SUMMARY OF NL-CAR’S COMMENTS ON GRIEG NL SEAFARM’S ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR THE PLACENTIA BAY SALMON AQUACULTURE PROJECT

CONCLUSION: The EIS is highly deficient in many areas. It does not answer the numerous public and scientific concerns that have been raised, nor does it meet the specific guidelines issued to the proponent by the Newfoundland and Labrador Government’s Environmental Assessment Division. Recommendation: NL-CAR recommends that the EIS be declared “deficient” by the Environmental Assessment Division and sent back to the proponent for significant further work.

LIST OF KEY DEFICIENCIES:

1. The proponent has made no effort to collect baseline data on threatened wild Atlantic salmon in Placentia Bay despite lack of data on wild salmon being a key reason why the EIS was ordered. The EIS guidelines identified abundance, migratory patterns, genetic population structure, health, and fitness of wild salmon as key areas where more data are needed.
2. The proponent continues to claim that any escaped salmon will be sterile and not able to interbreed with wild salmon but have provided no evidence to support this claim.
3. The impact of the spread of sea lice from sea-cages to wild salmon has not been adequately addressed. The proponent plans to use cleaner fish (lumpfish) to attempt to control sea lice in the cages, but provides no evidence that this will prevent sea lice from spreading to wild salmon. The impacts on wild salmon from sea lice outbreaks in the farms have not been assessed.
4. The extent to which pesticides and antibiotics are likely to be used has not been fully acknowledged, and the potential impacts of the use of these chemicals on the environment has not been adequately assessed.
5. The proposed follow-up monitoring program is completely inadequate for assessing the effectiveness of proposed mitigation measures and for determining if any unexpected environmental impacts occur. Monitoring programs are needed for sea lice and disease impacts on wild salmon, movement of escaped farmed salmon into rivers, ecological interactions between wild and escaped farmed salmon, and abundance and genetic integrity of wild salmon.
6. The proponent has not provided a balanced and defensible analysis of the potential for using land-based facilities instead of sea-cages. Insufficient, inaccurate, and misleading information has been provided to justify rejecting the land-based alternative. Conclusions around the carbon footprint, land and water use, and electricity needs of land-based facilities are not supported by the information provided.
7. Grieg was required to address the issue of proximity of sea cages to scheduled and non-scheduled salmon rivers and the potential effects on migrating wild Atlantic salmon. Some of the sea cages are located less than 20 km from the mouths of several rivers used by Atlantic salmon. DFO recommends that sea cages used for aquaculture be located at least 20 to 30 km from salmon rivers. Table 4.2 on page 17 of the wild Atlantic salmon component study shows 17 sea cages located less than 20 km from the mouths of these rivers, including 4 unscheduled rivers and a river with rainbow trout and arctic char. This increases the likelihood of genetic interaction of escaped farm salmon with wild stocks but also poses threats related to the transfer of disease and parasites to the wild populations. It is not necessary for the farm fish to escape for this to happen as these pathogens travel with the current and tides. Escaped fish also compete with wild salmon for habitat and food.
8. Grieg was required to address the issue of ice and ice bergs in the waters of Placentia Bay (PB). This subject is dealt with in section 4.5.2 on pages 21 to 23 of the Wild Atlantic Salmon Component Study. In its registration document Grieg claimed that PB was ice free. In its EIS Grieg states that PB is relatively ice free. However the discussion provided shows that ice can occur in PB during the period of mid-February to mid-April in any given year. The probability of ice occurring in any given year is 1 to 15 percent as shown in Figure 4.5, page 23. Figure 4.6 shows that when ice is present in early March the concentration is 9 to 9+ tenths. In percentage terms this translates to 90 to 90 + percent and it means that the Bay is full of ice. This condition occurs in the Northern part of PB where the sea cages are located. This is a potentially catastrophic condition and could easily destroy one or more or even all of the sea cages and allow the salmon to escape into frigid waters. Grieg’s answer to this condition is that it will tow the cages out of harm’s way or harvest the salmon if they are of market size. At that time of year with ice conditions like this it is not feasible to tow a 50 meter diameter sea cage. Also with 90 + percent ice cover there will be nowhere to tow the sea cage. A further constraint is that the cages cannot be towed when the temperature is 4 degrees C or colder, a very likely condition at that time of year. Such an ice condition occurred in late March to early April of 2016. This is an environmental effect for which there is no feasible mitigation and will result in a disaster if the sea cages are located as planned. There is much more information on ice in PB in different parts of the EIS. According to the information presented only 6 ice bergs have been observed in the area of PB where the sea cages would be located during the period between 1960 and 2015. This is not many ice bergs but it only takes one to wipe out a sea cage or anything else in its path.
9. The land based Recirculatory Aquaculture System (RAS) is located in Marystown and is used to grow the salmon from the egg stage to the smolt size. Grieg plans to grow some smolt to the size of 1400 grams so the salmon can be brought to market size more quickly. Little information is provided on the quantity and characteristics of the various wastes that will be collected in the RAS and how they will be dealt with. Grieg says that all of this will be transported to a local company for use as a commercial fertilizer and/or animal feed additive or a feed supply company located in Denmark. This raises a serious concern that there is an environmentally acceptable plan to deal with the unknown amount of organic waste produced by the 7 million salmon in the RAS. Because this is the land-based part of the project at least this waste stream can be collected and managed. However no specific plan is provided.
10. Grieg was required to provide a component study on the Aqualine Midgard sea cages that will be used in its project. This study is supposed to done by an independent panel of local experts. The component study is very poorly prepared and appears to be mainly sales and promotional information about the sea cages. No evidence is provided that the panel of experts actually did any work for this study. No evidence is provided to show that the panel personnel are actually experts. The conclusion they reach is that where these cages have been used in other countries like Norway, Scotland, Faroe Islands and Iceland, the conditions are similar or even harsher than in Placentia Bay. However, they ignore the presence of sea ice and ice bergs in Placentia Bay and these conditions do not occur in the other countries. Overall the quality of this component study is unacceptable and should be rejected outright.
11. Grieg was required to provide information and analysis related to the deposition of sewage from the farm salmon under and near the sea cages. The only information provided was for carbon and was generated by a computer model (Volume 3, Appendix D). No analysis was given and no reference was made to similar size farms in other areas. The deposition of sewage under the sea cages is a major problem. The addition of uneaten food along with possible therapuetants used to treat sea lice and antibiotics makes this a very toxic sludge. Grieg was also required to address the effects of these deposits on the adjacent aquatic environment. Grieg acknowledges that these deposits could attract wild salmon and other species including predators and that disease and parasites could be transferred to wild salmon but no mitigation is offered. Grieg should be required to present a full analysis of the amount and make-up of the sludge that will build up under the sea cages, the possible effects of this on wild salmon and other species and how this can be mitigated.
12. Grieg was required to provide a description of the standard operating procedures (SOPs) for the prevention of disease such as infectious salmon anemia virus (ISAV). This disease which is fatal to salmon is rampant in Atlantic Canada and particularly NL with 4 confirmed outbreaks since late 2017. Grieg’s response is provided in Volume 2, Appendix K and section 2.5.2.2 which describes Operations and Maintenance for Fish Escapes and Fish Health. These provide general precautions only and Grieg states that their SOPs will be developed but are proprietary. According to the Canadian Food Inspection Agency (CFIA) ISAV infected salmon is fit for human consumption and therefore part of the strategy for dealing with an outbreak of ISAV is to harvest the salmon as quickly as possible if it of market size.