

February 11, 2015



NORTHERN PULP NOVA SCOTIA  
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ATTENTION: Mr. Dave Davis  
Environmental/Technical Leader


***Abercrombie Mill 2015 Industrial Approval - Surface Water Monitoring Requirements***

As requested, we have reviewed the new Industrial Approval issued by Nova Scotia Environment (NSE) on January 30, 2015 (Approval No. 2011-076657-R03) in relation to the Abercrombie Mill groundwater and surface water monitoring program. Some items have been identified as requiring follow up/confirmation with NSE and this letter has been prepared to provide more details in this regard. In particular:

- **Item 12 ag)** requires semi-annual monitoring of one surface water station (SW12-3) for phenanthrene for a minimum of two years, with a trend analysis included in the annual report. Phenanthrene was the only polycyclic aromatic hydrocarbon (PAH) detected at one of the three new surface water stations established in 2012. The initial (Oct. 2012) sample concentration of 0.011 ug/L was marginally above the laboratory detection limit of 0.01 ug/L, which is likely the result of entrained sediment or could be a false positive detection due to sample matrix. Given that this sample was the only one of the three surface water samples to have measurable total suspended solids (TSS) and measurable phenanthrene, it is most likely related to entrained sediment. Therefore, phenanthrene may or may not actually be present and, if present, is not in and of itself a cause for concern. Phenanthrene can be a naturally occurring PAH compound. It is commonly found in soils throughout the region (detected in approximately 25% of Atlantic region background soils) and often detected in surface waters due to adherence to water borne sediment. For information, the CCME Freshwater Aquatic Life guideline for phenanthrene is 0.4 ug/L.

We do not believe that testing of phenanthrene is warranted and do not see the relevance of performing a trend analysis on a limited data set of three or five samples (which is the number of samples that would have been collected by the end of 2015 and 2016, respectively). Additionally, trend analysis is unlikely to be conclusive, as its usefulness is extremely limited when concentrations are at or near the detection limit.

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- Under **Item 12 ad**), some of the SW stations listed do not exist and the new stations (i.e., SW12-1, SW12-2 and SW12-3) are not referenced at all. The stations referenced under 12 ad) should be SW4, SW5, SW6, SW9, SW11, SW12, SW13, SW12-1, SW12-2 and SW12-3. The remaining stations are referenced under 12 ae), that is, SW2 and SW10.
- Middle River samples (i.e., Raw Water Dept. 8 and the Mill Lab) are not listed specifically. Therefore, it is assumed that these fall under Section 13 (page 38) Registered Public Water Supply.

We trust that this information is adequate for your needs at this time.

Yours truly,

DILLON CONSULTING LIMITED



Beverley Smith, P.Geol.  
Project Manager

BHS:jes  
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