



COLORADO

Division of Reclamation,
Mining and Safety

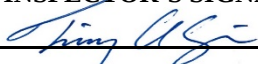
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT

PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Cresson Project	MINE/PROSPECTING ID#: M-1980-244	MINERAL: Gold	COUNTY: Teller
INSPECTION TYPE: Monitoring	INSPECTOR(S): Timothy Cazier, P.E.	INSP. DATE: April 19, 2022	INSP. TIME: 09:50
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Katie Blake & Johnna Gonzalez	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$209,491,188.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 3, 2022

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Hydrologic Balance

PROBLEM/POSSIBLE VIOLATION No. 1: Problem: The remote monitoring of the VLF1 LVSCS Phases I and II/III appear to be reporting using the wrong units (feet vs. inches). If the units are correct, then Phase II/III is out of compliance.

CORRECTIVE ACTIONS: The Operator must provide demonstrable documentation the remote monitoring for VLF1 LVSCS is either correct, or has been revised to report the water depths using the correct units by the corrective action due date.

CORRECTIVE ACTION DUE DATE: 5/31/22

INSPECTION TOPIC: Gen. Compliance With Mine Plan

PROBLEM/POSSIBLE VIOLATION No. 2: Problem: The current mine plan related to ore stacking as approved with TR-103 appears not to have been followed above the HGM.

CORRECTIVE ACTIONS: The operator must provide sufficient topographic information (i.e., a contoured survey

map of the entire VLF2) to the DRMS by the corrective action due date, in order for the DRMS to fully evaluate the VLF2 ore stacking with respect to the TR-103 stacking plan addendum approved on May 22, 2020. The resulting map should have the following:

- 10-foot, labeled contours;
- Distinctive line types delineating the crest and toe of each bench/intermediate slope to facilitate bench width measurements; and
- Labeled bench elevations to easily determine lift heights.

CORRECTIVE ACTION DUE DATE: 5/31/22

OBSERVATIONS

Tim Cazier (DRMS) conducted a regular monitoring inspection of the site on Tuesday, April 19, 2022. Ms. Katie Blake and Ms. Johnna Gonzalez represented CC&V for the duration of the inspection. The planned inspection agenda included the following facilities and areas:

- South Cresson Bench Failure;
- Growth Media Stockpile #32;
- Schist Island backfill;
- VLF 2 Ore Stacking;
- VLF Water Level checks.

South Cresson Bench Failure: The Cresson bench failure (see **Photo 1**) was discussed in the DRMS' March 30, 2022 inspection report. A follow-up visit was performed during this inspection to observe the mitigation under much better visibility conditions. The DRMS had concerns related to the effectiveness of the haul truck tire build up mitigation on the bench below the failed bench to have sufficient capacity to capture sloughed rock above it during the post-reclamation period. Discussions with site representatives revealed this section of the highwall will be laid back during the phase 2 of the South Cresson pit mine plan. As such, the DRMS is no longer concerned with this issue.

Growth Media Stockpile #32: The stability of Growth Media Stockpile #32 (GM-32) was discussed in the DRMS' March 30, 2022 inspection report. This was a follow-up visit to observe the stockpile under much better visibility conditions (see **Photo 2**). There was not a safe place to stop and inspect the stockpile up close due to its proximity to a major haul road. Photographs taken while driving past the stockpile were reviewed subsequent to the inspection. Review of these photos, suggests a small amount of growth media was lost either when the adjacent haul road was re-aligned, or shortly thereafter. Darker soil (typically indicating the presence of organic matter) can be seen in **Photo 2** on the east side of GM-32 below a scarp in the same area. The scarp is estimated to be on the order of two feet in thickness. The DRMS believes there is potential for the scarp to migrate to the north, resulting in the loss of additional growth media. However, given the thin nature of the scarp and that it's on the edge of the stockpile, additional growth media loss may not be significant. Nevertheless, [the GM-32 stockpile should be monitored to ensure significant growth media is not lost](#). Maria Bujenovic stated the annual report submitted to the DRMS reflected a reduction in the volume of growth media stockpiled in GM-32 (and the adjacent GM-33 across the haul road). The DRMS checked these records subsequent to the inspection and notes last year's annual report listed a combined GM-32/33 volume of 136,181 CY, which was reduced to 92,181 CY in this year's annual report. A reduction of 44,000 CY. Ms. Bujenovic indicated this material was placed as

part of the reclamation effort on the south end of the ECOSA.

Schist Island backfill: The high compaction zone backfill has ceased for the time being. Site representatives indicated the current effort is focused on shaping the compacted fill and reducing the height of Turkey Ridge (the term used to describe the ridge between the Schist Island pit and the north side of VLF2 - see **Photo 3**). A significant amount of oversized material (see **Photo 4**) was being pushed down by the dozers. I raised concerns about how this oversized material would not meet the specifications. A Newfields representative named Tyler stated all the Turkey Ridge material being pushed down would be wasted, most likely on the ECOSA. Furthermore, additional high compaction backfill placement was expected to resume one to two weeks after this inspection. He also stated underground opening remediation was being performed and would be documented the forthcoming CQA reports.

VLF 2 Ore Stacking: Photographs from the DRMS March 2022 aerial inspection indicated ore stacking on the southeast portion of VLF2, west of the High Grade Mill and north of the nearby projects office (see **Photo 5**) may not conform to the standards approved in TR-103. The ore stacking criteria for "Ore slopes above the Mill Platform were designed to be 2.0(H):1(V), a bench with a minimum width of 60' is required between the crest of the lower lift and the toe of the new lift." The TR further explains the 60-foot bench is required for the standard or typical 100-foot lift height. The area most concerning to the DRMS is that northwest of the projects building (see **Photo 6**). Site representatives concurred the bench observed in **Photo 6** was about 10 feet in width and the lift height was likely 50 feet. Pursuant to TR-103, the bench width for a 50-foot lift height would only need to be 30 feet, 20 feet wider than what was observed. **The inadequate bench width is cited as Problem 2 on page 1 of this report.** The prescribed bench width and lift height is intended to create an overall ore stack slope of 2H:1V in areas above the HGM. It is difficult to access a vantage point where additional bench widths and lift heights can be assessed. The DRMS requires as part of the corrective action, CC&V provide a contoured survey map/drawing of VLF2. The resulting map should have the following:

- 10-foot, labeled contours;
- Distinctive line types delineating the crest and toe of each bench/intermediate slope to facilitate bench width measurements; and
- Labeled bench elevations to easily determine lift heights.

The surface of VLF2 was observed from the contractor buildings on the northeast side of VLF2 for ponded process solution (see **Photos 7 and 8**). No ponding was observed.

VLF Water Level checks: The high volume and low volume solution levels were checked remotely from the office adjacent to ADR2 (see **Attachment A**). The low volume solution collection system (LVSCS) sumps are the latest to be added to this remote monitoring system. The water level monitoring systems in the site buildings in which the DRMS has been monitoring the water levels for at least 20 years were established over several years and vary in the use of inches or feet for the readouts at each site specific sensor. The DRMS has used a data recording sheet for many years, developed specifically for use with these variable units, that indicates whether feet or inches are expected for each sensor readout. All LVSCS sumps are required to have less than two feet (or 24 inches) of water in them at all times. Two of the remote monitoring readouts for the LVSCS appear to have switched the units from what is used at the site specific sensor readouts:

- 1) Phase I, which is reported in feet at the site specific readout, indicated the units were in inches at the remote monitoring location. The two numbers reported were 0.54 and 0.72, which would be very small if the units were actually in inches;
- 2) Phase II/III, which is reported in inches at the site specific readout, indicated the units were in feet

at the remote monitoring location. The two numbers reported were 3.64 and 3.69, which would be significantly exceeding the two-foot limit, if the units were actually in feet.

If CC&V and the DRMS are to continue relying on the remote monitoring system to check LVSCS water levels, the units (feet or inches) must be consistent with that being measured in the sumps. It is disconcerting that CC&V personnel have not noticed this error; or if it is not an error, it is more concerning that they have not reported the apparent exceedance in the Phase II/III volume as these volumes are required to be checked once per shift. **This apparent discrepancy in LVSCS reporting units is cited as Problem 1 on page 1 of this report.**

Close-out meeting: Ms. Blake and Ms. Gonzalez were present for the closeout meeting. The following items were discussed:

- VLF2 bench widths – Ms. Blake agreed to review TR-103 and provide feedback to the DRMS as to whether they concurred with the DRMS on interpretation of the criteria in TR-103.
- LVSCS water level reporting units – CC&V agreed to double check if the remote and site specific units (feet vs. inches) were consistent.

PHOTOGRAPHS

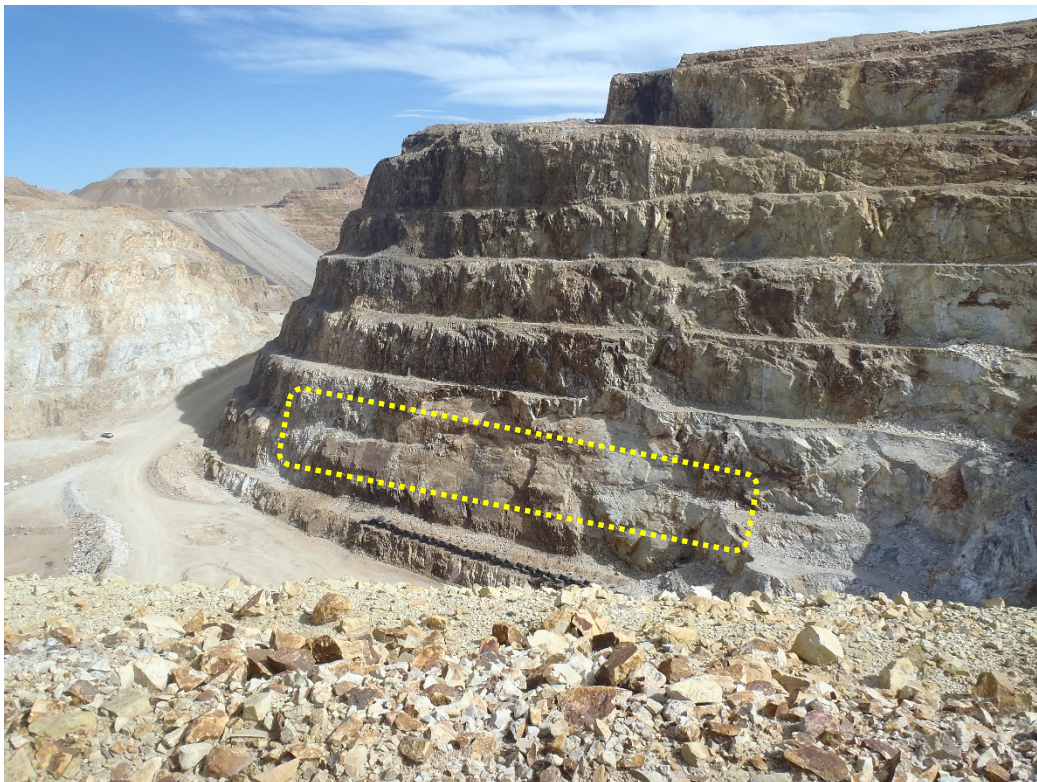


Photo 1. South Cresson bench failure (looking NE)

PHOTOGRAPHS (cont.)



Photo 2. Growth media stockpile #32 (circled), sloughing (arrow) (looking NW).

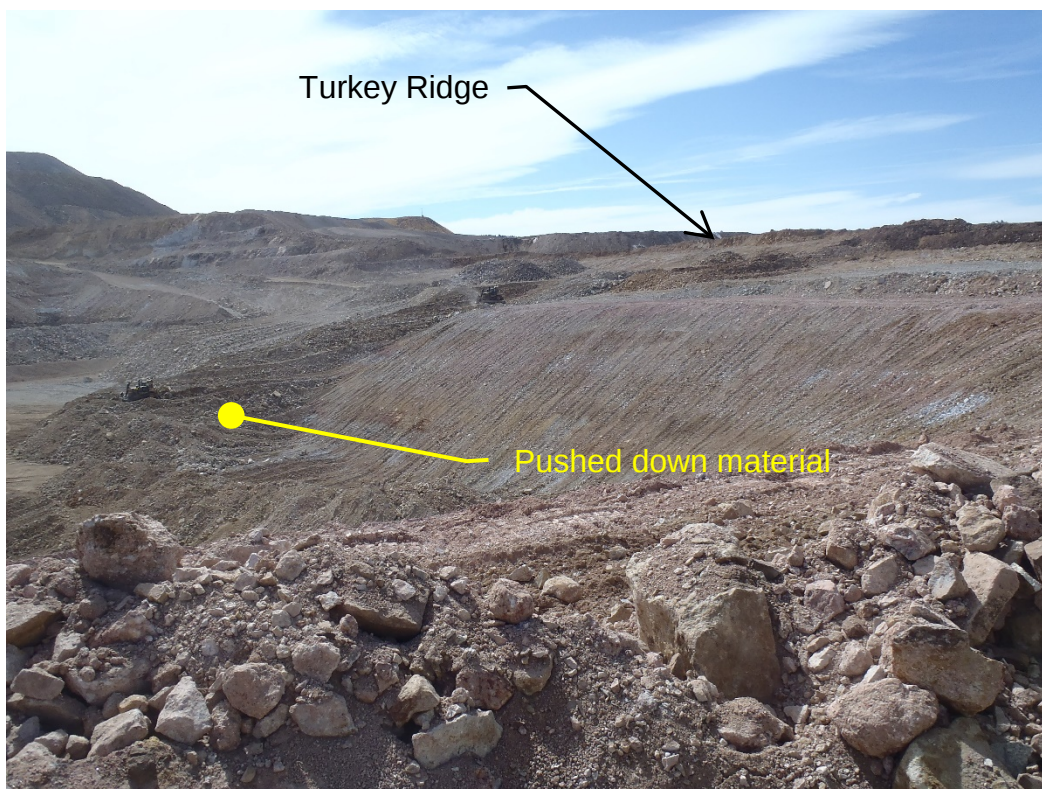


Photo 3. Dozers shaping (push down) Schist Island pit/Turkey Ridge.

PHOTOGRAPHS (cont.)



Photo 4. Oversize rock in Turkey Ridge material – to be wasted on ECOSA

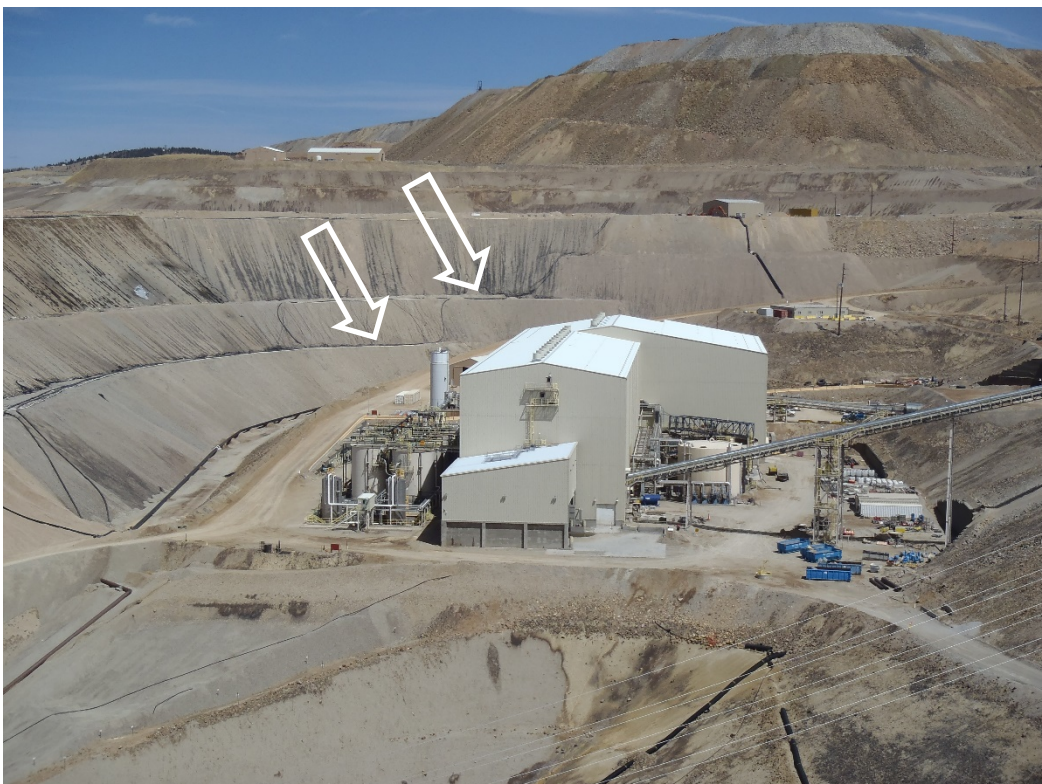


Photo 5. VLF2 benches in question (looking NNE from VLF1 overlook).

PHOTOGRAPHS (cont.)



Photo 6. 10-foot benches/50-foot lifts on VLF2 above the HGM (looking NW from projects office).



Photo 7. VLF2 leaching – no observed ponding (looking south from contractor buildings).

PHOTOGRAPHS (cont.)



Photo 8. VLF2 leaching – no observed ponding (looking west from contractor buildings).

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>PB</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>PB</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / **PB = Problem cited** / PV = Possible violation cited

Inspection Contact Address

Katie Blake & Johnna Gonzalez
Cripple Creek & Victor Gold Mining Company
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Victor, CO 80860

Enclosure: Attachment A – VLF Water Level Inspection Readings

ec: Michael Cunningham, DRMS
Amy Eschberger, DRMS
Elliott Russell, DRMS
Patrick Lennberg, DRMS
DRMS file
Katie Blake, CC&V
Justin Raglin, CC&V
Johnna Gonzalez, CC&V

CC&V VLF Water Level Inspection Readings

Previous Results

Date:	1/27/22	3/2/22	3/30/22	4/19/22		Notes
VLF1:	ERR	BFB	JPL	TC1		
Phase I HVSC & Pond Piezometers	TIME: 13:09	13:10	9:45	12:37		
Max. of Pump #299, #300, #301, #302, or #303	(ft)	49.3	44.5	56.7	45.5	
<u>Note: 80% cap. @ 63.75 ft</u>	Pond Lvl / XDCR #1	(ft)	47.9	43.9	57.2	52.1
	System Press / XDCR #2	(ft)	n/a	n/a	n/a	n/a
Phase I Low Volume Solution Collection	TIME: 13:09	13:10	9:45	12:37		
<u>Note: Req'd < 2 ft</u>	Piezo #1 (HAND)	(ft)	0.47	0.73	0.64	0.54
	Piezo #2 (AUTO)	(ft)	0.66	--	0.79	0.72
Phase II & III HVSC & Pond Piezometer	TIME: 13:10	13:10	9:45	12:37		
<u>Note: 80% @ 49.4 ft</u>	Max. of XDCR #4, #5, or #6	(ft)	22.0	29.6	28.6	34.3
	Piezo (Pipe)	(ft)	31.6	--	31	34.2
Phase II & III Low Volume Solution Collection	TIME: 13:10	13:10	9:45	12:37		
<u>Note: Req'd < 2 ft</u>	Pump / XDCR #1 (AUTO)	(ft)	3.68"	3.65	3.67	3.64
	Pump / XDCR #2 (AUTO)	(ft)	3.68"	--	3.71	3.69
Phase IV High Volume Solution Collection	TIME: 13:11	13:10	9:45	12:37		
<u>Note: 80% cap. @ 56.5 ft</u>	Max. of Pump #307, #308, or #309	(ft)	35.8	44.9	38.1	33.0
	XDCR pipe (#310 Resv'd)	(ft)	38.2	--	38.4	37.7
Phase IV Low Volume Solution Collection	TIME: 13:11	13:10	9:45	12:37		
<u>Note: Req'd < 24"</u>	Pump / XDCR #1	(in)	10.9	10.8	13.1	10.8
	Pump / XDCR #2	(in)	11.8	10.7	11.4	11.1
Phase V High Volume Solution Collection	TIME: 13:11	13:10	9:45	12:37		
<u>Note: 80% cap. @ 36.5 ft</u>	Max. of XDCR #311, #312, #313, or #314 (Circle XDCR #)	(ft)	27.0	28.8	28.8	29.5
Phase V Low Volume Solution Collection	TIME: 13:12	13:10	9:45			
<u>Note: Req'd < 24"</u>	XDCR #001	(in)	11.7	11.7	11.8	12.0
	XDCR #002	(in)	n/a	n/a	n/a	n/a
External Pond Low Volume Solution Collection	TIME: 9:45	12:37				
<u>Note: Req'd < 24"</u>	Pump / XDCR #1-EXT (AUTO)	(in)	--	--	15.2	?
	Pump / XDCR #2-EXT (AUTO)	(in)	--	--	17.1	?
Underdrain Discharge Area	TIME:					
	South Underdrain (S U/D)	(gpm)	--	--	--	--
	4" Pipe Discharge AG 01 Spring Pipe	(gpm)	--	--	--	--
<u>Note: 1 f/sec = 15.85 gpm</u>	NPDES Discharge AG 1.5 -001A	(gpm)	--	--	--	--
	North Underdrain (N U/D)	(gpm)	--	--	--	--
	24-inch Solid Pipe	(gpm)	--	--	--	--
Arequa Gulch Monitor Well Pumpback System	TIME:					
	63B	(ft)	--	--	--	--
<u>Data first collected by DRMS 3/8/12</u>	123C	(ft)	--	--	--	--
	B63	(gpm)	--	--	--	--
	123C	(gpm)	--	--	--	--
VLF2 High Vol. SC:	TIME: 13:13	9:45	12:37			
	LIT #88301 (north end)	(ft)	58.9	--	58.6	41.8
<u>Note: 80% cap. @ 94 ft</u>	LIT #88303	(ft)	55.0	--	57.7	40.8
	LIT #88305	(ft)	59.7	--	58.9	42.4
	LIT #88307 (south end)	(ft)	60.7	--	59.1	42.6
	Piezometer-LIT #88314	(ft)	68.8	--	71	56.0
VLF2 Low Vol. SC:	TIME: 13:13	9:45	12:37			
<u>Note: Req'd < 24"</u>	Leachate Pump 1	(in)	12.2	--	11.2	13.1
	Leachate Pump 2	(in)	10.3	--	9.5	11.3

Remote monitoring reports units as inches

Remote monitoring reports units as feet, making this value out of compliance