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Thu, Nov 7, 2019 at 11:19 PM

I am writing in relation to Northern Pulp's Replacement Effluent Treatment Facility Project and specifically their latest Focus Report. My name is Dave Gunning and I live in Pictou County and have been following this issue very closely since 2007. I would like to identify some uniquenesses about Northern Pulp, some differences between the current and proposed system along with some other concerns that I feel should be taken into consideration.

A 2010 AMEC study presented to the Province of NS identified that Northern Pulp were in the 100th percentile when compared to other similar bleached kraft pulp mill's in the country for: average flow rate, COD levels and colour of effluent. And since this study was completed Northern Pulp has not reduced water consumption and still use chlorine dioxide for bleaching. Bleached kraft mills by nature are the worst polluters out of all the different types of pulp mills. The production yield of a bleached kraft mill is approximately 50% meaning that half of the tree gets used for production and the other half ends up being released into the waste stream. TMP mills like Port Hawkesbury have a production yield closer to 95% so 95% of the tree gets used and 5% ends up in the waste stream. Plus bleached kraft pulping requires the use of chemicals to break down the fibres in the wood to make pulp and the use of chlorine dioxide to bleach the pulp versus TMP mills that use thermal mechanical energy to make pulp and peroxide to whiten the product. So by nature, bleached kraft pulp mills are the worst polluters out of all the different pulping processes and Northern Pulp is in the 100 percentile for water use, COD levels and colour of effluent.

According to the KSH Engineering's projections the new AST system would be better than Northern Pulp's current system, approximately 70-30% better depending on which variable you view. However, the receiving water now for the treated effluent is the Boat Harbour Basin and not the Northumberland Strait. After leaving the Boat Harbour Treatment Facility - at point C the treated effluent is then released into the Boat Harbour Basin where it is retained for approximately 20-30 days. Point C is the federally regulated point. The new ETF would release the treated effluent directly into the Northumberland Strait without the added bonus of the 20-30 day retention time for additional cooling, dilution and settling in the large Boat Harbour Basin. The elimination of the Boat Harbour Basin is a huge factor because EEM data shows that the Basin has a large affect on effluent quality that is currently reaching the saltwater.

So the receiving water for the treated effluent is at point C where it is released into the Boat Harbour Basin. Point D is where it leaves the Boat Harbour Basin and meets the saltwater at the shoreline of Pictou Landing. EEM data from 2014 showed a significant improvement in effluent quality between points C and D. It shows an improvement in TSS of 77.6% to 80.8% during the months of October, November and December between points C and D. And during that same period it showed that BOD levels where improved between 74.1% and 77.4% between points C and D. Strangely it showed that these numbers were worse at point D during the month of August. One industry professional that we spoke with speculated that there was either a problem with how the data was collected that month or that summertime pollen and dust could have settled on the Boat Harbour Basin contributing to the results measured. But regardless it is very clear that the elimination of the Basin would have a substantial and negative impact on the effluent quality reaching the Strait. Based on the data there is enough information to conclude that the new AST system would be worse than the old facility because of the elimination of the Boat Harbour Basin. So Northern Pulp is proposing a newer and better system but a worse location and the elimination of the Boat Harbour Basin which would result in more of the toxins reaching the Northumberland Strait.

Many third party consultants that have completed studies and documents for Northern Pulp and the Province of NS including: R.V. Anderson, CBCL, Neil McCubbin, Stantec, AMEC plus an internal audit conducted by their parent company. There are known problems internally at Northern Pulp which are causing to air emissions problems (i.e. the High Level Roof Vent is identified in NPulp's current Industrial Approval). Northern Pulp's proposed AST shows that much of the waste sludge would be burned in the power boiler. This is of great concern because the power boiler has no precipitator and there have been several reports about non-functioning scrubbers. And there is no hourly or daily monitoring of the stacks at Northern Pulp, only quarterly self-reported results conducted by Stantec who are hired by Northern Pulp.

Black liquor spills, sometimes referred to as process disturbances or process upsets have been documented by third party consultants as well. These events often result in raw untreated effluent being released from treatment facilities. These statements come from a Neil McCubbin memo to Northern Pulp dated April 6th 2015. "A few other kraft mills operate with annual average COD discharges of 15 kg/ton, demonstrating this level is attainable, but not without considerable effort. I consider that oxygen delignification, improved brown stock washing and screen-room closure, and substantially upgraded spill recovery systems for black liquor would be required to attain such a COD discharge level in the NPNS mill." The report also states, "The data in the AMEC report indicates that the sources of colour discharge are roughly one third each for brown stock washer losses, bleach plant and spills. The sources of COD are probably distributed similarly, except the condensates and causticising department will contribute some COD. These latter two sources will contribute virtually nothing to the COD of the treated effluent since the substances in them are very efficiently oxidized in any kind of biological treatment system." "COD from the bleach plant can be cut by about 40% by installing an oxygen delignification stage. This would leave the so called "spills", which consist of accidental losses, leaks, draining equipment for maintenance, operator errors, etc. Consideration of the variations in daily COD discharges suggests to me that there is room for fairly inexpensive and substantial improvement in this area. However, it must be recognized that while spills can be reduced, one can no more eliminate spills completely than one can eliminate traffic accidents." The Neil McCubbin memo also states, "Replacing the ASB with an AST system would reduce COD discharges somewhat, probably by roughly 20%. However, the cost would be significant.

Take away points from above paragraph;

1. There are three main sources of COD at NPNS split roughly evenly in thirds between; brown stock washer losses, bleach plant and spills.
2. An oxygen delignification system (if they ever built one) would only improve the COD level from the bleach plant so 40% of one third which equals 13.333%
3. Northern Pulp would need substantial upgrades to obtain a COD discharge level that matches the level of other bleached kraft pulp mills
4. Some mills are able to reach a level of 15kg/ton. The KSH engineer numbers for the new EFT system show that Northern Pulp could reach a final COD level of approx. 34kg/ton at a flow rate of 70 million litres per day - but their flow rate is known to vary some days.

And again it has been identified that Northern Pulp uses more water per ton of production than any other pulp mill in the Country. The Province of NS is aware of this issue and NSE has listed water use reduction requirements in Northern Pulp's current Industrial Approval. In an email obtained through freedom of information the manager of Northern Pulp informed NSE recently that they will not be able to reduce their water usage moving forward with the newly proposed treatment system even though this is a requirement within the current Industrial Approval.

A study conducted by R.V. Anderson Associates studied Middle River where Northern Pulp draws its water from. "The sustainable water withdrawal rate for the Granton water intake was determined to be 1.10 m³/s (95,040 m³/day)". "The Middle River watershed has a drainage area of 239 km² at the water intake location in Granton." In an email to Nova Scotia Environment to Northern Pulp dated November 3, 2017 it states, "NPNS will achieve the maximum daily water consumption rate of 92,310 m³/day by the end of the current IA". "a future 2020 annual water withdrawal limit of 70,000 m³/day is now not realistic or achievable." So Northern Pulp is using almost all of the water available in a water shed area of 239 km² and despite the requirements to reduce water use to 70,000 m³/day by 2020 they are telling Nova Scotia Environment that they will reach 92,310 m³/day by the end of the current IA.

In the EA on page 33, Northern Pulp / via Stantec (who were hired by Northern Pulp) are being very critical of the "Pilot study investigating ambient air toxics emissions near a Canadian kraft pulp and paper facility in Pictou County Nova Scotia" but they are leaving out important details from the rest of the study. According to the data collected the prevailing wind direction more often blows toward the Town of Pictou and Pictou Landing than it does toward Granton where the monitor was placed to collect the data for this study. The study concluded that "the mill is a likely contributor to increased concentrations" and "in addition, there are clear seasonal variations of meteorological conditions and VOC concentrations. Southwest PW blowing towards Pictou dominate during summer months, when people spend more time outdoors, and consequently are exposed to higher concentrations".

Northern Pulp is trying to claim that it's really not clear that they are the source of the VOC levels found present in the air. This is a scientific, peer-reviewed study and the fact that the authors suggested that Northern Pulp is the likely source could also be taken that NP is indeed the source if the rest of the study is considered in its entirety. Given that the cancer risk thresholds were exceeded and that the scientists recommended that more monitors be located in areas of higher population wouldn't we be better served by listening to the science instead of Northern Pulp / Stantec. With all the talk about "listening to the science" why does Northern Pulp put such an effort into trying to discredit the science. Science that isn't approved by Northern Pulp and their hired consultants does not make it non-science.

So there are air emissions problems, black liquor spills at Northern Pulp and more water per ton of production being used at Northern Pulp when compared to other bleached kraft mills.

The construction of the new proposed ETF is near the Canso Chemicals plant. There is mercury buried in the ground around that area which is of great concern should it be disturbed during the construction of the new system or should it seep into the treatment system at any point.

And the bottom line is that we simply do not trust the owners of the mill to do the right thing with any aspect of their operations. We also do not trust that the government has the ability to regulate the operations of the mill. Every other mill in Canada has a precipitator on their power boilers yet Northern Pulp does not. There is no other mill in the Country that we know of that is allowed to have a "high level roof vent" which is the case at NP and which has no filtration mechanisms whatsoever. The current mill operators and the government knew about the non-functioning precipitator on the recovery boiler at Northern Pulp for years yet the mill was allowed to keep operating while knowingly poisoning the community. The government now knows about the "high level roof vent" (as addressed in the current IA) and also knows that the power boiler has no precipitator but the mill is still being allowed to operate. If Irvings in New Brunswick were operating this mill in New Brunswick they would have been forced to temporarily shut down and fix the problem. In fact, Irvings likely would have shut the mill down to make the necessary repairs without government intervention because it would ethically be the right thing to do and also necessary for maintaining their social license to operate. There is zero trust for the owners of Northern Pulp. They have lost their social licence to operate and they earned every bit of that themselves.

I'll conclude with a list of points:

1. Northern Pulp's known and identified internal problems create a unique situation and building a new treatment system would not cure the internal problems at the mill.
2. There is an active fishing industry in the Northumberland Strait that needs to be protected.
3. Air pollution issues have not been fixed at the mill despite requests by NSE for Northern Pulp to move forward.
4. Northern Pulp uses more water per ton of production than any other mill in the country and draws upwards of 90 million litres per day from a river that drains an area of 239 square kms and has a sustained recovery rate of only 95 million litres per day. So Northern Pulp are using almost all of the water available.
5. The elimination of the Boat Harbour Basin and the change in location for the receiving water means that more pollutants would reach the Northumberland Strait than compared to the current system.
6. There would be a protest of 'never before seen in NS' proportion to stop a Boat Harbour extension and a pipe from going into the Northumberland Strait. And this will not be about a community whining that it didn't "get its way". This has been a 50 year plus battle for a lot of people.
7. Many first nations people and non-natives have had this pollution dumped on them for over 50 years. But our entire, and one and only mi'kmaq community have been victims of environmental racism for over 50 years and it must absolutely be stopped and they must be protected and respected in a real and meaningful way from this day forward.
8. The community no longer has any trust left for the mill based on NP's inaction to fix well documented problems with the mill.
9. Although the current government has made positive steps to right the wrongs there is still a lack of trust that the government can or would enforce regulations based on the fact that many of the regulations are either weak or have not been enforced in the past.

#noextension #nopipe #honourtheact