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1 November 2013

The Honourable Jim Bradley
Minister of Environment
11th Floor, Ferguson Block
77 Wellesley Street West
Toronto, ON
M7A 2T5

Email: Minister.MOE@Ontario.ca

Dear Minister Bradley:

Re: Wabagishik Rapids GS - Proposed Waterpower Project
Part II Order Request

Ontario Rivers Alliance (ORA) is a Not-for-Profit grassroots organization acting as a voice for the French River Delta Association, CPAWS-OV, Council of Canadians, Kiishik Community Association, Food & Water First, Whitewater Ontario, Vermilion River Stewardship, Mississippi Riverwatchers, French River Stewardship, as well as many other stewardships, associations, and private and First Nations citizens who have come together to protect, conserve and restore healthy river ecosystems all across Ontario.

The Vermilion River Stewardship (VRS) is a Not-for-Profit organization acting as a voice for the Vermilion River and its entire Watershed. We are a community working together to build partnerships and strategic alliances with all other interested parties, communities, stewardships, organizations and industry to ensure clean and healthy water quality, and a balanced and sustainable ecosystem and natural habitat.

Xeneca Power Development Inc. (Xeneca) is proposing to build a “modified run-of-river”, 3.4 MW Installed Capacity (IC) hydroelectric generation station at Wabagishik Rapids, on the Vermilion River system. As a result of seasonal flows on the Vermilion River, this project would more realistically actually generate approximately 1 to 1.5 MW of power. The Wabagishik Rapids GS proposal falls short of fulfilling the government’s mandate to produce green, or renewable energy, when several kilometers of lake and riverine ecosystem will be compromised, and quite possibly destroyed, to generate this small amount of power. Xeneca refers to this proposal as “green energy”, but this is very misleading when this proposal, as set out in the ER, is in fact as dirty as it gets. This proposal hardly fulfills the province’s mandate when during the hottest months of the summer, when power is needed the most, this facility would likely not be able to produce power at all because natural river flows would not be sufficient to turn the turbine.

Please note that all underlined text contained in this letter denotes our emphasis, and is used strictly to draw the reader's attention.

VRS and ORA would like to jointly comment on the Wabagishik Rapids Generating Station Environmental Report (ER) as follows:

While the Class EA for Waterpower is a proponent led process, "*the objective of the Class EA is to help ensure that projects are planned in an environmentally responsible manner*", and that "*proponents take into account the potential impacts and benefits of proposed waterpower projects as well as the interests of individuals, communities, agencies and organizations, as appropriate." "Common to all of these processes are the themes of "environmental responsibility" and "public accountability".*[1]

This project has not been planned in an environmentally responsible manner, and has not fully taken into account the interests of local stakeholders and the public. Therefore, it is our position that for all the reasons noted herein, Xeneca has not fulfilled its requirements under the Class EA for Waterpower.

Summary of Recommendations:

Recommendation 1:
After having carefully reviewed the information as presented in the ER, and considering the potential environmental impacts, the lack of consideration for the cumulative effects of the proponent's planned future waterpower developments, waste water and mining effluent, as well as the substantial impacts that could result from this operation releasing heavy metals into the environment, ORA and VRS are requesting that Minister Bradley issue a Part II Order to elevate the Wabagishik Rapids GS Environmental Assessment to an Individual Environmental Assessment.

Recommendation 2:
The Wabagishik Rapids GS ER, with all of its promises, must be guaranteed and signed by its author.

Recommendation 3:
Xeneca must undertake a sediment study both in Wabagishik Lake and downstream in the bay area to determine sediment composition, and then undertake a comprehensive plan to contain and control the sediment, both during construction and operation.

Recommendation 4:
In order to determine the full magnitude of impacts on public health and safety, aquatic life, water quality, and on the North Channel of the Lake Huron, Xeneca must do a risk/benefit analysis, as well as rigorous studies to assess the impacts of daily wetting and drying of sediment and wetlands, and its corresponding release of heavy metals into the environment.

Recommendation 5:
1. Xeneca must recognize Wabagishik Lake as part of the headpond and undertake full erosion, water quality, fish sampling, aquatic, reptile and bird studies on Wabagishik Lake to determine all environmental impacts.

[1] Class Environmental Assessment for Waterpower Projects, April 2012, P-12

2. Xeneca must inform Hutchinson that Wabagishik Lake will be used to impound water so that all pertinent fish and water quality studies can be accurately assessed.

Recommendation 6:
Xeneca must undertake a geomorphic erosion study on all of Wabagishik Lake, as well as the upstream portion of the Vermilion River (W1 and W2) to properly assess the potential for sediment transport and bank erosion.

Recommendation 7:
1. Erosion, shoreline stability and scour concerns have not been adequately addressed in the ER. Xeneca must do an in-the-field erosion study to determine the potential for erosion and/or disturbing the heavily contaminated sediment located in Wabagishik Lake and in the bay area.
2. Xeneca must commit to a Biological Monitoring Plan that includes erosion monitoring both downstream of the dam, as well as upstream – all the way to the base of the Lorne Falls GS.

Recommendation 8:
Xeneca must provide a clear and traceable method by which the average littoral zone width of 5m on Wabagishik Lake was arrived at, and how they arrived at the conclusion that the biota living in the littoral zone could be expected to withstand a 10cm daily fluctuation in water level, or that the impact would be minimal and not significant.

Recommendation 9:
Xeneca must be required to complete a comprehensive methylmercury study that will examine all of the above identified factors existing within the proposed headpond and zone of influence, including soil and sediment, to provide a quantitative analysis and a projected post-construction estimate of increased mercury levels in fish tissue.

Recommendation 10:
Xeneca must refer to this operation as a “peaking” facility to accurately communicate its potential impacts to the public and First Nations.

Recommendation 11:
1. Xeneca must provide an approved and final operating plan for public review and comment before any Statement of Completion is issued.
2. Xeneca must undertake a cost/benefit analysis, taking into account the predictions of climate change, impacts on fisheries and the riverine ecosystem to ensure this waterpower project is environmentally, socially and economically sound and sustainable over the long-term.

Recommendation 12:
Xeneca must undertake a rigorous assessment of the potential cumulative effects over time of all human impacts from all sources, including but not limited to the existing contaminated sediment, existing and future fish consumption restrictions, other existing and planned hydroelectric facilities, upstream and downstream wastewater and mining effluent, water taking, and climate change.

Recommendation 13:
Xeneca must undertake a comprehensive sediment and water quality study on Wabagishik Lake, complete with a monitoring plan, to provide a quantitative analysis and a projected post-

construction estimate of increased potential for toxic blue-green algae.

Recommendation 14:

1. Xeneca must do a comprehensive study and effective special event plan to indicate how they would deal with public safety issues in the event of ice jams and flooding.
2. Extreme rain events even throughout the winter months have become a normal occurrence, so in the event of flooding as a result of Xeneca's operation there must be a legal and binding commitment to cover any losses or damage to riparian landowners.

Recommendation 15:

Xeneca must be required to secure funds up front for future dam decommissioning in the event this facility is no longer socially, environmentally or economically sustainable and needs to be removed.

Recommendation 16:

1. Lake Sturgeon are listed as an endangered species, therefore, to confirm definitively whether they inhabit Wabagishik Lake it is recommended an extensive telemetry study is carried out over multiple years.
2. Xeneca must undertake further studies to ensure this sensitive population of Lake Sturgeon is protected and conserved.
3. If this project goes ahead, it could have a very negative impact on water quality, so any Monitoring Plan for Lake Sturgeon should take place over a minimum of 25 years in order to properly assess recruitment, abundance, and any changes.

Recommendation 17:

1. We request that Xeneca be required to adhere to the recommendations of the Class EA for Waterpower, and incorporate upstream and downstream fish passage into the project design to allow fish to migrate freely upstream and downstream.
2. We request the use of fish friendly turbines to reduce fish mortality.

Recommendation 18:

Xeneca must be required to undertake a study to assess public safety issues, and come up with a comprehensive plan to mitigate these risks.

Recommendation 19:

The proponent has issued an incomplete ER and must be required to go back to do the additional studies requested herein, and once completed Xeneca can resubmit their ER for public comment and review.

Recommendation 20:

Xeneca must follow established policy, process, best management practices, and agency directives, and any interference or non-compliance from the proponent should not be tolerated.

Recommendation 21:

1. Any B2B relationship, incentives, or funding/payment/partnerships that would include funding from any government source is relevant to this ER and must be transparent, made available to the public for our review, and be part of the Wabagishik Rapids GS Environmental Report.
2. A clear, traceable and transparent accounting of how Xeneca arrived at the conclusion that the Peer Review Group would generally endorse or agree with the idea in principle must be provided for public scrutiny and review.

Recommendation 22:
Xeneca must provide all minutes, documentation and correspondence relating to the VSAC, along with any partnerships or funding applications, agreements, or arrangements made with any and all members of the VSAC Committee, to be included in the ER.

Recommendation 23:
We urge the Minister to reject this Environmental Report on the grounds that this proponent has consistently undermined all trust and confidence through its direct actions, as well as through this sloppy, negligent and inconsistent ER.

Recommendation 24:
We request that the Minister reject this Environmental Report and send the proponent back to complete all studies, provide all documentation and finalize all agreements and operating strategies.

Recommendation 25:
Xeneca must undertake a quantitative Socio-economic Impact study to document and assess all anticipated positive and potentially negative impacts.

Summary of Supporting Information:

Summary of Recommendations
1. **Guarantee of Proponent**
2. **Contaminated Sediment – Severe Effect Level**
3. **Release of Heavy Metals**
4. **Headpond & Zone of Influence**
5. **Erosion, Shoreline Stability & Scour**
6. **Littoral Zone of Wabagishik Lake**
7. **Mercury in Fish Tissue**
8. **Modified Run of River**
9. **Operating Strategy**
10. **Cumulative Effects**
11. **Blue-green Algae**
12. **Ice and Flooding**
13. **Dam Decommissioning**
14. **Lake Sturgeon & Walleye**
15. **Fish Friendly Turbines and Fish Passage**
16. **Public Safety**
17. **Public Consultation**
18. **Site Release**
19. **Aboriginal Consultation**
20. **Vermilion Stakeholders Advisory Committee**
21. **Trust and Confidence**
22. **Water Management Plan – Vale & Domtar**
23. **Socio-economic Impacts**

Conclusion

Supporting Information:

1. Guarantee of Proponent

On an important document such as this, and for the purposes of validity and assurances, it is critical to include the author's credentials and guarantee that the information and promises contained in the ER along with its studies and reports are accurate and complete. This important guarantee is missing from this ER.

Recommendation 2:
The Wabagishik Rapids GS ER, with all of its promises, must be guaranteed and signed by its author.

2. Contaminated Sediment – Severe Effect Level

The Vermilion River system in the Greater District of Sudbury has already been highly compromised by over 100 years of mining waste and effluent, and a long history of 9 upstream wastewater treatment facilities releasing treated, undertreated and untreated effluent into its waters.[2],[3] A 1986 MOE Sediment Study for Wabagishik Lake[4] underscores this history when it reported contaminated sediment containing heavy metals such as nickel (24 times over the severe effect level (SEL), copper (5 times over the SEL), arsenic (3 times over the SEL); lead (1.5 times over the SEL), iron, and manganese over the SEL, and zinc, chromium and cadmium at elevated levels. On several occasions (both verbally and formally[5]) VRS requested that Xeneca undertake sediment sampling on Wabagishik Lake, and downstream in the bay area where silt and sediment have collected over the years, an area that is very vulnerable to the extremes of flushing, dewatering, erosion and scouring. However, Xeneca refused.[6]

Xeneca was made aware of this MOE study in the spring of 2013 in a public forum at the Walleye Club Conference, and yet none of its findings were addressed in this ER, except for a brief dismissal of the "*potential presence of contaminated sediment at the bottom of Wabagishik Lake*"[7]. This dismissal is misleading and unacceptable as Xeneca knows full well that the MOE's sediment study revealed several heavy metals that were many times over the severe effect level.

If Xeneca were diligent in addressing environmental concerns at Wabagishik, they would have undertaken their own study when they found out about the heavy metal contamination. In neglecting to do so, Xeneca has eroded our confidence by failing to address the potential impacts on water quality, aquatic life and public health and safety.

Xeneca only subscribes to standard construction best management practices, but the handling of this contaminated sediment would require very high level containment and care in both construction and operation. If this sediment is not properly contained it could be stirred up and ultimately be washed down into the Spanish River, and on into the North Channel of Lake Huron.

[2] Flushing Out the Truth: Sewage Dumping in Ontario – Ecojustice Report - 2009
[3] The Great Lakes Sewage Report Card – Ecojustice - 2013
[4] Historic 01003 Wabagishik Lake Data – Sediment Guidelines – Wabagishik Lake Water Quality Data 1983 to 1985 and 1993, and Wabagishik Lake Sediment Chemistry 1986
[5] Appendix D – Part 2, P-222 to 223
[6] Appendix D – Part 2, P-226 to 228
[7] Wabagisihik Rapids ER, P-187

In consideration of this highly contaminated sediment reported to be several times over severe effect levels, it is doubtful Xeneca can claim it will generate sustainable renewable energy, green energy, or have any kind of net benefit for the people of Ontario – especially with the small amount of power that would be generated.

Recommendation 3:
Xeneca must undertake a sediment study both in Wabagishik Lake and downstream in the bay area to determine sediment composition, and then undertake a comprehensive plan to contain and control the sediment, both during construction and operation.

3. Release of Heavy Metals

A recently released study reports on the impacts of wetting and drying of peat in wetlands from climate change that "*is predicted to cause an increase in frequency and severity of droughts in the boreal ecozone, which can result in the lowering of water tables and subsequent release of acidic, metal contaminated waters from wetlands. We believe that in areas where historical deposition of metals and sulphur was severe, these episodic pulses of metals could reach concentrations sufficiently high to severely affect aquatic communities in receiving waters and cause a delay in biological recovery.*

These results are important considerations for water quality of boreal surface waters in general, but this study also has particularly important implications for restoration efforts in smelter-impacted areas like Sudbury. Efforts to restore aquatic ecosystems in such areas and protect freshwater resources elsewhere must take into account biogeochemical processes within the entire watershed, especially within wetlands. In addition, disruptions to biogeochemical cycles are likely to become more prevalent and spatial and temporal variation in water chemistry is likely to increase in a time of changing climate."[8] *"This sulphate-release has been documented in wetland soils and riparian sediments in the Sudbury area and elsewhere, and can result in metal release with even small changes in soil moisture content."*[9]

This study is very relevant to this peaking facility where water will be held back from downstream flow, and will result in a wetting and drying of sediment and wetlands on a daily basis. The ER reports on the horseshoe-shaped riffle, *"(Q_{TL}) during the day (25m_3/s as per operating plan restriction (Ortech 2013). The daily variation in flow that occurs at these times will result in wetting and drying of channel substrate in this area of habitat. The area affected by drying has been calculated by comparing the area wetted under existing conditions during the average August flow rate of 15.5 m_3/s and the proposed minimum flow in August of 5 m3/s. The affected area is 1,000 m_2 in size (Xeneca 2012b)."*[10]

This area was specifically addressed because the Department of Oceans and Fisheries expressed concern for it. However, what other areas will be subjected to this wetting and drying? What about the downstream bay area where it is reported that navigation could be impacted, and how will the wetlands and tributaries be impacted by reduced water flow? Of course the figure of 1000 m^2 does not take into account the drying of the

[8] Szkokan-Emilson, E.J., Kielstra, B., Watmough, S., Gunn, J.M. (2013) Drought-induced release of metals from peatlands in watersheds recovering from historical metal and sulphur deposition. *Biogeochemistry DOI:* 10.1007/s10533-013-9919-0
[9] 29 October 2013 letter from Erik Szkokan-Emilson to Xeneca – Re: Wabagishik Rapids GS ER
[10] Annex III, Part 3, Preliminary Fish Habitat Compensation Plan, P-26

littoral zone of Wabagishik Lake, and whatever wetlands that could be impacted by the constant fluctuations of water levels from this peaking operation.

Erik Szkokan-Emilson very clearly points out the risks, and that the Sudbury basin is a sensitive area because of its historical metal and sulphur deposition. He suggests that it is "*particularly critical that we preserve and protect all existing habitat in this area*" and "*imperative that we preserve the hydrologic cycles of these areas as much as possible so to avoid the recontamination of surface waters with sediment- and soil-bound metals*."[11] ORA and VRS concur with his statement that "*the true risks of this "modified run-of-river" project have not been addressed or conveyed to the public or stakeholders*".

We go further to suggest that the generation of 1.5 MW of power is not worth the severe environmental and health risks.

Recommendation 4:
In order to determine the full magnitude of impacts on public health and safety, aquatic life, water quality, and on the North Channel of the Lake Huron, Xeneca must do a risk/benefit analysis, as well as rigorous studies to assess the impacts of daily wetting and drying of sediment and wetlands, and its corresponding release of heavy metals into the environment.

4. Headpond & Zone of Influence

Xeneca has defined the headpond as only extending to the outflow of the lake, when in fact all of Wabagishik Lake will be used as a headpond. This fact is supported in the ER many times when it is reported that "*Wabagishik Lake will function as part of the headpond"* and "*once operational, any modification of flow that affects the headpond also affects the lake*" [12].

The fact that the area defined in the ER as the headpond is only 4.8 hectares, while the actual headpond area of Wabagishik Lake is reported to be 629 hectares may have created the motivation for declaring this significant exemption in Xeneca's favor.

Xeneca also points out that "*Minor fluctuations in lake level will occur on a daily basis in conjunction with dam operations, and some ability to control lake levels during drought conditions may also be realized. The project is therefore considered a lake-coupled project, and the study area includes Wabagishik Lake.*"[13] We have yet to find one study in the entire ER for Wabagishik Lake that addresses environmental impacts.

This lake coupled operation will cause lake water levels to rise and fall daily with a 10 cm operating band. On close examination of the ER it raises the question of whether this was done to avoid having to carry out more extensive erosion, fisheries, wildlife, and water quality studies on Wabagishik Lake. This is very disturbing as it appears to be an attempt to gloss over, cut corners, and avoid addressing the full environmental impacts of the project.

Xeneca's own ER points out that "*Impounding rivers for hydroelectric generation can change their water quality through warming due to decreased water flow and increased*

[11] Erik Szkokan-Emilson, PhD Candidate, Living with Lakes Centre, Laurentian University - Letter to Xeneca dated 29 October 2013
[12] Annex III, Part 1, Natural Environment Characterization & Impact Assessment Report – P-160 of 174
[13] Annex III, Part 1, Natural Environment Characterization & Impact Assessment Report – P-9 of 174

surface area exposed to sun, changes to water chemistry from water contact with newly flooded soil and changes in flow, increases in oxygen demand and changes in microbial activity in the flooded soil. Typically, water quality has a very rapid response to inundation, changing quickly and then stabilizing within a few years. The potential increase of available mercury in surface water is a particular concern with water impoundment. Mercury and methyl mercury may biomagnify within the food chain and can pose a health concern to humans and wildlife that consume fish. The rate of mercury accumulation in fish depends on a variety of factors including fish size, diet and trophic position, as well as site-specific factors such as the type of terrain flooded, hydraulic residence time and water level fluctuation.[14] This report didn't mention that sediment can also be a major contributing factor in methylmercury production.

This report clearly points out that this waterpower development could result in increased mercury concentrations in fish tissue, when there are already "Fish Consumption" restrictions for the Vermilion River below Lorne Falls, including Wabagishik Lake, all the way out to the confluence with the Spanish River.

This report goes on to say that "*although aluminum, copper and nickel concentrations exceeded the Ontario Provincial Water Quality Objectives (PWQO), the project area has relatively good water quality typical of a northern Canadian Precambrian Shield river with limited impacts from mining activities*". How can this be considered good water quality when it exceeded the PWQO in all of these areas?

It appears as though Xeneca feels justified in not doing any erosion, water quality, fish sampling, or study of aquatic life, reptiles, or birds on Wabagishik Lake. This appears to be because Xeneca has confined the headpond to the 600m/800m (varies between 600 and 800m throughout the ER) area immediately above the dam, instead of all of Wabagishik Lake. This becomes apparent when Hutchinson Environmental Solutions Ltd. (HESL) reports, "HESL understands from Xeneca that the facility will not impound water in Wabagishik Lake." [15] This formed the basis of the Hutchinson study, and is obviously incorrect as Wabagishik Lake will be used to impound water for the hydroelectric facility, and the lake will be utilized within a 10 cm operating band – and more when you include the wave seiche effect.

Recommendation 5:

1. Xeneca must recognize Wabagishik Lake as part of the headpond and undertake full erosion, water quality, fish sampling, aquatic, reptile and bird studies on Wabagishik Lake to determine all environmental impacts.
2. Xeneca must inform Hutchinson that Wabagishik Lake will be used to impound water so that all pertinent fish and water quality studies can be accurately assessed.

5. Erosion, Shoreline Stability & Scour

Upstream of the Dam:

See our comments under "4. Headpond and Zone of Influence".

[14] Annex IV, Part 3 of 4 – P78, 2012 Pre-Development Water Quality and Fish Tissue Report
[15] Annex IV, Part 3 of 4 – Hutchinson Environmental Sciences – Surface Water Quality and Fish Sampling Guidance

The Vermilion River below Lorne Falls dam, and all of Wabagishik Lake, a distance of 11.5 km (629 hectares), of what is referred to as the "zone of influence" (ZOI) in the ER, were not studied in the Geomorphic Assessment report – even though daily peaking will fluctuate lake water levels within an operating band of 10 cm and will impact the entire lake and upstream portion of the Vermilion River. The ER indicates that this 10 cm fluctuation is less than what might be caused by wave action or siege effect at present. However, as one regulator pointed out, this 10 cm would be in addition to the wind siege effect. The Report also states that "*the fluctuation of daily water levels upstream of the proposed dam can increase the amount of shoreline erosion that would occur without modified operation*."[16] And yet there were no environmental studies completed for this entire area. This is irresponsible and unacceptable.

Xeneca reports "*For the Wabagishik Rapids development, fluctuation of daily water levels in the backwatered area upstream of the dam will likely not have an impact on bank stability due to the presence of bedrock lined channel in the backwatered zone.*"[17] Agreed - this area is mostly gravel and rock with little vegetation. It is no surprise that Xeneca confined their definition of what constitutes the headpond to this area only – much cheaper and easier to mitigate any problems in this section of the rapids. This seems to have negated their sense of responsibility for any impacts this could have on the lake.

Xeneca dismisses all effects on the lake when it reports, "*While Wabagishik Lake will function as part of the headpond, it will not be newly inundated and water levels will not change substantially.*"[18] In truth, water levels on Wabagishik Lake will change in accordance with the water levels in the headpond area. This analysis makes no mention of the potential erosion impact on Wabagishik Lake and the upstream portion of the Vermilion River with water levels rising and falling within a band of 10 cm on a daily basis for approximately 80% of the year. However, Xeneca reports that there would be "*no notable erosion concern*". We request a clear and traceable method of how they arrived at this conclusion.

Xeneca reports that changes in water levels created by the facility are less than half the magnitude of the fluctuations that occur under existing conditions[19]; however, ignores the fact that water fluctuations on the Vermilion River and Wabagishik Lake do not rise and fall daily under existing conditions. In actual fact this entire area - W1 and W2 - was not even studied in the Geomorphic Assessment – this is gross negligence.

Recommendation 6:
Xeneca must undertake a geomorphic erosion study on all of Wabagishik Lake, as well as the upstream portion of the Vermilion River (W1 and W2) to properly assess the potential for sediment transport and bank erosion.

Downstream of the Dam:
Downstream of the dam, this peaking operation will operate within an operating band of 30 cm. On a daily basis large sections of the river would be dewatered only to be flushed with a wall of water when the turbines are turned on at peak demand hours, and flow velocity would instantly jump from the environmental flow of 5, 6.5 or 8 cms to 25, 26.5 or 28 cms. This rush of water flooding out from the turbines would be like turning a

[16] Geomorphic Report, Annex 1, Part 2, P49
[17] Annex III, Part 1, P160 – Inundation Impacts and Proposed Mitigation
[18] Annex III, Part 1, P160 – Inundation Impacts and Proposed Mitigation
[19] Appendix C – Part 2, P-224

fire hose on a garden. Xeneca states that this is within the "natural fluctuations" in flow velocity, but natural fluctuations do not occur daily to this extreme, nor do they create an instant wall of water.

In the downstream bay area identified as W4 and W5 in the geomorphology report is where the greatest potential for erosion exists. W4 is described as a "*sediment sink"* and W5 was "*primarily comprised of fine silts and sands or coarse gravel*"[20] in this report. This bay area is filled with very fine silt that would very easily be disturbed and churned up with rapid flow velocity changes – Xeneca does not address this in the ER – nor does it address what that fine silt contains in the way of contaminated sediment.

It is our position that due to the operation of this peaking facility, with rising and falling water levels and rapid increases in flow velocity, that there is potential for considerable erosion, sedimentation and scouring of the substrate that would send contaminated sediment and soils downstream. This would have serious repercussions for all downstream aquatic life and habitat, as this heavily contaminated sediment would eventually end up in the North Channel of Lake Huron.

Xeneca's ER does not adequately identify and mitigate the serious risk to the public and riparian land owners that might be swimming, boating or fishing within the downstream zone of influence.

Xeneca has not provided a clear and traceable method of how they arrived at the conclusion that there would be "*no notable erosion concern*" on Wabagishik Lake.

Recommendation 7:

1. Erosion, shoreline stability and scour concerns have not been adequately addressed in the ER. Xeneca must do an in-the-field erosion study to determine the potential for erosion and/or disturbing the heavily contaminated sediment located in Wabagishik Lake and in the bay area.
2. Xeneca must commit to a Biological Monitoring Plan that includes erosion monitoring both downstream of the dam, as well as upstream – all the way to the base of the Lorne Falls GS.

6. Littoral Zone of Wabagishik Lake

In the ER Xeneca reports, "*a very conservative estimate of total littoral area can be generated by assuming a 5m average width for the littoral zone and multiplying this by the shoreline perimeter of the lake as follows: Shoreline perimeter = 25 km (25,000 m) Average Littoral zone width = 5m Therefore the littoral zone area is estimated at 125,000 m2 or 12.5ha. Within this estimated 12.5ha of littoral zone, any impacts on biota in the littoral zone habitat are predicted to be minimal and not significant. There will be an increase in the frequency of water level fluctuation, relative to a natural system. As noted above, a 10cm fluctuation in water level is less than what might be caused by wave action or seiche effect. As a result, the plants and other biota living in the littoral zone can be expected to withstand the 10cm daily fluctuation in water levels.*"[21]

Xeneca also reports, "*Plants and other biota living within the riparian zone can generally be expected to withstand the 10cm daily fluctuation in water levels based on their*

[20] Annex 1, Part 2 – Geomorphic Assessment – P-11 & 12
[21] Wabagishik Rapids GS ER, 6.4.2 Aquatic Impacts – Upstream Operational P-109 of 174

adaptation to the dynamic riparian environment."[22] No studies were undertaken to make this determination.

The ER also did not report whether the additional 10cm wind and wave seiche effect (as reported by the proponent) was added to the 10cm operating band when calculating the lake stage measurements and effects on littoral zone and biota.

Recommendation 8:
Xeneca must provide a clear and traceable method by which the average littoral zone width of 5m on Wabagishik Lake was arrived at, and how they arrived at the conclusion that the biota living in the littoral zone could be expected to withstand a 10cm daily fluctuation in water level, or that the impact would be minimal and not significant.

7. Mercury in Fish Tissue

Ministry of Environment Fish Consumption restrictions are already in place on Wabagishik Lake and posted on-line. These restrictions are in place all the way out to the confluence of the Vermilion River with the Spanish River, and this was not mentioned anywhere in the ER or its study documents. Any additional increase in mercury in fish tissue could make fish totally unavailable for recreational anglers, residents and First Nation communities. The very fact that there are already fish consumption restrictions in place should have necessitated a proper fish tissue sampling study.

The ER reports that "*MOE (2012) recommended that reference sampling be conducted upstream of barriers to fish migration. There is no barrier to upstream fish migration at the proposed Wabagishik Rapids facility. Therefore, upstream reference sampling will not be conducted for the facility as fish can freely migrate from the project area, upstream, and 'upstream references' would not provide an accurate reference of naturally occurring mercury concentrations in fish.*[23] If Wabagishik Lake were properly considered as the impoundment for this proposal, the upstream barrier to Wabagishik Lake is the Lorne Falls GS.

The ER also states, "*The Wabagishik Rapids hydroelectric facility will not impede fish movement through the project area so the study design to assess mercury concentrations in fish was based on a before/after approach with one site that will be compared between years*."[24] There is no fish passage included in this design, and the gross head of the facility is 6 meters. Therefore, the dam and power house would most definitely be a barrier that would impede fish movement through the project area.

"HESL understands from Xeneca that the facility will not impound water in Wabagishik Lake".[25] Wabagishik Lake would most definitely be used to impound water for the proposed facility, for without using the water resources of Wabagishik Lake the facility would have very little capacity to generate power. Wabagishik Lake is clearly part of the headpond and needs to be acknowledged and treated as such.

[22] Annex III, Part 1, Natural Environment Characterization & Impact Assessment Report – P-161 of 174
[23] Annex IV, Part 3 - Wabagishik Rapids, Surface Water Quality and Fish Sampling Guidance, Sec. 2, P-8 of 227
[24] Wabagishik Rapids GS ER, P-207 - Potential Impacts related to Inundation (Mercury)
[25] Annex IV, Part 3 - Wabagishik Rapids, Surface Water Quality and Fish Sampling Guidance, Sec. 2, P-7 of 227

Mercury levels are already elevated on this section of the river, and any additional increase in mercury in fish tissue could make this main dietary staple for consumption. This is not acceptable.

It is not sufficient to wait for adaptive management strategies, which would be much too late. This is a public health and safety issue that must take precedence over all other considerations.

Recommendation 9:
Xeneca must be required to complete a comprehensive methylmercury study that will examine all of the above identified factors existing within the proposed headpond and zone of influence, including soil and sediment, to provide a quantitative analysis and a projected post-construction estimate of increased mercury levels in fish tissue.

8. Modified Run-of-River

Xeneca is calling this proposal a "modified run-of-river" when it is actually a peaking operation. According to Table 3 [26] this operation will be in peaking mode 78% of the time, or for 285 days of the year – which seems very optimistic. According to this Table, it also appears this operation would be shut down for 7 days of the year – which also seems very optimistic.

Recommendation 10:
Xeneca must refer to this operation as a "peaking" facility to accurately reflect its potential impacts to the public and First Nations.

9. Operating Strategy

The operating strategy filed with this ER sets out possible operating strategies, but is only in draft form, and as such cannot be seriously considered. The Installed Capacity (IC) of this proposed generating station is 3.4 MW, and Xeneca's prediction of actual power to be generated is 1.7 MW. This seems very optimistic when, depending on river flows, there are some periods when the generator will be shut down completely, and several winter and summer months where power would be generated at minimum turbine speed – all because of low flows.

Recommendation 11:

1. Xeneca must provide an approved and final operating plan for public review and comment before any Statement of Completion is issued.
2. Xeneca must undertake a cost/benefit analysis, taking into account the predictions of climate change, impacts on fisheries and the riverine ecosystem to ensure this waterpower project is environmentally, socially and economically sound and sustainable over the long-term.

[26] Annex 1, Part 1 - Proposed Operating Plan & WMP Amendment, P-19 – Table 3

10. Cumulative Effects

Xeneca reports that as a result of its operating restraints, which have not been finalized, "*cumulative impacts downstream of the Domtar dam are anticipated to be minimal*." And yet, "*Wabagishik Rapids GS operation (combined with flows from the Nairn Dam) may result in pulses that could have a potential impact on hydroelectricity generation at the Domtar Dam because excess flows may result in an increased need for Domtar to spill water*", and "*may increase manpower requirements for operations*".[27] We submit that there is no clear and traceable way to know how Xeneca came to this conclusion.

Xeneca must also include the effects of the three additional proposed hydroelectric facilities planned for upstream of the Wabagishik Rapids site; the 9 City of Sudbury Wastewater Treatment Facilities releasing treated, undertreated and untreated effluent; the heavily contaminated sediment; as well as the planned and existing mines and other operations taking water and releasing effluent into the Vermilion River Watershed.

Cumulative effects refer to the accumulation of human impacts over time, from all sources – including heavily contaminated sediment. If enough impacts accumulate, this can push ecosystems or individual species past ecological "tipping points" from which they may not recover.

Xeneca does not account for the three upstream hydroelectric dams it is proposing upstream of Wabagishik Rapids. It is our understanding that Xeneca is moving forward on at least two of these facilities, and to claim in their ER that they are not is misleading. A Notice of Commencement was issued in 2010, and there has been no notification to the contrary.

Xeneca also makes no mention of the cumulative effects of the Greater City of Sudbury's 9 upstream wastewater treatment facilities releasing treated, undertreated and untreated effluent into the Vermilion River watershed. Holding water back in headponds containing nutrient rich effluent must be considered in any cumulative effects assessment.

Xeneca also makes no mention of the numerous planned and present mining operations releasing effluent into the Vermilion River Watershed either.

This ER has not even identified all the potential cumulative effects, let alone assessed them. This is totally irresponsible and unacceptable.

Recommendation 12:
Xeneca must undertake a rigorous assessment of the potential cumulative effects over time of all human impacts from all sources, including but not limited to the existing contaminated sediment, existing and future fish consumption restrictions, other existing and planned hydroelectric facilities, upstream and downstream wastewater and mining effluent, water taking, and climate change.

[27] Wabagishik Rapids GS ER, P-282

11. Blue-green Algae

The lower Vermilion River and several of its connecting lakes have had blue-green algae blooms reported for the last 3 years, and most recently Ella Lake had a reported blue-green algae bloom that lasted from November of 2012, right through the winter months until ice break-up in April. Ella Lake is part of the impoundment for Lorne Falls hydroelectric dam, which is immediately upstream of Wabagishik Lake. We are concerned that Wabagishik Lake will meet the same fate as Ella Lake, and for good reason.

November 2012

March 2013

There are numerous studies that associate impoundments with inducing blue-green algae (cyanobacteria) blooms. *"The building of dams and regulation of rivers has created more habitats suitable for cyanobacteria. The general opinion now is that "cyanobacterial blooms" are increasing in frequency worldwide. Exposure to hepatotoxins (microcystins, nodularins and cylindrospermopsins) has been reported to induce several health disorders depending on the route of exposure, the quantities absorbed and the toxicity of the cyanobacterial strain. Harmfulness ranges from minor disorders (headaches, nauseas, diarrheas) to lethal deterioration of hepatic functions. It is also thought that chronic exposure to low concentrations can promote liver cancer. In 1996, 60 patients died in Brazil after haemodialysis with contaminated water (Pouria et al. 1998). WHO considers that freshwater contamination by cyanobacteria, and the toxins they synthesize, constitutes a major worldwide threat that can limit utilization of water resources (Chorus & Bartram 1999)."* [28]

Xeneca reports, "*Following development, the water temperature in the impoundments may warm from increased river surface area, which may result in lower dissolved oxygen concentrations as the water's capacity to retain oxygen decreases. The magnitude of dissolved oxygen decrease will depend on how much the water warms and other factors such as changes in water turbulent flow, which recharges water with oxygen, changes in aquatic plant growth and oxygen demand from the conversion of inundated soil to sediment."*[29] This sounds like the perfect recipe for more blue-green algae.

As a matter of fact, Hutchinson made a report on a recurring blue-green algae problem in Callander Bay, and explains how "*this lack of oxygen (anoxia) in bottom waters has important implications for phosphorus cycling in Callander Bay. If periods of stratification are maintained for a sufficiently long period of time, there is a risk of complete oxygen depletion near the sediments. Phosphorus is normally bound to sediments under oxygenated conditions, but can be released into the water column under anoxic conditions. This process is called internal phosphorus loading. In lakes that maintain thermal stratification over the summer and only mix in late fall, phosphorus released by internal loading is confined to the deep cool dense layer of water (the hypolimnion) and remains mostly unavailable for uptake by algae until mixing of the water column in late fall. Callander Bay, however, mixes frequently over the summer months and so phosphorus in bottom waters from internal loading could be introduced into the surface waters at the height of the growing season, promoting aquatic plant growth*." [30]

Increased retention time in the headpond and Wabagishik Lake, and the potential for internal loading from the sediments has not been adequately addressed in the Environmental Report. The 1986 MOE sediment study reports heavily contaminated sediments that are several times over the SEL for heavy metals, and nutrient rich, so there is a strong potential for internal loading when flows are reduced and oxygen levels are depleted. Xeneca's ER has not addressed the issue of contaminated sediments, even though they were made aware of the MOE study months ago.

Blue-green algae can be lethal, and it is unacceptable that local residents, wildlife and fauna would be placed at risk for the sake of "green energy".

[28] Cyanobacteria, cyanotoxins and potential health hazards in small tropical reservoirs
[29] Wabagishik Rapids GS ER, P208 – Pre-and Post-construction monitoring of water quality and fish, P208
[30] North Bay-Mattawa Source Protection Area – Approved Updated Assessment Report, Hutchinson Environmental Sciences Ltd.

Recommendation 13:
Xeneca must undertake a comprehensive sediment and water quality study on Wabagishik Lake, complete with a monitoring plan, to provide a quantitative analysis and a projected post-construction estimate of increased potential for toxic blue-green algae.

12. Ice and Flooding

The ER reports Xeneca was "*asked to provide details on the increase in water levels at the bridge as a result of the project and asked to specify how the bridge piers would be protected from ice and water*"; and were asked to confirm "*whether they would accept liability for any damage to the bridge as a result of the undertaking*".[31] However, there was no indication in the ER whether an MOU was signed or whether Xeneca agreed to accept liability.

It appears the extent of Xeneca's safety and mitigation plan is summed up in a nutshell when the ER reports, "*Extreme cold weather conditions may lead to a build-up of ice at the intake that could necessitate plant shut-down and an interruption to the delivery of electricity to the provincial supply grid. Such an interruption will affect project revenues until the ice is naturally or artificially cleared*."[32]

Xeneca claims it would be "*unlikely that the project would result in ice jam formations at the bridge as a result of the project*[33]", but it is unclear how that conclusion was arrived at, how ice jams and flooding would be prevented, and what emergency mitigation measures would be undertaken to protect public safety.

Xeneca reports that the potential for spring ice damming and/or flooding on Wabagishik Lake is "*high*", magnitude "*low*", likelihood of effect "*low*", and that the residual effect would be "*not significant*".[34] This is the perspective of a developer who does not live on Wabagishik Lake; however, the stakeholder who expressed concerns because of past ice-jams and flooding on Wabagishik Lake will not be reassured by the lack of planning in this ER.

Xeneca's idea of a resolution: "*Potential impacts can be mitigated by regular water level monitoring and proper operation of facility*"[35]. This is not adequate and does not reassure the public.

The extent of Xeneca's "Special Event Operation" plan is that during floods and safety emergencies the procedure will be to operate as normal for a "high flood operation", and on the occasion of "extreme flood operation" it appears that the plan is to "evacuate the facility". This is not a plan – Xeneca's plan is to leave.

Ice jams at the outlet of Wabagishik Lake have happened in the past and have resulted in flooding and damage. Stakeholders must be assured that Xeneca has studied the entire possibility and scope of an ice jam, and that there is a strategy in place to prevent this from happening, and if it does there must be a plan of action to minimize and control any impacts or damage.

[31] Wabagishik Rapids GS ER, Snowmobilers, P-116
[32] Wabagishik Rapids GS ER, 8.8.1 – Extreme Winter Conditions, P-241
[33] Wabagishik Rapids GS ER, Snowmobilers, P-116
[34] Wabagishik Rapids GS ER, Table 35 - Residual Environmental Effects and Significance, P-252
[35] Wabagishik Rapids GS ER, Table 33 – Potential Residual Effects, P-190

Recommendation 14:

1. Xeneca must do a comprehensive study and effective special event plan to indicate how they would deal with public safety issues in the event of ice jams and flooding.
2. Extreme rain events even throughout the winter months have become a normal occurrence, so in the event of flooding as a result of Xeneca's operation there must be a legal and binding commitment to cover any losses or damage to riparian landowners.

13. Dam Decommissioning

With climate change scientists predicting a future with the possibility of extreme drought conditions, there is a very good possibility that this hydro project may no longer be economically feasible. Ontario is littered with old and derelict dams that are no longer in use, along with access roads, and in the case of hydro dams, transmission lines and poles that must be monitored and maintained (at a cost, usually to the taxpayer), and ultimately removed for safety and/or ecological reasons. This all takes dollars that taxpayers should not have to pay. Developers reap the rewards for at least the 40 year life cycle of their contract, and a portion of these funds must be secured for dam decommissioning.

If the FIT contract were to be terminated, profits reduced, or costly repairs were needed due to damage caused by ice or flooding, or if climate change reduced the amount of water available for energy production, the payback from these small rivers could make this facility unprofitable. This could result in bankruptcy and/or abandonment. There is no commitment in this ER for setting provisions aside to decommission the facility and its infrastructure if events such as the foregoing should occur. Provisions for dam decommissioning are essential.

Recommendation 15:
Xeneca must be required to secure funds up front for future dam decommissioning in the event this facility is no longer socially, environmentally or economically sustainable and needs to be removed.

14. Lake Sturgeon & Walleye

Xeneca has decided to compensate for the loss of the best spawning habitat available to the Walleye and Lake Sturgeon population, anywhere on the lower Vermilion-Spanish river system. Xeneca is planning to move the spawning area downstream of the dam to Graveyard Rapids, so without fish passage, Lake Sturgeon and Walleye could not migrate upstream into Wabagishik Lake because of a 6m gross head dam blocking their way.

While the Natural Environmental Characterization Report stated that it is unlikely for sturgeon to pass through the upper reaches of Wabagishik Rapids, it acknowledges that it is physically possible under the right conditions. Suitable spawning conditions do exist at Lorne Falls for Sturgeon, and MNR have said there are anecdotal reports of historic catches of Lake Sturgeon in Wabagishik Lake[36]. This is contrary to Xeneca's response

[36] Appendix C, Part 2 – P-58 – MNR Comments on the Draft ER – 1413 - EC

to First nations in the ER, "*further information from the district MNR staff and anecdotal data collected during the study period indicate that there are no Lake Sturgeon in the area*"[37]. Xeneca has also not provided the MNR data indicating that there are no Lake Sturgeon in the area.

In fact it is not revealed in the ER, that none of Xeneca's efforts resulted in finding Lake Sturgeon - it took an independent consultant hired by Vale to discover Lake Sturgeon in the lower reaches of the Vermilion. This indicates that further studies need to be undertaken before Lake Sturgeon can be ruled out in Wabagishik Lake, especially when the ER reports, "*it can be concluded that it is technically feasible for lake sturgeon to pass upstream through Wabagishik Rapids during the 5th percentile and median flow scenarios.*"[38]

The ER's conclusion contradicts its own Natural Environment Characterization and Impact Assessment Report's statement that "*there are no confirmed records of Lake sturgeon in Wabagishik Lake, although there is potential that lake sturgeon can ascend Wabagishik Rapids. The dam will restrict the lake sturgeon population to its current range, which may or may not represent a change from existing conditions*"[39].

There is not enough information currently available to know where the Walleye and Lake Sturgeon even come from – upstream or downstream, so the loss of spawning habit has not been adequately assessed, nor have the impacts to the recreational fishery and First Nation subsistence fishery which could be seriously impacted by this habitat loss and blocking of fish migration.

There is not enough information in the ER regarding the "compensation plan" (location, area, habitat characteristics, and feasibility) to adequately comment; however, this plan should have been in place before the ER was submitted for comment. We question how effective any compensation plan can be below a peaking operation with the daily extreme variation in flow, the wetting and drying of channel substrate and habitat, and the resulting change in the benthic community. The public must be consulted on how this valued population of Walleye and Lake Sturgeon will be protected and provided for.

Recommendation 16:

1. Lake Sturgeon are listed as an endangered species, therefore, to confirm definitively whether they inhabit Wabagishik Lake it is recommended an extensive telemetry study is carried out over multiple years.
2. Xeneca must undertake further studies to ensure this sensitive population of Lake Sturgeon is protected and conserved.
3. If this project goes ahead, it could have a very negative impact on water quality, so any Monitoring Plan for Lake Sturgeon should take place over a minimum of 25 years in order to properly assess recruitment, abundance, and any changes.

15. Fish Friendly Turbines and Fish Passage

No fish passage or fish friendly turbines have been included in this project design. Section 22(2) of the Fisheries Act states, "*The design of the dam and/or other barriers must allow for the safe passage of both ascending and descending migratory fish*."[40]

[37] Wabagishik Rapids GS ER, Table: 33 , P-170
[38] Annex III – Part 1, P-142
[39] Annex III – Part 1, Natural Environment Characterization and Impact Assessment Report - P-158
[40] Class EA for Waterpower, Table 1 Key Legislative Considerations for a Waterpower Project, P-14

Also, the Class EA for Waterpower recommends that waterpower structures "*incorporate fish passage structures into project design where appropriate*." [41] The ER acknowledges that not providing upstream fish passage "*carries some risk for fisheries management", but plans to finalize fish passage matters during the permit process with OMNR and DFO*"[42].

Recommendation 17:

1. We request that Xeneca be required to adhere to the recommendations of the Class EA for Waterpower, and incorporate upstream and downstream fish passage into the project design to allow fish to migrate freely upstream and downstream.
2. We request the use of fish friendly turbines to reduce fish mortality.

16. Public Safety

This proposal poses many risks to public health and safety. The risk of increased methylmercury production and resulting restrictions or loss of edible fish, increased risk of blue-green algae, and the unaddressed risk of heavy metal contamination and flooding have already been addressed separately.

There is also a risk to the potential safety of people swimming, boating and fishing below this peaking dam. Unless access is restricted then peaking will present a risk to public safety. Xeneca has not presented a plan of how this risk has been assessed, and how the public will be protected. This must be done before a Statement of Completion is filed.

Recommendation 18:
Xeneca must be required to undertake a study to assess public safety issues, and come up with a comprehensive plan to mitigate these risks.

17. Public Consultation

There are many aspects of this ER that are insufficient, incomplete or undecided, and therefore the public must have an opportunity to be consulted and offer input before a Statement of Completion can be issued. The approach taken by the proponent is we will address it in the permitting stage, but we the public must have an opportunity to have our input. Proper erosion studies, or any other kind of study, were not even attempted on Wabagishik Lake, which Xeneca has termed the upstream zone of influence. Also, the critical operating parameters are still in draft form, and consequently mitigation measures cannot be properly addressed.

Recommendation 19:
The proponent has issued an incomplete ER and must be required to go back to do the additional studies requested herein, and once completed Xeneca can resubmit their ER for public comment and review.

[41] Class EA for Waterpower, Appendix B: Examples of Typical Mitigation, 1.6 FISH AND WILDLIFE, P-91
[42] Annex III, Part 1, P-164

18. Site Release

Xeneca states in the ER that they have been engaged in the aboriginal consultation process as a component of the Crown Land Site Release Process in parallel with the Class EA process and where possible completed in parallel. However "*a separate report updating MNR on the status of the consultation process will be completed independently of this Class EA"*[43]. However, in another ER for a proposal on the Serpent River, there was evidence that MNR and MOE representatives both made clear recommendations in writing to Xeneca, recommending that they wait until the Site Release process was completed before formally commencing with the Waterpower Class EA process. MNR and MOE staff made a valiant attempt to follow their policy and procedure, and their legal obligations to the public, by protesting Xeneca commencing through the EA process, and attempted to protect the environment and natural resources. However, Xeneca pressed on in spite of their warnings.

It is noted that in an ER on another of their proposals, pressure tactics were applied on by Xeneca in their letter dated 27 May 2011, from P. Gillette to Richard Linley, MNR, where two MNR staff were reported, "*This is most obvious at the Serpent River sites, but Fishery Management Plans seem to be issued in a negative manner at all our FIT sites. The two key individuals raising these issues are …. …. and …. ….*" [44] (names are removed for privacy reasons).

It is very disturbing to see MOE and MNR staff make numerous recommendations on the Draft ER that were totally ignored by Xeneca. This shows contempt for the process and best practices advice of our regulators.

Xeneca has not yet been awarded Site Release at Wabagishik Rapids, and as previously communicated to Xeneca, "*any environmental assessment work undertaken before Site Release is completely at the proponent's risk*".[45]

Agency staff must be left to do their jobs, and not be pressured by upper management or Xeneca to do anything other than act in the best interests of the natural environment and riverine ecosystem.

Xeneca's timelines and interests must not take precedence over policy, procedure, provincial regulations, the public, and most of all the health and well-being of the community, the environment, and the riverine ecosystem.

Recommendation 20:
Xeneca must follow established policy, process, best management practices, and agency directives, and any interference or non-compliance from the proponent should not be tolerated.

19. Aboriginal Consultation

The Wabagishik ER contains the following statements, "*In November 2012, Xeneca, with the assistance of several Aboriginal Communities convened an EA Peer Review Group which would assist the various communities in reviewing aspects of the Project*

[43] Wabagishik Rapids GS ER – 6.5.3 – P-126
[44] Four Slide Falls GS ER – Serpent River - Appendix C, P-91, 2011, May 27 – Patrick Gillette to Richard Linley, MNR
[45] Four Slide Falls GS ER – Serpent River - Appendix C-P-76 to 81, 2011, May 18 – MNR memo to Xeneca

development. In addition to reviewing the Environmental Assessment, this group would also take on review of business to business (B2B) items. The B2B discussion between Xeneca and Aboriginal Communities are not part of the EA process and are for the most part confidential, therefore they will not be discussed further in this document. For the purposes of the Class EA Sagamok Anishnawbek was appointed the lead for the Environmental Assessment review. The members of the EA Peer Review group agreed that within reason, and in some cases with Elder approval, what the lead group (Sagamok) concluded from their review, they would also generally endorse." And that, "*Whitefish Lake First Nation (Atikameksheng Anishnawbek) was present at the November 5, 2012 coordination meeting for the EA Peer review group and have agreed with the idea in principle; however, they have remained independent from the group to date*." [46]

There was no information contained anywhere in the Environmental Report (ER) that would support Xeneca's claim that the members of the EA Peer Review Group or Sagamok First Nation agreed to endorse this project, or that Whitefish Lake First Nation or any other First Nation community agreed with the idea in principle, and there is also no explanation or description of what that "*idea*" is.

Any B2B arrangement must be open for public scrutiny so we know how much our fresh water and fishery is worth to all parties involved, what portion of funding taxpayers will be contributing, and what has transpired in the process of agreeing to any arrangement or accommodation.

A 19 September 2013 letter from Sagamok Anishnawbek[47] was included in the Final ER. However, it did not reflect an endorsement of the project, but did report some of their asks had been met, and stated a desire to receive and review the Final ER and to continue discussions and engagement.

As a matter of fact, in spite of MOE's request to include all aboriginal correspondence and documentation in the final ER[48], there was very little correspondence from First Nations included, except those that shone a favourable light on the project. In fact, many letters which appeared in the Draft ER did not make it into the Final ER. This is not congruent with the transparent requirements of the Class EA process.

By ignoring the advice of MOE staff, and going even further to remove important documentation, Xeneca has shown contempt for the regulators, and the entire process.

Recommendation 21:

1. Any B2B relationship, incentives, or funding/payment/partnership that would include funding from any government source is relevant to this ER and must be transparent, made available to the public for our review, and be part of the Wabagishik Rapids GS Environmental Report.
2. A clear, traceable and transparent accounting of how Xeneca arrived at the conclusion that the Peer Review Group would generally endorse or agree with the idea in principle must be provided for public scrutiny and review.

[46] Wabagishik Rapids GS – ER, 6.6.15 First Nations EA Peer Review Group, P-157
[47] Appendix E – P-252
[48] Appendix C – Part 3, P-68

20. Vermilion Stakeholders' Advisory Committee (VSAC)

It is also interesting to note that there is no information contained in the ER pertaining to the VSAC. This is a committee that was established by Xeneca to advise and deliberate on the pros and cons of all four of the Vermilion River hydroelectric proposals, and certainly would have been referred to if there were favourable reports regarding the Wabagishik Rapids proposal.

Recommendation 22:
Xeneca must provide all minutes, documentation and correspondence relating to the VSAC, along with any partnerships or funding applications, agreements, or arrangements made with any and all members of the VSAC Committee, to be included in the ER.

21. Trust and Confidence

Over the almost three years since first becoming aware of this Proposal in November of 2011, there has been a continual undermining of trust and confidence in Xeneca and that this "modified run-of-river" proposal would be good for the Vermilion River Watershed, its local communities, or the citizens of Ontario. What follows is an outline of the many reasons why trust and confidence have been broken.

1. Vermilion River Stewardship (VRS) registered as a stakeholder on 8 December 2010, and asked several questions of Xeneca.[49] There was no response until France Gelinas, NDP MPP intervened and reminded Xeneca of their obligations to consult. Xeneca then responded on January 15th, 2011, offering to share information when available.

2. VRS requested the PowerPoint presentation Xeneca made to City Council in March of 2010, and Mark Holmes responded by emailing only part of the presentation because he said the file was too large to email. When I informed him that I could receive a large file and was requesting the entire file, the full presentation was sent, and the only page that had been missing was the corporate and financial structure of the company which revealed this proposal was funded by OP Trust – our government pension fund.

3. After the first PIC I attended for the proposed Wabagishik Rapids GS, I received a call from a North Bay OPP Special Operations police officer who informed me he was present at the PIC and watched me the entire night, looking for an opportunity to talk to me, but couldn't because I was constantly surrounded by people. He informed me he was accompanied by an Espanola Police Department officer. I asked him if Xeneca requested he attend and he told me "no". A few days later I received an anonymous email with a picture attached of an email from the OPP to Mark Holmes asking whether their presence would be required at the PIC the next night. (This document is available upon request.)

4. VRS made a formal request in writing to Xeneca for documentation pertaining to the Vermilion River proposals on 8 February 2011[50], and was informed by

[49] Appendix D – Part 2 - P119
[50] Appendix D – Part 2, P-128

Xeneca that "*all the information that you have requested regarding the PICs will be available in the Waterpower Class EA when it is finalized.*"[51]

5. VRS sent an email to Xeneca restating the request contained in the 8 February letter, and admonishing Xeneca for not notifying the VRS of the 22 March Public Public Information Centre (PIC), and of continuing to erode confidence and trust in Xeneca and in the EA process.[52]

6. VRS filed a Freedom of Information Application (FIPPA) with MNR to gain access to several documents in April of 2011. In August VRS was granted permission. But before we could receive the documents Xeneca appealed the decision. At which time VRS decided to abandon the application because the documents had become available through the Canadian Environmental Assessment Act when it was triggered.

7. Mark Holmes negotiated with me for several months to talk me into joining the Vermilion Stakeholder Advisory Committee (VSAC). In a 4 March 2011 email to me he offered, "*further to your question on the "power" of the committee, if the committee brings forward an issue that is a show stopper, then it will have done it job and the project will either be abandoned or modified to avoid the problem."* He asked me to recommend some local representatives to be part of VSAC, so one of the people I recommended was Charles Ramcharan, a local Laurentian University professor. I soon regretted this recommendation, because at the very first meeting "*Charles discussed research ideas with Graeme and potential research projects with Xeneca. Charles is also asking Xeneca for sponsorship for a seminar series and scholarships for a new Environmental Science Program*." (VSAC Minutes not made available in the ER) Ramcharan informed me by telephone he was vying for as much as $400,000 in funding from Xeneca. I objected to Xeneca funding any study or course for him on the grounds that it was a conflict of interest because Ramcharan would stand to benefit from the project going forward. VRS subsequently wrote a letter to Xeneca, dated 10 July 2012 (not included in the ER) informing that a VRS Board Motion had been passed that if meeting protocols were not followed and if Charles Ramcharan did not resign from the VSAC that I would resign. Erin Calder responded on behalf of VSAC on 18 July 2012 (not included in the ER) refusing VRS's requests. On 25 July 2012 (not included in the ER) VRS wrote to Xeneca and Erin Calder submitting my resignation from the VSAC. These documents are available by clicking here.

8. Uwe Roeper on several occasions promised to provide me with unsecured documents in the ER that could be searched, copied, highlighted, etc. However, as per my 4 October 2013 letter to Xeneca, this was not done – all but one document had been scanned which made it impossible to search, copy, highlight, etc. Xeneca did provide unsecured documents, but not until the 11th of October – 11 days after commencement of the comment period, and valuable time was lost.

9. In a 16 November 2012 meeting with Uwe Roeper and Mark Holmes, the Meeting Notes prepared by Xeneca noted, "*MH asked if LH had received Xeneca's September 2012 letter responding to questions on siltation and*

[51] Appendix D – Part 2, P-140
[52] Appendix D – Part 2, P-148

> *sediment concerns. Responding affirmatively, LH said it was a thorough answer. LH also noted that recent correspondence sent to Al Hepburn regarding concerns over the Big Eddy Project in Pembroke had been received. She also noted Mr. Hepburn had complemented the thoroughness of the response*"[53] These Meeting Notes had not been sent to me for approval – I saw them for the first time in the final ER. These comments that were purported to have come from me did not. In fact I remember referring to Al Hepburn's letter as thorough, and I never would have referred to any of Xeneca's reports as being thorough.

There have been many other occurrences that have continued to undermine our trust and confidence in Xeneca as a company, and in the fate of the riverine ecosystem and public health and safety if they are allowed to build this hydroelectric facility. Xeneca has shown us that they cannot be trusted and will do whatever it takes to get their way.

Recommendation 23:
We urge the Minister to reject this Environmental Report on the grounds that this proponent has consistently undermined all trust and confidence through its direct actions, as well as through this sloppy, negligent and inconsistent ER.

22. Water Management Plan - Domtar & Vale

The ER points out that the downstream zone of influence only extends to the confluence of the Vermilion River with the Spanish River, when concerns have been expressed by the regulators and Domtar, that Xeneca's operation could have serious negative impacts on Domtar's ability to operate their hydroelectric facility and to dilute their effluent, and this could have serious repercussions further downstream. There appears to be no Memorandum of Understanding (MOU) between Xeneca and Domtar at this time. This should have been completed before the ER was issued for comment. Xeneca must ensure it will not have a negative impact on other established operators.

It also appears that the residents living in the Bay area directly below the dam could be seriously at risk from the rapid fluctuations in water levels and flow velocity when the turbines are turned on and flows instantly increase from 5, 6.5 or 8 cms to the minimum turbine speed of 20 cms, increasing flows to 25, 26.5 or 28 cms. This is not adequately addressed in the ER, and there appears to be no MOU in place to protect this family and their interests.

Again, it appears this operation could seriously impact on Vale's ability to operate its Lorne Falls hydroelectric facility, and yet no MOU is in place to secure its interests or to finalize Xeneca's operating plan.

Recommendation 24:
We request that the Minister reject this Environmental Report and send the proponent back to complete all studies, provide all documentation and finalize all agreements and operating strategies.

[53] Wabagishik Rapids GS ER – Appendix D, Part 2, P-232 – 16 November 2012 Meeting Notes written by Xeneca.

23. Socio-economic Impacts

Although the ER contains broad statements about positive economic impacts to the area due to employment and material sourcing during construction, this would all be very temporary. The dams would be operated remotely so it is unclear and doubtful whether there would actually be any long-term benefits due to employment. However, this project could have a severe impact on the local economy if water quality, recreational fishing, snowmobiling, and travel over Wabagishik Lake is hampered, or if blue-green algae and mercury levels in fish tissue increase because of this operation.

Generating clean and environmentally friendly waterpower requires a delicate balancing act to ensure the least amount of damage. This balancing act requires careful consideration of the ecological limits to development as well as the potential impacts to social and cultural values. Such impacts can have profound social and economic consequences. Identifying these tipping points and not going past them should be the goal of any cumulative effects assessment.

Recommendation 25:
Xeneca must undertake a quantitative Socio-economic Impact study to document and assess all anticipated positive and potentially negative impacts.

On behalf of VRS and ORA, I have met with Xeneca representatives on at least three occasions, other than PICS, with regard to the Vermilion River proposals, and sent additional letters to Xeneca setting out our many concerns and requesting answers as follows:

- 2011, 26 October – Wabagishik PIC Questions – 20 October
- 2012, August 3 – Wabagishik PIC Questions – 25 July
- 2012, August 7 – Wabagishik PIC Comments – 25 July
- 2012, August 9 – Requesting Xeneca do Silt Sampling

The nature of private sector-led development is of great concern when waterpower proposals proceed to this stage in the process, and so little attention has been paid to the risks to the environment and public health and safety. We also have further serious concerns regarding Xeneca's responsibility to monitor and manage any resulting environmental and socio-economic impacts, particularly given the dwindling capacities of the agencies involved.

Conclusion

The Wabagishik Rapids GS would have at least a 40 year impact, with effects accumulating and building on species and ecosystems every year if not properly planned and effective mitigation procedures implemented at the outset. The effects of waterpower facilities can be highly significant and are notoriously hard to mitigate after the facility has been constructed. Also, no provision has been made for decommissioning, so that impacts will likely continue long after the facility has reached the end of its useful lifespan. This project cannot be taken lightly - there is great potential for serious negative impacts. This causes great concern when it is obvious many important aspects of the proposal have not been recognized, let alone studied.

Finally, the very short comment period that has been allowed the public and stakeholders with an ER containing secured and scanned documents that cannot be searched, copied or highlighted, have made it difficult to properly review the thousands of pages of technical

documentation and still have time for any meaningful exchange of dialogue. Xeneca has also removed essential documentation from the ER, and left important documentation out even against the best advice from MOE and MNR staff. This is not acceptable.

It is essential to have an environment of trust and confidence in matters such as this, but it is only possible if Xeneca meets stakeholders halfway, by being open, transparent, and cooperative in providing essential information and documentation in a user-friendly format.

This proposed Wabagishik Rapids GS ER as written does not meet the criteria of *"Sustainable Development"*, or contribute to "*the betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment."*[54] For all the reasons noted above, this project could compromise ecosystems for decades into the future as well as the ability of our future generations to meet their own needs. Clean water is essential to life.

In all the years that Part II Order requests have been available to the public as a way to initiate a more rigorous Independent Environmental Assessment, there has never been one granted for a waterpower project. VRS and ORA submit that because of all the serious potential environmental impacts, the lack of attention to crucial components of the proposal, and the seeming inability of Xeneca to step up to the plate and do its due diligence for the environment and the people of Ontario, if ever there was an instance where an elevation is warranted – this would be it.

Consequently, VRS and ORA, after having carefully reviewed the Class Environmental Assessment Report and supporting documentation for the proposed Wabagishik Rapids GS, is requesting a Part II Order be issued to elevate this proposal to an Individual Environmental Assessment.

VRS and ORA thank you for your consideration and await your response.

Yours truly,

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Chair, Vermilion River Stewardship

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[54] Environmental Assessment Act (EAA), R.S.O. 1990, c E.18