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Honourable Gordon Wilson
Department of Environment
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Minister.Environment@novascotia.ca

**Re: Environmental Assessment - Northern Pulp Nova Scotia Corporation
Replacement Effluent Treatment Facility Project, Pictou County, Nova Scotia**

Dear Sir or Madam and Minister Wilson:

Please be advised we continue to represent the Harbour Authority of Caribou (hereafter "the Authority"), Pictou County, Nova Scotia.

Located at the mouth of Caribou Harbour, the Authority operates the busiest fishing port in Northern Nova Scotia. It is a hub of fishing activity from April to early December. It is accessed via the 106 branch of the Trans-Canada Highway and is adjacent to the Northumberland Ferries terminal. The facility managed by the Authority is the 'heart' of the commercial fishing industry in northern mainland Nova Scotia. It is also the site of Northern Pulp Nova Scotia's (NPNS) proposed marine effluent pipeline and effluent outfall.

The Authority has again retained our firm to express its continuing concerns regarding Northern Pulp's Focus Report for the Replacement Effluent Treatment Facility Project.

The Authority's position continues to be that Northern Pulp's proposal fails to adequately address critical issues which could result in catastrophic damage to the rich fishing grounds of Caribou Harbour and beyond. On this basis, as detailed below, my client is calling on Minister Wilson to reject Northern Pulp's proposed replacement effluent treatment facility.

This submission will address the following issues of concern to the Authority and its patrons:

1. No leak detection for marine portions of effluent pipe
2. Leak repair to the marine pipe in Caribou Harbour would be virtually impossible in winter months
3. Risk of ice damage to marine pipe
4. Navigation issues
5. No confirmed marine pipe route in Caribou Harbour
6. No definitive plan for marine pipeline construction
7. Risk of siltation in the harbour during construction causing significant harm to marine life and to current users of the harbour
8. Timing of marine pipe trenching and installation conflicts with existing uses of the harbour
9. Effluent will enter Caribou Harbour with significant harmful effects
10. Errors of fact relating to fisheries and presence of fish.

1. There is an absence of leak detection on the marine portions of the effluent pipe.

TOR 3.5 requires Northern Pulp to "Provide viable options including the selected option for leak detection technologies and inspection methodologies ..." Northern Pulp has provided no plan for leak detection on the marine portions of the effluent pipeline. The leak detection systems outlined in Section 3.5 apply only to the on-land portion of the pipeline.

"A leak detection system as described below will be installed with the effluent pipeline **to monitor for potential leaks in the overland portion of the route between Pictou and Caribou ...**" (FR, Section 3.5, p. 62) (emphasis ours).

In response to questions submitted about potential damage and leaks to the marine pipe, the public is directed to "Refer to section 3.5 for comments concerning pipeline leak detection and enhanced pipeline protection options." (Appendix 1.1, pp. 10 and 18) However, there is absolutely no mention of any leak detection system for the marine portion of the pipe in section 3.5. The marine pipe is explicitly excluded. There is similarly no mention of leak detection in other sections, e.g. section 2.5, Changes to Pipeline, and Appendix 2.5, which address marine pipeline construction.

The absence of attention to leak detection in the marine pipe is a critical omission. Risk of leakage in the marine pipe has been and remains a significant public concern. A leak

anywhere along the route of the marine pipe inside Caribou Harbour would result in build-up of effluent in the harbour, with the likely result being catastrophic damage to the marine environment, including juvenile lobster in the Marine Refuge Scallop Buffer Zone 24 and a highly productive rock crab nursery, both of which are critical to the regional fisheries of the Northumberland Strait.

Recommendation #1: Northern Pulp has not fulfilled the requirement of TOR 3.5 in relation to the marine portion of the pipeline. The Minister cannot approve this project without evidence that the project provides the highest level of effluent leak prevention, detection and timely repair to prevent significant and irreparable harm to the marine environment.

2. Leak repair to the marine pipe in winter months would be virtually impossible.

Even if effective leak detection technology was planned, in the event a leak developed during the 3- 4 month period when the harbour is ice-covered (with from 1- 5 metres of ice) repair would be nearly impossible. Ice conditions in Caribou Harbour and the Northumberland Strait are so severe that the PEI ferry does not run in the winter, and all fishing boats are taken out of Caribou Harbour.

The question of whether and how timely a repair could be carried out if a leak in the marine pipe occurred during winter months was raised repeatedly in public submissions. Northern Pulp has not addressed this issue, except by saying that burying the pipe will provide sufficient protection from ice scour. Ignoring and failing to address a possible occurrence on the basis that in Northern Pulp's view the event will not occur is not acceptable.

Recommendation #2: The Minister cannot approve this project without evidence that the project provides the highest level of effluent leak prevention, detection and timely repair to prevent significant and irreparable harm to the marine environment. The absence of attention to an acknowledged risk with such severe consequences greatly increases the likelihood of significant and irreversible harm at some point in the project life.

3. Risk of ice damage to the marine portion of the pipe

Ice damage to a marine pipe is an acknowledged risk in the Focus Report and accompanying documents, and in earlier reports from Stantec. TOR 2.2 requires Northern Pulp to "Conduct geotechnical surveys and provide the survey results to confirm viability of the marine portion of the pipeline route. The surveys must determine the potential impacts of ice scour on the pipeline."

Makai Engineering states that depth of burial for a marine pipe should be determined by survey information and historical data. Historical data has not been provided in the

Focus Report. NP has provided only one year of data on ice scour. Survey information from CSR shows that Caribou Harbour is an area with many ice scour events. One hundred and thirty-three (133) were noted in the survey, which CSR believes were from 2018-2019 alone. The company also notes that scours begin to fill in immediately, (Appendix 2.2, Section 5.5, p. 95) so that the measured scours do not indicate the deepest scour that would have taken place.

The general consensus among local fishermen and divers who have observed ice in the area for decades is that there is high risk of damage to the marine pipe and diffusers from ice even if the pipe is covered by 2-metres of soil. These same individuals note that shifting bottoms could uncover areas of pipe, making it more vulnerable to damage.

The Stantec Preliminary Receiving Water Study prepared for Northern Pulp in August 11, 2017, p. 4.80-4.81 contains this information:

It was reported (in ENSR, 1999) that Maritime Telephone and Telegraph (MT&T) performed an ice evaluation in support of an optical communication cable deployment across the Northumberland Strait. Based on MT&T's review, the estimated potential for damage to the cable from ice scour extended to water depths of 12 to 14 m. In 1991 their cable was trenched and buried to a selected depth (depth is unknown) and left on the surface of the sea bottom at greater depths. Unfortunately, the winter of 1991/1992 was severe and the cable was severed by ice keels at a water depth greater than 18 m towards the Woods Island, PEI side of the Northumberland Strait.

This indicates that ice scour can take place a much greater depths than expected. This is crucial information that should be considered by the Minister in determining likelihood of harm.

Ice scour is not the only source of risk to the marine pipe. There are also risks to the pipe's integrity from structural stresses, as explained in the [submission of Colton Cameron, PEng](#) to the EARD. Cameron writes: "Due to the cyclical nature of the tidal forces and wave action these induced stresses combined with ice loads over time could present fatigue stress issues."

These risks have not been addressed by Northern Pulp and must be fully examined before this project can be approved.

Finally, the Authority notes that there has been no attention given to protection of the marine pipe from ice or storm damage at the point where the proposed pipe would enter Caribou Harbour, before it is buried. This is another serious omission. This is a point where the marine pipe is vulnerable to moving ice as well as strong storm and wave action. Damage at this point could have the same catastrophic results as outlined above.

Recommendation #3: Northern Pulp has not fully addressed the issues to confirm the viability of the marine route in relation to ice or other stresses. They have not established that ice scour and other conditions do not present significant risks to the marine pipeline. Northern Pulp has not considered or responded to information submitted by local [diver Rob MacKay](#) based on his direct experience, nor to the issues of potential structural damage from ice pressure raised by [professional engineer Colton Cameron](#) in his submission. They have not considered historical information on ice scour in the area.

Damage to the marine portion of the pipe would result in significant and irreversible harm to the entire Caribou Harbour ecosystem. A break or leak in the marine effluent pipe in an iced-over marine environment with minimal flushing capacity could continue for an extended period before detection – at the rate of 62 million litres per day.

We ask the Minister to reject this proposal. Northern Pulp has not provided sufficient information to conclude that a marine effluent pipe installed as described will not be at risk.

4. Navigation issues

NPNS completely fails to address the navigational concerns raised in our earlier submission. The Authority is very concerned that its patrons, both commercial and recreational, will have their navigational abilities under the *Navigational Protection Act* restricted. NPNS has responded only that “Impact to navigation is not anticipated. A Navigational waters review will be required before construction begins, at this time adjustments will be made as necessary.”

In our submission this is not an adequate response.

The Authority’s earlier submission pointed out that the patrons of the Authority, in particular seventy plus (70+) commercial fishermen, navigate directly across the path of the proposed pipe route in Caribou Harbour, on a daily basis, during regular fishing seasons of lobster, crab, herring and scallop, from April through November.

Any interference with existing navigation routes could cost individual fishermen hundreds of miles of additional travel every season for the lifetime of the project, with corresponding costs in time and fuel, and increased emissions to the environment.

My client also has serious concerns about interference with navigation during the proposed construction timeline of 84+ days, detailed below.

Recommendation #4: The Authority’s position is that all navigation concerns must be addressed satisfactorily prior to any approval. The minister, in making his decision, must consider how the proposed project will impact existing uses of the area. Northern Pulp has not provided sufficient information to ensure that the proposal will not substantially

interfere with existing navigational uses of the area during construction and in the long-term.

5. There is no confirmed marine pipe route in Caribou Harbour.

NPNS has not presented a confirmed marine pipe route for Caribou Harbour. The only specific information provided about the route are the co-ordinates for the entry point of the marine pipe and the outfall location. This is in notable contrast to the detailed drawings and plans presented for the on-land portion of the pipe. Marine survey information was gathered from a corridor 200 metres wide, within which NPNS presumably plans to locate the marine pipe.

Recommendation #5: This project cannot be approved before a specific pipe route is presented for evaluation and input from the public and government departments. The minister cannot accurately evaluate whether there will be significant and irreversible harm in the absence of a detailed marine pipe route.

6. There is no definitive plan for marine pipeline construction.

Northern Pulp is required by TOR 2.5 to “Provide any proposed changes to the pipeline construction methodology and other associated pipeline construction work, related to the potential changes to the marine portion of the pipeline route (e.g., infilling, trenching, temporary access roads, excavation, blasting, disposal at sea, and others where applicable).

Northern Pulp has not fulfilled TOR 2.5. They have not provided a detailed plan for marine pipeline construction. The Focus Report states, “Appendix 2.5 provides the details of the current proposed construction.” (Section 2.5, p. 39). This is not accurate. Appendix 2.5 **does not provide this information**. Makai Ocean Engineering Inc. which prepared the report for Appendix 2.5 writes, “This report provides an opinion of the likely construction methods and design features of the pipeline, based on the available data and standard practices for marine pipelines.” They also state, “The exact method used for dredging will be determined by the selected marine contractor based on schedules, costs, and available equipment resources.” (Executive Summary, p. 1)

Makai states clearly that, “While Makai has extensive experience with HDPE pipeline installations and has taken considerable efforts to consider the site specifics and likely approaches for this project, **the actual means and methods and construction processes will remain the responsibility of the Marine Contractor, and may vary from this approach.**” (Introduction) (*emphasis ours*)

We note some, but not all, of the issues relating to TOR 2.5 where no concrete plan has been presented:

- **No plan for how excavated material will be dealt with during construction:**
Neither the Focus Report Section 2.5 and Table 2.5-1, p.18 nor Appendix 2.5

provide a definitive plan for how excavated material will be dealt with during the construction process, (sidecast, removed to barge or other.) Options are presented, but no definitive plan is presented.

- **No plan for spoils disposal:** The question of potential disposal at sea is raised explicitly in TOR 2.5. NPNS downplays the issue of spoils and their disposal. The Focus Report states, "It is anticipated that spoils from the excavation will be repurposed as fill to cover over the trenched pipeline once placed. Excess spoils may be (sic) require disposal and will be subject to regulatory approval and permitting." (Section 2.5, p. 43)
NPNS has provided no explanation of how spoils will be disposed of. They have not addressed the question of they will be looking at disposal at sea. The Harbour Authority notes that it appears physically impossible that there will not be a significant amounts of spoils requiring disposal in some way, given that 6" of gravel and a 36" diameter pipe will replace excavated soil for the 4 km distance of the trench.
- **Some of the excavated soil may exceed contaminant guidelines.** Contaminant levels beyond guidelines in some soils are identified in the Focus Report documentation. NPNS has not addressed this issue except to say that it will be dealt with at a later time.
- **There is no clear plan for how the trench will be finished.** "Once the trench is covered in soil, it could either be graded down using a towed grader bar, or left to the elements if local currents and sediment transport is agreeable." (Appendix 2.5, p.18) The possible use of armour stone in some places is mentioned. There has been insufficient attention given to the strong tides and currents that could expose the pipe to ice damage.
- **Blasting very unlikely.** In response to TOR 2.5, NPNS says only that blasting is "very unlikely." The Authority is very concerned with leaving this issue unresolved. My client's position is that sufficient information should have been gathered and provided in the Focus Report to determine whether blasting is proposed as part of this project or not, in order that this issue can be fully considered in terms of assessing potential impacts. Use of blasting could have significant consequences.
- **Siltation during construction.** See point 7 below regarding potential impacts of siltation during the 84+ day proposed construction period.

Recommendation #6: The Harbour Authority of Caribou believes that Northern Pulp has not provided sufficient information to fulfill the requirements of TOR 2.5. NPNS has presented a number of possible scenarios, but no plan that can be evaluated for potential impacts. The missing information is not available in earlier documentation, i.e. the EARD or in Appendix F to the EARD.

The Harbour Authority is very concerned that, "*The exact method used for dredging will be determined by the selected marine contractor based on schedules, costs, and available equipment resources.*" (Appendix 2.5, p. 1) Decisions based on schedules, costs and available equipment do not prioritize prevention of environmental harm to the

Harbour or impacts on present users of Caribou Harbour and do not ensure protection of the delicate harbour environment.

My client asks the Minister not to approve this project without a detailed construction plan subject to scrutiny and input from the public, including our patrons, who have detailed knowledge of the actual conditions of the area and the potential for harm. NPNS has not provided the Minister with the information needed to determine whether construction of the marine pipeline can be done without causing irreparable, long-term harm to Caribou Harbour and the nearby Northumberland Strait, including the marine life within it, both plant and animal, and current users.

7. Siltation in the harbour during construction may cause significant harm to marine life and current users of the harbour.

The Authority and our patrons have great concern about the impact of siltation on the Harbour and surrounding waters during construction and for an unknown period afterwards. No attention has been given to the potential effect of excavation of over 80,000 cubic metres of silty bottom over a period of 84+ days, (Focus Report, Table 2.5-1) in a shallow, tidal area. Caribou Harbour experiences tidal changes of up to 5 feet, twice daily. During a construction period of this length, storm conditions are almost inevitable. Storm surges can raise waters by 6 feet over normal conditions, with high winds and crashing waves. Northern Pulp has only addressed this issue by saying that silt curtains and isolating work areas will be used to reduce turbidity. This is completely insufficient for an issue which could have significant impacts on all life in the harbour.

Is it viable to isolate up to 4 km of trench and up to 80,000 cubic metres of sidecast soil effectively, without interfering with navigation and existing uses of the harbour? What amount of silt would be contained by these methods, what would be released? Conditions inside Caribou Harbour, with depths of between 0 and 8 metres, are significantly different than in many open ocean areas, where dispersion of silt would take place more effectively. What would be the impact of siltation under both normal and storm conditions on eel grass beds, on plankton, on juvenile lobster and crab and other forms of marine life, on the seabed itself? This issue must be fully examined based on the actual conditions in Caribou Harbour prior to approval being given for the project.

There are 70+ fishers, buyers and a nearby fish plant employing 140 people, that all need clean water for multiple purposes. During the months of May and June in Caribou Harbour at our wharf and at North Nova Seafood's, there is a minimum of 100,000 to 150,000 thousand pounds of live lobster, 'floating' every day. This means the lobsters are submerged in containment pens or 'cars' in seawater, in 100-pound crates. The lobsters are reliant on clean, oxygenated water. So are the oysters in the 4 oyster leases in the harbour, and the juvenile rock crab, lobster and other species. Fishers use seawater to spray down their catches as they fish, to keep them cool. They use seawater to wash down their boats and traps. That water must be clean.

Over 84+ days construction, with unpredictable weather, the Harbour Authority has serious doubts about whether installation of 4km of marine pipe can be carried out without significant, long-term harm. Certainly, Northern Pulp has not provided sufficient information to show that it can be done without such harm.

Recommendation #7: The Minister cannot approve this proposal until the potential impacts of siltation in the Harbour during the 84+ day proposed construction period is fully evaluated.

8. Timing of proposed marine pipe trenching and installation and existing uses of the harbour

The Authority's position is that there is no 84+ day construction window that would not severely interfere with existing activities. There is ice in the harbour from late December until April. Lobster season and the related storage/navigation/fishing from end of April to end of June. Major recreational activities occur throughout July, August and September, with rock crab season running from early August to November. Include the herring fishery in the Northumberland Strait from early September until later October, of which Caribou Harbour is the epicenter. Tuna fishing in August, September and October, then scallop fishing from early November to mid- December. Complicate that with the beginning of fall storms and high winds. Ice can close in by early December. Then add in the Northumberland Ferries running from May 1st until mid- December in a narrow channel only slightly larger than the vessels themselves.

Recommendation #8: Caribou Harbour is used for activities central to the economy of the area for all months of the year when it is ice-free. There is need for a full evaluation of the potential impacts of proposed pipeline construction on existing uses prior to any approval of the project.

9. Effluent will enter Caribou Harbour

Northern Pulp's proposal relies on a receiving water study (RWS) prepared by Stantec. This study indicates that there will be minimal flow of effluent discharged into Caribou Harbour. The Authority reasserts its position that this conclusion is erroneous, and does not reflect what its fishers know from working the waters of Caribou Harbour year-round for many decades.

- a) The receiving water study does not take into account conditions familiar to fishers in the area, including storm surges/surge tides or sustained, heavy onshore winds from the northeast or northwest that can last for several days and 'hold' the tide in.
- b) There is a bottleneck effect at the mouth of the Harbour between Munroe's Island and Caribou Island caused by the deeper water, (the proposed location for the outfall and diffusers), meeting the shallow water adjacent to the sandbar at the mouth of the harbour. This is the actual narrow, marked

channel the Prince Edward Island and Northumberland Ferry navigates to exit Caribou Harbour, which averages a depth of 25 feet. (This channel needs to be dredged every so often to maintain a safe depth for the ferry to navigate in and out of the harbour.) A rising tide basically, especially with onshore winds, funnels in from the proposed diffuser location.

- c) Under storm conditions, the water level in Caribou Harbour sometimes rises in excess of 2 meters. There is nowhere for this excess to come from but the mouth of the harbour, where the effluent outfall is proposed to be.
- d) A local knowledge submission containing detailed information about the tides, currents and winds in the Caribou Harbour area was submitted as a response to the EARD by [Caribou fishers Allan MacCarthy and Greg Egillson](#). It contains important information that does not appear to have been considered in the revised RWS.
- e) We draw your attention to the [expert opinion of Dr. Oliver Fringer of Stanford University](#), an oceanographer with expertise in numerical modelling of coastal dynamics. Dr. Fringer reviewed the Stantec RWS in the EARD and concluded that errors of modeling lead,

“to the incorrect conclusion that the environmental impacts will be negligible because the effluent concentrations are predicted to be unphysically low. **Instead, correct implementation of the models with more conservative and physically realistic scenarios would show that effluent concentrations in the region could be much larger and that effluent accumulation in Pictou and Caribou Harbours is likely.** (emphasis added) (Fringer, p. 1, Appendix 1, Ecojustice Response to EARD)

Dr. Fringer also states that Stantec’s use of the two-dimensional Mike 21 model is inappropriate as it fails to take into account local dynamics caused by wind, river inflows, offshore currents, ice, waves and storm surge. (p. 7)

Recommendation #9: We are aware that Dr. Fringer is preparing an updated submission on the revised RWS. We ask the Minister, and government departments reviewing the NPNS proposal, to give Dr. Fringer’s past and updated submissions their full attention, and to give attention and respect to the local knowledge of fishers submitted previously and to this review.

The RWS is a key element of NPNS’s conclusion that no harm will be done by the release of an average of 62 million litres of treated effluent daily into the Northumberland Strait at the mouth of Caribou Harbour. If the information on which the RWS modeling is based is not correct or complete, the results will not be correct. Likewise, if the methodology is not correct. The RWS is not an area where mistakes can be allowed; there is too much at stake.

The Harbour Authority and its patrons are not experts in modelling. Dr. Fringer is an independent expert, and we note that his conclusions were consistent with our fishers’ local knowledge. We note that there are many errors of fact in NPNS’ focus report in relation to fisheries and the presence of fish. We have listed some of these errors in

point 10 below. Fisheries and fish are subjects on which the fishers of the Authority do consider themselves experts. The multiple errors on these subjects (see point 10 below) in the Focus Report and attached documents do not give us confidence that NPNS has provided accurate information in other areas.

10. Errors of fact relating to fisheries and the presence of fish.

Due to limitations of time for public comments, my client is unable to fully respond to errors of fact relating to fish and fisheries that may exist in Northern Pulp's documents. However, we would like to point out some which are apparent to the Harbour Authority and its patrons.

- a) Appendix 7.3, p. 68, erroneously states that rock crab are not found at depths greater than 10 m. To give an idea as to how inaccurate this is, you simply need to understand that most fishermen have 35 to 60 meters of buoy line to fish rock crab. Rock crab are fished as deep as 35 to 50 m in the Strait. Depending on the time of year they congregate at different depths.
- b) Appendix 7.3, p. 68 also states that rock crab are not fished near the proposed outfall. This is false. The area is extensively fished for rock crab. The vast majority, if not all, fishers in Caribou who participate in the rock crab fishery have fished rock crab in the direct vicinity of the diffuser location.
- c) Figure 7.3-3, p. 130 of the Focus Report, titled Northumberland Strait Lobster Buoy Locations, gives a highly inaccurate picture of the presence and amount of lobster fishing directly in the vicinity of the diffusers. The entire harbour and channel area including the vicinity of the proposed diffuser is fished for lobster. Lobster fishing effort and locations change sometimes on a daily basis. They are dependent on many factors, including water temperatures, molt cycles, and annual migration inland to molt, spawn and feed. (In fact, Northern Pulp's own information contradicts itself. Figure 7.3-4 Lobster Distribution and Harvest Area indicates that lobster fishing takes place much closer to the proposed diffuser than the representation in Figure 7.3-3)
- d) Figure 3-12 (Appendix 7.3, p.66) suggests Atlantic Herring resources in the LAA are limited to the outer Caribou Harbour / Northumberland Strait where depths approach 10 m and greater. This is false and completely in error. The adjacent Pictou Banks, (middle ground), Caribou Point and northwest to Pictou Island, all are basically less than 10 meters depth and extensively fished for Atlantic Herring. Atlantic Herring converge in the exact location of the channel and proposed diffuser to spawn there and in the adjacent banks. Northern Pulp says herring are generally located outside the zone of discharge (Appendix 7.3, Section 4.1.3.6, p. 4.2) and pass through this area on their way to spawning grounds. (Appendix 7.3, Appendix D, last page, no page #) This is incorrect. This entire area including the area of the diffuser is the spawning ground for Atlantic Herring.

- e) Mackerel is fished extensively in the exact location of the channel and proposed diffuser location. Mackerel feed on juvenile herring and herring spawn and basically are in abundance when the herring come to this area to spawn. The greater depth of the channel allows for more line in the water, which enables more hooks to fish mackerel effectively at the exact diffuser location and all along the channel.

- f) Northern Pulp states that the proposed marine pipe intersects the scallop buffer zone and that the diffuser is not within the scallop buffer zone. (Appendix 2.5, p. 8) This is incorrect. The entire 4 km proposed pipe including outfall location is within a Scallop Buffer Zone, SFA 24. The buffer zone is measured 1 nautical mile (1.1 miles) from any land. These zones are part of a marine refuge for American Lobster and are part of Canada's Marine Refuge program, which contributes to Canada's marine conservation targets. Consider that part of the considerations given for the marine refuge is that 'no human activities that are incompatible with the conservation of the ecological components may occur or be foreseeable within the area'. This entire proposed pipe and associated effluent is not compatible with the intent of a Marine Refuge. Marine refuges contribute to [Canada's marine conservation targets](#).

The Harbour Authority submits for your attention Appendix 1, consisting of signed documentation from 65 fishers who fish lobster, rock crab and/or herring in the vicinity of the diffusers. This information is submitted to correct inaccurate information in Appendix 7.3 of Northern Pulp's Focus Report, which represents the area around the proposed outfall as free from fishing.

Sixty-five (65) fishermen and women indicated that they fish for either lobster, rock crab or herring in the vicinity of the proposed outfall. Thirty-eight (38) state that they fish one or more of these species within 300 metres of the proposed effluent outfall. Forty-three (43) state that they fish one or more of these species within 1 km of the proposed outfall.

This information was gathered in Pictou, Nova Scotia, on November 1 and November 4, 2019. Due to time constraints, this information represents some, but not all, of the fishers who fish in the vicinity of the proposed effluent outfall. It does not include information from fishers who fish other species in the immediate vicinity of the outfall.

Recommendation #10:

My client is disturbed by the many errors of fact regarding the presence of fish and fisheries in the area of the proposed outfall, including continued misrepresentation of the relationship of the 4 km pipeline and outfall to marine refuge SFA 24. Fishermen have presented information about the presence of fish and fisheries to Northern Pulp from the very first meeting almost two years ago. Northern Pulp has not reflected this information in their Focus Report. As noted, the short time for public input limits our ability to fully review the documents for errors in these areas. We ask the Minister to take into consideration the repeated errors of fact, which raise significant questions

about potential inaccuracies in other information, and must limit confidence in the conclusions drawn by NPNS that the project will cause no significant, residual harm.

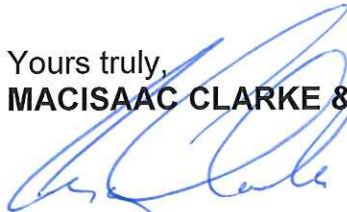
11. Conclusion and Final Recommendation:

The Authority's position is that the Minister must reject Northern Pulp's proposed new ETF. Northern Pulp's Focus Report response contains errors of fact and lacks information on critical issues. It lacks key protective measures. Northern Pulp has failed to address the Terms of Reference adequately and they have failed to address realistic and legitimate concerns raised by ourselves and other members of the public. Critical scientific studies have not been done, including lobster larvae studies recommended by NPNS's own consultants. Northern Pulp has drawn the conclusion that this project will cause no significant, irreversible harm without providing the science to back up this conclusion.

There is credible evidence of significant, long-term of risks to the marine environment presented by ourselves and others. There is also evidence of the devastation caused by pulp effluent to Boat Harbour. The Authority does not want to see this repeated in Caribou Harbour.

Because of these errors and omissions, and because of credible evidence of risk, we believe the Minister cannot approve this project. The Minister does not have a basis to conclude that the project can be undertaken without likelihood of serious consequences and irreparable harm to Caribou Harbour and the marine ecosystem that the Authority and its patrons rely on to earn a decent and moderate living. We ask that this proposal be outright denied based on these very realistic and legitimate concerns.

Yours truly,
MACISAAC CLARKE & DUFFY



B. CRAIG CLARKE

cc Client
Minister of Environment and Climate Change
Minister of Fisheries Oceans and the Canadian Coast Guard
Canadian Environmental Assessment Agency NS Regional Office

Appendix 1

Submission of Caribou Harbour Authority

November 6th, 2019

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
Craig MacIsaac	✓		✓	<i>Craig MacIsaac</i>
GREG ERILSSON	✓	SCALLOPS	✓	<i>Greg Erilsson</i>
David MacCarthy	✓		✓	<i>David MacCarthy</i>
Chad Guth	✓		✓	<i>Chad Guth</i>
Richard Jollymore		✓	✓	<i>Richard Jollymore</i>
COLTON CAMERON	✓	✓	✓	<i>Colton Cameron</i>
JAMES DALTON	✓		✓	<i>James Dalton</i>

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
Wayne Grealey	✓	✓	✓	<i>Wayne Grealey</i>
Stewart Macdonald	✓		✓	<i>Stewart Macdonald</i>
Rob Macdonald			✓	<i>Rob Macdonald</i>
Paul Smith	✓	✓	✓	<i>Paul Smith</i>
FRASER SHAW	✓		✓	<i>Fraser Shaw</i>
Jason Macdonald			✓	<i>Jason Macdonald</i>
Trevor Maclean	✓		✓	<i>Trevor Maclean</i>

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
Philip Falconer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Philip Falconer</i>
Wayne Anderson	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Wayne K Anderson</i>
Ryan Flency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Ryan Flency</i>
ALLAN MACDONALD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Allan Macdonald</i>
DONALD CHEVREUIL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Donald Chevreuril</i>
Tyler MacKeil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Tyler MacKeil</i>
JAMES RUSSELL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>James Russell</i>

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
Philip Falconer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Philip Falconer</i>
Wayne Anderson	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Wayne K Anderson</i>
Ryan Flency	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Ryan Flency</i>
Allan Macdonald	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Allan Macdonald</i>
Tyler MacKeil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Tyler MacKeil</i>
Andy Nicholson	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Andy Nicholson</i>
JAMES RUSSELL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>James Russell</i>

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
Ben Anderson			✓	Ben Anderson
Eugene Fortune		✓	✓	Eugene Fortune
John Baird	✓	✓	✓	John Baird
Hal Mayhew			✓	Hal Mayhew
Robert Baird	✓	✓	✓	Robert Baird
Barry Sutherland		✓	✓	Barry Sutherland

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
John Baird	✓	✓	✓	John Baird
Donald K English	Less than 100	Less than 100 ✓	✓	Donald K English
Hal Mayhew			✓	Hal Mayhew
George Baird			✓	George Baird
Kevin Thompson			✓	Kevin Thompson
Robert Baird	✓	✓	✓	Robert Baird
Paul Hogan	✓			Paul Hogan

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
Tracy MacCarthy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tracy MacCarthy
Chad Sutherland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Chad Sutherland
Darryl Bowen	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Darryl B
Danny Hogan		ground fish		Danny Hogan
David Barker	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	David Barker
MATT FULLER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Matt Fuller
ANGUS FALCONER			<input checked="" type="checkbox"/>	Angus Falconer

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
Barry Sutherland		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Barry Sutherland
Tracy MacCarthy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tracy MacCarthy
Chad Sutherland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Chad Sutherland
David Barker	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	David Barker
MATT FULLER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Matt Fuller
ANGUS FALCONER			<input checked="" type="checkbox"/>	Angus Falconer
Chad MacCarthy				Chad S MacCarthy

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
John Martin	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	John Martin
Amy Ferguson			<input checked="" type="checkbox"/>	Amy Ferguson
ALLAN MacCarthy	<input checked="" type="checkbox"/>			Allan J. MacCarthy

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
John Martin	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	John Martin
Amy Ferguson			<input checked="" type="checkbox"/>	Amy Ferguson
Warren Francis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Warren Francis
ALLAN MacCarthy		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Allan J. MacCarthy

The proposed effluent outfall is at: 14307.6
29812.2

Check the boxes for any species that you have fished within 1 km of the proposed outfall.

Name - print	Lobster	Rock Crab	Herring	Signature
JOHN COLLINS	✓	✓	✓	<i>John Collins</i>
Roger MacPhail	✓	✓	✓	<i>Roger MacPhail</i>
Travis Graham	✓			<i>Travis Graham</i>
Jim Cook	✓	✓	✓	<i>Jim Cook</i>
Paul Weston Mackel	✓	✓	✓	<i>Paul Weston Mackel</i> Less than
Stephen Ferdinand			✓	<i>Stephen Ferdinand</i>
Ryan Mac Donald			✓	<i>Ryan Mac Donald</i>

The proposed effluent outfall is at: 14307.6
29812.2

ALSO: Check the boxes for any species that you have fished within 300 metres of the proposed

Name - Print	Lobster	Rock Crab	Herring	Signature
Eugene Fortune		✓	✓	<i>Eugene Fortune</i>
R. GARY CAMERON	✓	✓	✓	<i>R. Gary Cameron</i>
Clifford Elliott			✓	<i>Clifford Elliott</i>
Clinton MacKell	✓	✓	✓	<i>Clinton MacKell</i>
Ben Casey	✓	✓	✓	<i>Ben Casey</i>
Patricia Cassie	✓	✓		<i>Patricia Cassie</i>
Alonzo MacISAAC	✓		✓	<i>Alonzo Mac Isaac</i>