

Agency	TC No	Subject/Topic	Reference to Type B	Summary	Importance of issue to the Type B Water Licence review process	Detailed Review Comment	Recommendation/Request	SBB Response	Updated Attachment
INAC	INAC-IR-1	Water Use	Main Application Document			The applicant has proposed that water use under this licence will be 297m3/day.	INAC does not have a problem with this allotted water usage. INAC requests that the applicant be diligent and keep records of water use, to ensure that to the applicant does not go over licence limits established under all other licences (2BE-GOO1520, 2BEGEO1520, 8BC-BRP----).	Sabina acknowledges that INAC has no problem with the allotted water usage of 297 m3/day, and agrees to be diligent and keep records of water use to ensure that Sabina does not go over licence limits established under all other licences (2BE-GOO1520, 2BEGEO1520, 8BC-BRP----) .	
INAC	INAC-IR-2	15 ML Fuel Tank	Main Application Document, Section 3.1.2.5			Section 3.1.2.5 of the application indicates that the applicant plans to construct a 15 ML fuel tank.	INAC could find no details on whether or not this fuel tank will be hydrostatically tested and where the water will come from to complete such a task. INAC recommends that the applicant provide these details of the fuel tank.	Sabina confirms that hydrostatic testing of fuel tanks is not under consideration as part of the initial development works; this is stated in Concordance Section 3, Section 15a (Hydrostatic Testing) (170913 8BC-BRP----PredevConcordance-IMLE_Version2.0 ).	
INAC	INAC-IR-3	Water Containment Structures	Main Application Document Section 3.3.4			In Section 3.3.4 the applicant has stated “Contact water management includes managing surface water that is impacted by/contacts with site infrastructure (i.e., runoff). All contact water from the development works will be sampled as part of ongoing monitoring and allowed to discharge to the environment if it meets discharge criteria as defined in the Type B Water Licence. Water quality monitoring applicable to the current scope of development works is provided in the EMPP”.	It is unclear in the application how and where this contact water will be collected. INAC recommends that the applicant provide details on how and where the contact water for pre-development work will be controlled as not to impact the environment.	<p>The scope and scale of associated water management mitigation measures for initial development works revolve primarily around contact water management in the quarry, and sediment and erosion control measures associated with road construction. Although the scale of activities proposed is increased from previous activities Sabina has successfully operated and maintained a quarry, constructed and maintained roads, an airstrip and numerous pads.</p> <p>It's important to note that the Airstrip Quarry was operational in 2013 under KIA Permit, KTP11Q001 and NWB Type B Water Licence 2BE-GOO1520. Ongoing surface drainage and surface water management procedures have been, and continue to be, implemented at the Airstrip Quarry; the existing layout can be seen in Section 4.2 of the Quarry Management Plan (170913 8BC-BRP----D3QuarryMgmtPlan-IMLE_Version2.0). The quarry configuration consists of a flat surface graded at approximately 1% in the down slope direction, adjoining a steeper angled rock surface that forms the transition to natural ground on the ridge above. Since 2013, Sabina has experienced minimal contact water collecting in the Airstrip Quarry; it is anticipated that contact water in the quarry sites will continue to be minimal during initial development works. As stated in Table 7-1 of the Quarry Management Plan (170913 8BC-BRP----D3QuarryMgmtPlan-IMLE_Version2.0), Sabina has committed to undertake an annual seep survey in Spring of all quarries. Routine visual inspections of all quarries occur daily during active quarry operations, during freshet, and after any major rainfall event. If runoff from the quarries is identified, it will be sampled to ensure it meets discharge criteria as defined in the Type B Water Licence. A notification of discharge will be submitted to appropriate regulatory parties under the land and water authorizations and also reported within annual reports. It should also be noted that the minimum 31 m buffer distance, intended to minimize surface flow impacts on water quality, will be applied to all quarry locations. This 31 m buffer was identified based on guidance documents and commonly established riparian zone buffer widths used in many regions, including the Arctic.</p> <p>Runoff from the all-weather service roads will be discharged to the terrestrial environment as diffuse sheet flow and will infiltrate into the terrestrial environment prior to reaching the aquatic environment. Since 2013, Sabina has experienced minimal runoff from the all-weather service roads constructed; it is anticipated this will continue. All-weather service roads will be constructed with geochemically suitable material located at a distance of at least 31 m above the highwater mark of any adjacent waterbody.</p> <p>As per Section 3.3.4 of the Type B Water Licence Application Main Application Supporting Document (170913 8BC-BRP----MainApplicationDocument_Version2.0), sediment and erosion control measures will be implemented prior to, and maintained during, the construction and operation of initial development works where necessary to prevent entry of sediment into water. Runoff may be managed locally with silt fences, turbidity curtains, interceptor channels, rock check dams, and/or small sedimentation ponds. Where surface runoff may directly or indirectly enter a waterbody, all flow shall meet the following effluent quality limits for total suspended solids presented in Table 3.3-2 in the Type B Water Licence Application (170913 8BC-BRP----MainApplicationDocument_Version2.0). Water quality monitoring for total suspended solids (TSS) and turbidity will be implemented during any in-water initial development work (including water intake/discharge installation, construction of water crossings, winter ice road construction and operation). The Environmental Management and Protection Plan (EMPP) developed for the Type B includes:</p> <ul style="list-style-type: none"><li>- monitoring of TSS and turbidity concentrations through construction;</li><li>- a restricted in-water work window (at stream crossing) during freshet (May 1 to July 15);</li><li>- no in-water blasting for construction of water intakes;</li></ul> <p>Sabina will modify the EMPP as stated in Type B IR Response KIA-NWB-61:</p> <ul style="list-style-type: none"><li>- inspections and sampling twice per day, and when a plume or a visible difference in turbidity is observed.</li><li>- comparison of daily TSS and turbidity concentrations to baseline concentrations and to the TSS and turbidity guidelines for protection of aquatic life (CCME 1999).</li><li>- should concentrations exceed the guideline, in-stream activities may need to stop and additional mitigations applied.</li></ul> <p>Turbidity will be monitored around the outside perimeter of the silt curtain during in-water initial development works. Turbidity profiles will be taken using an in-situ water quality monitoring probe (e.g., YSI). Turbidity will be measured by taking vertical profiles of the water column (surface to bottom) to monitor for a potential turbidity plume. Discrete water quality samples will be collected from different depth intervals (horizons) and sent to an accredited laboratory for TSS and turbidity analyses. Analytical results will be used to verify in-situ turbidity measurements and to establish the relationship (correlation) between TSS and turbidity in order for turbidity to be used reliably as a surrogate for TSS. Also, visual monitoring will be conducted around the perimeter of silt curtains for turbidity plumes and hydrocarbon sheens.</p>	
INAC	INAC-IR-4	Security	Main Application Document - Section 7.3 D5 Interim Closure and Reclamation Plan			INAC notes that there is no financial liability associated with surface and groundwater management.	INAC is of the opinion that there should be cost associated with the capital cost line item mentioned above, given that the applicant has described managing contact water (building of sumps, etc, to collect water). Also INAC could not find any closure costs associated with the construction of allweather or winter ice roads INAC recommends that the applicant either provide justification for not including any costs associated with the roads or point out where these costs have been already accounted for or come up with an estimate for this cost and include it in the closure costs estimate.	<p>Sabina acknowledges an allowance for contact water management in the closure cost estimate is required; this request was raised by both INAC and KIA (KIA-NWB-9).</p> <p>As such, Sabina has increased the closure cost contingency from 10% to 20% to address any potential in-situ treatment of water after Closure. Sabina believes this additional allowance, totally \$91,000, is appropriate to address the reviewer's comments.</p> <p>Regarding closure of all-weather roads, an allowance has already been included in the cost estimate for the decommissioning of 7.4 km of all-weather roads. This allowance, for approximately \$46,000, includes the road closure activities of scarifying roads and culvert removal, and has been included under the Buildings/Equipment Tab of the Closure Cost Estimate.</p> <p>Regarding winter ice roads, it is expected that approximately 9 km of local winter ice roads will be constructed within the Goose Property as part of initial development works. These roads will be temporary, seasonal features with no ground modifications and no fill placement; as such, Sabina believes that no allowance is required to decommission winter ice roads in the closure cost estimate.</p>	