Avalon Rare Metals Inc.

RESPONSE TO THE TECHNICAL REPORTS FOR THE THOR LAKE RARE EARTH ELEMENT PROJECT

Submitted To:
MACKENZIE VALLEY ENVIRONMENTAL IMPACT REVIEW BOARD

December 2012

Avalon Rare Metals Inc. (Avalon) is pleased to provide the Review Board with Technical Report responses, updated list of commitments and a summary of any project description changes to date. Technical Report responses are provided below and attached with this document is an updated commitments list. Avalon has reviewed the July 3, 2012 summary changes to the project description provided to MVEIRB and have no further updates at this time.

Avalon thanks all the parties for their recommendations and would like to respond to a select few prior to the public hearings.

Responses to the following recommendations are as follows:

- GNWT #1
- GNWT #3
- GNWT #19
- AANDC #2
- AANDC #3
- AANDC #10
- EC # 4.1
- EC # 4.3

Recommendation:	**GNWT #1**
Source:	Government of the Northwest Territories
To:	Avalon Rare Metals Inc.
Subject:	Air Quality

GNWT Recommendation #1

The GNWT recommends the Avalon IMP [Incineration Management Plan] incorporate stack testing at Project commissioning and periodically thereafter.

Avalon Response

Avalon has committed to stack testing its emissions upon commissioning of the power plant at Nechalacho and the sulphuric acid plant at Pine Point. Relative to these facilities, the incinerator produces few emissions. Waste incineration is a batch process that only occurs for short periods of time at a frequency of perhaps once a day.

Avalon has committed to developing an incineration management plan that will outline operating procedures to minimize emissions. This includes

- Selecting an appropriate incinerator for the load size
- Following the manufacturer's installation and operation guidelines
- Source separation of waste and mixing waste for optimal incineration
- Monitoring operations (record-keeping, training, and maintenance log)

Recommendation:	**GNWT #3**
Source:	Government of the Northwest Territories
To:	Avalon Rare Metals Inc.
Subject:	Archeology

GNWT Request #3

The PWNHC recommends to Avalon that the Archaeological Site(s) Protection Plan:

a. Demonstrate how avoided archaeological sites will be protected over the life of the project (including closure).
b. Demonstrate how footprint changes will be assessed for archaeological impacts.
c. Provide procedures to follow in the event archaeological materials are discovered during Project development or related activities.
d. Commitment is added to the Avalon commitment table list for the Project.

Avalon Response

Avalon has already commited to providing an Archeological Sites Protection Plan, and will add this to the commitment table.

Recommendation:	**GNWT #19**
Source:	Government of the Northwest Territories
To:	Avalon Rare Metals Inc.
Subject:	Socio-Economic

GNWT Recommendation #19

The GNWT recommends MVEIRB, as a condition of Project approval, include the following requirement in its Report of Environmental Assessment for the Project: "Avalon and GNWT shall negotiate and sign a follow-up program in the form of a Socio-Economic Agreement."

Avalon Response

On August 2nd, 2012, Avalon provided a letter to the Honorable Minister Ramsey. In this letter, attached, Avalon committed to negotiating a Socio-Economic Agreement (SEA) with the GNWT. On October 19th, 2012, Avalon received a response from the GNWT acknowledging our August 2nd letter and indicated discussions can commence through Deputy Minister, Peter Vician. Avalon and the GNWT have scheduled their first meeting January 25th, 2013 to begin the Socio-Economic discussions. Based on this, Avalon see's no need for the SEA to become a condition for approval as Avalon has committed to the agreement and has been proactive in initiating discussions.

Recommendation:	**AANDC #2**
Source:	Aboriginal Affairs and Northern Development Canada
To:	Avalon Rare Metals Inc.
Subject:	SSWQO

AANDC Recommendation #2

AANDC recommends that water quality in TMF, Drizzle Lake and Murky Lake be monitored year round to assess the average condition and trends during open water and under ice. Comparisons should be made to Environmental Assessment concentrations and predictions to assess changes in water quality. If trends indicate the proposed SSWQOs will not be achieved, water treatment options should be implemented.

Avalon Response

Avalon has already commited to year-round water quality monitoring. The confirmation of predictions and mitigations will be included in the Aquatic Effects Monitoring Program. Avalon looks forward to working with AANDC and other parties in the development of this monitoring program.

Recommendation:	**AANDC #3**
Source:	Aboriginal Affairs and Northern Development Canada
To:	Avalon Rare Metals Inc.
Subject:	SSWQO

AANDC Recommendation #3

Dissolved oxygen and metal concentrations under ice must be regularly assessed to ensure they do not become harmful to aquatic life in Drizzle, Murky and/or Thor Lake.

Avalon Response

Avalon has already commited to monitor nutrient and oxygen levels under the ice. We anticipate that the monitoring of metal concentrations in the winter will be component of our Aquatic Effects Monitoring Plan.

Recommendation:	**AANDC #10**
Source:	Aboriginal Affairs and Northern Development Canada
To:	Avalon Rare Metals Inc.
Subject:	Closure

AANDC Recommendation #10

AANDC recommends that the company be required to place tailings covers during the winter and design them sufficiently to maintain long-term stability including during summer thaw periods, for both the Nechalacho and L-37 tailings facilities.

Avalon Response

Avalon has previously committed to this recommendation as a contingency at the technical sessions:

- Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the Nechalacho tailings facility
- Avalon commits to a contingency of placing a tailings cover during winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the L-37 tailings facility

Avalon will consider long-term stability during operations which will provide the basis for seasonal best practices when tailings cover(s) are installed during future reclamation.

Recommendation:	**EC #4.1**
Source:	Environment Canada
To:	Avalon Rare Metals Inc.
Subject:	Wildlife

EC Recommendation #4.1

EC recommends that:

a) Avalon Rare Metals Inc. monitor the concentrations of contaminants of potential concern within supernatant water in the tailings management facilities at Thor Lake and discourage birds from using these areas through regular monitoring and employment of deterrent devices until it can be demonstrated that contaminant concentrations do not pose a health risk to birds.

Avalon Response

Avalon is committed to regular monitoring of the quality of the supernatant water in the Nechalacho TMF, and the use of the TMF by birds and other wildlife. Based on Avalon's knowledge and analysis, the tailings are predicted to be benign and non-toxic and are not anticipated to pose a health risk to birds and other wildlife. Thus, Avalon does not anticipate that bird deterrent devices will be needed. However, such devices would be employed if the monitoring demonstrates that there may be a risk to birds.

ATTACHMENTS

Attachment 1: Letter to the Honorable Minister Ramsey August 2nd, 2012

Attachment 2: Letter from Honorable Minister Ramsey October 19th, 2012

Attachment 3: Updated list of commitments

Attachment 1

AVALON RARE METALS INC.

Corporate Office:
130 Adelaide St. W., Suite 1901, Toronto, ON M5H 3P5
Tel: (416) 364-4938 Fax: (416) 364-5162
Operations Office:
Unit 330 – 6165 Hwy 17, Delta, BC V4K 5B8
Tel: (604) 940-3800 Fax: (604) 940-3808

August 2, 2012

Honorable David Ramsay
Minister Industry, Tourism and Investment
Government of the Northwest Territories, ("GNWT")
P.O. Box 1320
Yellowknife, NT X1A 2L9
Phone: 867-669-2377
Fax: 867-873-0388

Re: Nechalacho Rare Metals Project and Proposed Socio-Economic Agreement

Dear Minister Ramsay,

As you know from your recent visit to Avalon's Nechalacho Project site, we are making excellent progress on our definitive feasibility study and with our aboriginal participation agreements. Our definitive feasibility study, which is being compiled by Toronto based SNC-Lavalin with support from Avalon's staff and management, is still on track for completion in H1 2013.

Our development model for the project comprises three components starting with a 2,000 tonnes per day underground mine and surface concentrator at Thor Lake. The rare earth mineral concentrates produced there will be barged across Great Slave Lake during the four month summer shipping season to a hydrometallurgical plant which we propose to locate on the south shore of Great Slave Lake at the historic Pine Point minesite. Here the mineral concentrates will be processed using sulphuric acid to extract the rare earths into a chemical concentrate. The two products generated at the hydrometallurgical plant will then be trucked to Hay River and transported south via the CN rail system to a Separation Plant/Refinery, that we anticipate will be located in the Gulf States region of the United States.

As you witnessed, Avalon recently signed an Accommodation Agreement with the Deninu Ku'e First Nation at Fort Resolution. This agreement is the first of three intended to partner with the primary First Nations within Akaitcho Territory encompassing the Thor Lake Project area. Avalon is expected to complete the other two agreements with Lutsel K'e Dene and Yellowknives Dene First Nations in the coming months. Avalon is also in active discussions with the Northwest Territory Metis Nation, North Slave Metis Alliance and the Tlicho First Nation regarding their participation in the Nechalacho Project.

On July 31, 2012, Avalon met with Deputy Minister Peter Vician and Ministry staff to provide an update on Nechalacho Project status and future initiatives. During

this meeting, Mr. Vician informed us that the GNWT would be interested in working collaboratively with Avalon to development a Socio-economic agreement regarding the Nechalacho Project.

This is to confirm Avalon's willingness to enter into discussions with the GNWT with regard to developing such an agreement, one that can effectively serve the interests of both Avalon and the GNWT.

We look forward to working with your staff to develop a time frame for proceeding with these discussions.

Sincerely,
Avalon Rare Metals Inc.

Donald S. Bubar
President & CEO

cc. David Swisher
Kelly Cumming
Peter Vician

Attachment 2

Northwest Territories Industry, Tourism and Investment

OCT 19 2012

Mr. Donald S. Bubar, President and CEO
Avalon Rare Metals Inc.
Suite 1901
130 ADELAIDE STREET WEST
TORONTO ON M5H 3P5

Dear Mr. Bubar:

Proposed Socio-Economic Agreement

Thank you for your letter dated August 2, 2012. We appreciate Avalon Rare Metals Inc.'s (Avalon's) willingness to enter into discussions with the Government of the Northwest Territories (GNWT) with regard to developing a Socio-Economic Agreement (SEA). The GNWT is interested in pursuing a SEA with Avalon for the proposed Nechalacho mining project, which includes the Thor Lake mine and the hydrometallurgical facility at Pine Point.

As you may know, a SEA is a formal follow-up mechanism for the socio-economic commitments a developer such as Avalon makes during the Environmental Assessment (EA) process. It allows the GNWT to monitor and hold developers accountable to their commitments to mitigate negative impacts and optimize benefits of their developments in the Northwest Territories (NWT).

The GNWT considers the following five point framework in its review of EA material:

- Non-traditional economy;
- Traditional economy and cultural wellbeing;
- Community, family and individual wellbeing;
- Net effects on government; and
- Sustainable development.

.../2

The five-point framework forms the base of our socio-economic analysis. It allows the GNWT to determine the effectiveness of mitigation measures made by developers during an EA. In turn, each SEA we negotiate includes include commitments relating to all five points. SEAs work to protect the socio-economic well-being of all NWT residents.

The GNWT looks forward to working with Avalon over coming months. Please contact the office of Mr. Peter Vician, Deputy Minister, Industry, Tourism and Investment at (867-920-8048) to set up a meeting to discuss this further.

Sincerely,

ORIGINAL SIGNED BY
David Ramsay

David Ramsay
Minister

c. Mr. Peter Vician, Deputy Minister
Industry, Tourism and Investment

Mr. David Swisher, Vice President Operations
Avalon Rare Metals Inc.

Ms. Kelly Cumming, Northern Relations Manager
Avalon Rare Metals Inc.

Attachment 3

List of Commitments

Source of Commitment	DAR Item #	Plant Site	Commitment
REGULATORY / OTHER			
GNWT IR#17.2 February 2012		Both	Avalon will commit to providing an updated "final" List of Commitments two weeks prior to the Public Hearings
TC IR#2 January 2012		Both	More detailed design information for the two proposed barge docking structures, including plan and cross section drawings, will be provided to Transport Canada in the future NWPA applications that will be prepared and submitted to the Department for review and approval
NSMA IR#4.1 January 2012		Both	Avalon will incorporate the results from the Traditional Knowledge study into their action plans once NSMA's study is complete.
Technical Session #1 August 14, 2012		Both	Should the reagents change within the EA, Avalon notify the Board as soon as possible of that Avalon notify the Board as soon as possible
Technical Session #6 August 16, 2012		Both	Avalon to provide the Review Board with a copy of presentations from the August 16 technical sessions
AIR QUALITY			
DAR May 2011	1	Nechalacho	For all underground activities, A designated responsible employee will be assigned to monitor the air quality at each working location, during each shift, on a daily basis and maintain records of the air quality monitoring information as per the NWT Mine Health and Safety Regulations.
DAR May 2011	2	Both	Minimize potential effects on local and regional air quality and to control greenhouse gas emissions.
DAR May 2011	3	Both	Avalon will comply with Land Use Permit and Water License conditions to be issued by the MVLWB.
DAR May 2011	4	Nechalacho	Avalon commits to utilize low sulphur diesel fuel in conjunction with regular equipment and engine maintenance to ensure air quality standards are met during operations.
DAR May 2011	5	Nechalacho	Avalon commits to use low NOx and SOx diesel power generators at the Nechalacho Mine site.
DAR May 2011	6	Hydromet Plant	Avalon commits to the use of line power as the main source of power for the Hydrometallurgical Plant.
DAR May 2011	7	Both	Avalon will conform with the Guidelines for Ambient Air Quality Standards in the NWT
DAR May 2011	8	Nechalacho	Avalon will conform with GNWT and WSCC standards for mine and process plant(s) air quality
DAR May 2011	9	Both	Avalon will employ Passive Integrated Samplers to capture monthly averages for parameters such as NO2, SO2 and VOC's. An Air metrics "MiniVol" sampler or equivalent will be employed to sample PM10.
Technical Session #10 August 17, 2012		Nechalacho	Avalon commits to developing an air quality monitoring and management plan in consultation with ENR and Environment Canada, including, but not limited to, stack testing and SO2 and TSP monitoring

Source of Commitment	DAR Item #	Plant Site	Commitment
Technical Session #11 August 17, 2012		Nechalacho	Avalon commits to continuous monitoring of sulphur dioxide for one (1) year within the fence line at the Thor Lake mine site and hydrometallurgical plant site
EC IR #7 March 2012		Nechalacho	Avalon is pleased to commit to the preparation and implementation of an incineration management plan that incorporates the guidance provided in the Environment Canada Technical Document for Batch Waste Incineration. The dual chamber (two-stage process) selected will minimize emissions of persistent organic pollutants, including dioxans and furans. The incinerator manufacturer's specifications will be follwed.
Technical Session #9 August 17, 2012		Both	Avalon commits to consulting with Environment and the GNWT to develop and implement an incineration management plan that incorporates information in the Environment Canada Technical Document on Batch Waste Incineration Management
CONTRACTORS			
DAR May 2011	10	Both	All contractors or subcontractors will be required to sign and adhere to Avalon's policies and procedures when working at both sites.
DAR May 2011	11	Both	Avalon intends to maximize Northern and Aboriginal employment into its final contractual agreements with key specialized contractors.
DAR May 2011	12	Both	Avalon will give precedence to Northern contractors/vendors/suppliers that have a strong aboriginal involvement.
DUST CONTROL			
DAR May 2011	13	All	Secure containment of concentrate product during transportation from the Nechalacho Mine site to the Hydrometallurgical Plant site and from there to the Hay River railhead
DAR May 2011	14	Hydromet Plant	Avalon will utilize a combination of flat bed and bulk truck haulage from the Hydrometallurgical plant to the Hay River railhead. For bulk haulage, the concentrates will be maintained in a "moist" condition and the truck boxes and product will be covered.
DAR May 2011	15	Hydromet Plant	Use of existing highways for all Hydrometallurgical Plant-related vehicle traffic.
DAR May 2011 (+ EC IR March 2012)	16	Both	Conformance with GNWT Guideline for Dust suppression through the application of dust suppressants - e.g., water or approved dust suppressant products.
HAZMAT			
DAR May 2011	17	Nechalacho	Underground fuel will be transported in a Schedule 40 pipe from the tank farm on the surface directly to the mine decline. The piping will be attached to the rib of the decline to an underground holding facility with double walled storage tanks sized to supply 1-2 days of fuel. Avalon's Hazardous Spills Contingency Plan applies underground as it does above.
DAR May 2011	18	Nechalacho	There will not be any Beryllium produced from the operations.

Source of Commitment	DAR Item #	Plant Site	Commitment
LKDFN IR#4 January 2012		Nechalacho	Based on the uranium levels in the ore, personnel monitoring for radon is not anticipated to be an on-going requirement. However, to confirm the expected levels, the exposures of a representative group of underground workers to radon will be measured using monitors called PADs (personal alpha dosimeters) The results from any monitoring of the workers will be given to the workers. The frequency and necessity for any ongoing radon monitoring will be determined as part of the overall environmental monitoring programfor the proposed mine.
LKDFN IR#8.3 January 2012		Hydromet Plant	A Radiation Protection Program (RPP), which will include any necessary monitoring requirements and worker training, will be developed for the hydrometallurgical plant.
DAR May 2011	19	Nechalacho	The temporary construction explosives storage facility will be designed, located and operated in accordance with the NWT Mine Health and Safety Act and Regulations. Avalon will obtain an Explosives Magazine Permit for its proposed temporary construction explosives storage facility.
DAR May 2011	20	Nechalacho	At the Nechalacho site, two fuel containment areas are necessary to maintain year round operations located near the seasonal barge area and at the Nechalacho Mine. The seasonal barge area will contain two tanks capable of holding 1.5 million litres of diesel fuel while the Nechalacho mine will contain 4 tanks capable of storing 4.5 million litres each. All fuel and lubrication tanks (welded in place) will be placed in an engineered and lined enclosure capable of holding 110% of the capacity of the largest tank. Appropriate spill response equipment will be stored at the tank farm facility. Any fuel leaks and/or equipment spills will be reported to the EHS Coordinator. The EHS Coordinator will record and report the spills and direct cleanup activities in accordance with the procedures described in Avalon's Hazardous Materials Spill Contingency Plan. A spill kit will be located at both surface fuel storage facilities.
DAR May 2011	21	Hydromet Plant	At the Hydrometallurgical Plant site, diesel fuel will be utilized in small quantities and a small fuel containment area will be constructed for a total volume of 20,000 litres and meeting all requirements as outlined in commitment #16.
DAR May 2011	22	Both	The EHS Coordinator will conduct training for all surface personnel working on the Thor Lake Project. Surface personnel will be trained in the techniques and materials required to manage hazardous spill responses. Training will include the following instruction: the initial spill response procedure to use in the event of a spill; location and use of emergency equipment to respond to spills; safe operation of equipment and tools to minimize the potential for spills; operational procedures to limit the potential and impact of spills; monthly safety discussions to address work hazards.
DAR May 2011	23	Both	The transportation of all hazardous materials transported to and from the site will be conducted in accordance with existing territorial and federal regulations, including the Transportation of Dangerous Goods guidelines.
DAR May 2011	24	Both	Response preparedness will be maintained for incidents involving medical, fire, fuel or concentrate spills or other environmental related incidents (e.g., wildlife collisions).
DAR May 2011	25	Both	Fuel and other hydrocarbons will be stored in accordance with the existing CCME environmental code of practice for storage of these products (CCME 2003).

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	26	Both	"Any spills will be immediately reported to the 24-hour Spill Report Line… and spill containment and cleanup activities will be implemented in accordance with Avalon's Hazardous Materials Spill Contingency Plan".
DAR May 2011	27	Nechalacho	"Explosives ingredients (e.g., Ammonium Nitrate, diesel) will be transported to the site from local distributors in accordance with federal *Transportation of Dangerous Goods, Workplace Hazardous Materials Information System, and Explosives Act* requirements".
DAR May 2011	28	Nechalacho	"Both [underground explosives] storage drifts will be gated and locked with access keys given only to designated responsible employees. The two drifts will be separated by at least 4.5 metres (15 feet) of consolidated rock. One drift will be used for the safe storage of ANFO and Emulsion and the second drift will be utilized for all Detonators. Only properly trained and certified employees or contractors will be permitted to handle explosives".
DAR May 2011	29	Nechalacho	Explosives and detonators will be stored separately at the temporary surface explosives magazines. A primary lock will secure the magazines while a secondary lock will be used for a chain link fence to be installed at the magazine access.
DAR May 2011	30	Both	Hazardous materials not incinerated on site, will be shipped to the hazardous waste facility in both Yellowknife and Hay River for both sites.
DAR May 2011	31	Both	Used oils will be burned in an approved used oil heater by the Canadian Standards Association of the Underwriters' Laboratories of Canada for incineration of used oil and waste fuel. The developer will adhere to ENR's *Used Oil and Waste Fuel Management Regulations.*
DAR May 2011	32	Both	All solid non-combustible and non-hazardous waste will be collected and consolidated weekly and disposed of in either the Hay River or Yellowknife landfills.
DAR May 2011	33	Both	Disposal of all hazardous wastes in an approved manner.
DAR May 2011	34	Both	All solid wastes will be managed in accordance with NWT regulations.
HEALTH & SAFETY			
DAR May 2011	35	Both	Avalon will conduct annual health and safety checkup for its employees.
DAR May 2011	36	Both	Avalon has committed to using health and safety training as well as zero tolerance drug policy to promote a healthy employee population.
DAR May 2011	37	Both	Upon completion of Avalon's Emergency Response Plan, the following will be included but not limited to: an emergency response coordinator, a site hazard assessment, an ERP committee, site personnel accountability method, posted and designated escape routes and assembly points, reporting procedures, alarm system notification, procedures for key employees who are required to remain to operate critical equipment, identity of medically trained employees, posting of emergency numbers and contacts throughout facility, emergency drills, annual employee reviews.
DAR May 2011	38	Hydromet Plant	A manned gate will be installed near the Main access to provide security for plant equipment and materials. It will also serve as a safety precaution and prevent the public from coming into contact with plant equipment and operations.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	39	Both	All machinery will be equipped with standard noise suppression equipment. The company will construct earth berms as needed. Employee Personal Protective Equipment guidelines will also be outlined in all contractor and company operation procedures.
DAR May 2011	40	Both	The Thor Lake Project will employ a full-time EHS coordinator to implement and deliver specific training sessions. Safety related training will be given high priority and be a requirement for all employees and subcontractors. Required training will include: site orientation, mine site general safety rules, personal protective equipment use, hazardous materials spill contingency training, basic first aid training, and other (job specific) training.
DAR May 2011 & GNWT IR#12 February 2012	41	Both	Avalon will comply with all Emergency Medical Response criteria associated with the Mine Health and Safety Act. An Emergency Response Plan will be distributed to all employees and posted for easy access in the event of an emergency. Selected employees will be trained in First Aid, and mine rescue crews will be on-site. A dedicated first aid facility will be located on-site. There will be a dedicated ground vehicle for evacuation to Hay River and may include medi-evacuation options.
DAR May 2011	42	Nechalacho	There will be an underground medical vehicle equipped to treat and transport personnel from any location at the Nechalacho site to the airstrip for medi-evacuation.
DAR May 2011	43	Hydromet Plant	There will be a dedicated ground vehicle for evacuation to Hay River with the option of medi-evacuation in the event of a serious injury occurring at the Hydrometallurgical Plant.
DAR May 2011	44	Nechalacho	All underground escape routes will be inspected on a regular interval and maintained in a safe, travelable condition. Both the primary and secondary escape-ways will be marked with conspicuous and easily read direction signs that clearly indicate the ways of escape. Prior to entering the mine, all personnel will be trained and oriented to the proper method of escape from the mine.
DAR May 2011	45	Both	Avalon will put up signage indicating a no shooting zone within 3 square kilometers of the sites. Avalon will consult on a consistent basis with the local Aboriginal groups to ensure that traditional land users are award of the project and its boundaries.
DAR May 2011	46	Both	If unexpected archeological materials are encountered during any phase of this development, all activity in the area must cease and the PWNHC and any affected First Nations must be contacted.
GNWT IR#13.2 February 2012		Hydromet Plant	An archaeological impact assessment (AIA) of the marshalling yard at Pine Point will occur in the Summer of 2012, upon approval of the archaeological permit. The archaeologist will also conduct reconnaissance at the other proposed Pine Point infrastructure locations to confirm that they are located on previously disturbed ground and no further archaeological assessment will be required.
DAR May 2011	47	Both	During early stages of construction orientation sessions will be held w/personnel to address the issues including: site safety, heritage/archaeological protection, environmental protection. The Heritage resource component includes info on legal, reporting and mitigation requirements related to the protection of Archaeological/Heritage Resources in the event any are found
Technical Report response December 2012		Both	Avalon will provide an Archeological Sites Protection Plan to the Prince of Wales Northern Heritage Centre prior to construction.

Source of Commitment	DAR Item #	Plant Site	Commitment
GNWT IR# 8.4 February 2012		Both	All contract employees will be required to take some form of workplace orientation and safety training program before being allowed to work on-site. This orientation will be provided by Avalon.
GNWT IR#9.3 February 2012		Both	The Code of Business Conduct and Ethics will be reviewed with each new employee during workplace orientation including the section related to harassment
LKDFN IR#6.2 January 2012		Both	Avalon is committed to increasing the public understanding of rare earth elements, their nature, uses, etc.
INFRASTRUCTURE			
DAR May 2011	48	Both	Avalon has and will locate, to the greatest extent possible, buildings and site infrastructure on previously disturbed terrain.
DAR May 2011	49	Both	Avalon is committed to employing an adaptive management approach including a number of mitigation measures to minimize potential effects on the existing noise environment
DAR May 2011	50	Both	Avalon commits to regular maintenance of mobile and stationary equipment used during construction and operations.
DAR May 2011	51	Both	Avalon commits to the use of high performance engine exhaust silencers at the power plant.
DAR May 2011	52	Nechalacho	At the Nechalacho site, runoff mine ore will be temporarily stockpiled on surface during development activities. This ore will be the first material ran through the flotation plant. After start-up of operations, no additional ore will be stockpiled on surface.
DAR May 2011	53	Nechalacho	Concentrate from the Nechalacho flotation plant will be loaded into enclosed intermodal containers prior to shipment.
DAR May 2011	54	Both	Concentrate shipped across GSL will be handled with great care to ensure no loss of material. In the event any loss of containers where to occur in the lake, Avalon would recover the inert material.
DAR May 2011	55	Nechalacho	Diesel generation will be utilized for all power needs at the Nechalacho mine. Generator and stack heat will be utilized throughout the site.
DAR May 2011	56	Hydromet Plant	Avalon will employ hydroelectric line power for the bulk of its hydrometallurgical plant needs. A small diesel generation plant will be used for primary safety and environmental back-up in the event of power failures or scheduled maintenance on the Taltson Dam.
Technical Session #5 August 16, 2012		Hydromet Plant	Avalon commits to monitoring tailings during operations within the L-37 tailings facility to confirm saturation levels and ensure traffic ability for closure and placement of a cover
Technical Session #7 August 16, 2012		Nechalacho	Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the Nechalacho tailings facility
Technical Session #8 August 16, 2012		Hydromet Plant	Avalon commits during operations to implement monitoring, to verify the modelling predictions of the effluent plume down gradient of the L-37 tailings facility, assess the modelling parameters, and if there are deviations, initiate mitigation, if required

Source of Commitment	DAR Item #	Plant Site	Commitment
RECLAMATION			
DAR May 2011	57	Both	Reclamation of both sites will consist of removing all surface and underground conveyor components and belting. The surface structures will be dismantled and removed from site.
DAR May 2011	58	Both	Organic and mineral top soils collected from the Nechalacho site (hydrometallurgical site has no organics) will be salvaged and stored for future reapplication during reclamation of the site
DAR May 2011	59	Both	Re-contouring, scarification, and reseeding of disturbed areas with appropriate and approved native seed mixes will occur.
DAR May 2011	60	Both	Water discharge lines will be reclaimed and shipped off site. The fuel and lube tanks and associated piping will be drained, washed, cleaned and then dismantled. All infrastructure will be removed from site. The catchment containment berms will be breached or re-contoured to encourage natural drainage.
DAR May 2011	61	Both	Waste oils will be shipped off site or consumed in the on site incinerators or used oil heaters. Unused explosives will be shipped off site or burned or destroyed on site and unused chemicals as well as any other hazardous waste material will be either treated on site or shipped off-site for disposal. All non-combustible, non-hazardous waste will be disposed of in the permanent non-hazardous solid waste disposal facilities located in either Yellowknife or Hay River. Peripheral equipment like lighting and signposting will be removed.
DAR May 2011	62	Nechalacho	Reclamation of the underground decline will consist of removing all piping and support sets. Once the decline is cleared, rock material will be used to fill the underground entrance back to natural topographic levels.
DAR May 2011	63	Both	All temporary and permanent surface structures will be removed at the completion of mining and processing. All buildings will be stripped down and prepared for off-site transport. Any remaining foundations will be buried and where appropriate, the application of stockpiled organics, and re-vegetation to the extent possible.
DAR May 2011	64	Both	Reclamation and closure of all the Nechalacho Mine, Flotation Plant and Hydrometallurgical Plant facilities will be conducted in accordance with the terms and conditions of the future MVLWB Land Use Permit and Water License, the "Mine Site Reclamation Policy for the Northwest Territories" and the "Mine Site Reclamation Guidelines for the Northwest Territories and Nunavut" (INAC, 2007).

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	65	Nechalacho	Specifically for the Nechalacho tailings management facility, the main objective of the closure and reclamation initiatives will be to transform the tailings management facility area to its pre-mining usage and capability to the greatest degree possible. Closure and reclamation strategies will focus on stabilizing and covering the exposed tailing surfaces and re-establishing surface flow patterns, while ensuring that acceptable downstream water quality is maintained. Specific reclamation activities pertaining to the tailings management facility area will include the following: • The downstream face of the embankments will be reclaimed as the final downstream slope is constructed. Progressive reclamation will be implemented to the greatest degree possible; • The exposed tailings surface will be capped with stockpiled organics and re-vegetated; • Surface runoff control channels and permanent spillways will be constructed as required to provide sustainable surface runoff conditions; and • Infrastructure not required beyond Mine closure will be dismantled and removed.
DAR May 2011	66	Hydromet Plant	Specifically for the Hydrometallurgical Plant tailings management facility, the main objective of the closure and reclamation initiatives will be to transform the historic L-37 open pit to a pre-mining usage and capability to the greatest degree possible. Reclamation strategies will focus on utilizing nearby waste and overburden material to cover the exposed tailings and re-establish surface flow patterns and seeding with jack pine.
DAR May 2011	67	Both	Fuel and lube tanks, if not sold or reused, will be washed and the wash water captured and the tanks hauled off site to an appropriate disposal facility either in Hay River or Edmonton.
DAR May 2011 & ED IR #16 March 2012	68	Both	Post-closure monitoring will be limited to evaluating the success of the re-vegetation effort. Post-closure monitoring for re-vegetation success is envisioned to be conducted 1 & 5 year post closure.
DAR May 2011	69	Both	Following removal of the Thor Lake Project surface facilities, the remaining fill embankments, borrow pits, access roads and development footprint will be re-contoured and scarified as required to ensure surface stability and to facilitate the re-establishment of native vegetations.
DAR May 2011	70	Both	The initial reclamation and closure plan prepared for the Nechalacho Mine and Flotation Plant site will be a living document that will be updated throughout the Project's life to reflect changing conditions and the input of the applicable federal and territorial regulatory agencies.
EC IR #17.1 March 2012		Both	The conceptual closure plan will be regularly updated with the input of regulators, land users, stakeholders, and Aboriginal governments and organizations.
Technical Session #3 August 16, 2012		Nechalacho	Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods
Technical Session #4 August 16, 2012		Hydromet Plant	Avalon commits to a contingency of placing a tailings cover during winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the L-37 tailings facility
SOCIO-ECONOMICS			

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	71	Both	Avalon will conduct pre-employment screening, including criminal background checks on all finalists. In considering whether to hire a finalist who has been convicted of a criminal offense, Avalon will consider several factors including but not limited to: the relevance of the criminal conviction to job duties, the date of the most recent offense and employment history since the commission of the crime, the nature of the offense, the accuracy of the information the finalist provided on the employment application, and whether the offense was committed as a minor.
DAR May 2011	72	Both	Avalon will have zero tolerance for the possession and/or use of drugs or alcohol at any Avalon work location. The Company will conduct drug screening for "reasonable cause" and "post-accidents".
DAR May 2011	73	Both	Avalon will consider prior work experience as equivalent to education on a case-by-case basis.
DAR May 2011 & GNWT IR #1.2 February 2012	74	Both	Avalon will be working with the Mine Training Society to begin mine and process training programs that will target local communities including but not limited to Yellowknife, Ndilo, Dettah, Lutsel K'e, Fort Resolution, Hay River, Hay River Reserve and Fort Smith. Avalon's HR Management will liaise with the community points of contact and the Mine Training Society to advertise, screen and select candidates.
DAR May 2011	75	Both	Avalon will provide content expertise to the Mine Training Society in the development of curriculum for college certificate level training in mining and processing at Aurora College in Yellowknife, NT.
DAR May 2011	76	Both	Avalon's training program will initially be designed to fill apprenticeship and technological occupations. In addition, all Thor Lake Project contractors will also be required to adhere to Avalon's goal of maximizing Northern and Aboriginal employment.
DAR May 2011	77	Hydromet Plant	No camp facilities are expected during operations of the Hydrometallurgical Plant located at the former Pine Point mine site.
DAR May 2011	78	Both	Avalon is committed to employing as many persons as it can from the limited, locally available labour pool. The criteria for employee selection will recognize the value of years of experience in the work world.
GNWT IR #1.1 February 2012		Both	Avalon will continue to monitor the feedback from its employees to determine if changes to its Human Resources strategy and policies are necessary in order to attract and retain northern employees
DAR May 2011	79	Both	Avalon's commitment to training will include site-based on the job training and the support of a number of apprenticeships. Avalon will consult and collaborate with local Aboriginal interests and communities to encourage effective development and delivery of the training programs.
GNWT IR #3.1& 3.2 February 2012		Both	Socio-economic information will be shared through continued engagement with communities and governments and an annual Corporate Social Responsibility Report.Avalon will be reporting its hiring statistics in its sustainability reports, broken-down by Aboriginal, northern (NWT) and other employees. As our systems mature and the company grows, we anticipate that we will further break down our reporting into job categories such as skilled and unskilled labour and by gender in an effort to eventually give performance objectives in these areas. Avalon proposes to track its ability to retain employees

Source of Commitment	DAR Item #	Plant Site	Commitment
GNWT IR#3.2 February 2012		Both	If requested, Avalon would allow access to the mine site for the GNWT Bureau of statistics to conduct mine-employee surveys, similar to arrangements made for the 2009 NWT Survey of Mining Employees.
DAR May 2011 & GNWT IR#2.4 February 2012	80	Both	In considering contract bids, Avalon will prioritize Aboriginal and northern businesses, and will take a number of measures to maximize project-related business opportunities. These measures will include: preparing annual business opportunities forecast to identify foreseeable procurement requirements for mining equipment, operations and maintenance support services; providing technical support and assistance in accessing sources of commercial capital; working closely with local First Nations interests and communities; identifying project components at all stages of development and operations that should be targets for a northern business development strategy; facilitating subcontracting opportunities for northern businesses; and identifying possible opportunities for joint ventures with Aboriginal and northern businesses.
DAR May 2011	81	Both	Avalon will seek out bid packages from all local communities and aboriginal groups for the non-specialized services required for the project. Avalon will work first with the aboriginal groups to determine and demonstrate capacity, competiveness, regulatory requirement compliance and Avalon's operational requirement. If this cannot be done the developer will encourage joint venturing w/local business to meet these requirements.
GNWT IR#2.5 February 2012		Both	Avalon is committed to preferentially purchase materials and services in the NWT as long as they meet the product/service requirements and are competitive in price, including those identified as specialized where it is feasible to do so.
GNWT IR#2.4 February 2012		Both	a local NWT office and website will be opened to allow local suppliers to enquire about potential future business opportunities
Dec 7, 2011 - GNWT IR Mtg		Hydromet Plant	Avalon may need to accommodate fishermen so that they can safely store their equipment near the dock. Avalon is aware that they need to communicate with local fisherman on this and are initiating that discussion.
Dec 7, 2011 - GNWT IR Mtg		Hydromet Plant	Avalon has a working relationship with local trappers, is aware of trap lines in the regional study area and will ensure trappers have unrestricted access to their lines.
Dec 7, 2011 - GNWT IR Mtg		Hydromet Plant	Avalon's primary preference is to have employees live within or re-locate to Hay River or Fort Resolution to work at the Hydrometallurgical Facility in Pine Point. Should employees not be able to move, Avalon will: 1) Investigate various ways to accommodate employees working at the Pine Point site 2) · Pay transportation costs (where economically feasible) for northern employees working at the Pine Point site and rotating on a weekly basis.
Dec 7, 2011 - GNWT IR Mtg		Both	Avalon will have human resource generalists and procurement staff at both the Pine Point site and at the Nechalacho site. The staff at both of these sites will have the authority to hire employees and to purchase goods and services.
GNWT IR#7.3 February 2012		both	Most Project jobs will be located in the NWT, at the Nechalacho mine site, the hydrometallurgical facility, and at the administration offices located in Yellowknife and Hay River.

Source of Commitment	DAR Item #	Plant Site	Commitment
Dec 7, 2011 - GNWT IR Mtg & GNWT IR#4.1 February 2012		Both	Avalon will include socio-economic matters in its plans dealing with closure.
GNWT IR#6.1 February 2012		Both	Avalon will endeavor to complete its HR Plan for construction by the end of this year while the operations plan will be developed in 2013.
GNWT IR#9.4 February 2012		Both	Avalon will ensure that gender is taken into account when developing and incorporating our human resource policies
GNWT IR# 10.1 February 2012		Both	Avalon intends to have an Employee Assistance Program (EAP) for its employees.
GNWT IR#11 February 2012		Both	Avalon will require employees from outside of the NWT to have adequate medical insurance.
GNWT IR#8.5 February 2012		Both	Once in operation, Avalon will consider educational tours to the Project site for community, Aboriginal and territorial stakeholders when applicable.
GNWT IR #9.1 February 2012		Both	Avalon will work with community partners to try to address barriers for women in mining. Avalon will also collaborate with organizations that have expertise in promoting omen in the trades and in mining occupations like Skills Canada, the NWT Native Women's Association, the NWT Status of Women Council. Avalon will actively pursue the visibility of women in the company through its promotional materials and during recruitment drives and community outreach.
TRANSPORTATION			
DAR May 2011	82	Railhead	At the railhead transfer facilities, concentrate and product will be handled in a fully enclosed shelter, the facility size will be large enough to ensure rail loaders and haul truck traffic in and out, the facility will be supported by CN's environmental policy and standards. All material will be contained inside the building. Railcar loading activities will also take place inside the building to eliminate outside exposure. Any spillage of concentrate will be picked up in accordance with Avalon's hazardous spills contingency plans.
DAR May 2011	83	Railhead	Avalon's proposed rail loadout facility will be constructed ~1.0 m above the Designated Flood Level.
DAR May 2011	84	Both	Construction, materials, repair and maintenance of all secondary access roads pertaining to the Thor Lake Project, will be undertaken by Avalon to ensure year round, safe access for the Thor Lake Project and local land users.
DAR May 2011	85	Hydromet Plant	Avalon will provide daily transportation via bus/van to and from the hydrometallurgical site to workers from Hay River and Fort Resolution, from designated parking areas.
DAR May 2011	86	Hydromet Plant	Hydromet Plant related traffic will be complying with all DOT traffic regulations. Avalon will reinforce this expectation with all employees and contractors involved in travelling along the highway or any other roads from the Hydromet Plant.
DAR May 2011	87	Hydromet Plant	Concentrate produced will be transported from the Hydrometallurgical Plant to the railhead facility in designated trucks equipped with covers.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	88	Hydromet Plant	Avalon will haul during both day and night shift. The haul trucks to follow all operating regulations in the NWT and operate within the posted speed limits. Avalon will require its contractors or subcontractors to comply with government and company policies
DAR May 2011	89	Hydromet Plant	If a truck accident occurs hauling Avalon concentrate or product, Avalon will assist local authorities by ensuring the scene is safe to enter before starting clean-up of its products as per the Companies materials spills response plan. Cleaned up material will either be hauled to the railhead or back to the hydrometallurgical Plant for reprocessing.
DAR May 2011	90	Hydromet Plant	Avalon will post proper signage to make sure people are aware of main intersections used by Avalon traffic.
DAR May 2011	91	Both	Seasonal barging of the Nechalacho concentrate will be conducted under contract. Avalon will ensure that any contractor/subcontractor follow applicable marine guidelines when transporting across the GSL.
WATER MANAGEMENT and FISH			
DAR May 2011	92	Both	The BIODISK treatment system will be used for treating sewage, and the treated sewage [and greywater] will be co-mingled with process and mine water and directed to the tailings management facility.
DAR May 2011	93	Both	The sewage treatment plant will meet the Camp Sanitation Regulations, RR.NWT. 1990 c P12 and Public Health Act, RS.NWT. 1998, c P12
DAR May 2011	94	Nechalacho	Flotation system operators will be trained to prevent excess quantities of all reagents entering the process. Clearly written instructions will be provided to all trained flotation system operators. A written contingency plan for the handling of reagent spills will be prepared before the commissioning of the flotation plant.
DAR May 2011	95	Nechalacho	The Nechalacho Flotation Plant water intake will be designed to conform with the DFO Freshwater Intake End-of-Pipe Fish Screen Guideline (DFO 1995).
DAR May 2011	96	Both	Riparian vegetation clearance and erosion control will be conducted according to the DFO Land Development Guidelines (DFO 1993), which provides comprehensive guidance to protect watercourses from construction activities, including incursions into the riparian zone.
DAR May 2011	97	Both	All blasting activities near waterbodies will comply with DFO Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (DFO 1998).
DAR May 2011	98	Both	The design basis and criteria for the TMF are based on Canadian standards for the design of dams. In particular, all aspects of the design of the TMF have been completed in compliance with the following documents: • CDA Dam Safety Guidelines (CDA, 2007) • The Mining Association of Canada (MAC) Guide to the Management of Tailings Facilities (MAC, 1998)

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	99	Nechalacho	The principal objective of the Tailings Management Facility (TMF) design is to ensure protection of the environment during operations and in the long term (after closure) and achieve effective reclamation at mine closure. The design of the TMF has taken into account the following requirements: • Permanent, secure, and total confinement of all tailings solids within an engineered facility; • Control, collection and removal of free draining liquids from the tailings during operations, for recycling as process water to the maximum practical extent; • The inclusion of monitoring features for all aspects of the facility to ensure performance goals are achieved and design criteria and assumptions are met.
DAR May 2011	100	Nechalacho	The construction will be scheduled to ensure that there is always sufficient storage capacity available in the facility to avoid overtopping. The embankment raising schedule provides sufficient freeboard to safely accommodate the supernatant pond and Environmental Design Storm event, combined with wave run-up.
DAR May 2011	101	Nechalacho	The tailings and water management strategy for the Thor Lake design consists of a closed loop system to minimize impact on the natural hydrologic flows within the Thor Lake watershed area. All tailings solids and fluids as well as impacted water from the process plant will report to the Tailings Basin.
DAR May 2011	102	Nechalacho	All excess water released from the TMF will be returned to Thor Lake via the Drizzle Lake/Murky Lake drainage system
DAR May 2011	103	Nechalacho	All decant water released from the TMF into Drizzle Lake will comply with the requirements of the MVLWB Water License and the federal MMER regulations.
DAR May 2011	104	Nechalacho	Natural flows and conditions will be monitored and mimicked as closely as possible throughout operations to minimize possible effects on the local hydrological regime.
DAR May 2011	105	Nechalacho	Water will be recycled from the TMF to the greatest extent possible to minimize the fresh water requirement (currently 50% recycle and 50% fresh water has been modelled).
DAR May 2011	106	Nechalacho	Tailings will be pumped from the Process Plant to the Tailings Basin via a tailings delivery pipeline to the south west corner of the Tailings Basin. Tailings deposition to the basin will consist of single end-of-pipe discharge from the tailings deposition pipeline to reduce icing concerns during the winter months.
DAR May 2011	107	Nechalacho	The Tailings Basin and Polishing Pond embankments will be constructed from rock fill (mine development and/or waste rock) and till (local borrow). Construction of the two phases will be completed to meet scheduling requirements related to solids containment and water management.
DAR May 2011	108	Nechalacho	Before and during construction, an Operation, Maintenance and Surveillance (OMS) Manual will be developed for the TMF.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	109	Nechalacho	Regular inspections of the TMF and associated structures will be completed. Regular inspections will help identify any areas of concern that may require maintenance or more detailed evaluation. The inspection program would include detailed visual inspection of all embankments and berms, pipelines, pumps, culverts, spillways, etc. The regular inspections will be completed as follows: • Detailed monthly inspections by the EHS Coordinator to look for any less obvious signs of potential problems. • Detailed inspections by the EHS Coordinator, during and following any extreme events, including snowmelt and precipitation, to assess if any damages due to erosion, settlement, etc., require attention. • Annual inspection of the TMF by a qualified Geotechnical Engineer to verify that the embankments are performing as designed and that the facility is being operated following design intent.
DAR May 2011 + EC IR#20.1 March 2012	110	Nechalacho	Water quality and biological monitoring will be carried out according to requirements of the Water License and the MMER. Monitoring results will be used to confirm that water quality downstream of the TMF discharge remains within allowable limits.
EC IR#20.5 March 2012			Water monitoring will include winter water quality sampling to measure nutrient and oxygen levels.
DAR May 2011	111	Nechalacho	The floor of the process plant will be concrete lined and sloped to a central drainage sump.
DAR May 2011	112	Nechalacho	Extraction of fresh water from Thor Lake will be managed to conform to the 2010 Department of Fisheries and Oceans (DFO) Protocol for Winter Water Withdrawal (DFO 2010), which specifies the use of no more than 10% of the available under-ice water volume.
DAR May 2011	113	Nechalacho	Mine water and Plant site runoff will be collected and directed into the process as appropriate
DAR May 2011	114	Nechalacho	Avalon will be putting in place a pumping system with a maximum capacity of 500 gallons per minute In the event there are surges of water inflows outside the current geomechanical and hydrogeological designs.
DAR May 2011	115	Hydromet Plant	The tailings solids from the proposed process will be predominantly gypsum (approx. 84%) which are expected to be similar to gypsum tailings in terms of void ratio, dry density and consolidation properties. From a geochemical point of view the tailings will be a fully neutralized material (by the addition of limestone) and it is expected that there will not be any regulatory exceedances of significant amounts of leachable metals based on testing of the concentrate completed to date.
DAR May 2011	116	Hydromet Plant	Based on a review of several local historic open pits in close proximity to the Process Plant Site, the L-37 Pit was selected as the best option. The L-37 pit is located approximately 2.5 km south of the proposed Hydrometallurgical Process Plant site at Pine Point.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	117	Hydromet Plant	Preparation of the L-37 pit for tailings disposal will involve the following items: • Existing waste rock within the bottom of the pit will be used to re-grade the bottom of the pit so that all areas are above the aquifer water table. This will ensure that the deposited tailings are not in direct contact with aquifer water and that tailings are deposited within a dry basin to promote drainage and consolidation of the solids. • A perimeter road will be constructed around the edge of the pit to allow tailings to be strategically discharged to form an initial layer as quickly as possible over the bottom of the pit. Once the initial layer is formed, the discharge can be managed to maintain a central pond for water management.
DAR May 2011	118	Hydromet Plant	During ongoing operations, excess water accumulation within the L-37 pit be pumped to an adjacent pit (N-42) for discharge and infiltration within the Presqu'ile aquifer.
DAR May 2011	119	Both	Avalon commits to water quality sampling until such time that demonstration of compliance with the license criteria has been proven.
DAR May 2011	120	Hydromet Plant	There will be no direct discharge of any hydrometallurgical waste water discharges to any surface water such as area streams or lakes.
DAR May 2011	121	Both	Implementation of erosion control measures if and as warranted.
DAR May 2011	122	Hydromet Plant	Monitoring of water quality will be conducted in the following manner: • Samples of slurry will be taken at the plant discharge and both the solids and pore water will be tested for parameters of interest • Groundwater monitoring wells will be established around the pit and used for determination of baseline water quality as well as ongoing monitoring • Once a water pond starts to form within the pit, additional water samples can be taken to be tested for parameters of interest
EC IR#22 March 2012		Both	The AEMP sampling program will include periodic biological sampling (fish, benthic invertebrates) will be carried out in adherence to the schedule required by the MMER. monthly Surveillance Network Program (SNP) sampling will commence prior to mine operational start-up, thereby providing further baseline data.
DFO IR #10 March 2012		Both	Avalon is committed to working with DFO and implementing appropriate mitigation measures for any works in Great Slave Lake in order to protect all fish and fish habitat, including shortjaw cisco.
DAR May 2011	123	Hydromet Plant	Process water for the hydrometallurgical plant will be retrieved from the T-37 historic open pit located 4 kilometres North of the proposed plant.
AANDC IR #22.5 & 22.6 March 2012		Hydromet Plant	Additional sampling (groundwater andsurface water) is planned to be carried out in 2012. The results of this future sampling will be provided to the MVEIRB when they become available.
DFO IR #6 March 2012		Nechalacho	The decant pipe will discharge into an excavated ditch near the toe of the Polishing Pond embankment. The ditch will be inspected and maintained to ensure its integrity during operations and to verify that significant sediment is not reaching Drizzle Lake due to operations.
Technical Session #2 August 15, 2012		Hydromet Plant	Avalon to provide information at the Pine Point site on modelling of the contaminant plume stemming from the aquifer, including a plume diagram

Source of Commitment	DAR Item #	Plant Site	Commitment
TERRAIN/VEGETATION			
DAR May 2011	124	Both	Minimize footprint size
DAR May 2011	125	Both	Incorporate previously disturbed areas into development plans
DAR May 2011	126	Both	To the extent possible, construct infrastructure on bedrock, avoiding permafrost areas
DAR May 2011	127	Both	Use of appropriate engineering design for permafrost conditions where construction in permafrost cannot be avoided
DAR May 2011	128	Both	To the extent possible, avoid ecosystem types that are sensitive or provide high rare plant habitat potential
DAR May 2011	129	Both	Restrict site activities (e.g., ATV use) to footprint area
DAR May 2011	130	Both	Conduct periodic monitoring of disturbance areas, particularly roadsides, for invasive species presence
DAR May 2011	131	Both	Conduct reclamation trials throughout the life of the Project to identify effective treatment options
DAR May 2011	132	Both	Reclamation of the TLP will be conducted in accordance with the terms and conditons of the MVLWB Land Use Permit and INAC's Mine Site Reclamation Guidelines for the NWT (2007)
WILDLIFE			
DAR May 2011 / Revised GNWT IR #17.1 February 2012	133	Both	GNWT's ENR *Food and Waste Management Guidelines* will be implemented to ensure carnivores do not become habituated and eventually require relocation and destruction. Adaptive management will be applied to Avalon's waste management strategies such that if problem wildlife (e.g. black bears, bald eagles, red fox, etc.) is attracted to the site, additional management practices will be implemented.
GNWT IR #17.1 February 2012	[134]	Both	Develop and implement an education program for all Project employees and contractors detailing wildlife related policies and mitigation.
DAR May 2011	134 [135]	Both	As required by the NWT Mine Health and Safety Regulations (s.15.05), all field personnel will undertake bear-safety training. In the event that a bear is disturbed and/or encountered during project operations, information on the sighting will be forwarded to the local Renewable Resource Officer at the earliest opportunity. If a bear is encountered, response should be in accordance with ENR's Bear Response Guidelines (by extension, all employees must be familiar with these guidelines; it will be included in employee training). Any defense of life and property (DLP) kills must be reported ASAP.
DAR May 2011	135 [136]	Hydromet Plant	Power poles from the existing substation will be located alongside existing access roads. Marking material will be added to enhance visibility of the power lines between the poles.
DAR May 2011	136 [137]	Both	Avalon will implement a no hunting policy for all project employees and contractors within the Projects zone of influence defined by the shooting restrictions of 3 kilometres from the Project sites. In addition, the company will require all project-related transportation activities to give the right-of-way to any wildlife that such activities may encounter.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011 / Revised GNWT IR #17.1 February 2012	137 [138]	Both	Implement a transportation and traffic management plan to minimize vehicular interactions with wildlife, including: · Implementation of speed limits on all site roads · All Project-related transportation activities will give the right-of-way to any wildlife that such activity may encounter · Implementation of an alert system to warn personnel of wildlife (barrenground caribou, moose, bear, wolverine, etc.) in the Project area by relaying sighting information to vehicles and equipment operators and on-site personnel to avoid the area, if possible · Implementation of bus transportation for employees and contractors from Hay River and Fort Resolution to the Hydrometallurgical Plant site to minimize the risk of vehicle-wildlife collisions and disturbances from the road · Dust suppression strategies (e.g. water or approved dust suppressant products) in accordance with GNWT dust suppression guidelines
GNWT IR #17.1 February 2012	[139]	Nechalacho	Develop standard aircraft procedures for flying into and departing from the Nechalacho Mine airstrip to accommodate caribou if present
DAR May 2011	138 [140]	Both	Maintain a minimum flight altitude of 600 m during all times, except during take off and landings
DAR May 2011	139 [141]	Both	If a mineral lick is present in the project area, the proponent will maintain a 300 m buffer zone between any development activities and the lick.
DAR May 2011 / Revised GNWT IR #17.1 February 2012	140 [142]	Both	Maintain a buffer zone of 500 m between identified large mammal dens (wolf,black bear, wolverine) and Project personnel during construction; dens discovered within 500 m of the Project area after construction will be reported immediately to GNWT ENR to determine appropriate course of action.
DAR May 2011	141 [143]	Both	If caribou are encountered during the development they will be left alone, and as necessary, local wildlife officials will be consulted.
DAR May 2011	142	Both	Maintain sufficient buffer distances between development activities (e.g., re-fueling and material storage) and waterbodies
DAR May 2011	143 [144]	Both	No wildlife will be purposefully encouraged to habituate to human presence (eg wildlife will not be fed)
DAR May 2011	144 [147]	Both	Avalon will conduct limited wildlife monitoring in the immediate vicinity of the Nechalacho and Hydrometallurgical development area. Avalon will record all significant wildlife observations made by site personnel while in the project area, and report any wood bison sightings to GNWT's ENR.
DAR May 2011	145 [148]	Both	All waste foods and human garbage will be stored in wildlife proof containers prior to offsite disposal in an approved manner. No land filling of such wastes will be conducted on site.

Source of Commitment	DAR Item #	Plant Site	Commitment
DAR May 2011	146 [149]	Both	To the extent reasonable, Infrastructure design will consider minimizing attraction of predators: wedges of greater than 45 degrees to deter ravens from nesting; all areas (large and small) with horizontal surface that can be enclosed will be enclosed; horizontal supports will be of the minimum possible width; anti-nest spikes or angled surfaces will be used near heat sources at greater than 45 degrees; surface complexity of all infrastructure will be reduced to avoid small nooks and crannies; all buildings and stairs will be skirted down to the ground; waste management will be consolidated in one secure, well-monitored location; domestic waste will note be exposed to the environment; all infrastructure will be continuously monitored for points of compromise; monitoring of wildlife use of decommissioned sites will continue once project is complete.
DAR May 2011	147 [150]	Both	The primary mitigation measure for any species at risk will be avoidance. If species at risk are encountered the proponent will avoid contact with or disturbance to the species, its habitat, or its residence. Monitoring will be done to determine the effectiveness of mitigation or to determine if further mitigation is required. At minimum, the proponent will record and provide to the relevant authorities all observations of any species at risk, including information on location sighted, number and reaction of the wildlife to project activities, and in some cases further monitoring may be required for particular species. Mitigation and monitoring will be consistent with recovery strategies and action or management plans for the particular species.
DAR May 2011	148 [151]	Both	The proponent will undertake monitoring for whooping crane near the project site. Wetlands near the project site including the area identified as shrubby fen in the local study area will be visually checked every two (2) weeks from May to September to see if any cranes are present. If a whooping crane is observed, the wetland area will be visually checked on a weekly basis for cranes and measures undertaken to avoid disturbance to the bird. As well, Environment Canada will be contacted to determine whether any further mitigation measures might be required. Additionally, any other observations of whooping cranes will also be reported to Environment Canada.
DAR May 2011	149 [152]	Both	Develop and implement an education program of wildlife related policies and mitigation to all project employees and contractors
DAR May 2011	150 [153]	Both	The developer will provide employee education on the SARA listed species, so that people do understand what they are looking at and know what to identify when they do see it, as well as make it a policy that they report that immediately to Avalon's EHS Coordinator.
GNWT IR#14.2 February 2012		Both	Avalon commits to working with ENR and other relevant parties in the development of the Wildlife Effects Monitoring and Management Plan with the goal of an endorsed, initial Plan in place 90 days prior to construction proceeding at the Nechalacho Mine and Hydrometallurgical Plant site areas.
GNWT IR #17.1 February 2012	[145]	Both	Habitat clearing activities will be avoided to the greatest extent possible from May 15 – August 15 annually to prevent accidental mortality of adults, eggs, and pre-fledged young of SARA listed species (e.g. Common nighthawk, Olive-sided flycatcher, Rusty blackbird, etc.) as well as other upland breeding birds
GNWT IR #17.1 February 2012	[146]	Both	Mowing or other activities within the airstrip buffer zone will be avoided from late April to late July to prevent accidental mortality of nesting and fledging Short-

Source of Commitment	DAR Item #	Plant Site	Commitment
			eared owls.
EC IR #12.1 March 2012		Nechalacho	Avalon is committed to avoiding to the extent possible: · all known or suspected nest sites. · clearing during nesting season from May 15 to August 15. · clearing habitat from May 15 to August 15 to prevent accidental mortality of Olive-sided Flycatcher adults, eggs, and pre-fledged young (as well as other upland breeding birds). · clearing activities from mid-May to late August.
EC IR #13.5 March 2012		Both	If a deterrent is required to prevent birds and Species at Risk from coming into contact with tailings or water within the TMF, Avalon is committed to consulting with Environment Canada and GNWT ENR to determine the most appropriate method(s) to employ