

Meadowbank Type A Water License Application Reviews - Performed by INAC Internal and External Reviewers

			Comment	Document	Revised	Document References and Comments - 31/01/2008
Condition #	NIRB Commitment #	NWB Section #		Reference and Comments - 06/11/2007	Comments	
8			compliant	(D317) 2006 gw program completed (new wells, gw re-sampled); (D499) pit inflow water re-evaluated for higher mining rate of 8,500 TPD using same depth-TDS profile; (D516) Gw quality inputs into Portage and Goose Island pits based on average of gw quality for 2003, 2004 and 2005.		
9			compliant	Similar to NIRB Commitment 48		
10			non-compliant	This document contained only GENERAL information regarding potential systems as previously referenced in the FEIS. No recommended system is provided. Further we understand that a third (different) system has been purchased. Pre-screening of effluent, emergency storage/handling or sludge treatment is addressed.	compliant	
11			compliant	Conceptual design analysis completed.	compliant	
12				Type B Licence		
13			non-compliant	Can Not Find.	compliant	still need NWB criteria
			compliant	(D450, D515 and D516) Proposed water leaving Portage and Vault Attenuation Ponds will meet MMER at point-of-discharge and achieve Nunavut DW guidelines and "approach" CCME FAL at 30m radius from diffusers in Third Portage and Wally Lakes.	compliant	
14			compliant	(D450) Goose Island and Vault lake dikes breach proposed when pit water quality meets discharge criteria (as per Condition #13); (D516) Proposed waters in Portage and Goose Pits will meet MMER and most of [Nunavut] DW criteria.		
15			compliant	Operational ARD/ML Sampling and testing Plan section 1.0.		
16						
17			non-compliant	Expert analysis complete but need final report not draft.	compliant	
18			compliant	Mine Waste and Water Management section 6.3, 6.4.		
19			compliant/non-compliant	A 2m cover over tailings is in compliance with reference from Preliminary	compliant	contingent on review of commitment made by AEM
				Closure & Reclamation Plan section 12.1 and Operation ARD/ML		
				Sampling and Testing Plan section 1.0. Non-compliant on NWB and NIRB request for		
				results on re-evaluation - Cannot Find.		
20					compliant	
21			N/A			
22				Not included in MMC submission table.		

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23				Not included in MMC submission table.		
24			non-compliant	Report addresses conceptual approach. More design detail needed:	compliant	landfill documentation OK
				The operation of the landfill as a continuous fill as wind will disturb fill materials.	non-compliant	incinerator/bag house pre-design needed
				Operation should addressdaily cover (cell development/operation).		ash quality/disposal confirmation needed.
				The report dismisses leachate deveopment. Leachate monitoring must be addresssed.		when can incinerator be expected to meet emmission
				Final cover closure depths need to evaluate effects of global warming evaluations.		design/ regulatory standards
				Other WM practices (recycling, diversion) need to be addressed.		
				The operations document could be more operation specific. Training requirements identified.	compliant	
				Landfarm document is non committal on a system. Hydrocarbon contaminated soils		
				must be treated before used or disposed of in the landfill. A definative approach to		
				addressing spills and treatment method & area is needed.		
25			compliant/non-complie	Landfill approach appears compliant for wildlife. On-site waste mangement controls unknown.	compliant	
				Consultation with HTO, EC, INAC unknown		
26			non-compliant	(NIRB) Not included in MMC submission table. (EF) Cannot Find on the Spill Contingency Plan section 3.3 (MMC's Initial Action Plan)	compliant	landfarm
				Ensure Safety - Indentify and Contain - "Clean Up" (should be added here) - Report		
				This should also confirm landfarm design. No HCC material to landfill.	compliant	
27			compliant	Hazardous Materials Management Plan section 3.		
30				Not included in MMC Submission Table		
31			N/A	Not included in MMC Submission Table. Separate Water License		
35				Not included in MMC Submission Table, Type B Licence.		
37			need Type B WLA	(NIRB) Marine requirement. (EF) pending receipt of Type B WLA		
38			need Type B WLA	(NIRB) Marine requirement. (EF) pending receipt of Type B WLA		
39			need Type B WLA	(NIRB) Marine requirement. (EF) pending receipt of Type B WLA		
42			need Type B WLA	(NIRB) Marine requirement. (EF) pending receipt of Type B WLA		
44			need Type B WLA	(NIRB) Marine requirement. (EF) pending receipt of Type B WLA		

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45			compliant	Discharge water quality meet criteria at plume edge (conservative assumptions)		
48*						
49*						
50						
59						
72						
75			non-compliant	(NIRB) Marine requirement. (EF) Cannot Find	non-compliant	needs risk assessment for spills
77			non-compliant	(NIRB) Marine requirement. (EF) Cannot Find	non-compliant	expand Emergency Response Plan to include communities
78			non-compliant	Need to make "Preliminary" into Final. Report should have current site plan,	non-compliant	need to address dumping materials into open pits
				final impact plan map, and final reclamation plan map. Cannot find request for		
				information on NWB requirements.		
79			non-compliant	Can only find very general statements on items 1 to 4. Include these items in the	non-compliant	same as # 78
				Final Closure and Reclamation Plan.		
80				Not included in MMC Submission Table.		
82			compliant	(NIRB) Marine requirement. (EF) Generally covered in Spill Contingency Plan but could be more specific		
85				Not included in MMC Submission Table; Specifically Item d)		
	1		compliant	(D499) Pit water model re-run for higher mining rate of 8,500 TPD - shows pit water TDS may be 3x higher if gw TDS 3x higher; if hydraulic conductivities of Second Portage and Bay Zone Faults are 3x higher, pit water TDS may be 40% higher than base case.		
	2		compliant	(D317) 2006 gw program completed (new wells, gw re-sampled).		
	4		compliant			
	5		compliant	Fault Testing and Monitoring Plan		
	43		pending geochemical completeness	pending geochemical review by EBA		
	44		compliant	Operational ARD/ML Sampling and testing Plan		
	46		compliant	Operational ARD/ML Sampling and testing Plan		

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	48		compliant	(D467) Water treatment plans for attenuation ponds predicated on water not requiring significant treatment other than pH adjustment; treatment contingencies are provided.		
	49		compliant	(D467) In-situ treatment descriptions provided at conceptual level and assume that existing treatment technologies are viable for the proposed project.		
	50		compliant	(D499) Pit water salinity model re-run for higher mining rate of 8,500 TPD using same (2003 and 2004) depth-TDS profile.		
	60		compliant	Operational ARD/ML Sampling and testing Plan		
	61		compliant	(D420)		
	62		compliant			
	63		compliant			
	64		compliant/non-compliant	Draft Document Only. Proponent has deferred MMC's internal reviewer's key issues.	Deferred	Deferred as condition of Type A Licence
	65		compliant			
	86		compliant	Mine Waste and Water Management section 5.2, 5.3, Figure 5.1		
	6		non-compliant	Cannot Find.	compliant	Tech Memo, Golder April 21 '06
	29		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
	33		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
	36		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
	38		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
	41		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
	42		need Type B WLA	pending receipt of Type B WLA	need Type B WLA	pending receipt of Type B WLA
		3.1(i)	compliant	Work Plan to collect data to assess permeability is in place, Fault Testing and		
				Monitoring Plan		
		3.1(iii)	non-compliant	(D317) 2006 gw program completed; no 2007 program.	compliant	2007 reported in supplemental document (D548).
		3.1(iv)	compliant	(D499) Pit water model re-run for higher mining rate of 8,500 TPD - shows pit water TDS may be 3x higher if gw TDS 3x higher; if hydraulic conductivities of Second Portage and Bay Zone Faults are 3x higher, pit water TDS may be 40% higher than base case.		

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		3.1(v)	compliant	(D499) Pit water model re-run for higher mining rate of 8,500 TPD - shows pit water TDS may be 3x higher if gw TDS 3x higher. (D467) Water treatment plans predicated on water not requiring significant treatment; implied assumption that mitigation measures for "disposing of pit water of poor quality" not needed.		
		3.1(viii)	compliant	(D467) Water treament for tailings reclaim water and tailings slurry are provided; water treatment contingencies provided for attenuation pond and mine contact waters; treatment efficiencies not described; pH adjustments are provided.		
		3.1(x)	non-compliant	additional detail required	compliant	
				(D515) Proposed water leaving Portage and Vault Attenuation Ponds will meet MMER at point-of-discharge; CORMIX modelling "suggests" diffusers will dilute attenuation water to Nunavut DW guidelines and close to CCME FAL at 30m radius from diffusers.	compliant	
		3.1(xi)	compliant/non-compliant	Requirements were for the preparation of details on the outlet configuration, discharge characteristics, plume behavior and bathymetric information at two selected diffuser sites at Third Portage Lake and one site at Wally Lake. EBA did not find mention of potential cumulative impacts based on an extended life of the mine at respective locations. Also, a monitoring program to confirm mine effluent and dilution chemistry results should also be prepared prior to the final design and implementation program.	compliant	
		3.1(xii)	compliant/non-compliant	modelling completed; monitoring program not defined for Third Portage Lake diffuser sites; Wally Lake diffuser adjacent/within near field monitoring area for AEMP	compliant	
		3.1(xiii)	compliant	bathymetric survey completed	compliant	
		3.2 (i)	non-compliant	Cannot Find	non-compliant	update Spill Contg Plan to include all-weather road, marine
		3.2 (ii)	need Type B WLA	pending receipt of Type B WLA	need Type B WLA	
		3.2 (iii)	need Type B WLA	pending receipt of Type B WLA	need Type B WLA	
		3.2 (iv)	non-compliant	Cannot Find	non-compliant	pending incorporation into Type A
		3.2 (v)	non-compliant	Cannot Find	non-compliant	pending incorporation into Type A
		3.2 (vi)	non-compliant	Cannot Find	non-compliant	revise by June 01, 2008