

ANNEX 4: Additional Information Requests directed to the proponent (IR#2)

New IR-2 #	IR-2 reference #	Indigenous Reference #	Project Effects Link to CEAA 2012	Reference to EIS guidelines	Reference to EIS (including appendices)	Context and Rationale	Specific Question/ Proposed Follow-up Measure
New IR-2 #: AA(2)-02	IR-2 Ref. #: WL(2)-03; AA(2)-01	Ind. Reference #: ANA(2)-16	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2, Section 7.1.2	Reference to EIS: Section 4.3.2; Section 4.3.4	<p>Context and Rationale:</p> <p>The Agency noticed discrepancies in the proposed tailings storage facility (TSF) water quality within the revised EIS and IR responses. (IR#2, WL(2)-03), with predicted cyanide concentrations ranging from 0.2025 to 50 mg/L. Grassy Narrows First Nation noted concern with cyanide in the TSF, particularly in the impacts of a worst-case scenario failure of the TSF on their nation and treaty rights. The predictions for downstream surface water quality following a failure of the TSF are based on supernatant water quality within the TSF at the time of the accident. Therefore, should the concentration of cyanide used in the modeling prove inappropriate, the predictions of effects to the environment and human health may be underestimated.</p> <p>Further, the Agency noted in AA(2)-01 that Section 4.3.4 of the revised EIS includes "Uncontrolled Cyanide Release", as a potential accident and malfunction however does not discuss spillage from the carbon-in-leach (CIL) ore processing area.</p> <p>It was also noted that the proponent's emergency response plan does not include engagement and communication measures with Indigenous communities.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Taking into consideration the response to IR# WL(2)-03 and AA(2)-01, revise as necessary the assessment of effects of a failure of the TSF on the environment due to the release of cyanide, including the following:</p> <ul style="list-style-type: none"> - modeling of cyanide release - potential environmental effects (including on surface water, fish and fish habitat, vegetation) - effects to human health - impacts to Indigenous use of lands and resources, including to that of Grassy Narrows First Nation. <p>B. Update the emergency response plan to include measures to engage Indigenous communities in the event of an emergency. The measures should include a communication strategy to notify government and Indigenous groups.</p>
New IR-2 #: AA(2)-03	IR-2 Ref. #: AM(2)-03	Ind. Reference #: NFN-04	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 7.1.2	Reference to EIS: Section 4.3.2	<p>Context and Rationale:</p> <p>The proponent's assessment of potential effects of a tailings storage facility (TSF) failure does not adequately describe contingency measures to avoid or mitigate effects due to a TSF failure to fish and fish habitat. This was queried in IR# AM(2)-03.</p> <p>However, the proponent's assessment also does not consider socio-economic effects from a TSF failure. Naotkamegwanning First Nation holds commercial fishing licenses in Wabigoon Lake, including the spawning habitat in Thunder Creek, the fish sanctuary near Christie's Island and the important fishing location in Bonny Bay. A failure of the TSF could affect the fish and fish habitat, as well as the perception of the quality of the fish being harvested.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Describe the socio-economic effects of a worst-case scenario tailings failure on the fisheries in the area (local harvesters and commercial license holder), including the effect on the perception of the fisheries industry both locally and regionally.</p> <p>B. Describe how Naotkamegwanning First Nation was involved in the assessment requested in part A, and how their input was addressed.</p>
New IR-2 #: AC(2)-05	IR-2 Ref. #: AC(2)-01	Ind. Reference #: ELFN 4.8.2.7; ELFN 4.9.2.2; ANA(2)-2;	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic	Reference to EIS guidelines: Part 2 Section 11.1	Reference to EIS: Section 6.21.5 Table 6.23-20	<p>Context and Rationale:</p> <p>Section 6.21.5 and Table 6.23.20 outline mitigation measures for effects of changes to the environment on Indigenous peoples' health and socio-economic conditions, physical and cultural heritage, current use of lands and resources for traditional purposes and any structure site or thing</p>	<p>Specific Question/ Request for Information:</p> <p>A. Taking into account the response to IR# AC(02)-01 and comments submitted by Indigenous groups, confirm whether impacts to Indigenous groups have been mitigated by providing a response to the concerns raised, proposing mitigation measures, if applicable, and confirming</p>

		NFN (01); WLON(16); WLON(17); MNO-TMI-414; MNO-TMI-416; MNO-23; MNO-31; MNO-43; MNO-49.	conditions 5(1)(c)(ii) Aboriginal Physical and Cultural Heritage 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes 5(1)(c)(iv) any Structure, Site or Thing of Historical, Archaeological, Paleontological or Architectural Significance			that is of historical, archaeological or paleontological significance. However, the listed mitigation measures are directed to the change in the biophysical environment rather than the effect or impact on Indigenous people. Eagle Lake First Nation, Grassy Narrows First Nation, Métis Nation of Ontario, Nootkamegwanning First Nation and Wabigoon Lake Ojibway First Nation expressed concerns with a lack of engagement and consideration of their views in the development of mitigation measures for effects to effects of changes to the environment on Indigenous peoples' health and socio-economic conditions, physical and cultural heritage, current use of lands and resources for traditional purposes and any structure site or thing that is of historical, archaeological or paleontological significance. In considering paragraph 5(1)(c) of CEAA 2012, it is important to consider the impact on Indigenous people by not only confirming whether there has been an impact on the quality of the resource (bio- physical environment, including flora and fauna of interest to Indigenous people) due to a change in the environment caused by the Project, but also to consider whether any changes in the environment impact Indigenous people, specifically in relation to continued access and experience in relation to health and socio-economic conditions, physical and cultural heritage, current use of lands and resources for traditional purposes and any structure site or thing that is of historical, archaeological or paleontological significance.	those mitigation measures with the appropriate Indigenous groups. B. Identify mitigation measures that Treasury Metals has accepted which were proposed by an Indigenous group, or provide a rationale as to why this mitigation has not been taken.
New IR-2 #: AC(2)-06	IR-2 Ref. #:	Ind. Reference #: ELFN 4.5.2.1; ELFN 4.9.2.5.	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions 5(1)(c)(ii) Aboriginal Physical and Cultural Heritage 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes 5(1)(c)(iv) any Structure, Site or Thing of Historical, Archaeological, Paleontological or Architectural Significance	Reference to EIS guidelines: Part 2 Section 13.1.1	Reference to EIS: Section 6.1.4.20; Section 7.3.2, Table 7.3.2-1	Context and Rationale: Sections 6.1.4.20 and 7.3.2 of the revised EIS discuss the selection of the spatial boundaries for the effects of changes to the environment, including cumulative effects, on Indigenous peoples. However, the rationales provided are incomplete. The rationale provided in Section 6.1.4.20 states that for each activity, the local study area (LSA) and regional study area (RSA) are the same as those provided for the corresponding biophysical effects. For example, the LSA and RSA used for the effects of the Project on the fishing by Aboriginal peoples valued component (VC) corresponds to the LSA and RSA used for evaluating the effects on fish and fish habitat (Section 6.1.4.13 and Figure 6.1.4.13-1). Further, the selection of spatial boundaries for the cumulative effects assessment is based on the extent of biophysical effects from the Project. The rationale to support this states that cumulative effects would only occur if another activity were to overlap with the biophysical component relevant to hunting, trapping, fishing or gathering. While basing the LSA and RSA on the most relevant change to the environment is an appropriate start in their definition for an Indigenous activity or practice, the area used by an Indigenous group to exercise	Specific Question/ Request for Information: A. Demonstrate consideration of Indigenous groups' uses of land and resources and their views in the development of the spatial boundaries for the local and regional study areas for the assessment of effects on Indigenous peoples' physical and cultural heritage, current use of lands and resources for traditional purposes and any structure site or thing that is of historical, archaeological or paleontological significance.

						<p>their use of the land or resource should also be taken into consideration, including those which would contribute to effects to the “on-the-land experience” of the activity or practice.</p> <p>Further, the selection of a spatial boundary for the assessment of cumulative effects should be VC-specific and take into account the extent of the VC being examined (in this case, the current use of lands and resources for traditional purposes).</p> <p>Indigenous groups’ views on the LSA and RSA and spatial boundaries for cumulative effects should also be incorporated into the development of the definitions.</p>	
New IR-2 #: AC(2)-07	IR-2 Ref. #: AA(2)-03	Ind. Reference #: MNO 38	Project Effects Link to CEAA 2012: 5(1)(c)(ii) Aboriginal Physical and Cultural Heritage 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2 Section 13.1	Reference to EIS: Section 8.1.1.20, 8.21.2, Table 8.21.2.5-1	<p>Context and Rationale:</p> <p>In addressing this question, please also consider IR# AA(2)-03. In Section 8.1.1.20 of the revised EIS, the methodology used in the determination of significance of residual effects on Indigenous peoples relies on a number of indicators for each valued component (VC). These indicators are based on biophysical changes and do not take into consideration impacts to the exercise of the Aboriginal or treaty right itself. For example, loss of specific harvest locations for berry or plant gathering may carry more weight than the total area lost. This lack of granularity can affect the determination of magnitude of the impact.</p> <p>In addition, interactions of selected indicators should be considered. For example, the “change in access” may have an impact on “on-the-land experience” and ultimately on “berry harvesting”. This interaction may change the determination of magnitude. However, in order to capture these interactions, the criteria for levels of magnitude described in Section 8.1.1.20 would have to rely on more than biophysical changes.</p> <p>Finally, there is no evidence that Indigenous groups’ views about the indicators chosen for each VC were considered. For example, where controlled access to a certain area would not be acceptable to Indigenous people. If this is the case, the area would be considered as “removed from access” rather than controlled. As a result, the total area could increase and may alter the conclusions of significance.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Revise the selection and integration of indicator measures for effects to Indigenous peoples, to include non-biophysical changes to land and resource uses.</p> <p>B. Revise the significance assessment to include Indigenous groups’ input on the use of the selected indicator measures and the determination of magnitude of effect.</p>
New IR-2 #: AC(2)-08	IR-2 Ref. #:	Ind. Reference #: MNO 12, 23, 25, 26, 30, 32, 34, 39, 41; MNO-TMI462, MNO-TMI-464, MNO-TMI-467	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions 5(1)(c)(ii) Aboriginal Physical and Cultural Heritage 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2 Sections 9, 10	Reference to EIS: Sections 5, 6, 9	<p>Context and Rationale:</p> <p>The Agency understands that the Métis Nation of Ontario (MNO) provided a preliminary traditional knowledge and land use study (TKLUS) to the proponent prior to the submission of the revised EIS. However, it appears that the proponent may not have used all available information to inform the selection of the VCs, indicators and measures in the Revised EIS. For example, species including crappie, northern pike, deer and partridge were not studied. MNO gathers many varieties of berries and harvests a variety of species, their exclusion from consideration in the assessment highlights issues within the EIS.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Describe how the information from the TKLUS provided by the MNO, changes the conclusions for the following sections:</p> <ul style="list-style-type: none"> - Existing conditions, including <ul style="list-style-type: none"> o Traditional land and resource use and of interest to Métis Nation of Ontario - Predicted impacts on the Métis Nation of Ontario , including on: <ul style="list-style-type: none"> o Heritage resources, cultural and spiritual components o Harvesting and gathering of plant material o Hunting o Effects on Indigenous peoples health and socio-economics - Mitigation to address predicted impacts on Métis Nation of

			5(1)(c)(iv) any Structure, Site or Thing of Historical, Archaeological, Paleontological or Architectural Significance				Ontario (paragraph 5(1)(c) of CEAA 2012) - Impacts on Métis Nation of Ontario rights and identified traditional land use practices B. Demonstrate that the newly incorporated information has been validated with the Métis Nation of Ontario prior to submission.
New IR-2 #: AC(2)-09	IR-2 Ref. #:	Ind. Reference #: ELFN 4.7.2.6	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2 Section	Reference to EIS: Section 4.3.2.4	Context and Rationale: Section 4.3.2.4 of the revised EIS states that in the event of a TSF failure, a monitoring program will be developed to include wild rice samples from the mouth of Blackwater Creek that would be tested for metal concentrations. These samples would be compared against other wild rice stands in the Wabigoon Lake area. However, other industrial activities and historical sources of contamination present in other areas of the Wabigoon Lake area may result in background metal concentrations in wild rice stands that are variable from the true baseline found at the mouth of Blackwater Creek. Wild rice harvesting is of high socio-economic and cultural value to Indigenous communities in the area, and as such baseline information on wildrice stands should be collected prior to the Project being in place and this should as accurate as possible in order to have comparable results and an accurate determination of the Project's effects on wild rice stands, including that from any potential accidents and malfunctions.	Specific Question/ Request for Information: A. Describe how baseline metal concentration in wild rice stands at the mouth of Blackwater Creek will be determined prior to Project construction, and utilized in a monitoring program for wild rice stands in the event of a TSF failure during operation.
New IR-2 #: HE(2)-16	IR-2 Ref. #: WL(2)-03	Ind. Reference #: ELFN 4.10.2.7; 4.10.2.19; 4.10.2.21; 4.10.2.23	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Section 6.19.1; Appendix W and Appendix W-2	Context and Rationale: The Agency is aware that the June 2018 Human Health Risk Assessment (HHRA) (Appendix W-2 of the revised EIS) is a draft document and that only portions of the entire updated document were submitted for review. It is unclear whether the Ecological Screening Level Risk Assessment (ESLRA) in Section 5 of Appendix W has been revised to consider the following points. Section 6.19.1 of the Revised EIS states that "with the exception of nuisance animals, wildlife would be allowed to use the project site during operations, where they would be able to access the TSF, and its cover of treated process water." Yet, Appendix W-2, Section 3.5.3, indicates that "uptake of COCs [chemicals of concern] into country foods from waste rock was considered the dominant exposure pathway for COC uptake into country foods, and COC concentrations from ore/tailings were not used in the country foods assessment." This access of wildlife must be considered in the ERA. Section 5.2.5.5 of Appendix W states that the scope of the current ESLRA did not include assessing exposure pathways for aquatic receptors or wildlife with aquatic based diets, although these were complete and COCs are present that exceed the protection of aquatic life guidelines. It is important that any exposure pathways that can lead to exposure to	Specific Question/ Request for Information: A. Ensure that the uptake of contaminants from ore/tailings by wildlife that would be able to access the TSF and may frequent the project site are considered in the Ecological Screening Level Risk Assessment. The response to this question should be informed by the response to IR# WL(2)-03, regarding effects to wildlife accessing the TSF. B. Where any exposure pathways involving wildlife or aquatic receptors can lead to exposure via country foods consumed by humans, ensure that these pathways are fully integrated in the ERA, and in the HHRA. Discuss any uncertainty introduced by excluding complete exposure pathways from the ERA and HHRA.

						humans by consumption of country foods be incorporated into the ERA and HHRA.	
New IR-2 #: HE(2)-17	IR-2 Ref. #:	Ind. Reference #: ELFN 4.10.2.20	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Appendix W, Section 4.5.6	Context and Rationale: Section 4.5.6, Table T of Appendix W (HHRA in the 2015 EIS, unchanged in 2018 revised EIS) provides incremental fish tissue concentrations, but only provides lead concentrations in walleye in Wabigoon Lake and mercury concentrations in fish in Blackwater Creek. It is unclear why concentrations of both metals are not provided for both locations, and how much uncertainty may be introduced into the HHRA by omitting site-specific information on contaminants.	Specific Question/ Request for Information: A. Provide site-specific tissue concentrations for lead in fish in Blackwater Creek and mercury in walleye in Wabigoon Lake. If these are unavailable, discuss the uncertainty introduced into the human health risk assessment by assuming concentrations from another waterbody in the assessment.
New IR-2 #: HE(2)-03 SUPERSEDED HE(2)-03B	IR-2 Ref. #:	Ind. Reference #: ELFN 4.10.2.3, 4.10.2.13; WLON-19	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Appendix W-2, Section 3.5.3; Section 5.9, Figure 5.9.3.2-1	Context and Rationale: In responding to this question, consider your response to IR# AC(2)-09. Section 3.5.3 of the June 2018 HHRA (Appendix W-2 of the revised EIS) does not include wild rice as a country food studied in the country foods assessment. Several Indigenous groups indicated in previous comments to the Agency that wild rice is an economic resource, and consumed by their people. The Agency notes particular concern in relation to contamination of wild rice. Figure 5.9.3.2-1 of the revised EIS shows known locations of wild rice stands near the Project. It is unclear why wild rice was not included in the country foods assessment. To reassure Indigenous groups that the environmental assessment predictions are accurate, in areas where there may be uncertainty in relation to wild rice, follow-up program measures should be identified, such as appropriate follow-up monitoring, notification and regular communication with Indigenous groups. The follow-up program measures should be developed in consultation with Indigenous groups, to ensure that the program can be responsive to their interests.	Specific Question/ Request for Information: A. Include wild rice in the country foods assessment, or provide a rationale for excluding it. B. Describe additional mitigation measures to reduce potential effects on wild rice harvested at or near the Project. C. Provide details of the follow-up program to verify EA predictions related to wild rice, and how Indigenous groups would be involved in the development and implementation of the program. THIS IR SUPERSEDES IR# HE(2)-03.
New IR-2 #: HE(2)-04 SUPERSEDED HE(2)-04B	IR-2 Ref. #: AE(2)-03B HE(2)-03C	Ind. Reference #: ELFN 4.10.2.3, 4.10.2.13; WLON-19	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Appendix W-2, Section 3.1.1; Appendix EE, Figures 5.1 and 5.2; Section 5.9; Section 13	Context and Rationale: It is unclear whether the proponent considered the guidance document published by Health Canada in 2018 when evaluating human health impacts by country foods. This guidance should be followed by the proponent in the development of the final HHRA. Figure 3.1.1-1 of the June 2018 HHRA (Appendix W-2 of the revised EIS) does not clearly mark the locations of receptors being considered for the study. The locations of all receptors (including locations of traditional use of lands and resources, permanent residences, seasonal cottages/cabins, and recreational areas for determination of potential effects under subsection 5(2) of the <i>Canadian Environmental Assessment Act, 2012</i>) should be clearly identified to ensure that the receptors are selected in accordance with the land use in the area. Ensure that any new receptor locations identified through IR# AE(2)-03B are included in Figure 3.1.1-1. In areas where there would be a pathway that could impact human health, in relation to country food harvesting activities that would be permitted to continue, provide a detailed map. The map should include specific locations of country food harvesting activities (i.e., hunting, gathering, fishing etc.). This map, or series of maps, would consolidate	Specific Question/ Request for Information: A. Use the 2018 Health Canada guidance for the final HHRA to evaluate the human health impacts by country foods. B. Update Figure 3.1.1-1 to clearly mark the locations of off-site receptors. Ensure that any new receptor locations identified through IR# AE(2)-03B are included in the figure. C. Categorize the receptor points located in question B to distinguish locations of traditional use of lands and resources, permanent residences, seasonal cottages/cabins, and recreational areas. D. Provide a detailed map of the country foods harvesting areas including areas of potential fish harvesting. The Agency recognizes that some of this information may be confidential, in which case the existence of such areas may be mentioned without locating on the map. E. Provide details of the follow-up programs related to human health and country foods, to confirm that EA predictions made about country foods are acceptable. In particular, describe how Indigenous groups will be consulted in the development and implementation of the program. It is noted that the follow-up program related to wild rice would be provided in response to IR# HE(2)-03C. THIS IR SUPERSEDES IR# HE(2)-04.

						<p>and update the information provided in Appendix EE, Figure 5.1 and 5.2, and from maps showing locations of various plants in Section 5.9 of the revised EIS. Areas of potential fish harvesting should also be identified in waterbodies, given the bioaccumulative potential of metals, such as methylmercury.</p> <p>To reassure Indigenous groups that the environmental assessment predictions are accurate, in areas where there may be uncertainty in relation to human health or country foods, follow-up program measures should be identified, such as appropriate follow-up monitoring, notification and regular communication with Indigenous groups. These maps will be useful in developing these follow-up programs, to understand where potentially affected country foods may be found in the vicinity of the Project. It is unclear, at this time, what country foods will be monitored, and at what locations and times. The follow-up program measures should be developed in consultation with Indigenous groups, to ensure that the program can be responsive to their interests.</p> <p><u>Reference:</u> Health Canada. 2018. Guidance for Evaluating Human Health Impacts in Environmental Assessments: Country Foods. https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-country-foods.html</p>	
New IR-2 #: MW(2)-12	IR-2 Ref. #: MW(2)-06	Indigenous Ref #: ELFN 4.2.2.2	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: Part 2, Sections 9.1.2 and 10	Reference to EIS: Sections 6.2.4.1 and 6.2.5.	<p>Context and Rationale: The Agency noted concerns raised by Eagle Lake First Nation about the changes in water quality that could result from runoff and seepage from low-grade ore stockpile pile.</p> <p>It is stated in Section 6.2.4.1 that “The low-grade ore (LGO) stockpile will be constructed adjacent to the crusher, and will have a maximum height of 15 m above grade and an area of approximately 9 ha”. It is further stated in Section 6.2.5 that material will be removed “[...] from the low-grade ore (LGO) stockpile during closure”.</p> <p>Although it is noted in Section 6.2.5 that LGO stockpile “will be lined and equipped with runoff collection system and perimeter ditching”, it appears that a cover is not proposed for the LGO stockpile during the time it remains on the surface. The Agency has uncertainties with the assessment of acid rock drainage and metal leaching, particularly as it relates to the onset time for production of acidic water. In the absence of cover placement on LGO stockpile, it is reasonable to assume that acid rock drainage and metal leaching can occur in the ore exposed to the atmosphere.</p> <p>This information is important for the Agency to understand as uncaptured seepage and runoff from the low-grade ore stockpile can lead into the surrounding waterbodies and affect the fish and fish habitat and the health of Indigenous groups through the consumption of</p>	<p>Specific Question/ Request for Information:</p> <p>A. Provide an estimate of the maximum time that the ore in low-grade ore stockpile may be exposed to the atmosphere.</p> <p>B. Assess the potential for acid rock drainage and metal leaching from exposure of ore in low-grade ore stockpile to the atmosphere taking the response from Question A and MW(2)-06 from the Agency’s IR-2 into consideration.</p> <p>C. Assess the feasibility of placing a cover on low-grade ore stockpile during the time that ore is not used.</p> <p>D. Update the changes in water quality from the seepage and runoff that may escape the seepage and runoff collection ditches planned around the low-grade ore stockpile, taking responses from Questions A to C into consideration.</p> <p>E. Provide the effects on fish and fish habitat and health of Indigenous peoples, taking the response from Question D into consideration.</p> <p>F. Describe mitigation measures to prevent adverse effects on fish and fish habitat and health of Indigenous peoples.</p> <p>G. Characterize residual effects, if any, after the mitigation measures have been implemented.</p> <p>H. Update the follow-up program for potential effects to fish and fish habitat and health of Indigenous peoples, including objectives and any monitoring measures that will be implemented to verify the predictions of effects and evaluate the effectiveness of the proposed mitigation measures. If follow-up is not required, provide a rationale.</p>

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New IR-2 #: SW(2)-01 SUPERSEDED SW(2)-01B	IR-2 Ref. #:	Indigenous Ref #: SW(1)-22; SW(1)-29; SW(1)-31; ELFN 4.2.2.6, 4.2.2.7, 4.6.2.6, 4.10.2.5; ANA(2)-3; WLON 1, 2, 7, 8; MNO 22, 29 and 52.	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Sections 9.1.2, 10	Reference to EIS: Sections 5.8.1, 5.8.1.3 and 6.19.3; Appendix JJ, Section 6.3	<p>Context and Rationale: In Section 5.8.1 of the revised environmental impact statement (EIS), the proponent states that “more than two years of surface water quality samples have been collected in or near the Project area beginning November 2010 (KCB 2012) and again in 2012/2013. [...] Nine locations were added and three locations were discontinued during the 2012/2013 sampling program”. Table 5.8.1.3-1 provides a summary of baseline surface water quality results. However, these results appear to be only from the data collected during the 2012/2013 monitoring program completed by DST Consulting Engineers (Section 5.8.1.3).</p> <p>The raw data and a summary of baseline water quality results is not provided for the data collected during the 2010/2011 sampling program in Section 5, or the appendices of the revised EIS.</p> <p>As less than 2 years of data was used to characterize the baseline conditions for water quality, the raw data and a summary of baseline water quality results, similar to the tables provided for 2012/2013 sampling program, are required in order to assess the range and seasonal variation present in the baseline water quality.</p> <p>The Agency also noted that Indigenous groups (Eagle Lake First Nation, Grassy Narrows First Nation, Métis Nation of Ontario, and Wabigoon Lake First Nation) raised concerns related to baseline data collected for water and fish. The Agency expects that these concerns would be addressed in the responses provided to the groups.</p> <p>In particular, the Agency has uncertainty with the determination of background concentrations for mercury based on limited data, as it is noted in Section 6.19.3 that “In the case of mercury, effluent will be treated to meet the background concentrations in Blackwater Creek”. Seasonal variations and trends (i.e. increase or decrease) of mercury in the local study area are important considerations to determine the background concentrations of mercury that would be used as criteria for treatment of mercury in the effluent.</p> <p>Seasonal variations and ranges in baseline conditions are important for the Agency to understand and verify the baseline water quality and quantity, and changes from baseline conditions that can result in effects on fish and fish habitat, and health of Indigenous groups through the consumption of fish.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Address the comments related to baseline water and fish data from the Indigenous groups identified in the ‘Indigenous reference #’ column. B. Explain how surface water quality results from the 2010/2011 water quality sampling program were incorporated into the baseline surface water quality assessment. C. Provide an assessment of seasonal variation using the data collected in both the 2010/2011 and 2012/2013 sampling programs. D. Describe how background concentrations for mercury would be determined and used to set the effluent discharge criteria for mercury. Explain how seasonal variations and trends (increase or decrease) in mercury concentrations in the local study area were considered in establishing background levels and setting effluent discharge criteria. E. Update the water quality assessment, if necessary, taking responses from Questions A to D into consideration. F. Revise the effects on fish and fish habitat and health of Indigenous peoples, if necessary, based on the response from Question E. G. Describe any additional mitigation measures to prevent adverse effects to fish and fish habitat and health of Indigenous peoples described in the response to Question F, if necessary. H. Characterize residual effects, if any, after the mitigation measures described in the response to Question G have been implemented. H. Update the follow-up program for potential effects to fish and fish habitat and health of Indigenous peoples, including objectives and any monitoring measures that will be implemented to verify the predictions of effects and evaluate the effectiveness of the proposed mitigation measures. If follow-up is not required, provide a rationale.</p> <p>THIS IR SUPERSEDES IR# SW(2)-01.</p>
New IR-2 #: SW(2)-02 SUPERSEDED SW(2)-02B	IR-2 Ref. #: SW(1)-07	Indigenous Ref #: ELFN 4.6.2.9	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: Part 2, Section 9.1.2	Reference to EIS: Section 3.8.2; Section 13.8.3, Table 13.8.3-1.	<p>Context and Rationale: It is stated in Section 3.8.2 of the revised EIS that “mine water will contain suspended solids due to mining and earthmoving activities. Mine water may also contain residual ammonia and/or hydrocarbon from blasting operations with approximately 5% to 10% of the originally present ammonia remaining as residual post blast”.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Provide the predicted residual hydrocarbon and ammonia (total and un-ionized) concentrations in the effluent. B. Provide the threshold concentration for treatment of effluent with residual hydrocarbons and ammonia (total and un-ionized), and describe</p>

						<p>The response to IR# SW(1)-07 implies that mine water containing residual hydrocarbons would be treated in the effluent treatment system. However, Section 6.1.3.7 and the response to IR#SW(1)-07 do not identify residual hydrocarbons as being predicted to occur in effluent. Similarly, residual ammonia, which is likely to be a part of effluent due to blasting conducted at the open pit, is not listed as an indicator in the same section. Hydrocarbons are also not included in the proposed monitoring program for surface water quality (Section 13, Table 13.8.3-1).</p> <p>According to Environment and Climate Change Canada, elevated concentrations of hydrocarbons in the contact water could potentially foul the membrane of a reverse osmosis system, and cause a decrease in its treatment efficiency. This could result in adverse changes to water quality of the receiving waterbody and affect fish and fish habitat. Ammonia can also be toxic to aquatic organisms and cause effects to fish and fish habitat.</p>	<p>how this will be monitored to determine when to implement treatment.</p> <p>C. Describe how the effectiveness of the treatment will be monitored, and describe contingency measures to be implemented should the treatment method be found to be ineffective (for example due to fouling of the reverse osmosis membrane).</p> <p>D. Where treatment is not implemented or determined to be ineffective, update the water quality assessment, if needed, based on the response from Questions A and B.</p> <p>E. Describe the effects on fish and fish habitat, if necessary, based on the response from Question D.</p> <p>F. Describe mitigation measures to prevent adverse effects to fish and fish habitat described in the response to Question E, if necessary.</p> <p>G. Characterize residual effects, if any, after the mitigation measures described in the response to Question F have been implemented.</p> <p>H. Update the follow-up program for potential effects to fish and fish habitat, including a monitoring plan for hydrocarbons in the effluent stream, to verify the predictions of effects and evaluate the effectiveness of the proposed reverse osmosis system for treatment of effluent.</p> <p>THIS IR SUPERSEDES IR# SW(2)-02.</p>
New IR-2 #: FFH(2)-06	IR-2 Ref. #:	Indigenous Ref #: ELFN 4.6.2.3	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: Part 2, Section 9.1.2.	Reference to EIS: Section 6.14.4.4	<p>Context and Rationale:</p> <p>Eagle Lake First Nation raised a concern related to effects on fish and fish habitat from increases in flow in Blackwater Creek during abandonment.</p> <p>It is stated in Section 6.14.4.4 that "Post-closure, increases in annual flows are predicted for Blackwater Creek downstream from Blackwater Creek Tributary 1". It is further stated in the same section that "There is insufficient information to determine whether the increases in flow could affect upstream fish passage through existing culverts [...] If adverse effects to fish passage due to increased flows will occur, the downstream structures will be mitigated so that there is no negative effect on fish or fish habitat".</p> <p>A prediction of the effects on fish and fish habitat was not provided based on the predicted increases in flow in Blackwater Creek during abandonment as noted in Section 6.14.4.4. Further, the mitigation measures to prevent adverse effects on fish and fish habitat due to increases in flow were not provided.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Taking the comment ELFN 4.6.2.3 provided by Eagle Lake First Nation into consideration, describe the effects on fish and fish habitat from the predicted increases in flow in Blackwater Creek during abandonment.</p> <p>B. Describe the mitigation measures to prevent adverse effects on fish and fish habitat taking the response from Question A into account.</p> <p>C. Characterize residual effects, if any, after the mitigation measures described in response to Question B have been implemented.</p> <p>D. Update the follow-up program for potential effects to fish and fish habitat, including objectives and any monitoring measures that will be implemented to verify the predictions of effects and evaluate the effectiveness of the proposed mitigation measures. If follow-up is not required, provide a rationale.</p>
New IR-2 #: GW(2)-01 SUPERSEDED GW(2)-01B	IR-2 Ref. #: GW(2)-02; GW(2)-03; GW(2)-04; MW(2)-01; MW(2)-02; MW(2)-03;	Indigenous Ref #: ELFN 4.2.2.19	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic	Reference to EIS guidelines: Part 2, Sections 9.1.1 and 9.1.2	Reference to EIS: Section 6.11.4.2	<p>Context and Rationale:</p> <p>The groundwater model has a number of deficiencies, listed below, which raise uncertainties with the modelling exercise, the outputs of the model, and the effects assessments that incorporate those model outputs. These concerns are also tied with concerns raised in other IRs related to characterization of geochemistry on the site (see IR# MW(2)-06 to MW(2)-10), cover options for TSF and WRSAs (see IR# MW(2)-01 to</p>	<p>Specific Question/ Request for Information:</p> <p>A. Provide an updated groundwater model that addresses all seven of the concerns raised in the "Context and Rationale" for this IR. Incorporate the findings from the IRs # MW(2)-08 and GW(2)-02 to GW(2)-04 in the revision of the model.</p> <p>B. Provide the potential range in seepage volumes (e.g. based on</p>

<p>MW(2)-04; MW(2)-05; MW(2)-06; MW(2)-07; MW(2)-08; MW(2)-09; MW(2)10;</p>			<p>conditions</p>		<p>MW(2)-03 and GW(2)-02), and TSF base and liner (see IR# MW(2)-04 and -05).</p> <p>1) Recharge for overburden layers Recharge was based on very limited field observations which were conducted during unusually dry years (Appendix M of the revised EIS, Section 3.2 and Figure 9). Recharge rates have important implications for modelling the quantity of seepage.</p> <p>2) Recharge for waste rock storage area (WRSA) As discussed in IR# GW(2)-02, low values were used for infiltration through the WRSA. Using these low values for infiltration will cause the groundwater model to output a lower amount of seepage.</p> <p>3) Hydraulic conductivity measurements The hydraulic conductivity measurements as described in Section 5.6.2.2 of the revised EIS do not allow for proper characterization of the overburden layers or the bedrock. In addition, the number of measurements, particularly in key geologic units such as weathered bedrock and the different types of overburden appear to be limited. Furthermore, the data in Table 5.6.2.2-1 of the same section, presenting the hydraulic conductivity values (K) of the overburden layers, indicates either an error in testing or misinterpretation of units</p> <p>4) Thickness of the overburden It is stated in Appendix M, Section 5.1.1 of the revised EIS that "Model layer 3 corresponds to the weathered Shallow Bedrock unit. This zone was assumed to have a uniform thickness of 7 m". A rationale for this assumption was not provided in the revised EIS. The thickness of the model layers, particularly the upper layers, will have an effect on seepage flow estimates. These layers are also likely to have the greatest potential for interaction with surface water bodies.</p> <p>5) Porosity estimates There is uncertainty with the assumed porosity of 1% for shallow bedrock in the groundwater model (See IR# GW(2)-03)</p> <p>6) Particle tracking A particle tracking for the open pit zone of influence was not provided in the EIS and it is unclear how the clay layers that may exist between the tailings storage facility (TSF) and the pit lake may influence the rate of capture of seepage (See IR# GW(2)-04)</p> <p>7) Sensitivity analyses A sensitivity analysis for the recharge and infiltration from WRSA is not provided in the revised EIS. A sensitivity analysis for the hydraulic conductivity of key geologic units such as the overburden and weathered bedrock also needs to be factored into the groundwater model.</p>	<p>sensitivity analyses) from the TSF and WRSA. Also provide travel times for this seepage to various receptor locations. Include in this assessment, an explanation of how seepage volumes would be expected to flow through various geologic layers.</p> <p>C. Determine the capture efficiency of the seepage collection system, and assess the efficiency based on different ditch depths, and whether efficiency can be improved through the use of additional mitigation measures such as pump-back wells.</p> <p>D. Reassess the changes in water quality from seepage emanating from the TSF and WRSA and an updated groundwater model, taking the responses from Questions A to C into consideration.</p> <p>E. Revise the effects to fish and fish habitat and Indigenous health from impacted private groundwater wells taking the response from Question D into consideration.</p> <p>F. Describe additional mitigation measures to prevent adverse effects to fish and fish habitat and Indigenous health from impacted private groundwater wells, if necessary, taking into consideration the response to Question E.</p> <p>G. Characterize residual effects, if any, after the mitigation measures describes in Question F have been implemented.</p> <p>H. Update the follow-up program for potential effects to fish and fish habitat and Indigenous health from impacted private groundwater wells, including objectives and any monitoring measures that will be implemented to verify the predictions of effects and evaluate the effectiveness of the proposed mitigation measures. If follow-up is not required, provide a rationale.</p> <p>I. Incorporate the findings from this IR into the revision of seepage water quality assessment requested in IR# MW(2)-06.</p> <p>THIS IR SUPERSEDES IR# GW(2)-01.</p>
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New IR-2 #: WL(2)-07	IR-2 Ref. #:	Ind. Reference #: ELFN 4.5.2.2, 4.5.2.4, 4.5.2.6, 4.7.2.8, 4.5.2.14	Project Effects Link to CEAA 2012: 5(1)(a)(iii) Migratory Birds 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2, Section 9.1.2	Reference to EIS:	<p>Context and Rationale:</p> <p>The Eagle Lake First Nation has expressed concern regarding the proponent's assessment of wildlife and species at risk. The proponent has presented an incomplete list of wildlife field survey data in EIS Chapters 5 and 6, and Appendix R. Traditional knowledge and Indigenous values appear to have not been considered in scoping wildlife species of interest to Indigenous groups in the project area.</p> <p>Further, the proponent has not provided an assessment of project effects on several species at risk that were reported in the EIS to be observed or were determined to be likely to be observed within the PDA, LSA or RSA, including Olive-Sided Flycatcher, Canada Warbler, Eastern Whip-Poor-Will, Eastern Wood-Pewee, Bobolink, Loggerhead Shrike, Wood Thrush, Least Bittern, Yellow Rail, Rusty Blackbird and the Short-Eared Owl. In addition, Section 6.1.3.13 states monarchs were excluded from the list of VCs because they are listed as "Special Concern" in Ontario, however monarchs are listed as "Special Concern" by SARA and "Endangered" by COSEWIC, and are therefore covered under CEAA 2012. Section 6.1.3.11 states Gray Fox, a species at risk, is not included as a VC although it has been captured in the RSA and habitat exists within the LSA.</p>	<p>Specific Question/ Request for Information:</p> <p>A. Describe information sources to identify wildlife species in the project, including traditional knowledge, and provide a table with all wildlife species identified in the PDA, LSA or RSA, including species of interest to Indigenous communities and species at risk. Include the date of observation, federal status, whether it is a migratory bird, and location within the PDA, LSA or RSA.</p> <p>B. Reassess the valued components for wildlife and species at risk and provide an effects assessment for species of interest to Indigenous communities and species at risk that have been observed, or likely to occur, within the Project footprint, that were not presented in the EIS, including Olive-Sided Flycatcher, Canada Warbler, Eastern Whip-Poor-Will, Eastern Wood-Pewee, Bobolink, Loggerhead Shrike, Wood Thrush, Least Bittern, Yellow Rail, Rusty Blackbird, Short-Eared Owl, Monarchs and Gray Fox.</p> <p>C. Consider the capacity of adjacent habitat in the LSA to support the displacement of wildlife species.</p> <p>D. Describe the mitigation measures to address the potential effects to each species at risk, ensuring that the measures are consistent with applicable recovery strategies and management plans.</p> <p>E. Describe the residual effects on each species at risk and their habitat and the significance of those residual effects, based on the Agency's methodology for assessing significance (including the criteria of magnitude, geographic extent, timing, duration, frequency, reversibility, and ecological and social context).</p> <p>F. Describe the monitoring program for each species at risk, including objectives and any monitoring measures that will be implemented, to verify presence and effectiveness of mitigation measures.</p>
New IR-2 #: WL(2)-08	IR-2 Ref. #: AC(2)-05	Ind. Reference #: ELFN 4.7.2.11	Project Effects Link to CEAA 2012: 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2, Section 11.1	Reference to EIS: Sections 6.15.4, 13.15	<p>Context and Rationale:</p> <p>Section 6.15.4.1 states "floral invasive species can also be a concern" and Section 6.15.5 states "avoid broadcast spraying of herbicide for vegetation management. [Mig_086]." An invasive management plan has not been presented, and the proponent does not describe alternate mitigation measures to herbicide that will be implemented or circumstances where herbicide avoidance would not be possible.</p> <p>The implementation of an invasive species management plan developed</p>	<p>Specific Question/ Request for Information:</p> <p>A. Consider the response to AC(2)-05 and describe the mitigation measures that would be implemented to avoid the introduction or spread of invasive species due to Project activities during construction, operation and decommissioning.</p>

						in consultation with Indigenous groups would minimize project effects on adjacent habitat for migratory bird, species at risk and species of use to Indigenous groups, and improve the efficacy of the vegetation rehabilitation program during decommissioning.	
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