



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE

DATE: See date of Section Chief signature

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Waste Connections Seabreeze Environmental Landfill, Angleton, TX

FROM: Daniel Heins, Environmental Scientist
Stationary Source Enforcement Branch, EPA OECA

THRU: Gregory Fried, Branch Chief
Stationary Source Enforcement Branch, EPA OECA

TO: File

BASIC INFORMATION

Facility Name: Seabreeze Environmental Landfill

Facility Location: 10310 FM 528 Road, Angleton, TX 77516

Date of Inspection: On Site Inspection: March 16, 2023
Virtual Conference: April 21, 2023

EPA Inspector(s):

1. Daniel Heins, Environmental Scientist, EPA OECA ^{a,b}
2. Daniel Hoyt, Environmental Engineer, EPA OECA ^b
3. Colleen McCarthy, Life Scientist, EPA Region 6 ^b
4. Kenneth McPherson, Life Scientist, EPA Region 6 ^{a,b}
5. Benjamin Rosenthal, Physical Scientist, EPA Region 6 ^{a,b}
6. Jamie Lee, Office of Regional Counsel, EPA Region 6 ^a

Other Attendees:

1. Dave Matthews, District Manager, Seabreeze Recovery, Inc ^{a,b}
2. Brett O'Conner, Southern Region Engineering Manager, Waste Connections of Texas, LLC ^a
3. Nikki Crew, Compliance Manager, Waste Connections of Texas, LLC ^a
4. Gary Bartels, Regional Engineer, Waste Connections of Texas, LLC ^a
5. Dillon Hoppe, Regional Engineer, Waste Connections of Texas LLC ^a
6. John Perkey, Vice President/Deputy General Counsel, Waste Connections US, Inc ^a
7. Sarah Phillips, Environmental Compliance Manager, Waste Connections US, Inc ^a
8. Joe Ortiz, SCS Engineers ^b

9. Ben Ruiz, SCS Engineers ^b
10. Jake Stevens, SCS Engineers ^b

^a Attended conference

^b Attended surface emissions monitoring (SEM)

Contact Email Address: David.Matthews@WasteConnections.com

Purpose of Inspection: Surface monitoring and partial compliance evaluation for the Clean Air Act

Facility Type: Municipal solid waste (MSW) landfill

Regulations Central to Inspection: 40 C.F.R. Part 60, Subpart XXX; 40 C.F.R. Part 63, Subpart AAAA;

On Site (3/16) Arrival Time: 09:00 Central Time

On Site (3/16) Departure Time: 13:30 Central Time

Virtual Conference (4/21) Start Time: 13:00 Central Time

Virtual Conference (4/21) End Time: 15:00 Central Time

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

SITE OVERVIEW

Unless otherwise stated, the following information was obtained verbally from Waste Connections representatives, during the virtual conference.

Company Ownership:

As provided by email after the conference. The Seabreeze Landfill (“the Landfill”) is officially operated as Seabreeze Recovery, Inc. This is a subsidiary of Waste Connections US, Inc., in turn a subsidiary of Waste Connections US Holdings, Inc., the top-level US-based entity. The ultimate parent entity is Waste Connections, Inc., based in Canada. John Perkey explained that Waste Connections of Texas serves as the Waste Connections Southern Region administrative entity.

Waste Connections acquired the Seabreeze Landfill in 2009 as part of the divestitures associated with Republic Service’s acquisition of Allied Waste.

Operations Overview:

The Landfill began operations in the 1960s. Sector 1 refers to the pre-RCRA subtitle D operations without a modern liner. It is capped and closed, and together with Sector 2 make the southern hill of the Landfill (see overview map, attached). The northern hill of the Landfill is all post-RCRA and lined. There is a slough of water between the two hills. Liner type is variable,

using a class 1 liner profile typically with underdrain, clay, and plastic with leachate collection. Sector 2 was identified as most likely having a clay/plastic liner.

The site is permitted for 417 acres, with 283.7 acres constructed to date between both the north and south hills. The south hill has 120.4 acres of evapotranspirative cap. There is no final cover on the northern hill. Approximately four acres is under daily cover. No waste types are used as alternative daily cover, just spray-on daily covers (with tarps also approved). For intermediate cover, outer slopes are 4' of clay, with intermediate slopes and the top deck with a minimum of 1' of clay/soils.

The Landfill receives 3,500 to 4,500 tons per day of waste. Approximately 60% is MSW, with the remainder being various special wastes. Special wastes include petroleum contaminated soil (approximately 5% of total waste), refuse from industrial sites, and approximately 20% various sludges (such as wastewater treatment plant sludge). The site does solidify liquid wastes. The Landfill receives small amounts of construction and demolition waste.

Gas collection is primarily through vertical wells, though horizontals are sometimes utilized when building out an area. Wells are typically installed within a year or two of waste deposition. Gas is primarily routed to a separately permitted high BTU renewable natural gas plant, owned and operated by DTE. Waste Connections has a flare that can be utilized by DTE or control the landfill gas directly. The candlestick flare has a capacity of 4000 or 5000 scfm. There are two blowers. All gas goes to a common header.

SITE TOUR — MARCH 16, 2023

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Asked the company to identify CBI

Data Collected and Observations:

EPA conducted an SEM survey of part of the facility. Monitoring was ended early due to the arrival of rain. There were high winds on the day of the inspection. EPA used three ThermoFisher Toxic Vapor Analyzers 2020 (TVA2020) to perform EPA Reference Method 21 for the SEM. Dan Heins, Kenneth McPherson, and Ben Rosenthal each made measurements for EPA.

SCS was on site to perform quarterly monitoring. The SCS technicians were using SEM5000 instruments. After discussing with Waste Connections and SCS, EPA split in to two monitoring teams, each accompanied by one of the SCS technicians who could provide confirmation readings of the EPA measurements.

EPA inspectors identified 61 exceedances of the surface methane standard, all of which were confirmed by the SCS technicians. See Appendix B for location and description of measurements

and map of exceedances. Exceedances were primarily found at penetrations, in exposed waste, and in areas of erosion.

Parts of the top deck of the hill were in a state of construction, with DTE adding gas collection wells. EPA asked Waste Connections to identify which exceedances were affected by active construction work. Waste Connections highlighted six exceedances in a document provided via email after the inspection.

Independent of the areas affected by construction, EPA documented eroded cover and exposed waste throughout the survey area.

Photos and/or Videos: were taken during the inspection. See Appendix A.

Field Measurements: were taken during this inspection. See Appendix B.

INSPECTION CONFERENCE — APRIL 21, 2023

- ☒ Provided U.S. EPA point of contact to the facility
- ☒ Asked the company to identify CBI

EPA showed facility representatives a map of the path walked during the on-site SEM survey and the exceedances detected.

Staff Interview:

EPA inquired as to what level of involvement each conference attendee had directly in the operations of the landfill. David Matthews was the only one who reports to the facility directly. Dillon Hoppe and Gary Bartels work on multiple sites in Texas, including Seabreeze. Brett O'Conner, Dillon Hoppe, Gary Bartels, and David Matthews are all involved in decision making regarding contracting work on site. As Waste Connections has a corporate headquarters nearby, it is readily visited by corporate employees as well.

The Landfill design capacity was increased in 2019 and is approximately 64 million cubic yards. The site calculated an uncontrolled non-methane organic compound emission rate of above 50 megagrams and became subject to full gas collection and control system requirements more than five years ago. The GCCS has been in place since at least when it was owned by Allied Waste. The site has approximately 22 more years of capacity pending waste acceptance rates, and has capacity for further expansion.

The gas collection system on the Landfill is part of the Landfill's permit and Clean Air Act obligations, however it is managed by personnel from DTE in support of the gas plant. No DTE representatives were on the call.

Approximately 60 to 70% of the wells have dewatering pumps. DTE does checks on the dewatering of wells, though none of the Waste Connections staff could state how frequently this happened. New wells are typically installed with dewatering pumps.

When asked approximately how much gas is collected from each landfill hill, the Waste Connection staff stated that they would need to check with DTE.

Gas collection wells are manually tuned by DTE personnel, and tuning activity often occurs more frequently than monthly to try to optimize collection for the gas plant. All wellhead adjustments are logged. There are DTE staff dedicated full time to management of the GCCS. Part of the task of wellfield management is to ensure oxygen/nitrogen levels are managed.

EPA asked if the site was demonstrating compliance with the NSPS/EG via the NESHAP wellhead monitoring requirements and what wellhead parameters they were using for temperature. None of the Waste Connections staff on the call were able to provide an answer.

Waste Connections was unaware of any wells operating above 145 degrees Fahrenheit and that temperature exceedances are rare. They were uncertain if there were active Higher Operating Values approved for any wells.

Waste Connections works with DTE to determine need for expansions of the wellfield.

The Landfill will accept white goods that potentially contained ozone depleting substances, provided that there is record of refrigerant removal from a certified technician. The Landfill accepts asbestos waste, and they keep a map of where it has been deposited.

Waste Connections uses SCS for their Part 98 Subpart HH greenhouse gas reporting. EPA asked if there was a reason the Facility changed from reporting estimated emissions based on modeled generation (as it had through 2019) to reporting based on methane recovery and estimated collection efficiency (reporting years 2020 and 2021). EPA noted the sharp difference between the estimates, with the 2021 report showing 693,196 metric tons of CO₂ equivalent using the former method and only 89,561 metric tons of CO₂ equivalent by the latter. Waste Connections staff stated that they would need to look into that decision making and follow up.

SCS performs SEM at the landfill. They send Waste Connections the exceedance table day-of and include a map of the coverage. Corrective actions are grading/clay addition if erosion, if the exceedance is directly at the well then tuning may be done by DTE. Sometimes wellheads may be given boots, which would involve coordination between Waste Connections and DTE.

EPA asked about the use of the dangerous areas exemption, noting that reports indicated high vegetation was cited as a reason for excluding significant acreage of the landfill from surface monitoring. Waste Connections staff stated that if the grass is too high there is a risk of snakes and that ultimately they defer to SCS personnel to make decisions about monitoring safety and document areas not monitored in the report. EPA confirmed with Waste Connections that they do have lawn mowing equipment on site.

Records reviewed:

- Table of re-monitoring and corrective actions for exceedances measured during the inspection (via email)

- All exceedances addressed by soil addition and compaction, with the exception of two wells that were mid-construction, which were addressed by completing construction.
- Seabreeze Recovery Inc Parent Company Disclosure (via email)

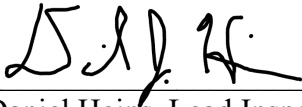
Requested documents:

After discussing preference between a Section 114 Request For Information Letter and an emailed list of documents associated with the inspection, Waste Connections expressed a preference for the latter.

Concerns:

- EPA observed erosion and exposed waste over much of the survey area
- EPA found a significantly higher rate of surface exceedances in the survey area than had been documented in recent SEM surveys
- EPA expressed concern that because high grass is something that could be readily resolved by the Facility in preparation for surface monitoring that it should not be cited as a dangerous area exempt from monitoring, and that it has not seen that practice at other landfills in similar climates.

DIGITAL SIGNATURES



Daniel Heins, Lead Inspector

on behalf of

Gregory Fried, Supervisor

APPENDICES AND ATTACHMENTS

Appendix A: Digital Image Log

Appendix B: Field Measurement

APPENDIX A: DIGITAL IMAGE LOG

Inspector Names: Colleen McCarthy & Dan Hoyt

Archival Record Location: US EPA SharePoint

Image #	File Name	Date and Time (Central)	Coordinates	Description of Image
1	IMG_4043.JPG	2023:03:16 10:23:56	29.085908, -95.357186	Erosion under piping, A1
2	IMG_4044.JPG	2023:03:16 10:28:51	29.085833, -95.357025	Erosion/soil discoloration, A2
3	IMG_4045.JPG	2023:03:16 10:33:31	29.085831, -95.357017	Erosion/exposed waste, A3
4	IMG_4046.JPG	2023:03:16 10:43:01	29.085928, -95.356392	Well 258 surrounded by exposed waste, A4
5	IMG_4047.JPG	2023:03:16 10:52:14	29.086175, -95.355889	GW 261 w/ nearby erosion/waste, A5
6	IMG_4048.JPG	2023:03:16 10:55:01	29.086503, -95.356072	Tire penetrating cover, A6
7	IMG_4049.JPG	2023:03:16 10:56:25	29.086406, -95.355958	Cracks in bare soil, A7
8	IMG_4050.JPG	2023:03:16 10:56:57	29.0864, -95.355964	Cracks in bare soil, A7
9	IMG_4051.JPG	2023:03:16 11:10:52	29.086983, -95.356117	Cracks in soil, A8
10	IMG_4052.JPG	2023:03:16 11:12:13	29.087353, -95.356217	GW189, exposed waste, A9
11	IMG_4053.JPG	2023:03:16 11:13:44	29.087019, -95.356164	Exposed waste/erosion gulley and discolored soil, A10
12	IMG_4054.JPG	2023:03:16 11:16:22	29.087111, -95.356117	Erosion gulley, A11
13	IMG_4055.JPG	2023:03:16 11:18:13	29.087114, -95.356108	GW187A, exposed waste visible, A12
14	IMG_4057.JPG	2023:03:16 11:21:12	29.087278, -95.356231	Soil cracks, A13
15	IMG_4058.JPG	2023:03:16 11:24:20	29.087417, -95.356231	bare soil A14
16	IMG_4059.JPG	2023:03:16 11:35:28	29.087672, -95.356561	GW253, A15
17	IMG_4060.JPG	2023:03:16 11:39:06	29.087889, -95.356567	GW108B w/ gap, A16
18	IMG_4061.JPG	2023:03:16 11:45:44	29.087922, -95.356636	Exposed waste, A17
19	IMG_4062.JPG	2023:03:16 11:49:17	29.088089, -95.356514	GW 283, A18
20	IMG_4063.JPG	2023:03:16 11:50:52	29.088161, -95.356736	Exposed waste, erosion, discolored soil, A19
21	IMG_4064.JPG	2023:03:16 12:00:29	29.088681, -95.356439	Well under construction, A21
22	IMG_4065.JPG	2023:03:16 12:02:46	29.088819, 95.356522	Erosion gulley, A22
23	IMG_4066.JPG	2023:03:16 12:04:56	29.088944, 95.356544	Erosion gulley, discolored soil, A23
24	IMG_4067.JPG	2023:03:16 12:12:30	29.088686, -95.356178	GW284 and nearby exposed waste A25
25	IMG_4068.JPG	2023:03:16 12:15:08	29.049833, -95.3526	GW176A, A26
26	IMG_4069.JPG	2023:03:16 12:17:30	29.087872, -95.355981	GW195A, A27

Image #	File Name	Date and Time (Central)	Coordinates	Description of Image
27	IMG_4070.JPG	2023:03:16 12:27:28	29.086653, -95.355522	GW170A, A30
28	IMG_4071.JPG	2023:03:16 12:28:46	29.086325, -95.355522	Mound with waste and vegetation growing on top
29	IMG_4072.JPG	2023:03:16 12:31:02	29.086158, -95.355606	GW165A, exposed waste, A31
30	IMG_4073.JPG	2023:03:16 12:35:05	29.085858, -95.355858	Well under construction, A32
31	IMG_4074.JPG	2023:03:16 12:43:14	29.086161, -95.355025	GW264, A33
32	IMG_4075.JPG	2023:03:16 12:49:37	29.086194, -95.355239	Gulley and discolored soil, A37
33	R0010044.JPG	2023:03:16 10:22:26	[Non GPS Camera]	Riser, B1
34	R0010045.JPG	2023:03:16 10:26:56	[Non GPS Camera]	Discolored soils and cracks/erosion, B2
35	R0010046.JPG	2023:03:16 10:33:01	[Non GPS Camera]	Discolored soils and cracks/erosion, B3
36	R0010047.JPG	2023:03:16 10:44:36	[Non GPS Camera]	Erosion and discolored soils, B4
37	R0010048.JPG	2023:03:16 10:50:42	[Non GPS Camera]	Well 101, B5
38	R0010049.JPG	2023:03:16 11:15:41	[Non GPS Camera]	Distressed vegetation, B6
39	R0010050.JPG	2023:03:16 11:28:02	[Non GPS Camera]	Riser with unsealed cap, B7
40	R0010051.JPG	2023:03:16 11:32:54	[Non GPS Camera]	Erosion and exposed waste, B8
41	R0010052.JPG	2023:03:16 11:43:58	[Non GPS Camera]	Penetration, erosion, B9
42	R0010053.JPG	2023:03:16 11:46:28	[Non GPS Camera]	Erosion, B10
43	R0010054.JPG	2023:03:16 11:54:37	[Non GPS Camera]	GW237, B11
44	R0010055.JPG	2023:03:16 12:03:32	[Non GPS Camera]	GW111B, exposed waste, B12
45	R0010056.JPG	2023:03:16 12:06:25	[Non GPS Camera]	GW178A, exposed waste, B13
46	R0010057.JPG	2023:03:16 12:11:01	[Non GPS Camera]	GW285, B14
47	R0010058.JPG	2023:03:16 12:15:50	[Non GPS Camera]	GW281, erosion rills, B15
48	R0010059.JPG	2023:03:16 12:26:07	[Non GPS Camera]	GW254, B16
49	R0010060.JPG	2023:03:16 12:29:22	[Non GPS Camera]	GW278, exposed waste, B17
50	R0010061.JPG	2023:03:16 12:31:28	[Non GPS Camera]	GW278A, nearby exposed waste, B18
51	R0010062.JPG	2023:03:16 12:33:41	[Non GPS Camera]	GW275A, B19
52	R0010063.JPG	2023:03:16 12:40:25	[Non GPS Camera]	GW164A, exposed waste, B20
53	R0010064.JPG	2023:03:16 12:47:37	[Non GPS Camera]	GW140B (active installation) B22

APPENDIX B: FIELD MEASUREMENT DATA**Measured Exceedances**

Flag	EPA Reading	Contractor Reading	Description	Latitude	Longitude
A1	1,100	1,170	Erosion/ near exposed piping	29.08596897	-95.35715885
A2	2,800	1,340	Erosion/soil discoloration, multiple exceedances throughout area	29.08586231	-95.35697572
A3	1,000	1,340	Erosion/exposed waste	29.08566135	-95.35663178
A4	1,200	1,000	Well 258 at penetration and nearby exposed waste	29.08594017	-95.35633526
A5	2,600	1,900	GW-261 at penetration and nearby erosion	29.08633178	-95.35602616
A6	1,100	870	Exposed tire	29.08651285	-95.35606345
A7	1,100	870	Soil crack	29.08638697	-95.35594851
A8	1,200	9,600	Cover integrity issues, general area of exceedances	29.08700568	-95.35614136
A9	900	3,000	GW189 multiple points on penetration	29.08708094	-95.35623312
A10	2,300	1,000	Exposed waste, erosion gully, discolored soils	29.08704893	-95.35615505
A11	710	710	erosion gulley	29.08713046	-95.35611623
A12	4,400	7,500	GW187A multiple penetration points	29.08739283	-95.35634281
A13	1,300	890	Soil crack, elevated throughout slope	29.08729546	-95.35616215
A14	1,065	700	area of wide exceedance	29.08742963	-95.35621747
A15	3,000	3,500	GW253	29.08762011	-95.35657209
A16	1,300	1,700	GW108B	29.08791663	-95.3565625
A17	2,300	2,800	Exposed waste, erosion gully, discolored soils	29.08788219	-95.35669983
A18	5,200	1,500	GW283 multiple penetrations at well	29.08818841	-95.35653674
A19	1,200	2,600	erosion gulley and nearby discolored soil	29.08815917	-95.35673282
A20	2,034	2,500	exposed waste	29.08853755	-95.3564061
A21	1,500	9,000	GW282A	29.08857715	-95.35642404
A22	700	522	Erosion gulley	29.08881124	-95.35654069

Flag	EPA Reading	Contractor Reading	Description	Latitude	Longitude
A23	600	510	Erosion gulley and discolored soils, throughout area	29.08895845	-95.35657368
A24	920	1,100	erosion gulley	29.08888577	-95.35639775
A25	3,300	3,400	GW284 at wellhead and nearby exposed waste	29.08885551	-95.35621155
A26	4,300	6,500	GW176A at penetration	29.08825782	-95.35611835
A27	1,500	3,300	GW195A multiple penetration points	29.08790811	-95.35595525
A28	6,600	89,000	GW144B at post and multiple wellhead penetration points	29.0876845	-95.35604908
A29	3,900	4,600	exposed waste (recent construction)	29.08700032	-95.3558506
A30	820	960	GW170A (multiple penetrations)	29.08660579	-95.35555762
A31	6,900	9,400	GW165A penetration	29.08615326	-95.35560546
A32	6,100	9,600	Capped well GW264A (construction)	29.08586545	-95.35582748
A33	1,400	2,000	GW264 (multiple penetrations)	29.0858023	-95.35579962
A34	690	9,600	GW141B	29.08581022	-95.35525543
A35	2,000	3,200	GW268, surrounding exposed waste	29.08606924	-95.35521492
A36	5,100	9,400	GW-268A	29.08611151	-95.35528983
A37	800	560	Erosion gulley plus discolored soil	29.08513551	-95.35487794
A38	1,300	530		29.08494782	-95.35509369
A39	1,200	1,600	GW267	29.08503241	-95.35566328
B1	13,000	3,865	Leachate riser 4, at cap/cover	29.08605082	-95.35752441
B2	1,175	1,800	Surface near above ground piping	29.08614032	-95.3569641
B3	1,595	803	Surface rut/erosion	29.08613558	-95.3570005
B4	4,400	4,250	Two detects near surface erosion	29.08669703	-95.35686105
B5	982	1,080	Gas well 101, leachate noted coming up from ground nearby	29.0868934	-95.35695642
B6	750	587	Surface	29.08745165	-95.35758924
B7	42,500	38,000	Flameout, leachate riser 6, highest near where pipe ends	29.08777034	-95.35791614

Flag	EPA Reading	Contractor Reading	Description	Latitude	Longitude
B8	640	585	Behind leachate riser 7	29.08800584	-95.35804211
B9	6,259	9,040	249 or 243 Toe Drain or leachate sump	29.08828498	-95.35724991
B10	1,410	2,760	Surface rut erosion	29.08844683	-95.35736335
B11	6,690	16,000	Gas well 237 from vacuum header	29.08873415	-95.35709778
B12	1,150	1,050	Gas well 111B	29.08908235	-95.35696502
B13	4,470	3,255	Gas well 178A	29.08938684	-95.35679304
B14	6,600	3,360	Gas well 285	29.08925616	-95.35624977
B15	2,883	3,100	Gas well 281	29.08849319	-95.35580616
B16	2,575	4,280	Gas well 254	29.08717067	-95.35509004
B17	1,160	1,285	Gas well 278 (exposed waste in area)	29.08675008	-95.35488648
B18	4,950	3,000	Gas well 278A	29.08672	-95.35496997
B19	6,594	45,000	Gas well 275A	29.08648808	-95.355185
B20	1,220	1,495	Gas well 164A	29.08638387	-95.35471721
B21	1,083	545	Gas well GW274	29.08607712	-95.35464607
B22	25,000	37,000	Gas well 140B, recently installed	29.08552714	-95.35465382

Background readings (taken by SCS):

Upwind: 2.3 ppm

Downwind: 2.4 ppm

EPA readings were taken with three ThermoFisher Toxic Vapor Analyzer Flame Ionization Devices, calibrated using zero air and methane-in-air at 500, 2000, and 10,000 ppm.

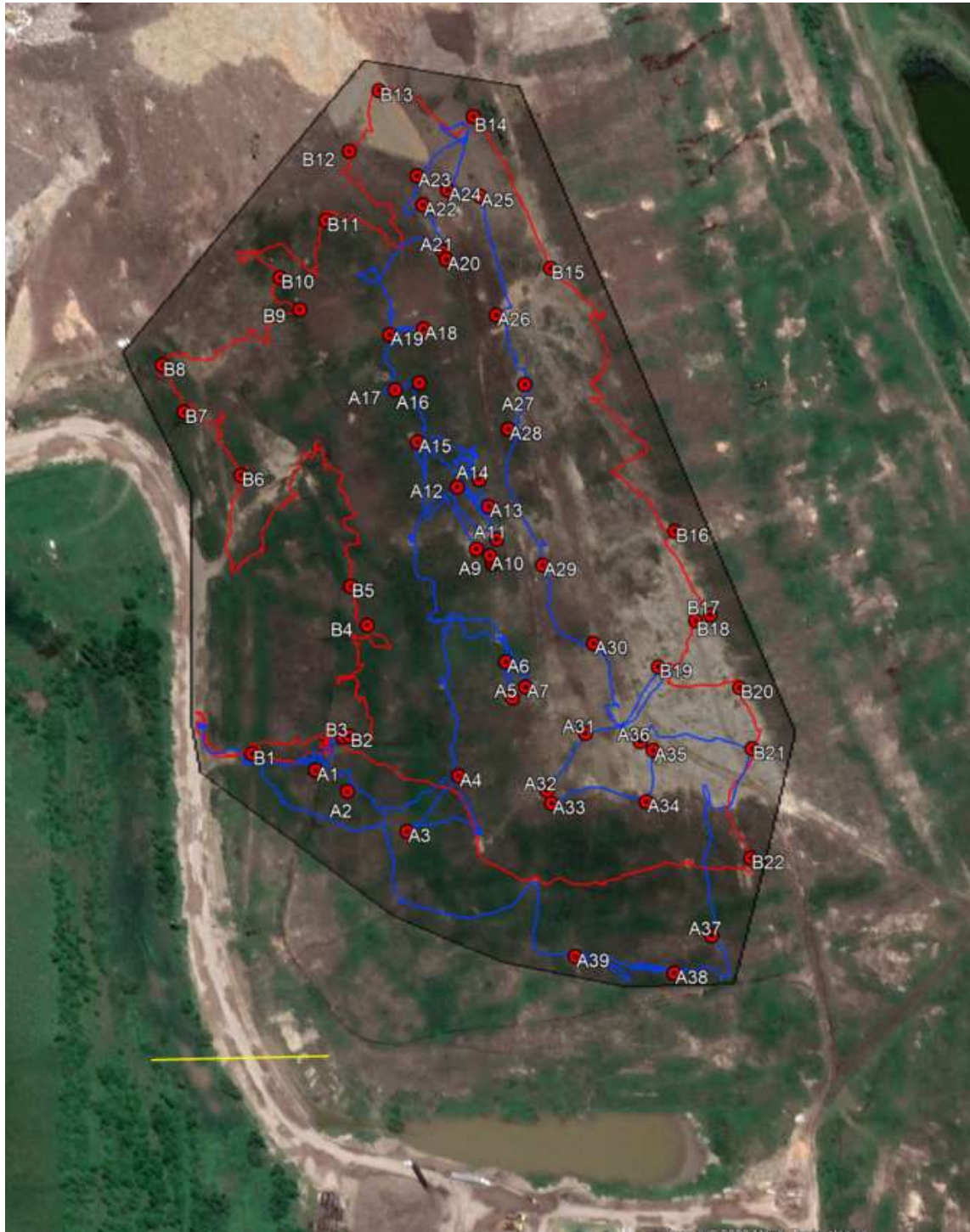
SCS/Contractor readings were taken with SEM5000s.

Facility Overview Map



EPA annotations over Google Earth imagery dated 4/26/2022. Image is ~1.7 miles wide with north oriented up.

Map of Detected Exceedances



Zoom in on map of EPA survey paths and detected exceedances, paths colored for each survey team. Yellow line is 100m for scale.