

## **BI-WEEKLY STATUS REPORT**

### **Cobble Hill Landfill Closure**

<b>PROJECT # : PRJ18074</b>	<b>File #:</b> 18074- BWR-71
<b>REPORT #:</b> 71	<b>Date:</b> June 30, 2020
<b>SHA REPRESENTATIVES:</b> Dr. Tony Sperling, P.Eng. Scott Garthwaite Carly Wolfe, EIT	<b>Owner:</b> Cobble Hill Holdings Ltd.  <b>Contractor:</b> Allterra Construction Ltd.

#### **Semi Monthly Reporting Requirements SPO MO1701**

##### **Per SPO MO1701 Section 4:**

Commencing in the month that closure activities commence pursuant to the approved Updated Final Closure Plan, the Named Parties must submit semi-monthly status reports, certified by a Qualified Professional. The reports must include the status of closure activities, inspection results, quality control and testing results, photographs which support/document the quality control and testing results, inspection reports and other supporting documents as needed to fully document all stages and components of the closure activities.

##### **Per Condition 10 of June 26, 2019 Letter Re: Second Amended Spill Prevention Order MO1701, dated June 29, 2017 – Final Closure Plan:**

Identification of any deviations from the quality management plan and the construction activities work plan and implementation schedule referenced in conditions 3 and 4 of this approval; The results of inspections, repairs, quality controls and testing, in accordance with the quality management plan referenced in condition 5 of this approval; The planned activities (and associated timing) for the next reporting cycle; and The environmental monitoring program laboratory reports and tabulated results (Quarterly Only-Submitted quarterly, reviewed annually by others). Copies of all soil relocation documentation as required in condition 7 of this approval.

Status reports must be submitted by the 15th and 30th of each month (or the next business day thereafter if the 15th or 30th of the month is not a business day) until closure activities have been completed. Submissions must be made electronically to the following email inbox:  
[EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca).

**1. Status of Closure Activities**

- Activities related to QMP “Construction Activities” occurred this reporting cycle.
- Placement of 50 mm thick sand layer on PEA occurred this period.
- Deployment of 12 oz. non-woven geotextile over sand layer on PEA occurred this period.
- Placement of 200 mm thick drainage gravel layer over 12 oz. geotextile on PEA occurred this period.
- Deployment of 8 oz. non-woven geotextile over gravel drainage layer on PEA occurred this period.
- Placement and compaction of common fill soil stabilizing wedge at toe of PEA occurred this reporting period.
- Growing medium importation occurred this reporting period. Source site is 2251 Bear Mountain Parkway.
- Blast rock was placed in east-west drainage ditch to accommodate future access to transport SMA soil to PEA at south side of PEA this reporting period.

**2. Inspection Results**

- Permanent Encapsulation Area (PEA): Liner appears to be in good condition. No noticeable changes since last reporting period.
- Soil Management Area (SMA): All works are in good condition, no noticeable changes since last reporting period.
- Cut-off ditch upland of PEA: All works are in good condition, ditch still performing well.
- Pictures detailing inspection results are shown at the end of this report.

**3. Results of Inspections, Repairs, Quality Controls and Testing, in Accordance with the Quality Management Plan**

- See attached site inspection reports.
- The Cobble Hill Landfill Environmental Monitoring Plan (EMP) was updated this reporting period

**4. Identification of Any Deviations from the Quality Management Plan and the Construction Activities Work Plan and Implementation Schedule**

<input checked="" type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD  <input type="checkbox"/> DEVIATIONS OCCURRED THIS REPORTING PERIOD	Notes:
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## **5. The Planned Activities (and associated timing) for the Next Reporting Cycle**

- Growing medium importation is to continue into the subsequent reporting cycle.
- Placement of 50 mm thick sand layer on PEA is to continue into the subsequent reporting cycle.
- Deployment of 12 oz. geotextile over sand layer on PEA is to continue into the subsequent reporting cycle.
- Placement of drainage gravel over 12 oz. geotextile layer on PEA is to continue into the subsequent reporting cycle.
- Placement of 8 oz. geotextile layer over drainage gravel layer on PEA is to continue into the subsequent reporting cycle.
- Placement and compaction of common fill soil stabilizing wedge is to continue into the subsequent reporting cycle.

## **6. Environmental Monitoring Program Laboratory Reports and Tabulated Results**

- No sampling this reporting period.

## **7. Copies of All Soil Relocation Documentation**

- Origin site land use was assessed via Technical Guidance 10 on Contaminated Sites. Soil quality was confirmed per letters of assurance provided by CSAP to BC ENV.

## **8. Leachate Volumes Over Reporting Period**

- Total Leachate Collected: 5.08 m<sup>3</sup>
- Total Leachate Stored: 33.13 m<sup>3</sup>
- Total Leachate Transferred: 0 m<sup>3</sup>

## **9. Pictures**



**Picture #1: Looking southeast at PEA**



**Picture #2: Drain rock on south slope of PEA**



**Picture #3: Soil stabilizing wedge at east side of PEA**





**Picture #4: Growing medium stockpile**

Report prepared by:

Carly Wolfe, EIT

Report Reviewed by:

Dr. Tony Sperling, P.Eng.



*June 30, 2020*

**Note:** Report prepared by Sperling Hansen Associates Inc. If those in attendance have additions or objections to these notes, they should report back to Sperling Hansen Associates (SHA) within 3 days of receipt, otherwise, these notes will be considered a complete and accurate permanent record of this reporting period.

**Attachments:**

Cobble Hill Landfill Site Inspection Report 2020-06-16  
Cobble Hill Landfill Site Inspection Report 2020-06-17  
Cobble Hill Landfill Site Inspection Report 2020-06-18  
Cobble Hill Landfill Site Inspection Report 2020-06-19  
Cobble Hill Landfill Site Inspection Report 2020-06-22  
Cobble Hill Landfill Site Inspection Report 2020-06-23  
Cobble Hill Landfill Site Inspection Report 2020-06-24  
CHH Mine Construction Schedule (updated June 25, 2020)

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**GEL REPRESENTATIVE:**

Rahim Gaidhar, GIT

**Date:** June16, 2020

**Time:** 8:30AM – 5:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun

### **Construction Activities:**

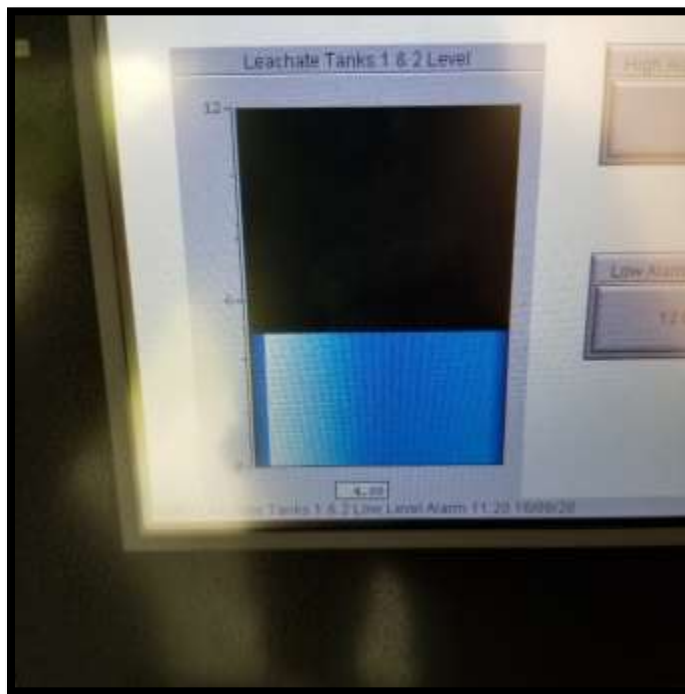
Islander Engineering Ltd (IEL) performed a site inspection on June 16, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items.



**Picture # 1:** Blast rock placed in East-West drainage ditch



**Picture # 2:** Stockpile location – South Stockpile



**Picture # 3:** Leachate Display – 4.88ft per tank



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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**GEL REPRESENTATIVE:**

Rahim Gaidhar, GIT

**Date:** June 17, 2020

**Time:** 8:30AM – 5:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 17, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items.



**Picture # 1:** New Lift – East face



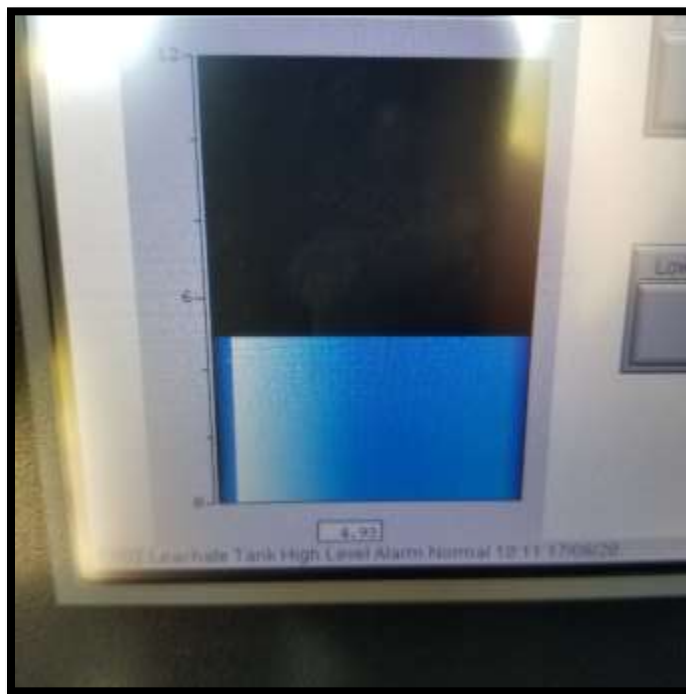
**Picture # 2:** New Lift – North Face



**Picture # 3:** Gravel Placement – East Face



**Picture # 4:** Soil Placement on the North Face



**Picture # 5:** Leachate Display – 4.93ft per tank

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**GEL REPRESENTATIVE:**

Rahim Gaidhar, GIT

**Date:** June18, 2020

**Time:** 8:30AM – 5:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 18, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items.





**Picture # 1:** Site – looking Southwest



**Picture # 2:** South Face – Sand and Filter Cloth Placement



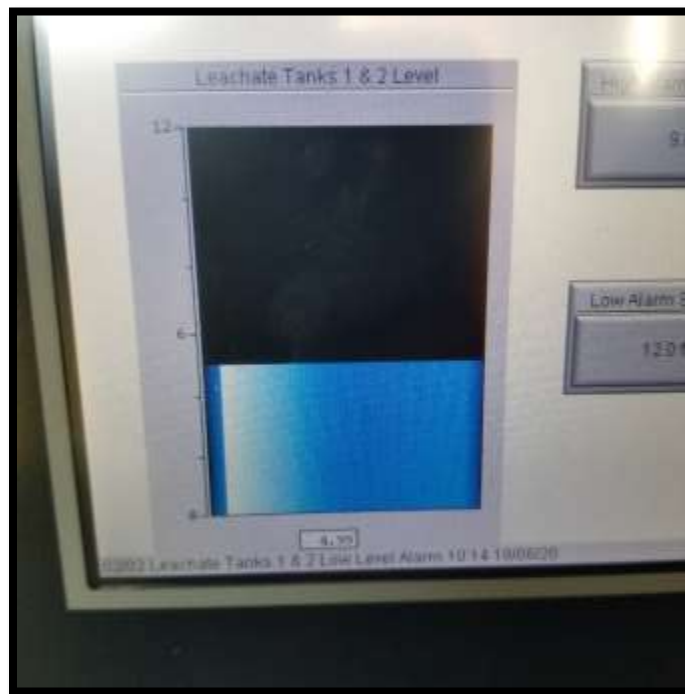
**Picture # 3:** South Face – Gravel Placement



**Picture # 4:** North Face – Preparation for soil placement



**Picture # 5:** East Face – Soil Placement



**Picture # 6:** Leachate Display – 4.99ft per tank

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**GEL REPRESENTATIVE:**

Rahim Gaidhar, GIT

**Date:** June19, 2020

**Time:** 8:30AM – 5:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 19, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items.



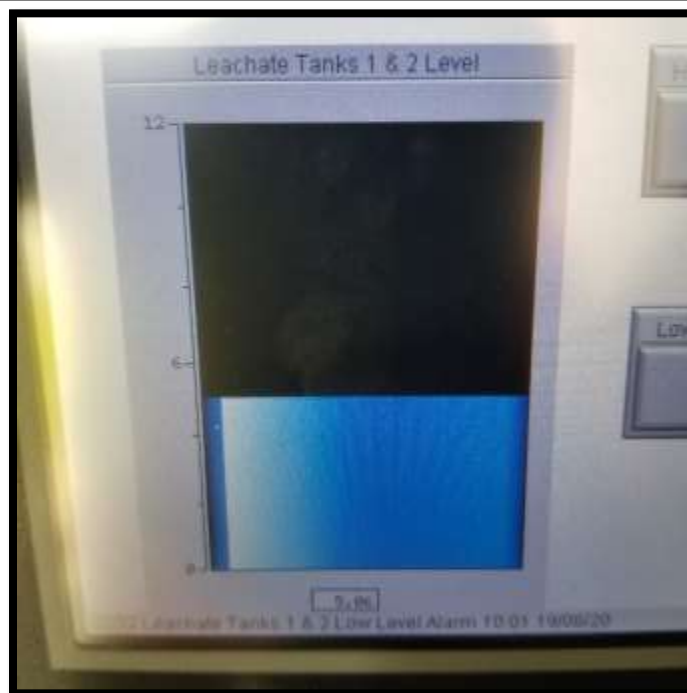


**Picture # 1:** Site – Looking Southwest – Soil Import to East Toe



**Picture # 2:** Site – Looking West – Leachate Facility





**Picture # 3:** Leachate Display – 5.06ft per tank

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Sean Babulic, EIT

**Date:** June 22, 2020

**Time:** 8:30AM – 4:30PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Partial Cloud

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Partial Cloud

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 22, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.

Construction activities included:

- Stockpiling of topsoils from 2251 Bear Mountain Parkway (78 loads)
- Relocating stockpiled soils from east of PEA to eastern PEA slope.



**Picture # 1:** Contractor stockpiling topsoil south of SMA.



**Picture # 2:** Recently stockpile topsoils south of PEA.





**Picture # 3:** Overview of PEA progress from quarry road.



**Picture # 4:** Drain rock placed on south face of PEA.





**Picture # 5:** Typical topsoil load from 2251 Bear Mountain Parkway.



**Picture # 6:** Excavator preparing stockpiled soils for relocation at end of day.



Report prepared by:



Sean Babulic, EIT.  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Sean Babulic, EIT

**Date:** June 23, 2020

**Time:** 8:30AM – 4:30PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Partial Cloud

**Contractor:**

Allterra Construction Ltd

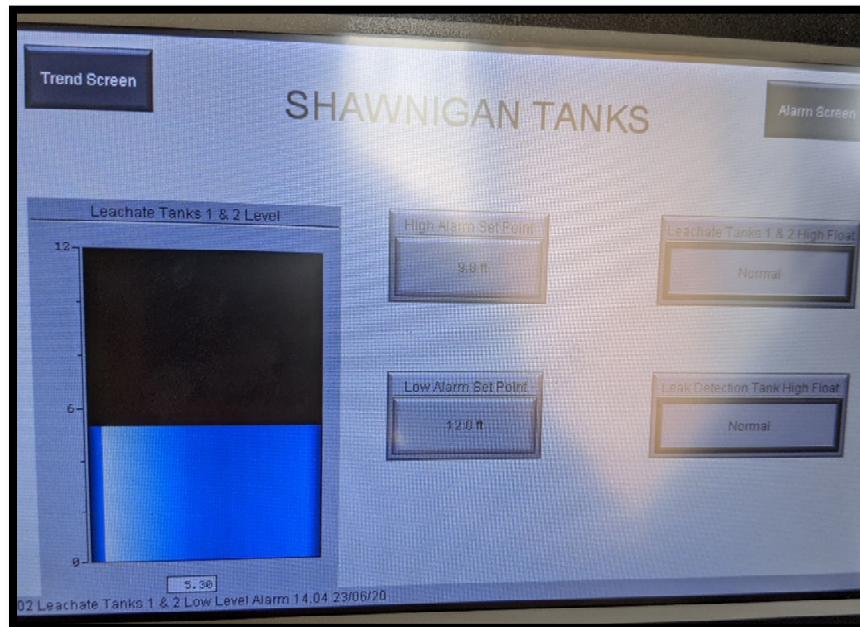
**Afternoon:** Partial Cloud

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 23, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.

Construction activities included:

- Stockpiling of topsoils from 2251 Bear Mountain Parkway.
- Relocating stockpiled soils from east of PEA to eastern PEA slope.



**Picture # 1:** Leachate level = 5.3 ft.



**Picture # 2:** D6 dozer track packing and distributing previously stockpiled soils.





**Picture # 3:** Stockpiling of topsoils from 2251 Bear Mountain Parkway.



**Picture # 4:** Loading previously stockpiled soils from east of the PEA.



**Picture # 5:** Dumping of previously stockpiled soils at north east corner of PEA.

Report prepared by:



Sean Babulic, EIT.  
Islander Engineering Ltd.



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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Joel Clarkston, Grad. Tech.

**Date:** June 24, 2020

**Time:** 8:00AM –3:30PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun and Cloud Mix

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun and Cloud Mix

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 24, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.



**Picture # 1:** Overview of construction progress, looking west. Previously stockpiled material on the north side of the PEA (excavator to right of the image) was hauled over to the east side of the PEA (bulldozer to the left of the image).



**Picture # 2:** Looking northwest along the east side of PEA towards the bulldozer pushing out material.



**Picture # 3:** Looking south from the south side of the PEA towards an excavator stockpiling imported capping material at the southeast corner of the site. Capping material was imported and stockpiled throughout the day.



**Picture # 4:** View of the imported soil capping material. Some larger rocks and roots are present in the capping material. Contractor informed Islander (Joel Clarkston) that they will be removed prior to final placement.





**Picture # 5:** Leachate display – 5.36 ft per tank.

Report prepared by:



Joel Clarkston, Grad Tech.  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**GEL REPRESENTATIVE:**

Rahim Gaidhar, GIT

**Date:** June 25, 2020

**Time:** 8:30AM – 5:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sun

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sun

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on June 25, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items.

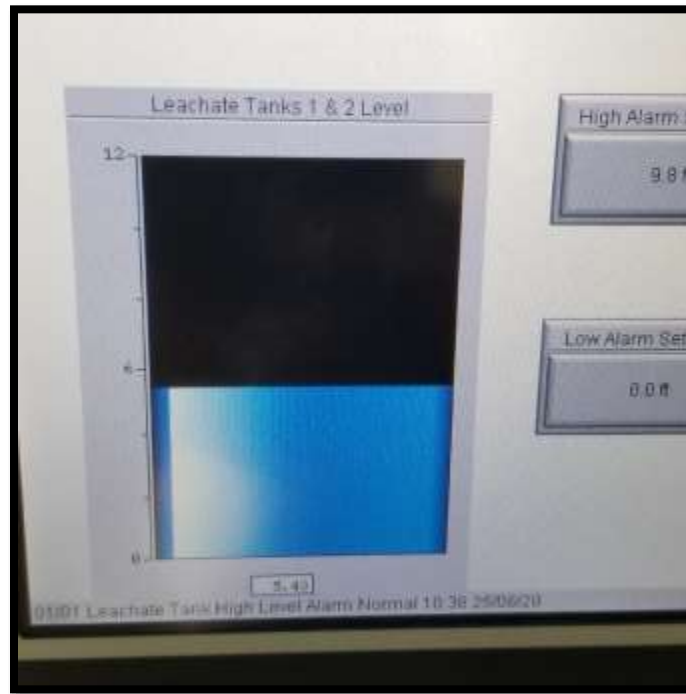




**Picture # 1:** Site – Looking Southwest – Site Soil Placement



**Picture # 2:** Site – Looking West – Leachate Facility



**Picture # 3:** Leachate Display – 5.43ft per tank

