PORT METRO VANCOUVER

PRE-OPERATIONS EAC COMPLIANCE REPORT
DELTAPORT THIRD BERTH

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LIST OF ACRONYMS

AMS	Adaptive Management Strategy
BCRC	BC Rail Company
COD	Corporation of Delta
CEAA	Canadian Environment Assessment Act
CWS	Canadian Wildlife Services
DCL	Deltaport Constructor's Limited
DCLC	Deltaport Community Liaison Committee
DFO	Department of Fisheries and Oceans
DP3	Deltaport Third Berth Project
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EC	Environment Canada
EMP	Environmental Management Plan
EWP	Environmental Work Plan
FTI	Foreshore Technologies Inc.
MMMP	Marine Mammal Monitoring program
MOE	Ministry of Environment
MOT	Ministry of Transportation
RBRC	Roberts Bank rail corridor
RTGs	rubber tire gantries
SAC	Scientific Advisory Committee
TFN	Tsawwassen First Nation
TOCA	Table of Owner’s Commitments and Assurances
TSI	Terminal Systems Inc.
VFPA	Vancouver Fraser Port Authority

1.0 INTRODUCTION

This document has been prepared to provide the British Columbia Environmental Assessment Office (EAO) with the status of the compliance with the Conditions of the Environmental Assessment Certificate (EAC #T06-01) issued to Vancouver Fraser Port Authority (VFPA) September 28, 2006 for the Deltaport Third Berth Project (DP3). As per condition 5 of the EAC, VFPA is required to submit a report documenting the status of compliance with the EAC four weeks prior to the start of operations. In February 2008, VFPA provided the EAO with a report on the status of key DP3 components which covered the start of construction up until December 31, 2007 ("*VFPA Deltaport Third Berth 2007 Status Report*", Feb 2008) and is available on the EAO website. This pre-operations report covers the period from January 2008 to November 2009. All status updates are provided in the updated Table of Owner's Commitments and Assurances (TOCA) (see **Appendix A**) however, key components of the TOCA are highlighted in this report and include the following:

- Construction Environmental Management Plans and Monitoring;
- Operation Environmental Management Plan;
- Environmental Monitoring;
- Adaptive Management Strategy;
- Consultation;
- Traffic, Air Quality, Lighting and Noise;
- Ocean Disposal Permit; and
- Fisheries Act Authorization.

1.1 PROJECT DESCRIPTION SUMMARY

DP3 is a VFPA and Terminal Systems Inc. (TSI) initiative to expand existing container operations at the Deltaport container terminal at Roberts Bank, in Delta, BC.

The main on-site project components include:

- a wharf to accommodate the third berth;
- creation of land for a container storage yard;
- tug moorage and safety boat launch;
- ship access channel; and
- terminal services and infrastructure.

The main off-site project components include:

- additional rail track; and
- road improvements.

DP3 will increase capacity at Deltaport by at least 600,000 TEUs (twenty-foot equivalent units) by adding a third berth and 20 hectares of container storage facilities to the existing two-berth container terminal. The third berth at Deltaport will be operated by TSI, a private company that operates the existing Deltaport container terminal. DP3 is part of VFPA's overall strategy to expand container capacity to accommodate consumer and business-driven demand for increased Canadian trade through the west coast of Canada (VFPA website, 2009).

The DP3 project was the subject of environmental assessments under the *B.C. Environmental Assessment Act* (BCEAA) and *Canadian Environmental Assessment Act* (CEAA). Both assessment processes were harmonised under the federal / provincial agreement, and the federal review was a Comprehensive Study. The project was approved under both these legislation in 2006.

1.2 CONSTRUCTION ACTIVITIES STATUS UPDATE

Following the December 8, 2006 award of the Deltaport Third Berth Marine Works contract to Deltaport Constructor's Limited (DCL), marine construction on DP3 began in January 2007 with dredging and marine works, and achieved Substantial Completion on June 23, 2009.

The Uplands portion of the Third Berth construction, including terminal utility installation and pavement surfacing, was overseen by TSI, Deltaport Terminal Operator. Installation of terminal utilities commenced September 2008 and was completed in August 2009. Asphalt surfacing of the terminal area began in May 2009 and is scheduled to be complete in November 2009.

Construction – Marine Works

Mobilization	January 2007
Perimeter Dike Construction	
Phase 1	January 2007 – May 2007
Phase 2	March 2008 – April 2008
Dredging (disposal) – Tug Basin	April 2007
Dredging (disposal) – Approach Channel	
Phase 1	March 2007 – April 2007
Phase 2	August 2008
Dredging (disposal and fill) – Caisson Trench	April 2007 – February 2008
Terminal In-fill	September 2007 – August 2008
Site Pre-loading	October 2007 – December 2008
Tug Basin Construction	March 2007 – August 2008
Caisson Fabrication	June 2007 – November 2007

Caisson Mattress Construction	June 2007 – May 2008
Marine Densification	August 2007 – June 2008
Caisson Placement and Backfilling	July 2008 – October 2008
Caisson Scour Protection	August 2008 – December 2008
Underground Services	April 2007 – July 2009
Surfacing – Perimeter Road and Apron	July 2009 – September 2009

Construction – Temporary Barge Berth

Construction of Berth	January 2009 – May 2009
Installation of Barge Ramp	May 2009

Construction – Terminal Infrastructure

Detailed Design and Tender	November 2007 – July 2008
Site Finishing Works / Utility Installation	September, 2008 – August 2009
Site Surfacing Works / Asphalt Placement	May 2009 – November 2009

Construction – Road and Rail Infrastructure

Rail and Road Construction	October 2008 – December 2008

1.3 OPERATIONS

Opening of DP3 is anticipated to occur January 1, 2010. Operational activities at the terminal include loading and unloading of container ships, container storage and container transfers to and from rail and road transport. While these activities are the same as those currently underway at Deltaport, the addition of the third berth will increase the capacity and increase the container storage facilities.

2.0 PROGRESS IN MEETING CONDITIONS OF EAC #T06-01

As part of its environmental assessment report on the Deltaport Third Berth Project, the EAO issued the TOCA (Appendix E of the report), a series of commitments to responsible environmental management and other measures. Since 2007, the VFPA has voluntarily provided quarterly updates on the status of the TOCA to the EAO, Deltaport Community Liaison Committee (DCLC) and the public via VFPA's website, as they became available. This quarterly report distribution has been an effective communication tool to provide interested parties with Project information and aid in transparency of the Project. The current status update of the TOCA (October 31, 2009) is included in this report as **Appendix A** and key areas of the TOCA are highlighted in the following sections.

2.1 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

As presented in the February 2007 "*Deltaport Third Berth Pre-Construction Report"*, prepared by VFPA, the construction Environmental Management Plan (EMP) developed for the marine works portion of the Project contained five comprehensive plans, some of which contained more than one of the 11 sub-plans described in section 2 of the TOCA. The construction EMP was attached as Schedule B to the "Fisheries Act *S.35(2) Authorization*, *Authorization for Works or Undertakings Affecting Fish Habitat, Deltaport Third Berth Project*" (December 2007), which was provided to the EAO within Appendix III of the VFPA report titled "*Vancouver Port Authority, Deltaport Third Berth, Pre-Construction Report*", dated February 2007.

Comprehensive plans within the marine phase construction EMP included:

- Surface Water Quality Management and Sediment Control Plan;
- Hazardous Waste Management and Spill Control Plan;
- Marine Environmental Management Plan;
- Marine Water Quality Management Plan; and
- Marine Mammal Monitoring Program.

In addition to the above, contractors working on both the marine and upland components of the Project developed and implemented their own EMPs for construction using information contained in the Construction EMP referenced above. These include:

- The marine works EMP: "*Deltaport Constructors Ltd. Project Environmental Management Plan, Deltaport Berth 3 Marine Works*" (DCL EMP), dated January 2007;
- The upland civil works, first phase EMP: "*Project Environmental Management Plan, Deltaport Berth 3 Finishing Works for Terminal Systems Inc*.", dated October 20, 2008 (MATCON EMP);
- The upland civil works, second phase EMP: "*Environmental Management Plan for Terminal Finishing Works, Deltaport Container Terminal, Berth 3 Expansion, Delta, British Columbia*", dated May 2009 and prepared for BA Blacktop by Trow Associates Inc. (BA Blacktop EMP); and
- The BC Rail Trackwork EMP: "*Environmental Work Plan for Third Berth Trackwork Extension at Gulf on BCRC Property, Delta, British Columbia*", dated July 22, 2009 (Mainland EWP).

The above EMPs were developed prior to the commencement of activities with the potential for adverse impacts. The DCL EMP has been reviewed by VFPA and the EAO working group, and was accepted as complete. The remaining EMPs have been reviewed by VFPA and are submitted to the EAO along with this report. Implementation of the plans was initiated with the start of marine works, and is on-going through the upland civil works and BC Rail Company (BCRC) railway construction ("trackwork"). See Section 2 of the TOCA (**Appendix A**) for comments and status updates on the individual EMPs.

The BCRC trackwork to date has been limited to site grading and the placement of sub-ballast, and the Mainland EWP referenced above was produced for that work. Additional work is not scheduled to begin until December 2009, and prior to that time, an updated EWP will be developed and submitted to VFPA for review. The BCRC updated schedule of work has been included in this report in **Appendix B**.

EMPs contained within schedule B of 2006 *Fisheries Act* Authorization and the DCL EMP (2007) were included in the 2007 pre-construction report to the EAO. EMPs developed in 2008 and 2009 are appended to this report (see **Appendix C**).

2.2 OPERATION ENVIRONMENTAL MANAGEMENT PLAN

TSI, the Terminal Operator has updated their Operation EMP, including the Emergency Response Plan, to include the new berth at Deltaport. A copy of the draft EMP was provided to VFPA for review in mid-November 2009 and is attached to this report as **Appendix D**. A finalized version of the EMP is anticipated to be completed by the end of November 2009.

The draft EMP is designed to capture, organize and manage activities at the terminal so that a consistent approach for controlling environmental risks can be implemented. Environmental management will be integrated into routine planning processes and daily terminal operations. TSI will review and update the EMP on an annual basis.

The draft Operation EMP is divided into several sections, and contains the following components:

- TSI's Environmental Policy;
- A list and hazard ranking of terminal and office (administrative) activities that have actual or potential environmental impacts;
- Environmental Management Plan Procedures (EMPPs) to address overall policies for environmental management, including monitoring legal and Regulatory requirements, verify compliance and measure performance relative to TSI objectives and targets;
- Specific Environmental Operating Procedures (EOPs) to ensure that activities are carried out in a systematic manner to avoid adverse impacts on the environment.
- A List of Forms that Support the EMPPs and EOPs

2.3 ENVIRONMENTAL MONITORING DURING CONSTRUCTION

As per commitment 4.3 of the TOCA and the requirements of the 2006 *Fisheries Act* Section 35(2) Authorization – Authorization No.: 02-HPAC-PA-000-000144, environmental monitoring was conducted by appropriately qualified Independent Monitors throughout Project construction.

Hemmera conducted environmental monitoring during both marine and upland works and reported on Project activities via weekly monitoring reports from January 2007 to November 2009. The weekly monitoring reports have been compiled and provided along with this report (see **Appendix E**). The monitoring reports identified environmental issues or impacts that occurred during construction works, provided recommendations for appropriate mitigation measures, and reported on implementation and effectiveness of those measures. Supplemental information included in the weekly monitoring reports included marine mammal observations, waterfowl and coastal seabird observations, and periodic construction noise monitoring.

While a variety of works were being monitored during Project construction, one weekly report was prepared that covered all DP3 environmental monitoring activities. Weekly reports were distributed to:

- Department of Fisheries and Oceans (DFO);
- Environment Canada (EC);
- Canadian Wildlife Services (CWS);
- BC Ministry of Environment (MOE); and
- Vancouver Fraser Port Authority (VFPA).

Depending on the works being monitored, Vancouver Pile Driving, Deltaport Contractors Ltd., project engineers, and / or TSI also received copies of the weekly report as appropriate.

Hemmera was retained by TSI to provide construction environmental monitoring of the tug basin temporary barge ramp works (under Authorization HPAC-PA-000-000144 -2, December 2008) from February 2009 to May 2009. Project activities and incidental observations, such as those made during crest protection works, were reported in the weekly monitoring reports.

Hemmera was also retained by TSI to provide construction environmental monitoring services for uplands terminal construction portion of the DP3 Project:

- Finishing Works for the upland terminal construction portion of the DP3 project (October 2008 – August 2009) under DFO Authorization 02-HPAC-PA1-000-000144; and
- Second Phase of Terminal Finishing Works (June 2009 – October 2009) under DFO Authorization 02-HPAC-PA1-000-000144 and 02-HPAC-PA1-000-000144-2.

Weekly monitoring reports for the above upland works have been distributed to DFO, EC, CWS, MOE, VFPA, and TSI, and will continue to be distributed until all Project works with the potential for adverse impacts are complete. The DFO have advised that weekly reporting on uplands terminal construction is to be limited to impacts and mitigation of fish and fish habitat as it relates to terminal construction activities.

Weekly monitoring continues to be reported and will be compiled in one stand-alone report to the DFO for the entire DP3 project after project completion (fall 2009).

2.4 MARINE MAMMAL MONITORING

The objective of the Marine Mammal Monitoring program (MMMP) was to monitor marine mammal presence within the Project area during construction and avoid, reduce or mitigate potential environmental effects, particularly as they apply to Killer Whales (orca). The MMMP can be found within Schedule C of "Fisheries Act *S.35(2) Authorization, Authorization for Works or Undertakings Affecting Fish Habitat, Deltaport Third Berth Project*" (Dec 2007), which was provided to the EAO within Appendix III of the VFPA report titled "*Vancouver Port Authority, Deltaport Third Berth, Pre-Construction Report*", dated February 2007.

The MMMP is an 11 phase program, including, but not limited to, baseline surveys, acoustic modeling, collection of real-time acoustic spectrographs of dredging and vibrodensification equipment, marine mammal surveys, daily marine mammal activity observations, and reporting. Stantec (formerly Jacques Whitford-AXYS), in association with JASCO Research Ltd., was retained by VFPA to conduct the above surveys. Originally, eight Marine Mammal Surveys were planned, however, one additional survey was conducted in May 2009, for a total of nine surveys. The reports are dated as follows:

- June and September 2007;
- January, May, June, August and September 2008; and
- January and May 2009.

Based on the results of the baseline survey work, the acoustic zone of influence for each piece of marine equipment activity (e.g. vibrodensification, suction cutter dredging) ranged from 130 m to 930 metres. For the purposes of monitoring, a one km zone of acoustic influence was chosen to represent all marine construction activities. The marine mammal monitoring program included a requirement to reduce construction activities if killer whales were observed within the zone of influence. Daily observations of marine mammal activities were conducted by Hemmera, the Environmental Monitor for the marine construction works, and by the VFPA environmental monitor. These observations were included with the environmental monitoring reports produced during construction works (see **Section 2.3**). No killer whales were observed within the zone of influence during the course of Project construction, and the closest killer whale sighting was approximately 2.5 to 3 kilometres from the marine construction activities.

DFO received copies of the above survey reports, and two baseline surveys *("Source Level Study of the Dredge Columbia and Killer Whale Acoustic Impact"*, dated 14 May, 2007 & *"Vibro Densification Source Level Study and Killer Whale Acoustic Impact"*, dated September 17, 2007). A final marine mammal monitoring report for the Project is currently being drafted, and will be submitted to DFO when complete (expected in Fall 2009). Copies of the baseline surveys and marine mammal survey reports have been included with this report (**Appendix F**).

In addition to the marine mammal monitoring work conducted during the construction of the Deltaport Third Berth, VFPA has also committed to ongoing measures to reduce potential environmental effects to Killer Whales at Roberts Bank during operation of the facility (i.e., pilot awareness and vessel speeds).

2.5 ADAPTIVE MANAGEMENT STRATEGY

Section 5 of the TOCA (**Appendix A**) outlines the requirement for an Adaptive Management Strategy (AMS) to be developed and implemented for the intercauseway marine and wildlife habitats at the site. The AMS is a science-based approach to monitoring and managing the Roberts Bank ecosystem. The approach will allow for the early detection of changes in the inter-causeway ecosystem so that potential significant negative ecosystem trends that are attributable to the DP3 Project can be prevented or mitigated. The AMS was developed in conjunction with and approved by Environment Canada.

The key areas of study for the AMS are:

1. Geomorphology/Oceanography
2. Surface Water Quality
3. Sediment Quality
4. Eelgrass
5. Other biota (benthic communities, fish, birds)

A Scientific Advisory Committee (SAC) was established in 2007 as a component of the AMS to provide scientific and technical advice and recommendations regarding the implementation of the AMS. Three scientists have been appointed to the SAC – one appointed by VFPA, one appointed by EC and a third that was jointly appointed by VFPA and EC. Information regarding each of the scientists is available on the Port website[1].

To date, the detailed AMS workplan, quarterly monitoring reports for 2007 and 2008, the first two quarterly monitoring reports for 2009, and the 2007 and 2008 Annual Reports have been submitted to the SAC for review. The 2007 Annual Report was completed in July 2008 and the 2008 Annual Report was completed in September 2009. The Annual Reports provide interpretation and discussion of the data that

[1] http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/environment.aspx

were collected in 2007 and 2008 as part of the AMS monitoring program. The reports also evaluate potential trends occurring in the inter-causeway area and include recommendations for modification of the AMS work program to better investigate identified trends or to reduce the scope of work when no impacts are evident. The 2007 and 2008 Annual Reports are available on the Port website[2].

The SAC met most recently on November 4, 2009 to discuss the draft first and second quarterly reports of 2009. The next meeting of the SAC is scheduled for late Fall 2009 to review the third quarterly report of 2009.

The SAC has continued to provide comments on the quarterly and annual reports, and have made some recommendations for changes or additions to the AMS program. The SAC comments have been taken into consideration and are reflected in the final documents reports, and in the field program. Examples of SAC recommendations that have been incorporated into the AMS work program since the 2007 status report (Feb 2008) was issued to the EAO include:

- The addition of a sampling station in the inter-causeway area in the area of new drainage channel development adjacent to the project footprint. The station will be sampled for benthic community, water quality and sediment quality in March 2010;
- The addition of several depth of disturbance rods in the inter-causeway area to provide increased resolution about sedimentation and erosion trends in the area of the new drainage channels; and
- Changes to the bird monitoring program in response to the data indicating that impacts to coastal seabirds and waterfowl appeared limited to direct habitat loss associated with the DP3 footprint, as predicted by the environmental assessment.

Based on the results of the first two years of monitoring for the DP3 AMS program, to date, it does not appear that the DP3 construction activities have contributed to significant negative ecosystem trends in the inter-causeway area. Additional information can be found in the annual reports or in the 2008 AMS Annual Report summary document, both available on the Port website[3].

2.6 CONSULTATION

VFPA is committed to working with the community of Delta to identify issues and minimize impacts related to DP3. A Project information and feedback line is available to the public and is advertised on the Project web site. All comments are documented and directed to the appropriate team member. Any issues and responses are tracked in the DP3 Public Issues Tracking document, which is available to the public on the Project website[4] or in library resource files. The tracking document has been updated prior to DCLC meetings, most recently on September 11, 2009.

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2 http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/environment.aspx
3 http://www.portmetrovancouver.com/projects/ongoing_projects/Deltaport_Third_Berth_Project/Environment.aspx
4 http://www.portmetrovancouver.com/projects/ongoing_projects/Deltaport_Third_Berth_Project/Project_consultation.aspx

Community Liaison

As per section 26.1 of the TOCA (**Appendix A**), a community liaison plan was developed in 2006. The Plan provides an overview of communication and consultation activities that we are undertaking as part of the regulatory commitments for the Project. The Plan was included in the February 2007 "*Deltaport Third Berth Pre-Construction Report"* which was provided to the EAO and is not attached to this report. The Plan is available from the EAO website[5] and the Port website[6].

Since the February 2008 "*Deltaport Third Berth 2007 Status Report*" was provided to the EAO, community liaison activities have included:

2008

- Seven (7) meetings of the DCLC;
- Two (2) open houses to provide Project updates and collect feedback;
- Two (2) newsletters (May and November 2008) delivered to all residential and business addresses in Delta, e-mailed to the Project database and posted on DP3 webpages;
- Eleven Project advisories/updates via email circulation to 597 individuals on the project database and postings on the DP3 webpages;
- Regularly updated community library files;
- Development and maintenance of a regularly updated public comment and issues tracking table; and
- Maintaining contact and feedback mechanisms (Project information line, e-mail address, facsimile line and mailing address).

2009

- Five (5) meetings of the DCLC;
- Four (4) open houses to provide Project updates and collect feedback (two more scheduled for November);
- One (1) open house and information session for Tsawwassen First Nation community;
- One (1) newsletter (May/June 2009) and one scheduled for November delivered to all residential and business addresses in Delta, e-mailed to Project database and posted on DP3 webpages;
- Fourteen (14) project advisories/updates delivered via email circulation to 583 individuals on the project database and postings on DP3 webpages;
- Regularly updated community library files;
- Development and maintenance of a regularly updated public comment and issues tracking table;

5 http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_home_212.html
6 http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/project_consultation.aspx

- Maintaining contact and feedback mechanisms(Project information line, e-mail address, facsimile line and mailing address).

Deltaport Third Berth Project Community Liaison Committee

The Deltaport Third Berth Project Community Liaison Committee (DCLC) was formed in early 2007 as part of the community liaison plan. The DCLC is made up of eighteen members, including a representative from VFPA, TSI, Corporation of Delta (COD), and Tsawwassen First Nation (TFN). Twenty meetings of the DCLC have been held since its formation (for exact dates and meeting notes please see the DCLC website[7]):

- Nine meetings in 2007;
- Seven meetings in 2008; and
- Five meetings to date in 2009. The next meeting of the DCLC is scheduled for November 19th, 2009.

In 2007, at the request of the DCLC, VFPA prepared three fact sheets in response to frequently asked questions. The fact sheets incorporate agency reviews of DCLC questions and VFPA responses as they became available. In September 2008 a lighting fact sheet and traffic summary report were also made available and posted to the DCLC website[8].

As per the DCLC's Term of Reference (updated version April 2008), the committee will continue to work with VFPA during the first year of DP3 operations to identify community concerns, develop potential solutions to address those concerns and assist in communicating information among the community, VFPA and other port stakeholders.

Sub-committees

DCLC established a traffic sub-committee in June 2009 with the mandate to "develop a better understanding about the various issues concerning Deltaport truck traffic and their underlying causes, and to make recommendations to DCLC that will address the community concerns whilst meeting the need for efficient port operations."[9]

Recent meetings held to address truck traffic issues include:

- Meeting with COD, Delta Police, RCMP, MOT, and TSI on June 5, 2009;
- Meeting with the DCLC traffic sub-committee to develop recommendations to DCLC on August 26, 2009; and

7 http://www.delta3berthinfo.org/meeting-minutes
8 http://www.delta3berthinfo.org/fact-sheets
9 http://www.delta3berthinfo.org/

- Meeting with DCLC (TSI also attended) on September 17, 2009. Meeting notes and powerpoint presentation for this meeting are available on the DCLC website[10].

A noise sub-committee was also formed in June 2009 to address noise concerns. This subcommittee operates under the general DCLC Terms of Reference.

Additional information regarding the DCLC, including Terms of Reference are available on the committee's website: http://www.delta3berthinfo.org/

Open Houses

In order to provide the community with updates on the Project, including construction activities and habitat projects, VFPA hosted six public open houses from 2008 – 2009 as follows:

- May 29, 2008, Tsawwassen (Coast Tsawwassen Inn, 43 attendees)
- December 2, 2008 Tsawwassen (Tsawwassen Golf and Country Club, 49 attendees)
- March 14, 2009 Delta (Tsawwassen Centre Mall, 54 attendees)
- May 30, 2009 Delta (Tsawwassen Centre Mall, 50 attendees)
- June 27, 2009 Delta (Tsawwassen Centre Mall, 38 attendees)
- July 12, 2009 Delta (Ladner Village Market, 236 attendees)

An information session was held for the TFN on July 22, 2009 at the TFN recreation hall.

At all events VFPA staff and TSI were available to answer questions. Members of the DCLC also attended the open houses. The next set of open house events are scheduled for November and December 2009.

Advertisements in local newspapers provided notification of the open houses and notifications are also sent to the DP3 Project Advisory list (currently 583 subscribers).

Newsletters and Project/Construction Updates and Advisories

The Deltaport Project Update newsletter is distributed biannually to provide updates to the public regarding DP3 activities. The newsletters are delivered to all residential and business addresses via Canada Post mail-drop, and circulated to the Project database via e-mail and posted on the Project website[11].

From January 2007 to August 2009 thirty six (36) Project/construction updates and advisories were issued by VFPA providing timely Project information such as upcoming Project activities and schedules,

[10] http://www.delta3berthinfo.org/blog/[user]/meeting-notes-from-september-meeting
[11] http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/project_consultation.aspx

public information events, report availability, and notification of incidents. Project updates were distributed via email to 597 individuals in 2008, and 583 individuals in 2009. Project updates are also posted on the Project website[5].

Library Resource Files

Since 2007, key Project information, including many of the files discussed in this report, is made available in hard copy in resource files at six local community libraries in Delta, Surrey and Langley.

First Nations Liaison

VFPA and its contractor continue to provide significant employment and contracting opportunities for the Tsawwassen First Nation (TFN). To date, the TFN has benefited from over 15 person years of employment and over $1.5 million in direct construction contracts, for example the TFN were the primary contractor for the log removal and channel extension portion of the salt marsh restoration work (see **section 3.1.2**).

2.7 TRAFFIC

VFPA is committed to continuing to work with relevant authorities and parties, including TSI, the COD, Ministry of Transportation (MOT), DCLC and the truck traffic sub-committee (see **Section 2.6**) to manage truck traffic issues. Key components of the TOCA related to traffic are summarized below. Updates on all traffic related commitments on included in the TOCA (**Appendix A**).

Improvements to Highway 17, as described in section 7.1 of the TOCA have been completed and all road improvements have been available for use since fall 2008. The improvements are reported on in the document titled "*Highway 17 Corridor Improvements, Construction Contract Completion Report",* undated and is available from MOT upon request. Pre- and post-construction noise monitoring for the Highway 17 Corridor Improvement Project indicated that the project had not resulted in a measurable change in community noise levels near the intersection of Ladner Trunk Rd and Highway 17. No further noise mitigation is required. The monitoring results are presented in *"Highway 17 Corridor Improvement Project – Results of Pre- and Post-Project Noise Monitoring*", dated January 17, 2009, prepared by Wakefield Acoustics Ltd. A copy of the report is included with this report (**Appendix G**).

In 2007, a study of the Roberts Bank rail corridor (RBRC), which included a review of rail-road interfaces in Delta and several other municipalities, was coordinated by Transport Canada with other participants including MOT, TransLink, Greater Vancouver Gateway Council and VFPA. The review identified potential candidate locations for road-rail grade separation projects, which would result in improved movement of both rail-based and road-based traffic. The study results were presented in "*Roberts Bank Rail Corridor: Road/Rail Interface",* dated February 2007, which was distributed to study participants and

other stakeholders including CN, Canadian Pacific Railway, BCRC, Southern Railway of BC, and the COD.

Several projects identified in the study are proceeding (e.g. A new overpass at 41B Street, and road/rail grade separations 57B Street and 80th Street in Delta), with preliminary design for each of the identified projects expected to be complete by the end of 2009. Some of the projects, including 41B Street, have already entered the detailed design phase. VFPA continues to actively participate in ongoing discussions with Transport Canada to advance the projects identified in the Rail Road Interface Study in the affected communities. Each project has a Project Steering Committee, on which the Port sits, and technical committees that meet monthly, at a minimum, and the overall Program partnership meets once a quarter, at a minimum. VFPA is also a funding participant.

TSI is also developing a Traffic Management Plan for the operation of the Deltaport facility, a draft of which will be shared with DCLC, Delta Police and the Corporation of Delta. This plan should be released for comment by the end of November. VFPA has created an internal Delta Trucking Strategy Group to review key trucking issues in Delta and to work with stakeholders to resolve issues related to current and future operations.

Note, further initiatives to manage traffic volumes as a result of the project are described below in the Air Quality section.

2.8 AIR QUALITY

VFPA has undertaken a number of initiatives to address Port related air emissions and is leading the way for other ports to address air quality and climate change, by focusing on the use of technologies and the promotion of operational efficiencies to reduce air emissions. VFPA is committed to conducting operations in a responsible and sustainable manner that safeguards and promotes continual protection of the environment.

The VFPA's Air Action Program (available on the Port's website [12]), outlines initiatives to reduce emissions related not only to the DP3 Project but on a port-wide basis. Key program initiatives applicable to DP3 include:

- Completion of a feasibility study for the use of shore power for DP3. The study report titled "*Deltaport Third Berth Container Terminal, Cold Ironing Feasibility Study*, May 2007", was provided to the EAO and the DCLC in 2007 and is available on the DCLC website[13].
- Implementation of a Differentiated Harbour Dues Program in April 2007, providing incentives through reduced harbour due rates to marine vessels that implement eligible emission reduction

[12] http://www.portmetrovancouver.com/environment/initiatives/air.aspx
[13] http://www.delta3berthinfo.org/reports-and-presentations

measures, including the use of low sulphur fuels. Program details are available on the VFPA website[14].

- Starting in 2008, increasingly stringent environmental requirements are being incorporated into the Container Truck Licensing Program, including the phasing out of older trucks, mandatory opacity and idling limits and an awareness program. Consistent with the Northwest Ports Clean Air Strategy, the requirements will bring the fleet up to the equivalent of a 2007 truck for particulate matter emissions by 2017. Program details are available on the VFPA website[15].
- Implementation of an anti-idling education program for all container trucks in 2006, and an extension of this to Port operations in 2007.
- Completion of pilot tests for the use of hybrid diesel-electric power units in rubber tire gantries (RTGs). To date, three hybrid RTGs have been brought into use at Deltaport, which have been shown to have an approximately 70% reduction in fuel consumption over conventional units.
- In collaboration with Metro Vancouver, Environment Canada, Corporation of Delta and Tsawwassen First Nations, siting and installation of an ambient air quality monitoring station in the local community. Request for Quotations for the monitoring station were received in August 2009, and instrument tenders are expected to go out in Fall 2009.
- Implementation of a truck reservation system in 2002 (VFPA and TSI initiative); all trucks now require a reservation to call at Deltaport.
- Extension of terminal gate operating hours (night-gate openings) in response to increases truck traffic volume. See section 20.5 of the TOCA for details.

Additional project specific mitigation measures implemented during construction include:

- VFPA specified, in the marine works construction contract, that all general fill, preload, granular sub-base and aggregate base course materials be imported by waterborne transport. This is estimated to have reduced truck traffic (and associated emissions) by approximately 300,000 single dump truck loads (return trips).
- VFPA and TSI constructed a temporary barge berth for importing materials and exporting waste associated with the East Causeway habitat compensation works and for TSI's pavement foundations. This is expected to eliminate approximately 24,500 return truck trips through Delta.

Operational traffic management improvements, Highway 17 improvements, road-rail interface improvements (see **section 2.7**), and TSI's Traffic Management Plan (currently in the development stage) will contribute to reducing emissions during DP3 operations, as well as traffic congestion issues (see traffic section above).

2.9 LIGHTING AND NOISE

Throughout marine and uplands construction VFPA advised the public of Project activities anticipated to increase light and /or the noise environment through Project updates via email and posted to the Project website[16]. As discussed in **section 2.6**, a Project information and feedback line is available to the public,

[14] http://www.portmetrovancouver.com/environment/initiatives/air.aspx
[15] http://www.portmetrovancouver.com/environment/initiatives/air.aspx
[16] http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/project_updates.aspx

and issues and responses are tracked in the DP3 Public Issues Tracking document, which is also publicly available.

Lighting

Construction lighting was addressed within the construction EMP and the Construction/Dredging Timing Plan. Dredge lights were shielded during operations (see 25.2 of the TOCA). Concerns raised regarding terminal operations lighting are addressed in the DP3 Public Issues Tracking document, available on the Project website[17].

A lighting study was conducted and assessed a number of lighting options for terminal operations while considering EA commitments, worker safety, energy efficiency and light throw. In November 2008, the findings of the lighting design report were presented to the DCLC by TSI. The report was also reviewed by a consultant for the COD and that review was discussed at the January 2009 meeting of the DCLC. The final lighting report titled *"Deltaport Berth 3 Terminal Finishing Works Lighting Study Report – Final"*, dated June 2009, prepared by OMNI Engineering Inc., recommended a preferred lighting configuration and has been reviewed by the VFPA, DCLC and COD. The final report is available on the Project website and on the DCLC website[18].

Noise

To evaluate for impacts of construction-related noise, and to compare with those predicted in the EA, a noise monitoring study ("*Deltaport 3rd Berth Construction Noise Monitoring*", dated November 15, 2007) was conducted in 2007. Result of the study did not show a significant change in the noise environment since pre-construction monitoring. The draft report was shared with the DCLC noise sub-committee (formed in June 2009, see **section 2.6**) and the DCLC as a whole. The report is available on Project website[19]. VFPA is reviewing available best management practices for noise from Port operations, and will assess their applicability for the DP3 Project in consultation with the noise sub-committee.

As part of construction environmental monitoring, VFPA conducted periodic noise monitoring and presented the results in the weekly environmental monitoring reports discussed above. Noise monitoring demonstrated that the dredge equipment was causing an increase in noise levels to the environment. VFPA also received complaints via the Project information line regarding noise coming from the dredging equipment. To mitigate for the excess noise being generated, VFPA required the contractor to outfit the dredge equipment with additional silencers. The mitigation measures resulted in a decrease in noise levels from the dredge equipment and were deemed effective based on a reduction in noise complaints. Periodic noise monitoring of other construction activities indicated that the noise levels met the

[17] http://www.portmetrovancouver.com/projects/ongoing_projects/Deltaport_Third_Berth_Project/Project_consultation.aspx
[18] http://www.delta3berthinfo.org/reports-and-presentations
[19] http://portmetrovancouver.com/libraries/projects_deltaport_third_berth_project/ 2007-11-15_dp3_noise_monitoring_report_1924-07b_final_report.sflb.ashx

recommended sound level limit of 55 dBA at suburban receptors, as recommended in the Canada Mortgage and Housing Corporation (CMHC) document ("*Road and Rail Noise: Effects on Housing"* dated 1981, report NNHA 5156 08/96. Ottawa, ON).

Pre- and post-construction noise monitoring for the Highway 17 Corridor Improvement Project indicated that the improvement project had not resulted in a measurable change in community noise levels at in the vicinity of the intersection of Ladner Trunk Rd and Highway 17 (*"Highway 17 Corridor Improvement Project – Results of Pre- and Post-Project Noise Monitoring*", dated January 17, 2009, prepared by Wakefield Acoustics Ltd.). No further noise mitigation is required. A copy of the report is included with this report in **Appendix G**.

2.10 OCEAN DISPOSAL PERMIT

An Ocean Disposal Permit (#4543-2-03414) dated January 2, 2007, was received from EC after it was gazetted for public comment. An amendment to the Permit was received from EC on July 09, 2007 for a volume change not to exceed 690,000 cubic meters. A second amendment to the Permit was received from EC on December 03, 2007 for a change to the expiration of the Permit, from April 17, 2007 to April 16, 2008. A second Ocean Disposal Permit (#4543-2-03449), dated March 17, 2008, was received from EC for a volume of 20,000 cubic meters.

The dredging and ocean disposal for the Project has been conducted in compliance with all required permits and regulations, with the exception of the incidents detailed below for which mitigations have been enacted to avoid future occurrences.

Update on 2007 Disposal at Sea Incident

On August 2, 2007 the then Vancouver Port Authority (VPA) learned that the Contractor, Deltaport Constructors Ltd. (a joint venture between Vancouver Pile Driving Ltd. and Graham Construction Ltd.) disposed of clean dredge material from bottom dumping scows outside of the permitted disposal location. The unauthorized disposal event took place approximately one kilometre south from the designated disposal at sea location in United States waters. The disposal also resulted in the damage of one of British Columbia Transmission Corporation's (BCTC) high voltage direct current (HVDC) underwater electrical power cable, which services Vancouver Island. Power service to Vancouver Island was not affected.

VFPA immediately advised Environment Canada and the Department of Fisheries and Oceans of the error and worked closely with BCTC, Environment Canada and U.S. officials to investigate and confirm details pertaining to the incident. In addition VFPA placed additional monitoring requirements on the Contractor including the use of an independent marine surveyor to confirm scow location prior to disposal.

In July 2009, Environment Canada's Enforcement Branch issued a "written warning" letter to the VFPA, as the Permit Holder and Deltaport Constructors as the Contractor responsible for the disposal, that sections of the *Canadian Environmental Protection Act 1999* were violated when dredge material was disposed of outside of the permitted disposal at sea location. The warning was issued to bring the matter to the attention of the named parties. Efforts to prevent further occurrences were implemented by VFPA in August 2007 and included the use of an independent marine surveyor and daily reporting and plotting for each disposal event.

Investigation of the 2007 at sea disposal violation is now complete, and the results have been communicated to the DCLC and the Corporation of Delta.

2008 Disposal at Sea Incident

In October 2008 VFPA voluntarily suspended ocean disposal operations at Roberts Bank upon learning that the Contractor, Deltaport Constructors Ltd. had exceeded ocean disposal amounts applied for under the 2008 ocean disposal permit. The primary method of dredging in 2008 was with suction cutter dredging and delivery of the dredged material to the disposal site via submerged pipeline. This unauthorized activity differed from the 2007 incident which involved clam shell loading of bottom dump scows that were towed to the disposal location for dumping. VFPA immediately advised EC of the excess disposal volume and provided Environment Canada's Enforcement Branch with all records of dredging from 2007 and 2008. The VFPA paid the disposal fee for the excess volume and is cooperating with Environment Canada's on-going investigation.

As a result of the above incident, daily reporting of all dredging activities including independent reporting of dredge volumes, dredged material quality and disposal location is now required of contractors by VFPA for all projects. For future construction, VFPA is also investigating the use of transponders on all dredges and scows to provide additional surveillance of construction activities.

3.0 FISHERIES ACT AUTHORIZATION

The DFO issued the *Fisheries Act* Section 35(2) Authorization – Authorization No.: 02-HPAC-PA-000-000144 (the Authorization) on December 19, 2006. As per the Authorization the VFPA has provided notification of the commencement of works to DFO. The VFPA report to the EAO titled "*Vancouver Fraser Port Authority, Deltaport Third Berth, 2007 Status Report",* dated February 2008, identified the Project notifications for 2007. The 2008 and 2009 notifications were as follows:

- Replacement Fill, dated January 21, 2008;
- Construction of containment dike #2 in water less than -5m CD, dated January 22, 2008;
- Update Marine Works and Crab Window, dated January 22, 2008;
- Caisson Placement, dated April 28, 2008;
- Containment Dike #2 & Terminal Fill, dated May 9, 2008;
- Caisson 21 & 23 Marine Tremie Pour, dated June 8, 2008;
- Caisson Repairs 21 & 23 Tremie pour, dated June 9, 2008;
- Containment Dike #3, dated July 15, 2008;
- General Fill Type 1 – Placement Procedure, dated August 7, 2008;
- Landside Densification, dated September 18, 2008;
- Landside Concrete, dated November 24, 2008;
- Caisson 26 Closure & fish Salvage, dated December 8, 2008;
- Toe Protection Works, dated December 8, 2008; and
- Barge Berth Facility, dated February 17, 2009.

In December 2008 VFPA received a DFO Authorization (#HPAC-PA1-000-000144-2) for construction of a temporary barge berth facility located within the new Deltaport tug basin. Modification of the crest protection was authorized for the temporary barge berth facility. This Authorization is attached as **Appendix H**.

3.1 HABITAT COMPENSATION

3.1.1 East Causeway Habitat Compensation Project

The East Causeway Habitat Compensation Project will transform the eastern part of the Deltaport causeway and part of the adjacent foreshore into diverse fish and wildlife habitat. Baseline work was conducted in 2007, 2008 and 2009 and construction commenced in October 2009, and will continue through 2010. Night work is required until April 2010 to undertake works during low tide in order to minimize the environmental impact of construction in the foreshore area. In order to protect sensitive wildlife habitat there will no longer be any public access to the east causeway. VFPA will work with the local community to identify opportunities to learn about and possibly visit the area.

VFPA has advised the public regarding the permanent closure of the east causeway and the need to conduct night work via Project updates and a project specific notification posted to the Port website[20,21].

3.1.2 Log Removal and Salt Marsh Restoration

The Log Removal and Salt Marsh Restoration project was completed in 2008. Hemmera provided environmental monitoring during the log removal and reported on site activities and recommended measures to mitigate for potential impacts to the environment in the weekly environmental monitoring reports discussed in **section 2.3** of this report.

Post construction monitoring has been implemented according the requirements of the Authorization. This monitoring is being conducted by G.L Williams & Associates Ltd. and Archipelago Marine Research Ltd. Annual reports are being forwarded to DFO as they become available.

3.1.3 Subtidal Reef

Work on the subtidal reef component of the compensation works was completed in early summer 2009. Post construction monitoring is being conducted by Foreshore Technologies Inc. (FTI) and has commenced. Annual reports will be forwarded to DFO as they become available.

3.1.4 Caisson Refugia Habitat

Caisson refugia are an integral part of the caissons and effectively became “complete” with the final installation of the caissons in the berth structure, in 2008. Post construction monitoring is being conducted by FTI in conjunction with the subtidal reef monitoring.

3.1.5 Sand Bar Stabilization – Dendritic Channel Modification

Baseline data was collected in March – July 2008 in the area of proposed sandbar stabilization/dendritic channel modification works by G.L Williams & Associates Ltd., Precision Identification Biological Consultants and Archipelago Marine Research Ltd. The January 2009 summary report was provided to DFO in spring, 2009. DFO advised the VFPA on October 20, 2009 that it was not approving this component of the compensation plan and requested that the VFPA develop an alternative compensation plan acceptable to DFO, to create a minimum of 5 hectares of on-site habitat. In the event that the VFPA is unable to develop an acceptable plan, DFO will exercise its option of requiring the VFPA to provide $500,000 in funding to a third party chosen by DFO, to develop habitat in the Fraser River Estuary. The VFPA intends to advise DFO that it has not been successful in developing an alternate habitat plan and will be providing the funding.

[20] http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/Environment.aspx
[21] http://www.portmetrovancouver.com/projects/ongoing_projects/deltaport_third_berth_project/Project_updates.aspx

3.1.6 Off-Site Habitat Compensation

The Rose-Kirkland Island habitat compensation works were completed in spring 2009. Biologists from DFO and Ducks Unlimited Canada biologist toured the compensation site in August 2009 and expressed satisfaction with the work. VFPA provided funding, and the works were conducted by other signatories to the agreement (*"Fish and Migratory Bird Habitat Agreement"*, December 5, 2006).

4.0 CLOSING

This document has been prepared to provide the EAO with an update on VFPA's progress in advancing the TOCA, and in particular to highlight key components of the TOCA and activities that have occurred since the previous status report was prepared. Construction of the Project has been implemented in an environmentally responsible manner, and VFPA is committed to continuing to adhere to the requirements of the TOCA through Project operations. VFPA will continue to report of the advancement of the TOCA through semi-annual updates on the TOCA (the next update is due on February 28, 2010), and the next status report on the DP3 Project will be completed one year after the start of Deltaport Third Berth operations (anticipated reporting date of January 1, 2011).

We trust that this report meets your requirements. Please feel free to contact the undersigned by phone or email regarding any questions or further information that you may require.

Regards,
Vancouver Fraser Port Authority

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APPENDIX A

Owner's Table of Commitments and Assurances – Status Update as of October 31, 2009

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
Responsible Environmental Management							
1	*As an overriding objective of responsible environmental management, the Owner shall ensure that an Environmental Management System (EMS) shall be implemented for the Project. The Owner will ensure that the design, construction and operation, including maintenance, of the Project is carried out in an environmentally responsible manner, and will employ Best Management Practices (BMPs[3]) and comply with federal, provincial and municipal statutes, where applicable. The Owner will instruct and advise the selected container terminal operator[4] to abide by all relevant commitments in this Table and as reflected in the EAC[5] .*	Pre-construction, Construction, Operation, Maintenance	VPA, Contractors, Terminal Operator	DFO, EC, EAO **NOTE:** *The agency listing applies to all subsections of a main section, unless otherwise specified.*	FN, MOE, COD, GVRD, FHA, HC		*See comments below.*
1.1	The Owner will ensure that required statutory Permits, Approvals and Authorizations are in place before proceeding with construction.	Pre-construction	VPA	DFO, EC and EAO	FN, MOE, COD, GVRD, FHA, HC	Complete	
1.2	The Owner will prepare or have prepared a Construction Environmental Management Plan (EMP)[6] for the Project as outlined in section 2 below and prior to the start of construction. The Construction EMP will provide contractors and on-site workers with procedures and requirements for meeting Permits, Approvals and Authorizations and for carrying out on-site activities using accepted BMPs and complying with conditions of the EAC.	Pre-construction, Construction	VPA, Contractors, Terminal Operator	DFO, EC and EAO	FN, MOE, COD, GVRD, FHA, HC	Complete	The details of the Construction Environmental Management Plan are contained in Schedule B of the document titled "Fisheries Act S.35(2) Authorization, Authorization for Works or Undertakings Affecting Fish Habitat, Deltaport Third Berth Project", dated December 19, 2007, prepared by Hemmera on behalf of the Port. Construction EMPs were also developed and implemented by contractors for the marine works (Deltaport Constructors Limited) the upland civil works (Trow on behalf of BA Blacktop and MATCON Civil Constructors), and the BCRC Trackwork Extension at Gulf (Trow on behalf of Mainland Civils Works). Additional information related to the EMPs is available in Section 2 of this table.
1.3	The Owner will prepare or have prepared an Operation EMP, as outlined in section 3 below and dealing with environmental management aspects of the longer-term operations and maintenance of the Project. The Owner will ensure compliance with applicable BMPs, as well as with the EAC and with federal, provincial and municipal requirements of the Project.	Operation, Maintenance	VPA, Contractors	DFO, EC and EAO	FN, MOE, COD, GVRD, FHA, HC	In-progress	The Terminal Operator is updating their Operations EMP. Additional information on this EMP is available in Section 3 of this table.
1.4	The Owner will ensure that the general content and intention of the Construction and Operation EMPs comply with the listing in section 21.2.1 of the EAC Application.	Construction, Operation	VPA, Terminal Operator	DFO, EC and EAO	FN, MOE, COD, GVRD, FHA, HC	On-going	The marine works Environmental Management Plans (EMP) were reviewed by the VFPA and the EAO working group in early 2007 and accepted as complete. The upland civil works EMPs were reviewed by VFPA and accepted as complete prior to the start of upland construction.
Construction Environmental Management Plan							
2	*The Owner will develop or have developed and implement or have implemented a detailed Construction EMP. The development of this plan is described in the EAC Application (Section 21, pg. 694 onwards).*	Pre-Construction, Operation	VPA, Contractors	DFO, EC, HC	FN, GVRD, MOE, FHA, COD		*See comments below.*
2.1	The Construction EMP shall include the following sub-plans which are further specified in section 2.2 through 2.12 below: - Construction/ Dredging Timing Plan[7] - Surface Water Quality Management and Sediment Control Plan - Hazardous Waste Management and Spill Control Plan· - Health and Safety/Emergency Response Plan· - Waste Management Plan· - Noise Management Plan· - Wildlife and Vegetation Impact Mitigation Plan· - Marine Environment Management Plan· - Marine Water Quality Plan· - Air Quality Impact Mitigation Plan· - Traffic Management Plan	As above	As above	As above	As above	EMP for marine works and civil upland works complete, implementation on-going.	The details of the *Construction Environmental Management Plan* are contained in the following documents: "*Fisheries Act S.35(2) Authorization, Authorization for Works or Undertakings Affecting Fish Habitat, Deltaport Third Berth Project*", dated December 19, 2006 and prepared by Hemmera; *"Deltaport Constructors Ltd Project Environmental Management Plan, Deltaport Berth 3 Marine Works"* (DCL EMP), dated January 2007; *"Environmental Management Plan for Terminal Finishing Works, Deltaport Container Terminal, Berth 3 Expansion, Delta, British Columbia"*, dated May 2009 and prepared for BA Blacktop by Trow Associates Inc. (BA Blacktop EMP); *"Project Environmental Management Plan, Deltaport Berth 3 Finishing Works for Terminal Systems Inc."*, dated October 20, 2008 (MATCON EMP); and *"Environmental Work Plan for Third Berth Trackwork Extension at Gulf on BCRC Property, Delta, British Columbia"*, dated July 22, 2009 (Mainland EWP). EMPs developed in 2008 and 2009 are provided in electronic format along with the status of compliance report (see Appendix C). Within the *Fisheries Act* Authorization, the EMPs are contained in Schedule B. The implementation of the plans has been initiated with the start of marine works, and is on-going through the upland civil works and BCRC trackwork. See subsequent Section 2 subsections for comments and status updates on the individual plans.

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
2.2	The *Construction/Dredging Timing Plan* shall form the basis for an Application for an EC "Disposal at Sea Permit", and must cover or include information that can be found on EC's website: http://www.ec.gc.ca/seadisposal/main/index_e.htm See also section 28 of this Table.	Pre-Construction (following determination under CEAA)	VPA, Contractors	EC	DFO, TFN, COD, MOE	Complete	The *Construction/Dredging Timing Plan* is contained within Schedule B of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006), within the plan titled Marine Environmental Management Plan. The *Dredging Timing Plan* is also contained within Section 4.1 of the DCL EMP (Jan 2007). The Disposal at Sea permit dated January 2, 2007 was received from Environment Canada after it was gazetted for public comment.
2.3	The *Surface Water Quality Management and Sediment Control Plan* shall be prepared for upland activities, largely associated with construction of additional rail siding from 57B Street to 64th Street. The plan must describe the following:· - Measures to minimize sedimentation of watercourses (ditches), and to prevent the discharge of deleterious substances or debris into the receiving environment; · - Procedures for collection and analysis of water quality samples to ensure that site runoff complies with project-specific requirements identified by regulatory agencies;· - Protocols for regular monitoring, maintenance and repair of sediment control systems to ensure that these systems function effectively under all site conditions;· - Responsibilities of the environmental monitor with respect to plan implementation[6];· - Procedures for immediate notification of the Port's authorized site personnel and/or responsible authorities, in the event of an environmental incident such as discharge of deleterious substance from the project site occurs; and· - Measures taken to address and resolve issues arising from non-compliance with applicable standards, criteria, guidelines and/or approvals to the satisfaction of VPA and the responsible authorities.	Construction	VPA, Contractors	EC, DFO, MOE, COD	GVRD, TFN	Completed and accepted by DFO as part of DFO Authorization (marine works). Completed for civil upland works, implementation on-going.	The Surface Water Quality Management and Sediment Control Plan has been completed and a copy was included within Schedule B of the Fisheries Act Authorization (02-HPAC-PA1-000-000144, December 2006). In addition, contractors have developed separate EMPs for each upland construction phase including the civil upland works (BA Blacktop EMP Sections 15 and 16 and MATCON EMP Section 4.0), and the limited BC Rail Trackwork at Gulf completed to date (BCRC Environmental Work Plan Section 2.1). The above EMPs are provided in electronic format along with the status of compliance report (see Appendix C). Rail Trackwork to date has included site grading and the installation of sub-ballast. Substantial work is not scheduled to begin until late 2009/early 2010, prior to which an updated Construction EWP will be submitted to VFPA and the EAO. An updated BCRC construction schedule is attached to the status of compliance report as Appendix B. Work completed to date includes the sampling of the 57B waterway for fish presence and the installation of the culvert extension at 57B crossing. Additional measures to be included in the updated EWP to be completed prior to the start of additional work on site (late 2009/early 2010). These procedures are to be included in the updated EWP to be completed prior to the start of additional work on site (late 2009/early 2010). These protocols are to be included in the updated EMP to be completed prior to the start of additional work on site (late 2009/early 2010). These responsibilities are to be included in the updated EMP to be completed prior to the start of additional work on site (late 2009/early 2010). These procedures are to be included in the updated EMP to be completed prior to the start of additional work on site (late 2009/early 2010). These measures are to be included in the updated EMP to be completed prior to the start of additional work on site (late 2009/early 2010).
2.4	A *Hazardous Waste Management and Spill Control Plan* shall be prepared to describe how the contractor will manage any hazardous waste material generated during Project construction as well as spill control procedures. The plan will describe the following: - Regulatory requirements of the federal Transportation of Dangerous Goods Act and other requirements pertaining to the handling and disposal of hazardous materials and wastes; - Procedures for fuelling of equipment and storage and handling of petroleum products in accordance with all applicable guidelines, legislation, and best management practices;· - Outline a spill prevention, containment and cleanup contingency plan for hydrocarbon products, and all other deleterious substances that may be used in association with the Project. Include a list of appropriate containment and clean up materials to be present on site throughout the construction of the Project.; and· - List of contacts and emergency numbers.	Construction	VPA, Contractors	TC, MOE, EC	GVRD, FHA	Completed and accepted by DFO as part of DFO Authorization (marine works). Completed for civil upland works, implementation on-going.	The *Hazardous Waste Management and Spill Control Plan* has been completed and a copy was included within Schedule B of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006). In addition, this is included within the construction EMP for each construction phase including marine works, civil upland works and BC Rail Trackwork at Gulf. The EMPs for civil upland works and BCRC trackwork EMPs are provided in electronic format along with the status of compliance report (see Appendix C).

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
2.5	Under the direction of the Owner, all contractors will develop a *Health and Safety/Emergency Response Plan* (Plan) for their component of work prior to the start of construction. The Plan would also outline emergency response procedures during construction. Although the primary responsibility for on-site emergency planning and response during construction rests with the contractors, the Owner will ensure that the developed Plans are not only site specific, but also meet all standards, BMP and guidelines applicable to emergency planning and incident response[9]. Local government's emergency services (fire, police, and ambulance) are responsible for operational support to the extent that expertise and resources are available and to the extent that the response functions are within their mandate. The Plan would typically include, but not be limited to:· - Site location and prime contacts;· - Local emergency and Project contact numbers;· - Description and map of emergency routes;· - Safety equipment required;· - List of site hazards and mitigation; and· - Potential waste generation and disposal methods.	Construction	VPA, Contractors	HC, FHA, EC, MOE	GVRD, COD, TFN	Completed (marine and upland civil works) On-going for BCRC trackwork	All site contractors and/or consultants are required to submit their health and safety plans to the Port. The health and safety plans for contractors and consultants on site have been accepted. Emergency response procedures are documented within both Schedule B of the *Fisheries Act* Authorization 02-HPAC-PA1-000-000144, December 2006 (*Hazardous Waste Management and Spill Control Plan*) and the DCL EMP (Section 7.0). With respect to BCRC, the Port has been provided with an *Environmental Work Plan* (EWP) that references a detailed "Spill Management and Emergency Response Environmental Work Procedures" that appears to address this commitment. The Port has requested that a copy of the BCRC plan be provided to permit confirmation that this commitment has been fully and properly addressed. In addition, BCRC has indicated that an updated EMP will be submitted prior to the start of substantial work at the site. (see Section 2.3 of this table).
2.6	A *Waste Management Plan* for construction activities will be prepared and include the following:· - Detail measures to minimize the amount of waste generated; and - Outline how waste and deleterious substances generated by construction of the Project will be appropriately contained by the contractors in the immediate work area, collected, and appropriately disposed of in accordance with all applicable legislation, guidelines, and best management practices (see also section 9 below).	Construction	VPA, Contractors	MOE, COD, FHA	GVRD, EC, HC, TFN	Completed and accepted by DFO as part of DFO Authorization (marine works). Completed for civil upland works, implementation on-going.	The *Waste Management Plan* has been completed and a copy was included within Schedule B of the *Fisheries Act* Authorization 02-HPAC-PA1-000-000144, December 2006, within the *Marine Environmental Management Plan* . In addition, a waste management plan is included within the construction EMP for each construction phase including marine works, civil upland works and BC Rail Trackwork at Gulf. These EMPs are provided in electronic format along with the report (see Appendix C).
2.7	A *Noise Management Plan* will be developed to ensure identified mitigation measures are implemented. This plan will include the following: · - Describe procedures for construction activities to meet the intent of Delta Noise Control Bylaw No. 1906, 1972[10] to avoid disturbance of the local community with 24 hour - 7 day per week construction periods.	Construction	VPA, Contractors	COD, HC, FHA	GVRD, TFN	Completed (marine and upland civil works) On-going for BCRC trackwork	The *Noise Management Plan* was prepared as a component within the construction EMP for each construction phase including marine works, civil upland works, and BC Rail Trackwork at Gulf. A noise monitoring study was conducted in June and July 2007 to evaluate any changes in construction noise from those predicted in the EA. The assessment concluded that the noise environment did not appear to have changed significantly since noise monitoring conducted prior to the start of Third Berth construction. The draft report was shared with the DCLC noise sub-committee and the DCLC as a whole in June 2009. The Port is reviewing available best management practices for noise from Port Operations and will be assessing their applicability, in consultation with the DCLC Noise Sub-Committee, for the Deltaport Third Berth Project. See Section 2.8 of the status of compliance report for additional information. The noise monitoring report is included in electronic format with this report (see Appendix F).

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
	- Set maximum allowable noise emissions for each type of machinery prior to construction to ensure that contractors do not utilize any excessively noisy equipment. - Outline training requirements to ensure construction workers are aware of noise issues and act to minimize noise where possible. - List an environmental helpline and management procedure to deal with noise complaints that may arise from construction activities. Outline procedures to ensure complaints are investigated, and appropriate noise amelioration measures established to mitigate future occurrences. See also section 22 and 23 of this Table.					On-going	A project information and feedback line is available to the public (604-665-9337). The number is advertised on the project website, project newsletters, project advisory notifications, and is also be available on other collateral material that is produced for the project. All complaints are documented and directed to the appropriate team member. Issues and responses are tracked in the DP3 Public Issues Tracking document, which is available to the public on the project website or in library resource files. In addition, TSI has a 24 hour complaint line for community members to reach the terminal foreman regarding any noise issues.
2.8	A *Wildlife and Vegetation Impact Mitigation Plan* for off causeway rail and road works must be developed by the Owner to ensure identified mitigation measures are implemented. The plan will include the following:· - Procedures to ensure vegetation clearing during construction is kept to a minimum;· - Outline procedures for areas disturbed by construction activities to be re-vegetated with native grass species, thereby enhancing native species in the study area and minimizing the potential for establishment of non-indigenous species. In addition backshore planting plans will be developed to meet the Authorization requirements under section 35(2) of the Canadian *Fisheries Act* for the Project; - Describe protocols to erect fences and silt curtains around the ditch between 57B Street and 64th Street to prevent disturbance to the grassy margins of the ditch, and to limit siltation to aquatic habitats;· - Outline procedures to store and/or dispose of food, garbage and petroleum products in an appropriate manner to prevent attraction of wildlife to construction sites;· - Outline a schedule to undertake construction works in upland areas in the winter months to limit sensory disturbance to wildlife or additional mitigation may apply;· - Outline the procedures to place barn owl nest boxes, through support of environmental stewardship programs, in areas towards Brunswick Point where they are less vulnerable to major motorways; and· - Relevant breeding seasons for:· - Terrestrial mammals and breeding birds March 15 - July 31; and· - Raptors/herons January 01- August 15.	Construction	VPA, BC Rail Company (BCRC), Contractors	EC, MOE, COD, DFO	GVRD, TFN	On-going	An *Environmental Work Plan* has been prepared and copied to the Port by BCRC for preliminary work for the Third Berth Trackwork Extension at Gulf on BCRC Property (the BCRC EWP, see Section 2.1 of this table and Appendix C of the status of compliance report). An updated work plan will be submitted to VFPA prior to initiation of substantial works at the site. VFPA is expecting an updated schedule of work from BCRC by the end of September 2009. Procedures are addressed within Section 2.5 of the *BCRC EWP*. Procedures are addressed within Section 2.1 of the *BCRC EWP*. Procedures are outlined in the *BCRC EWP (*Figure 3 of Appendix B). This commitment is addressed in Section 2.5 of the *BCRC EWP*. Procedures are outlined in the *BCRC EWP*. Songbird nesting surveys were completed within the vicinity of the proposed work; (management of songbird and raptor nest environmentally sensitive areas is discussed in Subsection 2.5.2 and 2.5.3). No raptor nest sites were identified within the BCRC site (Figure 1 of Appendix B cites Raptor nest vegetated buffer and quiet zone buffer). Several barn owl boxes have been constructed by VFPA and VFPA is working with Orphan Wildlife Rehabilitation Society in Delta (O.W.L.) on their distribution. VFPA has also met with O.W.L. to discuss various stewardship opportunities, and these opportunities are currently being reviewed by the Port. The *BCRC EWP* addresses breeding seasons for birds but does not address terrestrial mammals. The Port has requested additional information on this to be provided in the updated EWP to be provided prior to the start of the next phase of work (late 2009).

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Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
2.9	A *Marine Environmental Management Plan* must be developed by the owner, and applicable to the Project's operational phase as well, to meet the Authorization requirements under sub-section 35(2) of the Canadian *Fisheries Act* for the Project. Project and biota monitoring for the Adaptive Management Strategy. The VPA has submitted a conceptual draft Habitat Compensation Proposal (dated March 12, 2006) to DFO and EC[11], agreed by VPA and DFO/EC to contain satisfactory information and plan details to proceed with determination under CEAA and certification under the Act. The purpose and content of the Marine Environmental Management Plan is outlined in Schedule 1 of this Table.	Construction, Operation	VPA, Contractors, Terminal Operator	DFO, EC	TFN	Completed and accepted by DFO as part of DFO Authorization	The *Marine Environment Management Plan* has been completed and a copy was included within Schedule B of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006). A *Marine Environment Management Plan* is also presented in Section 4.0 of the DCL EMP.
2.10	A Project specific *Marine Water Quality Plan* must be designed by the Owner based on the baseline water quality information to confirm the construction mitigation measures are functioning and no impacts are occurring in the marine environment. The *Marine Water Quality Plan* will form part of the *Fisheries Act* Authorization and support the Adaptive Management Strategy for the Project. The plan would:· - Outline procedures for collection and analysis of water quality samples to ensure that marine water quality complies with Project specific requirements identified by regulatory agencies;· - List protocols for regular monitoring, maintenance and repair of sediment control systems to ensure that these systems function effectively under all site conditions;· - Describe the responsibilities of the environmental monitor[12];· - Identify procedures for immediate notification of VPA's authorized site personnel and/or responsible authorities, in the event of an environmental incident such as discharge of deleterious substances from the project site occurs; and· - Identify measures to be taken in order to address and resolve issues arising from non-compliance with applicable standards, criteria, guidelines and/or approvals to the satisfaction of VPA and the applicable regulatory agencies.	Construction	VPA, Contractors	DFO	EC, TFN	Completed and accepted by DFO as part of DFO Authorization (marine works). Completed for civil upland works, implementation on-going.	The *Marine Water Quality Management Plan* has been completed and a copy was included within Schedule B of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006). The *Marine Water Quality Plan* is also presented in the construction EMPs for each project phase including marine works, civil upland works and BC Rail Trackwork at Gulf. The EMPs for civil upland works and BCRC trackwork EMPs are provided in electronic format along with the status of compliance report (see Appendix C).
2.11	The Owner will develop an *Air Quality Impact Mitigation Plan* as addressed in Table 20.1 of the Application and further discussed in section 18 of this Table. The Plan will cover but not be limited to:· - The Owner, through the tendering of the Project, will implement air quality initiatives that will be undertaken during construction to reduce emissions to the air wherever possible.· - Use on-road (ultra low sulphur) diesel, where practical for all Project site based equipment that are capable of using such fuels.· - Use diesel particulate filters and/or other appropriate retrofits on construction equipment where possible (such as automatic anti-idling shut-offs).· - Use, where practicable, post 1996 shore based construction equipment and vehicles to reduce emissions of PM, hydrocarbons and nitrous oxides.· - Other measures using best available technology and continuous improvement to reduce air emissions discussed in detail in section 18 of this Table.	Construction	VPA	GVRD	EC, COD, FHA, HC, TFN	Complete (marine works). Completed for civil upland works, implementation on-going.	The *Air Quality Impact Mitigation Plan* was prepared as a component of the construction EMPs for each phase including marine works, civil upland works and BC Rail Trackwork at Gulf. The EMPs for civil upland works and BCRC trackwork EMPs are provided in electronic format along with the status of compliance report (see Appendix C).

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
2.12	The Owner will develop a *Traffic Management Plan* as discussed during the Project review. The Plan must reflect other conditions discussed in section 7 of this Table and include:·	Construction	VPA	MOT, COD, TransLink	GVRD, TFN	Complete for water-based portion of work	The Marine Works Contractor's original plan is contained within Section 9.0 of the DCL EMP and has been updated several times as construction has progressed. As construction and waste materials have been brought to and removed from the site primarily by water, not road, the focus of the plan has been on-site traffic. The Port's marine works construction contract specified that all general fill, preload, granular sub-base and aggregate base course materials should be imported by waterborne transport. This is estimated to have reduced project-related traffic on nearby roads by approximately 300,000 single dump truck loads, i.e. 300,000 return trips (600,000 one-way trips) on nearby roads. The Marine Works contractor was allowed to truck up to 50,000 m^3 of surplus preload to a South Fraser Perimeter Road (SFPR) site within Delta, since that created less traffic and emissions impact within Delta than fill located outside of Delta. Only 38,000 m^3 was actually taken to the SFPR site. Asphalt and ready-mixed concrete have been imported by truck, because there was no viable alternative that could provide the necessary time-sensitive delivery of these materials, which is essential for ensuring their quality. The Port and TSI have also built a temporary barge berth to bring construction materials to site by barge for terminal construction and for the east causeway habitat compensation project. This is expected to eliminate approximately 24,500 return truck trips through Delta.
	- The Owner will develop a Plan to reduce the potential for traffic incidents in the local community resulting from construction activities related to the Project. All construction truck traffic, with the exception of materials sourced locally, shall access the site solely via provincial highways rather than roadways within Delta's municipal jurisdiction.· - The Owner will instruct contractors to adopt reasonable efforts to use water borne delivery methods for construction materials and the removal of waste materials.					On-going	On-going commitment that is being met during construction largely through the import and export of materials via water rather than roads (see above). *See above.*
Operation Environmental Management Plan							
3	*The Owner will develop or have developed and implement or have implemented a detailed Operation EMP. The development of this plan is described in the EAC Application (Section 21, pg. 694 onwards).*	Operation	VPA, Terminal Operator	EC, DFO, EAO	GVRD,COD, FN; HC, FHA	On-going	TSI, the Terminal Operator has updated their Operation EMP, including the Emergency Response Plan, to include the new berth at Deltaport. A copy of the draft EMP was provided to VFPA for review in mid-November 2009 and is attached to this report as Appendix D. The EMP will be finalized in late 2009. The draft EMP is designed to capture, organize and manage activities at the terminal so that a consistent approach for controlling environmental risks can be implemented. Environmental management will be integrated into routine planning processes and daily terminal operations. TSI will review and update the EMP on an annual basis.
3.1	The Operation EMP shall include the following sub-plans which are further outlined below:· - A *Deltaport Terminal Environmental Management Plan*[13] - A *VPA Operations Environmental Management Plan*[14] - A *TSI Emergency Response Plan* (Note operational air impact mitigation strategies are in sections 19-21.)	Operation	VPA, Terminal Operator	As above	As above	On-going	*See above.*
3.2	The Owner will ensure that the Terminal Operator updates the existing *Deltaport Terminal Environmental Management Plan* (September 2004) to ensure that operation of the DP3 Project is carried out in accordance with the environmental goals and requirements presented in the EAC Application and discussed in section 21.2.3 of the EAC Application. In addition, the Terminal Operator must add environmental management measures to assess and minimize noise from the operation of the Project. The Deltaport Terminal EMP must be updated to include mitigation measures identified in this Assessment Report and would include equipment alarms, machinery noise, and operator awareness and training. Further details of this requirement and commitment are included in section 17 onwards of this Table.	Operation	VPA, Terminal Operator	As above	As above	On-going	*See above.*
3.3	The Owner will ensure that the Port *Operations Environmental Management Plan* available for the DP3 Project is updated to incorporate the latest Project design as it applies to ballast water and bilge water. For reference, see VFPA Harbour Operations Manual Revision, December 2007. http://www.portmetrovancouver.com/users/manualsandregulations.aspx	Operation	VPA, Terminal Operator	DFO, TC	GVRD, COD, TFN	On-going	With the formation of Port Metro Vancouver, Port Operations and Procedures have been updated to include the wider navigational and proprietary jurisdiction and includes Deltaport as a three berth container terminal. The Owner will proactively implement such practices and procedures as may be required to sustain safe and environmentally sound standards of marine operations in this area.

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3.4	The Owner must ensure that an Emergency Response Plan is available and updated by the Terminal Operator. The Terminal Operator must update the terminal Emergency Response Plan (ERP) prior to the commencement of terminal operations. The ERP would ensure that an organized and practiced response is provided to incidents and emergency situations that might affect the provision of port services at the Roberts Bank port facility. The ERP would distinguish the individual responsibilities of the Terminal Operator, Corporation of Delta, BC Rail Company (BCRC), and MOT and would cover sections listed in Schedule 1 to this Table.	Operation	VPA, Terminal Operator	EC, COD	GVRD, TFN	On-going	VFPA confirms that TSI is updating the *Emergency Response Plan* for the terminal as part of the Operations EMP. VFPA expects receipt of the plan in November 2009.
3.5	The Owner has committed to a number of other operational environmental planning and management activities and they are listed in the relevant bio-physical and socio-community sections of this Owner's Table.			EAO		On-going	
Environmental Monitoring							
4	*The Owner will ensure that general environmental monitoring and reporting for the construction and operation phases of the Project will be conducted, with respect to the terms and conditions of the EAC and other regulatory Permits, Approvals and Authorizations as applicable.*	Pre-construction, Construction, Operation	VPA, Contractors, Terminal Operators	EAO, DFO, EC	HC, FHA, GVRD, COD, FN		*See comments below.*
4.1	The Owner will ensure that the monitoring of the *Construction EMP* , outlined in section 21.2.4 of the EAC Application and in section 2 of this Table, will incorporate all plans developed for the construction phase of the Project and as detailed in the respective monitoring plans of the independent EMPs.	Construction	VPA, Contractors	EAO, DFO, EC	HC, FHA, GVRD, COD, FN	On-going	The construction EMPs have been developed prior to the commencement of marine works and upland works, and the programs themselves were initiated with the start of construction activities with the potential for adverse impacts and will continue throughout construction. The details of the EMPs are contained in the documents titled: "*Fisheries Act S.35(2) Authorization, Authorization for Works or Undertakings Affecting Fish Habitat, Deltaport Third Berth Project"* , dated December 19, 2006 and prepared by Hemmera, *"Deltaport Constructors Ltd Project Environmental Management Plan, Deltaport Berth 3 Marine Works"* (DCL EMP), dated January 2007, *"Environmental Management Plan for Terminal Finishing Works, Deltaport Container Terminal, Berth 3 Expansion, Delta, British Columbia",* dated May 2009 and prepared for BA Blacktop by Trow Associates Inc. (BA Blacktop EMP), *"Project Environmental Management Plan, Deltaport Berth 3 Finishing Works for Terminal Systems Inc."* , dated October 20, 2008 (MATCON EMP), and *"Environmental Work Plan for Third Berth Trackwork Extension at Gulf on BCRC Property, Delta, British Columbia", dated July 22, 2009 (Mainland EWP).* The EMPs for civil upland works and BCRC trackwork EMPs are provided in electronic format along with the status of compliance report (see Appendix C).
4.2	The Owner will ensure that each of the environmental monitoring plans will outline the rationale for monitoring, the parameters to be monitored, monitoring program details, and follow-up actions to be taken by the Owner or the Terminal Operator as appropriate.	Pre-construction, Construction, Operation	VPA, Contractors, Terminal Operators	EAO, DFO, EC	HC, FHA, GVRD, COD, FN	On-going	Each of the monitoring plans contains rationale, monitoring parameters and details of the programs within each of the individual plans. See Section 2 for additional comments.
4.3	The Owner will engage or have engaged an independent Environmental Monitor, or an environmental monitoring firm, for the construction phase of the Project. The Environmental Monitor will undertake environmental monitoring activities, and will implement each of the environmental monitoring plans developed for the Project and as reflected in the appropriate EMP. The Environmental Monitor will review, evaluate, and report to regulators on the construction activities and the effectiveness of the environmental control strategies and mitigation measures, with respect to the terms and conditions of the EAC and other regulatory Permits, Approvals and Authorizations that may apply.	Construction	VPA, Contractors	EAO, DFO, EC	HC, FHA, GVRD, COD, FN	Selection of EM for marine component complete - monitoring on-going. Selection of EM and monitoring for upland component complete.	Hemmera was retained to provide construction environmental monitoring services for the marine (now complete) and uplands (on-going) construction. The first weekly monitoring report was completed on January 26, 2007, and weekly reports were generated during any marine construction activities that had the potential to adversely impact marine resources. Monitoring reports for the marine works were distributed to DFO, EC, CWS, MOE, VFPA, VPD and DCL. Marine works are now complete. Hemmera was also retained by TSI to provide construction environmental monitoring services for the upland terminal construction portion of the DP3 project. Weekly monitoring continues to be reported and will be compiled in one stand-alone report to the DFO for the entire DP3 project. Monitoring reports for the upland works are being distributed to DFO, EC, CWS, MOE, VFPA, and TSI. The DFO have advised that weekly reporting on uplands terminal construction is to be limited to impacts and mitigation of fish and fish habitat as it relates to terminal construction activities. Electronic copies of the environmental monitoring reports have been included (see Appendix B) with the status of compliance report submitted to the EAO along with this table.

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4.4	A program of archaeological monitoring will be implemented if any excavation activities occur in the vicinity of the Cohilukthan Slough (west of 46A Street). If any archaeological sites are discovered during the proposed site construction, these sites would be reported to the British Columbia Archaeology Branch and the TFN and works would cease, pending their consideration. These sites would then be assessed for significance and, if required, protection measures established with construction proceeding under the supervision of an archaeologist.	Construction	VPA, Contractors, BCRC	MCS	MCS, TFN	Future commitment	No excavation activities have occurred or are expected to occur in the context of this project, in the vicinity of the Cohilukthan Slough (west of 46A Street). VFPA will request confirmation from BCRC prior to the start of substantial works in late 2009/early 2010.
4.5	The Owner will ensure that the monitoring of the Operation[22] EMP, outlined in section 21.2.4 of the EAC Application and in section 3 of this Table, will incorporate all EMPs developed for the operation phase of the Project and as detailed in the respective monitoring plans of the independent EMPs.	Operation	VPA, Terminal Operator	EAO	MCS, TFN	On-going	VFPA has confirmed that the Terminal Operator (TSI) is updating their Operation EMP, including the Emergency Response Plan, to include the new berth. VFPA expects receipt of the plan in November 2009.
Adaptive Management Strategy							
5	*The Owner and the Government of Canada, represented by EC, have taken steps to conclude an Agreement[15] on the compliance with the terms and conditions of an Adaptive Management Strategy for the inter-causeway marine and wildlife habitats. The Owners shall ensure that this Agreement and its environmental monitoring plan are fully complied with.*	Construction, Operation	VPA, Terminal Operator	EC	DFO,GVRD, COD, FN	On-going	The Scientific Advisory Committee (SAC) for the AMS was formed in 2007, with one member selected by each of the Port and EC, and the third jointly selected. The detailed AMS work plan, the 2007 and 2008 quarterly reports and annual reports have been reviewed by the SAC. The 2007 annual report, dated July 2008, and the 2008 annual report, dated September 2009, have been posted to the Port website at http://www.portmetrovancouver.com/projects/ongoing_projects/ Deltaport_Third_Berth_Project/Environment.aspx. Review of the draft 2009 quarterly reports completed to date is on-going.
5.1	The Owner will ensure that all details of Schedule B, dated April 2006, to the Agreement are complied with and shall conduct all required meetings to ensure that all parties to the Agreement, as specified in the Agreement and its Schedule B, comply with the intent of the Agreement and its amendments as required.	Construction, Operation	VPA, Terminal Operator	EC	DFO,GVRD, COD, FN	On-going	The AMS agreement was signed in December 2006, and the AMS program is underway. The most recent meeting of the SAC to discuss the AMS work plan, monitoring results and the second draft of the annual report was held on August 31, 2009. The next meeting of the SAC is scheduled for October 2009. See Section 2.5 of the compliance report for more information on the SAC and the status of the AMS.
5.2	The Owner commits to participate in the Roberts Bank Environmental Stewardship Program.	Construction, Operation	VPA	EC	DFO,GVRD, COD, FN	On-going	This initiative is being led by EC with support from the Port. Through the BIEAP-FREMP Management Committee a Reach Overview for Roberts and Sturgeon Banks was initiated. A project steering committee was formed in late 2008 and comprises representatives from Environment Canada, Department of Fisheries and Oceans, Transport Canada, BC MOE, Metro Vancouver, YVR , Ministry of Agriculture, Fisheries and Food, Corporation of Delta, City of Richmond, City of Vancouver, Tsawwassen First Nation, Katzie First Nation and the Port. The steering committee met on Dec 5, 2008 and to date, has met six times in 2009 (Jan 23, Feb 12, May 28, Jun 26, Aug 11, Sep 17). The Roberts and Surgeon Banks Reach Overview will provide a river-based description and analysis of water, shoreline and upland issues that transcend individual municipal and agency boundaries. The Reach Overview will use an Ecological Features and Function Approach to management that includes estuary and upland features, while taking into account the biological, economic and social characteristics of the estuary. The final document is intended to serve as a planning and decision making tool for municipal planners, agency staff, First Nations, developers, landowners and members of the public to integrate foreshore and upland activities. The document will build on existing FREMP area designation information, habitat inventory and classification data, and other reach overviews. The project was divided into phases and the first of four phases has been completed. It is expected that the final phase will be completed by the middle of 2010.
Consultation with the Public and First Nations							
6	*The Owner will involve the local community, other stakeholders and First Nations within an open and interactive consultation process during final design, construction and throughout the first year of operation. Consultation will be carried out according to BC government policies included in EAO's Section 11 Order issued on September 17, 2004.*	Pre-construction, Construction, early Operation	VPA	EAO,COD, TFN	Agency, FN	On-going	*See comments below.*
6.1	The Owner will conduct public as well as First Nations open houses and information sessions, at least twice each year, to provide information on the progress of design, construction, schedules, and upcoming milestones.	Pre-construction, Construction, early Operation	VPA	EAO,COD, TFN	Agency, FN	On-going	Public open houses/info sessions were held on May 29, May 31 and November 24 in 2007; May 29 and December 2 in 2008; March 14, May 30, June 27 and July 12 in 2009. The Port hosted an information session for the TFN community at the TFN recreation hall on July 22, 2009. See Section 2.6 of the compliance report for additional information on project communication.
6.2	The Owner will continue to update and make available media information material, as part of its public information commitment.	Pre-construction, Construction, early Operation	VPA	EAO,COD, TFN	Agency, FN	On-going	The *DP3 Community Liaison Plan* (CLP) outlines media relations activities that are undertaken to provide the public with current up-to-date information. The CLP is available on the project website and in library resource files.

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6.3	The Owner will implement a complaint tracking and response mechanism, agreed to by EAO prior to start of construction, for the construction phase of the Project. The Owner will commit to the organization of a Community Liaison Committee (CLC), including a representative from COD, for addressing public concerns. The Owner will also continue to liaise with First Nations, independently or though the CLC, to address relevant concerns over Project impacts.	Pre-construction, Construction, early Operation	VPA	EAO	Agency, FN	On-going	The Port implemented an issues and response tracking system during the pre-application phase of the Project, and the Deltaport Third Berth Project Community Liaison Committee (DCLC) formed in early 2007, with the first meeting held on March 22, 2007. The issues and response tracking system is outlined in the *"Deltaport Third Berth Project, Community Liaison Plan, Construction and First Year Operation Phase"* , December 12, 2006, amended April 23, 2009, which is available online on the Port's website. The draft Community Liaison Plan was reviewed by the EAO and approved via email on November 21, 2006. Tracking includes issues that arise via the project information and feedback line, through correspondence and meetings with team members, as well as issues raised at public events. In addition, comments received by or directed to the Deltaport Third Berth Project Community Liaison Committee (CLC), are included in overall issues tracking for the project. A copy of the DP3 Issues Tracking document is available on the project website and in library resource files. The DCLC is made up of eighteen members, including a representative from the Port, TSI, COD and TFN. The Terms of Reference has been adopted by the committee and is available on the Port website. The purpose of the committee is to work with the Port and port stakeholders to address issues pertaining to the construction and first-year operation of the project. The first meeting was held on March 22, 2007. Subsequent meetings in 2007 were held on April 19, May 1, June 11, June 26, July 3, September 6, October 25, and November 29. Meetings in 2008 were held on January 17, February 28, April 24, June 26, August 28, October 23 and November 27. Meetings in 2009 were held on January 22, February 19, April 16, June 18, and September 17. The next meeting of the DCLC is scheduled for November 19th, 2009. Information pertaining to the DCLC is available on the Port website or on the DCLC website at http://delta3berthinfo.org/. *For First Nations liaison, see Section 6.1 and 6.4.*
6.4	The Owner will continue to engage in consultation with relevant First Nations identified in the Assessment Report[16] throughout the Post-Review and Construction Phases, including discussions on economic development opportunities, employment and cultural display opportunities generated by the Project. More specifically, such consultation shall continue with those First Nations who have informed EAO or the Owner on the Project's adverse impacts on their asserted aboriginal rights, appropriate accommodation to reflect on such impacts as discussed and described in the EAO Assessment Report.	Pre-construction, Construction	VPA	EAO, FN	Agency, FN	On-going	Prior to Project certification, the Port consulted with a number of First Nations, including the Musqueam, TFN, Sencot'en Alliance (SA), and the Hul'qumi'num Treaty Group (HTG). Since project initiation, project updates have been sent to First Nations, including TFN, SA, HTG and Katzie. The project updates are available on the Port website at http://portmetrovancouver.com/projects/ongoing_projects/Deltaport_Third_Berth_Project/Project_updates.aspx. In addition, the Port hosted an information session for the TFN community at the TFN recreation hall on July 22, 2009. The Port and it's Contractor continue to progress economic and employment opportunities for the TFN. To date, the TFN has benefited from over 15 person years of employment and over $1.5 million in direct construction contracts.
6.5	Before start of construction, the Owner shall provide to the EAO a report on the results of discussions reflected in section 6.4. The report shall also include a discussion on any aboriginal fishery issues defined in section 13 of this Table.	Pre-construction	VPA	EAO	Agency, FN	Complete	This report has been completed and submitted to EAO and is included in the pre-construction report. The report is titled *"Deltaport Third Berth Project First Nations Consultation Report"* , dated February 2007, and is available on the EAO website at: http://a100.gov.bc.ca/appsdata/epic/documents/p212/d23743/1175534004825_edaffc899cfa4211859383b8c4953d6d.pdf
	Further socio-community commitments are included in section 26 of this Table.						
Specific Construction and Operation Issues							
7	*The Owner shall implement the Mitigation Measures and Compensation Measures committed to in the Traffic Section of the Application's Table 20.1 - pages 663/664. Further general commitments are listed below and specific impact sector commitments are included in the specific sections below.*	Construction, Operation	VPA, Terminal Operator, Contractors	MOT, COD, TFN , ALC	GVRD, TransLink		*See comments below.*
7.1	The specific traffic commitments to be undertaken in consultation with MOT and COD include:·	Construction, Operation	VPA, Terminal Operator, Contractors	MOT, COD, TFN , ALC	GVRD, TransLink	Complete	All road improvements have been available for use since late September 2008. MOT has addressed requests/deficiencies identified by COD.
	- Implement signal modifications at Highway 17/Ladner Trunk Road, as appropriate and approved by MOT and COD;·					Complete	This project has been completed as documented in the MOT report titled *"Highway 17 Corridor Improvements, Construction Contract Completion Report",* undated. Information requests for this report can be made through the MOT.
	- Extend HOV lines lanes on Highway 17;·					Complete	This project has been completed as documented in the MOT report titled *"Highway 17 Corridor Improvements, Construction Contract Completion Report",* undated. Information requests for this report can be made through the MOT.

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Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
	- Monitor pre- and post-construction noise adjacent to Highway 17 improvements and if necessary implement appropriate sound attenuation measures, subject to results of monitoring;· - Expand the Highway 99 Massey Tunnel congestion management system on Highway 17 as part of the highway improvements ;· - Investigate safety incidents with MOT that were recorded by the Port at Deltaport Way and 41B Street; and· - Subject to COD approval to close 57B Street rail crossing provide alternate access for farm equipment such as the proposed service road adjacent to the BC Rail Line between 57B Street to 64th Street.					Complete Deleted from Project Complete On-going	A post-construction noise monitoring report has been received ("*Highway 17 Corridor Improvements Project – Results of Pre- and Post-Project Noise Monitoring*", dated January 17, 2009), the results of which indicated that "the Highway 17 Corridor Improvements Project has not resulted in a measurable change in community noise levels at residences in the vicinity of the intersection of Ladner Trunk Rd and Highway 17," and no further noise mitigation is required. An electronic copy of the report has been included with the status of compliance report submitted to the EAO along with this table (see Appendix F). This commitment was deleted from the project at the request of COD due to their concern that trucks would use the Ladner Trunk Road route to avoid the tunnel congestion. The deletion of this work was discussed and confirmed at a October 15, 2007 meeting with MOT, COD, RCMP, Delta Police and VFPA. An update on all Highway 17 corridor improvements, including the deletion of this particular commitment, was presented to the DCLC on October 25, 2007. MOT reviewed the Port's traffic video and discovered a traffic signal timing malfunction at Deltaport Way and 41B Street, which was subsequently corrected. Since the signal was corrected, no further complaints have been received that the Port or MOT is aware of. Delta Council endorsed the plan on January 12,2009 presented by Delta Engineering (and supported by the DFI) for an overpass at 28th Ave at Highway 17 prior to the closure of 57B. Delta Council further confirmed support in principle for an overpass at 41B Street at Deltaport Way. MOT is responsible for the delivery of this work and VFPA is a direct participant in the projects, along with the other Roberts Bank Rail Corridor partners. VFPA is also providing funding for the 28th Ave project. These projects are scheduled to be complete by March 31, 2014.
7.2	The Owner will ensure that Transport Canada will undertake a warrant review for an overpass at the 80th Street rail crossing as part of their Roberts Bank rail corridor assessment and determine the appropriate funding if an overpass is required.	Construction, Operation	VPA	TC, COD, ALC	GVRD, TransLink	On-going	The Roberts Bank rail corridor assessment was completed in early 2007, and the results were documented in a report titled "Roberts Bank Rail Corridor: Road/Rail Interface", dated February 2007. The study was coordinated by Transport Canada with other participants including MOT, TransLink, Greater Vancouver Gateway Council and the Port, and the final report was distributed to the participants of the study and other stakeholders including CN, CPR, BCRC, Southern Railway of BC, the Corporation of Delta, and others. The 80th Street overpass is proceeding with COD responsible for delivering the project along with RBRC. VFPA is a funding participant in the project and is directly involved on the project Steering Committee.
7.3	The Owner will implement signal modifications at Ladner Trunk Road and Highway 17 (including Optimize Signal Timing; Move the Detector Loops; and Relocate the Northbound and Southbound Detector Loops).	Operation	VPA	MOT, COD	GVRD, TransLink	Complete	This was completed in conjunction with Highway 17 mitigation measures. See Section 7.1.
7.4	The Owner will work with MOT to amend the *Motor Vehicle Ac*t thereby restricting commercial vehicles to the outside (curb) lane on Highway 17.	Construction, Operation	VPA	MOT, COD	GVRD, TransLink	Complete	Regulatory signage for restricting commercial vehicles to the curb through lanes of Highway 17 at Ladner Trunk Road were erected in January 2008.
7.5	The Owner will implement geometric changes to the highway ramps in the southeast quadrant of the Ladner interchange.	Construction, Operation	VPA	MOT, COD	GVRD, TransLink	Complete	This was completed in conjunction with Highway 17 mitigation measures. See Section 7.1.
7.6	The Owner will work with BC Rail Port Sub Ltd. and the Delta emergency service providers to ensure that the existing emergency access protocols are adhered to for the specific grade crossings including access to Boundary Bay Airport (36th Ave., 72nd St., 80th St.), and 64th Street.	Construction, Operation	VPA	COD, ALC	GVRD, TransLink	Complete	The Port has confirmed that BC Rail Company (BCRC) follows standard procedures to move trains to ensure access across grade crossings in the event of an emergency. These procedures include splitting the train to open the crossing, if required, and BCRC contacting the Delta Police and/or RCMP for assistance if the crossing cannot be opened.
7.7	The Owner will participate with the COD and other stakeholders in the preparation of an incident management plan regarding traffic management and assist with the geometric and structural improvements to accommodate incident management bypass traffic and response measures along with safety improvement measures on Deltaport Way associated with truck incidents on the corridor.	Construction, Operation	VPA	MOT, COD	GVRD, TransLink	On-going	The Port continues to consult with COD and other stakeholders on these issues (see section 7.2). The Roberts Bank Rail Corridor Study identified a series of improvements in the corridor that are currently in the implementation planning stage. The detailed road concepts in the vicinity of the road crossings are being developed by the RBRC partners. Each project has a Project Steering Committee and technical committees that meet monthly, at a minimum. The overall Program partnership meets once each quarter, at a minimum. In addition, the Port has been working with the Provincial Gateway office to consider other road-related issues brought forward by COD and other stakeholders. A local access improvement program has been developed and agreed to in principle by farmers, COD, MOT, the Provincial Gateway office, TC, MOE, etc. Most recently, at a January 12, 2009 Council meeting, Delta Council endorsed the plan presented by Delta Engineering (and supported by DFI) for an overpass at 28th Ave prior to the closure of 57B. (See comment 7.1) In addition, TSI is developing a Traffic Management Plan for the Deltaport facility, a draft of which was released to VFPA for review on October 7, 2009. TSI is working to improve the plan to account for incident response and communication fan out.

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7.8	The Owner will work with the Corporation of Delta to conduct a preliminary design of improvements to the intersection of Arthur Drive/34B Avenue to correct the existing sight line problems.	Construction, Operation	VPA	MOT, COD	GVRD, TransLink	Future commitment	This commitment is part of the local access improvement program, which has been agreed to in principle (see comment 7.7). The Port will work directly with COD to develop improvement options for this location once the plan has been endorsed.
7.9	The Owner will continue to work with the COD, City of Surrey, City of Langley and Township of Langley to reduce traffic impacts.	Construction, Operation	VPA	Non-specific	GVRD, TransLink	On-going	This has been considered as part of the Roberts Bank Rail Corridor Road Rail Interface Study, which was completed in February 2007 (See 7.2 above). Preliminary design is underway on all of these projects (e.g. 232nd Street, 64th Avenue, 196th Street), and detailed design has begun on the 196th Street and 41B projects.
7.10	The Owner commits to working with relevant authorities and parties to optimize the performance, efficiency and reliability of container truck movements to relieve traffic congestion on local roads.	Construction, Operation	VPA	Non-specific	GVRD, TransLink	On-going	This work is on-going and involves liaison with MOT, COD, the DCLC, and others. Recent meetings held to address truck traffic issues include a June 5, 2009 meeting with COD, Delta Police, RCMP, MOT, and TSI, an August 26, 2009 meeting with the DCLC traffic sub-committee, and a September 17, 2009 meeting with DCLC (TSI also attended). In addition, TSI is developing a Traffic Management Plan for the Deltaport facility, a draft of which was released to VFPA for review on October 7, 2009.
Coastal Geomorphology							
8	*The Owner shall commit to a long-term coastal geomorphology monitoring program, as reflected in the AMS referenced in section 5 above, and consistent with the Habitat Compensation Plan and any future Fisheries Act Habitat Authorization monitoring requirements.*	Construction, Operation	VPA, Terminal Operator	EC, DFO	COD, FN, MOE, NRCan	Implemented	This commitment is met through the Adaptive Management Strategy monitoring program. The monitoring programs have been designed to be consistent with each other to maximize the utility of the data gained. Monitoring for both programs is on-going.
8.1	The Owner will ensure that shoreline protection (sloping rock revetment) along the newly created shoreline is designed to minimize reflection and propagation of waves.	Construction, Operation	VPA, Terminal Operator	EC, DFO	COD, FN, MOE, NRCan	Complete	The newly created shoreline has been designed to minimize reflection and propagation of waves. VFPA will be provided with the P.Eng-signed as-built drawings upon completion of all construction works.
8.2	The Owner will ensure that any repairs to the crest protection in the new tug basin, if required, will be planned and constructed to maintain its current location and function, thereby mitigating any potential effects.	Construction, Operation	VPA, Terminal Operator	EC, DFO	COD, FN, MOE, NRCan	Compete	The design of the new tug basin includes details ensuring the current location and function of the crest protection will be maintained. Dredging of the tug basin and slope protection have been completed. The VFPA received a DFO Authorization (#HPAC-PA1-000-000144-2) in December 2008 for construction of a temporary barge berth facility located within the new Deltaport tug basin. Modification of the crest protection was authorized for the temporary barge berth facility. The modification of the crest protection is reported on in the weekly environmental monitoring reports submitted to the DFO. Electronic copies of the environmental monitoring reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).
Water Quality							
9	*The Owner will ensure that the construction works and operations for the Project are conducted in compliance with legislated requirements and BMPs, with particular attention to construction practices that prevent the introduction of deleterious substances, pursuant to section 36(3) of the federal* Fisheries Act, *into fish frequented waters.*	Construction, Operation	VPA, Contractors, Terminal Operator	EC	COD, TFN, DFO	On-going	*See comments below.*
9.1	The Owner will ensure that all reasonable measures are taken to prevent the discharge to the marine environment of substances that are deleterious to fish, fish habitat or man's use of fish at the construction sites at any time during dredging, filling and construction of the terminal supportive structures and auxiliary facilities or at any other construction sites in the proximity of fish and aquatic habitat. Particular attention should focus on discharges of suspended sediments, construction waste, handling of uncured concrete and other potentially deleterious substances.	Construction, Operation	VPA, Contractors, Terminal Operator	EC	COD, TFN, DFO	On-going	Prior to the start of construction, environmental management plans were developed for use during the construction phase of the project (see Section 2 of this table). These plans included those for surface water quality and sediment control, hazardous waste management and spill control, and a marine environmental monitoring plan, amongst others. These plans have been followed during the construction works to minimize the potential for adverse impacts to fish resources. In addition, an Environmental Monitor has been on site during construction works that have the potential to impact the aquatic environment, with monitoring reports submitted to DFO, EC, CWS and MOE, amongst others, on a weekly basis. Electronic copies of the environmental monitoring reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).
9.2	The Owner will also commit to the following measures during construction:· - Implement containment dykes for dredging and terminal land fill operations to contain materials and prevent spill-over into surrounding foreshore areas.· - Dredged material will be pumped into the contained terminal area where the solids settle out.· - Decant water and suspended silt will be completely contained during the landfill process and will either be re-pumped via submerged pipeline or deposited via bottom dump barge to approved EC ocean disposal sites. · - Comply with DFO dredging guidelines for the protection of marine resources susceptible to total suspended solids (TSS) levels at Roberts Bank.· - Implement a marine water quality monitoring plan referenced in section 2.10 of this Table.	Construction, Operation	VPA, Contractors, Terminal Operator	EC	COD, TFN, DFO	Complete	The construction of the containment dikes was initiated on January 18, 2007, and the *Water Quality Management Plan* has been implemented. A containment dike, referred to as containment dike #1, was constructed (completed May 2, 2007) to enclose an area west of the existing tug basin and Westshore boat launch. Placement of material behind containment dike #1 commenced on June 29, 2007. A secondary containment dike was constructed between June 16 and July 12, 2008, located east of the existing tug basin. An additional containment dike (dike #3) was constructed between August 26 and September 02, 2008. It was constructed within the caisson trench between the perimeter dike and Caisson 20 for material placement from south to north in the caisson trench, east of containment dike #2. Silt curtains were used in combination with containment dike #3 for general fill placement in the caisson trench. Due to depth (>-5m CD) in the caisson trench, silt curtains were used to mitigate turbidity impacts for the remainder of general fill placed north along the caisson trench. Pumping of dredged material to behind containment dike #1 was completed January 25, 2008. Decant water and suspended silt was pumped by the Contractor via submerged pipeline to an approved ocean disposal site. Additionally, water was permitted to flow through the semi-porous perimeter dike as per tidal influences. DFO dredging guidelines for the protection of marine resources susceptible to total suspended solids (TSS) levels at Roberts Bank were complied with. A *Marine Water Quality Monitoring Plan* has been implemented as per Section 2.10 of this table. As mentioned in section 4.0 above, an Environmental Monitor has been on site during construction works that have the potential to impact the aquatic environment. Electronic copies of the environmental monitoring reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).

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Sediment Quality							
10	*The Owner will ensure that the construction works and operations for the Project are conducted in compliance with environmental protection requirements, the EMPs discussed above and relevant BMPs and shall commit to sediment quality monitoring as reflected in the AMS referenced in section 5, above.*	Pre-construction, Construction, Operation	VPA, Contractors	EC, MOE	COD, TFN	On-going	The construction works are being conducted in compliance with the conditions of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006) and all applicable Approvals and Permits. Environmental Monitoring Plans (see Section 2) have been initiated and are on-going in compliance with the conditions of the above. In addition, sediment monitoring is being conducted as part of the AMS program with the most recent sampling program being conducted in August 2009 (see Section 5 above).
10.1	The Owner will meet suspended sediment recommendations of the "Canadian Water Quality Guidelines for the Protection of Aquatic Life" and the "BC Approved Water Quality Guidelines".	Pre-construction, Construction, Operation	VPA, Contractors	EC, MOE	COD, TFN	On-going	The Environmental Monitoring Programs were initiated with the start of marine works and continue to be implemented. As part of the program, water samples are collected and assessed for water quality parameters and for compliance with the allowable limits. Any exceedances that are recorded are presented in the weekly construction environmental monitoring reports. Electronic copies of the environmental monitoring reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).
10.2	Stormwater from the Deltaport DP3 terminal will be directed through an oil interceptor and catch basins to act as a sedimentation tank to collect possible contaminants prior to discharging storm water effluent to the ocean.	Construction, Operation	VPA, Contractors	EC, MOE	COD, TFN	Construction in progress	Detailed design of the terminal stormwater systems has been completed. Construction of the works is in progress. As-built drawings, signed by a P.Eng., will be provided to the VFPA upon completion of construction.
10.3	The Owner will decommission and replace the eight existing storm outfalls, located along the northern perimeter of Deltaport, with new storm outfalls, located away from intertidal areas to drain into deeper water off of the new berth face.	Construction, Operation	VPA, Contractors	EC, MOE	COD, TFN	Construction in progress	Detailed design of the terminal stormwater systems has been completed. Construction of the works is in progress. As-built drawings, signed by a P.Eng., will be provided to the VFPA upon completion of construction.
10.4	The Owner will fit new storm outfalls with shut-off valves to terminate flow from the Project should a sizeable spill occur on the terminal and enter the stormwater system.	Construction, Operation	VPA, Contractors	EC, MOE	COD, TFN	Construction in progress	Detailed design of the terminal stormwater systems has been completed. Construction of the works is in progress. As-built drawings, signed by a P.Eng., will be provided to the VFPA upon completion of construction.
	Conditions pertaining to disposal at sea are included in section 27 below.						
Marine Environment							
11	*The Owner has agreed to develop a final Habitat Compensation Plan that meets DFO Policy objectives in support of a Fisheries Act authorization for the construction of the Deltaport Third Berth Project. See Schedule 1 EMP - Marine Environment Management Plan for additional details on the final Habitat Compensation Plan and monitoring.*	Pre-construction, Construction, Operation	VPA	DFO	FN, EC, MOE	Complete	The Habitat Compensation Plan and Habitat Compensation Monitoring Plan was submitted to DFO as part of the application package for DFO Authorization (02-HPAC-PA1-000-000144, December 2006). The Authorization places conditions on the Port, and those conditions are being complied with and are ongoing. Details will be provided in the following subsections as the work is conducted.
11.1	The Owner has agreed that the final *Habitat Compensation Plan* and Habitat Authorization will reflect all onsite and off site options identified in the *Proposed Habitat Compensation Plan* (March 12, 2006). The owner recognizes that the habitat targets specified in the *Proposed Habitat Compensation Plan* (March 12, 2006) may change as more detailed information and plans are developed to meet the requirements of a Section 35(2) *Fisheries Act* authorization.	Pre-construction, Construction, Operation	VPA	DFO	FN, EC, MOE	Complete (salt marsh, reefs and caisson refugia) On-going (east causeway, sandbar)	The Tsawwassen salt marsh habitat compensation and caisson refugia works are completed. Work on the subtidal reef component of the compensation works is complete. The East Causeway habitat construction is expected to commenced in September 2009 with construction staging and the order of plant nursery stock. The work is expected to be completed by the spring of 2011. Construction staging has commenced and plant nursery stock has been ordered. Baseline data was collected in March through July 2008 in the area of proposed sandbar stabilization/ dendritic channel modification works. DFO is currently reviewing baseline the data before making a final decision on authorizing a pilot scale version of the sandbar stabilization/dendritic channel modification project. Initiation of further work is contingent on the DFO decision, which is expected in Fall 2009. The Port is investigating alternative compensation options in the event that DFO decides against authorizing that component.
11.2	As part of the *Habitat Compensation Plan*, the owner is committed to entering an agreement with Ducks Unlimited Canada, DFO, EC and such other agencies or organizations as may be identified as being appropriate to ensure that the proposed off-site compensation is delivered in a timely and efficient manner. This agreement will commit the owner to providing $1.5 million in funding to ensure the off-site compensation program is achieved.	Pre-construction, Construction, Operation	VPA	DFO	FN, EC, MOE	Complete	The off-site compensation agreement, the *"Fish and Migratory Bird Habitat Agreement"*, December 5, 2006, was executed by all parties (DFO, EC, Ducks Unlimited Canada, VFPA, and the Pacific Salmon Foundation) in December 2006. The Port provided funding and the works were conducted by other signatories to the agreement. The Rose-Kirkland Island habitat compensation works were completed in Spring 2009. A DFO biologist toured the site with a Ducks Unlimited Canada biologist in August 2009 and both were very satisfied with the work.
11.3	The Owner commits to the following measures to protect the fish habitat:· - The Owner will comply with DFO guidelines to minimize disruption of intertidal/subtidal mudflat habitat or loss of individual adult crabs and fishes:· - No dredging is permitted in waters less than -5 m CD deep from March 1 to August 15 for the protection of juvenile salmon unless the works area is adequately isolated from fish bearing waters to the satisfaction of DFO; and· - From October 15 to March 31 there shall be no works conducted which would result in a significant disturbance to the seabed of outer Roberts Bank which is situated in water greater than -5 m CD deep at daily low water for the protection of adult ovigerous female Dungeness crabs.	Pre-construction, Construction, Operation	VPA	DFO	FN, EC, MOE	 Complete Complete Complete	The DFO *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006) and the Environmental Management Plans (see Section 2) are being complied with. Where construction activities have resulted in variations from the Authorization, these have been documented and submitted to DFO for review and approval where required. Further, where required, additional mitigation measures have been implemented (see below). Construction of containment dike #2 took place from May 5th to June 2nd, 2008 in waters less than -5m CD. VFPA provided DFO with a notification of the activity in a letter dated January 22, 2008. Fish and crab salvages were conducted under DFO License (#08.108). MOE advised (via email on June 2, 2008) that permits were not required because the salvages were conducted within tidal waters. The FRPD Cutter Suction Dredge ship began dredging on March 28, 2007 in water greater than -10 m CD. Also, VPD Barge No 2 conducted clamshell dredging in waters greater than -5 m CD from October 15, 2007 onward. VFPA notified DFO of the works to be conducted in notification letters dated March 23, 2007, and October 11, 2007. Crab salvages were also conducted prior to and periodically during the dredging periods, with documentation of the salvages produced by DCL and sent to DFO by VFPA. No permits were required for the crab salvage work.

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	- Bubble or silt curtains will be used to keep juvenile salmon away from specific works in water less than -5 m CD if monitoring indicates they are present. ·					Complete	Silt curtains were only used during fill placement in the caisson trench. For other work, fish salvages were conducted (e.g. behind the containment dikes). **R**ock placement for the perimeter dike was conducted in water shallower than -5mCD. DFO indicated that they had no objection to dike core rock placement as PMV had proposed and conducted.
	- Monitor over time to determine whether crab nursery habitat re-establishes itself along the newly created foreshore. If re-establishment is unsuccessful, two adjacent crab nursery areas will be enhanced to ensure full compensation;·					Future commitment	This monitoring will be conducted once the crab nursery habitat has had sufficient time to re-establish itself.
	- Survey the intertidal mudflat area within the Project footprint immediately prior to construction. Relocate any adult Dungeness crabs found to a suitable adjacent habitat prior to completion of containment dyke; and·					Complete	Crab surveys and salvages were conducted periodically during the marine works, with documentation of the salvages produced by DCL and sent to DFO by VFPA. No permits were required for the crab salvage work.
	- To the extent possible reasonable efforts will be made to relocate adult Dungeness crabs from intertidal areas prior to dredging.					Complete	Crab salvages were conducted prior to and periodically during the dredging periods, with documentation of the salvages produced by DCL and sent to DFO by VFPA. No permits were required for the crab salvage work.
11.4	The Owner commits to an appropriate monitoring plan to assess the performance of the compensation habitat designs and to ensure there is "no net loss" in the productive capacity of fish habitat. If the compensation habitat is not functioning to DFO's satisfaction, by the end of the monitoring period specified in the subsection 35(2) *Fisheries Act* authorization additional works and monitoring will be required to ensure the compensation habitat functions as designed or if appropriate, additional habitat compensation is provided.	Pre-construction, Construction, Operation	VPA	DFO	FN, EC, MOE	On-going	Pre-construction data gathering was completed for all components of the Habitat Compensation plan prior to the start of habitat construction. Post-construction monitoring has been implemented for the Tsawwassen salt marsh, caisson refugia and subtidal reef components, and will be implemented for the other components following their completion of construction, according to the requirements of the DFO Authorization. Following completion of the post-construction monitoring, VFPA will receive post-construction monitoring reports.
12	*The Owner accepts that the additional container ship traffic as a result of the Project has the potential for some impacts on marine mammals. This issue is generally covered in the Marine Environment EMP, included in section 2.10 above and outlined in Schedule 1 of this Table.*	Construction, Operation	VPA	DFO	FN	On-going	The marine mammal monitoring program has been developed and implemented, and the program can be found within Schedule C of the *Fisheries Act* Authorization (02-HPAC-PA1-000-000144, December 2006). Electronic copies of the baseline survey and marine mammal survey reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix E). See Subsections 12.1 through 12.4 of this table for additional information.
12.1	The Owner will ensure an underwater noise inventory of all equipment proposed for the Project will be developed and a marine noise-monitoring program will be established to measure acoustic frequencies of all marine construction equipment (dredge equipment, vibro-flotation equipment, other marine construction equipment). See Schedule 1 Marine Environment Management Plan for additional details on underwater noise and marine noise monitoring and noise mitigation measures to protect marine mammals.	Construction	VPA	DFO	FN	Complete	The baseline underwater acoustic assessment work has been completed for marine construction works related to dredging activity and vibro-densification activity that generate underwater acoustic levels that may affect whales. The baseline surveys are documented in two Jacques Whitford-AXYS reports titled "*Source Level Study of the Dredge Columbia and Killer Whale Acoustic Impact*" , dated 14 May, 2007, and "*Vibro Densification Source Level Study and Killer Whale Acoustic Impact*" , dated September 17, 2007, which were distributed to DFO. Electronic copies of these reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix E). See Section 2.4 (Marine Mammal Monitoring) of the compliance report for additional information.
12.2	The Owner will ensure that any densification equipment (i.e. vibro-flotation head) is shut down while densification equipment is being relocated.	Construction	VPA	DFO	FN	Complete	Marine vibro-densification work is complete. Based on the acoustic monitoring conducted for this equipment (noise from the equipment did not propogate well through shallow waters and behavioural disturbance to whales was found to occur at less than 200 metres and even less for other marine mammals) and because the repeated shut down and start up of the equipment was possibly more detrimental than allowing it to run, the vibro-densification head was not routinely shut down during small movements of the equipment. However, the head was brought up to shallow waters prior to movement to minimize the propogation of the sound waves. During any significant movement of the equipment, it was shut down. Note that these modified procedures complied with the *Fisheries Act* Authorization 02-HPAC-PA1-000-000144, December 2006, based on the acoustic monitoring and modeling submitted to DFO for review and approval.
12.3	The Owner commits to prepare a report on Orca pods in the vicinity of the Project and to assess avoidance and mitigation measures (the 0.5 kHz trigger threshold, vessel speeds) when pods are traversing the offshore areas of Roberts Bank. DFO marine mammal scientists will be consulted to ensure the report complements marine mammal monitoring requirements identified in the *Fisheries Act* authorization. A copy of the final report will be provided to DFO.	Construction	VPA	DFO	FN	Complete	The Marine Mammal Monitoring program has been completed. Originally, eight Marine Mammal Surveys were planned, however, one additional survey was conducted, for a total of nine surveys. The reports are dated as follows: June and September 2007, January, May, June, August and September 2008, and January and May 2009. All reports have been submitted to DFO and electronic copies of the reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix E).
12.4	The Owner will work with BC Pilots to develop an education and awareness program about marine mammals and have pilots of vessels transiting to Roberts Bank steer away from observed marine mammal pods when vessel safety is not compromised.	Operation	VPA	DFO	FN	On-going	The Port developed a marine mammal awareness pamphlet, entitled "Marine Mammals of the Roberts Bank Area". Distribution of the pamphlet began in December 2008 and continues to be distributed as appropriate. The pamphlet has been distributed to marine pilots, marine contractors, various agencies, at open houses, and more. Additionally, the Port is working with it's marine mammal monitoring program consultant on a series of questions for marine pilots in the development of the marine mammal awareness and education program.

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Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
13	*The Owner will monitor and evaluate any aboriginal or commercial fisheries issues during Project dredging and construction.*	Pre-construction, Construction	VPA	EAO, DFO	FN	On-going	The Port has met with TFN to discuss dredging and construction effects on their aboriginal fishery in and around the project area and will continue to monitor and communicate with TFN. TFN has not indicated that the construction program has had any direct impacts on aboriginal or commercial fisheries.
13.1	The Owner and its contractors will use reasonable efforts to avoid any disruption of aboriginal or commercial fisheries.	Pre-construction, Construction	VPA	EAO, DFO	FN	Complete	The marine works component of the Project is complete.
Waterfowl and Coastal Seabirds							
14	*The Owner will ensure that the applicable mitigation and compensation regarding waterfowl and coastal seabirds is implemented and shall commit to bird monitoring as reflected in the AMS referenced in section 5 above.*	Construction, Operation	VPA, Contractors	EC	MOE	On-going	*See comments below.*
14.1	The Owner will ensure that it is in compliance with the *Migratory Birds Convention Act* (MBCA), the *Species At Risk Act* (SARA), and the *Migratory Birds Regulations* (MBR) for the life-cycle duration of the Project.	Construction, Operation	VPA, Contractors	EC, MOE	MOE	On-going	The Port has been in compliance with the *Migratory Birds Convention Act* (MBCA), the *Species At Risk Act* (SARA), and the *Migratory Birds Regulations* (MBR) during construction. Waterfowl and coastal seabird surveys are conducted as part of the AMS and the results are included in the annual reports. The 2007 report titled "Deltaport Third Berth Adaptive Management Strategy, 2007 Annual Report", dated July 2008, is available on the VFPA website at http://portmetrovancouver.com/Libraries/PROJECTS_Deltaport_Third_Berth_Project/080718_AMS_2007_Annual_Final.sflb.ashx. The 2008 annual report is currently being finalized, and will be posted to the VFPA website when complete (expected in Fall 2009). Observations of waterfowl and coastal seabirds are also made during environmental monitoring and reported in the weekly EM reports that are distributed to DFO, EC, CWS, and MOE, amongst others.
14.2	Although construction of the Project would not impact the pelagic cormorant colony nesting on the Westshore jetty structure, the Owner commits to consult with government and non-government agencies to establish pelagic cormorant resting/roosting structures in the study area away from port docks.	Construction, Operation	VPA, Contractors	EC, MOE	MOE	On-going	The Port is in the early phases of consulting with CWS , MOE, DFO and other stakeholders on the establishment of pelagic cormorant resting/roosting structures.
14.3	Relocation of the osprey nest to a safer location. The Owner will work with the appropriate regulatory authorities to relocate this nest.	Construction, Operation	VPA, Contractors	EC, MOE	MOE	Complete	The osprey nest was re-located on March 13, 2007 to a location approximately 200m north of the new perimeter dike and approximately 120m east of the Deltaport Causeway. Regulatory authorities were consulted and an MOE wildlife permit (#SU07-31495) was issued to Hemmera on behalf of the VFPA prior to nest relocation. The osprey have been observed in the area following relocation; however, they are not yet using the relocated nest.
14.4	The Owner will undertake construction works in upland areas (off causeway) in the winter months to prevent impacts to nesting species and to limit sensory disturbance to wildlife. Nesting time windows are listed in section 2.8.	Construction, Operation	VPA, Contractors	EC, MOE	MOE	On-going	BCRC has begun site preparation work for the BCRC trackwork at Gulf. The work has included site grading and the placement of sub-ballast and was conducted in association with highway works being undertaken by the Ministry of Transportation. No additional work is to be conducted at the site until December 2009 or January 2010 and the updated schedule of work is included with the status of compliance report as Appendix B.
14.5	Limit disturbance of the ditch between 57B Street and 64th Street and prevent siltation of its aquatic habitats, by erecting fences and silt curtains prior to construction.	Construction, Operation	VPA, Contractors	EC, MOE	MOE	On-going	The BCRC EWP includes mitigation for impacts to ditches.
Terrestrial Wildlife and Vegetation							
15	*The Owner will ensure that the land-based construction works for the off causeway rail corridor components of the Project are conducted in compliance with applicable legislative requirements and BMPs, with particular attention to storm water management on the sites during construction, excavation and disposal of fill and concrete works. Further the Owner must ensure that municipal community planning is reflected in mitigation of terrestrial and vegetation impacts along the rail corridor. This may include applicable permits for development along watercourses, permits to deposit or remove soil or other material, and environmental reviews of specific works in and around environmentally-sensitive areas.*	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	BCRC has provided the Port with an *Environmental Work Plan* (BCRC EWP) that addresses this commitment as it pertains to the site grading and installation of sub-ballast work conducted at the BCRC trackwork at Gulf site (see Appendix C of the status of compliance report). An updated EWP will be submitted to the VFPA and the EAO prior to the start of the next phase of work (expected to be in December 2009 or January 2010). See further comments below.
15.1	The Owner will comply with all terms and conditions of Permits, Approvals and Authorizations, and environmental BMPs.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
15.2	The Owner will follow or have followed the Construction EMP for storm water management on the site during construction, in relation to material excavation and disposal of fill, concrete works, and other activities.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.

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Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
15.3	The Owner will ensure vegetation cleared during construction is kept to a minimum. This would maximize the habitat buffer between the edge of rail bed and adjacent habitats (e.g. ditches).	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
15.4	The Owner will re-vegetate areas disturbed by construction activities with native grass species. This would enhance native species in the study area and minimize the potential for establishment of non-indigenous species.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	Future commitment	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
15.5	The Owner will minimize the movement of people and machinery through vegetated areas.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
15.6	The Owner will manage interactions between employees/contractors and wildlife and will store and/or dispose of food, garbage and petroleum products in an appropriate manner to prevent attraction of wildlife to construction sites.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE, EC	COD, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
16	*The Owner must, through their Contractors, take every reasonable step to ensure that the landscape, vegetation, bushes and trees are protected during construction of the rail works.*	Pre-construction, Construction	VPA, Contractors, BCRC	COD	EC, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
16.1	The Owner commits to meet the intent of COD's Official Community Plan policies regarding environmentally-sensitive areas, specifically sections 2.4.1 - 2.4.15 and 2.4.21 - 2.4.26.	Pre-construction, Construction	VPA, Contractors, BCRC	COD	EC, TFN	On-going	*See 15.1 above.* BC Rail track work at GULF - Corp. of Delta Environmental Officer (Angela Danyluk) has been briefed by BC Rail on the planned work.
16.2	The Owner must ensure that vegetation clearing is undertaken without contravening section 34 of the British Columbia *Wildlife Act* . In this regard, it is the Owner's responsibility to determine appropriate timing for vegetation clearing activities. If assistance is required in the determination of appropriate time periods, the owner will retain the services of appropriately qualified environmental professionals.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE	EC, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
16.3	The Owner will ensure that it is in compliance with the *Migratory Birds Convention Act* (MBCA), the *Species At Risk Act* (SARA), and the *Migratory Birds Regulations* (MBR) for the life-cycle duration of the Project.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE	EC, TFN	On-going	The Port has been provided with the BCRC EWP that addresses this commitment. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
16.4	The Owner will support appropriate environmental stewardship programs to place barn owl nest boxes in areas towards Brunswick Point where they are less vulnerable to major motorways.	Pre-construction, Construction	VPA, Contractors	MOE	EC, TFN	On-going	In the absence of a formal environmental stewardship program, the Port is constructing barn owl boxes and working with OWL on their distribution.
16.5	The Owner will become involved in barn owl management planning, either through a Barn Owl Management Team, or its ad hoc equivalent.	Pre-construction, Construction	VPA, Contractors	MOE	EC, TFN	On-going	*See 16.4 above.*
16.6	The Owner will minimize impacts to foreshore marshes by adhering to the following mitigation measures: · - Where possible, minimize construction access across foreshore marshes and limit damage to riparian zone habitats; and.· - Avoid dredging and/or filling in marsh areas.	Pre-construction, Construction	VPA, Contractors, BCRC	MOE	EC, TFN	On-going	The Port has been provided with the BCRC EWP that provides for the mitigation impacts to waterways and sensitive areas including marshes. An updated EWP will be provided by BCRC prior to the start of the next phase of work.
Air Quality							
17	*The EAC Application Chapter 13.0 - Air Quality Assessment refers to the ambient air quality objectives. The Owner will ensure continuous improvement to air quality using applicable BMPs and available technology to meet applicable ambient air quality objectives.*	Construction, Operation	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA, HC	On-going	*See comments below.*
17.1	The Owner commits to working with the GVRD, in consultation with the COD, to fund and locate an air quality station, in the local community to provide for continuous ambient air quality monitoring.	Construction, Operation	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA, HC	On-going	The GVRD [now Metro Vancouver (MV)] is chairing a committee of technical representatives from MV, EC, the Port, COD and TFN looking at specific air quality information for the selection of a suitable location for the air quality station. Pebble Hill in the Tsawwassen area of Delta was selected as the air quality station site, however in January 2009 Metro Vancouver's Engineering and Construction Department confirmed they could no longer support that site due to seismic upgrades scheduled there within the next 5 years. Metro Vancouver has reviewed alternative locations and made a new recommendation nearby, on the same property. The Request for Quotes for the station trailer ended August 21, 2009. Instrument tenders are expected to go out in Fall 2009.

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
17.2	The Owner and the Terminal Operator must comply with the federal *Canada Wide Standards* (CWS), and specifically Annex A of the CWS Agreement, during construction and operation that commits the Owner and the Terminal Operator to "Continuous Improvement" and "Keeping Clean Areas Clean" (CI/KCAC). Where applicable, the GVRD's "*Air Quality Management Plan* , September 2005" and any subsequent changes to that document, and/or provincial or federal ambient air quality objectives, whichever is more stringent, will be used as the guide for ambient air quality objectives for the Project area.	Construction, Operation	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA, HC	On-going	Port Metro Vancouver's Air Action Program addresses these air quality requirements not only for the project but on a Port-wide basis. The document outlining the Program is titled *"Air Action Program, Addressing Air Quality and Climate Change"* , dated June 2008, and is available on the Port's website as follows: http://portmetrovancouver.com/Libraries/ENVIRONMENT/2008-06-18_VFPA_Air_Action_Program.sflb.ashx
17.3	The Owner shall ensure that all contractors and the Terminal Operator construct and operate the Project with due attention to adverse public health effects.	Construction, Operation	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA, HC	On-going	The public health effects related to air emissions are addressed in the Port's Air Action Program. The document outlining the Program is available on the Port's website as follows: http://portmetrovancouver.com/Libraries/ENVIRONMENT/2008-06-18_VFPA_Air_Action_Program.sflb.ashx. In addition, an Air Quality Impact Mitigation Plan was prepared and implemented for each phase of the construction works.
18	*The Owner must commit to develop a Construction Air Quality Mitigation Program that addresses all Project construction impacts on the ambient air quality in the Project area.*	Construction	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA	Complete	*See comments below.*
18.1	This Program must cover the marine construction program (undertaken by the Owner) and the terminal construction program (undertaken by the Terminal Operator) and other relevant and project specific off-site road and rail improvements. The construction air quality program will include the following:· - On-road diesel fuel will be included in bid-tenders for use in off-road construction equipment.· - Diesel particulate filters and/or other appropriate retrofits where possible (such as automatic anti-idling shut-offs) will be used on all construction equipment and construction vehicles capable of use.· - Covered road vehicles will be used in the transport of bulk fine materials to or from the Project site.· - Paved sections of the worksite and roads that are subject to accumulations of dust will be wetted/cleaned on a regular basis.· - A worksite speed limit will be put in place to further reduce dust.· - An ongoing program of implementation of a worker education program to address:· - Engine idling reduction (including provision for automatic anti-idling shut-off mechanism, if feasible),· - Operation of equipment at optimum rated loads,· - Routine equipment maintenance procedures,· - Options to reduce construction worker trips (i.e., carpooling, transit, other non-polluting transportation modes),· - Visual inspections on a daily basis for potential dust and odour issues, and· - Potential for impacts from equipment exhaust, dust and odours.	Construction	VPA, Contractors, Terminal Operator	GVRD	EC, COD, TFN, FHA	Complete	Construction EMPs of the marine works (DCL in Section 3.0), upland civil works (TSI in Section 3.0), and BCRC track work at Gulf (BCRC in Section 2.9) all address these commitments.
19	*The Owner commits, and must ensure that the Terminal Operator also commits, to diligently work towards a reduction of emissions from container vessels calling at Deltaport* [18] .	Operation	VPA, Terminal Operator	EC, GVRD	COD, TFN	Future commitment	*See comments below.*
19.1	The Owner confirms their willingness to continue to actively work with other ports, industry, regulators and other organizations to influence the IMO to create a "SOx Emission Control Area" (SECA)[19] for the West Coast where vessels must use fuel oil with a sulphur content of no more than 1.5% by 2009.	Operation	VPA, Terminal Operator	EC, GVRD	COD, TFN	On-going	This work is ongoing and is being lead by EC and TC with support by the Port. A SECA requires Canada to ratify Annex VI of MARPOL. In the meantime, the port has developed the "Northwest Ports Clean Air Strategy" with the Ports of Seattle and Tacoma that will bridge to a SECA (Sulphur Emission Control Area). Also, the Port's Differentiated Harbour Dues Program includes incentives for using fuel with low sulphur content. Canada has passed legislation to enforce the previous Annex VI which is a precursor to ratification. Canada now needs to develop legislation to enforce recent changes to Annex VI, including those to ECAs (Emission Control Areas), followed by ratification. In spring 2009, Canada and the U.S. submitted a joint application for a North America ECA to the IMO. VFPA has voluntarily instituted a local initiative while awaiting regulatory hurdles on adoption of the national initiative.
19.2	The Owner commits to assessing a differential port tariff system where cleaner ships (less emitting) calling on the Port of Vancouver are charged lower fees as a reward system to encourage a reduction in marine vessel air emissions.	Operation	VPA, Terminal Operator	EC, GVRD	COD, TFN	Complete	The Port implemented a Differential Harbour Dues program, which became fully operational on April 1, 2007. The program provides incentives for cleaner, less emitting, marine vessels, including the use of lower sulphur fuels. Program details are available on the VFPA website.
19.3	The Owner commits to undertake a vessel speed assessment of marine vessels approaching Roberts Bank to determine the potential benefit of lowering vessel approach speeds with the intention to reduce potential impacts on marine mammals and air emissions.	Operation	VPA, Terminal Operator	EC, GVRD	COD, TFN	On-going	The marine mammal monitoring program has assessed both the presence of killer whales and possible interactions and effects from ocean going vessels. With the designation of Southern Georgia Strait as critical killer whale habitat, VFPA is working with the Killer Whale Recovery Team on reducing potential impacts.

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19.4	The Owner must ensure that the Terminal Operator commits to the incorporation of infrastructure for shore power for ships in the Project design and construction. Further the Owner must commit to complete a feasibility study for shore based power within 8 months of receipt of Project EA approval. The feasibility study will identify the ships currently calling on the Port of Vancouver capable of connecting to shore power, their power requirements as well as timelines and targets for potential conversions.	Operation	VPA, Terminal Operator	EC, GVRD	COD, TFN	Completed	The feasibility study for shore based power was completed in May 2007. Omni Engineering Inc. and Westmar Consultants Inc. were retained by TSI Terminal Systems Inc. to conduct the study, the findings of which are presented in a report titled "*Deltaport Third Berth Container Terminal, Cold Ironing Feasibility Study*", dated May 30, 2007. The study was submitted to the Environmental Assessment Office in June 2007.
20	*The Owner and Terminal Operator will use all reasonable efforts to reduce emissions from terminal operations and container trucks as described and concluded in the revised Application Chapter of December 2005.*	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	On-going	This commitment is addressed with the Port's Integrated Air Action Program and the Port's Truck Licensing Program. Additional information on the Truck Licensing Program is available on the VFPA's website at http://portmetrovancouver.com/Libraries/ENVIRONMENT/Port_Metro_Vancouver_Differentiated_Harbour_Dues_Program.sflb.ashx. Specific action items that address this commitment are outlined and reported on below.
20.1	The Owner will ensure the Terminal Operator uses ultra low sulphur diesel in off-road terminal equipment starting September 2006.	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	Completed	TSI commenced use of low sulphur (on road fuel quality) in September 2006. In addition TSI also implemented the use of biofuels in terminal equipment to further reduce emissions in August 2006.
20.2	The Owner will ensure the Terminal Operator uses diesel oxidation catalysts in all applicable Deltaport terminal equipment.	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	Completed	TSI has been using diesel oxidation catalysts in applicable equipment since 2006.
20.3	The Owner will ensure the Terminal Operator completes the testing of the hybrid powered rubber tired gantry cranes (RTGs) at Vanterm and if successful, ensure that the Terminal Operator retrofits existing RTGs at Deltaport.	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	Implemented	TSI has completed pilot tests with three hybrid RTGs, and the RTGs are in use at the Deltaport facility. Testing of the units indicated an approximately 70% fuel savings, and an even greater emissions reduction, over the non-hybrid RTGs.
20.4	The Owner or its security personnel must ensure that non-reservation trucks continue to shut down their engines while waiting in queue during times when the Deltaport Terminal gates are closed (i.e. currently before 7:00 AM, 12:00 PM to 12:30 PM, and after 4:00 PM). Signs should be posted along the causeway to inform truckers of the environmental benefits of turning off engines while in queue for extended time periods	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	Implemented	All trucks now require a reservation. The Port implemented an anti-idling program for all container trucks in September 2006 and extended this program to port operations in January 2007. A mandatory idling limit has been incorporated into the Truck Licensing System (TLS) starting in 2008 that mirrors the City of Vancouver idling by-law. The TLS requirement limits idling to no more than 3 consecutive minutes in a 60 minute period.
20.5	The Owner and Terminal Operator commit to full implementation of the container truck reservation system, which may include the use of extended terminal gate operating hours, to reduce congestion and emissions from container trucks calling on Deltaport.	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	Implemented	The Port and the Terminal Operator implemented the truck reservation system in 2002. Extended terminal gate operating hours were implemented by the terminal operator in 2005. Due to a decrease in volumes in 2008, night-gate openings were reduced. Since night-gates were reinstated in June 2009, the Terminal Operator operates 5 night-gates per week. In addition, TSI has also reallocated daytime truck reservations to night gates, implemented speed gates, added security staff, added an additional pre-gate checker, and started the daytime gate shift at 7AM. All trucks now require a reservation to call at Deltaport.
20.6	The Owner commits to using mechanisms such as the truck licensing system to implement strategies to reduce truck emissions such as promoting the use of the newest and cleanest trucks, as well as the use of retrofit technologies for trucks making frequent visits to Deltaport.	Construction, Operation	VPA, Contractors, Terminal Operator	EC, GVRD	FHA, COD, TFN	In-progress and on-going	The truck licensing program (TLS) contains four components to address air emissions, and took effect on April 1, 2008. These components include: (a) phasing out trucks older than 1989; (b) increasingly stringent truck emission opacity standards; (c) mandatory idle reduction limits; and (d) a mandatory education program. Effective April 1, 2009, trucks older than 1994 were phased out. The next set of requirements for trucks older than 1999 will occur on April 1, 2011.
21	*The Owner must commit to work with the Railways serving the Project to reduce emissions due to rail operations at Roberts Bank*	Operation	VPA	TC	COD, GVRD, TFN, EC	In progress	The Port worked with Environment Canada and Metro Vancouver to develop the BC Locomotive and Rail Air Quality Work Group, which held it's first meeting in July 2008. The most recent meeting was held at Viterra in Spring 2009, one of the Port's grain terminals where their new low emission multi-genset locomotive was demonstrated.
21.1	The Owner commits to working with the Railways to develop an Operational Rail Emission Reduction Program. Elements of this emission reduction program are outlined in Schedule 1 to this Table.	Operation	VPA	TC	COD, GVRD, TFN, EC	In progress / Implemented	TC has entered into a Memorandum of Understanding with CP and CN to: 1) prepare an action plan for GHG emissions reduction; 2) meet 2010 greenhouse gas emission targets; 3) purchase only new locomotives meeting applicable Environmental Protection Agency (EPA) emission limits; 4) Retire 130 medium horsepower locomotives built between 1973-1999; 5) upgrade existing high horsepower locomotives when they are overhauled, to meet EPA emission limits; and 6) upgrade to Tier 0 existing 1973 or newer, medium horsepower locomotives when they are overhauled starting in 2010. Over time, this approach will achieve the results sought through this commitment, as rail operations are revised and new equipment purchased.
Noise, Dust and Vibration							
22	*The Owner will ensure that instructions are provided to their contractors throughout the pre-construction and construction phases to minimize possible effects related to noise, dust and vibration. The Owner must comply with the intent of COD Noise Bylaw No. 1906, 1972 and the Delta Zoning Bylaw (section 802)) to avoid disturbance of the local community with 24 hour -7 day per week construction periods.*	Pre-construction, Construction	VPA, Contractors	FHA GVRD, COD,FHA	HC, TFN , EC	On-going	*See comments below* that provide responses to specific mitigation measures that achieve this goal.
22.1	The Owner will ensure that the Construction and Operation EMPs and BMPs are complied with, as indicated in Table 20.1 of the EAC Application and reflected in this Table.	Construction, Operation	VPA, Contractors	FHA GVRD, COD,FHA	HC, TFN , EC	Implemented	Hemmera continues to provide construction environmental monitoring services during the construction phase of the program, with weekly environmental monitoring reports being submitted to DFO, EC, CWS, and MOE, amongst others. Electronic copies of the environmental monitoring reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D. In addition, a project feedback telephone line, 604-665-9337, is available to the public. Project related issues, including noise, dust and vibrations, are recorded along with their VFPA responses and mitigation measures, where applicable. The issues tracking tables are available on the VFPA website[24] at http://portmetrovancouver.com/projects/ongoing_projects/Deltaport_Third_Berth_Project/Project_consultation.aspx. The environmental monitoring program and the public issues feedback and response mechanism are two ways in which the VFPA attempts to ensure the EMPs and BMPs are being complied with.

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22.2	The Owner will incorporate BMP and mitigation measures reflected in this Table into the contract documentation for construction contractors, including the requesting of low emission equipment.	Pre-construction	VPA, Contractors	FHA GVRD, COD,FHA	HC, TFN , EC	Complete	BMPs and mitigation measures were included in the contract documentation for the Project and are reflected in the EMPs implemented by the construction contractors. See Section 2 for additional information on the EMPs.
23	*The Owner shall ensure that all contractors and the Terminal Operator construct and operate the Project with due attention to adverse public health effects.*	Construction, Operation	Owner, Contractors, Terminal Operator	FHA	HC, COD, TFN	On-going	*See comments below.*
23.1	The Owner shall commit to organizing a Community Liaison Committee referenced in section 6.3 of this Table, with a sub-committee on noise issues, with the participation of VPA, the Terminal Operator, COD and the Railways, specifically focusing on rail noise impacts and public concerns, such as whistles, train shunting and speed. The terms of reference for this committee shall be developed by the Owner and accepted by government regulators, TFN and COD prior to start of construction.	Construction, Operation	Owner, Contractors, Terminal Operator	FHA	HC, COD, TFN	Implemented	The DCLC is made up of eighteen members, including a representative from the Port, TSI, COD and TFN. The Terms of Reference has been adopted by the committee. The purpose of the committee is to work with the Port and port stakeholders to address issues pertaining to the construction and first-year operation of the project. The first meeting was held on March 22, 2007. Subsequent meetings in 2007 were held on April 19, May 1, June 11, June 26, July 3, September 6, October 25, and November 29. Meetings in 2008 were held on January 17, February 28, April 24, June 26, August 28, October 23 and November 27. Meetings in 2009 were held on January 22, February 19, April 16 and June 18. Additional meetings are scheduled for September 17 and November 19, 2009. The DCLC formed a noise subcommittee in June 2009 to address noise concerns. This subcommittee operates under the general DCLC Terms of Reference. BCRC has agreed to attend and participate in meetings when requested by the committee as a whole or by the noise subcommittee. The first report to the DCLC from the noise subcommittee is expected at the September 2009 meeting. Information pertaining to the DCLC, including the Terms of Reference and meeting minutes is available at http://www.portmetrovancouver.com/projects/ongoing_projects/ Deltaport_Third_Berth_Project.aspx or http://www.delta3berthinfo.org/.
23.2	The Owner will prepare a Construction Noise Management Plan containing environmental management measures to assess and minimize noise from the construction of the Project. Mitigation measures for terminal construction would include:· - Machinery noise control - a maximum allowable noise emission from each type of machinery set prior to construction to ensure that contractors do not utilize any excessively noisy equipment; and· - Awareness and training - Provision of training to ensure that construction workers are aware of the noise created during construction and are appropriately trained to minimize noise.	Construction, Operation	Owner, Contractors, Terminal Operator	FHA	HC, COD, TFN	In progress	Construction Noise Management Plans have been prepared as a component of the Construction Environmental Management Plans for each phase of construction (see Section 2.7 of this table). VFPA also conducted periodic noise monitoring during construction and has worked with the DCLC noise sub-committee on these issues. As a result of noise monitoring conducted during construction, dredge equipment were outfitted with mufflers to aid in dampening the noise. Present noise levels from construction equipment meet the CMHA guidelines.
23.3	A management procedure, such as a 24-hour helpline, will be put in place by the Owner to deal with noise complaints that may arise from construction activities. Each complaint would be investigated and appropriate noise reduction measures established to mitigate future occurrences.	Construction, Operation	Owner, Contractors, Terminal Operator	FHA	HC, COD, TFN	On-going	A project information and feedback line is available to the public. The project information and feedback line number is 604-665-9337. The number is advertised on the project web site, project newsletters, project advisory notifications and will also be available on other collateral material that is produced for the project. All complaints are documented and directed to the appropriate team member. Issues and responses are tracked in the DP3 Public Issues Tracking document, which is available to the public on the project website or in public library resource files (Delta, Surrey and Langley).
23.4	The Owner will ensure that the Terminal Operator prepares an *Operation Noise Management Plan* containing environmental management measures to assess and minimize noise from the operation of the Project. The Plan would be included in the Operational EMP for the Deltaport Third Berth Project. Mitigation measures for terminal operations would include: *Equipment Alarms* - New ship-to-shore gantry cranes and rail mounted gantries will be purchased with "alarms" that will be normally inaudible on shore.	Operation	Owner, Terminal Operator	FHA	HC, COD, TFN	On-going	VFPA has received a draft Operation EMP, which does not include a noise management plan. VFPA has discussed this with TSI, and TSI has confirmed that this component of the plan will be added prior to finalization of the EMP (late 2009).

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
23.5	The Owner will ensure that the Terminal Operator must conduct regular training of Operator awareness. Proper training and awareness of noise issues will be implemented to minimize noise associated with the operation of the proposed Project.	Operation	Owner, Terminal Operator	FHA	HC, COD, TFN	Future commitment	TSI's draft Operation EMP (November 2009) includes a number of Environmental Management Plan Procedures (EMPP) including plans for 'New Employee Orientation' (EMPP-12-01) and 'Training Needs Assessment and Planning' (EMPP-13-01). The draft Operation EMP is attached to the compliance report as Appendix D.
24	*The Owner will ensure that the design, construction, operation and maintenance of the Project attempts to minimize any public health concerns associated with the Project.*	Pre-construction, Construction, Operation, Maintenance	VPA	HC, FHA, COD, TFN	EAO	On-going	See comments below for information on individual commitments. In addition, the DCLC will continue to operate during the first year of terminal operations and will continue to address Project-related issues, including those of public health concerns.
24.1	The Owner will ensure that construction contractors are aware of their obligations to comply with all applicable standards and regulations regarding the handling and use of any hazardous materials that they may be using during construction (e.g., uncured concrete).	Pre-construction, Construction, Operation, Maintenance	VPA	HC, FHA, COD, TFN	EAO	On-going	The contractors have each developed a plan within their respective Construction EMPs that addresses this issue. Independent environmental monitoring has been conducted during the marine and upland phases of construction. No issues with this commitment were identified during monitoring activities.
	Other public health issues must be observed as reflected in other sections of this Table.						The individual consultants and contractors have their own Health and Safety Plans.
Visual/Lighting							
25	*The Owner shall ensure that all contractors and the Terminal Operator construct and operate the Project with minimal adverse visual and lighting effects.*	Construction, Operation	VPA, Terminal Operator	none	COD, TFN	On-going	*See comments below.*
25.1	The Owner shall commit to organizing a CLC referenced in section 6.3 of this Table, whose terms of reference shall include any visual and lighting impacts generating public concerns. The Owner shall develop a 24-hour help line for visual/lighting concerns/events, enabling contractors and terminal personnel to identify what events and operations are causing adverse impacts in the Tsawwassen communities, including the TFN Reserve.	Construction, Operation	VPA, Terminal Operator	none	COD, TFN	On-going	The DCLC is made up of eighteen members, including a representative from the Port, TSI, COD and TFN. The Terms of Reference has been adopted by the committee. The purpose of the committee is to work with the Port and port stakeholders to address issues pertaining to the construction and first-year operation of the project. The first meeting was held on March 22, 2007. Subsequent meetings in 2007 were held on April 19, May 1, June 11, June 26, July 3, September 6, October 25, and November 29. Meetings in 2008 were held on January 17, February 28, April 24, June 26, August 28, October 23 and November 27. Meetings in 2009 were held on January 22, February 19, April 16 and June 18. Additional meetings are scheduled for September 17 and November 19, 2009. Information pertaining to the DCLC is available at http://www.portmetrovancouver.com/projects/ongoing_projects/ Deltaport_Third_Berth_Project.aspx or http://www.delta3berthinfo.org/. A project information and feedback line is available to the public. The project information and feedback line number is 604-665-9337. The number is advertised on the project web site, project newsletters, project advisory notifications and will also be available on other collateral material that is produced for the project. All complaints are documented and directed to the appropriate team member. Issues and responses are tracked in the DP3 Public Issues Tracking document, which is available to the public on the project website or in public library resource files (Delta, Surrey and Langley).
25.2	The Owner must ensure the dredge lighting system shields light from spilling outside the basic working footprint of the dredge.	Construction, Operation	VPA, Terminal Operator	none	COD, TFN	Implemented	Addressed in Contractors (DCL) EMP and their dredging timing plan. VFPA did not receive any complaints regarding the dredge lighting, however, there were some complaints about noise from the dredging operations. The contractor was required to place additional muffler equipment on the dredge, which appeared to improve the situation (based on a reduction in noise complaints).
25.3	The Owner will ensure that the Terminal Operator undertakes the following measures:· - Ensure lighting equipment is pointed north and west, where possible, to reduce impacts to residents who are typically located east and south of the Roberts Bank port facility.· - Implement shielding on construction lighting.· - Use downlight style, cut-off luminaries for illumination of wharf and container yard areas.· - Use less intrusive lighting sources such as metal halide luminaries exclusively for illumination of new wharf and container yard areas.· - Reduce the amount of lighting during periods of low activity using lighting control systems.· - Incorporate an automatic light shutdown system when the booms of new ship-to-shore gantry cranes are raised and inactive for longer than 15 minutes.	Operation	VPA, Terminal Operator	none	COD, TFN	On-going	The Terminal Operator has committed to the following design elements: central site lighting will use downlighters or light deflectors; perimeter lighting will be directed inwards into the Terminal site (the type of light is yet to be determined); security lighting will only be used during non-working hours; and, minimal night time construction is proposed. The Terminal Operator continues to address these commitments in the on-going design and has produced a lighting design report that was presented to the Delta Community Liaison Committee on November 27th, for review and comment. It was subsequently reviewed by a consultant for the COD and that review was discussed by the DCLC at its January 22, 2009 meeting. The final design will be submitted to the EAO.

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
25.4	The Owner will evaluate the use of innovative mounting systems for lighting on ship-to-shore gantry cranes to minimize light throw during raising and lowering of the equipment. The Owner will examine options for mounting luminaries on the arms of ship-to-shore gantry cranes to prevent them from rotating when the arms are raised and lowered.	Operation	VPA, Terminal Operator	none	COD, TFN	On-going	The Operator has indicated that due to operational changes, boom lights will not be on during raising and lowering of the boom, therefore eliminating light throw from this source during these operations. The lighting systems for the Gantry Cranes are currently being evaluated.
25.5	The Owner will consider change of gantry crane colour and, where practical, options for a landscape buffer strip to be established along the outer edge of the Roberts Bank causeway.	Operation	VPA, Terminal Operator	none	COD, TFN	Complete	The three new Quad Cranes are white. This was deemed to be the best overall colour to satisfy the need for landscape buffering and aesthetics as well as for providing adequate visual recognition for aircraft safety. As an added benefit, stress cracks and fractures are clearly revealed on white and thus assist with maintenance and safety inspections.
Socio-economic/Socio-community Issues and Economics							
26	*The Owner will ensure that consideration is given to enhanced socio-economic aspects of the Project. If the Owner transfers the EAC to the Terminal Operator, the Owner will ensure the transfer to the Terminal Operator of all relevant commitments, including but not limited to those listed in this Table.*	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Owner will ensure that consideration is given to enhanced socio-economic effects as outlined in the specific commitments below, and that any transfer of the EAC to the Terminal Operator will also ensure the transfer of all relevant commitments.
26.1	The Owner will develop a community liaison plan to minimize construction-related impacts. The plan will ensure that adequate notification is provided and will be developed with meaningful consultation with COD and TFN. This community liaison plan shall provide opportunities for the local community, COD and TFN to provide meaningful input throughout the final design, construction and first year of operation, and it will also result in a CLC, both as discussed in section 6 of this Table.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Implemented	A Draft Community Liaison Plan (CLP) was sent to the EAO in December 2006 for review. A copy of the CLP was sent to the Corporation of Delta and TFN on January 15, 2007 for review and comment, and the plan has since been adopted. The CLP includes tactics to minimize construction-related impacts on the community including: the formation of DCLC, project feedback and information line, feedback mechanisms, newsletters, public events, project advisories and other communications, as required. The CLP can be viewed on the VFPA website at http://portmetrovancouver.com/Libraries/PROJECTS_Deltaport_Third_Berth_Project/2006-12-12_Community_Liaison_Plan_Construction_First_Year_Operation_Phase_amended_2009-04-23_FINAL.sflb.ashx.
26.2	The Owner will ensure that the Project implementation team[21] designs, constructs and operates the Project with care and attention provided to transportation and traffic considerations, so as to minimize and mitigate negative impact and effects. The Owner will resolve Project related transportation and traffic issues in consultation with COD and TFN.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Port's marine works construction contract specified that all general fill, preload, granular sub-base and aggregate base course materials shall be imported by waterborne transport. This is estimated to have reduced project-related traffic on nearby roads by approximately 300,000 single dump truck loads, i.e. 300,000 return trips (600,000 one-way trips) on nearby roads. To date, most project materials have been imported by water and waste materials have been exported by water. The Marine Works contractor was allowed to truck up to 50,000 m^3 of surplus preload to a South Fraser Perimeter Road (SFPR) site within Delta, since that created less traffic and emissions impact within Delta than the previous fill source for that site. Only 38,000 m^3 was actually taken to the SFPR site. The Port and TSI have built a temporary barge berth for importing materials needed for the East Causeway habitat compensation works and for TSI's pavement foundations, as well as to remove material excavated from the East Causeway as part of the compensation works. This is expected to eliminate approximately 24,500 return truck trips through Delta. In addition, operational traffic management improvements, Highway 17 improvements and road-rail interface improvements (see Section 7 of this table) will aid in easing congestion once the third berth is operating.
26.3	The Owner will ensure that the Project implementation team designs, constructs and operates the Project with care and attention to the provision of emergency services to the Project. The Owner will resolve issues in consultation with COD as the Project design and infrastructure is finalized.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Implemented	Access to the site for the provision of emergency services is available and unchanged.
26.4	The Owner will ensure that the Project implementation team designs, constructs and operates the Project in accordance with applicable bylaws and codes.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Complete	Following completion of construction, the VFPA will receive P.Eng. signed as-built drawings, which will provide confirmation that the works were built to the applicable codes. The Port has issued a permit to TSI for the Deltaport Third Berth finishing works (upland terminal construction), which requires them to construct according to all applicable laws and other necessary approvals.
26.5	The Owner will participate in Transport Canada's assessment of the Roberts Bank rail corridor to identify and seek solutions to rail crossing issues in Delta, Surrey and Langley.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Roberts Bank rail corridor assessment was completed in early 2007, and the results were documented in a report titled "Roberts Bank Rail Corridor: Road/Rail Interface", dated February 2007. The study was coordinated by Transport Canada with other participants including MOT, TransLink, Greater Vancouver Gateway Council and the Port. The Port continues to actively participate in ongoing discussions with Transport Canada to advance the projects identified in the Rail Road Interface Study in the affected communities. Each project has a Project Steering Committee and technical committees that meet monthly, at a minimum, and the overall Program partnership meets once a quarter, at a minimum. The preliminary design for each of the identified projects is expected to be complete by the end of 2009. Several of the projects (41B, 152nd Street, 192nd Street) are already into the detailed design phase.

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
26.6	The Owner and the Terminal Operator will use reasonable efforts to transport construction materials to and waste materials from the Project by barge to minimize additional highway traffic.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Port's marine works construction contract specifies that all general fill, preload, granular sub-base and aggregate base course materials shall be imported by waterborne transport. This is estimated to reduce project-related traffic on nearby roads by approx. 300,000 single dump truck loads, i.e. 300,000 return trips (600,000 one-way trips) on nearby roads. To date, most project materials have been imported by water and waste materials have been exported by water. The Marine Works contractor was allowed to truck up to 50,000 m^3 of surplus preload to a South Fraser Perimeter Road (SFPR) site within Delta, since that created less traffic and emissions impact within Delta than the previous fill source for that site. Only 38,000 m^3 was actually taken to the SFPR site. The Port and TSI are building temporary barge berth for importing materials needed for the East Causeway habitat compensation works and for TSI's pavement foundations, as well as to remove material excavated from the East Causeway as part of the compensation works. This is expected to eliminate approx. 24,500 return truck trips through Delta.
26.7	The Owner will monitor the impact of construction activities on community services such as fire, police and emergency response during construction and commits to discuss appropriate levels of emergency access to the Project with COD.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Port will coordinate regular meetings with fire, ambulance, police and emergency response providers to review emergency access to the site and monitor use of services.
26.8	The Owner and Terminal Operator will use reasonable efforts to purchase goods and services and source employment in the local community during construction and operation of the Project.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	Delta-based Graham Construction & Engineering is a partner in the joint venture firm (Deltaport Constructors Ltd) to which the Port awarded the $195 million marine works contract. That contract includes requirements to provide significant employment and contracting opportunities for the TFN**,** which has been done through over 15 person years of employment and over $1.5 million in direct construction contracts.
26.9	The Owner shall continue to participate in discussions with the Gateway Program, COD and other agencies regarding regional solutions to potential road and traffic issues in Delta.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	Delta Council passed a resolution on January 12, 2009 to generally support the construction of an overpass at 41B Street (and closure of 57B) and Deltaport Way subject to confirmation of integration between Tsawwassen First Nation's Road Network Plan and Delta's Road Network. Also, Delta Council endorsed the plan presented by Delta Engineering (and supported by the DFI) for an overpass on 28th Ave. (See comment 7.1). In addition, PMV continues to participate in ongoing discussions with relevant agencies regarding regional truck routes.
26.10	The Owner will construct traffic improvements as described in Section 7.1.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Some complete, others on-going	*See 7.1 for comments.*
Accident and Malfunctions							
27	*The Owner must ensure that all commitments designed to prevent or minimize accidents and malfunctions resulting from the Project are implemented.*	Design, Construction, Operation	VPA, Contractors, Terminal Operator	TC, EC, COD	GVRD		*See comments below.*
27.1	The Owner will ensure that the transport and storage of dangerous goods is carried out in compliance with the federal *Transportation of Dangerous Goods Act* (TDG). All dangerous goods transported by water within the Port of Vancouver must also be under permit issued by the Harbour Master Office.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Implemented	The Port continues to commit to the observation and enforcement of the *Transportation of Dangerous Goods Act* .
27.2	The Owner will observe the International Convention for the Prevention of Pollution from Ships (MARPOL), and MARPOL Annex V.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Implemented	The Port continues to commit to the observation and enforcement of MARPOL.
27.3	The Owner will ensure that the following fuelling and spill measures are committed to by all contractors and the Terminal Operator:· - Conduct fuelling of equipment and storage of petroleum products (e.g. fuel, oil, lubricants) over and adjacent to the marine environment in an appropriate manner and handle in compliance with all applicable guidelines, legislation, and best management practices.· - Have an appropriate spill prevention, containment and cleanup contingency plan for hydrocarbon products (e.g., fuel, oil, hydraulic fluid, lubricants), and all other deleterious substances used in association with the Project.· - The spill prevention, containment and cleanup contingency plan will be put in place prior to work commencing at the Project site. · - Be required to have appropriate containment and clean up materials on site throughout the course of work on the Project. · - Submit contractor's spill prevention, containment and cleanup contingency plans to the appropriate regulatory agencies for review prior to work commencing.· - Comply with the operator's Fuel Management and Dispensing Operating Procedure, which is part of the existing Deltaport Terminal *Environmental Management Plan* .· - Conduct fuelling for road container trucks or employee vehicles off-site, away from the existing Deltaport Container Terminal at approved fuelling facilities.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Implemented	The commitments can be found in the respective Contractor's construction EMPs (see Section 2). In addition, an independent Environmental Monitor has been employed by the VFPA and/or TSI during the construction phases of this Project. The environmental monitoring reports were submitted to DFO, EC, CWS and MOE, amongst others during the course of construction work, and electronic copies of the reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).

Owner's Table of Commitments and Assurances[1]
Status Update as of November 12, 2009

Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
27.4	The Owner will ensure that the contractor has a *Waste Management Plan* in place to ensure that all waste and deleterious materials generated by construction of the Project are appropriately contained in the immediate work area, collected, and appropriately disposed of in accordance with all applicable legislation, guidelines, and best management practices. The Owner will enforce procedures for collection and disposal of ship board waste as a requirement of the Project. The Owner will ensure that the Terminal Operator's waste management EMP is updated to include the Project and use the operator's established environmental procedures for items used at the terminal.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	Addressed as a component of each Contractor's construction EMP. In addition, an independent Environmental Monitor has been employed by the VFPA and/or TSI during the construction phases of this Project. The environmental monitoring reports were submitted to DFO, EC, CWS and MOE, amongst others during the course of construction work, and electronic copies of the reports have been included with the status of compliance report submitted to the EAO along with this table (see Appendix D).
27.5	The Owner and Terminal Operator will ensure that their contractors develop a health and safety plan for each component of contractor work prior to the start of construction. The health and safety plan would typically include:· - Site location and prime contacts;· - Local emergency and project contact numbers;· - Description and map of emergency routes;· - Safety equipment required;· - List of site hazards and mitigation;· - Potential waste generation and disposal methods; and· - Outline emergency response procedures to be followed during construction in the health and safety plan.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Port requires each Contractor/Consultant to have a Health and Safety Plan prior to working on site. To date, all have complied with this commitment, and the Port has received copies of the plans. This requirement will remain for all future Contractors/Consultants working on site.
27.6	The Owner and the Terminal Operator will enforce the following design, measures:· - Design storm drainage systems to consist of a combination of catch basins, slot drains and open cover manholes; · - Locate storm drains in areas to avoid equipment operating areas and runways;· - Design drainage structures to withstand loads from the container operating equipment;· - Grade the container yard in the direction parallel to the RTG runways with drainage grades of 1% or less;· - Design drainage systems to accommodate rainfall flows generated from a 1 in 10 year rainstorm;· - Direct stormwater from the DP3 Terminal through an oil interceptor and catch basin to collect possible contaminants prior to discharging storm water effluent to the ocean;· - Ensure that the eight existing storm outfalls, located along the northern perimeter of Deltaport, will be decommissioned and replaced by new storm outfalls; and· - Ensure that the new storm outfalls will be fitted with shut-off valves to terminate flow from the Project are should a spill occur on the terminal.	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	Complete	The Terminal Operator confirmed commitment to these design measures via email on February 12, 2007. The drainage installation has been completed. The storm drain outfalls located along the northern perimeter of Deltaport were temporarily re-routed to a new temporary perimeter drain and their flows passed through interceptors before discharge. They have been replaced with new storm outfalls. As-built drawings, signed by a P.Eng., will be provided to the VFPA upon completion of construction.
27.7	The risk of ship collisions or grounding will be minimized through observation of the *International Regulations for the Prevention of Collision at Sea* (ColRegs). The Owner will observe requirements of the *Transportation of Dangerous Goods Act* , and the *Canada Shipping Act* .	Pre-construction, Construction, Operation	VPA, Terminal Operator	none	GVRD, COD, TFN, TransLink	On-going	The Owner is committed to high standards of port safety and works with regulatory agencies and other partners, such as various branches of Transport Canada, Pacific Pilotage Authority and BC Coast Pilots, to continue to comply with acts and regulations that govern marine transportation, including the *Canada Shipping Act* and *Transportation of Dangerous Goods Act.*

Owner's Table of Commitments and Assurances[1]
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Ref	Objective - Commitments and Assurances	Timing	Delivered By	Approving/ Lead Agencies [2]	Advisory Agencies	Status	Comments
Disposal at Sea							
28	*Based on information available in the EAC Application ocean disposal of dredged material will be required. The Owner will be responsible for all required regulatory approvals pursuant to the Disposal at Sea Regulations (2001) under the Canadian Environmental Protection Act, 1999.*	Pre-construction, Construction	VPA, Contractors	EC	COD, TFN	Complete	The initial Ocean Disposal Permit (#4543-2-03414) received from EC was dated January 2, 2007. An amendment to the Permit was received from EC on July 09, 2007 for a volume change not to exceed 690,000 cubic meters. A second amendment to the Permit was received from EC on December 03, 2007 for a change to the expiration of the Permit, from April 17, 2007 to April 16, 2008. A second Ocean Disposal Permit (#4543-2-03449), dated March 17, 2008, was received from EC for a volume of 20,000 cubic meters. Non-compliances with the Permits occurred in 2007 and 2008, including ocean disposal outside of the authorized disposal site and disposal in exceedance of the permit limit. VFPA self-reported the non-compliances to EC and DFO immediately upon learning of the incidents and has been cooperating with EC to investigate the incidents. In addition, VFPA implemented additional checks and balances to minimize the potential for additional non-compliances. These included requiring the contractor to provide daily reports on ocean disposal activities and requiring them to retain an independent marine surveyor during disposal activities.
28.1	The Owner must ensure that if required by the EC Disposal at Sea Program staff, the Contractors have Disposal at Sea Program staff on site during sampling of any material proposed for disposal at sea; the Owner must provide the results of chemical analysis to the Program; the Program will then consult with the Regional Ocean Disposal Advisory Committee and if the results are acceptable, the Contractor may apply for a Disposal at Sea Permit under the direction of the Owner.	Pre-construction, Construction	VPA, Contractors	EC	COD, TFN	Complete	Not required. Ocean Disposal Permit issued on January 2, 2007.
Miscellaneous Commitments and Assurances							
29	The Owner commits to adhere to, or in the transfer of responsibilities to the Terminal Operator, ensure such contractual compliance, with all mitigation proposals, relevant to the Project, that are described in the Application, or reflected in all other Owner generated documents listed in Appendix A to this Assessment Report or otherwise defined in this Table.	Construction, Operation, Maintenance	VPA, Terminal Operator		All listed	On-going	The Port confirms commitment to compliance.

Notes:

1. **(1)** The "Owner" is understood to mean the applicant for an environmental assessment certificate (Certificate) pursuant to BCEAA (i.e. Vancouver Port Authority – VPA) and to whom the Certificate may be issued. Any transfer of commitments and assurances in this Appendix E by the Owner to a selected third party, such as the current terminal operator (TSI Inc.), must comply with all conditions of the Certificate. A potential full transfer of the Certificate and its conditions to TSI, if contemplated - as the new "Owner" - requires a name change for the holder of the Certificate and necessitates an Amendment to the Certificate. **(2)** The Owner has also confirmed their Summary of Potential Impacts and Mitigation Measures in Section 20 of the EAC Application, Table 20.1. The relevant commitments in Table 20.1 are superseded by this Appendix E. **(3)** In accordance with the Certificate of Amalgamation issued under Part 5.1 of the Port Authorities Management Regulations pursuant to the *Canada Marine Act* and having an effective date of January 1, 2008, the Vancouver Fraser Port Authority is the successor to the Vancouver Port Authority, the Fraser River Port Authority and the North Fraser Port Authority.
2. Abbreviations of Approving and Advisory Agencies: Agency = Canadian Environmental Assessment Agency; ALC = Agricultural Land Commission; COD = Corporation of Delta; CWS = Canadian Wildlife Service; DFO = Fisheries and Oceans Canada; EAO = BC Environmental Assessment Office; EC = Environment Canada; FHA = Fraser Health Authority; GVRD = Greater Vancouver Regional District; FN = First Nations; HC = Health Canada; MCS = Ministry of Community Services; MOE = Ministry of Environment; MOT = Ministry of Transportation; NRCan = Natural Resources Canada; TFN = Tsawwassen First Nations; TC = Transport Canada
3. Those that are technically and economically feasible, as determined by VPA and acknowledged by the Approving Agencies and as defined specifically in other sections of this Table.
4. Assumed to be the current terminal operator, TSI Inc.
5. EAC = Environmental Assessment Certificate
6. As discussed in section 21 of the EAC Application.
7. A requirement under EC's "Disposal at Sea Permit for Dredged Material".
8. For further details, see section 4 below.
9. Emergency Planning for Industry, Major Industrial Accidents, Canadian Standards Association, CAN/CSA-Z731-95. CSA Internet site: http://www.csa.ca/standards BC Guidelines for Industry Emergency Response Plans (revised from 1992) http://www.env.gov.bc.ca/eemp/industcplan.html
10. See also section 22.
11. "Vancouver Port Authority. Deltaport Third Berth. Proposed Habitat Compensation". DATE
12. See section 4 of this Table.
13. Defined in section 21.2.3 of the EAC Application
14. Consisting of a Ballast Water Management Plan, a Bilge Water Protocol and an Emergency Response Plan
15. The legal instrument is under negotiation between the parties. The key document addressing Project impact issues are contained in Schedule B to the Agreement, providing details of the AMS.
16. EAO's Deltaport Third Berth Project Assessment Report of DATE, PART A, section 1.4.1
17. The VPA undertook a revision of the EAC Application Air Quality chapter, which was distributed to reviewers in December 2005.
18. Initiatives related to reducing air emissions are outlined in letter correspondence dated October 18, 2005 from Alicia Blancarte, VPA to Morris Mennel, EC and Hugh Kellas, GVRD and letter correspondence dated September 30, 2005 from Joe Murphy, TSI to Jim Cox, VPA.
19. The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention of the International Marine Organization (IMO) covering prevention of pollution of the marine environment by ships from operational or accidental causes. The SOx emission limits of Annex VI of MARPOL include a global cap of 4.5% on a mass basis of the sulphur content of fuel oil used on board ships and establishment of "SOx Emission Control Areas" (SECAs) where vessels must use fuel oil with a sulphur content of no more than 1.5% on a mass basis or fit an exhaust gas cleaning system or use any other technological method to limit SOx emissions to ≤ 6 g/kWh (as SO2 mass). However, the EA process can not fetter other national and international legislation and measures to introduce new SECAs.
20. Posted on EAO's project website, December 2, 2005.
21. Consisting of at least VPA, the Terminal Operator and selected contractors for the construction of the Project.
23. In the original table, this is referred to as the "Construction EMP"; however, during the February 23, 2007 Post-Certification meeting, the EAO acknowledged that this was actually referring to the Operation EMP.

Acronym Definitions: AMS = Adaptive Management Strategy; BCRC = BC Rail Company; CD = chart datum; CEAA = Canadian Environmental Assessment Act; CLC = Community Liaison Committee; CMHA = Canada Mortgage & Housing Corporation; ColRegs = International Regulations for the Prevention of Collision at Sea; CLP = Community Liaison Plan; DCLC = Deltaport Third Berth Community Liaison Committee; DCL = Deltaport Constructors Limited; DCL EMP = DCL Environmental Management Plan; DFI = Delta Farmers Institute; DFO = Department of Fisheries and Oceans; DP3 = Deltaport Third Berth Project;
EA = Environmental Assessment; EMP = Environmental Management Plan; ERP = Emergency Response Plan; EWP = Environmental Work Plan; FREMP = Fraser River Estuary Management Program; HGT = Hul'qumi'num Group Treaty; HOV = High Occupancy Vehicle;
MARPOL = International Convention for the Prevention of Pollution from Ships; MBCA = Migratory Birds Convention Act; MBR - Migratory Birds Regulations;
MV = Metro Vancouver; RTGs = Rubber Tired Gantry Cranes; SARA = Species at Risk Act; TDG = Transportation of Dangerous Goods; TSI = Terminal Systems Inc.