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NUNAVUT IMPACT REVIEW BOARD (NIRB) ANNUAL REPORT -2024

File no.21YN032

Clyde River Harbour Development

DFO ET025-222050/A

Submitted to:

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1. DESCRIPTION OF PROGRESS

The construction project was awarded to Pilitak Enterprises Ltd (PEL) in May 2022 by Public Services and Procurement Canada (PSPC) for the Department of Fisheries and Ocean (DFO).

1.1 UNDERTAKEN ACTIVITIES DURING THE 2024 CONSTRUCTION SEASON

Our first crew was mobilized to Clyde River on May 14th, 2024, to open the camp, remove snow at the different sites and de-winterizing our equipment. The constructions activities started at the beginning of June 2024 and ended in mid-October 2024. The following main activities were performed:

- Drilling and blasting: About 26,500 cubic meters of rock were blasted from the existing quarry.
- Road maintenance: Roads from the harbour site to the quarry were maintained frequently to keep them in good condition. The reshaping of the surface was done with a grader and gravel was added on some road sections. Dust control was done by spreading calcium chloride and water on the road.
- Material preparation for the project: The rip rap plant, the screener plant and the rock crusher plant were used to produce gravel and rocks of variable sizes for the project.
- Gravel and rock transportation to harbour site: A total of 64,500 tonnes of rocks and gravel was transported between the quarry and the site this working season.
- Fixed Wharf: The sheet piles were installed, and the wharf was backfilled.
- Upland upgrades: Dredge reuse, shot rock and type 2 gravel was transported and placed in front of the harbour site (uplands).
- The Northeast breakwater was constructed with corestones, filterstones and armourstone. The breakwater was built to the full length and the construction was completed.
- The Sealift breakwater was constructed with armourstone. The breakwater was built to the full length and the construction was completed.
- The sealift ramp was upgraded and completed.
- The concrete anchor blocks for the floating wharf were installed.
- The dredging of the 3 areas was completed.
- Winterization of the equipment and facilities.

Drilling at the Quarry

Blasting Preparation

Road Maintenance

Road Maintenance, Dust Suppression

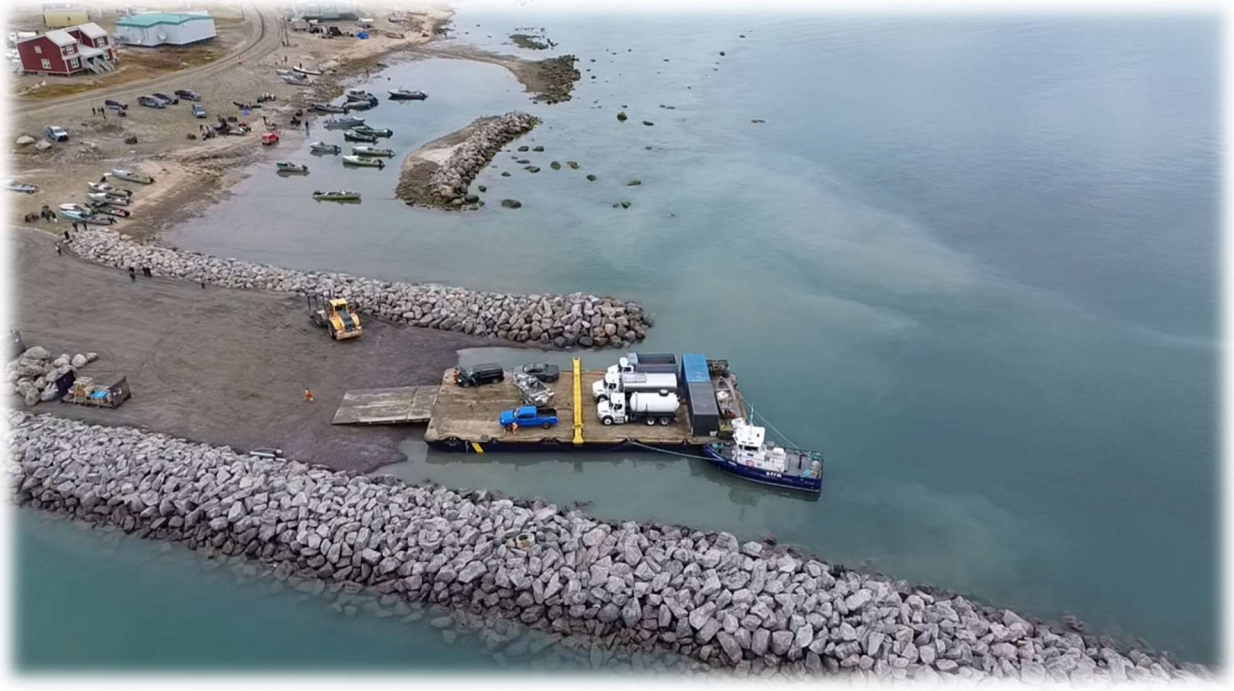
Quarry and Material Processing Area

Rocks Sorting from the Quarry

Steel Sheet Pile Installation at the Fixed Wharf

Northeast Breakwater Construction

Northeast Breakwater Construction Completed



Northeast Breakwater & Sealift Breakwater Construction Completed

Dredging

Dredge Spoil Dewatering Area

Material Transportation and Weighting

Uplands Upgrade

Uplands Upgrade

Traffic Control

Underwater Acoustical Monitoring from the Ice During the Sheet Pile Installation

Installation of the Concrete Anchor Blocks for the Floating Wharf

1.2 LOCAL HIRING

The following occupations have been filled by local workers:

- Janitors
- Cook helpers
- Heavy equipment operators
- Truck drivers
- Scale operators
- Signalman
- Mechanic helper
- Wildlife monitor
- Night guards
- Labourers
- Waterwork safety

A total of 59 local workers were employed. Since the beginning of the project, they worked a total of 48,486 hours, which represents 55% of the total on-site manpower to date.

1.3 INITIATIVES

Hamlet Road Repair

Due to the rapid snow meltdown, the road between the hamlet and the airport was washed out. Pilitak installed a culvert and repaired the road.

Hamlet Office and Garage Parking

Pilitak transported and placed material to extend the hamlet office parking and the hamlet garage parking.

Housing Marine Containers Relocation

For the housing department, Pilitak transported more than 20 marine containers for their relocation.

Burnt Sewage Truck

One of the hamlet sewage trucks caught in fire. Once the fire was extinguished, Pilitak transported the burnt sewage truck form the hamlet garage to the dump.

Sewage Lagoon Emergency Repair

Pilitak help the hamlet to perform emergency repairs at the sewage lagoon.

1.4 MONITORING ACTIVITIES

The following monitoring activities took place:

1.4.1 Daily Wildlife Monitoring

The daily wildlife observations reported by the wildlife monitor on duty and other workers were recorded in the daily environmental reports. The summary of the wildlife observations is presented in **Table 5** of the section 4 of the present document.

1.4.2 Erosion and Sediment Control

Erosion was monitored at the different working sites, during the snow melting and during rain episodes. Erosion and sediment control measures were installed at the harbour site and along the haul road, from the quarry to the airport road.

At the quarry site, silt fences and hay logs were installed between the wetland and the exit of the quarry.

At the harbour site, a dredge spoil dewatering area (DSDA) was built in 2023 including a decantation basin and filtration berm. In 2024, silt fences were added along the east berm. The decantation basin was upgraded. A filtration berm, made of hay logs and clear stone was built at the northeast corner of the DSDA, at the beginning of the community access road.

Silt Fences and Hay Logs Installed Between the Wetland and the quarry exit

Dredge Spoil Dewatering Area

Filtration Berm Built at the North Corner of the of the DSDA

Improvement of the Decantation Basin at the DSDA

1.4.3 Dust control

The dust induced by our operations was monitored by the site superintendent. Dust control measures were needed only on a few occasions during the months of July and August 2024, as summarized in the **Table 1** below:

***Table 1**: Dust Control Measures*

Date	Dust Control Measures	
	Water Spreading on Roads	**Calcium Chloride Spreading on Roads**
July 1st, 2024		1,000 Kg spread on roads from harbour site to quarry (5 km)
July 10th, 2024	20 m^3 of water pumped from the river and spread on roads from the harbour site to quarry	
July 14th, 2024	10 m^3 of water pumped from the river and spread on roads from the harbour site to quarry	--
Aug 1st, 2024	10 m^3 of water pumped from the river and spread on roads from the harbour site to quarry	--
Aug 17th, 2024	10 m^3 of water pumped from the river and spread on roads from the harbour site to quarry	--
Aug 28th, 2024	10 m^3 of water pumped from the river and spread on roads from the harbour site to quarry	

1.4.4 Spill

According to the Spill Contingency and Prevention Plan, spill kits were installed at the different working sites. Extra spill contingency equipment was stored into a marine container located beside the site office. A total of 5 spills occurred during the 2024's working season as summarized in ***Table 2***.

Table 2*: Spill Log*

Date of Spill & Location	Source	Quantity & Product	Contingency Measures
June 14th, 2024 Northeast breakwater	Broken hydraulic hose on excavator	3 liters of biodegradable hydraulic oil (Panolin)	No direct leak in water. Absorbent pads were used to wipe some rocks and others were containerized into a quatrex bag.
June 18th, 2024 Uplands, in front of the site office	Loader: valve on fuel line broke	5 liters of diesel	A pale was placed rapidly to contain the leak and the loader was drove to the hamlet garage for repair. A small quantity of impacted soil was placed into a Quatrex bag.
June 21st, 2024 Northeast breakwater	Broken excavator hydraulic cylinder	25 liters of biodegradable hydraulic oil (Panolin)	Some oil leaked into water but most part spilled into the excavator bucket. Oil was recovered with absorbent pads and some stained rocks were collected and placed into a Quatrex bag.
July 31st, 2024 Northeast breakwater	Broken hydraulic hose on the hydraulic roc breaker mounted on the excavator	50 liters of biodegradable hydraulic oil (Panolin)	Leak of Panolin biodegradable hydraulic oil on sea water surface. Absorbent pads were immediately placed to collect the surface floating oil. The absorbent pads (20) were removed and containerized for off-site disposal.

Sept. 24th, 2024 Temporary dredging road no.5, in water	Broken hydraulic hose on excavator	30 liters of biodegradable hydraulic oil (Panolin)	Leak of Panolin biodegradable hydraulic oil on sea water surface. Absorbent booms were deployed to surround the area where surface floating oil droplets were visible, and it was left in place all day to absorb all oil. No trace of free oil was visible the next morning. The floating absorbent booms were removed and containerized for off-site disposal.

Spill reports were sent to the Nunavut Spill Line for the spills that occurred on July 31st, 2024, and September 24th, 2024. These spills were under 100 litres but considering that they happened on the water, the Nunavut Spill Line was contacted. No corrective action was instructed by the Nunavut Spill Line authorities. Minor quantities of impacted soils and rocks were placed into one Quatrex bag. It will be shipped by sealift to Bécancour (QC) at the end of the summer 2025 for disposal.

1.4.5 Vibrations

A total of 9 blasts was done at the quarry from June 4th, 2024, to August 8th, 2024. There is only one building located within a perimeter of 1.5 km from the quarry, as per monitoring requirements. The Learning Center is located to 1.4 km to the northwest of the quarry. A seismograph *Mini Supergraph II* from *Nomis Seismographs* was installed on the concrete pad of the electrical transformer located beside the building. The seismograph was installed and removed before and after each blast. It was setup into "trigger mode", in order to record any vibration over 6 mm/sec. No blast has triggered the seismograph during the 2024 construction season, meaning that no significant vibration was generated in the vicinity of the health center. We have not received any complain of vibration from the clientele of the Learning Center or from any other buildings in the hamlet during the 2024 construction season.

Seismograph Installed Before Each Blast Beside the Learning Center

Three minor blasts were done at the harbour site, in order to remove some oversize boulders that were present in shallow waters in the areas to be dredged. On June 4th, 2024, 3 oversize boulders located on the east side of the sealift breakwater were blasted. On June 28th, 2024, one oversize boulder located at the fixed wharf was blasted. Finally, on August 4th, 2024, 12 boulders were blasted in the vessel basin area. For each of these blasts, the vibrations were monitored at the community petroleum tank farm, located 100 m north of the site. The seismograph was installed beside one of the tanks. It was setup into “trigger mode”, in order to record any vibration over 6 mm/sec. No blast has triggered the seismograph. No complain of vibration or noise was reported.

Seismograph Installed at the Community Petroleum Tank farm

1.4.6 Surface Runoff Quality Control

According to the water licence, all surface runoff or discharges impacted by construction activities associated with the Project, where flow may directly or indirectly enter Water, shall be monitored for the following parameters:

- Total Suspended Solids (TSS): Max grab sample of 100 mg/L and max average of 50 mg/L
- pH: Between 6.0 and 9.5
- Presence of hydrocarbon sheen: No visible sheen

The TSS was measured with a portable *Hach* turbidity meter LXV322 and the pH with a portable pH meter *Hanna* pHeP 4. Two locations, where runoff from construction activities enter water body, were monitored, as presented within the next pages.

Monitoring Stations 01 and 02

The monitoring Stations 01 and 02 were located on the southwest side of the bridge to the quarry. The station 01 was established where the runoff coming out of the rock and granular material processing area reaches the Clyde River. The station 02 was established directly in the river, 3 meters upstream from the station 01. The river started flowing around June 22nd, 2024, and became free of ice a week later. The surface water quality at the stations 01 & 02 was monitored for the first time on June 25th, 2024, and for the last time on October 10th, 2024. The surface water monitoring was done mainly after rain events to make sure that no visual sign of pollution was observed. The pH and the TSS were measured, and observations were done for the presence of hydrocarbon sheen.

Location of Monitoring Stations 01 and 02, bridge to quarry

The results for both monitoring stations 01 and 02 are presented in **Table 3** in **Appendix 1** and summarized here below.

At the station 01, no grab sample exceedance (100 mg/L) was measured during the entire monitoring season. The average measured TSS was 21.8 mg/L. No hydrocarbon sheen was ever observed. The measured pH values stayed within the permit criteria (6.0-9.5), with an average of 7.5.

In the river (station 02), no grab sample exceedance (100 mg/L) was measured during the entire monitoring season. The average measured TSS was 6.67 mg/L. The measured pH values stayed within the permit criteria (6.0-9.5), with an average value of 7.5. No hydrocarbon sheen was ever observed.

Monitoring Station 01

Monitoring Stations 03 and 04

The monitoring Station 03 was located just upstream of the culvert that crosses the PPD pipelines, downstream from the water discharge point of the dredge spoil dewatering area (DSDA). The station 04 was established 70 m upstream from the station 03, where surface water flows through this area prior to potentially being impacted by the project activities. A sedimentation pond and a filtration berm were built at the drainage exit area of the DSDA. The water that is coming out the filtration berm discharges into the existing ditch that drains the area located north of the community tank farm. The surface water quality at the station 03 was monitored for the first time on June 26th, 2024. The surface water quality at the station 04 was started later in the summer, on August 22nd, 2024, after a significant rain event. The last measurements were done on October 10th, 2024. After this date, temperatures went below the freezing point, and no more run-off was observed after.

Location of Monitoring stations 03 and 04, Dredge Spoil Dewatering Area

Monitoring Station 03

Monitoring Station 04

Results

The results for both monitoring stations 03 and 04 are presented in **Table 3** in **Appendix 1** and summarized here below.

The total suspended solids (TSS) measurements at the station 03 exceeded the grab sample criteria (100 mg/L) at 3 times during the 2024 construction season. The summer was mostly dry until August 22nd, 2024, where rain episodes became more significative. Two grab sample exceedances were monitored on August 22nd and 25th, 2024, after a rain period. The third exceedance was measured on September 7th, 2024, where extensive work was carried within the dredge spoil dewatering area (DSDA). During the entire monitoring season, the average TSS measured at station 03 was 64.35 mg/L, including the 3 grab sample exceedances. If we exclude these 3 episodes, the average TSS measurements for the entire summer was 30 mg/L.

The station 04 was located upstream of the DSDA discharge point. Data were collected from the first rain episode, August 22nd, 2024, when a TSS exceedance was measured at the station 3. The TSS measurement done at the station 4 were always higher than at the Station 3. The ditch that runs upstream od the DSDA is draining the area located north of the community tank farm.

No hydrocarbon sheen was ever observed at both stations. The measured pH values stayed within the permit criteria (6.0-9.5), with an average of 7.21 at the station 3 and 7.7 at the station 04.

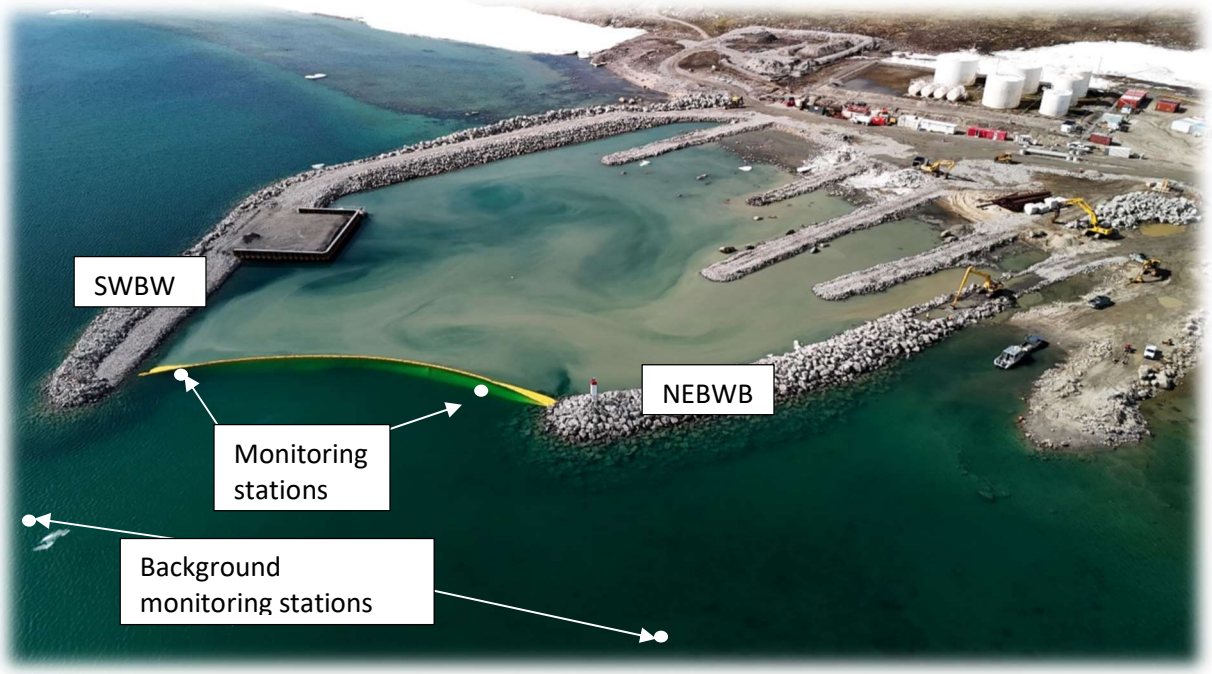
1.4.7 Ocean Water Turbidity Control

According to the *Fisheries Act Authorization (FAA)*, "*turbidity sampling should be taken outside the work area according to the Canadian Council of Ministers of the Environment Canadian Water Quality Guidelines for the Protection of Aquatic Life*". The quality guidelines stipulate that:

1- "*Turbidity (NTU) Allowance Over Background ("Induced" Turbidity): Maximum increase of 8 NTUs from background levels for a short-term exposure (e.g., 24-h period).*
2- *Maximum average increase of 2 NTUs from background levels for a longer-term exposure (e.g., 30-d period) in all waters during clear flow.*
3- *Maximum increase of 8 NTUs from background levels at any one-time when background the floating levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is >80 NTUs for high flow or turbid waters.*

The construction of the Northeast breakwater commenced during the second week of June 2024 and the dredging started during the last week of July. The turbidity monitoring started after the ocean ice cover left the work area, on July 30th, 2024. A floating silt curtain was installed between both breakwater ends, before commencing the dredging operations, at the end of July 2024, as

shown on the below picture. The floating silt curtain stayed in place for the entire construction season and was removed in October 2024, when the dredging operations were completed. The water turbidity was measured once a day, when the navigation conditions were safe and when the dredging operations were performed. For each monitoring day, the turbidity was measured outside of the silt curtain, beside both breakwaters. In addition, the background turbidity was also measured outside of the potentially impacted area.



Floating Silt Curtain and Monitoring Points

At each monitoring point, the turbidity was measured at 3 different depths: 1 m above the seafloor, mid-depth and one meter below the surface. The average value of the 3 measurements was used to be compared to the short term and long-term criteria. The monitoring results are presented in **Table 4**, in **Appendix 1**.

Based on the turbidity measurements, no exceedance of the 3 guideline conditions were noted:

1- *Short-term exposure (e.g., 24-h period)*: For each measurement event, the 3 depth average readings at both monitoring points (NEBW and SWBW) were compared to the background turbidity measured the day before, as presented in **Table 4**. No increase of more than 8 NTU from the background values was measured during the working shifts. The maximum turbidity increase (3.73 NTU) was measured on September 22nd, 2024. Occasionally, a small sediment plume could be observed outside of one end of the floating silt curtain, depending on the tide conditions. However, generally, the plume was no longer visible the next morning.

2- *Longer-term exposure (e.g., 30-d period):* The average of all background turbidity measurements collected during the entire monitoring season is 0.43 NTU. The daily background measurements were compared to this value. The highest increase observed was 1.01 NTU, on September 22nd, 2024, which is below the long-term exposure criteria of 2 NTU.

3- *For conditions where background levels would be between 8 and 80 NTUs:* No background level over 8 NTU was measured.

1.4.8 Fish and Fish Habitat

Small Craft Harbour Site

The construction of the northeast breakwater and the sealift breakwater was completed. A total of 7,500 tonnes of core stone, 3,500 tonnes of filter stone and 11,500 tonnes of armour stones were placed in the water and up to the elevations indicated on the project drawings. The sealift area, the vessel basin area and the turning basin area were all dredged. About 16,000 m3 of material was dredged and transported to the dredge spoil dewatering area. The steel sheet piles were installed and the fixed wharf completed.

At no time during these operations dead or injured fish were observed.

River Crossing

The Clyde River was crossed with a tracked excavator on August 10th, 2024, at the existing Ford crossing location (70° 28’ 26.52’’ N 68° 31’ 20.89’’ O). The excavator Komatsu PC-650 is too heavy and too wide to cross on the existing bridge. The crossing was done at 11:02 a.m., local time under the supervision of the environmental monitor and the presence of the wildlife monitor and the consultant representative. The procedures stated in the *Fisheries Act Authorization* were followed. The crossing report, attached in **Appendix 1**, was transmitted to DFO.

1.4.9 Hydroacoustic Monitoring Report

The fixed wharf perimeter walls made of steel sheet piles (SSP) were installed. A total of 50 pairs of sheet piles were installed with the help of a vibratory hammer mounted on a crane. According to the permitting conditions under the *Fisheries Act Authorization* for this project, underwater sound levels shall not exceed the threshold of 160 dB_{RMS} at 1µPa beyond the marine mammal exclusion zone, which is established to a minimum of 500 m. According to the project Construction Environmental Management Plan (CEMP), underwater pressure should be kept below 30 kPa at 10 meters from the noise generating activity.

The hydroacoustic noise measurement was done simultaneously at 10 m and at 500 m by the environmental monitor using two Oean Sonics (OS) Smart Hydrophone (icListen SC2-ETH-X2). The measurements were transmitted and recorded in real time to two computers installed at the site office. The readings at both sites were displayed on two screens and monitored and monitored directly. The detailed results of the monitoring are presented in **Appendix 2**.

Based on the underwater sound monitoring results, the underwater sound levels monitored during the piling activities stayed below the threshold of 160 dB_{RMS} within the marine mammal exclusion zone of 500 m except during the last day of piling operations where an exceedance of 1 dB_{RMS} was recorded for a duration of less than 1 minute while attempting to drive deeper the toe pin at the sheet pile location 8-9.

The underwater sound pressure stayed lower than of 30 kPa at 10 m from the noise generating activities during the entire sheet pile installation program.

No marine mammal was observed within or nearby the exclusion area (500 m) during the entire duration of the piling works. At no time dead fish was observed beside or nearby the work area.

2. WORK PLAN FOR THE UPCOMING YEAR

The following activities are currently planned for the 2025 construction season:

- Drilling and blasting at the quarry.
- Rock and granular material production.
- Dredging corrections.
- Fixed wharf access and grading completion.
- Southwest breakwater construction completion.
- Uplands grading completion.
- Floating wharf installation.
- Electrical distribution poles, lines and light installation and commissioning.
- Removal of the existing Ford crossing located upstream from the quarry bridge.
- Decommissioning of all temporary work areas.
- Project final completion.

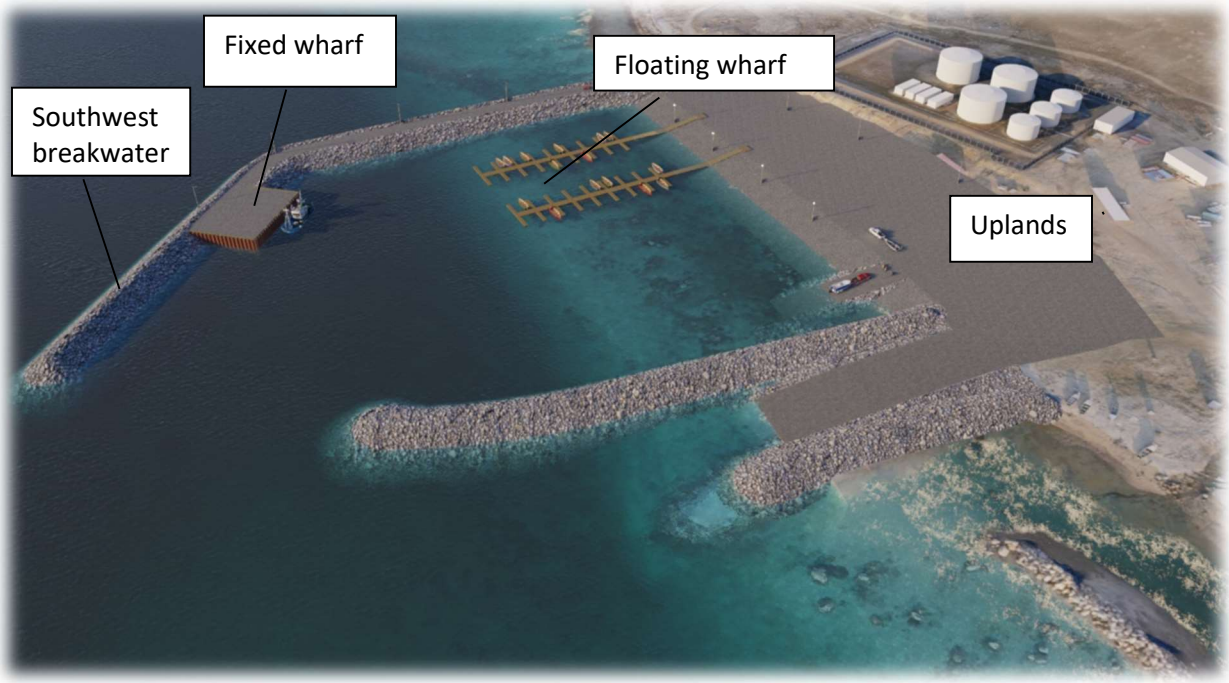


Figure 1: Activities Planned for 2025

3. COMMUNITY RELATIONS

3.1 COMMUNITY CONSULTATIONS

3.1.1 Community Meeting

A community meeting was held in Clyde River on June 5th, 2024. About 60 people attended the meeting at the school gymnasium. The presentation material is included in **Appendix 3.** The following topics were discussed:

- Work achieved in 2023.
- Work planned for the current year (2024).
- General project schedule.
- Safety.
- Employment opportunities and training.

The following comments / questions were made/asked by the community members:

01	Asked if an ATV access road will be built behind the tank farm and the dredge spoil storage area. This was supposed to be done last summer, and it was not done.	Yes, as soon as the snow will be melted in this area, the ATV trail around the dredge storage area will be upgraded.
02	Is the acoustic monitoring will be done during the rock placement?	No, according to permitting, the acoustic monitoring will be done only during the piling activities.

Community Meeting Held at the Beginning of the Construction Season

3.1.2 Follow Up on Community Concerns

ATV access road

The ATV access road was built on the top of the berm of the dredge spoil dewatering area (DSDA). A trail extension was done on the west side of the DSDA to reach out the original trail. A ramp from the existing trail was built on the east side to access to the top of the berm. The construction was completed in mid-July 2024, after the snow melt in this area.

ATV access road built for ATV

3.1.3 End of Construction Season Inspection

Pilitak and the consultant's representative made three separate attempts to coordinate a final walk-through of the site with the Hamlet and HTO, but unfortunately, their schedule was too busy, and they were unable to attend. As a result, a local community representative participated in the final walk-through of both the harbour site and the quarry, ensuring that all parties had a chance to review the areas before departure. The following persons were present at the tour:

- Pilitak: Joël Tremblay.
- EBG (consultant): Moe Nassir.
- Local community hunter/representative: Jayko Enuaraq.

- Site tour took place on October 21, 2024 at around 1:30 p.m. The purpose of this visit was to confirm that, by the end of the season, all parties agreed about the site's safety for the community and to identify any required corrective actions, if needed, before leaving and following items were discussed:

- The southwest breakwater access and spoil area ramp are inaccessible now as large boulders were placed obstructing the path, preventing vehicles or ATVs from passing through.

- The light on the pole at the entrance to the spoil area requires reconnection and restoration to proper working condition. QEC is informed of that and will be working on it.

- The sealift ramp and the small boat ramp are both still open for use for the locals. However, right adjacent to the boat ramp, access to the site has been blocked with boulders to stop people from entering the construction site area.

- Plywood to be installed along the scale area was discussed by the community member so it would be easier to see while removing snow from the area. The issue was addressed. The same day, Pilitak members proceeded to the installation, to the satisfaction of the community members.

- The main access road to the quarry is still open for public use, while only the road leading to the summit of the mountain has been closed off to prevent the risk of falling. A large boulder wall has also been placed as a barrier along the entire area to further reduce the risk of falls. This safety measure was discussed with and approved by the local community representative during the walk-through, and they were satisfied.

- The conclusions from the site walk-through were discussed with the SAO assistant and the hamlet Forman.

3.2 COMPLAINTS

Due to the intensive works around the northeast breakwater and the sealift breakwater, the access to the existing sealift ramp was blocked until mid-August 2024, forcing the local boaters to use the existing small harbour to launch their boats. Once the new sealift ramp was ready, local boaters started to use it. Some of the boaters complained about the ramp being too soft to use their ATV and trailer to launch their boat. The compaction was improved, and some corrections were done later in October 2024.

No other complaint was received during the 2024's construction season.

3.3 TRANSIT THROUGH THE PROJECT AREA

3.3.1 Construction Site

As happened last year, the night guard posted at the site office noticed that people were accessing the southwest breakwater for fishing during evenings. The access to the construction site is restricted with fences and construction signs are posted. However, it was decided that for the benefit of the community, the use of the breakwater at evening for fishing would be tolerated. The local hunters were allowed to use the sealift ramp once it was completed. Some

local people have used the trail located at north of the tank farm to access the area located west of the construction site., as previously described in the section 3.1.2.

3.3.2 Quarry Site

Some local people frequently used the quarry road after the working shift to access the beach area located southwest from the quarry. During the working shift, they were using an ATV trail, as presented in Figure 2. An environmental company did a site assessment of the old town located south of the quarry. They used the quarry roads to access to the old town.

Figure 2: Transit Through the Quarry and Haul Road Area

A log of instances in which community residents occupy or transit through the project areas is present in **Table 6** in **Appendix 4**.

4. ENVIRONMENTAL AND WILDLIFE MONITORING

4.1 ENVIRONMENTAL ISSUES

No environmental issue was experienced during the 2024 working season. As described within the section 1.4.4, some minor diesel/oil spills occurred but rapid actions were taken, and no environmental impact was generated by these events.

4.2 WILDLIFE MONITRING

The wildlife observation summary is presented in **Table 5**.

4.2.1 Ground Species

No ground species were observed within the quarry area and at the construction site during the 2024 construction season.

4.2.2 Marine Mammal

Polar bears were seen at a few occasions nearby the camp site, at the quarry and in town, mainly in August 2024. A wildlife monitor was hired to avoid or mitigate the potential interaction between the wildlife and our operations. The ice on Patricia Bay left at the end of July 2024. Three bowhead whales were observed on September 18th, 2024, by some locals. Some narwhals were seen by local hunters the first time at the end of July 2024, then in August 2024, and at mi-October2024.

4.2.3 Migration Birds

No migration birds were observed in the surrounding of the quarry area and at the construction site.

Table 5: *Wildlife Observation*

Date	Observed species	Time	Location	Activity/observation	Mitigation/other
July 23rd, 2024	Narwhales	During night	Patricia Bay *Coordinates N/A*	A lot of boats with hunters	Not required, no work at night
Aug 6th, 2024	Polar bear (1)	6:00-8:00	Came at the camp site went to the quarry and was chase away	Monitor its movement	Not required
Aug 6th, 2024	Narwhales	15:15	Patricia Bay *Coordinates N/A*	Observation reported by locals	Not required
Aug 9th, 2024	Polar bear (1)	9:45	Work site *70 28 03.19 N* *68 36 13.12 W*	Monitor its movement	Wildlife monitor diverted the bear away from the construction site
Aug 10th, 2024	Polar bear (1)	9:30	Work site *70 28 03.19 N* *68 36 13.12 W*	Monitor its movement	Wildlife monitor diverted the bear away from the construction site
Aug 11th, 2024	Polar bear (1)	At different times	In hamlet *Coordinates N/A*	Monitor its movement	Hamlet chased it away
Aug 12th, 2024	Polar bear (2)	12:25	Nearby quarry bridge *70 28 28.08 N* *68 32 2.12 W*	Monitor their movement	Wildlife monitor diverted the bear away from the construction site
Aug 15th, 2024	Polar bear (1)	20:00	Camp parking *70 29 13.97 N* *68 29 46.95 W*	The bear ran away	--
Aug 16th, 2024	Polar bear (2)	09:45	Quarry boundary *70 27 56.31 N* *68 31 54.73 W*	Monitor their movement	Not required
Aug 20th, 2024	Polar bear (1)	03:00	Beach, nearby SWBW *70 28 04.05 N* *68 36 00.64 W*	Night guard monitored its movement	Not required
Sept 13th, 2024	Polar bear (1)	05:15	Quarry *Coordinates N/A*	Night guard monitored its movement	Not required
Sept 18th, 2024	Bowhead whale (3)	6:00	Patricia Bay *Coordinates N/A*	Observed by local hunters.	Not required
Sept 19th, 2024	Arctic fox (1)	10:30	Beside airport road *Coordinates N/A*	Observed by a truck driver.	Not required
Oct 15th, 2024	Narwhale(s)	Morning	Patricia Bay, south *Coordinates N/A*	Rumours of Narwhale in the Bay	Not required

N/A: When coordinates of wildlife could not be recorded

4.2.4 Mitigation Measures for Wildlife

In order to not attract wildlife, all waste at the camp and at the site were stored into close containers and transported to the local disposal facility frequently. This mitigation measure seems to have been efficient. Some polar bears came close to the camp in August. It is difficult to confirm if they were attracted by the smell of the garbage or from the smell of the food coking. No other animal was seen around the garbage container.

The overburden at the quarry was removed last fall from the area where drilling and blasting will be conducted in 2025 in springtime in order to discourage bird nesting. The same action was taken in Fall 2023 and no nest were observed in Springtime 2024 in the quarry expansion area. From what we observed, this mitigation measure seams to be efficient.

When polar bears were seen, the wildlife monitor was following the animal movement and was discouraging him to come closer to the work area by using noise deterrents. At no time a firearm was used. The noise deterrent is an effective measure to get the polar bear out of a close area. However, the wildlife monitor needs to follow the animal movement to make sure the animal is not coming back into the work area. This method is employed also by the hamlet.

The piling works were done outside of the period where the narwhals are mostly seen in the Patricia Bay. We were told by the locals that they are usually seen in October. The pilling work was performed during a total of 17 days, from June 12th to July 5th, 2024, when sea ice cover was still present in the Patricia Bay and in the Clyde Inlet. The piling activities were performed with vibratory equipment only. A soft start procedure was used for the vibratory equipment at the beginning of each working shift and each time the works resumed after the equipment was stopped for 30 minutes or more. A marine mammal observer was present all time during the piling work. Underwater noise monitoring was done during the steel sheet pile installation. The results of the monitoring are presented in **Appendix 2**. The recorded underwater noise generated during the piling activities were below the threshold values established at 10 meters and 500 meters. One minor sound exceedance of 1 dB_{RMS} was recorded for a very short duration (less than 1 minute) at 500 meters during the installation of the toe pin at the location 9-1 on July 5, 2024. The mitigation measures used during the piling activities appeared to be efficient. The underwater noise stayed below the threshold values (except for one minute as above described) and no sign of marine mammal was observed within the 500 m exclusion area.

5. HERITAGE SITE AND INUIT LAND USE

5.1 HERITAGE SITE

Before the beginning of the project, an archeological assessment was carried out by the consultant at each of the locations to be used for the construction activities. No heritage sites within these areas have been identified. No heritage features were seen or discovered during the works that were performed this year.

5.2 INUIT LAND USE NEARBY THE PROJECT

5.2.1 Construction Site

Due to the intensive works around the northeast and the sealift breakwaters, the access to the existing sealift ramp was blocked until mid-August, forcing the local boaters to use the existing small harbour to launch their boats. Once the new sealift ramp was ready, local boaters started to use the ramp. Some of the boaters complained about the ramp being too soft to use their ATV and trailer to launch their boats. The compaction was improved, and some corrections were done later in October.

The access to the west side of the construction site was kept open through a trail that goes behind the tank farm.

5.2.2 Quarry Area

The area located west of the quarry is used by some locals for hunting and fishing activities. This area is accessible by ATV trails that start from the haul road, on the south side of the quarry bridge. The access to these trails has never become an issue. Extra care was asked to the users of the haul road to make sure that they stay visible and drive slowly. The truck drivers were instructed to yield the passage for local vehicles.

6. SUMMARY OF COMPLIANCE TO TERMS AND CONDITIONS

The **Table 7** included in **Appendix 4** presents the list of the project-specific terms and conditions according to the screening decision and summarizes the actions that were undertaken to comply with each item.

Clyde River Harbour Development
(NIRB) Annual Report, File no.21YN032

APPENDIX 1
Monitoring Tables and Ford Crossing Report

Clyde River Harbour Development
TABLE 3: 2024 Surface Water Quality Monitoring

Date	**Time**	**Station**	**Site/location**	**TSS (g/L)** Max average 50 mg/L Max grab sample 100 mg/L	**pH** Between 6.0 & 9.5	**Presence of HC sheen** No visible	**Note**
June 25	09:30	1	Downstream quarry	20		no	
June 25	09:45	2	River	10		no	
June 26	10:30	3	Downstream Laydown area (at culvert)	10		no	
June 29	07:00	1	Downstream quarry	10		no	
June 29	07:15	2	River	10		no	
June 29	10:00	3	Downstream Laydown area (at culvert)	10		no	
July 07	14:00	3	Downstream Laydown area (at culvert)	10		no	
July 11	11:00	3	Downstream Laydown area (at culvert)	10		no	
July 18	08:45	1	Downstream quarry	10		no	
July 18	09:00	2	River	10		no	
July 25	11:00	1	Downstream quarry	60		no	
July 25	11:15	2	River	10		no	
July 25	10:00	3	Downstream Laydown area (at culvert)	10		no	
July 30	15:00	1	Downstream quarry	10	7,8	no	
July 30	15:10	2	River	10	7,2	no	
July 30	16:00	3	Downstream Laydown area (at culvert)	20	7,8	no	Electrical pole was installed beside culvert
July 31	09:00	1	Downstream quarry	60		no	
July 31	09:15	2	River	10		no	
July 31	10:00	3	Downstream Laydown area (at culvert)	10		no	
Aug 01	13:15	1	Downstream quarry	10	7,8	no	
Aug 01	13:30	2	River	10	7,2	no	

Date	Time	Station	Site/location	TSS (g/L) Max average 50 mg/L Max grab sample 100 mg/L	pH Between 6.0 & 9.5	Presence of HC sheen No visible	Note
Aug 01	15:00	3	Downstream Laydown area (at culvert)	20	7,8	no	
Aug 04	14:00	1	Downstream quarry	10	7,6	no	
Aug 04	14:15	2	River	10	7,3	no	
Aug 04	15:00	3	Downstream Laydown area (at culvert)	20	7,8	no	
Aug 12	16:00	1	Downstream quarry	10	7,6	no	
Aug 12	16:15	2	River	0	7,2	no	
Aug 12	17:00	3	Downstream Laydown area (at culvert)	30	7,1	no	
Aug 20	12:30	1	Downstream quarry	20	7,6	no	
Aug 20	12:45	2	River	10	7,2	no	
Aug 20	17:00	3	Downstream Laydown area (at culvert)	30	7,4	no	
Aug 22	13:10	4	Upstream exit DSA	330	8,4	no	Heavy rain all night
Aug 22	13:15	3	Downstream exit DSA	280	7,3	no	Heavy rain all night
Aug 22	13:20	3	Downstream exit DSA, at culvert	310	7,3	no	Heavy rain all night
Aug 22	14:30	1	Downstream quarry	50	7,7	no	Heavy rain all night
Aug 22	14:45	2	River	10	8,2	no	Heavy rain all night
Aug 23	07:30	3	Upstream exit DSA	50	8	no	
Aug 23	07:30	3	Downstream exit DSA, at culvert	40	7,5	no	
Aug 25	10:45	4	Upstream exit DSA	120	7,8	no	Raining in morning
Aug 25	10:45	3	Downstream exit DSA, at culvert	110	7,5	no	Raining in morning
Aug 26	15:30	1	Downstream quarry	20	7,6	no	
Aug 27	15:45	2	River	10	7,3	no	
Aug 29	10:45	4	Upstream exit DSA	70	7,8	no	Raining in morning
Aug 29	10:45	3	Downstream exit DSA, at culvert	60	7,3	no	Raining in morning
Aug 29	06:30	1	Downstream quarry	50	7,4	no	Raining during night
Aug 29	06:15	2	River	10	8,3	no	Raining during night
Sept 7	10:45	3	Downstream exit DSA, at culvert	210	7,5	no	Sunny
Sept 7	06:30	1	Downstream quarry	10	7,6	no	Sunny
Sept 7	06:15	2	River	0	8,3	no	Sunny
Sept 10	10:45	4	Upstream exit DSA, at culvert	140	7,5	no	Sunny
Sept 10	10:45	3	Downstream exit DSA, at culvert	40	7,4	no	Sunny
Sept 10	06:30	1	Downstream quarry	0	7,2	no	Sunny
Sept 10	06:15	2	River	0	7,5	no	Sunny
Sept 16	10:45	4	Upstream exit DSA	70	6	no	Sunny
Sept 16	10:45	3	Downstream exit DSA, at culvert	20	6,2	no	Sunny
Sept 16	06:30	1	Downstream quarry	0	7,1	no	Sunny

Date	Time	Station	Site/location	TSS (g/L) Max average 50 mg/L Max grab sample 100 mg/L	pH Between 6.0 & 9.5	Presence of HC sheen No visible	Note
Sept 16	06:15	2	River	0	7,2	no	Sunny
Sept 26	00:00	3	Downstream exit DSA, at culvert	30	6,1	no	Cloudy
Sept 26	08:30	4	Upstream exit DSA	110	7,3	no	Cloudy
Sept 26	08:30	3	Downstream exit DSA, at culvert	30	6,9	no	Cloudy
Sept 28	07:00	4	Upstream exit DSA	140	7,2	no	Raining during night
Sept 28	07:10	3	Downstream exit DSA, at culvert	70	6,8	no	Raining during night
Sept 28	07:45	1	Downstream quarry	20	7	no	Raining during night
Sept 28	07:30	2	River	0	7,2	no	Raining during night
Oct 10	09:00	4	Upstream exit DSA	110	7,1	no	low run-off
Oct 10	09:05	3	Downstream exit DSA, at culvert	70	6,7	no	low run-off
Oct 10	09:30	1	Downstream quarry	--	--	--	Dry, no run-off
Oct 10	09:35	2	River	0	7,3	no	Cloudy

Clyde River Harbour Development
TABLE 4: 2024 Sea Water Turbidity Monitoring

Date	Time	Site/location	Wind direction and speed at the time of measurement		Wave size	Turbidity top (1 m below surface)	Turbidity mid-depth	Turbidity bottom (1 m above seafloor)	Turbidity MEAN	24 hrs Mean Turbidity Variation	BG Turbidity variation from cumulative mean BG Turbidity	Note
			Direction	Speed (km/hr)	N: < 0.1 m S: 0.1 - 0.25 m M: 0.26 - 0.5 m L: > 0.5 m					Short Term Criteria Max increase in 24 hrs: 8 NTU	Long term Criteria Max increase of BG: 2 NTU Mean background: 0.43 NTU	
						(NTU)	(NTU)	(NTU)	(NTU)	(NTU)	(NTU)	
July 30	AM	Inside Bay (boat)	S	13	N		0,69		0,69	0,38		Ice in the bay
July 30	AM	Background Outside Bay (south of SWBW)	S	13	S		0,32		0,32		-0,11	
July 31	AM	Inside Bay (boat)	S	15	N		1,07		1,07	0,75		Ice in the bay
July 31	AM	Background Outside Bay (south of SWBW)	S	15	N		0,49		0,49		0,06	
August 1	AM	Out SWBW	NW	12	N	0,35	0,47	0,55	0,46	-0,04		Ice in the bay
August 1	AM	Out NEBW	NW	12	N	0,75	0,37	0,65	0,59	0,10		
August 1	AM	Background SWBW	NW	12	N	0,36	0,32	0,36	0,35		-0,09	
August 5	AM	Out SWBW	NW	23	N	0,42	0,38	0,30	0,37	0,02		No ice
August 5	AM	Out NEBW	NW	23	N	0,39	0,27	0,27	0,31	-0,04		
August 5	AM	Background SWBW	NW	23	N	0,30	0,28	0,29	0,29		-0,14	
August 7	AM	Out Sea lift wharf	NW	28	N	0,66	0,68	0,69	0,67	0,38		No ice
August 7	AM	Out NEBW	NW	28	N	0,45	0,47	0,34	0,42	0,13		
August 7	AM	Background SWBW	NW	28	N	0,21	0,32	0,32	0,28		-0,15	
August 9	AM	Out SWBW	NW	49	S	0,56	1,26	1,16	0,99	0,71		nd 50 km/h, silt curtains limitin
August 9	AM	Out NEBW	NW	49	S	0,57	0,54	0,72	0,61	0,32		
August 9	AM	Background SWBW	NW	49	S	0,40	0,51	0,53	0,48		0,05	
August 11	16h30	Out SWBW	NW	23	N	0,33	0,29	0,30	0,30	-0,18		Dredging road 1
August 11	16h30	Out NEBW	NW	23	N	0,33	0,58	2,36	1,09	0,61		
August 11	16h30	Background SWBW	NW	23	N	0,45	0,61		0,53		0,10	
August 12	17h15	Out SWBW	S	10	S	0,27	0,25	0,22	0,25	-0,29		Dredging road 1
August 12	17h15	Out NEBW	S	10	S	0,40	0,22	0,57	0,39	-0,14		
August 12	17h15	Background SWBW	S	10	S	0,26	0,24	0,22	0,24		-0,19	
August 13	17h00	Out SWBW	SE	10	N	1,26	0,41	0,31	0,66	0,42		Dredging road 1
August 13	17h00	Out NEBW	SE	10	N	1,17	2,47	2,99	2,21	1,97		

Date	Time	Site/location	Wind direction and speed at the time of measurement		Wave size	Turbidity top (1 m below surface)	Turbidity mid-depth	Turbidity bottom (1 m above seafloor)	Turbidity MEAN	24 hrs Mean Turbidity Variation	BG Turbidity variation from cumulative mean BG Turbidity	Note
			Direction	Speed (km/hr)	N: < 0.1 m S: 0.1 - 0.25 m M: 0.26 - 0.5 m L: > 0.5 m					Short Term Criteria Max increase in 24 hrs: 8 NTU	Long term Criteria Max increase of BG: 2 NTU Mean background: 0.43 NTU	
August 20	07:00	Out SWBW	W	19	N	0,39	0,42	0,35	0,39	0,15		Dredging road 3, building road 5
August 20	07:15	Out NEBW	W	19	N	0,41	0,39	0,57	0,46	0,22		
August 20	07:30	Background SWBW	W	19	N	0,28	0,32	0,37	0,32		-0,11	
August 21	07:30	Out SWBW	SE	calm	N	0,45	0,79	1,41	0,88	0,56		Dredging road 3, building road 5
August 21	07:15	Out NEBW	SE	calm	N	0,42	0,60	0,92	0,65	0,32		
August 21	07:30	Background SWBW	SE	calm	N	0,37	0,35	0,36	0,36		-0,07	
August 23	07:30	Out SWBW	--	calm	N	1,20	1,40	4,20	2,27	1,91		Dredging road 3, building road 5
August 23	07:35	Out NEBW	--	calm	N	1,71	1,45	5,12	2,76	2,40		
August 23	07:15	Background SWBW	--	calm	S	1,46	0,34	0,68	0,83		0,40	
August 24	07:45	Out SWBW	--	calm	N	1,40	1,60	5,20	2,73	1,91		Dredging road 3, building road 5
August 24	07:40	Out NEBW	--	calm	N	1,81	1,53	5,81	3,05	2,22		
August 24	07:30	Background SWBW	--	calm	N	0,58	0,42	1,21	0,74		0,31	
August 25	14:45	Out SWBW	NW	14	N	0,14	0,12	0,30	0,19	-0,55		Dredging road 3, building road 5
August 25	15:00	Out NEBW	NW	14	N	0,18	0,15	0,90	0,41	-0,33		
August 25	14:30	Background SWBW	NW	14	N	0,14	0,12	0,30	0,19		-0,24	
August 29	07:30	Out SWBW	NW	18	N	0,25	0,44	1,23	0,64	0,45		Dredging road 3, building road 5
August 29	07:45	Out NEBW	NW	18	N	0,39	0,39	1,57	0,78	0,60		
August 29	07:20	Background SWBW	NW	18	N	0,30	0,35	1,02	0,56		0,13	
September 4	16h30	Out SWBW	SW	14	N	0,44	0,43	0,28	0,38	-0,18		Dredging road 5, building road 4
September 4	16h30	Out NEBW	SW	14	N	2,30	0,80	0,31	1,14	0,58		
September 4	16h30	Background SWBW	SW	14	N	0,38	0,32	,85	0,35		-0,08	
September 6	16h00	Out SWBW	SW	13	N	0,34	0,25	0,39	0,32	-0,03		Dredging road 5, building road 4
September 6	16h00	Out NEBW	SW	13	N	0,45	0,40	0,35	0,40	0,05		
September 6	16h00	Background SWBW	SW	13	N	0,23	0,21	0,19	0,21		-0,22	
September 8	15h30	Out SWBW	SE	18	S	0,63	0,69	0,67	0,66	0,45		Dredging road 5, building road 4
September 8	15h30	Out NEBW	SE	18	S	0,73	0,97	0,75	0,82	0,61		
September 8	15h30	Background SWBW	SE	18	S	0,40	0,41	0,31	0,37		-0,06	
September 10	15h30	Out SWBW	SE	7	N	0,37	0,28	0,23	0,30	-0,08		Dredging road 5, building road 4
September 10	15h30	Out NEBW	SE	7	N	0,51	0,26	0,31	0,36	-0,02		
September 10	15h30	Background SWBW	SE	7	N	0,26	0,25	0,24	0,25		-0,18	
September 19	16h00	Out SWBW	SW	8	N	1,41	1,38	4,12	2,31	2,06		Dredging road 5, building road 4
September 19	16h00	Out NEBW	SW	8	N	0,57	0,75	1,04	0,79	0,54		
September 19	16h00	Background SWBW	SW	8	N	0,30	0,35	0,41	0,35		-0,08	
September 20	16h00	Out SWBW	SE	21	S	2,15	1,79	2,21	2,05	1,70		Dredging road 5, building road 4
September 20	16h00	Out NEBW	SE	21	S	1,11	2,85	2,44	2,13	1,78		
September 20	16h00	Background SWBW	SE	21	M	0,54	0,42	0,22	0,39		-0,04	

Date	Time	Site/location	Wind direction and speed at the time of measurement		Wave size	Turbidity top (1 m below surface)	Turbidity mid-depth	Turbidity bottom (1 m above seafloor)	Turbidity MEAN	24 hrs Mean Turbidity Variation	BG Turbidity variation from cumulative mean BG Turbidity	Note
			Direction	Speed (km/hr)	N: < 0.1 m S: 0.1 - 0.25 m M: 0.26 - 0.5 m L: > 0.5 m					Short Term Criteria Max increase in 24 hrs: 8 NTU	Long term Criteria Max increase of BG: 2 NTU Mean background: 0.43 NTU	
September 22	16h00	Out SWBW	SW	calm	S	2,30	0,98	0,46	1,25	0,85		Dredging road 5, building road 4
September 22	16h00	Out NEBW	SW	calm	S	8,58	3,27	0,53	4,12	3,73		
September 22	16h00	Background SWBW	SW	calm	S	1,53	1,88	0,91	1,44		1,01	
September 24	14h30	Out SWBW	W	calm	N	2,31	1,41	0,39	1,37	-0,07		Dredging road 5, building road 4
September 24	14h30	Out NEBW	W	calm	N	0,94	0,67	0,34	0,65	-0,79		
September 24	14h30	Background SWBW	W	calm	N	0,38	0,33	0,34	0,35		-0,08	
September 26	14h30	Out SWBW	W	calm	N	2,31	1,41	0,39	1,37	1,02		Dredging road 5, building road 4
September 26	14h30	Out NEBW	W	calm	N	0,40	0,18	0,20	0,26	-0,09		
September 26	14h30	Background SWBW	W	calm	N	0,23	0,19	0,24	0,22		-0,21	
September 28	15h30	Out SWBW	SE	15	N	0,22	0,20	0,19	0,20	-0,02		Dredging road 5, building road 4
September 28	15h40	Out NEBW	SE	15	N	0,21	0,19	0,61	0,34	0,12		
September 28		Background SWBW	SE	15	N	--	--	--	--		--	
October 4	13h45	Out SWBW	SW	21	N	0,15	0,12	0,16	0,14	-0,08		Dredging road 5, building road 4
October 4	14h00	Out NEBW	SW	21	N	0,35	0,26	0,14	0,25	0,03		
October 4		Background SWBW	--	--	--	--	--	--	--		--	
October 8	15h30	Out SWBW	SE	14	N	0,29	0,21	0,24	0,25	0,03		Dredging road 4,
October 8	15h30	Out NEBW	SE	14	N	0,84	0,21	0,23	0,43	0,21		
October 8		Background SWBW	--	--	--	--	--	--	--		--	
October 15	15h00	Out SWBW	W	25	S	0,20	0,18	0,53	0,30	0,08		
October 15	15h10	Out NEBW	W	25	S	0,19	0,24	0,33	0,25	0,04		
October 15		Background SWBW	--	--	--	--	--	--	--		--	
October 20	09:00	Out SWBW	E	14	N	0,18	0,22	0,45	0,28	0,07		Before removing floating silt curtain
October 20	09:15	Out NEBW	E	14	N	0,17	0,23	0,29	0,23	0,01		
October 20		Background SWBW	--	--	--	--	--	--	--		--	
October 21	08:15	Inside breakwaters	E	22	N	0,38	0,45	0,77	0,53	0,25		24 hours after removal of the floating silt curtain
October 21	08:30	Background outside breakwaters	E	22	S	0,47	0,48	0,89	0,61		0,18	

PILITAK ENTERPRISES LTD

Submittals

No. :	91
Rev. :	00
Date :	August 13, 2024

Project : CLYDE RIVER HARBOUR DEVELOPMENT
DFO ETO-025-222050
Project No. : 2022-034

Subject : Ford crossing report Aug 10, 2024

Submitted to : CBCL Limited
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Halifax, NS, B3J 3K5

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Speciality :	Environment	**Submitted for :**	review
Specification section :		**Revision required by :**	August 23, 2024
Drawing reference :		**Color choice required :**	
Submited as :	review	**Total Page incl. cover :**	9

Subcontractor or supplier :

Manufacturer :

Description : Ford crossing report Aug 10, 2024

Supplier No :

Comments :

Revised and submitted by :

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Review by the consultant or the client :

August 13, 2024

Clyde River Small Craft Harbour Development, FAA ref: 20-HCAA-00154

Clyde River Fording report, August 10, 2024

The Clyde River was crossed with a tracked excavator on August 10, 2024, at the existing Ford crossing location (70° 28’ 26.52’’ N 68° 31’ 20.89’’ O), as presented in **Figure 1**. The excavator Komatsu 650 is too heavy and too wide to cross on the existing bridge. The crossing was done at 11:02 AM local time under the supervision of the environmental monitor and the presence of the wildlife monitor and the consultant representative. The sequence of event is summarized here below:

- Aug 9: Fish monitoring at the Ford crossing location, at 145 m upstream and at 250 m downstream by the wildlife monitor from 11 AM to 6 PM. No fish was observed. The monitoring was witnessed by the environmental monitor, the site superintendent and the consultant, refer to attached signed sheet.
- Aug 10: Fish monitoring at the Ford crossing, upstream and downstream, by the wildlife monitor before crossing the river. No fish was observed. The monitoring was witnessed by the environmental monitor, the site superintendent and the consultant, refer to attached signed sheet.
- Aug 10: The excavator, escorted by the wildlife monitor on an ATV, crossed the river at 11:02. The crossing took one minute, refer to the attached pictures.
- Aug 10: Fish monitoring at the Ford crossing after the excavator crossing. No fish was observed for the rest of the day.


N
Existing Bridge
Downstream monitoring location
Monitoring at Ford crossing
Ford crossing
Upstream monitoring location

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River Crossing Monitoring Report

Date (day/Month/Year)	09/08/2024	Equipment Inspector	[signature]	Clyde River Harbour Development
Environmental	[signature]	Superintendant	[signature] John	2022-034
Wildlife Monitor	[signature]	Client Representative	[signature]	[signature] Superintendant

Time	Common Species	Activity/Observation	Mitigation	Comments
11:00 AM				NO Fish observed
12:00 PM				NO Fish observed
13:00 PM				NO Fish observed
14:00 PM				NO Fish observed
15:00 PM				NO Fish observed
16:00 PM				No Fish observed
17:00 PM				NO fish observed
18:00 PM				No Fish observed

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River Crossing Monitoring Report

Date (day/Month/Year)	10/08/2024	Equipment Inspector		Clyde River Harbour Development
Environmental		Superintendant		2022-034
Wildlife Monitor		Client Representative		super intendent

Time	Common Species	Activity/Observation	Mitigation	Comments
11:00 AM				No Fish observed
12:00 PM				No Fish observed
13:00 PM				No Fish observed
14:00 PM				No Fish observed
15:00 PM				No Fish observed
16:00 PM				No Fish observed
17:00 PM				No Fish observed
18:00 PM				No Fish observed


August 10, 2024 11:02 Beginning of the Ford crossing from the south bank


August 10, 2024 11:02 crossing


August 10, 2024 11:03 Ford crossing completed to the north bank


August 12, 2024 Ford crossing conditions

Clyde River Harbour Development
(NIRB) Annual Report, File no.21YN032

APPENDIX 2
Hydroacoustic Monitoring Report

PILITAK ENTERPRISES LTD
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Submittals

No. : 96
Rev. : 01
Date : January 14, 2025

Project :	**CLYDE RIVER HARBOUR DEVELOPMENT**	**Project No. :**	2022-034
	DFO ETO-025-222050		
Subject :	**2024 Underwater sound monitoring report, rev-01**		

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Speciality :	Environment	**Submitted for :**	Review
Specification section :	01 35 43	**Revision required by :**	**January 24, 2025**
Drawing reference :		**Color choice required :**	
Submited as :	review	**Total Page incl. cover :**	**32**

Subcontractor or supplier :

Manufacturer :

Description : 2024 Underwater sound monitoring report, rev-01

Supplier No :

Comments :

Revised and submitted by :

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Review by the consultant or the client :

PILITAK ENTERPRISES LTD

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UNDERWATER SOUND MONITORING REPORT

Clyde River Harbour Development

DFO ET025-222050/A

Submitted to:

Public Services and Procurement Canada

Rev-01, January 2025

TABLE OF CONTENTS

PAGE

1. MONITORING GENERAL INFORMATION

- The steel sheet pilling work was performed during a total of 17 days, from June 12th to July 5th, 2024. The steel sheet piles installation is part of the fixed wharf infrastructure of the southwest breakwater (SWBW) for the small craft harbour project in Clyde River. The tie back wall portion of the fixed wharf was completed in 2023.

- All steel sheet piles, guiding piles and toe pins were installed with a vibrodriver *PTC 32HFC* (high frequency and variable moment) mounted on a crawler crane *Link-Belt 138 Hylab.* At no time the impact hammer was used.

- Sea ice cover on the Patricia Bay and on the Clyde Inlet was present during the entire piling activities, refer to Photo 6 and Photo 7. The underwater sound monitoring hydrophones were installed in holes drilled through the ice. The ice thickness at the beginning of the piling activities was 1.5 m thick and less than 1 m at the end.

- Piling work included the installation of 50 pairs of steel sheet piles and the temporary steel guiding tubes required for the alignment of each wall section. The sheet piling work started with the East peripheral wall section, followed by the North and the West sections. The three peripheral wall sections have a total length of 72-meters. Each steel sheet piles were 15 m long and were installed to reach out the depth of -11 meters (CD), which represents about 6.5 m below the seafloor.

- A total of 2 toe pins, consisting of 600mm diameter steel pipes, were installed with the vibrodriver at locations where the sheet piles could not reach the design depth. The first one was installed on the east wall on July 4th, 2024, at the location of sheet pile no. 9-1, and reached a depth of -12 m (CD). The second toe pin was installed on the north wall, on July 5, at the sheet pile location 36-1 and reached the depth of -15 m (CD).

- Underwater sound monitoring was also carried on June 28th, 2024, during the blasting of one oversize boulder located slightly below the seafloor. The boulder was blocking the installation of two sheet piles on the west wall of the fixed wharf. The boulder size was estimated to be around 3.5 m in diameter.

- During the entire piling activities, the underwater sound monitoring was conducted in order to ensure that underwater sound pressure was not exceeding 30 kPa (208 DB_{RMS} re: 1µPa) at 10 m from the piling site and the underwater noise was not exceeding 160 DB_{RMS} re: 1µPa within the marine mammal exclusion zone of 500 meters.

- The sound monitoring work was under the responsibility of Mr. Jean-Marc Ballard, the environmental monitor assigned to this project. A marine mammal observer (Mr. Jomie Apak) was also present at all times during the piling work.

- The underwater sound monitoring was done with two Ocean Sonics Iclisten RC9 hydrophone systems, using the 'Lucy' software version 4.4.0. The probes calibration was done in February 2023 and the calibration is valid for 2 years. These two systems were linked to computers installed inside the site office through a Wi-Fi antenna relay. That setup allows to follow simultaneously the measurements in real-time of both monitoring station from the office.

- The underwater sound measurement was conducted at the following locations (refer to Map 1 and Photo 1).

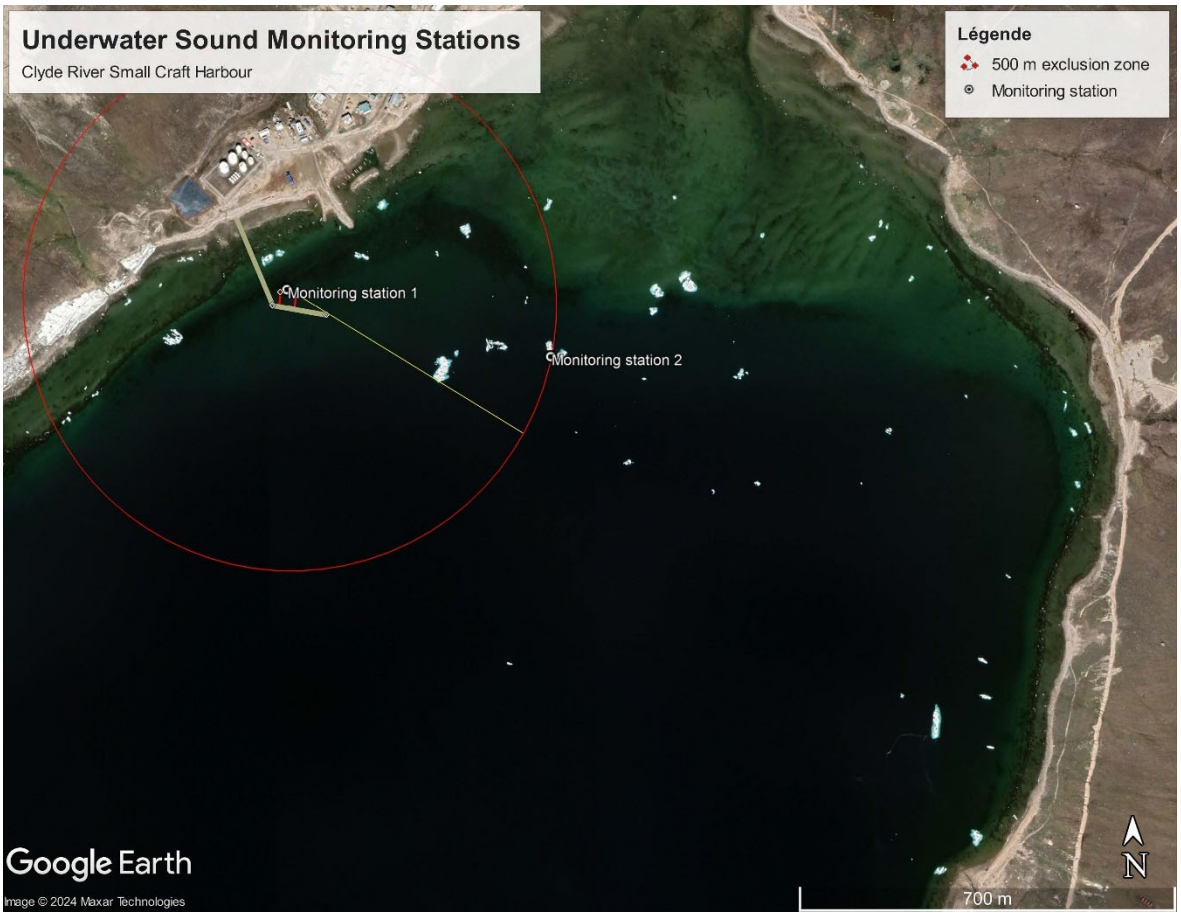
    1. At 10 m distance from the piling work, in front of the fixed wharf, from the ice surface. The hydrophone was placed at mid depth in the water column or at 3.5 m below the water surface.

    2. At 500 m northeast of the piling work, from the ice surface and at a depth of 7.5 m below the water surface. This location was selected to be an area where the underwater noise generated by the piling activities would not be attenuated by the partially developed breakwaters. Refer to ***Map 1*** below.

    3. The sound monitoring activities performed during the piling works are presented daily as a composite of the period of recordings made during that day (meaning that the time sequence presented on the X axis of the graphs might not represent the exact real time of the recordings). The inactive periods are not presented on the graphics as the results are showed as a continuous recorded driving activity.

- No sign of marine mammal presence was observed within the 500 m exclusion zone, 20 minutes before, and during the entire duration of the sheet pile installation.

1.1 MAP 1: LOCATION OF THE UNDERWATER SOUND MEASUREMENTS

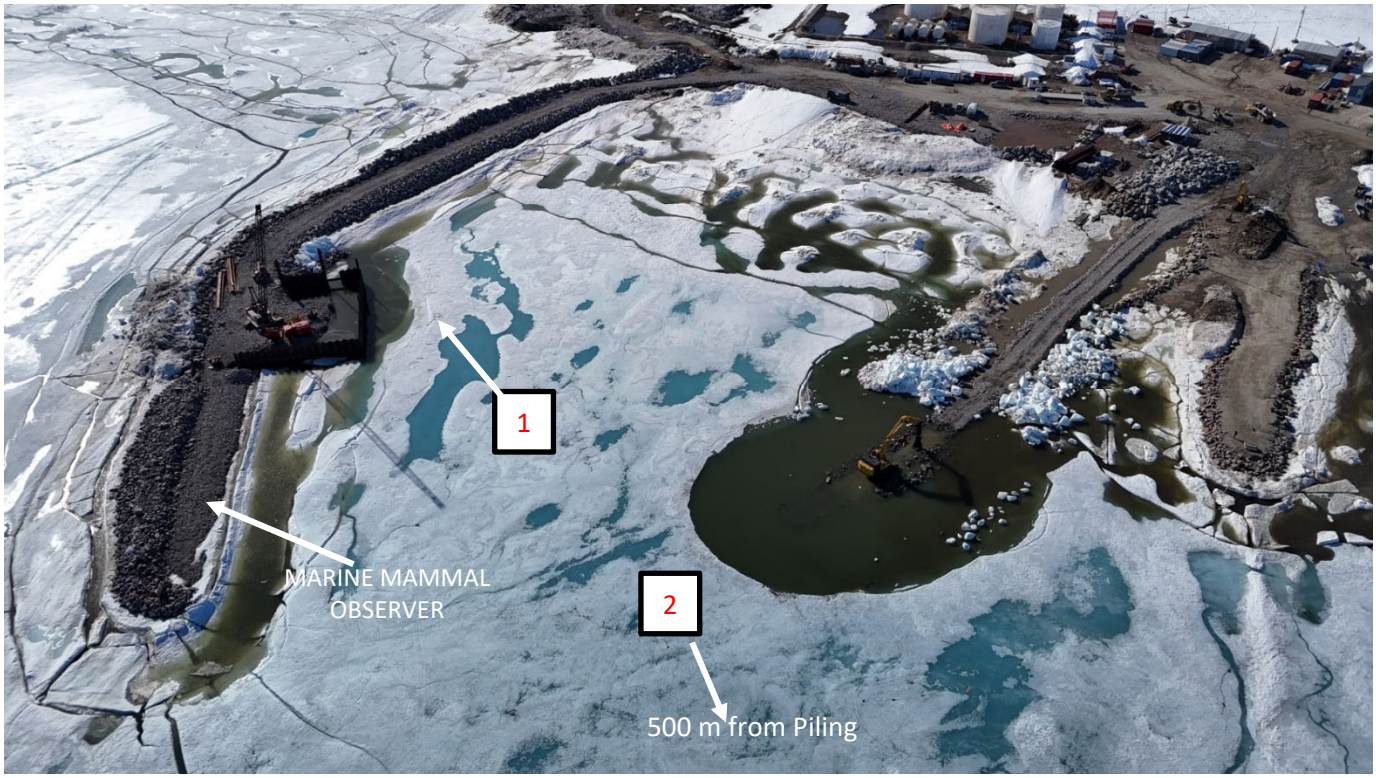


Monitoring Sation 01
Location: 10 m from the piling activities
Coordinates: 70° 27’ 59.92’’ N 68° 35’ 45.82’’W

Monitoring Station 02
Location: 500 m from the piling activities
Coordinates: 70° 27’ 55.63’’ N 68° 34’ 59.94’’W

Photo 1

Locations of Monitoring Station 01 and Marine Mammal Observer.



1.2 DEPLOYMENT OF THE UNDERWATER SOUND MONITORING EQUIPMENT

Photo 2

The two hydrophones were installed in a hole drilled through the ice at there respective location of 10 m and 500 m, and both at mid water column depth.

Photo 3

Monitoring Station 01 Located at 10 m from the Piling Site

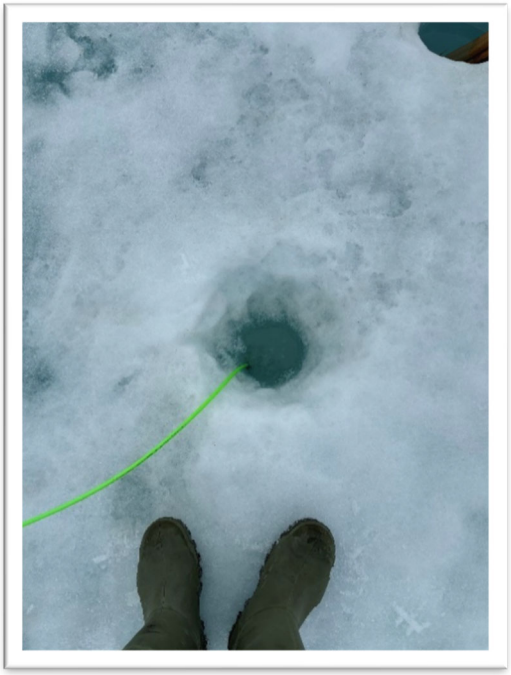


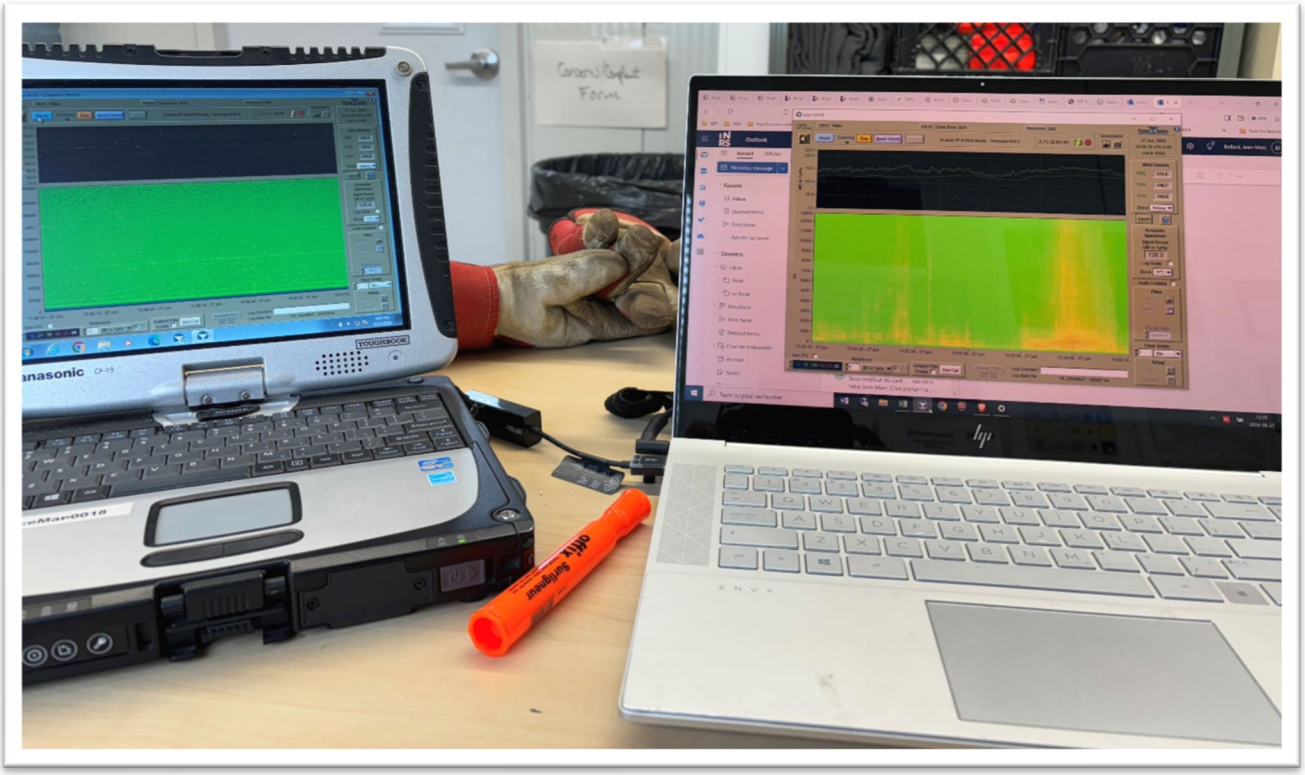
Photo 4

Hole through the ice to install the hydrophones

1.3 REALTIME MEASUREMENT WITH FIELD COMPUTER

Photo 5

Two computers used at the site office to monitor in real-time the underwater sound generated during the piling activities



1.4 STEEL SHEET PILE INSTALLATION

Photo 6

Steel sheet pile installation with the vibrodriver on the east wall

Photo 7

Sea ice cover in Patricia Bay and in the Clyde Inlet

Photo 8

Steel sheet pile installation with the vibrodriver on the west wall

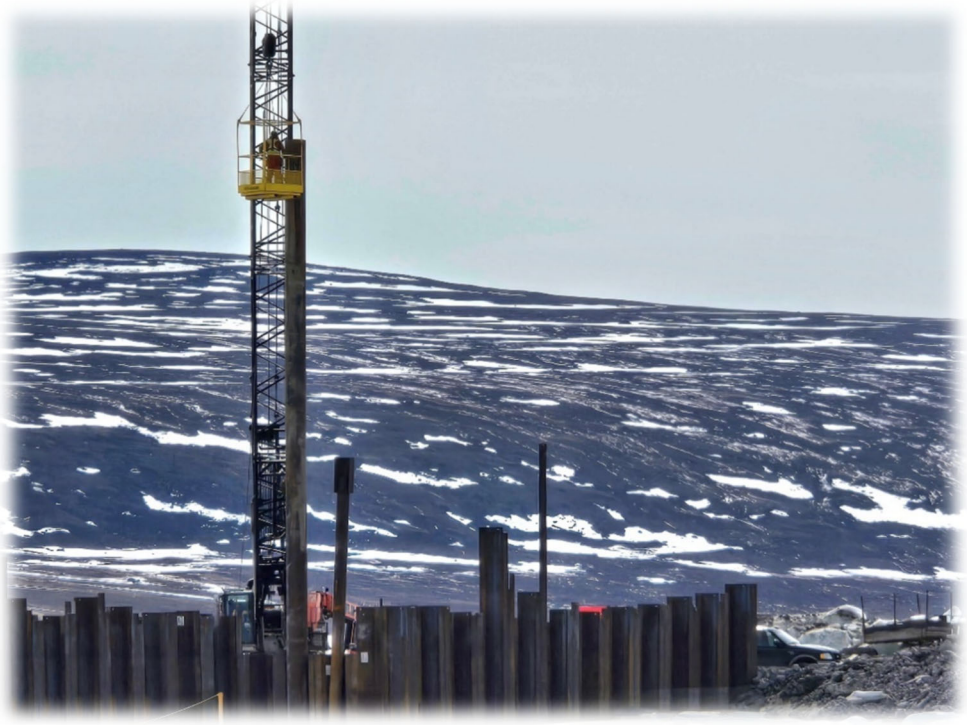
1.5 TOE PIN INSTALLATION

Photo 9

Toe pin installation on the north wall

Photo 10

Toe pin installation on the north wall



1.6 BOULDER BLASTING

Photo 11

Drilling for Boulder Blasting

Photo 12

Preparation for boulder blasting

2. MONITORING RESULTS

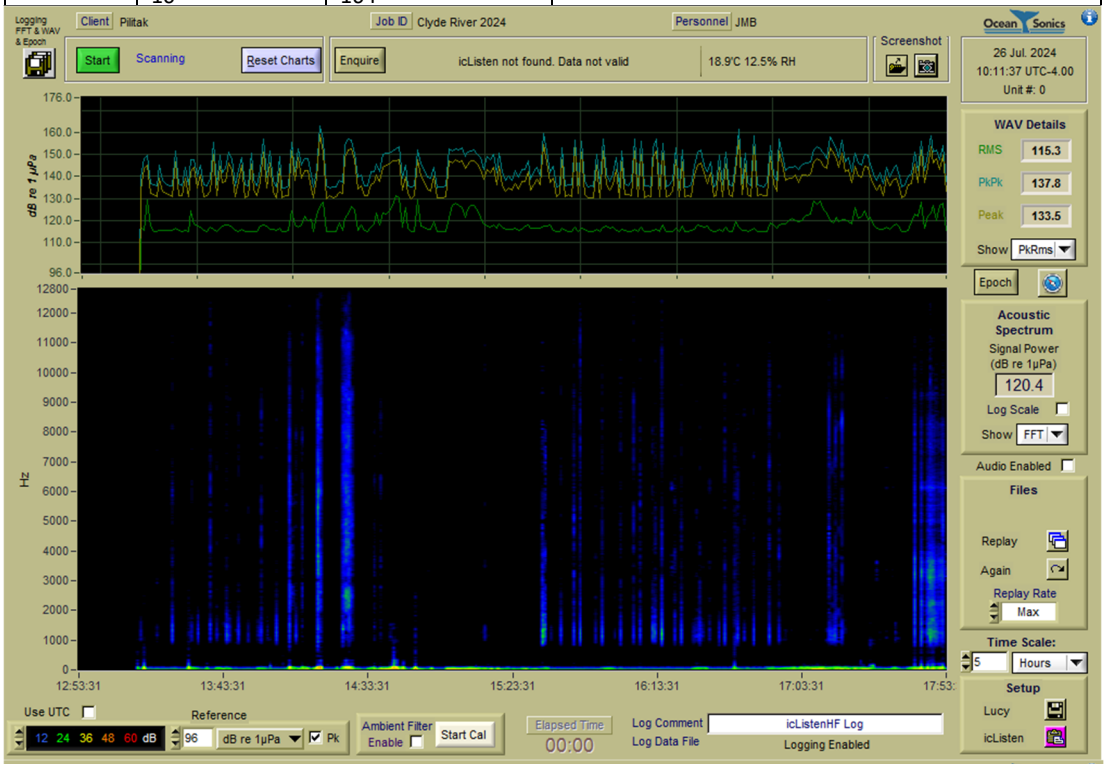
The monitoring measurements are summarized within the following Table 1. The detail results are presented within the next sections.

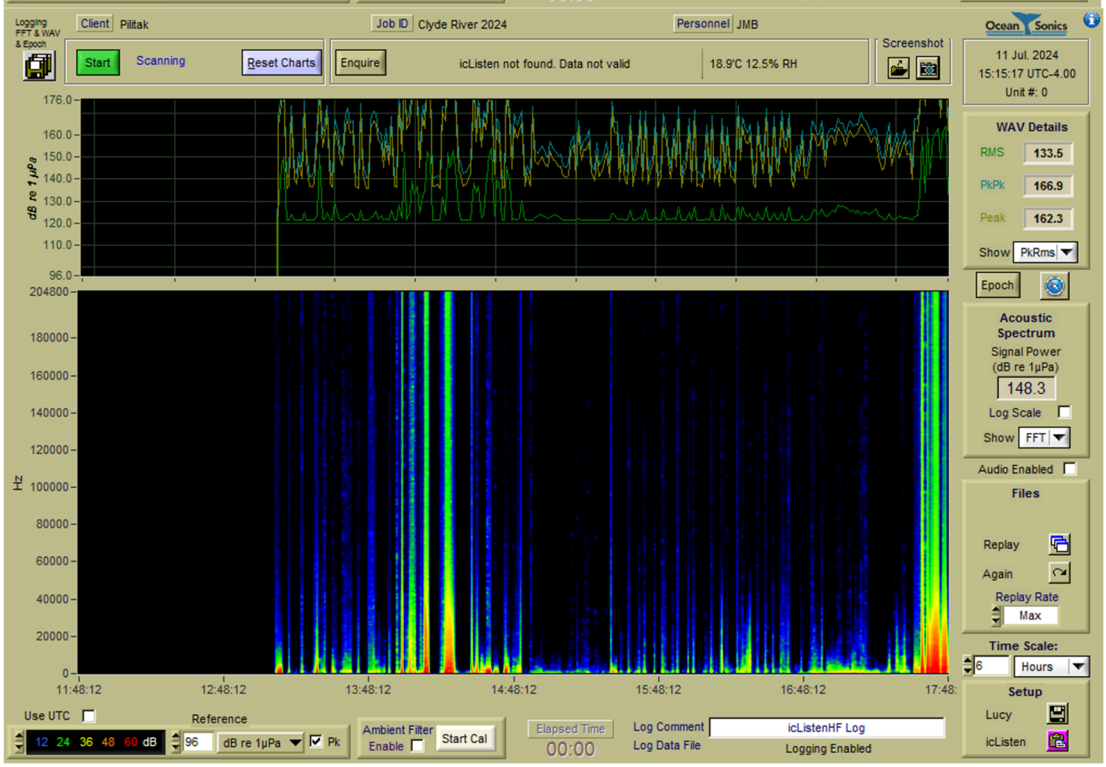
TABLE 1: *Monitoring Results*

Day of piling	Date	Item Pile ID number	Hydrophone 01 distance: 500m Depth: 7.6m (Max dB_{RMS})	Hydrophone 02 Distance: 10m Depth: 3m (Max dB_{RMS})	Remarks
1	june 12	guide tubes 1, 2, sheet 5	131	164	
2	june 13	Sheets 5,6,7,8,9,10,11,4	140	174	
3	june 14	Sheets 4,3,2,1,12	145	170	
4	june 15	Sheets 13,14,15	150	162	10m Hydrophone recording stopped working after the start. Backfill pad with corestone to have more reach for end of the wall
5	june 16	Sheets 16, 17, guide tubes	147	167	Change the location of the 2 guide tubes to North wall
	june 17				No piling for the day
6	june 18	18,29,19,20,21,22,23	144	176	Signal cut on hydrophone 500m with need to frequent restart, recording is compressed with false time axis
7	june 19	24,25,26,27,28	143	177	
8	june 20	28,27, guide tube 2	143	177	Change tubing guide 2 to new North wall
9	june 21	30,34,33,32,29	142	176	
10	june 22	36,37,38, guide tubes 1, 2	137	173	ge tubing guide 1 and 2 to new East wall
11	june 23	39, 40, 41. Big roc skip 43,44	133	171	First sheet 39 on new Est wall
12	june 24	42,43,41,42	133	170	
	june 24 to 27	Preparation for big boulder rock blast			
13	june 28	46,47,48,49,50	140	158	
14	june 29	43,42,41	141	170	Redriving the remaining piles 42, 43
15	june 30	43,42	140	171	Redriving the remaining piles 42, 43
16	July 4	Toe-pin 9	157	no 10m recording	
17	July 5	Toe-pin 36, try on 42, 43	161	no 10m recording	
		Mean	142.8	170.4	
		Maximun	161.0	177.0	

2.1 DAY 1, SOUND SEVEL RECORDINGS JUNE 12TH, 2024

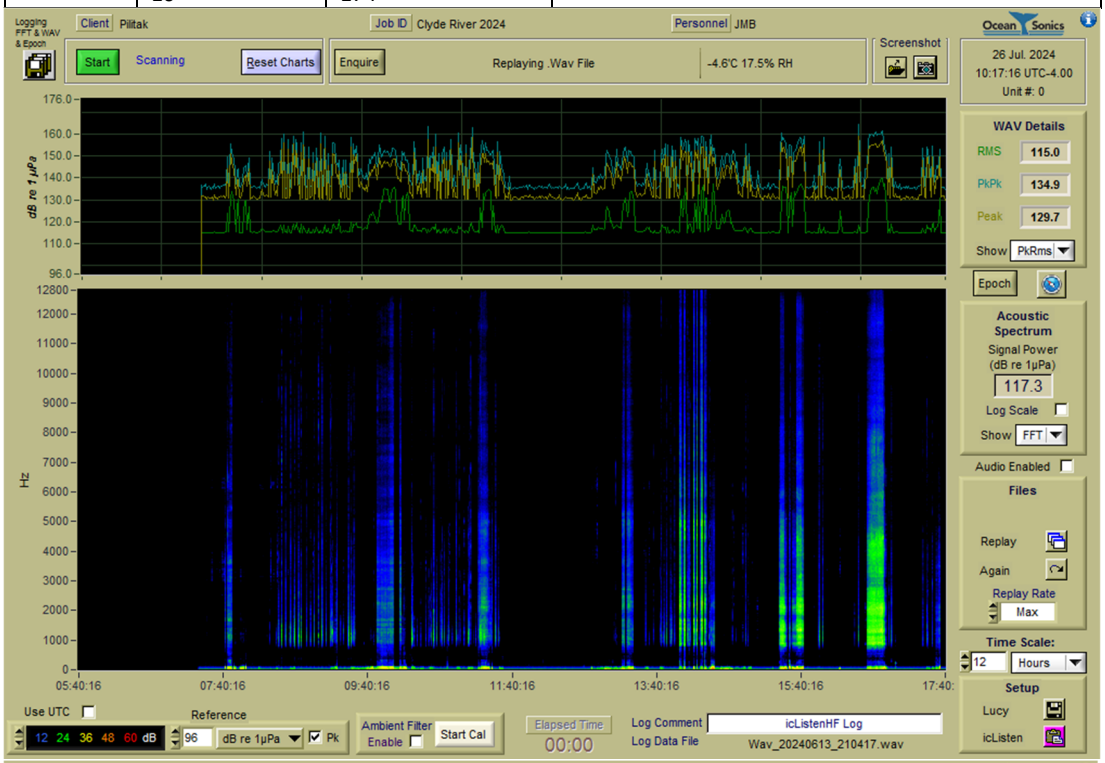
Date	Distance (m)	Maximum dB(rms)	Sheet
June 12	500	131	Guide tubes 1,2 and sheet 5.
	10	164	

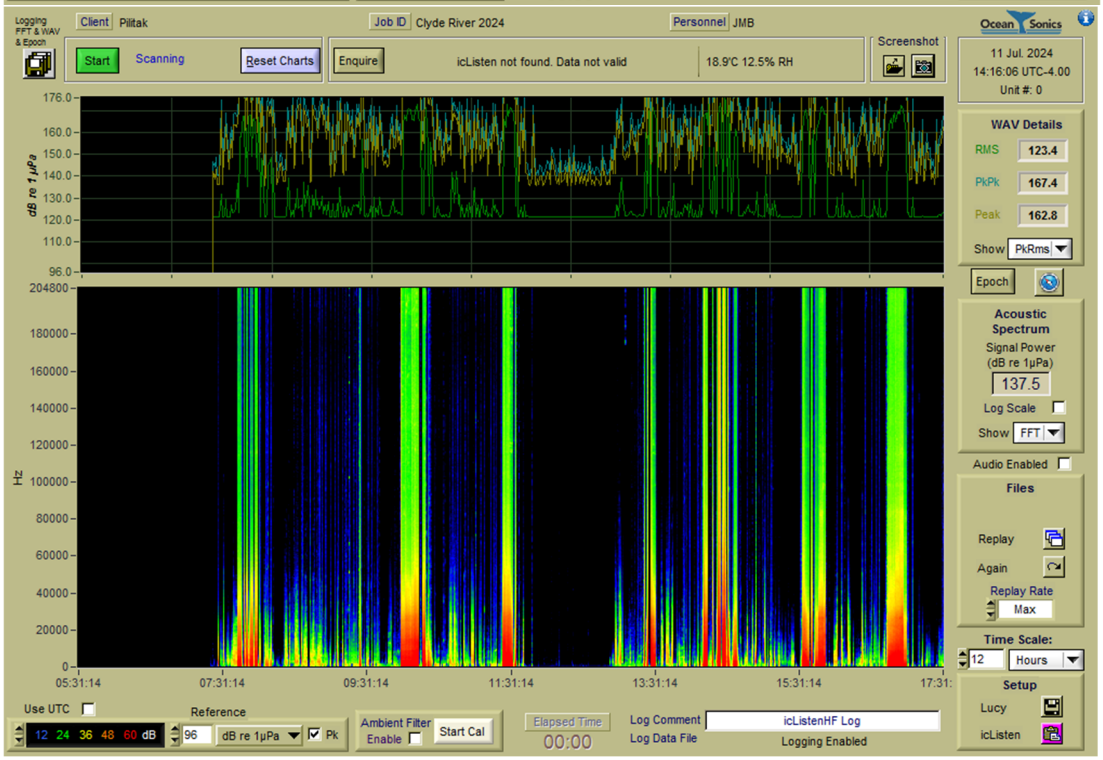




2.2 DAY 2, SOUND SEVEL RECORDINGS JUNE 13TH, 2024

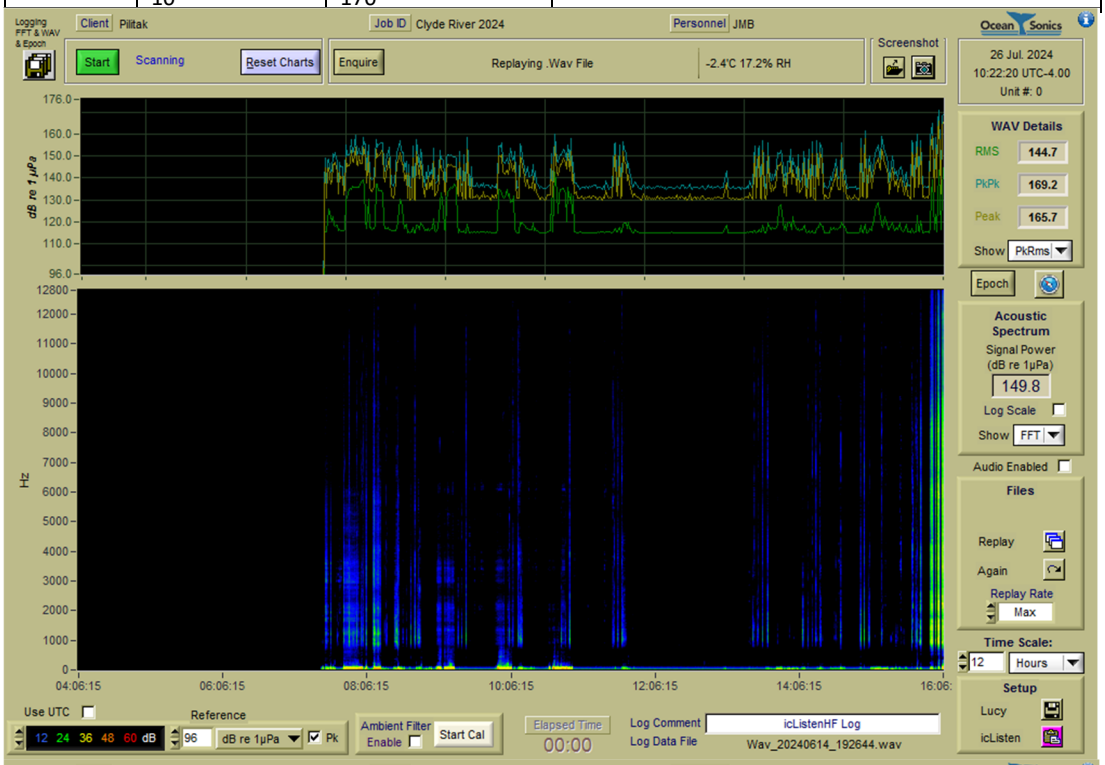
Date	Distance (m)	Maximum dB(rms)	Sheet
June 13	500	140	6,7,8,9,10,11,4.
	10	174	

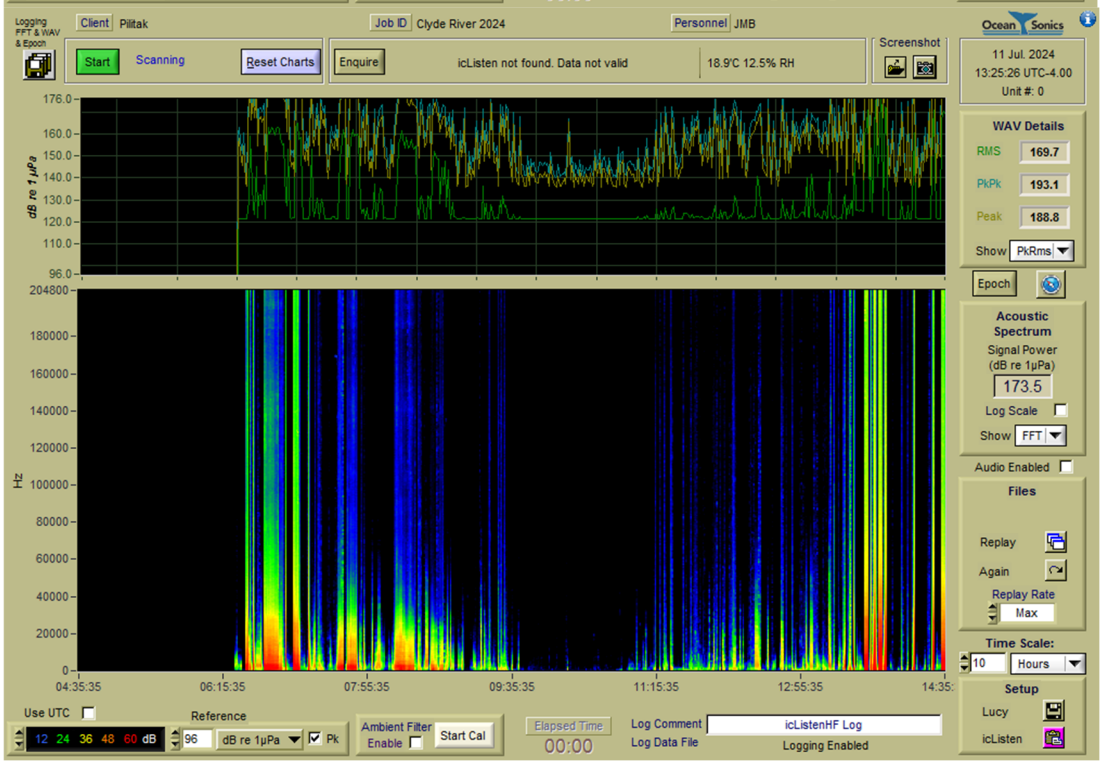




2.3 DAY 3, SOUND SEVEL RECORDINGS JUNE 14TH, 2024

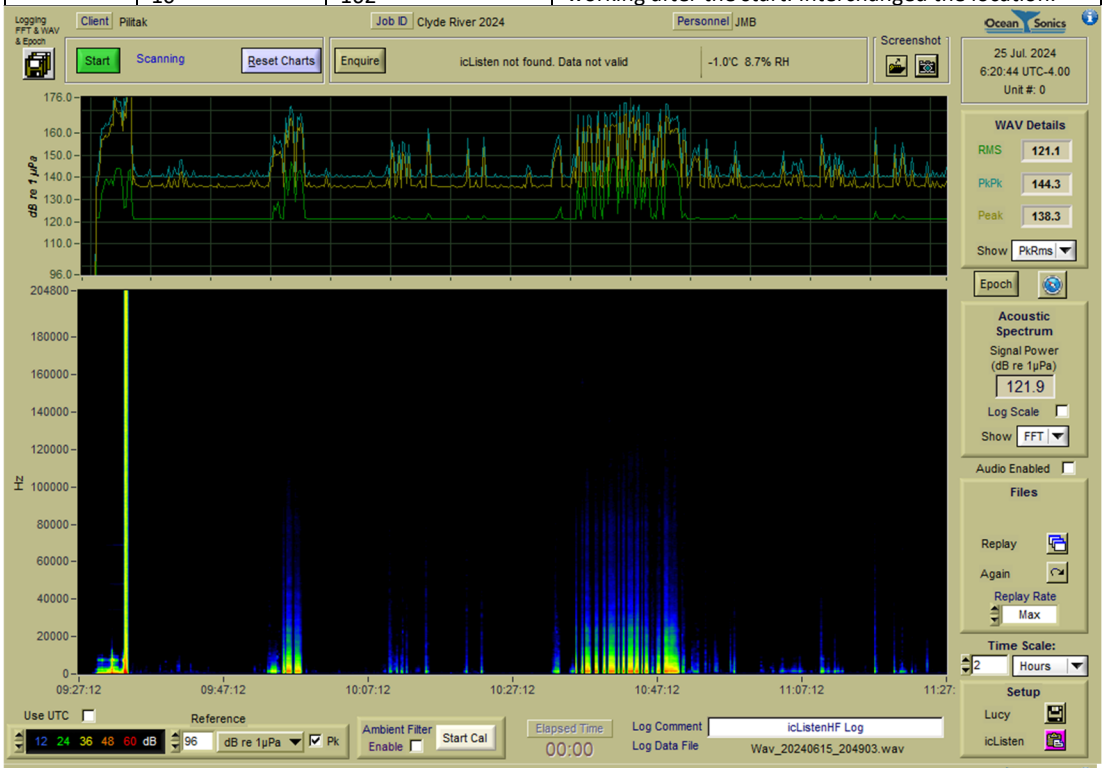
Date	Distance (m)	Maximum dB(rms)	Sheet
June 14	500	145	4,3,2,1,12.
	10	170	

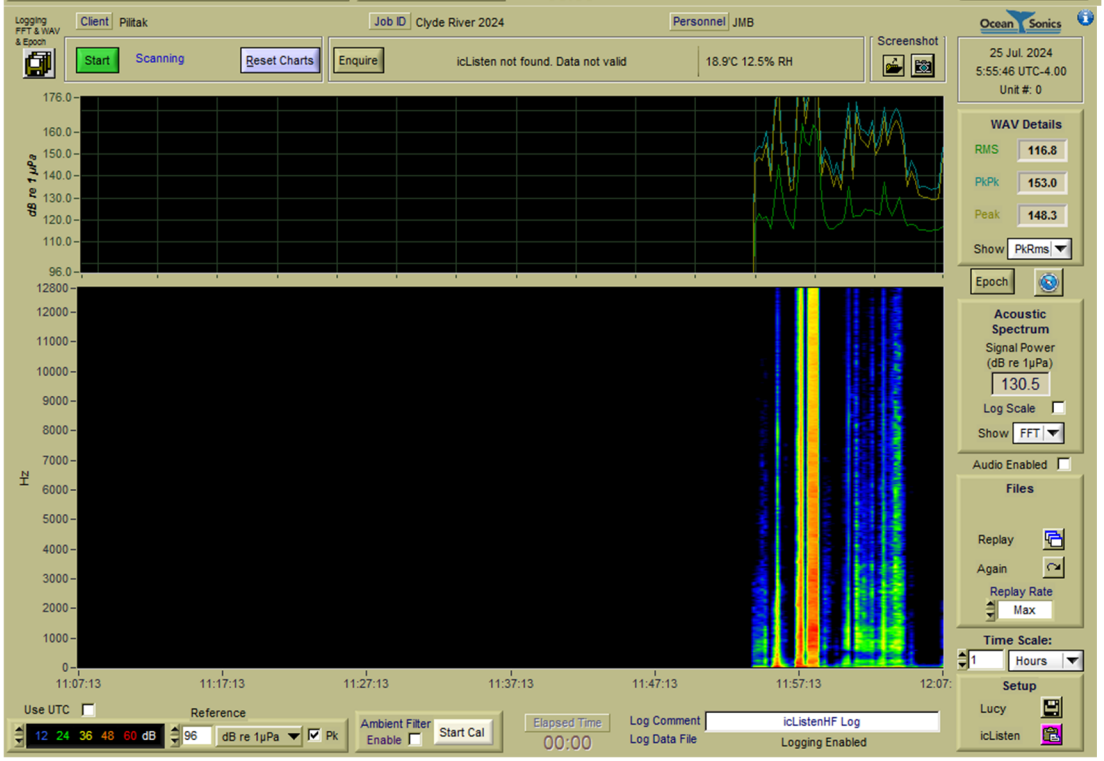




2.4 DAY 4, SOUND SEVEL RECORDINGS JUNE 15TH, 2024

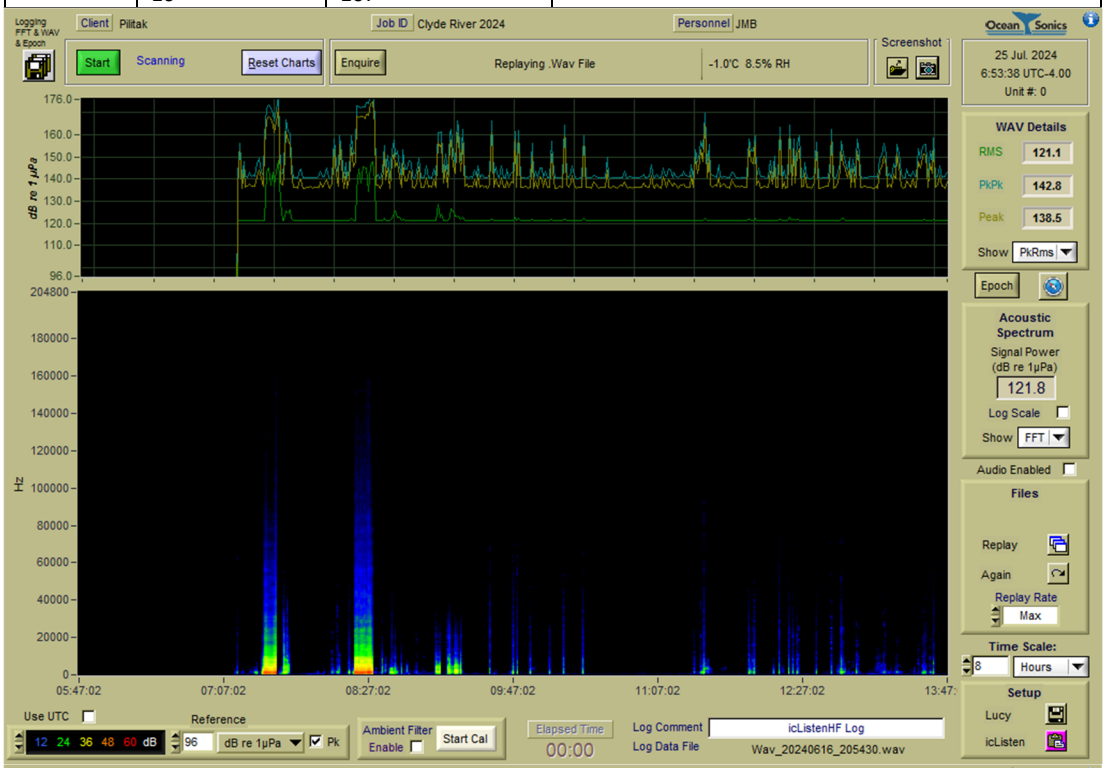
Date	Distance (m)	Maximum dB(rms)	Sheet
June 15	500	150	13,14,15. 10m Hydrophone recording stopped working after the start. Interchanged the location.
	10	162	

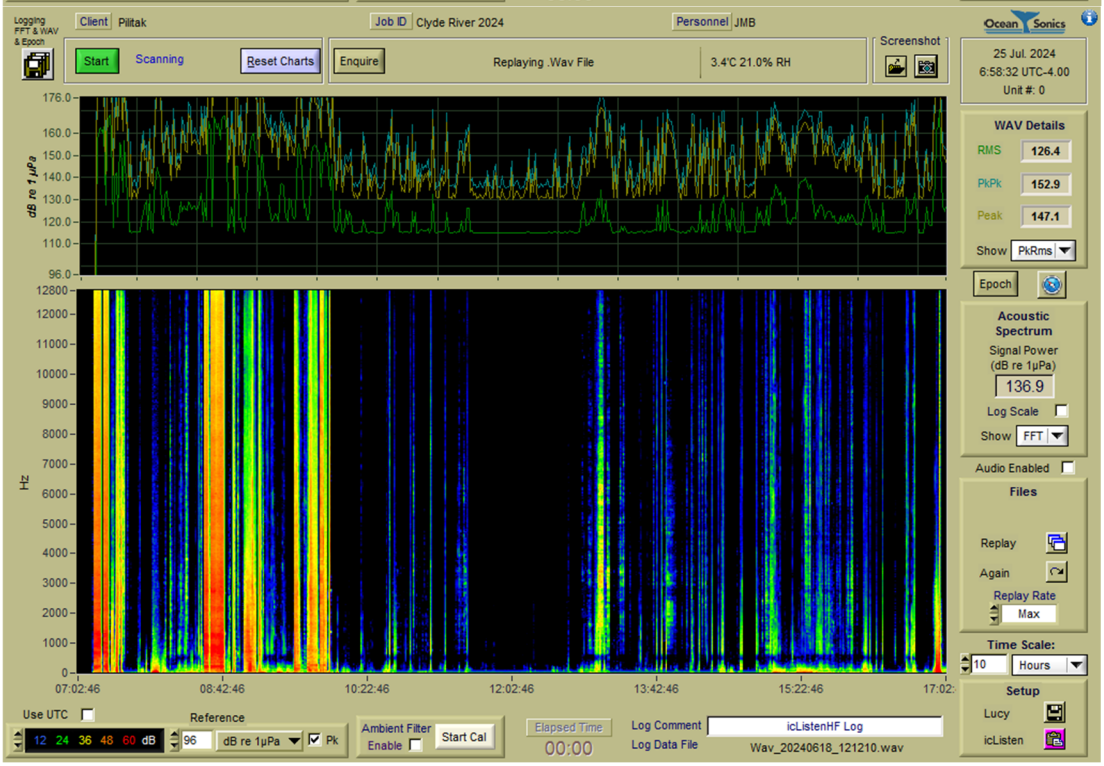




2.5 DAY 5, SOUND SEVEL RECORDINGS JUNE 16TH, 2024

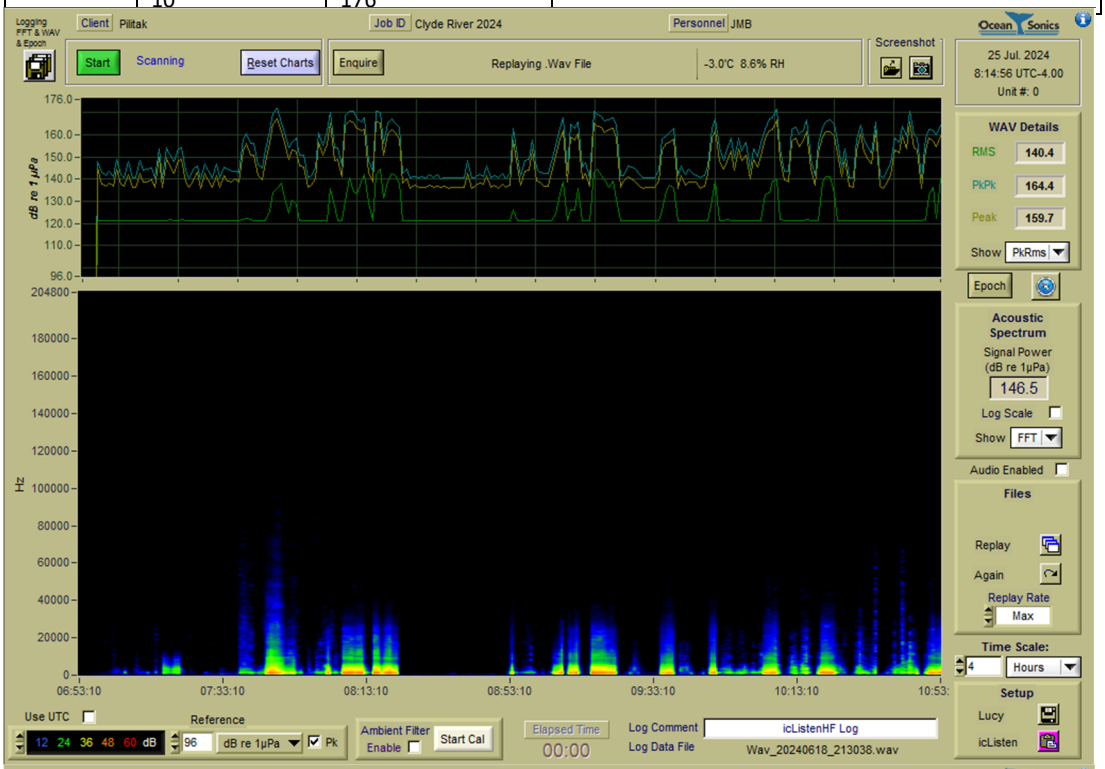
Date	Distance (m)	Maximum dB(rms)	Sheet
June 16	500	147	Sheets 16,17, guide tubes.
	10	167	

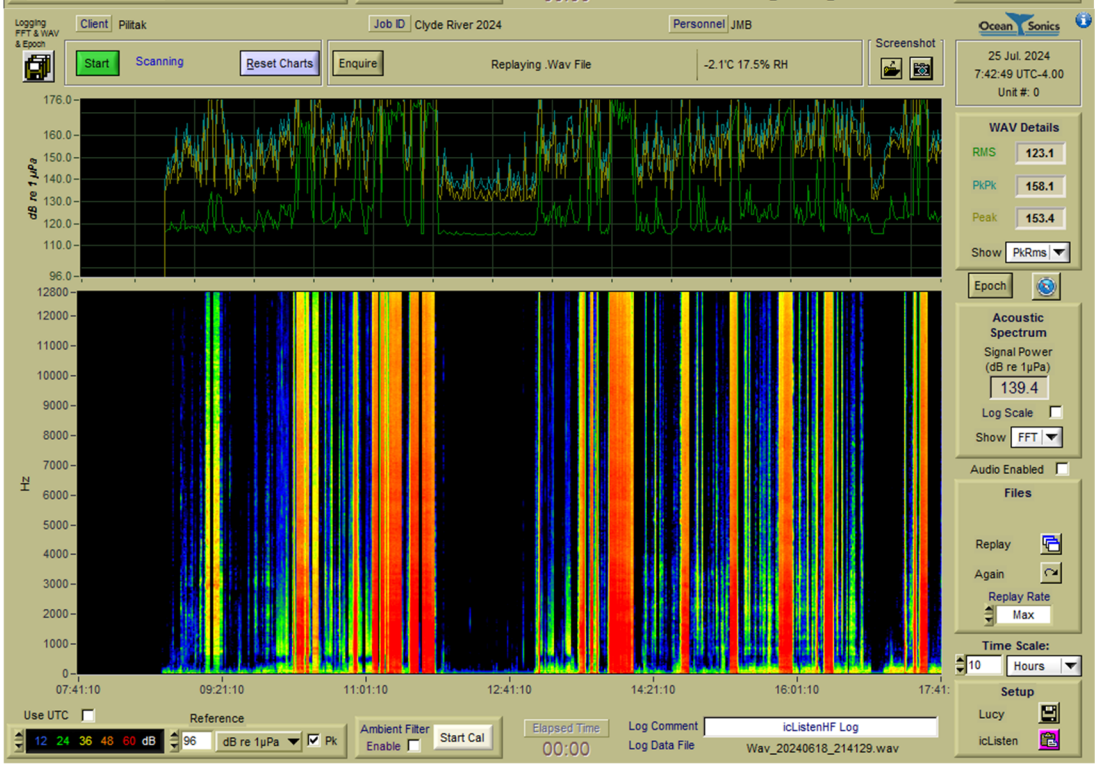




2.6 DAY 6, SOUND SEVEL RECORDINGS JUNE 18TH, 2024

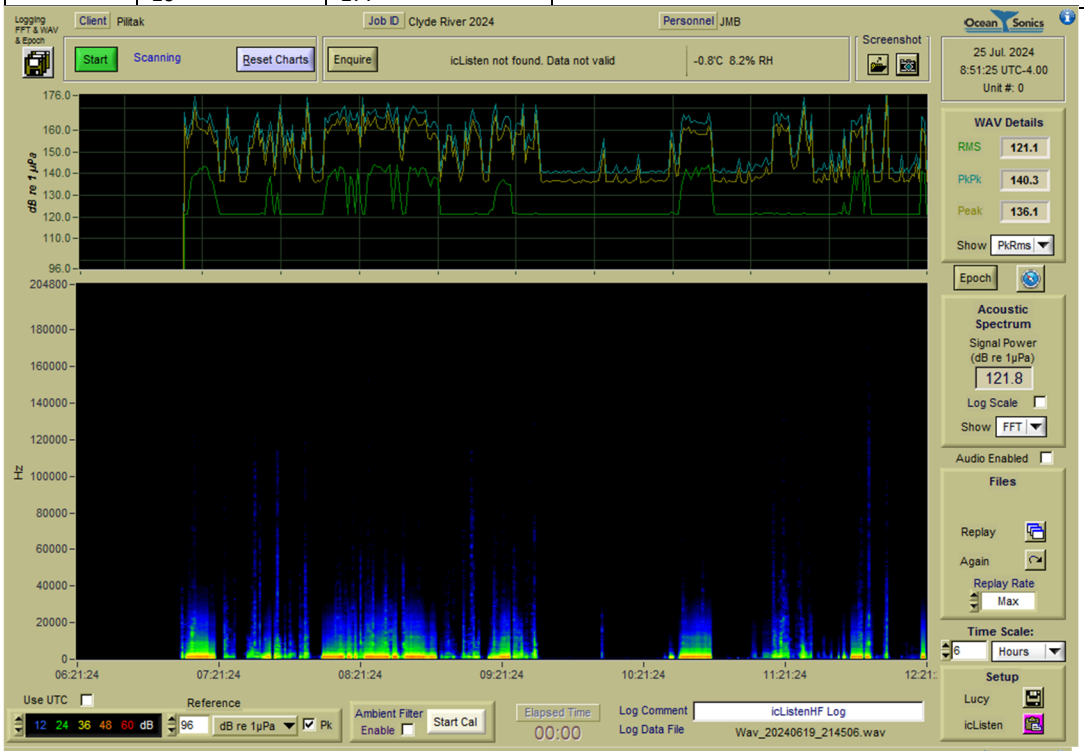
Date	Distance (m)	Maximum dB(rms)	Sheet
June 18	500	144	Sheets 18, 29.
	10	176	

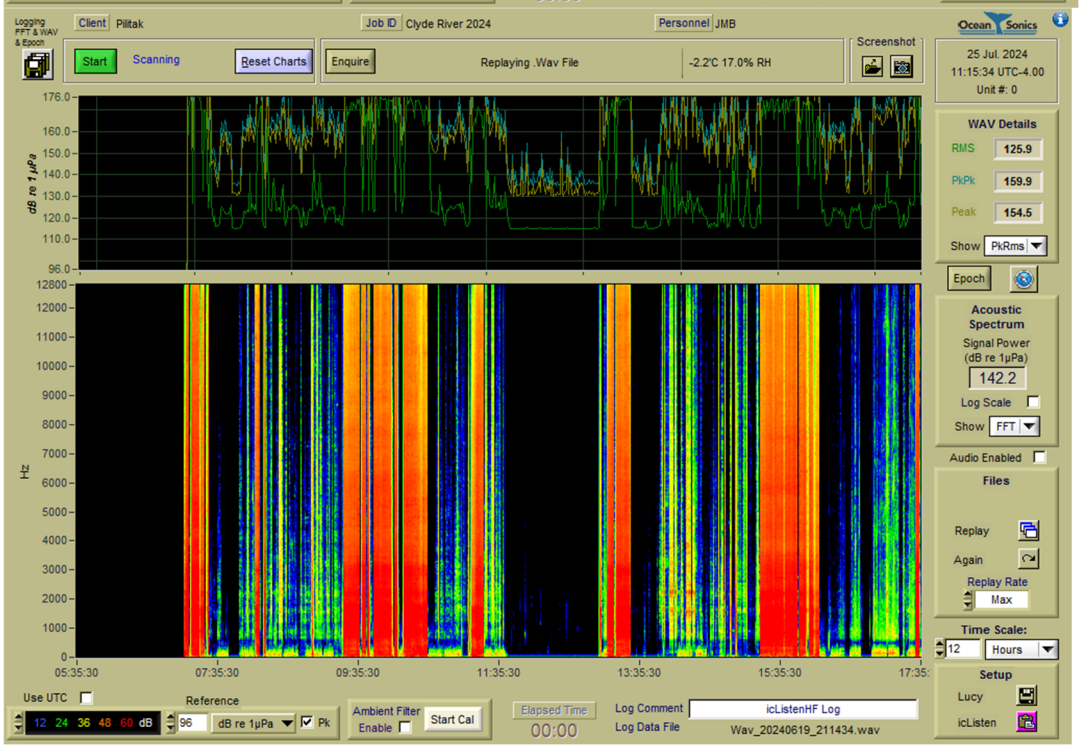




2.7 DAY 7, SOUND SEVEL RECORDINGS JUNE 19TH, 2024

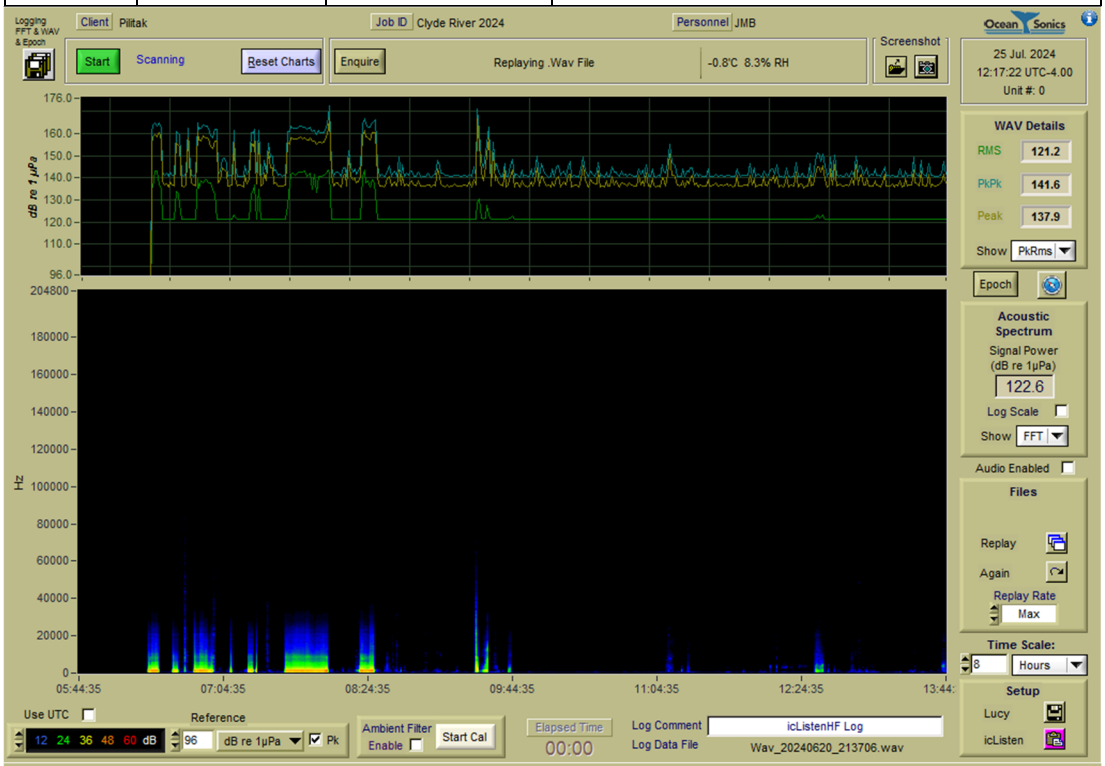
Date	Distance (m)	Maximum dB(rms)	Sheet
June 19	500	143	
	10	177	

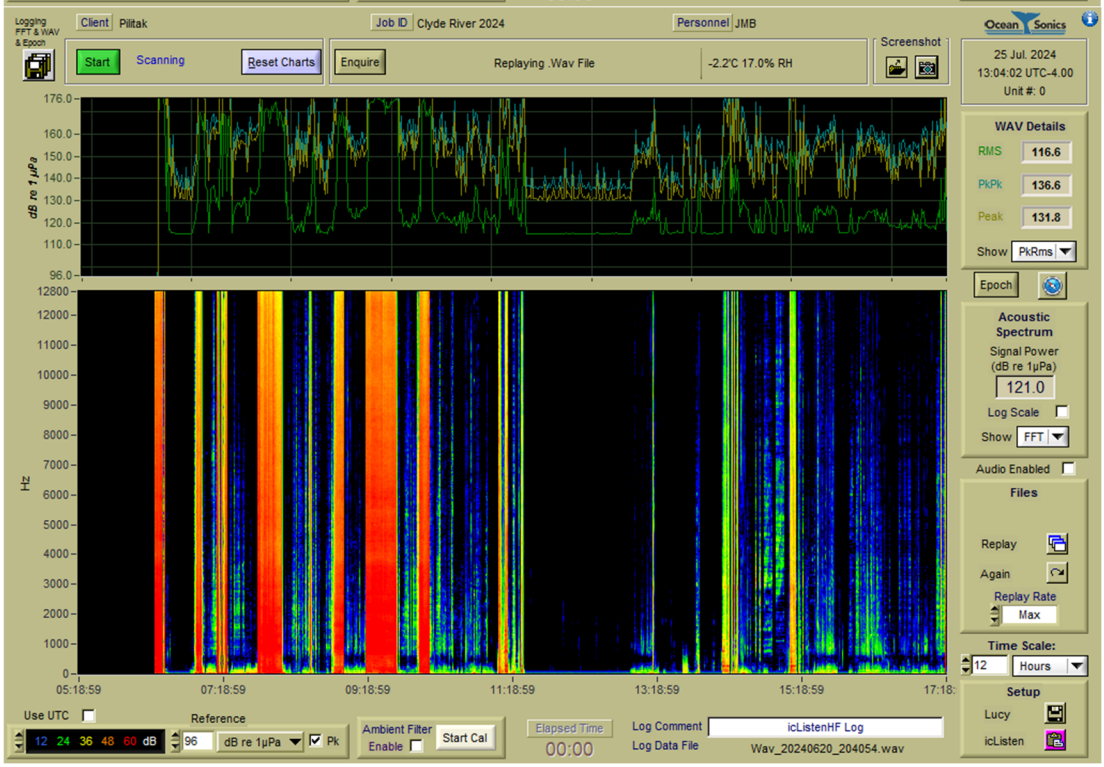




2.8 DAY 8, SOUND SEVEL RECORDINGS JUNE 20TH, 2024

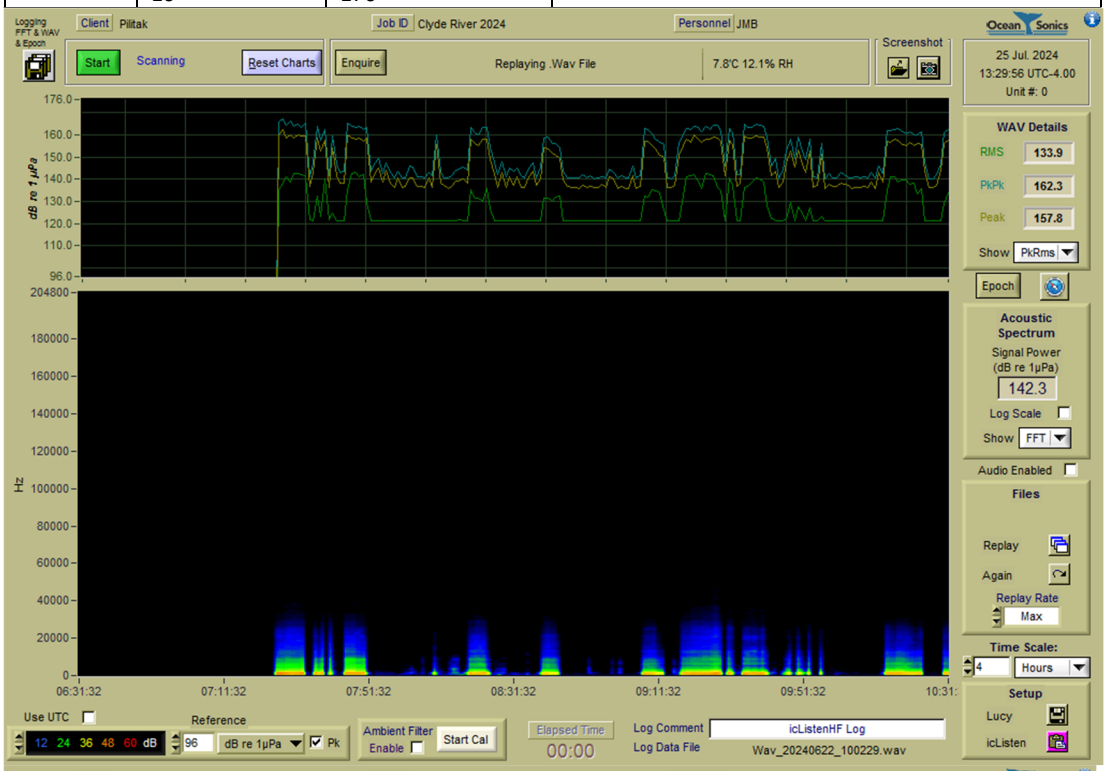
Date	Distance (m)	Maximum dB(rms)	Sheet
June 20	500	143	Change tubing guide 2 to new North wall.
	10	177	

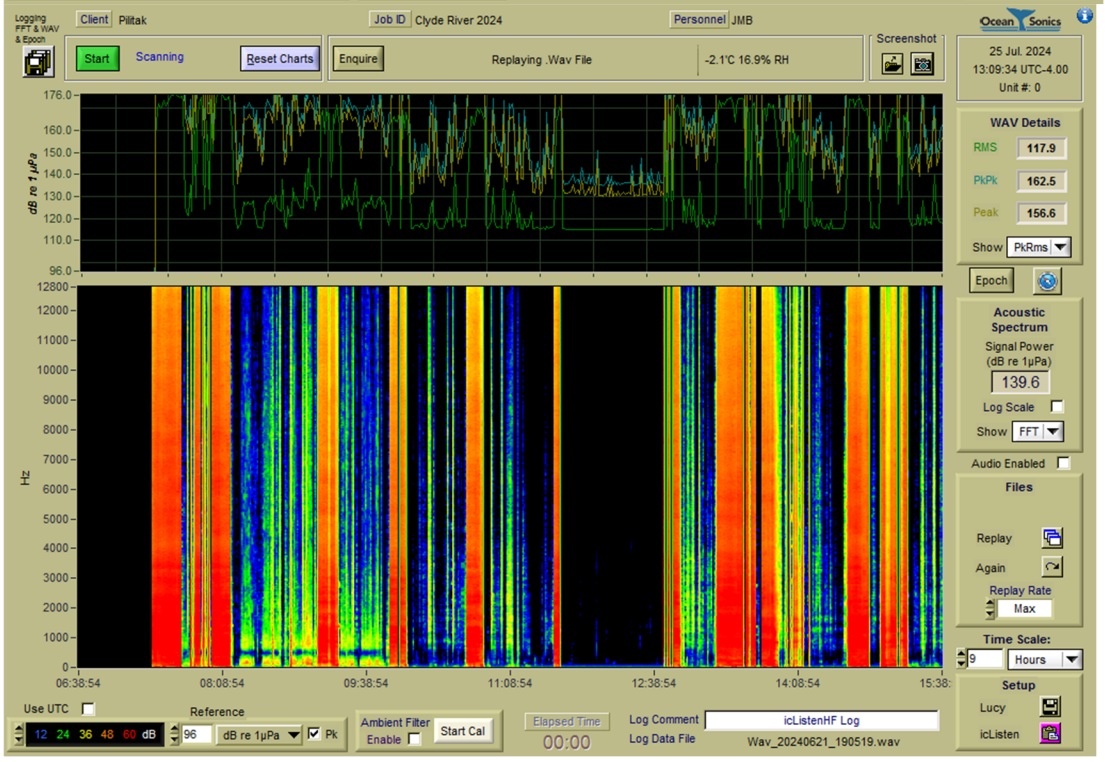




2.9 DAY 9, SOUND SEVEL RECORDINGS JUNE 21ST, 2024

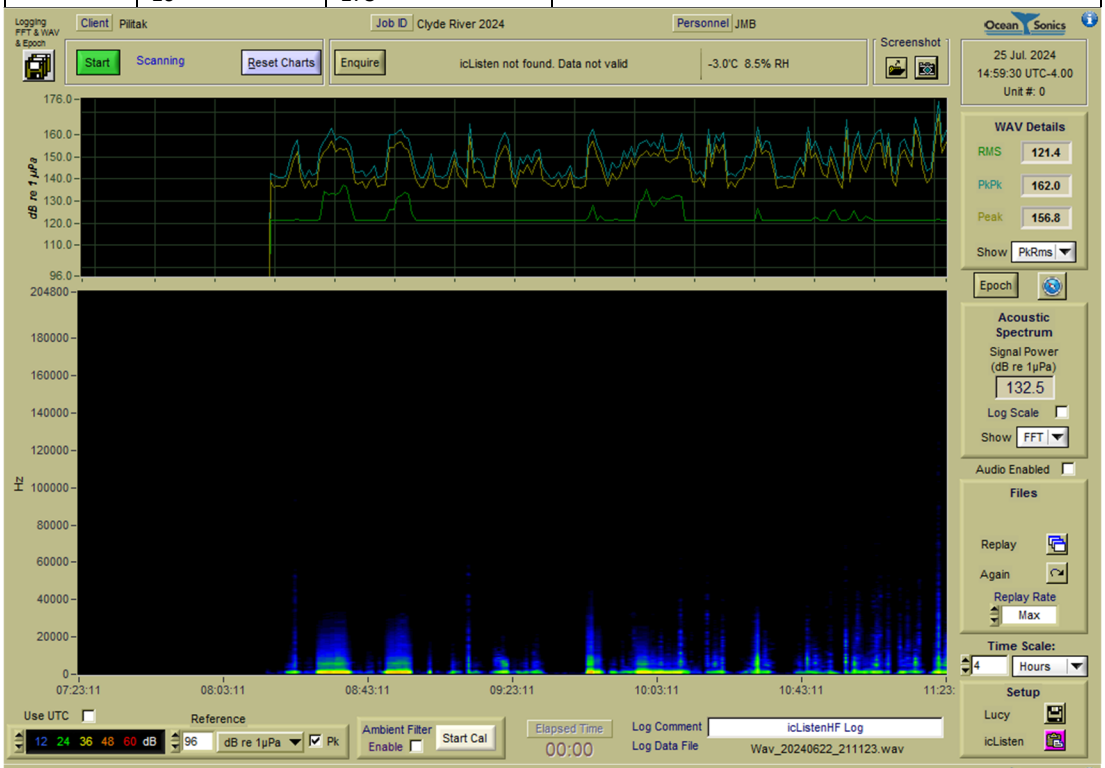
Date	Distance (m)	Maximum dB(rms)	Sheet
June 21	500	142	30,34,33,32,31,29.
	10	176	

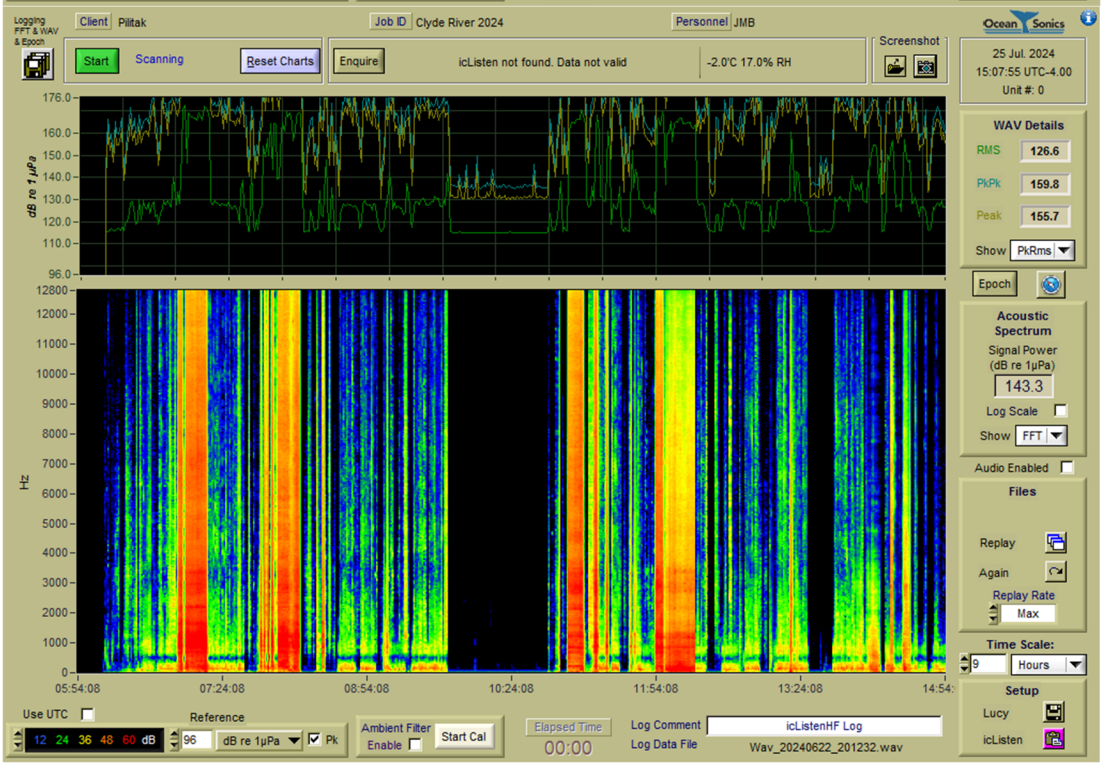




2.10 DAY 10, SOUND SEVEL RECORDINGS JUNE 22ND, 2024

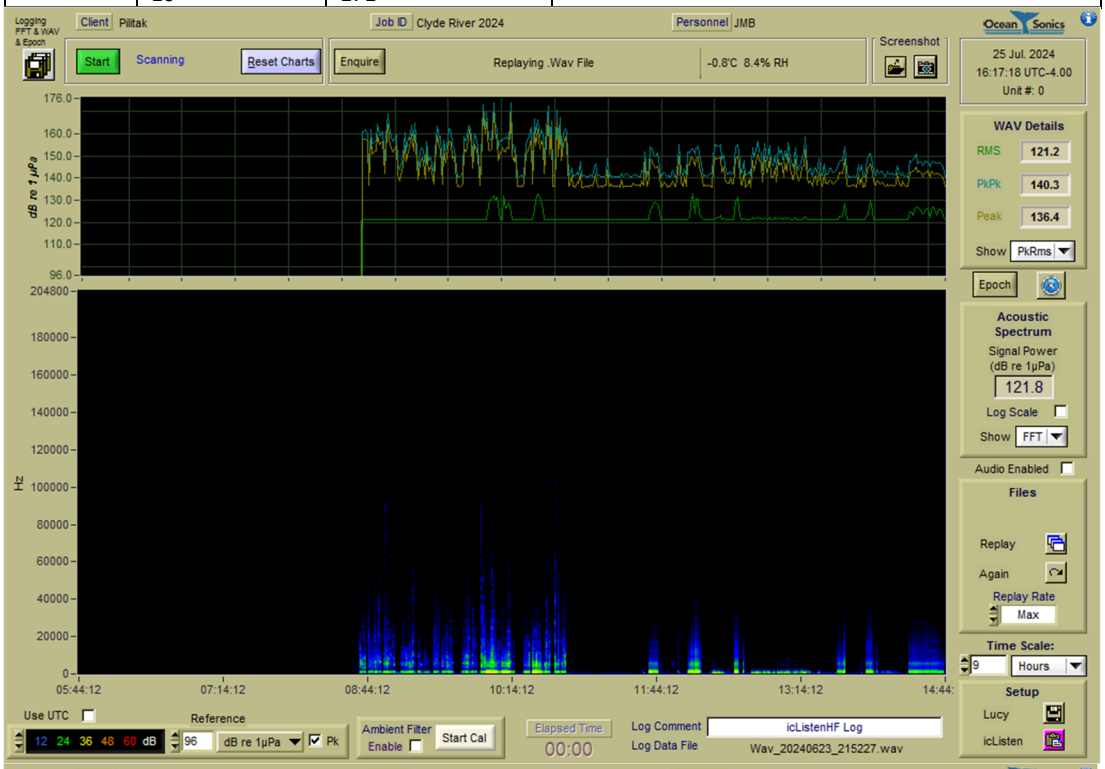
Date	Distance (m)	Maximum dB(rms)	Sheet
June 22	500	137	36,37,38, Change tubing guide 1 and 2 to East wall.
	10	173	

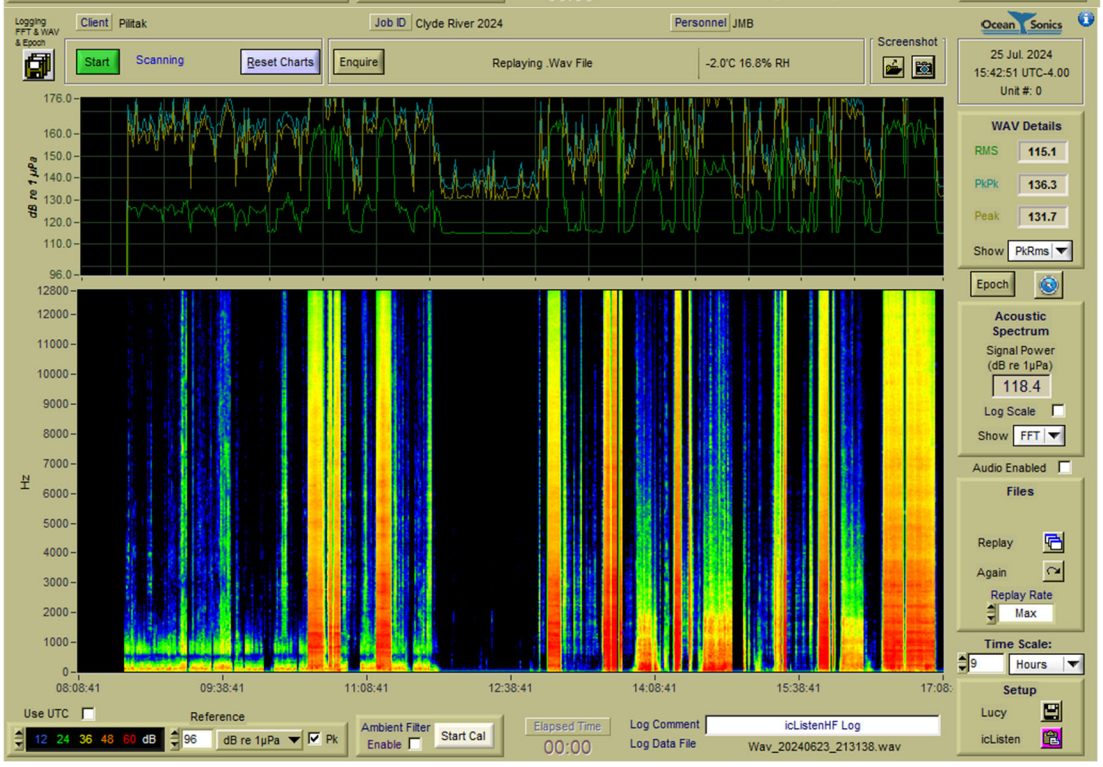




2.11 DAY 11, SOUND SEVEL RECORDINGS JUNE 23RD, 2024

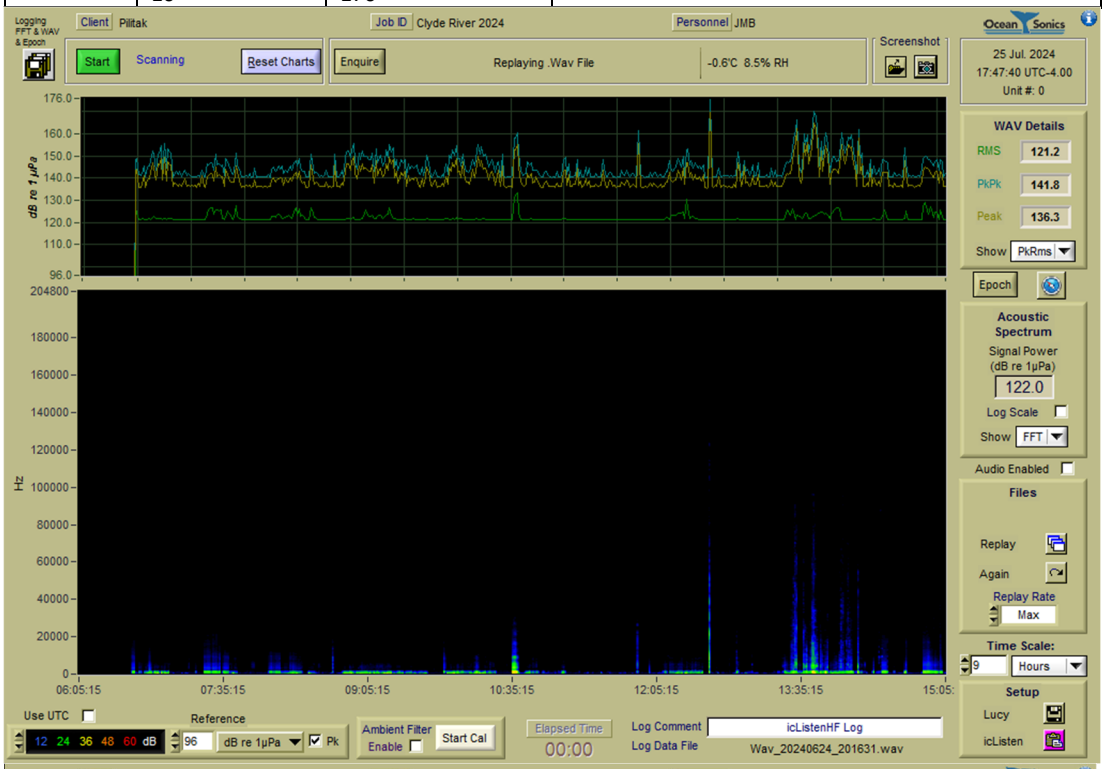
Date	Distance (m)	Maximum dB(rms)	Sheet
June 23	500	133	39,40,41. Big rock under bottom surface, skip 43 and 44.
	10	171	

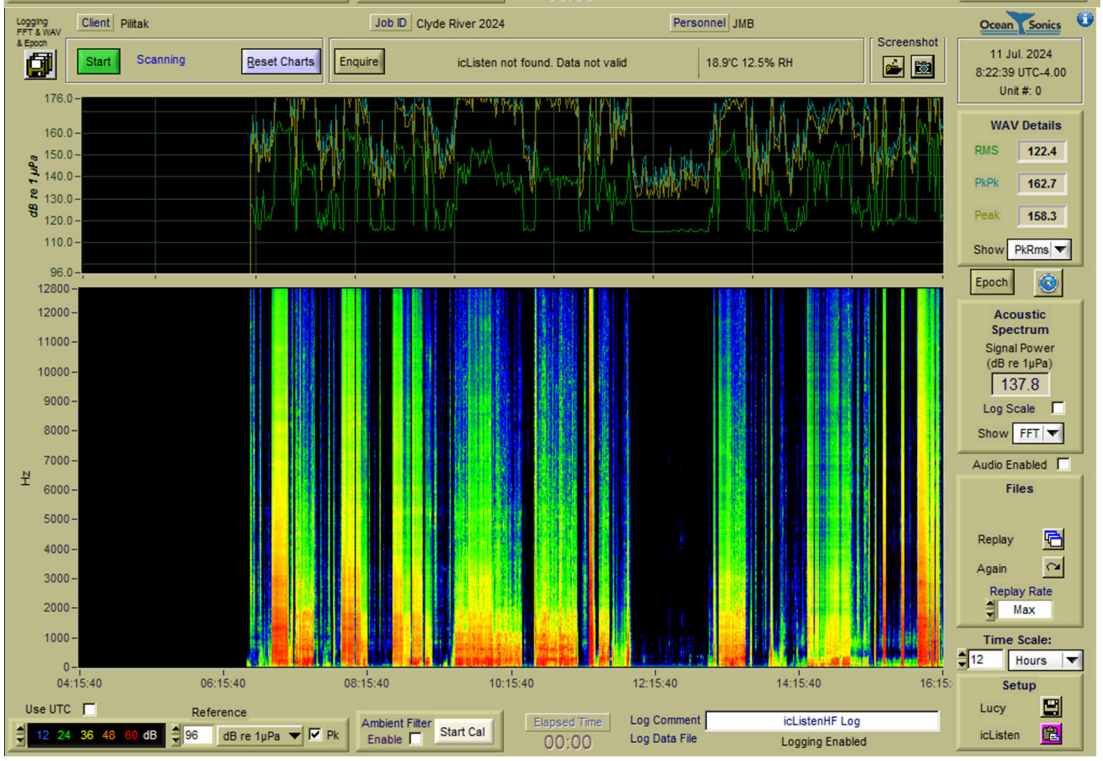




2.12 DAY 12, SOUND SEVEL RECORDINGS JUNE 24TH, 2024

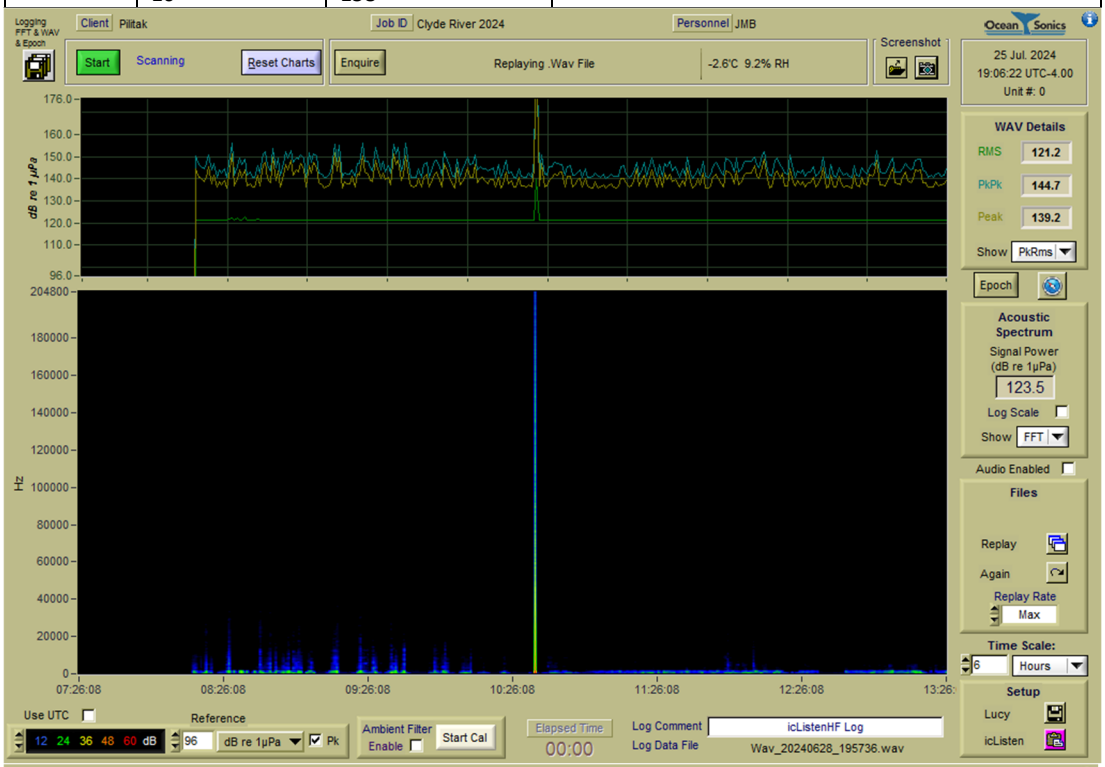
Date	Distance (m)	Maximum dB(rms)	Sheet
June 24	500	133	42,43,41,42.
	10	170	

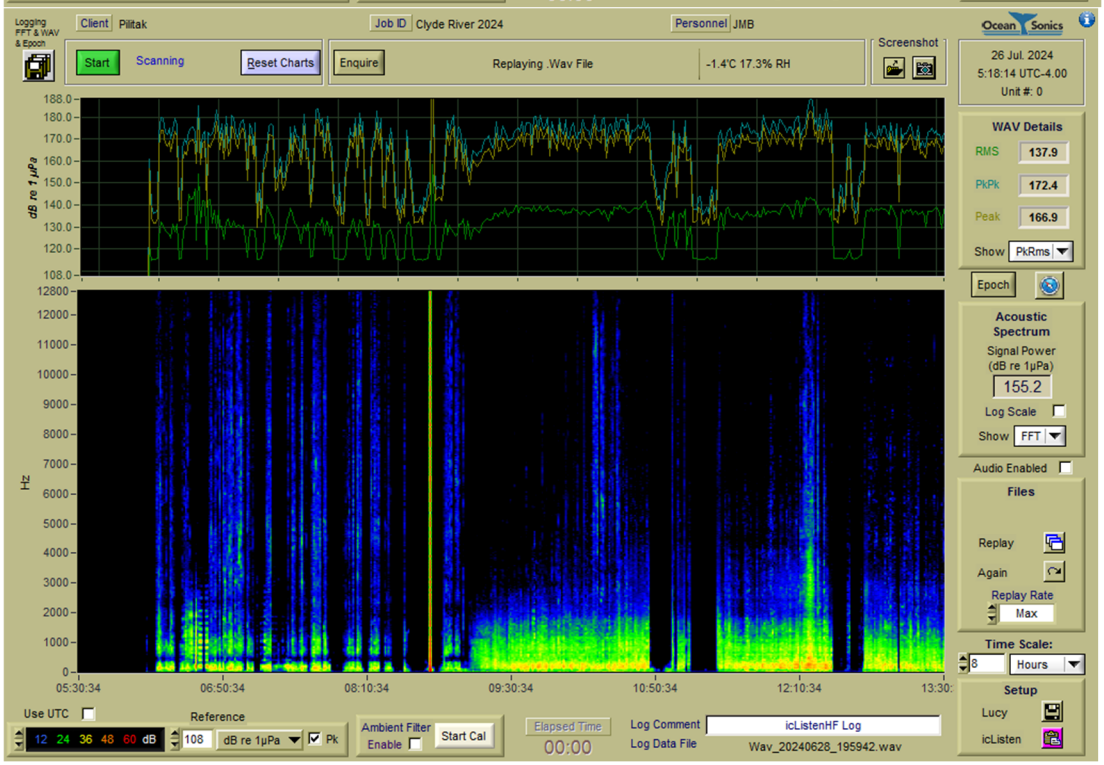




2.13 DAY 13, SOUND SEVEL RECORDINGS JUNE 28TH, 2024

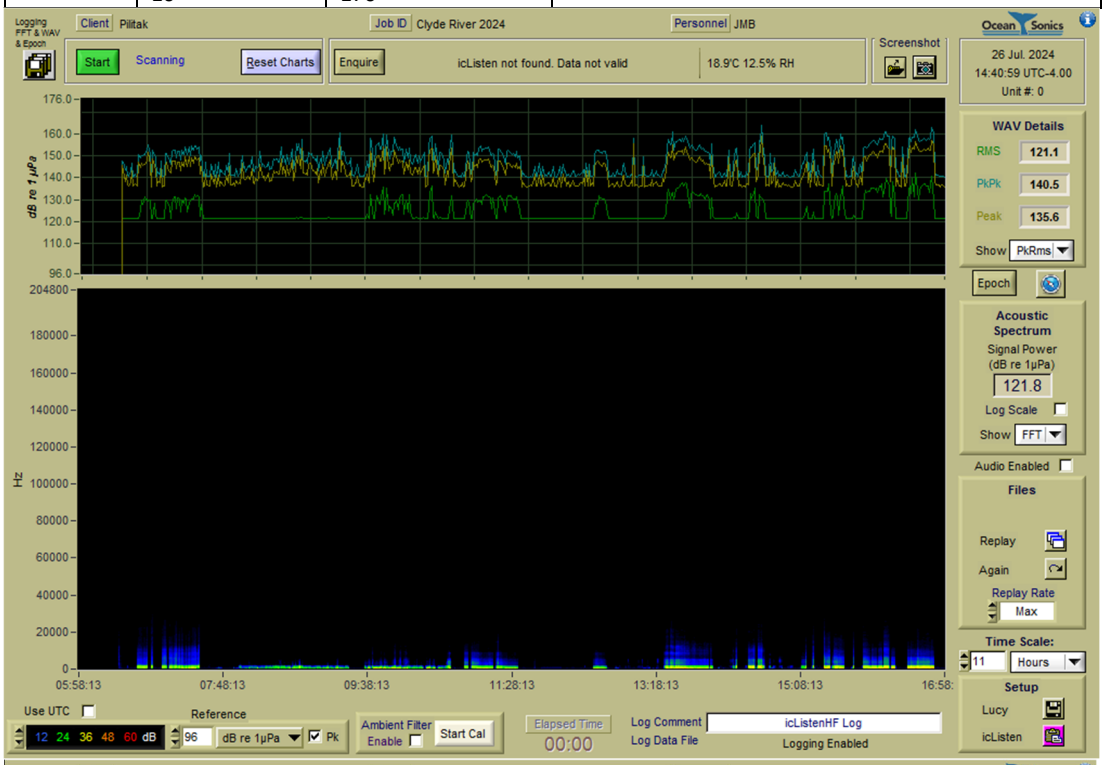
Date	Distance (m)	Maximum dB(rms)	Sheet
June 28	500	140	Rock blast.
	10	158	

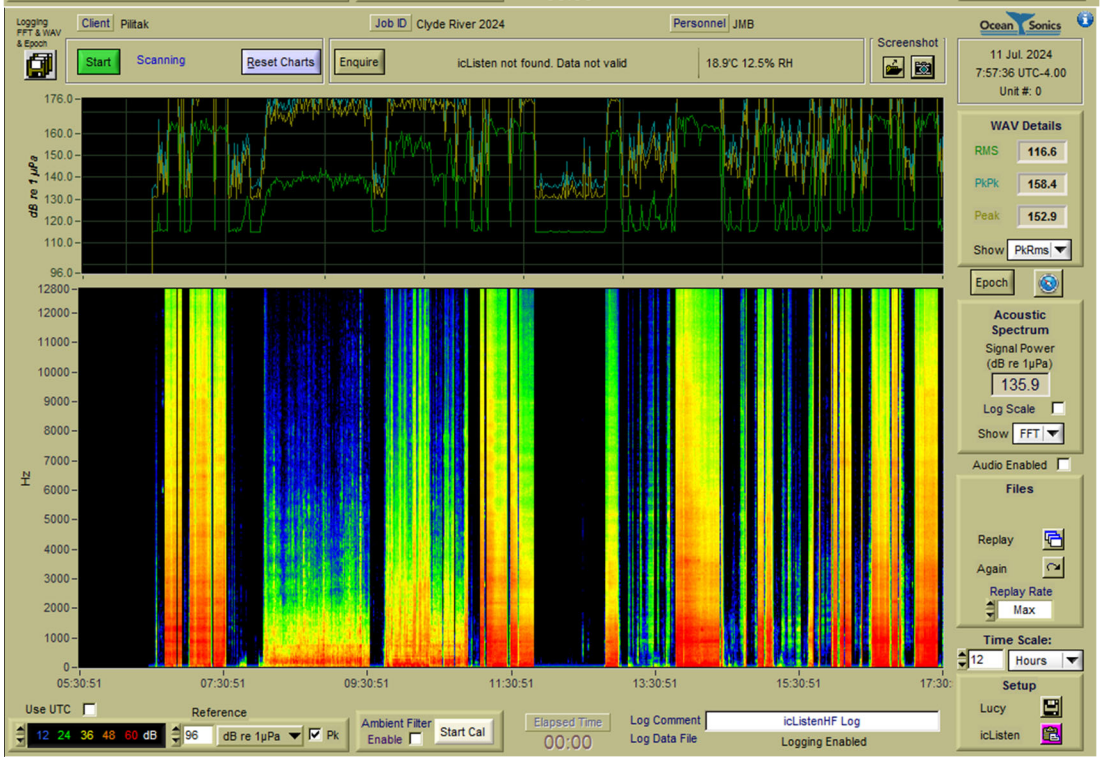




2.14 DAY 14, SOUND SEVEL RECORDINGS JUNE 29TH, 2024

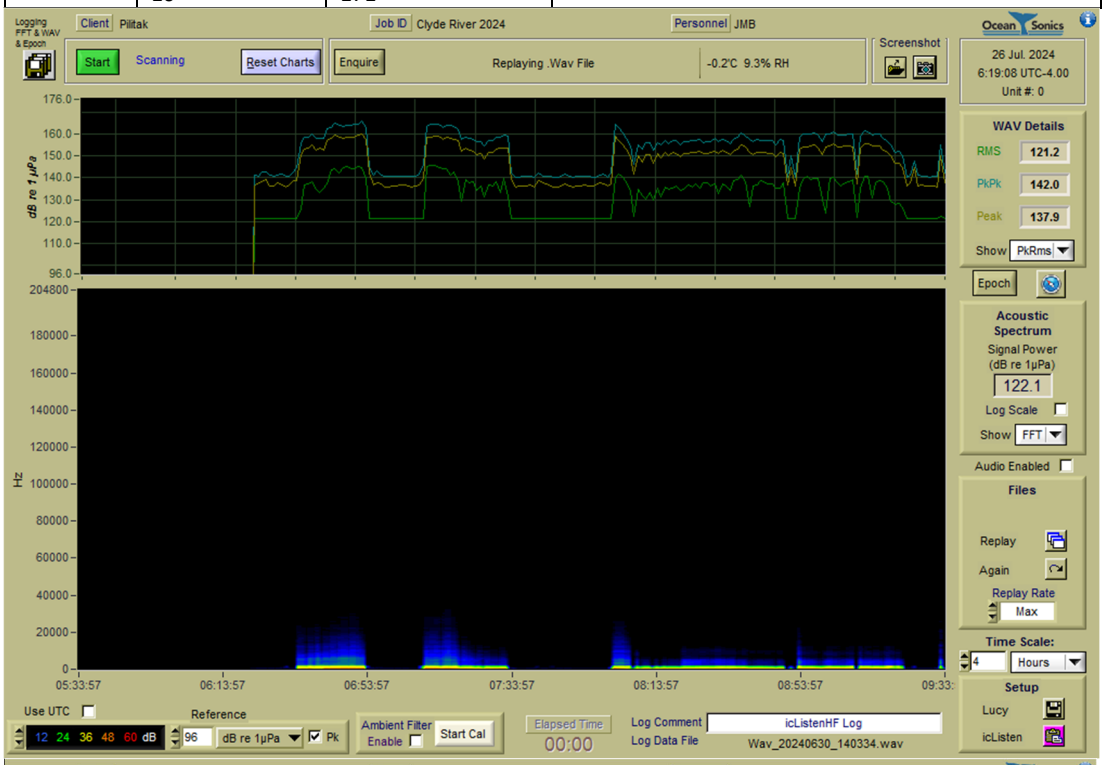
Date	Distance (m)	Maximum dB(rms)	Sheet
June 29	500	141	43,42,41.
	10	170	

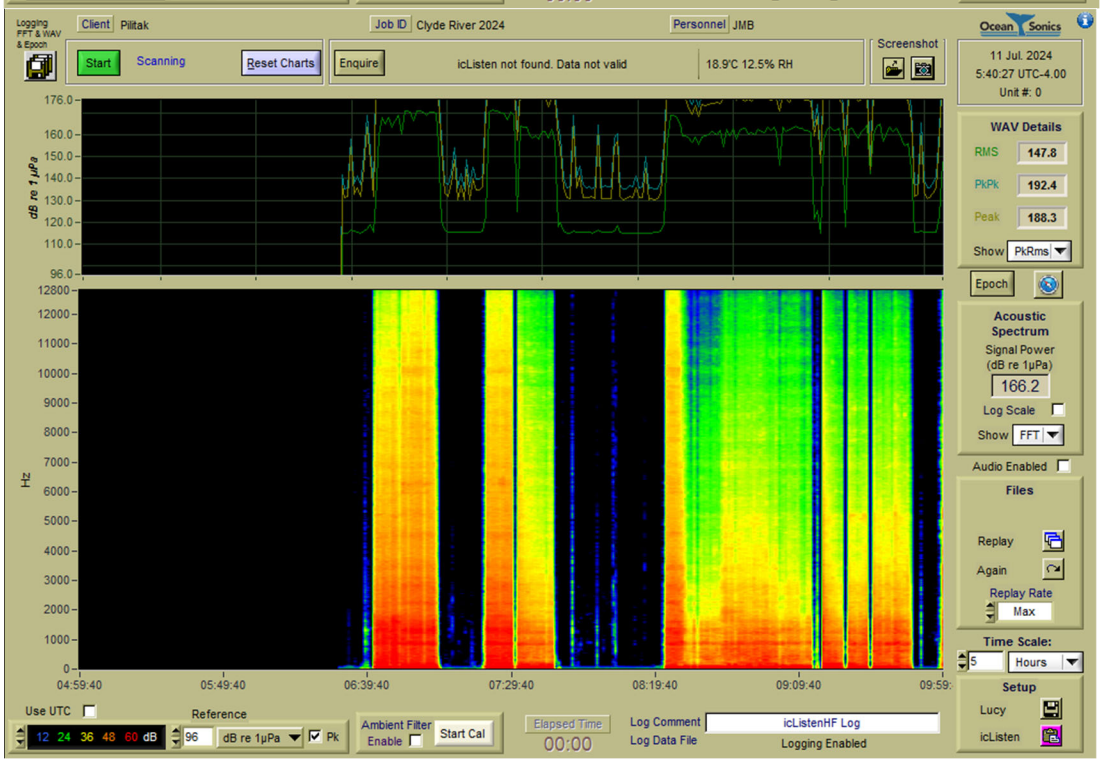




2.15 DAY 15, SOUND SEVEL RECORDINGS JUNE 30TH, 2024

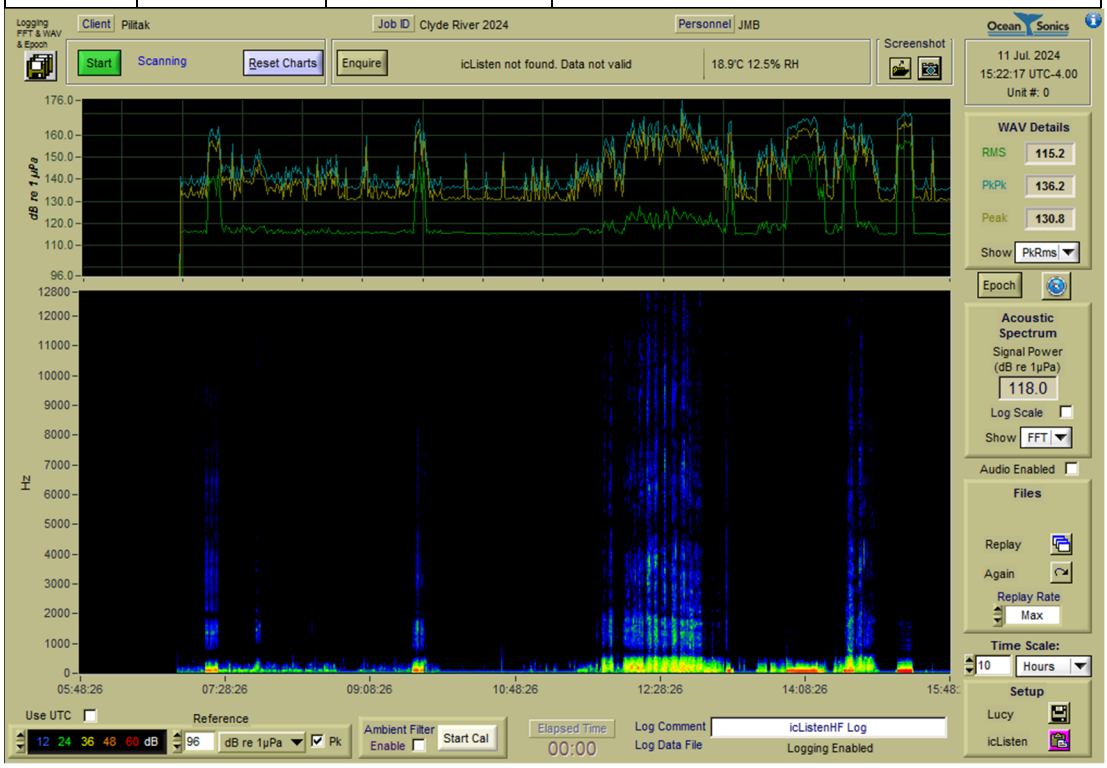
Date	Distance (m)	Maximum dB(rms)	Sheet
June 30	500	141	43,42.
	10	171	





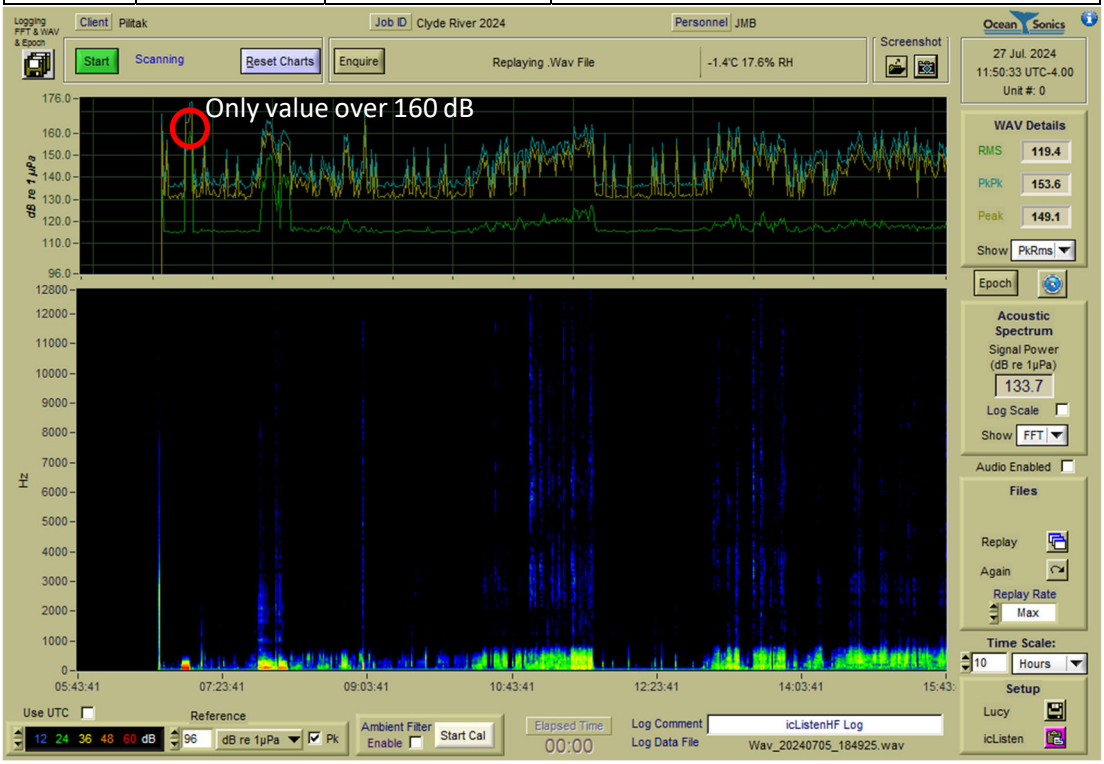
2.16 DAY 16, SOUND SEVEL RECORDINGS JULY 4TH, 2024

Date	Distance (m)	Maximum dB(rms)	Sheet
July 4	500	158	Install toe-pins 36.



2.17 DAY 17, SOUND SEVEL RECORDINGS JULY 5TH, 2024

Date	Distance (m)	Maximum dB(rms)	Sheet
July 5	500	161	Install toe-pins 9, Try on toe-pins 42,43. No 10m hydrophone.



3. CONCLUSIONS

- Sheet piling work was conducted between June 12th to July 5th, 2024, for the construction of the 3 peripheral walls of the fixed wharf portion of the southwest breakwater (SWBW). During this period, 50 pairs of sheet pile and two toe pins were installed.

- For the entire duration of these activities, underwater sound monitoring was conducted in order to ensure that underwater noise was not exceeding 160 dB_{RMS} re: 1µPa within the marine mammal exclusion zone of 500 meters from the noise generating activity. The sound pressure was monitored at 10m from the piling work to confirm that it stays below 30 kPa (or 208 DB_{RMS} re: 1µPa).

- The average background noise in the ocean recorded during the monitoring activities was always around 120 dB_{RMS}.

- At the 500 m measurements, during the 17 days of piling operations, the average sound value recorded was 142.8 dB_{RMS}. The maximum sound value recorded during the same period was of 161 DB_{RMS} re, on July 5th, for a brief period, during the installation of one toe pin. This minor sound exceedance of 1 dB_{RMS} was recorded for a duration of less than 1 minute while attempting to drive deeper the toe pin at the sheet pile location 8-9. The toe pin installation was stopped shortly after on a refusal due to the presence of a buried boulder at a depth of -12.0 m.

- At the 10 m measurements, during the 17 days of sheet piling operations, the average sound value recorded was 170.4 dB_{RMS} (0.331 kPa) with a maximum value of 177 DB_{RMS} re (0.708 kPa).

- During the underwater blasting of one oversize boulder located slightly below the seafloor at the SWBW, the maximum sound value recorded at 500m was 140 dB_{RMS} and the maximum sound pressure at 10m was 158 dB_{RMS} (0.079 kPa).

- Based on the underwater sound monitoring results, the underwater sound levels monitored during the piling activities stayed below the threshold of 160 dB_{RMS} within the marine mammal exclusion zone of 500 m except during the last day of piling operations where an exceedance of 1 dB_{RMS} was recorded for a duration of

less than 1 minute. The underwater sound pressure stayed lower than of 30 kPa at 10 m from the piling activities.

- No marine mammal was observed within or nearby the exclusion area (500 m) during the entire duration of the piling works. At no time dead fish was observed beside or nearby the work area.

Clyde River Harbour Development
(NIRB) Annual Report, File no.21YN032

APPENDIX 3
Community Presentation Material

PILITAK ENTERPRISES LTD ᐱᓕᑖᒃ ᐃᖅᑲᐃᓯᐊᕐᕕᐊᑦ ᓕᒥᑎᑦ	# Submittals	**No. :** 81 **Rev. :** 01 **Date :** May 9, 2024

Project : CLYDE RIVER HARBOUR DEVELOPMENT — **Project No. :** 2022-034
DFO ETO-025-222050

Subject : **2024 Community Meeting Presentation rev-01**

Submitted to :
CBCL Limited
1505 Barrington St
Halifax, NS, B3J 3K5

David Parsons
davidp@cbcl.ca
506-633-6650 ext 3233

Copy to :
Kenton Thiesson
PSPC

kenton.thiessen@pwgsc-tpsgc.gc.ca
204-229-6375

Speciality :	General	**Submitted for :**	
Specification section :		**Revision required by :**	**May 19, 2024**
Drawing reference :		**Color choice required :**	
Submited as :	review	**Total Page incl. cover :**	**79**

Subcontractor or supplier :

Manufacturer :

Description : 2025 Community Meeting Presentation rev-01

Supplier No :

Comments :

Revised and submitted by :

François Bourassa, P.Eng.
Pilitak Enterprises Ltd.
1519 Federal Road
Iqaluit
418-781-6114 ext 213
fbourassa@pilitak.biz

Review by the consultant or the client :

Shop Drawing Review

This review is intended to assist the contractor in complying with the requirements of the Contract Documents and does not relieve him of his responsibilities under the contract.

- [x] reviewed
- [ ] revise and resubmit
- [ ] reviewed as noted
- [ ] not required for review

PER
CBCL LIMITED
200235.00 — June 11, 2024
PROJECT — DATE

PILITAK ENTERPRISES LTD

ᐱᓕᒃ ᐃᖃᓗᐃᔨᕐᓂᐊᕆᔨᒃ ᓕᒥᑎᒃ

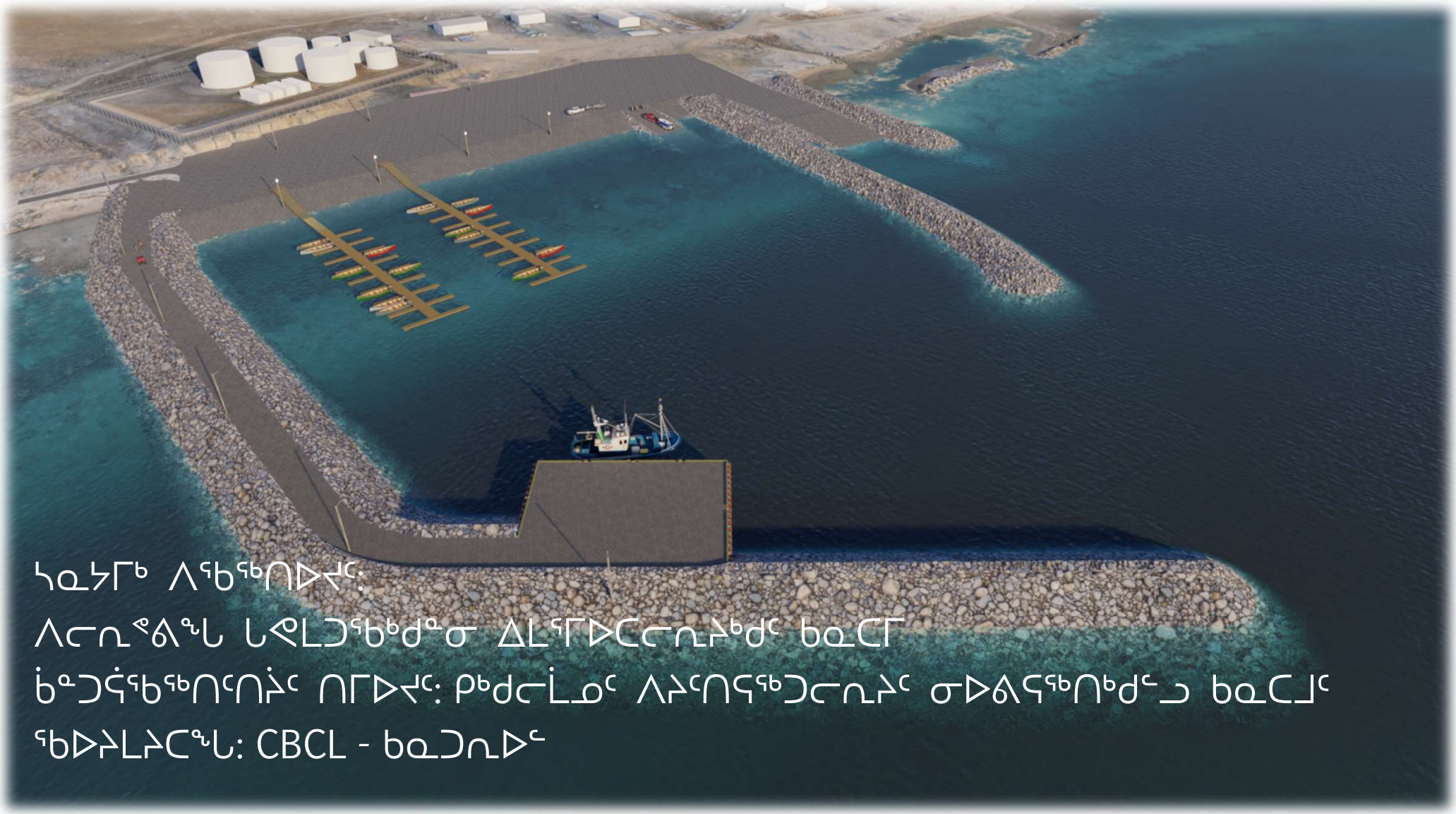
ᑲᖏᖅᑐᑎᒍᖓᒥ ᐃᒃᓴᕐᓂᓕᕆᔨᖅᓂᖅ ᑐᓴᒃᑲᕐᓂᓕᒃᓴᒥ
ᓄᓇᓕᖕᖓᓂ ᑲᑎᒪᑎᕐᑎᓂᖅ
ᐋᒥ2024

CLYDE RIVER HARBOUR DEVELOPMENT

COMMUNITY MEETING

JUNE 2024

PRESENTED BY
PILITAK ENTERPRISES LTD



- Project Owner: Department of Fisheries and Ocean (DFO)
- Contracting Authorities: Public Services and Procurement Canada (PSPC)
- Consultant: CBCL-Canadrill

ᐅᖃᐅᓯᓗᓕᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓕᕆᖅᑕᐅᔪᓂ2023-ᒥ
2. ᐊᖏᔪᒍᑎᓐᓂ ᐱᓪᓗᓕᐅᓂᐊᖅᑐᑦ
3. ᓴᓇᓕᐅᔪᒪᓪᓗᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓕᓪᓂᖅ
5. ᐊᐳᑎᒥᒃ ᓴᓕᓴᓯᒪᓇᓯᓐᓂᖅ
6. ᐃᖅᑲᓇᐃᓐᖏᓕᑦ ᐊᓚᒪᓗ ᐃᓪᓐᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
2. Work planned for this year
3. Work planned for 2025
4. Safety
5. Environment protection
6. Employment opportunities & training
7. Questions

ᐅᖃᐅᓯᓗᓕᕆᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓕᕆᖅᑕᐅᔪᑦ2023-ᒥ
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4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓪᓕᓂᓂᖅ
5. ᐊᐸᑎᒥᒃ ᓴᓕᓴᓯᒪᓇᓯᓐᓂᖅ
6. ᐃᖅᑲᓇᐃᓐᖏᓕᑦ ᐊᓚᒪᓗ ᐃᓪᓐᓂᐊᖅᑎᑦᑎᓂᖅ
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ᐅᒥᐊᖏᓴᐅᑉᓯᒪᓂ ᑎᑭᓪᓗᓂᖅᑐᑦᑕᓂ

SEALIFT DELIVERY

Drilling and blasting at the quarry


ᐅᓴᖅᓯᒪᔨᖏᑦ ᓂᐅᕐᖓᑕᖅᓯᒪᓕᒃ
Rock removal at the quarry

Production of various sizes of rocks

Granular material production

ᓄᓂᕆ ᐊᓱᒪ ᐅᔨᖅᑲᓂᕆ ᖃᐅᔨᓴᓕᖅ

Material Testing

ᓴᓇᖅᑭᑎᖅᑲᐅᑎᓄᑦ ᑲᑎᒪᖅᑲᓕᖅᓯᖅ

Tool Box Meetings

ᐅᓴᖅᑲᓂᕐ ᐃᖏᕐᕋᕆᔨᒪᓂᕐ

Material Transportation

ᐅᓴᖅᑲᓂᕐ ᐃᖃᓗᖅᓯᐊᕐᓗᓂᕐ

Material Transportation

ᐅᖏᒪᒧᕐᓂᖏᑐᓄᑦ ᐊᐅᓪᓕᓂᖅ

Traffic Control

ᓂᒋᖏᓂ ᓴᐅᓗᑕᓪᓕᖅᑕᐅᓂᖏᓐ, ᐋᓂᐅᕐ 29, 2023

Southwest Breakwater Construction

June 29, 2023

ᓂᒋᖅᓯᓂ ᓴᐃᓪᓗᑕᓕᕆᖅᑕᐅᓂᖅᓯᒪᔪᑦ, ᐃᓕᓴᐃ 17, 2023

Southwest Breakwater Construction

July 17, 2023

ᓂᒋᓂᓂ ᓴᐅᓗᑕᓪᓕᐊᖅᑕᐅᓂᖓ, ᐊᑯᓲᓗ 9, 2023

Southwest Breakwater Construction

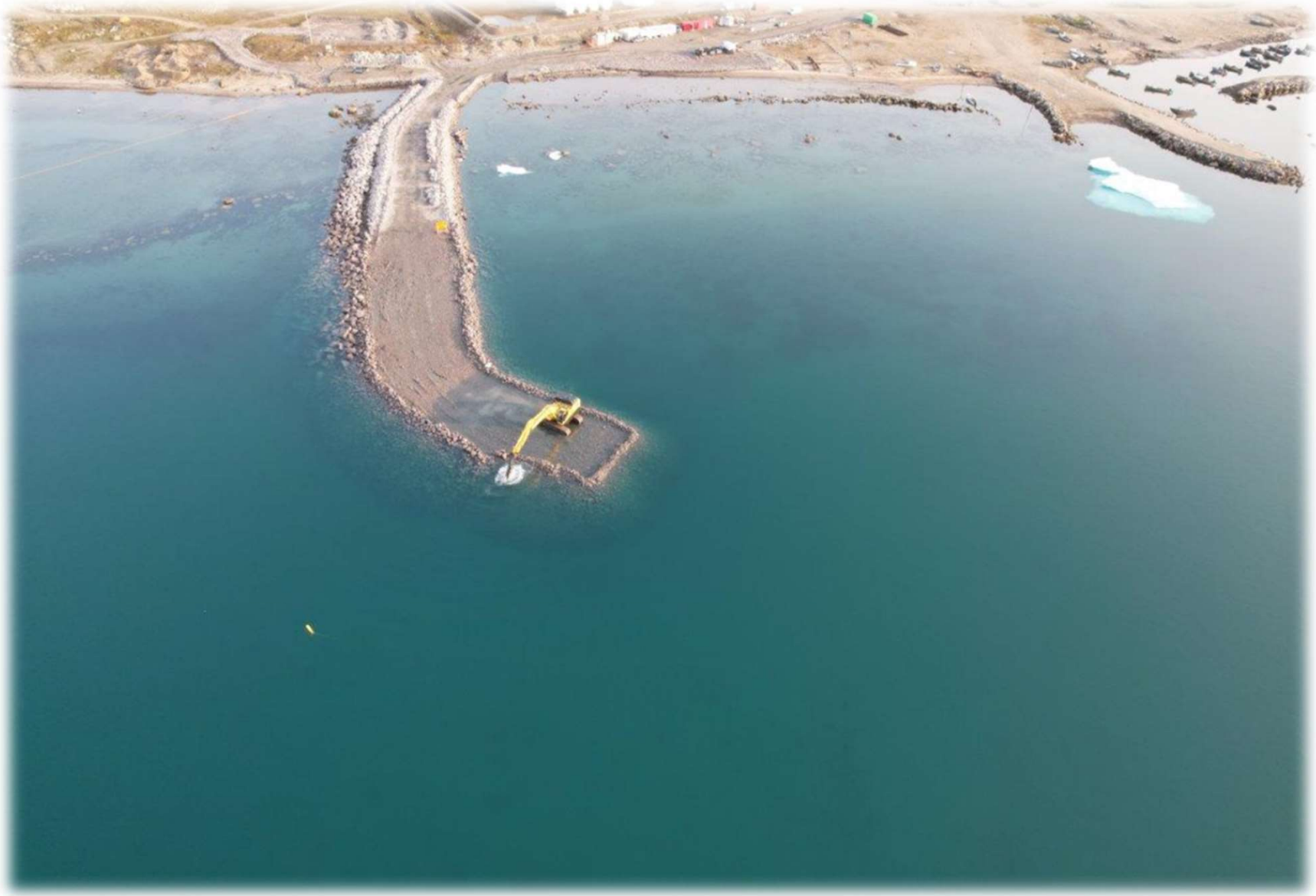
August 9, 2023

ᓂᒋᓂᓂ ᓴᐅᓗᑕᓪᓕᖅᑕᐅᓂᖓ, ᐊᖏᕈᓯ 12, 2023

Southwest Breakwater Construction

August 12, 2023

ᓂᒋᓂᓂ ᓴᐅᓗᑕᓪᓕᐊᖅᑕᐅᓂᖓ, ᐊᖏᕈᓯ 17, 2023



Southwest Breakwater Construction

August 17, 2023

ᓂᒋᓂᓂ ᓴᐅᓗᑕᐊᖅᑕᐅᓂᖏᓐᓄᑦ, ᐊᑦᒋᓯ 23, 2023

Southwest Breakwater Construction

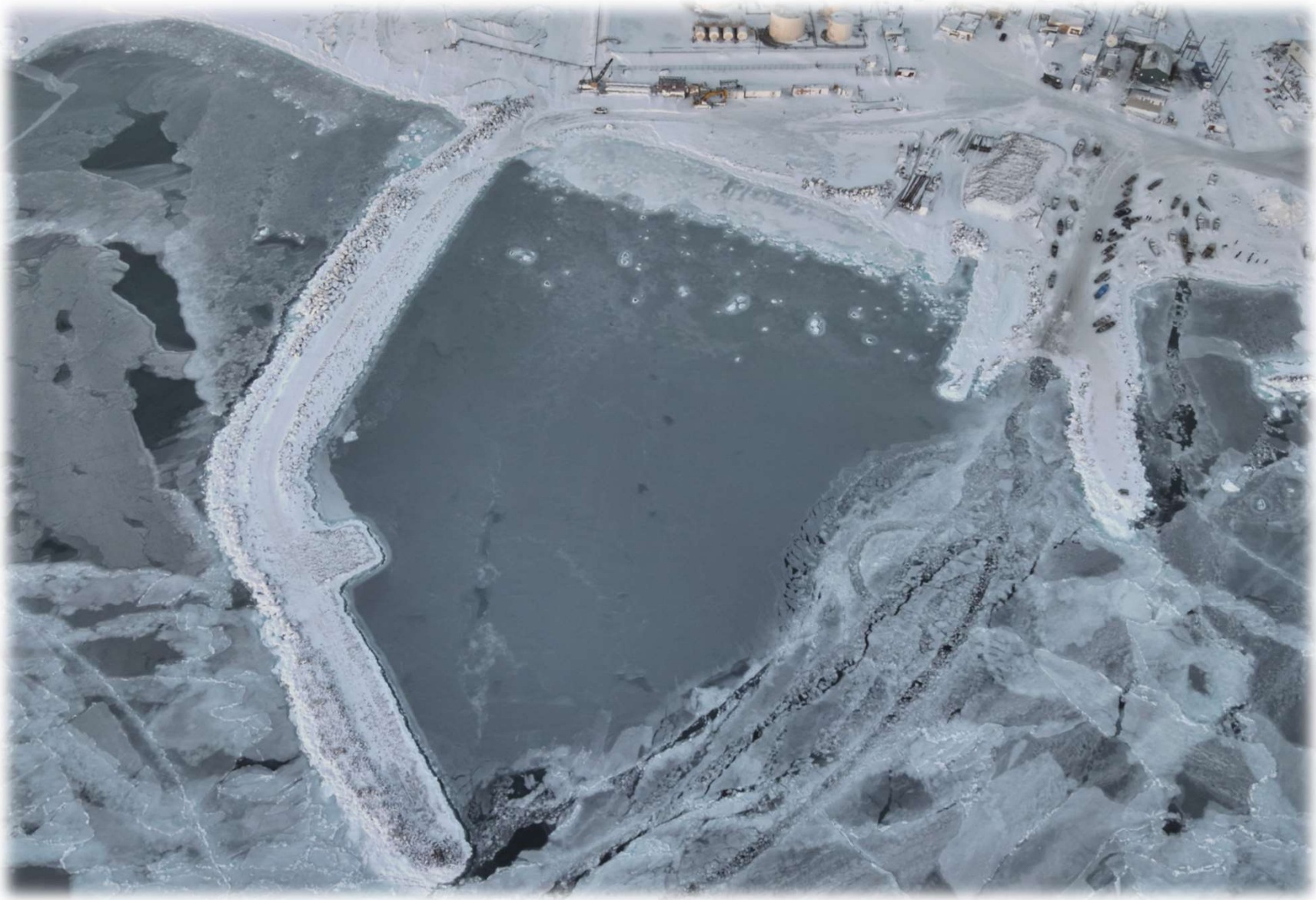
August 23, 2023

ᓂᒋᖅᓯᓂ ᓴᓐᓄᑕᒥᐊᖅᑕᐅᓂᖅ, ᓯᑎᐱᓗ 25, 2023

Southwest Breakwater Construction

September 25, 2023

ᓂᒋᓂᓂ ᓴᐅᓗᑕᐊᖅᑕᐅᓂᖓ, ᓄᕆᐱᒃ 20, 2023



Southwest Breakwater

November 20, 2023

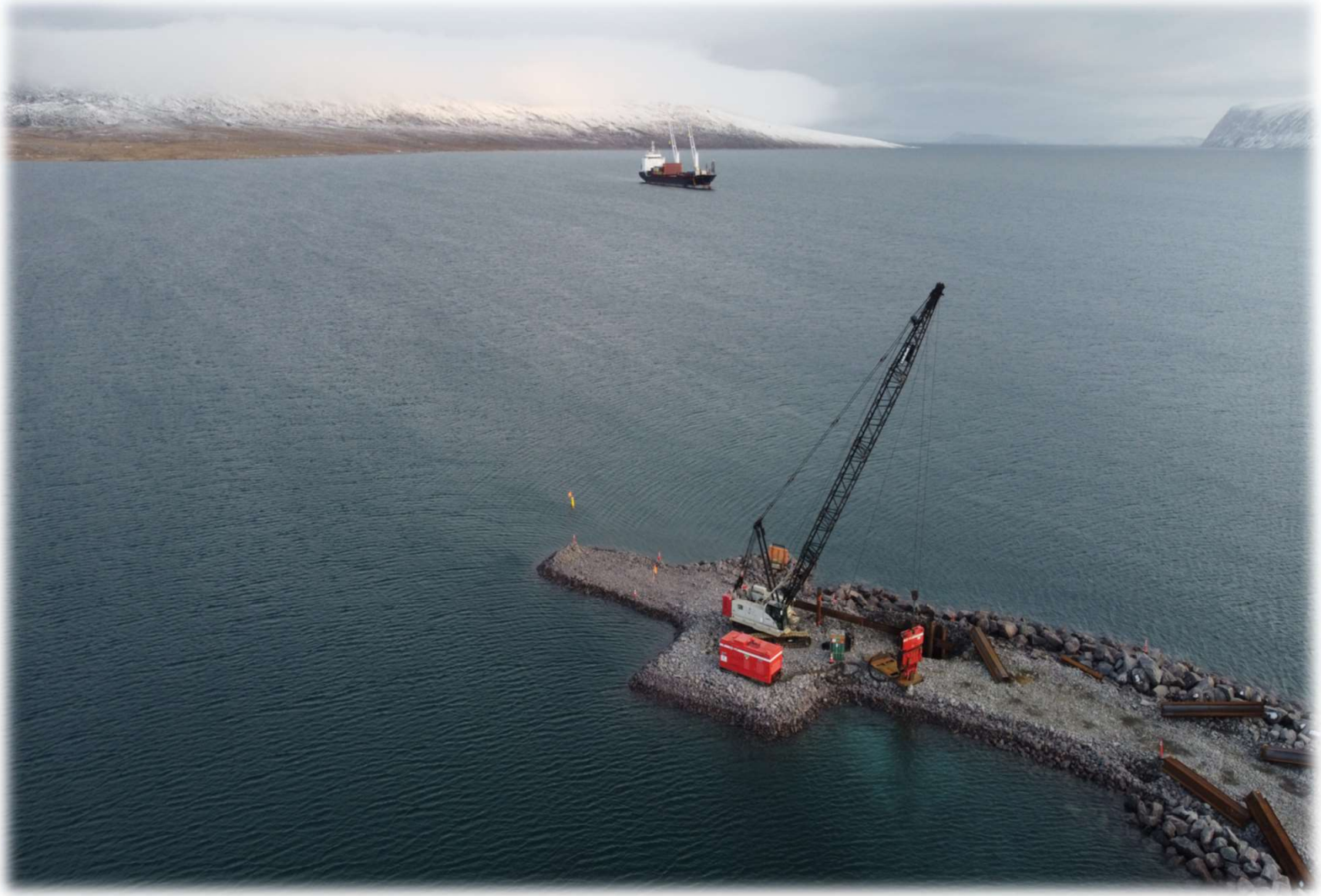
ᓄᑦᖃᖅ ᑭᓴᖅᓯᒪᓕᕆᔨ ᐅᒥᐊᓄᑦ ᐱᑐᕐᕆᔨᒃ ᐊᖅᑭᑦᑕᐅᓂᖏᓐ

New Mooring Bollard Installation

ᓄᒋᖅ ᑭᓴᖅᓭᒪᓕᕆᔨ ᐅᒥᐊᓄᑦ ᐱᑐᕐᓇᐅ ᐊᑎᖅᑭᑦᑕᐅᓂᖓᓪᓚᑦ

New Mooring Bollard

ᓴᖅᓯᓴᐃᑦ ᐊᑲᕐᓂᑦᑕᐅᓂᖏᑦ



Sheet Pile Installation

ᓴᐅᕐᓴᐃᑦ ᐊᑲᑭᓕᑕᐅᓂᖏᑦ

Sheet Pile Installation

ᖁᑲᕆᕆᓂᖅ

Dredging

ᐅᖃᐅᓯᓗᓴᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓴᓱᖅᑕᐅᔪᓪᓚ2023-ᒥ
2. ᐊᖃᖏᔪᑎᐅᓂ ᐱᓕᓗᓴᐅᓂᐊᖅᑐᑦ
3. ᓴᓇᓴᐅᔪᒪᓪᓗᑎᒃ ᕿᖃᓱᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓕᓂᓂᖅ
5. ᐊᐳᑎᒥᒃ ᓴᓕᔨᓯᒪᓇᓯᖏᓂᖅ
6. ᐃᖅᑲᓇᐃᓴᖅᓴᑦ ᐊᓱᒪᓗ ᐃᓕᖏᓂᐊᖅᑎᑦᑎᓂᖅ
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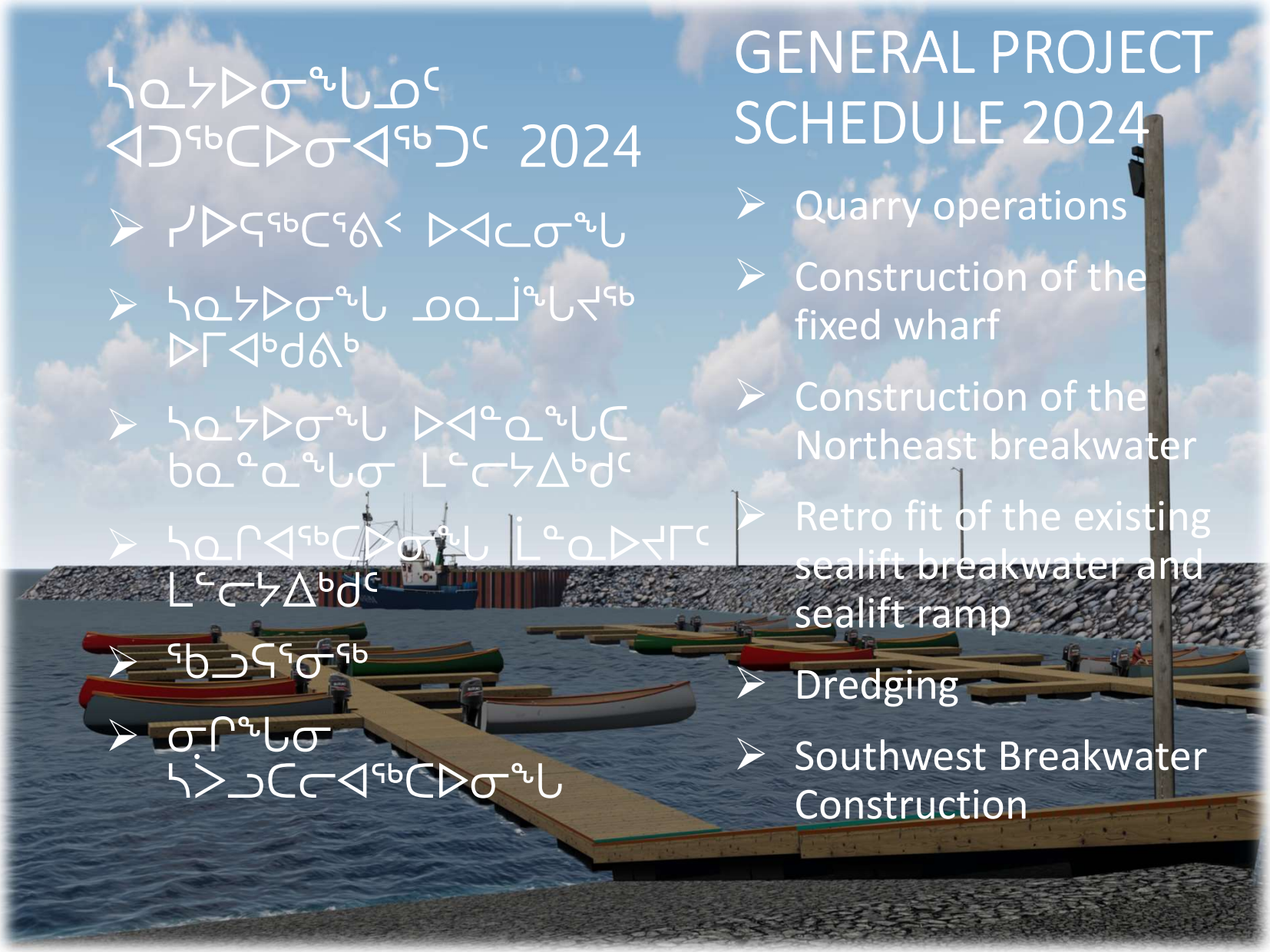


ᓴᓇᔨᐅᓂᖅᓯᓚᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ 2024

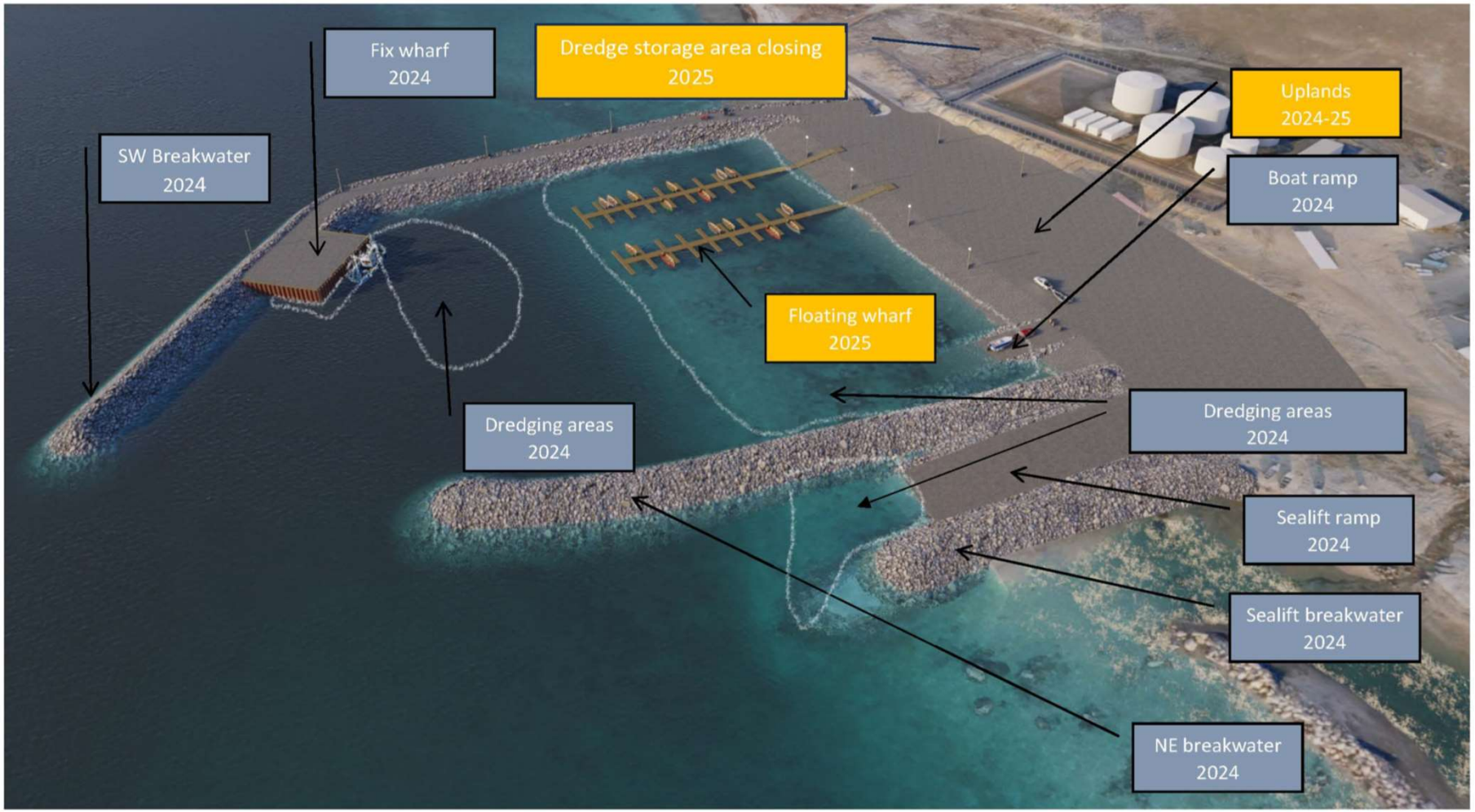
- ᓯᐅᕎᖅᑕᕐᓴᐸ ᐅᐊᓕᓂᖅᓯᒪ
- ᓴᓇᔨᐅᓂᖅᓯᒪ ᓄᓇᒧᖅᓯᒪᔪᖅ ᐅᒥᐊᵇᑯᓴᵇ
- ᓴᓇᔨᐅᓂᖅᓯᒪ ᐅᐊᵒᓇᖅᓯᒪᑕ ᑲᓇᵒᓇᖅᓯᓂ ᒪᑉᑕᔨᐃᵇᑯᑦ
- ᓴᓇᒋᐊᖅᑕᐅᓂᖅᓯᒪ ᐃᒪᵒᓇᐅᔪᒥᑦ ᒪᑉᑕᔨᐃᵇᑯᑦ
- ᖃᑲᑐᕕᓂᖅ
- ᓂᒋᖅᓯᓂ ᓴᐳᓗᑕᑕᐊᖅᑕᐅᓂᖅᓯᒪ

GENERAL PROJECT SCHEDULE 2024

- Quarry operations
- Construction of the fixed wharf
- Construction of the Northeast breakwater
- Retro fit of the existing sealift breakwater and sealift ramp
- Dredging
- Southwest Breakwater Construction

ᐱᓇᓴᐅᑎᑦᑕᐃᔪ ᐱᓕᕆᓂᖏᓐᓂ ᖃᖅᑐᐅᖅᓯᒪᔨᖅᑎᑦ

FIGURE 1: Yearly main construction activities at the harbour

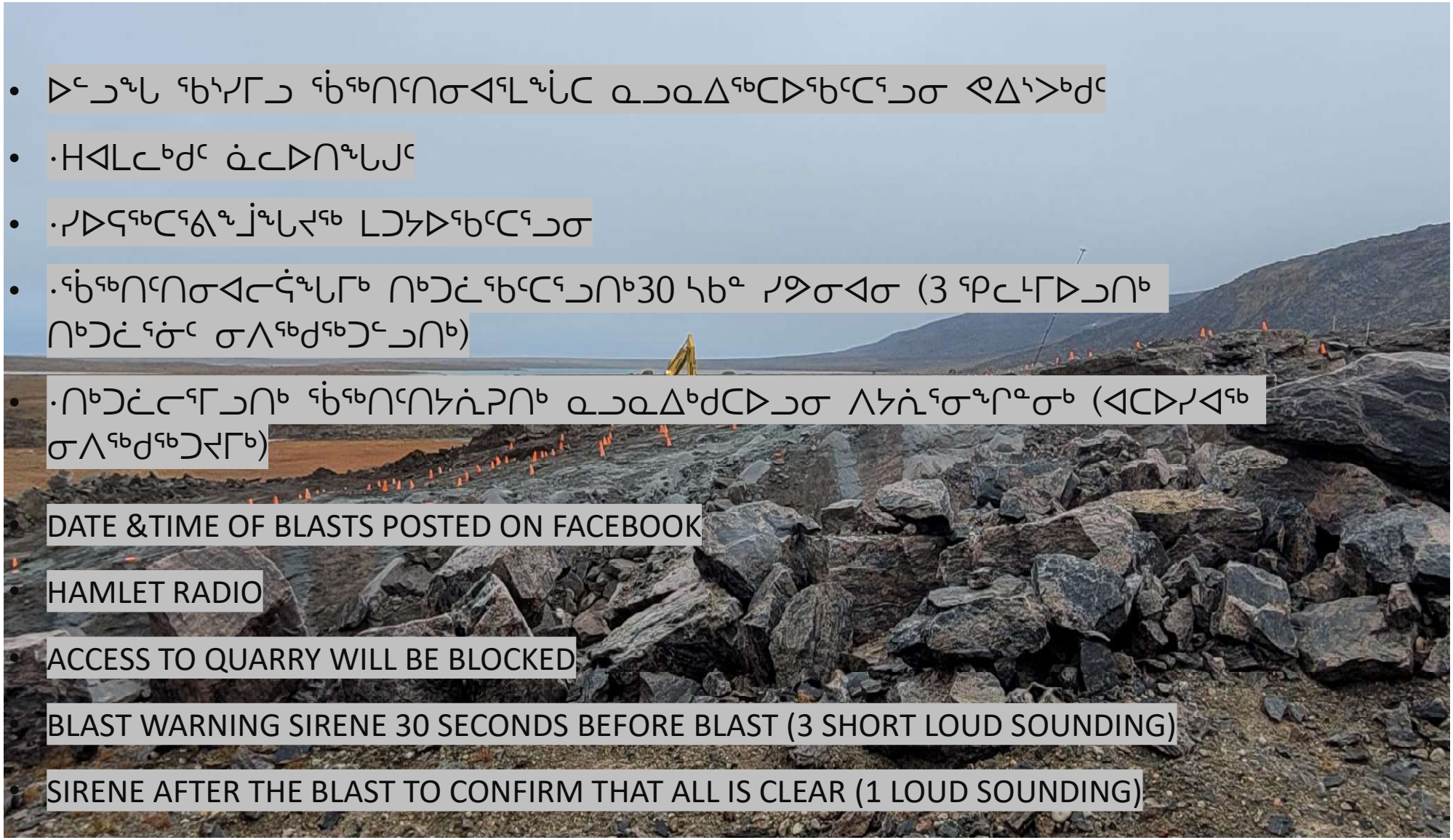


GENERAL PROJECT SCHEDULE

ᓱᐅᕐᖏᑕᕐᓇᖅ ᑐᐊᐸᓕᐅᕐᓇᐅᑦ ᐊᐅᓪᓂᖅᑕ 2024

Quarry operations 2024

ᖃᐅᖅᑎᑎᖅᑕᕐᓂᖅ
BLASTING



- ᐅᑦᓗᖏᓚ ᖃᓴᓯᒥᓗ ᖃᐅᖅᑎᑎᓂᐊᕐᓚᖏᓪᓕᑕ ᓇᓗᓇᐃᖅᑕᐅᖅᑕᕐᓗᓂ ᕿᐃᔭᐳᔪᑦ
- ·ᕼᐊᒪᒋᔪᑦ ᐃᓕᑐᐅᑎᖏᓚᔪᑦ
- ·ᓯᐅᕐᓂᖅᑕᕐᕆᖏᓚᓯᖅ ᒪᑐᐃᖅᑕᕐᓗᓂ
- ·ᖃᐅᖅᑎᑎᓂᐊᓕᕆᖏᓚᒃ ᑎᓴᒋᓚᖅᑕᕐᓗᑎᒃ30 ᓴᒃᓂ ᓯᕗᓂᐊᓂ (3 ᖁᓕᓚᒥᐅᓗᑎᒃ ᑎᓴᒋᓐᓂᑦ ᓂᐱᖅᔪᖅᑐᑦᓗᑎᒃ)
- ·ᑎᓴᒋᓕᓕᕐᒥᓗᑎᒃ ᖃᐅᖅᑎᑎᓂᐅᓰᕈᑎᒃ ᓇᓗᓇᐃᒃᔪᑕᐅᓗᓂ ᐱᓂᓰᕐᓂᖏᑭᒃ (ᐊᑕᐅᓯᐊᖅ ᓂᐱᖅᔪᖅᑐᔨᒥᒃ)
- DATE &TIME OF BLASTS POSTED ON FACEBOOK
- HAMLET RADIO
- ACCESS TO QUARRY WILL BE BLOCKED
- BLAST WARNING SIRENE 30 SECONDS BEFORE BLAST (3 SHORT LOUD SOUNDING)
- SIRENE AFTER THE BLAST TO CONFIRM THAT ALL IS CLEAR (1 LOUD SOUNDING)

ᐅᓴᖅᑲᓂᕐ ᐃᖃᓗᖅᓯᐊᑎᓄᑦ

Material Transportation

4300 truck loads were delivered to site in 2023

About 3500 truck loads will be delivered in 2024

ϧᓇᒃᐅᓂᖅ ᓄᓇᒧᖏᑦᑐᖅ ᐅᒥᐊᖅᑯᐊᕐ, ᖃᑎᐊᓂᑦᓯᔨᓂᐅᕙᓪᓕᖏᑦ ᖃᑎᖅᑕᓗᐊᓄᑦ

Fixed Wharf Construction Mid-June to Mid-August

50 ᓴᖅᓴᕆᐃᑦ ᐊᒃᑲᑭᑕᐅᓂᐊᖅᑐᑦ ᓴᓇᕐᐱᓇᔪᑦ ᐅᕆᕋᑎᐊᔪᑦ ᐱᒋᐊᕐᓗᓂ ᖁᑎᐊᓂ ᐅᓂᓂ ᑎᑎᐊᓂ ᖁᑎᐊᓄᑦ ᑎᑎᐊᓄᑦ ᐱᒋᐊᕐᓗᓂ ᓴᓇᕐᐱᓇᔪᑦ

Sheet Pile Installation for the fixed wharf

50 sheet piles to install with vibro-hammer from mid-June to mid-July

ϧᓇᓴᐅᓂᖅᓱᒃᑎᒍᖅᓯᒪᓕᒃ ᑲᓇᖅᓯᓂᖅᓯᓂᒃ ᓴᓇᖅᓇᖅᓱᓂᓂᓂᓗ ᒪᑉᑕᓴᐃᖅᑯᑦ
ᓄᖅᓱᖅᑭᖅᓂ ᔪᑎᓂᐅᑦ ᖃᐅᑎᐊᓄ ᔪᑕᐃ

Northeast Breakwater Construction

End of June to mid-July

ᓴᓇᒧᐊᖅᑕᐅᓂᖏᑦ ᐃᓐᓇᐅᔨᒥᑦ ᒪᑦᓀᓴᐃᓕᓐᓄᑦ ᐊᓪᒪ ᓄᑦᖅ ᐃᐃᒡᓘᓕᓕᖅ/ᑐᓕᖏᓘᓕᖅ ᓴᓇᔭᐅᓂᖏᑦ

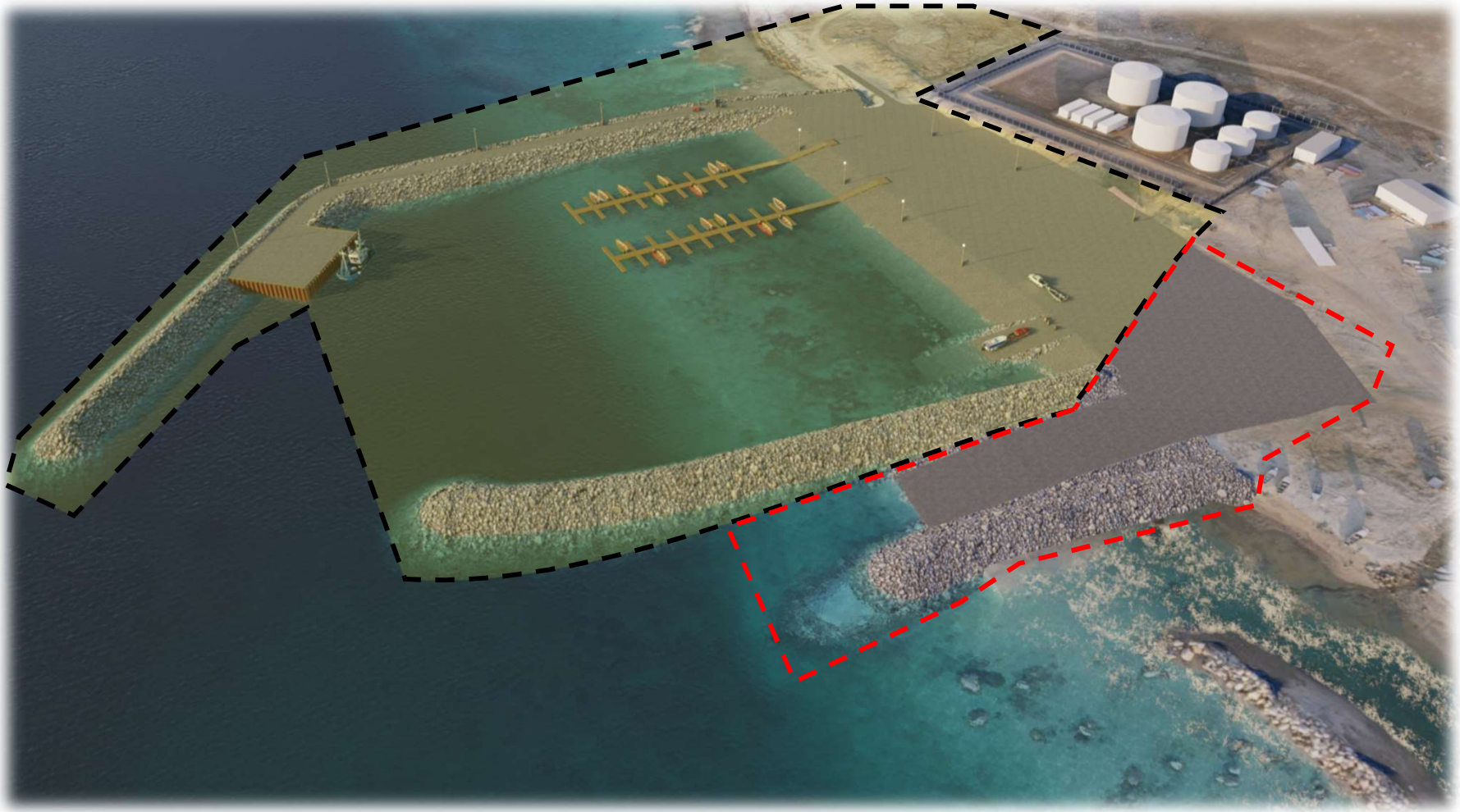
ᐃᓐᓇᐅᔨᒥᑦ ᐅᒥᐊᖅᔨᐊᑯᖅᑐᓄᑦ ᒪᑦᓀᖁᐃᓕᓐᓄᑦ ᓯᕐᑎᖅᑕᐅᓂᐊᖅᑐᖅ ᐊᓪᒪ ᓴᓇᔭᐅᓕᕆᓂᖅᓱᓄᓐ. ᑭᓕᑯᓂ ᐃᖅᓕᓇᐃᖁᖓᑎᑦᓯᑎᑦ (ᓄᖓᖏᓐᓂ ᐋᓂ ᑎᑭᑦᑐᒍ ᖃᑎᐊᓄ ᐋᓕᐃ), ᑐᓕᖏᓕᓕᖅ ᐊᓪᒪ ᒪᑦᓀᔭᐃᓕᓐᓄᑦ ᐅᐸᒐᔭᐅᖁᖏᑦᑐᑦ

Sealift Breakwater Retrofit & New Ramp Construction

The existing sealift breakwater will be demolished and reconstructed. During these works (end of June to mid-July), the ramp and the breakwater will not be accessible.

ᐅᐸᑦᑕᐅᒋᐊᖏᖅᓯᒋᑦᑐᑦ ᐊᓇᑎᑦᓗᒋᑦ

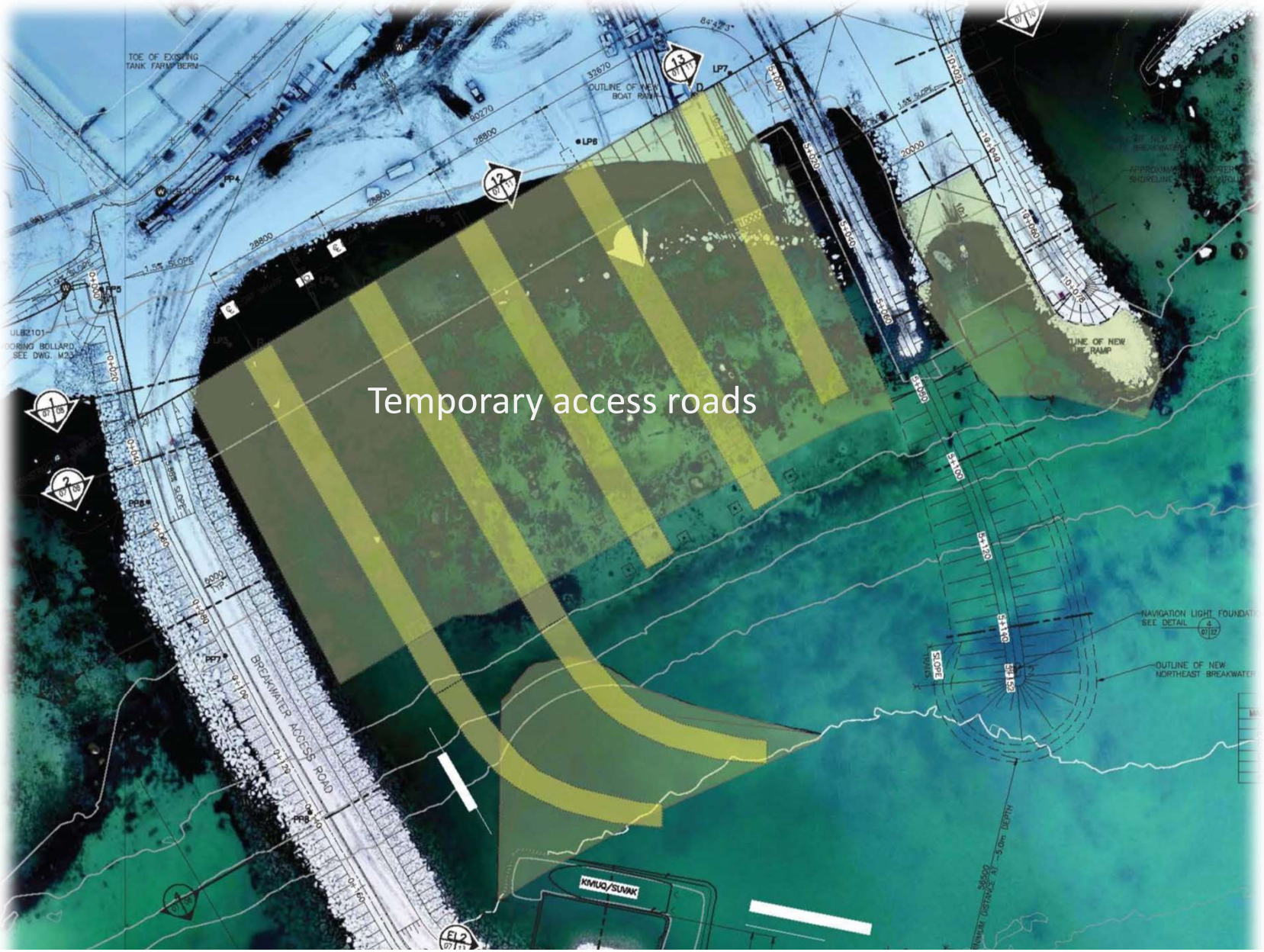
- - - ᐊᓇᓴᐅᔪᓂᑦ ᐅᐸᑦᑕᐅᒋᐊᖏᖅᓯᒋᑦᑐᑦ ᓇᒫᓂᖅᓱᖅ ᐃᓕᓴᐅᑎᖅ 1 : ᖃᑎᐊᓂ ᒪᐃ ᑎᑭᑦᓗᒍ ᓄᖓᓯᖅᓄᑦ ᐅᑐᐁᐱᓪ
- - - ᐊᓇᓴᐅᔪᓂᑦ ᐅᐸᑦᑕᐅᒋᐊᖏᖅᓯᒋᑦᑐᑦ ᓇᒫᓂᖅᓱᖅ ᐃᓕᓴᐅᑎᖅ 2: ᖃᑎᐊᓂ ᔪᓂ ᑎᑭᑦᓗᒍ ᖃᑎᐊᓄ ᔪᓚᐃ



Restricted Areas During Construction

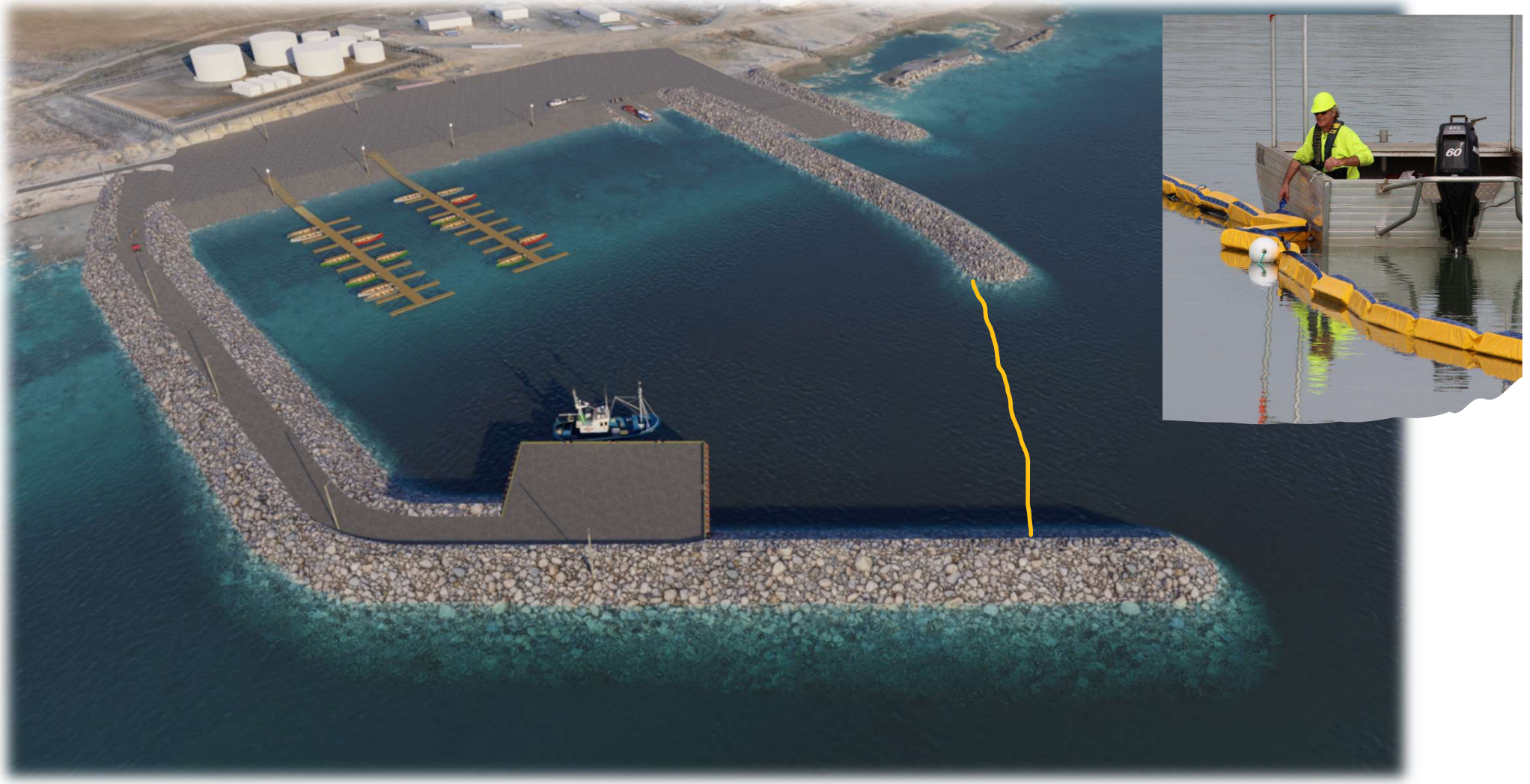
- - - - Construction restrited area no.1 : Mid-May to end of October
- - - - Construction restricted area no.2: Mid-June to Mid-July

ᖃᐅᑎᖑᓂᖅ -ᓄᖅᖢᖁᓕᓂᓂᓗ ᐊᓪᓚᐃ ᑎᑭᓪᓗᒍ ᖃᑎᐊᓄᓄᑦ ᓯᑎᐱᒃ



Dredging – End of July to mid-September

ᐃᓱᓗᐊᖅᐃᐅᑯᑎᖓᓕᒃ ᐊᑲᕈᓕᑕᐅᓂᖓᓕᒃ ᖃᐅᓗᖁᓂᖃᖅᑎᖅᓴᓗᒃ

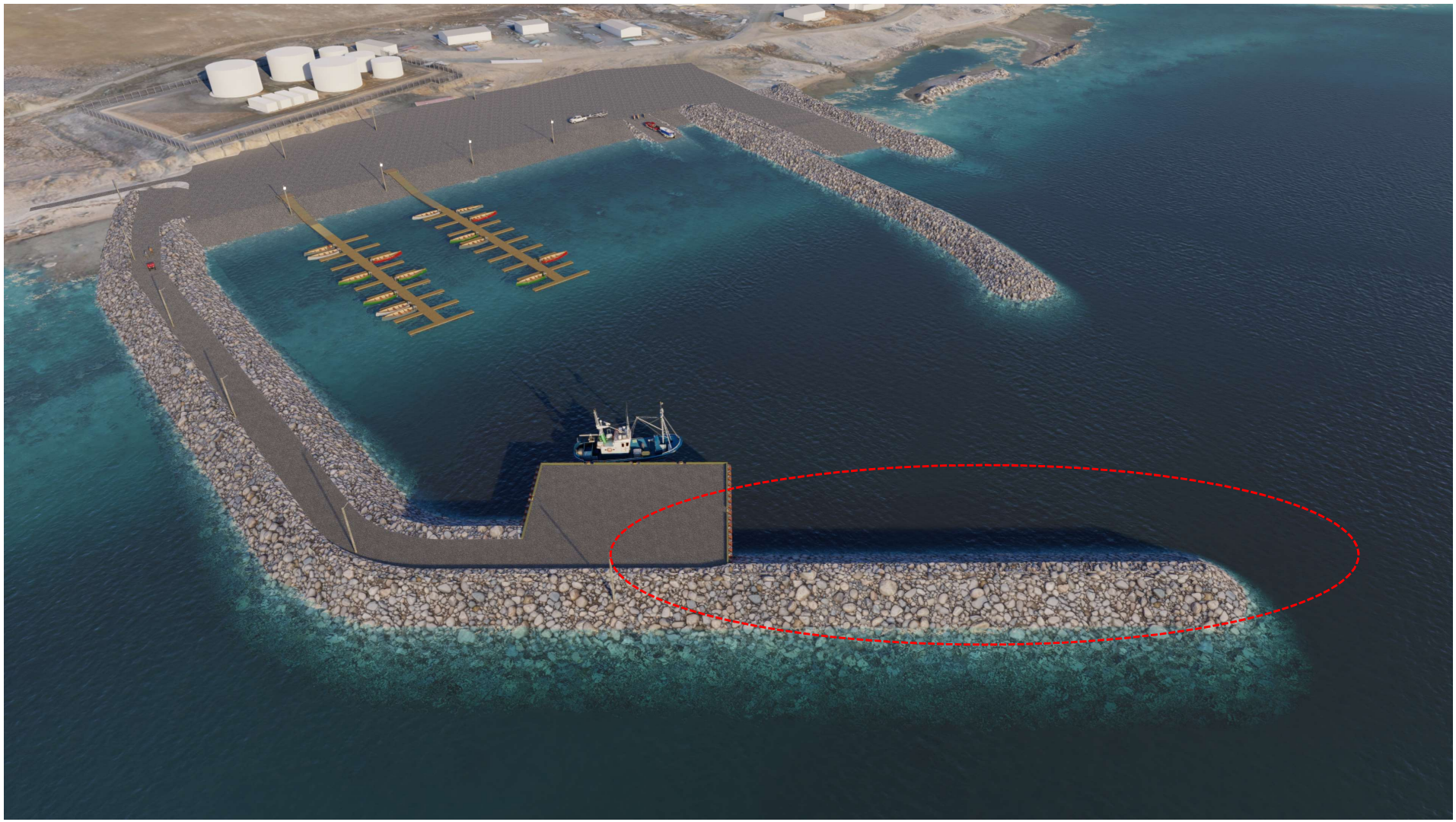


Turbidity curtains installation during dredging

ᖃᓄᕐᖃᑕᐅᓱᒪᔪᑦ ᐃᒋᑕᐅᔨᓄᑦ ᓇᒡᓂᓐᓴᖅ – ᖃᑎᐊᓂ ᔨᓪᓗᐃ ᑎᑭᑦᓄᒍ ᓄᓇᖅᑭᓂᓄᑦ ᓱᑎᐱᖅ

Dredged material disposal area – Mid-July to end of September

ᓂᒋᖏᓂ ᓴᐅᓗᑕᐊᖅᑕᐅᓂᖏᓐ ᓯᑎᐱᓗᒃ–ᐅᑐᐱᓗᒃ
ᓯᑎᐱᓗᒃ - ᐅᑐᐱᓗᒃ



Southwest Breakwater Construction September - October

TRAFFIC CONTROL

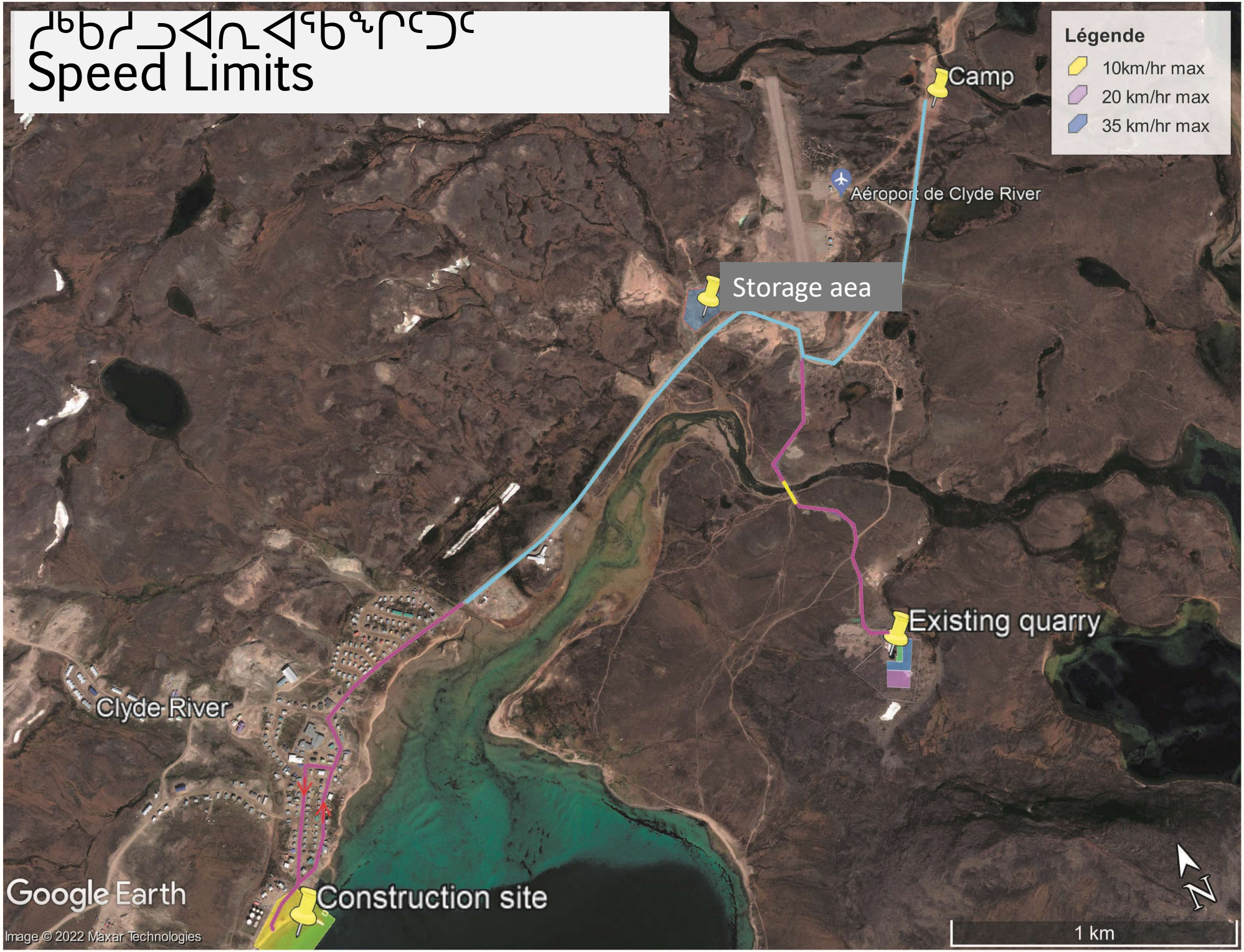
- Speed limits
- Road signage
- Barricades
- Escort for trucks
- Signalers
- Restricted areas
- Collaboration of everyone

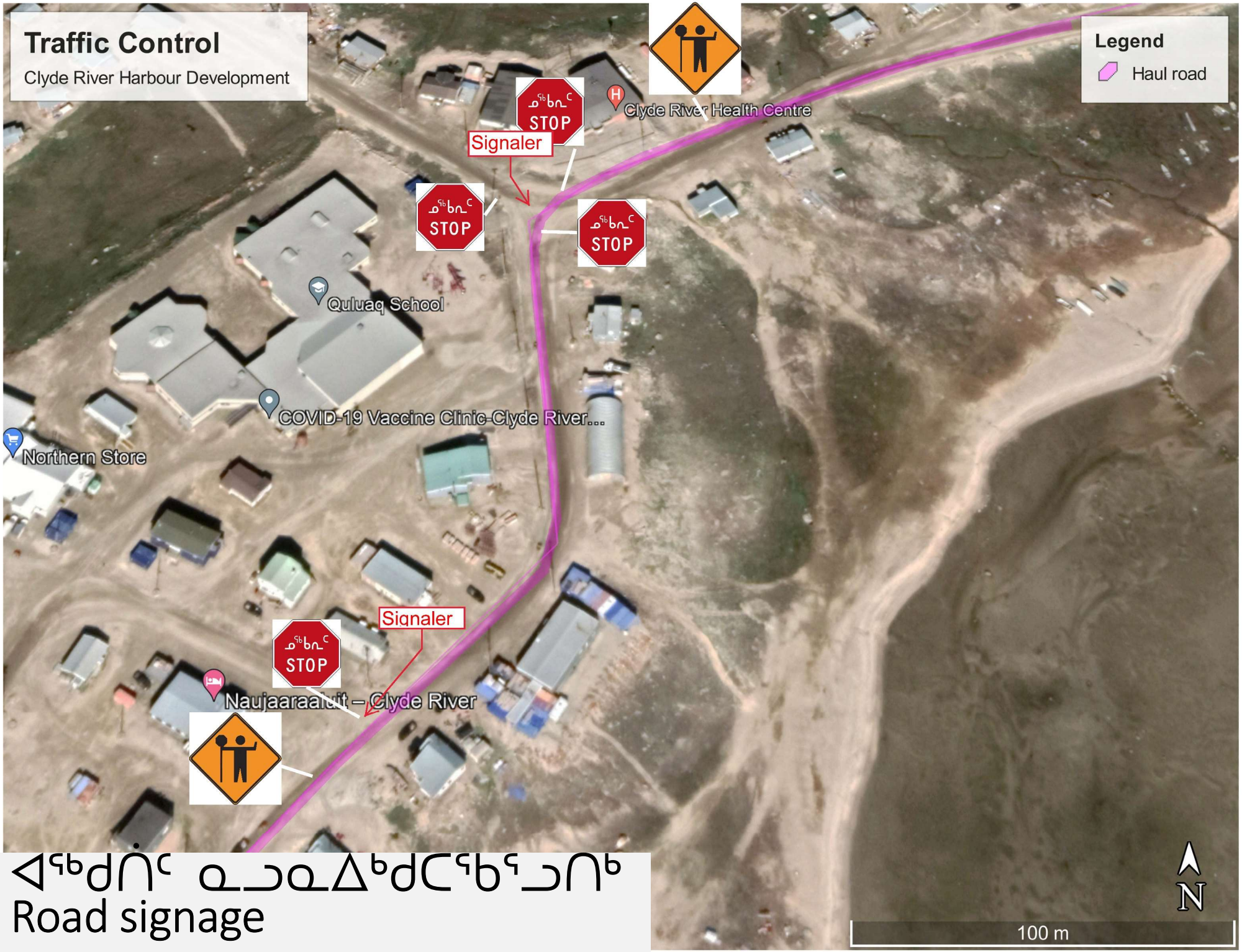
ᐅᖏᓚᒧᕆᓂᖅᑎᓂᒃᓄᑦ ᐊᐅᓪᓗᑎᒃᑐᖅ

- ᓯᒃᑯᓗᐊᕆᐊᖃᖅᖏᑦᑐᑦ
- ᐊᖅᑯᑎᑦ ᓇᓗᓇᐃᒃᑯᑕᖃᖅᓗᓂᒃ
- ᐃᖏᑦᕿᕆᐅᑦᑕᐃᓕᕐᓂᑦ
- ᓄᓇᒃᑯᑭᑎᑦ ᒪᓕᒃᑕᐅᖅᑲᑦᑕᕐᓗᓂᒃ
- ᓇᓗᓇᐃᖅᓯᔨᑦ ᑎᒍᒥᐊᖅᑎᐅᕐᓂᑦ
- ᐃᓯᕿᓕᖏᐅᓗᐊᖅᑕᐃᓕᕐᓂᑦ
- ᐱᓕᕆᖅᑎᑭᒃᑐᐃᐅᓇᐅᓗᑕ

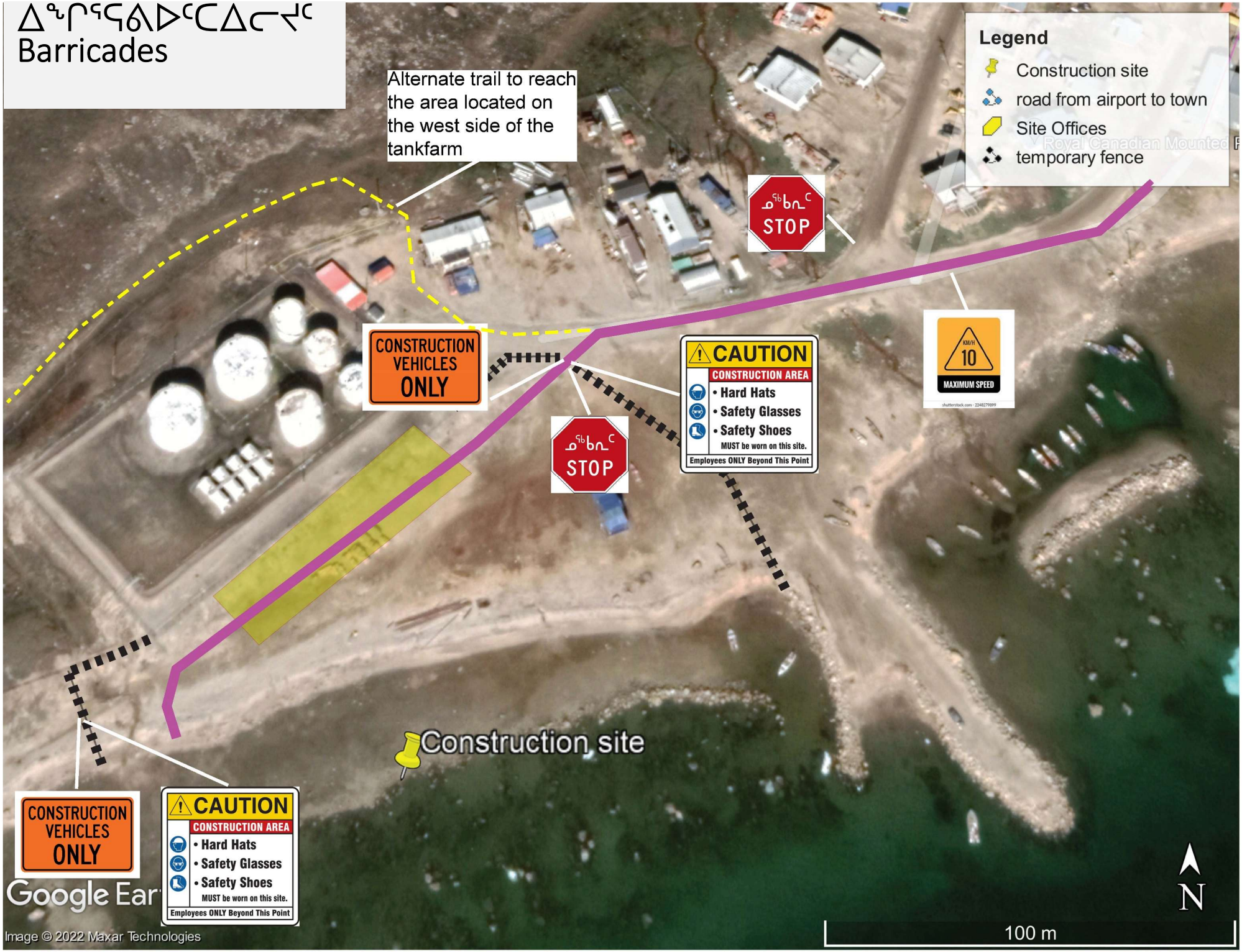
ᐅᖏᒪᒧᖅᓂᖏᓐᓄᑦ ᐊᐅᓪᓚᓂᖅ
Traffic Control Plan

ᓴᖅᑲᓪᓕᐊᕐᓂᖅᓯᒪᔪᑦ
Speed Limits





ᐊᖅᑯᑎᑦ ᓇᓗᓇᐃᒃᑯᑕᖅᑎᓗᑎᒃ
Road signage


ᐃᖃᓗᖅᑲᐅᑎᑕᐃᓕᓴᐅᑦ
Barricades
Alternate trail to reach the area located on the west side of the tankfarm
Legend
Construction site
road from airport to town
Site Offices
temporary fence
ᓂᒃᑲᓕᑦ
STOP
CONSTRUCTION VEHICLES ONLY
CAUTION
CONSTRUCTION AREA
• Hard Hats
• Safety Glasses
• Safety Shoes
MUST be worn on this site.
Employees ONLY Beyond This Point
KM/H
10
MAXIMUM SPEED
Construction site
Google Earth
Image © 2022 Maxar Technologies
N
100 m

Road maintenance
ᐊᖏძᑎᑦ ᑲᒪᒋᔭᐅᓂᖅᑎᑦ

- ᐳᓴᓗᐊᖅᐃᵇძᑎᓕᖏᑕᐅᓀᓗᓂᓂ ᖏᐅᔪᓕᖏᑕᐅᖏᑦᑕᕐᓗᓂᓗ
- ᐊᖏძᑎ ᖏᐅᐅᓴᖏᑕᐅᖏᑦᑕᕐᓗᓂ
- ᐊᖏძᑎ ᒪᓂᖏᑭᖏᑕᐅᖅᐃᐧᓇᕐᓗᓂ ᓴᓇᔭᐅᒋᐊᖏᑦᑕᕐᓗᓂᓗ

- Dust control with calcium chloride and water
- Road inspection
- Frequent road grading and repairs

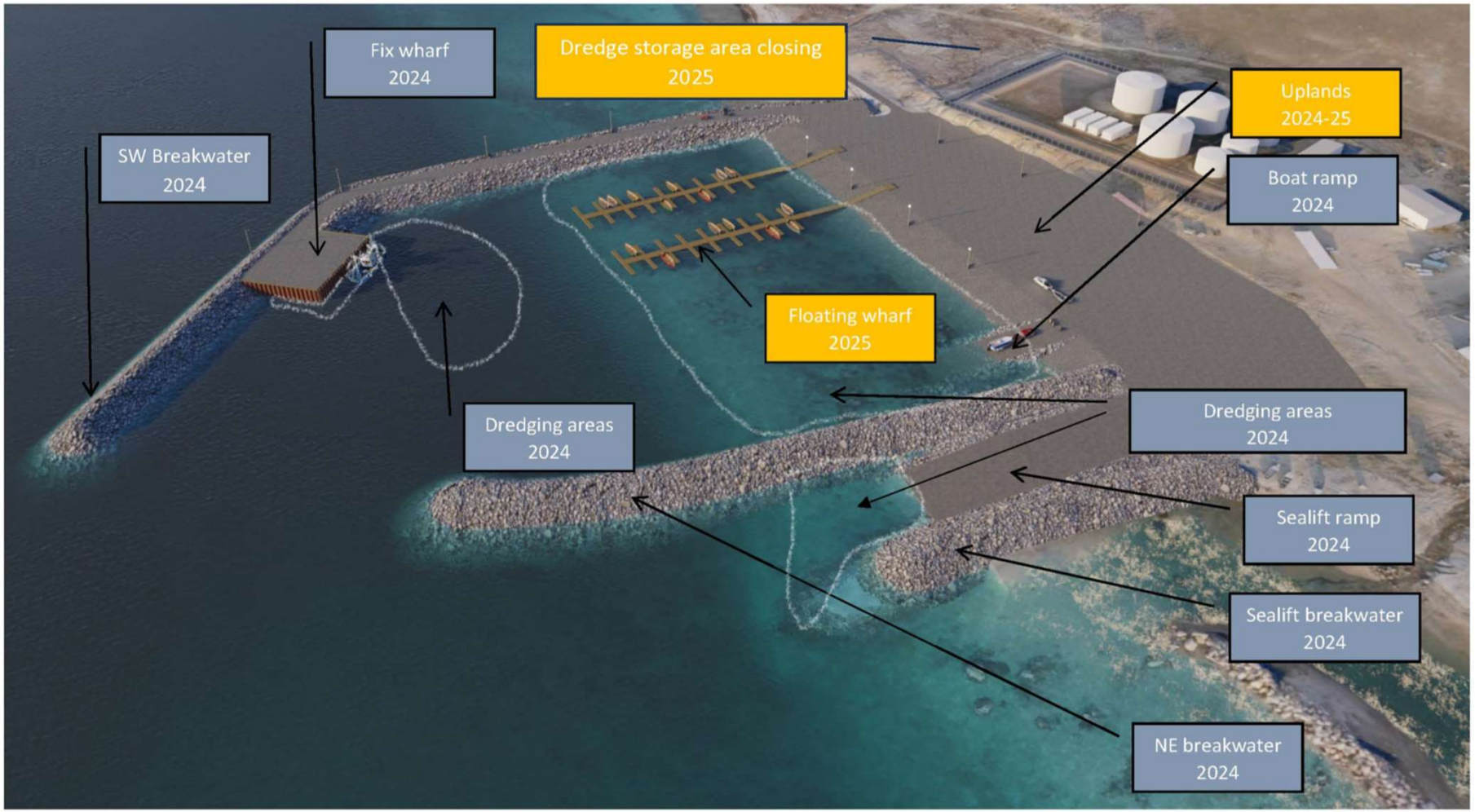
ᐅᖃᐅᓯᓗᓴᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓴᓱᖅᑕᐅᔪᓪᓚ2023-ᒥ
2. ᐊᖏᔪᒍᑎᓐᓂ ᐱᓕᓗᓴᐅᓂᐊᖅᑐᑦ
3. ᓴᓇᓴᐅᔪᒪᓪᓗᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓕᓕᓂᖅ
5. ᐊᕐᑎᑎᒥᒃ ᓴᓕᓴᓯᒪᓇᓯᓐᓂᖅ
6. ᐃᖅᑲᓇᐃᓴᒃᓴᑦ ᐊᓱᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
2. Work planned for this year
3. Work planned for 2025
4. Safety
5. Environment protection
6. Employment opportunities & training
7. Questions

ᐱᓇᓴᐅᑎᑦᑕᔪ ᐱᓕᕆᓂᖏᑦ ᖃᖅᑐᐅᖅᓯᒪᔨᑦ 2025

FIGURE 1: Yearly main construction activities at the harbour



GENERAL PROJECT SCHEDULE 2025

ᐅᖃᐅᓯᓗᓕᕆᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓕᕆᖅᑕᐅᔪᓂ2023-ᒥ
2. ᐊᖏᔪᒍᑎᓐᓂ ᐱᓪᓗᓕᐅᓂᐊᖅᑐᑦ
3. ᓴᓇᓕᐅᔪᒪᓐᓇᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓕᓪᓂᖅ
5. ᐊᐳᑎᒥᒃ ᓴᓕᓴᓯᒪᓇᓯᓐᓂᖅ
6. ᐃᖅᑲᓇᐃᓐᖏᓴᑦ ᐊᓱᒪᓇ ᐃᓪᓐᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
2. Work planned for this year
3. Work planned for 2025
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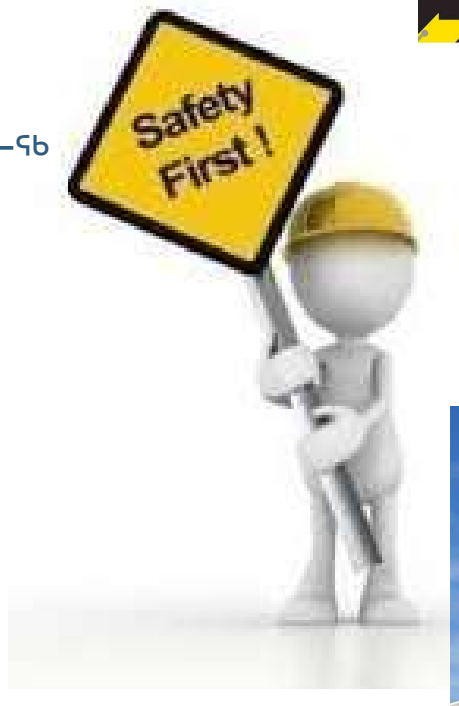
6. Employment opportunities & training
7. Questions

ᐊᐢᓂᐊᖏᓐᓄᑦᑐᓂᒃᓂᕐᒧᑦ ᐊᑦᑕᓐᓇᖅᑕᐃᓕᓂᕐᒧᑦᓗ ᐸᓐᓇᐅᑎ
Health and Safety Plan

- ᐸᓐᓇᐅᑎᐅᕐᖏᖅ ᐃᖅᑲᓇᐃᔪᖏᖅᑎᓄᑦ ᓴᓪᒥᒃᔪᒍᑎᐅᑦᓗᓂᒃ
- ᓴᓇᖕᑭᑎᖏᑲᐅᑎᓄᑦ ᑲᑎᒪᖏᑦᑕᖏᓂᖅ
- ᐊᑦᑕᓇᖅᑕᐃᓕᓂᕐᒧᑦ ᑲᑎᒪᖏᑦᑕᖏᓪᓗᑎᒃ
- ᑲᑐᔪᓗᑎᒃ ᐊᑦᑕᓇᖅᑕᐃᓕᓂᕐᒧᑦ ᑲᑎᒪᔪᖃᑦᑐᑦ ᐊᐢᓂᐊᖏᓐᓄᑦᑐᓂᕐᒪᑕᕐᓂᒃᓗ ᑲᑎᒪᖏᑦᑕᖏᓂᖅ
- ᐅᓗᓚᐊᓇᖅᑕᐃᓕᓂᕐᒧᑦ ᐃᓕᓴᐅᓂᐊᖅᑎᓂᖅ



- Health and Safety Plan for workers
- Tool Box meetings
- General Health and safety meetings
- Joint Health & Safety committee meetings
- Safety trainings

ᐃᑲᔪᖅᑎᒍᑦ ᐊᑦᑕᓇᖅᑐᒋᑎᑦᑎᑦᑕᐃᓕᓴᖅᑕᐅᓗᑎᑦ

Help us to keep everyone safe

ᑲᑐᔪᓂᑎᒃ ᐊᒃᑕᓇᖅᑕᐃᓕᓕᓂᔪᓐᓇᖅ ᐋᓐᓂᐊᖅᑐᓇᖅᑎᑦᑕᓕᕆᓂᔪᓐᓇᖅ ᑲᑎᒪᔨᖅ

Joint Health and Safety Committee Meeting

- ᐱᖓᓱᐊᖅᑎ ᑲᑎᒪᖅᑕᕐᓂᐊᖅᑐᑦ ᐊᐅᔪᖅ
- ᓵᓂᐅᕼ ᓄᕐᖓᐊᓂ, ᕿᓕᐃ ᐊᒻᒪᓗ ᐊᖏᓴ
- ᐊᑕᐅᓴᖅᓄᓇᓕᖅᓂᖓᓐᓂᔪᓐᓗ
- ᐊᑕᐅᓴᖅᑕᕐᕝᕙᓂ ᐃᖅᑲᓇᐃᔪᖅᑐᖅ
- ᐊᑕᐅᓴᖅᓄᓇᓕᖅᓂᖓᓐᓂᔪᖅᑎᑦᑐᖅ ᐃᖅᑲᓇᐃᔪᖅᑎ
- ᐋᓐᓂᐊᖅᑐᓇᖅᑎᑦᑕᓕᕆᓂᔪᓐᓇᖅ ᐊᑕᓇᖅᑕᐃᓕᓕᓂᔪᓐᓇᖅᓗ ᖃᐅᔨᓴᖅᑎ ᕿᓚᓇᐃᐅᕐᒥ ᐃᓱᒪᑕᖅ
- ᓴᓇᐃᐅᕐᒥ ᐃᓱᒪᑕᖅ

ᐃᑲᔪᖅᑎᔪᑦ ᐊᑦᑕᓕᖅᑐᒋᑎᑦᑎᓯᓇᒃᑕ

Help us to keep everyone safe

- 3 meetings during the summer
- End of June, July, and August
- 1 member of the community
- 1 local worker
- 1 non-local worker
- The health and safety officer
- The site superintendant

ᐅᖃᐅᓯᓗᓴᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓴᓱᖅᑕᐅᔪᓪᓚ2023-ᒥ
2. ᐊᖏᔪᒍᑎᓐᓂ ᐱᓕᓗᓴᐅᓂᐊᖅᑐᑦ
3. ᕿᓐᓴᐅᔪᒪᓪᓗᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓐᖅᑕᑐᑦᑕᐃᓕᓂᓂᖅ
5. ᐊᕐᑎᑎᒥᒃ ᕿᓂᓴᓯᒪᓐᓯᓐᓂᖅ
6. ᐃᖅᑲᓐᐃᓱᒃᖏᑦ ᐊᓚᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
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3. Work planned for 2025
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ᐱᓇᑎᓵᒍᓂ ᐊᐢᑭᑎᒥᒃ ᑲᒪᓂᑎᐊᕐᓂᖅ

CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

- ᐱᓂᕐᓄᓂ ᒪᕐᓗძᓄᓂ ᑲᒪᒋᐊᑎᒋᓂᕐᓂᐊᖅᑕᖏᓐᓄᑦ
- ᐃᒪᕐᒧᑦ ᒪᓕᖏᓄᓪᓗ ᓄᖓᔪᓪᓕᐊᔪᑦ ᓯᐅᕐᐃᓪᓗ ᓅᔪᓪᓕᐊᔪᑦ ᑲᒪᒋᐳᐅᓇᓯᖏᓪᓕᒋᑦ
- ძᕆᑦᑕᐃᓕᓂᓂᖅ ᐊᒻᒪᓗ ᓇᓪᓕᐅᑉᐹᑦᑲᒪᖏᓪᓕᒋᑦ
- ᐃᖏᕐᕋᖅᔪᑎᓂ ᑲᒪᖅᔪᑎᖏᓪᓕᒋᑦ
- ᐃᐃᓂ ᐱᓇᑎᓵᒍᓂ ᐊᐅᓪᓕᐊᑎᒃᑲᓂ
- ᐅᒪᔪᓂᑐ ᐅᖅᓴᖅᓯᐊᕐᑲᕐᓂᖅ
- ᓯᐅᕐᖅᑕᕐᓂᕐᒧᑦ ᑐᐊᕐᑲᓄᓪᓗ ᐱᓕᓪᓕᐊᓂᖏᓐᓄᑦ
- ᑐᐱᐅᒪᑎᕐᑎᓂᕐᒧᑦ ᕿᕐᓇᐅᑎ

- Waste Management Plan
- Erosion and Sediment Control Plan
- Spill Prevention and Contingency Plan
- Traffic Control Plan
- Marine Construction Management Plan
- Wildlife Monitoring Plan
- Quarry Development Plan
- Communication Plan

ᓴᓂᔨᒪᓕᕐᓗᑯᔨᓗᓂᓗ ᑲᒪᑎᓱᐊᑎᑎᕋᖅᑕᕐᓂᐅᓴᖅᑕᖅᓯᒪᔪ
Waste Management Plan

- ᐅᓗᓕᐊᓇᑭᓇᖅᑐᑦ ᓴᓂᓪ ᒪᕐᓗᑯᓪᓗ ᑲᑎᖅᓯᖅᑕᐅᓂᖅᑎᑦ ᐊᑲᖅᑕᐅᓂᖅᑎᓪᓗ ᐱᓕᓕᐃᑎᕐᐅᑉᐊᓪ ᐊᓯᐊᓂ
- ᓴᓂᖅᑲᓗᐊᖅᑕᐃᓕᓂᓂᖅ
- ᐊᑐᑲᖅᓂᖅᑎᑦᑎᖅᑕᕐᓂᖅ
- ᓴᓂᕐᓂᖅ ᐊᑲᓴᖏᓐᓄᓕᕆᑎᐊᖅᑲᕐᓂᖅ ᓄᓇᓕᐅᑉᐊᓪ ᐊᑲᓴᖏᓚᓂ/ᐊᑲᕐᓴᖏᓚᓂ

- Hazardous waste collection and off-site disposal
- Waste reduction
- Material Reuse
- Proper waste disposal at the local solid waste facility

ᓄᖅᑎᖅᑐᓂ ᐊᒪᒃ ᐃᖅᑲᖅᓱᓄ ᐊᐅᓪᓚᐅᓂᖅᓱᓄ ᓯᖏᐅᑦ

Erosion and Sediment Control plan

- Prevent erosion during the construction activities
- Prevent sedimentation of fine material into waterbodies
- Using silt fences and other protection devices
- Turbidity monitoring

- ᓄᖅᑎᖅᑎᑦᓚᐃᓪᓚᓂᓂᖅ ᐱᖏᐅᔨᓂᑦ ᐱᓪᓕᓂᖅᑲᖅᑎᑦᓗᒋᑦ
- ᐃᖅᑲᖅᓱᐃᓵᖅᑎᑎᑦᓚᐃᓪᓂᖅ ᐃᒪᖏᓄᑦ
- ᐊᑐᖏᖅ ᒪᖏᖅ ᐊᓀᓄᖅᒋᓐᓂ ᐊᒪᒪ ᐊᓯᖅᒋᑦ ᐱᓵᒥᑎᔨᐸᑦ
- ᐃᓯᖏᓂᖅᓱᓂ ᖁᐅᓕᐱᖁᑦᓚᖏᓂᖅ

Erosion and Sediment Control

ᓄᖓᑎᖅᑐᓂ ᐊᒻᒪ ᐃᖅᑲᖅᓯᓗᓄ ᐊᐅᓪᓚᑕᐅᓂᖅᓯᓗᓄ ᓯᖁᐅᑦ

ᑯᕆᑕᐃᓕᓂᖅᐊᓚᓗ ᓇᓪᓕᐊᒃᑯᒧᖅᑕᑎᒃᓴᖅᓯᓂ

Spill Prevention and Contingency Plan

- ᑯᕆᑕᐃᓕᓂᖅ
- ᐱᓕᓀᓲᕈᑎᑦ ᓴᓇᖅᑭᑎᓪᓗ <<ᑐᖅᑕᖅᑎᐊᖅᓂᖏᑦ
- ᑭᓂᖅᑐᒥᒃ ᐊᕐᑎᒍᒧᑦ ᐊᑦᑕᓇᖏᓐᓂᖅᓴᒥᒃ ᐊᑐᖅᓂᖅ ᐃᒪᓂ ᐱᓕᓀᓲᕈᑕᐅᖏᓂᖅᑐᓄᑦ
- ᐅᖅᓴᓴᖅᑕᐅᑎᐊᖅᑲᑦᑕᖅᓂᖏᑦ ᐱᓕᓀᓲᕈᑎᑦ ᓴᓇᖅᑭᑎᓪᓗ
- ᑐᐊᐃᖅᓇᖅᑐᖅᑲᓕᖅᐸᑦ ᐊᑐᖅᑐᓴᑦ ᑯᐃᕐᖅᑲᑦᑕᖏᓂᖅᐸᑦ
- ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᖅ

- Spill prevention
- Proper maintenance of equipment
- Use of biodegradable oil for equipment to work in water
- Proper equipment refueling
- Emergency procedures in case of spill
- Training

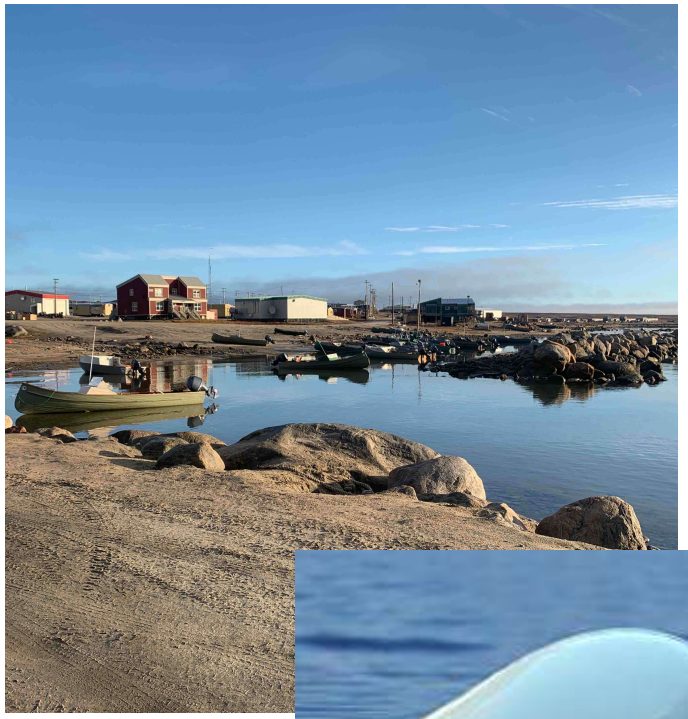
ᑯᕕᑦᑕᐃᓕᓂᖅᐸᒻᒪᓕᒐ ᓄᓪᓕᐊᑲᑎᒪᓕᖅᐹᑎᓴᖅ

Spill Prevention and Contingency Plan

ᐃᒧᓂ ᓴᖏᑎᓪᓗᑎᑦ ᐊᐅᓪᓚᕆᑎᑲᓴᑦ
Marine Construction Management Plan

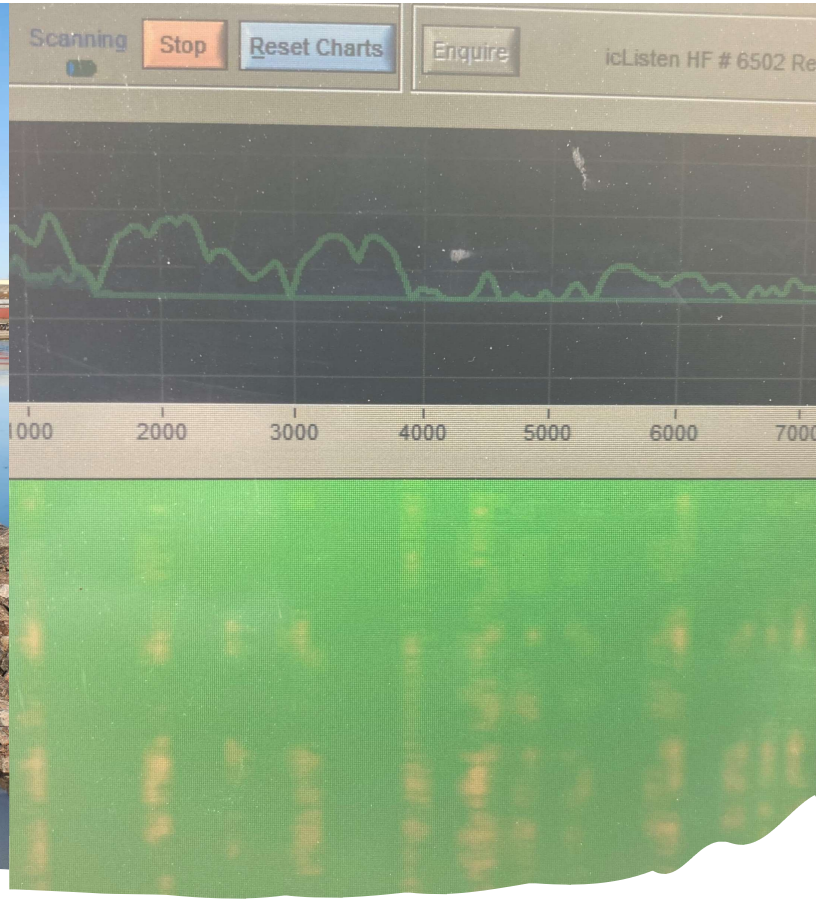
- ᑕᐃᒪᐃᓕᑕᐃᓕᓂᓂᖅ / ᐊᓐᔪᑎᖅᓄᐊᖅᑕᐃᓕᓂᓂᖅ ᓴᖅᓯᐅᐃᓚᓱᒻᒥᐅᖅ ᐃᒃᓴᖅᓇᖅᑭᓗᓐᓄᑦ ᐊᑐᖅᓕᕐᓂᑐᖅ
- ᓴᓐᑎᓗᑎᑦ ᐃᒪᖅᑭᐅᑦ ᐅᒪᔨᑦ ᓴᖏᓂᕆᕕᖅᑎᓐᓂᖅ
- ᐃᒻᒥᓂ ᓂᐱᓂᒃ ᐅᓴᖅᓯᔾᔨᖅ
- ᐃᒪᓐᓇᓂ ᖃᐅᔨᓴᖃᖅᑕᕐᓂᖅ
- 500 ᒥᑕᒥ ᐃᓂᖅᓂᖅ ᐃᒻᒪᑦ ᓂᐱᖅᖃᑦ ᐱᓕᓚᓂᓚᕆᑎᓐᓄᑦ
- ᐃᒪᖅᑭᐅᑕᓂᒃ ᖃᐅᔨᓴᖅᑎᑦ

- Avoid /reduce conflicts with users of the existing harbour facilities
- Protect marine mammal from construction activities
- Underwater noise monitoring
- Water quality monitoring
- 500 meters buffer zone for in water noise activities
- Marine mammal observers



500ᒥᑕᒥᐃᒪᓂᐊᔨᑎᓂᕐᒃᑲᖏᖅᑐᖅ

500 meters marine exclusion zone



ᐃᓚᓂ ᓂᐱᓂᒃ ᐅᖃᖅᓯᖅᓂᖅ

Underwater noise monitoring

ᓇᓗᓇᐃᖅᑎᑦ

Markers and signs

ᐅᒪᓴᓂᐅᓴᖅᓯᐊᖅᑲᖅᓂᖅ

Wildlife Monitoring Plan

- ᐅᒪᓴᓂ ᐊᐃᑎᑦᑕᓕᓂᖅ ᓴᓇᑎᑦᓗᑎᑦ
- ᐊᖅᑐᖅᑕᐅᓗᐊᖅᑕᐃᓕᓗᑎᑦ ᐅᒪᓴᑦ ᐊᓚᓗᓗ ᐅᒪᓴᖅᑲᕕᐅᕐᖅᑐᑦ
- ᐅᒪᓴᓂᒃ ᐅᓴᖅᓯᐊᖅᑲᖅᓂᖅ ᓇᓗᓇᐃᖅᑕᐅᖅᑲᑦᑕᕆᐊᖅᑲᓂᕐᓂᓗ

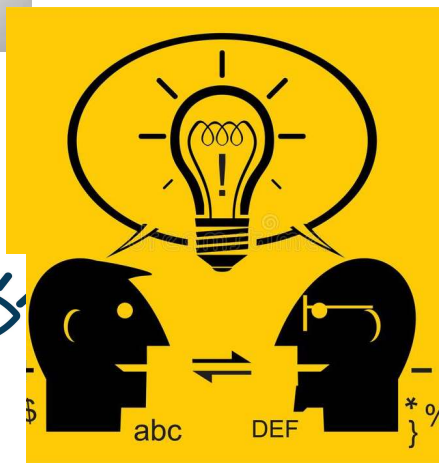
- Avoid conflict with wildlife during construction activities
- Reduce impact on wildlife and wildlife habitat
- Wildlife monitoring and reporting

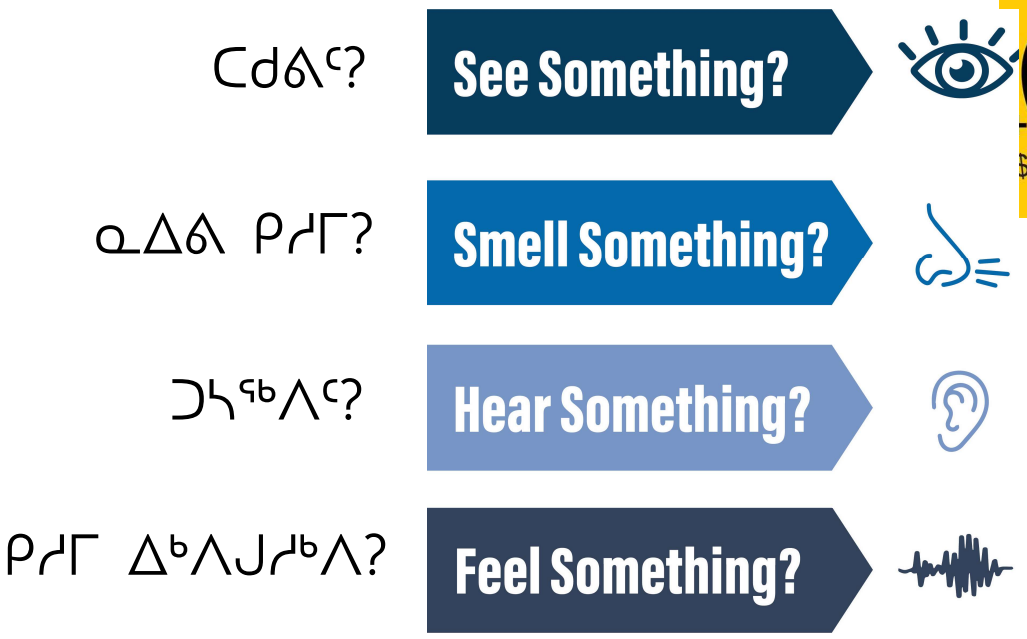
ᑐᐊᐅᒪᑎᑦᑎᓂᖅᓯᐊᑐᖅᓂᐊᖅᑕᕐᓂᑦ

Communication Plan

- ᑐᐊᐅᒪᑎᑦᑎᓂᖅᓯᐊᑦ ᐊᑐᒐᕐᓂᑦ
- ᑐᖏᖅᘿᐅᓴᒃᑲᑦ ᑐᐊᖅᑎᑦᑕᓗᐊᓕᓪᓗᑐ
- ᓄᓇᓕᓐᖏᓂ ᓵᓚᒋᑯᐅᖏᑦᑐᑦ
- ᐅᖏᓂᖅᔨᑎᑦ ᐊᑲᓗ.ᐅᖏᑦᑐᑦ
- ᓄᓇᓕᓐᖏᓂ ᑲᑎᒪᑎᑦᑎᓂᖅ
- ᑕᑯᘃᖅ?

- Communication protocol
- Contact information
- Community concerns
- Complaints





ᑐᓴᐅᒪᓲᕐᒪᖅᓴᖅ ᓄᓇᓕᖅᓂᓄᑦ

INFORMATION TO THE COMMUNITY

- ᖴᐃᔨᐳᑯᑦ ᒪᑲᐱᖅ ᐱᓕᓀᐊᑎᑐᖅᓄᑦ:Clyde River Harbour–PilitakEnterprisesᑲᖏᑎᖅᑐᐃᒪᐱᖏᒥ ᑐᓕᑕᖅᕼᑲᖅ -ᐱᓕᒥᑲ ᐃᖅᑲᓇᐃᔪᖅᕼᑉᐸᐊᖅ
- ᐅᓕᐅᑎᑯᑦ ᑲᖏᑎᖅᑐᐃᒪᐱᖏᒥ
- ᐱᓕᓀᕼᐱᔪᖅᑕ ᑎᑎᕆᖅᕼᖏᓚᓂ:

  ᐊᑭᓕᑲᑎᐅᑦ: ᑯᔭᐃ-ᐅᕼ ᓴᐃᵒᓕ-ᒪᓱ

  ᐊᖃᑎᓕᓀᓂᔪᑦ ᖁᑲᐅᔨᓴᖅᑎ: ᔪᵒ-ᐃᒃ <ᓕᐅᑦ

  ᓴᓇᕼᐅᐸᒥ ᐃᓗᒪᑕᑦ: ᔪᵒ ᐅᕆᐃᓗ, ᐃᓄᐃᐊᑦ ᐱᓕᒥᐊᖅ ᐊᑭᒪᓗ ᕿᐃᐊᑦ ᑐᖏᑦ<ᓕᐃ

  ᐊᑦᑕᓇᖅᑐᒋᑦᑕᐃᓕᑎᑎᓅᓂ: ᒪᓕᓴ ᐱᐅᕆᵒᑦ

- Facebook project page: *Clyde River Harbour –Pilitak Enterprises*
- Local Radio
- Site Office :

Clerk: Chloé-Ève Sainte-Marie

Environmental Monitor: Jean-Marc Ballard

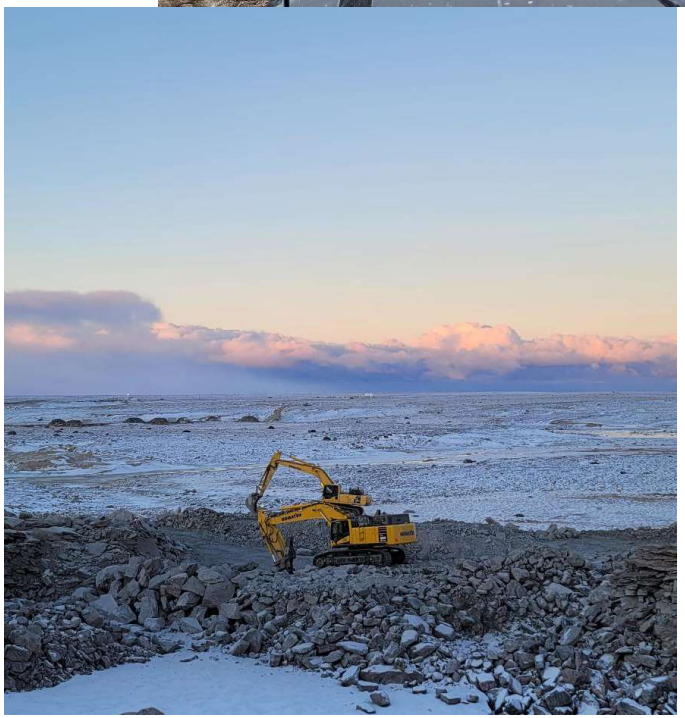
Site Superintenants: John Fraser and Joël Tremblay

Safety Officer: Mélissa Parent

ᓯᐅᕐᖃᑕᕐᓂᖅᓄᑐᐊᔪᓕᐅᕐᓂᖅᓄᑦᓴᐃᓇᖅᑕᖅ
Quarry Development Plan

- ᐱᓕᕆᓕᐊᔾᐅᓂᖏᓐ
- ᐃᑯᑕᖏᓂᖅ ᖁᖃᖅᑎᕆᑎᖁᑕᕐᓂᕐᓗ ᖃᐅᓂᖅ ᐱᖁᑕᕐᓂᐊᕐᓚᖏᑕ
- ᓴᓗᒪᖃᑕᐅᓂᖏᓐ

- Quarry development methodology
- Drilling and blasting procedures
- Reclamation



Complaint process

ᐊᑲᖏᓱᓕᑐᓂᔪᒃ ᐅᓐᓂᓂᔨᑎᔪᒃ ᐊᑐᖏᑕᐅᓯᓐᐊᖏᑐᖅ

- ᑲᑎᑲᑎᒋᔨᑎᒍᒃ ᐅᖏᑲᑲᑎᑦᓐᓂᐊᕐᑕ ᓇᓚᒪᓱᓕᑦᓴᒋᓐᓂ ᐅᖏᑲᐅᓯᖏᑲᓂᐊᕐᕕᒃ
- ᐱᓕᓀᕕᒋᓴᕐᑎᓐᓄᑦᔨᓂᔨᑎᑦ ᐅᖏᑲᐅᓴᓂᐊᕐᕕᒃ ᐅᓯᕐᑎᓐᓂᑦ
- ᑎᑎᕐᖏᔨᑎᑦ ᓇᓚᒪᓱᓕᑦᓴᒋᓐᒋᓴᖏᓂᑲ ᑎᑎᕐᖏᕕᕐᑎᓐᓂᒃ ᒡᐃᑲᓂ ᐱᓕᓀᕕᒋᓴᕐᑎᓐᓂᒃ ᐊᓚᒪᑦᔨᓂᒃ ᐊᓚᒪᓂᓐᓂᑦ ᕿᐊᒪᒡᓕᔨᑦ ᑎᑎᕐᖏᕕᖓᓂᒃ
- ᐃᓱᒪᒋᔭᑎᑦ ᐅᖏᑲᐅᓱᓗᔨᒋᑦ ᐅᓯᕐᑎᓐᓂᒃ ᐃᑲᔪᖏᓂᐊᕐᕕᒃ ᐊᑲᐅᓂᖓᓕᒃ ᐱᓕᓀᖏᔨᔨᒋᑦ!

- Meet us anywhere and discuss with us of your concerns
- Come to the site office and discuss with us
- Fill a complaint form at the site office or at the hamlet office
- Bring your ideas and help us to make things better!

ᐅᖃᐅᓯᓗᓴᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓴᓱᖅᑕᐅᔪᓪᓚ2023-ᒥ
2. ᐊᖏᔪᒍᑎᓐᓂ ᐱᓕᓗᓴᐅᓂᐊᖅᑐᑦ
3. ᖃᓄᓴᐅᔪᒪᓪᓗᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᓪ 2025–ᒥ
4. ᐊᓪᑕᓄᖅᑕᑐᑦᑕᐃᓕᓂᓂᖅ
5. ᐊᐳᑎᒥᒃ ᖃᓗᓴᓯᒪᓄᓯᓐᓂᖅ
6. ᐃᖅᑲᓄᐃᓴᒃᖏᑦ ᐊᓚᒪᓗ ᐃᓕᓐᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
2. Work planned for this year
3. Work planned for 2025
4. Safety
5. Environment protection
6. Employment opportunities & training
7. Questions

ᐱᓕᓀᐊᐅᕐᓂᑦ ᒪᑐᐃᖅᑐᑦ ᐊᒻᒪᓗ ᐱᓕᒻᒪᖅᓂᐅᑎᑦ

- ᐊᖏᔪᑎᑦ ᓄᓇᓯᐅᑎᓄᑦ (ᐊᖏᔪᕐᓂᑎᑦᑕᕐᓂᖅ ᐅᖏᔪᒪᐃᑦᑐᓄᑦ ᓯᐃᓐᓴᓯᖓᓂᖅ)
- Truck drivers (valid driver’s license is a requirement)
- ᐅᖏᔪᒪᐃᑦᑐᓄᑦ ᐊᖏᔪᑎᑦ (ᐸᐃᐸᑦᑎᓂᑦᑕᕐᓂᖅ ᐊᑐᑎᔨᒥᖅ ᐊᖏᔪᑦᑐᓴᓇᐅᑎᒥᖅ)
- Heavy equipment operators (valid driver license is a requirement)
- ᐊᖅᔪᑎᒥ ᓴᐃᓕᒪᑎᑦᑕᓇᓗ
- Road flagman
- ᐅᖏᔪᒪᐃᓴᖅᓯᐅᖅᑎᑦ ᐊᖅᔪᐁᓴᖅᐸᑦᑕᐊᔨᓄᑦ
- Weight scale operators
- ᓴᖅᐱᓴᖅᑐᑐᓄᑦ ᖁᔭᓐᓂᐊᖅᑎ
- Whale watcher
- ᓂᖅᓕᐅᖅᑎᐅᐸ ᐃᑲᔨᖅᑎᓐᓴᒐ
- Cook helper
- ᓴᑐᓕᒪᖅᓴᐃᓗᑦ
- Janitors
- ᐱᓗᐊᑲᑕᖅᑎᐅᔨᑦ
- Labourers

EMPLOYMENT OPPORTUNITIES & TRAINING

ᖁᓄᖁᑲ ᐅᑲᑐᑎᑎᖁᓇᐊᑭᓕᖁᐸ

- Fill application form at the hamlet or at our site office
- Contact Chloé-Eve by email: cstemarie@gely.biz

HOW TO APPLY

Application Form

PILITAK ENTERPRISES LTD

APPLICATION FORM
CLYDE RIVER HARBOUR CONSTRUCTION

PERSONAL INFORMATION	
FIRST NAME	LAST NAME
BIRTH DATE	PHONE NUMBER
EMAIL	
VALID DRIVERS LISCENCE YES NO	IF YES CLASS 5 OTHER

EDUCATION AND / OR TRAINING	
COURSE NAME	DIPLOMA/CERTIFICATE
	YES NO
	YES NO
	YES NO

WORK EXPERIENCE		
EMPLOYER	TRADE	DATE (START AND FINISH)

APPLICATION	
Cook Helper	Janitor
Heavy Equipment Operators	Labourers
Road flagmans	Weight scale operators
Truck Driver	Whale watcher
Other (specify):	

Please return your filled application form by email or fax to : **Elizabeth Marshall (Human Resources Technician)**
Email: emarshall@pilitak.biz
Fax: 1-800-667-1923

ᐱᓕᒪᖅᓴᐃᔨᔾᔪᑎᓕ ᒪᑐᐃᕈᑎᔨᓕ

- ᐃᖃᓗᕆᐃᔨᖏᓪᓗᓂᑦ ᐱᓕᒪᖅᓴᖏᑕᐅᓵᓕᓕᐊᓗᓂᑦ
- On the job training
- -ᐱᓕᒪᖅᓴᐃᔨᔾᔪᑎᖓᓐᓂᒃ ᐃᓕᓐᓂᐊᕈᑎᒃ ᐊᖏᑐᐊᖅᓂᒡᑐᐃᓐᓇᓕᓐᓂᒃ ᐅᒧᖓᓐᓄᑦ ᐅᓴᖅᑎᑕᐅᓪᓗᑎᒃ, ᐊᑲᖅᑭᒋᐊᕆᓂᖏᓪᓗᑎᒃ ᐃᓱᒪᓕᕆᕈᑎᒃ ᑐᖓᓚᐅᖅᓯᒪᔪᖅᑐᑦ
- Training program not necessarily related to this project, suggestions are welcome

TRAINING OPPORTUNITIES

ᐅᖃᐅᓯᓗᓴᐅᓂᐊᖅᑐᑦ
PRESENTATION PLAN

1. ᐱᓴᓱᖅᑕᐅᔪᓪᓚ2023-ᒥ
2. ᐊᖏᖅᔪᑎᑐᵒᓂ ᐱᓕᓗᓴᐅᓂᐊᖅᑐᑦ
3. ᓴᓇᓴᐅᔪᒪᓪᓗᑎᒃ ᕿᖏᒃᑕᐅᓯᒪᔪᑦ 2025–ᒥ
4. ᐊᑦᑕᓇᖅᑕᑐᑦᑕᐃᓕᓂᓂᖅ
5. ᐊᐸᑎᒥᒃ ᓴᓕᓴᓯᒪᓇᓯᵒᓂᖅ
6. ᐃᖅᑲᓇᐃᓴᒃᓴᑦ ᐊᓚᒪᓗ ᐃᓕᵒᓂᐊᖅᑎᑦᑎᓂᖅ
7. ᐊᐱᖅᑯᑎᑦ

1. Work completed in 2023
2. Work planned for this year
3. Work planned for 2025
4. Safety
5. Environment protection
6. Employment opportunities & training
7. Questions

PILITAK ENTERPRISES LTD

CLYDE RIVER HARBOUR DEVELOPMENT

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Clyde River Harbour Development
(NIRB) Annual Report, File no.21YN032

APPENDIX 4
Log of Transit Through the Project Area
Compliance to Term and conditions

Clyde River Small Craft Harbour Development

TABLE 6: 2024 Transit Through Project Areas

Date	Amount of people		Vessel	Notes
	Beach crossing	Quarry crossing		
June 4-8	5	5		DFO, PWGSC and CBCL representatives came for visit
June 26	2			2 kids came on the southwest breakwater at night
June 30	3	2		Quad came at the quarry and a pickup truck at the beach
July 2		1		Quad used the quarry road
July 3	2			2 people came at the SWBW
July 5	2			2 people came at the SWBW
July 6	1			1 person came at the SWBW
July 7	2			2 people came at the SWBW
July 8		1		Quad used the quarry road
July 12	22			People came at the beach for fishing/be on ice at night
July 13	52			People came at the beach for fishing at night
July 15	2			2 people came at the SWBW
July 17	2			3 people came at the SWBW
July 19		5		atvs at the quarry for accessing the land behind
July 20	42			People came by the beach at night
July 21	24			People came by the beach at night
July 22	10			People came by the beach at night
July 23	9			People came by the beach at night
July 24	4			People came by the beach at night
July 25	31			People came by the beach at night
July 26	8			People came by the beach at night
July 27	17			People came by the beach at night
July 28		1		Quad used the quarry road
July 29		1		Quad used the quarry road
July 30	29			People came by the beach at night
July 31	21			People came by the beach at night, some at the fixed wharf
Aug 01	15			People came by the beach at night

Date	Amount of people		Vessel	Notes
	Beach crossing	Quarry crossing		
Aug 02	31			People came by the beach at night, some at the fixed wharf
Aug 03	4			At the fixed wharf
Aug 04	12			At the fixed wharf
Aug 05	22			At the fixed wharf and by the beach
Aug 06	12			At the fixed wharf and by the beach
Aug 07	3			At the fixed wharf
Aug 08	6			At the fixed wharf
Aug 09	5			At the fixed wharf
Aug 10	8			At the fixed wharf
Aug 11	8			At the fixed wharf
Aug 12	10			At the fixed wharf
Aug 13	12			At the fixed wharf
Aug 15	2			At the fixed wharf
Aug 16	6			At the fixed wharf
Aug 17	4			At the fixed wharf
Aug 21		4		Bluemetric crew traveled by the quarry road to access the old town
Aug 22	1	5		DFO (1), bluemetric (4)
Aug 23	1	5		DFO (1), bluemetric (4)
Aug 24	10	5		DFO (1), bluemetric (4), local at the beach and boat ramp
Aug 25	10	5	1	DFO (1), bluemetric (4), local at the beach and boat ramp, vessel: Baffinland Fisheries
Aug 26		6		Bluemetric (4), local people 2, used the road to quarry for going to old town
Aug 27	10	6		Quarry road: Bluemetric (4), local people (2) Boat ramp: 10
Aug 28	3			2 kids playing on NEBW were told to leave. GN wildlife officer came for spill report
Aug 29			1	Commercial fishing vessel mooring ±500m away from site
Sept 3	3			At the fixed wharf
Sept 5	3			At the fixed wharf
Sept 6	1			At the fixed wharf
Sept 7	many		2	NSSI sealift, Woodward bulk fuel ship, many people at the boat ramp
Sept 8	1			At the fixed wharf

Date	Amount of people		Vessel	Notes
	Beach crossing	Quarry crossing		
Sept 9	1			At the fixed wharf
Sept 10	1			At the fixed wharf
Sept 12	4			At the fixed wharf
Sept 13	6			At the fixed wharf
Sept 14	3			At the fixed wharf
Sept 16	5			At the fixed wharf
Sept 17	4			At the fixed wharf
Sept 18	1		1	At the fixed wharf, sailboat mooring at ±300m from site
Sept 19	6		1	Woodward bulk fuel ship, crew working at beach manifold and tankfarm
Sept 20	6		1	Woodward bulk fuel ship, crew working at beach manifold and tankfarm
Sept 21	many		1	NEAS sealift, lot of people coming at sealift ramp
Sept 22	many		1	NEAS sealift, lot of people coming at sealift ramp
Sept 29			1	Cost guard ship mooring about 1 km from site
Sept 30			1	Cost guard ship mooring about 1 km from site
Oct 3			2	NSSI vessels mooring at ±2km from site, no unloading
Oct 4			2	NSSI vessels mooring at ±2km from site, no unloading

Clyde River Harbour Development, annual report for NIRB, File no. 21YN032
TABLE 7 : 2024 Compliance to terms and conditions

	Project-Specific Terms and Conditions	Compliance Y: Yes / NC: No NA: not applicable	Additional information
1	A copy of the project terms and conditions shall be at the site	Y	All documents are on site
2	NIRB and NPC files shall be at the site	Y	All documents are on site
3	Site to be operated according to applicable acts, regulations and guidelines	Y	All activities were done according to contract specifications, permits and applicable regulations.
4	Site to be operated according to applicable standards, permits and licences	y	Conditions of the applicable permits and licences where followed.
5	Adequate training for all personnel	y	Health & safety training for everyone and specific training for mechanic helper, cook helpers, marine workers and Signalman. A WHIMIS training was given to workers. An articulated dump truck training was provided to local drivers.
6	Waste and hazardous waste management	y	Refer to the our Waste Management Plan
7	Spill Contingency Plan in place	y	Refer to our Spill Prevention & Response Plan
8	Wildlife deterrent to keep wildlife away in case of spill	NA	Spill were collected shortly after it happened. Wildlife management has not been require.
9	Spill of 100 L and more to be reported immediately to Spill Line	Y	No spill greater than 100 L. Two spills were reported to the Spill Line because they happened on the water.
10	Dust suppression measures	y	Dust control measures were needed only on a few occasions during the months of July and August. Calcium chloride and water was used.
11	Eliminate unnecessary idling	y	Promoted by the site superintendent through tool box meetings.
12	Avoid alter or damage or destroy any wildlife habitat	y	No new area were used for work
13	Do not chase, weary, harass or molest wildlife	y	Wildlife monitor was in duty
14	No hunting and fishing unless proper authorization in place	y	No hunting is permitted. Employees who would like to fish requires a valid fishing licence to be issued by the HTO.

	Project-Specific Terms and Conditions	Compliance Y: Yes / NC: No NA: not applicable	Additional information
15	Give wildlife right of way on any roads and trails	NA	No wildlife observed on roads
16	Enforce speed limits	y	Speed limits enforced through tool box meetings and by the site superintendent.
17	Protect migratory birds	y	No migratory bird observed at the quarry.
18	Do not disturb or destroy nests or eggs of any birds	y	One nest was observed on a stockpile at the quarry. The nest was identified and operators were told to not work in this area until birds left the nest.
19	Avoid seaward site of seabirds colonies	NA	No seabirds colonies observed
20	Do not pursue seabirds or waterbirds	NA	No seabirds colonies observed
21	Do not move equipment where ground capacity is inadequate	y	Additional granular material was placed on the road to the dredge spoil dewatering area.
22	Install silt fence down stream of any quarry activities	y	Silt fences installed where needed. Erosion protection measures were installed at the construction site and along the quarry road.
23	Do not obstruct natural drainage flooding or channel diversion	Y	One dammaged culvert was repaired on the hamlet road nearby the site. All other culverts stayed in good shape.
24	Locate screening and crushing equipment on a stable ground	y	The rip-rap unit and screeners were installed in 2022 beside the quarry, on a pad made of blasted rocks.
25	Stake and flag pit and quarry boundaries	y	Limits of the quarry expansion were marked.
26	Locate pit and quarry sites away from recreational area	NA	Contractual location for the quarry site.
27	Avoid drilling waste to spread the surrounding lands or water bodies	y	Dust collector is used while drilling for blasting.
28	Ensure that no deleterious substances enter into water	y	Some minor biodegradable hydraulic oil spills happened on the water. They were contained and cleaned quickly.
29	Ensure that drill areas are built to minimize the footprint	y	At the quarry, drilling is done only for the material production.

	Project-Specific Terms and Conditions	Compliance Y: Yes / NC: No NA: not applicable	Additional information
30	In the case where artesian flow is encountered, plug hole immediately	NA	No artesian flow was observed while drilling.
31	Sump/depression capacities have a sufficient volume	NA	No sump was needed for our operations.
32	Drill hole are backfilled or capped	NA	Drilling is made for blasting. No drilling holes are left behind.
33	Use existing trails where possible	y	No new roads/trails were developed.
34	Ensure that Land use area is kept clean and tidy at all times	y	Debris from uncrating our supplies and equipment were collected and disposed / reused on a daily base.
35	Avoid disturbances on existing slopes	y	Except for the quarry development, no work was done on existing slopes.
36	Remove garbage, fuel & equipment at end of season and project	y	Hazardous waste were shipped off-site on the 2024's sealift.
37	Restore all disturbed areas	NA	Work areas are currently under a development phase.
38	Ensure that camp is located on a durable surface	y	The camp was installed on a previously disturbed area.
39	Do not erect camp or store material on surface ice of lakes or streams	NA	
40	Consult and inform the local resident	Y	Community meeting was done at the beginning of the season. Information on operations was provided on the project's Facebook page. A site inspection was done at the end of the construction season.
41	Ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities	y	
42	Hire local people and access local services	y	Inuit hiring exceeded our project target percentage of 30%