

**Annex 1 - Information Requirements for the Rook I Project draft Environmental Impact Statement**

**Table 1 – Federal Indigenous Review Team – Technical Review of Oct 31, 2023 NexGen Responses to Technical Review Comments of NexGen draft Environmental Impact Statement for the proposed Rook I project**

IR #	Dept	Reference to EIS, appendices/ supporting documents	Result of Review of NexGen Oct 2023 IR Response	Justification/Rationale	Follow up IR #	Follow up Information Request
1.	CNSC	General	Accepted			
2.	MN-S	Section 1.1.7 Section 17.2.9 Section 18.2.1	Accepted			
3.	MN-S	Section 1.2.3	Accepted			
4.	ECCC	Section 1.2.6	Not Accepted	<p><b>Context:</b> Parts one and two of the original IR have been met. These parts related to requests for information about the presence of fractures, faults and other discontinuities as well as providing the distance between underground tailings storage and Patterson Lake. This information was provided by the Proponent in their response.</p> <p>Further details are requested for part three of the original IR, as well as parts one and two of IR 26, related to scientific information that is needed to assess the potential for contaminants to migrate from the Underground Tailings Management Facility (UGTMF) and the Reflooded Mine Workings (RMW) area, to Patterson Lake by the groundwater pathway, and details related to the extent and associated timing of potential contamination. The details provided and requested in this IR are in following with the original request to demonstrate that no contaminants will migrate or seep into Patterson Lake from the cemented backfill material. The information requested is intended to provide specificity to the request to support a more structured response. It is also noted that discussion of the RMW as a source of contamination to Patterson Lake by the groundwater pathway was not discussed in Section 10.5.1 of the EIS. It is unclear if the EIS considered the RMW as a contamination source within the term UGTMF (potentially due to the close proximity of the UGTMF and the RMW).</p> <p>The Proponent’s response indicated that an advective flux of 0.55 m<sup>3</sup>/d from the UGTMF and 2.7 m<sup>3</sup>/d from the RMW to Patterson Lake is anticipated, as listed in Figure A-17 of Appendix A of Draft EIS TSD XIV. The advective flux values of 0.55 m<sup>3</sup>/d and 2.7 m<sup>3</sup>/d are not listed in the EIS or Appendix A of Draft EIS TSD XIV, outside of Figure A-17. While Figure A-17 contains a diffusive flux section, it has not been made clear how these values were considered or utilized. It was therefore difficult to assess the validity of the values in Figure A-17. The timing of when peak mass flux of contaminants from the UGTMF and RMW to Patterson Lake would occur was also not clear. A summary of the mass flux of individual contaminants from the UGTMF and RMW after closure could not be found.</p> <p>A clear understanding of how regional hydrogeology and the Project results in groundwater being transported from the UGTMF and RMW to Patterson Lake</p>	4-R1	<ol style="list-style-type: none"> <li>1. Provide details on how the advective flux of 0.55 m<sup>3</sup>/d from the UGTMF and 2.7 m<sup>3</sup>/d from the RMW to Patterson Lake were determined (Figure A-17 of Appendix A of Draft EIS TSD XIV). Details related to how mass flux from the UGTMF to Patterson Lake will occur over time should be provided. The requested details should be included within the body of text in Appendix A, with a summary of key parameters and results provided in the body of the EIS.</li> <li>2. Provide details on how the flooding of the mine during closure will impact regional hydrogeology, specifically related to the migration of contaminants from the UGTMF and RMW to Patterson Lake by the groundwater pathway.</li> <li>3. Clarify if contamination sourced from the RMW by the groundwater pathway has been included within the term UGTMF in section 10.5.1 of the EIS. If the RMW was not considered as a source of contamination to Patterson Lake by the groundwater pathway in Section 10.5.1 of the EIS, it should be added.</li> <li>4. Include a table summarizing the predicted mass flux of contaminants from the UGTMF and RMW to Patterson Lake over time.</li> <li>5. Provide justification for the assumption in the groundwater flow model of an equivalent porous media approach for groundwater transport through the shear and fault zones. The model should give due consideration for fracture dominated transport, either by directly modelling as fracture flow or through a robust justification for how the parameters used in the existing equivalent porous media model are reflective of fracture-dominant transport.</li> <li>6. Provide additional information on the assumption that dispersivity is 10% of the flow pathway for vertical flows from the UGTMF to Patterson Lake. Provide a reference for the validity of this approach that is either peer reviewed or which demonstrates that it is an established method. The supporting documentation for the use of this method to estimate dispersivity should indicate that it is valid for situations that are comparable to the Project site, notably vertical groundwater flows that are likely to be fracture dominated.</li> <li>7. Provide additional details on why the hydraulic conductivity value of the sandstone unit in the model is two orders of magnitude above the geometric mean.</li> <li>8. Provide details on the source of the values selected for the hydraulic conductivity of the fault and shear zones.</li> <li>9. If multiple calibrated model solutions were trialed, provide details, including why the parameters that were selected are considered the most appropriate model solution. If multiple calibrated model solutions were not trialed, provide</li> </ol>

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				<p>is requested to assess this potential pathway for surface water contamination. From Section 3.3.2 (Groundwater Flow Pathways) of Appendix A of Draft EIS TSD XIV, the advective flux from the UGTMF and RMW to Patterson Lake is stated to occur following flooding of the mine during closure:</p> <p>“Upon completion of mining and placement of underground waste, the mine would be flooded, and groundwater pressures would re-establish to natural hydrostatic conditions, which are anticipated to be similar to those observed in the pre-development period. Upon saturation of the mine backfill and open workings, groundwater would migrate from these source areas, through the geological pathways, discharging to the receiving environment.”</p> <p>The groundwater contaminant transport model is the primary tool being used to predict when and to what extent Patterson Lake may be contaminated by the groundwater pathway. It is therefore important that details of how key parameter values in the model were selected are provided and that the best available information is utilized. Parameter values in the groundwater model were selected by a variety of methods, including site analogues, literature values, and through model calibration. The source of hydraulic conductivity values for the fault and shear zones within the local areas was not clear. For vertical dispersivity from the UGTMF and RMW, a value equal to 10% of the flow pathway was used, referencing lecture notes.</p> <p>In addition to the parameters of relevance to contaminant transport in groundwater listed above, the fault zone and shear zone features that extend outside of the local area were included in the model through the following approach outlined in Section 2.3.3 (Groundwater flow Pathways) of Appendix A of Draft EIS TSD XIV:</p> <p>“To account for the presence of these [fault and shear zone locations outside of the local area] features, the bedrock in this area was assigned a horizontal hydraulic conductivity of <math>1.3 \times 10^{-07}</math> m/s with an orientation of 43° from north (i.e., approximating the trend of the fault and shear zones) and <math>1.0 \times 10^{-08}</math> m/s in the perpendicular (i.e., northwest-southeast) direction.”</p> <p>The approach to numerical modelling of groundwater flow is also relevant to assessing predictions for the transport of contaminants to Patterson Lake from the UGTMF and RMW by the groundwater pathway. Notably, in Section 2.2 (Numerical Model Approach) of Appendix A of Draft EIS TSD XIV, a general assumption and limitation applied to the numerical modelling approach is:</p> <p>“Groundwater flow in the model, regardless of the presence of bedrock fractures, is represented by an equivalent porous media approach.”</p> <p><b>Rationale:</b> Following from the original IR to demonstrate that no contaminants will migrate or seep into Patterson Lake from the cemented backfill material,</p>		<p>information to support that the calibrated parameter values represent a unique calibration solution.</p> <ol style="list-style-type: none"> <li>10. Where model parameters were obtained from site analogues or literature values, provide additional details that establish why the selected site analogues are valid for the Project site.</li> <li>11. For fault and shear zone features that extend out of the local area, provide a clear explanation of the method used to determine the location, size, angle, and parameters that were used in the model to describe these zones. Provide the reasoning for the use of different hydraulic conductivity values for the fault and shear zones within the local area vs outside the local area.</li> <li>12. In the sensitivity analysis, provide a justification for the magnitude of variability considered for each parameter. The justification should include consideration of how the value for each parameter was selected (field data, model calibration, etc.) and the level of uncertainty associated with each parameter. The magnitude of variability used for sensitivity analysis for each parameter should be chosen with respect to the level of confidence in the accuracy of each parameter value.</li> </ol>

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				<p>specific information is being requested related to groundwater as a contamination pathway to Patterson Lake. Expansion of the IR is intended to elucidate outstanding issues and improve specificity. Parameter values with an unclear source and the selection of model assumptions and parameters that are consequential simplifications of known site characteristics result in a high degree of uncertainty in the reliability of predictions from the groundwater model, predictions for contaminant transport from the UGTMF and RMW to Patterson Lake and subsequent impacts to fish and fish habitat cannot be adequately assessed.</p> <p>The groundwater flow and contaminant transport models are critical to predictions of how much and when contaminated groundwater from the UGTMF and RMW will reach Patterson Lake. To adequately assess the validity of the groundwater models, the reasoning behind underlying assumptions should be clearly explained. Specifically, the use of an equivalent porous media approach to model fractured media should be justified as the fracture dominated fault and shear zones are the likely path for water from the UGTMF and RMW to reach Patterson Lake.</p> <p>Using the most accurate values available for key parameters is important to assess the validity of predictions of the contamination pathway from the UGTMF and RMW to Patterson Lake. The parameters that quantify key groundwater characteristics should be based on the best available data, with the reasoning behind selection criteria clearly outlined. Where regional analogues or literature values are used, a justification of why the analogues are reasonable should be provided, based upon similarities between the Project location and the analogue location.</p>		
5.	ECCC	Section 2 Section 3 Section 14 Section 16 Section 20 Section 23 Section 24 Table 20.3-1 Table 23A-5	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent states that the information on their approach to minimizing, avoiding, and mitigating effects to woodland caribou is summarized in the Draft EIS. However, the information provided in the draft EIS is insufficient to adequately assess impacts and plans related to woodland caribou. The mitigations listed in Table 14.4-1 are insufficient to determine if impacts to boreal woodland caribou will be fully addressed, and often the proposed mitigation is the commitment to develop a Caribou Mitigation and Offsetting Plan (CMOP).</p> <p><b>Rationale:</b> The Proponent states that they are in the process of developing the CMOP and are engaging with Saskatchewan and Indigenous groups to meet provincial requirements. ECCC is collaborating with Saskatchewan to support alignment of the CMOP with the federal recovery strategy.</p> <p>ECCC recommends using the Operational Framework for Use of Conservation Allowances to inform offset multipliers. However, the determination of the appropriate offset ratio following the framework is case-specific and is based</p>	<b>5-R1</b>	<p>Provide the draft Caribou Mitigation and Offsetting Plan, including details on how residual effects to Caribou will be offset.</p> <p>If details on mitigation and offsetting cannot be provided at the time of response, present a discussion of the gap in information, related uncertainty with regards to potential effects and mitigation, and any additional mitigation measures and/or monitoring and follow up that will be implemented on a precautionary basis.</p>

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				<p>on an assessment of several factors such as impact type, severity, duration, site characteristics, vulnerability, uncertainties and risk characterization.</p> <p>For caribou, ECCC typically recommends a minimum offset multiplier of 4:1 (offset outcome : residual impact). This is a benchmark ratio applied to a project that is in the lower end of the risk spectrum; for example, for a project with a low severity impact adversely affecting a low vulnerability ecological component. In general, the minimum 4:1 multiplier accounts for time-lags to restoration, uncertainty in outcomes, a precautionary approach, and the adverse impact itself in its specific context. However, offset multipliers are variable and determined by project-specific circumstances and associated risks and uncertainties. Based on ECCC's characterization of risk for this Project a ratio of 4:1 to 20:1 would be consistent with the recovery objectives. Relevant factors in risk characterization include an assessment of population status, habitat replicability, habitat function, connectivity, and sensitivity, magnitude of impact, geographic scope, duration of effect, frequency, timing and irreversibility. When additional information is made available, a more specific range for offsetting can be provided.</p>		
6.	CNSC	Table 2.4-4	<b>Not Accepted</b>	<p>For this IR, NexGen states that they disagree with the reviewer and will not be updating Section 16.3.3 of the EIS or the IER due to the level of information within the documents being appropriate. NexGen should continue to demonstrate that they have been reaching out to meet with ACFN to get their input and remain open to including any relevant information about ACFN's traditional uses and knowledge that may be relevant to the Rook 1 project if provided.</p> <p>ACFN will be completing their Land Use and Indigenous Knowledge Study in February 2024, there may be additional information available and show land use in the region by ACFN members. NexGen should remain flexible and integrate and summarize any key findings from this study within the EIS including Section 16.3.2 and other relevant sections as applicable.</p> <p>If the study does not reveal any new or additional relevant information on ACFN's land use as it pertains to the Rook 1 project, or it does not get submitted to NexGen and the CNSC within a timely manner (in advance of the EIS being finalized), then this IR would be accepted as long as NexGen continues to document their attempts to engage with ACFN to gather and consider their knowledge, land use and concerns within the EIS and a proposed path forward to continue working with ACFN on addressing any concerns they raise regarding the Rook 1 project, as appropriate.</p>		
7.	CRDN	Section 2.5.1	<b>Accepted</b>			
8.	MN-S	Section 2.5.2.1 Section 2.6.3.1.1	<b>Accepted</b>			
9.	MN-S	Section 2.5.2.2, Table 2.5-1	<b>Accepted</b>			
10.	CRDN	Section 2.5.4	<b>Accepted</b>			

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11.	MN-S	Section 2.5.5	Accepted			
12.	MN-S	Section 2.5.5	Accepted			
13.	CNSC	Section 2.6	Accepted			
14.	MN-S CNSC	Section 2.6.1.2, Section 6.5.3, p. 6-21	Accepted			
15.	CNSC	Section 2.6.1.2.2 Other Indigenous Groups	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
16.	CNSC	Section 2.6.1.3 and Appendix 2B	Not Accepted.	<p>Although NexGen provided information about the verification process for CRDN with an example chart, CNSC requires NexGen to complete this process with all identified Indigenous Nations and communities and provide updated charts and rational for each within the Final revised EIS in order to accept this IR.</p> <p>The example table of issues and concerns for CRDN is acceptable and will need to be completed for each of the identified Indigenous Nations.</p> <p>CNSC recommends including another line in the table which indicates the status of the concern and justification of the status including how NexGen and the Nation came to consensus on the concern and validated the response and status with the Indigenous Nation.</p> <p>If NexGen was not able to receive a response with regards to addressing and validating the concerns and proposed responses with particular Indigenous Nations, NexGen should continue to document the attempts made to reach out, engage and address the concerns raised by the Indigenous Nation and confirm NexGen's planned path forward to continue to work with the Indigenous Nation and address their concerns, as appropriate.</p>		
17.	MN-S		Accepted			
18.	MN-S	Table 2A-2	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
19.	MN-S	2F, all	Accepted			
20.	MN-S	Section 3.6.2.1	Accepted			
21.	CNSC MN-S	Section 3.6.2.2	Accepted			
22.	CRDN	Section 4.1	Accepted			
23.	CRDN	Section 4.4	Accepted			
24.	CNSC	Section 4.4.2.1	Accepted			
25.	CNSC	Section 4.5.4 Process Stripping Method	Accepted			
26.	ECCC	Section 4.5.6	Not Accepted	See IR-4		See IR-4

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27.	ECCC	Section 4.5.6.4 Section 4.5.6.4.1	Accepted			
28.	CNSC	Section 4.5.6.4 TSD XVIII- SWWBM Report-section 5.2.2.4	Accepted			
29.	CNSC/ECCC	Section 4.5.6.4 Waste Rock	Accepted			
30.	ECCC	Section 4.5.7	Accepted			
31.	CNSC	Table 4.5-8	Not Accepted	The reviewer agrees with the response NexGen provided. However, in Table 4.5-8 of Draft EIS Section 4.5.6.2 (Tailings), geotechnical stability of the UGTMF caverns is not included under the 'Technical' category and 'Construction risk and complexity' sub-category.	31-R1	Add geotechnical stability of the UGTMF caverns to Table 4.5-8 under the 'Technical' category and 'Construction risk and complexity' sub-category.
32.	CNSC	Section 4.5.9 Camp Location	Not Accepted	<p>Although the preferred alternative for camp location is the west location after a screening level assessment for camp location with considering environmental, technical, economic, and social factors, the main shortcoming of the alternative assessment is that worker health and safety is not considered, in particular, under potential accidents and malfunctions. The preferred camp location may not be a preferred or safe location for workers if the factor of worker health and safety is taken into account for operation and/or under potential accidents and malfunctions in the process plant.</p> <p>In the response, with respect to the results of the assessment of accidents and malfunctions, NexGen stated that <i>"The probability of this type of accident or malfunction to occur is likely (i.e., less than or equal to 1 occurrence in 10 years and more than 1 occurrence in 100 years) and the consequence associated with this type of accident or malfunction is minor to moderate, for an overall risk rating of low to moderate (i.e., risk -reduction activities would reduce the risk associated with these scenarios to ALARP; risk may be characterized as tolerable)."</i> The reviewer does not agree with this statement.</p> <p>The west location is about 300~500 m west of the process plant, which is within the zone of (Acute Exposure Guideline Level) AEGL-2 based on the proponent's assessment of bounding scenario 6 – acid plant tail scrubber failure whether or not it is under worst-case weather conditions (i.e., the distance to the process plant from 261 m to 2500 m for AEGL-2, assumed peak wind speeds and worst-case conditions for dispersion of released materials) or under typical weather conditions (i.e., the distance to the process plant from 122 m to 849 m for AEGL-2, assumed average wind speeds and average conditions for dispersion of released materials). The level AEGL-2 means that the airborne concentrations of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape. This consequence can be classified as Major based on the definition of consequence in the EIS (Table 21.5-2). The probability of this accident is 0.1 per year as stated in the EIS (Table 21.6-3), which falls under likelihood of Likely to Very Likely. The risk of this accident to worker health and safety would then be Moderate to High based on Table 21.5-3 in the EIS.</p>	32-R1	Provide further justification on the assessment of potential risk level of accidents and malfunctions on the camp workers or an amended camp location assessment as required by the Saskatchewan Ministry of Environment.

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33.	CNSC	Section 4.5.12	Accepted			
34.	CNSC	Section 4.5.12	Accepted			
35.	CNSC	Section 4.5.13	Accepted			
36.	ECCC	Section 4.5.16 Section 11.4.2	Not Accepted	<p><b>Context:</b> The Proponent has acknowledged that a combined sewage and mine effluent final discharge point could reduce environmental impacts to surface water quality and aquatic receptors and has committed to evaluating options for a combined discharge system for effluent and sewage, though additional information is needed for all parts of the IR. ECCC acknowledges that the Province has requested the Proponent evaluate alternative locations for the mine campsite, and that this design change could influence the design decisions for a combined mine effluent and sewage discharge.</p> <p>It is however noted in the Proponent’s IR response that: “...the currently proposed system with two discharge points represents a conservative assessment of Project environmental effects because this assumption considers two separate discharge disturbances.” And: “...using the conservative approach described above, the treated sewage effluent did not adversely affect the surface water quality assessment (Draft EIS Section 10.5.3.1 [Lifespan of the Project]) nor the fish and fish habitat assessment (Draft EIS Section 11.5.4.2 [Significance Determination]). A revised combined discharge design is expected to be within the bounds of the EA and would not require reassessment.”</p> <p>The current assessment examines the discharges in separate locations and plumes. ECCC acknowledges the Proponent’s conclusion that two discharge points represent a greater disturbance and therefore evaluating two discharge points could be considered conservative compared to a single discharge point. However, the bounds of the current evaluation of effects does not consider the additive impacts from elevated concentrations of contaminants such as total suspended solids, chlorides and un-ionized ammonia from the sewage discharge to the mine effluent discharge within the near-field aquatic environment. Therefore, the effects in the receiving environment from the total concentrations of contaminants based on a single combined discharge should still be assessed.</p> <p><b>Rationale:</b> If a combined sewage and effluent discharge is selected, updated information is required to consider potential effects on fish and fish habitat. To adequately capture potential effects to the aquatic environment in the EIS, a review of the finalized combined discharge design, near-field modelling, and updated predictions in the environmental risk assessment are required to confirm modelling predictions for effluent discharged into the receiving environment.</p>	36-R1	Provide the following items for review and comment if a combined sewage and effluent discharge is selected: <ul style="list-style-type: none"> <li>Finalized combined discharge design,</li> <li>Near-field modelling,</li> <li>Updated environmental risk assessment predictions</li> </ul>
37.	CNSC	Section 4.5.17.3.1	Not Accepted	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		

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38.	ECCC	Section 5 Section 10 Section 14.4.2 Appendix 23A Table 5.4-4 Table 23A-5	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
39.	NRCan	5.2.6 8.3.1.1 5.1.3.2	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
40.	ECCC	Section 5.3.3.5	<b>Not Accepted</b>	<p><b>Context:</b> In response to the IR, the Proponent provided detailed justification for how the cutoff criteria for sulphur was established. The Proponent also indicated from the bulk mineralogy that although there is very little carbonate mineral in the rock to provide neutralization potential, that the silicate minerals in the rock will provide the neutralization potential (NP) needed to neutralize any sulphide oxidation. These led to the classification of potentially acid generating (PAG) and non-PAG rocks.</p> <p>However, the Proponent stated that “... the rate of sulphide oxidation is lower than the rate of silicate weathering” and it is not clear how the rate of sulphide oxidation could be slower than that the rate of silicate weathering when the opposite is typically true.</p> <p><b>Rationale:</b> Clarity on the rate of sulphide oxidation in comparison to the rate of silicate weathering is needed to assess the NP of silicate minerals and the subsequent impact on the classification of PAG and non-PAG rocks. Any error in the classification of the PAG rock may result in increased ARD/ML and therefore impact the receiving environment including waters frequented by fish.</p>	<b>40-R1</b>	Provide additional information to support the statement that “... the rate of sulphide oxidation is lower than the rate of silicate weathering”. The information provided should be linked to the classification of PAG and non-PAG rocks.
41.	CNSC	Section 5.3.3.5 Geochemical conditions, waste rock	<b>Accepted</b>			
42.	ECCC	Section 5.4.3	<b>Accepted</b>			
43.	ECCC	Section 5.4.4	<b>Accepted</b>			
44.	ECCC	Table 5.4-4	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent indicated that contact water from the non-potentially acid generating (NPAG) waste rock storage facility would report to the site run off pond 2, which they consider the final discharge point (FDP). In the EIS, the Proponent stated that “The west bermed runoff collection area would be located on the west side of the Project site. This collection area would receive runoff from the local contributing area as well as overflow from contact water pond #2, if required. This bermed area would prevent suspended solids entrained in runoff water from entering Patterson Lake by natural filtration through an unlined berm”, but did not mention any control points where the quality of effluent will be monitored.</p>	<b>44-R1</b>	Demonstrate how all effluent, including any seepage or surface runoff containing deleterious substances that flows over, through or out of the site, will be discharged through an FDP.



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				<p>Part one of the <i>Metal and Diamond Mining Effluent Regulations</i> (MDMER) defined effluent to mean:</p> <p>(a) hydrometallurgical facility effluent, milling facility effluent, mine water effluent, tailings impoundment area effluent, treatment pond effluent or treatment facility effluent other than effluent from a sewage treatment facility; or</p> <p>(b) any seepage or surface runoff containing any deleterious substance that flows over, through or out of the site of a mine.</p> <p>It also provides a definition for the FDP, “Final discharge point in respect of an effluent, means an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent.” The MDMER requires that any seepage or surface runoff containing deleterious substances that flows over, through or out of the site of a mine is required to go through the final discharge point.</p> <p><b>Rationale:</b> Without any effluent monitoring in place to measure the quality of water leaving the unlined bermed area or without further information regarding whether runoff that filters through the unlined berm will be discharged through the FDP or will bypass the FDP and discharge directly to Patterson Lake, it is unknown if there will be effluent containing deleterious substances discharging from a location that is not the FDP. Confirmation that all effluent will be discharged through an FDP will allow ECCC to assess potential adverse effects to water frequented by fish.</p>		
45.	ECCC	Section 5.4.4.3 Section 5.5.3.1 Table 11.4-1	<b>Not Accepted</b>	<p><b>Context:</b> Parts one and two are accepted. The Proponent’s response indicated that wind and water erosion is not expected given the slope and construction of the waste rock storage area (WRSA). Additionally, the waste rock material is composed of crystalline rock that was blasted large boulders that is not prone to wind erosion. It was also indicated that the final vegetation cover will also help to reduce any potential wind or water erosion.</p> <p>The Proponent indicated that non-PAG rock or borrow materials may be used for compacted layer overlying the PAG rock. Also, a vegetative cover that is suitable for plant growth will be applied over the compacted non-PAG and borrow material.</p> <p>Parts three and four were not fully responded to; although the Proponent indicated that the ARD mitigation associated with the cover system does not rely on the frozen core, they do not provide the thickness of the cover system that will ensure that the active layer is within the non-PAG cover material.</p> <p>Additionally, the Proponent referred to post-closure groundwater and solute transport modelling (Draft EIS TSD XIV Groundwater Flow Solute Transport Modelling Report). However, the requested information, such as thickness of</p>	<b>45-R1</b>	<ol style="list-style-type: none"> <li>1. Provide the thickness of the active layer and demonstrate that the active layer will be contained within the thickness of the cover during the warm months.</li> <li>2. Provide details on how the seepage from the PAG and NPAG WRSA will be managed post-closure if the ditches and runoff collection system are decommissioned.</li> </ol>

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				<p>the cover and how the seepage from the PAG and non-PAG waste rock storage area (WRSA) would be managed post closure, was not contained in the referenced report.</p> <p><b>Rationale:</b> It is unclear if the active layer will be contained within the non-PAG material during the warm or thaw months, whether or not the frozen core is relied on for containment. The thickness of the active layer is unknown, therefore ECCC cannot verify the Proponent's conclusions that the cover and vegetated cover layers are thick enough to contain the active layer during the warm months.</p> <p>Additionally, the Proponent has not clarified if the ditches and the runoff collection system will be decommissioned or provided details on how the seepage from the PAG and NPAG WRSA will be managed post-closure if they are decommissioned. This information is needed to assess the adequacy of the collection systems and any impact potential seepage may have on the environment.</p>		
46.	ECCC	Section 5.4.5.2 TSD XVIII, Section 3.4	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has addressed parts one, two, three, and five. However, further information is requested in responses to parts four, six and seven.</p> <p>ECCC notes that non-contact water/non-mineralized contact water runoff from site infrastructure and seepage from the west bermed runoff collection area meets the requirements of the definition of mine effluent under the Metal and Diamond Mining Effluent Regulations (MDMER) as it has the potential to contain deleterious substances. Runoff water from site infrastructure such as the airstrip and roads may be categorized as non-contact water because it does not come into contact with contaminants of potential concern (COPCs) directly from mining operations infrastructure. However, runoff water still has the potential to contain deleterious substances from all site infrastructure including the airstrip, roads, and camp area, and from mine-related activities such as operation of vehicles, including heavy machinery and aircraft, spills, fire management practices, and snow removal practices.</p> <p>In their response the Proponent has confirmed that contact water pond #2 is proposed to be the Final Discharge Point (FDP) for monitoring and that the downstream west bermed runoff collection area would discharge into the ground. However, from the figures provided in the Proponent's IR response, it is noted that in addition to potential runoff from the airstrip, the runoff to the west bermed runoff collection area would include runoff from the site access road and runoff from the site road that leads to the Explosives Magazine Storage Area. Site infrastructure runoff water has the potential to contain deleterious substances from Project-related activities, therefore deleterious substances from mine related activities could be introduced to the water within the west bermed runoff collection area after the proposed FDP at the outflow of contact water pond #2.</p>	<b>46-R1</b>	<ol style="list-style-type: none"> <li>1. Provide an updated site water management plan that includes management of the site infrastructure runoff water (i.e. non-contact water/non-mineralized contact water) from the airstrip and the west bermed runoff collection area.</li> <li>2. Demonstrate how all Project effluent as defined under the MDMER (i.e. runoff and seepage), will be discharged through an FDP.</li> <li>3. Demonstrate how the west bermed runoff collection area will prevent seepage of potentially deleterious substances containing non-contact water.</li> </ol>

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				<p><b>Rationale:</b> An updated site water management plan that includes management of the site infrastructure runoff water from the airstrip and the west bermed runoff collection area is necessary to evaluate how deleterious substances could impact the receiving environment. The proposed location of the FDP at the outflow of contact water pond #2 prior to the west bermed runoff collection area may not allow for characterization of all potential deleterious substances. This may lead to the accidental release of contaminants to the receiving aquatic environment, negatively impacting water quality, fish, and fish habitat. The Proponent should demonstrate how the west bermed runoff collection area will prevent seepage of potentially deleterious substances containing non-contact water to confirm the protection of the receiving environment, and confirm that all Project effluent as defined under the MDMER is discharged through an FDP to allow for effluent characterization.</p>		
47.	ECCC Response Reviewed by CNSC staff	Section 5.4.5.2 Section 22.6.3	<b>Not Accepted</b>	<p><b>Part 1: Not Accepted</b></p> <p>NexGen response indicated that the 24-hour 1:100-year rainfall to be used for design purposes is 89.4mm which appears to be obtained from ECCC IDF data [A1] at Cree Lake (Climate Station ID: 4061861). Nevertheless, no attempts were made by NexGen to utilize most up to date extreme rainfall data for estimation of 24-hour 1:100-year rainfall. The estimate at Creek Lake is based on data from 1970-1993 (24 years) thus no recent rainfall data is considered. CNSC staff request NexGen to provide updated 24-hour 1:100-year rainfall data with confidence intervals or provide justification on the validity of the current value despite the estimate is based on old data.</p> <p><b>Part 2: Not Accepted</b></p> <p>The response from NexGen indicated that the source of PMP estimate is from Hopkinson (1999) study and the value is 498.2mm (~490mm) and to be used design purpose. The 2000-year return period values for rainfall and precipitation are presented in Section 22A4.6 which is pointed out to be unrelated to PMP.</p> <p>CNSC staff accepts that critical structures (self-contained contact water ponds) are to be designed using a PMP however the PMP value of 489.3mm is obtained from 1999 study [A.2], based on historical rainfall data pre-1998, which appears to require an updated PMP value.</p> <p>Based on the response provided by NexGen it is difficult for CNSC staff to confirm whether the current PMP (489.3m) is conservative or not. Therefore, CNSC staff requests NexGen to use a PMP value that is estimated using updated historical rainfall data that includes the most up to date meteorological data or provide justification on the validity of the current PMP estimate.</p> <p><b>Reference:</b></p>	<b>47-R1</b>	<p>CNSC staff request NexGen to provide updated 24-hour 1:100-year rainfall data with confidence intervals or provide justification on the validity of the current value despite the estimate is based on old data.</p> <p>CNSC staff requests NexGen to use a PMP value that is estimated using updated historical rainfall data that includes the most up to date meteorological data or provide justification on the validity of the current PMP estimate.</p>

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				<p>[A.1] ECCC (Environment and Climate Change Canada). 2019. Environment Canada – Engineering Climate Datasets: Short Duration Rainfall Intensity-Duration-Frequency Data. Accessed November 2019. Available at <a href="https://climate.weather.gc.ca/prods_servs/engineering_e.html">https://climate.weather.gc.ca/prods_servs/engineering_e.html</a></p> <p>[A.2] Hopkinson RF. 1999. Point Probable Maximum Precipitation for the Prairie Provinces. Environment Canada Prairie and Northern Region. Report No. AHSD – R99 – 01. 54 p.</p>		
48.	ECCC	Section 5.4.5.3	Accepted			
49.	ECCC	Section 5.4.5.4	Not Accepted	<p><b>Context:</b> The Proponent has addressed parts one, two, four and six of the IR. However, further information is requested to resolve parts three and five. Additional information is needed to address effluent characterization concentrations and proposed environmental release targets for total suspended solids (TSS), un-ionized ammonia, and thallium, and to address the predicted exceedance of the MDMER Schedule 4 Maximum Authorized Monthly Mean Concentration for radium-226.</p> <p>Under the Metal and Diamond Mining Effluent Regulations (MDMER) there are Schedule 4 substances with Maximum Authorized Monthly Mean Concentrations permitted for discharge. Table G-2 of Appendix G in Draft EIS TSD XVIII does not provide effluent characterization concentrations or proposed environmental release targets for the following Schedule 4 substances: un-ionized ammonia and TSS. Additionally, the proposed environmental release target for radium-226 is 0.88 Bq/L which exceeds the Schedule 4 Maximum Authorized Monthly Mean Concentration of 0.37 Bq/L under the MDMER and could result in adverse effects to water quality and aquatic biota.</p> <p>Based on Appendix F Table F-1 Draft EIS TSD XVIII, during the construction phase the predicted effluent discharge rate is 899 m<sup>3</sup>/day. At an effluent flow rate of 50 m<sup>3</sup>/day, the mine becomes subject to the MDMER.</p> <p>Under the MDMER there are Schedule 5 Section 4(1) substances that have requirements for effluent characterization. Table G-2 does not provide effluent characterization concentrations or proposed environmental release targets for thallium under Schedule 5 which poses uncertainty regarding its effects on the receiving aquatic environment, including effects to fish and fish habitat.</p> <p><b>Rationale:</b> Discharges from the proposed Project will alter water quality in the nearfield receiving environment and could negatively affect aquatic biota. The lack of effluent characterization concentrations and proposed environmental release targets for un-ionized ammonia and TSS cause uncertainty about the effects of the Project's effluent on the receiving environment, and the release target for radium-226 may result in adverse effects to water quality and aquatic biota. Additionally, the Proponent has not provided data to validate their statements that there will not be a significant source term of thallium in Project effluent.</p>	49-R1	<ol style="list-style-type: none"> <li>1. Provide updated modelling and tables within Appendix G in Draft EIS TSD XVIII to include effluent characterization concentrations and proposed environmental release targets for the following parameters: TSS, un-ionized ammonia, and thallium</li> <li>2. Address the predicted exceedance of the MDMER Schedule 4 Maximum Authorized Monthly Mean Concentration for radium-226.</li> <li>3. Identify when it is predicted that effluent discharge flow rates from the mine site would meet the requirements for reporting under the MDMER and when effluent characterization concentrations or proposed environmental release targets for thallium will be provided.</li> <li>4. Update the Draft EIS Section 5.4.5.4 to include information on predicted effluent characterization concentrations and environmental release targets for MDMER Schedule 4 and 5 parameters.</li> </ol>

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				Currently not enough information is available regarding missing Schedule 4 and 5 parameters necessary for effluent characterization. This information is required to determine if effluent at the end-of-pipe from all final discharge points is predicted to be acutely lethal to aquatic biota including fish and fish habitat and to verify acute and chronic water quality thresholds. In accordance with the MDMERs, the Proponent will be required to demonstrate that their effluent quality meets the limits in the MDMER.		
50.	ECCC	Section 5.4.7.5 Appendix 7A3.2.10.2	Accepted	All parts from the IR have been accepted. However, a follow-up item of technical advice can be found in the Advice to the Proponent document (ECCC-10) which will allow for improved estimates of potential air quality impacts resulting from the Project.		
51.	ECCC	Section 5.4.7.7	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
52.	ECCC	Section 5.5	Accepted			
53.	ECCC	Section 5.5.1.5	Accepted			
54.	MN-S	Section 6.2	Accepted			
55.	ECCC	Section 6.2.3 Section 11.4.2 Section 11.5.1.2 TSD XXI ERA	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
56.	MN-S	Section 6.3.1	Accepted			
57.	MN-S	Section 6.3.2	Accepted			
58.	CNSC MN-S	Section 6.4.1, Section 14	Accepted			
59.	CNSC	Section 6.3.2, Table 6.3-1, page 6-12 Section 6.4, page 6-18	Accepted			
60.	CNSC	Section 6.3.2, Table 6.3-1, page 6-12	Accepted			
61.	CNSC	Figure 7.1-3, 7.2-4, 7.2-22	Accepted			
62.	HC	Section 7.2.3, page 7-30	Accepted			
63.	HC	Section 7.2.4, page 7-37	Accepted			
64.	HC	Section 7.2.5, page 7-41	Not Accepted	IR-64 was partially addressed, however, the rationale for not applying the CAAQS in the assessment lacks sufficient justification from a health perspective and further assessment is recommended.  1) The response to HC's IR-64 states that, "The CAAQS are applicable to measured ambient air concentrations over a three-year period and are not specifically applicable to modelled results from a single facility."	64-R1	HC recommends that the Impact Statement:  1. Compare ambient air concentrations to CAAQS to determine the nature and severity of the project's impacts and need for further mitigation measures;  2. Use modelled results for at least one calendar year when data is unavailable, to indicate frequency of CAAQS exceedances, and provide a discussion as to whether human health impacts are anticipated; and,

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				<p>The CAAQS are generally calculated for specific multi-year averages and for a particular statistical form so that extreme and unpredictable events do not drive risk management. However, if the data is not available for comparison to a full CAAQS timeframe, HC recommends using modelled results for at least one calendar year to allow for a basic comparison with the CAAQS statistical form.</p> <p>The CAAQS are national air quality standards, but they are not restricted to applications within the context of the Air Quality Management System (AQMS). An evaluation using CAAQS may be considered in determining the nature and severity of the project’s impact on air quality levels, and mitigation measures that may be required to maintain good air quality levels or to prevent an exceedance of the CAAQS. Please see <i>Table 2: Review of the NexGen Responses to Annex 2 – FIRT Advice to the Proponent (HC-1)</i> for further discussion on the use of CAAQS.</p> <p>2) The response also indicates that Section 4.3.3.3 of Draft EIS TSD XXI discusses air quality constituents that exceed screening values, including short-term exceedances for nitrogen dioxide, total suspended particulates (TSP), particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>), and uranium. Given the potential for these guideline exceedances, it is important to use a robust monitoring system capable of generating sufficient data to determine if any new mitigation measures are required.</p> <p>Health Canada (HC) also notes that, while more conservative than the former National Ambient Air Quality Objectives (NAAQO), the Saskatchewan Ambient Air Quality Standards (SAAQS) and Alberta Ambient Air Quality Objective (AAQO)’s screening values do not reflect the most recent science, which indicates that there is no apparent threshold for NO<sub>2</sub>, meaning that health effects may occur at any level of exposure.</p>		<p>3. Implement a monitoring plan for constituents where there are predicted exceedances.</p>
65.	HC	Reference to EIS: Section 7.3.2.5, page 7-99, pdf page 119	Accepted			
66.	HC	Section 7.3.2.8, page 7-106 pdf page 126	Accepted			
67.	ECCC	Section 7.4.5	Not Accepted	<p><b>Context:</b> The Proponent noted that GHG emissions associated with land use changes and the resulting loss of carbon sinks are provided in Table 7.4-8 in Draft EIS Section 7.4.5.1.1. These values are provided in tonnes of carbon dioxide equivalent (t CO<sub>2</sub>e), which is reasonable for land use change emissions. However, impacts on carbon sinks should be provided in tonnes of carbon (t C).</p> <p><b>Rationale:</b> There is a distinction between direct GHG emissions from land-use changes and the impacts on carbon sinks. An effect to a carbon sink implies the interruption of the land’s natural processes that results in the net absorption</p>	67-R1	Update Table 7.4-8 in Draft EIS Section 7.4.5.1.1 to display impacts on carbon sinks in tonnes of carbon (t C) using the Strategic Assessment of Climate Change (SACC) section 5.1.2 and the Draft Technical Guide section 4 for the most up to date guidance.

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				<p>of carbon from the atmosphere and should be considered separately from the land-use change evaluation. It is unclear which values presented in the table correspond to carbon sinks, therefore Table 7.4-8 should be updated to clarify the values for carbon sinks and allow for a more accurate assessment of the impact on carbon sinks.</p> <p>ECCC recognizes that this Project falls under CEAA 2012. However, the <i>Strategic Assessment of Climate Change (SACC)</i> and the <i>Draft Technical Guide Related to the SACC: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment</i> (Draft Technical Guide) contains the most up-to-date guidance for developing a qualitative and quantitative assessment on impact on carbon sinks. Therefore, ECCC recommends that the principles of the SACC and Draft Technical Guide be followed in order to support an understanding of how the Project impacts Canada's ability to meet its environmental obligations and commitments in respect of climate change.</p>		
68.	ECCC	Appendix 7A3.1	<b>Accepted</b>			
69.	HC	Section 7A3.2.13.3 Table 7A-114, Page 116	<b>Not Accepted</b>	<p>The response did not address NO<sub>2</sub>, particulate matter, and uranium (Chemical Risk), which exceeded the screening criteria.</p> <p>The response to HC's IR-69 indicates that "The TRVs were not presented for air constituents since no air COPCs progressed past the screening phase of the ERA"; however, Table 4-9 of the <i>Draft EIS TSD XXI (ERA)</i> indicates that nitrogen dioxide, particulate matter (total suspended particulate (TSP), PM<sub>10</sub>, PM<sub>2.5</sub>, and TSP deposition), and uranium exceeded their respective air screening criteria.</p> <p>Subsequently, NO<sub>2</sub> and Chemical Risks from Uranium were screened out of further assessment through qualitative evaluations, some of which contain limited, out of date and/or inaccurate information (e.g., referencing values from the NAAQO instead of the current CAAQS). HC's concerns with this approach are discussed further in <i>Table 2: Review of NexGen Responses to Annex 2 - FIRT Advice to the Proponent (HC-1)</i>. Uncertainty with the rationale used for screening these substances out for further assessment has the potential to underestimate potential health risks from the project.</p> <p>Providing an up-to-date quantitative risk assessment for the anticipated NO<sub>2</sub>, particulate matter, and uranium (Chemical Risk) emissions generated by the project and project activities, which considers site specific receptors, exposure, and appropriate reference values, would characterize potential health risks, reduce uncertainty, and strengthen the assessment.</p> <p>Please see the <i>Advice to the Proponent (Table 2)</i> for further discussion on the use of CAAQS, particularly in the context of NO<sub>2</sub> which HC considers a non-threshold contaminant, meaning that health effects may occur at any level of exposure.</p>	<b>69-R1</b>	<p>Health Canada recommends that the Impact Statement characterize (i.e., quantify) potential health risks for NO<sub>2</sub>, particulate matter, and uranium (Chemical Risk) to support the qualitative assessment in Section 4.3.3.3 of the ERA, considering the following:</p> <ol style="list-style-type: none"> <li>1. For NO<sub>2</sub>, use the most stringent, Canadian standards (e.g., 1-hour and Annual CAAQS).</li> <li>2. Consider inhalation risk to off-duty workers who reside at the Project site (i.e., in camp).</li> <li>3. Consider inhalation risks for receptors at other identified receptor sites where modeled concentration exceed the CAAQS or other health-based standards (e.g., Beet Lake, 19EXP01, and 19EXP02).</li> </ol>
70.	CNSC	Section 8.3.1	<b>Not Accepted</b>	CNSC staff request that NexGen include a justification for the exclusion of geology as a valued component within the EIS. As planned, the project will		

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				<p>result in the creation of a disposal facility (the underground tailings management facility – and the waste rock); geology has been included as a VC in the environmental assessments for other disposal projects as an important aspect of the physical environment (and expected to form a key part of the disposal system description in the documentation of the safety case for disposal); thus staff’s request for further explanation.</p>		
71.	ECCC	Section 9.2.3 Section 9.2.6 Section 9.3.2 Appendix 9A	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has provided the requested wetland baseline characterization information. However, the Proponent has not incorporated the information into the Draft EIS Section 9 on hydrology, identifying potential hydrological effects to wetlands as a Project pathway, including mitigation measures and monitoring.</p> <p>In Section 9.2.2.2 Measurement Indicators, wetlands are briefly mentioned as being captured under the umbrella term “waterbodies” for the hydrological assessment of waterbody surface elevation. Information on wetlands is not provided for any of the other measurement indicators. In Section 9.2.3 Spatial Boundaries the Regional Study Area (RSA) and Local Study Area (LSA) are defined, however, wetlands are not discussed in this section. The Proponent confirms there are several riparian wetlands adjacent to the lakes in the LSA assumed to be fish habitat, and one isolated non-riparian wetland that is not hydrologically connected to fish-bearing waters These wetlands are located within the LSA and additional information should be provided to allow for an assessment of potential impacts of Project-related activities to aquatic receptors including fish and fish habitat, species at risk, and migratory birds.</p> <p>In Section 9.2.6.1 Baseline Hydrology Monitoring and Studies, no specific baseline information is provided for wetlands. However, in Section 9.2.6.2 Hydrological Modelling of Water Surface Elevation and Flow Rates, some input data and parameterization of hydrological processes for wetlands were incorporated. In the following Section 9.2.6.4 Fluvial Sediment Transport, there is no mention of incorporating wetland data into the sediment transport modelling. In Section 9.3.2 Hydrographic Setting, the lakes in the RSA and LSA are described, but there is no mention of any wetlands connected to these lakes, and none are identified. Throughout the remainder of Section 9 there is no explicit mention of wetland hydrology in the modelling results, evaluation tables of potential adverse effects pathways for hydrology, residual effects analysis or mitigation measures and monitoring.</p> <p>The Proponent states in their response that waterbody surface elevation in wetlands will be strongly influenced by adjacent waterbodies and that the isolated wetland is not likely to be influenced by project activities. However, no information has been provided about the other measurement indicators: watercourse flow rates, stream channel parameters, and fluvial sediment transport. Watercourse flow rates and stream channel parameters may not be as applicable to wetlands; however, wetlands are often depositional areas for</p>	<b>71-R1</b>	<p>Incorporate specific information regarding the analysis of potential hydrological related effects to wetlands within the LSA and RSA into Section 9 of the Draft EIS. Assess potential impacts of Project-related activities to measurement indicators (i.e. waterbody surface elevation, watercourse flow rates, stream channel parameters, and fluvial sediment transport) for wetlands including updated sediment transport modelling as required to the hydrological assessment of wetlands.</p>



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				<p>sediment and the fluvial sediment transport measurement indicator has not been adequately assessed for impacts to wetlands. For example, the fluvial sediment transport analysis throughout Section 9 focuses on erosion from the Clearwater River below Patterson Lake Upper Reach to the northern end of Forrest Lake. According to Section 13.3.2.2 Wetland Ecosystem Distribution Figure 13.3-3, this area is predominantly riparian wetland. While the predicted changes in sediment transport and deposition are low, there are no references to the wetland habitat in this area throughout the results for hydrology in Section 9 of the EIS.</p> <p><b>Rationale:</b> To assess potential impacts of Project-related activities to measurement indicators (i.e. waterbody surface elevation, watercourse flow rates, stream channel parameters, and fluvial sediment transport) for wetlands and determine potential impacts to aquatic receptors, additional information is needed. Additional details provided should include specific information on wetland hydrology in the modelling results, evaluation tables of potential adverse effects pathways for hydrology, residual effects analysis, mitigation measures and monitoring.</p>		
72.	ECCC	Section 9.3.2.2 TSD VIII, Section 6.2 Section 7.4 Annex IV.3 Figure 13 Figure C4 Annex IV.2, Table 9	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
73.	ECCC	Section 9.5 Section 9.5.1 Section 11.4.1	<b>Accepted</b>			
74.	ECCC	Section 9.5	<b>Not Accepted</b>	<p><b>Context:</b> In Table 9.5-2 pg. 1401 H-06 for culverts, the Proponent states that the design cross drainage maximum flow was considered for a 24-hour 100-year event.</p> <p>The Proponent's response indicates that this meets a provincial guideline that cannot be located (SERM, 2000). The Proponent also erroneously states that the 100-year 24-hour storm event meets the design standard for a "primary access road" in Saskatchewan Ministry of Highways and Infrastructure (MHI) (2014). MHI (2014) does not use the term "primary access road" but does recommend the use of an instantaneous peak flow for culverts and a 100-year return period in cases where an area would be isolated by a hydraulic failure (PDF page 80 in MHI, 2014). The Proponent also indicates there is a 35% probability that the culverts will encounter a discharge event above their design in the 43 years planned for the Project. A storm above design can lead to failure of the culvert in various ways: road washout, overtopping, erosion, and sediment deposition downstream. The Proponent clarifies that culverts</p>	<b>74-R1</b>	<ol style="list-style-type: none"> <li>1. Provide a rationale for the selected 24-hour storm duration.</li> <li>2. Given that a storm event above design will affect all the culverts on site, discuss the potential impacts of a storm above design. Describe how the probability of a storm above design (35% over the life of the project) is incorporated into the description of significance of potential impacts. If there are potential impacts, describe any potential mitigations.</li> <li>3. Describe how culverts at risk of "reportable spill" will be identified.</li> <li>4. If the storm duration is reduced in line with the likely time of concentration for the site, provide clarity on if the design values will be adjusted for both the regular culverts (100-year return period) and the "reportable spill" culverts (PMP).</li> </ol>

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				<p>where overflow would be a reportable spill will use the higher 24-hour probable maximum precipitation (PMP).</p> <p>The Proponent does not comment on the choice of a 24-hour storm event, despite the likelihood that the time of concentration of the relatively small upstream areas would be much shorter than 24 hours. The rainfall intensity for shorter duration storms of the same return period is higher; the design discharge for a shorter duration storm would be higher as well.</p> <p><b>Rationale:</b> Culverts function primarily as hydraulic conduits but serve the dual purposes of functioning as hydraulic structures as well as acting as load bearing structures. As a result, the amount of precipitation becomes secondary to the intensity of precipitation. Considering the lifetime of the Project and the negative consequences of a culvert failure, a 100-year return period is not considered conservative. A risk analysis should be performed considering different rainfall intensity-duration-frequencies (IDF), including higher intensity, shorter duration rainfall events.</p> <p><b>References:</b> SERM (Saskatchewan Environment and Resource Management). 2000. Construction Guidelines for Pollution Control Facilities at Uranium Mining and Milling Operations. In draft. October 2000. [link unavailable] MHI (Saskatchewan Ministry of Highways and Infrastructure). 2014. Hydraulic Manual. Accessed December 2023. Available at <a href="https://publications.saskatchewan.ca">Publications Centre (saskatchewan.ca)</a></p>		
75.	ECCC	Section 9.6 Section 9.7 Annex IV.2, Section 5.3.1	<b>Not Accepted</b>	<p><b>Context:</b> Parts two, three and five of the IR are accepted. The responses to part one, four, and six of the original IR have not been fully answered.</p> <p>The Proponent has continued hydrometric monitoring and plans winter discharge measurements that will help characterize the inter- and intra-seasonal changes to the rating curves. However, the response to part one does not acknowledge that the open water rating curves for hydrometric stations CR-WC-MS-02 and CR-WC-MS-06, plotted in Figures 15 and 27 respectively, do not correspond to the equations printed in the same figures. For example, using Figure 27, the open water rating curve line for CR-WC-MS-06 passes very near a water surface elevation of 97.4 m and a discharge of 8 m<sup>3</sup>/s; however, using a water surface elevation of 97.4 m and a datum of 95.82 with the equation shown in the figure gives a discharge of 12.7 m<sup>3</sup>/s (over 50% higher).</p> <p>The response to part one also includes two statements that appear to be in contradiction: “the rating curves [...] were not used in the hydrological model” and “the observed discharge hydrograph [...] was used for the purpose of model calibration [...]”. However, both of those hydrometric stations are listed as calibration nodes in Table 9A-10 of Appendix 9A Hydrological Modeling Summary Report. The continuous discharge points shown in figure 9A-14 of</p>	<b>75-R1</b>	<ol style="list-style-type: none"> <li>1. Explain why the rating curve formulae for stations CR-WC-MS-02 and CR-WC-MS-06 do not match the plotted line for the open water rating curve. If corrections are required, detail any other report sections that are affected and ensure that all sections impacted by the error are updated.</li> <li>2. Provide an explanation for rating curve shifts that are not associated with data. Provide details on the monitoring strategy that will be utilized to deal with the unpredictable backwater effects that have led to frequent rating curve shifts. New data that supports the original rating curves should be presented in figures. If general rules on rating curve shifts have been developed, provide all relevant details.</li> <li>3. Provide details on where and how data derived from rating curves (i.e. the continuous discharge values for CR-WC-MS-01 to 06) are used in the hydrological model in the draft EIS Appendix 9A. Describe how the seasons with the most variable rating curve shifts (i.e. summer and fall) could be affected by this uncertainty.</li> </ol>

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				<p>the Hydrological Modelling Summary Report assume to be calculated from water surface elevations and a rating curve.</p> <p>In Appendix B Rating Shift Reports Annex IV.2: Hydrometric Monitoring Characterization Report, there are multiple rating shifts that are not associated with any discharge measurements and are not otherwise justified. For example, Table B-6 Rating Shift Report for CR-WC-MS-06, which happens to be a critical inflow to Patterson Lake, shows that in 2019 there were three rating shifts between July and August despite the only measurements that year being in May and October. These three rating shifts are not accompanied by written justifications such as a site visit or temperature needed for plant growth or senescence.</p> <p><b>Rationale:</b>                      The rating curve formulae for stations CR-WC-MS-02 and CR-WC-MS-06 do not match the plotted line for the open water rating curve. An error could be propagated to other sections of the EIS.                      Correction of this error and confirmation that other rating curves have not been affected is required.</p> <p>The data in Annex IV.2 did not present a strong case for the chosen rating curves or the associated shifts. The Proponent’s IR response indicated that they have acquired additional field data that supports the rating curves and shift patterns. However, the data is not presented and therefore cannot be verified. Verification of the rating curves chosen and shift patterns is needed to develop a stream discharge time series, which is used to establish baseline conditions and subsequently assess Project effects on water levels and flow.</p> <p>Due to the combined backwater effect of downstream lake levels and weed growth in the channel, there is a need for frequent spot measurements to justify rating curve shifts. It may not be possible to establish a regular pattern at the site due to an insufficient availability of historical data. A commitment by the Proponent to measure discharge year-round would increase confidence in reported discharge values.</p> <p>The inconsistencies with best practices (WSC, 2016) contribute to larger than expected uncertainty in the rating curves. Since rating curves are used to estimate stream flow (discharge) from measured water levels, inaccuracies and uncertainties in the rating curves can lead to under or overestimates of water quantity. This uncertainty is carried into subsequent studies that use the information and ultimately cause uncertainty in the description of baseline conditions and residual effects. As such, accurate rating curves are critical for monitoring water quantity in streams related to water intakes and discharges to the environment. Intakes and discharges have the potential to impact water quality and fish habitat through changes in streamflow and effects on flow velocities, water depths, water temperature, suspended sediment concentrations, erosion, sedimentation, and other related factors. The</p>		

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				hydrological model outputs are also used to evaluate the Project's resilience to extreme high and low flow events. Due to the uncertainty in the rating curves, the hydrological model outputs may under or overestimate extreme high and low flow events. As such, the Project's resilience to extreme events may be overstated, leading to accidental contaminant releases into the receiving aquatic environment which can negatively impact water quality, fish, and fish habitat.		
76.	ECCC	Appendix 9A3.6.4  Current Climate Total precipitation data – model input	<b>Not Accepted</b>	<p><b>Part 1: Accepted</b></p> <p><b>Part 2: Accepted</b></p> <p><b>Part 3: Not Accepted</b></p> <p>The comparison of total precipitation and mean temperature for the period from 1979 to 2019 was completed for nearby stations (Cree Lake, Cluff Lake, Key Lake and Fort McMurry). Total precipitation correlation analysis showed good correlation (R2&gt;7) between ERA-I and Observed at monthly scale (poor correlation for daily or annual). The daily, monthly and annual temperatures showed strong correlation (R2&gt;9). Nevertheless, the hydrologic model was run at daily time step with daily ERA-I data as input (Section 9A3.2) although the ERA-I data does not accurately represent observed data as this time scale. CNSC staff requests NexGen to provide justification why model was run at daily timestep instead of monthly and how this will not impact the hydrologic model outputs. In addition, it is not clear why ERA-I is preferred over MERRA-2 which was indicated to be better in quality than ERA-I (Section 22A4.1.2) used to characterize baseline climate (1981-2019) in Section 22A4.1 (Appendix 22A Climate Change Assessment).</p> <p><b>Part 4: Accepted</b></p> <p><b>Part 5: Accepted</b></p> <p><b>Part 6: Accepted</b></p> <p><b>Part 7: Not Accepted</b></p> <p>CNSC staff accepts that critical structures (self-contained contact water ponds) are to be designed using a PMP however the PMP value of 489.3mm is obtained from 1999 study [A.1], based on historical rainfall data pre-1998, which appears to require an updated PMP value.</p> <p>Based on the response provided by NexGen it is difficult for CNSC staff to confirm whether the current PMP (489.3m) is conservative or not. Therefore, CNSC requests NexGen to use a PMP value that is estimated using updated historical rainfall data that includes the most up to date meteorological data or provide sufficient justification on the validity of the current PMP estimate.</p>		

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				Reference: [A.1] Hopkinson RF. 1999. Point Probable Maximum Precipitation for the Prairie Provinces. Environment Canada Prairie and Northern Region. Report No. AHSD – R99 – 01. 54 p.		
77.	ECCC	Section 9A3.6.4.5 Historical Climate – model input	Accepted			
78.	ECCC	Section 10.2.6 Section 10.4.2 Section 10 Appendix 10A	Not Accepted	<p><b>Context:</b></p> <p>The Proponent has addressed both items from the original IR in their response; the Proponent has confirmed that no water quality or sediment quality baseline data within wetlands was collected or utilized in the water quality or sediment quality assessments. Additionally, the Proponent has confirmed that potential effects to wetlands within the Local Study Area (LSA) and Regional Study Area (RSA) were only evaluated as pathways for vegetation valued components within the terrestrial component of the draft EIS Section 13. While the potential exposure pathways evaluated may remain the same (i.e. effects from deposition of effluent), the potential effects to fish and fish habitat as a valued component, including to surface water and sediment quality as intermediate components which will affect fish and fish habitat, may differ and must be confirmed.</p> <p><b>Rationale:</b></p> <p>The Proponent has provided little information regarding baseline surface water and sediment quality for wetlands and has not assessed potential effects to surface water and sediment quality within wetlands. However, the Proponent has agreed to collect water level, water quality and sediment quality sampling data from wetlands adjacent to the project footprint and representative wetlands within the LSA. This data can be utilized to refine predictions of potential effects to wetland surface water and sediment quality, resulting in more accurate predictions of the likelihood of adverse direct effects to aquatic receptors and indirect effects within the pathway of consumption of aquatic receptors in wetlands through to higher trophic level species.</p>	78-R1	<ol style="list-style-type: none"> <li>1. Update the water quality modelling and environmental risk assessment using baseline data from wetlands adjacent to the Project for water levels, water quality and sediment quality. With consideration of this new data, confirm predictions of negligible effects to the aquatic environment and aquatic receptors. If additional corrections are required, detail any other report sections that are affected and ensure that all sections impacted by the error are updated.</li> <li>2. Incorporate information regarding the analysis of potential surface and sediment quality within wetlands and potential effects to fish and fish habitat within the LSA and RSA within Section 10 of the EIS.</li> </ol>
79.	ECCC	Section 10.2.8.2.1	Not Accepted	<p><b>Context:</b></p> <p>The Proponent has provided additional context regarding excluded parameters from surface water quality modelling and assessment with the exception of thallium. In their IR response the Proponent states that thallium is not expected in significant concentrations in effluent, however, this claim was not confirmed with predicted effluent concentration data and is not currently presented in effluent characterization tables. Because thallium was eliminated from further assessment based on the view that there will be no significant concentrations in effluent, there was no consideration of baseline concentrations of thallium in the receiving surface water and sediment quality. In Section 10.3.1 Water Quality and 10.3.2 Sediment Quality for existing conditions in the receiving environment there is no baseline data on thallium. In Appendix 10A Surface Water Quality Modelling Report Attachment 10A-1</p>	79-R1	<ol style="list-style-type: none"> <li>1. Provide baseline receiving environment surface water quality data for thallium and the predicted effluent concentrations of thallium.</li> <li>2. Update the surface water quality assessment and modelling as needed to incorporate data on thallium to confirm predictions of no adverse effects to the aquatic receiving environment. If additional corrections are required, detail any other report sections that are affected and ensure that all sections impacted by the omission of thallium data are updated.</li> </ol>

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				<p>Background Water Quality Characterization there is no baseline water quality data provided for thallium for any of the sampling locations within the Local and Regional Study Area. Regardless of whether thallium could potentially be screened out of later stages of the assessment, baseline concentrations of thallium in the receiving environment are required to validate that there are no baseline exceedances of water quality guidelines (i.e. Elevated background concentrations) of thallium in the existing receiving environment and to establish a baseline for comparison against future monitoring. Effluent characterization data and surface water quality modelling for thallium should be provided for review to confirm that concentrations in effluent will not result in negative effects to the receiving environment and aquatic receptors.</p> <p><b>Rationale:</b> Baseline data on thallium concentrations in water quality in the receiving environment are needed to verify that there are no elevated background concentrations of thallium and are needed for comparison against future monitoring and to inform surface water quality modelling. To confirm predictions that thallium will not result in negative effects to fish and fish habitat, predicted effluent concentrations and surface water quality modelling of thallium concentrations are needed.</p>		
80.	ECCC	Section 10.2.8.2.1 Section 10.3.1.2 Section 10.5.1.1.3, Section 10.5.1.1.1	<b>Accepted</b>	Response is accepted, however the Proponent should consider additional sampling for methylmercury within the follow-up monitoring program.		
81.	ECCC	Section 10.2.8.2.2 Section 10.3.2	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has responded to both parts of the original IR and has provided rationale for the exclusion of Total Organic Carbon (TOC), barium, manganese and vanadium from further assessment in sediment quality modelling and the Environmental Risk Assessment. However, based on requirements of CSA N288.6-22, iron should be evaluated further due to exceedances of water quality guidelines in baseline surface water quality data and the potential negative effects this may have on the receiving environment.</p> <p>In Section 10.3.1.2, iron was identified as having baseline water quality threshold exceedances in eight waterbodies and watercourses throughout the Local and Regional Study Areas including Patterson Lake.</p> <p>As per CSA N288.6-22 Section 7.2.5.4.2: “If COPCs exceed the screening level for one medium, they should be carried forward into the EcoRA [ecological risk assessment] for all media that are likely to contribute to exposure. For example, for a given COPC, if a water screening benchmark is exceeded, the same COPC should be carried forward for sediment if its concentration was above the detection limit.”</p> <p><b>Rationale:</b> Iron concentrations exceed water quality thresholds in baseline surface water quality throughout the LSA. Due to the exclusion of iron from the sediment</p>	<b>81-R1</b>	Iron should be included in the exposure assessment portion of the ERA and the sediment quality modelling for the sediment quality assessment.

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				quality assessment and ERA, a determination of Project-related impacts to sediment quality and aquatic biota cannot be made.		
82.	ECCC	Section 10.2.8.3.1 Section 10.3.1.2 Appendix 10A-2	<b>Not Accepted</b>	<p><b>Context:</b> Parts one, two, four and five of the original IR have been addressed by the Proponent. However, additional information is required to address parts three, six and seven.</p> <p>Baseline data has not been provided for thallium in Tables 10.3-3 to Table 10.3-6 or in Attachment 10A-1 of Draft EIS Appendix 10A. The Proponent has stated that thallium was not selected for further assessment because there is no significant source term, however, effluent characterization predictions and data on baseline concentrations of thallium in the receiving environment are required to validate predictions of no risk. Thallium is a required parameter for effluent and water quality monitoring under Schedule 5 of the MDMER.</p> <p>In the Draft EIS Table 10.2-5, the equation for calculating the Project threshold for Cobalt has been provided, rather than a calculated value based on baseline concentrations of hardness in the receiving environment.</p> <p><b>Rationale:</b> Currently there is no available baseline receiving environment surface water quality data or effluent characterization data available for thallium to confirm predictions of no risk to the receiving environment and aquatic receptors. Additionally, due to predicted changes in concentrations of hardness in the receiving environment over the course of the Project life cycle it is necessary that the Proponent confirm the Project threshold for cobalt.</p>	<b>82-R1</b>	<ol style="list-style-type: none"> <li>1. Provide the calculations used to determine the calculated value for cobalt in Table 10.2-5.</li> <li>2. Provide the revised Table 10.2-5 for review.</li> <li>3. Provide baseline receiving environment surface water quality data and predicted effluent characterization concentrations of thallium.</li> <li>4. Update the surface water quality assessment and modelling as needed to incorporate data on thallium and confirm predictions of no negative effects to the aquatic receiving environment and receptors.</li> </ol>
83.	CNSC	Section 10.2.8.3.1	<b>Not Accepted</b>	Based on NexGen's response, CNSC staff understand that the thresholds selected for radiological COPC's in section 10.2.8.3.1 represent the concentration in water that would result in meeting the dose threshold for that individual COPC. CNSC staff would like to emphasize NexGen will need to assess cumulative dose to biota through ongoing environmental risk assessment to ensure the ratios of radiological COPC's released to the environment do not cumulatively exceed the appropriate dose threshold.	<b>83-R1</b>	CNSC staff request NexGen provide the values and sources of the fresh mass aquatic animal to water concentration factor, dose conversion factor, and dose coefficients used to calculate their Biota Concentration Guides (BCGs).
83a	CNSC	Section 10.2.8.3.1, 10.2.8.3.2	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
84.	ECCC	Section 10.2.8.3.4	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has provided rationale for the selection of Burnett-Seidel and Liber (2013) Reference (REF) values as the preferred sources for Project thresholds and the proposed updates to the copper threshold selection. However, there remain inconsistencies in the listed Selected Project Thresholds in Table 10.2-9 Draft EIS Section 10.2.8.3.4 and in Table 4-3 Section 4.2.3.3 of TSD XXI Environmental Risk Assessment that the Proponent has not addressed.</p> <p>In Table 10.2-9 Draft EIS Section 10.2.8.3.4 selected Project threshold have not been listed for cadmium, lead, nickel, selenium, vanadium and zinc, despite</p>	<b>84-R1</b>	<p>Update the following tables and provide them for review:</p> <ul style="list-style-type: none"> <li>• Update Table 10.2-9 Draft EIS Section 10.2.8.3.4 to list the missing Selected Project Thresholds for cadmium, lead, nickel, selenium, vanadium and zinc.</li> <li>• Update Table 4-3 Section 4.2.3.3 of TSD XXI Environmental Risk Assessment to utilize the Burnett-Seidel and Liber (2013) REF value of 16.3 ug/kg dw for lead as listed in Table 10.2-9 Draft EIS Section 10.2.8.3.4.</li> <li>• Update Table 4-3 Section 4.2.3.3 of TSD XXI Environmental Risk Assessment to include vanadium and update the sediment quality assessment as needed.</li> </ul> <p>If additional corrections are required, detail any other report sections that are affected and ensure that all sections impacted by the error are updated.</p>

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				<p>thresholds being available for these parameters. With the exception of vanadium, these parameters were all screened in as Contaminants of Potential Concern (COPCs) for the sediment quality assessment. Vanadium was identified as having baseline exceedances of sediment quality guidelines in Naomi Lake. Selected Project thresholds should be clearly identified and listed in this table for each of these COPCs, as they are currently not identified.</p> <p>Furthermore, when Table 10.2-9 Draft EIS Section 10.2.8.3.4 is compared to Table 4-3 Section 4.2.3.3 of TSD XXI Environmental Risk Assessment there remains inconsistencies in the selection of the thresholds. Table 4-3 is part of the sediment quality screening comparing predicted sediment concentrations in Patterson Lake to selected Project thresholds and determines which COPCs proceed to the next tier of assessment. Table 4-3 should use the same screening values as the selected Project thresholds outlined in Table 10.2-9, and both tables should use the most stringent guidelines available, or the preferred Burnett-Seidel and Liber (2013) REF values as justified by the Proponent. However, the Burnett-Seidel and Liber (2013) values for lead are missing from Table 4-3, which as the most stringent value, should be used for the sediment quality assessment in the ERA. Additionally, vanadium is missing from Table 4-3 and should be included as part of the screening assessment for this tier of the ERA due to baseline exceedances of sediment quality guidelines.</p> <p><b>Rationale:</b></p> <p>Table 10.2-9 of the Draft EIS Section 10.2.8.3.and Table 4-3 Section 4.2.3.3 of TSD XXI Environmental Risk Assessment should be consistent with the COPCs being evaluated and the selected thresholds for those COPCs. The Proponent should remain consistent in the selection and application of thresholds based on their rationale for using Burnett-Seidel and Liber (2013) REF values and/or the selection of the most stringent guidelines and provide both updated tables for review to verify the changes.</p>		
85.	CNSC	Section 10.2.8.3.4	<b>Accepted</b>			
86.	CNSC	Section 10.3.1	<b>Accepted</b>			
87.	ECCC	Section 10.4.2	<b>Accepted</b>			
88.	CNSC	Section 10.4.2 and general throughout section 10	<b>Accepted</b>			
89.	ECCC	Section 10.5.1.1.1	<b>Not Accepted</b>	<p><b>Context:</b></p> <p>While the Proponent provided information on all parts of the original IR, the information needs to be incorporated into the EIS. Where COPCs and their derived guidelines will be affected by sulphate should be outlined. In their response the Proponent states:</p> <p>“NexGen clarifies that the changes to hardness in Patterson Lake are an expected effect of the proposed Project (i.e., from treated effluent discharge during Operations).”</p>	<b>89-R1</b>	<ol style="list-style-type: none"> <li>1. Incorporate information into the Draft EIS regarding the effects from projected increases in hardness in the receiving environment into the following sections: Section 10.4.3 Primary Effects Pathway for effects for discharge of treated effluent, Section 10.5 Residual Effects Analysis, Section 10.6 Predictions of Confidence and Uncertainty, and Section 10.7 Monitoring, Follow-up and Adaptive Management.</li> <li>2. Identify any COPCs with hardness-derived thresholds that would exceed their respective guidelines during operations if those guidelines were derived with respect to baseline hardness concentration of the receiving environment.</li> </ol>



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				<p>However, this effect is not explicitly outlined within the project pathways within Section 10.4 Project Interactions and Mitigations or within Section 10.5 Residual Effects Analysis. Section 10.5.1.1 Application Case does not describe the increasing hardness due to effluent deposition as a Project effect. It also does not explain how the increased hardness was factored in when considering water quality thresholds for other contaminants of potential concern (COPCs) that have guidelines that vary based on the hardness of receiving waters.</p> <p>Section 10.5.1.1 Application Case does not describe the increasing hardness in the receiving aquatic environment due to effluent deposition as a Project effect. Additionally, this section does not describe how the increasing hardness concentrations influence the calculation of water quality thresholds for Contaminants of Potential Concern (COPCs) that have hardness-derived guidelines.</p> <p><b>Rationale:</b></p> <p>The Proponent indicated that Project discharges to the receiving environment will increase hardness concentrations causing the water quality thresholds for other COPCs to increase, allowing for higher discharge levels of these COPCs.</p> <p>To understand how the thresholds for relevant COPCs will be impacted by increasing hardness concentrations in receiving waters and the potential for related impacts to aquatic receptors such as fish and fish habitat, a dedicated discussion should be provided within the draft EIS. This discussion should outline how hardness derived guidelines for COPCs are influenced throughout the Project lifecycle and how this impacts the concentrations of COPCs within the nearfield receiving environment and aquatic receptors. This information should capture the full scope of potential effects and anticipated changes to the receiving environment and aquatic receptors from the deposition of effluent throughout the lifecycle of the Project.</p>		
90.	CNSC	Section 10.5.1.1.1	<b>Accepted</b>			
91.	CNSC	Section 10.5.1.2.3 and throughout section 10	<b>Accepted</b>			
92.	CNSC	Section 10.5.1.2.6	<b>Accepted</b>			
93.	CNSC	Section 10.5.2.1.3 TSD XXI- ERA- section 6.3.1.1	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
94.	CNSC	Section 10.5 TSD XXI- ERA- section 4.2.2	<b>Accepted</b>			
95.	CNSC	Section 10A6.3.2.2	<b>Accepted</b>			
96.	ECCC	Section Appendix 10A7.4.1	<b>Not Accepted</b>	<p><b>Context:</b></p> <p>The Proponent has agreed to update Table 10A-34 to include general water quality parameters (ex. pH, temperature, hardness, total suspended solids, etc.) and un-ionized ammonia to address parts one and two of the original IR but has not provided the updated table for review. Additionally, in their response to part three of the original IR, the Proponent confirmed that</p>	<b>96-R1</b>	<ol style="list-style-type: none"> <li>1. Provide updated Table 10A-34 for review of proposed changes.</li> <li>2. Within Appendix 10A Surface Water Quality Modelling Report include a discussion on how changes to receiving aquatic environment hardness concentrations are a Project-related effect. Discuss the implications of this effect to hardness-derived water quality guidelines and calculated concentrations of COPCs for nearfield water quality modelling results.</li> </ol>

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				<p>sulphate concentrations in the nearfield receiving environment are not considered a threshold exceedance because the sulphate water quality threshold will increase from 128 mg/L to 429 mg/L over the course of the Project lifecycle due to increases in hardness concentrations from effluent deposition. However, the Proponent has not fully addressed and updated conclusions regarding changes to other water quality parameters over the Project lifespan.</p> <p><b>Rationale:</b> An updated Table 10A-34 should be reviewed to validate the additional information and confirm all the requested information was included. Additionally, as described in IR-89 (CIAR doc #79) changes in hardness of the receiving aquatic environment causes an increase to the water quality thresholds of certain COPCs, which should be discussed as a Project effect within the Draft EIS and relevant appendices.</p>		
97.	ECCC	Appendix 10A7.4.2	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
98.	ECCC	Appendix 10A7.5.1	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
99.	DFO	Sections 11 & 13	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
100.	ECCC	Section 11.2.2.1 Section 11.5.2.4.1	<b>Accepted</b>			
101.	CNSC	Section 11.2.2.3 and 11.2.2.2	<b>Accepted</b>			
102.	CNSC	Section 11.2.6 (pg 11-29)	<b>Accepted</b>			
103.	CNSC	Section 11.2.6.4 (pg 11-36)	<b>Accepted</b>			
104.	DFO	Section 11.4.1 Pg. 92	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
105.	ECCC	Table 11.4-1 Table 23A-4	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent provided additional clarification as to how negative effects to migratory birds and species at risk were assessed using pathway W-05, "Injury and mortality from clearing", but did not provide similar information on negative effects to migratory birds and species at risk from moving equipment across the river adjacent to the bridge.</p> <p><b>Rationale:</b> A comprehensive assessment of the pathways of effects to migratory birds and terrestrial species at risk, such as clearing land and equipment movement, is needed to understand potential impacts and mitigation measures. A pathway of effects must be relevant to the receptor, in this case migratory birds and</p>	<b>105-R1</b>	<p>Include consideration of how migratory birds (e.g., shoreline or overwater nesting species) and terrestrial species at risk (e.g., little brown bat, barn swallow, yellow rail) may be impacted by moving equipment across the river adjacent to the bridge in the Environmental Protection Plan. Provide details in the EIS, if the EPP cannot be provided for review.</p> <p>If any of the details requested above cannot be provided at the time of response, present a discussion of the gap in information, related uncertainty with regards to potential effects and mitigation, and any additional mitigation measures and/or monitoring and follow up that will be implemented on a precautionary basis.</p>

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				species at risk, to understand how the impacts occur. The pathway used to assess impacts from clearing land does not fully address impacts to migratory birds and species at risk from moving equipment across the river adjacent to a bridge. This information is important since land adjacent to the bridge and/or the bridge itself may provide habitat for species at risk bats and species at risk migratory birds. Information remains outstanding regarding the pathway resulting from moving equipment across the river adjacent to the bridge.		
106.	ECCC	Section 11.4.2	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has provided some additional information to address part one of the original IR regarding the current bridge crossing of the Clearwater River and hydrological and habitat information regarding the riverine environment at this location. However, no further information has been provided regarding the equipment or infrastructure that would be lifted across the river by crane or the size of the footprint for the work area to address part 2 of the original IR. Insufficient detail has been provided on the proposed approach/methodology for moving equipment/infrastructure by crane across the river, how frequently this should be conducted, or under what conditions upgrading the bridge would be deemed necessary. The magnitude of negative effects to the aquatic environment and receptors from spills or accidents due to the proposed crane approach is unclear. In Section 11.4.2 of the Draft EIS the Proponent concluded that both proposed approaches (i.e. use of crane to transport equipment across the river versus upgrading the existing bridge) would cause negligible changes to fish habitat. Additionally, the Proponent has not specified best management practices and mitigations that would be applied during spills and accident scenarios.</p> <p><b>Rationale:</b> The Proponent has provided some additional information to address the IR. However more information regarding the equipment that would need to be lifted by crane across the Clearwater River is needed to determine the associated effects to the environment, including frequency, duration, and magnitude of effects to fish and fish habitat from project-related activities from this proposed approach.</p> <p>It remains unclear what the likelihood of a negative effect from accidents and spills by using a crane to lift heavy equipment and infrastructure across the Clearwater River would be compared to the alternative approach of upgrading the existing bridge crossing. To adequately evaluate the approach, and resulting effects to the aquatic environment and receptors, the Proponent should provide additional information addressing the frequency, duration and magnitude of potential effects to fish and fish habitat from Project activities associated with each proposed approach.</p>	<b>106-R1</b>	<p>Further information is required comparing the use of a crane to transport equipment across the river versus upgrading the existing bridge. This information should address the frequency, duration and magnitude of potential effects to fish and fish habitat from Project activities associated with each proposed approach and should include:</p> <ul style="list-style-type: none"> <li>• An assessment of effects to the aquatic environment from potential accident scenarios related to each proposed approach,</li> <li>• Information on the frequency heavy machinery would need to be transported across the Clearwater River which the existing bridge would not be able to support, and</li> <li>• Specific information on mitigation measures and best practices that should be applied for each approach to be feasible.</li> </ul>
107.	CNSC	Figure 11.5-1 (pg 11-117)	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
108.	CNSC	Section 11.5.1.1 (pg 11-118), Table 115-1	<b>Accepted</b>			

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109.	ECCC	Section 11.7	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has identified that copper and cobalt loadings from surface runoff and groundwater seepage from the Waste Rock Storage Areas (WRSAs) and the Underground Tailings Management Facility (UGTMF) will cause exceedances of water quality guidelines for the protection of aquatic biota including fish in the future. This is a potential adverse effect of the Project. The aquatic health assessment determined that the predicted magnitude of the effect was unlikely to result in adverse effects on populations and communities, but that there could be exceedances of sensitive endpoints for chronic exposure of benthic invertebrates, reproduction of zooplankton and growth and reproduction for fish.</p> <p><b>Rationale:</b> A potential long-term future scenario adverse effect to the aquatic environment from the Project has been identified. The currently proposed mitigation measures of lined waste management areas and the use of an underground tailings facility still allows for seepage of contaminants to groundwater and transport to Patterson Lake. Therefore, the currently proposed mitigation measures and management are inadequate to address the contamination of Patterson Lake by the groundwater pathway. Additional information on proposed mitigation measures is needed to assess the potential adverse effects to aquatic biota in Patterson Lake in the future. The Proponent has committed to providing an Adaptive Management Plan, which is not yet available for review. A determination on the effectiveness of project management and mitigation measures to prevent future effects to the aquatic environment and receptors cannot be made until the proposed Adaptive Management Plan is available for review.</p>	<b>109-R1</b>	Provide the draft Adaptive Management Plan for review to demonstrate how future effects to Patterson Lake will be mitigated. If the draft Adaptive Management Plan is not available at the time of response, present a discussion of the proposed improvements to the effectiveness of Project management and mitigation measures, and provide additional details on how the mitigation strategies will be improved.
110.	ECCC	Section 11A2.3	<b>Accepted</b>			
111.	ECCC	Section 12 Table 14.4-1	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has committed to utilizing standard mitigations for erosion and sediment control during all phases of the Project and provided relevant examples. The Proponent also states that the details on mitigation methods and monitoring will be provided at a later stage of the Project. These measures, including adaptive management, are to be implemented through their Environmental Protection Plan, once finalized. A fulsome assessment of the mitigation measures to be implemented to address impacts to waters frequented by migratory birds and SAR requires details on methods and monitoring from the Environmental Protection Plan.</p> <p><b>Rationale:</b> Receiving the Environmental Protection Plan will allow ECCC to verify how standard mitigation measures will be implemented to address potential impacts to waters frequented by migratory birds (such as waterfowl and waterbirds) and SAR (such as horned grebe or yellow rail). Without details on methods and monitoring, ECCC is unable to evaluate or provide advice on the efficacy of their methods in relation to minimizing harmful effects to migratory birds and species at risk.</p>		Provide the Environmental Protection Plan including details on methods and monitoring related to erosion and sediment control measures with respect to how these measures will minimize effects to migratory birds and species at risk. If details on methods and monitoring cannot be provided at the time of response, present a discussion relating to how the mitigation methods and monitoring will be implemented with regards to potential effects and mitigation, and any additional mitigation measures and/or monitoring and follow up that will be implemented on a precautionary basis.

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112.	ECCC	Section 13 Section 14 Table 23A-5	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has provided an explanation of wetland loss caused by the Project. They confirmed that after application of avoidance, 0.8 hectare of wetland may be impacted by the Project footprint. The Proponent also states that the yet to be finalized detailed design would avoid effects to this wetland area, if practicable. No Wetland Mitigation and Offsetting Plan that would contain such details currently exists.</p> <p><b>Rationale:</b> Until detailed design features are available for review, there remains uncertainty surrounding Project-related impacts to wetlands, which serve as habitat for fish, migratory birds and species at risk. The Proponent has indicated that there is potential to avoid effects to that wetland area entirely. However, if the detailed design plan does not allow for avoidance, the Proponent has stated in their previous response that a mitigation and offsetting plan describing how no net loss of wetland function would be achieved would be prepared. ECCC will be able to evaluate or provide advice on the efficacy of the methods contained within the Wetland Mitigation and Offsetting Plan if the plan is received. If the details of the plan are unavailable, the Proponent can instead provide a detailed discussion, as outlined in the follow up IR, for review.</p>		Provide a draft Wetland Mitigation and Offsetting Plan. If the plan is not available at the time of response, present a discussion of the uncertainty which is caused by the lack of a Wetland Mitigation and Offsetting Plan. This discussion should include potential effects, avoidance plans, offsetting ratio, mitigation measures and monitoring that may be implemented. A description of how no net loss of wetlands will be achieved should be included.
113.	MN-S	Section 13.2.2.3  Table 13.2-1 Valued Components, Rationale, Measurement Indicators, and Assessment Endpoints	<b>Accepted</b>			
114.	CNSC	Sections 13.2.3.1 and 13.2.3.2	<b>Accepted</b>			
115.	CNSC	Section 13.2.3.2	<b>Accepted</b>			
116.	MN-S	Section 13.2.6.2	<b>Accepted</b>			
117.	CNSC	Section 13.4.2	<b>Accepted</b>			
118.	CNSC	Section 13.4.2	<b>Accepted</b>			
119.	CNSC	Sections 13.5.1.1.1 and 13.5.1.3.1	<b>Accepted</b>			
120.	CNSC	Section 13.5.4.3.2	<b>Accepted</b>			
121.	ECCC	Section 14	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has only partially responded to part one and two of the IR. The CNSC guidelines state: "the EIS will then describe mitigation measures that are specific to each environmental effect identified. Measures will be written as specific commitments that clearly describe how the proponent intends to implement them and the environmental outcome the mitigation is designed to address. The EIS will describe mitigation measures in relation to species and/or critical</p>	<b>121-R1</b>	<p>1. Provide the following information as detailed in the EIS guidelines: "the EIS will then describe mitigation measures that are specific to each environmental effect identified. Measures will be written as specific commitments that clearly describe how the proponent intends to implement them and the environmental outcome the mitigation is designed to address. The EIS will describe mitigation measures in relation to species and/or critical habitat listed under the Species at Risk Act (SARA). These mitigation measures will be consistent with any SARA permit, applicable recovery strategy and/or action plan."</p>

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				<p><i>habitat listed under the Species at Risk Act (SARA). These mitigation measures will be consistent with any SARA permit, applicable recovery strategy and/or action plan."</i></p> <p>The Proponent has provided some of the information required per the EIS guidelines. Table 14.4-1 in the draft EIS outlines some mitigation measures for each pathway. However, these mitigation measures do not provide sufficient detail to understand how these commitments will be implemented as per the EIS guidelines in italics above. Some mitigation measures are missing from the table that are mentioned in the text or are not included for all appropriate pathways. Also, the table does not contain a summary of species-specific mitigation measures, which are required to assess potential impacts to species at risk.</p> <p><b>Rationale:</b> In order to meet the requirements of the EIS Guidelines and to assess potential impacts of the Project on migratory birds and SAR, the Proponent should include a summary table that lists each species at risk, the proposed mitigation measures, and a description of how the Proponent intends to implement them. Details on how the effectiveness of mitigation measures will be assessed should be included in Table 14.4-1 alongside how mitigation commitments will be implemented.</p>		<ol style="list-style-type: none"> <li>Prepare a summary table that lists each species at risk, the proposed mitigation measures, and a description of how the Proponent intends to implement them. This list should include all species at risk known to occur in the Project area, including boreal woodland caribou.</li> <li>Revise Table 14.4-1 to include details on how mitigation commitments will be implemented (see also responses to IRs 123, 126, 270).</li> </ol>
122.	ECCC	Section 14	<b>Not Accepted</b>	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
123.	ECCC	Section 14 Table 14.4-1 Table 23A-3	<b>Not Accepted</b>	<p><b>Context:</b> Project lighting has the potential to attract wildlife to structures or other Project components which can result in harm or mortality. The lighting design is in development and not available for review. The Proponent has committed to limiting light pollution to the extent practicable for built infrastructure and that additional details on light mitigation will be developed. However, no details have been provided on what these mitigation measures will be.</p> <p><b>Rationale:</b> Without the ability to review the mitigation measures that will be developed, ECCC cannot advise on the effectiveness of mitigation measures to reduce effects to migratory birds e.g., shoreline or overwater nesting species) and species at risk (e.g., little brown bat, barn swallow, yellow rail) (see IR 121 Context and Rationale). A light pollution mitigation plan for migratory birds and bats should be developed. The plan should include details on how light pollution will be limited, and Table 14.4-1 should be updated to reflect these details and to allow for a fulsome assessment of the mitigation measures for these potential impacts.</p>	<b>123-R1</b>	<ol style="list-style-type: none"> <li>Develop a light pollution mitigation plan for migratory birds and bats.</li> <li>Revise Table 14.4-1 to include details on how light pollution will be limited.</li> </ol>
124.	ECCC	Section 14.2 Table 14.2-1	<b>Accepted</b>			

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125.	CNSC	Table 14.4-1; Appendix 14A	Accepted			
126.	ECCC	Section 14.4.2 Table 14.4-1 Table 23A-1 Table 23A-5	Accepted	Response accepted, however additional technical advice has been provided in the Advice to the Proponent document, ECCC-13.		
126 a	MN-S	Section 14.5.1.3.2  Section 14.7	Accepted			
127.	ECCC	Appendix 14A Table 20.3-1 Annex VIII.2, Sections 8, 10 Annex VIII.3, Section 3	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
128.	CNSC	Human Health  Accidents and Malfunction	Not Accepted	<p>The Proponent provided Attachment IR 128-1, which includes a summary of radiological and non-radiological effects on the health of nuclear energy workers (NEWs) and non-NEWs during normal operations and through the potential occurrences of accidents and malfunctions. This attachment is intended to be included as revised EIS Appendix 15A. However, the summary focuses on potential radiological effects of the Project in the context of effective doses to workers but neglected a discussion on equivalent doses for the lens of an eye, skin, and hands and feet.</p> <p>The Proponent also confirmed that detailed information on the topic of this IR will be provided as part of the licensing application submission to the CNSC in support of Project Construction and will include the deliverables for radiological and non-radiological hazards outlined below.</p> <p>For radiological hazards:</p> <ul style="list-style-type: none"> <li>• radiological exposure assessment for underground workers;</li> <li>• radiological exposure assessment for the process plant and waste tailings preparation workplace;</li> <li>• radiological exposure assessment for the low-level radioactive waste incinerator; and</li> <li>• radiological exposure assessment for accidents and malfunctions.</li> </ul> <p>For non-radiological hazards:</p> <ul style="list-style-type: none"> <li>• workplace exposure to diesel and crystalline silica dust;</li> <li>• hazard analysis reports; and</li> <li>• human factors engineering documentation.</li> </ul> <p>The Proponent's commitments need to be specified in the EIS for completeness.</p>	<b>128-R1</b>	In order to accept this response, CNSC staff request that the Proponent: <ol style="list-style-type: none"> <li>1) include a summary of the assessment of radiological effects of the Project on NEWs and non-NEWs in the context of equivalent doses for the lens of an eye, skin, and hands and feet during normal operations and through the potential occurrences of accidents and malfunctions.</li> <li>2) specify in the EIS that worker health, as it relates to normal operations and accidents and malfunctions, will be addressed independently as part of the CNSC licensing process as required.</li> </ol>
129.	MN-S	Section 15.1, Figure 15.1-3	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
130.	MN-S	Section 15.2.6	Accepted			
131.	MN-S	Section 15.2.7	Accepted			

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131a	MN-S	Section 15.2.8.1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
132.	CNSC	Section 15.2.8.1	Accepted			
133.	MN-S	Section 15.5.1.2	Accepted			
134.	CNSC	Section 15.5.1.3	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
135.	MN-S	Section 15.5.2.2, Table 15.5-6	Accepted			
136.	CNSC	Sections 15.6, 16.6, 17.6, 19.6,	Accepted			
137.	CNSC	Sections 15.8  TSD XXI: ERA Section 8.3 Monitoring and follow-up	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
138.	MN-S	Throughout EIS	Accepted			
139.	CRDN	Section 16?	Accepted			
140.	CNSC	Section 16, 17, 23 and 24	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
141.	CNSC	Section 16 and 16.4.2	Accepted			
142.	CNSC	Section 16 and 16.5.1.3.6	Accepted			
143.	MN-S	Section 16.1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
144.	MN-S	Section 16.2.2.3, Table 16.2-1	Accepted			
145.	MN-S	Section 16.2.5, Figure 16.2-2	Accepted			
146.	MN-S	Section 16.2.6	Accepted			
147.	MN-S	Section 16.2.7	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
148.	MN-S	Section 16.2.9	Accepted			
149.	MN-S	Section 16.2.11	Accepted			
150.	CNSC	Sections 16.3.2	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
151.	MN-S	Section 16.3.3.2.3	Accepted			
152.	MN-S	Section 16.3.3.2.4	Accepted			



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153.	MN-S	Section 16.3.3.2.5	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
154.	MN-S	Section 16.3.3.2.6	Accepted			
155.	MN-S	Section 16.3.3.2.6	Accepted			
156.	CNSC	Section 16.3.3.6	Accepted			
157.	MN-S	Section 16.3	Accepted			
158.	MN-S	Section 16.4	Accepted			
159.	MN-S	Section 16.4	Accepted			
160.	MN-S	Section 16.4	Accepted			
161.	MN-S	Section 16.4, Table 16.4-1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
162.	MN-S	Section 16.4, Table 16.4-1	Accepted			
163.	MN-S	Section 16.4.2	Accepted			
164.	MN-S	Section 16.5	Accepted			
165.	MN-S	Section 16.5.1.1	Accepted			
166.	MN-S	Section 16.5.1.2.2	Accepted			
167.	MN-S	Section 16.5.1.2.2	Accepted			
168.	MN-S	Section 16.5.1.3.1	Accepted			
169.	MN-S	Section 16.5.1.3.2	Accepted			
170.	MN-S	Section 16.5.1.3.6	Accepted			
171.	MN-S	Section 16.6	Accepted			
172.	MN-S	Section 16.7	Accepted			
173.	MN-S	Section 17 Section 17.1 Section 17.2	Accepted			
174.	MN-S	Section 17.2.3	Accepted			
175.	MN-S	Section 17.2.6	Accepted			
176.	MN-S	Section 17.2.9	Accepted			
177.	MN-S	Section 17.4.1	Accepted			
178.	MN-S	Section 17.6.2	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
179.	MN-S	Section 19.5.1.1	Accepted			
180.	CNSC	Section 21	Accepted			
181.	CNSC	Section 21	Accepted			
182.	CNSC	Section 21.2.2 TSD IX, Section 1.3	Accepted			
183.	MN-S	Section 21.5.1	Accepted			
184.	CNSC	Section 21.5.1	Accepted			

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185.	CNSC	Section 21.5.1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
186.	MN-S	Section 21.6	Accepted			
187.	CNSC	Section 21.6 TSD VIII	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
188.	CNSC	Section 21.6.3.1 TSD VIII, Section 6.2 TSD IX, Section 9	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
189.	CNSC	Section 21.6.4 TSD VIII, Section 7	Accepted			
190.	CNSC	21.6.4 TAD VIII, Section 7	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
191.	CNSC	Section 21.6.5 TSD VIII, Section 8	Not Accepted	NexGen's response does not include explanation for some values of factors for leak path factor calculation (i.e. the volume of air of 210 m <sup>3</sup> , maximum air flow of 27 m <sup>3</sup> , burning rate of 2.6 L/s) and the maximum uranium concentration of 8 g/L in the loaded solvent.	191-R1	Provide explanation for the following values of factors, the volume of air of 210 m <sup>3</sup> , maximum air flow of 27 m <sup>3</sup> , burning rate of 2.6 L/s, and the maximum uranium concentration of 8 g/L in the loaded solvent.
192.	MN-S	Section 21.7	Accepted			
193.	CNSC	Section 21.7 TSD IX	Accepted			
194.	CNSC	Section 21.7 TSD IX	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
195.	CNSC	Section 21.7.2.1	Accepted			
196.	CNSC	Section 21.7.2.2 TSD IX, Section 9.1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
197.	MN-S	Section 22.3	Accepted			
198.	ECCC	Section 22.6	Not Accepted	<p><b>Context:</b> The Proponent has clarified that climate change effects on future PMP have been evaluated by examining projections for a range of percentiles. However, it remains unclear what range of the projections was applied in design decisions and evaluation of risk and how these ranges were selected.</p> <p>In the IR response for IR-198 they indicate that: "As outlined in Section 22A.5.1.3 of Draft EIS Appendix 22A, climate projections for a range of variables were identified at various percentiles (i.e., 5%, 10%, 50%, 75%, 90%, 95%, and 99%). The climate projections provided across various percentiles have been considered for all climate variables, including extreme weather events such as a probable maximum precipitation (PMP) event. The PMP was projected for climate change scenarios in the 2050s and 2080s (Draft EIS Appendix 22A, Section 22A5.3)."</p> <p>And that:</p>	198-R1	Clarify what percentiles of projected changes in extreme precipitation including PMP have been considered and utilized in design of relevant infrastructure and management and evaluation of risks.

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				<p>“The climate information provided in Draft EIS Appendix 22A has also been applied to various disciplines, including hydrology, and has been used throughout the effects assessment. How the disciplines considered climate projections from Draft EIS Appendix 22A in the individual effects assessments are summarized in Table 6A-1 of Draft EIS Appendix 6A (Climate Change Roadmap)”</p> <p>“NexGen confirms that Table 22.6-3 of Draft EIS Section 22.6.3.2 considers the detailed climate change analysis (i.e., the Project has been designed to withstand a PMP event, which includes consideration of climate change), as well as the consideration of climate change in the effects assessment by the relevant disciplines (refer to Table 6A-1 of Draft EIS Appendix 6A [Climate Change Roadmap]).”</p> <p>In the Proponent’s response to IR-199 they indicate that:</p> <p>“The likelihood and consequence rankings shown in the various tables in Draft EIS Section 22.6 (Assessment of Effects of Natural Hazards) are accurate because the current Project design criteria and management practices incorporates climate change, which is based on the climate change assessment (Draft EIS Appendix 22A) and considered the range of variables identified at various percentiles as noted above (i.e., not just the median). Consequently, the risk ranking, which is the product of likelihood and consequence ratings assigned for each hazard scenario, is appropriate and would remain unchanged with more extreme projected future climate changes.”</p> <p>“The climate information provided in Draft EIS Appendix 22A has also been used by various discipline effects assessments (e.g., hydrology, surface water quality and sediment quality, fish and fish habitat, vegetation, wildlife) as described in Table 6A-1 of Draft EIS Appendix 6A (Climate Change Roadmap). As described in the discipline effects assessments, additional percentiles beyond the median have been considered to better understand climate related effects, especially for extreme events. A summary of the median (i.e., 50th) percentile projections has only been provided for a general context on future climate.”</p> <p>Table 6A-1 of the EIS indicates that mean projections rather than a range have been applied in the hydrology and Surface Water sections (Sections 9 and 10).</p> <p><b>Rationale:</b> It is unclear what percentiles of projected changes in extreme precipitation, including PMP, have been considered in the EIS. Clarification on the consideration and utilization of these percentiles in design of relevant infrastructure and the management and evaluation of risks is required to understand effects related to future extreme climate events.</p>		
199.	ECCC	Section 22.6 Appendix 22A	<b>Not Accepted</b>	<b>Context:</b>	<b>199-R1</b>	Clarify how projections for the three RCPs were treated and evaluated.

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				<p>The Proponent has fully responded to the IR. However, in the Proponent’s response it is indicated that they “considered the range of variables identified at various percentiles as noted above (i.e., not just the median)”.</p> <p>The Proponent also indicates that, “Given that climate change is occurring but there remains uncertainty in the future projections of climate change, NexGen would consider climate risks as a part of the continual improvement process, as outlined in the Climate Adaptation Framework (Draft EIS TSD XXII).”</p> <p><b>Rationale:</b> The Proponent indicates in the EIS that they evaluated projections for three Representative Concentration Pathways (RCPs). However, it is not clear how the different emission scenarios were considered. Specifically, it is unclear if the results for the three scenarios have been aggregated together. If this is the case, it is more difficult to separate the causes of uncertainty (e.g. differences between the scenarios) and therefore properly evaluate uncertainty in the projections.</p>		
200.	CNSC	Section 22.6.2 Drought	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
201.	CNSC	Section 22.6.6 Extreme Temperatures	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
202.	CNSC	Section 22.6.7 Seismic events	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
203.	NRCAN	Section 22.6.7.1	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
204.	NRCAN	22.6.7.1	<b>Accepted</b>			
205.	ECCC	Section 22.7 TSD XXII	<b>Accepted</b>			
206.	ECCC <b>CNSC reviewed</b>	Appendix 22A Appendix 22A2.2 Appendix 22A4.1.1	<b>Accepted</b>			
207.	ECCC	Section 23	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has not provided the following requested plans:</p> <ul style="list-style-type: none"> <li>• Environmental Monitoring Plan</li> <li>• Environmental Protection Program</li> <li>• Biodiversity Action Plan</li> <li>• Effluent Monitoring Plan</li> <li>• Decommissioning and Reclamation Plan</li> </ul> <p>The Proponent stated that this request is out of scope of the EA process.</p> <p>However, the Proponent states that Environmental Protection Program and supporting documentation (e.g., Environmental Monitoring Plan) and processes will outline considerations for the protection of species at risk,</p>	<b>207-R1</b>	<p>Provide the following plans and supporting documentation.</p> <ul style="list-style-type: none"> <li>• Environmental Monitoring Plan</li> <li>• Environmental Protection Program</li> <li>• Biodiversity Action Plan</li> <li>• Effluent Monitoring Plan</li> <li>• Decommissioning and Reclamation Plan</li> </ul> <p>Additionally, provide details on the methods of mitigation measures and monitoring plans. If this is not available, provide a discussion of the gaps in information including uncertainty related to potential effects, mitigation measures, and a follow up and monitoring plan. Where information is lacking, a precautionary approach is recommended.</p>

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				migratory birds and their nests, and wetlands. This will include wildlife monitoring, and surface water and groundwater monitoring to evaluate wildlife function.  <b>Rationale:</b> Without reviewing the requested plans, ECCC is not able to evaluate the efficacy of mitigation methods to protect SAR, migratory birds and wetlands in relation to this Project. If any of the details requested above cannot be provided at the time of response, a discussion of the gap in information should be presented. This discussion should include uncertainty related to potential effects, mitigation measures, and a follow up and monitoring plan.		
208.	CNSC	Section 23.5.1	Accepted			
209.	ECCC	Appendix 23A Table 23A-4 Table 23A-5 Table 23B-1	Accepted			
210.	ECCC	Table 23A-4	Accepted			
211.	ECCC	Table 23A-5	Accepted			
212.	CNSC	Section 23- Appendix 23B	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
213.	ECCC	Table 23B-1	Accepted			
214.	MN-S	Section 4.2.1.1	Accepted			
215.	MN-S	Section 6.1.1	Accepted			
216.	CNSC	TSD VII, Section 3.5 Multiple Accounts Analysis and Table B-7	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
217.	CNSC	TSD VIII	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
218.	CNSC	TSD VIII, Section 6.2	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
219.	ECCC	TSD VIII, Section 7.2	Accepted			
220.	CNSC	TSD VIII – Accidents and Malfunctions Report, Section 8.0	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
221.	CNSC	TSD VIII – Accidents and Malfunctions Report, Section 9.0	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
222.	CNSC	TSD IX – Transportation Risk Assessment Report	Accepted			
223.	CNSC	TSD IX, Section 1.3	Accepted			

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224.	CNSC	TSD IX, Section 5.2	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
225.	CNSC	TSD IX, Section 9.1.1	<b>Accepted</b>			
226.	CNSC	TSD IX, Section 9.1.6.2	<b>Not Accepted</b>	The reviewer does not understand why the minimum predicted uranium concentrate concentrations in river sediments would occur under average flow conditions, but not under maximum flow conditions. The reviewer believes that the text in section 9.1.6.2 is correct and the values in Table 9-5 for average concentration in sediment and average concentration in pore water appears to be switched between the average flow condition and the maximum flow condition (please refer to the values in Tables 9-1, 9-3, 9-7 for similar release scenarios).	<b>226-R1</b>	Further clarify the values in Table 9-5 under average and maximum flow conditions.
227.	CNSC	TSD IX, Section 9.1.7	<b>Accepted</b>			
228.	CNSC	TSD IX, Section 9.2.2	<b>Accepted</b>			
229.	CNSC	TSD IX, Section 10.3	<b>Not Accepted</b>	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
230.	ECCC	TSD XII	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent has not responded to either part of the previous IR. The Proponent has provided a net-zero framework document, which was “developed based on the guidance provided in the <i>Draft Technical Guide Related to the Strategic Assessment of Climate Change</i>”. This net-zero framework indicates technologies and practices that could be implemented to reduce GHG emissions from the Project, including information on technical feasibility and GHG reduction potential, which constitutes steps 1-3 of the SACC’s 6-step BAT/BEP Determination process.</p> <p>However, the Proponent’s framework makes no direct commitment to achieve net-zero emissions by 2050. As a result, the net-zero framework is incomplete. It does not provide information on the complete BAT/BEP determination and does not demonstrate how the Project’s net GHG emissions will equal 0 t CO<sub>2</sub> eq by 2050 and thereafter for the remainder of the Project lifetime.</p> <p>Additionally, the Proponent has not addressed the previous request to consider all main emission sources anticipated to contribute 1% or more of the total project GHG emissions.</p> <p><b>Rationale:</b> A net-zero framework which includes a commitment to achieve net-zero emissions by 2050, information on the complete BAT/BEP determination, and demonstration of how the Project’s net GHG emissions will be 0 t CO<sub>2</sub> eq by 2050 should be provided to complete the net-zero framework. Alongside a consideration of all main emission sources anticipated to contribute 1% or more of the total project GHG emissions, this complete net-zero framework will assist in estimating the impacts that may occur due to the GHG emissions from the Project.</p>	<b>230-R1</b>	<ol style="list-style-type: none"> <li>1. Clarify whether the Project is intending to achieve net-zero emissions by 2050.</li> <li>2. Update the net zero framework to align with the principles of sections 3.1 and 3.5.1 of the Draft Technical Guide by including the following: <ul style="list-style-type: none"> <li>• The information requirements outlined in section 3.5.2 of the Draft Technical Guide, including completion of the full 6-step BAT/BEP Determination process,</li> <li>• a consideration of all main emission sources defined in the Draft Technical Guide that are anticipated to contribute to 1% or more of total Project GHG emissions.</li> </ul> </li> </ol>

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				ECCC recognizes that this Project falls under CEAA 2012. However, if the Proponent's goal is to achieve net-zero emissions by 2050, the SACC and Draft Technical Guide will be useful in preparing a Project-specific net-zero plan, as they contain the most up-to-date guidance on this subject. This guidance should be followed by the Proponent to support Canada's ability to meet its environmental obligations and commitments in respect of climate change, including Canada's commitment to achieving net-zero emissions by 2050.		
231.	CNSC	TSD XIV, Section 2.3	Accepted			
232.	CNSC	TSD XIV, Section 3.3.1	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
233.	CNSC	TSD XIV, Section 3.3.1	Accepted			
234.	CNSC	TSD XIV, Section 4.1	Accepted			
235.	CNSC	TSD XV, Section 3.3.1.2 Base case and upper case source term calculations	Accepted			
236.	CNSC	TSD XV, Section 3.4.1 Evaluation of secondary mineral controls	Accepted			
237.	CNSC	TSD XV, Section 3.4.1 Evaluation of secondary mineral controls	Accepted			
238.	CNSC	TSD XVII WR and UG Source Term Report Section 2.2 Geochemical weathering concepts	Accepted			
239.	CNSC	TSD XVII, Section 3.2.2	Accepted			
240.	CNSC	TSD XVII, Section 3.2.2, Table 3-4	Accepted			
241.	CNSC	TSD XVII, Section 3.2.2, Table 3-9 and Table 3-10	Accepted			
242.	CNSC	TSD XVII WR and UG Source Term Report Section 3.2.2 Table 4.1, 4.3	Accepted			
243.	CNSC	TSD XVII WR and UG Source Term Report Section 3.2.2 Model inputs & assumptions, Oxygen transport modelling	Accepted			

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244.	ECCC	TSD XVIII, Section 4.1.2	<b>Not Accepted</b>	<p><b>Context:</b> The Proponent provided the additional information requested in the response to the IR. However, the provided information raises further questions about seepage from the west bermed runoff collection area.</p> <p>In their response the Proponent states: “NexGen notes that the west bermed runoff collection area would receive runoff from the local contributing area (i.e., non-contact water) as well as water from site runoff pond #2 (referred to as contact water pond #2 in Draft EIS Section 5.4.5 [Site Water Management], Figure 5.4-12) that is suitable release to the environment (i.e., release water) (Draft EIS Section 5.4.5; Draft EIS TSD XVIII [Site-Wide Water Balance and Water Quality Modelling Report], Section 4.4.1.4).”</p> <p>It is noted that the runoff from the local contributing area includes runoff from the site access road and the site road to the Explosives Magazine Storage Area. Site infrastructure runoff water has the potential to contain deleterious substances from Project-related activities (ex. Road salting, spills or leaks from vehicles, etc.) and must be managed. Therefore, potential additions of deleterious substances from mine related activities could be introduced to the water within the west bermed runoff collection area after the proposed Final Discharge Point (FDP) at the outflow of contact water pond #2.</p> <p>Non-contact water runoff from site infrastructure and seepage from the west bermed runoff collection area meets the requirements of the MDMER definition of mine effluent and has the potential to contain deleterious substances.</p> <p><b>Rationale:</b> The additional information provided by the Proponent confirms that seepage from the west bermed runoff collection area is not being managed.</p> <p>Site infrastructure runoff water has not been considered for the management of the west bermed runoff collection area, and the potential for deleterious substances in this runoff water could impact the receiving aquatic environment. The proposed location of the FDP at the outflow of contact water pond #2 prior to the west bermed runoff collection area will not be protective of the receiving aquatic environment.</p>	<b>244-R1</b>	<ol style="list-style-type: none"> <li>1. Provide an updated site water management plan that includes management of the site infrastructure runoff water (i.e. non-contact water) from the west bermed runoff collection area.</li> <li>2. Propose a new FDP location downstream of the west bermed runoff collection area outflow that would allow for sampling and monitoring for COPCs required for effluent characterization.</li> <li>3. Provide design specifications for the west bermed runoff collection area that would prevent seepage of potentially deleterious substance containing non-contact water to confirm the protection of the receiving environment.</li> </ol>
245.	ECCC	TSD XVIII, Section 5.1.1	<b>Accepted</b>			
246.	ECCC	TSD XVIII, Section 5.1.2.3 Section 7	<b>Accepted</b>			
247.	CNSC	TSD XVIII, Appendix H	<b>Accepted</b>			
248.	CNSC	TSD XVIII, Appendix H	<b>Accepted</b>			
249.	CNSC	TSD XVIII, Appendix H	<b>Accepted</b>			
250.	CNSC	TSD XVIII, Appendix H	<b>Accepted</b>			



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251.	CNSC	TSD XXI- ERA- section 2.3.3.2	Accepted			
252.	ECCC	TSD XXI, Section 4.2.3.1	Not Accepted	<b>NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
253.	ECCC	TSD XXI, Section 4.2.3.2	Not Accepted	<p><b>Context:</b> Additional information is needed to satisfy the original IR. The Proponent has not provided an assessment of un-ionized ammonia and total suspended solids (TSS) within the Environmental Risk Assessment (ERA) following standardized methodology. Un-ionized ammonia and TSS are Contaminants of Potential Concern (COPC) identified to be within effluent from both the mining effluent treatment plant and the effluent from the sewage treatment plant. Both were identified for further evaluation in Section 10.2.8.2 of the draft EIS for further assessment in receiving environment surface water quality. From the surface water quality assessment in Section 10.5 and Appendix A of the Draft EIS, predicted changes to receiving environment concentrations of un-ionized ammonia and TSS from effluent discharges were expected to be negligible if there were no predicted exceedances of effluent concentrations or baseline receiving environment concentrations of un-ionized ammonia and TSS, this should have been specified in the Tier 1 screening phase of the ERA. However, as stated in the original IR, un-ionized ammonia and TSS have not been included in Table 4-2 Section 4.2.3.2 of the ERA, which makes it unclear if risk from un-ionized ammonia and TSS have been assessed and deemed negligible or if they have not been assessed.</p> <p><b>Rationale:</b> The Proponent has confirmed that an assessment of un-ionized Ammonia and TSS were not conducted in the ERA.</p> <p>As with the other identified COPCs within effluent in Section 10.2.8.2 of the draft EIS, accurate methodology should be followed for the assessment of un-ionized ammonia and TSS in the ERA to confirm that there are no negative effects to the aquatic receiving environment and receptors.</p>	253-R1	Update the ERA to follow the correct methodology for the assessment of un-ionized ammonia and TSS. If corrections are required, detail any other report sections that are affected and ensure that all sections impacted by the error are updated.
254.	ECCC	TSD XXI, Section 4.2.3.3	Not Accepted	<p><b>Context:</b> In Section 10.3.1.2 Water Quality existing conditions of the draft EIS, baseline water quality concentrations of iron (eight lakes and watercourses), manganese (lakes downstream and in the Regional Study Area), lead (Forest and Beet Lakes), nickel (Patterson Lake – Local Study Area), and arsenic (Patterson Lake) exceeded water quality guidelines for the protection of aquatic life. In Section 10.3.2 Sediment Quality existing condition of the draft EIS, baseline sediment concentrations of arsenic and polonium-210 in Patterson Lake and baseline sediment concentrations of arsenic and vanadium in Naomi Lake exceeded guidelines. As per CSA N288.6-22 Section 7.2.5.4.2, "If COPCs exceed the screening level for one medium, they should be carried forward into the EcoRA [ecological risk assessment] for all media that are likely to contribute to exposure. For example, for a given COPC, if a water screening</p>	254-R1	Assess iron in the ERA and sediment quality modelling (i.e. quantitative risk assessment) for the sediment quality assessment.

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				<p>benchmark is exceeded, the same COPC should be carried forward for sediment if its concentration was above the detection limit.”</p> <p>However, in Table 4-3 Section 4.2.3.3 Constituents in Sediment in the Environmental Risk Assessment (ERA), iron and manganese were not assessed. Both parameters were screened out because concentrations in effluent did not exceed guidelines, however baseline concentrations were not adequately considered as per CSA 288.6-22 methodology. While manganese only exceeded water quality guidelines in the RSA and not Patterson Lake, iron was identified as having baseline water quality threshold exceedances in eight waterbodies and watercourses throughout the LSA and RSA including Patterson Lake.</p> <p><b>Rationale:</b> The Proponent has not provided rationale for the exclusion of iron from further assessment in sediment quality modelling and the ERA. Based on the requirements of CSA N288.6-22, iron should be evaluated further due to exceedances of water quality guidelines in baseline surface water quality data.</p> <p>Iron concentrations exceed water quality thresholds in baseline surface water quality throughout the LSA. Due to the exclusion of iron from the sediment quality assessment and ERA, a determination of effects to sediment quality and aquatic biota cannot be made.</p>		
255.	CNSC	TSD XXI – Environmental Risk Assessment/ Section 5.1.3.2.1 (page 5.11)	Accepted			
256.	CNSC	TSD XXI – Environmental Risk Assessment/ Section 5.3.2 (page 5.77)	Not Accepted	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
257.	ECCC	TSD XXI, Section 6.1.1	Not Accepted	<b>NexGen’s proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.</b>		
258.	CNSC	TSD XXI: ERA, Table 6-1	Accepted	<b>Follow-up Advice to Proponent:</b> Regarding item #1, for accuracy and completeness, please consider revision to Table 6-1 of the ERA (TSD XXI), to indicate that macrophyte sampling was conducted in Lloyd Lake, Broach Lake, Jed Creek, Patterson Creek, Beet Creek, and Clearwater River. Currently, the Table 6-1 only indicates sampling in Lloyd Lake.		
259.	CNSC	TSD XXI- ERA- section 6.3.1.1	Accepted			
260.	CNSC	TSD XXI- ERA- section 6.4.1.1.1	Accepted			
261.	CNSC	TSD XXI: ERA Section 7.1- QA/QC	Accepted			

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262.	CNSC	TSD XXI: ERA Section 7.2- Sensitivity analysis	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
263.	CNSC	TSD XXI: ERA Figure 5.5- Conceptual model	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
264.	CNSC	Annex III, Section 5.2.2.2, Appendix G	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
265.	CNSC	Annex III, section 6.1	Accepted			
266.	CNSC	Annex III, Section 6.3.3	Accepted			
267.	CNSC	Annex III, Section 6.4, Section 6.5 TSD XIV	Not Accepted	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		
268.	ECCC	Annex VIII.2, Section 3 Section 8 Section 10	Accepted			
269.	ECCC	Annex VIII.2, Section 8 Section 10	Accepted			
270.	ECCC	Annex VIII.2, Section 10	Not Accepted	<p><b>Context:</b> The Proponent commits to developing key mitigations (which are currently not all provided for review) that would be included as part of the Project Environmental Protection Program (EPP). The EPP would also include providing awareness training, giving wildlife the right of way, identifying wildlife use areas, reporting observations, and adjusting speed limits.</p> <p>The key mitigation measures that will be included in the EPP to avoid harm to Common Nighthawk are insufficient. Common Nighthawk is a migratory bird listed as threatened under the <i>Species at Risk Act</i> and therefore more prone to adverse effects.</p> <p><b>Rationale:</b> ECCC is not able to evaluate the effects and efficacy of mitigation methods without information regarding mitigation measures that will be employed if a Common Nighthawk nest is found on a roadway, airstrip, or other cleared area with vehicle traffic in order to provide a fulsome assessment of the efficacy of the key mitigation measures. Additionally, Table 14.4-1 in the draft EIS should be revised to include mitigation measures specific to Common Nighthawk, or minimally reference the Saskatchewan setback guidelines which include Common Nighthawk, to avoid vehicle injury or mortality, including nests on Project roadways or infrastructure (pathway W-18) so that the EIS is more inclusive of Common Nighthawk mitigation measures.</p>	270-R1	<ol style="list-style-type: none"> <li>1. Provide information regarding mitigation measures that will be employed if Common Nighthawk nest is found on a roadway, airstrip, or other cleared area with vehicle traffic.</li> <li>2. Update Table 14.4-1 in the draft EIS to include Common Nighthawk -specific mitigation (or minimally reference the Saskatchewan setback guidelines which include Common Nighthawk ) to avoid vehicle injury or mortality, including nests on Project roadways or infrastructure (pathway W-18).</li> </ol>

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271.	ECCC	Annex VIII.2, Section 10	<b>Not Accepted</b>	NexGen's proposed path forward / technical approach is acceptable, however, IR acceptance pending review of proposed text in revised EIS document.		

NEW Information Requests					
IR#	Dept	Reference to EIS/EIS supporting document	Context and Rationale	Information Requirement	
272. (Link IR-5)	ECCC	Section 5.3.2 Section 5.5.3 Section 13.4	<p><b>Context:</b> The Proponent has committed to the development of a Decommissioning and Reclamation Plan that references revegetation of disturbed areas, as well as conducting progressive reclamation and revegetation of all non-permanent alterations to the Project area. However, no details have been provided related to how these areas will be reclaimed (e.g., what plant species will be used, if they plan to restore to previous habitat type, or what restoration methods will be used), specifically in the context of reclaiming caribou critical habitat.</p> <p><b>Rationale:</b> Caribou critical habitat will be directly impacted within the Project footprint and restoration of these areas back to habitat that will develop the biophysical attributes required by caribou will minimize loss of critical habitat and maintain habitat integrity and connectivity. The SK2 caribou range is above the target disturbance threshold of 35% (Federal Recovery Strategy, 2020), therefore all further disturbance of caribou critical habitat should be restored.</p>	<p><b>Information Requirement:</b> Provide details for the revegetation of non-permanent alterations within the Project footprint with respect to caribou critical habitat. Include details such as what plant species and restoration methods will be used and if the restored areas will resemble the previous habitat type.</p>	