT'S BAY ONLY POSSIBLE WHEN WATER QUALITY CRITERIA ARE MET.

1. TSS TREATMENT IMPLEMENTED JULY 2022.
2. FILTERED TAILINGS STACK PLANNED FOR LATER YEARS OF MINE LIFE.
3. DORIS ORE PADS Q AND H/J.
4. DORIS WASTE ROCK PADS T AND I. PAD U TO BE CONSTRUCTED 2025.
5. DORIS SITE PADS INCLUDE SITE BUILDINGS, INFRASTRUCTURE, AND LAYDOWNS.
6. ANCILLARY FACILITIES INCLUDE FUEL TANK FARM, LANDFARM, AND LANDFILL.
7. ACTIVE WATER MANAGEMENT FOR QUARRIES A AND B. QUARRY 5 TO BE DEVELOPED STARTING IN 2024. QUARRIES E, AI, AND AF TO BE EXPANDED DURING CONSTRUCTION.
8. QUARRY D TO BE USED AS TEMPORARY HOLDING AND TRANSFER POINT FOR MADRID NORTH MINE WATER PRIOR TO PUMPING TO QUARRY 3 SALINE POND.
9. FLOW OF CONTACT WATER TO BE REDIRECTED FROM CONTACT WATER POND (CWP) 2 AND TO CWP 3 AT QUARRY D ONCE CONSTRUCTION AT QUARRY D IS COMPLETE. CWP 2 TO BE TRANSITIONED INTO MADRID SUMP
10. ORE PROCESSING ON HOLD SINCE OCTOBER 2021.

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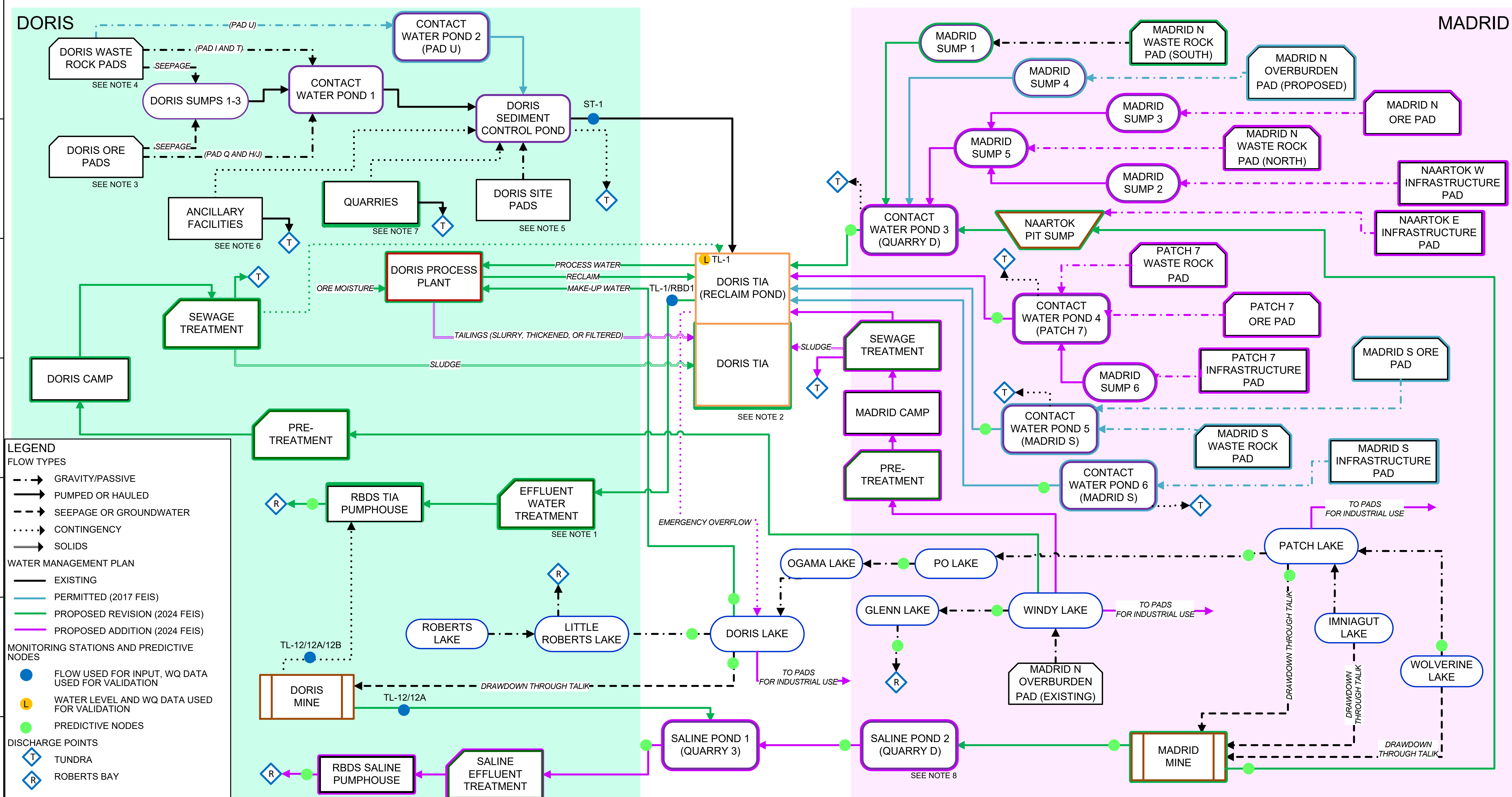
PROJECT NUMBER: CAPR003305	REVISION: 02 -DRAFT	DRAWN BY: NF/BPR	TITLE: HOPE BAY PROJECT MINE PLAN OPERATIONAL UPDATE WATER AND LOAD BALANCE RAMP DEVELOPMENT
FILENAME: HopeBay_WaterBalanceFlowsheet_FEIS_CAPR003305_rev02.vsdx	REVIEWED BY: BRS	APPROVED BY: CJ	DATE: 2025-01-20 / FIGURE NO. 1



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PROJECT NUMBER: CAPR003305	REVISION: 02 -DRAFT	DRAWN BY: NF/BPR	TITLE: HOPE BAY PROJECT MINE PLAN OPERATIONAL UPDATE WATER AND LOAD BALANCE FULL-SCALE PRODUCTION
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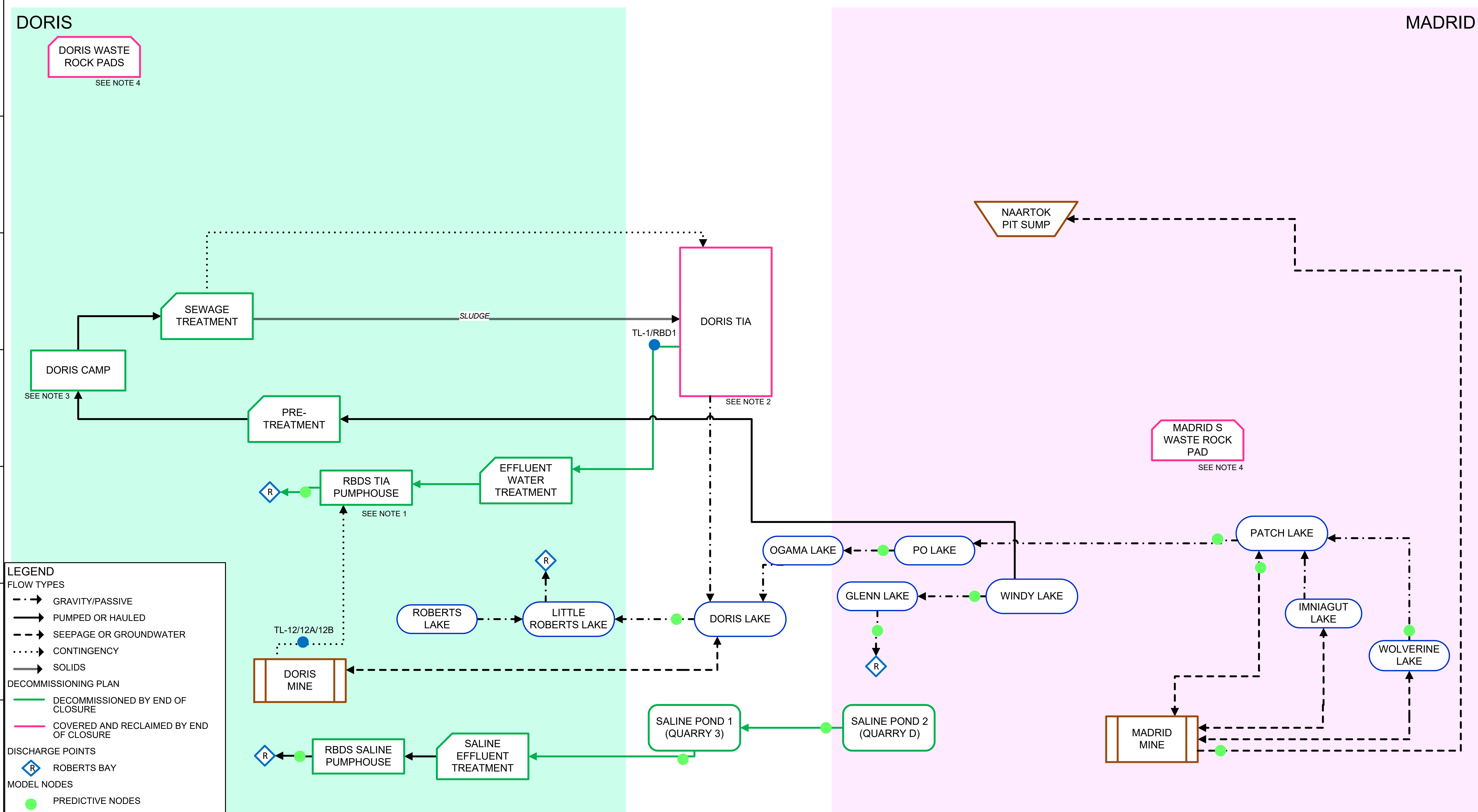

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DISCHARGE TO TUNDRA AND ROBERT'S BAY ONLY POSSIBLE WHEN WATER QUALITY CRITERIA ARE MET.
CONTACT WATER PONDS TO BE DECOMMISSIONED AND NATURAL FLOW PATHS RESTORED.
MINE PORTALS TO BE BACKFILLED THROUGHOUT OPERATIONS AND FLOODED DURING CLOSURE, ESTABLISHING EQUILIBRIUM THROUGH SEEPAGE WITH SURROUNDING NATURAL LAKES.

1. PUMPHOUSE AND EFFLUENT TREATMENT FACILITIES TO BE DECOMMISSIONED FOLLOWING DRAWDOWN OF TIA AND SALINE PONDS.
2. TIA IN DRAWDOWN DURING CLOSURE AND TO BE COVERED AND REVEGETATED.
3. DORIS CAMP TO REMAIN IN OPERATION TO SUPPORT STAFF DURING CLOSURE ACTIVITIES AND WILL BE DECOMMISSIONED THEREAFTER.
4. REMAINING WASTE ROCK AT DORIS AND MADRID SOUTH WASTE ROCK PADS TO BE COVERED AND REVEGETATED.

srk consulting	AGNICO EAGLE	TITLE: HOPE BAY PROJECT MINE PLAN OPERATIONAL UPDATE WATER AND LOAD BALANCE CLOSURE & POST-CLOSURE	
PROJECT NUMBER: CAPR003305	REVISION: 02 -DRAFT	DRAWN BY: NF/BPR	
FILENAME: HopeBay_WaterBalanceFlowsheet_FEIS_CAPR003305_rev02.vsdx	REVIEWED BY: BRS	APPROVED BY: CJ	DATE: 2025-01-20
			FIGURE NO.: 3

https://srk.sharepoint.com/sites/NACAPR003305/Internal/!070_Deliverables/CFD 2024/HopeBay_WaterBalanceFlowsheet_FEIS_CAPR003305_rev02.vsdx

Appendix B WLB Model Design Basis

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FINAL

Memo

To	Bobby Doroudiani	**Client**	Agnico Eagle Mines Limited
From	Nina Feng, Brandon Smith	**Project**	CAPR003305
Cc		**Date**	July 10, 2025

Subject Hope Bay Project Mine Plan Operational Update: Water and Load Balance Model Design Basis

File name: CAPR003305_HopeBay_DesignBasis_20250710_FINAL_REV1.docx

1 Introduction

This document is a design basis memorandum (DBM) that summarizes the updates implemented by SRK Consulting (Canada) Inc. to the Hope Bay Project water and load balance (WLB) model as part of the 2024 Mine Plan Operational Update.

This DBM also includes a description of settings, structure, inputs, outputs, and assumptions that were carried through this model update from previous scopes.

1.1 Model Overview

The conceptual model represents SRK's understanding of the Hope Bay Project water management strategy. Pertinent details of the conceptual model are summarized in Table 1-1 and described in detail in the following sections.

Mine year (Y) refers to the timeline relative to the re-start of operations, which is designated as Year 0 (Y0). Subsequent years are labeled as Y1, Y2, etc., and prior years are labeled as Y-1, Y-2, etc.

Table 1-1: Conceptual model inputs and parameters.

Parameter	Model Input	Comments	Sources
MODEL SIMULATIONS			
Model Start Date	June 1, 2010	Start of calibration period	SRK
Model End Date	End of Y17	End of post-closure period	Agnico (2024)
Model Basic Time Step	Daily	Site data is summarized monthly	SRK
MODEL STAGING			
Stage 0	2010 to 2023	Calibration Period	SRK
Stage 1	Y-4 to Y0	Construction	Agnico (2024)

Parameter	Model Input	Comments	Sources
Stage 2	Y0 to Y13	Operations	Agnico (2024)
Stage 3	Y13 to Y14	Closure	Agnico (2024)
Stage 4	Y15 to Y17	Post-Closure	Agnico (2024)
CLIMATE INPUTS			
Precipitation	Section 2.2	Recorded (past) and synthetic (future) daily totals	SRK
Air Temperature	Section 2.2	Recorded (past) and synthetic (future) daily temperature	SRK
Evaporation	Section 2.2	Mean Annual Evaporation (MAE) estimated from local and regional stations	SRK (2022)
PHYSICAL INPUTS			
Forecast Mill Rate	Table 4-1	Updated Life-of-Mine plan	Agnico (2024)
Thickened Tailings Solids	60% wt.	Consistent with 2017 FEIS	SRK (2017a)
Tailings Settled Dry Density	1.27 t/m^3	Consistent with 2017 FEIS	SRK (2017a)
Tailings Solids Particle Density	2.85 t/m^3	Consistent with 2017 FEIS	SRK (2017a)
Ex-pit Ore Moisture	4%	Consistent with 2017 FEIS	SRK (2017a)
FRESHWATER USAGE (FORECASTED)			
Industrial	2,753,950 m^3/year	Mill industrial freshwater	Agnico (2024)
Camp	64,240 m^3/year	Camp potable water	Agnico (2024)

Sources: Compiled in text.

1.2 Site Layout

Mine infrastructure includes processing facilities (i.e., mill, paste plant, tailings thickener), waste management facilities (i.e., Doris tailings impoundment area (TIA), waste rock dumps), water management infrastructure, and two water treatment plants (WTP), one underground at Doris and one for treatment of discharge from the Doris TIA.

Current water management infrastructure at the Hope Bay Project includes:

- The Doris TIA.
- Various Contact Water Ponds (CWP) and local collection sumps.
- A Saline Water Pond (SWP).
- Various Sediment Control Ponds (SCP).
- Dewatering of underground workings from the portals at the Doris and Madrid mines.
- Freshwater supply for industrial and potable water usage.

1.3 Model Layout

Flow exchanges expected to occur during the operations phase of the mine life, for each facility, are summarized in Table 1-2. Further detail regarding the current and future water management objectives at Hope Bay, and flows between these structures, is provided in the following sections.

Table 1-2: Water exchanges associated with Hope Bay Project facilities.

Facility	Inflows	Outflows	Storage
Doris TIA	■ Direct precipitation ■ Upstream runoff ■ Tailings water ■ Water in sewage treatment sludge ■ Contact water from nearby CWP and SCP	■ Evaporation ■ Process reclaim ■ Surplus water sent for treatment and discharge	■ Supernatant free water ■ Tailings void entrainment ■ Sewage treatment sludge
Doris Mill	■ Reclaim water from Doris TIA ■ Recirculated thickener and paste plant overflow ■ Ex-pit ore moisture ■ Freshwater supply from Doris Lake	■ Tailings sent to thickener and paste plant	■ N/A
Campsite(s)	■ Potable water supply from Windy Lake	■ Greywater and wastewater sent for treatment and TIA	■ N/A
SWP	■ Underground dewatering (i.e., mine water) ■ Direct precipitation ■ Upstream runoff	■ Evaporation ■ Pumped flows for treatment and discharge	■ Water temporarily held in inventory
Various CWP	■ Direction precipitation ■ Upstream runoff ■ Pumped flows from nearby collection sumps	■ Evaporation ■ Pumped flows to Doris TIA ■ Direct discharge to Tundra	■ Water temporarily held in inventory
SCP	■ Direct precipitation ■ Upstream runoff	■ Evaporation ■ Pumped flows to Doris TIA	■ Water temporarily held in inventory

Facility	Inflows	Outflows	Storage
	▪ Pumped flows from nearby CWP and ancillary facilities		
Crown Pillars (2x Madrid, 1x Doris)	▪ Direct precipitation ▪ Upstream runoff	▪ Infiltration reporting to underground workings ▪ Surface runoff reporting to downstream environment	▪ N/A
Local collection sumps	▪ Upstream runoff	▪ Pumped flows to nearby CWP	▪ N/A
Underground workings	▪ Intercepted groundwater	▪ Mine water pumped to nearby SWP	▪ N/A
Natural waterbodies: ▪ Wolverine Lake ▪ Imniagut Lake ▪ Patch Lake ▪ PO Lake ▪ Ogama Lake ▪ Doris Lake ▪ Windy Lake ▪ Glenn Lake	▪ Direct precipitation ▪ Upstream runoff	▪ Evaporation ▪ Downstream flow ▪ Potable water supply (Windy Lake) ▪ Industrial water supply (Doris Lake)	▪ Water temporarily held in inventory
Roberts Bay	▪ Upstream runoff ▪ Effluent from SWP ▪ Effluent from Doris TIA	▪ N/A	▪ N/A

Sources: Compiled in text.

2 Water Balance Model

2.1 Overview

This section summarizes the inputs, assumptions, and updates applied to the Hope Bay Project water balance.

2.2 Climate

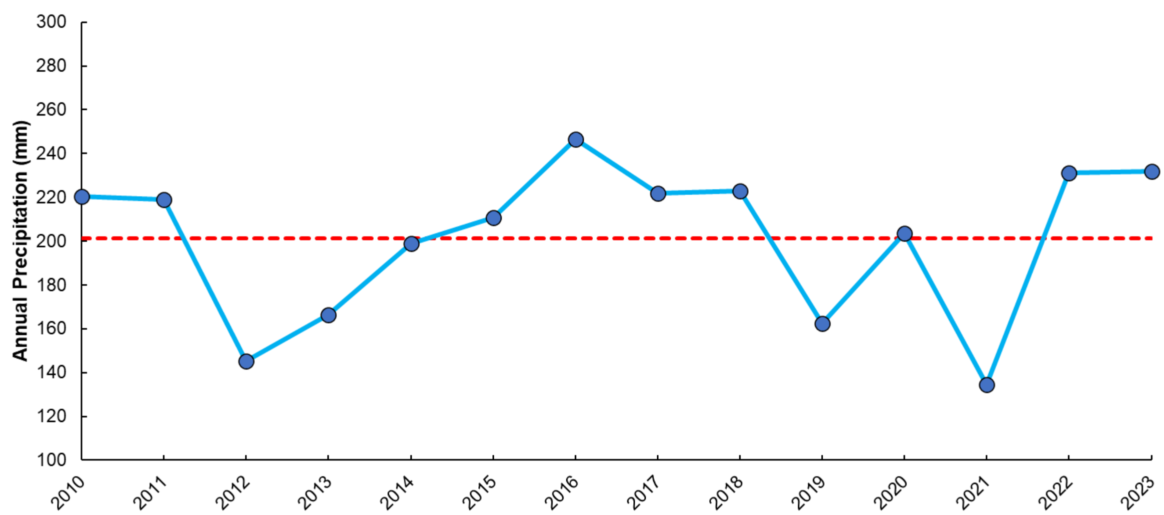
2.2.1 Historical Climate

The Hope Bay WLB model incorporates a 14-year deterministic climate sequence comprising historical daily precipitation and temperature variations (i.e., mean, minimum, maximum) for the period of 2010 to 2023 (inclusive), consistent with the period of available site water management (e.g., pumping, water level) records. This historical dataset comprises climate data from the Doris Mine meteorological station between 2010 and 2015, supplemented with Environment Canada data recorded at Cambridge Bay (Station IDs 2400600, 2400601) from 2015 to 2023 (inclusive).

Precipitation

Figure 2-1 illustrates estimated annual precipitation totals for 2010 to 2023 for the Hope Bay Project. The red dashed line represents the average annual precipitation of 200 mm.

Precipitation data recorded at Cambridge Bay was corrected by SRK to account for under-catch.

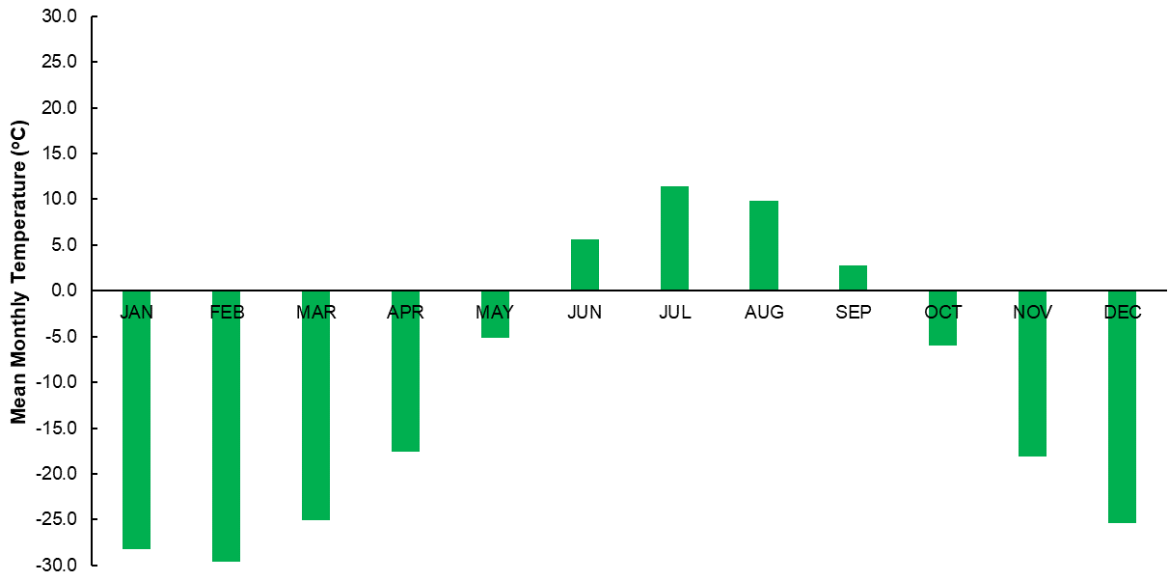


Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Figure 2-1: Annual precipitation totals for the Hope Bay project (2010 to 2023).

Temperature

Figure 2-2 illustrates average monthly temperatures for 2010 to 2023 for the Hope Bay Project. The average annual temperature for the site, for the period of record, is -10.6°C. Temperature records from Cambridge Bay required a +1.9°C adjustment to fit data recorded at Doris.



Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Figure 2-2: Mean monthly temperature variations for the Hope Bay project (2010 to 2023).

Evaporation

Mean annual evaporation (MAE) was estimated by SRK (2022). Using a MAE of 228 mm (representing 2001 and then adjusted by an annual rate of increase to account for climate change), SRK estimated the monthly evaporation distribution summarized in Table 2-1 from the calibrated water balance model.

Table 2-1: Estimated monthly lake evaporation at Hope Bay.

Month	Percent of Annual (%)	Season
Jan	-	Ice Cover
Feb	-	
Mar	-	
Apr	-	
May	3.1	Melting
Jun	25.5	
Jul	40.0	Open Water
Aug	23.7	

Month	Percent of Annual (%)	Season
Sep	7.2	
Oct	0.5	Ice Cover
Nov	-	
Dec	-	
Annual	**100**	

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Snowmelt

Consistent with SRK (2017a, 2017b), the energy snowmelt model by Walter et al. (2005) was used in the WLB model to characterize snow accumulation and snow ablation.

2.2.2 Climate Change

Climate change was incorporated in the WLB model based on information available from the Intergovernmental Panel on Climate Change (IPCC) sixth assessment report (AR6) (Masson-Delmotte et al. 2021).

For the purposes of this scope of work, Agnico selected a Base Case climate scenario characterized by a SSP2-4.5 climate change model.

Climate change characterization for the Hope Bay Project is described in detail in SRK (2024a).

2.3 Permafrost and Groundwater

The implications of permafrost on the WLB model are as follows:

- Estimates of underground dewatering rates based on mining in zones within and below permafrost.
- Estimates of loading from explosives within dewatering based on mining zone (Section 3.6).
- Underground geochemical source terms (specifically related to chloride, sodium, and total dissolved solids concentrations).
- Loadings to underground water from drilling brines and underground backfill.

Characterization of groundwater and the effects of permafrost are described in SRK (2024b).

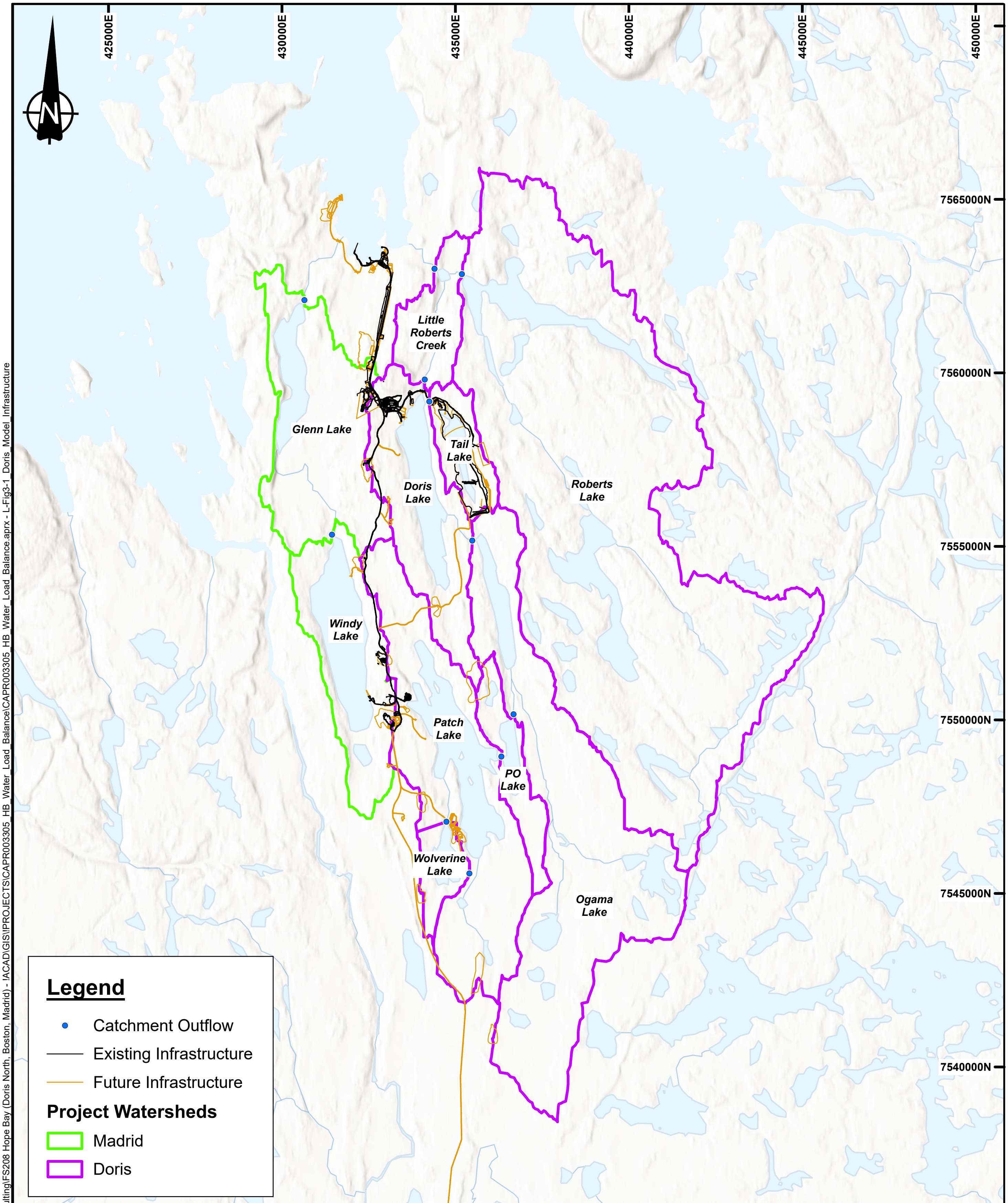
2.4 Catchment Areas

Figure 2-3 illustrates the catchment areas relevant for the Hope Bay Project, summarized in Table 2-2.

Table 2-2: Hope Bay project regional catchment areas.

Catchment	Area (km^2)	Catchment	Area (km^2)
Doris Lake	15.0	Wolverine Lake	3.1
Windy Lake	14.1	Patch Lake	26.9
Tail Lake	4.6	PO Lake	5.0
Little Roberts Creek	5.8	Ogama Lake	39.9
Glenn Lake	19.5	Roberts Lake	97.0

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/



C:\Users\MSMITH\SRK Consulting\FS208 Hope Bay (Doris North, Boston, Madrid) - !ACAD\GIS\!PROJECTS\CAPR003305\CAPR003305_HB_Water_Load_Balance\CAPR003305_HB_Water_Load_Balance.aprx - L-Fig3-1_Doris_Model_Infrastructure

Coordinate System: NAD 1983 UTM Zone 13N 0 1.5 3 km	srk consulting	AGNICO EAGLE	2024 Mine Plan Operation Update Water and Load Balance: Project Catchments
	Job No: CAPR003305 Filename: CAPR003305_HB_Water_Load_Balance	HOPE BAY PROJECT	Date: Dec 2024 / Approved: BRS / Figure: 2-3

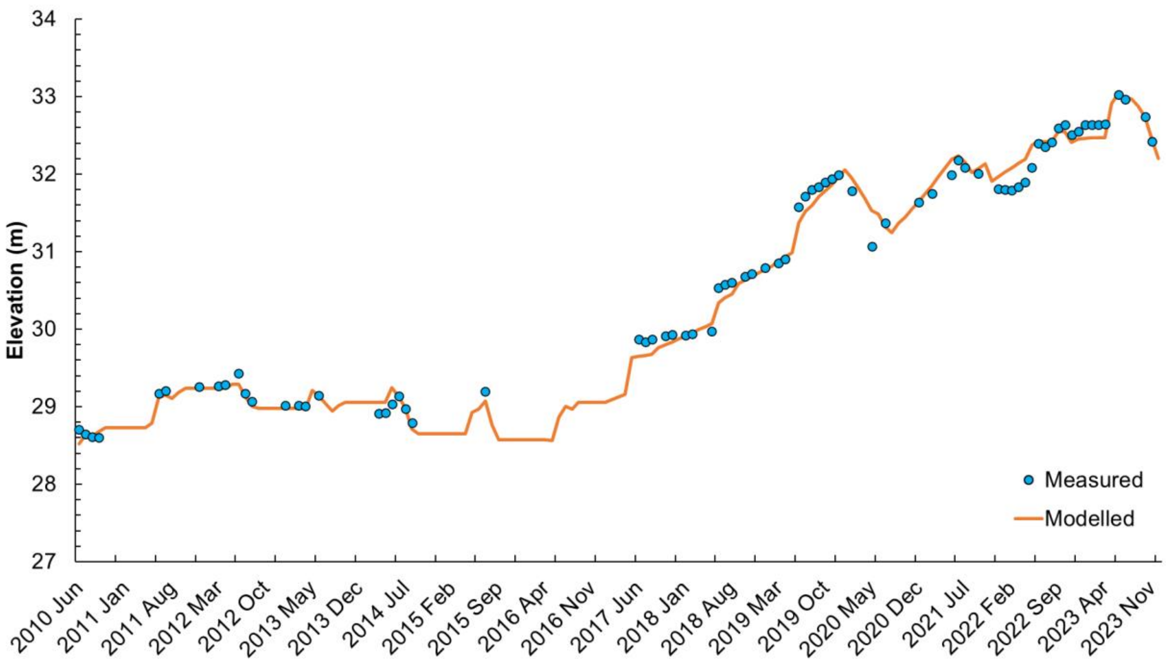
2.5 Lake Bathymetry

Bathymetric contours of the natural lakes adjacent the Hope Bay Project (Table 2-2) were provided by Environmental Resources Management Inc. (ERM 2016). This data was used to develop stage storage curves for incorporation in the WLB model.

2.6 Model Calibration

2.6.1 Methodology

Agnico routinely monitors water levels at the Doris TIA as part of ongoing water management at the Hope Bay Project. Together with climate data, pumping records, and an estimated tailings settled dry density (1.27 t/m^3), the WLB model was calibrated by comparing modelled water levels at the Doris TIA to monthly averaged levels measured between June 2010 and December 2023 (Figure 2-4).



Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Figure 2-4: Calibrated water levels at the TIA (2010 to 2023).

Model calibration was achieved by varying the following parameters:

- Monthly runoff coefficients for undisturbed and disturbed areas [unitless]
- Annual runoff coefficient for tailings beaches [unitless]
- An ice melt factor to trigger freeze-up and thawing of pond surfaces [calibrated value of 2.7 mm/day/^{o}C]
- A degree-day melt factor to trigger snow melt runoff [calibrated value of 5.9 mm/day/^{o}C].

The results illustrated above show that the model accurately replicates observed water levels from historical operations, and more recently while in care and maintenance, validating SRK's assumptions for runoff.

2.6.2 Runoff

Runoff was estimated by attributing monthly runoff coefficients to broad land use types within the WLB model. These monthly coefficients were estimated as part of the overall water balance calibration (Section 2.6.1).

Table 2-3 summarizes the monthly coefficients applied to the Hope Bay WLB model.

Table 2-3: Estimated monthly runoff coefficients (unitless) for Hope Bay.

Month	Undisturbed & Disturbed Areas	Tailings
Jan	0	
Feb	0	
Mar	0	
Apr	0	
May	0.74	
Jun	0.73	
Jul	0.99	
Aug	0.37	
Sep	0.14	
Oct	0.25	
Nov	0	
Dec	0	
Annual	**0.27**	**0.5**

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

2.6.3 Model Goodness of Fit

The model goodness-of-fit criteria used by SRK to quantify the accuracy of the model calibration is the Nash-Sutcliffe Efficiency Index (NSE) (Moriasi et al., 2007).

Values of NSE can range from minus infinity to +1. A value of NSE = 1 suggests that the modelled streamflow matches the observed data perfectly. A value of NSE = 0 indicates that the modelled streamflow matches the observed data only as well as the mean value of the observed data. By extension, a value of NSE < 0 suggested the mean value of the observed data is a better predictor than the modelled data. The objective of a model calibration is therefore to achieve an NSE value as close as possible to 1.

The Hope Bay WLB model was calibrated to an NSE of **0.98**. According to model evaluation guidelines recommended by Moriasi et al. (2007), this value fall within the rating of "Very Good".

3 Load Balance Model

3.1 Overview

Load balance modelling is performed using the Hope Bay Project water balance combined with geochemical source terms. Geochemical source terms (expressed as concentrations through time) for various mine facilities were derived by SRK as part of the 2024 Mine Plan Operations Update (SRK 2024c).

Load balance modelling for the Hope Bay project was carried out using a mass balance approach that assumes a fully mixed scenario at each model node and time step. SRK recognizes that the assumption of a fully mixed system does not consider the potential for naturally variable concentrations, nor does it account for complex physical, chemical, or biological processes like:

- Oxidation and reduction
- Sorption or desorption
- Incomplete mixing within watercourses, natural and manmade.

These processes are typically expected to reduce a species' concentration over time. Omitting these processes from the load balance modelling effort therefore suggests that water quality results are likely a conservative estimate of projected concentrations for those species that do not typically behave conservatively.

3.2 Geochemical Source Terms

Geochemical source terms for the LOM and closure phases of the load balance were derived by SRK (2024c). Source terms are estimates of chemistry for water in contact with weathering mine surfaces (e.g., stope walls, waste rock, tailings beaches). Terms applied to the WLB model reflect both base case and conservative case concentrations. Table 3-1 summarizes the source term types applied within the model.

The source terms comprise 43 parameters: total suspended solids (TSS), total dissolved solids (TDS), fluoride, chloride, free cyanide, total cyanide, WAD cyanide, cyanate, thiocyanate, ammonia, nitrate, nitrite, sulphate, alkalinity, hardness, aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silver, sodium, thallium, uranium, vanadium, and zinc.

Source terms applied to the Hope Bay WLB model are summarized in Table 3-1. Further information is provided in SRK (2024c).

Table 3-1: Water quality inputs and geochemical source terms.

Area	Flow/Source	Phase	Chemistry Input	Affected Parameters
Natural Runoff	Runoff	All	Concentration (Monthly)	All
Surface Pads and Infrastructure	Runoff	Operations, Closure, Post-Closure	Concentration (Constant), with TSS Metals	All
Waste Rock Stockpiles	Runoff/Seepage	Operations, Closure	Concentration (Constant), with TSS Metals	All
	Drilling Brines	Operations	Mass Loading	Cl, Ca
	Blasting Residues	Operations	Mass Loading	NH_3/NH_4, NO_3, NO_2
Ore Stockpiles	Runoff/Seepage	Operations	Concentration (Constant), with TSS Metals[1]	All
	Drilling Brines	Operations	Mass Loading	Cl, Ca
	Blasting Residues	Operations	Mass Loading	NH_3/NH_4, NO_3, NO_2
Overburden Stockpiles	Runoff/Seepage	Operations	Concentration (Constant), with TSS Metals[2]	All
Crown Pillar Recovery Trenches and Pit Walls	Runoff/Infiltration	Operations	Concentration (Constant)	All
Underground Workings	Groundwater	Operations, Closure	Concentration (Constant or Annual[3]), with TSS Metals	All
	Drilling Brines	Operations	Mass Loading	Cl, Ca
	Blasting Residues	Operations	Mass Loading	NH_3/NH_4, NO_3, NO_2
	Backfill	Operations	Mass Loading (Annual)	All
		Closure	Concentration (upon Reflood)	All
Mill	Process Water	Operations	Concentration (Annual[4])	All
	Drilling Brines	Operations	Mass Loading	Cl, Ca
	Blasting Residues	Operations	Mass Loading	NH_3/NH_4, NO_3, NO_2
Tailings (Exposed Beach or Dry Stack)	Runoff	Operations	Concentration (Constant), with TSS Metals[5]	All
Tailings Cover	Runoff	Closure	Concentration (Constant), with TSS Metals	All
	Infiltration	Closure	Concentration (Constant)	All
Treated Sewage		Operations, Closure	Concentration (Constant)	All

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Notes: Concentrations of total metals are calculated within the load balance model by multiplying the concentration of total suspended solids (TSS) by the solid phase concentrations of metals (expressed as mg/kg) to calculate suspended metals, which are then added to the dissolved metal concentration.

[1] Solid phase metals concentrations in ore are assumed to be similar to tailings.
[2] Solid phase metals concentrations in overburden are assumed to be similar to surface pads and infrastructure.
[3] Annual concentrations are applied to the Doris mine for parameters still reaching steady-state based on historical mine water observations, including chloride, sodium, and TDS.
[4] Mill process water concentrations vary annually with ore type(s).
[5] Solid phase metals concentrations in runoff from the TIA are weighted based on ore type(s) deposited.

3.3 Assumptions

The following assumptions and considerations have also been applied to the load balance:

- No chemical reactions occur along flow paths.
- The TIA is modelled as a fully mixed system.
- Load associated with precipitation or evaporation are anticipated to be negligible in comparison to those associated with mine waste and background chemistry.

3.4 Background Chemistry

Background water chemistry source terms were developed by SRK for use in the Hope Bay project WLB model. Background water chemistry terms currently applied to the WLB model are summarized in Attachment 1, Tables A – C and reflect monthly averaged concentrations of surface water samples collected from the following locations:

- Tail Lake
- Doris Lake

The background water quality term for all undisturbed catchments within the Hope Bay Project was developed by SRK using surface water quality records from Doris Lake between 2012 and 2017. Data from other lakes in the region were also reviewed and found to be comparable.

3.5 Effluent Limits

The Hope Bay Project is currently subject to the limits stated in the Federal Metal and Diamond Mining Effluent Regulation (MDMER 2021) for effluent discharge to Roberts Bay under the Federal Fisheries Act. Water quality modelling results for the remaining LOM and closure phases were therefore evaluated against the maximum monthly mean concentration values stated in Table 3-2 for the protection of aquatic life.

Table 3-2: Maximum authorized concentrations of prescribed deleterious substances.

Species	Units	Maximum Monthly Mean Concentration	Maximum Concentration in a Composite Sample	Maximum Concentration in a Grab Sample
Arsenic (As-T)	mg/L	0.10	0.15	0.20
Copper (Cu-T)	mg/L	0.10	0.15	0.20
Cyanide (Total)	mg-N/L	0.50	0.75	1.0
Lead (Pb-T)	mg/L	0.08	0.12	0.16
Nickel (Ni-T)	mg/L	0.25	0.38	0.50

Species	Units	Maximum Monthly Mean Concentration	Maximum Concentration in a Composite Sample	Maximum Concentration in a Grab Sample
Un-ionized Ammonia (NH_3-Un)	mg-N/L	0.50	n/a	1.0
Zinc (Zn-T)	mg/L	0.40	0.60	0.80
Total Suspended Solids	mg/L	15.0	22.5	30.0
Radium 226	Bq/L	0.37	0.74	1.11

Sources: MDMER (2021).

3.6 Drilling Residuals

Loadings to underground dewatering from drilling residuals (i.e., brine) are characterized in the WLB model consistent with the methodology applied to SRK (2017a).

3.7 Explosive Residuals

Agnico proposes to attenuate the presence of ammonium nitrate fuel oil (ANFO) residuals within underground contact water by means of emulsion.

Table 3-3 summarizes Agnico’s estimated release rates from ANFO under emulsion.

Table 3-3: Nitrogen (N) release rates and N-species distributions used for ammonia, nitrate, and nitrite source terms.

Constituent	Groundwater Inflow
Nitrogen Release Rate (kg N/t)	0.0135
Ammonia Proportion	45.4%
Nitrate Proportion	52.1%
Nitrite Proportion	2.4%

Source: Compiled in text.

3.8 Model Calibration

3.8.1 Methodology

Calibration of the load balance model was evaluated by comparing water chemistry estimates at the Doris TIA (process water) and SWP (saline water) for all modelled constituents. Unlike the water balance, calibration of the load balance was evaluated qualitatively.

Water quality estimates of constituents that frequently fell below method detection (MDL) within historical sampling records (e.g., aluminum-d, antimony, beryllium-d, cadmium, lithium, mercury, selenium, silver, etc.) were typically overestimated by the load balance model. Only those constituents with applicable criteria (Table 3-2) were adjusted as part of the model calibration to better match observed water quality records.

Load balance calibration results for the period of 2017 to 2023 (inclusive) are provided as Appendix C of the main report.

3.8.2 Degradation of Nitrogen and Cyanide

Cyanide and nitrogen species degradation within the Doris TIA and SWP were calculated in the load balance as part of the model calibration.

Degradation rates observed at the Colomac Mine (SRK 2017a) were initially input to the WLB model. These values were then adjusted to best match observed water quality records from 2017 to 2023.

Table 3-4 summarizes the degradation rates that provided the best model fit with observed water chemistry records.

Table 3-4: Estimated cyanide and nitrogen degradation rates.

Constituent	Calibration Period	Degradation [mg/m^2/day]	Degradation Product
Cyanide (Total)	2017 to 2023	-20	Cyanate
Cyanide (Free)		-15	Cyanate
Cyanate		-125	Ammonium
Thiocyanate		-75	Ammonium
Ammonium		-300	Various N species

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/
Note: Negative values denote a removal of mass.

3.8.3 Cryoconcentration

Methods used to account for cryoconcentration within the WLB model are consistent with those reported in the 2017 Final Environmental Impact Statement (FEIS) (SRK 2017a).

4 Life-of-Mine Plan

4.1 Overview

The following sections summarize relevant details of the 2024 Mine Plan Operations Update used to update the Hope Bay Project WLB model. A Gantt chart summarizing major project milestones, facility operations, ore processing, and mine closure, is provided as Attachment 2.

4.2 Production Rates

Table 4-1 summarizes forecasted ore production rates for the Life-of-Mine.

Table 4-1: Hope Bay Project forecasted production rates.

Year	Throughput (t/d)	Throughput (Mt)	Year	Throughput (t/d)	Throughput (Mt)
Y0	1,247	0.46	Y7	8,000	2.92
Y1	4,011	1.46	Y8	7,978	2.91
Y2	6,000	2.19	Y9	8,022	2.94
Y3	8,000	2.92	Y10	8,000	2.92
Y4	7,978	2.91	Y11	8,000	2.92
Y5	8,022	2.94	Y12	8,000	2.92
Y6	8,000	2.92	Y13	8,000	2.92

Sources: Agnico (2024).

4.3 Tailings Management

4.3.1 Tailings Parameters

The following is a summary of the operating conditions and tailings parameters assigned by SRK to the Hope Bay Project WLB model. SRK assumed that these parameters represent long-term conditions applicable to the remaining Life-of-Mine.

- Ex-pit ore moisture: 4%
- Thickened tailings solids content: 60% wt.
- Filtered tailings solids content: 89% wt.
- Conventional tailings settled dry density: 1.27 t/m^3
- Filtered tailings settled dry density: 1.69 t/m^3
- Tailings particle density: 2.85 t/m^3

4.3.2 Tailings Deposition

Table 4-2 summarizes the planned tailings operations at the Doris TIA.

Table 4-2: Doris TIA tailings operations.

Method	Operational Years	Tonnage (Mt)
Conventional	2017 to 2021	2.0
Thickened Tailings	Y0 to Y4	10.0
Dry Stack	Y5 to Y13	19.9

Sources: Agnico (2024).

4.3.3 Deposition Surfaces

Tailings deposition surfaces produced by SRK (2023b) using Muk3D modelling software were used to characterize future (conventional) tailings deposition in the Doris TIA.

Filling curves (i.e., Volume-Elevation-Area data) for the Doris TIA used in the WLB model are provided as Attachment 3.

4.4 Portal and Underground

4.4.1 Dewatering

Expansion of the underground workings will require continuous pumping of groundwater to the surface via the portal entrances.

For input to the WLB model, underground dewatering estimates were characterized as part of SRK's hydrogeology scope (SRK 2024b) and are summarized in Table 4-3.

Table 4-3: Estimated base case underground dewatering rates (full development).

Mine	Stage	Flow (m^3/d)
Doris Portal	Operations	2,270
Madrid Portal	Operations	807

Sources: SRK (2024b).

SRK assumed that the initial years of construction and portal development would yield a "ramping up" of underground dewatering rates, eventually achieving the above rates after the initial 8-9 years, and continuing thereafter.

4.4.2 Underground Backfill

Table 4-4 summarizes the planned underground backfill schedule for the Life-of-Mine.

Table 4-4: Underground rock backfill annual totals (tonnes).

End of Year	Doris	Madrid
Pre-Y0	1,224,590	131,841
Y0	92,702	198,390
Y1	355,507	693,884
Y2	378,327	930,110
Y3	299,322	1,234,706
Y4	320,906	1,518,880
Y5	351,132	1,547,225
Y6	123,368	1,850,238
Y7	43,582	1,986,982
Y8	45,495	1,879,256
Y9	30,084	1,672,913
Y10	-	1,259,268
Y11	-	1,372,525
Y12	-	1,078,118
Y13	-	547,668
Total	**3,265,015**	**17,902,004**

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

4.5 Catchment Areas

Table 4-5 summarizes the estimated two-dimensional footprints for project areas through the remaining LOM and Closure phases.

4.6 Water Treatment

Water treatment infrastructure is presently operational at the Hope Bay Project. One treatment system is currently deployed to the Doris underground and a second system is operational at the Doris TIA. Both systems treat only for elevated Total Suspended Solids (TSS).

For the purposes of this model, these systems were assumed to perform as intended, by sufficiently reducing TSS concentrations so that discharge remains compliant with applicable criteria (Table 3-2).

Beyond these systems, further water treatment was not modelled as part of this scope.

Table 4-5: Hope Bay Project facility footprints (ha) for the Life-of-Mine.

Year	Doris Sediment Pond					Doris CWP U			Madrid North CWP2			Madrid North Sump 4			Madrid North Sump 5				Madrid North CWP3	Madrid North CWP4				Naartok Pit		Madrid South CWP1				Madrid South CWP2		Saline Pond 1	Saline Pond 2
	Site	Waste Rock	Ore Pile	Overburden Pile	Undisturbed	Site	Waste Rock	Undisturbed	Site	Waste Rock	Undisturbed	Site	Overburden Pile	Undisturbed	Site	Waste Rock	Ore Pile	Undisturbed	Undisturbed	Site	Waste Rock	Ore Pile	Undisturbed	Site	Undisturbed	Site	Waste Rock	Ore Pile	Undisturbed	Site	Undisturbed	Undisturbed	Undisturbed
Pre-Y0	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	10.6	6.7	0.0	11.5	2.2	0.4	0.0	0.0	0.0	12.9	0.0	1.7	14.6	8.2
Y0	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	10.6	6.7	0.0	11.5	2.2	0.4	11.5	0.0	0.0	1.4	0.0	1.7	14.6	8.2
Y1	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	2.7	8.8	0.0	1.4	1.4	0.3	14.6	8.2
Y2	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	2.7	8.8	0.0	1.4	1.4	0.3	14.6	8.2
Y3	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	1.0	8.8	1.7	1.4	1.4	0.3	14.6	8.2
Y4	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	1.0	8.8	1.7	1.4	1.4	0.3	14.6	8.2
Y5	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	1.0	8.8	1.7	1.4	1.4	0.3	14.6	8.2
Y6	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	1.0	8.8	1.7	1.4	1.4	0.3	14.6	8.2
Y7	17.7	4.8	2.9	3.6	19.6	0.3	2.7	1.3	0.3	3.3	3.7	0.5	5.1	1.4	4.7	6.3	4.7	2.1	1.6	5.1	6.7	5.5	11.5	2.2	0.4	1.0	8.8	1.7	1.4	1.4	0.3	14.6	8.2

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

5 Water Management Objectives

5.1 Operating Rules & Conditions

The WLB model is driven by target operating levels and volumes at the Doris TIA. Inputs and their impact on the model are described in Table 5-1.

Table 5-1: Doris TIA operating conditions.

Facility	Condition / Rule	Value	Description
Doris TIA	Minimum Operating Level	30 m	▪ The target minimum operating (under ice) volume in the Doris TIA to ensure the primary reclaim source can sustain mill demand.
	Full Supply Level	34 m	▪ Target Full Supply Level.

Sources: Compiled in text.

5.2 Pumping Rates

Table 5-2 summarizes estimated maximum pumping rates for proposed Life-of-Mine surface water collection infrastructure. These reported rates (SRK 2024d) are expected to be sufficient to maintain dry sumps and ponds up to and including the inflow design flood (IDF).

Where available, measured pumping rates were using during the modelled historical period. In the forecasting period, maximum rates were applied across the model.

Sumps not listed below were modelled as inflows equal to outflows (i.e., no attenuation).

Table 5-2: Maximum pumping rates for future surface water collection points.

Location	Units	Rate
Doris Saline Pond	m^3/d	250
Doris Pad U CWP	m^3/d	250
Madrid North Sump 1	m^3/hr	192
Madrid North Sump 5	m^3/hr	427
Madrid North CWP3	m^3/hr	1,831
Patch 7 CWP4	m^3/hr	1,315
Naartok In-pit Sump	m^3/hr	217
Madrid South CWP1	m^3/d	800
Madrid South CWP2	m^3/d	350
Saline Water Pond(s)	m^3/hr	400

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

5.3 Discharge

Table 5-3 summarizes known and estimated discharge rates applied to the WLB model.

Table 5-3: Pumping rates applied to reservoirs within the WLB model.

Flow	Historical Data	Application in Model
TIA Discharge	2020 to Present	▪ Historical flow rates are used when available. ▪ Forecasted discharge in operations and closure is modelled under the following conditions: – If the TIA water level exceeds the minimum threshold for discharge. – During the period of June to October (inclusive), annually. – At the maximum pump capacity of 6,750 m^3/d in operations or 10,000 m^3/d in closure.
Saline Water Discharge	N/A	▪ Forecasted discharge in operations and closure is modelled at the maximum pump capacity of 400 m^3/hr (9,600 m^3/d). ▪ No seasonal constraints were applied to saline discharge.

Sources: Compiled in text.

5.3.1 Freshwater Consumption

Freshwater usage at the Hope Bay Project is currently defined by terms stated in the Amended Water License (2AM-DOH1335), which limits the total volume of water use from all sources to 2,033,800 m^3/year.

Document 2AM-DOH1335 also states the following:

Camp Use

- The Licensee shall obtain freshwater for domestic camp use from Windy Lake using the designated freshwater intake at monitoring program station ST-7A, with the volume not exceeding 43,800 m^3/year.

Industrial Water

- The Licensee shall obtain freshwater for mining, milling, and associated industrial uses from Doris Lake using the designated freshwater intake at monitoring program station ST-7, with the volume not exceeding 1,930,000 m^3/year.
- Drill water may also be obtained from locations proximal to the drilling targets.

Maintenance Water

- Water for winter ice road construction may be obtained from proximal sources and shall not exceed 60,000 m^3/year.

For the purposes of this scope of work, Agnico has projected the following freshwater usages for the proposed mine plan operational update:

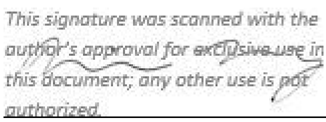
- Camp Potable Water: 64,240 m^3/year.
- Industrial Water: 2,753,950 m^3/year.

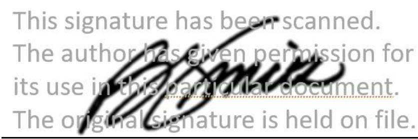
These values were therefore applied to this WLB modelling scope.

5.3.2 Dust Suppression

Within the WLB model, water consumption for the purpose of dust suppression is modelled as withdrawals from Doris Lake. The quantity of water used for dust suppression is implicit in the "Industrial Water" total mentioned above.

Regards,
SRK Consulting (Canada) Inc.





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Attachments:

Attachment 1: Background Water Chemistry
Attachment 2: Life-of-Mine Plan Schedule
Attachment 3: TIA Deposition Surfaces

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Attachment 1: Background Water Chemistry

Table A: Monthly median Doris Mine background chemistry (mg/L).

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Suspended Solids	5.6	5.6	5.6	3.8	4.4	4.4	4.4	4.2	5.6	5.6	5.6	5.6
Total Dissolved Solids	168	168	168	197	152	152	152	160	168	168	168	168
Fluoride	0.052	0.052	0.052	0.064	0.053	0.053	0.053	0.057	0.052	0.052	0.052	0.052
Chloride	61.2	61.2	61.2	76.9	62.3	62.3	62.3	61.2	61.2	61.2	61.2	61.2
Cyanide (Free)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cyanide (Total)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cyanide (WAD)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Cyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Thiocyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Ammonia (NH_3)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Nitrate (NH_3)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Nitrite (NH_2)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Sulphate (SO_4)	2.72	2.72	2.72	3.48	2.66	2.66	2.66	2.66	2.72	2.72	2.72	2.72
Alkalinity	30.7	30.7	30.7	36.4	28.9	28.9	28.9	28.9	30.7	30.7	30.7	30.7
Hardness	48.5	48.5	48.5	60.5	48.3	48.3	48.3	48.6	48.5	48.5	48.5	48.5
						Metals (Dissolved)						
Aluminium (Al)	0.052	0.052	0.052	0.008	0.059	0.059	0.059	0.051	0.052	0.052	0.052	0.052
Antimony (Sb)	0.00003	0.00003	0.00003	0.00003	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003
Arsenic (As)	0.00032	0.00032	0.00032	0.00033	0.00028	0.00028	0.00028	0.0003	0.00032	0.00032	0.00032	0.00032
Barium (Ba)	0.0033	0.0033	0.0033	0.0032	0.0036	0.0036	0.0036	0.0034	0.0033	0.0033	0.0033	0.0033
Beryllium (Be)	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Boron (B)	0.033	0.033	0.033	0.033	0.031	0.031	0.031	0.03	0.033	0.033	0.033	0.033
Cadmium (Cd)	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06
Calcium (Ca)	8.75	8.75	8.75	11	8.69	8.69	8.69	8.79	8.75	8.75	8.75	8.75
Chromium (Cr)	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cobalt (Co)	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Copper (Cu)	0.0015	0.0015	0.0015	0.0017	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0015
Iron (Fe)	0.094	0.094	0.094	0.03	0.17	0.17	0.17	0.12	0.094	0.094	0.094	0.094
Lead (Pb)	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Lithium (Li)	0.0039	0.0039	0.0039	0.0045	0.0037	0.0037	0.0037	0.0036	0.0039	0.0039	0.0039	0.0039
Magnesium (Mg)	6.49	6.49	6.49	8.13	6.43	6.43	6.43	6.43	6.49	6.49	6.49	6.49
Manganese (Mn)	0.021	0.021	0.021	0.005	0.02	0.02	0.02	0.027	0.021	0.021	0.021	0.021
Mercury (Hg)	5.6E-07	5.6E-07	5.6E-07	6.4E-07	7.0E-07	7.0E-07	7.0E-07	7.3E-07	5.6E-07	5.6E-07	5.6E-07	5.6E-07
Molybdenum (Mo)	0.00021	0.00021	0.00021	0.00022	0.00017	0.00017	0.00017	0.00020	0.00021	0.00021	0.00021	0.00021
Nickel (Ni)	0.00053	0.00053	0.00053	0.00056	0.00053	0.00053	0.00053	0.00056	0.00053	0.00053	0.00053	0.00053
Phosphorus (P)	0.027	0.027	0.027	0.025	0.022	0.022	0.022	0.027	0.027	0.027	0.027	0.027
Selenium (Se)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Silver (Ag)	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium (Na)	32	32	32	41	33	33	33	32	32	32	32	32
Thallium (Tl)	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002
Uranium (U)	3.6E-05	3.6E-05	3.6E-05	3.9E-05	3.4E-05	3.4E-05	3.4E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05
Vanadium (V)	0.00018	0.00018	0.00018	0.00008	0.00018	0.00018	0.00018	0.00017	0.00018	0.00018	0.00018	0.00018
Zinc (Zn)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Metals (Total)												
Aluminium (Al)	0.052	0.052	0.052	0.008	0.059	0.059	0.059	0.051	0.052	0.052	0.052	0.052
Antimony (Sb)	0.00003	0.00003	0.00003	0.00003	0.00002	0.00002	0.00002	0.00002	0.00003	0.00003	0.00003	0.00003
Arsenic (As)	0.00032	0.00032	0.00032	0.00033	0.00028	0.00028	0.00028	0.0003	0.00032	0.00032	0.00032	0.00032
Barium (Ba)	0.0033	0.0033	0.0033	0.0032	0.0036	0.0036	0.0036	0.0034	0.0033	0.0033	0.0033	0.0033
Beryllium (Be)	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Boron (B)	0.033	0.033	0.033	0.033	0.031	0.031	0.031	0.030	0.033	0.033	0.033	0.033
Cadmium (Cd)	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Calcium (Ca)	8.75	8.75	8.75	11	8.69	8.69	8.69	8.79	8.75	8.75	8.75	8.75
Chromium (Cr)	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cobalt (Co)	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Copper (Cu)	0.0015	0.0015	0.0015	0.0017	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0015
Iron (Fe)	0.09	0.09	0.09	0.03	0.17	0.17	0.17	0.12	0.09	0.09	0.09	0.09
Lead (Pb)	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
Lithium (Li)	0.0039	0.0039	0.0039	0.0045	0.0037	0.0037	0.0037	0.0036	0.0039	0.0039	0.0039	0.0039
Magnesium (Mg)	6.5	6.5	6.5	8.1	6.4	6.4	6.4	6.4	6.5	6.5	6.5	6.5
Manganese (Mn)	0.021	0.021	0.021	0.005	0.02	0.02	0.02	0.027	0.021	0.021	0.021	0.021
Mercury (Hg)	5.6E-07	5.6E-07	5.6E-07	6.4E-07	7.0E-07	7.0E-07	7.0E-07	7.3E-07	5.6E-07	5.6E-07	5.6E-07	5.6E-07
Molybdenum (Mo)	0.00021	0.00021	0.00021	0.00022	0.00017	0.00017	0.00017	0.0002	0.00021	0.00021	0.00021	0.00021
Nickel (Ni)	0.00053	0.00053	0.00053	0.00056	0.00053	0.00053	0.00053	0.00056	0.00053	0.00053	0.00053	0.00053
Phosphorus (P)	0.027	0.027	0.027	0.025	0.022	0.022	0.022	0.027	0.027	0.027	0.027	0.027
Selenium (Se)	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Silver (Ag)	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005
Sodium (Na)	32	32	32	41	33	33	33	32	32	32	32	32
Thallium (Tl)	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002
Uranium (U)	3.6E-05	3.6E-05	3.6E-05	3.9E-05	3.4E-05	3.4E-05	3.4E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05	3.6E-05
Vanadium (V)	0.00018	0.00018	0.00018	0.00008	0.00018	0.00018	0.00018	0.00017	0.00018	0.00018	0.00018	0.00018
Zinc (Zn)	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Note:

ND No data.

Table B: Monthly median Doris Lake background chemistry (mg/L).

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Suspended Solids	5.5	5.5	5.5	5.5	3	3	4.6	3	5.5	5.5	5.5	5.5
Total Dissolved Solids	110	110	110	110	74	74	110	110	110	110	110	110
Fluoride	0.056	0.056	0.056	0.056	0.044	0.044	0.055	0.055	0.056	0.056	0.056	0.056
Chloride	61	61	61	61	40	40	64	61	61	61	61	61
Cyanide (Free)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanide (Total)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanide (WAD)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Cyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Thiocyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Ammonia (NH_3)	0.05	0.05	0.05	0.05	0.05	0.05	0.042	0.05	0.05	0.05	0.05	0.05
Nitrate (NH_3)	0.005	0.005	0.005	0.005	0.05	0.05	0.028	0.05	0.005	0.005	0.005	0.005
Nitrite (NH_2)	0.001	0.001	0.001	0.001	0.05	0.05	0.026	0.05	0.001	0.001	0.001	0.001
Sulphate (SO_4)	2.8	2.8	2.8	2.8	2.1	2.1	2.8	2.7	2.8	2.8	2.8	2.8
Alkalinity	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Hardness	44	44	44	44	37	37	44	45	44	44	44	44
Metals (Dissolved)												
Aluminium (Al)	0.052	0.052	0.052	0.052	0.064	0.064	0.059	0.046	0.052	0.052	0.052	0.052
Antimony (Sb)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005
Arsenic (As)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005
Barium (Ba)	0.02	0.02	0.02	0.02	0.0034	0.0034	0.0043	0.003	0.02	0.02	0.02	0.02
Beryllium (Be)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Boron (B)	0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.1
Cadmium (Cd)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Calcium (Ca)	8.7	8.7	8.7	8.7	5.9	5.9	8.9	8.5	8.7	8.7	8.7	8.7
Chromium (Cr)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cobalt (Co)	0.0003	0.0003	0.0003	0.0003	0.002	0.002	0.002	0.002	0.0003	0.0003	0.0003	0.0003
Copper (Cu)	0.0015	0.0015	0.0015	0.0015	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0015
Iron (Fe)	0.13	0.13	0.13	0.13	0.11	0.11	0.17	0.12	0.13	0.13	0.13	0.13
Lead (Pb)	0.0005	0.0005	0.0005	0.0005	0.00011	0.00011	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005
Lithium (Li)	0.005	0.005	0.005	0.005	0.01	0.01	0.01	0.01	0.005	0.005	0.005	0.005
Magnesium (Mg)	6.3	6.3	6.3	6.3	4.1	4.1	6.4	6.2	6.3	6.3	6.3	6.3
Manganese (Mn)	0.018	0.018	0.018	0.018	0.018	0.018	0.023	0.019	0.018	0.018	0.018	0.018
Mercury (Hg)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	2.0E-05	2.0E-05	1.5E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Molybdenum (Mo)	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001
Nickel (Ni)	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001
Phosphorus (P)	0.025	0.025	0.025	0.025	0.014	0.014	0.024	0.017	0.025	0.025	0.025	0.025
Selenium (Se)	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0004	0.0004	0.0001	0.0001	0.0001	0.0001

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Silver (Ag)	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Sodium (Na)	32	32	32	32	22	22	32	31	32	32	32	32
Thallium (Tl)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Uranium (U)	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002
Vanadium (V)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zinc (Zn)	0.005	0.005	0.005	0.005	0.004	0.004	0.005	0.004	0.005	0.005	0.005	0.005
Metals (Total)												
Aluminium (Al)	0.052	0.052	0.052	0.052	0.064	0.064	0.059	0.046	0.052	0.052	0.052	0.052
Antimony (Sb)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005
Arsenic (As)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0005	0.0005	0.0005	0.0005
Barium (Ba)	0.02	0.02	0.02	0.02	0.0034	0.0034	0.0043	0.003	0.02	0.02	0.02	0.02
Beryllium (Be)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Boron (B)	0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.1	0.1	0.1	0.1
Cadmium (Cd)	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Calcium (Ca)	8.7	8.7	8.7	8.7	5.9	5.9	8.9	8.5	8.7	8.7	8.7	8.7
Chromium (Cr)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cobalt (Co)	0.0003	0.0003	0.0003	0.0003	0.002	0.002	0.002	0.002	0.0003	0.0003	0.0003	0.0003
Copper (Cu)	0.0015	0.0015	0.0015	0.0015	0.0014	0.0014	0.0014	0.0014	0.0015	0.0015	0.0015	0.0015
Iron (Fe)	0.13	0.13	0.13	0.13	0.11	0.11	0.17	0.12	0.13	0.13	0.13	0.13
Lead (Pb)	0.0005	0.0005	0.0005	0.0005	0.00011	0.00011	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005
Lithium (Li)	0.005	0.005	0.005	0.005	0.01	0.01	0.01	0.01	0.005	0.005	0.005	0.005
Magnesium (Mg)	6.3	6.3	6.3	6.3	4.1	4.1	6.4	6.2	6.3	6.3	6.3	6.3
Manganese (Mn)	0.018	0.018	0.018	0.018	0.018	0.018	0.023	0.019	0.018	0.018	0.018	0.018
Mercury (Hg)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	2.0E-05	2.0E-05	1.5E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Molybdenum (Mo)	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001
Nickel (Ni)	0.001	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001
Phosphorus (P)	0.025	0.025	0.025	0.025	0.014	0.014	0.024	0.017	0.025	0.025	0.025	0.025
Selenium (Se)	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0004	0.0004	0.0001	0.0001	0.0001	0.0001
Silver (Ag)	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Sodium (Na)	32	32	32	32	22	22	32	31	32	32	32	32
Thallium (Tl)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Uranium (U)	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002
Vanadium (V)	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03	1.0E-03
Zinc (Zn)	0.00500	0.00500	0.00500	0.00500	0.00400	0.00400	0.00500	0.00400	0.00500	0.00500	0.00500	0.00500

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Note:

ND No data.

Table C: Monthly median Tail Lake background chemistry (mg/L).

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Suspended Solids	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Total Dissolved Solids	140	140	140	140	79	130	130	140	140	140	140	140
Fluoride	0.063	0.063	0.063	0.063	0.023	0.05	0.054	0.06	0.063	0.063	0.063	0.063
Chloride	40	40	40	40	9	37	40	40	40	40	40	40
Cyanide (Free)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanide (Total)	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanide (WAD)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Cyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Thiocyanate	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Ammonia (NH_3)	0.034	0.034	0.034	0.034	0.05	0.05	0.013	0.05	0.034	0.034	0.034	0.034
Nitrate (NH_3)	0.05	0.05	0.05	0.05	0.11	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Nitrite (NH_2)	0.0013	0.0013	0.0013	0.0013	0.05	0.05	0.0019	0.05	0.0013	0.0013	0.0013	0.0013
Sulphate (SO_4)	2.7	2.7	2.7	2.7	2.7	2.1	2.1	2.8	2.7	2.7	2.7	2.7
Alkalinity	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Hardness	39	39	39	39	46	53	33	39	39	39	39	39
Metals (Dissolved)												
Aluminium (Al)	0.032	0.032	0.032	0.032	0.048	0.016	0.012	0.019	0.032	0.032	0.032	0.032
Antimony (Sb)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005
Arsenic (As)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005
Barium (Ba)	0.02	0.02	0.02	0.02	0.0047	0.0059	0.02	0.0032	0.02	0.02	0.02	0.02
Beryllium (Be)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Boron (B)	0.1	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.1	0.1	0.1	0.1
Cadmium (Cd)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.3E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Calcium (Ca)	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	12.0	12.0	12.0
Chromium (Cr)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cobalt (Co)	0.0003	0.0003	0.0003	0.0003	0.002	0.002	0.0003	0.002	0.0003	0.0003	0.0003	0.0003
Copper (Cu)	0.0014	0.0014	0.0014	0.0014	0.0020	0.0014	0.0012	0.0013	0.0014	0.0014	0.0014	0.0014
Iron (Fe)	0.28	0.28	0.28	0.28	0.35	0.23	0.17	0.3	0.28	0.28	0.28	0.28
Lead (Pb)	0.0005	0.0005	0.0005	0.0005	0.00011	0.0001	0.0005	0.00028	0.0005	0.0005	0.0005	0.0005
Lithium (Li)	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.005	0.005	0.005	0.005
Magnesium (Mg)	5.9	5.9	5.9	5.9	3.0	6.0	5.8	5.7	5.9	5.9	5.9	5.9
Manganese (Mn)	0.023	0.023	0.023	0.023	0.094	0.020	0.023	0.024	0.023	0.023	0.023	0.023
Mercury (Hg)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	2.0E-05	2.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Molybdenum (Mo)	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.005	0.001	0.001	0.001	0.001
Nickel (Ni)	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.002	0.001	0.001	0.001	0.001
Phosphorus (P)	0.013	0.013	0.013	0.013	0.000	0.020	0.014	0.013	0.013	0.013	0.013	0.013
Selenium (Se)	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Silver (Ag)	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Sodium (Na)	19	19	19	19	6.2	19	19	19	19	19	19	19
Thallium (Tl)	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002
Uranium (U)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Vanadium (V)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zinc (Zn)	0.005	0.005	0.005	0.005	0.0051	0.005	0.005	0.0054	0.005	0.005	0.005	0.005
Metals (Total)												
Aluminium (Al)	0.032	0.032	0.032	0.032	0.048	0.016	0.012	0.019	0.032	0.032	0.032	0.032
Antimony (Sb)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005
Arsenic (As)	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0005	0.0004	0.0005	0.0005	0.0005	0.0005
Barium (Ba)	0.02	0.02	0.02	0.02	0.0047	0.0059	0.02	0.0032	0.02	0.02	0.02	0.02
Beryllium (Be)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Boron (B)	0.1	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.1	0.1	0.1	0.1
Cadmium (Cd)	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
Calcium (Ca)	12.0	12.0	12.0	12.0	12.0	13.0	12.0	12.0	12.0	12.0	12.0	12.0
Chromium (Cr)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cobalt (Co)	0.0003	0.0003	0.0003	0.0003	0.0020	0.0020	0.0003	0.0020	0.0003	0.0003	0.0003	0.0003
Copper (Cu)	0.0014	0.0014	0.0014	0.0014	0.0020	0.0014	0.0012	0.0013	0.0014	0.0014	0.0014	0.0014
Iron (Fe)	0.28	0.28	0.28	0.28	0.35	0.23	0.17	0.30	0.28	0.28	0.28	0.28
Lead (Pb)	0.0005	0.0005	0.0005	0.0005	0.0001	0.0001	0.0005	0.0003	0.0005	0.0005	0.0005	0.0005
Lithium (Li)	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.005	0.005	0.005	0.005
Magnesium (Mg)	5.9	5.9	5.9	5.9	3.0	6.0	5.8	5.7	5.9	5.9	5.9	5.9
Manganese (Mn)	0.023	0.023	0.023	0.023	0.094	0.020	0.023	0.024	0.023	0.023	0.023	0.023
Mercury (Hg)	1.0E-05	1.0E-05	1.0E-05	1.0E-05	2.0E-05	2.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05	1.0E-05
Molybdenum (Mo)	0.001	0.001	0.001	0.001	0.005	0.0050	0.001	0.005	0.001	0.001	0.001	0.001
Nickel (Ni)	0.001	0.001	0.001	0.001	0.002	0.0020	0.001	0.002	0.001	0.001	0.001	0.001
Phosphorus (P)	0.013	0.013	0.013	0.013	0.013	0.02	0.014	0.013	0.013	0.013	0.013	0.013
Selenium (Se)	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001
Silver (Ag)	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002
Sodium (Na)	19	19	19	19	6.2	19	19	19	19	19	19	19
Thallium (Tl)	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002
Uranium (U)	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
Vanadium (V)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zinc (Zn)	0.005	0.005	0.005	0.005	0.0051	0.005	0.005	0.0054	0.005	0.005	0.005	0.005

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Note:

ND No data.

Attachment 2: Life-of-Mine Plan Schedule

Mining Activities

Area	Activity	Description	2024 Mine Plan Operational Update																					
			Y-4	Y-3	Y-2	Y-1	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
		Pre-Construction/Early Works	■	■	■																			
		Construction				■	■																	
		Operations					■	■	■	■	■	■	■	■	■	■	■	■	■	■				
Doris	Milling	1,200 tpd					■																	
		4,000 tpd						■																
		6,000 tpd							■															
		8,000 tpd								■	■	■	■	■	■	■	■	■	■	■				
	Ore	Mined					■	■	■	■	■	■	■	■	■	■								
		Processed at Doris Mill					■	■	■	■	■	■	■	■	■	■								
	Backfill	Waste Rock Stockpiled	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
		Backfill from Doris Waste Rock					■	■	■	■	■	■	■	■	■	■								
		Backfill from Detoxified Tailings																						
Madrid	Ore	Mined					■	■	■	■	■	■	■	■	■	■	■	■	■	■				
		Processed at Doris Mill					■	■	■	■	■	■	■	■	■	■	■	■	■	■				
	Backfill	Waste Rock Stockpiled	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
		Backfill from Madrid Waste Rock				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
		Closure																		■	■			
		Post-Closure																				■	■	■

Water Management

Contribution	Location/Activity	Description	2024 Mine Plan Operational Update																					
			Y-4	Y-3	Y-2	Y-1	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17
Potable Water	Doris Camp	400 people	■	■	■																			
		800 people: 48,945 m^3/year from Windy Lake				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Madrid Camp	250 people: 15,295 m^3/year from Windy Lake				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Underground Dewatering	Doris Portal	Ramp Development: 1,500 m^3/day	■	■	■	■																		
		Full-Scale Production: 2,270 m^3/day					■	■	■	■	■	■	■	■	■	■								
	Madrid Portal	Ramp Development: 196 m^3/day (average)	■	■	■	■																		
		Full-Scale Production: 349 m^3/day					■	■	■	■	■	■	■	■	■	■	■	■	■	■				
		Full-Scale Production: 474 m^3/day								■	■	■	■	■	■	■	■	■	■	■				
		Full-Scale Production: 807 m^3/day										■	■	■	■	■	■	■	■	■				
Saline Ponds	Saline Pond 1 (Quarry 3)	Primary saline water storage					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	Saline Pond 2 (Quarry D)	Primary saline water storage		■	■	■																		
		Saline water transfer point					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Water Treatment	UG Saline Effluent Treatment Plant	TSS removal, Pump to Saline Storage, Discharge to Roberts Bay				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
	TIA Effluent Water Treatment Plant	TSS removal, Discharge to Roberts Bay				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Tailings	Tailings Slurry (Thickened)	Conventional tailings deposition (60% wt. solids)				■	■	■	■	■	■													
	Tailings Filtered	Dry stack tailings deposition (89% wt. solids)										■	■	■	■	■	■	■	■	■				

Attachment 3: TIA Deposition Surfaces

Table A: Saline Water Storage Elevation (m) – Volume (m^3) data.

Elevation (m)	Volume (m^3)
31.8	0
32.0	748
32.2	7,382
32.4	18,255
32.6	32,671
32.8	50,958
33.0	73,466
33.2	99,645
33.4	129,266
33.6	162,397
33.8	198,878
34.0	238,562
34.2	281,142
34.4	326,473
34.6	374,658
34.8	425,645
35.0	479,124

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Table B: Saline Pond 1 Elevation (m) – Volume (m^3) data.

Elevation (m)	Volume (m^3)	Elevation (m)	Volume (m^3)
36.5	6,537	46.5	143,375
37.0	13,127	47.0	150,505
37.5	19,754	47.5	157,635
38.0	26,406	48.0	164,765
38.5	33,078	48.5	171,895
39.0	39,769	49.0	179,025
39.5	46,475	49.5	186,155
40.0	53,197	50.0	193,285
40.5	59,936	50.5	200,415
41.0	66,693	51.0	207,545
41.5	73,472	51.5	214,676
42.0	80,273	52.0	221,806
42.5	87,099	52.5	228,936
43.0	93,946	53.0	236,066
43.5	100,819	53.5	243,196

Elevation (m)	Volume (m^3)	Elevation (m)	Volume (m^3)
44.0	107,724	54.0	250,326
44.5	114,855	54.5	257,456
45.0	121,985	55.0	264,586
45.5	129,115	55.5	271,716
46.0	136,245	56.0	278,846

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Table C: Saline Pond 2 Elevation (m) – Volume (m^3) data.

Elevation (m)	Volume (m^3)	Elevation (m)	Volume (m^3)
36.0	0	46.0	208,634
36.5	10,090	46.5	219,497
37.0	20,233	47.0	230,360
37.5	30,420	47.5	241,222
38.0	40,640	48.0	252,085
38.5	50,888	48.5	262,948
39.0	61,163	49.0	273,811
39.5	71,457	49.5	284,673
40.0	81,770	50.0	295,536
40.5	92,102	50.5	306,399
41.0	102,453	51.0	317,262
41.5	112,827	51.5	328,124
42.0	123,229	52.0	338,987
42.5	133,663	52.5	349,850
43.0	144,126	53.0	360,713
43.5	154,628	53.5	371,575
44.0	165,184	54.0	382,438
44.5	176,046	54.5	393,301
45.0	186,909	55.0	404,163
45.5	197,771		

Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

Table D: Doris TIA Elevation (m) – Volume (m³) data (normalized to placed tonnes of tailings).

Elevation (m)	Tailings Placed (tonnes)																				
	0	377,060	1,210,290	1,442,550	1,552,720	1,616,145	1,862,860	2,684,665	3,414,666	4,144,665	4,874,665	6,152,165	7,612,165	9,072,165	10,532,165	11,992,165	13,452,165	14,912,165	16,372,165	17,832,165	19,292,165
22.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.5	10,684	-	7,513	7,513	7,513	7,513	-	7,419	7,419	6,683	3,976	-	-	-	-	-	-	-	-	-	-
23.0	36,057	-	26,830	26,830	26,830	26,830	2,611	26,415	26,415	24,885	15,779	262	-	-	-	-	-	-	-	-	-
23.5	95,988	16,571	90,186	90,186	90,075	87,536	13,652	82,597	79,642	71,110	49,102	14,420	1,599	-	-	-	-	-	-	-	-
24.0	210,593	53,498	178,804	178,804	178,156	172,642	37,158	158,780	150,522	134,235	99,497	40,402	7,873	-	-	-	-	-	-	-	-
24.5	336,616	138,979	297,761	297,761	293,989	285,273	91,529	258,581	243,453	218,177	171,454	83,444	24,395	1,894	34	-	-	-	-	-	-
25.0	580,446	267,604	440,747	440,747	432,440	419,680	185,539	378,202	354,977	320,650	262,512	143,879	53,450	9,137	374	-	-	-	-	-	-
25.5	827,676	442,980	615,512	615,512	600,778	581,895	313,322	524,243	491,566	447,934	378,931	230,434	103,671	30,737	7,357	4,830	4,830	4,830	-	-	-
26.0	1,106,458	657,168	816,634	816,634	796,228	768,913	476,782	693,893	650,511	597,120	517,727	341,711	174,927	67,974	22,801	13,447	13,016	13,016	-	-	-
26.5	1,410,660	904,723	1,044,700	1,044,700	1,019,481	982,634	672,716	888,486	832,945	769,456	679,576	478,781	270,664	125,945	51,514	27,102	24,934	24,934	57	-	-
27.0	1,738,281	1,182,960	1,295,260	1,295,260	1,267,065	1,220,543	896,377	1,104,928	1,036,025	961,996	861,559	638,258	390,391	205,505	95,773	48,344	39,871	39,762	1,540	-	-
27.5	2,087,325	1,488,732	1,568,472	1,568,472	1,539,327	1,483,472	1,143,430	1,343,843	1,261,096	1,175,811	1,065,052	820,375	536,295	308,991	159,733	82,881	59,688	58,064	8,362	13	-
28.0	2,457,438	1,819,894	1,861,166	1,861,166	1,831,991	1,768,736	1,410,483	1,603,243	1,506,391	1,408,882	1,287,888	1,022,370	705,941	435,637	244,820	133,283	87,196	79,129	22,449	528	-
28.5	2,720,648	2,179,991	2,175,526	2,175,474	2,146,299	2,078,746	1,695,993	1,886,758	1,774,322	1,663,812	1,532,174	1,246,067	901,465	589,368	356,030	205,180	129,948	106,239	45,117	4,636	189
29.0	3,130,290	2,578,582	2,509,961	2,509,851	2,480,677	2,411,600	2,001,642	2,193,724	2,064,004	1,939,793	1,796,877	1,490,365	1,120,735	770,034	492,960	300,153	190,769	143,968	74,606	15,772	1,495
29.5	3,586,488	3,016,634	2,868,446	2,868,115	2,838,940	2,769,680	2,332,102	2,528,193	2,379,741	2,241,112	2,086,325	1,760,089	1,366,598	981,463	660,948	424,507	276,935	201,145	114,166	37,379	6,235
30.0	4,069,754	3,488,794	3,244,459	3,243,857	3,214,682	3,145,423	2,682,854	2,884,135	2,716,512	2,561,805	2,394,561	2,049,140	1,632,192	1,217,485	854,955	573,735	384,788	274,941	165,528	69,055	17,682
30.5	4,576,800	3,985,898	3,643,437	3,638,823	3,608,280	3,539,020	3,052,334	3,261,799	3,074,565	2,902,304	2,721,787	2,356,573	1,916,668	1,476,541	1,074,885	748,857	515,817	367,988	231,505	110,344	38,810
31.0	5,105,757	4,504,956	4,072,181	4,052,035	4,019,699	3,950,441	3,439,586	3,660,379	3,453,083	3,262,218	3,067,138	2,681,151	2,219,436	1,756,001	1,319,505	949,864	670,789	482,003	313,791	162,079	70,493
31.5	5,655,721	5,044,970	4,550,372	4,498,297	4,459,567	4,388,912	3,845,421	4,083,628	3,856,104	3,646,407	3,435,082	3,027,231	2,544,494	2,058,180	1,591,619	1,180,001	854,248	621,447	417,309	229,196	114,602
32.0	6,226,131	5,605,454	5,065,246	4,973,217	4,926,179	4,854,479	4,276,022	4,532,755	4,284,943	4,055,721	3,826,987	3,395,479	2,892,172	2,382,793	1,889,877	1,439,147	1,067,738	787,626	544,524	313,189	170,001
32.5	6,816,864	6,186,745	5,615,996	5,477,473	5,419,636	5,346,505	4,752,822	5,007,647	4,738,171	4,488,347	4,242,212	3,784,524	3,260,485	2,729,014	2,211,579	1,726,158	1,310,442	981,319	696,872	416,237	238,320
33.0	7,428,078	6,789,664	6,196,236	6,009,582	5,938,540	5,861,990	5,272,440	5,502,371	5,209,470	4,938,896	4,675,341	4,189,116	3,643,613	3,091,608	2,550,627	2,035,316	1,577,331	1,200,041	871,419	538,472	319,974
33.5	8,060,050	7,414,910	6,806,114	6,575,981	6,491,132	6,408,219	5,832,506	6,020,443	5,701,067	5,409,601	5,127,218	4,611,455	4,043,234	3,471,300	2,907,500	2,365,827	1,868,910	1,445,060	1,069,877	682,074	417,834
34.0	8,713,738	8,062,664	7,446,894	7,184,813	7,081,292	6,992,629	6,429,940	6,569,439	6,219,930	5,904,776	5,602,652	5,057,115	4,463,023	3,871,625	3,286,479	2,720,895	2,192,331	1,724,983	1,304,104	857,423	542,924
34.5	9,389,978	8,733,460	8,116,496	7,840,888	7,709,127	7,617,079	7,063,147	7,157,510	6,774,469	6,431,868	6,109,589	5,532,305	4,909,337	4,297,488	3,692,301	3,105,079	2,551,251	2,048,133	1,585,214	1,076,574	708,716
35.0	10,089,939	9,428,645	8,811,850	8,534,525	8,374,670	8,282,426	7,733,053	7,787,084	7,370,170	6,995,981	6,649,215	6,038,776	5,386,833	4,750,434	4,125,939	3,518,237	2,941,889	2,411,425	1,912,099	1,343,948	919,472
35.5	10,089,939	10,149,421	9,533,450	9,256,125	9,077,870	8,985,624	8,402,959	8,461,978	8,008,901	7,601,974	7,227,570	6,581,137	5,897,236	5,235,017	4,588,964	3,961,408	3,364,000	2,809,389	2,282,406	1,660,584	1,178,436
36.0	10,089,939	10,897,959	10,282,483	10,005,158	9,820,824	9,728,340	9,072,866	9,183,069	8,692,442	8,254,622	7,849,210	7,161,962	6,443,803	5,754,910	5,084,010	4,436,171	3,817,771	3,241,385	2,690,574	2,025,561	1,488,957
36.5	10,089,939	11,674,242	11,060,298	10,782,973	10,598,621	10,504,869	9,742,772	9,945,639	9,424,543	8,952,791	8,518,734	7,786,121	7,030,097	6,310,386	5,615,207	4,943,658	4,304,117	3,706,284	3,134,324	2,434,892	1,850,249

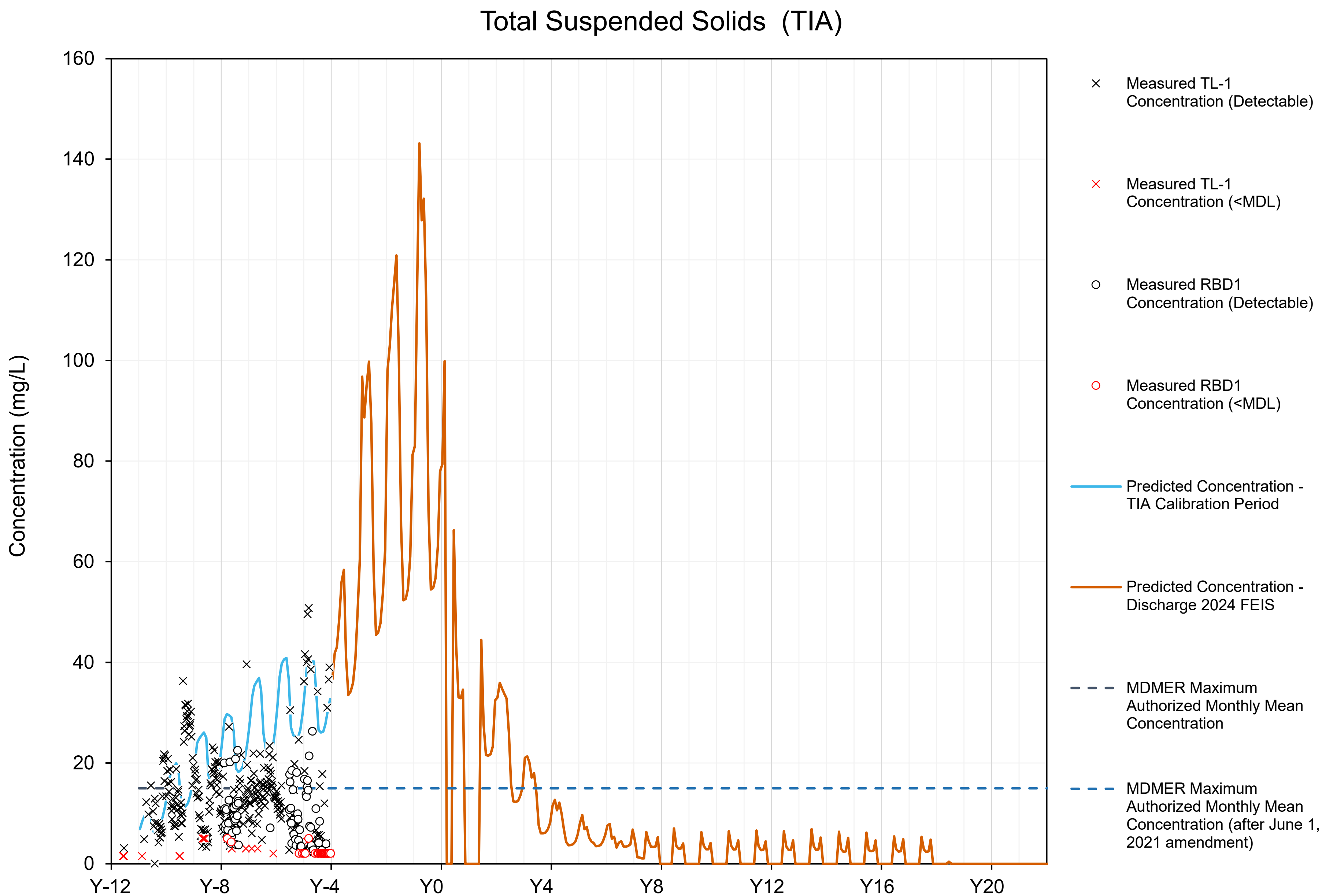
Sources: ~SRK Consulting/NA CAPR003305 Hope Bay FEIS Water and Load Balance Model Update – Internal/4_Model/Base_Model/

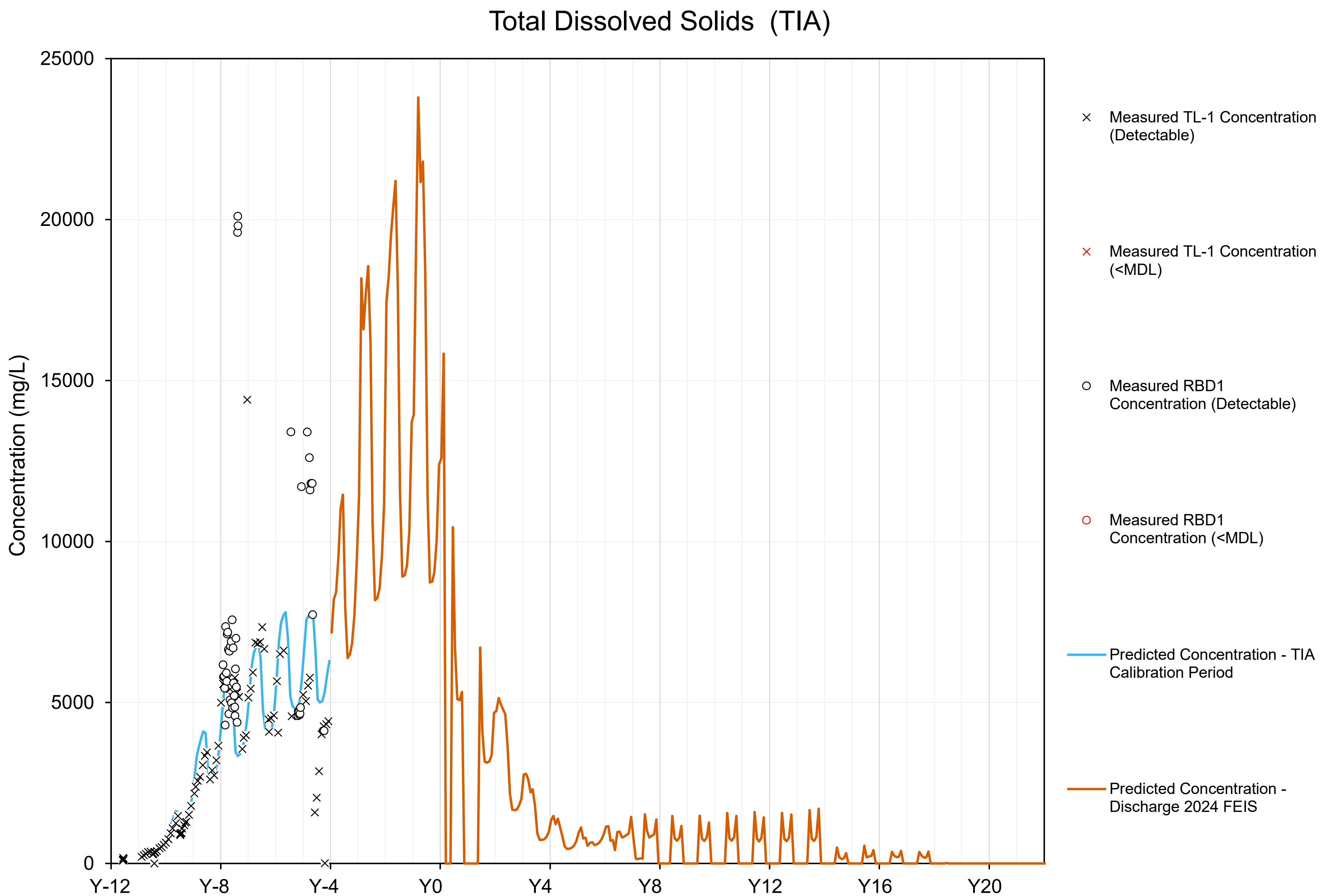
Appendix C Water Balance Results

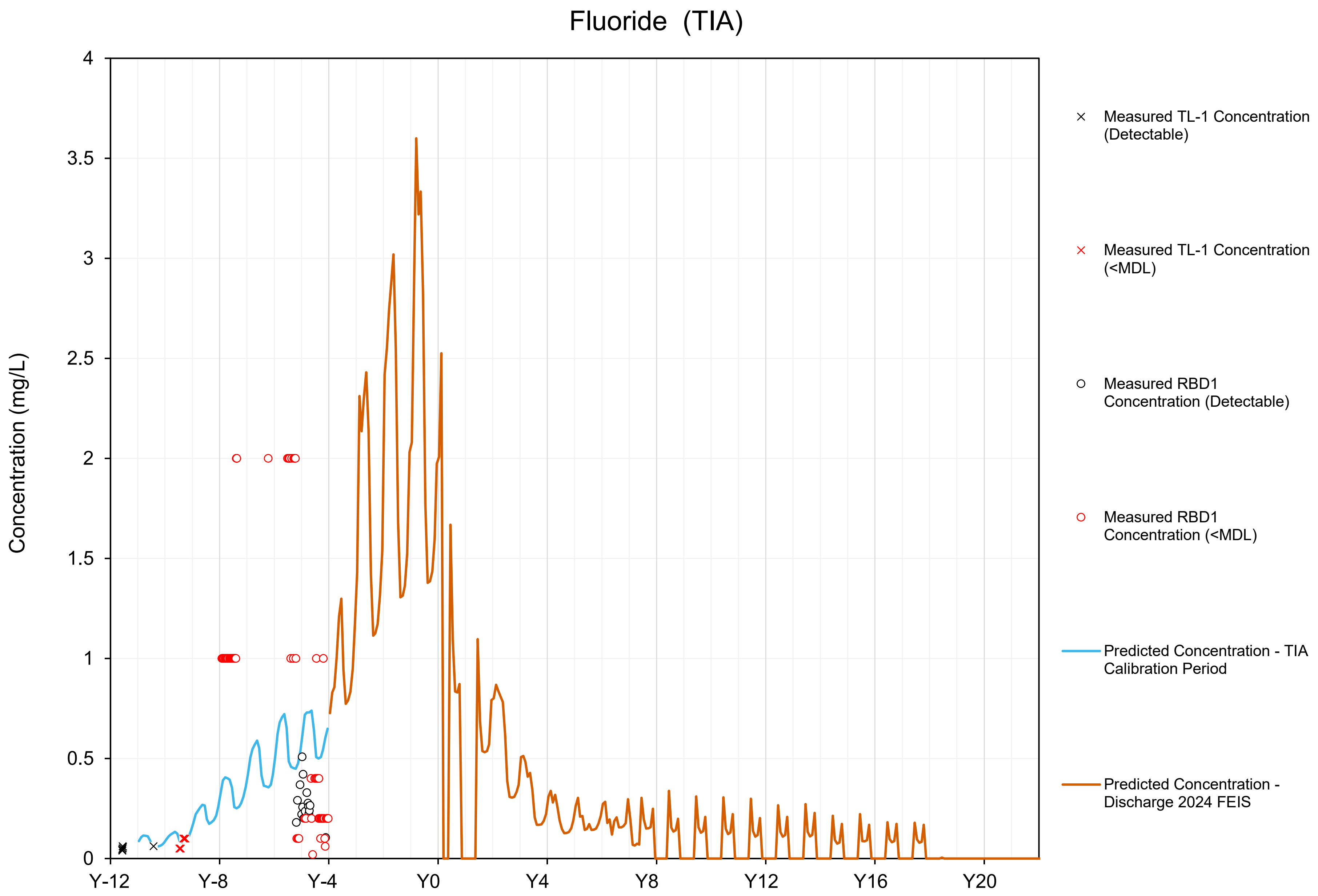
Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)
Y-4 Jan	282,700	Y1 Jul	282,700	Y7 Jan	45,600	Y12 Jul	282,720
Y-4 Feb	264,500	Y1 Aug	282,700	Y7 Feb	36,480	Y12 Aug	282,720
Y-4 Mar	282,700	Y1 Sep	273,600	Y7 Mar	36,480	Y12 Sep	282,720
Y-4 Apr	273,600	Y1 Oct	282,700	Y7 Apr	36,480	Y12 Oct	54,715
Y-4 May	282,700	Y1 Nov	209,800	Y7 May	36,480	Y12 Nov	-
Y-4 Jun	273,600	Y1 Dec	45,600	Y7 Jun	200,600	Y12 Dec	-
Y-4 Jul	282,700	Y2 Jan	54,720	Y7 Jul	282,700	Y13 Jan	-
Y-4 Aug	282,700	Y2 Feb	54,720	Y7 Aug	282,700	Y13 Feb	-
Y-4 Sep	273,600	Y2 Mar	72,960	Y7 Sep	273,600	Y13 Mar	-
Y-4 Oct	282,700	Y2 Apr	54,720	Y7 Oct	282,700	Y13 Apr	-
Y-4 Nov	273,600	Y2 May	63,840	Y7 Nov	72,960	Y13 May	-
Y-4 Dec	282,700	Y2 Jun	191,500	Y7 Dec	-	Y13 Jun	94,240
Y-3 Jan	136,800	Y2 Jul	282,700	Y8 Jan	-	Y13 Jul	282,720
Y-3 Feb	45,600	Y2 Aug	282,700	Y8 Feb	-	Y13 Aug	282,720
Y-3 Mar	54,720	Y2 Sep	273,600	Y8 Mar	-	Y13 Sep	282,720
Y-3 Apr	54,720	Y2 Oct	282,700	Y8 Apr	-	Y13 Oct	45,601
Y-3 May	36,480	Y2 Nov	273,600	Y8 May	-	Y13 Nov	-
Y-3 Jun	173,300	Y2 Dec	127,700	Y8 Jun	118,600	Y13 Dec	-
Y-3 Jul	282,700	Y3 Jan	91,200	Y8 Jul	282,700	Y14 Jan	-
Y-3 Aug	282,700	Y3 Feb	91,200	Y8 Aug	282,700	Y14 Feb	-
Y-3 Sep	273,600	Y3 Mar	91,200	Y8 Sep	273,600	Y14 Mar	-
Y-3 Oct	282,700	Y3 Apr	91,200	Y8 Oct	118,600	Y14 Apr	-
Y-3 Nov	273,600	Y3 May	91,200	Y8 Nov	-	Y14 May	-
Y-3 Dec	63,840	Y3 Jun	218,900	Y8 Dec	-	Y14 Jun	75,392
Y-2 Jan	45,600	Y3 Jul	282,700	Y9 Jan	-	Y14 Jul	282,720
Y-2 Feb	54,720	Y3 Aug	282,700	Y9 Feb	-	Y14 Aug	282,720
Y-2 Mar	54,720	Y3 Sep	273,600	Y9 Mar	-	Y14 Sep	282,720
Y-2 Apr	54,720	Y3 Oct	282,700	Y9 Apr	-	Y14 Oct	36,487
Y-2 May	54,720	Y3 Nov	273,600	Y9 May	-	Y14 Nov	-
Y-2 Jun	164,200	Y3 Dec	282,700	Y9 Jun	127,700	Y14 Dec	-
Y-2 Jul	282,700	Y4 Jan	100,300	Y9 Jul	282,700	Y15 Jan	-
Y-2 Aug	282,700	Y4 Feb	91,200	Y9 Aug	282,700	Y15 Feb	-
Y-2 Sep	273,600	Y4 Mar	100,300	Y9 Sep	273,600	Y15 Mar	-
Y-2 Oct	282,700	Y4 Apr	91,200	Y9 Oct	91,200	Y15 Apr	-
Y-2 Nov	273,600	Y4 May	72,960	Y9 Nov	-	Y15 May	-
Y-2 Dec	63,840	Y4 Jun	218,900	Y9 Dec	-	Y15 Jun	94,240
Y-1 Jan	72,960	Y4 Jul	282,700	Y10 Jan	-	Y15 Jul	282,720
Y-1 Feb	54,720	Y4 Aug	282,700	Y10 Feb	-	Y15 Aug	282,720
Y-1 Mar	54,720	Y4 Sep	273,600	Y10 Mar	-	Y15 Sep	282,720
Y-1 Apr	54,720	Y4 Oct	282,700	Y10 Apr	-	Y15 Oct	54,715
Y-1 May	54,720	Y4 Nov	273,600	Y10 May	-	Y15 Nov	-
Y-1 Jun	182,400	Y4 Dec	237,100	Y10 Jun	118,600	Y15 Dec	-
Y-1 Jul	282,700	Y5 Jan	72,960	Y10 Jul	282,700	Y16 Jan	-
Y-1 Aug	282,700	Y5 Feb	54,720	Y10 Aug	282,700	Y16 Feb	-
Y-1 Sep	273,600	Y5 Mar	63,840	Y10 Sep	273,600	Y16 Mar	-
Y-1 Oct	282,700	Y5 Apr	63,840	Y10 Oct	72,960	Y16 Apr	-
Y-1 Nov	273,600	Y5 May	54,720	Y10 Nov	-	Y16 May	-
Y-1 Dec	264,500	Y5 Jun	200,600	Y10 Dec	-	Y16 Jun	75,392
Y0 Jan	264,500	Y5 Jul	282,700	Y11 Jan	-	Y16 Jul	282,720
Y0 Feb	91,200	Y5 Aug	282,700	Y11 Feb	-	Y16 Aug	282,720
Y0 Mar	-	Y5 Sep	273,600	Y11 Mar	-	Y16 Sep	282,720
Y0 Apr	-	Y5 Oct	282,700	Y11 Apr	-	Y16 Oct	45,601
Y0 May	-	Y5 Nov	255,400	Y11 May	-	Y16 Nov	-
Y0 Jun	127,700	Y5 Dec	36,480	Y11 Jun	109,400	Y16 Dec	-
Y0 Jul	282,700	Y6 Jan	54,720	Y11 Jul	282,700	Y17 Jan	-
Y0 Aug	282,700	Y6 Feb	36,480	Y11 Aug	282,700	Y17 Feb	-
Y0 Sep	273,600	Y6 Mar	54,720	Y11 Sep	273,600	Y17 Mar	-
Y0 Oct	246,200	Y6 Apr	36,480	Y11 Oct	72,960	Y17 Apr	-
Y0 Nov	-	Y6 May	54,720	Y11 Nov	-	Y17 May	-
Y0 Dec	-	Y6 Jun	218,900	Y11 Dec	-	Y17 Jun	75,392
Y1 Jan	-	Y6 Jul	282,700	Y12 Jan	-	Y17 Jul	282,720
Y1 Feb	-	Y6 Aug	282,700	Y12 Feb	-	Y17 Aug	282,720
Y1 Mar	-	Y6 Sep	273,600	Y12 Mar	-	Y17 Sep	282,720
Y1 Apr	-	Y6 Oct	282,700	Y12 Apr	-	Y17 Oct	45,601
Y1 May	18,240	Y6 Nov	200,600	Y12 May	-	Y17 Nov	-
Y1 Jun	173,300	Y6 Dec	45,600	Y12 Jun	109,400	Y17 Dec	-

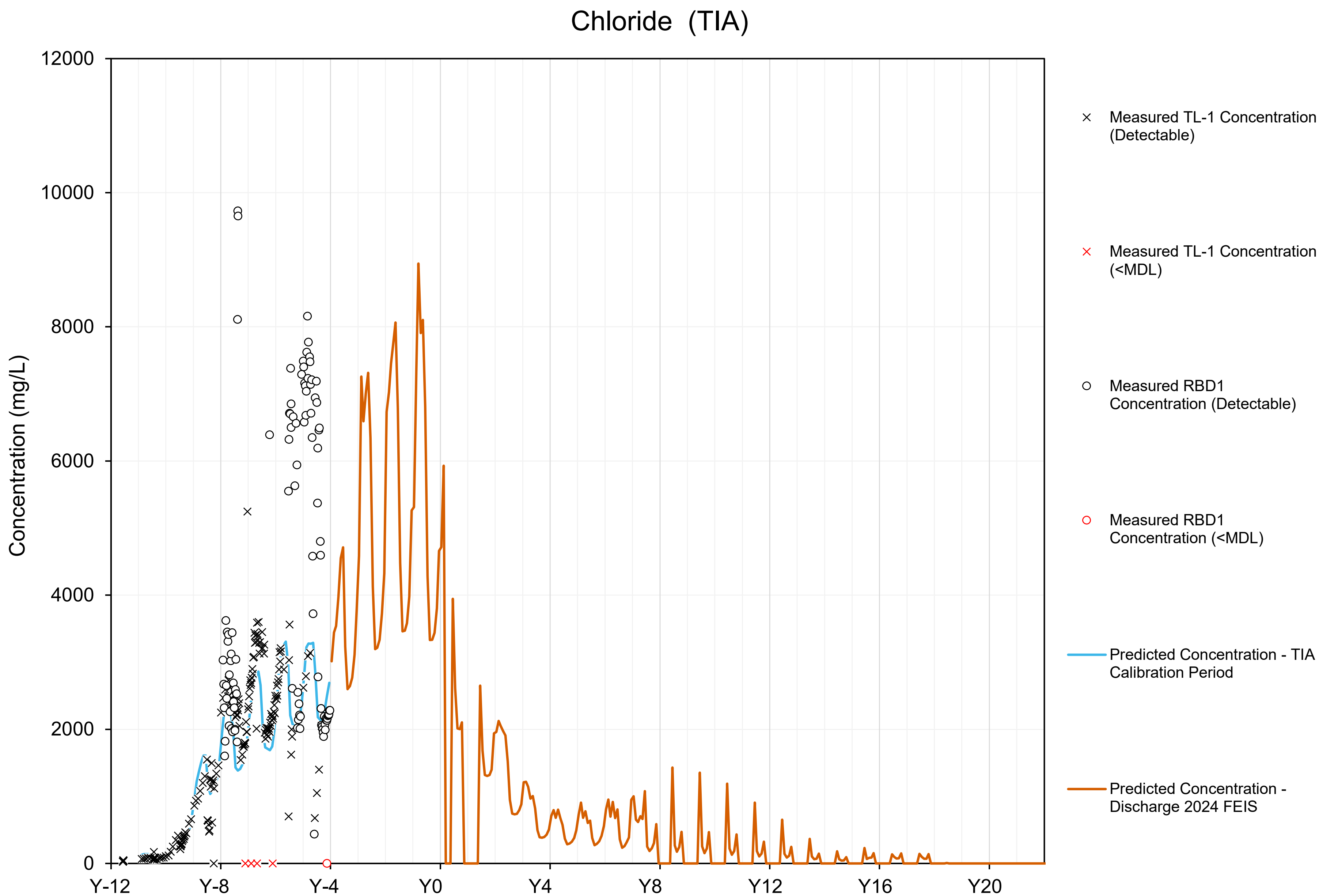
Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)	Year/Mon	Discharge (m^3)
Y-3 Jan	-	Y2 Apr	69,960	Y7 Jul	96,860	Y12 Oct	21,330
Y-3 Feb	-	Y2 May	52,240	Y7 Aug	77,250	Y12 Nov	21,450
Y-3 Mar	-	Y2 Jun	80,860	Y7 Sep	94,420	Y12 Dec	21,470
Y-3 Apr	-	Y2 Jul	84,960	Y7 Oct	74,210	Y13 Jan	21,470
Y-3 May	-	Y2 Aug	75,900	Y7 Nov	91,400	Y13 Feb	21,490
Y-3 Jun	-	Y2 Sep	67,640	Y7 Dec	60,260	Y13 Mar	21,510
Y-3 Jul	-	Y2 Oct	52,820	Y8 Jan	72,360	Y13 Apr	21,530
Y-3 Aug	-	Y2 Nov	62,600	Y8 Feb	96,470	Y13 May	21,120
Y-3 Sep	-	Y2 Dec	87,700	Y8 Mar	70,140	Y13 Jun	26,920
Y-3 Oct	-	Y3 Jan	53,040	Y8 Apr	96,860	Y13 Jul	40,380
Y-3 Nov	-	Y3 Feb	62,640	Y8 May	61,830	Y13 Aug	23,730
Y-3 Dec	-	Y3 Mar	69,960	Y8 Jun	108,300	Y13 Sep	20,970
Y-2 Jan	-	Y3 Apr	87,150	Y8 Jul	81,950	Y13 Oct	21,490
Y-2 Feb	-	Y3 May	52,170	Y8 Aug	87,220	Y13 Nov	21,630
Y-2 Mar	-	Y3 Jun	91,340	Y8 Sep	90,740	Y13 Dec	21,680
Y-2 Apr	-	Y3 Jul	58,920	Y8 Oct	55,920	Y14 Jan	-
Y-2 May	-	Y3 Aug	87,490	Y8 Nov	77,630	Y14 Feb	-
Y-2 Jun	-	Y3 Sep	67,630	Y8 Dec	81,110	Y14 Mar	-
Y-2 Jul	-	Y3 Oct	72,020	Y9 Jan	94,960	Y14 Apr	-
Y-2 Aug	-	Y3 Nov	72,120	Y9 Feb	64,510	Y14 May	-
Y-2 Sep	-	Y3 Dec	53,040	Y9 Mar	90,540	Y14 Jun	-
Y-2 Oct	-	Y4 Jan	97,580	Y9 Apr	90,660	Y14 Jul	42,470
Y-2 Nov	-	Y4 Feb	53,040	Y9 May	89,480	Y14 Aug	-
Y-2 Dec	-	Y4 Mar	87,650	Y9 Jun	83,980	Y14 Sep	-
Y-1 Jan	-	Y4 Apr	53,040	Y9 Jul	100,600	Y14 Oct	-
Y-1 Feb	-	Y4 May	52,340	Y9 Aug	78,040	Y14 Nov	-
Y-1 Mar	-	Y4 Jun	98,240	Y9 Sep	66,960	Y14 Dec	-
Y-1 Apr	-	Y4 Jul	95,200	Y9 Oct	88,100	Y15 Jan	-
Y-1 May	-	Y4 Aug	88,470	Y9 Nov	88,730	Y15 Feb	-
Y-1 Jun	-	Y4 Sep	51,670	Y9 Dec	88,890	Y15 Mar	-
Y-1 Jul	-	Y4 Oct	89,550	Y10 Jan	23,690	Y15 Apr	-
Y-1 Aug	-	Y4 Nov	53,030	Y10 Feb	-	Y15 May	-
Y-1 Sep	-	Y4 Dec	79,690	Y10 Mar	21,660	Y15 Jun	-
Y-1 Oct	-	Y5 Jan	72,240	Y10 Apr	21,680	Y15 Jul	-
Y-1 Nov	-	Y5 Feb	70,120	Y10 May	21,410	Y15 Aug	-
Y-1 Dec	-	Y5 Mar	69,960	Y10 Jun	21,300	Y15 Sep	-
Y0 Jan	51,810	Y5 Apr	77,780	Y10 Jul	59,470	Y15 Oct	-
Y0 Feb	52,940	Y5 May	81,140	Y10 Aug	19,780	Y15 Nov	-
Y0 Mar	53,060	Y5 Jun	75,390	Y10 Sep	20,860	Y15 Dec	-
Y0 Apr	53,180	Y5 Jul	80,730	Y10 Oct	2,105	Y16 Jan	-
Y0 May	62,280	Y5 Aug	78,930	Y10 Nov	19,575	Y16 Feb	-
Y0 Jun	71,430	Y5 Sep	94,060	Y10 Dec	21,760	Y16 Mar	-
Y0 Jul	58,730	Y5 Oct	52,820	Y11 Jan	21,780	Y16 Apr	-
Y0 Aug	81,400	Y5 Nov	94,220	Y11 Feb	21,800	Y16 May	-
Y0 Sep	51,660	Y5 Dec	62,640	Y11 Mar	21,840	Y16 Jun	-
Y0 Oct	51,580	Y6 Jan	84,720	Y11 Apr	21,210	Y16 Jul	-
Y0 Nov	75,360	Y6 Feb	61,650	Y11 May	21,560	Y16 Aug	-
Y0 Dec	50,410	Y6 Mar	79,560	Y11 Jun	24,930	Y16 Sep	-
Y1 Jan	60,140	Y6 Apr	71,240	Y11 Jul	43,540	Y16 Oct	-
Y1 Feb	66,580	Y6 May	75,610	Y11 Aug	24,920	Y16 Nov	-
Y1 Mar	51,040	Y6 Jun	105,900	Y11 Sep	21,710	Y16 Dec	-
Y1 Apr	51,240	Y6 Jul	81,260	Y11 Oct	21,210	Y17 Jan	-
Y1 May	76,230	Y6 Aug	90,460	Y11 Nov	21,400	Y17 Feb	-
Y1 Jun	68,890	Y6 Sep	51,310	Y11 Dec	21,470	Y17 Mar	-
Y1 Jul	85,070	Y6 Oct	79,800	Y12 Jan	21,500	Y17 Apr	-
Y1 Aug	71,270	Y6 Nov	80,100	Y12 Feb	21,500	Y17 May	-
Y1 Sep	51,710	Y6 Dec	91,440	Y12 Mar	21,500	Y17 Jun	-
Y1 Oct	78,400	Y7 Jan	68,140	Y12 Apr	21,500	Y17 Jul	-
Y1 Nov	52,890	Y7 Feb	80,310	Y12 May	21,100	Y17 Aug	-
Y1 Dec	53,040	Y7 Mar	77,980	Y12 Jun	26,460	Y17 Sep	-
Y2 Jan	79,560	Y7 Apr	62,640	Y12 Jul	42,430	Y17 Oct	-
Y2 Feb	68,650	Y7 May	90,020	Y12 Aug	24,280	Y17 Nov	-
Y2 Mar	62,640	Y7 Jun	74,270	Y12 Sep	20,870	Y17 Dec	-

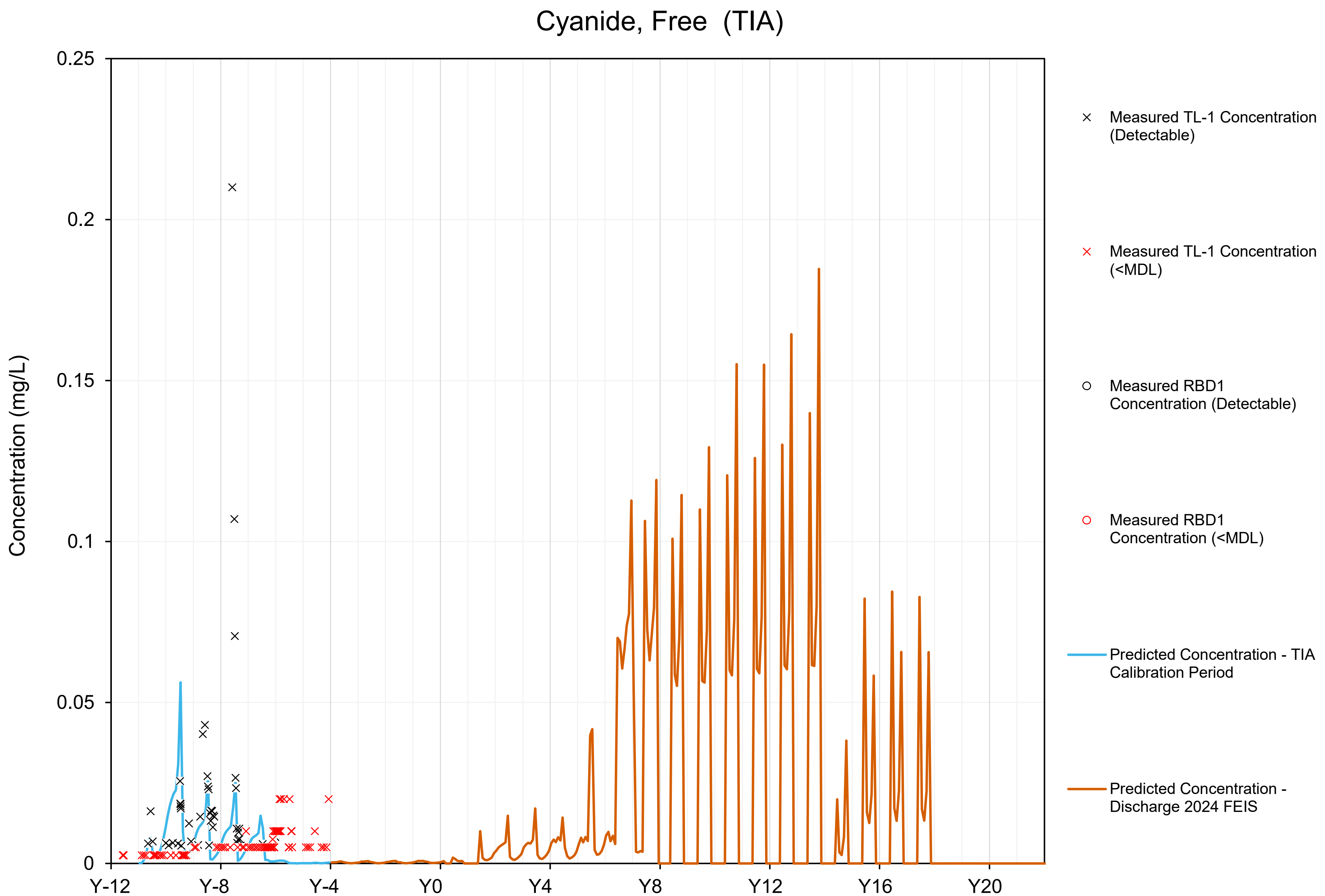
Appendix D Water Quality Results

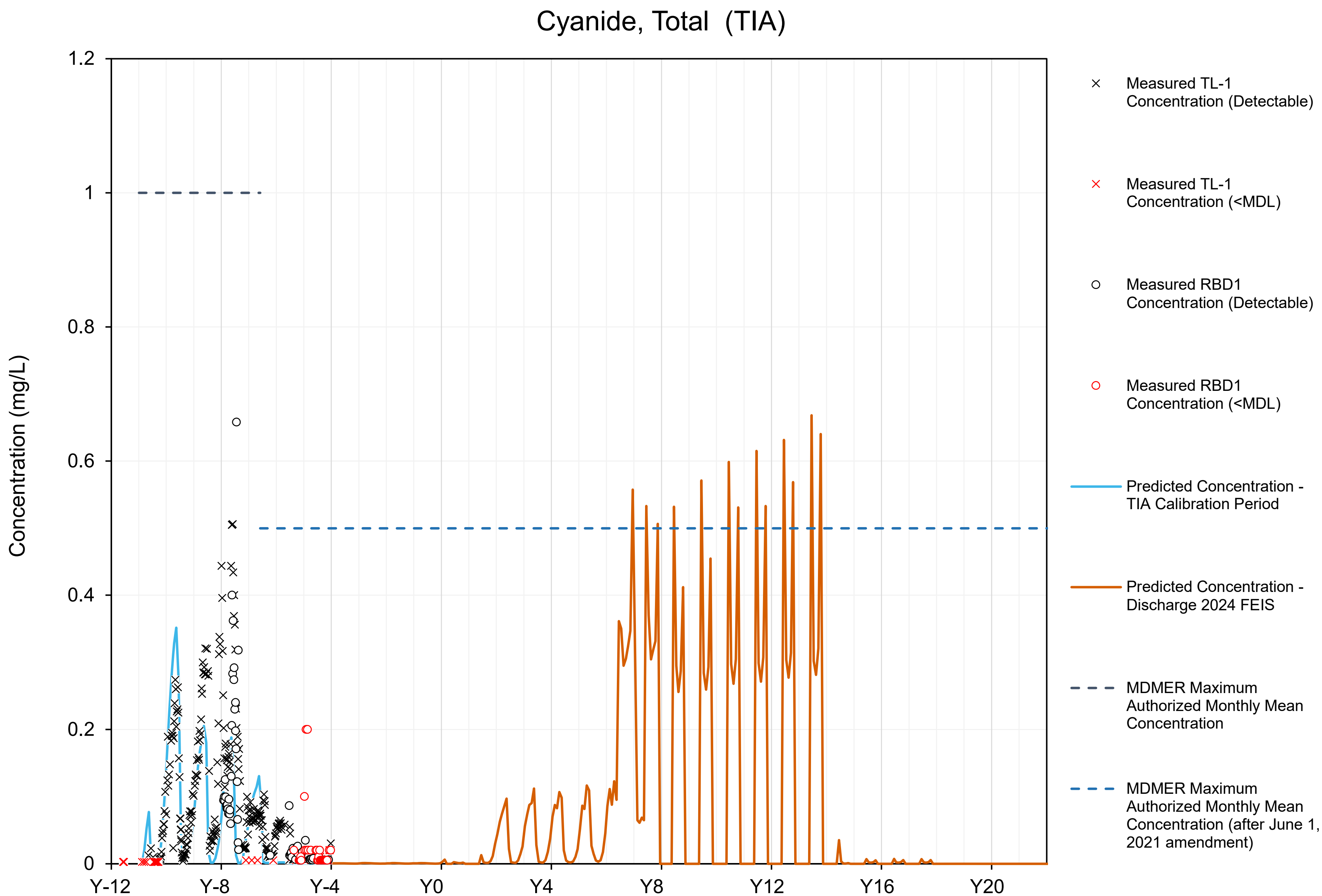

Total Suspended Solids (TIA)
Concentration (mg/L)
0
20
40
60
80
100
120
140
160
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

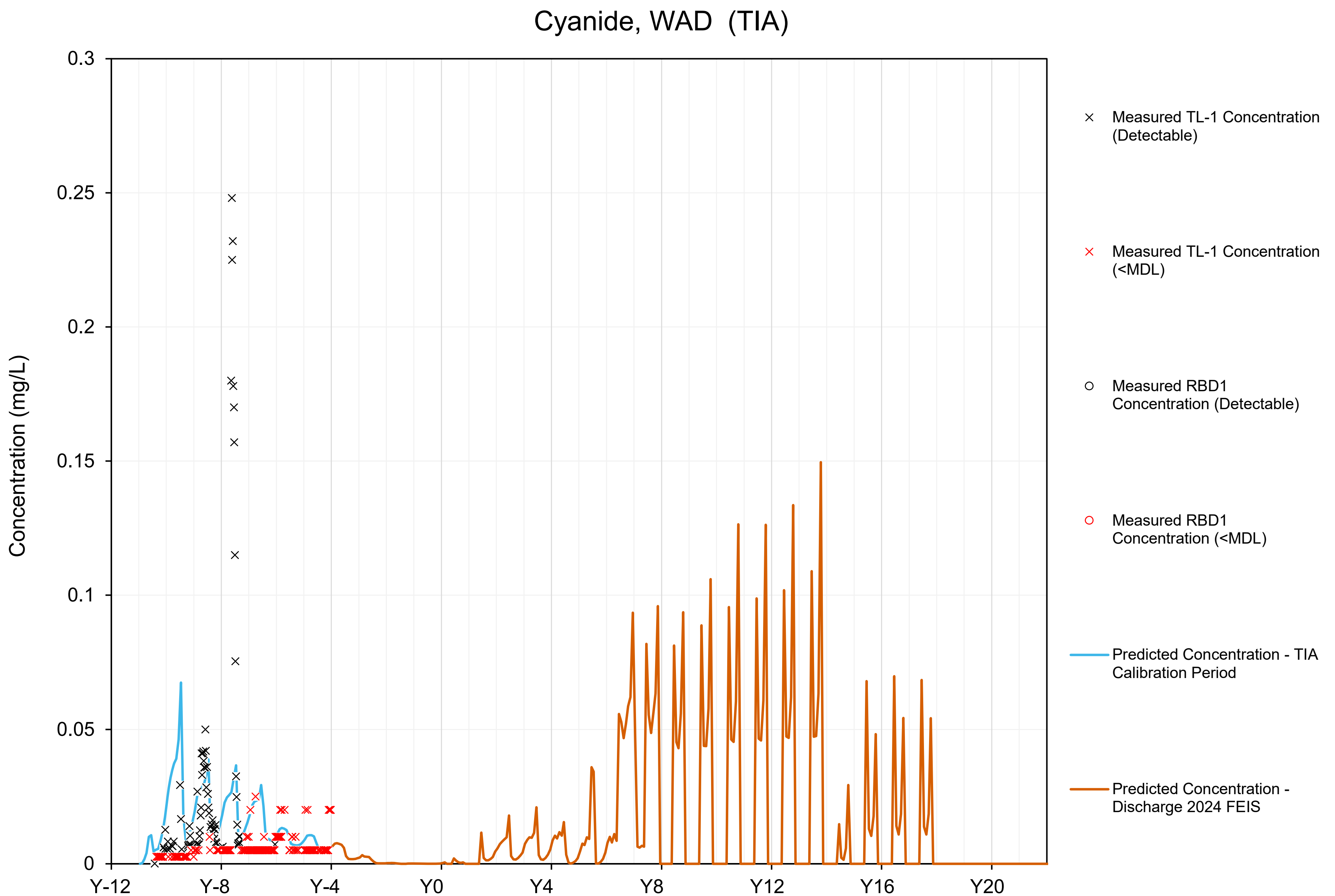

Total Dissolved Solids (TIA)
Concentration (mg/L)
25000
20000
15000
10000
5000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

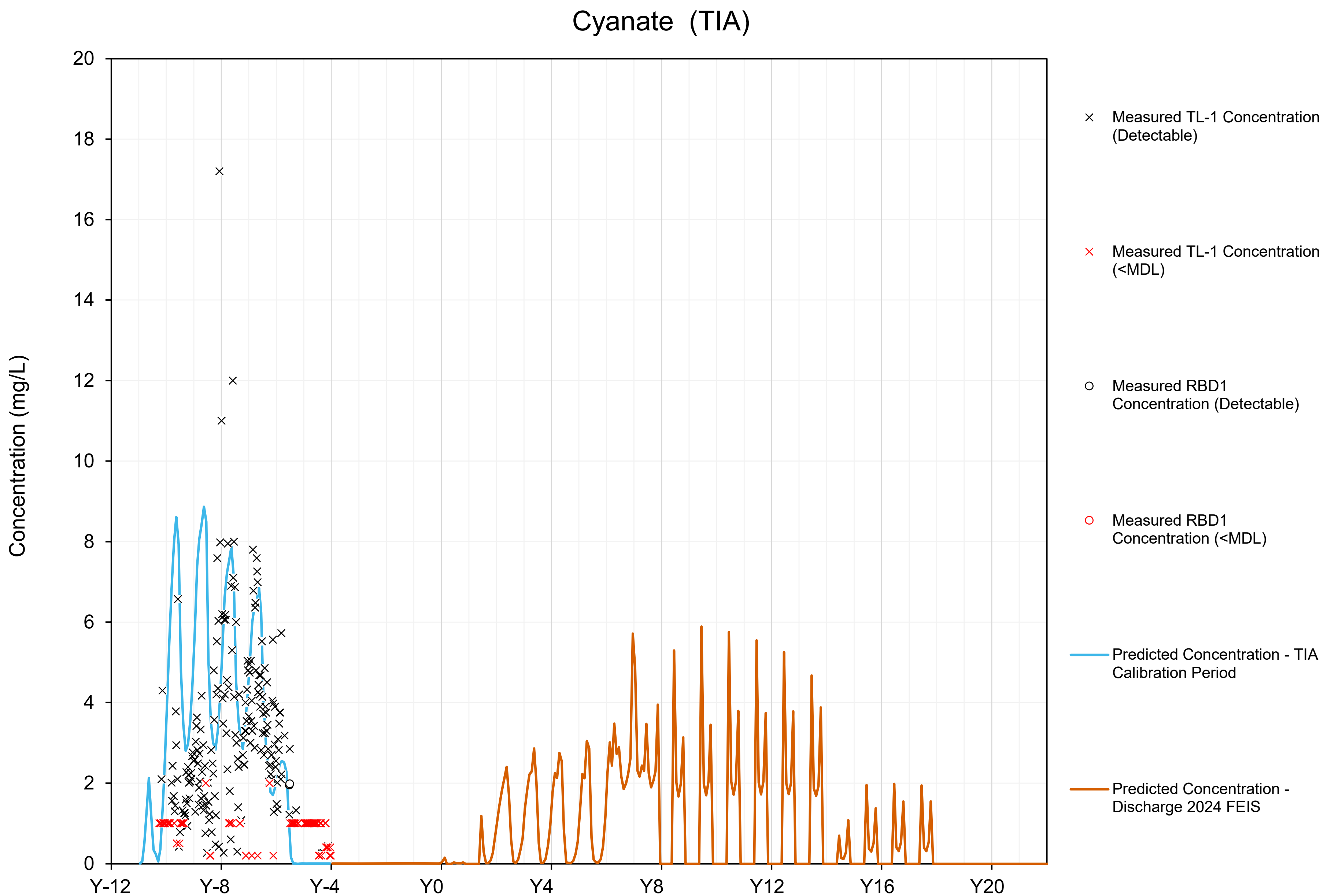

Fluoride (TIA)
Concentration (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

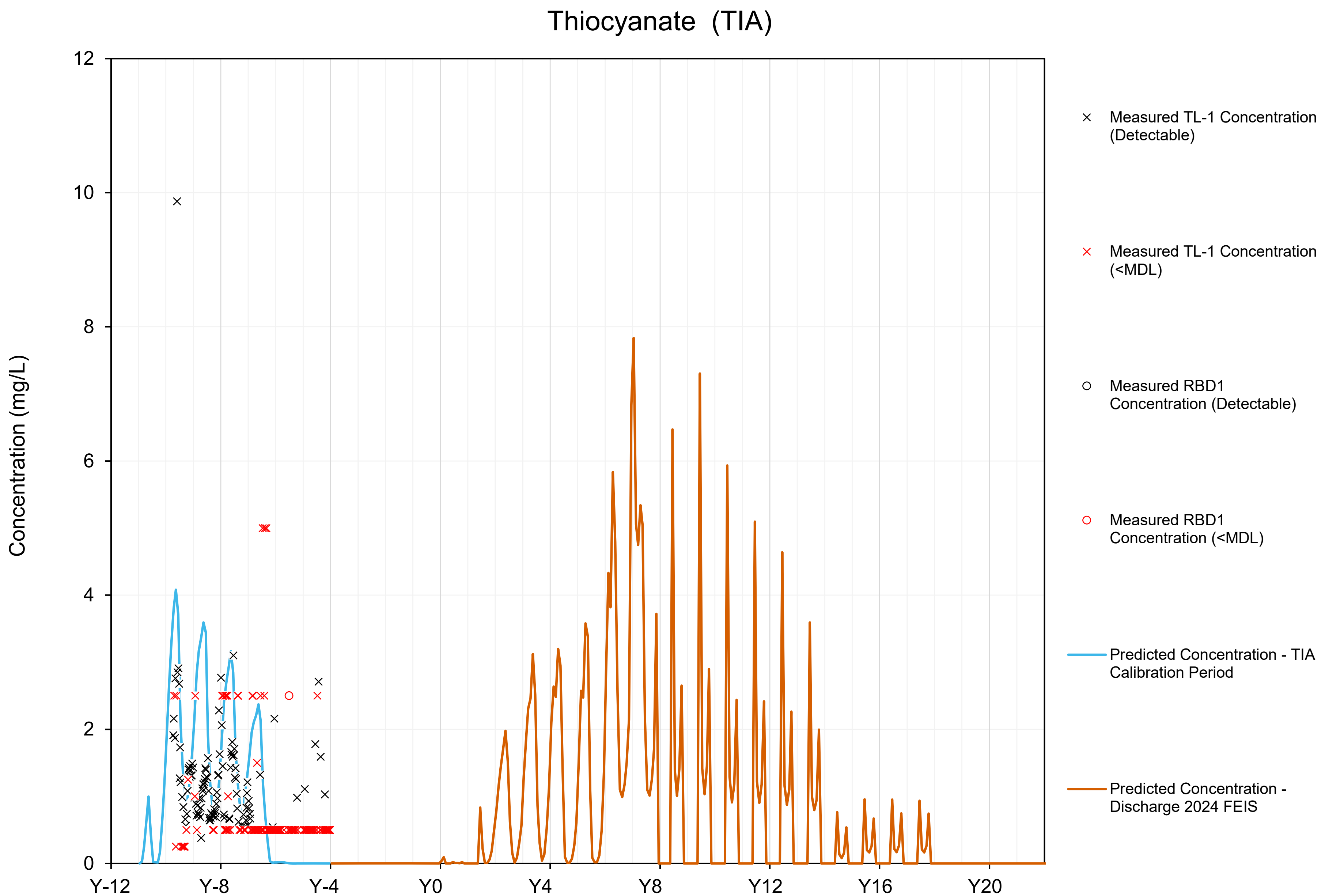

Chloride (TIA)
Concentration (mg/L)
12000
10000
8000
6000
4000
2000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

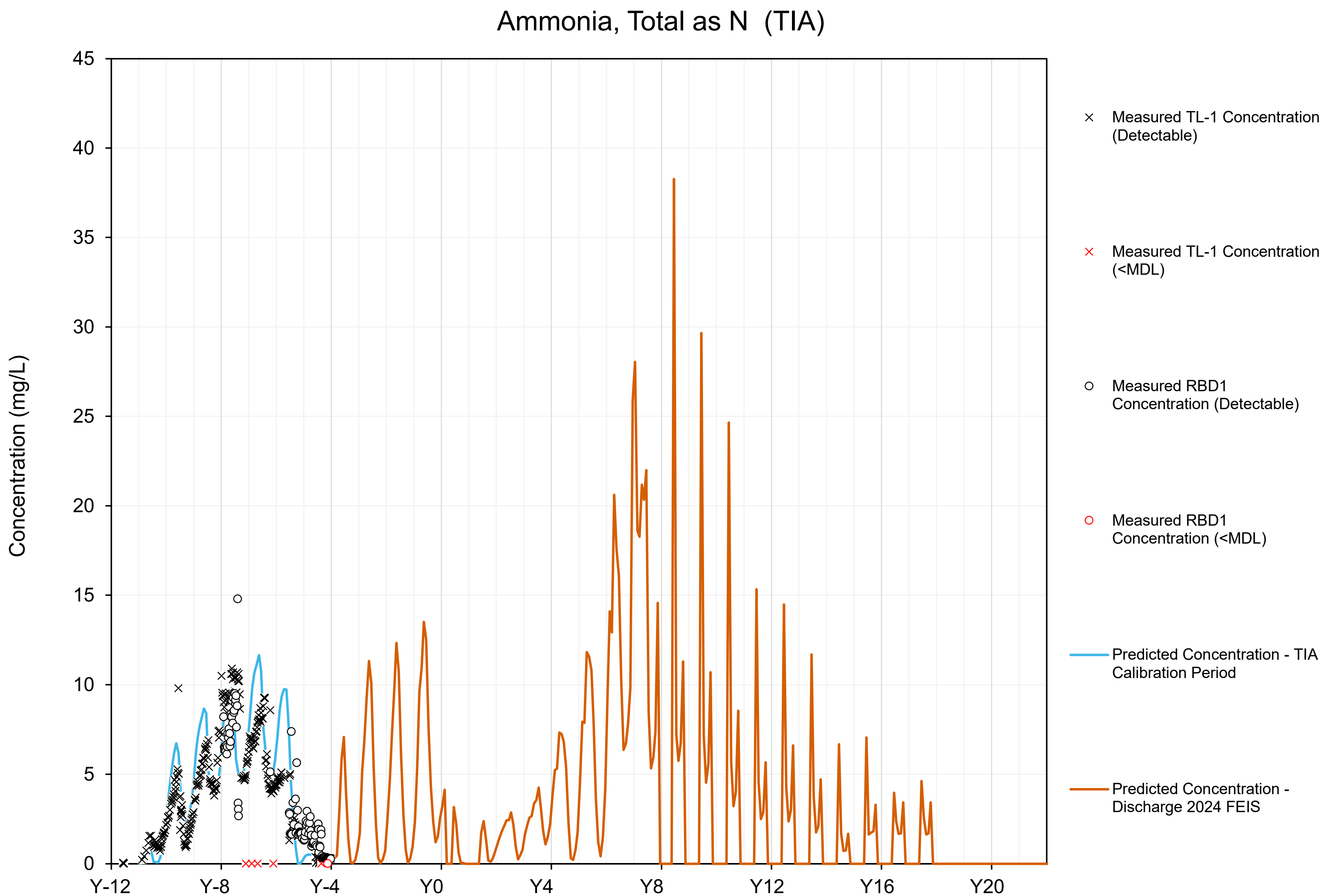

Cyanide, Free (TIA)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

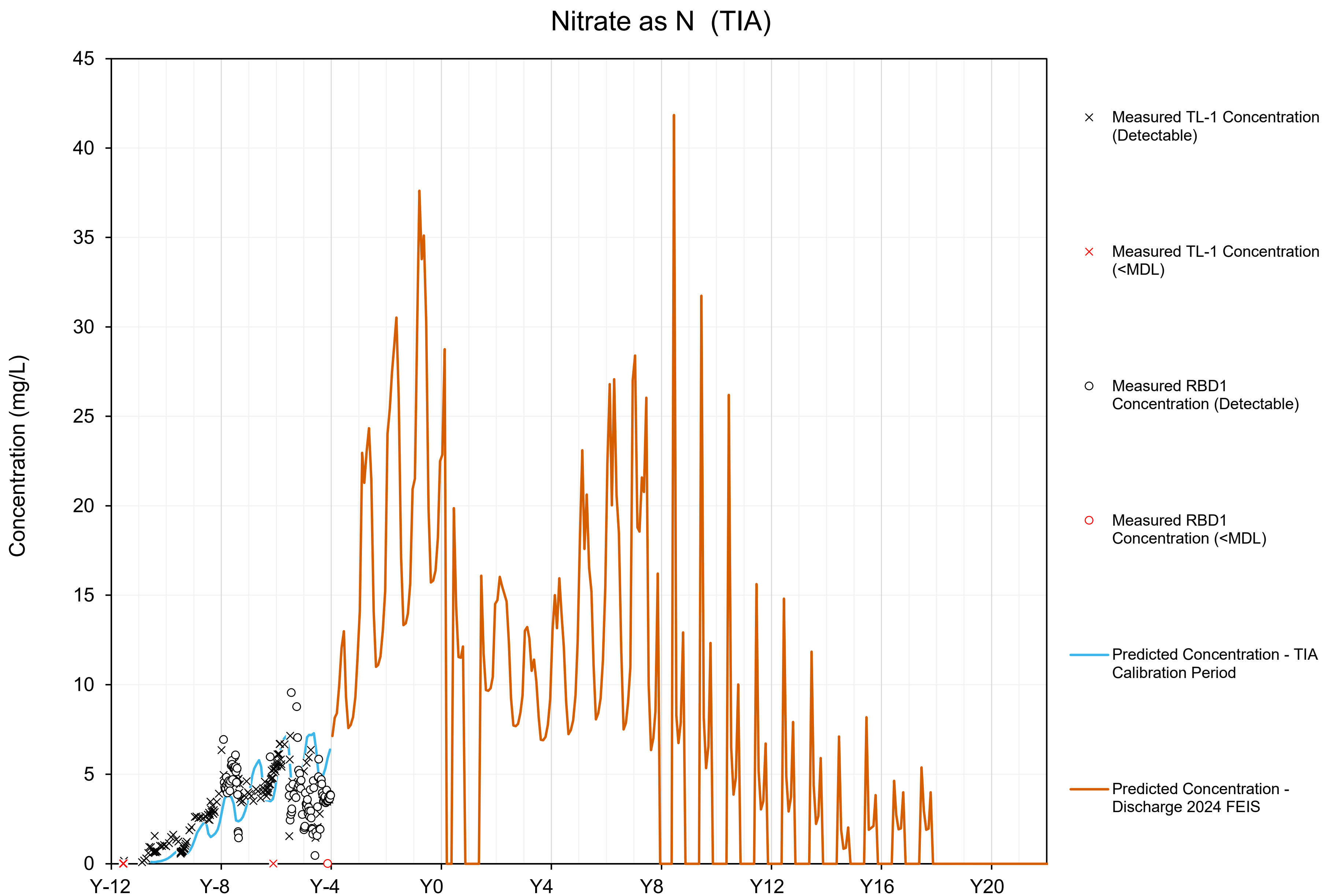

Cyanide, Total (TIA)
Concentration (mg/L)
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

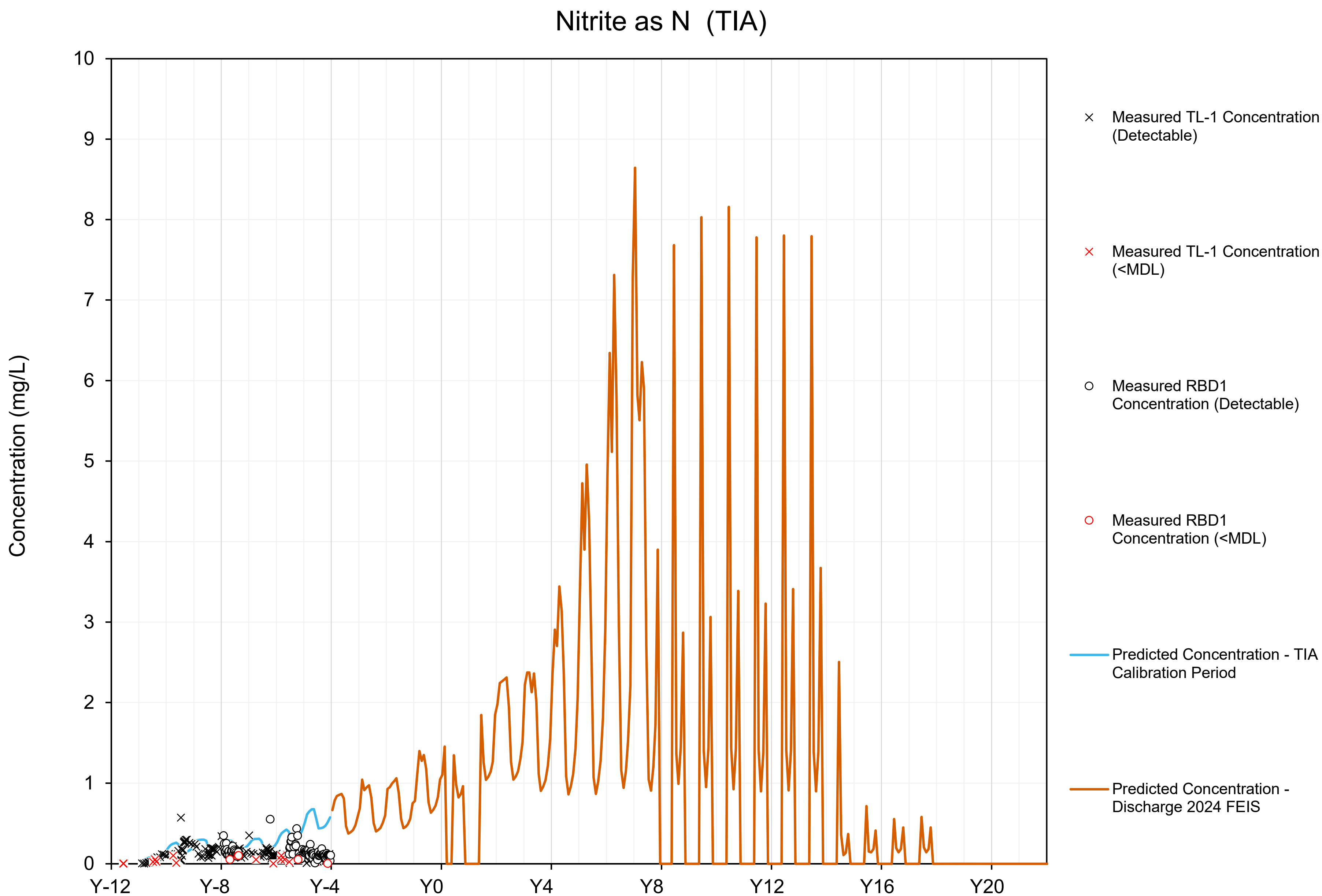

Cyanide, WAD (TIA)
Concentration (mg/L)
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

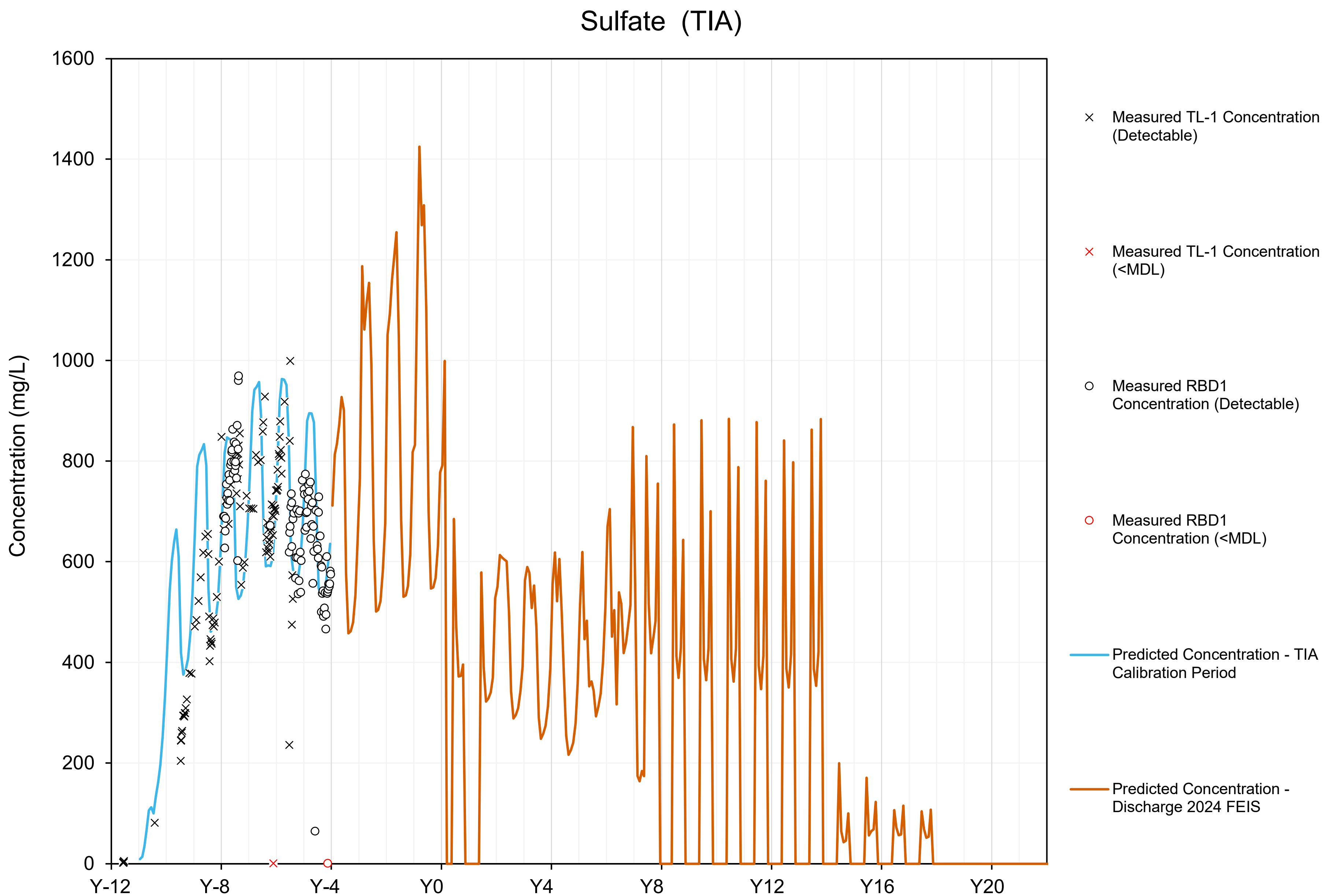

Cyanate (TIA)
Concentration (mg/L)
20
18
16
14
12
10
8
6
4
2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

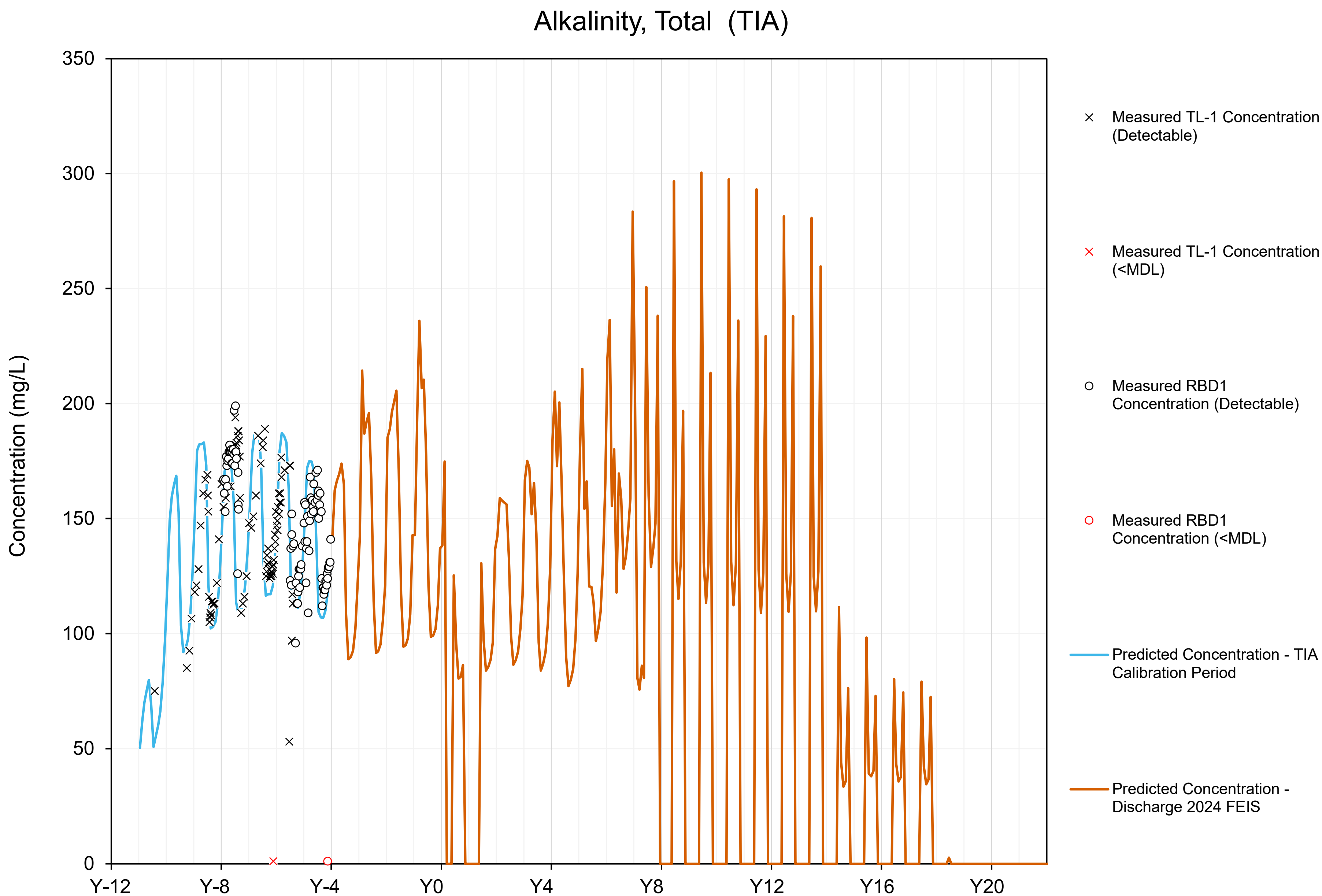

Thiocyanate (TIA)
Concentration (mg/L)
0
2
4
6
8
10
12
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

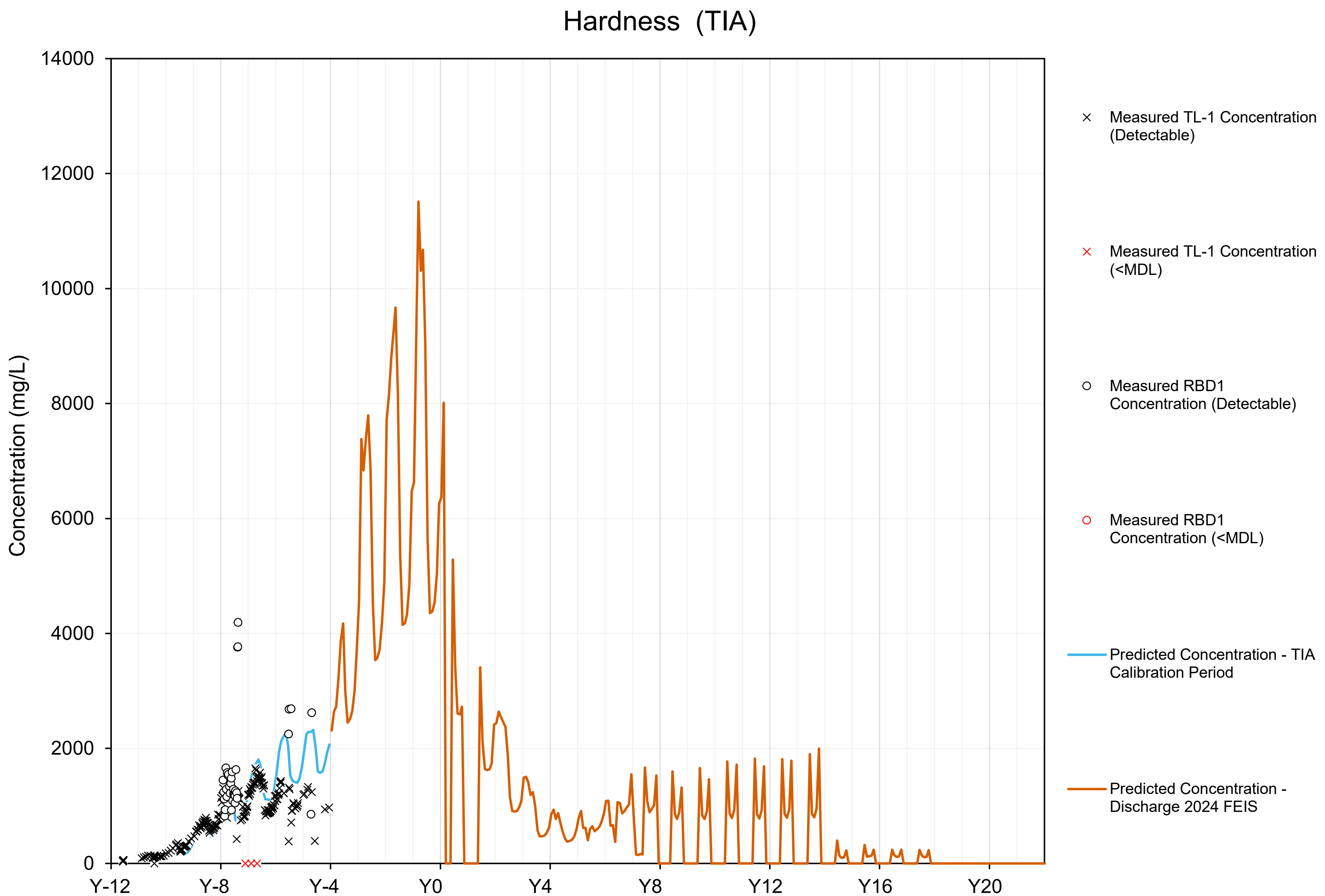

Ammonia, Total as N (TIA)
Concentration (mg/L)
45
40
35
30
25
20
15
10
5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

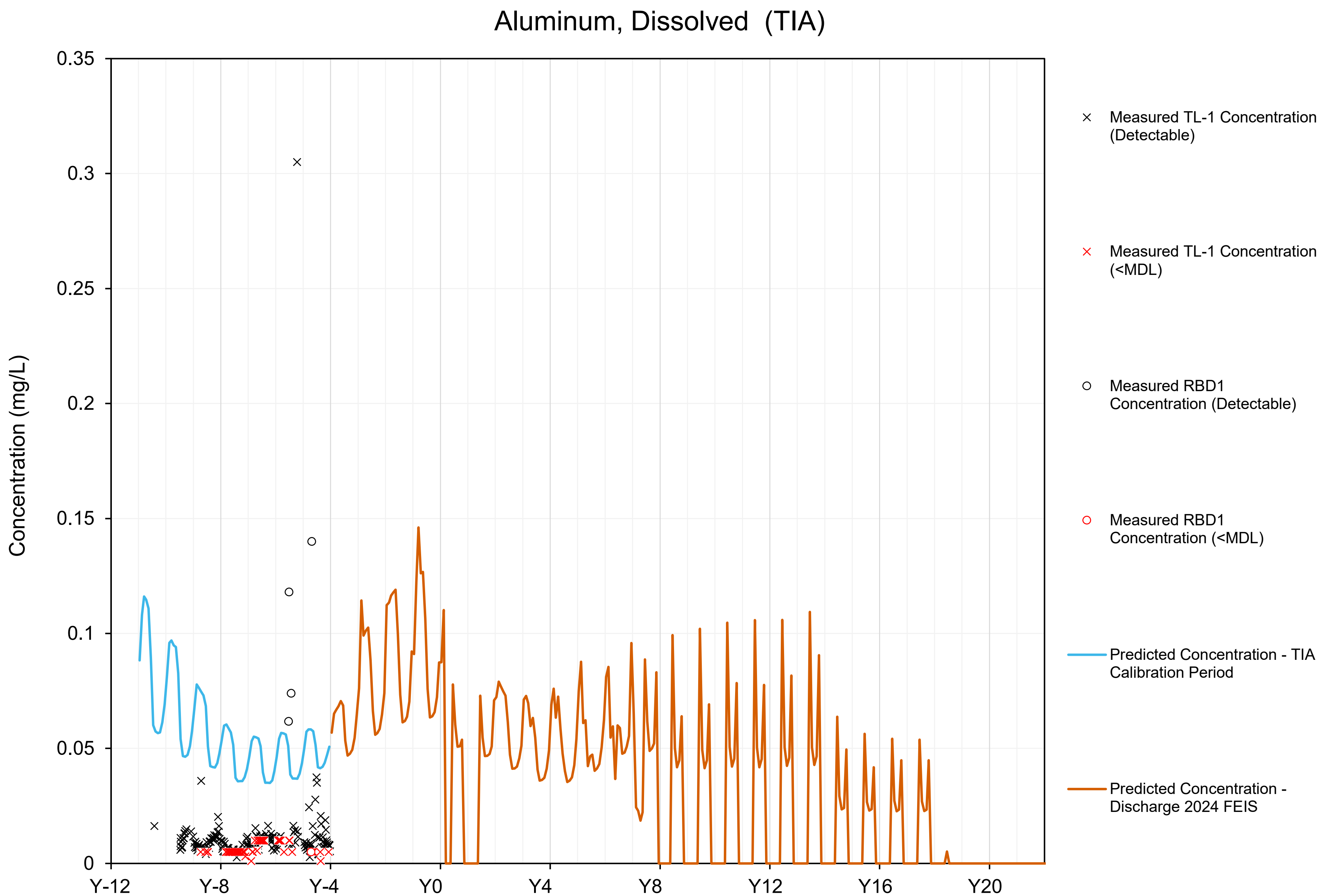

Nitrate as N (TIA)
Concentration (mg/L)
45
40
35
30
25
20
15
10
5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

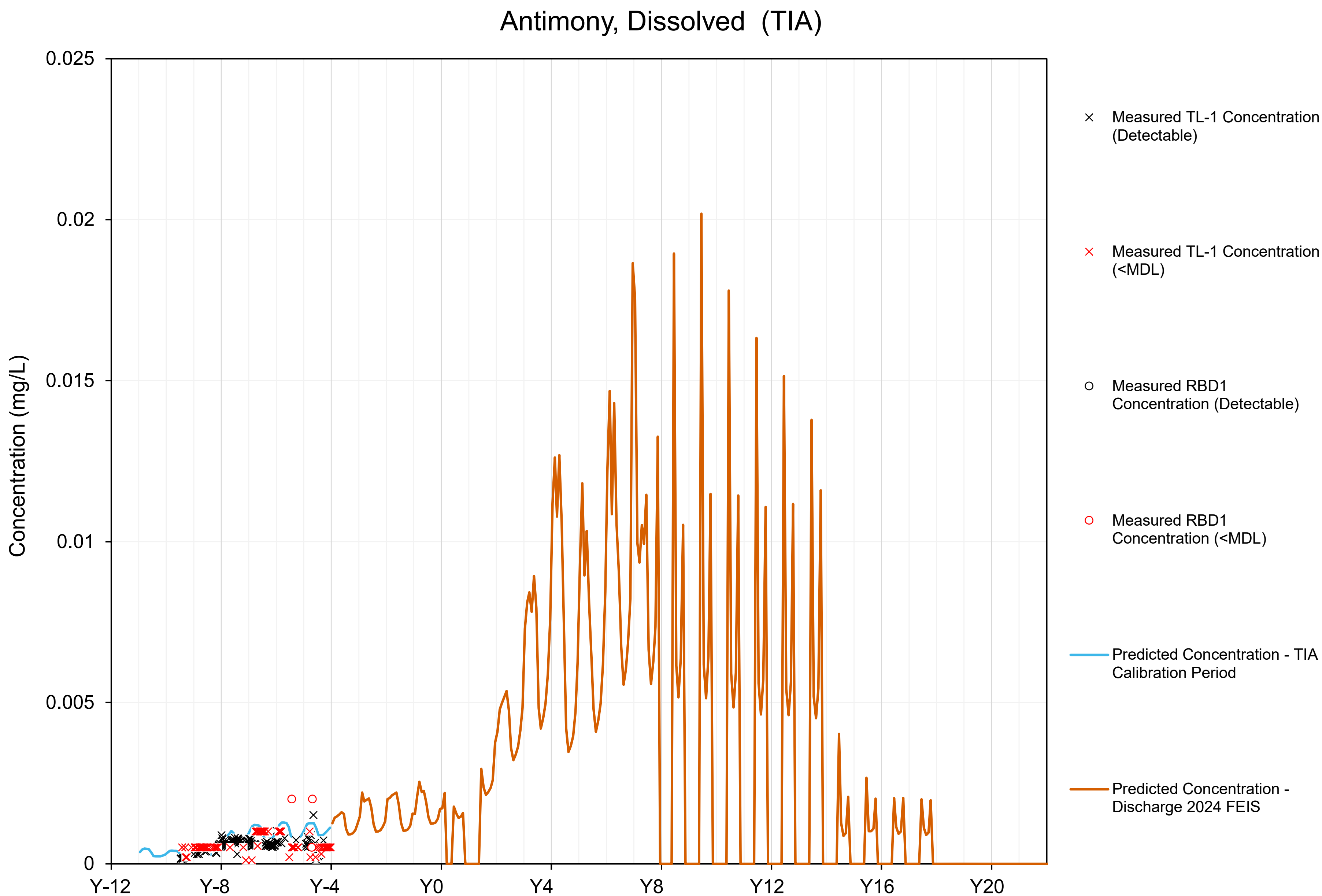

Nitrite as N (TIA)
Concentration (mg/L)
10
9
8
7
6
5
4
3
2
1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

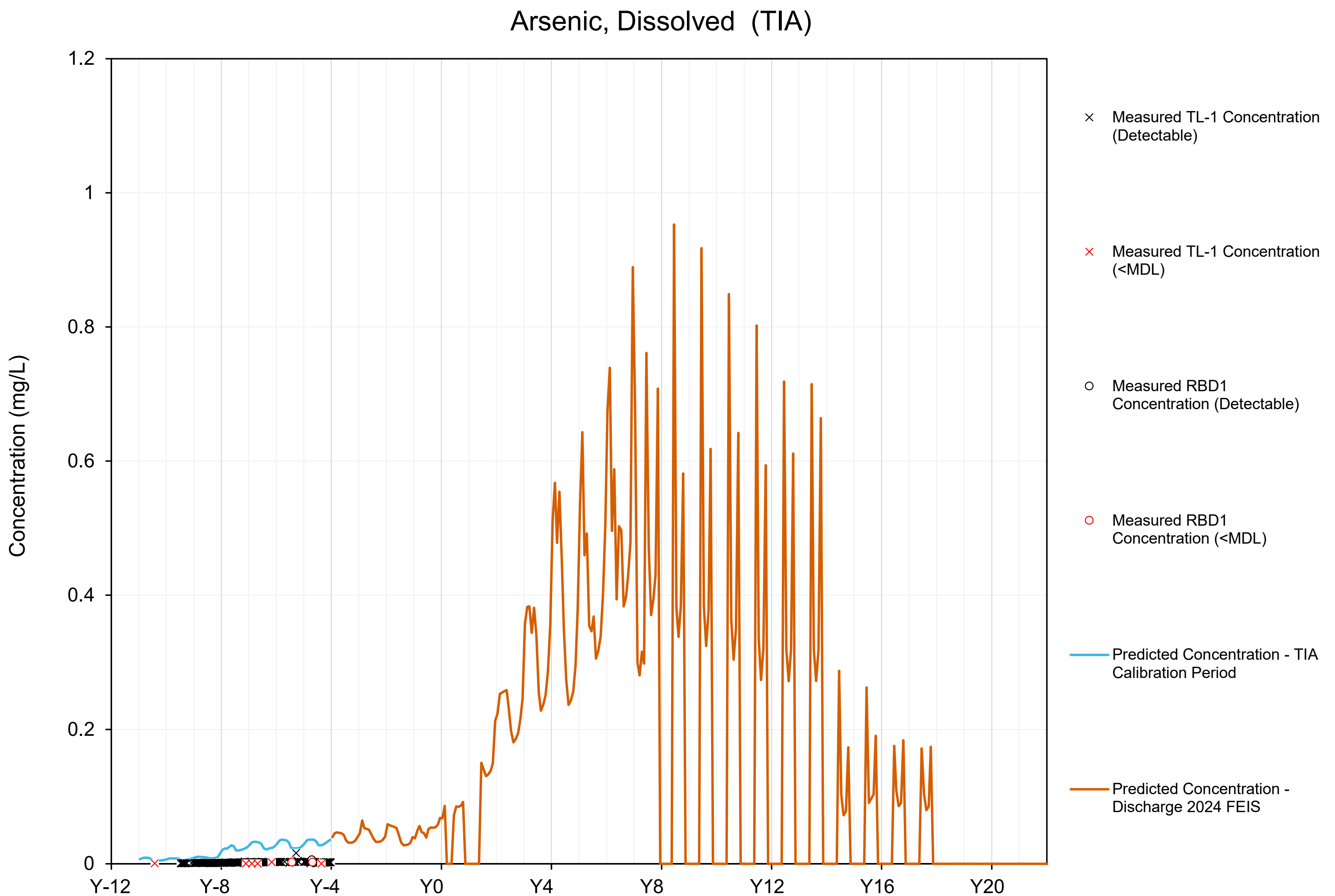

Sulfate (TIA)
Concentration (mg/L)
1600
1400
1200
1000
800
600
400
200
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

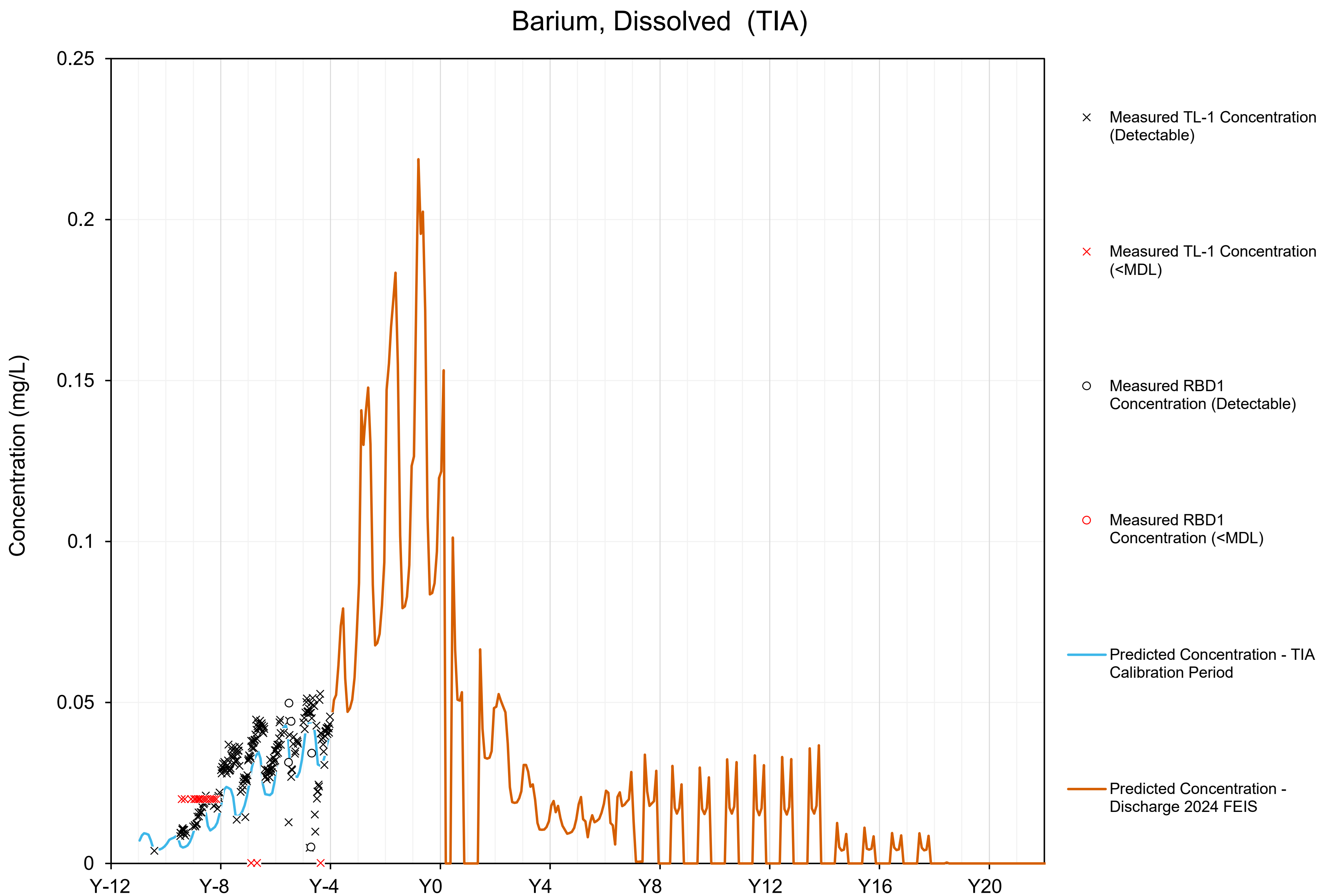

Alkalinity, Total (TIA)
Concentration (mg/L)
350
300
250
200
150
100
50
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

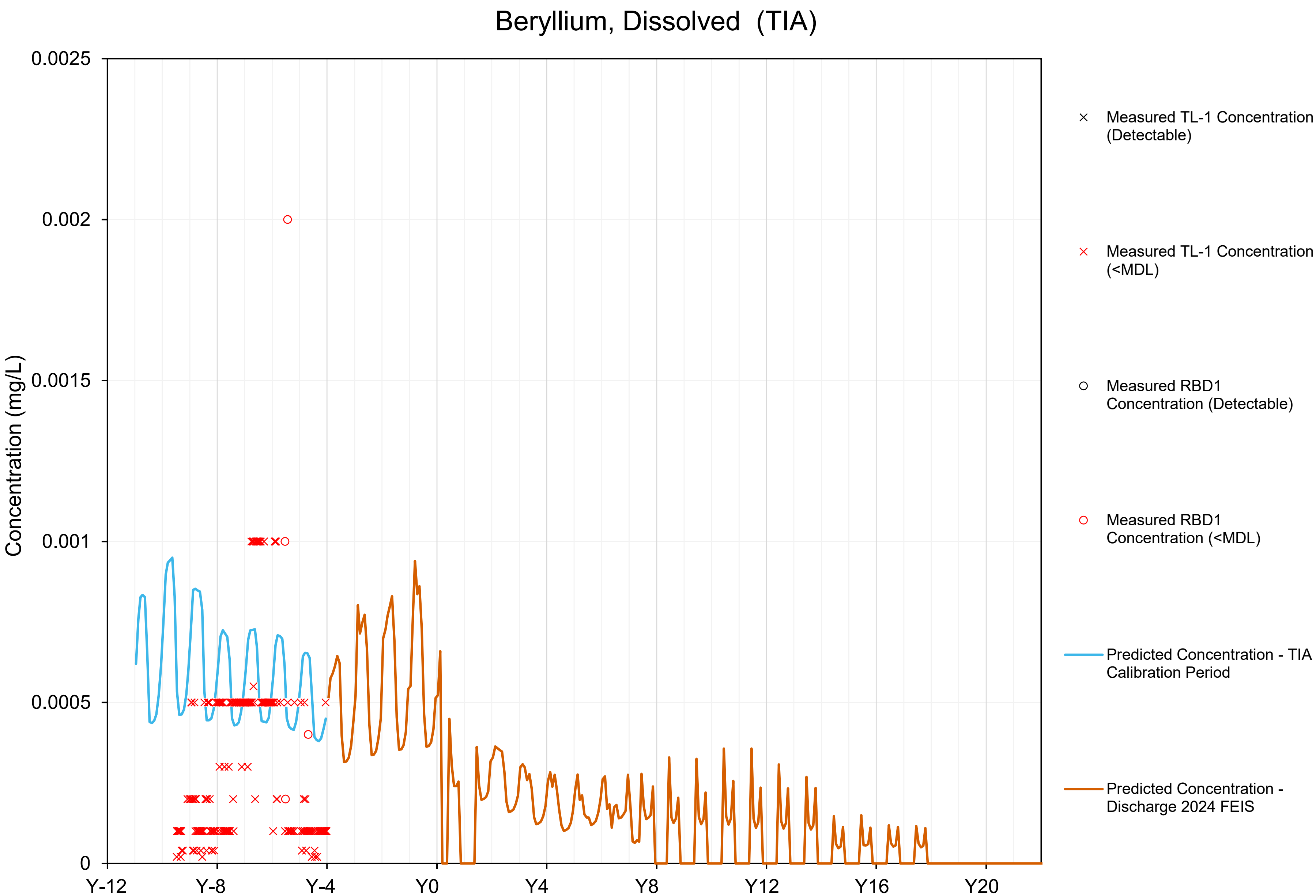

Hardness (TIA)
Concentration (mg/L)
14000
12000
10000
8000
6000
4000
2000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

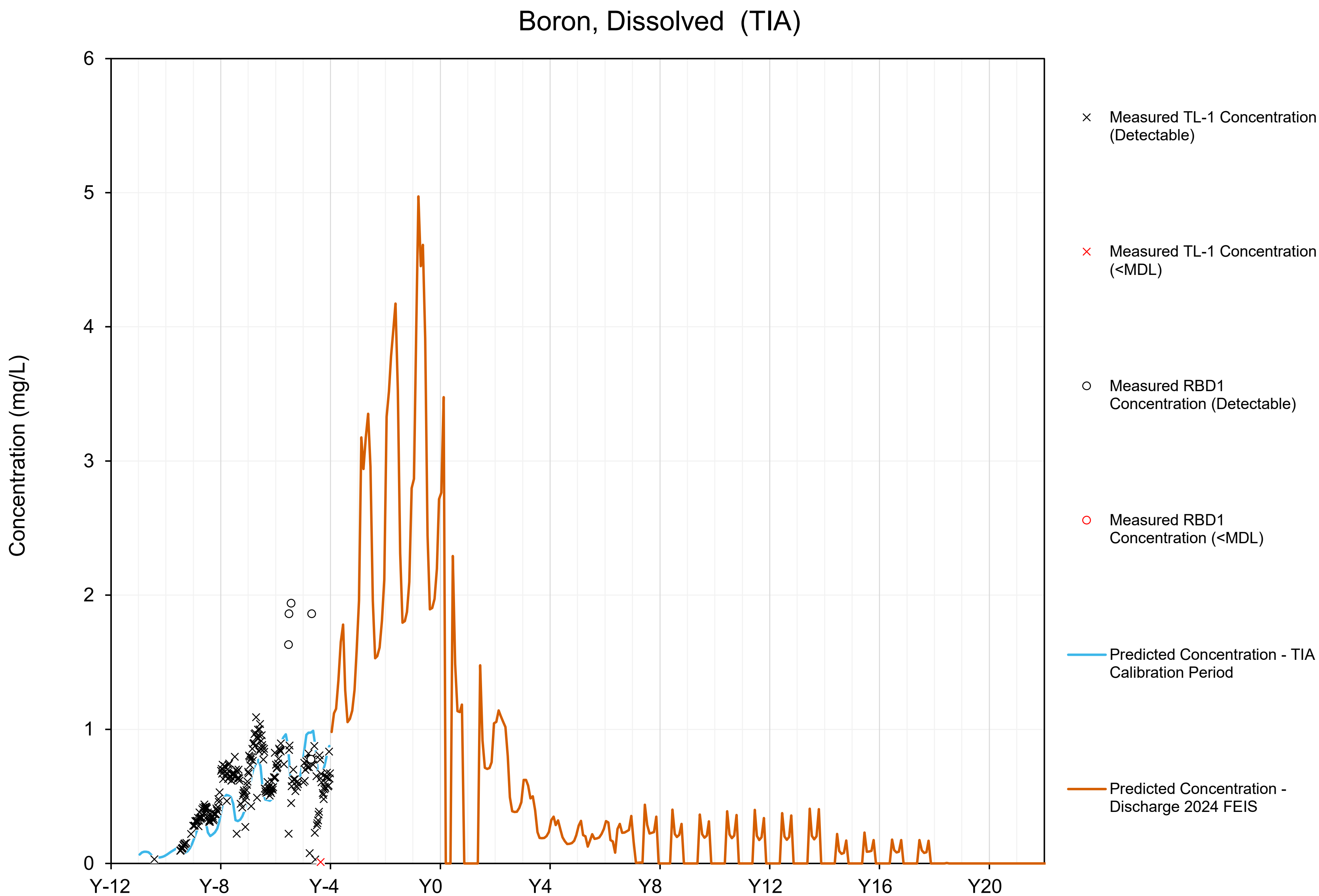

Aluminum, Dissolved (TIA)
Concentration (mg/L)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

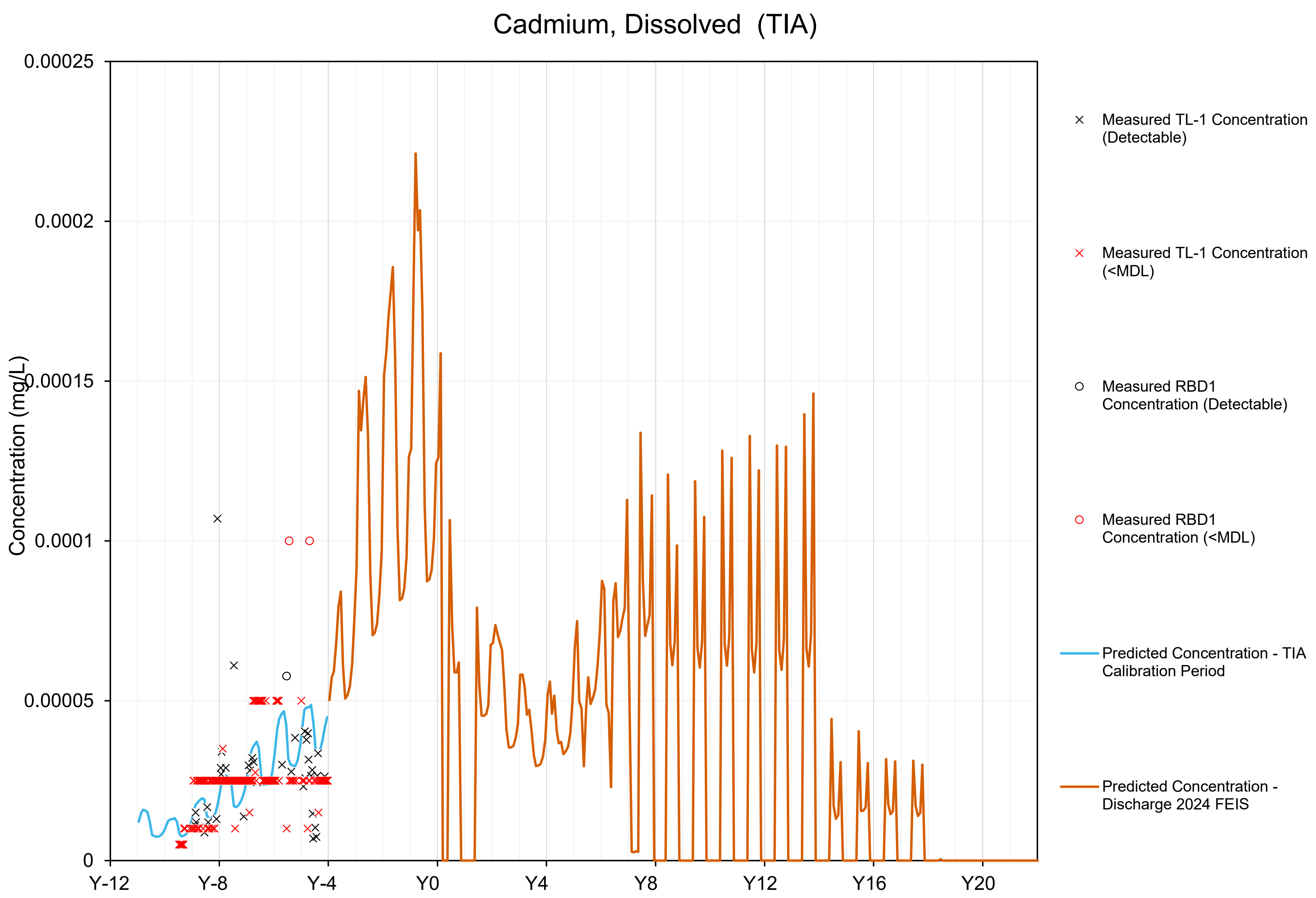

Antimony, Dissolved (TIA)
Concentration (mg/L)
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

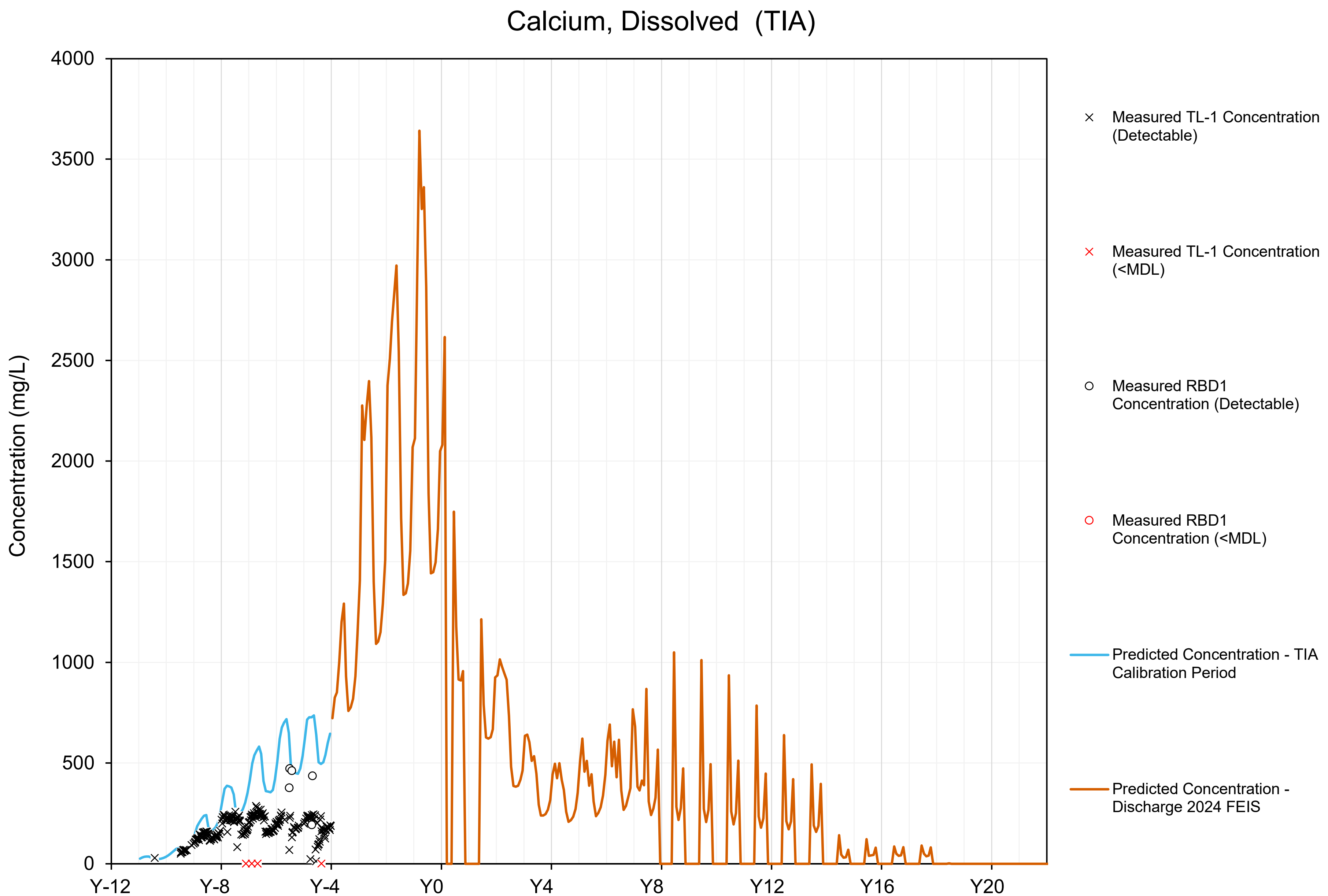

Arsenic, Dissolved (TIA)
Concentration (mg/L)
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

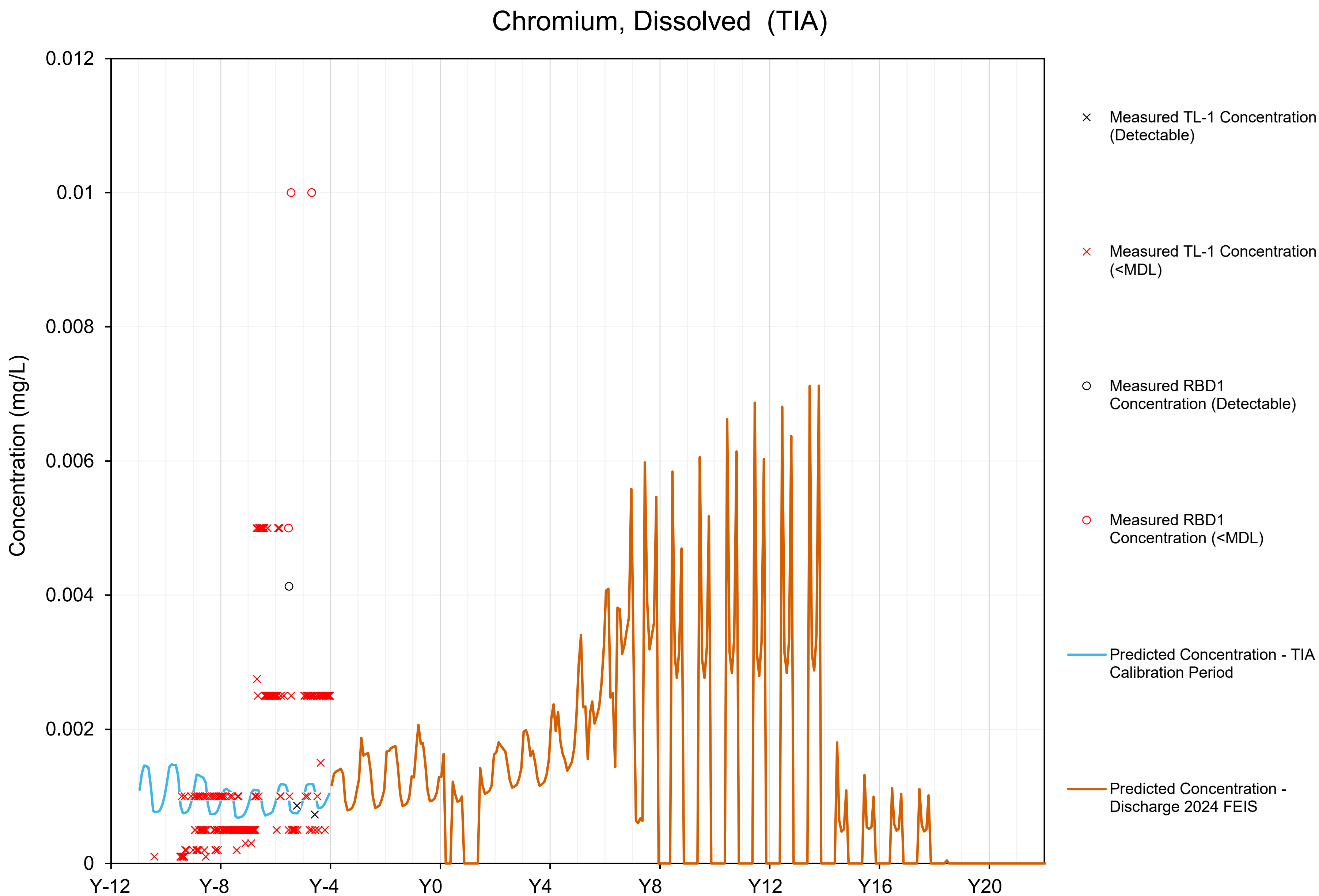

Barium, Dissolved (TIA)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

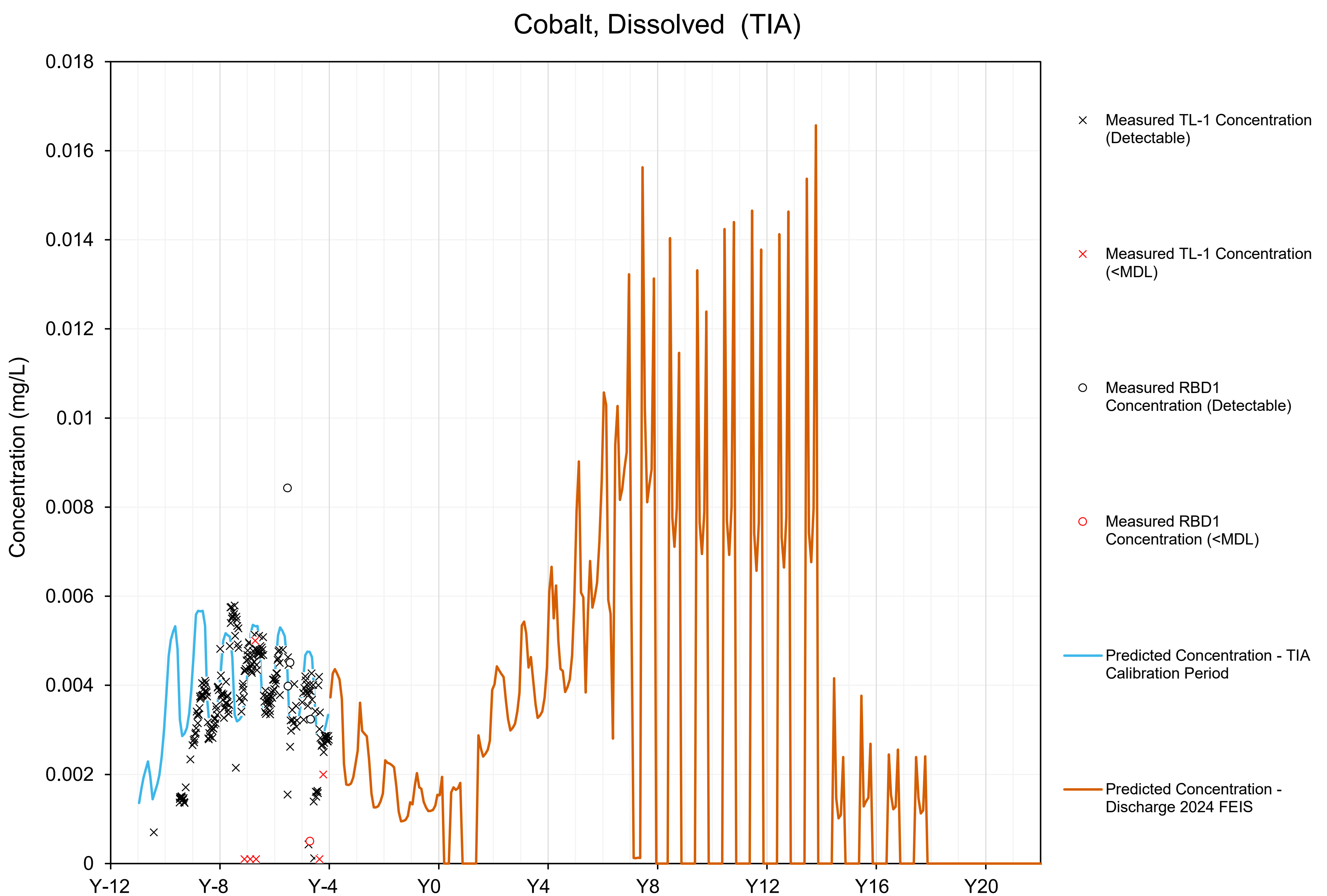

Beryllium, Dissolved (TIA)
Concentration (mg/L)
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

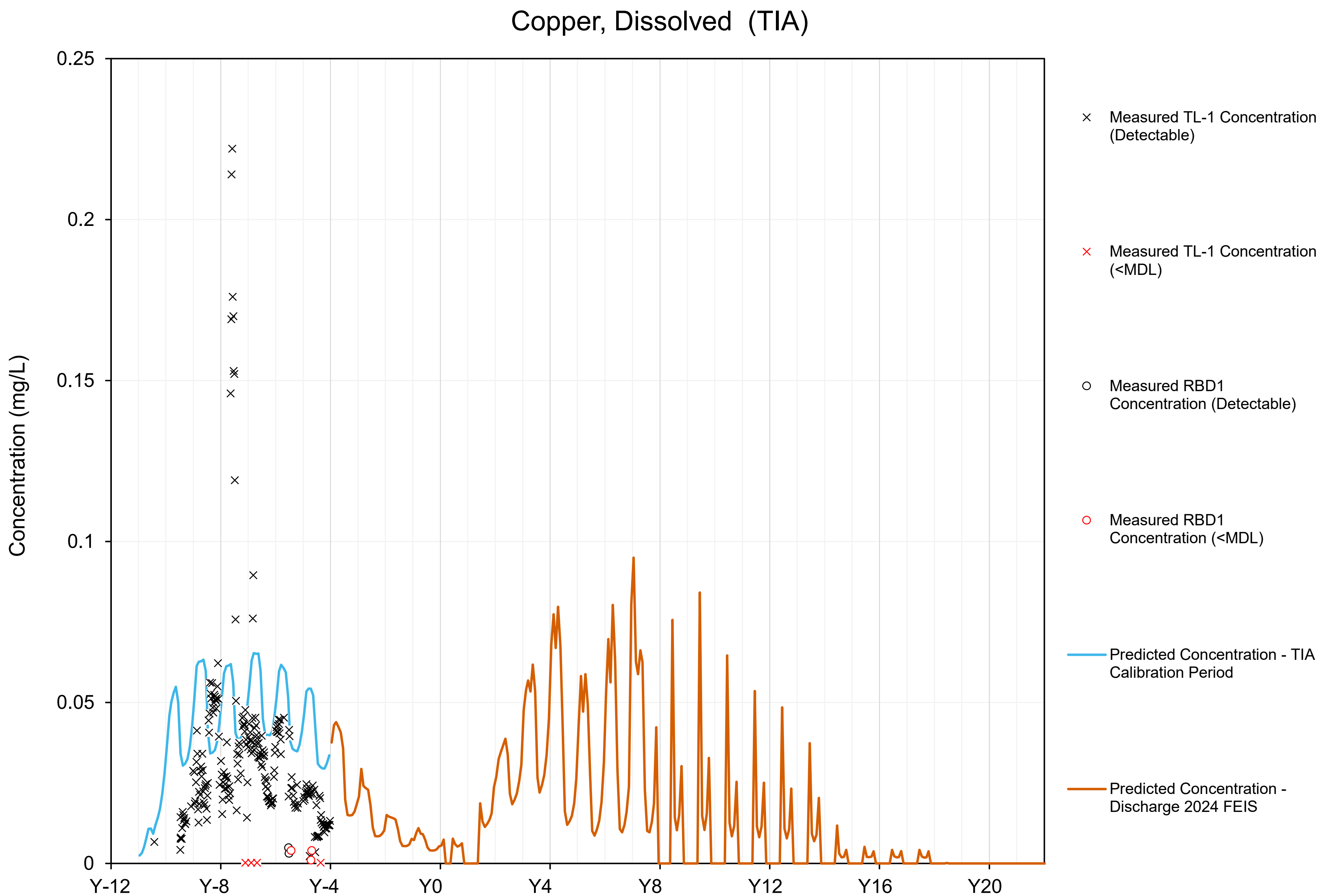

Boron, Dissolved (TIA)
Concentration (mg/L)
0
1
2
3
4
5
6
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

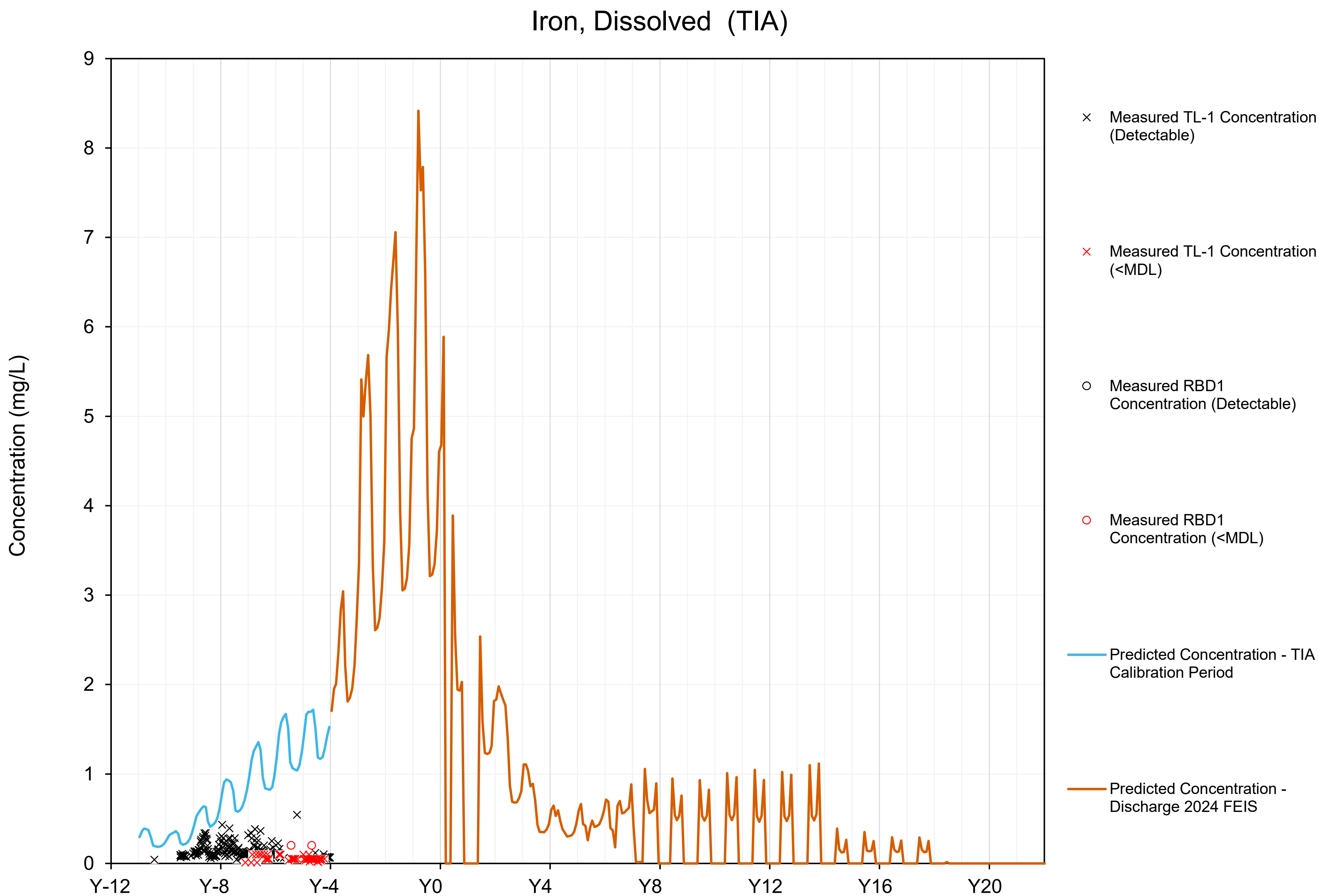

Cadmium, Dissolved (TIA)
Concentration (mg/L)
0.00025
0.0002
0.00015
0.0001
0.00005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

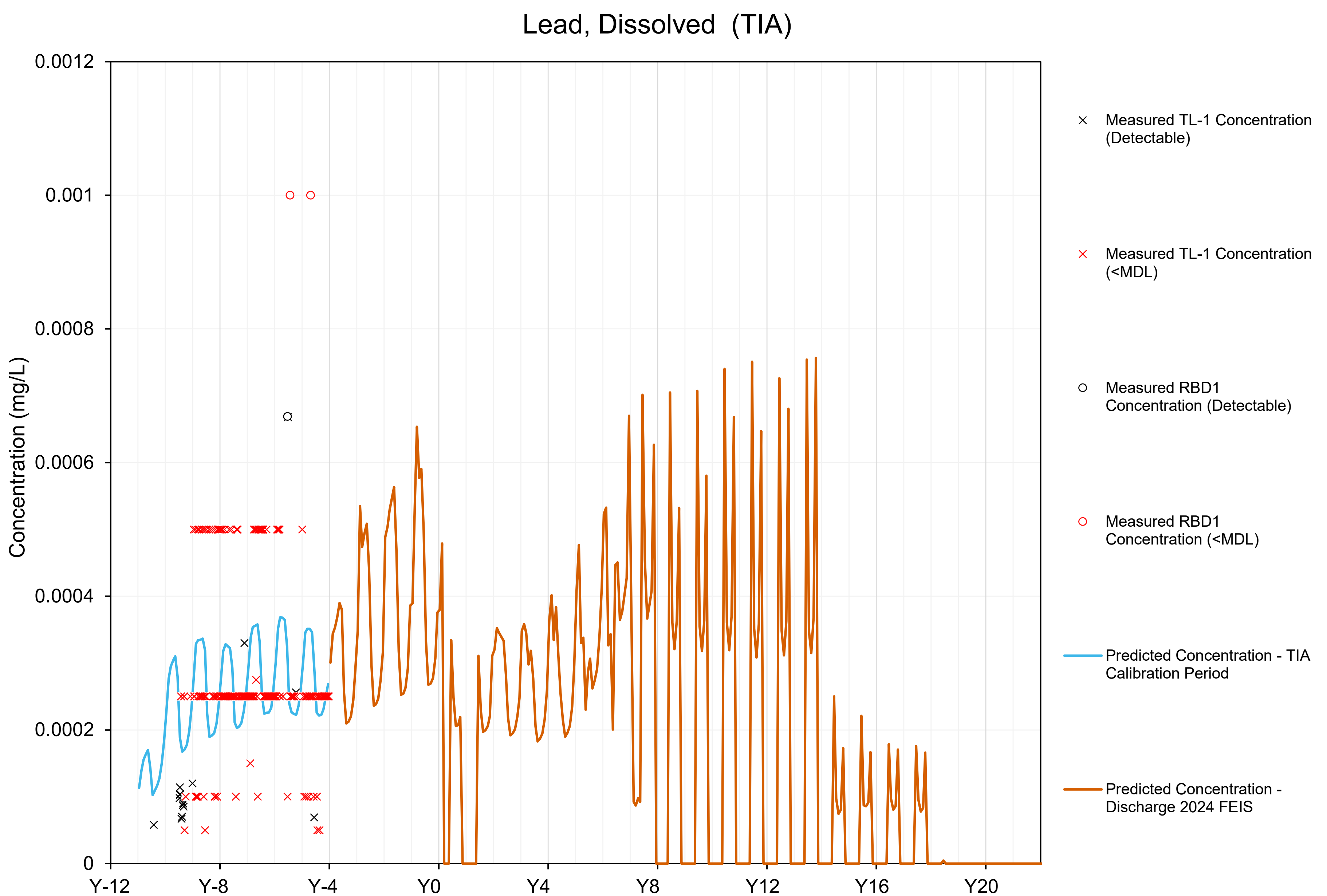

Calcium, Dissolved (TIA)
Concentration (mg/L)
4000
3500
3000
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

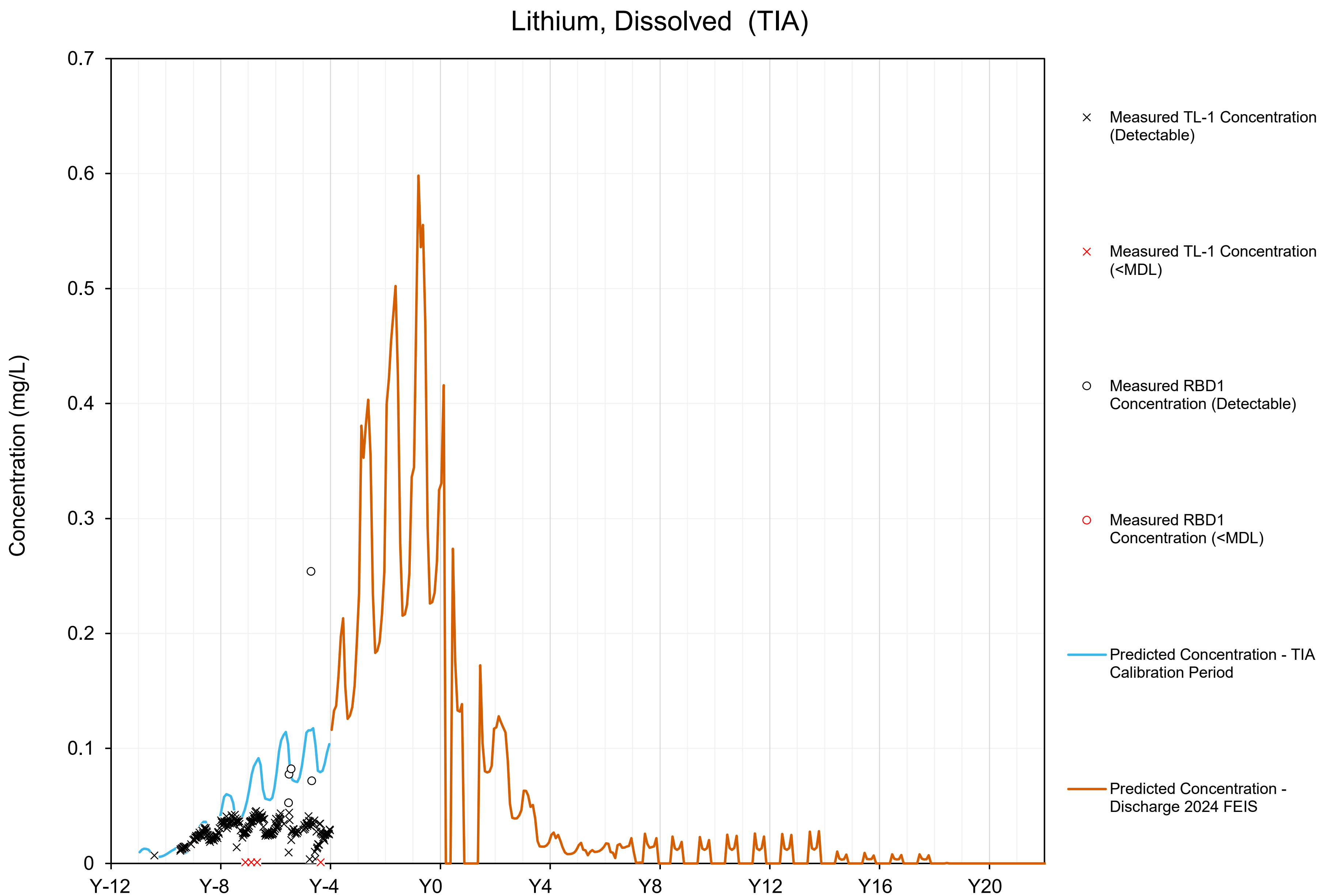

Chromium, Dissolved (TIA)
Concentration (mg/L)
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

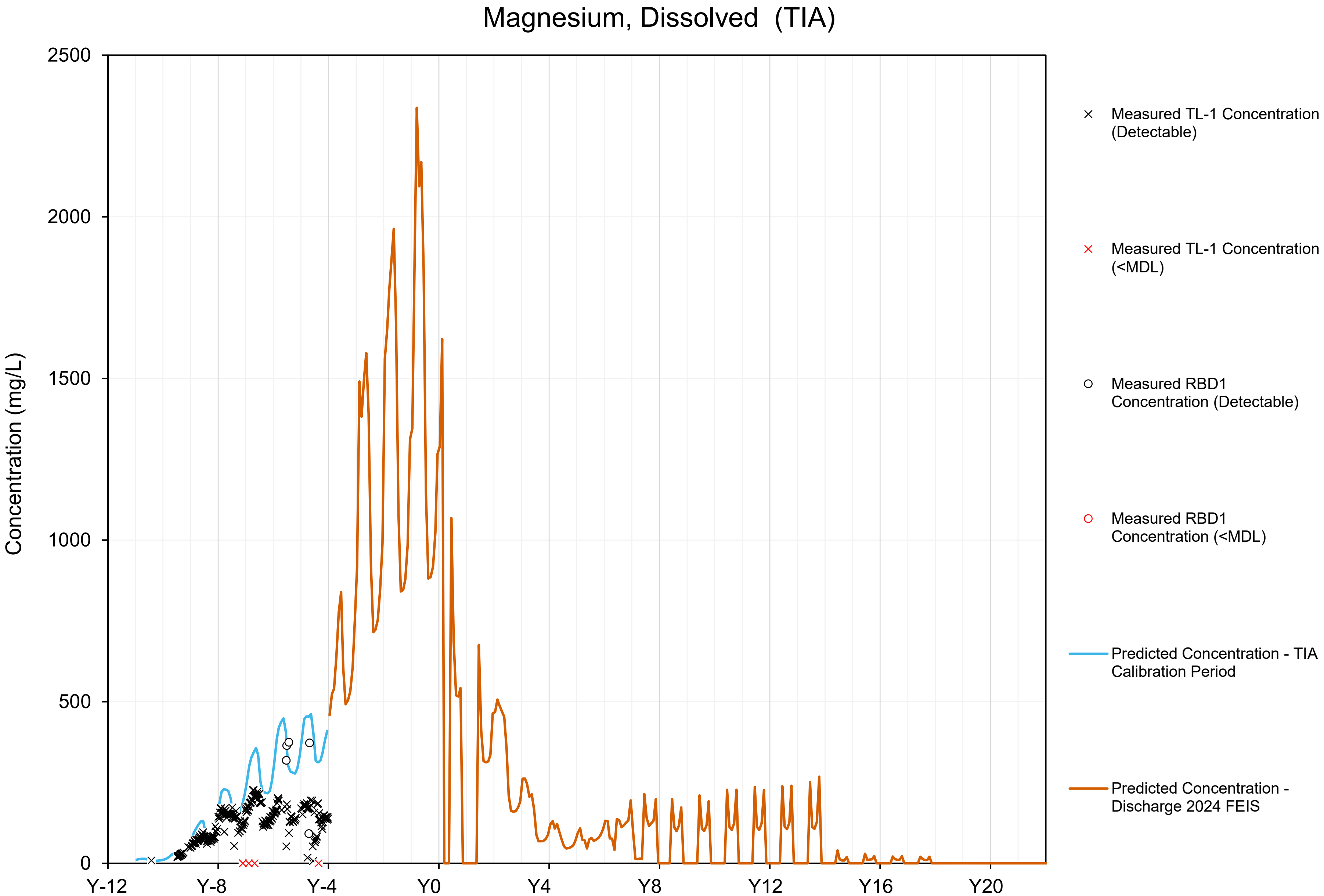

Cobalt, Dissolved (TIA)
Concentration (mg/L)
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

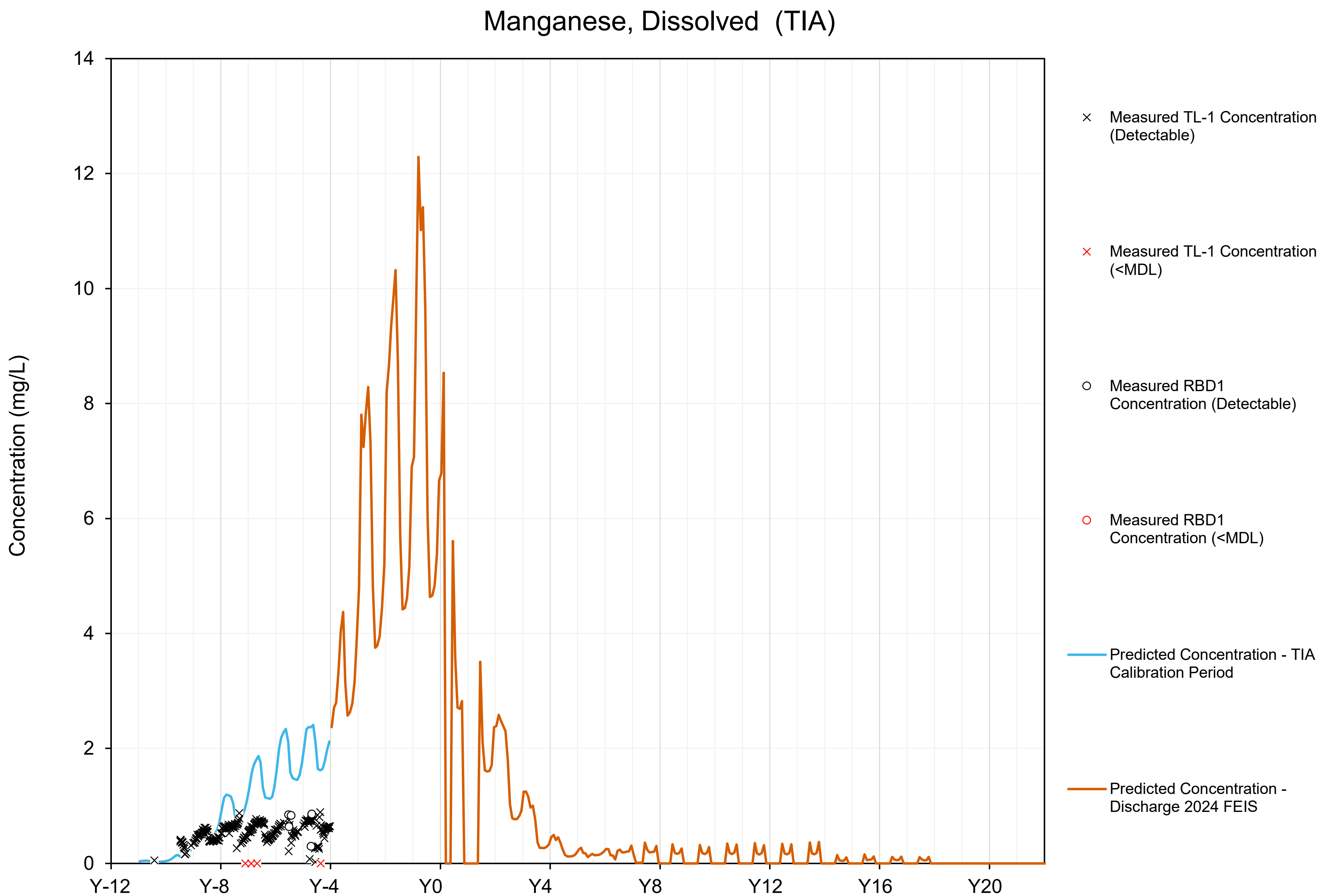

Copper, Dissolved (TIA)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

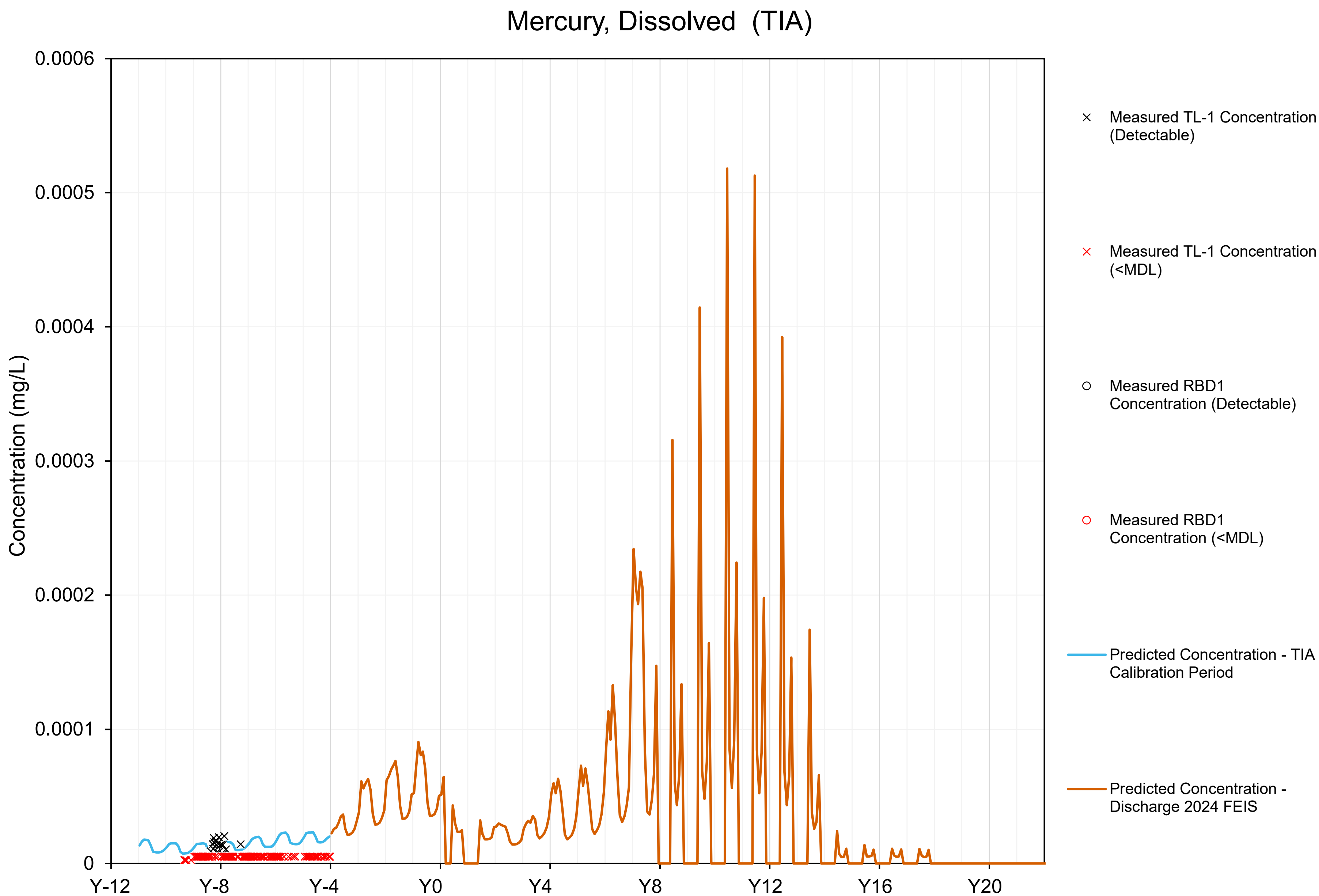

Iron, Dissolved (TIA)
Concentration (mg/L)
0
1
2
3
4
5
6
7
8
9
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

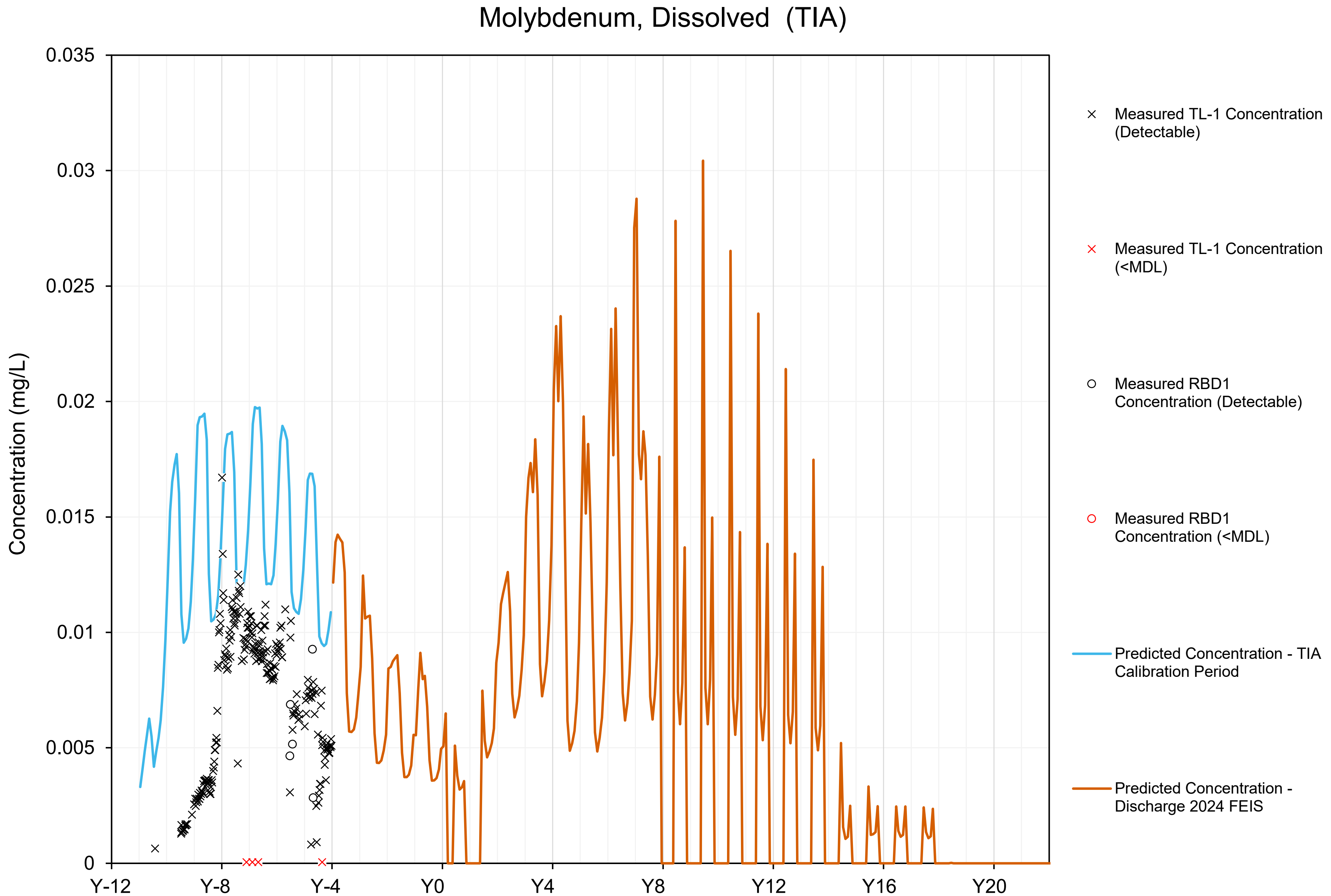

Lead, Dissolved (TIA)
Concentration (mg/L)
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

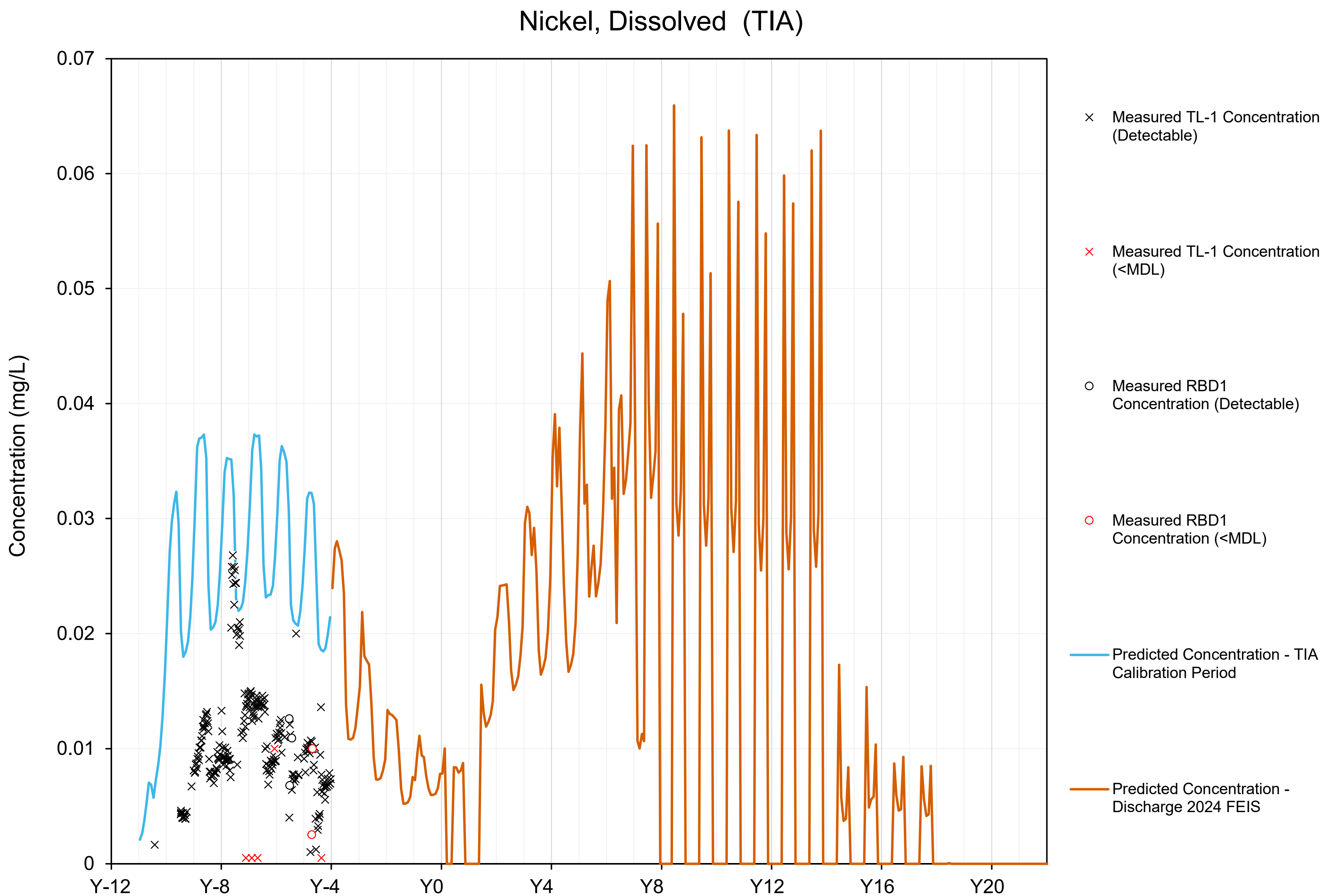

Lithium, Dissolved (TIA)
Concentration (mg/L)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

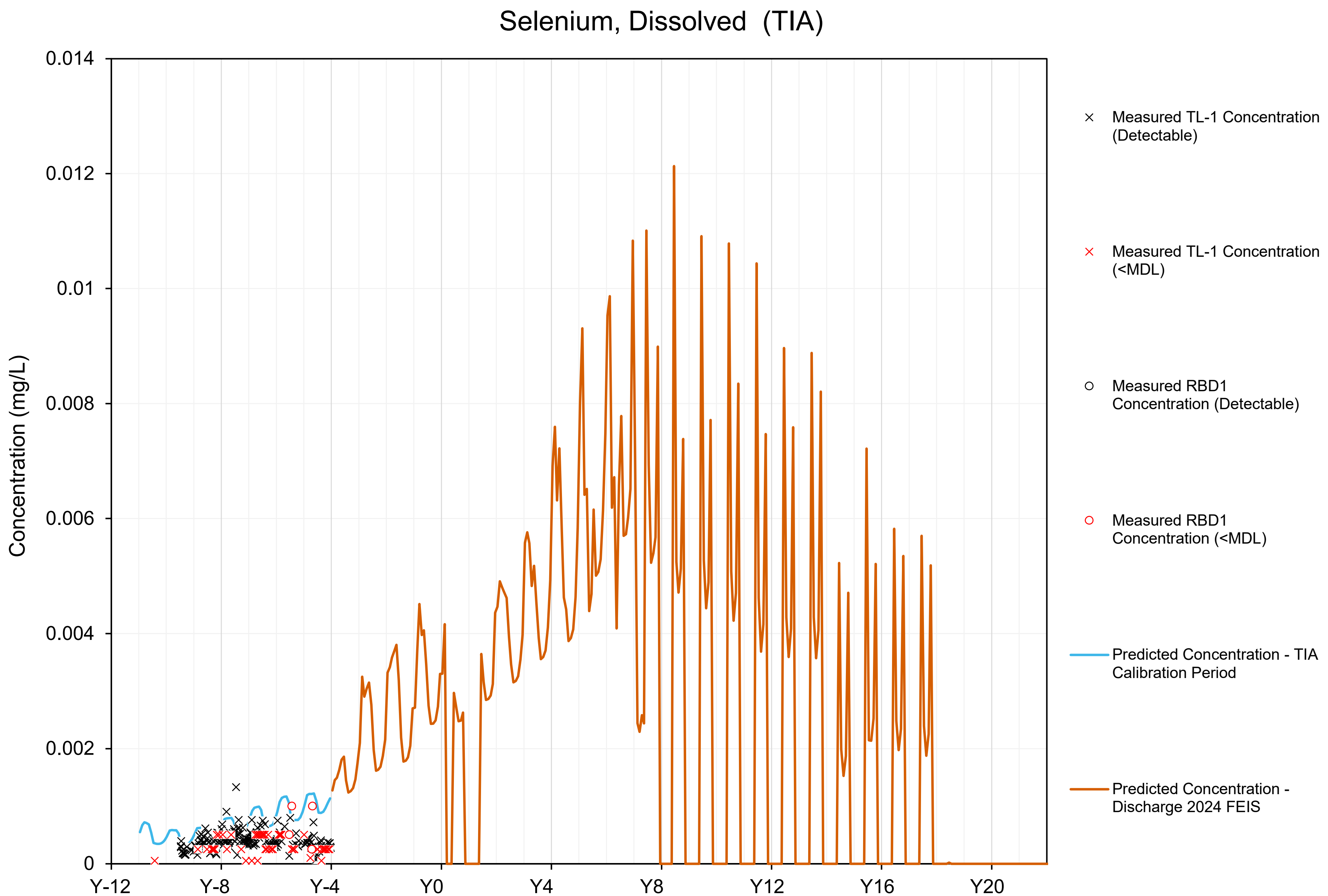

Magnesium, Dissolved (TIA)
Concentration (mg/L)
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

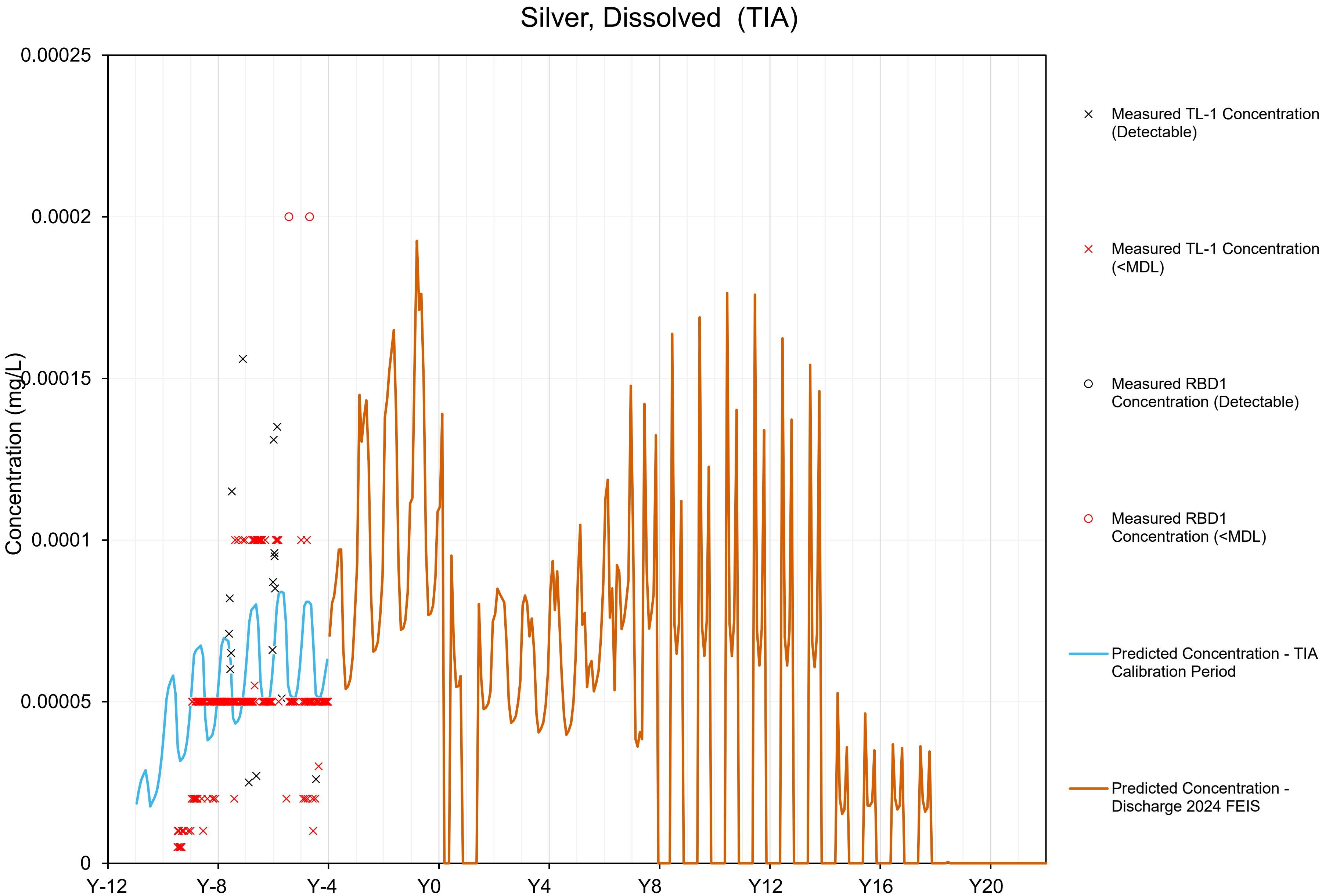

Manganese, Dissolved (TIA)
Concentration (mg/L)
14
12
10
8
6
4
2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

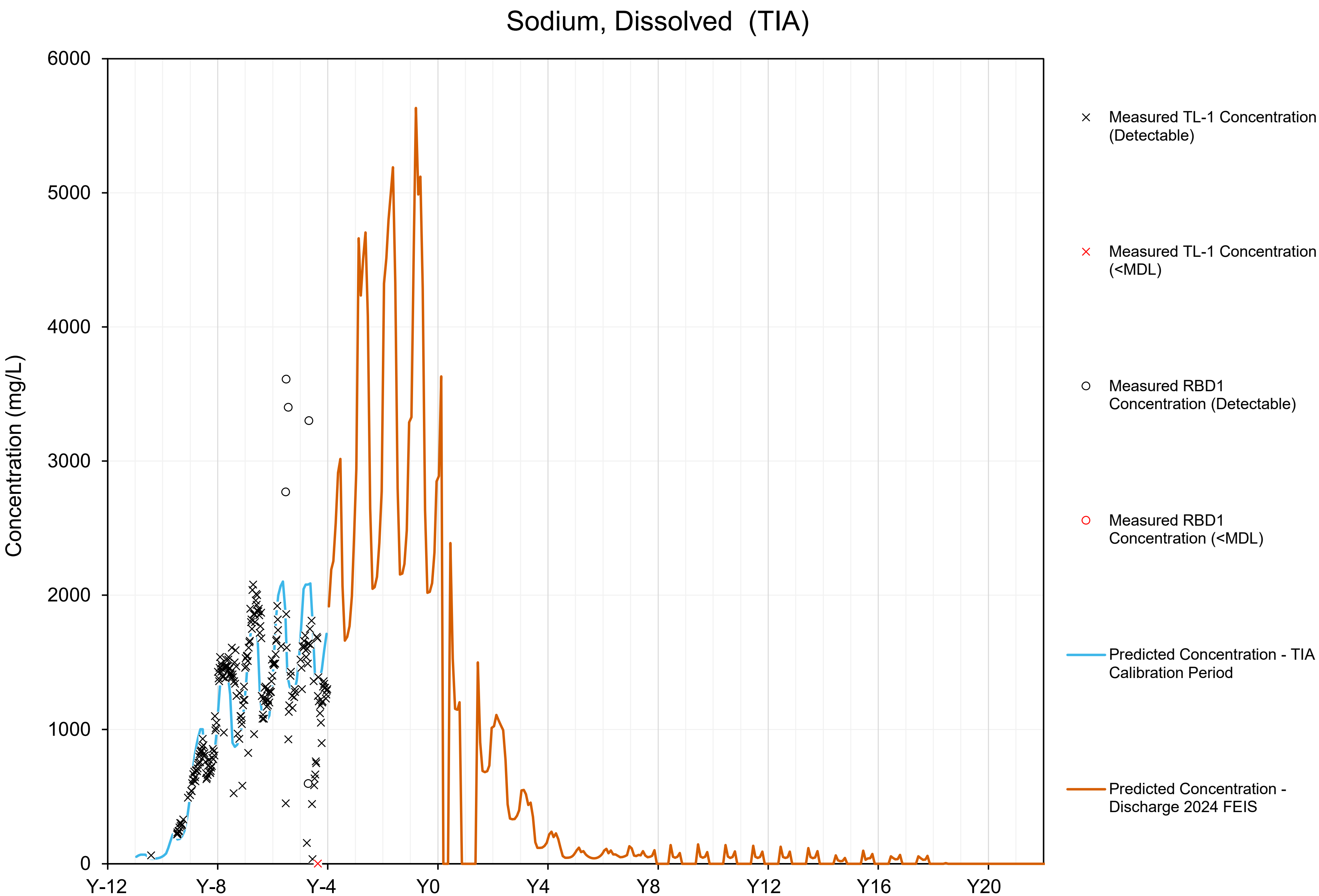

Mercury, Dissolved (TIA)
Concentration (mg/L)
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

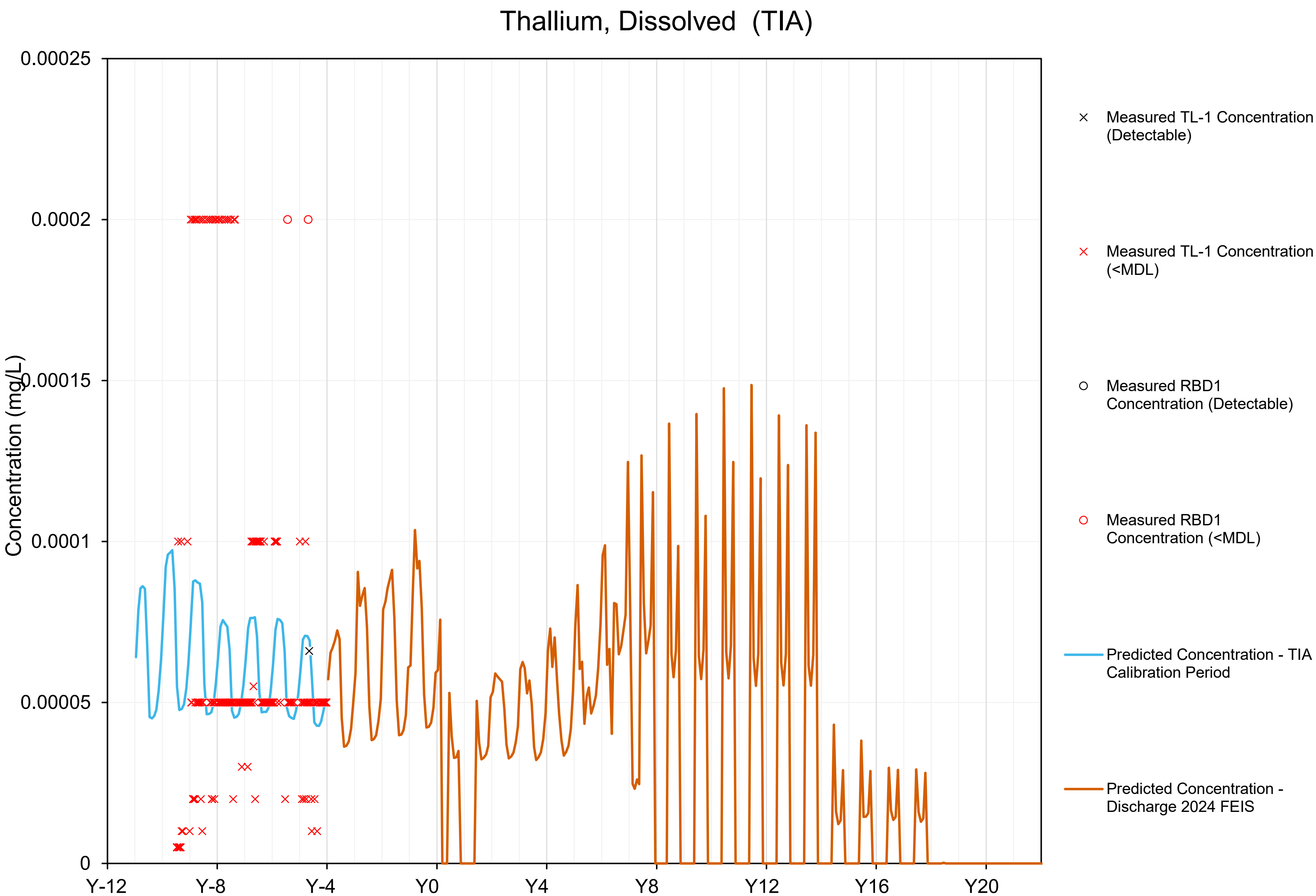

Molybdenum, Dissolved (TIA)
Concentration (mg/L)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

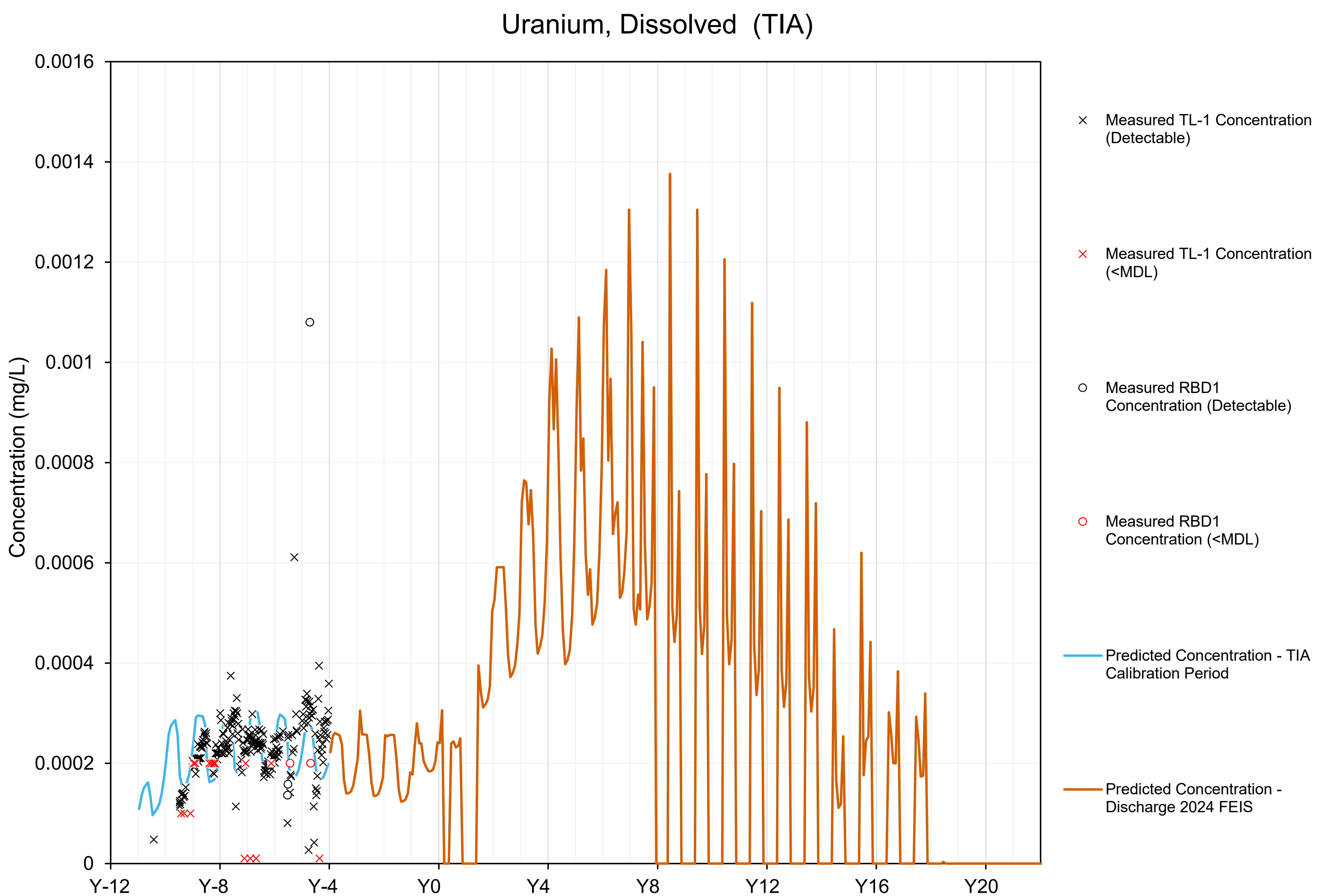

Nickel, Dissolved (TIA)
Concentration (mg/L)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

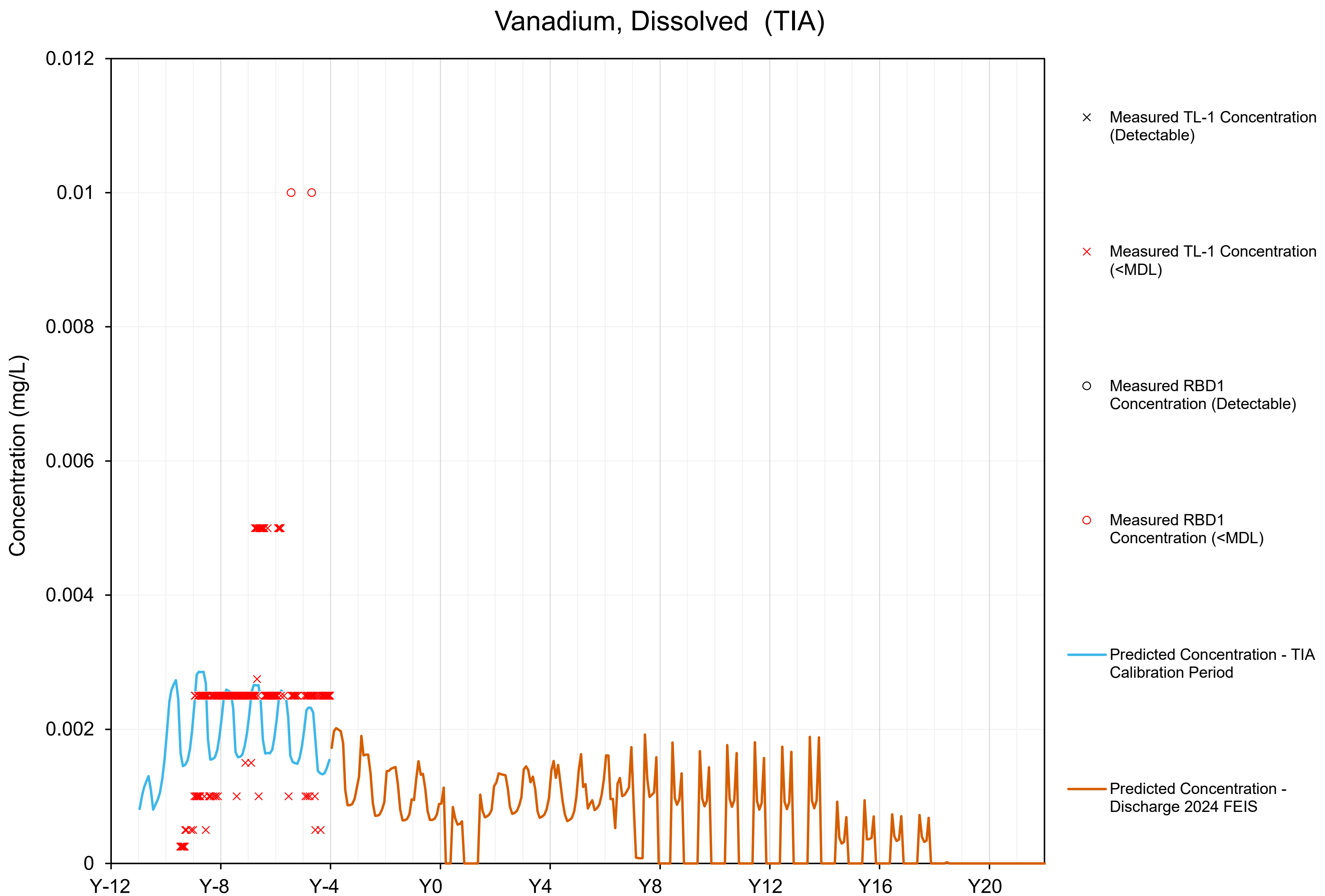

Selenium, Dissolved (TIA)
Concentration (mg/L)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

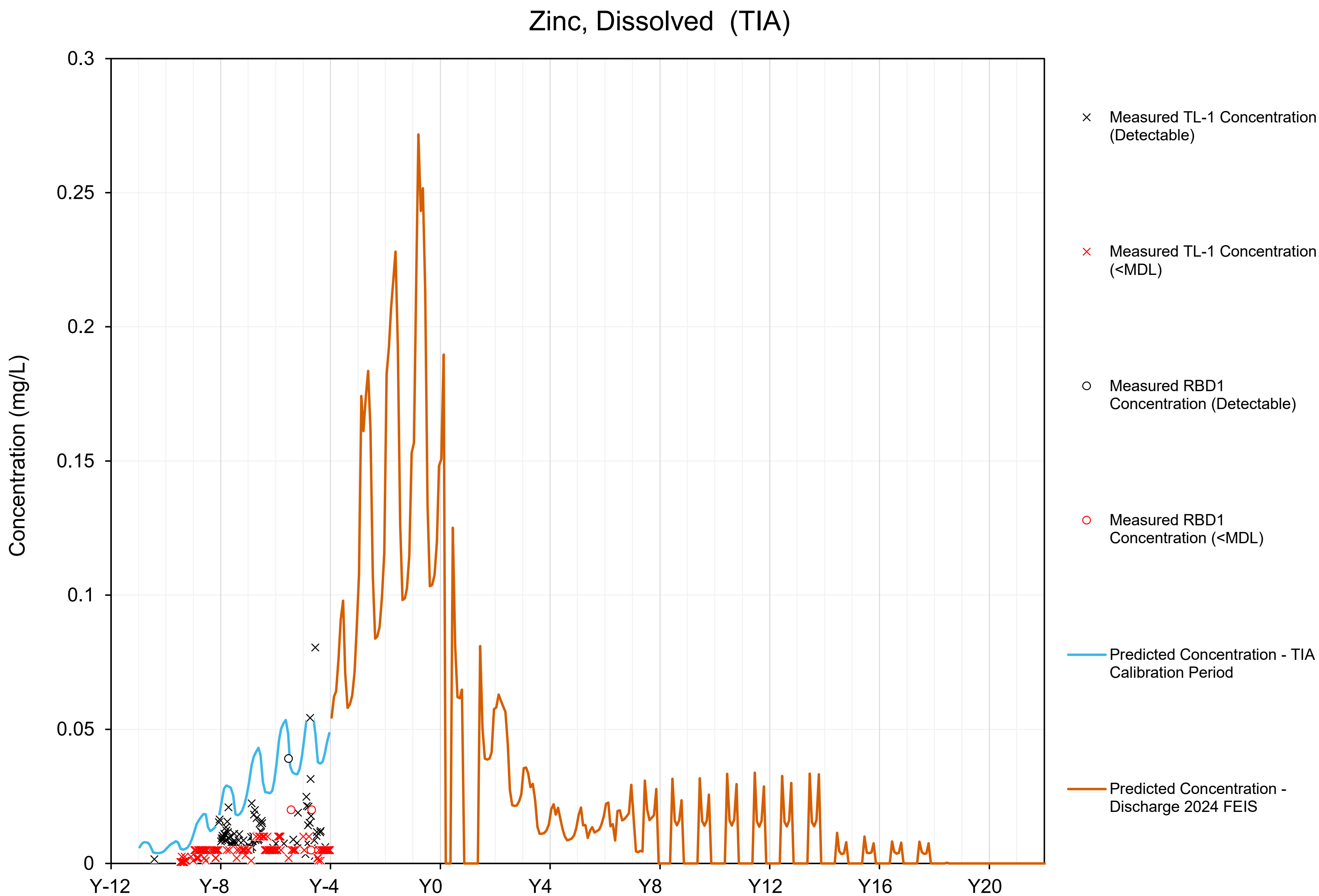

Silver, Dissolved (TIA)
Concentration (mg/L)
0.00025
0.0002
0.00015
0.0001
0.00005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

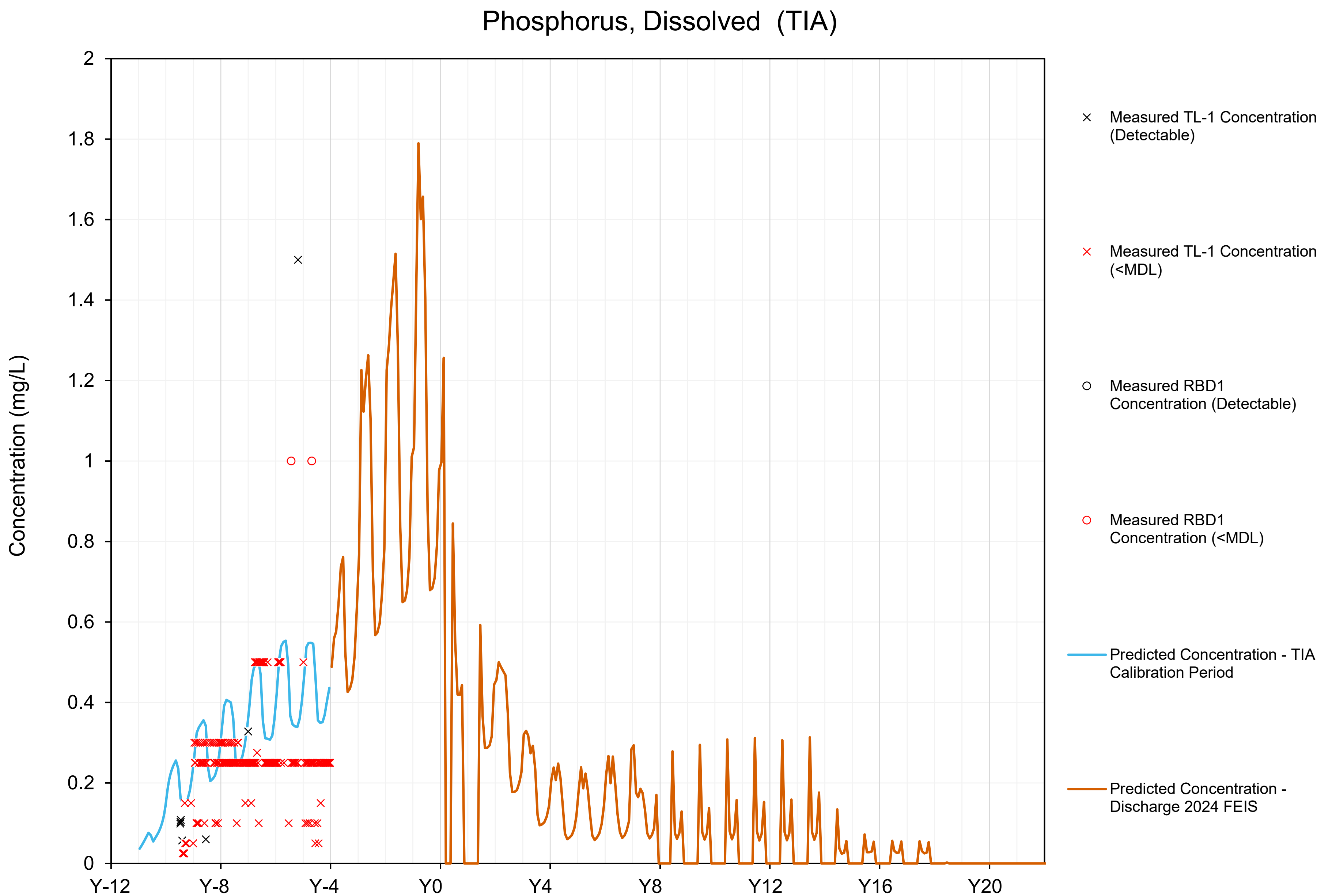

Sodium, Dissolved (TIA)
Concentration (mg/L)
6000
5000
4000
3000
2000
1000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

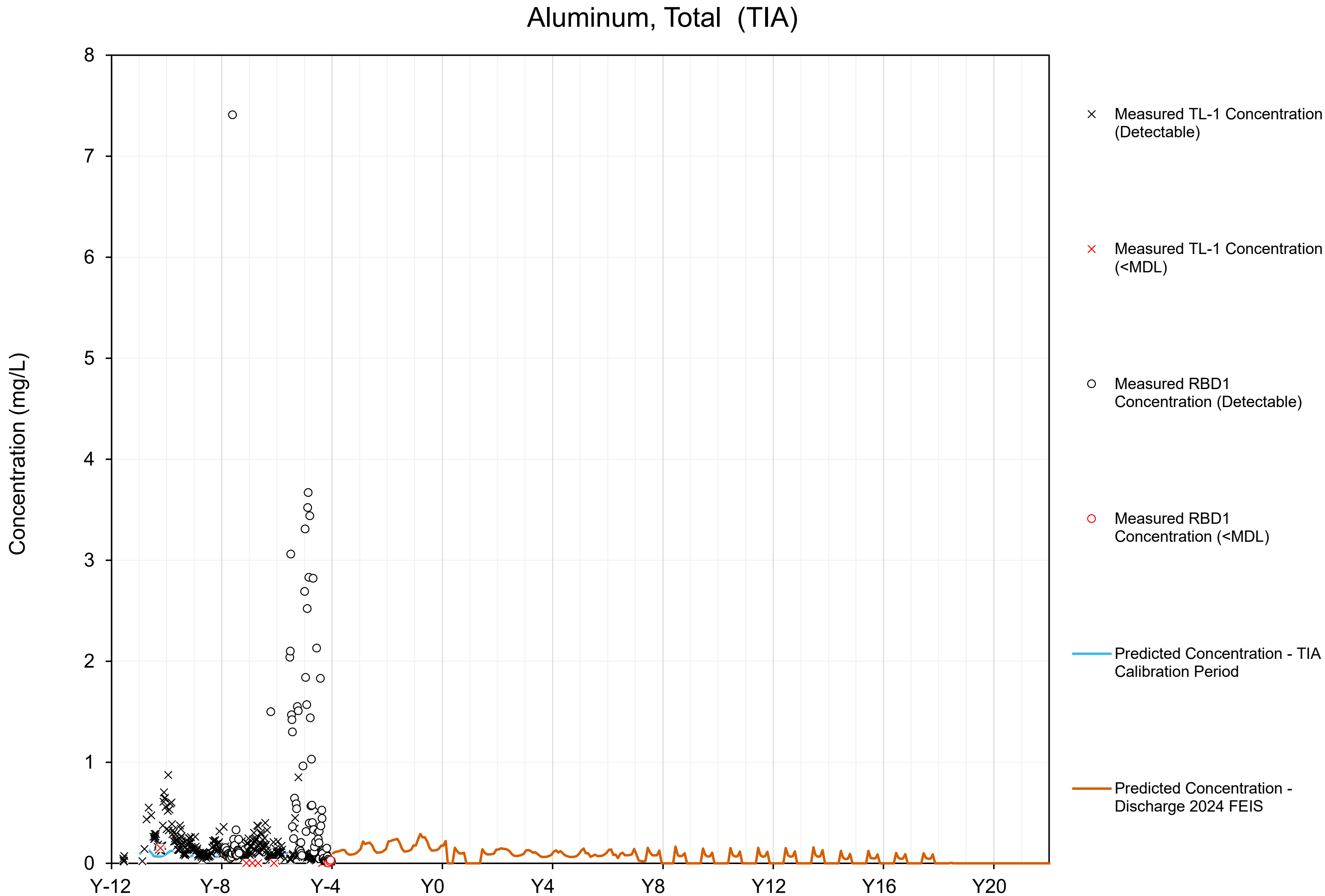

Thallium, Dissolved (TIA)
Concentration (mg/L)
0.00025
0.0002
0.00015
0.0001
0.00005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

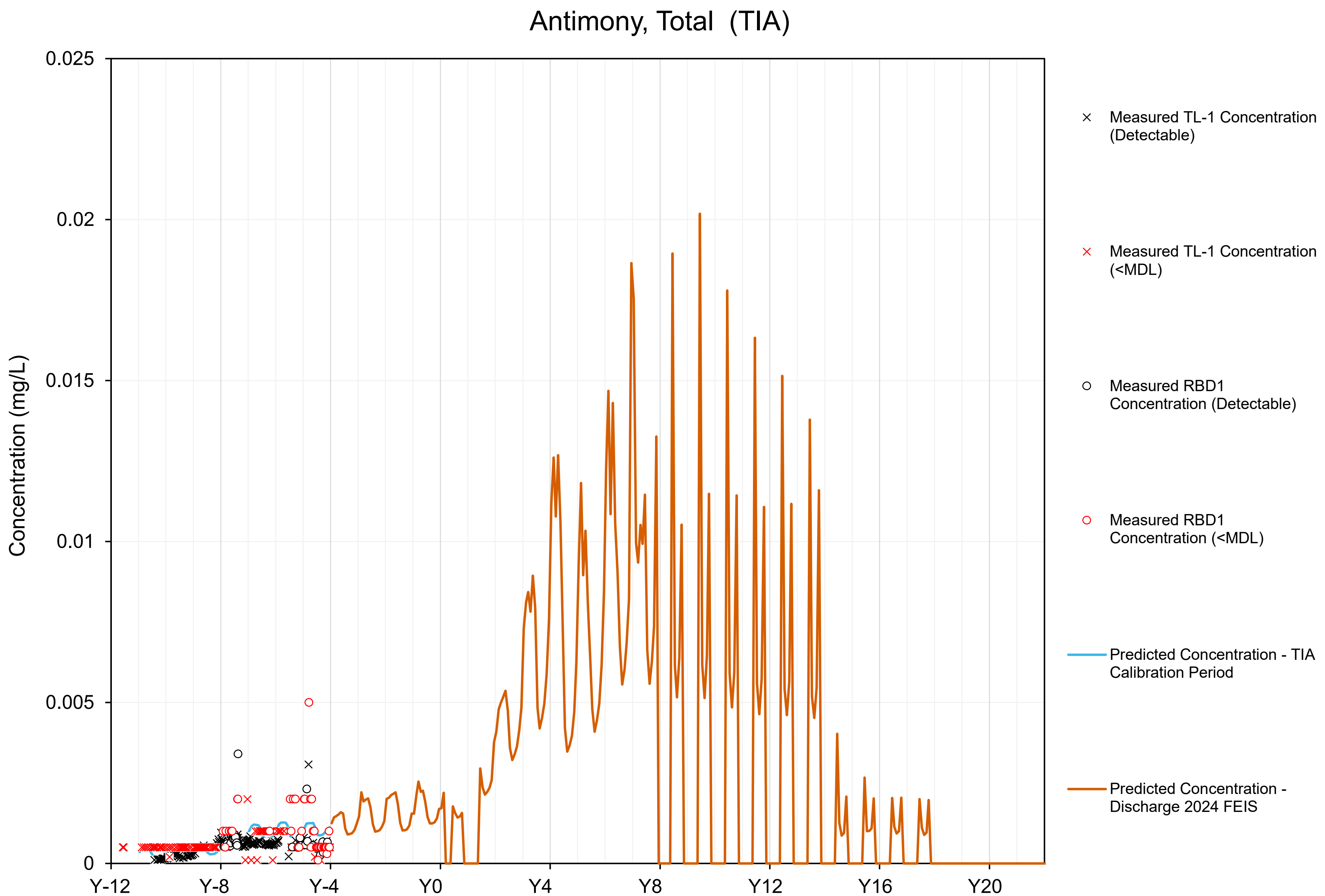

Uranium, Dissolved (TIA)
Concentration (mg/L)
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

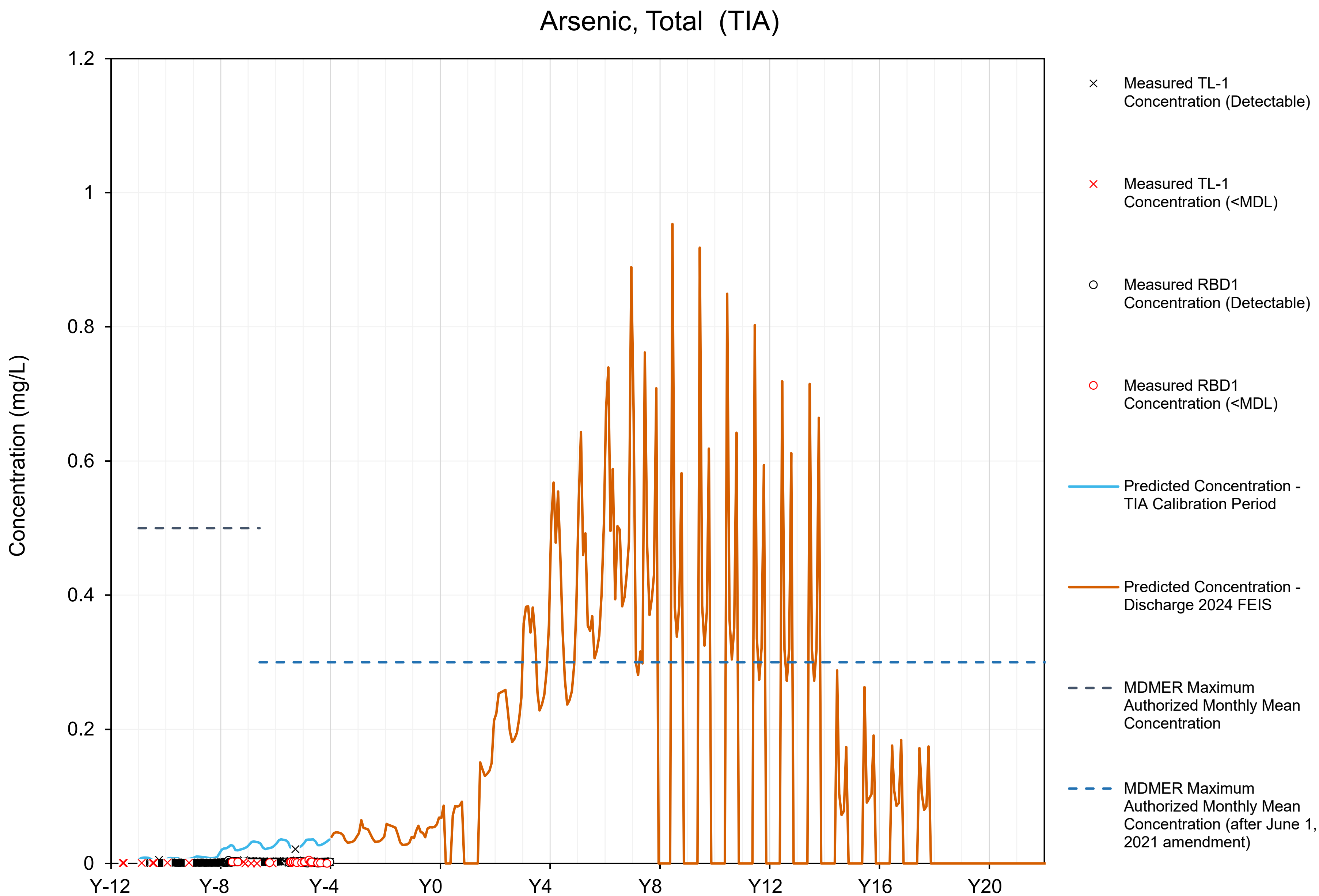

Vanadium, Dissolved (TIA)
Concentration (mg/L)
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

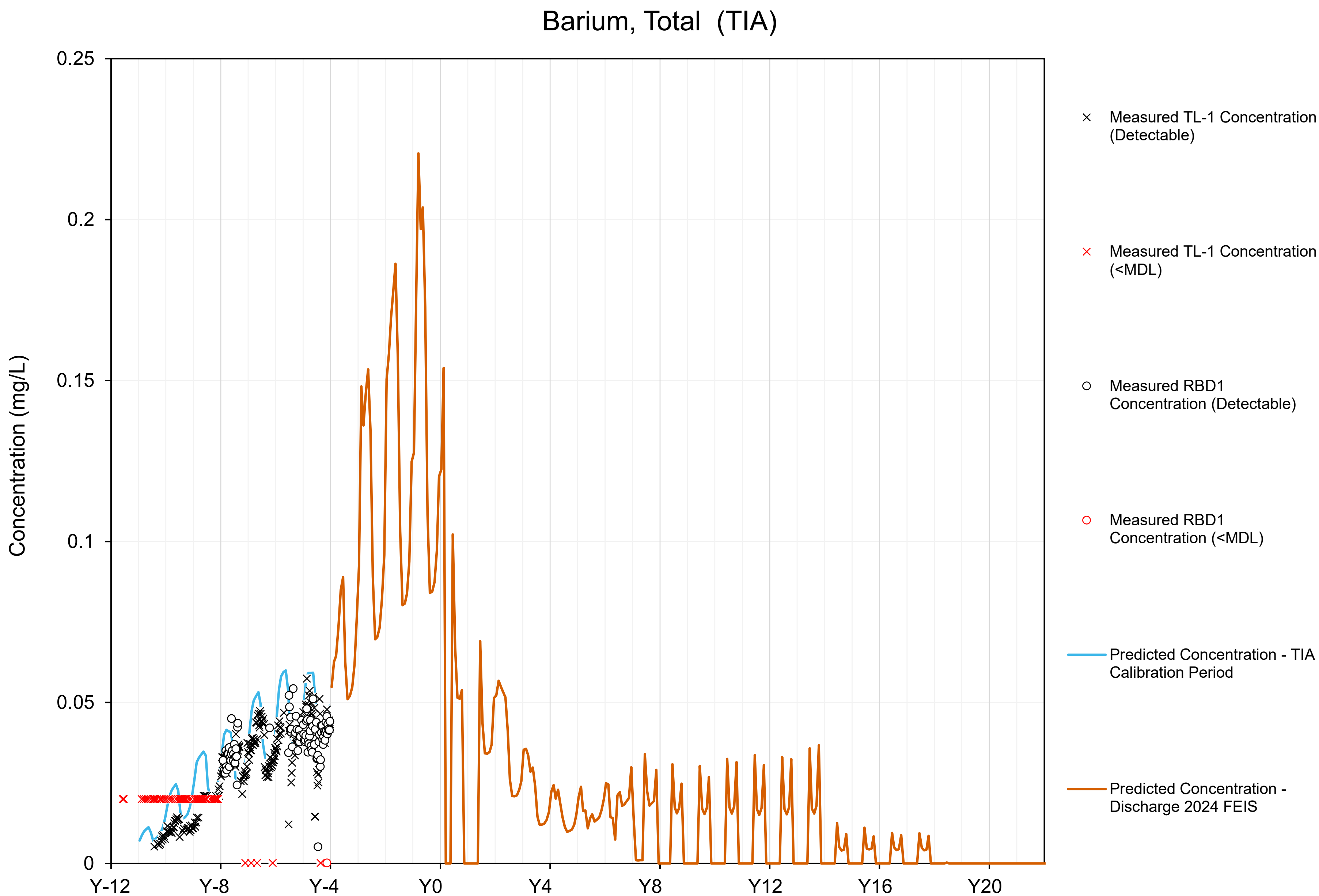

Zinc, Dissolved (TIA)
Concentration (mg/L)
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

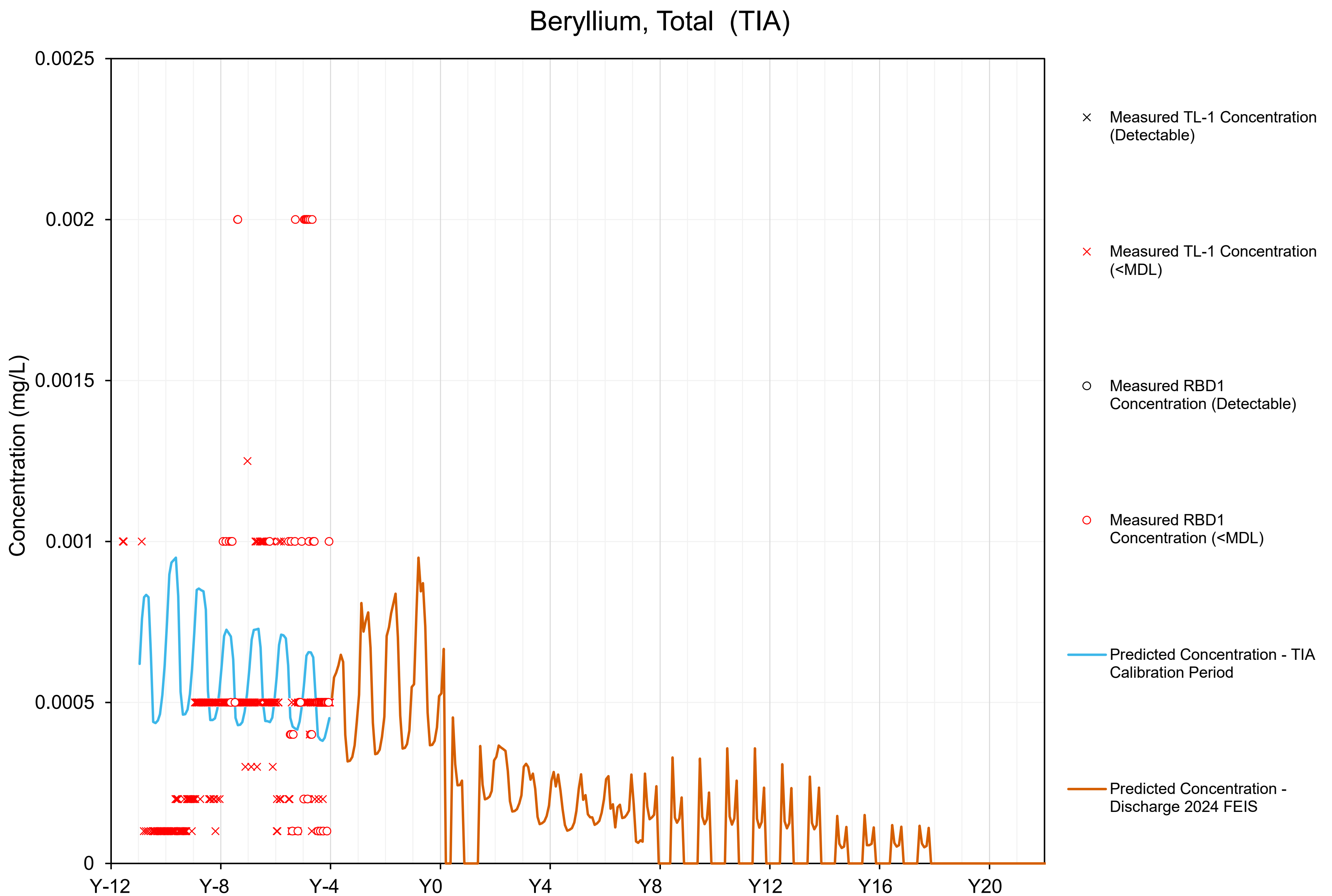

Phosphorus, Dissolved (TIA)
Concentration (mg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

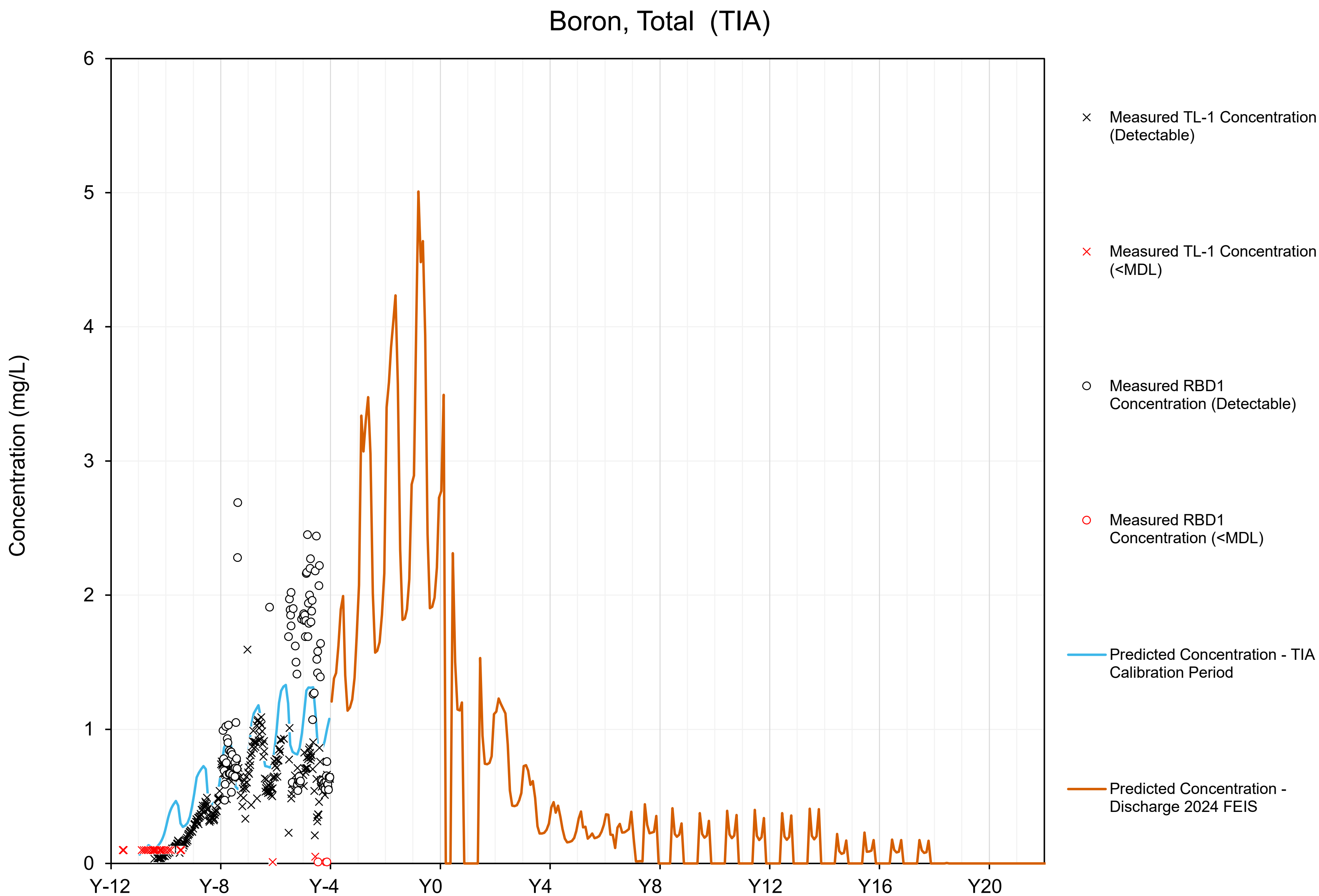

Aluminum, Total (TIA)
Concentration (mg/L)
8
7
6
5
4
3
2
1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

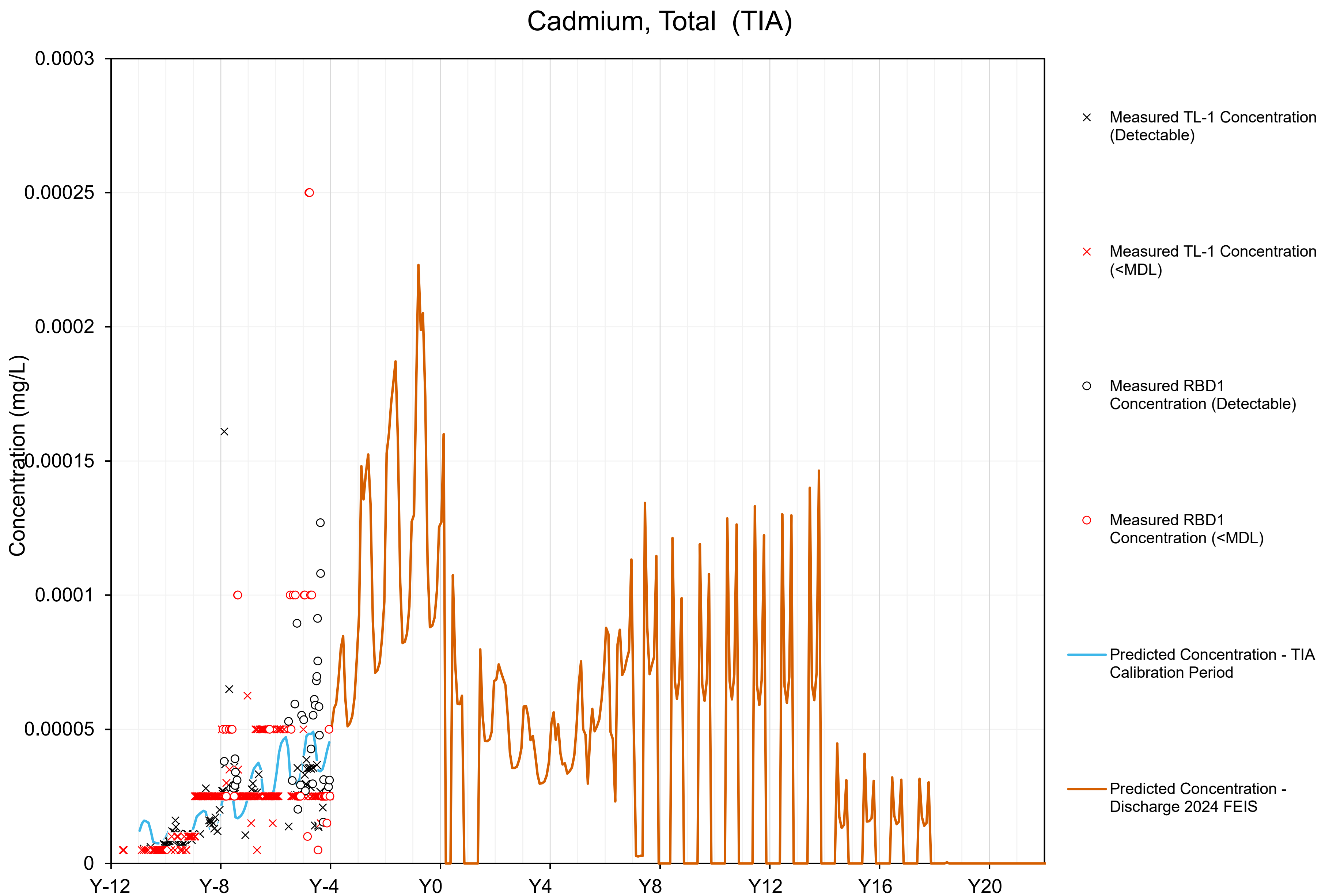

Antimony, Total (TIA)
Concentration (mg/L)
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

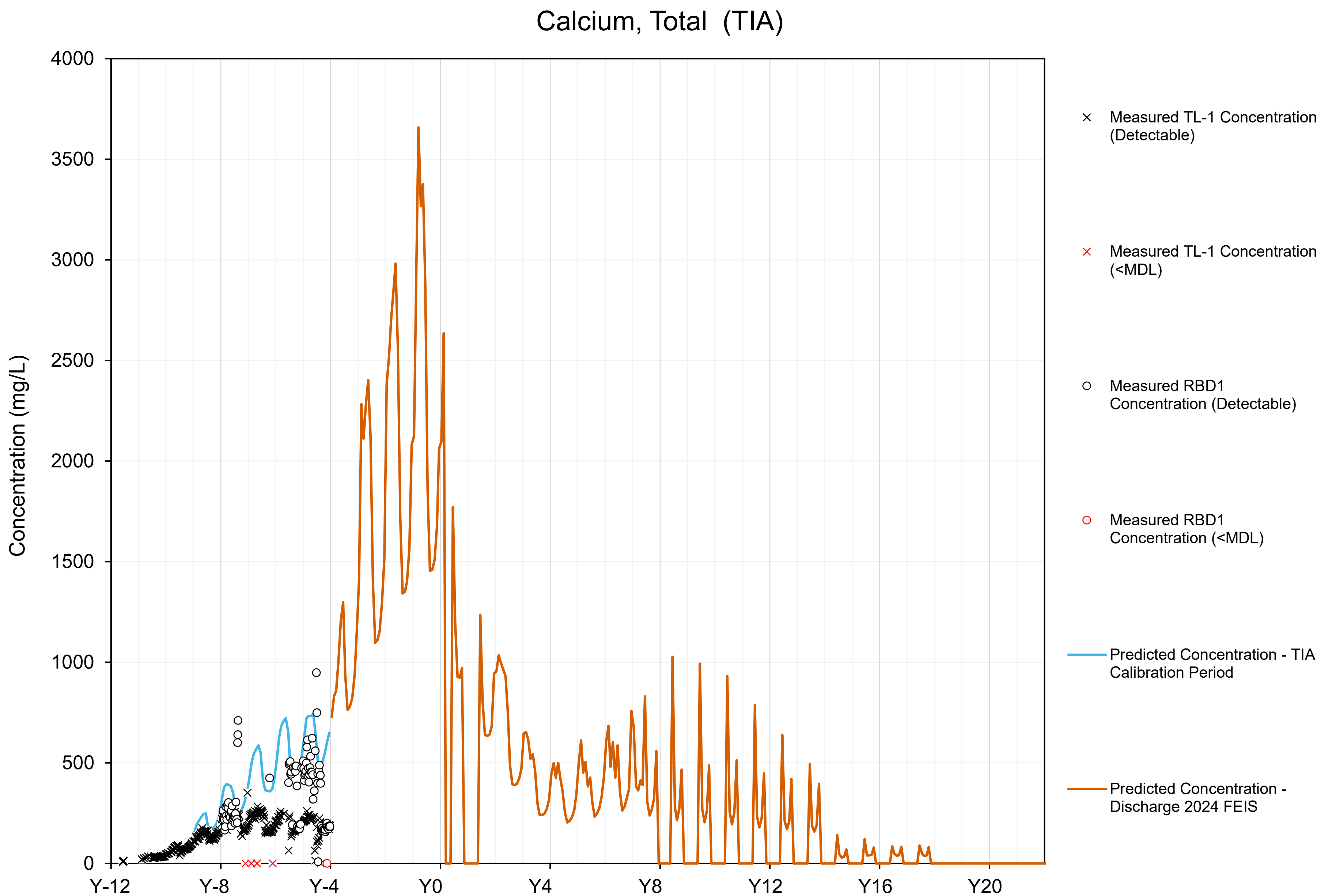

Arsenic, Total (TIA)
Concentration (mg/L)
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

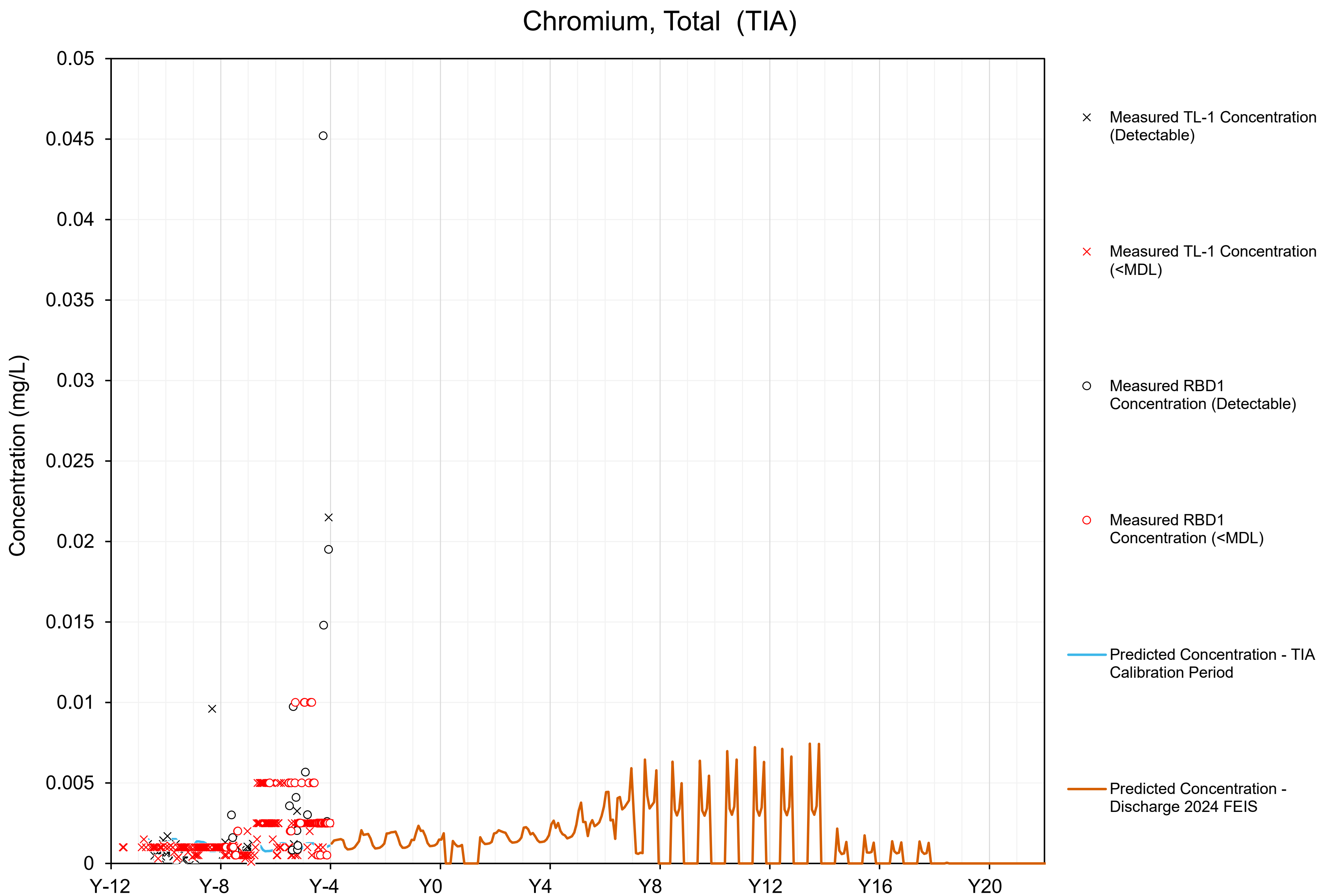

Barium, Total (TIA)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

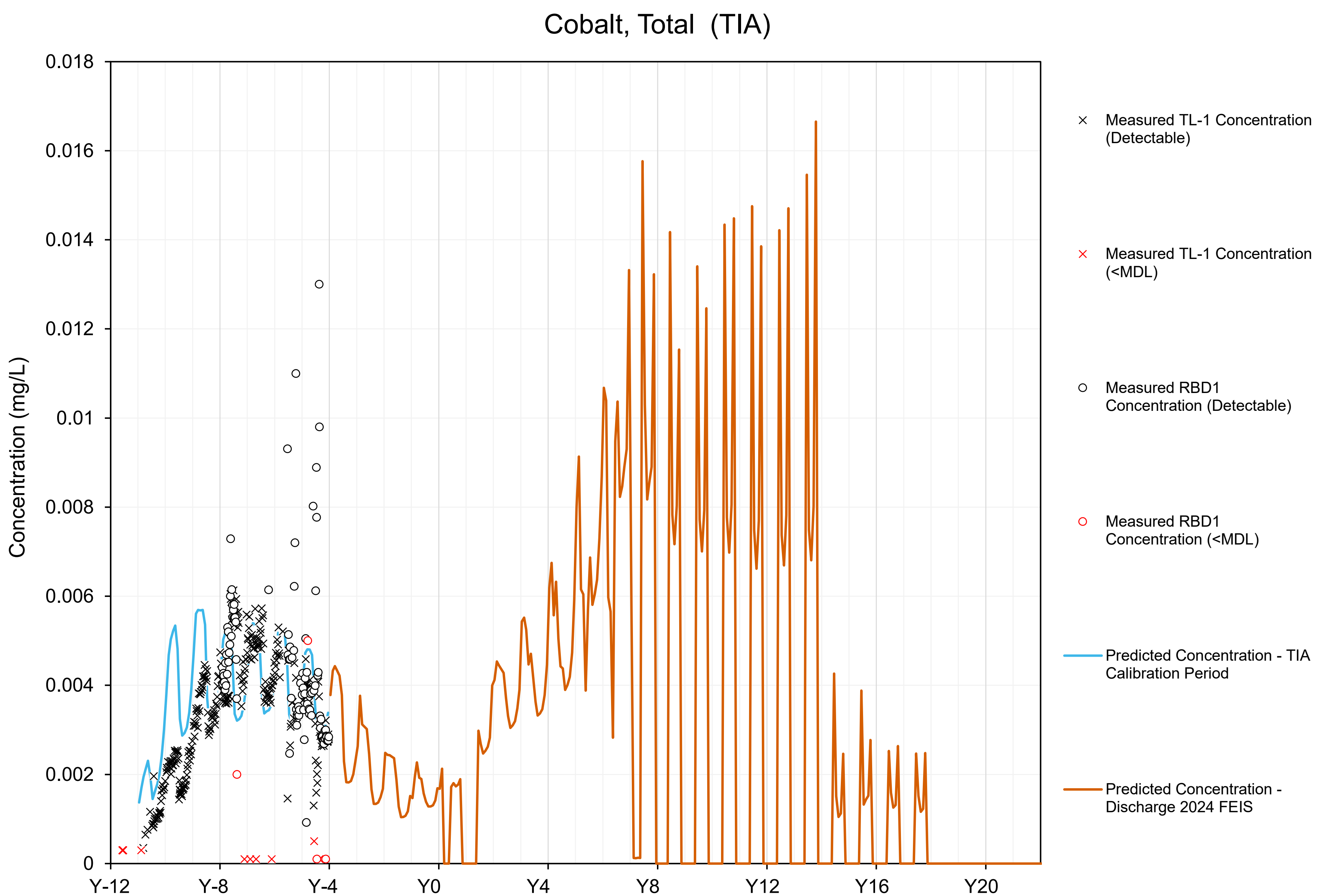

Beryllium, Total (TIA)
Concentration (mg/L)
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

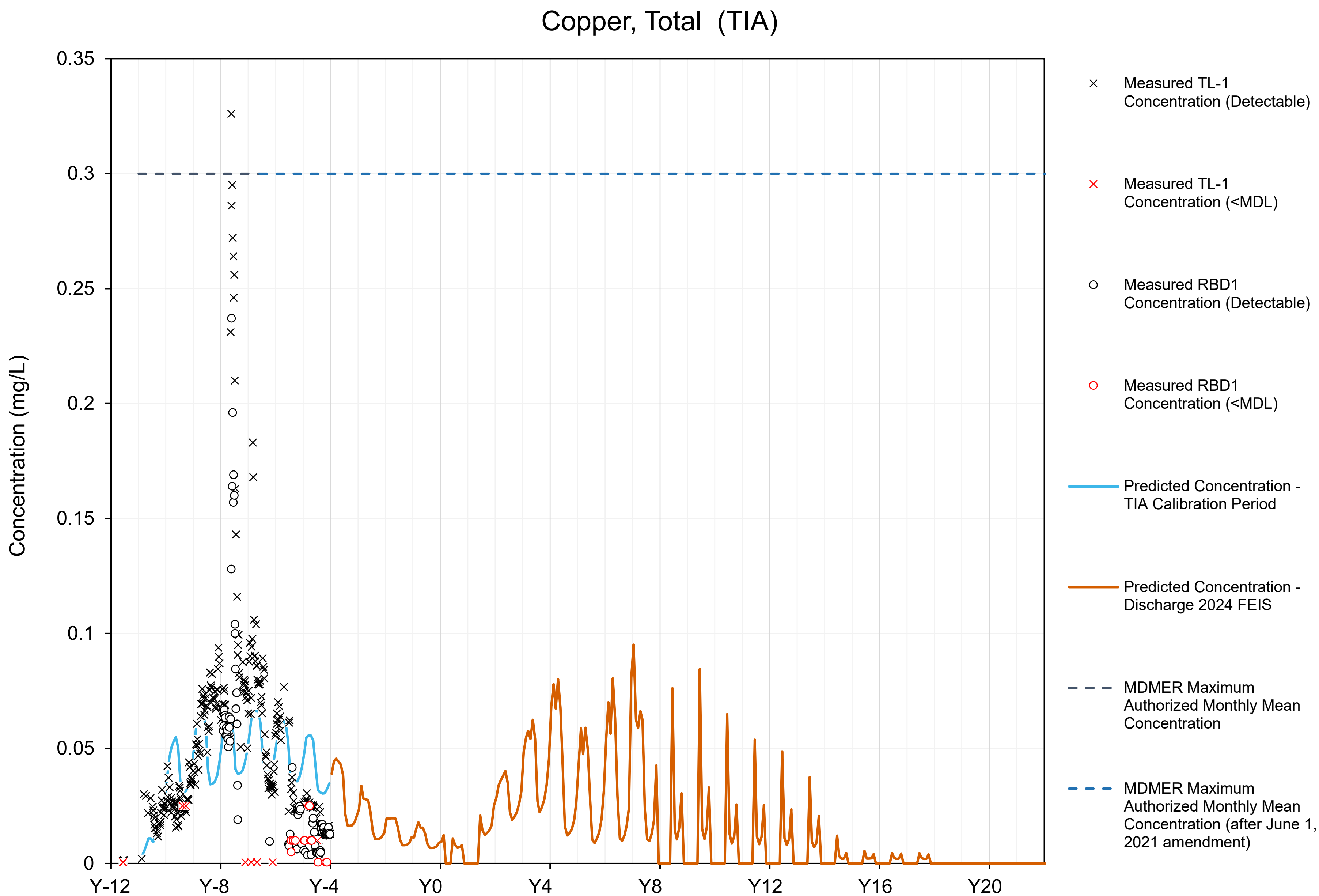

Boron, Total (TIA)
Concentration (mg/L)
0
1
2
3
4
5
6
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

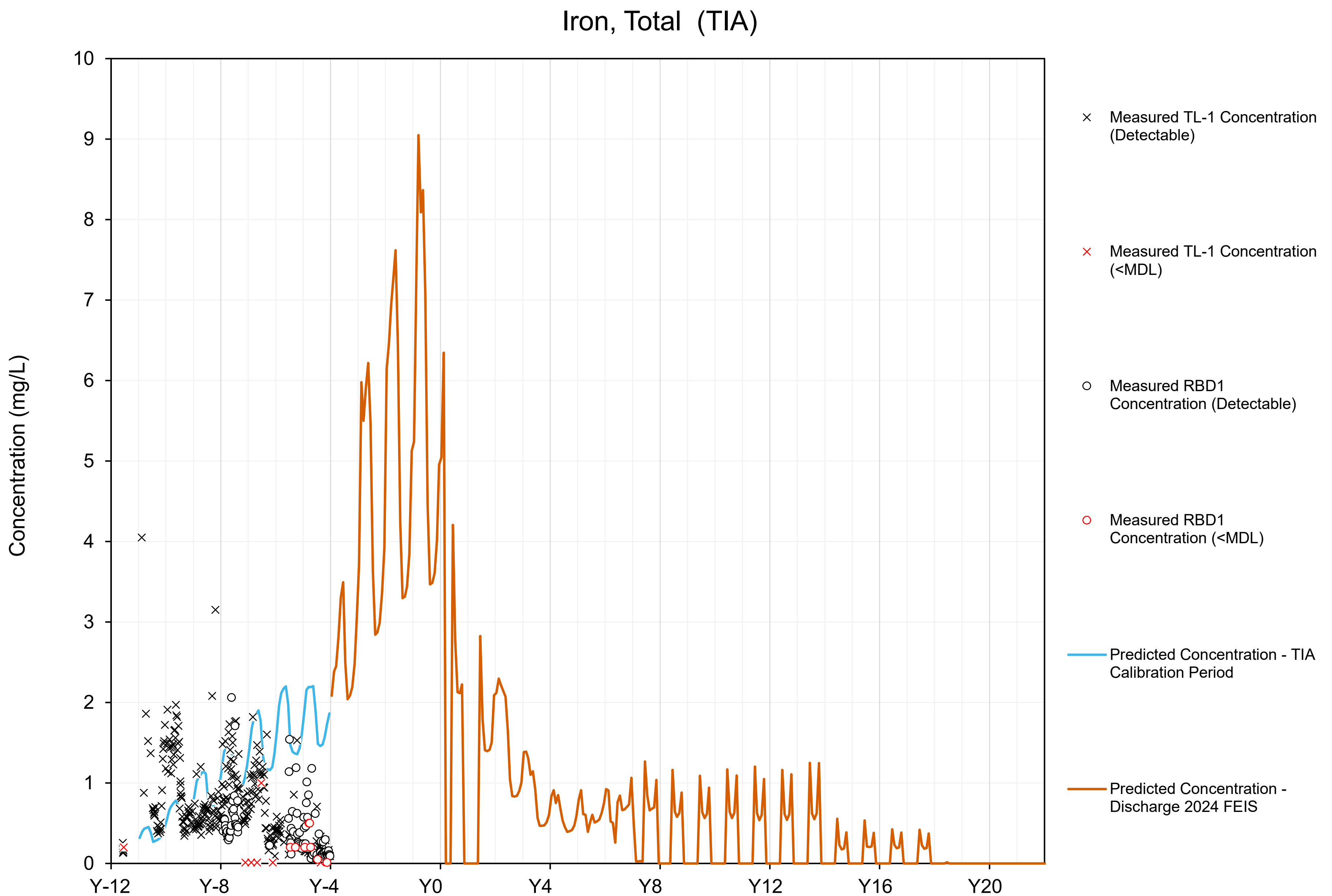

Cadmium, Total (TIA)
Concentration (mg/L)
0.0003
0.00025
0.0002
0.00015
0.0001
0.00005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

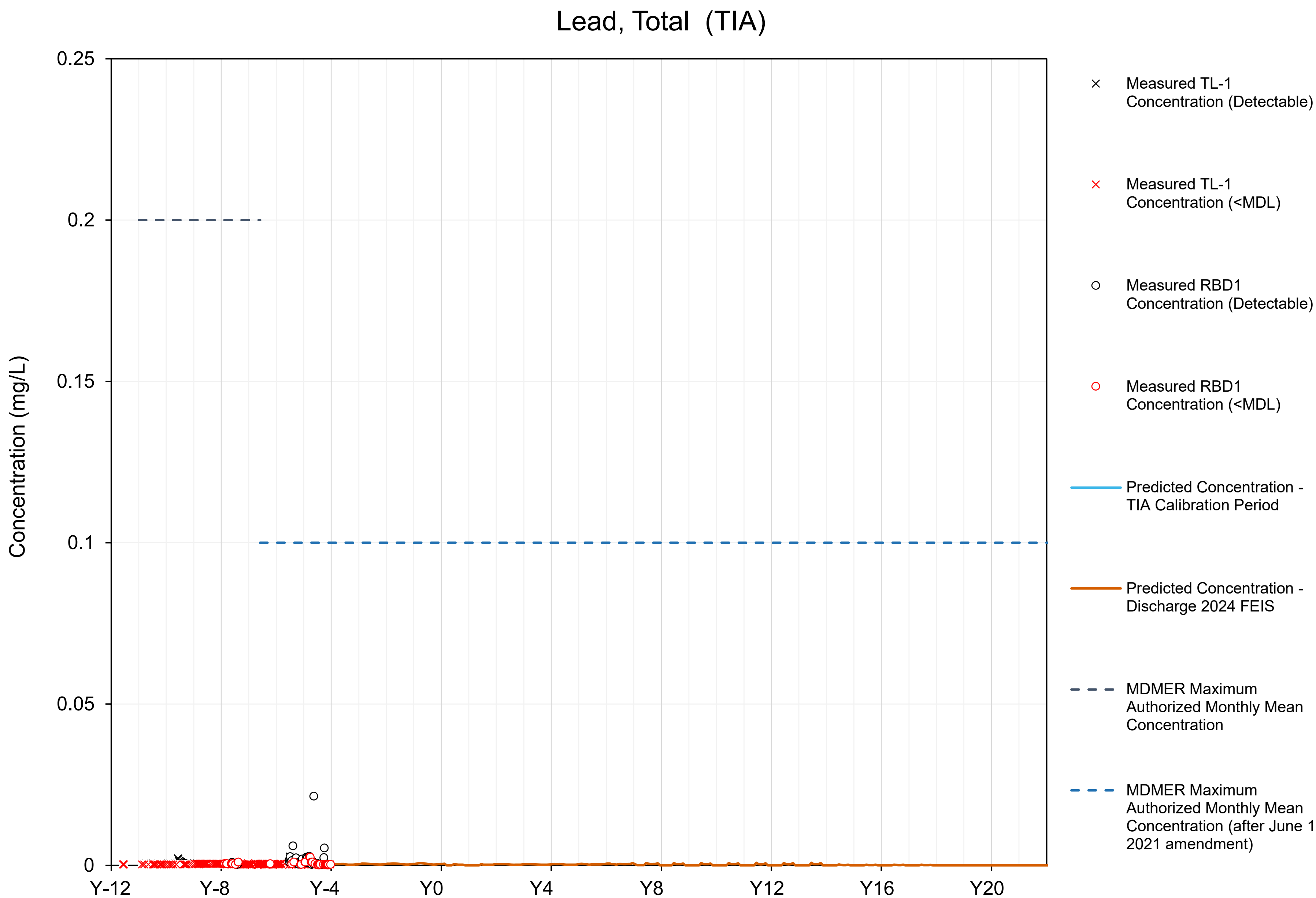

Calcium, Total (TIA)
Concentration (mg/L)
4000
3500
3000
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

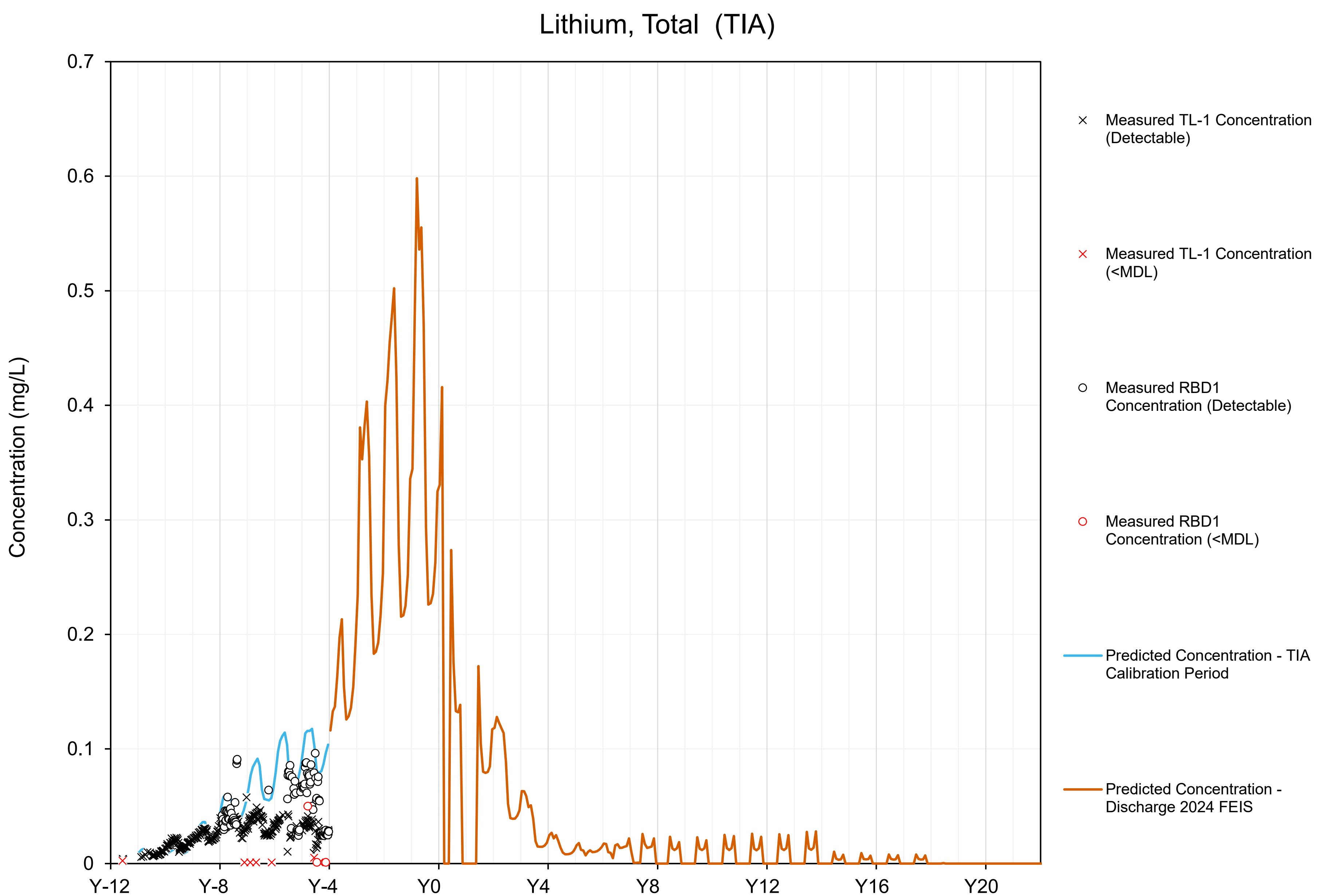

Chromium, Total (TIA)
Concentration (mg/L)
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

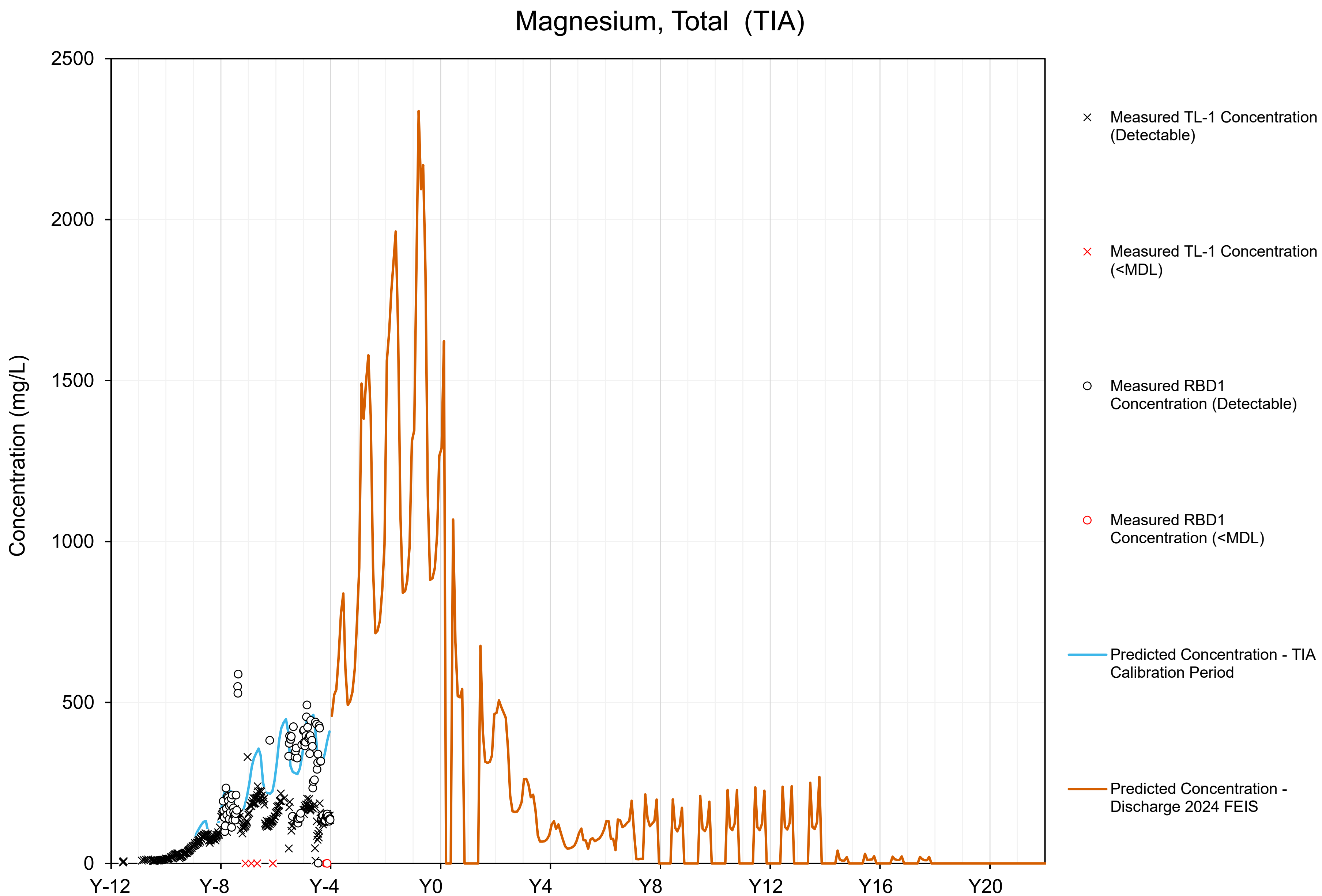

Cobalt, Total (TIA)
Concentration (mg/L)
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

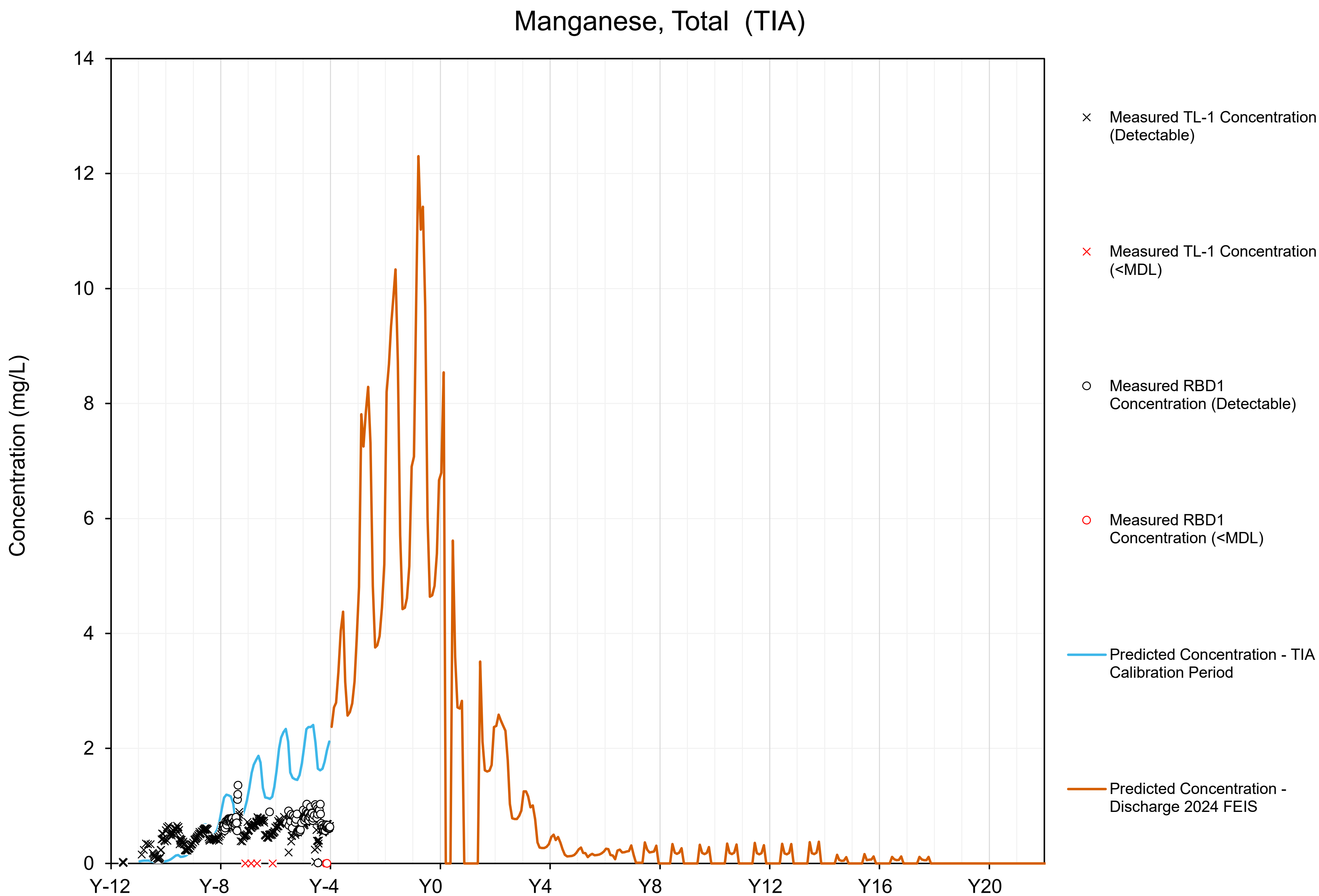

Copper, Total (TIA)
Concentration (mg/L)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

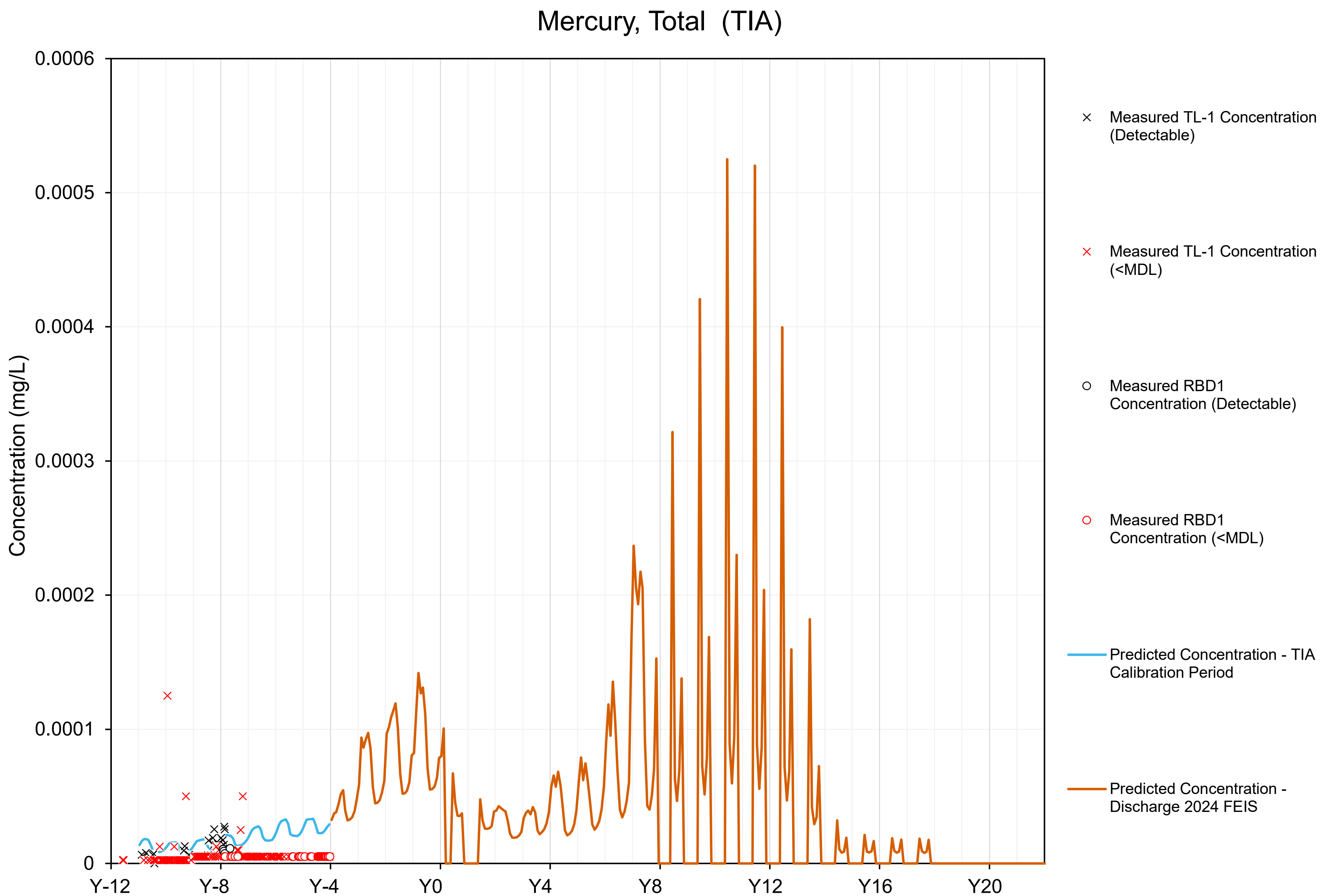

Iron, Total (TIA)
Concentration (mg/L)
10
9
8
7
6
5
4
3
2
1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

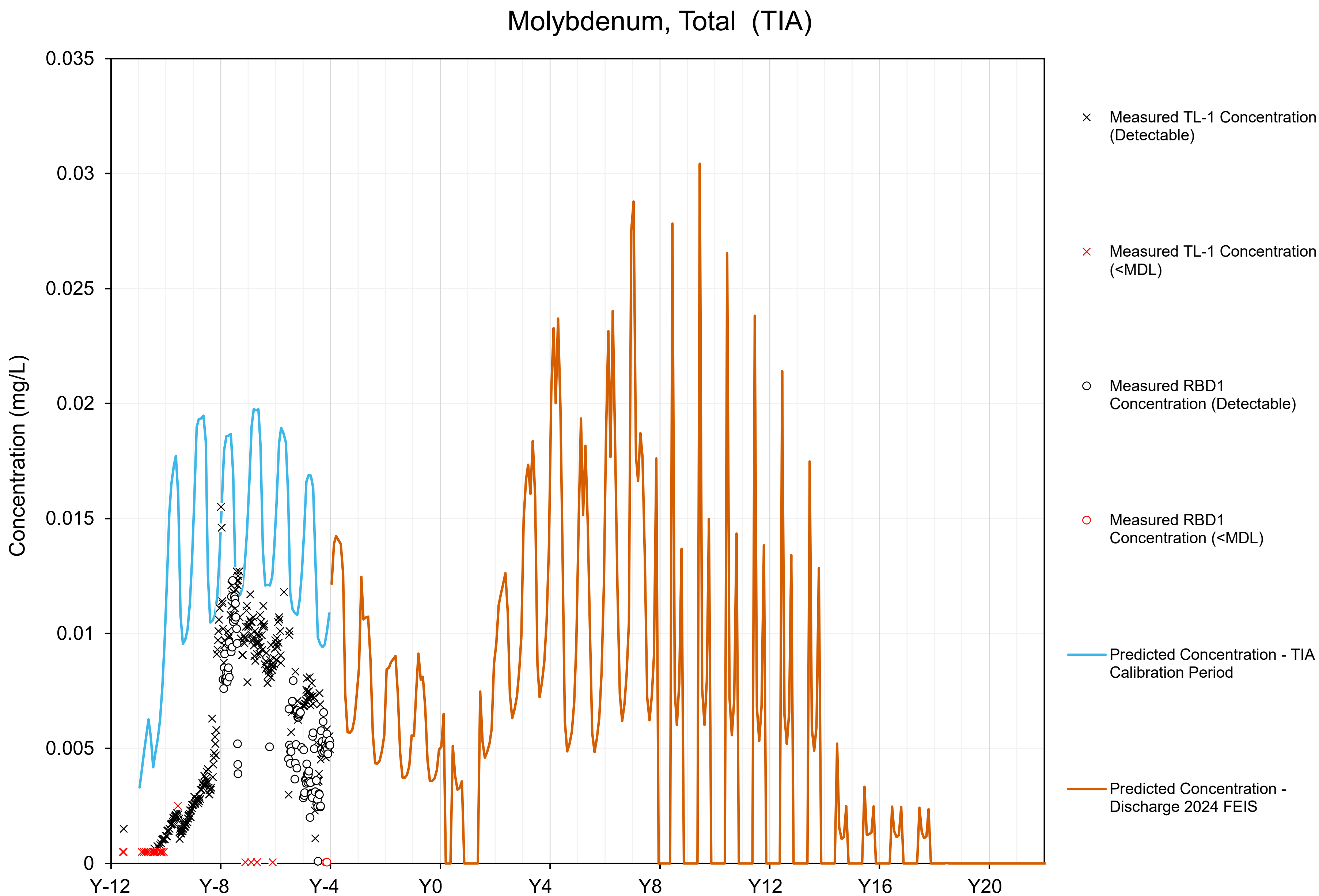

Lead, Total (TIA)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

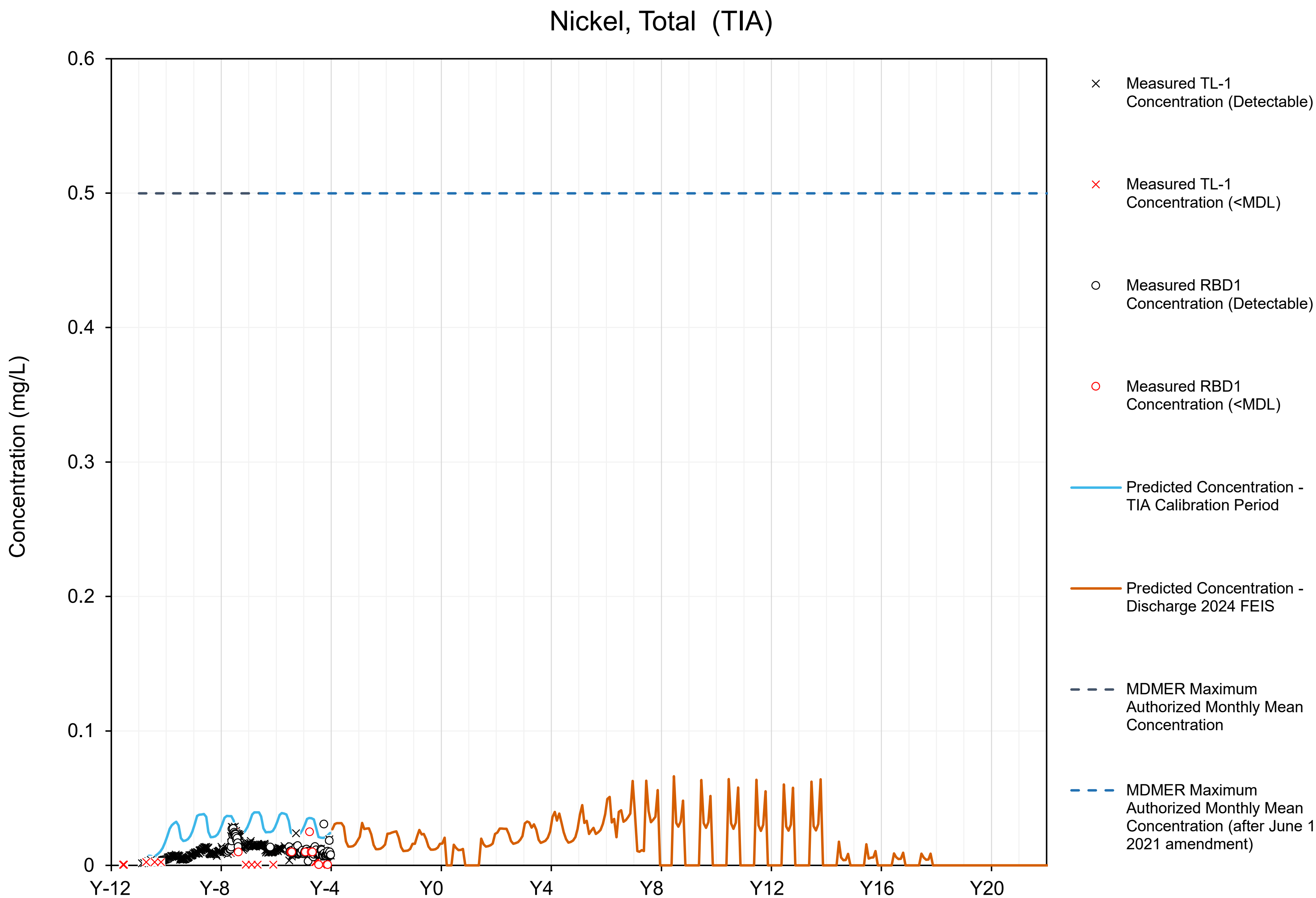

Lithium, Total (TIA)
Concentration (mg/L)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

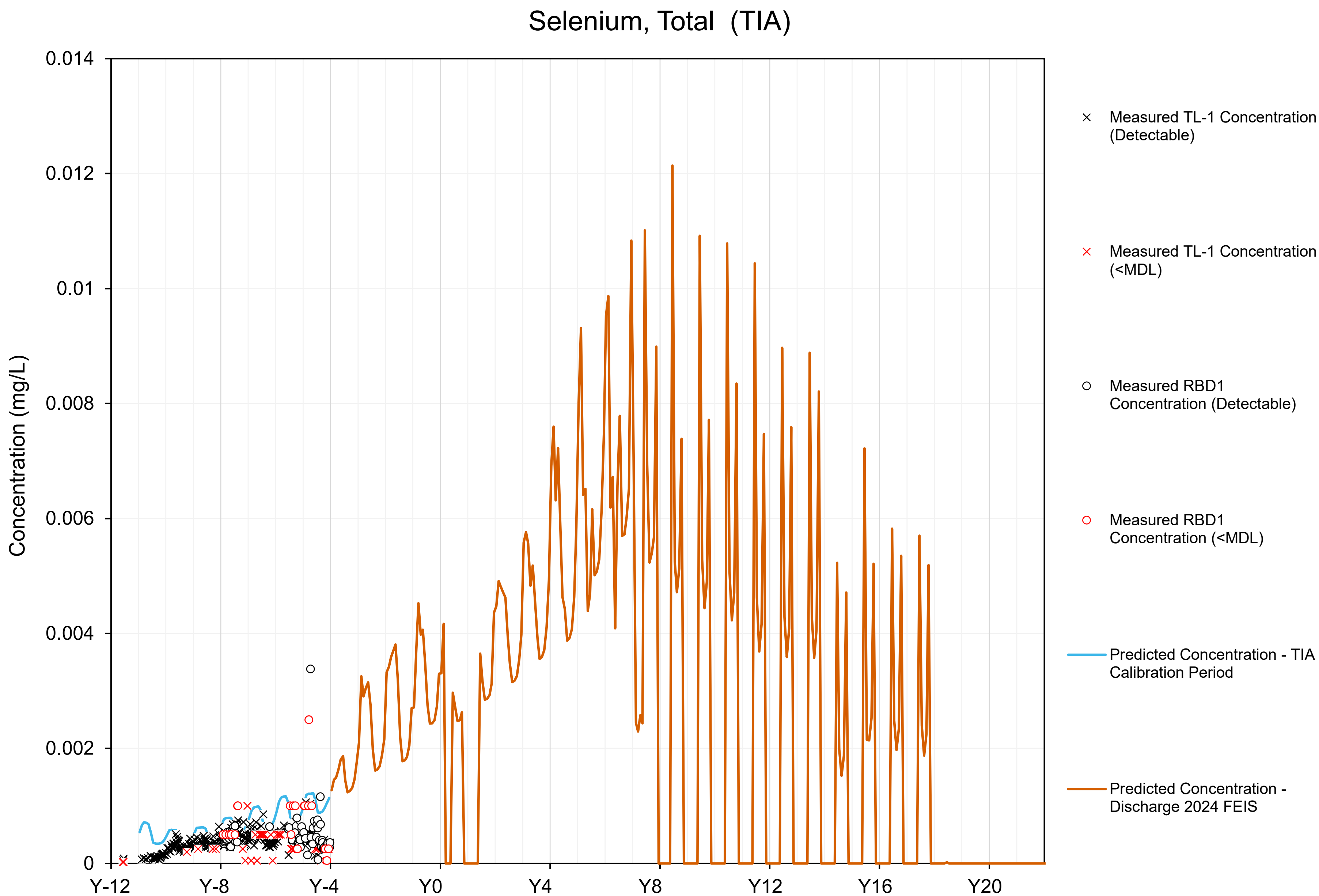

Magnesium, Total (TIA)
Concentration (mg/L)
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

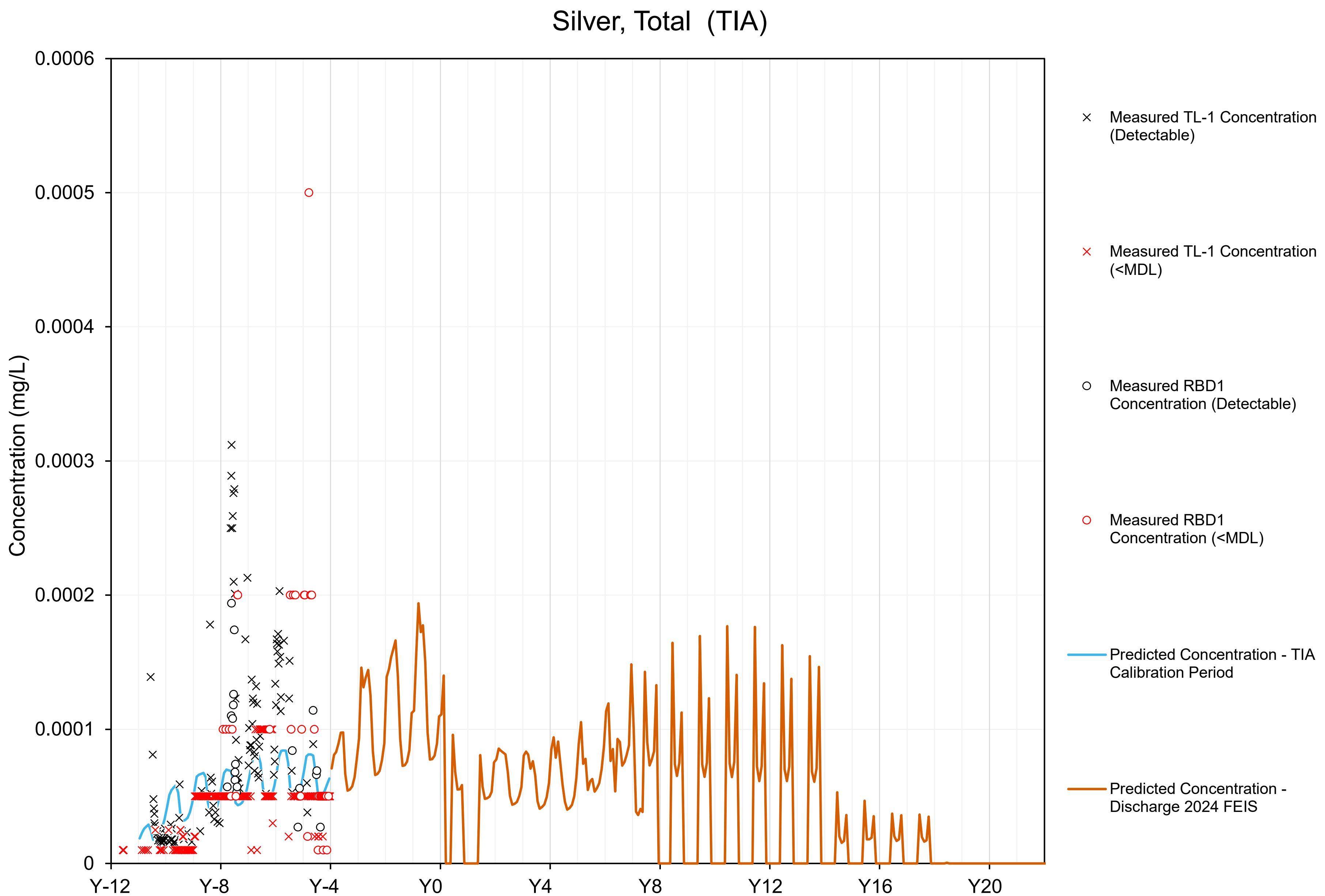

Manganese, Total (TIA)
Concentration (mg/L)
14
12
10
8
6
4
2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

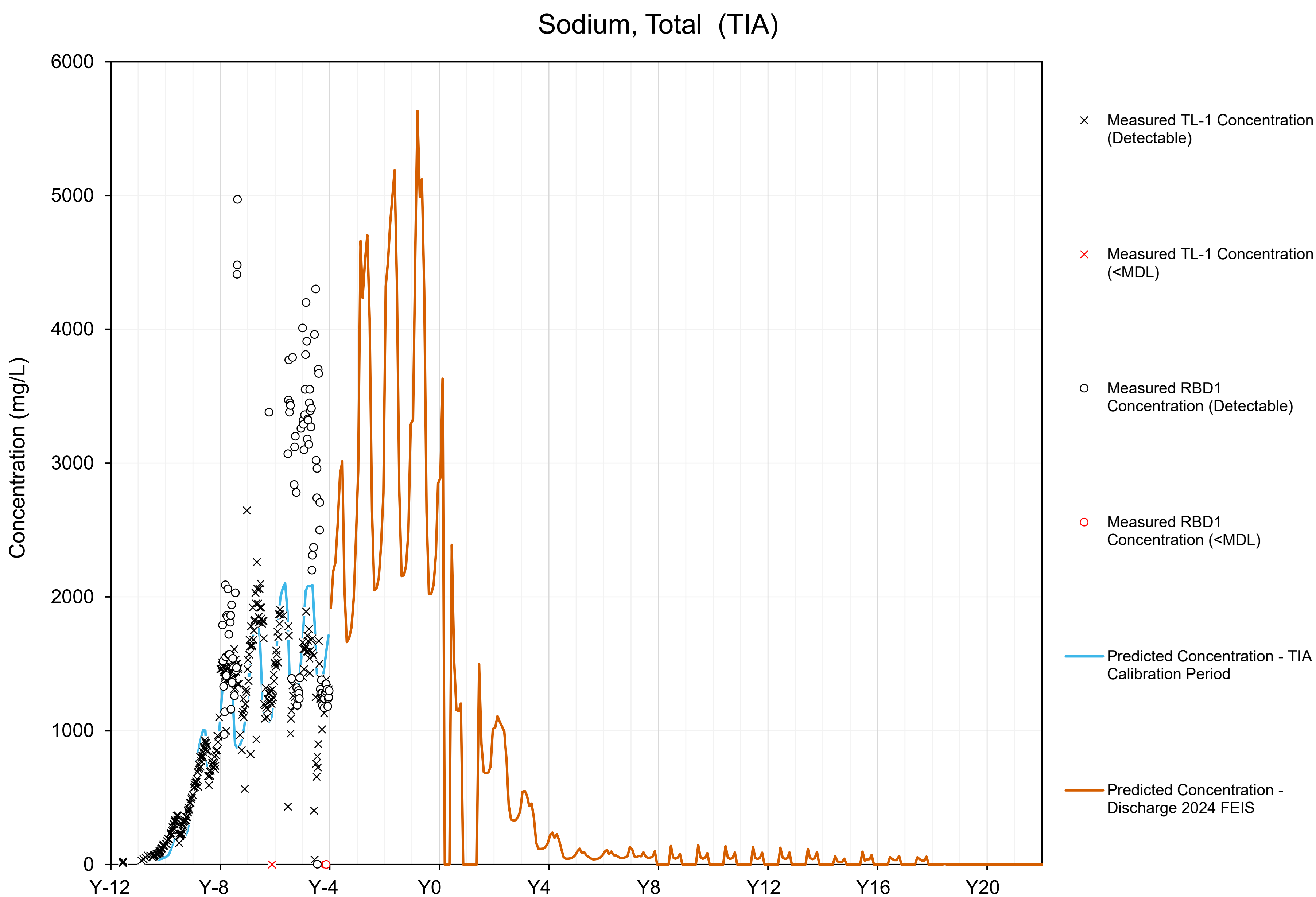

Mercury, Total (TIA)
Concentration (mg/L)
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

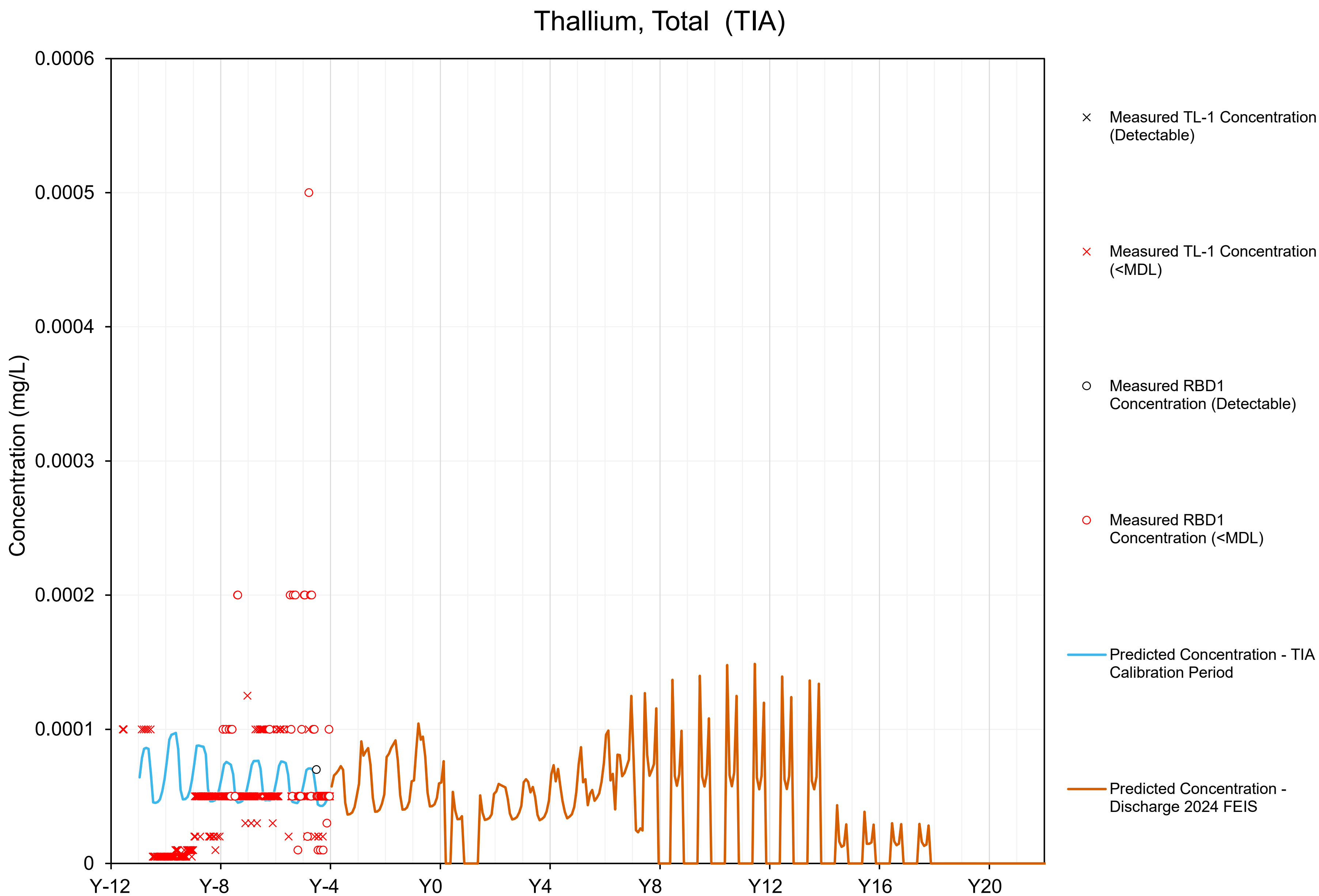

Molybdenum, Total (TIA)
Concentration (mg/L)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

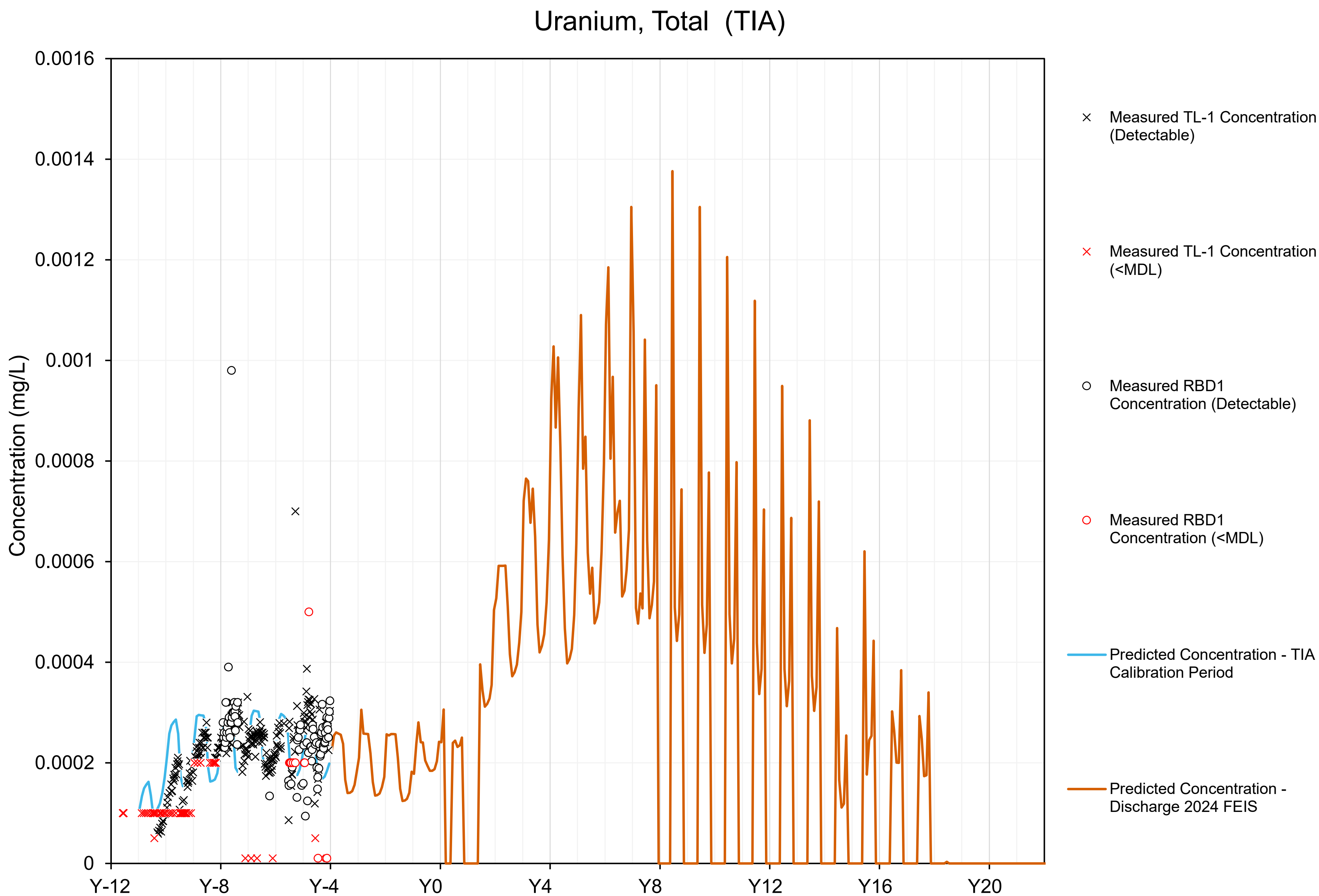

Nickel, Total (TIA)
Concentration (mg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

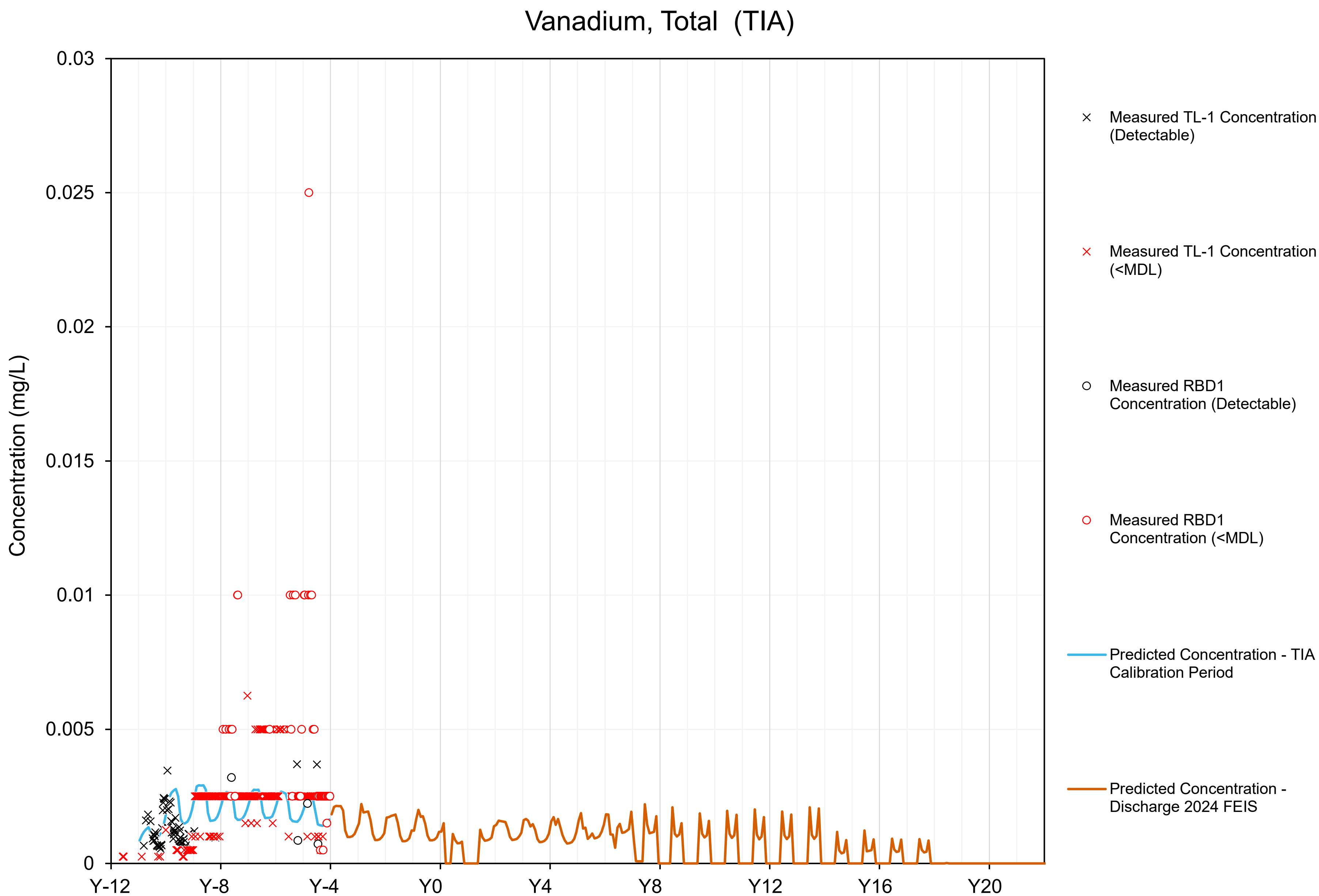

Selenium, Total (TIA)
Concentration (mg/L)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS


Silver, Total (TIA)
Concentration (mg/L)
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

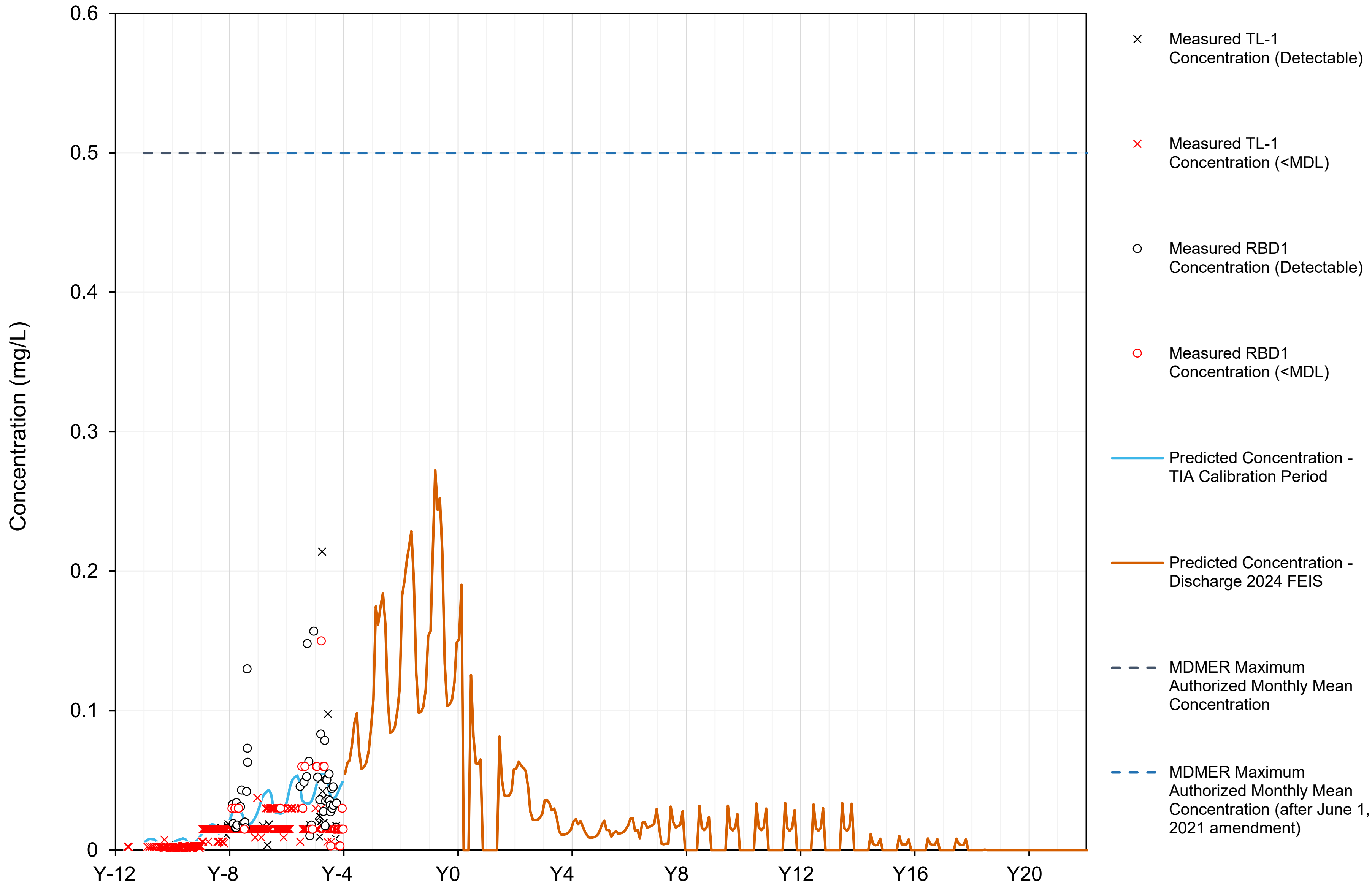

Sodium, Total (TIA)
Concentration (mg/L)
6000
5000
4000
3000
2000
1000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

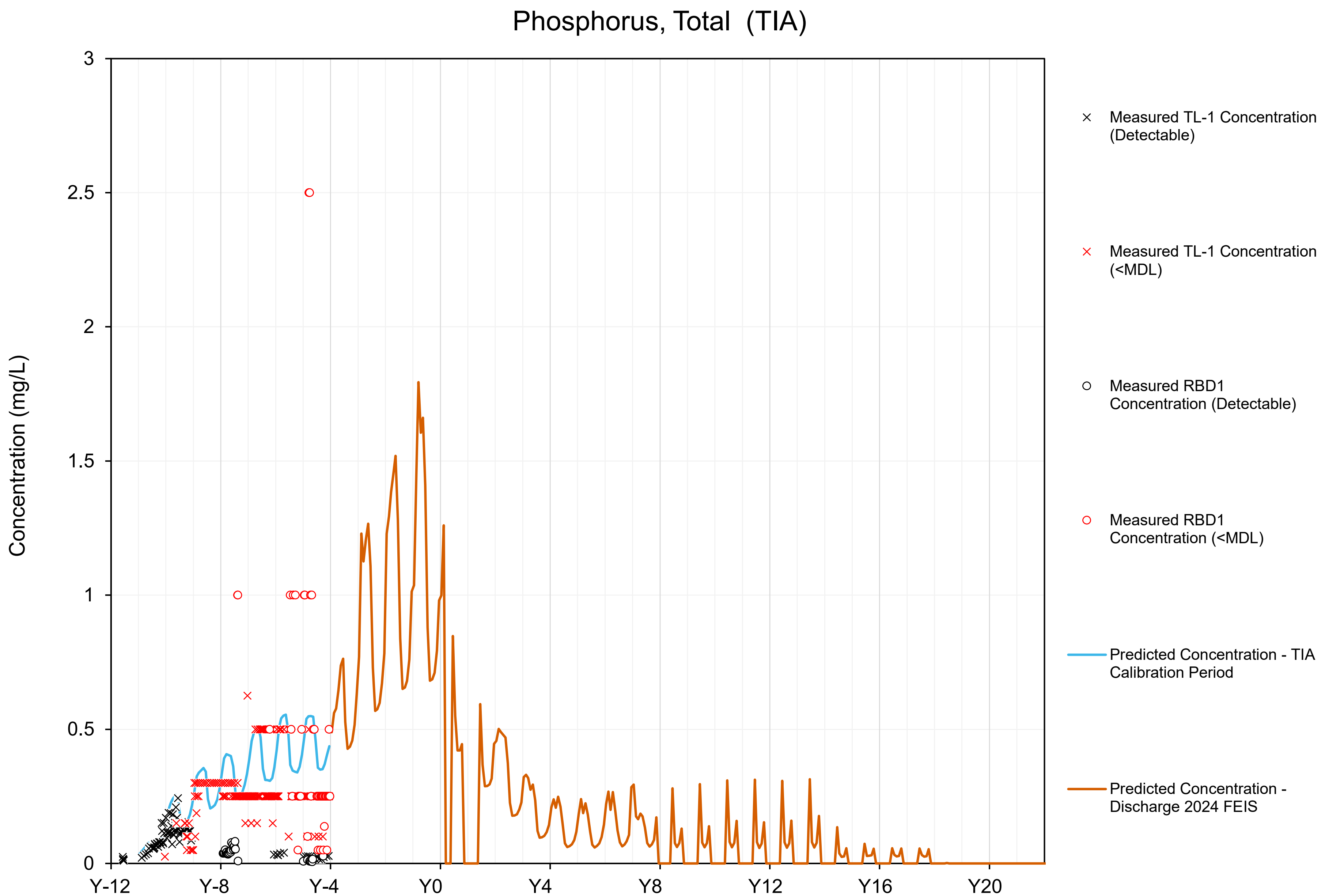

Thallium, Total (TIA)
Concentration (mg/L)
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

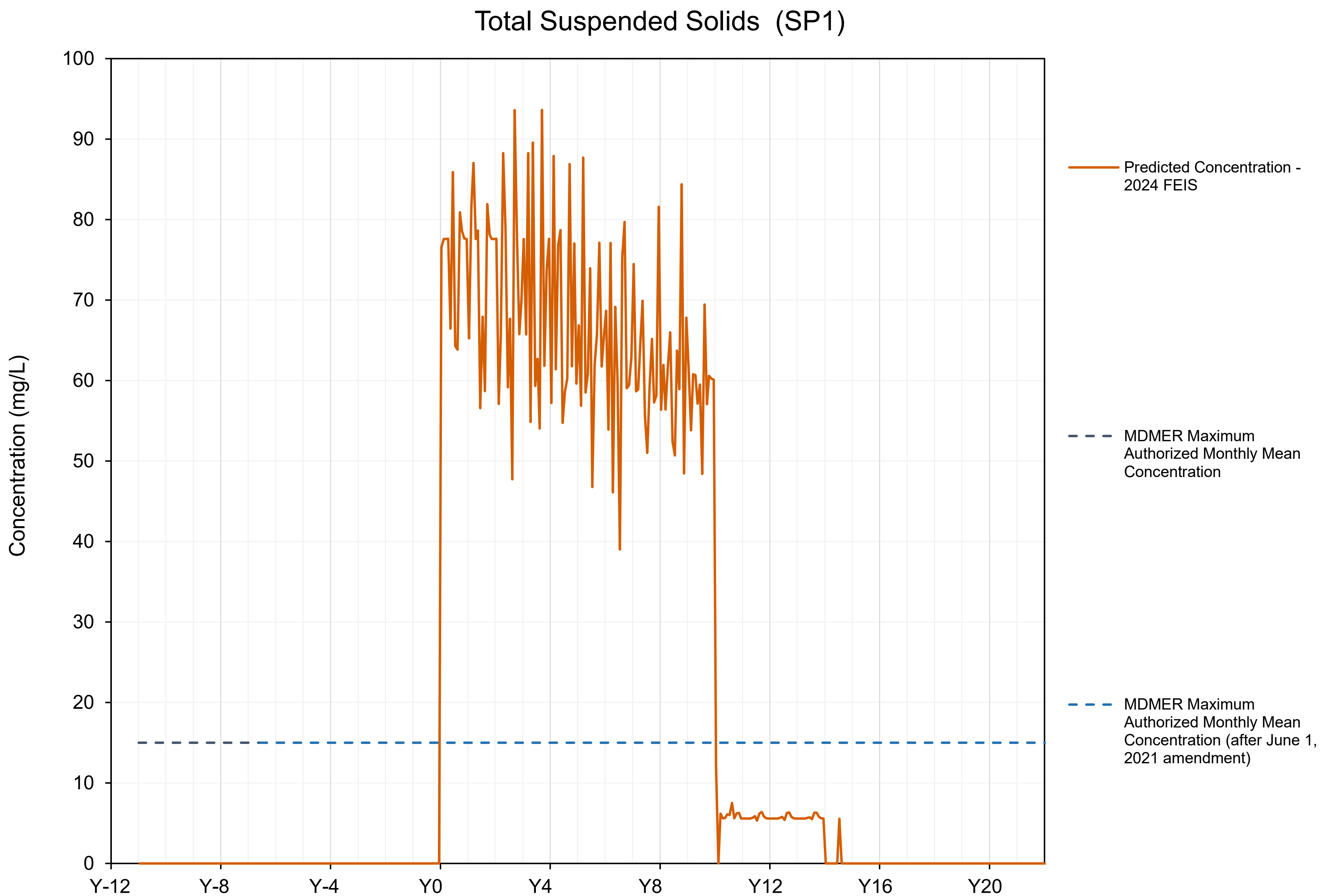

Uranium, Total (TIA)
Concentration (mg/L)
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

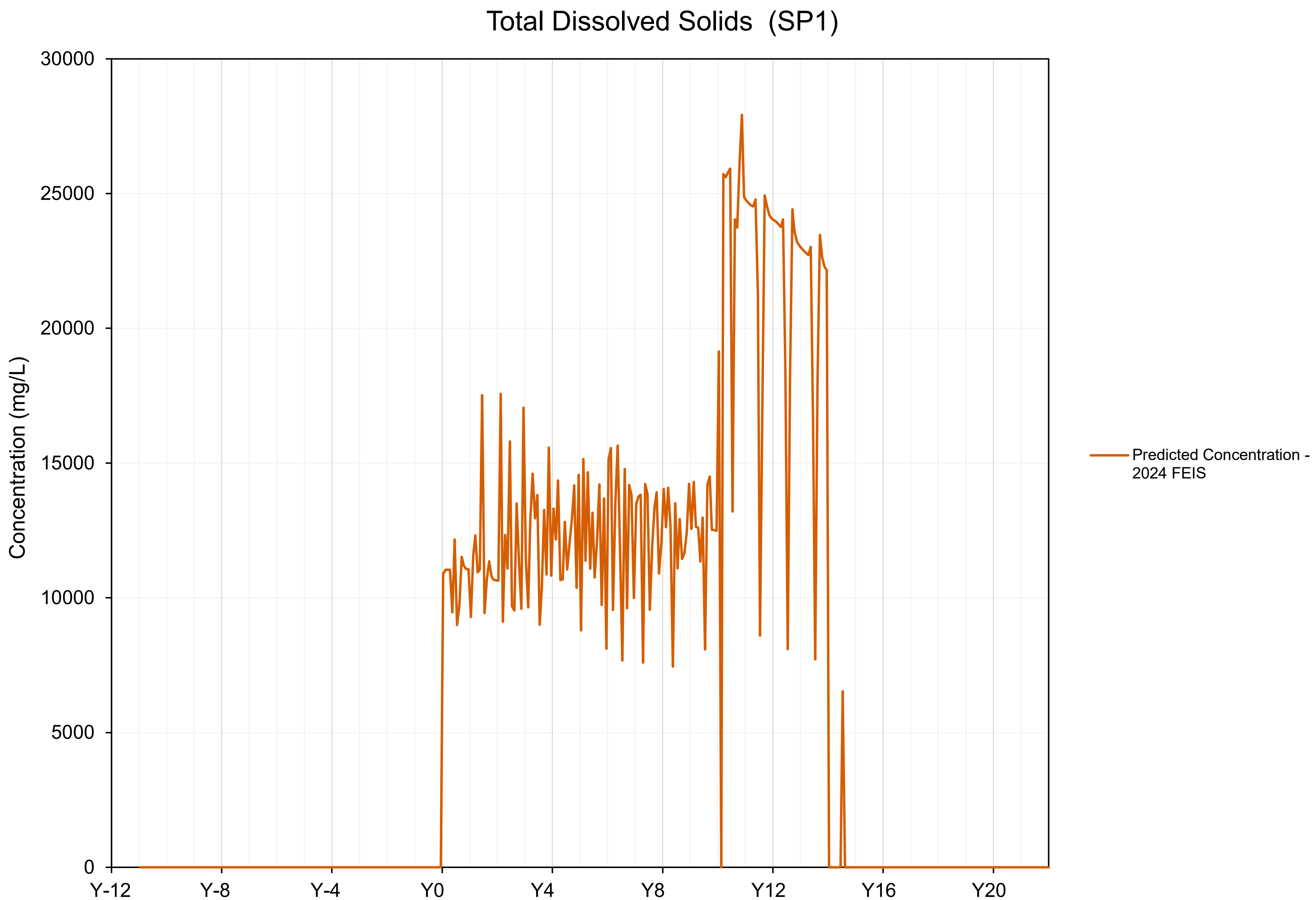

Vanadium, Total (TIA)
Concentration (mg/L)
0.03
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

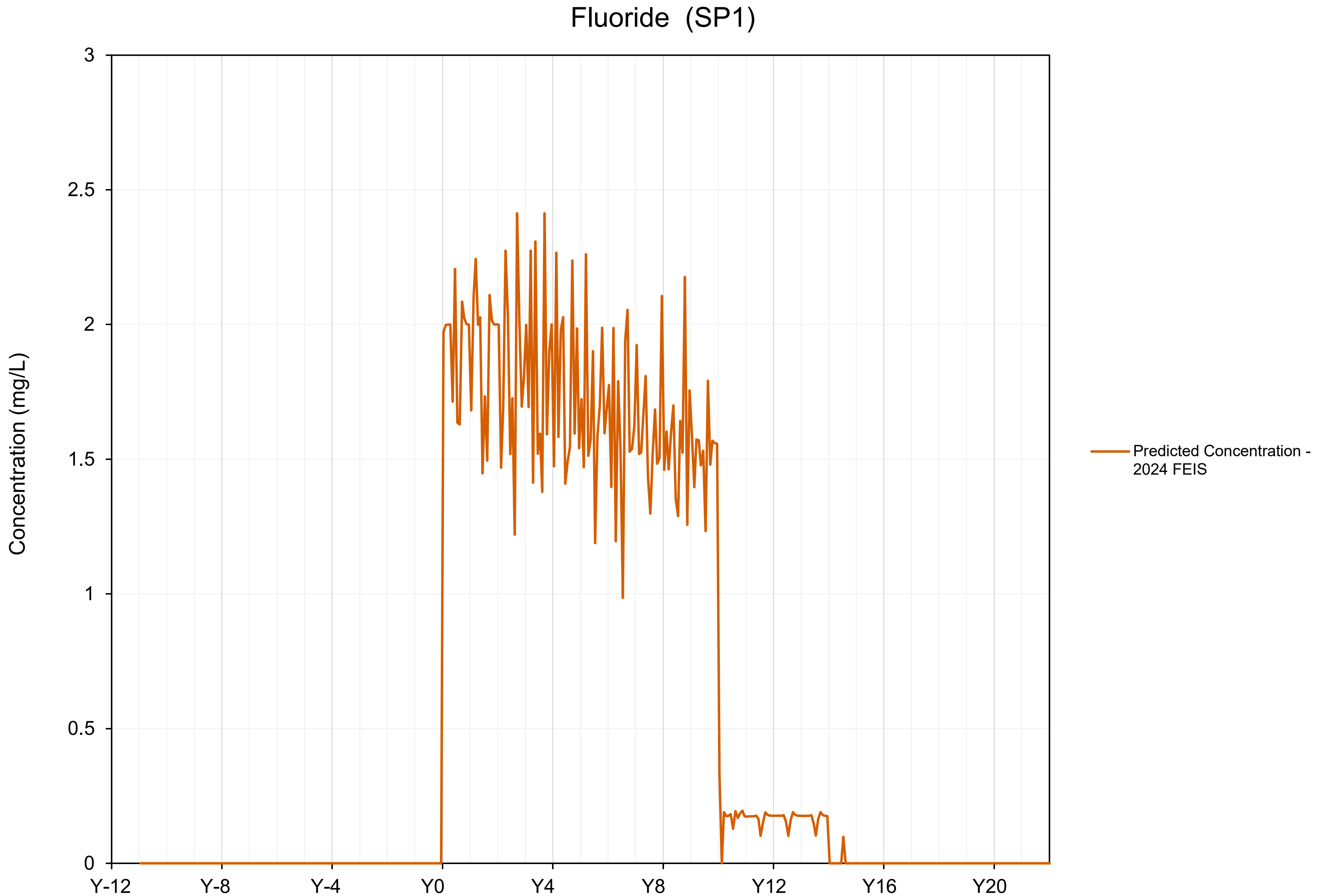
Zinc, Total (TIA)

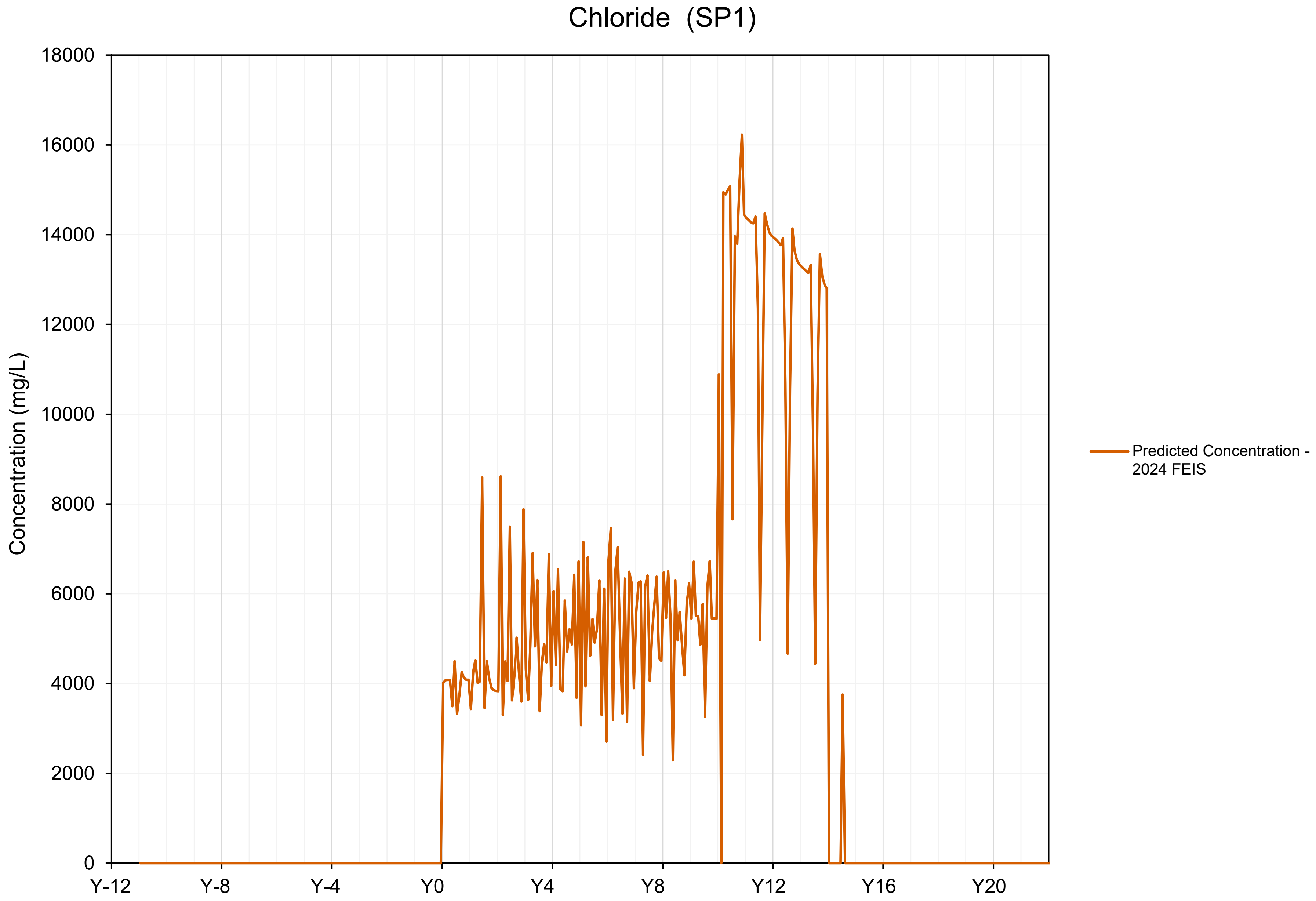


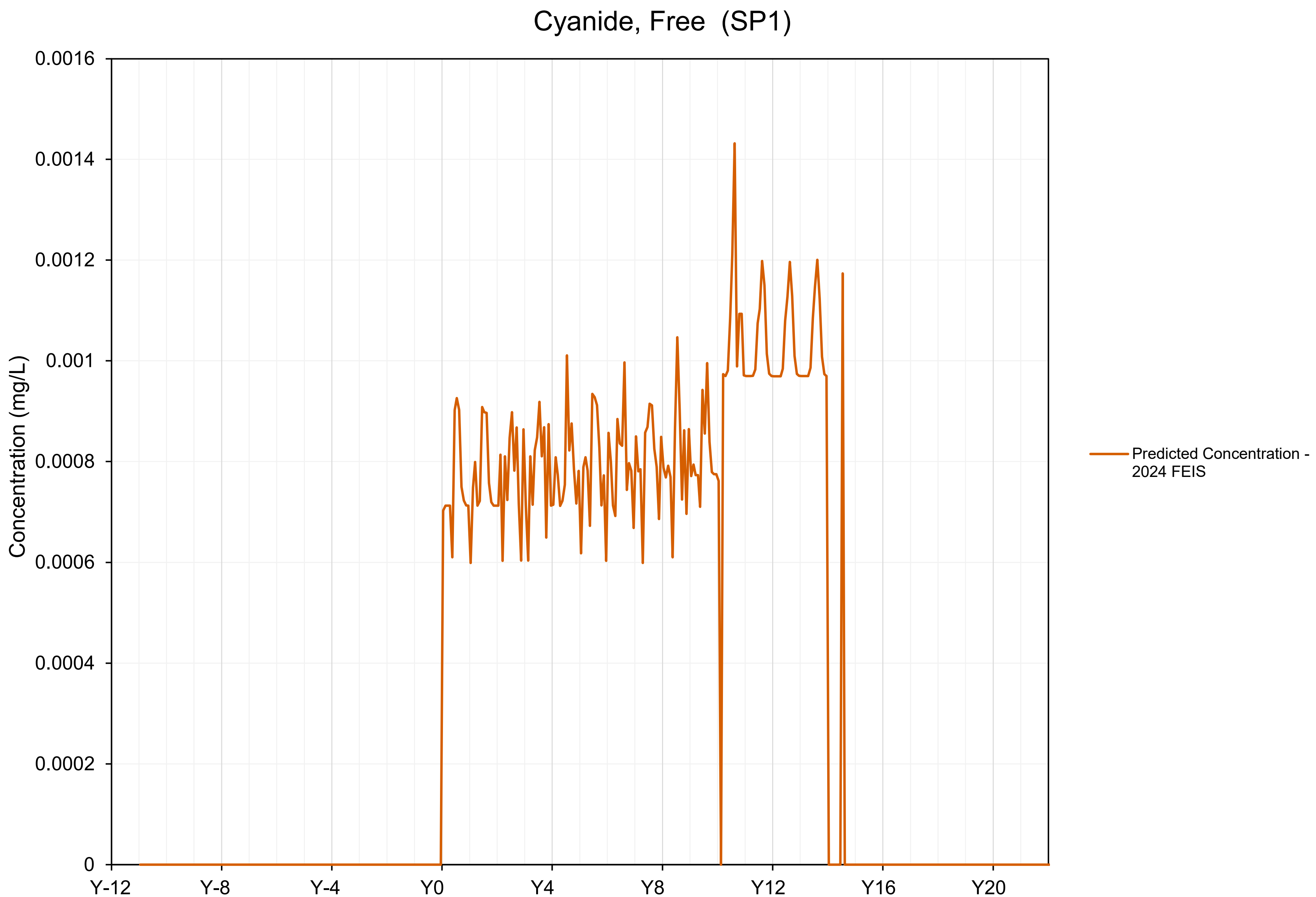

Phosphorus, Total (TIA)
Concentration (mg/L)
3
2.5
2
1.5
1
0.5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Measured TL-1 Concentration (Detectable)
Measured TL-1 Concentration (<MDL)
Measured RBD1 Concentration (Detectable)
Measured RBD1 Concentration (<MDL)
Predicted Concentration - TIA Calibration Period
Predicted Concentration - Discharge 2024 FEIS

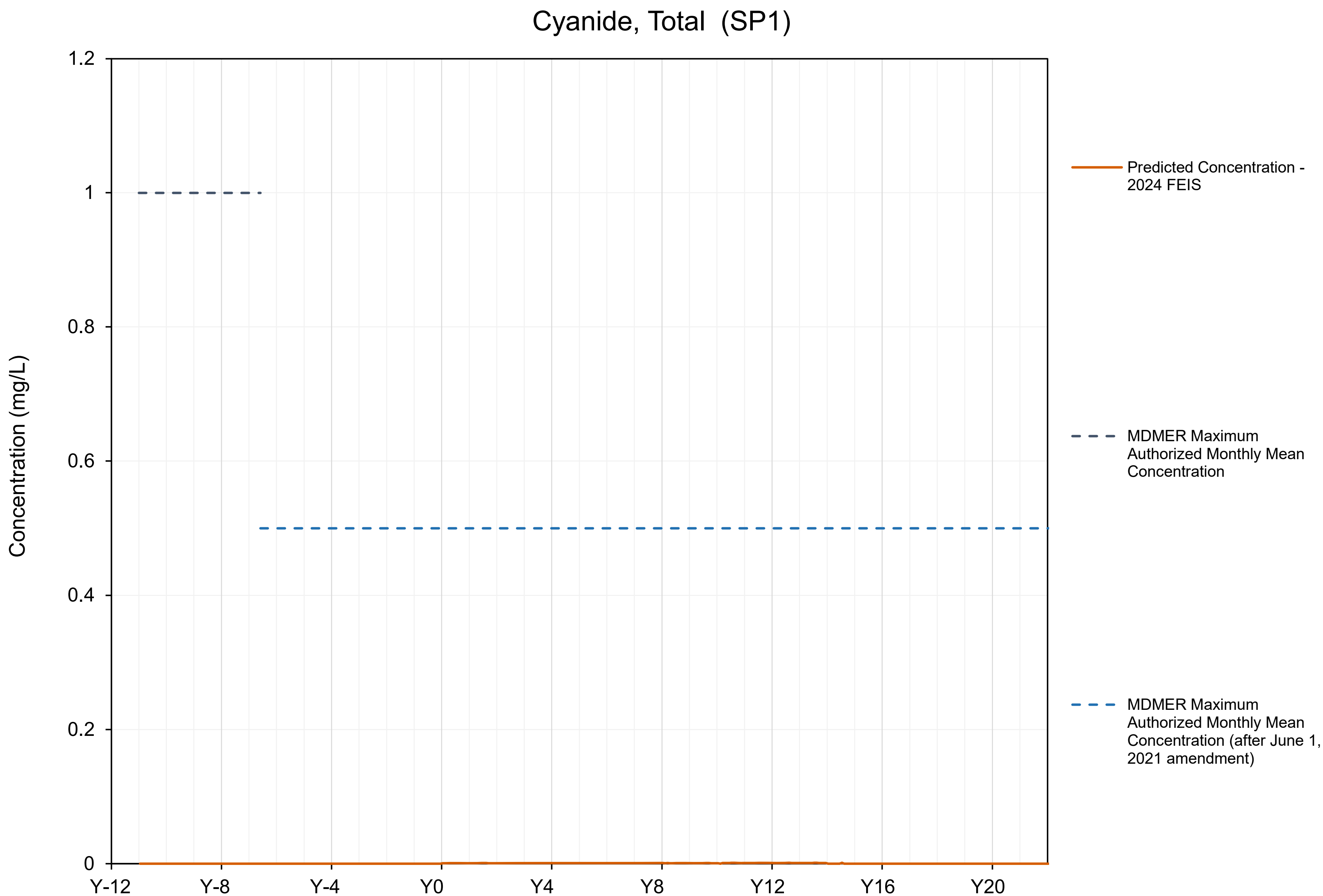

Total Suspended Solids (SP1)
Concentration (mg/L)
100
90
80
70
60
50
40
30
20
10
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

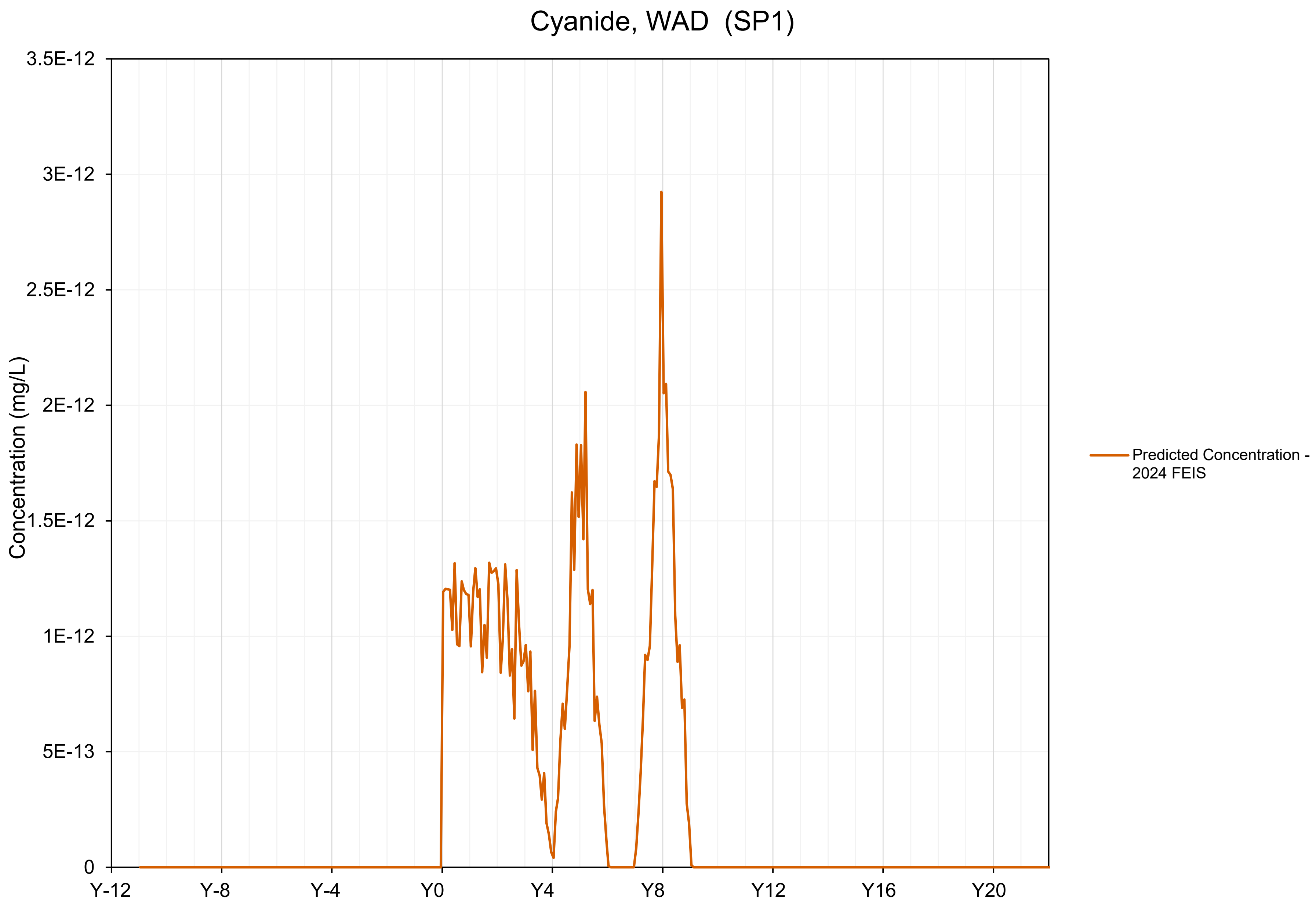

Total Dissolved Solids (SP1)
Concentration (mg/L)
30000
25000
20000
15000
10000
5000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

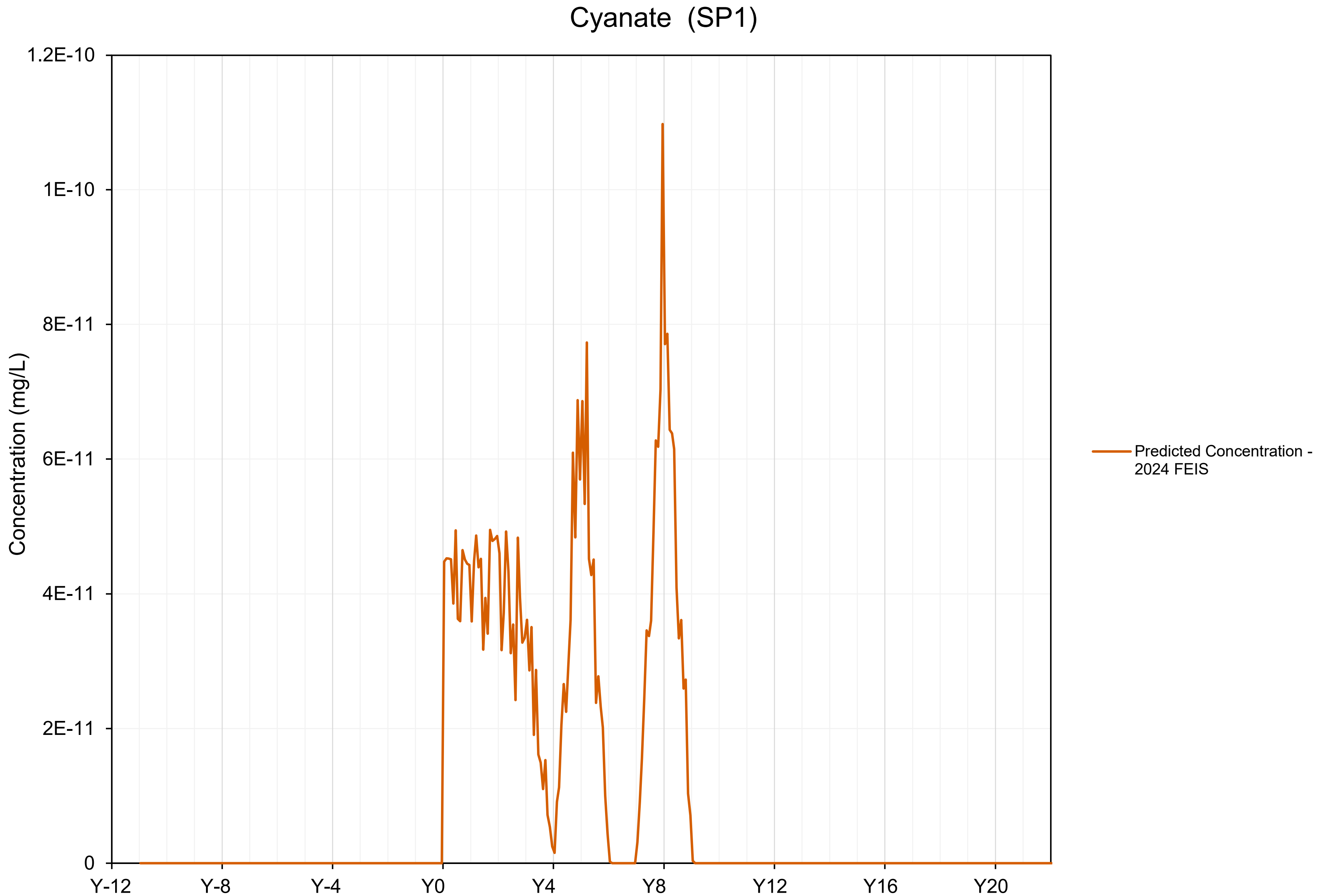

Fluoride (SP1)
Concentration (mg/L)
3
2.5
2
1.5
1
0.5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

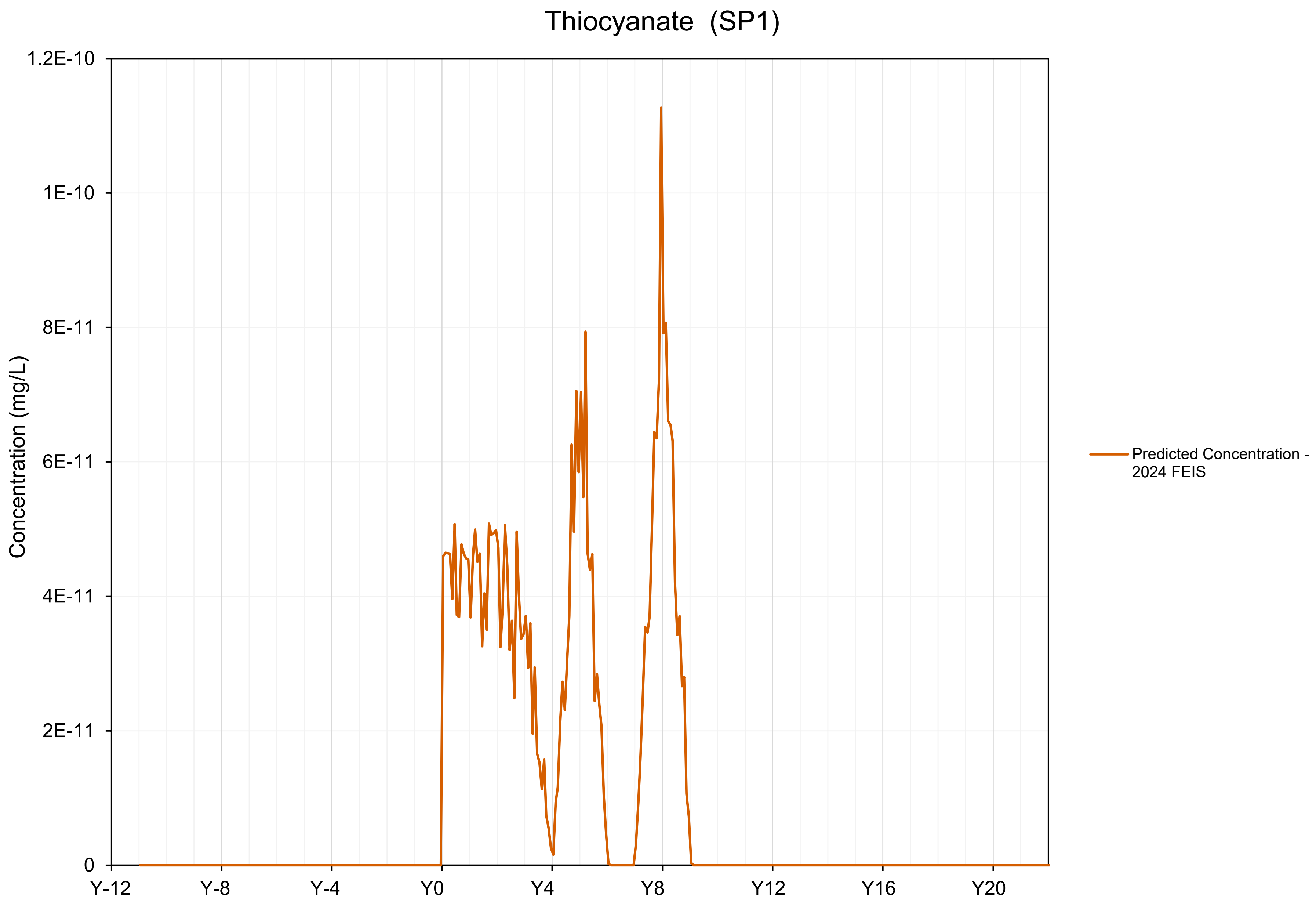

Chloride (SP1)
Concentration (mg/L)
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

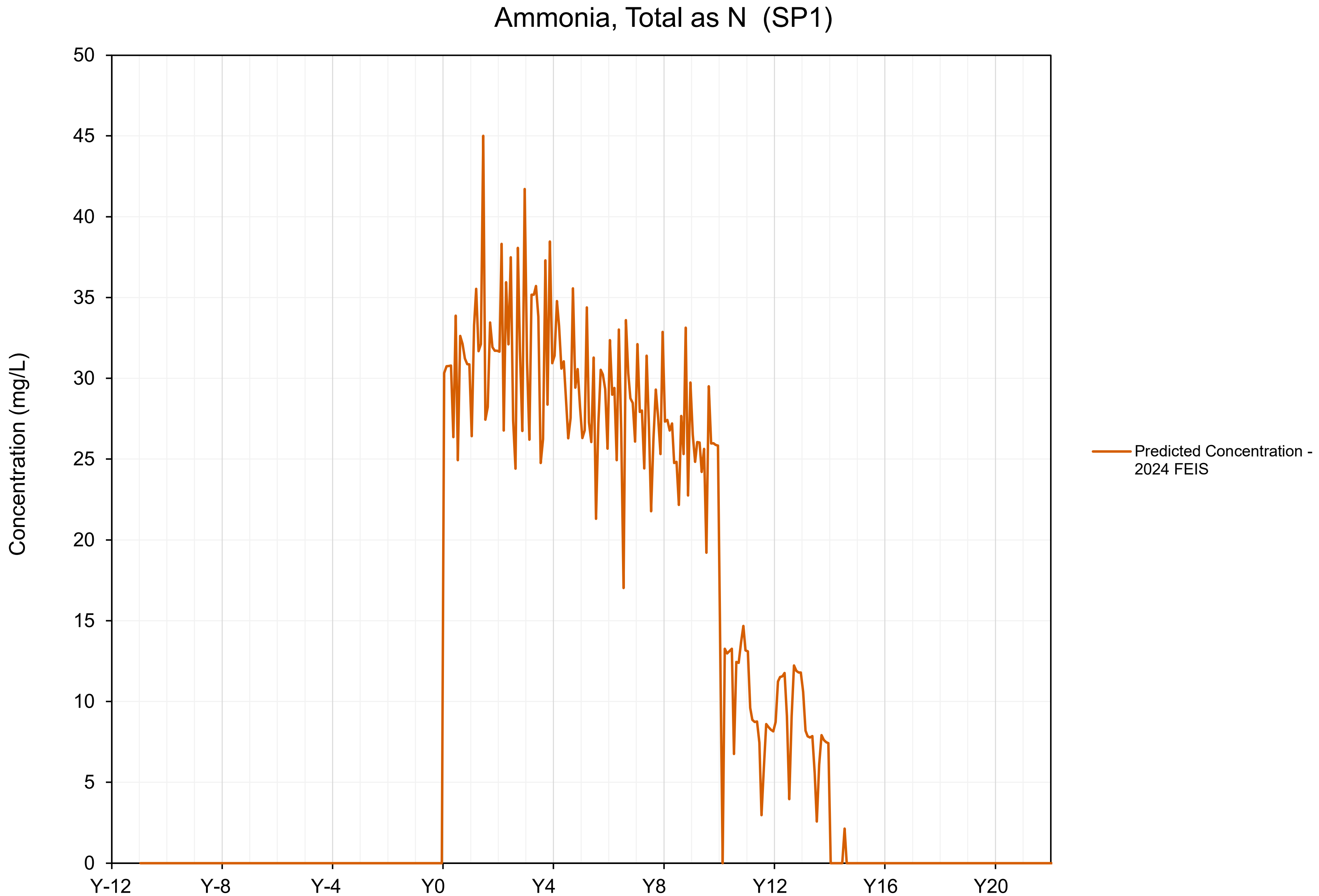

Cyanide, Free (SP1)
Concentration (mg/L)
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

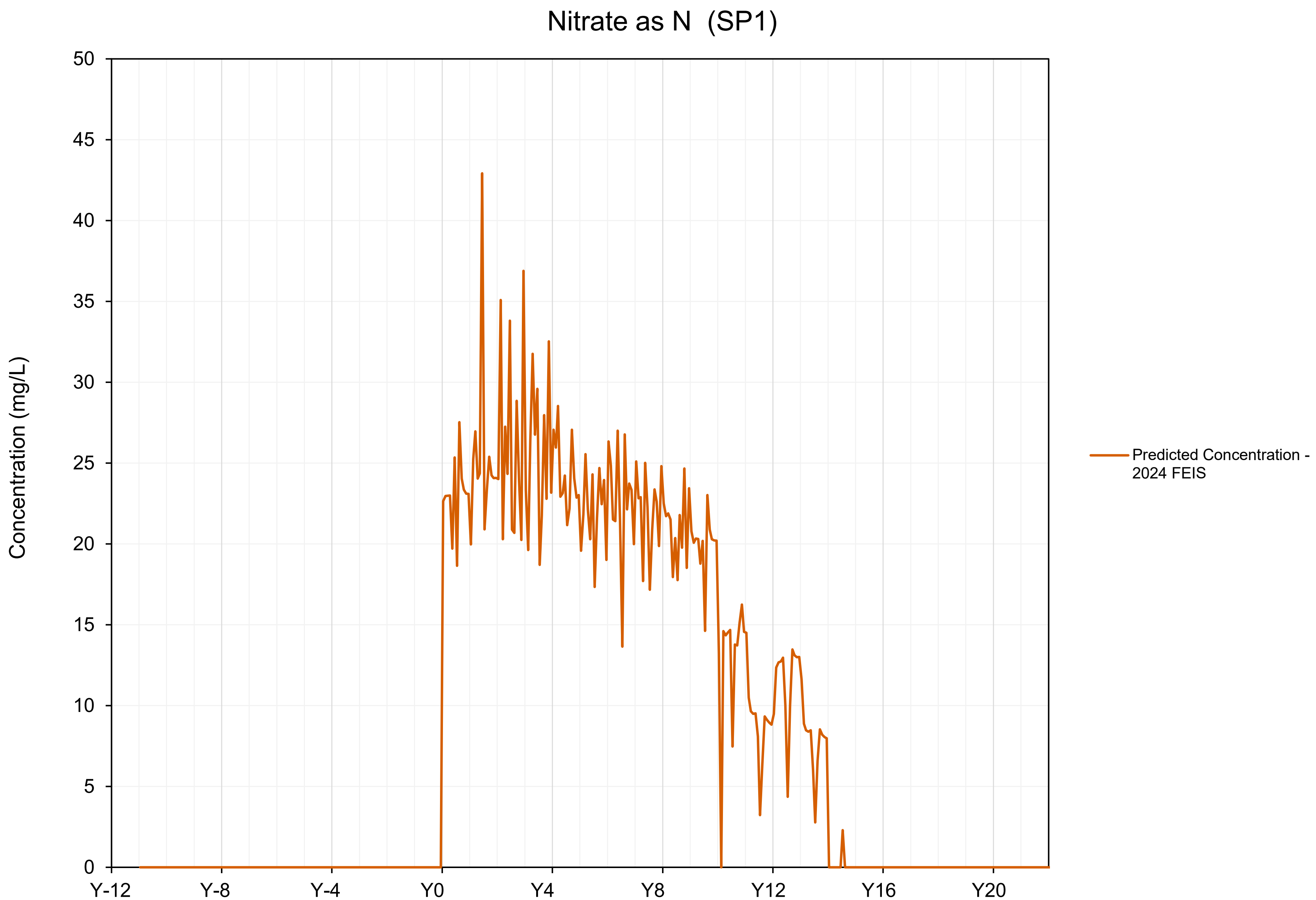

Cyanide, Total (SP1)
Concentration (mg/L)
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

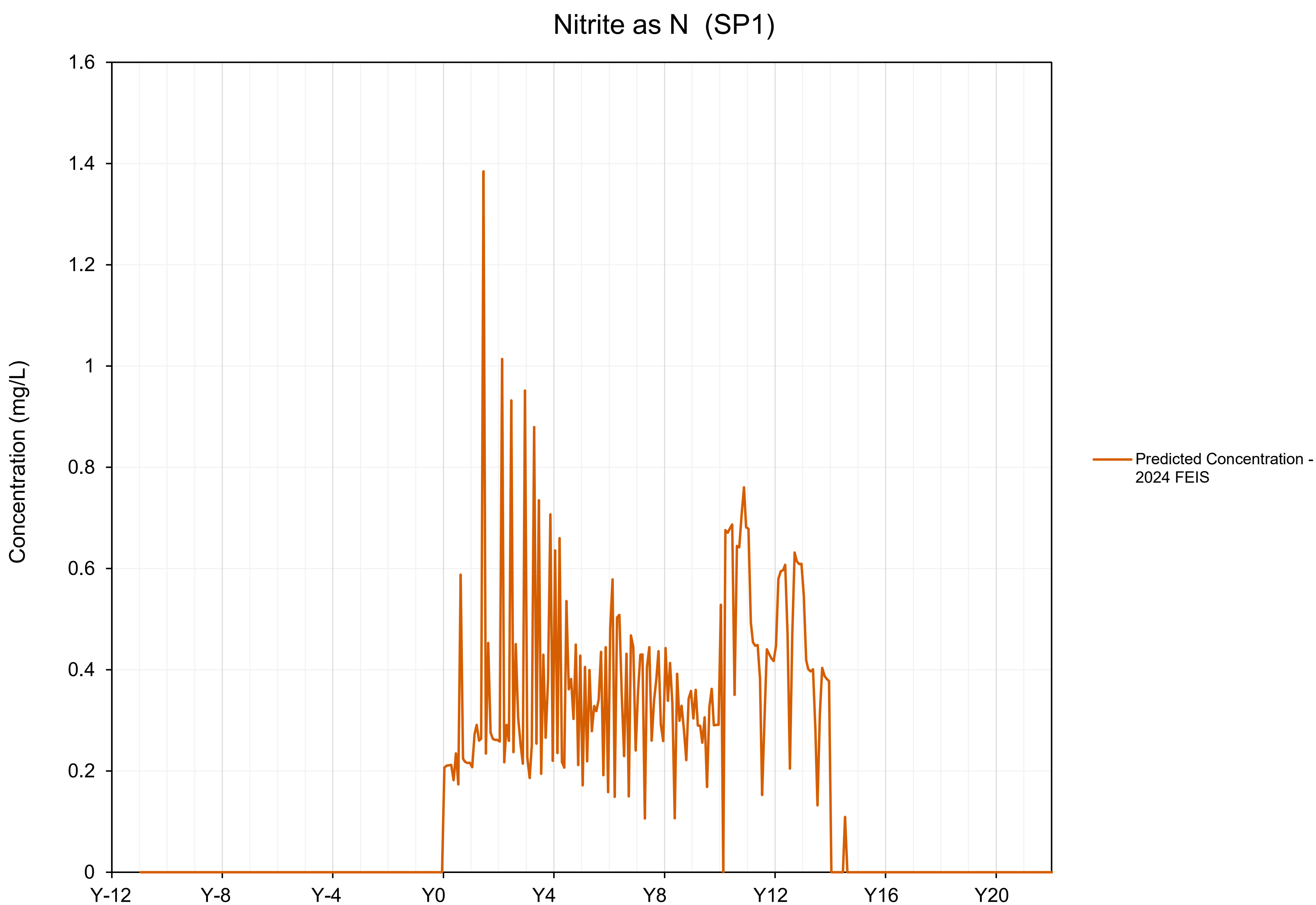

Cyanide, WAD (SP1)
Concentration (mg/L)
3.5E-12
3E-12
2.5E-12
2E-12
1.5E-12
1E-12
5E-13
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

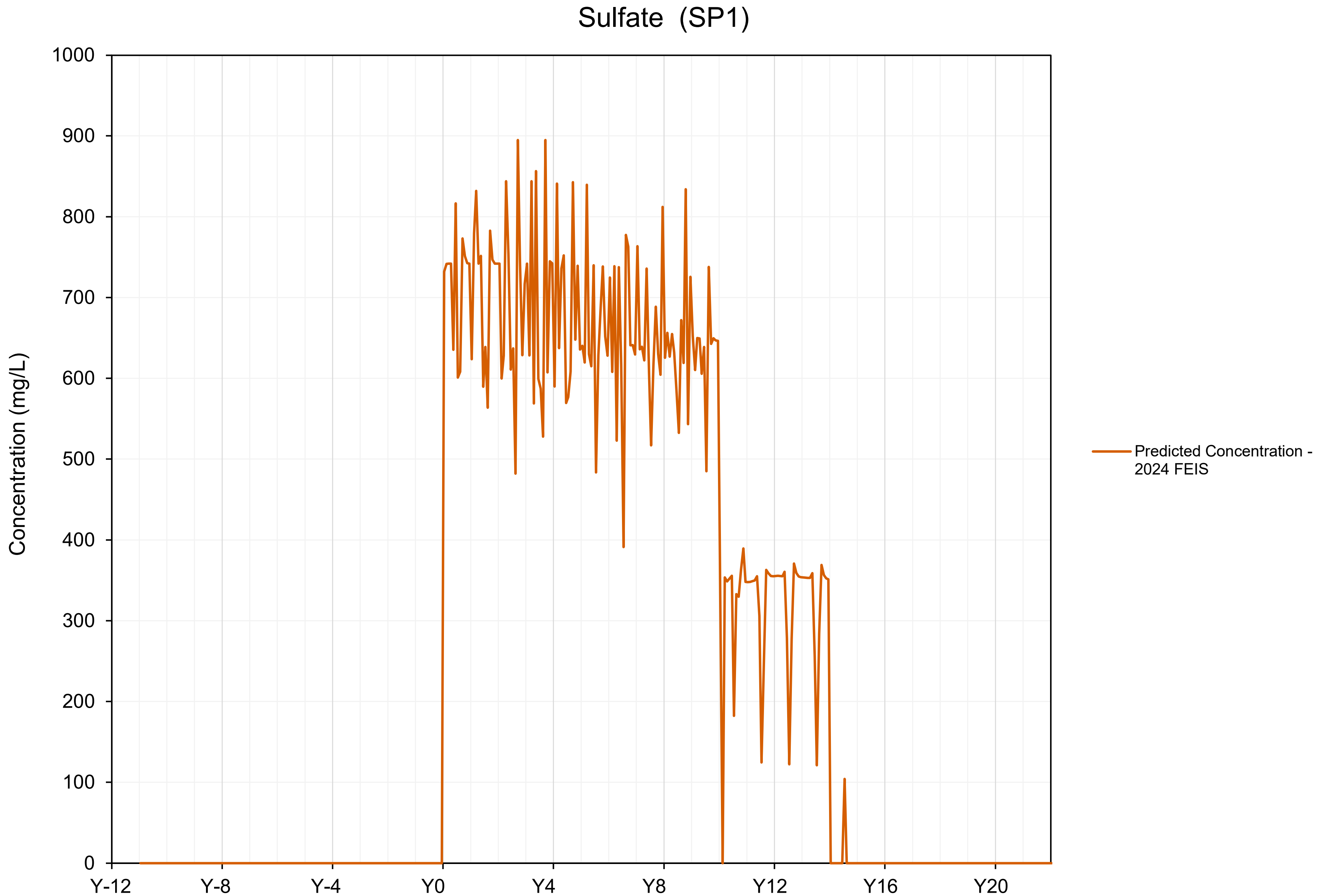

Cyanate (SP1)
Concentration (mg/L)
1.2E-10
1E-10
8E-11
6E-11
4E-11
2E-11
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

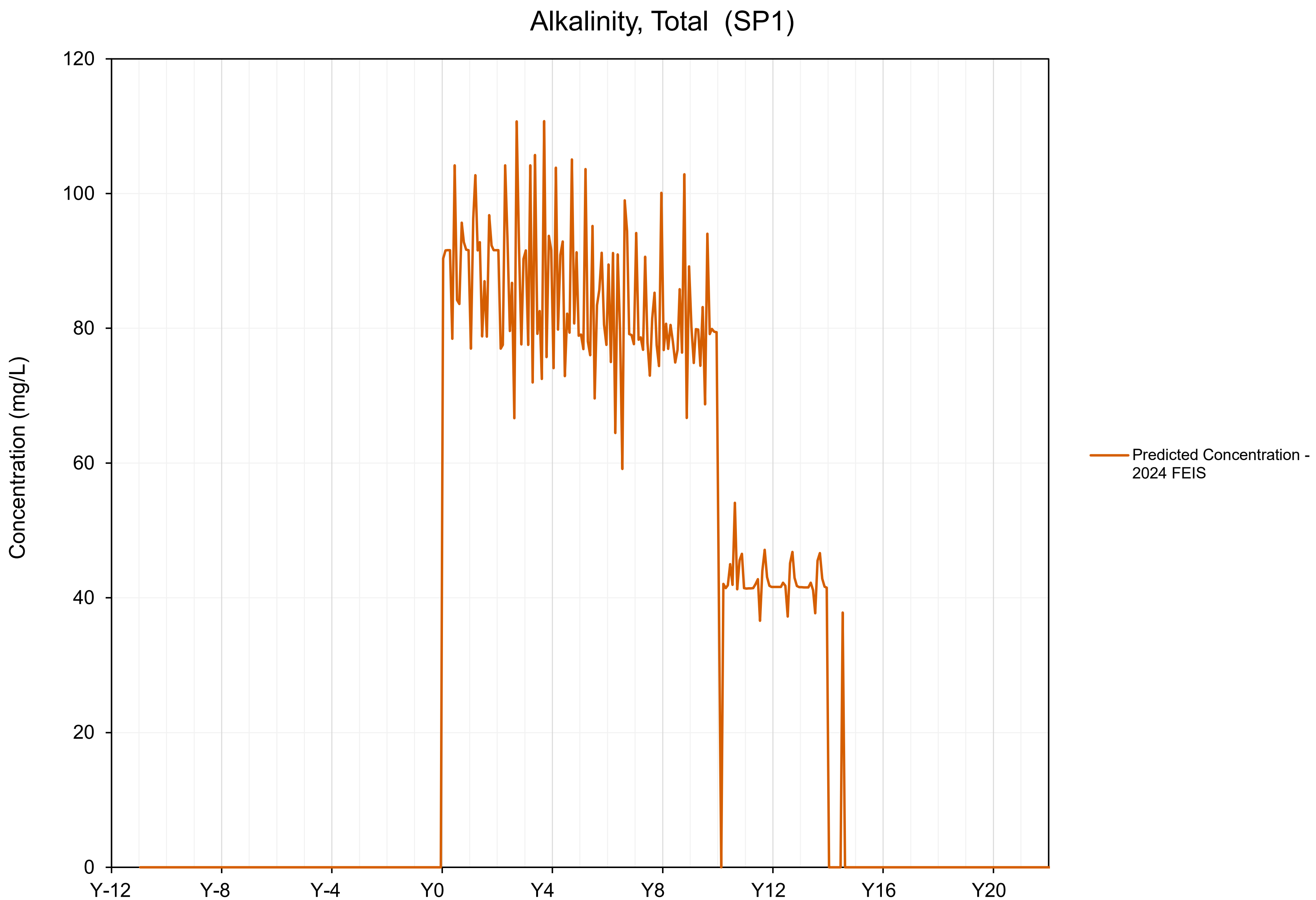

Thiocyanate (SP1)
Concentration (mg/L)
1.2E-10
1E-10
8E-11
6E-11
4E-11
2E-11
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Ammonia, Total as N (SP1)
Concentration (mg/L)
0
5
10
15
20
25
30
35
40
45
50
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

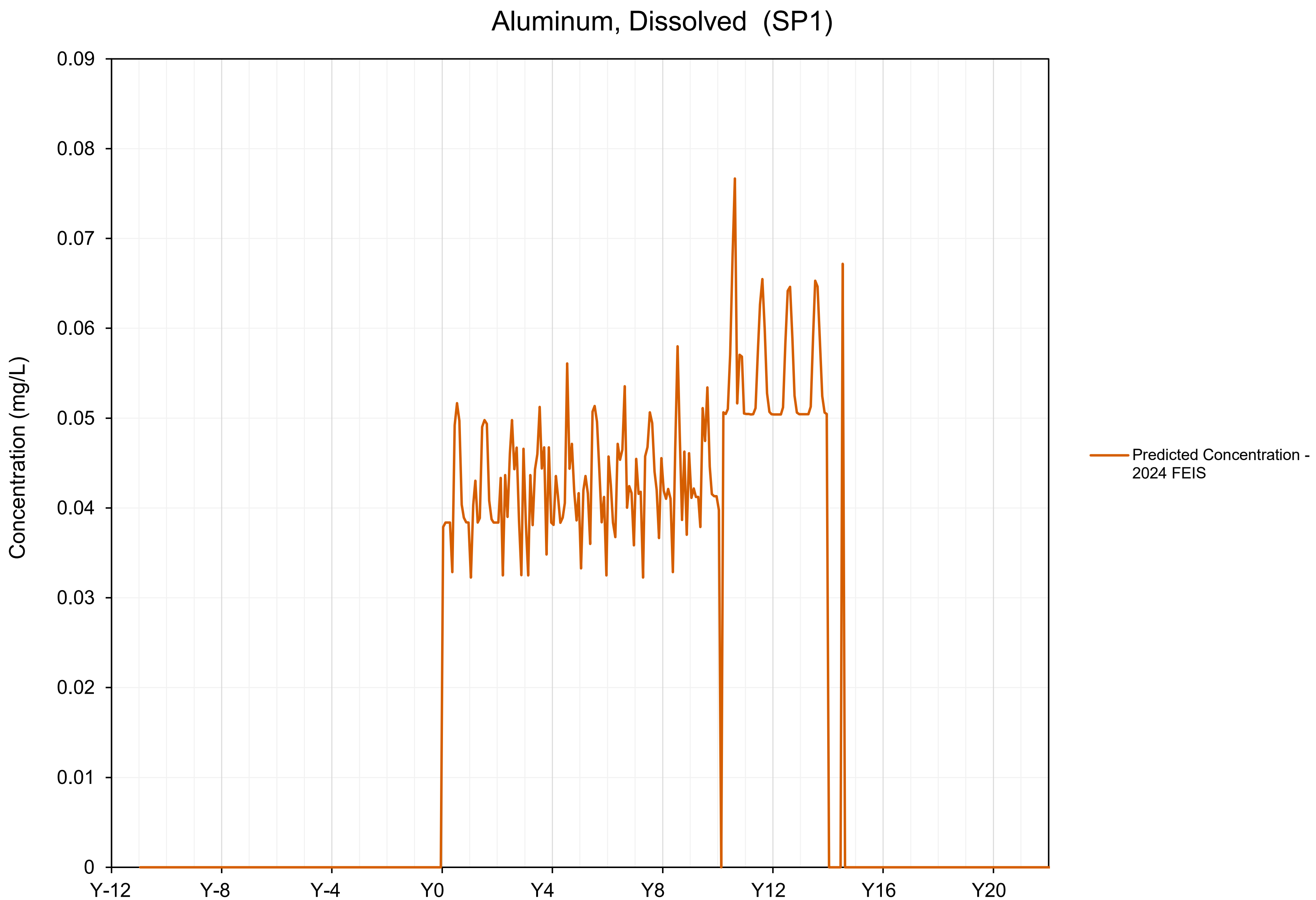

Nitrate as N (SP1)
Concentration (mg/L)
50
45
40
35
30
25
20
15
10
5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

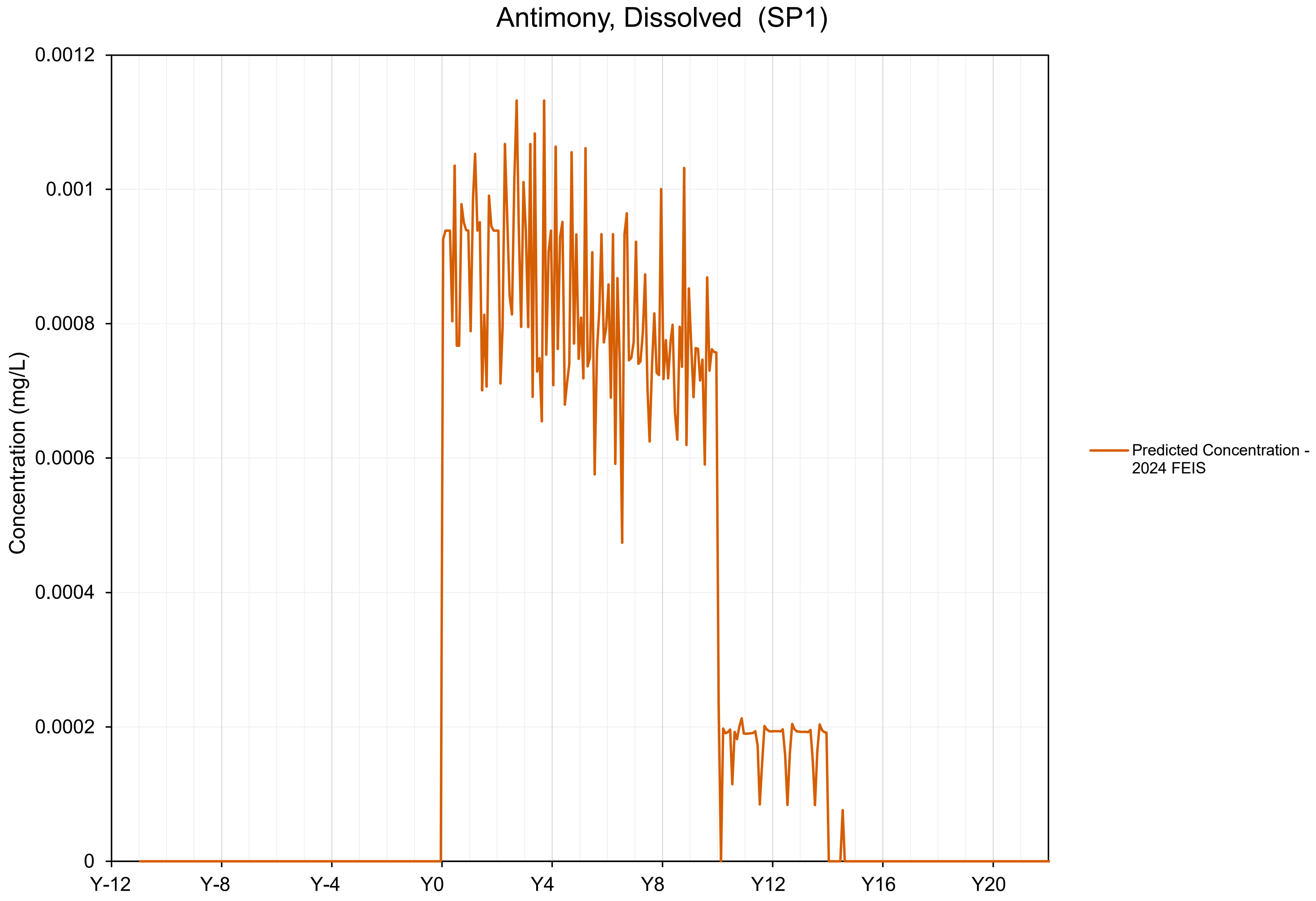

Nitrite as N (SP1)
Concentration (mg/L)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

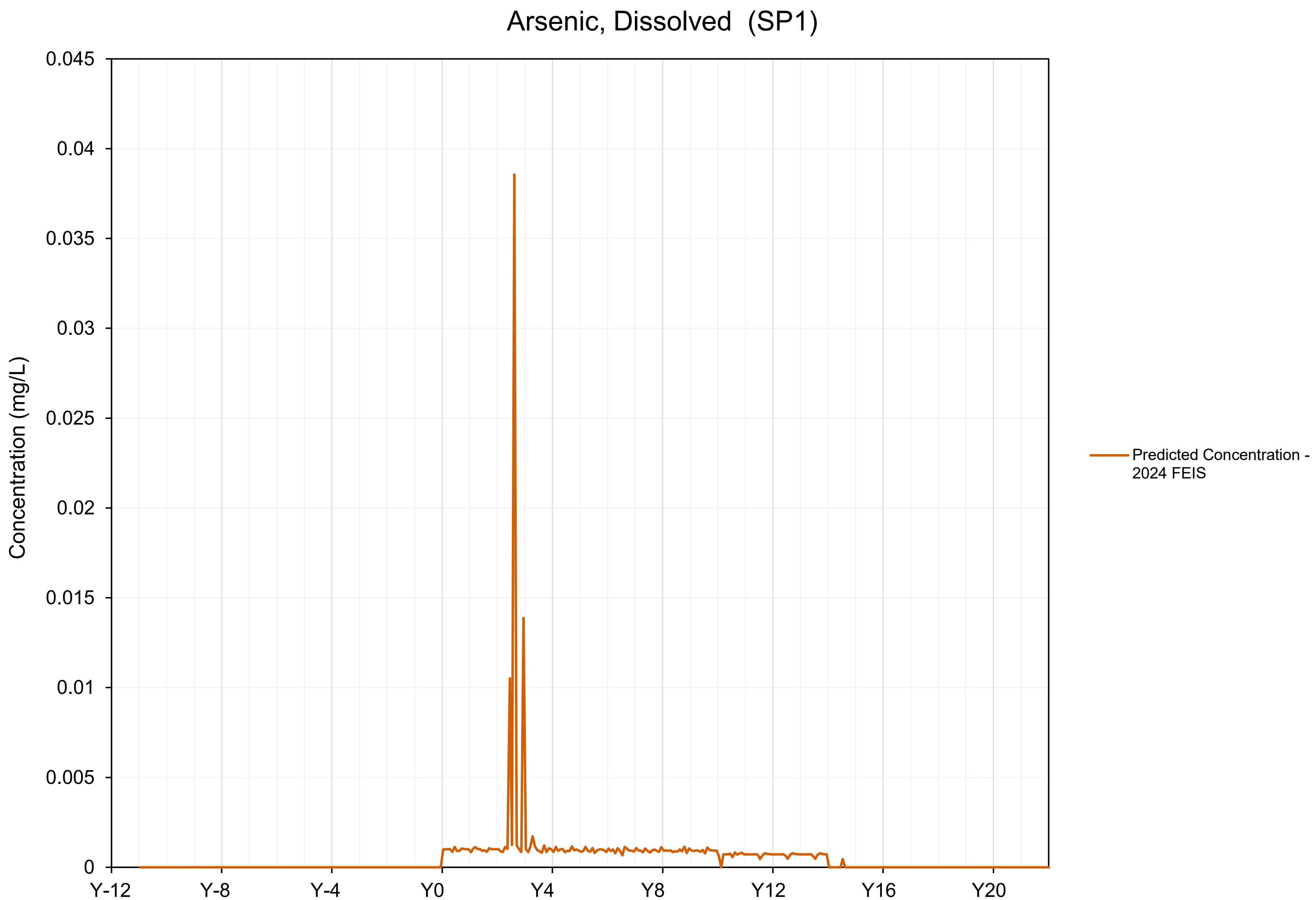

Sulfate (SP1)
Concentration (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

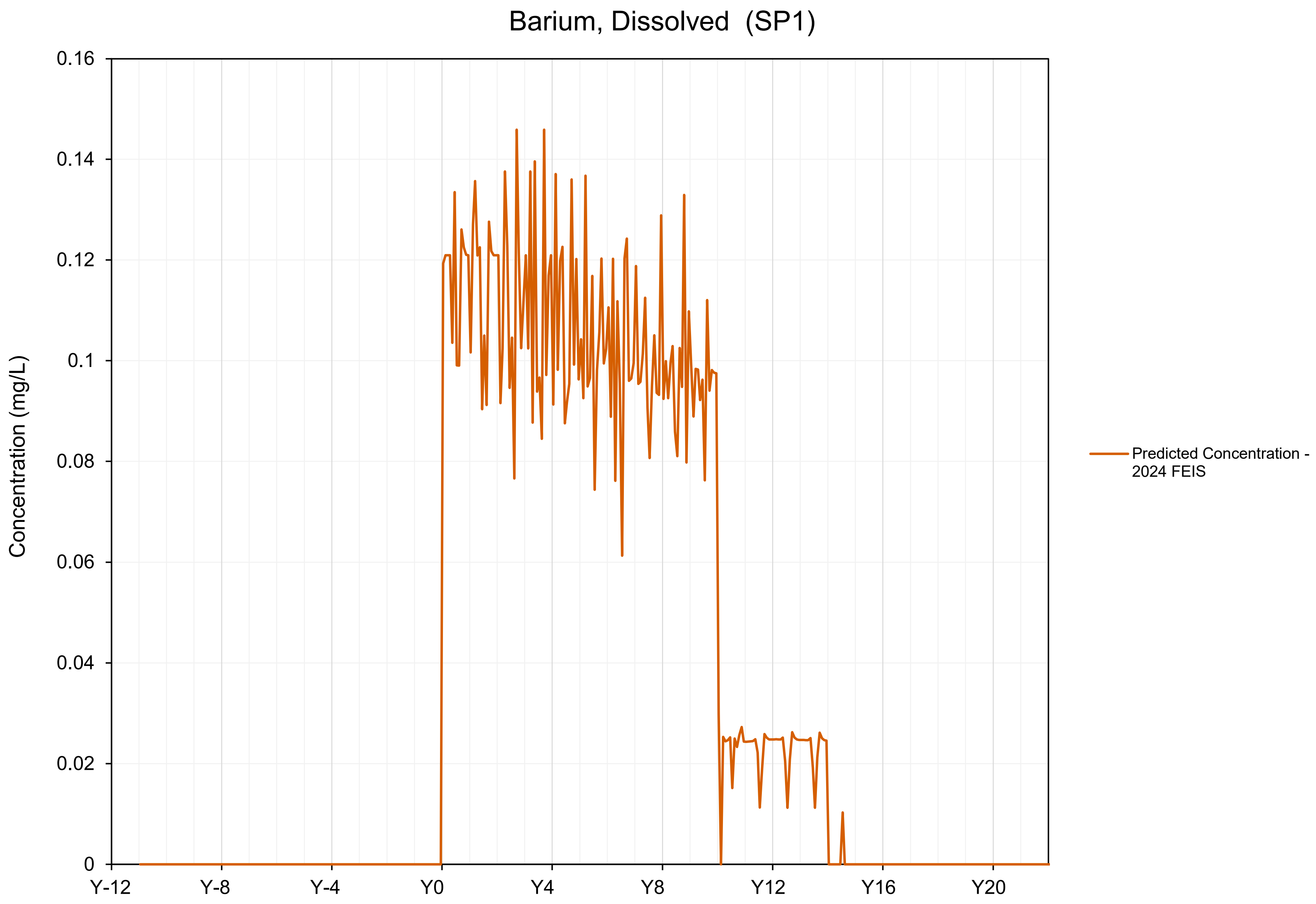

Alkalinity, Total (SP1)
Concentration (mg/L)
120
100
80
60
40
20
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

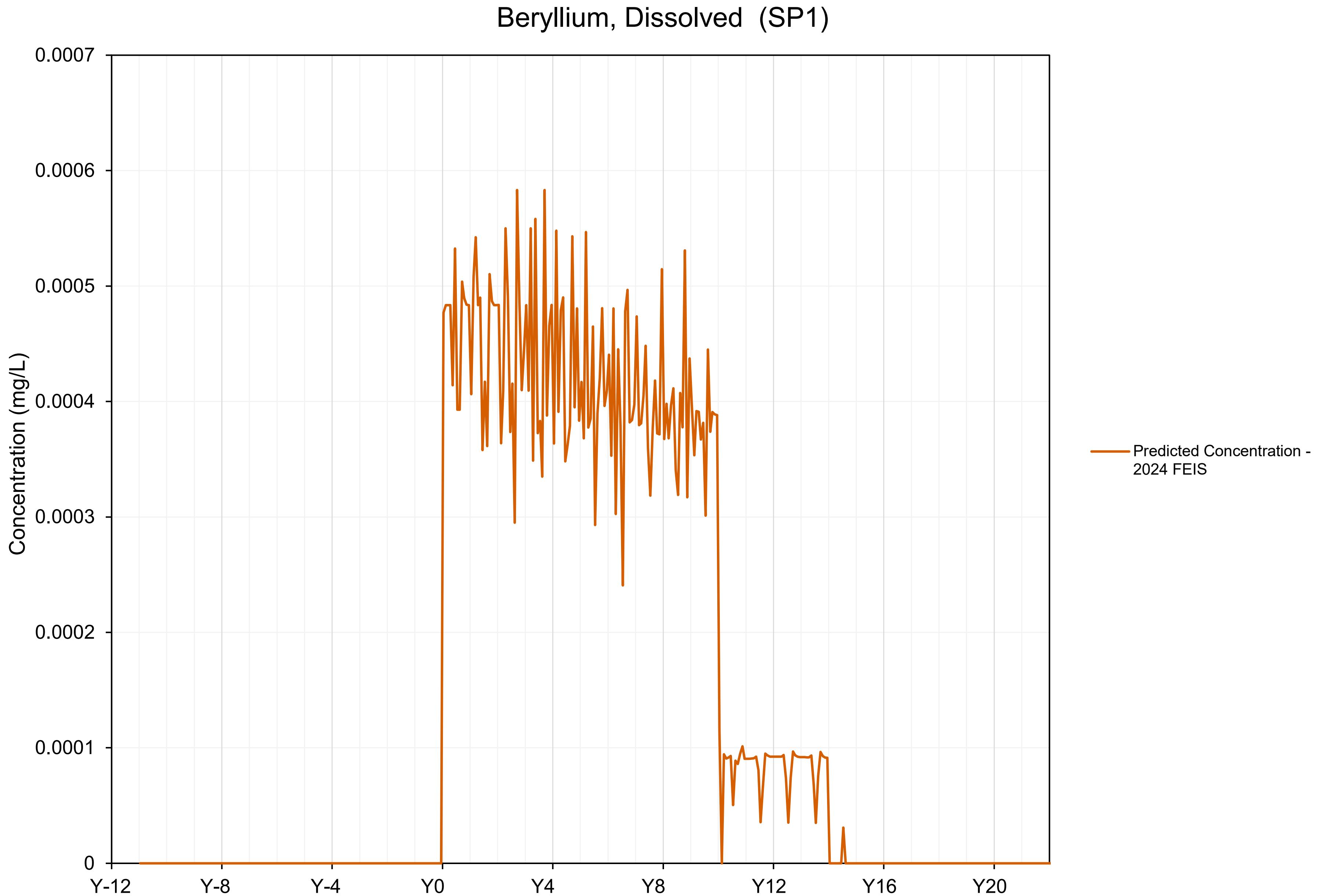

Hardness (SP1)
Concentration (mg/L)
14000
12000
10000
8000
6000
4000
2000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

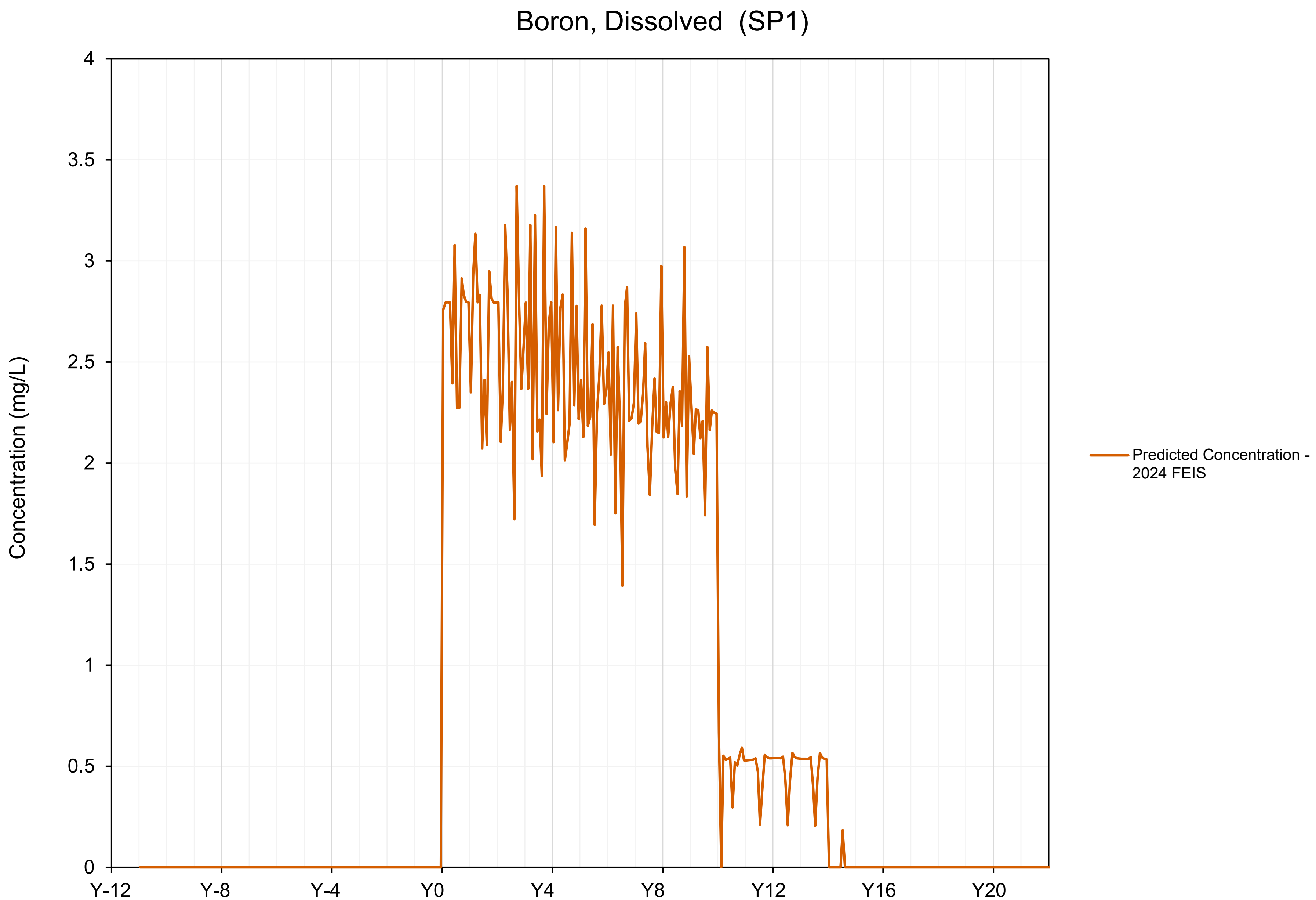

Aluminum, Dissolved (SP1)
Concentration (mg/L)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

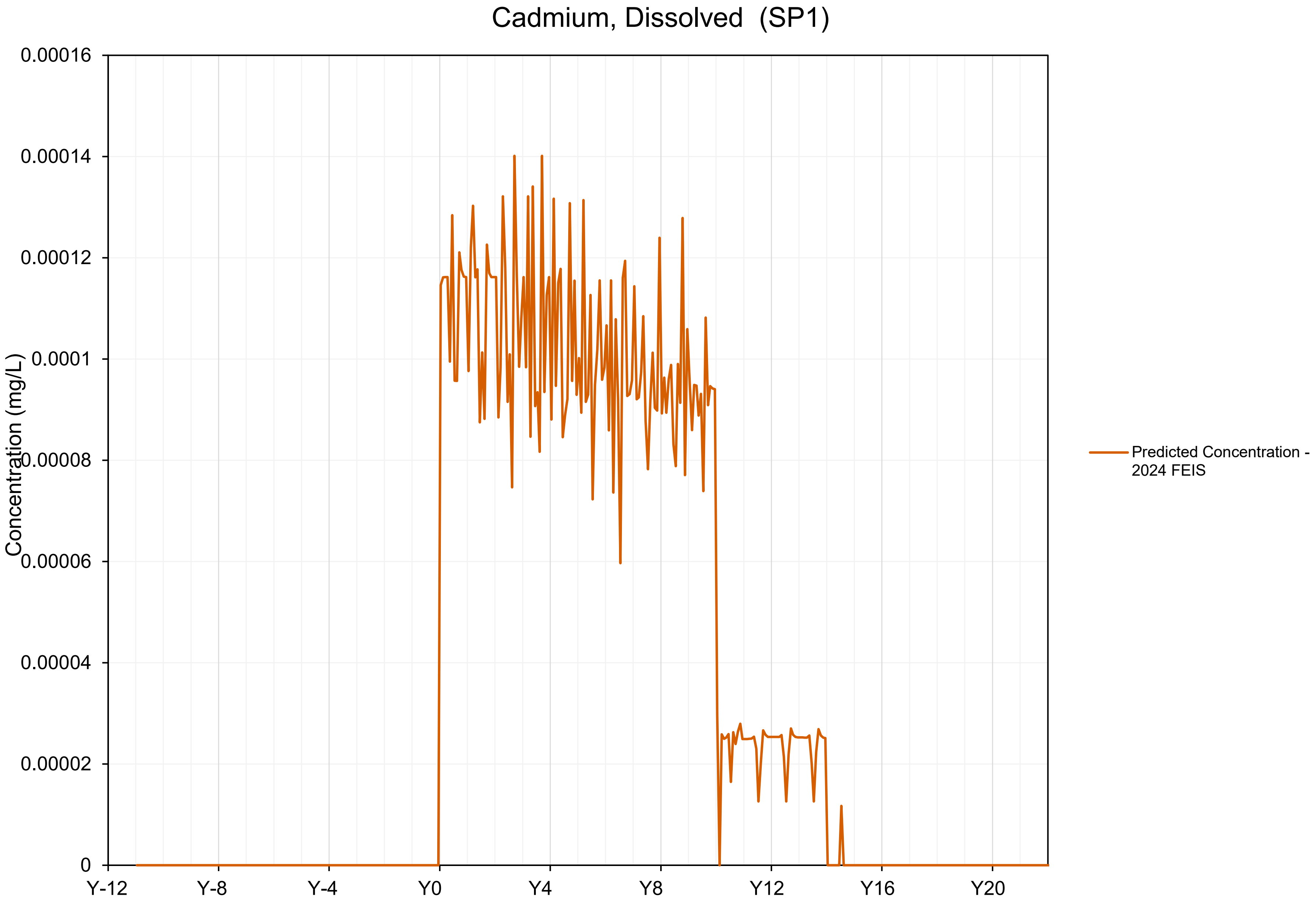

Antimony, Dissolved (SP1)
Concentration (mg/L)
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

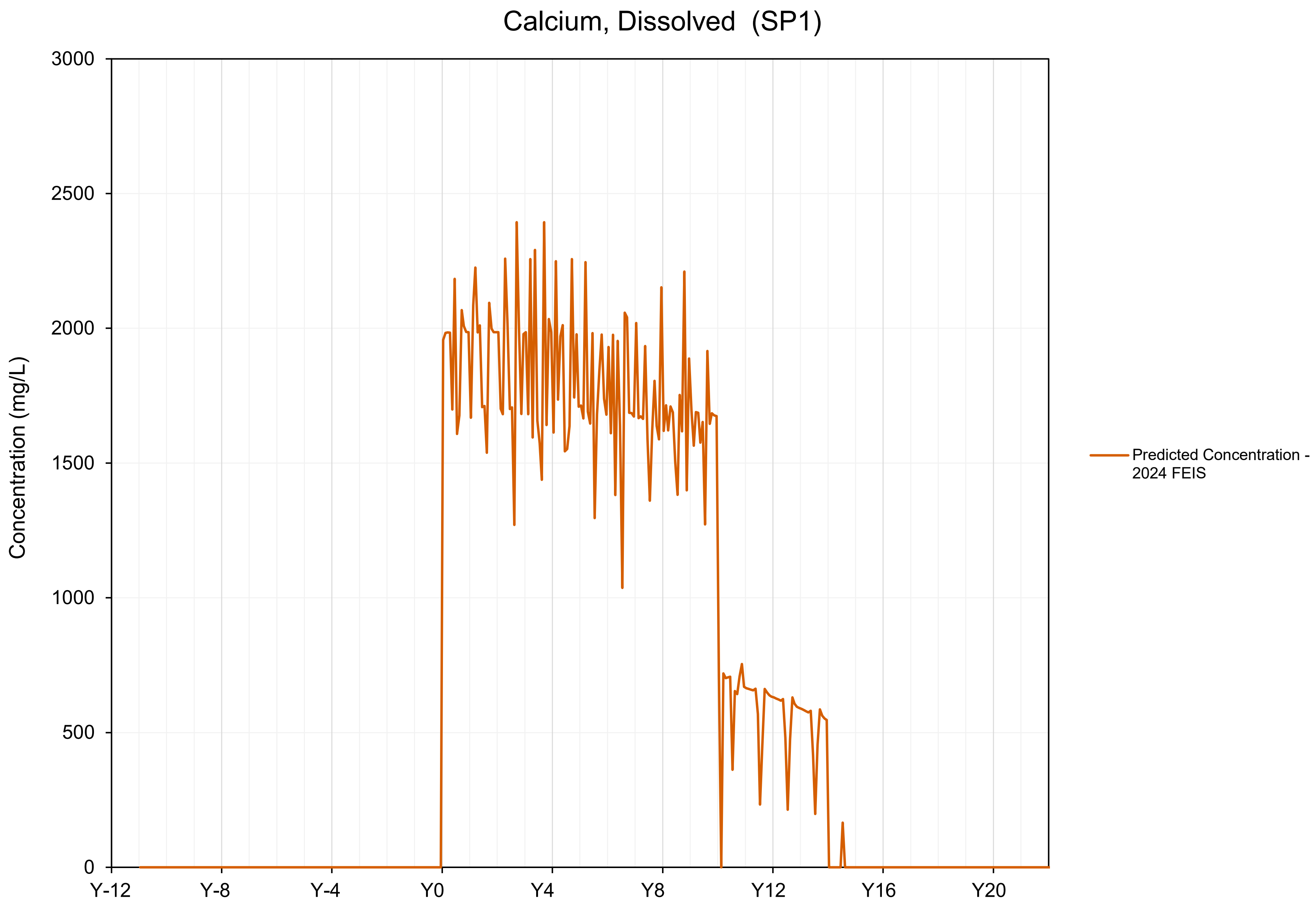

Arsenic, Dissolved (SP1)
Concentration (mg/L)
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Barium, Dissolved (SP1)
Concentration (mg/L)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

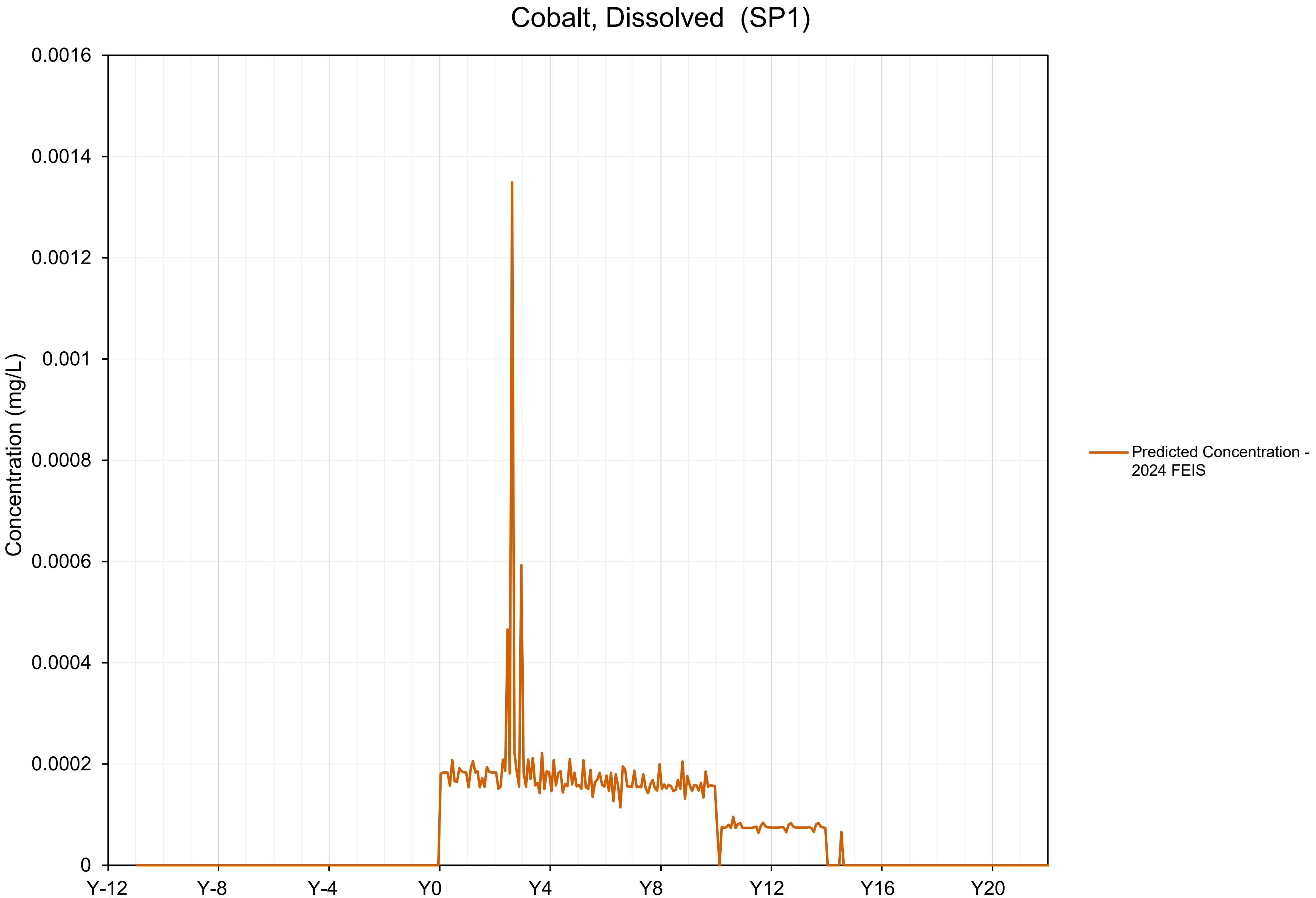

Beryllium, Dissolved (SP1)
Concentration (mg/L)
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

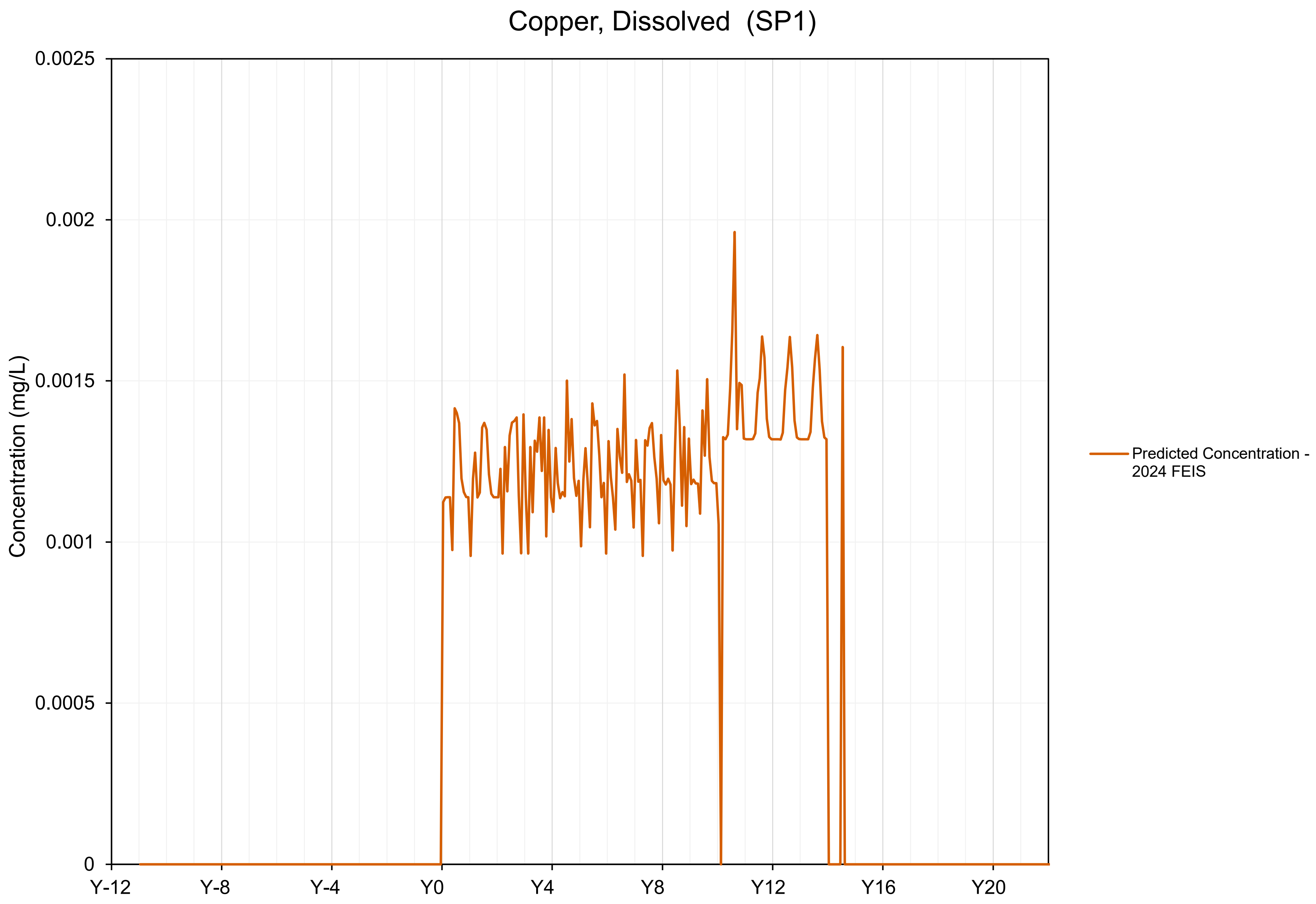

Boron, Dissolved (SP1)
Concentration (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

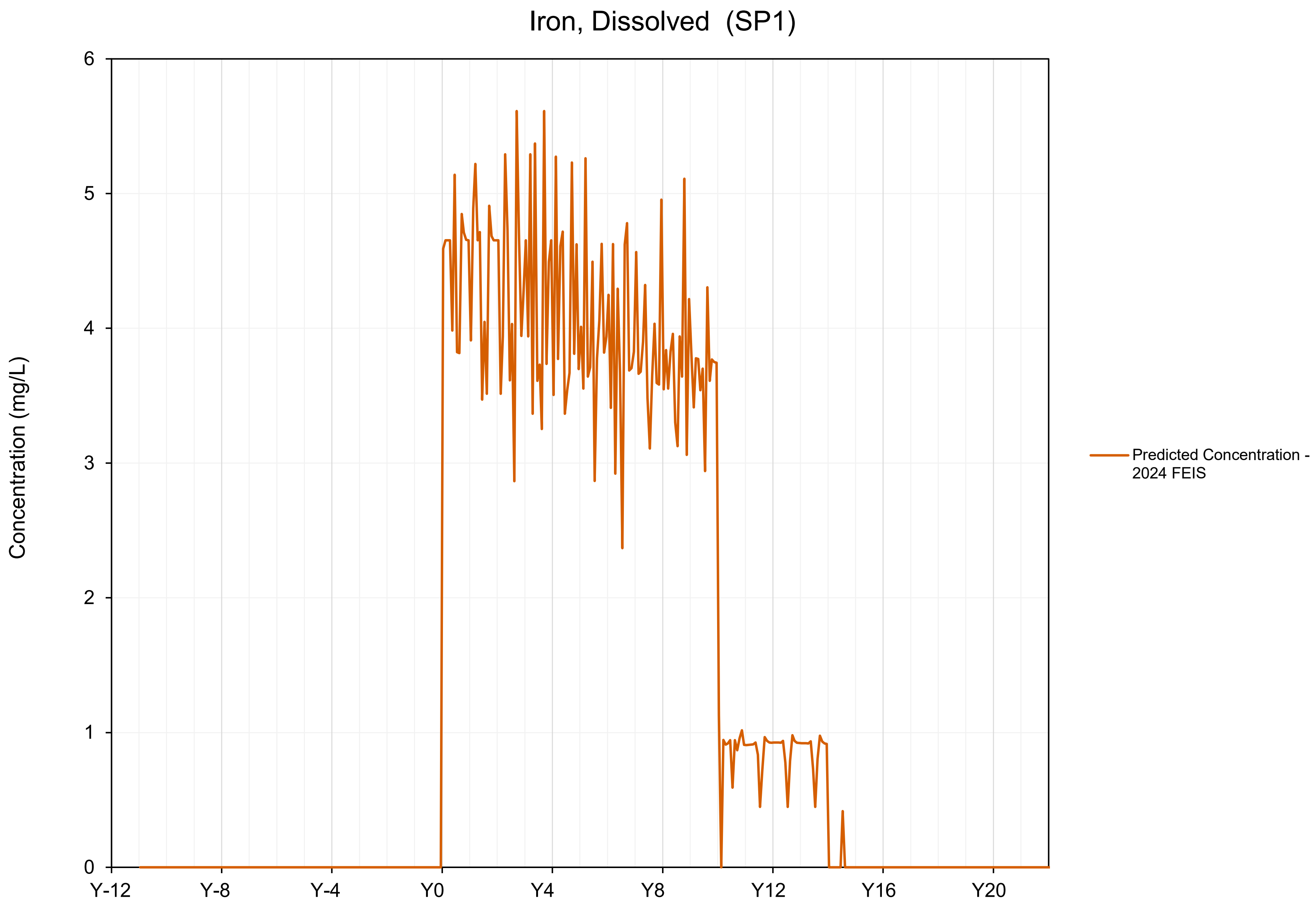

Cadmium, Dissolved (SP1)
0.00016
0.00014
0.00012
0.0001
0.00008
0.00006
0.00004
0.00002
0
Concentration (mg/L)
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

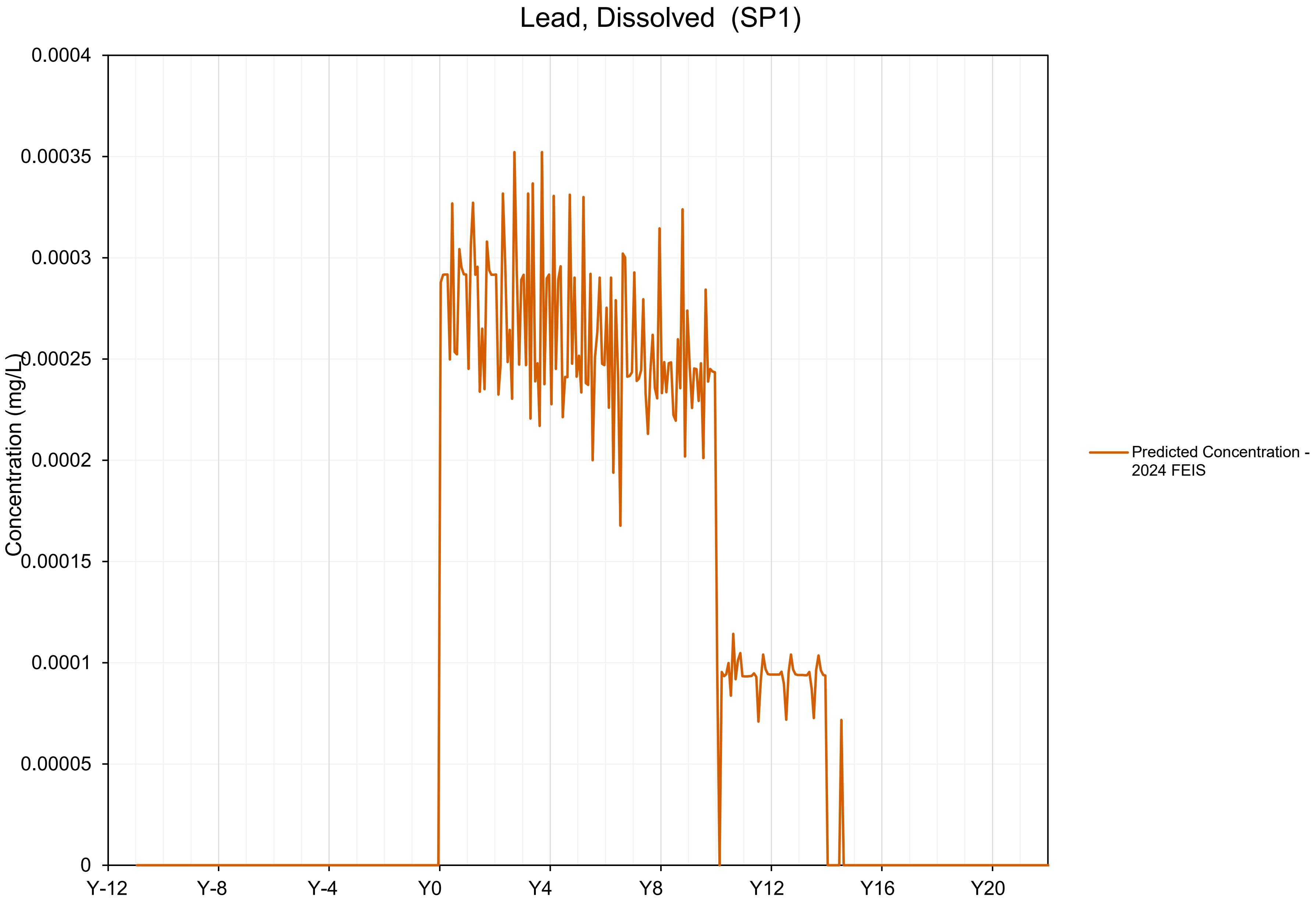

Calcium, Dissolved (SP1)
Concentration (mg/L)
3000
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

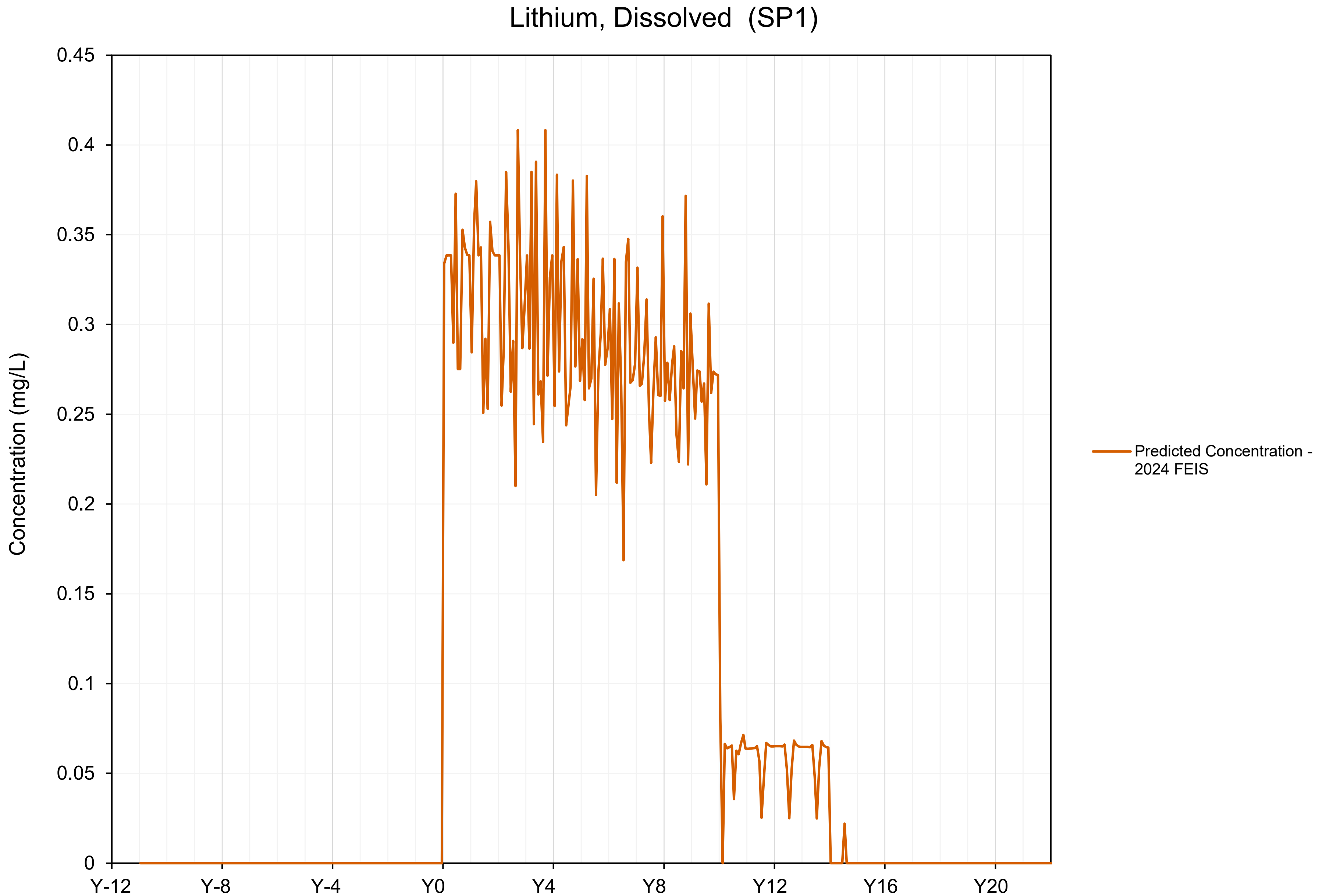

Chromium, Dissolved (SP1)
Concentration (mg/L)
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

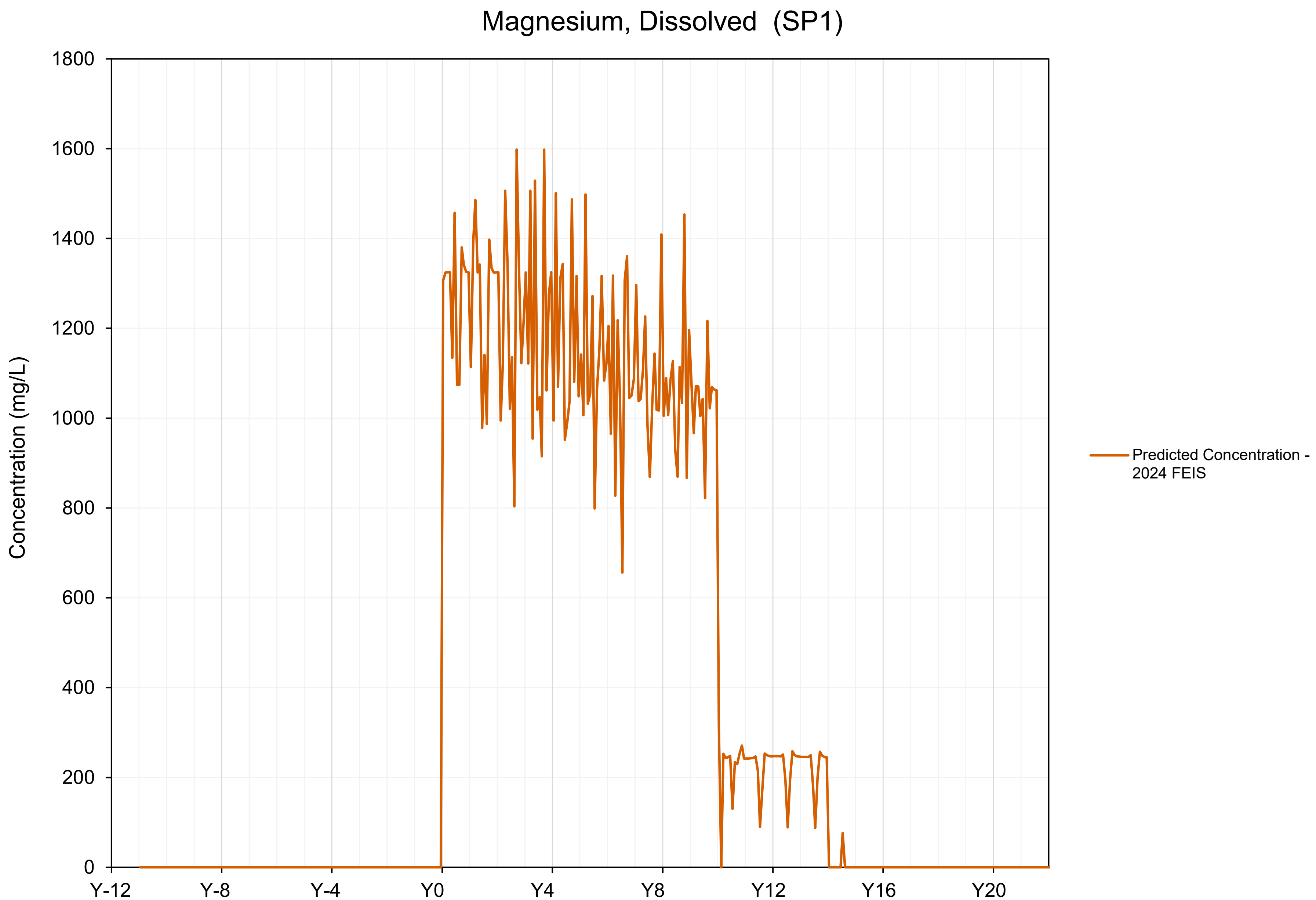

Cobalt, Dissolved (SP1)
Concentration (mg/L)
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

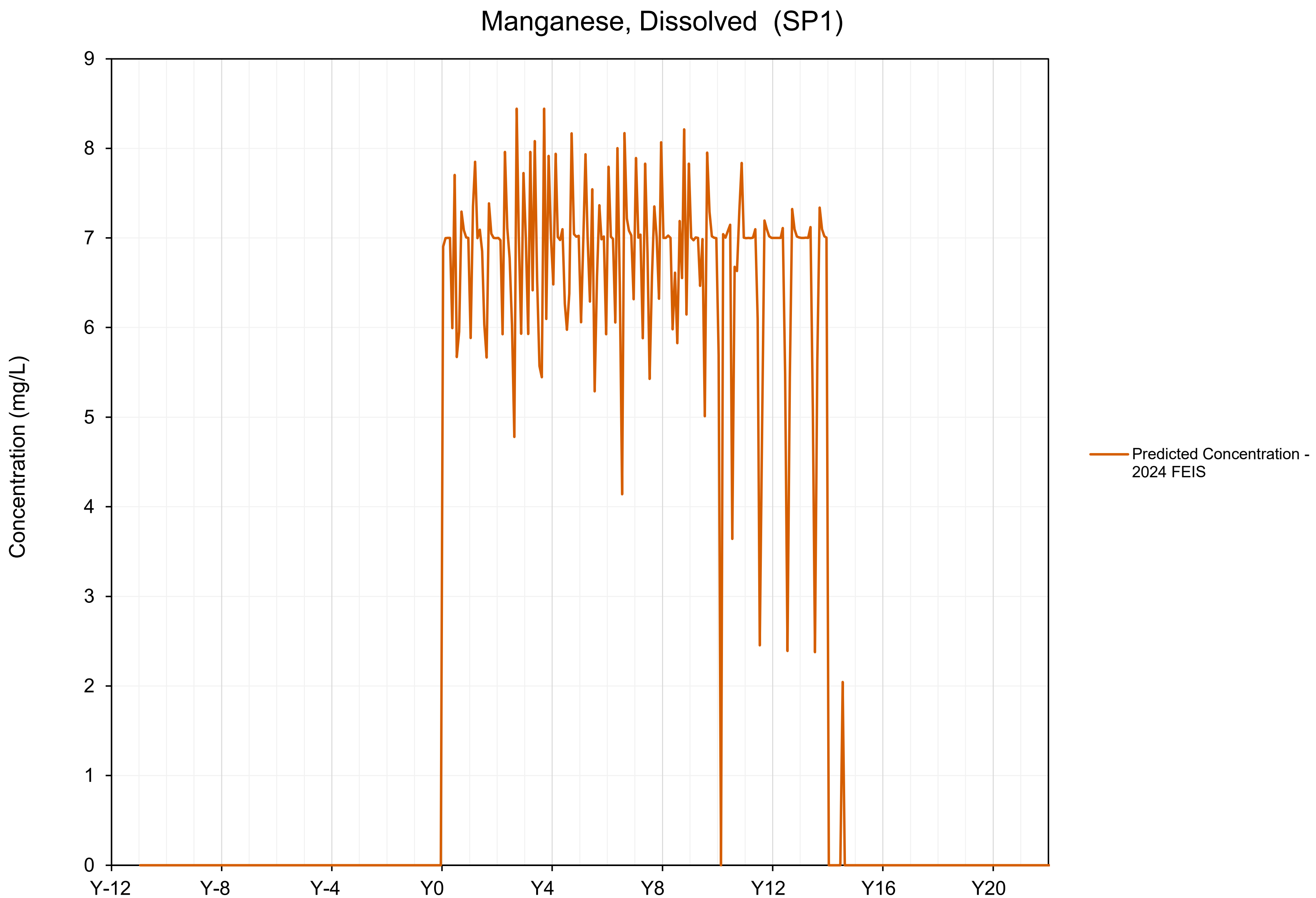

Copper, Dissolved (SP1)
Concentration (mg/L)
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Iron, Dissolved (SP1)
Concentration (mg/L)
0
1
2
3
4
5
6
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

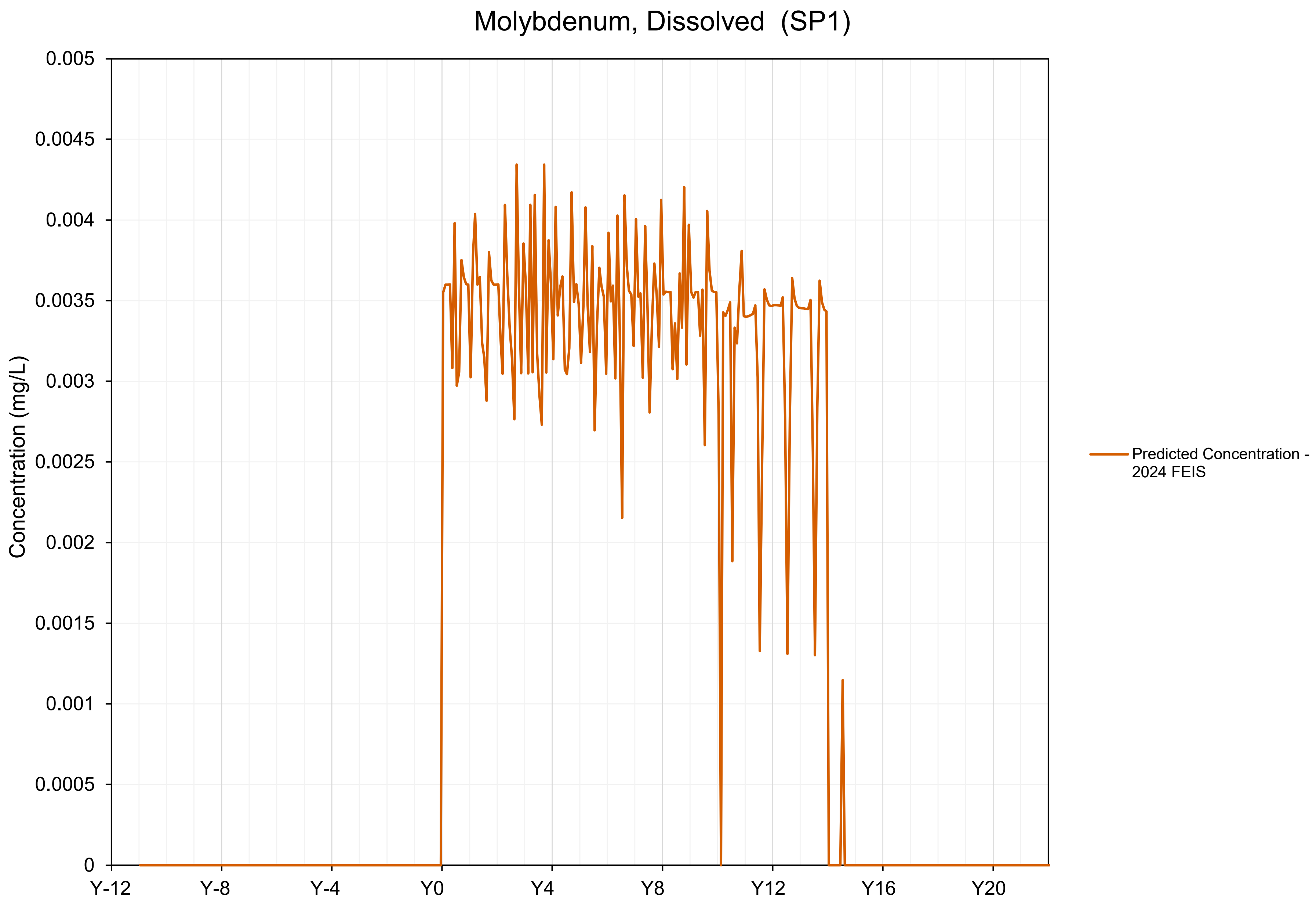

Lead, Dissolved (SP1)
Concentration (mg/L)
0.0004
0.00035
0.0003
0.00025
0.0002
0.00015
0.0001
0.00005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

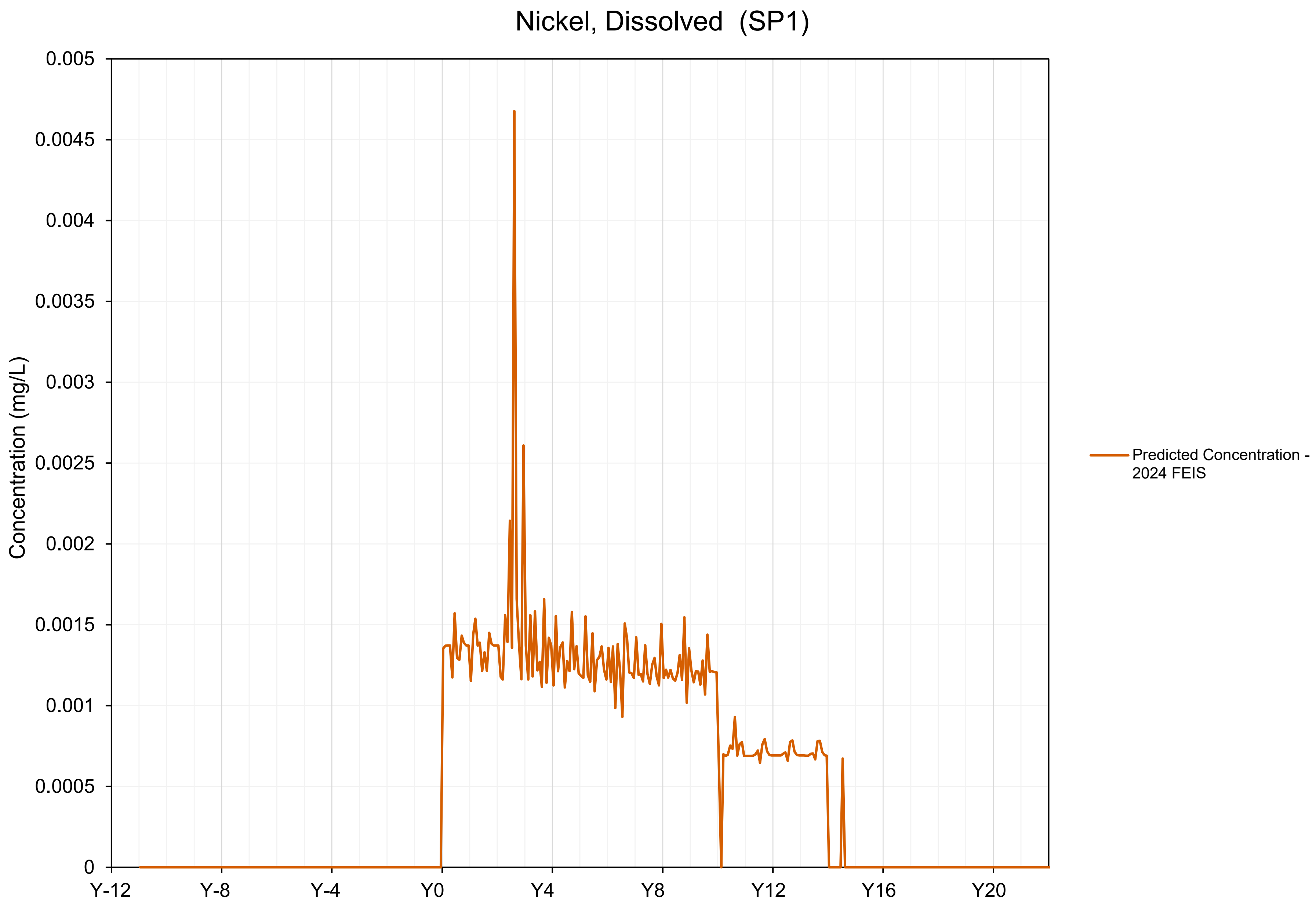

Lithium, Dissolved (SP1)
Concentration (mg/L)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

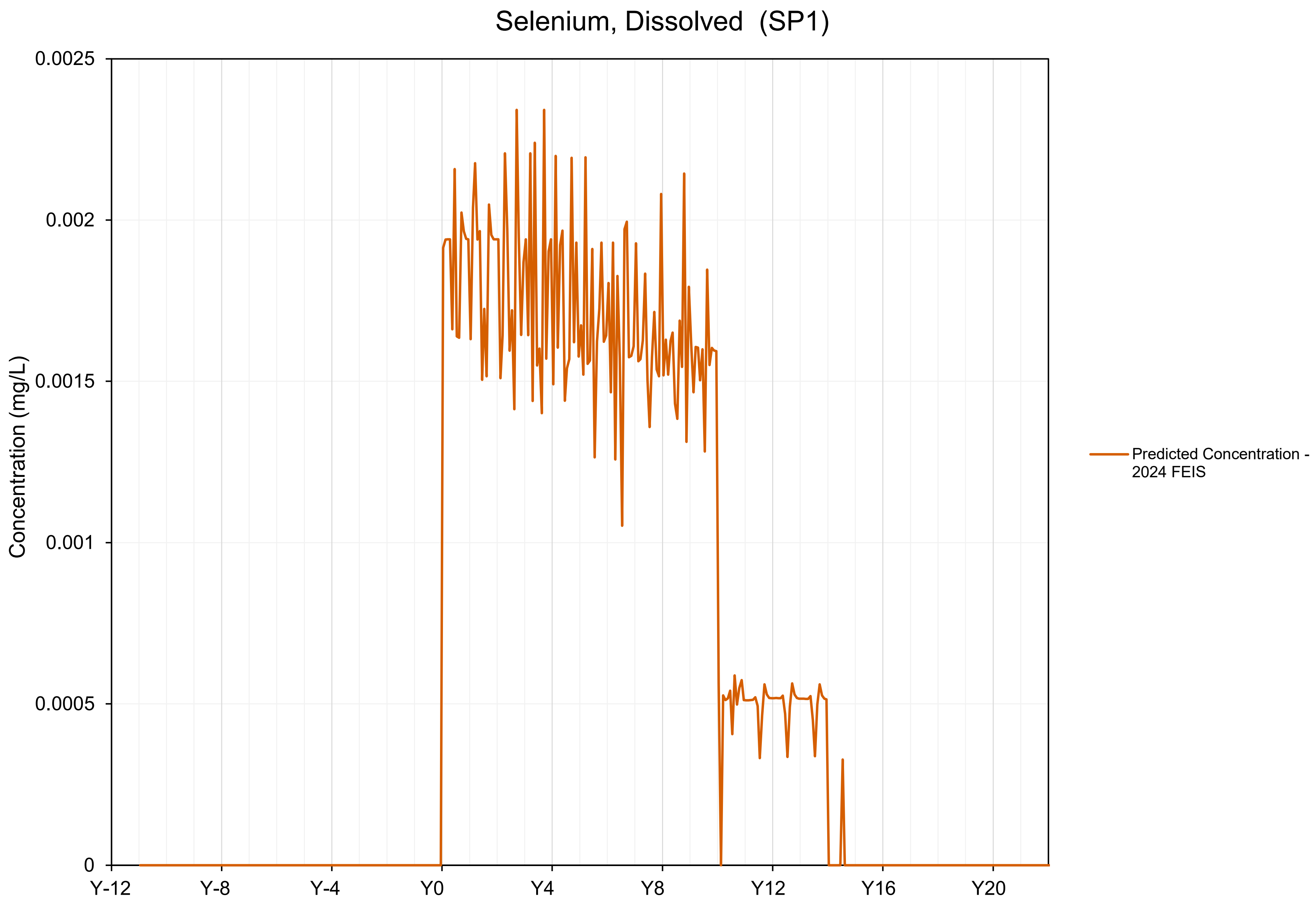

Magnesium, Dissolved (SP1)
Concentration (mg/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

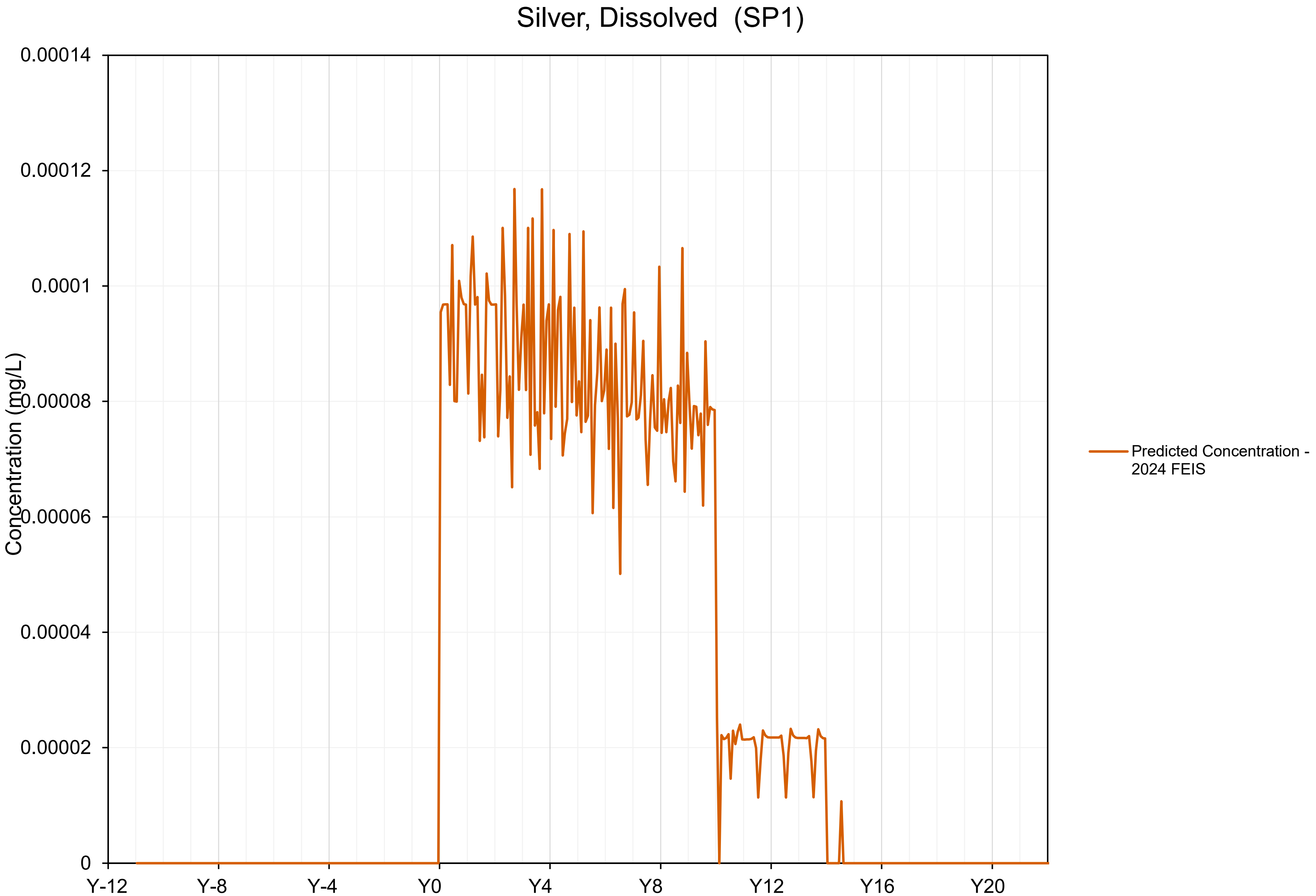

Manganese, Dissolved (SP1)
Concentration (mg/L)
0
1
2
3
4
5
6
7
8
9
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

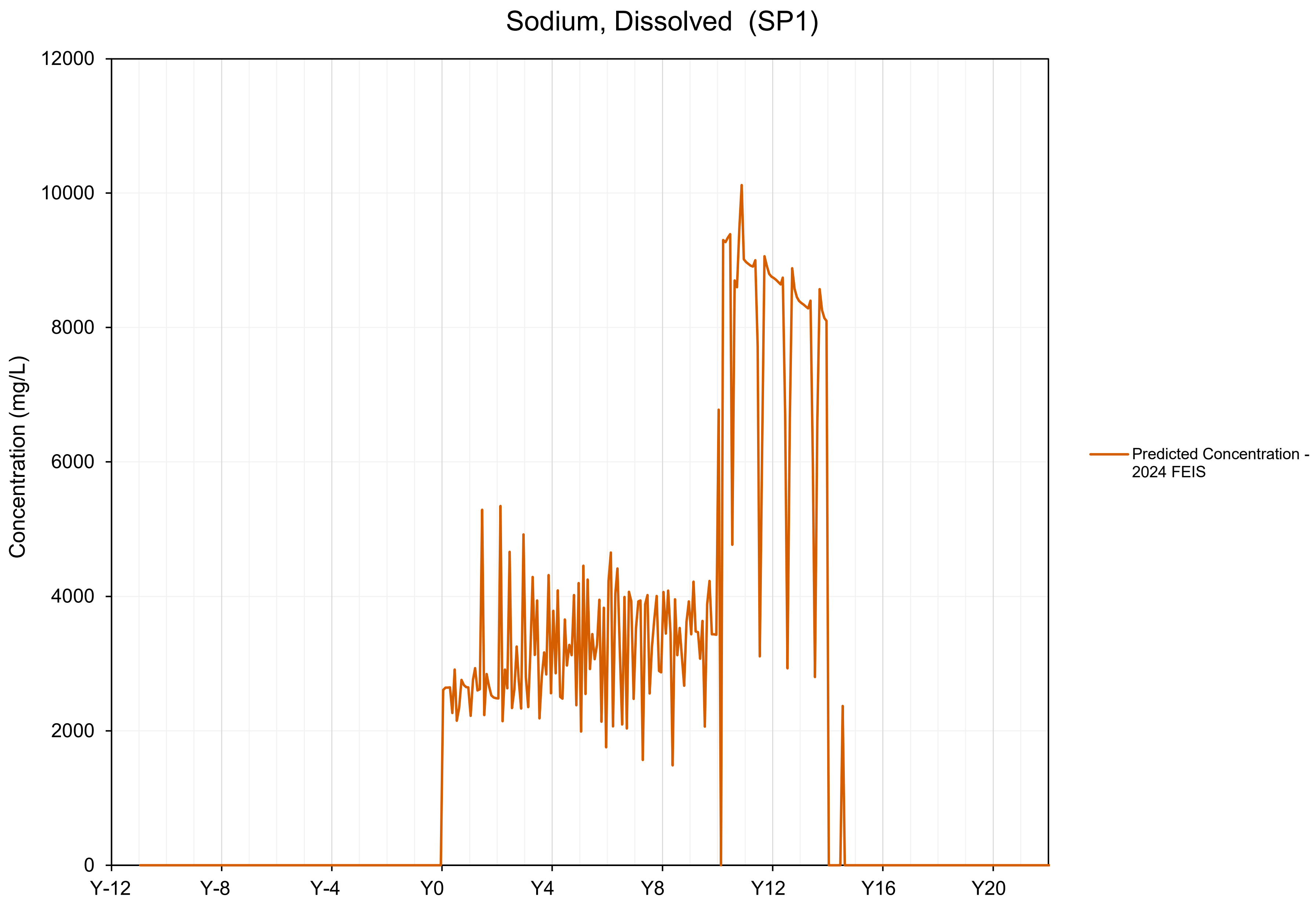

Mercury, Dissolved (SP1)
Concentration (mg/L)
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

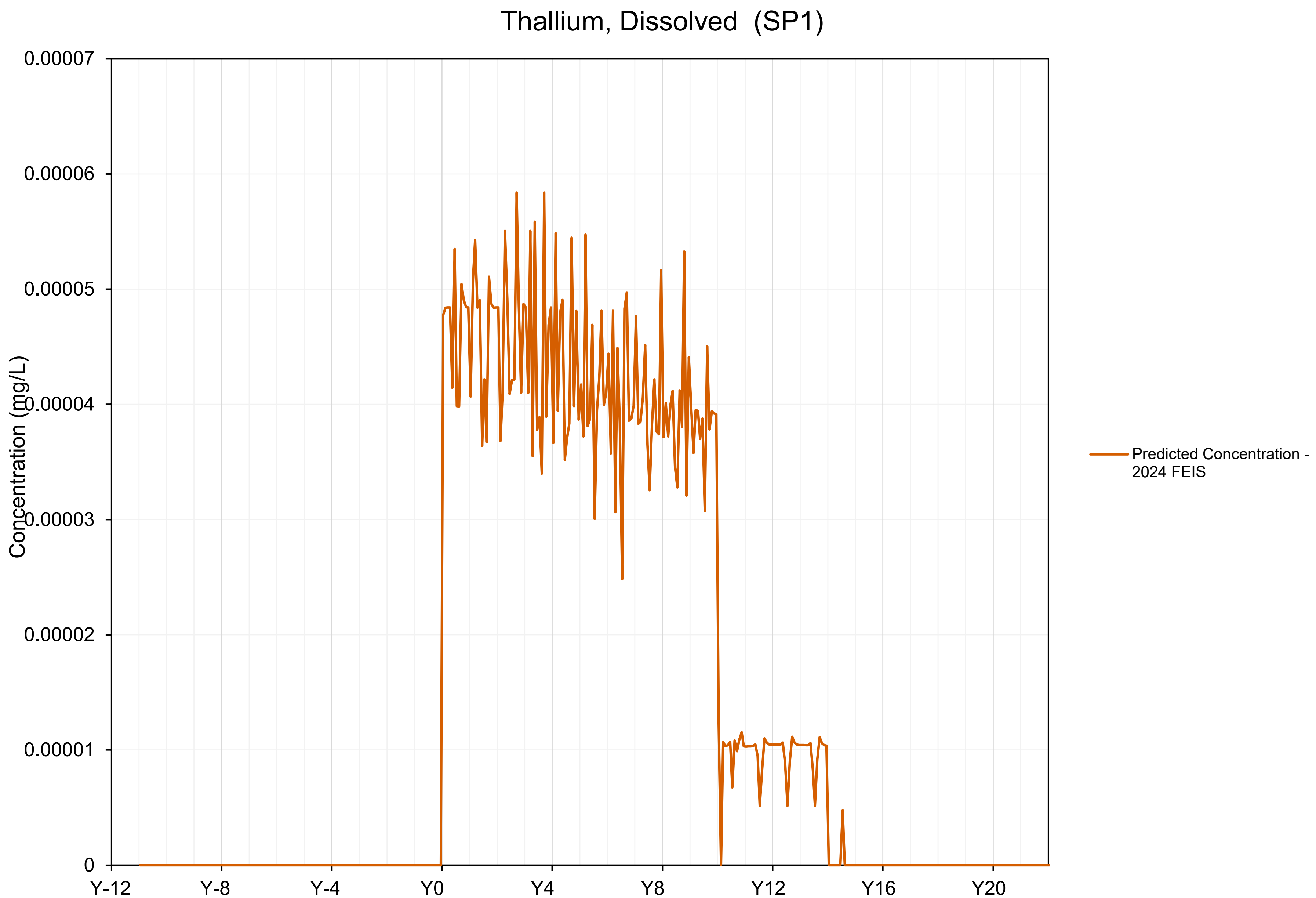

Molybdenum, Dissolved (SP1)
Concentration (mg/L)
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

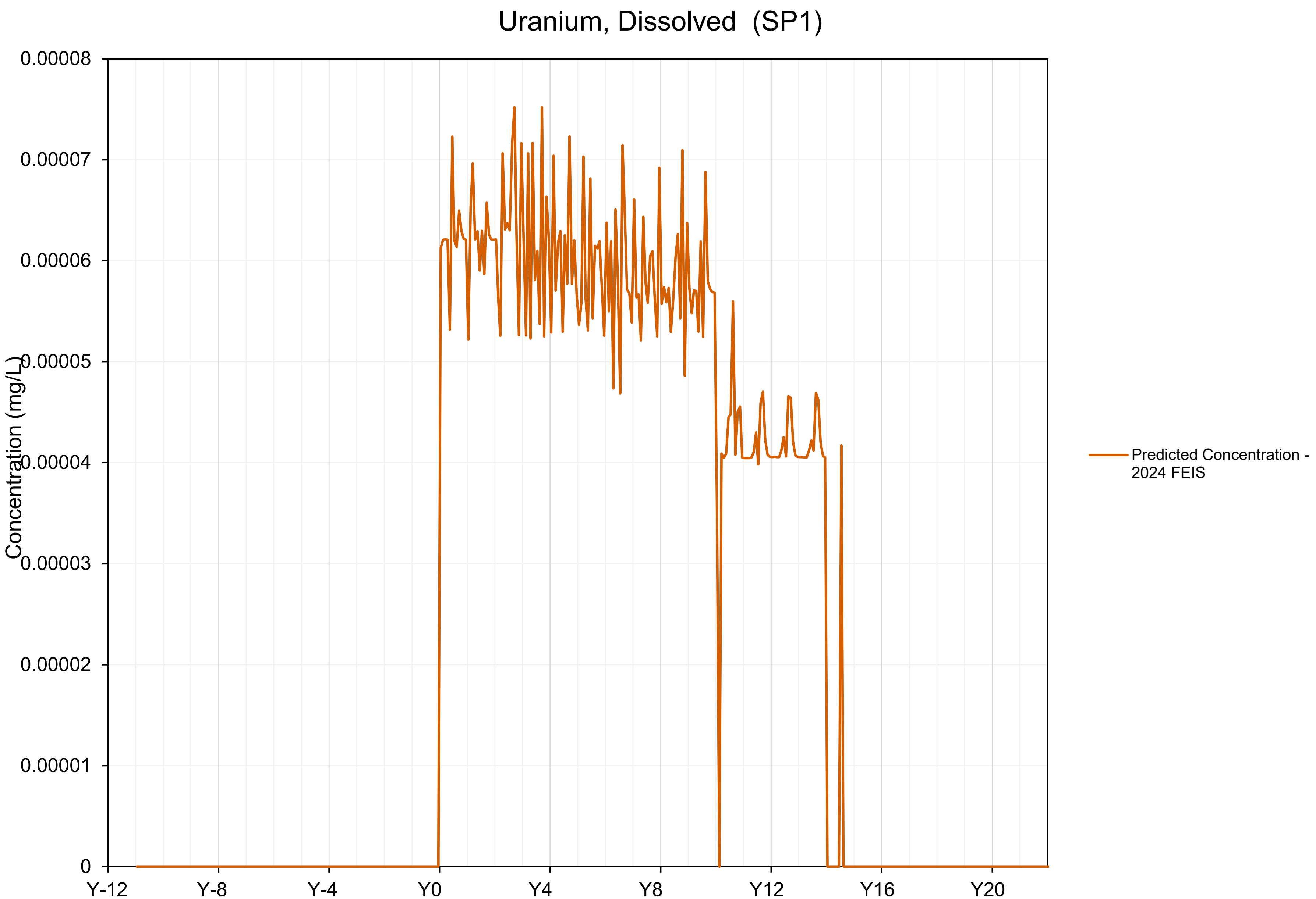

Nickel, Dissolved (SP1)
Concentration (mg/L)
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

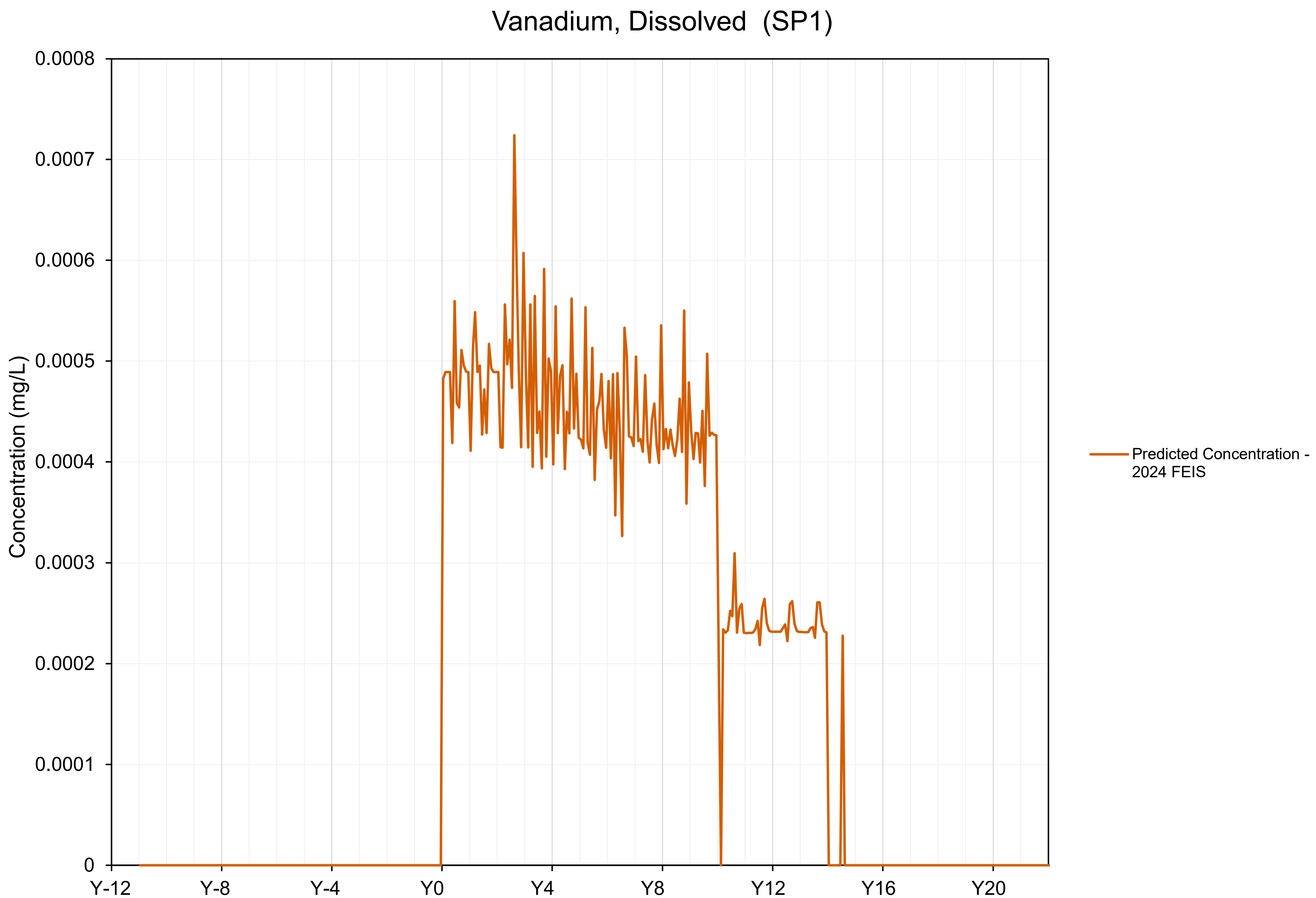

Selenium, Dissolved (SP1)
Concentration (mg/L)
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

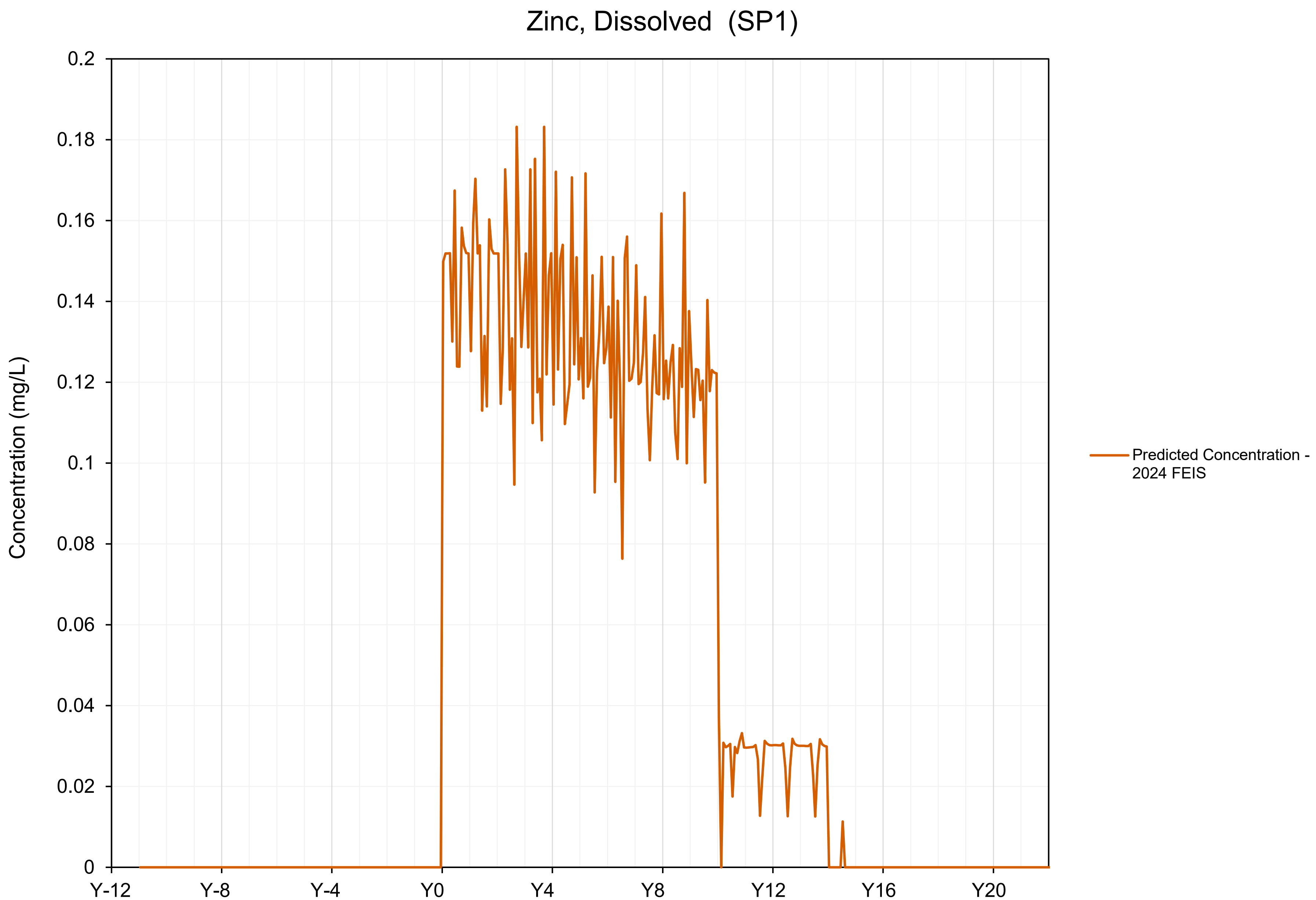

Silver, Dissolved (SP1)
Concentration (mg/L)
0.00014
0.00012
0.0001
0.00008
0.00006
0.00004
0.00002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

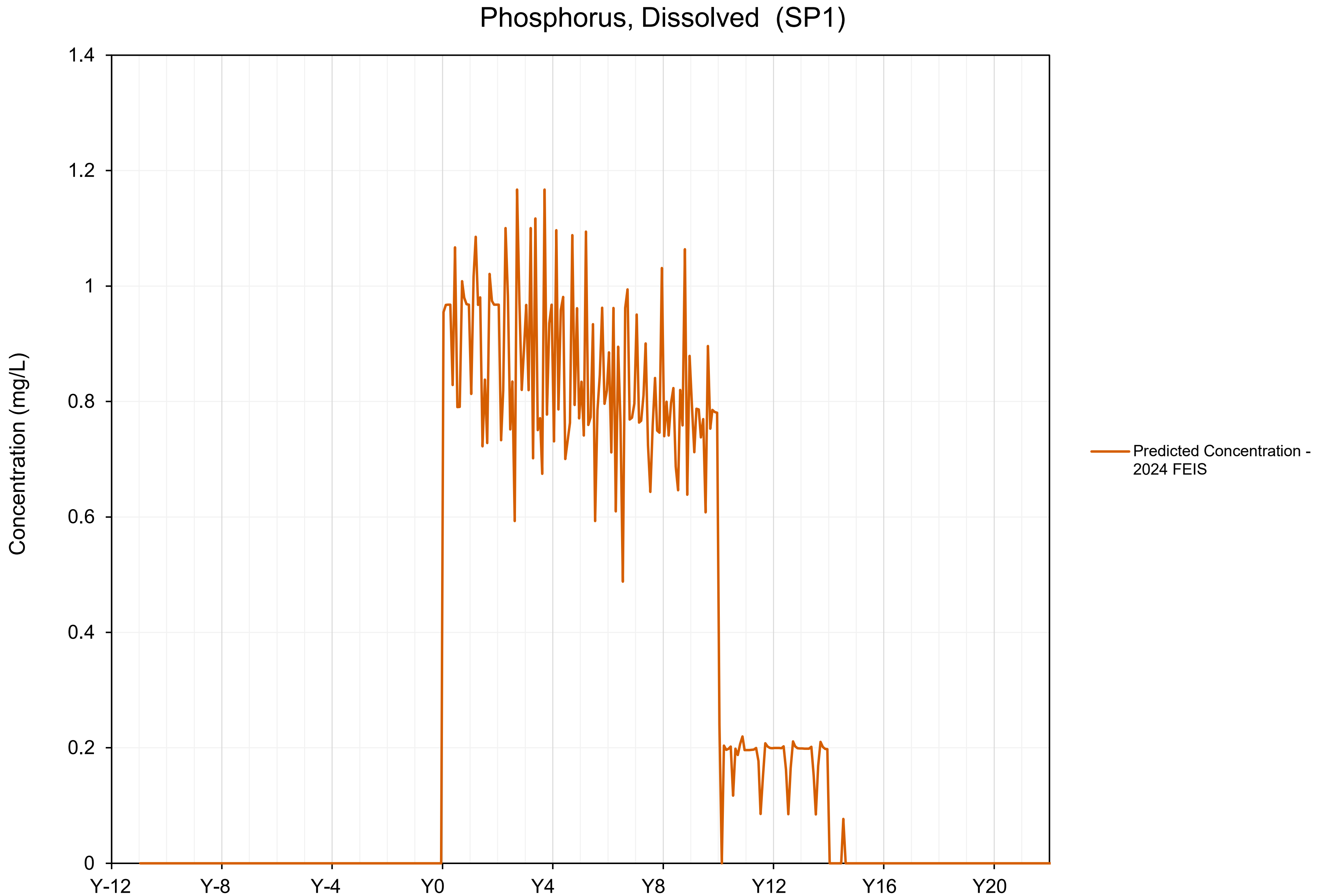

Sodium, Dissolved (SP1)
Concentration (mg/L)
12000
10000
8000
6000
4000
2000
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

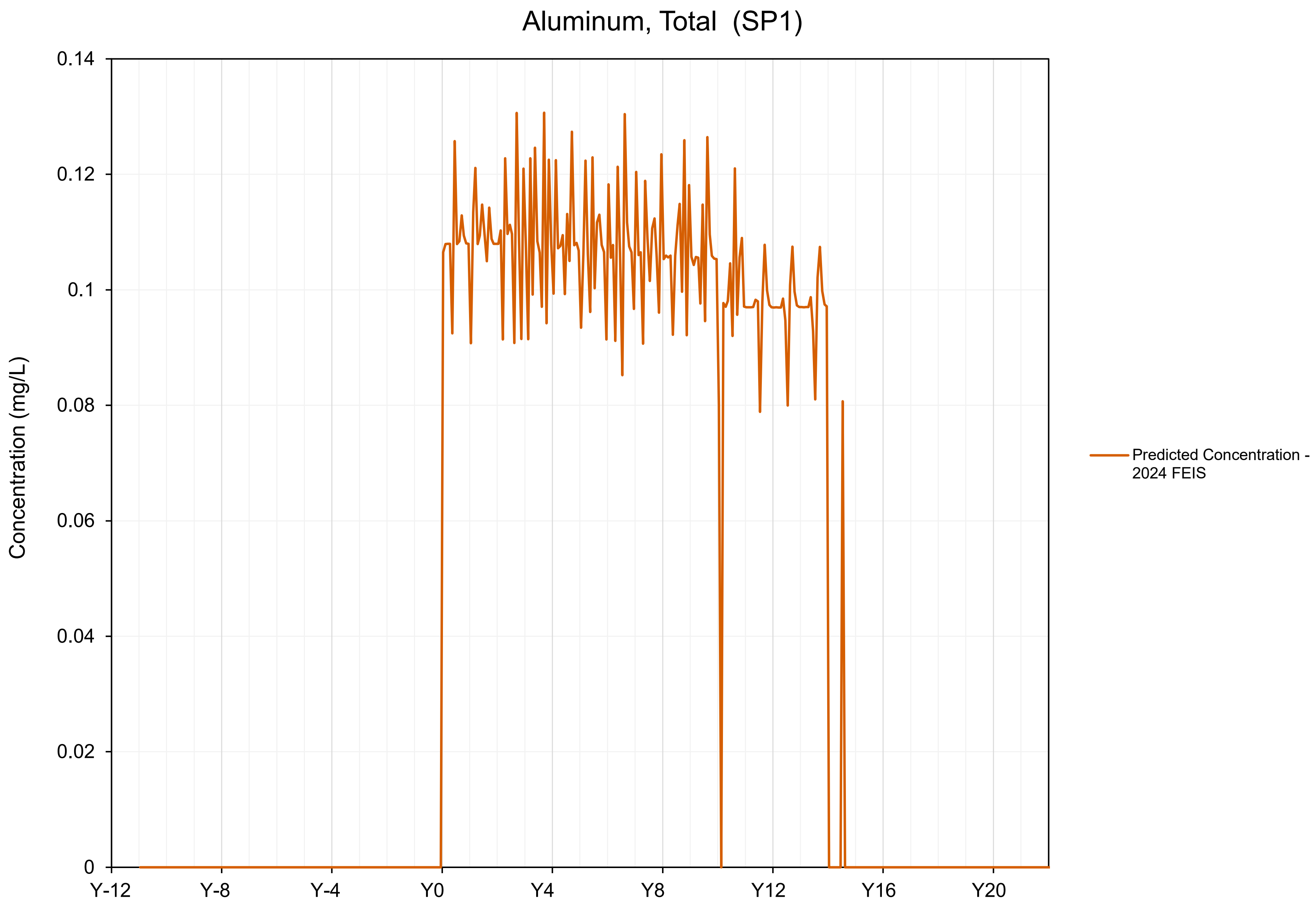

Thallium, Dissolved (SP1)
Concentration (mg/L)
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

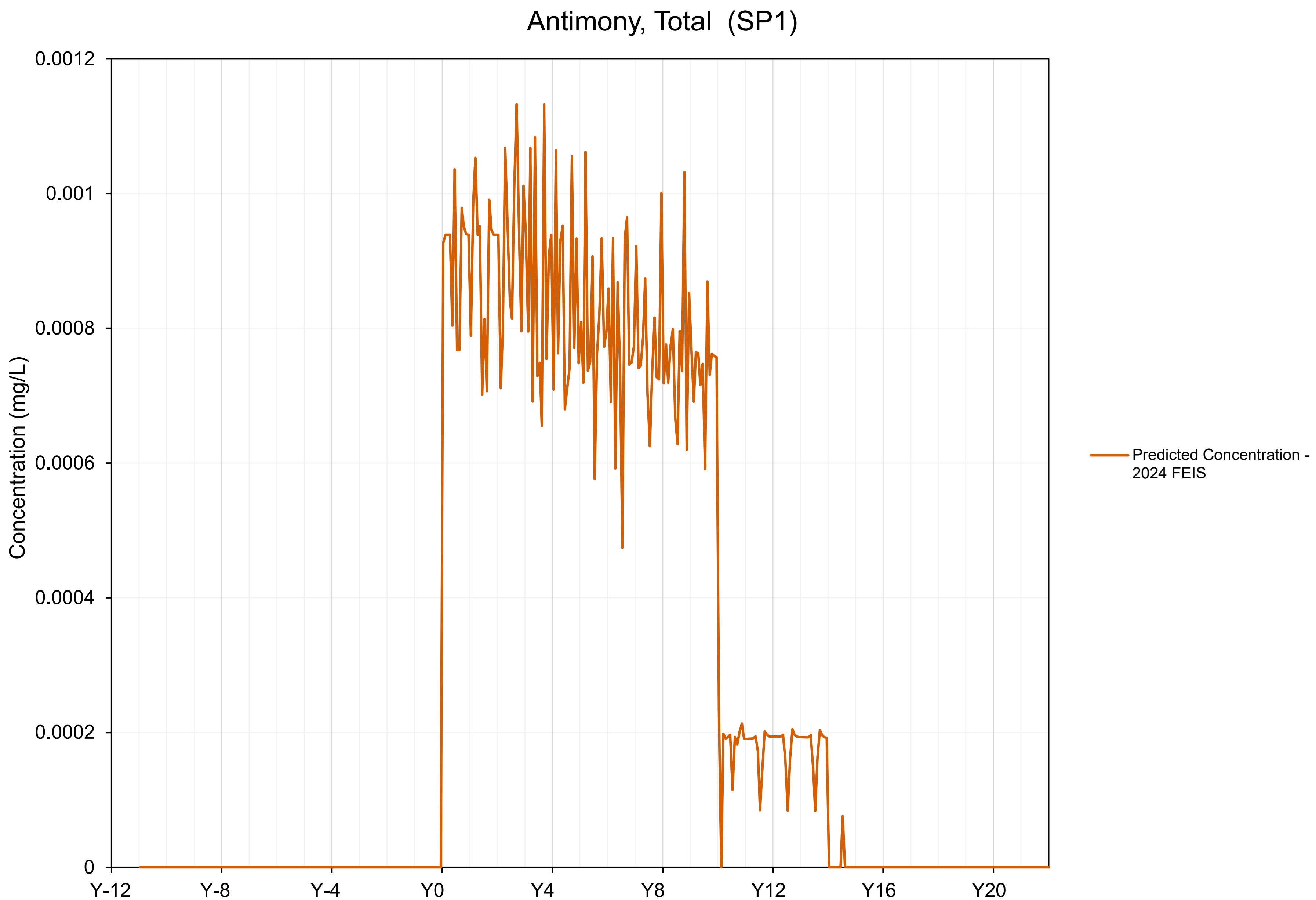

Uranium, Dissolved (SP1)
0.00008
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Concentration (mg/L)
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

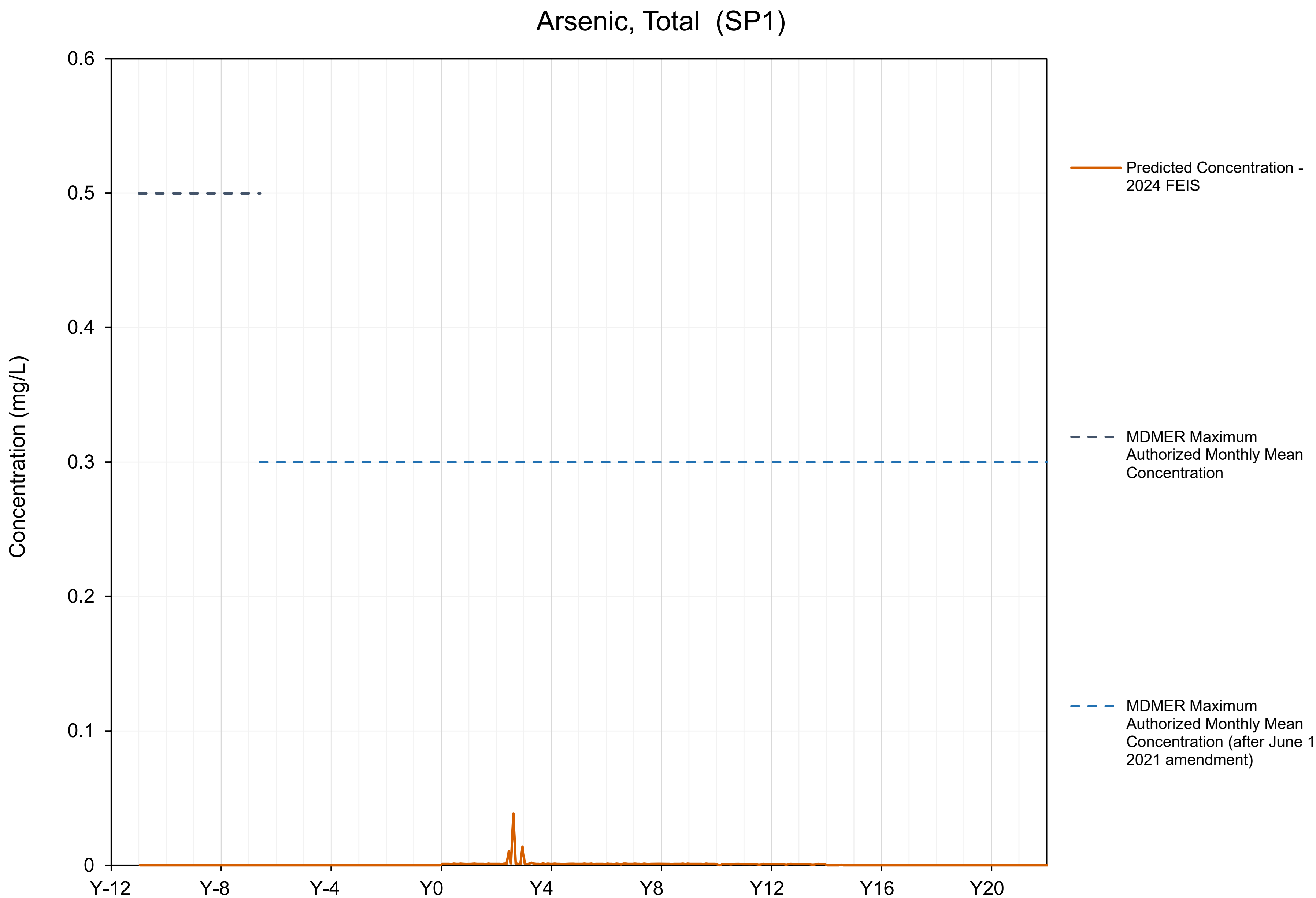

Vanadium, Dissolved (SP1)
Concentration (mg/L)
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

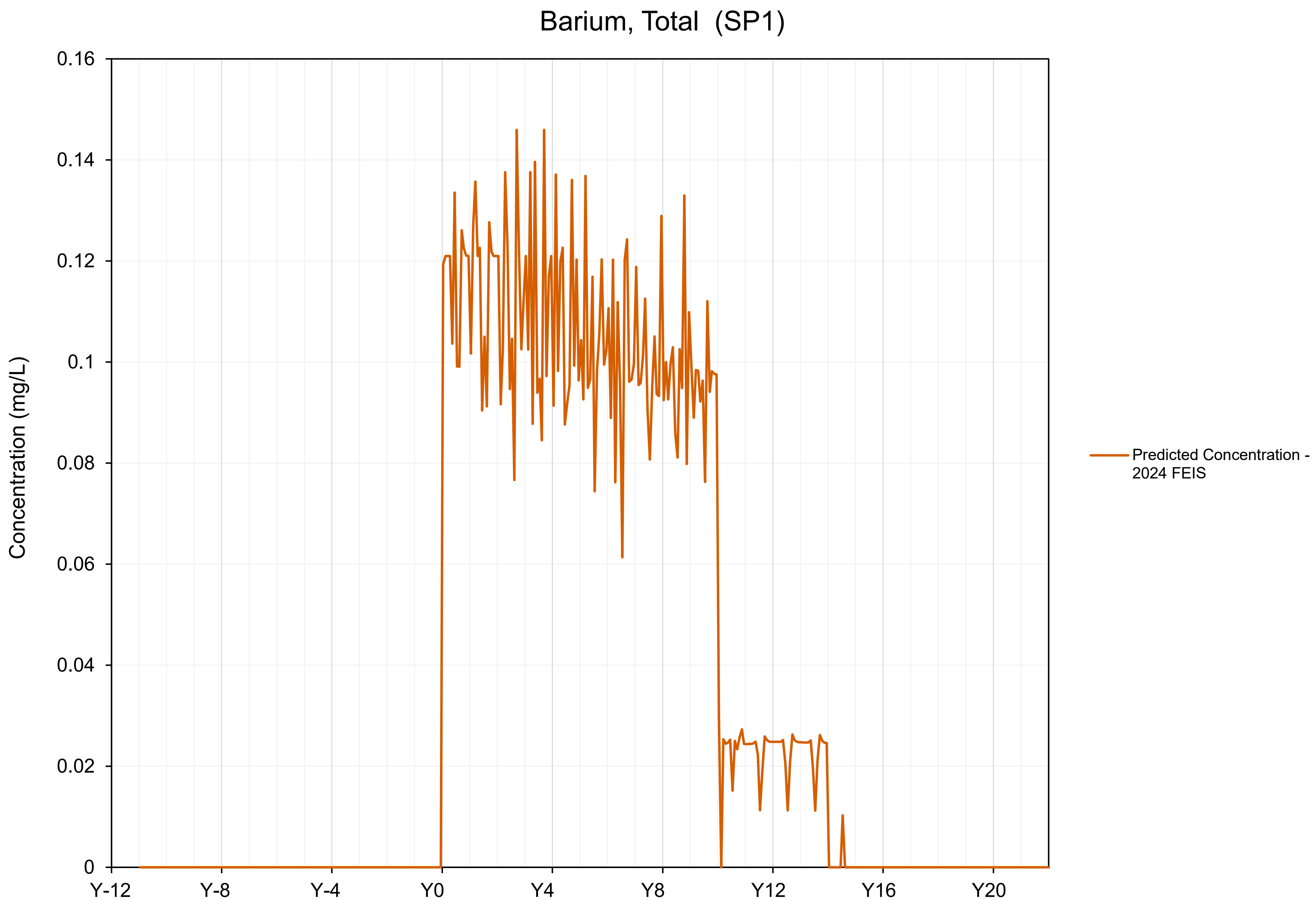

Zinc, Dissolved (SP1)
Concentration (mg/L)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

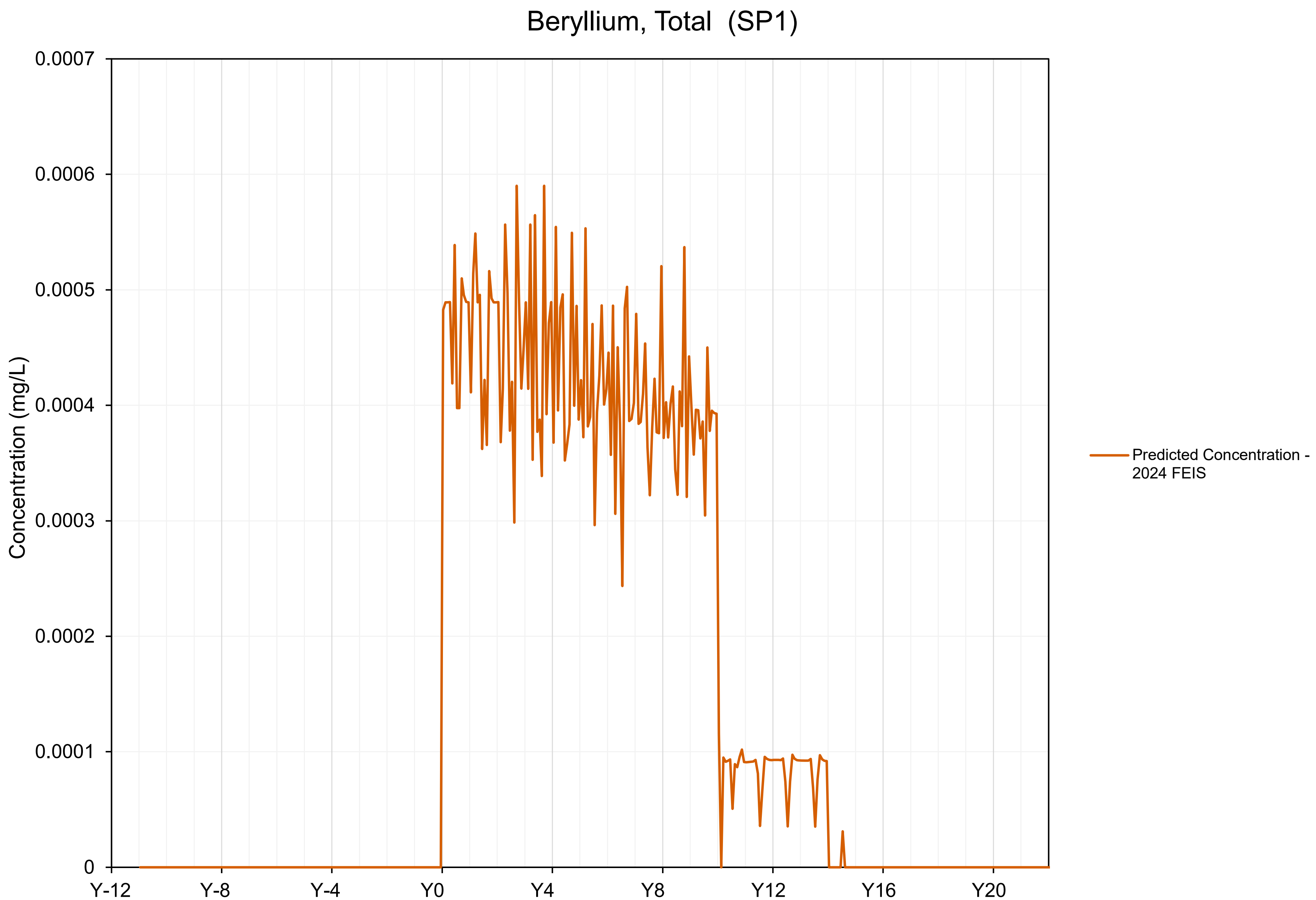

Phosphorus, Dissolved (SP1)
Concentration (mg/L)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

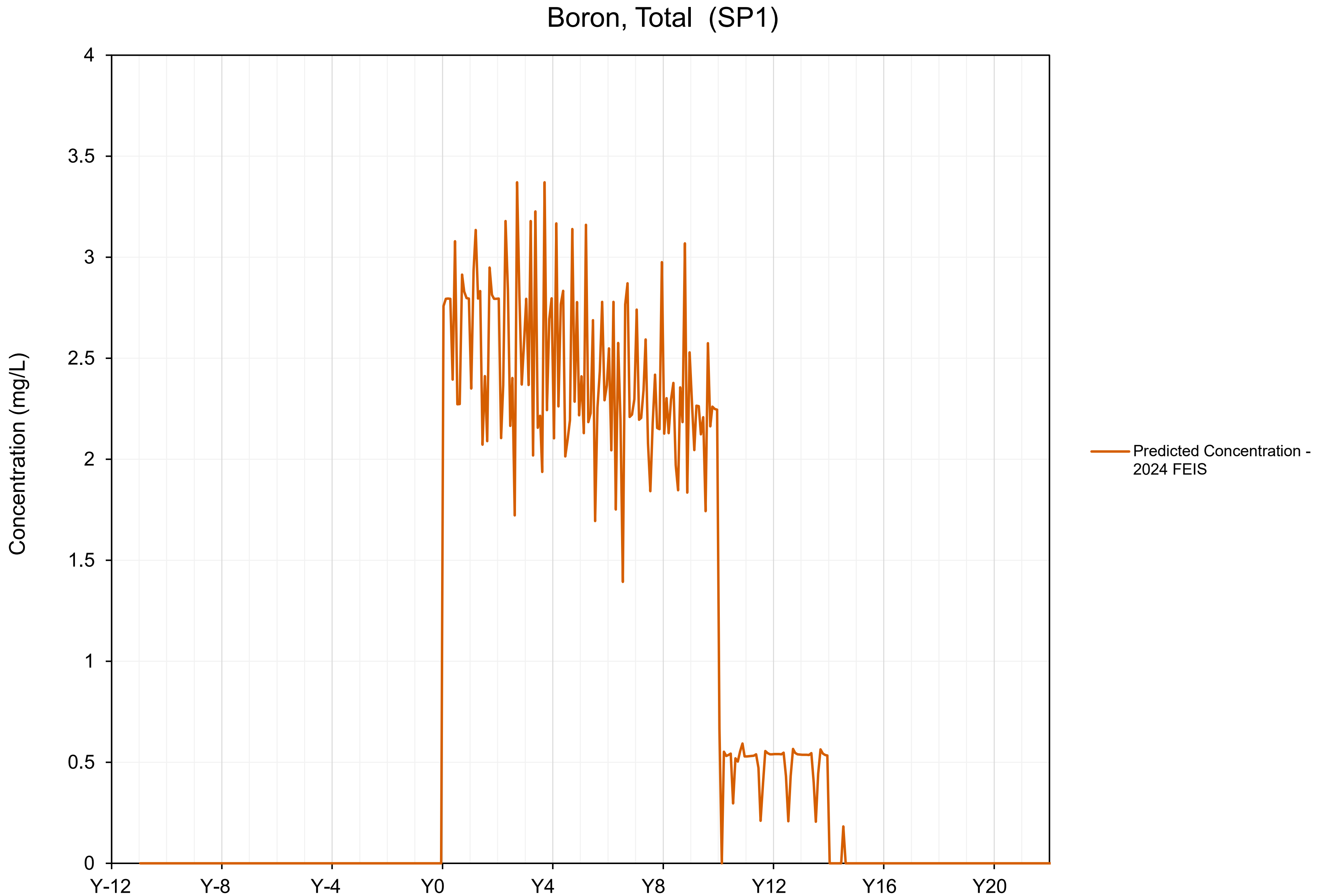

Aluminum, Total (SP1)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/L)
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

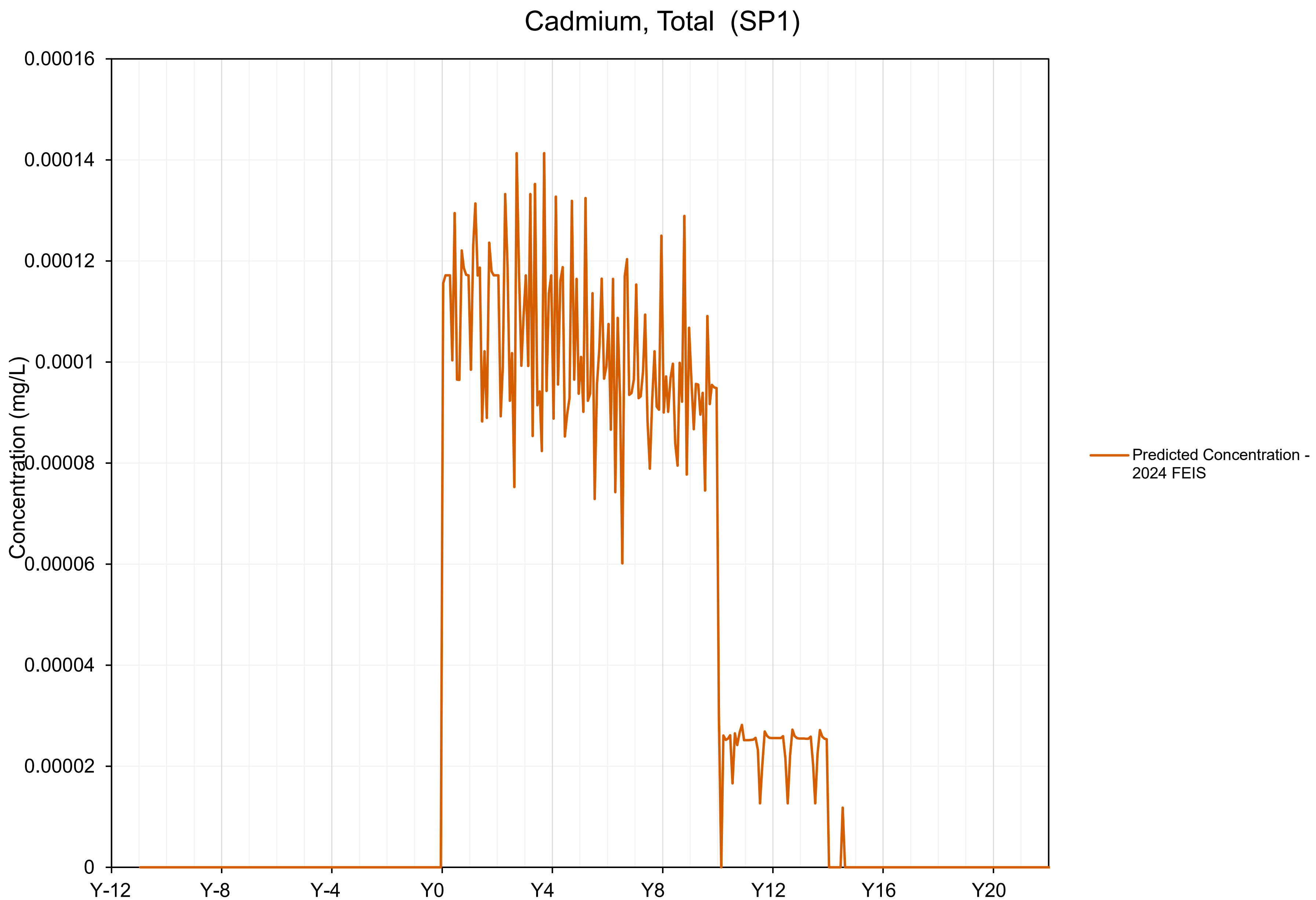

Antimony, Total (SP1)
Concentration (mg/L)
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

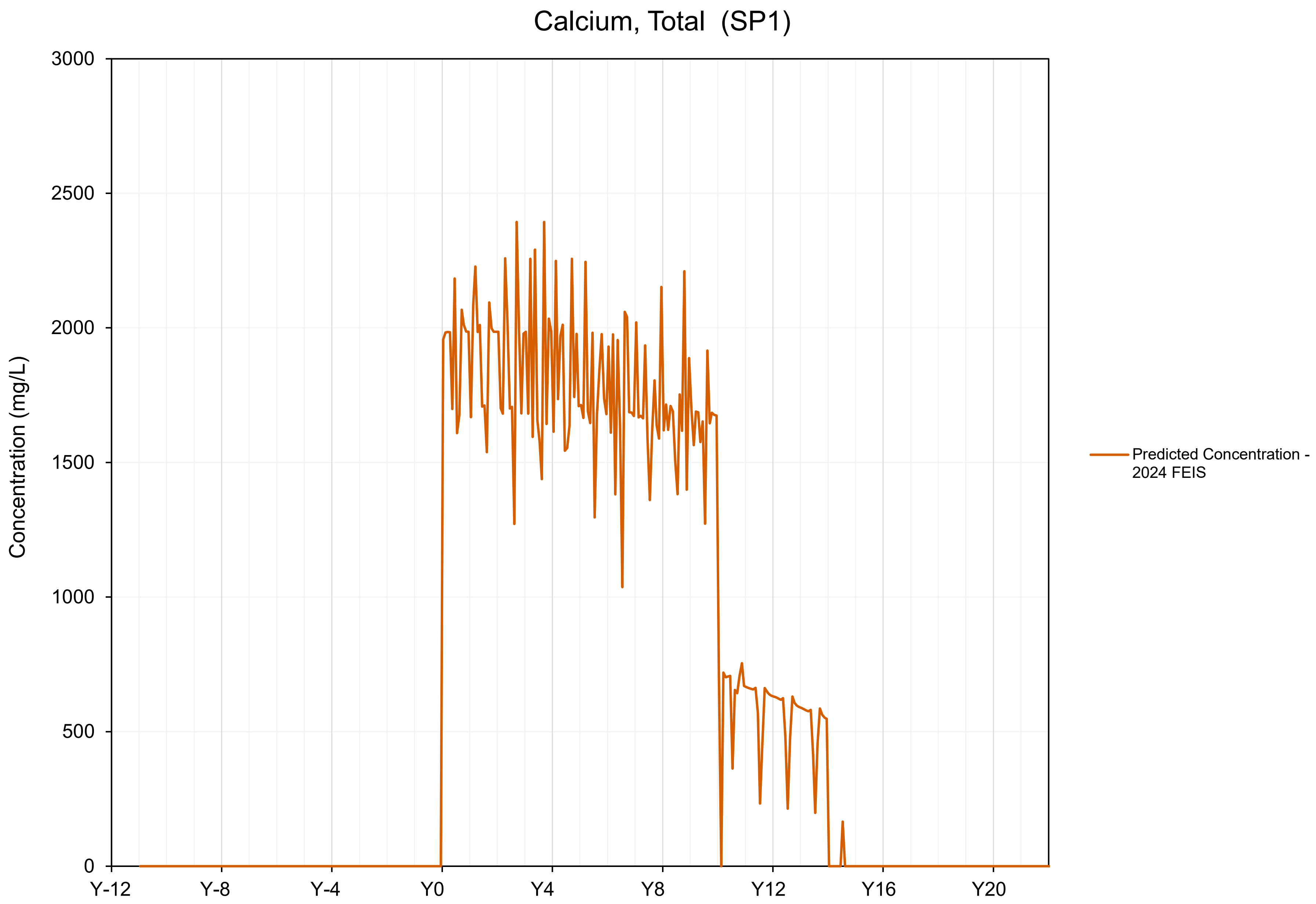

Arsenic, Total (SP1)
Concentration (mg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

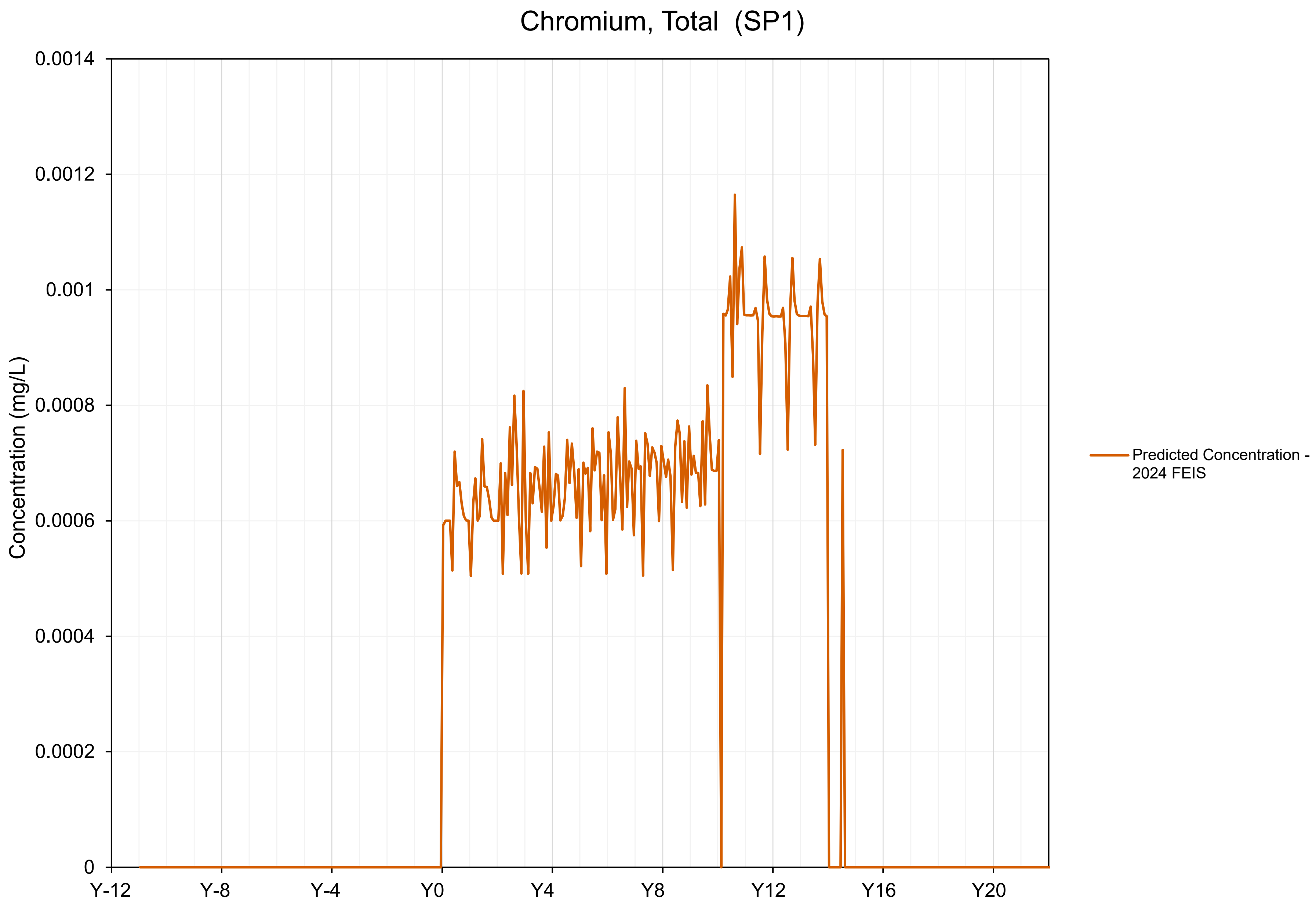

Barium, Total (SP1)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/L)
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

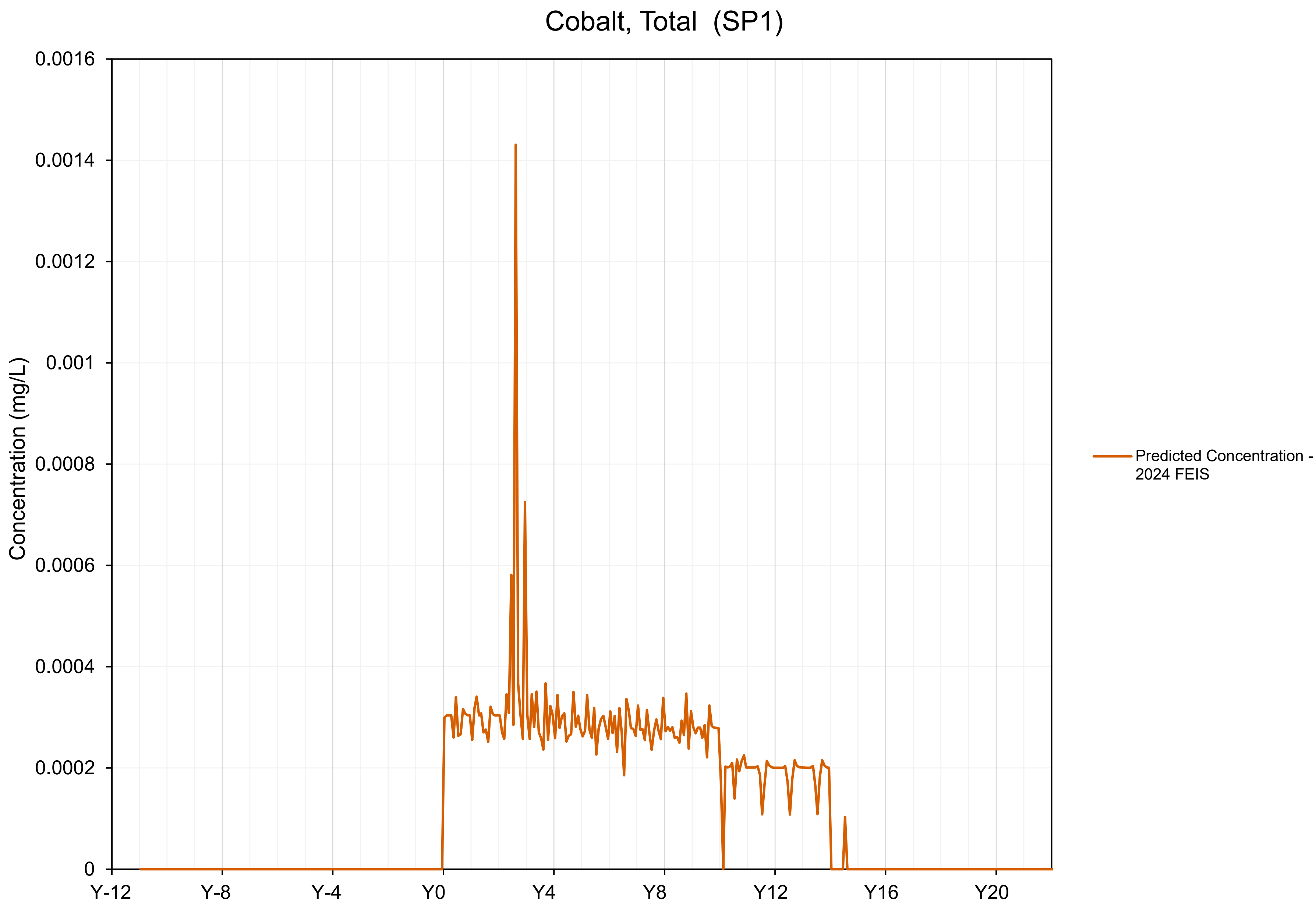

Beryllium, Total (SP1)
Concentration (mg/L)
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

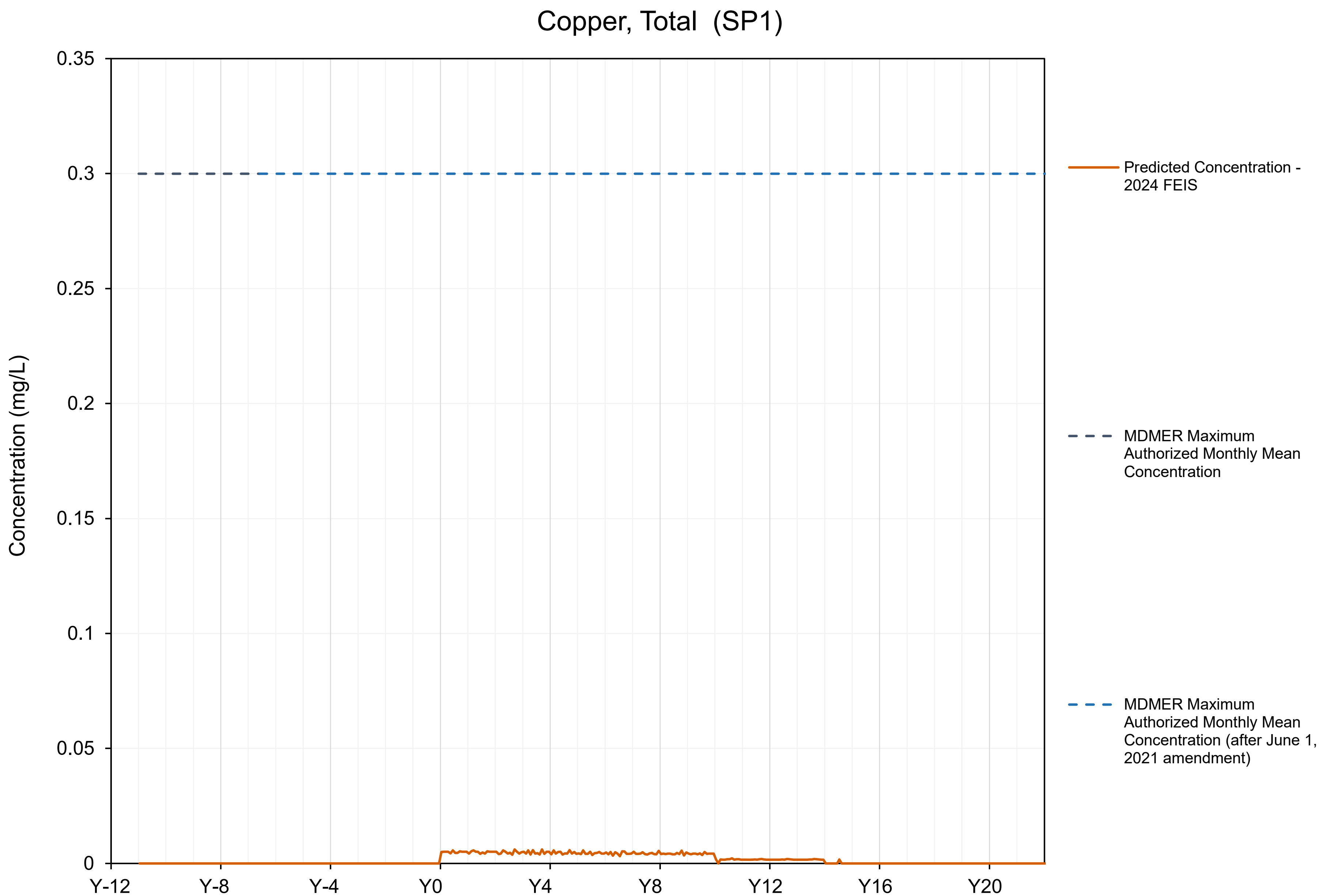

Boron, Total (SP1)
Concentration (mg/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

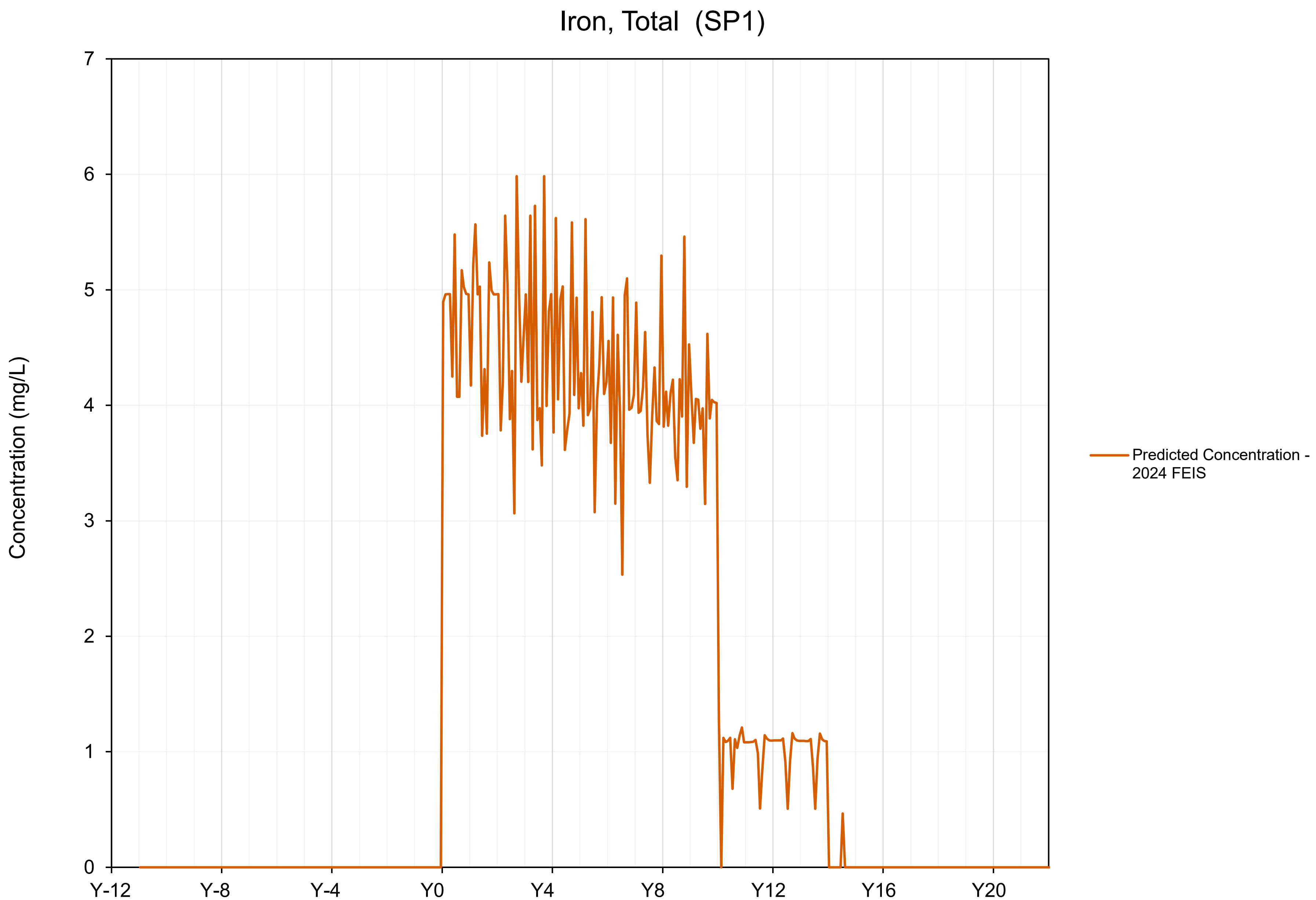

Cadmium, Total (SP1)
Concentration (mg/L)
0.00016
0.00014
0.00012
0.0001
0.00008
0.00006
0.00004
0.00002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

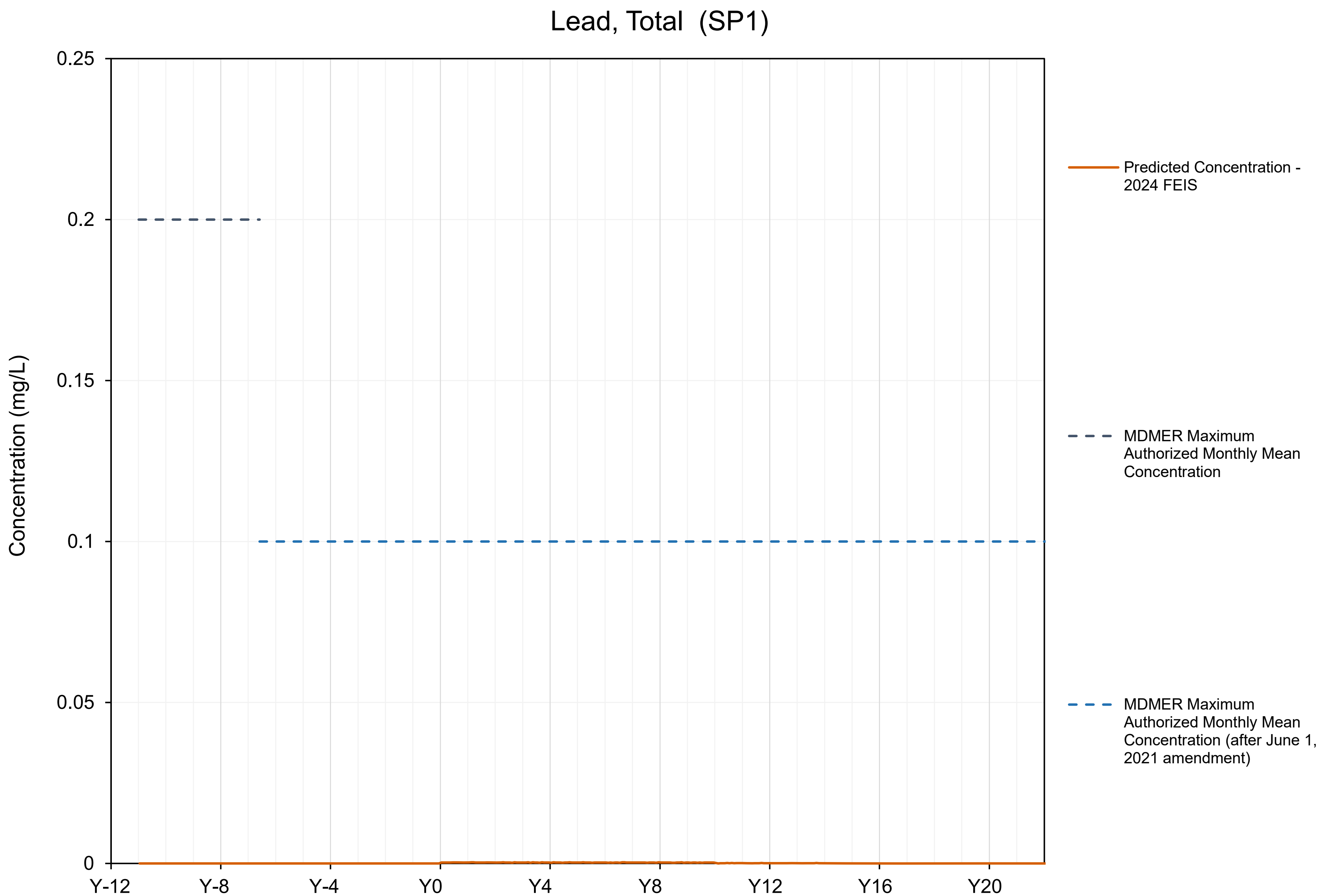

Calcium, Total (SP1)
Concentration (mg/L)
3000
2500
2000
1500
1000
500
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

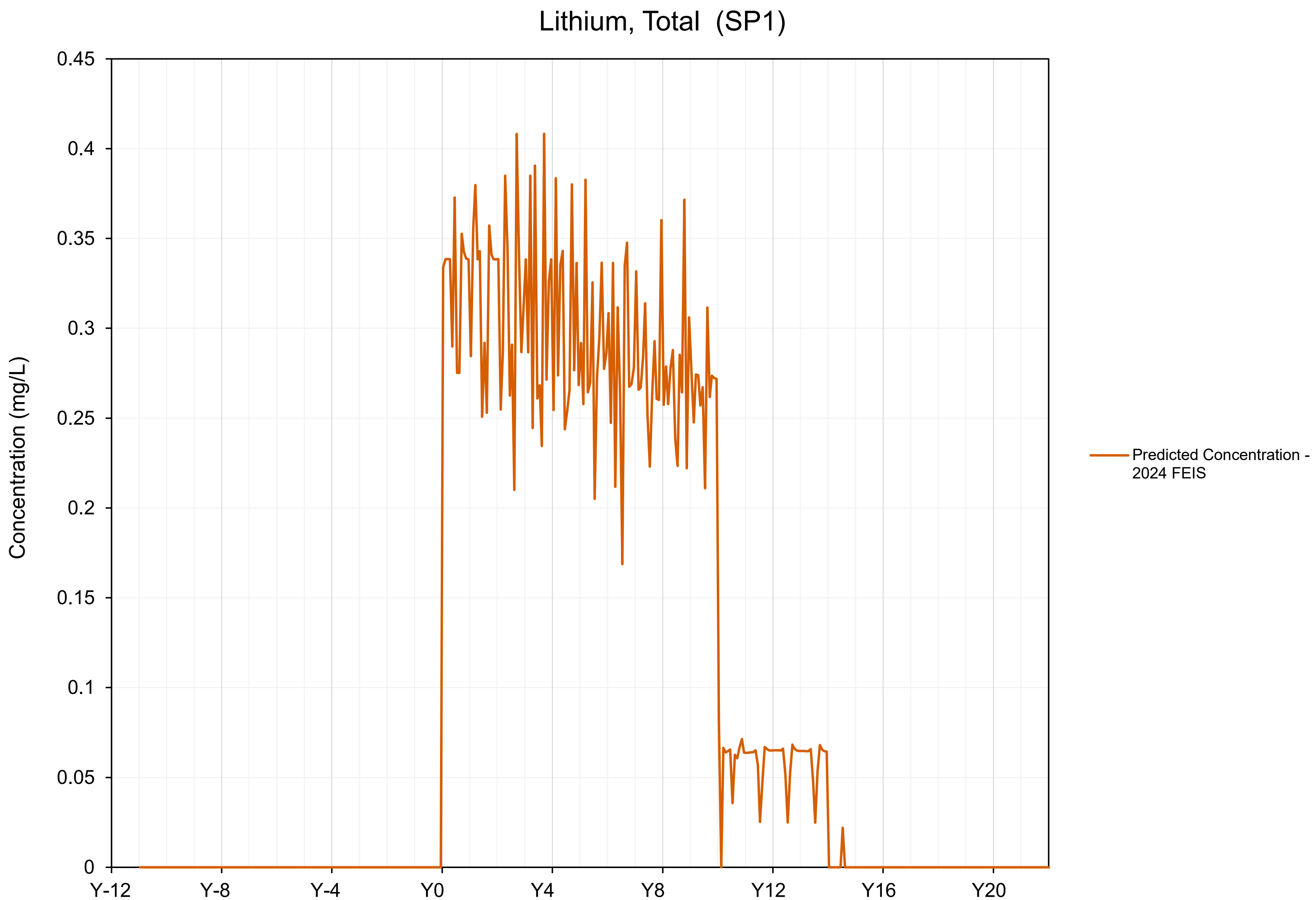

Chromium, Total (SP1)
Concentration (mg/L)
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

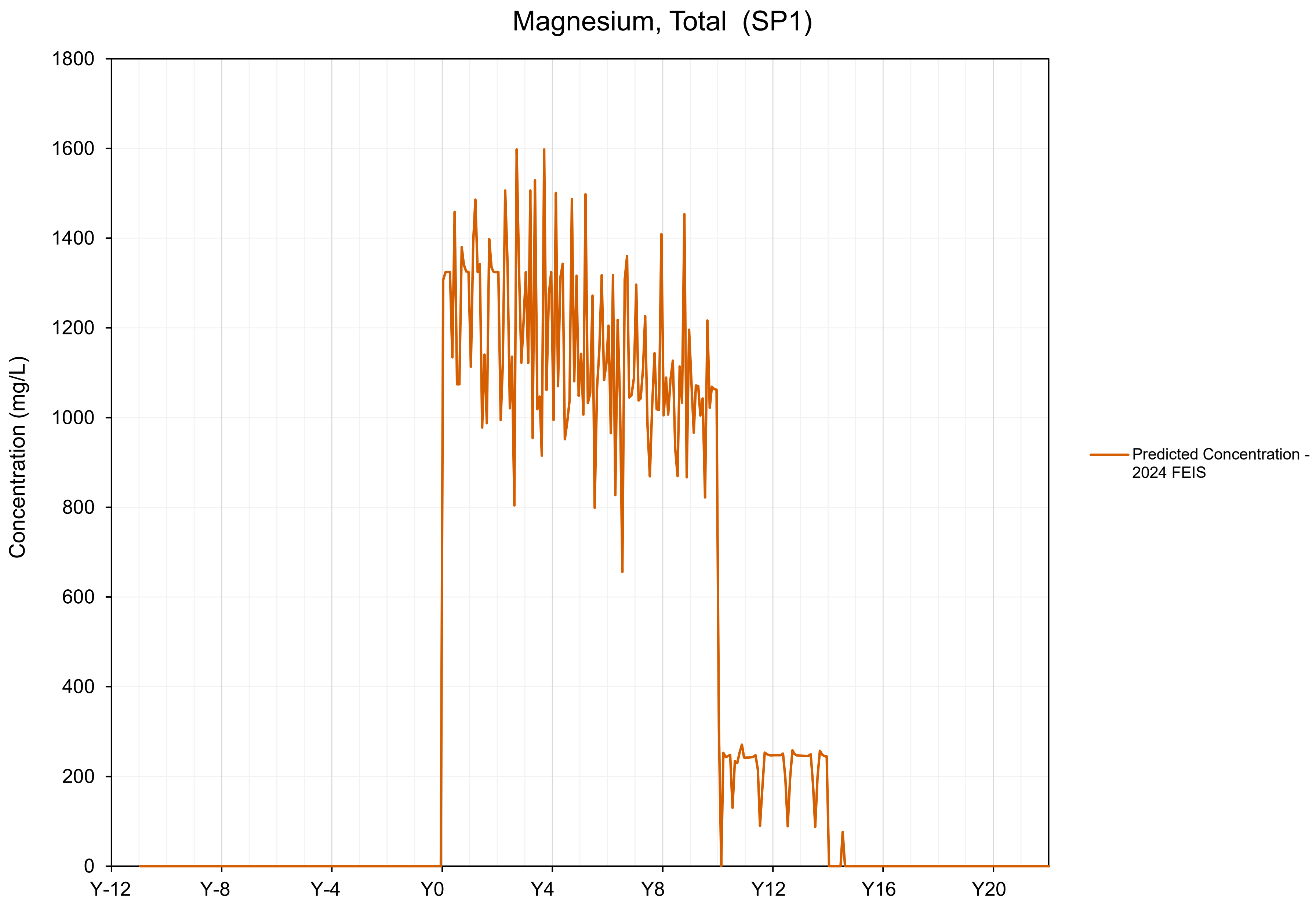

Cobalt, Total (SP1)
Concentration (mg/L)
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

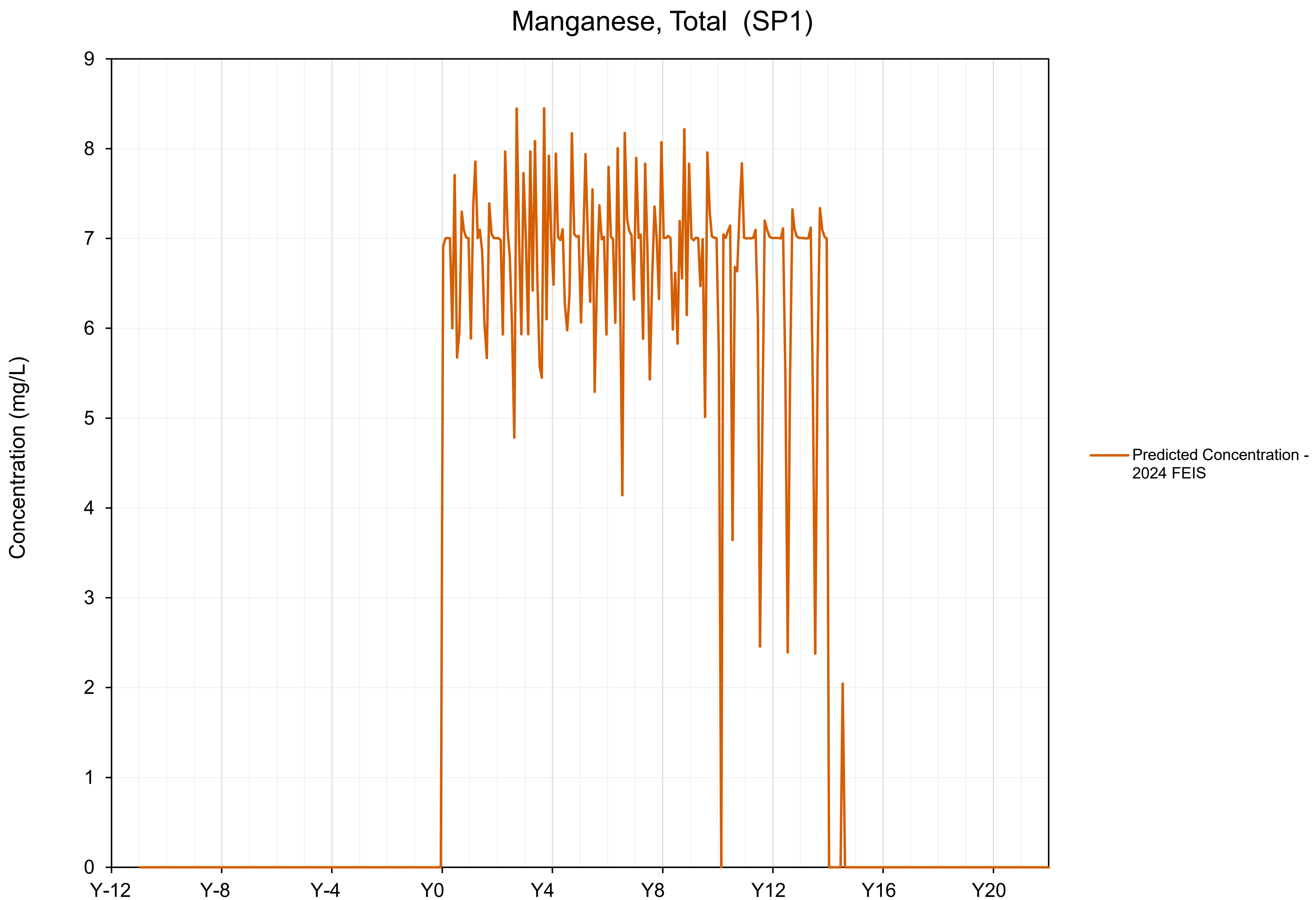

Copper, Total (SP1)
Concentration (mg/L)
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

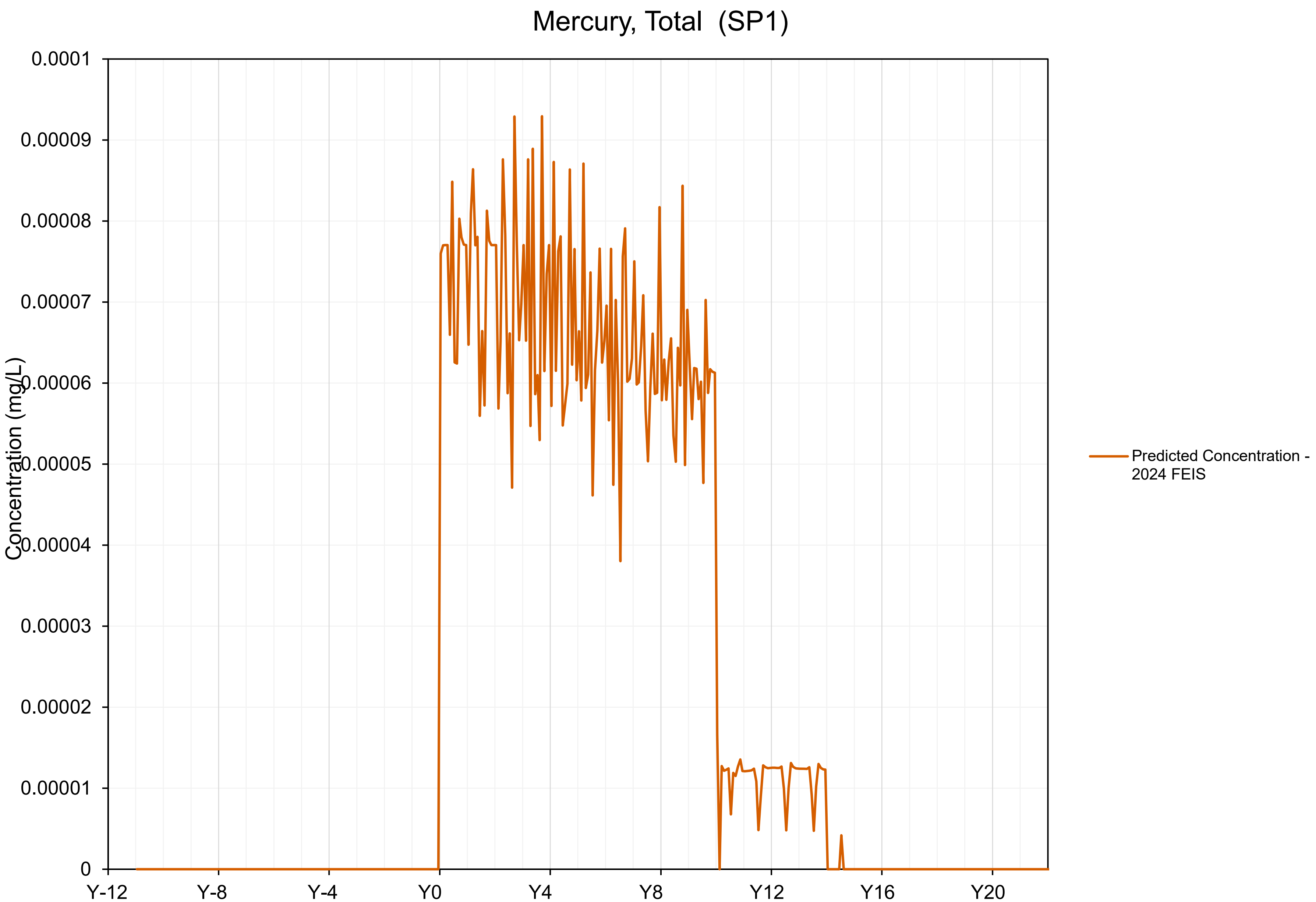

Iron, Total (SP1)
Concentration (mg/L)
0
1
2
3
4
5
6
7
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

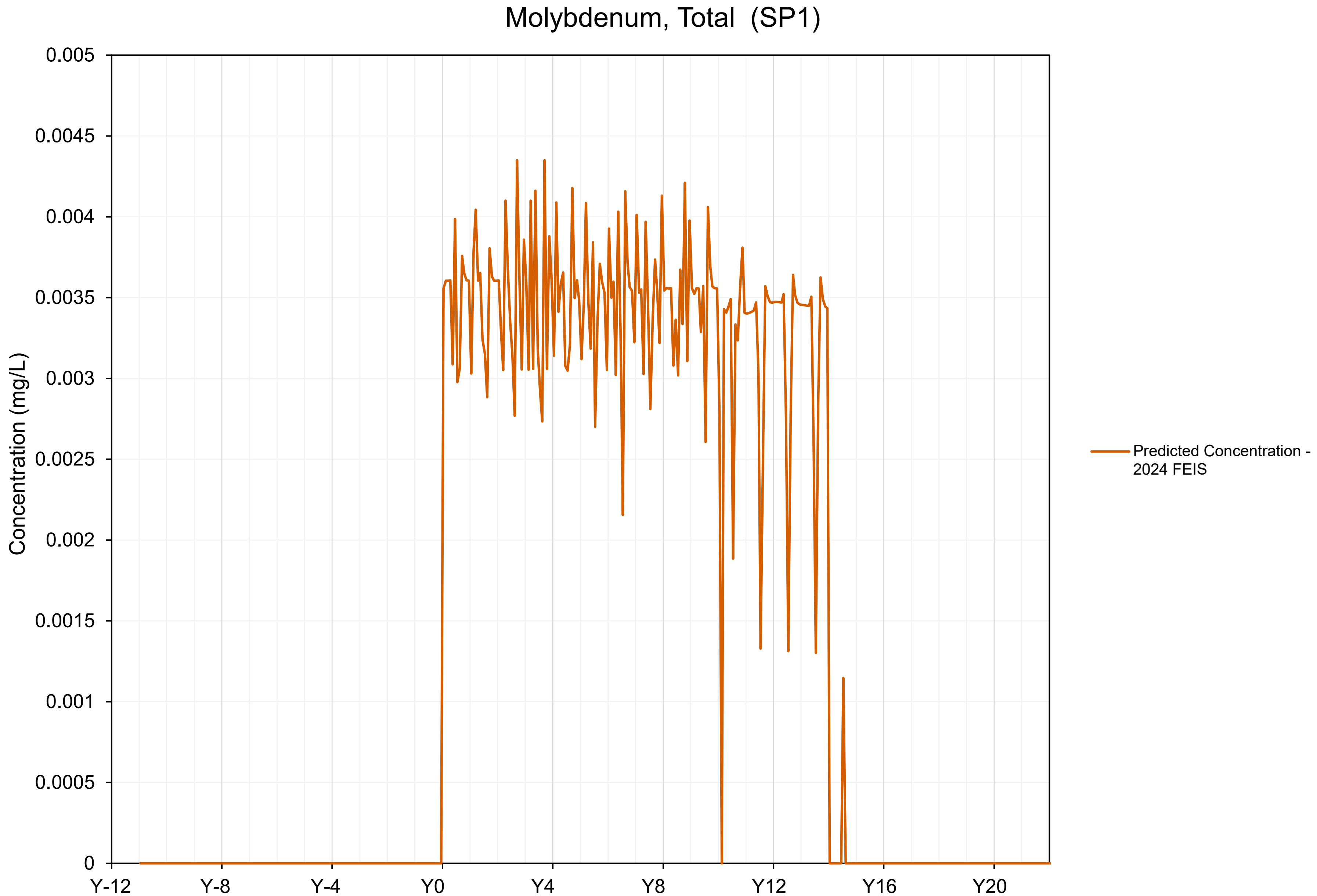

Lead, Total (SP1)
Concentration (mg/L)
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

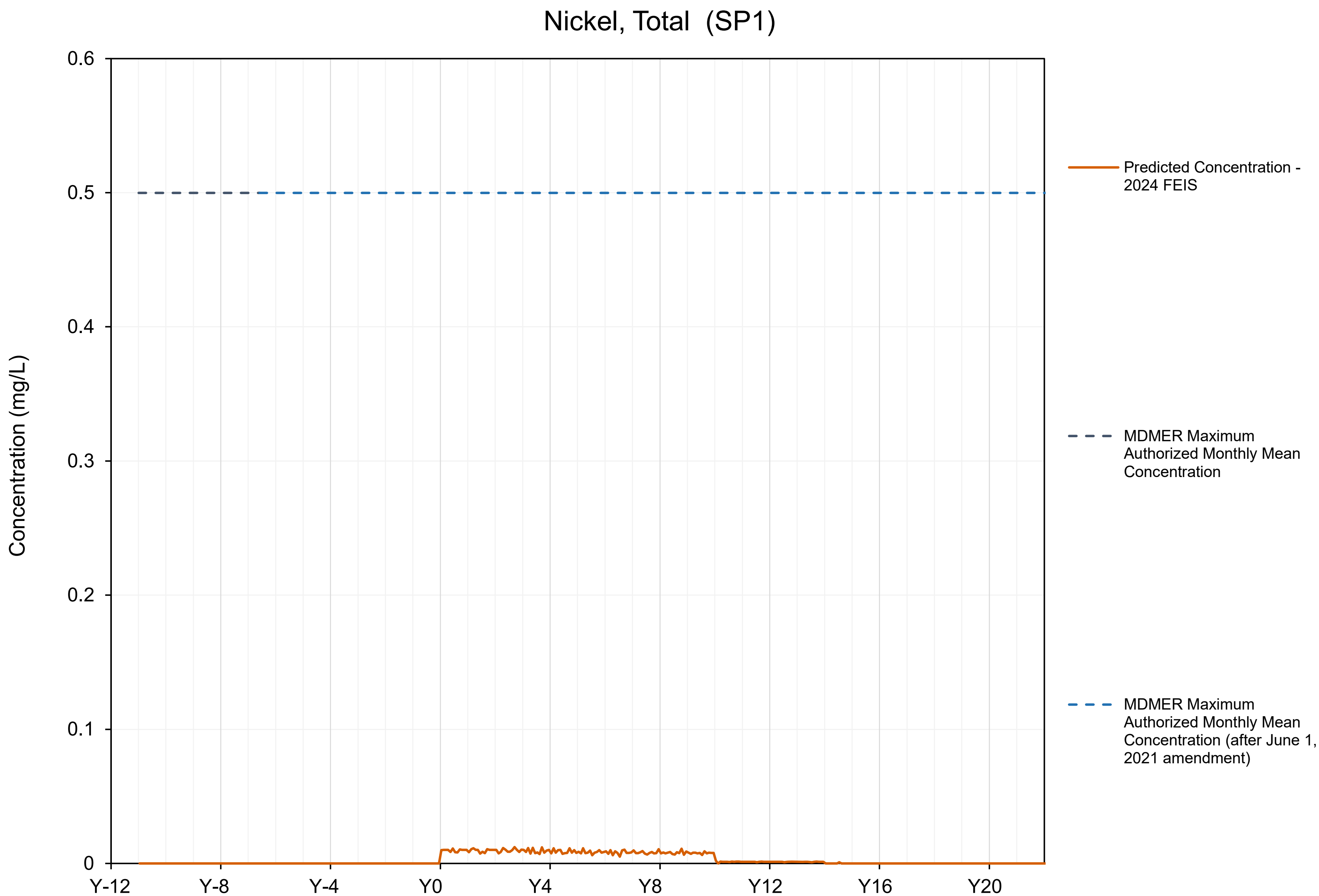

Lithium, Total (SP1)
Concentration (mg/L)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

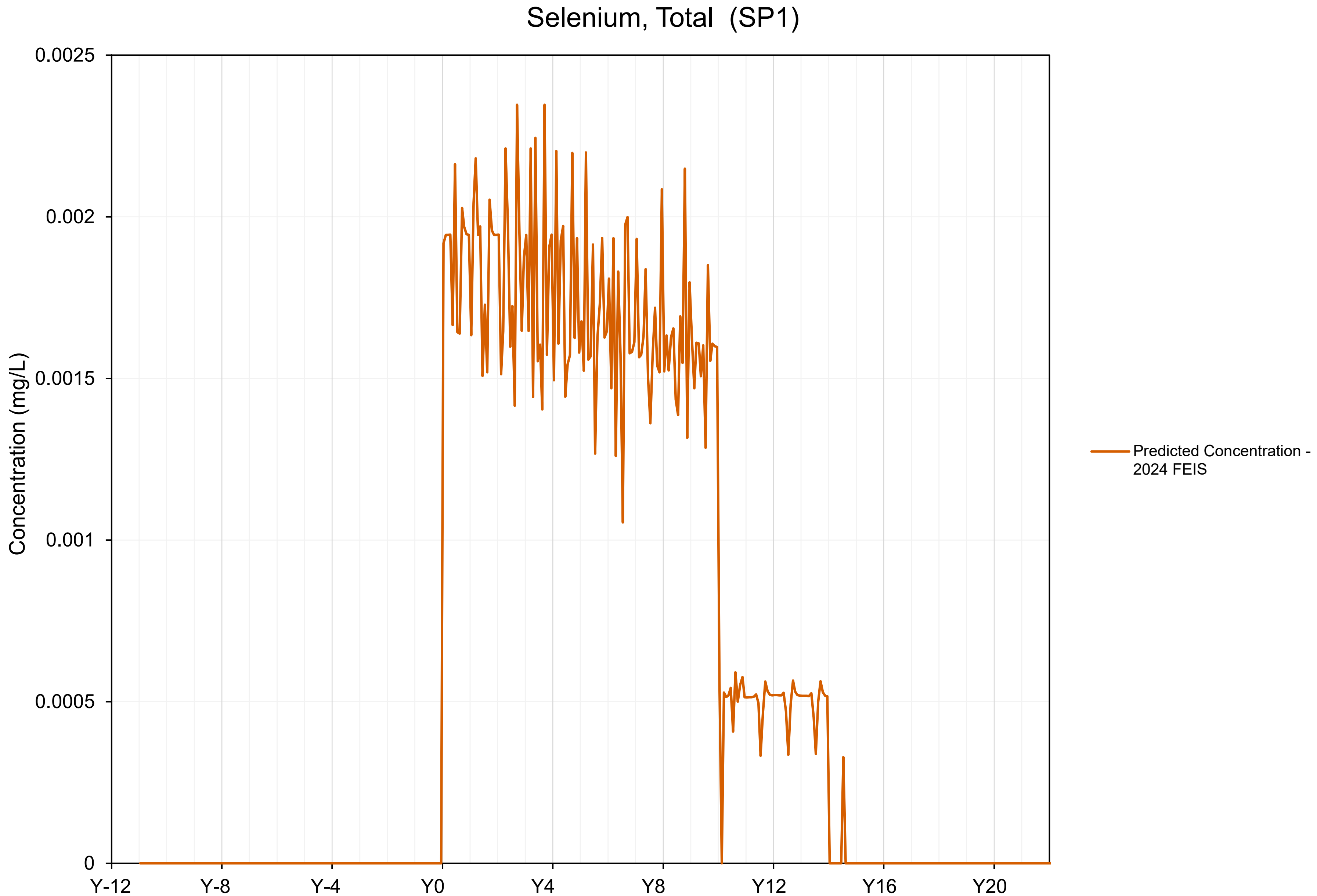

Magnesium, Total (SP1)
Concentration (mg/L)
0
200
400
600
800
1000
1200
1400
1600
1800
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Manganese, Total (SP1)
Concentration (mg/L)
0
1
2
3
4
5
6
7
8
9
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

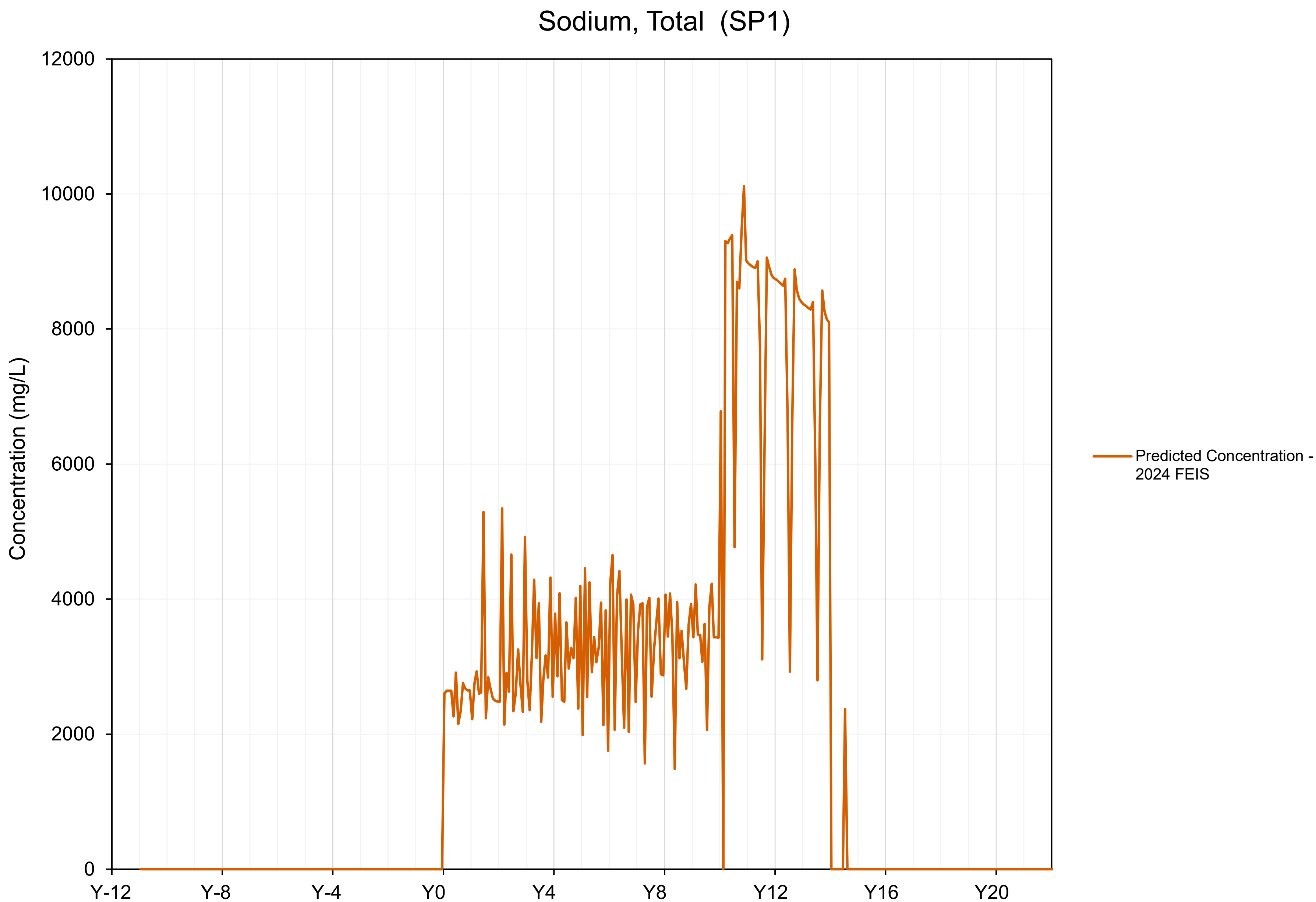

Mercury, Total (SP1)
Concentration (mg/L)
0.0001
0.00009
0.00008
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Molybdenum, Total (SP1)
Concentration (mg/L)
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

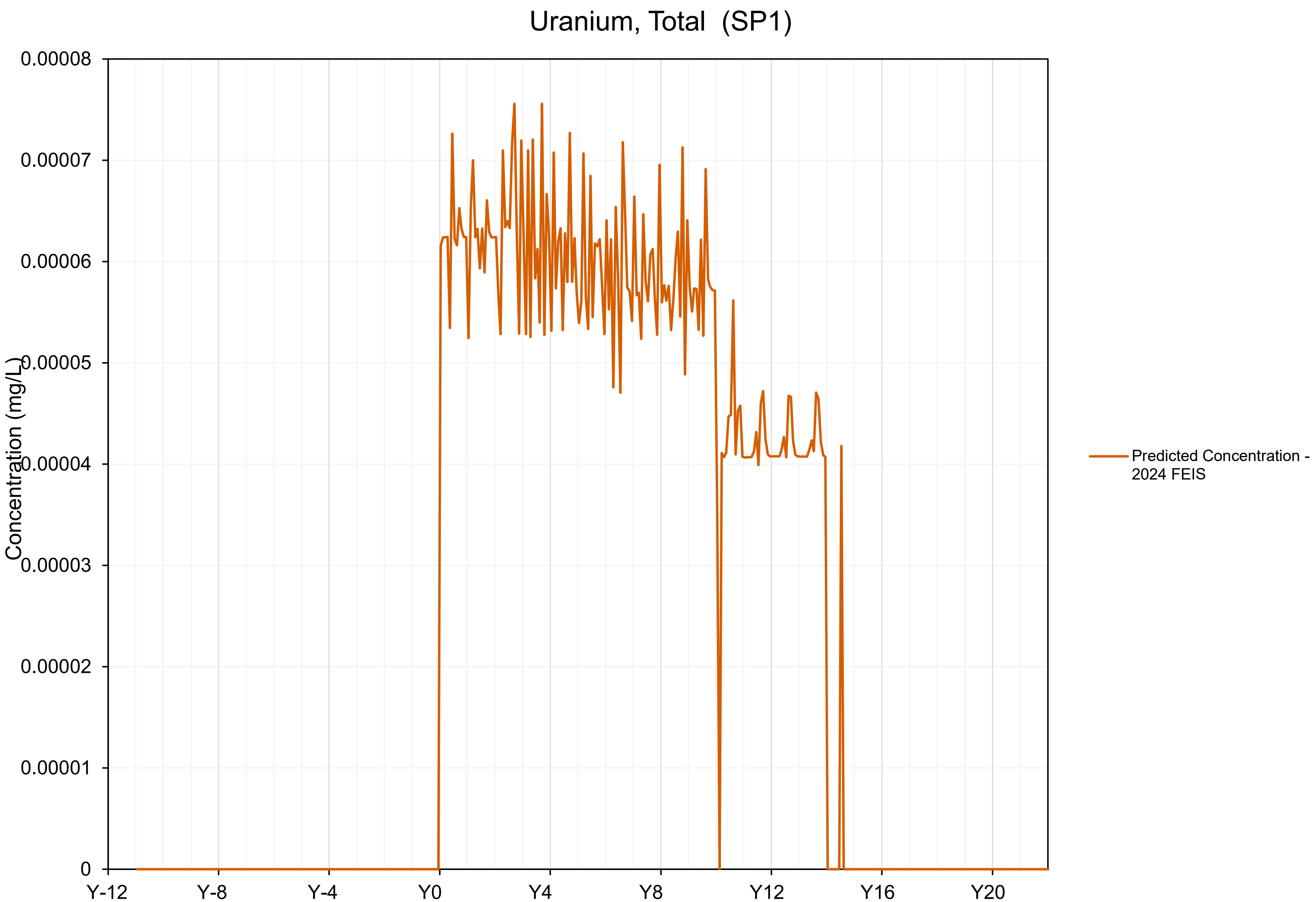

Nickel, Total (SP1)
0.6
0.5
0.4
0.3
0.2
0.1
0
Concentration (mg/L)
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)

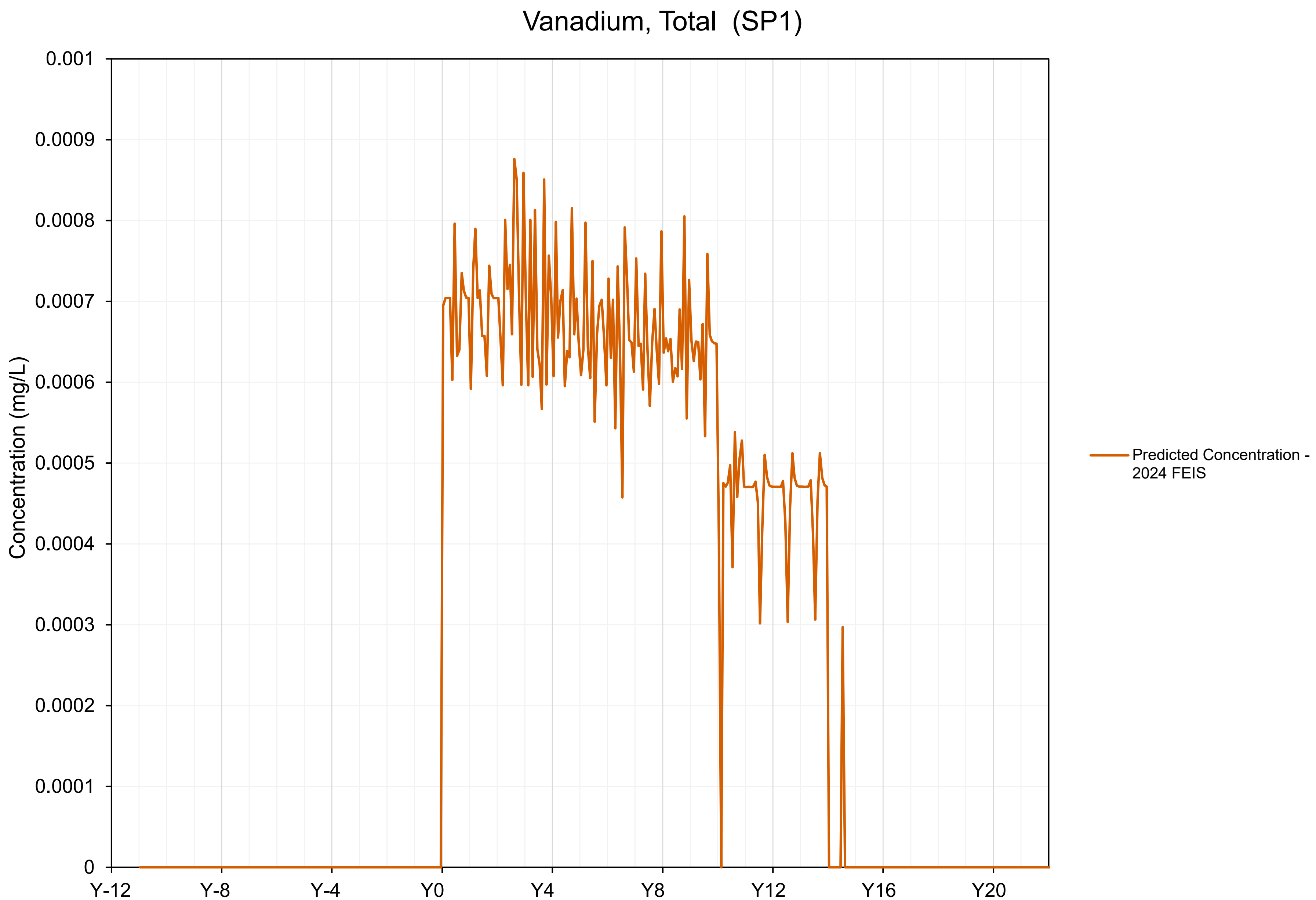

Selenium, Total (SP1)
Concentration (mg/L)
0.0025
0.002
0.0015
0.001
0.0005
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

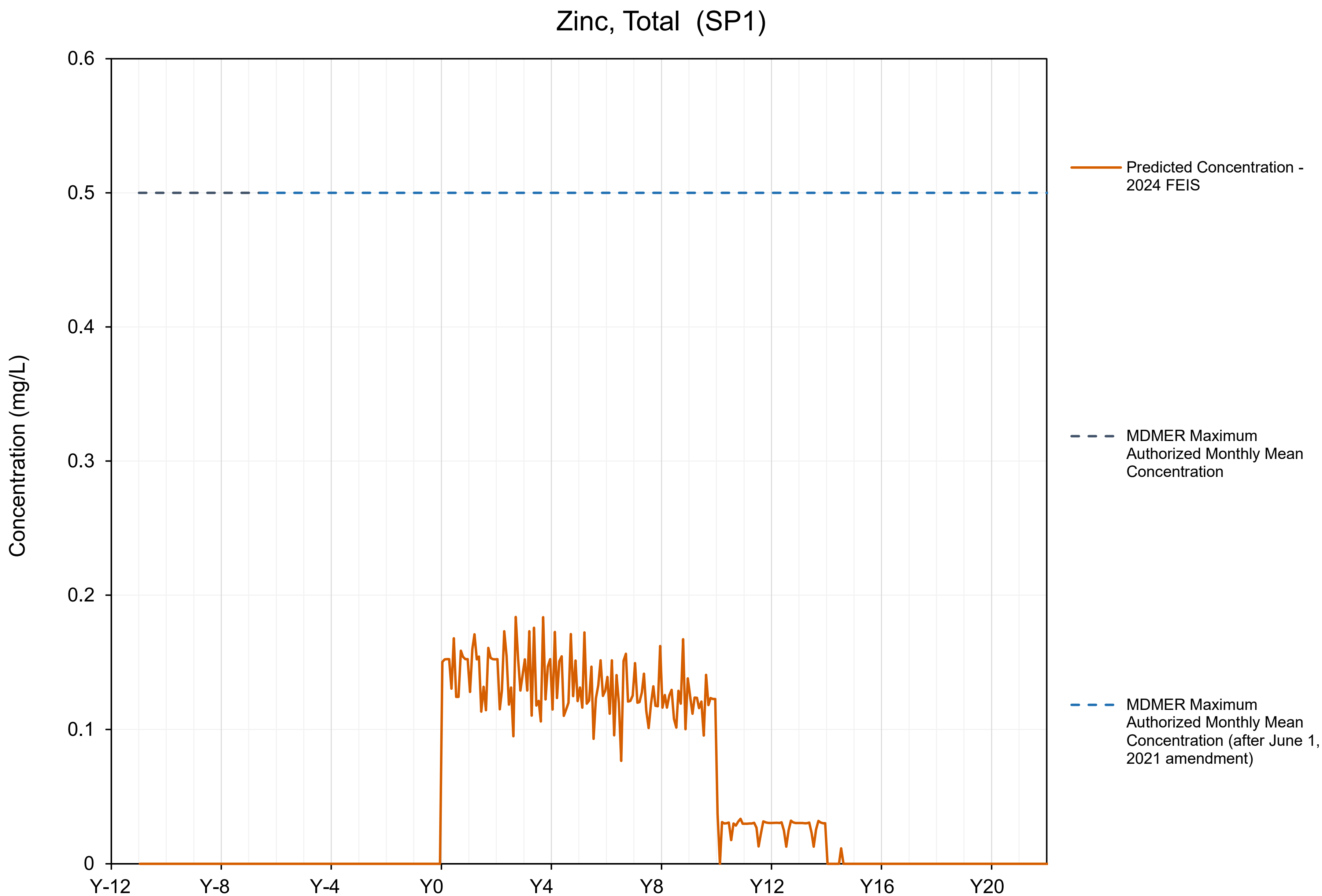

Silver, Total (SP1)
Concentration (mg/L)
0.00014
0.00012
0.0001
0.00008
0.00006
0.00004
0.00002
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS

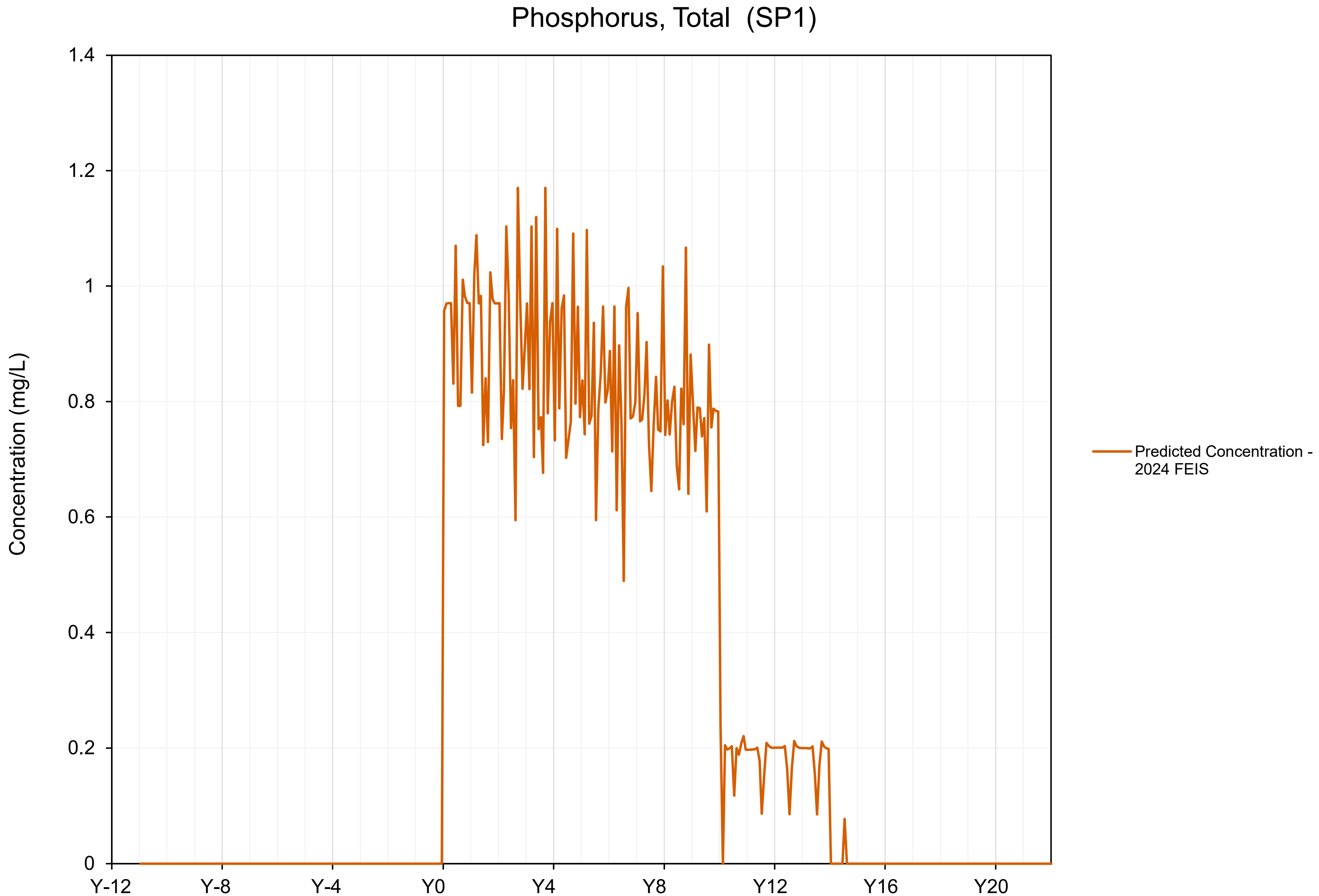

Sodium, Total (SP1)
Concentration (mg/L)
0
2000
4000
6000
8000
10000
12000
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Thallium, Total (SP1)
Concentration (mg/L)
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Uranium, Total (SP1)
Concentration (mg/L)
0.00008
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Vanadium, Total (SP1)
Concentration (mg/L)
0.001
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS


Zinc, Total (SP1)
Concentration (mg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS
MDMER Maximum Authorized Monthly Mean Concentration
MDMER Maximum Authorized Monthly Mean Concentration (after June 1, 2021 amendment)


Phosphorus, Total (SP1)
Concentration (mg/L)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Y-12
Y-8
Y-4
Y0
Y4
Y8
Y12
Y16
Y20
Predicted Concentration - 2024 FEIS