Comments on Marten Falls Community Access Road Project (Project) revised Atmospheric Environment and Greenhouse Gases (GHG) Study Plan – December 16, 2021

It is essential that the Impact Statement for the Marten Falls Community Access Road Project (the Project) address all requirements outlined in the Tailored Impact Statement Guidelines (the Guidelines), and that the study plans outline a clear approach to achieving these requirements. The Impact Assessment Agency of Canada (the Agency) has highlighted sections of the Guidelines where requirements for the Impact Statement may not be met, based on content of the study plan submitted to the Agency. Note that this table does not provide an exhaustive list of the requirements described in the Guidelines. The Guidelines should be reviewed in their entirety, including the sections identified below.

General Comments from the Impact Assessment Agency of Canada on the Marten Falls Community Access Road Draft Study Plans – July 2, 2020					
#	**Guidelines Section[1]**	**Required Action for Proponent**	**Proponent Response**	**Final Study Plan Section Reference**	**Agency comments**
GC-01	**Section 5 - Public Participation and views (including 5.1, 5.2)**	Provide a clear description in the study plans of how public engagement opportunities have been and/or will be integrated into the impact statement phase. This must include detail on how the public will have opportunities to provide input to contribute to the development of the Impact Statement, as required in Section 5 of the Guidelines. Describe what engagement with the members of the public listed in the Public Participation Plan has been done in the development of the study plans, and/or any planned engagement with members of the public on the proposed study plans.	Section 4: describes how the Proponent will provide Project notices and opportunities with members of the public listed in the Public Partnership Plan. This will also include the opportunity to provide input on the existing environment, VCs, effects assessment methods, effects assessment results, and mitigation and follow-up program measures as applicable. A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input. The study plans have recognized public and agency input received on the Project to date.	**Section 4.1** "A variety of activities will be offered so that members of the public are informed of the IS / EA Report as it progresses and are aware of the opportunities and means to provide their input."	Section 4.1 of the study plan mentions that "*a variety of activities will be offered*", however, no details on the likely engagement activities are provided. As required by Section 5 of the Guidelines, the Impact Statement must provide a record of engagement that describes all efforts taken to seek the views of local communities and other stakeholders with respect to the Project, including on the study plans. This record of engagement is to include all engagement activities undertaken prior to the submission of the Impact Statement, including prior to and during the planning phase, and in the preparation of the Impact Statement. Provide details on the timeline for public engagement relative to the project workplan, including engagement relative to the schedule for baseline work, and in consideration of the project team's timeline for the development of the Impact Statement. Demonstrate in the Impact Statement that comments provided by members of the public on Atmospheric Environment and GHG were taken into consideration. Comments provided to the Agency are available on the Canadian Impact Assessment Registry Internet site at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions
GC-02	**Section 6 - Description of Engagement with Indigenous Groups (including 6.1, 6.2, 6.3)**	Provide a clear description in the study plans of how all Indigenous groups listed in the Indigenous Engagement and Partnership Plan will have opportunities to provide Indigenous knowledge, including the validation of how information they provided was applied. The study plan should include a description of the proposed methods for data collection, management of confidentiality, and information storage. This should also include a methodology for tracking information that has been approved by the group, to demonstrate that the guidance outlined in Section 6.2 of the Guidelines has been incorporated into the study plans. Describe what engagement with all the Indigenous groups listed in the Indigenous Engagement and Partnership Plan has been done in the development of the study plans, and/or any planned engagement	In Section 4.2 it is noted that the Proponent will provide Project notices and opportunities for consultation and engagement with Indigenous communities identified in the Indigenous Partnership and Engagement Plan. A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input. Section 2.1.1 outlines the approach to handling confidential information, by means of permission from Indigenous communities to include Indigenous Knowledge in the IS / EA Report, regardless of the source of the Indigenous Knowledge. The study plans have recognized Indigenous community input received on the Project to date.	**Section 4.2** "…A variety of activities will be offered so that Indigenous communities are informed of the IS / EA Report as it progresses and are aware of the opportunities, means and timelines to provide their input…" "…Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process…"	Section 4.2 of the study plan states that "a variety of activities will be offered", however, no details on the planned engagement activities are provided. Section 4.2 of the study plan also states that "*Indigenous communities will have the opportunity to comment on components of the study plans throughout the IS / EA Report consultation and engagement process*", however, it is unclear on which components of the study plans the project team plans to engage. It is also unclear whether Indigenous groups will be provided with a meaningful opportunity to provide input on a preliminary approach/method for baseline data collection, as required in Section 6 of the Guidelines, or if engagement will take place after the baseline data collection is complete. Provide details on the timeline for Indigenous engagement on the Atmospheric Environment and GHG study plan, including engagement relative to the schedule for baseline work, and spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge, and in consideration of the project team's timeline for the development of the Impact Statement. Demonstrate in the Impact Statement that comments provided by Indigenous groups on the Atmospheric Environment and GHG

[1] Refer to complete sections of the Guidelines for more context.

General Comments from the Impact Assessment Agency of Canada on the Marten Falls Community Access Road Draft Study Plans – July 2, 2020					
#	**Guidelines Section[1]**	**Required Action for Proponent**	**Proponent Response**	**Final Study Plan Section Reference**	**Agency comments**
		with Indigenous groups on the proposed study plans, particularly in relation to collection of Indigenous knowledge (i.e. develop the work plan in collaboration with those Indigenous groups that would need to provide knowledge).			conditions were taken into consideration. Comments provided to the Agency are available on the Canadian Impact Assessment Registry Internet site at: https://iaac-aeic.gc.ca/050/evaluations/proj/80184/contributions
GC-03	**Section 6.2 - Analysis and response to questions, comments, and issues raised**	Revise the study plans to include an approach to handling confidential information that demonstrates adherence to the guidance provided in Section 6.2 of the Guidelines.	Section 2.1.1: Section has been updated to include information regarding both confidentiality and permission information on all collected Indigenous Knowledge, regardless of the source. This section also includes how information regarding the Indigenous Knowledge Sharing Agreements will be established by the Proponent and Indigenous community participating in the Program.	**Section 2.1.1** "…Sensitive and / or confidential information collected through Indigenous Knowledge Sharing Agreements will be protected from public or third-party disclosure and will be established between the Proponent and Indigenous communities participating in the Indigenous Knowledge Program prior to the sharing and use of any sensitive information. Instances where Indigenous Knowledge sharing has taken place during consultation activities (e.g., meetings) will be recorded in the Record of Consultation and Engagement, including where Indigenous Knowledge was incorporated into Project decisions and into the IS / EA Report (i.e., specifics will not be included in the Record of Consultation and Engagement given the potential sensitivity and / or confidentiality of the information shared)…"	As required in Section 6 of the Guidelines, describe the confidential information provided by each Indigenous group. Present the content in sufficient detail to support understanding of the potential effects and impacts on rights, while also protecting confidential/sensitive specifics and respecting stipulations in the confidentiality agreements (e.g, use buffer areas instead of specific locations, etc.). Provide to the Agency, in the form of a letter from the Indigenous group that shared confidential information, a letter confirming that: • the Indigenous group that provided confidential information is satisfied with the way the Impact Statement was informed; • the Indigenous group that provided confidential information is satisfied with the way the issue was solved or addressed.
GC-04	**Study plans spatial boundaries**	Describe the approach to be implemented to demonstrate how the definitions of the proposed study area boundaries: • encompass the anticipated boundaries of the Project's effects, including all potentially impacted local communities, municipalities and all Indigenous groups listed in the Indigenous Engagement and Partnership Plan; and • take into account community knowledge and Indigenous knowledge; current or traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights of Indigenous peoples, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and foreseeable future projects and activities.	Section 6.2: General information on study areas for the Project, including a detailed list of what was considered to develop the discipline-specific local and region study areas, is included in each study plan. Each study area has been proposed taking into consideration community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples, including cultural and spiritual practices, physical, ecological, technical, social, health, economic and cultural considerations available at this time. The proposed discipline-specific study areas are preliminary. The proposed study areas will be consulted and engaged on early in the IA / EA process. In addition, the Indigenous Knowledge Program provides additional opportunities for community knowledge and Indigenous Knowledge, current or traditional land and resource use by Indigenous communities, and the exercise of Aboriginal and Treaty Rights of Indigenous peoples to be shared in greater detail.	**Section 6.2** "…The PDA encompasses the 100 metre-wide CAR right-of-way (ROW), temporary construction access roads, work areas, worker camps, and pits, quarries and associated access roads. The preliminary LSA currently being considered within the scope of the ongoing provincial regulatory review process generally includes the area within 2.5 km of the centreline of Alternative 1 and Alternative 4. The preliminary study area generally allows for the documentation of existing conditions and prediction of potential environmental effects for the Project. A 5 km wide study area also allows for route refinements during development of Project design (e.g., adjustment of the alignment to avoid sensitive features)..." "…The LSA and RSA boundaries for the Atmospheric Environment are detailed in Table 6-1 and on Figure 6-2…" **<u>Local Study Area</u>** Geographic Extent: - Air Quality: PDA plus a 5 km buffer that extends from the perimeter of the PDA - GHGs: Physical footprint of the project during construction and operations, which is equal to the PDA.	As required by Section 7 of the Guidelines, provide details to demonstrate that the Atmospheric Environment and GHG Regional Study Area encompasses the anticipated boundaries of the Project's effects, including all potentially impacted local communities, municipalities and all Indigenous groups listed in the Indigenous Engagement and Partnership Plan. Note that the Regional Study Area must encompass the spatial boundary of cumulative effects. As required in Section 7.4.1 of the Guidelines, provide information regarding how the following were/will be taken into account in defining the spatial boundaries: community knowledge and Indigenous knowledge; current and traditional land and resource use by Indigenous groups; exercise of Aboriginal and Treaty rights, including cultural and spiritual practices; physical, ecological, technical, social, health, economic and cultural considerations; and the size, nature and location of past, present and reasonably foreseeable future projects and activities. Provide the above information in a way that allows those who provided the knowledge to the proponent and the Agency to see their input reflected in the Impact Statement. It is not sufficient to state that "input from participants will be/was taken into account".

General Comments from the Impact Assessment Agency of Canada on the Marten Falls Community Access Road Draft Study Plans – July 2, 2020					
#	**Guidelines Section[1]**	**Required Action for Proponent**	**Proponent Response**	**Final Study Plan Section Reference**	**Agency comments**
				Rationale: - Air Quality: Local study area has been selected to align with the Ontario MECP recommendations for local dispersion modelling, which is that effects be assessed up to 5 km from a source (MECP, 2019). - GHGs: Direct GHG emissions impacts of the project will be limited to the PDA. <u>Regional Study Area</u> Geographic Extent: - Air Quality: Not applicable - GHGs: Province (Ontario) Rationale: - Air Quality: Not Applicable as effects are not expected beyond the Local Study Area. - GHGs: Will be assessed against provincial-scale emissions as well as federal and sectoral totals documented within the 2020 (or most current) National Inventory Report (NIR) by Environment and Climate Change Canada (ECCC, 2020a)."	
GC-06	**Section 13 - Effects Assessment (including 13.1, 13.2)**	Provide further details in the study plans on how GBA+ has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines	Section 4.3 has been updated to include the consideration of Identity and Gender-Based Analysis Plus (GBA+) including both Indigenous communities and their relevant subpopulations and non-Indigenous communities and their subpopulations. During consultation and engagement activities these groups (and any others defined during consultation) will be engaged with on targeted input.	**Section 4.3**	Describe how GBA+ has been or will be applied to the consideration of engagement activities. Identify specific methods targeted to specific subgroups. Provide detail on how GBA+ has been integrated into all aspects of data collection methodology, as per Section 7.1 of the Guidelines, and into the assessment of effects and impacts, as mentioned in Sections 13, 20, 21, and others, related to effects assessments of the Guidelines. It is not sufficient to mention that GBA+ will be applied to the assessment. Clear descriptions of how GBA+ was integrated (including to which variables, method, and how it influenced results' interpretation) are needed in the Impact Statement.
GC-07		Provide details to demonstrate how the Project's potential effects will be considered, as per the requirements in Sections 13 to 19 of the Guidelines. Ensure that the effects assessment considers the effects of each of the project components and physical activities, in all phases, and that it is based on a comparison to the proposed baseline work.	Project environmental interaction are separated into Project phases, and Project activities for each environmental discipline in their VC-specific study plan listed as Table 9-1. Information collected through the various activities (e.g., field studies and programs, effects assessments) of each discipline area (e.g., wildlife, vegetation, cultural heritage) will be shared with the Indigenous Knowledge Program leads. This will support the establishment of the existing environment and the effects assessment for the Aboriginal and Treaty Rights and Interests environmental discipline,	**Throughout the study plan, Section 9**	As required in Sections 7 and 13 of the Guidelines, ensure that the effects assessment considers the effects of each of the project components (including but not limited to all alternative routes brought forward in the Impact Statement, all aggregates sources, access roads, etc.) and physical activities, in all phases, and that the assessment is based on a comparison to the data and information gathered during the proposed baseline work. Clarify the level of information that will be shared with, and explained to, the Indigenous Knowledge Program leads and whether study plans will be made available to all Indigenous groups listed in the Indigenous Engagement and Partnership Plan.

General Comments from the Impact Assessment Agency of Canada on the Marten Falls Community Access Road Draft Study Plans – July 2, 2020					
#	**Guidelines Section[1]**	**Required Action for Proponent**	**Proponent Response**	**Final Study Plan Section Reference**	**Agency comments**
		Provide detail on how engagement with all Indigenous groups listed in the Indigenous Engagement and Partnership Plan and the public will inform the effects assessment and the selection of mitigation measures and follow-up program measures.	as well as the identification of potential mitigation measures and monitoring programs.		
GC-08	**Section 13.1**	Provide clear descriptions of the rationale behind the assumptions, including but not limited to the assumed average daily traffic and vehicles composition during the construction and operation phases that will be considered for the effects assessment and the cumulative effects assessment.	Section 10: Current assumptions to be used in the effects assessment have been identified. Any additional assumptions will be identified and rationale will be provided in the IS / EA Report.	**Section 10** "Any assumption used in the effects assessment will be clearly identified and a rationale provided in the IS / EA Report. Examples of assumptions that will be used include but are not limited to: - The average annual daily traffic on the CAR is considered to be a low traffic volume; - Human settlement areas which will be assessed are assumed to be representative of all potential settlement areas over the lifespan of the Project; - A worst-case year of vehicle emission rates will be used within modelling. Year over year improvements in vehicle fuel efficiency will not be considered; - Specific inputs to the analysis will be selected based on currently available information (e.g., land use along the corridor, fuel type and composition). Changes to these types of parameters over the life of the Project cannot be accurately predicted, and; - Vehicles will travel along the roadway at the posted speed limit…"	Before conducting the effects assessment analysis, the Agency advises the proponent to seek the Federal Review Team's confirmation of the assumptions that will be used in the analysis or, at a minimum, to discuss the type of assumptions that will be considered. As required by Section 13.1 of the Guidelines, ensure that the Impact Statement clearly outlines the assumptions used for the assessment of effects, including cumulative effects, on each valued component. For example the following statement "The average annual daily traffic on the CAR is considered to be a low traffic volume" is not specific enough, as the average annual daily traffic will need to be quantified and a rationale will be required.
GC-09	**Section 19.2 - Impacts on the Exercise of Aboriginal and Treaty Rights**	Describe an approach for identifying the potentially impacted rights of Indigenous peoples of Canada that are recognized and affirmed by section 35 of the *Constitution Act, 1982*, and for integrating the potential impacts on those rights into the collection of baseline information and the effects assessment.	All study plans reference how potential effects on Indigenous rights will be assessed in the Aboriginal and Treaty Rights and Interests Study Plan. Impacts on Rights considerations are explained in the rationale for defining a Local Study Area and Regional Study Area for Aboriginal and Treaty Rights and Interests VCs. Further information for this is listed in Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan.	**Section 5, and Section 6.2.2 in the Aboriginal and Treaty Rights and Interests Study Plan**	Feedback will be provided in the Federal Review Team's comments package on the Aboriginal and Treaty Rights and Interests Study Plan.
GC-11	**Section 25 – Description of the Project's contribution to sustainability**	Provide detail on the approach to meeting the requirements of Section 25 of the Guidelines regarding the description of the Project's contribution to sustainability.	Section 9: the sustainability assessment for the Project will be undertaken on the preferred alternative and will characterize the Project's contribution to sustainability incorporating the requirements set out in Section 25 of the TISG.	**Section 9.7**	Section 9.7 of the study plan is listing the requirements outlined in Section 25 of the Guidelines. Ensure that the Impact Statement provides a description of the method or approach followed to meet the requirements of Section 25 of the Guidelines.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
GC	**General Comment**	**Section 15.5**	Provide detail in the atmospheric environment study plan to explain the proposed approaches and methods used to integrate all of the requirements in the Guidelines related to the Project's impact on climate change, particularly Section 15.5.	The Project's impact on climate change is addressed in this Study Plan, and the impact of climate change on the Project is addressed in the Climate Adaptation and Resiliency Study Plan.	Section 9.4	The distinction between the Atmospheric Environment and Greenhouse Gases (GHG) Study Plan and the Climate Adaptation and Resiliency Study Plan was clarified.
AQ-01	**Section 4.2 Study Methods** "The baseline Atmospheric Environment study will characterize the existing conditions for air quality. The study will involve a year-long field monitoring program. Quantifying existing emission sources for the Community as well as the remainder of the project footprint is not practical nor could it be completed to a degree that would produce reliable model results as a basis for establishing background." **Section 7 Conformance with Federal and Provincial Guidance** "Identified receptor locations will be described in the Impact Statement. Differential effects will not be considered in the Atmospheric Environment assessment. The relevant criteria (AAQC, CAAQS) have been developed in consideration of effects at any applicable receptor type".	**Section 8.1** "address seasonal variability in the baseline survey and include a determination of background or ambient contaminant concentrations at key receptor points (e.g., traditional land users, sensitive human receptors such as daycares, schools, hospitals, community centres, retirement complexes or assisted care homes) with monitoring data of appropriate duration, representativeness, data completeness, data validation and quality control… provide the approximate number, distance and identity factors of likely human receptors, including any foreseeable future receptors, that may be impacted by changes in air, water, country food quality (e.g., dust deposition on vegetation), and noise levels. At minimum, provide a map showing approximate locations of permanent residences, temporary land uses (e.g., cabins and traditional sites) and known locations of sensitive human receptors (e.g., schools, hospitals, community centres, retirement complexes or assisted care homes)."	Provide details to demonstrate that key receptor points have been or will be identified, and include details on how monitoring data of background or ambient contaminant concentrations will be collected for all key receptor points. Explain how the selection of sensitive receptors will take into account the views of all Indigenous groups listed in the IEPP. This includes incorporating into the plan where Indigenous groups will be provided with opportunities to: - provide Indigenous knowledge during baseline data collection; - comment on the list of valued components and indicators; - inform the effects assessment and review its conclusions; and - inform the development of mitigation measures and follow-up programs.	Sensitive receptor locations within the study area will be identified and evaluated in the IS / EA Report. Sensitive receptors will include the typical receptor types used in atmospheric assessments: residences, schools, healthcare facilities, daycares. In addition to the typical receptor types, indigenous receptor locations will be included in the assessment based on engagement completed as part of the project. Background concentrations will be collected in the community of Marten Falls for a period of up to one year. The data collected within the community will be conservatively assumed to represent the entire study area. It is expected that baseline concentrations within Marten Falls will be higher than the remainder of the Study Area. As a result, the use of data collected within Marten Falls will provide a more conservative assessment of impacts (based on cumulative impacts being defined as background concentrations plus predicted Project impacts), and will result in an assessment which is more protective of receptors. Additionally, the logistics of collecting reference-level data in the remote wilderness of Northern Ontario is prohibitive to deploying any additional monitoring. Monitoring equipment requires a reliable power source and routine maintenance (e.g., snow cleared from around the inlet ports, filter changes) which are not feasible outside of a community. It is important to note that reference-level data are not practical using solely solar powered equipment.	Section 9.4	This comment has been addressed.
AQ-02	**Section 4.2 Study Methods** "Quantifying existing emission sources for the Community as well as the remainder of the project footprint is not practical nor could it be completed to a	**Section 8.2** "provide hourly meteorological data (wind speed and direction, air temperature, net radiation, turbulence and precipitation data) from a	Provide details on how the requirements of Section 8.2 of the Guidelines for hourly meteorological data to support dispersion modeling will be met in the Impact Statement.	A 5-year hourly meteorological data to support dispersion modelling will be developed. Environment and Climate Change Canada measured data from stations in proximity to the study area and prognostic data (e.g., WRF data) for the study area will be used.	Section 9.4	This comment has been addressed.

[2] Refer to complete sections of the Guidelines for more context

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
	degree that would produce reliable model results as a basis for establishing background. Therefore, modelling is not proposed for this aspect."	minimum of one year to support dispersion modelling that captures the normal variability of meteorological conditions"				
AQ-03	**Section 4.2.1 Ambient Air Quality Monitoring** "An airpointer[2] will be deployed in the Community to monitor…as well as meteorological parameters including: wind speed, wind direction, temperature, relative humidity, barometric pressure, and precipitation."	**Section 8.2** "The Impact Statement must: - describe the local and regional climate including historical records of relevant meteorological information (e.g., total precipitation (rain and snow)); - provide mean, maximum and minimum temperatures; - provide typical wind speed and direction; - identify the potential for extreme weather events such as, wind, precipitation and temperature extremes; - provide hourly meteorological data (wind speed and direction, air temperature, net radiation, turbulence and precipitation data) from a minimum of one year to support dispersion modelling that captures the normal variability of meteorological conditions; and - provide pan evaporation measurements or estimates of monthly (or daily) evapotranspiration."	Provide details on how all requirements of Section 8.2 of the Guidelines will be included in the Impact Statement.	Meteorological parameters such as pan evaporation and evapotranspiration, and climate data such as extreme weather events, are not considered in air dispersion modelling. Any parameter not used as an input into the air dispersion modelling assessment will have no influence on the impact assessment and will therefore not be provided in the Air Quality Assessment Report.	Section 9.4	The comment was not addressed.
AQ-04	**Section 4.2.1 Ambient Air Quality Monitoring** "Monitored concentrations collected within the Community will be considered to be representative of all locations within the community and will be used to help establish background concentrations within the PSA. Baseline monitoring for the remainder of the PSA is not feasible given the remote nature of the Project corridor and lack of practical power and	**Section 7.1** "Ensure baseline data is representative of project site conditions."	Provide details and rationale for how data collected from the monitoring station located at the community nursing station will be representative of baseline emissions at all receptor locations within the PSA.	The intention of the Air Quality Assessment is to provide a realistic worst-case estimate of the impact on air quality as a result of the Project. The air quality assessment will add background concentrations to the predicted Project emissions to determine cumulative impacts within the PSA. Therefore, using the maximum background concentrations which would reasonably expected within the PSA will result in a conservative Air Quality Assessment. Concentrations within Marten Falls are expected to be elevated in comparison with the remainder of the study area due to the presence of sustained human activity (e.g., power generation, airport, and heating fuel use). Therefore, using background data collected from within	Section 7.2.1	This comment was partially addressed The approach proposed in the atmospheric environment and GHG study plan does not address the incremental health effects of non-threshold contaminants (e.g., carcinogens). Provide an air quality assessments for the following scenarios: i) baseline; ii) project alone; iii) baseline plus project; iv) cumulative effects.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
	serviceability access. Therefore, monitoring at the Community will have to serve as the basis for establishing baseline and background values."			Marten Falls is expected to result in a conservative Air Quality Assessment.		Clarify in the Impact Statement how the use of elevated baseline levels may have affected the health effects assessment results for non-threshold contaminants. Consider additional mitigation measures and follow-up monitoring, if necessary.[3]
AQ-05	**4.2.1 Ambient Air Quality Monitoring** "….An airpointer[2] will be deployed in the Community to monitor particulate matter (PM2.5), ozone, nitrogen oxides (NOx), sulphur dioxide (SO2), carbon monoxide (CO), and BTEX (benzene, toluene, ethylbenzene, and xylene) (…). BTEX and particulate matter will be used as surrogates for polycyclic aromatic hydrocarbons and diesel particulate matter which cannot be sampled for due to equipment limitations coupled with serviceability challenges given the relatively remote location. Concentrations of specific relevant contaminants such as acetaldehyde, formaldehyde, 1,3-butadiene, and acrolein will be estimated based on monitored BTEX concentrations and published emission factors, such as the United Stated Environmental Protection Agency's (US EPA) AP-42 emissions database..."	**Section 8.1** "provide the results of a baseline survey of ambient air quality by identifying and describing emission sources for the following contaminants: total suspended particulates, fine particulates smaller than 2.5 microns (PM2.5), respirable particulates of less than 10 microns (PM10), carbon monoxide (CO), ozone, sulphur oxides (SOx), nitrogen oxides (NOx), volatile organic compounds (VOCs)[25], polycyclic aromatic hydrocarbons (PAHs), diesel particulate matter (DPM), and any other toxic air pollutants (mobile and stationary sources); [25]It is recommended to assess specific aldehydes that are associated with diesel exhaust (DE), such as acetaldehyde, formaldehyde, 1,3-butadiene and acrolein, as well as benzene, for the evaluation of VOCs."	Describe any on-site sampling and quantitative analyses of common air pollutants (including SO_2, PAHs, and DPM) listed in Section 8.1 and 14.1 of the Guidelines that is being considered to help assess the project impacts on contaminant levels with confidence. Should other assessment approaches, including the use of surrogates and/or a qualitative assessment, be deemed more appropriate, or should an assessment be deemed unnecessary for any air pollutants, provide a detailed rationale for any deviation from recommended characterization/assessment approaches, as well as an estimate of the uncertainty associated with the use of the alternative approaches.	Background SO2 concentrations will be measured in the community. Background concentrations of PAHs will be estimated based on monitoring data collected within the community. The monitoring program includes an assessment of up to 1-year of data for benzene, toluene, ethylbenzene, and xylenes (i.e., BTEX). DPM emissions as a result of the Project will be included in the Air Quality Assessment. Due to the technical limitations of measuring DPM in the community, background DPM concentrations will be estimated based on the breakdown of fuel sources in the community. The Air Quality Assessment will include quantitative assessments (numerical estimates or monitoring of background concentrations and numerical modelling of Project impacts) of the following contaminants: • NOx, PM2.5, PM10, Diesel Particulate Matter (DPM), SO2, CO, Formaldehyde, Acetaldehyde, Acrolein, Benzene, 1,3-Butadiene, Total PAHs, Total VOCs	Section 7.2.1	This comment was partially addressed**.** The approach proposed in the study plan has not changed, as it still proposes to use BTEX measurements to estimate PAHs and other VOCs, such as acetaldehyde; formaldehyde; 1-, 3-butadiene; acrolein. Justify in the Impact Statement why PAHs and other VOCs cannot be measured directly and describe the equipment limitations for PAHs. In the Impact Statement, provide uncertainty estimates associated with using BTEX as a surrogate for estimating baseline levels of PAHs and describe how the uncertainty estimates were considered in assessing project impacts on air quality and associated human health risks.
AQ-06	**6.1 Indicators and Expression of Change** "The indicators and rationale for selection and measurement of potential effects, to be used to assess and evaluate the alternative routes in the IA/EA are provided in Table 6-1. The table includes both quantitative and qualitative indicators. The final list of indicators to be used in the IA/EA will be based on regulatory agency guidance, professional judgement and input received through the	**Section 14.1** "provide a quantitative assessment of common air pollutants (total particulate matter, fine particulate matter (PM2.5), respirable particulate matter with a diameter less than 10 microns (PM10), sulphur oxides, nitrogen oxides, volatile organic compounds, polycyclic aromatic hydrocarbons, diesel particulate matter, and carbon monoxide), as well as any air contaminants potentially	Provide details to demonstrate which air quality parameters will be assessed quantitatively and which will be assessed qualitatively. Clarify why sulfur oxide (SO) is selected for the effect assessment when SO_2 is used in the baseline study. Resolve inconsistencies between lists of air contaminants to be assessed during the baseline and the effects assessment. Provide details to demonstrate that all common air pollutants listed in Section 14.1 of the Guidelines will be included in the effects assessment, including DPM.	The following compounds will be quantitatively assessed within the Air Quality Assessment: • NOx, PM2.5, PM10, Diesel Particulate Matter (DPM), SO2, CO, Formaldehyde, Acetaldehyde, Acrolein, Benzene, 1,3-Butadiene, Total PAHs, Total VOCs The following will be monitored during the baseline program: • NOx, PM2.5, PM10, SO2, , BTEX (benzene, toluene, ethylbenzene, and xylene) Baseline concentrations for the following compounds will be calculated from results of the monitoring program: • TSP, PAHs, DPM, Formaldehyde, Acetaldehyde, Acrolein, 1,3-Butadiene	Section 7.2.1	This comment was partially addressed. While the study plan clarified that "SO_2" will be assessed, Table 9-2 still shows that "SO" will be used. Revise the study plan to correct Table 9-2. Common air pollutants, including DPM, have been listed in the revised study plan as per Section 14.1 of the Guidelines, however some of the pollutants will not be measured as indicated in response to AQ-05 above.

[3] Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: AIR QUALITY. Available at: https://publications.gc.ca/site/eng/9.802343/publication.html

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
	Project consultation process….” **Table 6-1: Atmospheric Environment Indicators** “Expression of Change: NOx, CO, SO, TSP, PM10, PM2.5, Selected Volatile Organic Compounds (acrolein, acetaldehyde, benzene, formaldehyde, 1,3-butadiene, toluene, ethylbenzene and xylene) Rationale for Selection: The contaminants chosen for the expression of change are based on those commonly associated with transportation and construction activities, as prescribed by the Ontario Ministry of Transportation (MTO, 2012).” **Section 7 Conformance with Federal and Provincial Guidelines** “The Project will be assessed following MECP and MTO guidance for the requested contaminants. The contaminants assessed will be those required by MTO guidance (i.e. NO_X, CO, $PM_{2.5}$, PM_{10}, formaldehyde, acetaldehyde, benzene, 1,3-butadiene, and acrolein). Additionally, toluene, ethylbenzene, and xylene will be consider based on inclusion in the human health risk assessment.”	associated with the Project such as dust resulting from construction activities and ongoing vehicle use during operations or maintenance of the gravel road bed;”		Relevant literature, emission factors, referenced methods and other representative stations will be utilized to estimate baseline concentrations for compounds that are not monitored.		Ensure that the Impact Statement covers all air pollutants, including DPM, required by Section 14.1 of the Guidelines.
AQ-07	**Section 6.2.1 Emissions** “GHG emissions will be estimated using published emission factors, approved estimation guidance, or engineering calculations as applicable.”	**Section 15.5** “provide the estimated annual GHG emissions from each source, including calculation methods, assumptions and related parameters that would enable calculations to be reproduced” **Section 20** “describe measures included in the design of the Project to mitigate its greenhouse gas emissions. These could	Provide details on how GHG emissions will be calculated and the measures to mitigate the Project's GHG emissions, as required in Sections 15.5 and 20 of the Guidelines. Provide details to demonstrate how the measures and practices proposed to mitigate the Project's GHG emissions, as required in Section 20 of the Guidelines, will be factored into the GHG estimates in Section 15.5 of the Guidelines.	The GHG analysis will include mitigative measures as part of the quantification of emissions. As part of the impact assessment, an analysis will be conducted to identify if additional mitigative measures are required for GHG emissions. All mitigative measures identified will be documented and reported on as part of the IS / EA Report.		This comment was addressed. Of note: Further guidance on GHG quantification and mitigation measures is provided in the Technical Guide Related to the Strategic Assessment of Climate Change, including: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, and upstream GHG assessment when published in its draft form in summer 2021.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
		include design decisions such as the use of low-emitting technologies, the use of low-carbon or renewable fuel or carbon capture and storage; describe practices that will be taken to mitigate the Project's greenhouse gas emissions, such as anti-idling practices for mobile equipment, or continuous monitoring systems".				
AQ-08	**6.2.1.1 Construction Phase** "Emissions will be estimated for the construction phase based on the projected types of activity and duration. All anticipated construction activity, such as land clearing, blasting, aggregate extraction, material hauling, and road construction will be included in the estimate of emissions. Emissions will be estimated based on published emission factors, such as those found in the US EPA's AP-42 emission factor database, or engineering principles, as applicable. (…)". **6.2.1.2 Operation Phase** "The assessment of the operations phase will not include any ongoing road maintenance activities such as road repairs as they are considered short-term and insignificant".	**Section 13.1** "The Impact Statement must describe in detail the project's potential adverse and positive effects in relation to each phase of the Project (construction, operation, maintenance, suspension, decommissioning, and abandonment)." **Section 14.1** • "provide a quantitative assessment of common air pollutants …., as well as any air contaminants potentially associated with the Project such as dust resulting from construction activities and ongoing vehicle use during operations or maintenance of the gravel road bed • provide a comprehensive list of project activities (air pollutant emission sources) that may affect ambient air quality, such as, but not limited to: …. • dust generation from material stockpiles, transportation and road maintenance during construction and operation." **Section 15.5** "provide the estimated annual GHG emissions from each source, including calculation	Provide details on the assessment of short-term effects, inclusive of road maintenance activities, during the operation phase relative to the applicable standards and/or criteria. Describe any on-site monitoring that is being considered during the construction and operation phases where sensitive receptors are identified near the project sites. Use Canadian-specific emission factors where possible, and provide justification if Canadian data sources are not used in the estimation of GHG emissions.	The Air Quality Assessment will include two bounding scenarios: roadway construction and roadway operation. Routine road maintenance activities such as snow clearing are expected to be captured in the roadway vehicle data (traffic volumes and vehicle types) within the roadway operation scenario, and therefore will be included in the Air Quality Assessment. Minor roadway maintenance activities, such as re-grading, are expected to have a lower impact than the initial construction bounding scenario, therefore the impact of these activities would have been assessed within that bounding scenario. Where applicable and available Canadian emission factors will be used in lieu of US EPA emission factors. Within the MOVES emission model, meteorological conditions reflective of the study area and Canadian fuel composition data will be used as inputs, where possible.	Section 9.4	This comment was addressed.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
		methods, assumptions and related parameters that would enable calculations to be reproduced"				
AQ-09	**Section 6.2.1.2 Operations Phase** "The assessment of GHG emissions will also consider the potential change in emissions from existing sources (e.g., aircraft, winter road usage) as a result of the project."	**Section 15.5** "describe how the Project may contribute to Canada's efforts to reduce GHG emissions, if applicable (e.g., the Impact Statement could explain how the Project would result in emission reductions in Canada by avoiding emissions from another source)"	Provide details on how the "potential change in emissions from existing sources" will be determined, and explain if and how the change in emissions would be calculated as part of the net GHG emissions of the project, in order to meet the requirements of Section 15.5 of the Guidelines.	Net GHG emissions as a result of the Project will be calculated using ECCC guidance. The modal shift analysis identified in the Study Plan will rely on the guidelines identified by The Agency (e.g., ECCC guidance, Infrastructure Canada's Climate Lens guidance), and will consider partial or full displacement of current forms of travel (e.g., winter road travel, air travel) with on-road vehicular traffic. The level of modal shift for each mode of transportation will be determined and documented as part of the assessment. Foreign emissions will not be considered in the analysis.	Section 9.4	This comment has been addressed. Of note: Further guidance on avoiding domestic GHG emissions will be provided in the Technical Guide Related to the Strategic Assessment of Climate Change, which includes: guidance on the quantification of net GHG emission, impact on carbon sinks, mitigation measures, and upstream GHG assessment when published in its draft form in summer 2021.
AQ-10	**Table 6-2: Air Quality Magnitude Definition** Low: Up to 10% above applicable Criteria. Medium: 11%-30% above applicable Criteria High: 31%-70% above applicable Criteria Very High: >70% above applicable Criteria Rationale: To align with IAAC evaluation criteria presented in the Tailored Impact Statement Guidelines.	**Section 13.1** "The effects to each valued component outlined in sub-sections 14.3, 15.2, 15.3, 15.4 must be described using the following criteria:" **21. Residual effects** "Proponents must describe the extent to which residual effects are adverse. Where relevant, or where best practice or evidence-based thresholds exist, effects should be described using criteria to quantify adverse effects. (…) Where the potential for human health effects exist due to exposure to a particular contaminant at any level (e.g., non-threshold air pollutants, including particulate matter and nitrogen dioxide, and water pollutants, such as but not limited to arsenic and lead) mitigation measures should aim to reduce the residual effects to as low as reasonably achievable…. The Impact Statement must: • characterize the residual effects using criteria most appropriate for the effect;	Clarify how the proposed adverse effects magnitude criteria definitions are relevant to the protection of human health in relation to air quality.	The Air Quality magnitude criteria have been updated. These criteria will characterize impacts on Air Quality using Air Quality criteria that are protective of human health. More specific analysis of Human Health impacts will be conducted within the Human Health assessment as is described within the Human Health and Community Safety Study Plan.	Section 9.6	This comment has been partially addressed. It is noted that the definitions for the residual effects magnitude criteria to consider both an exceedance of the air quality criteria and a percentage increase from baseline conditions have been revised from the previous definition. However, the new definitions still do not address the comment in that the percentage deviation from baseline conditions is an arbitrary threshold and that non-threshold contaminants may pose health risks even below the applicable criteria, such as the CAAQS. The CAAQS should not be considered as either regulatory criteria or "pollute-up-to" levels as exemplified by the CAAQS management levels (CCME, 2019). In the Impact Statement, clarify how the percentage deviation from baseline thresholds were derived for residual effects magnitude criteria definitions, and how they are relevant to the protection of human health. Where applicable, use the CAAQS management levels to support the definition of magnitude criteria.[4] Health Canada encourages the use of all available technologies to reduce air emissions as low as reasonably

[4] Canadian Council of Ministers of the Environment (CCME). 2019. GUIDANCE DOCUMENT ON AIR ZONE MANAGEMENT. Available at: https://ccme.ca/en/res/guidancedocumentonairzonemanagement_secured.pdf

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
		• characterize residual effects for human health using human health-related criteria most appropriate for the carcinogenic and non-carcinogenic health effects of non-threshold contaminants; • provide the rationale for the choice of criteria used to determine the extent to which the predicted effects are adverse. The information provided must be clear and sufficient to enable the Agency, review panel, technical and regulatory agencies, Indigenous groups, and the public to review the proponent's analysis of effects;"				achievable (ALARA) and to prevent air quality deterioration.
AQ-11	**Section 6.3 Magnitude of Effect. Table 6-3** "Releases of GHGs and their accumulation in the atmosphere influence regional, national and global climate and may affect emission reduction targets for GHGs that have been set or are being developed federally and provincially. The magnitude is therefore established as a percent contribution to provincial totals to assess the significance of Project emissions and hence potential effect on provincial reduction targets that may exist."	**Section 15.5** "describe how the Project may contribute to Canada's efforts to reduce GHG emissions, if applicable (e.g., the Impact Statement could explain how the Project would result in emission reductions in Canada by avoiding emissions from another source)".	Update the study plan to reflect that the requirement to describe the residual environmental, health, social or economic effects of the project does not extend to discussing the magnitude of the Project's GHG emissions against national and provincial emissions and emissions targets.	The Study Plan identifies the sources of GHGs and limits the assessment of GHGs to the specified magnitude criteria.	Section 9.4.3	This comment has not been addressed. The study plan indicates that it "identifies the sources of GHGs and limits the assessment of GHGs to the specified magnitude criteria." It is not appropriate for the Impact Statement to compare the magnitude of the Project's GHG emissions by comparing them against national or provincial emissions or emissions targets. When compared to provincial and national GHG emissions, the Project's GHG emissions will often be considered as low, which does not help to contextualize the Project's emissions against Canada's emissions targets. Update the study plan to reflect that the requirement to describe the residual environmental, health, social or economic effects of the Project does not extend to discussing the magnitude of the Project's GHG emissions against national and provincial emissions and emissions targets. Remove reference to discussing/assessing the magnitude of the Project's GHG emissions by comparing to National and Provincial GHG emissions targets or totals.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
AQ-12	**Section 7 Conformance with Federal and Provincial Guidance** "….will be described in the Impact Statement. The Impact statement will include….. The Impact Statement will provide…. "	**Section 14.1 and Section 15.5** [Relevant to many requirements]	Provide details on the proposed approaches and methods used to ensure that all requirements of Sections 14.1 and 15.5 of the Guidelines are met in the Impact Statement. Provide details to demonstrate that the effects assessment will consider the effects of each of the project components and physical activities, in all phases, and be based on a comparison to the proposed baseline work. Provide details to demonstrate that the effects assessment for the operation phase will include the effect cause by all different users (traffic volume, type of vehicles, etc.), including Indigenous groups, the general public, and mining proponents of reasonably foreseeable future projects ((e.g., Eagle's Nest, Blackbird, Black Thor, Black Label, Big Daddy, anticipated future community access roads);".	Traffic levels defined within the Project scope will be used for the Air Quality and GHG Assessment.	Section 9.4	This comment has been partially addressed. More information has been provided in terms of project components and physical activities related to air quality for both the construction and operation phases.). It is stated that the Impact Statement will include detailed descriptions of VCs and the rationale for their inclusion to describe their importance and the predicted residual effects. In terms of cumulative effects, it is stated that traffic related emissions for the operation phase will be assessed. Include in the Impact Statement detailed information of each of the project components and physical activities, including traffic related emissions, and a cumulative effects assessment for reasonably foreseeable activities and projects in keeping with the requirements of Section 22 of the Guidelines.
AQ-13	**Section 7.0 Conformance with Federal and Provincial Guidance** "The Impact Statement will include an assessment of land use changes (e.g. wetlands or peatlands) and the resultant net GHG emissions."	**Section 15.5** "provide a qualitative description of the Project's positive or negative effects on carbon sinks, including from the removal and alteration of wetlands"	Provide details to demonstrate that a qualitative description of the Project's positive or negative effects on carbon sinks will include consideration of the guidance provided by ECCC in the context column, in order to meet the requirements of Section 15.5 of the Guidelines.	The qualitative description of the Project's net effects on Climate Change will include consideration of the requirements of the Government of Canada's Strategic Assessment of Climate Change (SACC) guidance document (2020, and the guidance provided by ECCC). It is expected that in following the SAAC guidance, Section 15.5 of the Guidelines will be met.	Section 9.4	This comment has been addressed.
AQ-14	**Section 7 Conformance with Federal and Provincial Guidance** "Considering the projected roadway volumes (200-300 vehicles per day), an assessment of the formation of ozone is not warranted."		Clarify why Table 7-1 has a different average daily traffic amount than what was described in the Detailed Project Description. Provide details to demonstrate that the effects assessment will consider the highest annual average daily traffic amount of vehicles the road is designed for, which was described as 400.	The effects assessment will consider the highest AADT over the life of the Project.	Section 9.4	Before conducting the effects assessment analysis, the Agency advises the proponent to seek the Federal Review Team's confirmation of the assumptions that will be used in the analysis or, at a minimum, to discuss the type of assumptions that will be considered (see also comment GC-07). The Annual Average Daily Traffic must reflect the highest annual average daily traffic amount of vehicles, including vehicles associated with future reasonably foreseeable projects, as described in Section 22 of the Guidelines, during the lifespan of the Project.
AQ-15	**Section 7 Conformance with Federal Guidance**	**Section 13.1**	Provide further detail on proposed methodologies, including the rationale, to	Any reference to the "dispersion of emissions" being low-level within the Study Plan is unintentional. The Study	Section 9.4	This comment has been addressed.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
	"The air quality modelling will be described in detail within the Impact Statement. No chemical or physical transformation will be included in the modelling as the dispersion of emissions are generally expected to be generally low-level and near-field with respect to the Project."	"Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption." **Section 14.1** "provide details of all air quality model configuration ,including meteorology, land-use, gridded and sensitive receptors and chemical and physical transformation settings;"	meet the requirements of Section 14.1 of the Guidelines, including chemical and physical transformation. Provide details and rationale for describing the dispersion of emissions are expected to be "generally low-level".	Plan intended to communicate that the formation of secondary contaminants through chemical and physical transformation is expected to be low-level based on the predicted roadway volumes. While some formation of secondary particulate is expected, the Project is in a pristine setting without large industrial or transportation sources. Secondary formation is dependent on the presence of precursor species which will be limited because of the pristine nature of the environment. Based on a projected low AADT, the emissions of precursor species are expected to be relatively dilute in the atmosphere. Additionally, the formation of secondary contaminants is not instantaneous, and happens downwind of the source at which point the initial precursor contaminants have begun to disperse. In consideration of these factors, it is expected that assessing the near-road impacts of primary contaminants will result in a reasonably conservative Air Quality Assessment One exception to the above is the conversion of NO to NO2. It will be conservatively assumed that 100% of all NO emitted from the Project will be converted to NO2.		
AQ-16	**Section 7 Conformance with Federal Guidance** "The potential for the Project to contribute to acid deposition will be qualitatively assessed for both the construction and operation phases. Potential for acid formation will be evaluated based on the predicted increase in NOx and SOx to the airshed and subsequent potential nitrate and sulphate formation. Acid deposition will not be quantitatively assessed as the magnitude of effects is expected to be negligible."	**Section 13.1** "Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption." **Section 14.1** "assess the potential for emissions from the Project to contribute to acid deposition and exceedances of critical loads for terrestrial and aquatic ecosystems;"	Provide details on how the potential for emissions from the Project to contribute to exceedances of critical loads for terrestrial and aquatic ecosystems will be assessed, to meet the requirements of Section 14.1 of the Guidelines. Provide a rationale for determining that the magnitude of effects related to acid deposition is expected to be "negligible".	Acid deposition is a regional effect, meaning that near-roadway concentrations are not as important as airshed concentrations. It is estimated that the Project will partially displace air travel with road vehicle traffic. The impact of this modal shift on the contribution of NOx and SO2 to the airshed will be assessed and a qualitative statement regarding the implications for acid deposition will be provided in the IS / EA Report. There will be no assessment of emissions from the Project to contribute exceedances of critical loads for terrestrial and aquatic ecosystems. There is no threshold established to determine that a specific concentration of NOX and SO2 would be detrimental to the terrestrial and aquatic valued components.	Section 9.4	This comment has been addressed.
AQ-17	**Section 7 Conformance with Federal Guidance** "The potential for the Project to contribute to ground-level ozone will be qualitatively assessed for both the construction and operation phases. Potential for the generation of ground-level ozone will be evaluated based on the predicted increase in NOx and Volatile Organic Compounds around the Project area. Ozone formation will not be quantitatively assessed as the	**Section 13.1** "Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption." **Section 14.1** "provide an assessment of the Project's emissions potentially contributing or adding to existing ground ozone levels;"	Provide a rationale for determining that the magnitude of effects for ozone formation is expected to be "negligible".	In the Ministry of Transportation's Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects, the MTO states that, with respect to the formation of ground-level ozone, "ground-level ozone O3 is typically formed many kilometres downwind of the source of its precursors" and "concentrations are usually depressed around highways since NO emissions react relatively rapidly to convert O3 into oxygen gas." The MTO also states that "For major roads, the collective experience of the scientific community suggests that the affected immediate vicinity is limited to the area within approximately 500 metres of the road". Based on this, the contribution of the Project to ground-level ozone is likely to be minor in comparison to the near-field concentration of precursor species (i.e., NOx).	Section 9.4	This comment has been addressed.

Federal Review Team comments on the Marten Falls Community Access Road Project Draft Atmospheric and GHG Study Plan						
#	**Study Plan (2020) Reference**	**Guidelines Section[2]**	**Required Action for Proponent**	**Proponent Response**	**Study Plan (2021) Reference**	**Agency Response**
	magnitude of effects is expected to be negligible."					
AQ-18	**Section 7 Conformance with Federal Guidance** "Baseline air quality monitoring will be used to represent the Project Area and is assumed to include in the effect of any relevant regional sources. Therefore, regional source emissions will not be quantified or included in the dispersion modelling."	**Section 13.1** "Predictions must be made on clearly stated assumptions and the Impact Statement must clearly describe how it has tested each assumption." **Section 14.1** "provide emission rates for all project and regional sources within the study area, including emission factors(with methodology, uncertainty assessment and references) and all assumptions and related parameters that would enable calculations to be reproduced;"	Provide details on proposed methodologies, including rationales, to demonstrate how the studies described in the study plan will meet all requirements of Section 14.1 of the Guidelines, including emission rates for all regional sources within the study area. Provide a rationale for how it was determined that baseline air quality monitoring will include the effect of regional sources.	Baseline air quality monitoring will be used to represent the Project Area and is assumed to include in the effect of any relevant regional sources. Therefore, regional source emissions will not be quantified or included in the dispersion modelling. The majority of sources are expected to be personal vehicles, residential heating, and other miscellaneous activities. There are no significant sources (e.g., large industries) which would contribute to emissions in the Study Area. A conservative Air Quality Assessment is one which describes the reasonable worst-case impact of the Project. Background concentrations within Marten Falls are expected to be higher than the rest of the Study Area. Therefore, using measured concentrations in the Study Area will result in a conservative Air Quality Assessment.	Section 7	The comment was addressed.
AQ-19	**Section 7 Conformance with Federal Guidance** "Identified receptor locations will be described in the Impact Statement. Differential effects will not be considered in the Atmospheric Environment assessment. The relevant criteria (AAQC, CAAQS) have been developed in consideration of effects at any applicable receptor type."	**Section 14.1** "…describe the locations and characteristics of the most sensitive receptors including species at risk and differential effects for sensitive receptors;…"	Provide details on how the locations and characteristics of sensitive receptors, including species at risk, will be identified. Provide details on how the requirement in Section 14.1 of the Guidelines will be met, including differential effects for sensitive receptors.	Differential effects will not be considered within the air quality assessment. The air quality assessment will consider provincial and federal criteria and standards to evaluate the Project impacts on air quality. The results of the air quality dispersion modelling assessment will be used in subsequent assessments, such as the human health assessment and ecological assessments, which will form a part of the IA / EA. It is expected that the subsequent studies will use evaluation criteria specific to the receptor types. Locations of sensitive receptors, including species at risk, will be identified in various other study plans.	Fish and Fish Habitat Study Plan Wildlife Study Plan Vegetation Study Plan Ungulates Study Plan Bird Study Plan Human Health and Community Safety Study Plan Aboriginal and Treaty Rights and Interest Study Plan	This comment has been addressed.

Comments from the Federal Review Team on the Marten Falls Community Access Road Project Atmospheric Environment and GHG Study Plan submitted in June, 2021.				
ID #	**Study Plan Section**	**Guidelines Section**	**Context**	**Required Action for Proponent**
AQ-20	**Table3-1**		Table 3-1 is providing an incomplete representation of the status of the technical discussions. The column "solution" seems to suggest that all attendees are fully supportive of the content of the atmospheric environment and GHG study plan, however, the Federal Review Team raised comments and concerns that are still not fully addressed, as indicated in the comments above.	Edit Table 3-1 to indicate whether methodological issues identified in the study plan/monitoring plan were discussed during technical meetings and whether participants agreed on the approach to follow moving forward.
AQ-21	**Editorial - Footnote 7, Section 9.2** "In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs. The VCs will be consulted and engaged on early in the IA/EA process and finalized taking into consideration the input received. Therefore, only information relevant to the Project that arises from the regional assessment of the Ring of Fire within an appropriate timeline will inform the VCs for the Project."		The statement in the footnote 7 in Section 9.2 "*In February 2020 a regional assessment of the Ring of Fire region commenced; however, it is not sufficiently advanced at this time to inform the Project VCs."* is inaccurate, as the Regional Assessment in the Ring of Fire area has not yet begun.	Replace the text in footnote 7 with "*In February 2020, the Minister of Environment and Climate Change determined that a regional assessment will be conducted in an area centred on the Ring of Fire mineral deposits in northern Ontario. Relevant information available in relation to the Regional Assessment in the Ring of Fire area would be considered in the impact assessment of the Project."*
AQ-22		**Section 7.3** "…For each of the valued components that will be assessed in the Impact Statement, the proponent must create a study plan and a work plan to be validated by the Agency. Upon receipt of a study plan, the Agency may request that the proponent present and discuss the study plan at technical meetings, which will be scheduled during the impact statement phase."	In order to meet the requirements of Section 7.3 of the Guidelines, a work plan or work plans for the valued components to be assessed in the Impact Statement must be submitted to the Agency for validation. This atmospheric environment and GHG study plan does not outline when and how each Indigenous group listed in the IEPP will be engaged on baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge.	Provide a work plan that outlines the scheduling and sequencing of engagement activities relative to proposed baseline work, engagement on the study plan, spatial and temporal boundaries determinations, and particularly in relation to collection of Indigenous knowledge.
AQ-23	**Table 11-3: Study Plan Federal and Provincial Concordance – Requirement Deviations**		Proposed amendments and/or deviations from the Guidelines will not be reviewed or approved during the study plans review process. The Agency will provide guidance on the process to propose amendments and/or deviations to the Guidelines to the project team.	