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10 Years of Continued Progress

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kavamanga Government

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August 12, 2016

The Honourable Perry Trimper  
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Government of Newfoundland and Labrador  
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Dear Minister Trimper:

Pursuant to section 107 of the *Environmental Protection Act* (the Act), the Nunatsiavut Government is writing to appeal your decision of June 14, 2016 to approve Nalcor Energy's Human Health Risk Assessment Plan (HHRAP) for the Lower Churchill Hydroelectric Generation Project (the Project) (Reg. 1305).

Introduction

Your decision was conveyed to the Minister of Lands and Natural Resources for the Nunatsiavut Government in a letter dated June 21, 2016 which was first received by e-mail on July 7, 2016. Your letter enclosed notes on a Scientific Workshop in St. John's on March 22, 2016. The Nunatsiavut Government understands that these notes constitute a significant part of the record and form an essential part of your decision.

The Nunatsiavut Government is encouraged by your willingness to respond to our concerns about your decision by convening and attending the workshop in Goose Bay on August 4, 2016. The filing of this appeal is driven by the time limit established in section 107 of the Act and the appeal is not to be misunderstood as the Nunatsiavut Government's response to that workshop. On the contrary we ask that you consider the information and views expressed at the August 4 workshop in arriving at your decision on this appeal.

Context

The Nunatsiavut Government represents the 7,160 Inuit Beneficiaries of the Labrador Inuit Land Claims Agreement of whom 2,260 live in the upper Lake Melville region and 300 in the Inuit Community of Rigolet.

The Nunatsiavut Government has serious and continuing concerns about methylmercury contamination of the environment, including the Lake Melville food web, and about the threats that environmental methylmercury pose to Inuit health as a result of the Lower Churchill Hydroelectric Generation Project. We are deeply concerned that the

threats posed by methylmercury in the environment are being minimized **despite new scientific evidence that the risks of methylmercury contamination of the Lake Melville environment are significantly greater than was believed when the environmental assessment of the Project was completed in 2012.**

We also have grave concerns that corporate and regulatory approaches to management of methylmercury threaten Inuit culture and treaty rights. These rights are protected under the Canadian Constitution and under international law, including the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP). The Province of Newfoundland and Labrador has endorsed and vowed to implement the Truth and Reconciliation Commission's Calls to Action, one of which is to fully adopt and implement the UNDRIP. The UNDRIP affirms the rights of Indigenous peoples to the conservation and protection of the environment and the productive capacity of their lands; the right to maintain and protect their cultural heritage; the right to not be subject to forced destruction of their culture; an equal right to the enjoyment of the highest attainable standard of physical and mental health; and the right to participate in decision-making in matters which would affect their rights, amongst other rights.

### The Schartup Report and Lake Melville Report

Inuit fears about methylmercury entering the downstream environment as a result of the Project were initially stated in Nunatsiavut Government's submissions to the Joint Review Panel, were repeated during the consultations following the Panel Report and in relation to issuance of permits authorizing flooding of the Muskrat Falls reservoir and in judicial review applications to both the provincial Supreme Court and the Federal Court. The Nunatsiavut Government's position throughout has never been one of opposition to construction of the Project. We have always proceeded on the basis that the Project can be built and managed so as to protect our interests. This appeal represents our last chance to pursue that option before outright opposition to the Project becomes the only way for the Nunatsiavut Government to protect the Lake Melville environment, our Lake Melville communities and the health of our people.

Since our court applications were heard, new information has become available as a result of original, scientific research conducted as part of the Lake Melville: *Avativut Kanuittailinnivut* research program by scientific teams at Harvard University and the University of Manitoba. This research was not commissioned by the Nunatsiavut Government as suggested in the March 22, 2016 workshop notes; it was funded primarily through competitive funding processes in Canada and the U.S.A. As with all research projects under the Lake Melville: *Avativut Kanuittailinnivut* research program, Nunatsiavut Government has had no authority over the research design, collection, or analysis. Findings from this research are reported in a published, peer-reviewed paper titled *Freshwater discharges drive high levels of methylmercury in Arctic marine biota* by Schartup et al. (the Schartup Report) and a document titled *Lake Melville: Avativut Kanuittailinnivut (Our Environment, Our Health) Scientific Report* edited by Durkalec et al. (the Lake Melville Report). The Lake Melville report contains chapters by Schartup et al. and Kamula and Kuzyk that report new findings related to methylmercury and sediments and the organic carbon cycle in Lake Melville. Papers based on both of these chapters are currently being submitted for publication in peer-reviewed journals. The findings and implications of findings from the Lake Melville Report are summarized in the *Lake Melville: Avativut Kanuittailinnivut (Our Environment, Our Health) Summary for Policymakers* (the Policymakers Report), edited by Durkalec et al. All three of these documents are attached for your reference.

The significance of these reports cannot be minimized or dismissed and any assertion that nothing changes as a result of the Schartup and Lake Melville Reports is neither scientific nor credible. Nalcor Energy (Nalcor) excluded Lake Melville from detailed study for purposes of environmental assessment of the Project. Nalcor based this decision on a prediction that there would be no measurable impacts downstream. The Schartup and Lake Melville Reports establish that flooding of the Muskrat Falls reservoir will result in significant impacts on methylmercury concentrations in the Lake Melville ecosystem and increased Inuit exposure to methylmercury. The findings in the Schartup and Lake Melville Reports are substantially different than predictions presented in the Lower Churchill Environmental Assessment by Nalcor and demonstrate that the assumptions on which these predictions rest are false. The prediction of no measurable effects downstream by Nalcor underpins all decision-making with respect to the environmental effects of the Project in Lake Melville and for the peoples, including Inuit, whose cultures are grounded in that environment.

### Grounds of Appeal

The Nunatsiavut Government is appealing your decision of June 14, 2016 to approve Nalcor's HHRAP for the Project (the Decision) on the grounds that:

- (a) the Decision fails to act on the new scientific information which shows that the Project will have significant impacts on methylmercury concentrations in the Lake Melville ecosystem and increased Inuit exposure to methylmercury;
- (b) the Project will impair or damage the Lake Melville environment and have adverse effects on Inuit, including Inuit health and culture;
- (c) the Decision fails to require measures that will ensure risks associated with methylmercury concentrations in the environment as a result of the Project are properly mitigated, monitored and managed; and
- (d) the Decision, by approving the HHRAP before the results of the Human Health Risk Assessment (HHRA) are complete and can be assessed and acted on, is premature and an error in law.

### Arguments in Support of Appeal

It is the position of the Nunatsiavut Government that:

1. The Decision does not respond to new and critically relevant scientific evidence regarding methylmercury effects of the Project on Inuit health. You were made aware of this evidence and its adverse effects before the date of the Decision and also before the March 22, 2016 workshop on which the Decision is primarily based.

On February 23, 2016, representatives from the Nunatsiavut Government, Dr. Trevor Bell from the Memorial University of Newfoundland, and the lead of the Harvard science team, Dr. Elsie Sunderland, met with you and with Colleen Janes, Deputy Minister of Environment and Conservation; Martin Goebel, Assistant Deputy Minister of Environment and Conservation; Dr. David Allison, Chief Medical Officer of Health; and others. Dr. Sunderland led a two-hour technical briefing regarding her team's scientific findings that demonstrated that under the

current partial clearing plan, the Project will cause a significant increase in Inuit exposure to methylmercury, potentially leading to hundreds of Inuit exceeding Health Canada methylmercury guidelines. You were made aware that these findings were to be kept confidential until they were released publicly later that spring. On March 10, 2016, the Nunatsiavut Government sent you a letter that asked you to chart a new direction for Muskrat Falls by making a regulatory decision based on the Precautionary Principle and scientific evidence from the Schartup Report and new evidence of Inuit exposure to methylmercury from the Project forthcoming in April. Despite access to this new information of critical relevance to the evaluation of the HHRAP, you convened the March 22, 2016 workshop knowing that these new findings would be necessarily excluded. Martin Goebel and Dr. David Allison, who were present at the February 23 technical briefing, also attended this workshop. The notes on the March 22 workshop make reference to the February 23 technical briefing. The findings presented to you in detail on February 23 were released publicly on April 18, 2016 in the Lake Melville Report and accompanying Policymakers Report, nearly two months before the date of the Decision.

The Lake Melville Report demonstrates that under the current partial reservoir clearing plan the Project will cause methylmercury exposures to exceed the most conservative Health Canada methylmercury guideline for hundreds of Inuit, including up to about half of the Inuit Community of Rigolet, and that full clearing including removal of topsoil could reduce this number to approximately 30 individuals.

The Decision does not disclose how the findings presented in the Lake Melville Report were employed in reevaluating the HHRAP; whether the conclusions from the March 22 workshop were reconsidered or reevaluated in light of the Lake Melville Report; and there is nothing in the substance of the Decision, or the explanation of how it was made, to show that the findings were considered by you and have been incorporated into the Decision.

2. The evaluation of the Schartup Report at the March 22, 2016 workshop omits or mischaracterizes key issues of significance to the evaluation of the HHRAP, including the significant differences between the findings in the Schartup Report and Nalcor's science on which the HHRAP is based.

Most importantly, Nalcor asserted in the Environmental Impact Statement (EIS) that there would be no physical disturbance beyond the mouth of the Churchill River from this Project, based on the premise that Goose Bay dilutes any effects originating upstream to 'no measurable effects.' As recognized by the Joint Review Panel, these assertions were based on limited modeling that largely did not draw values from baseline sampling. Conversely, the findings in the Schartup Report are based on extensive field measurements of mercury and methylmercury in the biota, sediments, and water column of Lake Melville. Neither these methods nor the significance of these methods for interpreting differences between Nalcor's science and the Schartup Report are acknowledged in the March 22 workshop as represented by the meeting notes. To our knowledge, before the Lake Melville research program, there had been little to no baseline mercury and methylmercury measurements taken from the Lake Melville water column, sediments, and plankton. Based on these extensive field measurements the Schartup Report demonstrates that instead of diluting methylmercury, Lake Melville is a primary producer of methylmercury. Stratification of Lake Melville into a freshwater surface layer and saline bottom layer concentrates biological activity in the surface layer. This concentrated biological activity facilitates the conversion of inorganic mercury entering from rivers into methylmercury and its

rapid uptake into the Lake Melville food web.

The Schartup Report demonstrates that stratification of Lake Melville causes enhanced sensitivity in its food web to changes in the Churchill River. This evidence is not just different than Nalcor's prediction; it proves based on direct measurements of the environment that Nalcor's Goose Bay dilution premise is false. This finding fundamentally undermines the adequacy of the Project's environmental assessment and environmental decision-making that relies on evidence in the environmental assessment related to the downstream environment, including decision-making respecting mitigation and monitoring plans.

Further, the March 22 workshop implies that the Schartup Report prediction of methylmercury levels in water of 0.06 ng/L is not of concern as this value is lower than the Canadian Council of Ministers of the Environment (CCME) Aquatic Life guideline for methylmercury of 4 ng/L. However, these guidelines are designed for the protection of aquatic life, and not for protecting human health, and especially not for protecting the health of a population with a diet rich in aquatic foods. These same CCME guidelines caution that they may not prevent the accumulation of methylmercury in aquatic life. The misinterpretation and misapplication of the CCME guidelines with reference to the Schartup Report demonstrates the lack of understanding of the main findings of the Schartup Report at the March 22 workshop and their significance.

While acknowledging that the Schartup Report "presents a case for [methylmercury] effects extending further into Lake Melville than predicted by Nalcor in the EIS," the March 22 workshop asks: "Does the Schartup et al. (2015) study change the environmental assessment approach?" and responds, "No" (p. 4). This conclusion is fundamentally and alarmingly incongruous with the evidence presented in the Schartup Report and demonstrates that the March 22 workshop evaluation of Schartup Report and its implications was incomplete and inadequate.

This poor analysis appears related to the lack of any participants in the March 22 workshop that could speak to, support, or advance the Schartup Report. The notes of the March 22 workshop incorrectly characterize the Harvard science team as NG researchers, which they are not, and as such included in the NG's invitation to attend the workshop. In declining the invitation to the workshop, the NG did not preclude you from arranging for participants who could speak to, support, or advance the Harvard science team's findings. Biases resulting from this one-sided analysis at the March 22 workshop appear to have led to an incomplete understanding of the significance of the Schartup Report and to a flawed basis for the Decision. By relying on the incomplete, inadequate, and one-sided analysis of the Schartup Report provided by this workshop, the Decision did not include an objective and complete evaluation of new scientific information of fundamental relevance to the Decision.

3. The March 22, 2016 workshop on which the Decision is primarily based provides a grossly inadequately assessment of the human health risk of increased methylmercury exposure for Inuit populations living downstream of the Project and measures to mitigate, manage, and monitor that risk. There was no constructive review of Nalcor's HHRAP despite the statement in the Executive Summary of the March 22 workshop notes that this was one of the purposes of the workshop.

First, limitations in the EA for predicting Inuit exposures to methylmercury as a results of the Project are not discussed and critically evaluated during the March 22 workshop, despite acknowledgement that methylmercury effects from the Project will extend further downstream

than anticipated in the EA. For example, as stated in the Policymakers Report, no conclusions on post-flooding methylmercury exposures for Inuit can be drawn from Nalcor's commissioned studies, including the 2011 Golder Associates report for Nalcor titled *Human Health Risk Associated with Mercury Exposure*, due to limited Inuit-specific and community specific data.

Second, the HHRAP states that one of the purposes is to consider mitigation measures, and it also states that as part of its EA commitments, "Nalcor will design extensive monitoring and mitigation programs to ensure that Hg exposure will not produce unacceptable risk to human health" (p. 15). However, the only measure proposed in the HHRAP to manage adverse human health effects is consumption advisories, which are not expected to be required downstream. In the March 22 workshop, there is no critical review of consumption advisories as a primary mitigation measure for managing health impacts of the Project given the new and acknowledged information that methylmercury effects can be expected to extend further downstream than predicted during the environmental assessment. This includes lack of evaluation of the efficacy of employing consumption advisories for reducing methylmercury exposure and the significant, negative implications of consumption advisories for nutrition, culture, well-being, and land use and harvesting rights on Inuit and other downstream populations as an unanticipated negative effect of the Project.

Third, the evaluation of full clearing of the reservoir as a measure to reduce unanticipated downstream human health impacts of the Project is wholly inadequate. Based on the Executive Summary of the March 22 workshop notes, it is evident that full clearing including topsoil removal was dismissed as a mitigation option based on two main criteria: ease of topsoil removal and potential impacts of topsoil removal on fish in the reservoir. Ease of topsoil removal is evaluated as impractical based on assertions rather than information such as engineering feasibility studies, cost estimates and a cost benefit analysis (assuming Inuit health, rights and culture can be compromised in the interests of corporate profits, which the Nunatsiavut Government does not accept) or timeline. More important, we note that the North Spur has been stripped of vegetation and that Nalcor has removed a significant amount of soil to ensure the stability of the North Spur and mitigate Project safety concerns. This demonstrates that topsoil stripping and complete vegetation removal in the context of this Project is indeed feasible and justifiable. Potential impacts of full clearing on fish in the reservoir were deemed to be excessive without any acknowledgment that creation of a reservoir itself is a significant disturbance for fish and fish habitat. Moreover, while the March 22 workshop acknowledges that stripping vegetation and organics would prevent much of the methylmercury from forming, what is missing from the assessment of this methylmercury mitigation option is any evaluation of how full reservoir clearing or remaining on the current partial clearing path would impact human methylmercury exposures and the health of downstream communities. Simply put, the workshop sees fish but not Inuit. The seriousness of this omission cannot be overstated, given that Nalcor did not identify any feasible way to reverse mercury contamination in the ecosystem once flooding takes place. Thus, the criterion that ought to be central to evaluating full clearing in the context of an HHRAP approval—the extent to which it would mitigate human health effects of the Project—was not evaluated at all and therefore could not have been considered in the decision and recommendation of the March 22 workshop that full reservoir clearing and removal of topsoil before flooding are not required.

Fourth, the prediction noted in the March 22 workshop and that was made by Nalcor during the EA of a 10% additional reduction in methylmercury levels in the reservoir when moving from

partial clearing to full clearing of trees (with an implicit assumption of a zero reduction in downstream methylmercury effects as no measurable effects were predicted in the first place) was not updated or critically evaluated based on findings in the Schartup Report.

Fifth, the lack of adequate reassessment during the March 22 workshop of how the Project will affect Inuit health, culture, well-being, and land use rights based on higher than expected methylmercury effects downstream appears to have contributed to the lack of evaluation in the same workshop of appropriate changes to the environmental management of the Project, including any changes to involvement of downstream users in environmental decision-making. The opening comments reported in the March 22 workshop notes acknowledge the Nunatsiavut Government's submission with respect to downstream environmental monitoring and management but the workshop report provides no evaluation of the need to adapt management structures related to downstream monitoring and management of the Project in light of the new information and conclusions arising out of the Schartup Report.

Sixth, while there is discussion in the March 22 workshop of adding one additional monitoring site for fish and seals in Lake Melville to measure the spatial extent of downstream methylmercury effects, there is no critical evaluation of what changes to the downstream monitoring regime should take place to protect human health in light of the expectation of increased methylmercury exposures for Inuit and other downstream users, including monitoring that is predictive of changes to human methylmercury exposures before they occur. It is suggested that Health Canada is reviewing Nalcor's health research models and assumptions to provide advice on the monitoring regime in the future. It is contrary to the Precautionary Principle that the March 22 workshop participants fail to recommend that the Province wait to receive this important information before making a decision about the HHRAP and what changes to the monitoring regime may be needed before flooding begins an irreversible methylmercury pulse that will be transported downstream and begin accumulation and magnification in the food web.

The numerous ways in which the March 22 workshop fails to adequately assess environmental and human health risks of increased methylmercury exposure for Inuit populations living downstream of the Project and the appropriate measures to mitigate, manage, and monitor that risk has resulted in a Decision that is flawed and frustrates the purpose of environmental assessment and adaptive management. We will return to these last two points below.

4. The Decision, by approving the HHRAP before the results of the HHRA are complete and can be assessed and acted on, is premature. Currently, the complete results of the HHRA are not available; Nalcor is still collecting data and monitoring. Based on the results in the Schartup and Lake Melville Reports, it is clear that significant changes to the current mitigation, monitoring, and environmental management program for the Project are needed to address unpredicted and significantly adverse effects of the Project for the environment and Inuit and other downstream populations. For example, the HHRAP as a framework and process document specifies that consultation with relevant communities will be part of the HHRA. However, now that previously unexpected, significant negative downstream effects are expected to occur within the Labrador Inuit Settlement Area as a result of the Project, a significantly higher level of Inuit involvement in environmental decision-making is required and processes for accommodation of Inuit concerns related to threats to the Labrador Inuit Settlement Area should be specified in the HHRAP. If the Province has any uncertainty about the Harvard science results or their

implications — uncertainty which we note was not expressed during the August 4, 2016 methylmercury meeting, where neither the Province nor Nalcor disputed the Harvard science findings — then the precautionary approach and principles of evidence-based and scientifically-informed decision making dictate that the Province should wait until the HHRA is complete and can be assessed and responded to, and the HHRAP revised and amended based on these results, before the HHRAP is approved. We remind you that in your mandate letter of December 14, 2015, the Premier outlines his intention that policy decisions of his government are informed by research, evidence, and evaluation.

Further, in the HHRAP it is stated that, “Nalcor has committed to completing a final baseline HHRA before the Project changes the conditions of the lower Churchill River (i.e., pre-inundation) (p. 13).” This commitment means that the complete and final HHRA, including with baseline data from any additional monitoring sites, must be reviewed by appropriate authorities and organizations, including the Nunatsiavut Government, and that the HHRAP is reviewed and amended to address any concerns and gaps before flooding takes place, and indeed before any activities that change the conditions of the lower Churchill River take place. This commitment is a response to the requirement in the EIS guidelines that, “[t]he collection of baseline data of MeHg exposure of the local human population should be completed, including a review by Aboriginal groups and appropriate government agencies, before the Proponent changes the conditions of the Churchill River in any way that could affect mercury concentrations” (p. 30). This commitment has been expressly incorporated by reference as a term and condition on which the Project may proceed under section 4(a) of the *Lower Churchill Hydroelectric Generation Project Undertaking Order*. The Decision cannot exonerate or relieve Nalcor from that condition of the Order. For that reason the Nunatsiavut government believes, and submits, that approving the HHRAP before the HHRA has been completed and before the HHRAP can be evaluated and/or revised to take account of the HHRA is both premature and an error in law.

The Nunatsiavut Government notes that even if the Decision is not considered to be premature by the Province, the fact that the HHRAP is being approved before all health assessments are complete places a premium on the establishment of effective, responsive, independent, and credible adaptive management arrangements. The need for credible adaptive management arrangements is something that the Nunatsiavut Government considers critically important in the context of the methylmercury issue, particularly in light of the way the issue has been dealt with in the context of the Project to date, the risks it poses to human health, and the strong reliance that Nalcor and the federal and provincial governments place on consumption advisories. The Nunatsiavut Government considers that credible adaptive management will be served by a multi-party monitoring board acting with the advice and assistance of an independent advisory committee.

5. The failure of the Decision to require mitigation of methylmercury effects to the fullest extent possible within the context of the Project proceeding through full clearing of vegetation and topsoil removal is a failure of the application of the internationally-recognized Precautionary Principle and the Province’s own precautionary approach. The precautionary approach that informs the Act, as identified in the 2002 Guide to the Environmental Protection Act (the Guide), is informed by the Precautionary Principle. In the Guide, the precautionary approach states the intention that all reasonable environmental measures will be taken if there is a threat of serious or irreversible damage to the environment, even if full scientific knowledge is lacking. The precautionary approach is also a decision-making priority related to or affecting wildlife, plants



and their habitat in the Labrador Inuit Settlement Area, as outlined in the Labrador Inuit Land Claims Agreement (see section 12.2.1).

Precautionary Principle as defined by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) holds that when human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The Schartup and Lake Melville Reports demonstrate that we can expect Project effects that constitute morally unacceptable harm, as they meet not one but all of the criteria for such harm. Specifically, the Schartup and Lake Melville Reports demonstrate that effects of the Project: (a) threaten human health, through significantly increased methylmercury exposures for a large population of Inuit downstream of the Project; (b) are serious and effectively irreversible, as Nalcor has not identified a way to reduce methylmercury levels in the ecosystem due to flooding once flooding has taken place; (c) are inequitable to present or future generations, as young children are most vulnerable to neurological and cognitive impacts from dietary methylmercury exposure, with fetuses being most at risk, leading to a long-term and irreversible diminishment in potential for future generations; and (d) are being imposed without adequate consideration of the human rights of those affected, as the rights of Inuit to harvesting, culture, and to a safe environment, amongst other basic human and Indigenous rights, are expected to be diminished against the will and without the consent of affected Inuit populations.

Evidence from the Schartup and Lake Melville Reports demonstrate that there is more than a plausible risk of morally unacceptable harm; the evidence demonstrates that on the current regulatory path we can expect these harms to take place. At the March 22, 2016 workshop there was acknowledgement that the Schartup Report indicates that methylmercury levels will increase downstream contrary to predictions in the EA, and during the August 4, 2016 meeting on the Project's methylmercury effects with you and other representatives from the province, federal government, Nalcor, and Indigenous leadership, there was no disagreement with the results of the Harvard science as documented in the Schartup and Lake Melville Reports. At the August 4 meeting, Nalcor stated that they are aware that methylmercury levels will increase downstream as a result of the Project. With even less certainty in the plausibility of negative downstream methylmercury effects and only one criterion met for morally unacceptable harm, the application of a precautionary approach to environmental decision-making on the basis of the Precautionary Principle should be warranted with regards to mitigating methylmercury at the source. Given that there is agreement that methylmercury effects are expected and evidence that effects will constitute morally unacceptable harm, there can be no justification for failing to apply the Precautionary Principle by rendering a decision that fails or refuses to require the only measure that can mitigate increases in methylmercury levels in the downstream environment: full reservoir clearing of all vegetation and topsoil removal.

6. The Decision fails to serve the purpose of Part X of the Act as set out in section 46, which provides that:

*The purpose of this Part is to*

- (a) protect the environment and quality of life of the people of the province; and*
- (b) facilitate the wise management of the natural resources of the province, through the institution of environmental assessment procedures before and after the commencement of an undertaking that may be potentially damaging to the environment.*

As discussed in arguments 1 to 4, the Schartup and Lake Melville Reports demonstrate that

methylmercury resulting from flooding of the Muskrat Falls reservoir will affect the Lake Melville environment, a possibility that was neither studied nor predicted in the EA conducted prior to approval of the Project. As discussed in argument 5, the Province and Nalcor have not disputed Harvard science findings that demonstrated that the Project will cause methylmercury effects downstream. Section 46 of the Act speaks to protection of the environment “after the commencement” of the Project and the definition of “environment” as used in that section includes human life and the social, economic, recreational, cultural and aesthetic conditions and factors that influence the life of humans or a community. The Decision, by not addressing new scientific information about the adverse effects of the Project, by failing to require full clearing of the Muskrat reservoir, by failing to apply the Precautionary Principle, and by approving the HHRAP undermines, if not defeats, the purpose of Part X of the Act.

Further, the Decision to subject the HHRAP to an additional requirement to provide reasonable and appropriate compensation measures to address the impact of a consumption advisory should one be necessary, effectively licences harm to the environment, including the Inuit, and establishes an arrangement under which the entity that causes the harm will get to determine its licence fee by deciding the need for and the nature and extent of compensation for the harm. This is wrong and unacceptable.

7. The Report of the Joint Review Panel for the Project called for adaptive management of the Project to mitigate negative impacts that might be revealed through follow-up and monitoring (see recommendations 6.7 and 15.7). Indeed, follow-up and monitoring are pointless unless permitting and other management techniques and instruments are adapted to account for new information and unanticipated adverse effects. The importance of adaptive management is inherently recognized in the conditions of release of the Project under section 4 of the *Lower Churchill Hydroelectric Generation Project Undertaking Order* (Reg 18/12) (the Order). Subsection 4(e) of the Order provides in part that:

*Nalcor Energy shall prepare and abide by the requirements of environmental effects monitoring plans for all phases of the project, and those plans shall be submitted to and approved by the Minister of Environment and Conservation or the appropriate minister of the Crown before the commencement of an activity which is associated with or may affect one or more of the following matters:*

...

(iv) methylmercury,

(v) sediment quality and transport,

...

(x) reservoir clearing,

...

(xii) contaminant levels in country foods,

...

(xx) aboriginal land and resource use and culture,

...

(xxii) human health,

...

The Order, by requiring that Nalcor prepare and abide by environmental effects monitoring plans approved by the Minister of Environment and Conservation **before** the commencement of an activity associated with or that may affect methylmercury, reservoir clearing and human health

(amongst other matters), mandates adaptive management for all phases of the Project and requires Nalcor's compliance with adaptive management requirements before commencing those activities.

The implications of the Schartup and Lake Melville Reports are significant and of central relevance to the matters that must be considered before commencing an activity authorized by virtue of the Order. The Schartup and Lake Melville Reports, the results of which the Province and Nalcor did not dispute at the August 4, 2016 Project methylmercury effects meeting, provide previously unavailable information with respect to methylmercury, sediment quality and transport, the likelihood of contaminant levels in country food in Lake Melville, the likelihood of adverse effects on Aboriginal land and resource use and on human health, and the significance of reservoir clearing. These are all matters that will be affected by flooding of the Muskrat Falls reservoir and are all matters that the Order specifies **must** be addressed through an approved Environmental Effects Management Plan (EEMP) before flooding is commenced. There is nothing in the Decision to show that the new information has been systematically assessed in relation to the requirements of the Order (see arguments 1 to 3) or how the enumerated matters are provided for in the EEMP and HHRAP in light of the Schartup and Lake Melville Reports. In sum, the Decision demonstrates no adaptation to new information and includes no new adaptive measures or requirements in light of new information with respect to matters that must be addressed in terms of the Order. For that reason the Decision is inconsistent with the intent and the terms of the Order.

### Conclusion

In conclusion the Nunatsiavut Government believes that the Decision fails to properly account for the new scientific information provided in the Schartup and Lake Melville Reports and as a result fails to do what is required, whether in principle or by the Act or Order, to protect the health of the Lake Melville environment, the well-being of the people who depend on that environment and the culture of the Inuit. We believe that flooding of the Muskrat Falls reservoir should not commence before it has been fully cleared of trees, vegetation, and brush and topsoil removed.

In light of the history of this issue and the new information resulting from the Schartup and Lake Melville Reports we believe it is essential that environmental and human health monitoring and management plans are mediated by an independent expert advisory committee reporting to a joint management body on which the Inuit are full and equal partners. We believe that unless your decision provides for these accommodations the purpose of Part X of the Act will not be met, that adaptive management of the Project's environmental effects will be reduced to serving the interests of Nalcor at the expense of environmental and human health, and that decisions and actions arising out of monitoring and management arrangements will lack credibility and simply fuel ongoing controversy.

We therefore request that the Decision to approve the HHRAP be overturned. We also request that you issue a new decision designed to protect the environment and human health. To that end we ask that you act to minimize the amount of methylmercury entering the downstream environment, including Lake Melville, by ordering full clearing of trees, vegetation, and brush from the Muskrat Falls reservoir including the removal of topsoil. We also ask that you mandate the establishment of a joint management body, assisted by an independent expert advisory committee, to advise regulatory decision-makers about Nalcor's EEMP and HHRAP and necessary adaptive management measures in relation to both. Lastly, the Nunatsiavut Government also asks that you rescind the condition respecting consumption advisories

and compensation measures to address their impact and refer the issues of consumption advisories and compensation to the joint management body for its advice.

The Schartup report, Lake Melville report and Policymakers report are shown as enclosed to this letter. Due to email size limitations the reports can be found in the following dropbox folder link;  
[https://www.dropbox.com/sh/on8c3eu9d6z70nk/AAAiaTx2eOvhYbXaYn\\_qSxUBa?dl=0](https://www.dropbox.com/sh/on8c3eu9d6z70nk/AAAiaTx2eOvhYbXaYn_qSxUBa?dl=0)

All of which is respectfully submitted,



Daryl Shiwak  
Minister of Lands and Natural Resources  
Nunatsiavut Government

cc Hon. Dominic LeBlanc  
Minister of Fisheries and Oceans, Canada

Stan Marshall  
Chief Executive Officer  
Nalcor Energy

Todd Russell  
President  
NunatuKavut Community Council

Anastasia Qupee  
Grand Chief  
Innu Nation

Enclosure: Schartup Report  
Lake Melville Report  
Policymakers Report  
**(Enclosures by dropbox folder link only)**