NIRB Application for Screening #125470

MS ROALD AMUNDSEN: Northwest Passage – In the Footsteps of Roald Amundsen, from Kangerlussuaq, Greenland to Nome, Alaska USA, 20 August to 11 September 2019, Voyage AMNWP1911

Application Type:	New
Project Type:	Tourism
Application Date:	5/26/2019 4:03:02 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Jorn Henriksen Hurtigruten AS Postboks 6144 Tromso n/a N-9291 Norway Phone Number:: 47 970 57 030, Fax Number:: N/A

DETAILS

Non-technical project proposal description

English: MS ROALD AMUNDSEN is a newly-launched passenger ship owned/operated by Hurtigruten AS of Tromsø, Norway. One cruise through the historic Northwest Passage from East to West is planned to the Qikiqtaaluk and Kitikmeot regions of Nunavut during summer 2019. There will be up to 480 passengers and 170 crew members (including approx. 20 members of the expedition team) plus 1 contracted Ice Pilot. Project duration in Nunavut is 8 days, from 26 August to 02 September. The vessel will clear immigration and customs in Pond Inlet (arriving from Greenland) and clear out in Ulukhaktok, Northwest Territories en route to Alaska. Community visits are planned for Pond Inlet, Gjøa Haven and Cambridge Bay; with a Nunavummiut Beneficiary (Ms. Ashley Cummings from Pangnirtung, NU) hired to serve as Cultural Interpreter/Guest Lecturer as part of the staff team on board. Local services and guides will be employed when visiting communities. Equipment: MS ROALD AMUNDSEN – passenger ship. Proposed use: Vessel providing transportation/accommodations. Fuel: 550 metric tonnes, marine diesel fuel. Storage Methods: Built-in fuel tanks of the vessel. Auxiliary tender boats: Quantity: 15 (OXE-brand 7.0 Explorer rubber boats equipped with OXE PRO 150 HP diesel outboard engines). Proposed use: Sightseeing tours and to facilitate shore landings. Fuel: 50 litres marine diesel fuel (filled from ship's main tanks). Kayaks: Quantity: 12 doubles and 6 singles. Activities include sightseeing by ship, auxiliary boat cruising, kayaking excursions and shore landings for activities such as guided interpretive walks, bird and nature-watching and hiking. Activities will follow standard operating procedures and be managed by the Expedition Leader with the assistance of a highly-experienced team of expedition staff. Landings will be of short duration and in coastal areas. Visits will follow AECO guidelines (www.aeco.no), as well as Welcoming Visitors to Nunavut guidelines and the Code of Conduct for Operators in Nunavut as provided by Cruise Nunavut. No structures will be erected (permanent/temporary), including docks or piers to support the proposed tourism activity. Tenderboats will be used for shore landings in wilderness areas. Appropriate arrangements will be made where docks or piers are available for use.Where applicable, permit/license applications will be submitted to the appropriate authorities and permits/licenses carried on board. A detailed operations plan has been compiled to evaluate environmental aspects of the planned activity and to ensure compliance with requirements under Federal and Territorial legislation. Operations have been planned to be fully self-sufficient, with activities managed by experienced personnel and to be within the search and rescue capability of the vessel, including for medical evacuation. An Environmental Impact Statement has been prepared. Alternatives considered were: 1) Changes to itinerary. 2) Changes to number of guests. 3) Changes to vessel and auxiliary craft used. 4) Changes to activities. 5) Alternative of not proceeding. It is anticipated that the environmental impact resulting from the planned activity will be not more than minor or transitory in nature.

French: MS ROALD AMUNDSEN est un navire à passagers récemment lancé, propriété de / exploité par Hurtigruten AS, de Tromsø, en Norvège. Une traversée historique du passage du Nord-Ouest d'est en ouest est prévue dans les régions de Qikiqtaaluk et de Kitikmeot, au Nunavut, au cours de l'été 2019. Il y aura jusqu'à 480 passagers et 170 membres d'équipage (dont environ 20 membres de l'équipe d'expédition) plus un contrat. Pilote de glace. La durée du projet au Nunavut est de 8 jours, du 26 août au 2 septembre. Le navire dédouanera l'immigration et les douanes à Pond Inlet (en provenance du Groenland) et à Ulukhaktok, dans les Territoires du Nord-Ouest, en route pour l'Alaska. Des visites communautaires sont prévues à Pond Inlet, Gjøa Haven et Cambridge Bay; avec une bénéficiaire du Nunavummiut (Mme Ashley Cummings de Pangnirtung, NU) embauchée pour jouer le rôle d'interprète culturelle et de conférencière invitée au sein de l'équipe du personnel à bord. Les services locaux et les guides seront utilisés lors de la visite des communautés. Équipement: MS ROALD AMUNDSEN - navire à passagers. Utilisation proposée: Navire assurant le transport / l'hébergement. Carburant: 550 tonnes métriques, diesel marin. Méthodes de stockage: Réservoirs de carburant intégrés du navire. Bateaux auxiliaires annexes: Quantité: 15 (canots pneumatiques Explorer Explorer de marque OXE 7.0 équipés de moteurs hors-bord diesel OXE PRO 150 HP). Utilisation proposée: Visites touristiques et faciliter les débarquements à terre. Carburant: 50 litres de diesel marin (rempli des réservoirs principaux du navire). Kayaks: Quantité: 12 doubles et 6 simples. Les activités comprennent des visites touristiques en bateau, des croisières auxiliaires en bateau, des excursions en kayak et des débarquements à terre pour des activités telles que des promenades d'interprétation guidées, l'observation des oiseaux et de la nature et la randonnée. Les activités suivront les procédures opérationnelles standard et seront gérées par le chef d'expédition avec l'aide d'une équipe hautement expérimentée de personnel d'expédition. Les débarquements seront de courte durée et dans les zones côtières. Les visites suivront les directives d'AECO (www.aeco.no), ainsi que les directives relatives à l'accueil des visiteurs au Nunavut et le code de conduite des opérateurs du Nunavut, fournis par Cruise Nunavut. Aucune structure (permanente / temporaire) ne sera érigée, y compris des quais ou des piles pour soutenir l'activité touristique proposée. Des bateaux tendeurs seront utilisés pour les débarquements à terre dans les zones de nature vierge. Des dispositions appropriées seront prises lorsque des quais ou des quais sont disponibles pour utilisation. Le cas échéant, les demandes de permis / licences seront soumises aux autorités compétentes, ainsi que les permis / licences conservés à bord. Un plan d'exploitation détaillé a été élaboré pour évaluer les aspects environnementaux de l'activité prévue et pour

assurer la conformité aux exigences de la législation fédérale et territoriale. Les opérations ont été planifiées pour être entièrement autonomes, avec des activités gérées par du personnel expérimenté et dans les limites des capacités de recherche et de sauvetage du navire, y compris en cas d'évacuation médicale. Une étude d'impact sur l'environnement a été préparée. Les solutions envisagées étaient les suivantes: 1) Changements d'itinéraire. 2) Modifications du nombre d'invités. 3) Changements apportés au bateau et aux bateaux auxiliaires utilisés. 4) Changements d'activités. 5) Alternative de ne pas procéder. Il est prévu que l'impact sur l'environnement résultant de l'activité prévue ne sera que mineur ou transitoire.

Inuktitut: ᐱᓕᓇᐊᖏᑦ ᑐᓴᕐᕕᑕᕕᓪᓗᒃ ᑎᓵᔨᓄᑦ ᓇᐃᓭᖅᓯᒪᔪᖅMS ROALD AMUNDSENᓯᒃᓗᐊᓗᓵ - ᐸᖅᑕᓂᑦ Roald Amundsen ᐅᒥᐊᖏᔪᐊᖏᖅᑎᑦᓗᓯᐊᖅ, ᐊᑯᑭᖅᑐᑦᑎᑦ ᓄᓘ, ᐊᓪᓵᖅ ᐊᒥᐊᓕᒃᓄᑦ20 ᐃᑎᓯ - 11 ᓯᑎᐱᓇ 2019Voyage AMNWP1911MS ROALD AMUNDSEN ᓄᑲᖏᔪᖅ ᐅᓯᒃᑕᖅᓂᑦ ᐃᓄᖅᓂ ᐅᒥᐊᖏᔪᐊᖅ ᓇᖅᒥᓂᓵᕐᔪᖅ/ᐊᐅᓭᖅᑎᑕᐅᔪᖅ Hurtigruten AS-ᒧᑦ Tromsø, Norway-ᒥᑦ. ᐊᑕᐅᓯᖅ ᐅᒥᐊᖏᔪᐊᖅ ᓯᓗᐊᓗᓄᓪᓀᐊᖅᑐᖅ ᒪᓂᖅᓇᖅᓂᒪᓂᑦ ᖃᑭᖅᑲᓪᓚᒧᑦ ᐊᓪᒪᓗ ᖃᑎᖏᑎᐅᓄᑦ ᓄᓇᕐᒥᑦ ᐊᐅᔾᖅᓂᑦ 2019. 480-ᓂᑦ ᐅᓯᐊᖅᑐᖅ ᐊᓪᒪᓗ 170-ᓂᑦ ᐱᓕᓇᓂᓂ (ᐃᓕᐅᔪᑦ 20-ᓗᐊᑦ ᐃᖅᑎᖏᔭᐅᑐᖅᓯᓕᓇᓵᑦ) ᐃᑭᒪᓂᐊᖅᑐᑦ ᐃᖅᑎᖏᔭᖅᓂᒥᑦ. ᓄᓇᕐᓴᓐᓂᐊᖅᑐᑦ 8 ᐅᑦᓗᓂᑦ, ᐃᑎᓯ 26-ᒥᑦ ᓯᑎᐱᓇ 2-ᒧᑦ. ᐅᒥᐊᖏᔪᐊᖅ ᐊᓯᐊᓄᑦ ᓄᓇᓕᖅᒧᐊᖅᓂᒧᑦ ᐱᓕᓇᓕᓂᐊᖅᑕᖅᑎᑦ (ᑎᑭᓕᓂᑎ ᐊᔪᑭᑐᑦᑎᒥᑦ) ᐊᓪᒪᓗ ᐅᓗᕼᐊᖅᑐᒧᑦ, ᓄᓇᓕᑎᐊᖅᒧᑦ ᐊᓯᔪᖅᒧᓐᓇᐅᓗᑎᑐᖅ. ᓄᓇᓕᖅᓄᐊᖅᓂᐊᖅᑐᑦ ᒥᓕᑎᒪᓕᓂᖅᒥᑦ, ᐅᖅᓯᖅᑐᑦᑎᒥᑦ ᐊᓪᒪᓗ ᐃᓚᖅᑐᑦᑎᒥᑦ; ᐱᖅᑎᖅᖅᓗᑎᐅᖅ ᓄᓇᕐᒪᒥ ᓄᓇᒋᖅᑕᐅᓯᒪᔪᒥᖅ (ᒥᔪ ᐊᔪᓂ ᖃᒥᖅᔪ ᔪᖅᓂᖅᑐᖅ, ᓄᓇᕐᒪᒥᑦ) ᐱᓂᓇᓵᒋᔭᖅ ᐱᖅᑯᓯᓂᓵᐅᓂᒧᑦ/ᐅᔪᓵᐅᓗᓂ/ᐅᒡᓂᖅᑐᓄᑦ ᐅᖅᓐᓂᒃᑎᐅᓗᓂ ᐱᓂᓇᓵᒥᓴᐅᓗᓂ ᐅᒥᐊᖏᔪᐊᖏᑦ ᐃᑭᒪᓂᓗᓂ. ᓄᓇᓕᖅᒥᑦ ᐱᓵᑦᑎᑕᐅᓂᖅᐅᖅᓯᐊᖅᑐᖅ: 1) ᐊᓪᒪᓗ ᓄᓇᒋᖅᑕᐅᓯᒪᔪᒥᖅ ᐱᓕᓇᓕᓂᐊᖅᑐᑦ ᐱᓕᓇᓕᓂᐊᖅᑐᑦ ᐱᓕᓇᓕᓂᐊᖅᑐᑦ

20 ilauyut ihivriuqhiyaqtuqtut ikayuqtiriit) umiaqtuqtut atuni aulaaqniqmi. Havaap hivituniga Nunavumi iinik (8) ubluni, August 26-mit September 2-mut. Umiaq aniguqhiniaqtuq tuyuqmijat pulariagani ihivriuqtauniginiklu nakhaqtauyut Mitimatalikmi (tikilutik Akugitumit) ihivriuqtaufaaqlutiklu ahinugauyaagani Ulukhaqtuumit, Nunatiami aulariamini Alaska-mut. Nunagiyauyut pulaaqtauniaqtut upalugaiqtut ukua Mitimatalik, Uqhuqtuuq, Iqaluktuutiaqlu; Nunavumiutaqlu Nunataqtauhimayut (Ms. Ashley Cummings Pakniqtuumit, Nunavumi) havaktitauniaqtuq Ilitquhiqmik Uqaqtiliqtuiniaqtuq Pulaaqtuniklu Uqaujuiluni ilaginiaqtait havaktut ikayuqtiriit umiaqmi. Nunani ikayuutit munaqtikhalu havaktitauniaqtut pulaaliraagata nunagiyauyunik.Equipment: MS ROALD AMUNDSEN – inuknik akyaqtuq umiaqQanuq atuqnikhaagut: Umiaq aularutauniaqtuq hiniktaqviulunilu Uuqhukhaq: 550 m3 litres-nuk uukhuqyuamikTuutqumavikhat Atuqtauyukhat: Uuqhuqyuaqaqviit umiaqmillagiyait nunalitirutikhat qainatAmigainigit:15 (OXE-kunit hanahimayut 7.0-fiiguyut takinigit Explorer-guyut ulapait qainat OXE-kunit PRO-nik 150 hoaspauwauyut uqhuqyuaqtuqtunik igniqutinik)Qanuq atuqnikhainik: Ihivriuqhiyaagani takuyakhanik nunalijutigiyaaganilu Uukhukhaq: 50 litres-nik uukhuqyuamik (uuqhiqhiniaqtut umijap uukhuqaqviinit)Qainat Amigainigit: Tualut (12) malruutaqtut siksilu (6) atautitHulijutit ilaqaqtut takuyaqtuiyaagani umiakut, Zodiac-kut, qayaqtuqlutiklu aularutinik nunalitpaklutiklu hulilutik munaqtiinit uqaujuqtaulutik pihuuyaqtilugit, qupanuanik nunamiutaniklu qungiaqlutik pihuuyaqlutiklu. Hulijutit maliruarutauniaqtut atuqpaktunik aulanikut pigiarutinik munariyaulutiklu Takuyaqtuiyunik Hivuliqhuqti ikayuutainiklu qauyimaniqatiaqtut ikayuqtiriit takuyaqtuiyunik havaktini ilauyut. Nunalinigit hiviginiaqtut taqyulu qatiguani nunani. Pulaaqnigit malikniaqut AECO-mi maliruagakhanik qahaktunik www.eaco.no –mi, uvanilu 'Tuyuqmipkatiaqlutik Pulaaqtut Nunavuumut' maliruakhat unalu 'Inutiagujutainik Aulapkaiyut Nunavumi' pipkagauyunik Umiaqtuqvigilutu Nunavut-mi.Hanayakhat napaktiqtaulaitut (aulalimagitut atuqtaulaktuluniit), tulaktaqviit tunmiqaluniit ikayuriagani pulaqtuliqijutauyumayut hulijutit. Umijap qayanuagit atuqtauniqtut nunalijutigivagiagani maniqami nunani. Ihuaqhainiaqut tulaktaqviit tunmiqaluniit atuqtaulaaqniqata. Atulaaqniqata, piyunautinik laisiniklu tuukhiutit tuniyauvakniaqut ataniqtuiluaqtunut piyunautilu laisiuyuluniit nakhaqtauvakniaqut umiaqmi.Uqatiaqhimayuq aulanikut upalugaiyaut atautimuktiqhimaliqtuq nalunairiagani avatauyumik pijutauyunik upalugaiqtauyuni hulijutimi maliruatiariagani aturiaqaqtut Kanatami Ukiuqtaqtumilu maligauyut. Aulanigit upalugaiqtauyut tamaini inmiknik pivakniaqut, hulijutit munariyaulutik qauyimayunit havaktunit qanituaniilunilu qiniqhiakpata anaujiniaqatalu ayuginigata umijap, aaniaqtuqaqalu inuiyariaqaqniganik.Avatauyumik Aktunigagut Uqauhiq ihuaqhaqhimaliktuq. Ahiagurutikhat ihumagiyauhimayut ukuaguyuut: •Aalaguqnigit aulaaqvikhait •Aalaguqnigit amigainigit pulaaqtut •Aalaguqnigit umijap ilagiarutailu qainat atuqtauyut •Aalaguqnigit hulijutit •Ahiagurutit umiaqtugitpata Naahuriyauyuq avatauyumik aktuniga upalugaiyaqhimayumit hulijutimit agitqiyaulimagituq mikiyumit hiamayagiluniluniit maniqamut.

Personnel

Personnel on site: 651
Days on site: 8
Total Person days: 5208
Operations Phase: from 2019-08-21 to 2019-08-28

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Pond Inlet 26 August	Tourism Activities	Municipal	Inuit hamlet	n/a	Pond Inlet
Dundas Harbour/Crocker Bay 27 August	Tourism Activities	Inuit Owned Surface Lands	Dundas Harbour - RCMP Station and Thule Site	Twentieth century Hudson's Bay Company trading post, Royal Canadian Mounted Police station/base camp/burial site, and archaeological evidence of Inuit occupation, including a rare set of nangissat (hopping stones).	Pond Inlet (Mittimatilik)
Beechey Island 28 August	Tourism Activities	Inuit Owned Surface Lands	Northumberland House - Remains of supply depot and emergency shelter built by the Belcher Expedition in 1852. Franklin Camp - The 1845-46 wintering site of Sir John Franklin's Northwest Passage Expedition, including grave site and remains of brief occupation. Beechey Island Graves - Franklin 1845-1846 overwintering harbour, shore camp/depot, and crew burial site.	As above under Site History.	Resolute (Qausuittuq)
Prince Leopold Island 28 August	Tourism Activities	Inuit Owned Surface Lands	The Prince Leopold Island Migratory Bird Sanctuary, designated by CWS, is a migratory bird sanctuary in Qikiqtaaluk, Nunavut, Canada. It is located on Prince Leopold Island within Lancaster Sound at the junction of Prince Regent Inlet and Barrow Strait.	N/A	Resolute (Qausuittuq)
Conningham Bay 30 August	Tourism Activities	Inuit Owned Surface Lands	HBC trading post and Inuit Site	This was the last trading post erected (still standing) in the Eastern Arctic by the Hudson's Bay	Resolute (Qausuittuq)

				Company, in 1937, on the north shore of Bellot Strait. There are several Inuit sites nearby, including graves, caches and habitation sites.	
James Ross Strait 31 August	Marine Based Activities	Marine	N/A	N/A	Gjoa Haven (Uqsuqtuuq)
Gjoa Haven 1 September	Tourism Activities	Municipal	Inuit Hamlet	n/a	Gjoa Haven
Cambridge Bay 2 September	Tourism Activities	Municipal	Inuit hamlet	n/a	Cambridge Bay

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Pond Inlet	Enookie Killiktee	Economic Development Officer / Passenger Service Agent	2018-01-26
Gjoa Haven	Bob Cheetham / Connie Baines	Economic Development Officer / Passenger Service Agent	2018-02-14
Cambridge Bay	Jim MacEachern	Economic Development Officer / Passenger Service Agent	2018-02-22

Authorizations

Indicate the areas in which the project is located:

Transboundary
Kitikmeot
North Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Transport Canada	Equivalency Certificate	Applied, Decision Pending		
Government of Nunavut, Department of Culture, Language, Elders, and Youth	Class 1 Archaeology Permit	Applied, Decision Pending		
Government of Nunavut, Community Government and Transportation	Tourist Outfitter's License	Applied, Decision Pending		
Canadian Wildlife Service	Permit to enter Prince Leopold Island Migratory Bird Sanctuary	Applied, Decision Pending		
Government of Nunavut, Department of Environment	Wildlife Observation License	Not Yet Applied		
Qikiqtani Inuit Association	Class 2 Land Use License	Not Yet Applied		
Kitikmeot Inuit Association	Class 2 Land Use License	Not Yet Applied		
Hunters and Trappers Associations/Organizations	Authorizations from Mittimatalik (Pond Inlet) HTO, Gjoa Haven HTO and Ekaluktutiak (Cambridge Bay) HTO	Not Yet Applied		
Other	Authorization from Inuit Heritage Trust	Not Yet Applied		
Health Canada	Decision pending on Health Inspection	Applied, Decision Pending		
Other	Government of Nunavut, Workrs Safety & Compensation Commission - WSCC Exemption	Active	2019-05-19	2019-12-31

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	MS ROALD AMUNDSEN, passenger cruise ship, vessel providing transportation and accommodations. The vessel will be carrying up to 480 passengers plus 170 crew (including approx. 20 members of the expedition team) and 1 contracted Ice Pilot	

Project accomodation types

Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
MS ROALD AMUNDSEN	1	Length overall 140m, Breadth moulded 23.6m Draft 5.3m, GRT 20889	Vessel providing transportation and accommodation. Vessel is a new build, to be launched in April 2019.
OXE-brand 7.0 Explorer auxiliary tender boats – equipped with Oxe Pro 150 HP (Marine Diesel Oil) outboard engines	15	Capacity of 18 persons excluding the driver.	Motorized auxiliary vessel providing transport between ship and shore and for small group guided sightseeing.
Double kayaks	12	TBA	Guided sightseeing tours
Single kayaks	6	TBA	Guide kayaks (to accompany kayakers on sightseeing tours)
Palfinger type NDTS 3500H -brand Fast Rigid Rescue Boats	2	Capacity of 6 persons each.	Emergency use only (rescue situations).

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	1	550	550	Metric Tons	Main tanks of the vessel. Fuel is obtain using a “straw” down into the main diesel/MGO tank of the ship.
Diesel	fuel	15	50	750	Liters	Diesel for the Explorer tender boats
Diesel	fuel	2	50	100	Liters	Diesel for the Fast Rescue Boats

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	Production on board (reverse osmosis)	Produced in Engine space – NOTE – The vessel is a new build and the daily amount is unknown at time of submission

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Waste disposal	Combustible wastes	TBD	Separated	Depends upon type of Waste. Removed for disposal at certified reception port, e.g. for plastics. Incinerated as per Canadian legislation, e.g. for paper.
Waste disposal	Greywater	TBD	Treated on board	Disposal as per Canadian legislation
Waste disposal	Hazardous waste	TBD	Depends upon type of Waste. Collected/separated if Batteries; Collected/frozen if Medical and Sanitary; or Collected if Fuels and Oil.	Again depends upon the type of Waste: Removed for recycling or disposal at certified reception port
Waste disposal	Non-Combustible wastes	TBD	Depends upon type of Waste. If Food Waste segregated and refrigerated or grained and disposed of according to MARPOL regulations. If Metal, Glass, Aluminum or Dry, Non-burnable or Ash (24h burning), Separated.	Again depends upon the type of Non-Combustible Waste. Might be Removed for disposal at certified reception port (if separated and refrigerated) if Food Waste, Disposed of as per Canadian legislation if Glass, Removed for recycling or disposal at certified reception port if Aluminum, or Removed for disposal at certified reception port if Dry, non-burnable or Ash (24h burning) wastes.
Waste disposal	Sewage (human waste)	TBD	Treated on board	Disposal as per Canadian legislation

Environmental Impacts:

The project is a proposed cruise tourism project. The nature of potential impacts is considered to be well-known, with potential for infrequent, localized impacts to the biophysical environment that are temporary in nature, reversible and mitigable with due care. Examples of cumulative impacts to which the proposed activity may contribute include: • Effect on tundra vegetation or periglacial features through additive effects of pedestrian traffic, • Increased pedestrian traffic, • Disturbance of migratory and/or At Risk Species, • Degradation of cultural and historic artifacts from handling, abrasion, theft, etc., • Changes in attitudes over time and hence acceptable uses of localities through familiarity and precedent, • Effects to marine and terrestrial wildlife and historical sites. The proposed project has been planned to visit expedition landing sites that are in close proximity of those being visited by other expedition cruise operators; however, limited baseline environmental monitoring data exists for the sites that will be visited by ROALD AMUNDSEN, so it is difficult to judge the likely long-term cumulative effects of the visitation, however the activity as planned has been designed to have an environmental impact that is not more than minor or transitory. Potential negative impacts can be mitigated by adhering to the applicable Acts and Regulations, which must be observed by tourism operators conducting activities in the Canadian Arctic; by the hiring of experienced personnel; by strictly following established standard

operating protocols and guidelines and advice received from review boards, public comment and those experienced in operating in the region. Hurtigruten has recent Canadian Arctic experience with MS SPITSBERGEN and MS FRAM, as well as 125 years as a distinguished cruise line behind them.

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

Please refer to the Background Document: Project Description/ Environmental Impact Statement.

SECTION H2: Disposal At Sea

Waste disposal has been identified in the section on Waste. Please refer to the Background Document: Project Description/ Environmental Impact Statement for further information in this regard, however the vessel is a new build, so the project amounts generated are unknown at the time of document submission since the vessel has just been launched.

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

The Physical Environment has been described in numerous cited articles and publications and could be impacted by the proposed activities; however the activities have been planned so as to have not more than a minor or transitory impact. Please refer to the Background Document; Project Description/ Environmental Impact Statement for further information in this regard.

Description of Existing Environment: Biological Environment

The Biological Environment has been described in numerous cited articles and publications and could be impacted by the proposed activities; however, the activities have been planned so as to have not more than a minor or transitory impact. Please refer to the Background Document; Project Description/ Environmental Impact Statement for further information in this regard.

Description of Existing Environment: Socio-economic Environment

It is recognized that this activity will have both an economic impact and also a social impact on the communities that are planned to be visited. Both are perceived to be positive impacts. As to Socioeconomic impact, 140 crew (inc. up to 20 members of the expedition team) are employed to work aboard MS ROALD AMUNDSEN. A Pre-Trip Marine Tourism Economics Benefits Reporting Form has been compiled for Government Nunavut's Department of Economic Development & Transportation to document estimated expenditures while in the three communities. Economic benefit includes direct employment, purchased goods & services, services & training, donations and indirect benefits. When in communities, local guides will be hired and services arranged. A Nunavummiut Guide, Ms. Ashley Cummings, will be aboard for the entire cruise, to serve as a Cultural Interpreter and Guest Lecturer. We look forward to welcoming her as part of the Expedition Team. Please refer to the Background Document: Project Description/ Environmental Impact Statement for further information in this regard.

Miscellaneous Project Information

Please refer to the Background Document: Project Description/ Environmental Impact Statement.

Identification of Impacts and Proposed Mitigation Measures

The possibility of potential impacts will be minimized by strict adherence to applicable laws and regulations, company policies and standard operating procedures, careful pre-trip planning and preparation, including on board training, advance permits/authorizations (where applicable), briefings, advice received from communities, review boards and the supervision and monitoring of visitor activities in the field by experienced personnel. Direct, indirect and cumulative impacts of the proposed activity have been considered as have alternatives. Provided that minimization and mitigation measures are adhered to, it is concluded that the proposed activity will have less than a minor or transitory impact and the activity should be authorized/permitted to proceed. Further information can be found in the Background Document: Project Description/ Environmental Impact Statement.

Cumulative Effects

Cumulative effects of the proposed activity have also been considered as have measures to minimize and mitigate potential impacts. Cumulative Effects from other activities, including tourist activities, in the same area are unknown. The possibility of potential impacts will be minimized by strict adherence to applicable laws and regulations, company policies and standard operating procedures, careful pre-trip planning and preparation, including on board training, advance permits/authorizations (where applicable), briefings, advice received from communities, review boards and the supervision and monitoring of visitor activities in the field by experienced personnel. Further information can be found in the Background Document: Project Description/ Environmental Impact Statement.

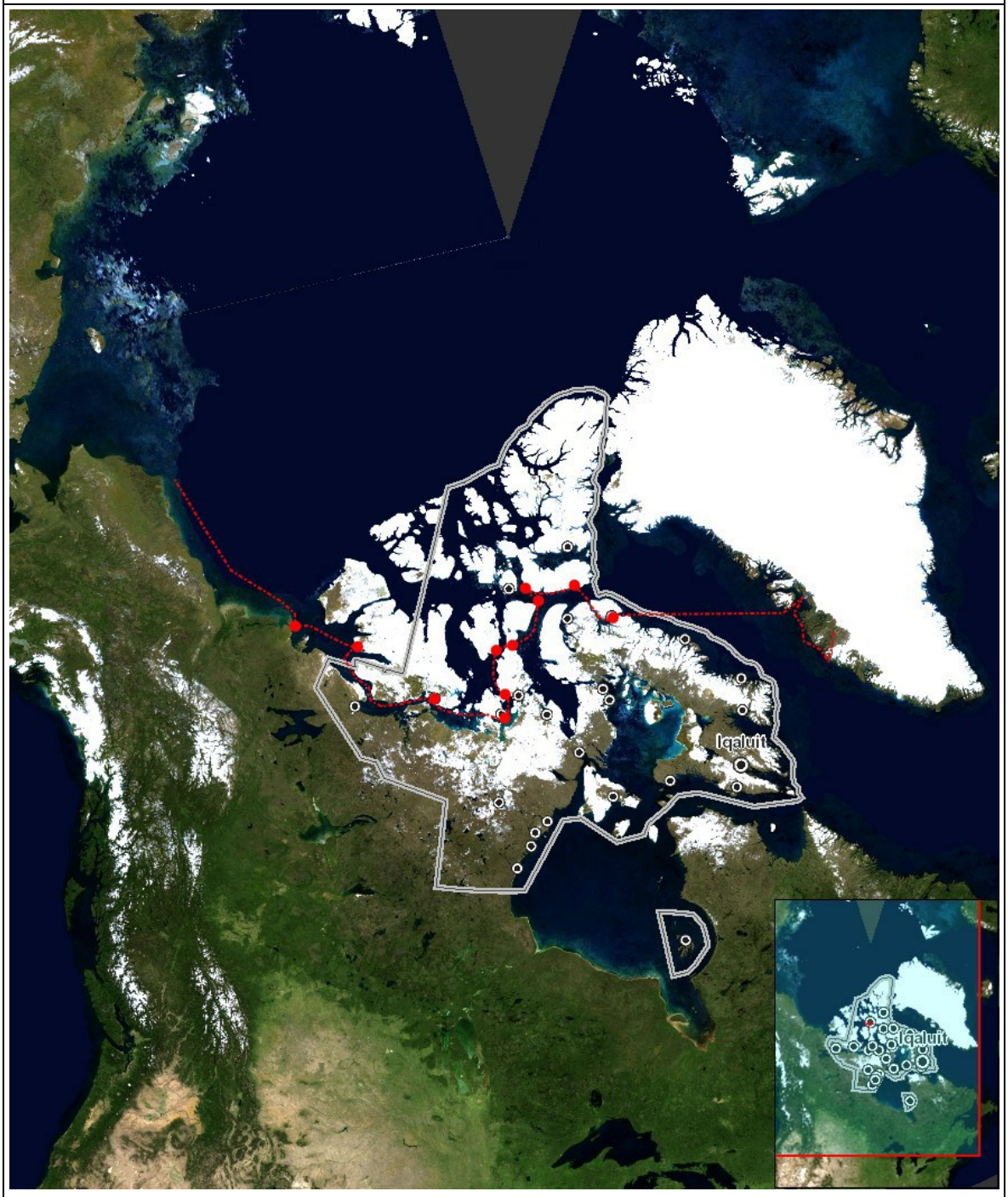
Impacts

Identification of Environmental Impacts

	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
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Tourism Activities		P	-	-	-	-	-	-	-	U	-	-	-		U	U	U	-	U		P	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polyline	Amundsen 2019
2	point	Pond Inlet 26 August
3	point	Dundas Harbour/Crocker Bay 27 August
4	point	Beechey Island 28 August
5	point	Prince Leopold Island 28 August
6	point	Fort Ross 29 August
7	point	Conningham Bay 30 August
8	point	James Ross Strait 31 August
9	point	Gjoa Haven 1 September
10	point	Cambridge Bay 2 September
11	point	Ulukhaktok 4 September
12	point	Smoking Hills 5 September