c. Sediment sampling

Sediment will be collected using a core sampler at each benthic invertebrate station and analyzed for PSA, TOC and metals. As outlined in the review comments, the TAP recommended collecting the upper 4 cm for analysis.

4. Effluent and Water Quality

Paula reminded everyone to ensure that labs use the appropriate detection limits when analyzing effluent and water quality samples, and that water sampling must be done in both the fish and benthic exposure and reference areas. The comments were noted. Mike asked about suitable sampling stations for the routine effluent and water quality sampling. Paula stated that the exposure station should be close to the point of discharge but far enough downstream to allow for some dilution. David suggested the station at the narrows be the exposure station and the one at Concession Creek act as a reference station.

5. Additional Items

a) Paula will be the EEM contact during the field surveys and will supply the consultants and facility with contact information
b) Paula will make arrangements with Mike for a visit to the site during field work.
c) Some of the TAP comments were discussed and an addendum will be submitted. The highlights of that conversation include: 1- lake seiche effects were not included in the model, 2- an estimate of the plume at 250 m will be done in the field, 3- any tissue metal data will continue to be reported in dry weight but the moisture content of the sample will also be presented and 4 – the consultants will verify the volume of sediment required for analysis.
d) Lupin is considering their options and may decide to submit a letter requesting Recognized Close Mine status. ***ACTION ITEM: Paula will review recent decisions regarding the timing of this request and provide that information to Mike.***

April 4 2005

To: Michael Tansey
Reclamation Manager
Kinross Gold Corporation, Lupin Operations
9818 Edmonton International Airport
Edmonton, Alberta
T5J 2T2

Dear Mr. Tansey:

Re: Environmental Effects Monitoring (EEM) Study Design Review

The Technical Advisory Panel (TAP) has completed the EEM Study Design review for Lupin Gold Mine. Appended are hardcopies of the compiled review comments that were sent to you electronically on April 4, 2005. These review comments should be addressed in the form of a simple addendum to the Initial Monitoring Study Design.

If you have any questions concerning the review of your EEM Study Design, please feel free to contact me (780) 951-8824.

Sincerely,

Paula Siwik
Regional EEM Coordinator

Attachment

cc:

Lupin Technical Advisory Panel (TAP) Members

Chris Baron	Fisheries and Oceans Canada
Dionne Filiatrault	Nunavut Water Board
David Hohnstein	Nunavut Water Board
Meighan Wilson	Indian and Northern Affairs Canada
Anne Wilson	Environment Canada
Steve Harbicht	Environment Canada

Peter Blackall Environment Canada, Regional Authorization Officer

Environment Effects Monitoring
Technical Advisory Panel Comments on "Lupin Gold Mine, Environmental Effects Monitoring Study Design"

General Comments

1. Mines are encouraged to follow guidance in the *Metal Mining Guidance Document (MMGD)*. Other new material available for use is posted on the EEM web-site at **http://www.ec.gc.ca/eem/English/Whatsnew.cfm**

2. Overall, the study design is well written and the pertinent plume delineation and historical information is nicely summarized.

3. Please note that in addition to obtaining routine sampling licenses, the Nunavut Research Council must be contacted (867-979-6734) as permits may be required for work conducted on Nunavut lands.

Site Characterisation

4. p.21: Does the plume delineation model consider lake seiche effects?

5. p. 23: Please note that the MMER requires an estimate of effluent concentration at 250 m from each final discharge point.

6. p. 23: Will the historical water quality monitoring point in Outer Sun Bay be used as the exposure area sampling point during the mine's effluent characterization and water quality measurements?

7. p. 42: The concentrations of copper found in livers from lake trout captured in Inner Sun Bay (115 µg/g) and Contwoyto Lake (66.2 µg/g) are notably high. For example, those from Inner Sun Bay are five times higher than livers of lake trout from lakes in the Lac de Gras area[1] (22.42 µg/g in Ron Lake and 23.78 µg/g in Long Lake), and concentrations of copper in livers of lake trout captured in Back Bay of Great Slave Lake[2] ranged from 12.3 to 22.78 µg/g. The TAP is concerned that copper may be an issue in the receiving waters of the Lupin Mine.

Adult Fish Survey

8. p. 52: Please note, page 4-15 of the MMGD outlines the options, in order of preference in situations where there are not two adult fish species. Please revise your study design based on that list of options.

9. p. 52: **Both the exposure and reference areas must be sampled for fish**. The reference area must be sampled for comparison purposes even if low numbers of fish are caught in the exposure area. **The recommended level of effort for the fish survey is 7 days in each of the reference and exposure areas**. If target sample sizes are achieved earlier, the fishing can stop earlier.

10. p. 53: As Lupin Mine has not discharged since 2002 and Seep Creek has had little flow outside the freshet, **the TAP strongly recommends a 2 day reconnaissance trip to determine if fish have moved back into Seep Creek, and allow Lupin Gold Mine to finalize their sentinel species and sampling areas**.

11. Please note that the latitude and longitude of sampling areas in UTM's, and degrees, minutes and seconds must be included in the Interpretative Report along with a written description sufficient to identify the location of the benthic and fish sampling areas.

12. p. 54: Please redesign the flow chart to reflect the sampling options outlined in the MMGD (p. 4-15).

13. p. 55: Water quality characteristics will likely change over the period of discharge. The TAP recommends collecting water quality samples near the end of the field sampling program.

14. p. 55: Parasite loads in stickleback can skew the metrics which involve weight. If heavily infested, how will this be handled?

15. p. 62: Please note that guidance for the non-lethal sampling of fish has been updated and can be found on the EEM website (http://www.ec.gc.ca/eem/English/default.cfm). The TAP recommends that this guidance be followed during a non-lethal fish survey. Please note specific guidance concerning YOY sampling and total numbers of fish to be sampled. The small size of the YOY at this site during sampling may pose some additional challenges (e.g. accurate weights and lengths) and these should be discussed during the April TAP meeting.

Fish Tissue Analysis

16. p. 64: Lupin Mine and EC EEM coordinator have discussed the lack of Hg effluent data at this site and reached the following agreement. As the water released as effluent is stored in Pond 2 prior to discharge, a sample will be taken from Pond 2 at the traditional sampling point after ice out but before discharge begins. This sample will be analyzed for Hg and for the full suite of deleterious substances as outlined in the MMER (Schedule 4). Provided the results of that sample are a) reviewed by the TAP before commencing discharge and b) has a Hg concentration below 0.1 µg/L, Lupin Mine will not be **required** to do a fish tissue survey.

    However, the fish tissue mercury data presented are high and the TAP suggests that a fish tissue survey is still appropriate for this site. Although it appears that there is natural geological enrichment of mercury in this area it is possible that mercury may be mobilized by mining activities. Monitoring mercury in effluent will help to further evaluate this possibility.

17. p. 65: Technical procedures referenced in this study design should be provided for review.

Invertebrate Community Survey

18. p. 64: given the variability in the historical samples due to things like habitat differences, the TAP recommends moving the benthic invertebrate survey into Seep Creek.

19. p. 65: Considering the fact that past benthic invertebrate data has yielded variable results at this site, the TAP recommends that sampling precision be

calculated, if possible, in order to determine whether 3 subsamples per station is sufficient.

20. p. 65: The recommendation for sieve and/or mesh size for all freshwater mines is 500 µm. While smaller mesh sizes can be used for comparison to historical data (MMGD Section 5.21.1.1), MMGD states that '... it is highly recommended that a stack of screens be used which minimally have the mandatory sieve sizes and then any other smaller sizes which are appropriate. This procedure simultaneously allows site-specific concerns to be addressed and fulfills EEM objectives by allowing for national or regional comparisons to be conducted on the standardized mesh sizes. Note that sieving with the finest scale sieve can be done in the field, as long as the appropriate fractionation of the sample is performed in the laboratory before processing.' **Given that the critical effect sizes for the benthic invertebrate endpoints may be determined based on 500 µm data, it is important that the 500 µm data be collected and analyzed at the family level for the MMER EEM program.**

21. p. 67: The TAP recommends that statistical analysis be done as outlined in the MMGD.

22. p. 68: The TAP strongly recommends that the *in situ* variables listed be collected at each sampling station (page 5-64 of the MMGD).

23. p. 68: Some other northern mines (e.g. diamond mines) use only the top 4 cm's of their sediment sample for analysis. In order to maintain regional consistency, the TAP suggests using only the top 4 cm layer of sediment for particle size and TOC analysis. The top 4 cm's can be collected by coring an undisturbed Ekman sample. This topic can be discussed further at the April meeting.

24. p. 68: A description of the volumes proposed for sediment sampling is needed.

25. p. 68: Water quality monitoring must be done at **both** the fish and benthic reference and exposure areas, during the field surveys. Water quality parameters to be measured are the same as those measured for effluent characterization, plus temperature, dissolved oxygen, deleterious substances and pH (as stated in the MMER).

26. 67: Will conductivity be used as the water column tracer in the benthic invertebrate survey? If not, please outline what parameters will be measured at each station and used as a tracer.

Schedule

27. P. 68: Please clarify that the fish survey will be done during effluent discharge.

28. p. 68: **The TAP recommends that the timing of the fish survey be discussed during the April TAP meeting as there are several questions and concerns**. Fish in some other systems migrated downstream upon commencement of mine discharge supporting the need to start sampling near the onset of discharge. However, it is quite possible that nine spine stickleback will still be spawning in mid-July and therefore will not be an appropriate species for sampling at that time. Moore (Appendix D) sampled at the end of July and states that "young

sculpin with unabsorbed yolk sacs, as well as mature eggs were observed near the mouth of Stream A." suggesting that sculpin should be finished spawning by the end of July. With respect to a non-lethal arctic grayling survey, young of the year arctic grayling in the region are thought to emerge 21 to 24 days after spawning [3], so assuming spawning is finished around July 15, YOY grayling should emerge around August 5.

Minor Point

29. p. 15: Please clarify the first sentence under Table 3-1.

30. p. 68: one of the sentences on the last line is incomplete ("...they spawn in...").

References

[1] Martin, K.A. 2001. A Limnological study of selected lakes in the Lac de Gras area, Northwest Territories with special reference to fish contaminants. Canadian Technical Report of Fisheries and Aquatic Sciences, No. 2385: viii + 78 p.

[2] Jackson, F.J., C.N. LaFontaine, and J.F. Klaverkamp. 1996. Yellowknife – Back Bay study on metal and trace element contamination of water, sediment and fish. Dept. of Indian and Northern Affairs Canada. Yellowknife, N.W.T. 195 p.

[3] Jones et al., 2003, Ecological Characteristics of Streams in the Barrenlands near Lac de Gras, N.W.T., Canada. Arctic. 56(3): 249-261.

Appendix B

Effluent and Water Quality Monitoring Data

KINROSS
Gold Corporation

Lupin Operation
9818 Edmonton International Airport
Edmonton, AB T5J 2T2 Canada

Telephone: (780) 890-8797
Fax: (780) 890-8814
email: mike.tansey@kinross.com

March 24, 2006

Ms. Paula Siwik
Regional EEM Coordinator
Toxic Substances Division
Environmental Protection Branch
Room 200, 4999-98 Ave. NW
Edmonton Alberta T6B 2X3

Dear Paula:

RE: Kinross Gold Corporation, Lupin Operations, Contwoyto Lake, NU; 2005 EEM Reporting Requirements.

With regard to the reporting requirements of Part 1, Paragraph 8 of the MMER, please accept this report of our annual effluent and water quality monitoring for 2005.

Discharge took place at the Lupin Discharge Syphons for a period of 27 days between July 15 and August 11, 2005. A total of 1,682,135 cubic metres of effluent was discharged into Seep Creek during this period. As the discharge period was less than one month duration, only one sample date is presented.

Tailings discharge effluent was sampled for Effluent Characterization on July 27, 2005, as was the sample for Sublethal Toxicity testing. These samples were taken at the point of discharge of the Lupin discharge siphons, designated as sample point 925-10. The location of the sample point in latitude and longitude is given in the sample summary report for 925-10.

Water Quality Monitoring samples were taken on July 19, 2005, in the exposure area downstream from the point of entry of the effluent into the environment (designated as sample point 925-24) and at the related reference area (designated as sample point 925-21). The locations of the sample points in latitude and longitude are given in the sample summary reports for 925-24 and 925-21.

Laboratory QA/QC data for the samples is attached.

Should you have any questions or comments regarding the above information and this report submission, please feel free to contact the undersigned at one of the numbers listed above.

Yours truly,

Michael Tansey
Reclamation Manager, Lupin

cc: Mark Ioli, Kinross

Facility Name Kinross Gold Corporation - Lupin Operations (Contwoyto Lake)
FDP Name Lupin Discharge Syphons
Discharge Locn Name SNP 925-10
FDP Location **Lat** 65 deg 43 min 43.8 sec N **Long** 111 deg 18 min 23.3 sec W
Outlet of Dam 1A syphons.
Sample location at point of discharge

EFFLUENT CHARACTERIZATION

Sample Date July 27, 2005
Discharge Volume 68,812 cubic metres

Parameter	units	Concentration	Mass Loading	units
Hardness	mg/l	216		
Alkalinity	mg/l	< 5		
Aluminum	mg/l	0.128		
Cadmium	mg/l	0.00010		
Iron	mg/l	0.2		
Mercury	ug/l	< 0.02		
Molybdenum	mg/l	0.002		
Ammonia	mg/l	1.88		
Nitrate	mg/l	7.45		
Arsenic	mg/l	0.0146	1.00	kg
Copper	mg/l	0.015	1.03	kg
Cyanide	mg/l	0.040	2.75	kg
Lead	mg/l	0.0005	0.03	kg
Nickel	mg/l	0.0955	6.57	kg
Zinc	mg/l	0.251	17.27	kg
TSS	mg/l	< 2	137.62	kg
Radium 226	Bq/l	0.006	412,872.00	Bq
Effluent Notes		Sample 51080		
Sublethal Toxicity Test		Sample 51081		

NOTE
925-10 is the only Final Discharge Point from the Lupin tails containment area
Effluent was discharged for a total of 27 days, from July 15, 2005 to August 11, 2005
The only sublethal toxicity sample taken while discharge was occurring was taken on July 27

NORWEST LABS

Analytical Report

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J 2T2
Attn: Michael Tansey
Sampled By: Steve Schlesak
Company: Kinross Gold Corporation

Project ID:
Name: Lupin Mine
Location: Nunavut
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 398142
Control Number:
Date Received: Jul 28, 2005
Date Reported: Aug 09, 2005
Report Number: 727534

	NWL Number	398142-13	398142-14	398142-15	
	Sample Date	Jul 26, 2005	Jul 27, 2005	Jul 27, 2005	
	Sample Description	925-25 / 51078	925-14 / 51079	925-10 / 51080	
	Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Inorganic Nonmetallic Parameters						
Ammonium - N		mg/L	<0.05	<0.05	1.88	0.05
Kjeldahl Nitrogen	Total	mg/L	-	0.53	-	0.05
Phosphorus	Total	mg/L	-	<0.1	-	0.1
Orthophosphate-P	Dissolved	mg/L	-	0.02	-	0.01
Cyanide	Strong Acid Dissociable	mg/L	0.002	-	0.040	0.002
Metals Total						
Iron	Total	mg/L	<0.1	0.3	0.2	0.1
Manganese	Total	mg/L	0.008	0.072	0.984	0.005
Silicon	Total	mg/L	0.11	0.25	1.86	0.05
Sulfur	Total	mg/L	1.9	22.4	95.5	0.3
Mercury	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Mercury	Total	ug/L	-	-	<0.02	0.02
Aluminum	Total	mg/L	0.026	0.049	0.128	0.005
Antimony	Total	mg/L	0.0016	0.001	<0.0002	0.0002
Arsenic	Total	mg/L	0.0015	0.0139	0.0146	0.0002
Barium	Total	mg/L	0.003	0.019	0.016	0.001
Beryllium	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Bismuth	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Boron	Total	mg/L	0.004	0.037	0.087	0.002
Cadmium	Total	mg/L	0.00003	<0.00001	0.00010	0.00001
Chromium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Cobalt	Total	mg/L	0.0004	0.0038	0.0496	0.0001
Copper	Total	mg/L	0.002	0.004	0.015	0.001
Lead	Total	mg/L	0.0009	0.0003	0.0005	0.0001
Lithium	Total	mg/L	0.002	0.236	0.030	0.001
Molybdenum	Total	mg/L	<0.001	0.002	0.002	0.001
Nickel	Total	mg/L	0.0022	0.0122	0.0955	0.0005
Selenium	Total	mg/L	<0.0002	<0.0002	<0.0002	0.0002
Silver	Total	mg/L	<0.0001	<0.0001	<0.0001	0.0001
Strontium	Total	mg/L	0.009	1.18	0.304	0.001
Thallium	Total	mg/L	<0.00005	<0.00005	<0.00005	0.00005
Tin	Total	mg/L	<0.001	<0.001	<0.001	0.001
Titanium	Total	mg/L	0.0008	0.0018	0.0045	0.0005
Uranium	Total	mg/L	<0.0005	<0.0005	<0.0005	0.0005
Vanadium	Total	mg/L	<0.0001	0.0002	0.0001	0.0001

NORWEST LABS

Analytical Report

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
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Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J 2T2
Attn: Michael Tansey
Sampled By: Steve Schlesak
Company: Kinross Gold Corporation

Project ID:
Name: Lupin Mine
Location: Nunavut
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 398142
Control Number:
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	NWL Number	398142-13	398142-14	398142-15	
	Sample Date	Jul 26, 2005	Jul 27, 2005	Jul 27, 2005	
	Sample Description	925-25 / 51078	925-14 / 51079	925-10 / 51080	
	Matrix	Water - General	Water - General	Water - General	
Analyte		**Units**	**Results**	**Results**	**Results**	**Detection Limit**
Metals Total - Continued						
Zinc	Total	mg/L	0.015	0.009	0.251	0.001
Physical and Aggregate Properties						
Temperature of observed pH		°C	21.7	22.0	22.4	
Solids	Total Suspended	mg/L	<2	<2	<2	1
Routine Water						
pH	@ 25 °C	pH	-	7.43	-	
pH			6.67	7.62	6.39	
Electrical Conductivity		µS/cm at 25 C	25	845	847	1
Calcium	Dissolved	mg/L	1.7	69.0	74.2	0.2
Magnesium	Dissolved	mg/L	0.6	7.4	7.5	0.1
Sodium	Dissolved	mg/L	1.6	79.8	85.4	0.4
Potassium	Dissolved	mg/L	<0.4	5.6	7.3	0.4
Iron	Dissolved	mg/L	0.01	0.23	<0.01	0.01
Manganese	Dissolved	mg/L	0.008	0.067	0.991	0.005
Chloride	Dissolved	mg/L	1.0	202	57.8	0.4
Nitrate - N		mg/L	0.10	1.23	7.45	0.01
Nitrite - N		mg/L	<0.005	<0.005	0.056	0.005
Nitrate and Nitrite - N		mg/L	0.10	1.23	7.50	0.02
Sulfate (SO4)	Dissolved	mg/L	5.9	73.3	303	0.9
Hydroxide		mg/L	<5	<5	<5	5
Carbonate		mg/L	<6	<6	<6	6
Bicarbonate		mg/L	<5	28	<5	5
P-Alkalinity	as CaCO3	mg/L	<5	<5	<5	5
T-Alkalinity	as CaCO3	mg/L	<5	23	<5	5
Total Dissolved Solids	Calculated	mg/L	11	451	537	1
Hardness	Dissolved as CaCO3	mg/L	7	203	216	
Ionic Balance	Dissolved	%	100	99	99	

SRC Group: 2005-4060

SRC ANALYTICAL
422 Downey Road
Saskatoon, Saskatchewan S7N 4N1
(306) 933-6932 1-800-240-8808

Aug-12-2005

Norwest Labs
7217 Roper Road
Edmonton, Alberta T6B 3J4
Attn: Client Services

Date Samples Received: Jul-29-2005 Client P.O.:

SAMPLE	CLIENT DESCRIPTION	
16737	LOT# 398142-15 *WATER*	
ANALYTE	UNITS	16737
RADIO CHEMISTRY		
Radium-226	Bq/L	0.006

NORWEST LABS

Quality Control

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J 2T2
Attn: Michael Tansey
Sampled By: Steve Schlesak
Company: Kinross Gold Corporation

Project
ID:
Name: Lupin Mine
Location: Nunavut
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 398142
Control Number:
Date Received: Jul 28, 2005
Date Reported: Aug 09, 2005
Report Number: 727534

Aggregate Organic Constituents

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Biochemical Oxygen Demand	mg/L	<4	0	-4	4	✓
Material Used:	BOD - Blank					
Date Acquired:	Jul 29, 2005					
Acquired By:	Zahra Momen					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Biochemical Oxygen Demand	mg/L	<4	<4	30	8	✓
Material Used:	Surrey - Int. Duplicate 1					
Date Acquired:	Jul 29, 2005					
Acquired By:	Zahra Momen					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Biochemical Oxygen Demand	mg/L	144	167	116	218	✓
Material Used:	BOD - G/GA					
Date Acquired:	Jul 29, 2005					
Acquired By:	Zahra Momen					

NORWEST LABS

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Quality Control

Bill to: Echo Bay Mines Ltd.
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9818 International Airport
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NWL Lot ID: 398142
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Date Received: Jul 28, 2005
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Inorganic Nonmetallic Parameters

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Ammonium - N	mg/L	<0.05	0.00	-0.08	0.08	✓
Kjeldahl Nitrogen	mg/L	<0.05	0.00	-0.05	0.05	✓
Phosphorus	mg/L	<0.1	0.0	-0.1	0.1	✓
Orthophosphate-P	mg/L	<0.01	0.00	-0.05	0.05	✓
Cyanide	mg/L	<0.001	0.000	-0.001	0.001	✓
Material Used:	Edmonton Method Blank					
Date Acquired:	Aug 08, 2005					
Acquired By:	Gordon Grensmann					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Ammonium - N	mg/L	<0.05	<0.05	9.99	0.10	✓
Phosphorus	mg/L	2.1	2.2	10.0	0.2	✓
Orthophosphate-P	mg/L	0.93	0.89	9.99	0.05	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Jul 29, 2005					
Acquired By:	Andrew Jong					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Ammonium - N	mg/L	3.00	2.99	2.59	3.39	✓
Kjeldahl Nitrogen	mg/L	14.8	15.25	11.65	18.85	✓
Phosphorus	mg/L	8.0	8.0	7.2	8.8	✓
Cyanide	mg/L	0.077	0.077	0.067	0.087	✓
Material Used:	Water High					
Date Acquired:	Aug 08, 2005					
Acquired By:	Gordon Grensmann					
Ammonium - N	mg/L	0.80	0.79	0.66	0.91	✓
Kjeldahl Nitrogen	mg/L	3.33	3.00	2.41	3.59	✓
Phosphorus	mg/L	2.1	2.0	1.8	2.2	✓
Orthophosphate-P	mg/L	0.41	0.41	0.36	0.47	✓
Cyanide	mg/L	0.015	0.016	0.013	0.018	✓
Material Used:	Water Low					
Date Acquired:	Aug 08, 2005					
Acquired By:	Gordon Grensmann					
Orthophosphate-P	mg/L	0.07	0.08	0.07	0.09	✓
Material Used:	Water Trace					
Date Acquired:	Jul 29, 2005					
Acquired By:	Andrew Jong					

NORWEST LABS

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J 2T2
Attn: Michael Tansey
Sampled By: Steve Schlesak
Company: Kinross Gold Corporation

Project ID:
Name: Lupin Mine
Location: Nunavut
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 398142
Control Number:
Date Received: Jul 28, 2005
Date Reported: Aug 09, 2005
Report Number: 727534

Metals Dissolved

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Sulfur	mg/L	<0.3	0.0	-0.3	0.3	✓
Material Used:	Edmonton Method Blank					
Date Acquired:	Jul 29, 2005					
Acquired By:	To Thong					

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
Sulfur	mg/L	16.5	16.4	10.0	0.1	✓
Material Used:	Edmonton Duplicate					
Date Acquired:	Jul 29, 2005					
Acquired By:	To Thong					

Control Sample	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Sulfur	mg/L	48.0	50.0	45.0	55.0	✓
Material Used:	Metals High					
Date Acquired:	Jul 29, 2005					
Acquired By:	To Thong					
Sulfur	mg/L	1	1.0	0.9	1.2	✓
Material Used:	Metals Low					
Date Acquired:	Jul 29, 2005					
Acquired By:	To Thong					

NORWEST LABS

Norwest Labs
7217 Roper Road NW
Edmonton, AB. T6B 3J4
Phone: (780) 438-5522
Fax: (780) 438-0396

Quality Control

Bill to: Echo Bay Mines Ltd.
Report to: Echo Bay Mines Ltd.
9818 International Airport
Edmonton, AB, Canada
T5J 2T2
Attn: Michael Tansey
Sampled By: Steve Schlesak
Company: Kinross Gold Corporation

Project ID:
Name: Lupin Mine
Location: Nunavut
LSD:
P.O.:
Acct. Code:

NWL Lot ID: 398142
Control Number:
Date Received: Jul 28, 2005
Date Reported: Aug 09, 2005
Report Number: 727534

Metals Total

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
Iron	mg/L	<0.1	0.0	0.0	0.0	✓
Manganese	mg/L	<0.005	0.000	-0.001	0.001	✓
Silicon	mg/L	<0.05	0.02	-0.04	0.09	✓
Sulfur	mg/L	<0.3	0.0	-0.3	0.3	✓
Mercury	mg/L	<0.0001	0.0000	0.0000	0.0000	✓
Aluminum	ug/L	<5	0	-5	5	✓
Antimony	ug/L	<0.2	0.0	-0.2	0.2	✓
Arsenic	ug/L	<0.2	0.0	-0.2	0.2	✓
Barium	ug/L	<1	0	-1	1	✓
Beryllium	ug/L	<0.1	0.0	-0.1	0.1	✓
Bismuth	ug/L	<0.5	0.0	-0.5	0.5	✓
Boron	ug/L	<2	0	-2	2	✓
Cadmium	ug/L	<0.01	0.00	-0.01	0.01	✓
Chromium	ug/L	<0.5	0.0	-0.5	0.5	✓
Cobalt	ug/L	<0.1	0.0	-0.1	0.1	✓
Copper	ug/L	<1	0	-1	1	✓
Lead	ug/L	<0.1	0.0	-0.1	0.1	✓
Lithium	ug/L	<1	0	-1	1	✓
Molybdenum	ug/L	<1	0	-1	1	✓
Nickel	ug/L	<0.5	0.0	-0.5	0.5	✓
Selenium	ug/L	<0.2	0.0	-0.2	0.2	✓
Silver	ug/L	<0.1	0.0	-0.1	0.1	✓
Strontium	ug/L	<1	0	-1	1	✓
Thallium	ug/L	<0.05	0.00	-0.05	0.05	✓
Tin	ug/L	<1	0	-1	1	✓
Titanium	ug/L	<0.5	0.0	-0.5	0.5	✓
Uranium	ug/L	<0.5	0.0	-0.5	0.5	✓
Vanadium	ug/L	<0.1	0.0	-0.1	0.1	✓
Zinc	ug/L	<1	0	-1	1	✓
Material Used:	Edmonton Method Blank					
Date Acquired:	Aug 03, 2005					
Acquired By:	Linda Li					
Mercury	ug/L	<0.02	0.000	-20.010	20.010	✓
Material Used:	Metals Blank - water - total					
Date Acquired:	Aug 08, 2005					
Acquired By:	Kelly Restiaux					