



March 2013

Tracking Number: 225272

Authorization Number: 105809

REGISTERED MAIL

Cobble Hill Holdings Ltd. (BC0754588)
Herald Street Law
101-536 Herald Street
Victoria BC V8W 1S6

Dear Permittee:

Enclosed is Permit 105809 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the Permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the Permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the West Coast Region. Plans, data and reports pertinent to the permit are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment, Regional Operations, West Coast Region, 2080A Labieux Road, Nanaimo, BC V9T 6J9.

Yours truly,

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for Director, *Environmental Management Act*
West Coast Region

Enclosure

cc: Environment Canada

DRAFT



MINISTRY OF ENVIRONMENT

PERMIT

PR-105809

Under the Provisions of the Environmental Management Act

Cobble Hill Holdings Ltd. (BC0754588)

**Herald Street Law
101-536 Herald Street
Victoria BC V8W 1S6**

is authorized to discharge refuse to ground and effluent to an ephemeral stream from a contaminated soil treatment facility and a landfill facility located at 640 Stebbings Road, Shawnigan Lake, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may lead to prosecution.

1. AUTHORIZED DISCHARGES

1.1 Authorized Discharges – General Considerations

This section applies to the discharge of refuse from a contaminated soil treatment and landfill facility.

- 1.1.1 The combined maximum rate of discharge from the treatment and landfill facility is 100000 tonnes per year. The estimated density of soil accepted at the site ranges from 1.5 to 1.8 t/m³ for the purpose of sampling incoming soil or treated soil for characterization. The above density estimate may be modified at any time with a scientific sampling method approved by the Director.
- 1.1.2 The authorized discharge period is as defined under the *Mines Act* permit Q-8-094.
- 1.1.3 The characteristics of the discharges must be as described under Subsections 1.2 and 1.3.

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for Director, *Environmental Management Act*
West Coast Region

Soil relocation requirements of the Contaminated Sites Regulation (CSR) apply to all other parameters than those specified in the Soil Acceptance Plan referred to under Section 2.2.

Soils meeting local background quality in accordance with CSR Protocol 4 may also be discharged.

If land use or site specific factors specified in Column I of Schedule 5 of the CSR change, the Permittee shall promptly notify the Director and immediately apply them for the purpose of Subsection 1.2 and 1.3.

- 1.1.4 The authorized works as defined under Subsections 1.2.1, 1.3.1, 1.4.5 and 1.5.4 must be complete and in operation while discharging.
- 1.1.5 The location of the facilities and the points of discharge is Lot 23, Plan VIP78459, Blocks 156, 201 and 323, Malahat Land District.

1.2 **Authorized Discharge –Treatment Facility**

This section applies to the discharge of refuse from a soil treatment facility. The site reference number for this discharge is E292169.

- 1.2.1 The authorized works are a lined asphalt paved soil management and treatment area of approximately 1800 m², biocell, berm, primary and secondary containment detection and inspection sumps and associated cleanout ports, catch basins, landfill area, groundwater monitoring wells, management works and related appurtenances approximately located as shown on Figure A.
- 1.2.2 The characteristics of the discharge must be equivalent to or better than:

soil suitable for industrial land use, as described by the Generic and Matrix Numerical Soil Standards in Schedule 4, 5, 7 and 10 (Column IV “Commercial, Industrial Soil Standard”) of the CSR, including the most stringent applicable site specific factors as defined in the Environmental Procedures Manual (EPM) referred to in Subsection 2.13, considering groundwater used for drinking water, toxicity to soil invertebrates and plants and groundwater flow to surface water used by freshwater aquatic life for the authorized soil treatment and discharge parameters as specified

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for Director, *Environmental Management Act*
West Coast Region

in Subsection 1.2.3.

- 1.2.3 The types of soil that can be bio-remediated at the treatment facility are soils contaminated with hydrocarbons, specifically soils contaminated with Benzene, toluene, ethylbenzene, xylenes (BTEX), styrene, Methyl tertiary butyl ether (MTBE), Volatile petroleum hydrocarbons (VPHs), Light and heavy extractable petroleum hydrocarbons (LEPH/HEPH), Polycyclic aromatic hydrocarbons (PAHs), Chlorinated Hydrocarbons, Phenolic Substances, chloride, sodium and Glycols as defined in Schedules 4 and 5 of the CSR.

Soils co-contaminated with hydrocarbons as described in this section and metals or other contaminants not suitable for bioremediation meeting industrial land use standards as defined in Schedules 4 and 5 of the CSR may also be accepted for treatment at the biocell.

1.3 **Authorized Discharge – Landfill Facility**

This section applies to the discharge of refuse from a landfill facility. The site reference number for this discharge is E292889.

- 1.3.1 The authorized works are a landfill, engineered lined landfill cells, perimeter ditches, erosion and sedimentation control infrastructure, primary and secondary containment detection and inspection sumps and associated cleanout ports, catch basins, groundwater monitoring wells, management works and related appurtenances approximately located as shown on Figure A.

- 1.3.2 The characteristics of the discharge must be better than:

Hazardous waste, as described in the Schedule 1, 1.1, 3 and 4 (Part 3, table 1 – Leachate Quality Standards) of the Hazardous Waste Regulation (HWR) and must be limited to contaminated soils and associated ash. Hazardous waste (as defined in the *Environmental Management Act* and the HWR) and putrescible waste must not be discharged.

- 1.3.3 The types of soil that can be discharged at the landfill facility are soils and associated ash contaminated with Inorganic Substances (including metals), Dioxins, Furans, BTEX, MTBE, VPHs, LEPH/HEPH, PAHs, styrene, Chlorinated Hydrocarbons, Phenolic Substances, chloride, sodium and

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for Director, *Environmental Management Act*
West Coast Region

Glycols as defined in Schedules 4 and 5 of the CSR.

1.4 **Ancillary Discharge – Water Treatment System**

This section applies to the discharge of the water treatment system (WTS). The site reference number for the WTS discharge is E292170.

- 1.4.1 The average rate of the WTS discharge is 12.1 cubic metres per day.
- 1.4.2 The maximum rate of the WTS discharge is 274 cubic metres per day.
- 1.4.3 The authorized discharge period is continuous.
- 1.4.4 The characteristics of the discharged treated effluent (WTS) shall be equivalent to or better than the most stringent of those British Columbia Approved Water Quality Guidelines (BCAWQG) and A Compendium of Working Water Quality Guidelines for British Columbia (BCWWQG) for Freshwater Aquatic Life uses, the Generic Numerical Water Standards required for Freshwater Aquatic Life uses as described in Schedule 6 of the CSR, the Effluent Standards for Hazardous Waste Facilities as described in Schedule 1.2 (column 2) of the HWR for the parameters of concern: Inorganic Substances (including metals), Dioxins, Furans, VPH_w, LEPH_w, VH_{w6-10}, EPH_{w10-19}, PAHs, BTEX, styrene, Chlorinated Hydrocarbons, Phenolic Substances, chloride, sodium, Glycols, pH and oil & grease.

The source of the discharge must be limited to site stormwater runoff and water from the primary and secondary collection systems authorized under Subsections 1.2.1, 1.3.1 and 1.4.5.

The Director may specify different standards and other substances in writing for the protection of human health or the environment.

- 1.4.5 The authorized works are surface runoff collection and diversion ditches associated to the WTS, WTS (including pH control and flocculent injection system, settling tank, bag and activated carbon filters), flow measurement device, reservoirs and related appurtenances approximately located as shown on Figure A.
- 1.4.6 The authorized works must be complete and in operation while discharging.

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for Director, *Environmental Management Act*
West Coast Region

- 1.4.7 The location of the facilities from which the discharge originates and the point of discharge is Lot 23, Plan VIP78459, Blocks 156, 201 and 323, Malahat Land District.

1.5 **Ancillary Discharge – Settling Pond**

This section applies to the discharge of stormwater from the settling pond. The site reference number for the settling pond outlet is E292898.

- 1.5.1 The maximum rate of the settling pond discharge is 42,500 cubic metres per day for up to 1 in 10 year 24-hour flood events.
- 1.5.2 The authorized discharge period is continuous.
- 1.5.3 The characteristics of the settling pond discharge treated effluent shall be equivalent to or better than the most stringent of those BCAWQG and BCWWQG for Freshwater Aquatic Life uses and total suspended solids (TSS) shall not exceed 25 mg/L for up to 1 in 10 year 24-hour flood events. Where natural background water quality concentrations exceed these guidelines, the characteristics of the surface water in the environment at the settling pond discharge must not exceed background concentrations.

The source of the discharge must be limited to site stormwater runoff.

The Director may specify different standards and other substances in writing for the protection of human health or the environment.

- 1.5.4 The authorized works are surface runoff collection and diversion ditches, one surface settling pond, emergency overflow and related appurtenances approximately located as shown on Figure A.
- 1.5.5 The authorized works must be complete and in operation while discharging.
- 1.5.6 The location of the facilities from which the discharge originates and the point of discharge is Lot 23, Plan VIP78459, Blocks 156, 201 and 323, Malahat Land District.

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for Director, *Environmental Management Act*
West Coast Region

2. GENERAL REQUIREMENTS

2.1 Soils and Associated Ash Unacceptable for Treatment

The following types of waste must not be accepted for treatment at the site:

- 1) Hazardous waste as defined in the HWR;
- 2) Soils contaminated with any substances not included in Subsection 1.2 above with concentrations exceeding relevant standards specified in Schedule 7 of the CSR;
- 3) Soils and associated ash that cannot be treated or landfilled successfully in the opinion of the Director; and
- 4) Liquid waste or soil and associated ash with a water content exceeding those described in the Soil Acceptance Plan.
- 5) Restricted wastes listed in the Soil Acceptance Plan described in Subsection 2.2 of this permit.

2.2 Screening and Acceptance of Soil

The Permittee shall submit a Soil Acceptance Plan to the satisfaction of the Director for the facility for screening of soil and associated ash acceptance procedures prior to receiving any material. No changes shall be made to the plan without prior approval by the Director. The Director may amend the procedure for the protection of human health or the environment.

Those soils suspected to be unacceptable shall be either rejected immediately or placed in a holding area within the soil management area waiting further re-characterization by a qualified professional in accordance with Technical Guidance Document #1 (Site Characterization and Confirmation Testing). If further characterization confirms soils as unacceptable for treatment or landfilling (as defined in Subsections 1.2 and 1.3) the soil shall not be mixed with any other soil and shall be removed from the facility in accordance with the requirements of the CSR.

2.3 Holding Area for Soil and Associated Ash Suspected/Determined to be Unacceptable

The Permittee shall designate a holding area within the soil management area for temporary storage of soil waiting for re-characterization or shipment to an appropriate management site as determined by a qualified professional.

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for Director, *Environmental Management Act*
West Coast Region

2.4 **Bedrock Integrity Inspection and Risk Assessment**

A bedrock integrity inspection and risk assessment for any new landfill cell construction area must be submitted to the Director prior to the construction of new landfill cells. For any abnormalities (open fractures, presence of water, percolation, etc) identified during the inspection, the Permittee must notify the Director immediately and issue a structural report within 30 days following the inspection. The report must be prepared by a suitably qualified professional and must include, but is not limited to:

- a) all relevant information collected during the inspection and detailing the abnormality;
- b) an explanation and/or interpretation of the abnormality;
- c) a risk assessment in regards to the risk to human health and the receiving environment; and
- d) remedial action planned and/or taken to control the risks.

2.5 **Soil Turning**

- a) The Permittee shall only conduct soil turning under the following conditions to prevent nuisance to potential receptors:
 - i. Ventilation index for Southern Vancouver Island for the day of soil turning is forecast as “good”;
 - ii. No sooner than three hours after sunrise and no later than two hours before sunset but within the authorized discharge period defined under Subsection 1.1.2;
 - iii. Favorable weather conditions (considering temperature and wind direction, etc.)
- b) Prior to every soil turning event the Permittee shall record the ventilation index forecast, time of sunrise and sunset, time and duration of aeration, and ambient temperature. Records shall be tabulated along with soil volumes and chemical characteristics in the biocell at the time of aeration.

2.6 **Prohibition of Blending**

Bioremediation shall be undertaken without blending/mixing of contaminated

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for Director, *Environmental Management Act*
West Coast Region

soil with cleaner soils for the purpose of dilution to meet the required standards.

2.7 **Weather Protection**

The Permittee shall cover the soil treatment piles, soil holding area and active landfill areas completely from November to April when not actively worked on and provide sufficient weather protection and containment for nutrients stored at the site for the protection of human health and the environment.

The Permittee shall cover any soil or waste stored within the holding area at all times.

2.8 **Erosion and Sedimentation Control**

The Permittee shall manage sediment and control erosion from the soil management and treatment area and from the landfill area, to prevent sediment releases to the settling pond, the water treatment system and to the receiving waters. Storm water runoff shall be diverted away from the soil management and treatment area and all active landfill areas at all times.

All surface water management, sediment and erosion controls shall adhere to best management practices and shall be to the satisfaction of the Director. The Permittee shall document details of the erosion and sediment controls in the EPM as defined under Subsection 2.13.

2.9 **Odour Control**

There shall be no objectionable hydrocarbon odour evident outside the property boundaries. The Permittee shall, at a minimum, implement contingency measures if the ambient air quality sampling results exceed the air quality standards defined under Subsection 3.5. The contingency measures are defined in the EPM as defined in Subsection 2.13 and include, but are not limited to, reduced soil turning times and the covering of soil piles.

Should hydrocarbon odour become objectionable, the Director may require additional control measures.

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for Director, *Environmental Management Act*
West Coast Region

2.10 Dust Control

The Permittee shall control fugitive particulate emissions generated from the property and implement contingency measures as needed. The contingency measures shall be defined in the EPM as defined in Subsection 2.13 and include, but not limited to, reduced activities, covering or application of dust suppressant on soil piles and exposed areas.

Should the Director have reasonable grounds to believe that fugitive particulate emissions cause pollution outside the property boundary the Permittee may be required to take additional measures and/or curtail operations to control the emissions.

2.11 Spill Reporting

All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program at 1-800-663-3456.

2.12 Maintenance of Works and Emergency Procedures

The Permittee shall inspect the authorized works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents effective operation of the authorized works or leads to unauthorized discharge, the Permittee shall comply with all applicable statutory requirements, immediately notify the Director, and take appropriate remedial action for the prevention or mitigation of pollution. The Director may reduce or suspend operations to protect human health or the environment until the authorized works have been restored and/or corrective steps have been taken to prevent unauthorized discharges.

The Permittee must prepare and maintain an Emergency Response Plan that describes the procedures to be taken to prevent or mitigate any deposit of deleterious substance out of the normal course of events. The Emergency Response Plan must be immediately implemented if there is a deposit, or any risk of a deposit, of a deleterious substance out of the normal course of events. In addition, an up-dated Emergency Response Plan, including a report on any emergency responses, taken in the previous year, must be kept available, on site for inspection, as defined under Subsection 5.1.

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for Director, *Environmental Management Act*
West Coast Region

2.13 **Environmental Procedures Manual**

An Environmental Procedures Manual (EPM) shall be prepared and submitted by the Permittee to the satisfaction of the Director for acceptance 30 days prior to receiving soil. The EPM shall be maintained as a working document for use by supervisory personnel and a guide to field staff during various stages of the project. The manual should cover all aspects of onsite environmental management applicable to the soil management and treatment and landfill facilities operation including but not limited to, the following items:

- a) Roles and responsibilities;
- b) Training requirements;
- c) Soil Acceptance Plan;
- d) Site preparation for the construction of landfill cells;
- e) Construction of the landfill cells;
- f) Operation and maintenance of the soil management and treatment facility, the landfill facility, the water treatment system and the settling pond;
- g) Routine site inspections;
- h) Erosion and sediment control measures;
- i) Environmental Monitoring Plan, including on and off site monitoring locations and the sampling procedures for soil, water, groundwater and air quality, as required; and
- j) An Emergency Response Plan, including contingency measures.

The Permittee shall review the EPM at least on an annual basis to determine if any changes are required and submit any revisions to the Director. Annual reviews and submission of revisions are due on March 31 of each year.

2.14 **Qualified Professionals**

All facilities and information, including works, plans, bedrock integrity and risk assessment, assessments, sampling, monitoring, investigations, surveys, programs and reports, must be conducted and certified by qualified professionals.

"qualified professional" means a person who

- a) is registered to practice in British Columbia with his or her appropriate professional association, acts under that professional association's code of

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for Director, *Environmental Management Act*
West Coast Region

ethics, and is subject to disciplinary action by that professional association, and;

- b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within his or her area of expertise as it relates to this operational certificate.

2.15 **Bypasses**

The discharge of contaminants which have bypassed the authorized treatment works is prohibited unless the prior approval of the Director is obtained and confirmed in writing, except those authorized under Subsection 1.2 of this permit.

Temporary storage or accidental deposit of contaminated soil at areas other than the soil management area is considered a bypass.

2.16 **Process Modifications**

The Director shall be notified in writing prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge.

2.17 **Plans - New Works**

Plans and specifications of the works shall be certified by a qualified professional registered to practice in the Province of British Columbia, and submitted to the Director. A qualified professional must certify that the works have been constructed in accordance with the plans before discharge commences.

2.18 **Notification**

The Director shall be notified of a change in ownership of the works within 10 days of an ownership change.

2.19 **Amended or Additional Requirements**

Based on the results of the monitoring programs, the Director may:

- a) Amend the monitoring and reporting requirements;

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for Director, *Environmental Management Act*
West Coast Region

- b) Amend the requirements of any of the information required by this permit; including plans, program and studies;
- c) Require additional investigations, tests, surveys or studies; or
- d) Require additional treatment facilities.

3. **MONITORING AND SAMPLING REQUIREMENTS**

3.1 **Incoming Soil and Associated Ash Sampling and Analysis**

The Permittee shall follow sampling procedures and frequency specified in the approved Soil Acceptance Plan described under Subsection 2.2 to verify soil and associated ash quality. The appropriate parameters shall include, but shall not be limited to the parameters of concern and all potential contaminants of concern as determined by the qualified professional. The Director may require testing of soil and associated ash for additional parameters.

3.2 **Treated Soil Sampling and Analysis**

The Permittee shall sample and characterize each batch of treated soil in accordance with Technical Guidance #1 Site Characterization and Confirmation Testing or an equivalent sampling protocol approved by the Director. Each batch shall be considered to be of suspect waste soil quality. Soil shall be analysed prior to disposal authorised in Subsection 1.2 and 1.3 of this permit. The samples shall be analysed for parameters appropriate to the type of contamination for which the soil is undergoing treatment. The appropriate parameters shall include, but shall not be limited to the parameters of concern and all potential contaminants of concern as determined by the qualified professional.

Confirmation of completion of soil treatment shall be obtained in writing from a qualified professional prior to discharge, for each stockpile of treated soil.

3.3 **Groundwater Sampling and Analysis**

The Permittee shall install and maintain a minimum of seven groundwater sampling facilities (MW-1S, MW-1D, MW-2, MW-3S, GW12-1 MOE well (83527), MW-4 and MW-5) as shown on Figure B and obtain groundwater samples once each quarter in a manner satisfactory to the Director. Proper care shall be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

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for Director, *Environmental Management Act*
West Coast Region

Groundwater samples shall be analysed for appropriate contaminants, including, but not be limited to the parameters of concern and any other contaminants of concern contained in the soil received at the site and listed in Schedules 6 and 10 of the CSR or any additional compounds required by the Director in writing. The groundwater quality shall be compared to the Freshwater Aquatic Life standards as described in Schedule 6 of the CSR.

The Permittee may be required to install additional groundwater sampling facilities upon request. The location and structural details of these sampling facilities are subject to the approval of the Director.

3.4 **Surface Water Sampling and Analysis**

The Permittee shall sample the water treatment system effluent (WTS) and the settling pond discharge point (SW-1) monthly and every 2000 m³ for the water treatment system effluent in a manner suitable to the Director. Proper care shall be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

Surface water samples shall be analysed for appropriate contaminants, including, but not be limited to the parameters of concern and any other contaminants of concern contained in the soil and associated ash received as per Subsection 3.1 or any additional compounds required by the Director in writing. The surface water quality results shall be compared to the standards set out in Subsection 1.4.4 and 1.4.5.

3.5 **Air Quality Monitoring**

The Permittee shall collect monthly ambient air samples during the active season (i.e. between April and November, inclusive) at the down-wind property line using a Summa® Canister. Ambient air samples shall also be collected using a Summa® Canister if and when soils with measurable volatile contaminant concentrations exceeding the established thresholds are being managed or treated at the soil treatment facility at the location and as documented in the Environmental Procedures Manual.

The ambient air sample shall be analysed for the relevant contaminants of concern and results shall be compared to the CSR Schedule 11 RL standards. In the event that results exceed the standards, the Permittee shall follow the

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for Director, *Environmental Management Act*
West Coast Region

requirements stated under Subsection 2.9.

3.6 **Receiving Environment Sampling**

The Permittee shall implement a receiving environment monitoring program for the receiving groundwater and surface water summarized in the table below and as defined under the Environmental Procedures Manual:

Receiving Waters	Monitoring Locations		Frequency
Groundwater	Up Gradient	(MW-4) Southeast corner of the site	Quarterly
	Down Gradient	(MW-2) Property boundary	
		(MW-3) Property boundary	
		(MW-5) North of the site	
Surface Water	Up Gradient	(SW-4) Shawnigan Creek	5 in 30* (2 times/year, conducted during fall first flush event and in the spring freshet)
		(SW-2) Ephemeral Creek 1	
	Down Gradient	(SW-5) Shawnigan Creek	
		(SW-3) Ephemeral Creek 2	

* 5 in 30 refers to at least 5 weekly samples taken in a period of 30 days

The receiving monitoring program shall include a minimum of one groundwater monitoring facility up gradient and down gradient of the site, as approved by the Director under Subsection 3.3. The receiving environment monitoring program shall also include a minimum of two (2) surface water sampling sites upstream and downstream of the site. Monitoring shall be done in the frequency and manner to be able to compare results to the standards defined under Subsections 1.4.4 and as prescribed in the table above. Additionally, flow measurements must be collected from all surface water monitoring locations at the time of

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for Director, *Environmental Management Act*
West Coast Region

sampling.

Based on the results from the receiving environment monitoring program, the Permittee monitoring requirements may be extended or altered by the Director.

3.7 **Sampling Procedures**

Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual is available on the Ministry web page at www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html.

3.8 **Analytical Procedures**

Analyses are to be carried out in accordance with procedures described in the "British Columbia Laboratory Manual (2009 Permittee Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual is available on the Ministry web page at www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html

3.9 **Quality Assurance**

- a) The Permittee must obtain from the analytical laboratory (ies) their precision, accuracy and blank data for each sample set submitted as well as an evaluation of the data acceptability, based on the criteria set by the laboratory.
- b) A duplicate sample must be prepared and submitted for analysis for each parameter sampled for each monitoring period.
- c) The analytical laboratory (ies) must be registered in accordance with the Canadian Association of Laboratory Accreditation (CALA) unless otherwise instructed by the Director.

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for Director, *Environmental Management Act*
West Coast Region

4. **SECURITY REQUIREMENTS**

4.1 **Closure Plan**

The Permittee shall submit a closure plan to the satisfaction of the Director in 6 months after the issuance of this permit. The Director may amend the plan, if required, or request amendment of the plan for environmental protection.

The closure plan shall include, but may not be limited to investigations of soil, sediments, surface water and groundwater quality and treatment, identification and assessment of any residual contamination. If any residual contamination is identified, the Permittee will be required to remediate the site to meet the applicable soil, surface water and groundwater standards and objectives, as determined by the Director.

The closure plan must be reviewed at least every five (5) years to inform the security adjustment defined in Subsection 4.2. The Director has the discretion to require a review on a more frequent basis.

4.2 **Posting of Security and Costs**

The Permittee must submit a cost estimate for maintenance, monitoring and closure of the landfill for the active life of the site and a minimum twenty-five year post-closure period based on the current updated Closure Plan referred to in Subsection 4.1. The cost estimate shall be prepared or reviewed by a suitably qualified, independent third party. The cost estimate is subject to the Director's approval.

An updated cost estimate must be reassessed and submitted to the Director for approval at least once every five (5) years and the security adjusted accordingly. The Director has the discretion to require reassessment on a more frequent basis.

The Permittee must provide and maintain security in a form and amount specified by the Director. At the discretion of the Director security may be applied, to any of the following:

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for Director, *Environmental Management Act*
West Coast Region

- To correct any inadequacy of the works relating to their construction, operation and maintenance;
- To correct any default in compliance with this permit or the Environmental Management Act; and remediation.

Any money spent from the posted security shall be replenished within sixty (60) days or as otherwise specified by the Director.

The operation of the facility without valid security is not authorized.

The Permittee may request the return of security where the title of the works has been transferred to a municipal authority or where the posted amount exceeds the estimated closure and post-closure costs, including remediation. Granting the request is at the discretion of the Director.

5. **REPORTING REQUIREMENTS**

5.1 **Records**

Maintain for inspection by Environmental Protection Division staff, a record of the following logs, suitably tabulated:

- 1) Facility inspection log with a record of observations of the soil management and treatment and landfill areas (including but not limited to bedrock integrity, liner, cover, stormwater and effluent collection and treatment works inspections), and preventative and corrective actions made;
- 2) Current soil and associated ash inventory, including volumes and characteristics of soils and associated ash in the soil management and treatment area and landfill area;
- 3) Tracking ID number linked to soil and associated ash analysis results and the signature of qualified professional who certifies completion of remediation in accordance with the requirements of the CSR and compliance with this permit;
- 4) Location of each batch of soil and associated ash in the soil management and treatment and landfill area on a map;
- 5) Analyses of screening of incoming soils and associated ash as described in Subsection 2.1 and 2.2 of this permit;
- 6) Soil treatment activities including turning records and quantities of

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for Director, *Environmental Management Act*
West Coast Region

- nutrients, bacteria seed or amendments added by date;
- 7) Conditions during turning events as described in Subsection 2.5 of this permit;
 - 8) Results of the vapour and dust monitoring activities as required;
 - 9) Analyses of treated soil as described in Subsection 1.2 of this permit;
 - 10) Quarterly volumes of soil stored in the holding area, awaiting final disposal as described in Subsection 2.3 of this permit;
 - 11) A summary of Emergency Response Plan exercises, and incidents, including effluent/soil spills, requiring the Emergency Response Plan implementation.

The above records of analyses for the re-characterization or characterization of incoming soil or treated soil, respectively, shall include batch sizes, number of samples collected and analysed per volume.

Records shall be kept on site or at another location acceptable to the Director for at least three years and made available upon request.

5.2 **Environmental Quarterly Reports**

The Permittee shall submit environmental quarterly reports prepared by a qualified professional with monitoring data, interpretations, conclusions and recommendations in a format acceptable to the Director no later than 30-days after the end of each quarter. The Permittee shall post the results from the Environmental Monitoring Plan online and provide a hard copy to the Director.

5.3 **Environmental Annual Reports**

The Permittee shall submit an environmental annual report prepared by a qualified professional with data, interpretations, conclusions and recommendations in a format acceptable to the Director no later than March 31 of each year.

The environmental annual report shall include, but is not limited to, the following:

- 1) An executive summary;
- 2) Quality and quantity (in tonnes and m³) of soil and associated ash received for treatment, direct landfilling and as direct landfill cover;
- 3) Quality and quantity (in tonnes and m³) of soil and associated ash that

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for Director, *Environmental Management Act*
West Coast Region

- could not be treated in the soil treatment facility and soil and associated ash rejected and diverted to other facilities for treatment and/or disposal;
- 4) Updated maps showing the active landfill area, the areas reclaimed and the location of each landfill cells (completed and in progress);
 - 5) Remaining landfill life and capacity;
 - 6) Review of the preceding year of operation, plans for the next year and a summary of any new information or changes to the facilities and plans, assessments, programs and reports;
 - 7) Review of any non-compliances with the conditions of this permit, including an action plan and schedule to achieve compliance (as per Subsection 6.1); and
 - 8) Results from the Environmental Monitoring Plan with interpretations, conclusions and recommendations.

The Permittee shall post the environmental annual report online and provide a hard copy to the local library. The Permittee may omit proprietary information from the publically available environmental annual report in accordance with the *Freedom of Information and Protection of Privacy Act*, as agreed to by the Director.

6. **NON-COMPLIANCE REPORTING**

6.1 **Non-compliance Reporting**

For any non-compliance with the requirements of this permit, the Permittee must submit to the Director, Environmental Protection, a written report within 30 days of the non-compliance occurrence. The report must include, but is not necessarily be limited to, the following:

- a) all relevant test results related to the non-compliance;
- b) an explanation of the most probable cause(s) of the non-compliance; and
- c) remedial action planned and/or taken to prevent similar non-compliance(s) in the future.

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