

Permit 7008 Environmental Technical Review Committee Action Item & Outcome Tracking Table									
Items	Meeting Type (Agency, Stakeholder)	ETRC Member or Stakeholder Responsible	Type	Context	Description	Date of Advice	Target Completion Date	Description of Follow-up	Status
1	Agency	QCC	Action Item	Agenda Item 3.1 - An update to the terms of reference was completed last year.	Terms of reference will be included in future meeting invites.	November 23, 2017	October 1, 2018		On-going
2	Agency	QCC	Action Item	Agenda Item 3.2 - Report Format Discussion around making the electronic version of the report easier to navigate.	Future Annual Reports will have separated appendixes. PDF version will include bookmarks and thumbnails.	November 23, 2017	June 30, 2018		On-going
3	Agency	QCC	Action Item	Agenda Item 3.2 - Report distribution to agencies	Future hard copies and electronic copies of the Annual Report will be sent to City of Campbell River (CoCR) and EMPR. Electronic versions will be submitted to ENV.	November 23, 2017	June 30, 2018	Annual Report received from CoCR	On-going
4	Agency	QCC	Action Item	Agenda Item 3.2 - Report distribution to library	Once reviewed by CoCR, QCC will deliver the Annual Report hard copy to the Vancouver Island Regional library.	November 23, 2017	Annually	Hard copy delivered 25-Apr-18	Closed
5	Agency	QCC	Action item	Agenda Item 3.3 - Public Notice The public notice was posted in the Campbell River Mirror on November 8th, 10th, 15th, & 17th	Tear sheet from newspaper will be sent to ENV.	November 23, 2017	November 27, 2017	Submitted Nov 27/17	Closed
6	Agency	QCC	Action Item	Agenda Item 4.1 - Tracking Table Updates Discussion around items that did not get closed from the 2016 tracking table.	Each year, include on-going action items from previous year for follow-up. Tracking table will be updated in Annual report and finalized at that year's ETRC meeting.	November 23, 2017	June 30, 2018		On-going
7	Agency	QCC	Action Item	Agenda Item 4.2 - On-going issues Items carried over from 2016 tracking table	As per recent reclamation activities at 242: - Review historical and current water quality at 242 flooded portal and 242 Sump, present data at 2017 Stakeholder meeting and write up in an e-mail to ENV.	November 23, 2017	January 31, 2018	Data was presented at the Stakeholder meeting. A report was sent to ENV with tracking table.	Closed
8	Agency	QCC	Action Item	Agenda Items 4.2 and 6 - Iron River borehole update / items carried over from 2016 tracking table. An assessment of the Iron River borehole issue is underway by ENV Compliance.	ENV to keep the ETRC and CREC updated on progress on the Iron River borehole.	November 23, 2017	December 31, 2018		On-going
9	Agency	QCC	Action Item	Agenda Item 7.2 - 4-South loading report summary. This report was submitted last year, QCC indicated they were considering following up with Lorax's recommendation to assess the colloidal Fe fraction at LLE, but were unsure if it was necessary.	Follow up on size fraction filtration techniques with Lorax and discuss with ENV at follow-up meeting.	November 23, 2017	December 31, 2017	Information was presented at Stakeholder meeting. Size fractionation of below 0.45 um was used to determine the bioavailability of dissolved iron less than 0.45 um. This was performed in order to assess whether LLE samples that exceed BCWQGs for dissolved iron contain a significant proportion of Fe-D as colloidal Fe. All samples are now field filtered to 0.45 um, in order to avoid chemical transformations during transport to lab.	Closed
10	Agency	QCC	Action Item	Agenda Item 7.3 - Summary of benthic invertebrate and sediment program results and recommendations.	Iron River sediment sampling is to be conducted in 2018. QCC to submit potential sampling locations to ENV for discussion.	November 23, 2017	April 30, 2018	To be submitted.	On-going
11	Agency	QCC	Action Item	Agenda Item 7.3 - Summary of benthic invertebrate and sediment program results and recommendations.	Recommendations for future monitoring will be included in the upcoming permit amendment application.	November 23, 2017	June 31st, 2018	Permit amendment application has been submitted. Draft version of recommendations from Stantec was submitted to QCC and is being reviewed. ENV will review the recommendations. Finalization will occur with minor permit amendment. Recommendations be included in 2017-18 Annual Report.	On-going
12	Agency	QCC	Recommendation	Agenda Item 7.3 - Summary of benthic invertebrate and sediment program results and recommendations.	Review when logging was performed within the vicinity of No Name Lake, provide a time line.	November 23, 2017	December 31st, 2017	Logging commenced within the vicinity of the lake during 2011 when comparing images using Google Earth.	On-going

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13	Stakeholder	QCC	Requests	Agenda Item 3.1 - Water Quality Summary. Elevated arsenic results were observed at 7SQR during summer low flow on two consecutive occasions. Stakeholders were concerned that arsenic concentrations were increasing on the Quinsam river since mining began. There was concern about the upstream Argonaut mine contaminating the Quinsam River influencing baseline results. QCC suggested graphing all arsenic data in the database to see if the trend for arsenic is increasing.	Arsenic concentrations on the Quinsam river remain in low concentrations. The upstream site (WA) near the inlet of Middle Quinsam Lake also remains low. Results of sediment samples were found in low concentrations as well. QCC to provide water quality for arsenic concentrations on the Quinsam River distribute to ETRC.	December 5th, 2017	April 24, 2018	Distributed with ETRC Tracking Table. Historical detection limits (2002) found in QCC's database were set above BCWQG. With the exception of the two elevated previous results from 2016 arsenic remains in low concentrations on the Quinsam River.	Closed
14	Stakeholder	ENV	Action Item	Agenda Item 4.2.1 - Iron River Borehole updates. A bore hole with elevated Arsenic was discover on the Iron River in This file was passed on to ENV Compliance who will be contacting Environment Canada (EC). Stakeholders question EC's role requesting mitigative actions be taken for the sump.	Compliance to contact Environment Canada with respect to the IRS1	December 5th, 2017			On-going
15	Stakeholder	ENV	Action Item	Agenda Item 4.2.2 4-South Loading Report Summary. A final report "4-South Loading-LLE Water Quality Summary Report (Including Historical Reports) - April 2017", QCC indicated they were considering following up with Lorax's recommendation to assess the colloidal Fe fraction at LLE if concentrations remain elevated.	Size fractioning of below 0.45 µm was used to determine the bioavailability of dissolved iron (Fe-D) less than 0.45 µm. This was preformed in order to assess whether LLE samples that exceed BCWQGs for Fe-D contain a significant proportion of Fe-D as colloidal Fe. All samples are now field filtered to 0.45 µm, in order to avoid chemical transformations during transport to lab.	December 5th, 2017		Wetlands are naturally elevated with metals especially during summer with low dissolved oxygen causing redox reactions at the sediment water interface.	Closed
16	Stakeholder	QCC	Requests	Agenda Item 4.2.3 - 242 portal data review and reclamation work performed to date. Reviewing historical to present water quality data.	Coal production from the 242 underground test mine began in September 1996 and ended in November of 1996. The 242 test site was recently reclaimed in 2016. An assessment of the historical to present water quality was presented and compared to BCWQG and contaminated sites regulations for protection of aquatic life (CSR-AW), where applicable.	December 5th, 2017	April 24, 2018	A summary report has been distributed with ETRC meeting minutes. Further sediment, groundwater and surface water sampling will be carried out to assess the results of reclamation activities and remove the monitoring requirements from the effluent permit.	Closed
17	Stakeholder	EMPR	Action Item	Agenda Item 5.0 - Effluent permit administration and compliance.	Mines Act permit requirements from the Area 5 permit amendment (C-172). All permit amendments pertaining to C-172 can be found on the EMPR website (https://mines.empr.gov.bc.ca/).	December 5th, 2017	December 5th, 2017	Link to the EMPR B.C. mining website (https://mines.empr.gov.bc.ca/)	Closed
18	Stakeholder	QCC	Action Item	Agenda Item 5.1 - Compliance with permit limits.	Follow-up with compliance ENV with a mitigation strategy for Total Suspended Solids (TSS) at Settling Pond # 4. TSS levels were in excess of permit limits during extreme storm events in 2016. A mitigation strategy was recommended.	December 5th, 2017	Report due May 2018	Response to compliance inspection was submitted with a mitigation strategy for TSS exceedances. This includes submitting a TSS management report and plans for installing a sediment curtain during 2018. The use of flock soaks will be evaluated if TSS levels increase (See attached Memo).	On-going

**Quinsam Coal Mine
2017 Environmental Technical Review Committee Meeting**

Date: November 23, 2017

Time: 9:30am – 2:30 pm

Location: MOE Office, 2080 Labieux Rd, Nanaimo

Also available via video conference using Lync (see invite)

Attendees	Initials	Position	Agency
Andrea Doll	AD	Senior Environmental Protection Officer, Mining Operations	Ministry of Environment and Climate Change Strategy (ENV), Nanaimo
Darren Stewart	DS	Environmental Protection Officer, Compliance Section	ENV, Nanaimo
Genevieve Huneault	GH	Community Resource Technologist, Compliance Section	ENV, Nanaimo
Karen Munroe	KM	Principal, Senior Aquatic Scientist	Stantec
Kathleen Russell	KR	Environmental Coordinator	Quinsam Coal Corporation (QCC)
Nicole Obee	NO	Environmental Impact Assessment Biologist	ENV, Victoria
Norm Johnson	NJ	Underground Mine Manager at Quinsam Coal	QCC
Paul Beddoes	PB	Senior Environmental Geoscientist, Mines and Mineral Resources Division	Ministry of Energy, Mines and Petroleum Resources (EMPR)
Terry Martin	TM	Environmental Specialist	City of Campbell River (CoCR)

Purpose: To review the Quinsam Coal Corporation's 2016/17 Annual Monitoring Report, provide updates on mine status and environmental matters, identify issues and agree on possible recommendations to be made to the Director of Environmental Protection, where warranted.

Agenda Items:

1. Meeting opening (ENV)
 - 1.1 Meeting objectives and introductions
 - 1.2 Review agenda
2. Overview of status and activities over the preceding year and plans for the coming year (QCC)
 - 2.1 Mine and ownership status
 - 2.2 Site activities over the past year and activities planned for the coming year
 - 2.3 Permitting update
3. ETRC administration
 - 3.1 Terms of reference (ENV)
 - 3.2 Data site update and Report Format (QCC)
 - 3.3 Public notice (ENV/QCC)
 - 3.4 Planning for stakeholder meeting (all)
4. Report out on actions taken as a result of the 2016 meetings (QCC)
 - 4.1 Tracking Table Updates
 - 4.2 On-going issues
5. Compliance with permit requirements (ENV)
6. Iron River borehole update (ENV)
7. Highlights from the Annual Monitoring Report (QCC)
 - 7.1 Lakes water quality summary
 - 7.2 4-South loading report summary
 - 7.3 Summary of arsenic data at Quinsam River and Iron River monitoring stations
 - 7.4 Summary of benthic invertebrate and sediment program results and recommendations
8. Any additional discussion topics (all)
9. Round table for minutes: action items, outcomes and positions (all)

Quinsam Coal Mine

2017 Stakeholder Environmental Technical Review Committee Meeting

Date: December 5, 2017; Time: 10:00 am – 3:00 pm

Location: Coast Discovery Inn, Vancouver Room

Purpose: To review the Quinsam Coal Corporation's 2016/17 Annual Monitoring Report, provide updates on mine status and environmental matters, identify issues and agree on possible recommendations to be made to the Director of Environmental Protection, where warranted.

Attendees	Initials	Position	Agency
Andrea Doll	AD	Senior Environmental Protection Officer, Mining Operations	Ministry of Environment and Climate Change Strategy (ENV), Nanaimo
Mark Love	ML	Section Head of North West and Vancouver Island Regions, Mining Operations	ENV, Smithers
Genevieve Huneault	GH	Community Resource Technologist, Compliance Section	ENV, Nanaimo
Nicole Obee	NO	Environmental Impact Assessment Biologist	ENV, Victoria
Paul Beddoes	PB	Senior Environmental Geoscientist, Mines and Mineral Resources Division	Ministry of Energy, Mines and Petroleum Resources (EMPR)
Karen Munroe	KM	Principal, Senior Aquatic Scientist	Stantec
Kathleen Russell	KR	Environmental Coordinator	Quinsam Coal Corporation (QCC)
Matt Ashley	MA	Mine Manager at Quinsam Coal	QCC
Terry Martin	TM	Environmental Specialist	City of Campbell River (CoCR)
Matt Rykers	MR	Water Quality Technician	City of Campbell River (CoCR)
Lynne Stone	LS	Representing Claire Trevena, MLA	Member Legislative Assembly (MLA)
Glenda Woodward	GW	Stakeholder	Campbell River Environmental Committee (CREC)
Leona Adams	LA	Stakeholder	CREC
Frank Jamieson	FJ	Stakeholder	CREC
John Lewis	JL	Stakeholder	CREC
Richard Hamilton	RH	Stakeholder	Greenways Land trust (GL)
Peter Schwarzhoff	PS	Stakeholder	GL
Leroy McFarlane	LM	Stakeholder	Oyster River Estuary

Lunch will be provided by QCC

Agenda Items:

10:00am

- 1.0 Meeting opening (ENV)
 - 1.1 Meeting objectives and introductions
 - 1.2 Review agenda

10:15

- 2.0 Overview of status and activities over the preceding year and plans for the coming year (QCC)
 - 2.1 Mine and ownership status
 - 2.2 Site activities over the past year and activities planned for the coming year

10:45

- 3.0 Highlights from the Annual Monitoring Report (QCC)
 - 3.1 Water quality summary
 - 3.2 Groundwater inputs and terminology
 - 3.3 Summary of aquatic biota and sediment results and discussion

1:00 -1:30 break

- 4.0 Report out on actions taken as a result of the 2016 meetings
 - 4.1 Tracking Table Updates (QCC)
 - 4.2 On-going issues (QCC)
 - 4.2.1 Iron River borehole updates (ENV)
 - 4.2.2 4-South loading report summary
 - 4.2.3 242 portal data review

2:00

- 5.0 Effluent permit administration and compliance
 - 5.1 Compliance with permit requirements (ENV)
 - 5.2 Permitting update (ENV, QCC)

2:30

- 6.0 Round table for minutes: action items, outcomes and positions (all)