

NORTHWATCH

August 31, 2009

Brian Riche
Area Supervisor
Ministry of Natural Resources
Espanola Area Office
148 Fleming Street
Espanola ON P3E 1R8

Dear Mr. Riche:

**Re. Application to Renew the Water Lot Lease and to Amend the Commodities List
Alexander Centre Industries Ltd. at Fisher Harbour**

Thank you for providing us with copies of environmental assessment report prepared by Alexander Centre Industries Limited and the related appendices.

As you know, Northwatch is a regional coalition of environmental and citizen organizations and individual members in northeastern Ontario. Founded in January of 1988, Northwatch has as a priority issues that are of a regional nature : energy use, generation and conservation; forest conservation and wild areas protection; waste management and water quality issues; mining; and militarization. In addition to acting on these issues as a representative body, Northwatch provides support to local citizens groups addressing these and other environmental concerns in their community.

Our interest in the request by Alexander Centre Industries Ltd. (ACIL) to renew the water lot lease and to amend the commodities list for their operations at Fisher Harbour relates primarily to the following:

- ? responsible disposition of Crown resources
- ? potential for environmental harm, particularly to the aquatic environment
- ? the quality of the environmental assessment that has been undertaken
- ? respect of the Aboriginal interest in the lands and waters potentially affected

We have had the opportunity to review the provided environmental assessment documents and to attend the public meeting convened by the Ministry of Natural Resources/ACIL on July 21st, 2009 and the community meeting convened by the Whitefish River First Nation on August 26th, 2009. Based on our review, we have come to the conclusion that the project poses significant potential for environmental harm and that there is a high level of public concern with respect the renewed lease and expanded commodities list. As a result, we strongly believe that the project review should be elevated from consideration under the Class Environmental Assessment for Ministry of Natural Resources' Stewardship and Facility Development Projects so that it is the subject of an individual Environmental Assessment, prepared in accordance with Part II of Ontario's Environmental Assessment Act (i.e. a Category D project)

Responsible Disposition of Crown Resources

In our view, the activities at Fisher Harbour, as undertaken by the ACIL and seemingly condoned by the Ministry of Natural Resources, have not been consistent with a responsible approach on the part of either the proponent or the regulator.

By our understanding, the 1975 approval was conditional on stringent controls on the harbour's operation, including a short list of commodities that could be off-loaded. Within a year of that approval the company was publicly describing a much larger list of potential users and commodities, and within a few years was receiving commodities that were not on the list of approved materials.

The current environmental study report indicates that approximately 90% of the materials being shipped through Fisher Harbour are not on the approved commodities list. We consider these to be illegal operations on the part of the company and evidence of the failure or refusal of the Ministry of Natural Resources to uphold the conditions of the approval.

It remains unclear to us why the ACIL was allowed to continue operating outside their commodities list, and so outside their lease agreement. We appreciate your explanation at the meeting of July 21st, at which time you stated that the water lot lease agreement did not provide the MNR with the authority it felt necessary to act. However, this seems inconsistent with the way we have found MNR policy to be stated in other instances. For example, as described in MNR Policy PL.2.05.01:

“A lessee or licensee of the Crown and his/her heirs or legal representative is obligated to meet all conditions of the lease/license... If the conditions are breached, the lease is subject to cancellation...”

Further, ACIL's lease expired in 2003, but the Ministry of Natural Resources has allowed operations to continue – including the trafficking of unapproved commodities – while they review ACIL's application to extend their lease, modify the water lot boundaries, and expand their commodities list.

Potential for environmental harm, particularly to the aquatic environment

White Fish River First Nation has identified run-off from salt piles as an urgent environmental concern, and the cottagers' association has documented numerous incidents of the salt piles being left uncovered. Salt is one of the commodities that ACIL does not have approval to unload at Fisher Harbour, but is seeking to have added to the commodities list

Road salt has recently been declared “toxic” by the federal government, and has been added to the *Priority Substances List* under the *Canadian Environmental Protection Act*.

According to the assessment undertaken by Health Canada (see Appendix A of this submission), road salts enter the Canadian environment through their storage and use and through disposal of snow cleared from roadways. The salts enter surface water, soil and groundwater after snowmelt and are dispersed through the air by splashing and spray from vehicles and as windborne powder.

According to the assessment:

Chloride ions are conservative, moving with water without being retarded or lost. Accordingly, all chloride ions that enter the soil and groundwater can ultimately be expected to reach surface water; it may take from a few years to several decades or more for steady-state groundwater concentrations to be reached. Because of the widespread dispersal of road salts through the environment, environmental concerns can be associated with most environmental compartments...

In water, natural background concentrations of chloride are generally no more than a few milligrams per litre, with some local or regional instances of higher natural salinity, notably in some areas of the Prairies and British Columbia. High concentrations of chloride related to the use of road salts on roadways or releases from patrol yards or snow dumps have been measured. For example, concentrations of chloride over 18 000 mg/L were observed in runoff from roadways. Chloride concentrations up to 82 000 mg/L were also observed in runoff from uncovered blended abrasive/salt piles in a patrol yard...

*Acute toxic effects of chloride on aquatic organisms are usually observed at relatively elevated concentrations. For example, the 4-day median lethal concentration (LC₅₀) for the cladoceran *Ceriodaphnia dubia* is 1400 mg/L. Exposure to such concentrations may occur in small streams located in heavily populated urban areas with dense road networks and elevated road salt loadings, in ponds and wetlands adjacent to roadways, near poorly managed salt storage depots and at certain snow disposal sites.*

Chronic toxicity occurs at lower concentrations. Toxic effects on aquatic biota are associated with exposures to chloride concentrations as low as 870, 990 and 1070 mg/L for median lethal effects (fathead minnow embryos, rainbow trout eggs/embryos and daphnids, respectively). The No-Observed-Effect Concentration (NOEC) for the 33-day early life stage test for survival of fathead minnow was 252 mg chloride/L. Furthermore, it is estimated that 5% of aquatic species would be affected (median lethal concentration) at chloride concentrations of about 210 mg/L, and 10% of species would be affected at chloride concentrations of about 240 mg/L. Changes in populations or community structure can occur at lower concentrations. Because of differences in the optimal chloride concentrations for the growth and reproduction of different species of algae, shifts in populations in lakes were associated with concentrations of 12-235 mg/L. Increased salt concentrations in lakes can lead to stratification, which retards or prevents the seasonal mixing of waters, thereby affecting the distribution of oxygen and nutrients...

Application of road salts can also result in deleterious effects on the physical and chemical properties of soils, especially in areas that suffer from poor salt, soil and vegetation management. Effects are associated with areas adjacent to salt depots and roadsides, especially in poorly drained depressions. Effects include impacts on soil structure, soil dispersion, soil permeability, soil swelling and crusting, soil electrical conductivity and soil osmotic potential. These can have, in turn, abiotic and biotic impacts on the local environment. The primary abiotic impact is the loss of soil

stability during drying and wetting cycles and during periods of high surface runoff and wind. Biological impacts relate primarily to osmotic stress on soil macro- and microflora and macro- and microfauna, as well as salt-induced mobilization of macro- and micronutrients that affect flora and fauna.

A number of field studies have documented damage to vegetation and shifts in plant community structure in areas impacted by road salt runoff and aerial dispersion. Halophytic species, such as cattails and common reed-grass, readily invade areas impacted by salt, leading to changes in occurrence and diversity of salt-sensitive species. Elevated soil levels of sodium and chloride or aerial exposures to sodium and chloride result in reductions in flowering and fruiting of sensitive plant species; foliar, shoot and root injury; growth reductions; and reductions in seedling establishment. Sensitive terrestrial plants may be affected by soil concentrations greater than about 68 mg sodium/kg and 215 mg chloride/kg. Areas with such soil concentrations extend linearly along roads and highways or other areas where road salts are applied for de-icing or dust control. The impact of aerial dispersion extends up to 200 m from the edge of multi-lane highways and 35 m from two-lane highways where de-icing salts are used. Salt injury to vegetation also occurs along watercourses that drain roadways and salt handling facilities.

Behavioural and toxicological impacts have been associated with exposure of mammalian and avian wildlife to road salts. Ingestion of road salts increases the vulnerability of birds to car strikes. Furthermore, intake calculations suggest that road salts may poison some birds, especially when water is not freely available during severe winters. Road salts may also affect wildlife habitat, with reduction in plant cover or shifts in communities that could affect wildlife dependent on these plants for food or shelter. Available data suggest that the severity of road kills of federally protected migratory bird species (e.g., cardueline finches) and the contribution of road salts to this mortality have been underestimated.

Ferrocyanides are very persistent but are of low toxicity. However, in solution and in the presence of light, they can dissociate to form cyanide. In turn, the cyanide ion may volatilize and dissipate fairly quickly. The ultimate effects of ferrocyanides therefore depend on the complex balance between photolysis and volatilization, which in turn depends on environmental factors. Modelling studies undertaken in support of this assessment indicate that there is a potential for certain aquatic organisms to be adversely affected by cyanide in areas of high use of road salts.¹

The findings of the Health Canada study with respect to patrol yards are particularly relevant, given the similarities that may be found between the patrol yards and the storage areas at Fisher Harbour. The issues are described as follows:

¹Priority Substances List Assessment Report for Road Salts

Key concerns relate to the contamination of groundwater at patrol yards and the discharge to surface water. In addition, overland flow of salty snowmelt waters can result in direct impacts to surface water and near-field vegetation. Based on surveys and reviews, salt losses from patrol yards are associated with loss at storage piles (which include salt piles as well as piles of sand and gravel to which salts have been added) and during the handling of salts, relating to both storage and loading and unloading of trucks. The discharge of patrol yard washwater is also a potential source of release of salts. Measures and practices should therefore be considered to ensure storage of salts and abrasives to reduce losses through weathering, to reduce losses during transfers and to minimize releases of stormwater and equipment washwater.²

Further, it is now hypothesized that not only is salt toxic and been shown to adversely affect fish and vegetation, but that salt also increases heavy metals in the aquatic environment, such as cadmium, as well as decreasing the levels of oxygen in lake and pond bottoms:

*.... results showed that when salt-laden water enters a lake or pond, it sinks to the bottom and prevents the normal water-mixing process, thereby depriving bottom-dwelling organisms of oxygen. The water in the pores of the sediments also contains high levels of salt, which, in turn, increases the concentration of heavy metals. Toxicity tests on a shrimp-like invertebrate (*Hyaella azteca*) show that the porewater itself is highly toxic and suggest that the toxicity is from heavy metals, such as cadmium, rather than high levels of chloride”³*

This latter interaction is of particular concern given the ACIL commodity list and the presence on that list of many materials that could be an added source of heavy metals, such as the proposed additions of metal bearing concentrates and metals and scrap metals.

The expanded list would triple the number of commodities on the 1975 lease, and would include the salt and silica currently being illegally transferred through the harbour, as well as slag, metals, metal concentrates and scrap metals, polymers, agricultural supplies, and several other broadly defined materials.

The length and vagueness of the list of new commodities is at issue. Not only is ACIL seeking approval to triple the number of commodities that can be received at Fisher Harbour, but they have described the materials so vaguely and broadly as to render the list meaningless.

For example, one of the proposed additions to the commodities list is “polymer materials”, with no further definition or description provided. While *polymer* in popular usage suggests plastic, the term

²Ibid

³ “Extractions”, Anewsletter of O’Connor and Associates, April 2000, summarizing an article from Science and the Environment, November/December 1999, <http://www.ec.gc.ca/science/sandenov99/article2_e.html>

actually refers to a large class of natural and synthetic materials with a variety of properties. For example, natural polymeric materials such as shellac, amber, and natural rubber, while the list of synthetic polymers includes synthetic rubber, Bakelite, neoprene, nylon, PVC, polystyrene, polyethylene, polypropylene, polyacrylonitrile, PVB, silicone, and many more. The “background” in Section 5.3.11 provides a very general description without identifying which polymer materials are being proposed for handling at the Harbour, while the “environmental analysis” in Section 5.3.1.1. addresses only “pure plastics”.

Which materials is ACIL proposing to move through the harbour, and what are their properties and characteristics, and what are the potential concerns related to fugitive or accidental releases to air, land or water?

Other concerns relate to water quality, habitat disruption, species at risk, bioaccumulation of toxic substances within the food chain and ecosystem, shoreline degradation, noise pollution and their long-term effects. The Town of Espanola, 30 kilometres north of the site, has been on record since 2004 with concerns about increased truck traffic on Highway 6 if the harbour was allowed to expand its operations

Quality of the Environmental Assessment

Despite being a second attempt, we found the environmental assessment report to be of relatively poor quality, and lacking in several respects, including the following:

- ? as noted above, there is no detailed description of the proposed additions to the commodities list, and / or discussion of their potential to harm the environment or of corresponding mitigation measures that could be undertaken to either prevent or remediate releases
- ? there is no rationale for the several years of operating outside of the commodity list; the EAR indicates that 90% of the volume of materials handled are not on the commodity list, but at no point offers a rationale or explanation as to how this situation came about
- ? the report appears to offer selective and limited information; for example, it references a review of commercial harbour activities, but does not provide adequate detail or a reference
- ? the report references the “1975 Environmental Hearing Board” but does not correctly identify the hearing body or the decision; nor does it provide the text of the relevant portions of the decision
- ? in several instances the report references the potential for expanded shipping opportunities, but in supporting documents (ie the transportation study) it indicates that there is no expectation that the volume of activity will increase; these appear to be inconsistent at best, and in our view are contradictory
- ? section 4.2 on cultural heritage sites is inadequate and inaccurate in its descriptions, and lacks the appropriate analysis of how the operations at Fisher Harbour may impact on the cultural and spiritual sites in the area
- ? in general, the report meets a low standard in terms of both content and presentation

Respect for the Aboriginal interest in the lands and waters potentially affected

The Union of Ontario Indians has described ACIL's operations as a case of environmental racism and an infringement on the Treaty and Aboriginal Rights of the Anishinabek people of Whitefish River First Nation.

The Whitefish River First Nation has been objecting to the storage and shipping of flux sand, salt and other metal concentrates at Fisher Harbour since 2003. The harbour is within their traditional territory and very close to sacred Anishinabek sites at Bell and Dream's Rock and the ancient burial grounds.

In our view, the proponent has made little progress in resolving issues with the Whitefish River First Nation, and continues to demonstrate a limited understanding of even the key concerns, or a responsiveness to these concerns. Until such time as ACIL gains

Conclusion

Clearly, the proponent has not made a satisfactory case for the renewal of the water lot lease with an expanded commodities list. This leaves two main options available to the Ministry of Natural Resources: renew the lease with an unchanged commodity list, and enforce the limitations of the list, or make a voluntary request that the project review should be elevated from consideration under the Class Environmental Assessment for Ministry of Natural Resources' Stewardship and Facility Development Projects so that it is the subject of an individual Environmental Assessment, prepared in accordance with Part II of Ontario's Environmental Assessment Act (i.e. a Category D project)

Thank you for consideration.

A handwritten signature in blue ink, appearing to read 'Brennain Lloyd', is enclosed in a thin black rectangular border.

Brennain Lloyd
Northwatch

cc. Mr. Marc McGoey, Project Consultant, ACIL