

APPENDIX E.5

WASTE ROCK GEOCHEMISTRY REPORTS AND STATUS UPDATE ON WASTE ROCK GEOCHEMISTRY PROGRAM

Geochemical Characterization Program - Implementation Schedule Update

		Refer to Report Section ¹	Description	Status
1.0	DRILLING PROGRAM			
1.01	Execute Drilling Program	3.2.2, 3.3	2,000 - 3,000 m drill program utilizing rotary core rig focused on footwall and hanging wall of the deposit.	Program completed in Q3 2012.
1.02	Core Logging	3.3	Log and sample core in accordance to established methods.	Program completed in Q3 2012.
1.03	Field Scale Geological Interpretation	3.3	Utilizing new information obtained from drill logs, revise geological maps and cross-sections of the footwall and hanging wall of the deposit.	Results reported in 2013 and 2014 updates to the Waste Rock Management Plan.
2.0	PREDICTIVE GEOCHEMICAL SAMPLING AND TESTING PROGRAMS			
2.01	Sampling	4.1, 4.5	Systematic sampling of 2012 drill core of footwall and hanging wall based on established methods.	Program completed in Q3 2012.
2.02	Static Testing	4.2, 4.5	Static testing of select 2012 drill cores using established analytical methodologies.	Program completed in Q4 2012.
2.03	Mineralogy	4.3, 4.5	Detailed mineralogical characterization by R-XRD, optical microscopy, and SEM.	First phase of program completed in Q1 2013. Work still ongoing.
2.04	PAG Segregation	4.5	Ongoing synthesis of available data to assess importance and ability to segregate PAG materials.	Ongoing.
2.05	Kinetic Testing - ongoing work	4.4	Continuation of kinetic test initiated in May 2011.	Select humidity cells continue to run to present time.
2.06	Kinetic Testing - from 2012 drill core	4.4, 4.5	Continued expansion of laboratory kinetic test work program,	New humidity cells selected and started in Q4 2014.
			Upgrade and ongoing sampling of lysimeters, monitoring wells, and seepage.	Program currently not active. Work to recommence once there is adequate development of waste rock storage area.
			Assess feasibility of field waste rock test piles.	Ongoing.
			If feasible, construct and sample test piles.	To be determined.
3.0	WATER QUALITY PREDICTIONS - WASTE ROCK AND PIT			
3.01	Hydrology	5.4	Collect additional hydrological data.	Hydrology station established near waste rock storage area to collect site specific data for the purpose of future water quality modeling.
3.02	Source Terms	5.4	Better quantify source terms for pit and waste rock models.	Ongoing.
3.03	Proportion of PAG	5.4	Better quantify proportion of PAG in waste rock pile and pit walls.	Ongoing.
3.04	ARD On-Set Time	5.4	Improve understanding of ARD on-set times.	Ongoing.
3.05	Surface Areas and Permafrost	5.4	Improve understanding of surface area scaling values, active zone thickness, and water infiltration into waste rock pile. Conduct thermal modeling of waste rock pile.	Work to commence once there is adequate development of waste rock storage area.
3.06	Mineralogy	5.4	Incorporate processes of metal sorption and solid phase precipitation behaviour.	Ongoing.
4.0	REPORTING UPDATES			
4.01	Interim Waste Rock Geochemical Characterization Report	7.2	Annual report updates that present latest results of geochemical characterization program including waste rock geochemistry, waste rock and pit water quality modeling, and related studies. Reports to be provided March 31 of each year.	Technical updates provided in QIA/NWB Annual Reports.
4.02	Waste Rock Water Quality Modeling Report	7.2		Planned for 2016-2017 once there is sufficient data available.
4.03	Open Pit Water Quality Modeling Report	7.2		Planned for 2016-2017 once there is sufficient data available.

Note: Geological and geochemical testing program report originally presented in Appendix 3 of the April 2014 revision to the Life-of-Mine Waste Rock Management Plan.



MEMO

To	Jim Millard (Baffinland)	File no	TC123908
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Date	20 March 2015		

**Subject Mary River Project
Review of 2014 Deposit 1 Mine Waste Rock ARD Testing Results**

1.0 INTRODUCTION

Baffinland Iron Mines Corporation (Baffinland) began producing iron ore at their Baffin Island Mary River Project (the Project) in September 2014. Amec Foster Wheeler Environment & Infrastructure, a division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler) has been retained by Baffinland to provide support in metal leaching/acid rock drainage (ML/ARD) characterization of waste rock for the Project. The objective of this memorandum is to provide a data review of ARD characterization results for mine waste rock produced during mining at Mary River Deposit 1 in 2014.

2.0 BACKGROUND

Waste rock for the overall Mary River project has been previously characterized for ML/ARD with documentation provided in AMEC (2014a). The characterization for the overall project was subsequently evaluated in the context of a revised initial five year mine plan established based on a lower iron ore production rate (AMEC 2014b). This work indicated that the Mary River Deposit 1 waste rock is characterized as having low neutralization potential (NP) and generally low acid potential (AP) based on a low sulphide content. It has been previously estimated that a total sulphur content of >0.25% was a strong predictor of potentially acid generating (PAG) material on the basis of a neutralization potential ratio (NP/AP) of <2.

Total sulphur has been identified as a good predictor of sulphide content for these materials. Subject to an on-going study, the modified Sobek NP has been identified as a more suitable estimate of NP than carbonate NP (CarbNP) due to the presence of iron carbonates in some materials and the generally low sulphide content and corresponding low sulphide oxidation rates in these materials.

Baffinland has implemented a waste rock screening program for PAG rock based on analysis of blast hole cuttings and on-site laboratory analysis of total sulphur. Total sulphur provides an estimate of the maximum potential acidity (MPA) of a sample. Total carbon is also determined in the analysis which can be used to estimate the carbonate content and CarbNP of the sample. However, as identified above CarbNP is not considered a good predictor of effective NP in the waste rock. A threshold of 0.2% total sulphur in blast hole cuttings has been set by Baffinland as an indicator of PAG rock. The on-site laboratory is operated by SGS. Selected samples have also

been analyzed for modified Sobek NP for periodic checks on the NP/MPA ratio of the tested material.

3.0 DATA REVIEW

Available 2014 blast hole cutting data for Deposit 1 waste rock provided by Baffinland is attached in Table 1. Based on review of the data the following is noted:

- A total of 161 blast hole cuttings samples of waste rock were analysed for total sulphur and total carbon;
- Only two of the samples exceeded a total sulphur concentration of 0.2% which has been identified as a strong indicator of potentially acid generating (PAG) waste rock;
- Total carbon content varies and has not been applied as an estimate of neutralization potential due to the presence of iron carbonates in some materials and the previous identification of the modified Sobek NP as a better estimate of NP in these low sulphide materials;
- Overall, the low sulphur content is consistent with previous studies confirming the low sulphide nature of the deposit;
- Selected samples were additionally analysed for modified Sobek NP in order to determine the PAG character on the basis of NP/MPA <2;
- A subset of the samples selected for modified Sobek NP have a calculated NP/MPA <2 including one sample with a sulphur content of 0.02%; and,
- These check samples are potentially identifying materials that do not fit well with the defined PAG threshold of 0.25% total sulphur.

Possibilities to explain the apparent inconsistency with the previously defined PAG sulphur threshold include:

- The current modified Sobek NP testing could be under predicting NP in comparison to previous studies;
- Some materials encountered in early operations that occur topographically higher in the pit could be geologically distinct and not well represented in the existing data set which was predominantly based on testing of samples from deeper (topographically lower) volumes of the deposit; or,
- The current sampling preferentially represents waste in closer proximity to ore than previous sampling, resulting in some iron formation zones being defined as waste.

4.0 REFERENCES

AMEC, 2014a. Mine Rock ML/ARD Characterization Report – Deposit 1, Mary River Project.

AMEC, 2014b. Mary River Deposit 1, 5-Year Pit ML/ARD Characterization.

Attachment:

Table 1 - Mary River Deposit 1 Open Pit Waste Rock Blast Hole Cuttings Results

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ATTACHMENT

TABLE 1:
Mary River Deposit 1 Open Pit Waste Rock Blast Hole Cuttings Results

Sample Description and Identification										ABA Results							
YEAR	Blast ID	Hole ID	Location	Easting	Northing	Elevation (masl)	Hole Depth (m)	Lithology	Class	Fizz Rating	C (%)	S (%)	NP (tCaCO ₃ /kt)	CarbNP (tCaCO ₃ /kt)	MPA (tCaCO ₃ /kt)	CarbNPR (CarbNP/MPA)	NPR (NP/MPA)
2014	N675001	45	PIT	563384.4	7914811.9	675.6	2.5	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675001	48	PIT	563381.2	7914812.3	675.9	2.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N675001	49	PIT	563378.7	7914809.3	676.7	2.5	Schist	WASTE	-	0.01	0.01	-	0.8	0.31	2.7	-
2014	N675001	53	PIT	563380.4	7914815.5	675.9	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675001	76	PIT	563374.5	7914813.1	677.0	2.5	Schist	WASTE	-	0.09	< 0.01	-	7.5	0.31	24	-
2014	N675001	201	PIT	563382.4	7914856.4	676.1	2.5	Schist	WASTE	1	n.r.	0.11	10	-	3.44	-	2.9
2014	N675001	208	PIT	563366.7	7914842.5	675.8	2.5	Schist	WASTE	1	0.05	0.89	7	4.2	27.8	0.1	0.25
2014	N675001	209	PIT	563369.3	7914845.4	675.6	2.5	Schist	WASTE	1	0.03	1.03	7	2.5	32.2	0.1	0.22
2014	N675002	1003	PIT	563361.6	7914821.7	675.0	2.5	Schist	WASTE	1	0.02	0.06	2	1.7	1.88	0.9	1.1
2014	N675003	75	PIT	563340.3	7914788.7	681.9	6.9	Schist	WASTE	1	0.02	0.06	2	1.7	1.88	0.9	1.1
2014	N675004	23	PIT	563328.7	7914766.4	679.6	4.6	Schist	WASTE	-	0.04	0.03	-	3.3	0.94	3.6	-
2014	N675004	57	PIT	563327.6	7914760.1	679.4	4.4	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675004	58	PIT	563326.5	7914763.7	679.6	4.6	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675004	60	PIT	563324.5	7914770.9	680.0	5.0	Schist	WASTE	1	0.08	0.17	3	6.7	5.31	1.3	0.56
2014	N675004	139	PIT	563316.6	7914757.6	683.5	8.5	Schist	WASTE	-	0.06	0.02	-	5.0	0.63	8.0	-
2014	N675005	10	PIT	563161.2	7914597.4	679.7	4.7	Schist	WASTE	-	0.32	0.05	-	26.7	1.56	17	-
2014	N675005	38	PIT	563313.1	7914748.9	684.3	9.3	Schist	WASTE	-	0.10	0.03	-	8.3	0.94	8.9	-
2014	N675005	40	PIT	563311.5	7914755.6	683.6	8.6	Schist	WASTE	1	0.05	0.02	1	4.2	0.63	6.7	1.6
2014	N675005	41	PIT	563309.3	7914753.1	683.9	8.9	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675005	43	PIT	563311.2	7914746.0	684.9	9.9	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675005	44	PIT	563312.0	7914742.3	685.1	10.1	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675005	50	PIT	563317.3	7914720.9	678.8	3.8	Schist	WASTE	-	0.03	0.05	-	2.5	1.56	1.6	-
2014	N675005	71	PIT	563315.6	7914717.2	678.9	3.9	Schist	WASTE	-	0.04	0.11	-	3.3	3.44	1.0	-
2014	N675005	76	PIT	563310.5	7914736.2	685.4	10.4	Schist	WASTE	-	0.13	0.02	-	10.8	0.63	17	-
2014	N675005	77	PIT	563309.2	7914739.4	685.4	10.4	Schist	WASTE	-	0.09	0.02	-	7.5	0.63	12	-
2014	N675005	78	PIT	563308.9	7914744.1	685.4	10.4	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675005	80	PIT	563307.1	7914750.6	684.5	9.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675005	82	PIT	563305.9	7914744.7	685.4	10.4	Schist	WASTE	-	0.11	0.01	-	9.2	0.31	29	-
2014	N675005	83	PIT	563306.2	7914740.8	685.4	10.4	Schist	WASTE	-	0.10	0.03	-	8.3	0.94	8.9	-
2014	N675005	84	PIT	563307.2	7914737.2	685.4	10.4	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675005	85	PIT	563308.3	7914733.8	685.4	10.4	Schist	WASTE	-	0.05	0.02	-	4.2	0.63	6.7	-
2014	N675005	87	PIT	563310.8	7914725.8	681.3	6.3	Schist	WASTE	-	0.05	0.03	-	4.2	0.94	4.4	-
2014	N675005	117	PIT	563305.2	7914734.6	685.4	10.4	Schist	WASTE	-	0.09	0.02	-	7.5	0.63	12	-
2014	N675006	17	PIT	563159.3	7914599.5	679.0	4.0	Schist	WASTE	1	0.10	0.03	4	8.3	0.94	8.9	4.3
2014	N675007	13	PIT	563171.8	7914581.5	683.0	8.0	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	21	PIT	563154.8	7914596.0	679.6	4.6	Schist	WASTE	-	0.23	0.02	-	19.2	0.63	31	-
2014	N675007	22	PIT	563152.8	7914597.9	679.1	4.1	Schist	WASTE	1	0.38	0.03	4	31.7	0.94	34	4.3
2014	N675007	23	PIT	563150.6	7914599.8	678.4	3.4	Schist	WASTE	-	0.07	0.02	-	5.8	0.63	9.3	-
2014	N675007	24	PIT	563148.6	7914601.5	677.9	2.9	Schist	WASTE	-	0.07	0.02	-	5.8	0.63	9.3	-
2014	N675007	25	PIT	563146.5	7914603.4	677.1	2.5	Schist	WASTE	-	0.08	0.13	-	6.7	4.06	1.6	-
2014	N675007	26	PIT	563144.3	7914605.3	676.6	2.5	Schist	WASTE	-	0.02	0.01	-	1.7	0.31	5.3	-
2014	N675007	27	PIT	563142.2	7914607.1	676.0	2.5	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	28	PIT	563140.1	7914609.0	675.5	2.5	Schist	WASTE	-	0.03	0.02	-	2.5	0.63	4.0	-
2014	N675007	31	PIT	563137.7	7914606.0	675.8	2.5	Schist	WASTE	-	0.12	0.01	-	10.0	0.31	32	-
2014	N675007	32	PIT	563139.6	7914604.2	676.3	2.5	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675007	33	PIT	563141.8	7914602.4	676.8	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	34	PIT	563143.9	7914600.3	677.2	2.5	Schist	WASTE	-	0.06	0.1	-	5.0	3.13	1.6	-
2014	N675007	35	PIT	563146.1	7914598.7	677.6	2.6	Schist	WASTE	-	0.05	0.02	-	4.2	0.63	6.7	-
2014	N675007	36	PIT	563148.2	7914596.9	678.3	3.3	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	39	PIT	563319.1	7914715.9	679.1	4.1	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	64	PIT	563181.7	7914562.9	684.1	9.1	Schist	WASTE	-	0.05	0.02	-	4.2	0.63	6.7	-
2014	N675007	65	PIT	563179.6	7914564.7	684.0	9.0	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	77	PIT	563153.9	7914586.8	680.6	5.6	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	78	PIT	563317.3	7914720.9	678.8	3.8	Schist	WASTE	-	0.01	< 0.01	-	0.8	0.31	2.7	-
2014	N675007	79	PIT	563150.0	7914590.5	679.3	4.3	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-

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2014	N675007	80	PIT	563147.7	7914592.3	678.9	3.9	Schist	WASTE	-	0.12	0.02	-	10.0	0.63	16	-
2014	N675007	81	PIT	563313.9	7914735.1	685.4	10.4	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675007	82	PIT	563143.6	7914595.9	677.4	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	83	PIT	563141.3	7914597.6	677.1	2.5	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	84	PIT	563139.1	7914599.8	676.7	2.5	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	85	PIT	563137.1	7914601.4	676.5	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	86	PIT	563135.1	7914603.3	675.8	2.5	Schist	WASTE	-	0.07	0.02	-	5.8	0.63	9.3	-
2014	N675007	89	PIT	563132.5	7914600.3	675.6	2.5	Schist	WASTE	-	0.01	< 0.01	-	0.8	0.31	2.7	-
2014	N675007	90	PIT	563134.5	7914598.4	676.3	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	91	PIT	563136.8	7914596.7	676.6	2.5	Schist	WASTE	-	0.02	0.01	-	1.7	0.31	5.3	-
2014	N675007	92	PIT	563138.9	7914594.8	676.9	2.5	Schist	WASTE	-	0.07	0.02	-	5.8	0.63	9.3	-
2014	N675007	93	PIT	563141.3	7914592.9	677.5	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	94	PIT	563143.2	7914591.1	678.1	3.1	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	95	PIT	563145.2	7914589.4	678.8	3.8	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	96	PIT	563147.6	7914587.5	679.4	4.4	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	97	PIT	563149.6	7914585.7	680.1	5.1	Schist	WASTE	-	0.05	< 0.01	-	4.2	0.31	13	-
2014	N675007	98	PIT	563319.5	7914712.5	679.3	4.3	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	135	PIT	563316.0	7914727.5	680.5	5.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N675007	136	PIT	563147.6	7914583.4	679.9	4.9	Schist	WASTE	-	0.02	0.01	-	1.7	0.31	5.3	-
2014	N675007	139	PIT	563281.3	7914685.3	678.1	3.1	Schist	WASTE	-	0.11	0.01	-	9.2	0.31	29	-
2014	N675007	140	PIT	563139.3	7914590.5	677.3	2.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N675007	141	PIT	563136.9	7914592.5	676.7	2.5	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675007	142	PIT	563134.9	7914594.3	676.3	2.5	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	143	PIT	563132.9	7914596.3	675.9	2.5	Schist	WASTE	-	0.04	< 0.01	-	3.3	0.31	11	-
2014	N675007	144	PIT	563130.7	7914598.1	675.2	2.5	Schist	WASTE	-	0.15	0.01	-	12.5	0.31	40	-
2014	N675007	146	PIT	563128.2	7914595.3	675.3	2.5	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675007	147	PIT	563130.1	7914593.4	675.6	2.5	Schist	WASTE	-	0.02	0.01	-	1.7	0.31	5.3	-
2014	N675007	148	PIT	563132.5	7914591.5	676.2	2.5	Schist	WASTE	-	0.03	0.01	-	2.5	0.31	8.0	-
2014	N675007	149	PIT	563134.3	7914589.6	676.8	2.5	Schist	WASTE	-	0.03	< 0.01	-	2.5	0.31	8.0	-
2014	N675007	152	PIT	563140.9	7914584.3	678.2	3.2	Schist	WASTE	-	0.46	< 0.01	-	38.3	0.31	123	-
2014	N675007	153	PIT	563142.6	7914582.2	678.8	3.8	Schist	WASTE	-	0.03	0.02	-	2.5	0.63	4.0	-
2014	N675007	154	PIT	563314.3	7914733.3	685.2	10.2	Schist	WASTE	-	0.05	0.02	-	4.2	0.63	6.7	-
2014	N675007	155	PIT	563317.2	7914724.6	679.1	4.1	Schist	WASTE	-	0.03	0.02	-	2.5	0.63	4.0	-
2014	N675007	161	PIT	563159.8	7914567.5	682.6	7.6	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	191	PIT	563142.5	7914577.6	679.3	4.3	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	192	PIT	563140.4	7914579.5	678.6	3.6	Schist	WASTE	-	0.04	0.01	-	3.3	0.31	11	-
2014	N675007	193	PIT	563138.1	7914581.3	678.1	3.1	Schist	WASTE	-	0.22	0.01	-	18.3	0.31	59	-
2014	N675007	194	PIT	563136.1	7914582.9	677.4	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	195	PIT	563134.1	7914584.6	677.1	2.5	Schist	WASTE	-	0.05	0.02	-	4.2	0.63	6.7	-
2014	N675007	196	PIT	563131.7	7914586.7	676.5	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675007	197	PIT	563127.8	7914590.4	675.5	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	198	PIT	563127.8	7914590.2	675.6	2.5	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675007	199	PIT	563125.8	7914592.2	675.0	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675007	200	PIT	563124.9	7914587.4	675.3	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675007	201	PIT	563127.4	7914585.8	675.8	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675007	202	PIT	563129.3	7914583.9	676.2	2.5	Schist	WASTE	-	0.06	< 0.01	-	5.0	0.31	16	-
2014	N675007	203	PIT	563131.7	7914582.1	677.0	2.5	Schist	WASTE	-	0.01	< 0.01	-	0.8	0.31	2.7	-
2014	N675007	204	PIT	563133.6	7914580.1	677.4	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675007	205	PIT	563135.9	7914578.4	677.9	2.9	Schist	WASTE	-	0.07	0.02	-	5.8	0.63	9.3	-
2014	N675007	206	PIT	563137.8	7914576.6	678.3	3.3	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675007	207	PIT	563140.3	7914574.4	679.0	4.0	Schist	WASTE	-	0.02	0.02	-	1.7	0.63	2.7	-
2014	N675008	18	PIT	563163.4	7914607.3	679.2	2.5	Schist	WASTE	-	0.23	0.01	-	19.2	0.31	61	-

TABLE 1:
Mary River Deposit 1 Open Pit Waste Rock Blast Hole Cuttings Results

Sample Description and Identification										ABA Results							
YEAR	Blast ID	Hole ID	Location	Easting	Northing	Elevation (masl)	Hole Depth (m)	Lithology	Class	Fizz Rating	C (%)	S (%)	NP (tCaCO ₃ /kt)	CarbNP (tCaCO ₃ /kt)	MPA (tCaCO ₃ /kt)	CarbNPR (CarbNP/MPA)	NPR (NP/MPA)
2014	N675008	57	PIT	563122.7	7914573.8	675.4	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675008	58	PIT	563125.4	7914571.5	676.0	2.5	Schist	WASTE	-	0.10	0.01	-	8.3	0.31	27	-
2014	N675008	60	PIT	563131.4	7914566.5	677.6	2.6	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675008	88	PIT	563126.5	7914566.8	676.6	2.5	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675008	89	PIT	563123.8	7914569.1	675.9	2.5	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675008	90	PIT	563120.9	7914571.4	675.2	2.5	Schist	WASTE	-	0.06	0.01	-	5.0	0.31	16	-
2014	N675008	91	PIT	563119.0	7914569.5	674.9	2.5	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675008	92	PIT	563121.7	7914566.9	675.7	2.5	Schist	WASTE	-	0.06	< 0.01	-	5.0	0.31	16	-
2014	N675008	93	PIT	563124.9	7914564.4	676.5	2.5	Schist	WASTE	-	0.07	< 0.01	-	5.8	0.31	19	-
2014	N675008	122	PIT	563122.9	7914562.5	676.0	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675008	123	PIT	563119.9	7914565.1	675.2	2.5	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675008	124	PIT	563117.4	7914567.5	674.7	2.5	Schist	WASTE	-	0.10	0.01	-	8.3	0.31	27	-
2014	N675008	125	PIT	563118.0	7914562.7	675.2	2.5	Schist	WASTE	-	0.11	0.01	-	9.2	0.31	29	-
2014	N675008	126	PIT	563121.4	7914560.2	675.8	2.5	Schist	WASTE	-	0.11	0.01	-	9.2	0.31	29	-
2014	N675008	155	PIT	563119.4	7914558.3	675.6	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675008	156	PIT	563116.3	7914560.8	675.1	2.5	Schist	WASTE	-	0.09	0.01	-	7.5	0.31	24	-
2014	N675008	157	PIT	563114.7	7914558.7	674.7	2.5	Schist	WASTE	-	0.10	0.01	-	8.3	0.31	27	-
2014	N675008	158	PIT	563117.6	7914556.1	675.4	2.5	Schist	WASTE	-	0.05	0.01	-	4.2	0.31	13	-
2014	N675008	161	PIT	563185.8	7914614.2	684.6	9.6	Schist	WASTE	1	0.06	0.02	2	5.0	0.63	8.0	3.2
2014	N675008	186	PIT	563169.4	7914594.3	681.8	6.8	Schist	WASTE	-	0.08	0.01	-	6.7	0.31	21	-
2014	N675008	187	PIT	563168.2	7914593.3	681.7	6.7	Schist	WASTE	-	0.06	< 0.01	-	5.0	0.31	16	-
2014	N675009	239	PIT	563302.5	7914670.5	679.5	4.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N675010	110	PIT	563123.7	7914514.6	681.2	6.2	Schist	WASTE	-	0.76	0.03	-	63.3	0.94	68	-
2014	N675010	139	PIT	563117.4	7914515.3	679.2	4.2	Schist	WASTE	-	0.72	0.01	-	60.0	0.31	192	-
2014	N675010	182	PIT	563126.3	7914541.4	677.6	2.6	Schist	WASTE	-	0.21	0.02	-	17.5	0.63	28	-
2014	N675010	214	PIT	563114.4	7914539.7	675.3	2.5	Schist	WASTE	1	n.r.	0.13	-2	-	4.06	-	-0.49
2014	N675010	219	PIT	563115.9	7914545.2	675.5	2.5	Schist	WASTE	-	0.09	< 0.01	-	7.5	0.31	24	-
2014	N675010	225	PIT	563115.3	7914548.5	675.6	2.5	Schist	WASTE	-	0.08	< 0.01	-	6.7	0.31	21	-
2014	N675010	226	PIT	563116.4	7914549.8	675.5	2.5	Schist	WASTE	-	0.17	0.01	-	14.2	0.31	45	-
2014	N675010	227	PIT	563114.4	7914551.4	675.2	2.5	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N675014	311	PIT	563196.3	7914601.9	684.5	9.5	Schist	WASTE	1	0.07	0.06	3	5.8	1.88	3.1	1.6
2014	N675PS003	4015	PIT	563241.2	7914677.5	685.0	10.0	Schist	WASTE	-	0.17	0.03	-	14.2	0.94	15	-
2014	N675PS003	4022	PIT	563231.7	7914666.7	685.1	10.1	Schist	WASTE	-	0.09	0.04	-	7.5	1.25	6.0	-
2014	N675PS003	4026	PIT	563226.8	7914660.8	684.7	9.7	Schist	WASTE	-	0.26	0.02	-	21.7	0.63	35	-
2014	N675PS004	20	PIT	563189.7	7914618.4	684.5	9.5	Schist	WASTE	-	0.09	0.06	-	7.5	1.88	4.0	-
2014	N675PS004	36	PIT	563174.0	7914600.2	683.2	8.2	Schist	WASTE	-	0.07	0.01	-	5.8	0.31	19	-
2014	N685001	141	PIT	563262.5	7914710.6	687.7	2.7	Schist	WASTE	-	0.03	0.02	-	2.5	0.63	4.0	-
2014	N685001	142	PIT	563264.3	7914713.4	687.4	2.5	Schist	WASTE	-	0.08	0.02	-	6.7	0.63	11	-
2014	N685001	143	PIT	563266.4	7914715.8	687.1	2.5	Schist	WASTE	-	0.13	0.03	-	10.8	0.94	12	-
2014	N685001	152	PIT	563269.8	7914723.7	686.1	2.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N685001	153	PIT	563267.3	7914720.9	686.5	2.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N685001	154	PIT	563265.8	7914718.5	686.8	2.5	Schist	WASTE	-	0.07	0.09	-	5.8	2.81	2.1	-
2014	N685001	155	PIT	563263.6	7914716.1	687.3	2.5	Schist	WASTE	-	0.04	0.04	-	3.3	1.25	2.7	-
2014	N685001	156	PIT	563261.5	7914713.4	687.5	2.5	Schist	WASTE	-	0.06	0.04	-	5.0	1.25	4.0	-
2014	N685001	158	PIT	563260.9	7914716.0	687.5	2.5	Schist	WASTE	-	0.09	0.04	-	7.5	1.25	6.0	-
2014	N685001	159	PIT	563262.1	7914719.1	687.0	2.5	Schist	WASTE	-	0.10	0.04	-	8.3	1.25	6.7	-
2014	N685001	160	PIT	563264.6	7914721.4	686.7	2.5	Schist	WASTE	-	0.06	0.04	-	5.0	1.25	4.0	-
2014	N685001	152D	PIT	563269.8	7914723.7	686.1	2.5	Schist	WASTE	-	0.04	0.02	-	3.3	0.63	5.3	-
2014	N685002	99	PIT	563261.5	7914700.6	689.8	4.8	Schist	WASTE	-	0.08	0.03	-	6.7	0.94	7.1	-
2014	N685002	102	PIT	563263.0	7914705.8	689.4	4.4	Schist	WASTE	-	0.05	0.04	-	4.2	1.25	3.3	-
2014	N685002	104	PIT	563258.6	7914700.7	689.6	4.6	Schist	WASTE	-	0.07	0.03	-	5.8	0.94	6.2	-
2014	N685002	129	PIT	563256.0	7914700.9	689.1	4.1	Schist	WASTE	-	0.14	0.03	-	11.7	0.94	12	-
2014	N685002	130	PIT	563258.1	7914703.4	688.6	3.6	Schist	WASTE	-	0.06	0.03	-	5.0	0.94	5.3	-
2014	N685002	160	PIT	563251.6	7914704.4	688.7	3.7	Schist	WASTE	-	0.10	0.04	-	8.3	1.25	6.7	-

n.r. = not reported.



MEMO

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Subject Mary River Project
Review and Recommendations for Existing Mine Rock Humidity Cell Program

1.0 INTRODUCTION

Amec Foster Wheeler Environment & Infrastructure, a division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler) has been retained by Baffinland Iron Mines Corporation (Baffinland) to conduct ML/ARD characterization of mine rock for the Mary River Project. On-going studies in support of this project include humidity cell testing of selected mine rock samples. The objective of this technical memorandum is to provide a review of mine rock humidity cell results.

2.0 HUMIDITY CELL OVERVIEW

The mine rock humidity cell testing program includes 11 standard humidity cells and eight carbonate depleted cells (nineteen cells in total). Eight of the nineteen humidity cells have been terminated, as recommended by AMEC in June 2014. At that time, AMEC also recommended the initiation of two new standard humidity cells (16628 and 16634) to represent previously untested mineralized waste materials expected to be present in generally low tonnages. The operational status of all nineteen mine rock humidity cells is provided in Table 1. Previous documentation and analysis of mine rock humidity cell data is provided in the document *Mine Rock ML/ARD Geochemical Characterization Report – Deposit 1, Mary River Project* (AMEC 2014).

A representative set of samples were selected for humidity cell analysis based on the 2010 static testing program. The samples for humidity cell testing were selected primarily on the basis of refining the limits of PAG and non-PAG materials and to better understand the effectiveness of non-carbonate NP in limiting ARD. The samples are well distributed spatially across the deposit and covered a range of metal contents. The representativity of the humidity cells in relation to AP, NP and metal contents are provided graphically in Appendix A.

2.1 Standard Humidity Cells

The purpose of testing using standard humidity cells (herein referred to as 'humidity cells') was to assess the ARD on-set time of PAG samples with different ranges of AP and NP contents. A second objective was to more carefully assess the threshold between PAG and non-PAG materials, which have been defined only on the basis of ABA static testing and assuming all materials with an NPR of <2 are PAG. Humidity cell testing of materials with an NPR between

1 and 2 may provide better information on what the appropriate NPR threshold to segregate acid generating from non-acid generating rock will be and how effective categorization of PAG and non-PAG on the basis of NP is for these generally low sulphide oxidation rate and low NP materials.

A humidity cell program was previously conducted for 53 weeks on ten rock samples from the Mary River project in early 2008 (Knight Piésold, 2008). Five of the samples each represented a single lithology, while the others were of mixed lithology or consisted of composites of two or more lithologies. In addition, one of the samples had a sulphide content of 5% which is considered high for mine rock at the project site.

The current standard humidity cell testing program was initiated in May 2011. Selection of samples was primarily focused on the three main lithologies (gneiss, schist and volcanic tuff) and covered a range of sulphide and metals content. An upper sulphide content limit of around 1% was considered to be representative of most of the PAG rocks based on available ABA data. Representative rock samples with NPR less than 2 were selected from the major hanging wall and footwall lithologies. Several non-PAG samples (NPR >2) have also been included to provide information on the broader range of rock compositions expected in the future mine rock stockpile.

Static test results for the humidity cell samples are presented in Table 2. Nine rock samples representing major lithologies of hanging wall and footwall rock were selected for humidity cell testing based on the waste subdivisions available at the time. Samples have since been categorized according to updated waste type subdivisions (FW, FWS, HW, HWS, IW – see AMEC 2014). A single sample of magnetite dominant ore was also included in the program.

2.2 Neutralization Potential Depleted Humidity Cells

The results of ABA testing on the Mary River Deposit No.1 samples indicated that the carbonate NP of the samples was generally lower compared to the modified Sobek NP. A significant number of samples (approximately 76%) had carbonate NP that was 20% or less than the Sobek NP. These results suggest silicate minerals as the long-term source of NP when the carbonate minerals are exhausted. Silicate minerals are able to buffer the mine waste pH at near neutral conditions under low acid generation rates (Mattson, 2009; Miller et al., 2010); however, effectiveness of silicate NP is dependent on the material and particularly the specific minerals present, and sulphide reaction rates.

To test the effectiveness of silicate NP specialized carbonate NP-depleted humidity cells were initiated in September 2011. These cells are being operated to assess the drainage chemistry of mine rock devoid of carbonate neutralization capacity. Samples were subjected to a sodium acetate leach prior to placement in the cells in order to dissolve carbonate minerals prior to testing.

Eight samples from the major lithologies (gneiss, schist and volcanic tuff) were selected for the NP-depleted humidity cells (Table 2).

2.3 Mineralized Waste Humidity Cells

In 2014, Amec Foster Wheeler initiated two additional humidity cells representing mineralized waste; one typical banded iron formation mine rock sample and one typical high grade iron formation mine rock sample. These were initiated to better assess the possible future impact of these previously untested, low tonnage materials (expected to make up less than 1% of the mine rock).

3.0 RESULTS AND ANALYSIS

A summary of ABA and key metal characteristics (Cu, Ni and Zn) for each cell are provided in Table 2. Summary static data for the cells and statistical distribution of the cells in comparison to the range of selected ABA and metals data are provided in Appendix A. Humidity cell data plots for the nineteen cells are presented in Appendix B.

Overall, the humidity cell results continue to confirm a protracted period of generally neutral pH (with a few exceptions) over the duration of testing (now at over 3.5 years of operation) indicating that PAG mine rock is expected to exhibit a long lag time to acid on-set even in the absence of neutralization capacity from carbonates.

3.1 Hanging wall and Footwall Humidity Cells

Based on 170 to 190 weeks of data for standard humidity cells and 150 to 180 weeks for NP depleted humidity cells the following observations are made regarding the hanging wall and footwall humidity cells:

- The pH of all humidity cells exhibited a generally steady trend or exhibited a slight decline over test duration;
- The pH of most cells were in the range of pH 5.5 to 7;
- A single low sulphide (0.06% sulphide) NP depleted cell (MRARD10-82) exhibited a fairly steady pH of around 5 over the duration of testing. This cell may be of very low reactivity and could be responding to the weakly acidic pH of the DI water used to flush the humidity cells;
- Three cells exhibited slowly declining pH throughout testing reaching a minimum measured weakly acidic pH between 4.5 and 5 after between 1 and 3 years of operation. The cell (5178) that reached the lowest pH within the first year of operation contained the highest sulphide content (0.9%) of all of the humidity cells;
- Sulphate release rates for most cells generally declined in the first 20 weeks of operation and subsequently exhibited a stable trend or continued to steadily decline at a slower rate;
- A few cells have indicated a possible slight increasing trend in sulphate release after 100 weeks of operation;

- Sulphate release rate weakly correlates to sulphide content;
- The highest steady sulphate release rates are relatively low in the range of 6 to 20 mg/kg/wk which corresponds to humidity cells with 0.2 to 1.0 % sulphide;
- The rest of the humidity cells, including a cell with a sulphide content of 0.6%, exhibited sulphate release rates of less than 3 mg/kg/wk;
- A single humidity cell at approximately 150 weeks of operation (MRARD10-051) exhibited a spurious spike in sulphate and associated metals release (especially Fe). This is inferred to represent sudden activation of a minute sulphide grain (e.g. 0.5 mg as pyrite) in this cell at that time;
- The ratio $(Ca+Mg)/SO_4$ for most humidity cells is in the range of 1 to 2, which is suggestive of sulphide oxidation and neutralization by carbonate dissolution; however, the cells are known to be largely or fully carbonate depleted and therefore the Ca and Mg in this case is inferred to originate from the dissolution of non-carbonate minerals.
- The non-carbonate related dissolution in the majority of cells is further confirmed by inspection of the Mg/Ca (molar) ratio which confirms Mg in excess of Ca on a molar basis which would generally not be the case for carbonate dissolution;
- One cell (5171) with low but relatively elevated carbonate NP for the test materials (2.8 kg $CaCO_3/t$) notably has a steady $(Ca+Mg)/SO_4$ ratio of 3 suggesting sulphide oxidation is low enough that a significant component of the carbonate NP is being depleted by the DI water flush alone;
- For all cells except those with pH <5, 12 elements (Ag, Al, As, Be, Bi, Cr, Li, Pb, Sb, Tl, W and Zn) had leachate concentrations that were generally at or near detection; and,
- Metal release rates are generally the highest in the lower pH humidity cells with notable release rates for Cd, Co, Cu, Ni, Pb and Zn in cells MRARD10-055 and 5178 which also contain near worst case solid concentrations for these metals in Deposit 1 mine rock;

3.2 Mineralized Waste Humidity Cells

Based on 21 weeks of data for the mineralized waste humidity cells the following observations are provided:

- The pH of the banded iron formation humidity cell was weakly acidic at between pH 4.2 and pH 4.8 and generally steady or possibly declining slightly over the test period;
- The pH of the high grade iron formation mine rock cell was generally steady and circum-neutral between pH 6 and 7 over the test period;

- Sulphate release rates were in the range of 30 mg/kg/wk and declining in both cells over the duration of testing;

Metal release rates are higher for the low pH banded iron formation cell as expected; however, in general steady state release rates have not been achieved for either cell and therefore the data will be reviewed again after 40 weeks and assessed further at that time.

4.0 REFERENCES

AMEC, 2014. Mine Rock ML/ARD Characterization Report – Deposit 1, Mary River Project.

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Tables:

Table 1 – Mine Rock Humidity Cell Operational Status

Table 2 – Mine Rock Humidity Cell Static Data

Appendices

Appendix A – Mine Rock Humidity Cell Static Data Plots

Static Data ABA Plots

Static Data Cumulative Frequency Plots

Appendix B – Mine Rock Humidity Cell Results

Hanging Wall Humidity Cell Plots

Footwall Humidity Cell Plots

Mineralized Waste Humidity Cell Plots

TABLES

TABLE 1:
Mine Rock Humidity Cell Operational Status

Humidity Cell	Type	Lithology	Weeks in Operation	Status
5171	Standard HC	FW-Metasediment	191	Ongoing
5178	Standard HC	FW-Schist	194	Ongoing
MRARD 10-030	Standard HC	FW-Gneiss	194	Ongoing
MRARD 10-055	Standard HC	FWS-Gneiss	194	Ongoing
MRARD 10-074	Standard HC	FWS-Gneiss	194	Ongoing
MRARD 10-080	Standard HC	HWS-Volcanic Tuff	170	Terminated
MRARD 10-092	Standard HC	HWS-Schist	194	Ongoing
MRARD 10-105	Standard HC	HWS-Volcanic Tuff	170	Terminated
MRARD 10-120	Standard HC	OZ-Schist	170	Terminated
16628	Standard HC	HWS - High Grade Iron Formation	21	Ongoing
16634	Standard HC	Internal Waste - Banded Iron Formation	21	Ongoing
5172	NP Depleted HC	FW-Metasediment	154	Terminated
5174	NP Depleted HC	FW-Gniess	154	Terminated
MRARD10-026	NP Depleted HC	HWS-Schist	178	Ongoing
MRARD10-048	NP Depleted HC	FW-Schist	178	Ongoing
MRARD10-051	NP Depleted HC	HWS-Volcanic Tuff	154	Terminated
MRARD10-057	NP Depleted HC	FWS-Gniess	154	Terminated
MRARD10-082	NP Depleted HC	HW-Volcanic Tuff	178	Ongoing
MRARD10-123	NP Depleted HC	FWS-Gniess	154	Terminated

TABLE 2:
Mine Rock Humidity Cell Static Data

Sample ID	Borehole ID	Waste Classification	Lithology	Humidity Cell Type	Total Sulphur	Sulphide	AP*	NP	CarbNP**	Non CarbNP	Non CarbNP	NPR	CarbNPR	Cu	Ni	Zn	Cu	Ni	Zn
					%			kg CaCO ₃ /t			%			ppm			Percentile of All Data		
MRARD10-055	MR1-08-159	Footwall Schist	Gniess	Standard	0.36	0.29	9.1	9.6	0.083	9.5	99	1.1	0.055	30	50	722	0.60	0.60	1.00
MRARD10-057	MR1-08-161	Footwall Schist	Gniess	NP Depleted ^[1]	0.19	0.05	1.5	15	0.083	14.9	99	10	1.3	29	15	24	0.59	0.30	0.26
MRARD10-074	MR1-08-149	Footwall Schist	Gniess	Standard	0.66	0.58	18	8.0	1.6	6.4	80	0.44	0.087	22	37	32	0.51	0.53	0.39
MRARD10-123	MR1-08-155	Footwall Schist	Gniess	NP Depleted ^[1]	0.42	0.27	8	21	0.083	21	100	2.5	0.18	31	6.0	21	0.62	0.08	0.21
MRARD10-048	MR1-08-163	Footwall Schist	Schist	NP Depleted ^[1]	0.19	0.11	3.3	5	0.083	5.3	98	1.6	1.0	48	130	42	0.73	0.83	0.53
5174	ARD-2B-NW	Footwall Waste	Gniess	NP Depleted ^[1]	0.061	0.011	0.3	4.2	0.083	4.1	98	12	5.1	17	5.7	30	0.44	0.08	0.35
MRARD10-030	MR1-09-170	Footwall Waste	Gniess	Standard	0.27	0.19	5.9	12	0.83	11.4	93	2.1	0.21	5.8	46	14	0.19	0.58	0.11
5171	ARD-2A-SE	Footwall Waste	Metasediment	Standard	0.40	0.23	7.2	9.0	2.8	6.2	69	1.3	0.63	92	4.0	26	0.86	0.02	0.28
5172	ARD-2A-SE	Footwall Waste	Metasediment	NP Depleted ^[1]	0.12	0.015	0.5	6	0.083	5.6	99	12	5.0	43	5.1	17	0.70	0.06	0.16
5178	ARD-2B-NW	Footwall Waste	Schist	Standard	1.5	0.91	28	23	1.5	21.1	93	0.79	0.053	67	620	100	0.80	0.99	0.94
MRARD10-026	MR1-09-173	Hanging Wall Schist	Schist	NP Depleted ^[1]	0.67	0.21	6.6	14	0.083	13.9	99	2.1	0.38	33	110	51	0.64	0.77	0.67
MRARD10-092	MR1-08-142	Hanging Wall Schist	Schist	Standard	0.59	0.31	9.7	23	0.083	23.3	100	2.4	0.052	2.3	45	30	0.07	0.58	0.35
MRARD10-051	MR1-08-158	Hanging Wall Schist	Volcanic Tuff	NP Depleted ^[1]	0.65	0.39	12.2	14	0.083	13.9	99	1.1	0.27	98	48	38	0.88	0.59	0.46
MRARD10-080	MR1-08-149	Hanging Wall Schist	Volcanic Tuff	Standard	1.3	1.0	31	20	0.13	20.2	99	0.65	0.024	8.8	46	12	0.28	0.58	0.08
MRARD10-105	MR1-08-141	Hanging Wall Schist	Volcanic Tuff	Standard	0.87	0.61	19	16	1.3	14.4	92	0.82	0.28	9.4	6.9	9.4	0.30	0.11	0.06
MRARD10-082	MR1-08-150	Hanging Wall Waste	Volcanic Tuff	NP Depleted ^[1]	0.12	0.06	1.7	7	0.83	5.8	87	3.8	1.6	7.7	6.8	3.8	0.25	0.11	0.01
MRARD10-120	MR1-08-148	Ore Zone	Iron Formation	Standard	0.46	0.30	9.4	5.6	1.1	4.5	81	0.60	0.12	4.5	20	9.9	0.14	0.37	0.07
16634	MR1 08 159	Mineralized Waste	Banded Iron Formation	Standard	0.53	0.50	16	6.2	0.42	5.8	93	0.40	0.037	23	6.3	7.8	0.52 (0.71 [2])	0.091 (0.33 [2])	0.042 (0.57 [2])
16628	MR1 08 154	Mineralized Waste	High Grade Iron Formation	Standard	0.97	0.88	28	13	12	1.0	7.3	0.48	0.45	56	16	6.2	0.77 (0.72 [2])	0.32 (0.45 [2])	0.023 (0.09 [2])

* Calculated from sulphide sulphur

**Calculated from minimum between total carbon and carbonate carbon

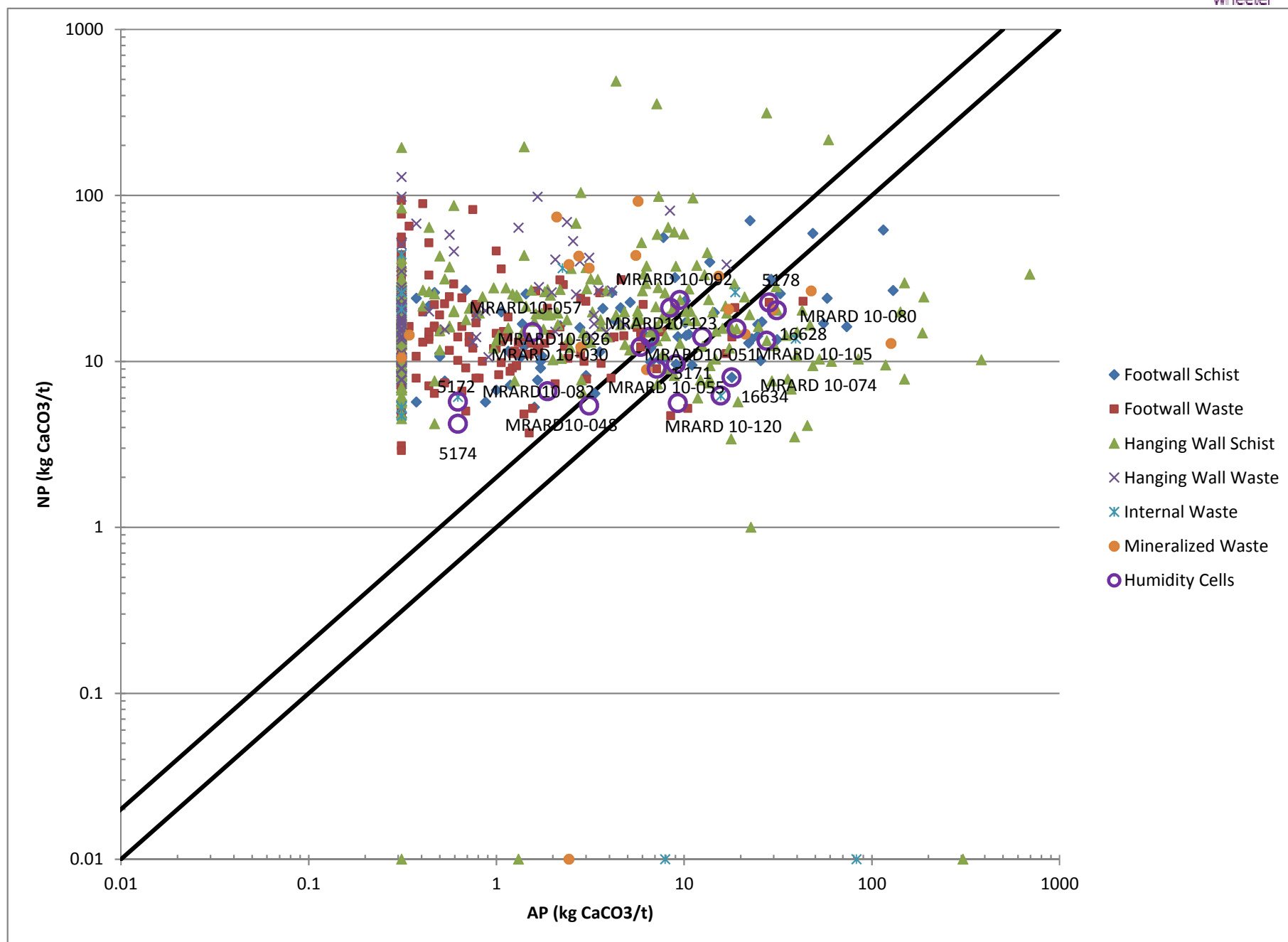
[1] Post Depletion values used for ABA Data

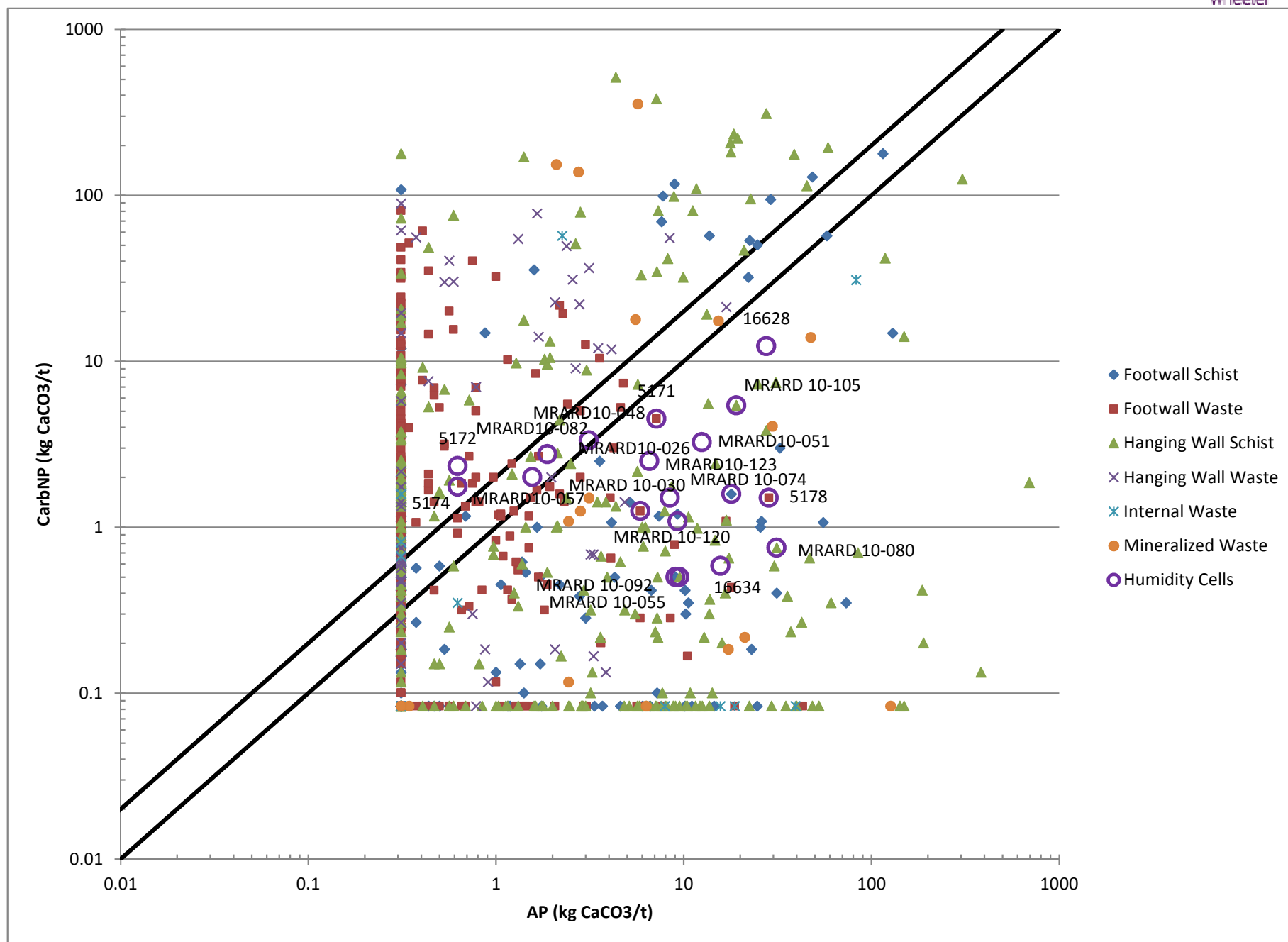
[2] Percentile of specific lithology

APPENDIX A

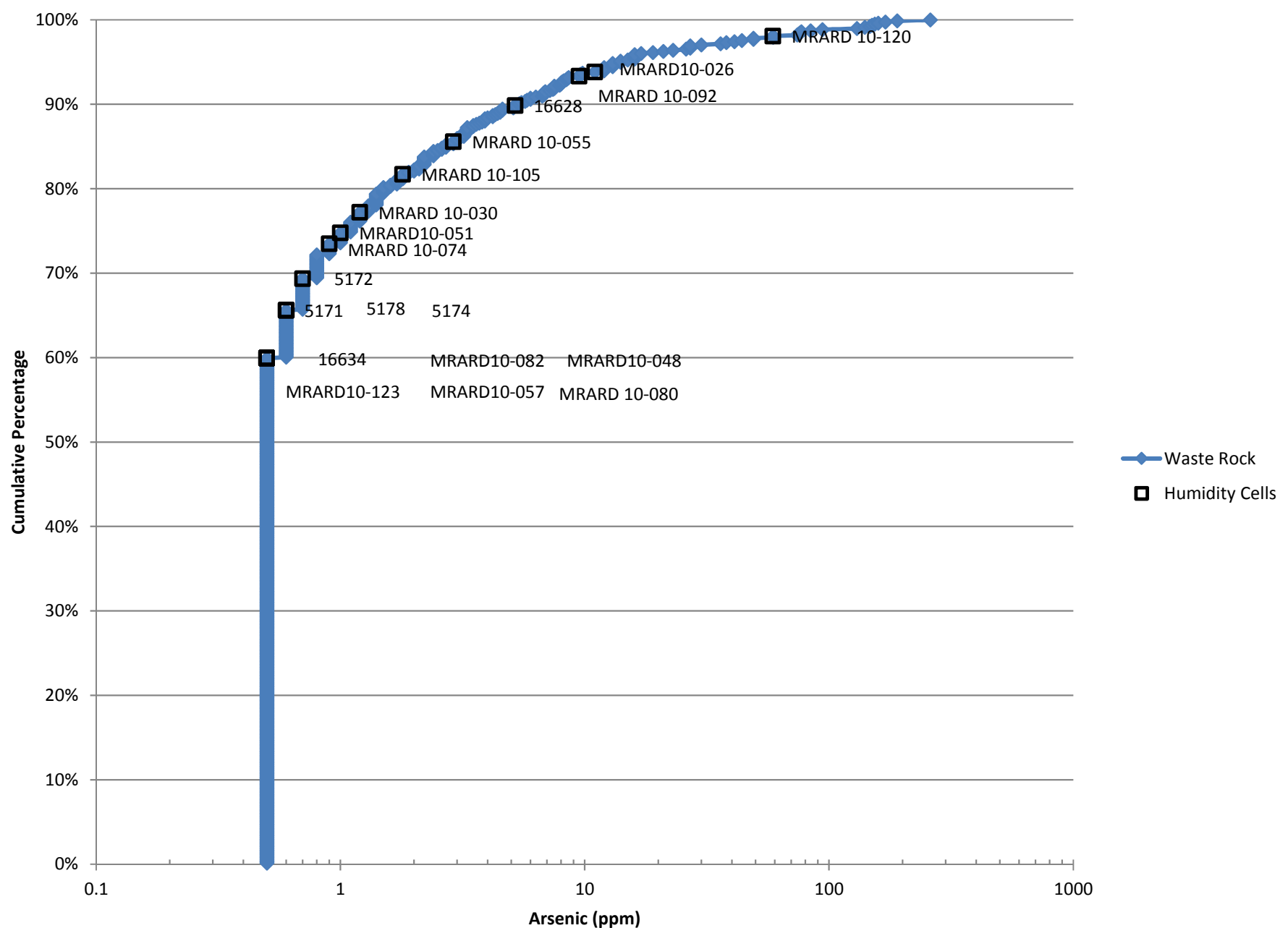
Mine Rock Humidity Cell Static Data Plots

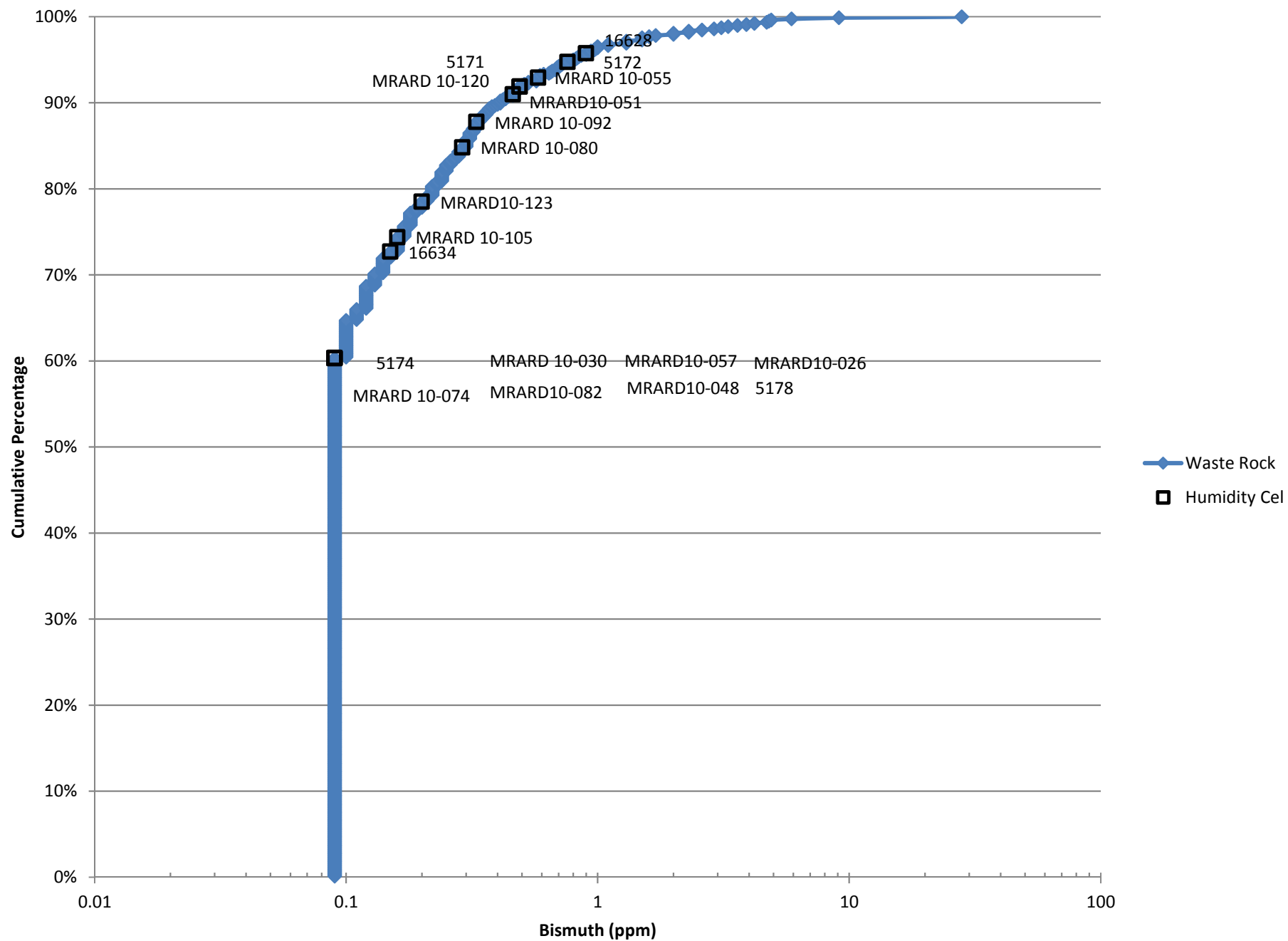
Static Data ABA Plots

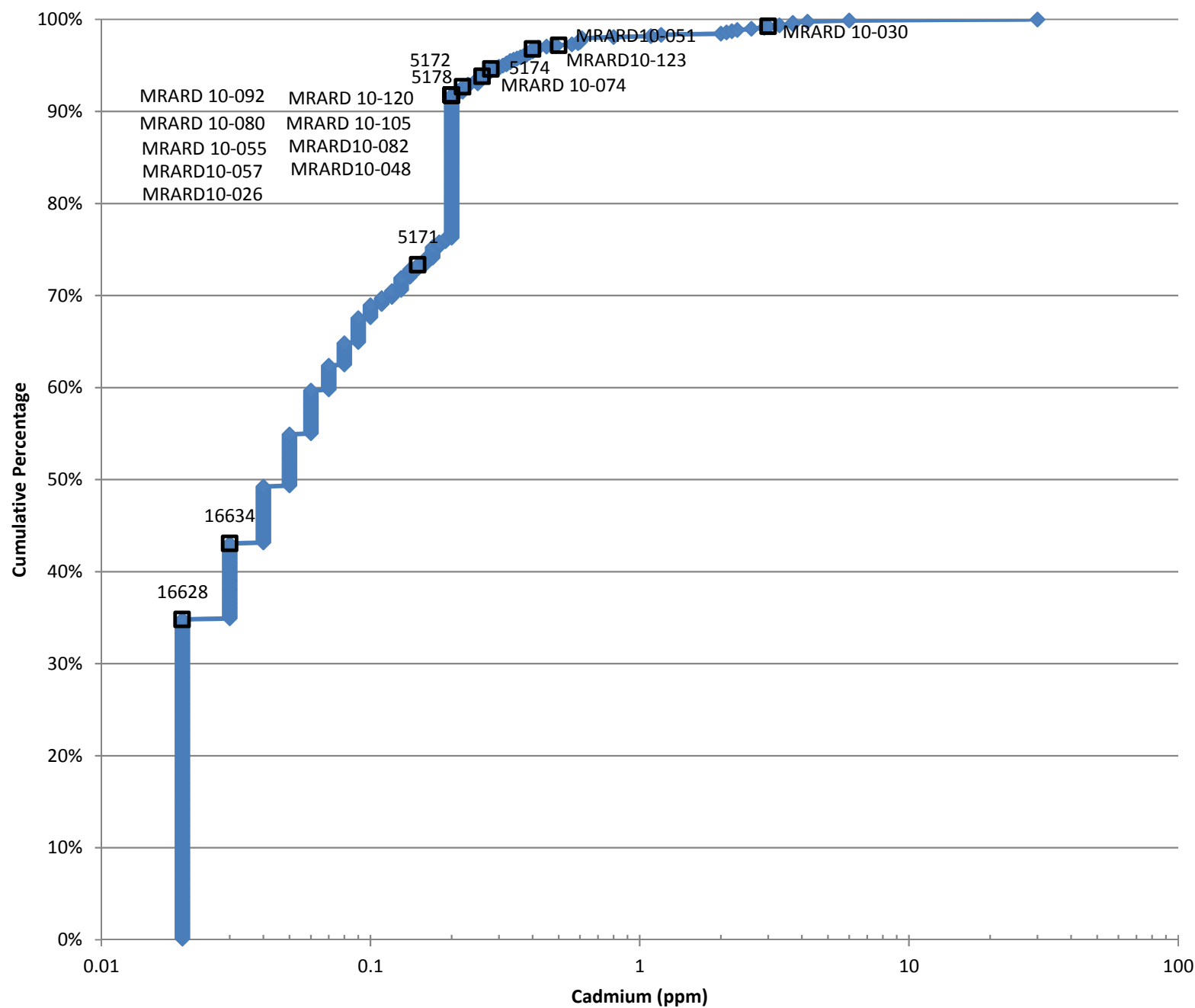


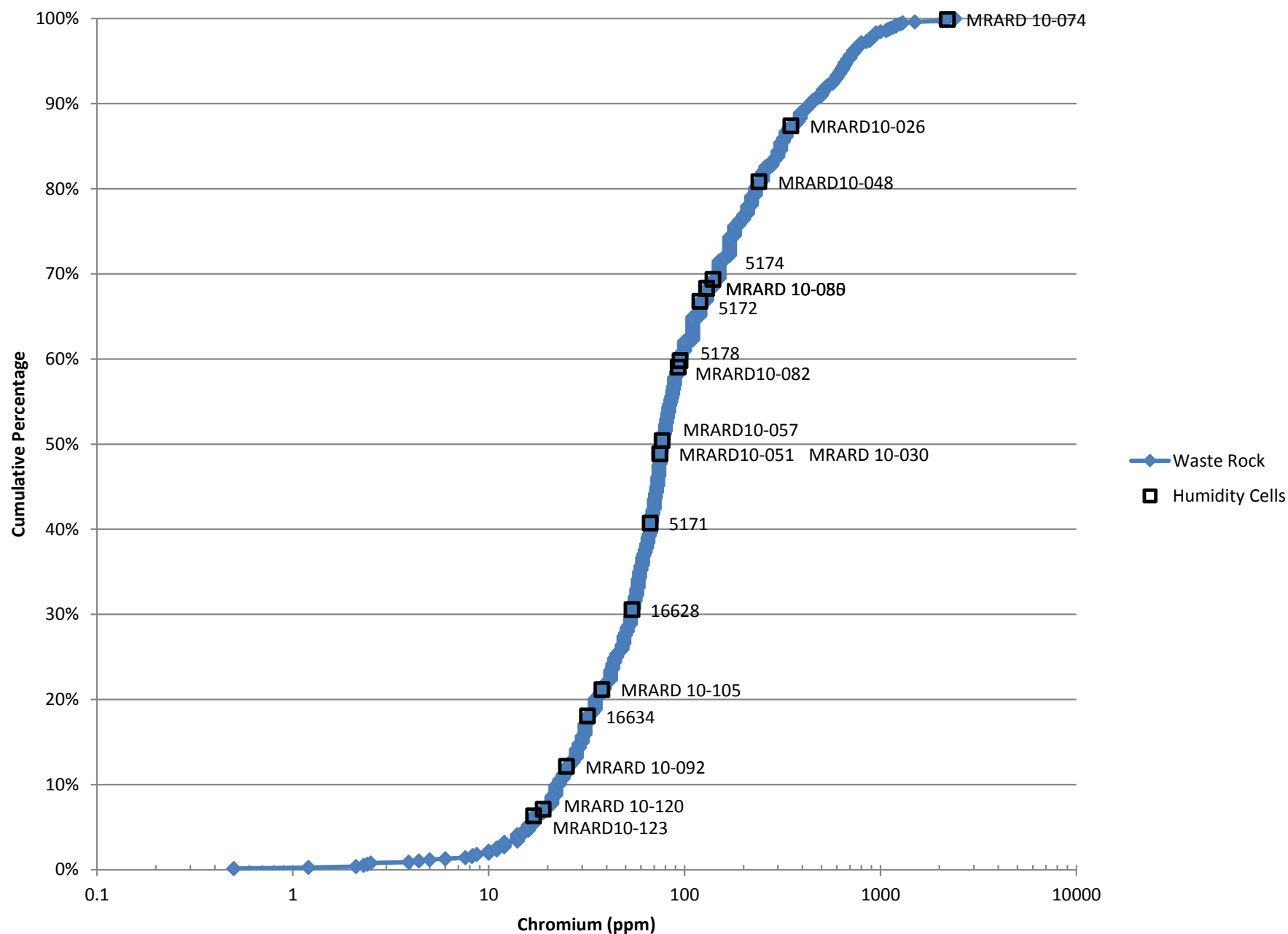


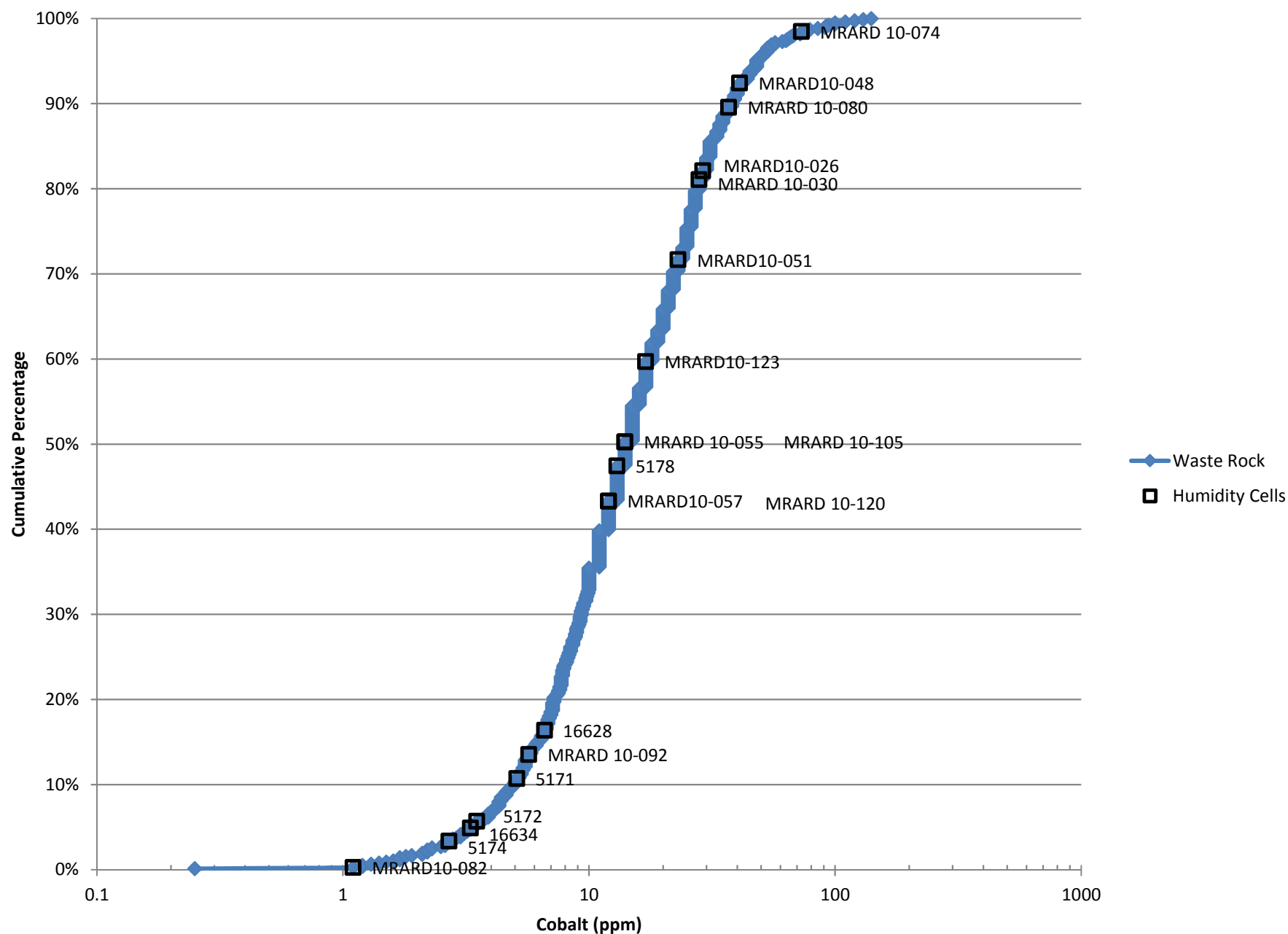
Static Data Cumulative Frequency Plots

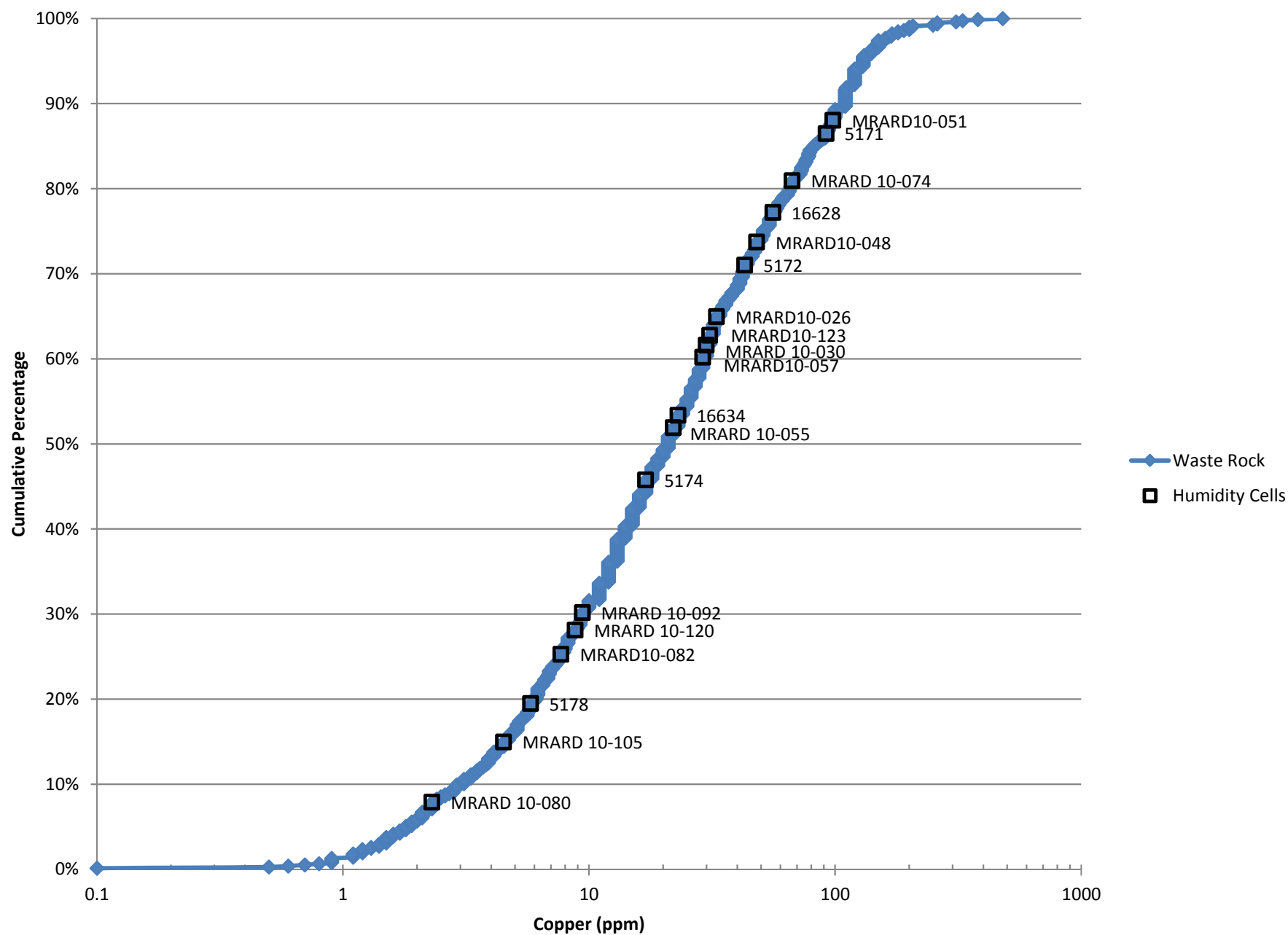


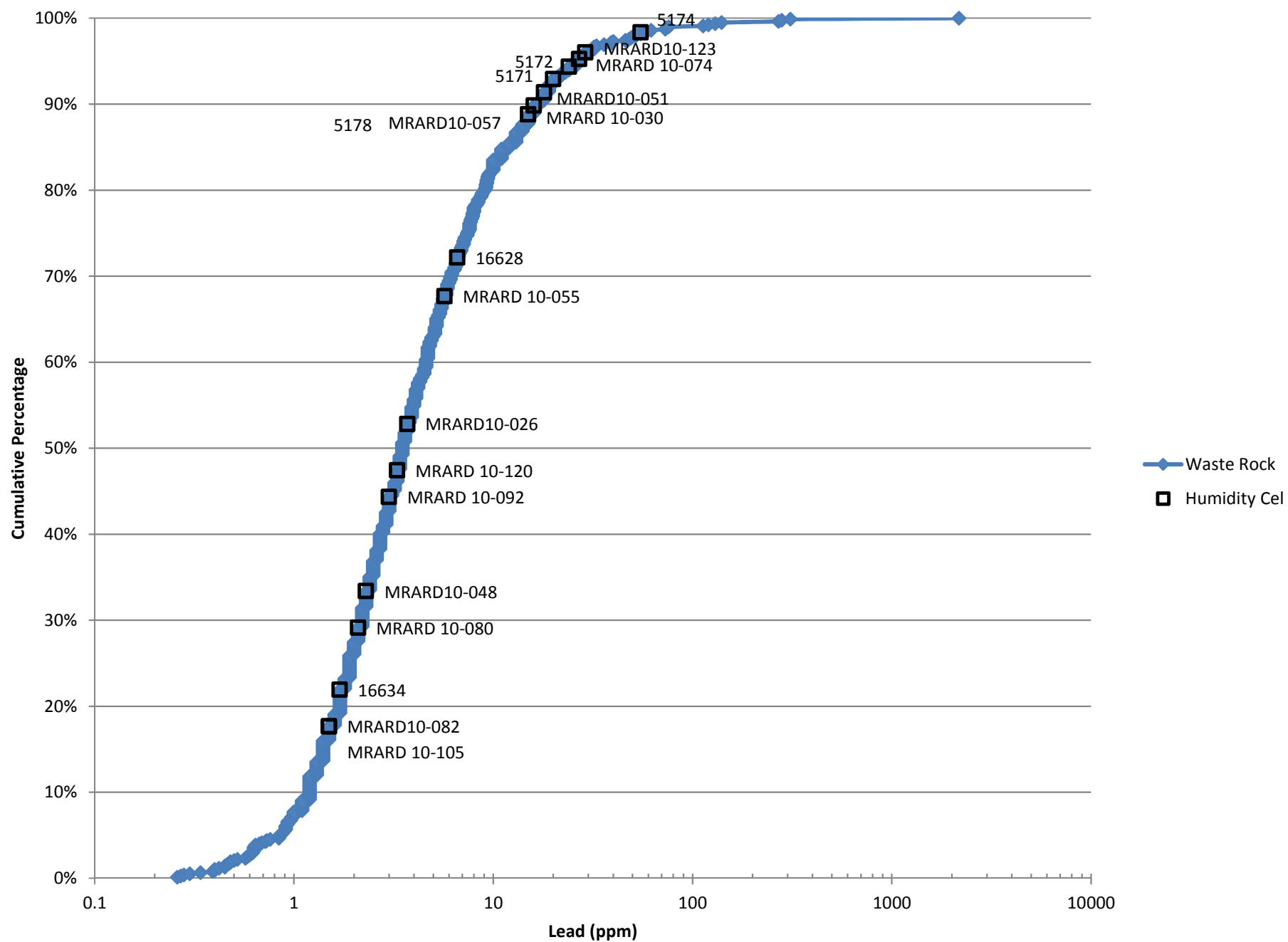


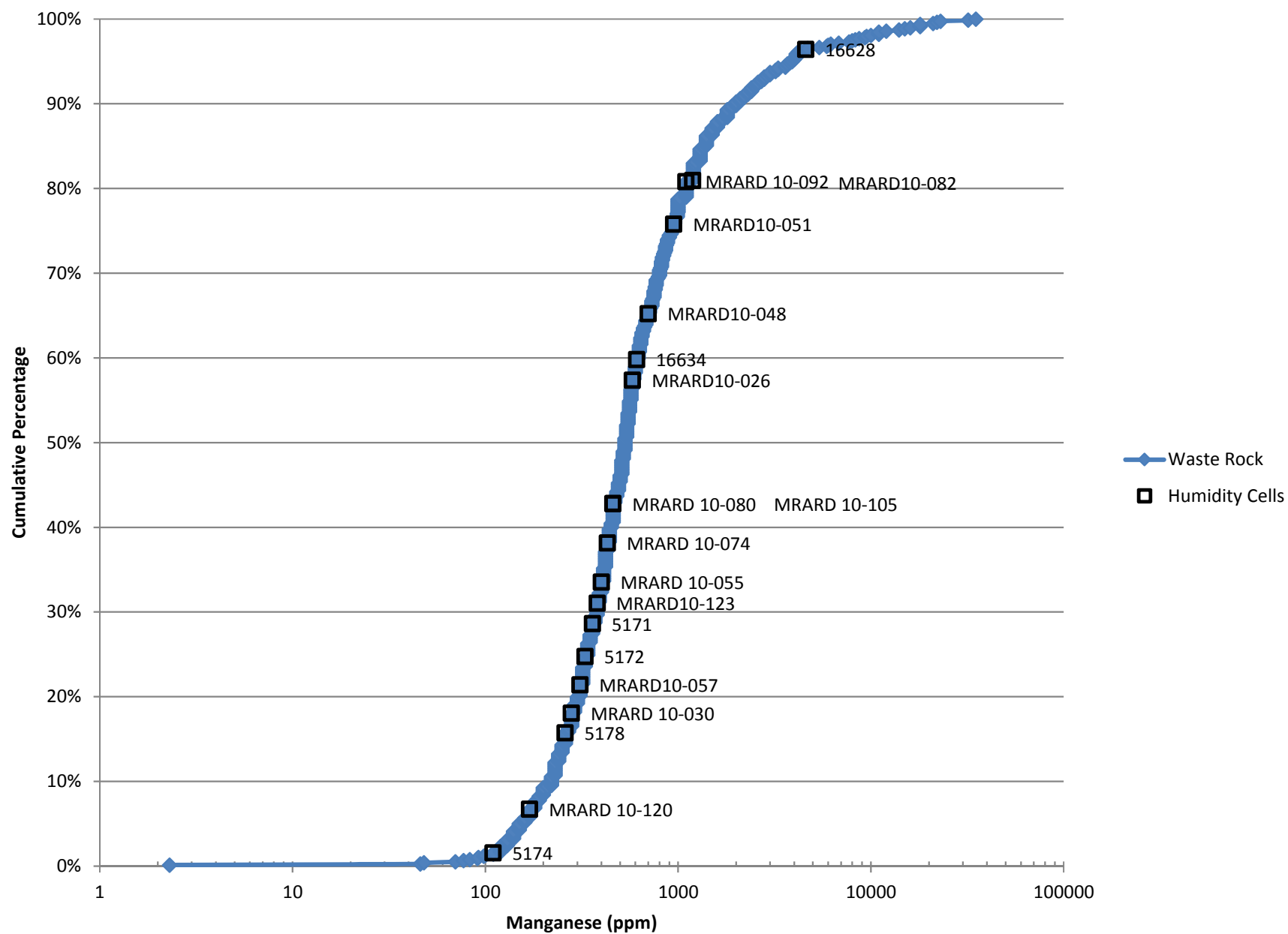


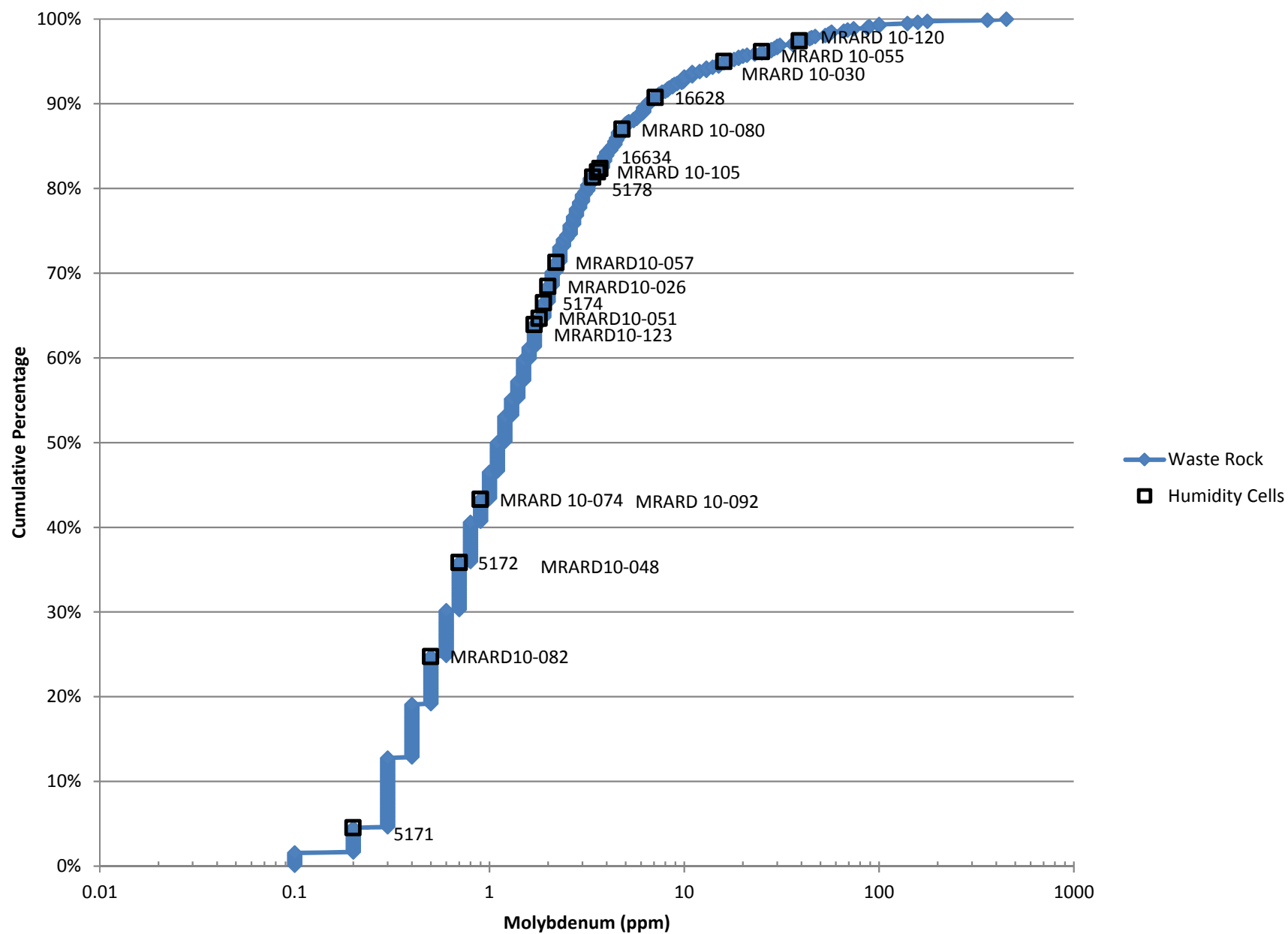


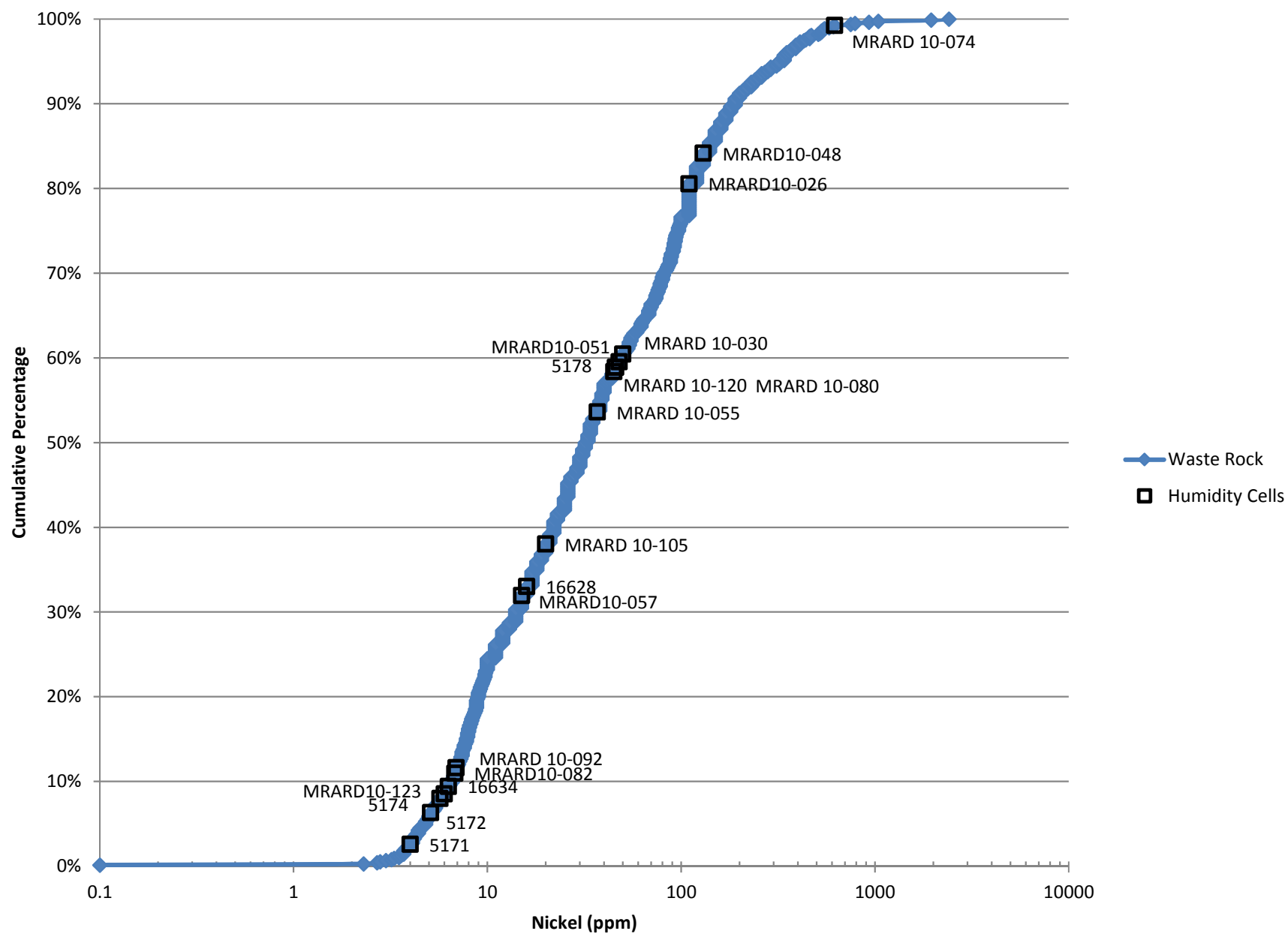


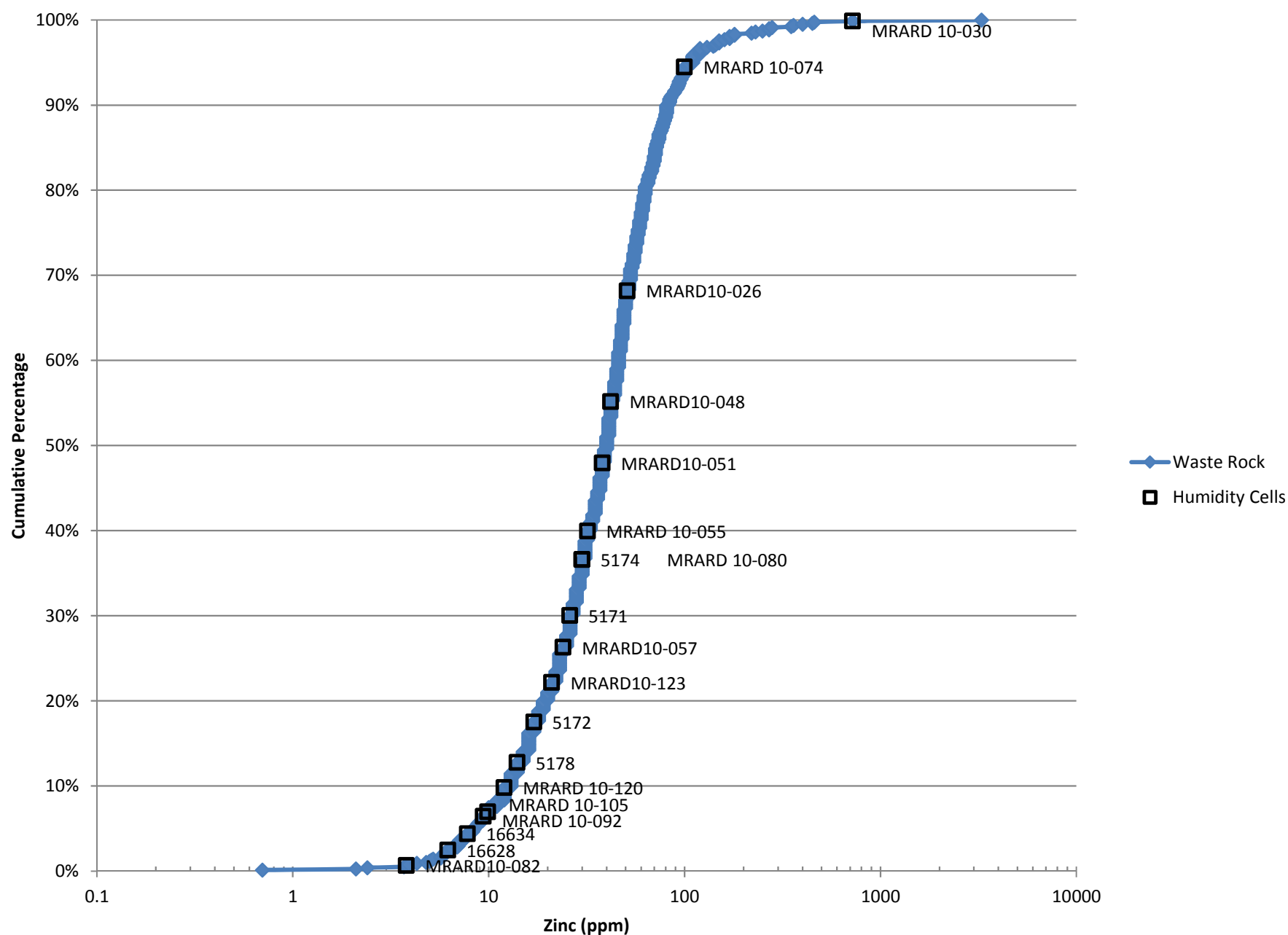










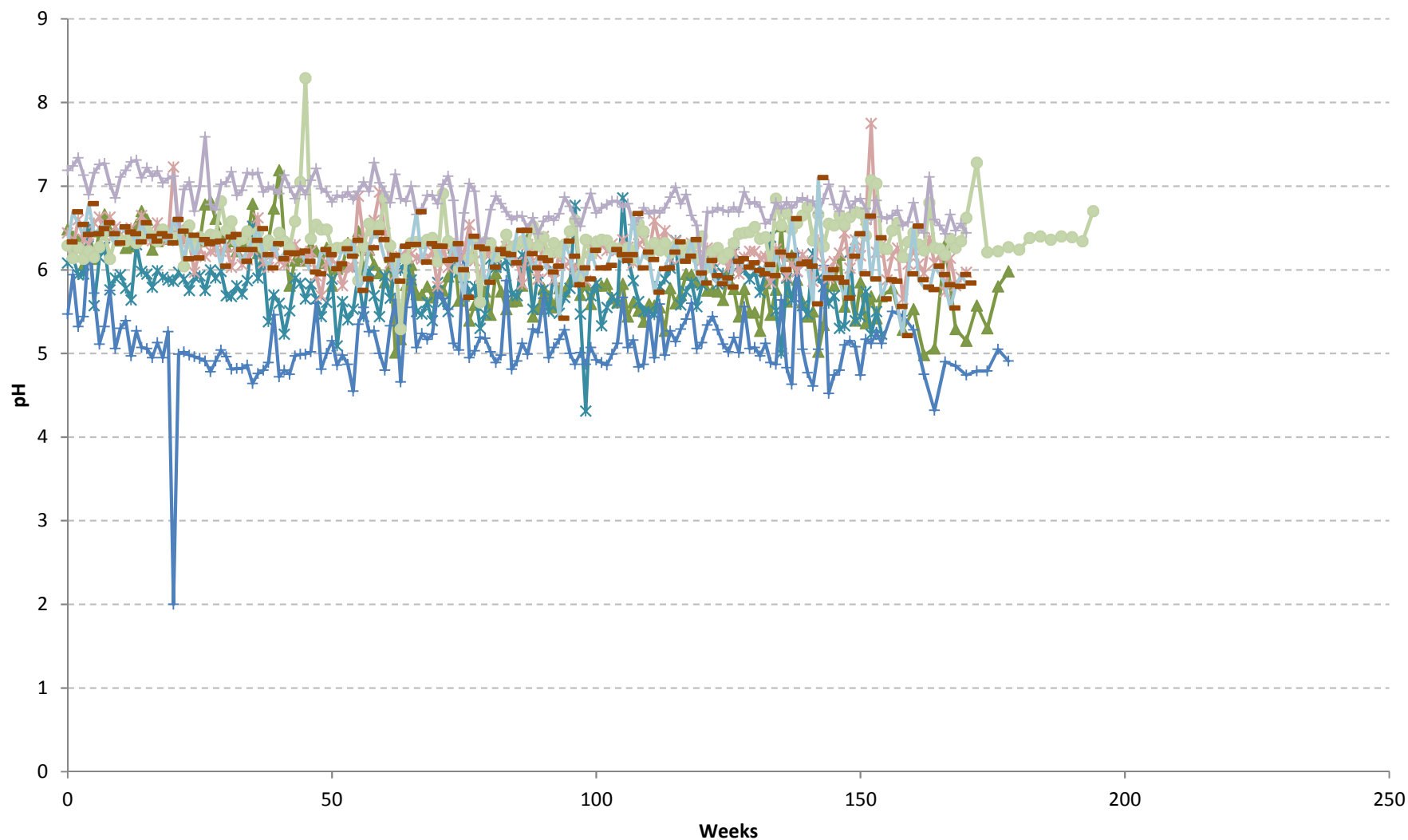


APPENDIX B

Mine Rock Humidity Cell Results

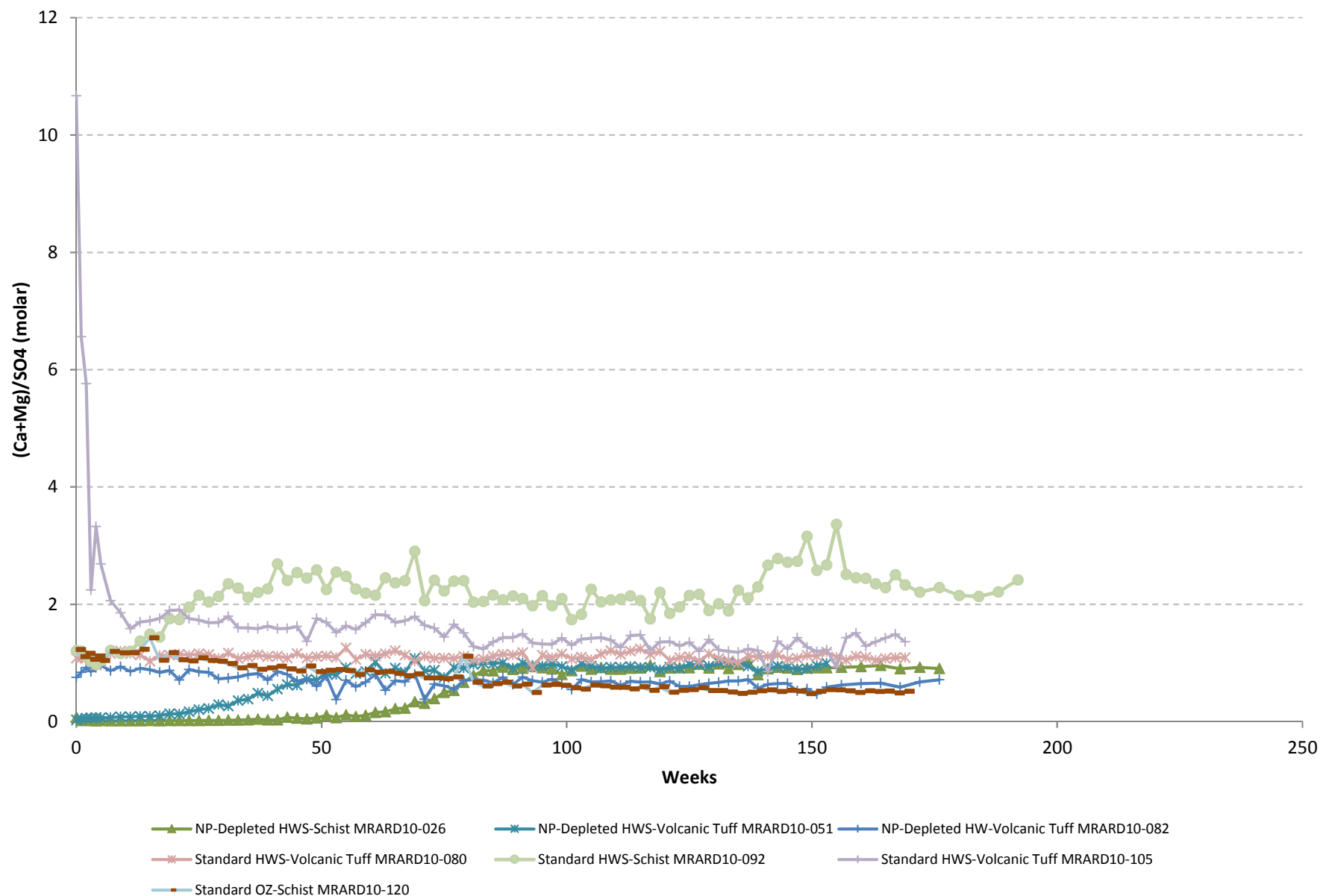
Hanging Wall Humidity Cell Plots

pH - Hanging Wall

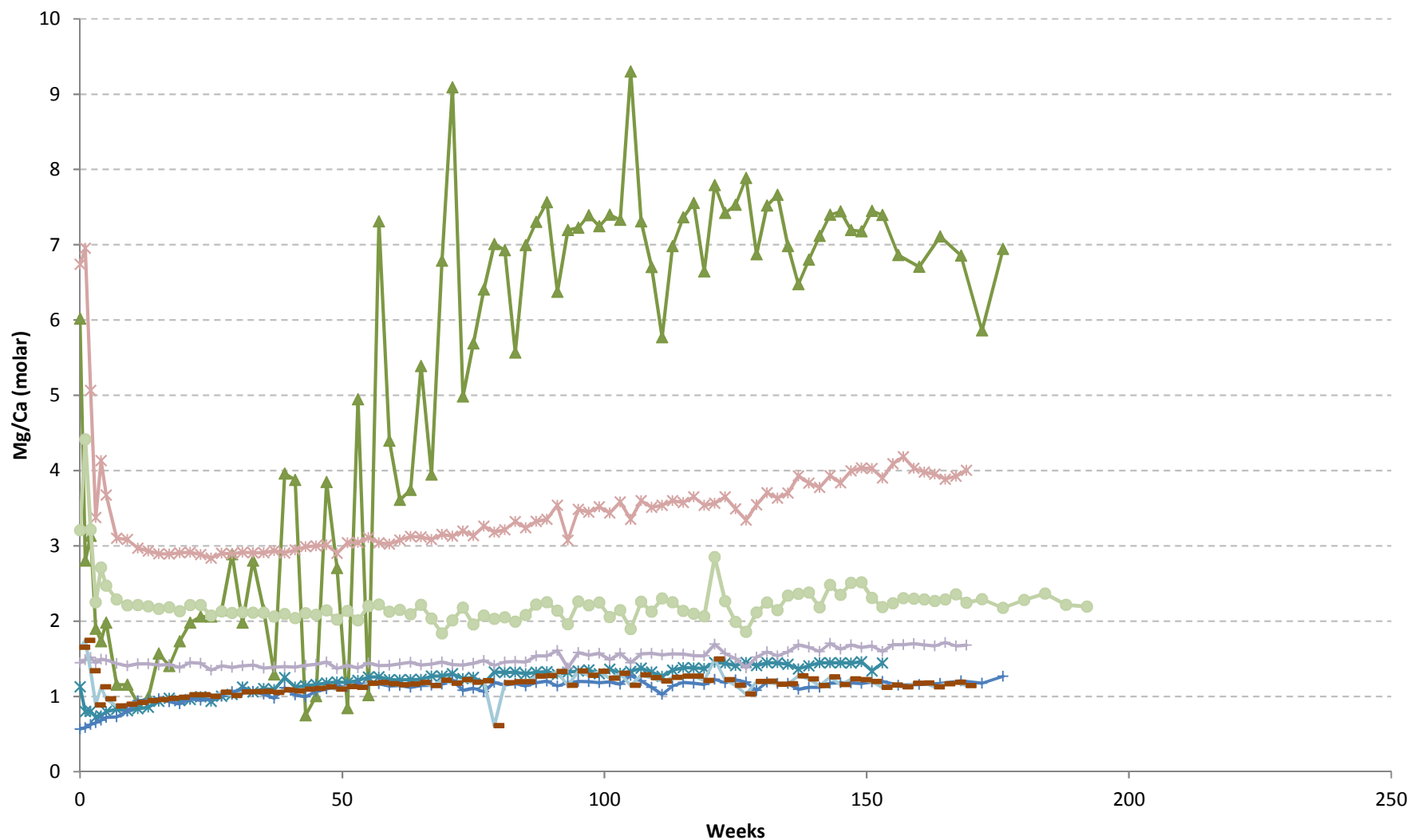


NP-Depleted HWS-Schist MRARD10-026 NP-Depleted HWS-Volcanic Tuff MRARD10-051 NP-Depleted HW-Volcanic Tuff MRARD10-082
 Standard HWS-Volcanic Tuff MRARD10-080 Standard HWS-Schist MRARD10-092 Standard HWS-Volcanic Tuff MRARD10-105
 Standard OZ-Schist MRARD10-120

(Ca+Mg)/SO₄ - Hanging Wall

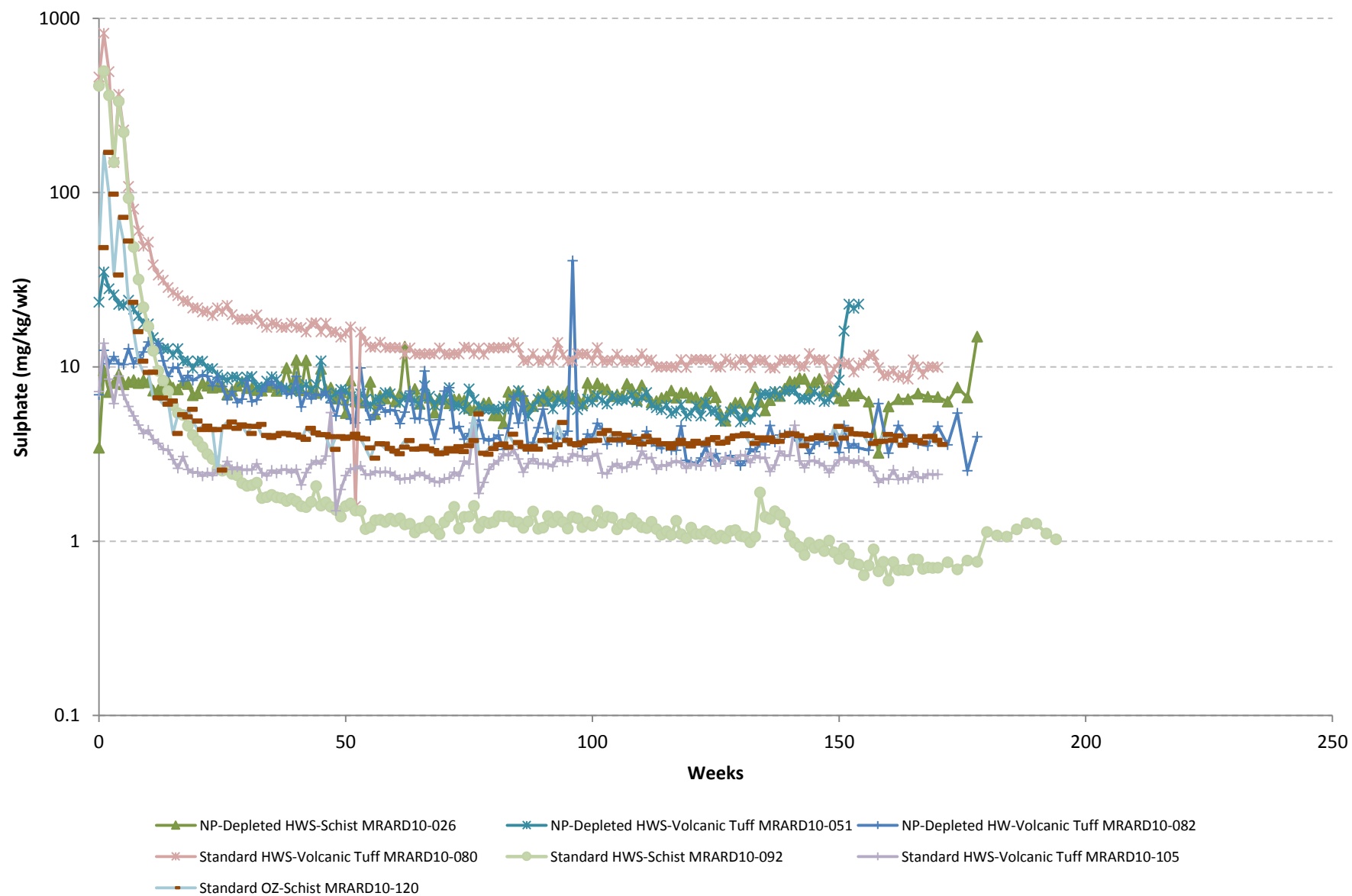


Mg/Ca - Hanging Wall

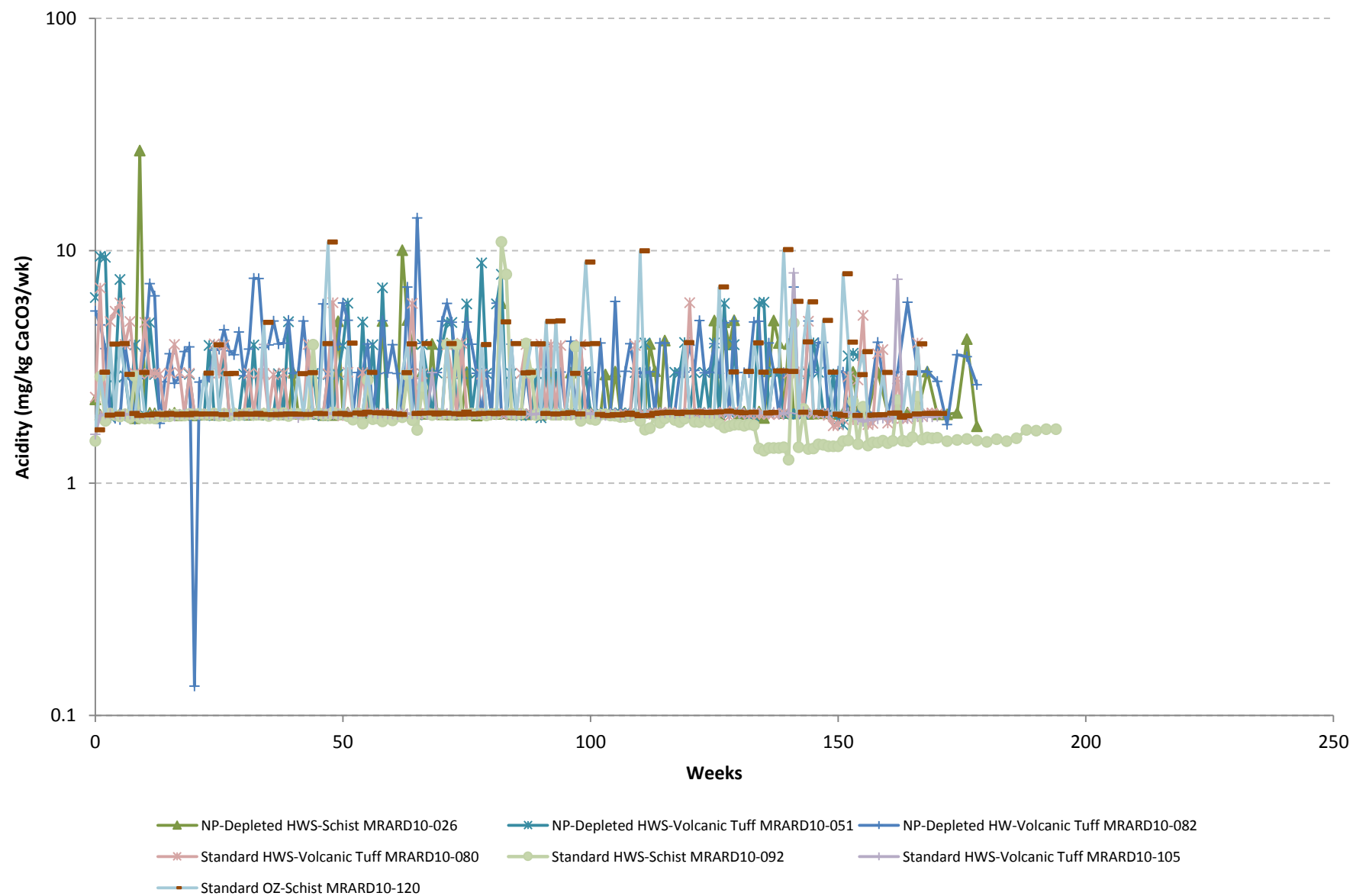


NP-Depleted HWS-Schist MRARD10-026 NP-Depleted HWS-Volcanic Tuff MRARD10-051 NP-Depleted HW-Volcanic Tuff MRARD10-082
 Standard HWS-Volcanic Tuff MRARD10-080 Standard HWS-Schist MRARD10-092 Standard HWS-Volcanic Tuff MRARD10-105
 Standard OZ-Schist MRARD10-120

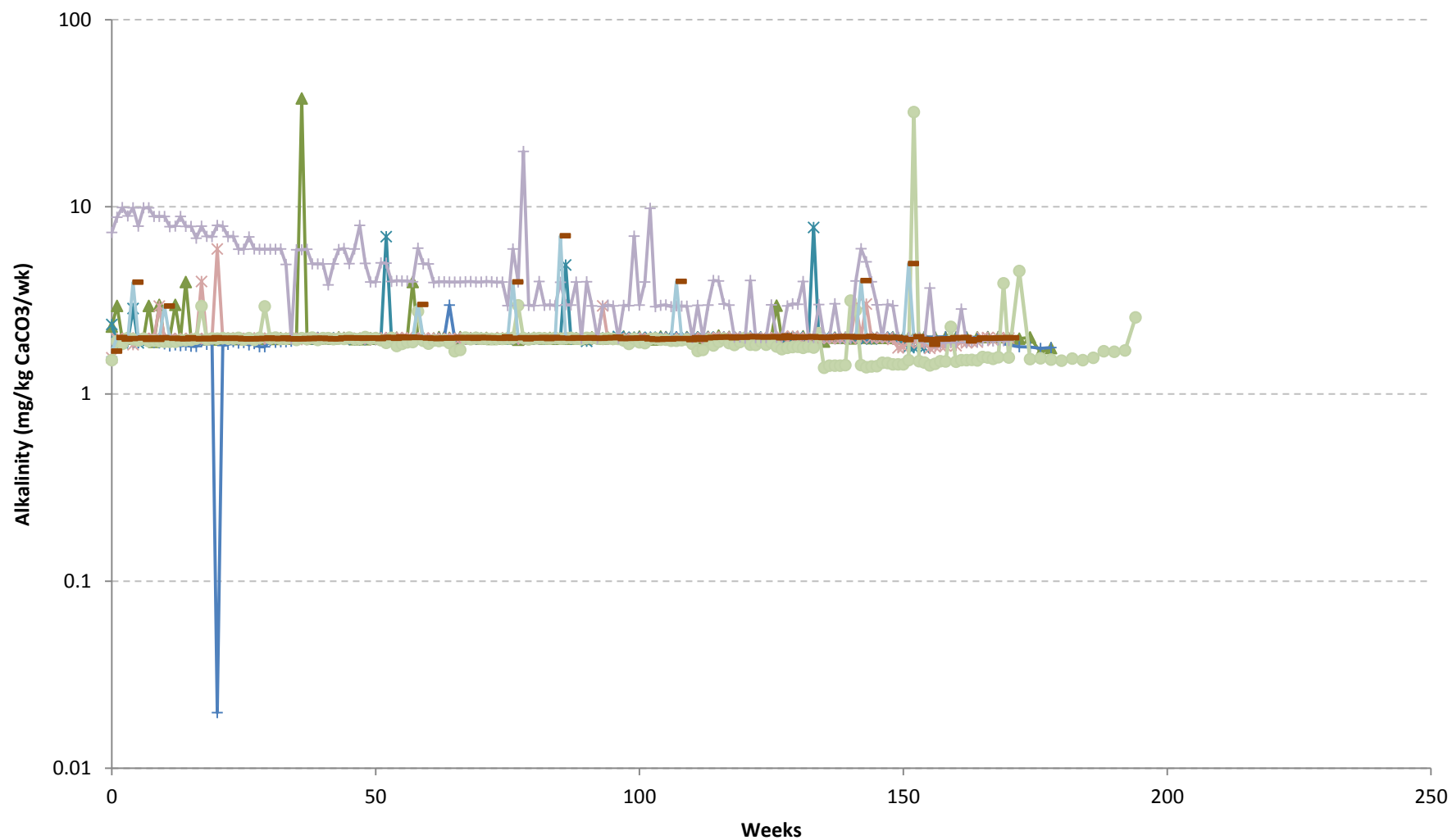
Sulphate - Hanging Wall



Acidity - Hanging Wall

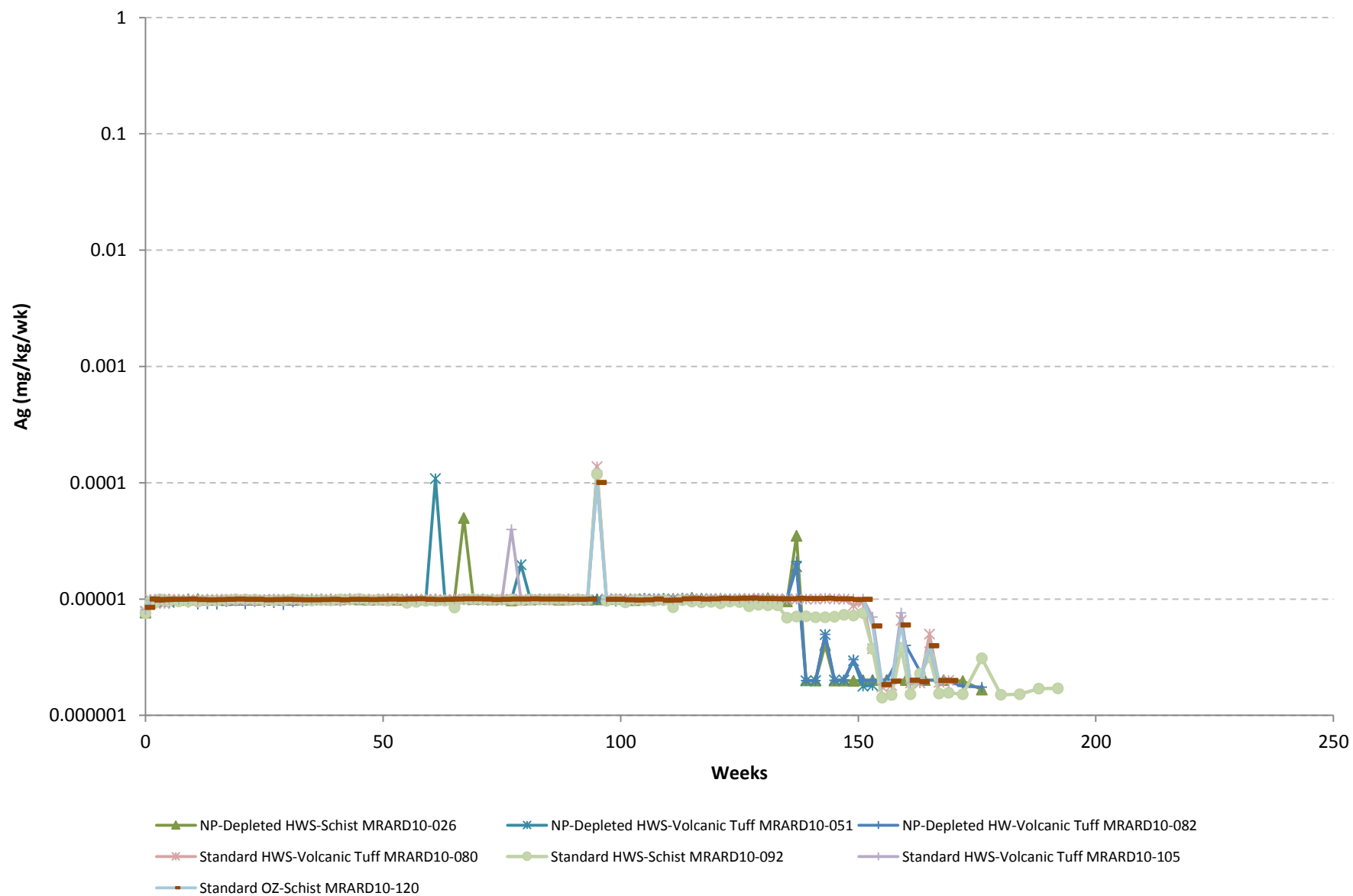


Alkalinity - Hanging Wall

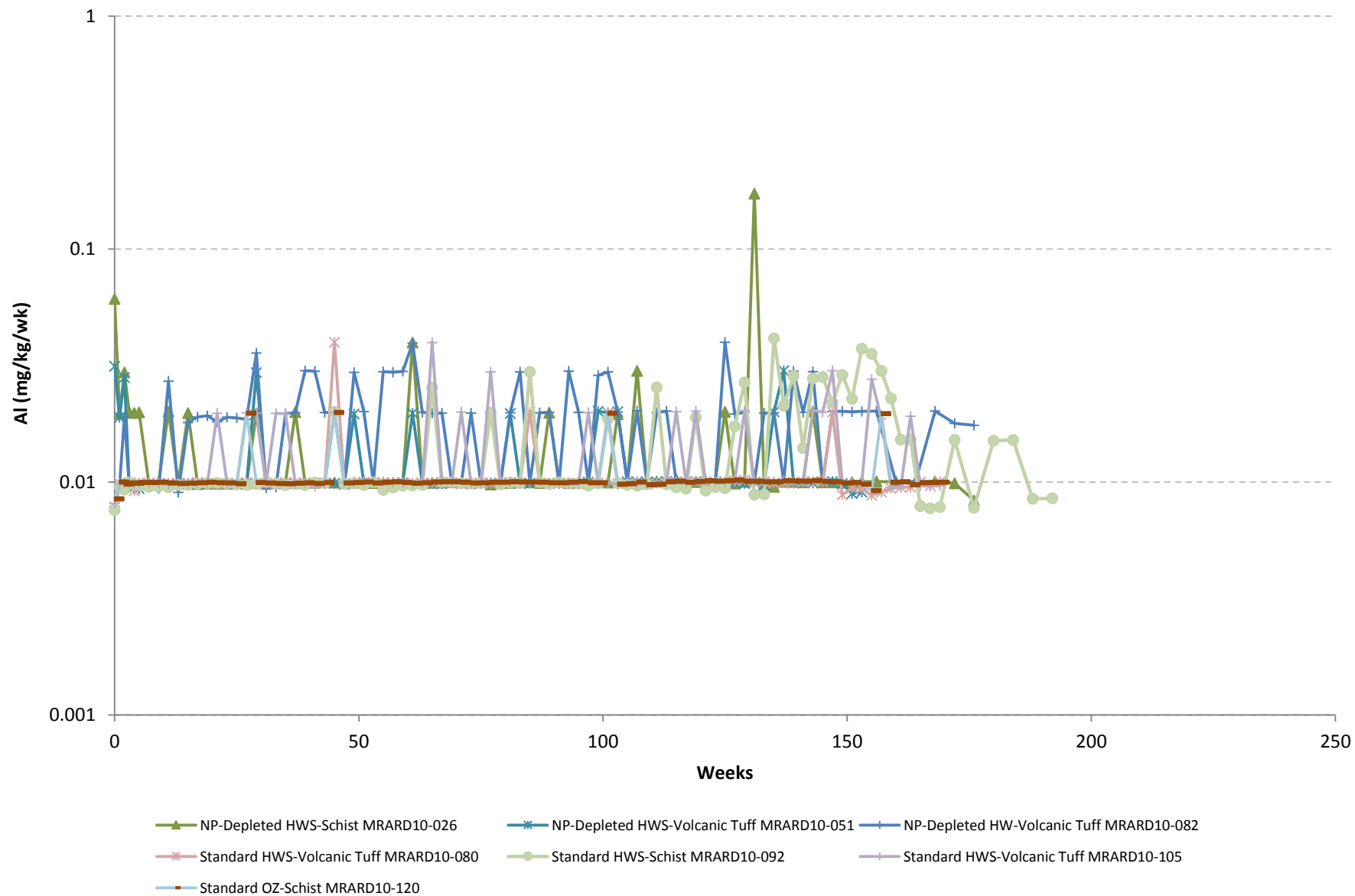


- ▲ NP-Depleted HWS-Schist MRARD10-026
 ✱ NP-Depleted HWS-Volcanic Tuff MRARD10-051
 + NP-Depleted HW-Volcanic Tuff MRARD10-082
- ✱ Standard HWS-Volcanic Tuff MRARD10-080
 ● Standard HWS-Schist MRARD10-092
 + Standard HWS-Volcanic Tuff MRARD10-105
- Standard OZ-Schist MRARD10-120

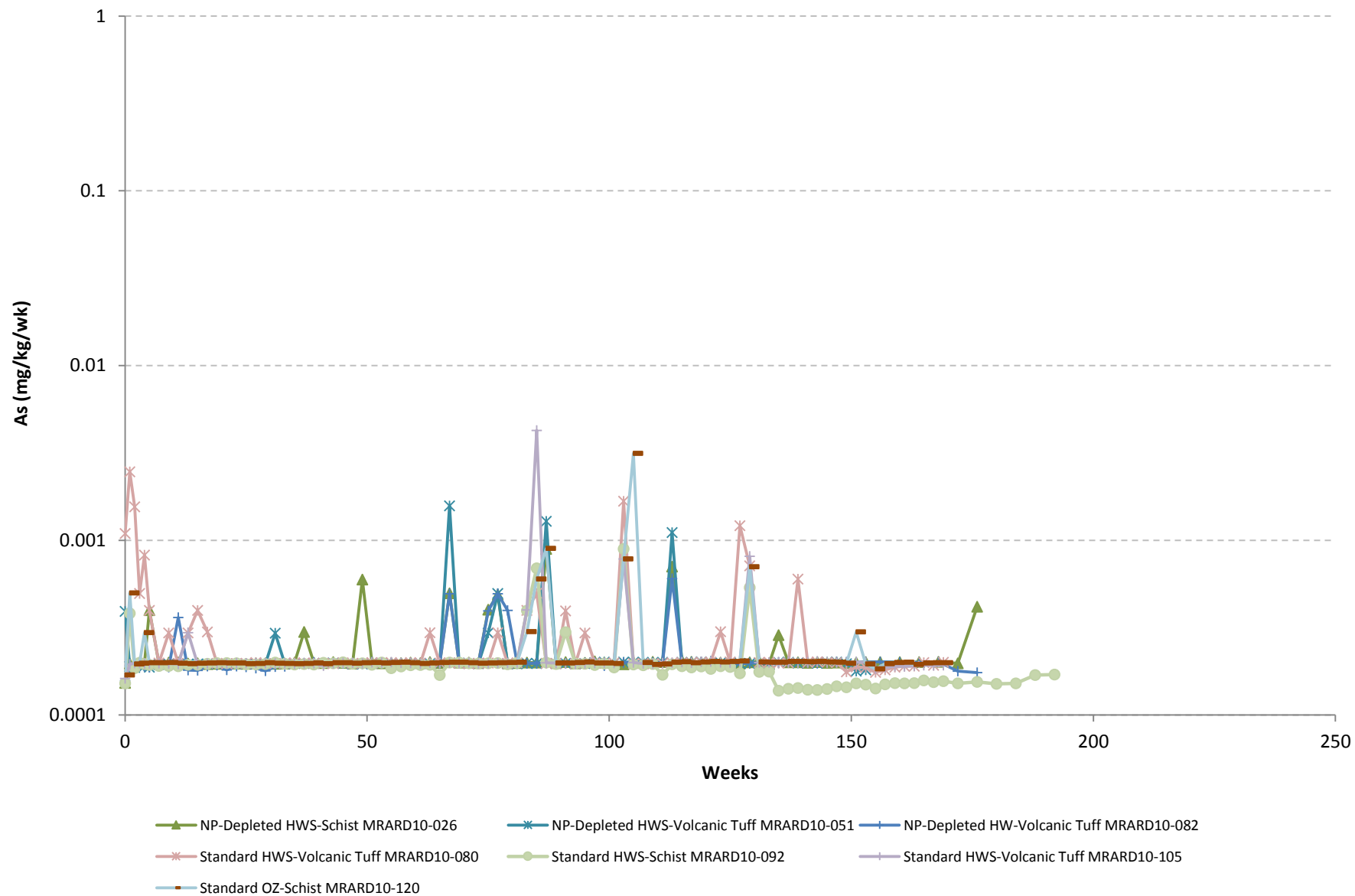
Silver - Hanging Wall



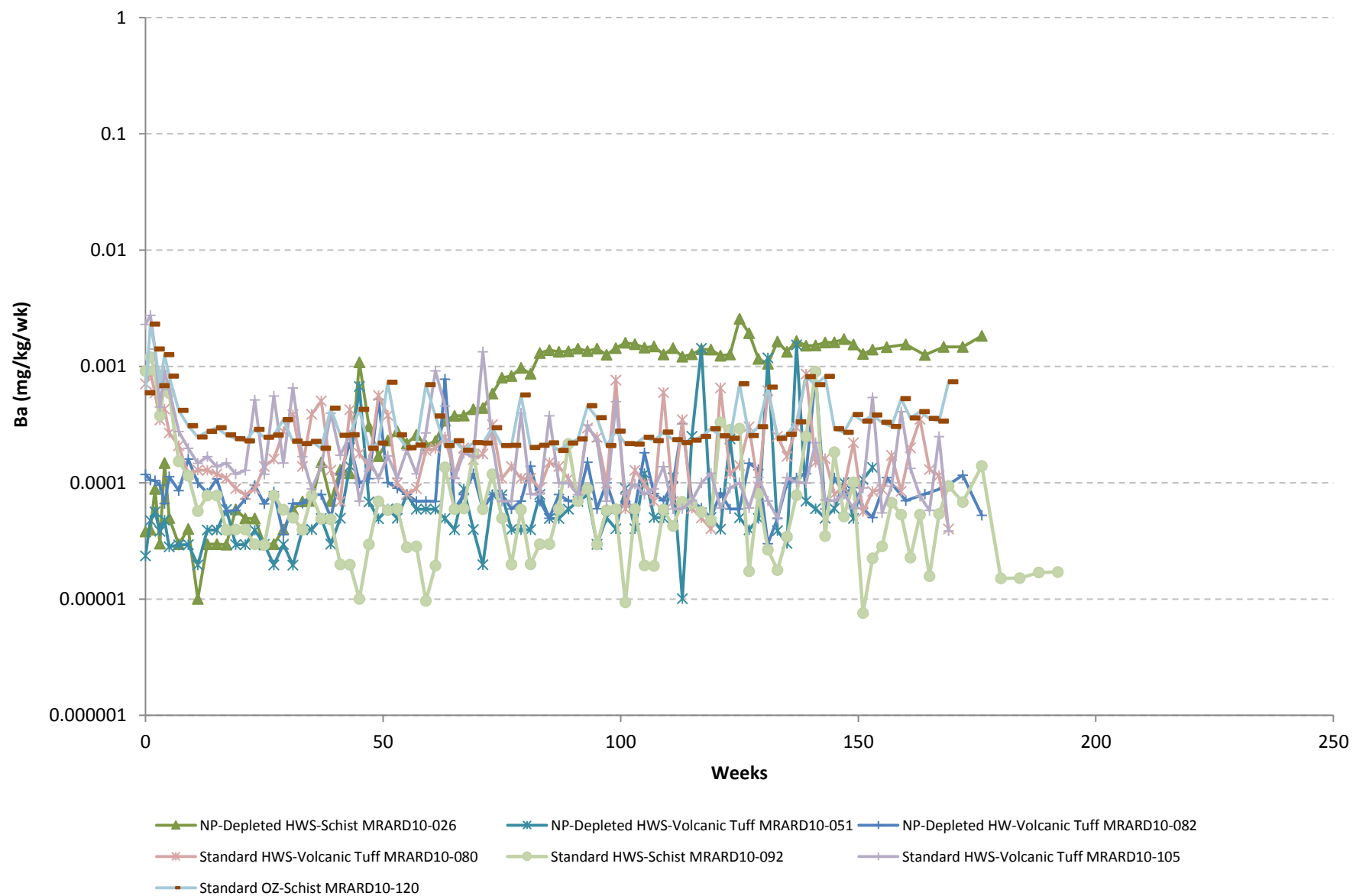
Aluminum - Hanging Wall



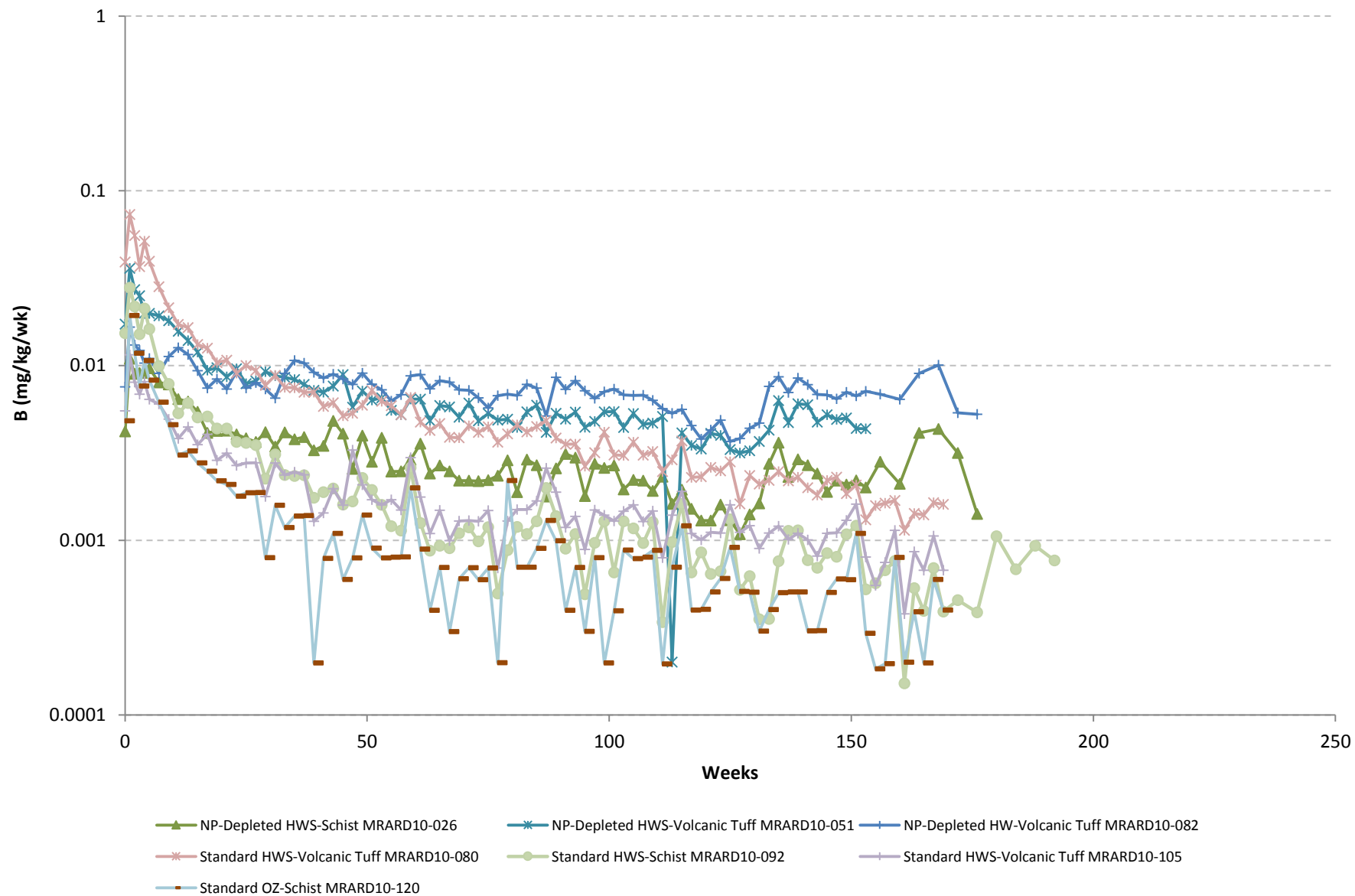
Arsenic - Hanging Wall



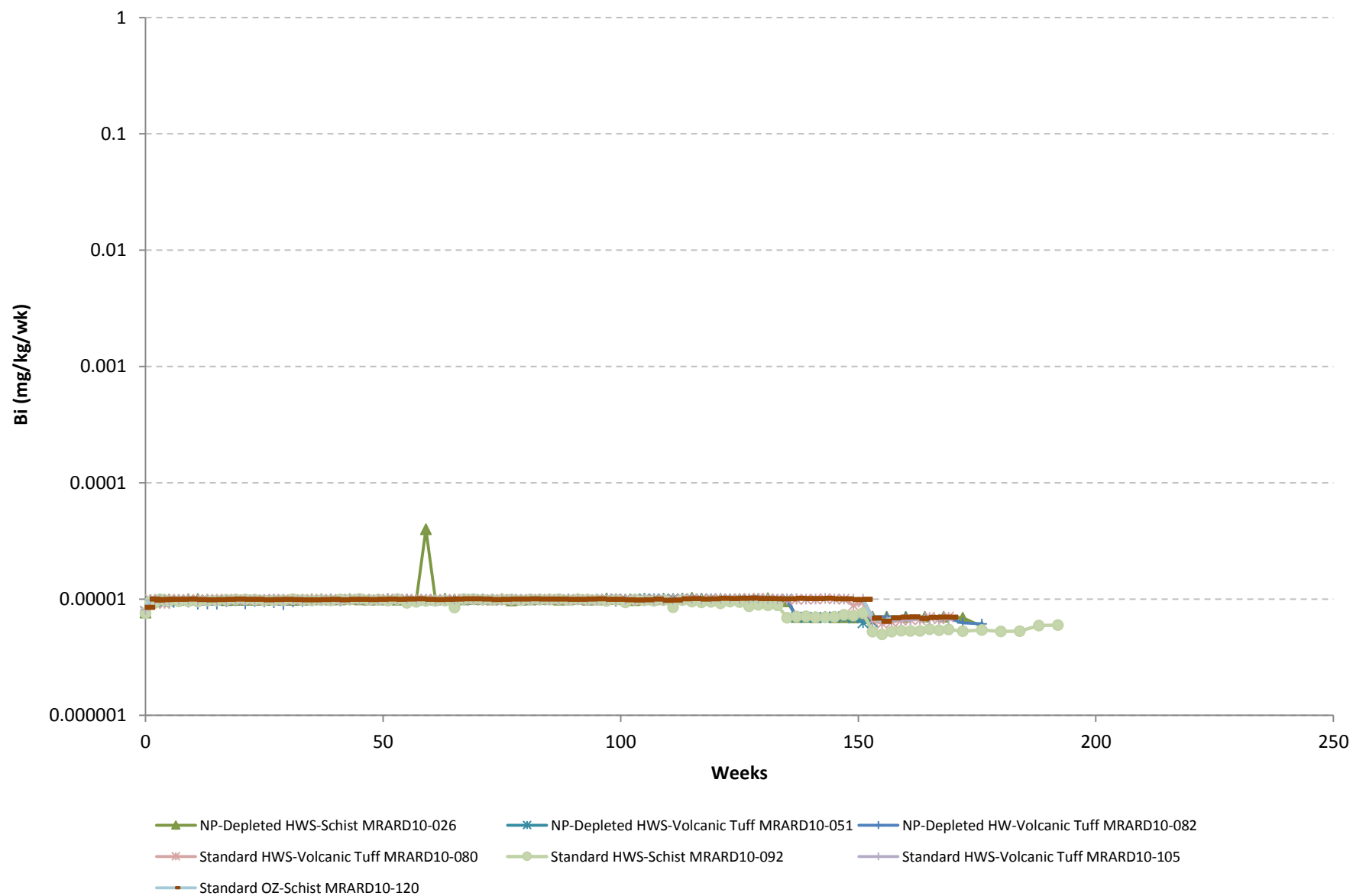
Barium - Hanging Wall



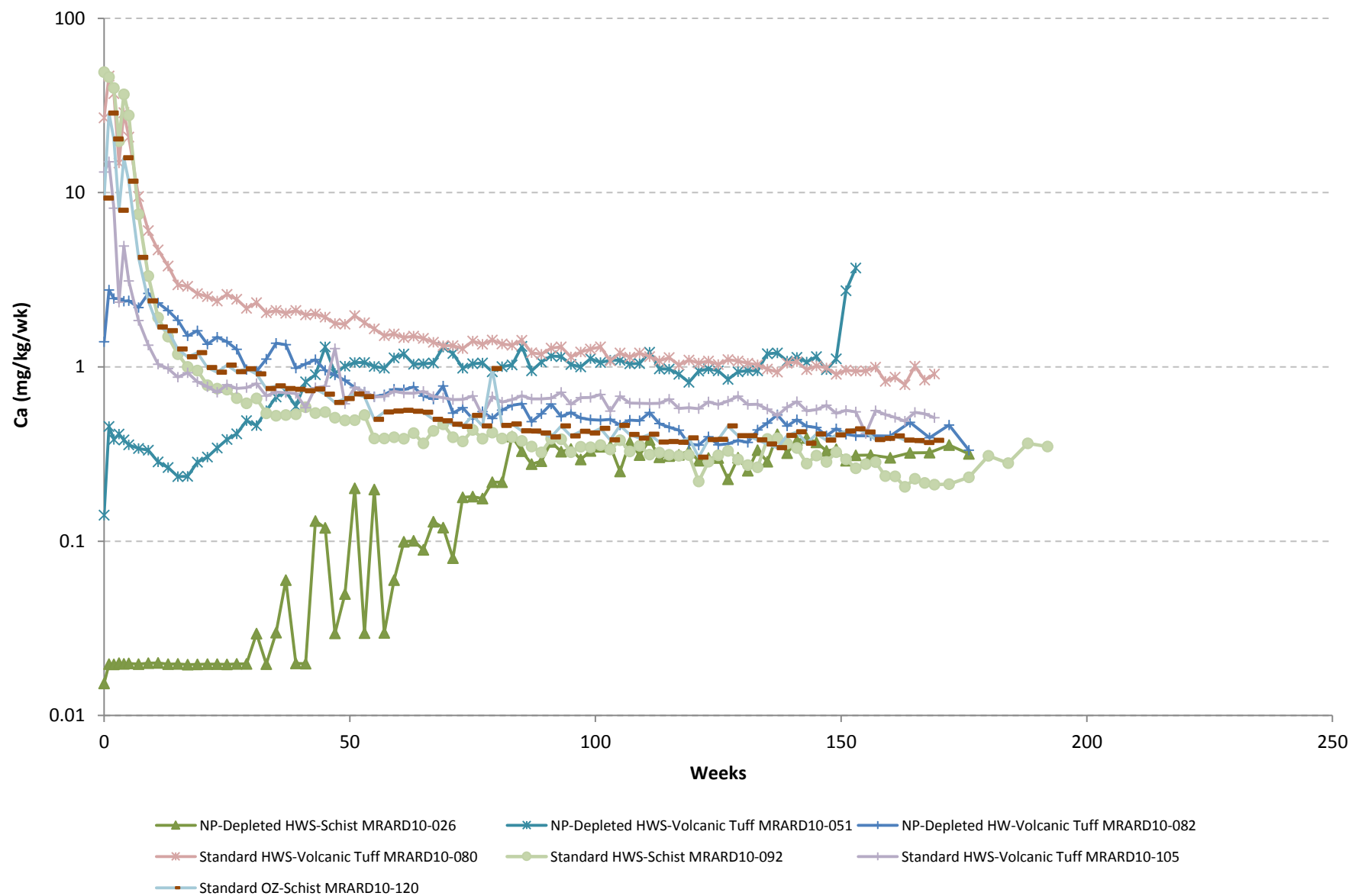
Boron - Hanging Wall



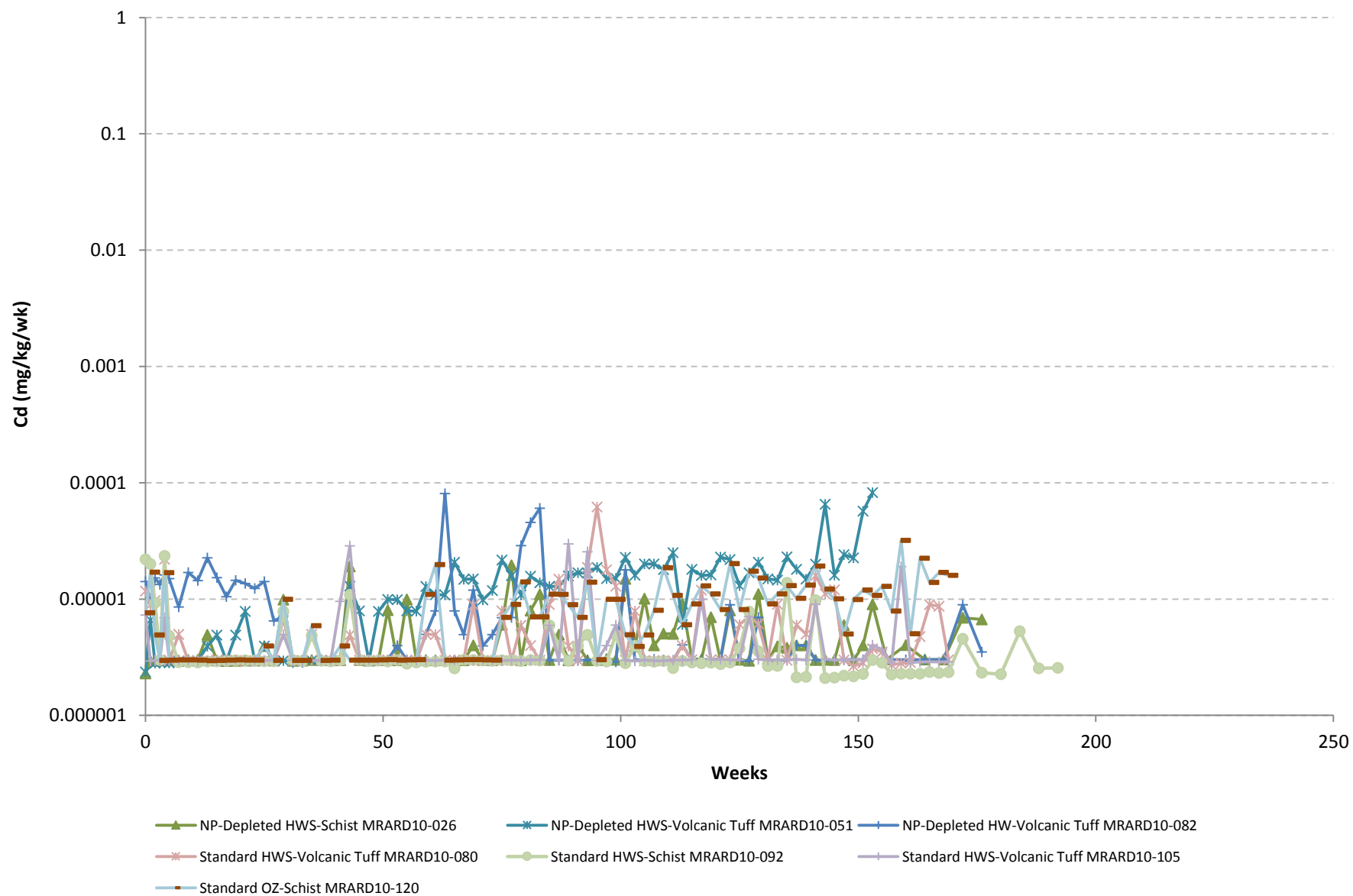
Bismuth - Hanging Wall



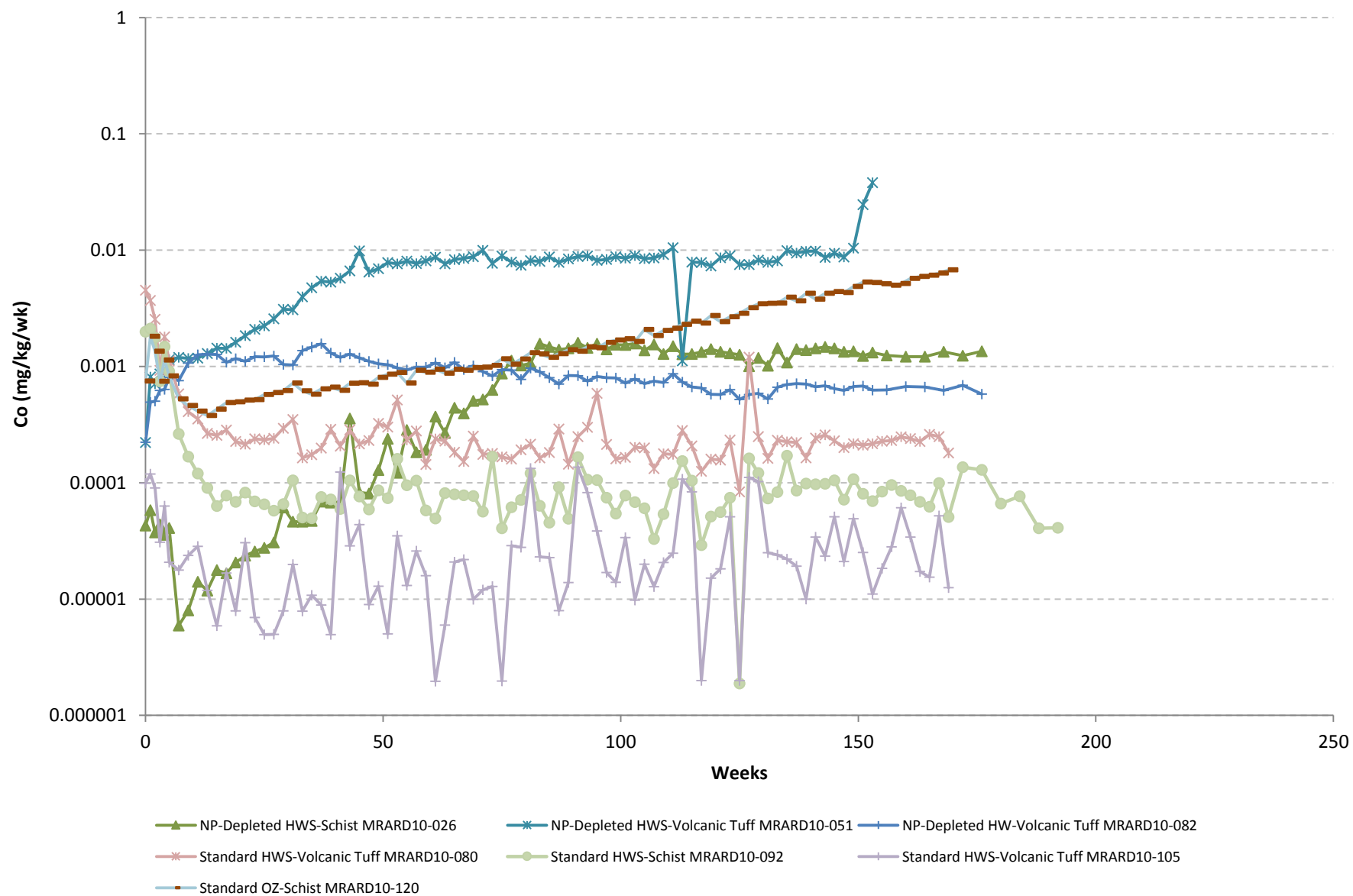
Calcium - Hanging Wall



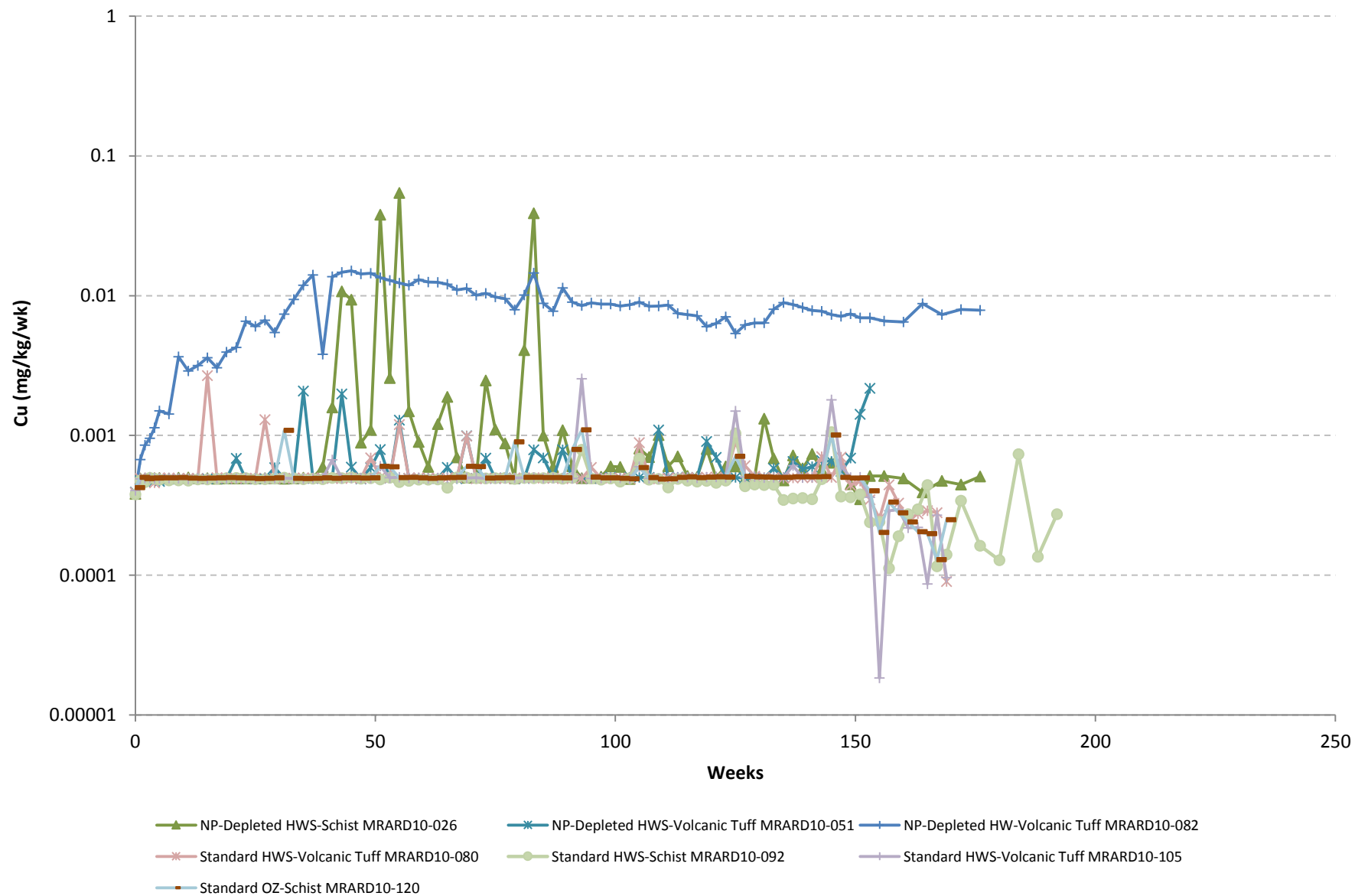
Cadmium - Hanging Wall



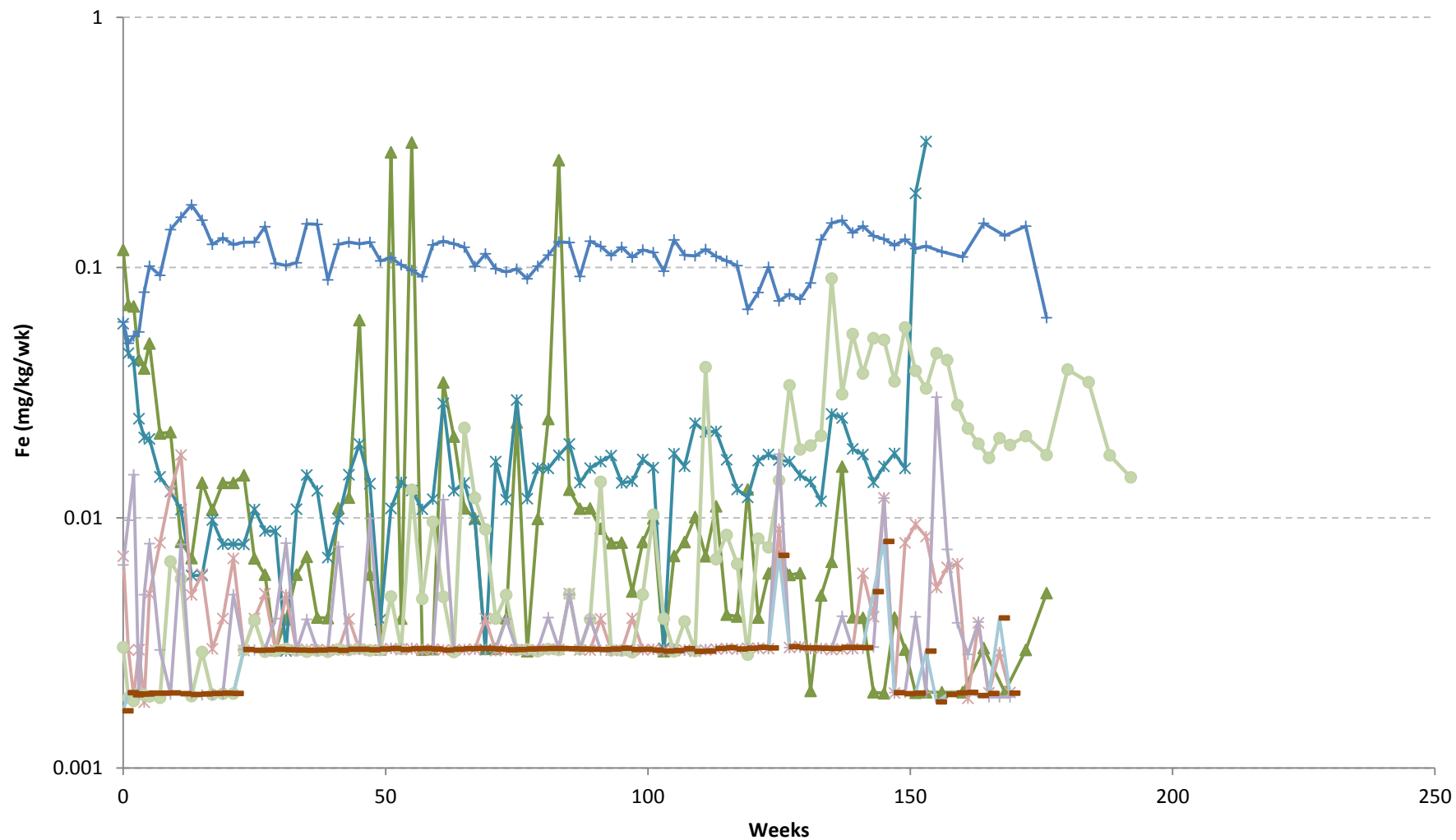
Cobalt - Hanging Wall



Copper - Hanging Wall

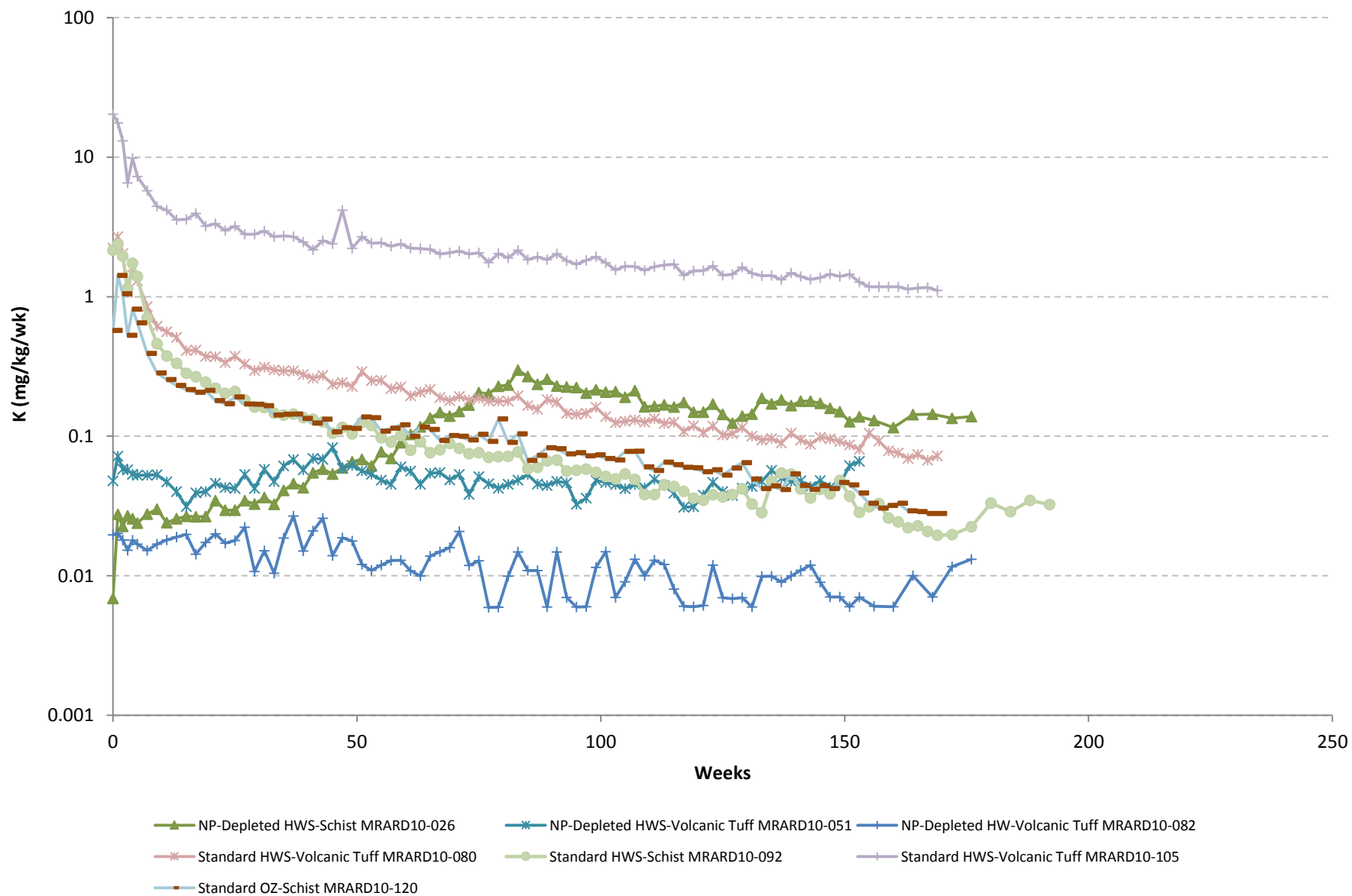


Iron - Hanging Wall

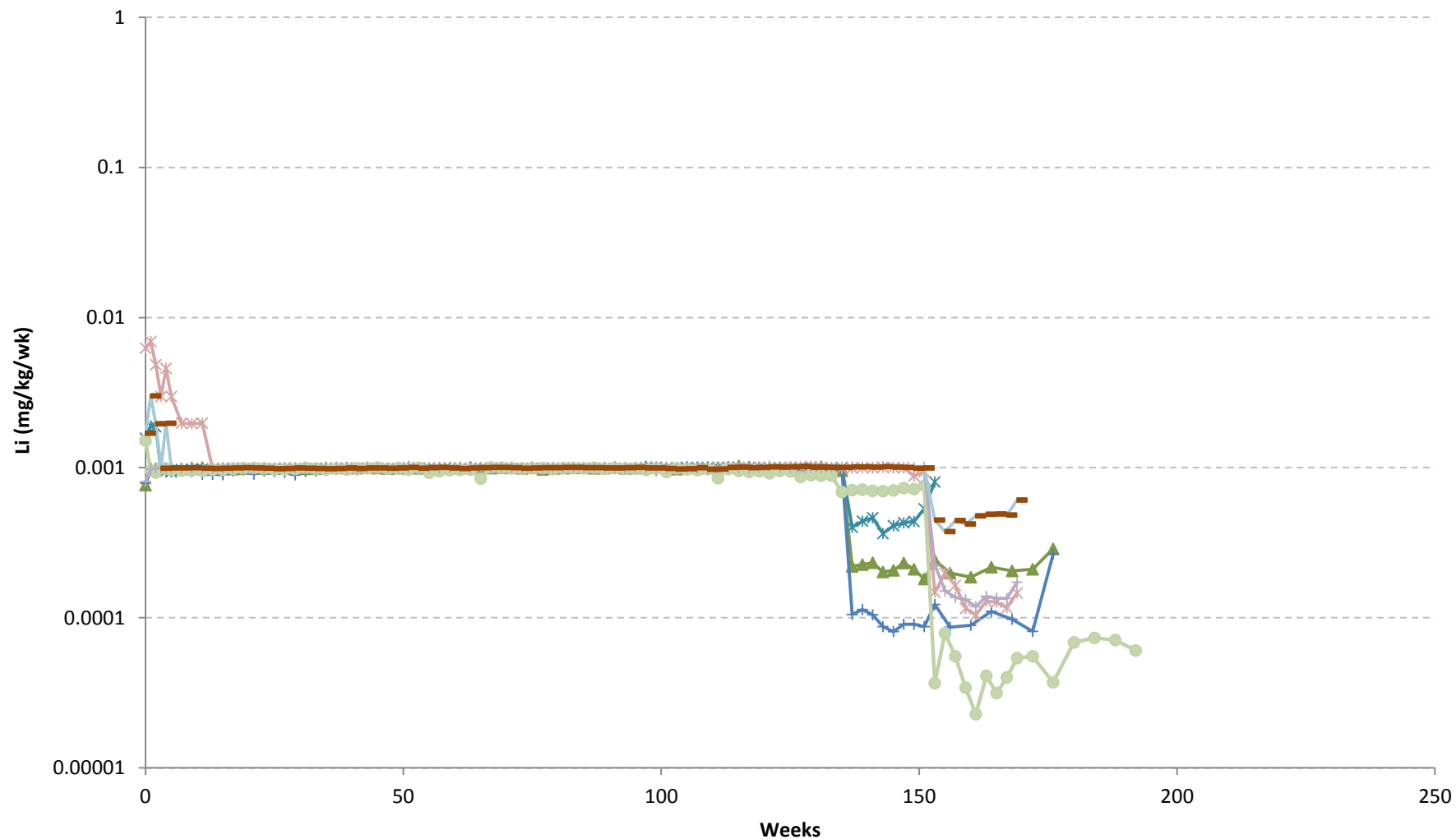


- NP-Depleted HWS-Schist MRARD10-026
- NP-Depleted HWS-Volcanic Tuff MRARD10-051
- NP-Depleted HW-Volcanic Tuff MRARD10-082
- Standard HWS-Volcanic Tuff MRARD10-080
- Standard HWS-Schist MRARD10-092
- Standard HWS-Volcanic Tuff MRARD10-105
- Standard OZ-Schist MRARD10-120

Potassium - Hanging Wall

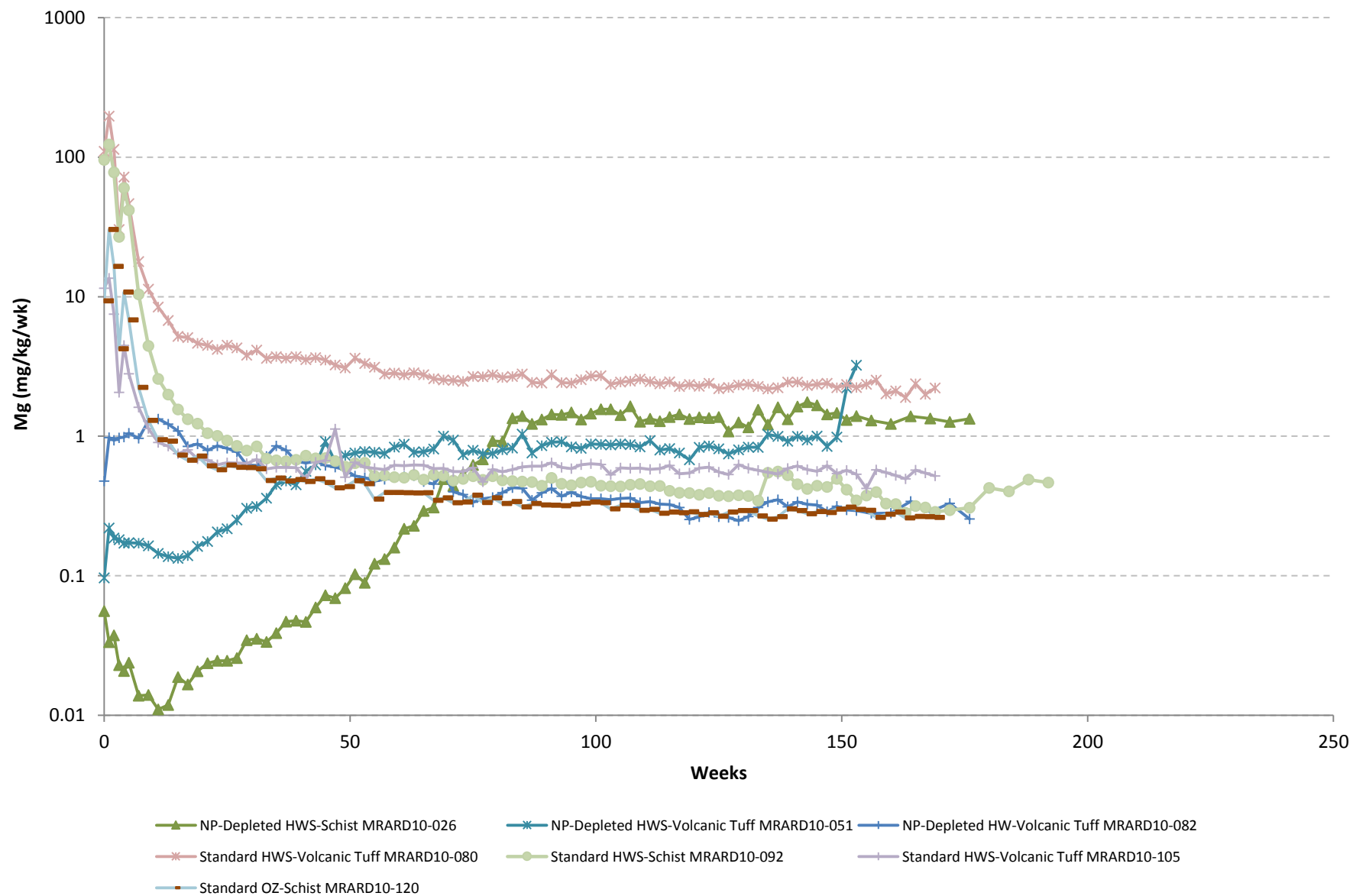


Lithium - Hanging Wall

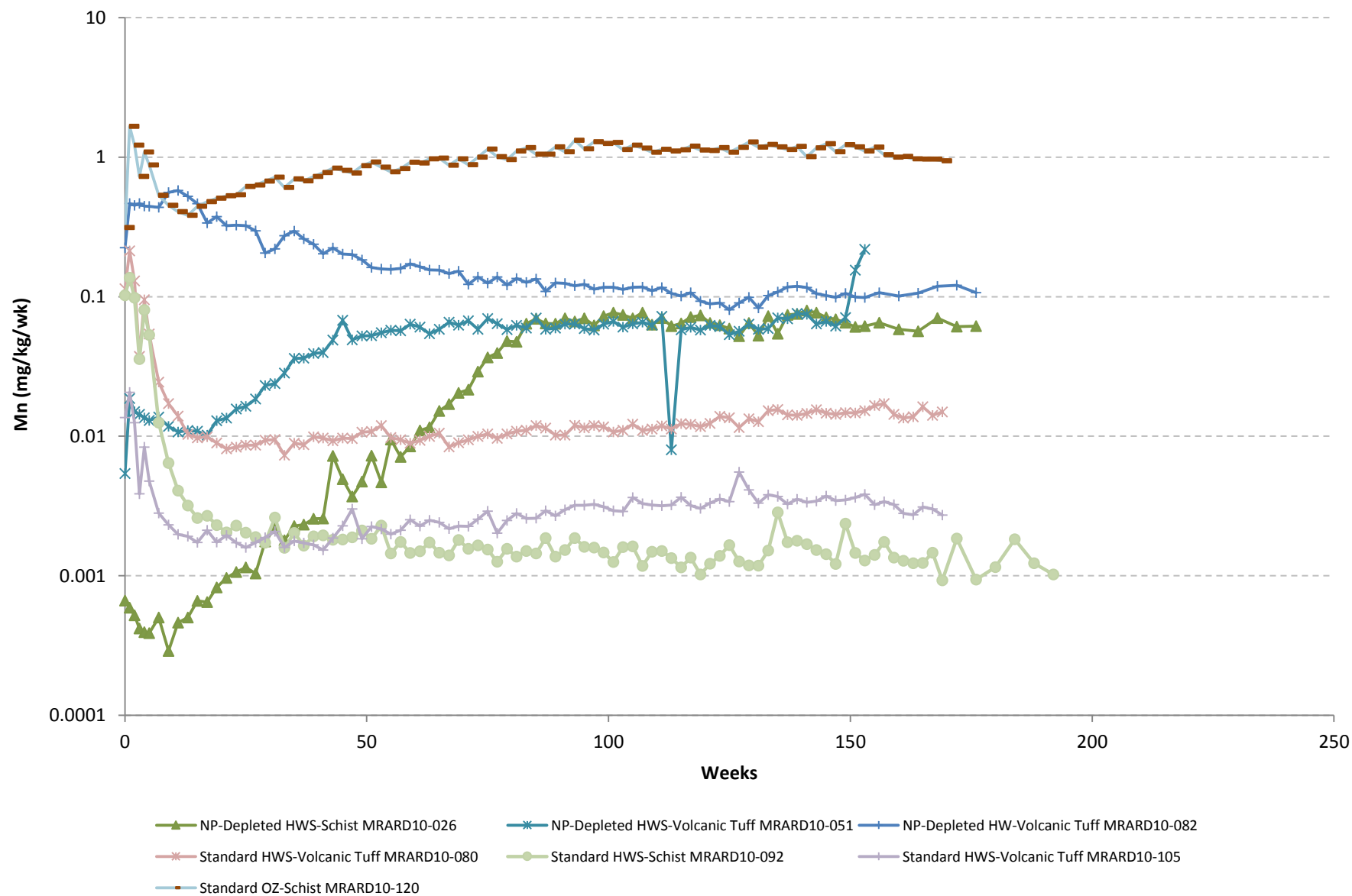


- NP-Depleted HWS-Schist MRARD10-026
- NP-Depleted HWS-Volcanic Tuff MRARD10-051
- NP-Depleted HW-Volcanic Tuff MRARD10-082
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- Standard HWS-Schist MRARD10-092
- Standard HWS-Volcanic Tuff MRARD10-105
- Standard OZ-Schist MRARD10-120

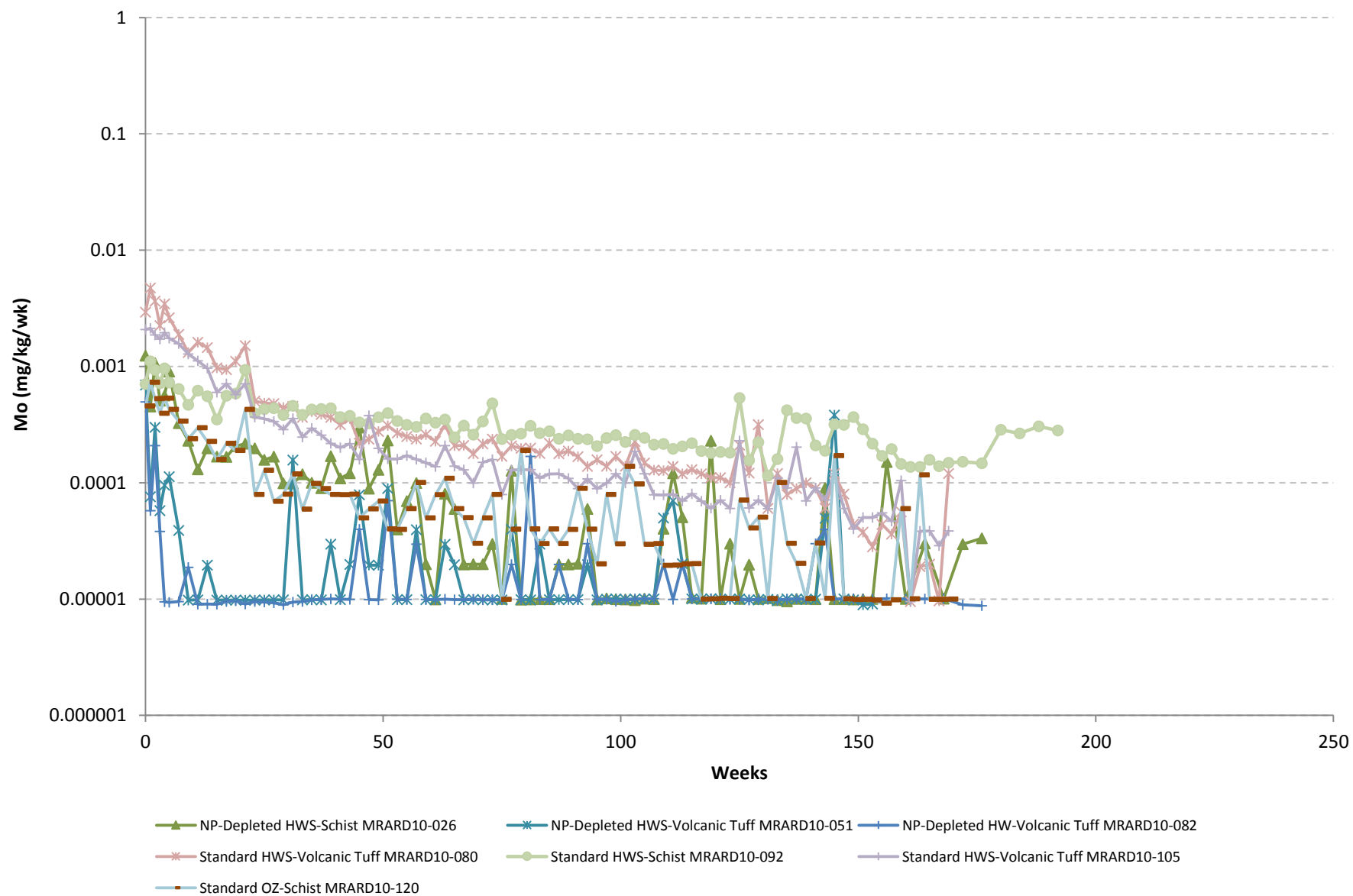
Magnesium - Hanging Wall



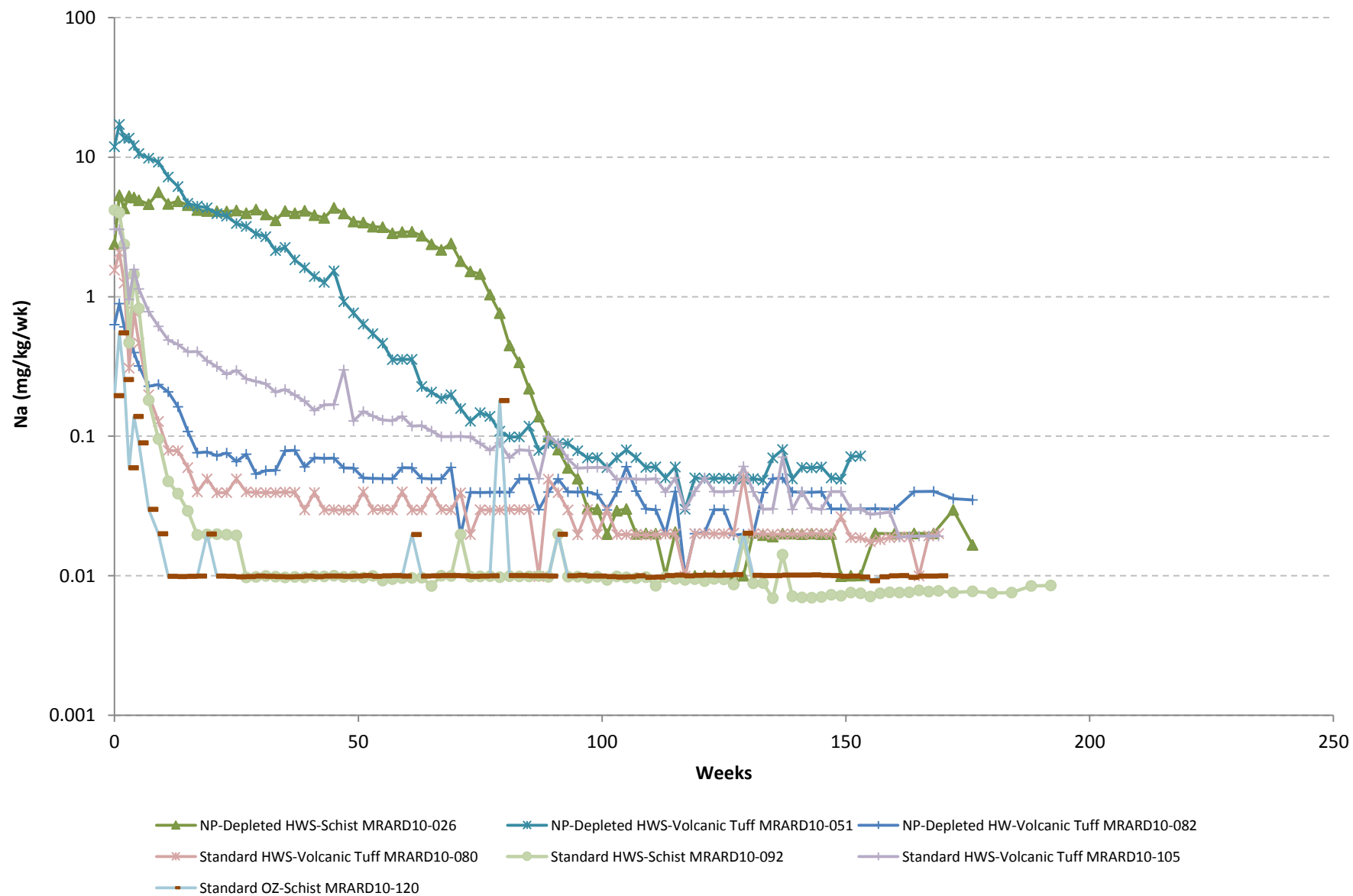
Manganese - Hanging Wall



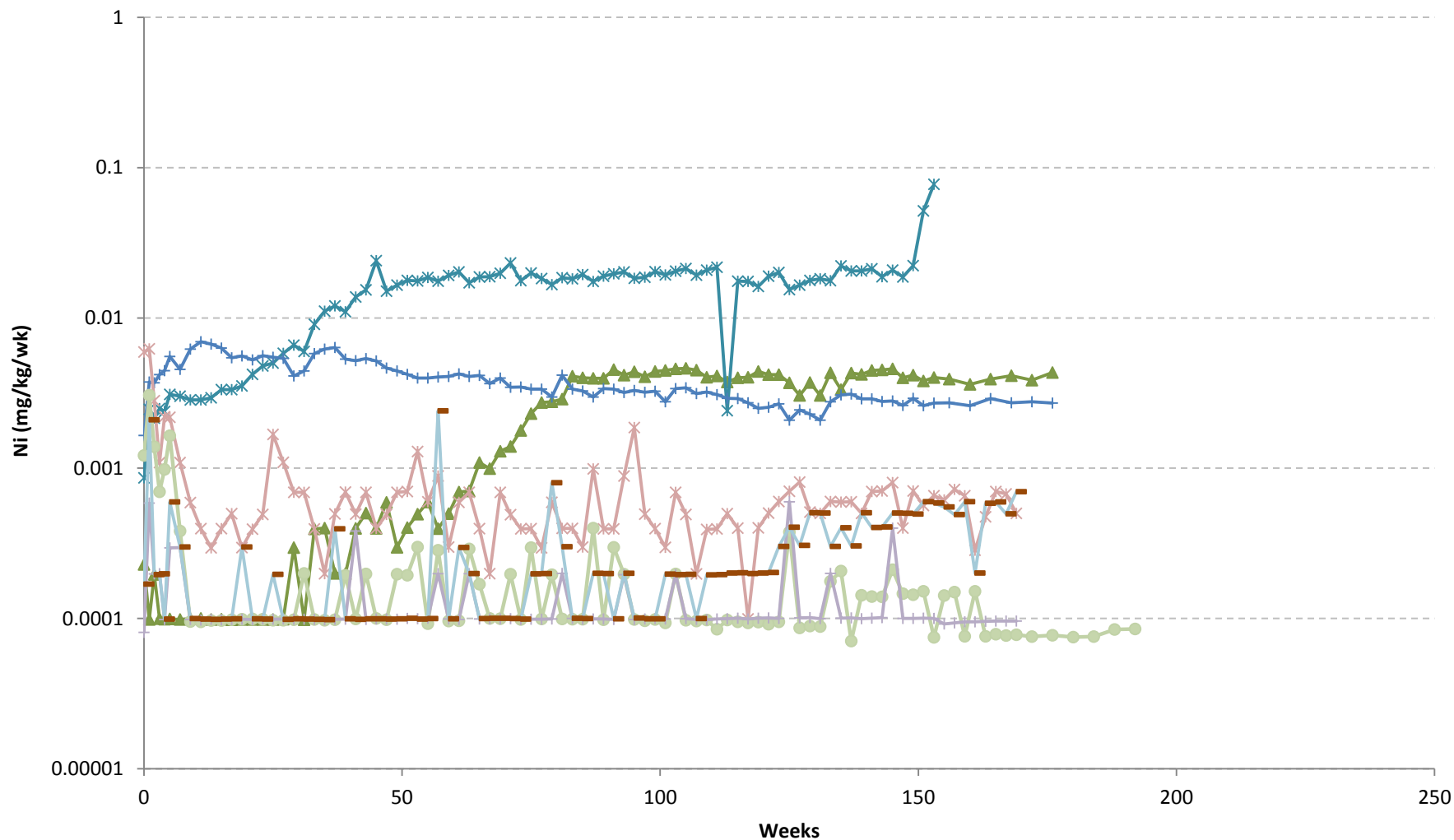
Molybdenum - Hanging Wall



Sodium - Hanging Wall

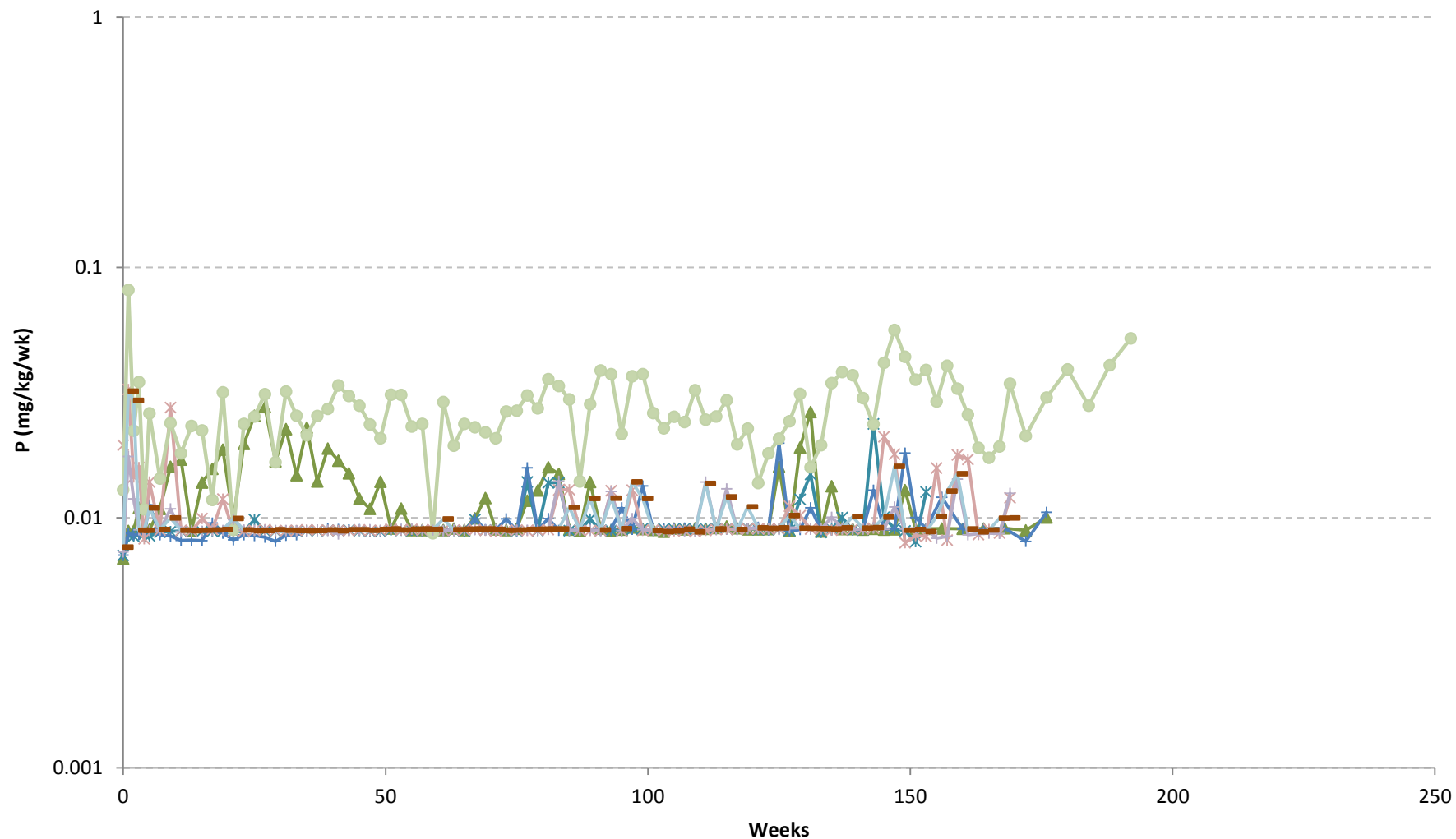


Nickel - Hanging Wall



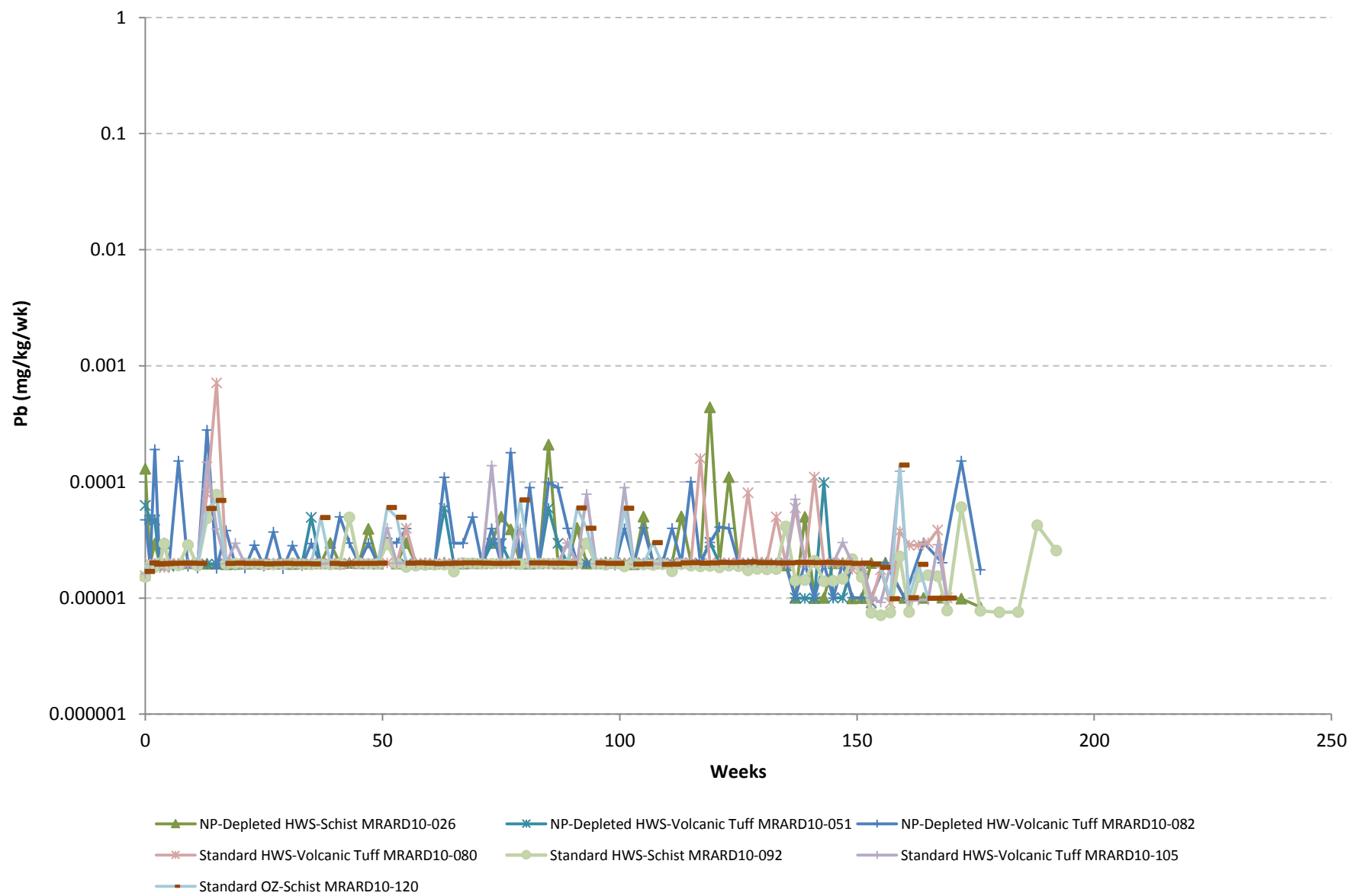
NP-Depleted HWS-Schist MRARD10-026 NP-Depleted HWS-Volcanic Tuff MRARD10-051 NP-Depleted HW-Volcanic Tuff MRARD10-082
 Standard HWS-Volcanic Tuff MRARD10-080 Standard HWS-Schist MRARD10-092 Standard HWS-Volcanic Tuff MRARD10-105
 Standard OZ-Schist MRARD10-120

Phosphorus - Hanging Wall

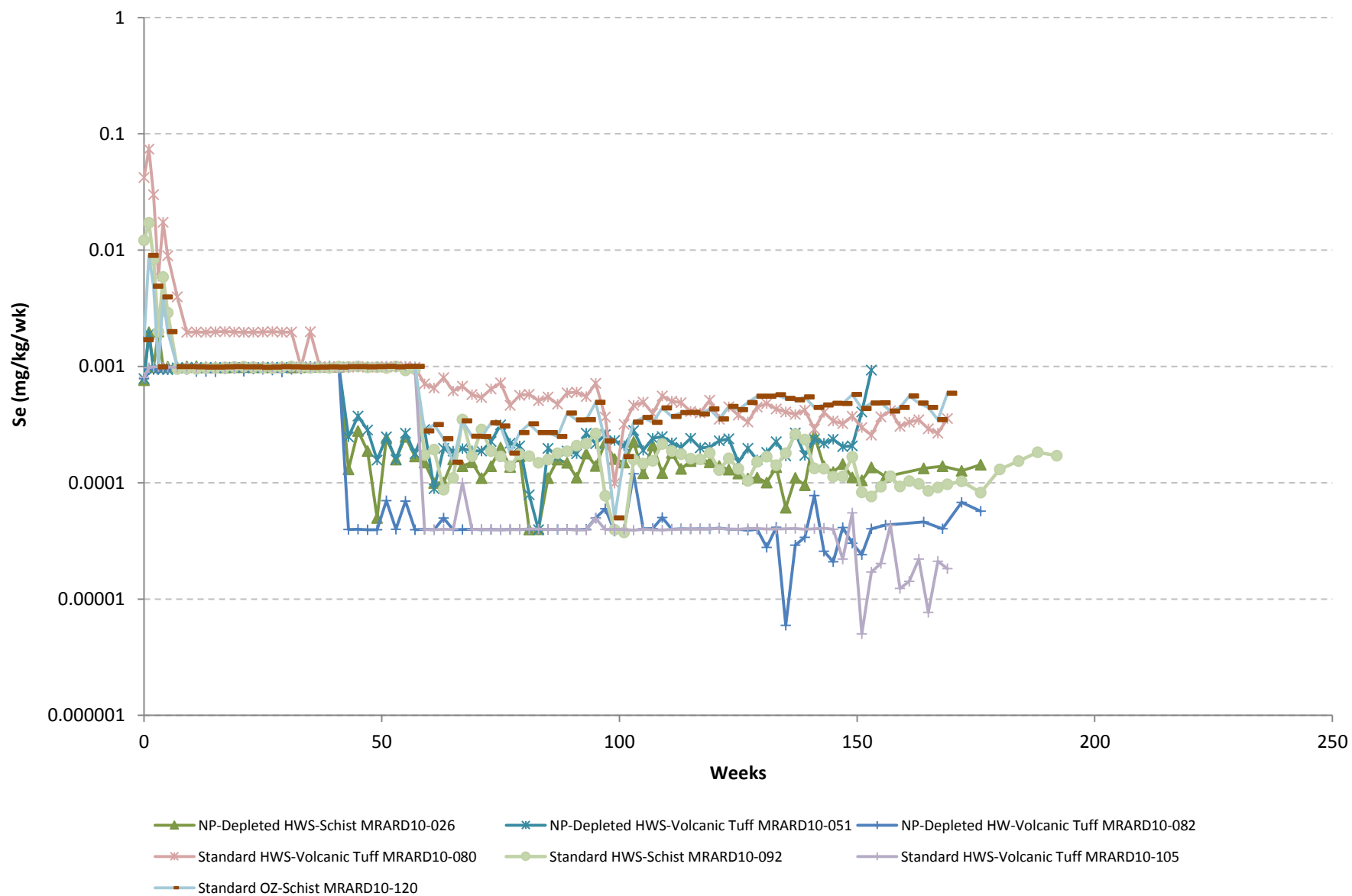


- NP-Depleted HWS-Schist MRARD10-026
- Standard HWS-Volcanic Tuff MRARD10-080
- Standard OZ-Schist MRARD10-120
- NP-Depleted HWS-Volcanic Tuff MRARD10-051
- Standard HWS-Schist MRARD10-092
- NP-Depleted HW-Volcanic Tuff MRARD10-082
- Standard HWS-Volcanic Tuff MRARD10-105

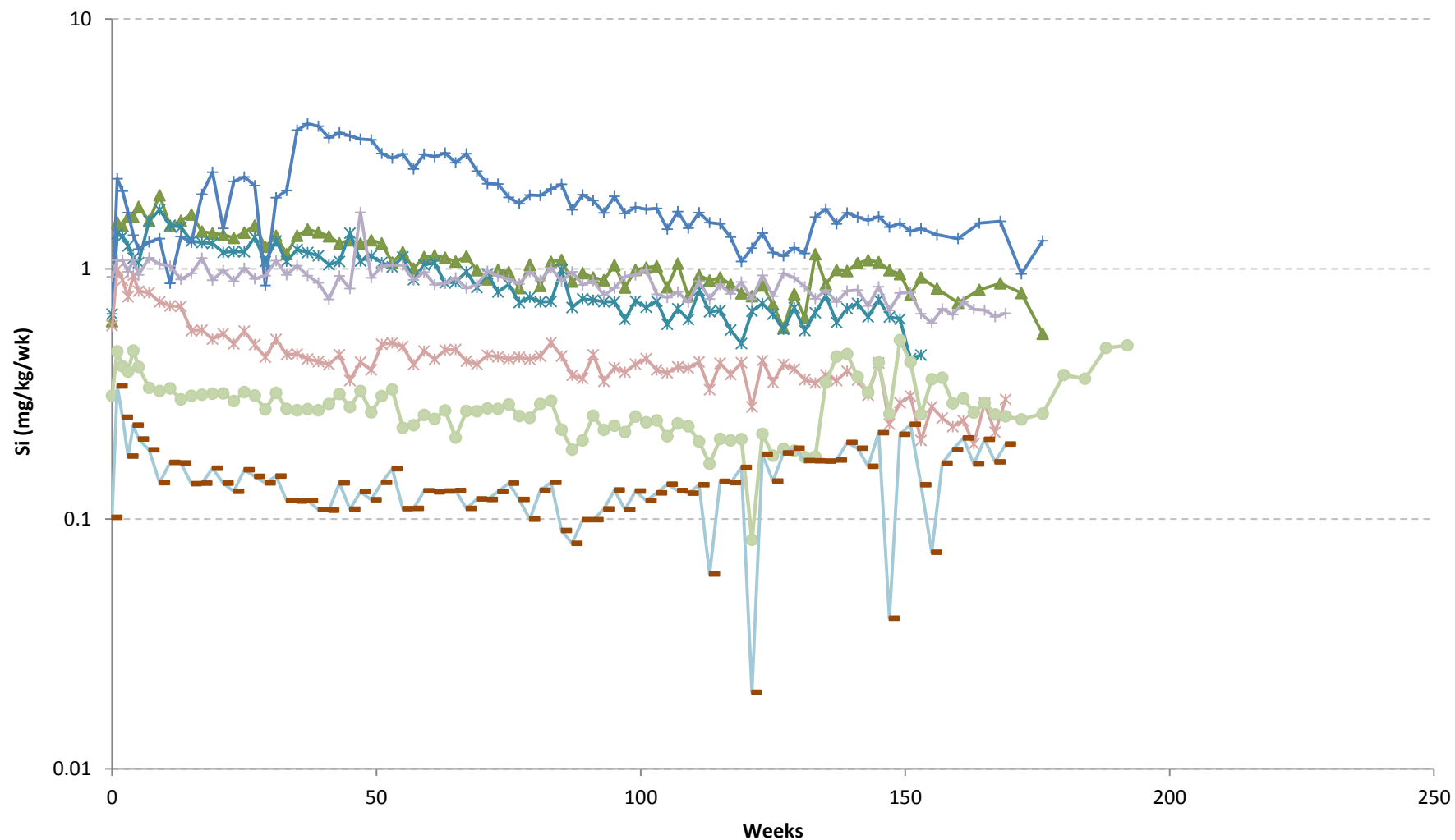
Lead - Hanging Wall



Selenium - Hanging Wall

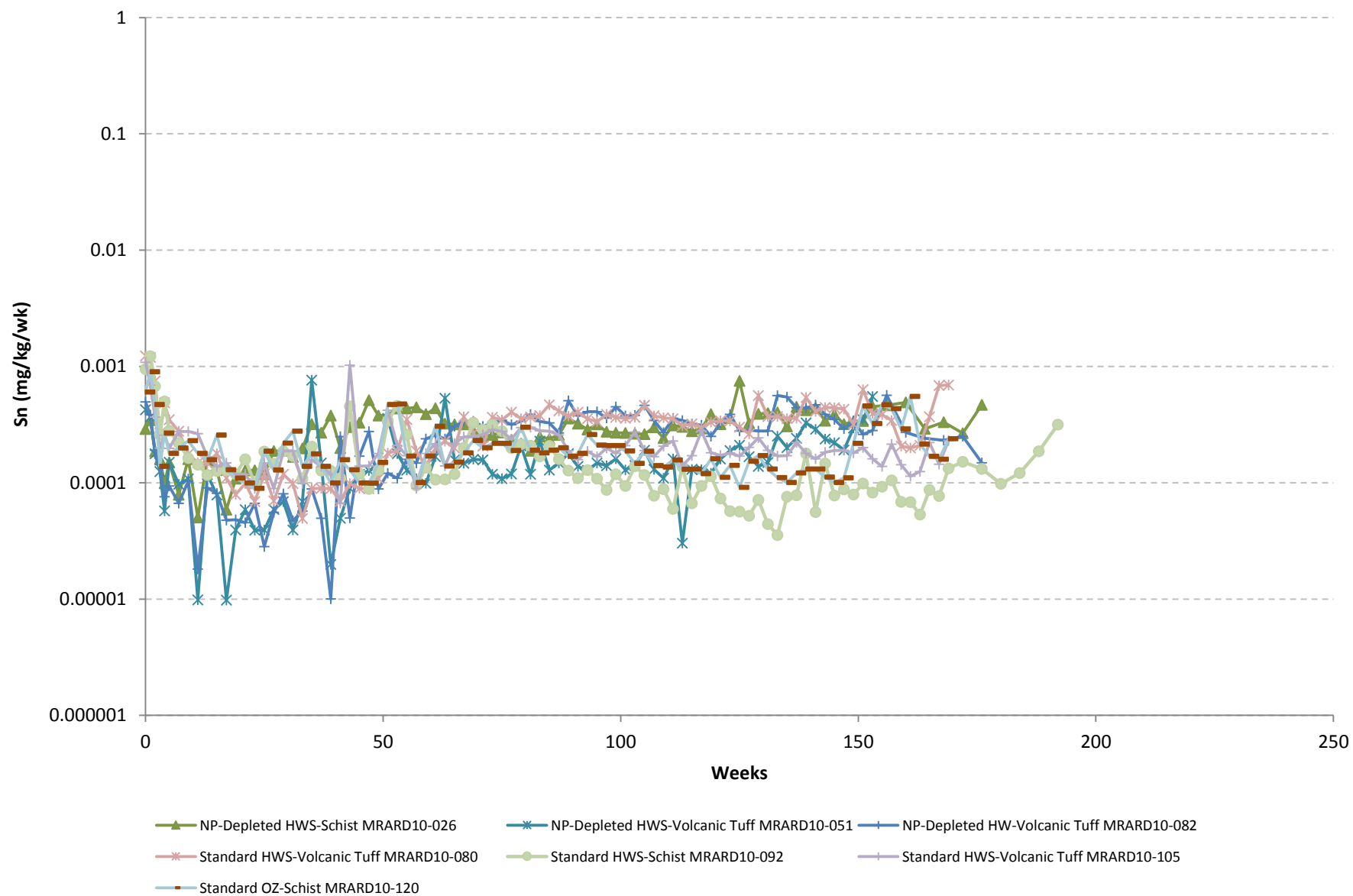


Silicon - Hanging Wall

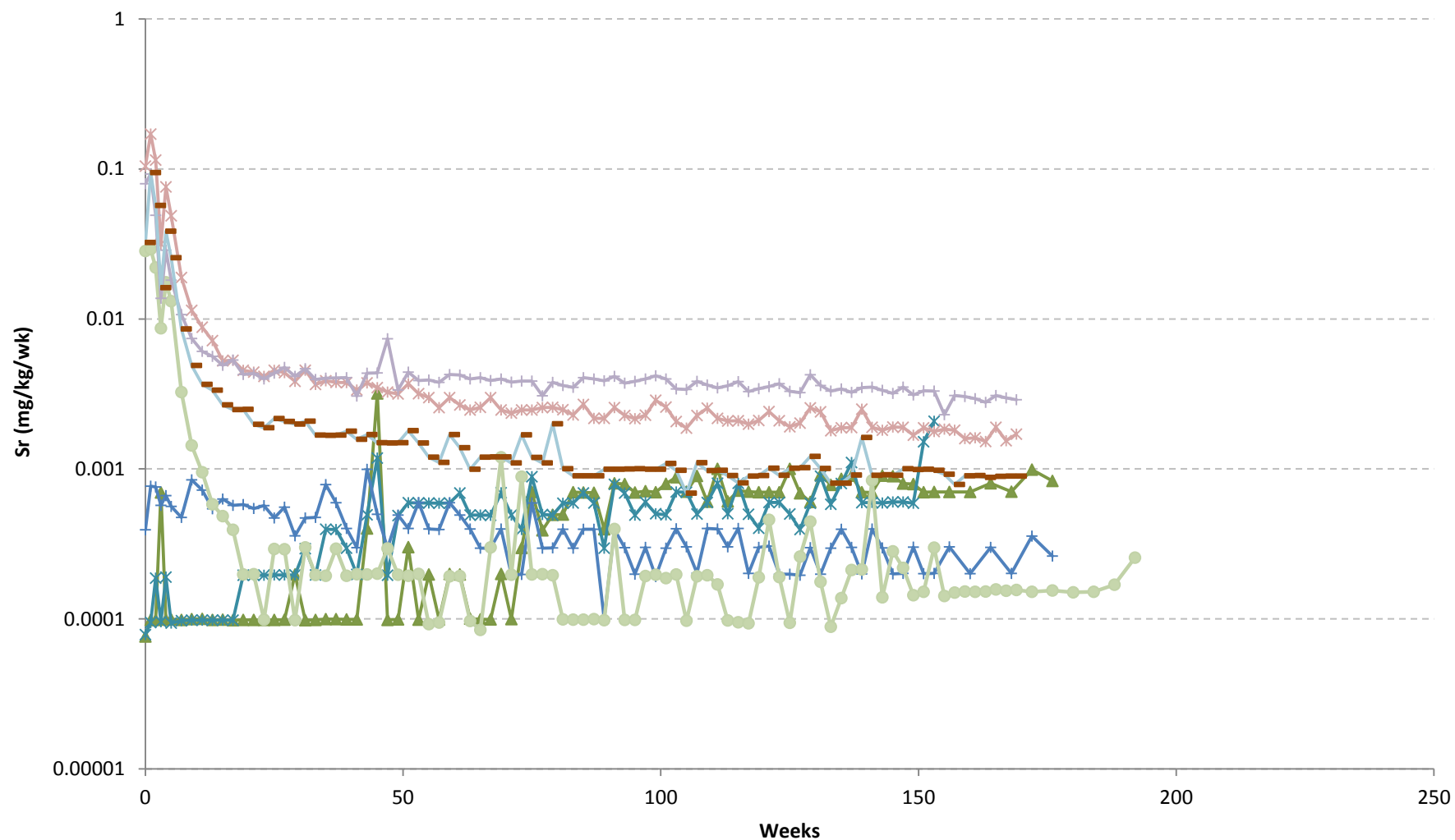


- NP-Depleted HWS-Schist MRARD10-026
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- NP-Depleted HW-Volcanic Tuff MRARD10-082
- Standard HWS-Volcanic Tuff MRARD10-080
- Standard HWS-Schist MRARD10-092
- Standard HWS-Volcanic Tuff MRARD10-105
- Standard OZ-Schist MRARD10-120

Tin - Hanging Wall

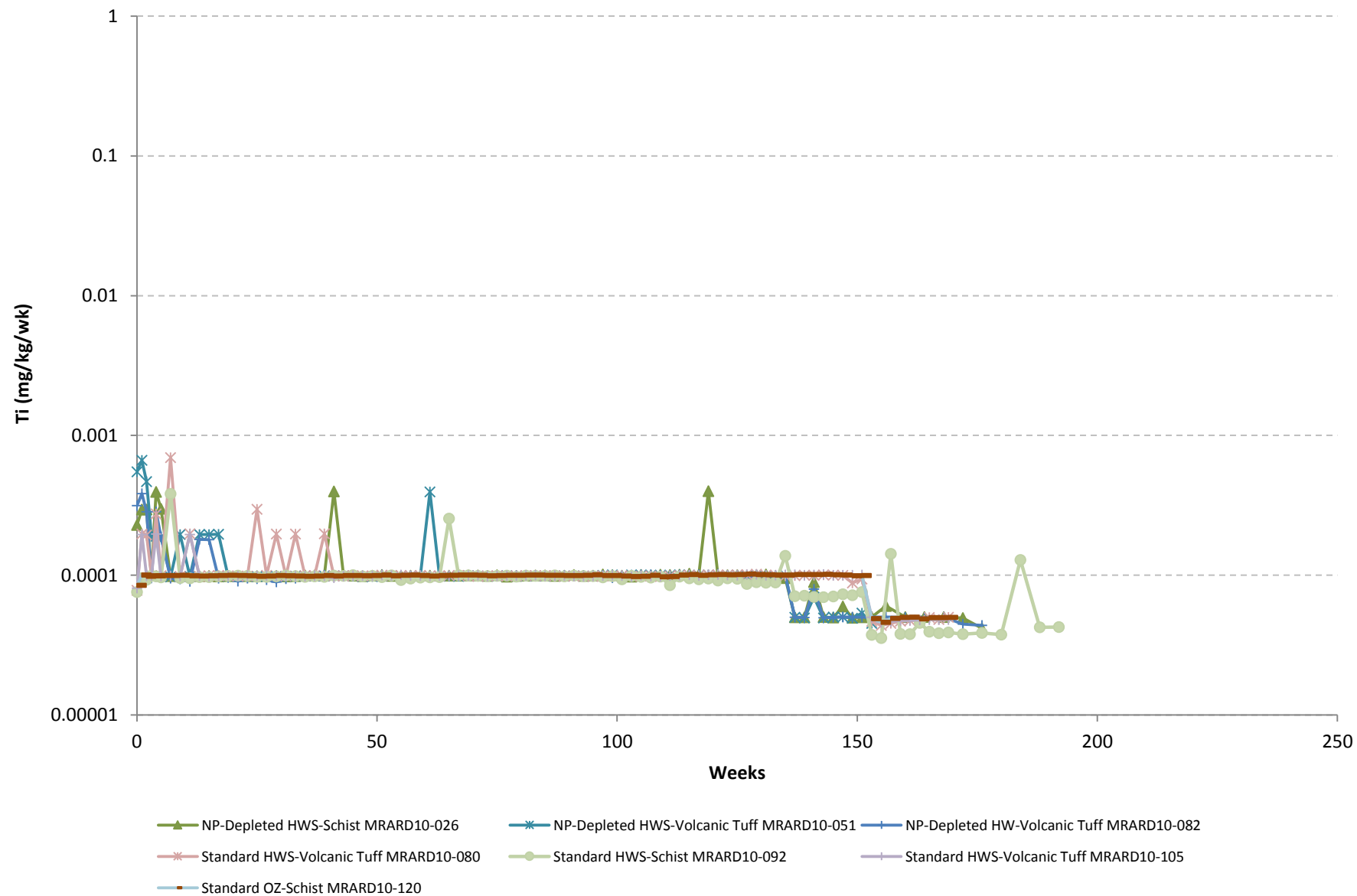


Strontium - Hanging Wall

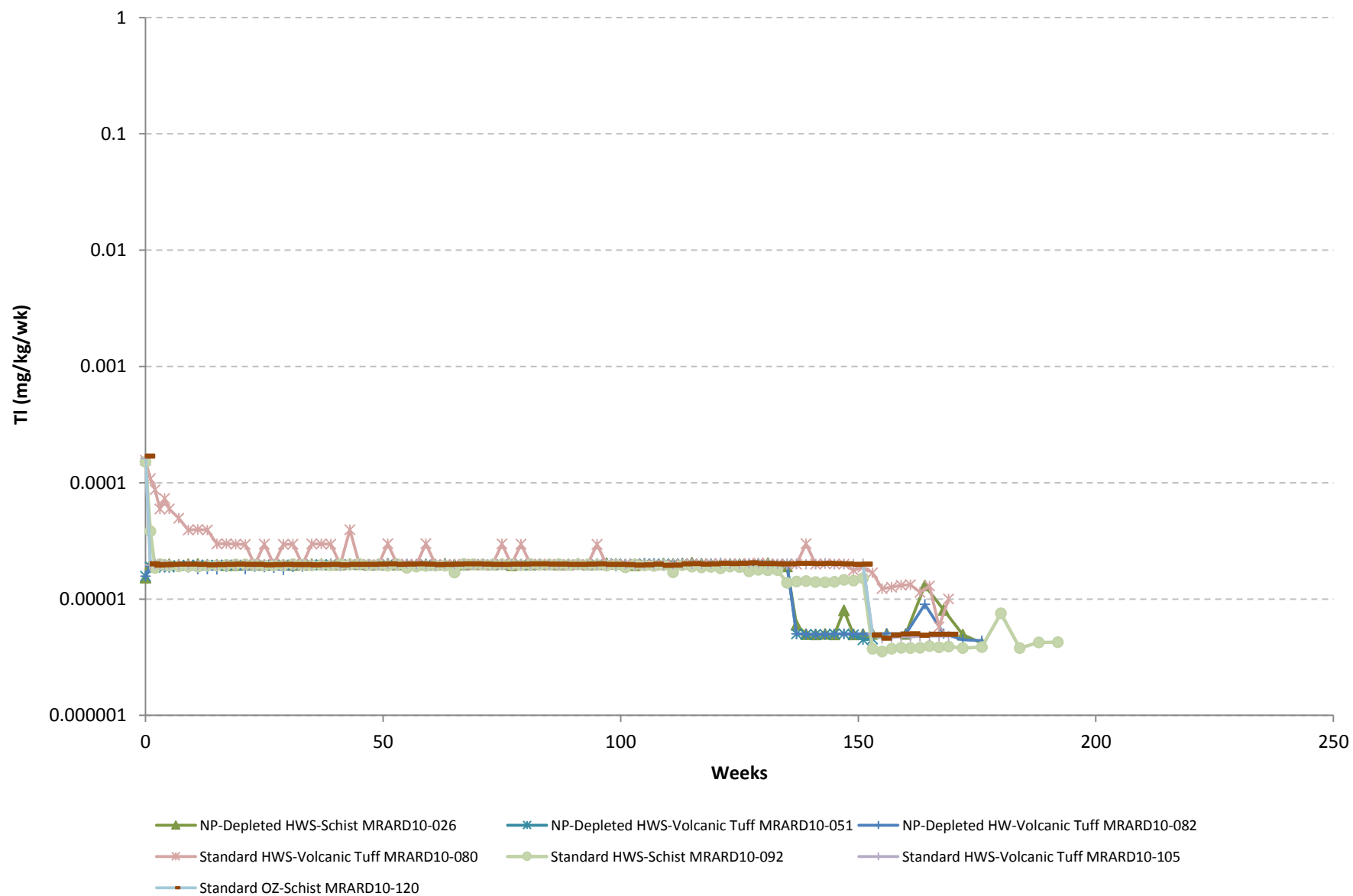


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 Standard OZ-Schist MRARD10-120

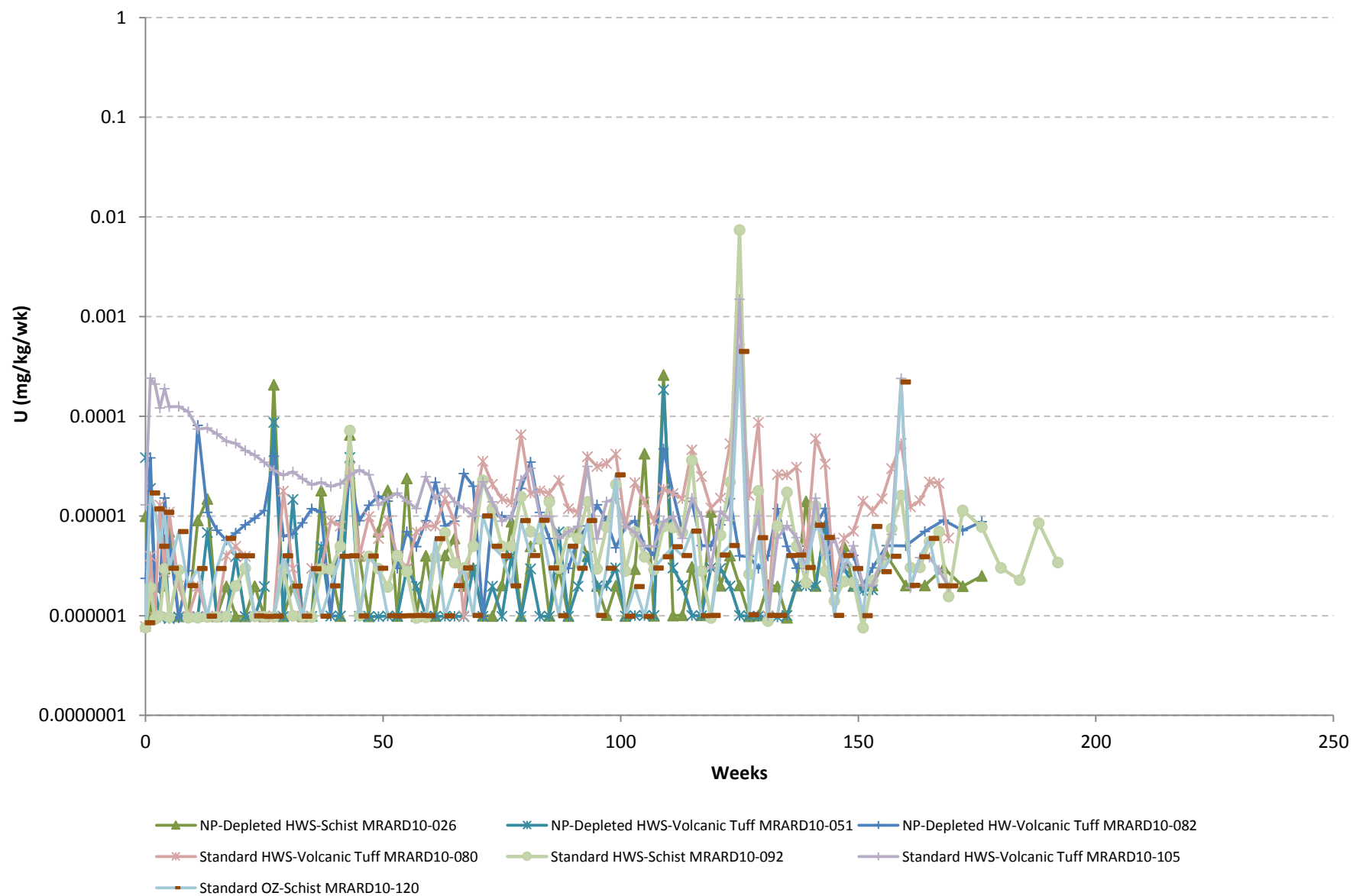
Titanium - Hanging Wall



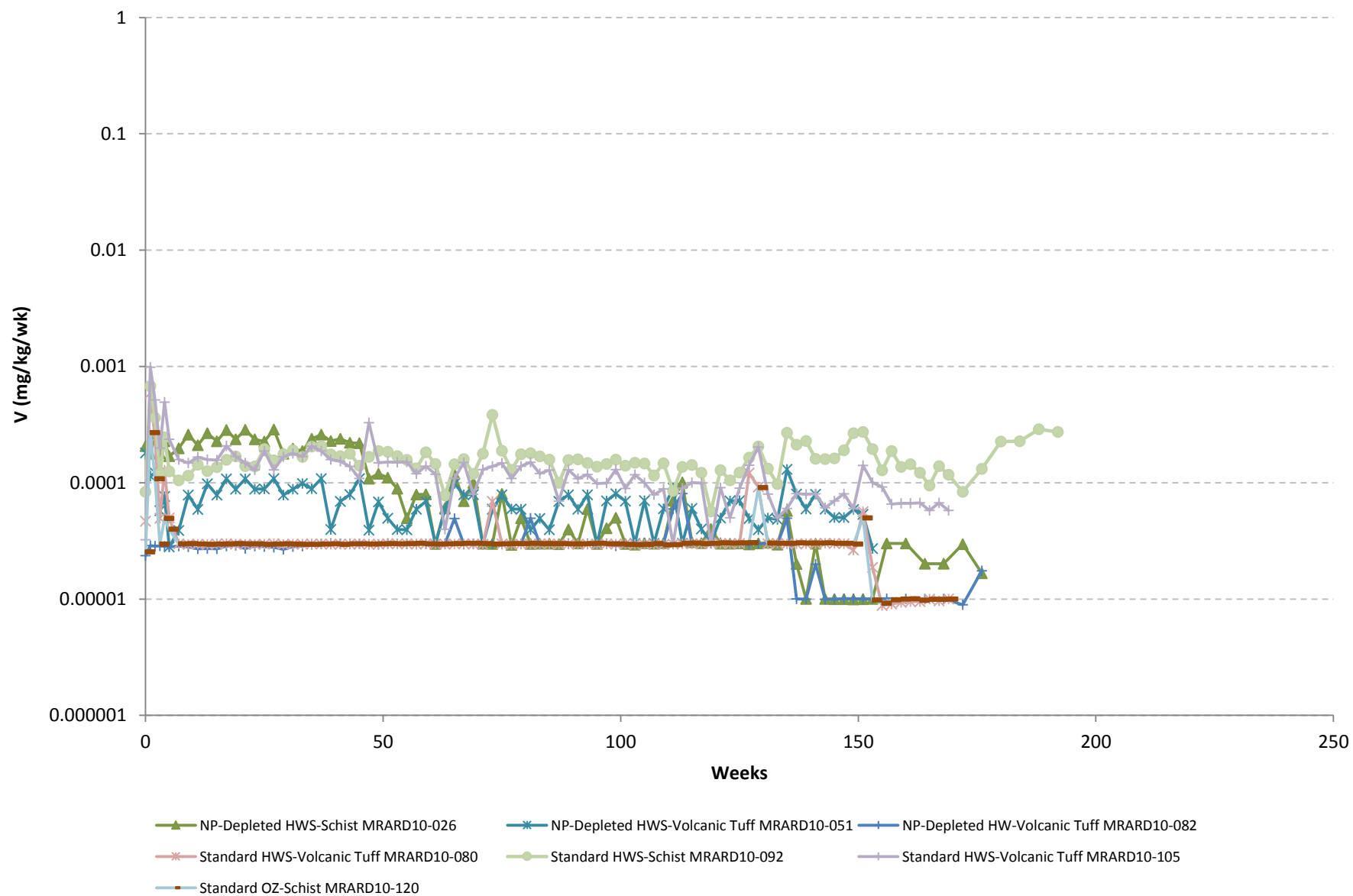
Thallium - Hanging Wall



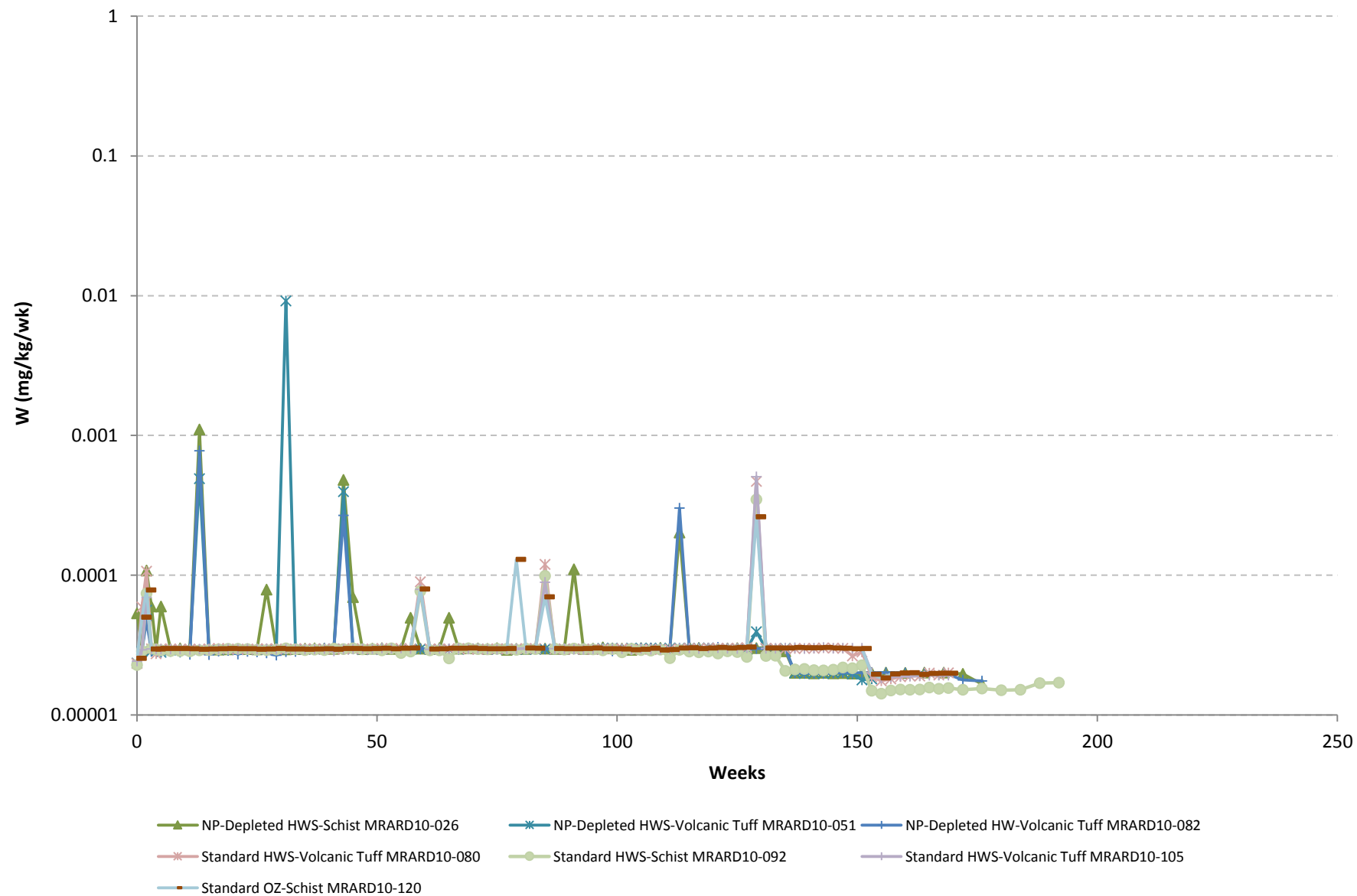
Uranium - Hanging Wall



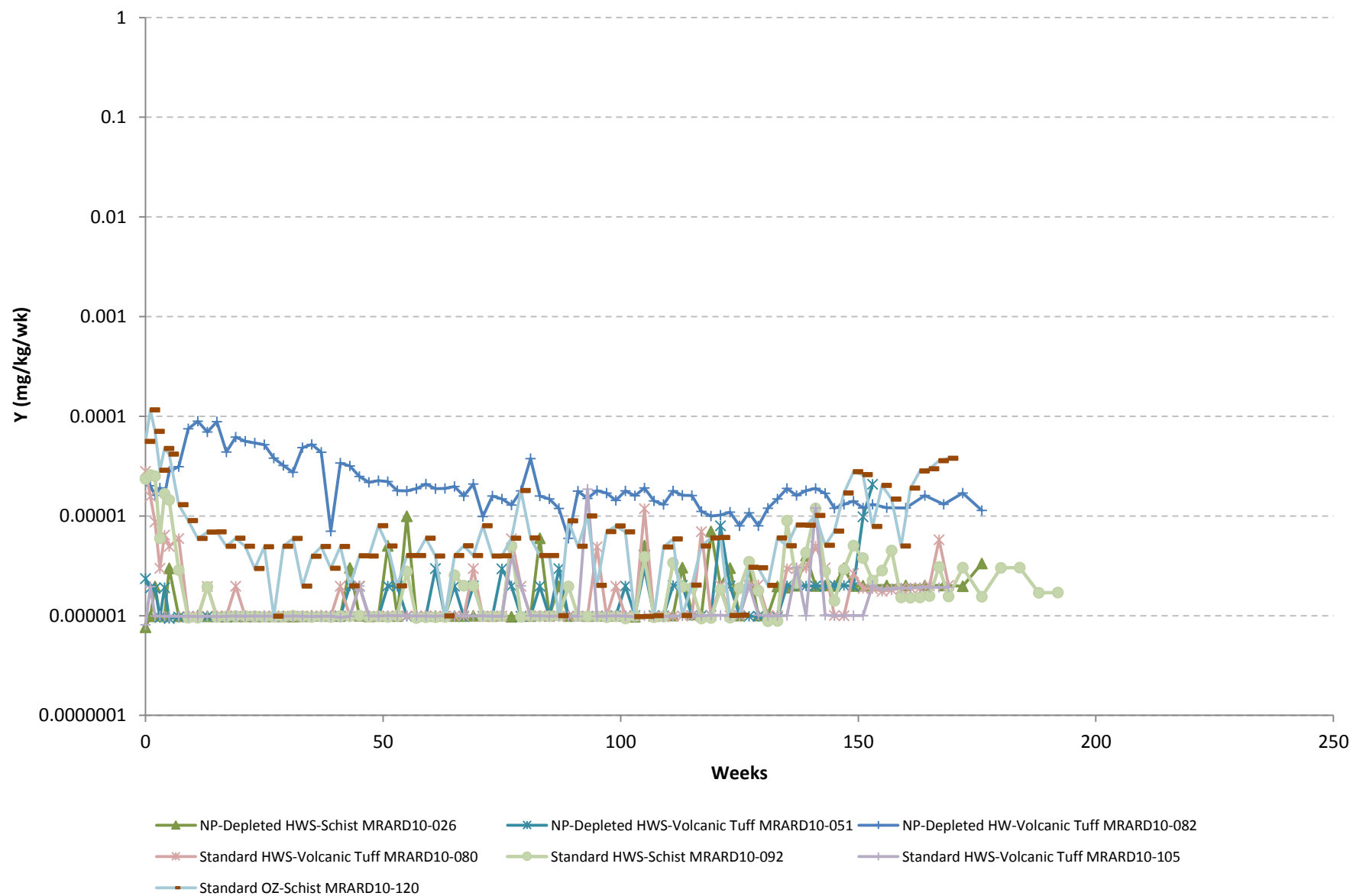
Vanadium - Hanging Wall



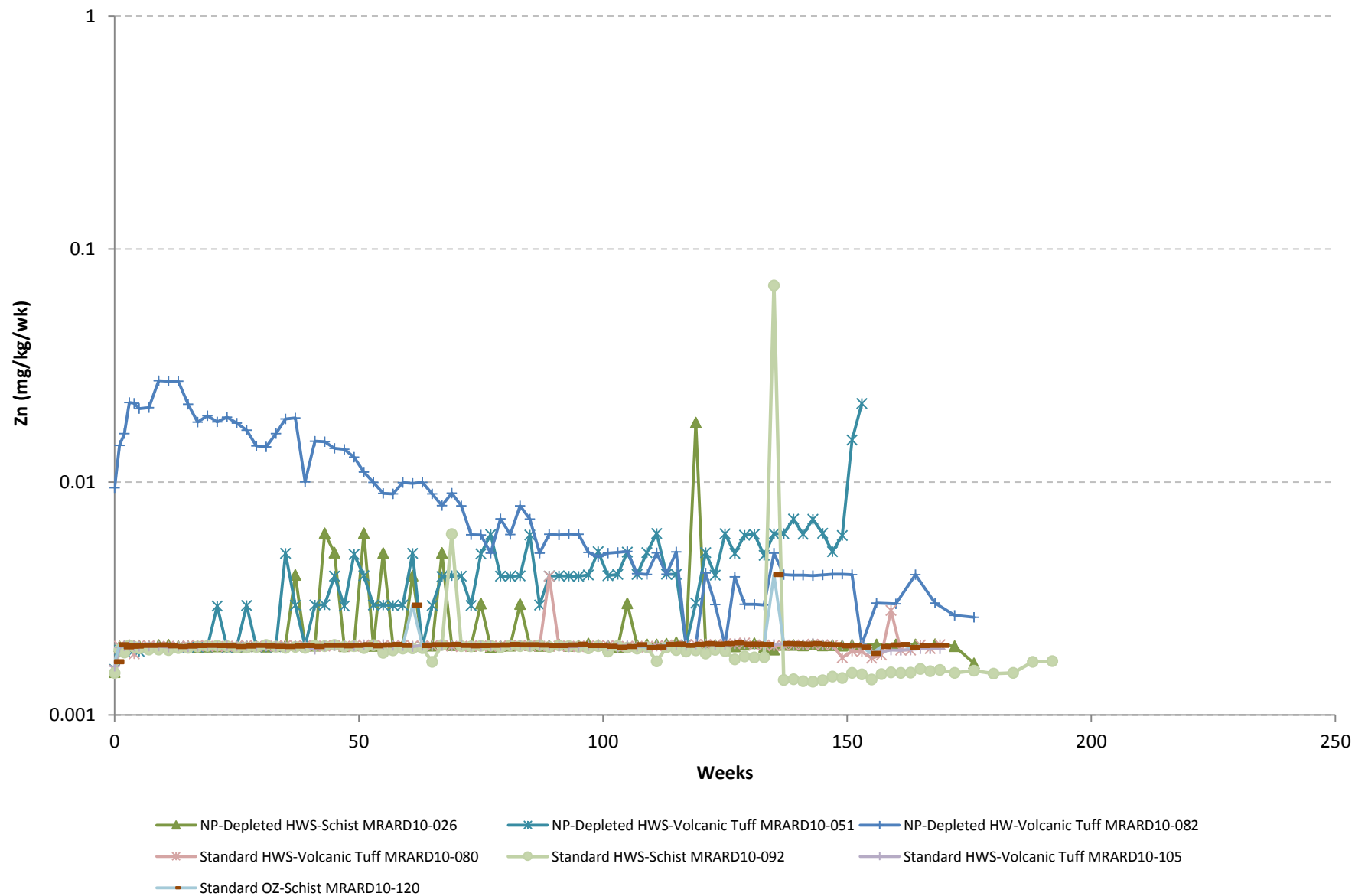
Tungsten - Hanging Wall



Yttrium - Hanging Wall

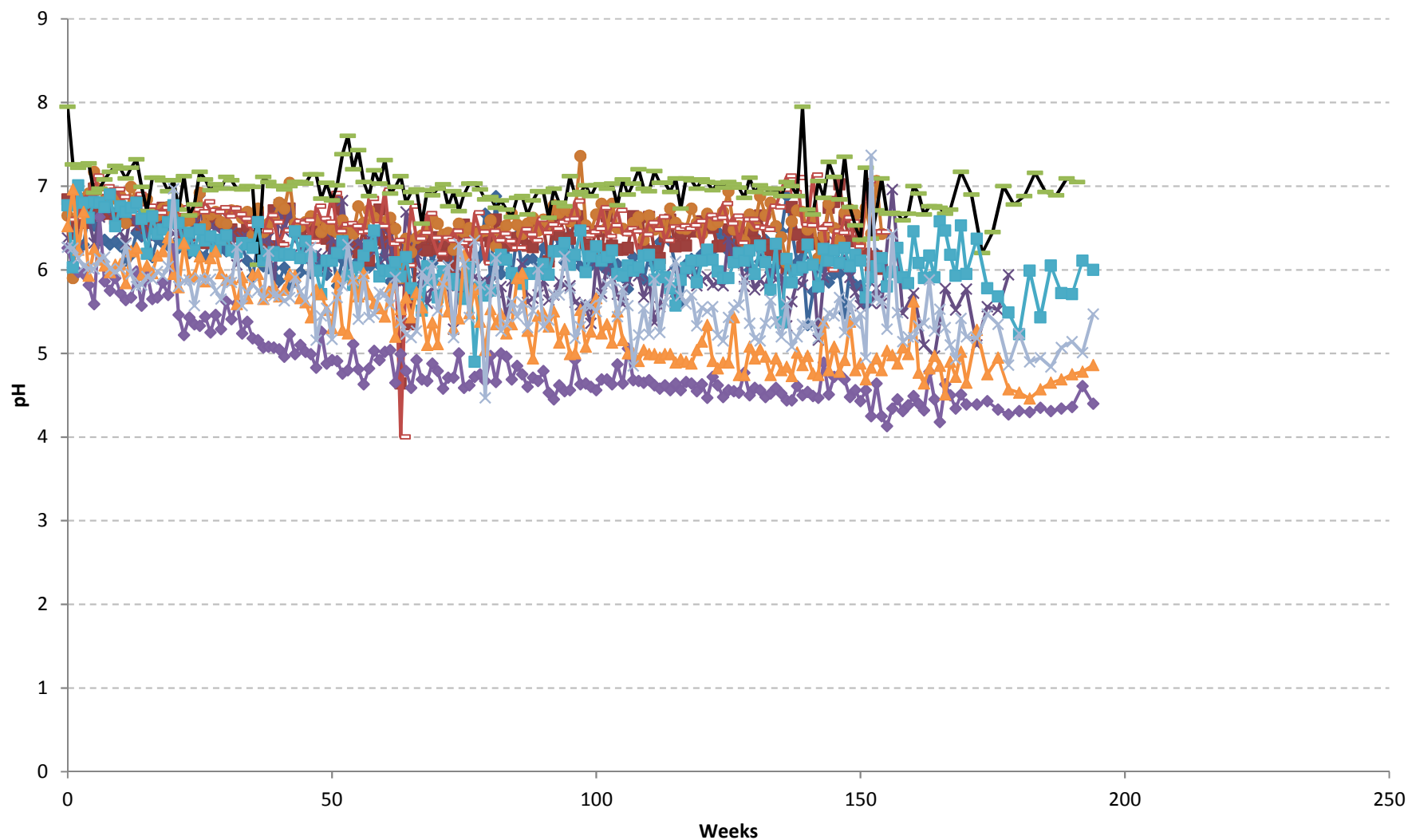


Zinc - Hanging Wall



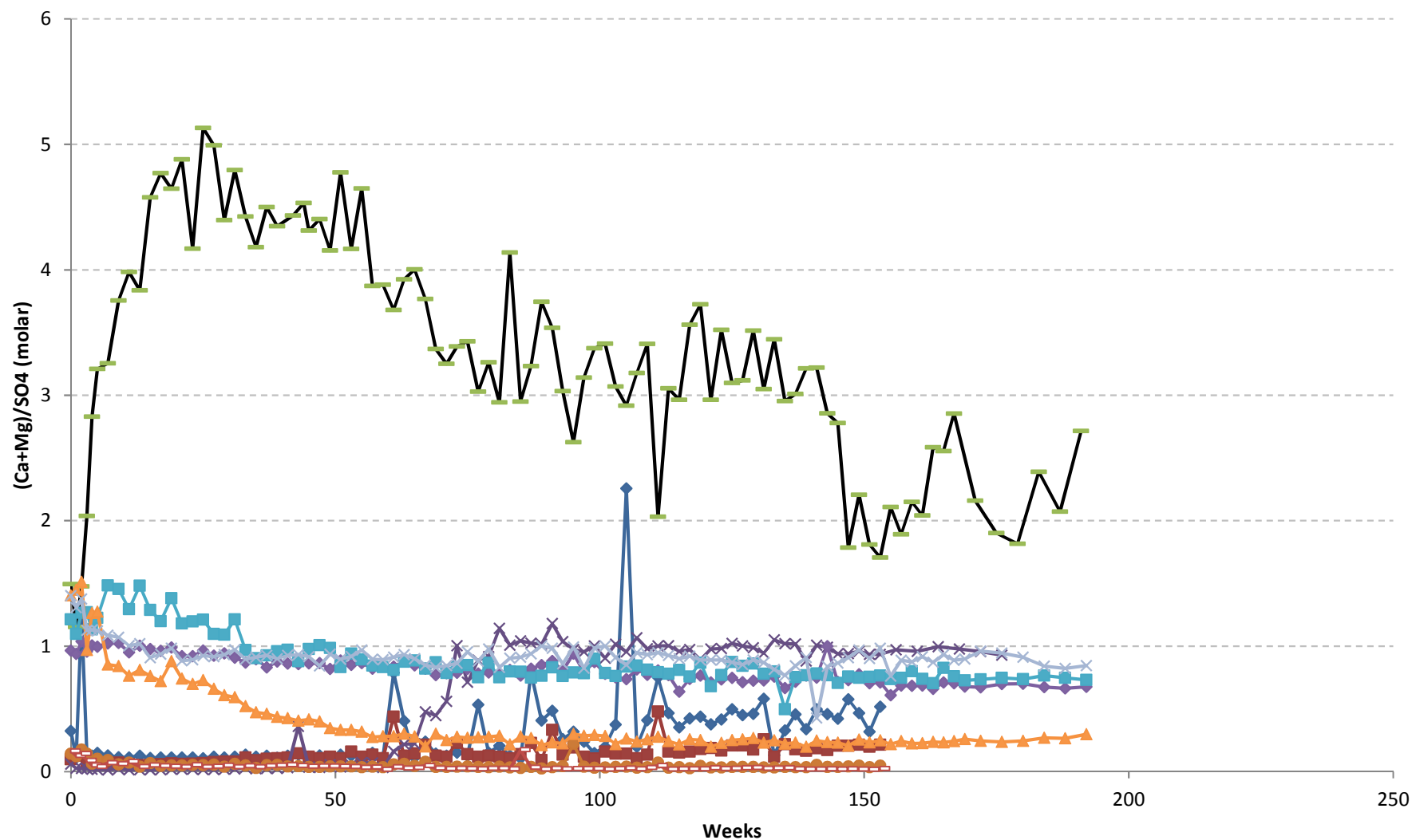
Footwall Humidity Cell Plots

pH - Footwall



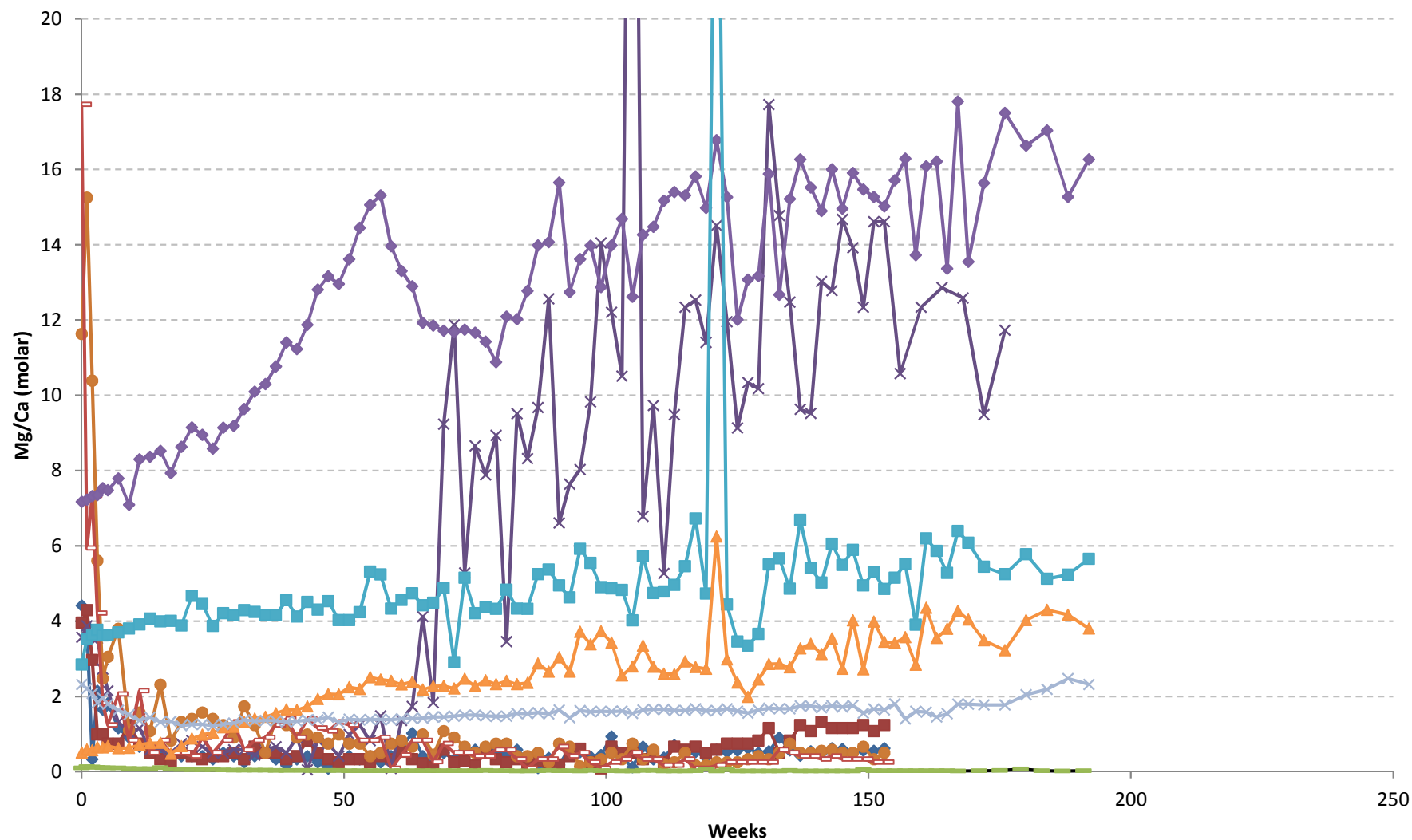
NP-Depleted FW-Metasediment 5172 NP-Depleted FW-Gneiss 5174 NP-Depleted FW-Schist MRARD10-048 NP-Depleted FWS-Gneiss MRARD10-057
 NP-Depleted FWS-Gneiss MRARD10-123 Standard FW-Metasediment 5171 Standard FW-Schist 5178 Standard FW-Gneiss MRARD10-030
 Standard FWS-Gneiss MRARD10-055 Standard FWS-Gneiss MRARD10-074

(Ca+Mg)/SO₄ - Footwall



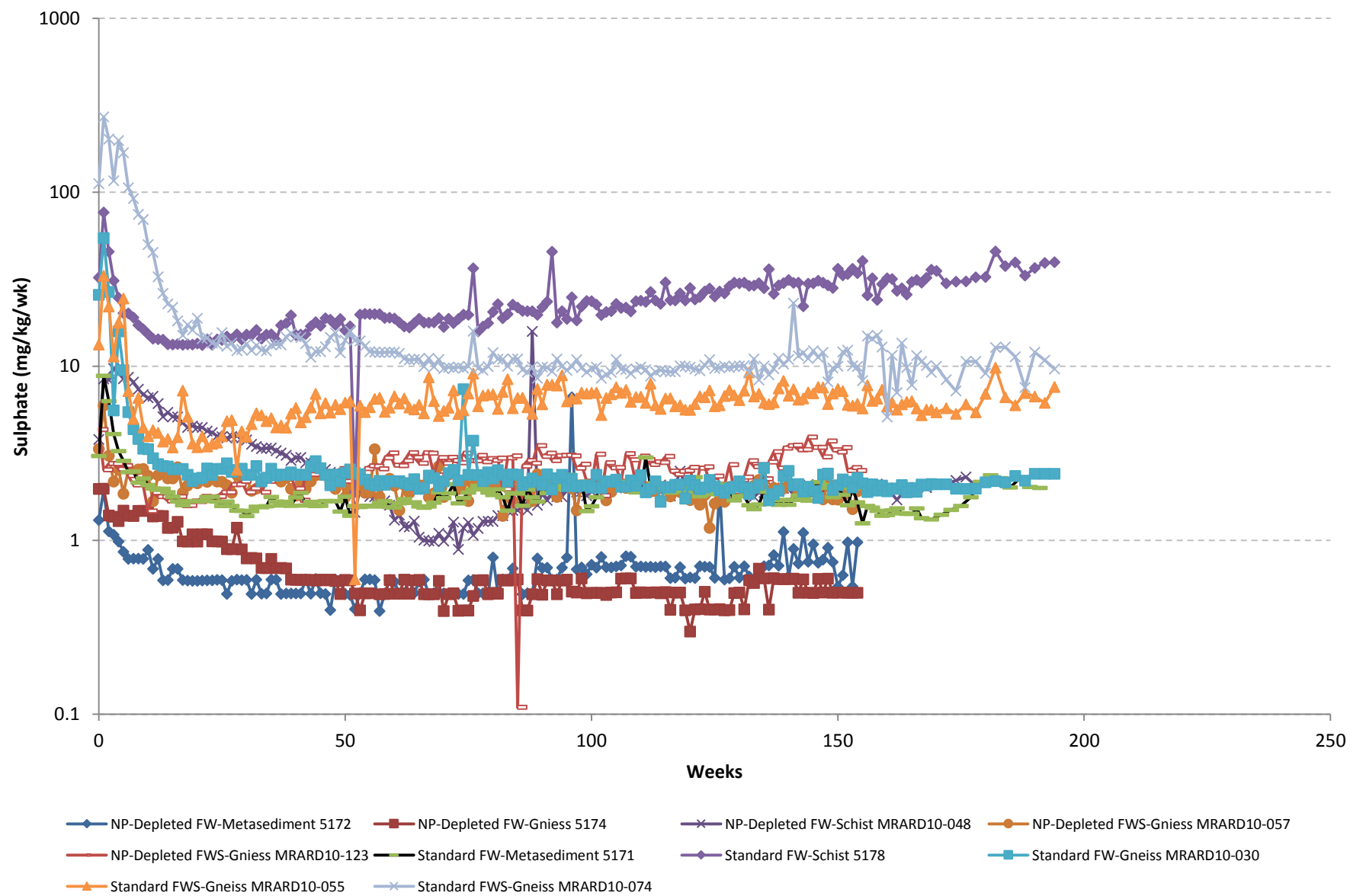
◆ NP-Depleted FW-Metasediment 5172 ■ NP-Depleted FW-Gneiss 5174 ✕ NP-Depleted FW-Schist MRARD10-048 ◆ NP-Depleted FWS-Gneiss MRARD10-057
 ■ NP-Depleted FWS-Gneiss MRARD10-123 — Standard FW-Metasediment 5171 ◆ Standard FW-Schist 5178 — Standard FW-Gneiss MRARD10-030
 ◆ Standard FWS-Gneiss MRARD10-055 ✕ Standard FWS-Gneiss MRARD10-074

Mg/Ca- Footwall

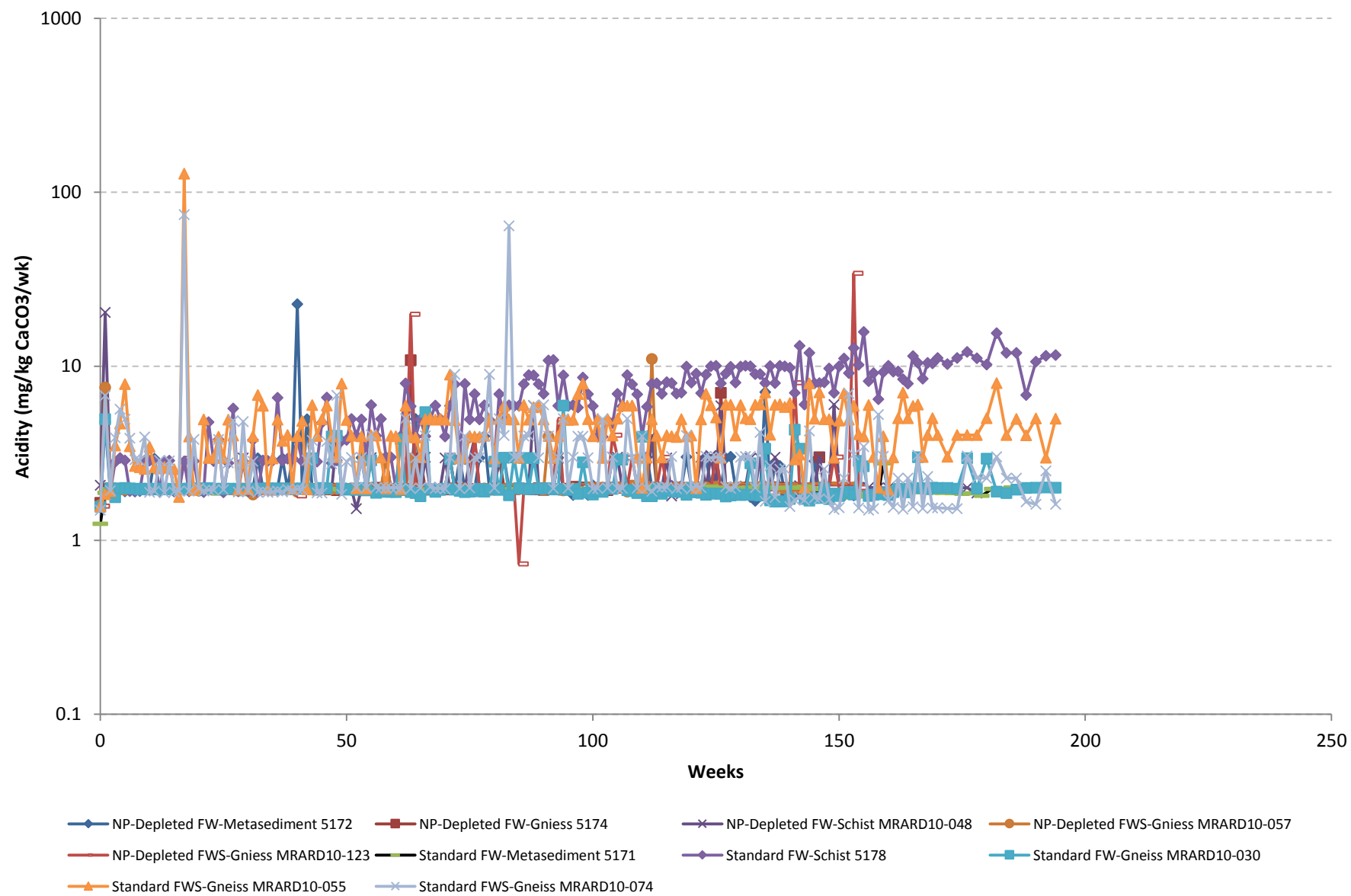


- ◆ NP-Depleted FW-Metasediment 5172
 ■ NP-Depleted FW-Gneiss 5174
 ✕ NP-Depleted FW-Schist MRARD10-048
 ● NP-Depleted FWS-Gneiss MRARD10-057
- NP-Depleted FWS-Gneiss MRARD10-123
 — Standard FW-Metasediment 5171
 ◆ Standard FW-Schist 5178
 ■ Standard FW-Gneiss MRARD10-030
- ▲ Standard FWS-Gneiss MRARD10-055
 ✕ Standard FWS-Gneiss MRARD10-074

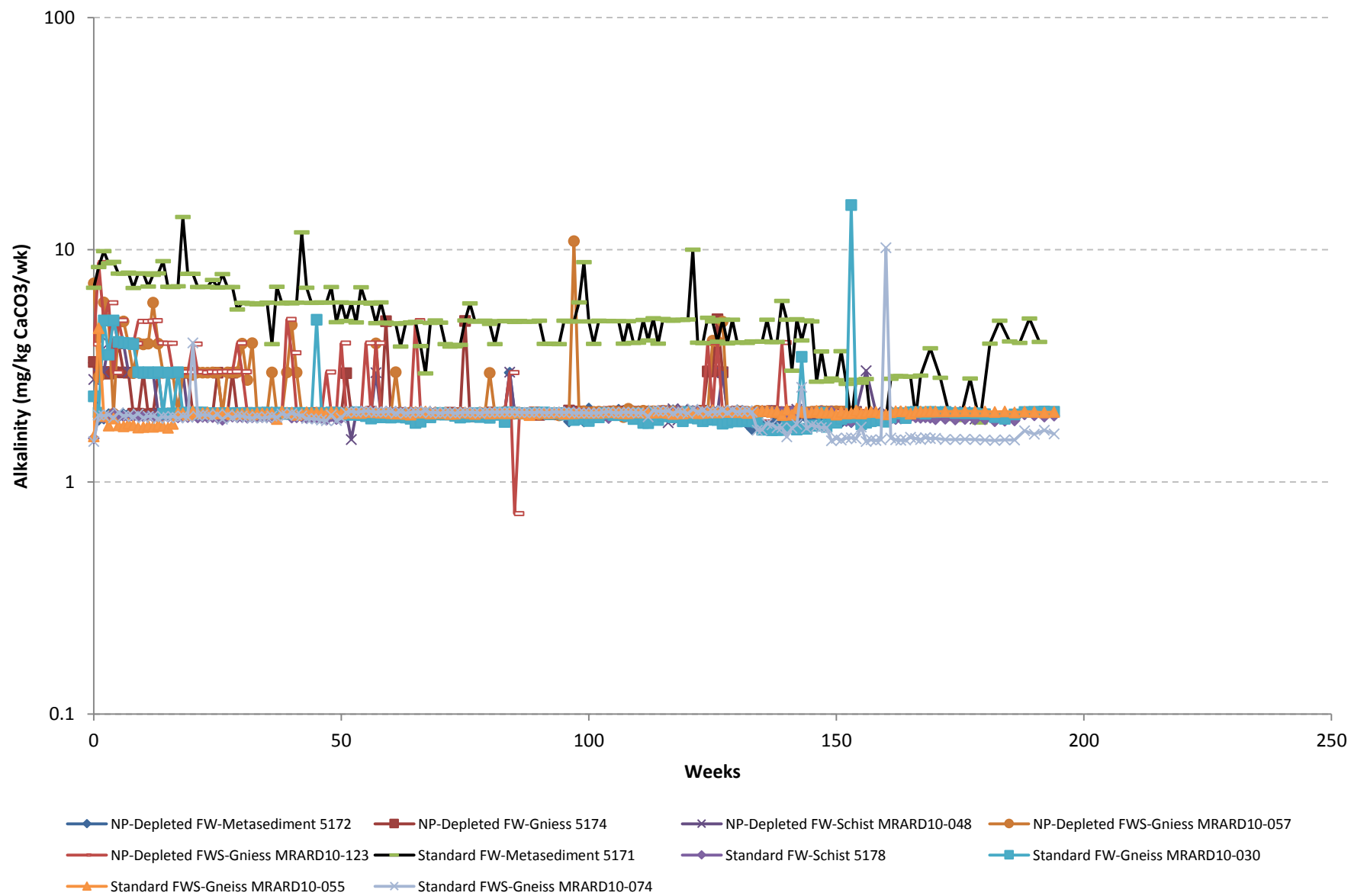
Sulphate - Footwall



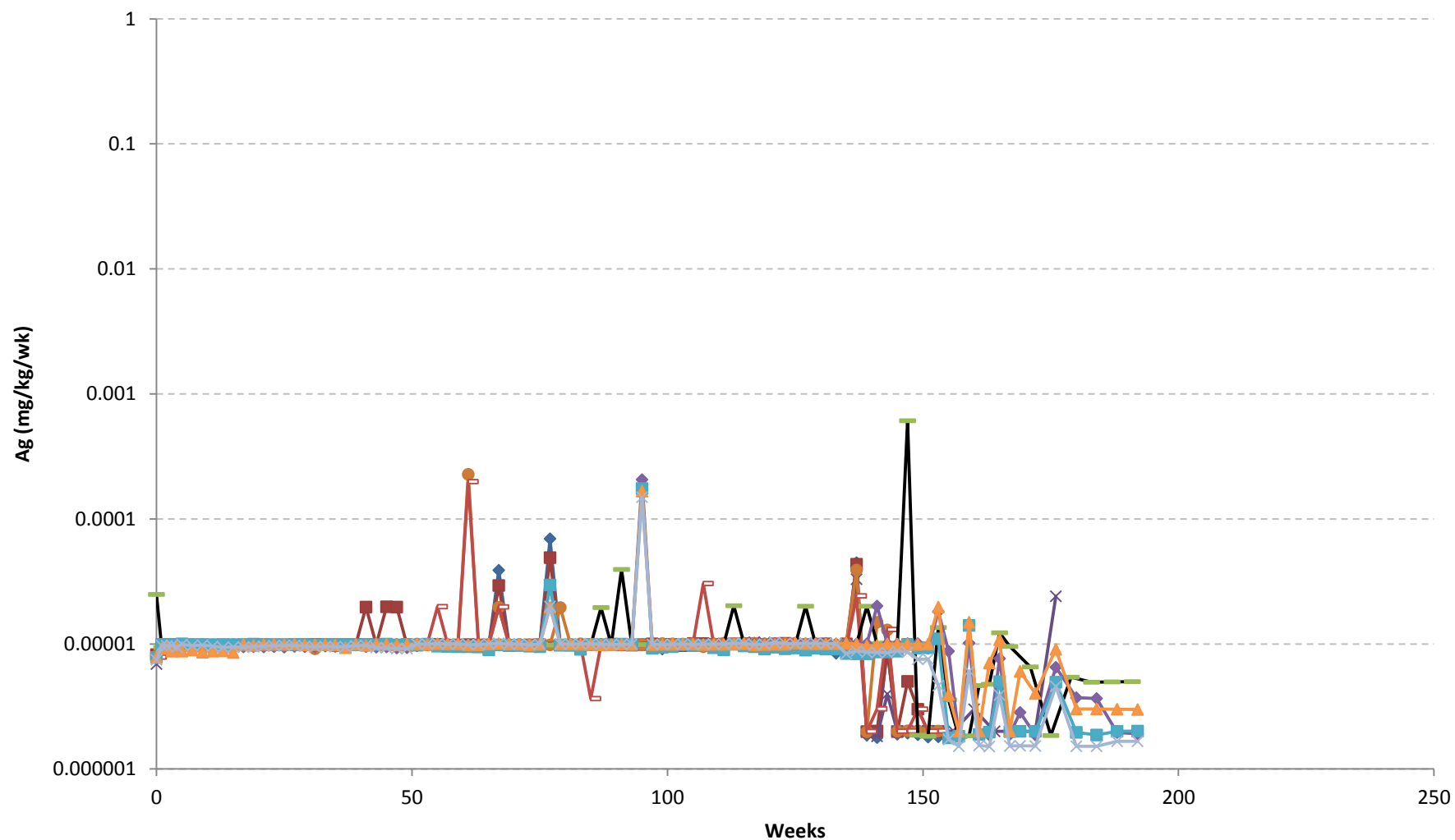
Acidity - Footwall



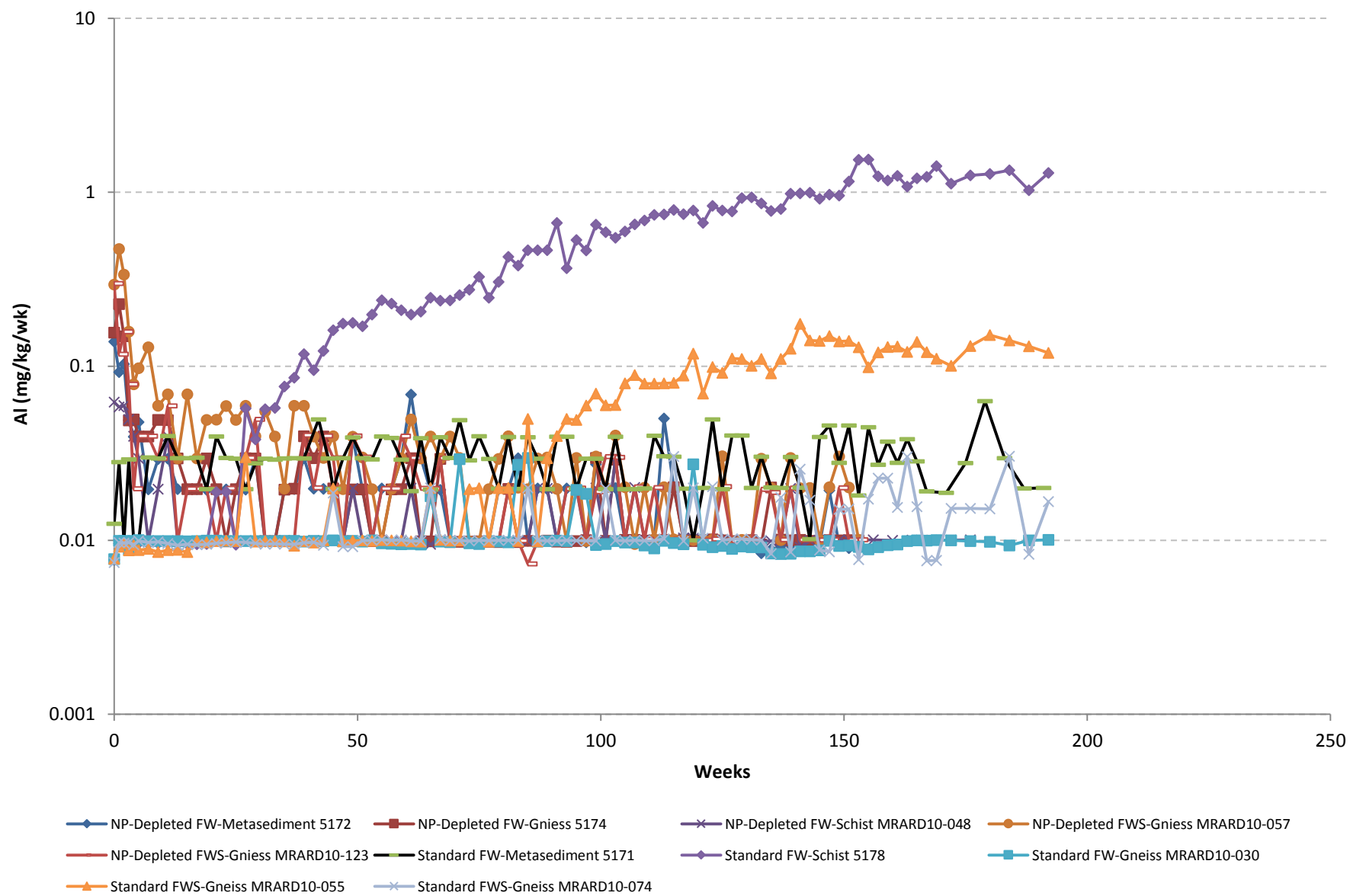
Alkalinity - Footwall



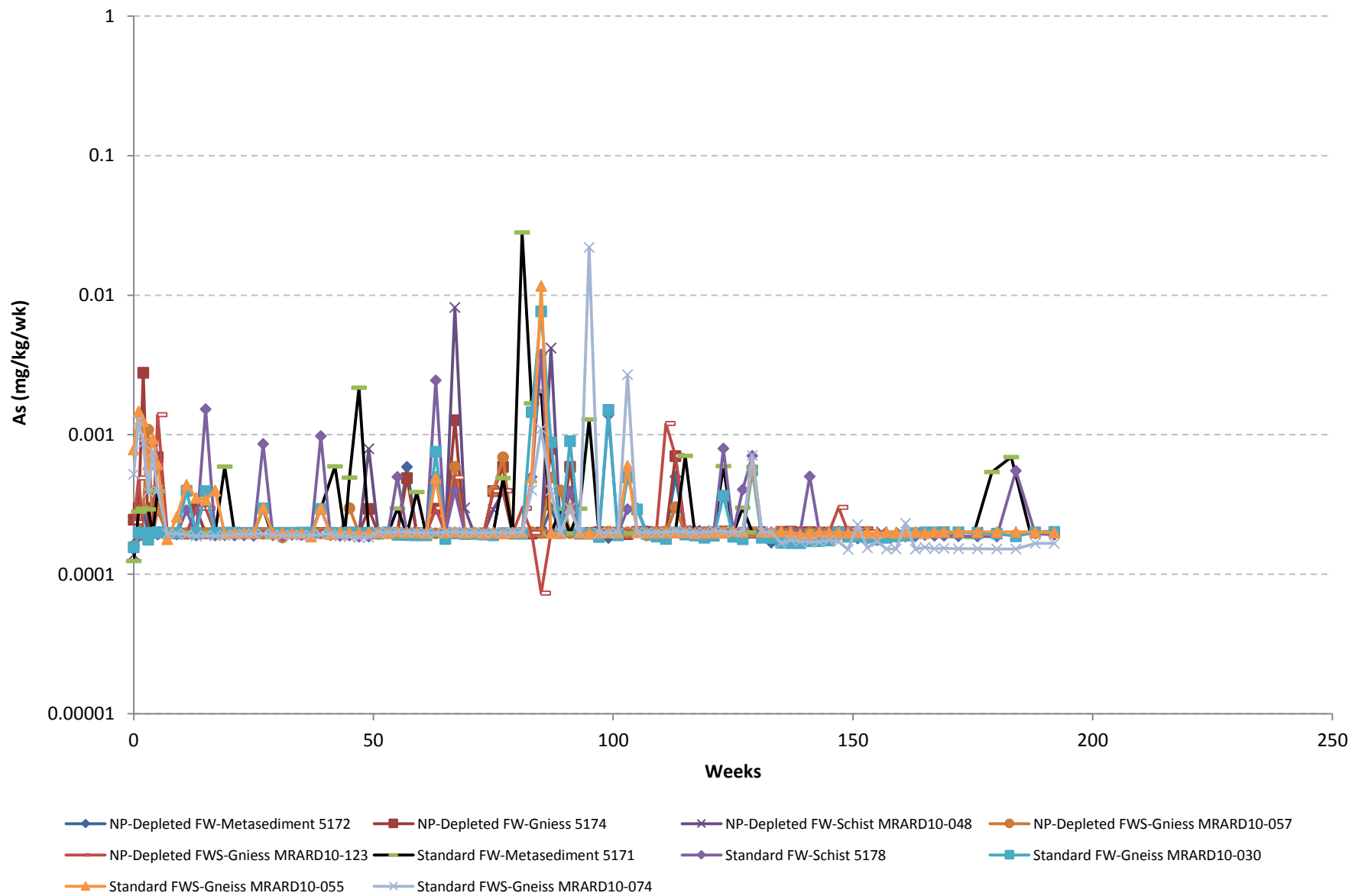
Silver - Footwall



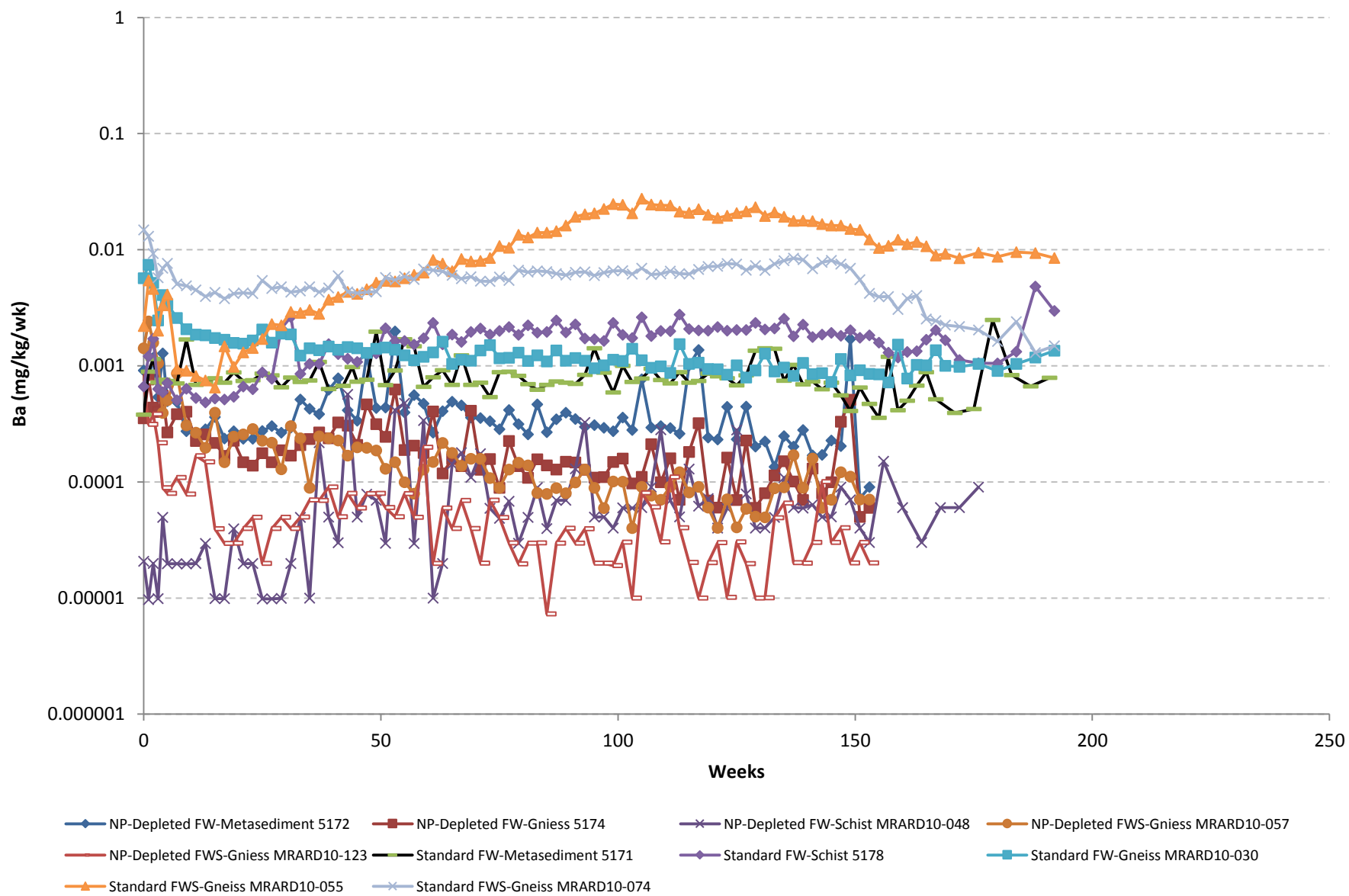
Aluminum - Footwall



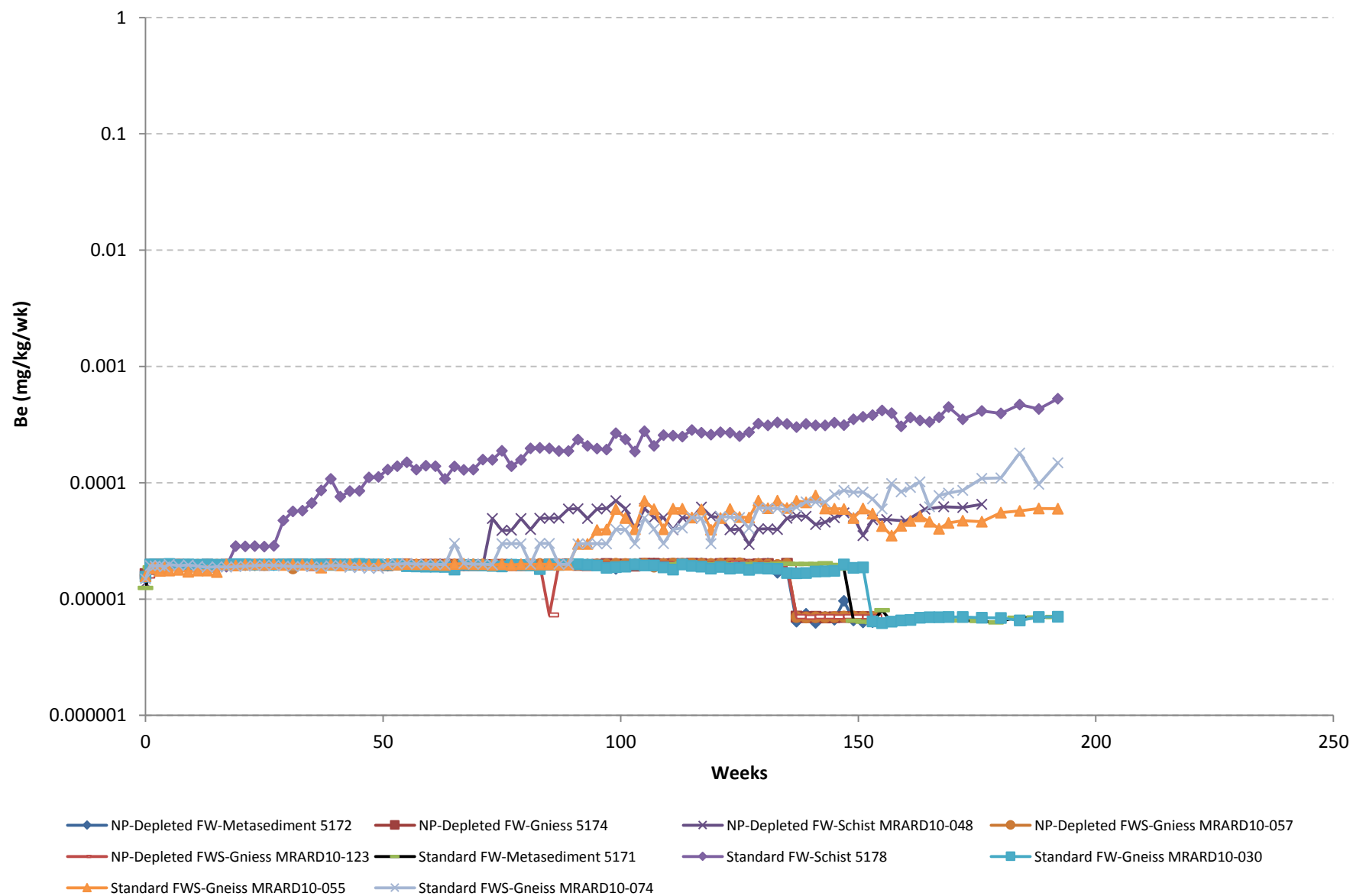
Arsenic - Footwall



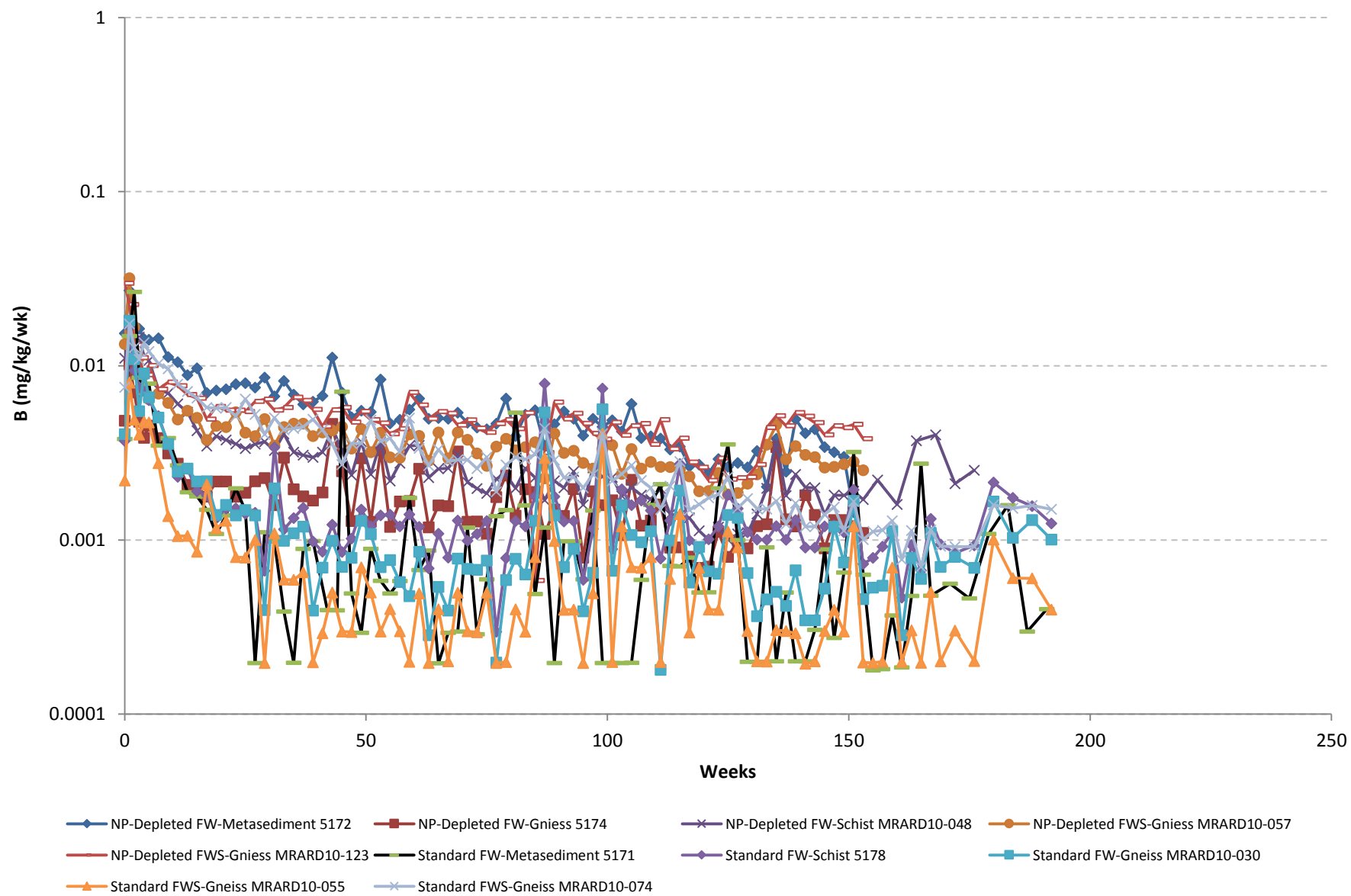
Barium - Footwall



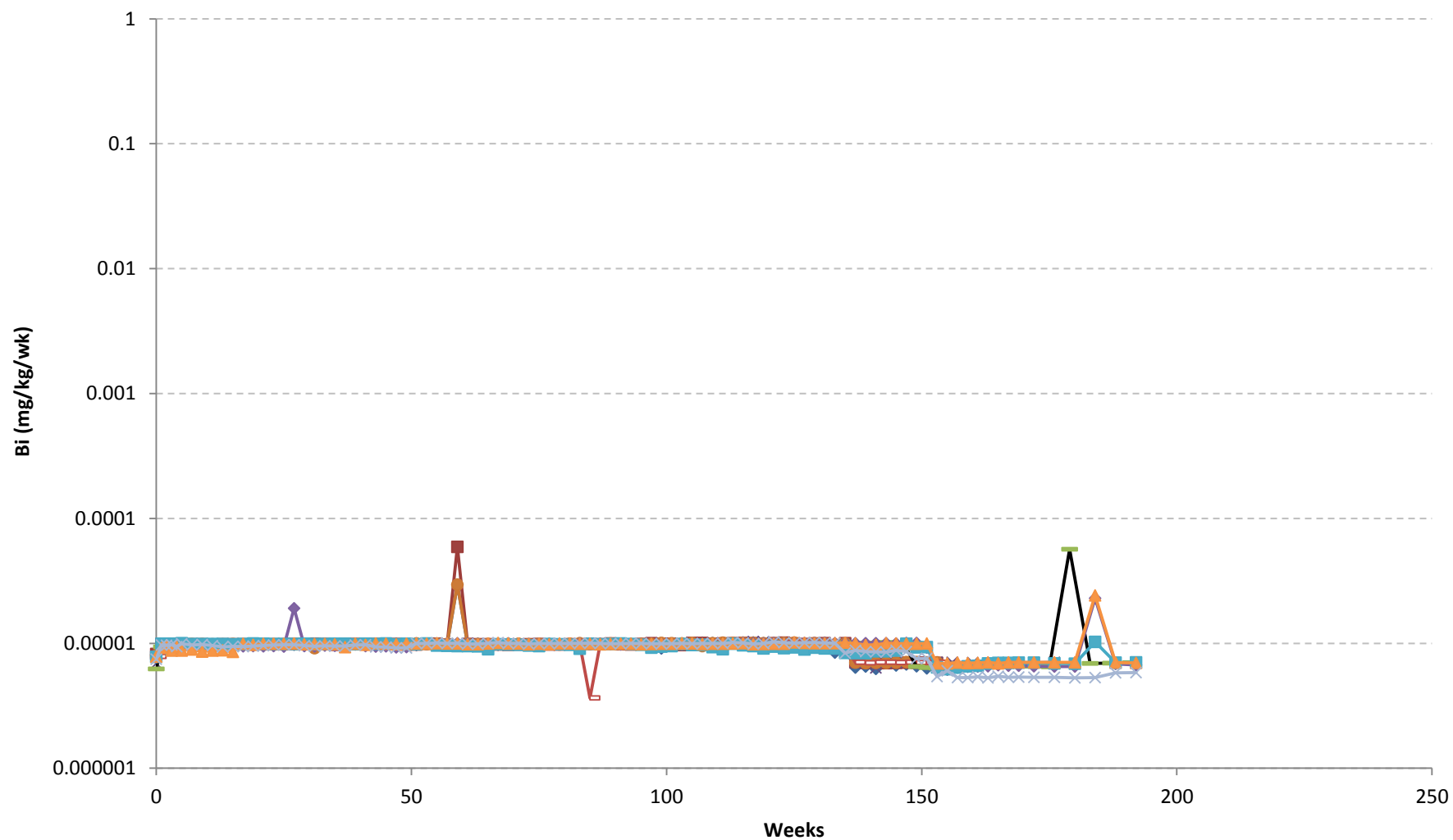
Beryllium - Footwall



Boron - Footwall

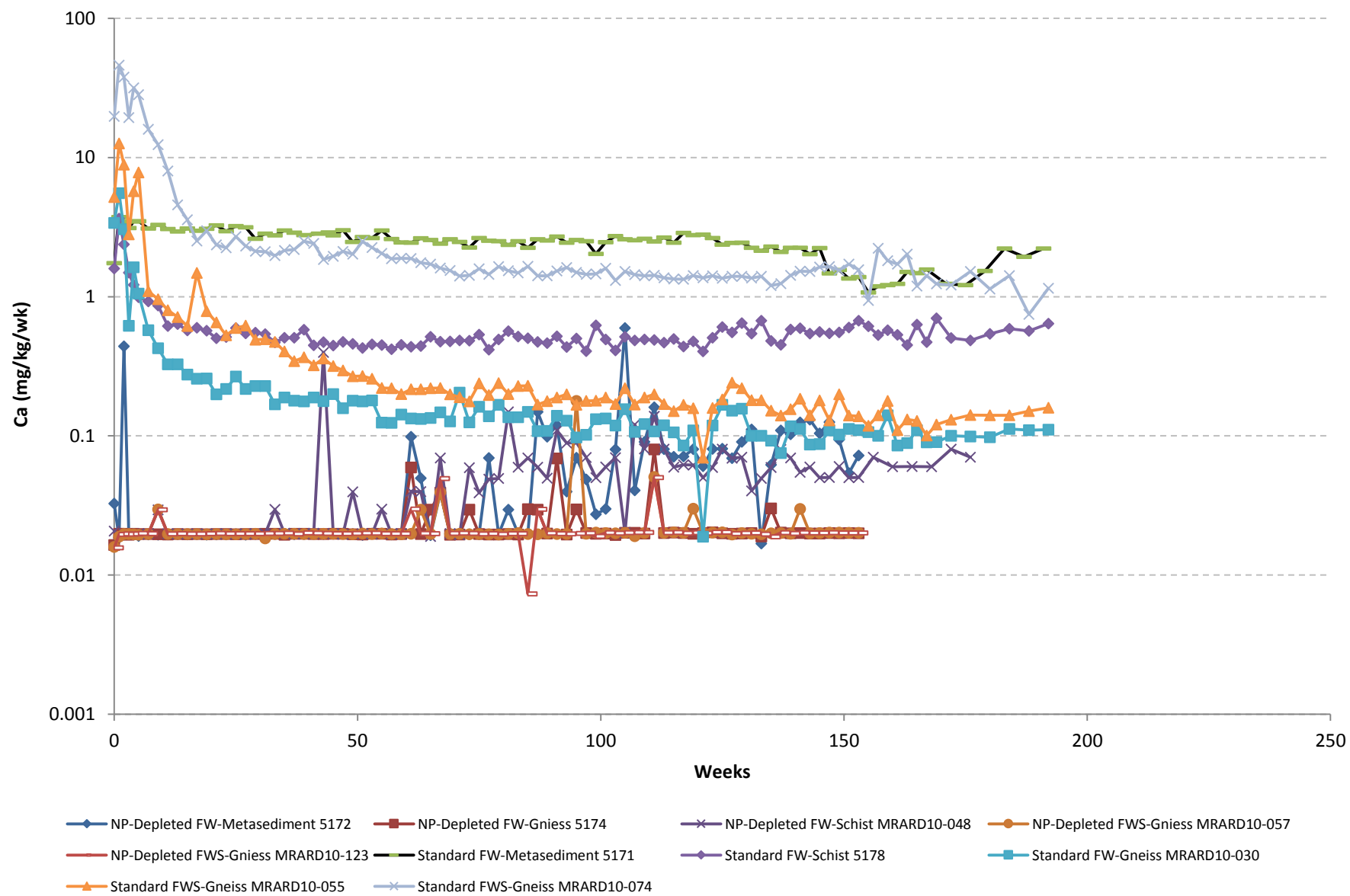


Bismuth - Footwall

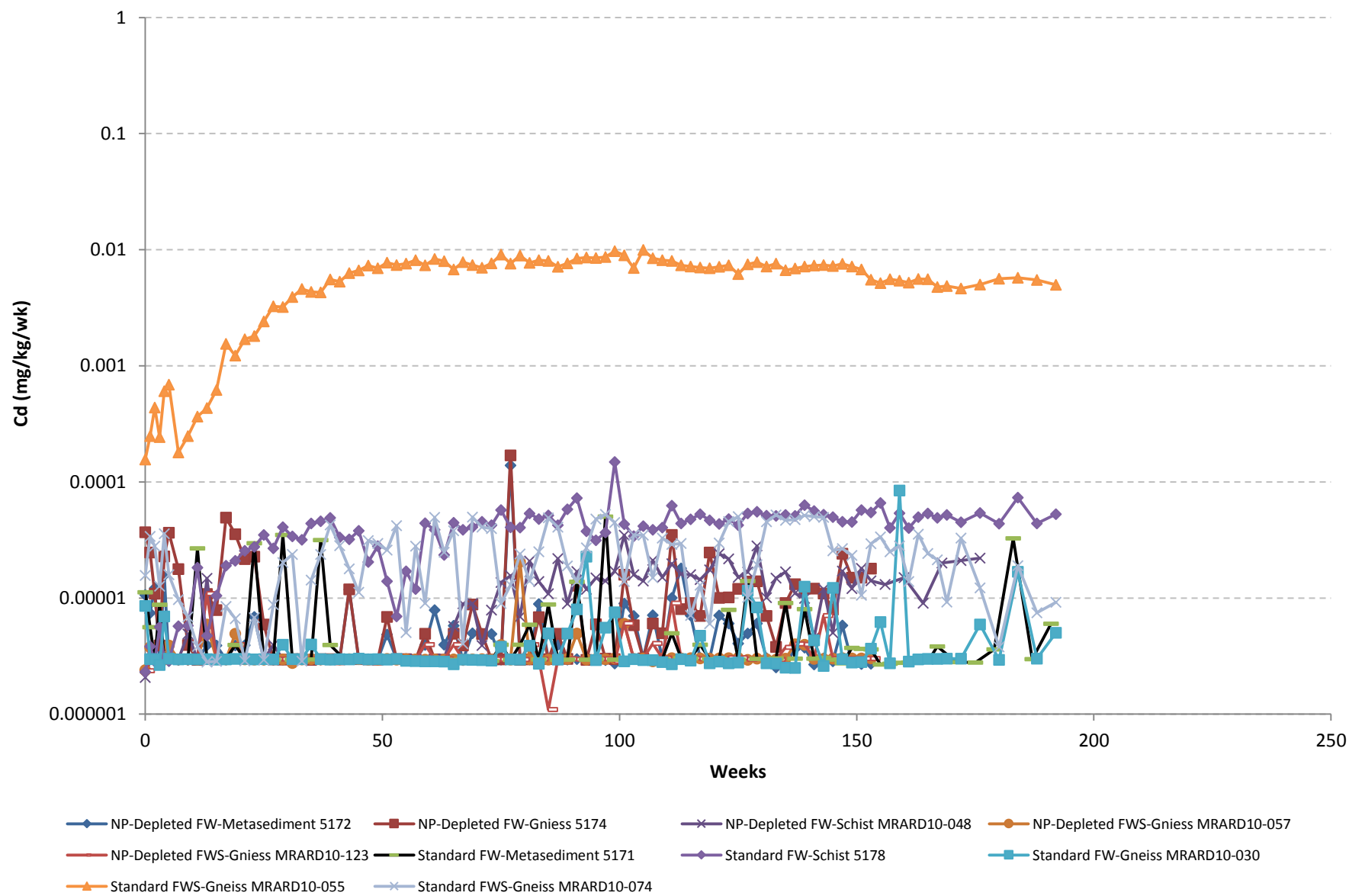


- NP-Depleted FW-Metasediment 5172
- NP-Depleted FW-Gneiss 5174
- NP-Depleted FW-Schist MRARD10-048
- NP-Depleted FWS-Gneiss MRARD10-057
- NP-Depleted FWS-Gneiss MRARD10-123
- Standard FW-Metasediment 5171
- Standard FW-Schist 5178
- Standard FW-Gneiss MRARD10-030
- Standard FWS-Gneiss MRARD10-055
- Standard FWS-Gneiss MRARD10-074

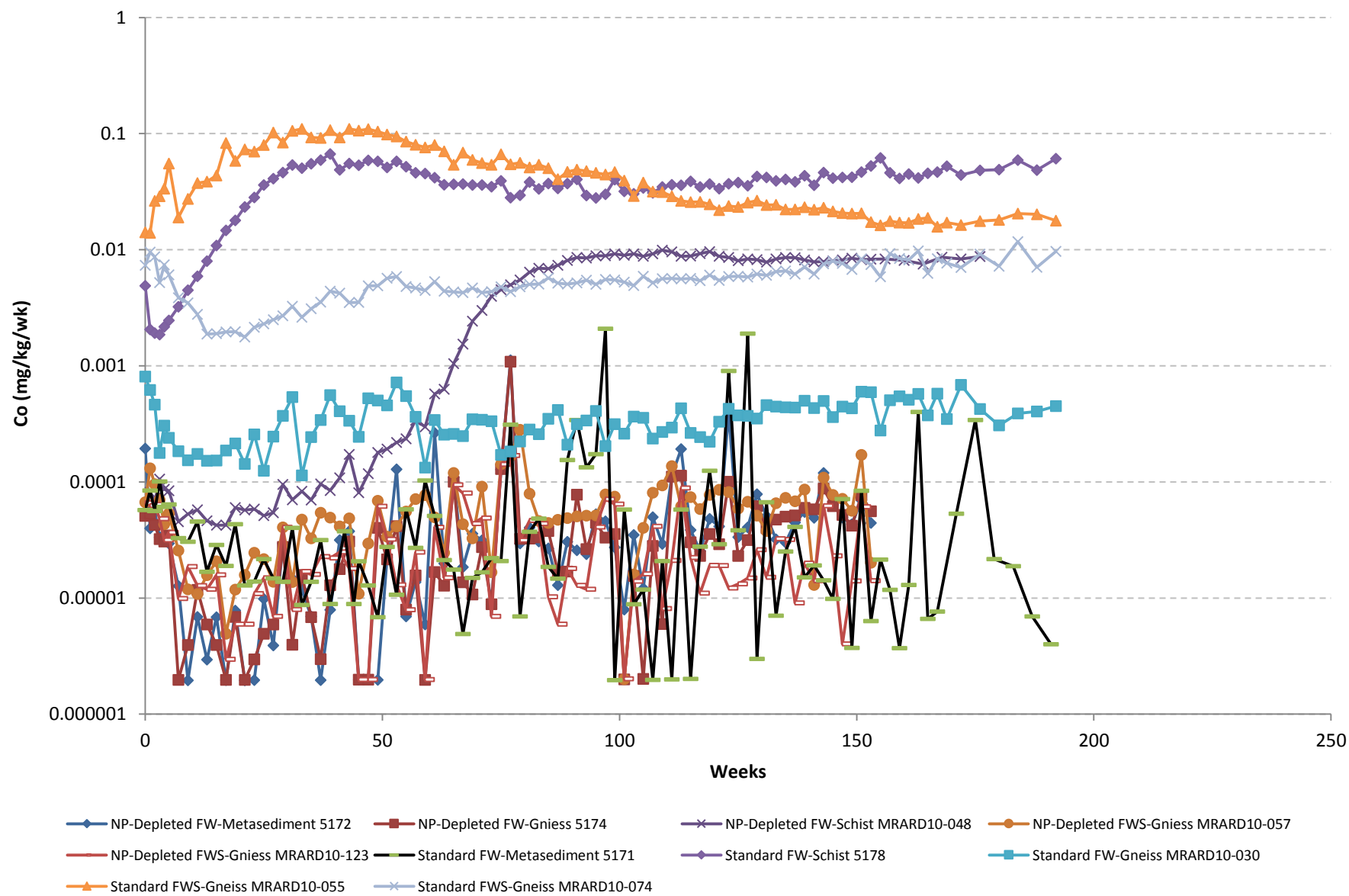
Calcium - Footwall



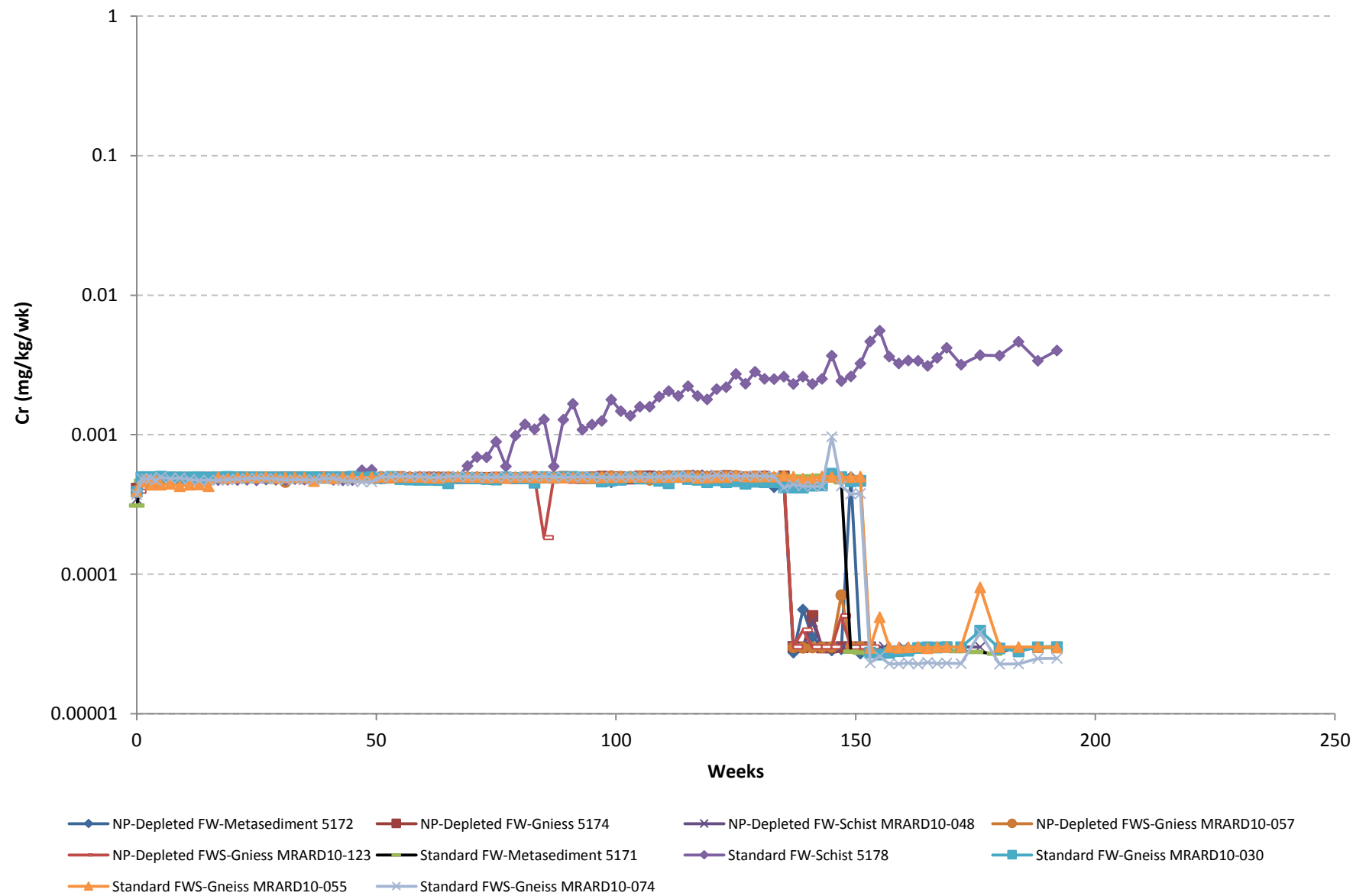
Cadmium - Footwall



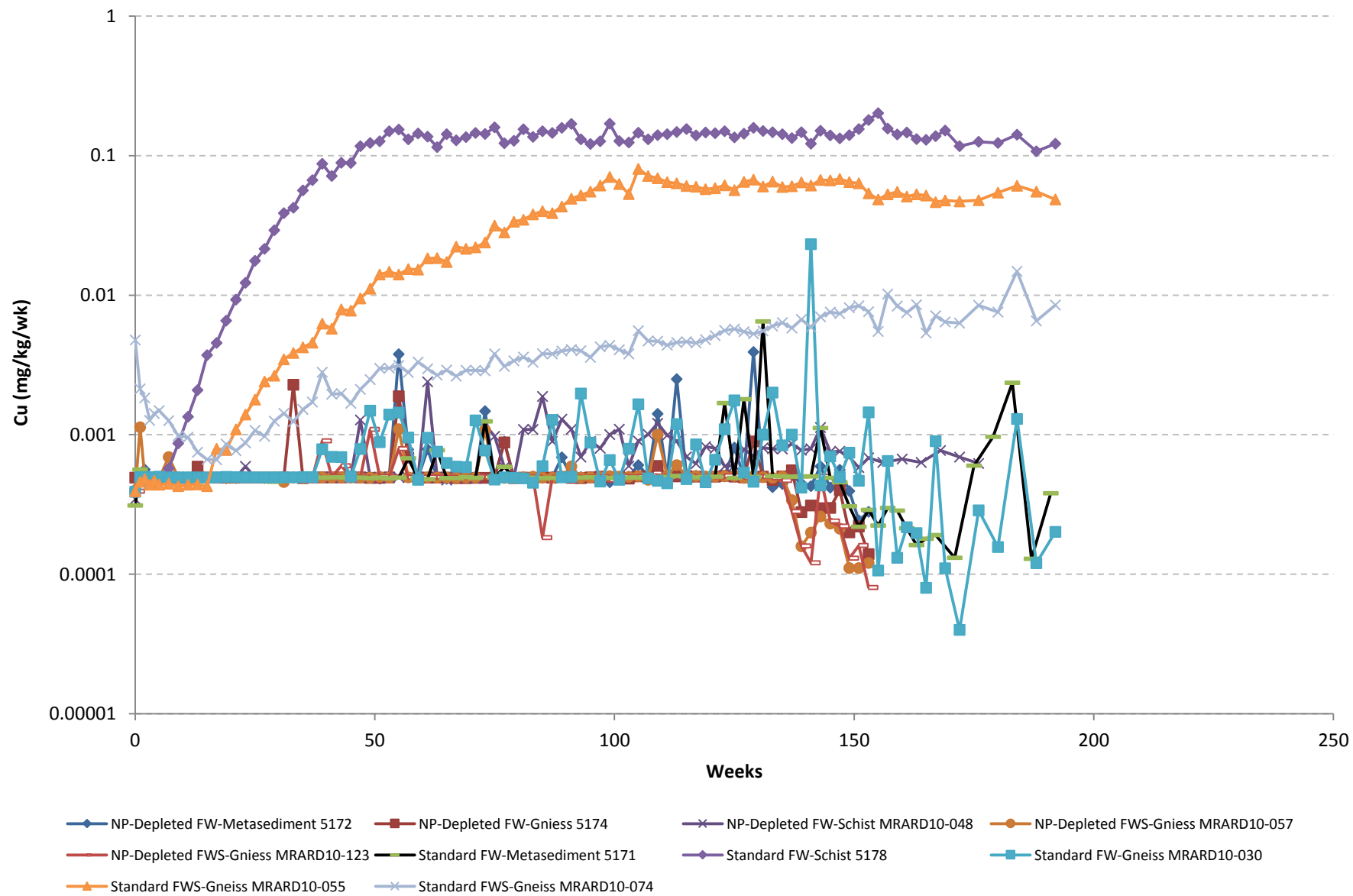
Cobalt - Footwall



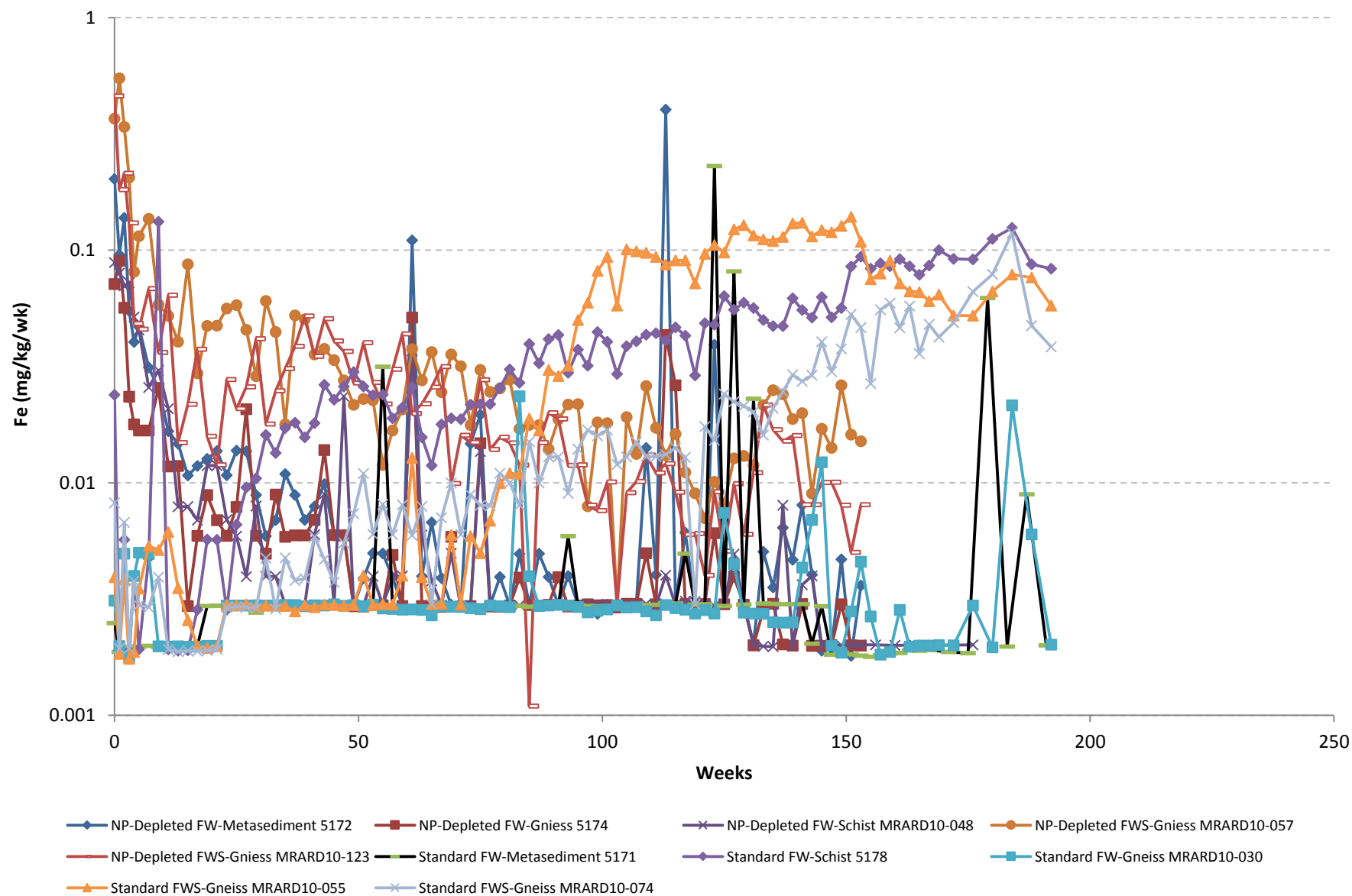
Chromium - Footwall



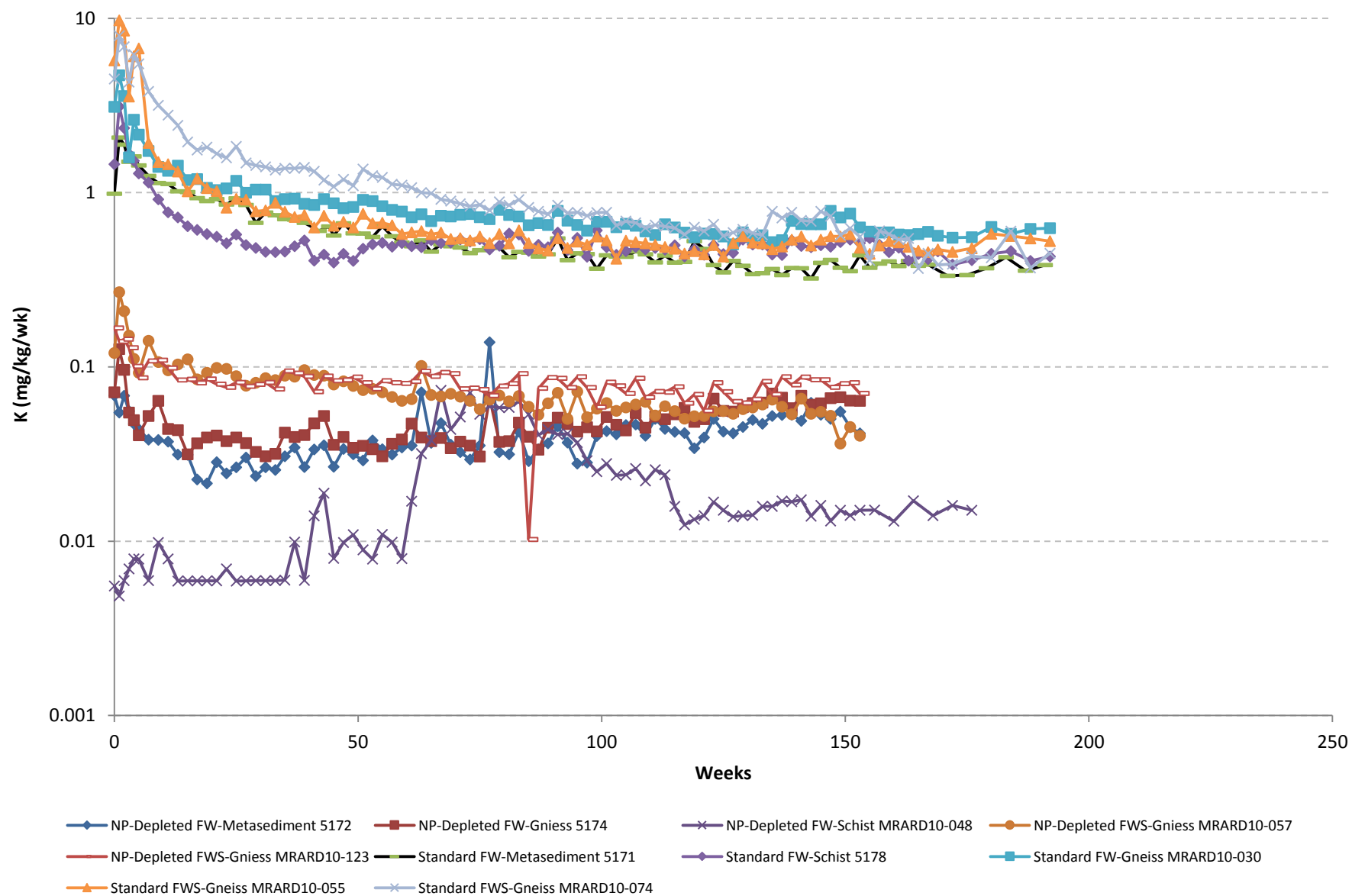
Copper - Footwall



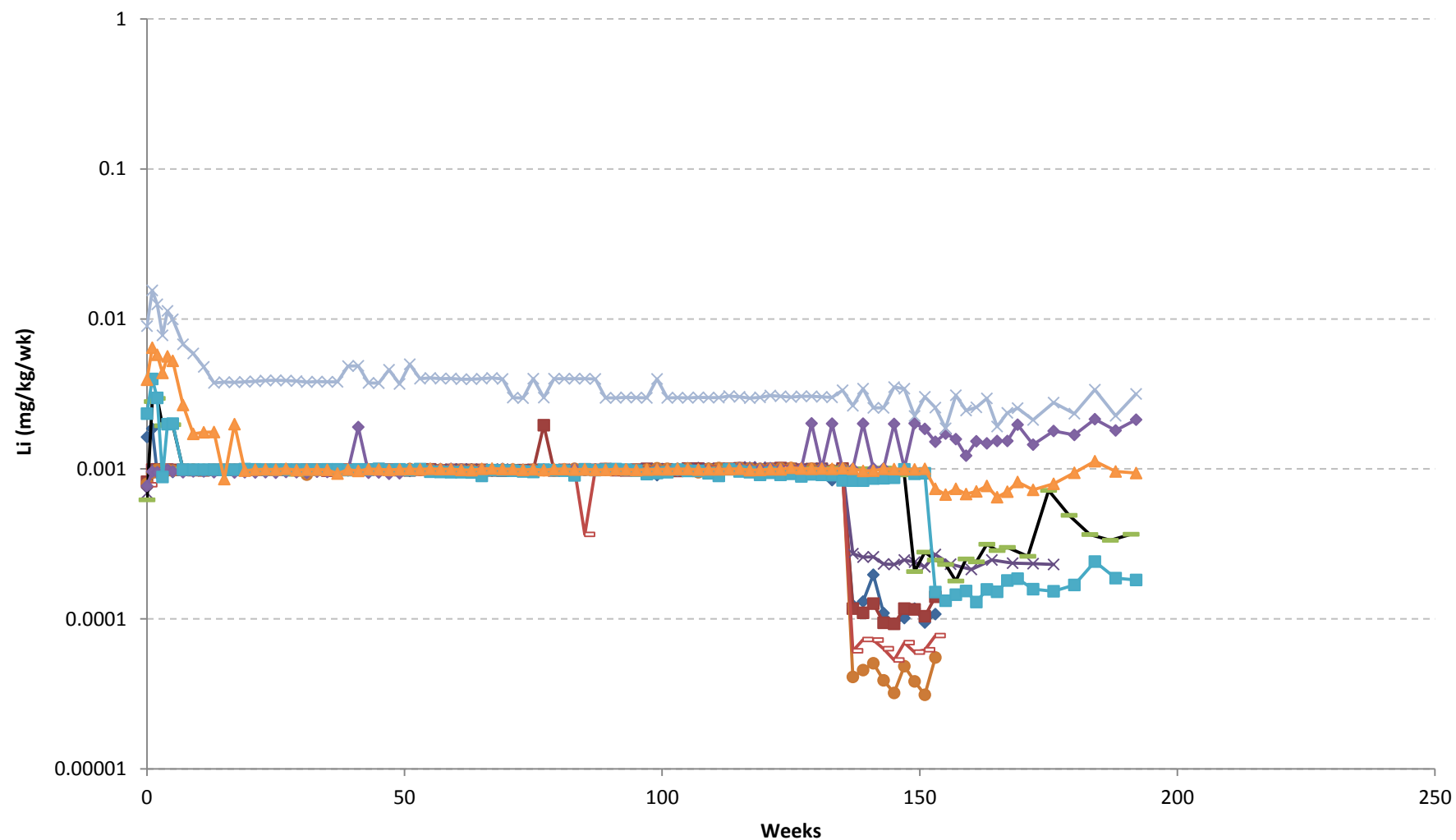
Iron - Footwall



Potassium - Footwall

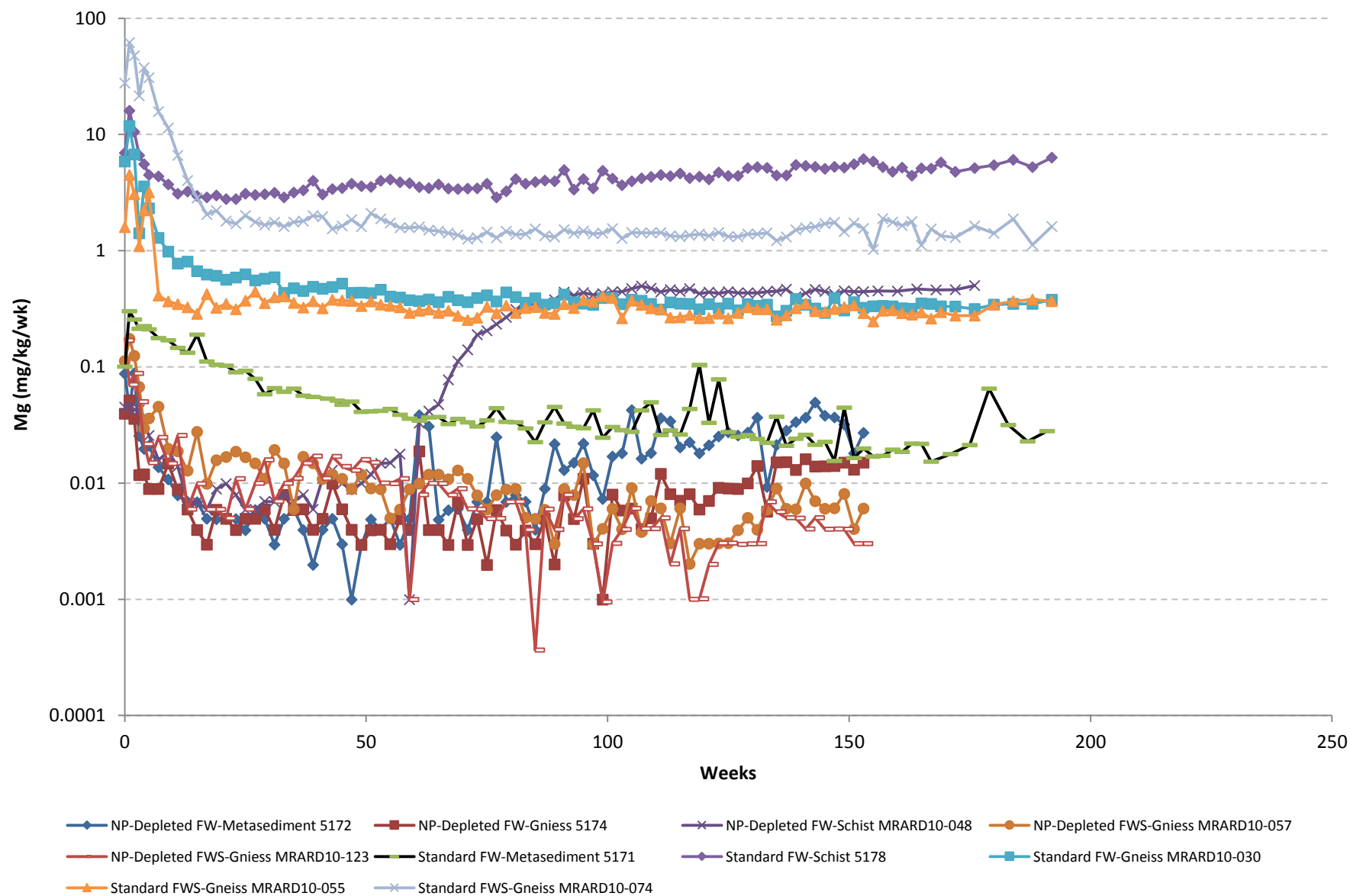


Lithium - Footwall

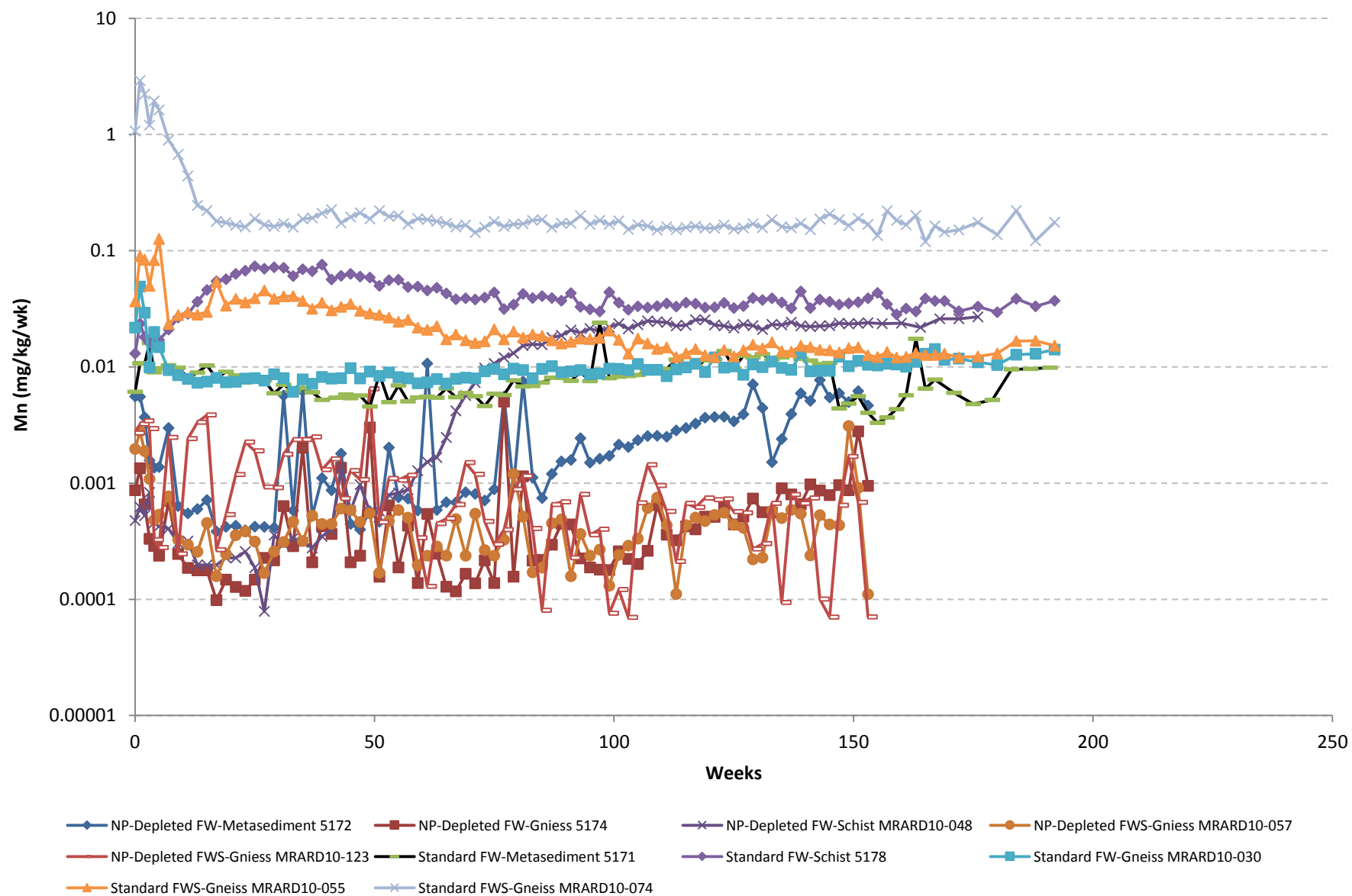


NP-Depleted FW-Metasediment 5172 NP-Depleted FW-Gneiss 5174 NP-Depleted FW-Schist MRARD10-048 NP-Depleted FWS-Gneiss MRARD10-057
 NP-Depleted FWS-Gneiss MRARD10-123 Standard FW-Metasediment 5171 Standard FW-Schist 5178 Standard FW-Gneiss MRARD10-030
 Standard FWS-Gneiss MRARD10-055 Standard FWS-Gneiss MRARD10-074

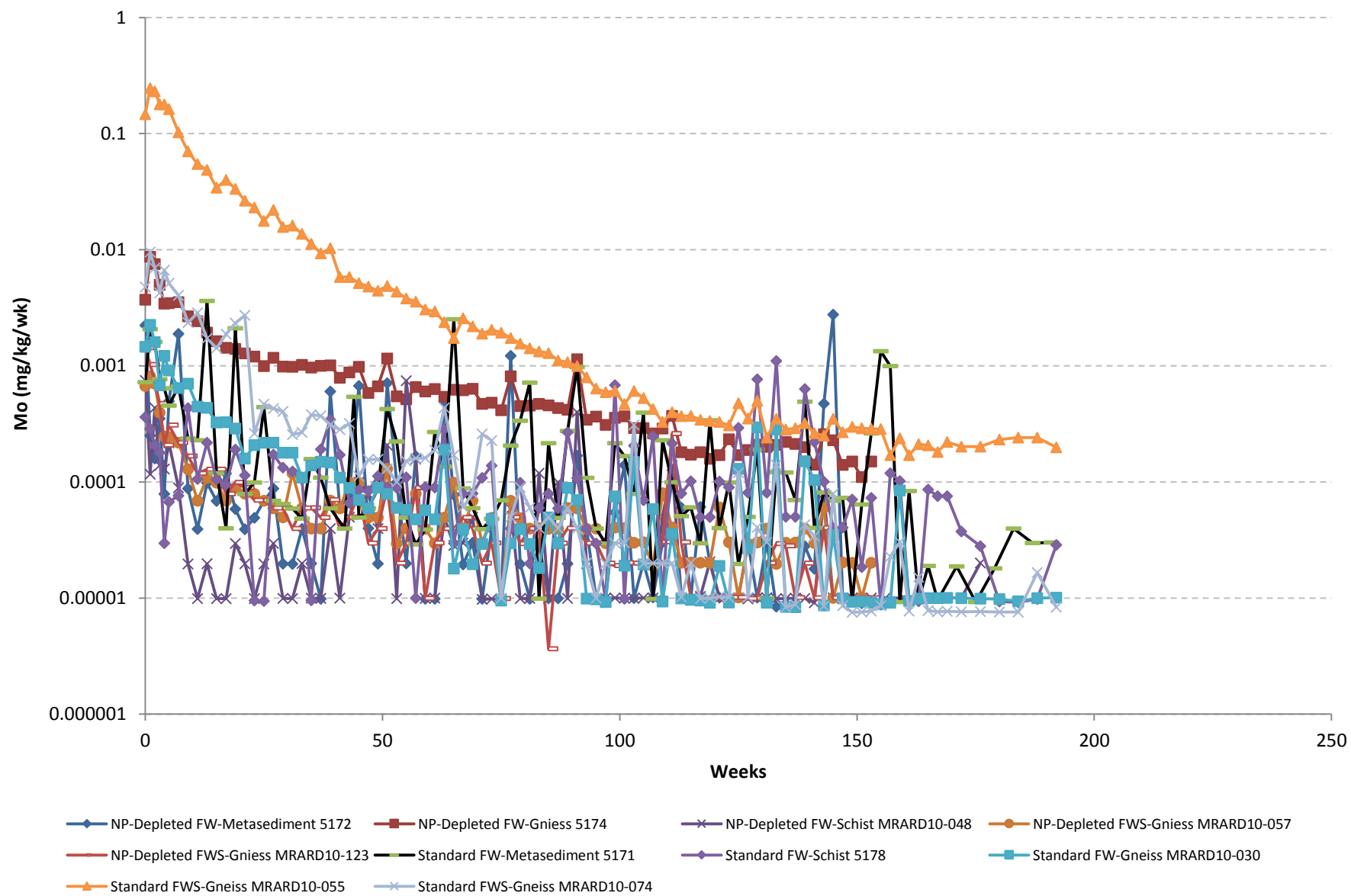
Magnesium - Footwall



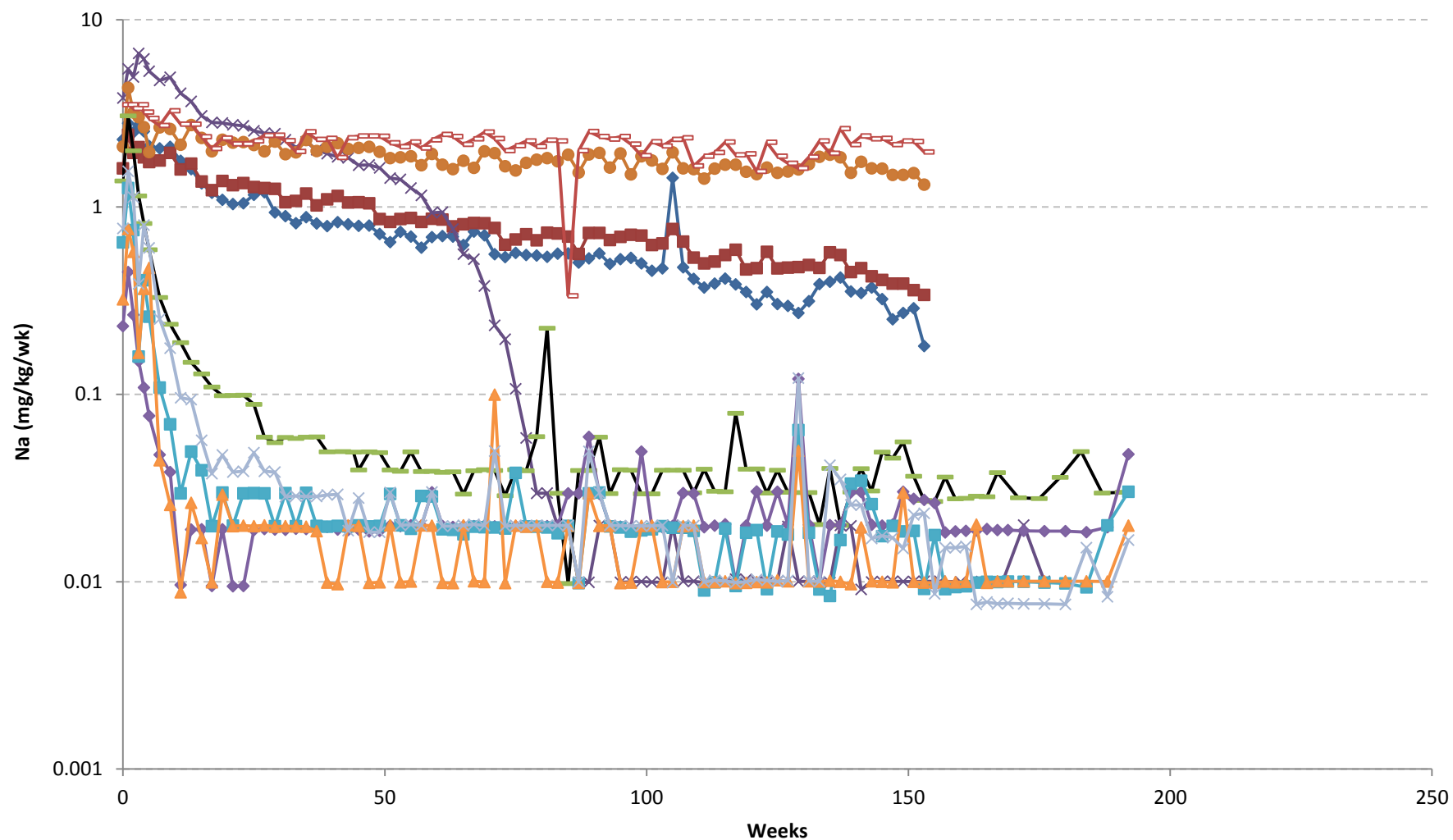
Manganese - Footwall



Molybdenum - Footwall

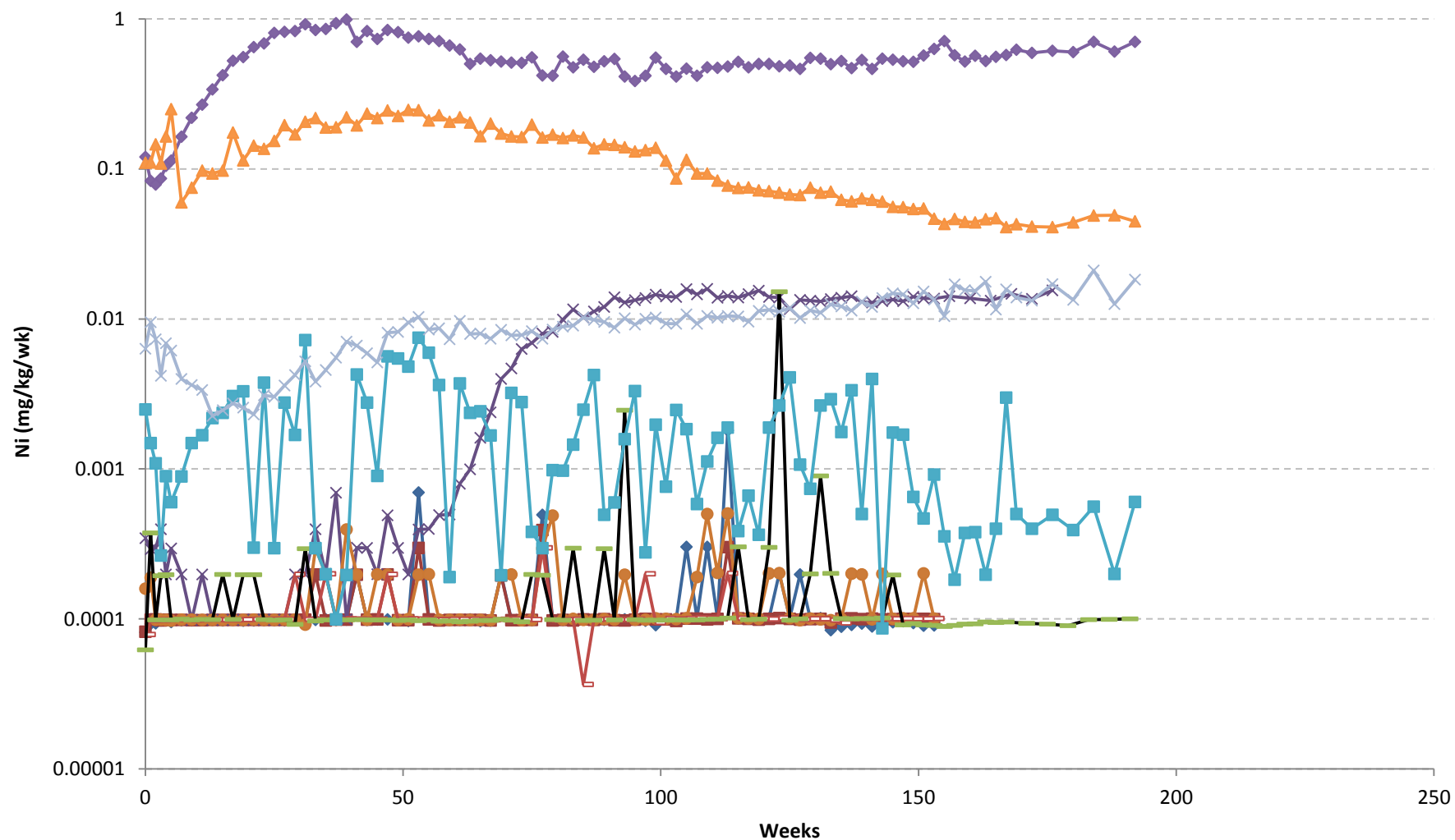


Sodium - Footwall



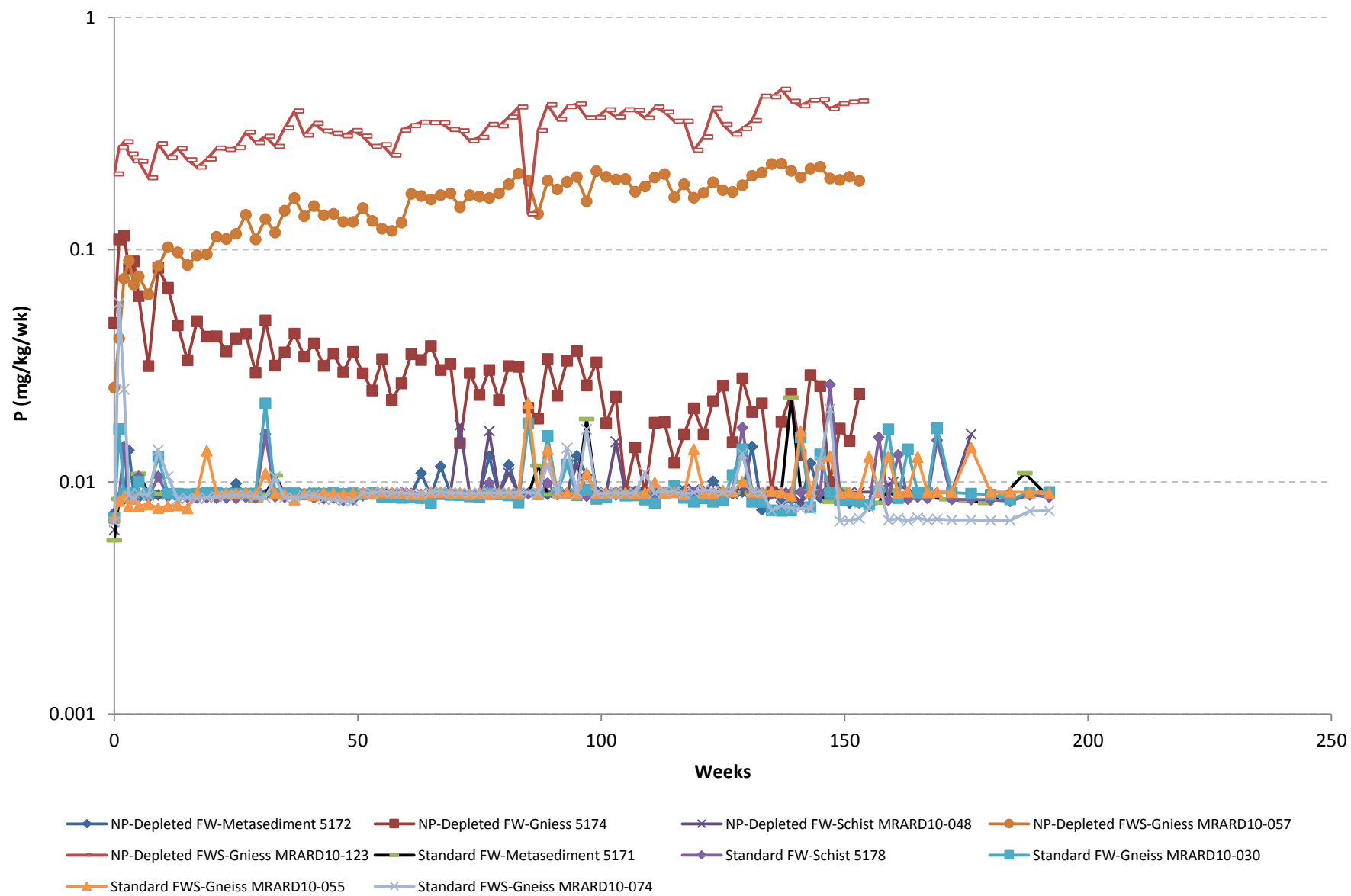
- NP-Depleted FW-Metasediment 5172
- NP-Depleted FW-Gneiss 5174
- NP-Depleted FW-Schist MRARD10-048
- NP-Depleted FWS-Gneiss MRARD10-057
- NP-Depleted FWS-Gneiss MRARD10-123
- Standard FW-Metasediment 5171
- Standard FW-Schist 5178
- Standard FW-Gneiss MRARD10-030
- Standard FWS-Gneiss MRARD10-055
- Standard FWS-Gneiss MRARD10-074

Nickel - Footwall

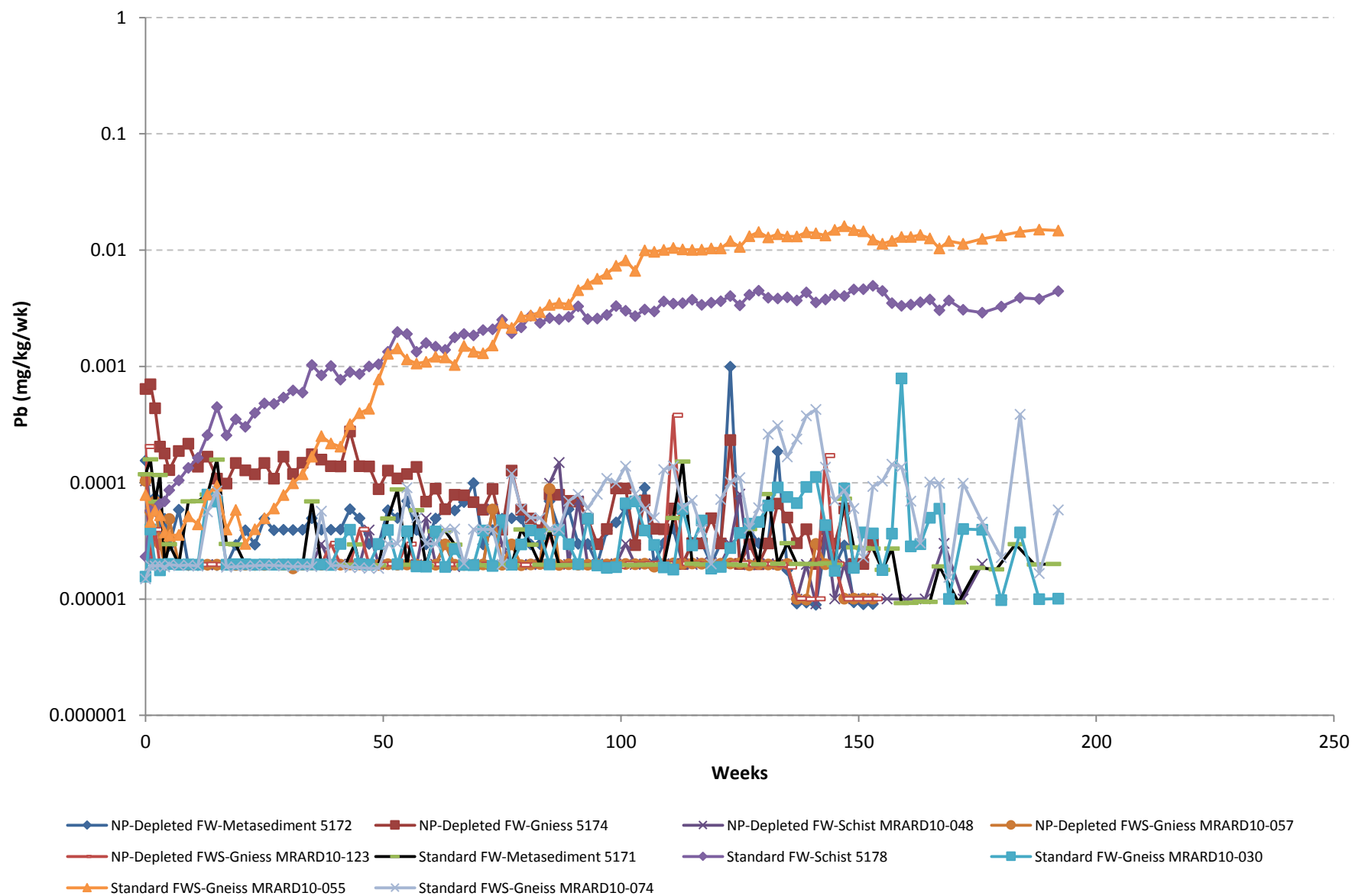


- ◆ NP-Depleted FW-Metasediment 5172
 ■ NP-Depleted FW-Gneiss 5174
 × NP-Depleted FW-Schist MRARD10-048
 ● NP-Depleted FWS-Gneiss MRARD10-057
- NP-Depleted FWS-Gneiss MRARD10-123
 — Standard FW-Metasediment 5171
 ◆ Standard FW-Schist 5178
 ■ Standard FW-Gneiss MRARD10-030
- ▲ Standard FWS-Gneiss MRARD10-055
 × Standard FWS-Gneiss MRARD10-074

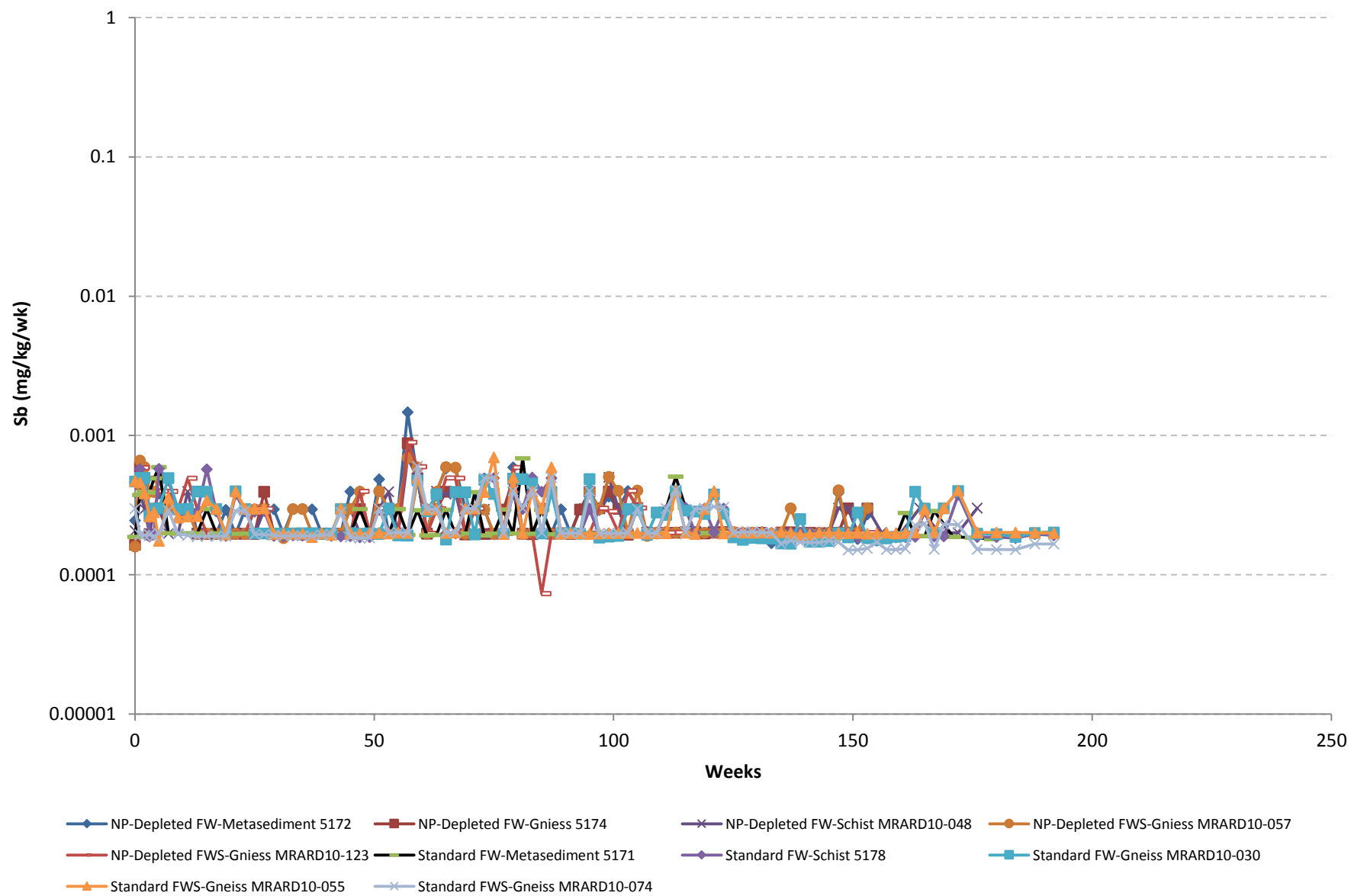
Phosphorus - Footwall



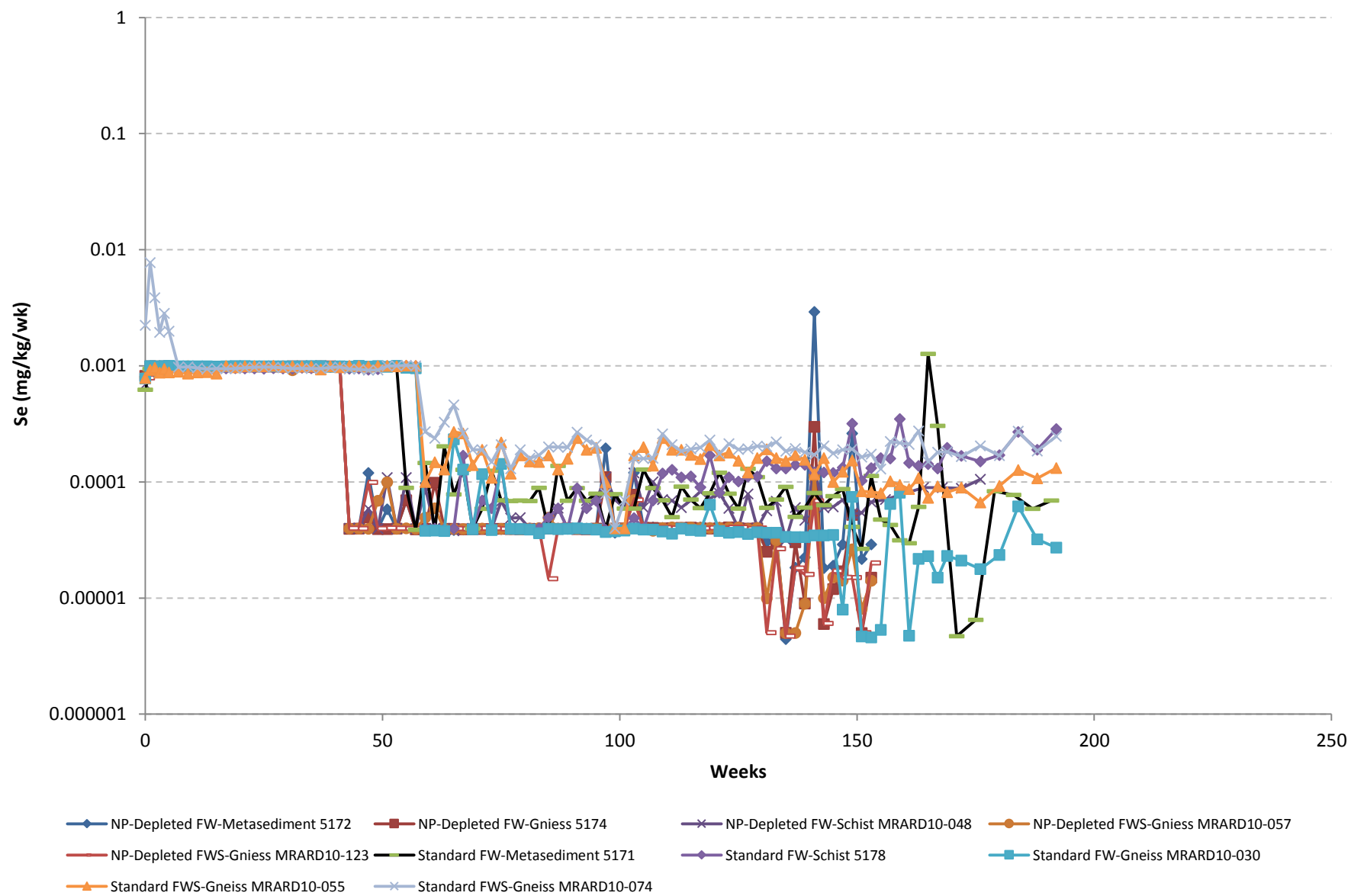
Lead - Footwall



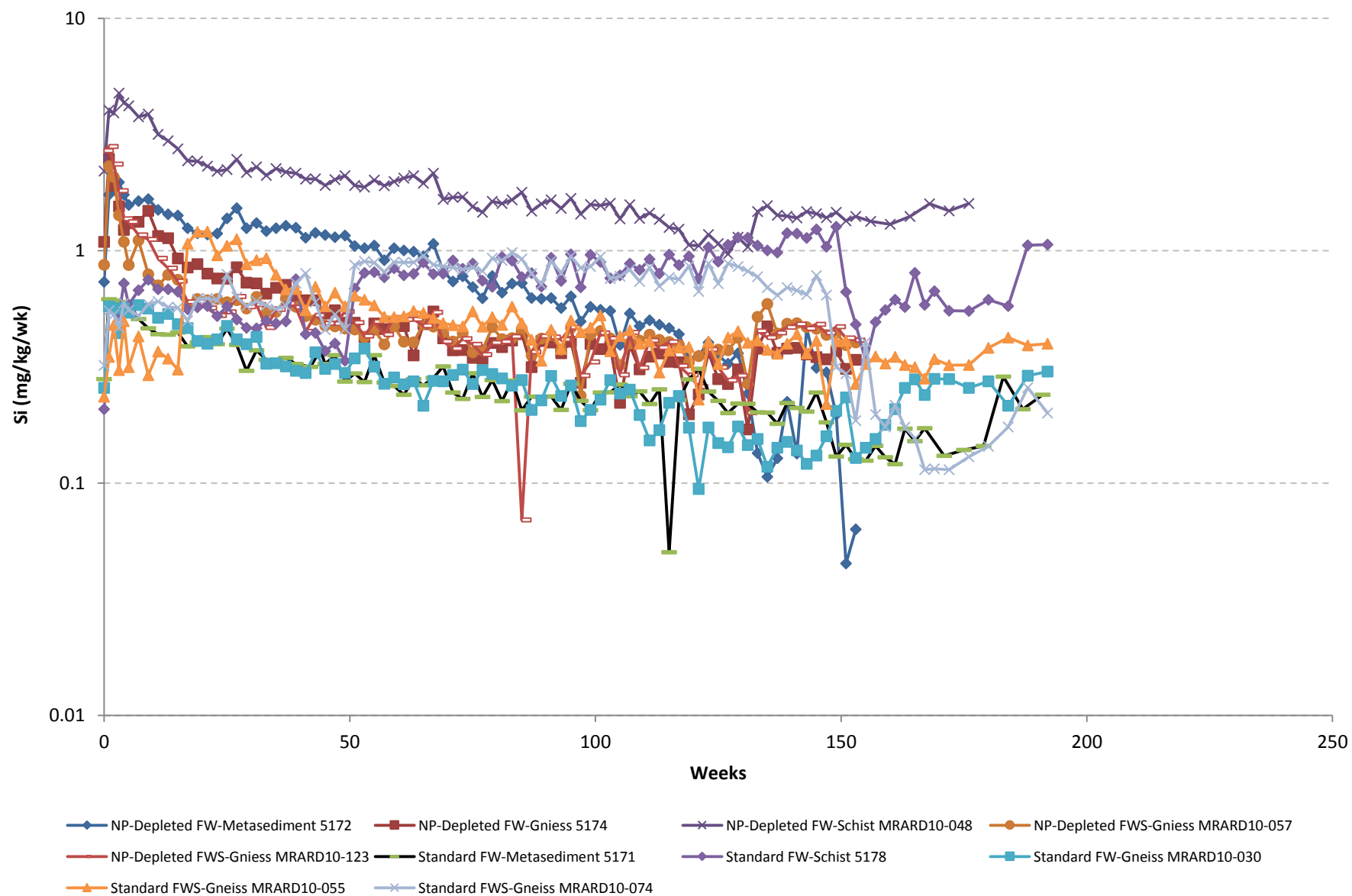
Antimony - Footwall



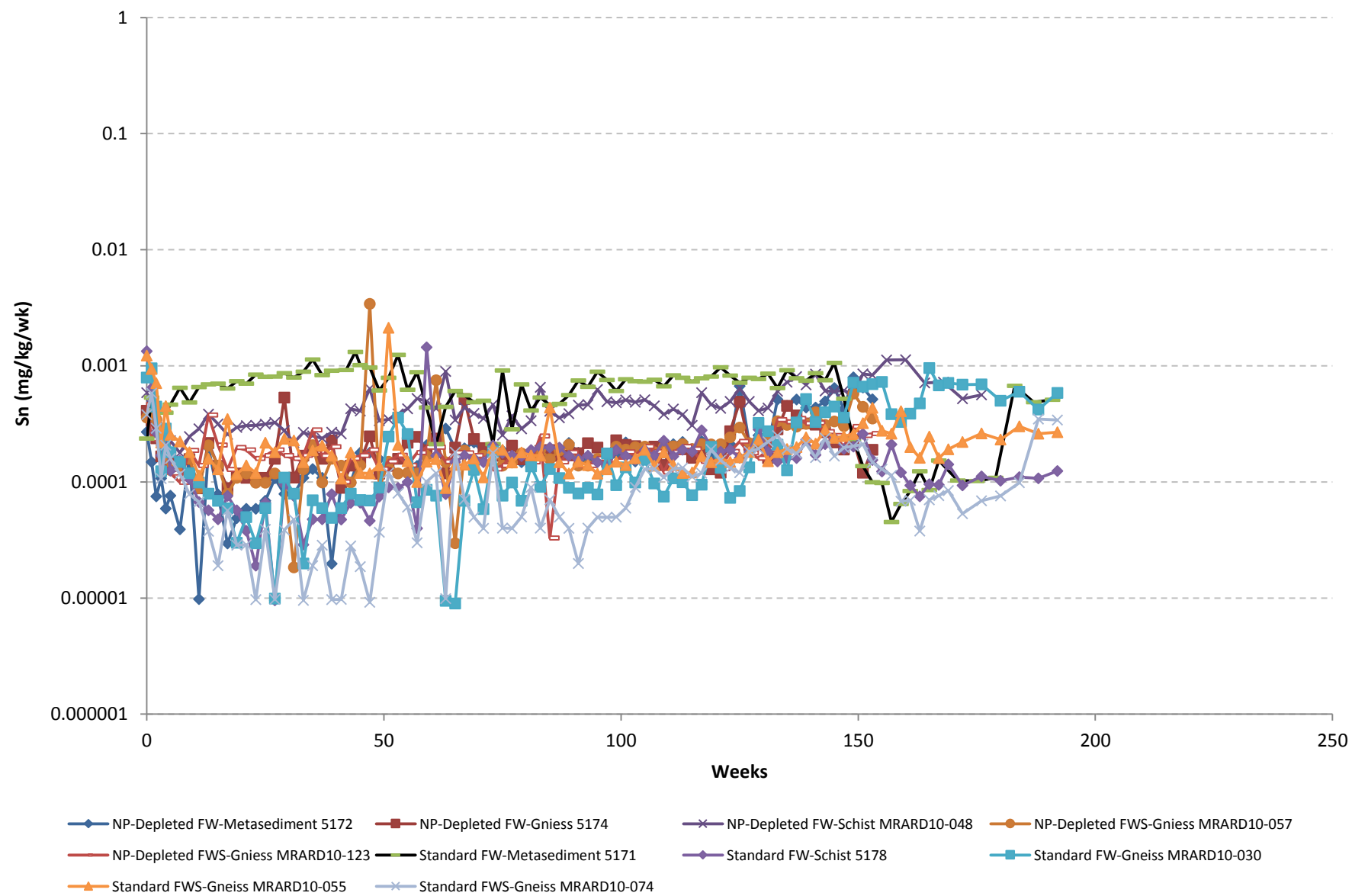
Selenium - Footwall



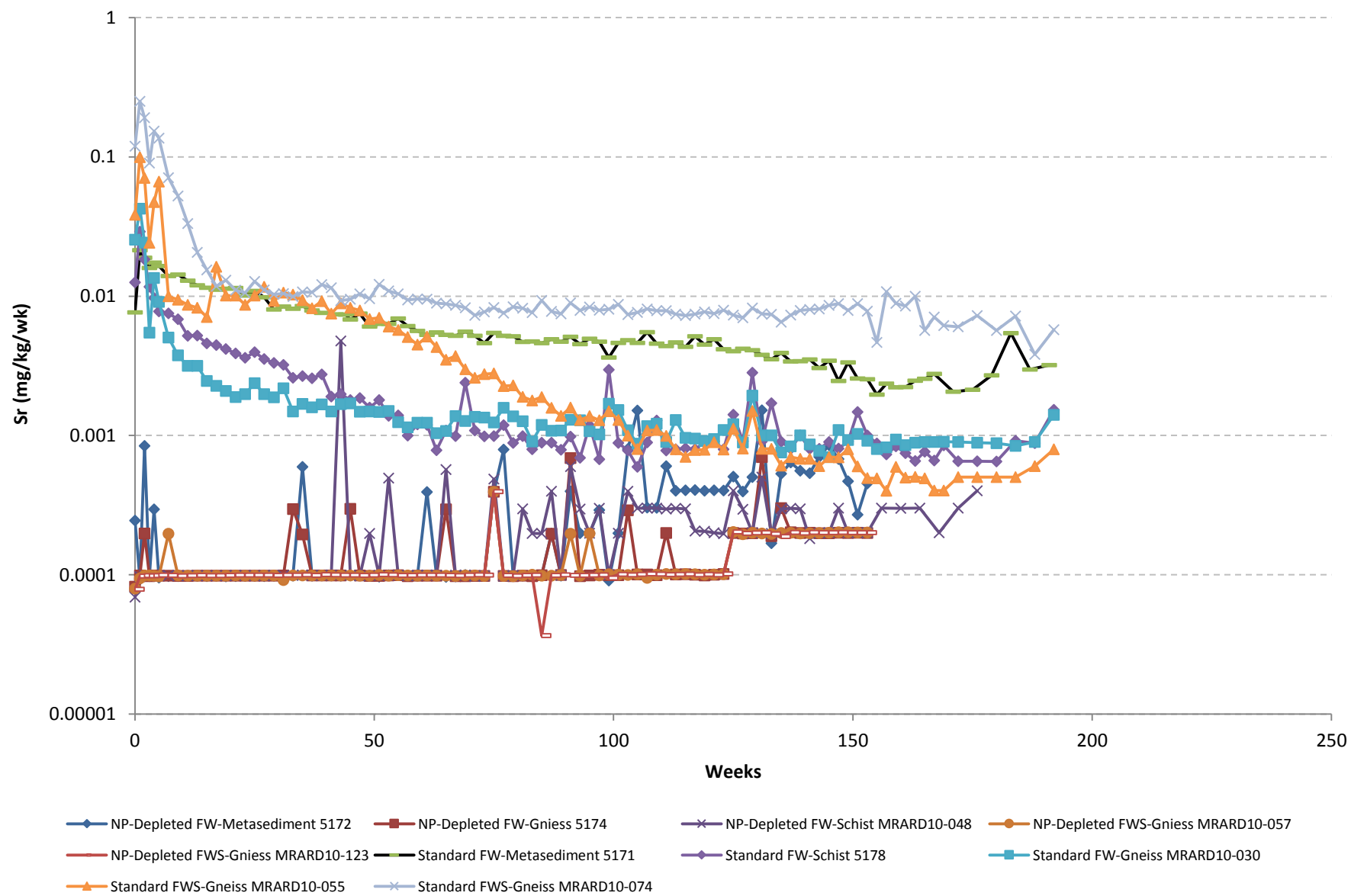
Silicon - Footwall



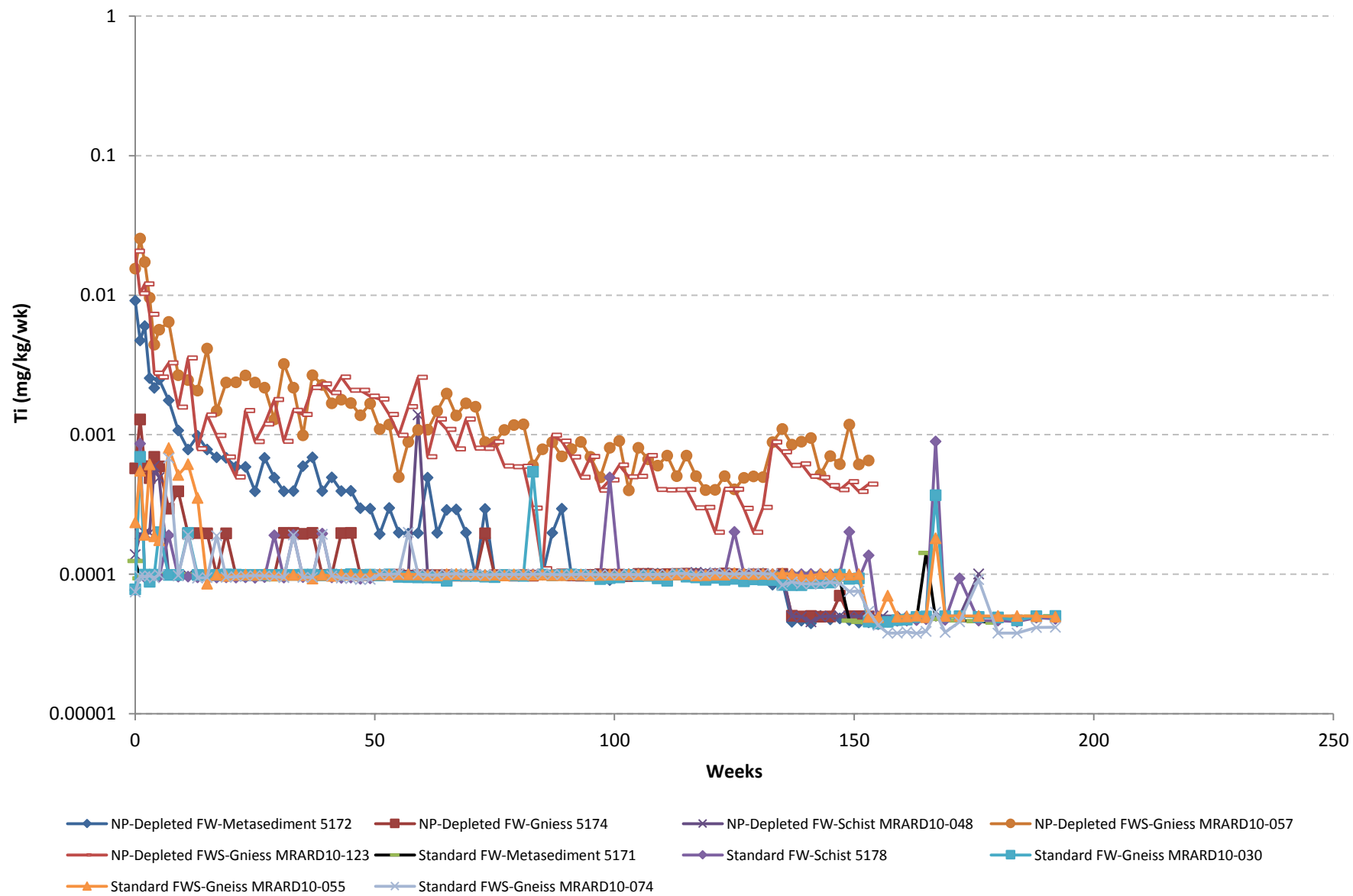
Tin - Footwall



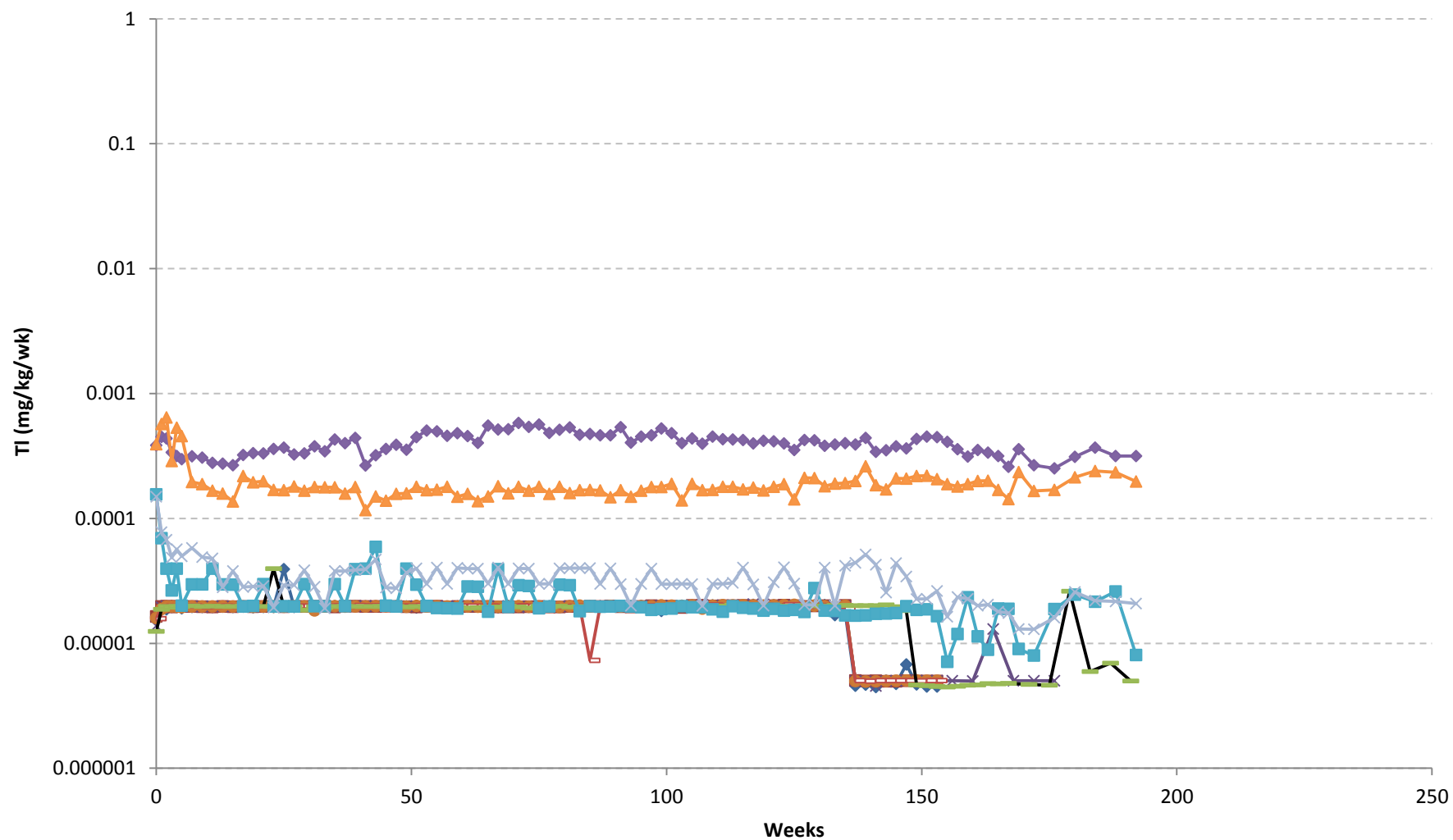
Strontium - Footwall



Titanium - Footwall

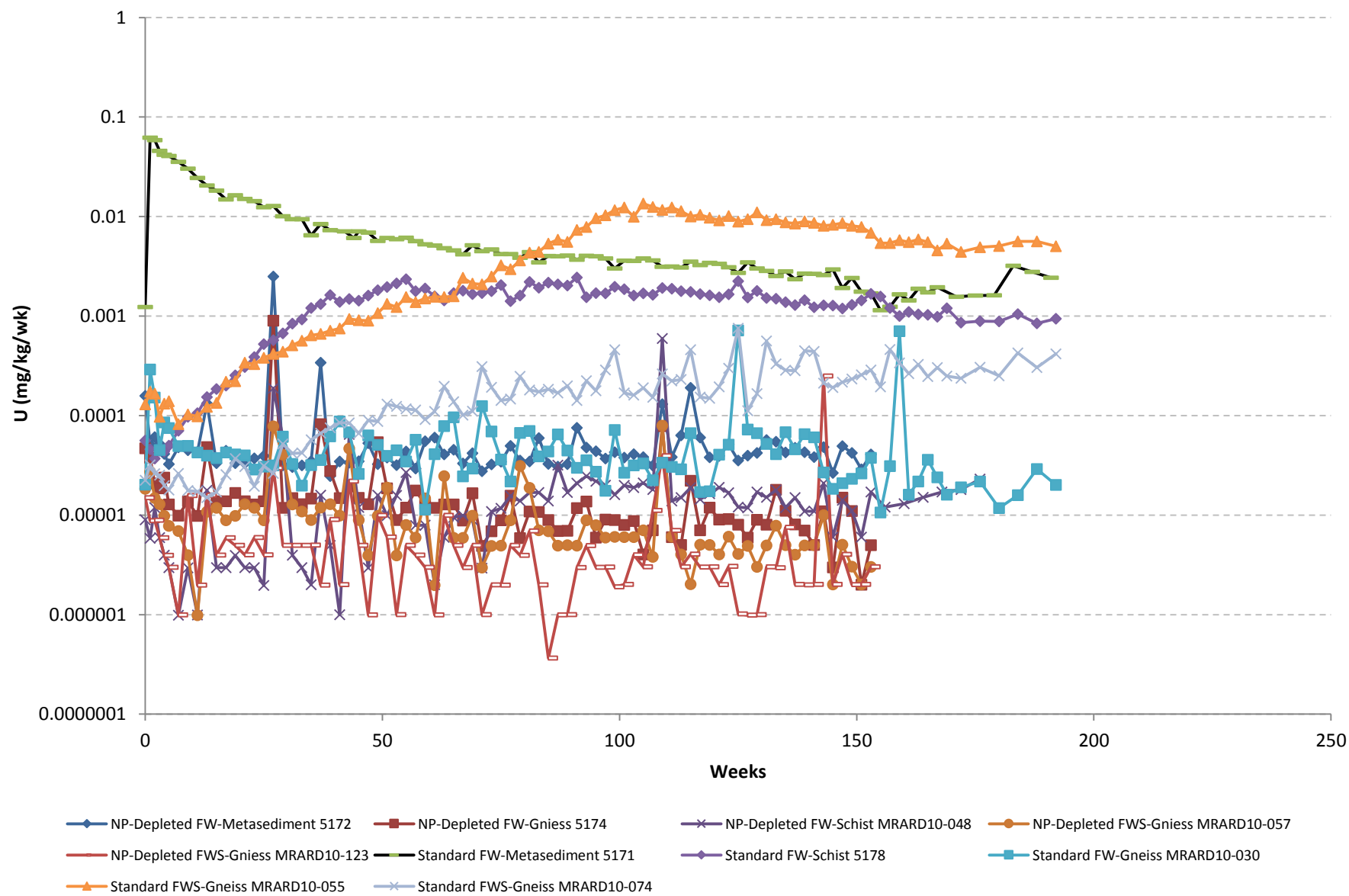


Thallium - Footwall

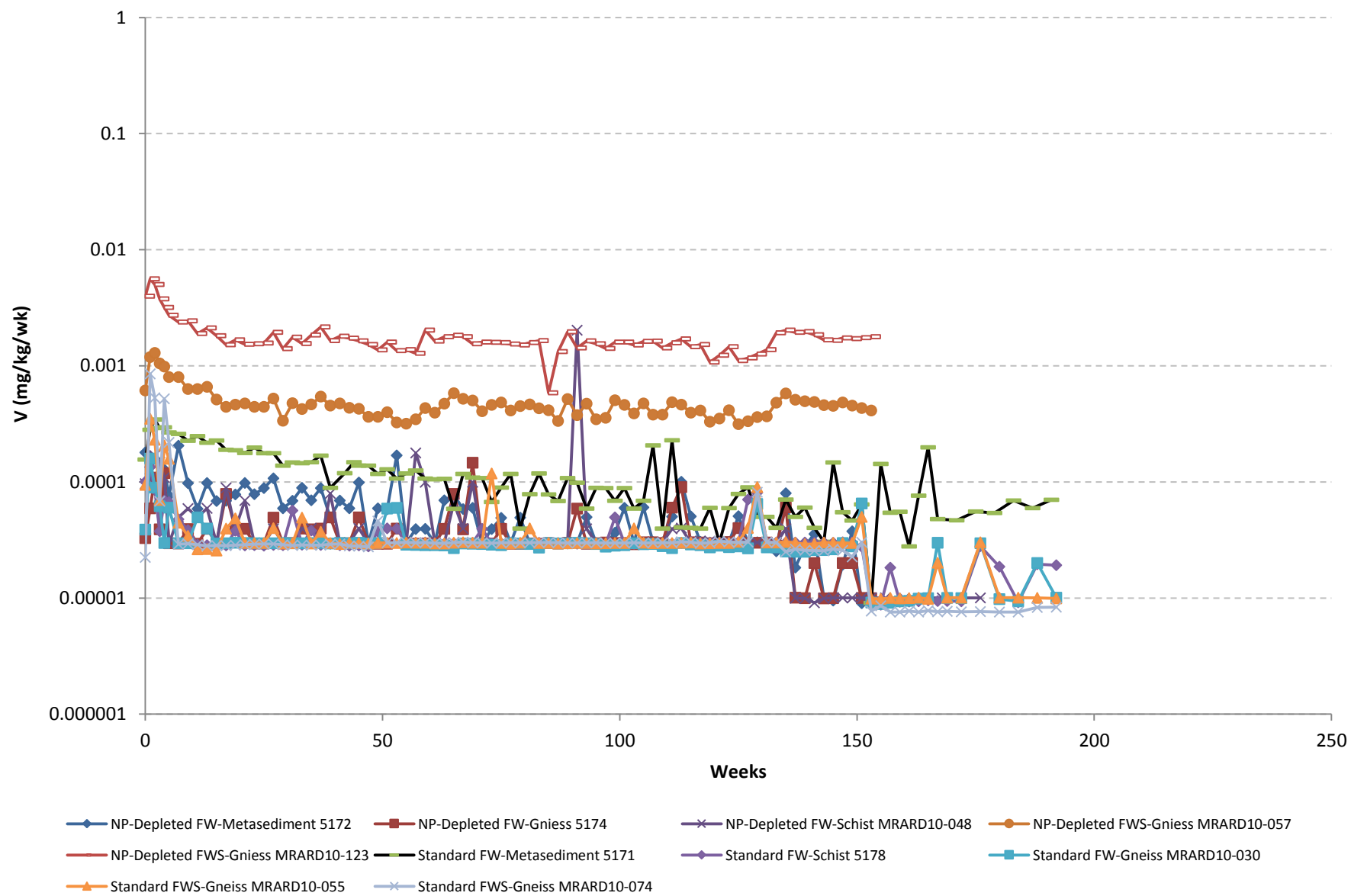


- NP-Depleted FW-Metasediment 5172
- NP-Depleted FW-Gneiss 5174
- NP-Depleted FW-Schist MRARD10-048
- NP-Depleted FWS-Gneiss MRARD10-123
- Standard FW-Metasediment 5171
- Standard FW-Schist 5178
- Standard FWS-Gneiss MRARD10-030
- Standard FWS-Gneiss MRARD10-055
- Standard FWS-Gneiss MRARD10-074

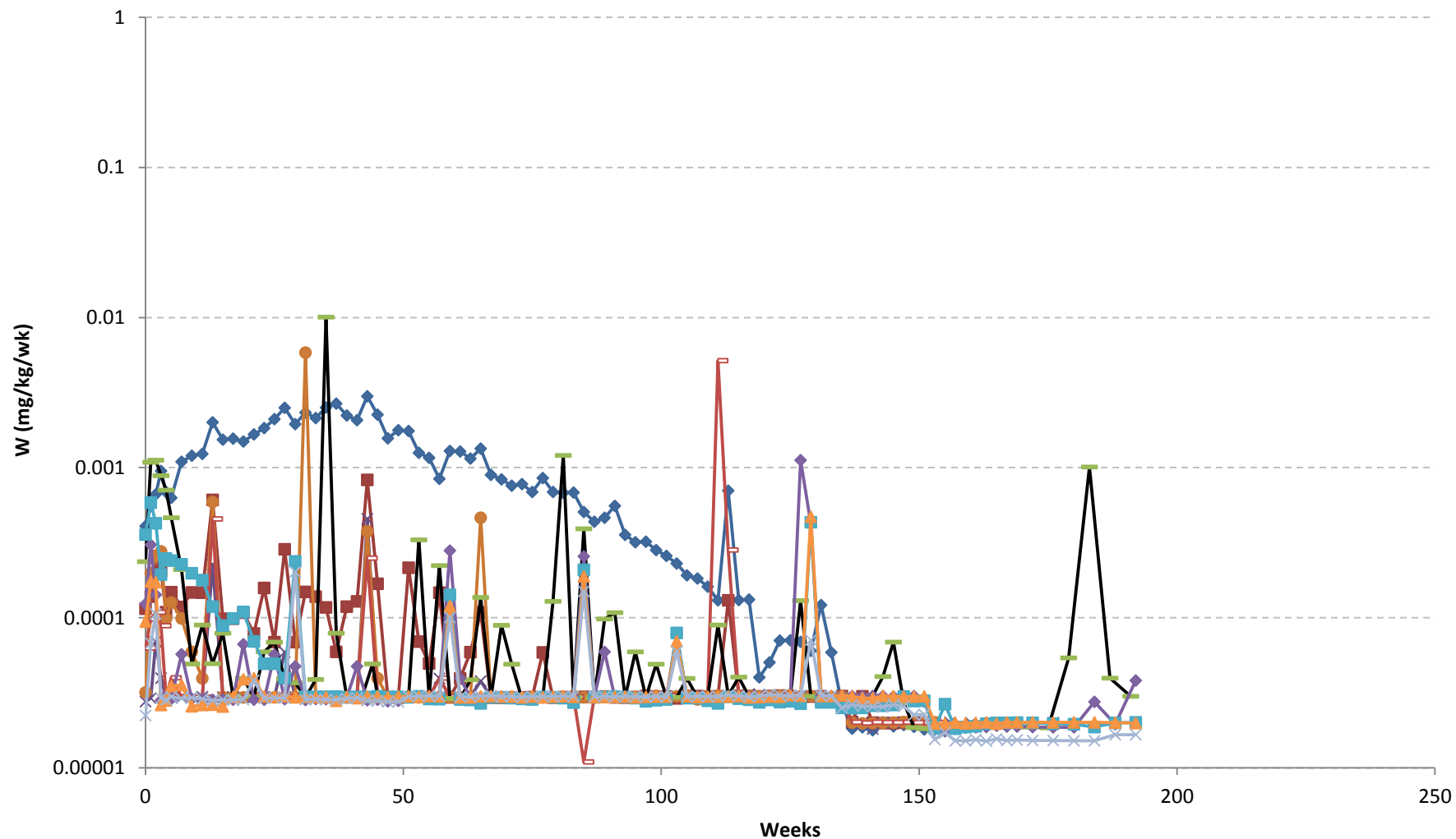
Uranium - Footwall



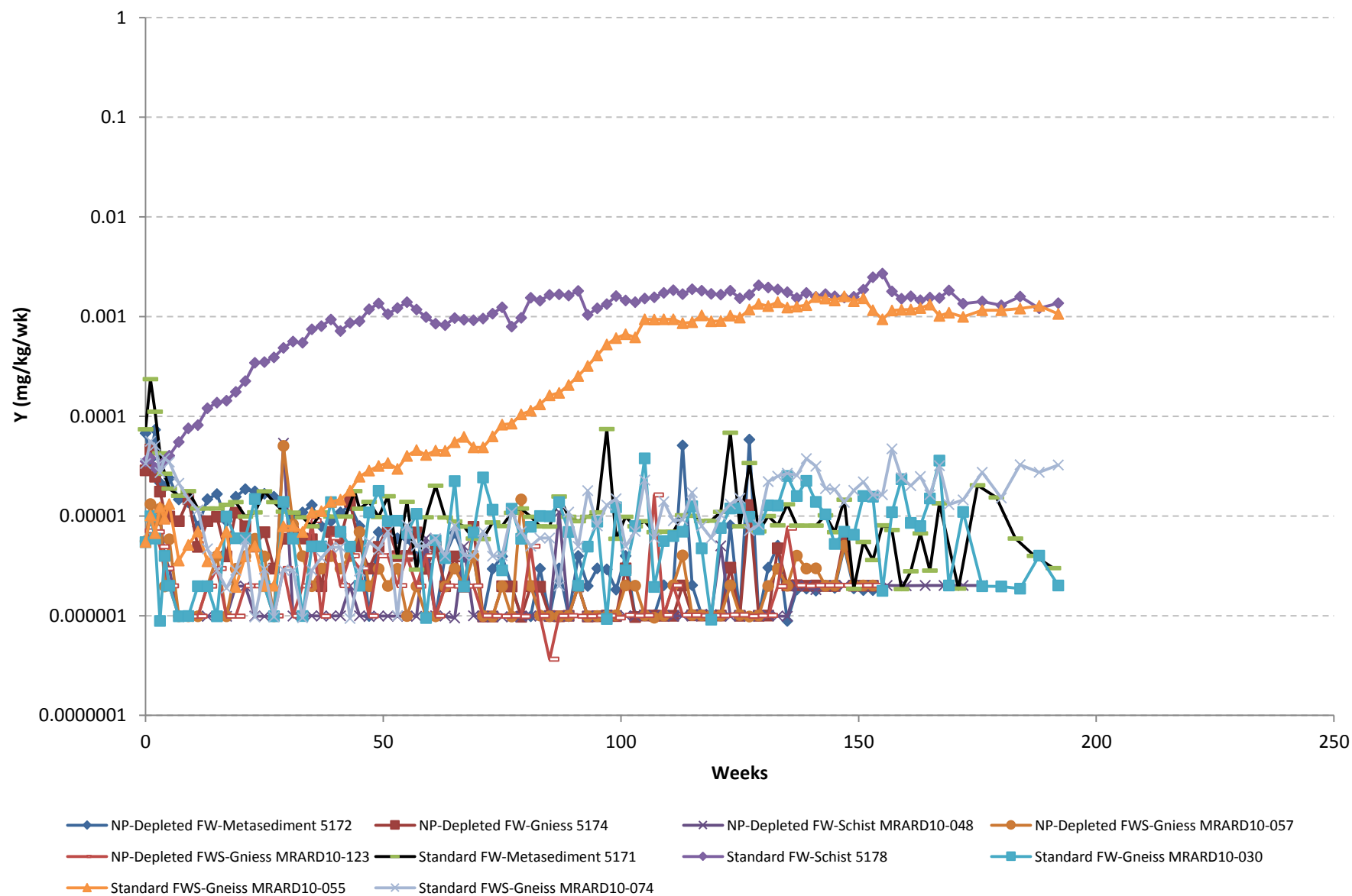
Vanadium - Footwall



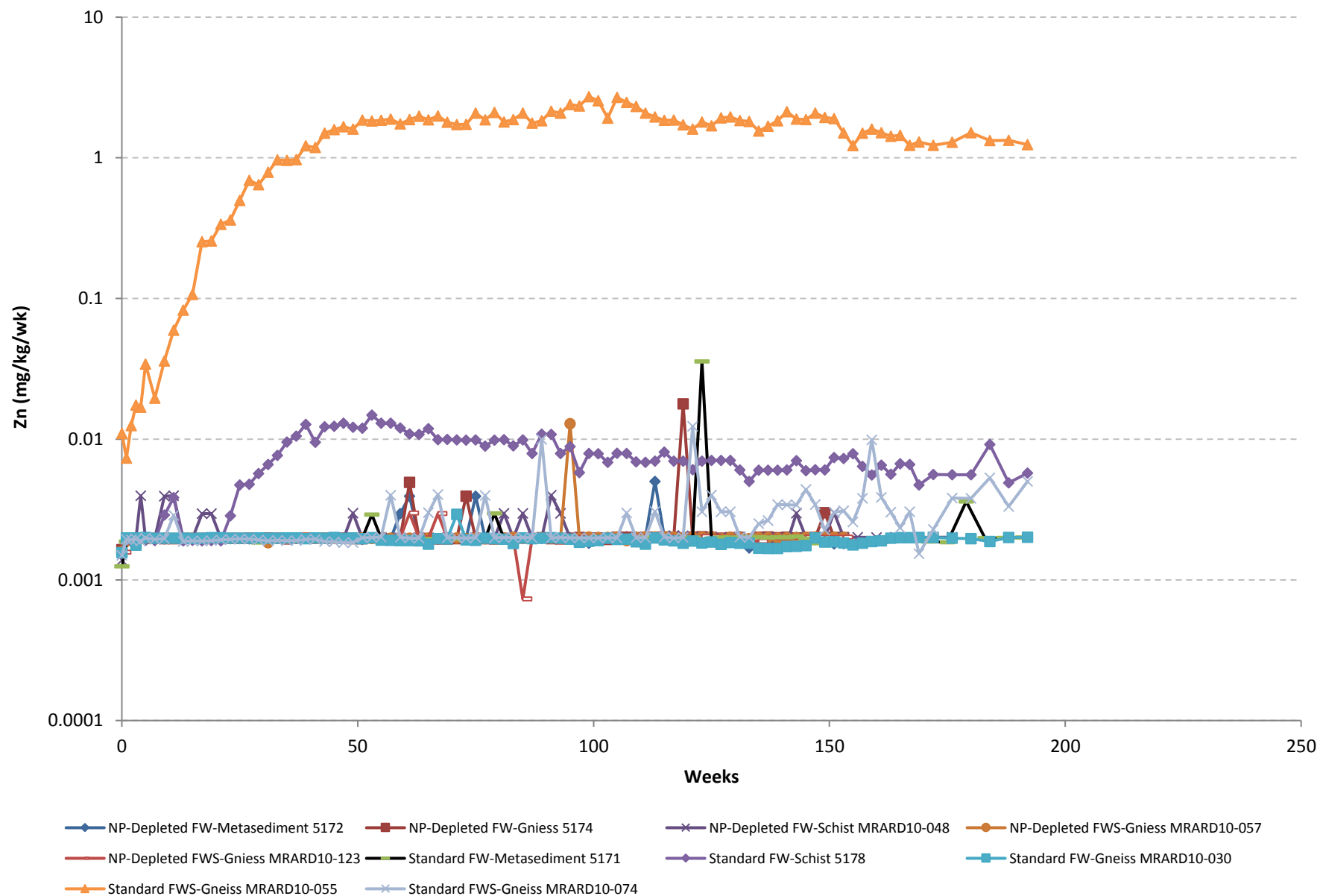
Tungsten - Footwall



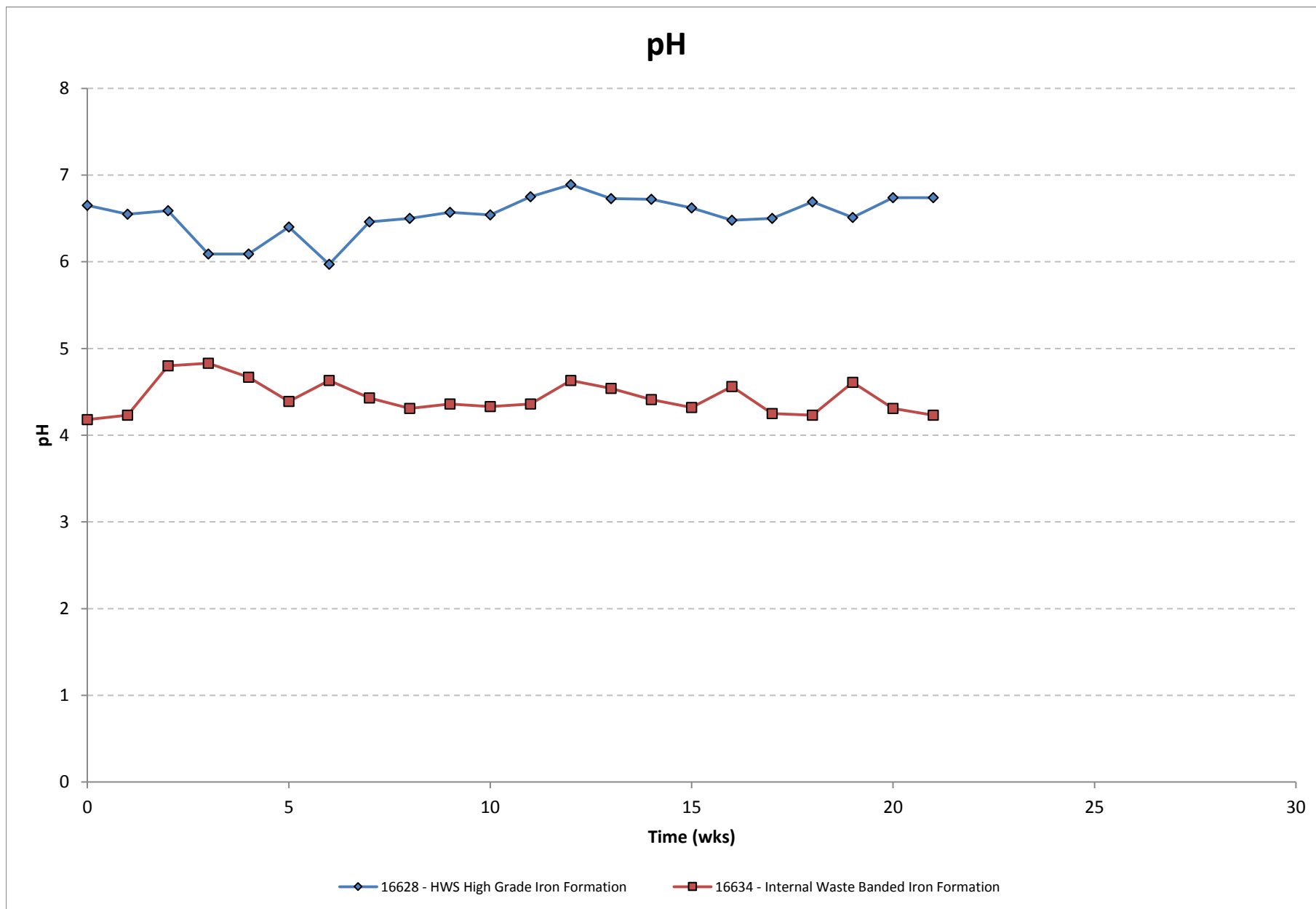
Yttrium - Footwall

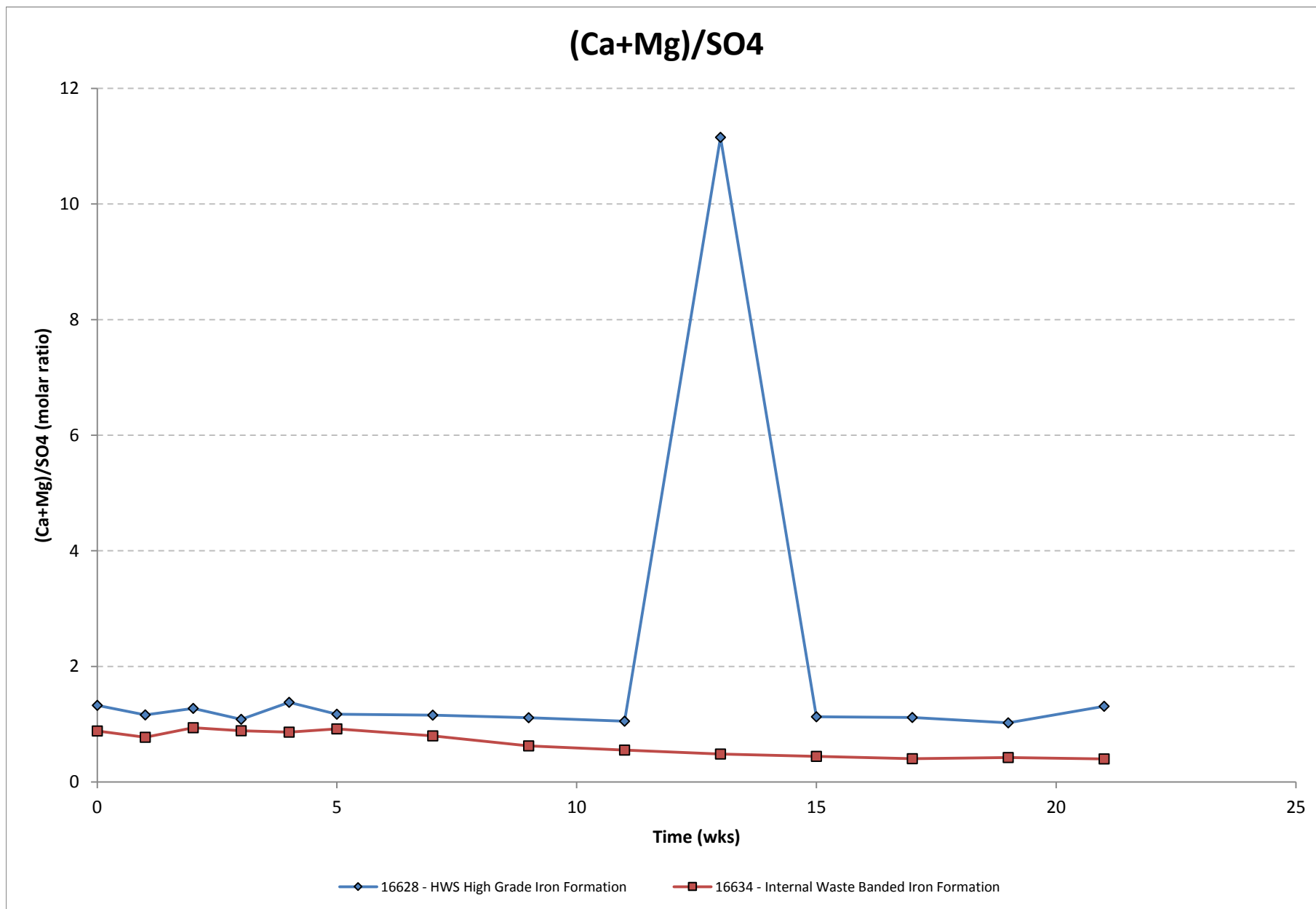


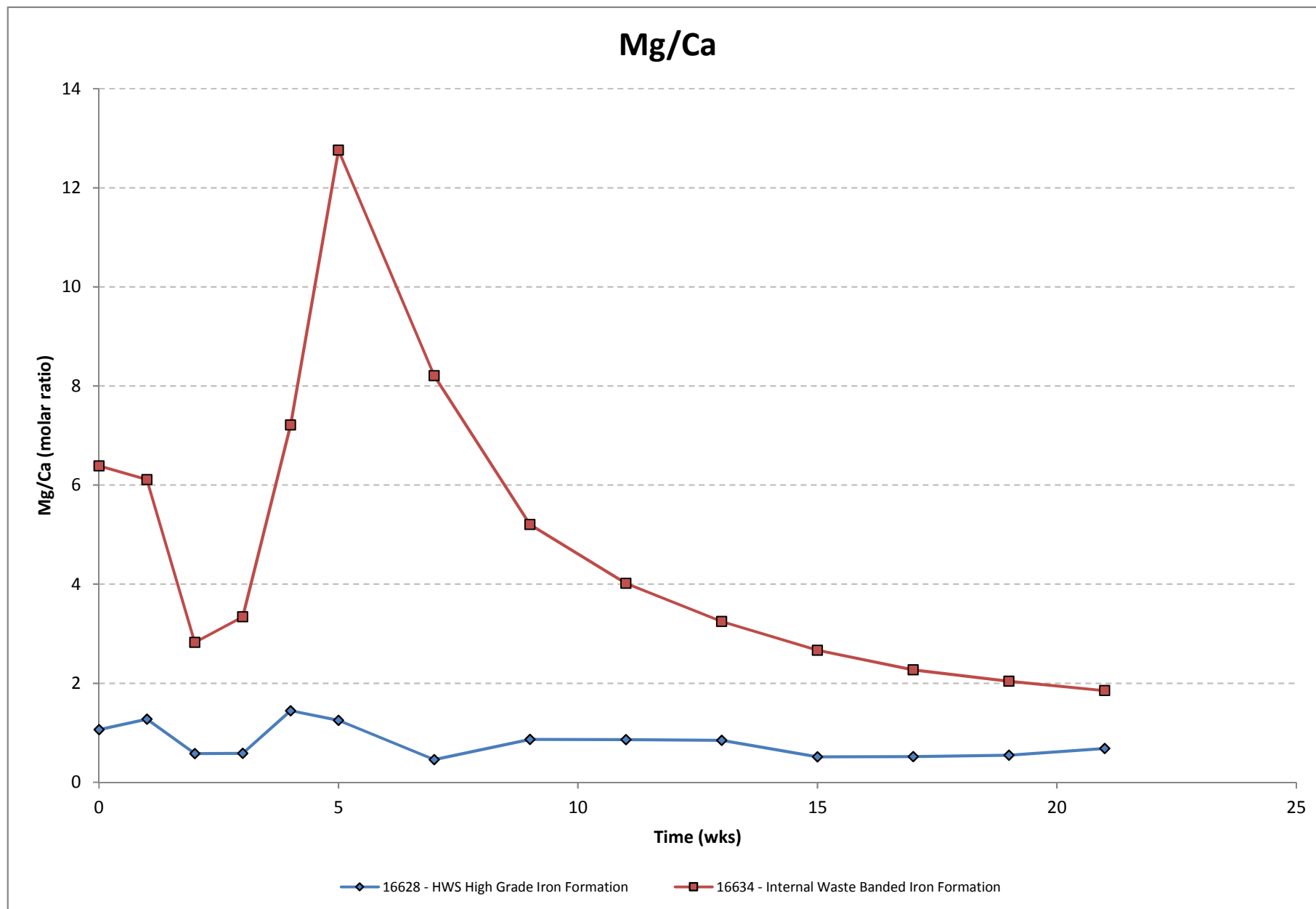
Zinc - Footwall

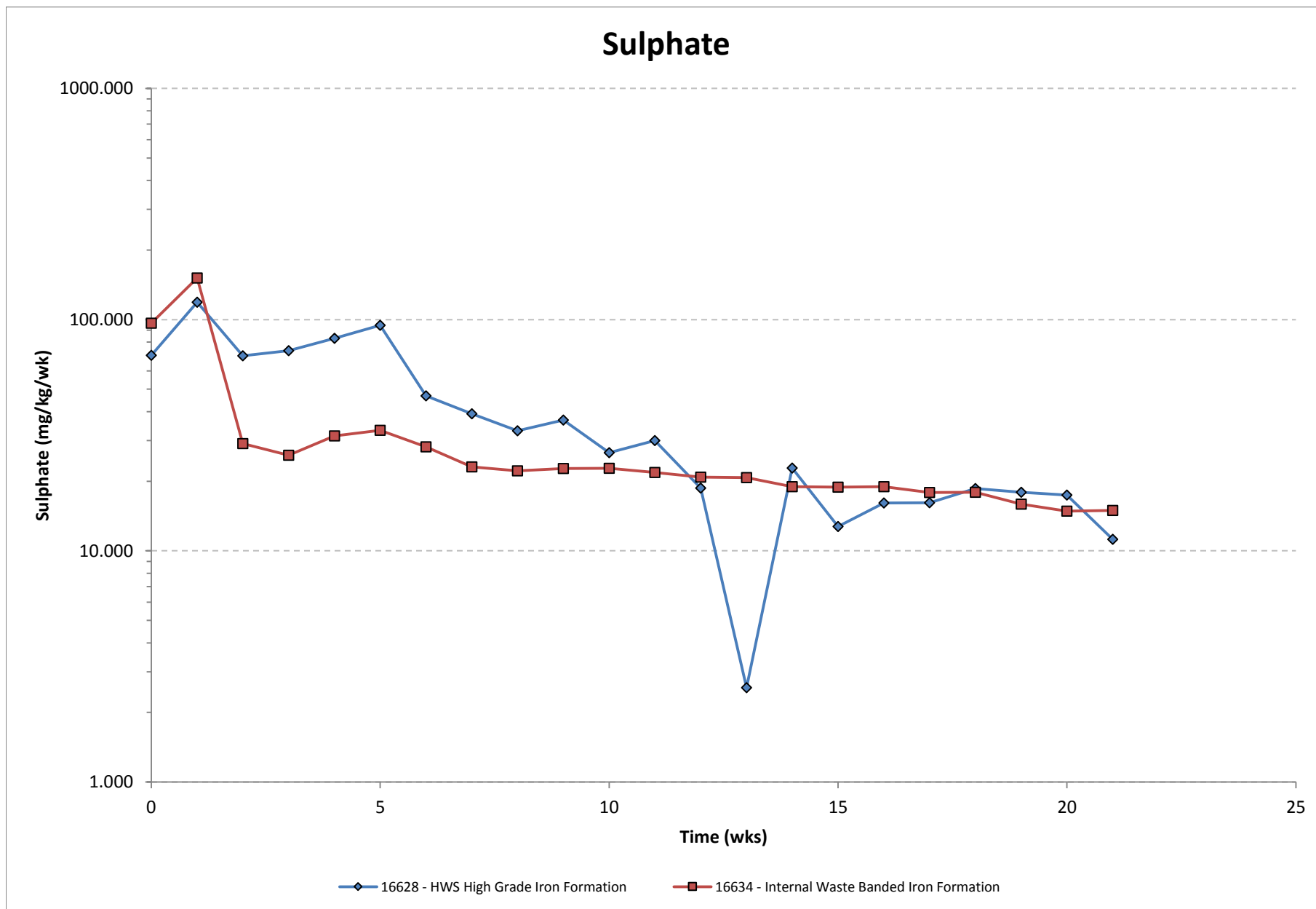


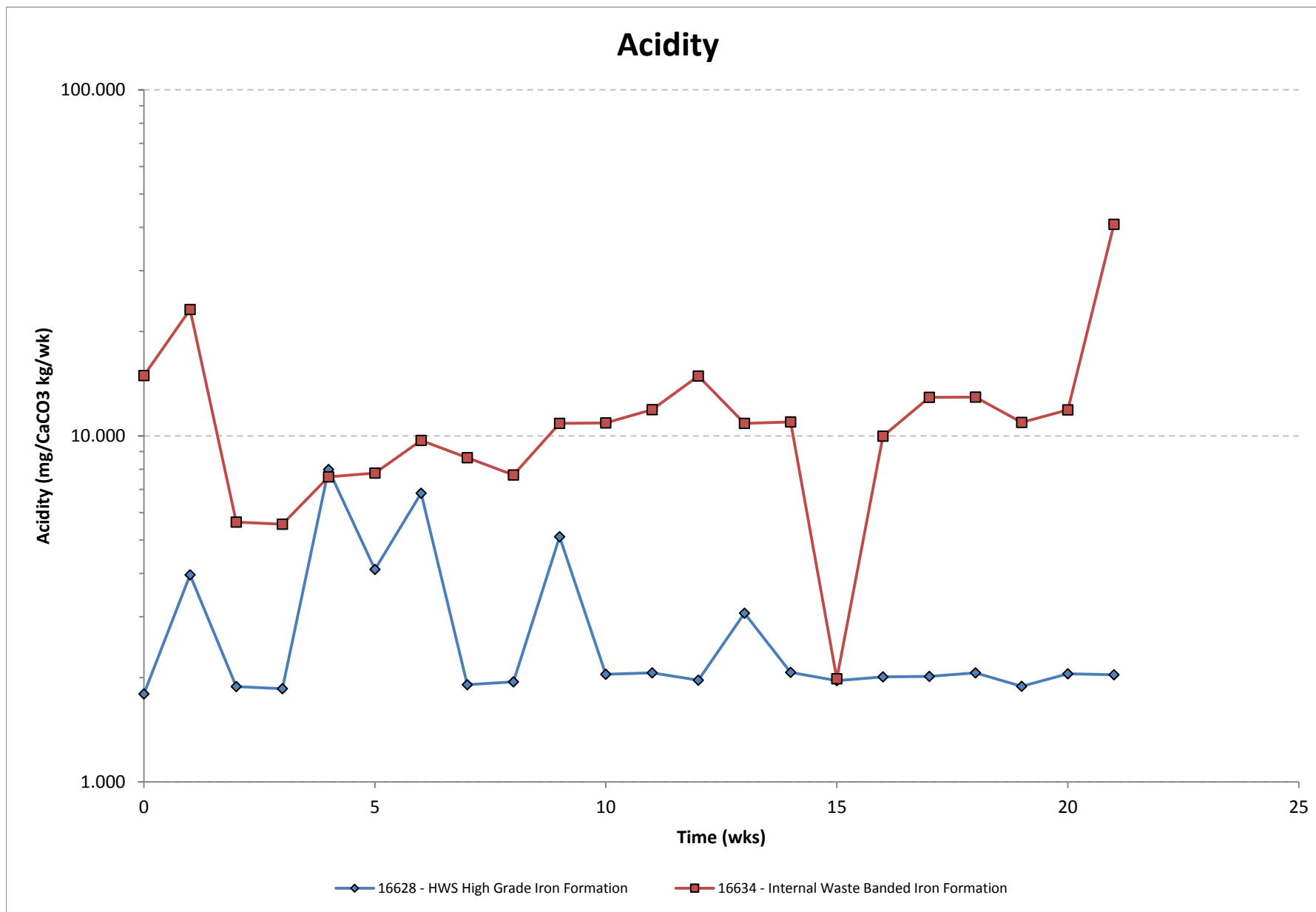
Mineralized Waste Humidity Cell Plots

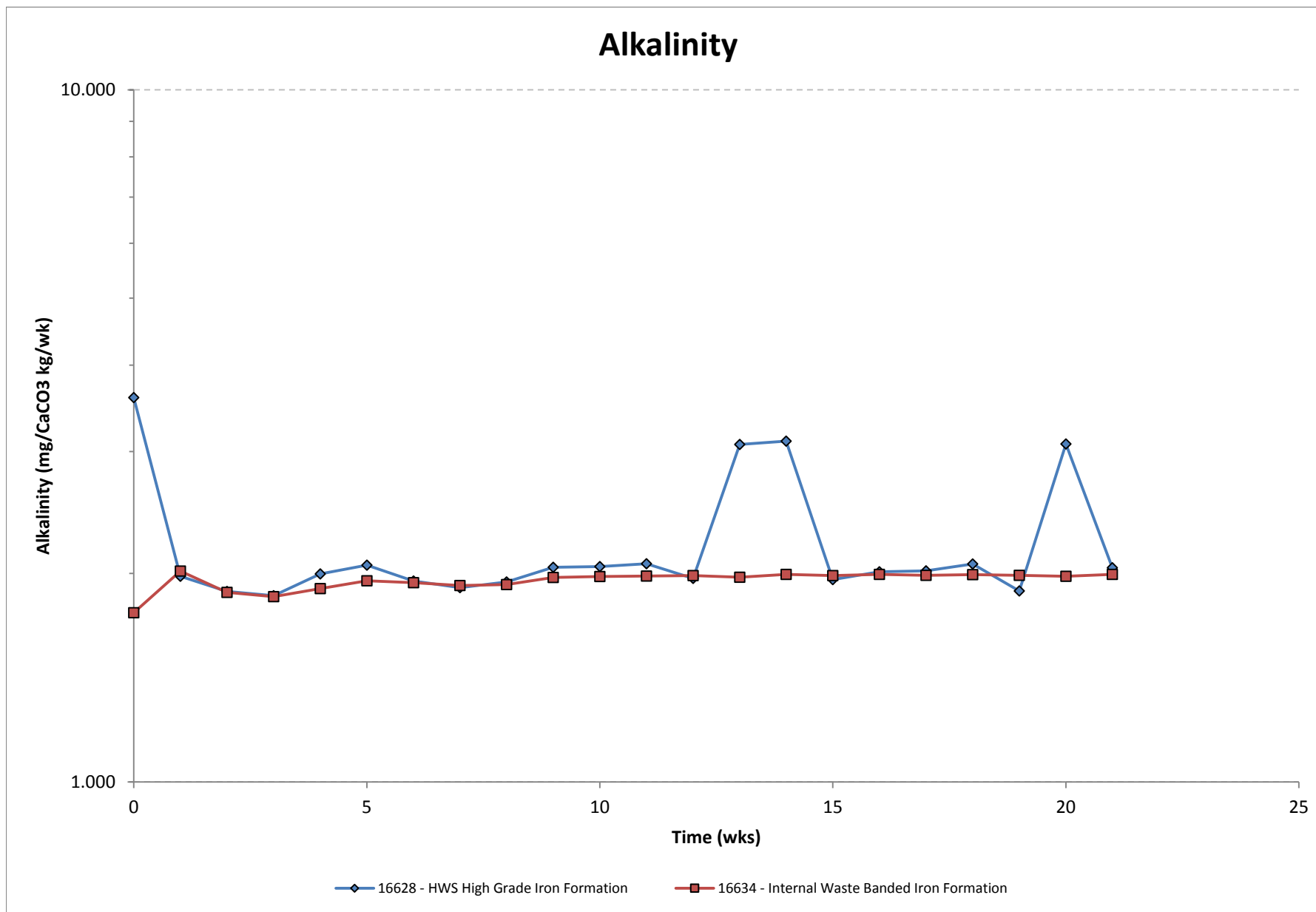


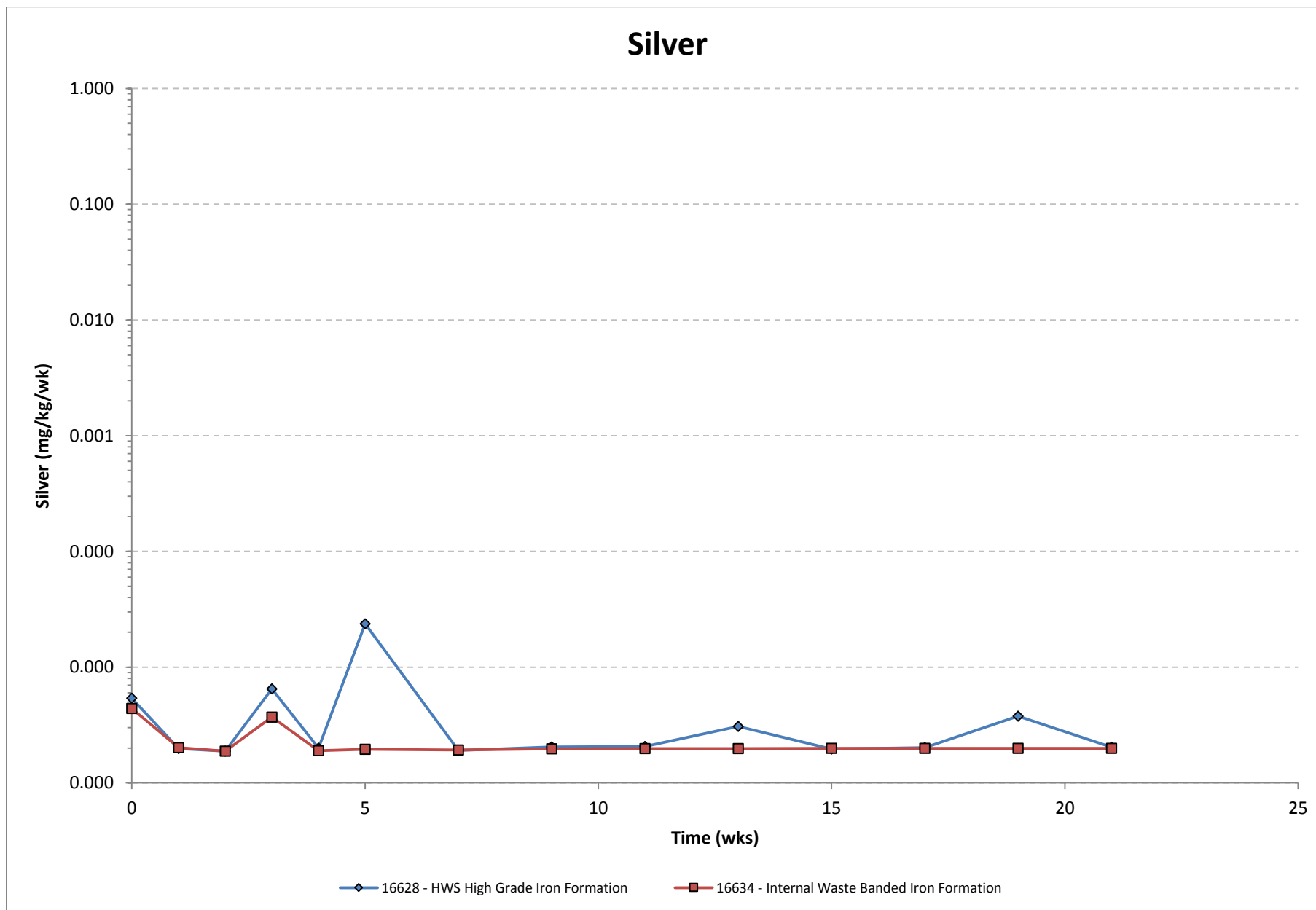


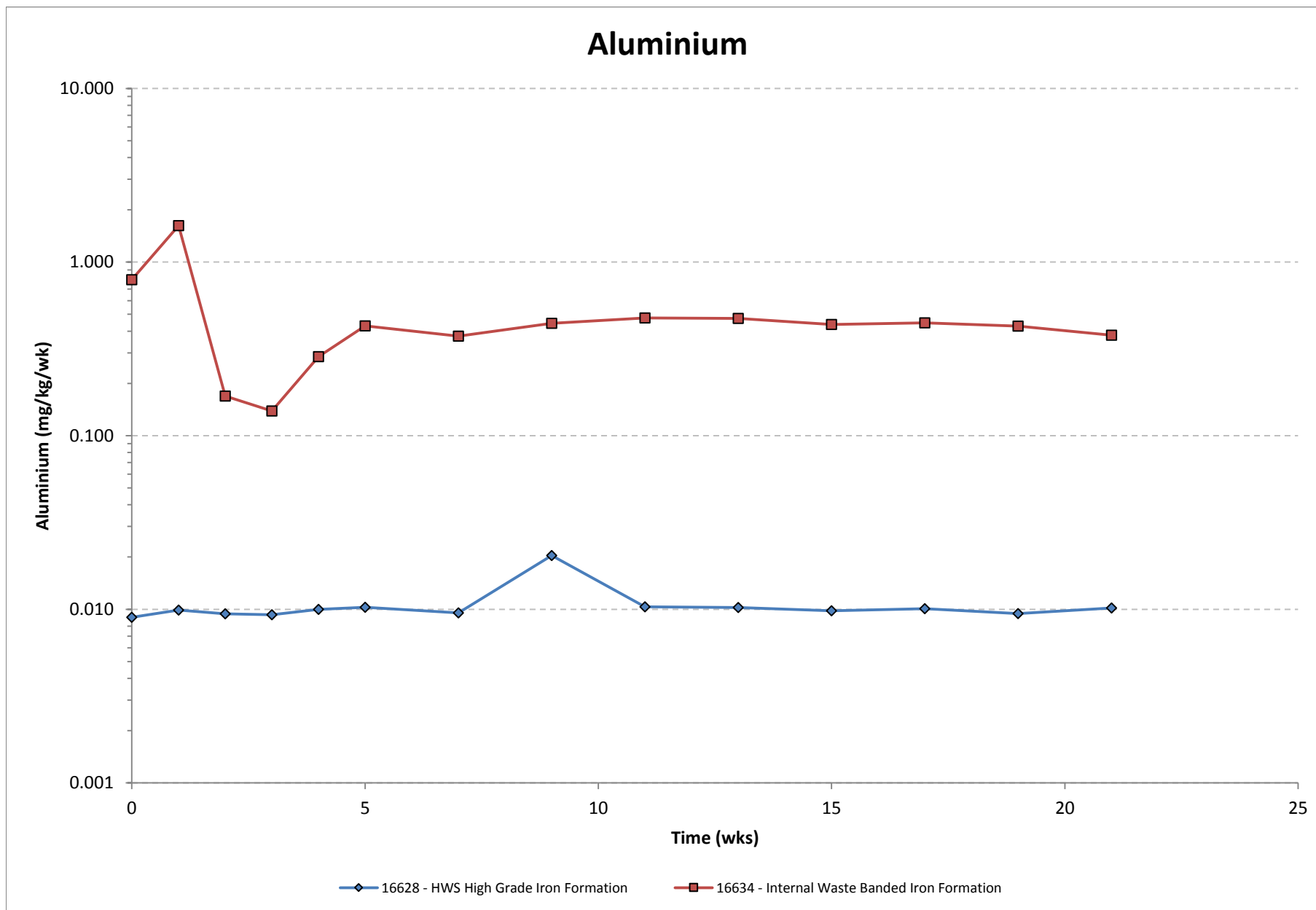


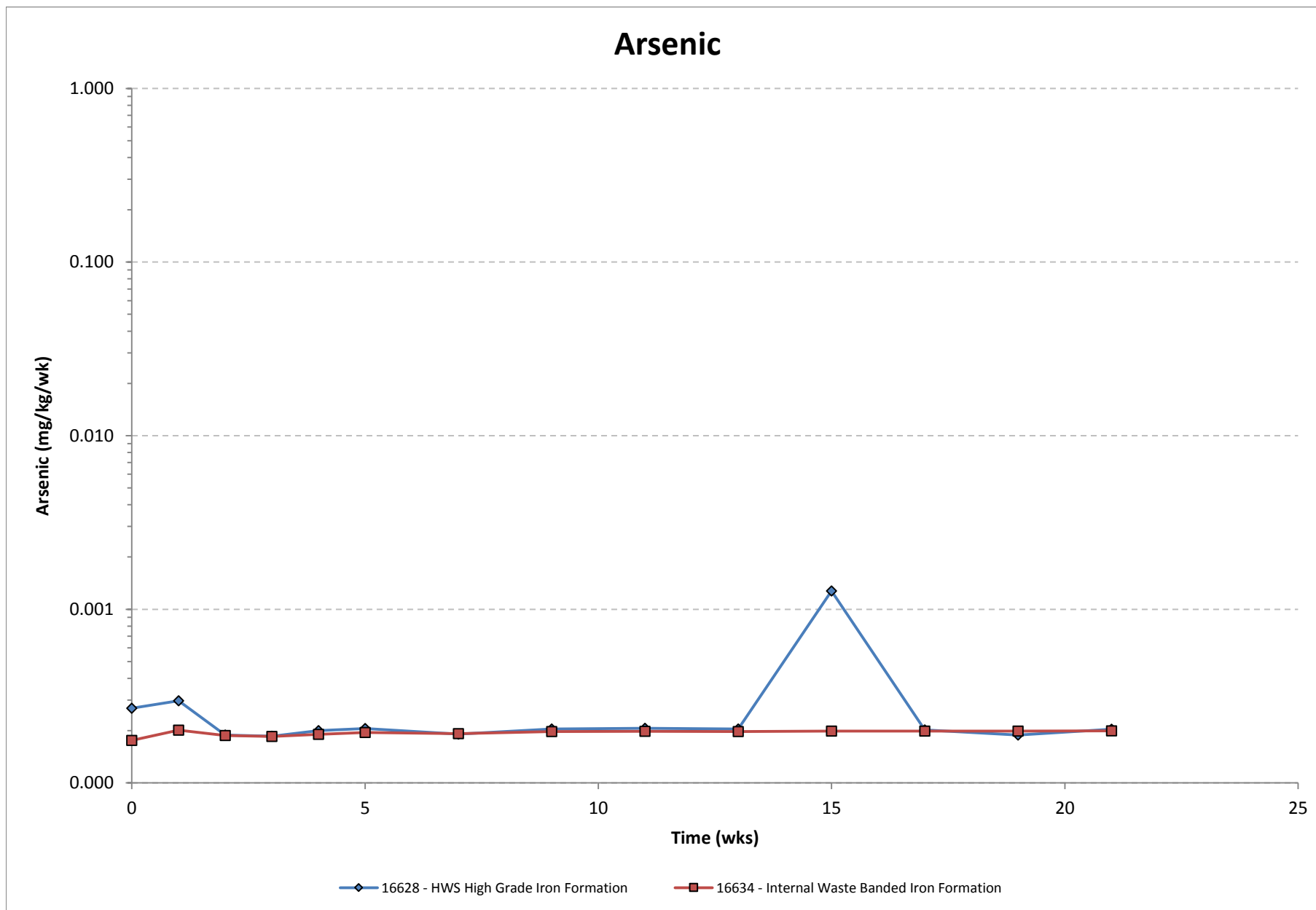


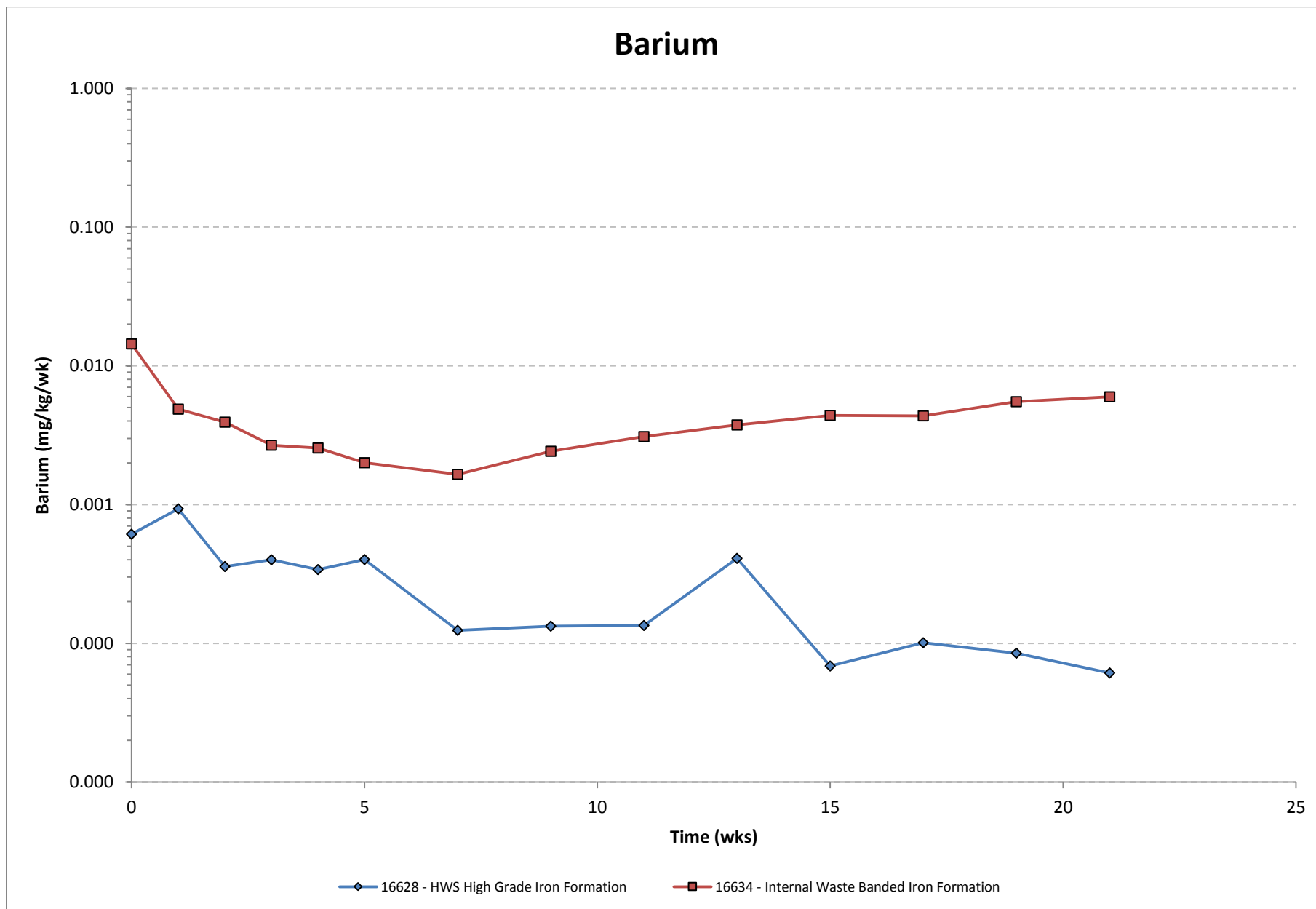


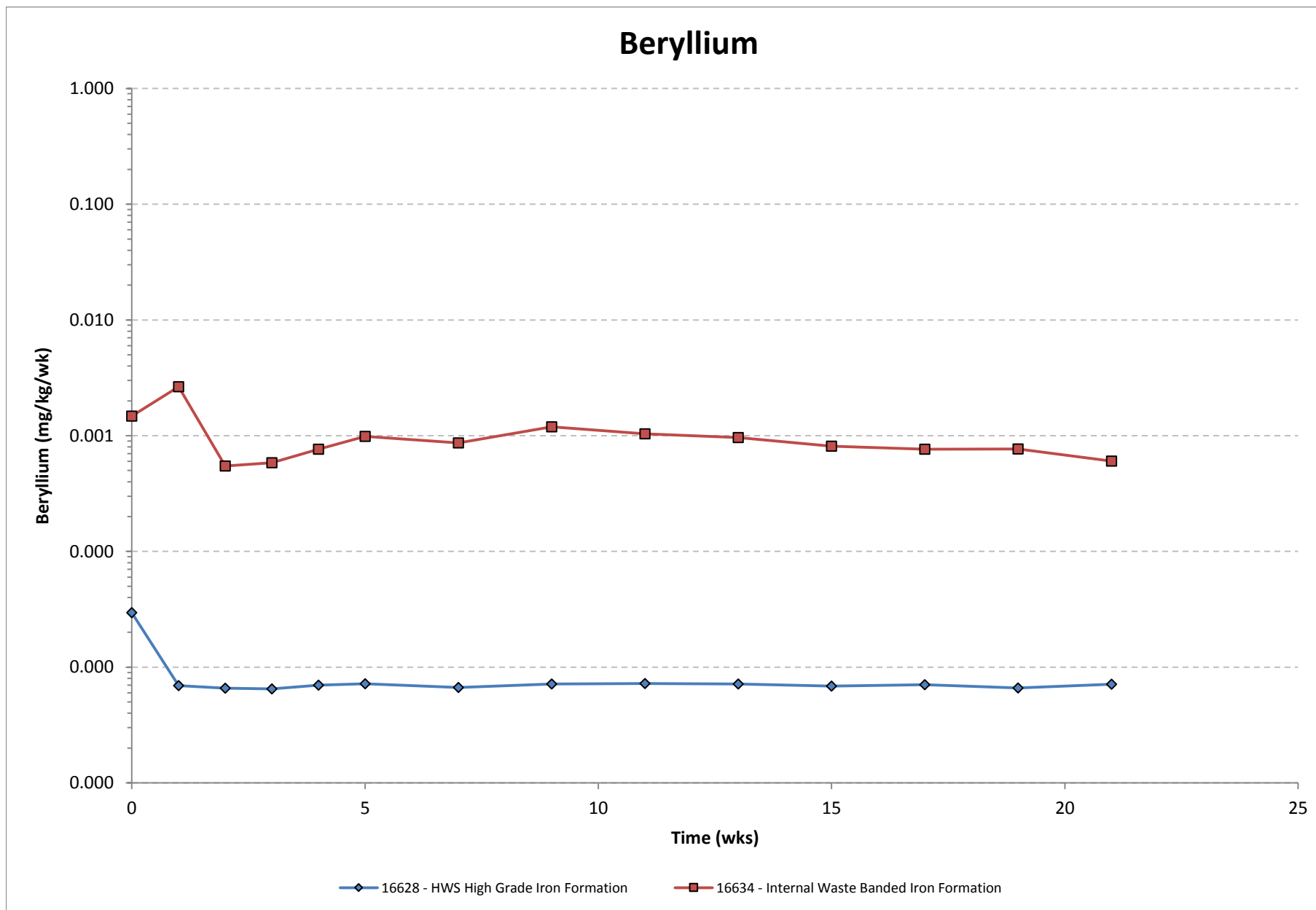


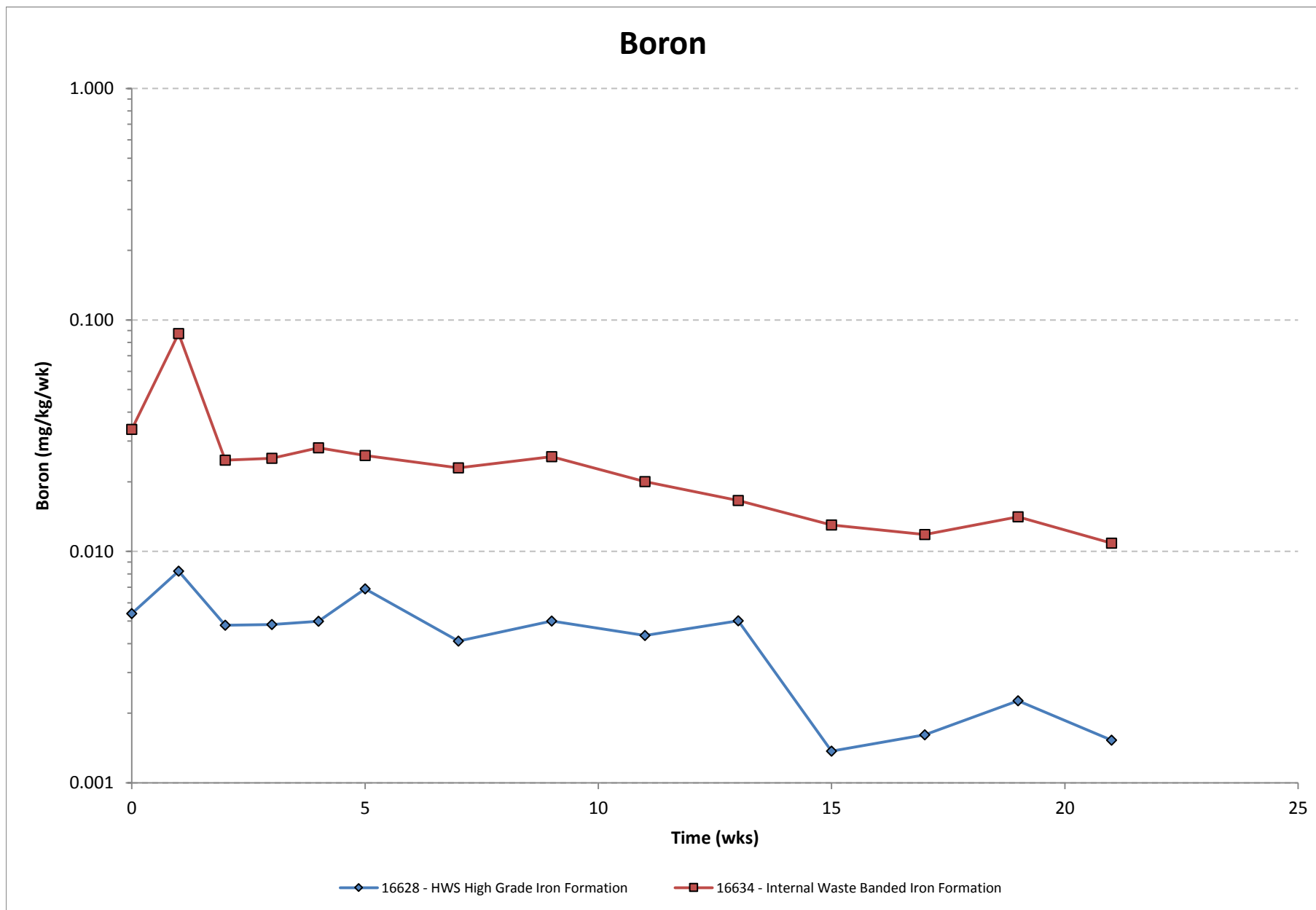


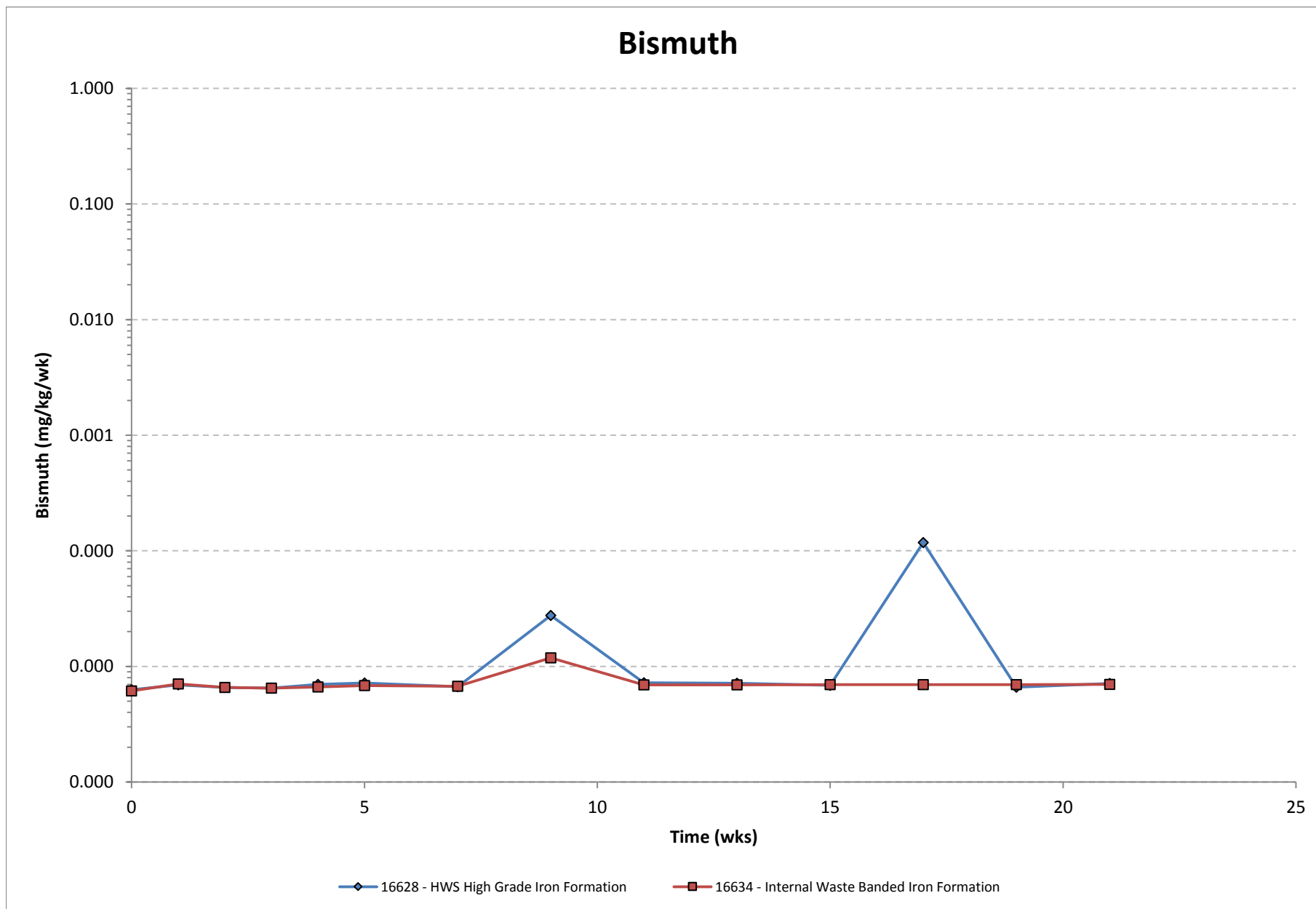


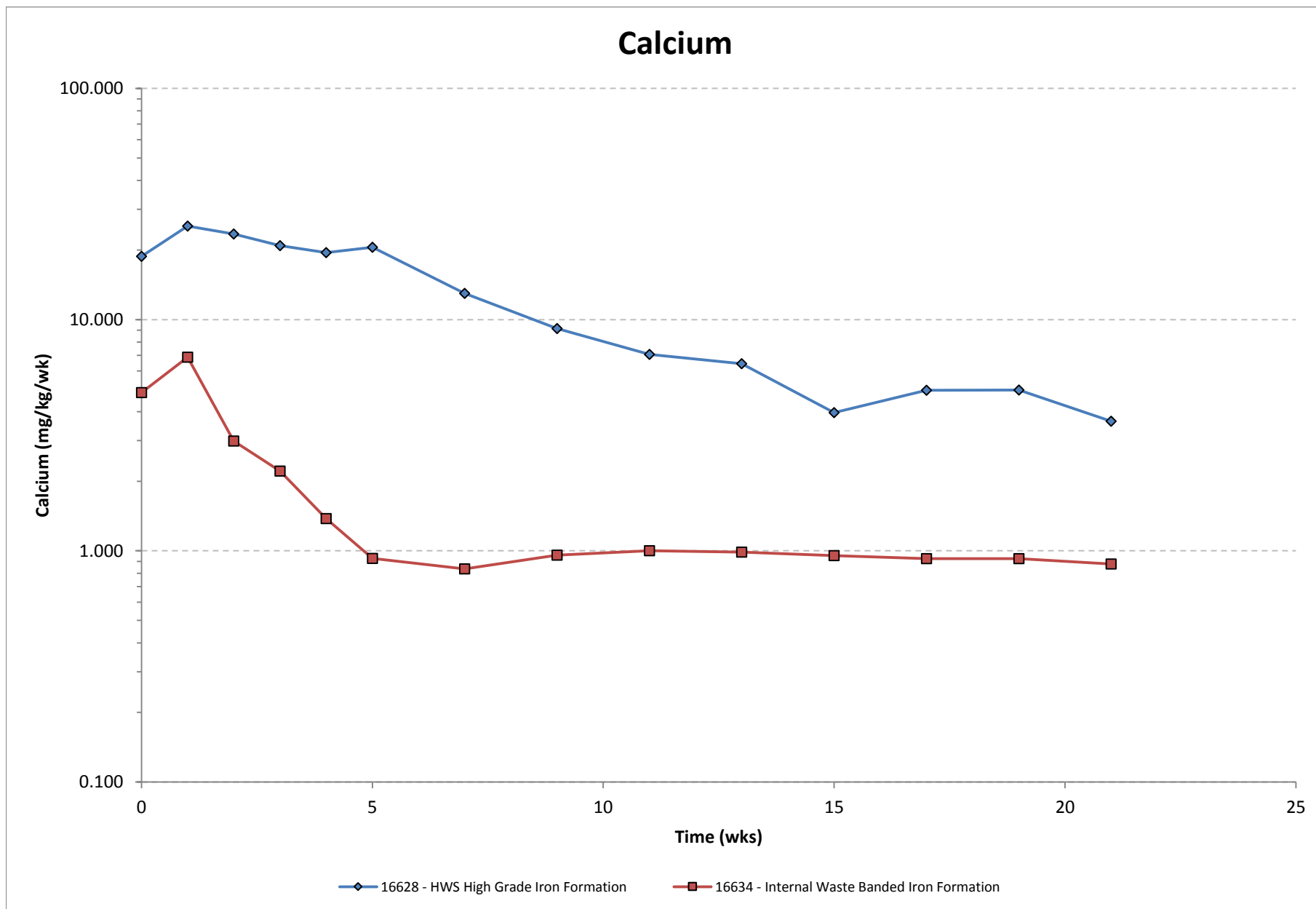


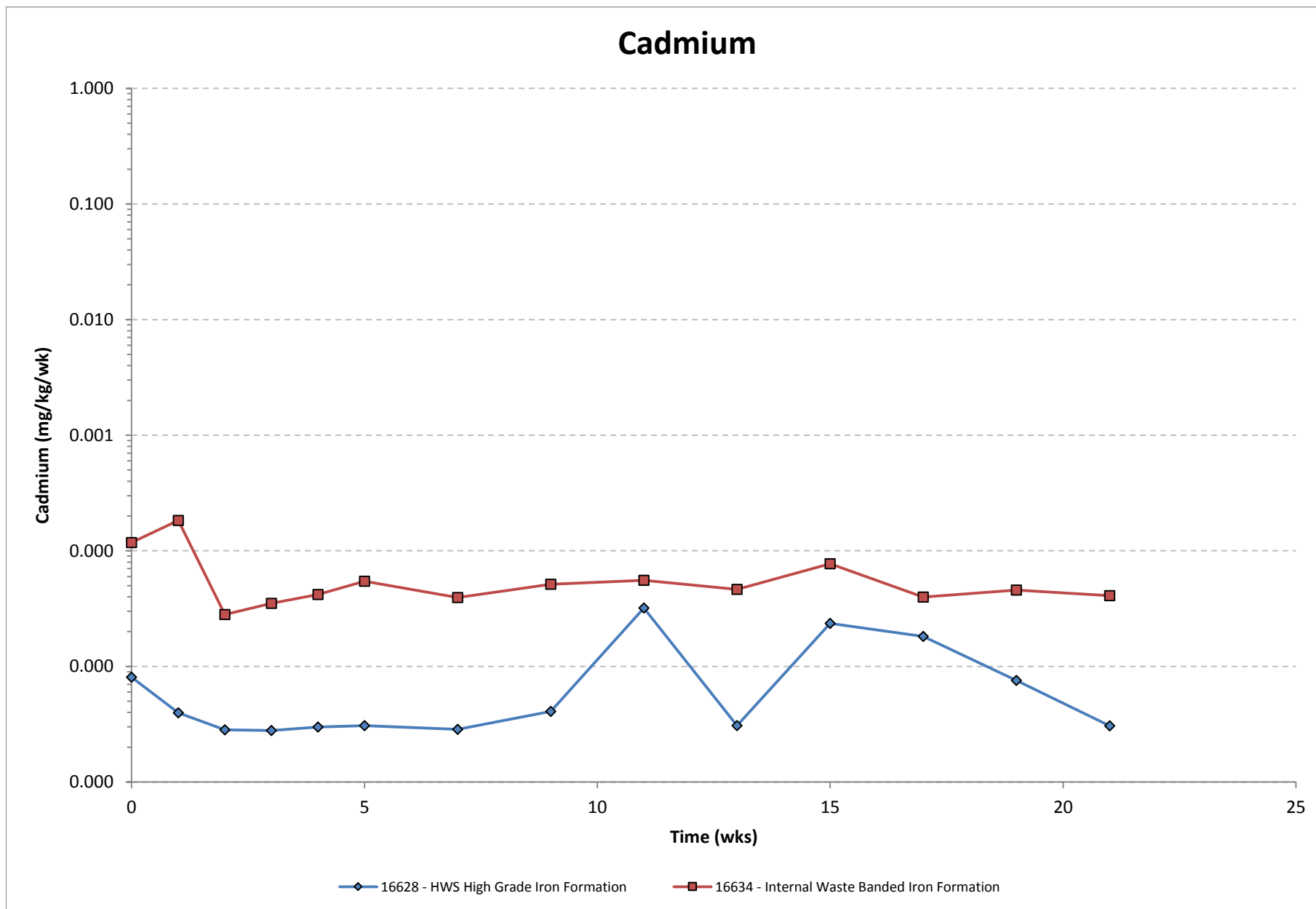


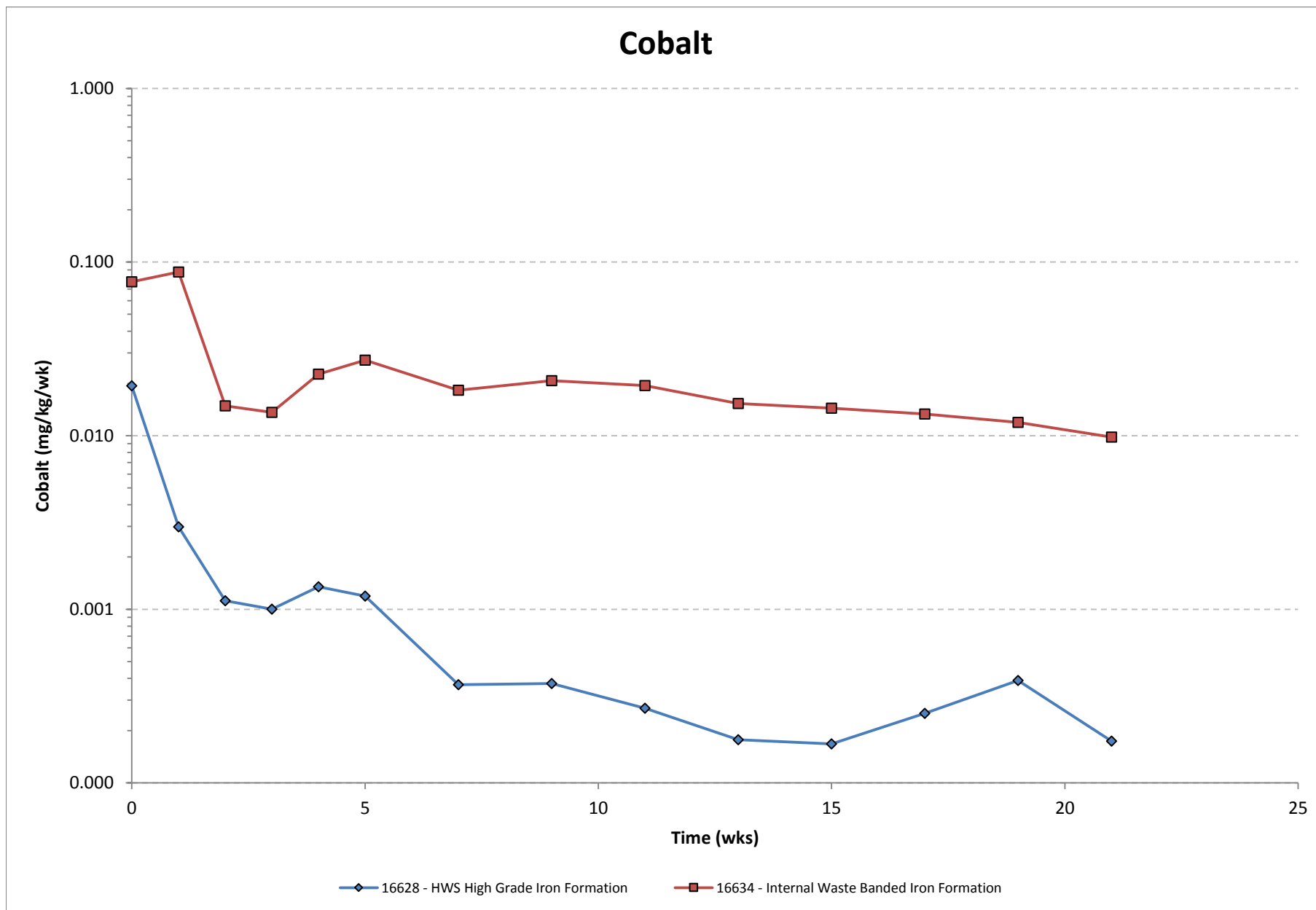


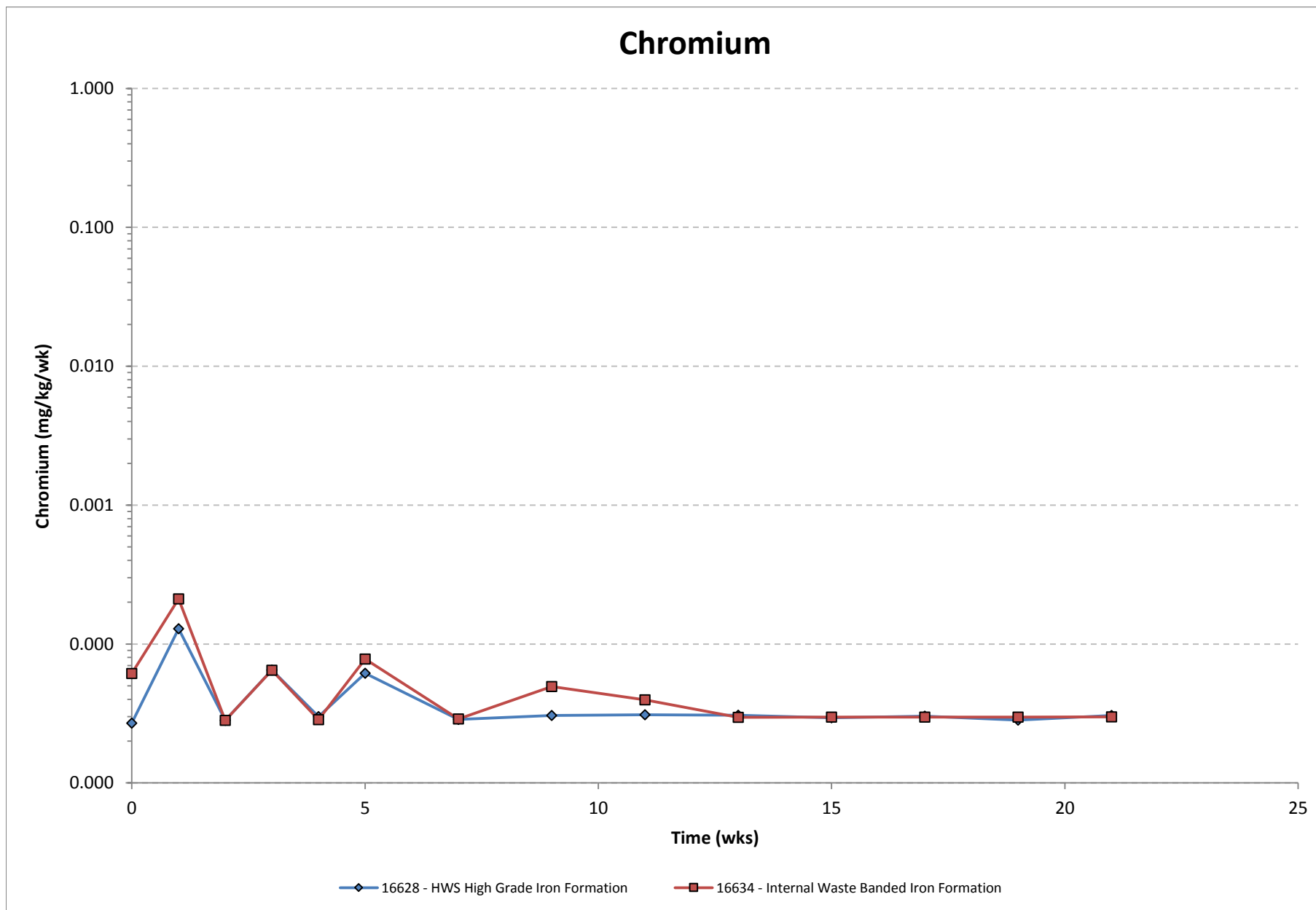


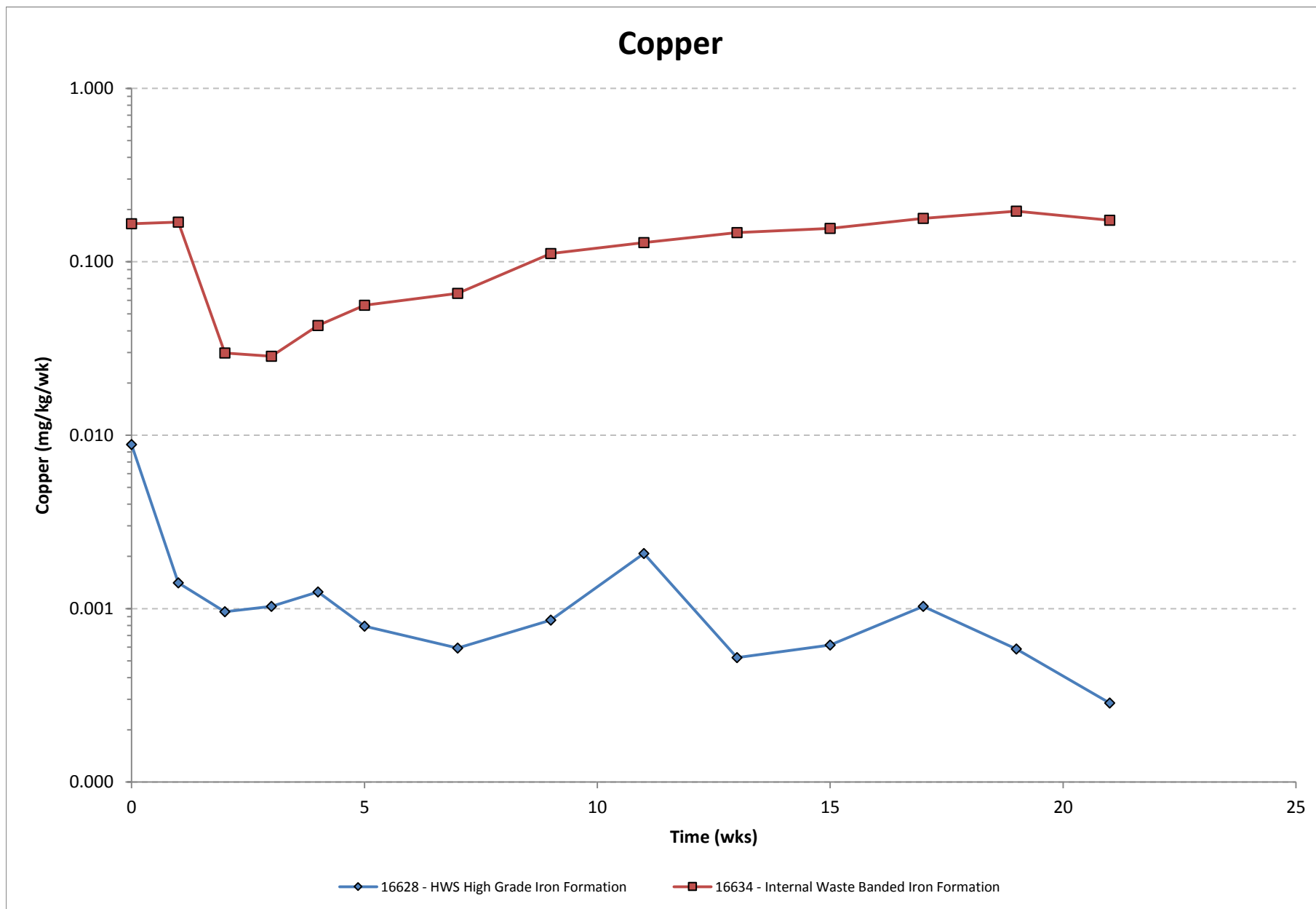


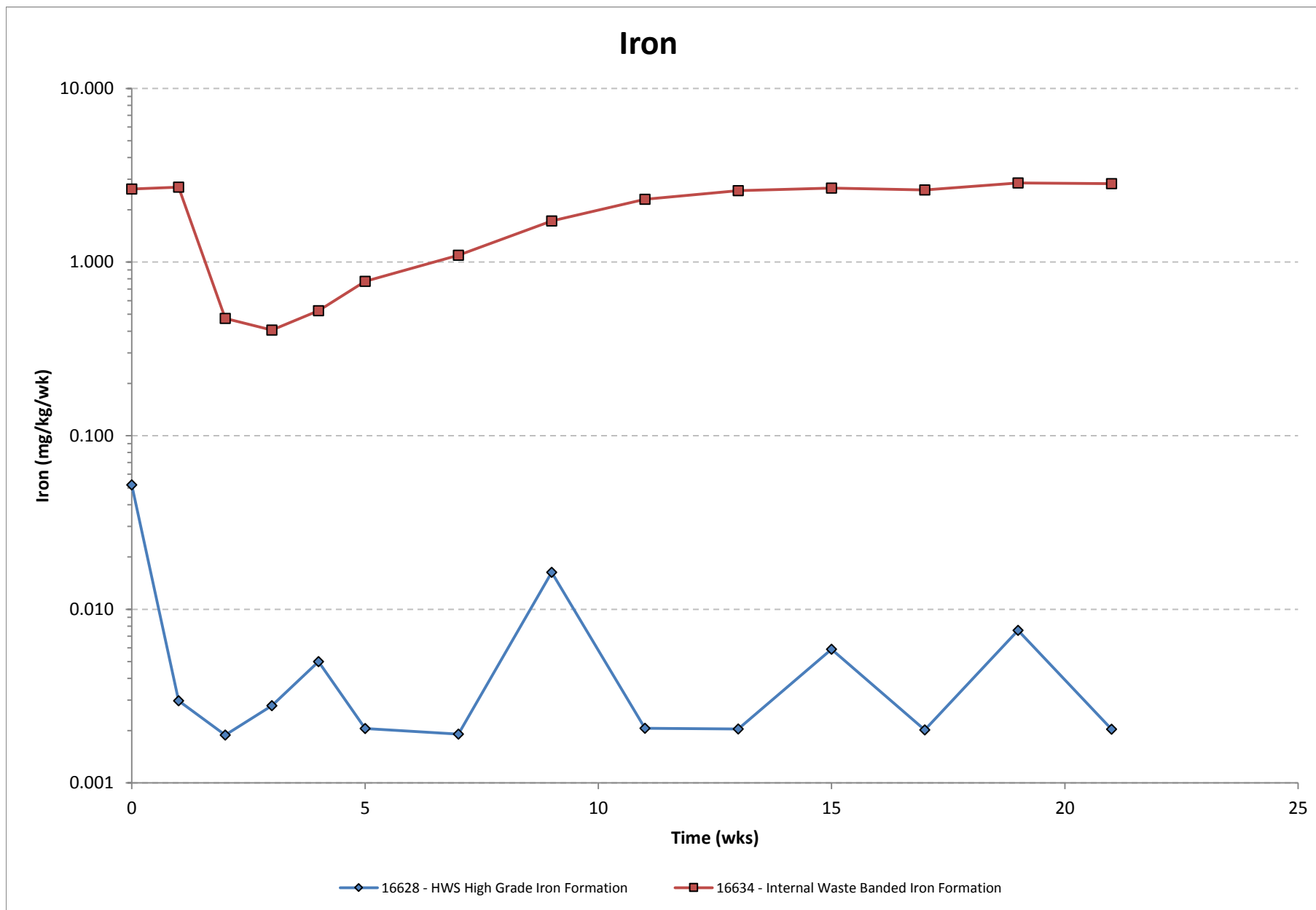


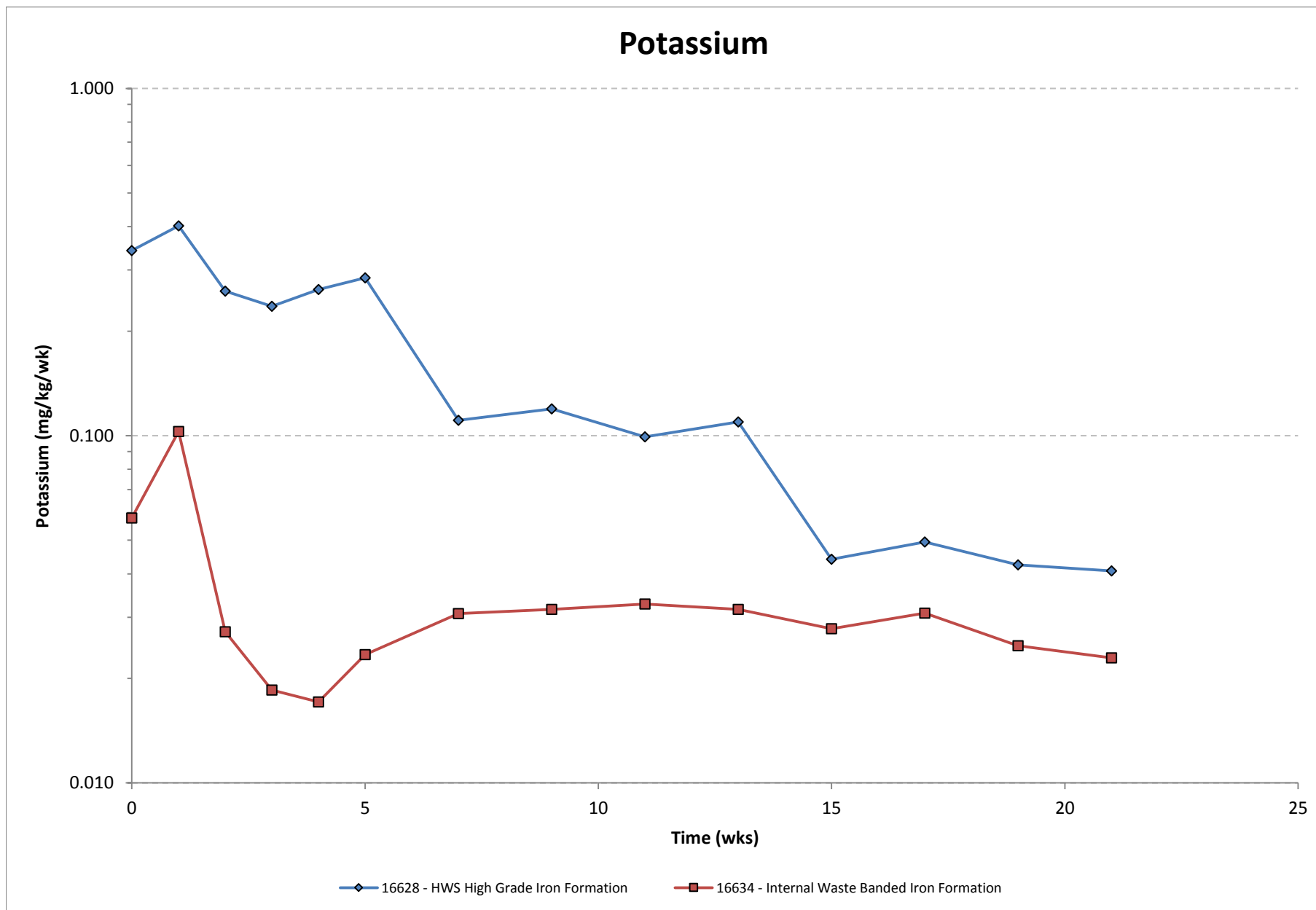


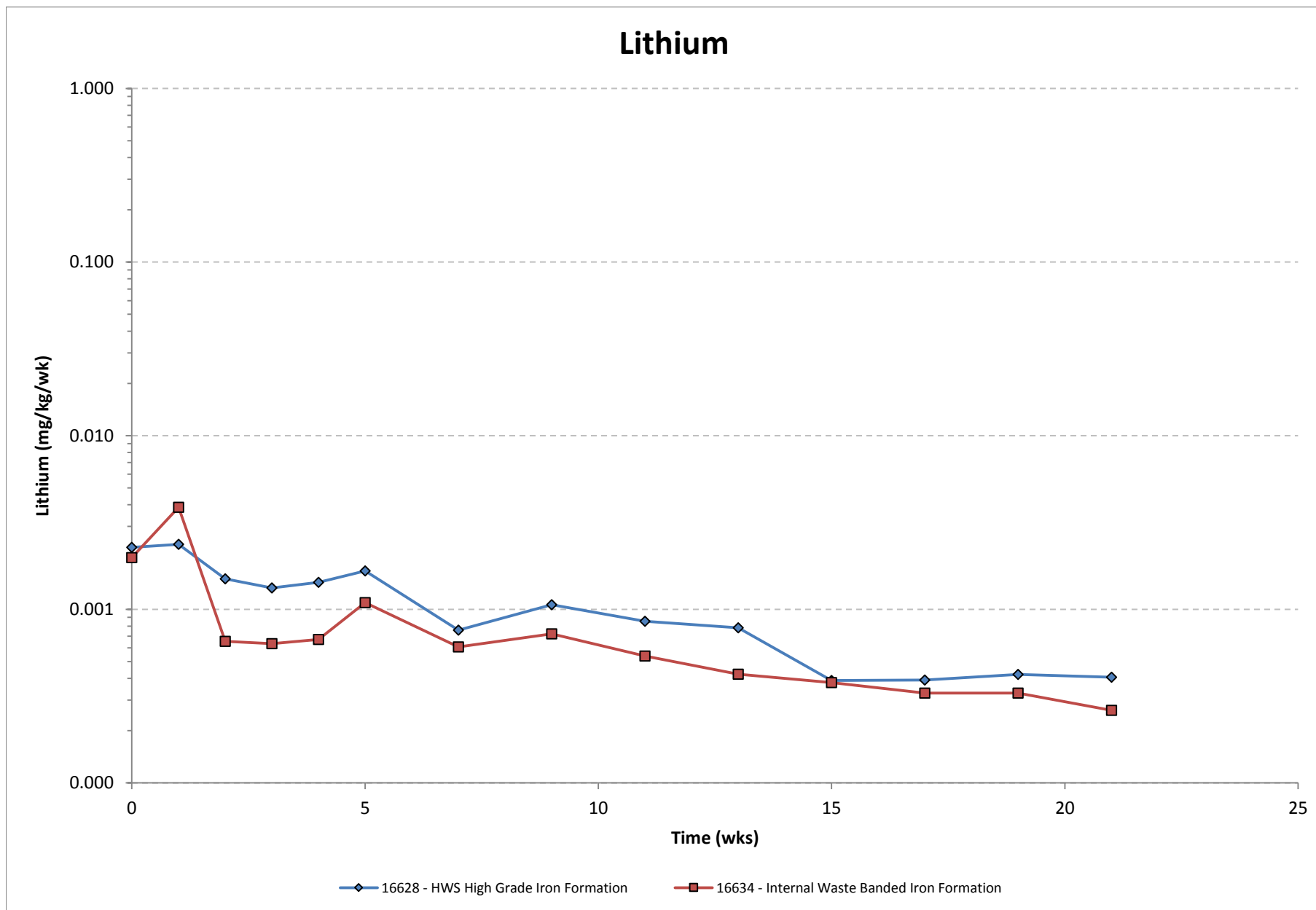


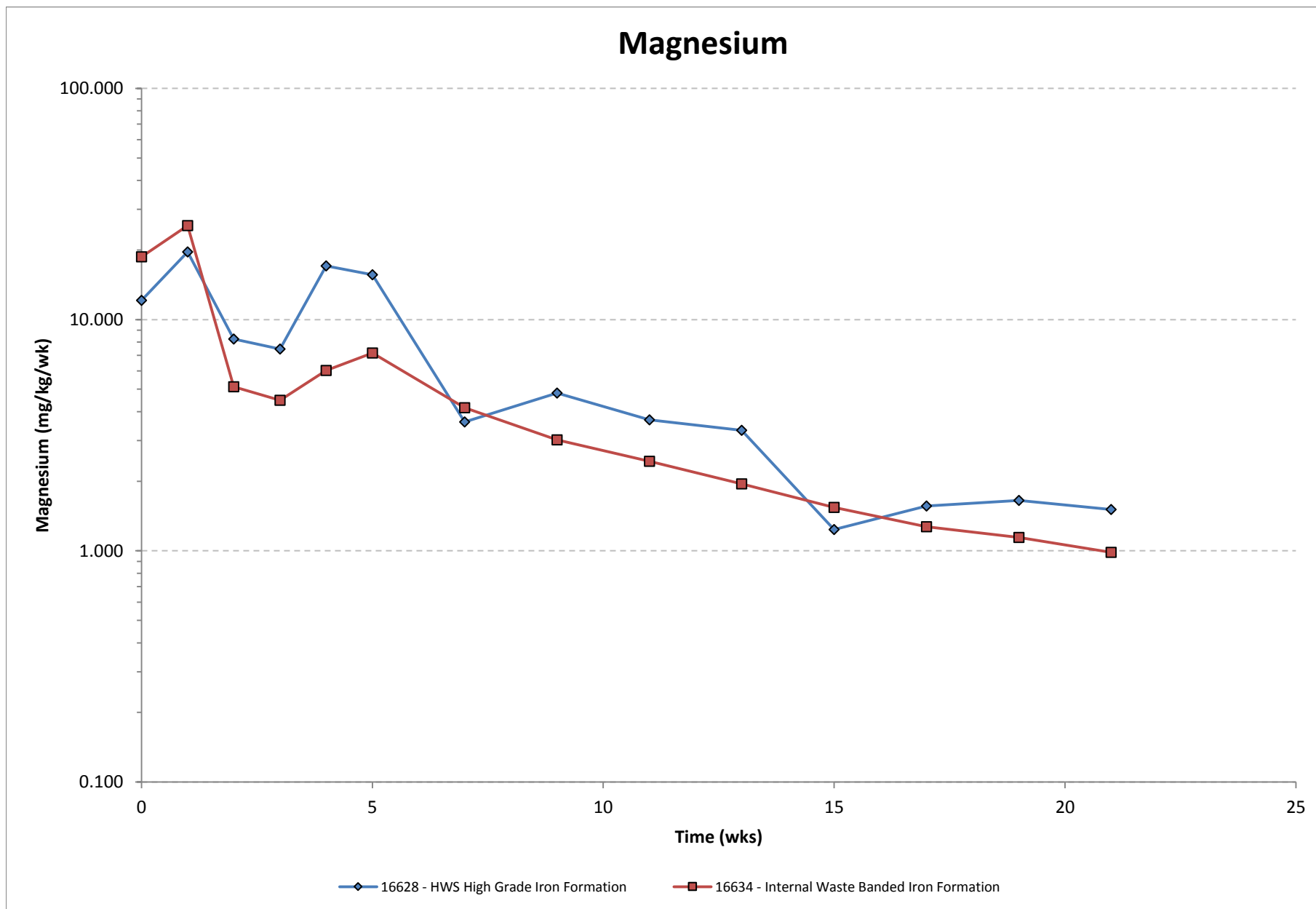


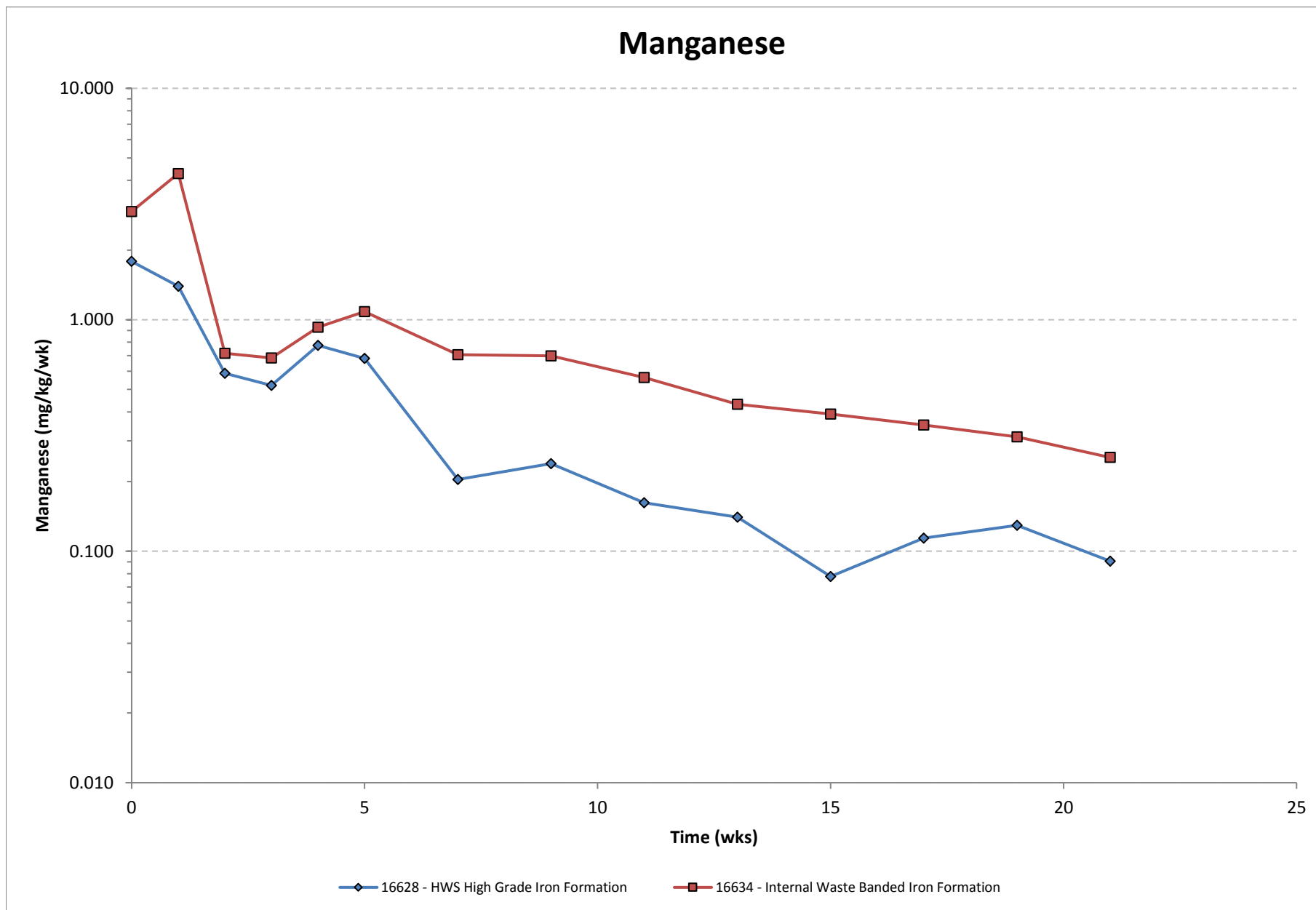


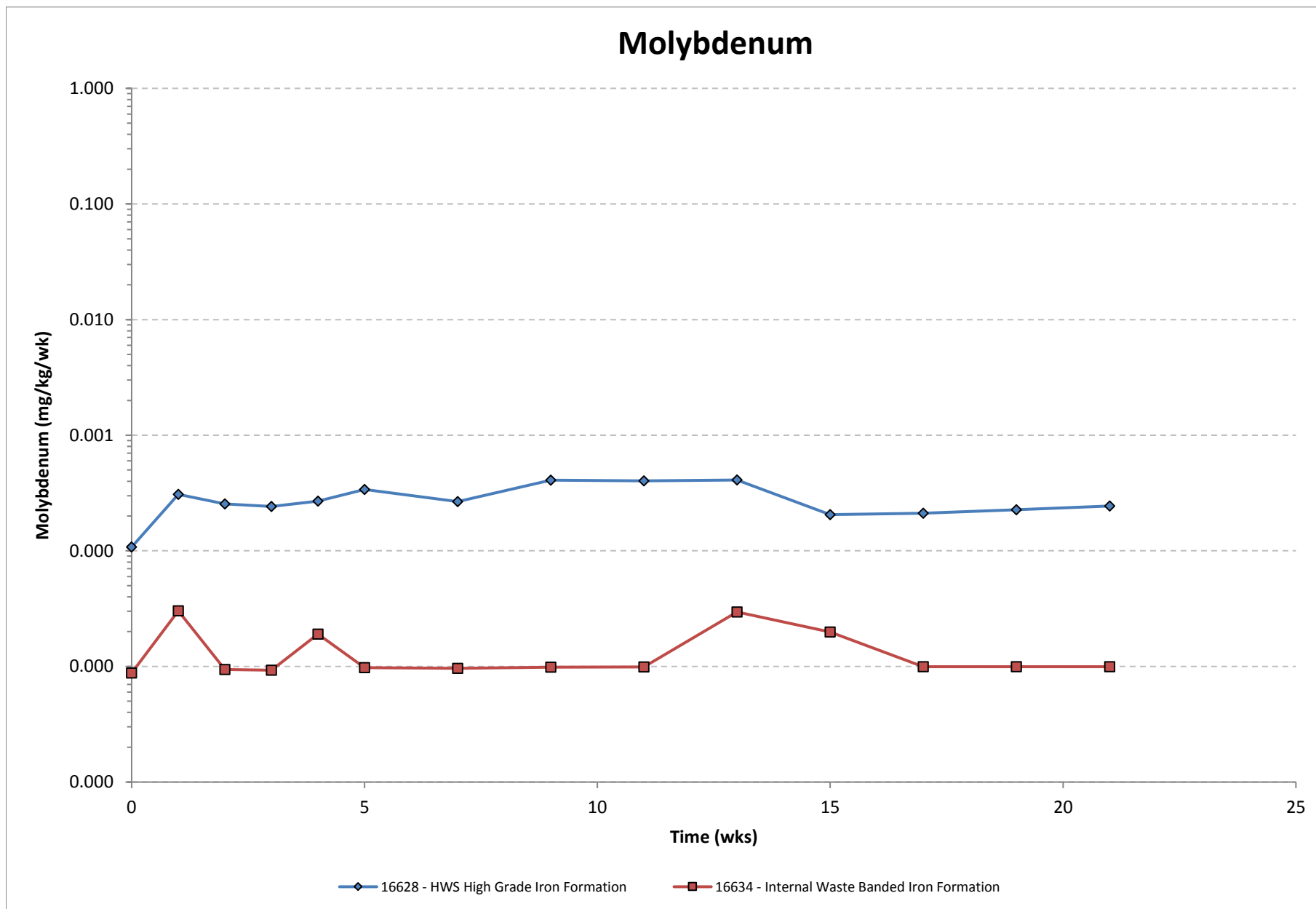


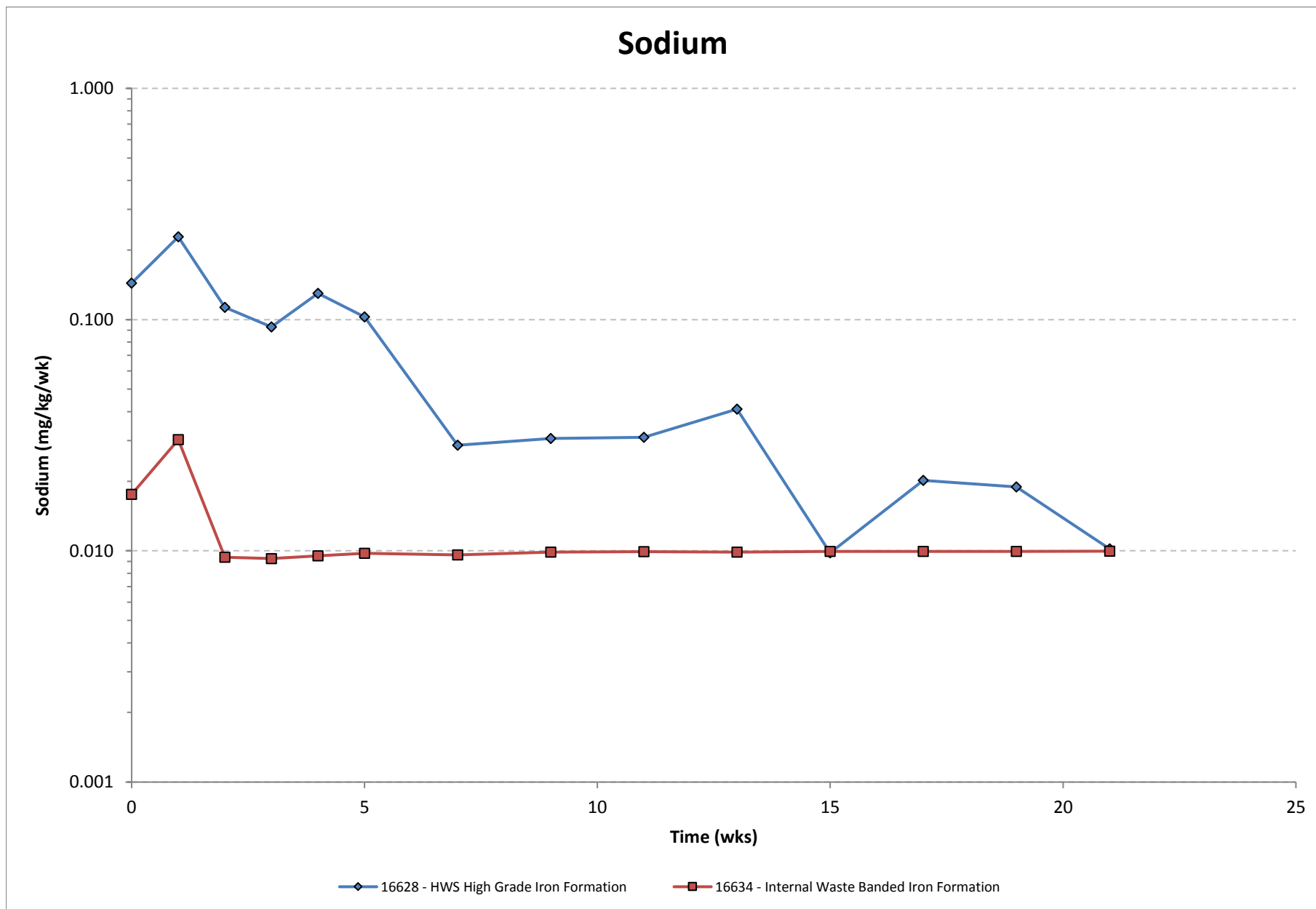


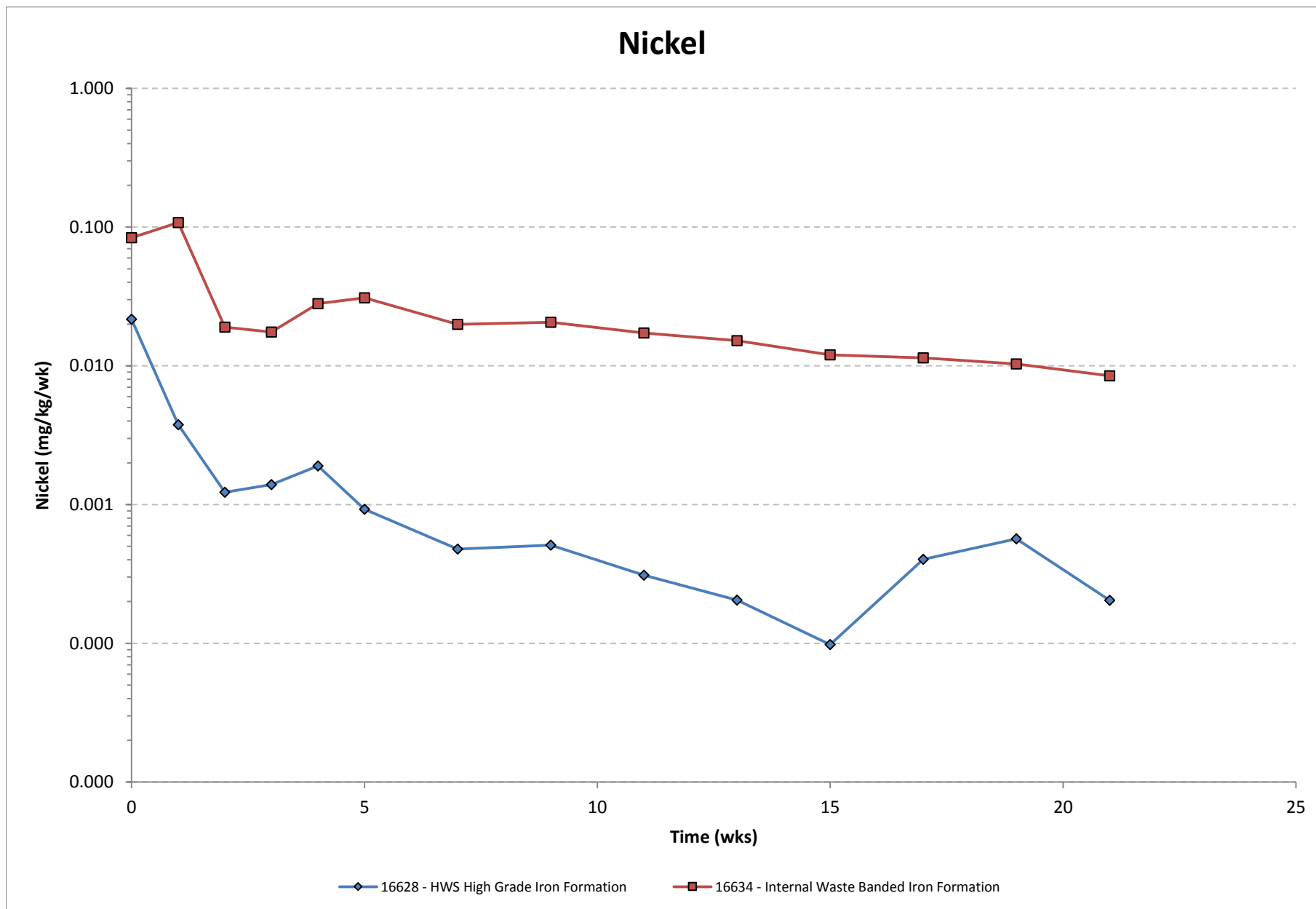


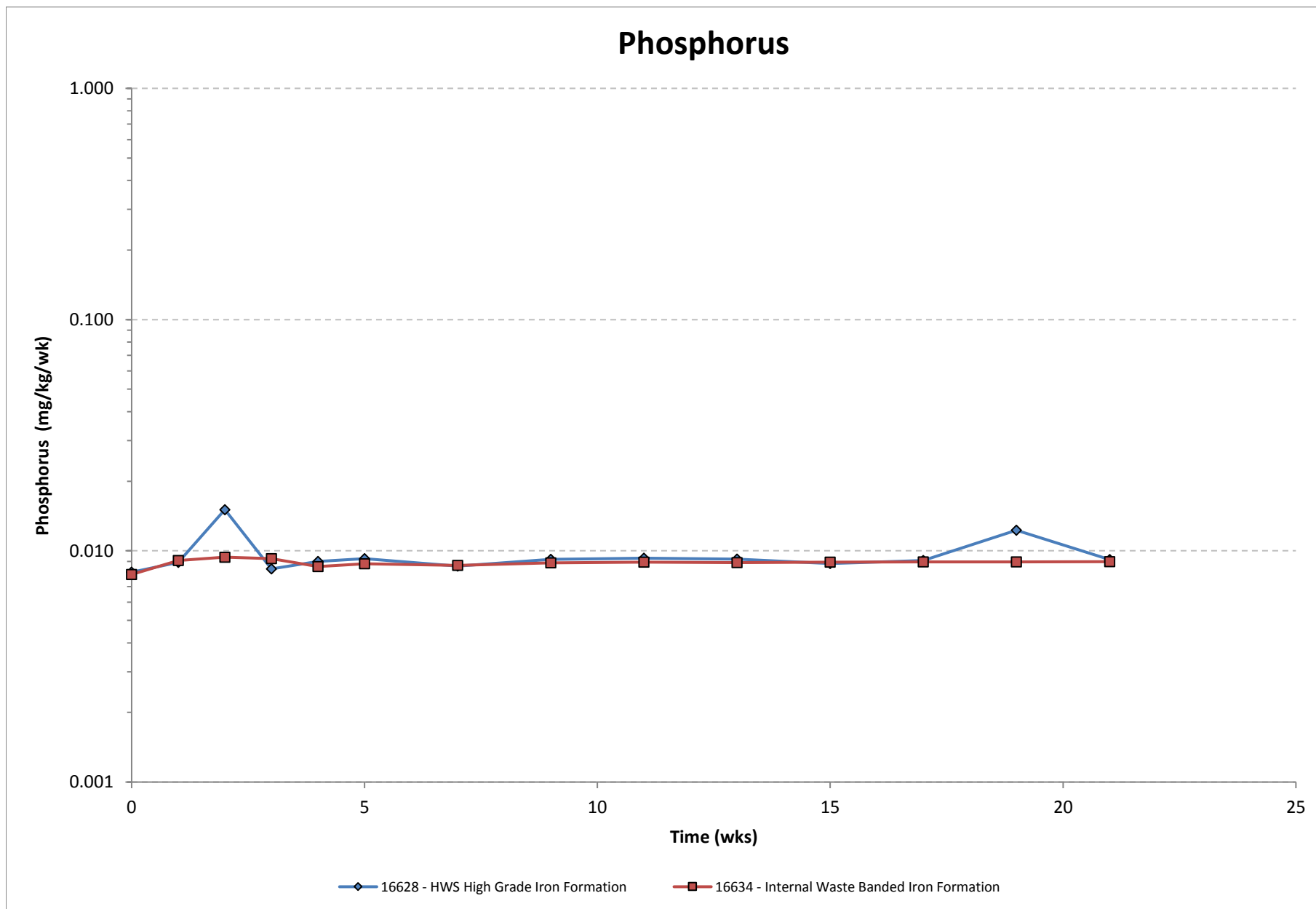


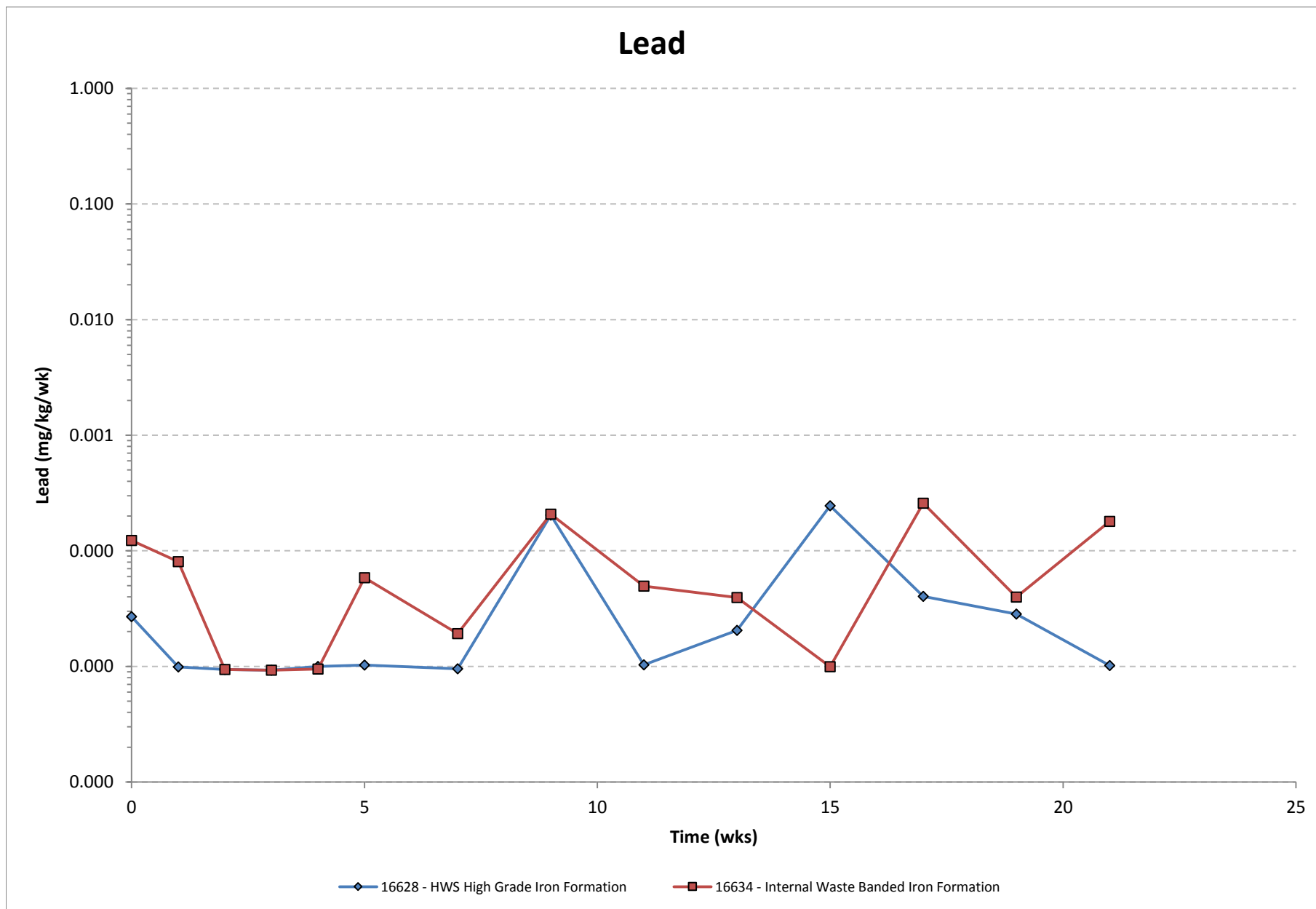


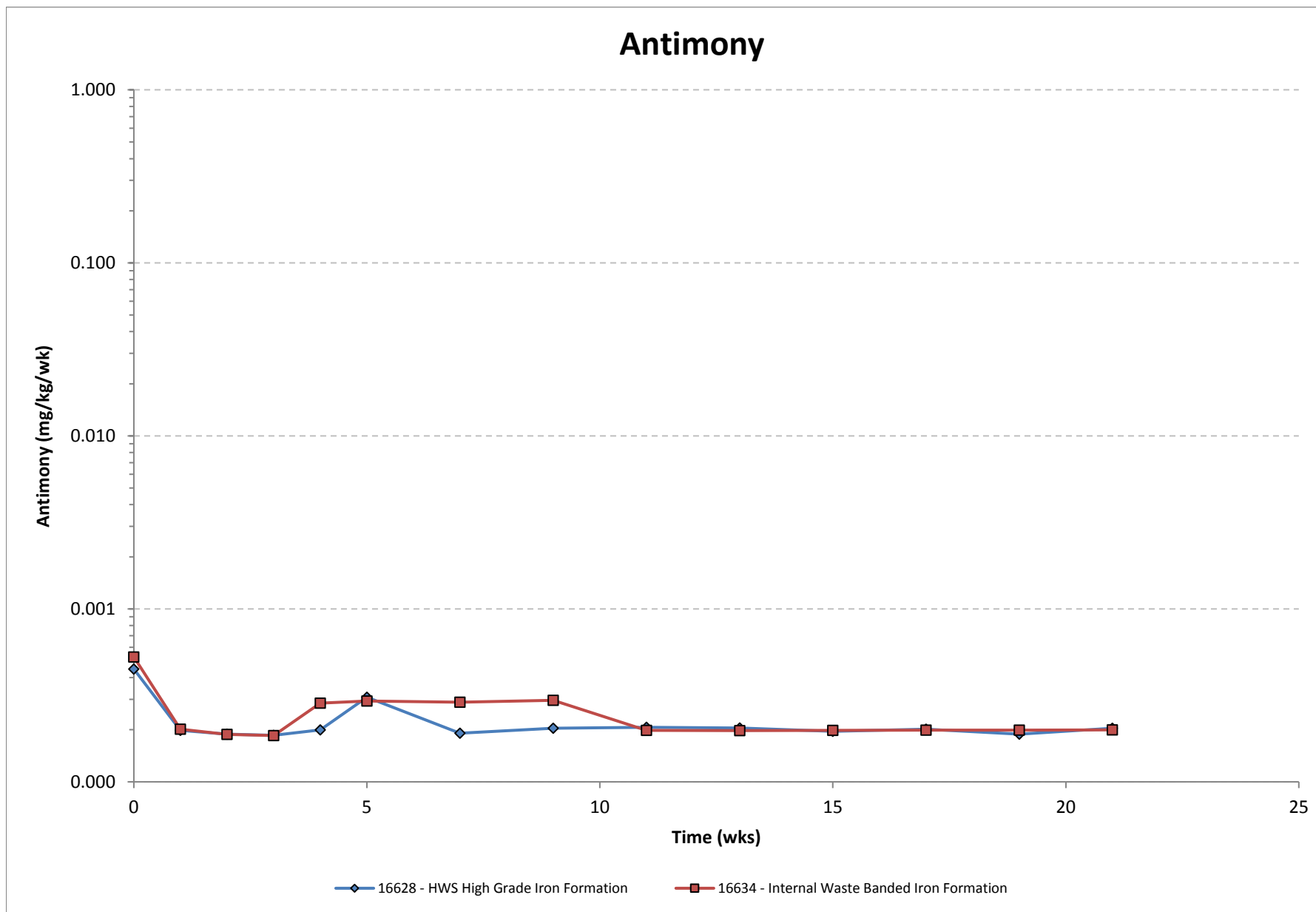


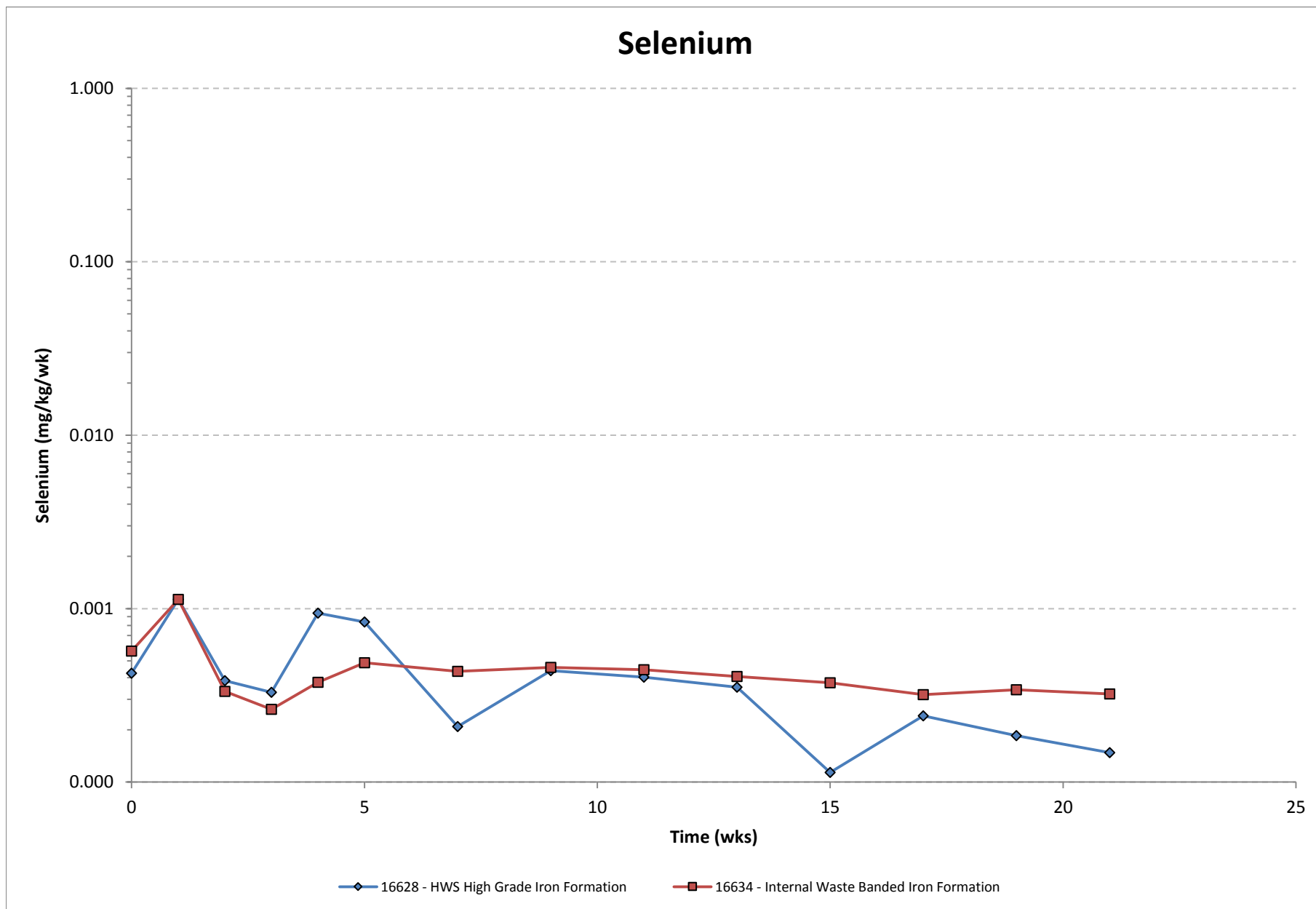


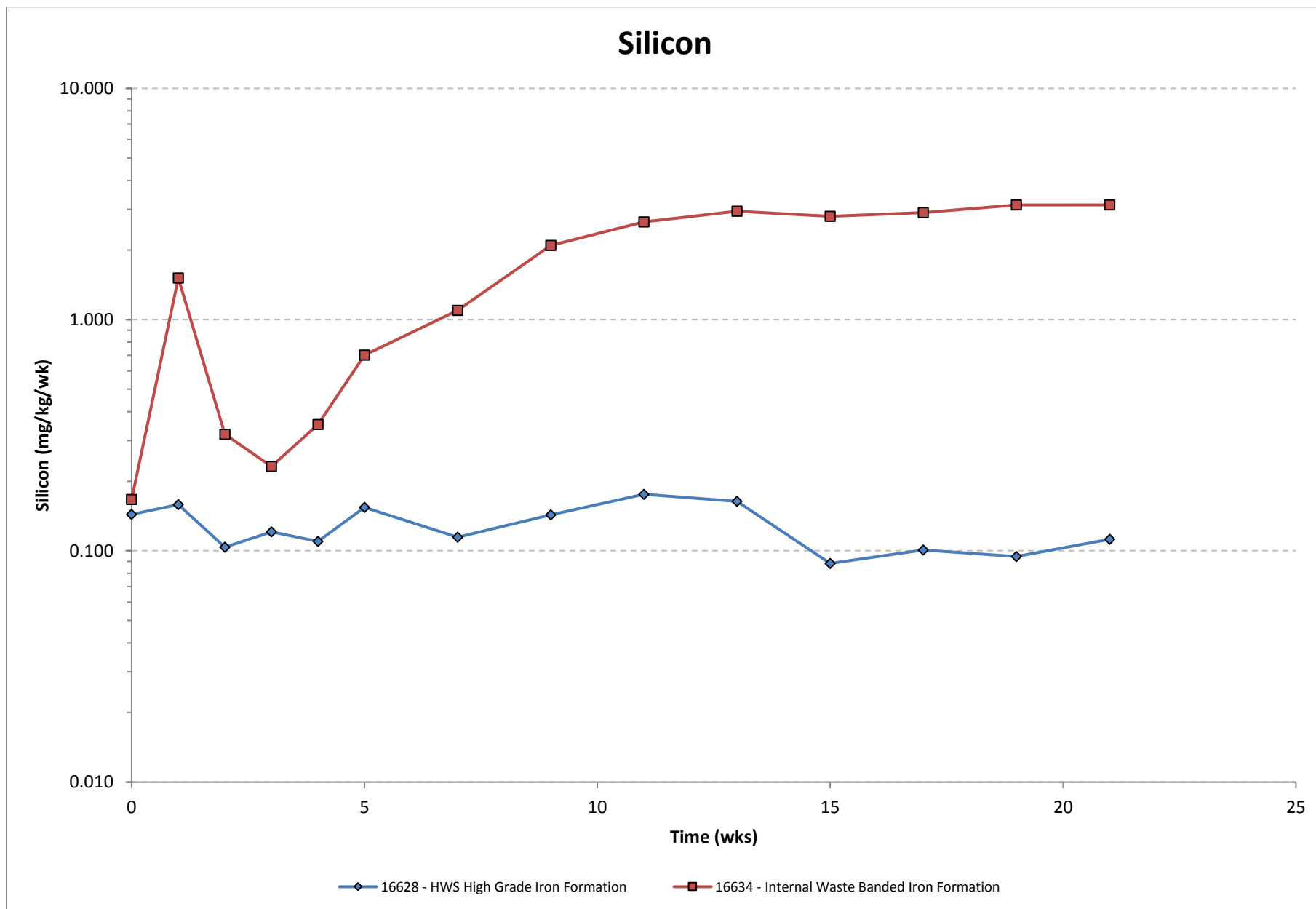


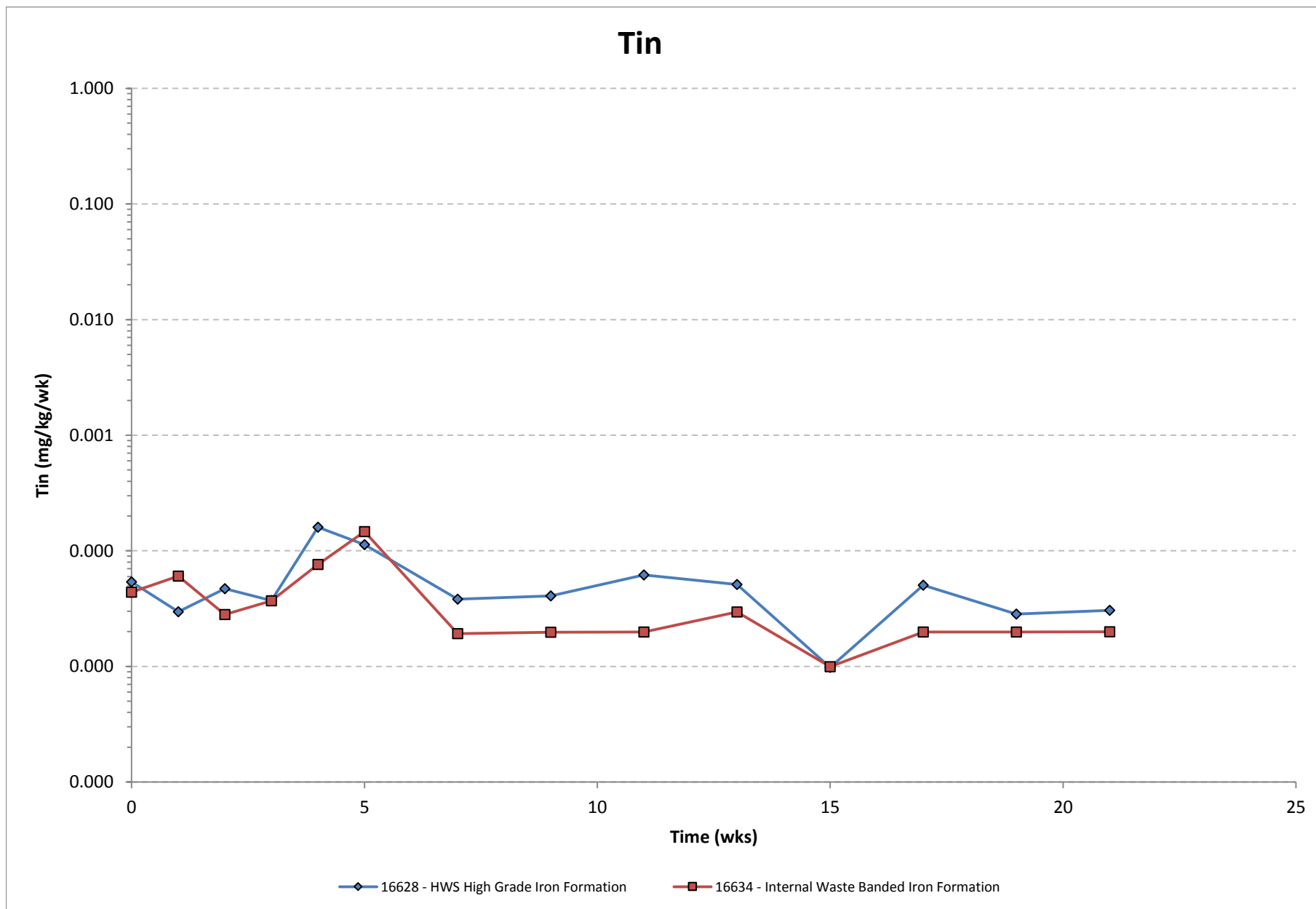


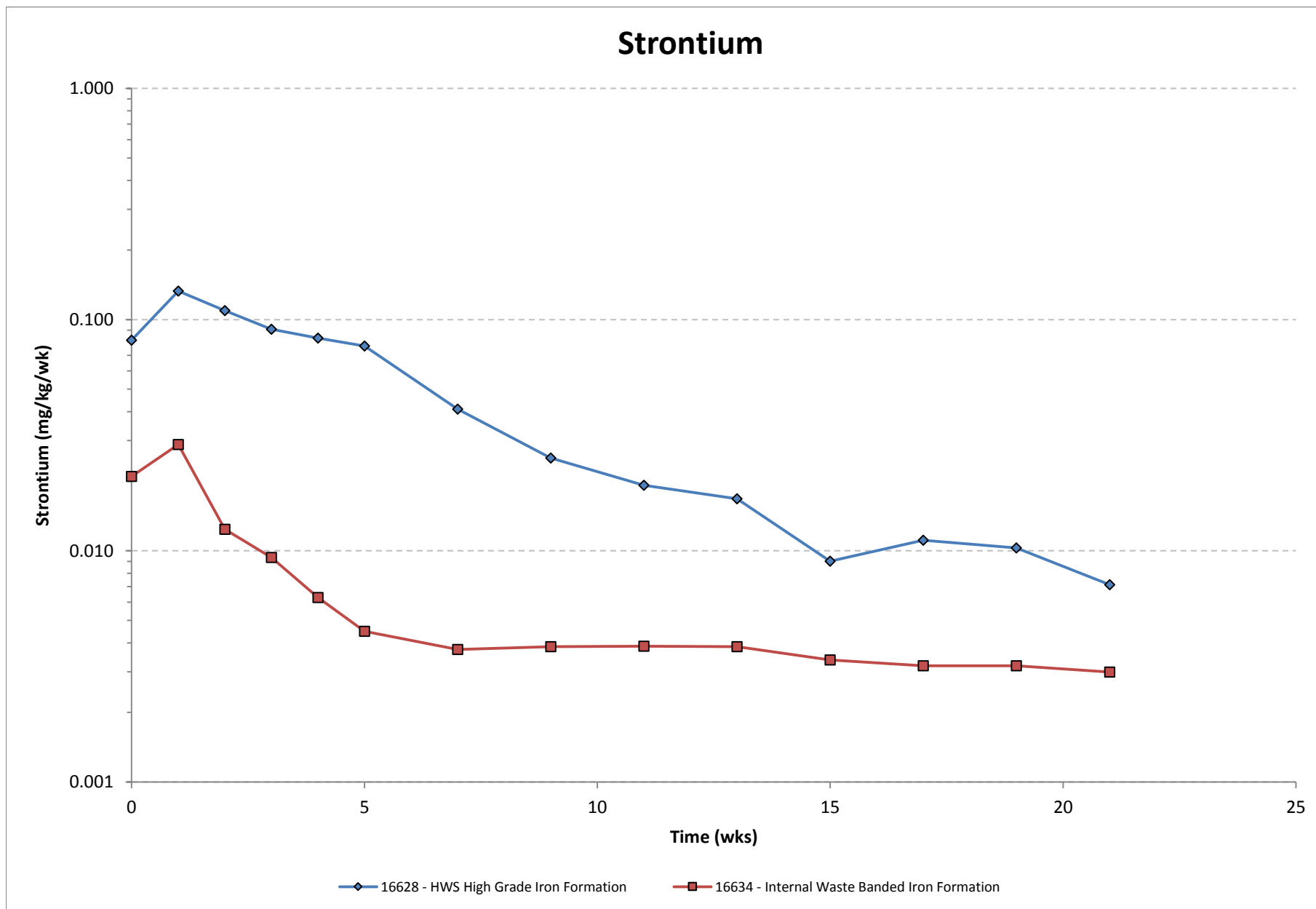


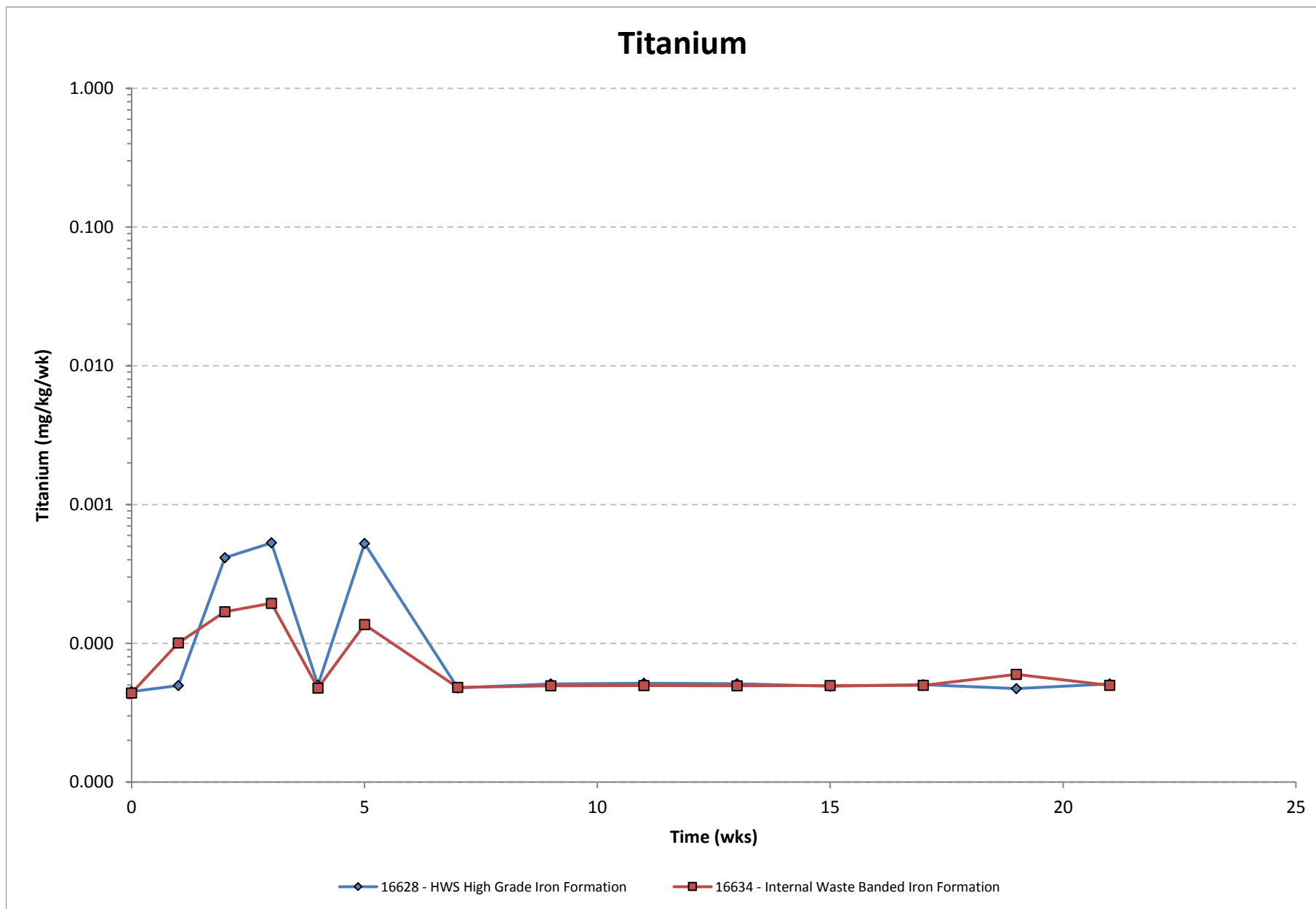


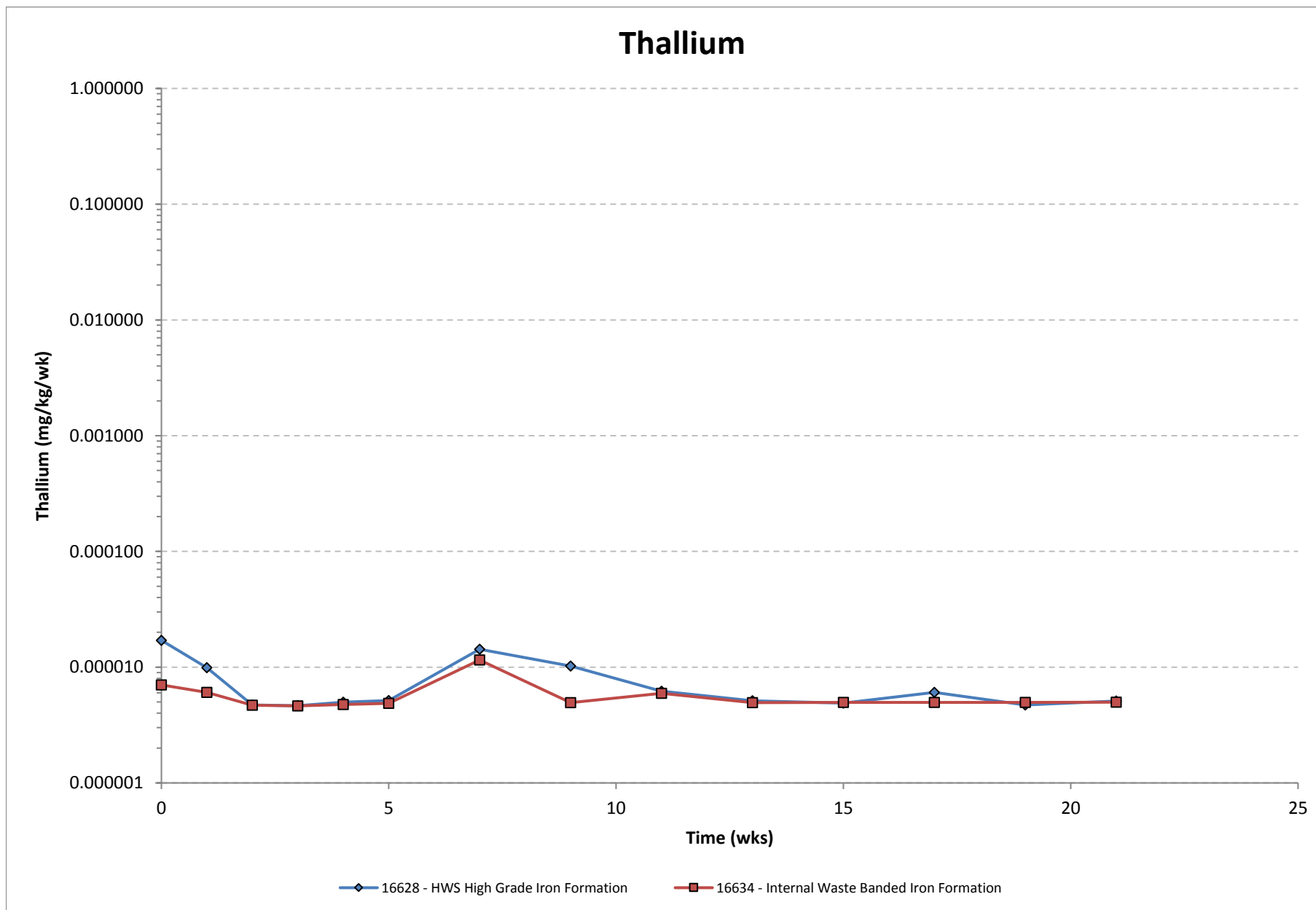


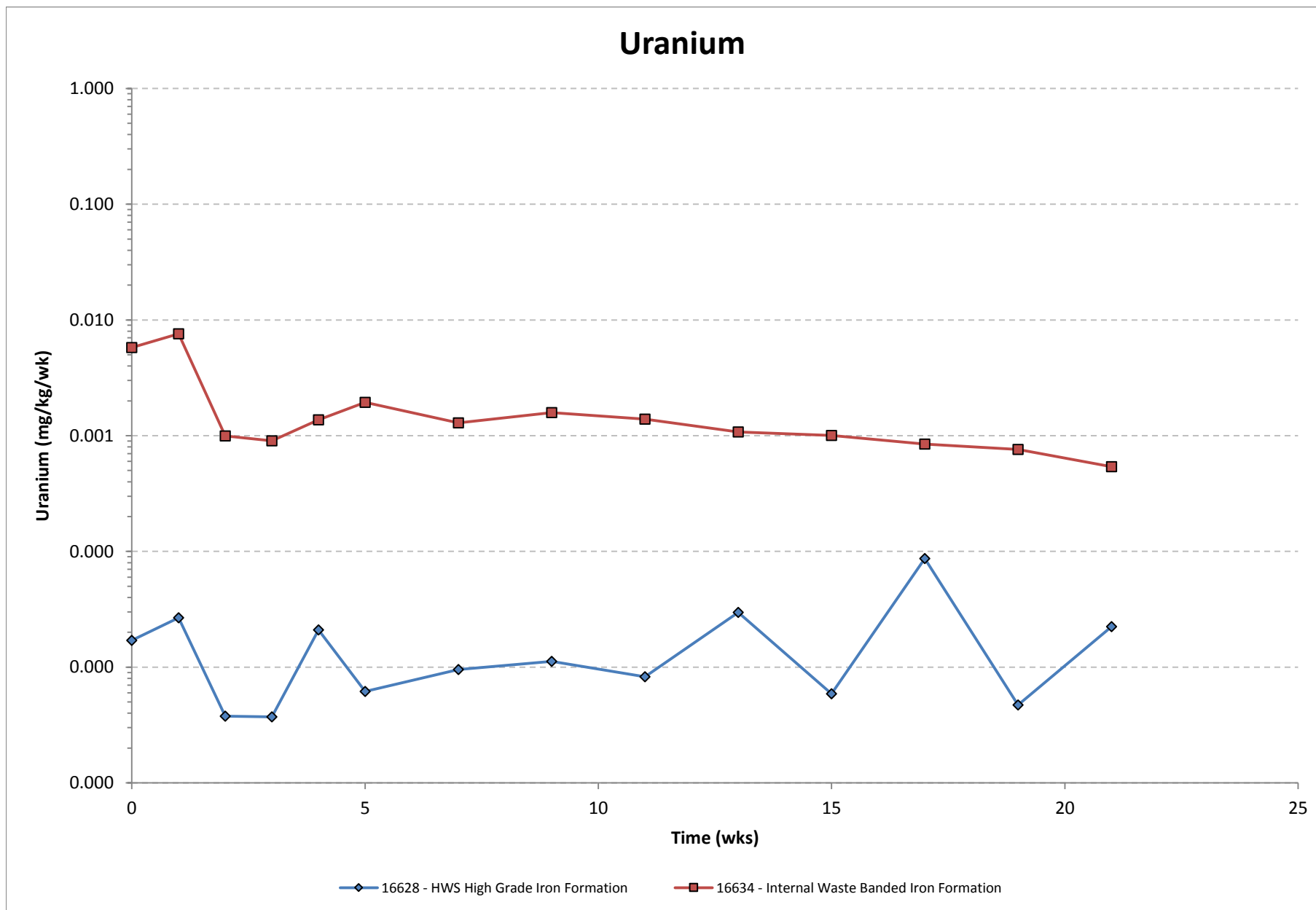


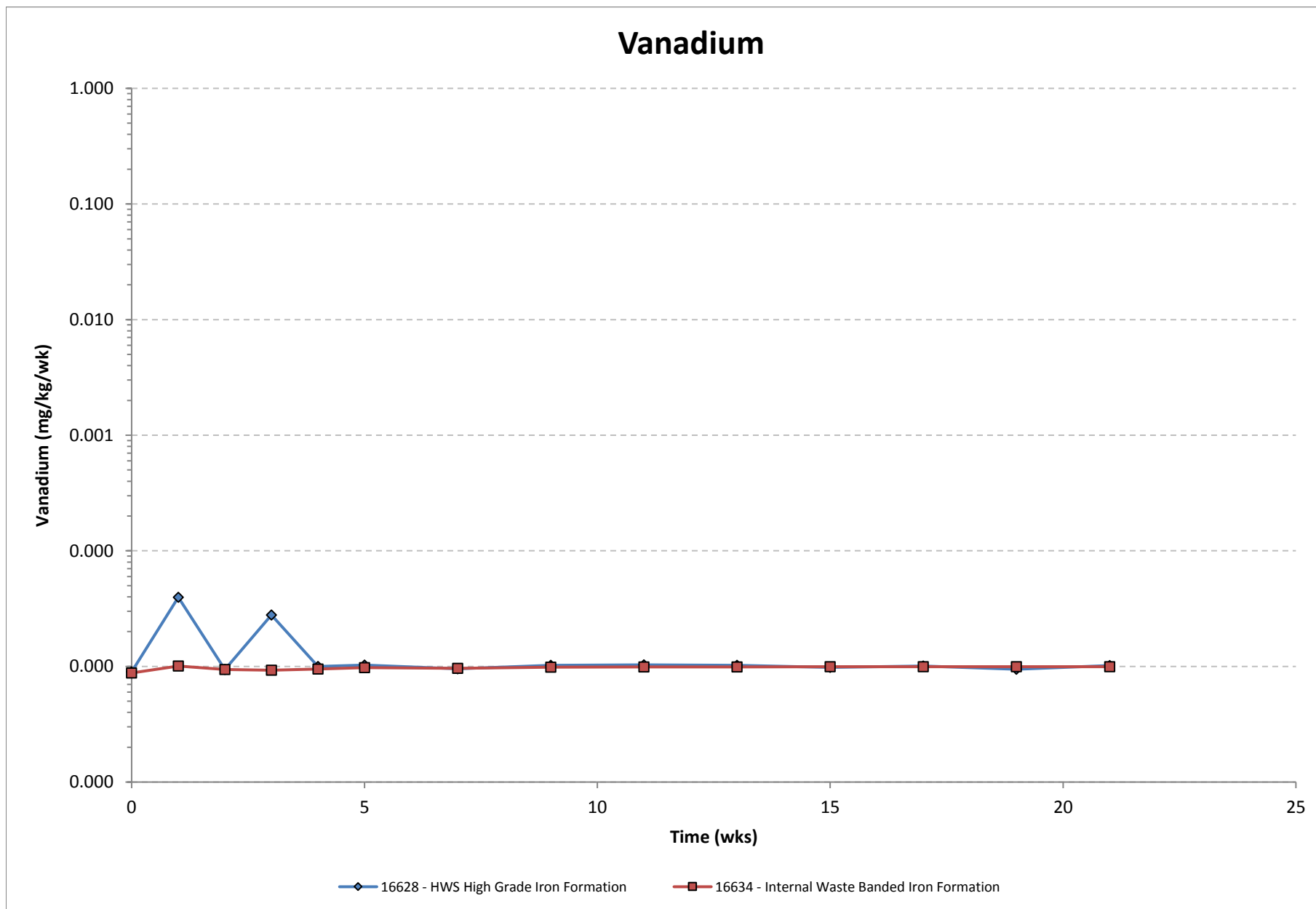


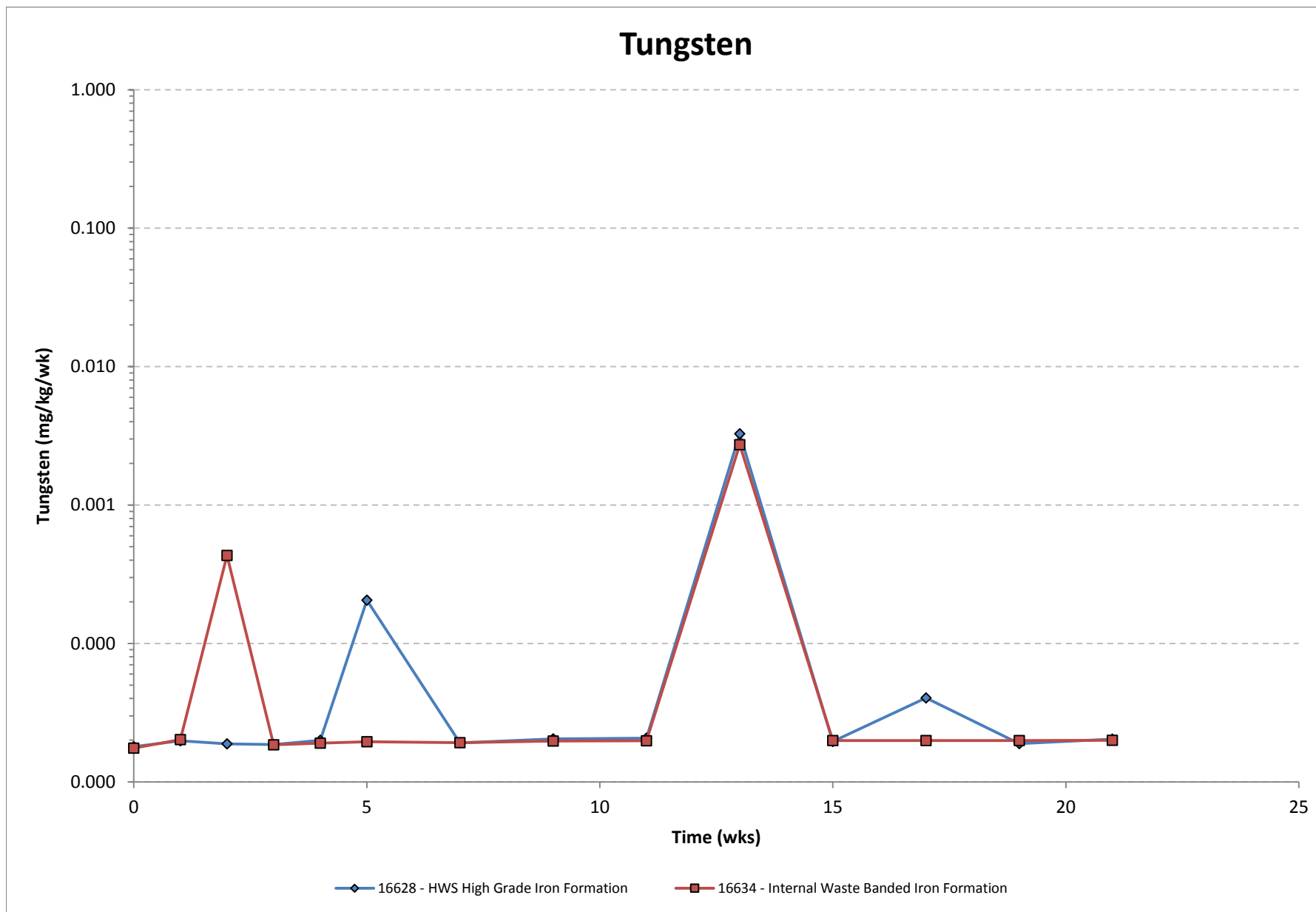


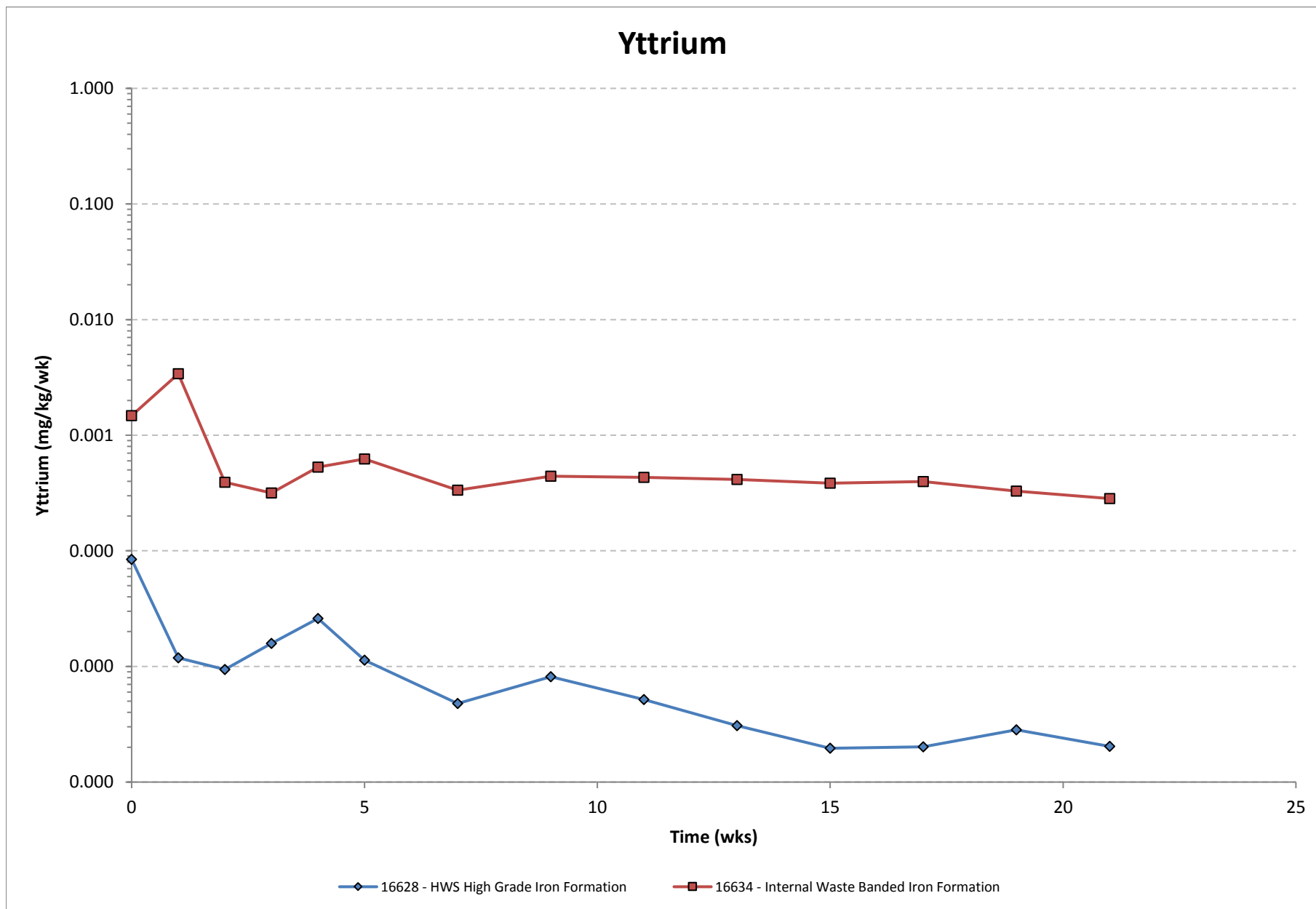




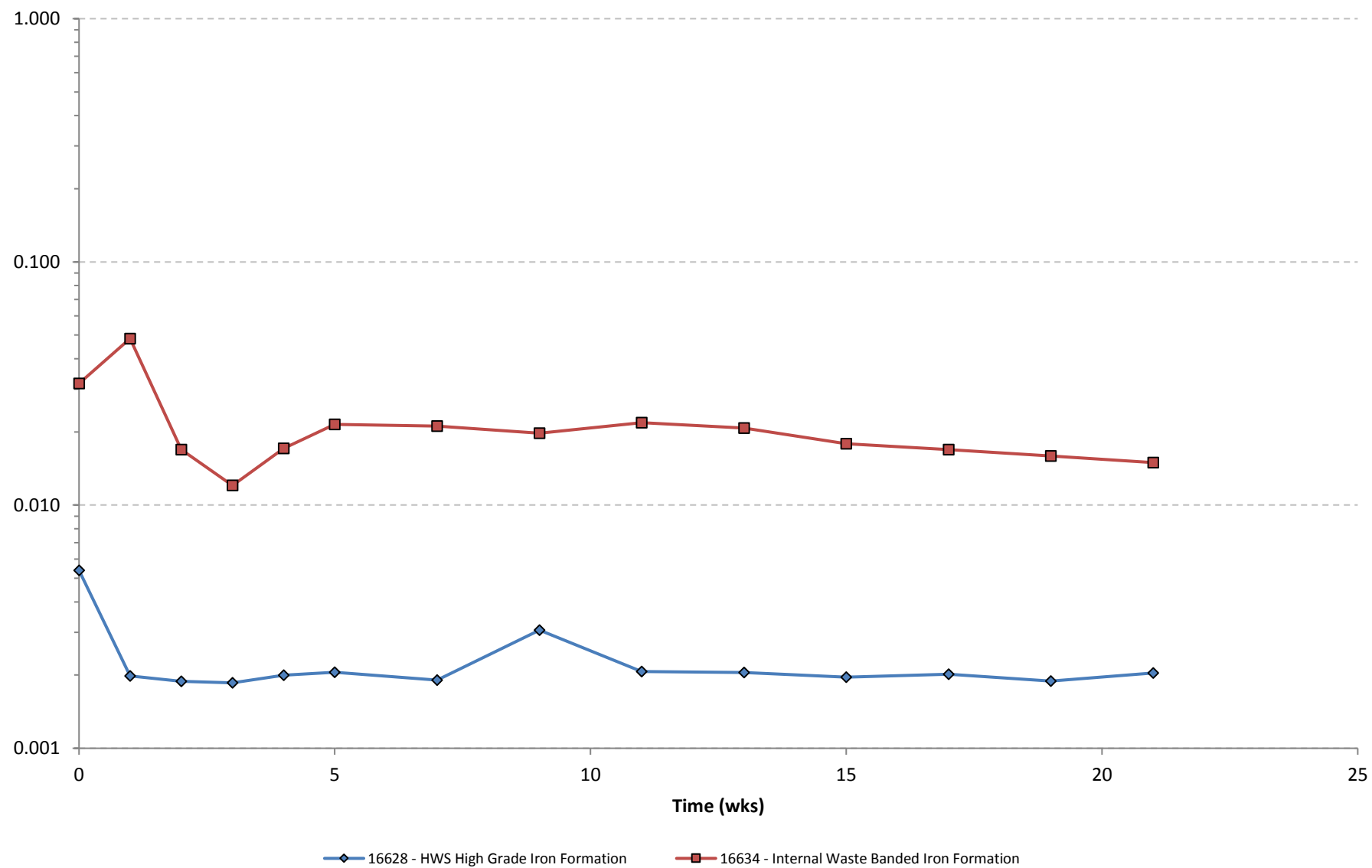


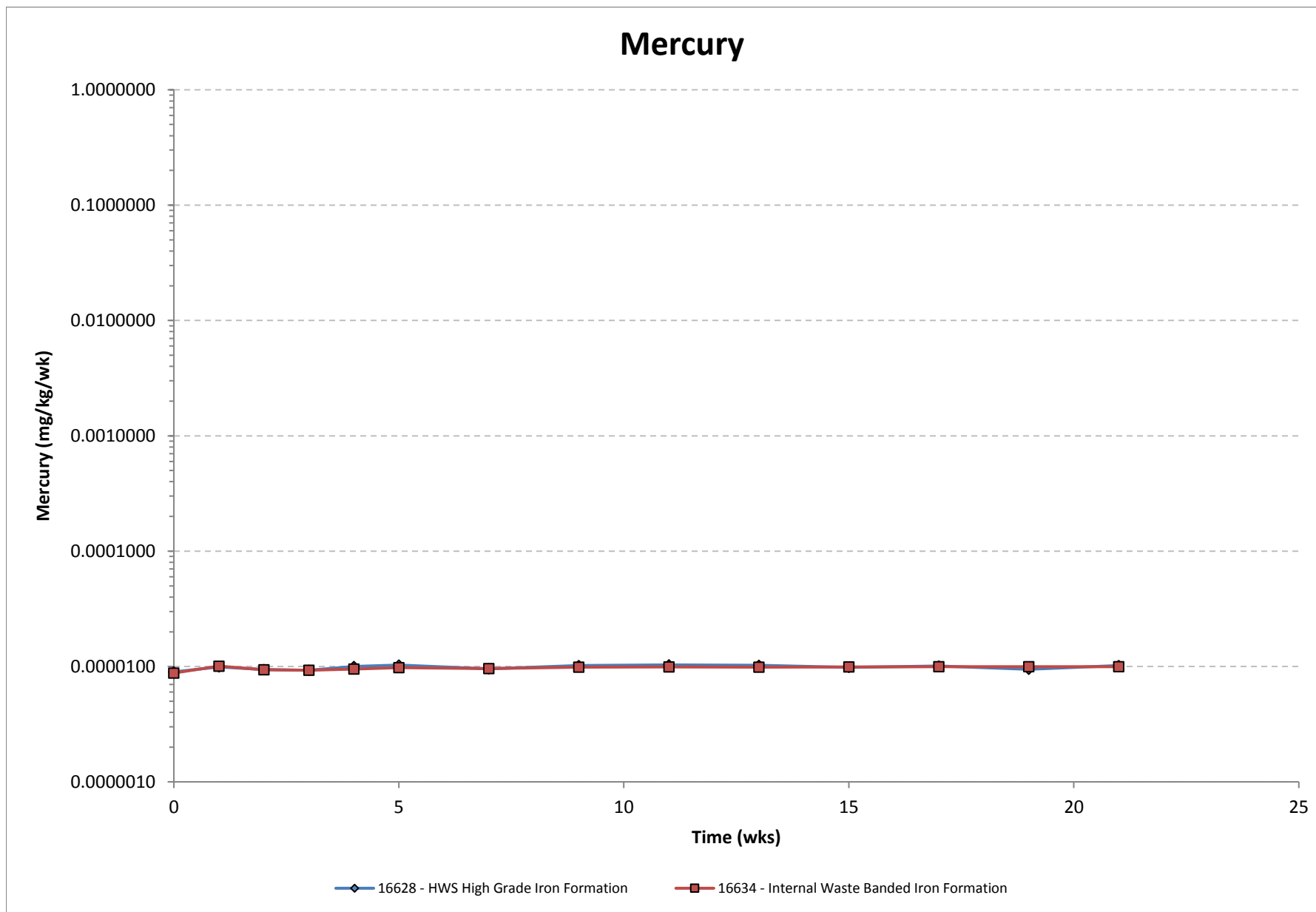






Zinc





APPENDIX E.6

QUARRY GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS

TABLE E.6.1

**BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT**

2014 QIA AND NWB ANNUAL REPORT

QUARRY Q1 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014 - SUMMARY STATISTICS

	Analysis																
	Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO ₄ -S	Sulphide	C	CO ₃
	Units																
	---	---	g	mL	Normality	Normality	mL	---	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	ratio	%	%	%	%	%
COUNT	51	51	51	51	51	51	51	51	51	51	51	51	15	4	4	51	51
MIN	8.74	1	1.93	20	0.1	0.1	6.26	0.9	2.2	0.31	1.89	7.1	0.006	0.01	0.01	0.034	0.03
MAX	9.96	4	2.05	51.1	0.1	0.1	19.97	1.84	76	0.44	76	246	0.037	0.03	0.01	1.14	4.53
MEAN	9.4978987	1.6459865	2.0010046	22.236764	0.1	0.1	15.36087	1.2137048	17.18596491	0.312522787	16.86946388	55.019602	0.003835	0.0015731	0.000786	0.2528131	0.7591797

TABLE E.6.2

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY Q1 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Quarry ID	Blast ID	Assay Sample ID	Hole Number	Analysis																
				Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
				Units																
				---	---	g	mL	Normality	Normality	mL	---	t CaCO3/1000 t	t CaCO3/1000 t	t CaCO3/1000 t	ratio	%	%	%	%	%
Quarry 01	Q01 1061 001	Q161001-014	138	9.59	1	2.01	20	0.1	0.1	17.73	0.9	5.7	0.31	5.39	18.4	0.007	< 0.01	< 0.01	0.039	0.04
Quarry 01	Q01 1061 001	Q161001-015	161	9.51	1	2	20	0.1	0.1	15.65	1.08	11	0.31	10.6	35.2	0.006	< 0.01	< 0.01	0.127	0.385
Quarry 01	Q01 1061 001	Q161001-016	199	9.74	1	1.99	20	0.1	0.1	17.07	1.06	7.4	0.31	7.09	23.9	0.006	< 0.01	< 0.01	0.063	0.235
Quarry 01	Q01 1061 001	Q01610001-259	259	9.49	1	2	20	0.1	0.1	15.78	1.09	11	0.31	10.3	34.2	0.007	< 0.01	< 0.01	0.163	0.375
Quarry 01	Q01 1061 001	Q01610001-200	200	9.42	1	2.03	20	0.1	0.1	16.44	1.06	8.8	0.31	8.49	28.4	0.008	< 0.01	< 0.01	0.122	0.29
Quarry 01	Q01 1061 001	Q01610001-284	284	9.83	1	2.04	20	0.1	0.1	17.93	1	5.1	0.31	4.79	16.5	0.006	< 0.01	< 0.01	0.054	0.13
Quarry 01	Q01 1061 001	Q01610001-292	292	9.62	1	1.99	20	0.1	0.1	18.01	0.97	5	0.31	4.69	16.1	0.006	< 0.01	< 0.01	0.068	0.11
Quarry 01	Q01 1061 001	Q01-021	423	9.68	1	2.01	20	0.1	0.1	17.73	0.95	5.6	0.31	5.29	18.1	< 0.005	< 0.01	< 0.01	0.06	0.14
Quarry 01	Q01 1061 001	Q01-022	423	9.86	1	2	20	0.1	0.1	17.02	1.11	7.5	0.31	7.19	24.2	< 0.005	< 0.01	< 0.01	0.068	0.13
Quarry 01	Q01 1061 001	Q01-023	384	9.32	1	1.97	20	0.1	0.1	16	1.12	10	0.31	9.89	32.9	< 0.005	< 0.01	< 0.01	0.214	0.4
Quarry 01	Q01 1061 001	Q01-024	358	9.51	1	2.05	20	0.1	0.1	17.94	1.05	5	0.31	4.69	16.1	< 0.005	< 0.01	< 0.01	0.058	0.095
Quarry 01	Q01 1061 001	Q01-025	319	9.59	1	2.03	20	0.1	0.1	18.42	1.02	3.9	0.31	3.59	12.6	< 0.005	< 0.01	< 0.01	0.066	0.05
Quarry 01	Q01 1061 001	Q01-026	484	9.9	1	2	20	0.1	0.1	17.81	1.04	5.5	0.31	5.19	17.7	< 0.005	< 0.01	< 0.01	0.05	0.115
Quarry 01	Q01 1061 001	Q01-027	456	9.7	1	2.02	20	0.1	0.1	17.61	0.99	5.9	0.31	5.59	19	< 0.005	< 0.01	< 0.01	0.088	0.115
Quarry 01	Q01 1061 001	Q01-028	417	9.96	1	2.01	20	0.1	0.1	17.67	1.13	5.8	0.31	5.49	18.7	< 0.005	< 0.01	< 0.01	0.034	0.055
Quarry 01	Q01 1061 001	Q01-029	390	9.79	1	2.03	20	0.1	0.1	17.66	1.16	5.8	0.31	5.49	18.7	< 0.005	< 0.01	< 0.01	0.073	0.09
Quarry 01	Q01 1061 001	Q01-030	351	9.86	1	2.03	20	0.1	0.1	13.99	1.3	15	0.31	14.5	47.7	< 0.005	< 0.01	< 0.01	0.175	0.545
Quarry 01	Q01 1061 001	Q01-031	327	9.88	1	1.95	20	0.1	0.1	16.82	1.16	8.1	0.31	7.79	26.1	< 0.005	< 0.01	< 0.01	0.073	0.145
Quarry 01	Q01 1061 001	Q01-032	265	9.67	1	2.04	20	0.1	0.1	17.24	1.06	6.8	0.31	6.49	21.9	< 0.005	< 0.01	< 0.01	0.066	0.16
Quarry 01	Q01 1061 002	Q01-033	59	9.25	1	2.04	20	0.1	0.1	17.26	0.94	6.7	0.31	6.39	21.4	0.032	0.02	0.01	0.066	0.04
Quarry 01	Q01 1061 002	Q01-034	112	9.72	1	2.02	20	0.1	0.1	17.86	0.9	5.3	0.31	4.99	17.1	< 0.005	< 0.01	< 0.01	0.056	0.07
Quarry 01	Q01 1061 002	Q01-035	190	9.24	2	1.97	20	0.1	0.1	14.84	1.25	13	0.31	12.8	42.3	< 0.005	< 0.01	< 0.01	0.278	0.58
Quarry 01	Q01 1061 002	Q01-036	178	9.6	1	2	20	0.1	0.1	17.28	0.93	6.8	0.31	6.49	21.9	< 0.005	< 0.01	< 0.01	0.135	0.13
Quarry 01	Q01 1061 002	Q01-037	226	9.13	2	1.99	28.5	0.1	0.1	11.42	1.6	43	0.31	42.6	138	< 0.005	< 0.01	< 0.01	0.68	2.07
Quarry 01	Q01 1061 002	Q01-038	252	9.33	2	1.97	20	0.1	0.1	13.4	1.05	17	0.31	16.5	53.8	0.037	0.03	0.01	0.198	0.555
Quarry 01	Q01 1061 002	Q01-039	292	9.09	3	2.04	51.1	0.1	0.1	19.97	1.5	76	0.31	76	246	0.021	0.02	< 0.01	1.1	4.24
Quarry 01	Q01 1061 002	Q01-040	292	9.12	3	1.96	46.7	0.1	0.1	18.16	1.5	73	0.31	72.5	233	0.015	< 0.01	0.01	1.05	3.93
Quarry 01	Q01 1061 002	Q01-041	332	9.18	1	1.98	20	0.1	0.1	13.62	1.35	16	0.44	15.7	36.8	0.014	0.01	< 0.01	0.422	0.684
Quarry 01	Q01 1061 002	Q01-042	352	9.6	3	1.99	20	0.1	0.1	11.59	1.21	21	0.31	20.8	68.1	< 0.005	< 0.01	< 0.01	0.274	0.919
Quarry 01	Q01 1061 002	Q01-043	425	9.33	3	1.99	24.8	0.1	0.1	8.84	1.64	40	0.31	39.8	129	< 0.005	< 0.01	< 0.01	0.546	2.03
Quarry 01	Q01 1061 002	Q01-044	461	9.41	1	2.02	20	0.1	0.1	14.54	1.33	14	0.31	13.2	43.5	< 0.005	< 0.01	< 0.01	0.243	0.644
Quarry 01	Q01 1061 002	Q01-045	516	9.42	3	1.97	20	0.1	0.1	6.26	1.62	35	0.31	34.6	113	0.007	< 0.01	< 0.01	0.447	1.91
Quarry 01	Q01 1061 002	Q01-046	616	9.17	3	2.02	20	0.1	0.1	9.4	1.52	26	0.31	25.9	84.5	< 0.005	< 0.01	< 0.01	0.422	1.1
Quarry 01	Q01 1061 002	Q01-047	671	9.47	1	1.99	20	0.1	0.1	15.1	0.99	12	0.31	12	39.7	< 0.005	< 0.01	< 0.01	0.198	0.48
Quarry 01	Q01 1054 002	Q01-048	88	9.53	1	2.03	20	0.1	0.1	17.66	1.21	5.8	0.31	5.49	18.7	< 0.005	< 0.01	< 0.01	0.121	0.17
Quarry 01	Q01 1054 002	Q01-049	127	9.73	1	1.98	20	0.1	0.1	19.11	1.1	2.2	0.31	1.89	7.1	< 0.005	< 0.01	< 0.01	0.057	0.03
Quarry 01	Q01 1054 002	Q01-050	260	9.74	1	1.98	20	0.1	0.1	18.45	1.16	3.9	0.31	3.59	12.6	< 0.005	< 0.01	< 0.01	0.055	0.095
Quarry 01	Q01 1054 002	Q01-051	253	9.7	1	1.98	20	0.1	0.1	18.1	1.16	4.8	0.31	4.49	15.5	< 0.005	< 0.01	< 0.01	0.061	0.105
Quarry 01	Q01 1075 001	Q01-052	80	8.74	3	1.99	32.1	0.1	0.1	9.27	1.76	57	0.31	57.1	185	< 0.005	< 0.01	< 0.01	0.983	3.03
Quarry 01	Q01 1075 001	Q01-053	149	9.48	3	2.05	20	0.1	0.1	6.92	1.72	32	0.31	31.6	103	< 0.005	< 0.01	< 0.01	0.416	1.59
Quarry 01	Q01 1075 001	Q01-054	184	9.13	3	1.99	30.5	0.1	0.1	8.78	1.84	55	0.31	54.3	176	< 0.005	< 0.01	< 0.01	0.776	2.72
Quarry 01	Q01 1075 001	Q01-055	81	9.27	2	1.98	20	0.1	0.1	12.91	1.28	18	0.31	17.6	57.7	< 0.005	< 0.01	< 0.01	0.231	0.794
Quarry 01	Q01 1054 003	Q01-056	119	9.43	2	2.03	20	0.1	0.1	15.22	1.16	12	0.31	11.5	38.1	< 0.005	< 0.01	< 0.01	0.178	0.555
Quarry 01	Q01 1054 003	Q01-057	133	9.64	2	1.96	20	0.1	0.1	17.98	1.07	5.1	0.31	4.79	16.5	< 0.005	< 0.01	< 0.01	0.06	0.13
Quarry 01	Q01 1054 003	Q01-058	12	9.18	2	1.93	20	0.1	0.1	13.26	1.24	18	0.31	17.2	56.5	< 0.005	< 0.01	< 0.01	0.296	0.649
Quarry 01	Q01 1054 003	Q01-059	96	9.75	2	1.97	20	0.1	0.1	18.34	1.07	4.2	0.31	3.89	13.5	< 0.005	< 0.01	< 0.01	0.074	0.065
Quarry 01	Q01 1054 003	Q01-060	96	9.93	2	1.98	20	0.1	0.1	18.16	1.11	4.6	0.31	4.29	14.8	< 0.005	< 0.01	< 0.01	0.152	0.075
Quarry 01	Q01 1054 003	Q01-061	32	9.02	2	1.95	20	0.1	0.1	17.01	1.16	7.7	0.31	7.39	24.8	< 0.005	< 0.01	< 0.01	0.217	0.165
Quarry 01	CRUSHER	Q01-CRU-001		8.99	4	2.05	40	0.1	0.1	9.91	1.8	73	0.31	73.1	235	0.016	< 0.01	0.01	1.14	4.53
Quarry 01	CRUSHER	Q01-CRU-002		9.42	2	2.02	20	0.1	0.1	15.04	1.19	12	0.31	12	39.7	0.007	< 0.01	< 0.01	0.119	0.405
Quarry 01	CRUSHER	Q01-CRU-003		9.71	2	2.01	20	0.1	0.1	13.14	1.29	17	0.31	16.8	55.2	< 0.005	< 0.01	< 0.01	0.183	0.575

102.03

TABLE E.6.3

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014 - SUMMARY STATISTICS

	Analysis																
	Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
	Units																
	---	---	g	mL	Normality	Normality	mL	---	t CaCO3/1000 t	t CaCO3/1000 t	t CaCO3/1000 t	ratio	%	%	%	%	%
COUNT	270	269	270	270	270	270	270	270	270	270	270	270	225	142	118	270	234
MIN	7.13	1	1.94	20	0.1	0.1	7.15	0.93	-16.4	0.31	-16.71	-52.9	0.005	0.01	0.01	0.015	0.01
MAX	10.13	4	2.08	135	0.1	0.1	58.72	1.99	278	14.4	277	680	0.612	0.15	0.46	3.01	12
MEAN	9.337	1.593	2.005	27.955	0.100	0.100	17.961	1.390	24.937	0.861	24.090	56.650	0.037	0.011	0.025	0.285	0.813

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO3/ 1000 t	t CaCO3/ 1000 t	t CaCO3/ 1000 t	ratio	%	%	%	%	%
QMR2 1210 001	QMR2 1210 001- 130	130	9.98	1	1.99	20.00	0.10	0.10	14.45	1.23	14	0.31	13.7	45.2	0.010	0.01	< 0.01	0.141	0.470
QMR2 1210 001	QMR2 1210 001- 253	253	9.77	1	2.01	20.00	0.10	0.10	17.28	1.13	6.8	0.31	6.49	21.9	0.012	0.01	< 0.01	0.026	0.020
QMR2 1210 001	QMR2 1210 001- 265	265	9.97	1	1.99	20.00	0.10	0.10	17.66	1.08	5.9	0.31	5.59	19.0	0.014	0.01	< 0.01	0.028	0.020
QMR2 1210 001	QMR2 1210 001- 273	273	9.21	1	2.04	20.00	0.10	0.10	13.49	1.26	16	0.31	15.7	51.6	0.016	0.02	< 0.01	0.269	0.530
QMR2 1210 001	QMR2 1210 001- 203	203	9.97	1	1.98	20.00	0.10	0.10	15.12	1.10	12	0.62	11.7	19.7	0.047	0.05	0.02	0.115	0.330
QMR2 1210 001	QMR2 1210 001- 296	296	9.38	1	2.01	20.00	0.10	0.10	13.86	1.21	15	0.31	15.0	49.4	0.013	0.01	< 0.01	0.152	0.440
QMR2 1210 001	QMR2 1210 001- 299	299	9.66	1	2.00	20.00	0.10	0.10	12.53	1.39	19	0.31	18.4	60.3	0.014	0.01	< 0.01	0.257	0.550
QMR2 1210 001	QMR2 1210 001- 306	306	9.56	1	2.03	20.00	0.10	0.10	14.74	1.21	13	0.31	12.6	41.6	0.012	0.01	< 0.01	0.130	0.310
QMR2 1210 001	QMR2 1210 001- 314	314	9.65	1	2.01	20.00	0.10	0.10	17.01	1.09	7.4	0.31	7.09	23.9	0.010	0.01	< 0.01	0.085	0.105
QMR2 1210 001	QMR2 1210 001- 278A	278A	9.85	1	2.02	20.00	0.10	0.10	16.19	1.05	9.4	0.31	9.09	30.3	0.011	0.01	< 0.01	0.078	0.225
QMR2 1210 002	QMR2-011	516	9.10	3	2.00	55.70	0.10	0.10	32.52	1.59	58	0.31	57.6	187	0.007	< 0.01	< 0.01	0.818	2.39
QMR2 1210 002	QMR2-012	171	9.36	3	1.95	46.90	0.10	0.10	19.75	1.60	70	0.31	69.3	225	0.005	< 0.01	< 0.01	0.893	3.46
QMR2 1210 002	QMR2-013	237	9.09	2	1.99	20.00	0.10	0.10	12.73	1.52	18	0.31	18.0	59.0	0.015	< 0.01	0.01	0.166	0.280
QMR2 1210 002	QMR2-014	254	9.63	2	2.04	32.30	0.10	0.10	19.98	1.57	30	0.31	29.9	97.4	0.026	< 0.01	0.02	0.414	1.22
QMR2 1210 002	QMR2-015	321	9.55	2	2.03	20.00	0.10	0.10	13.74	1.35	15	0.31	15.1	49.7	0.010	< 0.01	0.01	0.129	0.380
QMR2 1210 002	QMR2-016	177	9.90	2	1.98	20.00	0.10	0.10	14.51	1.18	14	0.31	13.6	44.8	0.007	< 0.01	< 0.01	0.138	0.400
QMR2 1210 002	QMR2-017	307	9.64	3	1.97	34.00	0.10	0.10	14.58	1.59	49	0.31	49.0	159	0.007	< 0.01	< 0.01	0.609	2.28
QMR2 1210 002	QMR2-018	268	9.85	2	2.01	20.00	0.10	0.10	12.01	1.45	20	0.31	19.6	64.2	0.018	< 0.01	0.01	0.222	0.644
QMR2 1210 002	QMR2-019	223	9.80	1	2.04	20.00	0.10	0.10	16.74	1.22	8.0	0.31	7.69	25.8	0.012	0.01	< 0.01	0.049	0.075
QMR2 1210 002	QMR2-020	223	9.86	1	1.99	20.00	0.10	0.10	16.88	1.17	7.8	0.31	7.49	25.2	0.018	< 0.01	0.01	0.045	0.085
QMR2 1210 002	QMR2-021	184	9.97	1	2.00	20.00	0.10	0.10	17.66	1.06	5.9	0.31	5.59	19.0	< 0.005	< 0.01	< 0.01	0.031	< 0.005
QMR2 1210 002	QMR2-022	31	9.91	1	2.01	20.00	0.10	0.10	17.41	1.13	6.4	0.31	6.09	20.6	< 0.005	< 0.01	< 0.01	0.035	0.020
QMR2 1210 002	QMR2-023	36	9.47	1	2.04	20.00	0.10	0.10	12.80	1.64	18	0.31	17.3	56.8	0.010	< 0.01	0.01	0.143	0.395
QMR2 1210 002	QMR2-024	424	9.98	1	2.04	20.00	0.10	0.10	17.68	1.12	5.7	0.31	5.39	18.4	0.006	< 0.01	< 0.01	0.029	0.025
QMR2 1210 002	QMR2-025	344	9.31	2	2.04	55.00	0.10	0.10	37.02	1.52	44	14.4	29.7	3.07	0.612	0.15	0.46	0.295	0.874
QMR2 1210 002	QMR2-026	358	9.84	1	1.99	20.00	0.10	0.10	14.18	1.26	15	0.31	14.3	47.1	0.006	< 0.01	< 0.01	0.153	0.435
QMR2 1210 002	QMR2-027	314	9.42	1	1.97	32.40	0.10	0.10	24.10	1.55	21	2.19	18.9	9.65	0.072	< 0.01	0.07	0.072	0.075
QMR2 1210 002	QMR2-028	327	9.96	1	1.94	20.00	0.10	0.10	16.19	1.09	9.8	0.31	9.49	31.4	0.012	< 0.01	0.01	0.071	0.170
QMR2 1210 002B	QMR2-029	401	9.62	1	2.01	32.00	0.10	0.10	16.19	1.63	39	4.38	34.9	8.98	0.182	0.04	0.14	0.158	0.395
QMR2 1210 002B	QMR2-030	438	9.62	3	2.05	54.50	0.10	0.10	29.41	1.55	61	0.31	60.9	196	0.012	< 0.01	0.01	0.743	2.97
QMR2 1210 002B	QMR2-031	476	9.82	3	2.06	27.50	0.10	0.10	15.24	1.57	30	0.31	29.5	96.1	0.005	< 0.01	< 0.01	0.345	1.25
QMR2 1210 002B	QMR2-032	490	9.36	3	2.04	57.60	0.10	0.10	35.24	1.59	55	0.94	53.9	58.5	0.029	< 0.01	0.03	0.632	2.01
QMR2 1210 002B	QMR2-033	521	9.51	3	2.01	33.40	0.10	0.10	17.29	1.55	40	0.31	39.8	129	0.006	< 0.01	< 0.01	0.493	1.60
QMR2 1210 002B	QMR2-034	574	9.64	2	1.95	31.50	0.10	0.10	20.57	1.57	28	0.94	27.1	29.9	0.039	< 0.01	0.03	0.255	0.799
QMR2 1210 002B	QMR2-035	593	9.55	2	2.05	20.00	0.10	0.10	11.53	1.53	21	0.31	20.4	66.8	0.010	0.01	< 0.01	0.226	0.595
QMR2 1210 002B	QMR2-036	607	9.63	3	1.96	35.00	0.10	0.10	13.91	1.57	54	0.31	53.5	174	0.005	< 0.01	< 0.01	0.628	2.44
QMR2 1210 002B	QMR2-037	654	9.27	2	1.96	33.50	0.10	0.10	16.27	1.55	44	0.31	43.7	141	0.013	< 0.01	0.01	0.455	1.68
QMR2 1210 002B	QMR2-038	682	9.22	2	2.00	52.00	0.10	0.10	31.83	1.58	50	0.62	49.8	80.6	0.032	0.01	0.02	0.593	1.98
QMR2 1210 002B	QMR2-039	742	9.25	2	1.98	29.00	0.10	0.10	14.86	1.56	36	0.31	35.4	115	0.005	< 0.01	< 0.01	0.442	1.31
QMR2 1210 002B	QMR2-040	760	9.25	3	2.01	105.70	0.10	0.10	58.72	1.56	117	2.19	115	53.4	0.097	0.03	0.07	1.16	3.82
QMR2 1210 002B	QMR2-041	760	9.42	3	2.05	91.00	0.10	0.10	56.69	1.58	84	2.81	80.9	29.8	0.135	0.14	0.09	0.838	3.08
QMR2 1210 002B	QMR2-042	774	9.80	1	1.98	20.00	0.10	0.10	14.63	1.22	14	0.31	13.3	43.9	0.009	< 0.01	< 0.01	0.132	0.275
QMR2 1210 003	QMR2-043	344	9.96	1	2.04	20.00	0.10	0.10	17.49	1.25	6.2	0.31	5.89	20.0	< 0.005	< 0.01	< 0.01	0.020	< 0.005
QMR2 1210 003	QMR2-044	296	9.64	1	1.96	20.00	0.10	0.10	13.79	1.42	16	0.31	15.5	51.0	0.010	0.01	< 0.01	0.218	0.375
QMR2 1210 003	QMR2-045	288	9.26	1	2.06	20.00	0.10	0.10	15.45	1.72	11	0.31	10.7	35.2	0.020	0.01	0.01	0.045	< 0.005
QMR2 1210 003	QMR2-046	248	9.85	1	2.03	20.00	0.10	0.10	17.02	1.29	7.3	0.31	6.99	23.5	0.005	< 0.01	< 0.01	0.033	0.030
QMR2 1210 003	QMR2-047	240	10.03	1	1.99	20.00	0.10	0.10	17.03	1.26	7.5	0.31	7.19	24.2	0.011	0.01	< 0.01	0.018	< 0.005

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO3/ 1000 t	t CaCO3/ 1000 t	t CaCO3/ 1000 t	ratio	%	%	%	%	%
QMR2 1210 003	QMR2-048	352	9.54	1	2.02	42.80	0.10	0.10	28.22	1.54	36	3.12	33.0	11.6	0.166	0.07	0.10	0.266	0.764
QMR2 1210 003	QMR2-049	336	9.23	1	2.01	26.00	0.10	0.10	18.48	1.65	19	7.81	10.9	2.39	0.327	0.08	0.25	0.097	0.150
QMR2 1210 003	QMR2-050	304	9.43	3	2.02	64.00	0.10	0.10	36.64	1.59	68	0.31	67.4	217	0.019	< 0.01	0.01	0.611	2.29
QMR2 1210 003	QMR2-051	280	9.64	1	1.99	20.00	0.10	0.10	16.44	1.30	8.9	0.31	8.59	28.5	0.032	0.02	0.01	0.040	< 0.005
QMR2 1210 003	QMR2-052	256	9.53	1	2.02	20.00	0.10	0.10	16.65	1.26	8.3	0.31	7.99	26.6	0.023	0.01	0.01	0.040	0.015
QMR2 1210 003	QMR2-053	199	9.17	1	2.03	26.00	0.10	0.10	19.06	1.56	17	11.2	5.85	1.52	0.434	0.07	0.36	0.101	0.045
QMR2 1210 003	QMR2-054	184	9.37	1	1.97	20.00	0.10	0.10	13.08	1.67	18	0.31	17.3	56.3	0.023	0.01	0.01	0.245	0.290
QMR2 1210 003	QMR2-055	152	9.18	1	1.99	20.00	0.10	0.10	12.24	1.93	20	3.12	16.4	6.24	0.130	0.03	0.10	0.376	0.295
QMR2 1210 003	QMR2-056	138	8.85	1	1.98	33.00	0.10	0.10	12.37	1.92	52	0.31	51.8	167	0.011	< 0.01	0.01	0.778	2.60
QMR2 1210 003	QMR2-057	104	9.41	1	1.99	20.00	0.10	0.10	17.67	1.16	5.9	0.31	5.59	19.0	0.006	< 0.01	< 0.01	0.034	0.025
QMR2 1210 003	QMR2-058	96	9.80	1	1.97	20.00	0.10	0.10	13.54	1.23	16	0.31	16.1	52.9	< 0.005	< 0.01	< 0.01	0.167	0.634
QMR2 1210 003	QMR2-059	88	8.98	1	1.95	27.00	0.10	0.10	17.75	1.52	24	1.88	21.8	12.6	0.116	0.06	0.06	0.279	0.644
QMR2 1210 003	QMR2-060	48	8.74	3	2.03	83.50	0.10	0.10	26.74	1.63	140	0.31	139	447	0.012	< 0.01	0.01	2.02	6.98
QMR2 1210 005	QMR2-061	23	10.00	2	2.02	20.00	0.10	0.10	17.62	1.15	6	0.31	5.6	19.00	0.011	0.01	< 0.01	0.038	< 0.005
QMR2 1210 005	QMR2-062	23	9.98	2	2.05	20	0.1	0.1	16.81	1.16	7.8	0.31	7.49	25	0.022	0.01	0.01	0.06	0.01
QMR2 1210 005	QMR2-063	7	9.79	2	2.03	20	0.1	0.1	13.69	1.67	16	0.62	14.9	24.8	0.028	< 0.01	0.02	0.074	0.125
QMR2 1210 005	QMR2-064	14	9.84	2	2	20	0.1	0.1	17.56	1.24	6.1	0.31	5.79	19.7	0.017	0.02	< 0.01	0.116	0.025
QMR2 1210 005	QMR2-065	20	10.04	2	1.98	20	0.1	0.1	15.44	1.2	12	0.31	11.2	37.1	0.017	0.02	< 0.01	0.054	0.02
QMR2 1210 005	QMR2-066	25	9.76	2	2.04	20	0.1	0.1	18.04	1.21	4.8	1.88	2.92	2.56	0.089	0.03	0.06	0.075	0.01
QMR2 1210 005	QMR2-067	33	9.56	2	2	20	0.1	0.1	16.52	1.29	8.7	0.31	8.39	27.8	0.025	0.02	0.01	0.058	0.02
QMR2 1210 007	QMR2-068	1	9.22	2	2	20	0.1	0.1	16.64	1.19	8.4	0.31	8.09	27.1	0.019	0.02	< 0.01	0.054	0.035
QMR2 1210 007	QMR2-069	5	9.47	3	2	20	0.1	0.1	8.91	1.81	28	0.31	27.4	89.4	0.022	0.02	< 0.01	0.415	1.09
QMR2 1210 007	QMR2-070	30	8.81	3	1.98	28.3	0.1	0.1	17.77	1.84	27	0.94	25.7	28.4	0.043	0.01	0.03	0.131	0.19
QMR2 1210 007	QMR2-071	37	9.32	3	2.05	45.5	0.1	0.1	25.5	1.63	49	0.94	47.9	52.1	0.048	0.02	0.03	0.455	1.4
QMR2 1210 007	QMR2-072	43	9.27	3	1.97	45.8	0.1	0.1	27.54	1.61	46	2.5	43.8	18.5	0.098	0.02	0.08	0.413	1.18
QMR2 1210 007	QMR2-073	89	8.88	3	1.99	39.7	0.1	0.1	26.55	1.61	33	1.88	31.1	17.6	0.076	0.02	0.06	0.17	0.395
QMR2 1210 007	QMR2-074	78	9.28	3	2.02	41	0.1	0.1	23.73	1.63	43	2.81	39.9	15.2	0.122	0.03	0.09	0.37	1.19
QMR2 1210 004	QMR2-075	18	9.42	3	1.99	79.5	0.1	0.1	42.95	1.54	92	5.31	86.5	17.3	0.192	0.02	0.17	0.916	3.47
QMR2 1210 004	QMR2-076	52	9.31	2	1.99	26	0.1	0.1	18.93	1.56	18	4.38	13.4	4.07	0.147	< 0.01	0.14	0.077	0.12
QMR2 1210 004	QMR2-077	93	9.45	2	2.04	39.8	0.1	0.1	24.21	1.59	38	0.62	37.6	61.1	0.028	< 0.01	0.02	0.28	0.914
QMR2 1210 004	QMR2-078	78	9.38	2	2.02	26.2	0.1	0.1	16.42	1.54	24	0.31	23.9	77.4	0.02	0.01	0.01	0.188	0.5
QMR2 1210 004	QMR2-079	131	9.36	2	1.99	35	0.1	0.1	21.71	1.62	33	2.81	30.6	11.9	0.109	0.02	0.09	0.296	0.605
QMR2 1210 004	QMR2-080	156	9.48	2	2.05	41.2	0.1	0.1	24.28	1.64	41	3.75	37.6	11	0.118	< 0.01	0.12	0.356	0.889
QMR2 1210 004	QMR2-081	156	9.31	2	2	41.5	0.1	0.1	25.47	1.56	40	5	35.1	8.02	0.17	0.01	0.16	0.338	0.889
QMR2 1210 004	QMR2-082	91	9.55	2	2.01	34.1	0.1	0.1	22.44	1.61	29	1.56	27.4	18.6	0.065	0.02	0.05	0.229	0.59
QMR2 1210 004	QMR2-083	150	9.29	2	2.03	25.2	0.1	0.1	15.71	1.76	23	0.31	23.1	74.9	0.026	0.02	0.01	0.182	0.545
QMR2 1210 004	QMR2-084	189	9.33	2	2.01	30	0.1	0.1	15.79	1.99	35	0.62	34.8	56.6	0.03	0.01	0.02	0.318	0.939
QMR2 1200 001	QMR2-085	56	9.49	2	1.99	20	0.1	0.1	17.6	1.13	6	0.31	5.69	19.4	0.018	0.02	< 0.01	0.015	< 0.005
QMR2 1200 001	QMR2-086	98	9.57	2	1.99	20	0.1	0.1	9.27	1.67	27	0.31	26.7	87.1	0.013	0.01	< 0.01	0.352	1.19
QMR2 1200 001	QMR2-087	121	8.36	2	2.02	20	0.1	0.1	15.07	1.29	12	0.31	11.9	39.4	0.012	0.01	< 0.01	0.141	0.27
QMR2 1200 001	QMR2-088	100	9.11	3	2.02	30	0.1	0.1	15.34	1.5	36	0.31	36	117	0.008	< 0.01	< 0.01	0.44	1.41
QMR2 1200 001	QMR2-089	71	9.64	2	2.04	20	0.1	0.1	15	1.28	12	0.62	11.7	19.7	0.045	0.02	0.02	0.12	0.215
QMR2 1200 001	QMR2-090	59	9.1	3	2.04	73.7	0.1	0.1	25.19	1.59	119	0.31	119	384	0.015	0.02	< 0.01	1.49	6.56
QMR2 1200 001	QMR2-091	83	8.35	3	2.01	47.4	0.1	0.1	18.9	1.6	71	0.31	70.6	227	0.017	< 0.01	0.01	1.24	3.62
QMR2 1200 001	QMR2-092	23	9.52	2	2.05	20	0.1	0.1	26.2	1.17	-15.1	0.31	-15.41	-48.71	0.016	0.02	< 0.01	0.031	< 0.005
QMR2 1200 001	QMR2-093	110	9.59	2	1.97	20	0.1	0.1	16.55	1.18	8.8	0.31	8.49	28.2	0.024	0.01	0.01	0.052	0.09
QMR2 1200 001	QMR2-094	35	8.35	2	2.04	20	0.1	0.1	26.71	1.22	-16.4	0.31	-16.71	-52.9	0.018	0.02	< 0.01	0.169	0.13

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO ₄ -S	Sulphide	C	CO ₃
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	ratio	%	%	%	%	
QMR2 1200 001	QMR2-095	95	9.35	2	2.05	20	0.1	0.1	23.89	1.09	-9.5	0.31	-9.81	-30.4	0.038	0.03	0.01	0.03	< 0.005
QMR2 1200 001	QMR2-096	132	8.93	2	2.04	20	0.1	0.1	15.97	1.18	9.9	0.31	9.59	31.9	0.027	0.03	< 0.01	0.062	0.035
QMR2 1200 001	QMR2-097	50	9.31	2	2	20	0.1	0.1	13.2	1.25	17	0.31	16.7	54.8	0.011	0.01	< 0.01	0.119	0.29
QMR2 1200 002	QMR2-098	291	8.84	3	2.03	20	0.1	0.1	10.76	1.33	23	0.31	22.5	73.5	0.007	< 0.01	< 0.01	0.315	0.779
QMR2 1200 002	QMR2-099	101	7.35	2	2.01	20	0.1	0.1	19.01	1.03	2.5	0.31	2.19	8.06	0.01	0.01	< 0.01	0.03	0.01
QMR2 1200 002	QMR2-100	130	7.39	2	1.98	20	0.1	0.1	18.24	1	4.4	0.31	4.09	14.2	0.013	0.01	< 0.01	0.084	0.01
QMR2 1200 002	QMR2-101	130	7.13	2	1.99	20	0.1	0.1	18.78	0.93	3.1	0.31	2.79	10	0.005	< 0.01	< 0.01	0.015	0.01
QMR2 1200 002	QMR2-102	232	7.88	2	1.97	20	0.1	0.1	17.56	0.99	6.2	0.31	5.89	20	0.011	0.01	< 0.01	0.065	0.01
QMR2 1200 002	QMR2-103	422	8.49	2	2.01	20	0.1	0.1	16.25	1	9.3	0.31	8.99	30	0.007	< 0.01	< 0.01	0.105	0.14
QMR2 1210 008	QMR2-104	19	9.51	1	2.01	20	0.1	0.1	17.62	0.97	5.9	0.31	5.59	19	0.011	0.01	< 0.01	0.064	0.095
QMR2 1210 008	QMR2-105	25	8.88	1	2	20	0.1	0.1	12.91	1.35	18	0.31	17.4	57.1	0.021	0.02	< 0.01	0.226	0.639
QMR2 1210 008	QMR2-106	47	9.23	1	1.99	20	0.1	0.1	18.45	1.13	3.9	0.31	3.59	12.5	0.025	0.02	0.01	0.034	< 0.005
QMR2 1210 008	QMR2-107	180	9.35	1	2	20	0.1	0.1	16.21	1.17	9.5	0.31	9.19	30.6	0.014	0.01	< 0.01	0.139	0.335
QMR2 1210 008	QMR2-108	100	9.1	1	1.99	20	0.1	0.1	18.14	1.06	4.7	0.31	4.39	15.2	0.02	0.02	< 0.01	0.038	0.025
QMR2 1210 008	QMR2-109	279	8.74	1	1.99	20	0.1	0.1	18.02	0.98	5	1.25	3.75	4	0.069	0.03	0.04	0.163	0.015
QMR2 1210 008	QMR2-110	134	8.43	1	2.01	20	0.1	0.1	17.7	1	5.7	0.31	5.39	18.2	0.02	0.01	0.01	0.153	0.015
QMR2 1210 008	QMR2-111	57	9.49	1	2.02	20.00	0.10	0.10	17.82	1.29	5.4	0.31	5.09	17.4	< 0.005	< 0.01	< 0.01	0.053	0.070
QMR2 1210 008	QMR2-112	67	9.56	2	1.95	20.00	0.10	0.10	19.34	1.62	1.7	0.31	1.39	5.48	0.010	0.01	< 0.01	0.318	1.09
QMR2 1210 008	QMR2-113	128	9.50	1	2.05	20.00	0.10	0.10	17.59	1.17	5.9	0.31	5.59	19.0	< 0.005	< 0.01	< 0.01	0.051	0.125
QMR2 1210 008	QMR2-114	213	9.70	1	1.96	20.00	0.10	0.10	18.27	1.27	4.4	0.31	4.09	14.2	0.005	< 0.01	< 0.01	0.027	< 0.005
QMR2 1210 008	QMR2-115	275	10.00	1	2.02	20.00	0.10	0.10	18.24	1.42	4.4	0.31	4.09	14.2	< 0.005	< 0.01	< 0.01	0.044	< 0.005
QMR2 1210 008	QMR2-116	189	9.35	1	2.02	20.00	0.10	0.10	13.57	1.48	16	1.25	14.6	12.7	0.081	0.04	0.04	0.192	0.435
QMR2 1210 008	QMR2-117	253	9.43	1	2.05	29.40	0.10	0.10	15.72	1.53	33	0.31	33.1	108	< 0.005	< 0.01	< 0.01	0.477	1.61
QMR2 1210 008	QMR2-118	472	9.55	1	2.00	20.00	0.10	0.10	15.60	1.42	11	0.62	10.4	17.6	0.016	< 0.01	0.02	0.143	0.265
QMR2 1210 009	QMR2-119	205	8.82	1	2	26.6	0.1	0.1	18.39	1.63	20	0.31	20.2	66.1	0.007	< 0.01	< 0.01	0.116	0.17
QMR2 1210 009	QMR2-120	205	8.88	1	1.99	27.1	0.1	0.1	19.46	1.65	19	0.31	18.9	61.4	0.013	< 0.01	0.01	0.106	0.1
QMR2 1210 009	QMR2-121	97	9.31	1	2.01	20	0.1	0.1	14.64	1.95	13	2.81	10.5	4.73	0.138	0.05	0.09	0.062	0.03
QMR2 1210 009	QMR2-122	215	9.25	1	2.01	38.1	0.1	0.1	25.15	1.69	32	1.88	30.3	17.2	0.096	0.04	0.06	0.127	0.325
QMR2 1210 009	QMR2-123	196	9.57	1	2.01	26.9	0.1	0.1	17.82	1.7	23	1.25	21.4	18.1	0.056	0.02	0.04	0.174	0.15
QMR2 1210 009	QMR2-124	150	9.42	1	2.01	20	0.1	0.1	17.35	1.15	6.6	0.31	6.29	21.1	0.022	0.01	0.01	0.121	0.025
QMR2 1210 009	QMR2-125	160	9.9	1	2.01	20	0.1	0.1	15.62	1.42	11	0.31	10.6	35.2	< 0.005	< 0.01	< 0.01	0.067	0.015
QMR2 1210 009	QMR2-126	42	9.69	1	1.99	20	0.1	0.1	14.71	1.56	13	0.31	13	42.9	0.006	< 0.01	< 0.01	0.072	0.1
QMR2 1210 009	QMR2-127	101	9.79	1	2.01	20	0.1	0.1	14.68	1.6	13	0.31	12.9	42.6	< 0.005	< 0.01	< 0.01	0.059	0.04
QMR2 1210 009	QMR2-128	108	9.38	1	2.01	43.1	0.1	0.1	25.36	1.59	44	1.56	42.5	28.2	0.068	0.02	0.05	0.42	1.24
QMR2 1210 009	QMR2-129	52	9.98	1	2.01	20	0.1	0.1	15.85	1.43	10	0.62	9.68	16.5	0.036	0.02	0.02	0.039	0.04
QMR2 1210 009	QMR2-130	67	9.83	1	2.01	20	0.1	0.1	15.65	1.43	11	0.31	10.5	34.8	< 0.005	< 0.01	< 0.01	0.035	0.02
QMR2 1210 009	QMR2-131	21	9.5	1	1.98	20	0.1	0.1	16.4	1.25	9.1	0.31	8.79	29.4	< 0.005	< 0.01	< 0.01	0.06	0.03
QMR2 1210 012	QMR2-132	783	9.52	2	1.98	20.00	0.10	0.10	8.27	1.57	30	0.31	29.3	95.5	< 0.005	< 0.01	< 0.01	0.498	1.44
QMR2 1210 012	QMR2-133	678	9.56	1	2.02	20.00	0.10	0.10	17.13	1.12	7.1	0.31	6.79	22.9	0.005	< 0.01	< 0.01	0.074	0.160
QMR2 1210 012	QMR2-134	566	9.46	2	2.05	29.00	0.10	0.10	12.70	1.42	40	0.31	39.5	128	0.010	0.01	< 0.01	0.542	1.84
QMR2 1210 006	QMR2-135	19	8.78	1	2	20	0.1	0.1	13.99	1.56	15	0.31	14.7	48.4	< 0.005	< 0.01	< 0.01	0.188	0.19
QMR2 1210 006	QMR2-136	115	9.21	2	2	20	0.1	0.1	15.6	1.33	11	0.31	10.7	35.5	< 0.005	< 0.01	< 0.01	0.08	0.11
QMR2 1210 006	QMR2-137	35	9.25	1	1.95	64.9	0.1	0.1	33.78	1.61	80	1.88	77.9	42.6	0.05	< 0.01	0.06	0.743	2.83
QMR2 1200 004	QMR2-138	66	9.17	2	2.06	28.4	0.1	0.1	13.04	1.93	37	0.31	37	120	0.009	< 0.01	< 0.01	0.274	0.989
QMR2 1200 004	QMR2-139	96	9.15	1	2.03	34.40	0.10	0.1	19	1.6	38	0.31	37.6	122	0.005	< 0.01	< 0.01	0.271	0.934
QMR2 1200 004	QMR2-140	96	8.82	1	2	28	0	0.1	16.39	1.59	28	0.31	27.9	91	< 0.005	< 0.01	< 0.01	0.154	0.415
QMR2 1200 004	QMR2-141	48	9.26	1	2.08	20.00	0.10	0.1	14.08	1.59	14	0.31	13.9	45.8	0.008	< 0.01	< 0.01	0.05	0.085

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO ₄ -S	Sulphide	C	CO ₃
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	t CaCO ₃ /1000 t	ratio	%	%	%	%	
QMR2 1200 004	QMR2-142	149	9.82	1	1.97	20.00	0.10	0.1	16.79	1.25	8.1	0.31	7.79	26.1	< 0.005	< 0.01	< 0.01	0.028	0.015
QMR2 1210 011	QMR2-143	1	9.91	1	1.95	20.00	0.10	0.1	16.48	1.14	9	0.31	8.69	29	0.019	0.02	< 0.01	0.091	0.16
QMR2 1210 011	QMR2-144	5	10.1	1	2.04	20.00	0.10	0.1	17.33	1.27	6.5	0.31	6.19	21	0.013	0.01	< 0.01	0.042	< 0.005
QMR2 1210 011	QMR2-145	8	9.95	1	2.01	20.00	0.10	0.1	18.12	1.21	4.7	0.62	4.08	7.52	0.072	0.05	0.02	0.044	< 0.005
QMR2 1210 011	QMR2-146	12	9.83	1	2.00	20.00	0.10	0.1	12.67	1.46	18	0.31	18	59	0.007	< 0.01	< 0.01	0.244	0.689
QMR2 1210 011	QMR2-147	16	9.86	1	1.98	20.00	0.10	0.1	17.83	1.2	5.5	0.31	5.19	17.7	0.01	0.01	< 0.01	0.038	< 0.005
QMR2 1210 011	QMR2-148	20	9.62	1	2.00	20.00	0.10	0.1	15.14	1.3	12	0.31	11.8	39	0.007	< 0.01	< 0.01	0.456	0.37
QMR2 1210 011	QMR2-149	23	9.59	1	1.97	20.00	0.10	0.1	12.27	1.56	20	0.31	19.3	62.7	0.035	0.02	0.01	0.29	0.649
QMR2 1210 011	QMR2-150	27	10.01	1	2.00	20.00	0.10	0.1	17.86	1.23	5.4	0.31	5.09	17.4	< 0.005	< 0.01	< 0.01	0.07	0.04
QMR2 1210 011	QMR2-151	31	9.69	1	1.98	20.00	0.10	0.1	16.84	1.26	8	0.31	7.69	25.8	0.013	0.01	< 0.01	0.068	0.04
QMR2 1210 011	QMR2-152	35	10.13	1	2.02	20.00	0.10	0.1	17.57	1.22	6	0.31	5.69	19.4	0.009	< 0.01	< 0.01	0.066	< 0.005
QMR2 1210 011	QMR2-153	39	10.01	1	2.03	20.00	0.10	0.1	18.07	1.21	4.8	0.31	4.49	15.4	0.033	0.02	0.01	0.046	< 0.005
QMR2 1210 011	QMR2-154	42	10.03	1	1.96	20.00	0.10	0.1	17.68	1.16	5.9	0.31	5.59	19	0.017	0.02	< 0.01	0.052	< 0.005
QMR2 1210 011	QMR2-155	46	9.76	1	2.02	20.00	0.10	0.1	17.04	1.22	7.3	0.31	6.99	23.5	< 0.005	< 0.01	< 0.01	0.064	0.06
QMR2 1210 011	QMR2-156	52	9.62	1	2.02	26	0.1	0.1	17.53	1.65	21	0.94	20.1	22.4	0.069	0.04	0.03	0.239	0.275
QMR2 1210 011	QMR2-157	54	9.85	1	2	20	0.1	0.1	16.83	1.26	7.9	0.31	7.59	25.5	0.008	< 0.01	< 0.01	0.111	0.195
QMR2 1210 011	QMR2-158	58	9.9	1	2.04	20	0.1	0.1	18.04	1.22	4.8	0.31	4.49	15.5	0.012	0.01	< 0.01	0.092	0.015
QMR2 1200 003	QMR2-159	32	9.83	1	1.97	20	0.1	0.1	19.85	1.09	0.4	0.31	0.09	1.29	< 0.005	< 0.01	< 0.01	0.024	< 0.005
QMR2 1200 003	QMR2-160	32	7.34	1	2	20	0.1	0.1	18.74	1.03	3.2	0.31	2.89	10.3	< 0.005	< 0.01	< 0.01	0.03	< 0.005
QMR2 1200 003	QMR2-161	91	7.93	1	1.98	20	0.1	0.1	18.27	1.12	4.4	0.31	4.09	14.2	0.006	< 0.01	< 0.01	0.104	0.01
QMR2 1200 003	QMR2-162	215	8.68	2	2.01	20	0.1	0.1	9.68	1.61	26	0.31	25.4	82.9	0.011	0.01	< 0.01	0.59	1.12
QMR2 1200 003	QMR2-163	344	8.35	2	2.05	20	0.1	0.1	7.45	1.85	31	6.88	23.7	4.45	0.252	0.03	0.22	1.08	1.23
QMR2 1210 013	QMR2-166	12	8.95	2	2	20	0.1	0.1	13.22	1.42	17	0.31	16.7	54.8	< 0.005	< 0.01	< 0.01	0.244	0.634
QMR2 1210 013	QMR2-167	62	9.22	2	1.96	20	0.1	0.1	13.18	1.54	17	0.31	17.1	56.1	0.008	< 0.01	< 0.01	0.166	0.47
QMR2 1210 013	QMR2-168	112	8.83	1	2.05	20	0.1	0.1	18.18	1.19	4.4	0.31	4.09	14.2	0.008	< 0.01	< 0.01	0.058	< 0.005
QMR2 1210 013	QMR2-169	212	9.15	1	2	20	0.1	0.1	17.9	1.17	5.2	0.31	4.89	16.8	< 0.005	< 0.01	< 0.01	0.05	< 0.005
QMR2 1210 013	QMR2-170	101	8.97	1	1.98	20	0.1	0.1	17.79	1.19	5.6	0.31	5.29	18.1	0.005	< 0.01	< 0.01	0.078	< 0.005
QMR2 1210 013	QMR2-171	234	9.91	1	1.99	20	0.1	0.1	18.85	1.13	2.9	0.31	2.59	9.35	0.008	< 0.01	< 0.01	0.043	< 0.005
QMR2 1210 013	QMR2-172	292	9.21	1	1.98	20	0.1	0.1	18.12	1.12	4.7	0.31	4.39	15.2	< 0.005	< 0.01	< 0.01	0.031	< 0.005
QMR2 1210 014	QMR2-173	231	9.69	1	1.99	20	0.1	0.1	11.35	1.74	22	0.31	21.4	70	0.018	0.02	< 0.01	0.345	1.01
QMR2 1210 014	QMR2-174	141	9.11	1	1.98	20	0.1	0.1	16.62	1.25	8.5	0.31	8.19	27.4	0.012	0.01	< 0.01	0.056	< 0.005
QMR2 1210 014	QMR2-175	191	8.98	1	1.98	135	0.1	0.1	24.82	1.6	278	0.94	277	297	0.096	0.07	0.03	0.207	0.295
QMR2 1210 014	QMR2-176	115	9.17	1	1.97	20	0.1	0.1	14.6	1.49	14	0.94	12.8	14.6	0.048	0.02	0.03	0.116	0.09
QMR2 1210 010	QMR2-177	12B	9.69	1	1.99	20	0.1	0.1	11.35	1.74	22	0.31	21.4	70	0.018	0.02	< 0.01	0.345	1.01
QMR2 1210 010	QMR2-178	205	9.11	1	1.98	20	0.1	0.1	16.62	1.25	8.5	0.31	8.19	27.4	0.012	0.01	< 0.01	0.056	< 0.005
QMR2 1210 010	QMR2-179	5B	8.98	1	1.98	135	0.1	0.1	24.82	1.6	278	0.94	277	297	0.096	0.07	0.03	0.207	0.295
QMR2 1210 010	QMR2-180	5B	9.17	1	1.97	20	0.1	0.1	14.6	1.49	14	0.94	12.8	14.6	0.048	0.02	0.03	0.116	0.09
QMR2 1210 014	QMR2-181	20	9.79	1	2.02	20	0.1	0.1	14.22	1.21	14	1.25	13	11.4	0.055	0.02	0.04	0.16	0.335
QMR2 1210 014	QMR2-182	13	9.25	3	1.98	52.9	0.1	0.1	22.22	1.54	78	0.31	77.2	250	< 0.005	< 0.01	< 0.01	1.05	4.23
QMR2 1210 014	QMR2-183	141	9.38	1	1.97	20	0.1	0.1	17.37	1.08	6.7	0.31	6.39	21.6	0.006	< 0.01	< 0.01	0.049	0.06
QMR2 1210 014	QMR2-184	63	9.67	3	2.03	25.5	0.1	0.1	10.14	1.71	38	0.31	37.5	121	0.041	0.03	0.01	0.536	1.85
QMR2 1210 014	QMR2-185	44	9.15	3	2.01	72.7	0.1	0.1	26.64	1.54	115	0.31	114	370	< 0.005	< 0.01	< 0.01	1.47	6.42
QMR2 1210 014	QMR2-186	101	9.54	1	2.04	20	0.1	0.1	16.94	0.95	7.5	0.31	7.19	24.2	0.01	0.01	< 0.01	0.059	0.095
QMR2 1200 005	QMR2-187	27	9.17	1	2.05	20.00	0.10	0.10	16.25	1.63	9.1	0.31	8.79	29.1	0.040	0.01	0.03	0.033	0.010
QMR2 1200 005	QMR2-188	25	9.88	1	2.04	20.00	0.10	0.10	19.40	1.12	1.5	0.66	0.84	2.29	0.021	0.02	< 0.01	0.040	0.010
QMR2 1200 005	QMR2-189	72	9.55	1	2.04	20.00	0.10	0.10	18.71	1.22	3.2	0.34	2.86	9.31	0.011	0.01	< 0.01	0.061	0.040
QMR2 1200 005	QMR2-190	82	9.53	1	1.99	20.00	0.10	0.10	19.14	1.23	2.2	0.75	1.45	2.93	0.024	0.02	< 0.01	0.046	0.010

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO3/ 1000 t	t CaCO3/ 1000 t	t CaCO3/ 1000 t	ratio	%	%	%	%	%
QMR2 1200 005	QMR2-191	65	9.66	1	2.00	20.00	0.10	0.10	19.26	1.19	1.8	0.41	1.39	4.43	0.013	0.01	< 0.01	0.031	< 0.005
QMR2 1200 005	QMR2-192	97	9.60	1	2.00	20.00	0.10	0.10	16.44	1.30	8.9	0.72	8.18	12.4	0.023	0.02	< 0.01	0.104	0.060
QMR2 1200 005	QMR2-193	52	8.38	1	1.99	27.00	0.10	0.10	17.97	1.60	23	0.50	22.2	45.4	0.016	0.02	< 0.01	0.204	0.400
QMR2 1200 005	QMR2-194	102	8.86	1	2.04	23.50	0.10	0.10	16.11	1.63	18	0.72	17.4	25.2	0.203	0.02	0.18	0.156	0.230
QMR2 1200 005	QMR2-195	127	10.09	1	2.01	20.00	0.10	0.10	18.45	1.17	3.9	0.38	3.52	10.4	0.012	0.01	< 0.01	0.055	0.015
QMR2 1200 005	QMR2-196	134	9.83	1	2.01	20.00	0.10	0.10	18.89	1.17	2.8	0.69	2.11	4.07	0.022	0.02	< 0.01	0.094	0.015
QMR2 1200 005	QMR2-197	87	9.87	1	2.00	20.00	0.10	0.10	18.79	1.19	3.0	0.69	2.31	4.36	0.022	0.02	< 0.01	0.038	< 0.005
QMR2 1200 005	QMR2-198	160	9.55	1	2.02	20.00	0.10	0.10	19.25	1.17	1.9	0.47	1.43	4.05	0.015	0.02	< 0.01	0.029	< 0.005
QMR2 1200 005	QMR2-199	228	9.14	1	2.00	20.00	0.10	0.10	15.80	1.58	10	0.31	10.2	33.9	0.157	< 0.01	0.17	0.037	0.050
QMR2 1200 005	QMR2-200	228	9.51	1	2.05	20.00	0.10	0.10	12.94	1.78	17	0.31	16.9	55.5	0.122	< 0.01	0.12	0.120	0.190
QMR2 1200 005	QMR2-201	213	9.07	1	2.01	27.60	0.10	0.10	20.56	1.65	18	0.53	17.0	32.9	0.087	0.02	0.07	0.030	0.015
QMR2 1200 005	QMR2-202	165	8.97	1	2.02	20.00	0.10	0.10	15.17	1.93	12	0.94	11.1	12.8	0.050	0.03	0.02	0.047	0.025
QMR2 1200 005	QMR2-203	235	9.83	1	1.95	20.00	0.10	0.10	18.52	1.20	3.8	0.62	3.18	6.08	0.020	0.02	< 0.01	0.046	0.010
QMR2 1200 005	QMR2-204	206	9.84	1	2.04	20.00	0.10	0.10	19.07	1.17	2.3	0.34	1.96	6.69	0.011	0.01	< 0.01	0.098	0.010
QMR2 1200 005	QMR2-205	172	9.06	1	1.99	20.00	0.10	0.10	18.42	1.27	4.0	0.38	3.62	10.7	0.012	0.01	< 0.01	0.020	< 0.005
QMR2 1200 005	QMR2-206	242	9.90	1	1.97	20.00	0.10	0.10	18.52	1.17	3.8	0.62	3.18	6.08	0.030	0.02	0.01	0.026	0.010
QMR2 1200 005	QMR2-207	198	9.14	1	2.05	20.00	0.10	0.10	14.61	1.68	13	0.53	12.6	24.7	0.117	0.02	0.10	0.128	0.105
QMR2 1200 005	QMR2-208	179	9.06	1	2.02	20.00	0.10	0.10	17.89	1.21	5.2	0.31	4.89	16.6	0.010	0.01	< 0.01	0.104	0.030
QMR2 1225 001	QMR2-209	24	8.87	2	2.03	43.00	0.10	0.10	12.09	1.81	76	0.31	75.8	245	< 0.005	< 0.01	< 0.01	1.08	3.83
QMR2 1225 001	QMR2-210	65	9.08	2	2.03	82.60	0.10	0.10	19.88	1.79	154	0.72	154	215	0.023	0.02	< 0.01	2.04	8.77
QMR2 1225 001	QMR2-211	129	9.17	2	2.02	29.80	0.10	0.10	13.23	1.82	41	0.53	40.5	77.2	0.037	0.02	0.02	0.620	2.03
QMR2 1225 001	QMR2-212	102	9.05	2	2.00	41.70	0.10	0.10	16.91	1.85	62	0.31	61.7	200	0.417	< 0.01	0.41	0.797	2.50
QMR2 1225 001	QMR2-213	30	8.79	2	1.98	36.40	0.10	0.10	14.03	1.89	56	0.31	56.2	182	0.097	< 0.01	0.09	0.698	2.23
QMR2 1225 001	QMR2-214	4	9.08	2	1.99	38.00	0.10	0.10	15.20	1.59	57	0.50	56.8	115	0.016	0.02	< 0.01	1.01	2.95
QMR2 1225 001	QMR2-215	33	9.72	2	2.02	20.00	0.10	0.10	11.44	1.50	21	0.31	20.9	68.4	0.005	< 0.01	< 0.01	0.420	1.24
QMR2 1225 001	QMR2-216	91	9.85	3	2.03	38.70	0.10	0.10	15.12	1.58	58	0.47	57.6	124	0.015	0.02	< 0.01	0.755	2.75
QMR2 1225 001	QMR2-217	10	9.47	2	2.00	27.30	0.10	0.10	13.70	1.56	34	0.31	33.7	110	< 0.005	< 0.01	< 0.01	0.544	1.91
QMR2 1225 001	QMR2-218	52	8.91	3	1.99	38.80	0.10	0.10	15.51	1.59	58	0.31	58.2	189	< 0.005	< 0.01	< 0.01	1.25	3.14
QMR2 1225 001	QMR2-219	87	9.11	3	2.00	47.70	0.10	0.10	13.76	1.82	85	0.31	84.6	274	< 0.005	< 0.01	< 0.01	1.37	4.91
QMR2 1225 001	QMR2-220	87	9.15	2	2.04	26.00	0.10	0.10	11.10	1.64	36	0.31	36.2	118	< 0.005	< 0.01	< 0.01	0.631	1.83
QMR2 1225 001	QMR2-221	119	9.47	2	1.96	20	0.1	0.1	13.6	1.29	16	0.31	16	52.6	< 0.005	< 0.01	< 0.01	0.232	0.699
QMR2 1225 001	QMR2-222	7	8.83	2	1.97	29.60	0.10	0.10	11.53	1.75	46	0.41	45.5	113	0.013	0.01	< 0.01	0.791	2.36
QMR2 1225 001	QMR2-223	79	8.84	2	1.99	20.00	0.10	0.10	12.13	1.44	20	0.31	19.5	63.9	< 0.005	< 0.01	< 0.01	0.323	0.689
QMR2 1225 001	QMR2-224	114	8.78	2	2.04	34.50	0.10	0.10	16.81	1.62	43	0.31	43.1	140	0.008	< 0.01	< 0.01	0.834	1.79
QMR2 1200 006	QMR2-225	100	9	1.00	2.00	20.00	0.10	0.10	18.72	1.2	3.20	0.31	2.9	10.300	0.01	< 0.01	< 0.01	0.097	0
QMR2 1200 006	QMR2-226	82	9	1.00	2.01	20.00	0.10	0.10	19.09	1.2	2.30	0.31	1.99	7.360	0.01	0.01	< 0.01	0.024	< 0.005
QMR2 1200 006	QMR2-227	108	10	1.00	2.01	20.00	0.10	0.10	17.89	1.2	5.20	0.31	4.89	16.600	0.01	0.01	< 0.01	0.051	0
QMR2 1200 006	QMR2-228	71	10	1.00	2.05	20.00	0.10	0.10	18.44	1.2	3.80	0.44	3.36	8.690	0.04	0.01	0.030	0.038	0
QMR2 1200 006	QMR2-229	36	10	1.00	2.00	20.00	0.10	0.10	18.72	1.2	3.20	0.88	2.32	3.660	0.03	0.03	< 0.01	0.037	< 0.005
QMR2 1200 006	QMR2-230	X12	9.34	< 0.001	2.01	20.00	0.10	0.10	18.28	1.13	4.30	0.31	3.99	13.80	0.02	< 0.01	0.010	0.037	0
QMR2 1200 006	QMR2-231	17	9.09	2.00	2.00	20.00	0.10	0.10	15.90	1.23	10.00	0.31	9.99	33.20	0.01	0.01	< 0.01	0.146	0
QMR2 1200 006	QMR2-232	75	8.95	2.00	2.01	20.00	0.10	0.10	18.73	1.17	3.20	0.62	2.58	5.12	0.02	< 0.01	0.020	0.041	0
QMR2 1200 006	QMR2-233	X20	8.96	2	1.96	20	0.1	0.1	18.87	1.13	2.9	0.31	2.59	9.28	0.013	< 0.01	0.01	0.041	0.015
QMR2 1200 006	QMR2-234	47	8.72	2	1.95	20	0.1	0.1	17.68	1.17	5.9	0.62	5.28	9.44	0.033	0.01	0.02	0.079	0.04
QMR2 1200 006	QMR2-235	50	9.24	2	2.04	20	0.1	0.1	17.85	1.12	5.3	0.62	4.68	8.48	0.017	< 0.01	0.02	0.038	0.02
QMR2 1200 006	QMR2-236	54	9.11	2	2	20	0.1	0.1	11.78	1.88	20	3.75	16.8	5.47	0.125	< 0.01	0.12	0.224	0.355
QMR2 1200 006	QMR2-237	97	8.42	2	1.98	20	0.1	0.1	18.46	1.18	3.9	0.31	3.59	12.6	< 0.005	< 0.01	< 0.01	0.106	0.02

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
			Units																
			---	---	g	mL	Normality	Normality	mL	---	t CaCO3/ 1000 t	t CaCO3/ 1000 t	t CaCO3/ 1000 t	ratio	%	%	%	%	%
QMR2 1200 006	QMR2-238	92	8.71	2	1.97	20	0.1	0.1	18.62	1.16	3.5	0.94	2.56	3.73	0.031	< 0.01	0.03	0.053	< 0.005
QMR2 1200 006	QMR2-239	21	9.17	2	2.03	20	0.1	0.1	18.17	1.18	4.5	0.62	3.88	7.2	0.018	< 0.01	0.02	0.145	0.055
QMR2 1200 006	QMR2-240	21	9.23	2	1.96	20	0.1	0.1	18.68	1.13	3.4	0.31	3.09	10.9	0.008	< 0.01	0.01	0.058	0.01
QMR2 1210 016	QMR2-241	41	9.37	2	2.05	20	0.1	0.1	18.56	1.11	3.5	0.31	3.19	11.3	< 0.005	< 0.01	< 0.01	0.021	0.015
QMR2 1210 016	QMR2-242	38	9.53	2	2.01	20	0.1	0.1	15.21	1.2	12	0.31	11.6	38.4	< 0.005	< 0.01	< 0.01	0.136	0.46
QMR2 1210 016	QMR2-243	49	9.41	2	1.95	20	0.1	0.1	17.14	1.2	7.3	0.31	6.99	23.5	< 0.005	< 0.01	< 0.01	0.131	0.16
QMR2 1210 016	QMR2-244	32	9.27	2	2.01	20	0.1	0.1	18.92	1.11	2.7	0.31	2.39	8.64	0.015	< 0.01	0.01	0.016	0.015
QMR2 1210 016	QMR2-245	75	8.46	2	1.98	20	0.1	0.1	15.89	1.28	10	0.31	10.1	33.5	< 0.005	< 0.01	< 0.01	0.473	0.28
QMR2 1210 016	QMR2-246	92	9.35	2	2.01	20	0.1	0.1	18.48	1.15	3.8	0.31	3.49	12.3	< 0.005	< 0.01	< 0.01	0.044	0.02
QMR2 1210 016	QMR2-247	55	9.03	2	2	40.9	0.1	0.1	16.99	1.53	60	0.31	59.5	193	< 0.005	< 0.01	< 0.01	0.771	3.14
QMR2 1200 007	QMR2-248	59	9.76	2	2	20	0.1	0.1	18.18	1.14	4.6	0.31	4.29	14.8	< 0.005	< 0.01	< 0.01	0.071	0.015
QMR2 1200 007	QMR2-249	48	9.88	2	2.03	20	0.1	0.1	18.32	1.18	4.1	0.31	3.79	13.2	< 0.005	< 0.01	< 0.01	0.06	< 0.005
QMR2 1200 007	QMR2-250	158	9.7	2	1.97	20	0.1	0.1	16.85	1.25	8	0.94	7.06	8.53	0.03	< 0.01	0.03	0.172	0.035
QMR2 1200 007	QMR2-251	96	8.55	1	1.96	26.5	0.1	0.1	15.62	1.59	28	5.62	22.2	4.94	0.185	< 0.01	0.18	0.208	0.56
QMR2 1200 007	QMR2-252	37	9.19	1	1.99	20	0.1	0.1	15.01	1.23	12	0.94	11.6	13.3	0.027	< 0.01	0.03	0.432	0.335
QMR2 1200 007	QMR2-253	214	9.88	1	1.99	20	0.1	0.1	17.96	1.13	5.1	0.62	4.48	8.16	0.026	< 0.01	0.02	0.053	0.015
QMR2 1200 007	QMR2-254	179	9.24	1	2.05	20	0.1	0.1	13.28	1.76	16	9.69	6.71	1.69	0.353	0.04	0.31	0.112	0.125
QMR2 1200 007	QMR2-255	143	9.31	1	1.97	20	0.1	0.1	16.11	1.2	9.9	1.56	8.34	6.34	0.047	< 0.01	0.05	0.092	0.05
QMR2 1200 007	QMR2-256	86	8.92	1	2.04	20	0.1	0.1	16.53	1.14	8.5	2.5	6	3.4	0.071	< 0.01	0.08	0.037	0.03
QMR2 1200 007	QMR2-257	201	9.28	1	2	20	0.1	0.1	18.31	1.05	4.2	0.94	3.26	4.48	0.034	< 0.01	0.03	0.066	0.01
QMR2 1200 007	QMR2-258	132	9.41	1	1.99	20	0.1	0.1	18.3	1.11	4.3	1.56	2.74	2.75	0.06	0.01	0.05	0.057	0.02
QMR2 1200 007	QMR2-259	192	9.33	1	2.02	20	0.1	0.1	18.4	1.09	4	0.62	3.38	6.4	0.025	0.02	0.02	0.083	< 0.005
QMR2 1200 007	QMR2-260	192	9.3	1	2.02	20	0.1	0.1	18.08	1.11	4.7	0.62	4.08	7.52	0.029	0.03	0.02	0.159	0.035
QMR2 1225 002	QMR2-261	179	9.02	4	1.97	123.4	0.1	0.1	39.66	1.59	212	0.31	212	680	0.013	0.01	0.01	2.54	12
QMR2 1225 002	QMR2-262	211	9.21	1	1.98	20	0.1	0.1	16.33	1.1	9.3	0.31	8.99	29.8	0.016	0.02	0.01	0.142	0.185
QMR2 1225 002	QMR2-263	139	9.21	1	2.03	20	0.1	0.1	10.04	1.42	24	0.31	24.2	79	0.006	< 0.01	< 0.01	0.388	0.974
QMR2 1225 002	QMR2-264	132	9.24	3	1.98	20	0.1	0.1	7.15	1.75	32	0.31	32.1	105	< 0.005	< 0.01	< 0.01	0.509	1.54
QMR2 1225 002	QMR2-265	258	9.06	1	2.02	20	0.1	0.1	15.03	1.22	12	0.31	12	39.7	< 0.005	< 0.01	< 0.01	0.283	0.39
QMR2 1225 002	QMR2-266	317	9.68	1	2.01	41.7	0.1	0.1	27.94	1.54	34	9.06	25.1	3.77	0.28	< 0.01	0.29	0.341	0.899
QMR2 1225 002	QMR2-267	322	9.35	1	1.98	20	0.1	0.1	14.66	1.28	14	0.94	12.6	14.4	0.027	< 0.01	0.03	0.133	0.325
QMR2 1225 002	QMR2-268	287	9.07	4	2.02	55.8	0.1	0.1	22.46	1.51	82	0.31	82.2	264	0.014	0.01	0.01	1.18	4.4
QMR2 1225 002	QMR2-269	171	8.94	3	1.99	70.3	0.1	0.1	25.5	1.56	113	0.31	112	360	0.011	0.01	0.01	1.53	6.04
QMR2 1225 002	QMR2-270	153	8.53	4	2.01	88.8	0.1	0.1	29.26	1.59	148	0.62	147	237	0.013	0.01	0.02	2.3	7.99
QMR2 1225 002	QMR2-271	49	8.74	4	1.96	86.6	0.1	0.1	23.05	1.73	162	0.31	162	519	0.013	0.01	0.01	3.01	8.31
QMR2 1225 002	QMR2-272	83	9.01	3	2	29	0.1	0.1	10.53	1.65	46	0.31	45.9	149	< 0.005	< 0.01	< 0.01	0.843	2.35
QMR2 1190 012	R570351	91													0.01			0.02	
QMR2 1190 012	R570352	109													0.04			0.11	
QMR2 1190 012	R570353	55													0.03			0.01	
QMR2 1190 012	R570354	119D													0.03			0.08	
QMR2 1190 012	R570355	38													0.01			0.01	
QMR2 1190 012	R570356	47													0.07			0.12	
QMR2 1190 012	R570357	145													0.2			0.07	
QMR2 1190 012	R570358	125													0.01			0.04	
QMR2 1190 012	R570359	157													0.03			0.02	
QMR2 1190 012	R570360	134													0.02			0.01	
QMR2 1190 012	R570361	163													0.07			0.03	
QMR2 1190 012	R570362	91D													0.01			0.01	

TABLE E.6.4

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT

2014 QIA AND NWB ANNUAL REPORT

QUARRY QMR2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014

Blast ID	Assay Sample ID	Hole Number	Analysis																	
			Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3	
			Units																	
			---	---	g	mL	Normality	Normality	mL	---	t CaCO3/ 1000 t	t CaCO3/ 1000 t	t CaCO3/ 1000 t	ratio	%	%	%	%	%	
QMR2 1190 012	R570363	13												0.23			0.05			
QMR2 1190 012	R570364	61												<0.01			0.01			
QMR2 1190 012	R570338	28												0.03			0.06			
QMR2 1190 012	R570339	131												0.01			0.02			
QMR2 1190 012	R570340	22												0.24			0.07			
QMR2 1190 012	R570341	153												0.01			0.02			
QMR2 1190 012	R570342	171												0.03			0.03			
QMR2 1190 012	R570343	104												0.01			0.04			
QMR2 1190 012	R570344	49												0.19			0.12			
QMR2 1190 012	R570345	44												0.01			0.02			
QMR2 1190 012	R570346	98												0.02			0.03			
QMR2 1190 012	R570347	79												0.01			0.05			
QMR2 1190 012	R570348	85												0.04			0.02			
QMR2 1190 012	R570349	119												0.02			0.09			
QMR2 1190 012	R570350	24												0.01			0.04			
QMR2 1190 013	R570074	2												0.04			0.03			
QMR2 1190 013	R570075	5												0.05			0.04			
QMR2 1190 013	R570076	5B												<0.01			0.01			
QMR2 1190 013	R570077	8												<0.01			0.02			
QMR2 1190 013	R570078	30												0.01			0.01			
QMR2 1190 013	R570079	34												<0.01			0.03			
QMR2 1190 013	R570080	38												0.01			0.01			
QMR2 1190 013	R570081	42												0.02			0.03			
QMR2 1190 013	R570082	56												<0.01			0.01			
QMR2 1190 013	R570083	66												0.01			0.02			
QMR2 1190 013	R570084	71												0.02			0.07			
QMR2 1190 013	R570085	76												0.02			0.01			
QMR2 1190 013	R570086	81												0.05			0.01			
QMR2 1190 013	R571476	10												0.05			0.03			
QMR2 1190 013	R571477	62												0.01			0.01			
QMR2 1190 013	R571478	37												0.02			0.02			
QMR2 1190 013	R571479	84												0.02			0.04			
QMR2 1190 013	R571480	84												0.02			0.03			
QMR2 1190 013	R571481	51												0.03			0.02			
QMR2 1190 013	R571482	77												0.01			0.03			
QMR2 1190 014	R571476	10												0.05			0.03			
QMR2 1190 014	R571477	62												0.01			0.01			
QMR2 1190 014	R571478	37												0.02			0.02			
QMR2 1190 014	R571479	84												0.02			0.04			
QMR2 1190 014	R571480	84												0.02			0.03			
QMR2 1190 014	R571481	51												0.03			0.02			
QMR2 1190 014	R571482	77												0.01			0.03			
QMR2 1190 014	R571580	19												<0.01			0.03			
QMR2 1190 014	R571581	28												<0.01			0.01			

TABLE E.6.5

**BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT**

2014 QIA AND NWB ANNUAL REPORT

QUARRY D1Q2 GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS FOR 2014 - SUMMARY STATISTICS

	Analysis																
	Paste pH	Fizz Rate	Sample weight	HCl added	HCl	NaOH	Vol NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	S	Acid Leachable SO4-S	Sulphide	C	CO3
	Units																
	---	---	g	mL	Normality	Normality	mL	---	t CaCO3/1000 t	t CaCO3/1000 t	t CaCO3/1000 t	ratio	%	%	%	%	%
	COUNT	25	25	25	25	25	25	25	25	25	25	25	25	22	14	11	25
MIN	7.36	1	1.94	20	0.1	0.1	8.72	1.08	4.1	0.31	3.26	2.7	0.005	0.01	0.01	0.02	0.015
MAX	9.73	3	2.05	50.6	0.1	0.1	19.43	1.85	84	1.88	84	272	0.116	0.04	0.1	1.08	4.5
MEAN	9.223	1.760	1.993	26.352	0.100	0.100	13.938	1.528	31.140	0.660	30.569	91.362	0.042	0.024	0.047	0.385	1.376