

**ROSIA MONTANA WATER BALANCE MODEL
SELECTED ENVIRONMENTAL AND ENGINEERING INPUT PARAMETERS**

MINING DATES

	Month	Year
Operations Start Month	5	2007
Operations End Month	2	2024
Cirnic Pond Commissioned	5	2006
Cirnic Dump Reclaimed and Pond	5	2019
Plant Site Pond decommissioned	5	2024

ENVIRONMENTAL DATA

Stream and Adit Flows

Month	May 1	June 2	July 3	Aug 4	Sep 5	Oct 6	Nov 7	Dec 8
Rosia Montana River (m3/hr)	576	576	576	576	576	576	576	576
Corna River (m3/hr)	36	36	36	36	36	36	36	36
Salistei River (m3/hr)	90	90	90	90	90	90	90	90
714 Adit (l/s)	14,2	14,0	17,5	14,0	10,7	14,6	14,9	14,4

714 Adit Capture

Month	May	June	July	Aug	Sep	Oct	Nov	Dec
Flow Control Toggle (0 = captured)	1	1	1	1	1	1	1	1
Storage Discharge Rate(m3/hr)	14,2	14,0	17,5	14,0	10,7	14,6	14,9	14,4

CORNA VALLEY

	Runoff Coefficient
TMF Pond (m ²)	1,00
TMF Beach (m ²)	0,80
TMF Undisturbed Diverted (m ²)	0,42
TMF Undisturbed (m ²)	0,42
Secondary Containment Diverted	0,42
Secondary Containment Basin & D	0,42
Cirnic - Covered with Waste Rock	0,50
Cirnic - Undisturbed (m ²)	0,42

ROSIA MONTANA VALLEY

	Runoff Coefficient
Total Area	-
North Diversion Area	0,42
Cetate Open Pit	0,85
Cirnic Open Pit	0,85
Orlea Open Pit	0,85
Jig Open Pit	0,85
Cetate Undiverted Area	0,50
Process Facilities Plant Site	0,50
Cetate Dump - Covered	0,50
Cetate Dump - Undisturbed	0,42

FACILITY PONDS

	Coefficient	Volumes (m ³)				Area (m ²)	Seepage Rate (m ³ /hr)
		Initial	Minimum	Normal	Maximum		
TMF Pond	1,00	1.500.000	500.000	1.000.000	2.500.000	-	Variable
Cetate Drainage Collection Pond	1,00	100.000	5.000	7.200	1.100.000	116.644	1,04
Cirnic Waste Rock Dump Pond	1,00	2.000	1.000	2.500	157.770	21.207	0,06
Plant Site Runoff Collection Pond	1,00	6.000	6.000	6.000	60.000	5.000	-0,49
Secondary Containment Pond	1,00	3.500	3.500	3.500	50.000	14.386	0
ARD Sludge Holding Pond	1,00	NA	NA	NA	NA	NA	0

Note:
TMF Seepage varies by year. See TMF Areas for seepage values
Negative seepage value represents seepage into structure

OPERATIONS DATA**Fixed Rates**

Mill Ore Feed Schedule (t/hr)	1.484	m ³ /hr
Mill Process Loss (m ³ /hr)	10,2	m ³ /hr
Reagents Added in Operations	4,1	m ³ /hr
Internal Recycle Rate (m ³ /hr)	2.000	m ³ /hr
Diversion Bypass Volume in TMF	100.000	m ³
Evaporation Efficiency Factor for Tailings Surface	0%	
Freshwater Feed Rate to Operations	210,4	m ³ /hr
ARD Treatment Plant Freshwater	7,6	m ³ /hr
Potable water requirement	5	m ³ /hr
Freshwater to Camp	8	m ³ /hr
Sewage Treatment Plant Effluent	5	m ³ /hr
Environmental Discharge - Rosia	18	L/s
Environmental Discharge - Corna	7	L/s
Dust Control	18,5	m ³ /hr

GEOTECHNICAL DATA

Tailings Slurry - Information from Rosia Montana/Corna Valley Water Balance			
Tailings Composition to Impoundment	0,485	Solids by Weight	0,515 Fluid by Weight
Specific Gravity of Solids	2,64		
Specific Gravity of Solution	1		
Void Ratio of Slurry	2,80	Dry Unit weight	0,69 t/m ³
Void Ratio (yrs 1-5)	1,11	Dry Unit weight	1,25 t/m ³
Void Ratio (yr 6)	1,10	Dry Unit weight	1,258 t/m ³
Void Ratio (yr 7)	1,08	Dry Unit weight	1,267 t/m ³
Void Ratio (yr 8)	1,07	Dry Unit weight	1,275 t/m ³
Void Ratio (yr 9)	1,06	Dry Unit weight	1,283 t/m ³
Void Ratio (yr 10)	1,04	Dry Unit weight	1,292 t/m ³
Void Ratio (yr 11)	1,03	Dry Unit weight	1,300 t/m ³
Void Ratio (yr 12)	1,02	Dry Unit weight	1,308 t/m ³
Void Ratio (yr 13)	1,01	Dry Unit weight	1,317 t/m ³
Void Ratio (yr 14)	0,99	Dry Unit weight	1,325 t/m ³
Void Ratio (yr 15)	0,98	Dry Unit weight	1,333 t/m ³
Void Ratio (yr 16)	0,97	Dry Unit weight	1,342 t/m ³
Void Ratio (yr 17)	0,96	Dry Unit weight	1,350 t/m ³
Solution Specific Retention (%)	100%		
Ore Moisture Content	0,05	t water/t total	
Low Grade Ore Moisture Content	0,06	t water/t total	
Reagent Moisture Content	0,95	t water/t total	0,05 t solids/t total
Waste Rock Insitu Moisture Content	0,02	t water/t total	
Waste Rock Field Capacity Moisture	0,07	t water/t total	

ARD Treatment System Parameters		
Weight of Solids per m ³ of Treated	1,10	8,80 kg/m ³
Initial Solids Content of Underflow	0,10	t solids/t total
Settled Solids Content of Underflow	0,40	t solids/t total