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January 6, 2011

To Whom It May Concern:

Attached are the worksheets used for determining the Sample Quantitation Limits for the New Idria Mercury Mine sampling event conducted in July 2010.

Sincerely,

A handwritten signature in black ink, appearing to read "A.K.C. Reilly", written over a light blue horizontal line.

Amanda K.C. Reilly
Associate Project Scientist

Sample Quantitation Limit. The SQLs provided in this table are CLP contract-required detection limits (CRDLs) for that analyte with any dilution factors, volume adjustments, or percent solids for that analysis taken into account. SSQs were calculated as follows:

$$SQL \left(\frac{\text{mg}}{\text{kg dry wt}} \right) = CRDL \left(\frac{\text{ug}}{\text{L}} \right) \times \frac{1 \text{ mg}}{1000 \text{ ug}} \times \frac{\text{final volume (mL)}}{\text{sample weight (g wet wt)}} \times \%S \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{1000 \text{ g}}{1 \text{ kg}} \times DF$$

Where:

Final volume (mL) is the final extract volume following sample preparation

Sample weight (g wet wt) is the weight of the sample used for analysis

% S is % solids value divided by 100; % solids is determined as follows: (g dry weight of sample used for analysis)/(g wet weight of sample used for analysis) x 100%

DF is the dilution factor for the instrumental analysis

Sample ID	CLP #	Analyte	Final Volume	Sample Weight	% Solids	CRDL	DF	SQL	Reference
NIMM-TL-3	MY71L5	Arsenic	100	1	99.2	10	1	1.008	Ref. 22, p. 2, 39, 67, 103, 104, 108, 115
		Cadmium	100	1		5	1	0.504	
		Copper	100	1		25	1	2.52	
		Lead	100	1		10	1	1.008	
		Mercury	100	0.2		0.2	100	2.016	
		Nickel	100	1		40	1	4.032	
		Zinc	100	1		60	1	6.048	
NIMM-TL-4	MY71L6	Arsenic	100	1.01	99.5	10	1	0.995	Ref. 22, p. 2, 40, 67, 103, 104, 108, 112, 115
		Cadmium	100	1.01		5	1	0.497	
		Copper	100	1.01		25	1	2.49	
		Lead	100	1.01		10	1	0.995	
		Mercury	100	0.2		0.2	50	5.03	
		Nickel	100	1.01		40	1	3.98	
		Zinc	100	1.01		60	1	5.97	
NIMM-TL-5	MY71L7	Arsenic	100	1.05	98.7	10	1	0.964	Ref. 22, p. 2, 41, 67, 103, 104, 108, 115
		Cadmium	100	1.05		5	1	0.482	
		Copper	100	1.05		25	1	2.41	
		Lead	100	1.05		10	1	0.964	
		Mercury	100	0.2		0.2	100	10.14	
		Nickel	100	1.05		40	1	3.86	
		Zinc	100	1.05		60	1	5.78	
NIMM-TL-6	MY71L8	Arsenic	100	1.04	99.6	10	1	0.965	Ref. 22, p. 2, 42, 67, 103, 104, 108, 115
		Cadmium	100	1.04		5	1	0.483	
		Copper	100	1.04		25	1	2.41	
		Lead	100	1.04		10	1	0.965	
		Mercury	100	0.2		0.2	20	2.008	
		Nickel	100	1.04		40	1	3.86	
		Zinc	100	1.04		60	1	5.79	
NIMM-TL-7	MY71L9	Arsenic	100	1.03	99.3	10	1	0.978	Ref. 22, p. 2, 43, 67, 103, 104, 108, 115
		Cadmium	100	1.03		5	1	0.489	
		Copper	100	1.03		25	1	2.445	
		Lead	100	1.03		10	1	0.978	
		Mercury	100	0.21		0.2	1	0.096	
		Nickel	100	1.03		40	1	3.912	
		Zinc	100	1.03		60	1	5.868	
NIMM-TL-8	MY71M0	Arsenic	100	1.02	99.1	10	1	0.99	Ref. 22, p. 2, 45, 67, 103, 104, 108, 115
		Cadmium	100	1.02		5	1	0.495	
		Copper	100	1.02		25	1	2.475	
		Lead	100	1.02		10	1	0.99	
		Mercury	100	0.2		0.2	50	5.05	
		Nickel	100	1.02		40	1	3.96	
		Zinc	100	1.02		60	1	5.94	
NIMM-TL-9	MY71M1	Arsenic	100	1	99.4	10	1	1.01	Ref. 22, p. 2, 46, 67, 103, 105, 108, 115
		Cadmium	100	1		5	1	0.505	
		Copper	100	1		25	1	2.525	
		Lead	100	1		10	1	1.01	
		Mercury	100	0.2		0.2	20	2.012	
		Nickel	100	1		40	1	4.04	
		Zinc	100	1		60	1	6.06	
NIMM-TL-10	MY71M2	Arsenic	100	1.04	98.7	10	1	0.974	Ref. 22, p. 3, 47, 67, 103, 105, 108, 115
		Cadmium	100	1.04		5	1	0.487	
		Copper	100	1.04		25	1	2.435	
		Lead	100	1.04		10	1	0.974	
		Mercury	100	0.2		0.2	20	2.028	
		Nickel	100	1.04		40	1	3.896	
		Zinc	100	1.04		60	1	5.844	
NIMM-TL-11	MY71M3	Arsenic	100	1.01	99	10	1	1	Ref. 22, p. 2, 48, 67, 103, 105, 108, 115
		Cadmium	100	1.01		5	1	0.5	
		Copper	100	1.01		25	1	2.5	
		Lead	100	1.01		10	1	1	
		Mercury	100	0.2		0.2	20	2.02	
		Nickel	100	1.01		40	1	4	
		Zinc	100	1.01		60	1	6	

Sample Quantitation Limit. The SQLs provided in this table are CLP contract-required detection limits (CRDLs) for that analyte with any dilution factors, volume adjustments, or percent solids for that analysis taken into account. SQLs were calculated as follows:

$$SQL = \left(\frac{mg}{kg \text{ dry wgt}} \right) = CRDL \left(\frac{\mu g}{L} \right) \times \frac{1 \text{ mg}}{1000 \mu g} \times \frac{\text{final volume (mL)}}{\text{sample weight (g wet wgt)}} \times \%S \times \frac{1L}{1000 \text{ mL}} \times \frac{1000 \text{ g}}{1 \text{ kg}} \times DF$$

Where:

Final volume (mL) is the final extract volume following sample preparation

Sample weight (g wet wgt) is the weight of the sample used for analysis

% S is % solids value divided by 100; % solids is determined as follows: (g dry weight of sample used for analysis)/(g wet weight of sample used for analysis) x100%

DF is the dilution factor for the instrumental analysis

Sample ID	CLP #	Analyte	Final Volume	Sample Weight	% Solids	CRDL	DF	SQL	References
NIMM-SD-1	MY71M4	Arsenic	100	1	98.6	10	1	1.01	Ref. 22, p. 3, 49, 67, 105, 108, 112
		Copper	100	1		25	1	2.53	
		Lead	100	1		10	1	1.01	
		Mercury	100	0.2		0.2	1	0.101	
NIMM-SD-3	MY71M6	Arsenic	100	1.04	95	10	1	1.01	Ref. 22, p. 3, 51, 67, 105, 109, 115
		Copper	100	1.04		25	1	2.53	
		Mercury	100	0.21		10	2	9.05	
NIMM-SD-8	MY71N1	Arsenic	100	1	97.6	10	1	1.02	Ref. 22, p. 3, 55, 67, 105, 109, 115
		Copper	100	1		25	1	2.55	
		Lead	100	1		10	1	1.02	
		Mercury	100	0.21		0.2	2	0.195	
NIMM-SD-9	MY71N2	Arsenic	100	1	97.4	10	1	1.03	Ref. 22, p. 4, 56, 67, 105, 109, 115
		Copper	100	1		25	1	2.58	
		Lead	100	1		10	1	1.03	
		Mercury	100	0.21		0.2	2	0.196	
NIMM-SD-10	MY71N3	Arsenic	100	1	98.6	10	1	1.01	Ref. 24, p. 2, 32, 60, 91, 92, 95, 102
		Copper	100	1		25	1	2.54	
		Lead	100	1		10	1	1.01	
		Mercury	100	0.2		0.2	20	2.03	
NIMM-SD-11	MY71N4	Arsenic	100	1.01	94	10	1	1.05	Ref. 24, p. 2, 33, 60, 91, 92, 95
		Copper	100	1.01		25	1	2.63	
		Lead	100	1.01		10	1	1.05	
NIMM-SD-12	MY71N5	Arsenic	100	1.01	97.1	10	1	1.02	Ref. 24, p. 2, 34, 60, 91, 92, 95, 102
		Mercury	100	0.2		0.2	4	0.412	
NIMM-SD-13	MY71N6	Arsenic	100	1	87.4	10	1	1.14	Ref. 24, p. 2, 35, 60, 91, 92, 95, 100
		Mercury	100	0.2		0.2	1	0.114	
NIMM-SD-14	MY71N7	Arsenic	100	1	94.2	10	1	1.06	Ref. 24, p. 2, 36, 60, 91, 92, 95, 100
		Copper	100	1		25	1	2.65	
		Lead	100	1		10	1	1.06	
		Mercury	100	0.21		0.2	1	0.101	
NIMM-SD-15	MY71N8	Mercury	100	0.21	98.3	0.2	2	0.194	Ref. 24, p. 2, 37, 60, 92, 102
NIMM-SD-16	MY71N9	Mercury	100	0.2	93.7	0.2	1	0.107	Ref. 24, p. 2, 38, 60, 92, 100
NIMM-SD-17	MY71P0	Mercury	100	0.2	98.2	0.2	2	0.204	Ref. 24, p. 2, 39, 60, 92, 102
NIMM-SD-18	MY71P1	Mercury	100	0.2	98.6	0.2	1	0.101	Ref. 24, p. 2, 40, 60, 93, 100
NIMM-SD-20	MY71P3	Mercury	100	0.21	96.9	0.2	5	0.491	Ref. 24, p. 3, 42, 60, 93, 102
NIMM-SD-21	MY71P4	Mercury	100	0.2	98.8	0.2	1	0.101	Ref. 24, p. 3, 43, 60, 93, 100
NIMM-SD-22	MY71P5	Mercury	100	0.2	98.7	0.2	1	0.101	Ref. 24, p. 3, 44, 60, 93, 100
NIMM-SD-23	MY71P6	Mercury	100	0.21	99.5	0.2	1	0.096	Ref. 24, p. 3, 45, 60, 93, 100
NIMM-SD-24	MY71P7	Mercury	100	0.21	92.5	0.2	2	0.206	Ref. 24, p. 3, 46, 60, 93, 102
NIMM-SD-25	MY71P8	Mercury	100	0.2	97.1	0.2	1	0.103	Ref. 24, p. 3, 47, 60, 93, 100
NIMM-SD-26	MY71P9	Mercury	100	0.2	99.3	0.2	1	0.101	Ref. 24, p. 3, 48, 60, 93, 99
NIMM-SD-27	MY71Q0	Mercury	100	0.2	98.8	0.2	1	0.101	Ref. 24, p. 3, 49, 60, 93, 100
NIMM-SD-28	MY71Q1	Mercury	100	0.2	98.9	0.2	1	0.101	Ref. 24, p. 3, 50, 60, 93, 100
NIMM-SD-29	MY71Q2	Mercury	100	0.2	99.1	0.2	1	0.101	Ref. 24, p. 3, 51, 60, 93, 100
NIMM-SD-30	MY71Q3	Mercury	100	0.19	98.2	0.2	1	0.107	Ref. 23, p. 4, 38, 58, 90, 98
NIMM-SD-31	MY71Q4	Mercury	100	0.2	98.6	0.2	1	0.101	Ref. 23, p. 4, 39, 58, 90, 98
NIMM-SD-32	MY71Q5	Mercury	100	0.21	99	0.2	1	0.096	Ref. 23, p. 4, 40, 58, 90, 98
NIMM-SD-33	MY71Q6	Arsenic	100	1.03	99.6	10	1	0.975	Ref. 23, p. 4, 41, 58, 89, 90, 92, 98
		Copper	100	1.03		25	1	2.44	
		Lead	100	1.03		10	1	0.975	
		Mercury	100	0.2		0.2	1	0.1	
NIMM-SD-34	MY71Q7	Mercury	100	0.2	97	0.2	1	0.103	Ref. 23, p. 4, 42, 58, 90, 98
NIMM-SD-59	MY71R0	Mercury	100	0.21	98.4	0.2	2	0.194	Ref. 23, p. 4, 44, 58, 90, 100
NIMM-SD-60	MY71R1	Mercury	100	0.21	96.8	0.2	1	0.098	Ref. 23, p. 4, 45, 59, 90, 98
NIMM-SD-61	MY71R2	Arsenic	100	1.02	99.4	10	1	0.986	Ref. 23, p. 4, 46, 58, 89, 90, 92, 98
		Copper	100	1.02		25	1	2.47	
		Lead	100	1.02		10	1	0.986	
		Mercury	100	0.2		0.2	1	0.101	

Sample Quantitation Limit. The SQLs provided in this table are CLP contract-required detection limits (CRDLs) for that analyte with any dilution factors, volume adjustments, or percent solids for that analysis taken into account. SSQLs were calculated as follows:

$$SQL \left(\frac{\mu g}{L} \right) = CRDL \left(\frac{\mu g}{L} \right) \times \frac{\text{final volume (mL)}}{\text{initial volume (mL)}} \times DF$$

Where:

Final volume (mL) is the final extract volume following sample preparation

Initial volume (mL) is the volume of sample used

DF is the dilution factor

Sample ID	CLP #	Analyte	CRDL	Final Volume	Initial Volume	DF	SQL	References
NIMM-SW-1	MY71S3	Arsenic	1	100	100	1	1	Ref. 25, p. 2, 33, 62, 96, 104; Ref. 27, p. 31, 54, 70, 71
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	
NIMM-SW-3	MY71S7	Mercury	0.2	100	100	1	0.2	Ref. 25, p. 2, 35, 62, 96, 104; Ref. 27, p. 54, 70, 71
NIMM-SW-4	MY71S9	Arsenic	1	100	100	1	1	Ref. 25, p. 2; Ref. 27, p. 34, 54, 70, 71
		Cadmium	1	100	100	1	1	
		Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	
NIMM-SW-6	MY71T3	Arsenic	1	100	100	1	1	Ref. 25, p. 3, 38, 62, 96, 104; Ref. 27, p. 36, 54, 70, 71
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	
NIMM-SW-7	MY71T5	Arsenic	1	100	100	1	1	Ref. 25, p. 3, 39, 62, 104; Ref. 27, p. 37, 54, 70, 71
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
NIMM-SW-8	MY71T7	Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 3, 40, 62, 96, 104; Ref. 27, p. 38, 54, 70, 71
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
NIMM-SW-9	MY71T9	Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 3, 41, 62, 96, 104; Ref. 27, p. 39, 54, 70, 71
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
NIMM-SW-10	MY71W1	Mercury	0.2	100	100	1	0.2	Ref. 25, p. 3, 42, 62, 96, 104; Ref. 27, p. 40, 54, 70, 71
		Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 4, 43, 62, 97, 104; Ref. 27, p. 41, 54, 70, 71
		Cadmium	1	100	100	1	1	
NIMM-SW-12	MY71W5	Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 4, 45, 62, 97, 104; Ref. 27, p. 43, 54, 70, 71
NIMM-SW-15	MY71X1	Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 4, 48, 62, 97, 104; Ref. 27, p. 46, 54, 70, 72
BLM-SW-1	MY71X6	Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	
BLM-SW-2	MY71X8	Arsenic	1	100	100	1	1	Ref. 25, p. 5, 49, 62, 97, 105; Ref. 27, p. 47, 54, 70, 72
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
BLM-SW-3	MY71Y0	Zinc	2	100	100	1	2	
		Arsenic	1	100	100	1	1	Ref. 25, p. 5, 50, 62, 97, 105; Ref. 27, p. 48, 54, 70, 72
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Mercury	0.2	100	100	1	0.2	
		Zinc	2	100	100	1	2	

Sample Quantitation Limit. The SQLs provided in this table are CLP contract-required detection limits (CRDLs) for that analyte with any dilution factors, volume adjustments, or percent solids for that analysis taken into account. SSQLs were calculated as follows:

$$SQL \left(\frac{\mu g}{L} \right) = CRDL \left(\frac{\mu g}{L} \right) \times \frac{\text{final volume (mL)}}{\text{initial volume (mL)}} \times DF$$

Where:

Final volume (mL) is the final extract volume following sample preparation

Initial volume (mL) is the volume of sample used

DF is the dilution factor

Sample ID	CLP #	Analyte	CRDL	Final Volume	Initial Volume	DF	SQL	References
NIMM-SW-1-F	MY71S4	Copper	2	100	100	1	2	Ref. 26, p. 2, 32, 56, 82, 88; Ref. 28, p. 31, 52, 68, 70
		Mercury	0.2	100	100	1	0.2	
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	
NIMM-SW-3-F	MY71S8	Mercury	0.2	100	100	1	0.2	Ref. 26, p. 2, 34, 56, 82, 88
NIMM-SW-4-F	MY71T0	Arsenic	1	100	100	1	1	Ref. 26, p. 2; Ref. 28, p. 34, 52, 68, 70
		Cadmium	1	100	100	1	1	
		Copper	2	100	100	1	2	
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	
NIMM-SW-6-F	MY71T4	Nickel	1	100	100	1	1	Ref. 26, p. 3; Ref. 28, p. 36, 52, 68, 70
		Zinc	2	100	100	1	2	
NIMM-SW-7-F	MY71T6	Copper	2	100	100	1	2	Ref. 26, p. 3; Ref. 28, p. 37, 52, 68, 70
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	
NIMM-SW-8-F	MY71T8	Nickel	1	100	100	1	1	Ref. 26, p. 3; Ref. 28, p. 38, 52, 68, 70
		Zinc	2	100	100	1	2	
NIMM-SW-9-F	MY71W0	Copper	2	100	100	1	2	Ref. 26, p. 3, 40, 56, 82, 88; Ref. 28, p. 39, 52, 68, 70
		Mercury	0.2	100	100	1	0.2	
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
NIMM-SW-10-F	MY71W2	Zinc	2	100	100	1	2	
		Copper	2	100	100	1	2	Ref. 26, p. 3; Ref. 28, p. 40, 52, 68, 70
		Nickel	1	100	100	1	1	
NIMM-SW-12-F	MY71W6	Zinc	2	100	100	1	2	
		Copper	2	100	100	1	2	Ref. 26, p. 4, 42, 56, 82, 88; Ref. 28, p. 41, 52, 68, 70
		Mercury	0.2	100	100	1	0.2	
		Nickel	1	100	100	1	1	
NIMM-SW-15-F	MY71X2	Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	
		Nickel	1	100	100	1	1	Ref. 26, p. 4; Ref. 28, p. 43, 52, 68, 70
		Selenium	5	100	100	1	5	
BLM-SW-1-F	MY71X7	Zinc	2	100	100	1	2	
		Copper	2	100	100	1	2	Ref. 26, p. 5, 45, 56, 82, 89; Ref. 28, p. 44, 52, 68, 71
		Mercury	0.2	100	100	1	0.2	
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
BLM-SW-2-F	MY71X9	Zinc	2	100	100	1	2	
		Copper	2	100	100	1	2	Ref. 26, p. 5; Ref. 28, p. 45, 52, 68, 71
		Nickel	1	100	100	1	1	
		Selenium	5	100	100	1	5	
		Zinc	2	100	100	1	2	