

DMR Summary Report

Mesabi Nugget Delaware LLC (MN0067687)

First DMR in Delta: 8/2005

Surface Discharge Station SD001

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Arsenic, Total (as As)	ug/L	SingleVal								NoDis					
Bicarbonates (HCO3)	268 mg/L	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Bicarbonates (HCO3)	301 mg/L	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Cadmium, Total (as Cd)	ug/L	SingleVal								NoDis					
Chloride, Total	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Chromium, Total (as Cr)	ug/L	SingleVal								NoDis					
Cobalt, Total (as Co)	ug/L	SingleVal								NoDis					
Copper, Total (as Cu)	ug/L	SingleVal								NoDis					
Flow	MG	CalMoTot	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	DailyAve	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Flow	mgd	DailyMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	268 mg/L	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	301 mg/L	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Lead, Total (as Pb)	ug/L	SingleVal								NoDis					
Mercury, Total (as Hg)	0.000070 kg/day	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Mercury, Total (as Hg)	1.8 ng/L	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Mercury, Total (as Hg)	3.2 ng/L	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Molybdenum, Total (as Mo)	ug/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Nickel, Total (as Ni)	ug/L	SingleVal								NoDis					
Nickel, Total (as Ni)	ug/L	SingleVal								NoDis					
pH	8.5 SU	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
pH	6.5 SU	CalMoMin	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Selenium, Total (as Se)	ug/L	SingleVal								NoDis					
Sodium, Total (as Na)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Dissolved (TDS)	752 mg/L	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Dissolved (TDS)	842 mg/L	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	mg/L	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Solids, Total Suspended (TSS)	mg/L	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Specific Conductance	1074 umh/cm	CalMoAvg	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Specific Conductance	1203 umh/cm	CalMoMax	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Sulfate, Total (as SO4)	mg/L	SingleVal	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	NoDis	
Thallium, Total (as Tl)	ug/L	SingleVal								NoDis					
Zinc, Total (as Zn)	ug/L	SingleVal								NoDis					

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.

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Surface Discharge Station SD001

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Zinc, Total (as Zn)	ug/L	SingleVal								NoDis					

Surface Water Station SW001 (Second Cr. - Upstream)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Bicarbonates (HCO3)	mg/L	SingleVal		428			216			371			302		329.25
Flow, Stream, Instantaneous	cfs	SingleVal	1.2	1.8	2.1	4.7	2.0	1.5	1.1	0.3	0.2	0.2	0.8	0.9	1.4
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	mg/L	SingleVal		749			334			498			540		530.25
Solids, Total Dissolved (TDS)	mg/L	SingleVal		926			436			575			663		650.0
Specific Conductance	umh/cm	SingleVal		1298			1201			983			1055		1,134.25

Surface Water Station SW002 (Second Cr. - Downstream)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Bicarbonates (HCO3)	mg/L	SingleVal		27.3			127			288			272		178.575
Flow, Stream, Instantaneous	cfs	SingleVal	0.3	0.3	0.8	2.21	2.58	4.96	0.15	0.04	0.06	0.03	0.18	0.15	0.98
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	mg/L	SingleVal		840			316			494			408		514.5
Solids, Total Dissolved (TDS)	mg/L	SingleVal		867			393			618			474		588.0
Specific Conductance	umh/cm	SingleVal		843			793			893			710		809.75

Surface Water Station SW003 (Area 1 Pit)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Bicarbonates (HCO3)	mg/L	SingleVal		353			326			311			320		327.5
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	mg/L	SingleVal		838			715			708			713		743.5
Mercury, Total (as Hg)	ng/L	SingleVal		<0.5			1.4			<0.5			<0.5		1.4
pH	SU	SingleVal		8.3			8.2			8.4			8.1		8.25
Solids, Total Dissolved (TDS)	mg/L	SingleVal		898			859			896			921		893.5
Specific Conductance	umh/cm	SingleVal		1413			1191			1276			1285		1,291.25

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Mesabi Nugget Delaware LLC (MN0067687)

First DMR in Delta: 8/2005

Waste Stream Station WS001 (Influent to Wastewater Treatment System)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Flow	mgd	DailyAve	1.15	1.73	1.584	1.58	1.58	1.6	1.58	1.58	1.6	1.3	1.3	1.59	1.515
Mercury, Total (as Hg)	ng/L	SingleVal	593	269	384	59.7	1700	295	158	676	651	50.5	159	155	429.183

Waste Stream Station WS002 (Influent to Tailings Filter #1)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Flow	mgd	DailyAve	0.44	0.50	0.667	0.67	0.67	0.8	0.76	0.7228	0.74	0.73	0.74	0.76	0.683
Mercury, Total (as Hg)	ng/L	SingleVal	50.6	56.3	35.2	53.1	89.4	10.3	115	3140	5700	40.6	44.4	66.9	783.483

Waste Stream Station WS003 (Dschrgr fr Tailings Filter #1 to Pit 1)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Bicarbonates (HCO ₃)	mg/L	SingleVal	331	114	68.2	64.5	219	22	12.7	17.4	24	286	17.1	24.9	100.067
Chloride, Total	mg/L	SingleVal	32.2	98.1	119	113	81.9	110	68.3	95.3	103	18.8	161	164	97.05
Flow	mgd	DailyAve	0.48	0.29	0.749	0.67	0.70	0.9	0.74	0.9792	0.72	0.77	0.71	0.75	0.705
Hardness, Calcium & Magnesium, Calculated (as CaCO ₃)	mg/L	SingleVal	591	576	490	1070	728	1170	1500	1710	1610	799	1760	1380	1,115.333
Mercury, Total (as Hg)	ng/L	SingleVal	3.0	1.7	0.7	0.6	1.1	2.0	1.6	189	179	47.9	1.8	1.3	35.808
Molybdenum, Total (as Mo)	ug/L	SingleVal	14.4	16.5	17.9	23.3	51.0	27	35.6	43.9	39.2	7.24	52.9	36.9	30.487
Sodium, Total (as Na)	mg/L	SingleVal	547	563	956	542	1030	497	141	212	209	52.2	174	336	438.267
Solids, Total Dissolved (TDS)	mg/L	SingleVal	2250	2660	3760	3350	3650	3336	2548	2802	2880	997	3420	3280	2,911.083
Specific Conductance	umh/cm	SingleVal	3243	3742	5180	4240	4768	3849	2850	3295	3390	1559	3520	3786	3,618.5
Sulfate, Total (as SO ₄)	mg/L	SingleVal	1250	1490	2220	1940	2430	2040	1630	1820	1840	491	1940	1910	1,750.083

Waste Stream Station WS004 (Influent fr Pit 1 to Tailings Filter #2)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Flow	mgd	DailyAve	0	0		0	NoFlo	NoFlo	0	NoFlo		NoFlo	NoFlo	NoFlo	0.0
Mercury, Total (as Hg)	ng/L	SingleVal	<0.5	<0.5	<0.5	NoFlo	1.7	2.4	<0.5	0.6	1.2	NoFlo	NoFlo	NoFlo	1.475

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First DMR in Delta: 8/2005

Waste Stream Station WS005 (Spent Tailings Disposal)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Mass Transported From Facility	ton/mo	SingleVal	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	

Waste Stream Station WS006 (Slag Disposal)

<u>Parameter Name</u>	<u>Limit and Units</u>	<u>Limit Type</u>	<u>1/11</u>	<u>2/11</u>	<u>3/11</u>	<u>4/11</u>	<u>5/11</u>	<u>6/11</u>	<u>7/11</u>	<u>8/11</u>	<u>9/11</u>	<u>10/11</u>	<u>11/11</u>	<u>12/11</u>	<u>Ave</u>
Mass Transported From Facility	ton/mo	SingleVal	NoMat	NoMat	NoMat		NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	NoMat	

Note: a limit in the Limit and Units column which is demarcated by asterisks is an Intervention limit, not a hard, violation-causing limit.