Vessel Use

1. Describe the purpose of vessel operations.

We carry out oceanographic and marine geological research on board a ship in order to get a better understanding of the marine environment and morphological processes since the last glaciation.

2. List classes and sizes of vessels to be used.

We will be on board the German Research Vessel Maria S. Merian (overall length: 94.8 m; max. draught: 6.50 m; net tonnage: 1,671 NT)

3. Indicate crew size.

20 members of the crew and 20 scientist will be on board.

4. Indicate operating schedule.

We will start the survey on 15 August with work areas A and I in the Labrador Sea and on the shelf. We then plan to enter the Hudson Strait around 20 August (depending on licence timing). We will then proceed to the Foxe Basin, Coast and Mansel, Central Hudson Bay, Winisk Trough and Belcher Islands work areas. As we are very late in the licence process, we do not expect to receive permission to enter the EMR and NMR. As a result, we are not planning to enter Working Area H (Great Whale River) at this time. We will start our transit to Nuuk (Greenland) after working area G, which will be on the 19th of September. The work areas you received from the NPC have been updated to the EMR and NMR borders (see attached map with updated work areas).

5. Provide a description of route to be traveled (include map).

See attached map of working areas for transit between areas.

6. Indicate whether the vessel will call at any ports. If so, where and why?

We will not call at any ports during the research cruise. We will leave the port of St. John's (NF) August 14th and arrive in the port of Nuuk (Greenland) September 20th.

7. Describe wastes produced or carried onboard including the quantities, storage, treatment, handling and disposal methods for the following:

a. Ballast water

maximum storage capacity: 1082m^3 ballast water on board 219m^3 ballast water contains fresh water only and is kept as permanent ballast on board. Additional vessel is equipped with a ballast water treatment system (Filtration & UV) Type Optimarine Ballast System (OBS) 0167-0125FS

b. Bilge water

maximum storage capacity: 5,2m^3, treatment bilge water filtering 15ppm with alarm and automatic stopping device (regulation 14.7). Disposal to port facility in port

c. Deck drainage

not treatment

d. Grey and black water

see section waste, treatment by Biological Sewage Plant (Capacity : 8 M^3/day), disposal according MARPOL regulations

e. Solid waste

see garbage management plan

f. Waste oil

maximum storage capacity 31,1m^3, disposal to port facility in port

g. Hazardous or toxic waste

not on board

8. List all applicable regulations concerning management of wastes and discharges of materials into the marine environment

MARPOL

9. Provide detailed Waste Management, Emergency Response and Spill Contingency Plans

see attached garbage management plan and SOPEP Plan

10. Does the vessel(s) possess an Arctic Pollution Prevention Certificate? If yes, indicate the date of issue and the name of the classification society.

Arctic Pollution Prevention Certificates are no longer valid. Vessel is Certified according POLAR CODE PC7; date of issue 12.11.2019 by BG Verkehr, German flag state authority

11. Describe the source of fresh water and potable water

Fresh water is produced on board by ships own fresh water generator

12. Indicate whether ice-breaking will be required, and if so, approximately where and when? Discuss any possible impacts to caribou migration, Inuit harvesting or travel routes, and outline proposed mitigation measures.

No ice breaking will be required.

13. Indicate whether the operation will be conducted within the Outer Land Fast Ice Zone of the East Baffin Coast. For more information on the Outer Land Fast Ice Zone, please see the Nunavut Land Claims Agreement (NLCA), Articles 1 and 16.

N/A

14. Indicate whether Fisheries or Environmental Observers or any other Qualified Marine Observer will be onboard during the proposed project activities. If yes, describe their function and responsibilities.

There will be a bird observer on board.

15. Describe all proposed measures for reducing impacts to marine habitat and marine wildlife (including mammals, birds, reptiles, fish, and invertebrates).

See section impacts and Additional Information: Identification of Impacts and Proposed Mitigation Measures

16. Describe whether any part of the project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).

The areas A and I are located in the Labrador Sea. We got the permission by the DFO (see attached document).