Information for the Water License Application for the Hamlet of Whale Cove

(1) Name and Mailing Address of Applicant/Licensee

The Hamlet of Whale Cove
Whale Cove, Nunavut

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(3) Location of Undertaking

Whale Cove is located at the tip of Term Point on the west coast of Hudson Bay at 62°10' N, 92°36' W. It is 80-air km south of Rankin Inlet and 1,139 km east of Yellowknife.

Whale Cove is a sheltered bay that faces southward. The Community is situated on a grassy, boulder-strewn area that gently slopes upward from the sea. The overburden of coarse gravel and sands reaches up to 1 m in depth. A ridge of Precambrian rock 15 to 20 m in height surrounds the community; rocky outcrops are common. The active layer of permafrost extends to about 1 m. Annual thaw in the summer is negligible.

A thin layer of organic material supports mosses and lichens along the rocky coast and low hills.

Whale Cove receives an average of 16.0 cm of rainfall and 118.1 cm of snowfall per year. Mean annual precipitation totals 27.8 cm. July mean high and low temperatures are 12.5° C and 4.2° C. January mean high and low temperatures are -28.0° C and -34.7° C. Winds are generally north-west and average 24 km/h annually.

The first Europeans to explore the Whale Cove area were Captain Thomas Button in 1613 and Captain Luke Foxe in 1631. The Hudson Bay Company began trading with people of the area during the 18th century. At the same time, European interest in mineral exploration developed.

The Department of Northern Affairs officially established Whale Cove in 1959. Starvation had stricken outlying camps the year before when the caribou herd failed to return. The Department of Northern Affairs believed that the Inuit could adapt their technologies to the use of coastal resources.

The Whale Cove area has abundant game resources. Hunting, fishing and trapping are the major economic activities of the Hamlet. Local businesses include meat product sales, cartage, general retail, food sales, hotels, outfitting, restaurants, amusement centres, and vehicle rentals.

Whale Cove gained Hamlet status on July 1, 1976. A traditional name for the Community is "Tikirarjuaq", meaning 'where many people arrive'.

(4) Description of Undertaking

Water Supply and Treatment

The community currently obtains its potable water from Fish Lake, located approximately 3.5 km north of the community. This source has been used since about 1982. The former source was Water Lake, 1 km north of the community. A new access road and truck turnaround pad were constructed at Fish Lake in 1986, allowing improved year-round access to the lake.

Until completion of the new intake/truckfill in 1991, water was drawn directly from the lake by the water truck. In winter, an ice auger was used to obtain access. Adding chlorine bleach to the tank of the delivery truck disinfects the water.

During the planning for the new intake/truckfill facility, Fish Lake was retained by the GNWT and the community as the supply source due to its pristine condition and favourable recharge characteristics. The lake's proximity to the Hamlet allows convenient access but has sufficient separation to mitigate possible contamination.

Observations of the shoreline indicate that the water elevation is relatively stable. Lakeshore erosion characteristics and high water markings indicate that the water level fluctuates less than 0.5 m, ensuring a reliable supply of water.

Based on topographical and geotechnical constraints, access to the Lake is sited at the most advantageous location for the facility. Water depths to 7 m are found within 60 m of shore. Only 140 m of relocated access road and a new turnaround pad had to be constructed.

A single vertically mounted drum screen intake and inclined shaft casing, which had been used successfully in other similar installations, was installed for the new intake system. The intake is located at a depth of 6 m. A submersible pump, located inside the casing about 15 m from the intake, is mounted on a skid and can be removed from the casing for servicing by means of a wire pull arrangement. The 100 mm diameter uninsulated, heat traced HDPE discharge line is carried inside the 300 mm diameter, 120 m long, HDPE insulated casing. The casing is ballasted and protected by a granular berm and riprap. The pump fills the trucks at a rate of 1000 L/min.

The pre-engineered, skid-mounted pumphouse, 3.5 m x 7 m, is divided into two rooms. One room contains hypochlorinator facilities and the steel discharge line from the intake casing to the truckfill arm. The other contains the emergency diesel electric generator. The pumphouse is normally powered by the NWTPC power plant in the community.

Water for the hypochlorite-mixing tank is supplied from the discharge line. The hypochlorite feed pump is controlled by the rate of water supplied to the water trucks by means of a flow-sensing meter

mounted on the discharge line. The chlorine is supplied to the main line by a tube and chlorine injector. The design flow rate of the injection system provides 0.5 mg/L residual chlorine. The dosage rate at the pumphouse allows for consumption and volatilization during delivery and residential storage. Estimated chlorine residual concentration at the point of domestic supply is 0.2 mg/L for a typical truck delivery system. Water is supplied to the water trucks by means of an overhead truckfill arm with flexible downspout, with thaw capability afforded by a manually activated heat trace. Provisions for future fluoridation were made by the installation of a supply fitting on the steel water discharge line and reserving space within the pump room for fluoridation equipment.

Water Storage and Distribution

The recharge potential of Fish Lake includes 37.4 ha of adjacent watershed, the discharge from two lakes to the South, and additional discharge from the North.

Nearly 93,000 m^3 of water per year is available as recharge for the lake, compared with the present annual consumption of 13,000 m^3. Winter storage capacity of 97,000 m^3 was calculated based on an assumption that 50% of the total volume of the lake was occupied by ice cover.

A 4540 L 1976 water truck and a 4540 L 1993 water truck are used for water distribution. Water is pumped directly into the truck tank using a truck mounted pump. The water is trucked approximately 4.0 km from the source. All water deliveries are metered.

Water Quality:

In a letter by Indian and Northern Affairs to the Hamlet of Whale Cove regarding the August 30, 2001 Municipal Water Use Inspection, no concerns were mentioned regarding the performance of the municipal water intake and supply facility on the shoreline of Fish Lake. The water samples meet the *Guidelines for Canadian Drinking Water Quality* except for the water quality of turbidity of 2.7 NTU. The standards are between 1 NTU, the maximum acceptable concentration in drinking water, and 5 NTU, the aesthetic objective for clean water.

Sewage Collection and Disposal

Bagged sewage is collected by the Hamlet garbage truck but is separated from the domestic solid waste. Only a very few homes are still on the bagged sewage system. Bagged sewage is deposited in a pit at the modified landfill site 1.1 km west of the community. The pit is surrounded by a fence and separated from the rest of the solid waste.

Sewage collection is provided by the Hamlet. Those buildings with sewage holding tanks are serviced by a Ford model F-800 8172 L capacity sewage pumpout truck. Pumpout sewage is treated at the community lagoon 0.7 km southwest of the community; this lagoon covers an area of 15,000 m^2. Effluent from the lagoon is further treated in a natural wetlands area, 700 m in length, before it flows into Hudson Bay.

Solid Waste Collection and Disposal:

Solid waste is collected daily by a two-person crew using a 1991 Ford F-350 compactor with a 9-m^3 capacity. Residents do not burn wastes in oil drums at home. Bulky waste disposal is the responsibility of the individual. An annual spring cleanup takes place in July.

Solid waste is deposited 1.1 km southeast of the community in a 40,000 m^2-modified landfill. A separate bulky waste disposal area has been set aside for disposal of used vehicles, large appliances and other large metal items.

Used oil wastes are placed in 205 L oil drums.

Coarse gravel is readily available for covering the disposal site.

(5) Type of Undertaking

Municipal

(6) Water Use

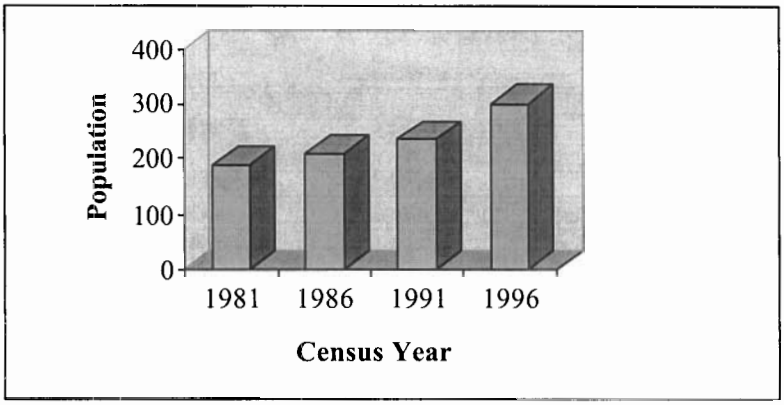
To obtain water

(7) Quantity of Water Involved:

Water Generation Projections:

The 1996 Census Report demonstrates the following increase in population of the Hamlet of Whale Cove between the census years of 1981 to 1996. Figure 2 illustrates this population increase. A per capita growth rate of 3.18% was determined between the census years of 1981 and 1996.

Figure 2 - Population Increase in the Hamlet of Whale Cove



The Municipal and Community Affairs (MACA) planning guidelines suggest that the increase in the projected per capita water use in a community should be modelled through the following series of equations.

(1) RWU x (1.0 + (0.0023 x Population))	**Population <2000**
(2) RWU x (-1.0 + (0.323 x Ln (Population))	**2000<Population<10,000**
(3) RWU x 2	**Population >10,000**

The RWU or residential water use is estimated to be 90 litres per capita (Lpcd) for populations lower than 2000. The RWU is estimated to be 220 Lpcd for populations greater than 2000.

Ln is the natural logarithm.

Equation 1 assumes that the population is using a delivery system to transfer water to the population.

Equation 2 assumes the development of a piping system to transfer the water to members of a community.

From these equations, the sewage generation of the community of Whale Cove was modelled within a 20-year span (Table 1). The current amount of water use was estimated to be 12,499,402 L annually. This corresponds to a per capita water use of 97.29 Lpcd. In the year 2011, the per capita water use would be 99.96 Lpcd corresponding to an annual water use of 17,564,647 litres.

Therefore, the community is requesting for an annual volume of 18,000,000 litres.

Table 1 - Water Use Projection for the Hamlet of Whale Cove

Planning Year	Calendar Year	Total Population	Projected Water Use	Daily Projected Volume	Annual Projected Volume
		#	Lpcd	Litres	Litres
	1996	301	96.23	28,965	10,572,386
	1997	311	96.43	29,948	10,931,048
	1998	320	96.63	30,966	11,302,567
	1999	331	96.84	32,020	11,687,445
	2000	341	97.06	33,113	12,086,208
0	2001	352	97.29	34,245	12,499,402
	2002	363	97.52	35,418	12,927,599
	2003	375	97.76	36,634	13,371,398
	2004	387	98.00	37,894	13,831,423
	2005	399	98.26	39,201	14,308,326
5	2006	412	98.52	40,556	14,802,789
	2007	425	98.79	41,960	15,315,525
	2008	438	99.07	43,417	15,847,281
	2009	452	99.36	44,928	16,398,836
	2010	467	99.66	46,496	16,971,006
10	2011	481	99.96	48,122	17,564,647
	2012	497	100.28	49,810	18,180,652
	2013	512	100.61	51,562	18,819,958
	2014	529	100.95	53,380	19,483,545
	2015	546	101.29	55,267	20,172,442
15	2016	563	101.65	57,227	20,887,724
	2017	581	102.02	59,262	21,630,521
	2018	599	102.41	61,375	22,402,015
	2019	618	102.80	63,571	23,203,446
	2020	638	103.21	65,852	24,036,117
20	2021	658	103.63	68,223	24,901,392

(8) Waste Generated

Sewage:

The current volume for the year 2001 of sewage generated by the community of Whale Cove is 12,499,402 litres annually corresponding to the annual water use. The Hamlet of Whale Cove is applying for a 10-year water license. In 2011, the annual volume of sewage generated by the Hamlet of Whale Cove will be 17,564,647 litres.

An existing lake was used as the site of the current sewage lagoon. There were natural drainage patterns to the east and west even before the lagoon was constructed. The drainage occurs primarily in the east and west ends of the lake. The drainage is both above ground and below the ground through rock fractures. The drainage is generally directed towards the low-lying areas to the west and partly to the solid waste site through some depressions north of the lake.

This lagoon covers an area of 15,000 m^2. Effluent from the lagoon is further treated in a natural wetlands area, 700 m in length, before it flows into Hudson Bay. The treatment through the natural wetlands area is very efficient. There was definite seepage from the lagoon on the ocean side. There are approximately 400 metres of wetlands between the sewage lagoon and the ocean. The drainage area around the sewage lagoon is approximately 3 km^2 determined through air photos of the area.

Wetlands treatment is a web of complex physical and biological processes. Sedimentation, absorption of pollutants in the surface soils, nutrient uptake by plants, and the oxidation of compounds by microorganisms are some of the processes that effect the treatment.

The combination between the retention time of the lagoon and the additional treatment provided by the vegetation in the discharge appears to treat the wastewater very efficiently.

The recent municipal inspection by the on August 30, 2001 of the sewage treatment facilities of the community of Whale Cove by the Department of Indian and Northern Affairs (DIAND) has resulted in no significant concerns. A sample was taken in the path of discharge of the sewage effluent treatment facility. The analytical results of this study are attached to this water license. All tested parameters met the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life* except for ammonia (13 mg/L versus 2.2 mg/L). The Microtox procedure tests water samples using a toxicity indicator (IC_{50}) The Microtox test did not indicate toxicity in the effluent.

Wetlands Treatment Efficiency:

The following tests of water quality to a known set of chemical standards were performed on the sewage before it was returned to source.

Around the sewage lagoon, the following samples were collected. Sample WC01 was taken within the lagoon directly along the berm on the oceanside. A sample was collected at the pond closest to the lagoon on the community side. Sample WC02 was obtained from near the water's edge. WC03 was collected in a stream-like area approximately 200 m from the lagoon. A final sample was taken at a pond that was about 75 m from the ocean. This sample, WC04 was taken at the lagoon side of the pond. The pond is located approximately 460 m from the lagoon. The samples were tested to for faecal coliforms, ammonia, nitrate/nitrite, total phosphorous, conductivity, pH, and total suspended solids.

Table 2 – Laboratory Tests on discharge from the Whale Cove Sewage Lagoon

Parameters	Samples			
	WC01	WC02	WC03	WC04
Faecal Coliforms (CFU/100ml)	800	100	100	<100
Ammonia as N (mg/L)	<0.005	<0.005	2.62	0.018
Nitrate+Nitrite as N (mg/L)	<0.008	<0.008	0.349	<0.008
Total Phosphorous (mg/L)	4.66	0.045	0.503	0.028
Conductivity (uS/cm)	604	914	632	566
pH (pH units)	7.45	7.45	8.43	8.40
Total Suspended Solids (mg/L)	17	24	7	4

Wastewater Effluent Quality Limits

Wastewater Flow (Lcd) & Season	Parameter	Unit	Overland Flow to Marine Mixing Condition	
			Open Coastline	Bay or Fjord
<150 Lcd Summer	BOD_5	mg/L	360	100
	TSS	mg/L	300	120
	F. Coliform	CFU/dL	N/A	N/A

Sludges:

Sludges are generated through the sewage lagoon process. It does not appear that the sludge has interfered with the treatment process and has not been removed from the lagoon system. If the sludges interfered with the sewage treatment process, the sludges would have to be removed to a Nunavut Water Board approved facility.

Greywater:

Greywater is collected with the liquid sewage and deposited in the sewage lagoon.

Solid Waste Treatment:

The landfill consists of three main areas. The bulky waste area at the back of the site, a honeybag pit and garbage trenches. The site is divided into strips of holding cells (10 m x 50 m per cell) running generally from the SW to NE direction.

There is a large amount of waste metal in the bulky waste area. This includes such items as vehicles, appliances, barrels, tanks and wood waste.

The solid waste site is operated using a modified trench method. The solid waste is placed in the trenches and then burned, then occasionally covered with granular material.

Solid Waste Volume Projections

The types and quantities of materials in the Whale Cove waste stream available for reuse, recycling, recover and composting programs was estimated in by reviewing current information and by literature.

A recent solid waste composition study has not been conducted in Whale Cove. The literature provides an insight. The Heinke and Wong study (1989) used by MACA in their planning studies to determine waste volumes suggests a certain volume and mix of MSW. A study by Quay and Heinke (1992) in Inuvik, Tsiigehtchic, and Fort McPherson suggests similar waste stream mix shown in the table that follows.

Table 3 - Estimated Solid Waste Composition

Food Wastes	20.3 %
Cardboard	9.8 %
Newsprint	2.4 %
Other Paper Products	14.8 %
Cans	4.4 %
Other Metal Products	6.2 %
Plastic, Rubber, Leather	14.0 %
Glass, Ceramics	5.7 %
Textiles	3.8 %
Wood	9.9 %
Diapers	3.8 %
Dirt	4.9 %
	100.0 %

NAPP Protocol

The National Packaging Protocol is an initiative by CCME in 1992 to respond to municipalities and the public over the proliferation of disposable consumer packaging. While per capita consumption of new packaging has decreased overall in the south where the data was generated, the implications for the North and, specifically, for Whale Cove is not as clear.

Southern reductions were primarily a result of recycling, an opportunity not available in Whale Cove. It is assumed that packaging for shipping foodstuff and consumer products has increased proportionately with population.

However, southern data for post-consumer packaging has shown an increase for various "sectors" of between 100 to 200 percent over a 5-year period (1992-1996). These sectors include: accommodation, food & beverage, amusement, and recreational services; retail; aluminium packaging; plastic; and paper sacks and bags. This data may have a direct implication in Whale Cove for increased quantities of waste as the data may transfer directly to current disposal practices.

The classes, "Other paper products", "Cans", and 'Plastic, Rubber, Leather" may represent the increasing sectors as per the NAPP data. These first two classes currently account for approximately 19.2% of the estimated waste stream in Whale Cove. If it can be assumed equal contribution from each waste in the third stream, then plastics account for an additional 5%.

It appears then, increasing packaging impacts on approximately 24% of the waste stream. Assuming worst case, then, the 200% increase over 5 years is about 40% per year and causes an overall increase of approximately (40% of 24%) 10% per year. This value may over estimate the additional contribution and is unlikely to remain at this level during the entire planning horizon.

Regardless, it is prudent to assume some increase during the planning horizon not directly attributed to a population increase, assuming that recycling programs may not be cost-effective, or implemented in Whale Cove.

Therefore, a 1% increase in the overall garbage generation rate has been incorporated in the volume estimations.

Table 2.2 shows the projected garbage projections.

The following assumptions were made to prepare this table:

- Per capita volume described by Heinke and Wong (1990) has been increasing at a rate of 1 % per year
- The per capita population growth rate of the Hamlet of Whale Cove is 3.18% per year.
- The waste density is 0.099 tonnes/m^3 (Bryant et al., 1996)

Table 4 - Solid Waste Projection estimates for the Community of Whale Cove

Planning Year	Calendar Year	Total Population	Projected Daily Rate (m^3pcd)	Projected Daily Volume (m^3/day)	Projected Daily Weight (Tonnes)	Projected Annual Volume (m^3)	Projected Annual Weight (Tonnes)	Running Total (m^3)
	1996	301	0.014	4.2	0.4	1538	152	
	1997	311	0.014	4.4	0.4	1603	159	
	1998	320	0.014	4.6	0.5	1670	165	
	1999	331	0.014	4.8	0.5	1741	172	
	2000	341	0.015	5.0	0.5	1814	180	
0	2001	352	0.015	5.2	0.5	1890	187	1890
	2002	363	0.015	5.4	0.5	1970	195	3861
	2003	375	0.015	5.6	0.6	2053	203	5914
	2004	387	0.015	5.9	0.6	2140	212	8053
	2005	399	0.015	6.1	0.6	2230	221	10283
5	2006	412	0.015	6.4	0.6	2324	230	12606
	2007	425	0.016	6.6	0.7	2421	240	15028
	2008	438	0.016	6.9	0.7	2523	250	17551
	2009	452	0.016	7.2	0.7	2630	260	20181
	2010	467	0.016	7.5	0.7	2740	271	22921
10	2011	481	0.016	7.8	0.8	2856	283	25777
	2012	497	0.016	8.2	0.8	2976	295	28754
	2013	512	0.017	8.5	0.8	3102	307	31855
	2014	529	0.017	8.9	0.9	3232	320	35087
	2015	546	0.017	9.2	0.9	3368	333	38455
15	2016	563	0.017	9.6	1.0	3510	348	41966
	2017	581	0.017	10.0	1.0	3658	362	45624
	2018	599	0.017	10.4	1.0	3812	377	49436
	2019	618	0.018	10.9	1.1	3973	393	53408
	2020	638	0.018	11.3	1.1	4140	410	57548
20	2021	658	0.018	11.8	1.2	4314	427	61863

Solid Waste Water Runoff Quality:

The Department of Indian and Northern Affairs (DIAND) has performed analytical analysis on the runoff discharge from the solid waste site. The final discharge from the site indicated that concentration of copper and iron slightly exceeded the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life.* Concentrations of copper were 5 µg/mL versus the standard 4 µg/mL and iron were 349 µg/mL versus 300 µg/mL. However, the Microtox sample did not indicate the toxicity of this runoff.

In addition, Ferguson Simek Clark and Community Government and Transportation (CG&T) performed sampling of the solid waste leachate runoff quality. A sample was taken within the trench that is not currently the burning site. The sample was taken as close as possible to the ocean side of the trench. The runoff could not be sampled because the streams were too low to fill any of the sample bottles. This sample was labelled WC1AC.

Sample WC3AC was taken of seepage from the trench that contained the recently dumped refuse. The sample was taken approximately four (4) metres from the end of the trench. Because of the quantity of refuse and animal bones in the stream it took some time to find an area deep enough to sample. Once the first sample was taken, the water became turbid.

Parameters	Samples		CCME Water Guidelines		
				Aquatic Life	
	WC1AC	WC3AC	Community	Freshwater	Marine
Ammonia as N (mg/L)	0.077	1.1	N/A	1370-2200	N/A
Oil and Grease (mg/L)	<0.2	1.7	N/A	N/A	N/A
Conductivity (uS/cm)	977	1010	N/A	N/A	N/A
pH (pH units)	7.96	7.55	6.5-8.5	6.5-9.0	7.0-8.7
Total Suspended Solids (mg/L)	14	48	N/A	N/A	N/A
Phenols (ug/L)	<0.5	<0.5	N/A	4	N/A
Arsenic (ug/L)	1.4	2	25	5	12.5
Cadmium (ug/L)	<0.3	0.3	5	5	N/A
Chromium (ug/L)	<3	4	50	0.0035	0.002
Cobalt (ug/L)	<1	<1	N/A	N/A	N/A
Copper (ug/L)	3	14	N/A	2-4	N/A
Iron (ug/L)	437	3320	N/A	300	N/A
Lead (ug/L)	<1	3	10	1-7	N/A
Manganese (ug/L)	109	113	N/A	N/A	N/A
Mercury (ug/L)	<0.01	<0.01	1	0.1	N/A
Nickel (ug/L)	4	4	N/A	25-150	N/A
Zinc (ug/L)	<10	122	N/A	N/A	N/A

Samples from each trench prove to have an excess of iron. The runoff from the garbage/burning trench shows to be high in chromium as well.

Bulky Waste:

The community separates bulky waste in an area approximately 60 m by 120 m located west of the solid waste site. This site contains bulky waste such as used vehicles, other appliances, and other large metal items. Bulky metals are generally compacted prior to infilling and capping work.

There is a vast amount of waste metal in the bulky waste area. This includes such items as vehicles of all types, appliances, barrels, tanks, wood waste etc.

Honey Bag Pit:

The honey bag pit has a fence around all three sides of it. The honey bucket pit is no longer needed at the landfill. No houses are currently using honey bags. However, the honey bag pit was used in the past as the community initially relied on the use of a bagged sewage system.

Hazardous Waste:

The Hamlet segregates hazardous waste to the bulky metal wastes area. The community is investigating purchasing a sealift container that would be dedicated to the storage of batteries and other hazardous materials prior to proper disposal.

Abandoned Landfill Site:

The abandoned solid waste site is located within the community of Whale Cove. It has not been used in years but still has a large amount of waste.

The majority of the site is covered with scrap metal that includes vehicles, crushed barrels and culvert material. There is some old garbage bags and refuse in the area as well.

A water sample was taken in an area of runoff from the site. The results are in the following table.

Parameters	WC2AB	CCME Water Guidelines		
		Community	Aquatic Life	
			Freshwater	Marine
Ammonia as N (mg/L)	<0.005	N/A	1370-2200	N/A
Oil and Grease (mg/L)	0.2	N/A	N/A	N/A
Conductivity (uS/cm)	345	N/A	N/A	N/A
pH (pH units)	8.09	6.5-8.5	6.5-9.0	7.0-8.7
Total Suspended Solids (mg/L)	3	N/A	N/A	N/A
Phenols (ug/L)	<0.5	N/A	4	N/A
Arsenic (ug/L)	<1.0	25	5	12.5
Cadmium (ug/L)	<0.3	5	5	N/A
Chromium (ug/L)	5	50	0.0035	0.002
Cobalt (ug/L)	<1	N/A	N/A	N/A
Copper (ug/L)	3	N/A	2-4	N/A
Iron (ug/L)	320	N/A	300	N/A
Lead (ug/L)	<1	10	1-7	N/A
Manganese (ug/L)	16	N/A	N/A	N/A
Mercury (ug/L)	<0.01	1	0.1	N/A
Nickel (ug/L)	3	N/A	25-150	N/A
Zinc (ug/L)	33	N/A	N/A	N/A

(11) Inuit Water Rights

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement? No

(12) Contractors and Sub-contractors

None

(13) Studies Undertaken to Date

Whale Cove Sewage and Solid Waste Planning Study, Ferguson Simek Clark 2001

(14) The following documents must be included with the application for the regulatory process to begin

Supplementary Questionnaire (where applicable: see section 5)	Yes
Inuktitut/English Summary of Project	Yes
Application fee of $30.00 (c/o Receiver General for Canada)	Yes