Fish Process Plant Waste Management Plan Hamlet of Pangnirtung, Pangnirtung, Nunavut

Type of Document
Final

Client:
Hamlet of Pangnirtung
Nunavut X0A 0R0

Project Number
FRE-00232735-A0

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Date Submitted
April, 2017

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1 Purpose

As a condition of the Nunavut Water Board water licence (No. 3BM-PAN1417), a Fish Process Plant Waste Management Plan is to be submitted to the Board. The Plan is to assist the Pangnirtung Fisheries Ltd. operations personnel to identify the appropriate means to dispose of any wastes (both solid and liquid) generated through the processing operations at the plant.

2 Site Description

Pangnirtung Fisheries Ltd. is a community-owned and operated corporation located in Pangnirtung, NU, which specializes in two main products: Greenland Halibut (turbot) and Arctic Char. Turbot harvesting/processing is generally a winter fishery lasting 3-4 months resulting in a catch of approximately 500 tonnes. Arctic Char harvesting/processing is primarily a summer fishery of 4 weeks or so, with a catch of approximately 10,000 to 25,000 kg. The location of the fish plant is shown in Figure 1.

Figure 1: Location of Pangnirtung Fisheries, Pangnirtung, NU

3 Waste Generation

Wastes generated at the plant would consist of solid wastes (domestic and processing) and liquid waste (domestic and processing). During the turbot season, the fish are delivered to the plant “clean” (with the head, tail and gut removed). Processing generally consists of cleaning, flash freezing and packaging. With the fish delivered “clean” and no further effort being put into preparing the fish other than cleaning, freezing and packaging, very little solid waste is produced. The processing solid waste generally consists of waste packing materials and any material generated during clean-up (paper towels, etc.). These solids wastes are to be transported to the solid waste landfill site for disposal.

Processing the Arctic Char does produce a fish processing solid waste product; while the fish are delivered with the gut removed, a portion of the fish are filleted prior to flash freezing and packaging (a portion is frozen and packaged whole). The waste produced during filleting would be in the order of 30-40% depending on whether the skin remains on the fillet or is removed. Therefore, depending on the market demand (whole fish versus filleted), the solid waste generated from Char processing could range from 0-10,000 kg (potentially up to approximately 400 kg/d over a 4-week period).

The liquid waste stream generally consists of domestic wastewater (sewage) and processing wastewater generated from cleaning the processing equipment and the facility itself.

4 Waste Management

All the liquid wastes (domestic and processing) generated within the plant are transported to the community wastewater treatment facility for treatment.

Currently, all the solid wastes generated at the processing plant (domestic and processing) are transported to the solid waste landfill for disposal. Due to the “small” quantity of the processing solid waste, there is currently no market for this product. This by-product will continue to be disposed of at the landfill. Upon disposal, any material should be buried as outlined in the Water Licence (Part D, 7.)

Consideration is being given to update the Hamlet’s Solid Waste Management Plan. The solid waste generated during fish processing can, again, be addressed under a new Solid Waste Management Plan.

5 Spill Contingency Plan

A Spill Contingency Plan (SCP) was completed for the Hamlet of Pangnirtung (**exp**, October, 2016). The fish plant management/personnel should follow the protocols outlined in the SCP in the event there is a spill of any contaminants (as defined in the SCP).