

**DE BEERS CANADA RESPONSE TO COMMENTS BY WILDLANDS LEAGUE
- VICTOR MINE**

Source	Comment	Response
2013 VDM Mercury Performance Report		
#1.	(1) the production data from wells number VM-23 and VM-25, brought online in mid-2013 were not included in Table 16a, 16b, 17a and 17b	As there was a very limited / incomplete dataset at that time for the new wells, the information was not included. The data is provided in Attachment 1 and Tables 16a, 16b, 17a and 17b have been updated accordingly to include data from well numbers VM-23 and VM-25.
	(2) Table 13a is missing an entire row of data for the month of September, 2009.	Table 13a has been updated accordingly to include data for September 2009.
#2.	(1) Monitoring stations unreported Despite the monitoring scheme described, with 8 monitoring stations (G1-G8) on the Granny system (per the map provided in the document - Fig 3), Mercury data is only reported for 4 stations reported together (G1-G3, and G5-G6, in Table 11, and 12 respectively), with 2 more to be found separately on Tables 30a/b (G4, G7). G2 and G8 are not presented anywhere that I could locate.	The Annual Mercury Performance Monitoring Report is submitted to address Conditions 7(5) and 7(6) of Certificate of Approval (C. of A.) #3960-7Q4K2G, and summarizes monitoring data relating to peat pore water, surface water systems, groundwater (well field) discharge and fish for the regulated locations <u>in accordance with the approval.</u>

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Source	Comment	Response
	<p>(2) Unfiltered data not reported for all stations The apparent priority placed on filtered data is troubling to us. While we recognize that the filtered fraction is conventional to general metals analysis, we are concerned that this approach fails to recognize the nature of the type of food-web at hand in this particular context, with this specific bio-accumulating metal. In any case, failing to provide the unfiltered alongside the filtered also precludes comparison by a reviewer and only tells part of the story. That specific reference standards for mercury often set unfiltered limits is also highly relevant. Only filtered Total and Methyl mercury for G4 and G7 are reported on Tables 30a/b.</p>	<p>The basis for the comment is unclear, as both filtered and unfiltered data are presented in the tables. Specifically, the following unfiltered data are presented in the 2013 annual report:</p> <ul style="list-style-type: none"> • Table 9 – Granny Creek, total mercury • Table 11 – South Granny Creek, methyl mercury • Table 12 – North Granny Creek, methyl mercury • Table 13a – Nayshkootayaow River and Attawapiskat River, total mercury • Table 14a – Nayshkootayaow and Attawapiskat Rivers, methyl mercury • Table 15 – well field discharge, total and methyl mercury • Table 16a – individual wells, total mercury • Table 17a – individual wells, methyl mercury
	<p>(3) Sampling frequency differs between NGC stations The sampling frequency differs, both between NGC and SGC (including DS of confluence - G8), and between the individual stations on NGC (e.g. between G1/G3 and G4. This makes informed trend analysis difficult with any confidence. As creek sediment sampling is unfortunately not provided, consistent monthly water quality sampling for all stations with this proximity to the site would not at all be unreasonable to expect.</p>	<p>In accordance with the Amended C. of A. #3960-7Q4K2G, dated March 13, 2009, only quarterly sampling is required to be undertaken in South Granny Creek and North Granny Creek.</p>

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	<p>(4) Critical months unreported - Jul and Oct are historical months of apparently particular methylation interest, yet substantial and unexplained data gaps are present for US stations on both creeks (esp. NGC).</p> <p>We find these gaps concerning when (a) NEF sulphate contributions have been flagged as an operational contribution of concern in previous years, and (b) that filtered data is reported for both of those particular months for above-confluence points for both creeks (G4 and G7).</p>	<p>Table 3 of the C. of A. requires quarterly sampling of methyl mercury in Granny Creek. Data are available and <u>inadvertently were not reported</u> (F: filtered; U: unfiltered):</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">SGC/US/SWF</td> </tr> <tr> <td>July 2013</td> <td>October 2013</td> </tr> <tr> <td>MeHg F - 0.05 ng/L</td> <td>MeHg F - 0.163 ng/L</td> </tr> <tr> <td>MeHg U - 0.08 ng/L</td> <td>MeHg U - 0.246 ng/L</td> </tr> <tr> <td>Tot Hg F - 1 ng/L</td> <td>Tot Hg F - 0.85 ng/L</td> </tr> <tr> <td>Tot Hg U - 1.58 ng/L</td> <td>Tot Hg U - 0.86 ng/L</td> </tr> <tr> <td colspan="2">SGC/DS/SWF</td> </tr> <tr> <td>MeHg F - 0.33 ng/L</td> <td>MeHg F - 0.052 ng/L</td> </tr> <tr> <td>MeHg U - 0.49 ng/L</td> <td>MeHg U - 0.06 ng/L</td> </tr> <tr> <td>Tot Hg F - 1.2 ng/L</td> <td>Tot Hg F - 0.69 ng/L</td> </tr> <tr> <td>Tot Hg U - 1.88 ng/L</td> <td>Tot Hg U - 1.41 ng/L</td> </tr> <tr> <td colspan="2">NGC/DN/NEF</td> </tr> <tr> <td>July 2013</td> <td>October 2013</td> </tr> <tr> <td>MeHg F - 0.22 ng/L</td> <td>MeHg F - 0.245 ng/L</td> </tr> <tr> <td>MeHg U - 0.304 ng/L</td> <td>MeHg U - 0.299 ng/L</td> </tr> <tr> <td>Tot Hg F - 0.9 ng/L</td> <td>Tot F - 0.91 ng/L</td> </tr> <tr> <td>Tot Hg U - 1.55 ng/L</td> <td>Tot U - 0.99 ng/L</td> </tr> <tr> <td colspan="2">NGC/UP/NWF</td> </tr> <tr> <td>July 2013</td> <td>October 2013</td> </tr> <tr> <td>MeHg F - 0.03 ng/L</td> <td>MeHg F - 0.58 ng/L</td> </tr> <tr> <td>MeHg U - 0.074 ng/L</td> <td>MeHg U - 0.217 ng/L</td> </tr> <tr> <td>Tot F - 0.8 ng/L</td> <td>Tot F - 0.83 ng/L</td> </tr> <tr> <td>Tot U - 1.3 ng/L</td> <td>Tot U - 2.04 ng/L</td> </tr> </table> <p>These data will be added to the 2014 annual mercury report.</p>	SGC/US/SWF		July 2013	October 2013	MeHg F - 0.05 ng/L	MeHg F - 0.163 ng/L	MeHg U - 0.08 ng/L	MeHg U - 0.246 ng/L	Tot Hg F - 1 ng/L	Tot Hg F - 0.85 ng/L	Tot Hg U - 1.58 ng/L	Tot Hg U - 0.86 ng/L	SGC/DS/SWF		MeHg F - 0.33 ng/L	MeHg F - 0.052 ng/L	MeHg U - 0.49 ng/L	MeHg U - 0.06 ng/L	Tot Hg F - 1.2 ng/L	Tot Hg F - 0.69 ng/L	Tot Hg U - 1.88 ng/L	Tot Hg U - 1.41 ng/L	NGC/DN/NEF		July 2013	October 2013	MeHg F - 0.22 ng/L	MeHg F - 0.245 ng/L	MeHg U - 0.304 ng/L	MeHg U - 0.299 ng/L	Tot Hg F - 0.9 ng/L	Tot F - 0.91 ng/L	Tot Hg U - 1.55 ng/L	Tot U - 0.99 ng/L	NGC/UP/NWF		July 2013	October 2013	MeHg F - 0.03 ng/L	MeHg F - 0.58 ng/L	MeHg U - 0.074 ng/L	MeHg U - 0.217 ng/L	Tot F - 0.8 ng/L	Tot F - 0.83 ng/L	Tot U - 1.3 ng/L	Tot U - 2.04 ng/L
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	To summarize, I was expecting to find comprehensive provision of all mercury data, (1) for all stations, (2) for both unfiltered and filtered analysis, (3) at the same frequency, and (4) in an accountable fashion that undertakes replacement samples were necessary and provides clear notation for discrepancies in the sampling/analytic chain of custody. For the reasons above, I did not find that the material provided met these expectations. The picture available from the provided data is highly fragmented and incomplete for the purposes at hand.	As indicated above, the report was prepared to address Conditions 7(5) and 7(6) of C. of A. #3960-7Q4K2G. It summarizes monitoring data relating to peat pore water, surface water systems, groundwater (well field) discharge and fish for the regulated locations in accordance with the approval.
	[A] Have your reviewers flagged these issues as well?	No, they have not.
	[B] Has DeBeers separately provided more comprehensive data to your reviewers, or are they also only working from these Reports?	Correct; they have the same information.
Other Documents / Requests		
#3.	<p>We are in receipt of the tabular DeBeers / AMEC response to our Closure Plan (amendment #3) comments.</p> <p>However, unfortunately, we have not yet been forwarded a copy of the final Plan that includes the significant number of proposed replacement pages - or a package that contains those replacement pages. I dislike having to trouble you for this, but (in addition to not reflecting our efforts) the final EBR Registry on the subject Plan similarly fails to provide a final copy or a link to the file.</p> <p>Access to the final incorporating these changes would certainly contribute to our comfort that these comments provided the intended value to the process.</p>	Replacement pages were provided to MNDM along with the response to your comments. We suggest that you follow up with Rob Calhoun, MNDM.

Source	Comment	Response
#4.	<p>Apologies for troubling you, but I am interested in viewing the following Victor reporting documents for all available years:</p> <p>(1) Annual Reports The annual reports to date, titled: "<i>Annual Groundwater and Subsidence Report for XXXX period as per Condition 4.1.5 of Permit to Take Water #1810-99FHAD, Victor Mine</i>", as well as the upcoming version (2014) when it becomes available this month.</p> <p>(2) Quarterly Reports The quarterly reports (and/or spreadsheets) that have been prepared to-date for the following two conditions of the Open Pit Wellfield (PTTW NUMBER 4767-9HKJ38 and related):</p> <p><i>4.4.4 Compile a quarterly report providing all of the Granny Creek hydrological data as collected by the monitoring program. Data to be compiled in an Excel spreadsheet.</i></p> <p><i>4.5.4 Compile a quarterly report providing all of the Nayshkootayaow River hydrological data as collected by the monitoring program. Data to be compiled in an Excel spreadsheet.</i></p>	With apologies, but these are not publicly released reports.

Sources of Comments:

- #1. E-mail to Larry Lefebvre, MOECC from Trevor Hesselink. January 14, 2015. Subject "A question regarding the Victor 2013 mercury Performance Report..."
- #2. E-mail to Larry Lefebvre, MOECC from Trevor Hesselink. January 19, 2015. Subject "Victor Mine 2013 Mercury Performance Report - missing mercury reporting..."
- #3. E-mail to Stephen Monninger, De Beers from Trevor Hesselink. January 14, 2015. Subject "Victor Closure Plan"
- #4. E-mail to Stephen Monninger, De Beers from Trevor Hesselink. January 12, 2015. Subject "Happy New Year! and further documents request..."

ATTACHMENTS

2013 VDM Mercury Performance Report

– Updated Tables 13a, 16a, 16b, 17a and 17b

TABLE 13a - Revised
TOTAL MERCURY - NAYSHKOOTAYAOW AND ATTAWAPISKAT RIVERS (Unfiltered)
 (concentrations in ng/L)

Date	Naysh. R. Upstream (Naysh Riv up)	Naysh. R. Middle (Naysh Riv dn)	Naysh. R. Downstream (Naysh Riv up Att Riv)	Monument Channel (Naysh Riv Control)	Attawapiskat R. A-1 (Att Riv up 2)	Attawapiskat R. A-2 (Att Riv up A2-1)	Attawapiskat R. A-5 (Att Riv dn 500(40))	Attawapiskat R. A-3 (Att Riv dn A3-1)	Attawapiskat R. A-4 (Att Riv dn Naysh Riv)
Feb-08	1.48	1.47	5.33	0.81	8.75	2.19		10.50	2.20
May-08	4.31	4.58	3.30	3.15	3.41	3.64		3.64	3.61
Aug-08	1.98	2.14	2.28	2.13	1.91	2.32		2.09	1.82
Oct-08	2.30	2.31	2.53	1.86	1.93	1.25		1.72	1.79
Jan-09	1.39	1.19	2.00	1.07	1.39	2.09		2.35	1.34
Feb-09	-	-	-	-	-	2.17		1.84	-
Mar-09	-	-	-	-	-	1.36		1.28	-
Apr-09	-	1.00	1.47	0.69	1.36	1.26		1.93	1.22
May-09	5.26	-	-	-	-	4.17		3.19	-
Jun-09	-	-	-	-	-	2.81		2.57	-
Jul-09	2.80	2.58	2.47	2.83	3.58	3.23		3.48	3.50
Aug-09	-	-	-	-	-	1.69		1.79	-
Sep-09	-	-	-	-	-	1.56		1.56	-
Oct-09	0.80	0.70	1.33	1.07	1.58	1.25		1.39	1.35
Nov-09	-	-	-	-	-	1.07		1.13	-
Dec-09	-	-	-	-	-	0.81		0.96	-
Jan-10	-	-	-	-	-	1.20		1.52	-
Feb-10	1.39	1.11	1.50	1.03	1.76	1.43		1.93	1.52
Mar-10	-	-	-	-	-	1.67		1.80	-
Apr-10	-	-	-	1.60	-	2.13		2.31	-
May-10	2.54	2.21	2.17	-	2.58	2.68		2.82	2.77
Jun-10	-	-	-	-	-	0.70		0.94	-
Jul-10	1.28	1.10	1.12	1.10	1.40	1.08		0.87	0.90
Aug-10	-	-	-	-	-	2.50		1.89	-
Sep-10	-	-	-	-	-	1.23		1.12	-
Oct-10	1.27	1.35	1.28	1.30	1.31	1.71		1.24	1.26
Nov-10	-	-	-	-	-	1.52		1.28	-
Dec-10	-	-	-	-	-	2.17		1.35	-
Jan-11	0.86	0.86	0.98	0.74	1.07	1.31		1.10	1.05
Feb-11	-	-	-	-	-	1.12		1.39	-
Mar-11	-	-	-	-	-	2.67		1.22	-
Apr-11	0.69	0.66	1.30	0.68	0.70	2.18		0.93	0.77
May-11	-	-	-	-	-	3.20		3.83	-
Jun-11	-	-	-	-	-	1.76		1.90	-
Jul-11	1.16	1.46	1.67	2.14	1.36	1.42		1.43	1.44
Aug-11	-	-	-	-	-	1.48		1.55	-
Sep-11*	-	-	-	-	-	-		-	-
Oct-11	1.90	2.53	2.09	2.99	-	2.85		1.99	1.95
Nov-11	-	-	-	-	-	1.79		2.09	-
Dec-11	-	-	-	-	-	3.51		1.23	-
Jan-12	1.53	1.28	1.47	0.94	1.27	1.16		1.28	1.15
Feb-12	-	-	-	-	-	0.85		0.88	-
Mar-12	-	-	-	-	-	0.73		0.75	-
Apr-12	-	-	-	-	-	-		-	-
May-12	2.22	1.86	2.06	2.54	1.80	1.62		1.51	1.61
Jun-12	-	-	-	-	-	3.59		4.00	-
Jul-12	2.00	1.79	1.77	2.39	2.27	2.93		2.20	2.37
Aug-12	-	-	-	-	-	1.76		1.51	-
Sep-12	-	-	-	-	-	1.43		1.88	-
Oct-12	1.82	1.80	1.91	2.56	1.30	1.08		1.03	1.09
Nov-12	-	-	-	-	-	-		-	-
Dec-12	-	-	-	-	-	2.11		2.24	-
Jan-13	2.13	6.63	1.47	3.72	1.58	3.14		2.63	-
Feb-13	-	-	-	-	-	2.00		1.89	-
Mar-13	-	-	-	-	-	1.24		1.36	1.32
Apr-13	0.82	0.88	0.78	2.79	1.77	1.09		1.01	0.83
May-13	-	-	-	-	-	3.11		2.43	-
Jun-13	-	-	-	-	-	3.06		2.48	-
Jul-13	0.77	0.76	0.84	0.99	1.04	1.16	0.98	0.95	1.06
Aug-13	-	-	-	-	-	1.90	1.48	1.34	-
Sep-13	-	-	-	-	-	1.70	1.63	1.60	-
Oct-13	0.96	1.16	1.12	1.08	1.08	1.03	1.22	1.21	1.35
Nov-13	-	-	-	-	-	1.14		0.97	-
Dec-13	-	-	-	-	-	0.82		0.82	-
Average 2009	2.56	1.37	1.82	1.42	1.98	1.96		1.96	1.85
Average 2010	1.62	1.44	1.52	1.26	1.76	1.67		1.59	1.61
Average 2011	1.15	1.38	1.51	1.64	1.04	2.12		1.70	1.30
Average 2012	1.89	1.68	1.80	2.11	1.66	1.73		1.73	1.56
Average 2013	1.17	2.36	1.05	2.15	1.37	1.78	1.33	1.56	1.14
Average All Years	1.82	1.81	1.84	1.76	2.01	1.68	1.33	1.89	1.64

CCME Protection of Aquatic Life Guideline - 26 ng/L
 Sampling locations and frequency governed by Amended C. of A. #3960-7Q4K2G, dated March 13, 2009
 Bracketted sampling notations are field identifications
 * Samples discarded as a result of lab miscommunication

TABLE 16a - Revised
TOTAL MERCURY - INDIVIDUAL MINE DEWATERING WELLS (Unfiltered)
 (concentrations in ng/L)

Date	VDW-2	VDW-3	VDW-6	VDW-7	VDW-11	VDW-12	VDW-14	VDW-15	VDW-17	VDW-18	VDW-21	VDW-22	VDW-23	VDW-25
Nov-07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec-07	-	-	0.07	-	1.31	-	-	-	-	-	-	3.08	-	-
Jan-08	-	-	0.06	-	1.64	-	-	0.29	0.09	-	-	3.66	-	-
Feb-08	-	-	0.12	-	1.41	-	-	-	-	-	-	3.13	-	-
Mar-08	-	-	0.33	-	2.93	-	-	0.22	0.28	-	-	3.26	-	-
Apr-08	-	-	-	-	1.89	-	-	0.64	0.31	-	-	4.27	-	-
Jul-08	-	-	0.14	-	2.18	-	-	0.20	0.19	-	-	2.28	-	-
Oct-08	-	0.03	0.05	0.42	*38.6	-	-	0.07	0.06	-	-	6.52	-	-
Jan-09	-	0.04	0.02	0.25	3.33	-	-	0.07	0.10	-	-	6.56	-	-
Apr-09	-	0.03	0.05	-	3.34	-	-	0.03	0.10	-	-	5.59	-	-
Jul-09	-	0.74	0.52	1.11	3.50	-	-	0.69	0.85	-	-	4.37	-	-
Oct-09	-	0.14	0.63	0.16	1.55	-	-	0.41	0.09	-	-	1.61	-	-
Jan-10	-	<0.01	<0.01	<0.01	3.40	-	0.01	<0.01	<0.01	-	-	3.80	-	-
Apr-10	-	<0.01	<0.01	<0.01	2.59	-	<0.01	<0.01	<0.01	-	-	3.32	-	-
Jul-10	-	0.12	0.09	0.28	3.00	-	0.08	0.03	0.24	-	-	3.36	-	-
Oct-10	-	<0.01	0.01	0.01	4.31	-	<0.01	<0.01	<0.01	0.35	-	5.18	-	-
Jan-11	-	-	-	0.23	3.34	1.39	0.20	<0.01	0.01	0.01	-	3.66	-	-
Apr-11	-	-	0.39	0.72	3.76	1.37	1.07	0.44	0.66	0.40	-	2.92	-	-
Jul-11	0.85	-	-	0.57	5.15	2.18	0.37	0.79	0.25	0.39	-	5.18	-	-
Oct-11	0.59	-	0.60	2.08	*125.15	2.75	0.67	0.55	0.95	1.21	-	15.86*	-	-
Jan-12	0.43	-	0.01	0.43	-	2.48	0.01	0.41	0.01	0.60	1.23	109.24*	-	-
Apr-12	0.54	-	0.47	0.68	-	3.65	0.51	0.56	0.32	1.00	0.89	6.63	-	-
Jul-12	0.12	-	0.13	0.28	-	2.66	<0.10	0.12	<0.10	<0.10	0.47	8.29	-	-
Oct-12	<0.10	-	<0.10	0.69	-	3.63	<0.10	<0.10	<0.10	1.19	0.66	9.69	-	-
Jan-13	1.15	-	0.34	0.33	29.80	4.00	1.92	0.71	1.26	2.43	2.63	8.97	-	-
Apr-13	0.12	-	0.16	0.28	20.99	3.26	0.18	0.12	0.13	0.96	0.42	10.19	-	-
Jul-13	<0.10	-	0.23	0.23	24.70	2.88	<0.10	0.24	<0.10	1.46	1.53	3.85	-	-
Aug-13	-	-	-	-	-	-	-	-	-	-	-	-	1.05	<0.10
Oct-13	0.33	-	0.39	9.50	34.40	1.98	0.36	0.49	<0.01	1.61	6.98	3.54	1.32	-
Average 2009	-	0.24	0.31	0.51	2.93	-	-	0.30	0.29	-	-	4.53	-	-
Average 2010	-	0.04	0.03	0.08	3.32	-	-	0.01	0.07	-	-	3.91	-	-
Average 2011	0.72	-	0.50	0.90	4.08	1.92	0.58	0.45	0.47	0.50	-	3.92	-	-
Average 2012	0.30	-	0.18	0.52	7.55	3.11	0.18	0.30	0.13	0.82	0.80	8.20	-	-
Average 2013	0.43	-	0.28	2.59	27.47	3.03	0.64	0.39	0.38	1.62	2.89	6.64	1.19	0.10
Average All Years	0.43	0.13	0.21	0.91	7.55	2.69	0.36	0.29	0.25	0.93	1.85	4.92	1.19	0.10

* Samples excluded from average calculations

CCME Protection of Aquatic Life Guideline - 26 ng/L

Sampling locations and frequency governed by Amended C. of A. #3960-7Q4K2G, dated March 13, 2009

TABLE 16b - Revised
TOTAL MERCURY - INDIVIDUAL MINE DEWATERING WELLS (Filtered)
 (concentrations in ng/L)

Date	VDW-2	VDW-3	VDW-6	VDW-7	VDW-11	VDW-12	VDW-14	VDW-15	VDW-17	VDW-18	VDW-21	VDW-22	VDW-23	VDW-25
Nov-07	-	-	0.08	-	1.07	-	-	-	-	-	-	2.36	-	-
Dec-07	-	-	0.08	-	0.96	-	-	-	-	-	-	2.27	-	-
Jan-08	-	-	0.05	-	1.01	-	-	0.08	0.12	-	-	1.87	-	-
Feb-08	-	-	0.10	-	1.17	-	-	-	-	-	-	2.74	-	-
Mar-08	-	-	0.25	-	0.14	-	-	0.09	0.17	-	-	2.92	-	-
Apr-08	-	-	-	-	1.21	-	-	0.18	0.35	-	-	3.71	-	-
Jul-08	-	-	0.18	-	1.56	-	-	0.15	0.18	-	-	1.82	-	-
Oct-08	-	0.05	0.06	0.41	*17.4	-	-	0.09	0.06	-	-	6.09	-	-
Jan-09	-	0.02	0.01	0.19	2.30	-	-	0.05	0.09	-	-	4.63	-	-
Apr-09	-	0.04	0.06	-	3.34	-	-	0.03	0.08	-	-	5.28	-	-
Jul-09	-	0.61	0.62	0.60	1.12	-	-	0.58	0.45	-	-	0.95	-	-
Oct-09	-	0.09	0.34	0.10	0.49	-	-	0.36	0.08	-	-	0.38	-	-
Jan-10	-	0.01	0.01	<0.01	0.53	-	0.01	<0.01	<0.01	-	-	0.62	-	-
Apr-10	-	<0.01	<0.01	<0.01	0.82	-	<0.01	<0.01	<0.01	-	-	0.57	-	-
Jul-10	-	0.10	0.06	0.11	0.42	-	0.20	0.03	0.12	-	-	0.45	-	-
Oct-10	-	0.39	0.36	0.42	0.75	-	-	0.01	0.01	0.01	-	0.01	-	-
Jan-11	-	-	0.01	0.23	0.88	0.48	0.40	0.01	-	0.01	-	0.73	-	-
Apr-11	-	-	0.01	0.36	0.80	0.46	0.54	0.01	0.38	0.37	-	1.10	-	-
Jul-11	0.01	-	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	1.86	-	-
Oct-11	0.01	-	0.01	0.01	0.73	0.54	0.01	0.01	0.35	0.35	-	1.08	-	-
Jan-12	0.42	-	<0.01	0.40	-	0.82	0.01	0.01	0.01	0.42	0.01	0.71	-	-
Apr-12	0.18	-	0.16	0.30	-	0.28	0.18	0.06	0.18	0.38	0.33	1.07	-	-
Jul-12	0.10	-	<0.10	0.15	-	1.59	<0.10	0.12	<0.10	<0.10	0.20	0.14	0.64	-
Oct-12	<0.10	-	<0.10	<0.10	-	1.03	<0.10	<0.10	<0.10	0.36	0.18	1.08	-	-
Jan-13	1.19	-	0.11	0.14	3.52	2.34	1.21	<0.10	1.08	1.09	1.07	0.93	-	-
Apr-13	0.16	-	0.16	0.24	5.35	1.15	0.16	0.17	0.09	0.50	0.15	0.62	-	-
Jul-13	<0.10	-	<0.10	<0.10	4.88	0.5	<0.10	<0.10	<0.10	0.20	<0.10	0.9	-	-
Aug-13	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10
Oct-13	0.15	-	0.14	0.39	10.9	0.57	0.23	0.60	<0.01	0.59	0.11	1.27	-	-
Average 2009	-	0.19	0.26	0.30	1.81	-	-	0.22	0.18	-	-	2.81	-	-
Average 2010	-	0.13	0.11	0.14	0.63	-	-	0.02	0.04	-	-	0.41	-	-
Average 2011	0.01	-	0.01	0.15	0.61	0.37	0.24	0.01	0.25	0.19	-	1.19	-	-
Average 2012	0.20	-	0.09	0.24	-	0.93	0.10	0.07	0.10	0.34	0.17	0.88	-	-
Average 2013	0.40	-	0.13	0.22	6.16	1.14	0.43	0.24	0.32	0.60	0.36	0.93	0.10	0.10
Average All Years	0.24	0.15	0.12	0.21	1.91	0.81	0.22	0.12	0.17	0.35	0.26	1.74	0.10	0.10

* Samples excluded from average calculations

CCME Protection of Aquatic Life Guideline - 26 ng/L

Sampling locations and frequency governed by Amended C. of A. #3960-7Q4K2G, dated March 13, 2009

TABLE 17a - Revised
METHYL MERCURY - INDIVIDUAL MINE DEWATERING WELLS (Unfiltered)
 (concentrations in ng/L)

Date	VDW-2	VDW-3	VDW-6	VDW-7	VDW-11	VDW-12	VDW-14	VDW-15	VDW-17	VDW-18	VDW-21	VDW-22	VDW-23	VDW-25
Nov-07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec-07	-	-	<0.01	-	0.01	-	-	-	-	-	-	0.01	-	-
Jan-08	-	-	0.01	-	0.01	-	-	0.01	0.01	-	-	0.01	-	-
Feb-08	-	-	<0.01	-	<0.01	-	-	-	-	-	-	<0.01	-	-
Mar-08	-	-	0.02	-	0.02	-	-	0.02	0.01	-	-	0.02	-	-
Apr-08	-	-	-	-	0.01	-	-	0.01	<0.01	-	-	<0.01	-	-
Jul-08	-	-	0.01	-	0.02	-	-	0.02	0.02	-	-	0.01	-	-
Oct-08	-	<0.01	0.01	0.01	0.01	-	-	<0.01	0.01	-	-	0.01	-	-
Jan-09	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr-09	-	0.01	0.01	-	0.02	-	-	0.02	<0.01	-	-	<0.01	-	-
Jul-09	-	0.03	-	-	0.01	-	-	-	-	-	-	-	-	-
Oct-09	-	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-	-	0.04	-	-
Jan-10	-	0.04	0.03	0.07	0.07	-	0.03	0.06	0.20	-	-	0.06	-	-
Apr-10	-	0.01	0.05	0.01	0.01	-	<0.01	<0.01	0.02	-	-	0.01	-	-
Jul-10	-	0.02	0.01	<0.01	<0.01	-	<0.01	0.03	<0.01	-	-	<0.01	-	-
Oct-10	-	0.01	<0.01	<0.01	0.01	-	<0.01	<0.01	<0.01	0.03	-	<0.01	-	-
Jan-11	-	-	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	0.01	-	-
Apr-11	-	-	<0.01	<0.01	<0.01	-	-	0.55	<0.01	-	-	0.03	-	-
Jul-11	0.01	-	-	<0.01	0.03	0.01	0.01	0.01	<0.01	0.01	-	0.01	-	-
Oct-11	0.01	-	0.04	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.06	-	0.01	-	-
Jan-12	0.02	-	0.07	<0.01	-	0.04	0.03	0.05	0.01	0.05	0.01	0.06	-	-
Apr-12	<0.01	-	<0.01	<0.01	-	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	0.04	-	-
Jul-12	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-
Oct-12	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	-	-
Jan-13	<0.02	-	<0.02	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-
Apr-13	<0.02	-	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-
Jul-13	0.07	-	0.05	0.03	0.19	0.03	<0.02	0.04	0.05	0.05	0.03	0.03	-	-
Aug-13	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Oct-13	<0.01	-	<0.01	<0.01	0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	-	-
Average 2009	-	0.02	0.01	0.01	0.01	-	-	0.02	0.01	-	-	0.02	-	-
Average 2010	-	0.02	0.03	0.03	0.02	-	-	0.03	0.06	-	-	0.02	-	-
Average 2011	0.01	-	0.02	0.01	0.02	0.01	0.01	0.14	<0.01	0.03	-	0.01	-	-
Average 2012	0.01	-	0.03	0.01	-	0.02	0.01	0.02	0.01	0.02	0.01	0.03	-	-
Average 2013	0.03	-	0.02	0.02	0.09	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Average All Years	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02	0.02

CCME Protection of Aquatic Life Guideline - 4 ng/L (unfiltered)

Sampling locations and frequency governed by Amended C. of A. #3960-7Q4K2G, dated March 13, 2009

TABLE 17b - Revised
METHYL MERCURY - INDIVIDUAL MINE DEWATERING WELLS (Filtered)
 (concentrations in ng/L)

Date	VDW-2	VDW-3	VDW-6	VDW-7	VDW-11	VDW-12	VDW-14	VDW-15	VDW-17	VDW-18	VDW-21	VDW-22	VDW-23	VDW-25
Nov-07	-	-	0.01	-	0.01	-	-	-	-	-	-	<0.01	-	-
Dec-07	-	-	0.01	-	<0.01	-	-	-	-	-	-	0.01	-	-
Jan-08	-	-	0.01	-	0.01	-	-	0.01	0.01	-	-	0.01	-	-
Feb-09	-	-	0.01	-	0.01	-	-	-	-	-	-	0.01	-	-
Mar-09	-	-	<0.01	-	0.01	-	-	0.01	0.01	-	-	0.02	-	-
Apr-08	-	-	-	-	0.01	-	-	0.02	0.01	-	-	0.02	-	-
Jul-08	-	-	0.02	-	<0.01	-	-	0.01	0.01	-	-	0.02	-	-
Oct-08	-	0.01	<0.01	<0.01	<0.01	-	-	0.01	0.01	-	-	0.01	-	-
Jan-09	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr-09	-	0.01	0.02	-	0.02	-	-	0.02	0.01	-	-	0.02	-	-
Jul-09	-	0.05	0.18	-	0.06	-	-	0.03	0.14	-	-	0.03	-	-
Oct-09	-	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-	-	0.01	-	-
Jan-10	-	0.07	0.02	0.04	<0.01	-	0.04	0.01	0.02	-	-	0.01	-	-
Apr-10	-	0.01	0.01	<0.01	0.02	-	<0.01	<0.01	0.01	-	-	<0.01	-	-
Jul-10	-	0.01	0.02	0.01	0.01	-	0.04	<0.01	0.01	-	-	<0.01	-	-
Oct-10	-	0.01	0.01	0.01	0.01	-	<0.01	<0.01	<0.01	0.05	-	<0.01	-	-
Jan-11	-	-	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-
Apr-11	-	-	<0.01	<0.01	<0.01	-	-	<0.01	0.01	-	-	<0.01	-	-
Jul-11	0.01	-	-	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	<0.01	-	-
Oct-11	0.01	-	0.04	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.05	-	<0.01	-	-
Jan-12	0.02	-	0.05	<0.01	-	0.03	0.01	0.01	0.01	0.03	0.01	<0.01	-	-
Apr-12	<0.02	-	<0.02	<0.01	-	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.02	-	-
Jul-12	<0.02	-	<0.01	<0.01	-	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.02	-	-
Oct-12	<0.01	-	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	-	-
Jan-13	<0.02	-	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	-	-
Apr-13	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-
Jul-13	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-
Aug-13	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02
Oct-13	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-
Average 2009	-	0.02	0.07	0.01	0.03	-	-	0.02	0.05	-	-	0.02	-	-
Average 2010	-	0.03	0.01	0.02	0.01	-	-	0.01	0.01	-	-	0.01	-	-
Average 2011	0.01	-	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.02	-	0.01	-	-
Average 2012	0.02	-	0.02	0.01	-	0.02	0.01	0.02	0.01	0.02	0.02	0.02	-	-
Average 2013	0.02	-	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Average All Years	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.02

CCME Protection of Aquatic Life Guideline - 4 ng/L (unfiltered)

Sampling locations and frequency governed by Amended C. of A. #3960-7Q4K2G, dated March 13, 2009