

Undertaking #6 Avalon to identify how traditional knowledge was used and incorporated into the DAR and how TK was used in the design of the proposed project within the limits of existing confidentiality agreements. Avalon has been asked to identify how traditional knowledge was used and incorporated into the project design.

Avalon has had input into the project from our Aboriginal Partners through traditional knowledge studies, input from Aboriginal employees at site, and meetings with leadership and community members. This engagement will continue through the life of the project. Certain areas, like wildlife monitoring and closure planning will seek-out more local and traditional knowledge as those plans pass from the conceptual stage to operational plans, and as part of ongoing reviews.

Itemizing traditional and local knowledge reduces the context and holism of the knowledge. In order to respond to the request, however, we have listed instances where the project design has changed as a result of all Aboriginal forms of engagement and knowledge.

TK	Incorporation into design / mitigations
Site	
The area immediately northeast of Thor Lake does not have much wildlife. It is very rocky and has been an area to avoid hunting.	Siting of the tailings management facility at Nechalacho in an area where it was known to have less wildlife and use to minimize impacts.
Destruction of the land at Nechalacho	Avalon's original scoping study for the Nechalacho site included designs for an open pit mine. Due to the concerns expressed by our aboriginal partners regarding denuding the land and adversely affecting wildlife, Avalon began looking at alternative mining methods and eventually settled on underground mining while also reducing the surficial footprint by placing a large amount of infrastructure underground.....i.e. crusher station.
Concerns about fish habitat destruction	Avalon originally investigated the Cressy Lake site as an optimal location for tailings discharge that satisfied an earlier concern about discharging effluent directly into Great Slave Lake. Upon further consideration regarding potential fish destruction, Avalon investigated other areas and happened across the Ring/Buck Lake system which was later found to be non-fish bearing.
Concerns about past operations scarring the land (reference to the T-zone exploration in the past)	Avalon heard many concerns from our Aboriginal partners regarding the past operations and the amount of garbage and material waste left behind. During the summer of 2010, Avalon identified an opportunity to address this concern by progressively reclaiming all the T-zone waste stockpiles and utilizing these for the construction of the existing airstrip. In addition, Avalon removed several broken down trailers in the area and disposed of them in Yellowknife while repurposing others for future use. Avalon also utilized diesel fuels left in the tanks from past operations for use in existing fuel oil heaters.
The Pine Point site was negatively impacted by mining in the area. It is important to help the land in this area heal if any activity is to occur there.	Avalon changed the location of the tailings from the existing Teck tailings facility to a pit where progressive reclamation and revegetation could assist the area to heal.
Concerns that an increase in traffic on the road between Pine Point and Hay River could have negative effects on the environment	Avalon changed where it will stage its resupply from Pine Point to Hay River to reduce the amount of truck traffic travelling along highway #5 and #6.
The bay on the north side of the Hearne Channel is a known safe-haven location for boaters	Confirmed that the location for the barge-loading is lower-risk than the surrounding area.
The water quality at Pine Point has suffered from the past mining activities. Concerns surface water flowing	Avalon originally planned to discharge tailings into the exiting Cominco tailings which would have resulted in

directly into Great Slave Lake.	surface water discharges. This has changed to discharging into the L-37 open pit and diverting decanted water directly to the underground aquifer, avoiding direct discharges to Great Slave Lake and comingling with Cominco tailings.
Water in Great Slave Lake is a priority for the environment and people	The original plan at Nechalacho was to discharge water to Elbow Lake which flows directly to Great Slave Lake. In response to concerns about this, the an alternative tailings area was identified that allowed for the discharge point to enter Drizzle Lake and eventually discharge from Thor Lake which results in 18 kilometers before reaching the Great Slave Lake.
Transportation	
Water levels in Great Slave Lake have declined significantly in the last number of years.	Designed all docking facilities to accommodate fluctuating water levels (i.e. no permanent docks)
Weather is more unpredictable now than in the past. Winters are shorter and warmer.	Avalon originally investigated the potential to develop a seasonal road from Yellowknife to the Nechalacho site. This feedback supported by actual weather data encouraged Avalon to look at alternative means of transport of its concentrate and resupply.
Emphasis on the severity of winds in the barging area, concern about wind storms on east arms, and how winds may affect anchored barges	Careful selection of barge routes to minimize wind exposure. Provide a sufficient amount of contingency in the number of barging days to allow for wind delays. Ensure appropriate anchoring systems in place to secure and stabilize barges and tugs during inclement weather events.
Other	
Details about the wildlife at site	Incorporated types of species and frequency of fish, mammals, birds, trees, and plants into baseline environmental assessment. These baselines were also the foundation for the wildlife effects and management plan.
Concerns about the social impacts of working at the mines including money management, occupational segregation, and increased use of drugs and alcohol	Avalon plans to work with our aboriginal communities to develop sustainable solutions for the communities to implement.
Concerns about the impacts of exiting land disturbances at Nechalacho site (litter, old trailers, piles of waste rock) on wildlife and water	Removal of garbage, recycling of old trailers, and waste rock has been used for construction activities at site.