Attachment 2-1

SRK Consulting. Sample Selection for Humidity Cells, NorthMet Project. Memorandum to Jennifer Engstrom, MDNR. November 24, 2005.

SRK Consulting
Engineers and Scientists

SRK Consulting (Canada) Inc.
Suite 800 – 1066 West Hastings Street
Vancouver, B.C. V6E 3X2
Canada

vancouver@srk.com
www.srk.com

Tel: 604.681.4196
Fax: 604.687.5532

Memo

To:	Jennifer Engstrom, MDNR	**Date:**	November 24, 2005
cc:	Paul Eger, MDNR Kim Lapakko, MDNR Jim Scott, PolyMet	**From:**	Stephen Day
Subject:	NorthMet Project Sample Selections for Humidity Cells	**Project #:**	1UP005.001

Jennifer,

This memorandum provides a final version of the humidity cell sample characteristics. I plan to incorporate this into the Waste Rock and Lean Ore Plan (if desired) but have provided this separately for convenience.

I attach two tables showing non-reactive waste rock, reactive waste rock and lean ore samples selected for testing in humidity cells. Table 1 is a listing of the sample identification numbers with their corresponding units, rock types and chemical characteristics. The 93 humidity cells (including method blank and duplicates) are currently underway.

Table 2 shows the matrix used for sample selections. It shows the target sulfur concentrations for each percentile, the actual sulfur concentrations in the sample chosen to represent the indicated sulfur percentiles and the ratio of copper and nickel to sulphur (by weight) for the same samples. The sulfur concentrations in Table 2 are from Table 1.

1 Waste Rock and Lean Ore Selections

The 79 samples (25 non-reactive, 32 reactive, 22 lean ore) represent several iterations of sample selection, analysis and re-selection. Samples are being tested in humidity cells for all but one of the DNR's requested and optional samples. A suitable sample for the P95 sulfur concentration (6.06%) in the Virginia Formation could not be located.

As described previously, some deviation from the target sulfur concentrations was expected because (a) samples were selected using weighted average analyses in PolyMet's drill core sample database, (b) suitable samples were not always available; and (c) the actual analyses combine compositing and analytical errors for both the original database values and composite analytical results. Deviations from target values were calculated from:

$$\text{Deviation (\%)} = (S_{Actual} - S_{Target})/S_{Target}).100$$

The resulting deviations (Table 2) show:

- For non-reactive samples:

  - Deviations of 100% are common but they usually represent absolute differences of less than or equal to 0.02% on sulfur concentrations below 0.05% and close to the method detection limit of 0.01%.
  - Two samples (8% of non-reactive samples) with target concentrations of 0.01% had deviations exceeding 100%.

- For reactive samples:
  - 84% of samples selected had deviations below 50%.
  - For four samples (13%), the deviation was between 50 and 100% and only one sample had a deviation of 200%. This latter sample was classified as "optional" in the selections.

- For lean ore samples, only one sample (less than 5% of samples) showed a deviation of 50%.

Based on this low overall incidence of deviation from target values and the large size of the dataset, no further sample selections are necessary for waste rock and lean ore.

2 Deferred Ore

As shown in Table 2, the three ore composite used for metallurgical testing are being tested in humidity cells 66, 67, and 73. These samples contain sulfur concentrations (0.9%) that are bracketed by reactive and lean ore samples being tested, nickel concentrations that are slightly above lean ore grades, and copper concentrations that are above lean ore grades. The copper and nickel to sulfur ratios shown by the ore samples are contained within the range of lean ore samples. Since deferred ore will contain nickel and copper concentrations between ore and lean ore, and sulfur concentrations straddle reactive waste rock and lean ore, the existing distribution of waste rock, lean ore and ore samples will provide sufficient data for characterization of runoff chemistry for temporary deferred ore stockpiles.

No additional sample selection or characterization is needed for deferred ore.

3 Conclusion

The sample distribution for non-reactive waste rock, reactive waste rock, lean ore and ore will provide a more than adequate database for characterization of these materials. No further sampling is proposed for these rock categories or deferred ore.

Attached:
Table 1: Characteristics of Samples in Humidity Cells
Table 2: Summary of Sample Selected for Testing in Humidity Cells for Non-Reactive Waste Rock, Waste Rock and Lean Ore, November 24, 2005.

Table 1
Characteristics of Samples in Humidity Cells

HCT ID	Comment	HCT Full ID (Drill Hole, Footage, HCT)	Waste Type	Geological Unit	Rock Type	Target S Percentile or Level	4-Acid Cu	4-Acid Ni	Leco S	Cu/S	Ni/S
							%	%	%	wt/wt	wt/wt
1		DDH-99-320C(830-850)-1	Reactive	1	Anorthositic	P25	0.0365	0.0174	0.09	0.41	0.19
2		DDH-00-361C(310-320)-2	Reactive	1	Anorthositic	P50	0.0152	0.0208	0.18	0.08	0.12
3		DDH-00-361C(345-350)-3	Reactive	1	Anorthositic	P75	0.0236	0.0276	0.05	0.47	0.55
4		DDH-00-343C(240-250)-4	Reactive	1	Anorthositic	P95	0.0759	0.0199	0.68	0.11	0.03
5		DDH-26030(1047-1052)-5	Reactive	1	Sedimentary Hornfels	P10	0.0098	0.0104	0.24	0.04	0.04
6		DDH-26061(1218-1233)-6	Reactive	1	Sedimentary Hornfels	P25	0.0146	0.0122	0.44	0.03	0.03
7		DDH-00-340C(990-995)-7	Reactive	1	Sedimentary Hornfels	P50	0.0142	0.0144	0.55	0.03	0.03
8		DDH-00-340C(965-974.5)-8	Reactive	1	Sedimentary Hornfels	P75	0.0198	0.012	1.74	0.01	0.01
9	1 Dup	DDH-99-320C(830-850)-9D	Reactive	1	Anorthositic	P25	0.0365	0.0174	0.09	0.41	0.19
10		DDH-00-340C(765-780)-10D	Reactive	1	Troctolitic	P100	0.0707	0.0304	1.68	0.04	0.02
11		DDH-26043&26027(1501&740-1506&745)-11	Reactive	1	Sedimentary Hornfels	P85	0.04	0.02	2.47	0.02	0.01
12	Blank	Method Blank - 12	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
13		DDH-00-340C(595-615)-13	Non-reactive	1	Troctolitic	NR-0.03	0.0141	0.0365	0.04	0.35	0.91
14		DDH-00-334C(580-600)-14	Non-reactive	1	Troctolitic	NR-0.05	0.0278	0.0319	0.06	0.46	0.53
15		DDH-00-334C(640-660)-15	Reactive	1	Troctolitic	P25	0.0311	0.0497	0.07	0.44	0.71
16		DDH-00-347C(795-815)-16	Reactive	1	Troctolitic	P50	0.0446	0.0389	0.07	0.64	0.56
17		DDH-00-350C(580-600)-17	Reactive	1	Troctolitic	P80	0.0423	0.0298	0.19	0.22	0.16
18		DDH-00-327C(225-245)-18	Reactive	1	Troctolitic	P90	0.0324	0.0156	0.44	0.07	0.04
19		DDH-00-371C(435-440)-19	Reactive	1	Troctolitic	P95	0.0563	0.0267	0.88	0.06	0.03
20	10 Dup	DDH-00-340C(765-780)-20	Reactive	1	Troctolitic	P100	0.0707	0.0304	1.68	0.04	0.02
21		DDH-00357C(335-340)-21	Reactive	1	Ultramafic	P25	0.0269	0.0255	0.08	0.34	0.32
22		DDH-00326C(680-685)-22	Reactive	1	Ultramafic	P80	0.105	0.023	0.30	0.35	0.08
23		DDH-00-357C(535-540)-23	Reactive	1	Ultramafic	P85	0.1015	0.0257	0.2	0.51	0.13
24		DDH-99-318C(725-735)-24	Reactive	1	Ultramafic	P90	0.0534	0.0196	0.72	0.07	0.03
25		DDH-99-317C(460-470)-25	Reactive	1	Ultramafic	P95	0.0668	0.0224	1.24	0.05	0.02
26		DDH-00-366C(185-205)-26	Non-reactive	2	Anorthositic	NR-0.01	0.0082	0.0208	0.02	0.41	1.04
27		DDH-00-366C(230-240)-27	Non-reactive	2	Anorthositic	NR-0.03	0.0125	0.0171	0.02	0.63	0.86
28		DDH-99-320C(165-175)-28	Non-reactive	2	Anorthositic	NR-0.05	0.014	0.025	0.03	0.47	0.83
29		DDH-99-318C(250-370)-29	Non-reactive	2	Troctolitic	NR-0.01	0.0139	0.0311	0.04	0.35	0.78
30		DDH-00-373C(95-115)-30	Non-reactive	2	Troctolitic	NR-0.03	0.0226	0.0477	0.04	0.57	1.19
31		DDH-00-373C(75-95)-31	Non-reactive	2	Troctolitic	NR-0.05	0.0286	0.0432	0.06	0.48	0.72
32		DDH-00-357C(110-130)-32	Reactive	2	Troctolitic	P50	0.0427	0.0356	0.08	0.53	0.45
33		DDH-99-320C(315-330)-33	Reactive	2	Troctolitic	P80	0.0355	0.0213	0.07	0.51	0.30
34		DDH-00-369C(335-345)-34	Reactive	2	Troctolitic	P95	0.0433	0.0207	0.18	0.24	0.12
35		DDH-00-368C(460-465)-35	Non-reactive	2	Ultramafic	NR-0.01	0.0413	0.0535	0.06	0.69	0.89
36		DDH-26055(940-945)-36	Non-reactive	2	Ultramafic	NR-0.03	0.0321	0.0495	0.06	0.54	0.83
37		DDH-00-368C(125-145)-37D	Non-reactive	3	Anorthositic	NR-0.03	0.0182	0.0201	0.04	0.46	0.50
38		DDH-00-369C(305-325)-38D	Reactive	3	Troctolitic	P95	0.0349	0.0299	0.25	0.14	0.12
39		DDH-26098&00-337C(145&105-148.5&110)-3	Non-reactive	2	Ultramafic	NR-0.05	0.023	0.055	0.1	0.23	0.55
40		DDH-00-334C(30-50)-40	Non-reactive	3	Anorthositic	NR-0.01	0.0085	0.0262	0.02	0.43	1.31
41	37 Dup	DDH-00-368C(125-145)-41	Non-reactive	3	Anorthositic	NR-0.03	0.0182	0.0201	0.04	0.46	0.50
42		DDH-00-368C(20-40)-42	Non-reactive	3	Anorthositic	NR-0.05	0.022	0.0108	0.04	0.55	0.27
43		DDH-00-366C(35-55)-43	Non-reactive	3	Troctolitic	NR-0.01	0.0054	0.0238	0.02	0.27	1.19
44		DDH-00-334C(110-130)-44	Non-reactive	3	Troctolitic	NR-0.03	0.0135	0.0363	0.04	0.34	0.91
45		DDH-00-347C(155-175)-45	Non-reactive	3	Troctolitic	NR-0.05	0.0162	0.018	0.06	0.27	0.30
46		DDH-00-347C(280-300)-46	Reactive	3	Troctolitic	P50	0.0355	0.0211	0.06	0.59	0.35
47		DDH-00-326C(60-70)-47	Reactive	3	Troctolitic	P85	0.043	0.0413	0.14	0.31	0.30
48	38 Dup	DDH-00-369C(305-325)-48	Reactive	3	Troctolitic	P95	0.0349	0.0299	0.25	0.14	0.12
49		DDH-00-367C(50-65)-49	Non-reactive	4	Troctolitic	NR-0.01	0.0108	0.0192	0.03	0.36	0.64
50		DDH-00-367C(260-280)-50	Non-reactive	4	Troctolitic	NR-0.03	0.018	0.0254	0.04	0.45	0.64
51		DDH-00-367C(290-310)-51	Non-reactive	4	Troctolitic	NR-0.05	0.0198	0.0249	0.04	0.50	0.62
52		DDH-00-370C(20-30)-52	Reactive	4	Troctolitic	P25	0.0177	0.0137	0.08	0.22	0.17
53		DDH-00-369C(20-30)-53	Reactive	4	Troctolitic	P75	0.0577	0.0303	0.21	0.27	0.14
54		DDH-00-367C(170-175)-54	Reactive	4	Troctolitic	P90	0.0331	0.0267	0.51	0.06	0.05
55		DDH-00-367C(395-400)-55	Reactive	4	Troctolitic	P95	0.112	0.0363	0.77	0.15	0.05
56		DDH-26064(44-54)-56	Non-reactive	5	Troctolitic	NR-0.01	0.0104	0.0426	0.02	0.52	2.13
57	51 Dup	DDH-00-367C(290-310)-57D	Non-reactive	4	Troctolitic	NR-0.05	0.0198	0.0249	0.04	0.50	0.62
58		DDH-00-364C(210-229)-58D	Reactive	20	Virginia	P75	0.0155	0.0186	3.79	0.00	0.00
59		DDH-26064(264&146-269&156)-59	Non-reactive	5	Troctolitic	NR-0.05	0.027	0.029	0.06	0.45	0.48
60		DDH-26056(110-125)-60	Non-reactive	6	Troctolitic	NR-0.01	0.0293	0.0401	0.04	0.73	1.00
61		DDH-00-361C(240-245)-61D	Lean Ore	2	Ultramafic	P95	0.0196	0.1075	0.06	0.33	1.79
62		DDH-00-361C(737-749)-62	Reactive	20	Virginia	P25	0.0152	0.0121	2	0.01	0.01
63	58 Dup	DDH-00-364C(210-229)-63	Reactive	20	Virginia	P75	0.0155	0.0186	3.79	0.00	0.00
64		DDH-00-337C(510-520)-64	Reactive	20	Virginia	P90	0.0198	0.0168	5.68	0.00	0.00
65		DDH-26027(616-626)-65	Lean Ore	1	Anorthositic	P95	0.126	0.0528	1.83	0.07	0.03
66		P1-0-66	Ore	#N/A	#N/A	#N/A	0.345	0.0971	0.86	0.40	0.11
67		P2-0-67	Ore	#N/A	#N/A	#N/A	0.349	0.1485	0.9	0.39	0.17
68		DDH-26062&26026(993&565-998&568)-68	Lean Ore	1	Sedimentary Hornfels	P95	0.129	0.047	4.46	0.03	0.01
69		DDH-00-340C(725-745)-69	Lean Ore	1	Troctolitic	P95	0.1005	0.0407	0.91	0.11	0.04
70		DDH-00-344C(515-520)-70	Lean Ore	1	Ultramafic	P95	0.0899	0.0529	1.2	0.07	0.04
71		DDH-00-340C(380-390)-71	Lean Ore	2	Troctolitic	P95	0.0502	0.0342	0.15	0.33	0.23
72	61 Dup	DDH-00-361C(240-245)-72	Lean Ore	2	Ultramafic	P95	0.0196	0.1075	0.06	0.33	1.79
73		P30-73	Ore	#N/A	#N/A	#N/A	0.444	0.0972	0.86	0.52	0.11
74		26029(interval 815-825)-74	Non-reactive	1	Troctolitic	NR-0.01	0.0055	0.0114	0.02	0.28	0.57
75		DDH-26030&26049(291&358-296&362)-75	Lean Ore	3	Troctolitic	P95	0.174	0.071	0.59	0.29	0.12
76		DDH-00-367C(400-405)-76	Lean Ore	4	Troctolitic	P95	0.1	0.0299	1.37	0.07	0.02
77		DDH-26056(302-312)-77	Lean Ore	5	Troctolitic	P50	0.0866	0.0365	0.23	0.38	0.16
78		26056(135-153)-78	Non-reactive	6	Troctolitic	NR-0.03	0.0389	0.0439	0.05	0.78	0.88
80		DDH-26142(360&345-365&350)-80	Lean Ore	6	Troctolitic	P95	0.115	0.048	0.18	0.64	0.27
93		00-331C(255-260)-93	Lean Ore	1	Anorthositic	P75	0.153	0.043	0.86	0.18	0.05
94		00-344C (630-635)-94	Lean Ore	1	Ultramafic	P75	0.155	0.055	0.34	0.46	0.16
95		00-326C(495-505)-95	Lean Ore	1	Ultramafic	P50	0.077	0.065	0.16	0.48	0.41
96		99-318C(325-330)-96	Lean Ore	2	Troctolitic	P85	0.117	0.054	0.17	0.69	0.32
97		00-330C(275-280)-97	Lean Ore	1	Ultramafic	P85	0.148	0.069	0.75	0.20	0.09
98		26056(282-292)-98	Lean Ore	5	Troctolitic	P95	0.141	0.047	0.32	0.44	0.15
99		00-326C (250-265)-99	Lean Ore	1	Troctolitic	P25	0.052	0.034	0.08	0.65	0.43
100		00-340C(910-925)-100	Lean Ore	1	Troctolitic	P50	0.174	0.041	0.36	0.48	0.11
101		26039(310-315)-101	Lean Ore	2	Ultramafic	P95	0.039	0.095	0.06	0.65	1.58
102		00-331C(190-210)-102	Lean Ore	1	Troctolitic	P85	0.175	0.046	0.42	0.42	0.11
103		99-320C(400-405)-103	Lean Ore	1	Anorthositic	P50	0.1	0.068	0.18	0.56	0.38
104		00-326C(225-235)-104	Lean Ore	2	Ultramafic	P80	0.094	0.071	0.12	0.78	0.59
105		00-367C(495-500)-105	Lean Ore	3	Troctolitic	P75	0.193	0.051	0.28	0.69	0.18
106		26058(704-715)-106	Lean Ore	1	Sedimentary Hornfels	P50	0.083	0.03	1.46	0.06	0.02

Table 2
Summary of Sample Selected for Testing in Humidity Cells for Non-Reactive Waste Rock, Waste Rock and Lean Ore
November 24, 2005

Unit	Rock Type	Parameter		Unit Tonnages			Percentiles for Sulfur Contents and Metal to Sulfur Ratios in Test Materials																			
				Non-Reactive	Reactive	Lean ore	Non-reactive			Reactive									Lean Ore							
				M. tons	M. tons	M. tons				P10	P25	P50	P75	P80	P85	P90	P95	P100	P10	P25	P50	P75	P80	P85	P90	P95
1	**Anorthositic**	**Target**	**Total S, %**	0.57	0.99	0.98				0.08	0.1	0.15	0.29				1.09	1.09	0.11	0.26	0.36	0.93				***1.95***
		Characteristics of Test Materials	Total S, %								0.09	0.18	0.05				0.68				0.18	0.86				1.83
			Cu/S, wt/wt								0.41	0.08	0.47				0.11				0.56	0.18				0.07
			Ni/S, wt/wt								0.19	0.12	0.55				0.03				0.38	0.05				0.03
	Sedimentary horr	**Target**	**Total S, %**	0	1.6	0.88				**0.08**	0.35	0.69	2.2	2.32	2.81	3.38	3.5	3.78	0.34	1.37	1.58	1.76				***4.91***
		Characteristics of Test Materials	Total S, %							0.24	0.44	0.55	1.74		2.47						1.46					4.46
			Cu/S, wt/wt							0.04	0.03	0.03	0.01		0.02						0.06					0.03
			Ni/S, wt/wt							0.04	0.03	0.03	0.01		0.01						0.02					0.01
	Troctolitic	**Target**	**Total S, %**	17.2	40.1	35.6	0.01	0.03	0.05	0.06	**0.07**	0.1	0.18	0.21	0.26	0.34	0.62	1.97	0.08	0.15	0.24	0.42	0.49	0.55	0.68	***0.98***
		Characteristics of Test Materials	Total S, %				0.02	0.04	0.06			0.07		0.19		0.44	0.88	1.68		0.08	0.36			0.42		0.91
			Cu/S, wt/wt				0.28	0.35	0.46			0.64		0.22		0.07	0.06	0.04		0.65	0.48			0.42		0.11
			Ni/S, wt/wt				0.57	0.91	0.53			0.56		0.16		0.04	0.03	0.02		0.43	0.11			0.11		0.04
	Ultramafic	**Target**	**Total S, %**	0.21	1.1	2.3				0.07	0.08	0.1	0.13	0.2	0.3	0.5	0.8	1.35	0.07	0.09	0.14	0.33	0.55	0.56	0.65	***0.81***
		Characteristics of Test Materials	Total S, %								0.08			0.3	0.2	0.72	1.24				0.16	0.34		0.75		1.2
			Cu/S, wt/wt								0.34			0.35	0.51	0.07	0.05				0.48	0.46		0.2		0.07
			Ni/S, wt/wt								0.32			0.08	0.13	0.03	0.02				0.41	0.16		0.09		0.04
2	**Anorthositic**	**Target**	**Total S, %**	2.4	0.56	0.25	0.01	0.03	0.05	0.06	0.06	0.08	0.11				0.19		0.09	0.12	0.17	0.21				0.25
		Characteristics of Test Materials	Total S, %				0.02	0.02	0.03																	
			Cu/S, wt/wt				0.41	0.63	0.47																	
			Ni/S, wt/wt				1.04	0.86	0.83																	
	Troctolitic	**Target**	**Total S, %**	16.9	9.7	7	0.01	0.03	0.05	0.06	0.06	**0.07**	0.09	**0.09**	0.1	0.11	**0.12**	0.25	0.05	0.07	0.12	0.18	0.2	0.22	0.26	0.32
		Characteristics of Test Materials	Total S, %				0.04	0.04	0.06			0.08		0.07			0.18							0.17		0.15
			Cu/S, wt/wt				0.35	0.57	0.48			0.53		0.51			0.24							0.69		0.33
			Ni/S, wt/wt				0.06	0.48	0.72			0.45		0.24			0.12							0.33		0.23
	Ultramafic	**Target**	**Total S, %**	0.38	0.25	1.8	0.03	0.04	0.05	0	0	0	0				0		0.04	0.05	0.07	0.12	0.14	0.16	0.19	0.23
		Characteristics of Test Materials	Total S, %				0.06	0.06	0.1														0.12			0.06
			Cu/S, wt/wt				0.69	0.54	0.23														0.78			0.65
			Ni/S, wt/wt				0.89	0.83	0.55														0.59			1.58
3	**Anorthositic**	**Target**	**Total S, %**	9.4	1.2	0.54	0.01	0.03	0.05	0.07	0.08	0.08	0.12				0.14		0.06	0.08	0.12	0.27				0.38
		Characteristics of Test Materials	Total S, %				0.02	0.04	0.04																	
			Cu/S, wt/wt				0.43	0.46	0.55																	
			Ni/S, wt/wt				1.31	0.5	0.27																	
	Troctolitic (augite	**Target**	**Total S, %**	41.2	12.5	1.9	0.01	0.03	0.05	0.06	0.06	0.08	0.1	0.11	0.12	0.14	0.19	0.36	0.05	0.13	0.19	0.32	0.35	0.45	0.48	***0.52***
		Characteristics of Test Materials	Total S, %				0.02	0.04	0.06			0.06			0.14		0.25					0.28				0.59
			Cu/S, wt/wt				0.27	0.34	0.27			0.59			0.31		0.14					0.69				0.29
			Ni/S, wt/wt				1.19	0.91	0.3			0.35			0.3		0.12					0.18				0.12
4	**Troctolitic**	**Target**	**Total S, %**	7	2.2	0.5	0.01	0.03	0.05	0.06	0.07	0.09	0.18	0.19	0.19	0.48	0.92	1.53	0.09	0.15	0.22	0.47				***1.52***
		Characteristics of Test Materials	Total S, %				0.03	0.04	0.04		0.08		0.21			0.51	0.77									1.37
			Cu/S, wt/wt				0.36	0.45	0.5		0.22		0.27			0.06	0.15									0.07
			Ni/S, wt/wt				0.64	0.64	0.62		0.17		0.14			0.05	0.05									0.02
5	**Troctolitic**	**Target**	**Total S, %**	2.5	2	1.1	0.01		0.05	0.07	0.09	0.11	0.16				0.22	0.22	0.12	0.17	***0.26***	0.37				0.45
		Characteristics of Test Materials	Total S, %				0.02		0.06												0.23					0.32
			Cu/S, wt/wt				0.52		0.45												0.38					0.44
			Ni/S, wt/wt				2.13		0.48												0.15					0.15
6	**Troctolitic**	**Target**	**Total S, %**	6.8	0.59	0.33	0.02	0.04		0	0	0	0				0		0.01	0.01	0.03	0.07				0.19
		Characteristics of Test Materials	Total S, %				0.04	0.05																		
			Cu/S, wt/wt				0.73	0.78																		
			Ni/S, wt/wt				1	0.88																		
20	Virginia	**Target**	**Total S, %**	0	10.4	0.054				0.59	1.25	2.98	4.15	4.49	4.85	5.07	6.06	7.45	0	0	0	0				0
		Characteristics of Test Materials	Total S, %								2		3.79			5.68										
			Cu/S, wt/wt								0.01		0.00			0.00										
			Ni/S, wt/wt								0.01		0.00			0.00										

Deviations																										
Non-reactive			Reactive									Lean Ore														
			P10	P25	P50	P75	P80	P85	P90	P95	P100	P10	P25	P50	P75	P80	P85	P90	P95	P100
#N/A	#N/A	#N/A	#N/A	-10%	20%	-83%	#N/A	#N/A	#N/A	-38%	#N/A	#N/A	#N/A	-50%	-8%	#N/A	#N/A	#N/A	-6%	
#N/A	#N/A	#N/A	200%	26%	-20%	-21%	#N/A	-12%	#N/A	#N/A	#N/A	#N/A	#N/A	-8%	#N/A	#N/A	#N/A	#N/A	-9%	
100%	33%	20%	#N/A	#N/A	-30%	#N/A	-10%	#N/A	29%	42%	-15%	#N/A	-47%	50%	#N/A	#N/A	-24%	#N/A	-7%	
#N/A	#N/A	#N/A	#N/A	0%	#N/A	#N/A	50%	-33%	44%	55%	#N/A	#N/A	#N/A	14%	3%	#N/A	34%	#N/A	48%	
100%	-33%	-40%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
300%	33%	20%	#N/A	#N/A	14%	#N/A	-22%	#N/A	#N/A	50%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-23%	#N/A	-53%	
100%	50%	100%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-14%	#N/A	#N/A	-74%	
100%	33%	-20%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
100%	33%	20%	#N/A	#N/A	-25%	#N/A	#N/A	17%	#N/A	32%	#N/A	#N/A	#N/A	#N/A	-13%	#N/A	#N/A	#N/A	13%	
200%	33%	-20%	#N/A	14%	#N/A	17%	#N/A	#N/A	6%	-16%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-10%	
100%	#N/A	20%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	-12%	#N/A	#N/A	#N/A	-29%	
100%	25%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
#N/A	#N/A	#N/A	#N/A	60%	#N/A	-9%	#N/A	#N/A	12%	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	

Notes

Target sulfur levels for samples tested in humidity cells (selected by DNR).

0.07 Optional target samples selected by DNR.

1.52 Additional low grade ore samples.

* Approximate sulfur concentrations

Notes:

Greater than 100% deviation for non-reactive samples and between 50% and 100% deviation for reactive and lean ore samples.

Greater than 100% deviation for reactive and lean ore samples.