

## **Geotechnical Investigations (April 2011)**

### **Container Capacity Improvement Program**

The Container Capacity Improvement Program is Port Metro Vancouver's long term strategy to deliver projects to meet anticipated growth and demand in container capacity through 2030. The program includes increasing operational efficiencies at all of Port Metro Vancouver's container facilities in the Lower Mainland, with an emphasis on initial investment and infrastructure improvements at Roberts Bank in Delta.

Following improvements at Vanterm and Centerm in 2005, and the completion of the Deltaport Third Berth Project in 2010, Port Metro Vancouver is evaluating infrastructure improvements at Roberts Bank in Delta, including the proposed Roberts Bank Terminal 2 Project. The Roberts Bank Terminal 2 project is a proposed multi-berth container terminal which could provide container capacity of more than two million TEUs (twenty foot equivalent unit containers) per year.

Any development of the proposed Roberts Bank Terminal 2 project will be subject to a thorough and independent environmental assessment process.

### **Geotechnical Investigations**

Port Metro Vancouver is initiating geotechnical investigations beginning in spring 2011 as part of the project definition phase of the proposed Roberts Bank Terminal 2 project. The purpose of these investigations is to:

- Gather geotechnical data about sediment properties for input into project design, particularly dredging and marine structure foundations; and
- Evaluate the susceptibility of the proposed project area to seismic impacts.

### **Scope of Work**

Drilling is expected to occur at approximately 200 locations adjacent to the existing Deltaport and Westshore terminals at Roberts Bank in Delta. Prior to the start of drilling, dive surveys will be conducted to ensure that the investigation avoids areas of key habitat value, such as eelgrass.

Drilling will be carried out using sonic drilling and cone penetration testing equipment mounted on a marine barge. An accompanying tug boat will anchor the marine barge in specific locations to reduce marine disturbance. Upon completion of drilling, the tug boat will pull up the anchors and tow the barge to the next location, leaving no structures on the seafloor.

Although the majority of the test holes are located in deep water, the crew will make use of high tides to enter into shallow areas. Tug boat propulsion from the propellers will be directed horizontally to reduce the propeller wash and disturbance to the seabed. Noise and light associated with these investigations is anticipated to be consistent with tug boat operations.

As part of the investigation, some intertidal drilling will take place, and will consist of cone penetration tests and/or sonic test holes in the intertidal area west of the Roberts Bank causeway. This drilling will be conducted using track mounted equipment and will take place during low tide hours. The equipment will be removed from the site during higher tide hours. Access to the drilling locations will be through the maintenance road at the north end of the BC Rail yard.

Investigations will extract sediment cores for sampling and analysis. This information will be used primarily for geotechnical purposes, but some samples may be analyzed for environmental chemical parameters as well.

### **Environmental Permits and Monitoring**

The geotechnical investigation program received a permit from Fisheries and Oceans Canada (DFO), which outlines the environmental requirements that must be complied with during the program. An Environmental Monitor will be present during the course of the geotechnical investigations to advise and recommend any necessary measures to mitigate potential impacts to the environment.

### **Timing**

The geotechnical investigations are anticipated to commence in early April 2011 and will last between eight to 10 weeks, pending weather and tide conditions.

To complete the work as quickly as possible, it is anticipated that testing will be carried out 24 hours per day, seven days per week, with two 12-hour shifts per day.

### **For Further Information**

For further information, please visit our website at [www.portmetrovancover.com/CCIP](http://www.portmetrovancover.com/CCIP) or contact the Container Capacity Improvement Program Team by:

**Phone:** 604-665-9337

**Fax:** 1-866-284-4271

**Email:** [container.improvement@portmetrovancover.com](mailto:container.improvement@portmetrovancover.com)