

Water-related Reference Materials for Technical Sessions on EA0607-002: Tamerlane Ventures' Pine Point Pilot Project

July 9, 2007

Introduction

To facilitate preparation for the Technical Sessions in Hay River, Review Board staff compiled a list of materials on the Public Registry that relate to water issues. The following document is broken down into:

1. Relevant sections of the Developer's Assessment Report (DAR); and
2. Other materials relevant to water issues.

Please note that comments from scoping sessions, Terms of Reference and comments on Terms of Reference, proposed Technical Session Topics from Parties, and other concerns and questions stated during the course of the EA are not included here. They have been incorporated as appropriate into the July 5, 2007 Review Board document on the Public Registry listing all topics/specific questions to be addressed at the Technical Sessions - http://www.mveirb.nt.ca/upload/project_document/1183659943_final%20agenda%20for%20EA0607-002%20Technical%20Sessions.pdf.

Contact me with any questions or to identify any other relevant sources.

Regards,



Alistair MacDonald
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
amacdonald@mveirb.nt.ca
(867) 766-7052

1. Relevant Sections of the Developer's Assessment Report (DAR)

The following table breaks down the relevant sections of the DAR and supporting appendices that technical experts should familiarize themselves with prior to the Technical Sessions in Hay River on July 17-18. It is broken down into sections relevant for examining:

1. water quality issues (Topic 2, and parts of Topics 3 and 4 at the Technical Sessions); and/or
2. likelihood of freezeway technology success and predictions of water quantify inflows and potential impacts of same (Topic 1 and parts of Topic 3 and 4 at the Technical Sessions).

NOTE: As Technical Sessions are focusing on water issues only, this table should not be read as a guide for Parties' overall Technical Review of the Developer's Assessment Report for the whole EA. In addition, this is a general guidance document only; Parties should be guided by their level of interest in water issues and level of expertise in determining which sections of the DAR to be familiar with.

DEVELOPER'S ASSESSMENT REPORT – RELEVANT SECTIONS FOR TECHNICAL SESSIONS ON WATER

DAR SECTION & TITLE	RELEVANT TO WATER QUALITY	RELEVANT TO FREEZEWAY/WATER QUANTITY	COMMENTS
Section 2.0 – Description of Existing Biophysical Environment	Should be familiar with entire section, including wildlife, aquatic life and vegetation, given potential for impacts of poor water quality on these VCs	General overview of whole section	
2.4 geology	yes	Yes	
2.5 seismic	no	Yes	
2.6 hydrogeology	yes	Yes	
2.8 surface hydrology	yes	No	
2.9 water quality	yes	No	

DAR SECTION & TITLE	RELEVANT TO WATER QUALITY	RELEVANT TO FREEZE WALL/WATER QUANTITY	COMMENTS
Section 4.0 Development Description	General overview of whole section	General overview of whole section	
4.1.3-4.1.5 Freezing	No	Yes	Linked to Appendices C-1 and C-2
4.2.2.8 Dewatering	Yes	Yes	
4.3.1-4.3.5 Surface Infrastructure	Yes	No	
4.3.7 Greywater and sewage treatment	Yes	No	
4.3.15 Infiltration basin	Yes	No	
4.5 Hazardous Materials	Yes	No	
4.6 Water management	Yes	No	
4.6.2 Water releases	Yes	No	
Section 5.0 Alternatives	Specific sections noted below only	Specific sections noted below only	
5.2 Alternative mining methods	No	Yes	
5.3 Water control options	No	Yes	
5.3.4 Infiltration basin	Yes	No	This is the proposed "end of pipe" release point
5.7 Sewage treatment	Yes	No	
5.9 Explosives	Yes	No	Potential for ammonia and nutrient release possibilities important
Section 7.0 – Environmental Assessment			
7.1 Impact Assessment Methodology	General overview only	General overview only	
7.2 Water Resources	Yes	No	

DAR SECTION & TITLE	RELEVANT TO WATER QUALITY	RELEVANT TO FREEZEWALL/WATER QUANTITY	COMMENTS
7.3 Fish and fish habitat	Yes	No	This is important to a much lesser degree than 7.2, given that DFO has not identified any nearby fish-bearing streams or lakes
7.4 Vegetation	Yes	No	Only of import if problems in water quality or quantity predicted
7.6 Wildlife and wildlife habitat	Yes	No	Only of import if problems in water quality or quantity predicted
7.8.1 Water quality monitoring	Yes	No	
7.8.3 Freezewayall monitoring	No	Yes	
Section 9.0 - Closure and reclamation	General overview only	General overview only	See Section 4 in Final Technical Sessions Agenda for more specific questions relating closure and reclamation to water issues
Section 10.0 - Cumulative effects	10.3.1 – cumulative water effects	Not generally applicable	
Section 11.0 – Accidents and Malfunctions	Not generally applicable	11.3 on freezewayall failure	
APPENDICES			
B-1 Water Quality baselines studies	Yes	No	
B-4 2006 Water quality sampling	Yes	No	
C-1 Feasibility assessment of Pine Point ground freezing project	No	Yes	
C-2 Desktop evaluation of natural groundwater flow velocities	No	Yes	

2. Other Materials Relevant to Water Issues

The following table identifies materials on the MVEIRB website Public Registry - www.mveirb.nt.ca - for the Pine Point Pilot Project Environmental Assessment that is relevant to water issues:

DATE ON PUBLIC REGISTRY	NAME OF PUBLIC REGISTRY FILE	AUTHOR/YEAR/ ORGANIZATION	OFFICIAL TITLE OF DOCUMENT
July 9, 2007	Additional questions for Topic 1 of the Technical Sessions	MVEIRB	Additional questions on groundwater and frezewall
July 6, 2007	List of concerns about the DAR	Fort Resolution Metis Council	Concerns based out of the PPPP DAR report (<i>water and frezewall applicable only</i>)
July 6, 2007	NWT Mine Reclamation Guidelines	INAC – January 2007 version	Same as on the Public Registry
July 6, 2007	Info on newly proposed Water Treatment Plant	Century Environmental Services for Tamerlane	Tamerlane Water Treatment Plant
July 5, 2007	Fort Resolution Fish Monitoring Program 1992-3	Caroline Lafontaine for INAC - 1997	Same as on the Public Registry
June 19, 2007	Tamerlane Responses to Technical Meeting Topics	Tamerlane Ventures	Same as on the Public Registry
June 14, 2007	INAC response to First Round IR #32	INAC	Same as on the Public Registry
June 14, 2007	Tamerlane additional info on IR #19 response	SGS Lakefield Research Ltd. For Tamerlane Ventures	Further info on preliminary laboratory bench-scale process water discharge analysis
May 29, 2007	First Round Information Responses from Tamerlane Ventures	Tamerlane Ventures	Same as on the Public Registry (<i>relevant responses: 2-4, 8-9, & 19-28</i>)
May 18, 2007	First Round IR #33 – Environment Canada Response	Environment Canada	Same as on the Public Registry

DATE ON PUBLIC REGISTRY	NAME OF PUBLIC REGISTRY FILE	AUTHOR/YEAR/ ORGANIZATION	OFFICIAL TITLE OF DOCUMENT
February 12, 2007	2004 report for Tamerlane Ventures on Great Slave Reef Lead-Zinc deposits	G.H. Giroux for Tamerlane Ventures (2004)	Report on the Great Slave Reef Lead Zinc Deposits – Pine Point, NWT
February 7, 2007	NHRI 1998 study of metals in Resolution Bay	M.S. Evans (1998) – National Hydrological Research Institute	Metals in water, sediment and fish in Resolution Bay <i>(contact Review Board for a hard copy – summary from INAC is that there was no measurable impact from mining on waters or fish)</i>
August 22, 2006	Beak Consultants Ltd. 1980 Initial Evaluation of Great Slave Reef Project	Beak Consultants (1980)	Same as on the Public Registry
August 22, 2006	Hydrogeology Evaluation for Environment Canada 1983	GTC Geological Testing Consultants (1983)	Same as on the Public Registry
August 12, 2006	Article on open-pit dewatering at Pine Point Mines	B. Calver (1969)	Same as on the Public Registry
August 11, 2006	Hydrogeology of R190 by Stevenson International	Stevenson International (1983)	Same as on the Public Registry
August 11, 2006	R190 Aquifer Test Analysis and Preliminary Dewatering Design	Brown, Erdman & Associates (1982)	Same as on the Public Registry (NOTE: first 42 pages blank)
August 11, 2006	Some Practical aspects of open-pit dewatering at Pine Point	Vogwill (1976)	Same as on the Public Registry