



Ministry of Environment Inspection Record

Environmental Protection Division

Inspection: Number: 20849		Inspection Status: <i>FINAL</i>	
Trigger: <u>Incident</u>		Date: 2015-05-13	Total Non-Compliance(s): 5
EP System: <u>AMS</u>		EP Number: 105809	EP Status: <u>Active</u>
Region: <u>West Coast</u>		Regional Office: <u>Nanaimo</u>	Audit Number:
Regulated Party:			
Cobble Hill Holdings (BC0754588)			
Contact(s):			
Marty Block			
Address:		Telephone Number: (250)743-3332	
Mailing:		Fax Number:	
South Island Aggregates Ltd.		Email:	
PO Box 282 Malahat BC V0R 2L0		marty.sia@shaw.ca	
Inspector	Laura Hunse		Risk Ranking: <u>1 to 2 = Medium</u>
Name(s):			
Location Description:		Receiving Environment: <u>Surfacewater</u>	
Latitude: 48.5511	N	Longitude: 123.6066	W
460 Stebbings Road, Shawnigan Lake			

Summary

Incidents of Non-Compliance Observed:

Yes

MONITORING AND REPORTING REQUIREMENTS

Inspection Period: **From:** 2014-06-01 **To:** 2015-05-13

Requirement Source:

Permit

Activity: On Site

Waste Type: Effluent

Non-Compliance Decision Matrix Level:

Level 1

Non-Compliance Decision Matrix Category:

Category A

Inspection Summary:

Facility was inspected May 13, 2015, and included sampling of groundwater and receiving environment surface water. Results of the sampling are discussed under separate memos. The Environmental Appeal Board delivered its decision on March 20, 2015, and an amended permit was issued June 4, 2015, with additional requirements including community representation on the advisory committee, fulltime weather protection of the soil management area, wheel washing requirement, and prohibition of reuse of landfill cell liners. The landfill construction is not yet complete, therefore no discharge to land has yet taken place, and there was no discharge to the environment from the pond during the period covered by this inspection, therefore many clauses below are marked undetermined or not applicable. This inspection evaluates compliance against the original permit. Future inspections will determine compliance with the amended permit, and it is noted that all requirements of the new amended are currently in effect. One shipment of metals contaminated soil, commencing May 8, 2015, from construction of new commercial/residential development in Victoria, has been received over the period covered by this inspection, and is awaiting landfilling. No soils have been accepted to date with the intent of bioremediation. Annual report for 2015 is due March 31, 2016. Non-compliances noted in this inspection are related to incomplete monitoring and reporting and not assigning a Tracking ID to incoming soil in accordance with the procedures listed in the Environmental Procedures Manual.

Response:

Advisory

ACTIONS REQUIRED BY REGULATED PARTY:

- 1) Amended permit was issued June 4, 2015. Adhere to all permit conditions and ensure operating, sampling and monitoring requirements are met and reported on time.

- 2) Install flow meter for sedimentation pond that meets BC Sampling Manual requirements (permit clause reference 1.5.4, 3.7)
- 3) Install groundwater well to replace GW4. Ensure applicable plans and specs requirements are met (3.3)
- 4) Include sampling information, lab info, blank info, etc. as appendix in future reports (3.9)
- 5) Ensure Emergency Response Plan is reviewed annually as required (2.12)
- 6) Ensure Environmental Procedures Manual is reviewed and kept up to date as required (2.13)
- 7) All non-contact water must report directly to settling pond prior to discharge to the environment (2.16)
- 8) Ensure Tracking ID system is implemented as discussed in the Soil Acceptance Plan (5.1)
- 9) Review all Details/Findings listed in Inspection Details section below and take appropriate action where necessary.

This inspection report serves as an advisory to the permittee noting non-compliances. Please notify me in writing within 30 days of receipt of this letter, advising what corrective measures have and are being taken to bring this authorization into compliance. Contact me with any concerns or question at laura.hunse@gov.bc.ca or 250.751.3224.

ADDITIONAL COMMENTS:

Compliance Summary	In	Out	N/A	N/D
Discharge	4	0	3	1
Operations	13	0	9	4
Reporting	1	2	0	1
Monitoring	1	3	2	1

Inspection Details

Requirement Type:	Requirement Description:	Details/Findings:	Compliance:

<u>Discharge</u>	1.1 Authorized Discharges ____ General Conditions This section applies to the discharge of refuse from a contaminated soil treatment and to the landfill facility. 1.1.1 The combined maximum rate of discharge from the treatment and to the landfill facility if 100 000 tonnes/yr. 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.	Landfill facility construction not yet complete. No discharge to the landfill has occurred.	<u>Not Applicable</u>
<u>Operations</u>	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.	Landfill facility construction not yet complete, discharge not yet occurring.	<u>Not Applicable</u>
<u>Operations</u>	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 authorised works are a lined asphalt paved soil management and bioremediation treatment area of approximately 1800 m², temporary soil holding area (as described under Subsection 2.3), biocell, berm, primary and secondary containment detection and inspection sumps and associated cleanout ports, catch	Authorized works appear to have been completed and certified as-built plans are on file.	<u>In</u>

	basins, groundwater monitoring wells (as described under Subsection 3.3), management works and related appurtenances approximately located as shown on Figure A of the permit.		
<u>Operations</u>	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, Xylene (BTEX), Styrene, Methyl Tertiary Butyl Ether (MTBE), Volatile Petroleum Hydrocarbons (VPHs), Light and Heavy Extractable Petroleum Hydrocarbons (LEPHs/HEPHs), 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.	No soils were bioremediated during the period covered by this inspection. Soils awaiting landfilling have analysis supporting	<u>Not Applicable</u>
<u>Operations</u>	1.3 Authorized Discharge ____ Landfill Facility This section applies to the discharge of refuse from a soil treatment facility and from relocated contaminated soil and associated ash. The site reference number for this discharge is E292889.	The landfill facility construction is not yet complete.	<u>Not Applicable</u>

	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 of the permit.		
<u>Discharge</u>	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), liquids, putrescible and other wastes must not be discharged. The Director may specify different standards and other substances in writing for the protection of human health or the environment.	No discharge to the landfill facility has occurred yet. The recent soils added to the Soil Management Area (SMA) awaiting landfill have metals levels not exceeding Schedule 7 Column IV, according to the May 6, 2015 Stantec report.	<u>In</u>
<u>Discharge</u>	1.3.3 The types of soil that can be discharged at the landfill facility are soils and associated ash contaminated with metals, Dioxins, Furans, BTEX, MTBE, VPHs, LEPHs/HEPHs, PAHs, Styrene, Chlorinated Hydrocarbons, Phenolic Substances, Chloride, Sodium and Glycols as defined in Schedules 4 and 5 of the CSR.	No discharge to the landfill facility has occurred yet. The recent soils added to the SMA awaiting landfill have metals levels not exceeding Schedule 7 Column IV, according to the May 6, 2015 Stantec report.	<u>In</u>

<u>Discharge</u>	1.4 This section applies to the discharge of effluent from the water treatment system (WTS). The site reference number for the WTS discharge is E292170. 1.4.1 The annual average rate of the WTS discharge is 12.1 cubic metres per day.	The annual average has not exceeded 12.1 m3/day.	<u>In</u>
<u>Discharge</u>	1.4.2 The maximum rate of the WTS discharge is 274 cubic metres per day.	The maximum discharge rate has not been exceeded.	<u>In</u>
<u>Discharge</u>	1.4.4 The characteristics of the discharged treated effluent must 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 (AL) protection and Drinking Water (DW) uses for the parameters of concern: Inorganic Substances including metals, VPHw, LEPhw, VHW6-10, EPHw10-19, PAHs, BTEX, Styrene, Chlorinated Hydrocarbons, Phenolic Substances, Chloride, Sodium, Glycols, pH and Oil & Grease. Dioxins and Furans analysis must be conducted at a laboratory and using an analytical method agreed to by the Director and results must be below detection limit at all times. The source of the discharge must be limited to site stormwater runoff and water from the primary and secondary containment systems	According to the Quarterly Monitoring Report Update (Active Earth, May 26, 2015). No discharge to the environment has taken place during the evaluation period of this inspection. Following the recent issuing of the amended permit, it is expected that all quality standards shall be met as listed in the permit. If changes to the quality requirements are desired, an application to amend the permit must be submitted. The follow-up commissioning report of May 1, 2015 (Water Treatment Plant Commissioning Report, Active Earth Engineering), notes that during this commissioning period all parameters have met Health Drinking Water guidelines and all but chloride, zinc and aluminum have met Aquatic guidelines at the treatment plant, though these parameters have been met at the discharge point to the environment (from the sedimentation pond). Both of the zinc and aluminum concerns appear to have been addressed satisfactorily, but the chloride AW standard has not been consistently	<u>Not Determined</u>

	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.	achieved (though the standard is met at the pond discharge point). If chloride (or any other parameter) concentrations do not meet permit requirements, additional treatment may be required.	
<u>Operations</u>	1.4.5 The authorized works are surface runoff collection and diversion ditches associated with the WTS, WTS (including pH control and flocculent injection system, settling tank, bag and activated carbon filters), leachate and leak detection reservoirs, flow measurement device, monitoring and sampling equipment, reservoirs and related appurtenances approximately located as shown on Figure A of the permit. 1.4.6 The authorized works must be complete and in operation while discharging.	Works are in place.	<u>In</u>
<u>Discharge</u>	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 rate of the settling pond discharge is 42,500 cubic metres per day for up to 1 in 10 year return period flood event of 24 hour duration.	No pond discharge occurred during the period covered by this inspection. See findings in 1.5.3, below.	<u>Not Applicable</u>
<u>Discharge</u>	1.5.3 The characteristics of the settling pond discharge effluent (SW-1) must be equivalent to or better	According to the Quarterly Monitoring Report Update (July 2014 - April 2015), no discharges from the sedimentation	<u>Not Applicable</u>

	than the most stringent of those BCAWQG and BCWWQG for Freshwater Aquatic Life uses and Total Suspended Solids (TSS) must not exceed 25 mg/L for up to 1 in 10 year return period flood event of 24 hour duration. For flood events greater than 1 in 10 year return period flood event of 24 hour duration, the characteristics of the settling pond discharge must not exceed background concentrations (SW-4). The source of the discharge must be limited to non contact site stormwater runoff and treated effluent released from the WTS described in Subsection 1.4. The Director may specify different standards and other substances in writing for the protection of human health or the environment.	pond occurred during that monitoring period as the water level in the pond did not reach the outlet elevation at any point.	
<u>Operations</u>	1.5.4 The authorized works are surface runoff collection and diversion ditches, leachate, surface runoff and leak detection control reservoirs, one surface settling pond, flow measurement device, monitoring and sampling equipment, emergency overflow and related appurtenances approximately located as shown on Figure A of the permit. 1.5.5 The authorized works must be complete and in operation while discharging.	A flow measuring device has not been installed for the ancillary discharge. This was noted in the previous inspection as well and would be marked out of compliance had water levels reached high enough to discharge during the period covered by this inspection.	<u>Not Applicable</u>

<u>Operations</u>	1.5.6 Settled solids which have accumulated in the settling pond must be removed as required to maintain a minimum water depth below the pond decant of 0.5 metre. The removed solids must be disposed of in a manner approved by the Director.	There has not been significant quantities of settled solids to necessitate removal to date.	<u>Not Applicable</u>
<u>Operations</u>	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 4 and 5 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.	To date no soils/ash have been taken in for treatment. According to the documentation, all soils meet the quality requirements of section 1.3.2 and 1.3.3 of the permit and are awaiting landfilling (upon completion of the landfill cell).	<u>Not Applicable</u>
<u>Operations</u>	2.2 Screening and Acceptance of Soil The Permittee must submit a Soil Acceptance Plan prepared by a Qualified Professional to the satisfaction of the Director for screening soil and associated ash for all potential contaminants of concern	Only one shipment of soil was accepted during period covered by this inspection and that was on May 8, 2015, from 1950 Blanshard Street, which was approximately 600 tonnes. Soils accepted during this inspection period were accompanied by documentation from Stantec Consulting, who analysed	<u>In</u>

	prior to receiving any material at the facility. No changes must be made to the plan without prior approval by the Director. The Director may amend the plan for the protection of human health or the environment. Those soils suspected to be unacceptable must be either rejected immediately or placed in a holding area (as defined in Subsection 2.3) 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 must not be mixed with any other soil and must be removed from the facility in accordance with the requirements of the Environmental Management Act and of the CSR	the stockpiles at 1950 Blanshard Street, Victoria, for metals to determine suitability for disposal at CHH. The Blanshard shipment took place on various days from May 8 to June 12 and totalled approximately 2060 tonnes.	
<u>Operations</u>	2.3 Holding Area for Soil and Associated Ash Suspected/Determined to be Unacceptable The Permittee must designate a holding area within the soil management area for short term storage of soil waiting for re-characterization or shipment to an appropriate management site as determined by a Qualified Professional. Short term storage must not exceed 30 days from the	There are no soils awaiting re-characterization.	<u>Not Applicable</u>

	day of the delivery or as agreed by the Director. The soil must be kept separate from the soil treatment area and be protected from the weather at all times.		
<u>Operations</u>	2.4 Bedrock Integrity Inspection and Risk Assessment A bedrock integrity inspection and risk assessment report must be submitted to the Director prior to the construction of any 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 submitted to the satisfaction of the Director and 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.	This report has been submitted to the satisfaction of the director (Bedrock Integrity Inspection and Risk Assessment, Oct 13, 2013, Active Earth Engineering Ltd.)	<u>In</u>
<u>Operations</u>	2.5 Soil Aeration a) Where the thickness of contaminated soil within the soil treatment facility is greater than 30	No soils have been taken accepted for bioremediation during this period nor to date.	<u>Not Applicable</u>

	cm, the Permittee must periodically conduct mechanical soil aeration. Soil aeration must only be done 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 <u>good</u>; 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 aeration event the Permittee must record the ventilation index forecast, time of sunrise and sunset, time and duration of aeration, and ambient temperature. Records must be tabulated along with soil volumes aerated and chemical characteristics in the biocell at the time of aeration.		
<u>Operations</u>	2.6 Soil Amendment and Prohibition of Blending Bioremediation must be undertaken without blending/mixing of contaminated soil with cleaner soils for the purpose of dilution to meet the required standards. Soil amendments which will enhance remediation potential, including bulking materials such as sawdust or straw, may be added prior to or during treatment. Should water be	No soils have been accepted for bioremediation during this period nor to date.	<u>Not Applicable</u>

	required to enhance soil treatment, contact water generated at the facility must be used in priority.		
<u>Operations</u>	2.7 Weather Protection The Permittee must 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 must cover any soil stored within the holding area at all times.	Cover not required at time of inspection, though permanent cover will be required as part of the amended permit.	<u>Not Determined</u>
<u>Operations</u>	2.8 Erosion and Sedimentation Control The Permittee must ensure erosion and sedimentation control measures are implemented with the soil management and treatment area and the landfill area, to limit sediment releases to the settling pond, the water treatment system and to the receiving waters. Storm water runoff must be diverted away from the soil management and treatment area and all active landfill areas at all times. Erosion and sedimentation controls must be developed and implemented according to industry best management practices and consider the Aggregate Operators Best Management Practices Handbook prepared by the Ministry of Energy	Erosion and sedimentation control are discussed in the Environmental Procedures Manual (Section 7 of EPM).	<u>In</u>

	and Mines.		
<u>Operations</u>	2.9 Odour Control There must be no objectionable hydrocarbon odour evident outside the property boundaries. The Permittee must, 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 must be defined in the EPM as documented in Subsection 2.13 and include, but are not limited to, reduced soil aeration times and the covering of soil piles. The Director may amend the permit to require the implementation of additional control measures to limit odour generation.	No objectionable odour observed or reported.	<u>In</u>
<u>Operations</u>	2.10 Dust Control Fugitive dust created within the operation area must be suppressed. Measured dustfall must not exceed the B.C. Ambient Air Quality Residential Objective of 1.7 mg/(dm²-day) over a two week averaging period at the property boundary. The contingency measures must be documented 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.	Dust suppression tactics are discussed in section 8.1 of the EPM. No measured dustfall records submitted.	<u>Not Determined</u>

	The Director may amend the permit to require the implementation of additional control measures on fugitive dust sources.		
<u>Operations</u>	2.12 Maintenance of Works and Emergency Procedures The Permittee must 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 must 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 (ERP) to the satisfaction of the Director that describes the procedures to be taken to prevent or mitigate any discharge in contravention of the EPM. The ERP must be immediately implemented if there is a discharge, or any risk of a discharge in contravention of the EPM. In addition, an up-dated ERP, including a report on any emergency responses, taken	The ERP has been submitted to the satisfaction of the director and is listed in section 9 of the EPM.	<u>In</u>

	in the previous year, must be kept available, on site for inspection, as defined under Subsection 5.1. The Permittee must review the ERP at least on an annual basis to determine if any changes are required and submit any revisions to the Director for acceptance.		
<u>Operations</u>	2.13 Environmental Procedures Manual An Environmental Procedures Manual (EPM) must be prepared and submitted by the Permittee to the Director. No soil may be received prior to acceptance of the EPM by the Director. The EPM must be kept current and available for use as a guide at all times at the facility. The manual must cover all typical aspects of an Environmental Management Systems (EMS) relevant to the management of the soil treatment, water treatment and landfill facilities including but not limited to, the following items: a) Risk identification and prioritization; b) Administrative and engineering controls; c) Roles and responsibilities; d) Training requirements; e) A Soil Acceptance Plan; f) A Water Management Plan; g) An Environmental Monitoring Plan, including on and off site monitoring locations and the sampling procedures for soil, water, groundwater and air quality, as required;	The EPM has been submitted to the director as required. Most recent version on file is v 1.3, 2015 June.	<u>In</u>

	h) An Emergency Response Plan, including contingency measures. i) Details on the site preparation and the construction of landfill cells; j) Operation, inspection and maintenance of the soil management and treatment facility, the landfill facility, the water treatment system, erosion and sediment controls measures, the settling pond and associated appurtenances; k) Internal and external EMS audits, and; l) Notification, reporting, investigation and corrective and preventive measures. The Permittee must review the EPM at least on an annual basis to determine if any changes are required and submit any revisions to the Director for acceptance. Annual reviews and submission of revisions are due on March 31 of each year.		
<u>Operations</u>	2.14 Advisory Committee The Permittee must establish an Advisory Committee and develop terms of references to the satisfaction of the Director. The Committee must be composed of one representative of each relevant regulatory agency and one representative from the local government. The Committee must meet annually within 3 months of the submission of the annual report as required under Subsection 5.3 and provide advice to the Director within 30 days of the meeting. Based on advice of the Committee, the Director	It is anticipated that the permittee will proceed with establishing this committee.	<u>Not Determined</u>

	may revise the monitoring, sampling and reporting requirements in Sections 3 and 5.		
<u>Operations</u>	2.15 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 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 permit.	In compliance	<u>In</u>
<u>Operations</u>	2.16 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	Water Management Plan (various sections, EPM) -- all non-contact waters must report to the sedimentation pond. It appears that a sump has been created to drain waters from just north of the sedimentation pond directly to the pond outlet (photos 7 and 8, attached), though no pumping was not actually occurring at time of inspection. Any non-contact waters must be diverted to the sediment pond for settling prior to discharge.	<u>Not Determined</u>

	other than the soil management area is considered a bypass.		
<u>Operations</u>	2.17 Process Modifications The Director must be notified in writing prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge.	Process modifications not implemented.	<u>In</u>
<u>Operations</u>	2.18 Plans - New Works Plans and specifications of the works must 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.	Ensure QP certifies construction of permanent cell prior to discharge.	<u>In</u>
<u>Monitoring</u>	3. MONITORING AND SAMPLING REQUIREMENTS 3.1 Incoming Soil and Associated Ash Sampling and Analysis The Permittee must 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 contaminants must include, but not be limited to, the parameters of concern listed in Subsection 1.3.3, as determined by a Qualified Professional. The Director may require testing of soil and associated ash for additional parameters.	QA/QC sampling conducted as described in section 6.5 of the EPM.	<u>In</u>

<u>Monitoring</u>	3.2 Treated Soil Sampling and Analysis The Permittee must 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 must be considered to be of suspect waste soil quality. Soil must be analysed prior to disposal as authorised in Subsection 1.2 and 1.3 of this permit. The samples must be analysed for the parameters relevant to the type of contamination for which the soil is undergoing treatment as determined by a Qualified Professional. The appropriate parameters must include, but must not be limited to, the parameters of concern listed in Subsection 1.3.3 as determined by a Qualified Professional. Confirmation of completion of soil treatment must be obtained in writing from a Qualified Professional prior to discharge, for each stockpile of treated soil.	This is applicable to soils that have been bioremediated at the permitted facility, and no soils have been treated to date.	<u>Not Applicable</u>
<u>Monitoring</u>	3.3 Groundwater Sampling and Analysis The Permittee must install and maintain a minimum of seven groundwater sampling facilities (MW-1 (S/D), MW-2, MW-3(S/D), MW-4 and MW-5) as shown on Figure B and obtain groundwater samples once each quarter in a manner satisfactory	MW-4 is reported no longer operational due to tampering and has not yet been replaced. It must be replaced as soon as possible. Ensure proper documentation is submitted to the director as required. According to the Quarterly Monitoring Report Update (July 2014 - April 2015), there are no impacts observed to groundwater quality related to the	<u>Out</u>

	to the Director. MW-4 and MW-5 must be drilled using a non-destructive method and cores must be logged by a Qualified Professional. The design and location of the wells must be to the satisfaction of the Director. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc. Groundwater samples must be analysed for all potential contaminants of concern. The contaminants may include, but not be limited to, the parameters of concern listed in Subsection 1.3.3, as determined by a Qualified Professional. The groundwater quality must be compared to the standards described in Schedules 6 and 10 of the CSR or any additional standards specified by the Director in writing. 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.	operations under the permit. More in depth trend analysis will be included as part of annual reports.	
<u>Monitoring</u>	3.4 Surface Water Sampling and Analysis The Permittee must sample the water treatment system effluent (WTS) and the settling pond discharge point (SW-1) monthly and every 2000 m3 for	Monthly sampling has not been conducted during this monitoring period due to the limited site activity and appeal process.	<u>Out</u>

	the water treatment system discharge effluent in a manner suitable to the Director. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc. Turbidity of the settling pond discharge effluent (SW-1) must be monitored bi-weekly between November to April and after every event greater than 1 in 10 year return period flood event of 24 hour duration. Surface water samples must be analysed for all potential contaminants of concern. The contaminants may include, but not be limited to, the parameters of concern listed in Subsection 1.3.3, as determined by a Qualified Professional. The surface water quality results must be compared to the standards set out in Subsection 1.4.4 and 1.4.5.		
<u>Monitoring</u>	3.5 Air Quality Monitoring The Permittee must 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 must 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	Loads on site do not have measureable volatile contaminant concentrations exceeding the established thresholds.	<u>Not Applicable</u>

	treatment facility at the location and as documented in the EPM. The ambient air sample must be analysed for the all potential contaminants of concern, as determined by a Qualified Professional, and results must be compared to the CSR Schedule 11 RL standards. In the event that results exceed the standards, the Permittee must follow the requirements stated under Subsection 2.9.		
<u>Monitoring</u>	3.6 Receiving Environment Sampling The Permittee must implement a receiving environment monitoring program for the receiving groundwater and surface water summarized in the table below and as defined under the EPM: The following Groundwater sites to be sampled quarterly: Up Gradient (MW-4) Southeast corner of the site Quarterly Down Gradient (MW-1(S/D)) On site Down Gradient (MW-2) Property boundary Down Gradient (MW-3(S/D)) Property boundary Down Gradient (MW-5) North of the site The following Surface Water sites to be sampled 5 in 30, which refers to at least 5 weekly samples taken in a period of 30 days, 2 times/year, conducted during fall first flush event	The receiving environment was not sampled quarterly during this monitoring period due to limited site activity and appeal process.	<u>Out</u>

	and in the spring freshet. Due to the ephemeral nature of some of the creeks, the first 5 in 30 sample should be collected when the ground has first been saturated. Up Gradient (SW-4) Shawnigan Creek Up Gradient (SW-2) Ephemeral Creek 1 Down Gradient (SW-5) Shawnigan Creek Down Gradient (SW-3) Ephemeral Creek 2 Flow measurements must be collected from all surface water monitoring locations at the time of sampling. Based on the results from the receiving environment monitoring program, the monitoring requirements may be extended or altered by the Director.		
<u>Monitoring</u>	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	Please include original lab analysis, blank, and duplicate sample documentation as appendix in future reports.	<u>Not Determined</u>

	Canadian Association of Laboratory Accreditation (CALA) unless otherwise instructed by the Director.		
<u>Operations</u>	4. SECURITY REQUIREMENTS 4.1 Closure Plan The Permittee must submit a closure plan to the satisfaction of the Director in 6 months after the issuance of this permit. Based on monitoring results or changes in the operation, the Director may require amendment of the plan for environmental protection. The closure plan must 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.	Submitted as required. (See Closure Plan and Financial Security Posting, Oct 22, 2013, Active Earth Engineering Ltd.)	<u>In</u>
<u>Operations</u>	4.2 Posting of Security and Costs The Permittee must submit a cost estimate for maintenance, monitoring, remediation and closure of the landfill for the active life of the site and a minimum twenty-five year	Submitted as required. (See Closure Plan and Financial Security Posting, Oct 22, 2013, Active Earth Engineering Ltd.)	<u>In</u>

post-closure period based on the current updated Closure Plan referred to in Subsection 4.1. The cost estimate must 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:

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

Any money spent from the posted security must 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.		
<u>Reporting</u>	5. REPORTING REQUIREMENTS 5.1 Records Maintain for inspection by Environmental Protection Division staff, a record of the following logs, suitably tabulated: 1) Landfill cells construction QA/QC results; 2) Maintenance records of pollution control equipment listed as authorized works; 3) 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 identified and implemented; 4) 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; 5) Tracking ID number linked to soil and associated ash analysis results and the signature of a Qualified Professional who certifies completion	5) Though essentially the Soil Acceptance Plan has been followed as described in section 6 of the EPM, no coded Tracking ID number (as described in EPM 6.4) was issued for the 1950 Blanshard shipment commencing May 8, although there is an associated project number. I understand the tracking process is being further refined and updated WAA and Soil Acceptance Forms to reflect this. The refined system is being used for all new jobs after the Blanshard shipment, the tracking system will be retroactively applied to all loads that have been received thus far. Ensure any changes are incorporated into the EPM.	<u>Out</u>

	of remediation in accordance with the requirements of the CSR and compliance with this permit; 6) Location of each batch of soil and associated ash in the soil management and treatment and landfill area on a map;		
<u>Reporting</u>	5.1 Records cont'd from above 7) Analyses of screening of incoming soils and associated ash, and associated QA/QC results, as described in Subsection 2.1 and 2.2 of this permit; 8) Soil treatment activities including turning records and quantities of nutrients, bacteria seed or amendments added by date; 9) Weather conditions during turning events as described in Subsection 2.5 of this permit; 10) Results of the vapour and dust monitoring activities as required; 11) Analyses of treated soil, and associated QA/QC results, as described in Subsection 1.2 of this permit; 12) Quarterly volumes of soil stored in the holding area, awaiting final disposal as described in Subsection 2.3 of this permit; 13) 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,	7. QA/QC results provided as requested.	<u>In</u>

	respectively, must include batch sizes, number of samples collected and analysed per volume. Records must be kept on site or at another location acceptable to the Director for at least three years and made available upon request.		
<u>Reporting</u>	5.2 Environmental Quarterly Reports The Permittee must submit environmental quarterly reports prepared by a Qualified Professional with all monitoring data and associated QA/QC results, interpretations, conclusions and recommendations in a format acceptable to the Director and post the results online and provide a hard copy to the Director no later than 30 days after the end of each quarter.	Regular quarterly reports were not submitted during the time of the appeal; however, quarterly reporting has resumed following the conclusion of the appeal and issue of amended permit in June. Most recent report covers period from 2014 July to 2015 April.	<u>Out</u>
<u>Reporting</u>	5.3 Environmental Annual Reports The Permittee must submit an environmental annual report prepared by a Qualified Professional with monitoring data and associated QA/QC results, interpretations, conclusions and recommendations in a format acceptable to the Director no later than March 31 of each year. The environmental annual report must 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	Not evaluated for 2014 due to very limited site activity and appeal process. 2015 report will be due at the closing of March, 2016.	<u>Not Determined</u>

received for treatment, direct landfilling and as direct landfill cover;
3) Quality and quantity (in tonnes and m3) of soil and associated ash that 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) Landfill operational plan and 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 must post the environmental annual report online and provide a hard copy to the local library by March 31 of each year. 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.

Inspection Details Continued

Were the following collected during inspection:	
Samples? ☒	EMS No.
Photos? ☒	
Other (please specify) Groundwater and surface water reports submitted under separate memo.	
Is the Inspection related to an EA Project? ☐	EA Project Certificate No.

INSPECTION CONDUCTED BY:	
Signature Laura Hunse	Date Signed 2015-06-22
ENCLOSURE(S) TO REGULATED PARTY & DESCRIPTION: 	
CVIS Archives	
REGULATORY CONSIDERATIONS:	
This inspection document may not list all requirements as listed in the permit PR-105809. Please refer to the official permit document for full text and all requirements.	
DISCLAIMER:	
Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice. To see the most up to date version of regulations and codes of practices please visit: http://www.bclaws.ca/ If you require a copy of the original permit, please contact the inspector noted on this inspection record or visit: http://www2.gov.bc.ca/gov/topic.page?id=DF89089126D042FD96DF5D8C1D8B1E41&title=Publicly%20Viewable%20Authorizations It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.	

				Mailing Address:	
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Ministry of Environment	West Coast	2080-A Labieux Rd	Phone: (250) 751-3100
	Region Environmental Protection Division	Nanaimo, BC V9T 6J9	Fax: (250) 751-3103
Website: http://www.gov.bc.ca			

Authorization: 105809	Client Name: Cobble Hill Holdings (BC0754588)
CVIS IR #: 20570	May 13, 2015 Site Inspection Photos

General site
overview



Authorization: 105809	Client Name: Cobble Hill Holdings (BC0754588)
CVIS IR #: 20570	May 13, 2015 Site Inspection Photos

Photo 1

Nearly complete landfill cell with roll of liner, looking approx. NE



Photo 2

Looking approx. SW



Authorization: 105809	Client Name: Cobble Hill Holdings (BC0754588)
CVIS IR #: 20570	May 13, 2015 Site Inspection Photos

Photo 3

Soil management area with 1950 Blanshard soil in foreground



Photo 4

Soil pile regulated in agreement with land remediation group



Authorization: 105809	Client Name: Cobble Hill Holdings (BC0754588)
CVIS IR #: 20570	May 13, 2015 Site Inspection Photos

Photo 5

Soil management
area holding
pond



Photo 6

Wastewater
treatment plant
and (dry) settling
pond



Authorization: 105809	Client Name: Cobble Hill Holdings (BC0754588)
CVIS IR #: 20570	May 13, 2015 Site Inspection Photos

Photo 7

Non-contact
water sump



Photo 8

Sump hose
directly to
sedimentation
pond discharge
pipe

