



# Corporate Report

NO: R095

COUNCIL DATE: May 2, 2005

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## REGULAR COUNCIL

TO: Mayor & Council                      DATE: April 27, 2005  
FROM: General Manager,  
Engineering                                  FILE: 5650-40(VPA)  
SUBJECT: Deltaport Third Berth Project Environmental  
Assessment Review

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## RECOMMENDATIONS

1. That the City of Surrey state its' qualified support for the expansion of the Deltaport third berth contingent upon additional actions on the part of the Vancouver Port Authority (VPA) to mitigate train noise and congestion at train crossings in the City of Surrey, and continued strong support of the South Fraser Perimeter Road by the VPA.
2. That a copy of this report be forwarded to the Environmental Assessment office.

## INTENT

The intent of this Corporate Report is to provide background on a recommended position of the City with respect to the proposed expansion at Deltaport terminal.

## BACKGROUND

In response to industry market projections, the Vancouver Port Authority (VPA) is proposing to expand the Deltaport Container Terminal at Robert's Bank in Delta BC. The expansion project will increase the annual terminal capacity by over 40%. Construction is expected to start in August 2005 with dredging to permit the construction of the wharf and container storage area. The proponent, Vancouver Port Authority, must obtain federal and provincial environmental approval through a combined process to be able to dredge, dispose of the dredged material and impact fisheries.

The VPA has made an application to initiate the comprehensive federal and provincial environmental assessment and has circulated the application to the public and to affected agencies such as the City of Surrey. The purpose of the application is to assess the significance of all potential environmental effects of the project, beyond dredging and fisheries, and to suggest mitigating measures with the goal of obtaining the necessary permits. The Environmental Assessment Office (EAO) is accepting comments from the public and from agencies until May 9, 2005. The VPA plans to make a separate environmental assessment application for an additional three berth terminal called Terminal 2, at a later date.

Six steps make up the assessment application and they include scoping the project activities, defining the existing conditions, and then predicting the changes in the environment due to the proposed project. Measures are recommended to mitigate the changes to the environment and, where changes cannot be mitigated, the significant residual effects are determined.

Study areas were defined in the initial scoping documents and varied according to the impact parameter. For example, the noise review only considered noise level changes in the area from Deltaport to 156 Street. Air quality assumed a local study area surrounding the Deltaport as well as a regional study area that included the Lower Fraser Valley airshed. Road and rail transport were not directly part of the environmental assessment but they were part of

the operational impacts considered in the Socio-Community Impact discussion; for this impact parameter, the impact on regional traffic was considered.

## DISCUSSION

In reviewing the assessment application, we have focused on three main topics related to transportation of containers to the new berth: Safety/Road Capacity, Noise and Air Quality. A summary of the existing conditions and projected conditions as a result of construction of the third berth are contained in Appendix A. The City of Surrey is not directly impacted by the construction of the new berth however, the City will experience continual, long term impacts related to the operation of the new berth; specifically, the increased train and truck traffic that will be generated by the berth. In addition to the indirect, negative impacts of the third berth, as part of the GVRD, Surrey is expected to experience some positive socio-economic impacts related to employment during construction and other secondary benefits related to increased regional and provincial business opportunities.

### Summary of the Impacts of Third Berth Expansion:

- Surrey experiences and will continue to experience indirect but significant impacts due to the operation of Deltaport. Most of these impacts are related to the transportation of goods to/from the port.
- Railway engine and track noise in residential areas bordering the rail line are already significantly higher compared to what is commonly considered to be acceptable levels. Additional rail traffic for the project will add an average of 2 to 3 dB which, although relatively minor, will only add to the problem. Additionally, train whistles can add a sudden increase of 20-30 dB over the ambient noise levels and are particularly aggravating at night. To complicate matters, it would appear that neither VPA nor BC Rail, has a specific noise policy in place nor do they have a set of practices for mitigating noise.
- Train whistles are a particular problem in residential communities in Surrey and their use to enhance safety at at-grade crossings is governed by Transport Canada. All trains are required to whistle at unrestricted, public railway crossings to warn vehicles, pedestrians and trespassers. As at-grade crossings within the City are eliminated, the use of train whistles will diminish but in the short term, the increase in the number of trains through Surrey will increase the amount of train whistles.
- The process of eliminating train whistles requires the municipality to initiate the application with the railway companies and with Transport Canada and to jointly conduct a safety assessment which Transport Canada reviews. The safety assessment may require the installation of railway crossing warning systems and fencing for ¼ mile (400m) beyond the crossing to prevent track trespass. If successful, the municipality would then have to deal with liability issues, either directly with the rail companies or via additional liability insurance at a cost currently being determined.
- Ten at-grade, public crossings of the rail line serving the Port exist within the City of Surrey. Using the Transport Canada road/rail traffic cross-product guideline, grade-separated crossings are currently warranted at two locations in the City; 152 Street (a MRN road) and 192 Street. Both of these locations have lights, bells and gates which warn pedestrians and vehicles that trains are nearby; however, these warning devices do not replace the requirement for train whistling. Until grade separation takes place, longer and more frequent trains will worsen the congestion problem at these locations. The at-grade crossings necessitating the whistle problems in Panorama Ridge are caused primarily by low road volume crossings.
- The increase in train traffic will not necessitate improvements in the rail system in Surrey.
- Truck traffic will be dispersed over the major truck routes and it is expected that over half of the generated trucks traveling in Surrey (360 trucks per day), would use the proposed new South Fraser Perimeter Road. The remaining half would use the existing truck network but no details of this movement were provided in the report.
- The major air quality impact that Surrey will experience as a result of the port expansion is the increased emissions from the increased number of trucks and trains.

The following is a summary list of Mitigation Measures the VPA is suggesting in the Assessment Application:

- *It is recommended that VPA continue its participation in this program (Surrey Rail Initiative) with the City of Surrey, BC Rail Port Sub Ltd., and the residents of the Panorama neighbourhood of Surrey to mitigate rail impacts in the City of Surrey.*
- *The VPA will work with BC Rail, CP Rail, CN Rail, TSI and Westshore to form a Roberts Bank Noise Management Committee to address the issue of noise generated from port operations and the rail lines. The Noise Management Committee would invite representatives from the Corporation of Delta, City of Surrey, City of*

*Langley, Township of Langley, the TFN and residents from affected neighbourhoods to participate.*

- *VPA will work with the Railways to expedite fleet replacement of line haul engines calling on Roberts Bank.*

While the construction of the South Fraser Perimeter Road (SFPR) is not listed as a mitigating measure to be undertaken by the Vancouver Port Authority, the VPA assumes that the South Fraser Perimeter Road will be constructed by the Province and will assist in mitigating truck traffic. The application assessment does not consider a scenario where the South Fraser Perimeter Road is not constructed. This adds pressure to ensure the SFPR is completed at the same time as the Port expansion.

The following is a list of the City of Surrey Recommended Mitigation Measures that the City believes necessary in order to be able to support the Delta Port expansion.

- That the VPA hire a consultant to undertake a preliminary safety assessment of *all* railway crossings within the City and to provide direction on the opportunities for closure, grade separation and whistle cessation including but not limited to:
  - The closure of low volume at-grade crossings and ensuring against trespass. Transport Canada provides municipalities with \$20,000 per crossing that is closed and pays for infrastructure to allow the closure, such as turnarounds.
  - The eventual grade separation of 152 Street and 192 Street over the mainline railway tracks between Langley and Delta.

This preliminary safety assessment would provide guidance to the City in its pursuit of a formal application for whistle cessation.

- That the VPA continues to strongly support the South Fraser Perimeter Road which will be an important road link to serve the Deltaport facility as well as the industrial lands along the foreshore and divert truck traffic away from residential areas.
- That the VPA continues to encourage railway service providers to upgrade their fleet to less noisy and polluting locomotives.

### Other Input

The West Panorama Ridge Ratepayers Association has independently submitted their comments to the Environmental Assessment office. Their concerns entirely relate to noise. Recently, the Vancouver Port Authority committed to working with local municipalities to resolve rail level crossing issues.

## **CONCLUSION**

Noise, road capacity at existing level crossings, and air quality are the major negative impacts to Surrey created by the currently proposed port expansion and the expected future construction of a new terminal. It is important that the issues of increased truck traffic and the safety of the at-grade crossings be considered further. A separate report will be brought forward to Council on train whistling once liability and insurance issues have been further clarified.

Paul Ham, P.Eng.  
General Manager, Engineering

PH/VL/AMC/rdd  
Attachments

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**APPENDIX A**

## Existing and Projected Conditions

Shipments of containers to and from the proposed third berth will arrive by rail and by truck. According to the assessment application, it is estimated that by 2012:

### RAIL

- More shipments will arrive by rail than by road: 65% of all import and export containers at Roberts Bank will arrive by rail resulting in an increase of daily container trains from 6 in 2003 to 9 in 2012. The number of coal trains is expected to remain the same at 12 per day.
- The rail line to Robert's Bank consists of four “subdivisions” and is owned by four different railway companies: Canadian National Railway (CN), Canadian Pacific Railway (CP), Burlington Northern Santa Fe Railway (BNSF) and BC Rail. BC Rail owns most of the track in Surrey with some track in the east near Langley owned by CP and a short section of track near Delta owned by both BC Rail and BNSF. CN owns the track in Langley. The mainline and the four sidings that separate the subdivisions are shown in FIGURE 1.



FIGURE 1: Sidings and subdivisions on the mainline track between Roberts Bank and Langley

- Train length and frequency is expected to increase to meet the demand of container shipments at Deltaport. The number and length of coal trains destined for Westshore (6in/6out, 7000') per day, will remain the same.

CONTAINER TRAINS	CURRENT		POST THIRD BERTH (2012)	
	LENGTH	FREQUENCY	LENGTH	FREQUENCY
CP	6000' (1.8 km)	2/2	8000' (2.4 km)	2/2
CN	12000' (3.7 km)	1/1	12,000' (3.7 km)	2/2

- The changes in frequency and train length will not require any new train infrastructure to be built.

- There are approximately 30 at-grade rail crossings between Roberts Bank and the Rawlinson siding (10 at-grade crossings within Surrey) but the report considered only those crossings near Deltaport in its traffic impact study; the VPA states that it is actively working with communities along the line regarding these grade crossings. Using the cross product guideline, grade-separated crossings or overpasses are required at two locations in Surrey: 152 Street and 192 Street.
- BC Rail is working with the Panorama neighbourhood and the City of Surrey to close private at-grade crossings and to reduce the number of train whistles in that area. Train whistles are particularly aggravating to adjacent residents, particularly at night. A report prepared by a resident of Panorama Ridge indicates that train whistles can be 40 times louder than ambient noise followed by the sound of rolling stock, engines, etc, which are 25 times louder than ambient noise. The noise event can last as long as 8.75 minutes per train or an average of two and a half hours per day. The number and length of noise events will increase along with longer and more frequent trains.

## TRUCK

- Although the percentage of containers arriving by truck will have decreased from 42% to 35% in 2012, with the increase in the total number of containers, the number of daily trucks will increase from 900 in/900 out to 1,200 in/1,200 out.
- Truck origins to Deltaport are expected to be:
  - 40% from north of the Fraser River via the Massey Tunnel
  - 27% from the south and east via Highway 99 and Ladner Trunk Road
  - 33% from the east via River Road

Therefore, up to 60% of trucks destined to Deltaport or 180 in/180 out per day could be originating in or traveling through Surrey. The future South Fraser Perimeter Road will be needed to provide a good connection between the lands along the Fraser River and Deltaport, handling approximately half of the trucks traveling through Surrey. The other half would use the existing Surrey truck routes to access Highway 99.

The application included a review of air quality that primarily addressed air quality issues related to the terminal operations and directly influenced by VPA. According to the report, "there are no residual effects on ambient air quality as a result of construction and operation of the proposed Deltaport Third Terminal Berth Project". Outside of the port area, the report acknowledged that older locomotives emitted up to twice the number of greenhouse gases. The VPA recommended that it would work with the railway companies to encourage replacement to locomotives that were friendlier to the environment.

The applicant measured existing noise levels at four locations, including Southridge Drive in Surrey. The applicant concludes that there will be a certain and continual noise impact at this location due to the annoyance factor of trains whistles. The noise impacts of increased truck traffic will be minimal.

The assessment application also included a discussion of accidents. With respect to this proposal, transportation of dangerous goods by rail or road is the most relevant accident type to the City of Surrey. Emergency response plans and environmental management plans are already in place and will be updated as necessary.

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