## Pulchan65ppppppANNEX 1: Departmental input re conformity information requirements directed to the proponent Joyce Lake Direct Shipping Iron Ore Project

Please use the table below to provide your department's comments and suggestions for information that should be required from the proponent to ensure the EIS conforms to the EIS Guidelines. Please keep in mind the focused questions provided in the cover letter as to what is required during a **conformity** review; your input on whether the information is scientifically and technically accurate will be sought later during the **technical** review.

ID	Reference to EIS Guidelines	Reference to EIS	Context and Rationale	Specific Conformity Information Requirement	Revised EIS or Supplementary Info
ECCC-01-CWS- 01	Part 2, Section 8 – Alternative Means of Carrying Out the Project	Section 2.8 – Alternative Means of Carrying out the Project (pages 2-43 to 2-57)	The EIS Guidelines (pages 13) state that the proponent will <i>"identify and consider the</i> <i>effects of alternatives means of carrying out</i> <i>the project that are technically and</i> <i>economically feasible".</i> The proponent has not included project lighting design in the alternatives assessment, but it is an important project component to consider given the potential for lighting design to have an adverse effect on migratory birds and species at risk. Note – the EIS Guidelines were developed in 2013 and are outdated. It is now standard practice for ECCC to request "project lighting design" as a standard component of a Project that requires an alternatives assessment.	Provide information on the specifications of the Project's lighting design, as well as assessment of potential alternatives to reduce adverse impacts on migratory birds and species at risk. ECCC has provided standard advice in ECCC-14-CWS-04 in Annex 2 for the proponent's consideration.	This information request can be addressed through the provision of supplementary information.
ECCC-02-CWS- 02	Part 2, Section 9.1.2 – Biophysical Environment	Section 16.5.1 – Information Sources (page 16-8)	Quote from EIS (page 16-2) "Information used to determine the known or likely presence of birds and wildlife in or near the PDA was derived from reviews of local	Provide a clear summary of the baseline information gathered from other sources (such as those included in the quoted statements in the	This information request can be addressed through the provision of supplementary information or, at minimum, clearer referencing of

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			<ul> <li>historical records and other baseline data sources including:</li> <li>Field data collected as part of the environmental baseline program for the Project in 2012</li> <li>Published and unpublished literature including peer-reviewed academic journals, research project reports, government publications.</li> <li>Government and non-government sources, including ACCDC, NLDFFA, Birds Canada's "Nature Counts" web portal (e.g. Breeding Bird Survey (BBS) data, eBird data), the Québec Breeding Bird Atlas 2010-2014 (les oiseaux nicheurs du Québec: atlas des oiseaux migrateurs du Québec meridional), and local naturalists."</li> <li>Quote from EIS (page 16-18) "Information used to determine the known or likely presence of wildlife species in the RSA was derived from a variety of baseline data sources, avian field surveys, conducted in 2012, incidental observations during field surveys and an ELC habitat analysis."</li> </ul>	previous column), or at minimum, clear reference to the sources used throughout the EIS.	information sources throughout the EIS.

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ECCC-03-CWS- 03	Part 2, Section 9.1.2 – Biophysical Environment	Section 16.5.2.1 – Bird Surveys (pages 16-19 to 16-20) Section 16.5.3.3 – Baseline Conditions – Birds (pages 16-20 to 16- 28)	Although referenced in the statements above, the proponent has not provided a clear summary of the baseline migratory bird information gathered from existing sources. The information included in Appendix X (Avifauna Baseline Study) appears to include the results of the 2012 survey only and no other information from existing sources. It is not clear to ECCC where the other baseline information (from existing sources) has been included as references are not included throughout the EIS. The EIS Guidelines (page 23-24) state that the proponent is expected to provide "preliminary data from existing sources on year-round migratory bird use of the area (e.g. winter, spring migration, breeding season, fall migrationexisting data will be supplemented by surveys, where necessary".	Provide comprehensive spring and fall migration information using existing sources and supplemented by surveys, where necessary.	This information request can be addressed through the provision of supplementary information.
			The EIS does not include baseline information related to spring and fall migration of migratory birds and species at risk in the area (from existing sources nor survey information). It is not possible to evaluate the potential effects of the Project on migratory birds, including bird species at		

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			risk or of conservation concern, based on the information provided.		
ECCC-04-EE-01	7.1.2 Effects of potential accidents or malfunctions	21.8.2 train derailment	The EIS guidelines states "The geographical and temporal boundaries for the assessment of malfunctions and accidents may be different than those in the scope of factors for each VC. This will include an identification of the magnitude of an accident and/or malfunction, including the quantity, mechanism, rate, form and characteristics of the contaminants and other materials likely to be released into the environment during the accident and malfunction events." The proponent identified as a worst-case scenario, 576 000 L of diesel could be released. However, the characteristics of diesel may have been omitted. Diesel is classified as a class 3, flammable liquid, during rail transportation. Consequently, a worse case scenario would involve a large fire following a large spill of diesel.	Identify the magnitude of a diesel spill following a train derailment, including the quantity, mechanism, rate, form and characteristics of diesel released into the environment during a derailment.	This information request can be addressed through the provision of supplementary information.
ECCC-05-EE-02	7.1.2 Effects of potential accidents or malfunctions	22.8 Accidents and Malfunctions	The EIS guidelines states "The EIS will also describe the safeguards that have been established to protect against such occurrences and the contingency/emergency response procedures in place if accidents and/or	Describe safeguards that will be established to protect against settling ponds overflow such as monitoring systems or diversion channels in the event of an overflow in	This information request can be addressed through the provision of supplementary information.

ID	Reference to EIS Guidelines	Reference to EIS	Context and Rationale	Specific Conformity Information Requirement	Revised EIS or Supplementary Info
			malfunctions do occur. Detailed contingency and response plans will be presented." The proponent described the mitigation measures that will be established for a train derailment forest fires and hydrocarbon spills but there was no section dedicated to the potential settling/sedimentation overflow. This was identified as a potential accidents and malfunction scenario in chapter 22.8.	order to reduce the risk of adverse effects to valued component.	
ECCC-06-EE-03	7.1.2 Effects of potential accidents or malfunctions	21.8 Accidents and malfunctions	The EIS guidelines states "The proponent will identify the probability of potential accidents and malfunctions related to the project, including an explanation of how those events were identified, potential consequences (including the environmental effects), the plausible worst case scenarios and the effects of these scenarios." The proponent identified in Chapter 2 that the project site will include an explosive magazine storage. Due to the presence of ammonium nitrate prills and ANFO, there is a chance that an uncontrolled explosion could occurr. This was not included or identified in the accidents and malfunction section.	ECCC encourages the proponent to identify the probability and consequences associated to an explosion of ANFO. The EIS will also describe the safeguards that have been established to protect against such occurrences and the contingency/emergency response procedures in place if an uncontrolled explosion were to occur.	This information request can be addressed through the provision of supplementary information.

ID	Reference to EIS Guidelines	Reference to EIS	Context and Rationale	Specific Conformity Information Requirement	Revised EIS or Supplementary Info
ECCC-07-ES-01	9.1.2	11.5.3, page 11-76	The water and sediment baseline study (GENIVAR 2013) was not available for review. This is critical to the understanding of the baseline water and sediment conditions and the assessment of effects in water sediment.	Provide the GENIVAR 2013 report.	This information request can be addressed through the provision of supplemental information
ECCC-08-ES-02	4.18.4.2	11.6.2.1, page 11-144	In reference to the assessment of mixing zone boundaries, the report states that "these results are preliminary and detailed studies such as Attikamagen Lake circulation patterns, bathymetry data for sediment ponds SP1 and SP2 discharge locations, temperature profiles are needed to improve the mixing zone predictions." As the conclusions of this mixing zone assessment indicates mixing zone boundaries that are well into Attikamagen Lake, these detailed studies as well as a full explanation of how the CORMIX model is applied are required now to fully assess the environmental risks from this project to the water quality of Attikamagen Lake.	Provide detailed studies to support mixing zone assumptions as well as a full explanation of how the CORMIX model is applied.	This information request can be addressed through the provision of supplemental information
ECCC-09-ES-03	4.18.4.2	11.6.2, page 11-106	The report states that "At other iron ore mining operations in the Labrador City, Wabush, NL and Fermont, Québec area, the red water condition is associated with tailings effluent and is not an issue associated with waste rock or open pit runoff. The red water condition is not associated with ARD and is associated with	Provide a more rigorous scientific discussion on the potential for red water.	This information request can be addressed through the provision of supplemental information

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	Guidelines		very fine colloidal reddish iron mineral or iron stained quartz / silica particles in suspension. As a result, red water is not considered to be a potential concern at the open pit mine." While understanding some of the anecdotal evidence from nearby operations is useful, a more rigorous scientific discussion on the potential for red water is required to assess the potential risk for this project.	Information Requirement	
ECCC-10-ES-04	9.1.2	11-5	In addition to available regional historical datasets from 2006 (lake sediment and water survey) and 2007-9 (Canada – Newfoundland WQMA), it appears that additional project specific water and sediment sampling was conducted in 2012- 13 by Stantec and WSP. It is not clear if the project specific baseline water and sediment sample dataset is adequate to characterize baseline conditions. In general, recent data is expected across multiple years and seasons to characterize baseline conditions with enough data points to have statistical confidence when compared to future monitoring data. As the project specific baseline data supported by historical regional datasets forms the basis for water quality modelling (and subsequent assessment of risks to water quality), it is important to verify that the baseline data presented in historical and	Verify that the baseline data presented in historical and project specific water and sediment sampling is adequate for this purpose and representative of current baseline conditions.	This information request can be addressed through the provision of supplemental information

ID	Reference to EIS	Reference to EIS	Context and Rationale	Specific Conformity	Revised EIS or Supplementary Info
	Guidelines			Information Requirement	
			project specific water and sediment		
			sampling is adequate for this purpose and		
			representative of current baseline		
			conditions.		
ECCC-11-MSC-	3.2 Study strategy	Ch 6: Effects of the	The EIS relied on older climate normals	Use of older climate normals	This information request can be
01	and methodology,	Environment on the	(1971-2000) for Schefferville A and older	and data should be identified	addressed through the provision of
	7.1.3 Effects of the	Project; Ch 10:	climate data (1948-2012, generally).	as a cause of increased	supplemental information
	environment on the	Atmospheric	Normals for 1981-2010 are not available for	uncertainty in model results.	
	project, 9.1.2	Environment and	Schefferville, and normals for 1991-2020		
	Biophysical	Climate; Ch. 11: Water	have not yet been calculated.	Lack of snowfall data past	
	environment	Resources.		1993 and reduced	
			Given observed trends particularly in	completeness of precipitation	
		Specifically: 6.3	temperature, the older normals and climate	data after 1993 should be	
		Environmental Effects	data may not fully represent current	identified as knowledge gaps.	
		Analysis and Mitigation,	conditions. This is important because		
		6.3.1.1 Existing	temperature and precipitation are required	Consideration should be given	
		Conditions;	for defining the hydrologic conditions.	to producing updated	
		10.5 Existing	Temperature and precipitation significantly	statistics, at least for	
		Environment, 10.5.2.1	affect basin runoff and streamflows. This	temperatures.	
		Climate, 10.5.3.1-10.5.3.3	could have implications for the water		
		(Climate, Temperature,	balance models and results derived from	Calculations should follow	
		Precipitation); 11.5.2	those models for the climate normal year.	data completeness rules such	
		Methodology for		as described for the 1981-	
		Characterization of	Table 10.11 lists appropriate stations and	2020 climate normals here:	
		Baseline Conditions;	recent dates as available up to 2021.	https://climate.weather.gc.ca/	
		11.5.3 Baseline	However Tables 10.13 – 10.17 present	doc/Canadian Climate Norma	
		Conditions; 11.5.3.3	either Schefferville A (climate ID 7117825)	ls 1981 2010 Calculation Inf	
		Environmental Water	data from 1948-2010 or normals from	ormation.pdf.	
		Balance (Tables 11.22-	1971—2000.		
		11.24); 11.5.3.4 Surface		Note: Use of MSC stations	
		Water Supply;	The temperature, rain, snow, and	Schefferville (climate ID	
			precipitation 1971-2000 normals are based	7117827) and Schefferville	

ID	Reference to EIS	Reference to EIS	Context and Rationale	Specific Conformity	Revised EIS or Supplementary Info
	Guidelines			Information Requirement	
			on 23 years of data from 1971 to 1993 only	Cote-Nord (climate ID	
			(the station with a human observer was	7117824), are preferred over	
			replaced by an automatic station at end of	the NC-AWOS, Schefferville A (	
			Sept 1993). (Wind normals were based on	climate ID 7117823) for	
			the full 30 years, 1971-2000).	precipitation when possible,	
				since the NC-AWOS use a	
			Chapter 11 Water Resources, which relies	heated tipping bucket rain	
			heavily on climate data, including selection	gauge that does not work well	
			of wet and dry years, did not appear to use	in freezing temperatures.	
			any climate data after 2012 (Table 11.5 lists	ECCC-MSC Climate Services	
			stations and dates) (with the possible	Atlantic or Quebec could	
			exception of the NL/MUN IDF results from	provide station maintenance	
			2015).	information.	
			Climate data (temperature, total	Note: The total precipitation	
			precipitation, winds) continue to the	data from the various	
			present day from automatic stations, so	automated stations since 1993	
			updated averages based on joining station	may suffer from gaps and	
			data would be possible. However the	quality problems, so they do	
			precipitation data may suffer from gaps,	need to be reviewed carefully,	
			reduced QA/QC, undercatch due to wind	if used, to make sure that only	
			especially in snow, and maintenance delays.	monthly totals based on	
				complete data from	
			Increasing temperatures from 1948 to	functioning gauges are used.	
			2018, have been documented, including in	An example of this is the data	
			the Schefferville Area (Vincent et al. 2020),	from 1997, used in the EIS as	
			and when compared to the 1961-1990	the representative dry year	
			climate normals (seasonal and annual	from the 1948 to 2010 period,	
			Climate Trends and Variations Bulletins	with annual total precipitation	
			online:	of 521 mm (p.11-38). That	
			https://www.canada.ca/en/environment-	might be underestimated:	
			climate-change/services/climate-	there were some months with	

ID	Reference to EIS	Reference to EIS	Context and	Rational	е		Specific Conformity	Revised EIS or Supplementary Info
	Guidelines				1 1 /		Information Requirement	
			change/scie				missing data and some winter	
			trends-varia	<u>ollity/trer</u>	ids-variati	<u>ons.ntmi</u> ).	data when the gauge	
			There have a	lco boon	docroacia	<del>,</del> trands in	appeared not to be functioning properly. However	
			snow cover			g trenus in	there were earlier dry years	
			311000 COVET	LUCC 202			with similar values for the	
			Wabush Lak	A show	decadal o	hanges in	annual total precipitation,	
			annual temp			-	including the year with the	
			(decreases)	-	-		lowest total based on	
			(decreases),				complete data, in 1962, with	
			normal perio		p		518.7 mm.	
				-				
			Av	g			[Note correction may be	
			Те	-	Snowf	Tot.	needed: temperature values in	
			m	o. all	all	Precip	Table 10.13 and Table 11.13	
			(°C	) (mm)	(cm)	(mm)	may not be from 1948-2010 as	
			1961-				described - they are identical	
			1991 -3	6 476.0	455.0	880.6	to the 1971-2000 normals	
			1971-				values in Table 10.14 (monthly	
			2000 -3	5 482.6	445.7	851.6	means, and monthly extremes	
			1981-				of daily max and min	
			2010 -3	1 502.9	428.7	839.5	temperatures based on 1948	
				-   002.5	12017	00010	to 1993).]	
			References:					
			Vincent, L., I	Л. Hartwo	ell & X. Wa	ng (2020):		
			A Third Gen			• • •		
			Temperatur	e for Tren	d Analysis	and		
			Monitoring	Changes i	n Canada's	s Climate,		
			Atmosphere	-Ocean, 🛛	001:			
			10.1080/070	55900.20	20.17657	28. To link		
			to this articl	2:				

ID	Reference to EIS Guidelines	Reference to EIS	Context and Rationale	Specific Conformity Information Requirement	Revised EIS or Supplementary Info
			https://doi.org/10.1080/07055900.2020.17 65728 Environment and Climate Change Canada (2020): Canadian Environmental Sustainability Indicators: Snow cover. Available at: www.canada.ca/en/environment-climate- change/services/environmental- indicators (many pages http://		
ECCC-12-MSC- 02	7.1.3 Effects of the environment on the project, 9.1.2 Biophysical environment	Ch 6: Effects of the Environment on the Project, 6.3 Environmental Effects Analysis and Mitigation, 6.3.1.1 Existing Environment, 6.3.1.2 Effects Analysis and Mitigation, 6.3.4 Hydrological Factors, Section 11.5.3	indicators/snow-cover.html Drought was described briefly (based on the AAFC Canadian Drought Monitor 2002- 2021) but there was little quantitative information or little discussion on impacts based on existing conditions on the project.	Expand description of drought frequency based on past 30 years; expand description of impacts of drought and dry spells on project.	This information request can be addressed through the provision of supplemental information.
ECCC-13-MSC- 03	7.1.3 Effects of the environment on the project, 9.1.2 Biophysical environment	<ul> <li>6.3 Environmental Effects</li> <li>Analysis and Mitigation,</li> <li>6.3.1.1 Existing</li> <li>Conditions;</li> <li>10.5 Existing</li> <li>Environment, 10.5.2.1</li> <li>Climate, 10.5.3.4 Wind,</li> <li>Table 10-13; 11.6.2.1</li> <li>Potential Environmental</li> </ul>	The EIS uses 1971-2000 normals for Schefferville A. Wind averages are based on the full 30 years to 2000, with the monthly maximum of the sustained wind speed reported hourly based on 1953-2002. There are 2 more decades of wind data through to the present. Averages based on the most recent 30 year period (and extremes that include the most recent decades) may be	ECCC recommends calculating updated wind averages using the most recent 30-years (1991-2020) for the averages and the full period of record for the monthly maximum of the sustained winds reported hourly.	This information request can be addressed through the provision of supplemental information.

ID	Reference to EIS Guidelines	Reference to EIS	Context and Rationale	Specific Conformity Information Requirement	Revised EIS or Supplementary Info
		Effects (wind-wave effects on the causeway across Iron Arm, Table 11.13, 11.37 Wave Assessment Summary)	more representative of the existing climate. Estimates of wind statistics affect the wave assessment and design for the causeway across Iron Arm.	As noted above, calculations should follow data completeness rules such as described for the 1981-2020 climate normals here: <u>https://climate.weather.gc.ca/</u> <u>doc/Canadian_Climate_Norma</u> <u>ls_1981_2010_Calculation_Inf</u> <u>ormation.pdf</u> .	
ECCC-14-MSC- 04	7.1.3 Effects of the environment on the project, 9.1.2 Biophysical environment	Ch 6: Effects of the Environment on the Project, 6.3 Environmental Effects Analysis and Mitigation, 6.3.1.1 Existing Environment; Ch 10: Atmospheric Environment and Climate, 10.5 Climate, 10.8 Accidents and Malfunctions, 10.8.3 Forest Fire	Lighting from thunderstorms could have effects on the project, and is a risk factor for forest fires.	Enhance information about lightning risk. Make use of Canadian Lightning climatology (Kochtubajda and Burrows, 2020). B. Kochtubajda & W.R. Burrows (2020): Cloud-to- Ground Lightning in Canada: 20 Years of CLDN Data, Atmosphere-Ocean, 58:5, 316- 332, DOI: 10.1080/07055900.2020.1845 117	This information request can be addressed through the provision of supplemental information.

## ANNEX 2: Departmental advice to the proponent Joyce Lake Direct Shipping Iron Ore Project

Please use the table below to provide any additional advice to the proponent not needed for conformity, such as guidance or standard advice related to your departmental mandate. This information will be passed along to the proponent, but no responses will be required from the proponent.

ID	Reference to EIS	Context and Rationale	Advice to the Proponent
ECCC-15-CWS-04		This is standard advice provided to proponents regarding lighting design and mitigations to reduce potential impacts to migratory birds and species at risk.	<ul> <li>Attraction to lights at night or in poor visibility conditions during the day may result in collision with lit structures, or with other migratory birds. Disoriented migratory birds are prone to circling light sources and may deplete their energy reserve and either die of exhaustion or be forced to land where they are at risk of depredation.</li> <li>To reduce the risk of disturbance or harm to migratory birds related to humaninduced light, ECCC-CWS recommends implementation of the following beneficial management practices:</li> <li>Use the minimum amount of pilot, warning and obstruction lighting needed on tall structures. Warning lights should flash and completely turn off between flashes.</li> <li>Use the fewest number of site-illuminating lights possible in the project area. Only use strobe lights at night, at the lowest intensity and the smallest number of flashes per minute allowable by Transport Canada.</li> <li>Reduce lighting levels during severe weather events that may force migratory birds to land to prevent birds from landing in areas that would cause injury, harm, or death.</li> <li>Avoid or restrict the time of operation of exterior decorative lights such as spotlights and floodlights whose function is to highlight features of buildings or to illuminate an entire building. These lights, especially on humid, foggy or rainy nights, can draw birds from far away. Turn off these lights during the migratory season when the risk to birds is highest and during periods when birds are dispersing from their nests or colonies.</li> <li>Shield safety lighting so that the illumination shines down. Only install safety lighting where it is needed, without compromising safety.</li> </ul>

			<ul> <li>Shield street and parking lot lighting so that little escapes into the sky, and it falls where it is required. Consider using LED lighting fixtures as they are generally less prone to light trespass.</li> <li>The proponent should make all reasonable attempts to limit construction activities to the day and avoid illuminating the habitat adjacent to the worksite.</li> </ul>
ECCC-16-CWS-05		This is standard advice provided to proponents regarding the development of Wildlife Response Plans.	<ul> <li>All emergency incidents can potentially affect wildlife. During these incidents, ECCC acts as a Resource Agency, which sets wildlife emergency response standards and guidelines related to Migratory Birds and Species at Risk under its jurisdiction. As such, Wildlife Response requires a Wildlife Emergency Response Plan (WRP), which is a component of the Incident Command System (ICS) for pollution incidents affecting wildlife, and should address all of the various procedures and strategies required to mount an effective wildlife response. At minimum, a WRP must include the following information: <ol> <li>Information on the wildlife potentially at risk in the area;</li> <li>Mitigation measure to deter non-affected areas;</li> <li>Mitigation and response measures to be undertaken if wildlife and/or sensitive habitats become contaminated by the incident (including treatment of oil-affected wildlife), and</li> <li>The type and extent of wildlife monitoring that would conducted during and following a pollution incident.</li> </ol> </li> <li>The proponent is recommended to consult ECCC when developing Wildlife Emergency Response Plans (WRPs). ECCC is available to review WRPs prior to their implementation.</li> <li>Even during an emergency situation, it is also important to note that permits issued by ECCC may be required prior to deterring or relocating Migratory Birds and/or Species at Risk.</li> </ul>
ECCC-17-MSC-05	Ch 6: Effects of the Environment on the Project, 6.3 Environmental Effects	Intensity-Duration-Frequency (IDF) extreme rainfall estimates are used for design of water management structures. Long years of	Recommend checking short duration IDF extreme rainfall analysis results produced by the Engineering Climate Service Unit of ECCC-MSC as these are updated periodically. Time permitting they may also be able to do custom

	<ul> <li>Analysis and Mitigation, 6.3.1.1</li> <li>Existing Environment;</li> <li>Ch 10:</li> <li>Atmospheric Environment and</li> <li>Climate, 10.5 Climate, 10.8 Accidents</li> <li>and Malfunctions;</li> <li>Ch. 11: Water Resources, 11.5.2.2 Data</li> <li>Analysis</li> </ul>	records are important to represent the full range of inter-annual variability and to reduce the uncertainty of the estimates.	updates by request as new data becomes available. The current version 3.2 released March 26, 2021, includes results for Schefferville based on data from 1965 to 1992 + 2 additional years, 2014 and 2017. The 24-hr 100 year return period value is 86.4 mm, similar to the value presented based on the NL/MUN analysis (81.7 mm, Table 6.2), or the 85.0 mm (Table 11.13). <u>https://climatedata.ca/site/assets/themes/climate-data- ca/resources/app/idf/idf_v-</u> <u>3.20_2021_03_26_711_QC_7117827_SCHEFFERVILLE.txt</u>
ECCC-18-MSC-06	Ch 6: Effects of the Environment on the Project, 6.3 Environmental Effects Analysis and Mitigation, 6.3.1.1 Existing Environment; Ch 10: Atmospheric Environment and Climate, 10.5 Climate, 10.8 Accidents and Malfunctions; Ch. 11: Water Resources, 11.5.2.2 Data Analysis (including p.11-25), 11.5.3 Baseline Conditions, 11.5.3.1 Climate	Long-duration (1-30 day) IDF results are produced by ECCC. Slow moving synoptic scale events can produce high rainfall totals over durations of 2 to 3 days and can be significant for operations with large water management requirements. In addition, the long-duration IDF analysis includes estimates of the Probable Maximum Precipitation (PMP) for 1 to 30-day durations. The 1-day PMP based on total precipitation was 192.8 mm, compared to the 142 mm presented in the EIS (11.5.3.1, p. 11-38).	Recommend using, as applicable, long-duration (one to 30 day duration) extreme rainfall analysis results, produced by ECCC-MSC's Engineering Climate Services Unit (ECSU). The 1-30 day IDF results are available online, here: <u>https://climate.weather.gc.ca/prods_servs/engineering_e.html</u> , with link to Intensity-Duration-Frequency (IDF) Files, then to folder 1- 30_Day_IDF/1-30_jour_IDF. Consider updating the Probable Maximum Precipitation estimates in the EIS using the values from this analysis. The 1-30 day IDF results were last produced Jan 27, 2016. Currently the results for Schefferville A (climate ID 7117825) based on total precipitation, are based on the years 1948 to 2010. It may be possible to get more updated results by joining more recent station records, as a custom request to the Engineering Climate Services Unit at <u>ec.scg-ecs.ec@canada.ca</u> .
ECCC-19-MSC-07	Ch 6: Effects of the Environment on the Project, 6.3 Environmental Effects	Snowfall data are not available at Schefferville after 1993. As noted in MSC-1 of Annex 1, trends have been observed in temperature, precipitation, and snow cover.	Explore research results about snowfall/snow cover changes, and whether it is possible to adjust older snowfall averages (and the proportion of total precipitation falling as snow) for the most recent 30-year period. The province of Québec's Ministère de l'Environnement et de la Lutte contre les

Analysis and Mitigation, 6.3.1.1	This may make averages based on older	changements climatiques (MELCC) may be able to provide additional
Existing Environment;	snowfall data alone unrepresentative of	information through provincial networks not available on the ECCC climate
Ch 10:	current conditions.	website. Questions can be addressed to : Info-
		Climat@environnement.gouv.qc.ca.
Atmospheric Environment and		
Climate, 10.5 Climate, 10.8 Accidents		
and Malfunctions;		
Ch. 11: Water Resources, 11.5.2.2 Data		
Analysis, 11.5.3.1 Climate (including		
p.11-34)		