

APPENDIX E.2

Incinerator Ash Testing Results

Table E.2.1: Annual Inventory and Status of 2020 Produced Incinerator Ash

Category	Mine Site Bins	Mine Site Volume (m ³)	Mine Site Status	Milne Port Bins	Milne Port Volume (m ³)	Milne Port Status
Landfill	11	35.11	Landfilled	12	36.56	Landfilled
Hazardous	-	-	N/A	-	-	N/A
Total	11	35.11	Landfilled	12	36.56	Landfilled

Notes:

TCLP residual analysis tests were performed by ALS Laboratories and compared to Criteria for Process Residuals (Government of Nunavut, 2011) to determine if ash is Landfill compliant. 2020 Incinerator ash volume: bin volumes converted to m³ and 'Full Bin' = 3.62 m³.

Table E.2.2: Annual Analytical Testing Results of 2020 Produced Incinerator Ash for Mary River Site

Analyte	Sample ID			MS-ASH-182	MS-ASH-183	MS-ASH-184	MS-ASH-185	MS-ASH-186	MS-ASH-187	MS-ASH-188	MS-ASH-189	MS-ASH-190
	ALS Laboratory Sample ID			L2409370-1	L2419474-1	L2432736-1	L2437526-1	L2459442-1	L2473125-1	L2479390-1	L2487482-1	L2520940-1
	Sample Date and Time			2020-01-22 15:55	2020-01-22 16:00	2020-03-25 11:00	2020-04-09 16:40	2020-06-07 14:55	2020-07-03 15:30	2020-07-22 11:10	2020-08-10 14:00	2020-10-11 13:30
	Units	LOR	Waste Criteria ¹									
Arsenic	mg/L	0.050/1.0	2.5	<0.050	0.080	<0.050	<0.050	<0.050	<0.050	<0.050	<1.0	<0.050
Barium	mg/L	0.50/2.5	100	1.82	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50
Cadmium	mg/L	0.0050/0.050	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0060	0.0087	<0.050	<0.0050
Chromium	mg/L	0.050/0.25	5	0.168	<0.050	0.438	0.762	<0.050	<0.050	<0.050	<0.25	<0.050
Lead	mg/L	0.025/0.25	5	<0.025	<0.025	<0.025	<0.025	0.062	<0.025	<0.025	<0.25	<0.025
Mercury	mg/L	0.00010/0.0010	0.1	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010
Selenium	mg/L	0.025/0.10	1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.10	<0.025
Silver	mg/L	0.0050/0.050	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050
Uranium	mg/L	0.25/2.0	10	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<2.0	<0.25
Zinc	mg/L	0.50/1.0	500	<1.0	3.4	<1.0	<1.0	3.9	2.0	<1.0	0.83	<1.0

Notes:
¹ Criteria for process residuals from Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (Government of Nunavut, 2011).

Table E.2.2: Annual Analytical Testing Results of 2020 Produced Incinerator Ash for Mary River Site

Analyte	Sample ID			MS-ASH-191	MS-ASH-192
	ALS Laboratory Sample ID			L2526967-1	L2539948-1
	Sample Date and Time			2020-11-03 11:00	2020-12-04 12:00
	Units	LOR	Waste Criteria ¹		
Arsenic	mg/L	0.050/1.0	2.5	<0.050	<0.050
Barium	mg/L	0.50/2.5	100	<0.50	<0.50
Cadmium	mg/L	0.0050/0.050	0.5	0.0077	<0.0050
Chromium	mg/L	0.050/0.25	5	<0.05	2.89
Lead	mg/L	0.025/0.25	5	<0.025	<0.025
Mercury	mg/L	0.00010/0.0010	0.1	<0.00010	<0.00010
Selenium	mg/L	0.025/0.10	1	<0.025	<0.025
Silver	mg/L	0.0050/0.050	5	<0.0050	<0.0050
Uranium	mg/L	0.25/2.0	10	<0.25	<0.25
Zinc	mg/L	0.50/1.0	500	16.7	<1.0

Notes:

¹ Criteria for process residuals from Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (Government of Nunavut, 2011).

Table E.2.3: Annual Analytical Testing Results of 2020 Produced Incinerator Ash for the Milne Port Site

Analyte	Sample ID			MP-ASH-231	MP-ASH-232	MP-ASH-233	MP-ASH-234	MP-ASH-235	MP-ASH-236	MP-ASH-237	MP-ASH-238
	ALS Laboratory Sample ID			L2411884-1	L2425620-1	L2439714-1	L2447422-1	L2459449-1	L2473897-1	L2484587-1	L2504403-1
	Sample Date			2020-01-26 9:50	2020-03-04 11:30	2020-04-19 17:45	2020-05-11 10:35	2020-06-06 17:10	2020-07-11 11:00	2020-07-27 15:45	2020-09-05 8:45
	Units	LOR	Waste Criteria ¹								
Arsenic	mg/L	0.050/1.0	2.5	<0.050	<0.050	<0.050	<0.050	<0.050	<1.0	<0.050	<0.050
Barium	mg/L	0.50/2.5	100	<0.50	1.29	<0.50	0.71	<0.50	<2.5	<0.50	<0.50
Cadmium	mg/L	0.0050/0.050	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
Chromium	mg/L	0.050/0.25	5	3.49	<0.050	3.32	2.75	0.304	<0.25	<0.050	0.824
Lead	mg/L	0.025/0.25	5	<0.025	<0.025	<0.025	<0.025	<0.025	<0.25	<0.025	<0.025
Mercury	mg/L	0.00010/0.0010	0.1	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010	<0.00010
Selenium	mg/L	0.025/0.10	1	<0.025	0.028	<0.025	<0.025	<0.025	<0.10	<0.025	<0.025
Silver	mg/L	0.0050/0.050	5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050
Uranium	mg/L	0.25/2.0	10	<0.25	<0.25	<0.25	<0.25	<0.25	<2.0	<0.25	<0.25
Zinc	mg/L	0.50/1.0	500	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0

Notes:
¹ Criteria for process residuals from Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (Government of Nunavut, 2011).

Table E.2.3: Annual Analytical Testing Results of 2020 Produced Incinerator Ash for the Milne Port Site

Analyte	Sample ID			MP-ASH-239	MP-ASH-240	MP-ASH-241	MP-ASH-242
	ALS Laboratory Sample ID			L2510779-1	L2526965-1	L2531909-1	L2545279-1
	Sample Date			2020-09-28 10:00	2020-11-02 15:00	2020-11-13 8:25	2020-12-21 17:00
	Units	LOR	Waste Criteria ¹				
Arsenic	mg/L	0.050/1.0	2.5	<0.050	<0.050	<0.050	<0.050
Barium	mg/L	0.50/2.5	100	1.57	8.31	<0.50	0.58
Cadmium	mg/L	0.0050/0.050	0.5	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/L	0.050/0.25	5	0.353	0.480	1.15	2.21
Lead	mg/L	0.025/0.25	5	<0.025	<0.025	<0.025	0.546
Mercury	mg/L	0.00010/0.0010	0.1	<0.00010	<0.00010	<0.00010	<0.00010
Selenium	mg/L	0.025/0.10	1	<0.025	<0.025	<0.025	<0.025
Silver	mg/L	0.0050/0.050	5	<0.0050	<0.0050	<0.0050	<0.0050
Uranium	mg/L	0.25/2.0	10	<0.25	<0.25	<0.25	<0.25
Zinc	mg/L	0.50/1.0	500	<1.0	<1.0	<1.0	<1.0

Notes:
¹ Criteria for process residuals from Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities (Government of Nunavut, 2011).