

List of Commitments for the Madrid-Boston Proposal

NIRB Technical Comment ID	Commitment	Timeline
DFO-3.1.1	TMAC commits to engaging further with DFO to determine the most appropriate threshold limit to use to reduce the risk of serious harm to fish, including considerations of measures to avoid causing harm to fish.	Prior to submission of DFO Application
DFO-3.1.2	TMAC will apply DFO's measures to avoid causing harm to fish and fish habitat, including monitoring, as necessary as it pertains to water crossing construction, operation, and decommissioning.	Prior to submission of DFO Application
DFO-3.1.3	TMAC commits to undertaking field studies (fish habitat, fish community and/or hydrological assessments) in spring and summer 2017 (see also Technical Comments KIA-DEIS-34, KIA-DEIS-37).	Pre-FEIS
DFO-3.1.3	TMAC therefore commits to quantifying predicted habitat loss/alteration using area units (e.g., in m2) in the FEIS submission.	FEIS
DFO-3.1.4	Studies will be in waterbodies predicted to be affected by changes in water levels, based on predictions presented in Volume 5, Section 1.5 of the DEIS. These data will supplement existing data sets, and will help to evaluate the value of potentially lost or altered habitats. The FEIS will incorporate the newly-collected data and will adjust effects conclusions on the scale of potential habitat loss or alteration. TMAC therefore commits to quantifying predicted habitat loss/alteration using area units (e.g., in m2) in the FEIS submission.	Pre-FEIS
DFO-3.1.4	TMAC will work with Fisheries and Oceans Canada's Fisheries Protection Program and local Inuit to develop a freshwater fisheries offsetting plan.	FEIS
DFO-3.2.1	TMAC will work with DFO to determine the necessary mitigation and monitoring required under the Authorization.	Prior to submission of DFO Application
DFO-3.2.2	TMAC will work with Fisheries and Oceans Canada's Fisheries Protection Program and local Inuit to develop a marine fisheries offsetting plan.	FEIS
DFO-3.2.2	TMAC commits to working with Fisheries and Oceans Canada's Fisheries Protection Program to develop a marine fisheries offsetting plan for construction, operation, maintenance and decommissioning of the proposed ore dock.	Prior to submission of DFO Application

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ECCC-4.01	New equipment purchased for Phase 2 will comply with Canadian regulations for emission standards during the procurement period. TMAC will revise the air quality modelling study and air quality assessment for the FEIS. The model revision will include a revised emissions inventory (including revising mobile and stationary emissions) that will more accurately reflect the expected equipment fleet use for Phase 2 and the applicable Canadian regulations for mobile and stationary equipment emission rate standards. The revised emissions inventory will be documented in the revised Air Quality Modelling Study document for the FEIS. The inventory will include detailed information about the expected equipment emission Tiers or manufacture dates, and their associated emission factors from published sources. The emissions inventory used for the DEIS will be compared to the FEIS, in order to highlight and summarize the emissions inventory changes. These changes will be discussed with ECCC and documented in the FEIS Air Quality Modelling Study.	FEIS
ECCC-4.02	The need to implement ambient NO2 monitoring and adaptive management will be determined based on the revised model results of commitment to ECCC-4.1 and in discussion with ECCC. If NO2 monitoring is warranted, it will be described in an updated Air Quality Management Plan as part of the FEIS.	FEIS
ECCC-4.03	Incinerators will be stack tested within 6 months after commissioning. If an incinerator exceeds the emission regulatory requirements, TMAC will take corrective actions, including looking at the waste stream and the Incinerator Management Plan. The incinerator in question will be re-tested within 3 months after applying the corrective actions, to verify compliance. TMAC will maintain regular operational records available for review by the appropriate designated inspector.	Operations
ECCC-4.04	As part of the emissions inventory revisions, the number of surface vehicles will be revised to reflect the expected traffic rate on roads. The methods used for road dust suppression (e.g., suppression type and application frequency) will also be refined and reflected in the model. The revised FEIS Air Quality Modelling Study will include detailed justification of the methods used to determine the resulting expected road dust control efficiency.	FEIS
ECCC-4.06	TMAC will work with ECCC to ensure that relevant updates for guidance to spill response for birds are addressed in the plan.	FEIS
ECCC-4.07	As part of the FEIS, TMAC will provide contingency measures to manage mine water resulting from uncertainty associated with arsenic concentrations in the Madrid Mine.	FEIS
ECCC-4.07	Mine water sampling and testing will be completed as part of Bulk Sample development and mining at Madrid. As part of the FEIS, TMAC will provide contingency measures to manage mine water resulting from uncertainty associated with arsenic concentrations in the Madrid Mine.	FEIS

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ECCC-4.08	To ensure that the TIA discharges meet MMER (including both changes in the limits), TMAC will provide contingency measures and associated triggers in an adaptive management plan as part of the FEIS.	FEIS
ECCC-4.09	As part of the FEIS, TMAC will provide mine water inflow triggers and contingency measures in a Groundwater Management Plan for the Boston Mine.	FEIS
ECCC-4.10	TMAC anticipates presenting refined source terms and additional sensitivity estimates for loading from the road and pads to more clearly show the potential range in concentrations that can be anticipated under more realistic base case and upper bound scenarios.	FEIS
ECCC-4.11	Where they are not already included in the predictions, total concentrations will be included in the updated predictions of the Water and Load Balance model for the FEIS and used for comparison to objectives.	FEIS
ECCC-4.12	The correctly modeled TDS in the combined effluent from the water and load balance will be carried forward to the FEIS water and load balance.	FEIS
ECCC-4.13	British Columbia's sulphate water quality guideline for the protection of aquatic life will be used as an assessment threshold for the Freshwater Water Quality Indicators in the FEIS.	FEIS
ECCC-4.14	Data will be augmented with baseline data that has been or will be collected in Windy, Patch, Doris, Wolverine, Aimaokatalok, Stickleback, and Reference Lake B in 2017	FEIS
ECCC-4.15	Trucking of effluent to the Doris TIA will be evaluated, complete with a more comprehensive analysis of other contingencies should effluent predictions be unsuitable to release to freshwater, be as part of the FEIS. TMAC commits to review chlorisde predictions in light of options to reduce concentrations contributed to the brine.	FEIS
ECCC-4.22	TMAC will provide additional information on the expected performance of the proposed closure cover for the Doris TIA as part of the FEIS.	FEIS
GN-02	As previously stated in TMAC's response to GN-IR-43, TMAC will reach out to third parties to deliver financial management programs such as financial literacy, financial planning and personal budgeting.	Operations
GN-02	In particular, TMAC will approach GN Family Services (or other GN department as appropriate) to solicit input and/or participate in the delivery of programming to Project workers. TMAC will also track statistics regarding the delivery of the programming. This may include the number and percentage of workers that have completed the training. TMAC will provide updates on program participation to the Kitikmeot Socio-economic Monitoring Committee during its annual meeting.	Operations
GN-03	TMAC commits to have dialogue with the Government of Nunavut on the topic of sexual health, including education and awareness materials, sexual health data to consider in the FEIS, and sexually transmitted infections (STIs) testing.	FEIS

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GN-05	For the FEIS, TMAC will update the CIP to clarify communication with the GN and other stakeholders. The CIP update will identify key stakeholder issues/initiatives and outline a schedule of communication with stakeholders. TMAC will also include a list of key contacts in the CIP, where practicable (e.g., contact information for public agencies).	FEIS
GN-06	TMAC will undertake additional work to refine its estimates of fuel use, and remuneration paid to workers (direct, indirect and induced) for work done in Nunavut, and develop separate estimates of Petroleum Tax and Payroll Tax payments. This information will be provided in the FEIS.	FEIS
GN-07	TMAC confirms that all Kitikmeot residents, Inuit and non-Inuit, will be provided with transport from their home community to site if employed by the Project. The applicable wording in the Human Resources Plan (Volume 8, Annex 26) will be revised for the FEIS to be consistent with this statement.	FEIS
GN-07	TMAC will update the Human Resources Plan to state that, as per the IIBA, Inuit and non Inuit Kitikmeot residents employed at Hope Bay will be provided air transportation from the home communities of Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak and Kugaaruk to the project site. Non Kitikmeot residents employed at Hope Bay are provided transportation to and from the project site, as per the guidelines described in TMAC's Hope Bay Travel Policy.	Not Applicable
GN-08	The Community Involvement Plan (see TMAC's response to Technical Comment ID #GN-05) will be updated for the FEIS to provide additional detail regarding the communication protocols for advancing these discussions.	FEIS
GN-08	TMAC will participate in further discussions with the Department of Education and the Department of Family Services regarding its participation and support for the provision of training development and career-awareness information in Kitikmeot schools.	FEIS
GN-09	NO2 emissions will be reassessed in the FEIS.	FEIS
GN-10	TMAC will revise the noise and vibration study for helicopters to reflect more realistic scenarios for the flight paths, altitudes and flying hours of operation, including all Hope Bay activities, and incorporate this information into the wildlife effects assessment as appropriate.	FEIS

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GN-11	<p>Caribou collar analyses will be conducted using the most recent data (up to and including spring migration 2017) and extended to examine the indirect habitat loss (theoretical ZOI), encounter rate and residency time (of collars in the study area) that both Dolphin and Union (winter and both spring and fall migration) and Beverly/Ahiak (summer, fall and winter) caribou spend in the Project areas, including the PDA and ZOI areas; these results will be presented in the FEIS.</p> <p>To bracket the uncertainty in ZOI value, TMAC will include two additional possible ZOI scenarios (to extend from the outer edge of the Hope Bay PDA) in addition to those chosen from the literature or calculated from existing site data: 1) 14 km surrounding the mine and 4 km surrounding roads, and 2) 5 km from the mine and 1.5 km from the road. A map and explanation of the ZOI will be included for all analyses.</p>	FEIS
GN-11	TMAC assumes that the GN meant to request the degree of overlap between the subpopulation areas and the zone of influence used for the DEIS and TMAC will provide these data in the FEIS.	FEIS
GN-11	TMAC will include the results of the analysis conducted in response to GN-IR-16 in the FEIS.	FEIS
GN-12	The results from workshops described in Technical Comment GN-12 will be incorporated into the FEIS to present on potential impacts, mitigation and monitoring.	FEIS
GN-12	TMAC will clarify in the FEIS the meaning of a group of caribou, including the context for input received from the GN and other parties during the review of the WMMP.	FEIS
GN-12	TMAC will include additional rationale in the FEIS as to why caribou mitigation measures are implemented when a single caribou is observed, including the context for input received from the GN and other parties during the review of the WMMP.	FEIS
GN-14	The FEIS will clarify that TMAC will be in compliance with the Nunavut Wildlife Act for the Phase 2 Project and obtain appropriate permits if necessary as related to carnivore dens.	FEIS
GN-14	TMAC agrees to produce a habitat suitability map showing available suitable denning habitat for grizzly bears for the FEIS and will use the outcome of the assessment to inform mitigation, including pre-construction surveys for dens.	FEIS
GN-15	TMAC agrees to present the results of additional analyses conducted during the Information Request stage for the Dolphin and Union caribou in the FEIS (See GN-DEIS-16 and GN-DEIS-17) and present similar residency and encounter rate analyses for the Beverly and Ahiak subpopulations.	FEIS
GN-15	TMAC agrees to present the results of supplementary analyses conducted for GN-IR16 within the FEIS (see GN-DEIS-10) and use these updated range analyses to define seasonal ranges for the Beverly and Ahiak subpopulations.	FEIS

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GN-15	Indirect habitat loss (ZOI) calculations will be conducted as described in the commitment for GN-11.	FEIS
GN-15	TMAC will update the cumulative effects assessment to include the Meadowbank Project, and will consider other reasonable human activities and settlements and other active facilities that may affect caribou behaviour in the FEIS. This update will include a table of human features with estimated ZOIs.	FEIS
GN-16	The results from the workshops described in Technical Comment GN-12 will be incorporated into the FEIS to present on potential impacts, mitigation and monitoring.	FEIS
GN-16	TMAC agrees to modify the Project WMMP in the FEIS to consider additional monitoring strategies for test impact predictions for caribou, including analysis of caribou collar data using techniques similar to those outlined in Wilson et al. (2016) and Blum et al. (2015).	FEIS
GN-16	TMAC agrees to use all available and current collar data in the analysis described in Comment GN-12.	Pre-FEIS
GN-16	TMAC will conduct an analysis of the crossing rates and encounter rates of both Dolphin and Union and Beverly Ahlak caribou of the existing Doris road and proposed Boston road and the proposed ZOIs of those roads as described in GN-11.	FEIS
GN-17	Caribou residency analysis will be conducted as described in the commitment for GN-11. Direct (PDA) and Indirect (ZOI) habitat loss will be calculated for high quality and absolute habitat loss.	FEIS
GN-17	TMAC agrees to present the results of supplementary analyses presented in GN-IR-18 and GN-IR-21 in the FEIS.	FEIS
GN-19	Given that the final results of the comprehensive analyses included in the 2016 WMMP indicated a small effect on raptor breeding, the FEIS will re-evaluate the characterization of the residual effect of disturbance on raptors.	FEIS
GN-21	TMAC will address discussion for potential mitigation for muskox in the next wildlife working group and report the results in the FEIS.	FEIS
GN-22	The noise modeling conducted for the DEIS was conducted based on the types of blasts conducted at the Doris site and which are planned for the Phase 2 Project. Details on the blasts proposed and used for the noise modeling will be listed in the DEIS.	FEIS
GN-22	TMAC agrees to provide more justification in the FEIS on the use of a setback buffer for triggering mitigation activities at Project quarries, which will include a more in depth discussion of the literature and responses of wildlife to various sound levels and discussing any information gaps within the assessment.	FEIS
GN-22	TMAC notes that the blast buffers and mitigation measures for caribou and other wildlife applies to all above-ground blasting. TMAC agrees to making this distinction within the FEIS .	FEIS
GN-25	The FEIS will clarify that TMAC will be in compliance with the Nunavut Wildlife Act for the Phase 2 Project and obtain appropriate permits if necessary as related to raptors.	FEIS

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GN-26	TMAC will provide estimates of the proportion of Doris and Phase 2 roads that will be greater than 3 m in height and will have a safety berm.	FEIS
GN-27	TMAC will provide estimates of the levels and types of traffic on the Project's all-weather road segments during years 1-4 of the Project.	FEIS
GN-28	As indicated in response to GN-22 additional justification will be included in the FEIS for the mitigation buffers used in the WMMP .	FEIS
GN-28	TMAC will contact the GN for the available satellite collar data on the Dolphin and Union herd and investigate if there is sufficient data to conduct a ZOI analysis for the Doris site. If there is sufficient data, then the results of this analysis will be included in the FEIS. TMAC will consult the GN regarding the selection and treatment of the data.	FEIS
GN-28	TMAC will include additional justification for its choice of ZOI in the FEIS.	FEIS
GN-29	The Community Involvement Plan (see TMAC's response to Technical Comment ID #GN-05) will be updated for the FEIS to provide additional detail regarding the communication protocols to support these discussions on an ongoing basis.	FEIS
GN-29	TMAC will participate in further discussions with the Department of Family Services and the Nunavut Arctic College regarding its participation and support for the provision of training.	Operations
GN-30	TMAC will provide an updated estimate of labour force needs and workforce schedule for each phase of the Project, to be included in the FEIS.	FEIS
GN-30	To the extent that such communications are consistent with and not limited by TMAC's obligations under the 2015 Hope Bay IIBA, TMAC will provide the GN and the NIRB information regarding the labour force needs of the Phase 2 Project, should the Project receive regulatory approval and the decision is made by TMAC to proceed with the construction of the Project.	Operations
GN-30	TMAC commits to have continued dialogue with the Government of Nunavut regarding anticipated labour force needs, employment schedules, and education and training requirements related to specific positions.	Ongoing
GN-32	For the FEIS, TMAC will update the CIP to clarify communication with the NHC and other stakeholders (see TMAC's response to GN-05). The CIP update will identify key stakeholder issues/initiatives and outline a schedule of communication with stakeholders. TMAC will also include a list of key contacts in the CIP, where practicable (e.g., contact information for public agencies).	FEIS

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HC-4.1.1	The air quality model will be revised for the FEIS; for example, the camp locations for workers will be off-set from the emission sources when the air quality model is updated (in the current model they were on top of each other). In the FEIS, any air quality guideline exceedances identified in the new model results will result in classification of those parameters as COPCs and they will be carried through the HHRA and will have hazard quotients calculated and incremental lifetime cancer risks calculated, if applicable (if the COPC is a carcinogen).	FEIS
HC-4.1.2	For the FEIS, any parameters that exceed guidelines will be carried forward in the HHRA as COPCs and will have hazard quotients calculated and incremental lifetime cancer risks calculated, if applicable (if the COPC is a carcinogen). TMAC will describe those parameters that exceed guidelines under baseline/existing conditions to indicate that they are not a result of the Project. This will show quantitatively the incremental risks from the Project.	FEIS
HC-4.2.1	In the FEIS, country food calculations for Phase 2 Project-related HHRA will be conducted, in addition to the existing condition assessment, recognizing that Project-related COPC concentrations in environmental media will likely remain unchanged from baseline/existing conditions. This will show quantitatively the incremental risks from the Project.	FEIS
INAC-TRC 01	TMAC will validate model-generated temperature profiles against in-situ measurements at multiple sites within Aimaokatalok Lake, including the 14 m depression near the proposed outfall.	FEIS
INAC-TRC 02	Attention will be paid to this potential for effluent pooling in Aimaokatalok Lake within the calibrated hydrodynamic modelling exercise and this information will be presented clearly in the FEIS.	FEIS
INAC-TRC 03	TMAC anticipates presenting refined source terms and additional sensitivity estimates for loading from the road and pads to more clearly show the potential range in concentrations that can be anticipated under more realistic base case and upper bound scenarios.	FEIS
INAC-TRC 08	Inconsistencies in the Evaporation data will be resolved and the updated evaporation results will be used in the updated water and load balance for the FEIS. In appreciation of providing this information Karen Costello will provide donuts at the next technical hearing.	FEIS
INAC-TRC 09	TMAC will also be undertaking field studies (fish habitat, fish community, and hydrological assessments) in spring and summer 2017 in waterbodies predicted to be affected by changes in surface water quantity, based on predictions presented in Volume 5, Section 1.5 of the DEIS.	Pre-FEIS
INAC-TRC 10	TMAC will work with DFO to determine the necessary mitigation and monitoring required under the Authorization.	Prior to submission of DFO Application

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INAC-TRC 16	The DEIS documentation will be revised to clarify that TMAC does not intend to segregate waste rock from Madrid North, Madrid South or Boston based on mineralization classification, nor to use waste rock from Madrid North, Madrid South or Boston for construction. The Waste Rock and Ore Management Plan will be updated for submission with the FEIS to reflect this intention.	FEIS
INAC-TRC 17	TMAC commits to monitoring the Contact Water Ponds as part of the SNP monitoring network and at a higher frequency than a bi-annual seepage survey.	Water Licence
INAC-TRC 18	TMAC agrees to include the use of revegetation as a possible reclamation measure for disturbed overburden surfaces when appropriate. The CCRP will be amended with an additional section (Section 5.4.14) containing the following text: "5.4.14 Disturbed Overburden Areas Where appropriate, consideration will be given to revegetate areas of overburden disturbed by excavation or other activities resulting in loss of natural vegetation. Depressions will be backfilled preferentially with suitable soils from the existing overburden piles to avoid ponding water resulting in permafrost degradation. Revegetation works may consist of application of seeds collected from the surrounding vegetation. Temporary erosion protection measures may also be implemented, as required."	FEIS
INAC-TRC 20	Any public comments applicable to the alternatives assessment, such as advantages or preferences for specific Project component alternatives, will be further considered in the alternatives assessment and documented in the FEIS.	FEIS
INAC-TRC 20	TMAC will include the description of the process used to determine no applicable interactions between the alternative and excluded VSECs, as described in the June 5, 2017 response to Technical Comments.	FEIS
INAC-TRC 21	TMAC will include a statement in the FEIS outlining the role of the Kitikmeot Socio-economic Committee in understanding cumulative impacts in the area, and the role of regulators and industry in cumulative socio-economic monitoring.	FEIS
INAC-TRC 22	The following figure (Figure 1) will be included in the FEIS as a supplement to Table 3.6-1, to show the temporal overlap between the Phase 2 and Hope Bay Project and other projects and activities included in the CEA.	FEIS
INAC-TRC 23	In the FEIS, TMAC will describe the CEA methodology and provide readers with the rationale for inclusion or exclusion of Valued Socio-economic Components in this analysis.	FEIS
INAC-TRC 24	TMAC confirms its participation in regional socio-economic monitoring, specifically the Kitikmeot Socio-Economic Monitoring Committee (Kit-SEMC), and through this participation, will support understanding industry's role in cumulative effects in the region.	Operations

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INAC-TRC 24	TMAC will describe mechanisms for monitoring/management of socio-economic or land use cumulative effects in the FEIS.	FEIS
INAC-TRC 25	The FEIS will include a description of the rationale for the exclusion of past, existing and foreseeable future projects in NWT for the Land Use CEA.	FEIS
INAC-TRC 25	TMAC will include additional clarification regarding the selection of the temporal boundary in the CEA in the FEIS for the Socio-Economic and Land Use VSECs.	FEIS
INAC-TRC 26	TMAC will conduct additional community-level research in 2017 to update socio-economic and land use baseline information. This information will be presented in the FEIS and incorporated into the assessment, where appropriate. TMAC will continue to implement standard practices to collect qualitative data, in order to maximize the level of confidence in qualitative information. TMAC will identify any specific qualitative data limitations in the FEIS. TMAC will provide the level of confidence for socio-economic quantitative data.	FEIS
INAC-TRC 27	Following the baseline data update, and as applicable, the FEIS will include a discussion of any socio-economic baseline data gaps and uncertainties created by these gaps.	FEIS
INAC-TRC 27	TMAC has committed to update socio-economic and land use baseline information. Data collection is planned for 2017. This information will be incorporated in the FEIS.	FEIS
INAC-TRC 28	TMAC will provide the justification for exclusion of the 'Regional Populations and Demographics' VSEC into the FEIS, as provided in the June 5, 2017 response to Technical Comments.	FEIS
INAC-TRC 29	In the FEIS, TMAC will describe the provision of country food supplied for Inuit mine workers, as provided in the June 5, 2017 response to Technical Comments.	FEIS
INAC-TRC 31	TMAC has committed to update socio-economic baseline information. Data collection is planned for 2017, and updated information relating to food services will be included in the FEIS.	FEIS
INAC-TRC 31	TMAC will include a distinct section in the FEIS entitled "Food Services", which will present information on existing food services in the socio-economic Regional Study Area (RSA).	FEIS
INAC-TRC 32	For the FEIS, TMAC will provide the additional rationale for conclusion of 'not significant' for potential effects on competition for local labour, as provided in the June 5, 2017 response to Technical Comments.	FEIS
INAC-TRC 32	TMAC is committed to ongoing participation in the Kitikmeot Socio-economic Monitoring Committee (Kit-SEMC).	Ongoing
INAC-TRC 33	TMAC will work with the KIA and other stakeholders to enhance local business capabilities and the benefits realized by businesses within the region.	Operations
INAC-TRC 33	For the FEIS, TMAC will provide information regarding business capacity trends in the FEIS, as provided in the June 5, 2017 response to Technical Comments.	FEIS

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INAC-TRC 34	For the FEIS, TMAC will describe the Project's potential impacts on alcohol and prohibited substance import and/or export, as provided in the June 5, 2017 response to Technical Comments.	FEIS
INAC-TRC 35	For the FEIS, TMAC will clarify statements made in Volume 6, Section 4.5.3.3 regarding the use of IQ in monitoring.	FEIS
INAC-TRC 35	TMAC is planning a follow-up workshop with Elders and harvesters in August or September of 2017 to focus on the design of wildlife monitoring programs, and this information will be incorporated into the WMMP and the FEIS.	FEIS
INAC-TRC11	TMAC will include the response to INAC-TRC 11 in the FEIS	FEIS
INAC-TRC12	TMAC will include the response to INAC-TRC 12 in the FEIS	FEIS
INAC-TRC13	TMAC will include the response to INAC-TRC 13 in the FEIS	FEIS
INAC-TRC14	TMAC will include the response to INAC-TRC 14 in the FEIS	FEIS
INAC-TRC15	TMAC will include the response to INAC-TRC 15 in the FEIS	FEIS
INAC-TRC19	TMAC will include the response to INAC-TRC 19 in the FEIS	FEIS
INAC-TRC4	TMAC will include the response to INAC-TRC 4 in the FEIS	FEIS
INAC-TRC5	TMAC will include the response to INAC-TRC 5 in the FEIS	FEIS
INAC-TRC6	TMAC will include the response to INAC-TRC 6 in the FEIS	FEIS
INAC-TRC7	TMAC will include the response to INAC-TRC 7 in the FEIS	FEIS
KIA-DEIS-01	As discussed with the KIA on May 10th, TMAC has reviewed the traffic levels used in the DEIS and will update the traffic rates for Project roads in the FEIS. If different traffic volumes are anticipated from what was presented in the wildlife assessments of disruption of movement, TMAC will re-evaluate potential effects on caribou, grizzly bear, muskox, and wolverine including a consideration of the academic literature provided by the KIA. TMAC will also review the required mitigation in light of any updated effects assessment in the FEIS and discuss results with the KIA.	FEIS
KIA-DEIS-02	As discussed with the KIA, TMAC agrees to produce a habitat suitability map showing available suitable denning habitat for grizzly bears for the FEIS. TMAC will consider the results of this mapping exercise in the FEIS.	FEIS
KIA-DEIS-03	As discussed with the KIA on May 10th, TMAC will present and discuss the camera data by date, caribou season and caribou herd (where possible) in the FEIS. TMAC will consider the updated results from this analysis to determine whether changes in the assessment to caribou are warranted, including evaluation of potential effects and mitigation and monitoring strategies. These results will be considered in conjunction with collar data analysis already in conjunction with the GN.	FEIS
KIA-DEIS-04	Relevant information pertaining to wind turbines and their potential effects will be evaluated in the FEIS as requested by the KIA. Results will be discussed with the KIA when available.	FEIS

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KIA-DEIS-05	TMAC will highlight additional information in the FEIS that describes the sensitivity and resilience of wildlife populations. This will include population size and trajectory and the species and population resiliency to disturbance. The EIS methodology will be updated to describe how for wildlife the resilience will be used to inform the determination of significance.	FEIS
KIA-DEIS-06	TMAC will include in the FEIS further information on managing harvester access and information from the Wildlife Working Group collected in 2017.	FEIS
KIA-DEIS-08	As discussed with KIA on May 10, 2017, TMAC will include following items in the FEIS for the results of the ZOI analysis conducted for the Windy Camp in 2010: 1) Effect sizes when examining for a ZOI using the caribou aerial survey data. 2) power valued achieved, and 3) the alpha-value used.	FEIS
KIA-DEIS-09	In regards to dustfall monitoring, the Phase 2 Air Quality Management Plan (AQMP) presented in the DEIS (Volume 8, Annex 19) will be updated as required to support project monitoring, post technical review. This will include a dustfall monitoring program that will measure the quantities of dust deposited at dustfall sampling locations. Establishing sampling locations perpendicular to the road to monitor dust generation will be considered. Updated atmospheric modelling and other potential impacts to vegetation, health and diversity will be considered in the FEIS to reexamine the predicted extent of the impacts to vegetation and required mitigation and monitoring will be discussed with the KIA.	FEIS
KIA-DEIS-10	As one of the mitigation measures for invasive plant species, TMAC (in the invasive plant management plan) will consider using native plants in disturbed areas.	FEIS
KIA-DEIS-10	TMAC will address the concern related to invasive species related to the Project by way of including a plan in the FEIS.	FEIS
KIA-DEIS-11	The HHRA and associated modelling included in the FEIS will replace the consumption of Canada goose with the consumption of ptarmigan.	FEIS
KIA-DEIS-12	Additional baseline sampling in Roberts Bay for Arctic Char tissue metal concentrations and age will be conducted this summer (2017) and those data will be included in the HHRA in the FEIS. The sample sizes collected will aim to meet Health Canada Guidance of at least 20 fish and will be in accordance with DFO permits for fish sampling.	Pre-FEIS
KIA-DEIS-12	In the FEIS, the adult and toddler fish consumption rates will be adjusted to include a consumption rate for freshwater fish (i.e., Lake Trout) and for marine fish (i.e., Arctic Char) separately. The overall risk to human health will still include the total fish consumption taken into account these relative proportions.	FEIS
KIA-DEIS-17	As noted in the response to KIA-DEIS-12, a field program will be conducted this summer (2017) to collect marine fish (i.e., Arctic Char) for analysis and inclusion in the risk assessment for the FEIS.	FEIS

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KIA-DEIS-18	A literature search for BTFs applicable to country food species and ecological receptors was conducted prior to writing the risk assessment for the DEIS. An additional literature search will be conducted for BTFs prior to completing the FEIS to identify more relevant values if available or methods of deriving values for inclusion in the FEIS.	FEIS
KIA-DEIS-19	The additional Arctic Char data will be included in the risk assessment in the FEIS.	FEIS
KIA-DEIS-21	As noted in comment responses KIA-DEIS-13, Whitefish will be removed from the HHRA entirely because the Lake Trout dataset (which is the highest trophic level fish) is more than adequate (n=69) to represent freshwater fish consumption.	FEIS
KIA-DEIS-22	Since representative vegetation tissue metal concentrations appears to be a critical issue for KIA, surrogate or analogue data from other projects in Nunavut (e.g., Meliadine, Meadowbank, Back River) will be considered, assuming the baseline vegetation data for those projects is publicly available on the NIRB website.	FEIS
KIA-DEIS-23	The soil ingestion rates for caribou and muskox will be updated in the FEIS, based on information from Bayer et al. (1994) and Macdonald and Gunn (2004).	FEIS
KIA-DEIS-24	Additional fish (i.e., Arctic Char) captured for tissue metal analysis this summer (2017) will be included in the FEIS.	FEIS
KIA-DEIS-28	TMAC will update land use baseline information in 2017, the updated information to be incorporated in the FEIS. The approach to update the baseline data will engage Hunter and Trapper Organization (HTO) representatives to undertake additional interviews and/or focus groups, including resource mapping.	FEIS
KIA-DEIS-29	TMAC will update land use baseline information in 2017, and the updated information will be incorporated in the FEIS. The approach to update the baseline data will engage Hunter and Trapper Organization (HTO) representatives to undertake additional interviews and/or focus groups, including resource mapping.	FEIS
KIA-DEIS-34	As recommended/requested by DFO in their technical comments (refer to DFO-3.1.4 and DFO-3.2.2), TMAC will work as required with DFO and KIA as required to develop a freshwater and marine fisheries offsetting plan.	FEIS
KIA-DEIS-34	TMAC commits to quantifying predicted habitat loss/alteration using area units (e.g., in m ²) in the FEIS submission.	FEIS
KIA-DEIS-35	TMAC commits to working with DFO through the Fisheries Protection Program to determine the most suitable approach to estimating potential fisheries productivity losses.	FEIS
KIA-DEIS-36	TMAC plans to undertake additional fish community and fish habitat baseline surveys in Imniagut Lake and Imniagut Outflow in spring and summer 2017.	Pre-FEIS
KIA-DEIS-37	TMAC acknowledges the KIA's request to improve the clarity of Volume 5, Section 6.5.4.2 of the DEIS and commits to revising this section in the FEIS.	FEIS

List of Commitments for the Madrid-Boston Proposal

NIRB Technical Comment ID	Commitment	Timeline
KIA-DEIS-37	TMAC commits to initiating additional field investigations (fish habitat, fish community and/or hydrological assessments) in spring and summer 2017 (see also Technical Comment ID #KIA DEIS 34)	Pre-FEIS
KIA-DEIS-37	TMAC therefore commits to quantifying predicted habitat loss/alteration using area units (e.g., in m ²) in the FEIS submission.	FEIS
KIA-DEIS-38	The potential effects to aquatic habitat from changes in water level and flow predicted in the sensitivity analysis on high groundwater inflows in the Madrid mines will be evaluated in the FEIS.	FEIS
KIA-DEIS-39	Uncertainty will be managed using a groundwater management plan, as per the existing Doris mine.	FEIS
KIA-DEIS-40	If the FEIS assumes treated sewage will be discharged to the tundra during operations, the effects of those discharges will be evaluated in the FEIS.	FEIS
KIA-DEIS-44	The Air Quality Management Plan (AQMP; Annex 19 of the DEIS) contains air quality mitigation and adaptive management measures that were designed to protect ambient air quality during all phases of mining. While not referencing Greenhouse Gas (GHG) emissions explicitly, many of the measures in the AQMP are applicable to reduction of GHG emissions over the life of the mine. This will be clarified in the AQMP provided as part of the FEIS.	FEIS
KIA-DEIS-46	Additional water quality data, including winter under ice sample, is being collected in Windy, Patch, Wolverine, Doris, Aimaokatalok, and Stickleback lakes in 2017.	Pre-FEIS
KIA-DEIS-47	TMAC will review the modeling methodology for modeling smaller lakes where cryoconcentration is resulting in an excessively high modelled baseline concentration, and adjust as necessary to reduce this artefact. TMAC anticipates presenting refined source terms and additional sensitivity estimates for loading from the road and pads to more clearly show the potential range in concentrations that can be anticipated under more realistic base case and upper bound scenarios.	FEIS
KIA-DEIS-48	TMAC will further evaluate this historical dataset to assess bathymetric and hydrological data, and if warranted will include it in the FEIS. TMAC will also revisit the historical geodetic data and complete survey work to provide geodetic data for Windy Lake in 2017.	FEIS
KIA-DEIS-55	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
KIA-DEIS-56	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence

List of Commitments for the Madrid-Boston Proposal

NIRB Technical Comment ID	Commitment	Timeline
KIA-DEIS-57	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
KIA-DEIS-58	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
NRCAN-2.1.2	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
NRCAN-2.1.3	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
NRCan-2.1.4	Uncertainty will be managed using a Groundwater Management Plan, and will include triggers and mitigation measures similar to the approved Doris Mine Groundwater Management Plan. The GWMP will be submitted part of the FEIS.	FEIS
NRCAN-2.1.5	TMAC will be conducting additional geotechnical site characterization studies after completion of the FEIS as part of detailed engineering. Data collected as part of these characterization studies will be used to update any engineering design analysis.	Post Water Licence
NRCan-2.2.2	Uncertainty will be managed using a Groundwater Management Plan, and will include triggers and mitigation measures similar to the approved Doris Mine Groundwater Management Plan. The GWMP will be submitted part of the FEIS.	FEIS
NRCan-2.2.3	Uncertainty will be managed using a Groundwater Management Plan, and will include triggers and mitigation measures similar to the approved Doris Mine Groundwater Management Plan. The GWMP will be submitted part of the FEIS.	FEIS
NRCan-2.2.4	Uncertainty will be managed using a Groundwater Management Plan, and will include triggers and mitigation measures similar to the approved Doris Mine Groundwater Management Plan. The GWMP will be submitted part of the FEIS.	FEIS
TC-3.1.2	TMAC appreciates the information provided in Transport Canada's Technical Comment TC-3.1.2, and will indicate our intention to opt in or out in the FEIS.	FEIS
TC-3.2.1	TMAC appreciates the clarity provided in Transport Canada's Technical Comment TC-3.2.1. The text will be updated in the FEIS as described within the recommendation.	FEIS
TC-3.2.3	TMAC will work with Transport Canada to obtain a letter of compliance for its occasional use marine facility.	FEIS
TC-3.4.2	TMAC will include <i>The Transportation of Dangerous Goods Act (1992) and Regulations</i> to the list of Acts and Regulations that regulate the handling on explosive materials as required in the FEIS.	FEIS
TC-3.4.3	TMAC will revise the wording as requested by Transport Canada's Technical Comment TC-3.4.3 in the FEIS.	FEIS

List of Commitments for the Madrid-Boston Proposal

NIRB Technical Comment ID	Commitment	Timeline
TM GN-01	TMAC will conduct a workshop that will include the KIA and the GN to discuss monitoring mitigation and management measures for the Phase 2 project prior to submission of the FEIS.	Pre-FEIS
TM- NIRB-01	TMAC will provide additional clarity on how pipelines will be managed under a Care and Maintenance Scenario in the FEIS as part of an updated Closure and Reclamation Plan.	FEIS
TM-HC-01	TMAC will update the spill contingency plan to include notification to the KIA in the event of the spill potentially impacting drinking water sources	Ongoing
TM-NIBR-02	TMAC commits to providing in the FEIS a more parcelled out cumulative effects assessment to show Phase 2 impacts, and how that adds to existing Doris project, and then how other exploration and projects in the area would affect the results as presented.	FEIS