



Ministry of Environment
Inspection Record

**Environmental
Protection
Division**

EP System: <u>AMS</u>	Inspection Status: <u>FINAL</u>
System Number: <u>105809</u>	Inspection No: <u>27734</u>
EP System Status: <u>Active</u>	Inspection Date: <u>2016-08-03</u>
Region: <u>West Coast</u>	Office: <u>Nanaimo</u>
Trigger: <u>Planned</u>	Incidents of Non-Compliance Observed: <u>No</u>
Non-Compliance Decision Matrix Level: <u>Level 0</u>	Non-Compliance Decision Matrix Category: <u>Category 0</u>
Inspector Name(s): <u>Laura Hunse</u>	CPIX: <u>Over 2 = High</u>
Audit: <u></u>	Total Non-Compliance(s): <u>0</u>
Regulated Party: <u>COBBLE HILL HOLDINGS LTD. (BC0754588)</u>	
Regulated Party Contact(s): <u>Marty Block (CHH director), Todd Mizuik (SIRM)</u>	
Mailing Address: <u>South Island Aggregates Ltd. PO Box 282 Malahat BC V0R 2L0</u>	
Phone No: <u>(250)743-0811</u>	Fax No: <u>(250) 743-3338</u>
Contact Email: <u>marty.sia@shaw.ca</u>	
Location Description or Site Address: <u>460 Stebbings Road, Shawnigan Lake</u>	
Latitude: <u>48.5511</u> <u>N</u>	Longitude: <u>123.6066</u> <u>W</u>
Receiving Environment(s): <u>Groundwater, Land & Surfacewater</u>	

Summary

MONITORING AND REPORTING REQUIREMENTS

Inspection Period:

From: 2016-08-03

To: 2016-08-03

Requirement Source:

Permit

Activity:

On Site

Waste Type:

Effluent

Inspection Summary:

Response:

Notice

On August 3, 2016, Environmental Protection Officer Laura Hunse conducted an onsite inspection of Cobble Hill Holdings Ltd. (BC0754588) (CHH)'s operation near Shawnigan Lake, authorized under Environmental Management Act refuse permit 105809 (Permit). Also present during the inspection were site operations staff Todd Mizuik and Tom Good of South Island Resource Management (SIRM) as well as two ministry co-op students. Attendees gathered first to discuss matters of the permit as well as various concerns brought forward by the public; this was followed by a site tour to view the works and assess onsite compliance. Copies of records were obtained to be reviewed under separate inspection report (IR 29047).

The scope of this inspection is limited to assessing compliance with regards to the concerns discussed at the site and the Permit clauses specified in the "Inspections Details" section below.

Cobble Hill was found to be in compliance with the following sections of the Permit: 1.2.1, 1.3.1, 1.4.5, 1.4.6, 1.5.4, 2.7, 2.7.1, 2.8 and 2.9.

See "Additional Comments" below for further discussion.

ACTIONS REQUIRED BY REGULATED PARTY:

As discussed at the site inspection, please submit the following documents, signed and sealed by a qualified professional (QP): As-Built cross-section details for Permanent Encapsulation Cell 1A, 1B and 1C; Soil Management Area (SMA) permanent roof structure plans and specs; cover letter with attached original As-Built plans/specs for the newly located Water Treatment System (WTS).

ADDITIONAL COMMENTS:

Regarding the WTS location/plans and specs: SIRM stated that, for operational reasons, the WTS was physically moved from beside the settling pond to beside the SMA; however, the WTS has not changed at all from the previously submitted As-Built/specs certified by a QP. SIRM committed to submit a cover letter certified by a QP stating that the WTS has not changed at all from the previously submitted As-Built plans/specs certified by a QP, and a copy of the previously submitted As-Built plans/specs certified by a QP.

Regarding the landfill liner, and alleged leakage through Cell 1A/1B liners: The leak detection system is monitored as part of the daily inspection routine and there has been no indication of liner leaks. The onsite engineer as well as the independent site geotechnical engineer agree that the visible seepage exposed by excavation is groundwater in the soil outside the encapsulation cell.

Regarding construction of Permanent Encapsulation Area (PEA) extension and installation concerns: Actual construction may deviate slightly from submitted plan/specs and generic cross-sections and discretion of the professionals in the field is acknowledged. As-Built plans/specs for PEA Cell 1C are on file at MOE; SIRM will submit accurate As-Built cross-section details for PEA Cells 1A, 1B and 1C, certified by a QP, including all details (e.g. leak detection works, all layers, anchor trenches, etc.). Regular inspections are made as part of the liner installation process, and welds and patches are applied as necessary. What looks to be excavation

tracks on the liner in a photo submitted by the public appears to be a factory weld. Actual excavator track damage on surplus liner was also viewed at the site and would cause significant damage (see photos 11 - 14).

Regarding the SMA -- storage of soil outside of the SMA: It was discussed that contaminated soil had been temporarily stored on the concrete pad north of the SMA permanent roof. Any liquid from the pad is collected and routed to the contact water pond and the WTS. SIRM was reminded that all contaminated soil must be stored under the SMA permanent roof and no further soil was stored inside or outside the SMA at the time of inspection.

Regarding the SMA -- structural concerns: repairs to the structure were viewed at the inspection. Results of sediment sample at point of concern did not exceed CSR Schedule 7 Col II levels except in the case of chromium which tested at below original background levels found in quarry rock testing by Golder in 2013. The wetting of the soil shown in photos submitted by the public near the SMA structural buckling appears to be a result of runoff from the roof of the SMA in that area as opposed to sourcing from beneath the wall (see photos 15 and 16). A QP has signed off on the structural safety. SIRM will provide a copy of the QP certified plans/specs for the cover.

Regarding concerns of liquid discharge into the PEA: As part of regular maintenance to the contact water holding pond, the majority of liquid was decanted off for treatment in the WTS, and the remaining saturated material removed by vac truck. It was determined that the saturated sludge was not suitable for direct discharge to the landfill; the majority of the sludge was taken to the SMA where it was stabilised and then discharged to the PEA.

Compliance History:

2016-08-08 -- 2B Warning
 2016-06-14 -- 2B Warning
 2015-12-17 -- Notice -- No non-compliances noted.
 2015-12-02 -- Notice -- No non-compliances noted.
 2015-11-14 -- 2A Warning
 2015-09-15 -- Notice -- No non-compliances noted.
 2015-05-13 -- 1A Advisory
 2014-05-29 -- 1A Advisory

Please contact me with any questions at laura.hunse@gov.bc.ca or 250.751.3224.

Compliance Summary	In	Out	N/A	N/D
Operations	8	0	0	0

Inspection Details

Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
Operations	<p>SMA AUTHORIZED WORKS</p> <p>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.</p> <p>1.2.1 The authorized works are a lined asphalt paved soil management and bioremediation treatment area of approximately 1800 m2, temporary soil holding area (as described under</p>	<p>The authorized works are complete and in operation and located as per updated site map as included with 2016 Q2 report p. 20. See photos 1 and 2.</p>	In

	Subsection 2.3), biocell, berm, primary and secondary containment detection and inspection sumps and associated cleanout ports, catch basins, groundwater monitoring wells (as described under Subsection 3.3), management works and related appurtenances approximately located as shown on Figure A.		
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>LANDFILL AUTHORIZED WORKS</p> <p>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.</p> <p>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.</p>	The authorized works are complete and in operation and located as per updated site map as included with 2016 Q2 report p. 20. See photos 3 and 4.	<u>In</u>
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>WTS AUTHORIZED WORKS</p> <p>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.</p> <p>1.4.5 The authorized works are surface runoff collection and diversion ditches associated with the WTS, WTS (including pH control and flocculent injection</p>	The authorized works are complete and in operation and located as per updated site map as included with 2016 Q2 report p. 20. See photos 5 and 6.	<u>In</u>

	<p>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.</p> <p>1.4.6 The authorized works must be complete and in operation while discharging.</p>		
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>SETTLING POND AUTHORIZED WORKS</p> <p>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.</p> <p>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.</p>	<p>The authorized works are complete and in operation and located as per updated site map as included with 2016 Q2 report p. 20. See photo 7.</p>	<u>In</u>
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>WEATHER PROTECTION</p> <p>2.7 A permanent roof must be placed over, cover, and prevent precipitation from entering the soil management and bio-remediation treatment area including the temporary soil holding area (as described under subsection 2.3), referred to in subsection 1.2.1. The Permittee must cover the active landfill areas completely from</p>	<p>SMA permanent roof is in place and no soil was stored outside or inside the covered area at time of inspection. See additional comments for further discussion. See photos 1 and 2.</p>	<u>In</u>

	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.		
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>WHEEL RINSING</p> <p>2.7.1 Before soil transport vehicles leave the site, their wheels must be rinsed to remove all soil and waste. Soil and waste must be managed in accordance with the permit. Rinse water must be directed to the leachate and leak detection reservoir(s). These requirements must be included in the Environmental Procedures Manual.</p>	Wheel rinsing facilities are in place, vehicle wheels and truck beds are rinsed and soil and waste dealt with in accordance with the permit. See photo 8.	<u>In</u>
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:
<u>Operations</u>	<p>EROSION AND SEDIMENTATION CONTROL</p> <p>2.8 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 and Mines.</p>	Ongoing and progressing erosion and sedimentation control measures including vegetation and diversion tactics were evident at the site visit. See photos 9 and 10.	<u>In</u>
Requirement Type:	Requirement Description:	Details/Findings:	Compliance:

<u>Operations</u>	ODOUR CONTROL 2.9 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.	No objectionable hydrocarbon odour was evident outside the property boundary at the time of inspection.	<u>In</u>
--------------------------	---	---	------------------

Were the following collected during inspection:	
Samples? <input type="checkbox"/> Photos? <input type="checkbox"/> EMS No. <input type="text"/>	
Other (please specify)	
<input type="text"/>	
<input type="text"/>	
Is the Inspection related to an EA Project? <input type="checkbox"/>	EA Project Certificate Number: <input type="text"/>

INSPECTION CONDUCTED BY:	
Signature	Date Signed
Laura Hunse	2016-08-11

ENCLOSURE(S) TO REGULATED PARTY & DESCRIPTION:
<input type="text"/>
<input type="text"/>
<u>CVIS Archives</u>

REGULATORY CONSIDERATIONS:
<input type="text"/>
<input type="text"/>

DISCLAIMER: <p>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.</p> <p>To see the most up to date version of regulations and codes of practices please visit: http://www.bclaws.ca/</p> <p>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</p> <p>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</p>

conditions listed in the inspection record.

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

Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 1

Soil Management
Area (SMA)



Photo 2

SMA



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 3

Southwest of
Landfill looking
northeast



Photo 4

Landfill southeast
corner looking
northwest



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 5

Water Treatment
System (WTS)



Photo 6

Containment
Pond



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 7

Settling pond
looking south.



Photo 8

Wheel Rinsing
facilities



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 9

Diversion ditch (aka east-west pit crest ditch) along landfill bordering south boundary (left side of photo)



Photo 10

Final west ditch, which now diverts non-contact flow in a manner which does not short-circuit settling time.



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 11

Factory welded
seam



Photo 12

Excavator tracks
on excess liner



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 13

In the installation process, any suspect areas on the liner are marked for further action



Photo 14

Typical hand-welded patch on liner



Authorization: 105809	Client Name: Cobble Hill Holdings
CVIS IR #: 27734	August 3, 2016 Site Inspection Photos

Photo 15

Reinforced outer
wall of SMA



Photo 16

Internal view of
reinforced area
of SMA

