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Project No: 1CB002.002

Group Manager Environment
CanZinco Mines Ltd.
c/o Nyrstar
Tessinerplatz 7, CH-8002
Zurich, Switzerland

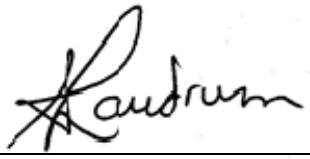
Attention: Johan Skoglund

Dear Mr. Skoglund:

Update to Soil Quality Remediation Objectives for the Former Nanisivik Mine

Please find attached a listing of soil quality remediation objectives that are applicable to the former Nanisivik Mine. This attachment is intended to replace Appendix B of the Abandonment and Reclamation Plan for Treatment of Contaminated Soil at the Former Nanisivik Mine issued by SRK in 2014.

Sincerely,
SRK Consulting (Canada) Inc.



Arlene Laudrum, PGeo, FGC
Principal Consultant

U.S. Offices:		Mexico Office:		Canadian Offices:		Group Offices:
Anchorage	907.677.3520	Hermosillo		Saskatoon	306.955.4778	Africa
Denver	303.985.1333	52.662.215.1050		Sudbury	705.682.3270	Asia
Elko	775.753.4151	Queretaro		Toronto	416.601.1445	Australia
Fort Collins	970.407.8302	52.442.218.1030		Vancouver	604.681.4196	Europe
Reno	775.828.6800	Zacatecas		Yellowknife	867.873.8670	North America
Tucson	520.544.3688	52.492.927.8982				South America

Appendix B – Soil Quality Remediation Objectives

Soil Quality Remediation Objectives

Soil quality remediation objectives for the treatment of contaminated soil at Nanisivik dock area as specified in this updated *Appendix B Soil Quality Remediation Objectives* (SRK 2015) of the *Abandonment and Reclamation Plan for Treatment of Contaminated Soil at the Former Nanisivik Mine* (SRK 2014) are listed in Table 1. A site specific remedial objective for petroleum hydrocarbon (PHC) Fraction 2 (F2) was developed based on an assessment of the ecotoxicity of soil at the site (Hemmera 2015). The remaining objectives were derived from generic commercial land use guidelines established in the Canadian Council of Ministers of the Environment (CCME) in *Canadian Environmental Quality Guidelines* (CCME 1999) and *Canada-Wide Standards for Petroleum Hydrocarbons in Soil* (CCME 2008). The list includes interim and provisional soil quality guidelines for Polycyclic Aromatic Hydrocarbons (PAHs) that apply to the site.

Table 1: Soil Quality Remediation Objectives for the Nanisivik Former Bulk Fuel Storage Facility

Parameter	Surface Soil (mg/kg)	Subsurface Soil (mg/kg)
Benzene [a,b,c]	110	360
Toluene [a,b,c]	250	500
Ethylbenzene [a,b,c]	300	600
Total Xylenes [a,b,c]	350	700
PHC Fraction 1 (F1) [a,b,c]	320	700
PHC Fraction 2 (F2) [a,b,c,d]	410	1,000
PHC Fraction 3 (F3) [a,b,c]	1,700	3,500
PHC Fraction 4 (F4) [a,b,c]	3,300	10,000
PAH Anthracene [a]	32	32
PAH Benz[a]anthracene [a,e]	10	10
PAH Benzo[a]pyrene [a]	72	72
PAH Benzo[b]fluoranthene [a,e,f]	10	10
PAH Benzo[k]fluoranthene [a,ef]	10	10
PAH Dibenz[a,h]anthracene [a,e]	10	10
PAH Fluoranthene [a]	180	180
PAH Indeno[1,2,3-c,d]pyrene [a,e]	10	10
PAH Naphthalene [a,g]	22	22
PAH Phenanthrene [a,e]	50	50
PAH Pyrene [a]	100	100

Notes:

a) Canadian Council of Ministers of the Environment (CCME) soil quality guidelines for commercial land use. The site-specific exposure pathways used to determine the standards include: direct contact (ingestion, skin contact, dust inhalation), eco soil contact and management limits (Hemmera 2015).

b) Guidelines are dependent upon depth of sample. Surface soil refers to the unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for terrestrial plant growth and can extend as deep as 1.5 m. Subsoil is defined as the unconsolidated regolith material

above the water table and not subject to soil forming processes. A surface soil depth of 1.5 m has been applied for contaminated soil remediation during all mine closure and site reclamation activities.

c) *Guideline is dependent on medium grain size of soil analyzed (Fine <75 µm, Coarse >75 µm). Median grain size of soil sampled is coarse.*

d) *Site specific soil remediation objective for surface soil (Hemmera 2015).*

e) *The interim soil quality criterion (CCME 1991) is retained as the soil quality guideline.*

f) *Resolution between benzo[b]fluroanthene and benzo[k]fluroanthene gas chromatograph peaks may be difficult to achieve. When these two PAHs cannot be reported separately, report them as the sum of benzo[b+j+k]fluoranthene and compare to the guideline for benzo[b]fluoranthene.*

g) *The CCME 1997 provisional soil quality guideline for the protection of environmental health is retained as the soil quality guideline.*

References

[CCME] Canadian Council of Ministers of the Environment. 1999 – Updated to September 2014. Canadian Environmental Quality Guidelines. Canadian Council of Ministers of the Environment, Winnipeg.

[CCME] Canadian Council of Ministers of the Environment. 2008. Canada-Wide Standards for Petroleum Hydrocarbons in Soil: Technical Supplement. January 2008. Revised from 2001 version.

Hemmera, 2015. Soil Toxicity and Derivation of Site Specific Soil Remediation Objectives for the Nanisivik Docksite. Prepared for CanZinco Mines Ltd. March 2015.

SRK Consulting (Canada) Inc. 2014. Abandonment and Reclamation Plan for Treatment of Contaminated Soil at the Former Nanisivik Min. Prepared for CanZinco Mines Ltd. September 2014.