Page 1 Nanisivik Mine

Proposed Geotechnical Monitoring Program 2009-2012						
Summary of Instrument Readings Requirements						
	Instrument Informati	on	Post-Closure Monitori	ng Period (2009-2012)		
Instrument Label	Instrument Type	Location	2009 - 2010 Monitoring Frequency	2011 - 2012 Monitoring Frequency	No. of Monitoring Nodes	
West Twin Dike						
TC12	Thermocouple	Dike Face	Quarterly	Quarterly	2	
TC13A	Thermocouple	Dike Face	Quarterly	Quarterly	5	
TC31	Thermocouple	Dike Face	Quarterly	Quarterly	5	
TC32	Thermocouple	Dike Face	Quarterly	Quarterly	7	
TC33	Thermocouple	Dike Face	Quarterly	Quarterly	7	
BGC03-33	Thermistor	Dike Crest	Quarterly	Quarterly	10	
BGC03-34	Thermistor	Dike Crest	Quarterly	Quarterly	10	
BGC05-09	Thermistor	Dike Crest	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12	
BGC05-15	Thermistor	Dike Crest	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12	
BGC05-17	VW Piezo.	Dike Crest	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
Surface Cell						
BGC02-03	Thermistor	Surface Cell	No longer functioning, discontinue monitoring.		N/A	
BGC03-07	Thermistor	Surface Cell	Quarterly	Quarterly	9	
BGC03-09	Thermistor	Surface Cell	Quarterly	Quarterly	10	
BGC03-10	Thermistor	Surface Cell	Quarterly	Quarterly	8	
BGC03-11	Thermistor	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10	
Notes:						

- Quarterly readings to be taken during December, Late April, Early July, Late August.
   Frost gauges to be read weekly between June 1 and Sept. 15.
   Produced by BGC Engineering Inc. for CanZinco Ltd., a division of Breakwater Resources Ltd.

Page 2 **Nanisivik Mine** 

Proposed Geotechnical Monitoring Program 2009-2012						
Summary of Ir Instrument Information			nstrument Readings Requirements Post-Closure Monitoring Period (2009-2012)			
Instrument Label	Instrument Type	Location	2009 - 2010 Monitoring Frequency	2011 - 2012 Monitoring Frequency	No. of Monitoring Nodes	
BGC03-12	Vibrating Wire Piezometer	Surface Cell	Quarterly	Quarterly	1	
BGC03-14	Vibrating Wire Piezometer	Surface Cell	Quarterly	Quarterly	1	
BGC03-15	Thermistor	Surface Cell	Quarterly	Quarterly	10	
BGC03-20	Thermistor	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10	
BGC03-21	Thermistor	Surface Cell	Quarterly	Quarterly	10	
BGC03-32	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC03-35	Vibrating Wire Piezometer	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC03-36	Thermocouple	Surface Cell	Quarterly	Quarterly	5	
BGC03-37	Thermistor	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	9	
BGC05-05	Thermistor	Surface Cell	Quarterly	Quarterly	12	
BGC05-06	VW Piezo.	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC05-07	VW Piezo.	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC05-08	Contingency	Surface Cell	-	-	N/A	
Surface Cell	T			<u> </u>		
BGC05-10	VW Piezo.	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC05-11	Monitoring Well	Surface Cell	Once per summer.	Once per summer.	N/A	
BGC05-12	Monitoring Well	Surface Cell	Once per summer.	Once per summer.	N/A	
Notes:	•		•		•	

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   Produced by BGC Engineering Inc. for CanZinco Ltd., a division of Breakwater Resources Ltd.

Page 3 **Nanisivik Mine** 

Proposed Geotechnical Monitoring Program 2009-2012						
	Instrument Informat		nstrument Readings Requirements Post-Closure Monitoring Period (2009-2012)			
Instrument Label	Instrument Type	Location	2009 - 2010 Monitoring Frequency	2011 - 2012 Monitoring Frequency	No. of Monitoring Nodes	
BGC05-13	VW Piezo.	Surface Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC05-14	Contingency	Surface Cell	-	-	N/A	
BGC05-16	Contingency	Surface Cell	None at this time.	None at this time.	N/A	
FG-1	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
FG-2	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
FG-3	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
FG-4	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
FG-5	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
FG-6	Frost Gauge	Surface Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A	
Toe of West Twi	in Dike				•	
BGC03-18	Thermocouple	Toe of West Twin Dike	Quarterly	Quarterly	4	
BGC03-19	Thermistor	Toe of West Twin Dike	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	8	
BGC05-26	Thermistor	Toe of West Twin Dike	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10	
Test Cell						
BGC05-04	Thermistor	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10	
BGC05-18	VW Piezo.	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	
BGC05-19	Thermistor	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12	
BGC05-20	VW Piezo.	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1	

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Page 4 **Nanisivik Mine** 

	Pro	posed Geotech	nical Monitoring Progra	m 2009-2012	
Summary of Instrument Readings Requirements					
	Instrument Informat	ion	Post-Closure Monitori	ng Period (2009-2012)	
Instrument Label	Instrument Type	Location	2009 - 2010 Monitoring Frequency	2011 - 2012 Monitoring Frequency	No. of Monitoring Nodes
BGC05-21	Monitoring Well	Test Cell	Once per summer.	Once per summer.	N/A
BGC05-22	VW Piezo.	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1
BGC05-23	Monitoring Well	Test Cell	Once per summer.	Once per summer.	N/A
BGC05-24	VW Piezo.	Test Cell	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1
BGC05-25	Contingency	Test Cell	-	-	N/A
FG-7	Frost Gauge	Test Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A
FG-8	Frost Gauge	Test Cell	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A
Test Cell Dike					
BGC02-09	Thermistor	Test Cell Dike	Quarterly	Quarterly	3
BGC03-22	Thermistor	Test Cell Dike	Quarterly	Quarterly	8
BGC05-29	Thermistor	Test Cell Dike	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12
Toe of Test Cell	Dike				•
BGC05-27	Thermistor	Toe of Test Cell Dike	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10
BGC05-28	VW Piezo.	Toe of Test Cell Dike	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	1
FG-9	Frost Gauge	Toe of Test Cell Dike	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A
FG-10	Frost Gauge	Toe of Test Cell Dike	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A
Oceanview Pit					
BGC05-01	Thermistor	Oceanview Pit	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12
FG-16	Frost Gauge	Oceanview Pit	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A
Notes:	•		•		

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Page 5 **Nanisivik Mine** 

	Proposed Geotechnical Monitoring Program 2009-2012						
		Summary of In	strument Readings Require	ements			
Instrument Information Post-Closure Monitoring Period (2009-2012)							
Instrument Label	Instrument Type	Location	2009 - 2010 Monitoring Frequency	2011 - 2012 Monitoring Frequency	No. of Monitoring Nodes		
East Open Pit							
BGC05-02	Thermistor	East Open Pit	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12		
BGC05-03	Thermistor	East Open Pit	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	12		
FG-13	Frost Gauge	East Open Pit	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A		
FG-14	Frost Gauge	East Open Pit	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A		
Landfill		l .		l	I.		
BGC05-30	Thermistor	Landfill	Quarterly/ Bi-weekly June 1 - Sept 15	Quarterly	10		
FG-11	Frost Gauge	Landfill	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A		
Area 14							
TC8	Thermocouple	Area 14	Quarterly	Quarterly	4		
FG-15	Frost Gauge	Area 14	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A		
Upper Dump Pond							
FG-17	Frost Gauge	Upper Dump Pond	Bi-weekly (June 1 - Sept 15)	Once per summer in late August.	N/A		
Notes:	1				I		

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