

## **Appendix E**

### **Environmental Mitigation Measures**

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**ENVIRONMENTAL MITIGATION MEASURES**

**Responsible Authority:** Environment Canada

Hamilton, Ontario  
Randle Reef Sediment Remediation Project (Stage 1)

**PWGSC Project No. R.050927.001**

The purpose of this record is to monitor the implementation of mitigation measures. It is the responsibility of the PWGSC Project Manager to ensure that this record is completed over the duration of the project. This Environmental Mitigation Measures report form must be completed in full. Specify in the table below whether the mitigation measures have been applied. If a mitigation measure has not been applied, specify the reason(s) why this was not done.

<b>Environmental Mitigation Measure</b>	<b>Implementation Schedule/Date</b>	<b>Person/Title/ Firm Responsible</b>	<b>Compliance (Task Complete – Yes or No/Date) If No, provide reason</b>
Trucking routes shall be selected to minimize the effect on local residences.			
Enforced speed limits on project site to minimize dust generation.			
Perform house keeping on roads including watering/sweeping and / or vacuuming to minimize track-out onto local roads.			
Truck cleaning / washing stations set up at the exit to prevent track out of dust as well as contaminated material.			
Implement a “no idle” policy on site to minimize unnecessary combustion emissions.			
Follow developed health and safety plan(s).			
Manage any stockpiles to eliminate dust and erosion.			
Cease all dust-generating activities in the event of extremely high winds.			
Development of a dust management plan.			
All internal combustion engines will be fitted with appropriate muffler systems.			
Noise-muffling equipment will be in good working order.			
Intensive construction activities will be limited to the hours between 07:00 and 19:00 to reduce the potential impact on receptors.			

Nearby residents will be advised of significant noise-causing activities and these activities will be scheduled to cause the least disruption to receptors.			
The public will have contact numbers for appropriate construction and government personnel in the case of any noise issues.			
Vibratory pile-driving will be used when possible.			
Evening and night time operations will be minimized.			
Traffic management, which includes limiting traffic in and around the site and modifying speed limits will be implemented.			
Strategic placement of material storage piles to reduce noise associated with loading/unloading will be undertaken.			
Soil stockpiles shall be shaped to avoid steep faces.			
Refueling areas shall employ standard mitigations (e.g., a gently sloping area with compacted soils and three-sided containment berm) operator training, emergency response planning and equipment maintenance. A refueling station will be set up within the project area so that any accidental leaks of petroleum products during equipment fuelling and maintenance will be contained and managed within the refueling area. This station should have a liner/spill containment control features (e.g., collection systems, berms).			

All materials and equipment used for the purpose of site preparation and ECF completion will be operated and stored in a manner that prevents any deleterious substance (e.g., petroleum products, silt etc.) from entering the water.			
Application of best management practices to prevent spillage of gasoline, diesel fuel and other oil products in to the water.			
Contactors will have emergency spill response equipment available onsite to facilitate prompt response to any accidental oil, fuel leaks or spills.			
Use a cleanup crew with containment/sorbent booms, sorbent pads and skimmers as required primarily for removal of spilled non-aqueous phase liquids (NAPLs) including hydrocarbon fuels, oils and lubricants, and aromatic solvents.			
Delineate the limits of work zones.			
Designate and enforce haul route so that all truck traffic uses the designated truck routes. (via QEW and Burlington Street not through the city).			
Appropriate methods and approved Municipal and Provincial haul routes must be adhered to during construction.			
Haul routes will be selected so that effects to sensitive land use are minimized.			
Transport of materials will be in an environmentally sound manner and in accordance with all applicable legislation.			

Follow standard operating regulations and local protocols defined by the HPA.			
Trucks carrying loose material either entering or leaving the project site will have boxes covered.			
Standard construction procedures and street cleaning will be employed to keep the trucks clean and minimize the accumulation of soils on public roadways.			
Dust suppressants will be used, when necessary.			
Proper site security and site access will be established by the contractors and will likely involve some combination of temporary barriers, flag persons, and other measures.			
The contractor will be required to develop a Health and Safety Plan for the project.			
The contractor will be required to develop a traffic management plan for the project site.			
A Spill Control Plan will be developed and implemented by the contractor during construction.			
The Health and Safety Plan for the project will also include measures to ensure the safety of the public in the event of a spill.			
Contact Canadian Coast Guard Radio Station prior to in-water work activities. Notify Marine Communications and Traffic services, Central and Arctic Region, Canadian Coast Guard (CCG) in Prescott, Ontario prior to in-water work activities.			

Communicate in-water work activities (e.g., dredging, construction and obstruction) to Hamilton Harbour recreational facilities and users (e.g., notices to mariners).			
All vessels (e.g., dredging float) will have proper lighting.			
Mark in-water works area (e.g., dredging construction and/or obstruction) area with cautionary/navigation buoys in compliance with the Private Buoy Regulations of the Canada Shipping Act.			
Placement of additional structures/beacons in coordination with the Harbour Master and HPA.			
Shipping and navigation to be accommodated at all times except within 50 metres of the ECF and at Pier 15.			
All vessels (e.g., dredging float) will have proper lighting.			
Provide proper navigation lighting on and around ECF.			

NOTES:

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**Completed by:**

Name: \_\_\_\_\_

Firm: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Date: \_\_\_\_\_