Technical Summary of the Environmental Facilities in Clyde River

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Clyde River is a small Arctic Community located at $70^0$27' N and $68^0$33'W on the west shore of Patricia Bay within Clyde Inlet. The average annual rainfall in Clyde River is 4.6 cm and the average annual snowfall is 203 cm. Temperatures in the summer range between 0 and 8°C and in winter between -22.5°C and -30°C. It is generally quite windy with an average wind speed of 14.4 km/h. Permafrost is present in the soil, it recedes to approximately 1 m below the surface in the summer time.

The Community has been maintaining three Environmental Facilities under the Water licence # 3BM-CLY0909, such as: Wastewater Treatment by two cells lagoon, Waste Management by open land fill process and Water Truck Fill Station (WTFS) including truck water delivery system.

Wastewater Treatment facility: Wastewater of the Community is being treated by Sewage Lagoon system. The location of the existing sewage lagoon is approximately 1.2 km west of the Hamlet, 800 m North of Patricia Bay. It is adjacent to a scrap metal dump which is located to the North and the Community landfill to the East. The existing sewage lagoon did not have sufficient holding capacity for the present population size of Clyde River for 963 people. The existing lagoon was constructed in 1976. A new lagoon was built in 2011 adjacent to the existing lagoon having a common berm for the operational capacity of 46,300 cubic meters. The existing old lagoon was rehabilitated. Both lagoons together will satisfy the Community demand for 20 yrs. with total operational capacity for 51,300 cubic meters. The community has been using both lagoons since they were commissioned in 2011.

Waste Management Facility: The Community has been managing wastes in open land fill process. They are managing two waste sites: one for domestic wastes located at the left side of the access road and second one for metal wastes located at the right side of the access road towards the lagoons. These are non- engineered facilities. The consultant right now is on board and is in the process to build a new facility.

Water Truck fill Station (WTFS): The water truck fill station is located at the natural lake which is about 45ft deep. This station is connected with the power line. The station has a flow meter which records the water extraction volume daily from the lake. The raw water is chlorinated prior to filling the tank of water truck for delivery to the Community. The Community has a water permit for 38,000 cubic meters annually. This is an engineered facility and functioning satisfactorily.

Monitoring Stations: Hamlet received signage and they are installing this summer with GPS coordinates to effectively manage their annual Monitoring program.