POLARIS MINE

POST-RECLAMATION MONITORING REPORT

2011 4th QUARTER and 2011 ANNUAL REPORT

FOR THE NUNAVUT WATER BOARD

&

ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA

March 17, 2013

Teck

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March 17, 2013

Nunavut Water Board
Box 119
Gjoa Haven, NU
X0B 0J0
Attention: Phyllis Beaulieu, Manager of Licensing

Aboriginal Affairs and Northern Development Canada
969 Qimugjuk Building, 2nd Floor
Iqaluit, Nunavut
X0A 0H0
Attention: Jeff Mercer, Manager, Lands Administration

Dear Ms. Beaulieu and Mr. Mercer;

Re: Polaris Mine Water Licence NWB1POL0311 – 2011 4th Quarter and Annual Water Licence and Decommissioning and Reclamation Plan Reports

Please find attached the Polaris Mine 2011 4th Quarter and 2011 Annual Reports required under Polaris's Water Licence and Decommissioning and Reclamation Plan (DRP). I have attached paper copies of this report to this letter in addition to an electronic copy (pdf format on CD). I have not included a translation into Inuktitut as the translator is currently travelling. I will forward the translation electronically as soon as we receive it.

There were no activities or sampling done at the Polaris Mine site during the 4th Quarter of 2011 as the site was snow covered and there were no effluent discharges due to the freezing temperatures. Apart from the sampling of Garrow Lake in the 2nd Quarter of 2011, all monitoring was conducted during the 3rd Quarter of 2011 which was previously reported. As of September 2011, it has now been nine years since the mine ceased production and closed and seven years since reclamation was completed. The Polaris Mine has been a Recognized Closed Mine under the Metal Mining Effluent Regulations (MMER) since 2006 and has no further obligations under MMER.

If you have any questions regarding this report, please do not hesitate to contact me.

Yours truly,

Bruce Donald
Reclamation Manager
Environment
Teck Resources Limited

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1. INTRODUCTION

The Polaris Mine ceased operation in September of 2002. Immediately upon mine closure, reclamation activities commenced in accordance with the Decommissioning and Reclamation Plan (DRP) approved by the Nunavut Water Board and Indian and Northern Affairs Canada. The DRP as well as the Water Licence requires reporting of work and monitoring activities on both a quarterly and an annual basis. This document includes both the 2011 4th Quarter and the 2011 Annual Report for the Polaris Mine site.

An executive summary of this report translated into Inuktitut is included as Appendix 1.

2. 2011 4th QUARTER REPORT

2.1. Reclamation Activities

During the entire 4th Quarter of 2011, the Polaris Mine remained unoccupied by personnel. All reclamation activities are now fully completed.

2.2. Site Monitoring

During the entire 4th Quarter of 2011, the Polaris Mine remained unoccupied by personnel and no monitoring events occurred as all surface waters were frozen. As a result there is no effluent water quality data to report.

2.3. Financial Reporting

2.3.1. Updated Financial Report

No further costs have been expended as all activities for the year are now complete.

2.3.2. Request for Adjustment`

As stated in the 3rd Quarter report, Teck is not requesting an adjustment of its reclamation security (currently there is $3.539M posted) as this topic will be reviewed as part of any re-licensing activities going forward.

3. 2011 ANNUAL REPORT

Part B, Section 6 of the Water Licence requires that an Annual Report be filed that includes the following topics.

3.1. Unauthorized Discharges

The Polaris Mine had no unauthorized discharges to report.

3.2. Progress Report of Studies and Plans

- The primary issue that has not been resolved is a geotechnical report discussing potential future subsidence of the ground surface over the underground mine workings. This remains outstanding.
- The Spill Contingency Plan is now null and void as there are no further activities or conditions on site that require a spill contingency plan.

3.3. Executive Summary of Report Translated into Inuktitut

Included in Appendix 1 is an executive summary of both the 2011 4th Quarter Report and the 2011 Annual Report translated into Inuktitut.

3.4. Summary of Closure and/or Reclamation Work Undertaken

- A summary of any closure and reclamation work undertaken during the year and an outline of work anticipated for the next year is outlined below:
- During the 3rd Quarter of 2011, the key annual monitoring requirements for the Polaris Mine were undertaken.
- From July 16th to 21st, 6 people were on site to conduct a geotechnical inspection, topographical monitoring by surveying, retrieving thermistor data from landfills, and collecting other miscellaneous samples. A contractor also had two people on site making final preparations for removal of all remaining equipment and supplies from the site.
- A site inspection was conducted by 4 AANDC representatives on July 17th. The group consisted of Ian Parsons, (AANDC, Water Resources); Kevin Robertson (Lands Inspector, AANDC), Holger Hartmaier, consulting Geotechnical Engineer from BGC Engineering; and Christine Berube (summer student, Water Resources). The AANDC representatives spent all day on site and inspected all areas of significant reclamation activities. They also collected water samples from Garrow Creek, Garrow Lake, Frustration Lake and LRD Quarry Landfill.
- On September 1st, the final removal of Teck's temporary exploration style camp, site materials, equipment, and supplies was done by sea lift. A wood shed was left for a local Inuit at his request. Two quads, a boat and miscellaneous equipment remained on site until September 2nd for the Garrow Lake sampling event. After the Garrow Lake sampling was completed, this equipment was also removed.
- .No further reclamation work is planned and not has been requested by regulators who have inspected the site.

3.5. Estimate of the Total Mine Closure Cost

An update of reclamation and monitoring costs was presented in the 3rd Quarter report and no further costs were incurred in the 4th Quarter of 2011. Total costs for 2011 were $474,000. No further work under the Closure Plan nor the Water Licence are required. The Land Leases have now expired and the Water Licence expired at year end.

3.6. Public consultation / Participation

- No public consultations were conducted as the site is basically dormant other than for monitoring.
- One Inuit resident from Resolute assisted with the annual inspection and maintenance program at the site. In addition to providing local employment, the local knowledge for the safety of workers on site is important. Having a local resident involved with monitoring of the site has the benefit of ensuring that the nearest community is aware of site activity and site conditions.

3.7. Work Conducted in Response to Inspection or Compliance Reports

- None required.

3.8. Effluent and Water Quality Studies Conducted

3.8.1. Quantities of Fresh Water Pumped From Frustration Lake

The water licence requires the monthly and annual quantities (in cubic metres) of water pumped from Frustration Lake to be reported.

- No water was pumped as the site's freshwater system was demolished and reclaimed in 2004.

3.8.2. Garrow Lake Water Column Monitoring

During 2011, the Water Licence required three monitoring events (at mid-winter, at maximum ice thickness, and at maximum ice melt) in two separate locations of the Garrow Lake water column stratigraphy. The mid-winter monitoring event was not conducted as charter aircraft will not fly to this isolated, abandoned site in the dark. The maximum ice thickness and maximum melt monitoring event did not occur due to problems with shipping sampling equipment to the site as discussed in the 2nd Quarter report. The 3rd Quarter sampling event was reported in the 3rd Quarter report.

The 3rd Quarter reports include an analysis of the limnology of Garrow Lake in Appendix B in the form of Total Zinc concentration graphs from 2005 to 2011 for both the Centre sampling station (#262-3) and the South sampling station (#262-3A). Trends were fully consistent with previous sampling events continuing to confirm the expected on-going stability of both the physical and chemical properties of the lake.

3.8.3. Garrow Creek Effluent Monitoring

The Water Licence and the DRP requires sampling of the Final Discharge Point from Garrow Lake during periods of effluent discharge. All water quality results were compliant with the parameters specified in the Water Licence. In addition there was no acute toxicity in either the Rainbow Trout or the Daphnia magna. Subleathality sampling was also done and some subleathal effects were noted. An assessment of this is provided in Appendix 2. The details of the monitoring results can be found in the previously submitted 3rd Quarter report. The 3rd Quarter report also reports the sample results from the reference area and Garrow Bay sample results.

3.9. Details of Water Use or Waste Disposal Requested By the Board

- There is no fresh water use at the site. No details of water use have been requested by the board.
- There was no waste disposal at the site. All debris generated in 2011 was removed from site along with the sealift of other materials leaving site.

APPENDIX 1

Executive Summary

Translated into Inuktitut

1. ᓯᕗᓕᕐᑎᓄᖓᔪᖅ ᓇᐃᓈᕐᓯᒪᔪᖅ ᐅᓂᑳᖅ ᐃᓄᒃᑎᑐᑦ

ᐅᓇ ᐅᓂᑳᖅ ᓇᐃᓈᕐᓯᒪᔪᓂᒃ ᐅᓂᑳᓂᐅᔪᖅ ᐱᖓᔪᒋᔭᖓ ᑎᓴᒪᐃᓕᖃᖓᔪᑦ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᒧᑦ ᐅᓂᑳᖅ ᐃᓄᒃᑎᑑᓕᕐᑎᑕᐅᓯᒪᔪᖅ.

2. ᑭᓱᒨᖕᒪᖔᑦ

ᐅᓇ ᐅᓂᑳᖅ ᑭᖑᓕᕐᕚᖅ ᓄᐊᑕᐅᓯᒪᔪᓂᑦ ᐊᒪᓗ ᐅᓂᑳᓕᐊᕆᔭᕗᑦ ᒪᓕᓗᒋᑦ ᒪᓇᐅᔪᖅ ᐊᑐᕐᑕᐅᔪᖅ ᐃᒪᕐᒧᑦ ᐱᔪᓇᐅᑎᒧᑦ ᐃᓱᓕᓂᖃᓛᕐᒪᑦ ᑎᓯᐱᕆ 31, 2011ᒥ ᐊᒪᓗ ᑕᐃᒪᐃᓂᖓᓄᑦ ᐅᐊᓯᔭᕆᐊᖃᔾᔪᓂᕐᑕ ᑎᓴᒪᑭᒐᔭᕐᑕᖓᓂ ᑎᓴᒪᐃᓕᖃᖓᔪᓂ.

ᐅᓂᑳᓯᒪᑎᐊᕐᑐᖅ ᓄᓇᓕᖓᓂ ᐅᐊᓯᓂᖅ ᑲᔪᓯᓚᐅᑐᖅ ᒪᕈᓕᕿᒥ ᑕᐃᒪᖓᓂ ᒪᕈᓕᕿ ᐱᒋᐊᓕᓚᐅᓯᒪᒪᑦ 1981ᒥ ᐊᒪᓗ ᑲᔪᓰᓇᕐᓗᓂ ᑕᐃᒪᖓᓂᑦ ᖃᓄᐃᑐᓂᕕᓂᖓᓄᑦ ᐅᑎᑎᑕᐅᓇᓱᓕᕐᓂᕆᓚᐅᑕᖓᓂᑦ ᐱᔭᕆᑕᐅᓚᐅᕐᑐᑦ ᓯᑎᐱᕆ 2004ᒥ. ᐊᕐᕌᒍ ᑕᒫᑦ ᖃᐅᔨᓴᕐᑕᐅᓂᐅᖃᑕᕐᑐᑦ ᒪᕈᓕᕿᒥ ᑲᔪᓯᓚᐅᑐᑦ ᐊᒪᓗ ᒐᕙᒪᑯᑦ ᖃᐅᔨᓴᕐᓂᖓᑦ ᐊᕐᕌᒍᑕᒫᑦ ᑲᔪᓯᖃᑕᓚᐅᑐᑦ ᓄᓇᖃᖃᓯᒪᔪᑦ ᐅᐊᓇᕐᒥᐅᓗ ᐱᕙᓕᐊᔪᓕᓇᕈᖏᓂᑦ ᑲᓇᑕᒥ ᐃᓚᐅᓗᓂ ᐊᐅᔭᖓᓂ 2011ᒥ.

ᖃᓄᐃᑐᓂᕕᓂᖓᓄ ᐅᑎᑎᓇᓱᓂᖅ ᑲᔪᓯᓚᐅᖏᑐᖅ ᒪᕈᓕᕿᒥ 2011ᖑᑎᓗᒍ ᑭᓯᐊᓂ ᓯᑎᐱᕆ 1ᒥᑐᐊᖅ, ᑭᖑᓕᕐᕚᖅ ᑏᒃᑯᑦ ᐱᖁᑎᖏᑦ ᑕᐃᑲᖓ ᓄᑕᐅᓚᐅᑐᑦ ᓯᓂᕐᑕᐅᑎᕈᔪᖏᑦ, ᐱᖁᑎᖏᑦ ᐊᓯᖏᓗ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᐅᓯᔭᐅᓗᑎᒃ. ᕿᔪᓗᓂ ᓯᕐᓗᐊᖅ ᑕᐃᑯᖓ ᕿᒪᒃᑕᐅᓚᐅᑐᖅ ᓄᓇᓕᒥᐅᓄᑦ ᐃᓄᖏᓄᑦ ᑕᐃᑯᖓ ᕿᒪᒃᑕᐅᖁᔭᐅᓚᐅᒪᑦ. ᒪᕐᕉᒃ ᑎᓴᒪᓖᒃ, ᐅᒥᐊᖅ ᐊᓯᕈᓗᔭᖏᓗ ᐱᖁᑏᑦ ᓱᓕ ᒪᕈᓕᕿᒥᓚᐅᑐᑦ ᓯᑎᐱᕆ 2ᖑᕋᓱᒃᓂᖓᓂ ᒥᐊᕆ ᑕᓯᖓᓂ ᖃᐅᔨᓴᕈᑎᒃᓴᐅᓗᑎᒃ. ᒥᐊᕆ ᑕᓯᖓ ᖃᐅᔨᓴᕈᑎᒃᓴᐅᔭᕆᓚᒪᑦ, ᑕᐃᑯᐊ ᐃᖏᕋᔪᑎᕈᔪᐃᑦ ᑕᐃᑲᖓ ᓅᑕᐅᓚᐅᒥᔪᑦ.

3. ᐃᒪᐅᑉ ᐱᐅᓂᖓᑕ ᐅᐊᓯᔭᐅᓂᖓ

ᐱᖓᔪᖓᓂ ᑎᓴᒪᐃᓕᖃᖓᔪᓂ, ᐃᒪᐅᑉ ᐱᐅᓂᖓᑕ ᐅᐊᓯᔭᐅᓂᖓ ᒥᐊᕆ ᑕᓯᖓᓂ ᑲᔪᓯᓚᐅᑐᖅ ᓯᑎᐱᕆ 2ᖑᑎᓗᒍ ᐊᒪᓗ ᒥᐊᕆ ᑰᖓᑕ ᑰᒃᓂᖓ ᖃᐅᔨᓴᕐᑕᐅᓚᐅᕐᒥᔪᖅ ᐱᓇᓱᐊᕈᓯᑕᒫᑦ ᔪᓚᐃᒥ, ᐊᐅᓯᒥ ᐊᒪᓗ ᓯᑎᐱᕆᐅᑉ ᐱᒋᐊᕐᓂᖓᓂ.

3.1. ᒥᐊᕆ ᑰᖓ

ᐃᒪᕐᒧᑦ ᐱᔪᓇᐅᑎᒃ ᐱᔭᕆᐊᖃᑎᓯᔪᖅ ᐱᓇᓱᐊᕈᓯ ᑕᒫᑦ ᖃᐅᔨᓴᕐᑕᐅᖃᑦᑕᖁᔨᓗᓂ ᒥᐊᕆ ᑰᖓᓂᒃ ᑰᒃᑎᓗᒍ. ᐃᓚᒋᐊᕈᑦ 2 ᐃᒪᐅᑉ ᐱᐅᓂᖓᑕ ᖃᐅᔨᓴᕈᑎᕕᓃᑦ ᑎᑎᕋᓯᒪᔪᑦ ᐊᐅᔭᐅᓚᐅᑐᖅ ᖃᐅᔨᓴᕈᑎᕕᓂᕐᓂᑦ. ᐃᒪᐅᑉ ᐱᐅᓂᖓᑕ ᖃᐅᔨᓴᕈᑎᓕᒫᑦ ᒪᓕᒃᓯᒪᔪᑦ ᒪᓕᒋᐊᖃᑕᑎᓂᒃ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᖓᓂᑦ. ᐅᒪ ᐊᑕᓂ ᑎᑎᕋᓯᒪᔪᑦ ᓇᐃᓈᕐᓯᒪᓗᒋᑦ ᑎᑎᕋᓯᒪᔪᑦ ᐱᒪᕆᐅᔪᓂᒃ ᖃᐅᔨᓴᕈᑎᒥᑦ ᖃᐅᔨᔭᐅᓂᑯᐃᑦ:

	ᓴᕕᕋᔭᒃᓴᖃᓂᖓ-ᐅᒃᑐᒧᑦ ᐃᖑᓯᔪᐊᒧᑦ		
	ᐊᕿᓂᕐᓴᖅ	ᓴᕕᒃᓴᔭᖅ	ᐊᖏᓂᖓ[1]
ᐃᒪᕐᒧ ᐱᔪᓇᐅᑎᐅᑉ ᐃᓱᓕᑕᕐᕕᖓ			
ᑕᕿᓕᒫᕐᒧᑦ ᐊᖏᓛᖅ	0.07	0.50	15.00
ᐃᓱᓕᑕᕐᕕᖓ ᐊᖏᓛᖑᔪᓇᐅ	0.14	1.00	30.00
ᖃᐅᔨᓴᕐᑕᐅᔪᑦ ᐅᓪᓗᖏᑦ:			
ᔪᓚᐃ/2/2011	0.0030	0.011	1.0
ᔪᓚᐃ/12/2011	0.0002	0.025	1.0
ᔪᓚᐃ/18/2011	0.0002	0.057	1.0
ᔪᓚᐃ/23/2011	0.0001	0.062	3.0
ᐊᐅᓯ/16/2011	0.0002	0.041	1.0
ᐊᐅᓯ/26/2011	0.0002	0.041	1.0
ᓯᑎᐱᕆ/2/2011	0.0002	0.041	1.0
ᓯᑎᐱᕆᔭ/09/11	0.0003	0.051	1.0

ᐅᐳᓇᓗᒍ-ᖃᐅᔨᓴᕐᑕᐅᔪᑦ ᒥᑭᓂᕐᓴᐅᔪᑦ ᐃᓱᓕᕕᓴᓂᑦ

ᖃᐅᔨᓴᕐᑕᐅᔪᑎᕕᓃᑦ 1

3.2. ᒥᐊᕆ ᑕᓯᖓᑕ ᑕᕆᐅᖑᓕᓈ

ᐃᒪᕐᒧᑦ ᐱᔪᓇᐅᑎᒃ ᐱᔭᕆᐊᖃᑎᓯᔪᖅ ᖃᐅᔨᓴᕐᑕᐅᑎᐊᓗᓂ ᖃᐅᔨᓴᑕᐅᐊᔪᑎᓴᕐᒥᒃ ᐱᖁᔨᓗᑎᒃ ᒥᐊᕆ ᑕᓯᖓᑕ ᑕᕆᐅᖑᓕᓇᖕᓂᖓᓂᑦ ᒪᕈᐃᓂᑦ ᓯᑯᖃᕐᑎᐊᓂᕐᐹᖑᓕᕐᐸᑦ. ᑕᒪᓇ ᖃᐅᔨᓴᕐᓂᖅ ᑲᔪᓯᓚᐅᑐᖅ ᓯᑎᐱᕆ 2, 2011ᖑᑎᓗᒍ.

ᓇᐃᓈᕐᓗᒍ, ᖃᐅᔨᓴᕐᑕᐅᓗᐊᑕᕐᓂᒧᑦ ᖃᐅᔨᔭᐅᔪᑦ ᓂᕆᐅᒋᔭᐅᓚᐅᓗᑎᒃ ᑕᐃᒪᐃᖢᑎᒃᓗ:

- ᓴᓇᒪᓂᖓ ᒋᐊᕈ ᑕᓯᖓᑕ ᓱᓕ ᐊᑕᕐᓇᑐᒥᖏᑐᖅ ᐱᔪᑎᒋᓗᒍ ᑕᕆᐅᖑᓕᕆᓂᖓᑕ ᐊᔨᒌᖏᓂᖏᑦ (ᓲᕐᓗ ᐃᑎᓕᕙᓕᐊᓗᓂ ᑕᕆᐅᖑᓕᕐᐸᓕᐊᓂᖓ) ᑕᕙᓂ ᐃᒪᖓᑕ ᑕᕆᐅᖑᓕᕇᓂᖓᓂ.
- ᖃᐅᔨᓴᕐᑕᐅᔪᓂ ᖃᐅᔨᔭᐅᔪᑦ ᖄᕐᐸᓯᐊᓂᑦᑕᓯᐅᑉ ᐃᖃᖓᓄᑦ ᑎᑭᖢᒍ ᑕᓯᐅᑉ ᐊᔨᓗᐊᖓᓂ ᖃᐅᔨᓴᕐᑕᐅᔪᑎᐅᔪᑦ ᑕᐃᒪᐃᑐᓚᐅᑐᖅ ᐊᓂᒍᕐᑐᓂ ᐊᕐᒍᔪᕐᑎᑐᑦ ᑕᐃᒪᖓᓂ ᐅᑎᑎᑕᐅᓇᓯᓂᖓ ᐱᔭᕆᕐᑕᐅᒪᑦ.

ᐃᓚᒋᐊᕈᑦ 3ᒥ ᐃᓗᓕᓕᒃ ᒪᕈᓕᕿᒥ ᖃᐅᔨᓴᕈᑎᓂᒃ ᓄᐊᓚᐅᑕᕗᑦ ᐃᒪᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᕕᖓᓂᑦ ᐃᑎᓕᕆᓂᖓᓂᑦ ᐃᒪᖓᑕ ᑕᕆᐅᖑᓕᕆᓂᖓᓂᑦ. ᖃᐅᔨᓴᕐᑕᐅᔪᑎᕕᓃᑦ ᐃᓗᓕᖅᒥᔪᑦ ᐅᑯᓂᖓ: ᐃᒪᖓ, ᐅᓇᕐᓂᖓ, ᐳᓚᖃᓂᖓ, ᑕᕆᐅᖑᓕᕆᓂᖓ ᐊᒪᓗ ᐳᓚᖃᓗᐊᓕᖏᑲᓗᐊᒪᖔᑦ. ᐃᓚᒋᐊᕈᑦ 4ᒥ ᐃᓗᓕᓕᒃ ᐃᒪᐅᑉ ᐃᒪᕐᓗᖃᒪᖔᑦ ᖃᐅᔨᓴᕐᑕᐅᔪᑎᕕᓂᖏᑦ ᐱᔭᐅᓚᐅᑐᑦ ᐃᑎᓕᕇᓂᖓᓂᑦ ᑕᕆᐅᖑᓕᕇᒃᑐᕐᒥᑦ ᐃᒪᕐᒥᑦ.

ᐅᒋᐊᓇᕐᑐᐊᓗᒥᒃ ᖃᐅᔨᔭᐅᔪᖃᓚᐅᖏᑐᖅ ᐊᒪᓗ ᐃᒪᕐᓗᖓ ᓱᓕ ᑕᑯᓴᐅᔪᖅ:

- ᖄᕐᐸᓯᖓ ᐃᒪᐅᑉ ᓴᕕᕋᔭᒃᓴᖃᓂᓇᔭᖓ ᐊᑕᖏᕐᑐᕐᒥᒃ ᑐᖓᓂᑐᖅ 0.2 ᐆᒃᑐᕐᒧᑦ/ᐃᖑᓯᔪᐊᕐᒧᑦ (9ᒥᑕᒥᒃ ᐅᒃᑐᒧᑦ ᐃᑎᓂᖓ ᐊᒪᓗ ᐃᑲᓂᕐᓴᖓᓂ), ᐊᒪᓗ
- ᓴᕕᕋᔭᒃᓴᖃᓂᖓ ᐊᖏᓂᕐᓴᕈᖃᑕᕐᑐᖅ 9ᒦᑕᒥᒃ ᐃᑎᓂᖓᓂ (0.221 ᐆᒃᑑᒧᑦ/ᐃᖑᓯᕐᔪᐊᕐᒧᑦ ᓴᕕᕋᔭᒃᓴᕐᒥᒃ) ᐊᒪᓗ 10ᒦᑕᒥᒃ ᐃᑎᓂᖓᓂ (0.376 ᐆᒃᑑᒧᑦ/ᐃᖑᓯᕐᔪᐊᒧᑦ ᓴᕕᕋᔭᒃᓴᑕᖃᓂᖓ), ᐊᒪᓗ
- ᑕᐃᒪ ᓴᕕᕋᔭᒃᓴᑕᖃᓂᖓ ᒥᑭᓕᕙᓕᓇᓗᓂ 11ᒦᑕᒥᒃ ᐅᑎᓂᕐᒥᕐᑐᑦ (0.153 ᐆᒃᑑᒧᑦ/ᐃᖑᓯᕐᔪᐊᕐᒧᑦ ᓴᕕᕋᔭᒃᓴᕐᒥᒃ), ᐊᒪᓗ
- 12ᒦᑕᒥᒃ ᐃᑎᓂᖓ, ᑲᑎᖢᕆᑦ ᓴᕕᕋᔭᒃᓴᖃᓂᖓ ᒥᑭᓕᕚᓕᓇᓗᓂ 0.026ᒧᑦ ᐆᒃᑐᒧᑦ/ᐃᖑᓯᔪᐊᒧᑦ, ᐊᒪᓗ ᒥᑭᓕᕙᓕᐊᖏᓇᓕᒫᕐᖢᓂ 0.010 ᑎᑭᖢᒍ ᐆᒃᑑᒧᑦ/ᐃᖑᓯᕐᔪᐊᕐᒧᑦ ᑎᑭᓗᒍ 15ᒦᑕᒥᒃ ᐃᑎᓂᖓᓄᑦ.

ᐱᒪᕆᐅᕗᖅ ᐅᐱᕆᔭᐅᔭᕆᐊᓕᒃ ᐊᖏᓂᕐᐹᖑᔪᖅ ᓴᕕᕋᔭᒃᓴᕐᑕᓕᒃ (ᑕᐃᒪᐃᑐᔪᖅ 10ᒦᑕᒥᒃ ᐃᑎᓂᖓᓂ), ᑐᖔᓂᑐᖅ 0.5 ᐆᒃᒃᑐᒧᑦ/ᐃᖑᓯᔪᐊᕐᒧᑦ ᑕᐃᒪᐃᑕᕆᐊᖅᑎᓯᔪᑦ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᒥ ᑰᖓᓂ ᑕᓯᕐᒥᖔᕐᑐᕐᒥᑦ. ᐃᓚᒋᐊᕈᑦ 5 ᐃᓗᓕᓕᒃ ᑎᑎᖅᑲᓯᒪᔪᓂ ᓇᓗᓇᖏᐃᓯᔪᑦ ᒥᑭᓕᕙᓕᐊᓂᖓᓂᒃ ᓴᕕᕋᔭᒃᓴᐅᑉ ᑕᐃᒪᖓᓂᑦ 2005ᒥᓂᑦ.

3.3. ᐊᑎᖏᑦ ᐃᒪᐅᑉ ᖄᕐᐸᓯᐊᓂᑐᑦ

ᐊᖏᕐᑕᐅᓯᒪᔪᑦ ᖃᓄᐃᑐᓂᖓᓄᑦ ᐅᑎᑎᑕᐅᓇᓯᓂᒧᑦ ᐸᕐᓇᒍᑎᑎᓂ ᖃᐅᔨᓴᓇᐊᖅᑎᓯᔪᖅ ᐃᒪᐅᑉ ᖄᕐᐸᓯᐊᓂᒃ ᒪᕈᐃᖑᔪᓂ ᐊᕋᒍ ᑕᒫᑦ. ᑕᑯᐊ ᖃᐅᔨᓴᕐᑕᐅᔪᑎᒃᓴᐃᑦ ᐱᔭᐅᓚᐅᑐᑦ ᐱᖓᔪᖓᓂ ᑎᓴᒪᐃᓕᖅᖓᔪᑦ ᐊᐅᔭᑯᑦ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᐱᔪᓇᕐᓯᑐᐊᕐᑕ ᐱᓚᐅᓯᒪᒪᓚᑕ (ᑕᑯᓗᒍ ᐃᓚᒋᐊᕈᑦ 6 ᖃᐅᔨᓴᕐᑕᐅᕕᓚᓇᒥ ᖃᐅᔨᓴᕈᑎᕕᓃᑦ ᐅᓂᑳᖏᑦ). ᖃᐅᔨᔭᐅᓂᑯᐃᑦ ᐅᒪ ᐊᑖᓂ ᑎᑎᕐᓯᒪᔪᑦ.

3.3.1. ᐊᐅᐸᕐᑐᖅ ᕿᒥᑯᓗᒥ ᓴᐅᔭᐅᓯᒪᔪᑦ

ᐊᐅᐸᕐᑐᖅ ᕿᒥᑯᓗᒥ ᓴᐅᔭᐅᓯᒪᔪᑦ ᓯᕕᖓᔪᖅ ᓴᐅᔭᐅᓯᒪᓂᖓ ᖄᕐᐸᓯᐊᓄᖓᐅᔪᖅ ᐃᒪᖅ ᑰᒍᓇᖅᑯᓗᒍ ᓴᐅᓯᒪᔪᕐᒥᑦ. ᐊᖏᕐᑕᐅᓯᒪᓂᖏᑦ ᓱᕈᕐᓯᒪᔪᑦ ᑐᐊᐸᐃ ᓴᐅᓯᒪᔪᕐᒥ ᐱᔭᕆᐊᖅᑎᓯᕗᑦ ᖄᕐᐸᓯᐊᓂᑐᑦ ᐃᒪᕈᔪᐃᑦ ᖃᐅᔨᓴᕐᑕᐅᖃᑕᕆᐊᓖᑦ ᐊᕋᒍᑕᒫᑦ. ᔪᓚᐃ 19ᖑᑎᓗᒍ, ᖄᕐᐸᓯᐊᓂᑐᖅ ᐃᒪᖅ ᖃᐅᔨᓴᕐᑕᐅᓚᐅᑐᖅ ᐊᒪᓗ ᖃᐅᔨᔭᐅᓂᖓ ᐊᔭᐸᓗᒋᓚᐅᑕᖓ ᐊᕋᒍᔪᓂ ᐊᓂᒍᕐᑐᓂ ᑕᐃᒪᐃᑐᖃᑕᓚᐅᓂᖓᑐᑦ. ᓴᕕᕋᔭᒃᓴᐃᑦ ᐃᒪᕐᒥ ᐊᑎᒃᑐᔪᖅ ᓇᓴᐅᑖ ᑕᐃᒪᐃᓂᖓᓄ ᐃᓯᒫᓗᓇᖏᑐᖅ ᐃᒪᐅ ᐱᐅᓂᖓ ᐱᓪᓗᒍ. ᐅᑯᐊᑕᕙ ᖃᐅᔨᔭᐅᓂᑯᐃᑦ:

- ᓴᕕᕋᔭᒃᓴᖅ ᐊᕿᓂᓴᖅ 0.0006 ᐆᒃᑐᕐᒧᑦ/ᐃᖑᓯᕐᔪᐊᕐᒧᑦ (ᑲᑎᓗᒍ)
- ᓴᕕᕋᔭᒃᓴᖅ 0.012ᖑᓗᓂ ᐅᒃᑐᕐᒧᑦ/ᐃᖑᓯᕐᔪᐊᕐᒧᑦ (ᑲᑎᓗᒍ)

3.3.2. ᓱᑲᑲᖓᔪᖅ ᑕᓯᖅ

ᑐᐊᐸᓕᕐᓱᕐᑕᐅᓗᓂ ᖃᑎᓯᓯᒪᔪᖅ ᓱᑲᑲᖓᔪᖅ ᑕᓯᕐᒥ ᖃᐅᔨᓴᕐᑕᐅᖃᑦᑐᖅ ᐊᕋᒍ ᑕᒫᑦ ᓯᑯᖃᕐᓂᕈᖓᑦ ᐊᐅᔭᑯᑦ. ᐃᒪᕐᒥ ᐱᓚᐅᑐᒍᑦ ᖃᐅᔨᓴᕐᑕᐅᔪᒃᓴᕐᒥᒃ ᖃᑎᒃᓯᓯᒪᔪᕐᒥᑦ ᓱᐸᕐᓯᒪᐸᔭᒃᑐᕐᑕᓖᑦ ᐃᒪᕐᒥ. ᖃᑎᒃᓯᓯᒪᔪᖅ ᓱᓕ ᐊᑦᑕᕐᓇᖏᑦᑐᕐᒥᒃ ᐊᒪᓗ ᑕᑯᓴᐅᔪᕐᑕᕐᓴᕐᓂ ᑎᓯᕐᑐᕐᒥᒃ ᑐᐊᐸᕐᒥᒃ ᑕᕙᖓ ᖃᑎᒃᑐᐊᓇᔭᐅᓯᒪᔪᕐᒥᑦ. ᑕᓯᐅᑉ ᐃᒪᖓ ᑲᑭᐊᑎᐊᓚᐅᑐᖅ ᑕᑯᓴᐅᓂᖓ ᒪᓕᖢᒍ ᐊᒪᓗ ᒪᕿᔪᕐᖏᖢᓂ ᓯᐅᕿᔪᓇᓂᖓ ᐃᒪᖓ ᓇᓗᓇᐃᑕᐅᑲᓂᓚᐅᑐᖅ ᖃᐅᔨᓴᕈᑎᓂᑦ.

4. ᖃᓄᐃᑐᓚᑖᖑᓂᖓ ᐊᑕᕐᓇᖏᓂᖓ ᒪᕈᓕᕿᒥ

ᖃᓄᐃᑐᓚᑖᖑᓂᖓ ᐊᑕᕐᓇᖏᓂᖓ ᒪᕈᓕᕿᒥ ᐅᐊᓯᔭᐅᖃᑦᑐᖅ ᐅᔭᖁᓕᕆᐳᒪᕆᐅᑉ ᖃᐅᔨᓴᕐᑎᖓᓄᑦ ᒪᕈᓕᕿᒥ ᐊᒪᓗ ᑲᑎᓕᕆᓂᖏᑕ ᕿᖑᒥᒪᕐᑕᐅᓂᖏᓂ.

4.1. ᓄᓇᖓᑕ ᐊᐅᓚᓂᖓᑕ ᕿᖑᓯᔭᕐᑕᐅᓂᖓ

ᓄᓇᖓᑕ ᐊᐅᓚᓂᖓᑕ ᓇᓗᓇᐃᓯᒪᑎᐊᕐᑐᓂᒃ ᕿᖑᒥᒐᕐᑕᐅᖃᑕᓚᐅᑐᖅ ᐊᕐᒍ ᑕᒫᑦ ᖃᐅᔨᓴᕐᑕᐅᓗᓂ ᐃᓂᓚᒃᐸᓕᐊᓂᖓ ᓄᓇᖓᑕ ᖄᕐᐸᓯᐊᓂᑐᖅ ᐊᑖᓂ ᐅᔭᕿᒃᓯᐅᕕᐱᓂᐅᑉ. ᑭᖑᒥᒐᕐᓂᖅ 2011ᖑᑎᓗᒍ ᐅᔭᕐᓇᑐᐊᓗᓂ ᐊᓯᔮᕐᓂᑕᖃᓚᐅᖏᑐᖅ ᐊᕐᒍᔪᑦ ᓯᕗᓂᐊᓂᑦ. ᓯᕙᖓᓕᕆᓂᖓᓂ ᓴᕿᔮᕐᑎᓯᔪᖅ ᓄᓇᖑᐊᖅ ᐃᓚᒋᐊᕈᑦ 7ᒥᑐᖅ.

4.2. ᓯᒃᔭᕐᐸᓯᐊᑕ ᕿᖑᒥᒐᕐᑕᐅᓂᖓ

ᐊᕐᒍᑕᒫᑦ, ᕿᖑᒥᒐᖅᑕᕐᑐᒍᑦ ᐱᖓᓱᐃᓕᖅᖓᔪᓂ ᓯᒃᔭᕐᐸᓯᐊᓂ ᑕᐃᑯᓂ ᓯᕙᖓᓕᕐᑎᑕᐅᑲᓂᕐᓯᒪᒪᑕ ᖃᓄᐃᑐᓂᕕᓂᖓᓄ ᐅᑎᕐᑎᑕᐅᓇᓱᒃᑎᓗᒍ ᐊᕿᑕᐅᓂᑯ. ᕿᖑᒥᒐᕐᓗᑕ ᖃᐅᔨᓇᓱᖃᑕᕐᑐᒍᑦ ᑎᓱᓯᒪᒪᖔᑕ ᓯᒃᔭᕐᐸᓯᐊᓄ ᐊᕿᓱᓚᐅᓯᒪᔭᕗᑦ ᒪᓕᓄᑦ. ᕿᖑᒥᒐᕐᓗᑕ ᑕᑯᓴᐅᔪᓂ ᖃᐅᔨᓴᖃᑕᕐᑐᒍᑦ ᓯᔭᖓᓂ ᑕᑯᑯᓴᐅᔪᖃᒪᖔᑦ ᓯᒃᔭᕐᐸᓯᐊᓂ ᐊᓯᔮᕐᑕᐅᓂᑯᓂᑦ ᓯᑯᓄᑦ ᐊᒪᓗ ᒪᓕᖕᓄᑦ, ᑕᑯᓴᐅᔪᕐᒥ ᑎᓱᔪᖃᐸᓕᐊᖏᑐᖅ. ᑎᑎᕐᐅᔭᕐᓯᒪᔪᓂ ᕿᖑᒥᒐᕐᑕᐅᔪᓂ ᓯᒃᔭᕐᐊᓯᐊᓂ ᑕᕙᓂ ᐃᓚᐅᔪᕐᑕᓕ ᐃᓚᒋᐊᕈᑦ 7ᒥᑐᓂᒃ.

4.3. ᐊᕐᒍᑕᒫᑦ ᓄᓇᖓᑕ ᐊᕿᑕᐅᓯᒪᓂᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᓂᖓ

ᓇᓗᓇᐃᓯᒪᓚᕆᑐᑯᓗᓗᑎᒃ ᐱᖏᒪᑕ ᐃᒪᕐᒧᑦ ᐱᔪᓇᐅᑎᑎᓂ ᖃᓄᐃᑐᓂᖓᑕᓗᓃᑦ ᐅᑎᑎᑕᐅᓇᓱᓂᖓᑕ ᐸᕐᓇᒍᑎᒥ ᐊᖏᑕᐅᓯᒪᔪᓂ ᖃᓄᐃᓕᐅᕆᐊᖃᒪᖔᑕ ᒪᓂᕋᖓ ᖃᐅᔨᓴᕐᑕᐅᓂᖓᓂ. ᐊᕐᒍ ᑕᒫᑦ, ᖃᐅᔨᓴᕐᑕᐅᑎᖃᑕᕐᑕᕗᑦ ᐃᒥᓂᕐᓱᕐᑐᕐᒧᑦ ᐅᔭᕿᓕᕆᔨᒪᕆᒧᑦ. 2011ᖑᑎᓗᒍ ᖃᐅᔨᓴᕐᑕᐅᓂᕆᔭᖓᑕ ᐅᓂᑳᖓ ᐃᓚᐅᖃᑕᐅᔪᖅ ᑕᕙᓂ ᐃᓚᒋᐊᕈᑦ 8ᒥ. ᖃᐅᔨᓴᕐᑕᐅᓂᖓ ᐃᓗᓕᖃᓚᐅᒥᔪᖅ ᐊᕿᓱᕐᑕᐅᓯᒪᔪᑦ ᓴᓇᔭᐅᓯᒪᔪᓂ ᐅᕙᓗᓃᑦ ᐊᓯᔭᕆᐊᑕᐅᓂᑯᐃᑦ ᖃᓄᐃᑐᓂᖓᓄᑦ ᐅᑎᑎᑕᐅ)ᓱᒃᑎᓗᒍ ᐅᑯᓇᓂ ᐃᓗᐊᓂᑦ:

- ᒋᐊᕈ ᑕᓯᖓ, ᑰᖓ ᐊᒪᓗ ᓯᒥᓕᐊᖑᓯᒪᔪᖅ
- ᓱᑲᑲᖓᔪᖅ ᑕᓯᕐᒥ ᖃᑎᒃᑐᓕᐊᖑᓯᒪᔪᖅ ᐊᖁᑎᓕᐊᖑᓯᒪᔪᕐᒥᓗ
- ᓄᑖᖅ ᑐᐊᐸᒃᑕᕐᕕᐅᔫᑉ ᓄᓇᖓ
- ᓯᕙᖓᔪᓕᐊᖑᓯᒪᔪᖅ ᓄᓇᖓ
- ᐊᑐᕐᑕᐅᔪᖅ ᐊᒃᑕᕐᕕᒃ
- ᐊᐅᐸᕐᑐᖅ ᕿᒥᑯᓘᑉ ᓴᐅᔭᐅᓯᒪᓂᖓ
- ᐅᔭᕿᒃᓯᐅᕕᐅᓚᐅᑐᑦ ᐃᓯᕐᑕᕕᖏᑦ
- ᓯᒃᔭᕐᐊᓯᐊ ᐃᓪᓗᖓᖓᓂᑐᖅ ᑐᓚᒃᑕᕐᕕᕕᓂᐅᑉ

ᐅᖃᐅᓯᕆᓯᒪᔭᖏᑦ ᒎᓪᑕ ᑲᑐᔨᖃᑎᒥᖏᑕ ᐅᓂᑳᓕᐊᖏᑦ ᓇᐃᒃᓕᒋᐊᕐᓯᒪᔭᑦ:

ᓄᓇᖓ 1 – ᒋᐊᕈ ᑕᓯᖓ, ᑰᖓ ᓯᒥᓕᐊᕆᓯᒪᔪᕐᓗ

- “ᐅᔭᕐᓇᑐᐊᓗᖏᑐᖅ ᐊᐅᓂᖓᓄᑦ ᐃᓂᓚᒃᓂᑯᑦ ᖄᖓ ᖃᑎᒃᓯᑎᑕᐅᓯᒪᔫᑉ ᓯᒥᓕᐊᖑᓯᒪᔫᑉ ᒪᓇᕐᑖᖅ ᒪᑐᔭᐅᓂᐊᓕᕐᑎᓗᒍ ᐊᕐᒍᑕᒫᑦ ᓄᓇᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᓂᖓᓂ. ᓴᓂᕐᖏᑕ ᓯᕙᖓᓕᕐᑎᓯᒪᔫᑉ ᓯᒥᐅᔫᑉ ᑕᑯᓴᐅᓂᖓ ᓄᖑᑕᐅᕙᓕᐊᓚᐅᖏᑐᖅ ᐃᒪᕐᒧᑦ ᐅᕙᓗᓃᑦ ᐊᑕᕐᓇᖏᑐᖅ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᑕᐅᑎᓗᒍ."
- “ᐃᖑᔭᕆ ᑐᖓᕕᖓᓂᑐᖅ ᓯᕙᖓᓕᕐᑎᑕᐅᔫᑉ ᑕᑯᓴᐅᓂᖓ ᖃᓄᐃᖏᑎᐊᕐᑐᖅ ᐊᒪᓗ ᐊᑐᑎᖅᓯᐊᕐᓗᓂ ᓴᐳᔨᓯᒪᔪᖅ ᓯᕙᖓᔪᐊᕆᓯᒪᔪᕐᒥᑦ ᑲᖐᔭᑯᓘᒃ ᐃᒪᐅᓂᒧᑦ ᑎᓱᕙᓕᐊᖏᑐᖅ.”
- “ᑕᐃᒪᖓᓂ ᐃᒍᑎᕐᑕᐅᓕᓚᐅᒪᑕ, ᑐᐊᐸᖕᒥᒃ ᖃᑎᓯᕙᓕᐊᔪᖃᐃᓇᕐᑐᖅ ᐃᓪᓗᖓᖓᓂ ᖃᑎᒃᑐᓕᐊᕆᔭᐅᓯᒪᔪᕐᒥᒃ ᒪᓕᕐᒧᑦ ᓄᖃᑎᓯᔪᑎᐅᑉ ᓱᓪᓗᖓᓂ. ᖃᑎᓯᓯᒪᔪᖅ ᐅᕙᓗᓃᑦ ᑐᐊᑉ ᒪᓕᒧᑦ ᓄᖃᑎᓯᔪᑎᓕᐊᕆᓯᒪᔪᖅ ᐃᓪᓗᖓᖓᓂᑑᑉ ᑐᐊᐸᖓ ᐊᖏᒃᓕᕙᓕᐊᔪᖅ (ᓲᕐᓗ ᑎᓱᕙᓕᐊᓂᖓ ᓯᓕᓯᕙᓕᐊᓗᓂᓗ) ᐊᑐᓂ ᐊᕐᒍᑖᒪᑦ ᑕᐃᒪᐃᓂᖓᓄᑦ ᑐᐊᐸᖓ ᐊᖏᓕᕙᓕᐊᔪᖅ. ᐊᖏᓕᕙᓕᐊᓂᖓ ᑕᐃᒪᐃᓇᓱᒋᔭᐅᔪᖅ ᓯᑯᒧᑦ ᐊᒪᓗ ᒪᓕᒧᑦ ᐃᑲᓂᖓᓂᑦ ᑯᐊᐸᖓ ᓄᒃᑎᕐᐸᓕᐊᔪᖅ ᖃᓂᒋᔮᓂᑦ ᓂᒋᕐᐸᓯᐊᓂᑦ ᒋᐊᕈ ᑕᓯᖓᑕ. ᑕᒪᓇ ᑕᐃᒪᐃᑑᔮᕐᑐᖅ ᐃᓄᒧᑦ ᑕᐃᒪᐃᑎᑕᐅᓇᓂ ᑕᐃᒪᐃᖃᑕᓂᑯᕐᑰᑐᖅ ᐅᕙᕐᓯᐅᕐᕕᑉ ᐱᒋᐊᕐᑕᐅᓚᐅᕐᑎᓇᒍ. ᑕᒪᓇ ᐊᑕᕐᓇᖏᑐᑯᓗᓗᓂ ᑕᐃᒪᐃᖃᑕᕐᓂᖓ ᑕᐃᒪᐃᑎᓯᔫᔮᕐᑐᖅ ᐃᒪᖅ ᑎᓂᐸᑉᓗᓂᓗ ᐅᓕᑉᐸᑉᓗᓂᓗ ᑐᐊᐸᒥ ᖃᑎᓯᒥᓯᒪᔪᕐᒥᑦ ᑕᓯᕐᒥᑦ ᑰᒧᑦ ᐃᒪᐅᓂᑯᑦ ᐊᐅᔭᐅᑎᓗᒍ. ᑭᓯᐊᓂᓕ, ᑐᐊᐸᑉ ᖃᑎᑐᓕᐊᕆᓯᒪᔪᖅ ᐃᒪᕐᒥ ᓄᖃᖕᓕᕐᑎᓯᖃᑕᕐᒪᑦ ᐊᒪᓗ ᓱᓃᓯᒪᕐᑯᑐᖅ ᑕᓯᐅᑉ ᐃᒪᖓᑕ ᐃᒪᖃᓂᕐᓯᓂᒃ (ᓇᓗᓇᐃᕐᑕᐅᔭᕆᐊᓕᒃ ᒎᓪᑕᑯᑦ ᕿᒥᕈᓚᐅᖏᒪᑕ ᑕᓯᐅᑉ ᐃᒪᖃᓂᕆᔭᖓᑕ ᐊᖏᓂᖓᓂᒃ ᓄᐊᑕᐅᑎᓗᒋᑦ ᖃᐅᔨᓴᕐᑕᐅᔪᑎᖏᑦ ᐊᓯᖏᓄᑦ ᑕᐃᒪᐃᓂᖓᓄᑦ ᑕᒪᓇ ᓇᓗᓇᐃᔪᖅ ᑕᓯᐅᑉ ᐃᒪᖓᑕ ᐊᖏᓂᖓ ᓱᓂᕐᓯᒪᖏᑐᖅ ᑕᐃᒪᖓᓂ 2008ᖑᓚᐅᓯᒪᖕᒪᑦ).

ᓄᓇᖓ 2 – ᓱᑲᑲᖓᔫᑉ ᑕᓯᖓᑕ ᖃᑎᒃᑐᓕᐊᕆᔭᐅᓯᖓᓂᖓ ᐊᖁᑎᓕᐊᖑᓯᒪᔪᕐᓗ

- “ᓱᑲᑲᖓᔫᑉ ᑕᓯᐅᑉ ᐅᐸᑕᐅᔪᓇᕈᑎᖓᑕ ᐊᖁᑖ ᓱᓕ ᖃᓄᐃᖏᑎᐊᕐᑐᖅ, ᐃᒥᓂ ᐊᕿᓱᕐᑐᕐᒥᒃ ᓴᐳᓗᑕᓕᐅᖢᓂ ᓴᕐᕙᐅᕙᓕᐊᖏᑐᖅ ᑰᒃᕕᐅᓂᖏᓂ. ᓯᕗᓂᐊᓂ ᐊᕿᓱᕐᑕᐅᓚᐅᑐᑦ ᓄᖑᐸᓕᐊᔪᑦ ᑎᓱᓗᑎᒃ ᐃᓗᕐᓴᓕᐊᖑᓯᒪᔪᑦ ᐅᔨᕆᔭᐅᓚᐅᑐᑦ ᐊᑕᕐᓇᖏᑐᕐᒥᑐᑦ ᔪᓚᐃ 2011ᖑᑎᓗᖑ ᖃᐅᔨᓴᕐᑕᐅᒪᑦ ᐊᒪᓗ ᑭᖑᓂᐊᒍᑦ ᑲᒪᒋᔭᐅᖏᑲᓗᐊᕈᓂ ᖃᓄᐃᖏᖢᓂ."
- “ᐱᔭᕐᓂᖓᑕ ᐃᓚᖓ ᖃᑎᒃᑐᓕᐊᕆᓯᒪᔪᑦ ᑐᐊᐸᓕᓱᕐᓯᒪᔪᑦ ᑕᐃᒪᐃᑐᔪᖅ ᐱᔪᑎᒥᓗᒍ ᓯᑯ ᐊᔭᒃᑕᐅᕙᓕᐊᖅᑕᕐᓂᖓᓄᑦ ᖃᑎᓯᓯᒪᔪᕐᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ. ᑕᓯᐅᑉ ᐃᒪᖓ ᖃᑎᓯᓯᒪᔪᕐᐸᓯᒥ ᐅᔨᕆᔭᐅᓚᐅᑐᖅ ᓯᑯᖃᖏᑐᖅ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ.

ᓄᓇᖓ 3 – ᓄᑖᖅ ᑐᐊᐸᒃᑕᕕᓕᐊᕆᔭᐅᓯᒪᔪᖅ

- ᐱᕐᔪᐊᖑᖏᑐᕐᒥ ᐃᓄᒧᖏᑐᖅ ᑎᓲᕐᐸᓕᐊᔪᖅ ᐅᔨᕐᓇᓚᐅᑐᑦ ᓇᓗᓇᐃᑕᐅᓗᑎᒃᓗ ᑭᓯᐊᓂ ᐃᓱᒫᓗᓇᖏᑐᑦ. ᓴᓂᕐᓂ ᓯᕕᖓᔪᑦ ᑐᐊᐸᒃᑕᕐᕕᓕᐊᕆᓯᒪᔪᕐᒥ ᑲᔪᓯᔪᖅ ᐊᑕᕐᓇᑐᖓᖏᖢᑎᒃ. ᐃᓱᒫᓗᓇᕐᑐᕐᒥ ᓇᓗᓇᐃᑕᐅᔪᖃᓚᐅᖏᑐᖅ.

ᓄᓇᖓ 4 – ᓯᕕᖓᓂᖓ ᓄᓇᐅᑉ

- “ᐅᔨᓇᕐᑐᐊᓗᓂ ᑕᑯᓴᐅᔪᓂᒃ ᐊᓯᔨᕐᓂᑕᖃᓚᐅᖏᑐᖅ ᐅᔭᕿᒃᓯᐅᕐᕕᕕᓂᐅᑉ ᓯᕕᖓᓂᖓᓂ ᑕᑯᔭᐅᔪᓂ ᔪᓚᐃ 2011ᖑᑎᓗᒍ ᓄᓇᖓ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ ᐃᓱᒪᒋᓗᒍ ᓯᕗᓂᐊᓂ ᒪᑐᔭᐅᓚᐅᑎᓇᒍ ᖃᐅᔨᓴᕐᑕᐅᒪᑦ. ᐅᔨᕐᓇᑐᕐᒥᒃ ᑕᑯᓴᐅᔪᓂ ᐱᑕᖃᓚᐅᖏᑐᖅ ᓯᕕᖓᓂᖓᓂ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ ᐊᑕᕐᓇᕈᑕᐅᔪᓇᕐᑐᓂᒃ ᐃᓄᖕᓄᑦ ᐅᕙᓗᓃᑦ ᐅᒪᔪᕐᓄᑦ.”
- “ᐊᕿᒍ ᑕᒫᑦ ᖁᑎᓕᕆᓂᖓ ᕿᖑᒥᒐᕐᑕᐅᑎᓗᒍ ᓇᓗᓇᐃᓯᔪᖅ ᐅᔨᕐᓇᑐᒪᕆᒥᒃ ᐃᓂᓚᒃᑐᕐᓂᒃ ᐱᑕᖃᓚᐅᖏᑐᖅ ᒪᑐᓂᐅᑉ ᓯᕗᓂᐊᓂ ᐅᐊᓯᔭᐅᖃᑕᕐᑎᓗᒍ (ᓲᕐᓗ, ᑕᐃᒪᖓᓂ 2005ᒥᓂᑦ)."

ᓄᓇᖓ 5 – ᐊᑐᕐᑕᐅᔪᖅ ᐊᒃᑕᕐᕕᒃ

- ᓄᓇᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᓂᑯᖓᑕ ᐅᓂᑳᖓ ᐅᖃᓯᒪᔪᖅ "ᓇᓗᓇᐃᓯᒪᔪᕐᒥᒃ ᓯᕕᖓᓂᖓᑕ ᐊᑕᓇᓕᓂᖓᓂ ᐱᑕᖃᖏᑐᖅ ᐅᕙᓗᓃᑦ ᓴᕿᔮᕐᑐᓂᒃ ᐊᒃᑐᕐᓗᑯᓂᒃ ᑕᑯᓴᐅᔪᕐᑕᖃᓚᐅᖏᑐᖅ. ᓄᑎᒃᓯᒪᔪᕐᓂᒃ ᐅᕙᓗᓃᑦ ᐃᓗᑐᖅᒪᔪᓂᒃ ᐃᓂᓚᖕᓂᖓᓄᑦ ᐱᑕᖃᓚᐅᖏᑐᖅ ᑕᑯᔭᐅᔪᓂ ᐊᒃᑕᕐᕕᐅᑉ ᓯᕕᖓᓂᖓᓂ." ᐃᓱᒫᓗᓇᕐᑐᓂᒃ ᓇᓗᓇᐃᑕᐅᔪᖃᓚᐅᖏᑐᖅ ᐅᓂᑳᓕᐊᖑᓯᒪᔪᕐᒥ.

ᓄᓇᖓ 6 – ᐊᐅᐸᕐᑐᑯᓗ ᕿᒥᒥ ᓴᐅᔭᐅᓯᒪᔪᑦ ᓄᓇᒧᑦ ᐅᓕᒃᑕᐅᓯᒪᓗᑎᒃ

- “ᓴᕿᑐᓂᒃ ᐊᒃᑕᕐᓗᑯᓂ ᐱᑕᖃᖏᑐᖅ, ᓄᑎᒃᓯᒪᔪᓂᓗᓃᑦ ᐅᕙᓗᓃᑦ ᑲᑕᒃᓯᒪᔪᕐᓂᒃ ᐃᓂᓚᖕᓂᑯᓂᒃ ᑕᑯᔭᐅᔪᖃᓚᐅᖏᑐᖅ ᐊᐅᐸᕐᑐᑯᓗ ᕿᒥᕐᒥ ᓴᐅᔭᐅᓯᒪᔪᓂ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ." ᐅᓂᑳᖅ ᐅᖃᓯᒪᒥᔪᖅ ᓴᐅᔭᐅᑎᓗᒍ 2010ᒥ ᐊᔨᒥᖏᑐᑦ ᐊᒃᑕᕐᓗᑯᐃ ᓄᐊᑕᐅᑎᓗᒥᑦ ᒪᑐᓂᐅᑉ ᓯᕗᓂᑎᐊᖓᓂ, ᐊᒪᓗ ᐅᓇᕐᓂᖓᑕ ᖃᐅᔨᓴᕈᑎᖏᑦ ᐊᕿᓱᕐᑕᐅᑎᓗᒥᑦ ᑏᒃᑯᑦ ᓴᕿᑎᓯᓚᐅᑐᑦ ᐊᐅᒪᓂᖓ ᓱᓕ ᐅᓕᖓᑕ ᐅᖓᑖᓂᖏᑐᖅ.

ᓄᓇᖓ 7 – ᐅᔭᕿᒃᓯᐅᕐᕕᐅᑉ ᐃᓯᕐᑕᕐᕕᕕᓂᖏᑦ

- “ᑕᕐᒪᒥᓕᒫᖅ ᑎᓴᒪᐃᑦ ᐃᓯᕐᑕᕐᕕᕕᓂᖏᑦ ᑕᑯᔭᐅᒐᒥᒃ ᓱᓕ ᐱᐅᔭᐃᑦ ᖃᓄᐃᖏᑎᐊᕐᑐᑦ ᐊᒪᓗ ᐊᑕᕐᓇᑐᒥᓕᒪᖓᑕ ᓇᓗᓇᐃᑯᑕᖃᖏᑐᑦ ᓄᖑᓚᓕᒪᖓᑕᓗᓃᑦ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ”.
- “ᓯᕕᖓᓂᖓ ᓯᕗᓂᐊᓂ ᐃᓯᕐᑕᕐᕕᓗᐊᑕᐅᓚᐅᕐᑑᑉ ᓴᐳᓗᑕᓕᕐᑕᐅᑲᓂᓚᐅᑐᖅ ᓯᖓᕐᑕᐅᑎᐊᕐᖢᓂ 2009ᖑᑎᓗᒍ ᓯᕕᖓᓂᖓ ᐊᕿᓱᕐᑕᐅᑲᓂᖢᓂ ᐱᐅᖏᓗᐊᕐᒪᑦ ᑕᔭᐅᓚᐅᑐᖅ ᖃᓄᐃᖏᑎᐊᕐᑐᖅ.”

ᓄᓇᖓ 8 – ᓯᒃᔭᕐᐸᓯᐊᑕ ᐃᒡᓗᖓᖓᓂᑐᖅ ᑐᓚᒃᑕᕐᕕᕕᓂᖅ

- “ᓯᕕᖓᓂᖏᑦ ᐃᒡᓗᖓᖓᓂᑐᑦ ᑐᓚᑕᕐᕕᕕᓂᐅ ᐊᑕᕐᓇᑐᒥᖏᑎᐊᕐᑐᑦ ᐅᔨᕆᔭᐅᓚᐅᑐᑦ. ᑕᑯᓴᐅᔪᕐᒥ ᒪᓕᓄᑦ ᓄᖑᑕᐅᕙᓕᐊᔪᕐᒥᒃ ᐱᑕᖃᓚᐅᖏᑐᖅ, ᓯᐅᕿᔭᐃᓗᓃᑦ ᑎᓱᕙᓕᐊᖏᑐᑦ ᓯᒃᔭᕐᐸᓯᐊᓂ ᔪᓚᐃ 2011ᒥ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ. ᐃᒪᖓ ᐃᒡᓗᖓᖓᓂᑐᖅ ᓯᒃᔭᕐᐸᓯᐅᑉ ᓯᑯᖃᖏᑎᐊᓚᐅᑐᖅ ᒪᓇᐅᔪᖅ ᐊᒪᓗ ᓯᕗᓂᐊᓂ ᓄᓇᖓ ᖃᐅᔨᓴᕐᑕᐅᓂᖃᑎᓗᒍ ᑕᒪᓇ ᓇᓗᓇᐃᓯᔪᖅ ᓯᐅᕿᔭᕐᒥᒃ ᒪᕿᔭᕐᒥᓗᓃᑦ ᑕᓇᐅᒧᑦᑐᖅᐸᓕᐊᖏᑐᖅ ᐊᕿᓱᕐᑕᐅᓯᒪᔫᑉ ᓯᒃᔭᕐᐸᓯᐊᓂᑦ.”
- “ᐊᐅᒪᓂᖓᑕ ᐃᓂᓚᖕᓂᖓ ᐊᒪᓗ ᖃᓄᐃᓕᖓᓂᖓ ᑐᐊᐸᐅᔪᑦ ᑐᑭᓕᕇᑦ ᑕᐃᒪᐃᓕᑎᑕᐅᓯᒪᔪᑦ ᒪᓕᖑᑦ ᐊᒪᓗ ᓯᑯᒧᑦ ᑕᑯᔭᐅᓚᐅᑐᑦ ᓯᒃᔭᕐᐸᓯᐊᓂ ᒪᑐᓂᒃᓴᐅᑉ ᓯᕗᓂᐊᓂ ᖃᐅᔨᓴᕐᑕᐅᓂᖃᑎᓗᒍ." "ᑭᓯᐊᓂᓕ ᐊᑕᖏᕐᓗᒍ ᓯᔭᓕᒫᖓ ᐊᑕᕐᓇᑐᒥᑐᔫᖏᑐᖅ ᐊᒪᓗ ᐱᓕᕆᐊᖑᑲᓂᕆᐊᖅᖁᔨᖏᑐᖅ."

ᓈᒪᓗᓂ ᓄᓇᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᓂᖓᑕ ᐅᓂᑳᖓ ᐃᓚᐅᖅᑕᐅᔪᖅ ᑕᕙᓂ ᐃᓚᒋᐊᕈᑦ 8ᒥ.

4.4. ᑭᐊᑭ ᑕᓯᖏᑕ ᐃᒪᖏᓪ ᖃᐅᑎᓯᒪᔪᖅ

ᐊᖏᔪ ᑕᒪᓵᑦ ᖃᖏᒐᖏᓂᖏᓂᑲᑦ ᓯᕕᖏᓂᖏᓂᑲᑦ ᑭᐊᑭ ᑕᓯᖏᑕ ᑲᔪᓯᑎᑕᐅᓕᐅᔪᑐᖅ. ᐊᑐᓯ 2006ᖏᑎᓗᔪᒍ, ᐊᖏᔪᐊᑎᑭᓗᐃᑦ ᑐᐊᐸᐃᑦ ᓴᓗᑕᓕᓚᓴᐅᓕᐅᔪᑦ ᑕᒪᓭ ᐅᑦᓚᐅᐅᓕᐅᔪᑐᖅ ᐊᓐᖏᑕ ᖃᓂᖏᓂᑲᑦ ᐱᔪᑎᑕᐅᓗᒍ ᓯᐊᓐᒪᑦ ᑕᐃᒪᐃᑎᑕᐅᔪᑦ. ᑕᐃᒪᐃᓂᖏᓄᑦ ᑕᓯᐅᑦ ᐃᒪᖏ ᖃᖏᒐᖏᓂᑲᑦ ᐊᐊᓐᖏᖏᓂᖏᓂᑕ 2005 ᐊᒪᓗ 2008. ᖃᖏᒐᑎᓯᓂᑦ ᓴᓗᑕᖏᓂᖏᑦ ᓴᖃᑎᓯᔪᖅ ᐅᑦᓯᓚᓴᑐᑎᒃ ᐊᓯᑦᓯᑎᒃ ᖃᓄᐃᔪᖏᓂᖏᓂᑕ ᐊᖏᒐᑕ ᐊᖏᒍᒪᑦ ᐱᔪᑎᑕᐅᓗᒍ ᓯᓂᑦ ᓯᓂᓂᖏᓄᑦ (ᑕᓂᓗᒍ ᖃᐅᑎᓕᓂᖏᓂᑕ ᑎᑎᖏᐅᓴᖏᓯᒪᓂᖏᓂᑦ ᐃᓕᓯᐊᓄᑦ 7ᒥ). ᐃᒪᖏᖓ ᑕᓯᐅᑦ ᐊᖏᓕᓂᓕᓪᓚᓗᐊᖅ 0.67 ᑭᑕᒥᒃ 2005ᒥᑦ 2008ᒧᑦ, ᒪᓇᐅᔪᖅ ᐊᓯᐅᓴᓯᒪᔪᓂᓪᓕᖅ ᖃᑎᖏᓂᑦ ᓄᖓᐊᓄᑦ ᔪᓕᐃᒥ ᑕᓯᐅᑦ ᐃᒪᖏᖓ ᐊᓯᐅᓴᓂᖏᓕᕆᔨᖅ ᒥᑎᑦᑎᒥᒃ 0.1ᑭᑕᒥᒃ

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ᖃᐅᔨᓴᑎᐊᓂᑦ 2 - ᑭᐊᑭ ᑕᓯᖏᑕ ᓯᕕᖏᓂᖏᖓ

ᐅᑉᓗᖏᖓ	ᑕᓯᐅᑦ ᓯᕕᖏᓂᖏᖓ (ᐅᑦᔨᑦ ᑭᑕᒧᑦ)	ᐅᖃᐅᓯᖏᓴᐃᑦ
27-ᔪᓂ-05	1005.30	
24-ᐊᒪᓯ-05	1005.26	ᑯᓗᐊᑭᓂᔭᖅ ᓂᒃᓪᓓᓯᓂᖏᓄ ᐱᑉᓗᒍ
29-ᔪᓂ-06	1005.69	
09-ᔪᓪᐃ-06	1005.62	ᑯᒃᔭᖅ ᑐᐊᐸᑯᑦ ᓴᓗᑕᓕᓚᖏᓪᓕᔪᑯᑦ
20-ᐊᒪᓯ-06	1005.50	ᓯᓪᓕ ᑯᒃᔭᖅ ᑯᒃᔭᐊᓗᔪᓂᓪᓗᓂ
31-ᔪᓪᐃ-07	1005.60	ᑯᒃᔭᖅ ᑐᐊᐸᑯᑦ ᓴᓗᑕᓕᓚᖏᓪᓕᔪᑯᑦ
19-ᔪᓪᐃ-08	1005.97	ᖃᖏᓕᖅᑎᑕᐅᓯᒪᔪᖅᑎᒃ ᐊᑐᖅᑐᒧᑦ ᑕᒪᖓᑎᑎᐊᑐᒥ
29-ᐊᒪᓯ-08		ᖃᐅᔨᓴᑎᓀᖓᑕᑉᓂᑦ ᒪᓕᓪᓗᐊᖅᒪᑦ
24-ᔪᓪᐃ-09	1006.09	ᖃᖏᓕᖅᑎᑕᐅᓯᒪᔪᖅᑎᒃ ᐊᑐᖅᑐᒧᑦ ᑕᒪᖓᑎᑎᐊᑐᒥ
14-ᔪᓪᐃ-10	1006.04	ᖃᖏᓕᖅᑎᑕᐅᓯᒪᔪᖅᑎᒃ ᐊᑐᖅᑐᒧᑦ ᑕᒪᖓᑎᑎᐊᑐᒥ
19-ᔪᓪᐃ-11	1006.10	ᖃᖏᓕᖅᑎᑕᐅᓯᒪᔪᖅᑎᒃ ᐊᑐᖅᑐᒧᑦ ᑕᒪᖓᑎᑎᐊᑐᒥ

5. ᐊᓯᖏᑦ ᓄᓀᐃᑦ ᐅᐊᓯᔭᐅᓯᒪᔪᑦ

ᖃᐅᓂᐊᔪᑦ ᐅᐊᓯᓂᐅᑦ ᐃᒪᓕᖃᒪᖏᓕᑦ ᐅᐅᓴᓀᑐᓂᓗ ᐊᑕᓴᓀᖓᑲᓂᓗᐊᒪᖏᓕᑦ ᒪᑐᓕᖏᒥ, ᐅᐊᓯᓂᖅ ᐊᓂᓀᐅᑦ ᓯᐅᓂᓂᓂᑲ ᑎᓵᓗᐸᐃᒥ, ᐅᐊᓯᓂᖅ ᐃᓗᐊᓂ ᐊᐅᑦᓗᓄᐃᑦ ᐅᓀᓂᖏᓂᑲ, ᐊᒪᓗ ᐅᐊᓯᓂᖅ ᓴᐃᕆᔨᐅᓴᐃᑦ ᓄᓀᖏᓂ ᒪᕆᐊᔪᓂᒪᖏᓕ ᓯᓴᓗᓂᐊᐃᐊᓂᒥ ᓴᐃᕆᔨᐅᖏᓴᖓᒥ ᖃᐅᔨᓴᑎᓀᖓᑕᑉᓂᑦ ᐱᖏᓴᖓᑕ ᑎᓴᒪᐃᓕᓂᖏᖓᓂᑦ 2011ᒥ.

5.1. ᖃᓴᓗᐸᐃᒥ ᐊᓀᓀᒪᑦ ᖃᐅᔨᓴᑎᓂᖅ

ᐃᒪᐅᐸ ᐱᔪᓀᐅᑎᖏᓂ ᐊᒪᓗ ᖃᓀᐃᑐᓂᖏᓀᓄᑦ ᐅᑎᑎᑕᐅᓀᓯᓂᖏᓂᑕ ᕿᑎᓀᒍᖏᓂ ᐱᐅᓀᐊᖃᖅᑎᓂᓯᖅ ᓯᓀᖃᖏᑎᓗᒍ ᑭᐊᑭ ᑕᓯᖏᓂ ᐃᖃᓀᐃᐅᖅᑎᑦ, ᕿᑎᓀᒍᖏᓂᑲᑦ ᐃᓀᓀᐊᓀᓯᓂᖏᓂᑕ, ᐊᓀᓀᐅᑦ ᓯᒃᓂᖏᖓ ᐅᐊᓯᔭᐅᑎᓀᓀᒍ ᖃᓴᓗᐸᐃᒥᑦ. ᓀᓗᓀᐃᓯᒪᑎᐊᑎᑦ ᐊᓀᓀᐅᑦ ᓯᒃᓂᖏᓂᑕ ᑎᑎᖃᓯᒪᔪᓂ ᐃᓕᓯᐊᓄᑦ 9ᒥᑦ. ᓯᑎᐱᓇ 22ᒥ ᐊᒪᓗ 23ᒥ, ᖃᓴᓗᐸᐃᒥ, ᐊᓀᓀᐅᑦ ᓯᒃᓂᖏᖓ ᐅᖏᓪᓗᓂᓕᐅᔪᖅ 50 ᑭᓪᓕᒥᑕ/ᐃᒃᖃᖅ 34ᓄᑦ ᐃᒃᖃᓄᑦ ᑲᔪᓯᓀᓗᓂᓂ (66 ᑭᓪᓕᒥᑕ/ᐃᒃᖃᓗᐊᕆᓕᐅᔪᖅ). ᑭᐊᑭ ᑕᓯᖏ ᐅᖏᓯᓂᖏᖓᑦ 80 ᑭᓵᓕᒥᑕᐅᑦ ᐅᖏᓪᓗᓂ ᖃᓴᓗᐸᐃᒥᑦ ᓀᓗᓀᓪᓚᔪᖅ ᑕᐃᒪᐃᔪᐃᓀᐊᕆᓕᐅᒪᖏᓕᑦ ᑭᐊᑭ ᑕᓯᖏᓂᓂ.

ᑭᓯᐊᓂᓪ, ᒪᑭᓗᐊᓪᒃ ᐱᔪᑎᕕᐅᓴᒃ ᖃᓀᐃᒪᓕᑦ ᑕᒪᓀ ᐃᓯᒪᓗᓀᓀᒪᒪᖏᓕᑦ:

- ᓯᓀᐅᓂᐊᓂ ᖃᓀᐃᑐᓂᖏᓂᑕ ᐅᓂᓂᖅᓂ (ᐃᓕᕆᐅᓗᓂ ᐊᖏᔪᑎᑕᐅᓯᒪᔪᓂ ᐃᔨᑎᑎᑕᐅᓂᖅᓂᑦ ᐊᒪᓗ ᖃᓀᐃᑐᓂᖏᓀᓄᑦ ᐅᑎᑎᑕᐅᓀᓯᓂᖏᓂᑕ ᕿᑎᓀᒍᖏᓂᑲᑦ ᐊᒪᓗ ᖃᓀᐃᑐᓂᖏᓀᓄᑦ ᐅᑎᑎᑕᐅᓀᓯᓂᖏᓂᑕ), ᕿᐅᓗ ᐃᐊᓚᓴᓘ ᐃᒪᔪᓂᑲᑦ ᐅᓗᔪᑦᓯᒪᓚᓚᓂᑦ ᖃᐅᔨᓴᑎᓀᖓᑕᑉᓂᑦ ᐊᐸᑎᓯᓚᓚᓂᑦ ᐅᖃᐅᓯᒪᓚᓂᑦ 49 ᑭᓪᓕᒥᑕᒥᑦ/ᐃᒃᖃᓪᓕᑦ ᐊᓀᓀᖓᑦ ᐊᓀᓂᔪᑎᓗᒍ ᐅᓗᔪᓪᓕᑦ ᐊᑕᐅᓯᔪᓪᓕᑦ ᖃᓂᔪᓯᐊᓂᑦ ᐃᖏᓪᓕᔪᓯᔪᓀᓐᖏᑦ 1ᑭᑕᒥᒃ ᑕᓀᐅᔪᔭᐊᓂᑦ ᖃᓂᔪᓯᐊᓂᔪᒥᒃ ᐃᓕᔪᒥᒃ, 8.5ᑭᑕᒥᒃ ᐃᑎᓂᖃᓕᓗᒍ. ᐊᒪᓗ ᐅᓗᓂᑦ 8ᖏᔭᑦ ᑕᐃᒪᓴᐃᓀᖅ ᐊᓀᔪᑎᑎᑭᓂᓴᖃᖅᑐᖅᑎᒃ ᐃᑎᑎᑕᐅᓯᒪᔪᓂ ᑕᒪᓀ ᐃᖏᓪᓕᓯᓚᓂᖓᓄ ᑕᓀᐅᑦ 2ᑭᑕᖏᔪᓂᓂᔪᓪᓕ 10.5 ᑭᑕᒧᑦ ᑎᑭᓗᒍ. ᐅᖃᓕᐅᒥᔭᖅ ᐊᓀᔪᓂᔪᓴᐅᔭᔪᖅ ᑕᐃᒪᓴᐃᓀᖅ ᐃᖏᓪᓕᓯᓚᓴᖓᓄᑦ ᖃᓕᒥᐅᓕᐅᑎᑎᓂᔪᓪᓕ. ᐊᓀᓀᐅᑦ ᓯᒃᓂᖏᓂ ᓯᑎᐱᓀᐅᑎᓗᒍ ᖁᓂᔪᓴᓴᐅᓕᐅᔪᖅ 49 ᑭᓪᓕᒥᑕ/ᐃᒃᖃᓪᓕᑦ ᑕᒪᓀ ᐊᑐᑕᐅᓕᐅᔪᖅ ᒥᔪᑕ ᐃᐊᓀᔪᓴᐅᑎᓗᒍᖓᓂ, ᐅᖏᓪᓗᓀᓐᖏᖓᑦ ᐊᓀᓂᔪᓂᖏᓂ ᐅᓗᐃᑦ ᐊᑕᐅᓯᓄᑦ ᓀᐸᔪᓗ, ᑕᒪᓀ ᐃᖏᓪᓕᓯᓚᓀᓯᓚᖏᓪᓕᔪᑯᓂᖅᑐᑦ ᖁᐸᓯᐊᓂᒃ 10ᑭᑕᒧᑦ ᐃᑎᑎᒥᔪᑦ.

- ᖃᕐᐸᓯᕆᖏᑕᖓ ᑕᓯᐅᑉ ᐃᖕᒍᓚᕐᑕᐅᒐᔭᕐᐸᑦ ᖃᕐᐸᓯᖓᓂᖔᕐᑐᕐᒥᒃ ᑕᓯᕐᒥ, ᑕᐃᒪ ᑕᒪᕐᒥᒃ ᖄᐸᓯᐊᓗ ᐊᑕᓂᕐᑐᕐᓗ ᐊᑎᒃᑐᕐᒥᑲᔭᕐᑐᖅ ᓴᕕᕋᔭᒃᓴᖃᓂᖓ, ᖃᓄᐃᑐᑐᐃᓇᖅ ᐃᒪᖅ ᑰᒃᑐᖅ ᑕᕐᓯᒥᑦ ᑰᖕᒧᑦ ᓱᓕ ᐅᖓᑖᓄᕐᔭᖏᑐᖅ ᐃᒪᐅ ᐱᔪᓇᐅᑎᑕ ᐱᔪᓇᕐᑎᑕᖓᓂᑦ ᒪᓕᒋᐊᖃᑕᑎᓂᑦ.

5.2. ᐊᒃᑕᕐᕕᒥ ᐅᓇᓂᖓᑕ ᖃᐅᔨᓴᕐᑕᐅᓂᖓ

ᑎᓴᒪᐃᑦ ᐅᓇᕐᓂᕐᓯᐅᑏᑦ ᐊᕿᓱᕐᑕᐅᓚᐅᕐᑐᑦ ᑕᒪᐃᓄᑦ ᐊᐅᐸᕐᑐᖅ ᕿᒥᑯᓗᒥ ᓴᐅᔭᐅᓯᒪᔪᑦ ᐊᒃᑕᕐᓗᑯᓂ ᐊᒪᓗ ᐊᑐᕐᑕᐅᔪᖅ ᐊᒃᑕᕐᕕᒥ ᓴᐅᔭᐅᓯᒪᔪᓂ. ᐅᓇᕐᓂᕐᓯᐅᑦ ᐊᑐᓂ ᑕᒪᕐᒥᒃ ᐃᓕᓯᕕᐅᓯᒪᔪᑦ ᐅᓇᕐᓂᓯᐅᑎᓂᒃ ᐊᔨᖏᑐᓂ ᐃᑎᓕᕇᒃᓂ ᐅᓕᖓᓂᓗ ᑕᒪᓂ ᑐᐊᐸᖕᒥ ᐊᒪᓗ ᐃᑎᓂᕐᓴᕐᒥ ᐊᒃᑕᕐᕕᖃᕕᐅᔪᕐᒥ ᐅᐊᓯᔭᐅᕐᑯᓗᒍ ᐅᓇᕐᓂᖓᑕ ᖃᓄᐃᑐᓂᖓ. ᖃᐅᑕᒫᑦ ᐅᓇᕐᓂᓯᐅᑏᑦ ᐅᓕᓯᒪᔪᕐᒥᑐᑦ ᐊᒪᓗ ᑕᒪᐃᓂ ᐃᔪᓂᖏᓂ ᓴᐅᔭᐅᓯᒪᔪᕐᓂ ᑎᑎᕋᑕᐅᕙᓕᐊᔪᑦ ᐃᒥᓂᒃ ᑎᑎᕋᐸᓕᐊᓗᑎᒃ ᑕᒪᐃᓂᓕᒫᖅ ᐅᓇᕐᓂᓯᐅᑎᖃᑐᓂ. ᑕᐃᒪ ᐊᐅᔭᑕᒫᑦ, ᑕᑯᐊ ᑎᑎᕋᓯᒪᔪᑦ ᑕᑯᓇᖓ ᑎᑎᕋᕈᑎᖏᓂᑦ ᓄᐊᑕᐅᖃᑕᕐᑐᑦ ᐊᑐᐃᓇᕈᑎᓯᓗᑎᒃ ᖃᐅᑕᒫᑦ ᐅᓇᕐᓂᖓᑕ ᑎᑎᕋᐸᓕᐊᓯᒪᔭᖏᓂᑦ ᑕᒪᐃᓂ ᐅᓇᓂᕐᓯᐅᑎᓂᑦ.

ᖄᕐᐸᓯᐊ ᑕᒪᕐᒥᒃ ᐊᒃᑕᕐᓗᑯᐃᑦ ᓴᐅᔭᐅᓯᒪᔪᑦ ᐃᔪᓂᖃᑐᑦ ᐅᓕᖏᑦ 1.8 ᒦᑕᒥᒃ ᐊᒪᓗ ᐅᓇᕐᓂᓯᐅᑎᓂᒃ ᐃᓕᓯᕕᐅᓯᒪᓗᑎᒃ ᑕᑯᓴᐅᑎᓯᓗᑎᒃᓗ ᐊᐅᒪᓂᖓᓂᒃ (ᓲᕐᓗ ᓄᓇᖓ ᐊᐅᖃᑕᕐᑐᖅ ᐊᐅᔭᑕᒫᑦ) ᓴᓂᕐᓴᐅᔪᖅ ᐅᓕᓕᐊᓇᓯᒪᔪᕐᒥᑦ (ᐊᐅᒪᖃᑕᕐᓂᖓ ᐃᔪᓂᐹᖅ 1.5ᒦᑕ) ᑕᒪᐃᓂᖓᓄᑦ ᑕᐃᑯᐊ ᐊᒃᑕᕐᓗᑯᐃᑦ ᓴᐅᔭᐅᓯᒪᔪᑦ ᖁᐊᖑᖃᑕᕐᑐᑦ ᐊᕿᒍᓕᒫᖅ. ᑎᑎᕋᓯᒪᔪᑦ 5.2ᒥ ᑕᕙᓂᓗᐊᑕᖅ ᐅᓂᑲᓕᐊᖑᓯᒪᔪᕐᒥ 8ᖑᔪᓂᒃ ᑎᑎᕋᓯᒪᔪᕐᑯᑎᓕᒃ ᓇᓗᓇᐃᓯᒪᔪᓂᒃ ᓂᒃᓚᓱᖕᓂᖓᑕ ᐅᓇᕐᓂᖓᑕᓗᓃᑦ ᐊᓯᔨᕐᑲᑕᓂᖓᓂ ᐊᕿᒎᑉ ᐃᓗᐊᓂ.

5.3. ᓴᕕᕋᔭᒃᓴᖃᐅᑎᕕᓂᖅ ᓯᕐᓗᐊᕕᓂᐅᑉ ᐃᓂᕕᓂᖓᑕ ᓄᓇᖓᑕ ᓱᕈᓯᒪᓂᖓ

ᖃᓄᐃᑐᓂᕕᓂᖓᓄᑦ ᐅᑎᑎᑕᐅᓇᓱᓂᖓᓂ ᒪᕈᓕᕿᒥ, ᓴᕕᕋᔭᓴᕐᒧᑦ ᓱᕈᑕᐅᓯᒪᔪᑦ ᓄᓇᖓ ᐃᓗᐊᓂ ᑐᒥᖑᐊᑉ ᓴᕕᕋᔭᓴᖃᕕᐅᓚᐅᑑᑉ ᓯᕐᓗᐊᖑᓚᐅᕐᑑᑉ ᐃᓪᓗᕐᑯᑖᓂ ᐲᔭᕐᑕᐅᓚᐅᑐᖅ. ᑭᓯᐊᓂᓕ, ᖃᖓᑕ ᖄᐸᓕᓯᒪᑲᓂᕐᑐᑉ ᓴᕕᕋᔭᒃᓴᑕᖃᕈᔪᒃᑐᑉ ᐳᔪᕈᔪᐊᓂᒃ ᐱᑕᓕᒃ ᐊᑖᓂ ᓱᕋᓯᒪᔫᑉ ᖃᐃᑐᕐᒥ ᐃᓪᓗᖃᕕᕕᓂᐅᑉ ᑐᒥᖑᐊᑉ ᐃᓚᖕᓂ. ᖃᓄᐃᑐᓂᖓᓄ ᐅᑎᑎᑕᐅᓇᓱᓂᖓ ᐱᔭᕆᑕᐅᓚᐅᑐᖅ ᐊᒪᓗ ᒥᑭᓕᓚᕐᒥᒃ 0.5 ᒦᑕᒥᒃ ᐃᔪᓂᓕᒧᑦ ᐅᓚᒃᑕᐅᓗᓂ ᑕᐃᑲᖕ ᑐᐊᐸᖕᓂᑦ ᐃᓕᓯᕕᐅᓚᐅᑐᖅ ᑕᐃᑯᖕ ᓱᕈᓯᒪᓂᕐᒧᑦ. ᑏᒃᑯᑦ ᐊᖏᓚᐅᑐᖅ ᖃᐅᔨᓴᕐᑕᐅᔪᑎᓴᕐᒥᒃ ᖄᐸᓯᐊᓂᑦ ᓴᕕ%ᕋᔭᒃᓴᕐᑕᖃᒪᕝᒡ ᑕᐃᕙᓯᒪᕝᒡᑐᒥᒃ ᐊᕿᒍ ᑕᒫᑦ ᖃᐅᔨᓴᕐᑕᐅᖃᕐᑕᒫᑦ ᖃᐅᔨᓴᕐᑕᐅᑎᓗᒍ ᓴᕿᑎᓇᓱᒃᓗᒍ ᑕᒪᐃᒥᒃ ᐊᕿᓂᕐᓴᖅ ᓴᕕᕋᔭᒃᓴᖅ ᐊᒪᓗ ᑎᓯᓂᕐᓴᖅ ᓴᕕᕋᔭᓴᐃᑦ ᑐᓂ ᑐᖕᓂᑐᑦ ᐃᓯᓕᑕᕕᖓᑕ ᐊᖏᑕᐅᓯᒪᔪᑦ ᓴᕕᕋᔭᒃᓴᐃᑦ ᒪᕈᓕᕿᒥ.

6. ᖃᓄᐃᑐᓂᕕᓂᐊᓄᑦ ᐅᑎᕐᑎᑕᐅᓂᖓᓄᑦ ᐱᓕᕆᐊᑦ

ᓴᓗᒪᕐᓴᐃᓂᖅ ᑲᔪᓯᓚᐅᖏᑐᖅ 2011ᖑᑎᓗᒍ. ᓯᑎᐱᕆ 1, 2011ᖑᑎᓗᒍ ᑕᐃᑯᐊ ᐊᒥᐊᑯᖏᑦ ᐊᖏᔪᑎᐅᓂᓴᐃᓗ ᒥᑭᓂᓴᐃᓗ ᐱᖁᑎᑦ ᑕᐃᑲᖕ ᓃᑕᐅᓚᐅᑐᑦ ᒪᕈᓕᕿᒥᑦ ᐅᒥᐊᕐᔪᐊᑯᑦ ᐊᒪᓗ ᐊᐅᓚᐅᔭᐅᓗᑎᒃ ᖃᓗᓈᑦ ᓄᓇᖓᓄᑦ ᑲᓇᑕᒥ. ᓄᖑᐊᓂ ᐱᖓᔪᖓᑕ ᑎᓴᒪᐃᓕᖃᖓᔪᑦ, ᑏᒃᑯᑦ ᓇᒥᓂᕐᑯᑎᖏᓂᒃ ᐱᕐᑯᑎᓂᒃ ᐱᑕᖃᕈᓂᓚᐅᑐᖅ ᒪᕈᓕᕿᒥ. ᐊᑕᐅᓯᑐᐊᖅ ᕿᔪᖕᒥᑦ ᓴᓇᒪᓇᖅ ᐃᓪᓗ ᓱᓕ ᑕᐃᑲᓂᑐᖅ ᖃᓂᒥᔭᓂᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᓕᓂᐊᕐᒪᒍ ᐃᓄᐃᑦ ᓄᓇᕐᑯᑎᖓᓄᑕᐅᓛᕐᓗᓂ ᐅᑭᐅᑯᑦ.

7. ᓇᓚᐅᑖᕐᑕᐅᓯᒪᔪᑦ ᐊᒥᐊᑯᖏᑦ ᑭᓇᐅᔭᐃᑦ ᐅᖓᑖᓄᕈᑏᑦ

ᐃᓚᐅᔪᖅ ᐃᓚᒋᐊᑭᑦ 11ᒥ ᐱᖓᔪᕆᔭᖓᓂ ᑎᓴᒪᐃᓕᖃᖓᔪᑦ ᓄᑕᐅᓕᕐᑕᐅᓯᒪᔪᖅ ᒪᕈᓕᕿᒥ ᐃᒍᑎᕐᑕᐅᓂᖓ, ᖃᓄᐃᑐᓂᖓᓄ ᐅᑎᑎᑕᐅᓂᖓ ᐊᒪᓗ ᐅᐊᓯᓂᖅ - ᖃᓯᓚᓇᓂᒃ ᑭᓇᐅᔭᕐᓂᒃ ᐊᑐᓚᐅᒪᖓᑕ ᑕᒪᑐᒧᖓ. ᑭᓇᐅᔭᐃᑦ ᐅᑐᕐᑕᐅᔪᑦ 2011ᒥ ᓄᖑᐊᓄᑦ ᐱᖓᔪᖓᓂ ᑎᓴᒪᐃᓕᖃᖓᔪᑦ ᓇᓚᐅᑕᕐᑕᐅᓯᒪᓚᐅᑐᖅ $474,500ᖑᓂᐊᕐᓱᕆᔭᐅᓗᓂ. ᐊᖏᔪᕐᒥ ᐱᒪᕆᒥᒃ ᑭᓇᐅᔭᕐᓂ ᐊᑐᓚᐅᖏᑐᑦ ᑎᓴᒪᖓᓂ ᑎᓴᒪᐃᓕᖃᖓᔪᓂ 2011ᖑᑎᓗᒍ ᐱᔪᑎᒋᓗᒍ ᑕᐃᑲᓂ ᐱᓕᕆᓂ ᐊᒪᓗ ᐅᐊᓯᓂᖅ ᑕᒪᐃᑕᕆᐊᖃᑎᓯᒪᑕ ᐃᒍᑎᕆᓂᒧᑦ ᖃᓄᐃᑐᓂᖓᓄᓗ ᐅᑎᑎᑕᐅᓇᓱᓂᒧᑦ ᐸᕐᓇᐅᑎᒃ ᐱᔭᕆᓯᒪᓕᓚᐅᒪᑦ.

ᑐᖓᕕᒋᓗᒍ ᐱᔭᕆᐊᖃᓂᖓ ᒪᓇᐅᔪᖅ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᑉ, (ᐃᓱᓕᓂᐊᑐᖅ ᑎᓯᐱᕆ 31, 2011ᒥ), ᑎᒃᑯᑦ ᐃᓱᒪᒧᑦ ᑕᒪᕿᒥᓕᒫᖅ ᐱᔭᕆᐊᖃᑕᖏᑦ ᒪᓕᓗᒋ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᒃ ᑲᔪᓯᑎᑕᐅᓚᐅᑐᑦ. ᑎᒃᑯᑦ ᐃᓱᒪᔪᑦ ᑭᓇᐅᔭᕐᓂ ᐅᖓᑖᓄᕈᑎᓂᒃ ᐱᑕᖃᖏᑐᖅ ᒪᕈᓕᕿ ᐱᓪᓗᒍ ᒪᓕᓗᒋᑦ ᒪᓕᑕᐅᔭᕆᐊᓖᑦ ᐃᒪᒧᑦ ᐱᔪᓇᐅᑎᒥᖓᕐᑐᓂᒃ.

ᑎᒃᓯᑦ ᐅᖏᐅᓴᖏᖃᕐᓂᒪᔪᑦ ᑐᒃᓴᕐᕿᐅᑎᒥᒃ ᑐᒃᓴᕐᑐᐃᓐᓇᕆᖏᓂᕐᓂᓕᕐᓂᒃ ᐃᒪᒧᑦ ᐱᔪᓐᐅᑎᒃ ᐊᑎᒃ ᑕᐃᔾᐅᐅᔪᖅ ᕆᓯᓯᐅᐅᔪᖅ ᐅᐊᓴᔾᐅᖏᓯᒍᒍᔪᒍ ᒪᑭᓕᖏᑎ ᐅᖏᓪᓗᒍᔪᒍ ᓇᖕᒪᐊ 2011. ᑕᒪᓇ ᓴᓕ ᐊᖏᑕᐅᑲᓂᕆᐊᓕᓕᒃ. ᑎᒃᓯᑦ ᒪᓇᐅᒧᖅ ᑐᒃᓴᕐᑐᑦ ᐅᑎᖏᑎᐊᒪᓗᑎᒃ ᐊᒥᐊᓯᖏᓂ 3,539,000ᒥᒃ ᓴᓗᒪᖏᓴᕐᑐᐅᓂᖏᑕ ᓴᓂᕐᑦᑕᐅᓴᒪᓂᖏᓂ ᒪᓕᓗᒍ ᖃᓄᐃᑦᓂᓂᖏᓐ ᑕᑯᐊ ᐅᖏᒪᔾᐅᑎᐅᐊᕐᓂᑦ.

APPENDIX 2

Letter Report Titled

"Implications of Subleathal Toxicity Testing Results at the Polaris Mine"

Azimuth Consulting Group

April 3, 2013

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Our File #: TC-03-01

April 3, 2013

Mr. Bruce Donald
Teck Metals
PO Box 2000
Kimberley BC V1A 3C1

Dear Mr. Donald:

RE: Implications of Sublethal Toxicity Testing Results at Polaris Mine

At the request of Teck Metals (Teck), Azimuth has prepared this brief summary of results of sublethal toxicity test results at the Polaris Mine, Little Cornwallis Island and implications of failures of sublethal toxicity testing on future monitoring and/or requirements, based on Environment Canada guidance within the Metal Mining Effluent (MMER) regulations. The impetus for this technical letter is to review the most recent results of sublethal toxicity testing and discuss implications, if any, on future long-term monitoring requirements at the Polaris Mine.

Tables 1 and **2** provide a summary of acute and sublethal toxicity data respectively between 2003 and 2011. Results of these tests have been discussed within other submissions, however, the consequences of toxicity in acute and sublethal tests has not.

No acute lethality to rainbow trout (*Oncorhynchus mykiss*) and the waterflea (*Daphia magna*) have been recorded in two or three times annual toxicity testing since 2003, save a single event in 2007 when testing was conducted by a different laboratory. Given the lack of acute toxicity, there is no requirement within the MMER to conduct any further testing (e.g., a toxicity identification evaluation) nor follow up assessment of effluent quality.

There has been consistent sublethal toxicity since 2003 for two of three species tested. Because the effluent from Garrow Lake is slightly brackish, effluent has been salinity adjusted to allow testing of marine organisms. A brief summary of most recent 2010 and 2011 results (Table 2) is as follows:

- No effect to topsmelt (*Atherinops affinis*) survival or growth rate at full strength effluent
- In the 2011 Echinoderm (*Dendraster ecentricus*) fertilization test, only the full strength effluent concentration produced a significantly lower fertilization ratio relative to the

control group. The IC25 was 41% and the IC50 was >53%. Similar results were observed in 2010, with slightly lower IC25 and IC50 values (67% and >100%).

- In the 2011 algal reproduction test (*Champia parvula*), there was 43% impairment to cystocarp production at the IC25 level. In 2010, there was 68% impairment to cystocarp production, but only at the highest effluent concentration (66%). The IC25 was estimated at 41% effluent.

With respect to the implications of sublethal toxicity of effluent, Environment Canada MMER guidelines specifically address this in a recent March 1, 2012 update to the MMER. The link to the test specifically relating to sublethal toxicity of effluent can be found at http://canadagazette.gc.ca/rp-pr/p2/2012/2012-03-14/html/sor-dors22-eng.html . A summary of the specific text within this update is as follows:

> *4. The Amendments remove the requirement in Schedule 5, paragraph 17(g) and referred to in paragraphs 21(1)(a) and 25(a) to compare the results of sublethal toxicity testing with results of biological monitoring studies to determine if there is a correlation. These comparisons did not lead to meaningful results on a consistent basis.*
>
> *In place of the previous requirement in paragraph 17(g), the Amendments introduce a new requirement to include, as part of each interpretive report for biological monitoring studies, a summary of the results of effluent characterization, water quality monitoring and sublethal toxicity testing. (see footnote 4) Prior to the Amendments, many mines voluntarily included such a summary in each interpretive report, but this requirement will ensure that this summary is provided in all cases, aiding in the interpretation of the results of biological monitoring studies.*

This text clearly states that there is no specific requirement to conduct follow up testing in the receiving environment, nor have such studies attempting to do so found any correlation. Notwithstanding this, Azimuth did undertake a receiving environment effects assessment in 2003 on nearshore water quality, plume delineation and dispersion and metals concentrations in benthic clams offshore of Garrow Creek. No effects and no potential effects was found because of rapid dilution and dispersion of the slightly brackish plume within the upper few cm of the water column as it entered the marine environment of Garrow Bay.

In summary, there are no follow up procedures or studies that are required in the event that sublethal toxicity is found in effluent. The trigger for follow up investigations lies in consecutive failures in acute toxicity tests, which have never been observed at Polaris Mine. Thus, there is no requirement to pursue any incidences of sublethal toxicity as part of a long-term monitoring program of discharge from Garrow Lake

Please let me know if you required any further information.

Sincerely,
Azimuth Consulting Group Partnership

Randy Baker, MSc, RPBio.

Table 1. Summary of Polaris Mine acute toxicity tests, 2003 - 2011.

Test Date	Species Tested	Test Type	Sample Method	Consultant Laboratory	LC50 (% effluent)	LC50 Lower Confidence Limit (% effluent)	LC50 Upper Confidence Limit (% effluent)
Rainbow Trout 96-hr LC50							
29-Jul-03	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
19-Aug-03	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
16-Sep-03	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
7-Jul-04	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
27-Jul-04	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
24-Aug-04	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
16-Jul-05	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
6-Aug-05	*Oncorhynchus mykiss*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
15-Jul-06	*Oncorhynchus mykiss*	Survival	Grab	Golder Associates, North Vancouver, BC	> 100	-	-
23-Aug-06	*Oncorhynchus mykiss*	Survival	Grab	Golder Associates, North Vancouver, BC	> 100	-	-
9-Sep-06	Sample lost due to laboratory error						
26-Jul-07	*Oncorhynchus mykiss*	Survival	Grab	ALS Environmental, Winnipeg, MB	PASS	-	-
23-Aug-07	*Oncorhynchus mykiss*	Survival	Grab	ALS Environmental, Winnipeg, MB	> 100	-	-
6-Sep-07	*Oncorhynchus mykiss*	Survival	Grab	ALS Environmental, Winnipeg, MB	> 100	-	-
30-Aug-08	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
9-Sep-08	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
18-Jul-09	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
16-Jul-10	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
23-Aug-10	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
23-Jul-11	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
7-Sep-11	*Oncorhynchus mykiss*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
***Daphnia magna* 48-hr LC50**							
29-Jul-03	*Daphnia magna*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
19-Aug-03	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
16-Sep-03	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
7-Jul-04	*Daphnia magna*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 100	-	-
27-Jul-04	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
24-Aug-04	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
16-Jul-05	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
6-Aug-05	*Daphnia magna*	Survival	Grab	EVS Consultants North Vancouver, BC	> 100	-	-
15-Jul-06	*Daphnia magna*	Survival	Grab	Golder Associates, North Vancouver, BC	> 100	-	-
23-Aug-06	*Daphnia magna*	Survival	Grab	Golder Associates, North Vancouver, BC	> 100	-	-
9-Sep-06	*Daphnia magna*	Survival	Grab	Golder Associates, North Vancouver, BC	> 100	-	-
26-Jul-07	*Daphnia magna*	Survival	Grab	ALS Environmental, Winnipeg, MB	PASS	-	-
23-Aug-07	*Daphnia magna*	Survival	Grab	ALS Environmental, Winnipeg, MB	67.4	59.7	76.1
6-Sep-07	*Daphnia magna*	Survival	Grab	ALS Environmental, Winnipeg, MB	86.6	-	-
30-Aug-08	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
9-Sep-08	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
18-Jul-09	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
16-Jul-10	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
23-Aug-10	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
23-Jul-11	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-
7-Sep-11	*Daphnia magna*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100	-	-

Table 2. Summary of Polaris Mine sublethal toxicity tests 2003 - 2011.

Test Date	Species Tested	Test Type	Sample Method	Consultant Laboratory	EC25 or IC25 (% effluent)	EC25 or IC25 Lower Confidence Limit (% effluent)	EC25 or IC25 Upper Confidence Limit (% effluent)
Topsmelt (*Atherinops affinis*) 7-d Growth and Survival Toxicity Test - Growth Endpoint							
19-Aug-03	*Atherinops affinis*	Growth	Grab	EVS Consultants, North Vancouver, BC	> 72.3	-	-
7-Jul-04	*Atherinops affinis*	Growth	Grab	EVS Consultants, North Vancouver, BC	> 72.6	-	-
27-Jul-04	*Atherinops affinis*	Growth	Grab	EVS Consultants, North Vancouver, BC	> 69.0	-	-
24-Aug-04	*Atherinops affinis*	Growth	Grab	EVS Consultants North Vancouver, BC	> 71.0	-	-
16-Jul-05	*Atherinops affinis*	Growth	Grab	EVS Consultants North Vancouver, BC	> 71.4	-	-
6-Aug-05	*Atherinops affinis*	Growth	Grab	EVS Consultants North Vancouver, BC	> 67.4	-	-
16-Jul-10	*Atherinops affinis*	Growth	Grab	Nautilus Environmental, Burnaby, BC	> 100		
Topsmelt (*Atherinops affinis*) 7-d Growth and Survival Toxicity Test - Survival Endpoint					**LC50 (% effluent) for survival endpoint only**		
19-Aug-03	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 72.3	-	-
7-Jul-04	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 72.6	-	-
27-Jul-04	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 69.0	-	-
24-Aug-04	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 71.0	-	-
16-Jul-05	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 71.4	-	-
6-Aug-05	*Atherinops affinis*	Survival	Grab	EVS Consultants, North Vancouver, BC	> 67.4	-	-
16-Jul-10	*Atherinops affinis*	Survival	Grab	Nautilus Environmental, Burnaby, BC	> 100		
Sandollar Echinoderm (*Dendraster excentricus*) 92-h Echinoderm Fertilization Test							
19-Aug-03	*Dendraster excentricus*	Reproduction	Grab	EVS Consultants North Vancouver, BC	3.8	1.1	7.2
27-Jul-04	*Dendraster excentricus*	Reproduction	Grab	EVS Consultants North Vancouver, BC	8.7	7.6	9.9
24-Aug-04	*Dendraster excentricus*	Reproduction	Grab	EVS Consultants North Vancouver, BC	17.5	11.6	22.6
16-Jul-05	*Dendraster excentricus*	Reproduction	Grab	EVS Consultants North Vancouver, BC	5.2	4.4	6.0
6-Aug-05	*Dendraster excentricus*	Reproduction	Grab	EVS Consultants North Vancouver, BC	15.6	13.6	18.3
16-Jul-10	*Dendraster excentricus*	Reproduction	Grab	Nautilus Environmental, Burnaby, BC	66.6	42.6	83.1
Red Algae (*Champia parvula*) 7-d Sublethal Algal Toxicity Test							
19-Aug-03	*Champia parvula*	Reproduction	Grab	Saskatchewan Research Council (SRC), Saskatoon, SK	13.6	9.0	16.0
27-Jul-04	*Champia parvula*	Reproduction	Grab	SRC, Saskatoon, SK	26.6	20.8	31.5
24-Aug-04	*Champia parvula*	Reproduction	Grab	SRC, Saskatoon, SK	45.3	36.3	58.1
16-Jul-05	*Champia parvula*	Reproduction	Grab	Stantec Inc, Guelph,ON	24.6	22.2	27.2
6-Aug-05	*Champia parvula*	Reproduction	Grab	SRC, Saskatoon, SK	45.3	27.5	52.4
Red Algae (*Champia parvula*) 48-hr Sexual Reproduction Test							
23-Aug-10	*Champia parvula*	Reproduction	Grab	Nautilus Environmental, Burnaby, BC	41.1	37.3	43.9

APPENDIX 3

Electronic Copy of Report on CD