

IN THE TERRITORIAL COURT OF THE NORTHWEST TERRITORIES

B E T W E E N:

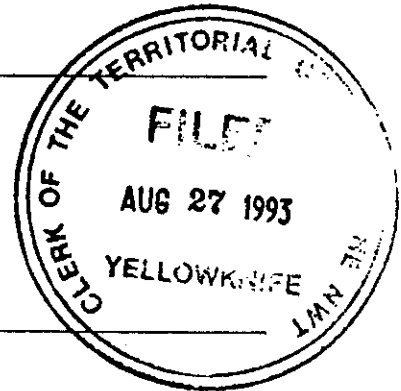
HER MAJESTY THE QUEEN IN RIGHT OF CANADA
AS REPRESENTED BY ENVIRONMENT CANADA

- and -

HER MAJESTY THE QUEEN IN RIGHT OF CANADA
AS REPRESENTED BY THE COMMISSIONER OF
THE NORTHWEST TERRITORIES



REASONS FOR JUDGMENT OF
HIS HONOUR JUDGE R.M. BOURASSA
FILED: August 27, 1993



APPEARANCES:

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REASONS FOR JUDGMENT

The Defendant is charged with three offences contrary to Section 36 of the Fisheries Act. These charges follow the washout of the Defendant's sewage lagoon in Iqaluit, Northwest Territories, and the alleged resultant discharge of sewage into the waters of Koojesse Inlet. The charges read:

Count 1:

Between the 1st day of June, A.D. 1991 and the 10th day of June, A.D. 1991 inclusive at the Iqaluit sewage lagoon, at or near the Municipality of Iqaluit, on Baffin Island, in the Northwest Territories, did unlawfully deposit or permit the deposit of a deleterious substance, to wit: sewage, in a place, to wit: the intertidal area of Koojesse Inlet immediately southwest of the west dyke of the Iqaluit sewage lagoon, under conditions where the said deleterious substance may enter water frequented by fish, to wit: Koojesse Inlet, in violation of Section 36 (3) of the Fisheries Act and did thereby commit an offence contrary to Section 40 (2) of the Fisheries Act.

Count 2:

Between the 1st day of June, A.D. 1991 and the 10th day of June, A.D. 1991 inclusive at the Iqaluit sewage lagoon, at or near the Municipality of Iqaluit, on Baffin Island, in the Northwest Territories, did unlawfully deposit or permit the deposit of a deleterious substance, to wit: sewage, in a place, to wit: the intertidal area of Koojesse Inlet immediately southwest of the west dyke of the Iqaluit sewage lagoon, under conditions where the said deleterious substance entered water frequented by fish, to wit: Koojesse Inlet, in violation of Section 36 (3) of the Fisheries Act and did thereby commit an offence contrary to Section 40 (2) of the Fisheries Act.

Count 3:

Between the 1st day of June, A.D. 1991 and the 10th day of June, inclusive at the Iqaluit sewage lagoon, at or near the Municipality of Iqaluit, on Baffin Island, in the Northwest Territories, did unlawfully deposit or permit the deposit of a deleterious substance, to wit: sewage, in water frequented by fish, to wit: Koojesse Inlet, in violation of Section 36 (3) of the Fisheries Act and did thereby commit an offence contrary to Section 40 (2) (a) of the Fisheries Act.

In determining the factual issues herein, I have, of course, relied upon the evidence, in particular Exhibit 26 as it relates to the construction, maintenance and operation of sewage lagoons. The viva voce evidence given by all witnesses, with one exception, was notable for its candour and honesty; the evidence of the Defendant's employee in charge of the Department of Public Works in Iqaluit was coloured. I admitted some hearsay evidence to avoid a totally mechanistic approach to the events. I attributed such weight as I felt appropriate to that evidence. I thank counsel for their effort and vigorous advocacy.

In broad terms I have to answer two questions: 1) Has the Crown proven its case beyond a reasonable doubt and if so, 2) Has the Defendant established any defence?

I answer the first question in the affirmative. These are my reasons.

Section 36 Fisheries Act prosecutions involve proof of a particular actus reus. Section 36 can be broken down into a number of constituent elements which the Crown must prove. I address those elements with respect to Count 3.

THE DEFENDANT:

At the beginning of the prosecution, both the Defendant and the Municipality of Iqaluit were named on the Information. At the

opening of the trial the Defendant, through its counsel, acknowledged its "responsibility" for the sewage lagoon. In response to this the Crown withdrew the charges against the Municipality. This responsibility was reaffirmed during the trial by counsel for the Defendant. I understand the admission of responsibility in the context and the circumstances in which it was stated, i.e., an acknowledgement that the Defendant was the owner/operator of the lagoon and therefore responsible in law for any default found by this court. This point has to be made because at a later time during the trial the Defendant attempted to distance itself from that acknowledgement.

I find, on the evidence, that the Defendant was the owner and operator of the sewage lagoon. It was desirous of transferring its responsibility for the lagoon to the Municipality of Iqaluit and to that end had entered into an agreement with the Municipality. A number of witnesses spoke of this transfer agreement. It is clear that the Municipality was a reluctant party and, at the time in question, had not yet accepted such responsibility. The Municipality wanted a lengthy phase-in in order to hire, train and prepare staff and allocate resources for the obligations that would arise with the responsibility. That agreement, presumably setting out the rights, liabilities, and responsibilities of the two parties with respect to the operation and maintenance of the lagoon, in the sole control of the Defendant, was not tendered in evidence.

The evidence discloses that there was confusion and uncertainty on the part of the Municipal employees and the Defendant's employees located in that community, as to who was responsible for exactly what with respect to the lagoon. On the evidence, no one was in charge. The Municipal employees working in the field were left in a state of ignorance. I find that there was no person actually responsible. The Defendant's supervision and control existed on paper only.

Later in the trial, the Defendant argued that the Municipality, in the maintenance and repair of the lagoon following the washout, was an independent contractor which absolved the Defendant of its responsibility for any delict arising therefrom. The facts do not support this argument and I reject it.

THE CHARGE:

1. Between the 1st day of June, 1991 and the 10th day of June, 1991 inclusive, at the Iqaluit sewage lagoon, at or near the Municipality of Iqaluit on Baffin Island, in the Northwest Territories...

There is no issue with respect to these elements.

2. ...did unlawfully deposit or permit the deposit..

In discussing the principles to be applied in determining the actus reus of permitting, discharging or causing pollution, Mr. Justice Dickson stated in *R. v. City of Sault Ste Marie*:

The prohibited act would, in my opinion, be committed by those who undertake the collection and disposal of garbage, who are in a position to exercise continued control of this activity and prevent the pollution from occurring, but fail to do so. The "discharging" aspect of the offences centres on the direct acts of pollution. The "causing" aspect centres on the defendant's active undertaking of something which results in pollution. The "permitting" aspect of the offence centres on the defendant's passive lack of interference or, in other words, its failure to prevent an occurrence which it ought to have foreseen.

This sewage lagoon is located in a depression bounded by elevated ground on three sides. It is located a few hundred meters from the town site, a short distance from the tidal waters of Koojesse Inlet. The sewage is contained by the existing hills and two dykes; the main one known as the west dyke. The lagoon is in a

natural drainage basin for a large surrounding area. It holds approximately 56,000 cubic meters of municipal waste when full.

This lagoon has been problematic in the past. The evidence in chief is that the west dyke failed on at least two prior occasions. On one occasion, a high tide washed out the west dyke; on another, in 1987, spring runoff flooded the lagoon and the same west dyke failed. It was at that time that a small diversion ditch was dug to attempt to direct some of the runoff away from the lagoon, which was the natural place for it to go. In cross-examination of Crown witnesses, it was further revealed that this same west dyke had failed a total of five times in the past ten years.

Based on the evidence before me, I fix the Defendant with constructive and actual notice of the construction, operational and maintenance needs involved in the operation of sewage lagoons. The facts indicate that the Defendant had actual notice of these needs, in particular, of the problems of spring runoff and snowmelt.

I find that the Defendant had no personnel actually and effectively in charge responsible for the supervision, operation, and maintenance of the lagoon. One Municipal employee conducted a drive-by five days per week and if everything looked OK that was precisely what he reported ... "OK". Another Municipal employee, concerned about the state of the lagoon that very spring, increased this surveillance, on his own initiative, by conducting a drive-by on weekends. The reports were simply filed. For this purpose only he was somehow deemed an employee of the Defendant. Some Municipal employees were concerned about the lagoon site, but had no authority, direction or responsibility. Municipal employees, aware of the potential problems with the sewage lagoon and out of simple concern, had requested manuals, guidelines and instructions from the Defendant on a number of occasions. They received none. Those employees had concerns about spring runoff; they had concerns about

the high level of waste in the lagoon before the washout, but the defendant was not there to listen.

The diversion ditch that was dug in 1987 was not maintained. At the time of the washout it was shallow and unable to handle the runoff where it made a right angle turn.

Earlier in the year, a major construction project was commenced on the lands adjacent to the sewage lagoon and on the lagoon's watershed. This work was the construction of the Forward Operating Location undertaken by the Department of National Defence. By any scale, it was a major undertaking and the work was visible to anyone who looked. It involved construction of barracks, hangars, roads and taxi-ways. These works were carried out at a location close to and uphill of the sewage lagoon. The project included replacing a number of nearby drainage culverts, increasing their capacity and altering the topography. The project works affected the watershed such that it would possibly allow for an increased flow of water downhill to the lagoon. In my view, this major construction project would have alerted any reasonable observer to the possibility of an effect on the drainage patterns in the area and the nearby lagoon.

This work had been outlined, discussed and described in a planning meeting between the contractor, Municipal officials and the Defendant's representatives months in advance of construction. The Defendant's agents and employees knew the work was being undertaken and, in fact, was done. The project was known to all, yet this did not generate any watchfulness, vigilance, concern, or action by the Defendant. No inspections were undertaken. No risk assessments were made. On the evidence, the only concern voiced by the Defendant as a result of this knowledge was one of access to its nearby furniture warehouse.

The drainage ditch that would bear the increased flow of spring runoff remained in the state it was.

On June 1, 1991, it was unusually warm in Iqaluit. What experience taught, engineering studies described, and any person could foresee, happened: runoff - snowmelt - overran the drainage ditch at the right angle turn. The lagoon was already overfull -- ice and sewage levels had reached the top of the west dyke -- the lagoon overflowed at the dyke. The dyke failed and the entire contents of the lagoon washed out -- 56,000 cubic meters or more of waste.

Following the washout, the lagoon was hastily repaired by Municipal officials who had to act in default. The Defendant was simply not present in any meaningful way at the site. It did not direct, supervise or participate in the repairs. It was not repaired in a manner that was even close to the Defendant's own guidelines for the construction of such lagoon dykes. As a result, there was significant seepage of raw sewage estimated by one observer at 5 gallons per minute or 7,200 gallons per day.

In these circumstances, I find that the Defendant permitted the deposit as set out in the Information.

3. ...of a deleterious substance, to wit: sewage ...

Is raw, untreated sewage a substance deleterious to fish? Specifically, was this effluent deleterious to fish?

Raw sewage is referred to in a number of exhibits in negative terms insofar as human, animal, and fish are concerned. From Exhibit 26, it is clear that sewage is a public health concern that demands the creation of some kind of proper functioning treatment, including the prevention of spills and seepage.

The Defendant's own agents, including the Deputy Minister, described the waste in Exhibit 33, a letter to the Government of Canada, Environmental Protection Service. With respect to the Iqaluit lagoon, it states:

...Nor were we willing to undertake this considerable expense (regular sampling of the effluent) knowing that the treated waste water discharged from a cold temperature lagoon was toxic... (my emphasis)

The problematic aspect of untreated sewage in proximity to people and animals in the N.W.T. was discussed in **Health of our Oceans**, a March, 1991 publication of the Marine Environmental Quality Group, Conservation and Protection of Environment Canada as follows:

Municipal Effluent:

Municipal use of the marine environment is restricted to discharges of untreated or primary-treated sewage into coastal waters. Seven communities collect liquid sewage and transfer it to holding ponds or lagoons. Two communities, Resolute and Rankin Inlet, discharge liquid sewage directly into the ocean through outfall pipes (Cameron et al., 1982a, b; Dusseault and Elkin, 1983a, b). Therefore, sewage effluents enter marine waters directly, or by percolation through lagoon substrates and leaching into surface drainage systems. Communities on open coasts may discharge raw sewage directly onto the shoreline. At present, there is no completed chemical analysis of treated or untreated sewage from coastal Arctic communities although preliminary assessments are under way (Stanley and Associates and Dobrocky Seatech, 1987). A public health concern may exist at communities which harvest shellfish from contaminated waters or butcher marine mammals on contaminated shorelines. At present, however, the possible relationship between sewage disposal practices, consumption of contaminated meats, and the incidence of enteric diseases in Arctic peoples is unknown.

A community dump (West 40) in Iqaluit, although primarily used for domestic waste, has been known to be a disposal site for industrial chemicals. During the spring snow melt, runoff from this site enters Frobisher Bay. There have been several aviation fuel spills in a watershed that runs through another dump site in Iqaluit (North 40) and drains into Frobisher Bay. Inorganic and mixed organic compounds may have contaminated the Apex dump site. Runoff from this site drains into Tarr Inlet.

Further on at page 72, dealing specifically with fish and shell fish, the report states:

Important fish and shellfish species in the Arctic include broad whitefish, arctic cisco, least cisco, arctic char, lake fish, arctic cod, pacific herring, polar cod, capelin, clams, and scallops. Anadromous fish species, particularly arctic char and whitefish, are a very valuable resource. Environmental threats to both marine and anadromous species, described in Table 4.5, include destruction of bottom habitat (by dredging or drilling waste discharges) and bioaccumulation of contaminants in fish tissue. Fish that live close to or in contact with marine sediments and feed on benthic infauna and epifauna are particularly vulnerable to these threats.

Chronic water quality problems may exist near coastal communities discharging raw or primary-treated sewage into estuaries and fjords. Residents of most eastern Arctic communities harvest shellfish in near shore waters. The potential for shellfish contamination with pathogenic organisms exists in these coastal communities, although the correlation between the incidence of human disease and sewage disposal practices is not known (Sackmann et al., in preparation). During high tide near the community of Iqaluit, Baffin Island, the potential for flooding of the sewage lagoon with runoff into Frobisher Bay is quite high (S. Heinze-Milne, pers. comm.). Bacteriological studies near the Pangnirtung, Baffin Island, dump site showed that clams in the area had high faecal coliform counts (Coleman et al., unpubl. data).

The Defendant argues that municipal waste is comprised of a naturally occurring, biodegradable material and perforce, cannot be deleterious -- or I take it -- if it is, it must form an exception to the definition of "deleterious" because of its very characteristics as a naturally occurring product. The analogy was drawn to the thousands, if not tens of thousands, of caribou that roam the Arctic leaving deposits with no adverse effects on man animal or fish. This argument is untenable. Caribou do not live in towns and use lagoons.

There have been decisions by other courts that have held raw, untreated sewage to be "deleterious" as contemplated by the Fisheries Act s. 36 (3) most notably R. v. The Corporation of the

District of North Vancouver, a decision of the B.C. Court of Appeal reported (1982) 11 C.E.L.R. 158. At all levels, trial and appeal, the finding that raw municipal sewage was deleterious to fish was sustained.

The lagoon held raw untreated sewage. Moreover, this sewage was under ice cover and had been for the whole winter -- approximately 7 to 8 months. In these circumstances, the degradation of the sewage is minimal according to the authors of Exhibit 26. The seepage that was examined by witnesses, shortly after the failure and subsequent repair, was noted to be greyish-green. According to Exhibit 26 a grey colour is consistent with an anaerobic lagoon performing very badly. Again, according to the authors of Exhibit 26, this is a common problem with cold temperature storage lagoons. I have evidence before me that prior to the washout of the dyke, the lagoon level was up to the top of the west dyke.

I have no evidence that would suggest that the lagoon had been cleaned out, drained, or otherwise tampered with by officials at any time in the year preceding which would reduce, or affect, its toxicity.

The evidence indicates that samples of the effluent seeping from the repaired dyke were taken on June 9 and 10, 1991. These samples were taken to be utilized in a bioassay procedure. That is to say, fish were introduced to various concentrations of the sampled effluent and observations are made with respect to their vitality.

The Defendant argues that the effluent sampling procedures were defective in a number of respects and, therefore, suspect. This argument is based only upon the fact that certain protocols were not followed to the letter.

For example, the protocol states that samples should be collected in a sterile container, and maintained in a cool or refrigerated

environment and utilized quickly. The sampled effluent was stored in new 5 gallon plastic "jerry cans". These cans were not sterilized, the samples were not refrigerated; we do not know if they froze. A number a days passed before they arrived in Edmonton for use in the bioassay procedure.

However, I have no evidence that would suggest that the alleged failures in any way affect the ultimate results. Additionally, "protocol" does not represent a rigid formula. As I understand the word, in this context, it is a "preliminary draft or memorandum" from its root in Greek for the first sheet of a papyrus roll with the date of manufacture, and the word for glue or glue together.

Exhibit 19, **The Field Procedures for Water Quality Sampling**, commences with the preamble:

This document is intended as a reference manual to promote uniformity in water quality field procedures within the Western Region and to assist with the initial training and orientation of new staff members. It outlines the present state of field methods practised. However, due to variations in hydrological or environmental conditions and changes to program design, adaptations may be required. (my emphasis)

Finally, I have the evidence of Mr. Sackmann who stated that the delay and the possibility of elevated temperatures would have worked to the benefit of the Defendant in reducing the coliform count of the samples.

Similarly, defense argues that the bioassays were not conducted exactly according to protocol, (in this case Exhibit 21, **Biological Test Method: Reference Method to Determine Acute Lethality of Effluents to Rainbow Trout**) and therefore, are suspect. Alleged failures include: a) that there is no evidence the test fish were not fed within 24 hour pre-test period; b) that the biologist

involved ran an unplanned, unsanctioned additional test; and c) that not enough concentrations were prepared for testing.

I can find nothing on the evidence that compromises the bioassay results. The alleged failures, if they are such, do not impact on the actual results obtained by the biologist, an expert in her field. Any departures from norm were inconsequential and of no import. She applied her expertise and made definite and certain scientific findings: all of the fish placed in a 100% solution of the effluent died within 3 hours. At a calculated dilution of 31.4%, 50% of the fish would die. This finding came as no surprise to Mr. Nickel, an expert biologist with extensive experience in the field. He testified about the effect of raw sewage on fish generally. In response to questions about bioassay testing of fish in sewage, he confirmed the efficacy of such testing and stated that he was not surprised with the results of the testing in this case. In his opinion it simply confirmed what everyone knew, "sewage kills fish".

Therefore, in light of the above, and in light of the fact that I have no evidence -- in direct or cross -- that would even suggest that the minor departures from the protocols would in any way compromise the sampling results, I am satisfied beyond a reasonable doubt that the samples were properly taken and the results gained from them accurately reflect what they purported to measure.

I am satisfied, beyond a reasonable doubt that the contents on the Iqaluit sewage lagoon - raw, untreated sewage - immediately prior to the washout on June 1 and continuing to June 10 were deleterious to fish.

4. ... in water ... to wit: Koojesse Inlet ...

Where did more than 56,000 cubic meters of waste go when the west dyke failed? The Defendant argues that there is no direct proof that the sewage actually entered the waters of Koojesse Inlet. No one saw where it went. I agree. However, I have no difficulty in concluding what occurred. The view shown in Exhibit 32, a photo montage of the area, places me at the site. The sewage flowed down a patently obvious drainage course, from the lagoon into the waters of Koojesse Inlet a mere 1 or 2 hundred meters distant. The same course is described as a "discharge stream" in Exhibit 34, a draft of the Operations and Maintenance Manual for the lagoon prepared by the Defendant. This drainage course is in the area that is flooded at high tide; indeed some high tides lap at the base of the west dyke. That the sewage ran out over the shore ice, flowed into crevices in that ice and was not in evidence when the ice melted does not persuade me that the sewage somehow did not flow into those waters. I find that the sewage entered the waters as alleged. Those waters are waters as defined in the **Fisheries Act**.

5. ... frequented by fish ...

In my view, the evidence is clear and unambiguous. The waters of Koojesse Inlet are frequented by fish as defined in the **Fisheries Act**. In this part of the ocean, people actively net fish, dig and harvest clams and all within short distances of the lagoon. The Defendant's arguments to the contrary are not based on any evidence.

I am satisfied that all elements have been proven. Certainly there have been some questions raised, but no doubts.

Having answered yes to the first question, I now turn to the second: has the Defendant established any defence? My answer to this question in every aspect is no. My reasons are as follows:

DUE DILIGENCE:

To address this defence, I begin from the consideration stated by Dickson J. in **Sault Ste Marie**:

Has the Defendant exercised all reasonable care by establishing a proper system to prevent the commission of the offence and by taking reasonable steps to ensure that the effective operation of the system.

I conclude there is nothing to demonstrate or reflect anything that might be construed as due diligence. The Defendant was at best only perfunctorily and nominally involved -- on paper -- in the operation and maintenance of the lagoon. Yet, it was fully aware, through reports it commissioned, of what was required to operate such a facility.

In this regard, I refer to Exhibit 26, **Guidelines for the Planning Design Operation and Maintenance of Wastewater Lagoon Systems in the N.W.T.** produced for the Defendant dated November, 1988. I recognize that this exhibit titles itself as "guidelines" and not as a mandatory code. However, it is a useful discussion which is relevant to the issues before me. It shows that the Defendant was alive to the subject matter in 1988. As guidelines, the report marks the path that the Defendant may follow, complete with advice, direction and warnings.

Sewage lagoons are used to hold the raw sewage emanating from human settlements for a period of time wherein it undergoes some degradation, following which the high quality effluent is released into the watershed in concentrations that are, by and large, harmless. This is an ongoing process.

Sewage lagoons represent a practical, efficient and relatively inexpensive way of dealing with municipal waste water. They are used across North America and extensively in Northern Alberta and

the N.W.T. They have been in use for many years, and the technology for their construction and operation is basic. They are not without problems however.

Many problems exist in the application of published guidelines for wastewater lagoons when applied to conditions in the N.W.T. and in other parts of northern Canada. The severe climate in the N.W.T. causes winter freeze-up of receiving water courses potentially restricting the discharge of effluents. Cold water temperatures produce thick ice covers on lagoons for many months and reduce treatment performance during that time. Therefore lagoons may need to be designed for long-term storage of winter flows to achieve adequate performance. Design criteria based on a continuous discharge mode of operation cannot generally be used without serious environmental impact. Most lagoons in the N.W.T. need to be operated in a draw-fill mode with discharge occurring only once or twice a year, and in some locations, with continuous discharge during summer months only. The abundance of lakes near communities may, under certain circumstances, make their use as part of an engineered lake-lagoon system possible. Furthermore, construction, operation and maintenance of lagoons in the N.W.T. must take into account the special difficulties caused by the occurrence of deep frost penetration, existence of permafrost and the shortage of trained personnel in the N.W.T. For these reasons there is a need for guidelines for wastewater lagoons for the Northwest Territories, which this document addresses. (Guidelines for the Planning p. 2)

With respect to design the report has states:

The lagoon should, if possible, be located to permit gravity drainage from the collection system. However, the lagoon must be located out of the flood plain so that its operation is not impaired by high water or flooding. The lagoon should not intercept surface runoff, ground water, or snowmelt. The use of lift stations should be minimized to reduce capital and operating costs as well as maintenance requirements. It may be necessary to install a lift or pump station near a lagoon to ensure that the mains do not surcharge. (my emphasis)

and further:

The dykes should be constructed of impervious soil and compacted to 95 per cent of Standard Proctor density. This will reduce permeability and improve the side slope stability. This does not relieve the designer of the permeability requirements of Section 5.2.3.2. (my emphasis)

With respect to design features to prevent dyke erosion, the report states:

Wind action and surface runoff are the two main sources of slope erosion. Several approaches are available for erosion protection of inner and outer slopes. The least expensive and most widely used method is grass cover from the toe of the outer slope to the toe of the inner slope. If grass cover is not practical, some form of revetment is necessary. Revetment materials can include rip-rap, soil cement, gabions, geocomposites, interlocking concrete blocks, sand bags, or scrap materials such as broken concrete or discarded tires. (my emphasis)

With respect to operation the report states:

Wastewater lagoons are an attractive wastewater treatment technology for small communities since lagoons require relatively little attention to achieve good performance. However, some attention is necessary to ensure optimum performance and to prevent catastrophic failure of the lagoon system. (my emphasis)

With respect to planning and operation:

The ground thermal regime, soil type, permeability, and slope stability are topics of importance in the design of a lagoon. A competent geotechnical specialist should be involved during the pre-design soil investigations and through detailed design and construction of a lagoon in cold regions. Catastrophic failures of the lagoon earthworks or serious pollution of ground water may occur if the geotechnical engineering is overlooked. The Cold Climate Utilities Manual provides an excellent review of geotechnical considerations in cold climates. (my emphasis)

Notwithstanding the simplicity of lagoon works, they cannot simply be ignored. They must be maintained and operated. Exhibit 26 sets out the operational and maintenance standards. These include checking that the lagoon works normally, adjusting the water levels and ensuring that the controls work, the keeping of records, repairs and the like.

Records are required:

Record keeping is necessary to have information on what has happened. The use of accurate records is very important for the operator, the manager, the Department of Public Works, the Water Board and its supporting agencies and to engineers that may need to work on the system.

The records must be detailed enough to allow evaluation of performance and to track the development of problems. The records also give a good check on completed tasks and those left to do ... (my emphasis)

Finally with respect to maintenance requirements the report states:

Liners are installed to prevent water from seeping through the berm to avoid ground water pollution, and to ensure that the berm does not collapse because of washout or through pressure from ice lens formation within the berm. (my emphasis)

The objective of berm and liner inspection is to make sure that leakage does not occur. The two major concerns are excessive growth of vegetation due to lack of cutting, which may hide developing problems, and erosion. Erosion of dikes is caused by wave action and surface runoff. The problems can be aggravated by animal burrows. (my emphasis)

Regular monitoring and maintenance are required to control berm erosion.

Surface runoff will have been normally prevented from entering the lagoon through diversion ditches at the bottom of the outer berm slope. The ditches must be properly maintained to prevent blockage of drainage. (my emphasis)

These excerpts describe the fundamentals, and basic design, construction, operation, and maintenance techniques for sewage lagoons. I use this document not as an ideal, nor as a minimum in the sense of standards but only as its title suggests -- a guide. Even at that level it represents actual notice to and knowledge of the Defendant with respect to the issues, concerns, and needs generated by the establishment and operation of lagoon waste water treatment systems. Action on some of the guidelines might well

have constituted due diligence. Unfortunately, for all intents and purposes, this document is not even remotely reflected in the operation of the Iqaluit sewage lagoon. The Iqaluit lagoon was out of sight and out of mind, under paper management only.

ACTS OF THIRD PARTIES:

The Defendant has argued vigorously that it was the intervening acts of third parties that contributed to, if not caused, the event so that the Defendant bears no responsibility. The Defendant refers to the Forward Operating Location construction site and new culverts. I agree that acts of third parties contributed to the event in question. However, in my view that fact does not absolve or shield the Defendant. The Defendant knew one year in advance of the project details, including modifications/replacements of culverts. The evidence reveals that there was a meeting in March, 1991 between the contractor involved, Municipal officials, and the Defendant's officials to discuss the works, including the replacement of the culverts. This aspect of the work is clearly shown on blueprints presented at the meeting. Yet, there was a want of even modest vigilance on the part of the Defendant as to what was occurring at the site from day to day or week to week. The Defendant's only concern was for its furniture warehouse. As I stated above, the Defendant knew and ignored what was occurring with respect to the construction project as it impacted on the drainage immediately uphill of the sewage lagoon. This ignorance is totally consistent with the confusion and non involvement of the Defendant in the maintenance, supervision and operation of the lagoon. The Defendant cannot shelter behind the acts or omissions of the contractor involved -- even if it did not follow municipal by laws -- for the simple reason that it knew, well in advance, that the work was going to affect the drainage and did nothing. Any person, exercising a modicum of vigilance over its undertaking

would have seen the project under way and asked questions. This, in my view, is simply the principle stated by Dickson, J. in action.

ACT OF GOD

An Act of God is an event that has been "caused directly and exclusively by such a direct and violent and sudden and irresistible act of nature as could not by any amount of ability have been foreseen, or, if foreseen that it would happen, could not by any amount of care and skill be prevented." *McQuillan v. Ryan* 64 DLR 482 applying *Nugent v. Smith* (1875) 1 CPD 19.

Ford J. in *Low v. C.P.R.* [1949] 2 WWR 433 stated:

The defence of vis major or act of god is also relied on by the defendant. The decisions make it clear that it is a question of fact whether an occurrence of nature is so phenomenal or of such a magnitude as not to be reasonably foreseen and guarded against, the capacity to foresee being based on previous experience and knowledge of nature's law.

Foreseeable adverse weather conditions require reasonable precautions. Whatever contributing influence can be attributed to nature, this influence could have been avoided by reasonable foresight and preventative steps. *Stuart J.R. v. Placer Developments* 13 CELR p. 52 (Yukon Territorial Court).

Historical data reveals that the temperature on June 1, 1991 was one of the warmest days on record. More precisely, the temperature reached a high not seen for 37 years. Evidence indicates temperatures at the period in question were as follows:

<u>Date</u>	<u>Degrees Celcius</u>
May 15	- 7.1
May 16	- 6.9
May 17	- 4.5
May 18	- 2.5
May 19	- 1.9
May 20	- 3.9

May 21	- 1.2
May 22	- 2.0
May 23	- 1.4
May 24	- 1.9
May 25	.8
May 26	- .7
May 27	- .8
May 28	- .7
May 29	1.9
May 30	3.5
May 31	7.9
June 1	11.7
June 2	9.6

The Defendant argues that this unseasonably high temperature must have caused significant runoff which resulted in flooding of the lagoon and the washout. I accept that the temperature was unusually high, however, that is not evidence of a flood problem. A report purporting to show precisely that was introduced into evidence and subsequently demolished in cross-examination. The report was flawed, based on fictitious data.

Common sense may tell us that a warm or hot day will cause snow to melt, but it cannot tell us what percentage nor how much will ultimately runoff and at what rate. Nor do I have any evidence that I accept in that regard. Iqaluit is by and large built on the side of a ridge of rising ground. If the temperature was such as to cause flooding, would there not be some evidence of such flooding elsewhere? I have no evidence of flooding problems anywhere else in the town.

Notwithstanding many past catastrophic failures of the west dyke due to spring runoff, the Defendant had not built or provided for any emergency overflow control or decant structure.

In my view the Defendant had the power and authority to prevent or control the alleged flooding. It could have simply maintained the drainage ditch; it could have liaised with the contractors doing

nearby work altering the culverts; it could have been modestly vigilant. In history, in reports, in evidence, and in view of the general problem of spring runoff, the potential for flooding was evident; the problem was foreseeable. The Defendant's own documents must be taken to have made it alive to the issue.

Finally, there is no evidence other than the high temperature on that day that suggests a phenomenal natural occurrence that would fall under the legal understanding of an Act of God. The evidence is conclusive: care and skill would have prevented this washout, even with the elevated temperatures.

WATER LICENSE:

There is one issue that I must address if only to dismiss it.

Pursuant to the **Northern Inland Waters Act** and Regulations, the Northwest Territories Water Board has issued a Water License that relates to this sewage lagoon. The License, Exhibit 13, permits the use of certain water resources for municipal sewage purposes. It also sets standards for effluent quality after such use. In other words, for the quality of the discharge from the Iqaluit sewage lagoon.

It is argued that, for all practical purposes, the Defendant was the Licensee, and that I ought to recognize the Defendant as such in considering certain arguments: The Defendant has argued that, what one enactment -- the **Northern Inland Water Act**, and the actions of the Water Board set up thereunder -- permits, another enactment -- the **Fisheries Act** -- cannot prohibit. Furthermore, there is a conflict between the two enactments in that they both purport to regulate the same matter -- the effluent quality discharged from the sewage lagoon. The Defendant argues that in (presumably) complying with the Water Board requirements, it is

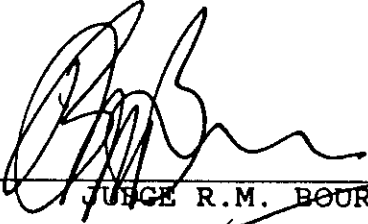
protected from prosecution under the **Fisheries Act**. If the effluent quality is such as to contravene the **Fisheries Act**, then this is an officially induced error.

The arguments ignore the fact that the effluent released between June 1 and June 10, 1991 exceed the quality standards set out in the License. It ignores the fact that the License, by its terms, is subject to "compliance with the requirements of other Federal or Territorial legislation". It ignores the fact that the Water License is issued to the Municipality of Iqaluit. It is the legal entity that is licensed to use water for its municipal purposes, and it is the entity that is subject to the terms, rights, and obligations of that License.

The Defendant, in policy and law, maintains the independence and separate identity of Municipalities. It cannot ignore that legal reality at its pleasure when convenient. this is what I am asked to do. I cannot. In my view, the instant case does not provide the factual basis which would allow me to rule on those arguments. The Defendant is not a party to the License.

The Water License and its terms are irrelevant in this case.

I convict the Defendant on Count 3.



JUDGE R.M. BOURASSA