



regulatory body which is supposed to be enforcing the licence requirements neglect to do their job. We prefer not to interfere in another agency's jurisdiction except under extenuating circumstances. We feel strongly that the agencies with regulatory jurisdiction over this activity should be diligent in fulfilling their respective mandates as has been entrusted to them by the public.

Part C, Item 5 asks that an inspection of Lake Geraldine Reservoir Dam be completed by a “qualified Geotechnical Engineer as soon as reasonably possible during open and high water conditions but no later than **July 31, 2000.**” In the document entitled ‘Decision’, the NWB notes that this inspection is “for engineering reasons to ensure safety in all respects.” If the NWB suspects that the dam is not safe it is important for us, and for the safety of the residents of Iqaluit, to have details of such findings.

The cost of a geotechnical investigation is also a problem. The Municipal budget process is nearing completion and the estimated \$50,000 cost of such a study is not presently available. The deadline imposed for this study may prove difficult to meet. Consultant services have to be tendered and scheduled. If we are unable to have this task completed by the date noted, would we not be in violation of the licence? If this condition is to be kept as part of the licence, we request that the deadline be removed and funding be identified by the Water Board. The costs involved in completing studies, as demanded by the NWB, and the timelines attached to them, are a recurring problem with this water licence.

DSD comments:

This is primarily an engineering and safety concern. It is DSD's understanding that regular geotechnical inspections are a requirement for most, if not all other developments that require dykes and dams. Inspections are necessary to confirm the structural integrity of such works so that serious problems do not arise in the future. This should be of particular importance in Iqaluit which lies in a seismic zone. DSD refers the NWB to the *Dam Safety Guidelines* which are published by the Canadian Dam Association, Edmonton, Alberta. A copy is available from our office.

DSD therefore does not understand why the Municipality of Iqaluit feels that they should be exempt from these requirements.



***Part D, Item 1** requires the Municipality to direct all piped and trucked sewage to the Sewage Treatment Plant as soon as reasonably possible but no later than **Feb 15**, 2000. The construction of the Sewage Treatment Plant is not yet complete. The plant will not be able to act as a water reclamation facility by Feb 15. I ask that this deadline be removed so that the plant can be completed prior to this condition taking effect. Is it not more important that the effluent quality meet the guidelines as set forth by the NWB by the end of the licence term than the plant be mandated for completion by an arbitrary date?*

DSD comments:

This is a valid point. If the facility is not ready by Feb 15th, then we don't see what other options the Municipality of Iqaluit has available to them, except the status quo. DSD recommends that the NWB be more flexible on the timeline, recognizing that the final decision still rests with the NWB who are ultimately responsible for overseeing these matters.

***Part D, Item 6** requires an inspection of the sewage lagoon dykes by a geotechnical engineer no later than **July 31**, 2000. The \$20,000 cost involved in completing this study, and the timeline attached, are issues that must be addressed by the NWB.*

DSD comments:

DSD refers the NWB to our previous comments pertaining to geotechnical inspections. Furthermore, DSD does not understand why the Municipality of Iqaluit is having difficulty with this requirement, aside from the financial aspect and perhaps the deadline. DSD is of the understanding that it was already agreed that the old sewage lagoon would be upgraded and left in place as an emergency repository in the event of a failure in the new facility. It is therefore incumbent upon the Municipality to ensure that the structural integrity of the lagoon is maintained. In the meantime and up until the new facility goes on line, the existing lagoon will continue to be the primary waste treatment facility, therefore we do not believe that the aforementioned licence requirement is unreasonable. DSD again reminds the NWB of the unexpected and sudden failure of the sewage lagoon several years ago in which the dyke breached, discharging thousands of gallons of raw sewage into Koojessie Inlet and for which the Territorial government was successfully prosecuted under the federal *Fisheries Act*.



***Part D, Item 9** asks for a plan for the interim treatment and disposal of sludge generated by the Sewage Treatment Plant to be submitted before **Feb 1, 2000**. Our staff has informed me that this plan was detailed at the hearings in September. Please inform us if there is any additional information required and exactly what this information is.*

DSD comments:

It appears that the Municipality of Iqaluit did not, in fact, present a concrete plan for the treatment/disposal of sewage sludge. The Municipality proposed biopiles/composting, however this method is very difficult to implement under the climatic conditions found in the Arctic. DSD, in our presentation to the NWB at the water licence hearings, strongly suggested that 1) the sludge be characterized before proceeding with a biopile and 2) that a small-scale pilot project be set up beforehand to determine the effectiveness of composting for treating sewage sludge. Thus far, aside from general statements of intent, we have seen no detailed plans for such a pilot project nor has the Municipality offered any alternatives should composting prove to be ineffective.

***Part D, Item 11** requires a comprehensive waste management plan to be submitted before **May 31, 2000**. As you are aware the Municipality is presently preparing a Solid Waste Management Plan. Details of this plan will be available for review by the Water Board by the given date. However, further site investigation is required during the summer months, no matter what the components of the selected plan are. The availability of funds from the Government of Nunavut will also guide the final plan. This information may not be available to the Municipality until late this year.*

DSD comments:

The Municipality presents some valid concerns, however we suspect that the Municipality's past performance - in terms of complying with their licence requirements - is the reason behind NWB's apparent stringent request. We are cognizant of the fact that the Municipality has contracted the services of a professional engineering firm and that they are working towards a final solid waste management plan. We therefore suggest that as a minimum, the Municipality provide NWB with a detailed update on the status of the solid waste management plan if the final plan is not ready by the deadline set forth by the NWB. It is apparent that the actual site assessments will have to take place during the summer months and this too, can be taken into consideration.



Again, we make this recommendation recognizing that the final decision rests with the NWB.

Part D, Item 12 asks for an extensive study of the effect of burning at our dump on pollution in water. Terms of Reference for this study are due on **March 1, 2000**. This condition is perhaps the most troubling of all in the licence. Is it not the Municipality's responsibility to abide by waste treatment and burning standards as established by the Water Board? It is our position that the Municipality should not be tasked with a research project to establish something that should be the responsibility of a variety of other agencies.

DSD comments:

DSD can only assume that NWB's requirement for the Municipality of Iqaluit to conduct this study is an oblique means of ensuring that the Municipality determine the effects of dump smoke on the environment and subsequently on human health. This likely stems in part from the contentious issue of whether or not dump smoke affects water and if not, should it be included in a water licence requirement? DSD contends that if solid waste management is part and parcel of the water licence, then so too should the activities associated with solid waste management. Furthermore, there is an overwhelming public concern with the current practice of open burning. DSD commends the NWB, for attempting to address this concern.

As for the Municipality's contention that this research should be conducted by other agencies: DSD operates on the principle of "polluter pays". The Municipality of Iqaluit is practicing open burning of garbage due to a combination of choice and poor planning. It is up to them to prove that open burning of garbage is not adversely affecting the environment and in particular, human health.

The expectation of the Water Board to have this study completed by the public hearing in the fall shows a complete lack of understanding of the complexities involved in doing this kind of research. To establish a link between an air pollution source and a body of water requires an extensive analysis of existing contaminants in that water. The link between such contamination and other pollutant sources, such as old waste disposal sites, must also be established. Exhaust from automobiles, the NTPC furnace and smoke from residential buildings would all have to be accounted for in this study. Constant monitoring over a period of years must then be maintained to assess the effect, if any, of air pollution on water contamination.



DSD comments:

DSD agrees that this could be a very costly and complicated study. What we suggest as an alternative, is to characterize the dump smoke at the source and perhaps establish air monitoring stations in town. This is only a general suggestion. There are a number of firms in Canada that specialize in emissions studies. They would be able to provide the Municipality with advice on how this particular study could be conducted.

The cost of such a research project is a major concern for the Town. We would expect a research project of this magnitude to cost somewhere in the order of \$100,000 to start. Each subsequent year may see additional costs of \$20,000. This money is not available at this time.

DSD comments:

While the Municipality has expressed a valid concern, it should be noted that they were cautioned by all regulatory agencies several years ago, that open burning of garbage must be phased out. The Municipality ignored many of the requirements of the previous water licence, including a requirement to develop a long-term solid waste management plan (which eschewed open burning) by 1996. Four years later, and after much public and regulatory pressure, the Municipality has only begun to address this requirement and now find themselves in a crisis situation.

Having stated this, DSD agrees that such a study could place undue financial burdens upon the Municipality and that this expenditure might divert valuable resources away from the core programs, such as the construction of a new solid waste management facility. For the time being at least, the Municipality of Iqaluit has committed to terminating the practice of open burning of garbage in their new facility. In light of this, the NWB might wish to consider alternate methods to address the issue of dump smoke and its effects on the environment and on human health.

It is my hope that with this letter we may start a dialogue with the Water Board. It is imperative that the members of the Board realize the impact of the Iqaluit Water Licence on the resources of the Municipality. A one year licence makes it very difficult to meet so many stringent requirements. The following have also been requested by the NWB:



- DSD comments:**

If you have any questions regarding any of the above comments, please do not hesitate to contact me.

c. Earle G. Baddaloo