

December 5, 2013

DARRELL DESJARDIN
Director, Environmental Programs
Port Metro Vancouver
100 The Pointe
999 Canada Place
Vancouver, BC V6C 3T4

Dear Mr. Desjardin:

RE: Fraser Surrey Docks EIA dated November 18

Further to our letter dated November 13, 2013, we submit the following additional comments with respect to the EIA prepared by SNC-Lavalin for Fraser Surrey Docks (FSD). We wish to inform you that we will be sharing our comments with the relevant local and regional governments pursuant to section 73(3) of the BC *Public Health Act*.

Prior to further addressing the EIA, we wish to reiterate our consistent over-arching approach to the project and its assessment. It is very likely that, had FSD collaborated with the Medical Health Officers of Fraser Health and Vancouver Coastal Health and other interested parties over the scope and content of the assessment required, we would have jointly agreed on necessary mitigation strategies and the ongoing verification needed to reassure all concerned that modeling and assumptions involved predicted actual population health impacts. We are disappointed that our input was never utilized in the work.

Our earlier comments still stand: we do not have enough information to determine the extent of the potential health impact from this project. We do however have additional comments after reviewing the revised EIA dated November 18, 2013.

1. The Geographic, Population, and Temporal Scope of the EIA

We continue to be disappointed by the narrowness of the scope of the EIA. A more comprehensive EIA that addresses the issues of concern not only to Port Metro Vancouver but also to the community and local governments could have been produced. We reiterate, this EIA will not be credible to the public unless it covers the entire geographic area in which this project will operate in British Columbia.

Several places in the EIA mention Tsawwassen as a community that has experienced little air quality impact from the coal handling at Westshore Terminals, implying that a similar outcome should be expected for neighborhoods near FSD. We draw attention to the project proponent that when compared to Tsawwassen, North Delta (Census2006) has a higher proportion of immigrant population, a higher proportion of children, a lower average household income, and higher proportion of the population under age 19 living below the Census Low Income Cutoff (LICO). Therefore extrapolating data from Tsawwassen to a community with a very different mixture of potentially sensitive populations is inappropriate.

Additionally, there is a difference in the separation between Tsawwassen and the Westshore Terminals when compared to the distance between FSD and neighbourhoods close to it. These differences make direct comparisons of potential impacts of little practical value, and are additional reasons to undertake a complete Health Impact Assessment.

There remains a lack of clarity regarding the planned life span for the project. The application before Port Metro Vancouver (PMV) is for a project that will run its course in 6 years. Yet the EIA states clearly that there is no intention of decommissioning the structures at FSD after 6 years. Furthermore, the rail yard improvements as planned will result in double the capacity needed for this project even when it is fully operational. While any additional coal volume will require a new application to PMV, we believe such incremental scope creep, if it is the intention, will add unnecessary challenges to the determination of the total impact of the project – both in the case of a volume expansion between year 1 and 6, as well as having the operation run beyond the stated six years.

2. Air Quality

• Coal dust

The recently completed coal dust fall monitoring by the Corporation of Delta was referenced in the revised EIA (page) as further evidence to imply that coal dust will unlikely to be of concern from the FSD project (page 132). No mention was made in the EIA that four of the five monitoring sites in the study, where little coal dust was detected, were located in Tsawwassen at distances between 4.5 km and 5.5 km away from the Westshore Terminals facility. These sites provide no data meaningful to those living closer to railways transporting coal or coal handling facilities. The fifth monitoring site, 15 meters from the railway and at a location north of Boundary Bay Airport, however, found a dust level that was above both the residential and non-residential BC Air Quality guidelines for dust fall. As a comparison, the closest residential area to FSD is about 520 meters away (page 103). Moreover, there are residences within 100 meters of the track as the railway passes through North Delta neighborhoods. The result from the track side monitoring site is therefore far more informative with respect to the FSD project. The conclusion of the EIA regarding the Corporation of Delta's study in relation to the FSD project is therefore incorrect. We support the Corporation of Delta's recommendation to gather more data including track side locations in North Delta, should the FSD project be approved.

In response to questions about the evidence supporting the stated effectiveness of chemical topper agents in reducing coal dust, which was included in modeling work upon which conclusions were drawn by consultants, the EIA includes a statement from retired BNSF assistant Vice President W. VanHook (Appendix XIV). It is problematic in several respects to use this statement to assess the coal dust suppression impact of topper agents, the primary mitigation strategy proposed for the FSD project:

- The statement is the public version of the verified statement given by Mr. VanHook before the US Surface Transportation Board. The statement contains a number of blank spaces, presumably due to the need to protect proprietary information, that include key data on the test results of effectiveness of the agents. As a result, however, it is not possible to independently review the BNSF data that underpins the efficacy claims for the selected chemical topper agents for dust control.
- The proceedings to determine the reasonableness of the BNSF coal dust mitigation tariff provisions are ongoing before the US Surface Transportation Board (Docket FD 35557 at <http://www.stb.dot.gov/stb/index.html>). Final decision has yet to be posted, as of December 5, 2013. Until the final decision is given by this Board, it is not clear how BNSF will be able to assure consistent application of the chemical topping agents by coal producers and shippers.
- The main BNSF objective for dust mitigation is the prevention of derailment due to dust fouling of rail road ballast. Without the BNSF data being available publicly, it is not clear whether the dust fractions of interest for assessing ballast fouling are the same as the dust fractions of interest for assessing human health impact.
- The EIA indicates that a second application of the chemical dust suppressant is proposed approximately at the mid point of the journey from mine to dockside. Given the current dispute before the US Surface Transportation Board, it is necessary to have confirmation on the feasibility of this second application in term of cost and who will pay, since cost appears to be a main driver to the current dispute.

A letter from General Electric, the manufacturer of the dust suppressants chosen for use during coal transfer and barge loading by FSD, is included in Appendix II. Again the letter does not include enough information for an independent assessment of the claimed dust mitigation efficacy.

The revised EIA continues to treat coal dust as something that will occur in complete isolation from other particulate air pollutants. When present, coal dust is part of the mixture of particulates, and contributes to the total toxicity from outdoor particulate air pollution. As mentioned in our earlier submitted comments, the WHO International Agency for Research on Cancer (IARC) recently announced the inclusion of outdoor air pollution in general as a Group 1 carcinogen. In making its decision IARC included both anthropogenic and natural sources of air pollution (doi:10.1016/S1470-2045(13)70487-X, http://www.iarc.fr/en/media-centre/pr/2013/pdfs/pr221_E.pdf). The Health Effects Institute also recently published its review on particulate (PM) air pollution. While the review found stronger evidence for the health effects from certain types of particulates, "...the review panel concluded, however, that the studies do not provide compelling evidence that any specific source, component, or size class of PM may be excluded as a possible contributor to PM toxicity." (<http://www.healtheffects.org/Pubs/NPACT-ExecutiveSummary.pdf>)

We again note there is no reference given for the rationale for the EIA to use a ten fold (10X) factor for transforming occupational health limits for coal dust to sensitive populations such as children and the elderly (page 130). We disagree that the ten fold factor is a commonly accepted practice. We submit that there is a range in the factors applied and the choice is substance dependent. Therefore a reference from the published literature for coal dust is required to support this assumption.

- **Dispersion modeling**

We remain concerned with the air dispersion modeling scope and the appropriateness of the interpretation applied to the modeling results. Specifically we note the following:

- The EIA appears to suggest that because the current background air quality is so good in the neighborhoods near FSD that a small degradation of the air quality from the project is acceptable. Maintaining and improving health is the primary objective for the BC Provincial Air Quality Objectives (<http://www.bcairquality.ca/reports/pdfs/ago-framework-information-sheet.pdf>). The AAQO are not levels for projects to "pollute up to".
- The health impact from degradation in air quality – however small or large – depends on the size of the vulnerable population exposed. Concentration response functions are available to estimate health impacts from predicted pollutant increments, including but not limited to mortality, as well as a variety of health care utilization indicators. Given the size of the population in the neighborhoods near FSD, health impacts from the predicted air quality changes should be estimated.
- We disagree that the cursory and very selective screening level modeling along the BNSF railroad from the border to FSD is sufficient to rule out the potential for health impacts from the coal train traffic. As a start, the screening model used emission factors from the modeling work done for the FSD site. Train speed affects dust release. The speed of the train at the FSD rail yard will be quite different from the speed of the train en route to FSD. In addition, the screening model only provided estimates for annual and 24 hour concentrations for particulates. While there currently are no air quality objectives for particulates for time periods less than 24 hours, it does not mean there may not be health impacts from exposure to particulates of durations shorter than 24 hours. There is no known threshold below which particulate air pollution have no health effects. We request a complete modeling of the exposure along the rail corridor from the border to FSD, and along the barge transport route and coal handling facilities at Texada Island.

- **Diesel particulates**

The revised EIA includes a discussion on the potential for the diesel particulate emissions from this project to impact health. Comparison is made between the US EPA reference concentration (RfC) for diesel particulates and the predicted maximum annual PM_{2.5} at the nearest residence to FSD. The EIA concludes that even if the entire predicted PM_{2.5} (4.1 ug /M³) is from diesel engine emissions, it is still below the US EPA RfC of 5 ug /M³, and therefore no health impact is expected from the diesel emissions from the project. Regarding the RfC, the US EPA states: "*In general, the RfC is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily inhalation exposure of the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.*" (<http://www.epa.gov/iris/subst/0642.htm>). Given that the uncertainty can span an order of magnitude, the difference between 5ug/M³ and 4.1ug/M³ is moot. It is also the incremental contribution from the FSD project to the overall diesel particulate concentration that is of more interest. As well, the EPA acknowledges that the diesel particulate RfC is for assessing long term chronic exposures only, and is not meant for assessing short

term acute exposures. Again, we note that diesel particulates when present contribute to the overall health effects from particulate pollution in general.

3. Emergency Vehicle Access

We continue to recommend that the proponent asks BC Ambulance Service, the Surrey and Delta Fire Departments and other appropriate first responders to review the proposal for adequacy with respect to emergency response access.

4. Monitoring Post Permit Approval

We continue to recommend more comprehensive air quality monitoring should this application be approved. As mentioned above, we support the Corporation of Delta's intention to collect baseline track side coal dust data in North Delta. In addition we believe air monitoring stations at strategic locations along the rail corridor are required. The selection of monitoring locations must include participation from Metro Vancouver, the local governments and residents.

In summary, the revised EIA is not substantially different from the October 24, 2013 draft version we reviewed earlier. The EIA continues to lack clarity and depth. It still does not provide enough information for us to properly assess whether the activities associated with this project will have health impacts and if so to what degree. The proponent could provide additional information based on comments from us and others. However, given that the major deficiency of the EIA is its scope, it is unlikely the EIA can be substantially improved further without the proponent at least involving Metro Vancouver, the local governments and the Medical Health Officers to establish the appropriate scope. We continue to offer our assistance in this regard. Moreover, we again respectfully submit that it is the most appropriate and socially responsible approach for the proponents to address the health concerns through a well scoped and carried out Health Impact Assessment.

Sincerely,



Paul Van Buynder, MBBS, MPH, FAFPHM Chief Medical Health Officer and Program Medical Director, Public Health Fraser Health Authority	Patricia Daly MD, FRCPC Chief Medical Health Officer and Vice-President, Public Health Vancouver Coastal Health
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CC Dr. Perry Kendall, Provincial Health Officer

Mayors and Councils,
City of New Westminster
City of Surrey
City of White Rock
Corporation of Delta
City of Richmond
City of Vancouver

Board Chairs and Directors,
Metro Vancouver
Powell River Regional District

Roger Quan, Air Quality Policy & Management Division Manager, Metro Vancouver