ᓄᓇᕗᒻᒥ ᐊᓯᑎᓕᓵᕆᔨᖅᑎᑦ ᑲᑎᒪᔨᖏᑦᑎᒍᑦ ᑐᓴᖅᑐᓂᒃ ᖃᐅᔨᒪᓂᖅ #125789

Inuit Qaujisarnirmut Pilirijjutit on Arctic Shipping Risks in Inuit Nunangat

ᑐᓴᔨᖅᑐᑕᐅᔪᖅ ᖁᓕᓂᐅᓚᖅ:	New
ᐱᓕᓇᐊᓇᓴᐅᔪᒪᔪᑦ ᖁᓕᓂᐅᓚᖅ:	Scientific Research
ᐅᖃᓗᖅ ᑐᓴᖅᑐᑎᓕᐊᓂᐅᔪᑦ:	4/5/2023 11:32:42 AM
Period of operation:	from 0001-01-01 to 0001-01-01
ᑲᔪᓯᓴᐃᐸᐅᓂᐊᕐᓂᕆᓴᐅᔪᑦ:	from 0001-01-01 to 0001-01-01
ᐱᓕᓇᐊᖁᕈᒪᔪᖅ:	Jackie Dawson University of Ottawa 60 University Pvt. Ottawa Ontario K1N6N5 Canada ᐅᖁᓂᐅᑎᑦ: 6135050303, ᓯᓴᕐᓂᑦ:

ᑐᓴᐅᒪᔭᒃᓴᑦ

ᖃᓄᐃᑦᑑᑎᓂᒃ ᐱᓕᕆᐊᖃᕐᓂᐊᕆᐊᖕᒐᓐᓂᒃ

ᖃᓪᓗᓈᑎᑐᑦ: Our project is focused on understanding risks from climate change and growth in shipping across Inuit Nunangat and to identify ways to manage these issues that support Inuit self-determined shipping and oceans governance. Our project objectives include to: 1. Analyse past and future ship traffic in Nunavut; 2. Model current and future underwater noise caused by ships; 3. Sample potential air and water pollution from ships; 4. Evaluate potential for non-indigenous species introduction from ships, and; 5. Develop risk maps and evidence-based recommendations. Fieldwork: We will opportunistically conduct water samples from on board ships (Amundsen, Ocean Endeavour, Fram), transiting Nunavut waters from July-September, 2023, and 2024. We will also opportunistically conduct water and sediment samples at shore locations along cruise ship routes (where appropriate). Shore locations may include Dundas Harbour, Fort Ross, Gjoa Haven, Beechey Island, Resolute, and Cambridge Bay. We will also conduct community-based sampling of air, water, and sediment, led by Inuit in Arviat and Pond Inlet from June – September, 2023 and 2024. Methods: Onboard the ships, we will sample seawater from the inlet in the hull and filter it through a mesh to collect plastic and other sediments. We will set up onboard air sampling arrays, where particles in the air will be collected on filters. We will take water samples for eDNA to identify any non-indigenous species upstream and downstream of the ship and at shore locations. At shore locations, we will take sediment samples (100g) in a metal bottles and take pictures of any plastic debris. Community-based sampling in Arviat and Pond Inlet will include setting up air sampling arrays near the communities, water sampling for plastic and eDNA by boat and Remotely Operated Vehicle (ROV) (Pond Inlet in 2023 and 2024, Arviat in 2024). Impacts: There are no expected impacts to the environment, wildlife, or people. Data Storage and Management: The research team follows all procedures for data management and storage that is outlined in the Tri-Council protocols and the National Inuit Strategy on Research. All data and samples are saved and/or stored in locked facilities and password protected computers/servers. Physical samples (air, water, and sediment) will be stored at locked facilities in Ottawa and Cambridge, UK. Nunavut residents involvement: Nunavut residents have been involved in the project since the beginning. We have partnered with Ikaarvik (Pond Inlet, NU) and Aqqiumavvik Society (Arviat, NU) to develop the original project proposal and research questions. In May, 2022 all southern team members attended training on Inuit Qaujimajatuqangit (IQ). In December, northern team members received training on how to collect acoustic data using hydrophones, and, in February, training on water and plastics sampling and analysis. In 2023-24, we plan to conduct similar community researcher sampling training and workshops.Results Sharing: Results validation and sharing workshops in Arviat and Pond Inlet are planned for 2025. These events will be co-led by Inuit Youth. Results will also be shared with Nunavut partners throughout the project.

ᐅᐃᕖᑎᑐᑦ: N/A

ᐃᓄᒃᑎᑐᑦ: ᐱᓕᕆᐊᒃᓴᕗᑦ ᑐᕌᒐᖃᖅᑐᖅ ᑐᑭᓯᐅᒪᓂᕐᒥᑦ ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᐊᒻᒪ ᐊᖏᓪᓕᐸᓪᓕᐊᓂᖓᓄᑦ ᐅᒥᐊᕐᔪᐊᓕᕆᓂᕐᒧᑦ ᐃᓄᐃᑦ ᓄᓇᖓᓂ ᓇᓗᓇᐃᖅᓯᓂᕐᒥᓪᓗ ᖃᓄᖅ ᐊᐅᓪᓚᑦᑎᒍᓐᓇᕐᒪᖔᑦ ᐊᑲᐅᙱᓕᐅᕈᑕᐅᔪᓂᒃ ᐃᑲᔪᖅᓱᖅᑐᓂᒃ ᐃᓄᐃᑦ ᓇᒻᒥᓂᖅ ᓇᓗᓇᐃᖅᓯᒪᔭᒥᓂᒃ ᐅᒥᐊᕐᔪᐊᓕᕆᓂᕐᒧᑦ ᐊᒻᒪ ᑕᕆᐅᕐᔪᐊᓂᒃ ᐊᐅᓪᓚᑦᑎᓂᕐᒥᑦ. ᐱᓕᕆᐊᒃᓴᒧᑦ ᑐᕌᖓᔭᕗᑦ ᐃᓚᖃᖅᑐᑦ ᐃᒪᐃᓕᐅᕐᓂᕐᒧᑦ:1.ᖃᐅᔨᓴᕐᓂᕐᒥᑦ ᑭᖑᓂᑦᑎᓐᓂ ᐊᒻᒪ ᓯᕗᓂᒃᓴᒥᑦ ᐅᒥᐊᕐᔪᐊᑦ ᐃᖏᕐᕋᓂᖏᑦ ᓄᓇᕗᒻᒥ;2.ᐆᑦᑑᑎᒋᓗᒋᑦ ᒫᓇᐅᔪᖅ ᐊᒻᒪ ᓯᕗᓂᒃᓴᒥᑦ ᐃᒪᐅᑉ ᐃᖅᑲᖕᒐᓂ ᓂᐱᖃᕐᓂᐅᔪᑦ ᐅᒥᐊᕐᔪᐊᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ;3.ᖃᐅᔨᓴᕋᒃᓴᓂᑦ ᐱᖁᑕᕐᓗᑎᒃ ᐊᓂᕐᓂᒥᑦ ᐊᒻᒪ ᐃᒪᕐᒥᑦ ᓱᑮᑉᐸᓪᓕᐊᔪᓂᒃ ᐅᒥᐊᕐᔪᐊᕐᓂᑦ;4.ᖃᐅᔨᓴᕐᓗᒥᑦ ᐱᑕᖃᐅᓐᓇᕆᐊᖃᕐᓂᖓ ᑕᒫᖓᔭᐅᙱᑦᑐᓂᒃ ᐆᒪᔪᓂᒃ ᑎᑭᐅᔾᔭᐅᔪᓂᒃ ᐅᒥᐊᕐᔪᐊᕐᓄᑦ, ᐊᒻᒪ;5.ᐋᖅᑭᒃᓱᐃᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᓄᓇᙳᐊᓂᑦ ᐊᒻᒪ ᖃᐅᔨᔭᐅᓂᒌᔪᓄᑦ ᑐᙵᕕᖃᕐᓗᑎᒃ ᐊᑐᓕᖁᔭᐅᔪᓂᒃ.ᐱᓕᕆᕝᕕᐅᔪᒥᑦ: ᐱᕕᖃᓕᖅᐃᒍᑦᑕ ᐃᒪᕐᒥᑦ ᖃᐅᔨᓴᖅᑕᓂᑦ ᐱᖃᑦᑕᕐᓂᐊᖅᑐᒍᑦ ᐅᒥᐊᕐᔪᐊᕐᓂᑦ (Amundsen, Ocean Endeavour, Fram), ᐃᖏᕐᕋᔪᓂᒃ ᓄᓇᕗᒻᒥ ᐃᒪᖁᑎᖏᓐᓂᒃ ᔪᓚᐃᒥᑦ ᓯᑎᐱᕆᒧᑦ, 2023, ᐊᒻᒪ 2024. ᐱᕕᖃᓕᖅᐃᒍᑦᑕ ᐃᒪᕐᒥᑦ ᐊᒻᒪ ᕿᒻᒪᖁᓂᒃ ᖃᐅᓴᖅᑕᓂᑦ ᐱᖃᑦᑕᕐᓂᐊᖅᑐᒍᑦ

ᓯᒡᔭᒥᑦ ᑲᔾᔭᐅᓴᓇᐊᒃᑐᓄᑦ ᐅᒥᐊᕐᔪᐊᑦ ᐊᖕᑯᑎᒥᐹᑦᑕᖅᒥᑎᒍᑦ (ᑕᐃᒫᒃ ᓈᒻᒪᑎᓪᓗᒍ). ᓯᒡᔭᐅᑉ ᐃᓂᒥᖅᑲᓯᐅᑎᑐᐃᓐᓇᖅᑕᖅᒥᑦ ᑕᓐᑖᔅ Hᐋᐳ, ᕕᐊᑦ ᖀᔅ, ᐅᖅᓯᖅᑑᖅ, ᐲᑦᓯ ᕿᑭᖅᑕᖅ, ᖃᐅᓯᐃᑦᑐᖅ, ᐊᒻᒪ ᐃᖃᓗᒃᑑᑦᑎᐊᖅ. ᐱᓕᕆᓂᐊᕐᒥᔪᑦ ᓄᓇᓕᓐᓂ ᑐᙵᕕᖃᕐᓗᑕ ᖃᐅᔨᓴᕋᒃᓴᓂᑦ ᐊᓂᕐᓂᒥᑦ, ᐃᒪᕐᒥᑦ, ᐊᒻᒪ ᕿᒻᒪᑯᓂᑦ, ᓯᕗᓕᖅᑎᖃᕐᓗᑎᒃ ᐃᓄᓐᓂᒃ ᐊᕐᕕᐊᓂ ᐊᒻᒪ ᒥᑦᑎᒪᑕᓕᖕᒥ ᔫᓂᒥᑦ – ᓯᑎᐱᕆᒧᑦ, 2023 ᐊᒻᒪ 2024.ᐱᓕᕆᔾᔪᓰᑦ: ᐅᒥᐊᕐᔪᐊᕐᒦᑎᓪᓗᒥᑦ, ᖃᐅᔨᓴᕋᒃᓴᑖᕈᖅᑐᒍᑦ ᑕᕆᐅᕐᒥᑦ ᑲᖕᒥᖅᖢᖕᒥᑦ ᐅᒥᐊᕐᔪᐊᑉ ᐊᑖᓂ ᐊᒻᒪ ᓴᓗᒻᒪᖅᓴᖅᑕᐅᓗᑎᒃ ᒪᑦᑎᑦᑕᐅᑎᓪᓚᐅᔭᒃᑰᕐᓗᓂ ᓄᐊᑦᑎᓂᕐᒧᑦ ᐊᐅᑦᑕᕘᓂᒃ ᐊᓯᖕᒥᓂᓪᓗ ᕿᒻᒪᑰᕗᓂᒃ. ᐋᖅᑭᒃᓯᐃᓗᑕ ᐅᒥᐊᕐᔪᐊᕐᒥᑦ ᐊᓂᕐᓂᒥ ᖃᐅᔨᓴᕋᒃᓴᑖᕈᓐᓇᖅᑐᓂᒃ, ᐊᓂᕐᓃᑦᑐᑦ ᓄᐊᑕᐅᓗᑎᒃ ᓴᓗᒻᒪᖅᓴᐅᑎᒃᑯᑦ. ᐃᒪᕐᒥᑦ ᖃᐅᔨᓴᕋᒃᓴᓂᑦ ᐱᓖᖅᑐᒍᑦ ᐊᕙᑎᒧᑦ ᓴᓇᓯᒪᓂᖓᓄᑦ (eDNA) ᓇᓗᓇᐃᖅᓯᓂᕐᒥᑦ ᑕᒫᖓᔭᐅᙱᑦᑐᓂᒃ ᐆᒪᔪᓂᒃ ᓯᕗᓂᐊᓂ ᐊᒻᒪ ᑐᓄᐊᓂ ᐃᒥᐊᕐᔪᐊᑉ ᐊᒻᒪ ᓯᒡᔭᒥᑦ. ᓯᒡᔭᒥᑦ, ᕿᒻᒪᑯᓂᑦ ᖃᐅᔨᓴᕋᒃᓴᓂᑦ ᐱᓖᖅᑐᒍᑦ (100 ᒍᖄᒻ) ᓴᕕᖃᔭᓂᑦ ᐃᒥᖅᑕᐅᑎᓂᒃ ᐊᔾᔨᓕᐅᕆᓗᑎᓗ ᐊᐅᒃᑕᕘᓂᒃ ᓴᓂᕐᓂᒃ. ᓄᓇᓕᓐᓂ ᑐᙵᕕᖃᕐᓗᑎᒃ ᖃᐅᔨᓴᕋᒃᓴᑖᓂᕐᒥᑦ ᐊᕐᕕᐊᓂ ᐊᒻᒪ ᒥᑦᑎᒪᑕᓕᖕᒥ ᐃᓚᖅᑲᓚᖅᑐᖅ ᐋᖅᑭᒃᓯᐃᓂᕐᒥᑦ ᐊᓂᕐᓂᒥ ᖃᐅᔨᓴᕋᒃᓴᑖᕈᑎᓂᒃ ᓄᓇᓖᑦ ᖃᓂᒋᔭᖓᒋᓐᓂ, ᐃᒪᕐᒥᑦ ᖃᐅᔨᓴᕋᒃᓴᑖᓂᕐᒥᑦ ᐊᒃᑕᕘᓄᑦ ᐊᒻᒪ ᐊᕙᑎᒧᑦ ᓴᓇᓯᒪᓂᖓᓄᑦ ᐅᒥᐊᒃᑯᑦ ᐊᒻᒪ ᐃᖕᒥᖃᔾᔪᑎᒃᑯᑦ (ROV) (ᒥᑦᑎᒪᑕᓕᖕᒥᑦ 2023-ᒥᑦ ᐊᒻᒪ 2024-ᒥᑦ, ᐊᕐᕕᐊᓂ 2024-ᒥᑦ).ᐊᒃᑐᐃᓂᐅᔪᑦ: ᓂᓇᐅᒥᔭᖅᑲᙱᑦᑐᑦ ᐊᒃᑐᐃᓂᐅᕙᔭᖅᑐᓂᒃ ᐊᕙᑎᒧᑦ, ᐆᒪᔪᓄᑦ, ᐅᓪᐸᓗᓐᓃᑦ ᐃᓄᖕᓄᑦ.ᖃᐅᔨᔭᐅᕙᓪᓕᐊᔪᓂᒃ ᑐᖅᑯᐃᓂᕐᒥᑦ ᐊᒻᒪ ᐊᐅᓚᑦᑎᓂᕐᒥᑦ: ᖃᐅᔨᓴᖅᑎᐅᖃᑎᒦᒃᑐᑦ ᒪᓕᑦᑎᐊᓰᑦ ᐱᓕᕆᔾᔪᓯᓕᒫᓂᑦ ᖃᐅᔨᔭᐅᕙᓪᓕᐊᔪᓂᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐊᒻᒪ ᑐᖅᑯᐃᓂᕐᒧᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓂᒃ ᐱᖓᓲᓕᖅᑲᖓᔪᓄᑦ-ᑲᑎᒪᔩᓄᑦ ᒪᓕᕐᑯᔭᐅᔪᓂᒃ ᐊᒻᒪ ᑲᓇᑕᒥ ᐃᓄᐃᑦ ᐸᕐᓇᐅᑎᖓᓂ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ. ᖃᐅᔨᓴᖅᑕᐅᕙᓪᓕᐊᔪᓕᒫᑦ ᐊᒻᒪ ᖃᐅᔨᓴᕋᒃᓴᓕᒫᑦ ᐱᓯᒪᔭᐅᓰᑦ ᐊᒻᒪ/ ᐅᓪᐸᓗᓐᓃᑦ ᑐᖅᑯᖅᑕᐅᓯᒪᓰᑦ ᑮᒃᓯᒪᔪᓂᒃ ᐃᓂᐅᔪᓂᒃ ᐊᒻᒪ ᐃᓯᕈᑎᖃᓇᐊᓕᖕᓄᑦ ᖃᕋᓴᐅᔭᕐᓄᑦ/ ᖃᕋᓴᐅᔭᓕᕆᔾᔪᑎᓄᑦ. ᐱᓪᓚᑦᑖᖑᔪᑦ ᖃᐅᔨᓴᕋᒃᓴᑦ (ᐊᓂᕐᓂ, ᐃᒪᖅ, ᐊᒻᒪ ᕿᒻᒪᑯᑦ) ᑐᖅᑯᖅᓯᒪᓖᖅᑐᑦ ᑮᒃᓯᒪᔪᓂᒃ ᐃᓂᐅᔪᓂᒃ ᐋᑐᐋᒥᑦ ᐊᒻᒪ ᑲᐃᓪᐳᓇᑦᔅ, ᔫᓇᐃᑕᑦ ᑭᖕᑕᒻᒥ.ᓄᓇᕗᒻᒥᐅᑦ ᐱᖃᑕᐅᓂᖕᒥᑦ: ᓄᓇᕗᒻᒥᐅᑦ ᐱᖃᑕᐅᓯᒪᔪᑦ ᑕᐃᒪᙵᓂ ᐱᓕᕆᐊᒃᓴᖅ ᐱᒋᐊᙵᕐᓂᖕᒐ. ᑲᑐᔾᔨᖃᑎᖃᖅᓯᒪᔪᒍᑦ ᐃᑳᕐᕕᖕᒥᑦ (ᒥᑦᑎᒪᑕᓕᒃ, ᓄᓇᕗᑦ) ᐊᒻᒪ ᐊᖅᑭᐅᒪᕕᒃ ᑲᑐᔾᔨᖃᑎᒦᑦ (ᐊᕐᕕᐊᑦ, ᓄᓇᕗᑦ) ᐱᕙᓪᓕᐊᑎᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᒃᓴᐅᑉ ᑐᒃᓯᕋᐅᑎᖕᖑᐅᑎᖕᖑᓂ ᐊᒻᒪ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᐱᖅᑯᑎᓂᑦ. ᒪᐃ, 2022-ᒥ ᖃᓪᓗᓈᑦ ᓄᓇᖕᒐᓅᙶᖅᑐᓕᒫᑦ ᐱᓕᕆᕈᖅᑕᐅᔪᑦ ᐱᓕᒻᒪᒃᓴᖅᑎᑕᐅᓚᐅᖅᑐᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ (IQ). ᑎᓯᐱᓇᒥᑦ, ᐅᑭᐅᖅᑕᖅᑐᕐᒥᐅᑕᑦ ᐱᓕᕆᕈᖅᑕᐅᔪᑦ ᐱᓕᒻᒪᒃᓴᓚᐅᖅᑐᑦ ᖃᓄᖅ ᓂᐱᖃᖅᑐᓂᒃ ᓄᐊᑦᑎᓂᕐᒥᑦ ᐊᑐᕐᓗᑎᒃ ᐃᒫᓂ ᓂᐱᓕᐅᕈᑎᓂᒃ, ᐊᒻᒪ, ᕕᑦᔫᐊᓕᒥ, ᐱᓕᒻᒪᒃᓴᐃᓂᕐᒥᑦ ᐃᒫᓂ ᐊᒻᒪ ᐊᐅᒃᑕᕘᓂᒃ ᖃᐅᔨᓴᕋᒃᓴᓂᑦ ᐊᒻᒪ ᖃᐅᔨᓴᕐᓂᕐᒥᑦ. 2023-2024-ᒥᑦ, ᐸᕐᓇᔭᒪᔪᒍᑦ ᑕᐃᒪᐃᓕᐅᕐᓂᕐᒥᑦ ᐊᔾᔨᐸᓗᖕᒐ ᓄᓇᓕᖕᓂ ᖃᐅᔨᓴᖅᑎᓄᑦ ᖃᐅᔨᓴᕋᒃᓴᓕᕆᓂᕐᒧᑦ ᐱᓕᒻᒪᒃᓴᐃᓂᕐᒥᑦ ᐊᒻᒪ ᑲᑎᒪᑦᑎᓂᕐᒥᑦ.ᖃᐅᔨᔭᐅᓂᖁᔪᓂᒃ ᑐᓴᖅᑎᑦᑎᓂᕐᒥᑦ: ᖃᐅᔨᔭᐅᓂᖁᔪᓂᒃ ᓇᓗᓇᐃᖅᓯᓂᕐᒥᑦ ᐊᒻᒪ ᑐᓴᖅᑎᑦᑎᓂᕐᒥᑦ ᑲᑎᒪᑦᑎᓈᖅᑐᑦ ᐊᕐᕕᐊᓂ ᐊᒻᒪ ᒥᑦᑎᒪᑕᓕᖕᒥ ᐸᕐᓇᔭᔪᑦ 2025-ᒥᑦ. ᑖᒃᑯᐊ ᖃᓄᐃᓕᐅᕐᓂᐅᔪᑦ ᐱᓕᕆᖃᑎᖃᕈᓐᓇᖅᑐᑦ ᐃᓄᖕᓂᑦ ᒪᒃᑯᒃᑐᓂᑦ. ᖃᐅᔨᔭᐅᓂᖁᔪᑦ ᑐᓴᖅᑎᑕᐅᓈᕐᒥᔪᑦ ᓄᓇᕗᒻᒥ ᑲᑐᔾᔨᖃᑎᒋᔭᐅᔪᓂᒃ ᐱᓕᕆᐊᒃᓴᓕᕆᓂᓕᒫᖏᓐᓂᒃ.

Inuinnaqtun: N/A

Personnel

Personnel on site: 14

Days on site: 21

Total Person days: 294

Operations Phase: from 2022-04-01 to 2025-03-31

ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᑦ

ᓇᒥ	ᖃᓄᐃᑦᑑᒥᑦ ᐱᓕᕆᐊᖃᕐᓂᐊᖅᐸ	ᑭᒃᑯᑦ ᓄᓇᖁᑖᓂ	ᑐᓴᐅᒪᔭᒃᓴᑦ ᓄᓇᐅᑉ ᖃᓄᖅ ᐊᑐᖓᐅᓚᐅᖅᓯᒪᔭᕆᐊᖓᓐᓂᒃ	ᐃᑦᓴᕐᓂᑕᖃᕐᕕᐅᕙᓚᐅᖅᐸ ᐃᓄᖕᓄᑦ ᓇᕙᖅᑕᐅᖃᑦᑕᕐᓂᑰᕙᓗ ᑕᐃᑦᓯᒪᓂᑐᖃᐅᓕᖅᑐᖅ	ᖃᓂᓐᓂᖅᐹᖅ ᓄᓇᓕᒥᔭᐅᔪᖅ ᐊᒻᒪᓗ ᓴᐳᒻᒥᒃᓲᕕᐅᕙᓗ ᓯᓇᓄᑦ
Arctic Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Gjoa Haven (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Cambridge Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Resolute Bay (potential shore location)	Sampling sites	Municipal	N/A	N/A	We will be sampling the shoreline within or near the community depending on where the ship goes.
Dundas Harbour (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
King William Island (potential	Sampling sites	Crown	N/A	N/A	N/A

shore location)					
Fort Ross (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Devon Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Prince Leopold Island (potential shore location)	Sampling sites	Crown	N/A	N/A	N/A
Pond Inlet - community-based sampling	Sampling sites	Crown	N/A	N/A	We will be working with community members to locate sampling sites near the community on crown land, in a location that does not disrupt any local activities.
Arviat - community-based sampling	Sampling sites	Crown	N/A	N/A	We will be working with community members to locate sampling sites near the community on crown land, in a location that does not disrupt any local activities.

ᓄᓇᓕᐅᑦ ᐃᓕᐅᖅᑕᐅᓂᖅ ᓄᓇᓖᑦ ᐊᐱᑐᖅᓯᒪᐅᖅᓂᖅᓄᑦ ᐃᑲᔪᑕᐅᔪᓐᓇᖅᑐᑦ

ᓄᓇᕗᒻᒥᖅ	ᐊᑎᑦ	ᑲᑐᔾᔨᐊᖅᑎᑎᒋᒻᒪᖅ	ᖅᑲᖅᓗᓂ ᑐᓴᖅᑎᑕᐅᓕᐅᓇᐊᖅᑭᓚᖅ

ᒥᑦᑎᒪᑕᓂᒃ	Eric Soloman	Ikaarvik	2021-07-27
ᒥᑦᑎᒪᑕᓂᒃ	Shelly Elverum	Ikaarvik	2021-07-27
ᒥᑦᑎᒪᑕᓂᒃ	Justin Milton	Ikaarvik	2021-07-27
ᒥᑦᑎᒪᑕᓂᒃ	Michael Milton	Ikaarvik	2023-02-24
ᐊᖏᕕᐊᑦ	Kukik Baker	Aqqiumavvik Society	2021-07-27
ᐊᖏᕕᐊᑦ	Shirley Tagalik	Aqqiumavvik Society	2021-07-27
ᒥᑦᑎᒪᑕᓂᒃ	Peter Inootik	N/A	2023-02-16
ᒥᑦᑎᒪᑕᓂᒃ	Jamie Enook	ECCC	2022-09-20
ᐊᖏᕕᐊᑦ	Jimmy Muckpah	Aqqiumavvik Society	2023-02-10
ᐊᖏᕕᐊᑦ	Zachariah Owingayak	Aqqiumavvik Society	2023-02-10

ᓚᐃᓴᓐᓰᑦ ᐱᒧᖅᓇᐅᑏ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ

ᓇᒦᒥᐊᖏᓐᓂᒃ ᐱᓕᕆᐊᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᑎᑎᖁᕐᓗᒥᑦ:

Transboundary
Kitikmeot
Kivalliq
North Baffin

ᓚᐃᓴᓐᓰᑦ ᐱᒧᖅᓇᐅᑏ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ

ᒐᕙᒪᒋᔭᐅᔫᑉ ᐊᑭᒃᑐᖅᓯᒪᐅᕐᓂᖅᑲᓐᓂ ᒪᓕᒐᕐᓅᖅᑲᔪᓂᒃ ᐱᕐᑯᔭᕐᓅᖅᑲᔪᓂᒡᓗ ᑲᒪᔩᑦ ᐱᔪᖅᓇᐅᑎᑖᕈᑎᓂᒃ ᓚᐃᓴᓐᓯᓄᓪᓗ ᑲᔪᓯᒃᑲᐃᔩᑦ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᓚᐃᓴᓐᓯᑖᕈᑕᐅᔪᖅ ᐱᔪᖅᓇᐅᑎᑖᕈᑕᐅᔪᖅ ᐊᖏᖅᑕᐅᔪᕐᓘᓐᓃᑦ	ᒫᓐᓇ ᖃᓄᐃᓕᖓᕙ	ᐅᓪᓗᒥ ᑐᓂᔭᖅ/ ᑐᒃᓯᕐᑑᑕᐅᓚᐅᖅᓯᒪᔪᖅ	ᑭᒡᓕᖅᑲᕕᖓ
ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒦᒃᑯᖏᑦ	QIA Land Use Exemption Certificate– QX-2210 (Jennifer Provencher)	Active	2022-06-01	2025-12-31
ᓄᓇᕗᑦ ᒐᕙᒪᖓ, ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ	NRI Scientific Research License – 03 014 22R-M (Jennifer Provencher). Renewal pending.	Active	2022-06-01	2022-12-31
ᓄᓇᕗᑦ ᒐᕙᒪᖓ, ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ	NRI Scientific Research License	Applied, Decision Pending		

Project transportation types

Transportation Type	ᓱᓇᒧᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ	Length of Use
Water	Ship and local boats	

Project accomodation types

ᐊᓯᖓ,

ᐊᑐᒐᐅᓂᐊᖅᑐᖅ

ᐱᕐᑯᑦ ᐊᖏᔪᖅ ᐊᑐᖅᑕᐅᓂᐅᓴᔪᖅ ᐃᓚᖃᓯᐅᑎᓗᒋᑦ ᐃᒎᑕᐃᑦ, ᒥᓪᓗᐊᕈᑏᑦ, ᖃᖓᑕᓲᖅ, ᓄᓇᓯᐅᑦ ᐊᓯᖏᓪᓗ

ᐊᖏᔪᖅ ᐱᕐᑯᑦ ᐊᑐᒐᐅᓂᐊᖅᑐᖅ ᖃᓄᐃᑦᑑᓂᖓ	ᖃᑦᓯᐅᕙᑦ	ᐊᖏᓂᖏᑦ - ᐳᖅᑐᓂᖏᑦ	ᓱᓇᒧᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ
Air sampling array	4	<1m	Optical particle counters, air filtration units and depositional dust gauges to quantify the concentration and size distribution of particulates and allowing for the assessment of black carbon concentration.
Water filters	4	0.5m	Customised filtration system which sample a ship's uncontaminated sea water supply (ambient near-surface waters pumped through the hull). The filtration system has an inline flow meter to record the volume of water filtered and three sequential filters (i.e., mesh size 300, 100 and 50 microns).
Manta net	2	2m x 0.6m	Sampling using manta nets to identify and quantify the concentration of anthropogenic particulates and microplastics in surface waters.
Niskin water sampler	4	0.6m	Collect small water samples (50mL) for environmental DNA(eDNA) meta-barcoding.
Remotely Operated Vehicle (ROV)	2	0.5m x 0.4m	Take surface water samples using syringe sampler and take underwater photographs vessel hulls to determine the extent of biofouling.

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ᓱᓇᒎᑦ ᐅᖅᓱᒃᓴᒡᒥᐊᖅ ᐊᑐᒐᐅᓂᐊᖅᐸ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᐅᖅᓱᒃᓴᒡᒥᐊᖅ	ᖃᑦᓯᐅᕙᑦ ᐅᖅᓱᒃᓴᖃᐅᑏᑦ	ᔫᒃᓴᐅᑉ ᐃᒪᖃᖅᑎᒋᔨᓐᓇᕐᓂᖓ	ᑲᑎᓪᓗᒍ	ᔫᒃᓴᐃᑦ ᐊᒥᓲᓂᖏᑦ	ᓱᓇᒎᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ
Information is not available						

ᐃᒪᖅ ᐊᑐᖅᑕᐅᔮᖅᑐᖅ

ᐅᓪᓗ ᑕᒫᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ	ᖃᓄᖅ ᐃᒥᖅᑕᖃᑦᑕᕐᓂᐊᖅᐸᑦ	ᓇᑭᑦ ᐃᒥᖅᑕᖃᑦᑕᕐᓂᐊᖅᐸᑦ
0		

ᐊᑲᑕᔪᑦ

ᐊᑲᑕᔪᓕᓇᓂᐊᕐᓂᖅ

ᐱᓕᓇᐊᓇᔭᐅᔨᒪᔨᒧᑦ ᐱᓕᓇᐊᓇᔭᐅᓂᐊᖅᑐᖅ	ᖃᓄᐃᐃᑦᑐᖅ ᐊᑲᑕᔪᖅ	ᖃᓄᐃᑎᒋᑦ ᐊᑲᑕᔪᑦ ᓴᖅᑭᐊᓂᐊᖅᑐᓇᔭᐅᕐᓂᑦ	ᖃᓄᐃᓄᖅ ᐊᑲᑕᖅᑕᐅᓂᐊᖅᐸ	ᓴᓗᒪᖅᓴᐅᑎᑲᑲᓄᖅᓂᐅᓂᐊᖅᑐᑦ
Information is not available				

ᐊᐸᑎᒥᐅᑕᓂᕐᑐᑦ ᐊᑲᑐᖅᑕᐅᓯᒪᔨᒃᑐᑦ

Waste: We expect waste to be minimal, limited to small amounts of garbage from sampling equipment. Sampling equipment will be unpacked in the South to reduce waste brought to Nunavut. Any waste produced while sampling will be packed out and transported South for disposal. Wildlife disturbance: All sampling activities will be accompanied by local residents and/or vessel operators trained in the local marine and terrestrial wildlife, in order to reduce any potential disturbances. Environmental disturbance: All research staff are trained in sampling protocols in order to minimize any potential disturbance to the environment. Physical samples taken will be small, and we will not be taking more than is needed for laboratory analysis. Local residents: Our research is being conducted in partnership with local organizations and relies on IQ in order to be of maximum benefit to local residents. Before any research activities are undertaken, we will consult with our Inuit partners, local hunters, and local residents to ensure our activities will not disrupt any traditional practices (e.g. hunting activities).

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

ᐃᓐᓇ ᐊᕿᑎᐅᕐ ᖃᓄᐃᑦᑐᑦᓇᐅᓂᖅ: ᓄᓇᐅᕐ ᖃᓄᐃᑦᑐᓂᖅ

ᐃᓐᓇ ᐊᕿᑎᐅᕐ ᖃᓄᐃᑦᑐᑦᓇᐅᓂᖅ: ᐅᒪᔨᖅᑕᖃᖅᓂᖅ

ᐃᓐᓇ ᐊᕿᑎᐅᕐ ᖃᓄᐃᑦᑐᑦᓇᐅᓂᖅ: ᐃᓄᓕᓇᓂᕆᔭᖅᓴᑦ-ᐱᕿᑦᓕᐊᔨᓇᓂᕆᔭᖅᓴᑦ

Miscellaneous Project Information

ᓄᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᐊᐅᑐᖅᑕᐅᔨᒪᔨᑦ ᖃᓄᐃᑦᑐᓂᖏᑦ ᕿᓕᐅᒥᔭᔨᓂᖅᑕᐅᓂᐊᕐᓂᖏᑦᓗ

Waste: We expect waste to be minimal, limited to small amounts of garbage from sampling equipment. Sampling equipment will be unpacked in the South to reduce waste brought to Nunavut. Any waste produced while sampling will be packed out and transported South for disposal. Wildlife disturbance: All sampling activities will be accompanied by local residents and/or vessel operators trained in the local marine and terrestrial wildlife, in order to reduce any potential disturbances. Environmental disturbance: All research staff are trained in sampling protocols in order to minimize any potential disturbance to the environment. Physical samples taken will be small, and we will not be taking more than is needed for laboratory analysis.Local residents: Our research is being conducted in partnership with local organizations and relies on IQ in order to be of maximum benefit to local residents. Before any research activities are undertaken, we will consult with our Inuit partners, local hunters, and local residents to ensure our activities will not disrupt any traditional practices (e.g. hunting activities).

Cumulative Effects

Impacts

ᓄᓗᓄᐃᖅᑕᐅᓂᖅᑎᑦ ᐊᐢᑎᑎᒥᐅᑕᓱᑦᑐᑦ ᐊᑲᑐᖅᑕᐅᓯᒪᔪᑦ

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
ᓴᓇᓂᖅ																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
ᐅᔾᕿᑲᑦᓂᖅ																									
Sampling sites		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	P	P	-	-
ᐃᑐᑦᑎᓇᓂᖅ																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = ᐊᑲᐅᔪᕈᑎᓴᓐᓇᖅᑐᑦ, N = ᐊᑲᐅᖏᕿᔨᑕᐅᓴᓐᓇᖅᑐᑦ ᑭᓪᐅᒥᕿᔨᓴᓂᖅᑐᑦᑕᐅᓴᓐᓇᖅᑐᑦᓯᒪᓂᑦ, M = ᐊᑲᐅᖏᕿᔨᑕᐅᓴᓐᓇᖅᑐᑦ ᑭᓪᐅᒥᕿᔨᓴᓂᖅᑐᑦᑕᐅᓴᓐᓇᖅᑐᑦᓯᒪᓂᑦ, U = ᖃᑲᐅᕆᒪᓐᓇᖏᑦᑐᖅ)

ᓄᒋᒪᖏᖅ ᐱᓕᓇᐊᓇᖅᐳᔪᖅ

List of Project Geometries

1	polyline	Potential ship route
2	point	Pond Inlet - community-based sampling
3	point	Arviat - community-based sampling
4	point	Dundas Harbour (potential shore location)
5	point	King William Island (potential shore location)
6	point	Arctic Bay (potential shore location)
7	point	Gjoa Haven (potential shore location)
8	point	Cambridge Bay (potential shore location)
9	point	Fort Ross (potential shore location)

10	point	Resolute Bay (potential shore location)
11	point	Devon Island (potential shore location)
12	point	Prince Leopold Island (potential shore location)