REPUBLIC SERVICES

28972Coffin Butte Rd Corvallis, OR 97330
o 541.745.5792 f 541.230.5534 republicservices.com

July 29, 2024

Ms. Suzy Luttrell
Oregon Department of Environmental Quality
Air Quality Division
4026 Fairview Industrial Drive
Salem, OR 97302

Re: Revised Monthly Title V Report – June 2024
Coffin Butte Landfill
Title V Operating Permit No. 02-9502
Project No. 0120-174-76-07-06

Dear Ms. Luttrell:

Please find the attached Revised monthly Title V report for June 2024 for Coffin Butte Landfill, in accordance with Title V Operating Permit No. 02-9502, Condition 37.

If you have any questions, please do not hesitate to contact Ian Macnab or myself at 541.745.5792.

Sincerely,
Valley Landfills, Inc.

Bret Davis
General Manager

Attachments

cc: Melissa Green, Weaver Consultants Group *(via email)*

PERMIT CONDITION 37a:

COVER INTEGRITY MONITORING REPORT, RESULTS, AND REPAIR

"Monthly & Quarterly" Title V Monitoring Checklist

Oregon Title V Operating Permit No.: 02-9502 *Coffin Butte Landfill*

Performed By: Ian Macnab Date: 6/30/2024 Weather: See Daily

Title V Condition No.	Monitoring Requirement	Monitoring				Comments
		Results		Method	Time	
		Yes[1]	No			
13.8	Monthly, measure the gauge pressure at each individual gas extraction point. Does a positive pressure exist in any extraction point?	X				Wells with positive pressure are inactive, being repaired or on the alternative monitoring plan.
13.9	Monthly, measure the O2 concentration and temperature at each individual gas extraction point. Is the O2 concentration >= 5% or the temperature >= 55 degrees C (131 degrees F)?	X				Wells with O_2 are inactive, being repaired or on the alternative monitoring plan.
13.10	Quarterly, conduct Surface Emissions Monitoring. Is methane concentration >= 500 ppm?	X				Second Quarter SEM was performed in June
13.11	Monthly, check the Integrity of the Cover. Are there any Holes?		X			Monthly cover inspection monitoring was performed.

Notes: [1] Review the Condition listed in the Title V Operating Permit for specific requirements. Describe corrective action taken under Comments. Report any excess emission events in accordance with Title V Operating Permit, Condition 32.

PERMIT CONDITION 37b:

RESULTS OF THE QUARTERLY SURFACE EMISSIONS MONITORING

FIRST QUARTER 2024 SEM REPORT

May 15, 2024
File No. 07222178.00

Mr. Ian MacNab
Republic Services – Coffin Butte Landfill
28972 Coffin Butte Road
Corvallis, Oregon 97330

Subject: Coffin Butte Landfill - Corvallis, Oregon

Surface Emissions Monitoring for First Quarter 2024.

Dear Mr. MacNab:

SCS Field Services (SCS-FS) is pleased to provide Republic Services, with the enclosed report summarizing the surface emissions monitoring services provided at the Coffin Butte Landfill (Site) during the first quarter of 2024. This report includes the results of the surface scan, component emissions, and blower/flare station emissions monitoring for the Site for this monitoring period.

SCS-FS appreciates the opportunity to be of assistance to Republic Services on this project. As you review the enclosed information, please contact Stephan Harquail at (503) 867-2369 or Max Polkabla at (510) 277-5122 if you have any questions or comments.

Sincerely,

Max Polkabla

Max Polkabla
Senior Technician/Data Analyst
SCS Field Services

Stephen Harquail
PNW Region Manager
SCS Field Services

Coffin Butte Landfill

Oregon Landfill Gas Emissions Rule (OAR) and Surface Emissions Monitoring

First Quarter 2024

Presented to:

Mr. Ian MacNab
28972 Coffin Butte Road
Corvallis, Oregon 97330

SCS FIELD SERVICES

File No. 0722178.00 | May 15, 2024

SCS FIELD SERVICES
15949 SW 72nd Ave
Portland, Or 97224

Coffin Butte Landfill

Oregon Landfill Gas Emissions Rule (OAR) and Surface Emissions Monitoring First Quarter 2024

INTRODUCTION

This letter provides results of the February 22, 27, March 5, 15, 25, and April 3, and 10, 2024, OAR landfill surface emissions monitoring (SEM) performed by SCS Field Services (SCS) at the Coffin Butte Landfill. All work was performed in accordance with our approved Work Scope dated August 29, 2022, and the OAR requirements.

2024 State Regulatory Applicability

CBL is subject to the Oregon-specific landfill gas emission regulations in OAR Chapter 340 Division 239. These SEM regulations are detailed below. The following requirements are stricter than the NESHAP regulations in previous Sections and require additional compliance:

SURFACE EMISSION METHANE CONCENTRATION LIMITS

> *340-239-0200 (1) Surface Emission Methane Concentration Limits. Except as provided in OAR 340-239-0110(4), 340-239-0110(5), 340-239-0300, and 340-239-0600(1), beginning August 1, 2022, or upon commencing operation of a newly installed gas collection and control system or modification of an existing gas collection and control system pursuant to OAR 340-239-0110(1), whichever is later, no location on the landfill surface may exceed either of the following methane concentration limits:*
>
> *(a) 500 ppmv, other than nonrepeatable, momentary readings, as determined by instantaneous surface emissions monitoring conducted in accordance with OAR 340-239-0800(3)(b);*
>
> *(b) An average methane concentration limit of 25 ppmv as determined by integrated surface emissions monitoring conducted in accordance with OAR 340-239-800(3)(c).*

The 500 ppmv limit is already a requirement in the Federal regulations above, but an average methane concentration limit of 25 ppmv will be adhered to as required.

SURFACE EMISSION RECORDKEEPING

> *340-239-0700(2)(a)(C) All instantaneous surface readings of 100 ppmv methane or greater. All exceedances of the limits in OAR 340-239-0100(6)(b) and 340-239-0200, including the location of the leak (or affected grid), leak concentration in ppmv methane, date and time of measurement, the action taken to repair the leak, date of repair, any required remonitoring and the remonitored concentration in ppmv methane, wind speed during surface sampling, and the installation date and location of each well installed as part of a gas collection system expansion;*

The Federal regulations only require monitored surface emissions over 500 ppmv to be documented, so all of the above recordkeeping will be performed on emission points 100 ppmv or over. All repeatable

instantaneous records of 100 ppm or higher (taken during SEM) must be kept for 5 years AND recorded in the semi-annual reports.

SUMMARY AND CONCLUSIONS

As stipulated in OAR, if uncorrectable exceedances within the 10-day limitation are detected or emissions are discovered during an inspection by Regulatory Agencies, the landfill must perform monitoring on a 25-foot pathway on a quarterly basis for active disposal sites. Upon completion of four consecutive SEM events without an uncorrectable exceedance of the 25 ppmv or 500 ppmv standards, other than non-repeatable momentary readings, the landfill may perform the monitoring on a 100-foot spacing on an annual basis for closed landfills or quarterly for active disposal sites. In accordance with the provisions of the OAR, the monitoring of the landfill was done on a 25-foot pathway based on a prior inspection, in which exceedances were observed.

On February 22, 27, March 5, 15, 25, April 3, and 10, 2024, SCS performed first quarter 2023 surface emissions monitoring testing as required by the Oregon Landfill Gas emission Rule. Instantaneous surface emissions monitoring results indicated that eleven (11) locations exceeded the 500 ppmv maximum concentration on the above-mentioned dates (Table 1 in Attachment 3). The required first and second 10-day (OAR) follow-up monitoring indicated that not all areas returned to below regulatory compliance limits following system adjustments and remediation by site personnel. Based on these monitoring results, and in accordance with OAR, the site is required to perform a system expansion within 120 days of the initial detected exceedance or July 24, 2024. These results are discussed in a subsequent section of this report.

Also, during the instantaneous monitoring event, SCS performed integrated monitoring of the landfill surface. As required by the OAR, the landfill was divided into 50,000 square foot areas. The Coffin Butte Landfill surface is divided into 105 grids, as shown in Figure 1 in Attachment 1. During this monitoring event, several grids were not monitored, in accordance with the regulations, due to ongoing active landfilling activities, unsafe conditions, or there was no waste in place prior to the monitoring event.

During the monitoring event, there were four (4) areas observed to exceed the 25 ppmv OAR integrated average threshold (Table 2 in Attachment 4). The required first and second 10-day OAR follow-up monitoring indicated that all four (4) areas had returned to compliance following system adjustments and remediation by site personnel. Based on these monitoring results no additional follow-up testing was required at this time. These results are discussed in a subsequent section of this report.

In addition, quarterly monitoring of the pressurized piping or components of the Gas Collection and Control System (GCCS) under positive pressure must be performed quarterly. Results of the testing of the landfill gas (LFG) Blower Flare Station (BFS) pressurized pipe and components indicated that all test locations were in compliance with the 500 ppmv requirements.

Further, as required under the OAR, any location on the landfill that has an observed instantaneous methane concentration above 100 ppmv, must be included within the surface emission monitoring report and if any instantaneous location records above 250 ppmv, it must be monitored in a 5-foot grid around the location to determine extents of the methane leak. During this reporting period, nine (9) locations were observed showing elevated concentrations between 100-499 ppmv, of the reporting threshold. When these readings are observed to be repeatable, they are reported to site personnel for tracking and/or remediation and will be reported in the next submittal of the annual OAR report. Finally, to help prevent potential future exceedances, SCS recommends that the landfill surface be routinely inspected and any observed surface erosion be routinely repaired.

BACKGROUND

The Coffin Butte Landfill is an active organic refuse disposal site. By way of background, organic materials buried in a landfill decompose anaerobically (in the absence of oxygen) producing a combustible gas that contains approximately 50 to 60 percent methane gas, 40 to 50 percent carbon dioxide, and a trace amount of various other gases, some of which are odorous. The Coffin-Butte/Corvallis property contains a system to control the combustible gases generated in the landfill.

SURFACE EMISSIONS MONITORING

On February 22, 27, March 5, 15, 25, April 3, and 10, 2024, the instantaneous and integrated SEM was performed over the surface of the subject site. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the OAR threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring in the 50,000 square foot grids as required under the OAR. During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rules as required.

EMISSIONS TESTING INSTRUMENTATION/CALIBRATION

The instruments used to perform the landfill surface emission testing consisted of the following:

- Thermo Scientific TVA 2020 portable Flame Ionization Detector (FID). This instrument measures methane in the air over a range of 1 to 50,000 ppmv. The TVA 2020 meets the State of California Air Resources Board (CARB) requirements for combined instantaneous and integrated monitoring and was calibrated in accordance with the United States Environmental Protection Agency (US EPA) Method 21.

- Weather Anemometer with continuous recorder for meteorological conditions in accordance with the OAR.

Instrument calibration logs and weather information are shown in Attachments 5 and 6.

SURFACE EMISSIONS MONITORING PROCEDURES

Surface emissions monitoring was conducted in accordance with the OAR and SEM requirements. Monitoring was performed with the FID inlet held within 2 inches of the landfill surface while a technician walked a grid in parallel paths not more than 25 or 100 feet apart over the landfill's surface. Cracks, holes, and other cover penetrations in the surface were also tested. Surface emissions readings were monitored continuously and recorded every 5 seconds. Any areas exceeding the 100 or 500 ppmv standards (reporting and compliance levels, respectively) would be GPS-tagged and stake-marked for on-site personnel to perform remediation or repairs.

The integrated average is based on the readings stored on the instrument, which are recorded every 5 seconds. The readings are then downloaded and the averages are calculated for each grid using SCS eTools®. All readings are maintained in this secure SCS Database. The readings are not provided in the report due to the volume of readings but can be furnished upon request.

Recorded wind speed results are shown in Attachment 6. Wind speed averages were observed to remain below the alternative threshold of 10 miles per hour, and no instantaneous speeds exceeded 20 miles

per hour. No rainfall occurred within 72 hours of the monitoring events. Therefore, site meteorological conditions were within the alternatives of the OAR requirements on the above-mentioned dates.

TESTING RESULTS

During this event, SCS performed the monitoring on a 25-foot pathway in accordance with the rule as required under the OAR. The intent of the monitoring was to identify any specific locations or areas of the landfill surface with organic compound concentrations exceeding the OAR or NSPS threshold limit values of 500 ppmv measured as methane for instantaneous monitoring, or an average methane concentration of 25 ppmv for the integrated monitoring (OAR).

On March 26 and 29, 2024, SCS performed first quarter 2024 instantaneous emissions monitoring testing as required by the Oregon DEQ/OAR. During this monitoring, surface emissions results indicated that eleven (11) locations exceeded the 500 ppmv maximum concentration. The required first and second 10-day (OAR) follow-up monitoring performed on April 3, and 10, 2024, indicated that not all locations returned below compliance limits as required, following system adjustments and remediation by site personnel. Based on these monitoring results, and in accordance with the OAR, the site is required to perform a system expansion within 120 days of the initial detected exceedance or July 24, 2024. Results of the initial and follow-up monitoring are shown in Attachment 3 (Table 1). Calibration logs for the monitoring equipment are provided in Attachment 5. Results of the monitoring are shown in Attachments 2 and 3 (Table 1).

Additionally, calculated integrated monitoring indicated four (4) integrated exceedances of the 25-ppmv requirement on March 5, and 15, 2024. The required first and second 10-day OAR follow-up monitoring performed on March 15, and 25, 2024, indicated that all four (4) areas had returned to compliance. Results of the initial and follow-up monitoring are shown in Attachment 4 (Table 2). Calibration logs for monitoring equipment are provided in Attachment 5.

During this monitoring event, several girds were not monitored, in accordance with the OAR, due to active landfilling activities, unsafe conditions, overgrown vegetation, or no waste in place. SCS will continue to monitor all accessible locations during the second quarter of 2024.

PRESSURIZED PIPE AND COMPONENT LEAK MONITORING

On March 29, 2024, quarterly leak monitoring was performed in accordance with the OAR. SCS performed LFG pressurized pipe and component leak monitoring at the BFS. Monitoring was performed with the detector inlet held one-half of an inch from the pressurized pipe and associated components. No locations exceeding the 500 ppmv threshold were observed during our monitoring event. The maximum reading, which was 4.30 ppmv, was well below the maximum threshold (see Table 1 for component results). Therefore, all pressurized pipes and components located at the LFG BFS were in compliance at the time of our testing.

PROJECT SCHEDULE

According to the OAR, surface emissions monitoring at active landfills is required to be performed on a quarterly basis. Therefore, in accordance with our approved Work Scope, the second quarter 2024 (April through June) surface emissions testing event is scheduled to be performed by the end of June 2024.

STANDARD PROVISIONS

This report addresses the conditions of the subject site during the testing dates only. Accordingly, we assume no responsibility for any changes that may occur subsequent to our testing which could affect the surface emissions at the subject site or adjacent properties.

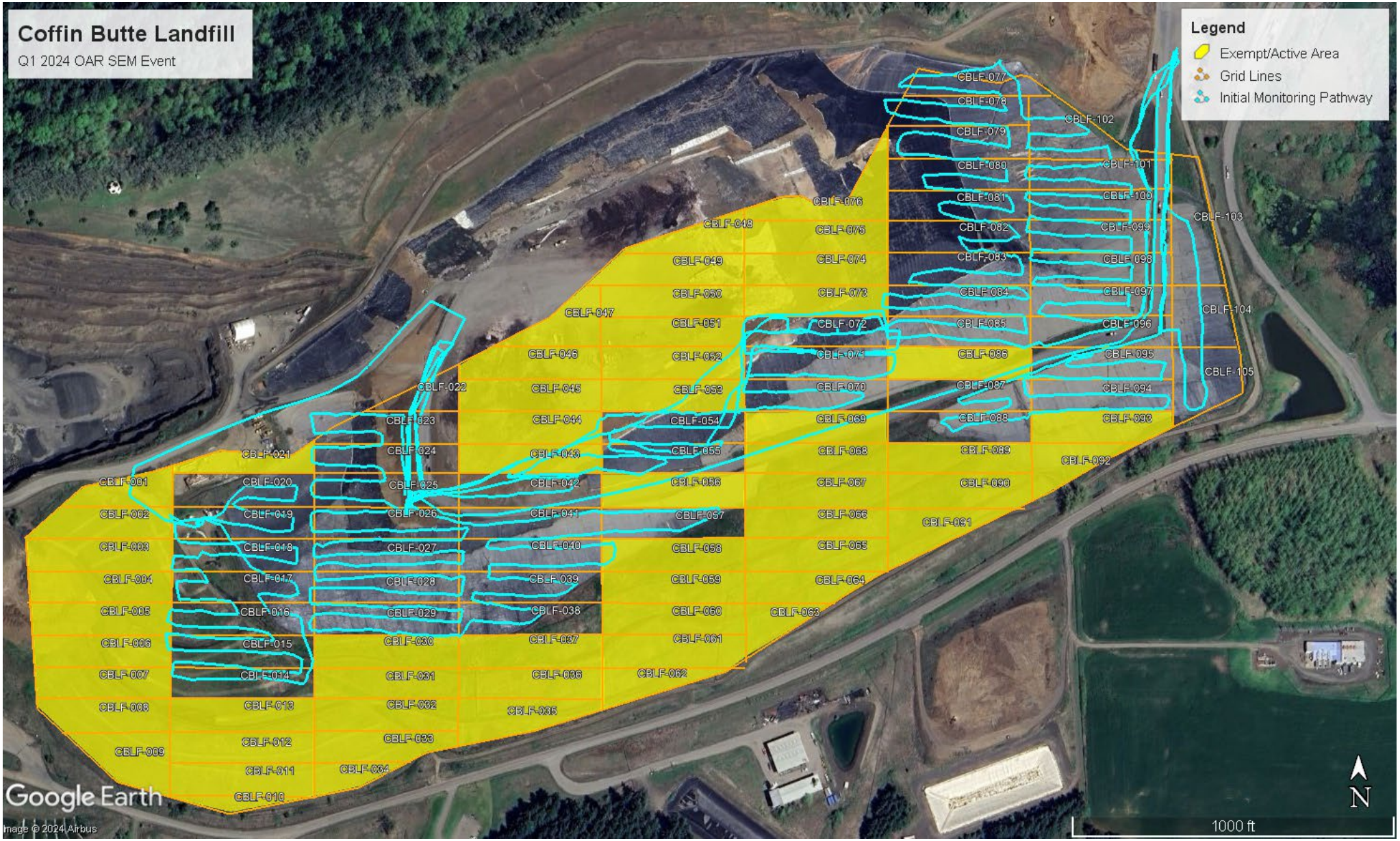
Attachment 1

Landfill Grid

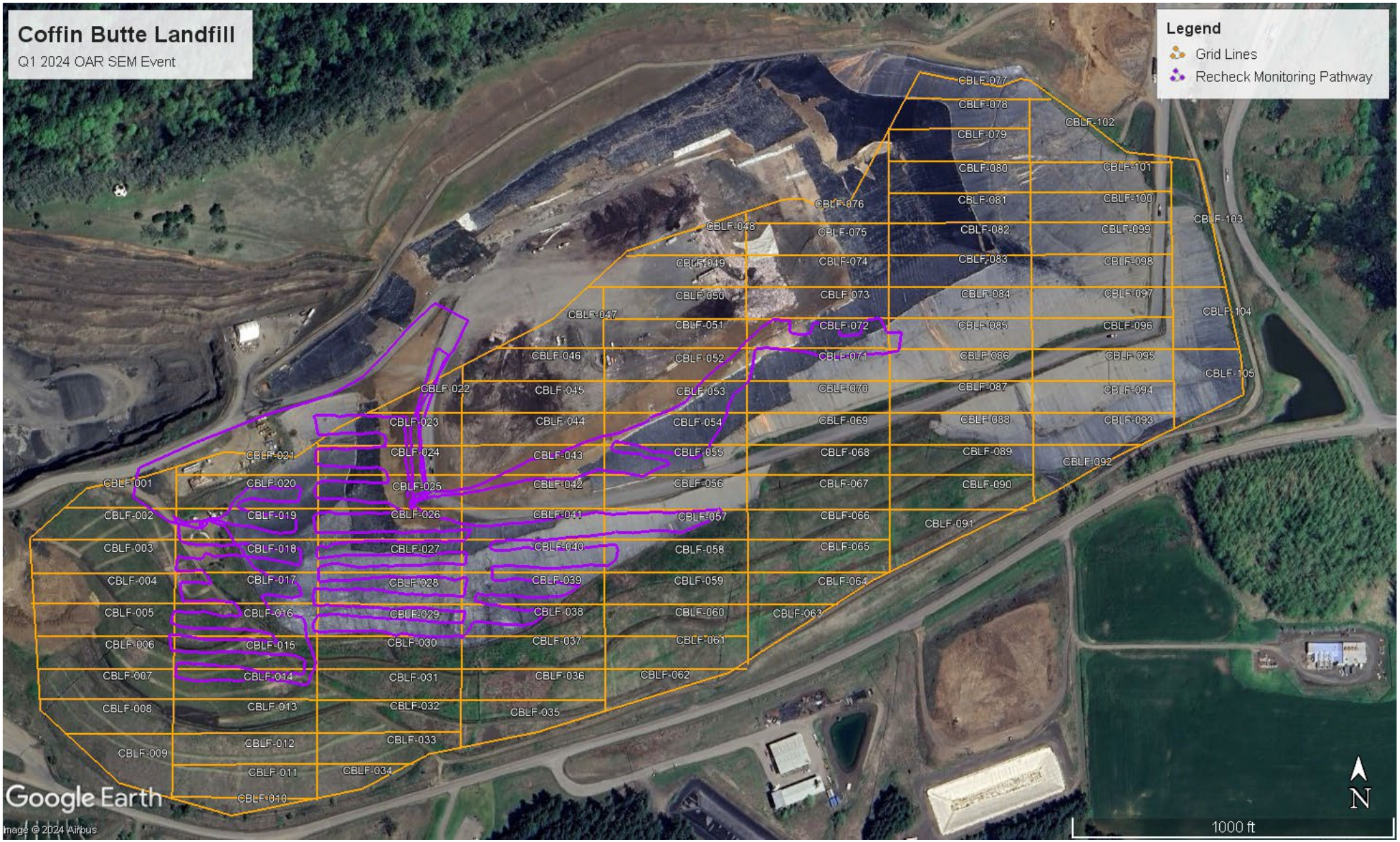
Surface Emissions Monitoring Site Grid Map
Coffin Butte Landfill, Corvallis, Oregon

Attachment 2

Surface Pathway



First Quarter 2024
Initial Surface Emissions Monitoring Pathway
Coffin Butte Landfill, Corvallis, Oregon



First Quarter 2024
Recheck Surface Emissions Monitoring Pathway
Coffin Butte Landfill, Corvallis, Oregon

Attachment 3

Instantaneous and Component Emissions Monitoring Results

First Quarter 2024
Initial Emissions Monitoring Results Greater Than 100 and 500 ppmv
Coffin Butte Landfill, Corvallis, Oregon

First Quarter 2024

Table 1. Instantaneous Surface and Component Emissions Monitoring Results Coffin-Butte Landfill, Corvallis, Oregon

Instantaneous Data Report for March 26, 29, April 3, and 10, 2024

Location (Surface)	Initial Monitoring Results (ppmv) 3/26/2024	Initial Monitoring Results (ppmv) 3/29/2024	First 10-Day Monitoring Results (ppmv) 4/3/2024	Second 10-Day Monitoring Results (ppmv) 4/10/2024	120-Day Expansion Due Date:	Latitude	Longitude
4V000055	7750	N/A	11217	2218	**July 24, 2024**	44.70118004	-123.22759998
2V000089	N/A	22000	7981	7072	**July 24, 2024**	44.70056003	-123.22847002
3A0V0078	N/A	14000	9747	7501	**July 24, 2024**	44.69873998	-123.23320001
2H000103	N/A	8852	54	N/A	N/A	44.69975746	-123.22959730
3V000100	N/A	4757	756	4940	**July 24, 2024**	44.69902103	-123.23261898
2H000086	N/A	4310	2532	3729	**July 24, 2024**	44.69952998	-123.23150997
2V00100S	N/A	3692	722	12400	**July 24, 2024**	44.69920753	-123.23143126
2H000101	N/A	2139	1112	1600	**July 24, 2024**	44.69929654	-123.23080053
3ARC0074	N/A	1954	2319	1326	**July 24, 2024**	44.69944272	-123.23203468
3A0V0074	N/A	1800	2561	211	N/A	44.69945001	-123.23203996
3A0V0076	N/A	978	296	N/A	N/A	44.69910996	-123.23274999

First Quarter 2024

Table 1. Instantaneous Surface and Component Emissions Monitoring Results Coffin-Butte Landfill, Corvallis, Oregon

Instantaneous Data Report for March 26, 29, April 3, and 10, 2024
Readings between 100-499 ppmv

Location (Surface)	Initial Monitoring Results (ppmv) 3/29/2024	Latitude	Longitude
4V000056	428	44.70086999	-123.22715004
3V00096S	471	44.69896277	-123.23220449
3V00096D	463	44.69895833	-123.23219821
4H000051	290	44.69939997	-123.22805998
2H000099	272	44.70014898	-123.23024179
3ARC0076	252	44.69910996	-123.23274999
5H000026	242	44.70244001	-123.22776997
2V00100D	210	44.69920702	-123.23142330
3V000084	200	44.69929000	-123.23078997

First Quarter 2024

Table 1. Instantaneous Surface and Component Emissions Monitoring Results Coffin-Butte Landfill, Corvallis, Oregon

Pressurized Pipe and Component Results

Route	Date	Concentration (ppmv)
FLARE STATION	3/29/2024	4.30

No other exceedances of the 500 ppmv threshold were observed during the first quarter of 2024 monitoring.

Attachment 4

Integrated Monitoring Results

First Quarter 2024

Table 2. Integrated Surface Emissions Monitoring Results

Coffin-Butte Landfill Corvallis, Oregon

Point Name	Record Date	FID Concentration (ppm)	Comments
CBLF-001	--	--	Exempt Area
CBLF-002	--	--	Exempt Area
CBLF-003	--	--	Exempt Area
CBLF-004	--	--	Exempt Area
CBLF-005	--	--	Exempt Area
CBLF-006	--	--	Exempt Area
CBLF-007	--	--	Exempt Area
CBLF-008	--	--	Exempt Area
CBLF-009	--	--	Exempt Area
CBLF-010	--	--	Exempt Area
CBLF-011	--	--	Exempt Area
CBLF-012	--	--	Exempt Area
CBLF-013	--	--	Exempt Area
CBLF-014	3/15/2024	0.23	Exempt Area
CBLF-015	3/15/2024	0.37	
CBLF-016	3/15/2024	0.09	
CBLF-017	3/15/2024	2.22	
CBLF-018	3/15/2024	0.76	
CBLF-019	3/15/2024	0.24	
CBLF-020	3/15/2024	5.32	
CBLF-021	--	--	Exempt Area
CBLF-022	3/15/2024	12.12	Exempt Area
CBLF-023	3/15/2024	41.74	Initial Monitoring
CBLF-023	3/15/2024	13.76	10-Day Recheck
CBLF-024	3/25/2024	14.66	
CBLF-025	3/15/2024	13.44	
CBLF-026	3/15/2024	10.94	
CBLF-027	3/15/2024	7.09	
CBLF-028	3/15/2024	3.49	
CBLF-029	3/15/2024	1.69	
CBLF-030	--	--	Exempt Area
CBLF-031	--	--	Exempt Area
CBLF-032	--	--	Exempt Area
CBLF-033	--	--	Exempt Area
CBLF-034	--	--	Exempt Area
CBLF-035	--	--	Exempt Area
CBLF-036	--	--	Exempt Area
CBLF-037	--	--	Exempt Area
CBLF-038	3/15/2024	1.89	
CBLF-039	3/15/2024	5.06	
CBLF-040	3/15/2024	6.48	
CBLF-041	3/15/2024	29.65	Initial Monitoring
CBLF-041	3/25/2024	9.36	10-Day Recheck

First Quarter 2024

Table 2. Integrated Surface Emissions Monitoring Results

Coffin-Butte Landfill Corvallis, Oregon

Point Name	Record Date	FID Concentration (ppm)	Comments
CBLF-042	3/5/2024	17.99	
CBLF-043	--	--	Exempt Area
CBLF-044	--	--	Exempt Area
CBLF-045	--	--	Exempt Area
CBLF-046	--	--	Exempt Area
CBLF-047	--	--	Exempt Area
CBLF-048	--	--	Exempt Area
CBLF-049	--	--	Exempt Area
CBLF-050	--	--	Exempt Area
CBLF-051	--	--	Exempt Area
CBLF-052	--	--	Exempt Area
CBLF-053	--	--	Exempt Area
CBLF-054	3/5/2024	21.68	
CBLF-055	3/5/2024	35.74	Initial Monitoring
CBLF-055	3/15/2024	11.45	10-Day Recheck
CBLF-056	--	--	Exempt Area
CBLF-057	3/15/2024	3.13	
CBLF-058	--	--	Exempt Area
CBLF-059	--	--	Exempt Area
CBLF-060	--	--	Exempt Area
CBLF-061	--	--	Exempt Area
CBLF-062	--	--	Exempt Area
CBLF-063	--	--	Exempt Area
CBLF-064	--	--	Exempt Area
CBLF-065	--	--	Exempt Area
CBLF-066	--	--	Exempt Area
CBLF-067	--	--	Exempt Area
CBLF-068	--	--	Exempt Area
CBLF-069	--	--	Exempt Area
CBLF-070	3/5/2024	18.02	
CBLF-071	3/5/2024	19.82	
CBLF-072	3/5/2024	30.26	Initial Monitoring
CBLF-072	3/15/2024	24.60	10-Day Recheck
CBLF-073	--	--	Exempt Area
CBLF-074	--	--	Exempt Area
CBLF-075	--	--	Exempt Area
CBLF-076	--	--	Exempt Area
CBLF-077	2/22/2024	1.46	
CBLF-078	2/22/2024	1.67	
CBLF-079	2/22/2024	18.40	
CBLF-080	2/22/2024	4.07	
CBLF-081	2/22/2024	5.46	
CBLF-082	2/22/2024	9.03	

First Quarter 2024

Table 2. Integrated Surface Emissions Monitoring Results

Coffin-Butte Landfill Corvallis, Oregon

Point Name	Record Date	FID Concentration (ppm)	Comments
CBLF-083	2/22/2024	20.66	
CBLF-084	2/22/2024	22.64	
CBLF-085	2/22/2024	22.74	
CBLF-086	--	--	Exempt Area
CBLF-087	3/5/2024	13.87	
CBLF-088	3/5/2024	15.26	
CBLF-089	--	--	Exempt Area
CBLF-090	--	--	Exempt Area
CBLF-091	--	--	Exempt Area
CBLF-092	--	--	Exempt Area
CBLF-093	--	--	Exempt Area
CBLF-094	3/5/2024	8.25	
CBLF-095	3/5/2024	7.92	
CBLF-096	2/22/2024	5.10	Exempt Area
CBLF-097	2/22/2024	5.25	
CBLF-098	2/22/2024	4.53	
CBLF-099	2/22/2024	1.64	
CBLF-100	2/22/2024	1.33	
CBLF-101	2/22/2024	1.96	
CBLF-102	2/22/2024	1.16	
CBLF-103	2/25/2024	5.09	
CBLF-104	2/26/2024	4.23	
CBLF-105	2/27/2024	2.24	

Attachment 5

Calibration Logs

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 2/22/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 9 MPH Wind Direction: SE Barometric Pressure: 29.73

Air Temperature: 48 deg F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	499	1
2	0	501	1
3	0	500	0

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on SE side. Reading: 0.6 ppm

Downwind NW side of site Reading: 5.1 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 2/27/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 4 MPH Wind Direction: SE Barometric Pressure: 29.63

Air Temperature: 38 deg F General Weather Conditions: Overcast

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	500	0
2	0	501	1
3	0	499	1

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on SE side. Reading: 1.5 ppm

Downwind NW side of site Reading: 4.3 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 3/5/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 7 MPH Wind Direction: SE Barometric Pressure: 30.01

Air Temperature: 37 deg F General Weather Conditions: Overcast

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	499	1
2	0	501	1
3	0	500	0

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on SE side. Reading: 2.1 ppm

Downwind NW side of site Reading: 4.7 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 3/15/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 7 MPH Wind Direction: NE Barometric Pressure: 30.12

Air Temperature: 49 deg F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	500	0
2	0	501	1
3	0	499	1

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on NE side. Reading: 3.2 ppm

Downwind SW side of site Reading: 4.8 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 3/26/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 6 MPH Wind Direction: SW Barometric Pressure: 30.09

Air Temperature: 49 deg F General Weather Conditions: Overcast

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	499	1
2	0	501	1
3	0	500	0

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on SW side. Reading: 2.3 ppm

Downwind NE side of site Reading: 5 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 3/29/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 6 MPH Wind Direction: NE Barometric Pressure: 30.11

Air Temperature: 43 deg F General Weather Conditions: Overcast

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	500	0
2	0	499	1
3	0	501	1

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

Up Wind of landfill area on NE side. Reading: 1.7 ppm

Downwind SW side of site Reading: 4.3 ppm

NOTES:

CARBON EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 4/3/2024 Site Name: Coffin Butte Landfill

WEATHER OBSERVATIONS SCS Employee Riley Baksic

Wind Speed: 6 MPH Wind Direction: SW Barometric Pressure: 30.13

Air Temperature: 50 deg F General Weather Conditions: Overcast

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Response Time trial #1 *5 seconds*

Response Time trial #2 *5 seconds*

Response Time Trial #3 6 seconds

Instrument ID: TVA-202016031210 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	|(Cal Gas Conc. - Cal Gas Reading)|
1	0	501	1
2	0	500	0
3	0	499	1

Average Difference: 0.00

Calibration Precision = Average Difference / Cal Gas Concentration X 100%
= 0 / 500 X 100%
= 0.0% %

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 500 ppm

BACKGROUND CONCENTRATION CHECKS

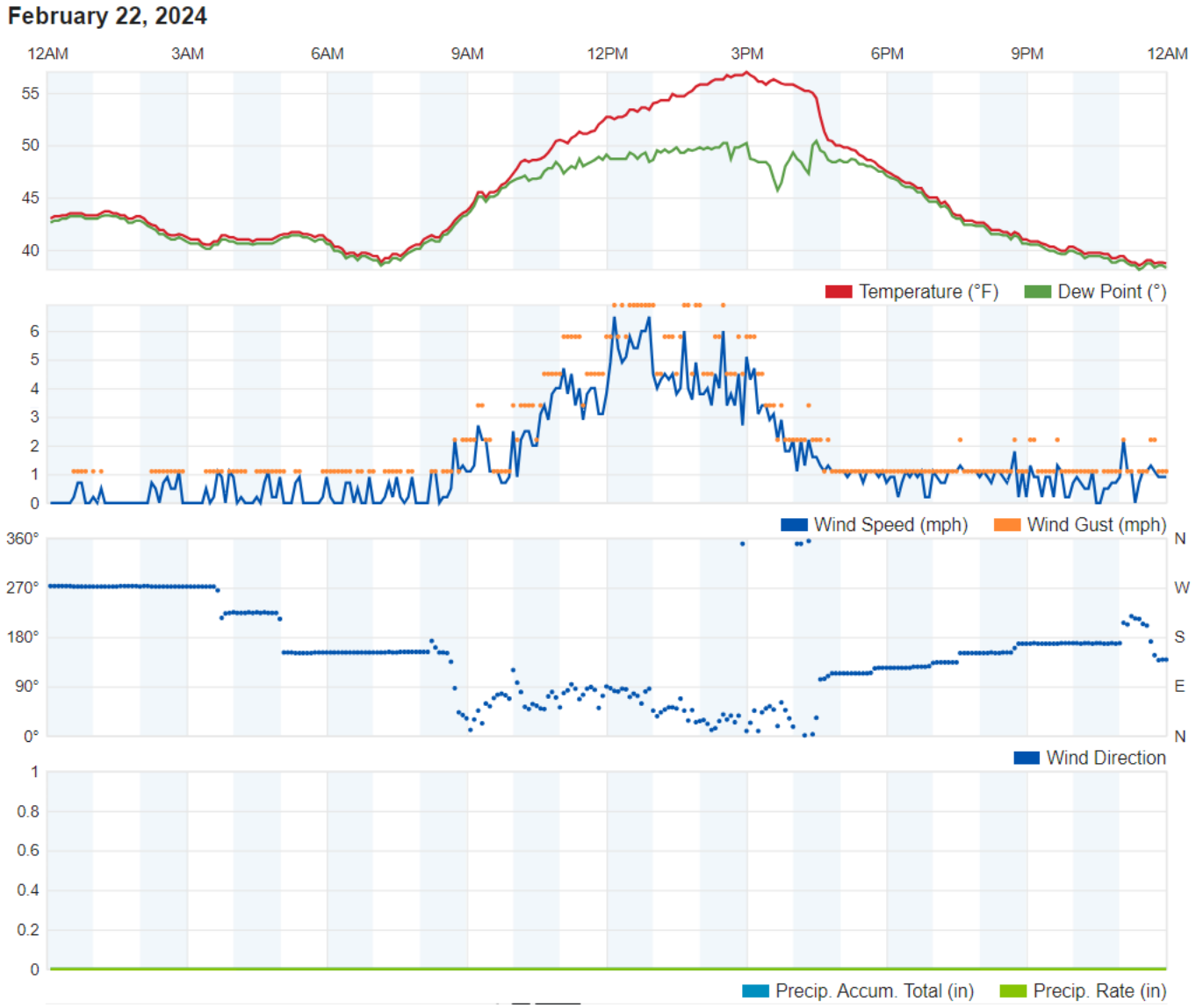
Up Wind of landfill area on SW side. Reading: 0.8 ppm

Downwind NE side of site Reading: 2.4 ppm

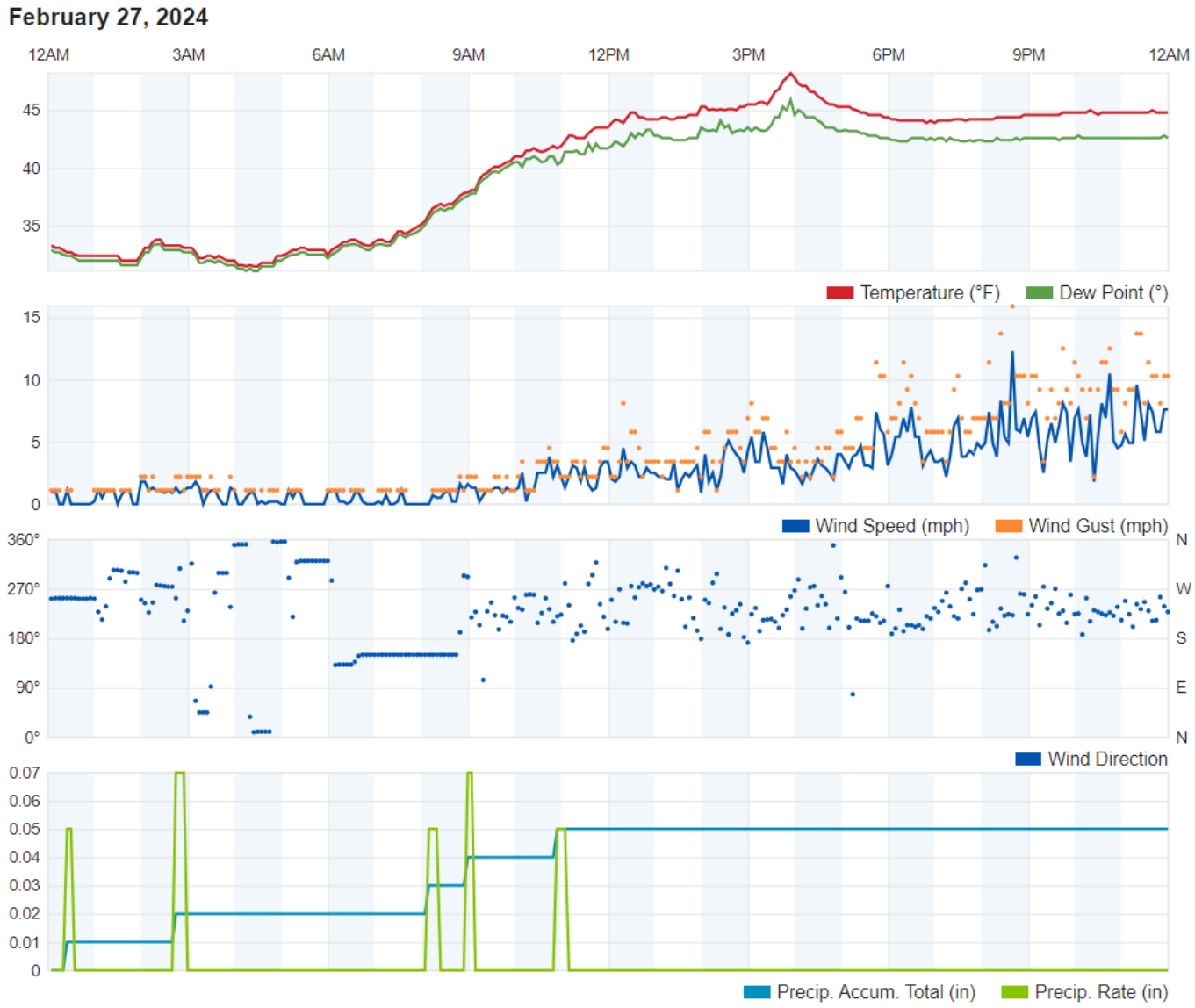
NOTES:

Attachment 6

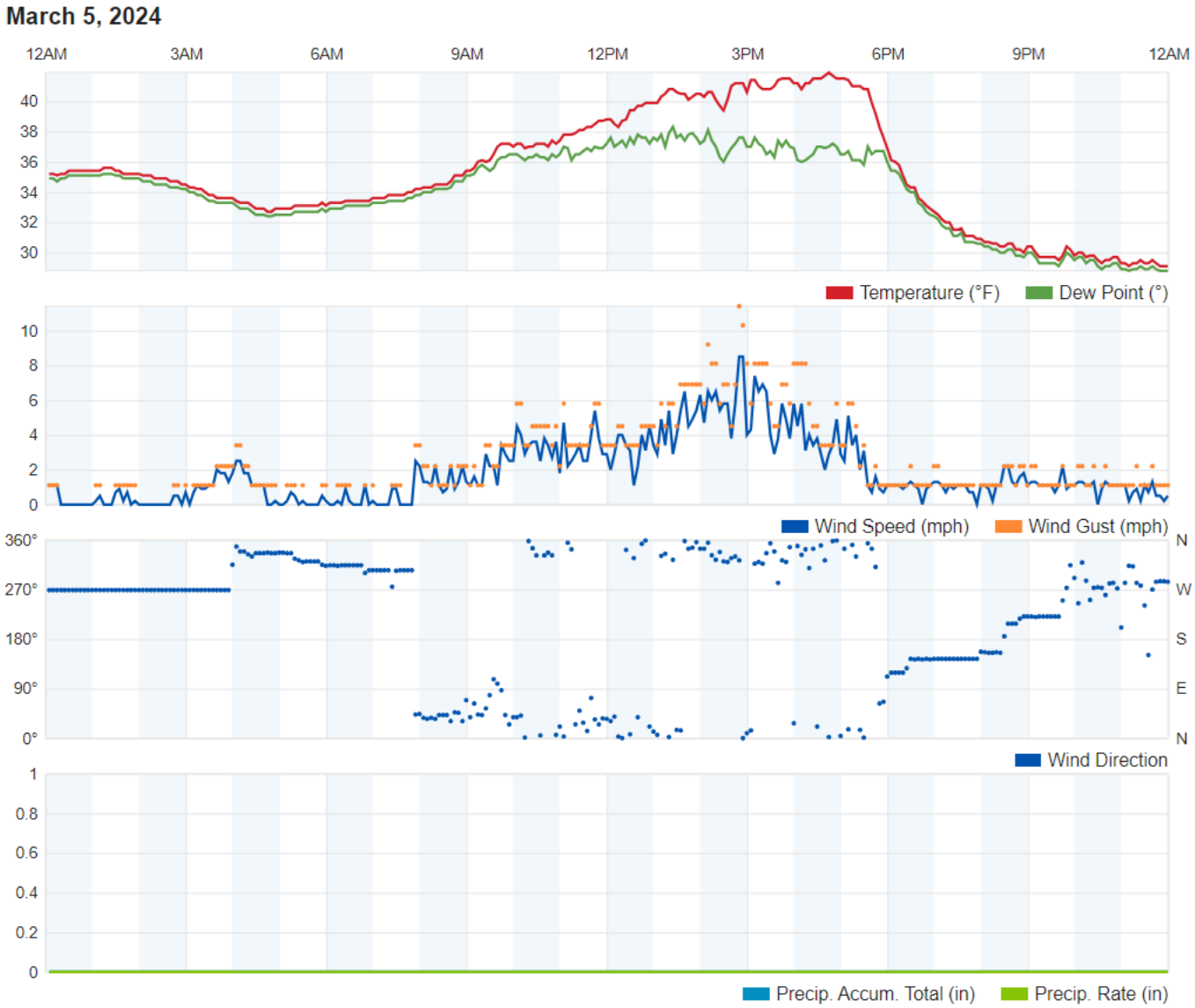
Weather Data



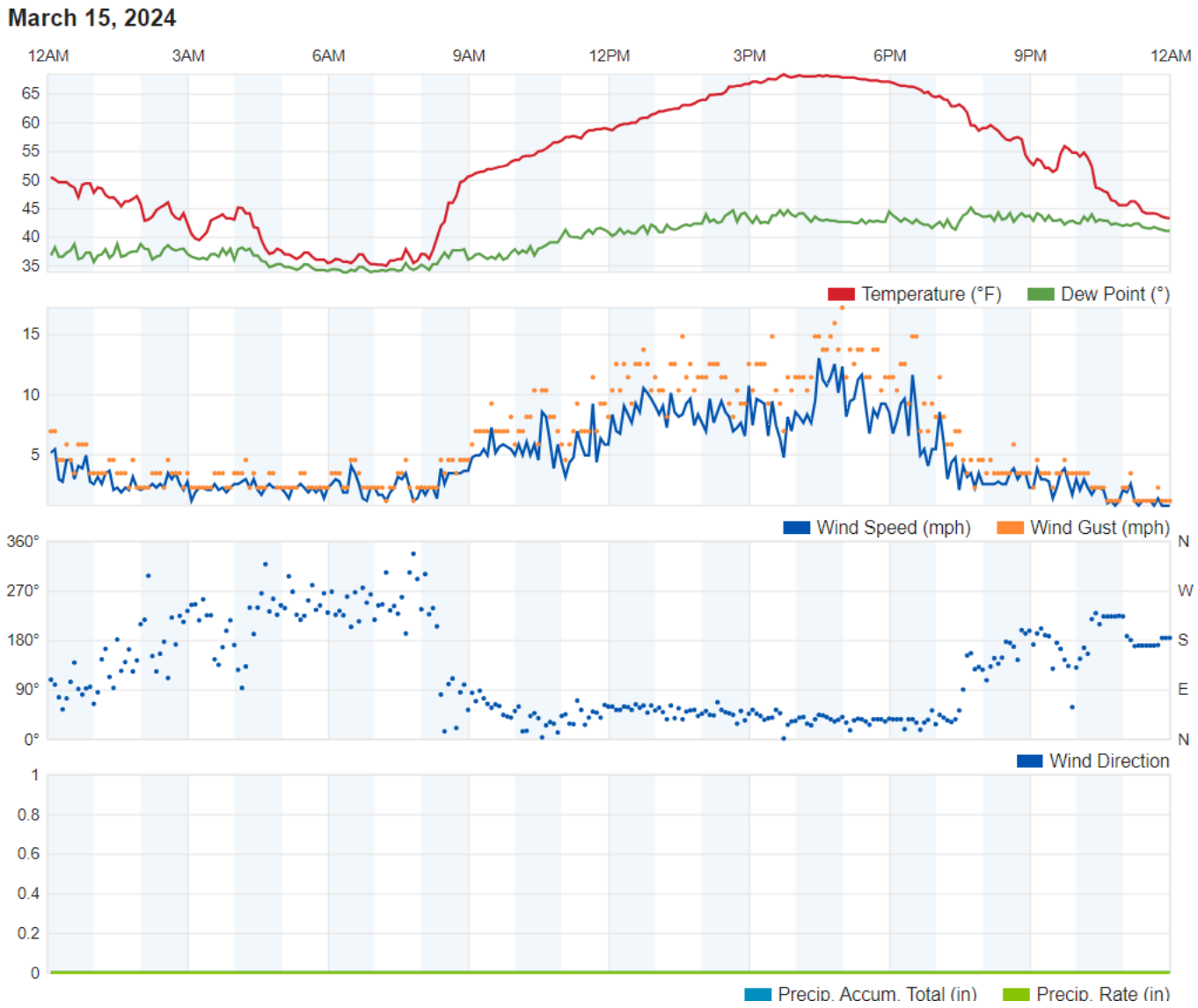
February 22, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



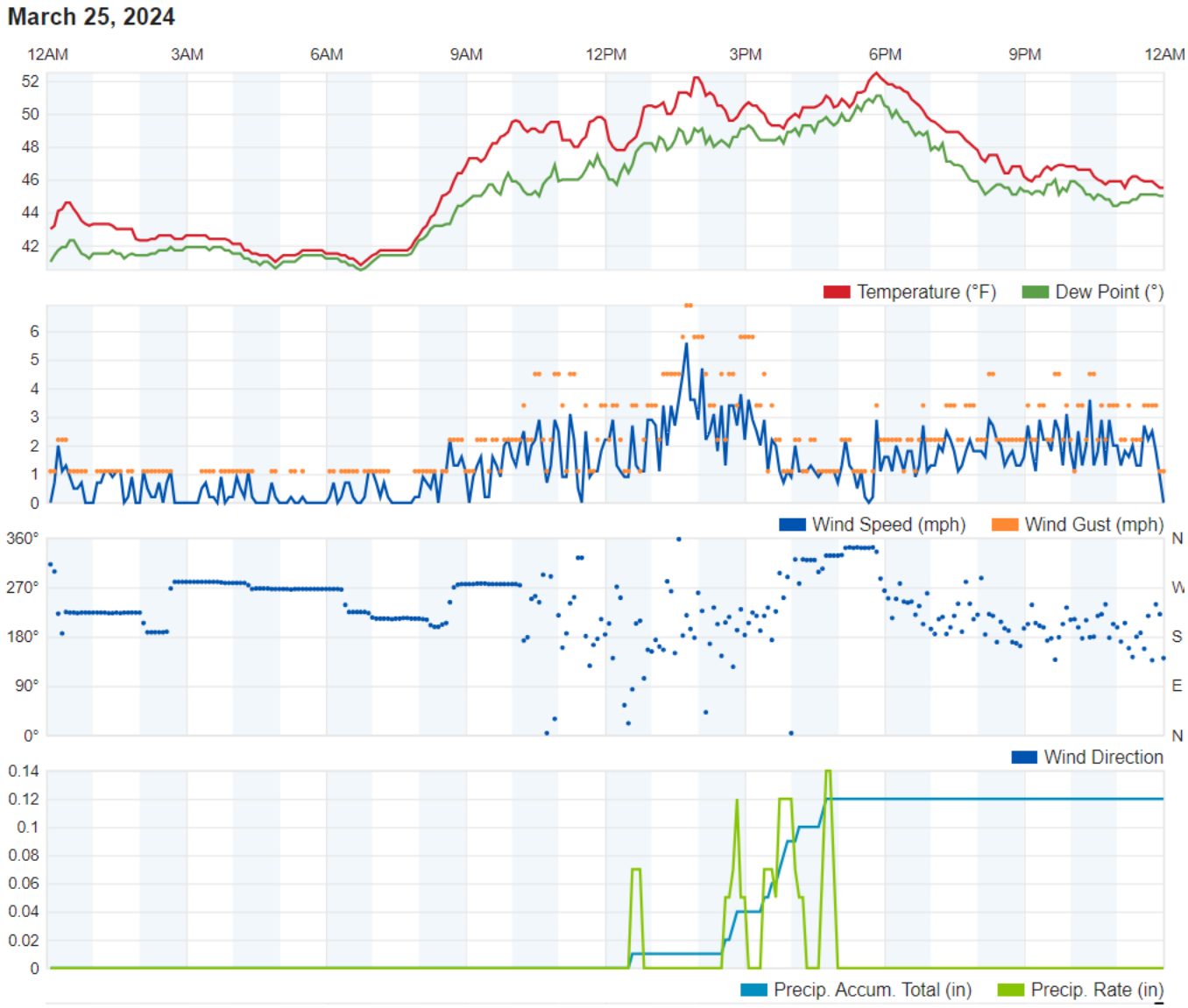
February 27, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



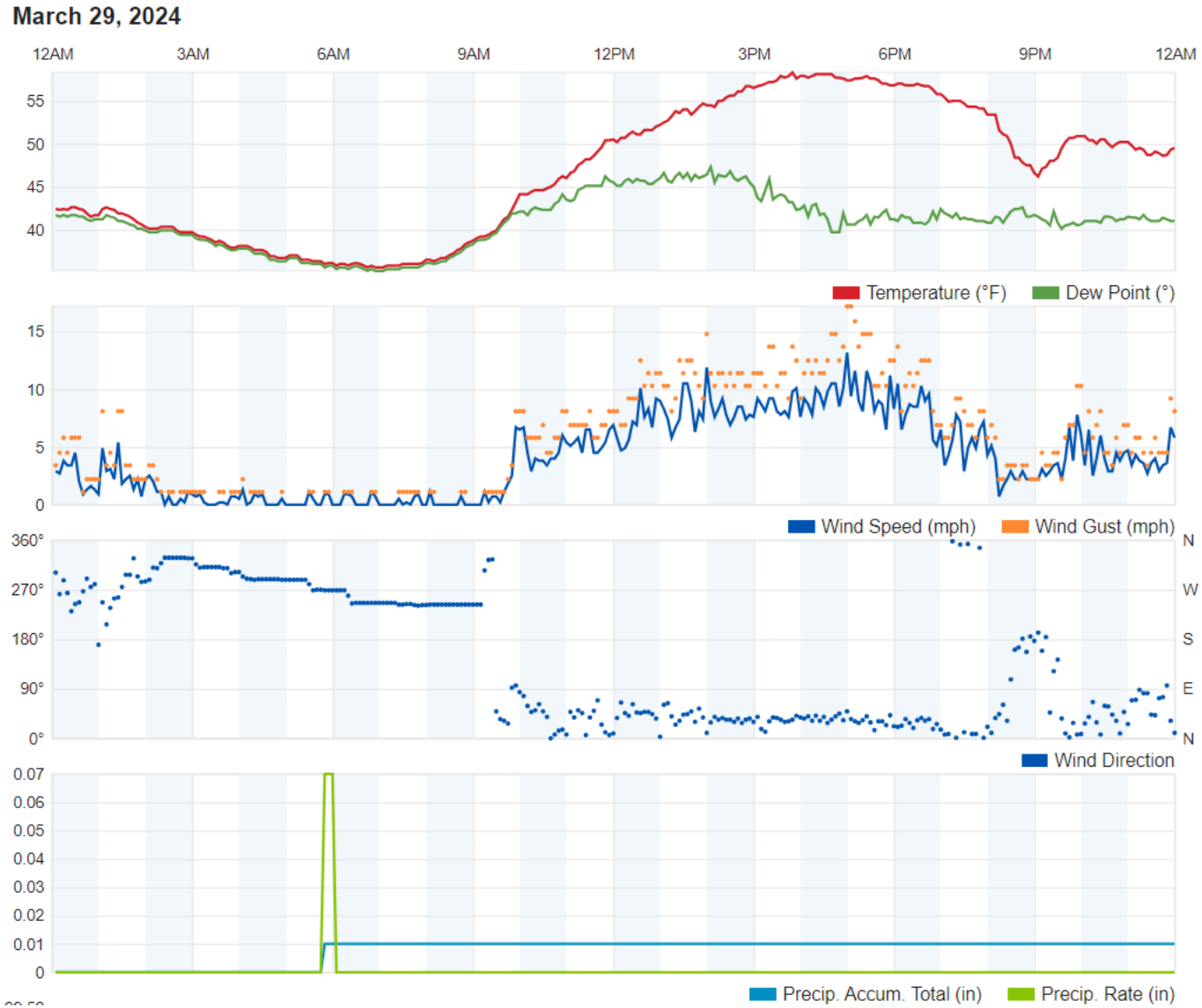
March 5, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



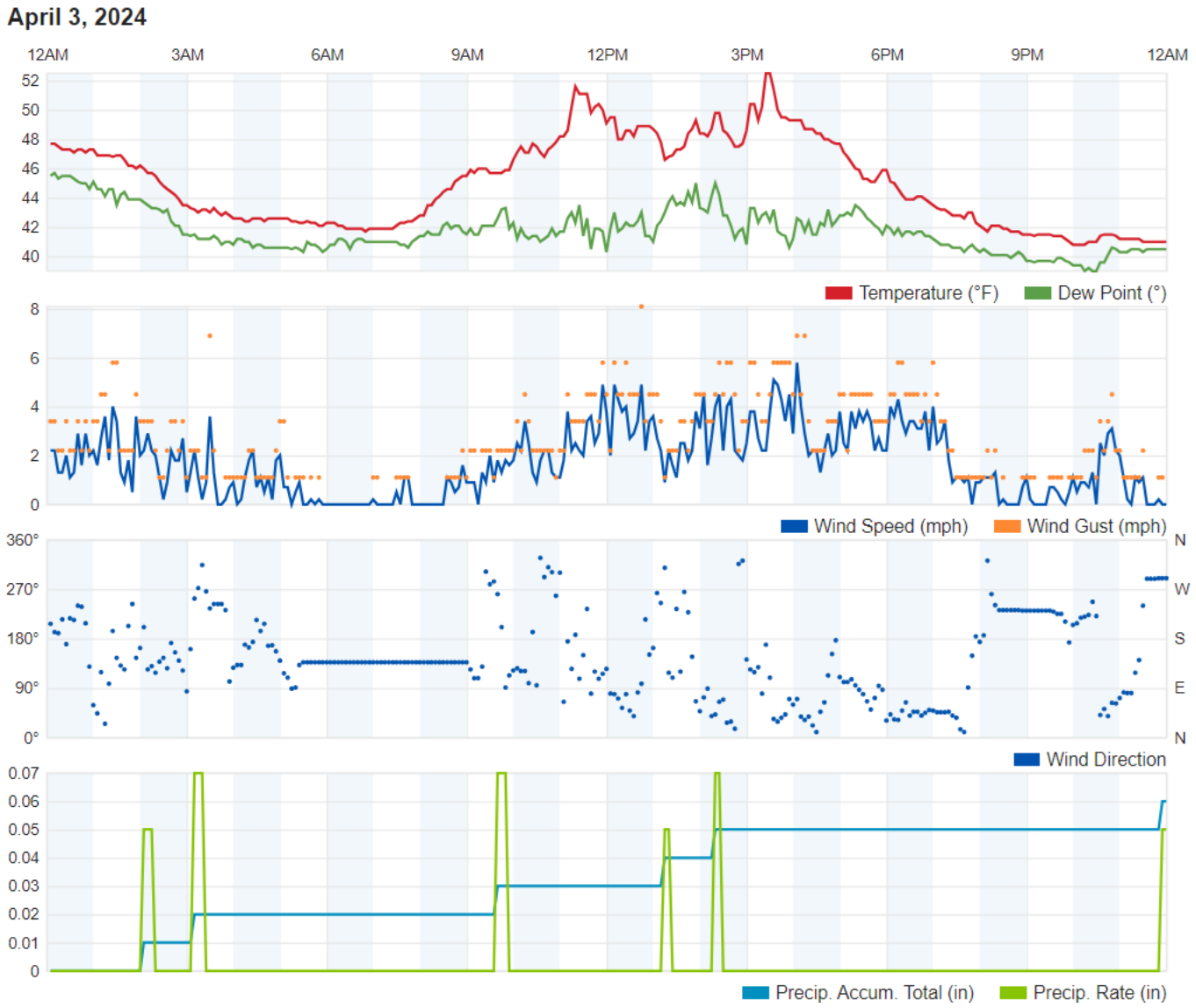
March 15, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



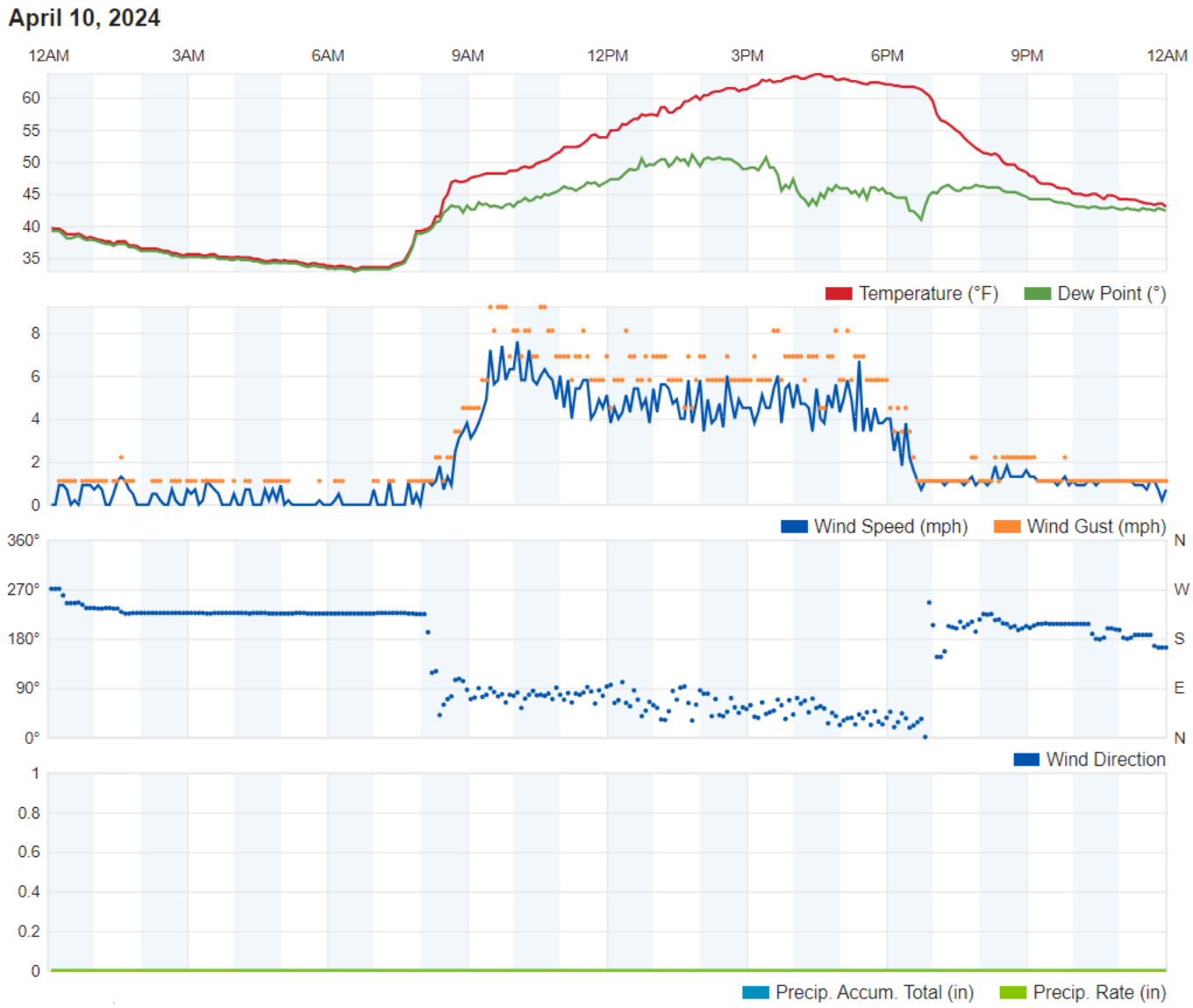
March 25, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



March 29, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



April 3, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon



April 10, 2024
Emissions Monitoring Weather Data
Coffin-Butte Landfill, Corvallis, Oregon

PERMIT CONDITION 37c:

OTHER INFORMATION REGARDING UPSETS, MAINTENANCE, AND OPERATIONAL PROBLEMS

Maintenance
PNGC IC Engines

Engine #	Normal Maintenance	Down Time (hrs)
1	Engine service	2.0
2	Engine service	1.0
3	Engine service	0.0
4	Engine service	3.0
5	Engine service	3.0

Repairs/Operational Problems
PNGC IC Engines

Engine #	Repairs/Operational Problems	Down Time (hrs)
1	Wellfield problem, gen windings	2.0
2	Wellfield problem	1.0
3	Major overhaul	720.0
4	Wellfield issue, wellfield problem	2.0
5	Wellfield problem	1.0

Operational Problems
VLI Flare

Flare #	Operational Problems	Down Time (hrs)
1	Flare ran intermittently, as necessary	N/A
2	Flare ran intermittently, as necessary	N/A

Coffin Butte Resource Project- June 2024

Engine Hours of Operation

Unit # 1

Date	Total Hours	On-line Hours
June-24	244,684	716

Engine Downtimes

Date	Time	Event
6/19/24	1.00	Wellfield problem
6/22/24	1.00	Gen Windings
6/27/24	2.00	Service

Total Hours Off-line **4.00**

Unit # 2

Date	Total Hours	On-line Hours
June-24	242,474	718

Date	Scheduled Time	Event
6/19/24	1.00	Wellfield problem
6/20/24	1.00	Service

Total Hours Off-line **2.00**

Unit #3

Date	Total Hours	On-line Hours
June-24	243,112	0

Date	Scheduled Time	Event
	720.00	Engine down entire month due to major overhaul

Total Hours Off-line **720.00**

Unit # 4

Date	Total Hours	On-line Hours
June-24	142,075	715

Date	Scheduled Time	Event
6/5/24	3.00	Service
6/12/24	1.00	Wellfield issue
6/19/24	1.00	Wellfield problem

Total Hours Off-line **5.00**

Unit # 5

Date	Total Hours	On-line Hours
June-24	140,632	716

Date	Scheduled Time	Event
6/19/24	1.00	Wellfield problem
6/26/24	3.00	Service

Total Hours Off-line **4.00**

Note: **Jun-24** 720

PERMIT CONDITION 37d:

INSTALLATION OF NEW WELLS OR EXPANSION OF THE GAS SYSTEM

New Wells

Well ID	Date Installed
No wells installed	

Decommissioned Wells

Well ID	Date Decommissioned
No wells decommissioned	

PERMIT CONDITION 37e:

AMOUNT OF LANDFILL GAS COLLECTED AND TREATED

Amount of Landfill Gas Collected and Treated

Combustion Device	Total Gas Collected (cf)
PNGC IC Engines	66,360,600
VLI Flare 1	0
VLI Flare 2	42,002,942

PERMIT CONDITION 37f:

TOTAL OPERATING HOURS OF THE IC ENGINES AND FLARES

Total Operating Hours
PNGC IC Engines

Engine #	Operating Hours
1	716.0
2	718.0
3	0.0
4	715.0
5	716.0
Total Operating Hours	**2,865.0**

Total Operating Hours
VLI Flares

Flare #	Operating Hours
1	0.0
2	720.0
Total Operating Hours	**720.0**

PERMIT CONDITION 37g:

LOG OF AIR QUALITY COMPLAINTS RECEIVED

The site received the following air quality complaints from ODEQ on 6/20/2024 that occurred in May 2024:

- **5/22/2024, reported to ODEQ on 6/10/2024**
- **5/27/2024, reported to ODEQ on 6/10/2024**
- **5/30/2024, reported to ODEQ on 6/10/2024**