



Baseline Kinetic Geochemical Testing Report – Kinetic Testing Update Q4 2024

Springpole Gold Project
First Mining Gold Corp.

ONS2104

Prepared by:
WSP Canada Inc.

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Baseline Kinetic Geochemical Testing Report – Kinetic Testing Update Q4 2024 Springpole Gold Project

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Project #ONS2104

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EXECUTIVE SUMMARY

First Mining Gold Corp. has proposed to develop an open pit mine with supporting facilities known as the Springpole Gold Project (the Project). Baseline kinetic geochemical testing is required to support mine planning, mine rock management and permitting for the Project. This report documents the study approach, methods, and results of kinetic geochemical testing, including laboratory humidity cell tests for samples of rock (drill core) and synthetic tailings for the Project. This report is a living document and is periodically updated as test results become available. This report reflects the status of the program for Q4 2024, including test results reported to August 28, 2024.

The kinetic testing program for the Project includes 16 mine rock humidity cell tests. Five of the 16 cells are currently operating.

- Ten mine rock humidity cell tests were initiated in 2020, representing higher sulphide and metal content material and are considered “conservative case” for the Project. These tests were initiated by KCC Geoconsulting (KCC 2020) based on mine planning information available at that time. Information regarding the sample selection process and materials used in the tests is provided in KCC (2020). Seven of these ten tests were terminated by WSP Canada Inc. ([WSP] formerly Wood Environment & Infrastructure Americas [Wood]) after operating over the long term (96 to 140 weeks). Three cells are still in operation and 240 weeks of test data are available.
- An additional six mine rock humidity cell tests were initiated by WSP in 2021, generally representing materials more likely to be encountered during the Project in terms of their sulphide and metal content. Four cells were terminated after 123 weeks of testing. Two cells are still in operation and 140 weeks of test data are currently available for these cells.

Currently, three tailings humidity cell tests and one tailings column test are operating.

- Three tailings humidity cell tests were initiated by WSP from 2021 to 2023. The tests were prepared with non-acid generating (NAG) tailings. One test has operated for 140 weeks, and the other two tests have operated for 68 weeks. One tailings column test was initiated by WSP in 2023, prepared with PAG tailings and has operated for 63 weeks. All tailings samples utilized in these kinetic tests are synthetic tailings that are representative of the current Project mine plan.

Other tailings kinetic tests were initiated as part of previous studies (KCC 2020) but are not representative of the current mine plan.

Mine Rock Humidity Cells

Eleven of the 16 mine rock humidity cell tests exhibited circumneutral pH leachates. Some of these cells showed higher release rates for arsenic, molybdenum, cadmium, and selenium relative to other cells with neutral pH conditions. The observed metal leaching rates are biased towards higher values relative to the overall Project mine rock as some of those tests contained notably elevated metal contents in the solid phase. However, test results for mine rock samples representing materials more likely to be encountered show similar metal release rates for some parameters. Metal release rates will continue to be monitored as testing progresses.

Strongly acidic leaching conditions have developed in 2 of the 16 mine rock humidity cell tests (approximately pH 2.5). The development of acidic conditions was protracted for one of the tests (e.g., HC-2), which showed a progressive decrease in pH over the first 140 weeks of testing, concurrent with increasing sulphate and metal release rates, with the development of strongly acidic leaching conditions (pH 2.5) during that time. One of the tests (e.g., HC-16), which contains negligible neutralization potential (NP) content (e.g., 5 kilograms calcium carbonate per tonne [kg CaCO₃/t]), showed rapid acidification, with

the development of strongly acidic leaching conditions (pH 3) and elevated metal release rates relative to other cells over the first 25 weeks of testing. The pH levels were at approximately pH 2.2 in recent data.

The remaining three of the 16 mine rock humidity cell tests showed weakly acidic leachate pH in recent data (e.g., pH less than 6.5). Several of these cells had relatively stable pH levels of around pH 4.5 to 6.2, and results suggested that pH conditions may be influenced by the dissolution of iron carbonates present in the samples, rather than sulphide oxidation. The pH levels for other cells showed an ongoing decreasing trend, often observed with concurrent increasing sulphate and metal release, consistent with sulphide oxidation.

Results of the kinetic tests were interpreted with respect to the broader metal leaching / acid rock drainage (ML/ARD) dataset (876 samples, WSP 2024a). This analysis included consideration of the ML/ARD dataset categorized by geologic zone of the deposit, as notable differences in the ML/ARD potential of samples from the Portage Zone, East Extension Zone and Camp Zone were observed in the available static testing data (WSP 2024a).

Without considering potential mitigating measures, preliminary estimates based on currently available kinetic testing suggest that on the order of 15 to 20% of the Portage Zone mine rock samples could become net acid generating within several weeks to one year of exposure, with most of these samples estimated to become net acid generating within weeks of exposure owing to their very low neutralization potential content (less than 5 kg CaCO₃/t). Up to 20% to 25% of the samples from the Portage Zone were estimated to become net acid generating over approximately 10 years. Approximately 50% of the Portage Zone mine rock samples were estimated to eventually become net acid generating after several decades of exposure. Conversely, approximately 15% of the mine rock samples from the East Extension and Camp zones were estimated to be PAG with the lag time to acid onset for these samples estimated to be on the order of several decades of exposure. This lag time is notably longer than samples from the Portage Zone owing to the higher neutralization potential content of these samples. Based on the currently available data, less than 1% of the samples from these zones showed the potential for rapid acid onset.

Humidity cell test results were also reviewed in the context of developing a site-specific neutralization potential ratio (NPR) value. Evaluation of the test results indicated that the dissolution of neutralization potential in these cells was driven by weakly acidic rinse water in the test procedure, rather than in response to sulphide oxidation, under current test conditions. Therefore, a NPR of 2 is still recommended based on the current data.

Tailings Kinetic Tests

Results for the NAG tailings humidity cell tests, prepared with synthetic tailings representing the current mine plan, indicated no potential for ARD from the samples. Leachates for one of the NAG tailings humidity cell tests which has operated over the long term (140 weeks) showed slightly decreasing pH levels, attributed to the dissolution of iron-bearing carbonates in the sample, rather than sulphide oxidation. Iron and lead release rates exhibited a slight upward trend during the first 100 weeks, but recent data indicate a gradual decline. The test will continue to be monitored. The two NAG tailings humidity cell tests have been in operation for 68 weeks and release rates continue to change, but in general trends for these two cells appeared to be similar to the NAG tailings cell which has operated over the long term.

The PAG tailings column has operated for 63 weeks. Release rates generally appear to be decreasing. The test will continue to be monitored.

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LIST OF ABBREVIATIONS

AND_TUFF_MSED	Andesite, Tuff and Metasediments
CaCO ₃	calcium carbonate
KCC	KCC Geoconsulting
LAM	Lamprophyre
ML/ARD	metal leaching and acid rock drainage
NAG	non-acid generating
NP	neutralization potential
NPR	neutralization potential ratio
PAG	potentially acid generating
POR	Porphyry
TRA	Trachyte
VBX	Volcanic Breccia
Wood	Wood Environment & Infrastructure Americas
WSP	WSP Canada Inc.
%	percent
cm	centimetre
kg	kilogram
kg CaCO ₃ /t	kilograms calcium carbonate per tonne
km	kilometre
mg CaCO ₃ /m ² /week	milligrams calcium carbonate per square metre per week
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
mg/m ² /week	milligrams per square metre per week
mL	millilitre
mmol/kg/week	millimoles per kilogram per week
CarbNP	carbonate neutralization potential
wt%	weight percent
Carb NPR	carbonate neutralization potential ratio
AP	acidity potential

1.0 INTRODUCTION

This document outlines the approach, methods and currently available test results from ongoing kinetic geochemical testing undertaken as part of the metal leaching and acid rock drainage (ML/ARD) characterization program for the Springpole Gold Project (the Project). It is recommended that this report be read in conjunction with the *Baseline Static Geochemical Testing Report – Springpole Gold Project*, prepared by WSP Canada Inc. (WSP; formerly Wood, WSP (2024a)).

This report is a living document and is periodically updated based on recent test results from the ongoing Springpole laboratory humidity cell testing program. This report reflects the status of the program for Q4 2024, including test results reported to August 28, 2024.

1.1 Background

First Mining Gold Corp. proposes to develop an open pit mine and supporting facilities known as the Springpole Gold Project. The Project is located in a remote area of northwestern Ontario, approximately 110 kilometres (km) northeast of the Municipality of Red Lake (Figure 1-1).

This report has been prepared to describe the geochemistry of the rock likely to be encountered during future mine development at the Project site. Specifically, this report documents the approach and currently available results of the ongoing kinetic geochemical testing program to assess rates of sulphide oxidation and metal release from rock at the Project site. Currently available kinetic testing data for samples of synthetic tailings produced as part of metallurgical testing are also included.

As described in the WSP (2024a) baseline static geochemical testing report, rock at the Project site was classified into two groups:

- **Ore-grade material:** rock with potentially economic gold content. For the purposes of this assessment, ore-grade material is assumed to contain 0.4 grams per tonne (g/t) gold or greater, based on discussions with First Mining Gold geologists.
- **Mine rock:** all mine rock excluding ore-grade material and including future exposed rock surfaces (e.g., pit walls).

1.2 Purpose

The purpose of this report is to document the ML/ARD characterization work completed by WSP including the following:

- Analysis and interpretation of data from existing geological and geochemical characterization studies; and
- ML/ARD characterization, including static and kinetic testing, to evaluate the geochemical characteristics of ore-grade material, future stockpiled mine rock, exposed mine rock surfaces and tailings, for the Project.

1.3 Ongoing Geochemical Studies

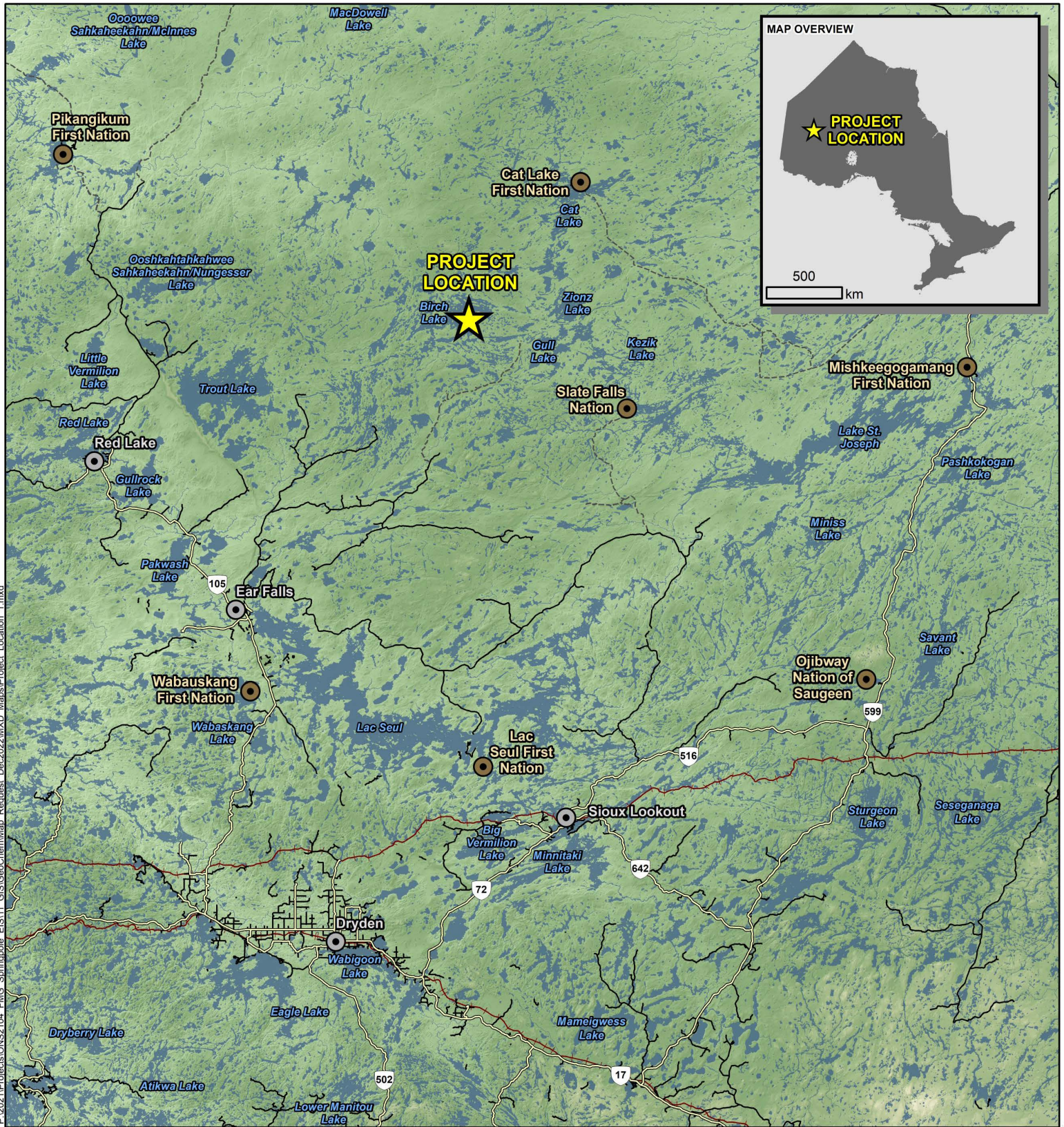
Geochemical investigations in support of the Project are ongoing. Results of static testing conducted as part of the ML/ARD characterization program were provided in the baseline static geochemical testing report (WSP 2024a).

Kinetic testing is being undertaken, including a laboratory mine rock humidity cell test program and a tailings kinetic testing program (humidity cells and column test), which is outlined in this report.

Several supplemental kinetic testing programs are underway or were conducted to support the Project. These include:

- **A laboratory mine rock trickle leach column testing program:** Results of the mine rock column testing program are reported in WSP (2025a); and
- **A mine rock field leach barrel program:** The field leach barrel program is summarized in WSP (2025b).

As this report serves to provide an update to test results, termination test results for previously completed tests are not carried forward in subsequent updates. However, terminated tests are considered in the overall discussion and presentation of test results in this report. Since the last report was prepared, four humidity cells tests have been terminated. The results from these cells are presented in this report.



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LEGEND

- Project Location
- Town
- First Nation Reserve
- Highway
- Secondary Road
- Resource / Winter Road
- Railway

NOTES:
- Topographic information extracted from LIO, MNRF.

	FIRST MINING GOLD	
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SPRINGPOLE GOLD PROJECT

Project Location

Datum: NAD83
Projection: UTM Zone 15N



PROJECT N^o: ONS2104

FIGURE: 1-1

SCALE: 1:1,500,000

DATE: July 2024



2.0 PROJECT GEOLOGY

A detailed summary of Project geological information is presented in WSP (2024a). Key Project lithological groups and associated rock types referenced in this report are presented in Table 2–1.

Table 2–1: Springpole Lithology Groups

Lithology Group	Lithology Code	Rock Types
Andesite, Tuff, and Metasediments	AND_TUFF_MSED	Andesite
		Metasediment
		Tuff
		Iron Formation
		Quartz Porphyry Dyke
		Conglomerate
Trachyte	TRA	Trachyte
Volcanic Breccia	VBX	Volcanic Breccia
Porphyry	POR	Porphyry
Lamprophyre	LAM	Lamprophyre Dyke

3.0 LABORATORY KINETIC TESTING PROGRAM

Kinetic testing is undertaken to estimate the rates of weathering, oxidation and metal release from rock materials and can be used to estimate the time to acid onset when potentially acid generating (PAG) materials are identified. There are currently no criteria that are directly applicable to assess metal release data from kinetic tests such as humidity cells. Kinetic test results are interpreted to inform the Project in terms of:

- Rates of sulphide oxidation, neutralization potential depletion and metal release;
- Interpreted timing of acid onset in PAG materials; and
- Site-specific NPR thresholds to define PAG material, where applicable.

The kinetic testing program presented in this report includes tests initiated as part of several geochemistry programs. In total, the laboratory kinetic testing program includes 16 mine rock humidity cell tests (five currently operating), three tailings humidity cell tests and one tailings column test. All tests are conducted at Global ARD Testing Services Inc., located in Burnaby, BC.

The initial Springpole kinetic testing program was initiated by KCC Geoconsulting (KCC 2020) based on mine planning information available at that time. Information regarding the sample selection process and materials used in the tests is provided in KCC (2020)¹. This program included 10 humidity cell tests prepared with drill core (HC-1 to HC-10). These tests are currently under the direction of WSP, and seven of these tests have been terminated.

Review of the humidity cell samples selected by KCC (HC-1 to HC-10) suggests that many of the drill core samples used in the tests are not representative of the overall current Project mine rock as most of the test samples have notably elevated sulphur and metal contents relative to the overall static testing database for the Project (WSP 2024a). Rather, these samples are more representative of the less common higher sulphide and metal contents found in some of the mine rock and are considered “conservative case” for the Project. Additionally, the tailings tested as part of the initial kinetic testing program were PAG and are not representative of the expected life of mine tailing, in which both PAG and non-acid generating (NAG) tailings will be generated.

WSP (formerly Wood) initiated additional humidity cell tests to expand the kinetic program for the Project. This included six additional mine rock humidity cell tests (HC-12 to HC-17), three additional tailings humidity cell tests (HC-18, HC-19, and HC-20) and one additional tailings column test (Col-14). The mine rock humidity cell tests were selected to generally represent materials that are more likely to be encountered in terms of their sulphide and metal content. Since the last report, 4 humidity cell tests were terminated, specifically HC-12, HC-13, HC-14, and HC-15.

The synthetic tailings used in the tailings kinetic tests were consistent with the current mine plan for the Project and included NAG tailings (humidity cell tests) and PAG tailings (column test).

A summary of the status of the kinetic testing program is provided in Table 3–1. Detailed information on the samples in the kinetic tests is provided in Table 3–2.

¹ KCC (2020) initiated both mine rock and synthetic tailings kinetic tests. The tailings tests that were initiated as part of the work completed in 2020 (HC-11 and COL-1) operated for 90 and 51 weeks, respectively, and were terminated as the samples do not represent the current mine plan. Results presented in this report include samples that represent the current mine plan for the Project.

Table 3–1: Kinetic Testing Program Status

Cell ID	Test Type	Start Date	End Date	Weeks of Data	Status
HC-1	Mine rock humidity cell	January 20, 2020	November 22, 2021	96	Terminated
HC-2	Mine rock humidity cell	January 20, 2020	-	240	Ongoing
HC-3	Mine rock humidity cell	January 20, 2020	-	240	Ongoing
HC-4	Mine rock humidity cell	January 20, 2020	November 22, 2021	96	Terminated
HC-5	Mine rock humidity cell	January 20, 2020	September 26, 2022	140	Terminated
HC-6	Mine rock humidity cell	January 20, 2020	November 22, 2021	96	Terminated
HC-7	Mine rock humidity cell	January 20, 2020	-	240	Ongoing
HC-8	Mine rock humidity cell	January 20, 2020	November 22, 2021	96	Terminated
HC-9	Mine rock humidity cell	January 20, 2020	September 26, 2022	140	Terminated
HC-10	Mine rock humidity cell	January 20, 2020	November 22, 2021	96	Terminated
HC-12	Mine rock humidity cell	December 20, 2021	April 29, 2024	123	Terminated
HC-13	Mine rock humidity cell	December 20, 2021	April 29, 2024	123	Terminated
HC-14	Mine rock humidity cell	December 20, 2021	April 29, 2024	123	Terminated
HC-15	Mine rock humidity cell	December 20, 2021	April 29, 2024	123	Terminated
HC-16	Mine rock humidity cell	December 20, 2021	-	140	Ongoing
HC-17	Mine rock humidity cell	December 20, 2021	-	140	Ongoing
HC-18	Tailings humidity cell	December 20, 2021	-	140	Ongoing
HC-19	Tailings humidity cell	May 8, 2023	-	68	Ongoing
HC-20	Tailings humidity cell	May 8, 2023	-	68	Ongoing
Col-14	Tailings column	June 14, 2023	-	63	Ongoing

Table 3-2: Summary of Laboratory Kinetic Testing Program

Cell ID	Sample ID	Lithology ⁽²⁾	Total S ⁽¹⁾	Sulphide S ⁽²⁾	AP	NP ⁽³⁾	Carb NP ⁽⁴⁾	NPR	Carb NPR	Classification ⁽⁵⁾	Description ⁽⁶⁾	Metals Description ⁽⁶⁾	Weeks of Data & Status
			%	%									
HC-1	009555	AND_TUFF_MSED	4.9	4.8	151	184	135	1.2	0.90	PAG	High S, high NP	80 th percentile As and Mo 90 th percentile Sb 95 th -99 th percentile Zn, Cd, Hg, Pb	96 Terminated
HC-2	009573	TRA ⁽⁷⁾	5.6	5.5	171	19	24	0.10	0.10	PAG	High S, low NP	80 th percentile Zn 90 th percentile As, Cd, Hg, Se 95 th percentile Mo, Sb	240 Ongoing
HC-3	009587	AND_TUFF_MSED ⁽⁷⁾	2.1	2.1	66	15	5.0	0.20	0.10	PAG	High S, low NP	95 th -99 th percentile Hg, Zn, Cu 99 th percentile Cd	240 Ongoing
HC-4	009594	VBX ⁽⁷⁾	4.2	4.2	130	30	19	0.20	0.10	PAG	High S, low NP	90 th percentile Mo and Se	96 Terminated
HC-5	009608	POR	4.4	4.4	138	100	80	0.70	0.60	PAG	High S	75 th percentile Hg 80 th percentile Cd 85 th percentile Zn and Cu 90 th percentile Mo 95 th percentile Se and Pb	140 Terminated
HC-6	009626	AND_TUFF_MSED ⁽⁷⁾	2.6	2.6	82	167	184	2.0	2.2	NAG	Moderate S	75 th percentile Cd 90 th percentile Hg, Se	96 Terminated
HC-7	009668	TRA	4.4	4.3	136	171	69	1.3	0.50	PAG	High S	75 th percentile Mo 90 th percentile Hg and Cu 95 th to 99 th percentile Cd, Se, Zn, Pb	240 Ongoing
HC-8	009688	AND_TUFF_MSED ⁽⁷⁾	3.8	3.8	119	191	148	1.6	1.2	Uncertain	High S	75 th percentile Se 99 th percentile As	96 Terminated
HC-9	A00356169	VBX ⁽⁷⁾	2.5	2.4	76	117	105	1.5	1.4	Uncertain	Moderate S	85 th percentile Mo 99 th percentile As	140 Terminated
HC-10	009702	AND_TUFF_MSED	1.0	0.90	29	159	146	5.5	5.1	NAG	Moderate S	75 th percentile Cu 80 th percentile Hg and Mo 95 th to 99 th percentile Pb, Cd, Zn	96 Terminated
HC-12	W-119	POR	0.32	0.30	9.7	121	104	13	11	NAG	Low S, moderate NP	40-60 th percentile As, Cd, Sb 70 th percentile Pb	123 Terminated
HC-13	W-199	AND_TUFF_MSED	1.8	1.8	55	101	70	1.8	1.3	Uncertain	Typical S, typical NP	40-60 th percentile Mo, Pb, Sb, Se 70 th percentile Cd, Co, Cu 80 th percentile Zn	123 Terminated
HC-14	W-098	AND_TUFF_MSED	2.4	2.4	75	168	126	2.2	1.7	Uncertain	Typical S, high NP	40-60 th percentile Cd, Pb, As, Co, Mo	123 Terminated
HC-15	M112153	TRA	0.80	0.80	26	75	47	2.9	1.8	Uncertain	Moderate-low S, typical NP	40-60 th percentile Se, As, Cd 75 th percentile Pb 90 th percentile Sb	123 Terminated
HC-16	W-109	VBX	3.9	3.8	119	7.2	1.7	0.060	0.010	PAG	Moderate-high S, low NP	40-60 th percentile Cu, As, Sb 80 th percentile Pb, Se, Zn 90 th percentile Cd, Mo	140 Ongoing
HC-17	W-105	TRA	1.4	1.4	42	10	1.7	0.24	0.040	PAG	Typical S, low NP	40-60 th percentile Cu, Pb, Cd, Mo, Se, Zn 80 th percentile Co	140 Ongoing
HC-18	Synthetic NAG Tailings (Current Mine Plan) ⁽⁸⁾		0.080	0.050	1.6	108	101	69	65	NAG	Life of mine tailing	--	140 Ongoing
HC-19	Synthetic NAG Tailings (Current Mine Plan) ⁽⁹⁾		0.23	0.17	5.3	145	121	27	23	NAG	Later stage mining tailing	--	68 Ongoing
HC-20	Synthetic NAG Tailings (Current Mine Plan) ⁽¹⁰⁾		0.21	0.16	5.0	85	51	17	10	NAG	Early stage mining tailing	--	68 Ongoing
Col-14	Synthetic PAG Tailings (Current Mine Plan) ⁽¹¹⁾		18	17	537	33	41	0.06	0.076	PAG	Sulphide concentrate tailing	--	63 Ongoing

Notes:

Grey shading indicates cells that have been terminated.

(1) Total sulphur (%) by Leco analyzer.

(2) Sulphide sulphur (%) by difference (Total sulphur (Leco) %) – Sulphate sulphur (HCl leach) %).

(3) Sobek NP Method.

(4) Carbonate (Carb) NP calculated from TIC (total inorganic carbon) by HCl-Leco.

(5) Classification generally based on Carb NPR. Classification was based on NPR for HC-6, where Carb NP was greater than NP and suggested the presence of non-net neutralizing carbonate minerals. Per MEND (2009), NPR ≤ 1 = PAG; NPR 1-2 = uncertain; and NPR ≥ 2 = NAG.

(6) The metallurgical tailings samples were prepared as part of metallurgical test work at the time the kinetic tests were initiated (KCC 2020).

(7) Au > 0.4 g/t.

(8) Metallurgical tailings representative of the life of mine tailing for the current mine plan.

(9) Metallurgical tailings representative of tailing at a later stage of mining (6+ years) for the current mine plan.

(10) Metallurgical tailings representative of tailing at an early stage of mining (1 to 6 years) for the current mine plan.

(11) Composite of metallurgical tailings representative of tailing at an early stage of mining (1 to 6 years) and later stage of mining (6+ years) for the current mine plan.

4.0 METHODS

Test methods used as part of the kinetic testing program are summarized in Sections 4.1 and 4.2.

As noted in Section 3.0, HC-1 to HC-10 were initiated by KCC (2020) as part of an initial humidity cell program for the Project. These cells are currently under the direction of WSP. HC-12 to HC-18 were initiated by WSP in December 2021. HC-19 and HC-20 were initiated by WSP in May 2023, and one column test (Col-14) was initiated by WSP in June 2023.

4.1 Humidity Cells

4.1.1 Operational Conditions

Humidity cell testing is ongoing at Global ARD Testing Services in Burnaby, BC, following procedures outlined in the Mine Environment Neutral Drainage (MEND 2009) *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials*. This includes both mine rock humidity cell tests and tailings humidity cell tests as presented in Table 3–2.

- The mine rock humidity cell tests were prepared with a 1-kilogram (kg) sample of prepared drill core and operated as standard mine rock humidity cell tests.
 - o Mine rock humidity cells HC-1 to HC-10 were initiated in January 2020.
 - Analysis of leachates from HC-1 to HC-10 included general parameters (pH, conductivity, acidity, alkalinity); anions (sulphate, chloride, fluoride); and dissolved metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, calcium, cadmium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, sulphur, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, zirconium). The analytical schedule was updated to include the measurement of phosphorus by colorimetry and mercury by CV-AAS beginning in May 2021. Analysis of chloride was discontinued after 98 weeks of testing for HC-3, HC-5, HC-7, and HC-9 and after 154 weeks of testing for HC-2, when chloride concentrations were generally below detection. Analysis of alkalinity was discontinued after 112 weeks of testing for HC-2 as measurements fell below the detection limit.
 - Leachates from HC-1 to HC-10 were analyzed weekly from start-up through week 8, every two weeks from week 9 to week 32, monthly from weeks 33 to 63, and weekly from week 64 to 69. After that time, general parameters were analyzed weekly, and anions/metals were analyzed every two weeks for most cells. Metals analysis for HC-3, HC-5, HC-7, and HC-9 were further reduced to monthly analysis starting in week 113, as release rates appeared to be stable for those cells. Metals analysis for HC-2 were reduced to a monthly frequency starting in week 183.
 - o Mine rock humidity cells HC-12 to HC-17 were initiated in December 2021.
 - Analysis of leachates from HC-12 through HC-17 included general parameters (including pH, conductivity, acidity, alkalinity); anions (sulphate, chloride, fluoride); and dissolved metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, calcium, cadmium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, sulphur, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, zirconium). Dissolved phosphorus and mercury were analyzed using colorimetry and

CV-AAS, respectively. Analysis of chloride was discontinued after 55 weeks of testing for HC-12, HC-13, HC-14 and HC-16, when chloride concentrations were generally below detection. Alkalinity measurements for HC-16 were discontinued after 56 weeks of testing, after measurements were below the detection limit.

- o Analysis of leachates from HC-12 to HC-17 followed variable schedules. For most cells, general parameters, anions and metals were analyzed weekly from start-up through week 19. General parameters and sulphate continued to be analyzed weekly after that time. Metals analysis was updated to be every two weeks from week 20 to week 55 and monthly from weeks 56 to 97. Metals analysis for HC-16 was conducted weekly from start-up through week 55, every two weeks from weeks 56 to 82 and monthly from weeks 83 to 97.
- o The tailings humidity cells (HC-18, HC-19, and HC-20) were prepared with 1 kg of synthetic tailings and operated as standard tailings humidity cell tests.
 - HC-18, representing the currently planned life of mine NAG tailing, was initiated in December 2021 and has operated for 97 weeks. HC-19 and HC-20, representing later and early operations NAG tailings, respectively, were initiated in May 2023 and have operated for 25 weeks. Cyanide destruction was conducted on the tailings samples used in HC-18, HC-19, and HC-20 prior to kinetic testing.
 - Leachate analysis for HC-18, HC-19, and HC-20 included general parameters (including pH, conductivity, acidity, alkalinity); anions (sulphate, chloride, fluoride); phosphorus by colorimetry; mercury by CV-AAS; and dissolved metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, calcium, cadmium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, sulphur, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, zirconium). In addition, leachate analysis for HC-19 and HC-20 included cyanide and nitrogen species (weak acid dissociable [WAD] and total cyanide, nitrate, nitrite, and ammonia). Leachates were analyzed weekly from start-up to week 19 for HC-18, and week 20 for HC-19 and HC-20, after which time general parameters were analyzed weekly, and anions and metals were analyzed every two weeks.
- Leachate chemistry was used to calculate release rates based on estimated surface areas of the mine rock humidity cell samples. Grain size analysis was conducted on each mine rock humidity cell test sample (Appendix E). A simple geometric model of particle size and surface area (assuming spherical particles) was then used to determine a reference surface area for each sample. For the tailings humidity cell tests, release rates were calculated based on the mass of tailings sample used in the test.
- Calculated release rates were used to determine trends in metal release, the rates of sulphide and neutralization potential depletion, and to estimate the lag time to acid onset in the sample.

4.1.2 Termination Procedure

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated in April 2024 after 123 weeks of operation. The results from the termination tests are presented in this report. Other termination test results have been previously reported (WSP 2024b) and are incorporated into release rates presented herein for previously terminated cells.

- Humidity cell termination procedures for these cells followed the standard approaches outlined in MEND (2009). This included the execution of a 24-hr bottle roll test with the humidity cell residue, followed by analysis of the residue by acid base accounting (ABA).

A bottle roll test was conducted on the humidity cell sample residue following cell termination to assess if soluble reaction products (i.e., secondary minerals) were retained within the humidity cell during its operation. As part of the bottle roll test, the humidity cell residue was air dried following dismantling of the cell, and the dried residue was agitated with deionized water (3:1 mass ratio of water to solid) for 24 hours. The resulting supernatant was analyzed for general parameters and dissolved metals.

- The load released from the bottle roll test was calculated and scaled to the weight of the humidity cell test sample. This load was assumed to represent the load from soluble reaction products retained in the cell during its operation and was used to recalibrate humidity cell release rates for the terminated cells over the duration of the test as per MEND (2009). Recalculated release rates were used to estimate steady state release rates for the last 20 weeks of testing and estimate the time to acid onset for the terminated cells.

Post-test ABA analysis were conducted on the humidity cell residues for the terminated cells to determine the remaining acid potential (AP) and neutralization potential (NP) content of the samples. This included analysis of humidity cell residues for paste pH, total sulphur by Leco furnace, sulphur speciation (sulphate sulphur by Leco furnace / HCl leach, and sulphide sulphur by difference), total carbon by Leco furnace, carbonate carbon by Leco furnace / HCl leach, and NP by the Sobek method. The post-test ABA results were compared to the pre-test results.

4.2 Column Test

A subaqueous column test was prepared with PAG tailings representing the current mine plan as outlined in Table 3–2. The column test is conducted at Global ARD Testing Services in Burnaby, BC. The column test is intended to represent tailings stored under a water cover and to monitor the ongoing release of pore water and load from the submerged tailings.

- The test was prepared with 2.6 kg of tailings in an approximately 15-centimetre (cm) diameter clear cast acrylic column. In this configuration, the tailings were 10 cm thick, and the column was operated with 30 cm of deionized water overlying the tailings. The top of the column was covered to limit evaporative water losses.
- Initial operation of the column involved weekly collection of 190 millilitres (mL) leachate from a port at the base (i.e., underside) of the column, with a p-trap between the drain port and the sample collection container to exclude oxygen. The sample collection container was purged with nitrogen before sampling. Following sampling, additional deionized water was added to the top of the column following sampling to maintain the 30 cm water column overlying the tailings. After 19 weeks, operation of the column was updated to include the collection of 500 mL of leachate per week while maintaining 30 cm of deionized water overlying the tailings.
- Leachate from the column was analyzed weekly for general parameters (including pH, conductivity, oxidation reduction potential, dissolved oxygen, acidity; and alkalinity); cyanide and nitrogen species (weak acid dissociable and total cyanide, nitrate, nitrite and ammonia); anions (sulphate, chloride, and fluoride); phosphorus by colorimetry; and dissolved metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, calcium, cadmium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, sulphur, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, zirconium).

5.0 RESULTS

Results of the kinetic testing program are present below, based on currently available data (as of August 2024).

5.1 Humidity Cells – Mine Rock

Test results for the 16 mine rock humidity cells are presented in Figures A-1 through A-45 in Appendix A. Key results are discussed below. The results include both operating humidity cells and cells that were terminated.

As described in Section 3.0, HC-1 to HC-10 are considered a conservative case for the Project as the test samples generally represent higher sulphide and metal content materials found in some of the mine rock. Of these tests, HC-2, HC-3, and HC-7 continue to operate and up to 240 weeks of data are available. Test samples in HC-12 to HC-17 are generally representative of materials that are more likely to be encountered in terms of their sulphur and metal contents. Four cells (HC-12, HC-13, HC-14, and HC-15) were terminated after 123 weeks of testing. Two mine rock humidity cells (HC-16 and HC-17) are still in operation and 140 weeks of test data are currently available.

5.1.1 pH, Acidity, and Alkalinity

- Leachate from 11 out of the 16 cells had a circumneutral pH, with pH values ranging from approximately pH 6.5 to 7.5 in recent data (Figure A-1). This included cells HC-1, HC-4, HC-5, HC-6, HC-8, HC-9, HC-10, HC-12, HC-13, HC-14, and HC-15, for which 96 to 123 weeks of data were available.
 - Decreasing pH trends were observed in cells HC-12 (low sulfate, moderate non-purgeable organic carbon, high lead, POR), HC-13 (typical sulfate, typical non-purgeable organic carbon, high metals, AND_TUFF_MSED), HC-14 (typical sulfate, high non-purgeable organic carbon, high metals, AND_TUFF_MSED), and HC-15 (moderate-low sulfate, typical non-purgeable organic carbon, high metals, TRA) since startup. However, leachate pH remained stable at approximately 6.5 for these cells from week 80 to week 123. The observed pH trends were attributed to the dissolution of iron carbonates (ankerite-dolomite, siderite), which were variably present in several samples.
- Weakly acidic conditions (pH less than 6.5) were observed in 3 out of the 16 humidity cells, with pH values on the order of approximately pH 4.5 to 6.2 in recent data. This included cells HC-3, HC-7, and HC-17.
 - Leachate pH for HC-3 (High S, low NP, high metals, AND_TUFF_MSED) showed a decreasing trend from approximately week 145 to present, with leachate pH on the order of 4.5 in recent data. Leachate pH for HC-7 (High S, high metals, TRA) showed a decreasing trend from approximately week 140 with leachate pH on the order of 6.1 in recent data.
- Strongly acidic leaching conditions were observed in 2 out of the 16 humidity cell tests, specifically HC-2 and HC-16. Since start-up, leachate pH for HC-2 (High S, low NP, high metals, TRA) showed a generally steadily decreasing trend with leachate pH on the order of 2.2 in recent data. The pH levels rapidly decreased to pH 3 for HC-16 (Moderate-high S, low NP, high metals, VBX) over the first 25 weeks of testing. After that time, the leachate pH decreased to as low as pH 2, and leachate pH was approximately pH 2.2 in recent data.
- Acidity release rates for HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, HC-9, and HC-10 (operated for 96 to 240weeks) and HC-13, HC-14, and HC-15 (operated for 123 weeks) generally ranged from 0.1 to 1 milligram calcium carbonate per square metre per week ($\text{mg CaCO}_3/\text{m}^2/\text{week}$) and were often based

on concentrations at or near the analytical detection limit for acidity (0.5 mg calcium carbonate per litre [CaCO_3/L]; Figure A-2). Acidity release rates were slightly higher, in the range of 1 to 2 mg $\text{CaCO}_3/\text{m}^2/\text{week}$ for HC-12 and HC-17 (operated for 123 and 140 weeks, respectively), and HC-3 (operated for 240 weeks) in recent data, consistent with pH trends for these cells.

- Acidity release rates for HC-2 (High S, low NP, high metals, TRA) showed a generally increasing trend since start-up and were on the order of 45 mg $\text{CaCO}_3/\text{m}^2/\text{week}$ in recent data. This was consistent with pH trends observed for this cell. Acidity release rates for HC-16 (Moderate-high S, low NP, high metals, VBX) varied with pH and were on the order of 45 mg $\text{CaCO}_3/\text{m}^2/\text{week}$ in recent data (Figure A-2).
- Alkalinity release rates for HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, HC-9, and HC-10, which operated for 96 to 240 weeks, and HC-12, HC-13, HC-14, HC-15, and HC-17 which operated from 123 up to 140 weeks, were relatively stable to slightly decreasing and ranged from 0.5 to 3 mg $\text{CaCO}_3/\text{m}^2/\text{week}$ (Figure A-3) in recent data.
- Alkalinity release rates for HC-2 (High S, low NP, high metals, TRA) showed a decreasing trend until week 60, consistent with trends in pH for this cell, whereafter alkalinity release rates were based on the analytical detection limit (0.5 mg CaCO_3/L). Alkalinity analysis was discontinued for HC-2 after 112 weeks of testing owing to the strongly acidic leachate pH for this cell. Alkalinity release rates showed a generally rapidly decreasing trend for HC-16 (Moderate-high S, low NP, high metals, VBX) until week 15, after which alkalinity was below the analytical detection limit (0.5 mg CaCO_3/L), consistent with observed pH trends for this cell. Alkalinity analysis was discontinued for HC-16 after 56 weeks of testing owing to the strongly acidic leachate pH.
- Starting in week 100, alkalinity release rates for HC-3 (High S, low NP, high metals, AND_TUFF_MSED) showed a decreasing trend, consistent with trends in pH for this cell, with alkalinity release rates on the order of 0.03 mg $\text{CaCO}_3/\text{m}^2/\text{week}$ in recent data (Figure A-3).

5.1.2 Sulphate

- Sulphate release rates had a steady to declining trend for most cells, including HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, HC-9, and HC-10, which operated for 96 to 240 weeks, and HC-12, HC-13, HC-14, and HC-15, which operated for 123 weeks. Sulphate release rates typically ranged from 0.1 to 1 milligram per square metre per week ($\text{mg}/\text{m}^2/\text{week}$) for these cells (Figure A-4). Similar sulphate release rates were observed for HC-7, HC-12, HC-13, HC-14, HC-15, and HC-17, which had a weakly acidic pH.
- Sulphate release rates for HC-2 (high sulphur, low nitrogen phosphorus, high metals, TRA) ranged from 3 to 20 $\text{mg}/\text{m}^2/\text{week}$ during the first 172 weeks of operation. Following this period, sulphate release rates rose to approximately 100 $\text{mg}/\text{m}^2/\text{week}$, with recent data indicating rates around 40 $\text{mg}/\text{m}^2/\text{week}$.
 - Trends in sulphate release were consistent with changes in pH and the onset of strongly acidic conditions for this cell.
- Sulphate release rates for HC-16 (moderate-high sulphur, low nitrogen phosphorus, high metals, VBX) increased rapidly starting in week 20 (see Figure A-4), correlating with the onset of acidity in this cell. Following this initial rise, sulphate release rates continued to climb alongside decreasing pH levels. After 80 weeks of testing, rates peaked at 175 $\text{mg}/\text{m}^2/\text{week}$ and have since declined to approximately 45 $\text{mg}/\text{m}^2/\text{week}$ in recent data.
 - While humidity cell tests are designed and operated to limit the formation of secondary reaction products, it is noted that the sulphate concentration in leachates from HC-16 were on the order of 2,000 milligrams per litre (mg/L) between weeks 51 and 80, consistent with solubility limits for gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$). However, calcium concentrations were low and the

magnitude of sulphate and iron release from this strongly acid leaching cell (pH 2.2 in recent data) were consistent with pyrite oxidation; equilibrium with gypsum is unlikely to be a key process influencing sulphate release in the cell. Sulphate concentrations decreased slightly toward approximately 480 mg/L after that time.

- Sulphate release rates for HC-3 (High S, low NP, high metals, AND_TUFF_MSED) were stable until approximately week 150 when sulphate release rates began to increase, consistent with decreasing pH trends for this cell. Sulphate release rates were on the order of 3 mg/m²/week in recent data (Figure A-2).

5.1.3 Key Metals

Release rates for key metals are presented below. In general, under circumneutral pH conditions, release rates for several parameters including beryllium, boron, phosphorus, silver, vanadium, and mercury were generally based on concentrations that were at or near detection limit concentrations in most humidity cells.

It is noted that release rates for metals presented below may not be directly comparable among the various humidity cell tests since some cells have not yet reached steady state leaching conditions for all parameters, acidic conditions are developing in some cells, and the cells have operated for a range of time periods. These factors are considered in the discussion below.

- Arsenic release rates showed variable trends among the humidity cell tests as described below (Figure A-10).
 - o Steady to steadily decreasing trends in arsenic release rates have been observed for most cells that were initiated in 2020 (96 to 240 weeks), including HC-1, HC-3, HC-4, HC-5, HC-6, HC-7, and HC-10, with release rates on the order of approximately 1x10⁻⁵ to 1x10⁻⁴ mg/m²/week in recent data (Figure A-10). Similar arsenic release rates were observed for several of the more recently initiated cells which have operated for 123 weeks, including HC-12, HC-13, HC-14, and HC-15. Arsenic release rates for HC-17 decreased from start-up to approximately week 65, with release rates on the order of 7 × 10⁻⁶ mg/m²/week in recent data.
 - o Arsenic release rates for HC-8 (High S, high selenium and arsenic, AND_TUFF_MSED) and HC-9 (Moderate S, high molybdenum and arsenic, VBX), which operated for 96 and 140 weeks, respectively, were elevated relative to most other cells, and showed relatively steady to slightly decreasing trends with release rates on the order of 0.001 mg/m²/week at the time of termination of these cells.
 - o Rapidly increasing arsenic release rates were observed for HC-16 (Moderate-high S, low NP, high metals, VBX) and HC-2 (High S, low NP, high metals, TRA) beginning in week 25 and week 168, respectively. Arsenic release rates for these cells were approximately 0.007 mg/m²/week in recent data. The rapid increase in arsenic release rates was concurrent with the development of strongly acidic leaching conditions (pH less than 3) in these cells.
 - o As described above, arsenic release for neutral leaching cells HC-8 (High S, high selenium and arsenic, AND_TUFF_MSED) and HC-9 (Moderate S, high molybdenum and arsenic, VBX) was elevated relative to other cells. This was consistent with elevated arsenic content in these cells as the test samples represented the 99th percentile arsenic content in the Project ML/ARD database (on the order of 400 to 500 milligrams per kilogram [mg/kg]). In general, samples with a higher arsenic content tended to have higher arsenic release rates than samples with a lower arsenic content. Additionally, arsenic release rates were broadly correlated with the

arsenic to sulphur molar ratio of the test sample (an indicator of arsenic host mineralogy), consistent with relationships discussed in WSP (2025a), for the neutral leaching cells. Arsenic release rates for HC-2 (173.9 mg/kg arsenic and 90th percentile arsenic content in ML/ARD database) and HC-16 (37 mg/kg arsenic and approximately 50th percentile arsenic content in ML/ARD database) were notably elevated relative to the other cells, which was attributed to the strongly acidic leaching conditions of these cells (e.g., pH less than 3).

- Humidity cell tests that had weakly acidic to circumneutral pH leachates had iron release rates that were based on detection limit derived concentrations. As expected, cells with strongly acidic leachate had higher iron release rates than the other tests, with iron release rates on the order of approximately 10 mg/m²/week for HC-2 (High S, low NP, high metals, TRA) and HC-16 (Moderate-high S, low NP, high metals, VBX) in recent data (Figure A-11). Trends in iron release for these cells were consistent with trends for sulphate release rates and leachate pH.
- Copper release rates for humidity cells with a circumneutral to weakly acidic pH, including HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, HC-9, and HC-10, which have operated for 96 to 240 weeks, and HC-12, HC-13, HC-14, HC-15 and HC-17, which have operated for 123 to 140 weeks, were generally based on concentrations at or near the detection limit (Figure A-12). Copper release rates for HC-2 (High S, low NP, high metals, TRA) exhibited a generally increasing trend over time, which aligns with observed trends in pH and sulfate release for this cell. However, after week 180, a decreasing trend was noted, with recent copper release rates around 0.005 mg/m²/week. Copper release rates for HC-16 (Moderate-high S, low NP, high metals, VBX) rapidly increased to values near 0.2 mg/m²/week from weeks 6 to 25, consistent with a rapidly declining pH over that period. After that time, copper release rates have shown a steadily increasing trend and were on the order of 0.04 mg/m²/week in recent data. Elevated copper release from HC-2 (74 mg/kg copper and 66th percentile copper content in ML/ARD database) and HC-16 (46 mg/kg copper and 37th percentile copper content in ML/ARD database) were attributed to their strongly acidic leaching condition. Copper release exhibited an upward trend in HC-3 (High S, low NP, high metals, AND_TUFF_MSED) after 170 weeks, with release rates ranging from 5×10^{-4} to 5×10^{-2} mg/m²/week in recent measurements. This trend aligns with the observed changes in sulfate and pH levels for this cell.
- Molybdenum release showed a decreasing to steady trend for most cells, with molybdenum release rates on the order of 1×10^{-5} to 1×10^{-4} mg/m²/week. Molybdenum release rates for HC-4 (High S, low NP, high molybdenum and selenium, VBX), HC-5 (High S, high metals, POR), HC-9 (Moderate S, high molybdenum and arsenic, VBX), and HC-10 (Moderate S, high metals, AND_TUFF_MSED) were steady and elevated relative to the other circumneutral leaching cells, ranging from 5×10^{-4} to 0.001 mg/m²/week after 96 to 140 weeks of test operation (Figure A-13). An increase in molybdenum release rates was observed for HC-16 (Moderate-high S, low NP, high metals, VBX) starting at week 25, coinciding with the development of strongly acidic conditions (pH < 3) in this cell. Following a stable phase, the release rates show a slight upward trend post week 120, currently rising at an approximate rate of 0.013 mg/m²/week based on recent data. Rapidly increasing molybdenum release rates were observed in HC-2 (High S, low NP, high metals, TRA) in week 172, following the onset of strongly acidic conditions (pH less than 3) in this cell. Higher molybdenum release rates were sometimes associated with higher molybdenum content; however, this was not consistently observed among the tests.
- Zinc release rates were steady for most humidity cell tests, including HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, and HC-9, which operated for 96 to 240 weeks, and HC-12, HC-13, HC-14, and HC-15, which operated for 97 to 123 weeks (Figure A-14). Release rates were based on concentrations at or near the analytical detection limit (0.001 mg/L) for several of these cells.

- o Zinc release rates for HC-10 (Moderate S, high metals, AND_TUFF_MSED) were slightly higher than other circumneutral pH cells (Figure A-14). Specifically, zinc release rates for HC-10 were on the order of 3×10^{-4} mg/m²/week and relatively stable prior to termination of this test at week 96 (Figure A-14). The slightly higher zinc release rates in this cell relative to the other tests may be related to higher zinc content (HC-10 at the 97th percentile zinc content), but trends in zinc content and zinc release were not consistent among the tests.
- o Zinc release rates for strongly acidic-leaching cells HC-2 (High S, low NP, high metals, TRA) and HC-16 (Moderate-high S, low NP, high metals, VBX), which operated for 240 and 140 weeks, respectively, were approximately one to three orders of magnitude higher than other cells, likely owing to their strongly acidic condition (Figure A-14). Trend in zinc release for these cells were generally consistent with trends in sulphate release and leachate pH.
- o Zinc release rates showed an increasing trend for HC-3 (High S, low NP, high metals, AND_TUFF_MSED), consistent with increasing sulphate release and decreasing pH for this cell. Zinc release rates for HC-3 were on the order of 0.1 mg/m²/week in recent data.
- Cadmium release rates showed variable trends among the tests as described below (Figure A-15).
 - o Cadmium release rates were steady to steadily decreasing for most humidity cell tests, including HC-1, HC-4, HC-5, HC-6, HC-8, HC-9 and HC-10, which operated for 96 to 140 weeks, as well as HC-12, HC-13, HC-14 and HC-15, which operated for 123 weeks. Release rates were typically between 1×10^{-7} and 1×10^{-5} mg/m²/week for these cells (Figure A-15).
 - o Cadmium release rates for HC-2 (High S, low NP, high metals, TRA) exhibited an increasing trend up to week 170, subsequently stabilizing at approximately 4×10^{-4} mg/m²/week in recent observations. Cadmium release rates for HC-16 (Moderate-high S, low NP, high metals, VBX) were generally elevated relative to other cells but showed a decreasing trend toward approximately 6×10^{-5} mg/m²/week in recent data. Trends in cadmium release for HC-2 and HC-16 were consistent with trends in sulphate release and pH for these cells. HC-3 (High S, low NP, high metals, AND_TUFF_MSED) showed a steadily increasing cadmium release rate, with release rates on the order of 5×10^{-3} mg/m²/week in recent data (Figure A-15), consistent with increasing sulphate release and decreasing leachate pH. Cadmium release rates for HC-3 were notably elevated relative to other cells with a similar leachate pH, and this was attributed to the elevated cadmium content of HC-3 (17.4 mg/kg, 99th percentile cadmium content in the Project ML/ARD database). Overall trends in cadmium release for HC-2, HC-3 and HC-16 were broadly consistent with trends in zinc release.
 - o Test results did not indicate a clear relationship between cadmium content and cadmium release rates. For example, while some tests with an elevated cadmium content showed higher cadmium release rates (e.g., HC-3 at the 99th percentile cadmium content), relationships between elevated cadmium content and higher cadmium release rates were not always observed, as other cells with elevated cadmium contents (e.g., HC-1, HC-7 and HC-10 at the 97th to 98th percentile cadmium content) had lower cadmium release rates.
- Variable trends in lead release were observed among the cells as outlined below (Figure A-17).
 - o Lead release rates showed a steady to decreasing trend for several circumneutral to weakly acidic leaching cells including HC-1, HC-4, HC-5, HC-6, HC-8, HC-9, and HC-10, which operated from 96 to 140 weeks, and HC-12, HC-13, HC-14, HC-15, and HC-17, which operated for 123 to 140 weeks. Release rates were on the order of 2×10^{-6} to 1×10^{-3} mg/m²/week (Figure A-17). Release rates for HC-13, HC-14 and HC-17 were generally based on concentrations near the analytical detection limit for lead (0.001 mg/L).

- o Lead release rates for the acidic-leaching cell HC-2 (High S, low NP, high metals TRA), which has operated for 240 weeks, were relatively stable at 7×10^{-5} mg/m²/week in recent data. Lead release rates for HC-16 (Moderate-high S, low NP, high metals, VBX) rapidly increased during the first 25 weeks of testing, concurrent with a rapid decrease in pH in this cell. Following week 25, lead release rates showed a decreasing trend toward values near 1×10^{-4} mg/m²/week in recent data, despite the concurrent increase in sulphate release rates and decrease in leachate pH for this cell.
- o Rapidly increasing lead release rates were observed in HC-3 (High S, low NP, high metals, AND_TUFF_MSED) after week 150, with release rates on the order of 5×10^{-4} mg/m²/week. Lead release rates for HC-7 (High S, high metals, TRA) showed a slightly increasing trend over the duration of cell operation but appeared relatively steady in recent data, with release rates on the order of 5×10^{-4} mg/m²/week. Higher release rates of lead among the humidity cell tests were sometimes consistent with increased solid lead content, as in the case of HC-7, which ranked in the 99th percentile of samples in the Project ML/ARD database. However, trends in lead content and lead release were not always observed.
- Cobalt release rates were steady for most humidity cell tests, including HC-1, HC-4, HC-5, HC-6, HC-7, HC-8, HC-9, and HC-10, which have operated for 96 to 240 weeks, and HC-12, HC-13, HC-14, and H-15, which have operated for 123 weeks (Figure A-18). Release rates for these cells were typically based on concentrations at or near the analytical detection limit (0.0001 mg/L). Cobalt release rates for HC-3 (High S, low NP, high metals, AND_TUFF_MSED) were based on detection limit derived concentrations from start-up until approximately week 125. After this period, cobalt release rates showed a slight upward trend, with recent values around 0.001 mg/m²/week, consistent with sulfate release patterns and pH levels observed in this cell. Cobalt release rates for HC-16 (Moderate-high S, low NP, high metals, VBX) showed decreasing trends (Figure A-18) after 60 weeks, with release rates on the order of 0.01 mg/m²/week in recent data. Cobalt release in HC-2 (High S, low NP, high metals, TRA) showed an increasing trend until week 180, displaying release rates on the order of 0.01 mg/m²/week in recent data, consistent with increasing sulphate release and decreasing leachate pH. Cobalt release rates for HC-17 (Typical S, low NP, high Co, TRA) showed an increasing trend over the first 50 weeks of testing (Figure A-18), with release rates on the order of 4×10^{-4} mg/m²/week in recent data.
- Selenium release rates were steady (on the order of 3×10^{-5} mg/m²/week) for most cells, including HC-1, HC-6, HC-7, HC-8, HC-9, and HC-10, which operated from 96 to 240 weeks, and HC-12, HC-14, HC-15, and HC-17, which operated for 123 to 140 weeks (Figure A-19). Release rates for selenium were often based on concentrations at or near the analytical detection limit for these cells. Selenium release rates showed steady to decreasing trends for HC-2 (High S, low NP, high metals, TRA), HC-4 (High S, low NP, high molybdenum and selenium, VBX), HC-5 (High S, high metals, POR), and HC-7 (High S, high metals, TRA), which operated for 96 to 240 weeks, as well as for HC-13 (Typical S, typical NP, high Zn AND_TUFF_METASED), which operated for 97 weeks. Release rates for these cells were approximately 6×10^{-6} to 5×10^{-4} mg/m²/week in recent data (Figure A-19). Selenium release rates for HC-3 (High S, low NP, high metals, AND_TUFF_MSED) were based on detection limit derived concentrations from start-up until approximately week 150. After this period, selenium release rates showed a slight upward trend, with recent values around 4.5×10^{-5} mg/m²/week. Rapidly increasing selenium release rates were observed for HC-16 (Moderate-high S, low NP, high metals, VBX) after week 25 of testing, consistent with increasing sulphate release rates and a rapid decline in leachate pH for this cell. Selenium release rates for HC-16 were relatively stable on the order of 0.0004 mg/m²/week in recent data. Slightly higher selenium release rates were observed for HC-5 relative to the other humidity cell tests, consistent with higher selenium contents of this cell (among the 95th percentile in the Project ML/ARD database).

However, elevated selenium release rates did not always correspond to higher solid selenium content in the test samples, whereby some neutral leaching cells with selenium above the 80th percentile relative to the Project ML/ARD database (such as HC-4, HC-6, and HC-8) did not show the same trend.

5.1.4 Termination Testing

Following the 2023 Q4 Kinetic Testing Review (WSP 2024b), mine rock humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated in April 2024 after 123 weeks of test operation. Termination testing was conducted at Global ARD in Burnaby, BC, and included bottle roll testing, ABA analysis, and elemental content analysis. Key results of termination testing are discussed below. All test results are provided in Appendix C.

- Concentrations in the bottle roll leachates were low indicating that stored oxidation products did not accumulate in the cells during the test.
- Overall, the pre- and post-test ABA test results were similar as shown in Table 5–1. In general, these results were not consistent with the observed sulphide oxidation and NP dissolution during the test. The differences between the pre- and post-test results were attributed to subsample variability.

5.2 Humidity Cells – Tailings

Tailings humidity cell test results are presented in Figures C-1 to C-50 in Appendix B. Key results for the ongoing tailings humidity cell tests HC-18, HC-19, and HC-20 are discussed in Sections 5.2.1 to 5.2.3.

5.2.1 pH, Acidity, and Alkalinity

- The leachate pH of HC-18 was steady and ranged from pH 7.5 to 8 for approximately the first 45 weeks of testing, after which time the leachate pH showed a decreasing trend to approximately pH 6 to 6.5 in recent weeks (Figure C-1). A concurrent increase in acidity release rates was observed, with acidity release rates on the order 10 mg CaCO₃/kg/week in recent data (Figure B-2). Alkalinity release rates steadily decreased from approximately 30 mg CaCO₃/kg/week to 13 mg CaCO₃/kg/week in recent data (Figure C-3). Trends in pH and acidity were relatively steady for HC-19 and HC-20, which have operated for 68 weeks, and both cells had a leachate pH of approximately pH 6.5 in recent data. Alkalinity release rates for HC-19 and HC-20 increased from approximately 10 CaCO₃/kg/week at start-up to 20 CaCO₃/kg/week in recent data.
- Acid-base accounting data indicated that the tailings samples in HC-18, HC-19, and HC-20 are NAG (NPR>2), with total sulphur contents on the order of 0.05 % to 0.2%. X-ray diffraction with Rietveld refinement (R-XRD) test results indicated that carbonate minerals in the samples were predominantly calcite (2.2 to 8.9 weight percent [wt%], CaCO₃) and ankerite-dolomite (3.3 to 5.7 wt%; Ca(Fe²⁺,Mg,Mn)(CO₃)₂-CaMg(CO₃)₂). The weakly acidic leachate pH (e.g., pH 6.5) observed in these cells was attributed to the dissolution of ankerite-dolomite present in the samples and the subsequent release, oxidation, and hydrolysis of iron, which can generate acidity.

5.2.2 Sulphate

- Sulphate release rates for HC-18 showed a decreasing trend over the 140 weeks of testing and were relatively stable at approximately 1 mg/kg/week in recent data (Figure C-6).
- Cells HC-19 and HC-20 had decreasing sulphate release rates over their operation (68 weeks), with sulphate release rates on the order of 3.8 mg/kg/week and 1.7 mg/kg/week in recent data, respectively (Figure C-6).

5.2.3 Key Metals

Metal release rates for HC-18 generally showed stable to decreasing trends for most parameters after 140 weeks of testing. Tests HC-19 and HC-20 generally displayed decreasing metal release rates; however, they have not yet reached steady state. Release rates for beryllium (Figure C-14), chromium (Figure C-18), mercury (Figure C-25), phosphorus (Figure C-28), and vanadium (Figure C-43) were generally based on concentrations at or near the analytical detection limit for the three tailings humidity cells.

- Release rates for arsenic were generally stable in HC-18, with values on the order of 0.001 mg/kg/week in recent data (Figure C-12). HC-19 and HC-20 had relatively steady to decreasing arsenic release rates, on the order of 4×10^{-4} mg/kg/week and 5×10^{-4} mg/kg/week in recent data, respectively (Figure C-12).
- Iron and lead release rates in HC-18 exhibited a steadily increasing trend over the test period, with release rates respectively on the order of 0.01 mg/kg/week and 1×10^{-4} mg/kg/week in recent data (Figure C-21 and C-22). Similar trends and release rates were observed for HC-19. Iron release rates were also similar in HC-20, but lead was generally based on detection limit derived values until week 15, after which time lead release rates showed a slightly increasing trend (Figures C-21 and C-22).
- Molybdenum release rates for HC-20 were higher than the other two NAG tailings humidity cell tests and displayed a decreasing trend toward approximately 0.04 mg/kg/week in recent data (Figure C-26). All three cells had similar solid phase molybdenum contents, and patterns in molybdenum release rates and molybdenum content were not observed.

5.3 Column Test – Tailings

Column test results are presented in Figures D-1 to D-52 in Appendix D. Several metals were at or below the detection limit concentrations in the column leachate including beryllium, chromium, phosphorus, and vanadium. Key results are discussed below for Col-14:

- The leachate pH of Col-14 was steady and ranged from pH 7 to 7.5 for approximately the first 9 weeks of testing, after which time the leachate pH showed a decreasing trend to approximately pH 6.2 in recent weeks (Figure D-1).
- Sulphate concentrations showed a rapidly decreasing trend from approximately 3,200 to 800 mg/L in the first five weeks of the test (Figure D-5), corresponding to one pore volume passing through the tailings in the column (Figure D-1). After week 15, sulphate concentrations continued to decrease, reaching approximately 190 mg/L in the most recent data.
- Metals showed varying trends, whereby:
 - Concentrations of antimony (Figure D-16), boron (Figure D-21), cadmium (Figure D-22), cobalt (Figure D-25), copper (Figure D-26), lead (Figure D-28), mercury (Figure D-32), nickel (Figure D-34), selenium (Figure D-37), silver (Figure D-39), thallium (Figure D-44), uranium (Figure D-49), and zinc (Figure D-51) showed a decreasing trend over the test period.
 - Concentrations of arsenic (Figure D-17), aluminum (Figure D-15), molybdenum (Figure D-33), tungsten (Figure D-48) were relatively steady.
 - Iron concentrations decreased from start-up until approximately week 15, after which time iron concentrations showed an increasing trend (Figure D-27). This trend was consistent with decreasing dissolved oxygen concentrations in the overlying water of the column.

Table 5–1: Comparison of Pre- and Post-Test ABA Results for Terminated Mine Rock Cells

Humidity Cell ID	Test	Paste pH	Total S ⁽¹⁾	SO ₄ S ⁽²⁾	Sulphide S ⁽³⁾	AP ⁽⁴⁾	NP ⁽⁵⁾	Carb NP ⁽⁶⁾
		pH Units	%	%	%	kg CaCO ₃ /t		
HC-12	Pre-Test	9.6	0.32	<0.01	0.32	10.0	121.1	104.2
	Post-Test	9.2	0.38	0.07	0.31	9.7	128.4	115.0
HC-13	Pre-Test	7.9	1.79	0.02	1.77	55.3	101.1	70.0
	Post-Test	8.4	2.44	0.01	2.43	75.9	107.9	94.2
HC-14	Pre-Test	9.2	2.41	<0.01	2.41	75.3	167.9	125.8
	Post-Test	8.3	2.08	0.02	2.06	64.4	190.2	185.0
HC-15	Pre-Test	9.0	0.83	<0.01	0.83	25.9	74.8	72.0
	Post-Test	9.3	0.86	0.02	0.84	26.3	71.6	74.2

Note(s):

- (1) Total S (%) by Leco analyzer.
- (2) Sulphate S (%) by HCl leach.
- (3) Sulphide S by difference (Total S – Sulphate S).
- (4) Acid potential (AP) (31.25*Sulphide S).
- (5) Sobek NP Method.
- (6) Carbonate (Carb) NP calculated from TIC by HCl-Leco.

6.0 KEY FINDINGS

The kinetic testing program for the Project includes 16 mine rock humidity cell tests. Ten mine rock humidity cell tests were initiated in 2020 and represented higher sulphide and metal content material and are considered a conservative case for the Project. An additional six mine rock humidity cell tests were initiated in 2021 and generally represented material that is more likely to be encountered at the Project site in terms of their sulphide and metal content. Of the ten mine rock cells initiated in 2020, three are still in operation and 240 weeks of data are available. Among the cells initiated in 2021, two are still in operation and 140 weeks of data are available.

The mine plan includes generation of PAG and NAG tailings. A total of three NAG tailings humidity cell tests were initiated in 2021 and 2023, with NAG tailings representing the current mine plan. At the time of reporting, one of these tests had 140 weeks of available results and two of the tests had 68 weeks of results. A PAG tailings column test was initiated in 2023, with metallurgical tailings representing the sulphidic concentrate tailings for the Project. At the time of reporting, 63 weeks of tests results were available for this column test.

Key findings based on current data for the ongoing kinetic testing program are provided in Sections 6.1. and 6.2.. Although release rates for several tests and parameters appear to have reached steady state leaching conditions, release rates for other parameters and tests have not yet stabilized and may change with continued operation of the tests.

6.1 Lag Time to Acid Onset

The time to depletion of sulphide and neutralization potential in the humidity cells was estimated to provide guidance on the time to acid onset for PAG materials. Samples that deplete their neutralization potential before their sulphide content are assumed to represent the lag time to acid onset in mine rock in the field. As well, the onset of acidic conditions within a humidity cell is taken to represent the lag time until acidic drainage is observed in the field.

Sulphate release was used to estimate the depletion of sulphides, whereas calculations for neutralization potential release assumed that all calcium and magnesium released from the sample (millimoles per kilogram per week [mmol/kg/week]) at circumneutral pH was a measure of the dissolution rate of neutralization potential (as carbonate neutralization potential [CarbNP], representing the predominant neutralizing minerals in the samples, calcite and dolomite). Estimates of the time to sulphide and neutralization potential depletion were calculated by accounting for the sulphide and CarbNP lost from the sample during testing, then projecting the expected times for depletion of the remaining sulphide and neutralization potential based on the average sulphate and neutralization potential release rates. Median release rates were calculated over the last 20 weeks of testing for all cells. Calculations for one sample (HC-6) utilized the Sobek NP results as the data indicated the potential presence of an excess of non-neutralizing carbonate minerals.

Lag time estimates were supported by calculations of carbonate molar ratio, represented by the molar release of calcium, magnesium and sulphate as $((Ca + Mg)/SO_4)$ for the samples, to estimate if NP release was enhanced under test conditions (e.g., due to weekly flushing with weakly acidic rinse water). If this was observed to occur, neutralization potential release was adjusted to account for this process.

Estimated and observed lag times for the mine rock and tailings humidity cell tests are presented in Table 6-1.

Results of the kinetic tests were interpreted with respect to the broader ML/ARD dataset (876 samples, WSP 2024a). Median release rates for sulphur and NP from the neutral pH humidity cell tests were used, and it

was assumed that 10 kg CaCO₃/t of NP in the samples was unavailable for neutralization. This analysis included consideration of the ML/ARD dataset based on geologic zone of the deposit, as notable differences in the ML/ARD potential of samples from the Portage Zone, East Extension Zone and Camp Zone were observed in the available static testing data (WSP 2024a).

Without considering potential mitigating measures, preliminary estimates based on currently available kinetic testing suggest that on the order of 15% to 20% of the Portage Zone mine rock samples could become net acid generating within several weeks to one year of exposure, with most of these samples estimated to become net acid generating within weeks of exposure owing to their very low NP content (less than 5 kg CaCO₃/t). Up to 20% to 25% of the samples from the Portage Zone were estimated to become net acid generating over approximately 10 years. Approximately 50% of the Portage Zone samples were estimated to eventually become net acid generating after several decades of exposure.

The lag time to acid onset for PAG samples from the East Extension and Camp zones was estimated to be on the order of several decades of exposure, with approximately 15% of the mine rock samples from these zones eventually becoming net acid generating. This lag time is notably longer than samples from the Portage Zone owing to the higher NP content of these samples. Based on the currently available data, less than 1% of samples from these zones showed the potential for rapid acid onset.

Mine rock humidity cell test results were also interpreted to support an assessment of developing a site-specific NPR threshold for the Project mine rock. Per the standard thresholds for PAG and NAG mine rock listed in MEND (2009), NPR up to 1 is PAG, NPR 1 to 2 has an uncertain acid generating potential, and NPR above 2 is NAG. Humidity cell testing of materials with an NPR between 1 and 2 can be used to support further refinement of the uncertain acid generating potential NPR threshold, through evaluation of sulphide and neutralization potential reaction rates in humidity cell tests.

Two humidity cell tests, HC-14 and HC-15 had an NPR between 1 and 2, and results were reviewed in the context of developing a site-specific NPR value. Evaluation of the test results indicated that the dissolution of NP in these cells was driven by weakly acidic rinse water in the test procedure, rather than in response to sulphide oxidation, under current test conditions. Therefore, an NPR of 2 is still recommended based on the current data. This should continue to be evaluated considering ongoing humidity cell test results and results from the field leach barrel program.

Results for the NAG tailings humidity cell tests, prepared with synthetic NAG tailings representing the current mine plan, indicated no potential for ARD from the samples. Leachates for these cells showed circumneutral to slightly decreasing pH levels in recent data, attributed to the dissolution of iron-bearing carbonates in the sample, rather than sulphide oxidation. The tests will continue to be monitored to confirm how this influences leachate characteristics.

6.2 Metal Leaching

Summarized release rates for the mine rock humidity cell samples are presented in Table 6-2 for key parameters. All parameters measured as part of the test are summarized in Table A-1 (Appendix A). Release rates are based on the median release rates observed over the last 20 weeks of testing for all cells.

As previously described, review of the mine rock humidity cell test sample characteristics relative to the broader geochemical dataset (n=876 samples, WSP 2024a) for the Project indicated that many of the drill core samples used in the initial humidity cell tests for the Project (HC-1 to HC-10), which were started in 2020 (96 to 240 weeks), represent higher sulphide and metal content material present in some of the Project mine rock, and the tests are considered a conservative case for the Project (Table 3-2). As such, the metal leaching rates presented for these cells are biased towards higher values relative to the overall Project mine rock.

The humidity cell tests initiated in late 2021 (HC-12 to HC-17) used test samples that were generally more representative of mine rock that is likely to be encountered during mining in terms of their sulphide and metal content (Table 3–2). Release rates from these tests were often consistent with or slightly lower than release rates observed for tests initiated in 2020, which were considered a conservative case for the Project. However, this was not always observed, as discussed in this report. Metal leaching results presented in this report should be considered along with broader Project data including results from the mine rock column testing program and field barrel tests.

Summarized release rates for the tailings humidity cell tests are presented in Table 6–3 for key parameters and in Table B-1 (Appendix B) for all parameters. Rates are based on the median release rates observed over the last 10 weeks of testing for HC-18 (NAG tailings), which continues to operate and has 140 weeks of data currently available, and the last five weeks for HC-19 (NAG tailings) and HC-20 (NAG tailings), which have 68 weeks of data available.

Table 6-1: Observed and Estimated Sulphide and Carbonate Neutralization Potential Depletion Times

Cell ID	Lithology	Sulphide Sulphur	CarbNP ⁽¹⁾	Sulphate Release Rate	NP Release Rate ⁽²⁾	Time to Total S Depletion	Time to NP Depletion ⁽³⁾	Carb NPR ⁽⁴⁾	Classification Based on Kinetic Test Results
		%	kg CaCO ₃ /t	mg/kg/week	mmol/kg/week	Years	Years	CarbNP/AP	PAG or NAG
HC-1	AND_TUFF_MSED	4.8	135	3.4	0.072	818	360	0.89	PAG
HC-2	TRA ⁽⁵⁾	5.5	24	Cell acidic from week 0				0.14	PAG
HC-3	AND_TUFF_MSED ⁽⁵⁾	2.1	5.0	Cell acidic from week 166				0.076	PAG
HC-4	BX ⁽⁵⁾	4.2	19	4.0	0.083	607	43	0.15	PAG
HC-5	POR	4.4	80	2.7	0.055	959	273	0.58	PAG
HC-6	AND_TUFF_MSED ⁽⁵⁾	2.6	167 ⁽¹⁾	3.7	0.078	406	411	2.2	NAG ⁽⁶⁾
HC-7	TRA	4.3	69	1.2	0.026	2,035	1,247	0.51	PAG
HC-8	AND_TUFF_MSED ⁽⁵⁾	3.8	147	4.4	0.092	503	308	1.2	PAG
HC-9	BX ⁽⁵⁾	2.4	105	3.1	0.065	450	303	1.4	PAG
HC-10	AND_TUFF_MSED	0.92	146	2.1	0.043	269	647	5.0	NAG
HC-12 ⁽⁷⁾	POR	0.31	104	1.0	0.022	177	912	11	NAG
HC-13 ⁽⁷⁾	AND_TUFF_MSED	1.8	70	4.6	0.095	224	139	1.3	PAG
HC-14 ⁽⁷⁾	AND_TUFF_MSED	2.4	126	3.1	0.066	440	365	1.7	PAG
HC-15 ⁽⁷⁾	TRA	0.82	47	1.6	0.033	300	265	1.8	PAG
HC-16	VBX	3.8	1.7	Cell acidic from week 0				0.014	PAG
HC-17 ⁽⁷⁾	TRA	1.4	1.7	Cell acidic from week 127				0.039	PAG
HC-18	Synthetic NAG tailings (current mine plan)	0.050	101	1.0	0.021	22	878	65	NAG
HC-19	Synthetic NAG tailings (later operation, years 6+ of mining)	0.17	121	4.8	0.10	18	225	23	NAG
HC-20	Synthetic NAG tailings (early operations, years 1-6 of mining)	0.16	51	1.5	0.031	49	296	10	NAG

Notes:

- (1) CarbNP was used for all samples for depletion time calculations, except for HC-6, where Sobek NP results were used as the data indicated the potential presence of an excess of non-neutralizing carbonate minerals.
(2) NP release rates were calculated as two times the molar sulphate release rate for cells with carbonate molar ratio greater than 2.
(3) Time to NP depletion based on carbonate NP except for HC-6, which used Sobek NP to be conservative, as CarbNP was greater than NP in this cell.
(4) Neutralization potential ratio generally based on Carb NPR. NPR for HC-6 based on NPR, where CarbNP was greater than NP and suggested the presence of non-net neutralizing carbonate minerals. Per MEND (2009), NPR ≤ 1 = PAG; NPR 1-2 = uncertain; and NPR >2 = NAG.
(5) Gold > 0.4 g/t.
(6) Classified as NAG based on an NP depletion time that was estimated to be longer than sulphide depletion time. There is uncertainty on this result given the magnitude of the estimated lag time and the similarity of the sulphide and NP depletion times.
(7) HC-12, -13, -14, -15, and -17 had weakly acidic pH conditions (pH 6-6.5) which was attributed to the dissolution of iron carbonates in the samples (see text).

Table 6-2: Summary of Metal Release Rates for Key Parameters - Mine Rock

Humidity Cell	Lithology	Weeks Operating / Status	Weeks Used for Steady State	Metals Description	pH	Sulphate	Phosphorus (P)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Beryllium (Be)	Boron (B)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)
					pH Units	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk
HC-1	AND_TUFF_MSED	96 Terminated	77-96	•80th percentile As and Mo •90th percentile Sb •95th-99th percentile Zn, Cd, Hg, Pb	6.9	0.54	3.9E-04	0.0049	1.1E-04	7.8E-05	8.1E-06	0.0010	3.1E-06	4.1E-05	8.1E-06	4.2E-05	8.1E-04	1.4E-04
HC-2	TRA	240 Ongoing	221-239	•80th percentile Zn •90th percentile As, Cd, Hg, Se •95th percentile Mo, Sb	2.2	61	1.8E-04	0.29	6.2E-05	0.012	1.4E-05	1.1E-04	3.9E-04	2.4E-04	0.012	0.0078	15	5.7E-05
HC-3	AND_TUFF_MSED	240 Ongoing	221-239	•95th-99th percentile Hg, Zn, Cu •100th percentile Cd	5.2	3.3	2.8E-04	6.3E-04	5.7E-06	1.1E-05	5.3E-05	1.8E-04	0.0041	2.8E-05	6.5E-04	0.0041	9.2E-04	3.6E-04
HC-4	VBX	96 Terminated	77-96	•90th percentile Mo and Se	7.0	0.46	5.1E-04	0.0034	7.0E-05	1.2E-04	6.2E-06	7.8E-04	1.3E-06	3.4E-05	6.6E-06	4.2E-05	0.0034	3.9E-05
HC-5	POR	140 Terminated	121-140	•75th percentile Hg •80th percentile Cd •85th percentile Zn and Cu •90th percentile Mo •95th percentile Se and Pb	7.2	0.36	3.3E-04	6.6E-04	7.9E-06	6.0E-06	6.8E-07	1.4E-04	6.4E-07	2.9E-05	1.0E-06	2.2E-05	1.4E-04	1.5E-05
HC-6	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cd •90th percentile Hg, Se	7.2	0.35	2.2E-04	0.0015	5.3E-05	1.6E-05	4.7E-06	5.9E-04	4.8E-07	2.4E-05	4.7E-06	2.9E-05	6.7E-04	2.3E-05
HC-7	TRA	240 Ongoing	221-239	•75th percentile Mo •90th percentile Hg and Cu •95th to 99th percentile Cd, Se, Zn, Pb	6.6	0.076	1.4E-04	0.0034	8.3E-06	1.1E-05	1.4E-06	5.6E-05	4.4E-06	1.4E-05	1.7E-06	2.2E-05	8.6E-05	6.2E-04
HC-8	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Se •99th percentile As	7.2	0.60	3.6E-04	0.0041	5.5E-05	0.0012	6.9E-06	8.6E-04	6.9E-07	3.5E-05	2.1E-05	3.9E-05	0.0010	3.3E-05
HC-9	VBX	140 Terminated	121-140	•85th percentile Mo •99th percentile As	7.3	0.51	3.9E-04	0.0058	1.2E-04	5.1E-04	7.8E-07	1.5E-04	9.4E-07	2.6E-05	2.7E-06	1.2E-05	1.5E-04	3.9E-06
HC-10	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cu •80th percentile Hg and Mo •95th to 99th percentile Pb, Cd, Zn	7.3	0.34	4.0E-04	0.0053	2.2E-04	1.3E-04	8.4E-06	0.0010	1.3E-05	4.3E-05	8.6E-06	5.1E-05	0.0015	1.0E-04
HC-12	POR	123 Terminated	104-123	•40-60th percentile As, Cd, Sb •70th percentile Pb	6.6	0.21	4.6E-04	0.0090	9.8E-05	1.7E-04	9.5E-07	2.0E-04	2.5E-07	4.7E-05	8.0E-07	3.4E-05	2.1E-04	5.2E-06
HC-13	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Mo, Pb, Sb, Se •70th percentile Cd, Co, Cu •80th percentile Zn	6.5	0.44	2.4E-04	8.3E-04	1.7E-05	9.2E-06	4.7E-07	9.6E-05	2.2E-07	2.4E-05	6.0E-07	2.1E-05	1.1E-04	2.5E-06
HC-14	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Cd, Pb, As, Co, Mo	6.6	0.35	2.5E-04	0.0028	1.3E-05	1.4E-04	5.2E-07	1.0E-04	1.0E-07	2.6E-05	1.2E-06	1.5E-05	1.1E-04	2.6E-06
HC-15	TRA	123 Terminated	104-123	•40-60th percentile Se, As, Cd •75th percentile Pb •90th percentile Sb	6.7	0.22	4.0E-04	0.0056	9.0E-05	8.2E-05	6.6E-07	1.3E-04	2.0E-07	3.3E-05	3.9E-07	1.7E-05	1.3E-04	3.6E-06
HC-16	VBX	140 Ongoing	121-140	•40-60th percentile Cu, As, Sb •80th percentile Pb, Se, Zn •90th percentile Cd, Mo	2.3	51	0.091	0.56	1.1E-04	0.0077	1.1E-04	1.9E-04	7.1E-05	9.3E-05	0.011	0.047	12	1.4E-04
HC-17	TRA	140 Ongoing	121-140	•40-60th percentile Cu, Pb, Cd, Mo, Se, Zn •80th percentile Co	5.9	1.2	3.5E-04	7.6E-04	7.0E-06	7.0E-06	1.4E-06	2.8E-04	1.8E-05	7.0E-05	4.7E-04	6.1E-05	3.1E-04	7.0E-06

Notes:
Release rates in shaded cells primarily based on detection limit values.
Release rates based on the last 20 weeks of testing.
Phosphorus measured by colourimetry.

Table 6-2: Summary of Metal Release Rates for Key Parameters - Mine Rock

Humidity Cell	Lithology	Weeks Operating / Status	Weeks Used for Steady State	Metals Description	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Thallium (Tl)	Tungsten (W)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Mercury (Hg)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
					mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk
HC-1	AND_TUFF_MSED	96 Terminated	77-96	•80th percentile As and Mo •90th percentile Sb •95th-99th percentile Zn, Cd, Hg, Pb	1.7E-04	4.0E-05	4.5E-05	6.8E-06	4.0E-06	1.7E-05	4.7E-06	8.1E-05	9.7E-05	4.4E-07	0.56	0.10	0.014	0.078
HC-2	TRA	240 Ongoing	221-239	•80th percentile Zn •90th percentile As, Cd, Hg, Se •95th percentile Mo, Sb	1.5E-04	0.011	1.5E-04	7.7E-05	2.1E-05	7.3E-07	2.3E-04	6.1E-04	0.038	7.5E-07	0.75	0.27	0.0029	0.020
HC-3	AND_TUFF_MSED	240 Ongoing	221-239	•95th-99th percentile Hg, Zn, Cu •100th percentile Cd	5.7E-06	9.3E-04	5.1E-05	1.7E-06	5.7E-07	5.7E-07	1.7E-06	2.8E-05	0.063	1.0E-06	1.1	0.088	0.032	0.018
HC-4	VBX	96 Terminated	77-96	•90th percentile Mo and Se	4.5E-04	3.2E-05	1.2E-04	6.2E-06	3.0E-06	8.1E-05	4.5E-05	7.6E-05	7.4E-05	8.2E-07	0.37	0.041	0.0092	0.091
HC-5	POR	140 Terminated	121-140	•75th percentile Hg •80th percentile Cd •85th percentile Zn and Cu •90th percentile Mo •95th percentile Se and Pb	5.2E-04	7.9E-06	2.2E-04	1.0E-06	4.6E-07	1.3E-05	8.2E-06	6.8E-05	6.8E-05	4.6E-07	0.33	0.16	0.0041	0.031
HC-6	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cd •90th percentile Hg, Se	1.1E-04	2.3E-05	2.8E-05	5.2E-06	2.3E-06	1.3E-05	3.3E-06	4.9E-05	5.9E-05	2.5E-07	0.27	0.14	0.015	0.026
HC-7	TRA	240 Ongoing	221-239	•75th percentile Mo •90th percentile Hg and Cu •95th to 99th percentile Cd, Se, Zn, Pb	4.9E-05	5.6E-06	1.4E-04	8.5E-07	2.8E-07	3.0E-05	7.9E-06	1.4E-05	1.1E-04	7.0E-08	0.36	0.012	0.0014	0.0073
HC-8	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Se •99th percentile As	2.9E-05	3.4E-05	3.5E-05	5.4E-06	3.5E-06	1.8E-05	3.9E-06	8.5E-05	8.2E-05	3.7E-07	0.56	0.088	0.0039	0.095
HC-9	VBX	140 Terminated	121-140	•85th percentile Mo •99th percentile As	9.5E-04	9.7E-06	7.7E-06	7.8E-07	1.5E-06	1.5E-05	3.7E-06	7.7E-05	1.1E-04	3.9E-07	0.86	0.086	0.0036	0.032
HC-10	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cu •80th percentile Hg and Mo •95th to 99th percentile Pb, Cd, Zn	8.3E-04	4.2E-05	4.5E-05	6.6E-06	4.3E-06	3.4E-05	1.5E-05	8.5E-05	2.8E-04	4.5E-07	0.66	0.14	0.0055	0.10
HC-12	POR	123 Terminated	104-123	•40-60th percentile As, Cd, Sb •70th percentile Pb	7.9E-06	3.9E-06	9.5E-06	9.5E-07	6.0E-07	1.9E-05	1.4E-05	9.5E-05	9.6E-05	4.9E-07	0.55	0.082	0.0059	0.020
HC-13	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Mo, Pb, Sb, Se •70th percentile Cd, Co, Cu •80th percentile Zn	1.1E-04	2.0E-06	6.4E-06	5.1E-07	7.4E-07	1.0E-05	2.5E-06	4.7E-05	4.7E-05	2.4E-07	0.52	0.024	0.0041	0.013
HC-14	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Cd, Pb, As, Co, Mo	4.9E-05	2.8E-06	5.2E-06	5.2E-07	6.8E-07	1.0E-05	1.0E-06	5.2E-05	5.2E-05	2.7E-07	0.38	0.13	0.0054	0.020
HC-15	TRA	123 Terminated	104-123	•40-60th percentile Se, As, Cd •75th percentile Pb •90th percentile Sb	3.6E-05	2.9E-06	6.6E-06	6.7E-07	3.0E-07	1.3E-05	1.4E-05	6.6E-05	6.6E-05	3.3E-07	0.39	0.071	0.0020	0.014
HC-16	VBX	140 Ongoing	121-140	•40-60th percentile Cu, As, Sb •80th percentile Pb, Se, Zn •90th percentile Cd, Mo	0.0085	0.0083	4.6E-04	3.5E-05	2.2E-05	1.9E-05	0.0020	9.8E-05	0.0047	1.3E-06	0.23	0.036	0.0079	0.069
HC-17	TRA	140 Ongoing	121-140	•40-60th percentile Cu, Pb, Cd, Mo, Se, Zn •80th percentile Co	5.7E-06	2.2E-04	1.4E-05	1.4E-06	2.8E-06	2.8E-05	6.6E-07	1.4E-04	3.7E-04	3.5E-07	0.26	0.036	0.011	0.062

Notes:
Release rates in shaded cells primarily based on detection limit values.
Release rates based on the last 20 weeks of testing.
Phosphorus measured by colourimetry.

Table 6-3: Summary of Metal Release Rates for Key Parameters - Tailings

Parameter	Units	HC-18	HC-19	HC-20
Sample Type		Synthetic NAG Tailings (Current Mine Plan)	Synthetic NAG Tailings - Later Operation (Current Mine Plan)	Synthetic NAG Tailings - Early Operation (Current Mine Plan)
Weeks Operating / Status		140 / Ongoing	68 / Ongoing	68 / Ongoing
Weeks used for Steady State		Weeks 131-140	Weeks 58-67	Weeks 58-67
pH	pH Units	6.5	6.5	6.6
Sulphate	mg/kg/wk	1.0	4.8	1.5
Aluminum (Al)	mg/kg/wk	0.090	0.011	0.025
Antimony (Sb)	mg/kg/wk	4.7E-04	3.6E-04	4.7E-04
Arsenic (As)	mg/kg/wk	9.9E-04	4.0E-04	5.1E-04
Beryllium (Be)	mg/kg/wk	4.4E-06	8.6E-06	4.4E-06
Boron (B)	mg/kg/wk	8.9E-04	0.0018	0.0010
Cadmium (Cd)	mg/kg/wk	3.9E-06	9.1E-06	9.1E-06
Chromium (Cr)	mg/kg/wk	2.2E-04	4.3E-04	2.2E-04
Cobalt (Co)	mg/kg/wk	5.5E-05	1.1E-04	2.1E-04
Copper (Cu)	mg/kg/wk	0.0017	0.0010	9.1E-04
Iron (Fe)	mg/kg/wk	0.027	0.011	0.015
Lead (Pb)	mg/kg/wk	2.6E-04	1.0E-04	4.0E-05
Phosphorus (P)	mg/kg/wk	0.0022	0.0022	0.0022
Molybdenum (Mo)	mg/kg/wk	0.0019	0.015	0.037
Nickel (Ni)	mg/kg/wk	3.7E-05	4.9E-05	3.2E-05
Selenium (Se)	mg/kg/wk	9.0E-05	2.0E-04	2.7E-04
Silver (Ag)	mg/kg/wk	9.4E-06	8.6E-06	5.2E-06
Thallium (Tl)	mg/kg/wk	1.1E-05	1.6E-05	2.3E-05
Tungsten (W)	mg/kg/wk	1.6E-04	1.7E-04	1.3E-04
Uranium (U)	mg/kg/wk	2.0E-04	6.6E-04	7.7E-04
Vanadium (V)	mg/kg/wk	4.4E-04	8.6E-04	4.4E-04
Zinc (Zn)	mg/kg/wk	8.5E-04	8.6E-04	5.2E-04
Mercury (Hg)	mg/kg/wk	2.2E-06	2.2E-06	2.2E-06
Calcium (Ca)	mg/kg/wk	4.7	7.6	6.8
Magnesium (Mg)	mg/kg/wk	0.71	0.91	2.1
Sodium (Na)	mg/kg/wk	0.061	0.087	0.072
Potassium (K)	mg/kg/wk	0.43	0.57	0.71

Notes:

Release rates in shaded cells primarily based on detection limit values.
 Release rates based on the last 10 weeks of testing.
 Phosphorus measured by colourimetry.

7.0 CLOSURE

This baseline kinetic geochemical testing report Q4 2024 update was prepared for First Mining Gold Corp. by WSP. The quality of information, conclusions and scheduling estimates contained here is consistent with the level of effort involved in WSP's services and based on 1) information available at the time of preparation; 2) data supplied by outside sources; and 3) the assumptions, conditions and qualifications set forth in this report.

Yours sincerely,

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- WSP 2025a. Mine Rock Column Testing and Detailed Mineralogy Summary – Draft Springpole Gold Project. ONS2104. Draft Memorandum. Prepared for First Mining Gold Corporation. April 2025.
- WSP 2025b. 2024 Field Leachate Barrel Update. Springpole Gold Project. ONS2104. Draft Memorandum. Prepared for First Mining Gold Corporation. February 2025.

Appendix A

Mine Rock Humidity Cell Tests

Table A-1 Summary of Metal Release Rates - Mine Rock

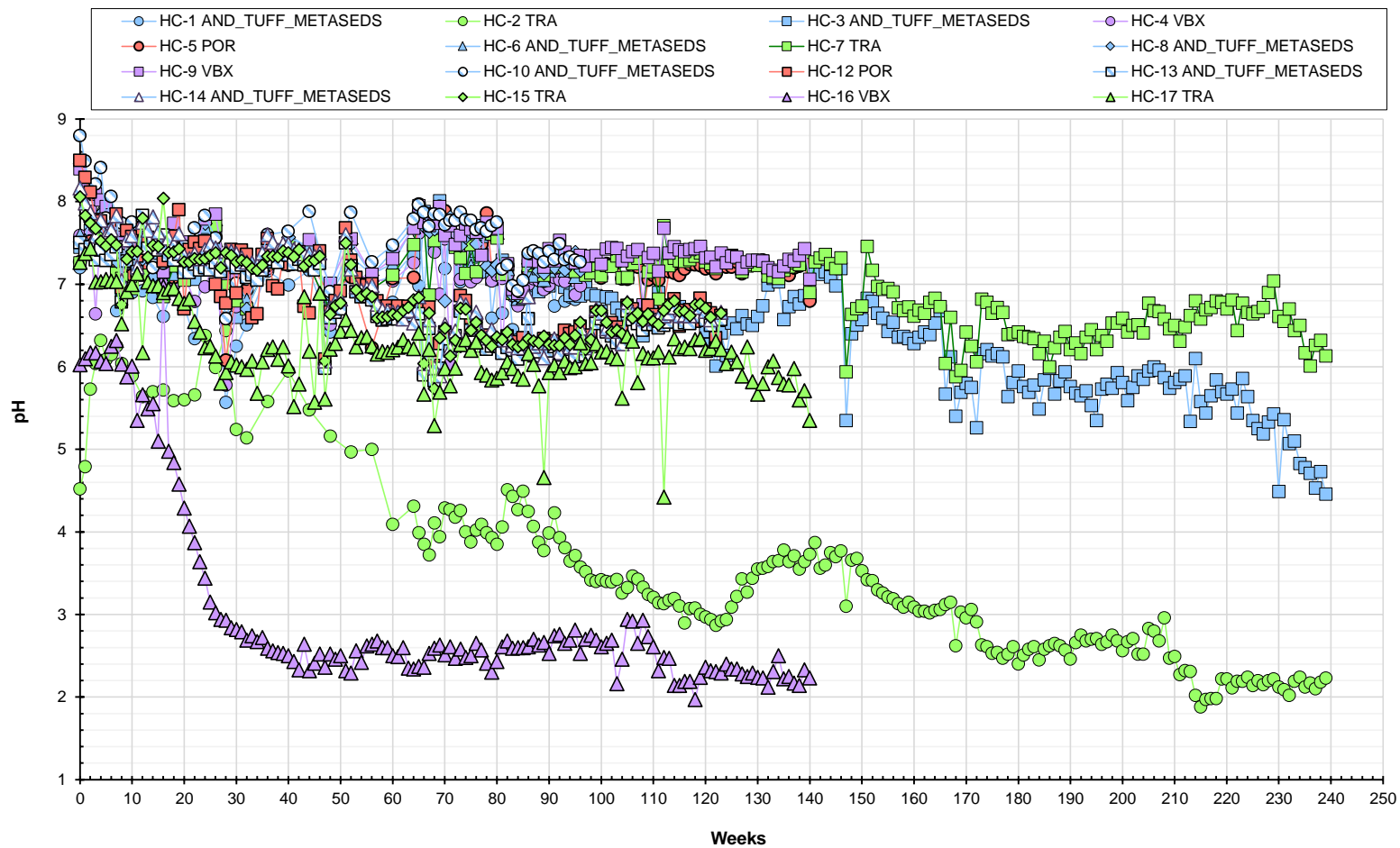
Humidity Cell	Lithology	Weeks Operating / Status	Weeks Used for Steady State	Metals Description	pH	Acidity	Alkalinity	Sulphate	Chloride	Fluoride	Phosphorus (P)	Aluminum (Al)	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Bismuth (Bi)	Boron (B)	Cadmium (Cd)	Calcium (Ca)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Iron (Fe)	Lead (Pb)	Lithium (Li)
					pH Units	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk
HC-1	AND_TUFF_MSED	96 Terminated	77-96	•80th percentile As and Mo •90th percentile Sb •95th-99th percentile Zn, Cd, Hg, Pb	6.9	0.40	1.4	0.54	0.0070	0.0015	3.9E-04	0.0049	1.1E-04	7.8E-05	0.013	8.1E-06	8.1E-06	0.0010	3.1E-06	0.56	4.1E-05	8.1E-06	4.2E-05	8.1E-04	1.4E-04	5.1E-05
HC-2	TRA	240 Ongoing	221-239	•80th percentile Zn •90th percentile As, Cd, Hg, Se •95th percentile Mo, Sb	2.2	63	0.019	61	0.0035	0.0036	1.8E-04	0.29	6.2E-05	0.012	4.7E-05	1.4E-05	1.8E-06	1.1E-04	3.9E-04	0.75	2.4E-04	0.012	0.0078	15	5.7E-05	0.0016
HC-3	AND_TUFF_MSED	240 Ongoing	221-239	•95th-99th percentile Hg, Zn, Cu •100th percentile Cd	5.2	1.3	0.076	3.3	0.0030	0.0012	2.8E-04	6.3E-04	5.7E-06	1.1E-05	0.0016	5.3E-05	2.8E-06	1.8E-04	0.0041	1.1	2.8E-05	6.5E-04	0.0041	9.2E-04	3.6E-04	1.7E-04
HC-4	VBX	96 Terminated	77-96	•90th percentile Mo and Se	7.0	0.27	0.82	0.46	0.0035	0.0023	5.1E-04	0.0034	7.0E-05	1.2E-04	7.9E-04	6.2E-06	6.2E-06	7.8E-04	1.3E-06	0.37	3.4E-05	6.6E-06	4.2E-05	0.0034	3.9E-05	4.3E-04
HC-5	POR	140 Terminated	121-140	•75th percentile Hg •80th percentile Cd •85th percentile Zn and Cu •90th percentile Mo •95th percentile Se and Pb	7.2	0.50	1.2	0.36	0.0038	0.0079	3.3E-04	6.6E-04	7.9E-06	6.0E-06	7.1E-04	6.8E-07	8.1E-07	1.4E-04	6.4E-07	0.33	2.9E-05	1.0E-06	2.2E-05	1.4E-04	1.5E-05	6.2E-05
HC-6	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cd •90th percentile Hg, Se	7.2	0.20	0.99	0.35	0.0027	8.8E-04	2.2E-04	0.0015	5.3E-05	1.6E-05	1.1E-04	4.7E-06	4.7E-06	5.9E-04	4.8E-07	0.27	2.4E-05	4.7E-06	2.9E-05	6.7E-04	2.3E-05	3.3E-05
HC-7	TRA	240 Ongoing	221-239	•75th percentile Mo •90th percentile Hg and Cu •95th to 99th percentile Cd, Se, Zn, Pb	6.6	0.63	0.82	0.076	0.0015	0.045	1.4E-04	0.0034	8.3E-06	1.1E-05	0.0098	1.4E-06	1.4E-06	5.6E-05	4.4E-06	0.36	1.4E-05	1.7E-06	2.2E-05	8.6E-05	6.2E-04	2.8E-05
HC-8	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Se •99th percentile As	7.2	0.28	1.3	0.60	0.0049	0.0013	3.6E-04	0.0041	5.5E-05	0.0012	1.0E-04	6.9E-06	6.9E-06	8.6E-04	6.9E-07	0.56	3.5E-05	2.1E-05	3.9E-05	0.0010	3.3E-05	8.0E-05
HC-9	VBX	140 Terminated	121-140	•85th percentile Mo •99th percentile As	7.3	0.57	2.1	0.51	0.0039	0.0077	3.9E-04	0.0058	1.2E-04	5.1E-04	8.4E-04	7.8E-07	7.8E-07	1.5E-04	9.4E-07	0.86	2.6E-05	2.7E-06	1.2E-05	1.5E-04	3.9E-06	1.0E-05
HC-10	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cu •80th percentile Hg and Mo •95th to 99th percentile Pb, Cd, Zn	7.3	0.32	2.4	0.34	0.0050	0.0016	4.0E-04	0.0053	2.2E-04	1.3E-04	0.0012	8.4E-06	8.4E-06	0.0010	1.3E-05	0.66	4.3E-05	8.6E-06	5.1E-05	0.0015	1.0E-04	6.2E-05
HC-12	POR	123 Terminated	104-123	•40-60th percentile As, Cd, Sb •70th percentile Pb	6.6	1.3	1.7	0.21	0.010	0.0098	4.6E-04	0.0090	9.8E-05	1.7E-04	0.0027	9.5E-07	9.5E-07	2.0E-04	2.5E-07	0.55	4.7E-05	8.0E-07	3.4E-05	2.1E-04	5.2E-06	1.5E-05
HC-13	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Mo, Pb, Sb, Se •70th percentile Cd, Co, Cu •80th percentile Zn	6.5	0.70	0.72	0.44	0.0058	0.0046	2.4E-04	8.3E-04	1.7E-05	9.2E-06	7.6E-04	4.7E-07	4.7E-07	9.6E-05	2.2E-07	0.52	2.4E-05	6.0E-07	2.1E-05	1.1E-04	2.5E-06	1.5E-05
HC-14	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Cd, Pb, As, Co, Mo	6.6	0.77	1.1	0.35	0.0051	0.0051	2.5E-04	0.0028	1.3E-05	1.4E-04	3.6E-05	5.2E-07	5.2E-07	1.0E-04	1.0E-07	0.38	2.6E-05	1.2E-06	1.5E-05	1.1E-04	2.6E-06	1.8E-05
HC-15	TRA	123 Terminated	104-123	•40-60th percentile Se, As, Cd •75th percentile Pb •90th percentile Sb	6.7	0.92	1.2	0.22	0.0065	0.0066	4.0E-04	0.0056	9.0E-05	8.2E-05	0.0015	6.6E-07	6.6E-07	1.3E-04	2.0E-07	0.39	3.3E-05	3.9E-07	1.7E-05	1.3E-04	3.6E-06	6.9E-06
HC-16	VBX	140 Ongoing	121-140	•40-60th percentile Cu, As, Sb •80th percentile Pb, Se, Zn •90th percentile Cd, Mo	2.3	56	0.045	51	0.0097	0.35	0.091	0.56	1.1E-04	0.0077	0.0037	1.1E-04	9.4E-07	1.9E-04	7.1E-05	0.23	9.3E-05	0.011	0.047	12	1.4E-04	3.4E-04
HC-17	TRA	140 Ongoing	121-140	•40-60th percentile Cu, Pb, Cd, Mo, Se, Zn •80th percentile Co	5.9	1.8	0.31	1.2	0.0071	0.023	3.5E-04	7.6E-04	7.0E-06	7.0E-06	5.3E-04	1.4E-06	1.4E-06	2.8E-04	1.8E-05	0.26	7.0E-05	4.7E-04	6.1E-05	3.1E-04	7.0E-06	1.3E-04

Notes:
Release rates based on the last 20 weeks of testing.
Phosphorus measured by colourimetry.

Table A-1 Summary of Metal Release Rates - Mine Rock

Humidity Cell	Lithology	Weeks Operating / Status	Weeks Used for Steady State	Metals Description	Magnesium (Mg)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Potassium (K)	Selenium (Se)	Silicon (Si)	Silver (Ag)	Sodium (Na)	Strontium (Sr)	Sulphur (S)	Tellurium (Te)	Thallium (Tl)	Thorium (Th)	Tin (Sn)	Titanium (Ti)	Tungsten (W)	Uranium (U)	Vanadium (V)	Zinc (Zn)	Zirconium (Zr)
					mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk	mg/m ² /wk
HC-1	AND_TUFF_MSED	96 Terminated	77-96	•80th percentile As and Mo •90th percentile Sb •95th-99th percentile Zn, Cd, Hg, Pb	0.10	0.0031	4.4E-07	1.7E-04	4.0E-05	0.078	4.5E-05	0.027	6.8E-06	0.014	0.0045	0.17	1.8E-05	4.0E-06	8.1E-06	3.9E-05	6.3E-05	1.7E-05	4.7E-06	8.1E-05	9.7E-05	8.1E-06
HC-2	TRA	240 Ongoing	221-239	•80th percentile Zn •90th percentile As, cd, Hg, Se •95th percentile Mo, Sb	0.27	0.047	7.5E-07	1.5E-04	0.011	0.020	1.5E-04	0.34	7.7E-05	0.0029	6.6E-04	17	6.6E-04	2.1E-05	7.6E-05	3.3E-05	0.0013	7.3E-07	2.3E-04	6.1E-04	0.038	1.8E-04
HC-3	AND_TUFF_MSED	240 Ongoing	221-239	•95th-99th percentile Hg, Zn, Cu •100th percentile Cd	0.088	0.013	1.0E-06	5.7E-06	9.3E-04	0.018	5.1E-05	0.27	1.7E-06	0.032	0.020	0.96	1.1E-05	5.7E-07	5.7E-06	2.3E-05	2.9E-05	5.7E-07	1.7E-06	2.8E-05	0.063	5.7E-06
HC-4	VBX	96 Terminated	77-96	•90th percentile Mo and Se	0.041	0.0015	8.2E-07	4.5E-04	3.2E-05	0.091	1.2E-04	0.081	6.2E-06	0.0092	0.0058	0.15	1.4E-05	3.0E-06	6.2E-06	3.0E-05	1.0E-04	8.1E-05	4.5E-05	7.6E-05	7.4E-05	1.0E-05
HC-5	POR	140 Terminated	121-140	•75th percentile Hg •80th percentile Cd •85th percentile Zn and Cu •90th percentile Mo •95th percentile Se and Pb	0.16	8.1E-04	4.6E-07	5.2E-04	7.9E-06	0.031	2.2E-04	0.011	1.0E-06	0.0041	0.0019	0.16	3.4E-06	4.6E-07	6.8E-07	2.9E-05	1.4E-05	1.3E-05	8.2E-06	6.8E-05	6.8E-05	1.3E-06
HC-6	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cd •90th percentile Hg, Se	0.14	1.0E-03	2.5E-07	1.1E-04	2.3E-05	0.026	2.8E-05	0.020	5.2E-06	0.015	0.0016	0.11	1.0E-05	2.3E-06	4.7E-06	2.3E-05	3.7E-05	1.3E-05	3.3E-06	4.9E-05	5.9E-05	6.2E-06
HC-7	TRA	240 Ongoing	221-239	•75th percentile Mo •90th percentile Hg and Cu •95th to 99th percentile Cd, Se, Zn, Pb	0.012	4.6E-04	7.0E-08	4.9E-05	5.6E-06	0.0073	1.4E-04	0.020	8.5E-07	0.0014	0.0027	0.025	5.6E-06	2.8E-07	2.8E-06	2.3E-05	1.4E-05	3.0E-05	7.9E-06	1.4E-05	1.1E-04	2.8E-06
HC-8	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Se •99th percentile As	0.088	0.0016	3.7E-07	2.9E-05	3.4E-05	0.095	3.5E-05	0.015	5.4E-06	0.0039	0.0014	0.19	1.5E-05	3.5E-06	6.9E-06	3.3E-05	5.9E-05	1.8E-05	3.9E-06	8.5E-05	8.2E-05	7.1E-06
HC-9	VBX	140 Terminated	121-140	•85th percentile Mo •99th percentile As	0.086	0.0086	3.9E-07	9.5E-04	9.7E-06	0.032	7.7E-06	0.048	7.8E-07	0.0036	0.0038	0.25	3.9E-06	1.5E-06	7.8E-07	2.0E-05	1.6E-05	1.5E-05	3.7E-06	7.7E-05	1.1E-04	7.7E-06
HC-10	AND_TUFF_MSED	96 Terminated	77-96	•75th percentile Cu •80th percentile Hg and Mo •95th to 99th percentile Pb, Cd, Zn	0.14	0.0015	4.5E-07	8.3E-04	4.2E-05	0.10	4.5E-05	0.035	6.6E-06	0.0055	0.0049	0.10	1.8E-05	4.3E-06	8.4E-06	4.0E-05	7.9E-05	3.4E-05	1.5E-05	8.5E-05	2.8E-04	8.9E-06
HC-12	POR	123 Terminated	104-123	•40-60th percentile As, Cd, Sb •70th percentile Pb	0.082	0.0014	4.9E-07	7.9E-06	3.9E-06	0.020	9.5E-06	0.048	9.5E-07	0.0059	0.011	0.095	4.7E-06	6.0E-07	9.5E-07	1.2E-05	1.9E-05	1.9E-05	1.4E-05	9.5E-05	9.6E-05	2.1E-06
HC-13	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Mo, Pb, Sb, Se •70th percentile Cd, Co, Cu •80th percentile Zn	0.024	4.9E-04	2.4E-07	1.1E-04	2.0E-06	0.013	6.4E-06	0.025	5.1E-07	0.0041	0.0040	0.24	2.4E-06	7.4E-07	4.7E-07	9.9E-06	9.5E-06	1.0E-05	2.5E-06	4.7E-05	4.7E-05	1.0E-06
HC-14	AND_TUFF_MSED	123 Terminated	104-123	•40-60th percentile Cd, Pb, As, Co, Mo	0.13	8.5E-04	2.7E-07	4.9E-05	2.8E-06	0.020	5.2E-06	0.022	5.2E-07	0.0054	0.0015	0.14	2.6E-06	6.8E-07	5.2E-07	6.4E-06	1.0E-05	1.0E-05	1.0E-06	5.2E-05	5.2E-05	1.1E-06
HC-15	TRA	123 Terminated	104-123	•40-60th percentile Se, As, Cd •75th percentile Pb •90th percentile Sb	0.071	0.0027	3.3E-07	3.6E-05	2.9E-06	0.014	6.6E-06	0.037	6.7E-07	0.0020	0.0056	0.066	3.3E-06	3.0E-07	6.6E-07	8.2E-06	1.3E-05	1.3E-05	1.4E-05	6.6E-05	6.6E-05	1.5E-06
HC-16	VBX	140 Ongoing	121-140	•40-60th percentile Cu, As, Sb •80th percentile Pb, Se, Zn •90th percentile Cd, Mo	0.036	9.3E-04	1.3E-06	0.0085	0.0083	0.069	4.6E-04	1.6	3.5E-05	0.0079	0.019	19	2.9E-04	2.2E-05	0.0012	7.6E-05	8.7E-04	1.9E-05	0.0020	9.8E-05	0.0047	1.1E-04
HC-17	TRA	140 Ongoing	121-140	•40-60th percentile Cu, Pb, Cd, Mo, Se, Zn •80th percentile Co	0.036	0.47	3.5E-07	5.7E-06	2.2E-04	0.062	1.4E-05	0.048	1.4E-06	0.011	0.0032	0.49	7.0E-06	2.8E-06	1.4E-06	6.4E-05	2.8E-05	2.8E-05	6.6E-07	1.4E-04	3.7E-04	5.5E-06

Notes:
Release rates based on the last 20 weeks of testing.
Phosphorus measured by colourimetry.



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

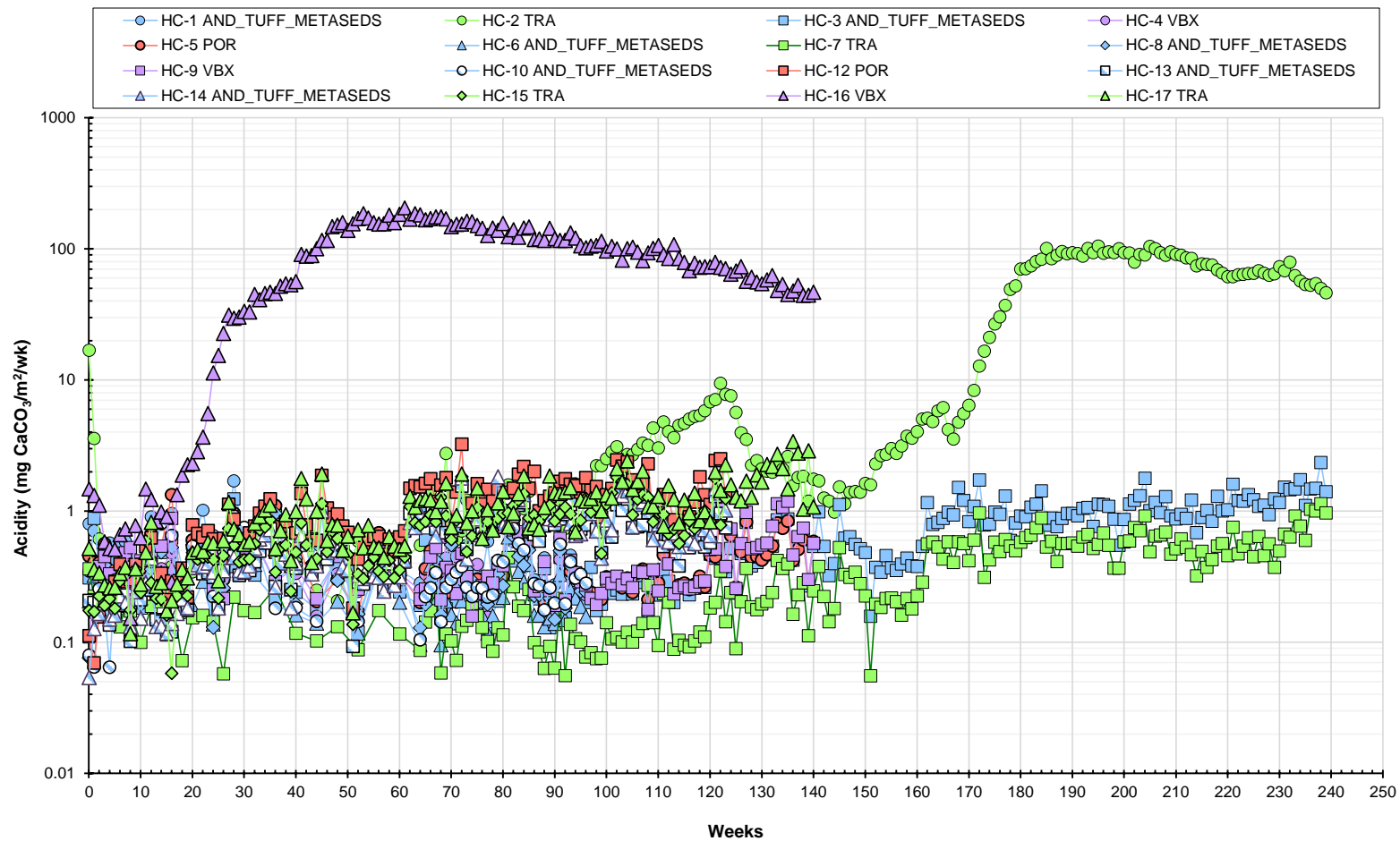
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



pH			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number	A-1		
Project Number	ONS2104		
Date	Apr-25		
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

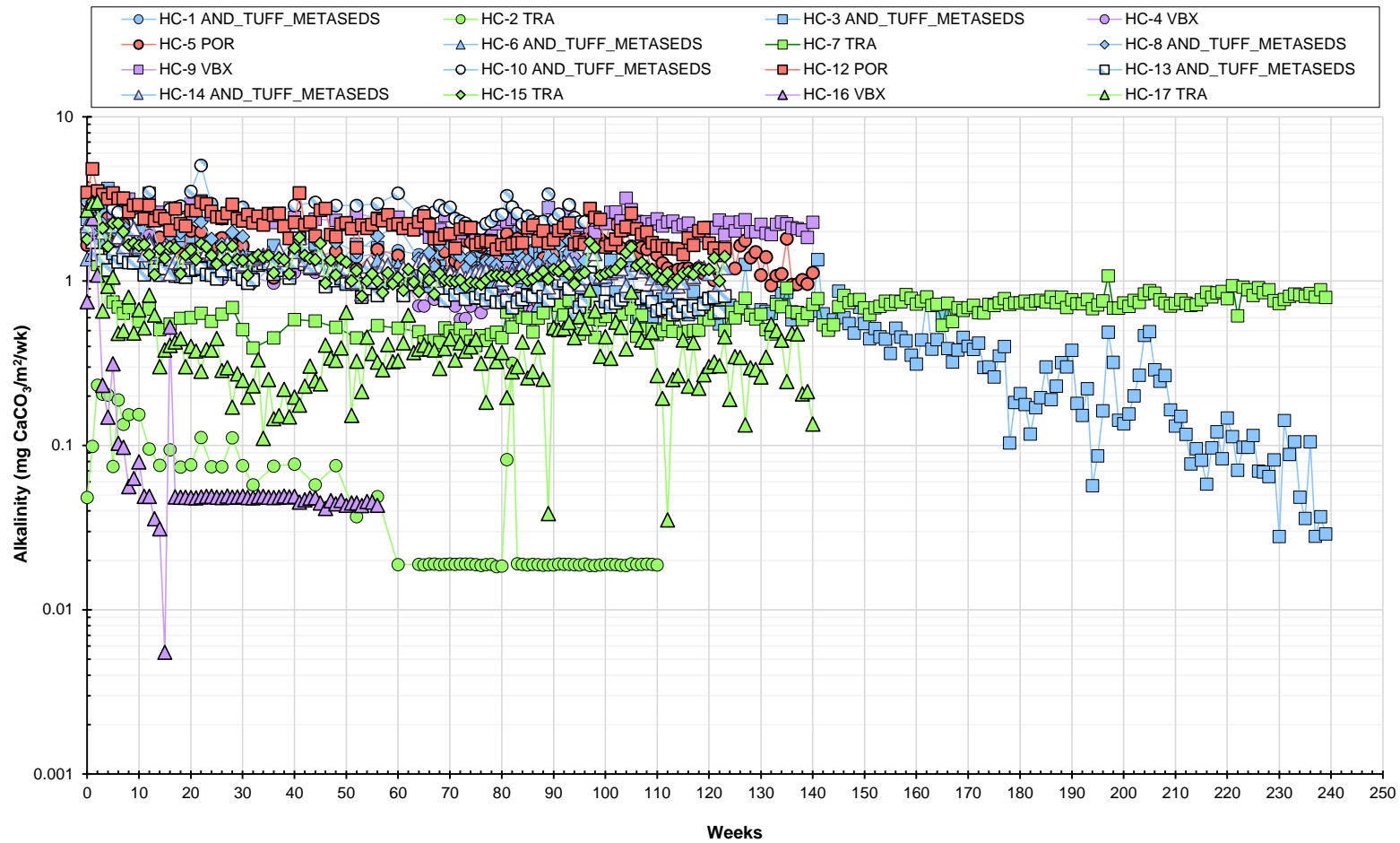
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Acidity			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-2	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

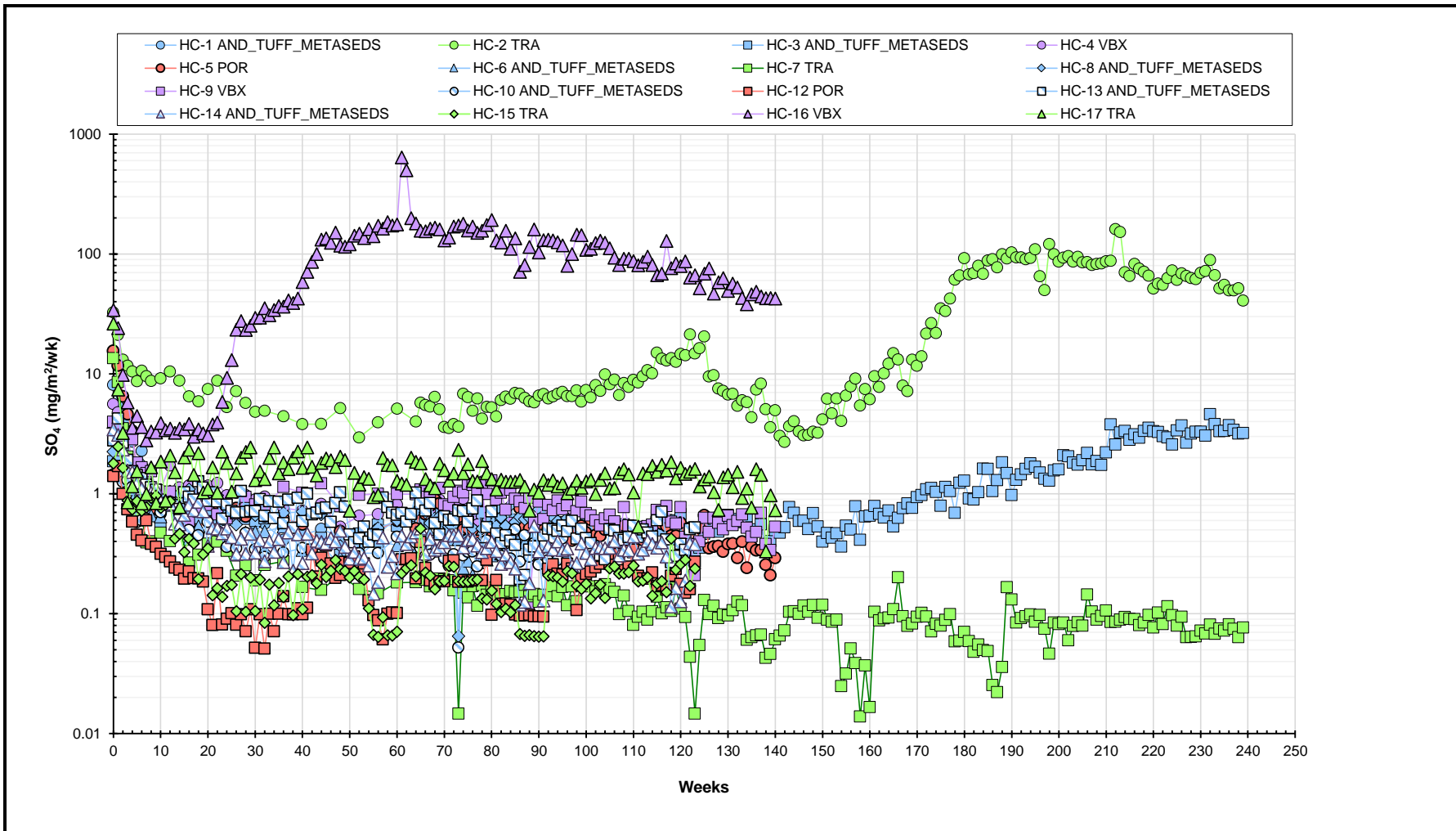


Alkalinity

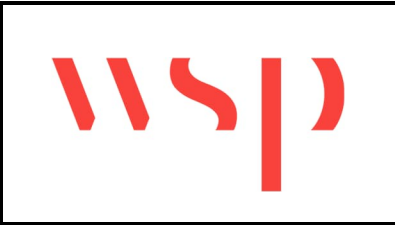
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

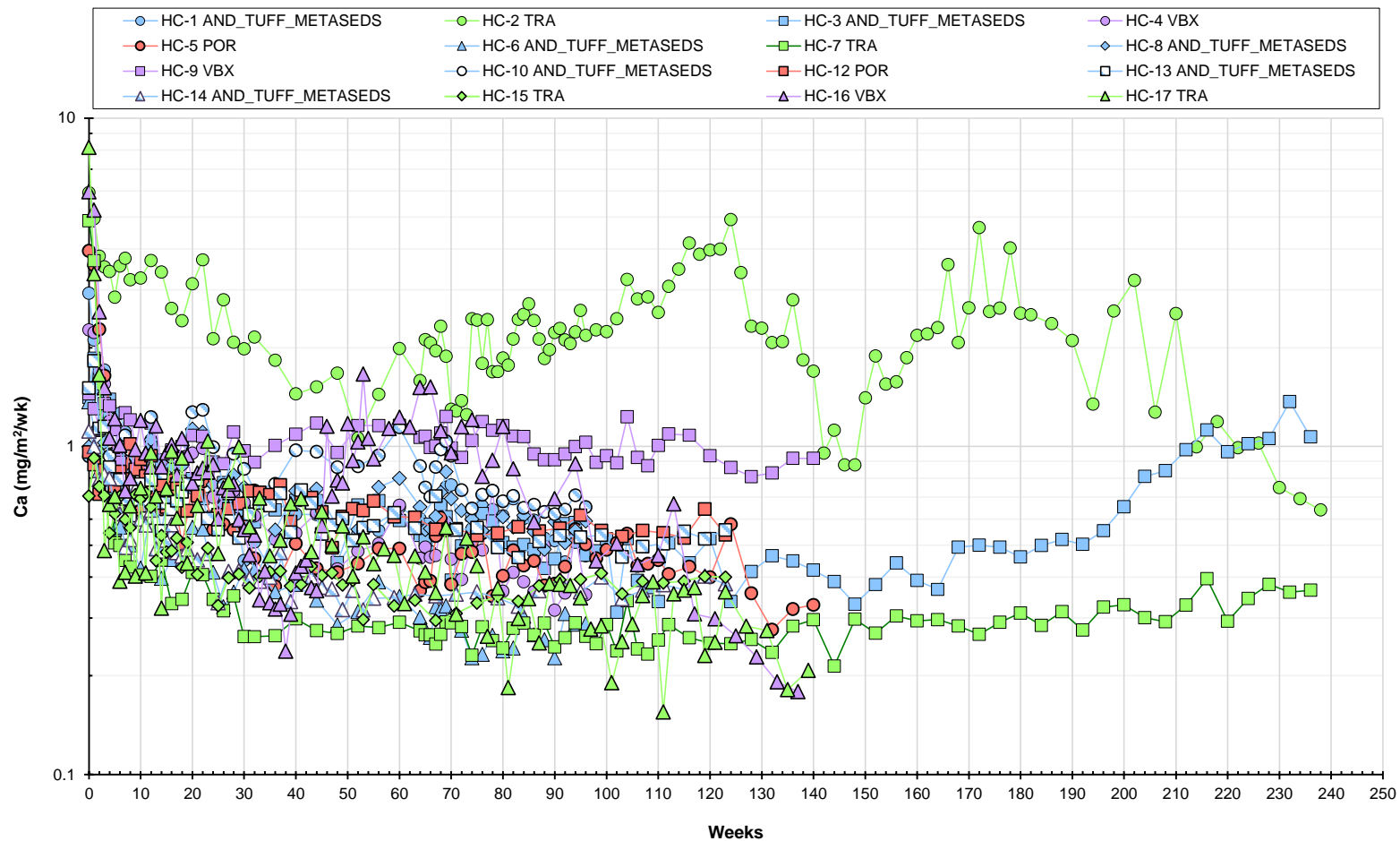
Figure Number		A-3	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes
 Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Sulphate			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-4	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

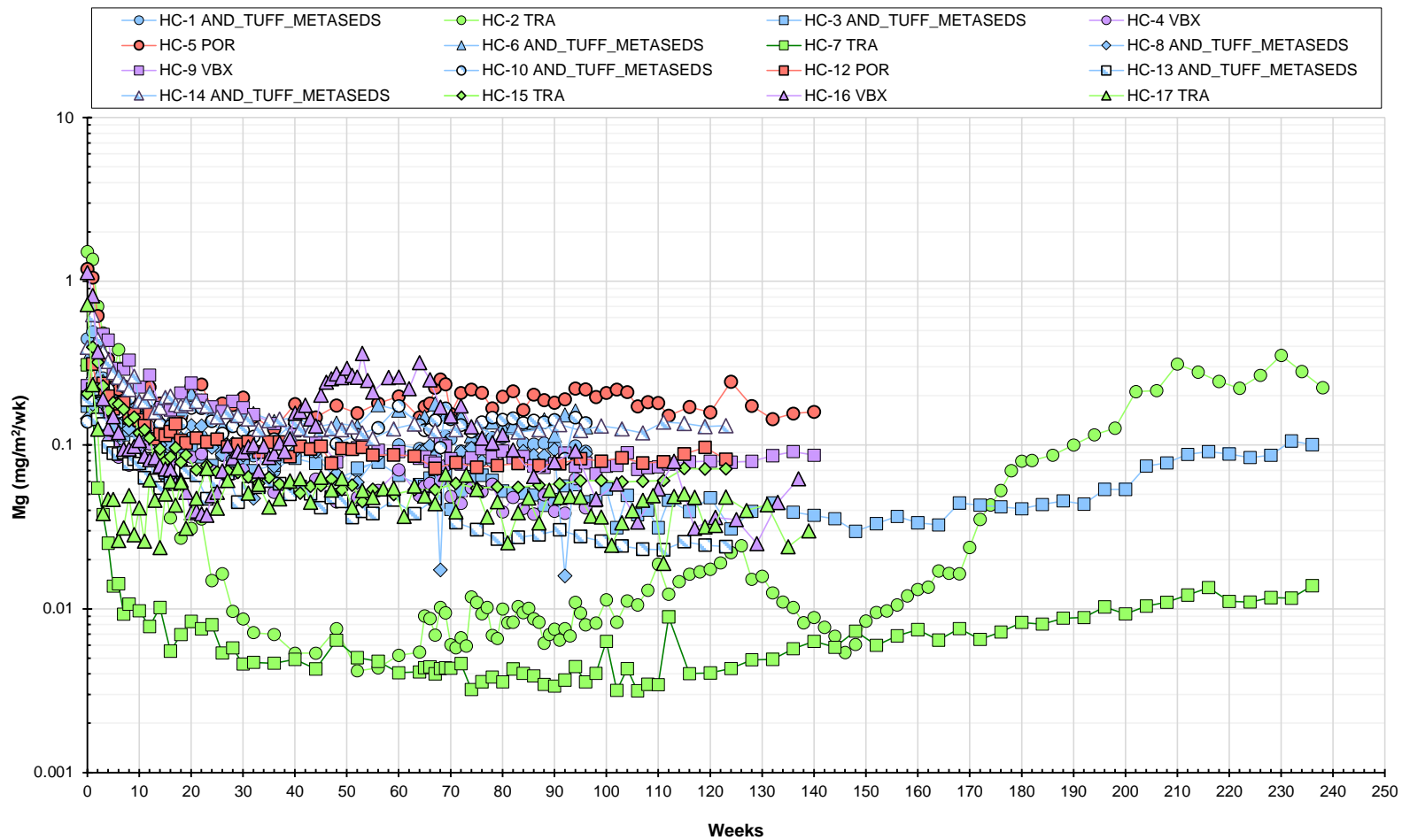
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Calcium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-5	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

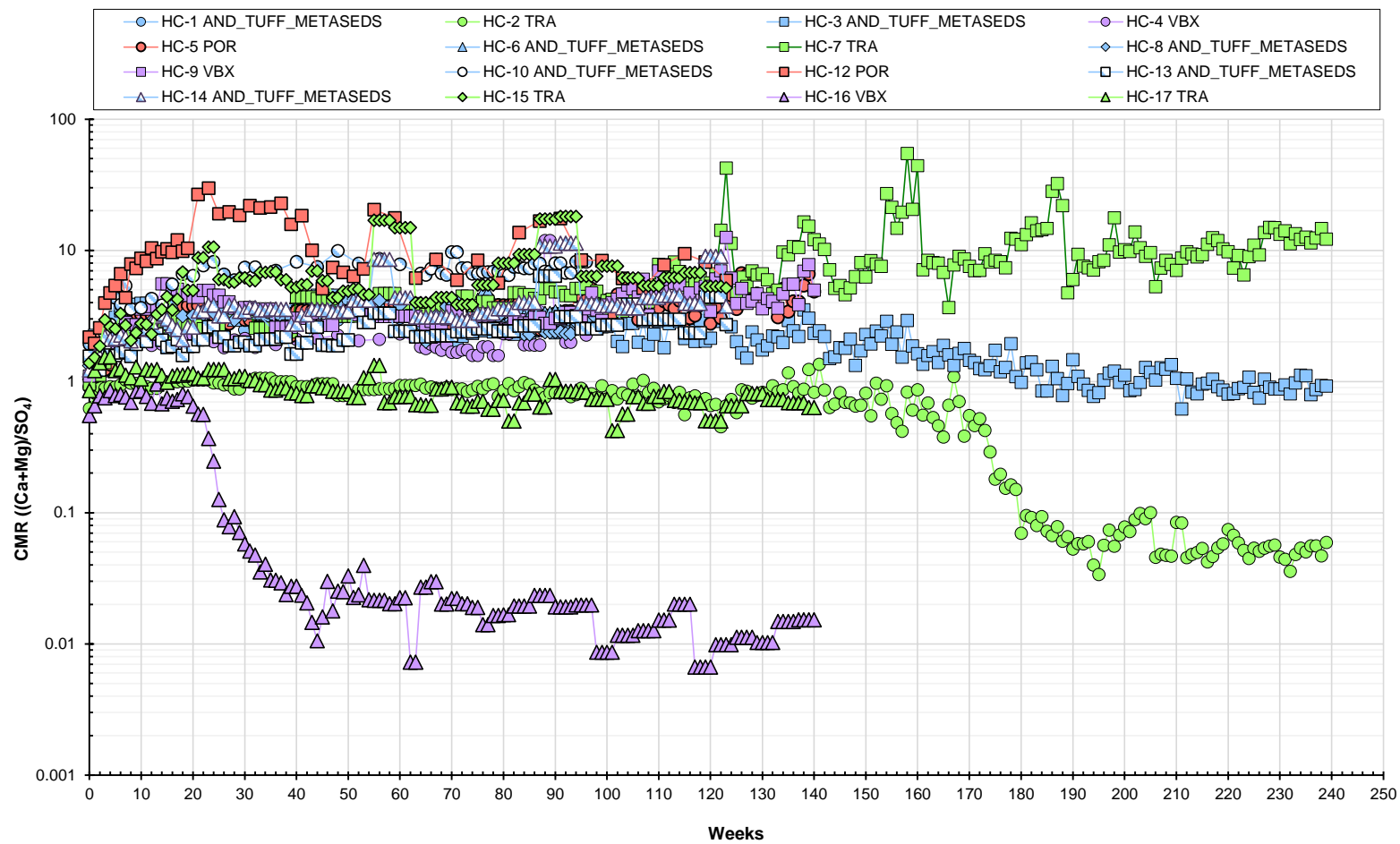


Magnesium

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number		A-6	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

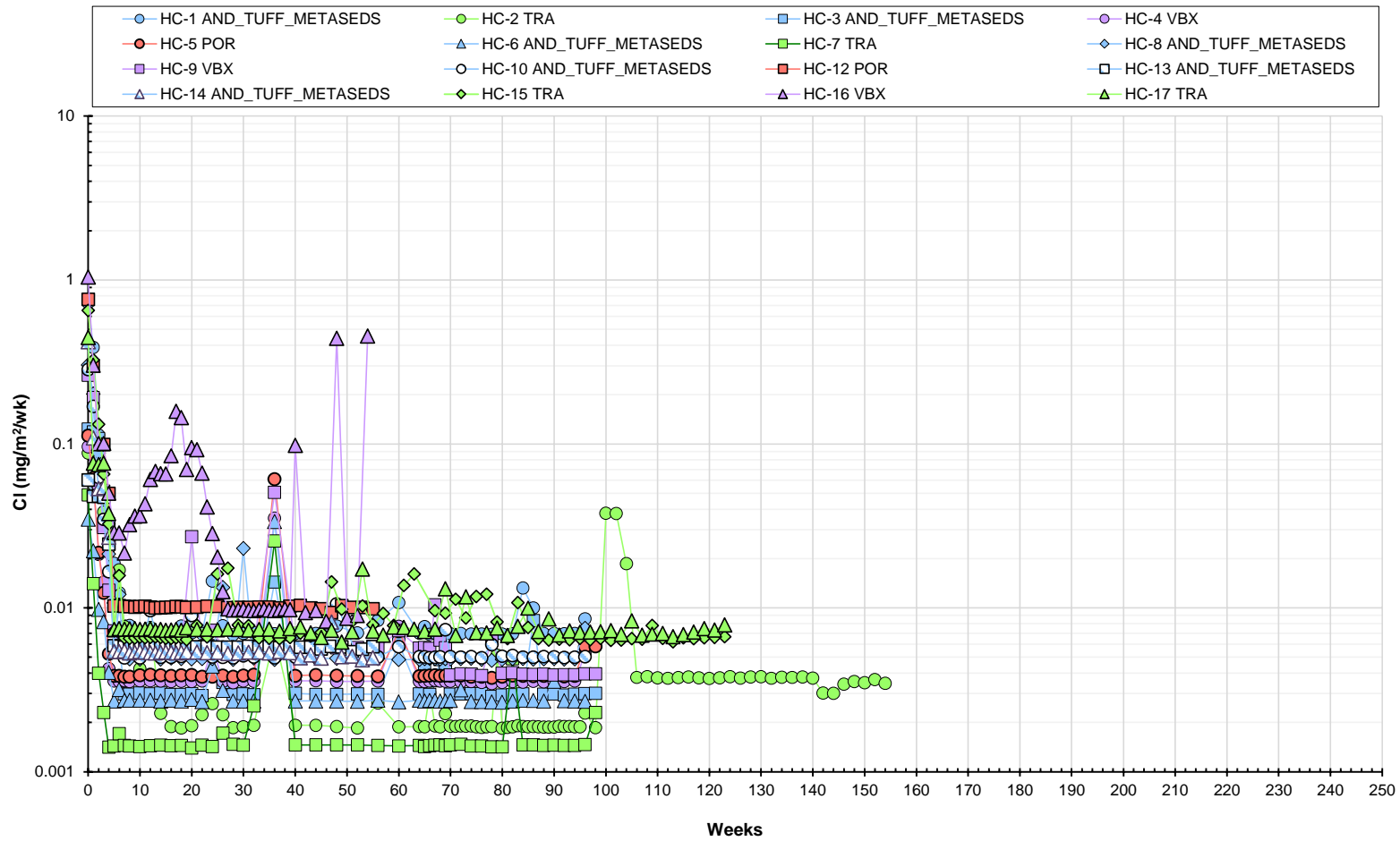
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Carbonate Molar Ratio			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-7	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

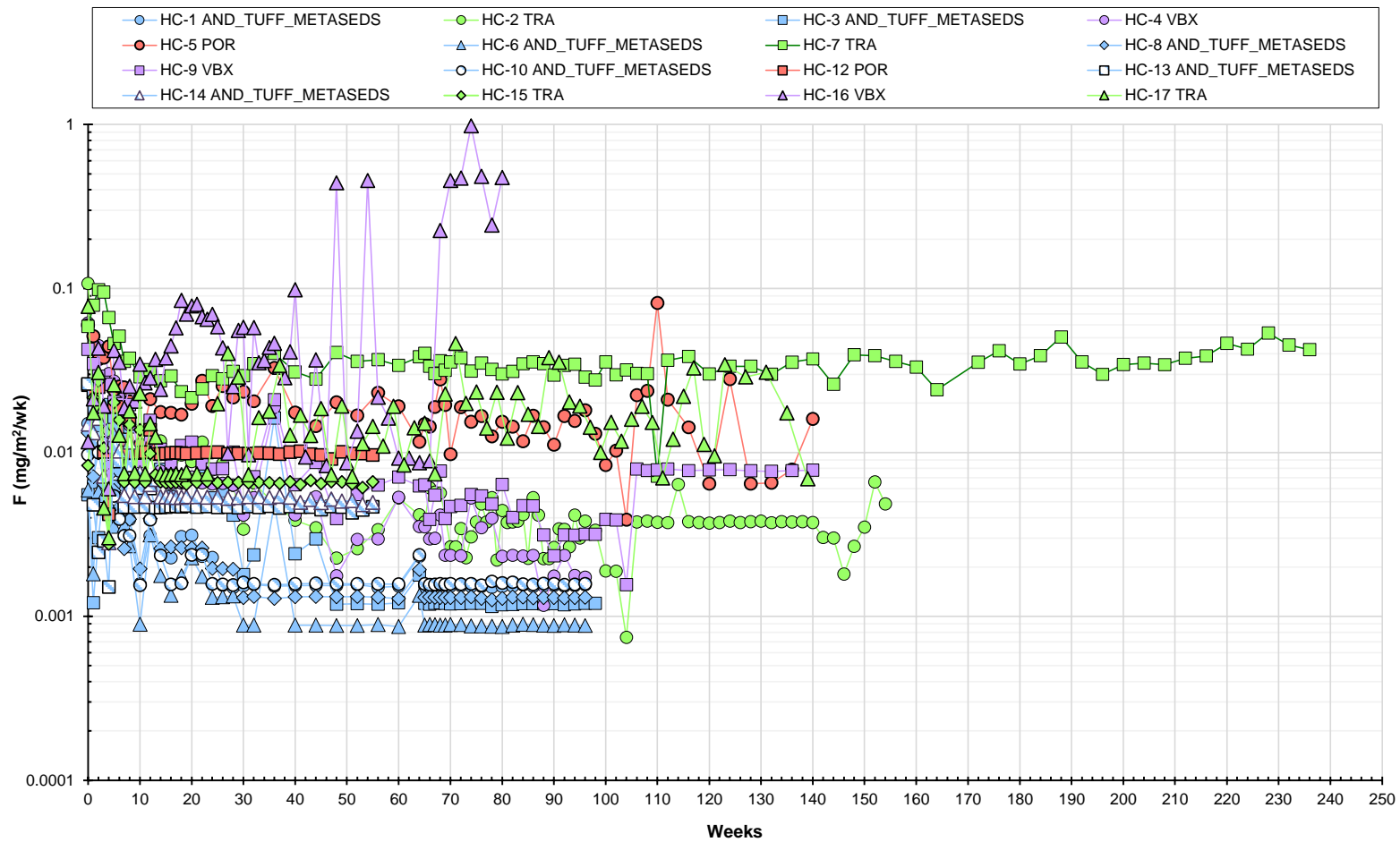


Chloride

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number	A-8		
Project Number	ONS2104		
Date	Apr-25		
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

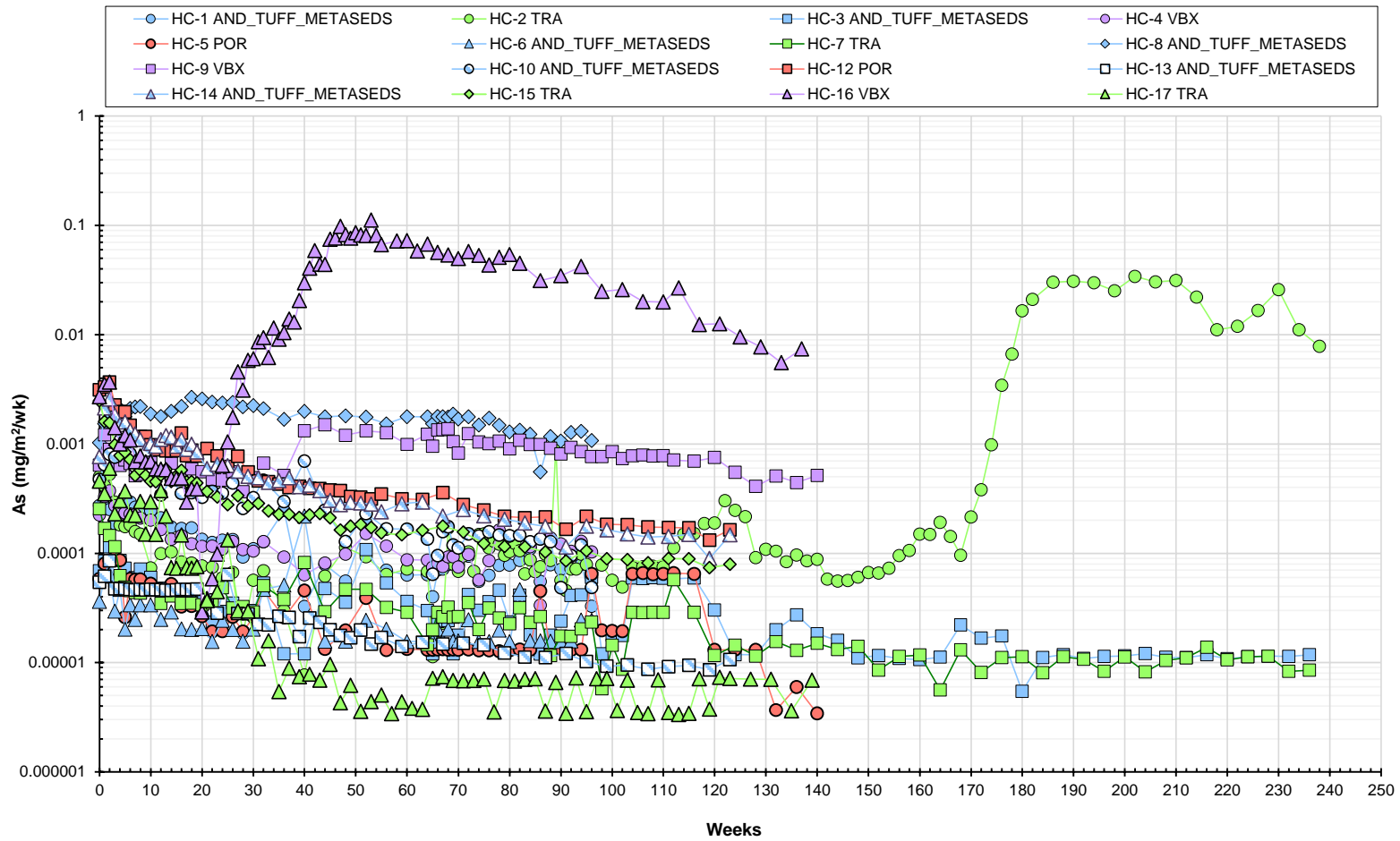
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Fluoride			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-9	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

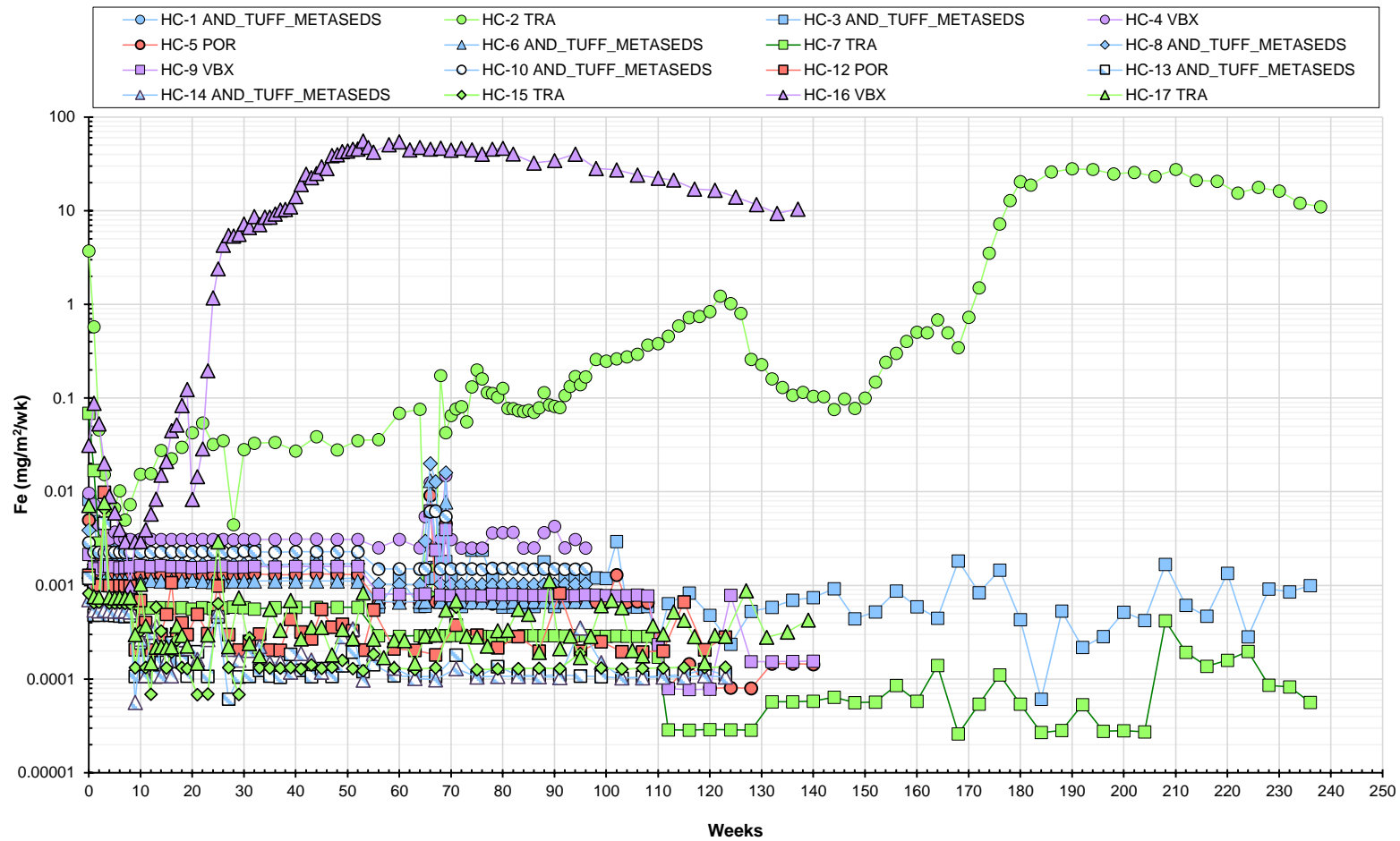
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Arsenic			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-10	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

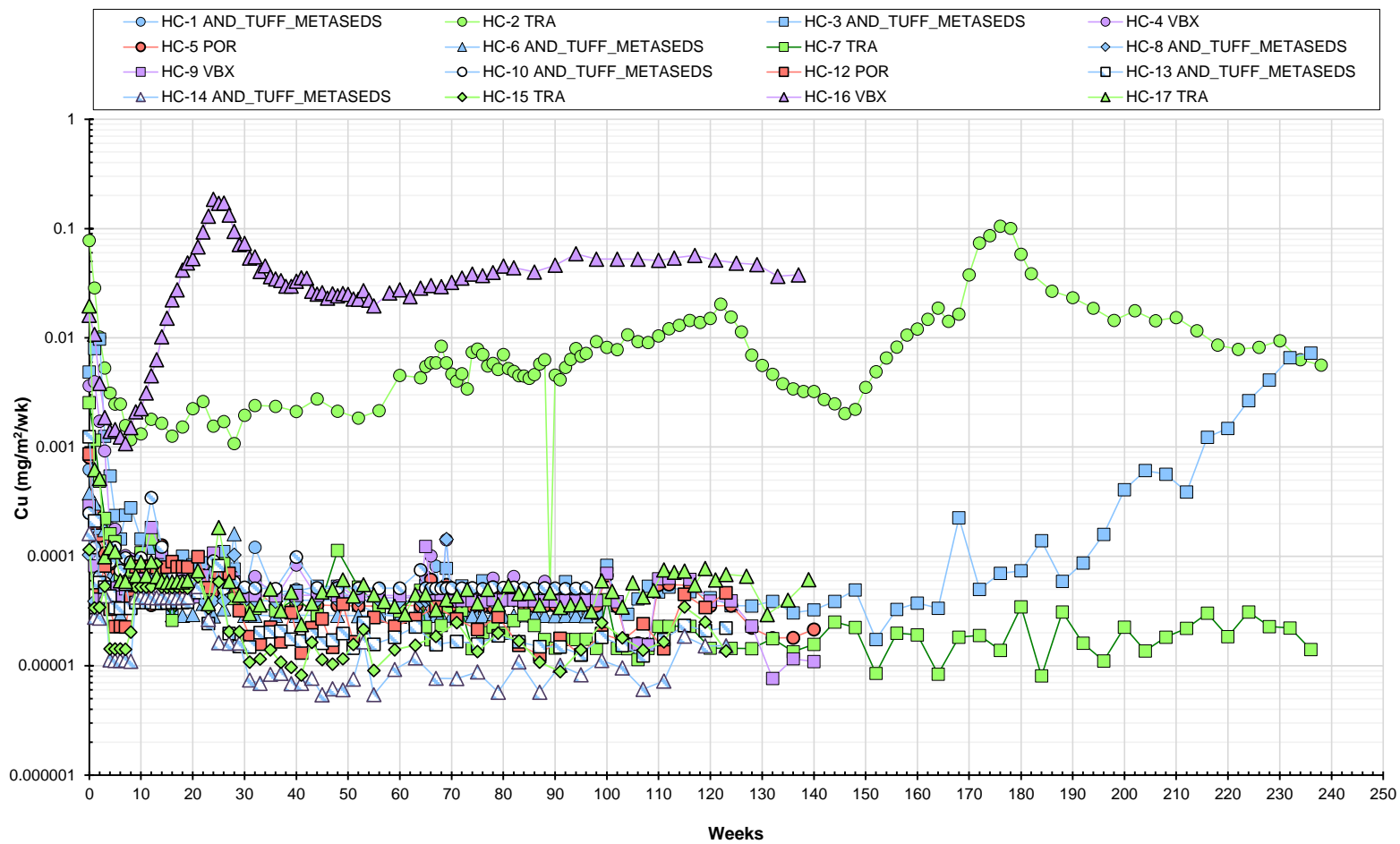


Iron

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number		A-11	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

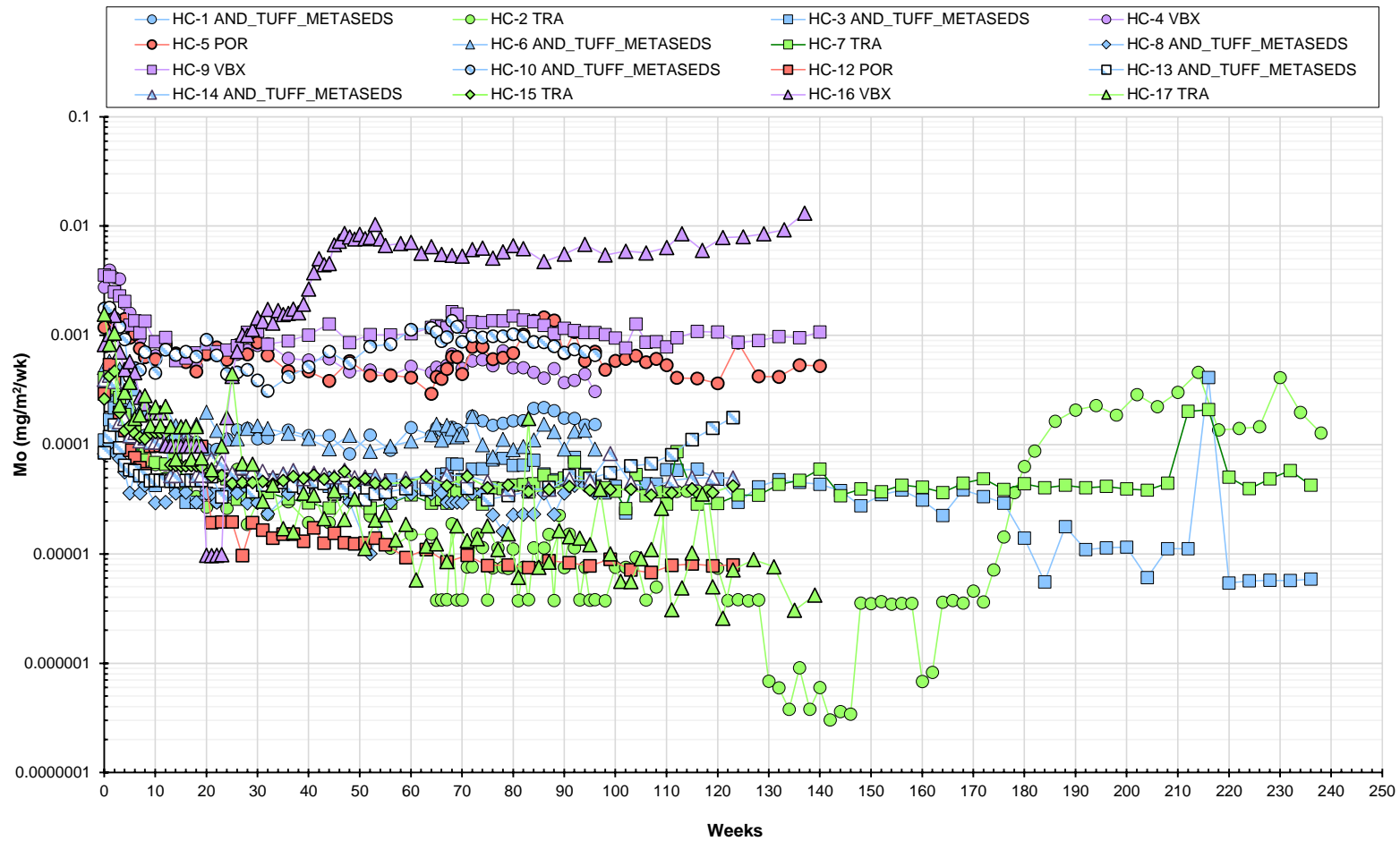


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Copper			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-12	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

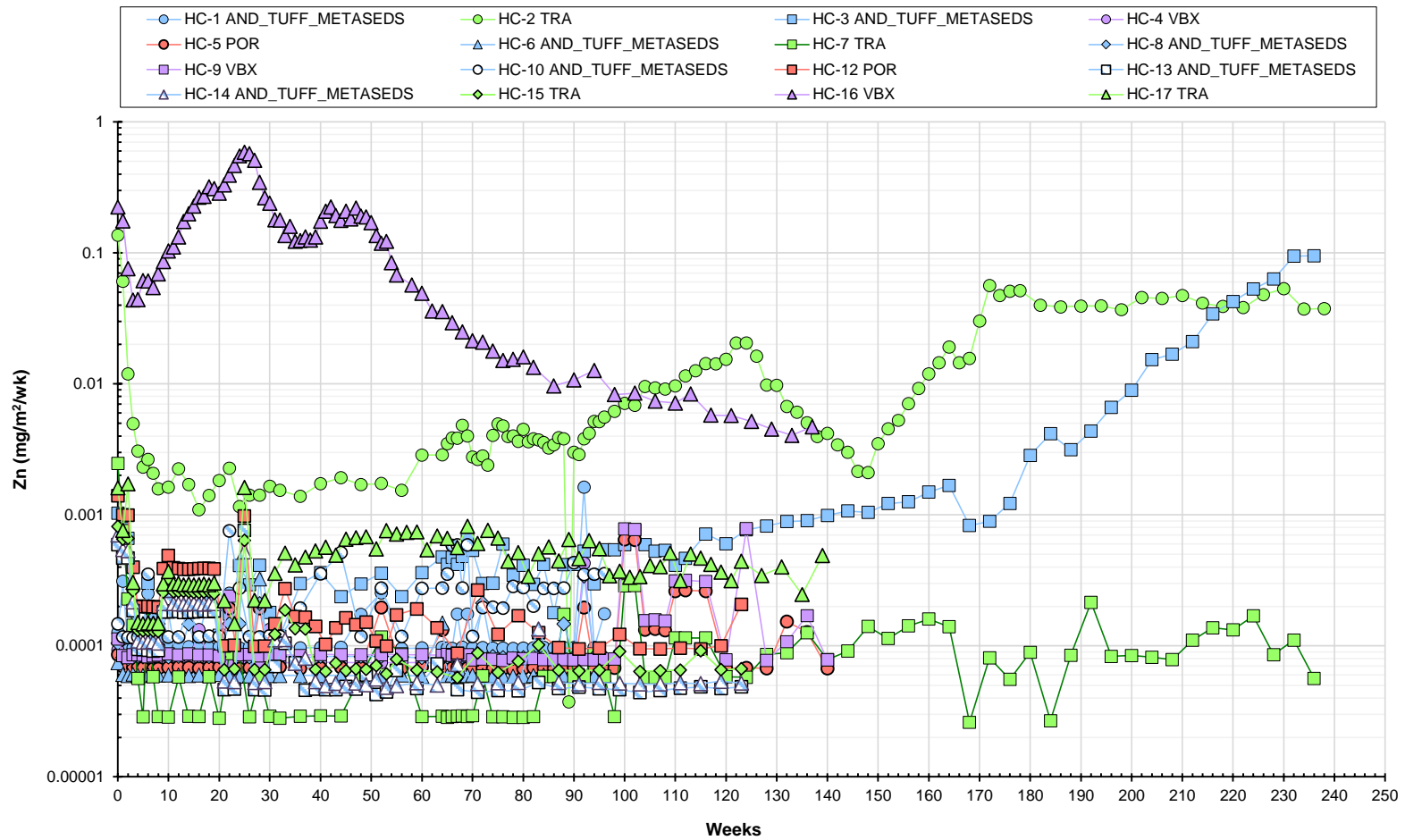


Molybdenum

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number	A-13		
Project Number	ONS2104		
Date	Apr-25		
Drawn	MT	Reviewed	EC

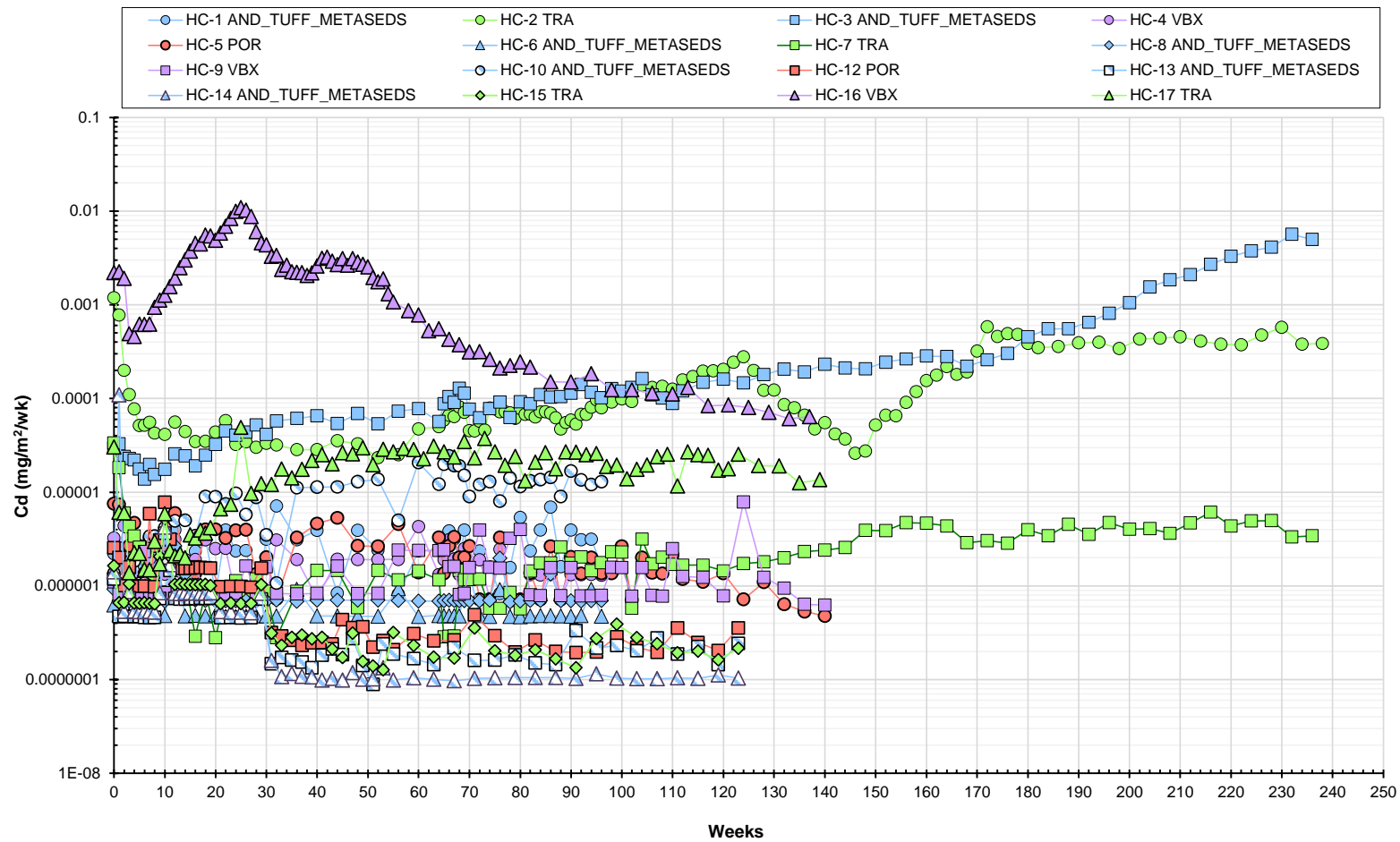


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Zinc			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-14	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

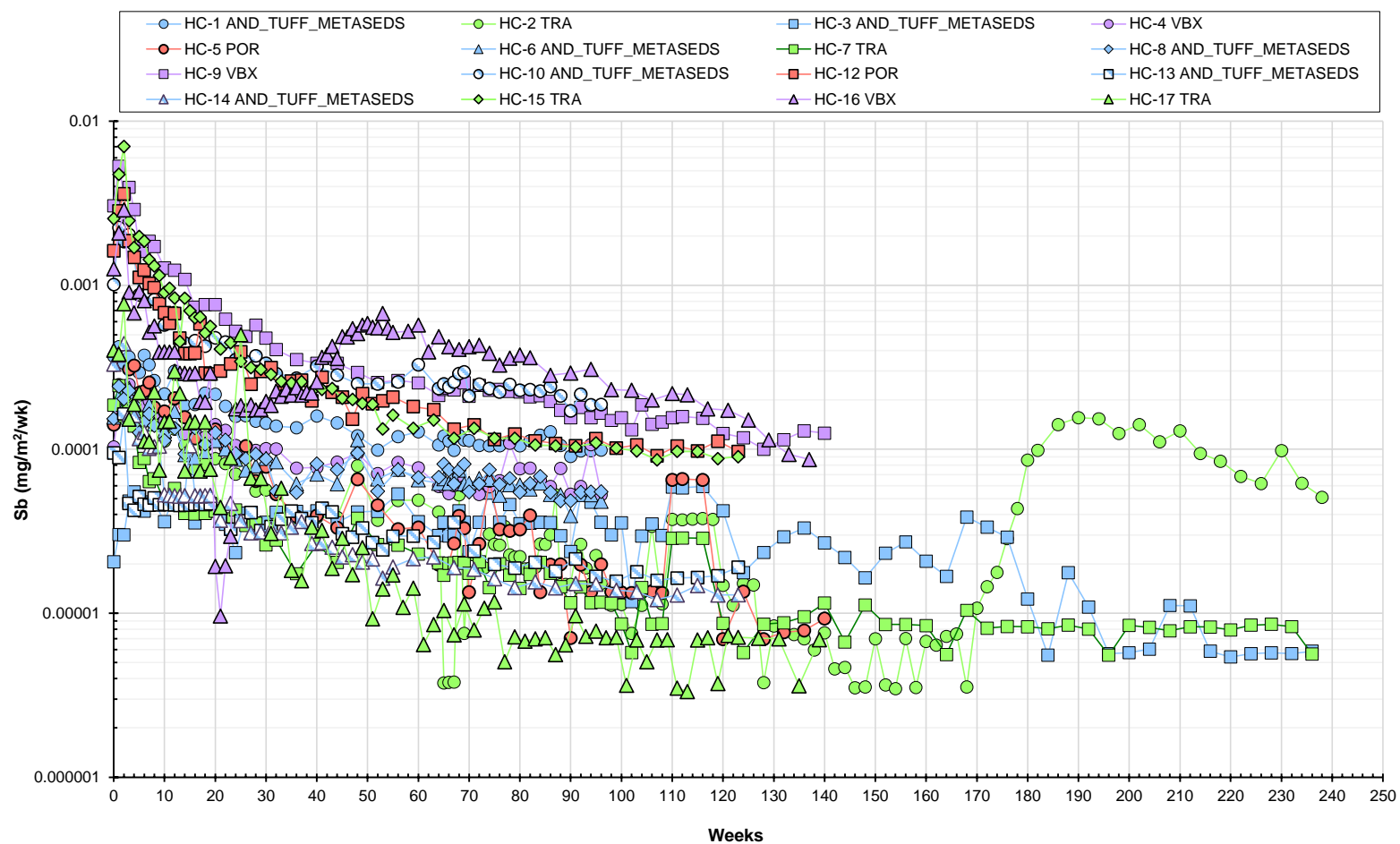
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Cadmium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-15	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

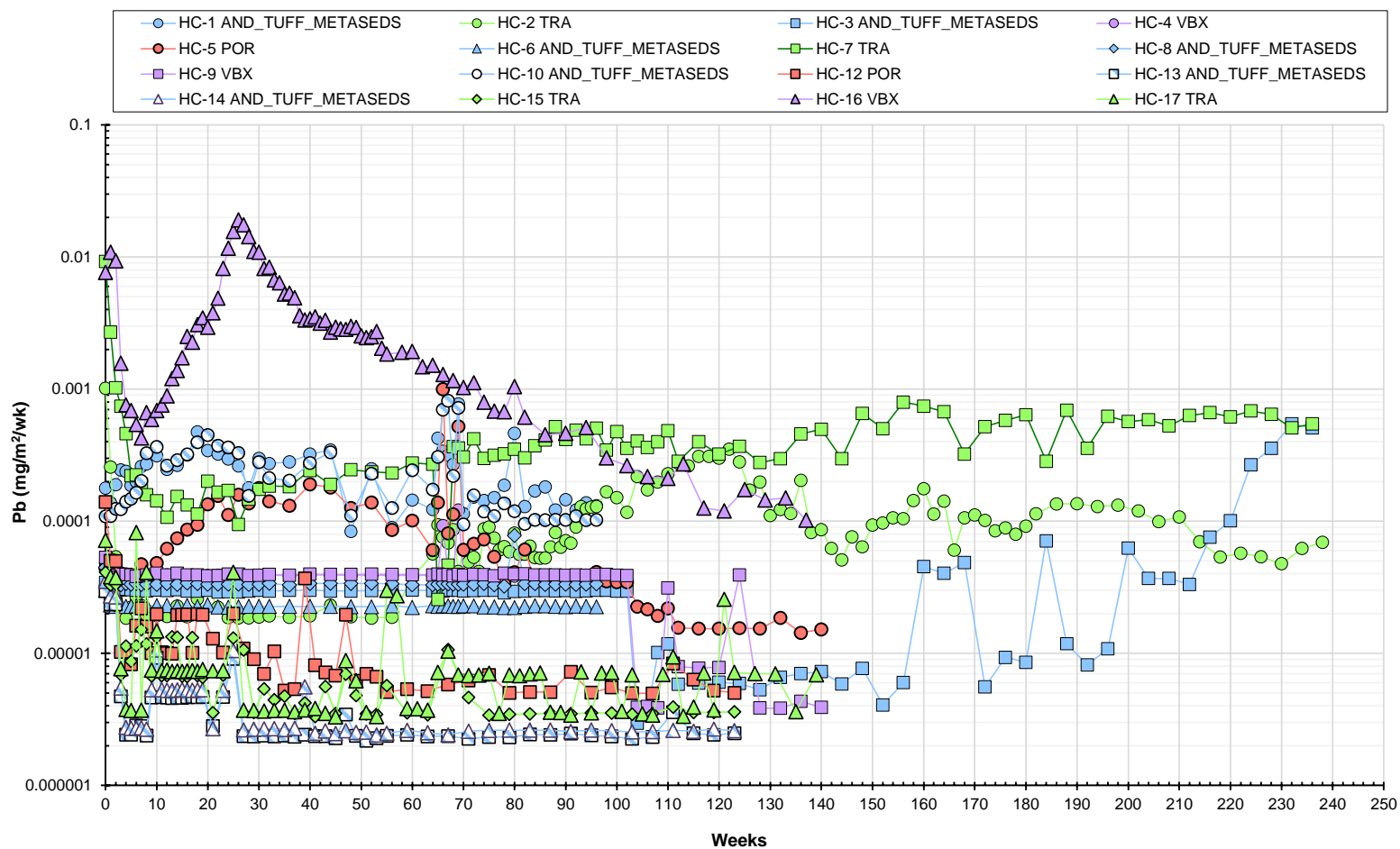


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Antimony			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-16	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

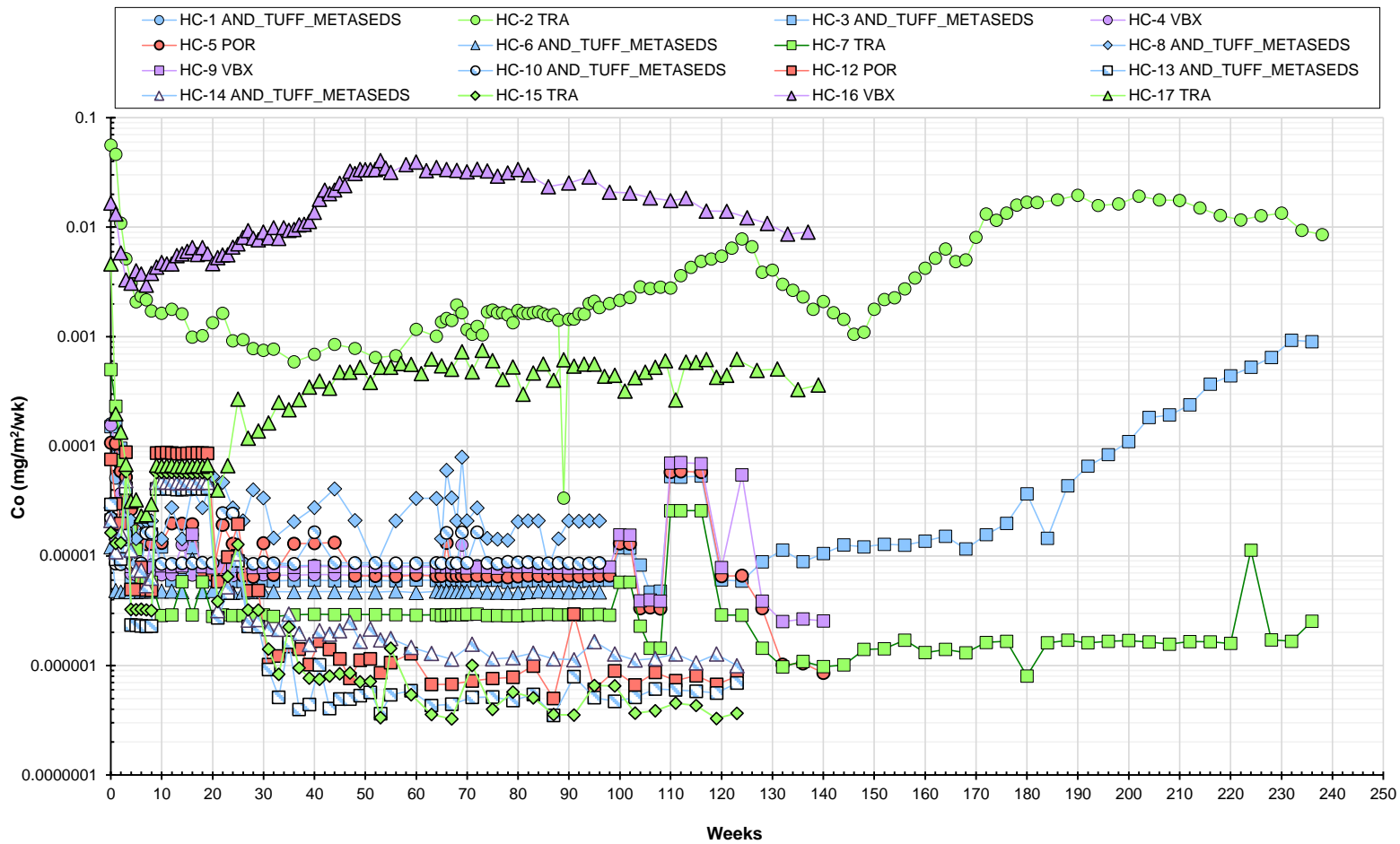


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Lead			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-17	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

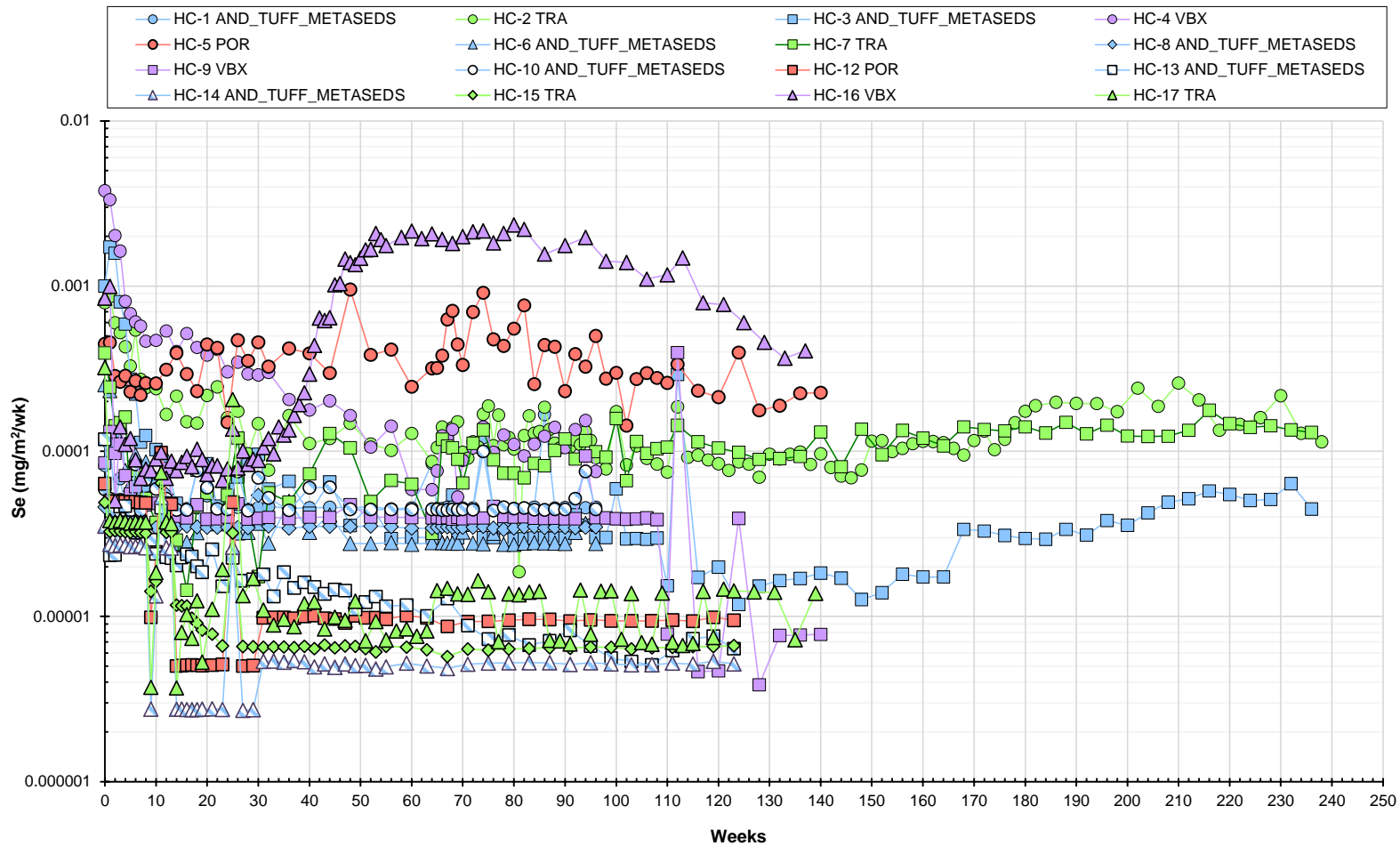


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Cobalt			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-18	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

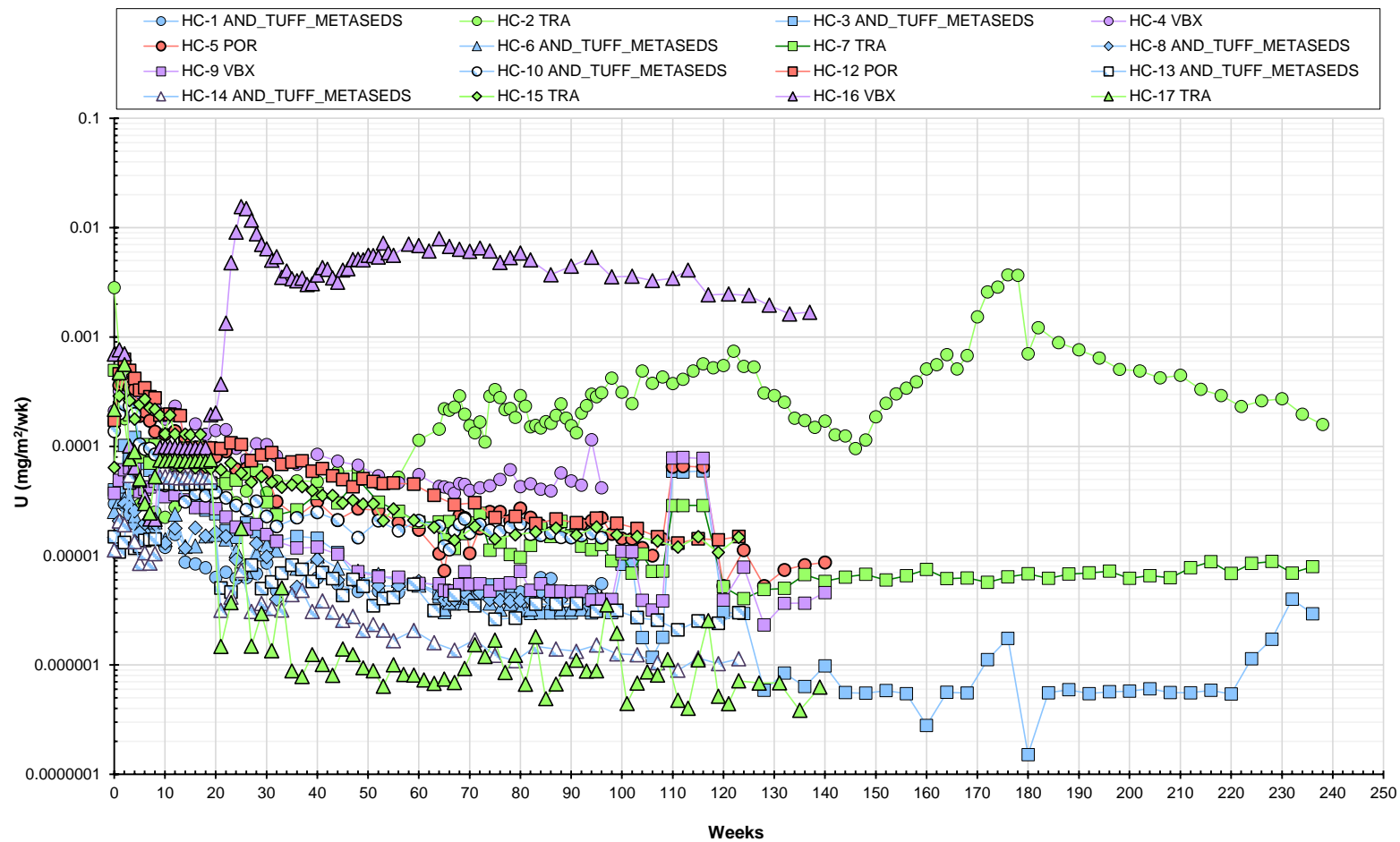
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Selenium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-19	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

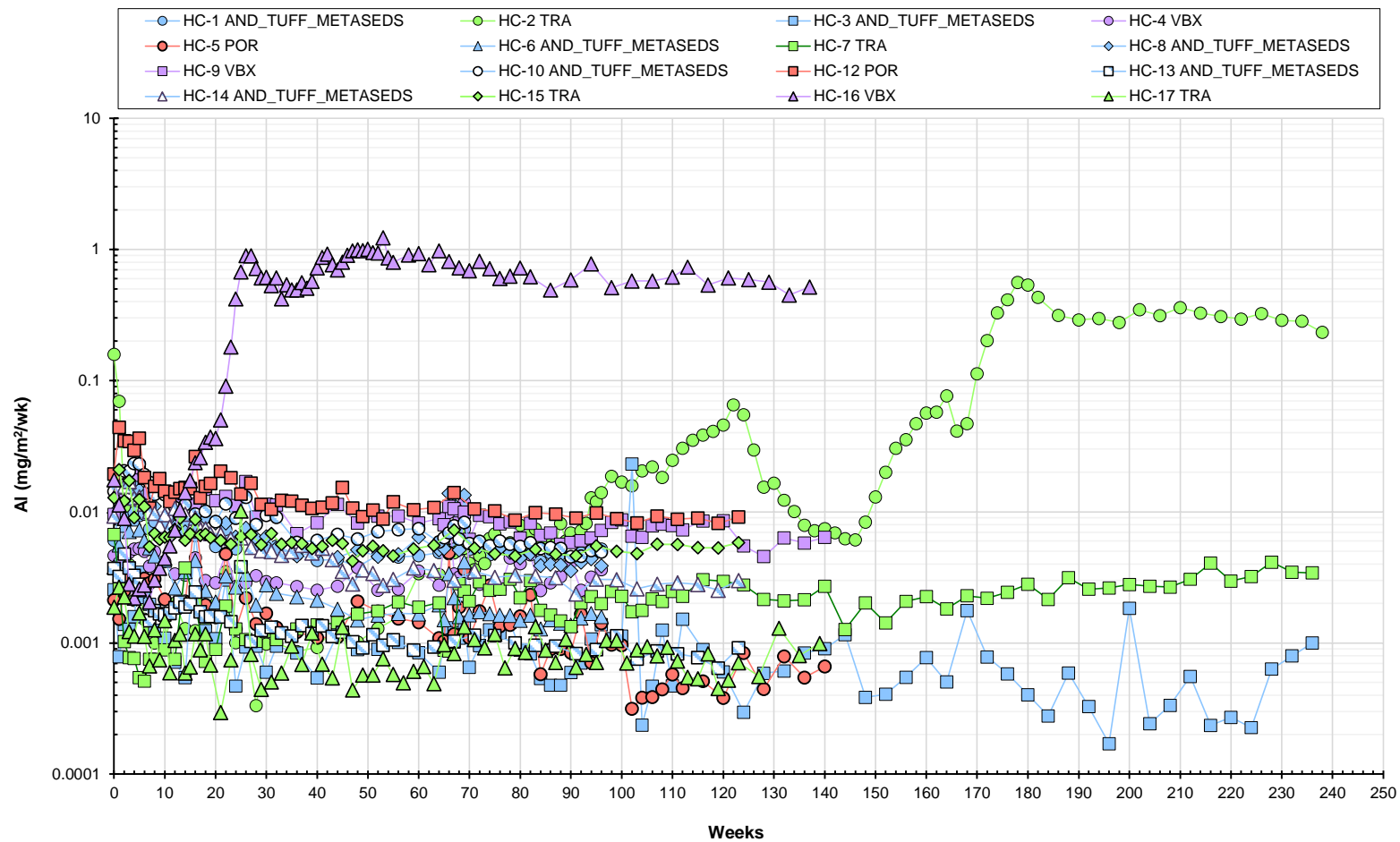


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Uranium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-20	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

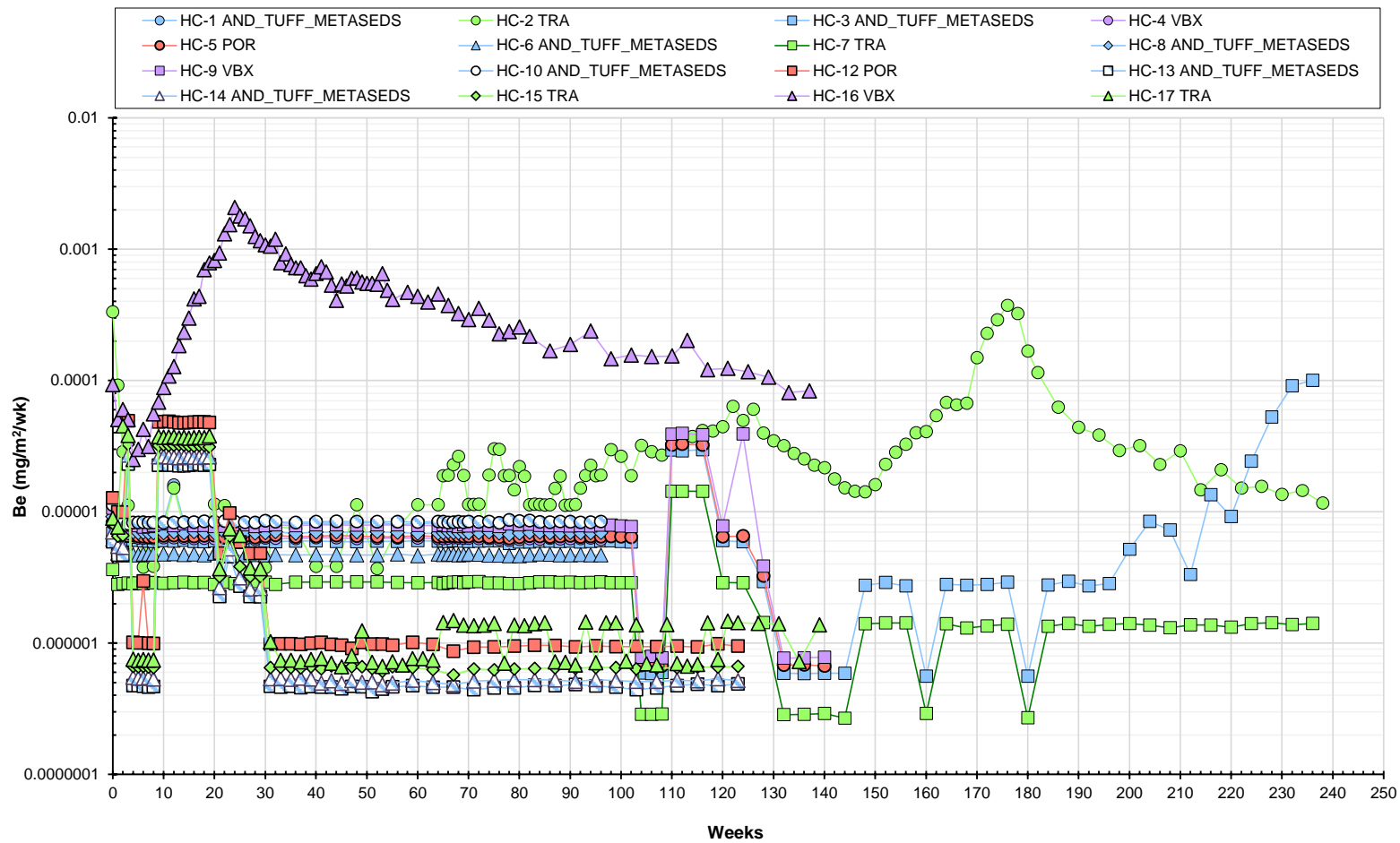


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



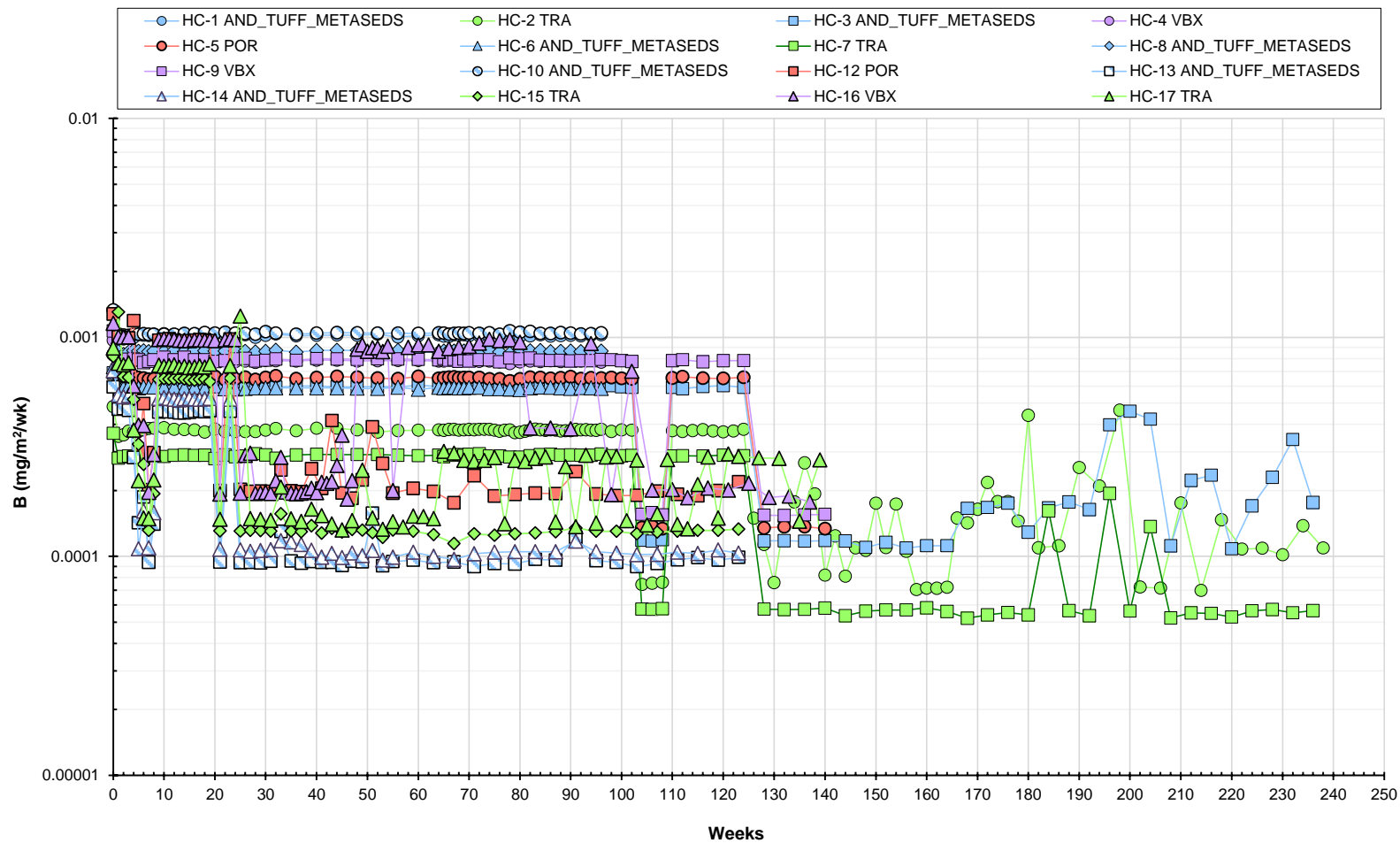
Aluminum			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-21	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes
 Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Beryllium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number	A-22		
Project Number	ONS2104		
Date	Apr-25		
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

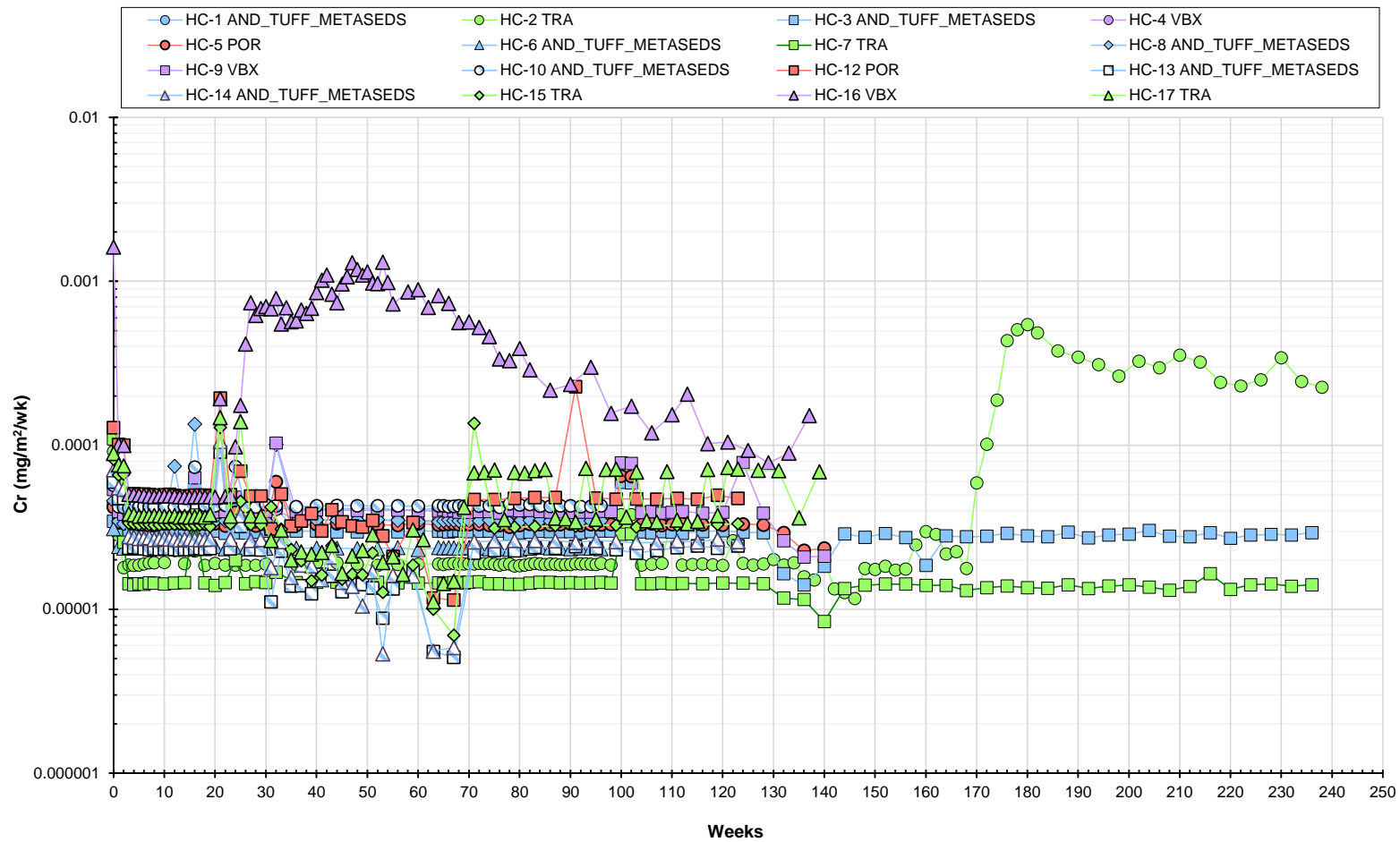
Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Boron			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-23	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

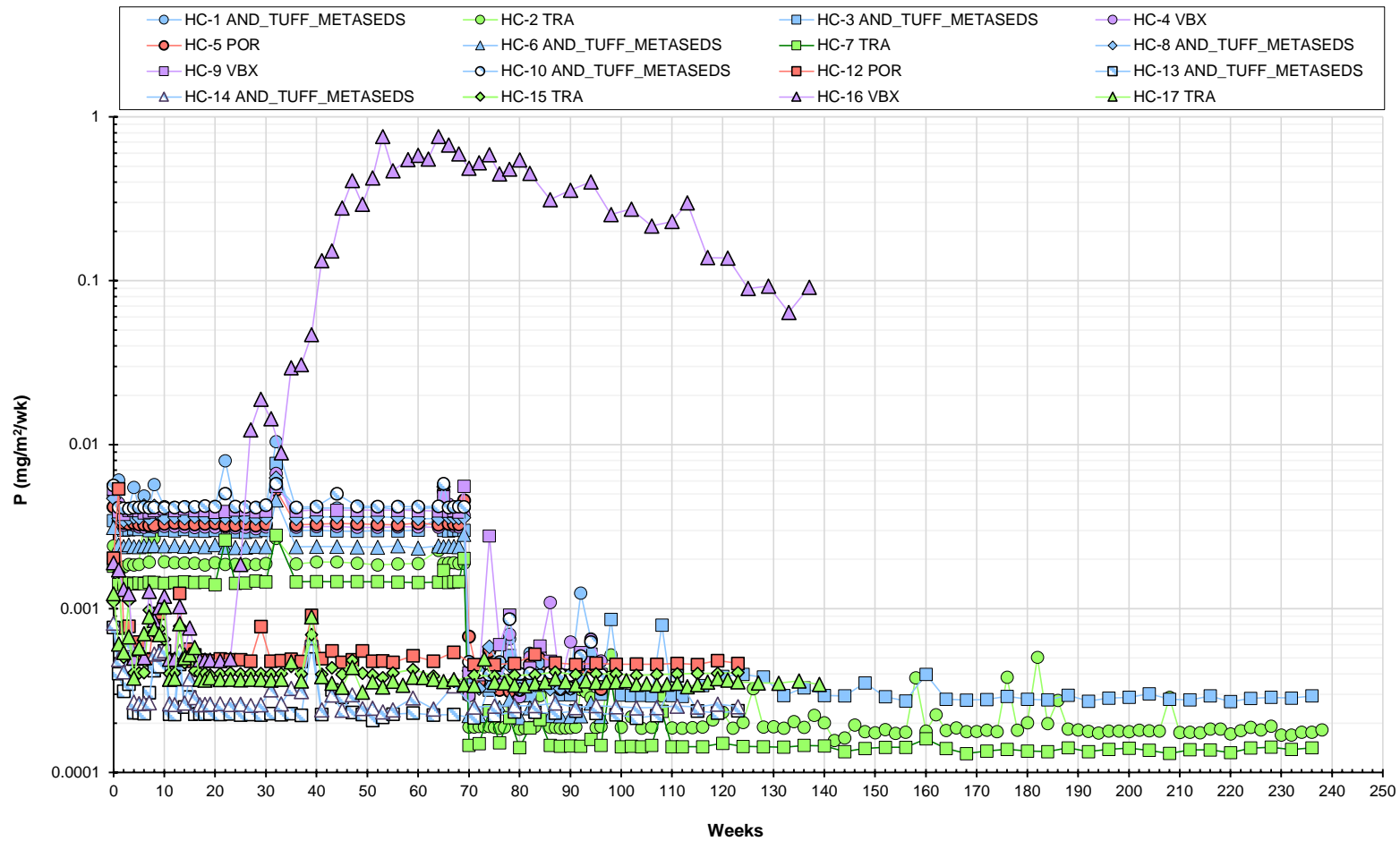


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Chromium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-24	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

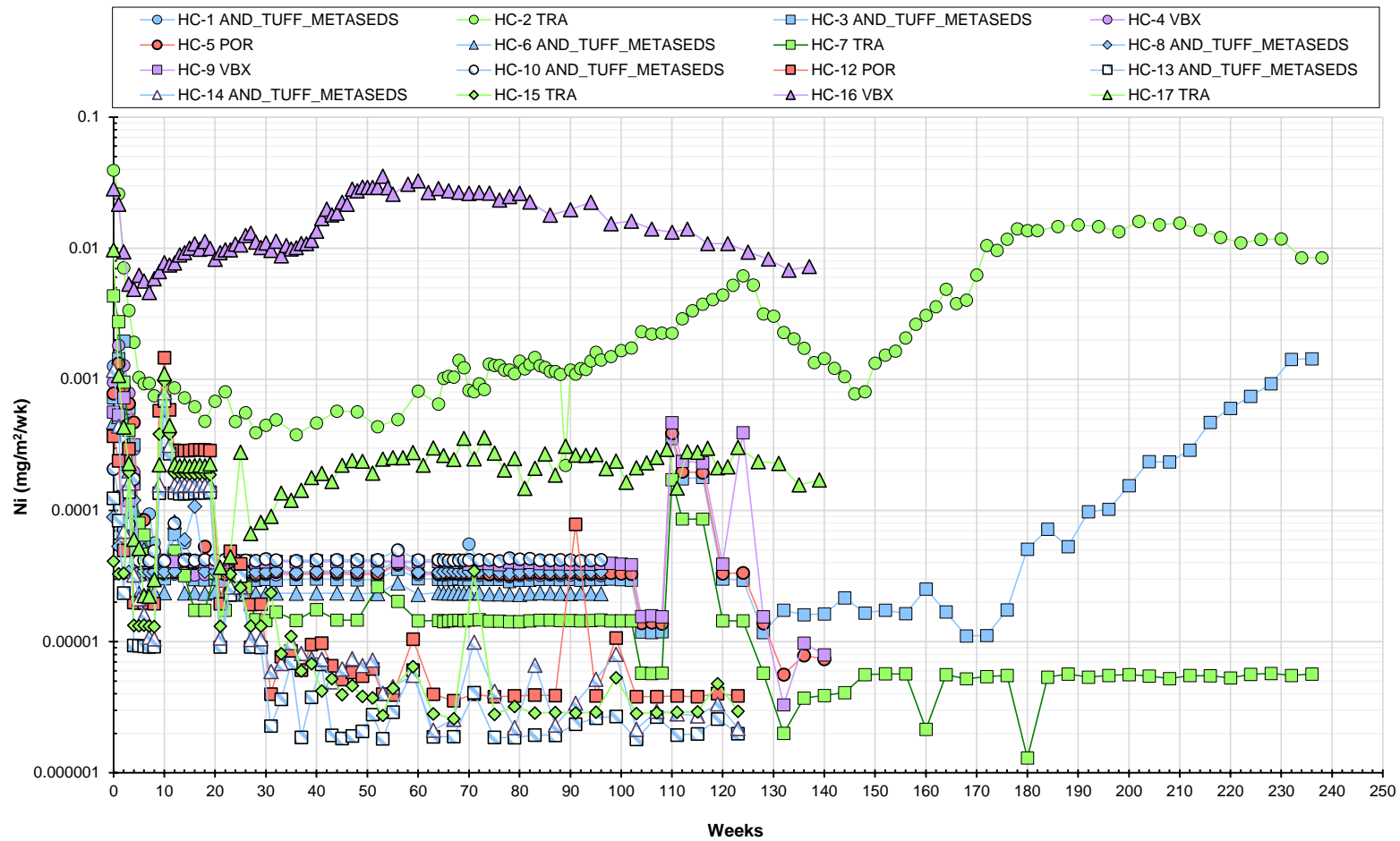


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Phosphorous			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-25	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

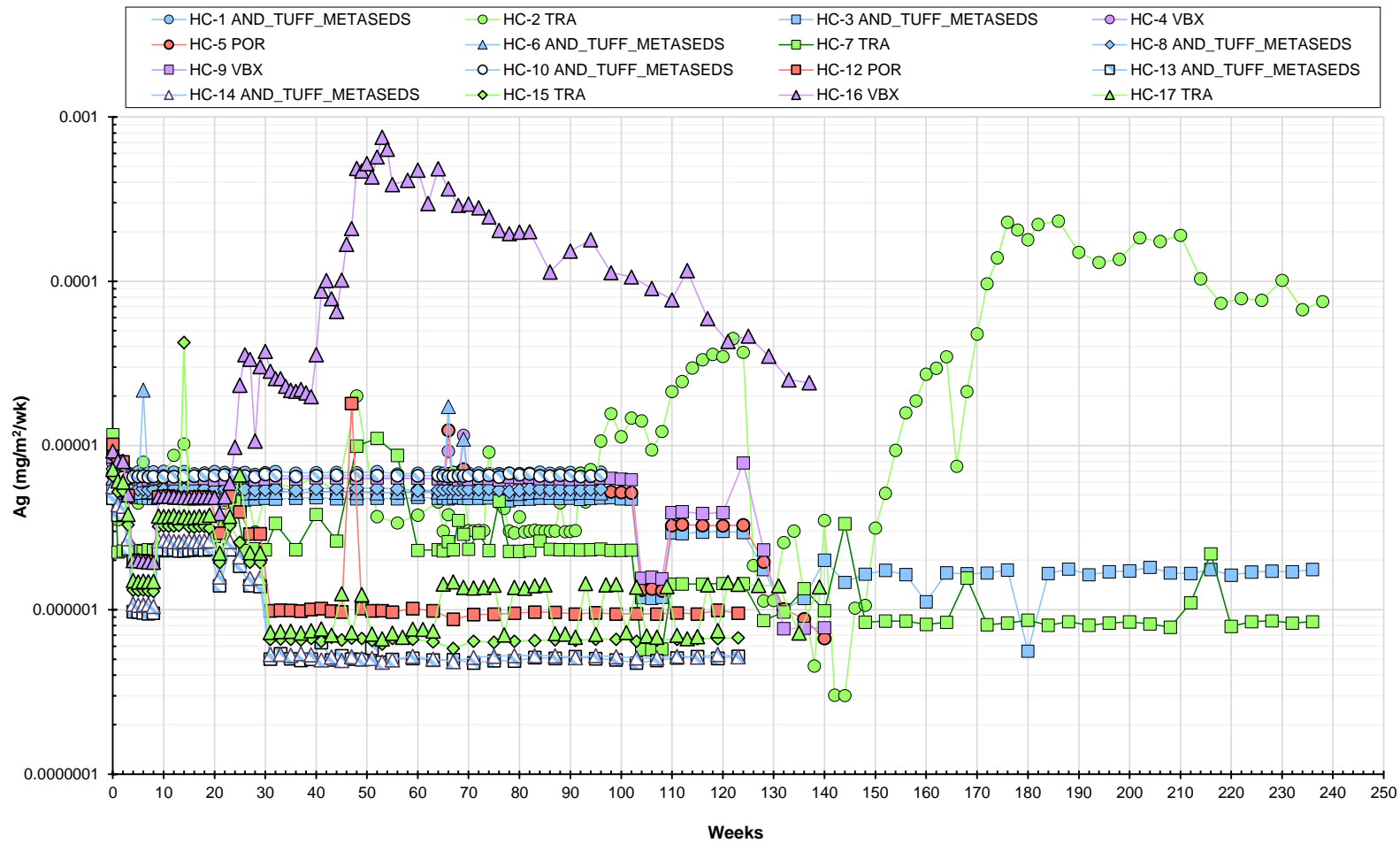


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Nickel			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-26	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.

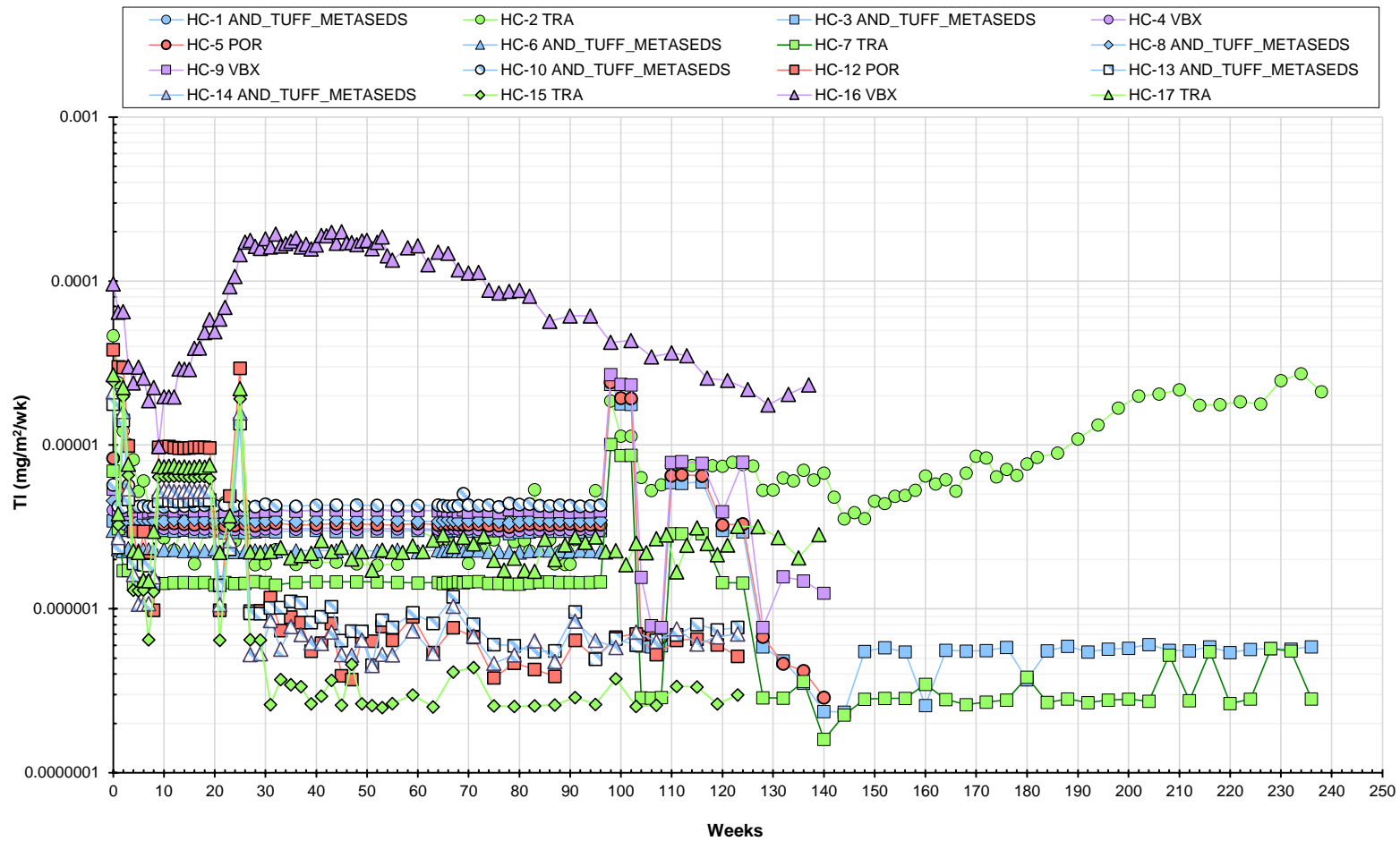


Silver

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number		A-27	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

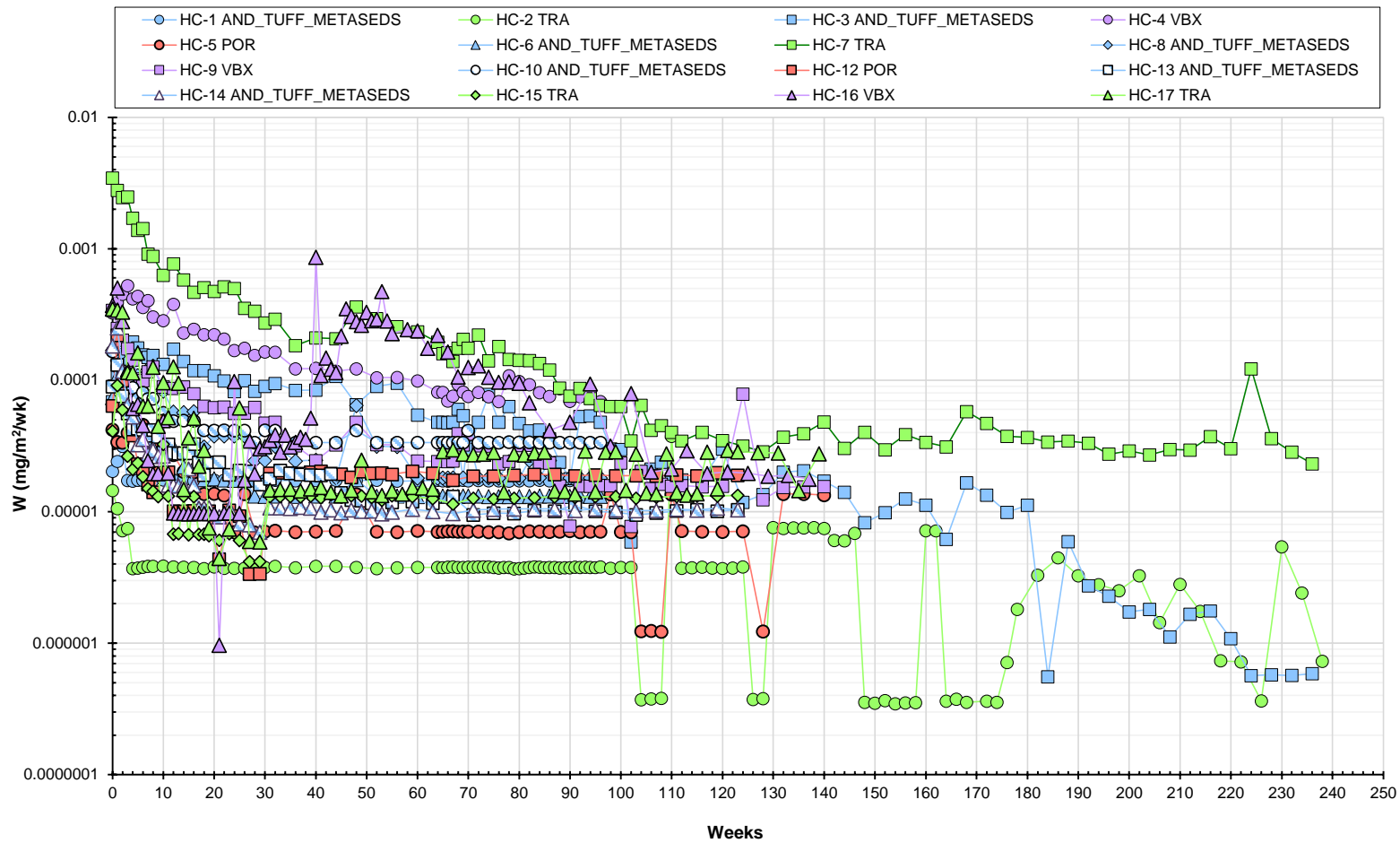


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Thallium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number	A-28		
Project Number	ONS2104		
Date	Apr-25		
Drawn	MT	Reviewed	EC

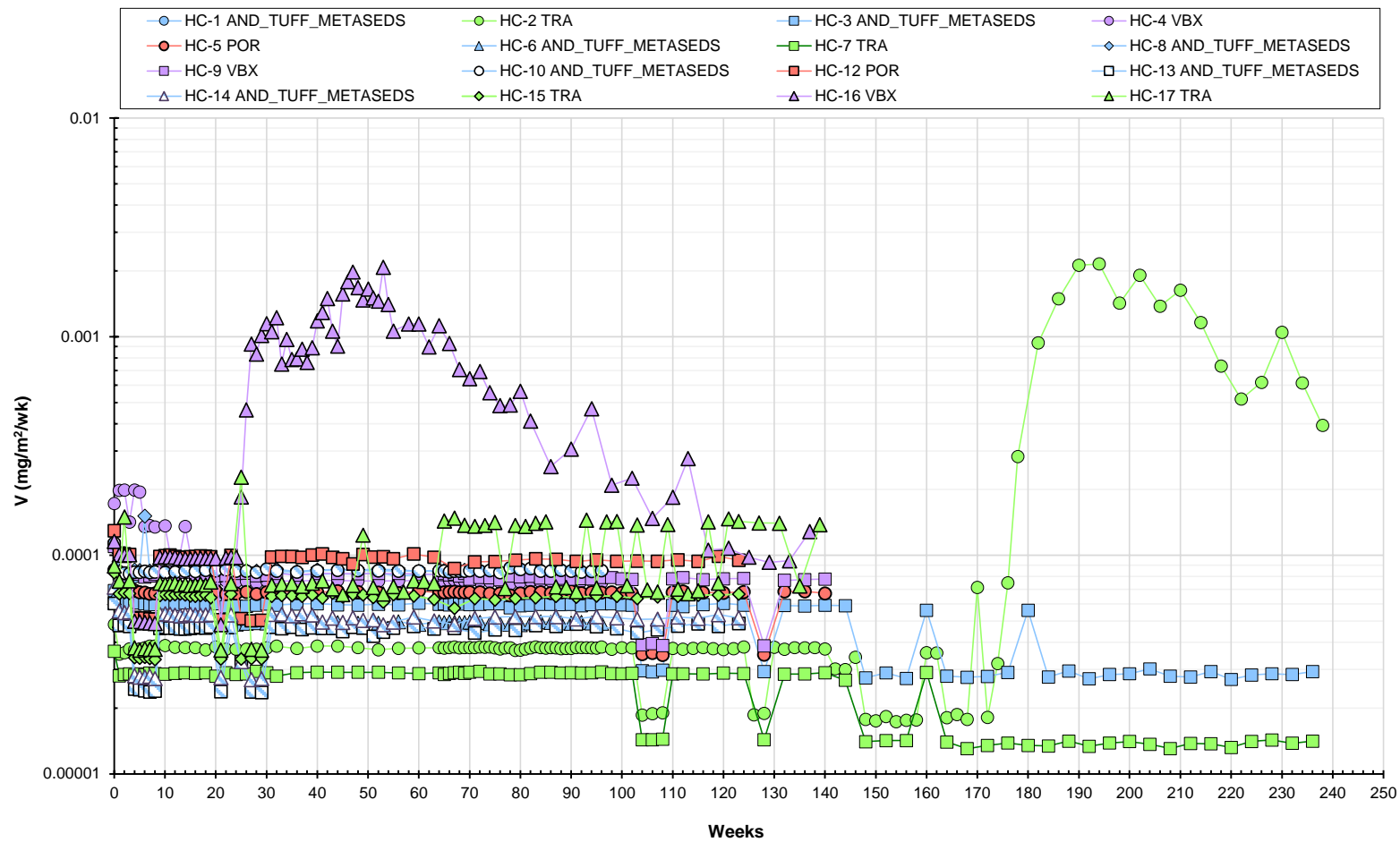


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Tungsten			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-29	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

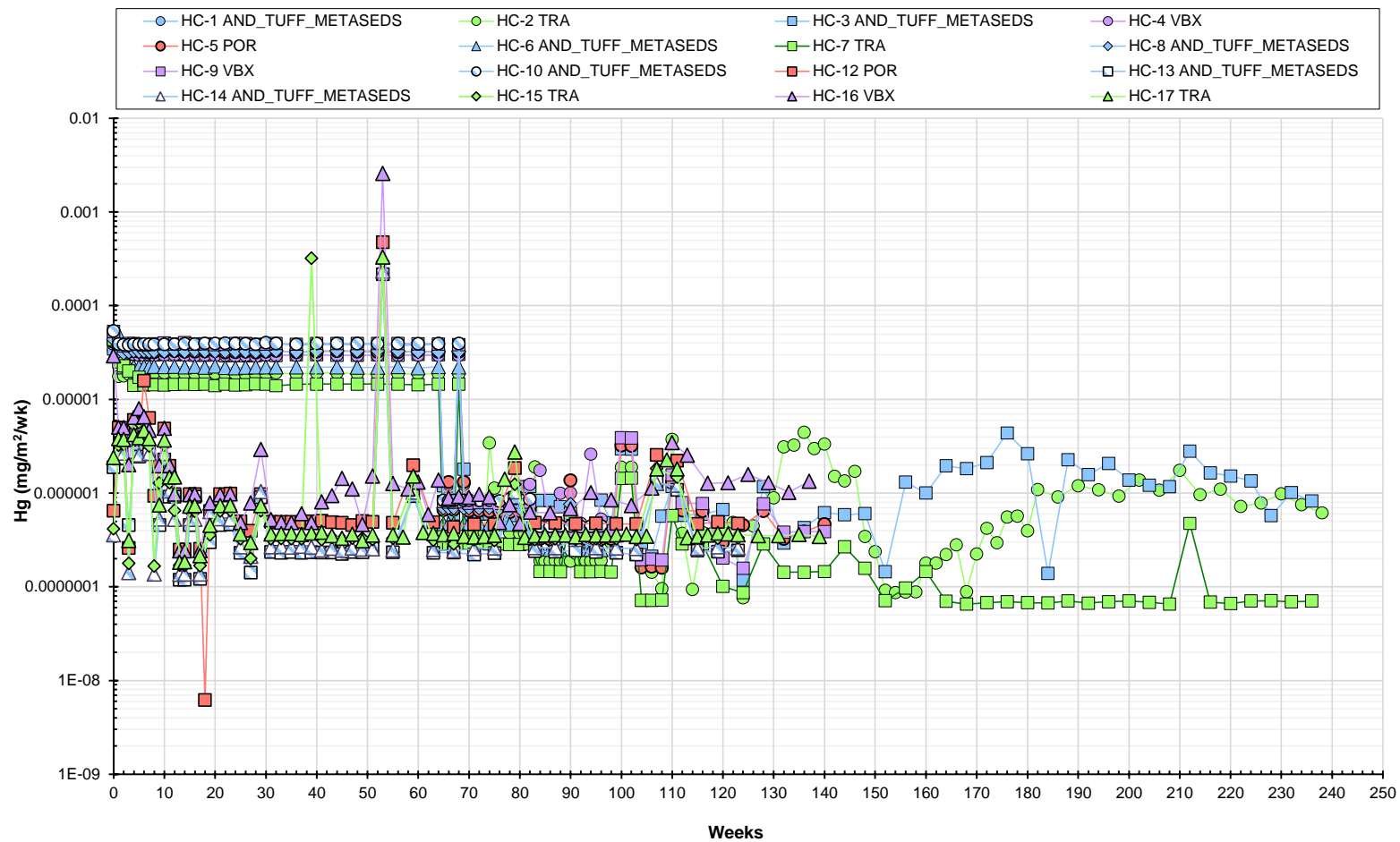


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Vanadium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-30	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

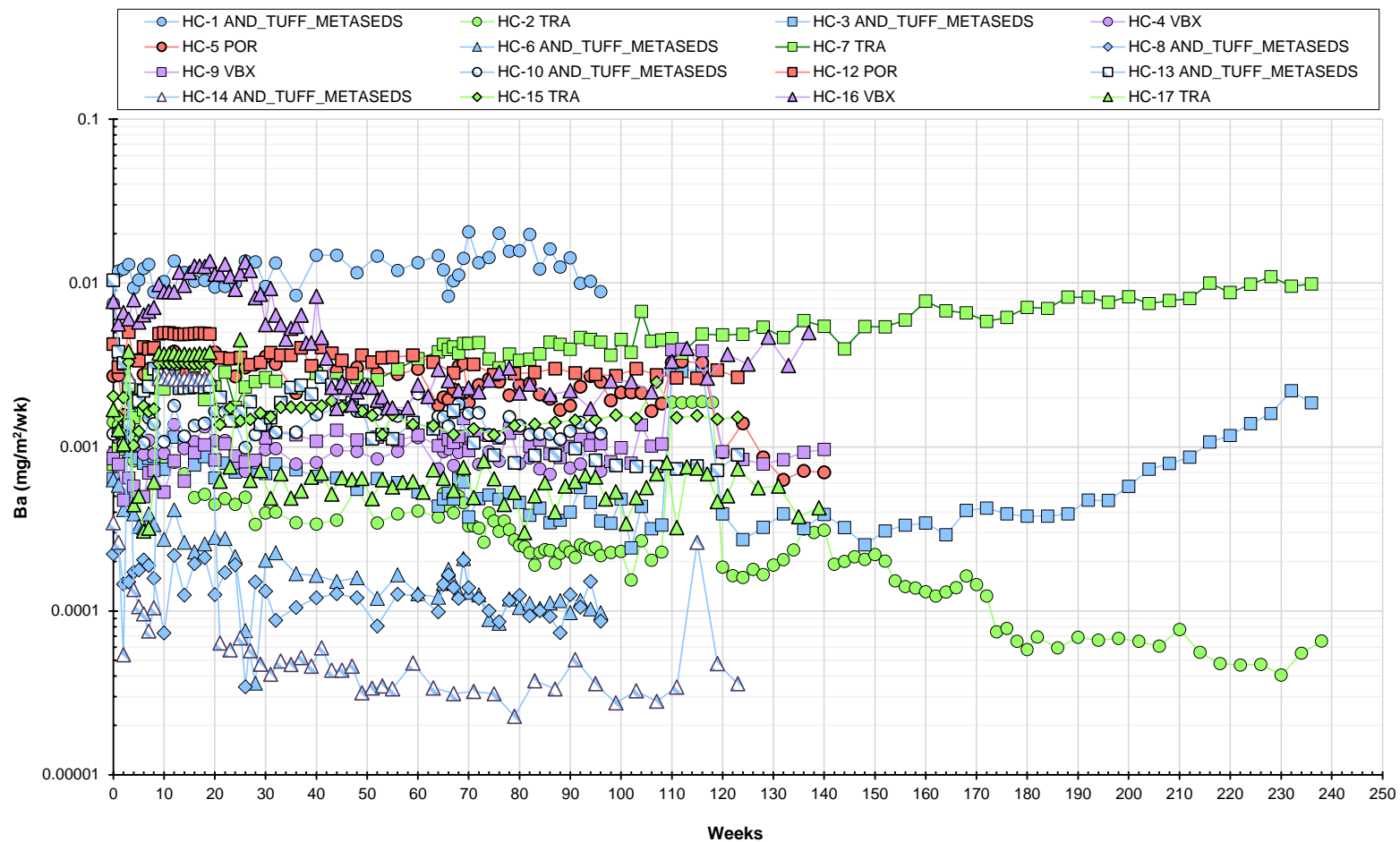


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Mercury			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-31	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

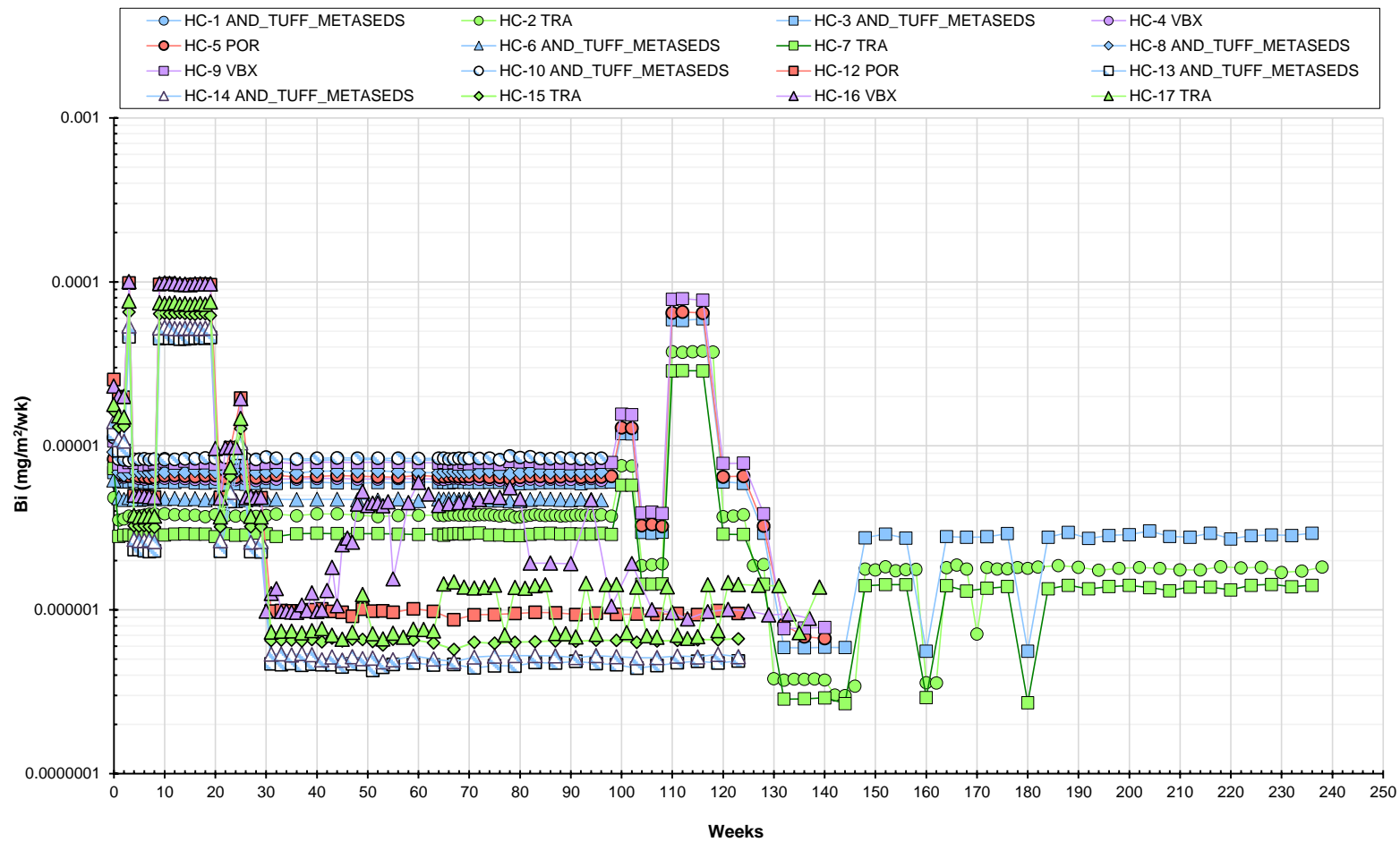


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Barium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-32	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

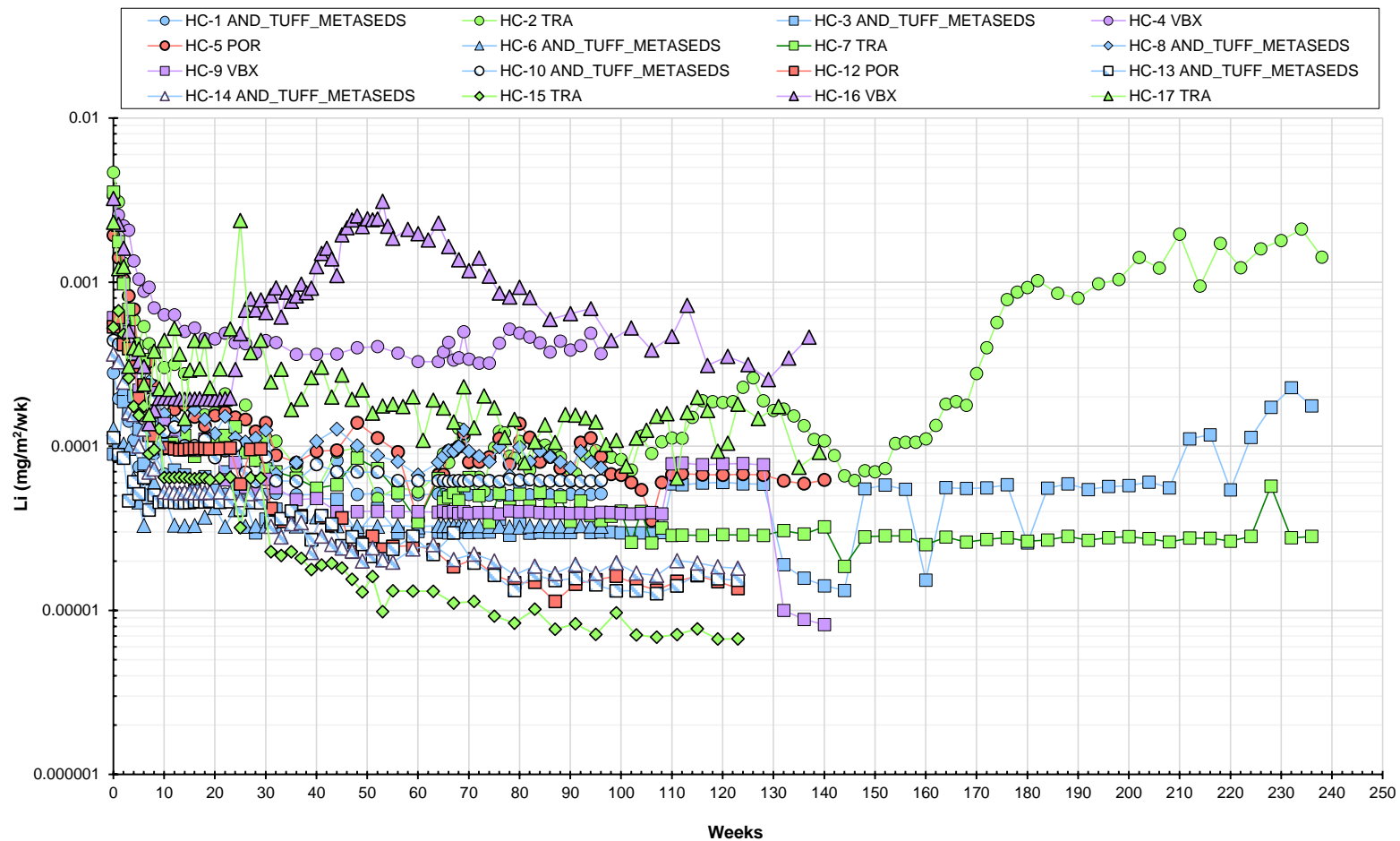


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Bismuth			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-33	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

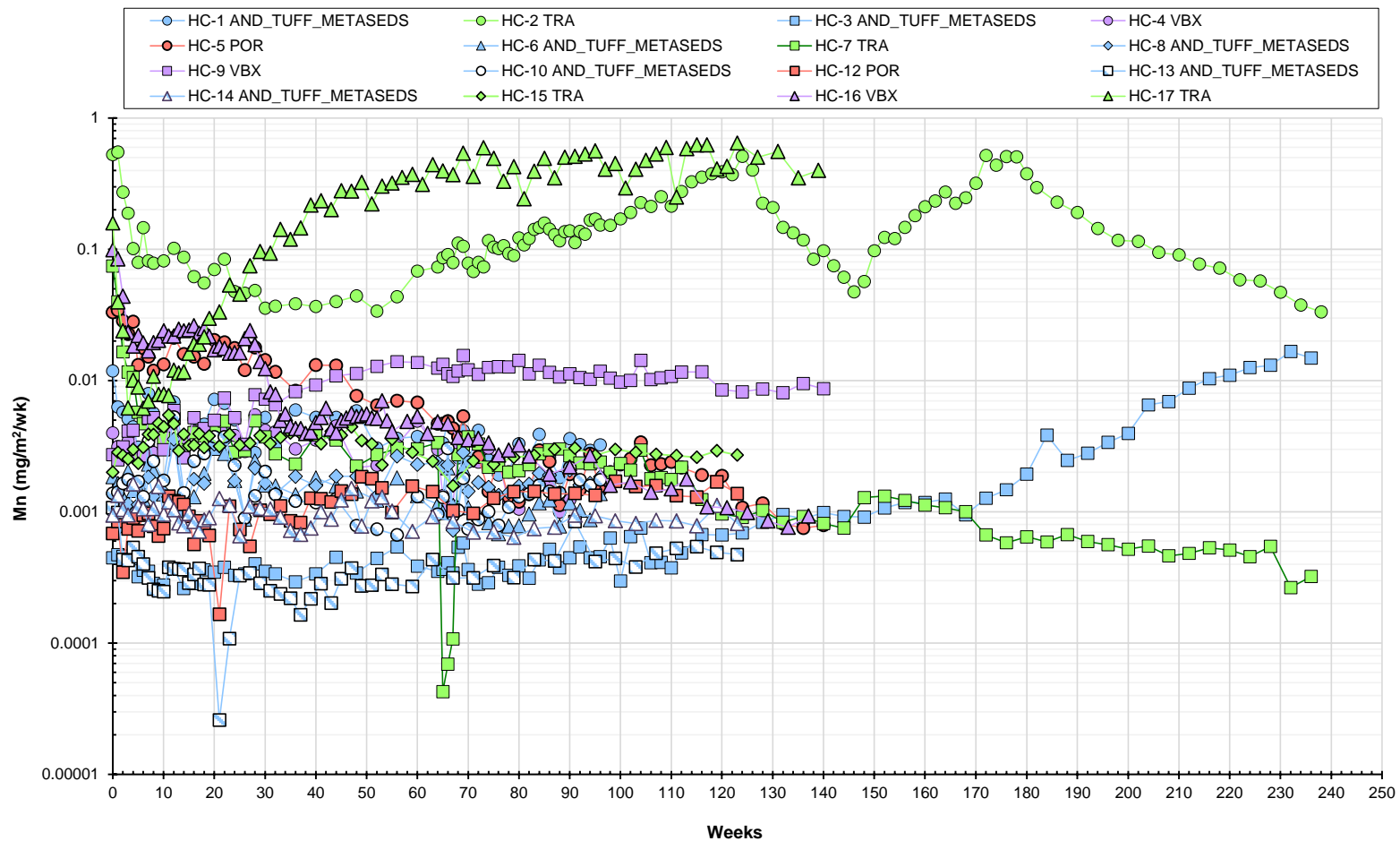


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Lithium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-34	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

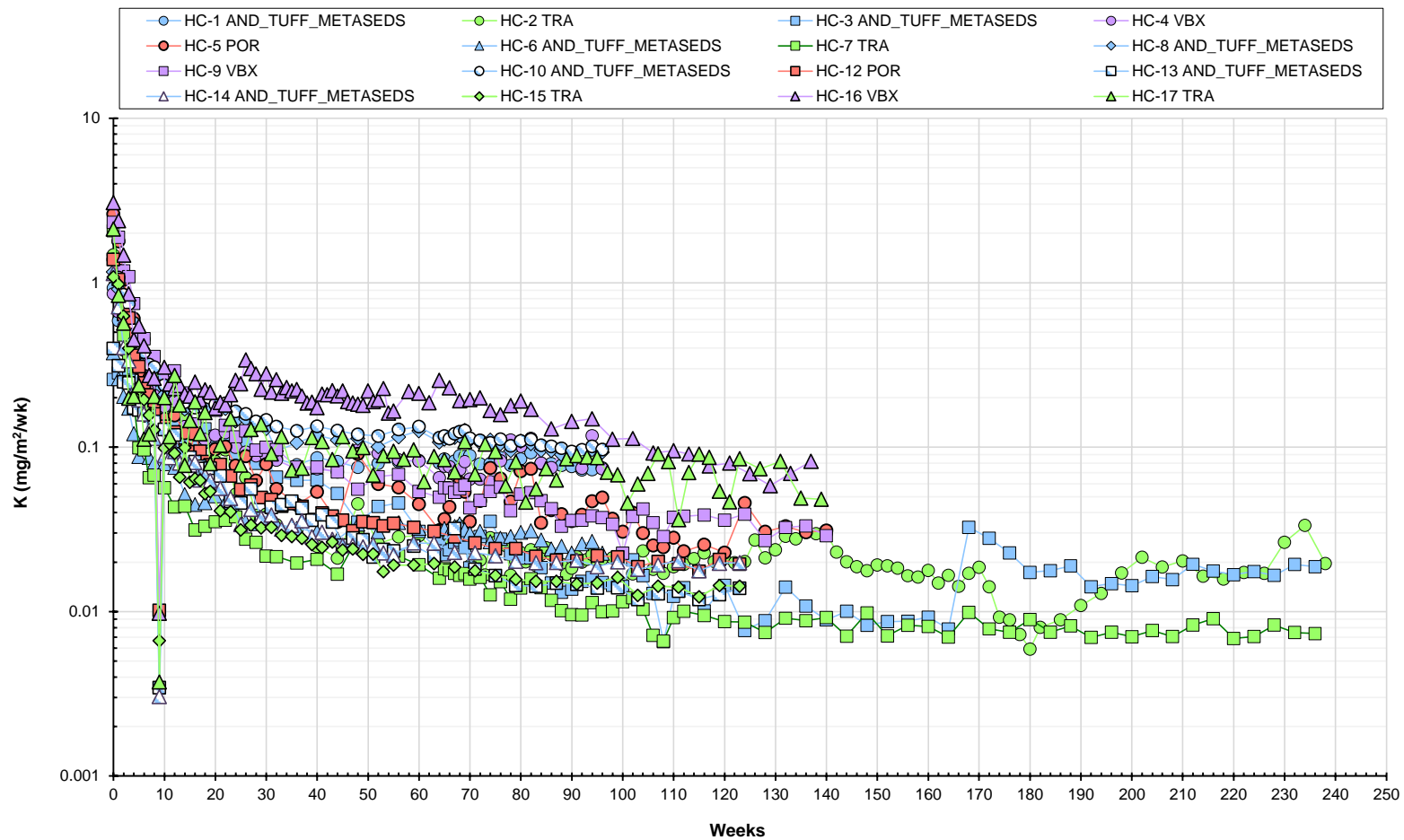


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Manganese			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-35	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

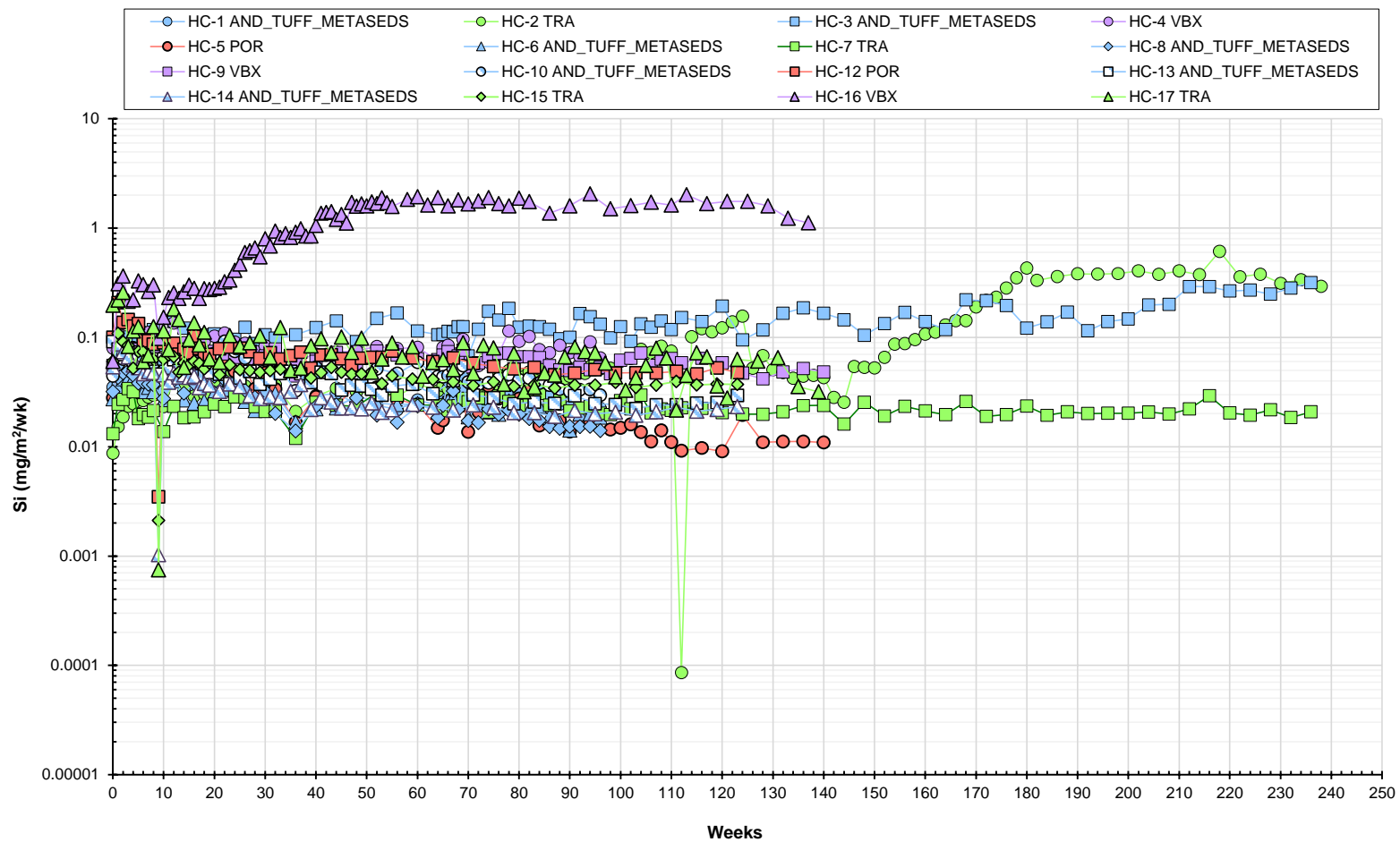


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Potassium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-36	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

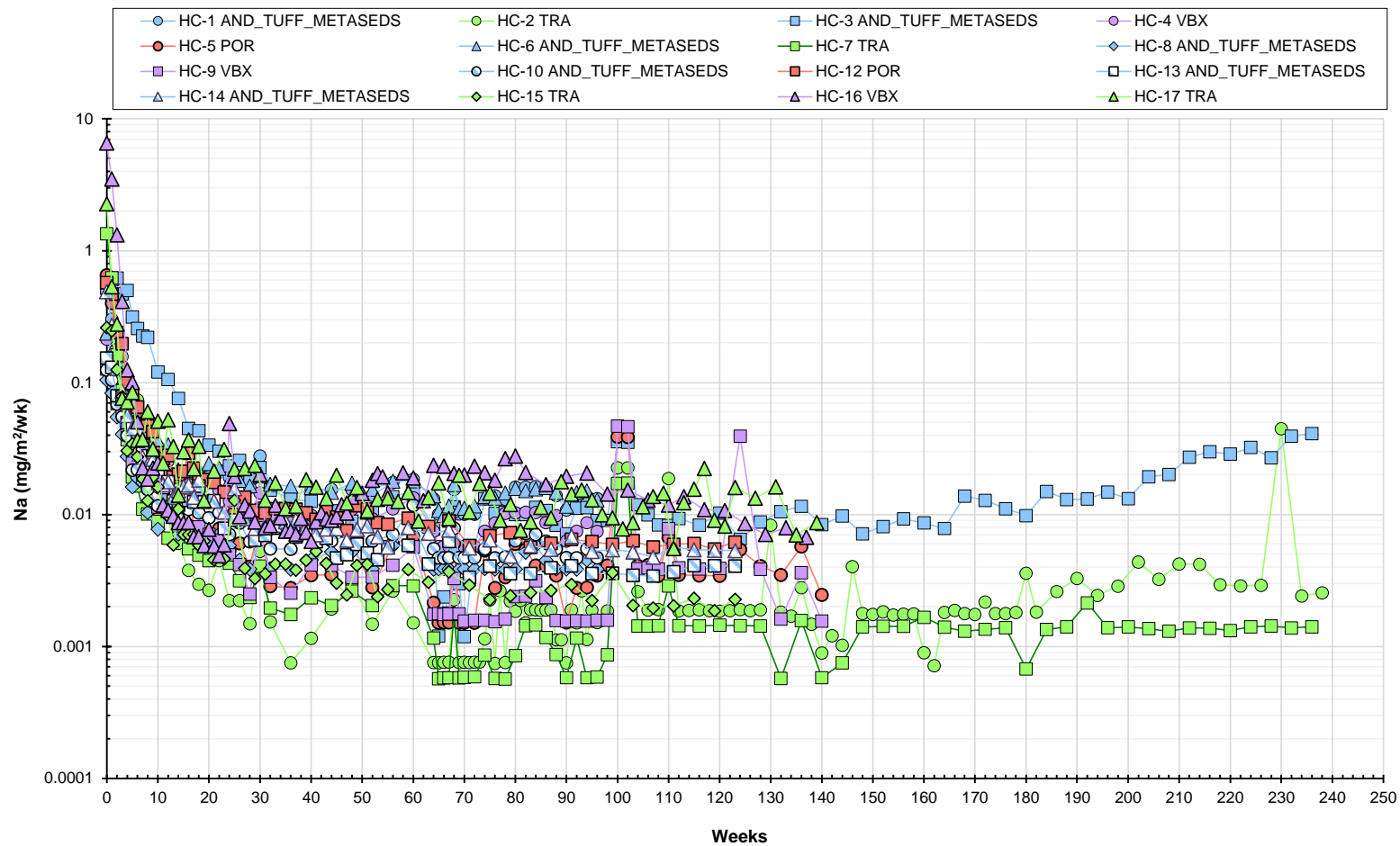


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Silicon			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-37	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

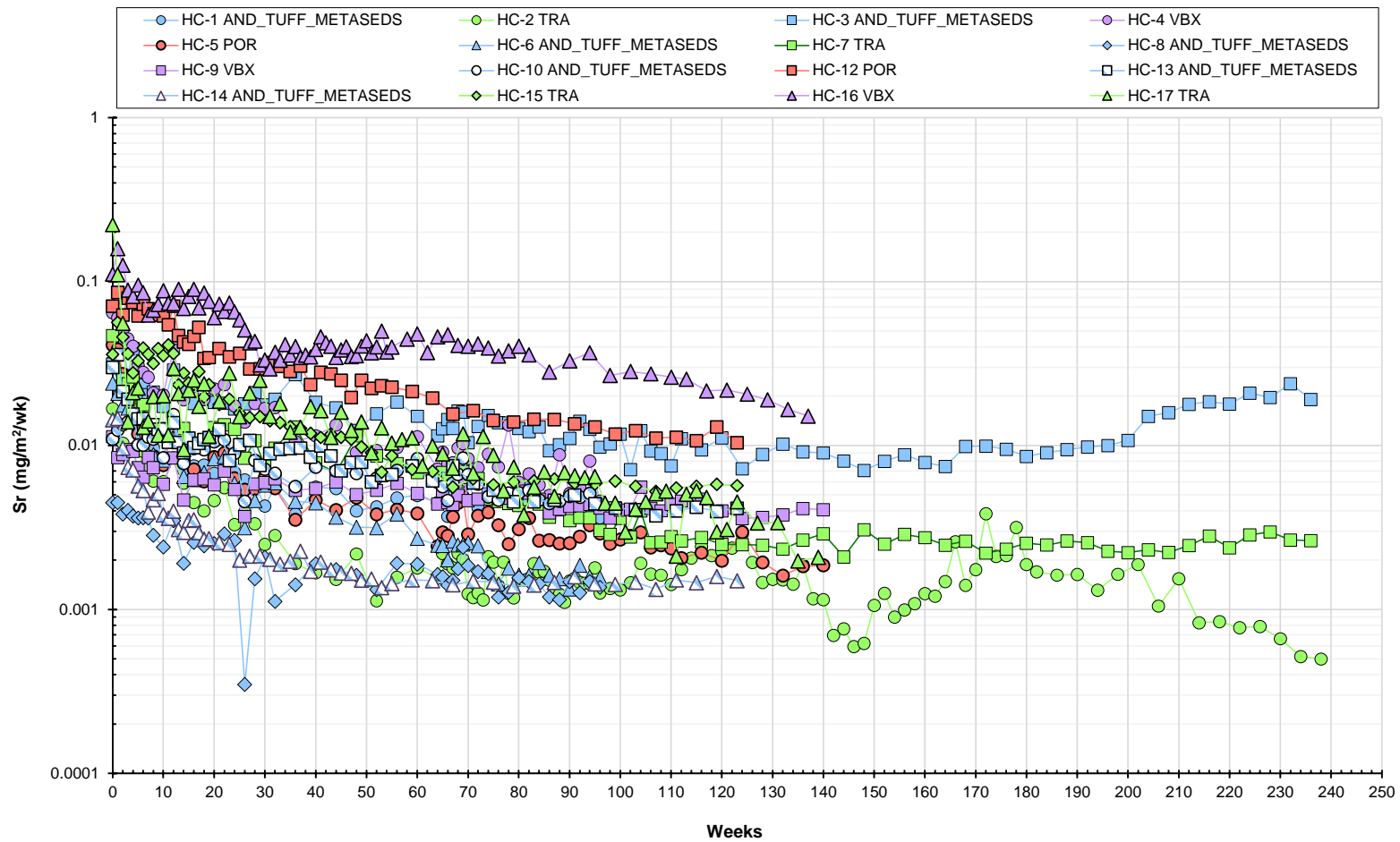


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Sodium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-38	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

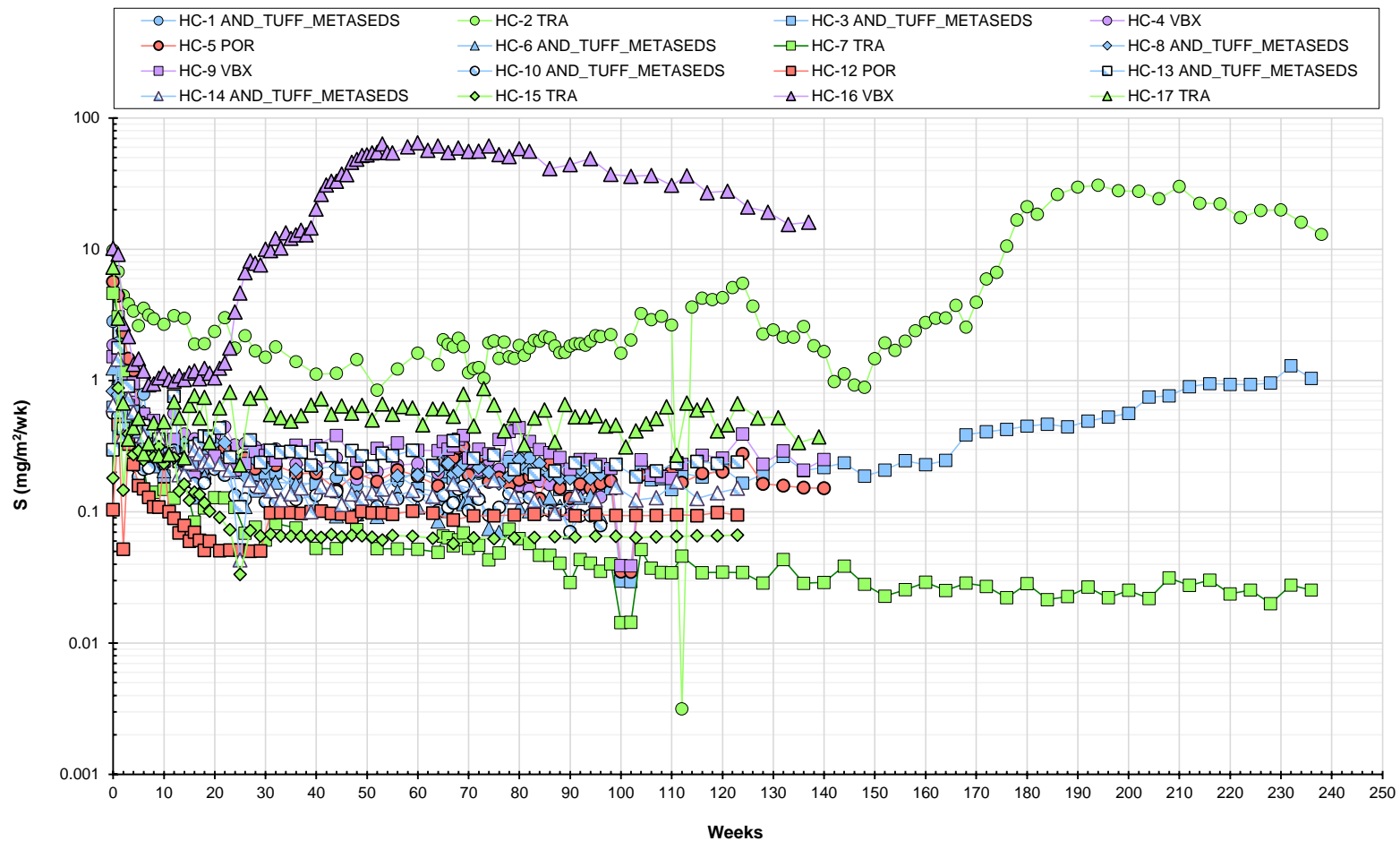


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Strontium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-39	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

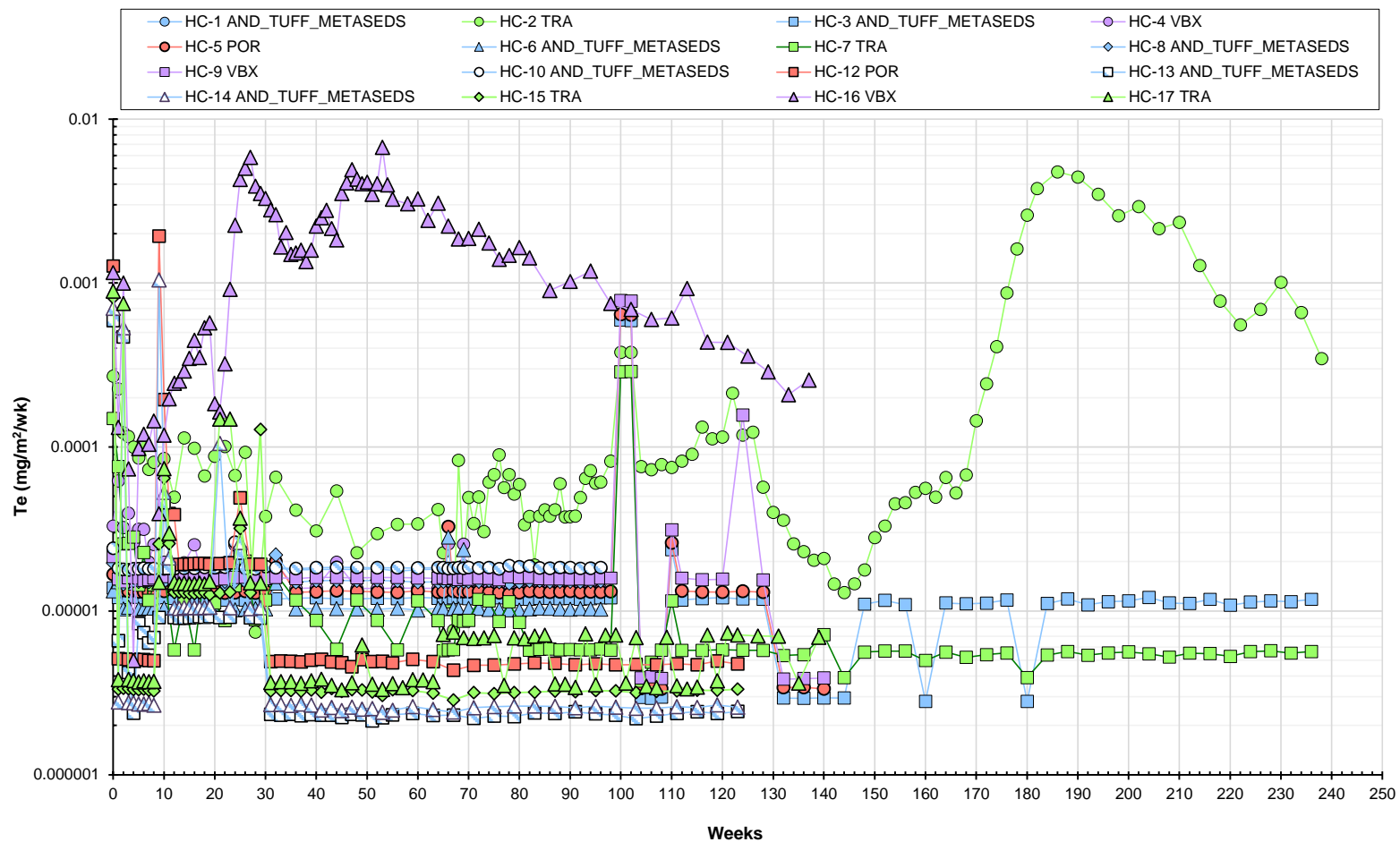


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Sulphur			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-40	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

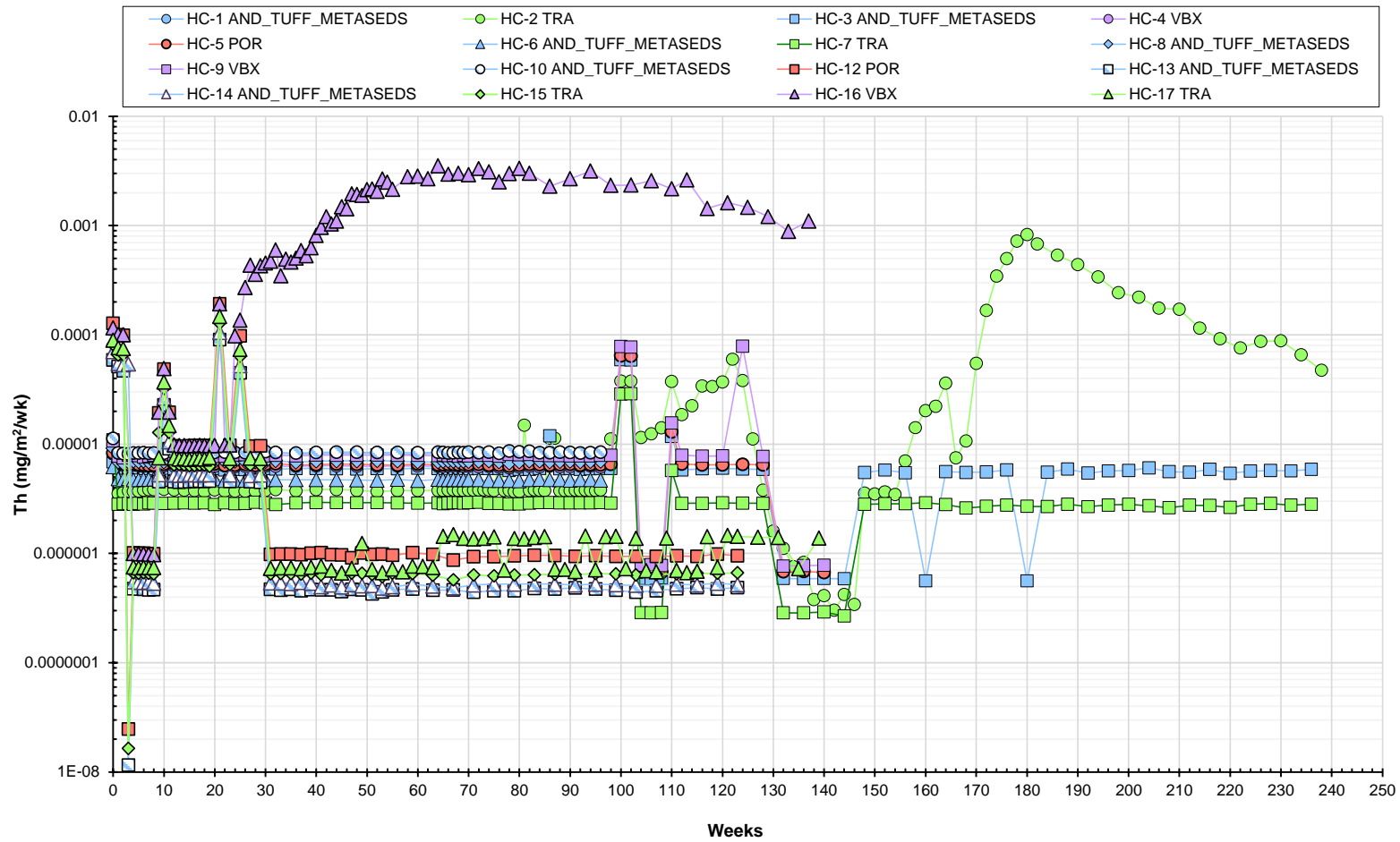


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Tellurium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-41	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

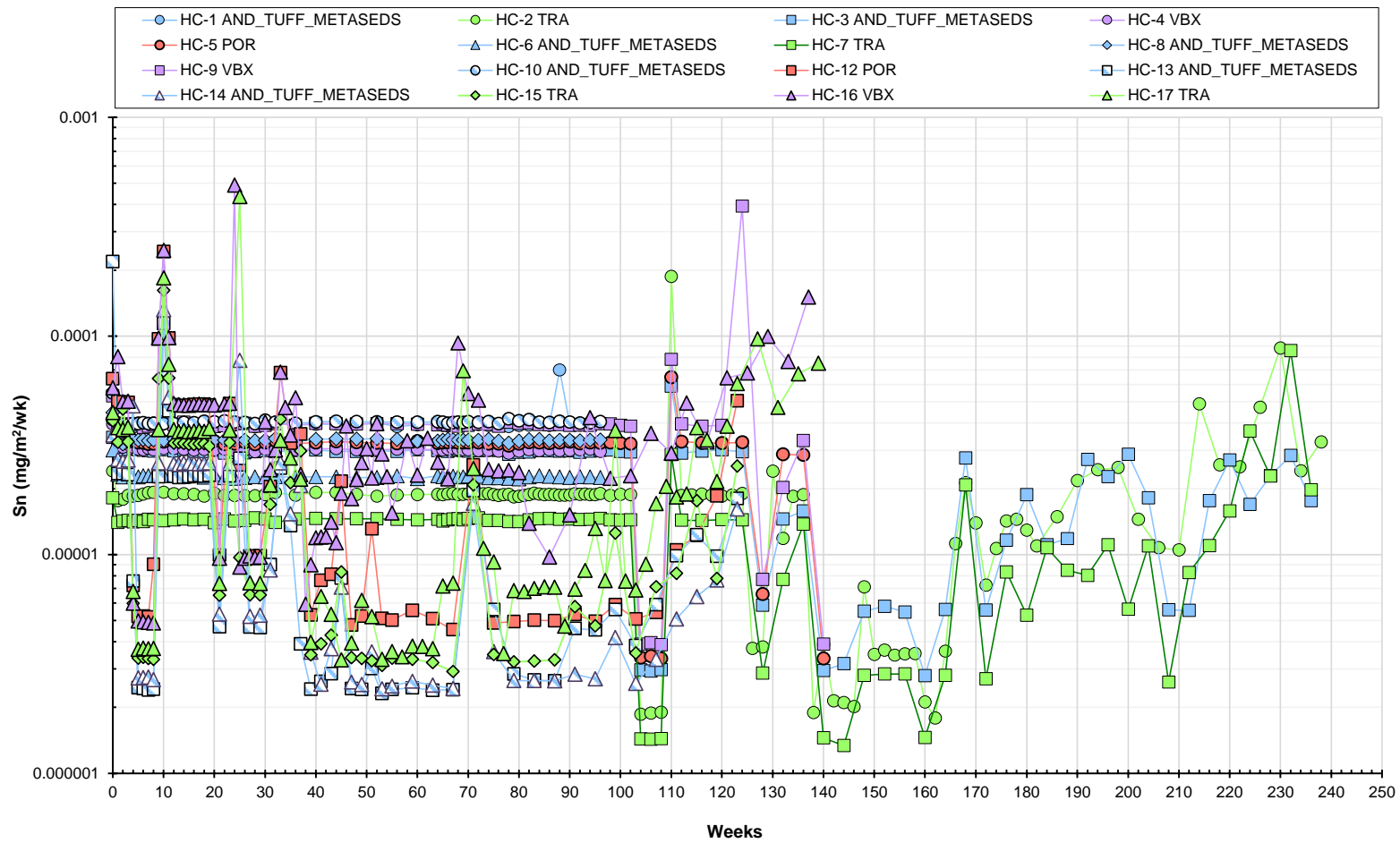


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Thorium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-42	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

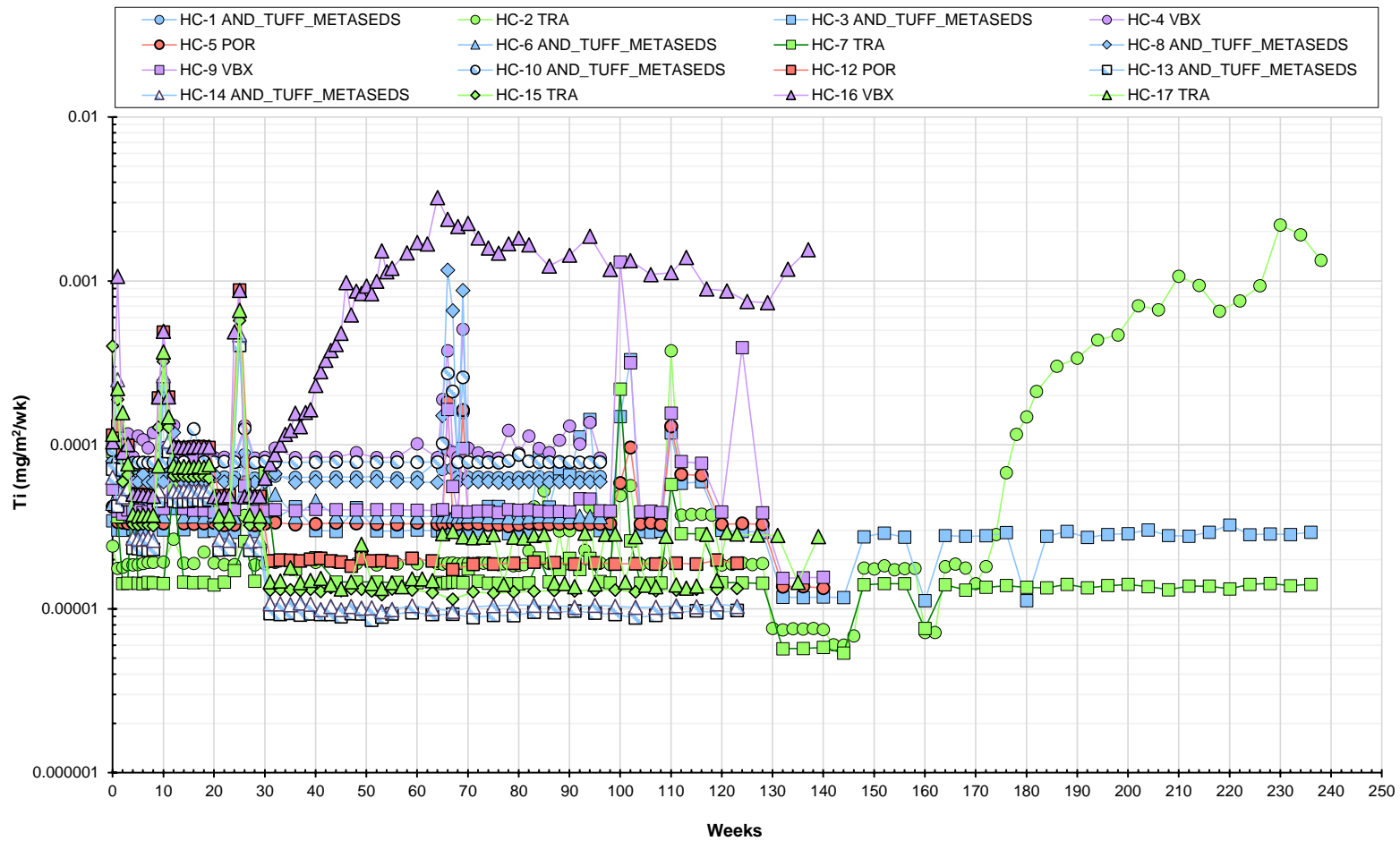


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Tin			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-43	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

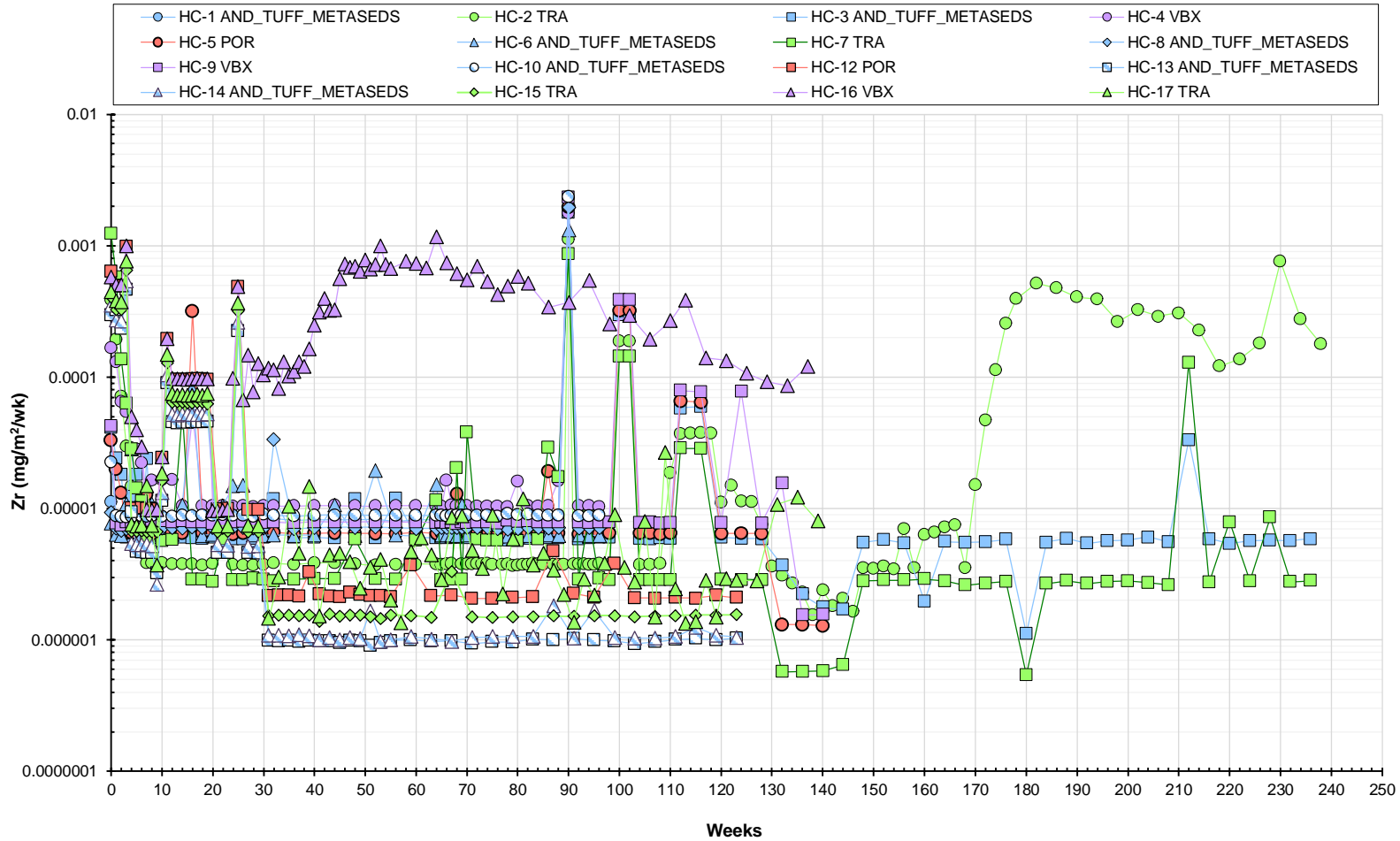


Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.
 Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.
 Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.
 Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Titanium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		A-44	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC



Notes

Humidity cells HC-1, HC-4, HC-6, HC-8, and HC-10 were terminated after 96 weeks of testing.

Humidity cells HC-5 and HC-9 were terminated after 140 weeks of testing.

Humidity cells HC-12, HC-13, HC-14, and HC-15 were terminated after 123 weeks of testing.

Results shown for terminated cells incorporate additional load from bottle roll testing where available.



Zirconium

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

Figure Number		A-45	
Project Number		ONS2104	
Date		Apr-25	
Drawn	MT	Reviewed	EC

Appendix B

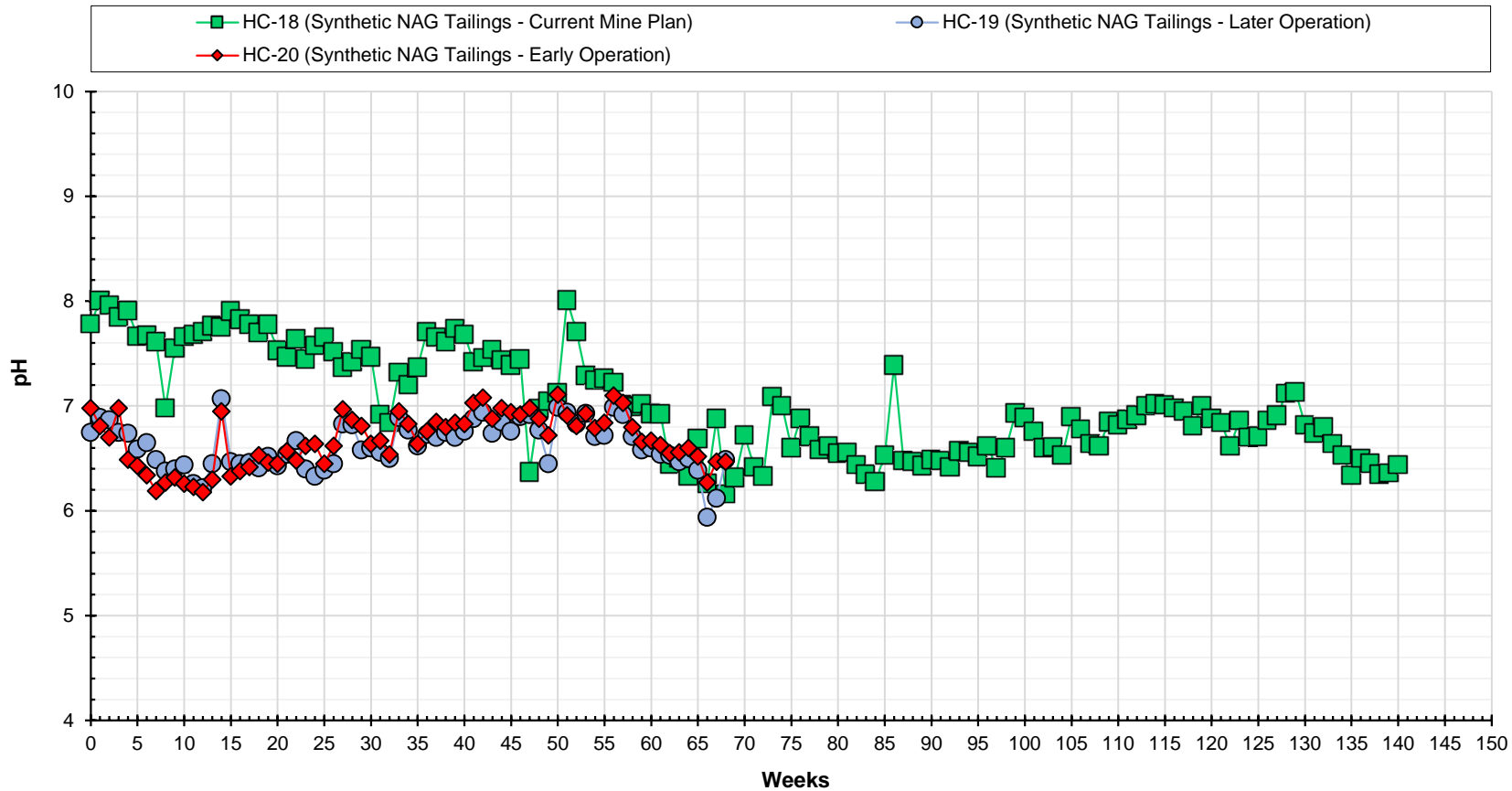
Tailings Humidity Cell Tests

Table B-1 Summary of Metal Release Rates - Tailings

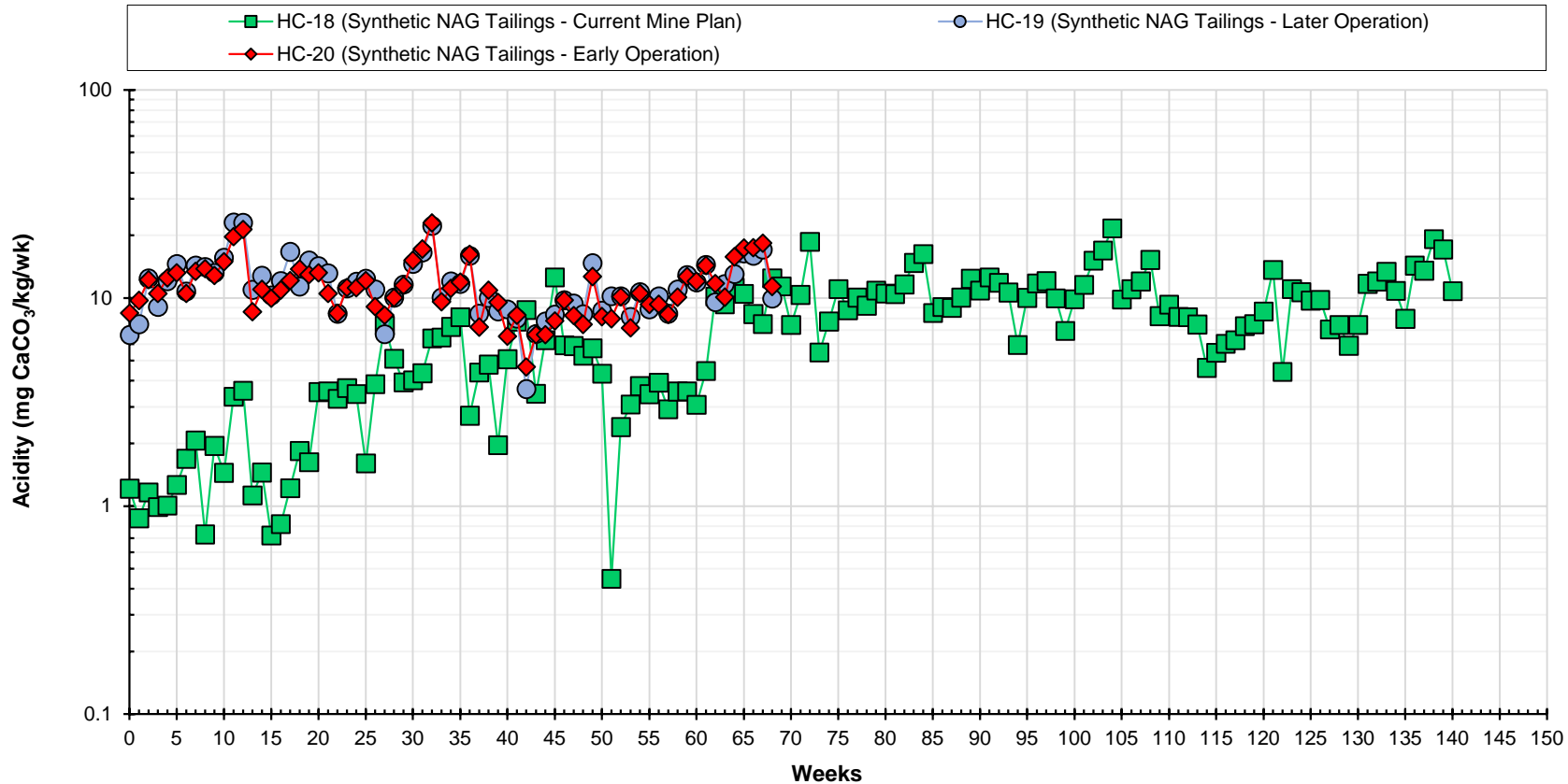
Parameter	Units	HC-18	HC-19	HC-20
Sample Type		Synthetic NAG Tailings (Current Mine Plan)	Synthetic NAG Tailings - Later Operation (Current Mine Plan)	Synthetic NAG Tailings - Early Operation (Current Mine Plan)
Weeks Operating / Status		140 / Ongoing	68 / Ongoing	68 / Ongoing
Weeks used for Steady State		Weeks 131-140	Weeks 58-67	Weeks 58-67
pH	pH Units	6.5	6.5	6.6
Acidity	mg CaCO ₃ /kg/wk	13	13	13
Alkalinity	mg CaCO ₃ /kg/wk	15	20	24
Sulphate	mg/kg/wk	1.0	4.8	1.5
Chloride	mg/kg/wk	0.13	0.93	0.94
Fluoride	mg/kg/wk	0.045	0.61	0.28
Aluminum (Al)	mg/kg/wk	0.090	0.011	0.025
Antimony (Sb)	mg/kg/wk	4.7E-04	3.6E-04	4.7E-04
Arsenic (As)	mg/kg/wk	9.9E-04	4.0E-04	5.1E-04
Barium (Ba)	mg/kg/wk	0.090	0.20	0.23
Beryllium (Be)	mg/kg/wk	4.4E-06	8.6E-06	4.4E-06
Bismuth (Bi)	mg/kg/wk	4.4E-06	8.6E-06	4.4E-06
Boron (B)	mg/kg/wk	8.9E-04	0.0018	0.0010
Cadmium (Cd)	mg/kg/wk	3.9E-06	9.1E-06	9.1E-06
Calcium (Ca)	mg/kg/wk	4.7	7.6	6.8
Chromium (Cr)	mg/kg/wk	2.2E-04	4.3E-04	2.2E-04
Cobalt (Co)	mg/kg/wk	5.5E-05	1.1E-04	2.1E-04
Copper (Cu)	mg/kg/wk	0.0017	0.0010	9.1E-04
Iron (Fe)	mg/kg/wk	0.027	0.011	0.015
Lead (Pb)	mg/kg/wk	2.6E-04	1.0E-04	4.0E-05
Lithium (Li)	mg/kg/wk	2.3E-04	5.2E-04	6.7E-04
Magnesium (Mg)	mg/kg/wk	0.71	0.91	2.1
Manganese (Mn)	mg/kg/wk	0.013	0.034	0.0077
Mercury (Hg)	mg/kg/wk	2.2E-06	2.2E-06	2.2E-06
Molybdenum (Mo)	mg/kg/wk	0.0019	0.015	0.037
Nickel (Ni)	mg/kg/wk	3.7E-05	4.9E-05	3.2E-05
Phosphorous (P)	mg/kg/wk	0.0022	0.0022	0.0022
Potassium (K)	mg/kg/wk	0.43	0.57	0.71
Selenium (Se)	mg/kg/wk	9.0E-05	2.0E-04	2.7E-04
Silicon (Si)	mg/kg/wk	0.51	0.53	0.51
Silver (Ag)	mg/kg/wk	9.4E-06	8.6E-06	5.2E-06
Sodium (Na)	mg/kg/wk	0.061	0.087	0.072
Strontium (Sr)	mg/kg/wk	0.085	4.4	0.36
Sulphur (S)	mg/kg/wk	0.44	2.1	0.48
Tellurium (Te)	mg/kg/wk	2.2E-05	4.5E-05	2.2E-05
Thallium (Tl)	mg/kg/wk	1.1E-05	1.6E-05	2.3E-05
Thorium (Th)	mg/kg/wk	4.4E-06	1.7E-05	6.3E-06
Tin (Sn)	mg/kg/wk	1.9E-04	4.5E-05	2.9E-05
Titanium (Ti)	mg/kg/wk	5.1E-04	1.7E-04	1.5E-04
Tungsten (W)	mg/kg/wk	1.6E-04	1.7E-04	1.3E-04
Uranium (U)	mg/kg/wk	2.0E-04	6.6E-04	7.7E-04
Vanadium (V)	mg/kg/wk	4.4E-04	8.6E-04	4.4E-04
Zinc (Zn)	mg/kg/wk	8.5E-04	8.6E-04	5.2E-04
Zirconium (Zr)	mg/kg/wk	2.0E-04	5.1E-05	6.4E-05

Notes:

Release rates based on the last 10 weeks of testing.
Phosphorus measured by colourimetry.



pH			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-1	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



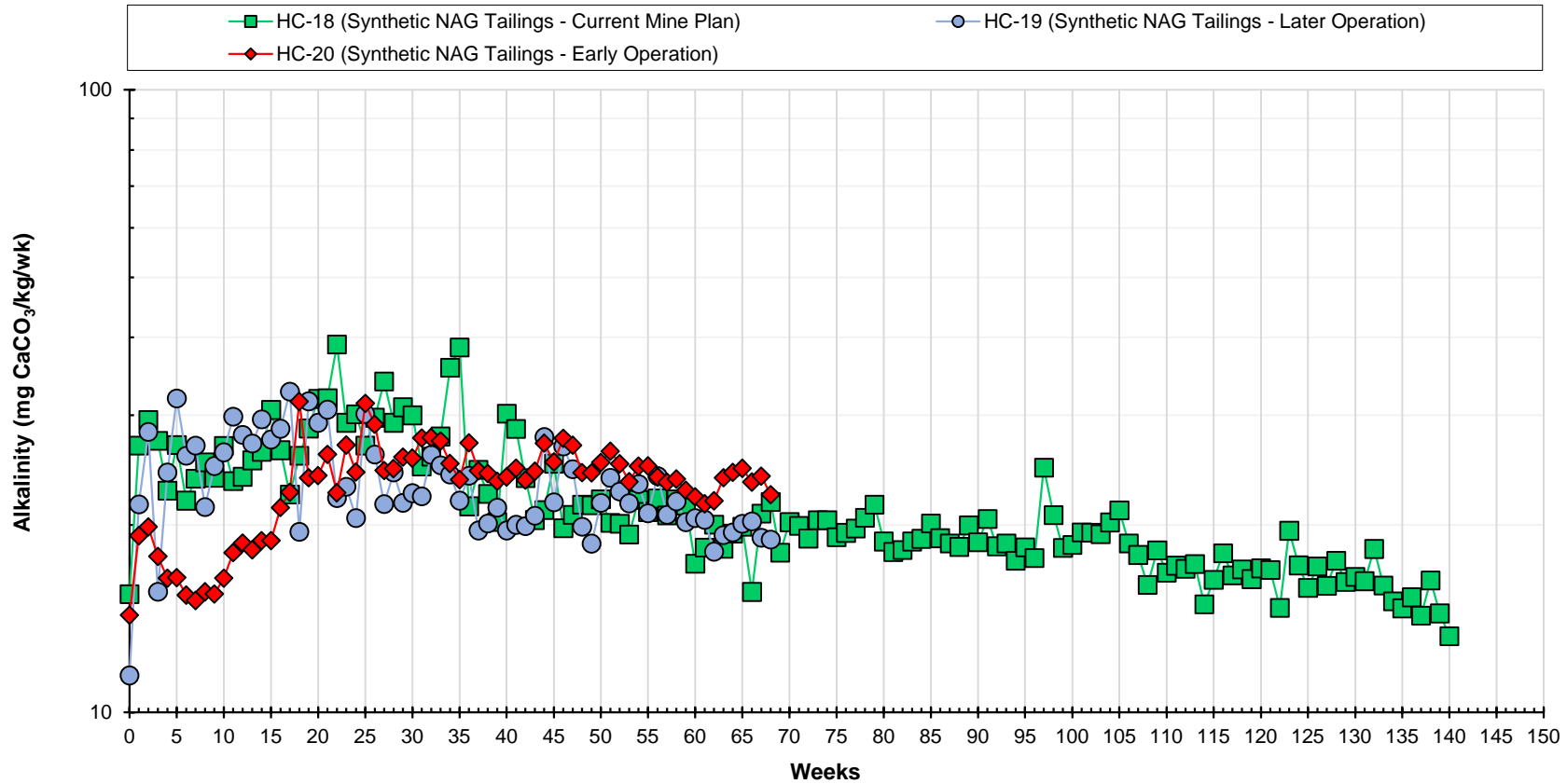
Acidity (to pH 8.3)

**Baseline Kinetic Geochemical Testing Report -
Kinetic Testing Update - Q4 2024**

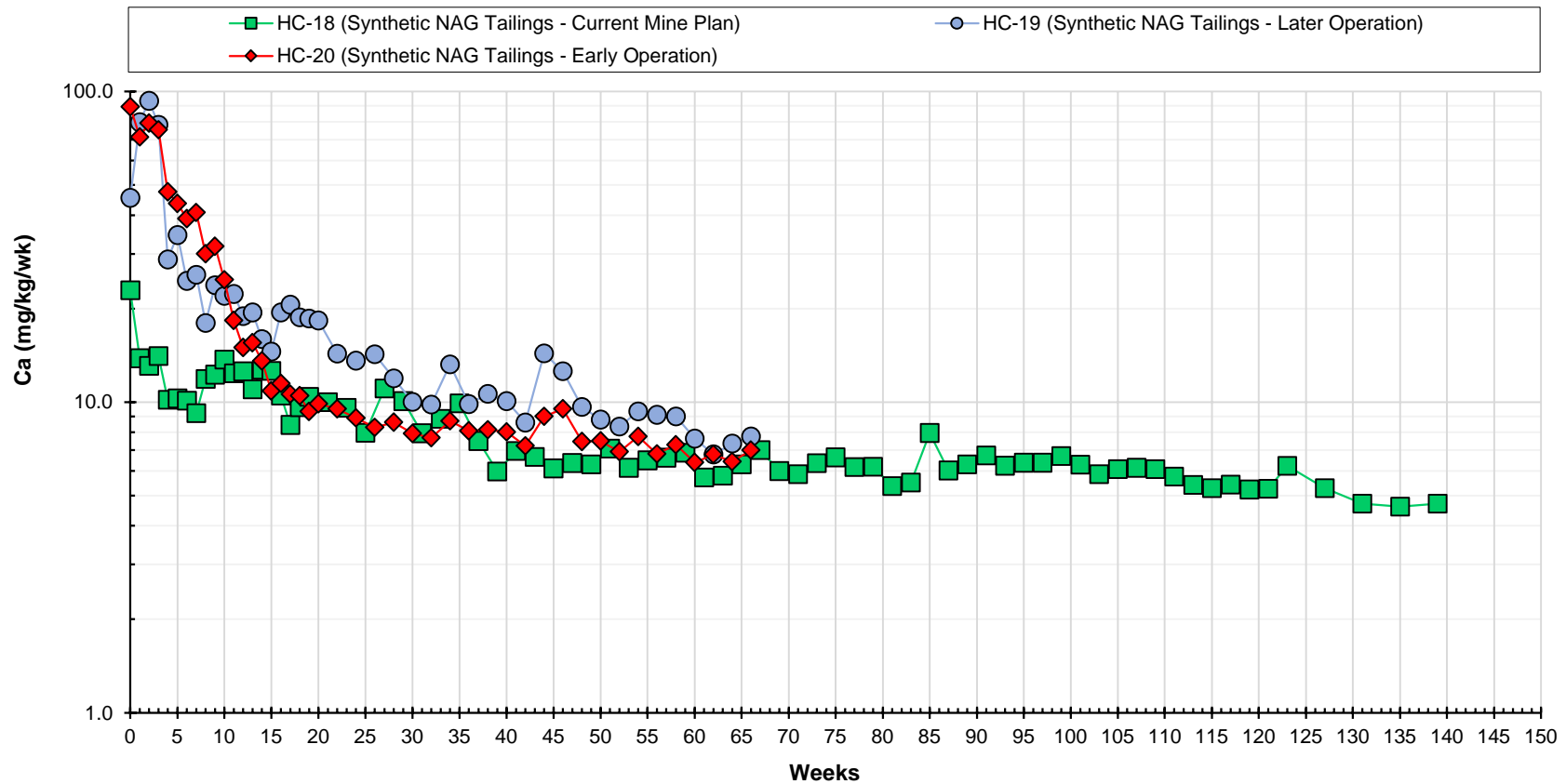
Springpole Gold Project

Figure Number		B-2	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

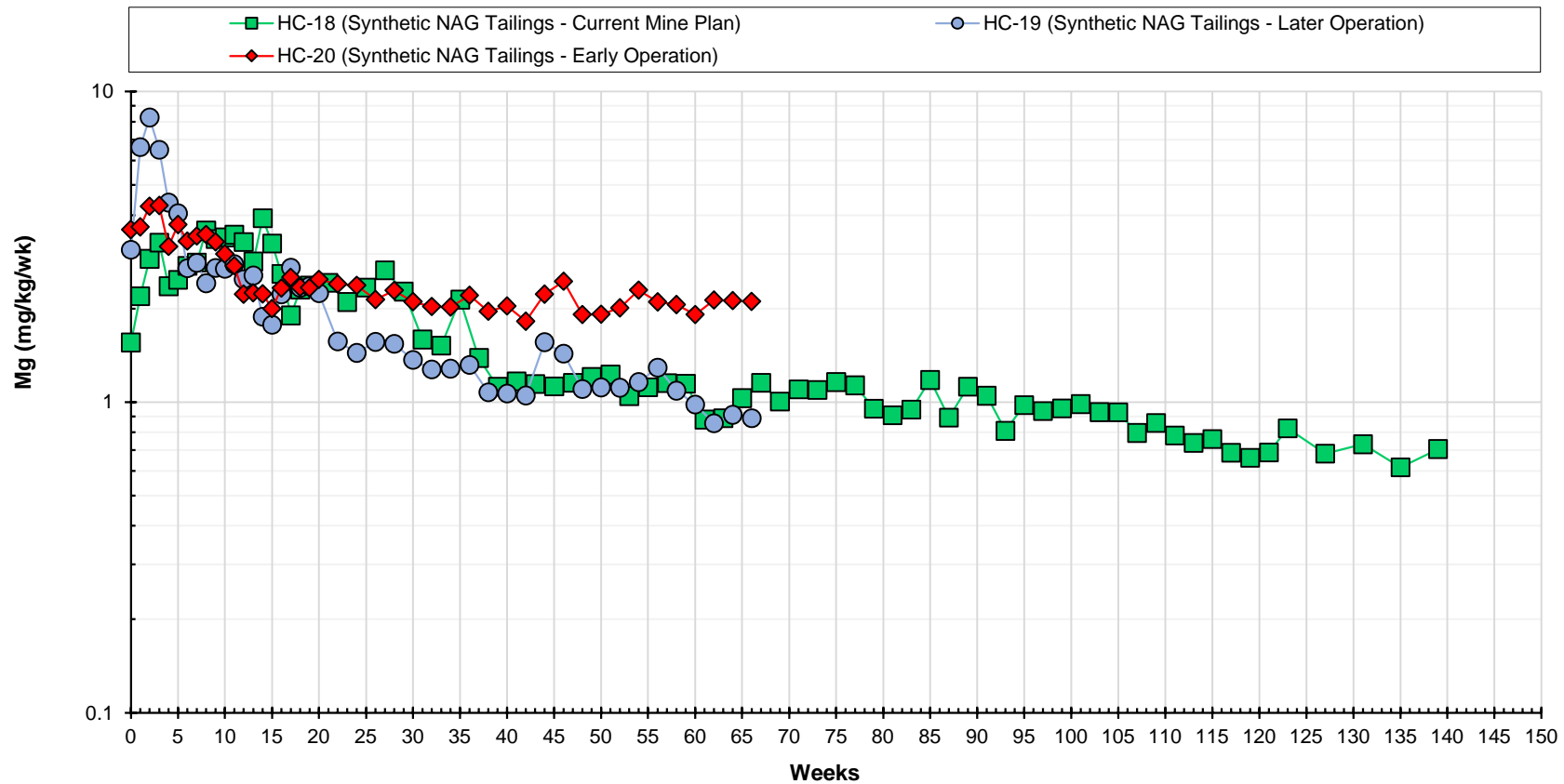




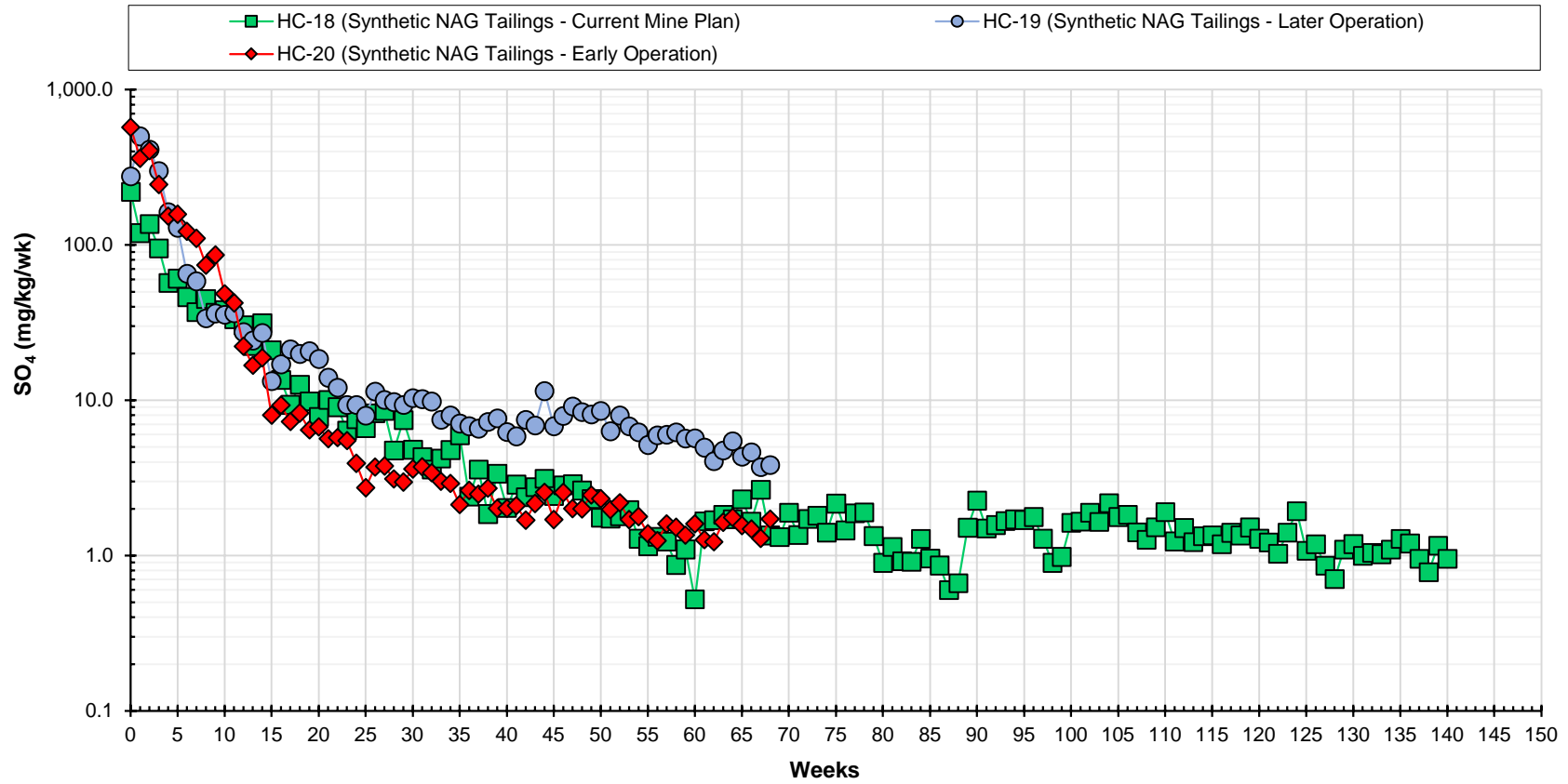
Alkalinity (to pH 4.5)			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-3	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



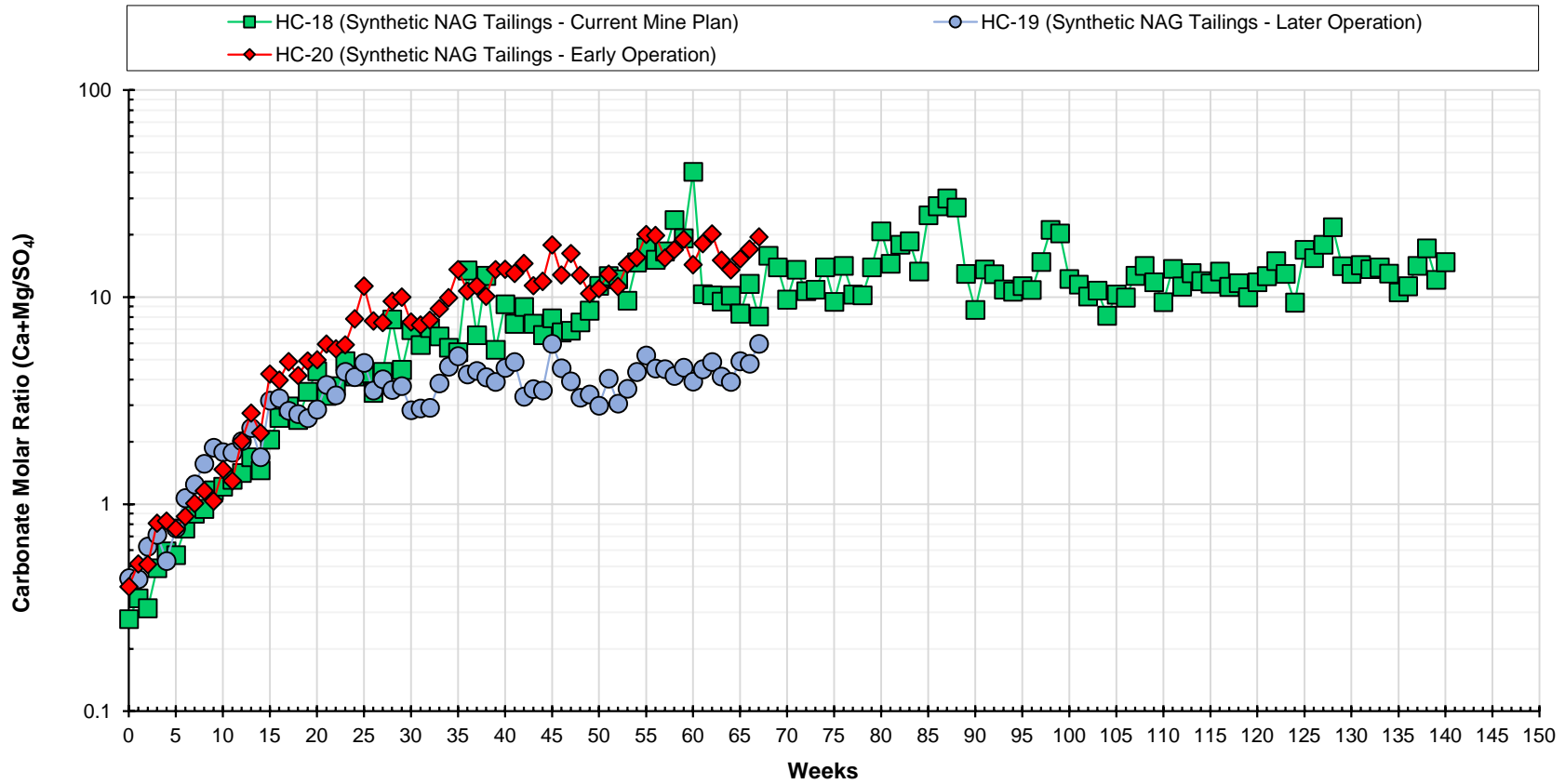
Calcium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-4	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



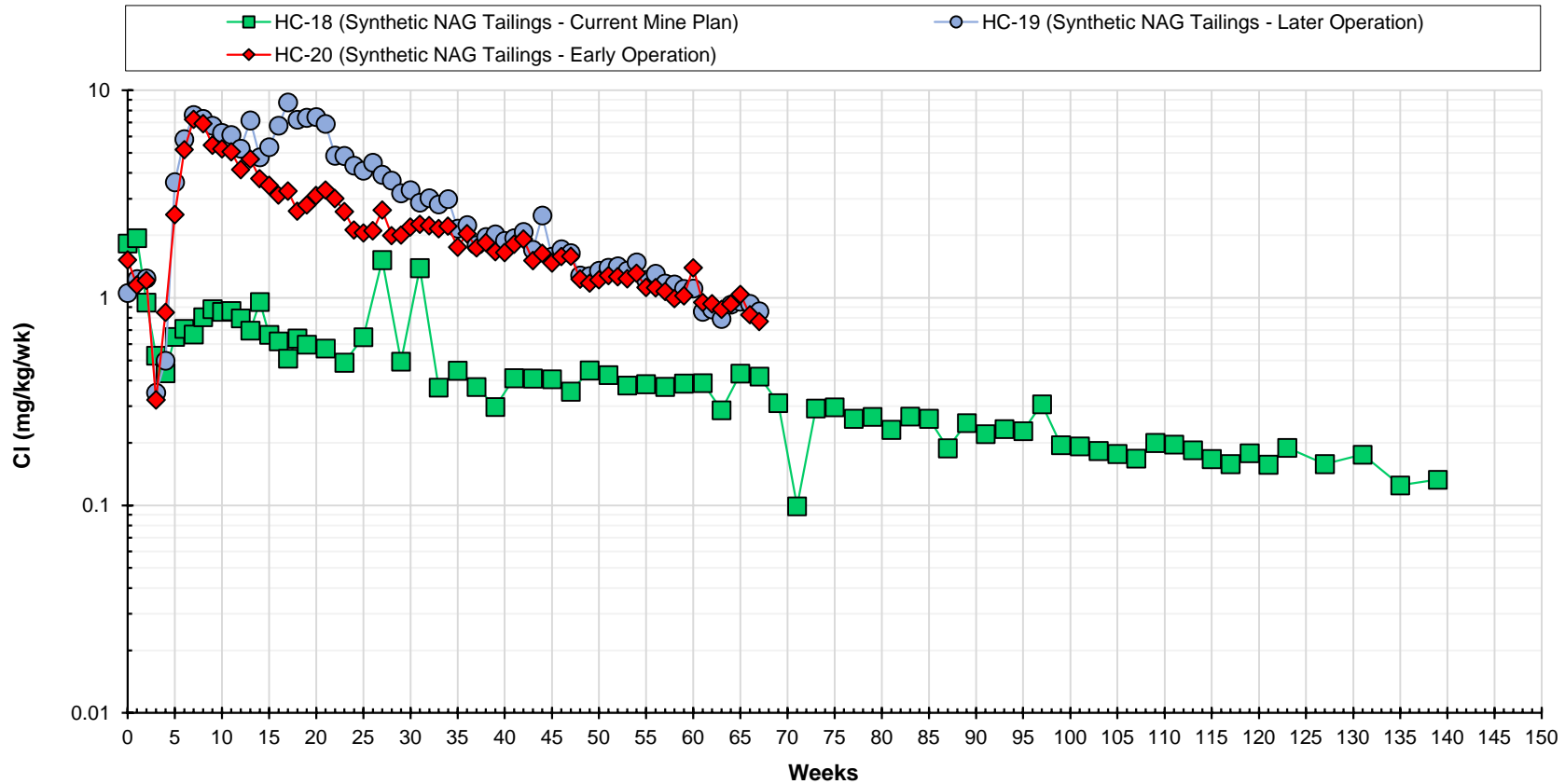
Magnesium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-5	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



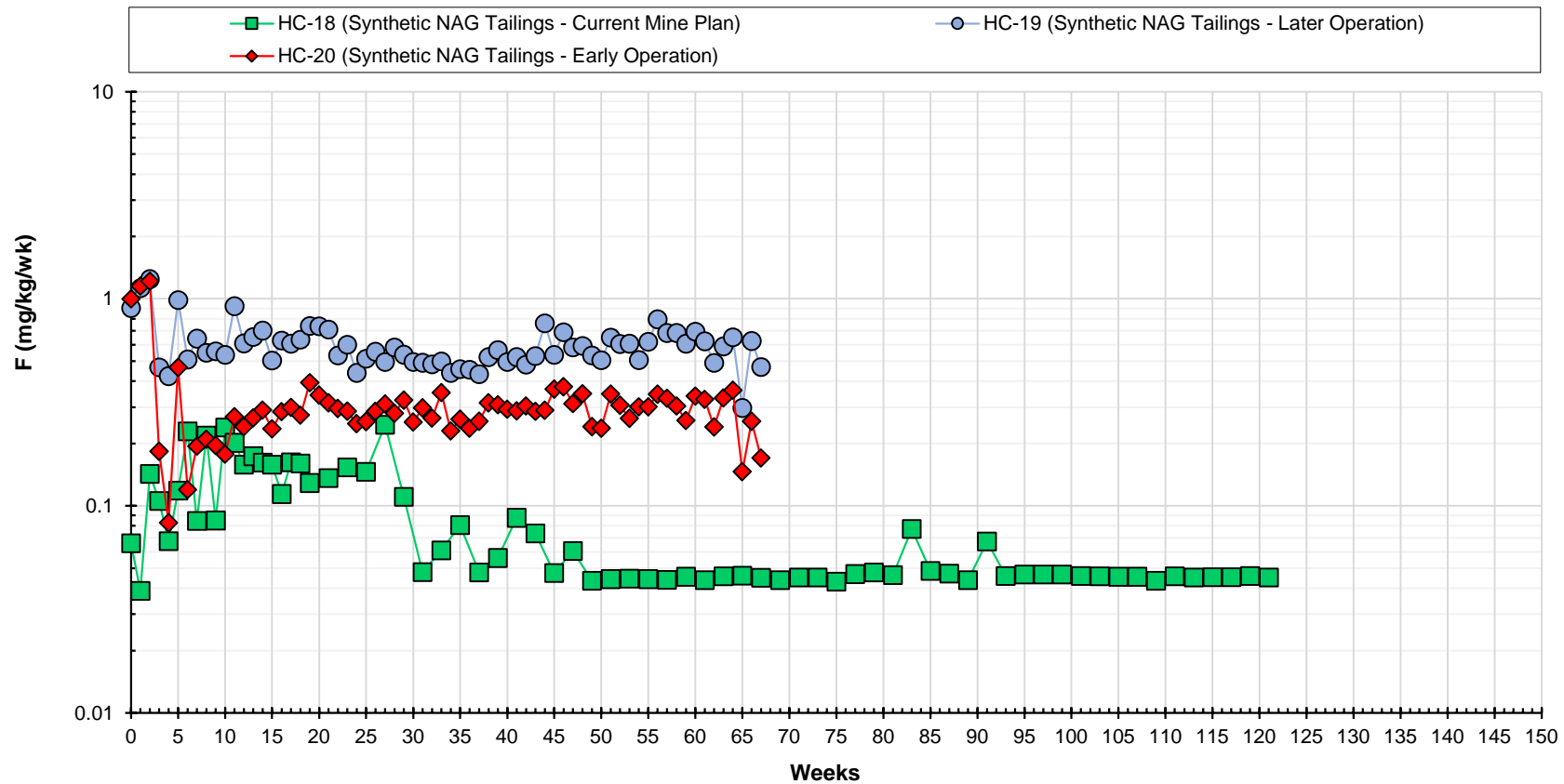
Sulphate			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-6	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



CMR			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-7	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

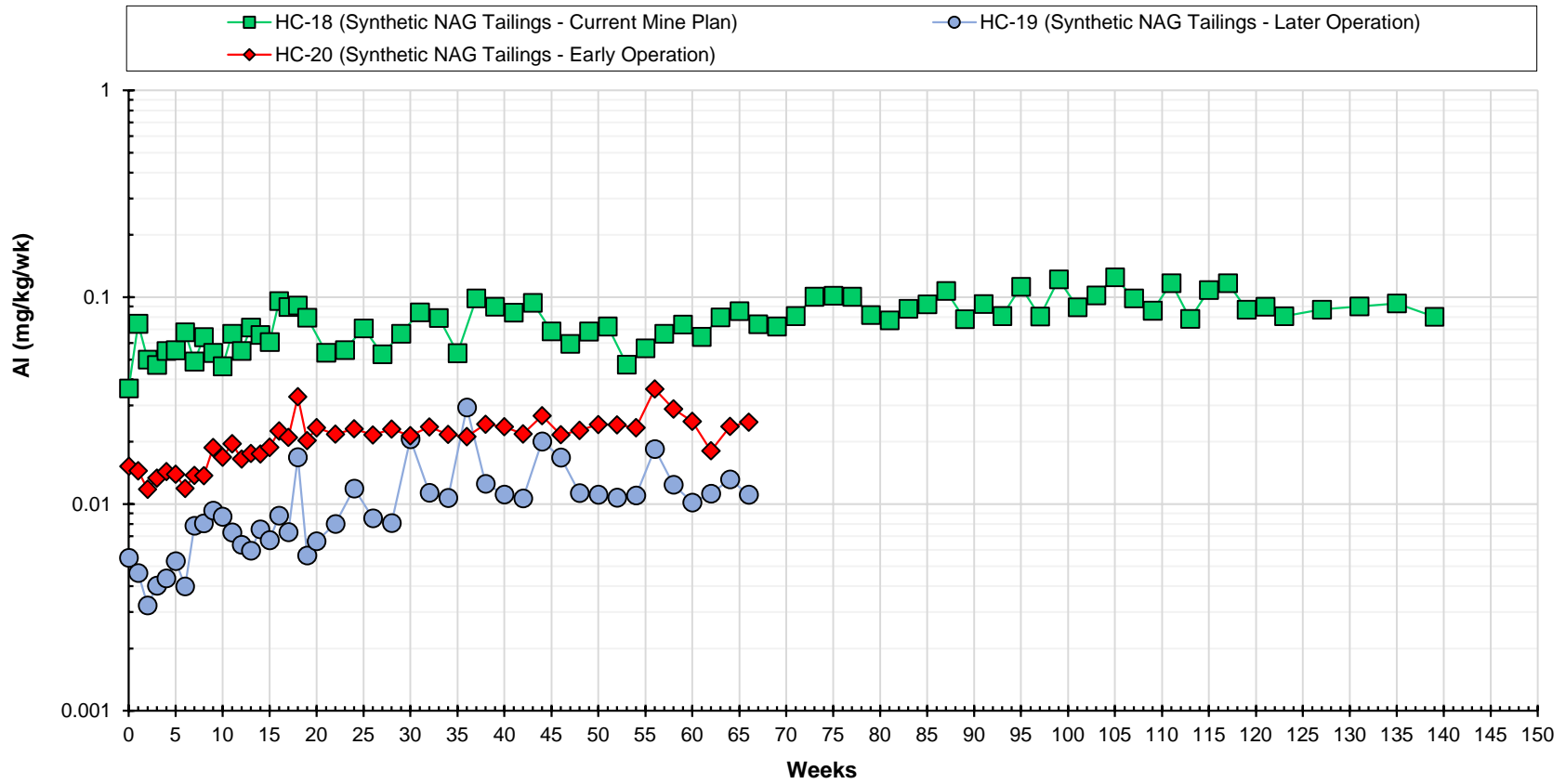


Chloride			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-8	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



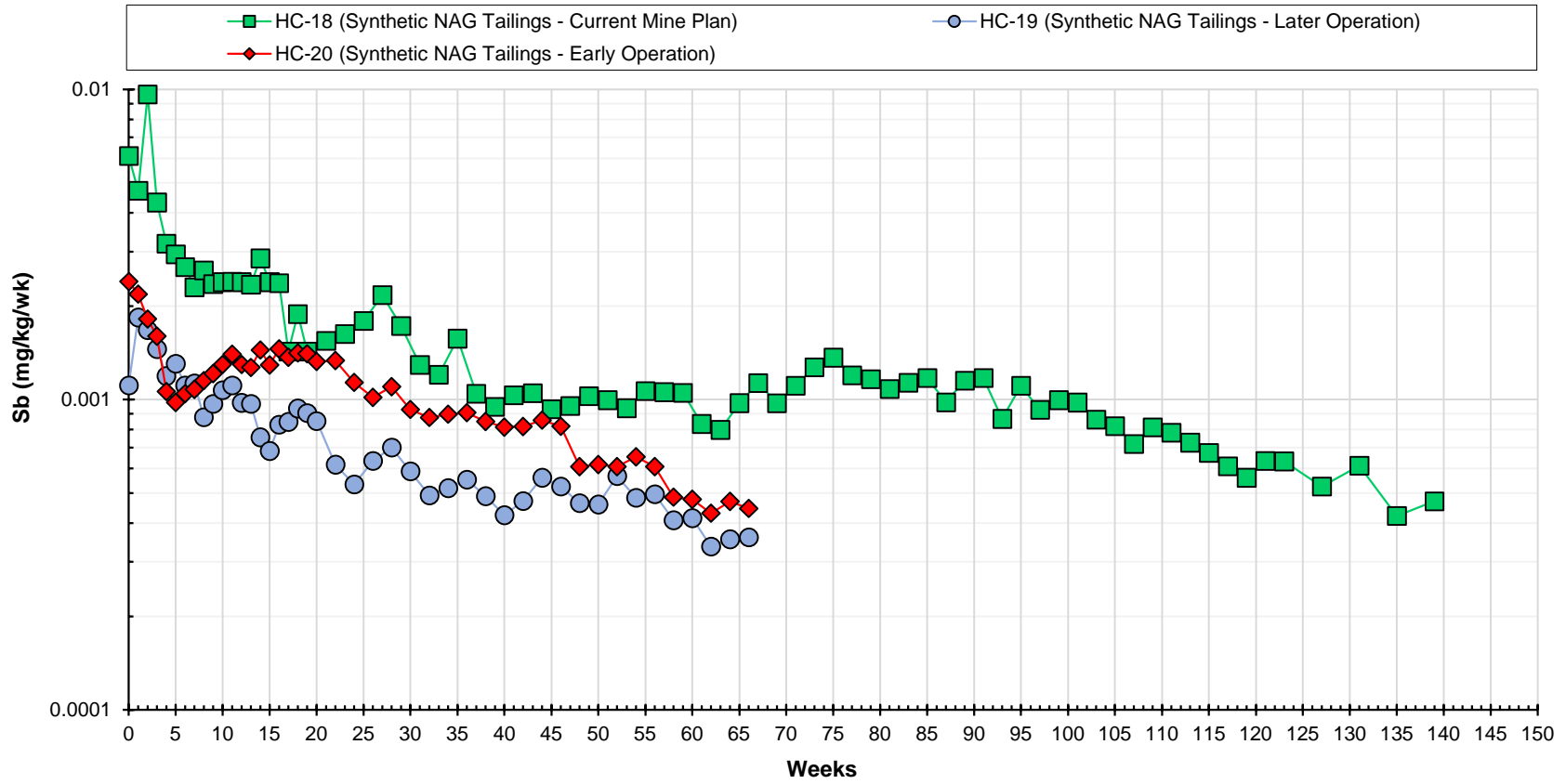
Fluoride			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-9	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



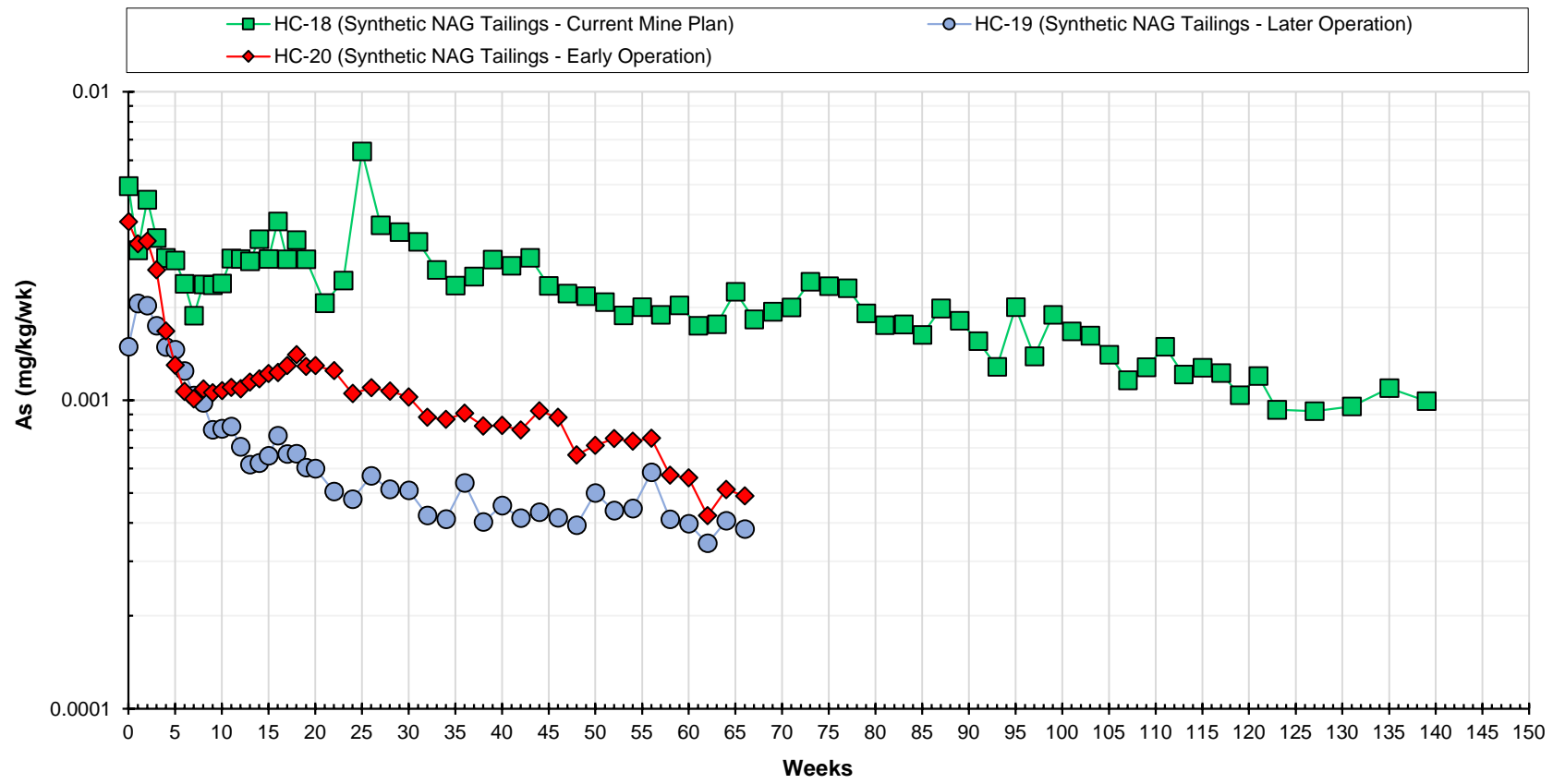


Aluminum			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-10	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

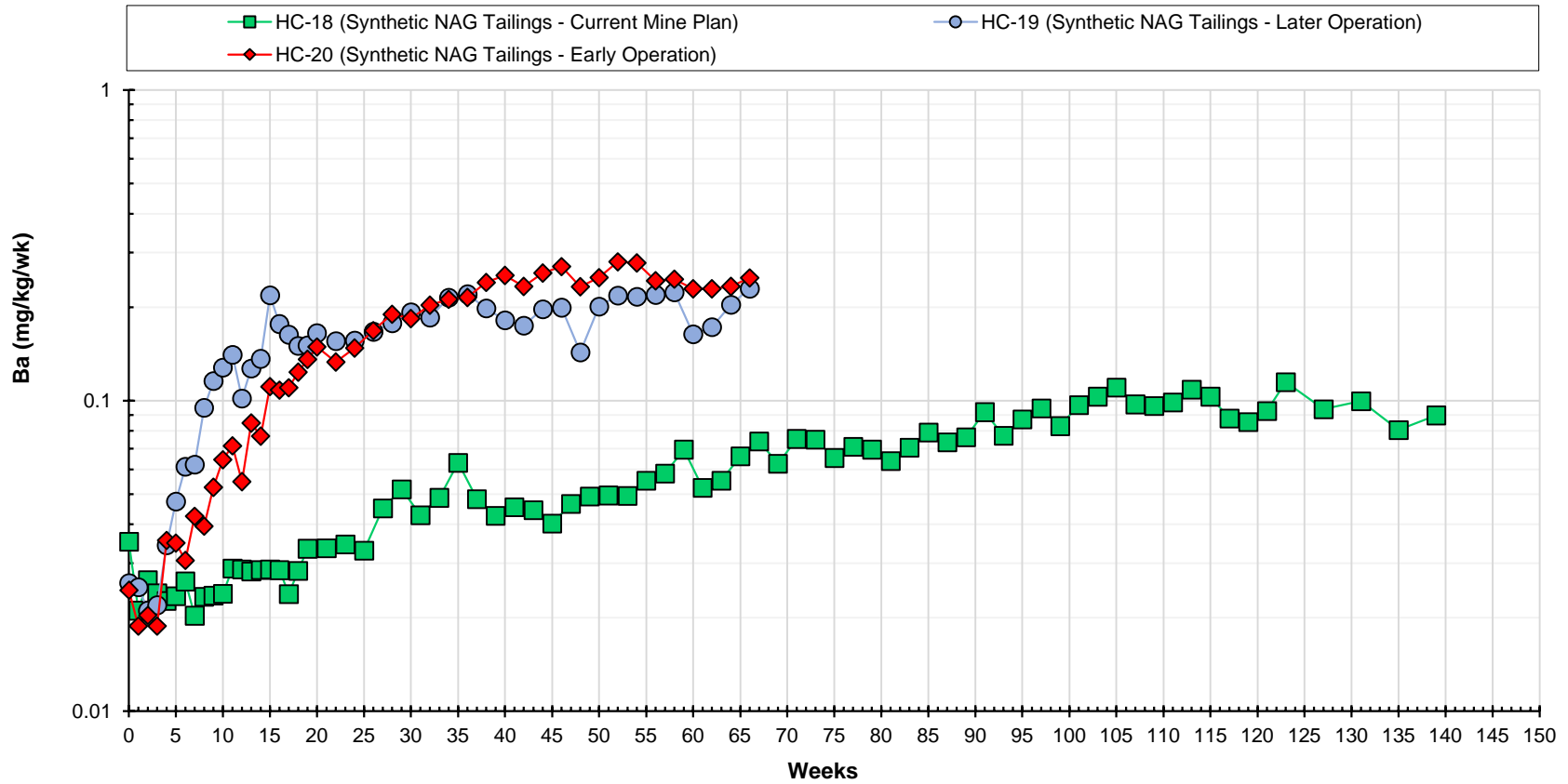




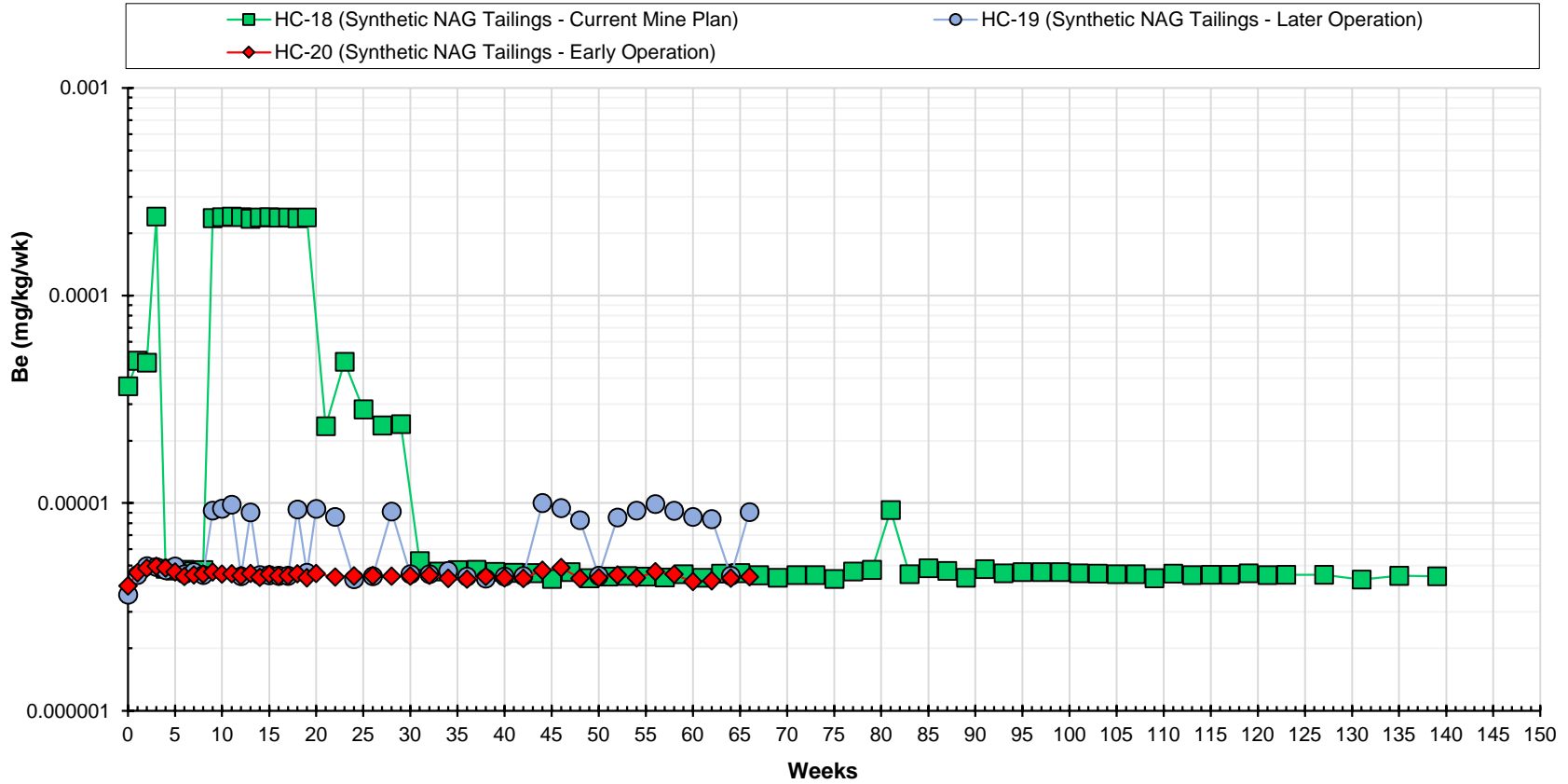
Antimony			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-11	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Arsenic			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-12	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

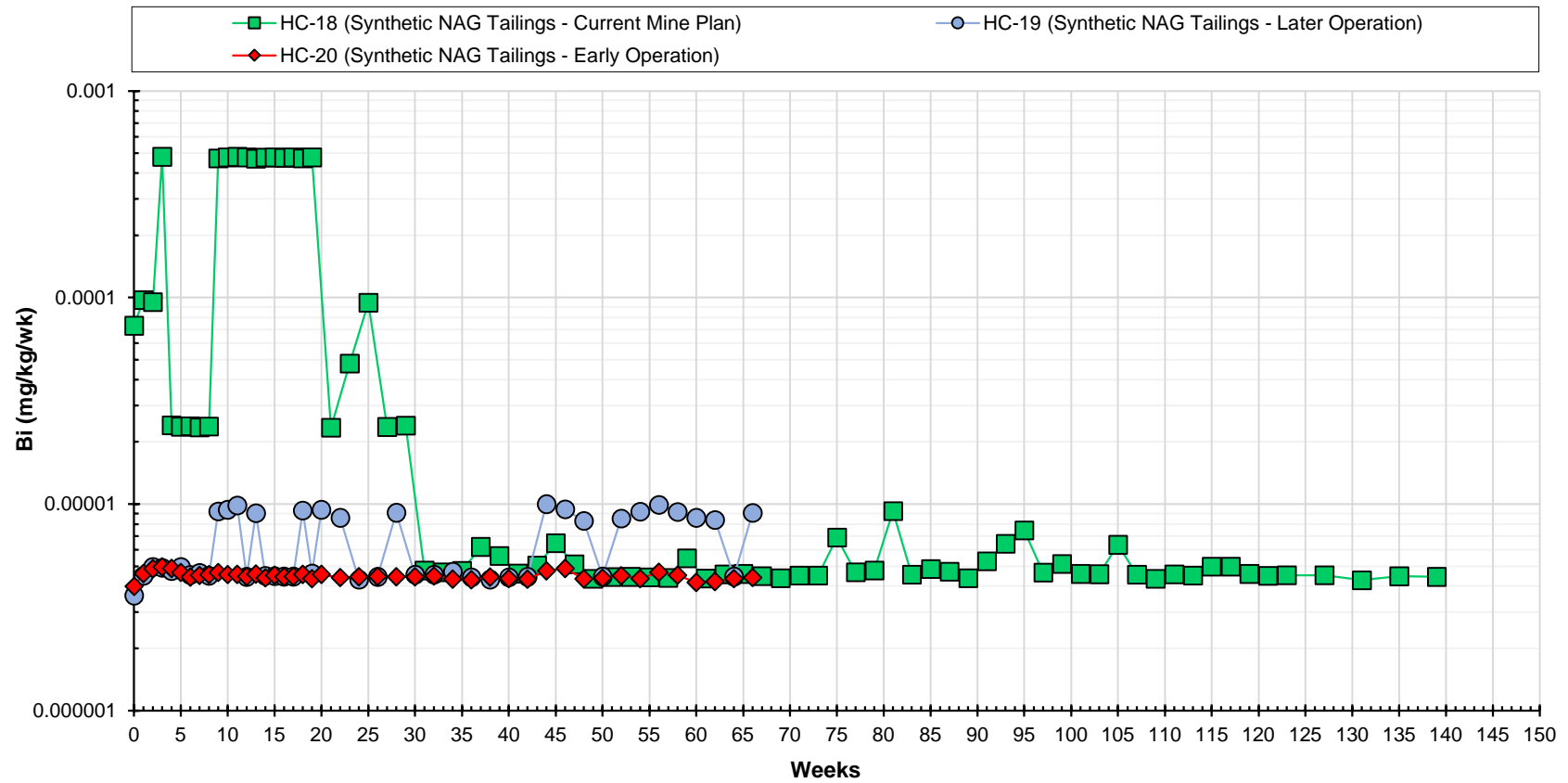


Barium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-13	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

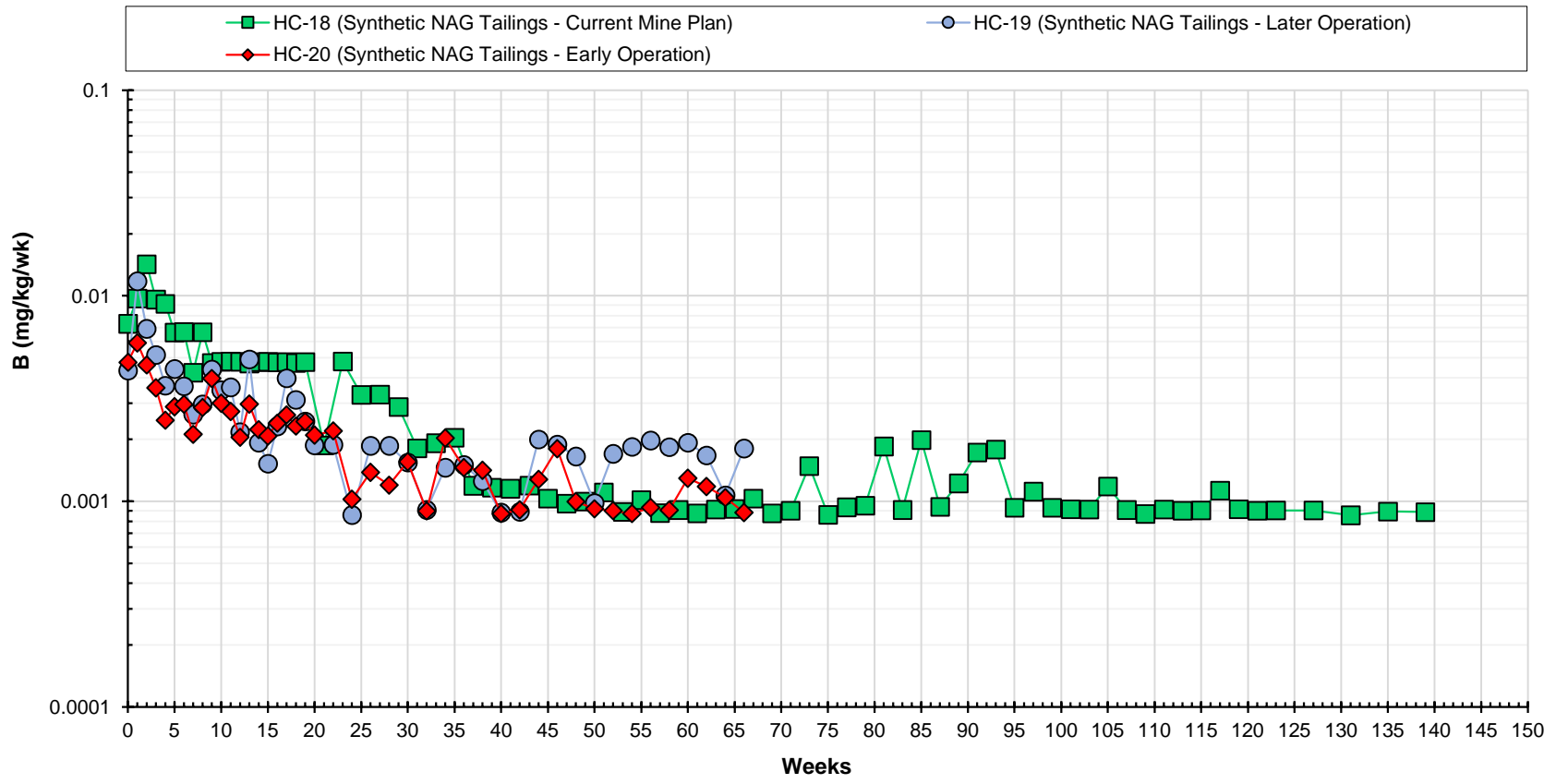


Beryllium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-14	
Project Number		ONS2104	
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Drawn	MT	Reviewed	EC

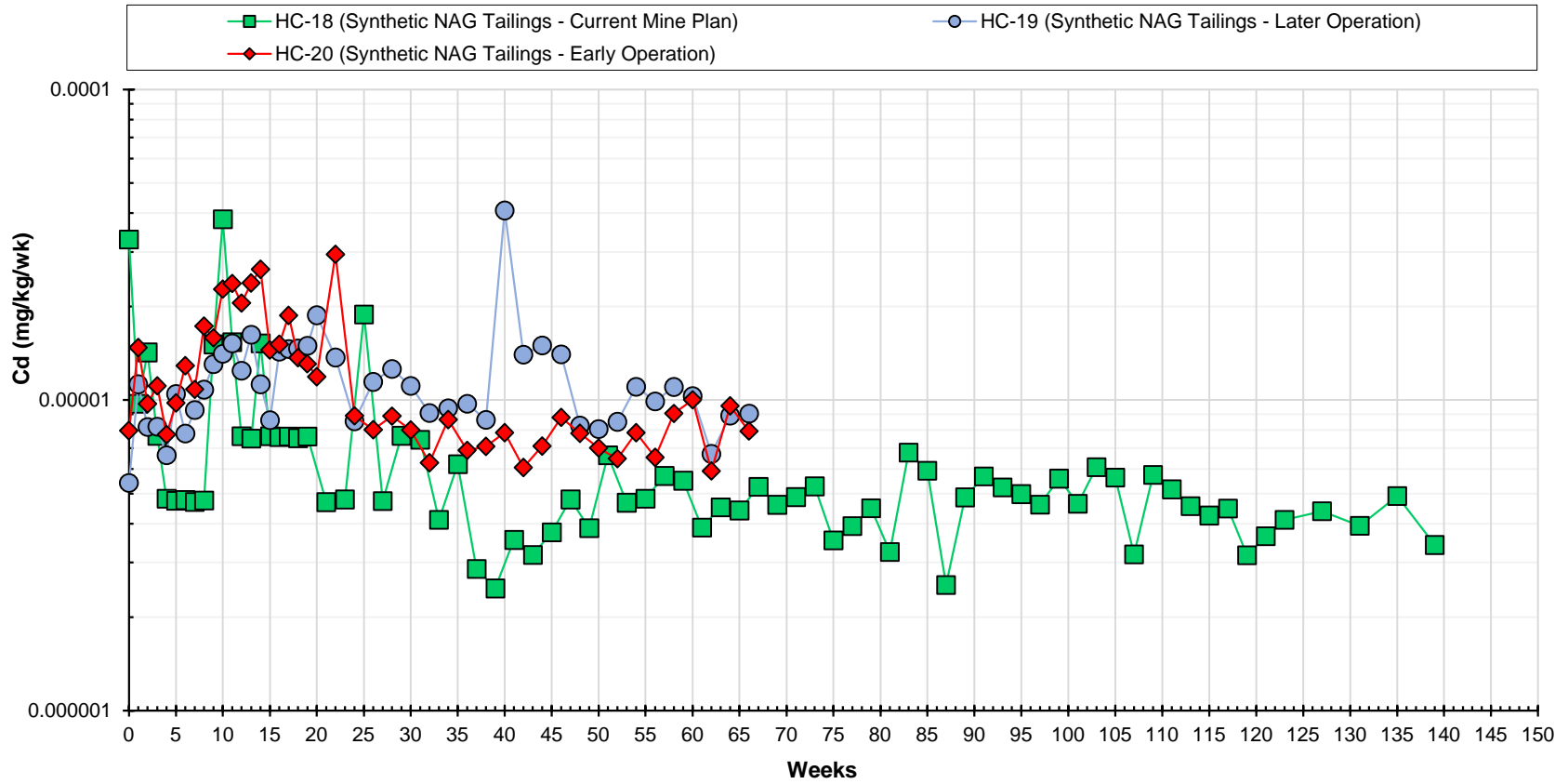




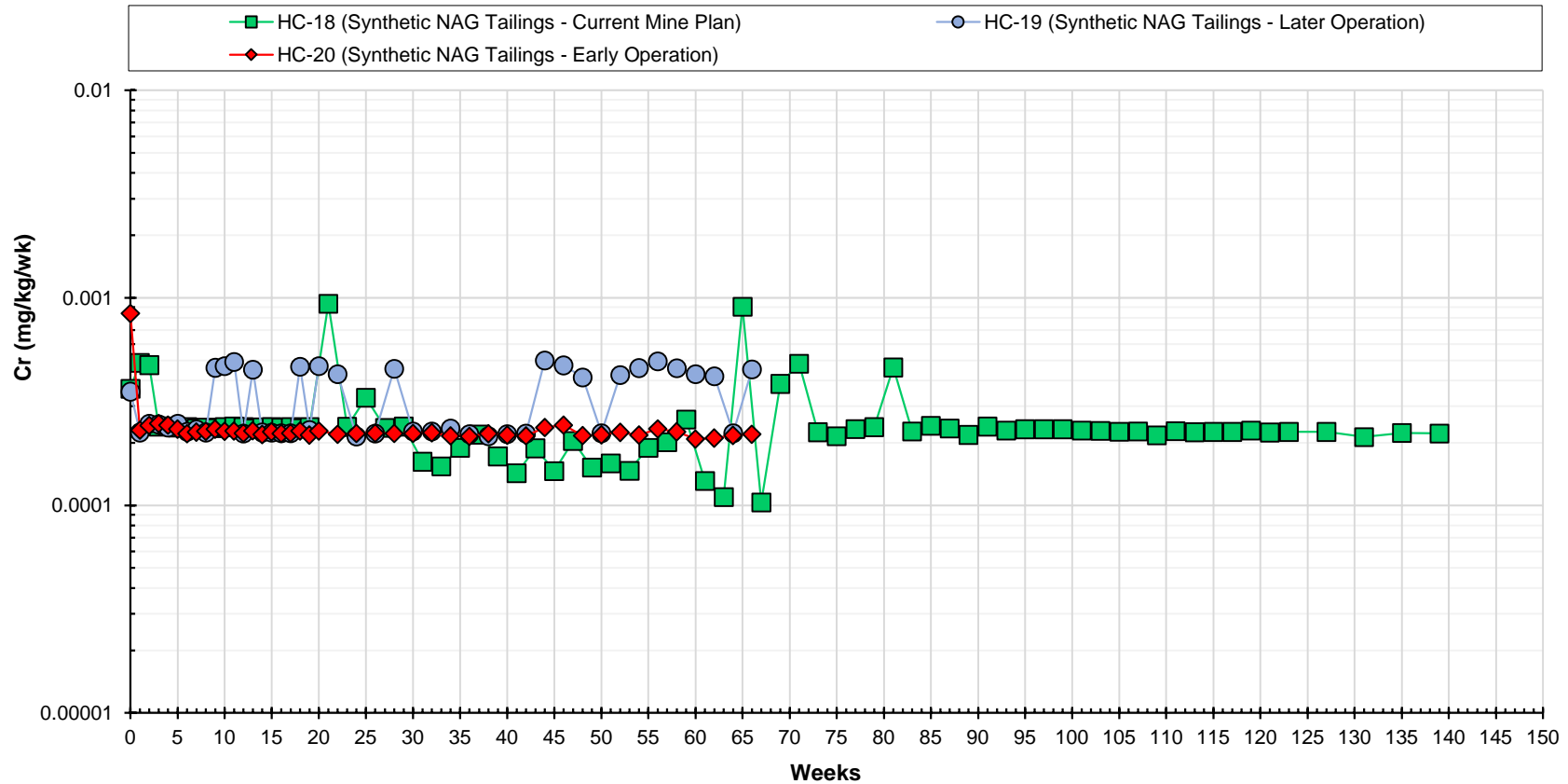
Bismuth			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-15	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



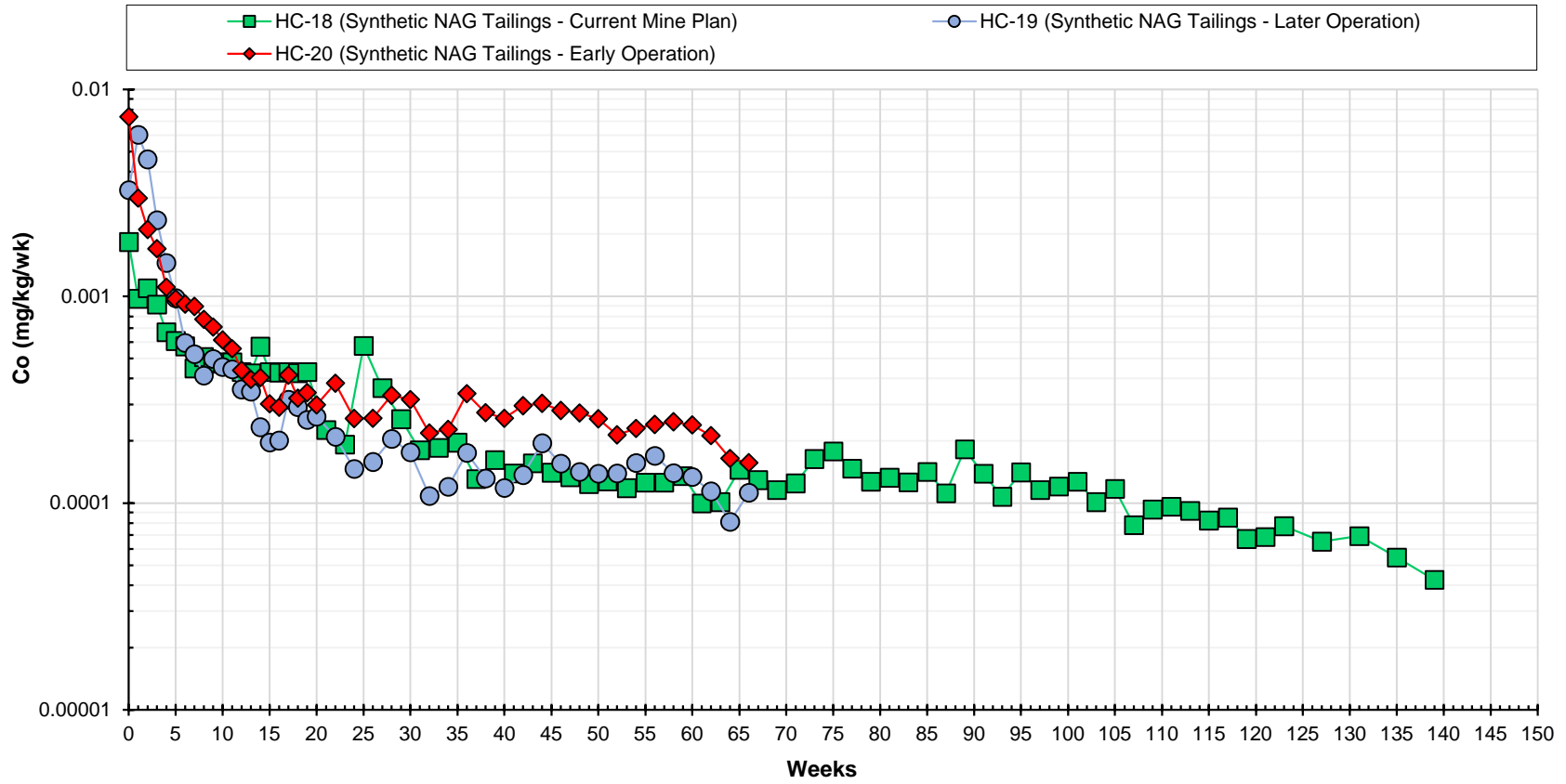
Boron			
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Springpole Gold Project			
Figure Number		B-16	
Project Number		ONS2104	
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Drawn	MT	Reviewed	EC



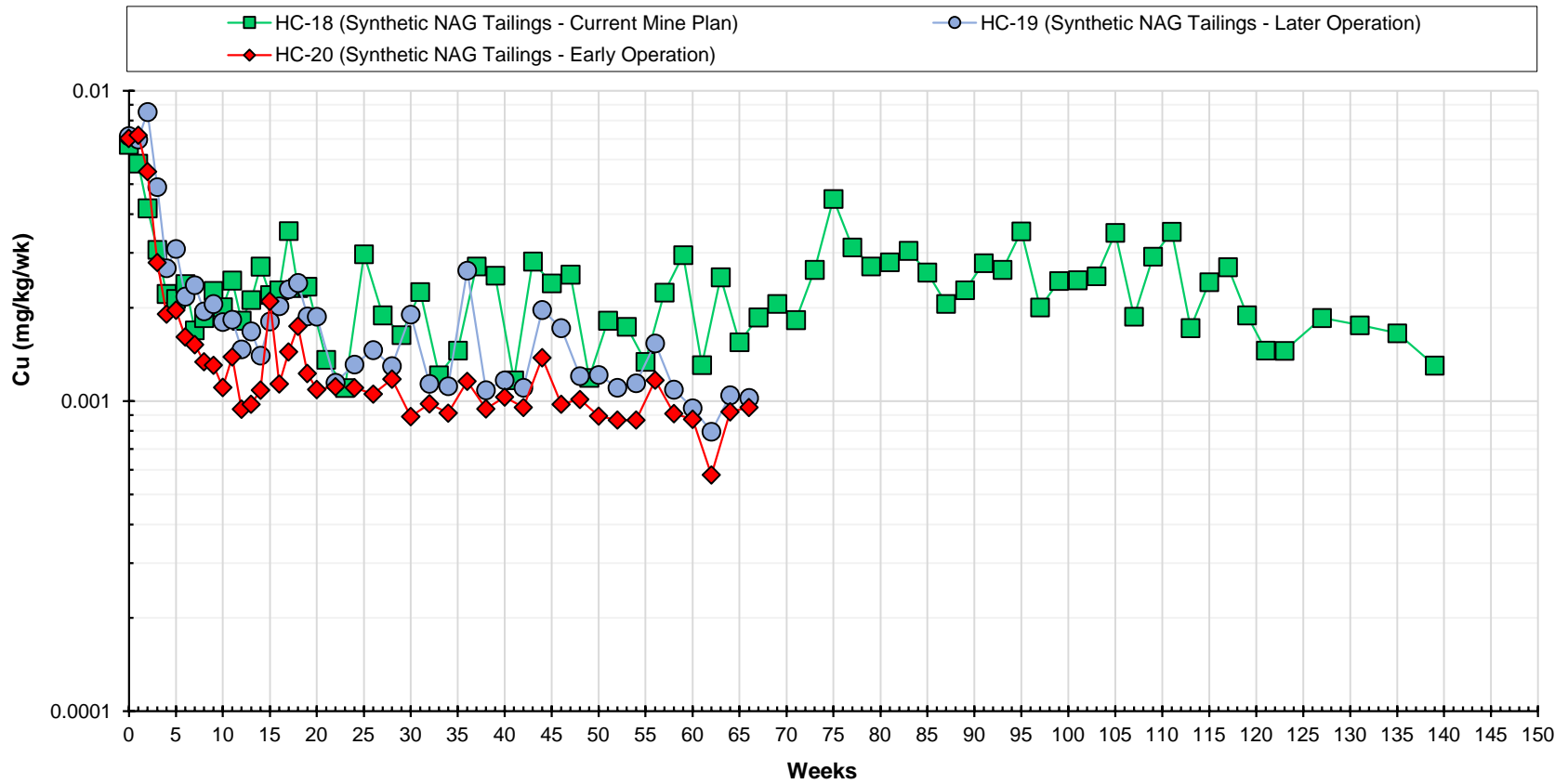
Cadmium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-17	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Chromium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-18	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Cobalt			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-19	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



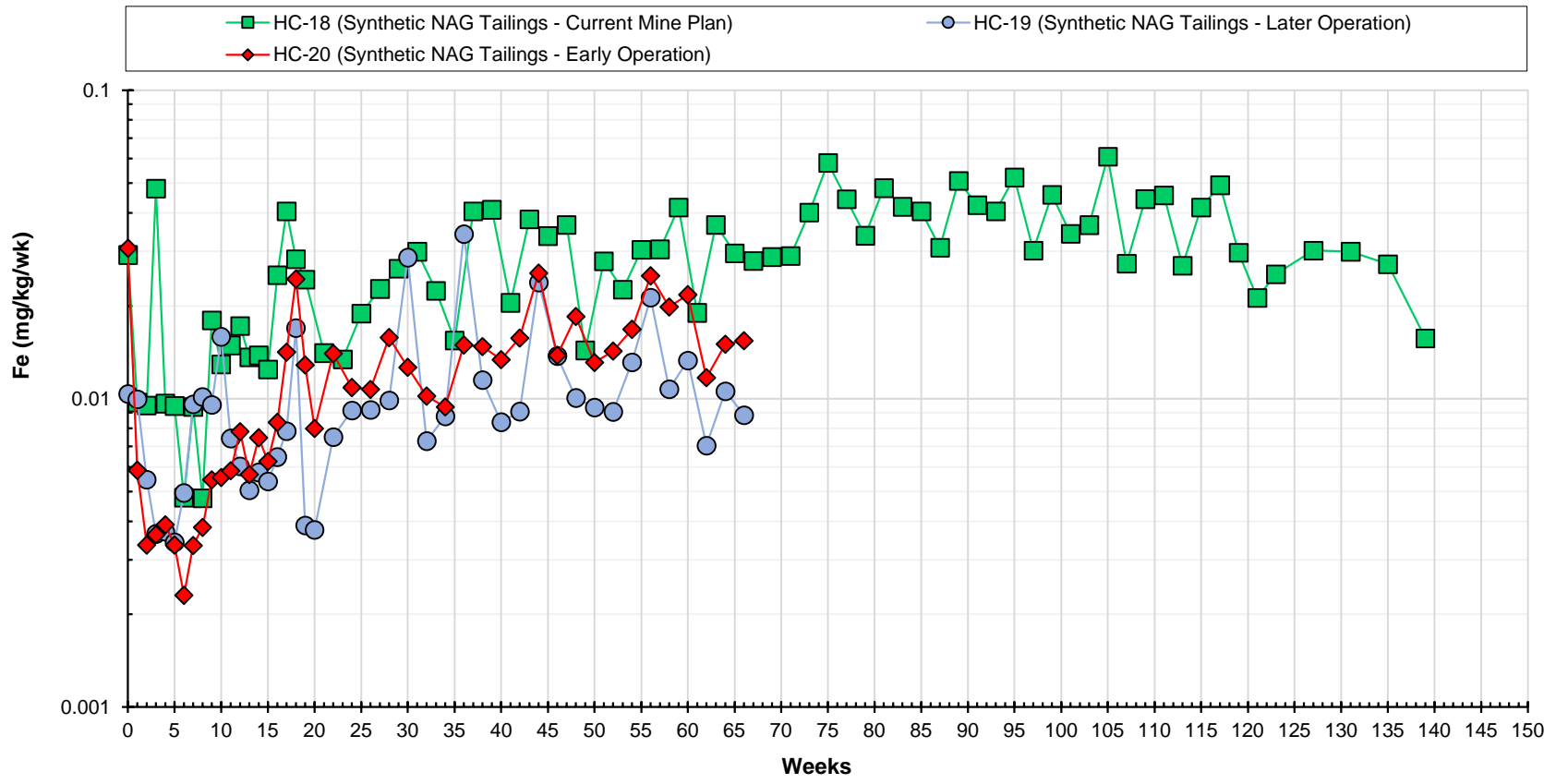
Copper

**Baseline Kinetic Geochemical Testing Report -
Kinetic Testing Update - Q4 2024**

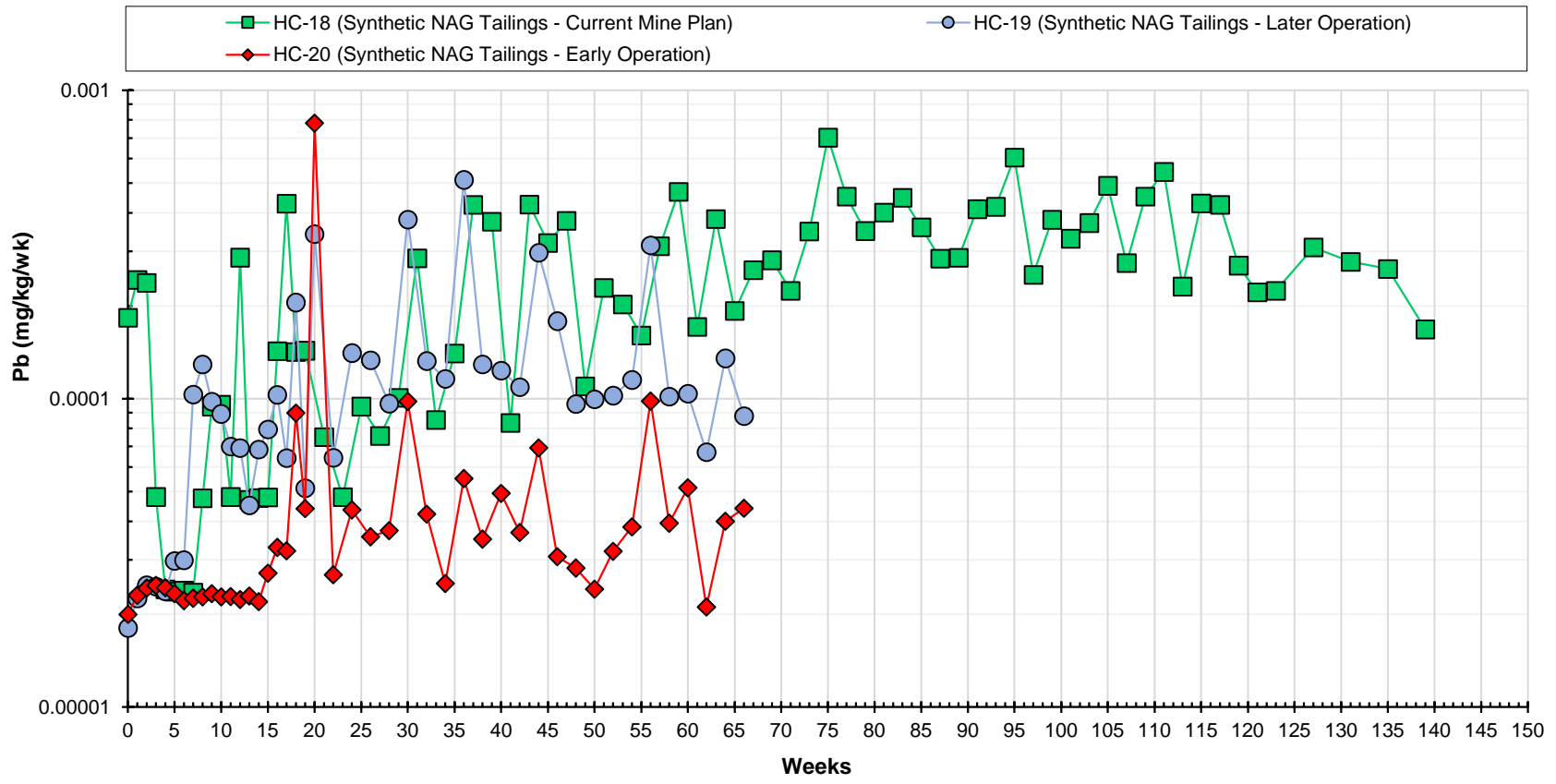
Springpole Gold Project

Figure Number		B-20	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

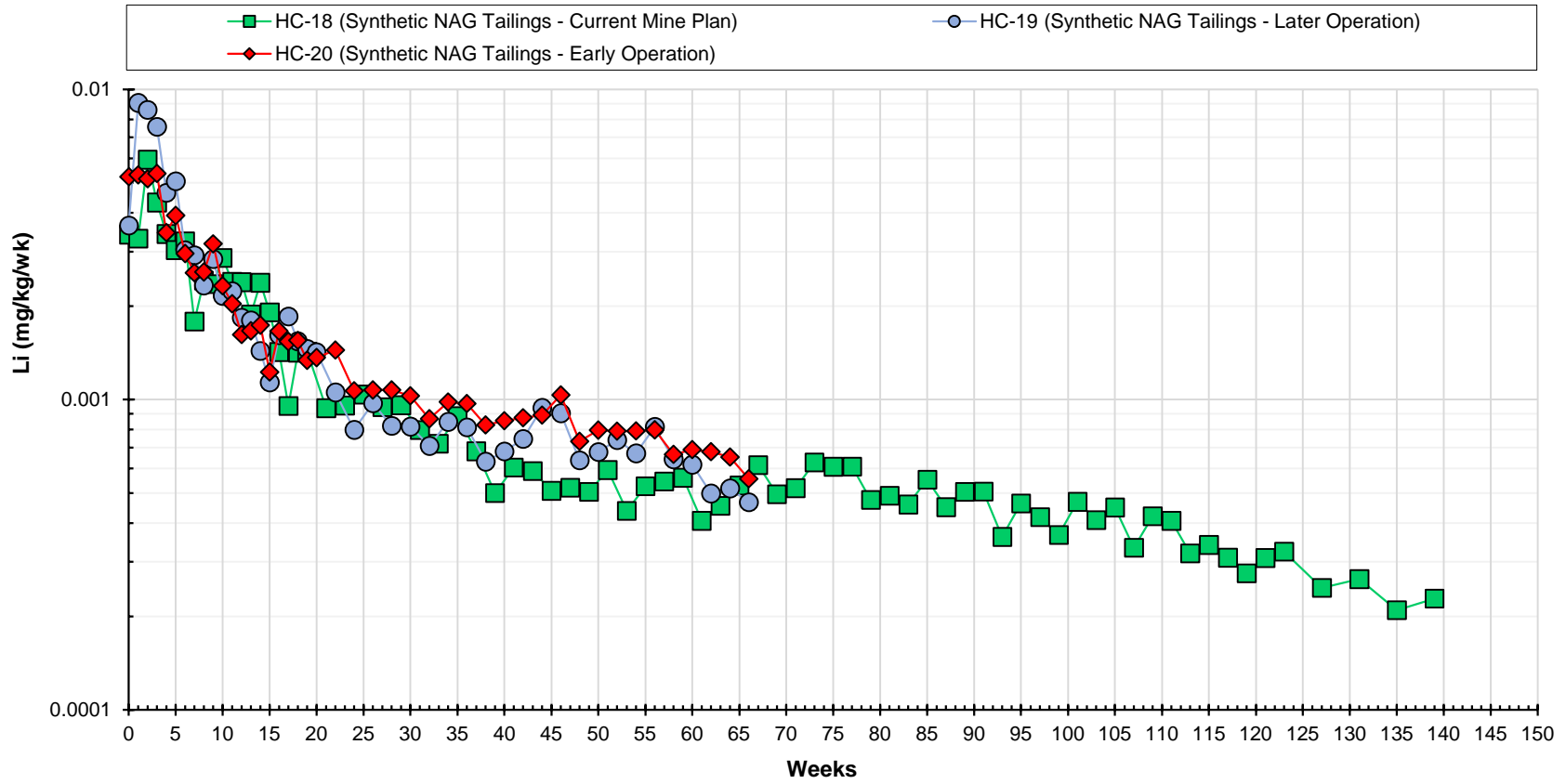




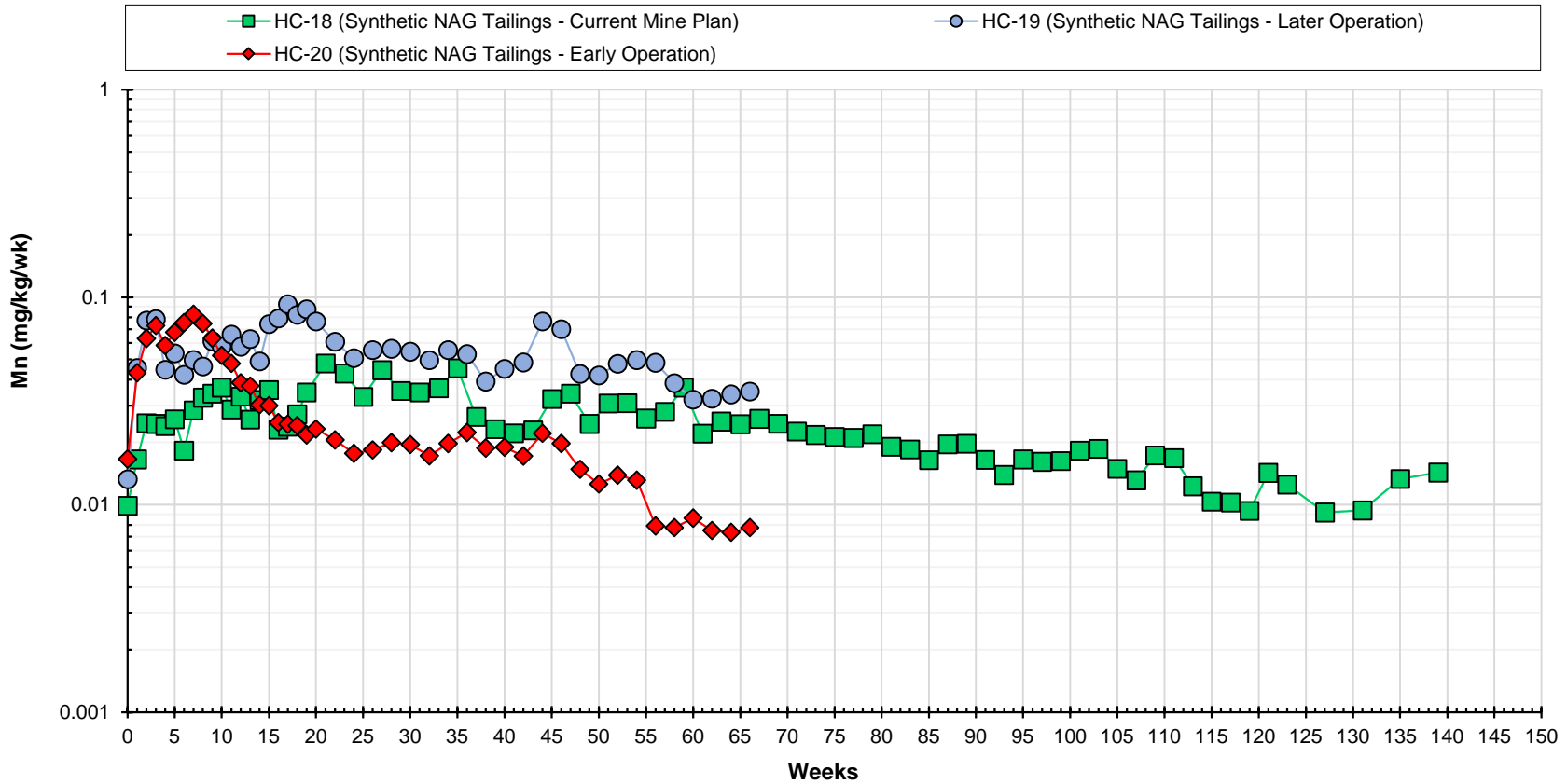
Iron			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-21	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



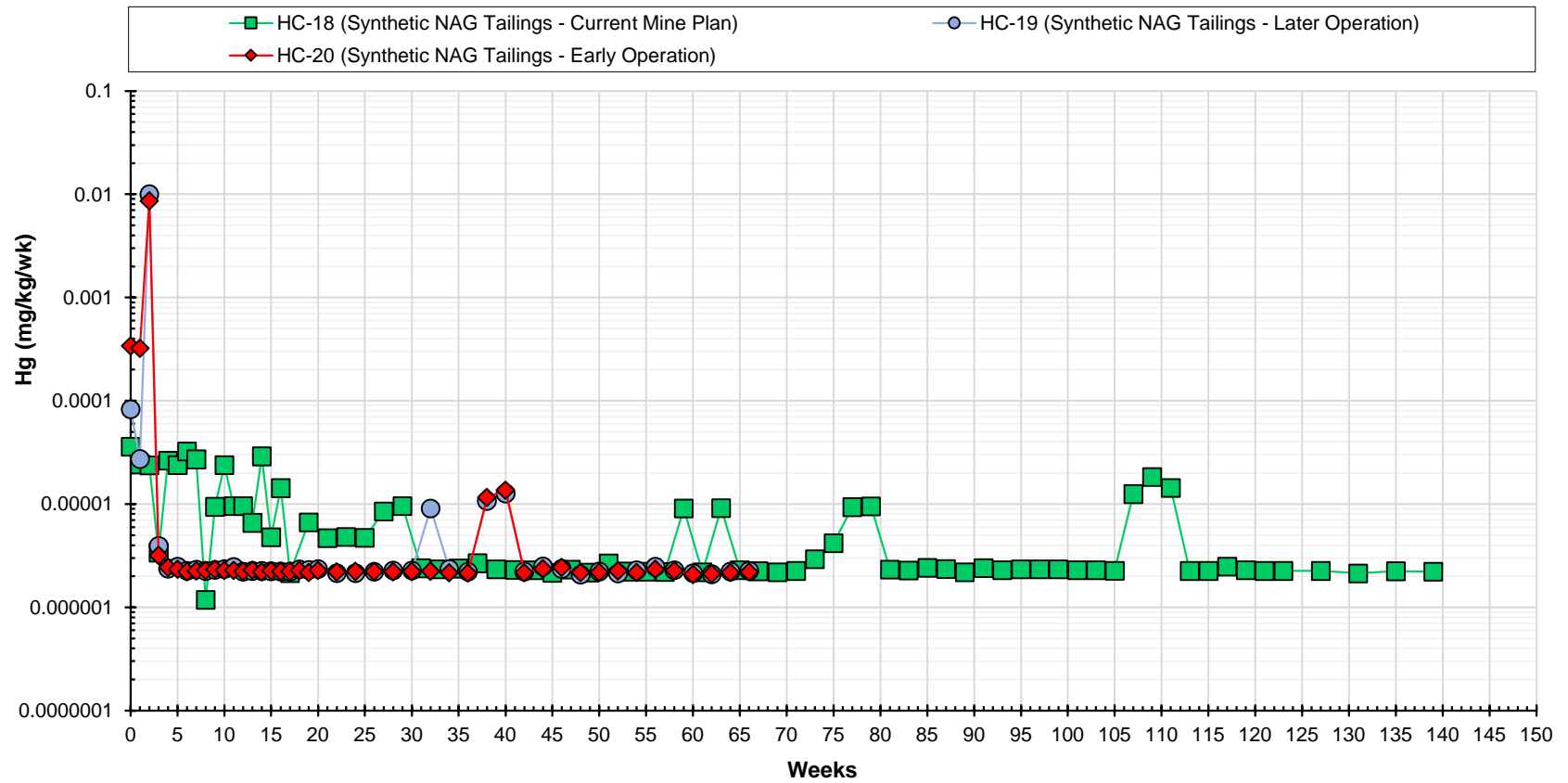
Lead			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-22	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



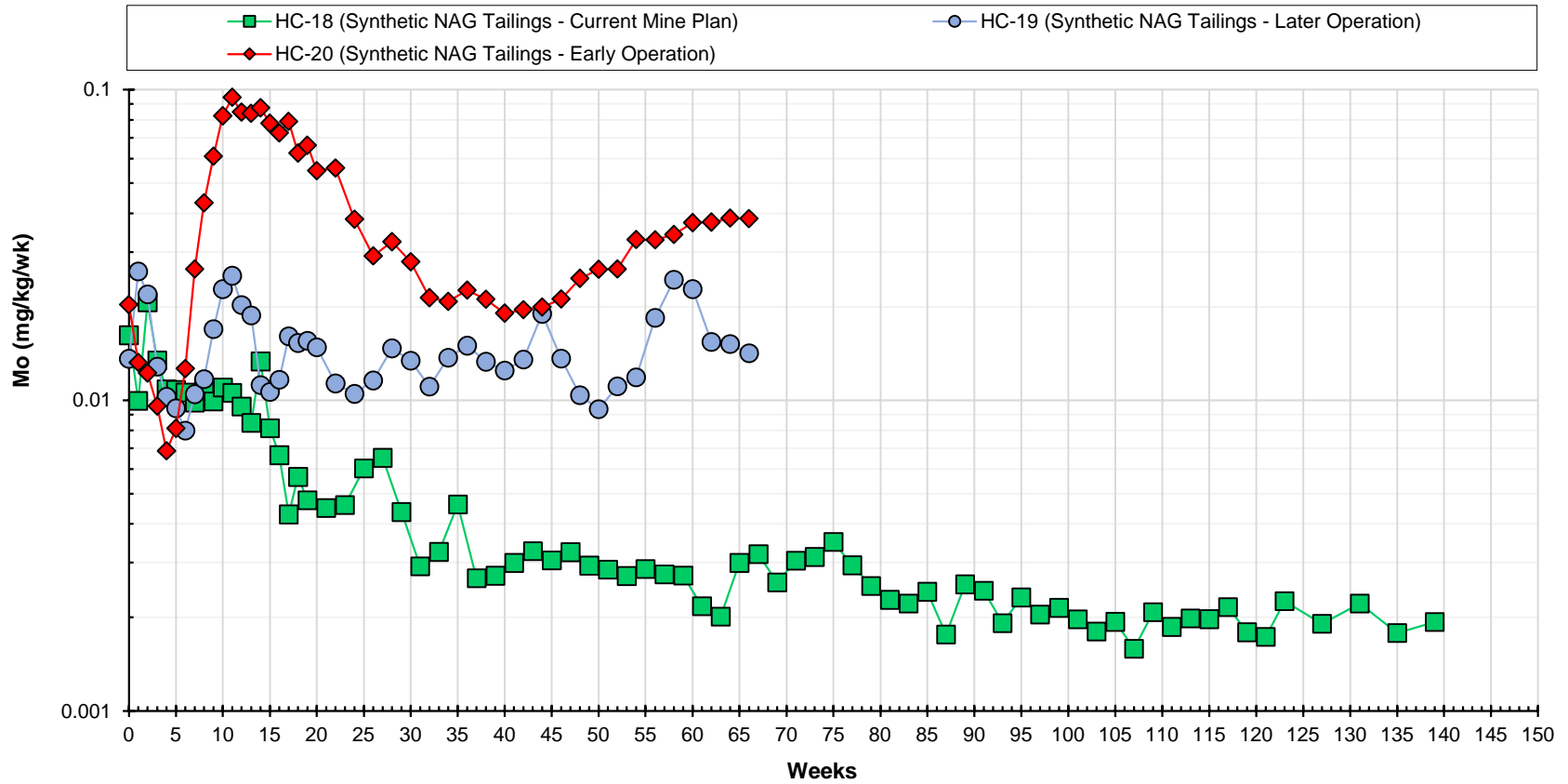
Lithium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-23	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



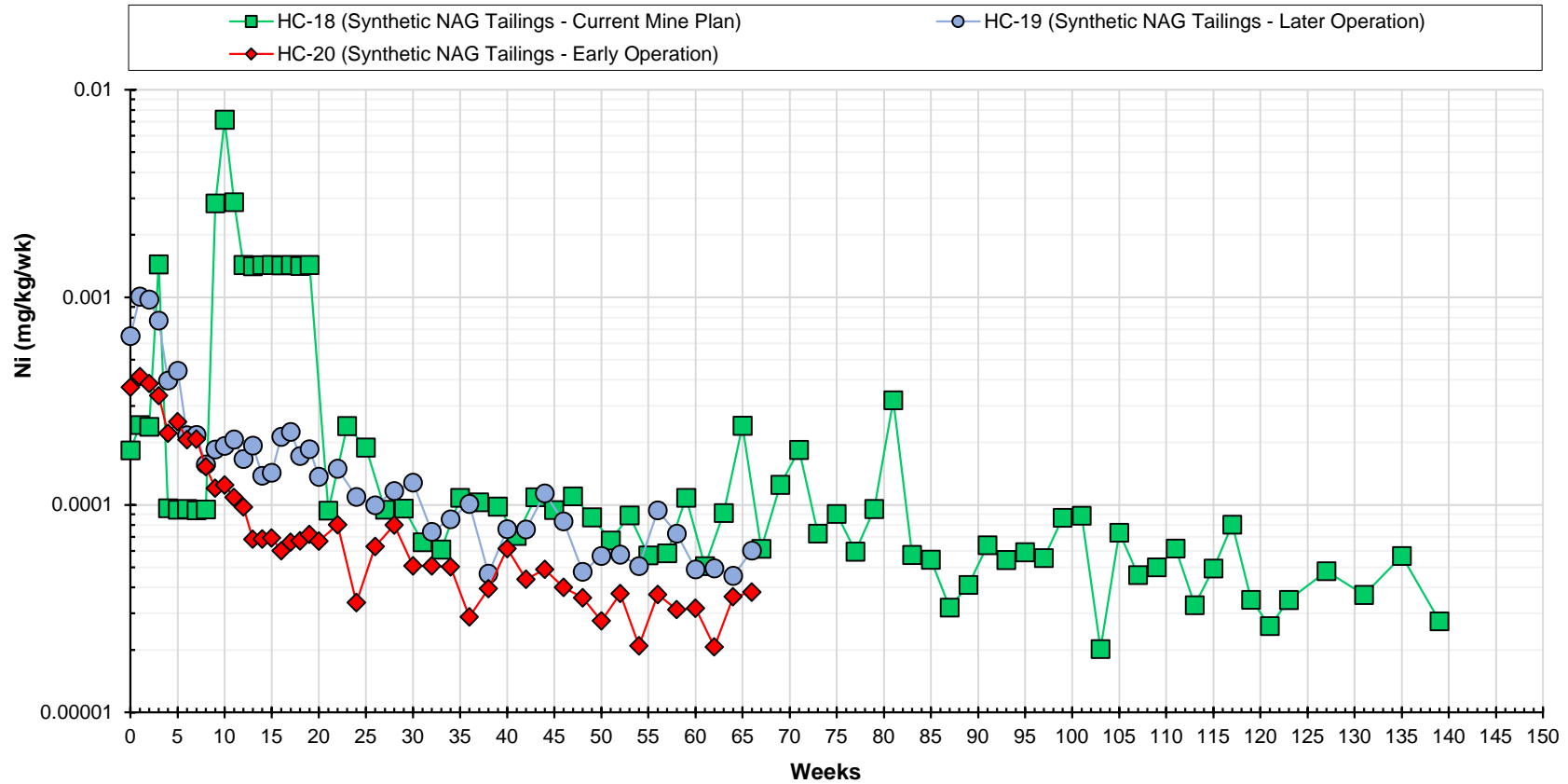
Manganese			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-24	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



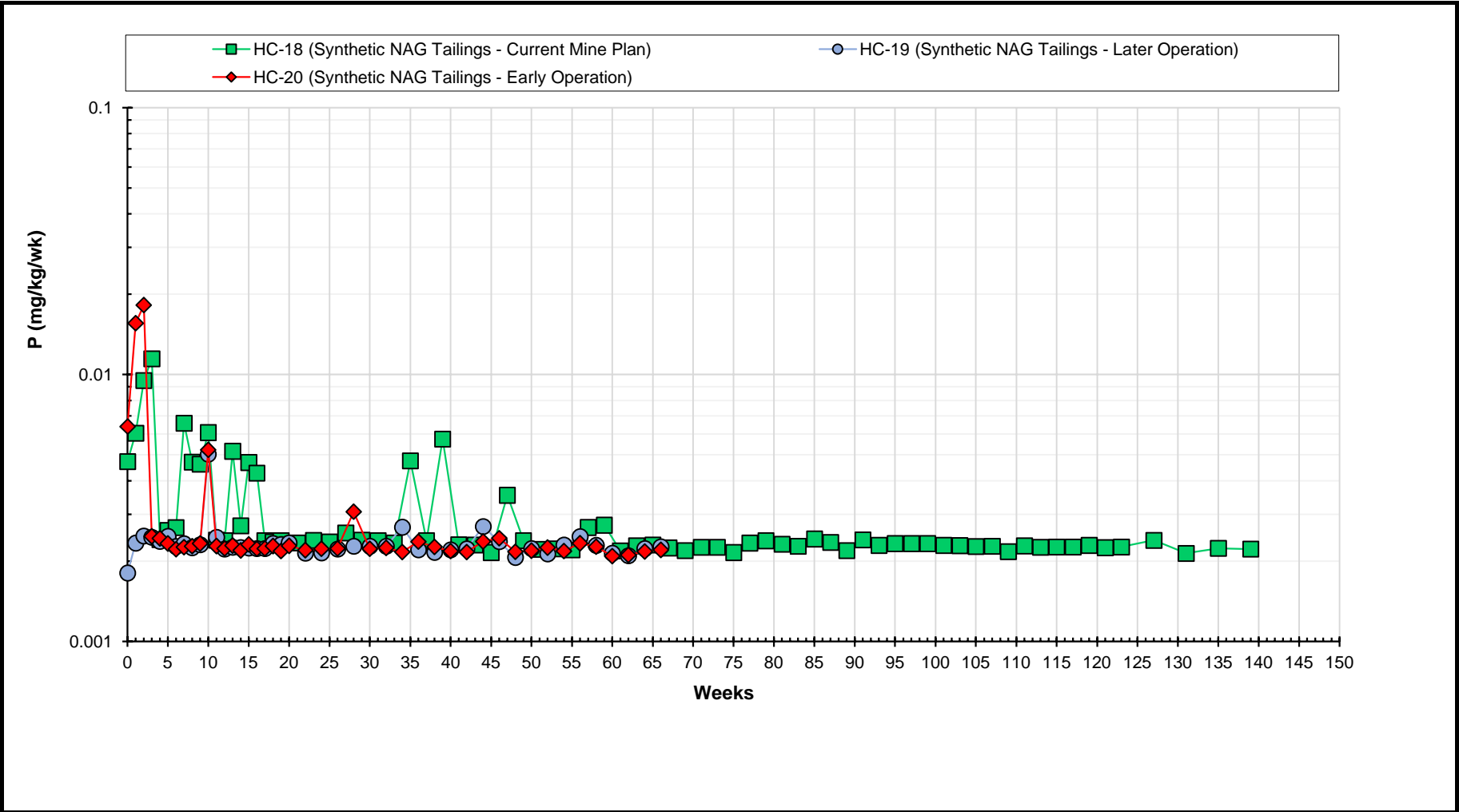
Mercury			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-25	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Molybdenum			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-26	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



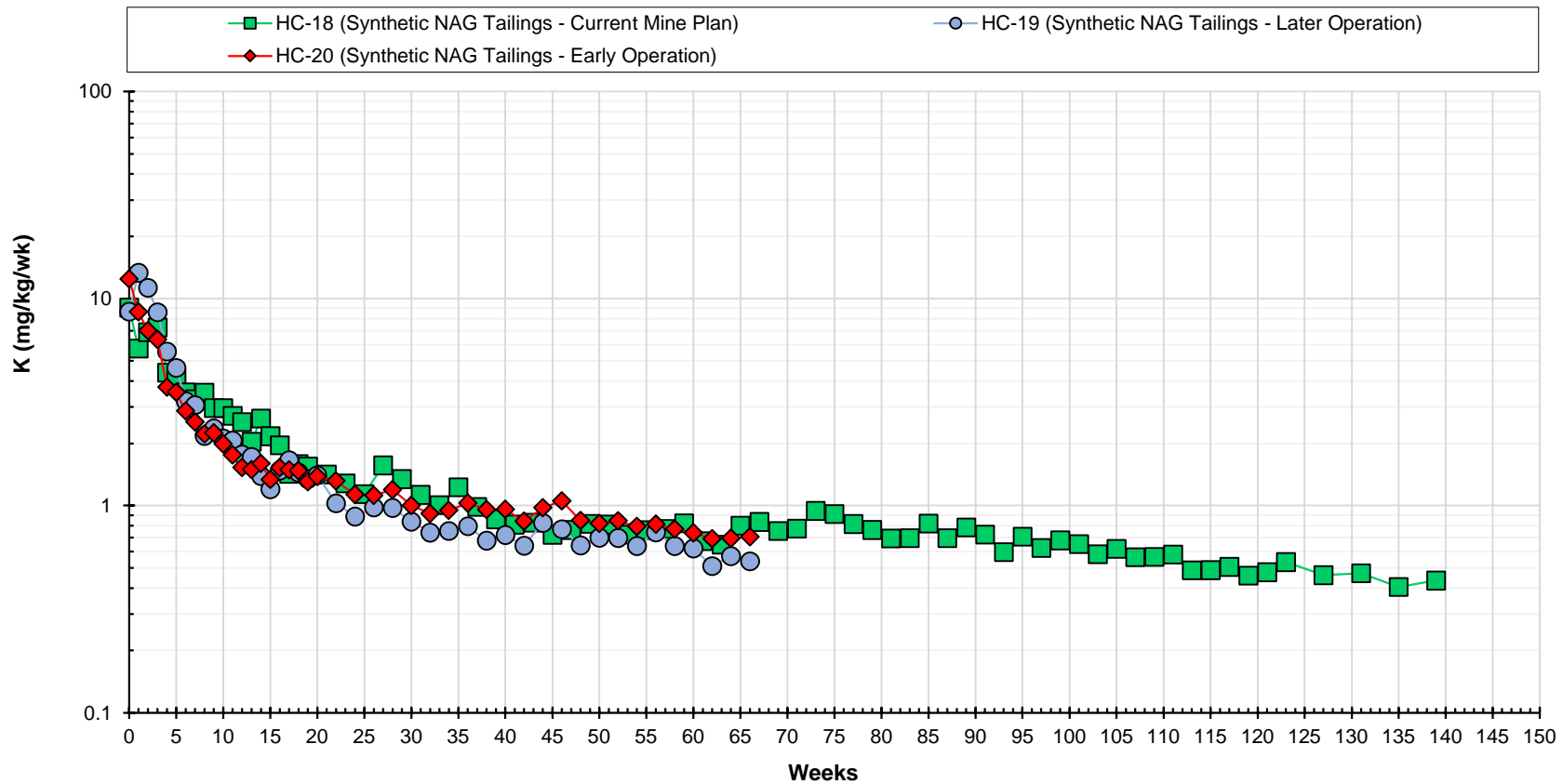
Nickel			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-27	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



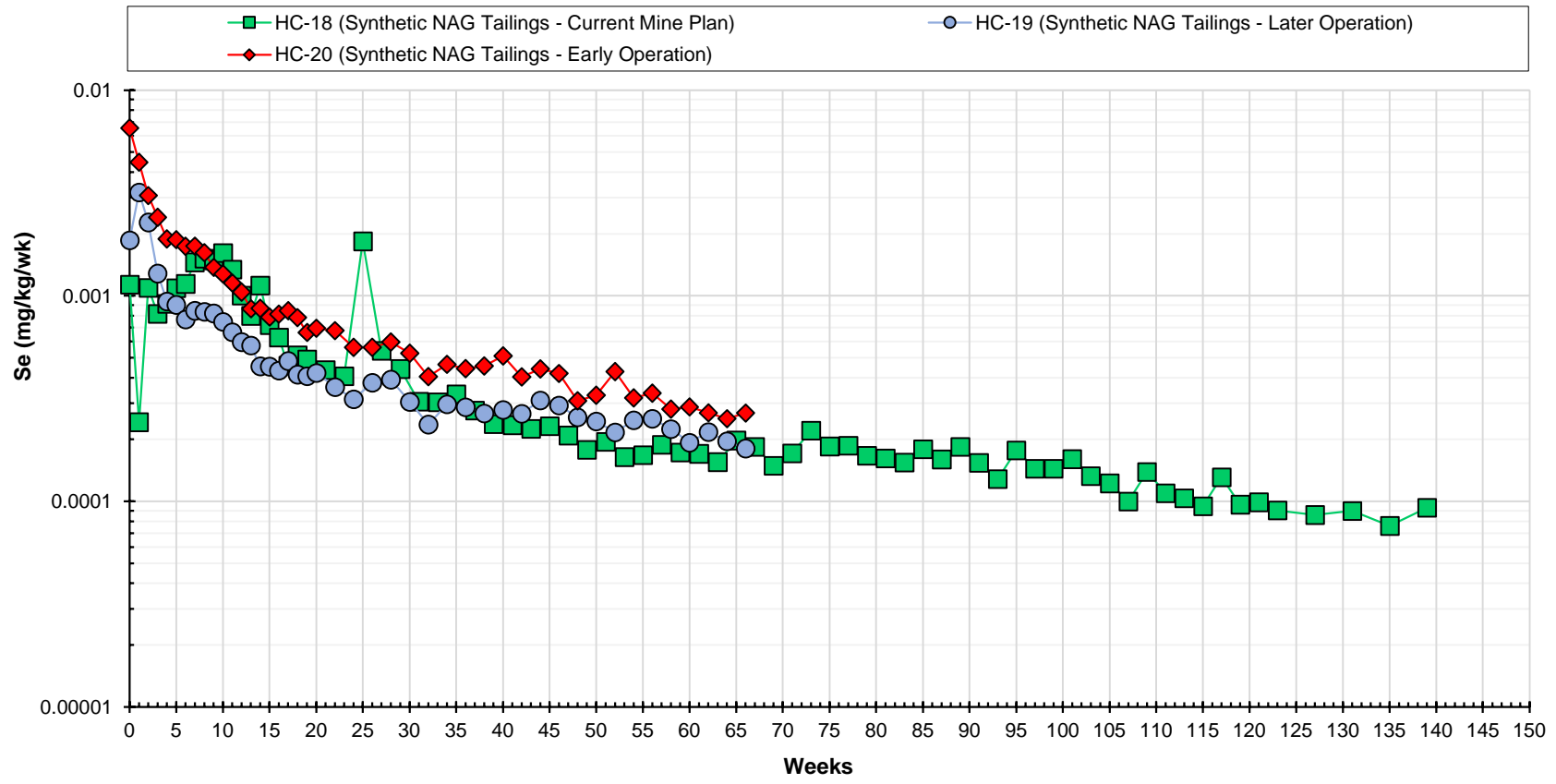
Notes
 Phosphorous measured by colorimetry starting in week 0 for cells HC-18, HC-19, and HC-20.



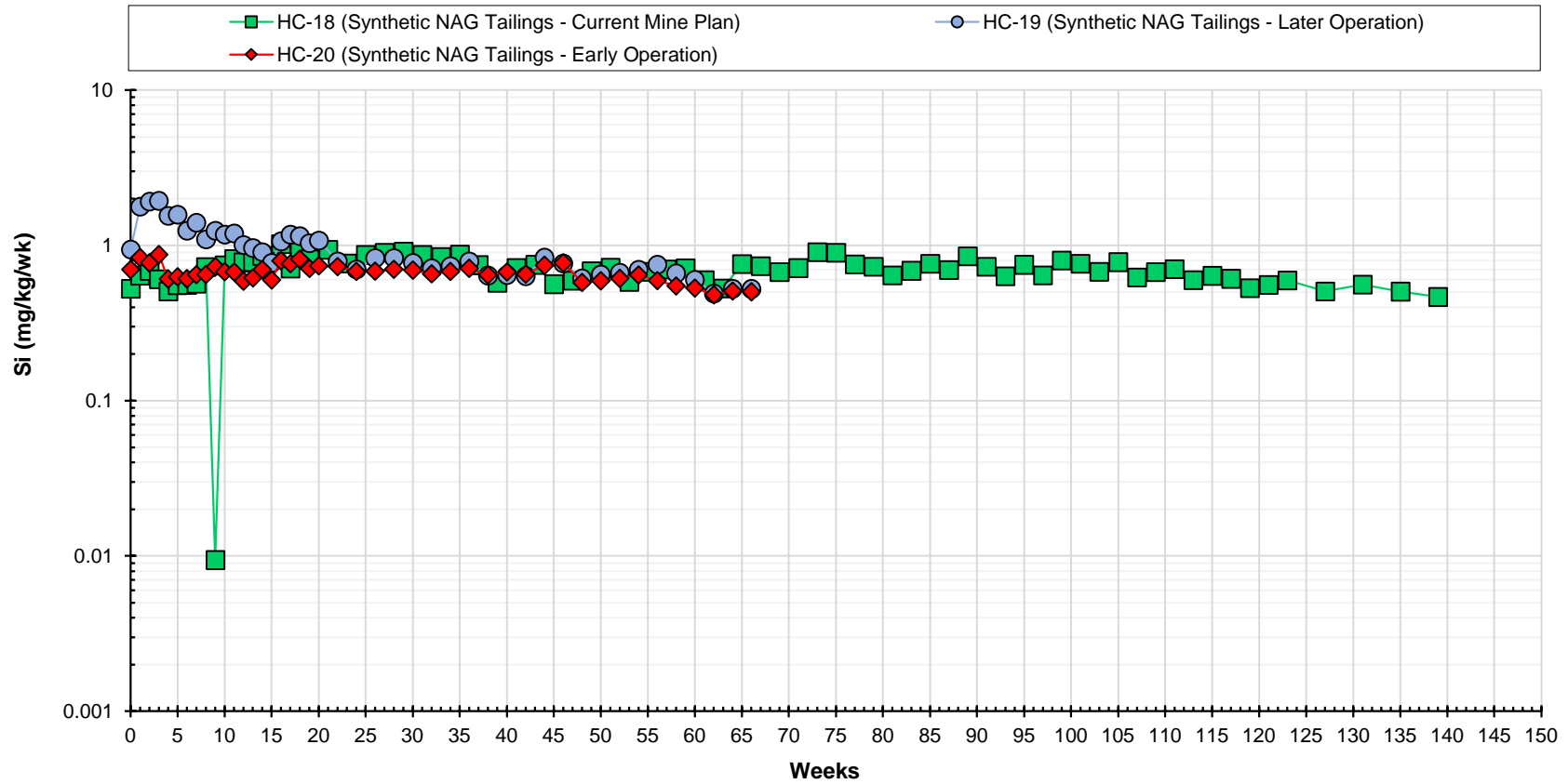
Phosphorous			
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Springpole Gold Project			
Figure Number		B-28	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



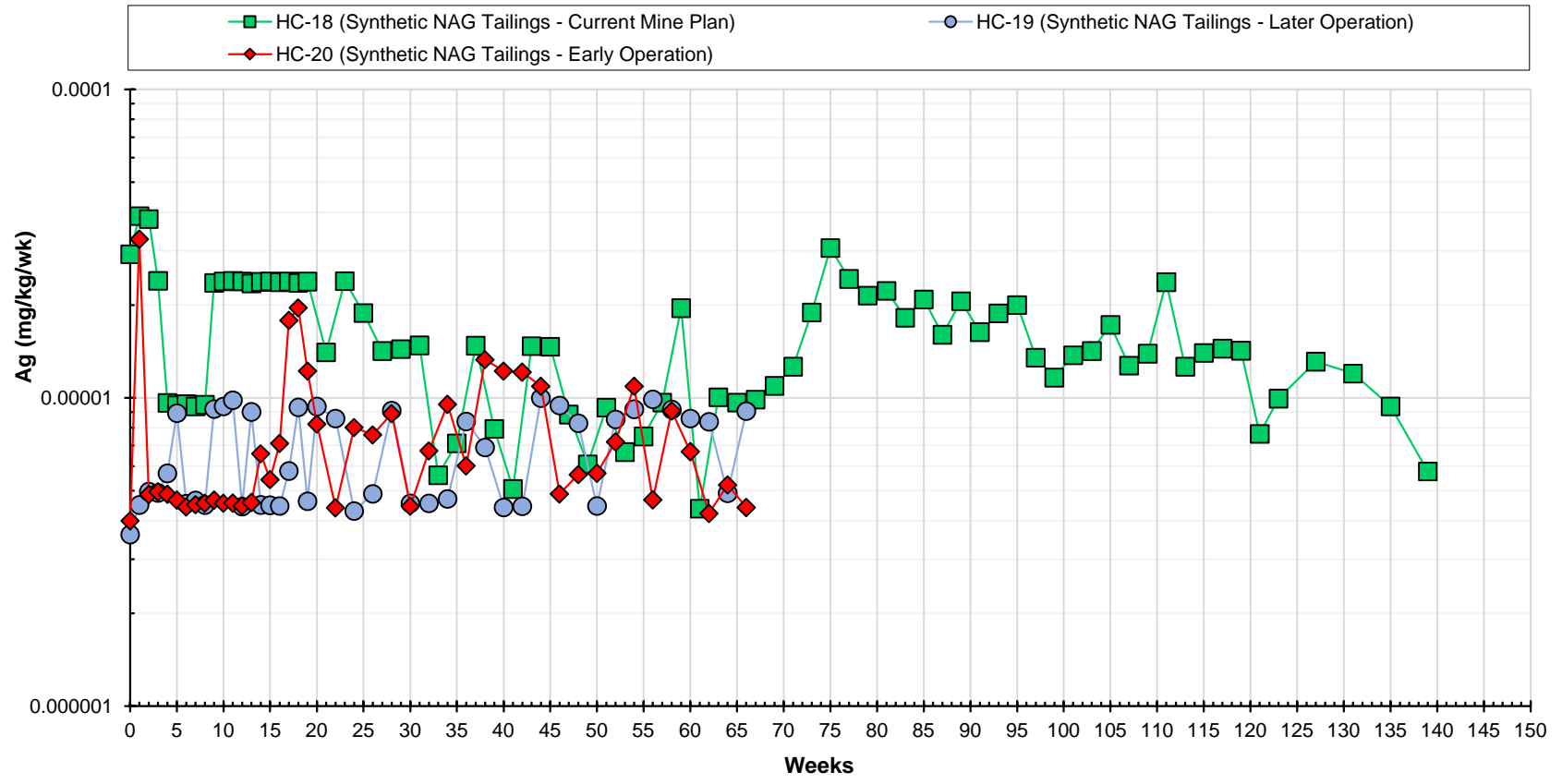
Potassium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-29	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



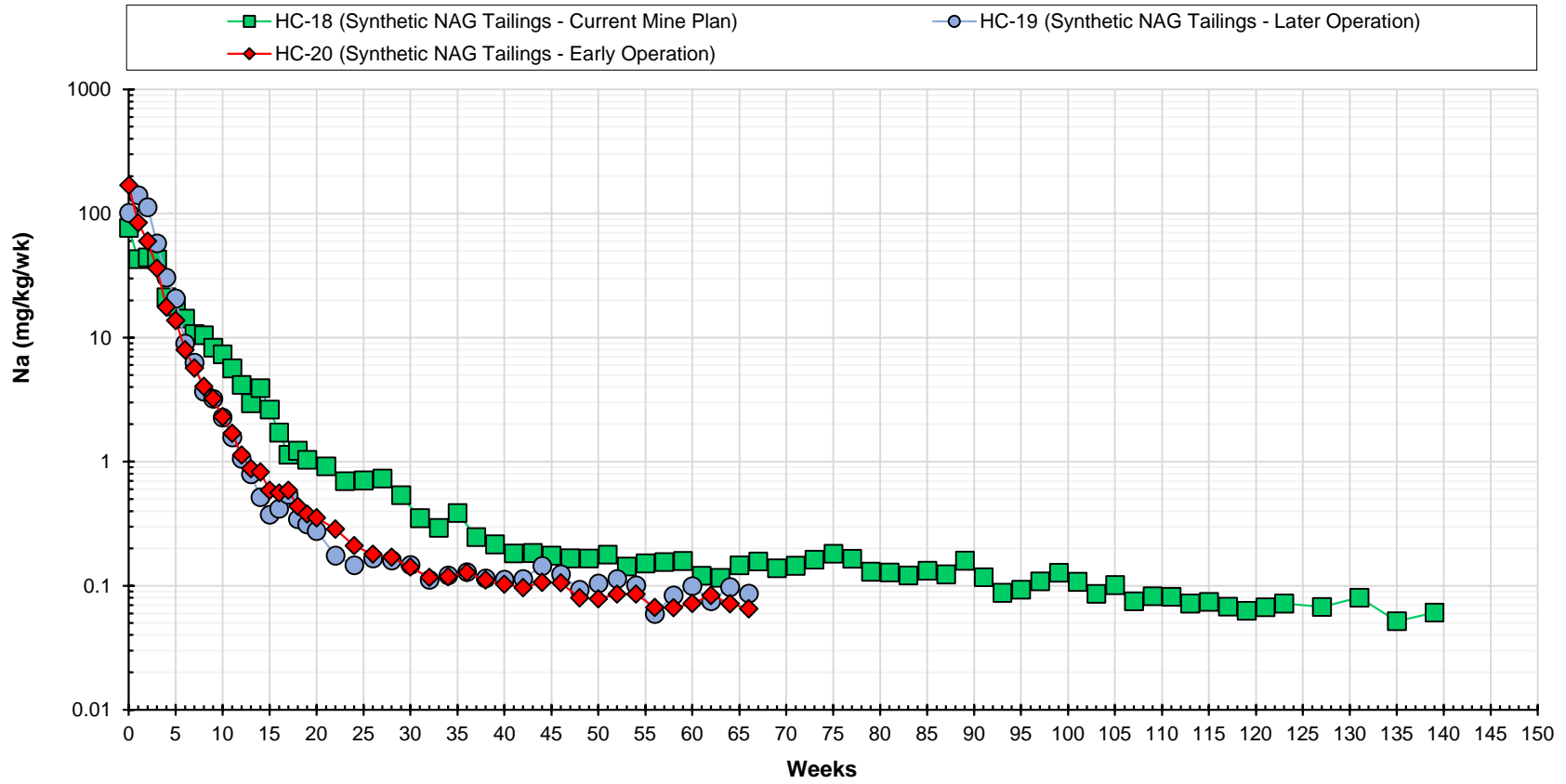
Selenium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-30	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



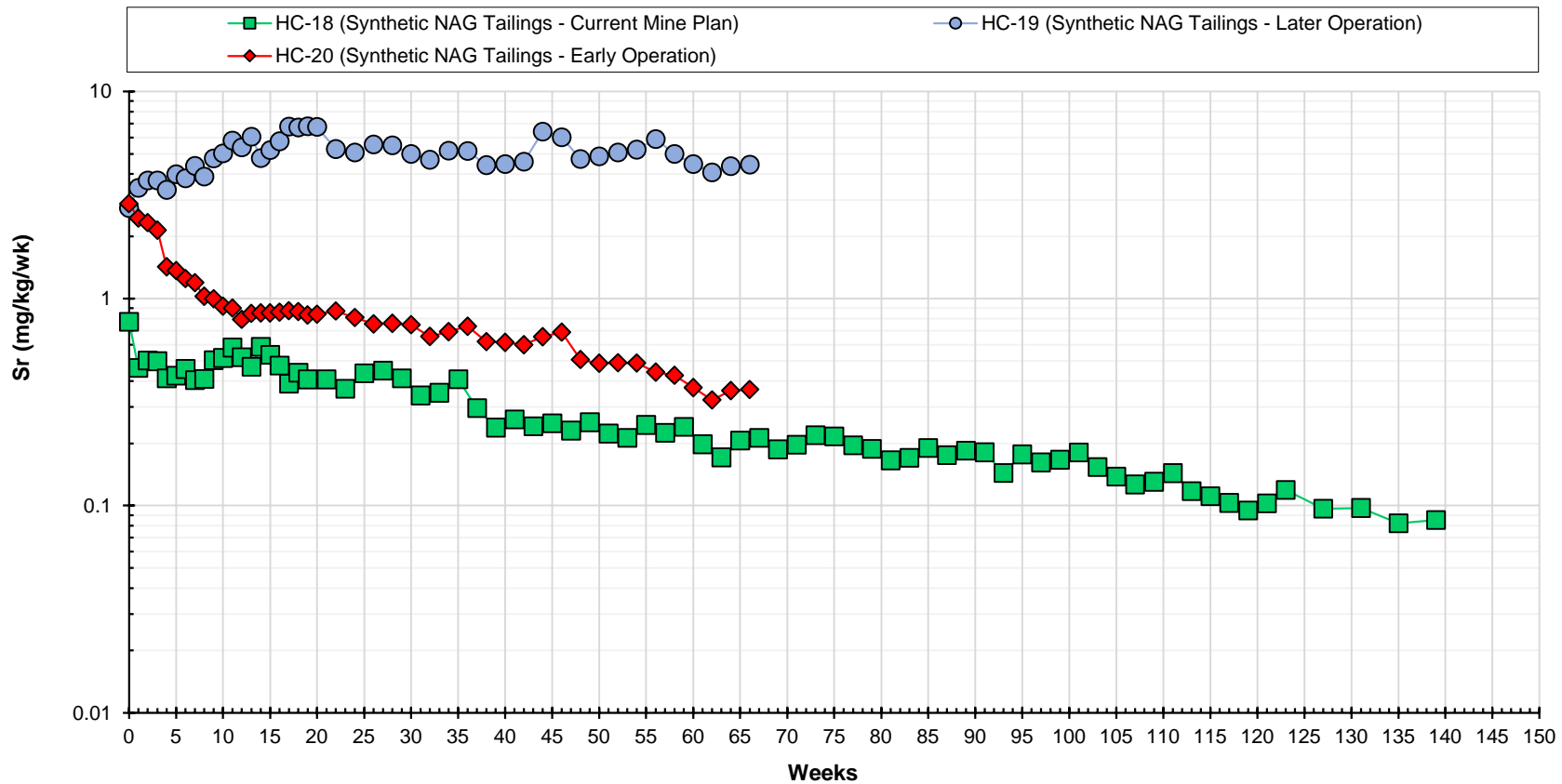
Silicon			
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Springpole Gold Project			
Figure Number		B-31	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



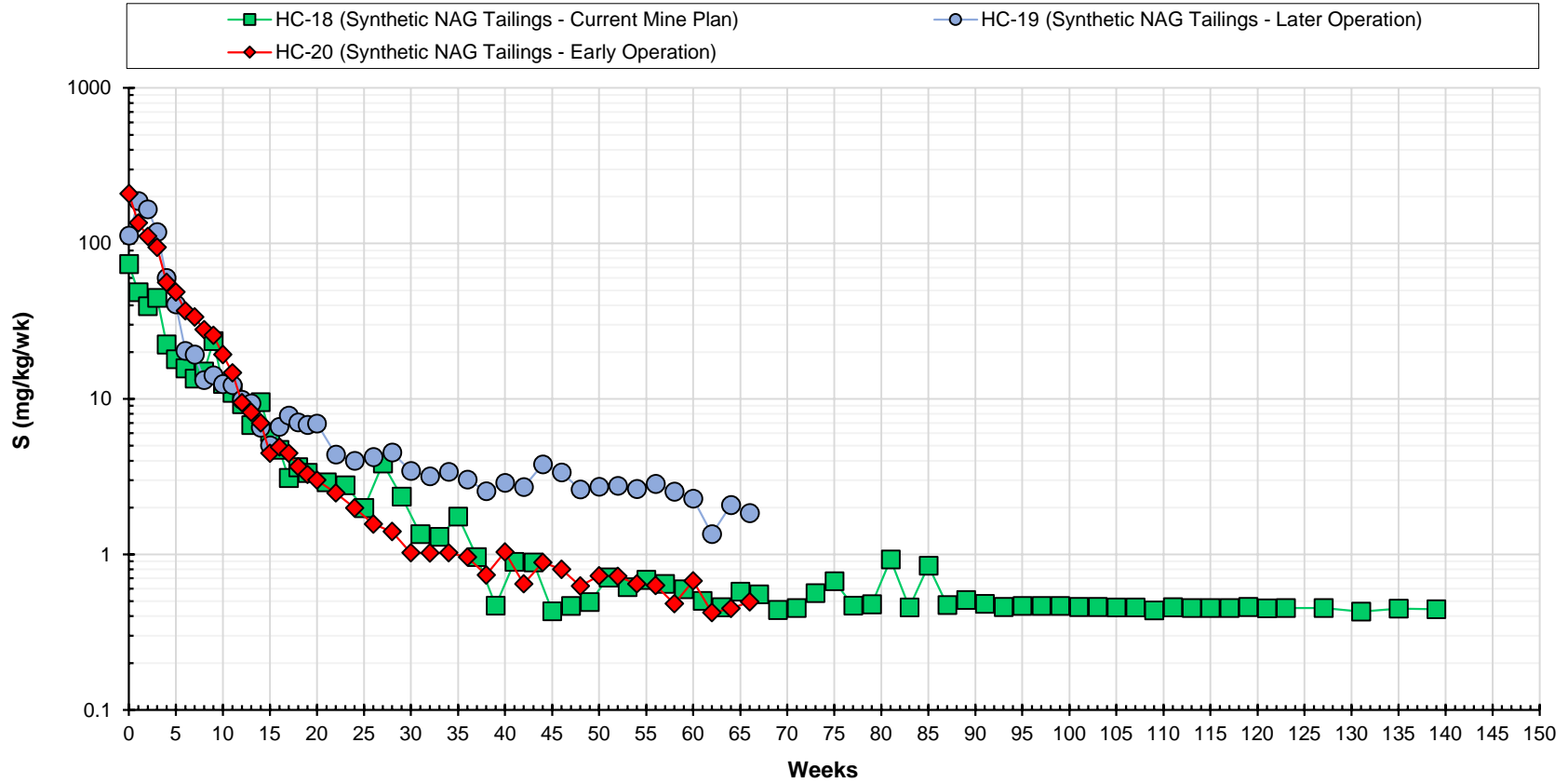
Silver			
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Springpole Gold Project			
Figure Number		B-32	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Sodium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-33	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Strontium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-34	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



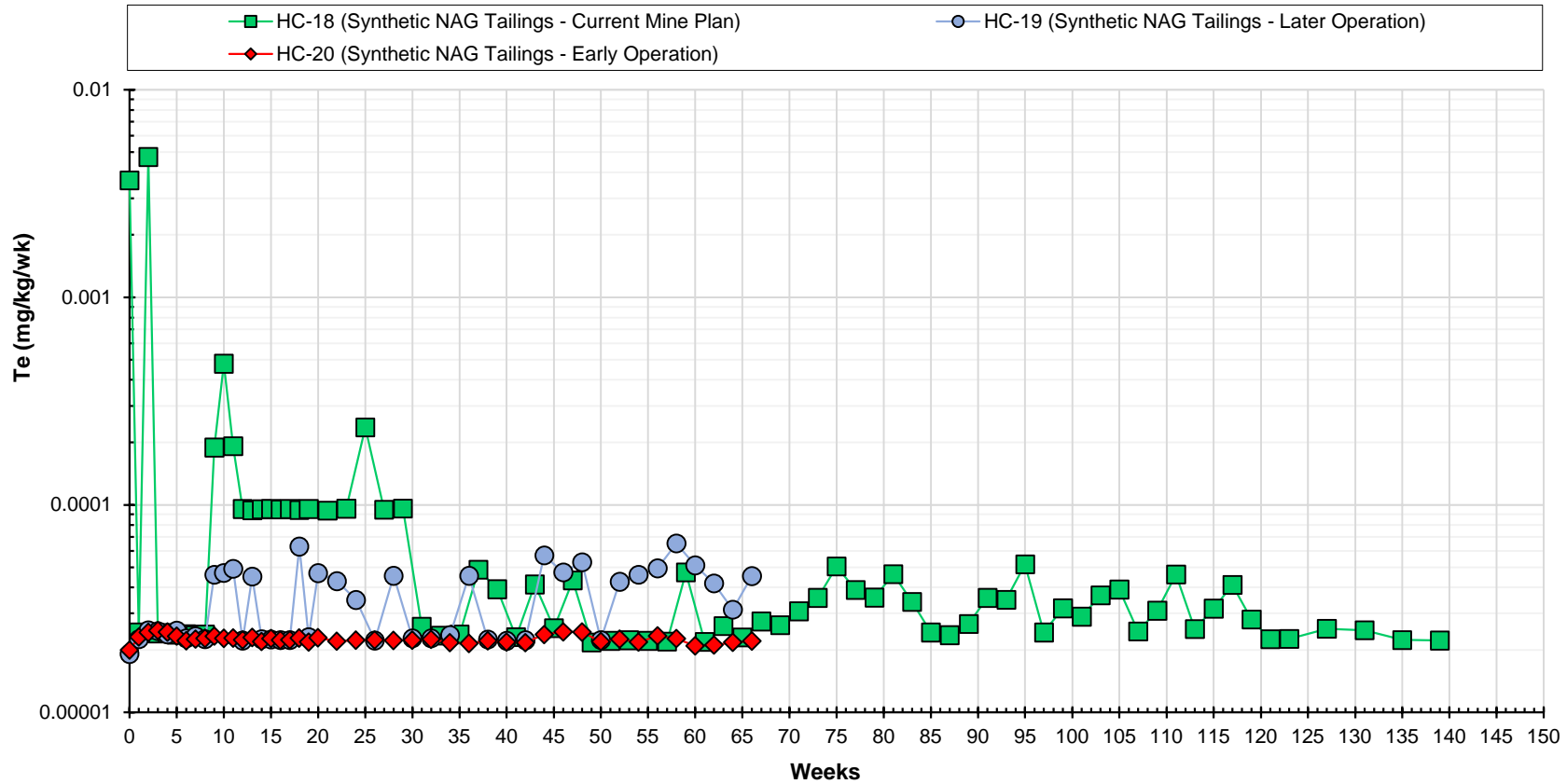
Sulphur

**Baseline Kinetic Geochemical Testing Report -
Kinetic Testing Update - Q4 2024**

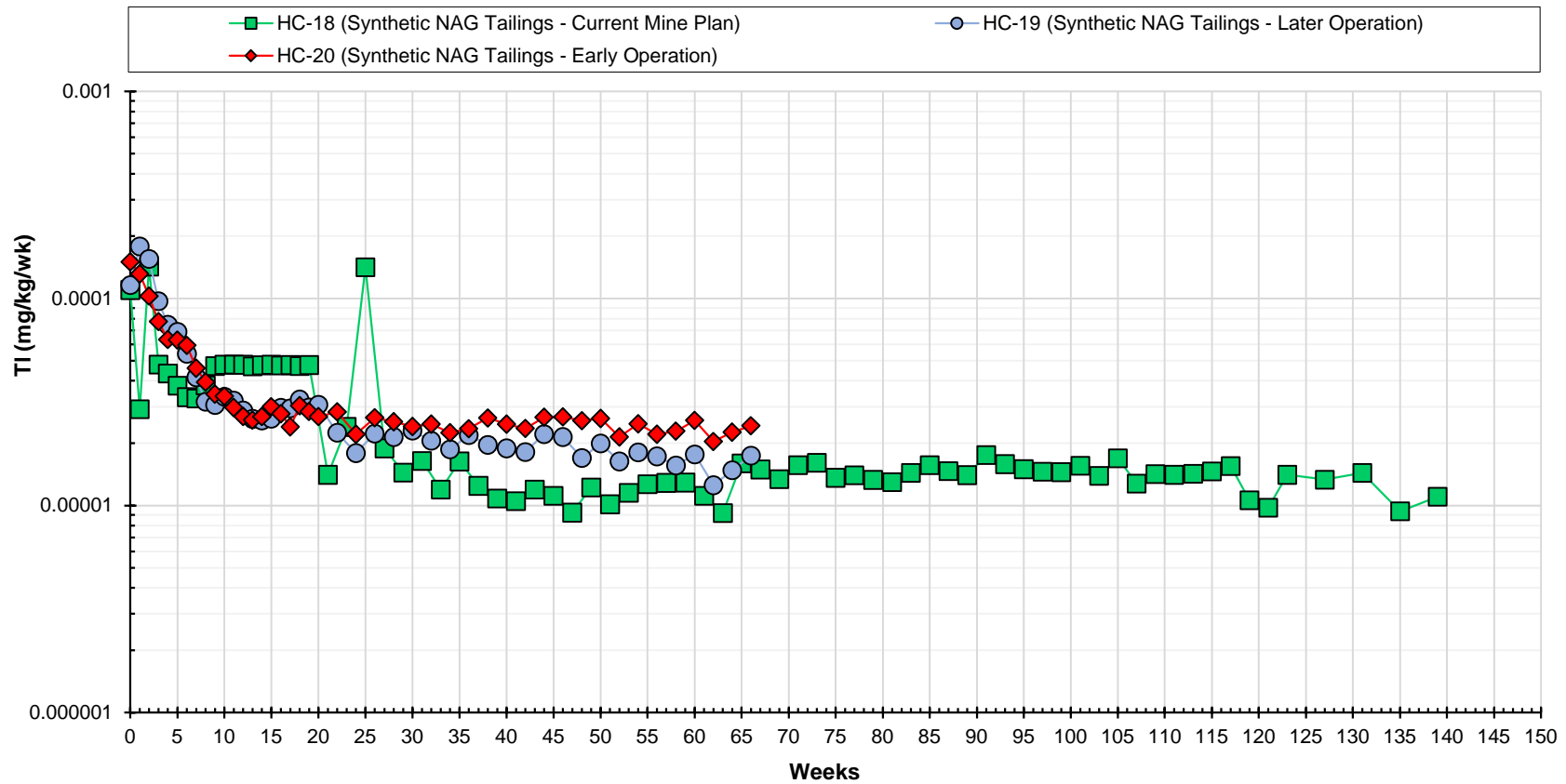
Springpole Gold Project

Figure Number		B-35	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

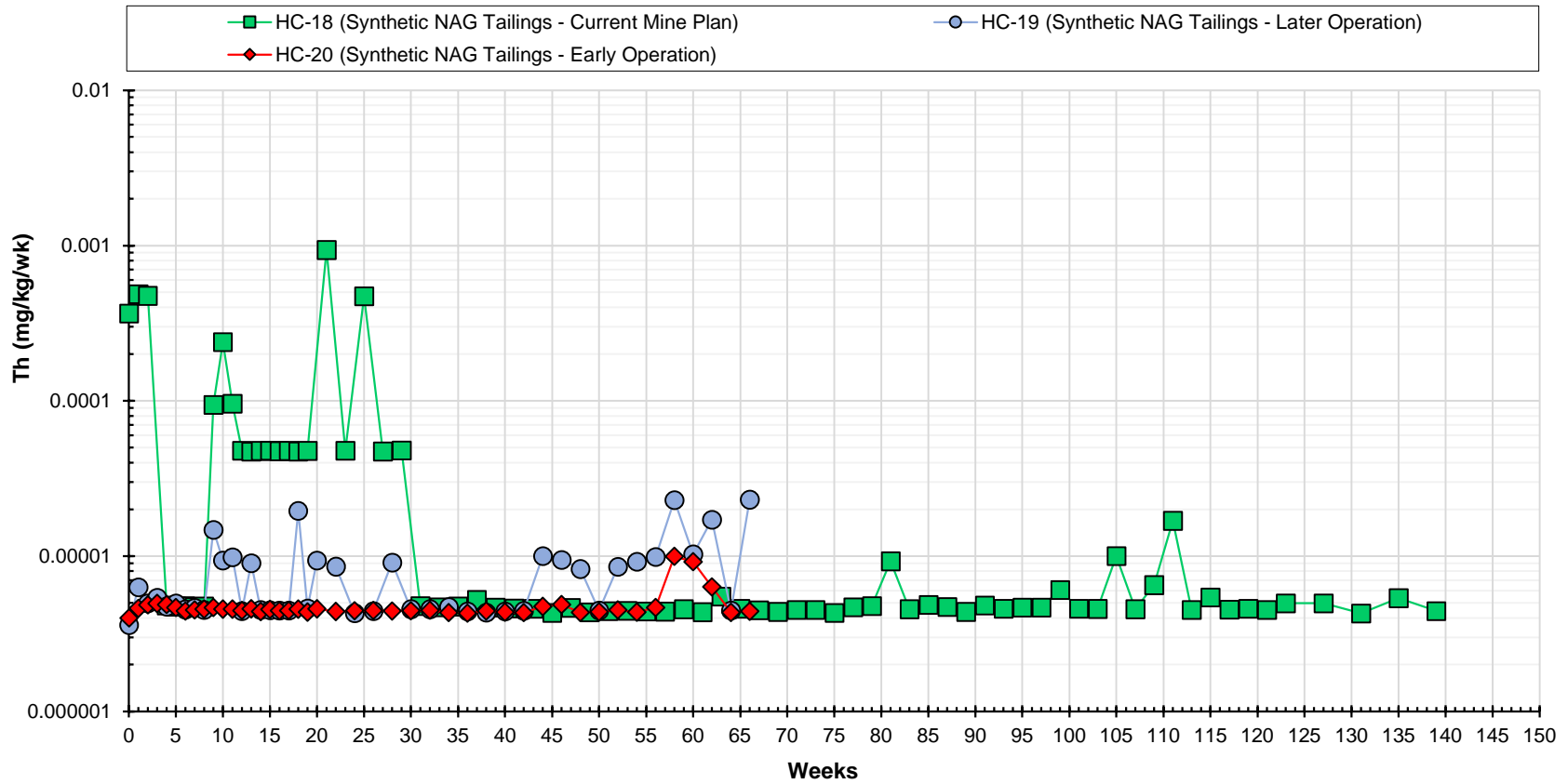




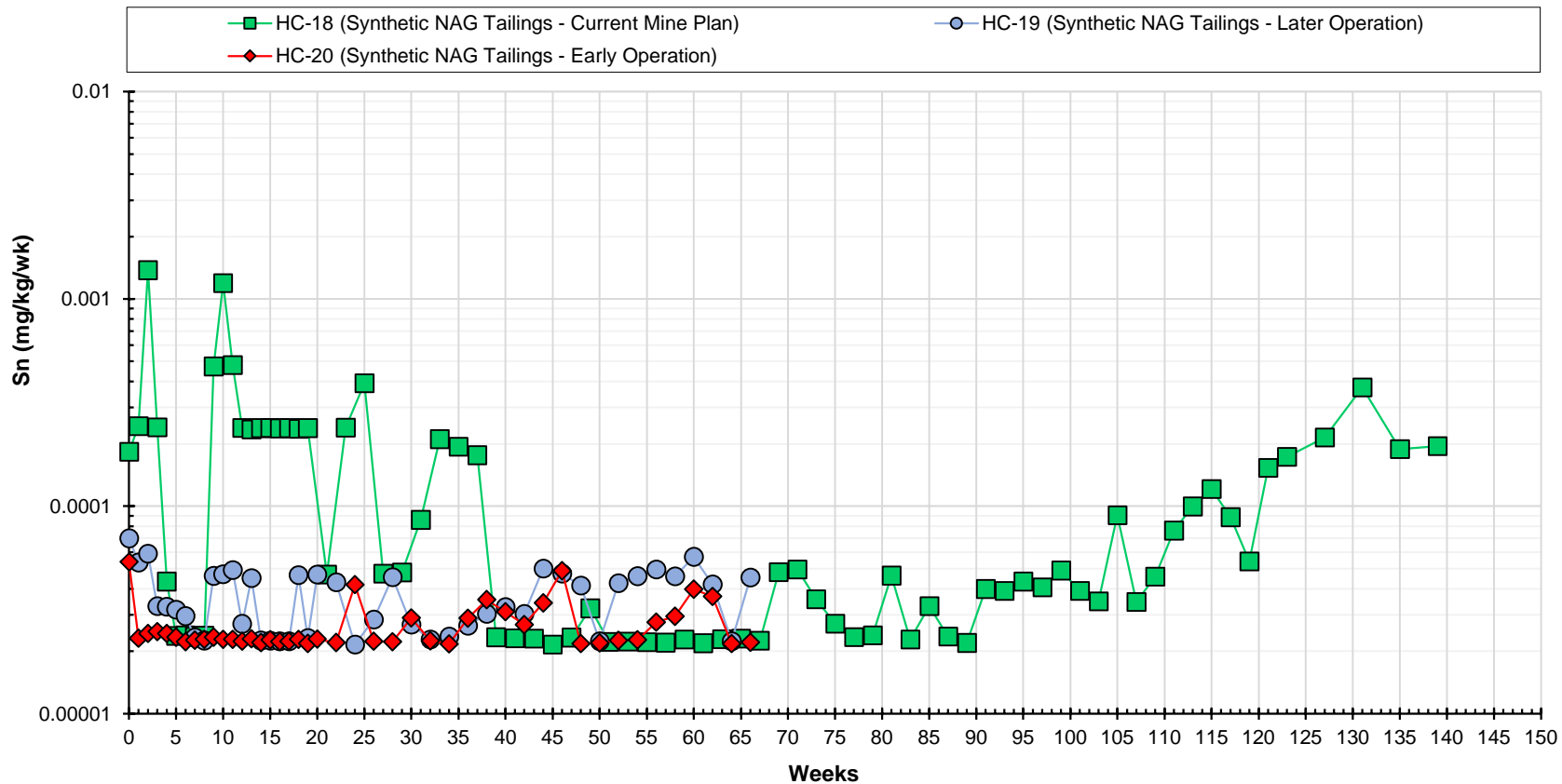
Tellurium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-36	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



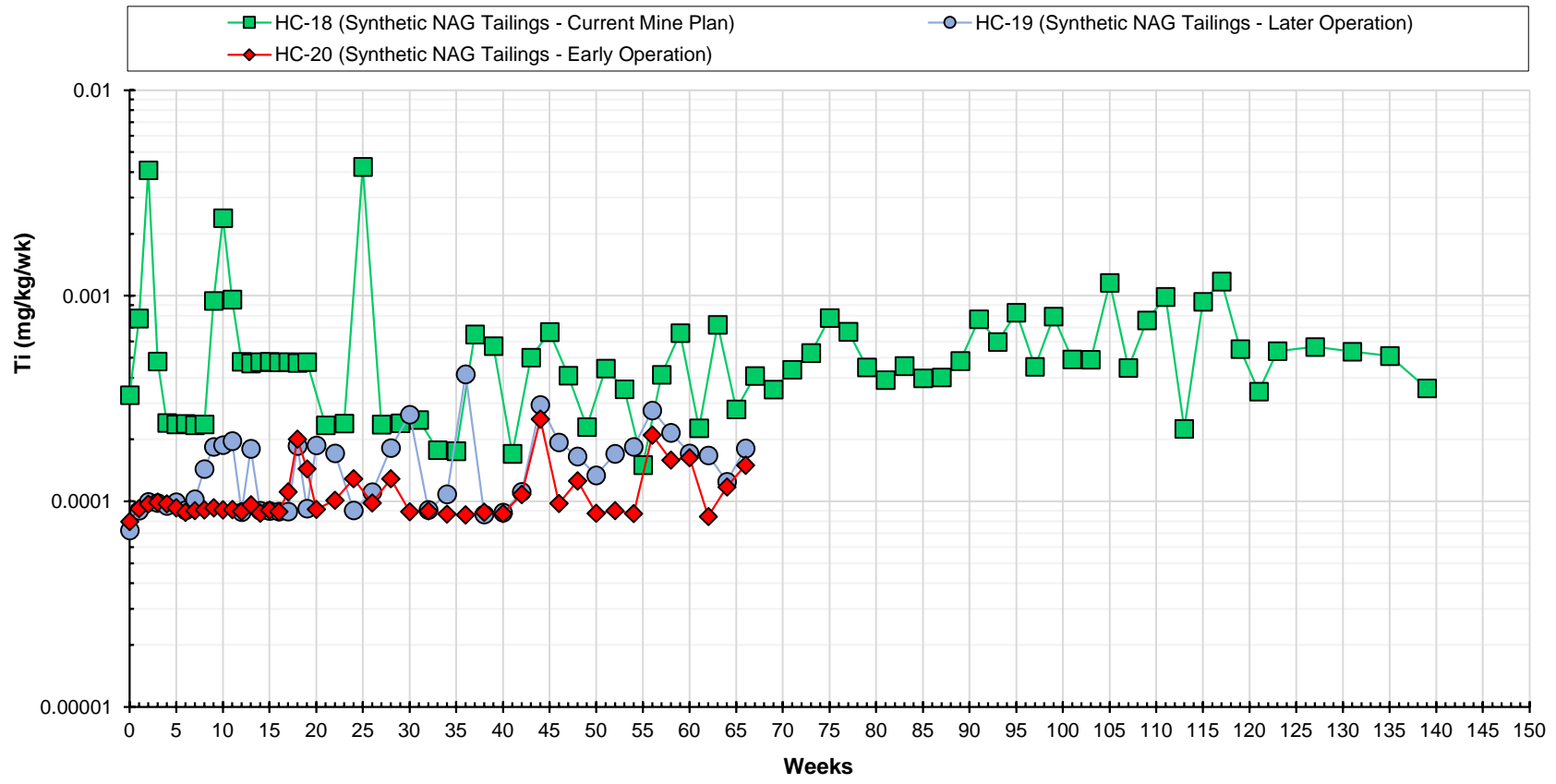
Thallium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-37	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Thorium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-38	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

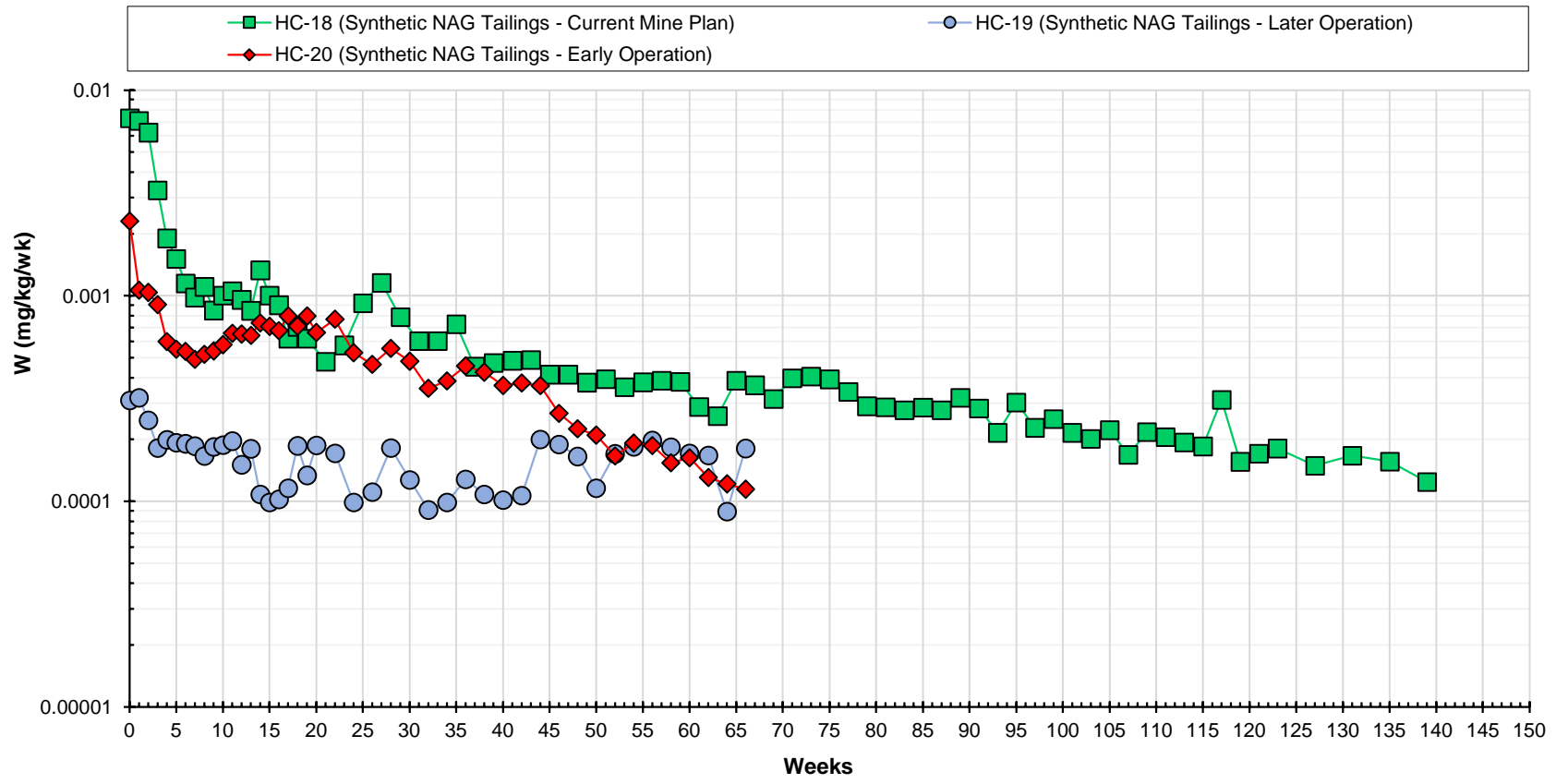


Tin			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-39	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

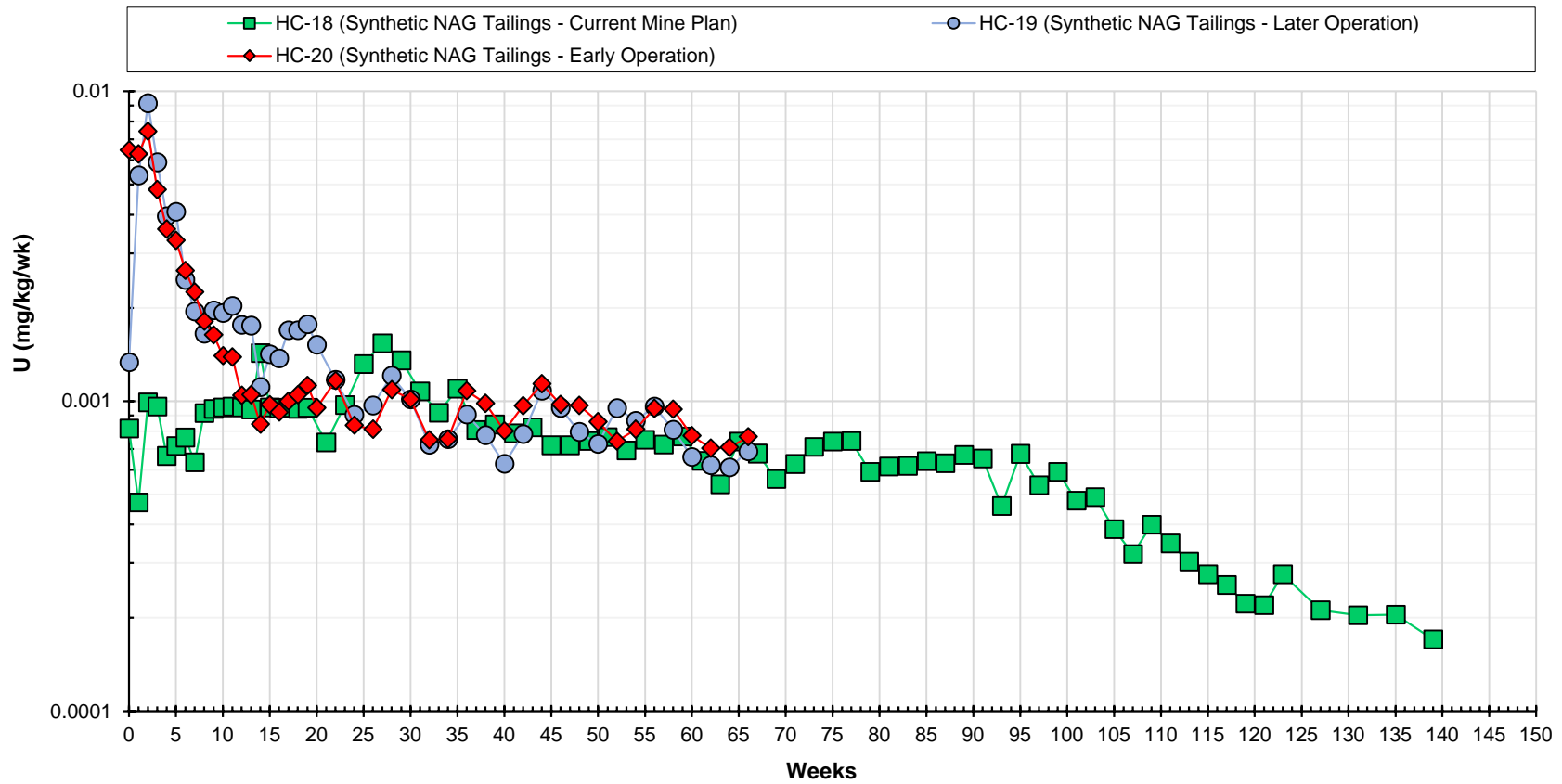


Titanium			
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Springpole Gold Project			
Figure Number		B-40	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

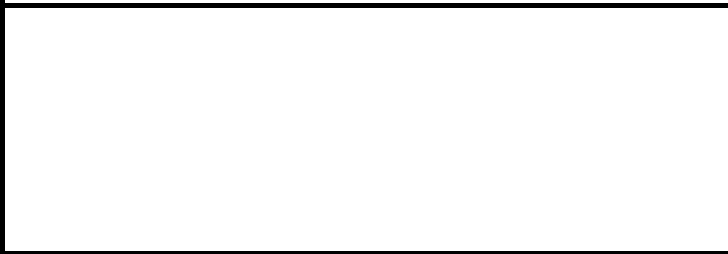
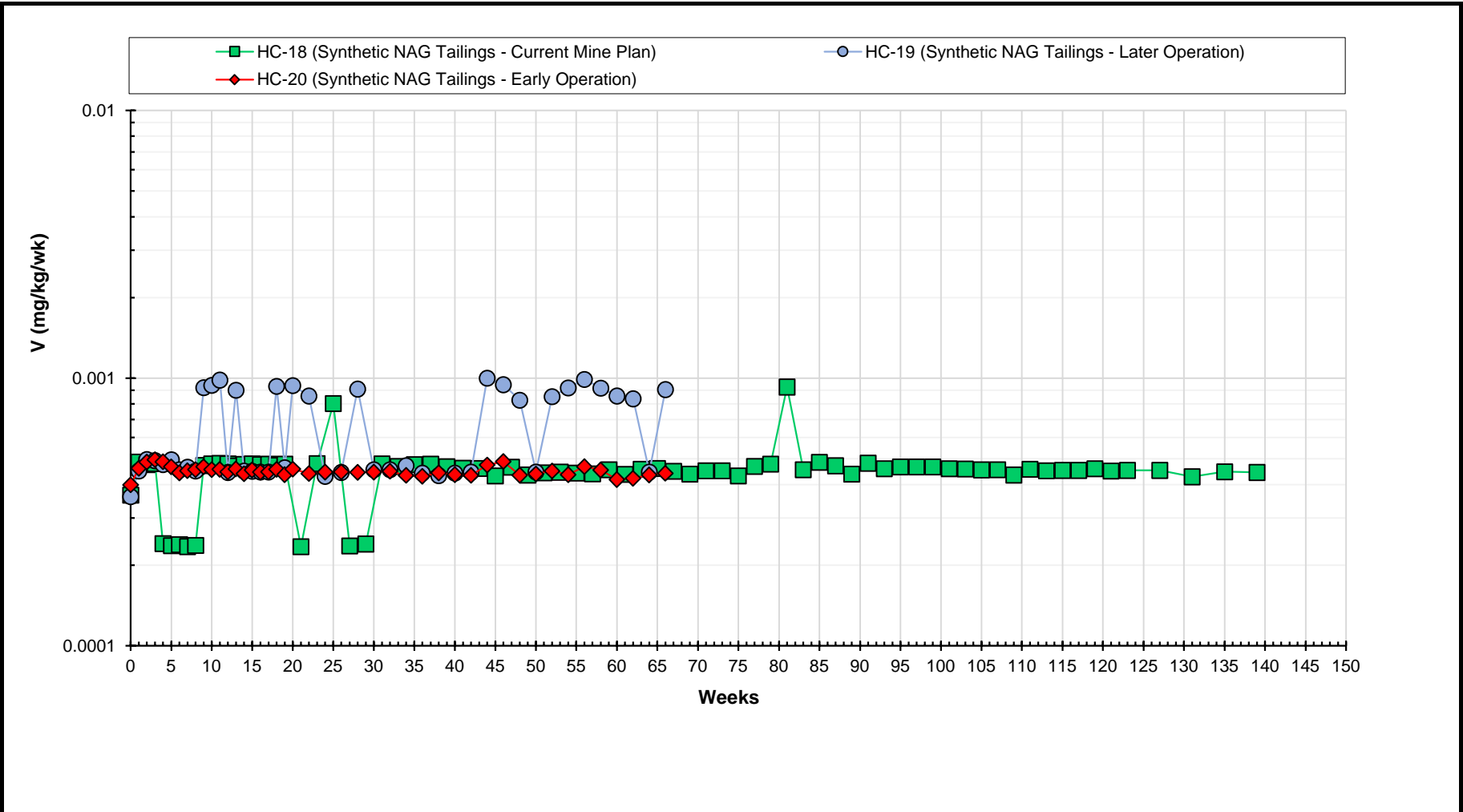




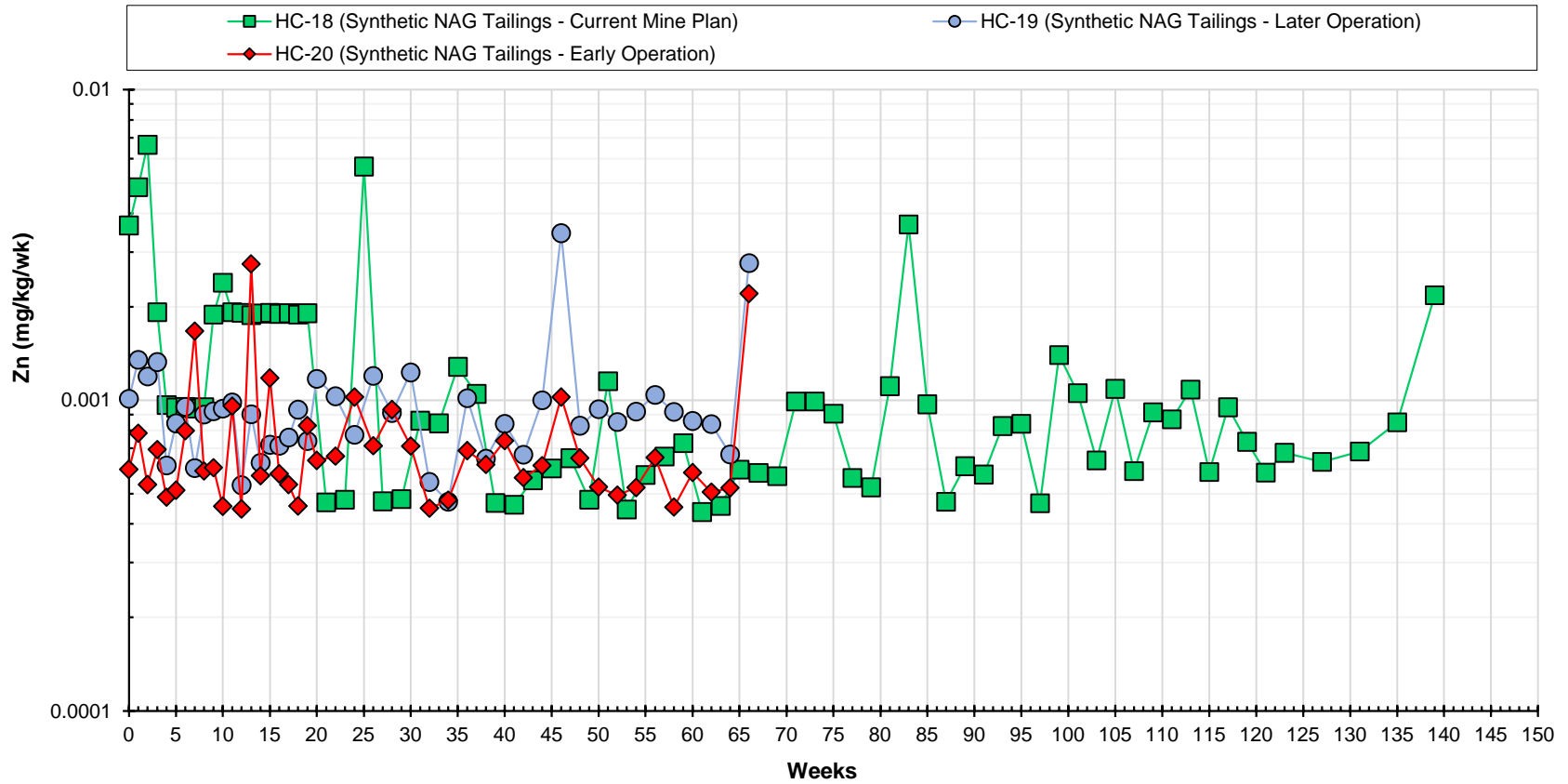
Tungsten			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-41	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



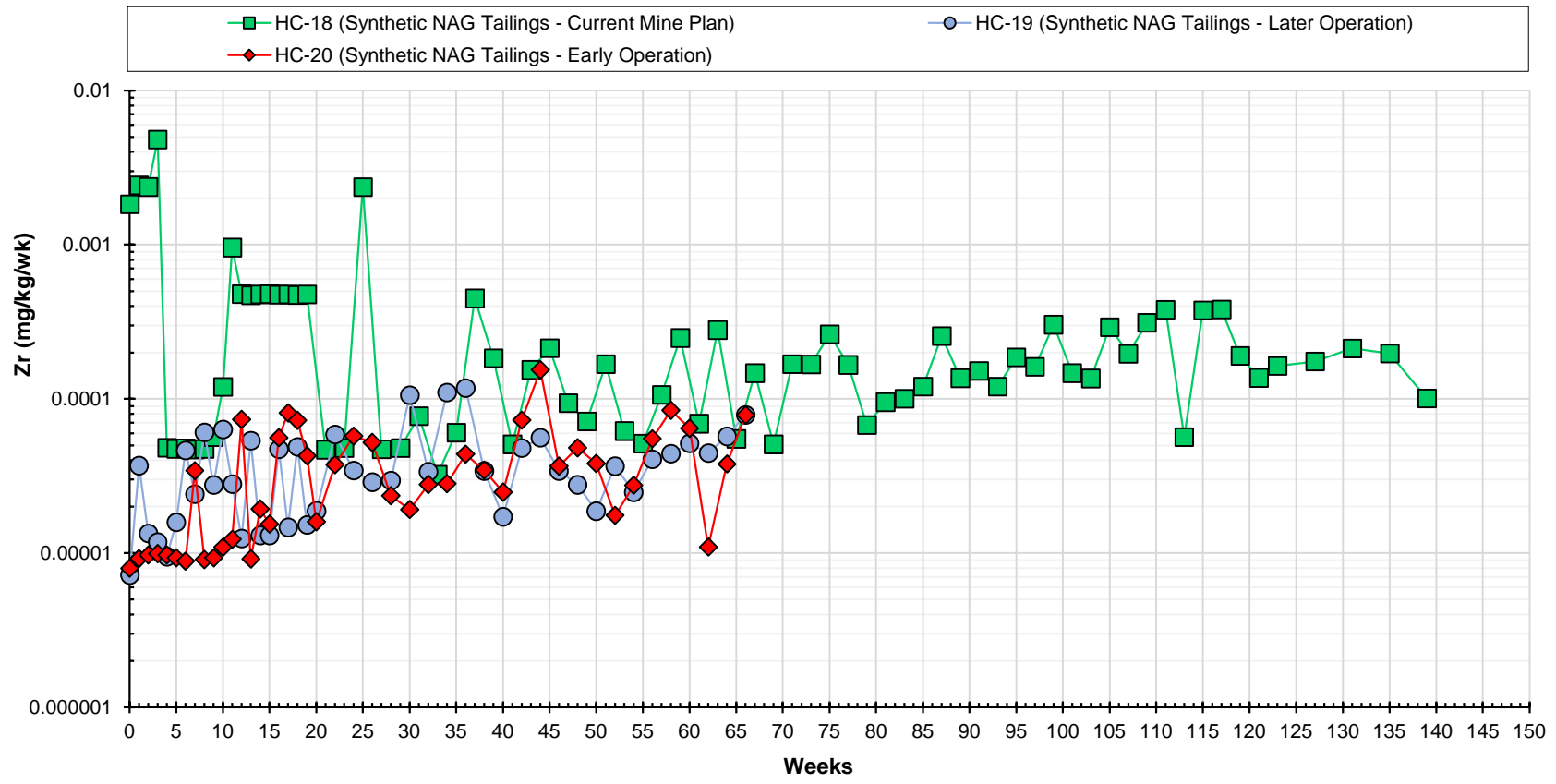
Uranium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-42	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Vanadium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-43	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

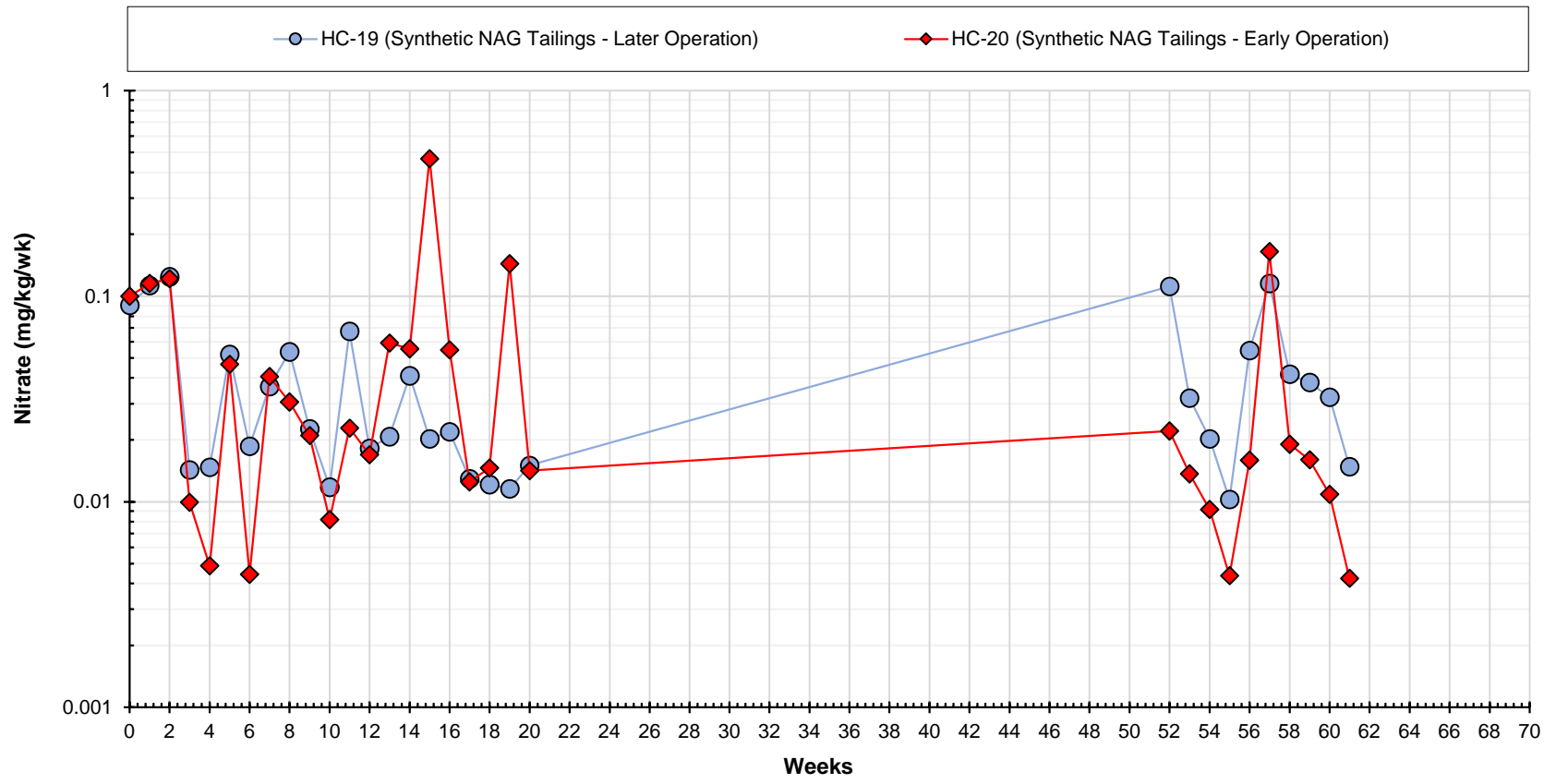


Zinc			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-44	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Zirconium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-45	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



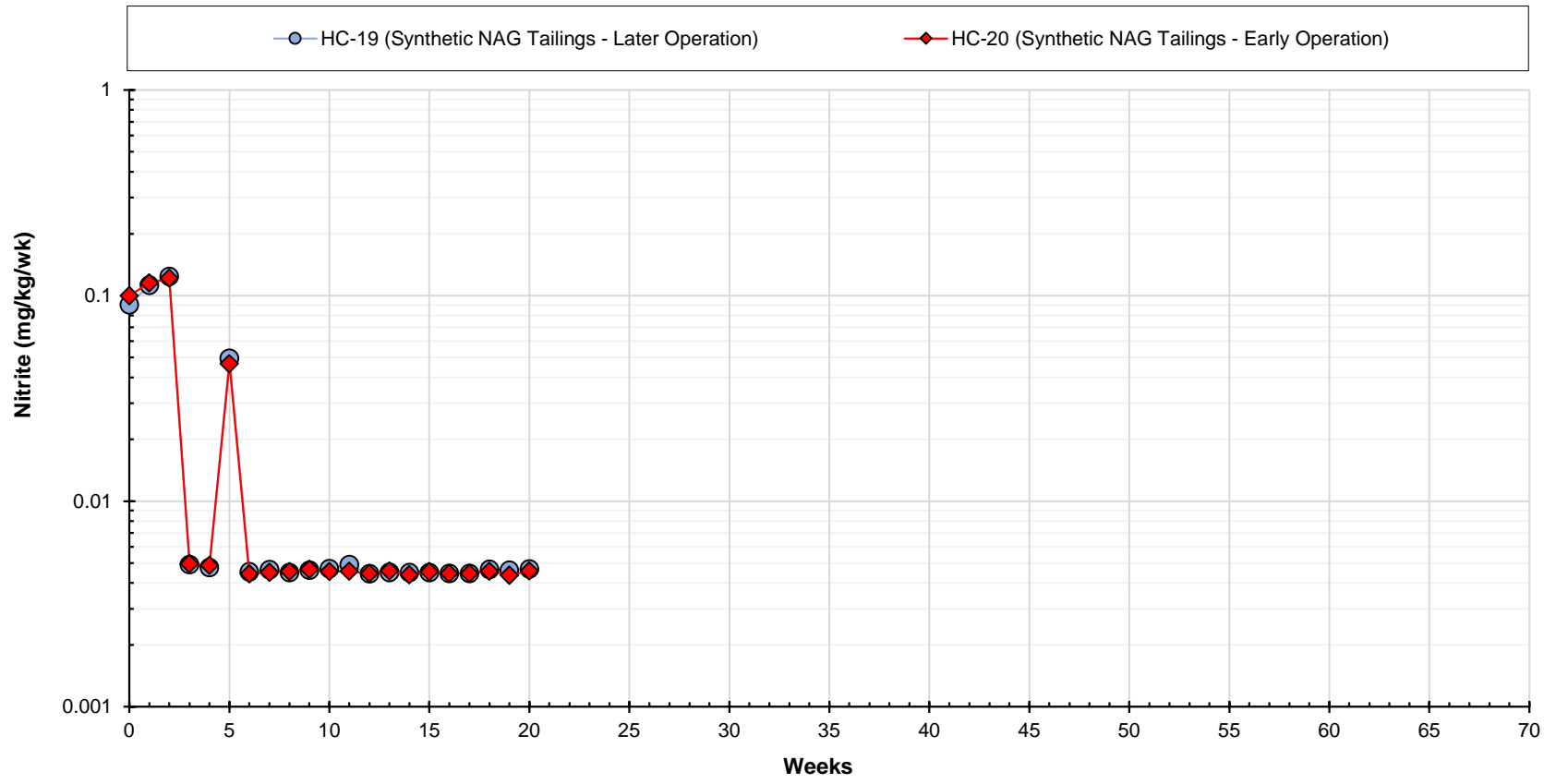


Notes

Nitrate was not measured in HC-18.
 Nitrate measurements were terminated after week 20 for HC-19 and HC-20.



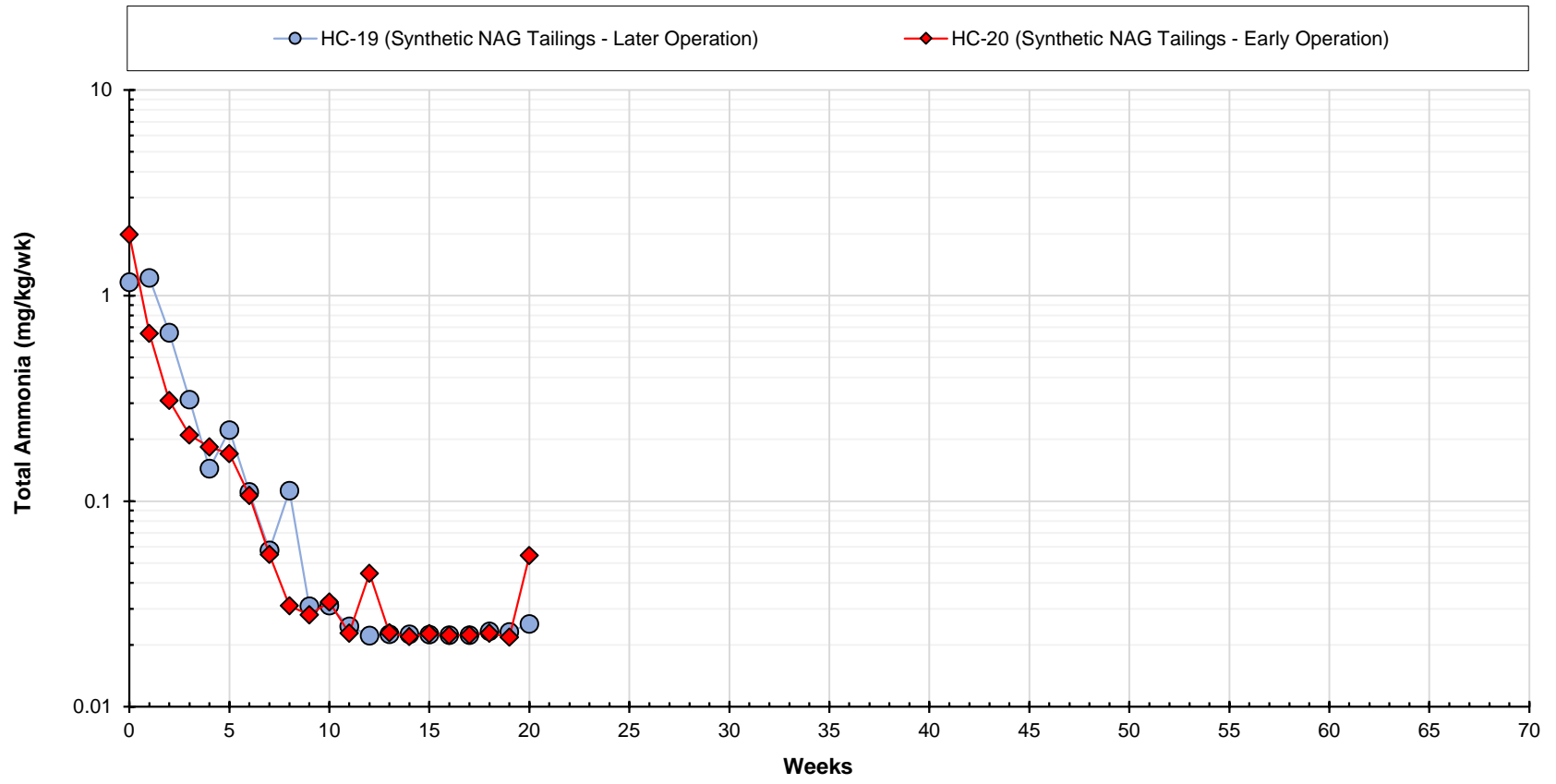
Nitrate			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-46	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Notes
 Nitrite was not measured in HC-18.
 Nitrite measurements were terminated after week 20 for HC-19 and HC-20.



Nitrite			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-47	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

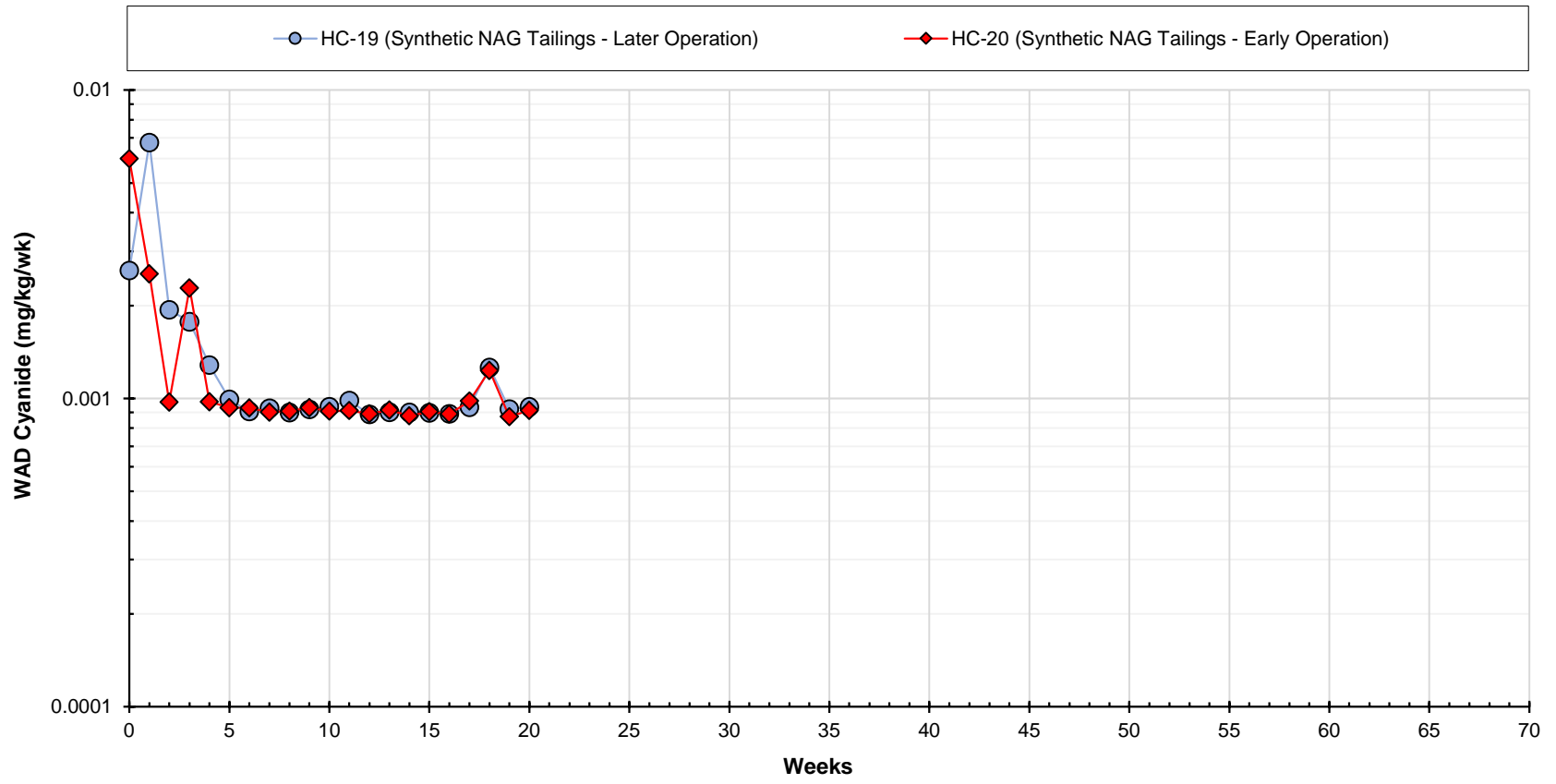


Notes

Total ammonia was not measured in HC-18.
 Total ammonia measurements were terminated after week 20 for HC-19 and HC-20.



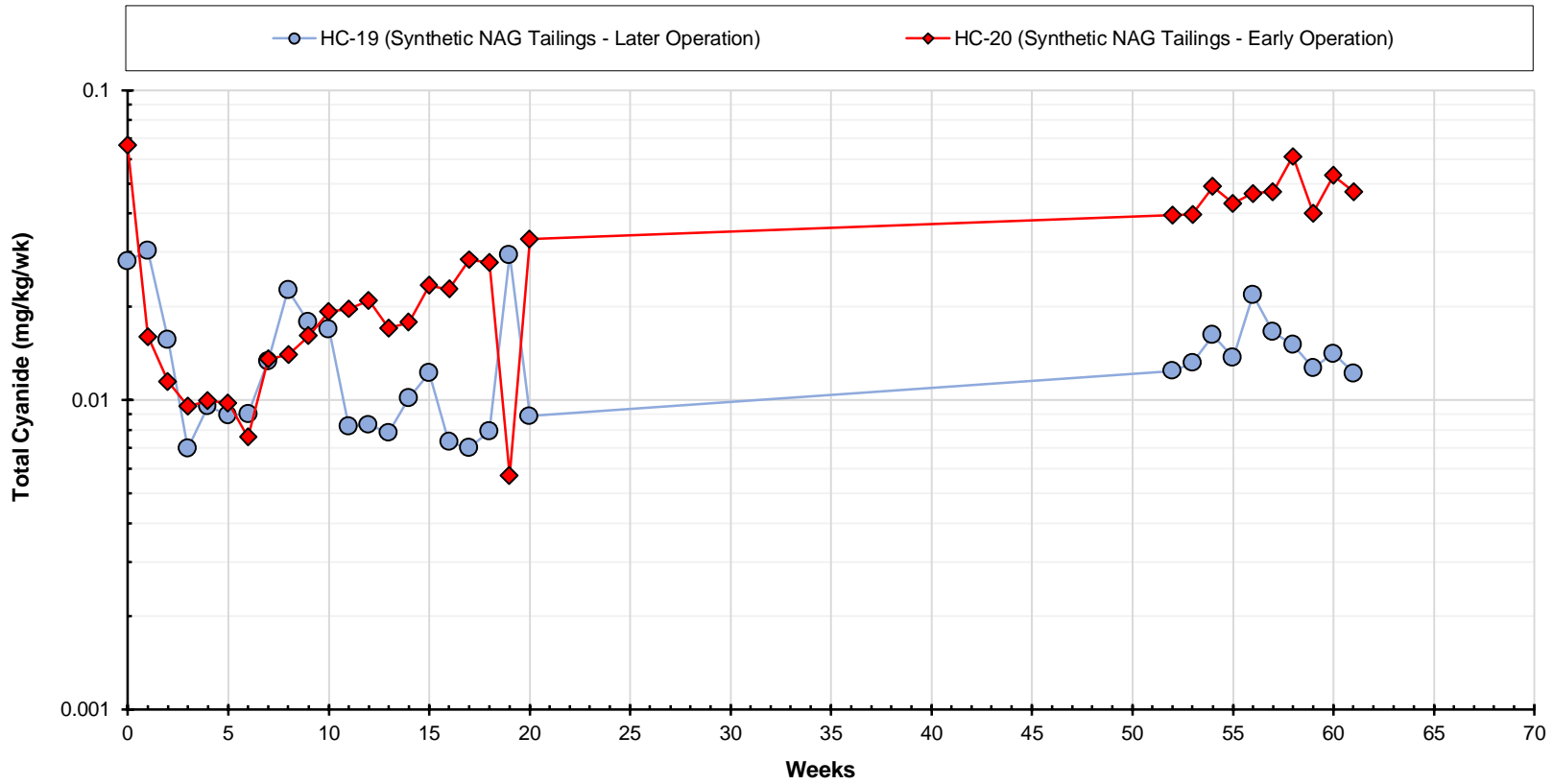
Total Ammonia			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-48	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Notes
 WAD cyanide was not measured in HC-18.
 WAD cyanide measurements were terminated after week 20 for HC-19 and HC-20.



WAD Cyanide			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-49	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Notes

Total cyanide was not measured in HC-18.
 Total cyanide measurements were terminated after week 20 for HC-19 and HC-20.



Total Cyanide			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		B-50	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

Appendix C

Termination Tests

Table C-1. Bottle Roll Results

Parameter	Unit	HC-12	HC-13	HC-14	HC-15
Weight of dry sample used	g	250	250	250	250
Volume of DI water used	mL	750	750	750	750
General Chemistry					
pH	pH Units	6.6	6.7	6.7	6.7
EC	mV	34	41	36	29
Acidity (to pH 8.3)	mg CaCO ₃ /L	19	21	16	16
Total Alkalinity (to pH 4.5)	mg CaCO ₃ /L	24	24	24	21
Sulphate	mg/L	1.3	2.3	1.4	1.3
Chloride	mg/L	0.19	1.1	0.10	0.10
Fluoride	mg/L	0.10	0.10	0.10	0.10
Phosphorous	mg/L	0.005	0.005	0.005	0.0050
Hardness	mg/L	22	23	22	17
Dissolved Metals					
Aluminum	mg/L	0.259	0.034	0.165	0.22
Antimony	mg/L	4.4E-04	5.8E-04	1.2E-04	4.7E-04
Arsenic	mg/L	<0.00299	<0.00088	<0.00469	0.00193
Barium	mg/L	0.0363	0.0411	0.00054	0.0176
Beryllium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Bismuth	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Boron	mg/L	<0.003	<0.003	<0.002	<0.002
Cadmium	mg/L	4.6E-06	4.9E-06	2.0E-06	5.0E-06
Calcium	mg/L	8.1	8.7	7.5	6.1
Chromium	mg/L	5.0E-04	5.0E-04	5.0E-04	5.0E-04
Cobalt	mg/L	9.4E-06	1.5E-05	2.1E-05	5.3E-06
Copper	mg/L	0.0013	0.0014	0.0005	0.0008
Iron	mg/L	0.0052	0.014	0.0032	0.0028
Lead	mg/L	1.6E-04	9.0E-05	5.0E-05	<0.00022
Lithium	mg/L	8.5E-05	3.0E-04	1.8E-04	5.0E-05
Magnesium	mg/L	0.5	0.4	0.9	0.51
Manganese	mg/L	0.020	0.011	0.023	0.03
Mercury	mg/L	<0.000	<0.000	<0.000	<0.000
Molybdenum	mg/L	0.0000	0.0011	0.0002	0.0001
Nickel	mg/L	6.3E-05	7.2E-05	1.2E-04	2.2E-04
Potassium	mg/L	0.21	1.03	0.32	0.159
Selenium	mg/L	0.0001	0.0002	0.0001	<0.0001
Silicon	mg/L	0.62	0.75	0.38	0.51
Silver	mg/L	<0.00001	<0.00004	<0.00001	<0.00002
Sodium	mg/L	0.074	0.104	0.068	0.042
Strontium	mg/L	0.13	0.07	0.03	0.06
Sulphur	mg/L	<1	<1	<1	<1
Tellurium	mg/L	<0.00005	<0.00005	<0.00005	<0.00005
Thallium	mg/L	6.0E-06	3.3E-05	9.9E-06	4.2E-06
Thorium	mg/L	<0.00001	<0.00001	<0.00001	<0.00001
Tin	mg/L	<0.00013	<0.00013	<0.00007	<0.00009
Titanium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002
Tungsten	mg/L	<0.0002	<0.0008	<0.0002	<0.0002
Uranium	mg/L	2.2E-04	5.9E-05	7.7E-06	1.3E-04
Vanadium	mg/L	<0.001	<0.001	<0.001	<0.001
Zinc	mg/L	<0.001	<0.001	<0.001	0.0011
Zirconium	mg/L	1.0E-04	6.8E-05	3.0E-05	1.6E-04

Phosphorous measured by colorimetry.

Table C-2. Pre- and Post-Test Acid Base Accounting (ABA) Results

Humidity Cell ID	Test	Paste pH	Fizz Rating	Total C ⁽¹⁾	TIC ⁽²⁾	CarbNP ⁽³⁾	Total S ⁽⁴⁾	SO4 S ⁽⁵⁾	Sulphide S ⁽⁶⁾	AP ⁽⁷⁾	Sobek NP ⁽⁸⁾	NPR ⁽⁹⁾
		pH Units		wt. %	wt %	CaCO3/ton	wt. %	wt %	kg CaCO3/tonne			
HC-12	<i>Pre-Test</i>	9.6	Strong	1.40	1.25	104.2	0.32	<0.01	0.32	10.0	121.1	12.1
	<i>Post-Test</i>	9.2	Moderate	1.45	1.38	115.0	0.38	0.07	0.31	9.7	128.4	13.3
HC-13	<i>Pre-Test</i>	7.9	Strong	1.03	0.84	70.0	1.79	0.02	1.77	55.3	101.1	1.8
	<i>Post-Test</i>	8.4	Moderate	1.20	1.13	94.2	2.44	0.01	2.43	75.9	107.9	1.4
HC-14	<i>Pre-Test</i>	9.2	Moderate	2.22	1.51	125.8	2.41	<0.01	2.41	75.3	167.9	2.2
	<i>Post-Test</i>	8.3	Moderate	2.22	2.22	185.0	2.08	0.02	2.06	64.4	190.2	3.0
HC-15	<i>Pre-Test</i>	9.0	Moderate	0.88	0.86	72.0	0.83	<0.01	0.83	25.9	74.8	2.9
	<i>Post-Test</i>	9.3	Slight	0.93	0.89	74.2	0.86	0.02	0.84	26.3	71.6	2.7

Notes

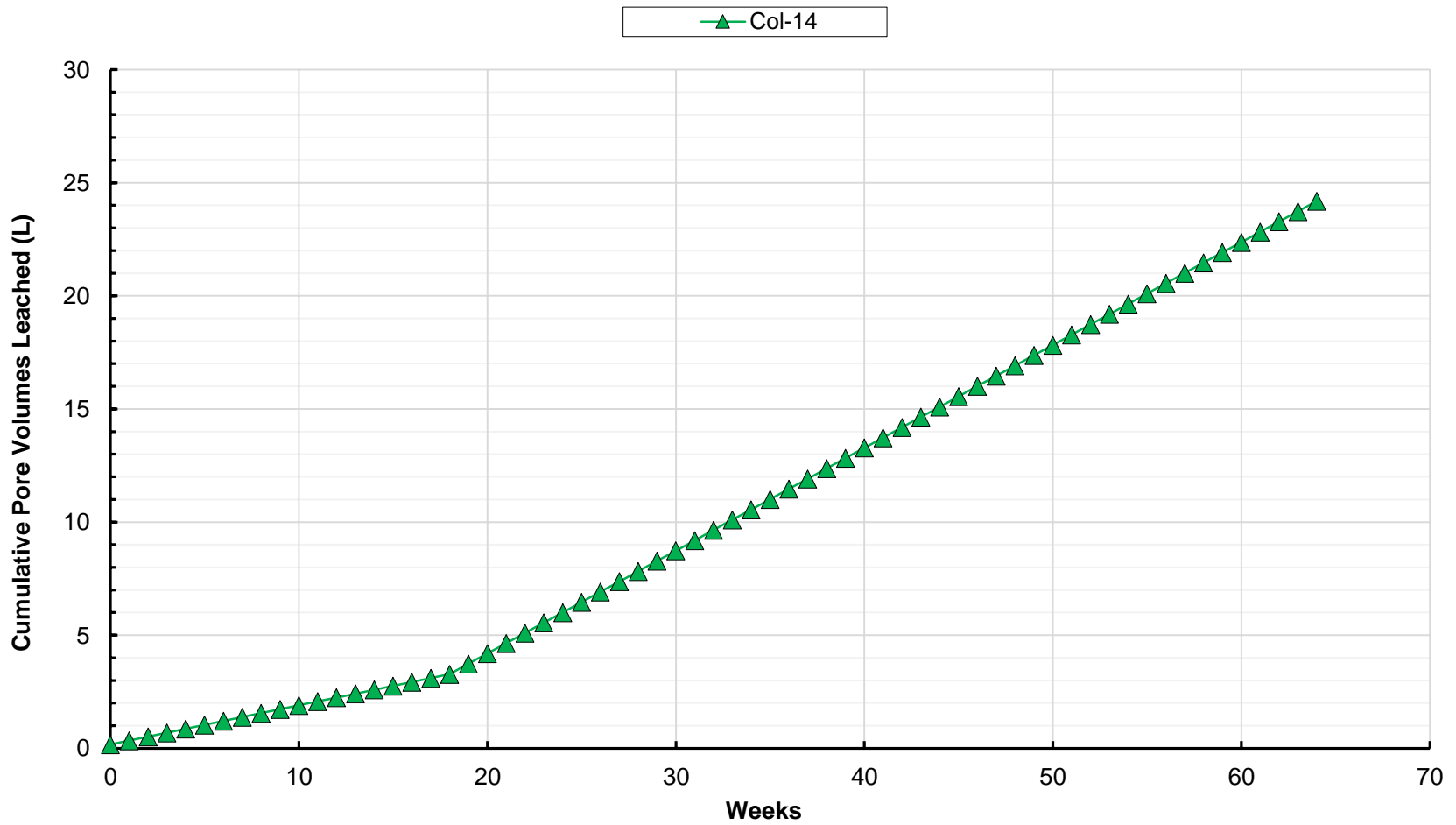
- (1) Total carbon by Leco furnace
- (2) Total inorganic carbon by HCl leach and Leco furnace
- (3) Carbonate Neutralization Potential
- (4) Total sulphur by Leco furnace
- (5) Sulphate sulphur by HCl leach and Leco furnace
- (6) Sulphide sulphur by difference (Total S - SO4 S = Sulphide S)
- (7) Acid Potential, calculated from sulphide sulphur
- (8) Neutralization Potential Ratio (NP/AP)

Table C-3. Pre- and Post-Test Aqua Regia Metals Results

Parameter	Units	HC-12		HC-13		HC-14		HC-15	
		Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test	Pre-Test	Post-Test
Ag	ppm	0.12	0.10	2.35	1.55	0.48	0.40	0.59	0.64
Al	%	0.41	0.34	2.35	2.15	0.76	0.68	0.45	0.34
As	ppm	28.2	29.1	13.8	16.7	52.8	52.7	50.9	53.2
Au	ppm	0.0068	0.0081	0.21	0.21	0.16	0.15	0.21	0.25
Ce	ppm	69.51	66.49	26.44	23.26	38.54	39.55	49.72	45.54
Co	ppm	5.6	4.9	34.9	35.7	30.7	25.6	5.2	5.1
B	ppm	<10	<10	<10	<10	<10	<10	<10	<10
Ba	ppm	139	120	116	75	65	54	138	100
Be	ppm	0.63	0.64	1.11	0.47	0.33	0.27	0.40	0.32
Bi	ppm	0.50	0.47	0.04	0.04	0.04	0.04	0.44	0.44
Cr	ppm	23	28	156	152	41	46	30	29
Cs	ppm	3.02	2.67	13.41	8.83	7.51	6.83	2.47	2.18
Ca	%	3.91	3.90	2.91	3.78	4.35	4.34	2.06	2.13
Cd	ppm	0.13	0.11	0.27	0.21	0.13	0.16	0.14	0.14
Cu	ppm	17.4	17.2	74.3	60.8	32.6	31.8	19.3	19.3
Fe	%	1.16	1.09	7.08	6.82	5.52	5.24	1.52	1.51
Ga	ppm	1.97	1.82	6.27	6.20	2.63	2.23	1.96	1.46
Ge	ppm	0.10	<0.05	0.11	0.07	0.09	<0.05	<0.05	<0.05
Hf	ppm	1.64	1.83	0.35	0.48	1.04	1.05	1.12	2.43
Hg	ppm	0.03	0.04	0.20	0.16	0.02	0.02	0.11	0.14
In	ppm	<0.005	<0.005	0.013	0.012	0.008	0.007	<0.005	<0.005
K	%	0.35	0.30	0.50	0.48	0.66	0.60	0.41	0.31
La	ppm	30.0	30.0	12.5	11.1	17.0	19.0	22.1	21.1
Li	ppm	8.7	8.2	28.3	28.6	14.6	12.9	7.2	6.8
Mg	%	0.56	0.53	2.27	2.01	1.70	1.59	0.58	0.62
Mn	ppm	595	600	914	1012	1334	1407	1159	1276
Mo	ppm	0.85	0.74	4.03	5.86	9.61	7.75	2.20	2.12
Na	%	0.04	0.03	0.02	0.02	0.03	0.03	0.02	0.02
Nb	ppm	0.08	0.12	<0.05	<0.05	<0.05	<0.05	0.05	0.10
Ni	ppm	6.9	6.1	50.0	45.7	53.7	45.4	9.0	8.9
P	ppm	1420	1342	650	636	913	892	1315	1363
Pb	ppm	35.5	30.5	17.1	16.7	9.9	10.3	43.7	40.3
Rb	ppm	29.0	24.0	71.1	57.8	56.3	46.7	29.2	23.6
Re	ppm	<0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001
S	%	0.38	0.35	1.86	2.49	2.42	2.17	0.93	0.92
Sb	ppm	1.58	1.2	1.57	0.83	0.76	0.59	5.78	2.6
Sc	ppm	0.7	0.9	5.0	5.0	3.1	2.9	0.9	1.0
Se	ppm	<0.2	<0.2	0.8	1	0.2	<0.2	0.3	0.3
Sn	ppm	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sr	ppm	576.7	539	85.5	69.9	180.2	166.6	316.3	282.3
Ta	ppm	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Te	ppm	0.04	0.04	2.6	2.7	0.18	0.21	0.18	0.18
Th	ppm	6.3	5.6	0.9	0.9	1.8	1.8	6.7	5.7
Ti	%	0.017	0.015	0.05	0.053	0.057	0.05	0.012	0.01
Tl	ppm	0.48	0.41	1.23	1.08	1.21	1.01	0.55	0.45
U	ppm	3.02	2.54	0.31	0.28	0.41	0.35	4.91	4.05
V	ppm	6	5	75	71	36	32	8	6
W	ppm	0.22	0.17	6.05	1.7	2.23	2.61	1.19	0.66
Y	ppm	9.00	8.74	10.45	10.69	6.99	6.85	9.09	9.18
Zn	ppm	60	55	156	126	58	57	53	60
Zr	ppm	84.3	74.3	13.9	16.2	45.1	39.6	91	111.9

Appendix D

Tailings Column Test



Notes

Column Test Pore Volume = 1.1 L

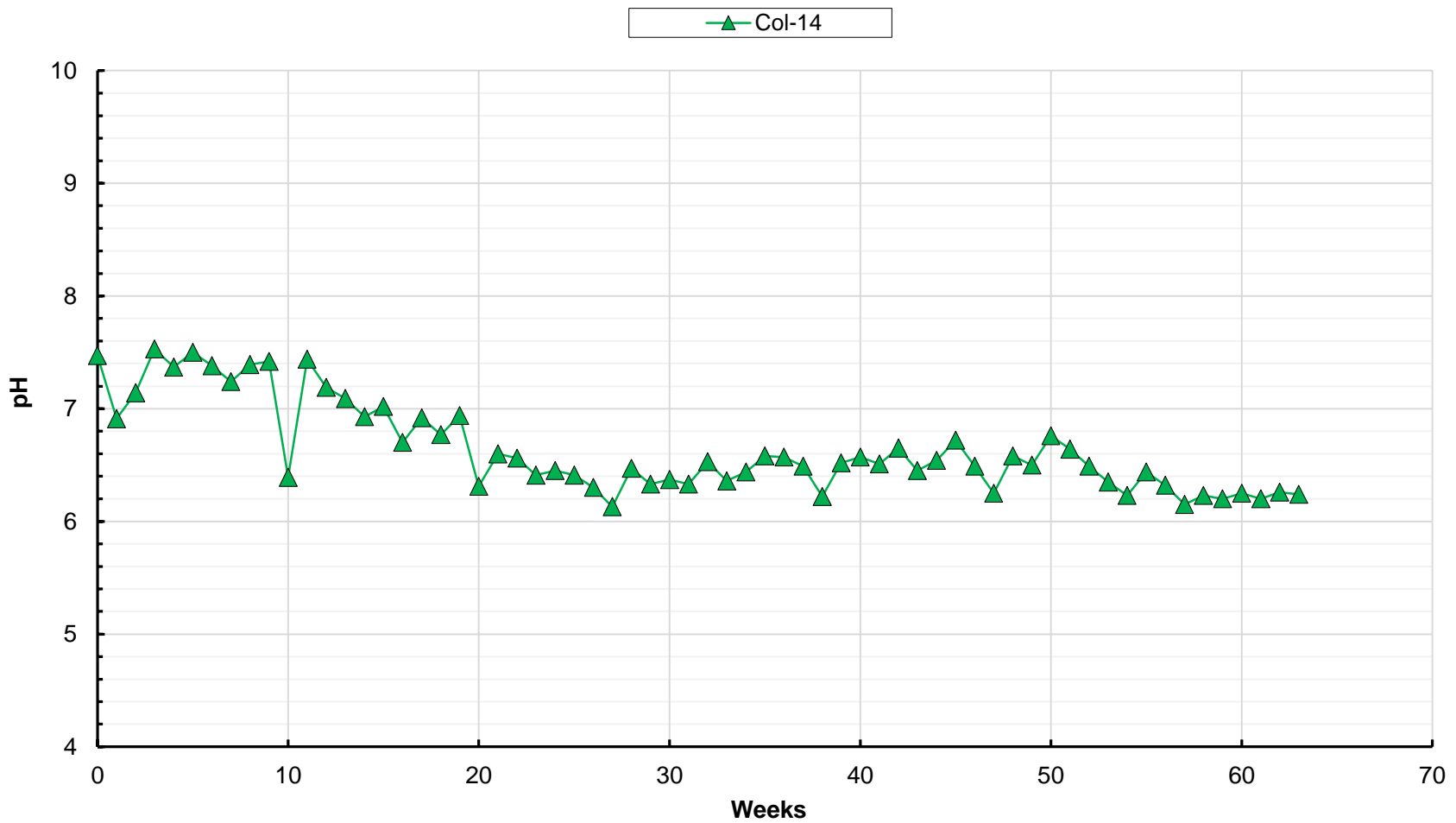


Pore Volume

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

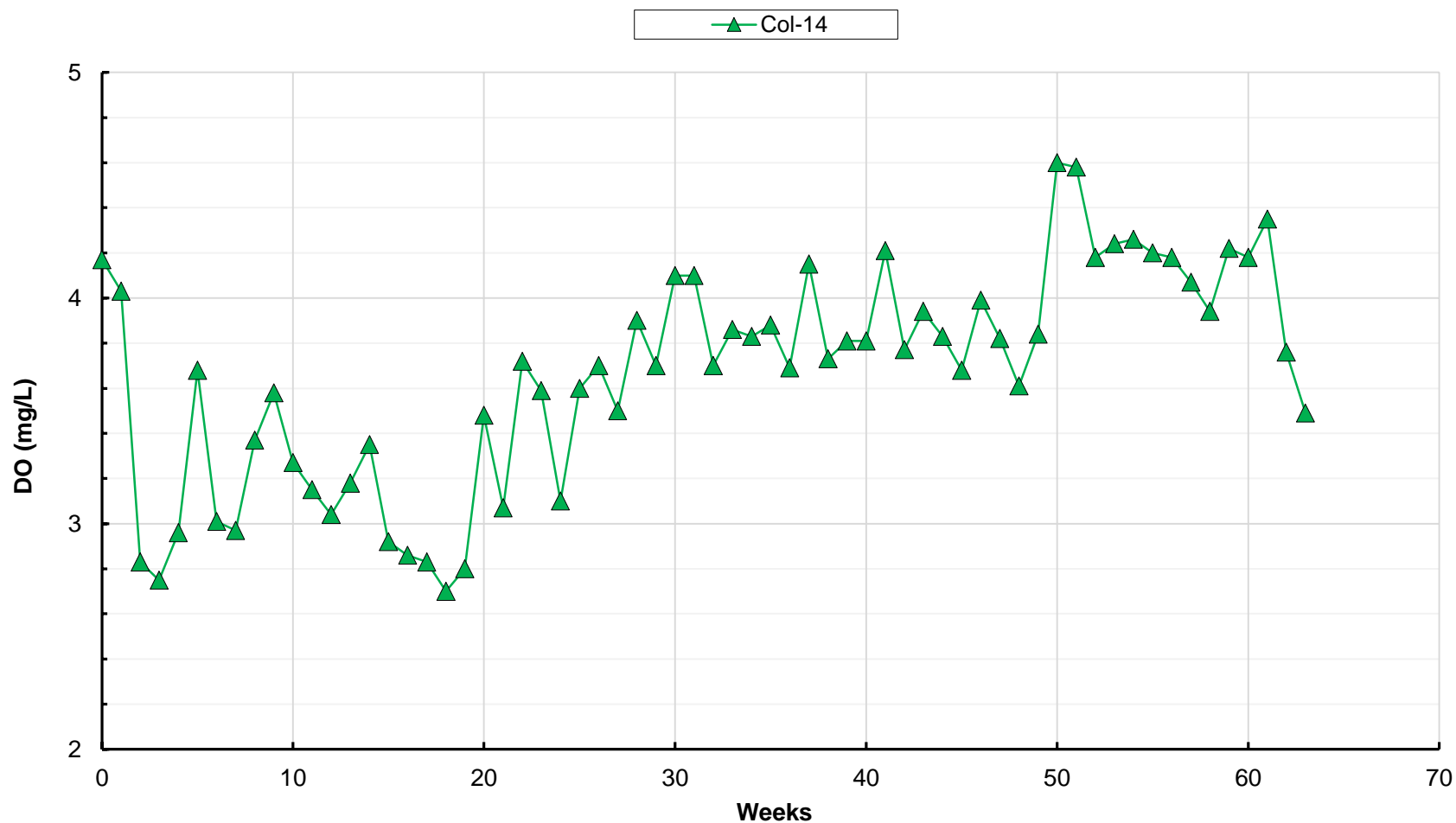
Springpole Gold Project

Figure Number	D-1		
Project Number	ONS2104		
Date	April 2025		
Drawn	MT	Reviewed	EC



pH			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-2	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC





Notes

Dissolved oxygen was measured on the overlying water inside the column 4 inches above the solids.

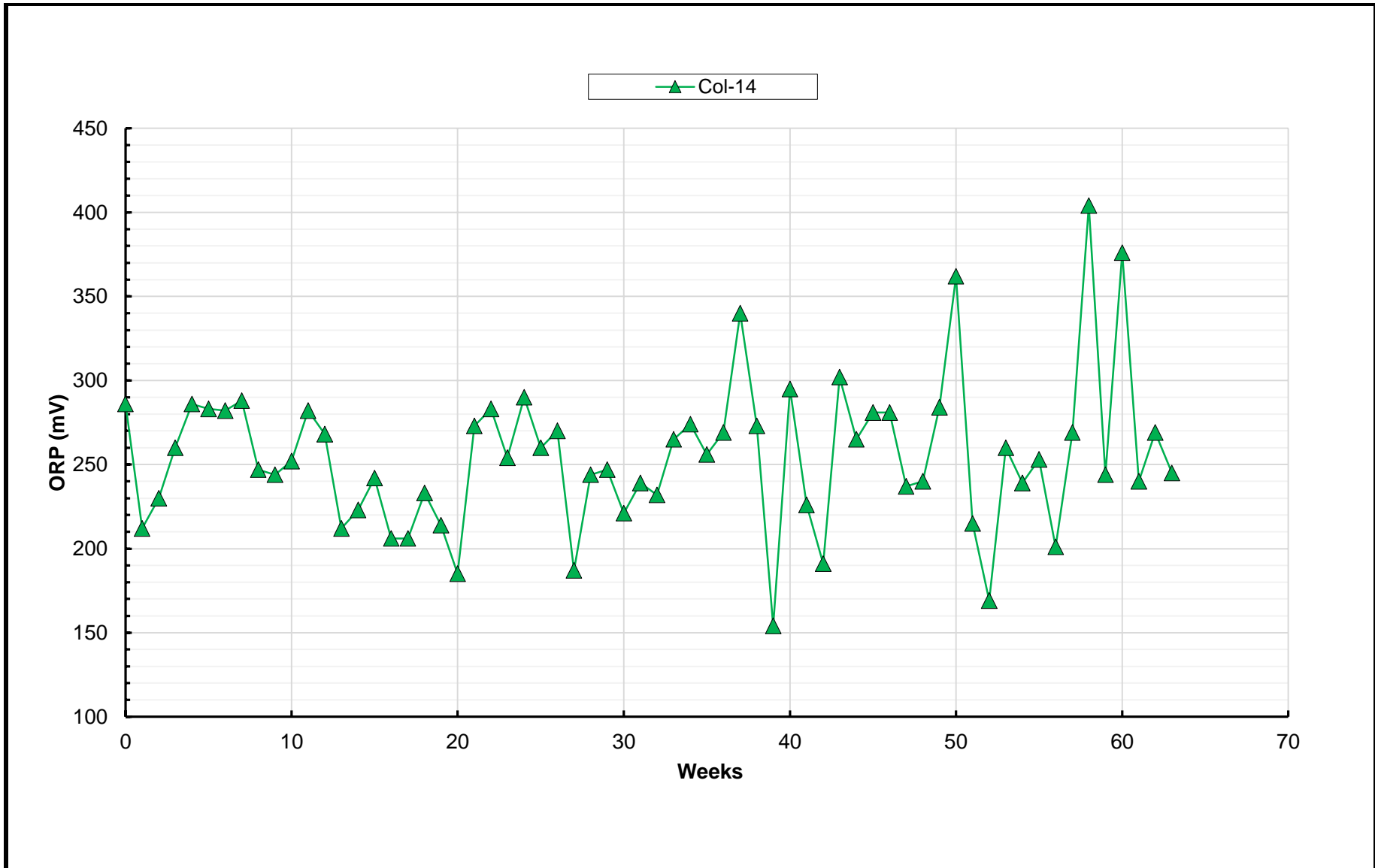


Dissolved Oxygen

Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024

Springpole Gold Project

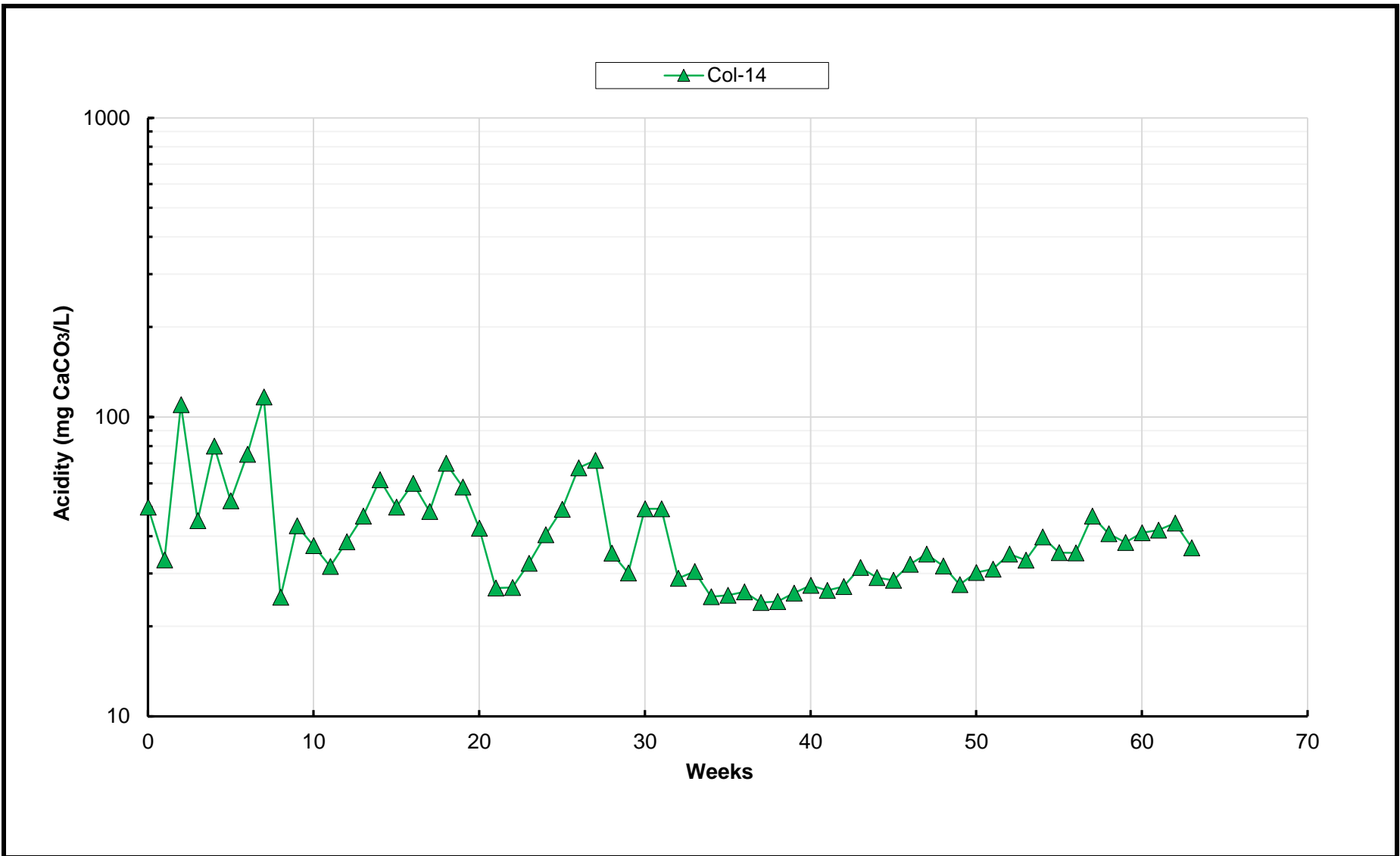
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Project Number	ONS2104
Date	April 2025
Drawn	MT
Reviewed	EC



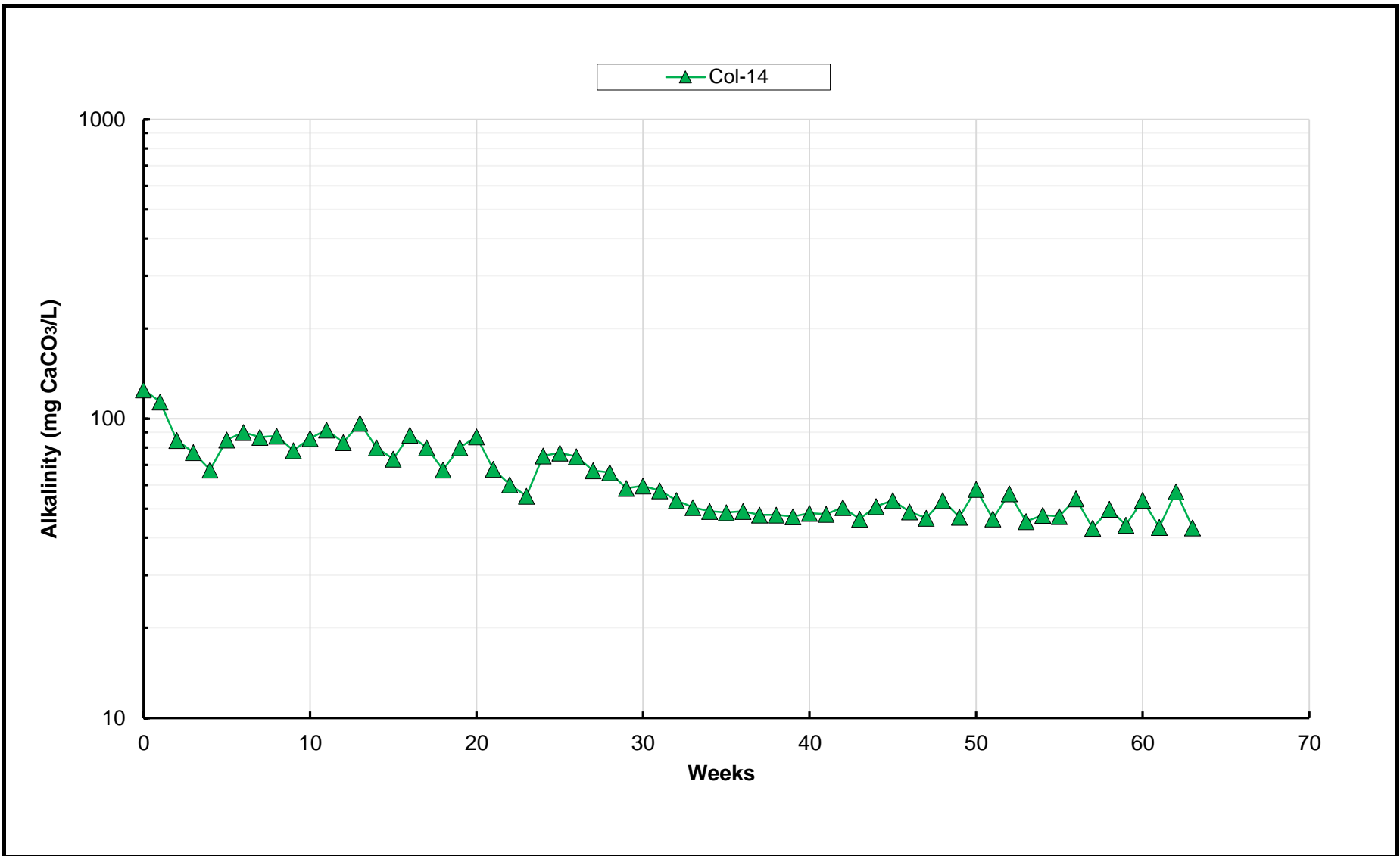
Notes
 Oxidation-Reduction Potential was measured on the leachate samples immediately after filtering.



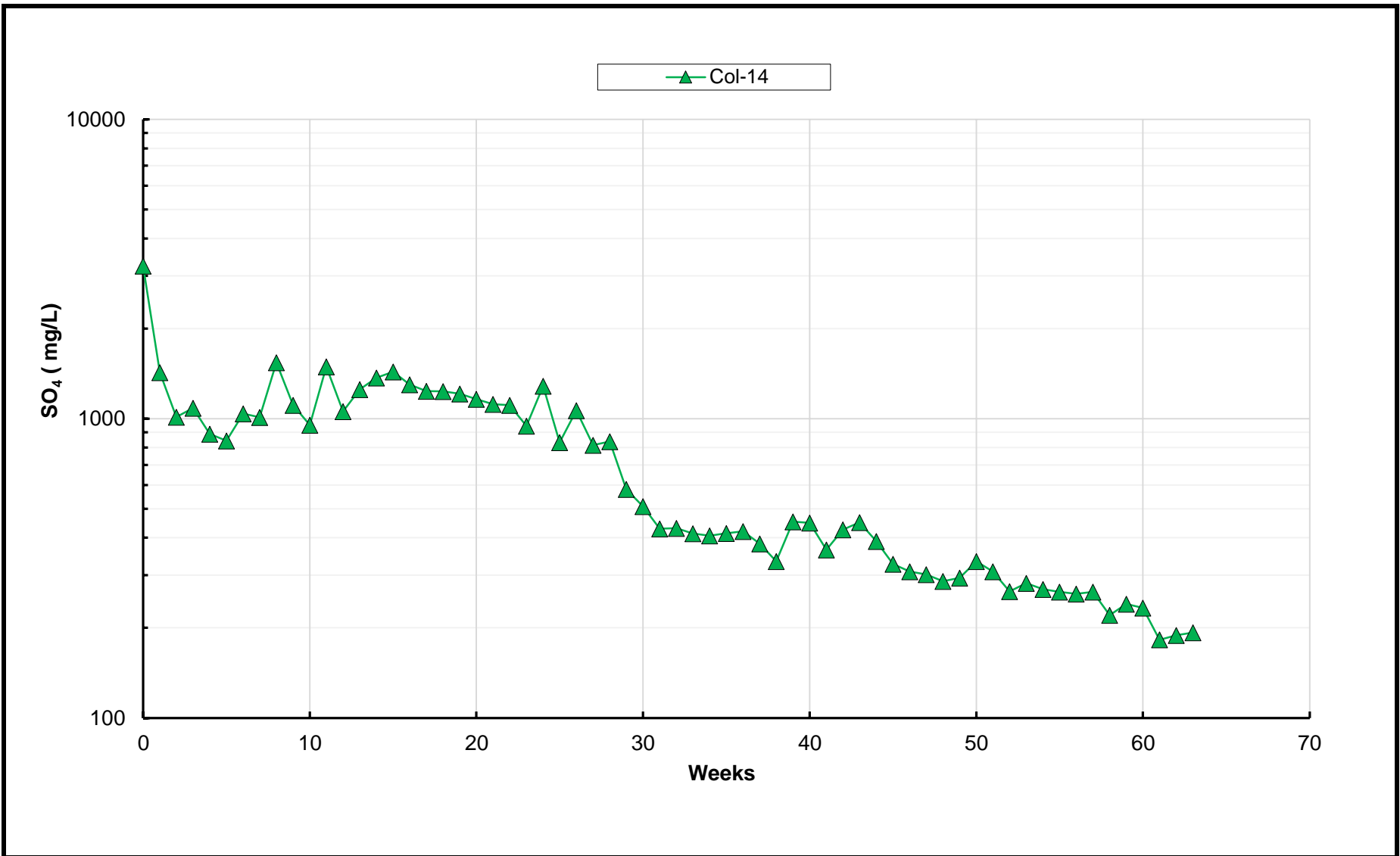
Oxidation-Reduction Potential			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-4	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



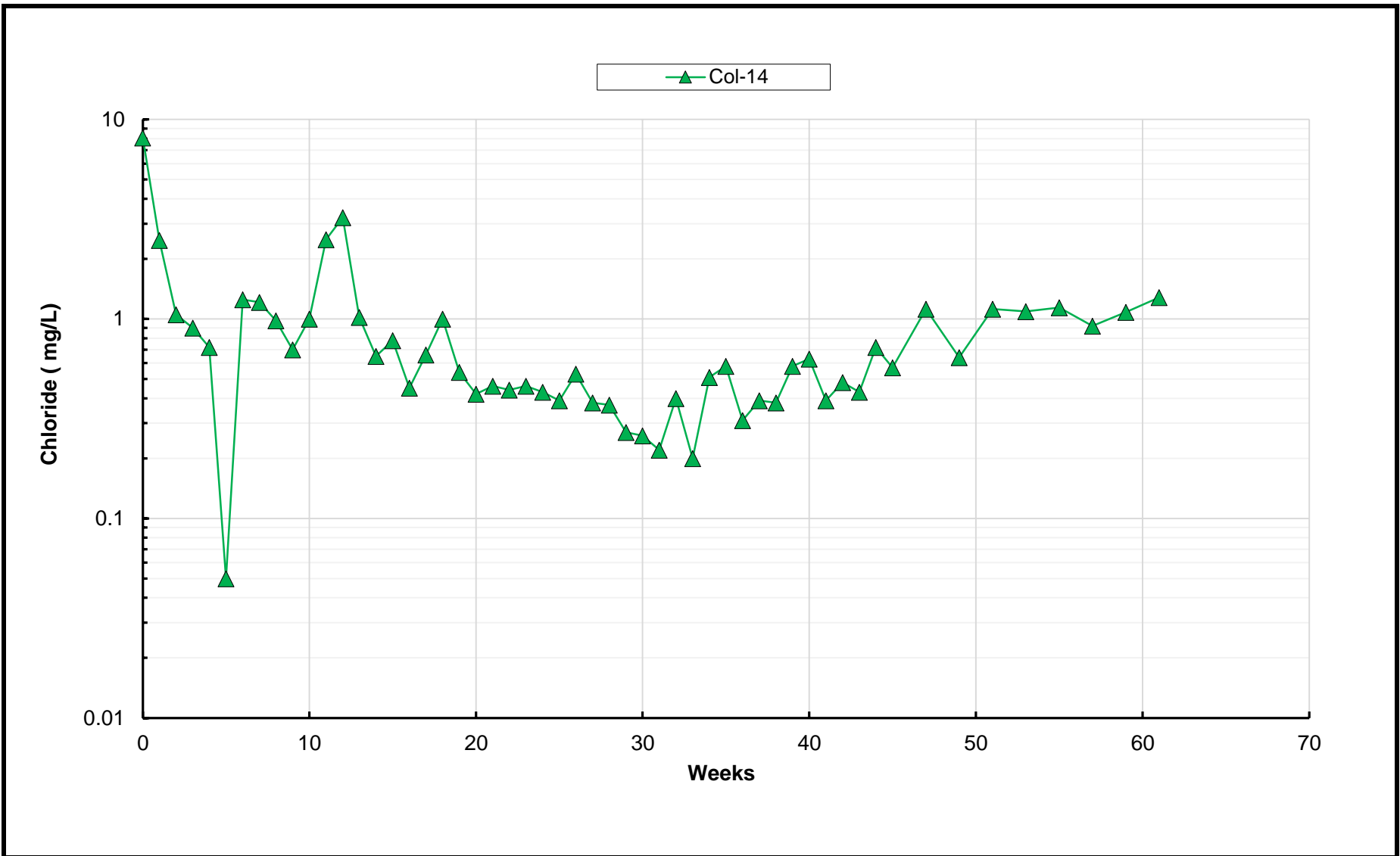
Acidity (to pH 8.3)			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-5	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



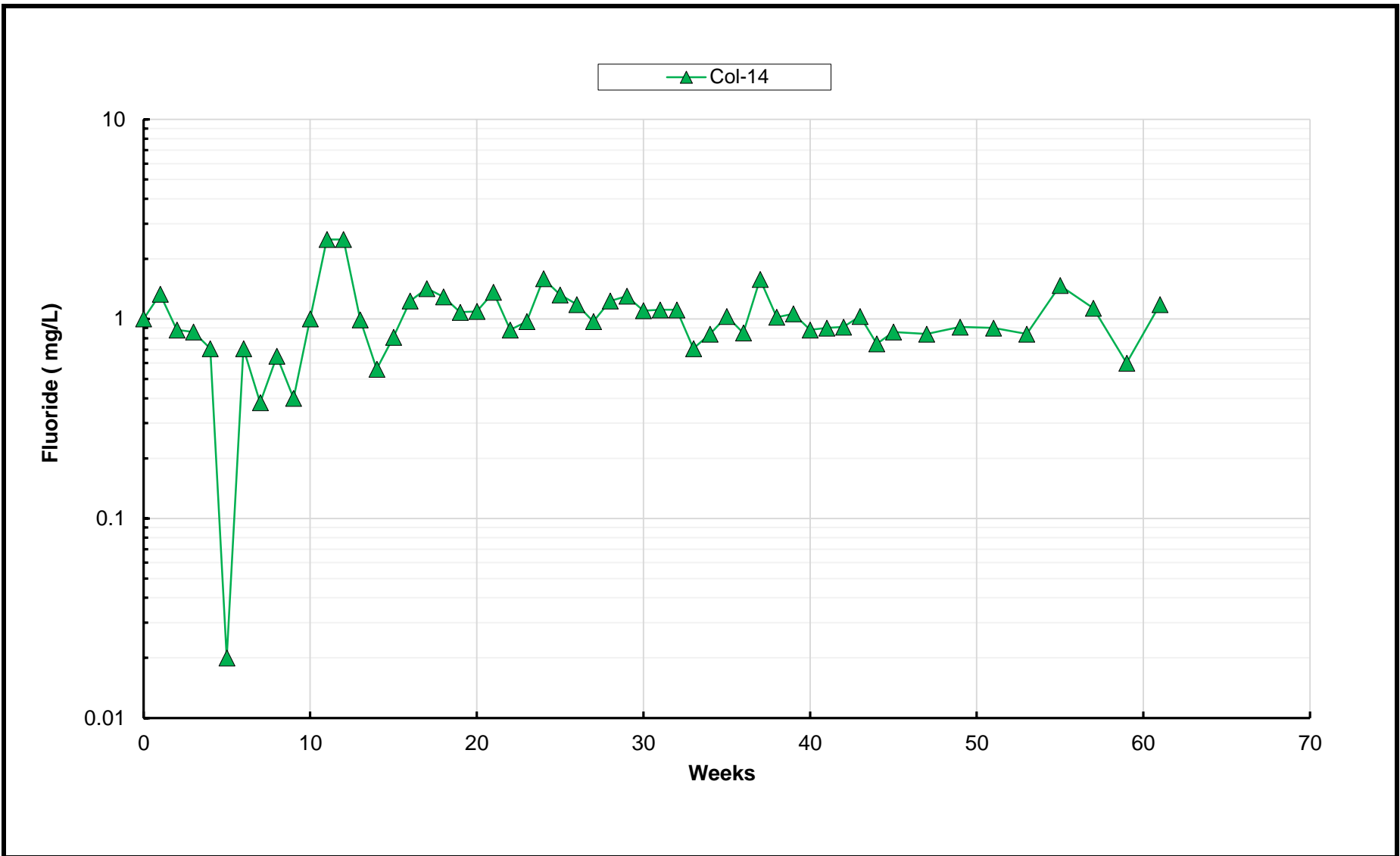
Alkalinity (to pH 4.5)			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-6	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



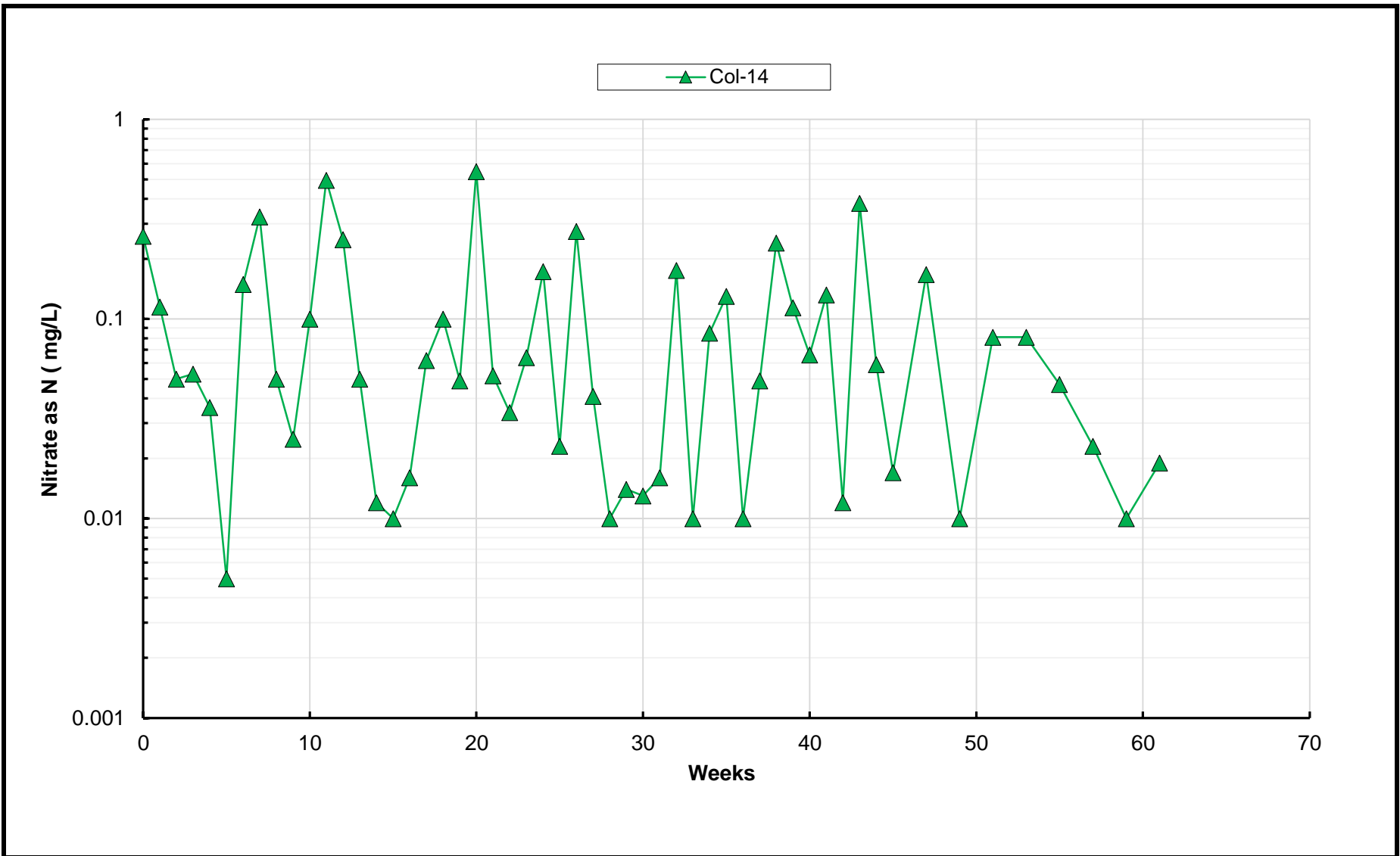
Sulphate			
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Figure Number		D-7	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



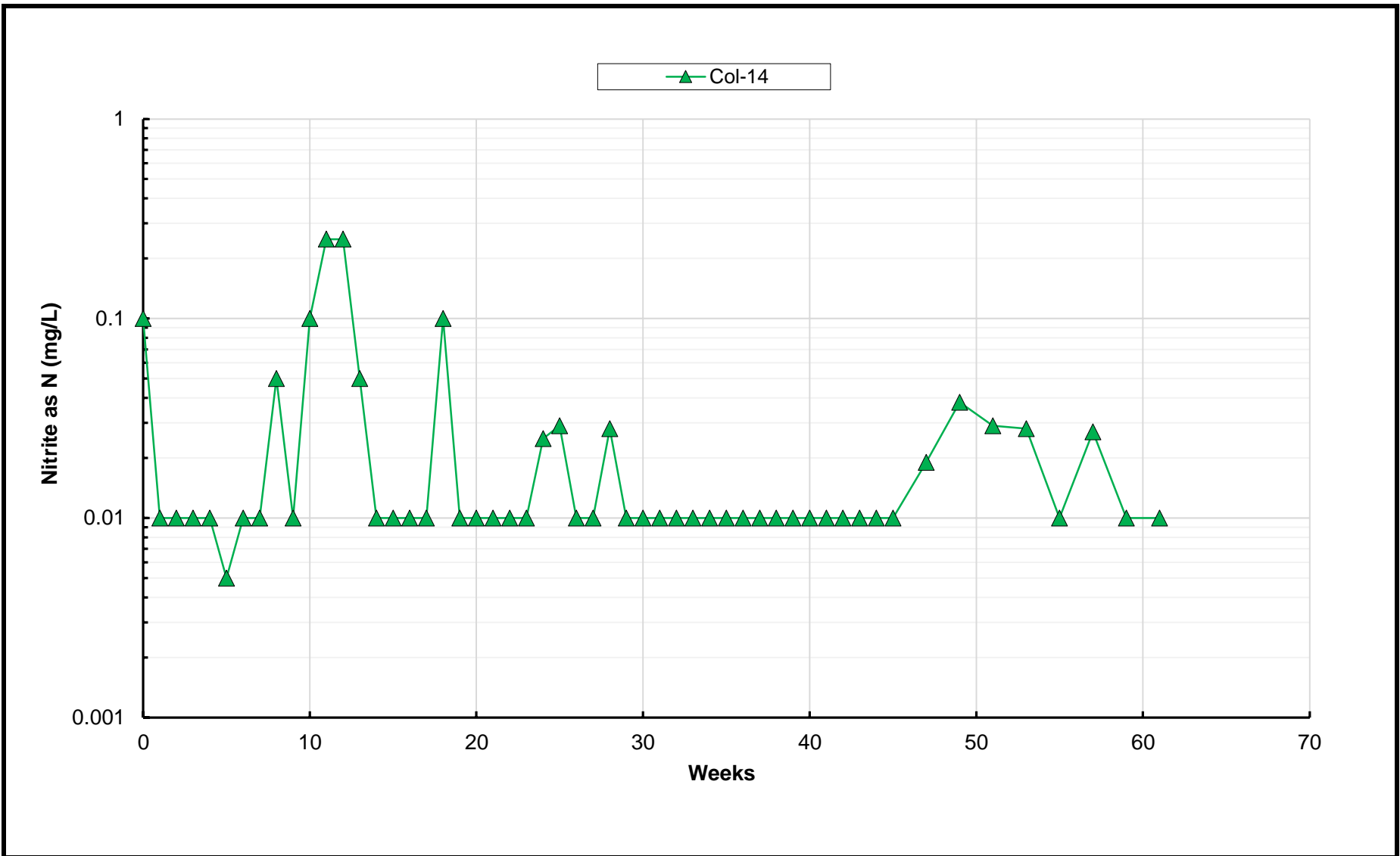
Chloride			
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Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



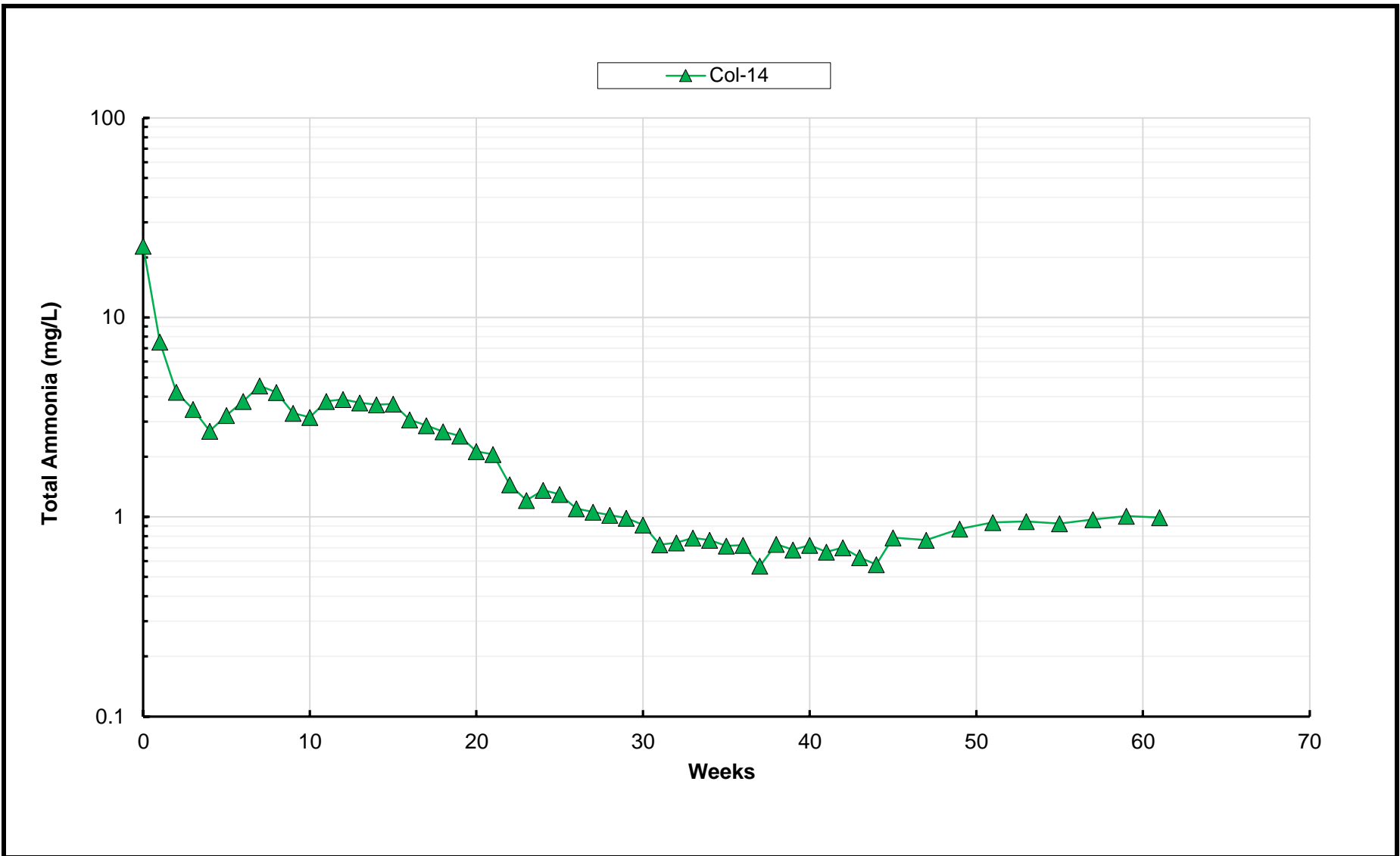
Fluoride			
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Springpole Gold Project			
Figure Number		D-9	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



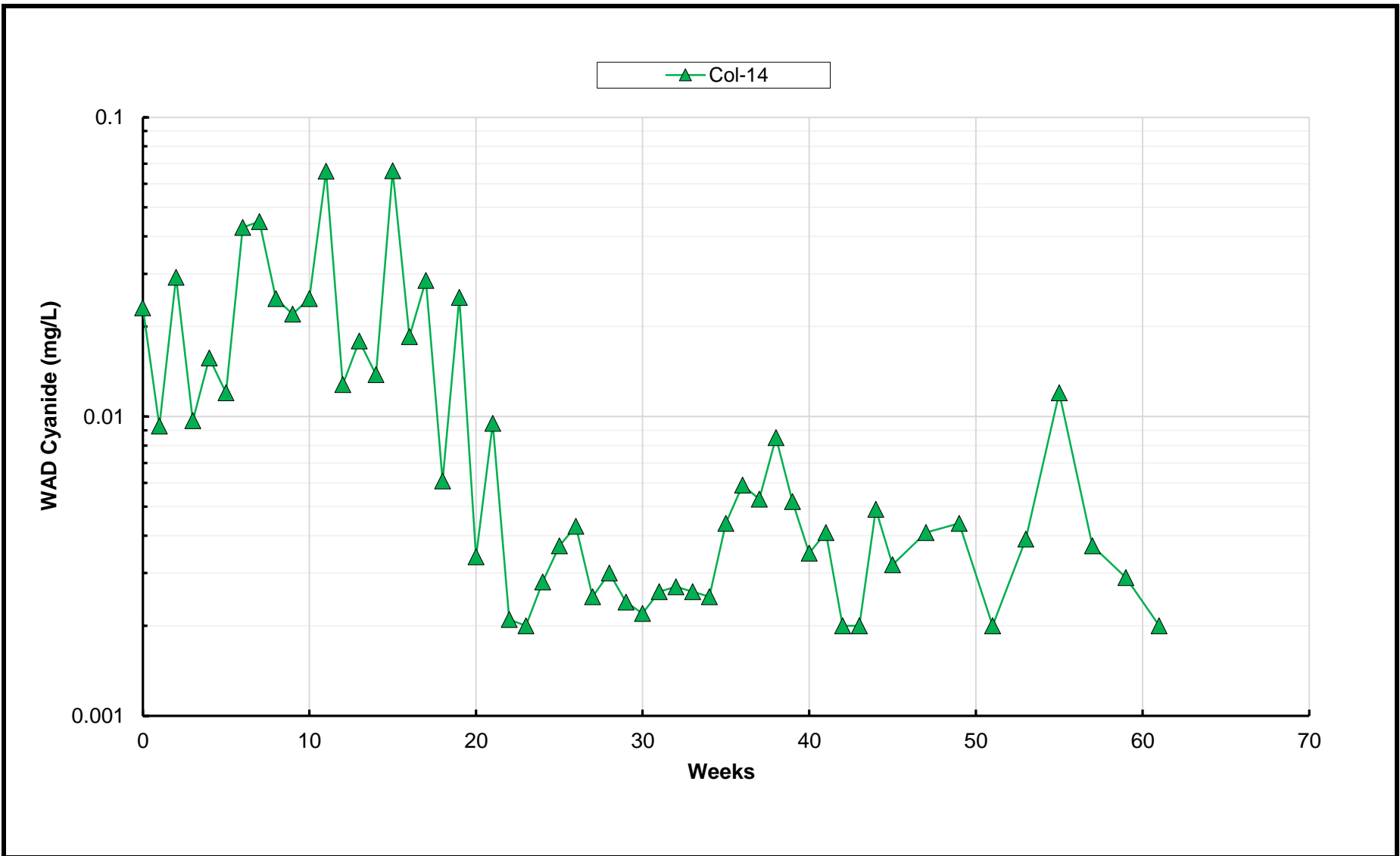
Nitrate (as N)			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
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Figure Number		D-10	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



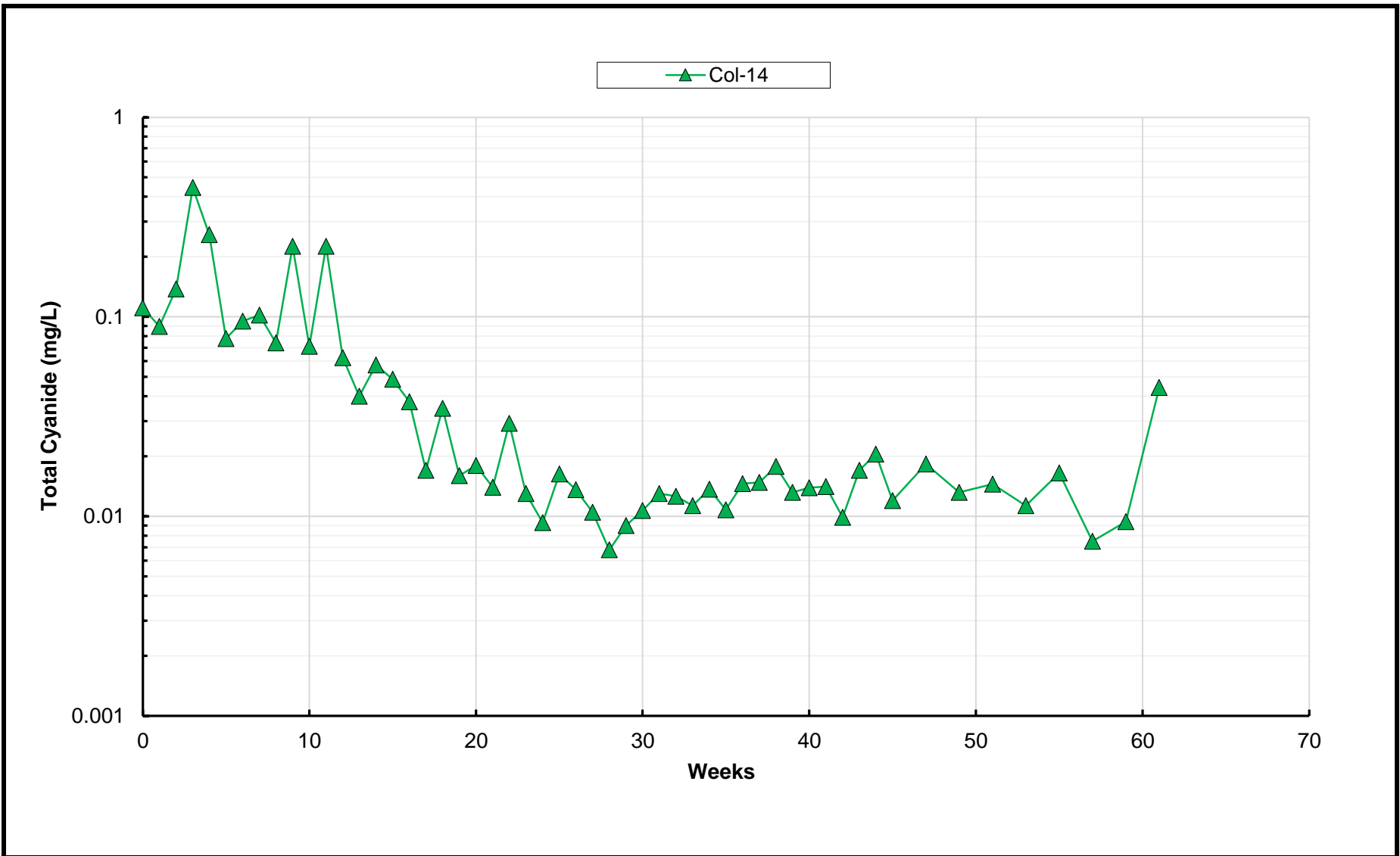
Nitrite (as N)			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-11	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



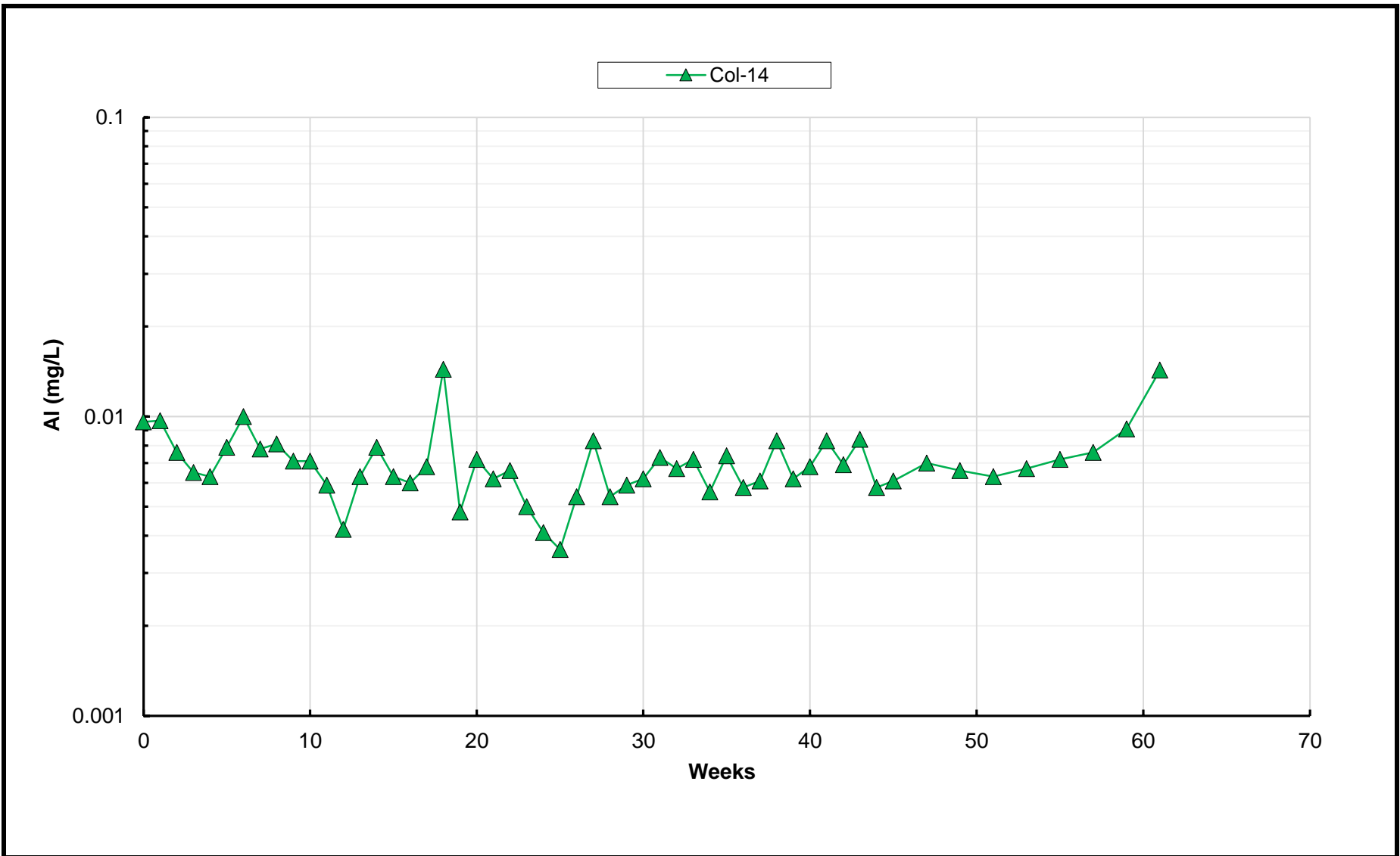
Total Ammonia			
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Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



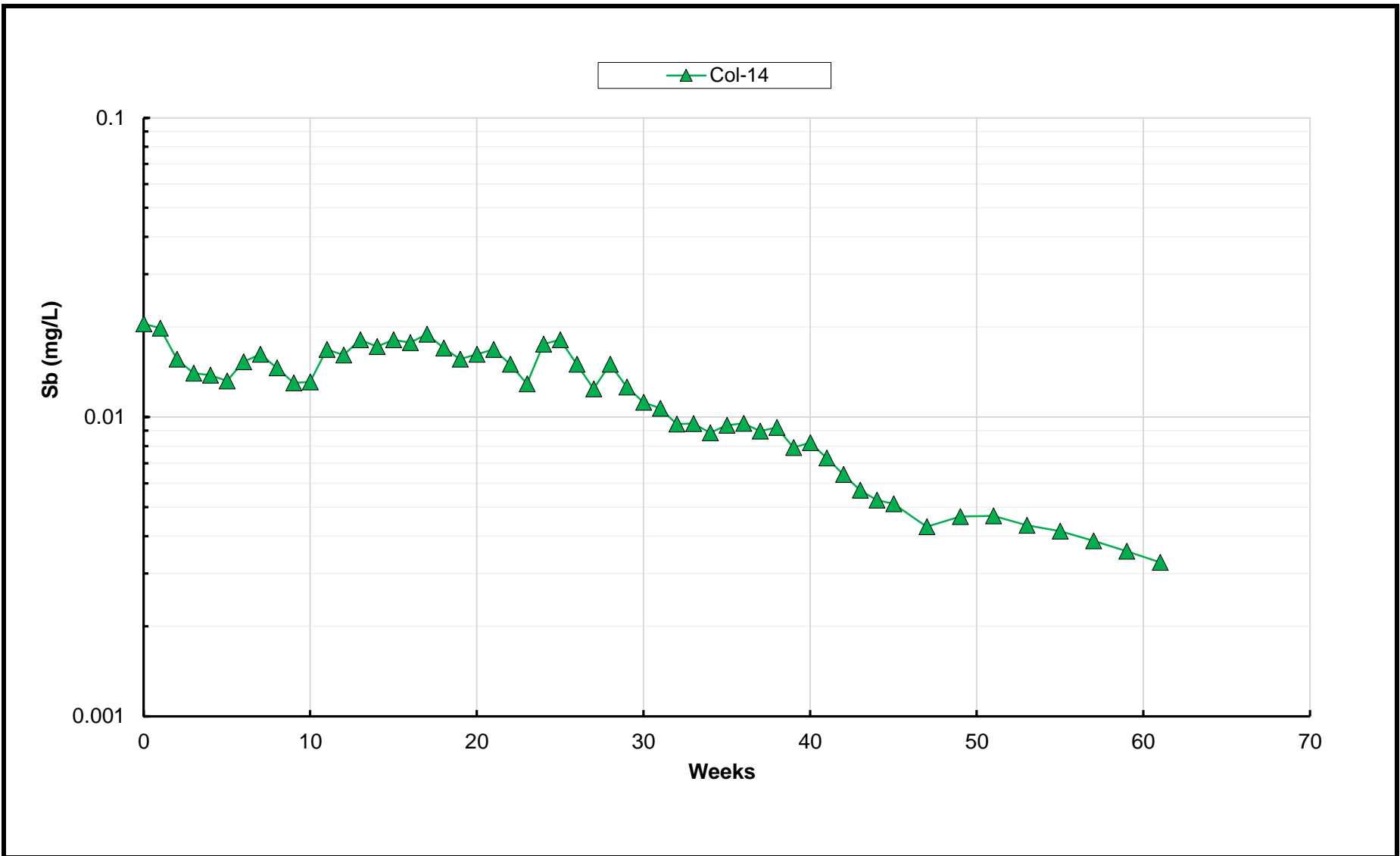
WAD Cyanide			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
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Figure Number		D-13	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



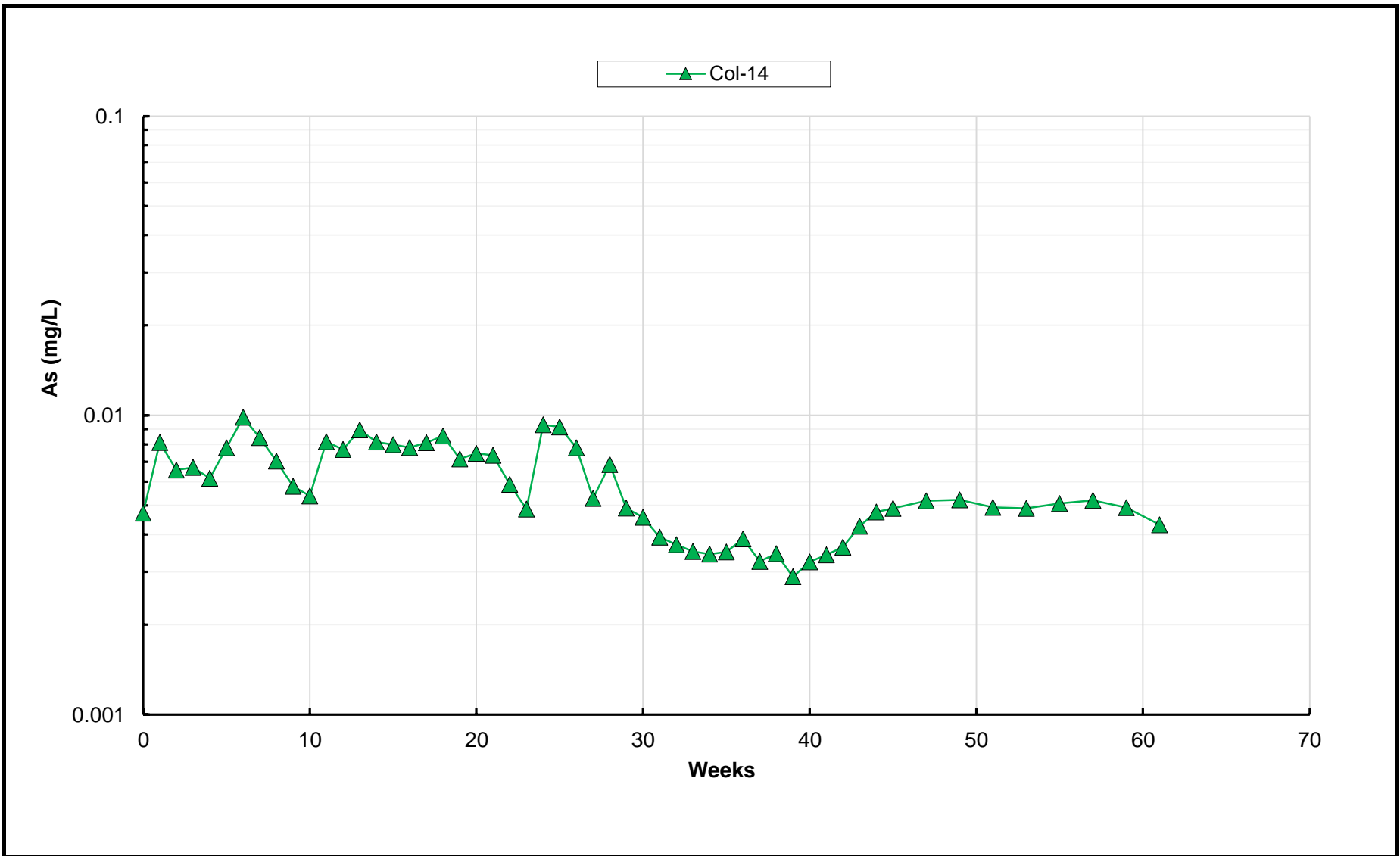
Total Cyanide			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-14	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



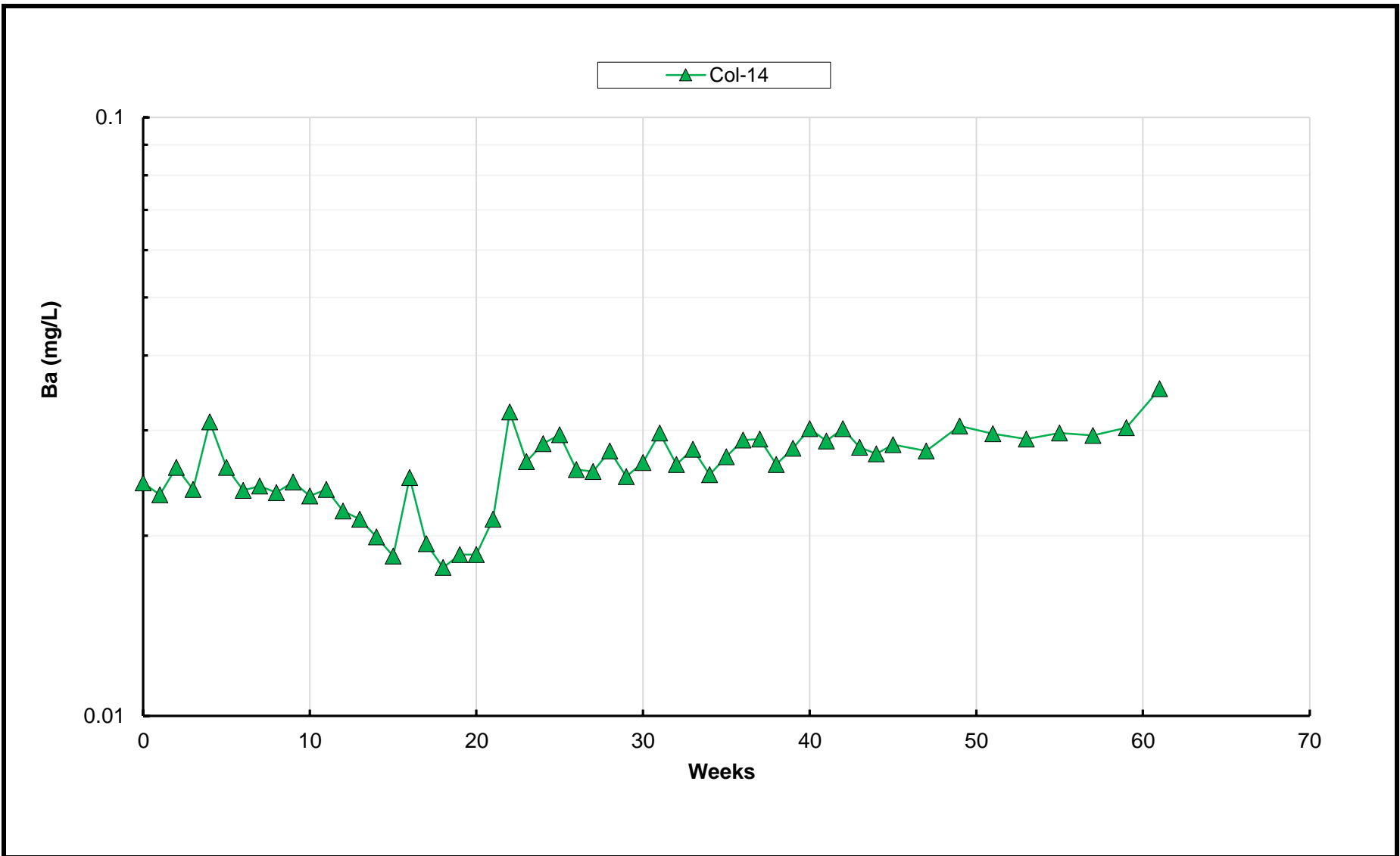
Aluminum			
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Figure Number		D-15	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



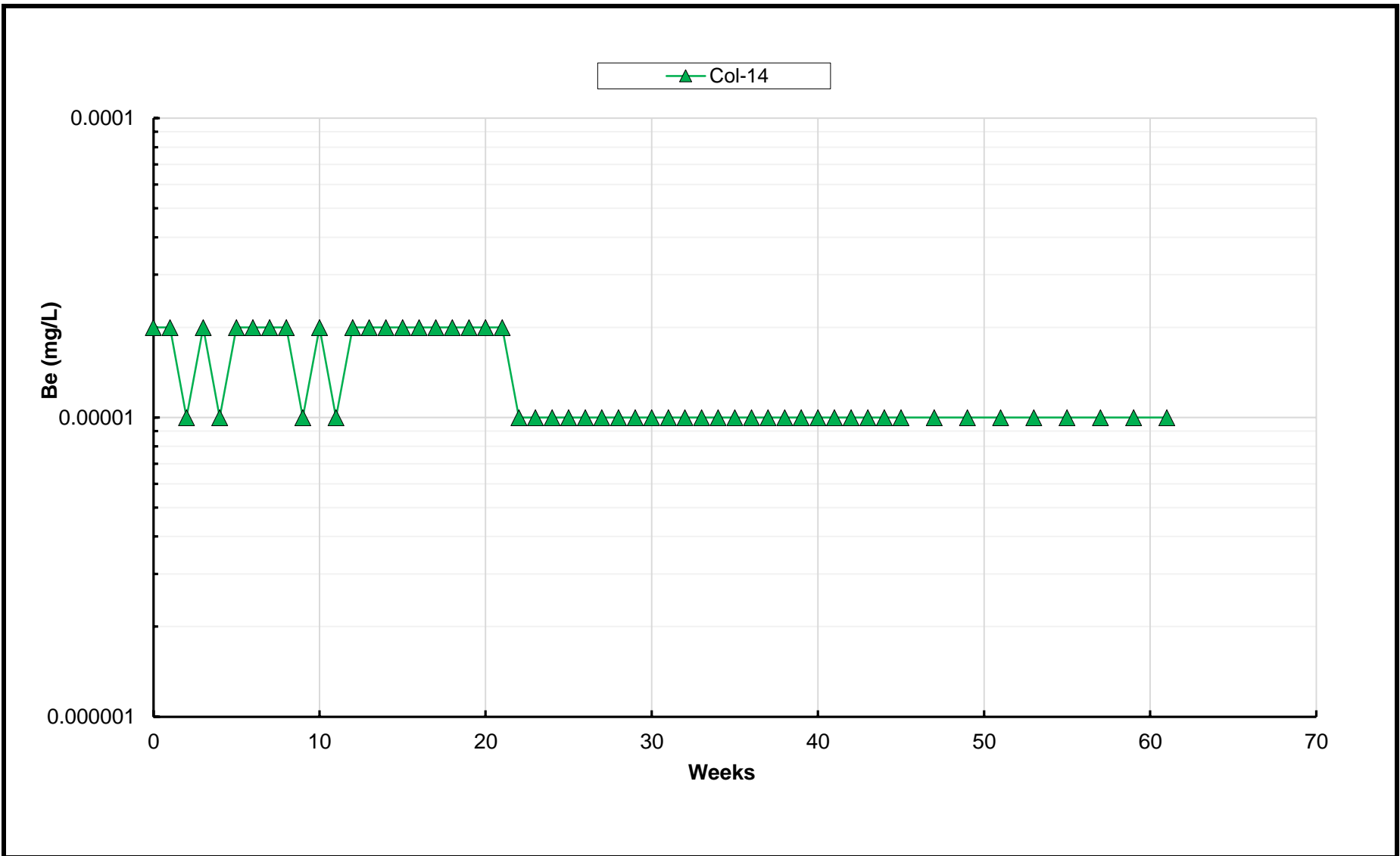
Antimony			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
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Project Number		ONS2104	
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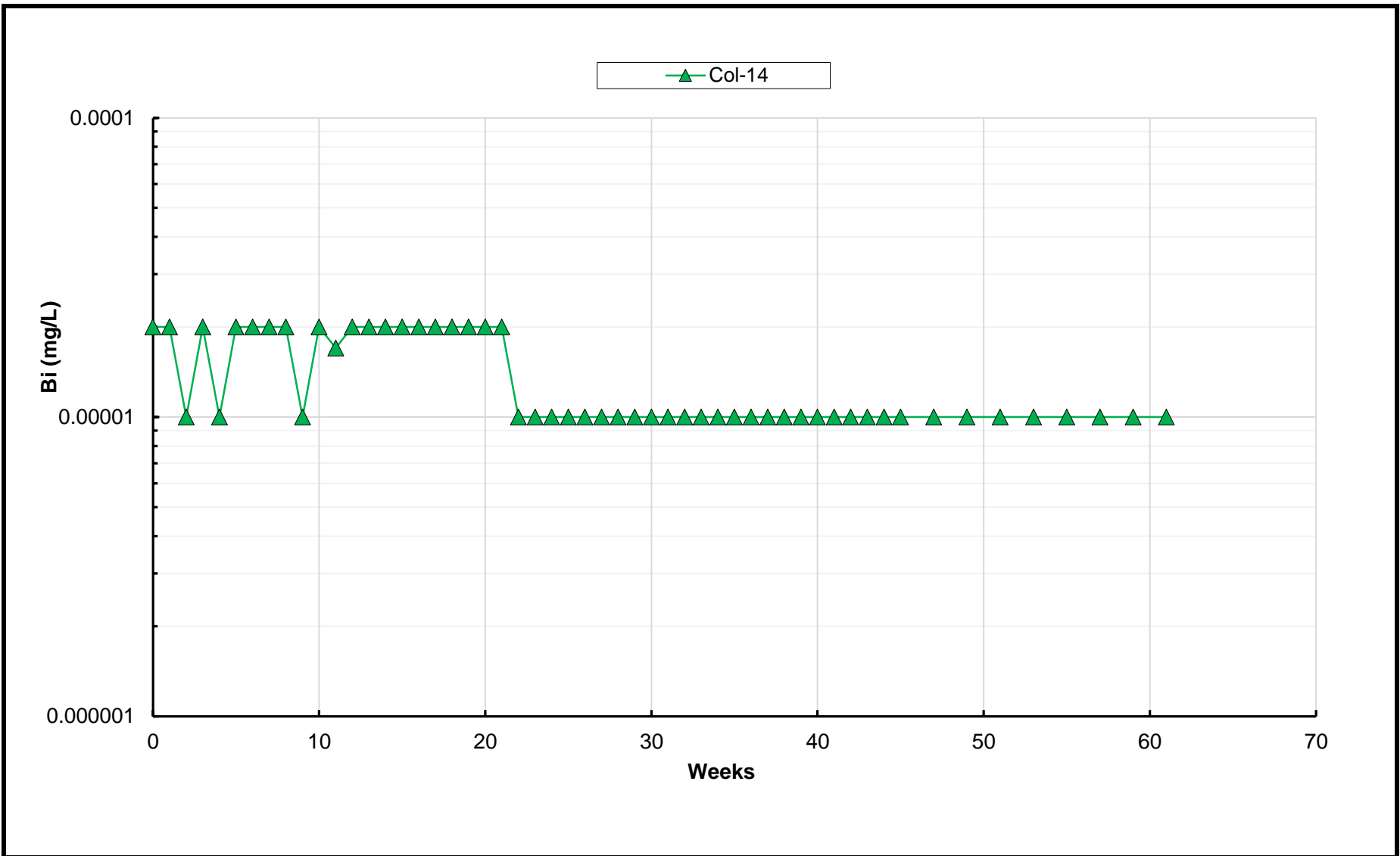
Arsenic			
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Project Number		ONS2104	
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Drawn	MT	Reviewed	EC



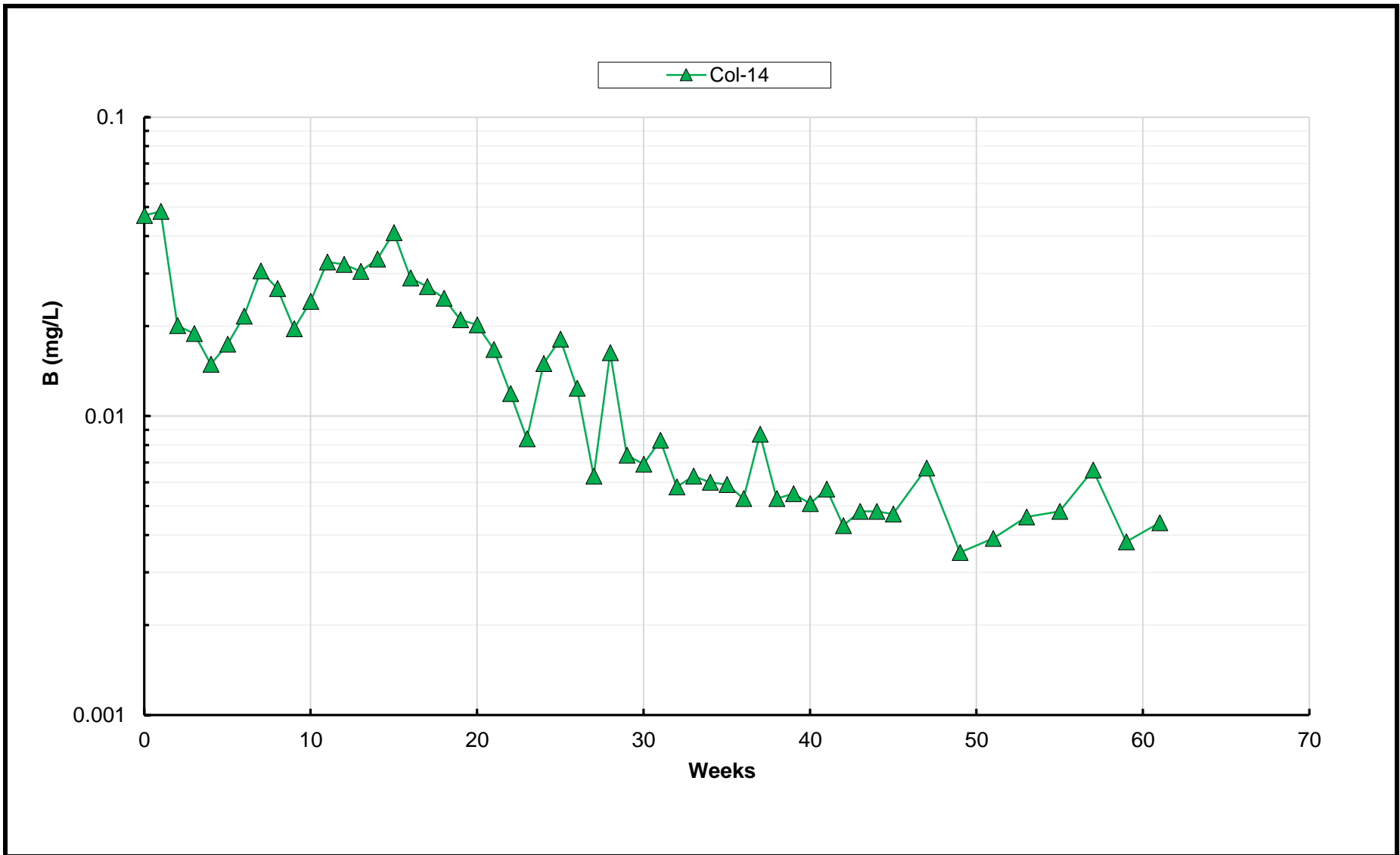
Barium			
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Figure Number		D-18	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



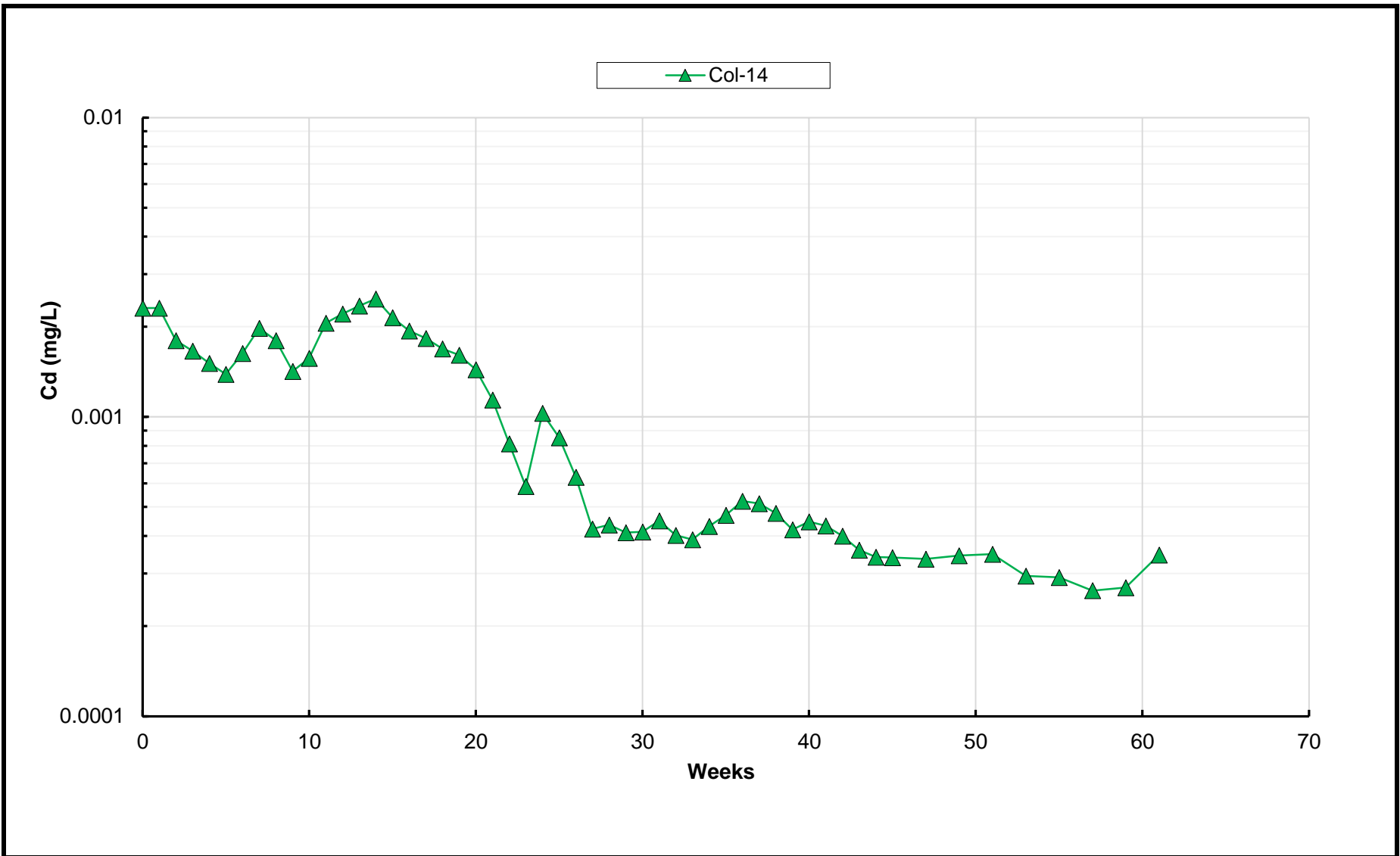
Beryllium			
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Figure Number		D-19	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



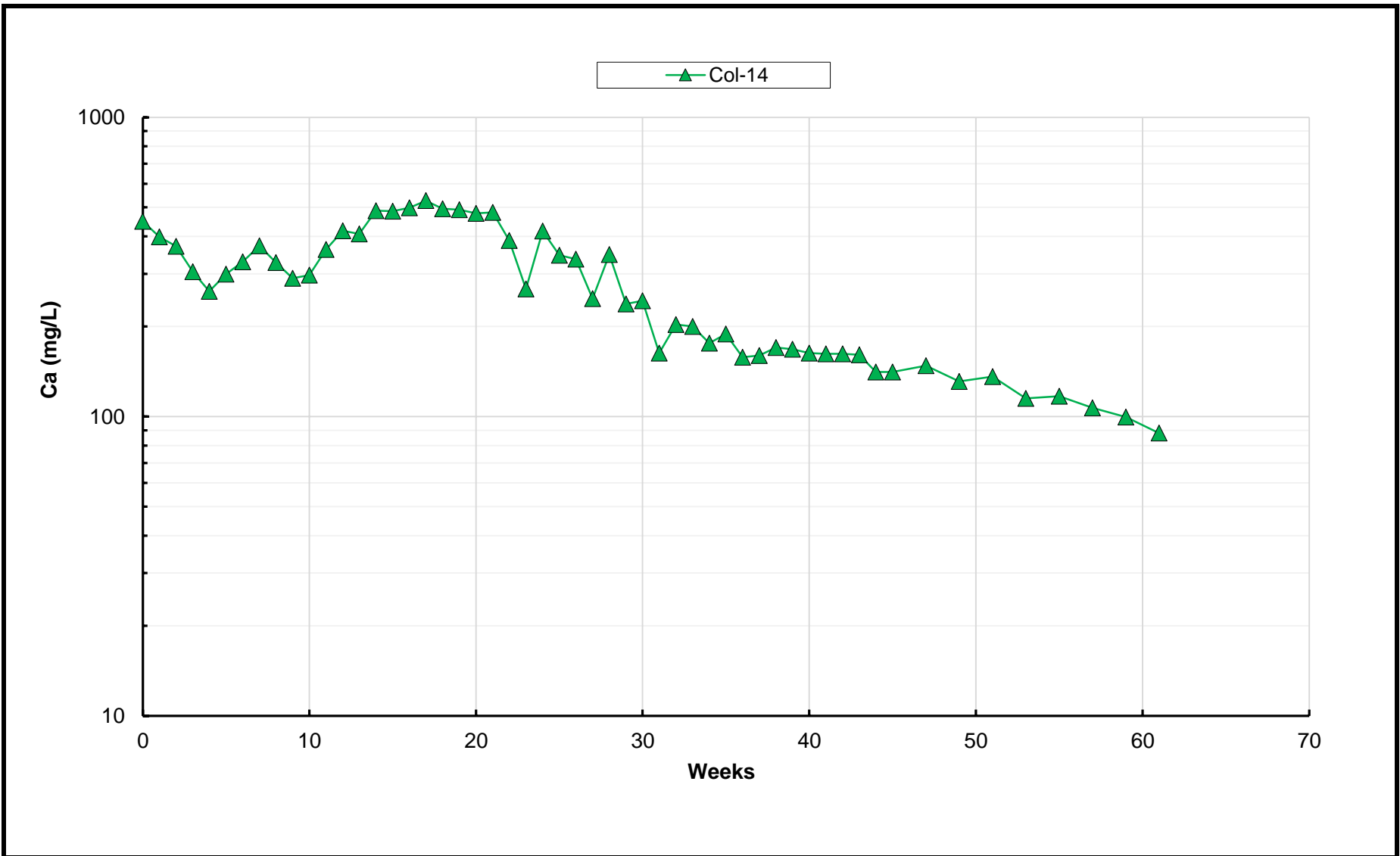
Bismuth			
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Drawn	MT	Reviewed	EC



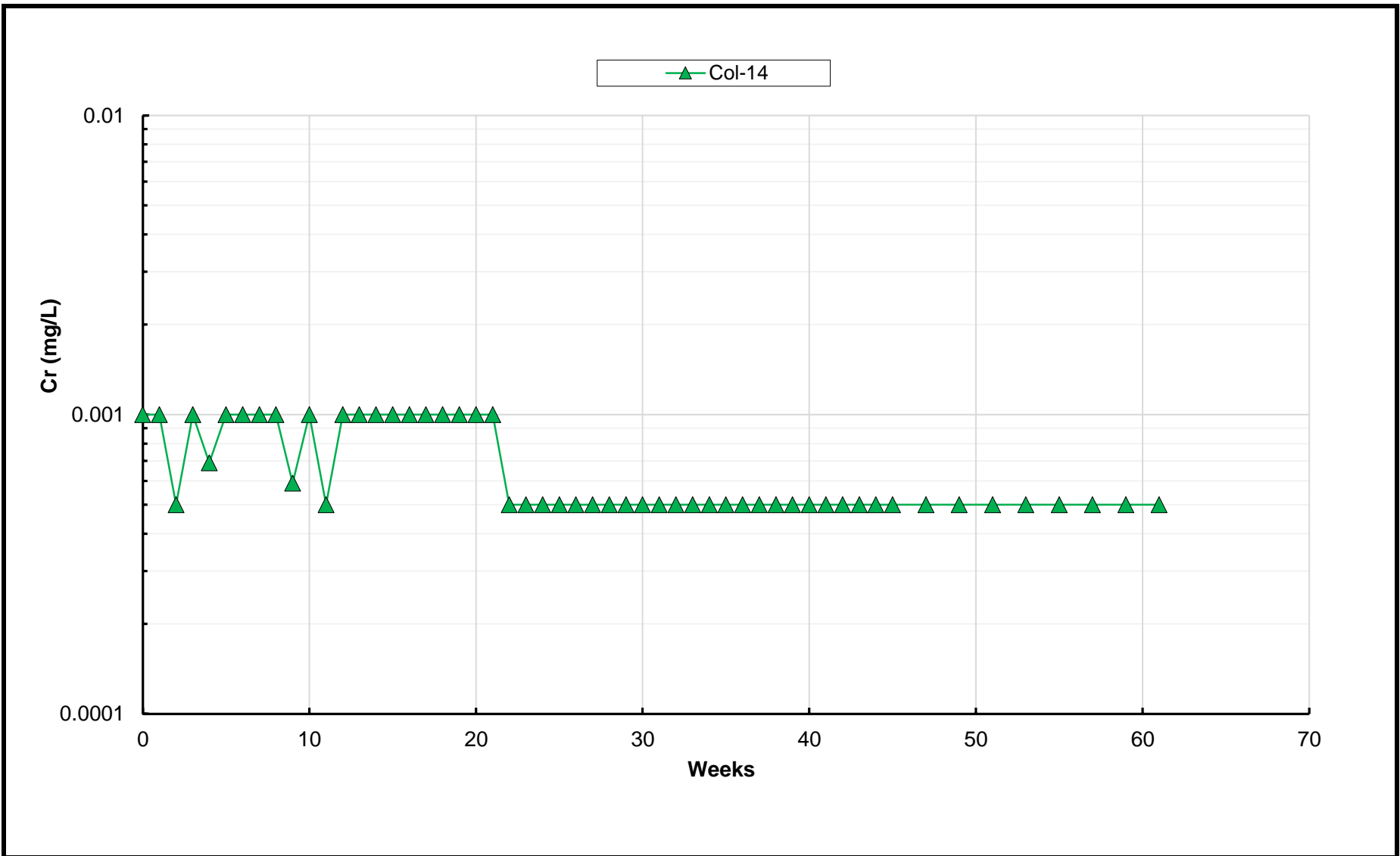
Boron			
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Date		April 2025	
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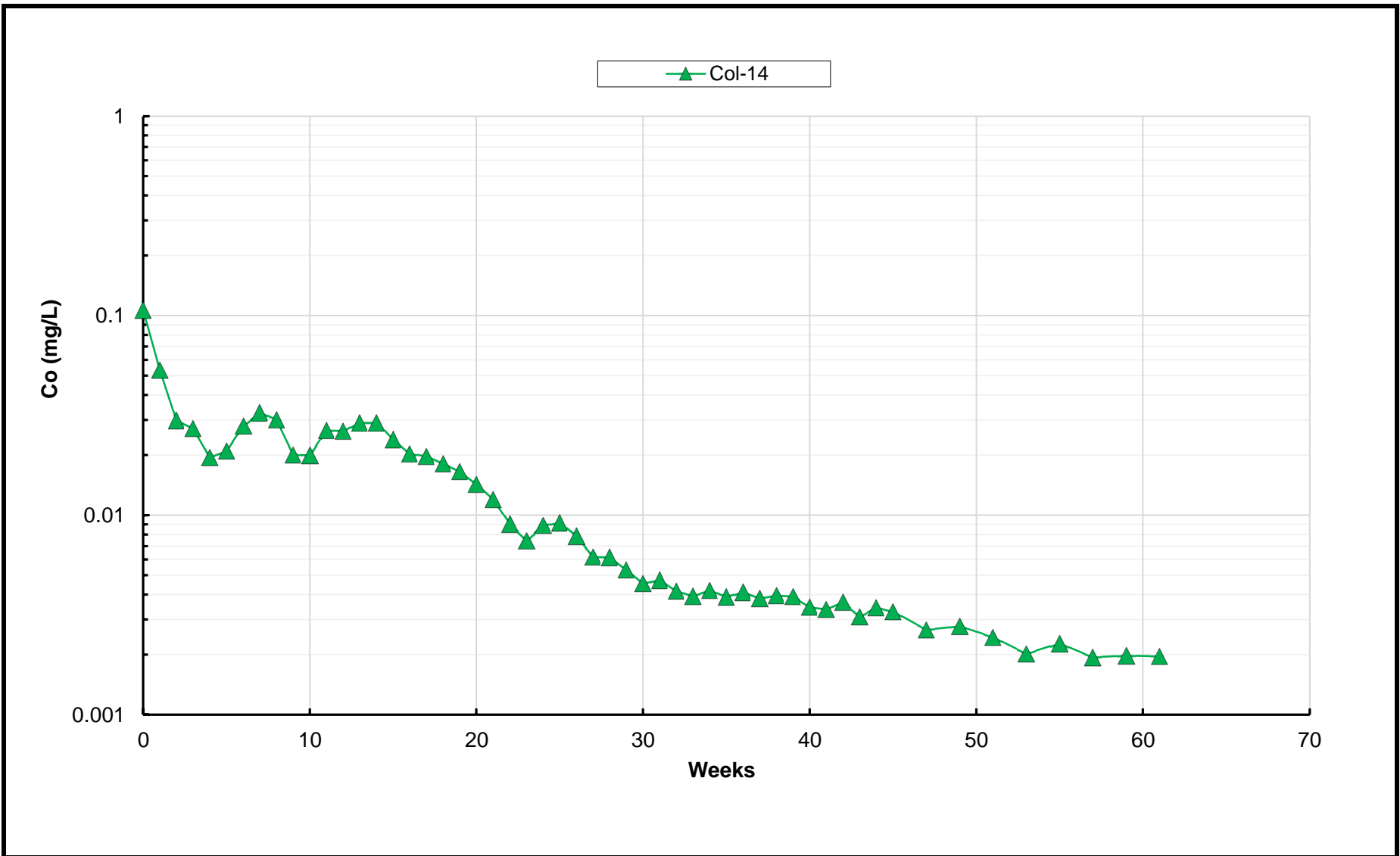
Cadmium			
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Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



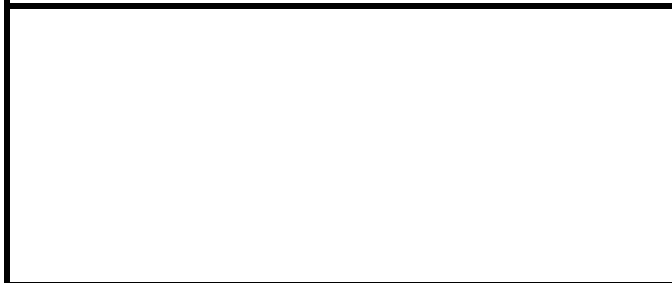
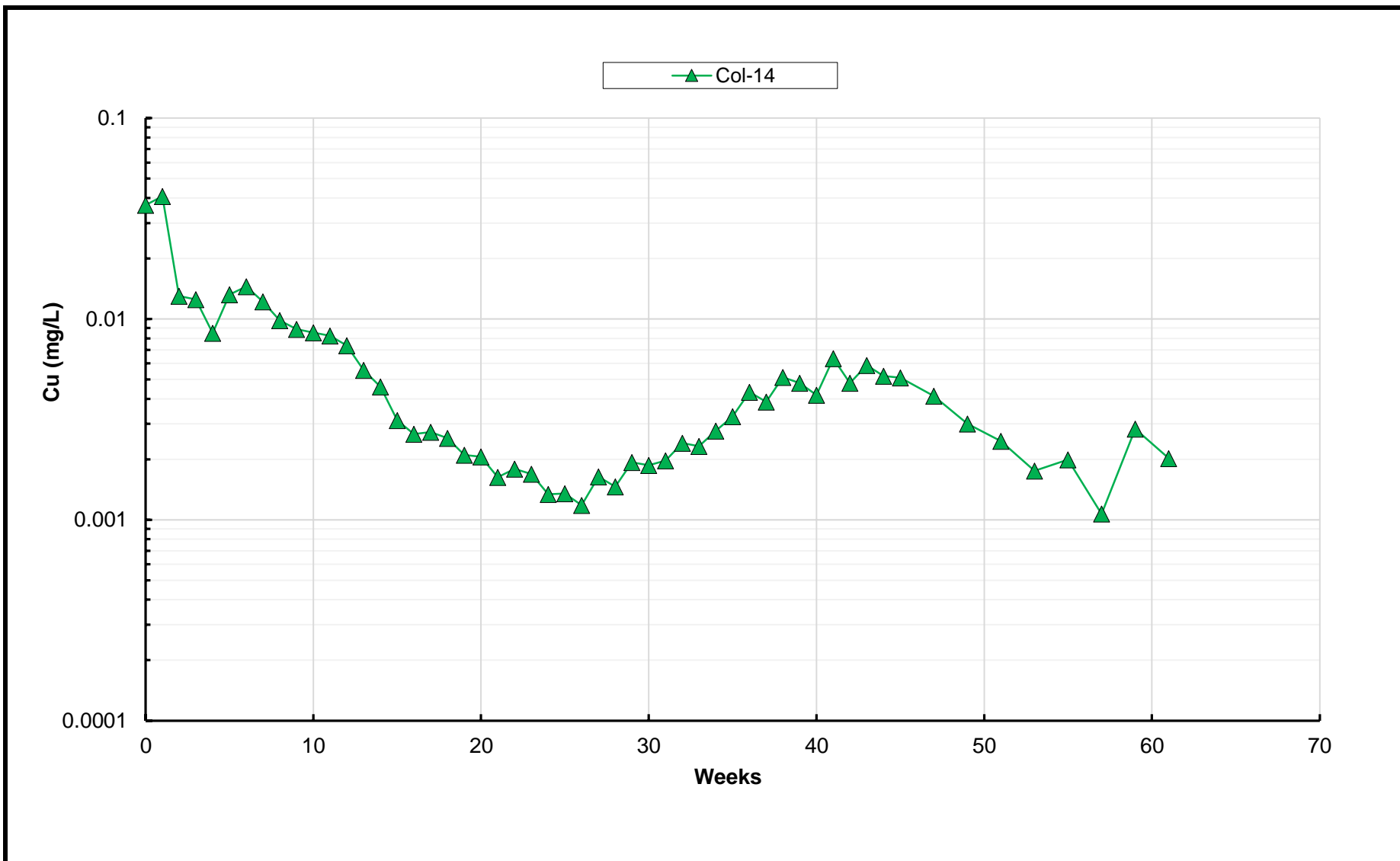
Calcium			
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Drawn	MT	Reviewed	EC



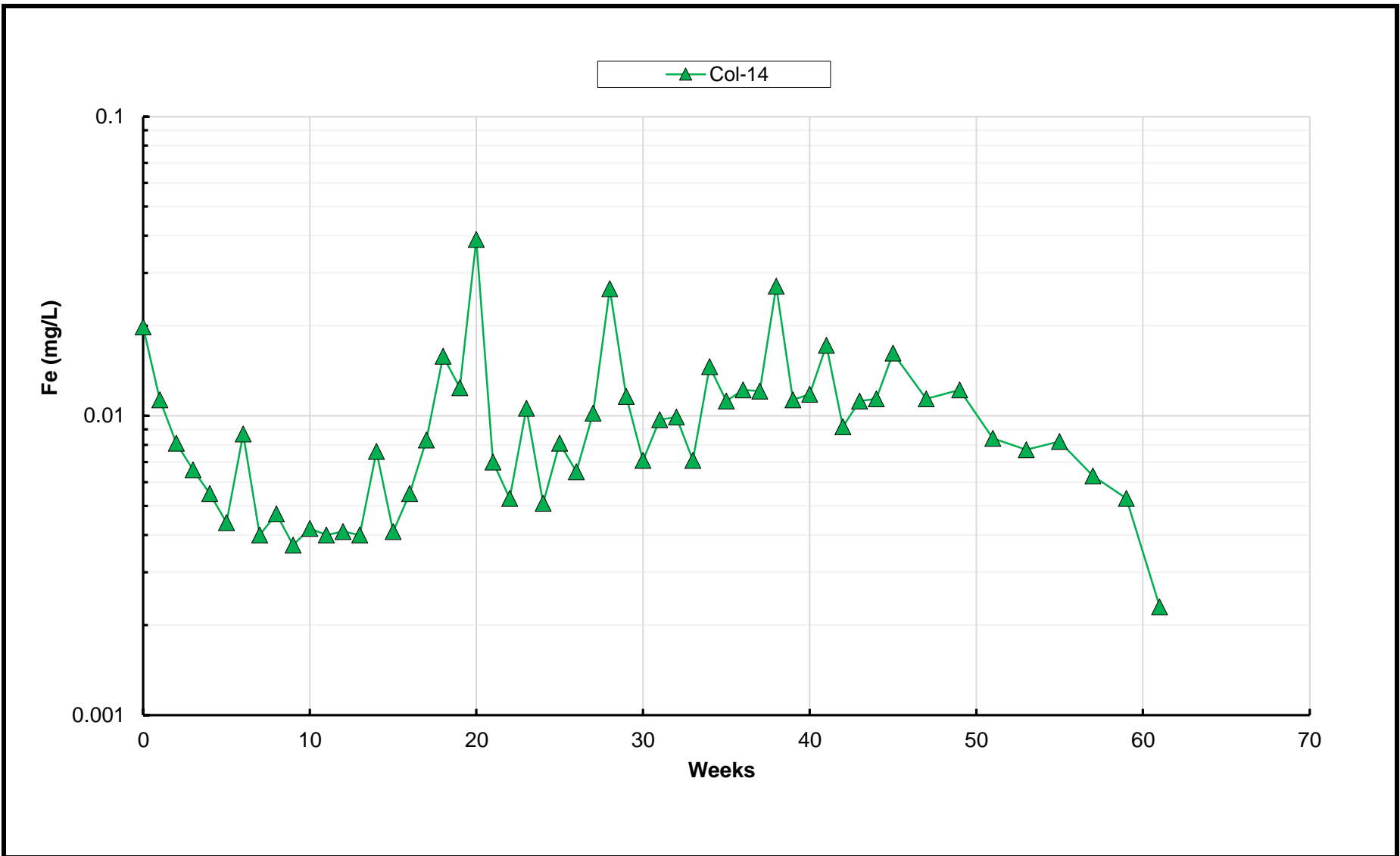
Chromium			
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Drawn	MT	Reviewed	EC



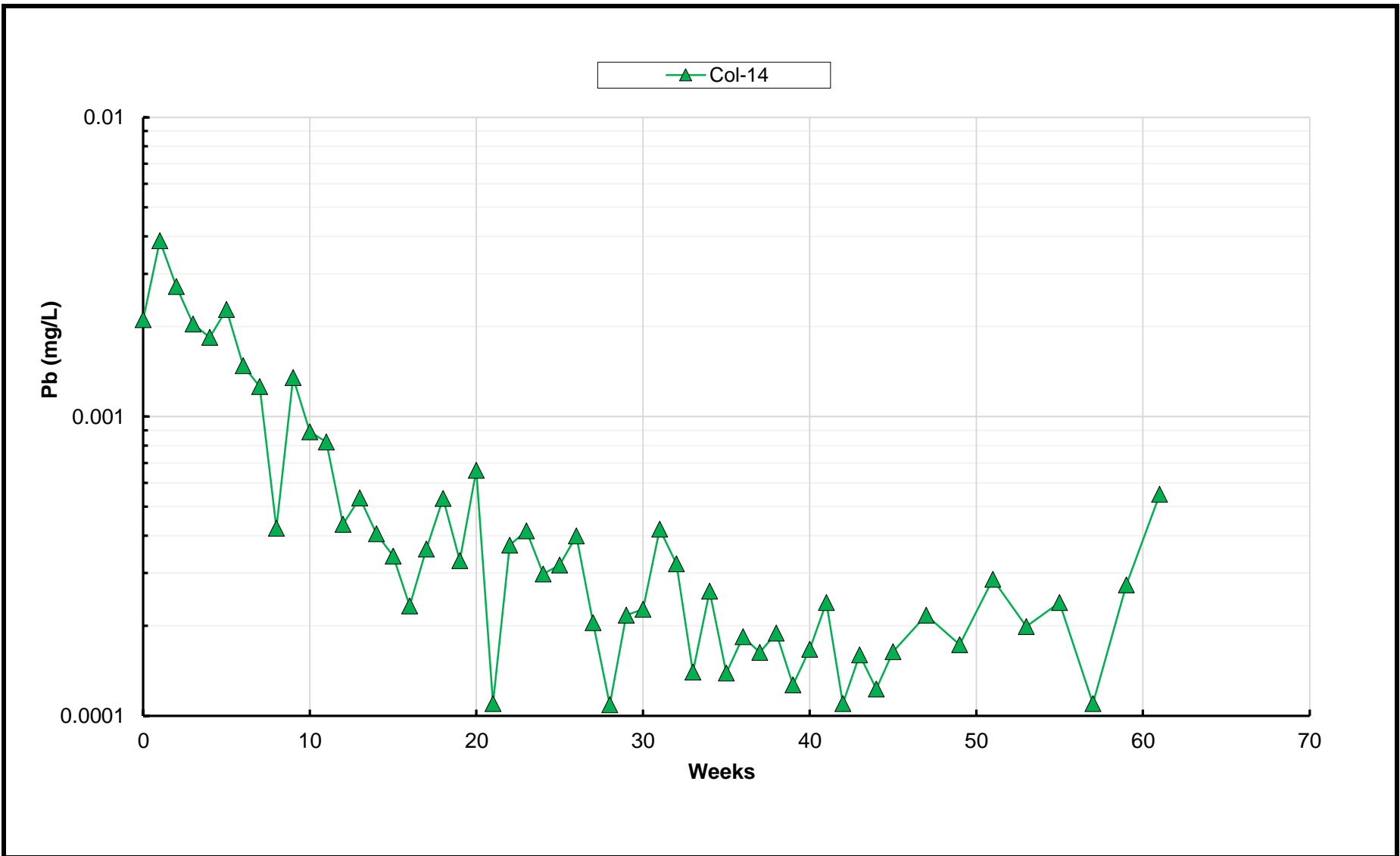
Cobalt			
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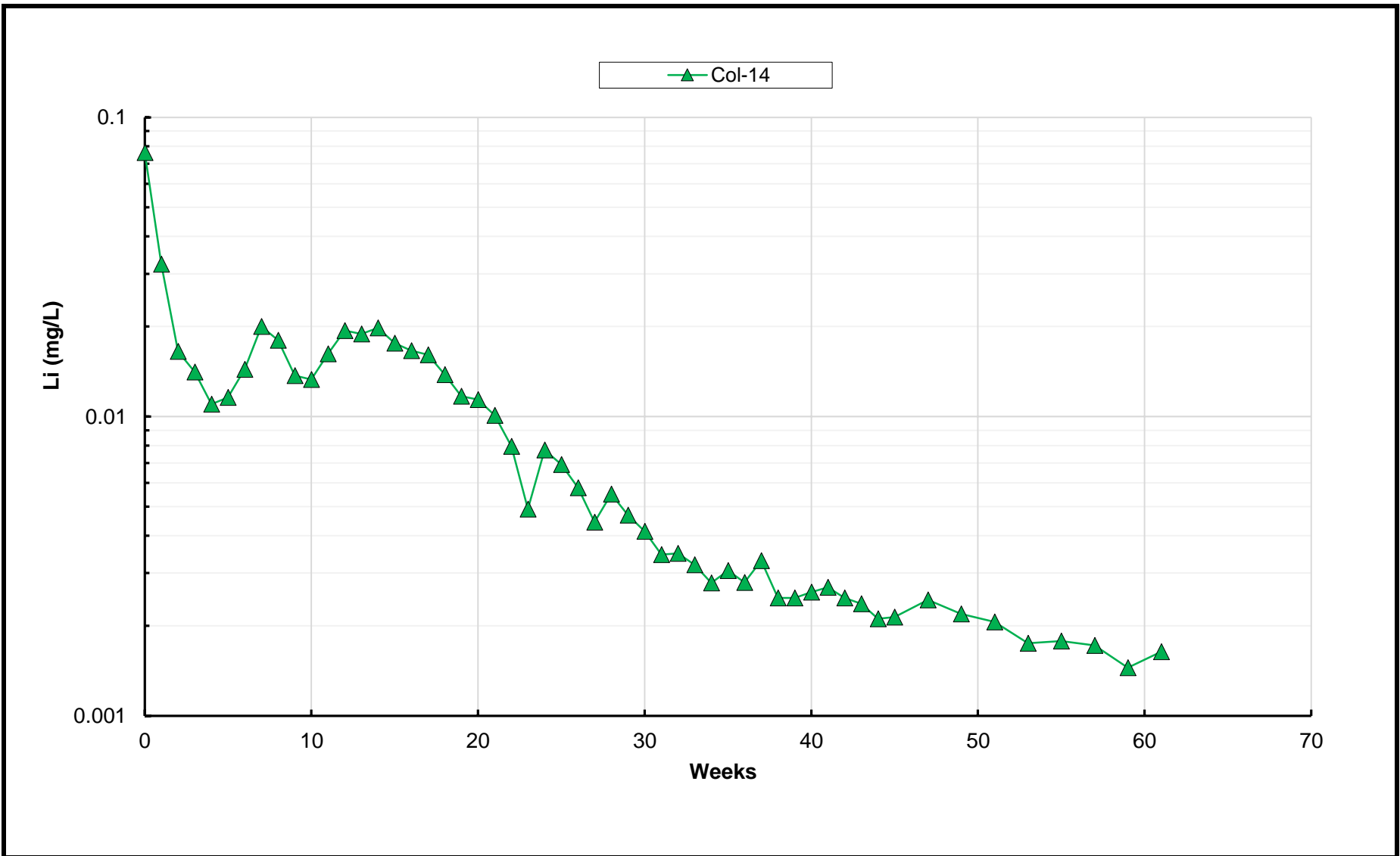
Copper			
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Drawn	MT	Reviewed	EC



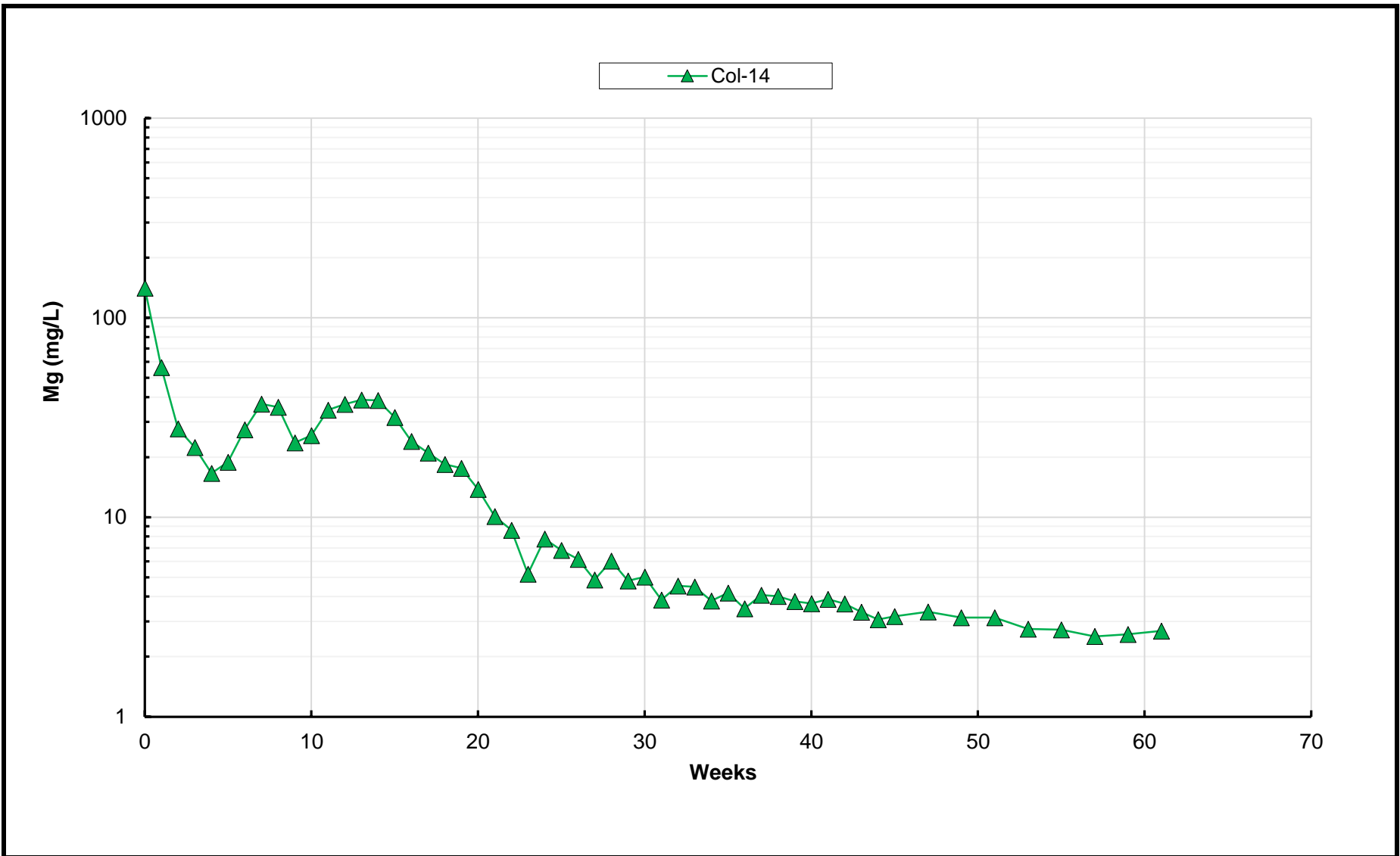
Iron			
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Date		April 2025	
Drawn	MT	Reviewed	EC



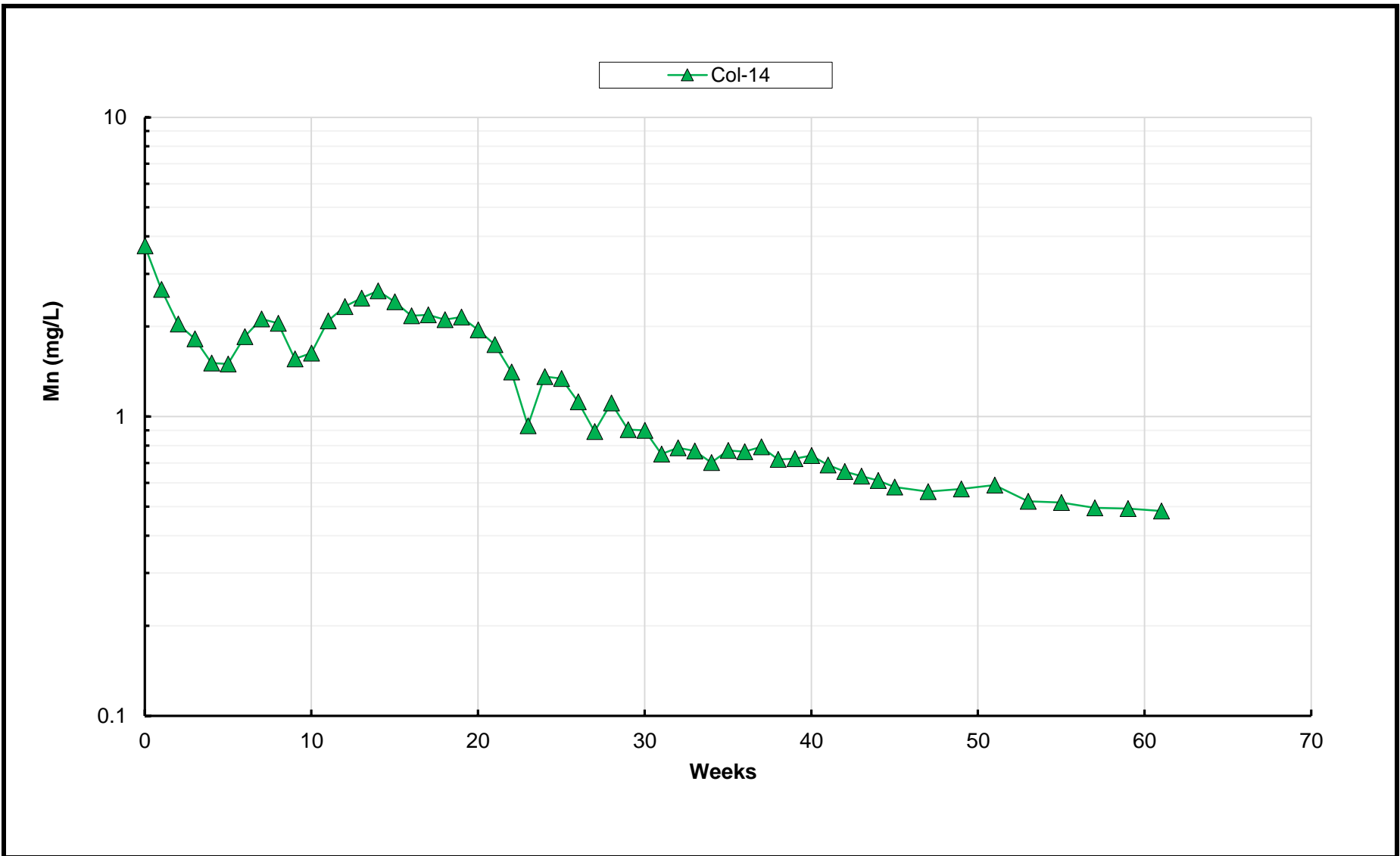
Lead			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-28	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



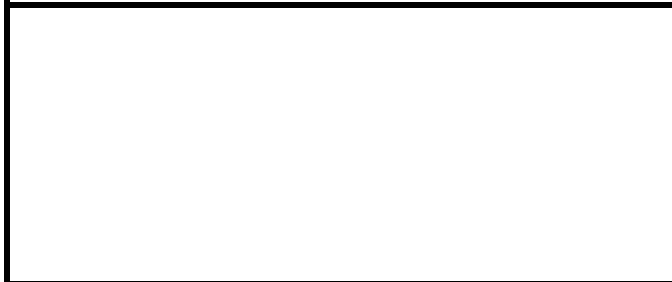
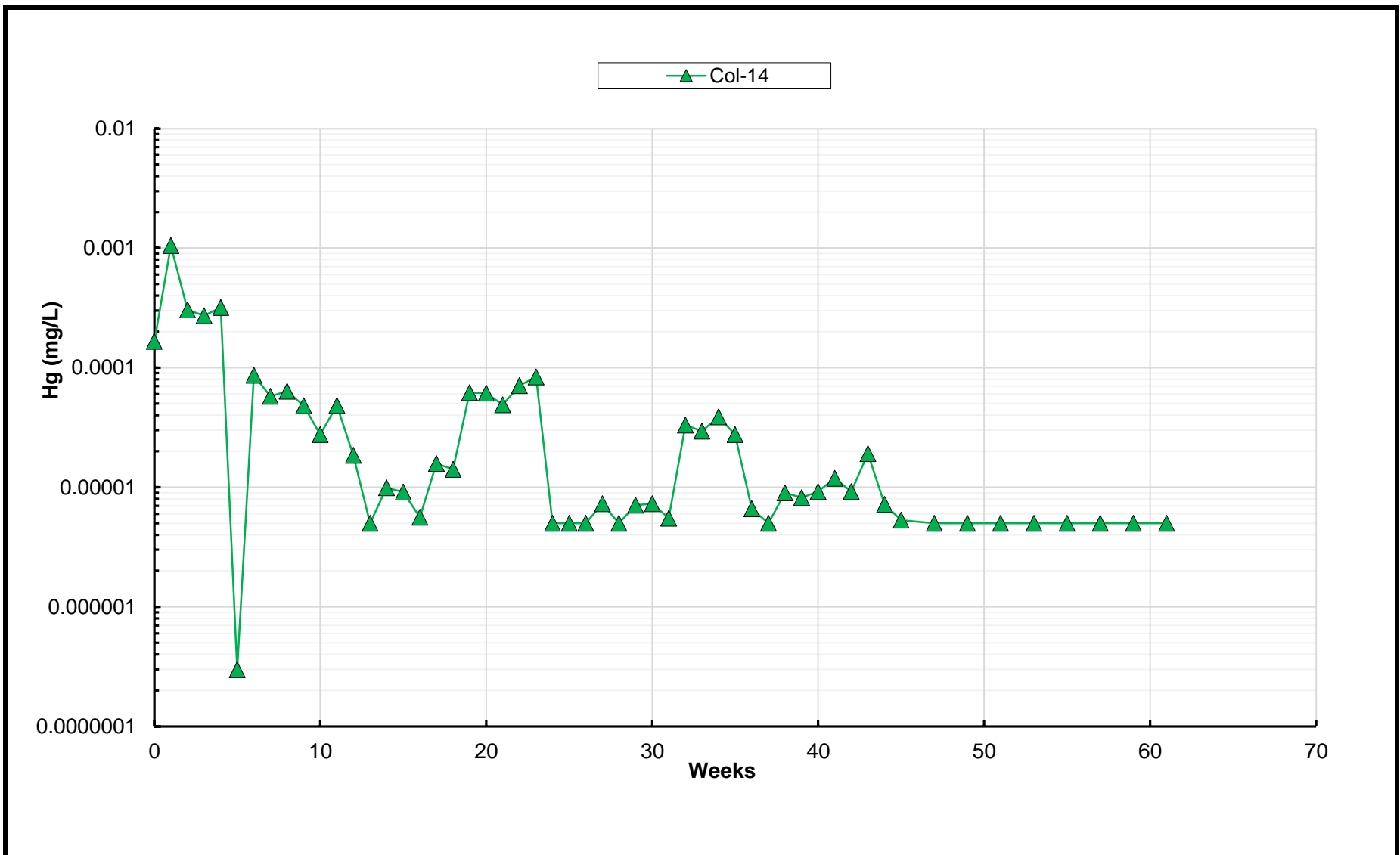
Lithium			
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Springpole Gold Project			
Figure Number		D-29	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



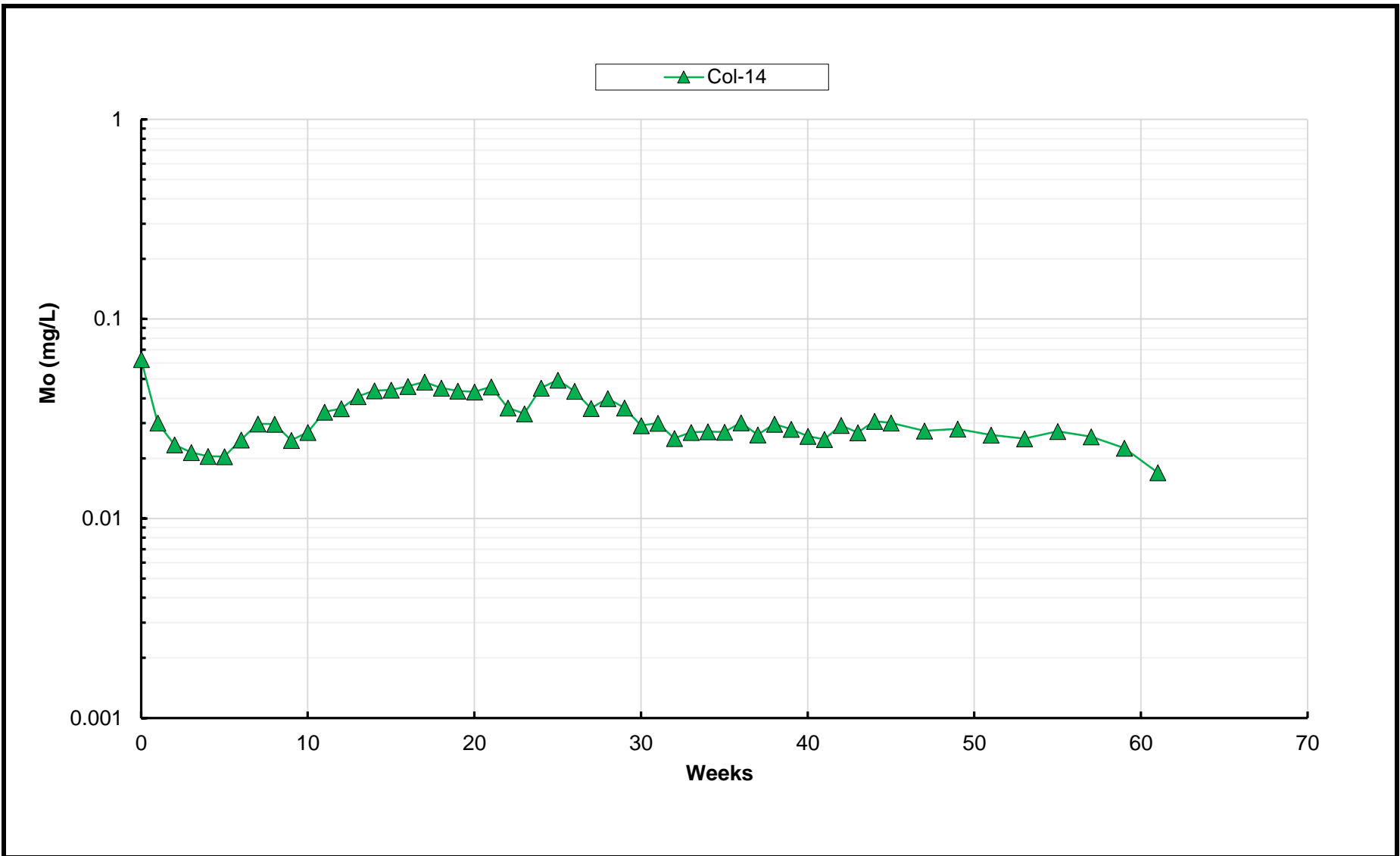
Magnesium			
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Springpole Gold Project			
Figure Number		D-30	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



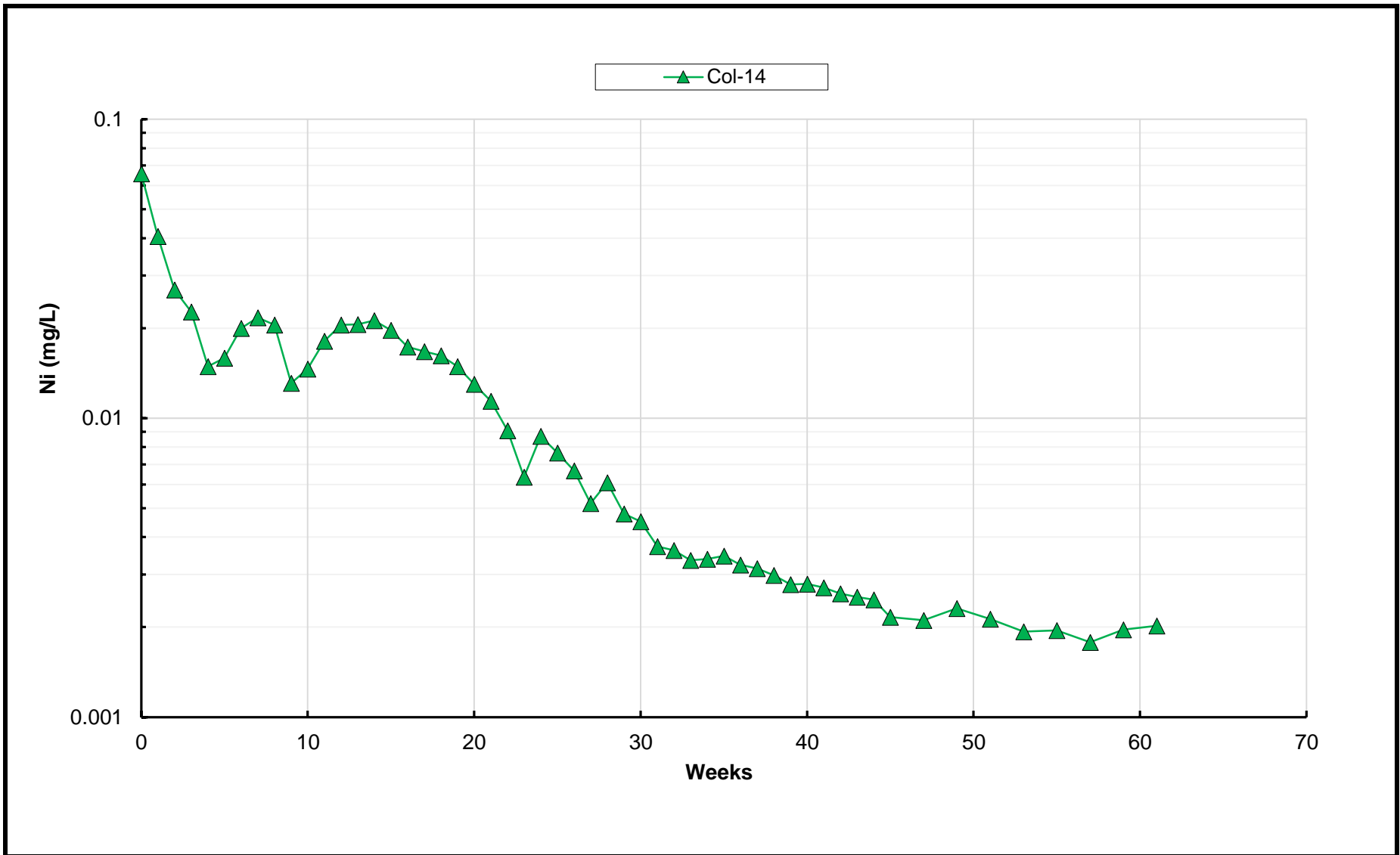
Manganese			
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Springpole Gold Project			
Figure Number		D-31	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



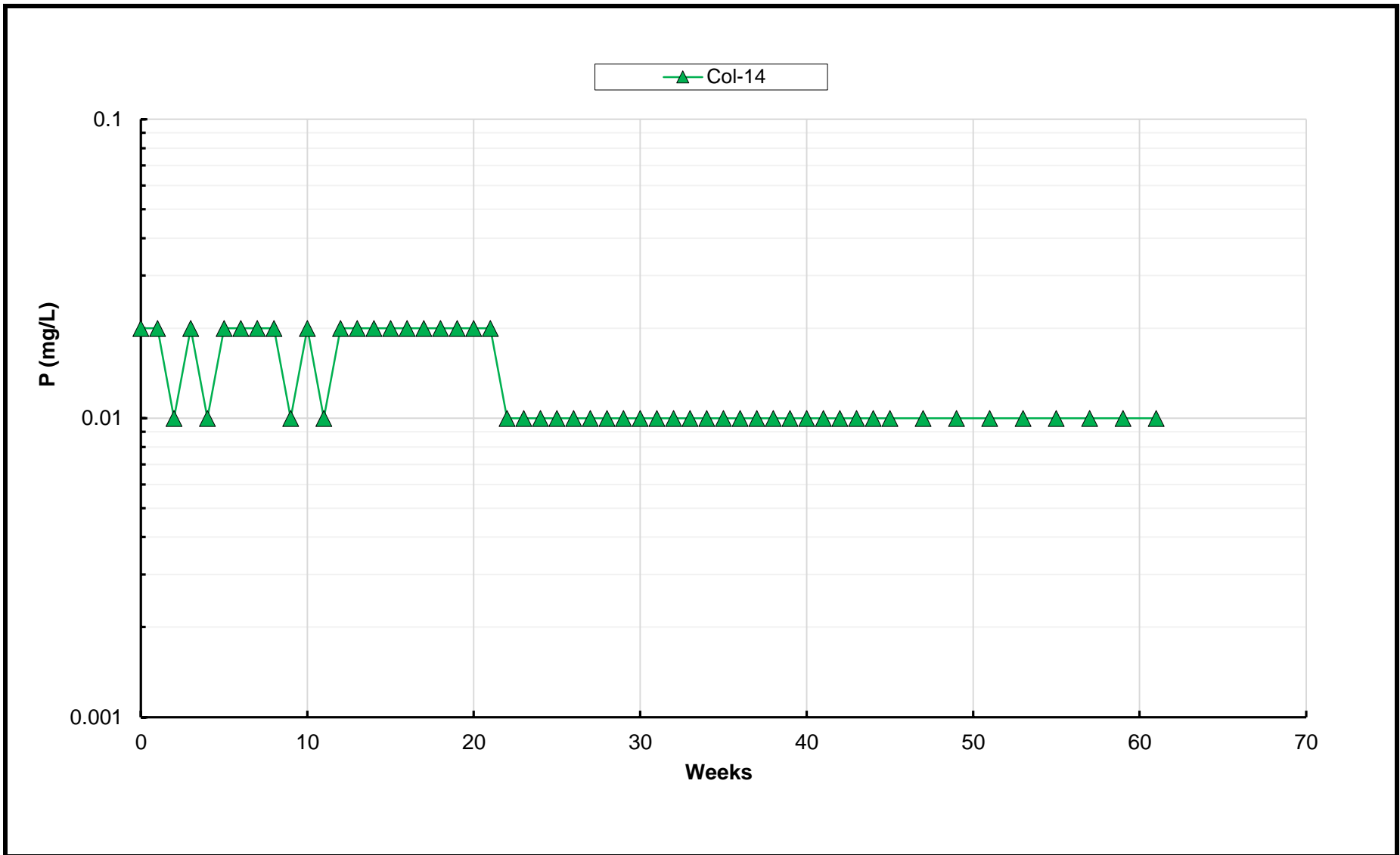
Mercury			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-32	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



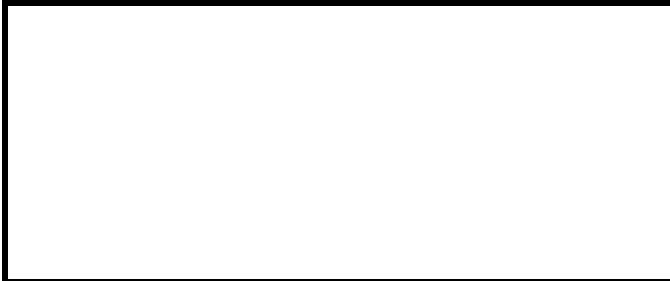
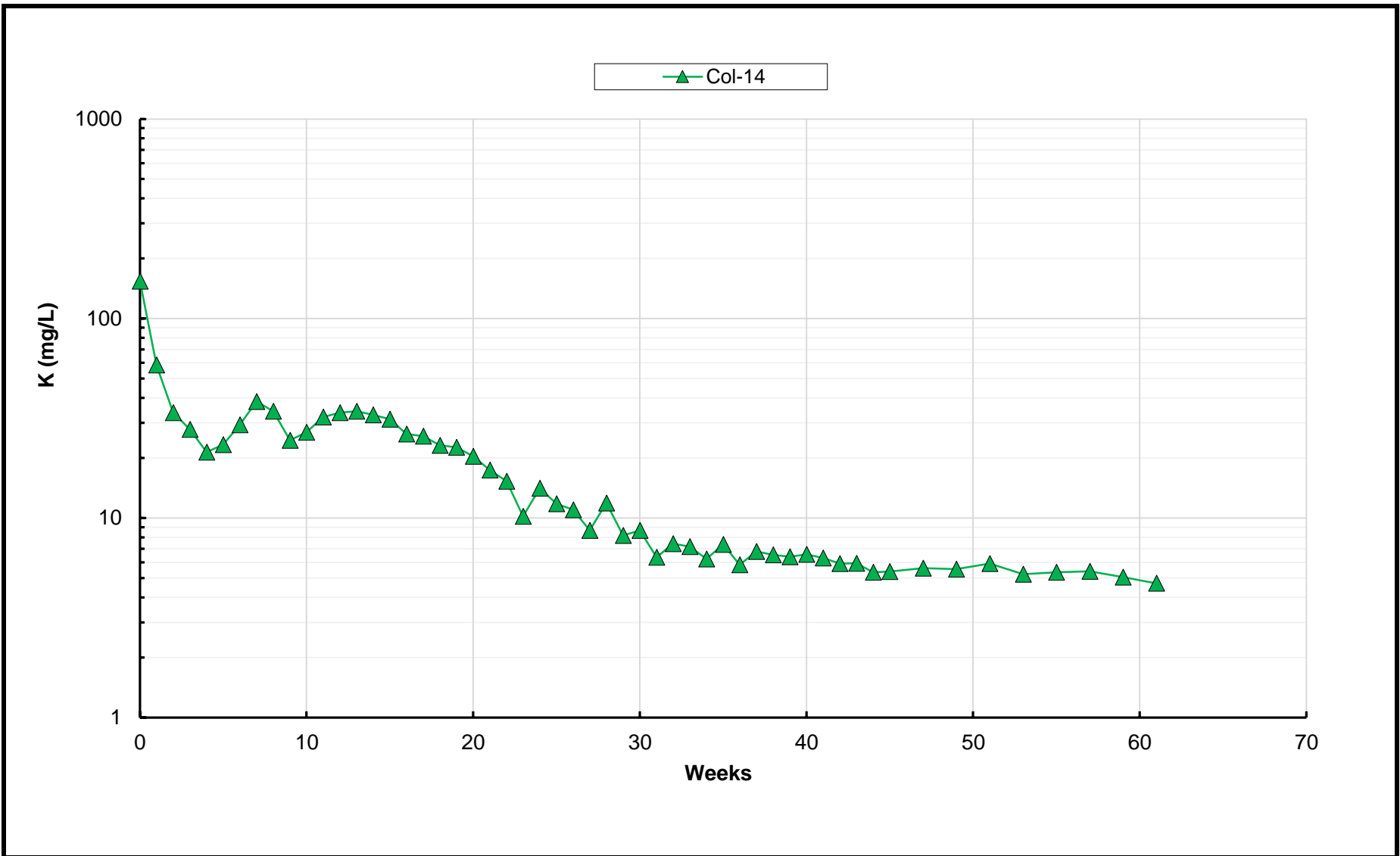
Molybdenum			
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Springpole Gold Project			
Figure Number		D-33	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



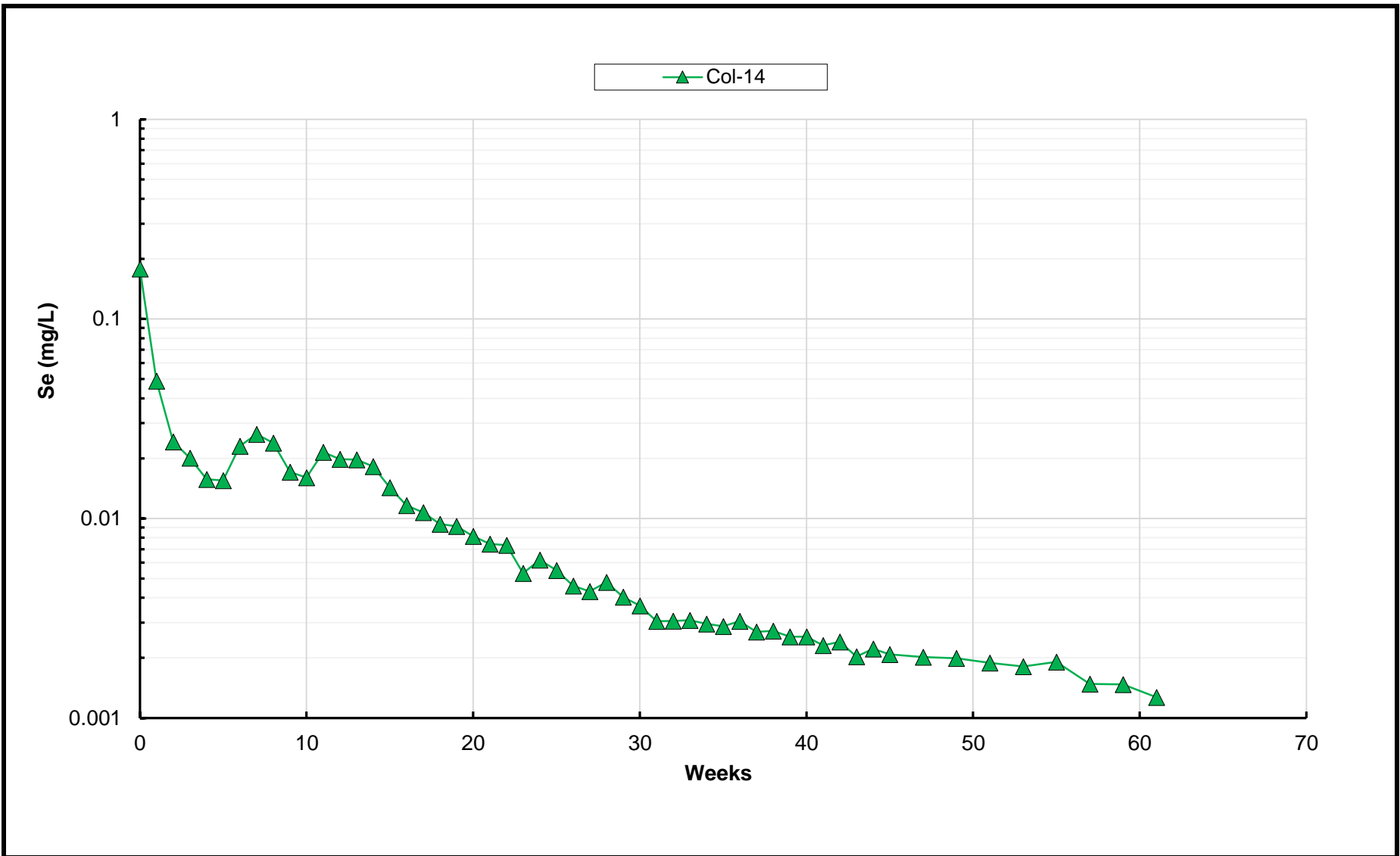
Nickel			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-34	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



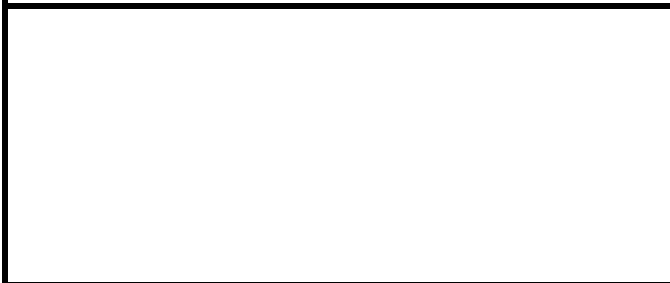
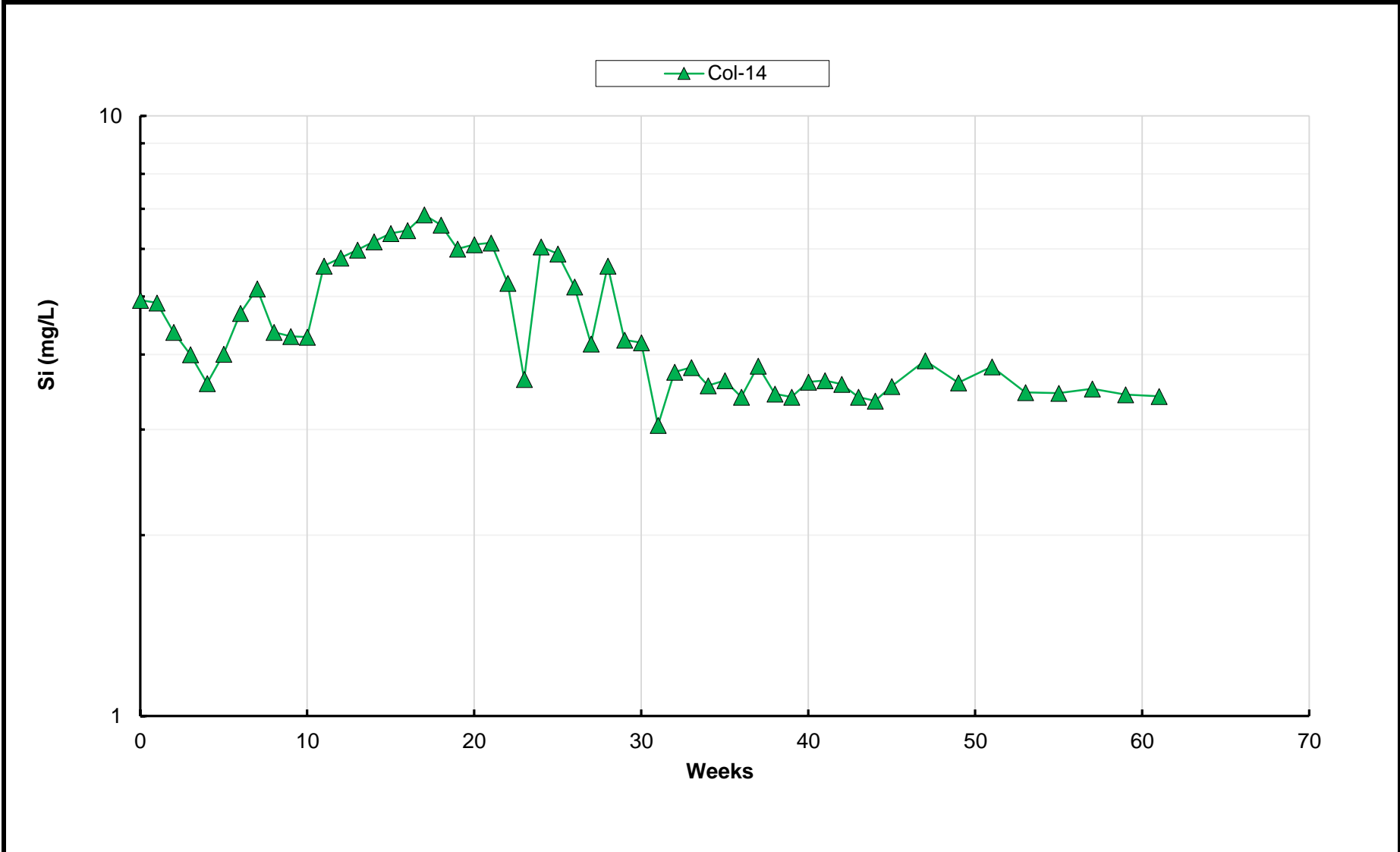
Phosphorous			
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Springpole Gold Project			
Figure Number		D-35	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



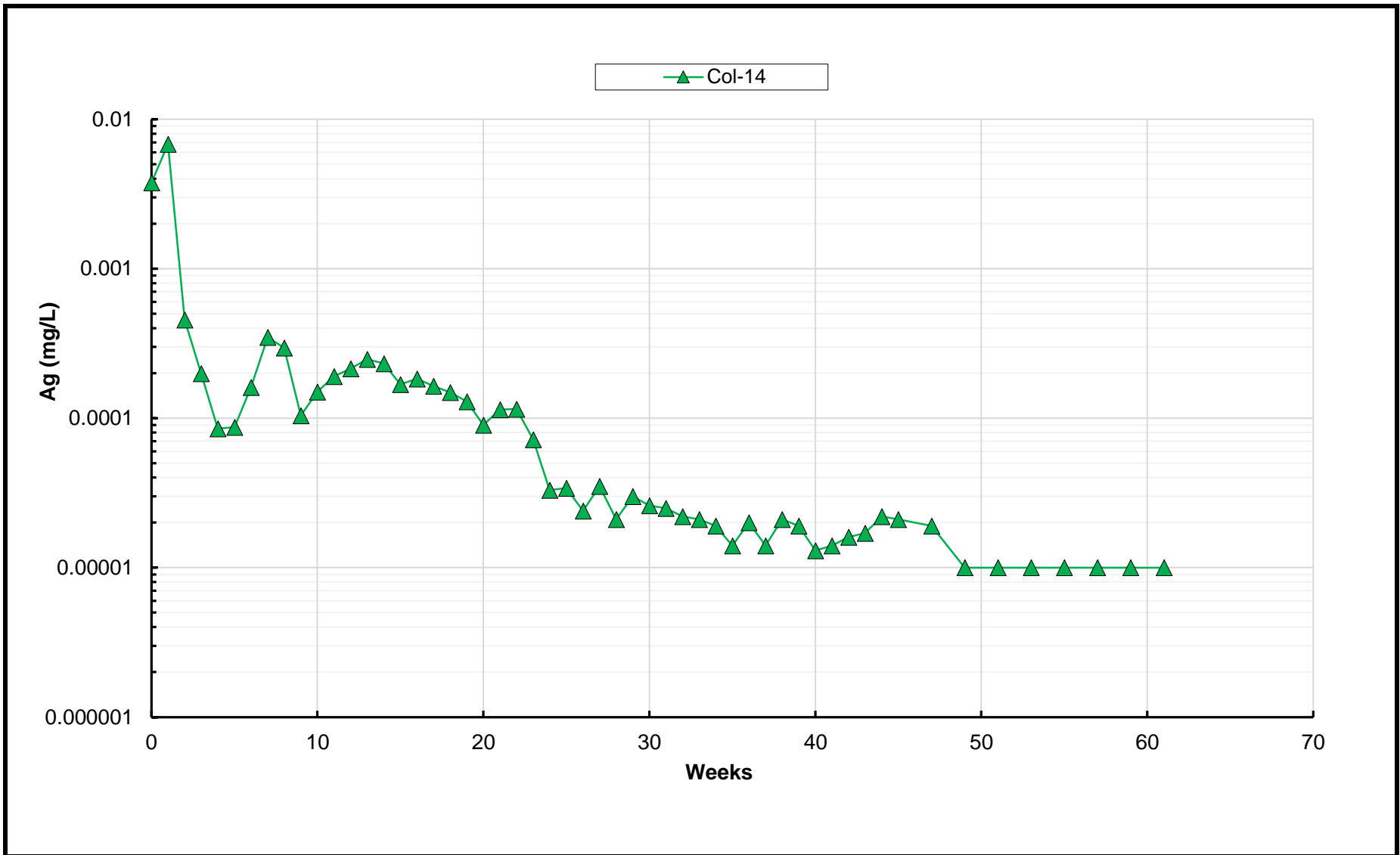
Potassium			
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Springpole Gold Project			
Figure Number		D-36	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



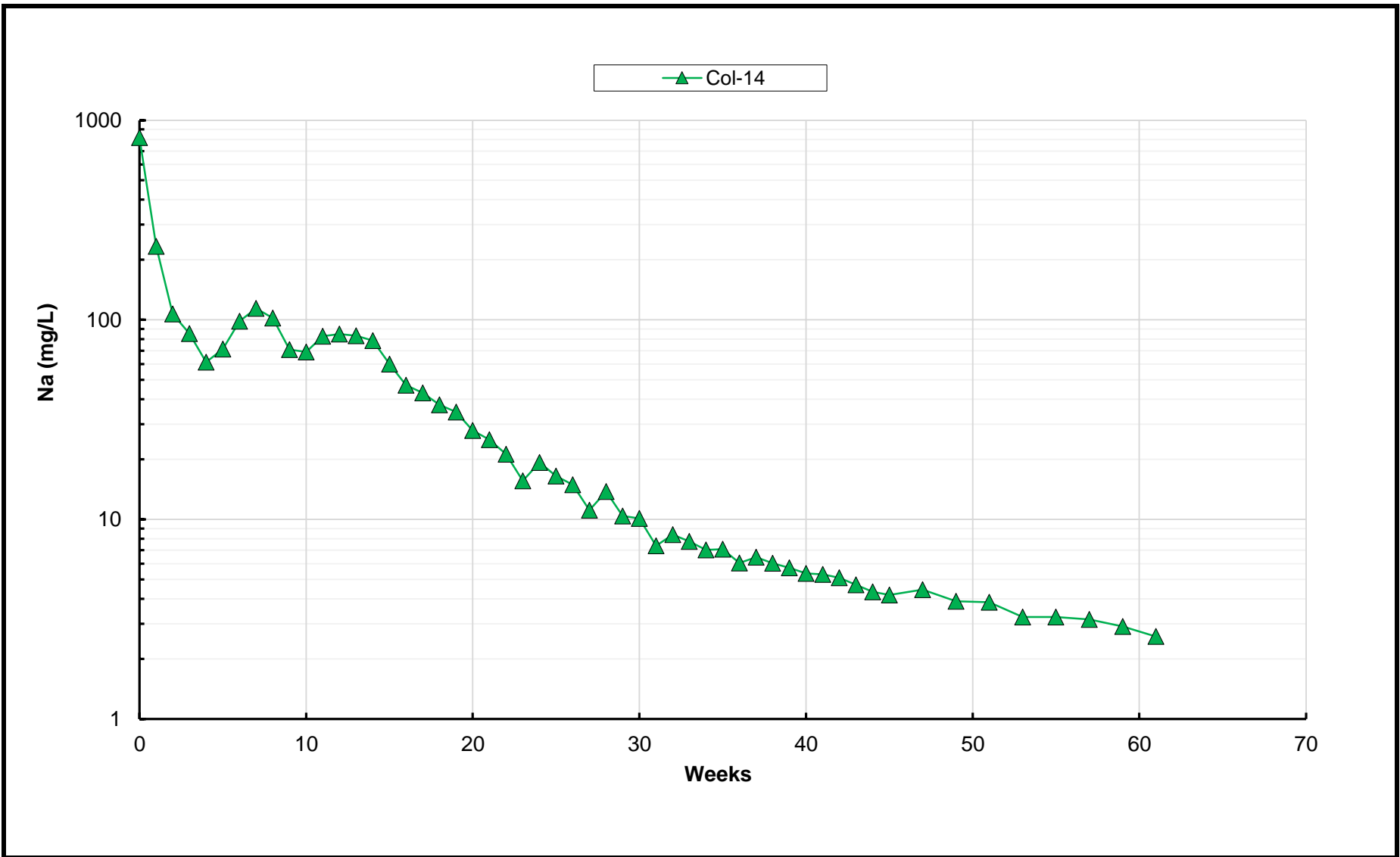
Selenium			
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Springpole Gold Project			
Figure Number		D-37	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



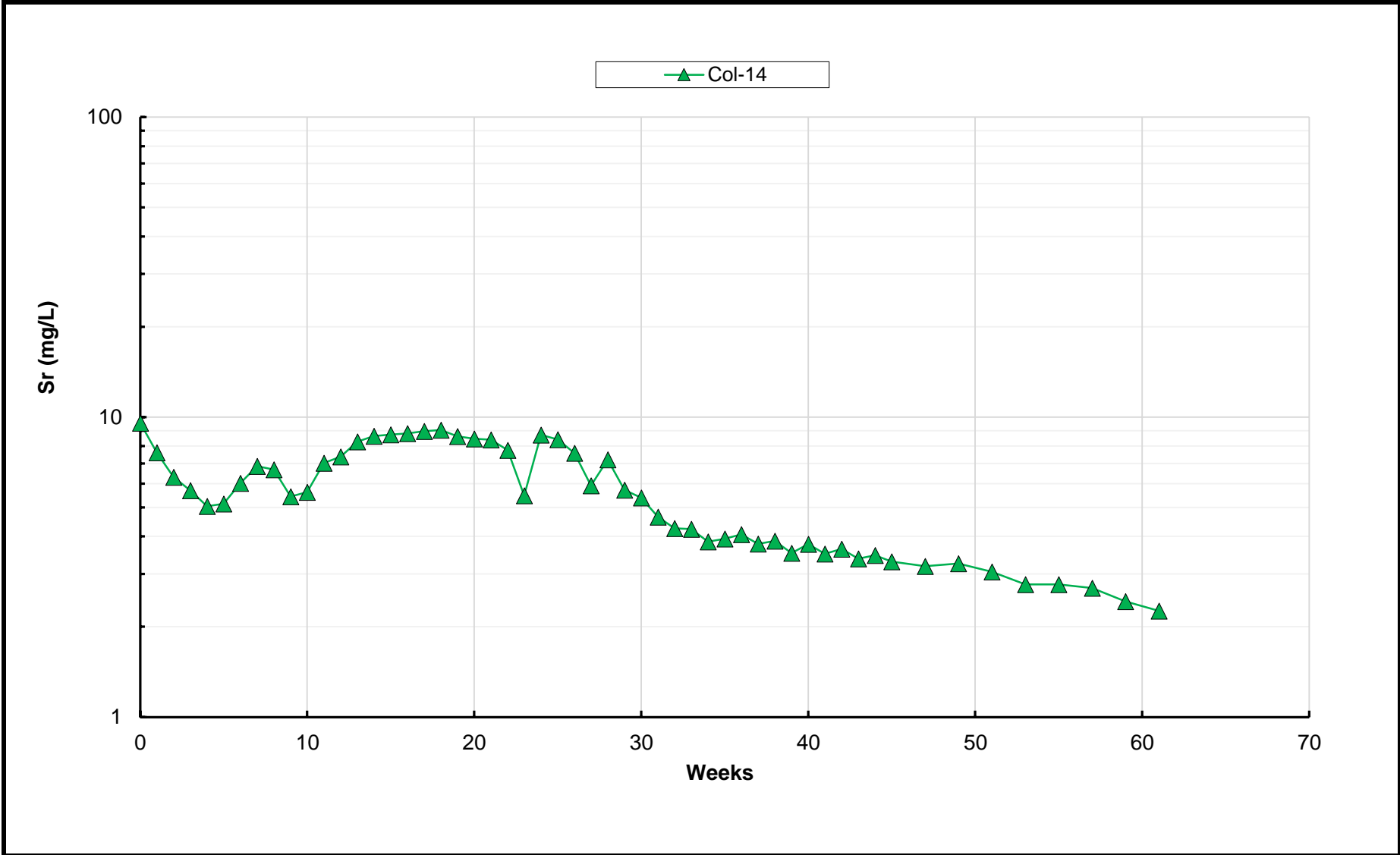
Silicon			
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Springpole Gold Project			
Figure Number		D-38	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



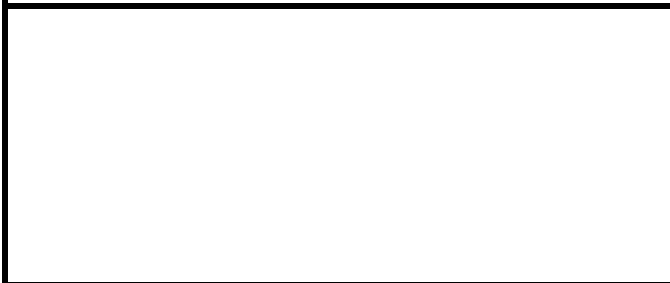
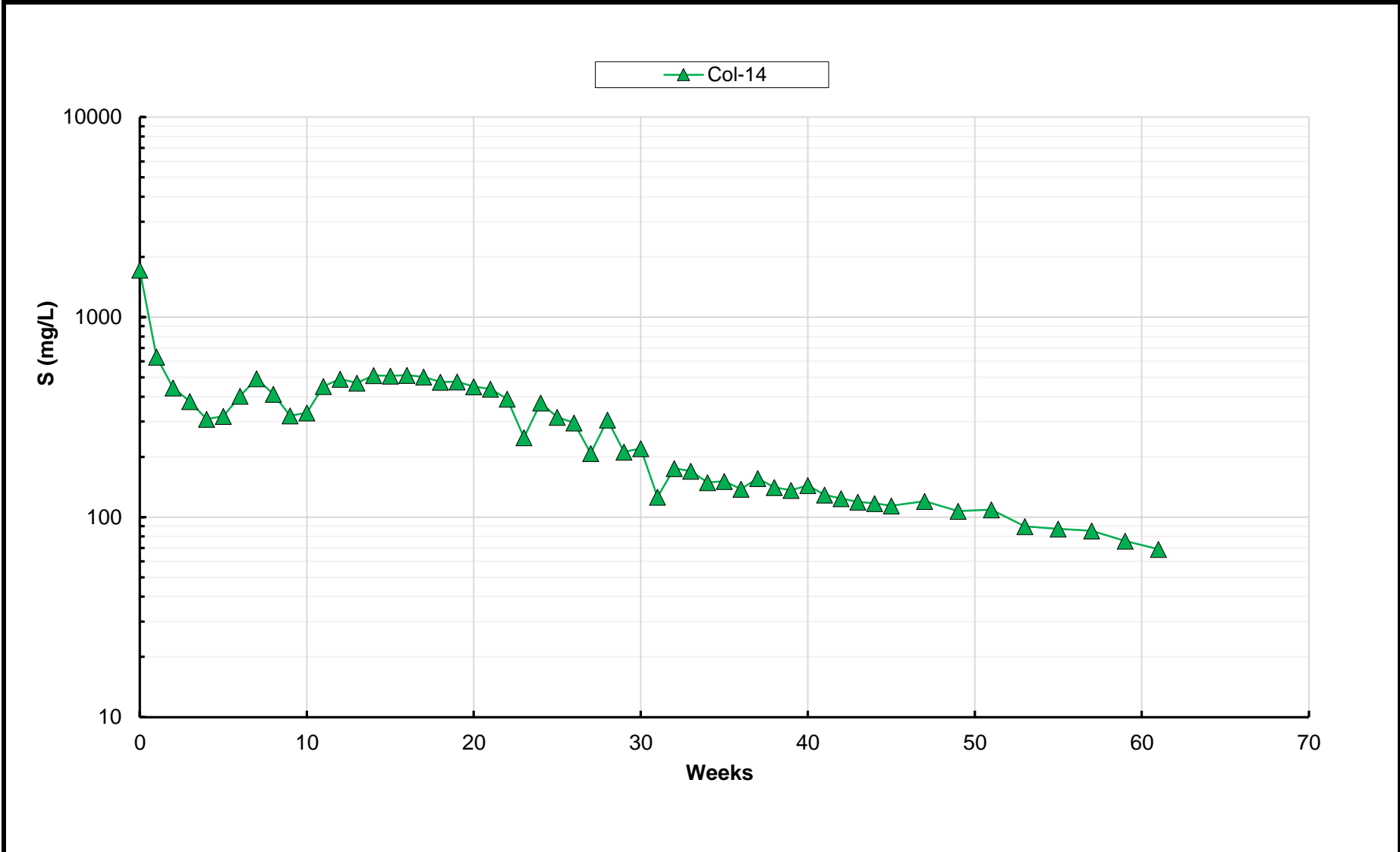
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Springpole Gold Project			
Figure Number		D-39	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



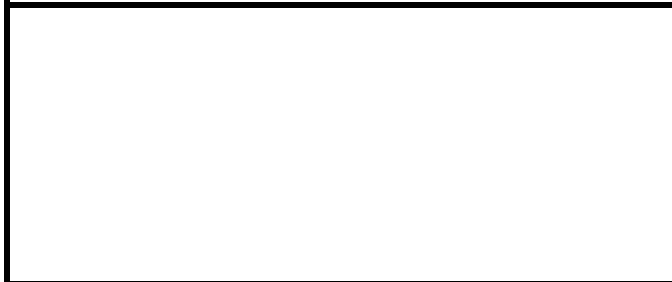
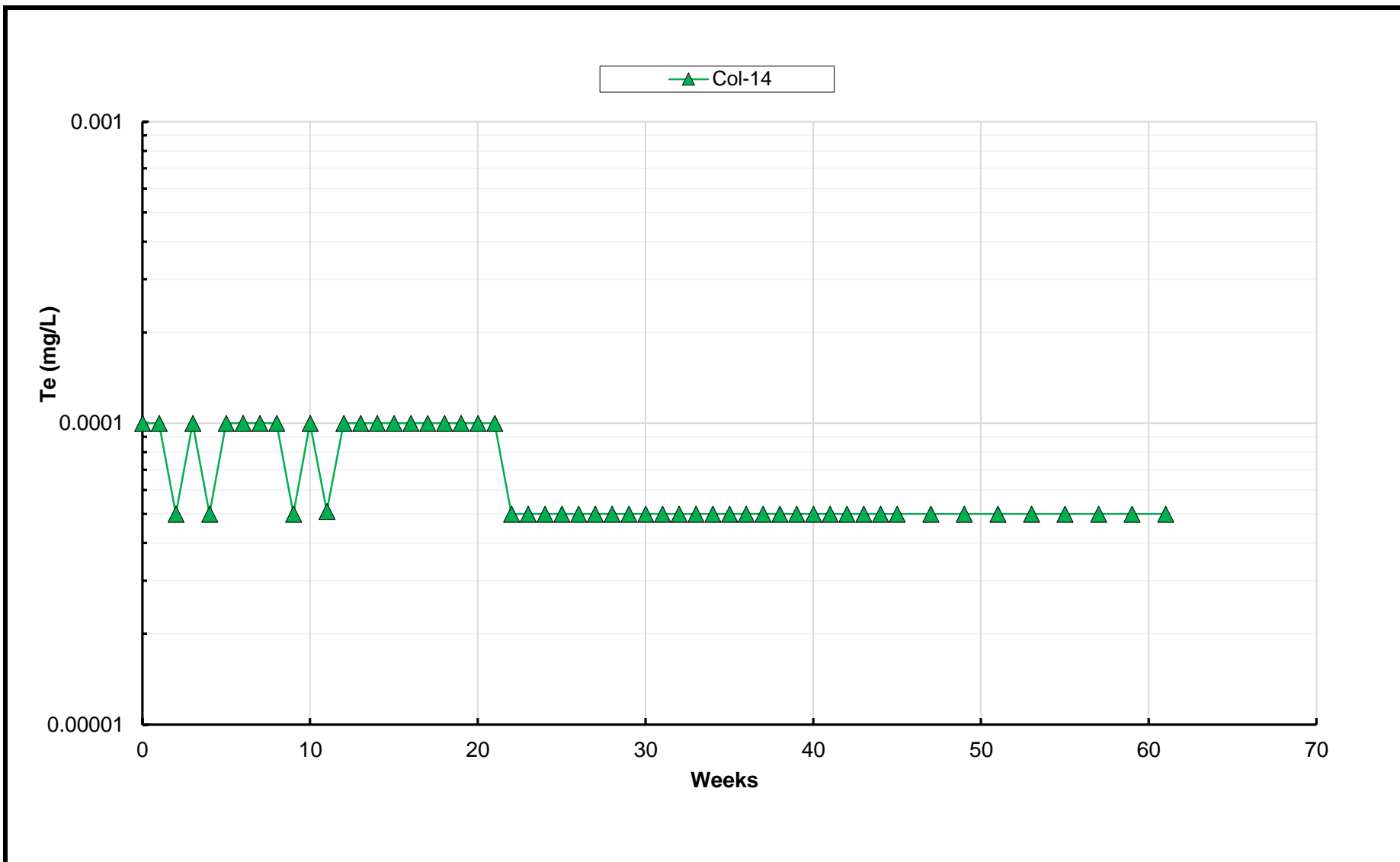
Sodium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-40	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



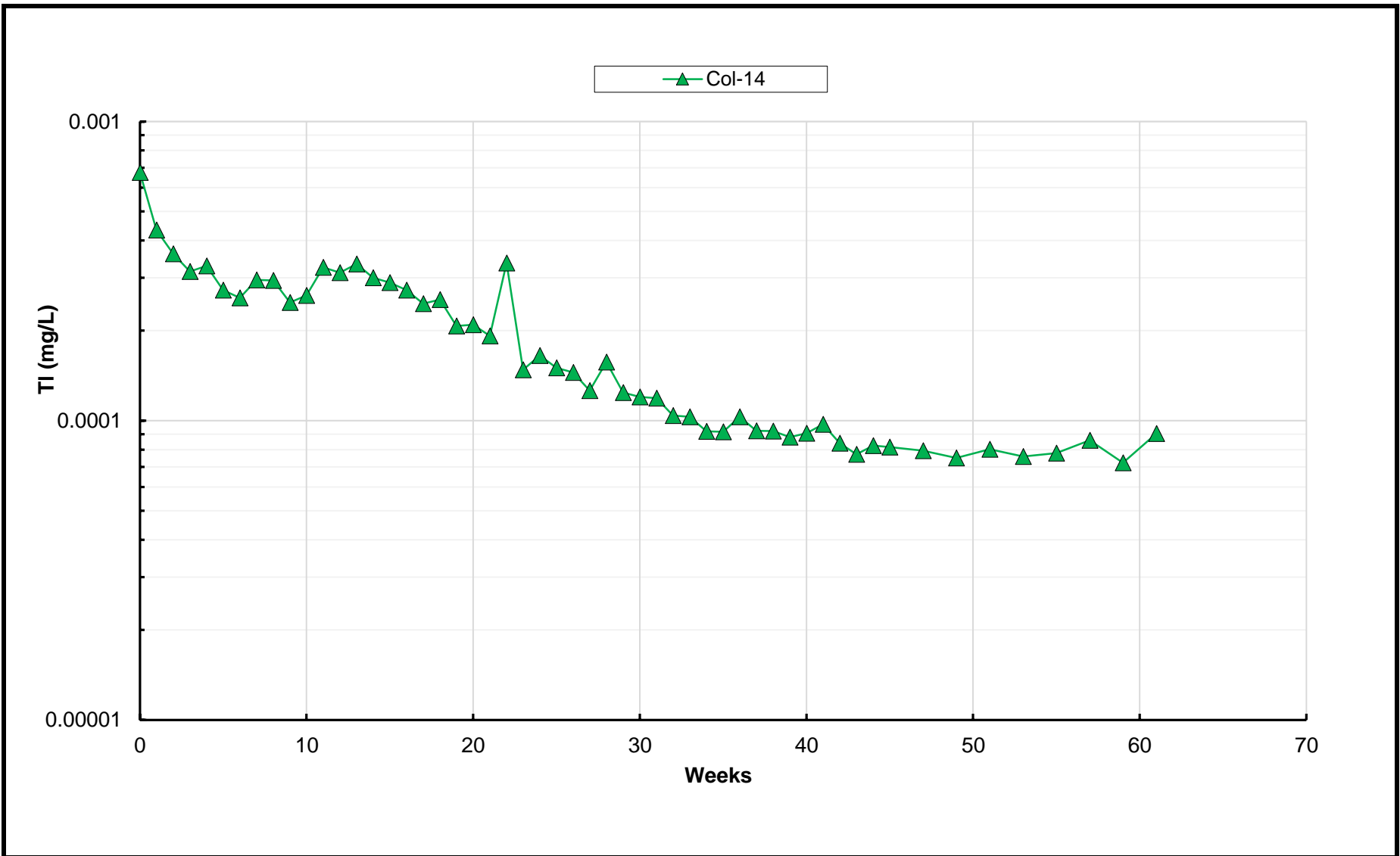
Strontium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-41	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



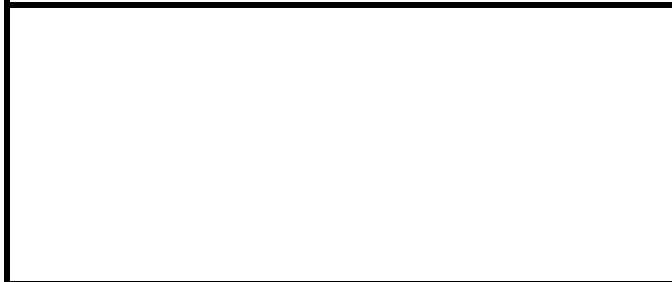
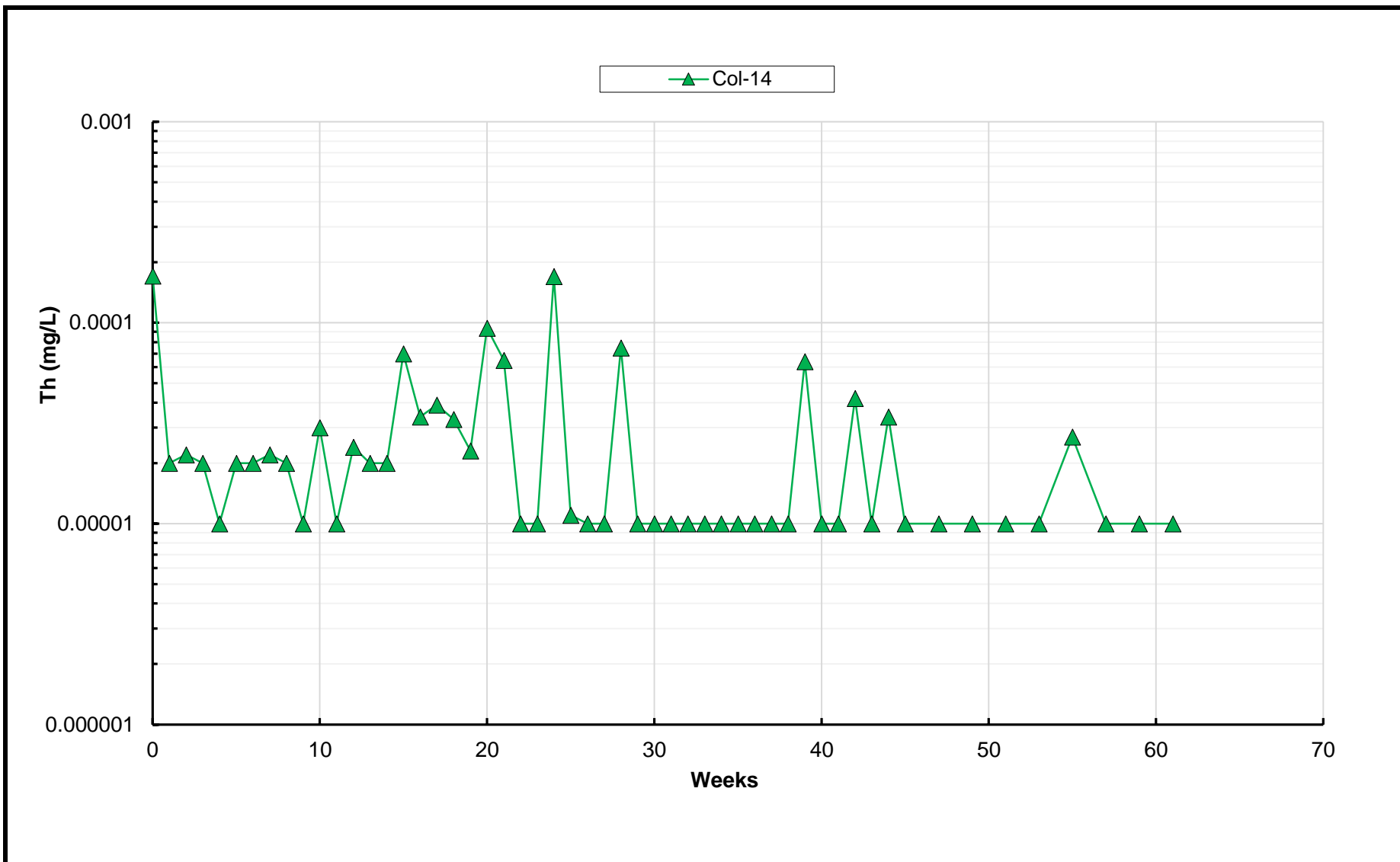
Sulphur			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-42	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



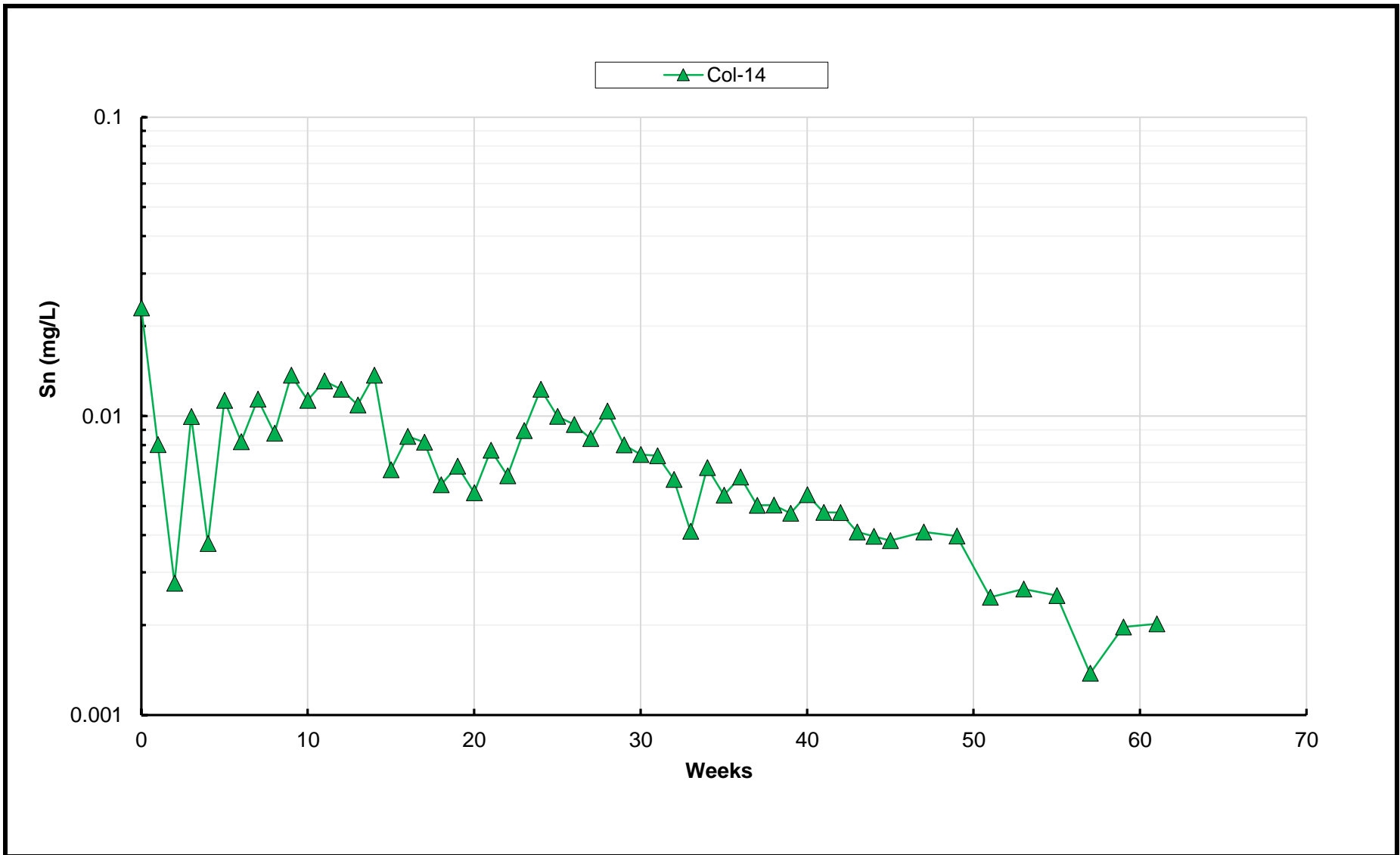
Tellurium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
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Figure Number		D-43	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



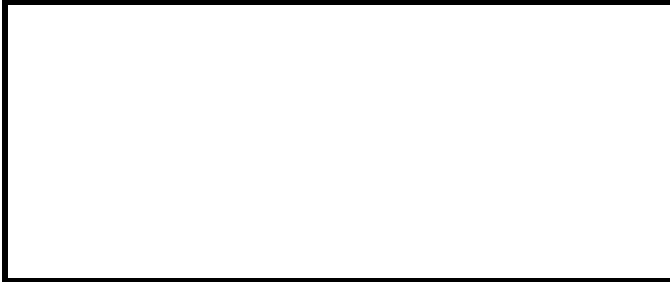
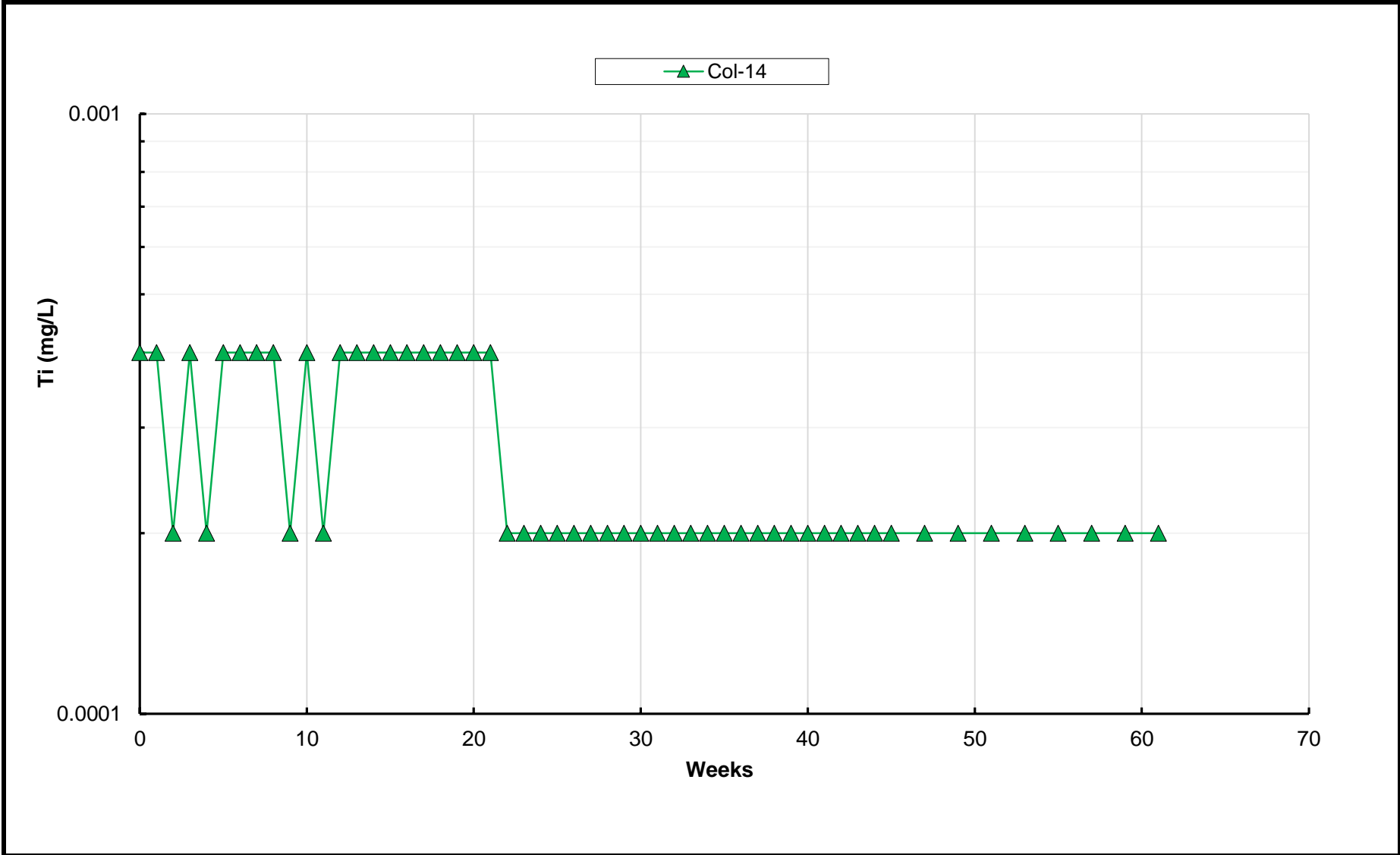
Thallium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-44	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



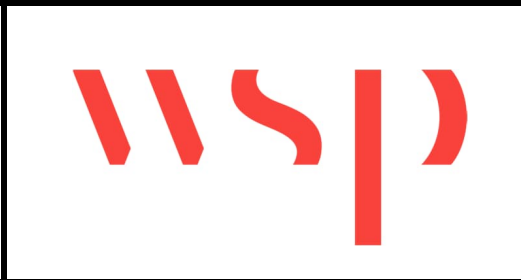
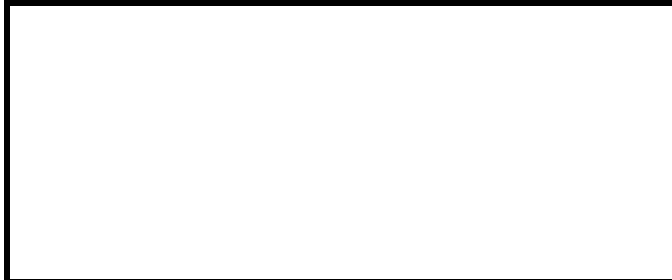
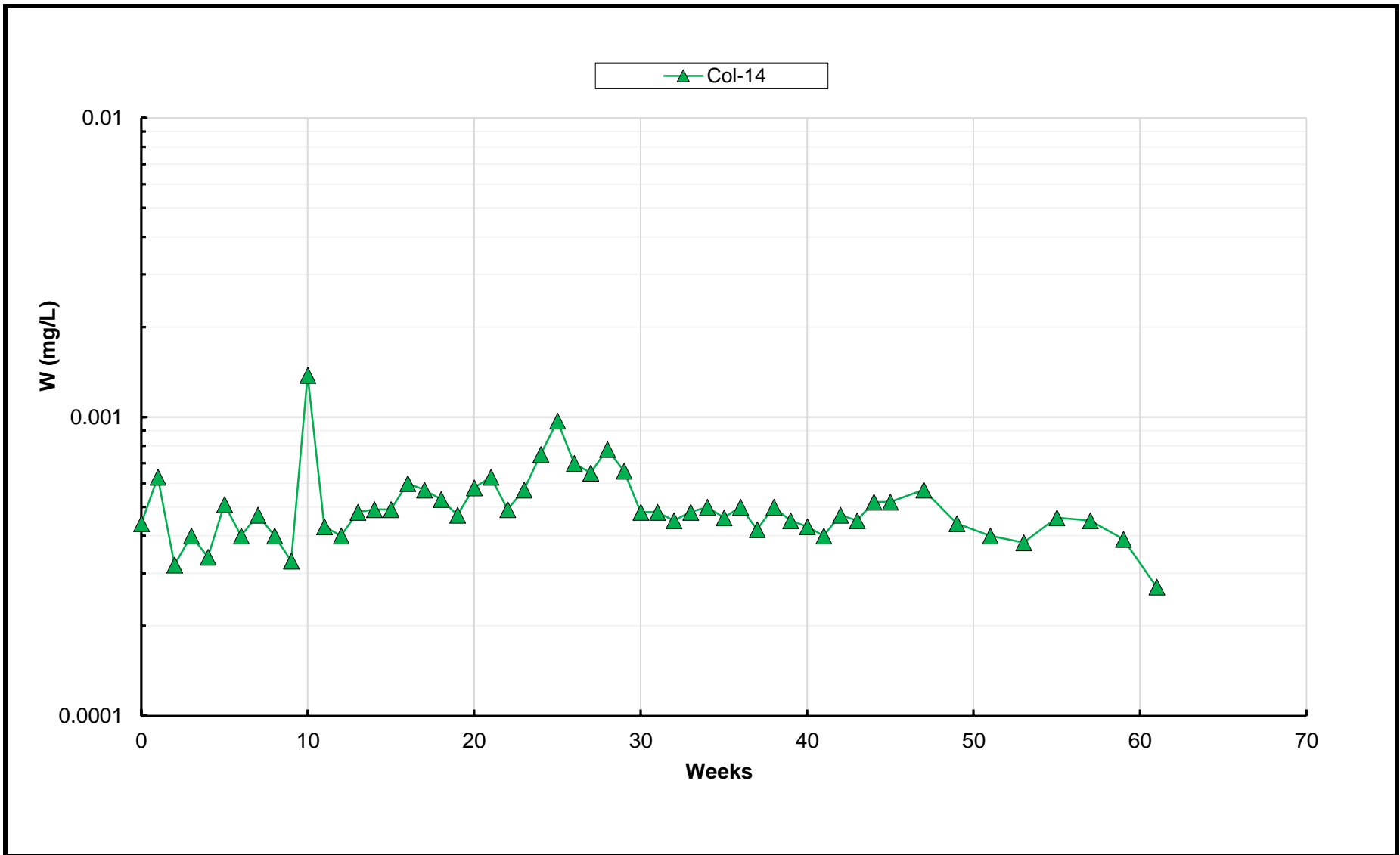
Thorium			
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Springpole Gold Project			
Figure Number		D-45	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



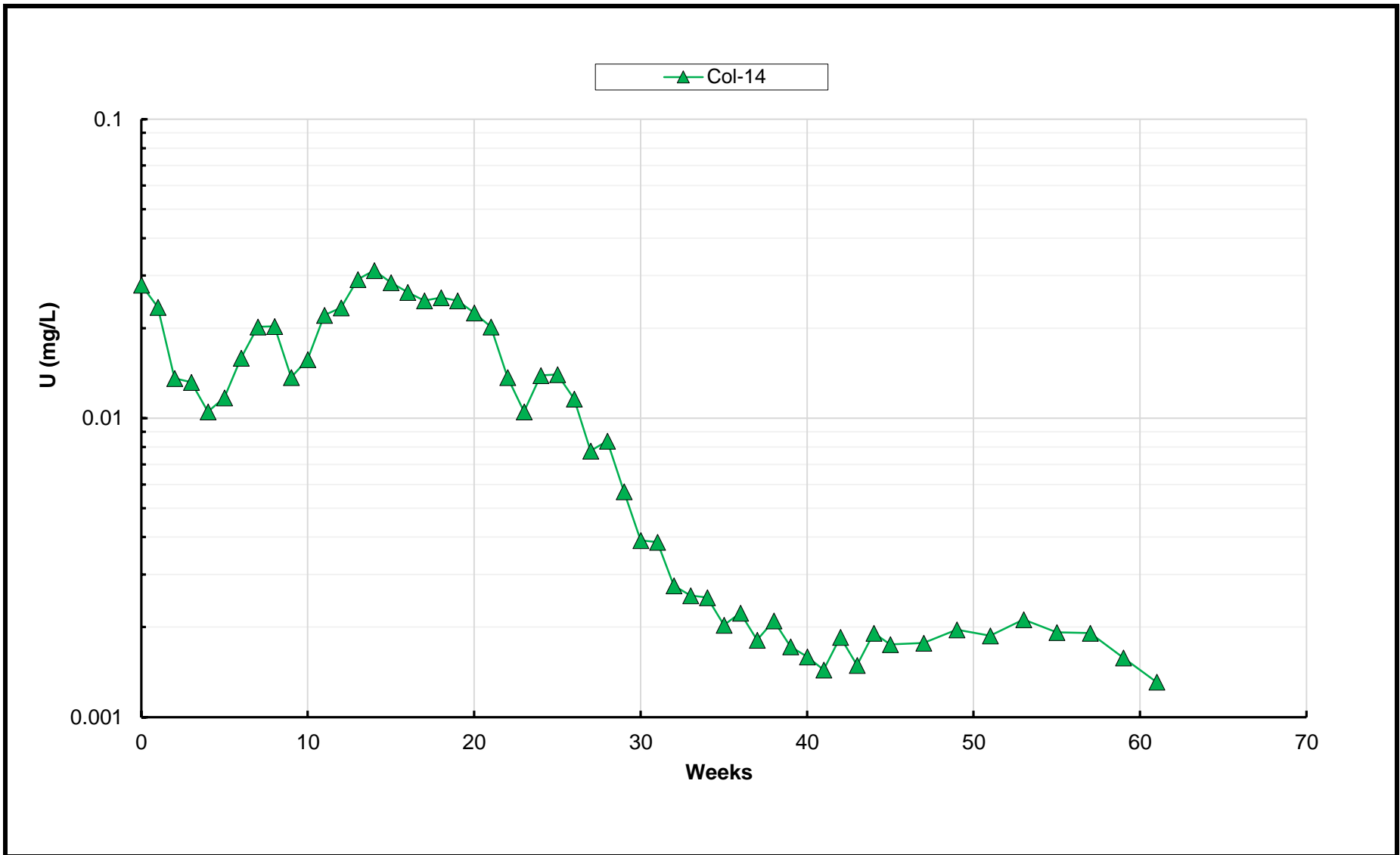
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Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-46	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



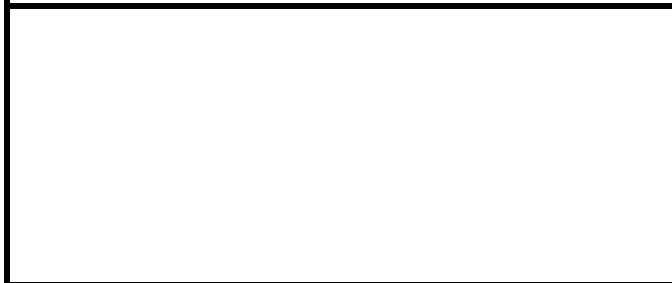
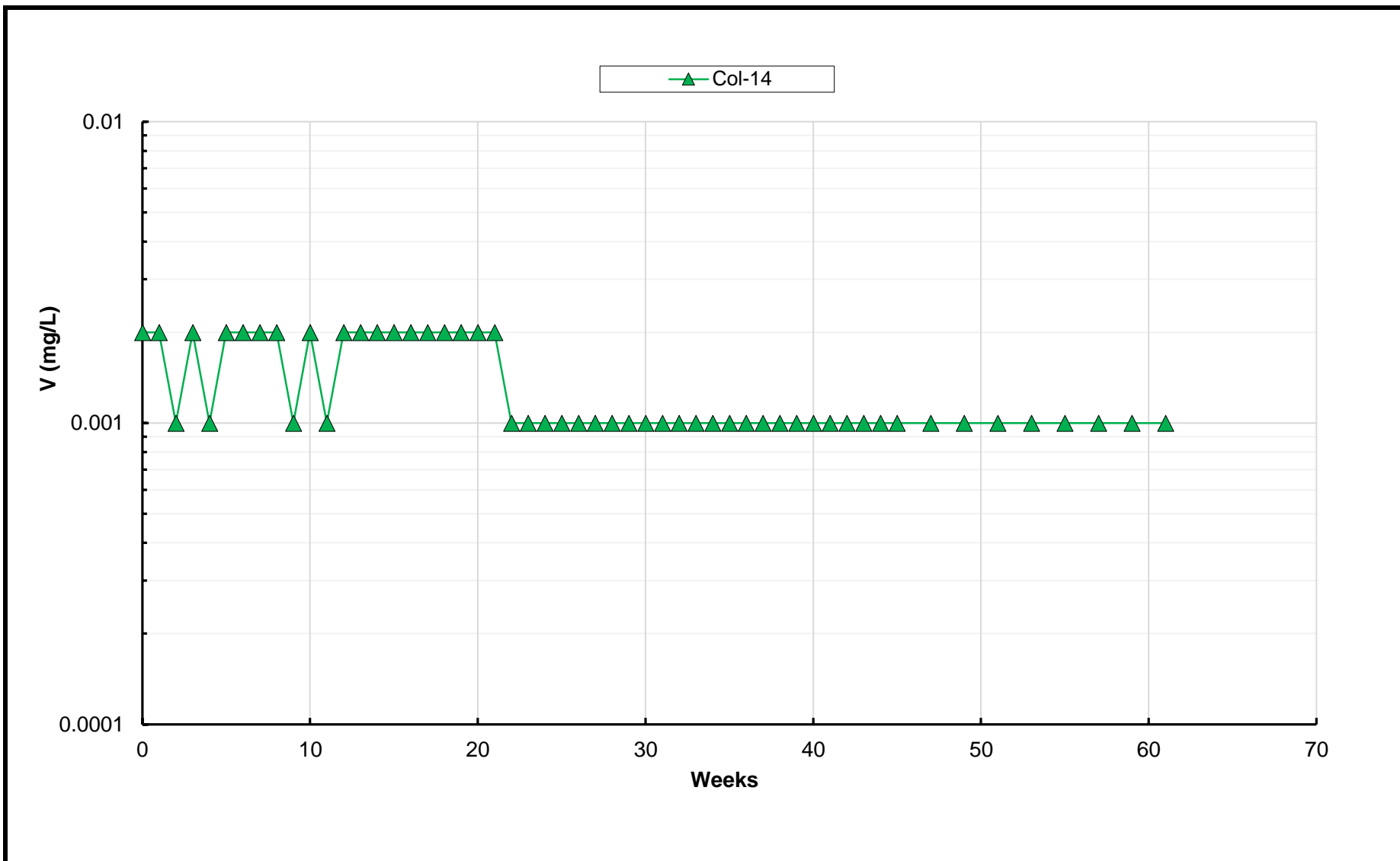
Titanium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-47	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



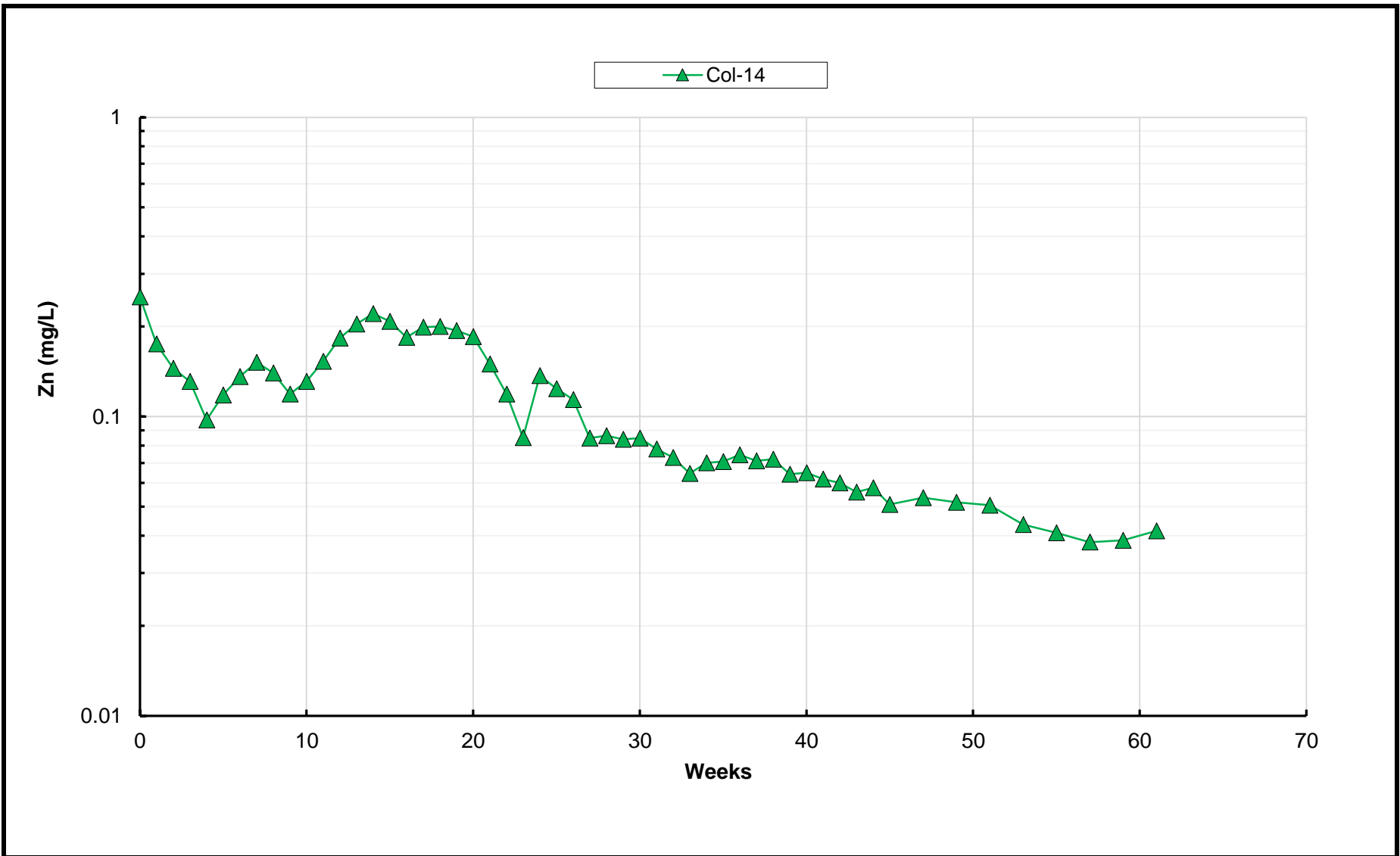
Tungsten			
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Springpole Gold Project			
Figure Number		D-48	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



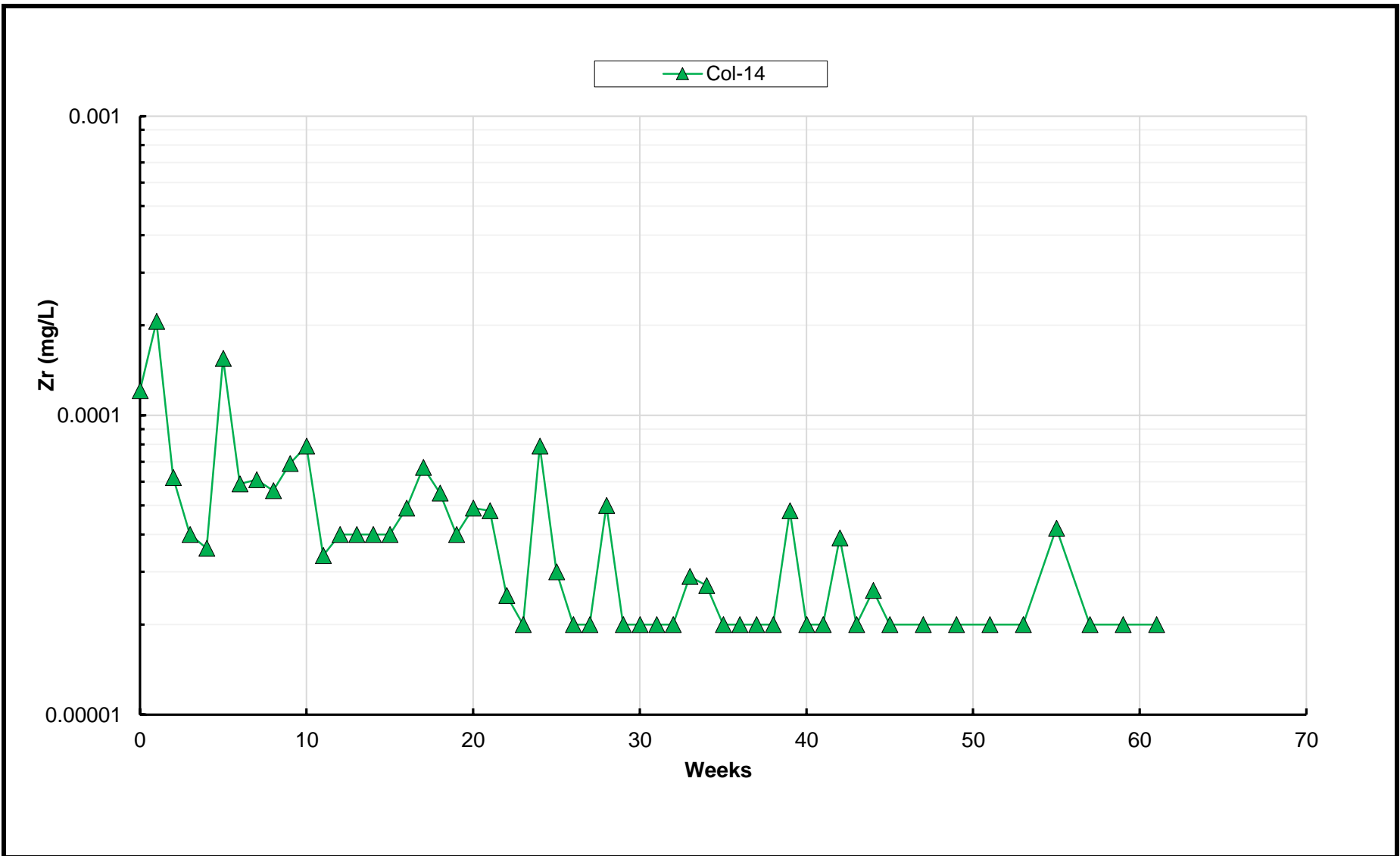
Uranium			
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Springpole Gold Project			
Figure Number		D-49	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Vanadium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-50	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Zinc			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-51	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC



Zirconium			
Baseline Kinetic Geochemical Testing Report - Kinetic Testing Update - Q4 2024			
Springpole Gold Project			
Figure Number		D-52	
Project Number		ONS2104	
Date		April 2025	
Drawn	MT	Reviewed	EC

Appendix E

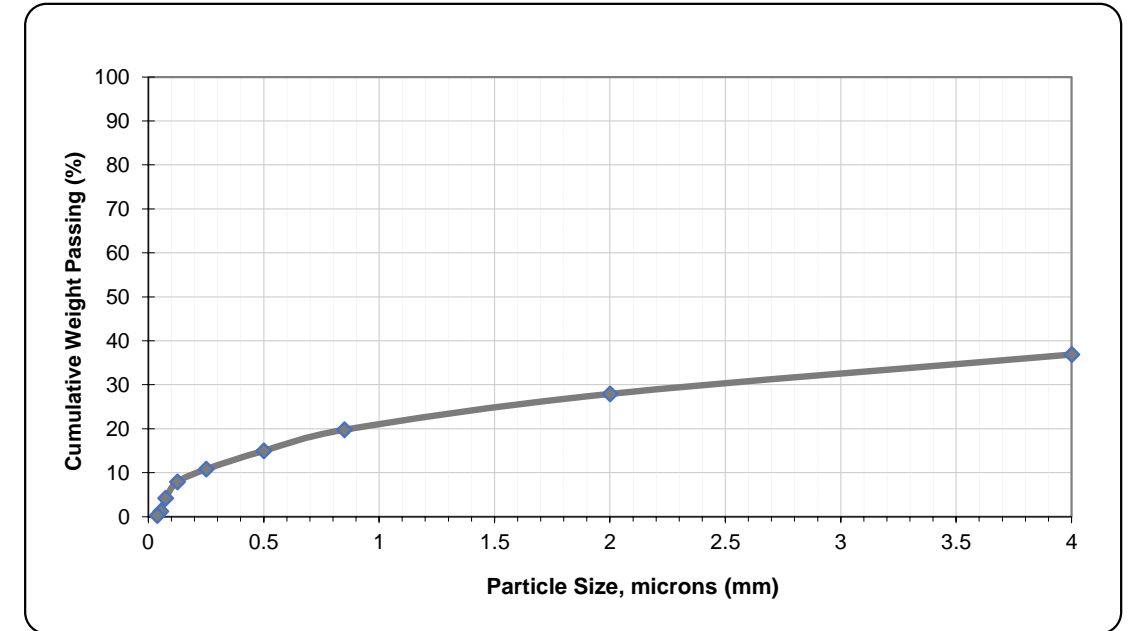
Particle Size Distribution Results

CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

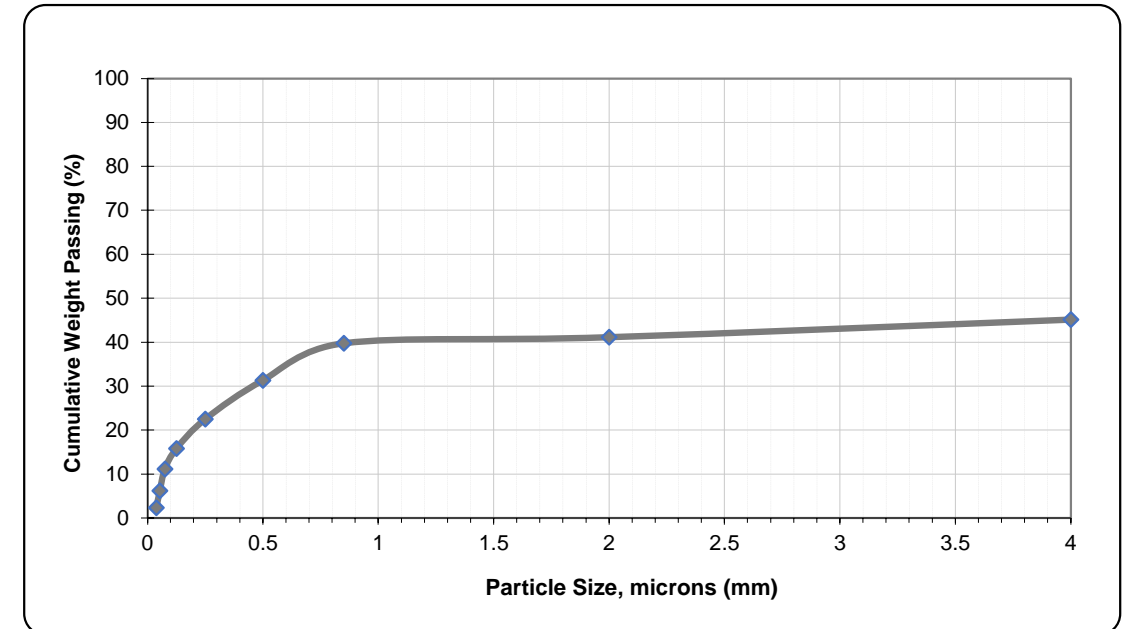


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-1: Sample ID: (55) 009555							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	157.29	63.1	63.1	36.9
9	10	2.000	0.079	22.46	9.0	72.1	27.9
20	20	0.850	0.0331	20.25	8.1	80.2	19.8
35	40	0.500	0.0197	12.00	4.8	85.0	15.0
60	60	0.250	0.0098	10.45	4.2	89.2	10.8
115	120	0.125	0.0049	7.20	2.9	92.1	7.9
200	200	0.075	0.0029	9.30	3.7	95.8	4.2
270	270	0.053	0.0021	7.45	3.0	98.8	1.2
400	400	0.038	0.0015	2.25	0.9	99.7	0.3
<400.000	400 (Pan)	<0.04	<0.002	0.75	0.3	100.0	0.0
Wt. of sample used: 250.0 g				249.4	100.0		



HC-2: Sample ID: (73) 009573							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	43.81	54.9	54.9	45.1
9	10	2.000	0.079	3.20	4.0	58.9	41.1
20	20	0.850	0.0331	1.10	1.4	60.2	39.8
35	40	0.500	0.0197	6.70	8.4	68.6	31.4
60	60	0.250	0.0098	7.05	8.8	77.5	22.5
115	120	0.125	0.0049	5.35	6.7	84.2	15.8
200	200	0.075	0.0029	3.75	4.7	88.9	11.1
270	270	0.053	0.0021	3.95	4.9	93.8	6.2
400	400	0.038	0.0015	3.05	3.8	97.6	2.4
<400.000	400 (Pan)	<0.04	<0.002	1.90	2.4	100.0	0.0
Wt. of sample used: 80.0 g				79.9	100.0		

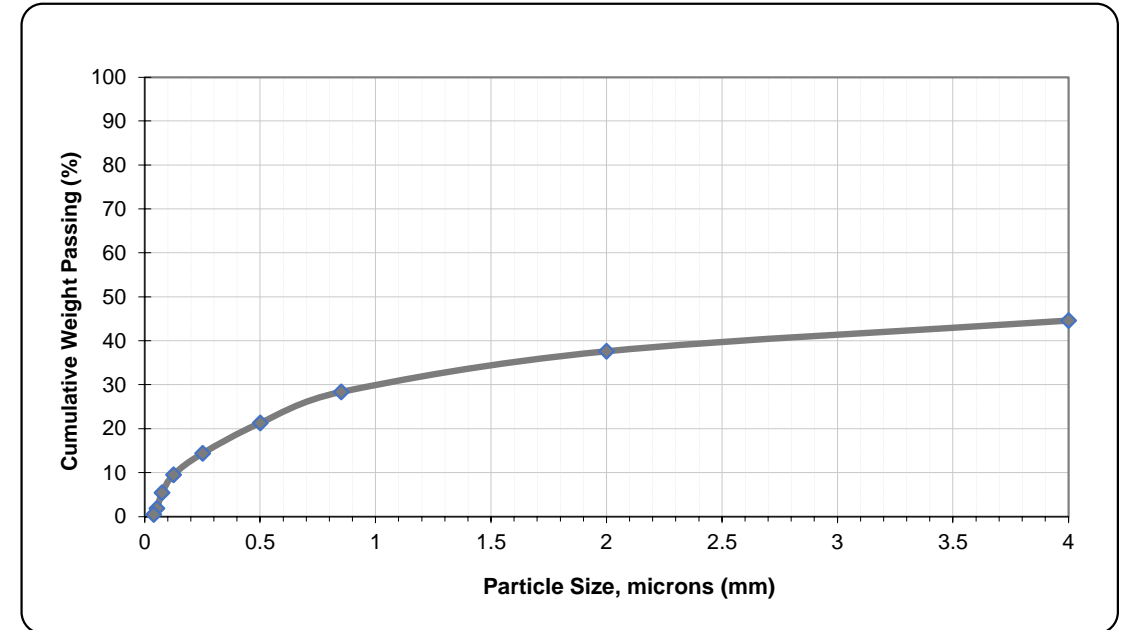


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

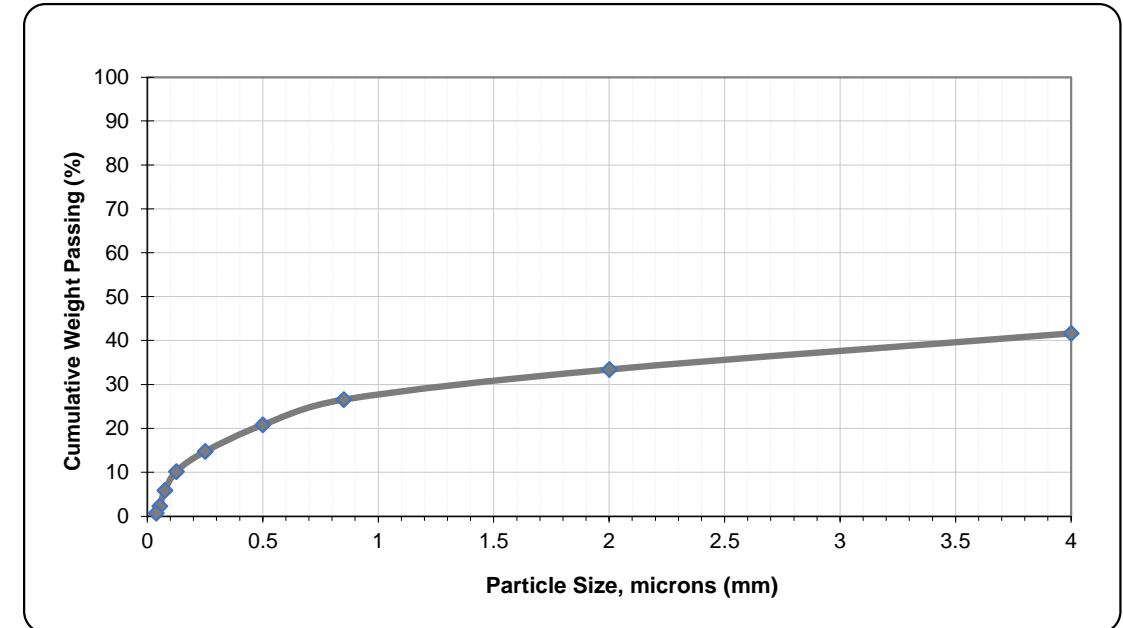


PAGE: 14 of 15
 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-3: Sample ID: (87) 009587							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	137.5	55.4	55.4	44.6
9	10	2.000	0.079	17.32	7.0	62.4	37.6
20	20	0.850	0.0331	22.96	9.2	71.6	28.4
35	40	0.500	0.0197	17.55	7.1	78.7	21.3
60	60	0.250	0.0098	17.15	6.9	85.6	14.4
115	120	0.125	0.0049	12.05	4.9	90.5	9.5
200	200	0.075	0.0029	10.20	4.1	94.6	5.4
270	270	0.053	0.0021	8.75	3.5	98.1	1.9
400	400	0.038	0.0015	3.55	1.4	99.5	0.5
<400.000	400 (Pan)	<0.04	<0.002	1.20	0.5	100.0	0.0
Wt. of sample used: 250.0 g				248.2	100.0		



HC-4: Sample ID: (94) 009594							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	64.84	58.4	58.4	41.6
9	10	2.000	0.079	9.09	8.2	66.5	33.5
20	20	0.850	0.0331	7.62	6.9	73.4	26.6
35	40	0.500	0.0197	6.45	5.8	79.2	20.8
60	60	0.250	0.0098	6.70	6.0	85.2	14.8
115	120	0.125	0.0049	5.05	4.5	89.8	10.2
200	200	0.075	0.0029	4.85	4.4	94.1	5.9
270	270	0.053	0.0021	3.95	3.6	97.7	2.3
400	400	0.038	0.0015	1.80	1.6	99.3	0.7
<400.000	400 (Pan)	<0.04	<0.002	0.75	0.7	100.0	0.0
Wt. of sample used: 112.0 g				111.1	100.0		

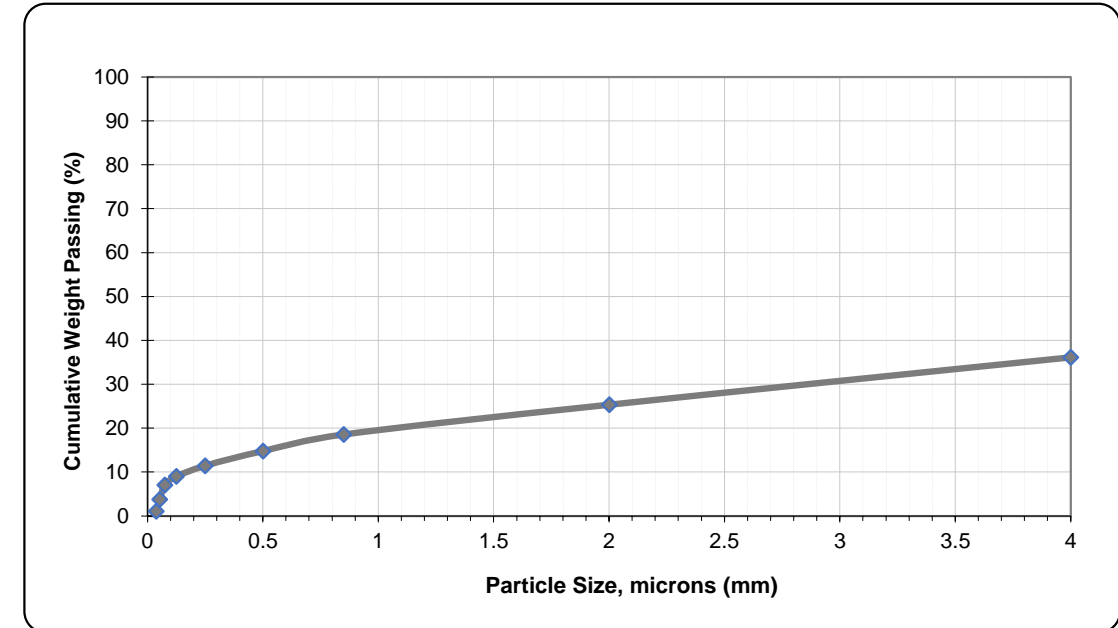


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

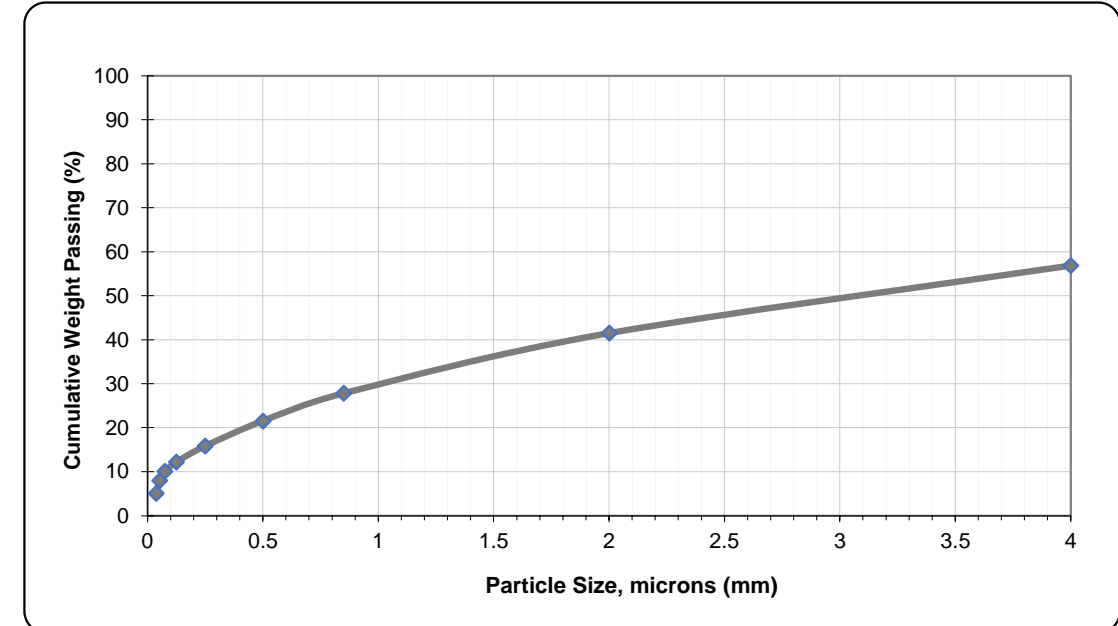


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-5: Sample ID: (108) 009608							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	158.82	63.8	63.8	36.2
9	10	2.000	0.079	26.88	10.8	74.6	25.4
20	20	0.850	0.0331	16.90	6.8	81.4	18.6
35	40	0.500	0.0197	9.30	3.7	85.2	14.8
60	60	0.250	0.0098	8.35	3.4	88.5	11.5
115	120	0.125	0.0049	6.10	2.5	91.0	9.0
200	200	0.075	0.0029	4.85	1.9	92.9	7.1
270	270	0.053	0.0021	8.20	3.3	96.2	3.8
400	400	0.038	0.0015	6.65	2.7	98.9	1.1
<400.000	400 (Pan)	<0.04	<0.002	2.75	1.1	100.0	0.0
Wt. of sample used: 250.0 g				248.8	100.0		



HC-6: Sample ID: (126) 009626							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	107.56	43.1	43.1	56.9
9	10	2.000	0.079	38.46	15.4	58.5	41.5
20	20	0.850	0.0331	34.13	13.7	72.2	27.8
35	40	0.500	0.0197	15.65	6.3	78.4	21.6
60	60	0.250	0.0098	14.25	5.7	84.2	15.8
115	120	0.125	0.0049	9.10	3.6	87.8	12.2
200	200	0.075	0.0029	5.25	2.1	89.9	10.1
270	270	0.053	0.0021	5.30	2.1	92.0	8.0
400	400	0.038	0.0015	7.15	2.9	94.9	5.1
<400.000	400 (Pan)	<0.04	<0.002	12.75	5.1	100.0	0.0
Wt. of sample used: 250.10 g				249.6	100.0		

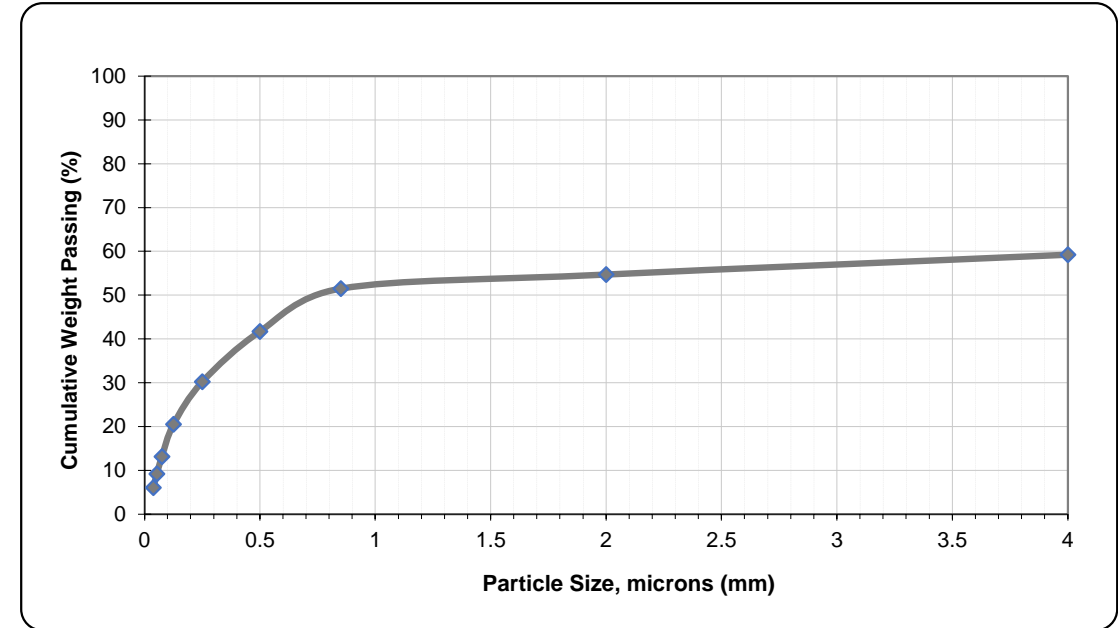


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

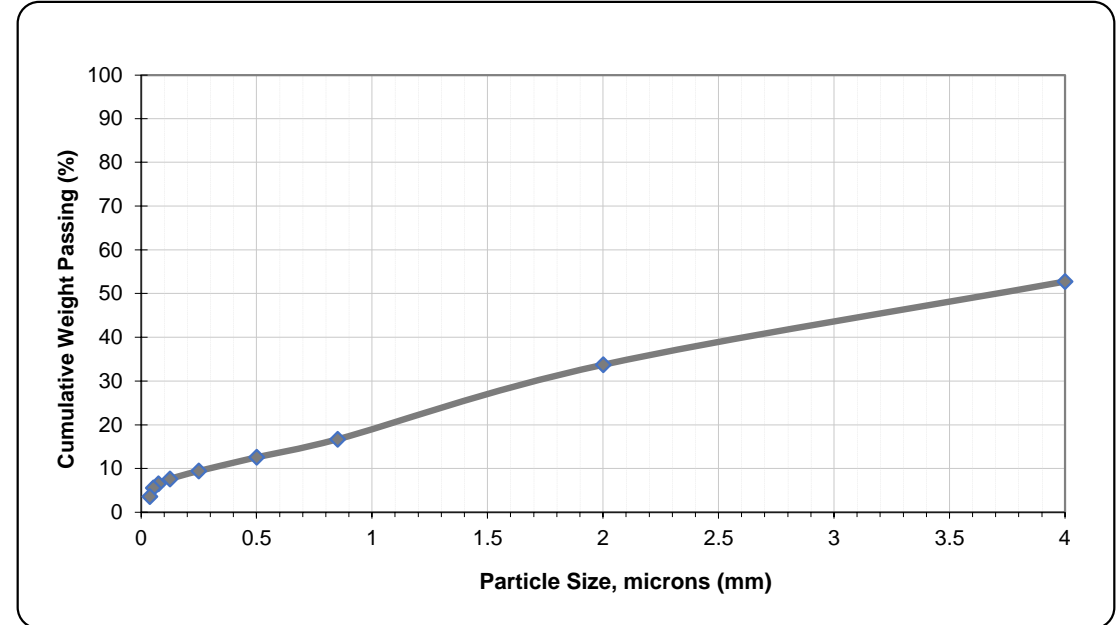


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-7: Sample ID: (168) 009668							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	101.42	40.8	40.8	59.2
9	10	2.000	0.079	11.23	4.5	45.3	54.7
20	20	0.850	0.0331	8.00	3.2	48.5	51.5
35	40	0.500	0.0197	24.30	9.8	58.2	41.8
60	60	0.250	0.0098	28.65	11.5	69.8	30.2
115	120	0.125	0.0049	24.25	9.7	79.5	20.5
200	200	0.075	0.0029	18.30	7.4	86.9	13.1
270	270	0.053	0.0021	9.75	3.9	90.8	9.2
400	400	0.038	0.0015	7.80	3.1	93.9	6.1
<400.000	400 (Pan)	<0.04	<0.002	15.15	6.1	100.0	0.0
Wt. of sample used: 250.0 g				248.9	100.0		



HC-8: Sample ID: (188) 009688							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	117.62	47.2	47.2	52.8
9	10	2.000	0.079	47.36	19.0	66.2	33.8
20	20	0.850	0.0331	42.52	17.1	83.3	16.7
35	40	0.500	0.0197	10.25	4.1	87.4	12.6
60	60	0.250	0.0098	7.85	3.2	90.5	9.5
115	120	0.125	0.0049	4.50	1.8	92.4	7.6
200	200	0.075	0.0029	2.80	1.1	93.5	6.5
270	270	0.053	0.0021	2.40	1.0	94.4	5.6
400	400	0.038	0.0015	4.90	2.0	96.4	3.6
<400.000	400 (Pan)	<0.04	<0.002	8.95	3.6	100.0	0.0
Wt. of sample used: 250.0 g				249.2	100.0		

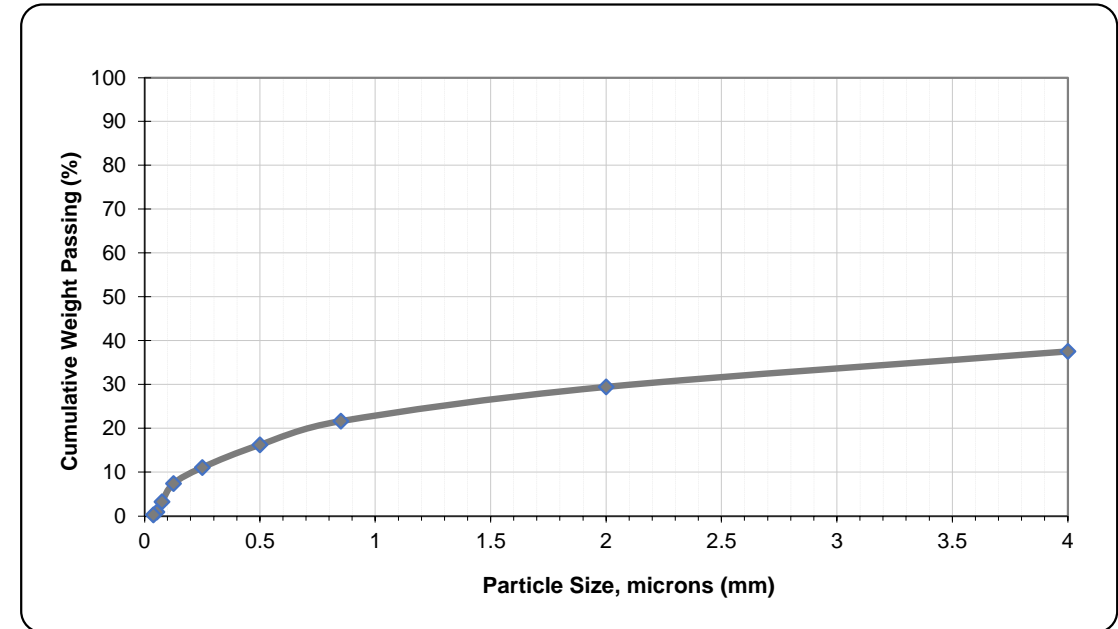


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

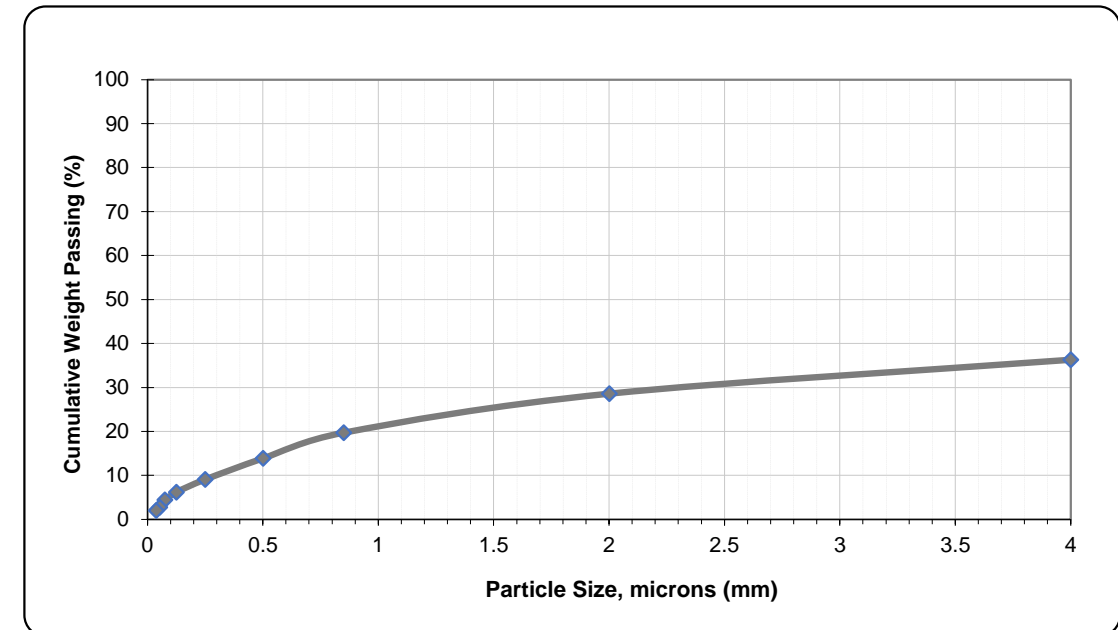


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-9: Sample ID: (219) A00356169							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	155.52	62.4	62.4	37.6
9	10	2.000	0.079	20.27	8.1	70.5	29.5
20	20	0.850	0.0331	19.41	7.8	78.3	21.7
35	40	0.500	0.0197	13.50	5.4	83.7	16.3
60	60	0.250	0.0098	12.85	5.2	88.9	11.1
115	120	0.125	0.0049	9.10	3.7	92.6	7.4
200	200	0.075	0.0029	10.50	4.2	96.8	3.2
270	270	0.053	0.0021	5.85	2.3	99.1	0.9
400	400	0.038	0.0015	1.55	0.6	99.7	0.3
<400.000	400 (Pan)	<0.04	<0.002	0.65	0.3	100.0	0.0
Wt. of sample used: 250.0 g				249.2	37.6		



HC-10: Sample ID: (252) 009702							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
5	5	4.000	0.157	156.3	63.7	63.7	36.3
9	10	2.000	0.079	18.97	7.7	71.4	28.6
20	20	0.850	0.0331	21.69	8.8	80.2	19.8
35	40	0.500	0.0197	14.40	5.9	86.1	13.9
60	60	0.250	0.0098	11.80	4.8	90.9	9.1
115	120	0.125	0.0049	7.10	2.9	93.8	6.2
200	200	0.075	0.0029	4.25	1.7	95.5	4.5
270	270	0.053	0.0021	4.05	1.6	97.2	2.8
400	400	0.038	0.0015	1.85	0.8	97.9	2.1
<400.000	400 (Pan)	<0.04	<0.002	5.10	2.1	100.0	0.0
Wt. of sample used: 250.0 g				245.5	100.0		

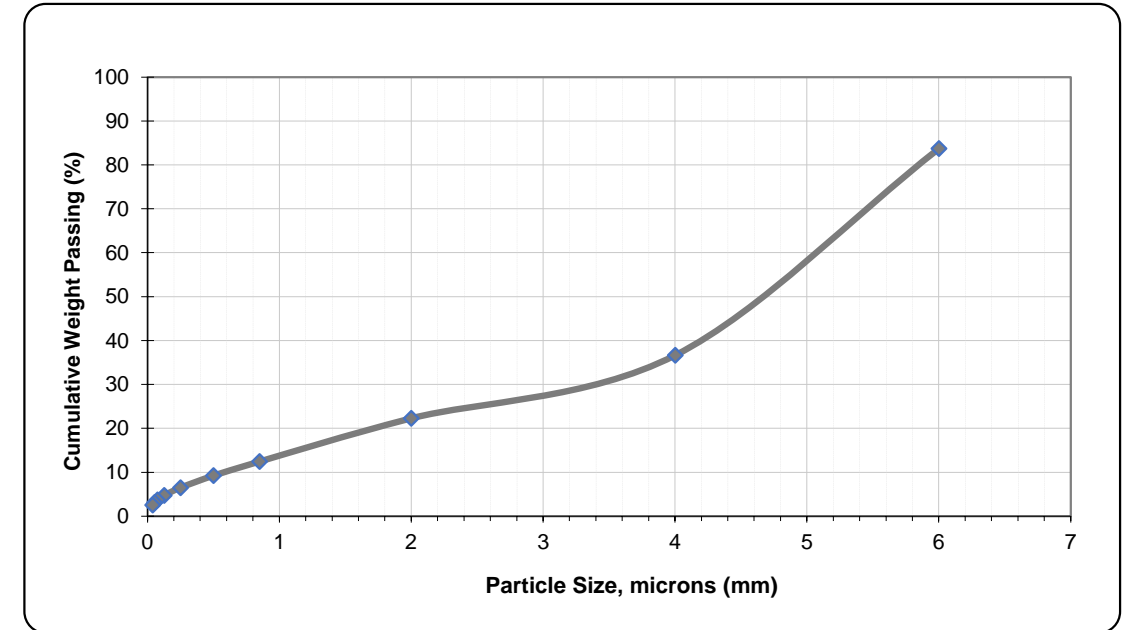


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

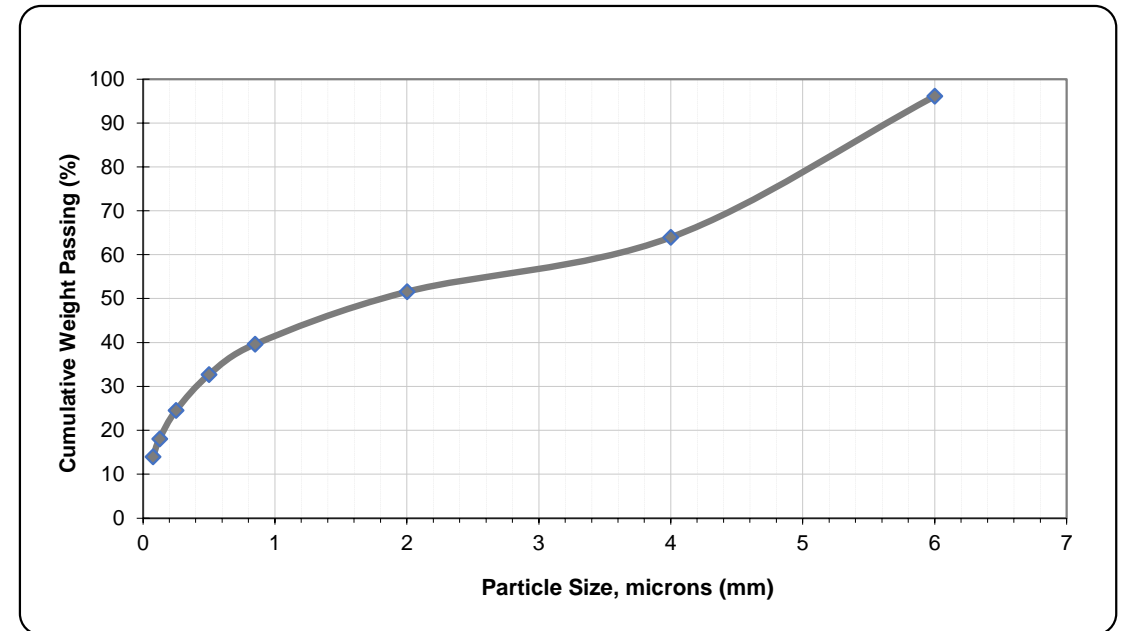


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-12: Sample ID: W-119							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	24.40	16.3	16.3	83.7
5	5	4.000	0.157	70.50	47.0	63.3	36.7
9	10	2.000	0.079	21.60	14.4	77.7	22.3
20	20	0.850	0.0331	14.70	9.8	87.5	12.5
35	40	0.500	0.0197	4.85	3.2	90.7	9.3
60	60	0.250	0.0098	4.10	2.7	93.5	6.5
115	120	0.125	0.0049	2.70	1.8	95.3	4.7
200	200	0.075	0.0029	1.45	1.0	96.2	3.8
270	270	0.053	0.0021	0.90	0.6	96.8	3.2
400	400	0.038	0.0015	0.85	0.6	97.4	2.6
<400.000	400 (Pan)	<0.038	<0.002	3.90	2.6	100.0	0.0
Wt. of sample used:				150.0	100.0		



HC-13: Sample ID: W-199							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	6.00	3.9	3.9	96.1
5	5	4.000	0.157	49.90	32.1	36.0	64.0
9	10	2.000	0.079	19.25	12.4	48.4	51.6
20	20	0.850	0.0331	18.50	11.9	60.3	39.7
35	40	0.500	0.0197	10.80	7.0	67.3	32.7
60	60	0.250	0.0098	12.65	8.1	75.4	24.6
115	120	0.125	0.0049	10.05	6.5	81.9	18.1
200	200	0.075	0.0029	6.40	4.1	86.0	14.0
<200.000	200 (Pan)	<0.075	<0.003	21.70	14.0	100.0	0.0
Wt. of sample used:				155.3	100.0		

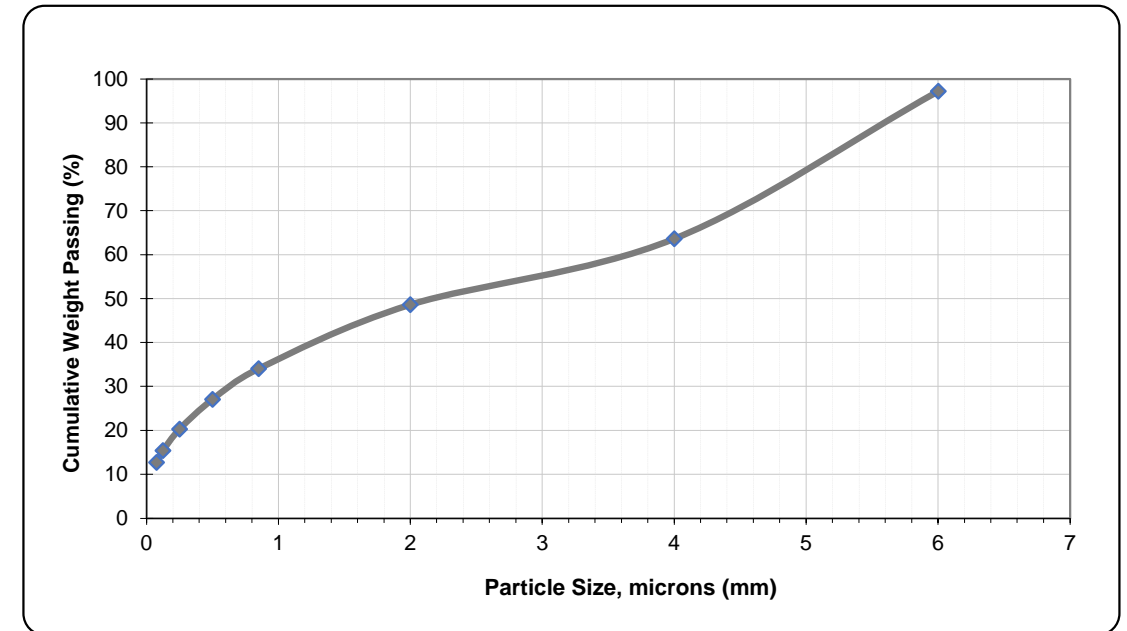


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

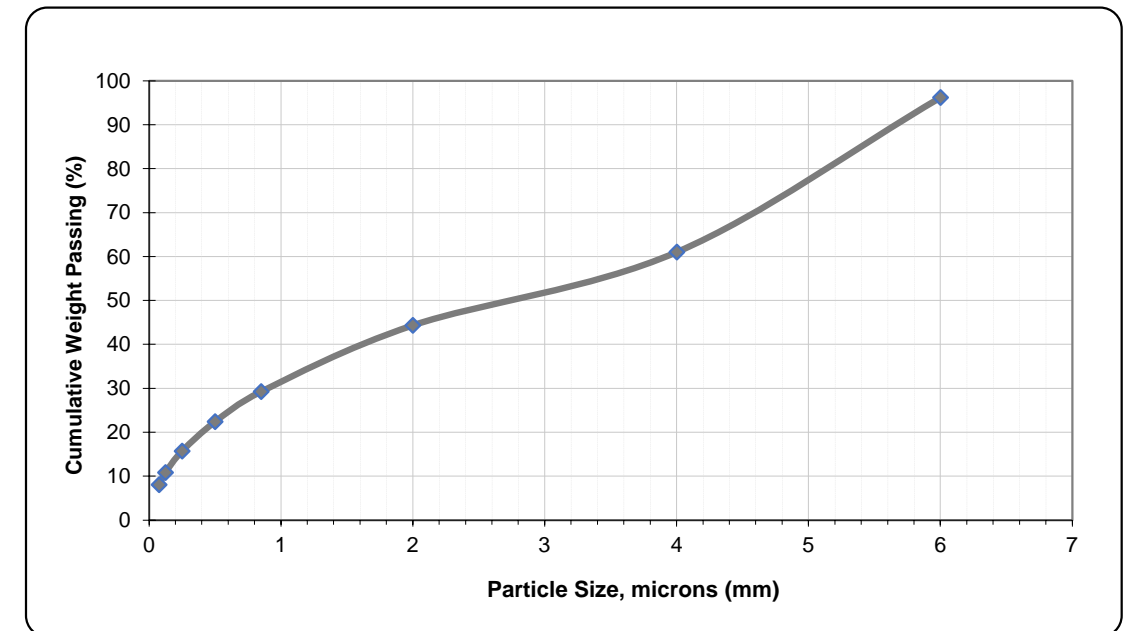


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-14: Sample ID: W-098							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	4.20	2.7	2.7	97.3
5	5	4.000	0.157	51.30	33.6	36.3	63.7
9	10	2.000	0.079	23.00	15.1	51.4	48.6
20	20	0.850	0.0331	22.25	14.6	66.0	34.0
35	40	0.500	0.0197	10.60	6.9	72.9	27.1
60	60	0.250	0.0098	10.40	6.8	79.7	20.3
115	120	0.125	0.0049	7.45	4.9	84.6	15.4
200	200	0.075	0.0029	4.10	2.7	87.3	12.7
<200.000	200 (Pan)	<0.075	<0.003	19.45	12.7	100.0	0.0
Wt. of sample used:				152.8	100.0		



HC-15: Sample ID: M112153							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	5.70	3.7	3.7	96.3
5	5	4.000	0.157	54.00	35.3	39.0	61.0
9	10	2.000	0.079	25.50	16.7	55.6	44.4
20	20	0.850	0.0331	23.10	15.1	70.7	29.3
35	40	0.500	0.0197	10.50	6.9	77.6	22.4
60	60	0.250	0.0098	10.25	6.7	84.3	15.7
115	120	0.125	0.0049	7.45	4.9	89.1	10.9
200	200	0.075	0.0029	4.25	2.8	91.9	8.1
<200.000	200 (Pan)	<0.075	<0.003	12.40	8.1	100.0	0.0
Wt. of sample used:				153.2	100.0		

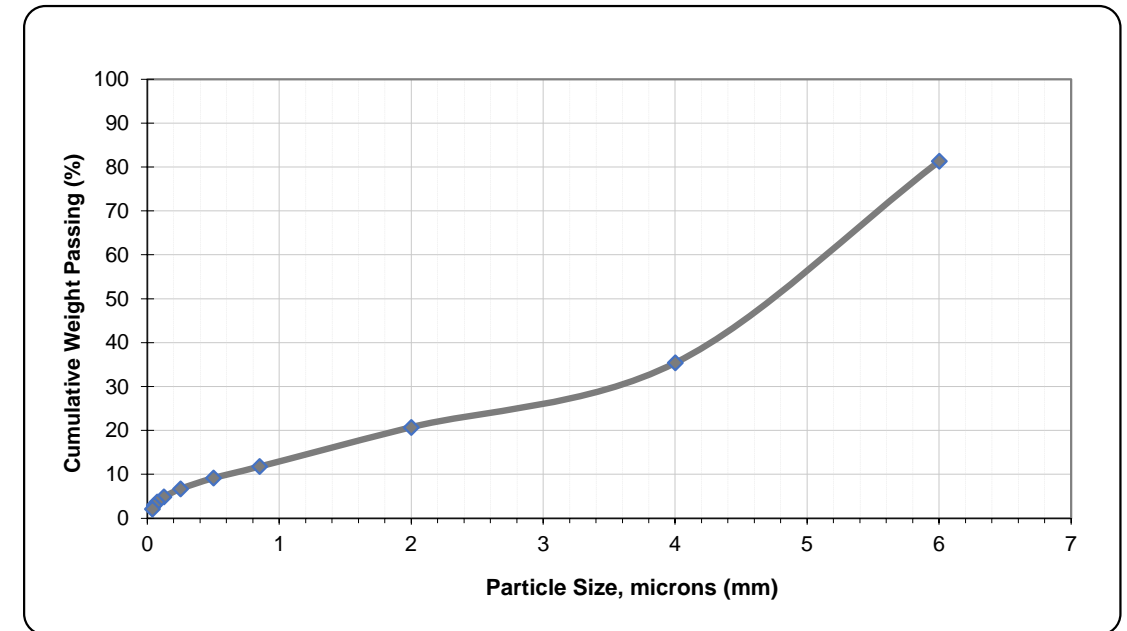


CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS

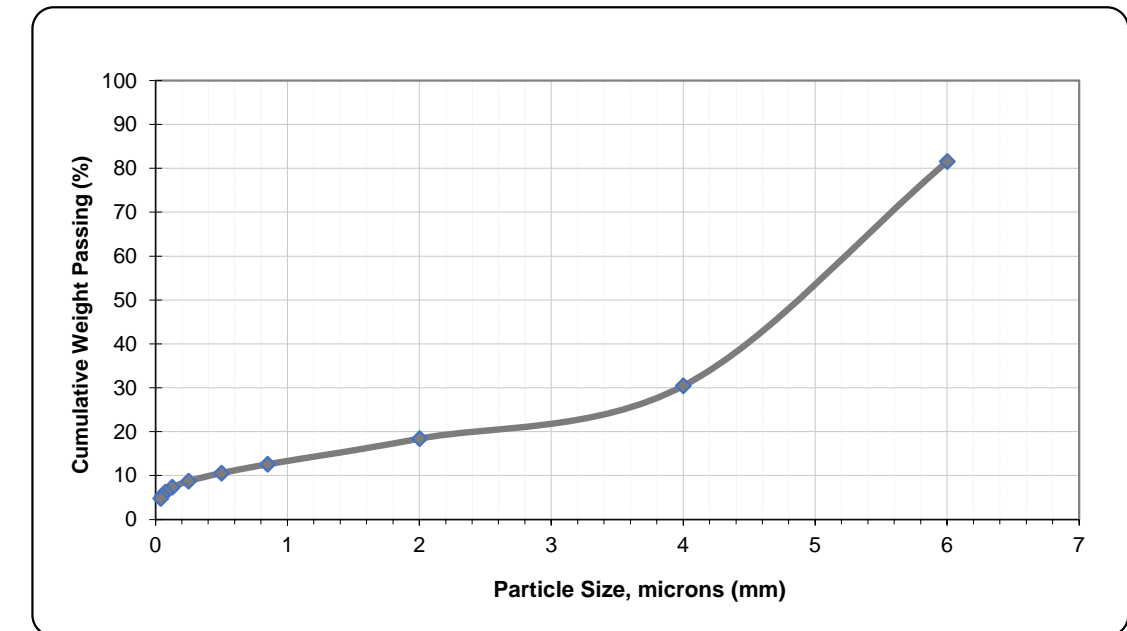


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 GLOBAL PROJECT NO: 1956 (B1)
 CLIENT: First Mining Gold Corporation
 PROJECT NAME: Springpole Project Geochem
 PROJECT NO: 2019-12

HC-16: Sample ID: W-109							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	27.95	18.6	18.6	81.4
5	5	4.000	0.157	68.90	45.9	64.6	35.4
9	10	2.000	0.079	22.00	14.7	79.2	20.8
20	20	0.850	0.0331	13.40	8.9	88.2	11.8
35	40	0.500	0.0197	3.95	2.6	90.8	9.2
60	60	0.250	0.0098	3.70	2.5	93.3	6.7
115	120	0.125	0.0049	2.70	1.8	95.1	4.9
200	200	0.075	0.0029	1.75	1.2	96.2	3.8
270	270	0.053	0.0021	1.15	0.8	97.0	3.0
400	400	0.038	0.0015	1.25	0.8	97.8	2.2
<400.000	400 (Pan)	<0.038	<0.002	3.25	2.2	100.0	0.0
Wt. of sample used:				150.0	100.0		



HC-17: Sample ID: W-105							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	27.60	18.4	18.4	81.6
5	5	4.000	0.157	76.70	51.2	69.6	30.4
9	10	2.000	0.079	18.00	12.0	81.6	18.4
20	20	0.850	0.0331	8.75	5.8	87.4	12.6
35	40	0.500	0.0197	3.00	2.0	89.4	10.6
60	60	0.250	0.0098	2.75	1.8	91.2	8.8
115	120	0.125	0.0049	2.15	1.4	92.7	7.3
200	200	0.075	0.0029	1.55	1.0	93.7	6.3
270	270	0.053	0.0021	1.10	0.7	94.4	5.6
400	400	0.038	0.0015	1.15	0.8	95.2	4.8
<400.000	400 (Pan)	<0.038	<0.002	7.20	4.8	100.0	0.0
Wt. of sample used:				150.0	100.0		



CERTIFICATE OF ANALYSIS - PARTICLE SIZE ANALYSIS RESULTS



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 GLOBAL PROJECT NO: 1956 (B8, B9, B13, B22)
 CLIENT: WSP E&I Canada Ltd.
 PROJECT NAME: Springpole Project Geochem
 CLIENT PROJECT NO: 2019-12 (HC-12 to HC-18) | ONS2104 (HC-19 to HC-20)

HC-18: Sample ID: Production Composite Flotation Tailings							
Tyler Mesh	U.S Mesh	Opening (mm)	Screen (inches)	Mass (g)	% Retained		% Passing
					Interval	Cumulative	
		6.000	0.250	0.00	0.0	0.0	100.0
5	5	4.000	0.157	0.00	0.0	0.0	100.0
9	10	2.000	0.079	0.00	0.0	0.0	100.0
20	20	0.850	0.0331	0.30	0.1	0.1	99.9
35	40	0.500	0.0197	11.45	4.6	4.7	95.3
60	60	0.250	0.0098	16.75	6.7	11.4	88.6
115	120	0.125	0.0049	40.40	16.2	27.6	72.4
200	200	0.075	0.0029	65.40	26.2	53.7	46.3
270	270	0.053	0.0021	39.50	15.8	69.5	30.5
400	400	0.038	0.0015	30.05	12.0	81.6	18.4
<400	<400 (Pan)	<0.038	<0.0015	46.10	18.4	100.0	0.0
Wt. of sample used:				250.0	100.0		

