Commonwealth of Virginia

Blalock, Susan <susan.blalock@deq.virginia.gov>

FW: Semi-Monthly Daily LFG Well Temperature and Status Update

1 message

Crystal Bazyk <crystal.bazyk@deq.virginia.gov> Fri, Jul 15, 2022 at 3:38 PM
To: Susan Blalock <susan.blalock@deq.virginia.gov>, Stacy Bowers <stacy.bowers@deq.virginia.gov>

From: King, Brandon <BKing@scsengineers.com>
Sent: Friday, July 15, 2022 3:33 PM
To: crystal.bazyk@deq.virginia.gov; hall.kristen@epa.gov; jeff.hurst@deq.virginia.gov; willard.erinm@epa.gov; stacy.bowers@deq.virginia.gov; David Cochran <dcochran@bristolva.org>; Randall Eads <CityManager@bristolva.org>; 'mmartin@bristolva.org' <mmartin@bristolva.org>
Cc: Warren, Charles <CWarren@scsengineers.com>; Dick, Bob <BDick@scsengineers.com>; Nachman, Lucas <LNachman@scsengineers.com>; Lock, Tom <TLock@scsengineers.com>
Subject: Semi-Monthly Daily LFG Well Temperature and Status Update

Ms. Hall and Ms. Bazyk,

In accordance with EPA's letter, "Approval of Higher Operating Temperature Values of Landfill Gas Wells and Submission of Gas Treatment Alternatives at the Bristol Virginia Integrated Solid Waste Facility" from August 2021, I am providing the July 15, 2022 status report on the existing wells, expansion of the gas collection system, and continuing operating and monitoring results, covering the period from July 1-15, 2022.

Thank you,

D. Brandon King

Project Manager

SCS Engineers

15521 Midlothian Turnpike

Suite 305

Midlothian, VA 23113

Office: (804) 378-7440

Office Direct: (804) 486-1902

Mobile: (804) 840-7846

Bimonthly Daily LFG Well Temperature Update_7-15-22.pdf
546K

Commonwealth of Virginia

Blalock, Susan <susan.blalock@deq.virginia.gov>

Fwd: FW: Semi-Monthly Daily LFG Well Temperature and Status Update

1 message

Blalock, Susan <susan.blalock@deq.virginia.gov> Tue, Jul 19, 2022 at 9:37 AM
To: Susan Blalock <susan.blalock@deq.virginia.gov>

From: Nachman, Lucas <LNachman@scsengineers.com>
Sent: Monday, July 18, 2022 3:26 PM
To: King, Brandon <BKing@scsengineers.com>; crystal.bazyk@deq.virginia.gov; hall.kristen@epa.gov; jeff.hurst@deq.virginia.gov; willard.erinm@epa.gov; stacy.bowers@deq.virginia.gov; David Cochran <dcochran@bristolva.org>; Randall Eads <CityManager@bristolva.org>; 'mmartin@bristolva.org' <mmartin@bristolva.org>
Cc: Warren, Charles <CWarren@scsengineers.com>; Dick, Bob <BDick@scsengineers.com>; Lock, Tom <TLock@scsengineers.com>
Subject: RE: Semi-Monthly Daily LFG Well Temperature and Status Update

All:

Please find the attached revised version of the Semi-Monthly Daily LFG Well Temperature and Status Update Report that was originally submitted on July 15th. Note that the erroneous temperature value at EW-31R has been corrected to display the correct value. Please let me know if you have any questions.

Thank you,

Lucas Nachman

SCS Engineers

804-840-5325

From: King, Brandon <BKing@scsengineers.com>
Sent: Friday, July 15, 2022 3:33 PM
To: crystal.bazyk@deq.virginia.gov; hall.kristen@epa.gov; jeff.hurst@deq.virginia.gov; willard.erinm@epa.gov; stacy.bowers@deq.virginia.gov; David Cochran <dcochran@bristolva.org>; Randall Eads <CityManager@bristolva.org>; 'mmartin@bristolva.org' <mmartin@bristolva.org>
Cc: Warren, Charles <CWarren@scsengineers.com>; Dick, Bob <BDick@scsengineers.com>; Nachman, Lucas <LNachman@scsengineers.com>; Lock, Tom <TLock@scsengineers.com>
Subject: Semi-Monthly Daily LFG Well Temperature and Status Update

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Thank you,

D. Brandon King

Project Manager

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Revised_Bimonthly Daily LFG Well Temperature Update_7-15-22.pdf
555K

July 15, 2022
File No. 02218208.04

MEMORANDUM

TO: Kristin Hall, EPA Region III
Crystal Bayzk, VDEQ-SWRO

FROM: D. Brandon King, SCS Engineers
Robert E. Dick, SCS Engineers

SUBJECT: Semi-monthly Status Update – July 1st through July 15th, 2022
Bristol Integrated Waste Management Facility, Bristol, Virginia

In accordance with the Environmental Protection Agency (EPA) Region III letter, *Approval of Higher Operating Temperature Values for Landfill Gas Wells and Submission of Gas Treatment Alternatives at the Bristol Virginia Integrated Solid Waste Management Facility*, dated 8/23/21, SCS is submitting this semi-monthly status update to satisfy the condition of compliance provision #2. This compliance provision report includes daily temperature readings of the existing and new wells installed. In addition, this report includes a summary of work accomplished during this reporting period of 7/1/22 through 7/15/22, pursuant of compliance provision #2.

DAILY TEMPERATURE READINGS

Daily temperature readings were recorded by the City throughout the first half of July and displayed on the attached table. Existing wells GW-31R and GW-37 temperatures have slightly increased from approximately 145F to between 150F to 160F at the end of this reporting period. Existing well GW-46 exhibited temperatures averaged approximately 165F, while existing temperature HOV well GW-47 remained below 145F throughout this reporting period. New wells GW-55 and GW-67 recorded temperatures above 145F at the beginning of this period, but both wells demonstrated readings below 145F as of 7/15/22 according to the City's data. SCS has recently made dewatering improvements at the new wells. All other LFG wells recorded temperatures below 145F during the first half of July. SCS will perform the 15-day retest monitoring on the LFG wellfield by 7/21/22.

LFG ANALYTICAL DATA REVIEW

The City and SCS are still awaiting the EPA's evaluation of the Higher Operating Value for Temperature Request letter submitted to EPA on 3/8/22. According to SCS July 2022 initial LFG monthly wellfield data, exceedance temperatures persist in HOV requested wells GW-31R and GW-37, as well as GW-54 and GW-55.

Wells GW-54 and GW-55 recorded temperatures of 162F and 164F respectively by SCS on 7/6/22. Wells GW-31R and GW-37 recorded temperatures of 155F and 154F respectively by SCS on 7/6/22. SCS recorded a CO sample via 1.5L Summa Canister at wells GW-31R, GW-37, GW-46, and GW-54, and GW-55 on 7/6/22. SCS is still awaiting the lab results from Enthalpy Analytical, which will be provided on the next update.

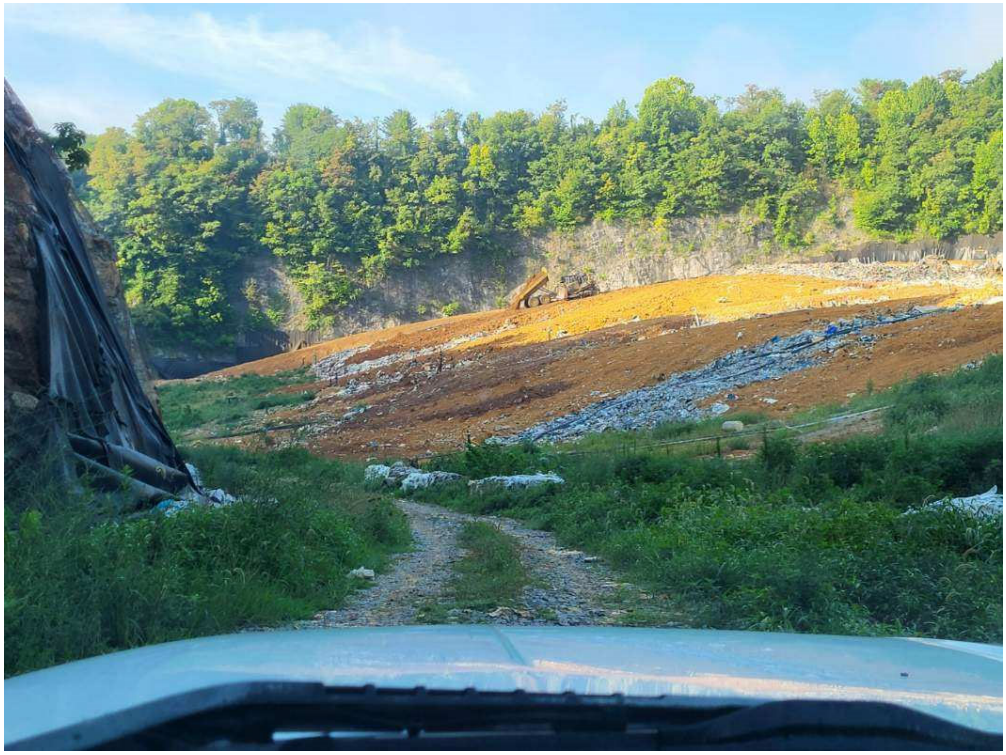
NON-ROUTINE O&M

SCS Field Services (FS) O&M mobilized to the Facility on 6/21/22 to pull dewatering pumps from LFG wells for inspection, cleaning, replace parts as needed, and test the pneumatic pump to confirm operational status prior to installing back in the well. SCS-FS O&M concluded non-routine maintenance activities on 7/1/22. In total, SCS-FS O&M cleaned (and repaired if necessary) and reinstalled 18 dewatering pumps into LFG wells as of 7/1/22.

City personnel have been hauling cover soil into Permit #588 Landfill and spreading over exposed areas of waste in non-active filling areas during the first half of July. The City's Street Department allocated several dump trucks to stockpile soil at a staging area at the north end of the Permit #588 Landfill, which is moved by the Facility to the south end and spread over non-active filling areas. See reference photos below for this update period.

Ingenco and subcontractor began installing the new Parnell blower and controls at the Facility's existing LFG blower/flare station during the week of 7/11/22. The PEI rental flare has been operating the LFG Collection System throughout the week's construction activities on the blower/flare station. Subsequent to start up activities at the upgraded blower/flare station, SCS will begin demobilizing the PEI rental blower/flare skid at the City's request.

Facing north end soil stockpile, truck loaded to address uncovered areas (7/14/22)



Facing south from NE corner truck dumping cover soil (7/14/22)

View of south end of LF looking west, dozer spreading soil over uncovered areas (7/14/22)

EVALUATION OF LFG SYSTEM

The City is equipped with several functional dedicated pneumatic dewatering pumps available on standby to be switched out in the event a well has a non-functioning pump. The City has set up a dedicated pump cleaning and testing station allowing SCS-FS O&M access to the City's wash bay. This includes an air compressor from a service truck and a water barrel to test the pneumatic pumps to satisfy this need from O&M. A total of 18 LFG well pumps were serviced and are in operating condition. The pump cleaning and testing station was successful during SCS-FS O&M latest pump maintenance event.

According to the LFG dewatering well pump stroke counter data collected during monitoring activities conducted on 7/6/22, approximately 500,000 gallons of landfill liquids were pumped from the extraction wells since 6/1/22. SCS assumes the majority of these liquids were pumped subsequent to non-routine O&M dewatering pump cleaning, maintenance, and testing activities conducted in late June. SCS will continue to monitor the pump status at each well and perform maintenance on the well pumps as needed.

SCS Engineers advises the City to procure four additional Pump One pneumatic pumps to have on standby for O&M to replace pumps as necessary during future pump cleaning activities. SCS understands the City has allocated funds in their FY22-23 budget to procure these pumps.

Please contact SCS or City personnel if you have any questions or require additional information.

cc: Randall Eads, City of Bristol
Michael Maine, City of Bristol
Jeff Hurst, VDEQ-SWRO
Tom Lock, SCS Field Services
David Cochran, City of Bristol
Erin Willard, EPA Region III
Stacy Bowers, VDEQ-SWRO
Robert E. Dick, P.E., SCS Engineers

Note	Well Depth	Date Drill	Phase	Month	July	July	July	July	July	July	July	July	July	July	July	July	July	July	July
				Day	Friday	Saturday	Sunday	Monday	Tuesday	Vednesda	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Vednesda	Thursday	Friday
				Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
				Well Number															
1	102	10/16/2016	Old Well	**35**	90	82	58	74	84	90	90	89	89	71	80	80	75	85	75
2	70	9/6/2017	Old Well	**39**	110	110	88	105	102	120	120	120	120	119	115	115	114	115	115
3	100	9/7/2017	Old Well	**40**	11	110	90	110	113	110	110	112	110	102	110	110	110	110	110
4	110	10/4/2016	Old Well	**46**	160	168	180	169	172	180	165	160	169	161	160	165	160	160	165
5	120	10/4/2016	Old Well	**47**	120	125	100	120	118	140	135	141	138	135	NM	100	130	120	80
6	120	9/17/2013	Old Well	**29**	Too Tall	115	92	130	122	NM	NM	NM	120	122	NM	NM	NM	115	105
7	100	8/23/2017	Old Well	**30R**	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall
8	120	8/30/2017	Old Well	**31R**	140	148	120	144	140	160	160	160	160	150	155	160	160	155	160
9	70	7/29/2016	Old Well	**32**	70	NM	NM	NM	88	80	80	89	90	88	75	75	80	75	NM
10	100	7/28/2016	Old Well	**33**	105	110	90	130	122	120	120	120	122	121	120	125	125	120	90
11	100	7/30/2016	Old Well	**34**	90	90	110	86	102	90	90	95	85	90	90	95	100	90	NM
12	100	8/1/2016	Old Well	**36**	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall
13	100	8/24/2017	Old Well	**37**	150	145	120	170	165	160	160	160	159	154	150	150	150	150	160
14	50	8/25/2017	Old Well	**38**	90	80	70	85	90	100	120	119	100	120	105	105	105	105	105
15	75	9/8/2017	Old Well	**41**	Too Tall	Too Tall	Too Tall	Too Tall	118	Too Tall	Too Tall	Too Tall	141	140	140	140	140	140	120
16	57	9/8/2017	Old Well	**42**	Too Tall	120	100	142	145	NM	NM	NM	130	132	NM	NM	NM	120	120
17	110	10/7/2016	Old Well	**48**	Too Tall	80	50	68	72	NM	NM	NM	80	76	NM	NM	NM	NM	NM
1	120	10/1/2021	New Well	**32R**	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall
2	110	10/1/2021	New Well	**49**	125	130	108	125	132	140	140	140	139	139	130	135	135	135	135
3	96	10/1/2021	New Well	**50**	130	130	108	128	124	145	140	145	144	139	140	140	140	140	140
4	114	10/1/2021	New Well	**51**	115	110	98	100	106	120	110	120	111	110	110	110	120	130	130
5	109	10/1/2021	New Well	**52**	150	152	140	165	155	180	NM	NM	Foaming	Foaming	Foaming	Foaming	Foaming	Foaming	Foaming
6	91	10/1/2021	New Well	**53**	120	120	100	115	120	130	125	125	122	122	NM	120	120	120	110
7	91	10/1/2021	New Well	**54**	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall	Too Tall
8	104	10/1/2021	New Well	**55**	150	170	150	169	170	140	145	140	152	155	140	140	130	130	110
9	109	10/1/2021	New Well	**56**	130	135	150	130	135	140	130	130	149	136	140	140	140	130	130
10	103	10/1/2021	New Well	**57**	130	132	150	125	123	145	145	140	140	148	140	140	140	140	140
11	92	10/1/2021	New Well	**58**	125	122	150	124	122	140	130	140	139	132	135	130	150	140	135
12	72	10/1/2021	New Well	**59**	120	110	120	110	119	120	120	120	125	116	120	120	120	120	120
13	120	10/1/2021	New Well	**60**	120	120	100	120	112	130	140	130	120	132	130	130	130	125	125
14	105	10/1/2021	New Well	**61**	105	108	88	108	100	120	115	110	115	115	110	110	115	110	110
15	120	10/1/2021	New Well	**62**	115	100	130	130	122	120	120	120	90	117	120	120	110	110	105
16	117	10/1/2021	New Well	**63**	105	110	78	120	125	110	120	120	130	132	130	125	130	125	125
17	120	10/1/2021	New Well	**64**	130	138	112	158	131	145	140	140	149	149	140	145	145	140	140
18	100	10/1/2021	New Well	**65**	80	95	70	90	94	95	95	95	122	128	120	125	130	120	120
19	102	10/1/2021	New Well	**66**	130	130	150	130	128	135	140	140	140	140	140	125	140	149	140
20	100	10/1/2021	New Well	**67**	160	150	120	38	132	140	145	140	150	150	150	140	160	150	120
21	75	10/1/2021	New Well	**68**	120	122	100	120	114	135	135	130	122	121	120	125	125	120	135