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DEPARTMENT OF
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Mr. Darrell Desjardins
Director, Environmental Programs
Port Metro Vancouver
100 The Pointe, 999 Canada Place
Vancouver, BC V6C 3T4

Dr. Barry Smith
Acting Reg. Dir. to The CWS
Pacific Wildlife Research Centre
RR#1, 5421 Robertson Road
Delta, BC V4K 3N2

Dear Mr. Desjardins, and Dr. Smith,

In July 2008, Port Metro Vancouver and its consultant Hemmera Envirochem Inc. released the 2007 Annual Report, which compiled and interpreted results of the first year's work on the Adaptive Management Strategy (AMS), addressing the potential environmental impacts of the construction of Deltaport 3. Herewith a response from the Scientific Advisory Committee to this report. I have taken the liberty of including some additional material that you may find superfluous, but which will help others with whom you may decide to share this letter.

BACKGROUND

What is the Adaptive Management Strategy?

The Adaptive Management Strategy takes a science-based systematic approach to monitoring and managing potential impacts on the 'intercauseway ecosystem' (that between the container port and BC Ferry jetties) that may arise as a consequence of the construction of DP3. The AMS was initiated as a result of the Environmental Assessment of DP3 carried out by Environment Canada. An Environmental Assessment is a federally-mandated process required of all such major projects. The AMS has the specific goals of assessing the potential for significant negative impacts on the ecosystem that may occur as a result of DP3 construction. Of particular interest are marine eutrophic events and dendritic channelization leading to erosion. The strategy for the AMS is a public document and is available at http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/environment.aspx

The core activity is a five year (2007 – 2011) monitoring program to provide data on the environmental situation in and around the intercauseway area. Data are collected regularly on geomorphological factors, on surface water and sediment quality, the extent and health of the eelgrass bed, benthic community, and the birds in the area. The AMS compares these data to environmental thresholds based on regulatory screening levels and baseline surveys (from 2003/04) established in accordance with Environment Canada. The data are summarized in quarterly reports, and in an annual report, which also provides some interpretation.

What is the Scientific Advisory Committee?

The Scientific Advisory Committee (SAC) was established in response to the

Environmental Assessment process, as a means to provide independent scientific and technical advice to Port Metro Vancouver, and upon request to Environment Canada, in relation to the implementation of the Adaptive Management Strategy (AMS). The SAC is composed of three scientists, one appointed by Environment Canada (Dr. Terri Sutherland, Research Scientist, DFO), one appointed by Port Metro Vancouver (Mr. Rowland Atkins, M.Sc., P.Geo. Senior Geomorphologist, Golder Associates), and a third selected jointly by Environment Canada and Port Metro Vancouver to chair the committee (Dr. Ron Ydenberg, Professor of Biological Sciences, SFU). All three of us have extensive experience on these mudflats. It is important to note that we do not represent either our employers or the agencies that appointed us. We were appointed as members of an independent technical committee set up by Port Metro Vancouver to review the AMS reports, and to help steer the 'adaptive' part of the management process.

The SAC was appointed and began work in spring 2007, just after monitoring began. The committee toured the construction site, and met to review drafts of the quarterly reports on June 27, November 2, December 18 (2007), and April 2 (2008). We met on May 23 and June 26, 2008, to review the draft Annual Report. The final 2007 Annual Report was released on July 22, 2008.

RESPONSE TO THE ANNUAL REPORT

Inevitably, some will charge that this Annual Report is untrustworthy because it was written by the same consultant who collected the data (and who incidentally also wrote the AMS workplan). Though we do not share it, we understand the reasons for this suspicion. It is part of the reason that an independent advisory committee was established in the first place. The Annual Report is a public document (available at the web site given above) and we encourage anyone with concerns to take some time to peruse it. The SAC would be happy to answer questions or assist with the technical details. We have inspected closely all the procedures used, and have recommended alterations to or required extra work on scores of details in a whole variety of procedures. Hemmera is to be commended for their responsiveness to and co-operation with these requests.

Stated very broadly, the 2007 Annual Report identifies no emerging adverse environmental trends. The SAC by and large is in agreement with this assessment. We are mindful that the report contains a massive amount of detail covering only one complete seasonal cycle, and we hasten to add that there are a few issues that will get close scrutiny in the next years of the AMS. Therefore, there are also a number of important caveats. I summarize all of this here briefly with the following five points. Full details are of course available in the Annual Report.

1 The pattern of erosion and sediment deposition in the intercauseway area appeared normal for the year, with two exceptions. The first was that water flowing out of the dredged material deposited to create the new berth created some channels

as it flowed through the dyke and onto the mudflat. This was unforeseen. These new channels appear to have stabilized, and are being watched closely. Secondly, though it appears sound, some of the measures made along the crest protection structure have caused SAC to ask for a lot more detail. These measures might indicate the start of erosional processes, or might be due simply to measurement error. This is also being watched closely. We expanded the AMS program measuring these attributes so that we gain more information.

2 The vast majority of the surface water and sediment quality measures were well within guideline levels, but those who bother to work systematically through the data will find instances sprinkled throughout in which some measurements either exceed the guideline, or are higher by more than 20% (the agreed upon 'trigger' level) than the previous level. The SAC has reviewed and considered these instances in detail. In general, the pattern of these exceedances leads us to suspect that DP3 construction is not the cause. For example, the level of boron in water samples is persistently high, but as boron is known to be high throughout BC coastal waters, it seems likely that this high background is responsible for the high levels measured. Copper and zinc levels were persistently high at one sample station, but we feel confident that the source of these metals is the agricultural lands draining into the ditch adjacent to this sample station. Other measures show erratic patterns, either spatially or temporally, and none appear persistent.

3 There is already extensive, historical information on the eelgrass bed and the avian community around the mudflat. Both appear healthy. We know far less about the benthic community on the mudflat, but have requested enhancements to the sampling program.

4 The most important caveat to these very basic results is that this is only the first year of the AMS monitoring program: it is possible that a second year might tell a different story. Some of the fluctuations we have observed may simply be seasonal in nature. We shall be able to say more after another's year data have been collected.

5 'Adaptive Management' refers to the procedure of adjusting management as information comes in so that more can be learned. For this reason the SAC is recommending or considering a number of changes. We will be reducing effort in some areas of study in 2009 (contingent on 2008's results), in order to be able to increase effort in other areas. The main change is that bird surveys (which have consumed a lot of effort) will be reduced and simplified, while we will continue or expand the benthic sampling scheme. The SAC feels that this is a prudent reallocation that will obtain more information for the resources available.

As a final point, there may be questions about why we have delayed in delivering commentary on the Annual Report. The answer is simply that we would have

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preferred to wait until a second full year's data had been collected and analyzed before making comment at all. Those involved with providing scientific services in the service of public policy know that for science to play a responsible role, it is necessary to win the trust of all sides around an issue. Therefore, it is essential to pose questions as fairly as possible, to frame answers as accurately as possible, to maintain a neutral stance with respect to the outcomes that various stakeholders may prefer, and especially to avoid public statements before there are adequate supporting data. In our view, there are not as yet enough data to support definitive statements. We therefore stress the caveats issued with the above statements, and repeat that we are engaged in a learning process.

Any member of the SAC would of course be pleased to answer any questions that you may have.

Sincerely,

Monica Court

R. C. Ydenberg

cc Dr. Terri Sutherland, DFO
Mr. Rowland Atkins, Golder Associates