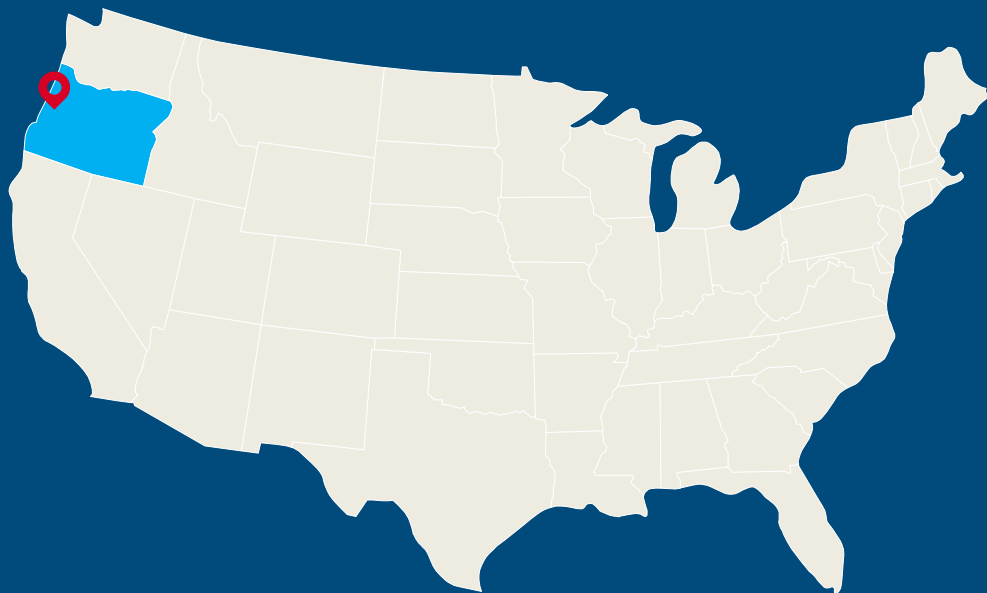




Sustainability in Action

Coffin Butte Landfill and Pacific Region Compost Annual Report

Benton County
2023





Sustainability in Action

Letter from Management

August 28, 2024

Commissioners Augerot, Malone and Wyse
County Administrator McEneny
Benton County Staff

Dear Commissioners, Administrator McEneny and Staff,

Republic Services is pleased to submit this updated version of the Coffin Butte Landfill Annual Report for 2023. It contains operating, environmental compliance and sustainability updates and information for your review. Per our discussion at the Board of Commissioner's meeting on Tuesday, August 6, you'll find additional information regarding odor complaints and methane mitigation, among other topics. Commissioners also requested that we include information about our odor reporting portal in this document. That was included in the original version but has been highlighted on page 11.

This report also includes airspace and landfill capacity forecasting, as well as highlights from our forthcoming expansion request.

We welcome your feedback and look forward to continuing our strong partnership in the years to come.

Please feel free to contact me or Environmental Manager Ian Macnab for more information.

Best Regards,
Bret Davis
General Manager



Sustainability in Action



Sustainability in Action

Executive Summary

Republic Services is pleased to submit its amended annual report, summarizing our annual operations for the 2023 calendar year at Coffin Butte Landfill and the Pacific Region Compost facility.

As always, we are ready to answer questions from, and engage with, the community.

In our 2022 annual report, we estimated that Coffin Butte Landfill had 14.6 years of total capacity (life) remaining. In this report, we projected that at the end of 2023, the Landfill had 13.4 years of airspace remaining.

Our current estimates, based on airspace used since the beginning of this calendar year, is that Coffin Butte Landfill has 12.9 years of life remaining. As you know, unforeseen events, including natural or manmade disasters, can have a direct impact on airspace.

All estimates assume eventual use of the airspace in the Quarry, which is still being excavated. As of June 2024, there are only eight months of disposal life remaining in the fully constructed and permitted portion of the Landfill.

This report is being presented to you as we prepare responses to the County's feedback on our conditional use proposal (CUP) request for the Landfill. This request comes three years after our original proposal. In the interim, it has been substantially revised, based on considerable community and stakeholder feedback and engagement.

Our 2024 expansion proposal would add approximately six years of additional life to Coffin Butte. By contrast, our previous application sought an expansion that would have yielded 12 years. We believe the proposal also reflects additional input received during the Benton County Talks Trash Process, while ensuring a sustainable and cost-effective path for providing safe and reliable waste disposal for Benton County and its residents.

Further details can be found on page 2 of this annual report.



Our Promise

Sustainability in Action



Our Vision

Partnering with customers to
create a more sustainable world

Table of Contents

• Landfill Capacity	1
• 2024 CUP application	2
• Landfill Infrastructure and Enhancements	3-4
• NEW: Methane and the EPA	5-7
• Managing PFAS in Leachate	8
• Environmental Impact and Monitoring Report	9-11
• Groundwater Monitoring	9
• Leachate Management	10
• Air Quality	10-11
• OSHA Inspections	11
• NEW: Odor Complaints and Mitigation	12-13
• Summary of Landfill Users by County of Origin	14
• Status of Landfill Environmental Trust Fund and Insurance	15
• Summary of Landfill Environmental and Regulatory Permits	16
• Summary of Customer Complaints	17
• Summary of Pacific Region Compost (PRC) Activity	18
• Summary of Pacific Region Compost Odor Notices	19
• Appendix A	20-31
• Appendix B	32-33
• Appendix C	34-36
• Appendix D	37-39
• Arsenic Memo	40

Landfill Capacity

Coffin Butte Landfill has permitted airspace of 39,006,573 cubic yards (including what has already been consumed by waste disposal). During 2023 the landfill accepted 1,032,214 tons of solid waste. Based on historical aerial fly-over data, the average effective density of the in-place waste at the Coffin Butte Landfill is 0.98 tons/cy (1,965 lbs/cy – 2023 Operational Density).* Therefore, an estimated 1,051,134 cubic yards of airspace was used for the year. A total of 24,013,893 cubic yards has been consumed as of December 31, 2023, leaving a remaining capacity of 14,992,680 cubic yards of permitted air space.

What does that mean in terms of remaining life at Coffin Butte? At the end of 2023, we projected the Landfill had 13.4 years of life remaining. As of today (June 2024), we project about 12.9 years of life remaining – 95 percent of which is in the Quarry and is still being excavated.

As noted in the executive summary of this report, we are proposing an expansion that would add six years of life to Coffin Butte. When the proposed expansion airspace is combined with the not-yet-accessible airspace in the Quarry, the total estimated life at Coffin Butte is anticipated to be about 18.5 years.

We are actively depositing waste in a cell on the northern side of the Landfill, known as Cell 5E. We estimate that that cell will be completely full by February 2025. As you are aware, we have been working aggressively to construct a new cell in the eastern corner of the Quarry to ensure that the county's waste disposal needs can be met without service disruptions. That new cell, called 6A, will begin accepting waste in early 2025, based on current estimates, and we anticipate it will be full by September 2026.

*Effective density incorporates the effects of daily and intermediate soil cover usage. It is calculated by measuring the amount of airspace occupied between successive aerial flyovers using photogrammetric maps and dividing that volume into the number of tons of waste received at the gate.



2024 Expansion Request

Coffin Butte Landfill has started the process for requesting a Conditional Use Permit (CUP). Its purpose is to expand the waste disposal area of the landfill on to an existing parcel of property, south of Coffin Butte Road.

This request is considerably different than the 2021 expansion proposal and is the result of more than two years of listening, dialogue and collaboration among key stakeholders, including community leaders, landfill neighbors, NGOs, local governments, state leaders and Benton County Staff.

Our CUP request proposes adding six years of life to Coffin Butte Landfill – about half of what we requested in 2021. As noted previously in this report, there is currently about eight months of airspace remaining in the cell currently being used for waste disposal.

An approved CUP would ensure continuity of disposal services while the county works to develop a Solid Materials Management Plan. We are requesting this CUP now because **industry best practice is to start working on an expansion project when there is 10-12 years of life remaining at a site.** This is a prudent timeframe given that it takes an average of three years or longer to complete the local land use process. After the land use process is complete, it could take an additional three years or longer to obtain the permits required from various state agencies and then to initiate and complete construction of the disposal cells.

While we remain eager to participate in a solid materials management plan that will help meet Benton County’s sustainability and recovery goals, **we need to begin permitting and constructing new disposal cells now to ensure continuous, safe, reliable and affordable disposal of the county’s waste.**

Expansion Proposal Highlights



A **50 percent smaller expansion** than the 2021 proposal (6 years versus 12)



Improves Coffin Butte Road and adds bike lanes



Increased transparency, communication and community responsiveness



Improved vegetative screening along major travel corridors



Containment of the landfill’s working face and disposal **area to the Landfill Site (LS) zone**



Landfill Infrastructure Enhancements

We continually invest in Coffin Butte’s infrastructure to ensure we are providing best-in-class service and environmental stewardship to the County. The following pages summarize work completed through 2023.

Gas Collection System

Coffin Butte Landfill’s gas infrastructure is best-in-class. Since 2019 we have invested \$9.4 million in the gas control and collection system, installing 57 vertical wells and 22,700 feet of horizontal gas collection piping.

Further investments are scheduled for this year, including installation of an additional 18 horizontal wells and 14 vertical wells, at an estimated cost of \$1.2 million.

Coffin Butte’s gas collection infrastructure is 3x the industry standard and is critical to controlling emissions, as required by the EPA. Coffin Butte already meets or exceeds the tightened requirements that were set forth under the U.S. Methane Emissions Reduction Plan.

For example, since 1995, Coffin Butte has captured methane gas to generate electricity for 4,000 area homes, via a partnership with PNGC Power. In addition, we operate the Pacific Region Compost facility, which processed more than 124,000 tons of organic material in 2023 from Benton and surrounding counties.



By the numbers

124K

tons of organics processed annually at the PRC

3x

industry standard for gas collection wells

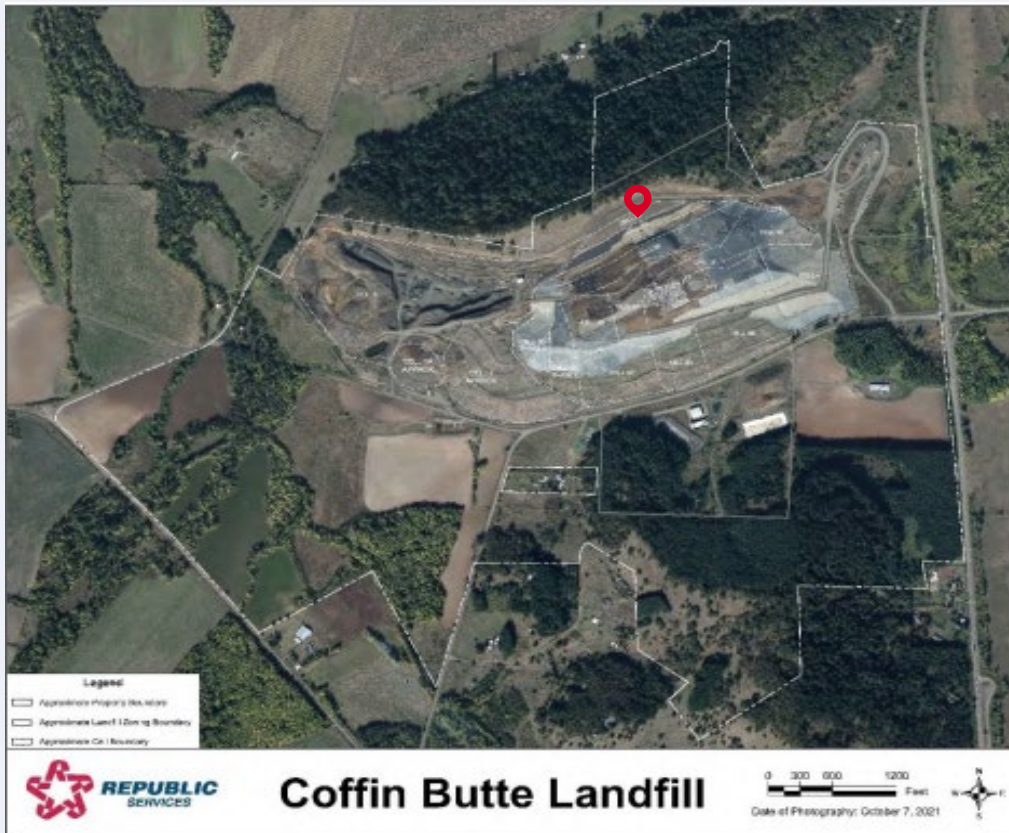
\$9.4M

invested in landfill gas collection system since 2019

Infrastructure (continued)

Cell Construction

In 2023, we completed construction on Cell 5E, which is located on the northern edge of the landfill, as noted in the aerial photo below. We are currently depositing waste in this 3.5-acre cell and expect it to be full by early 2025.



Given the limited remaining airspace remaining in Cell 5E, we are working aggressively to construct Cell 6A in the Quarry. We anticipate spending \$9 million this year to construct the liner system for this next phase of the landfill to ensure it will be ready for waste disposal next spring. The cell is approximately 10.5 acres, and, based on current annual tonnage, will be capable of accepting waste through mid-2026.

Leachate Management

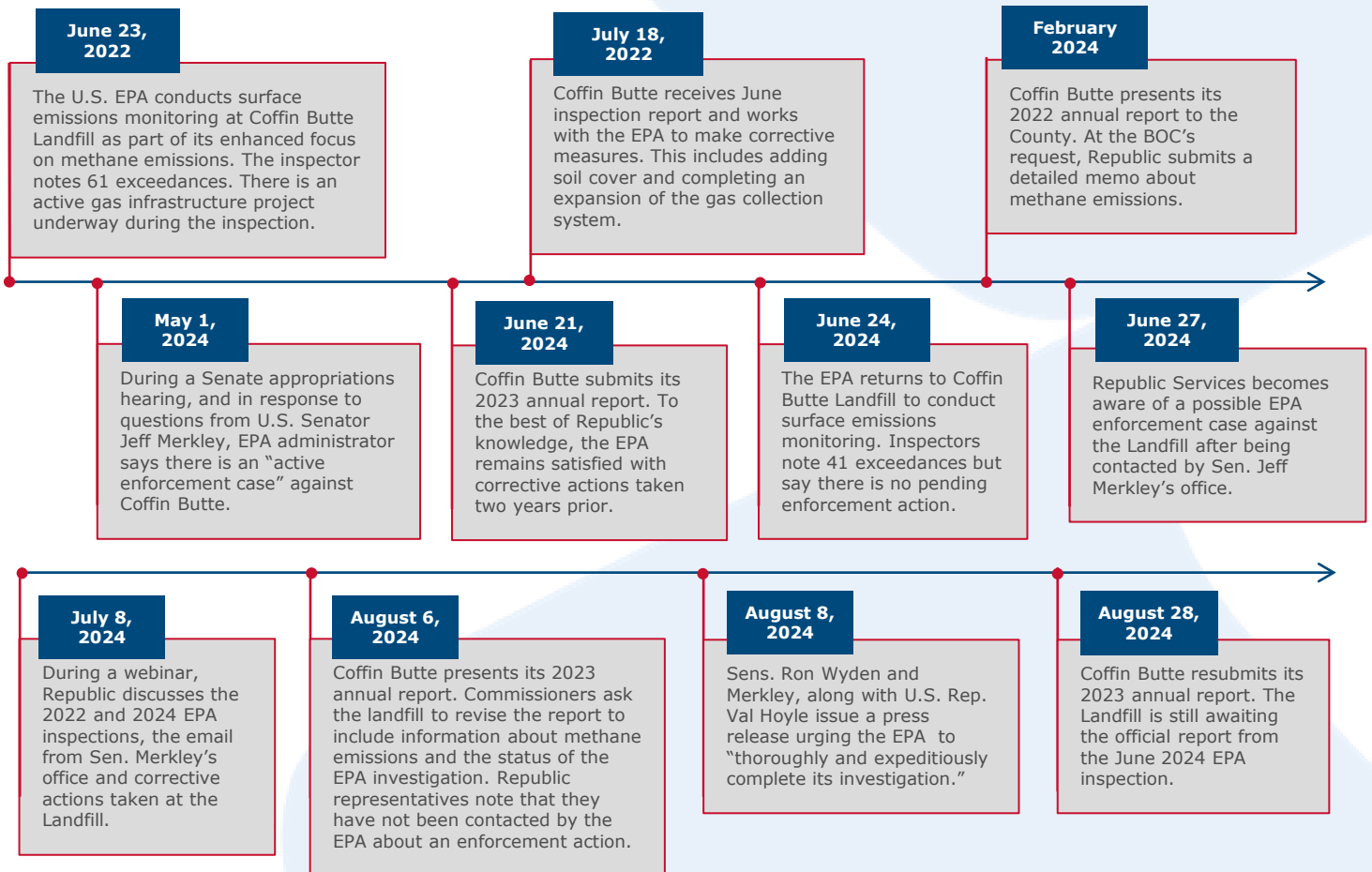
Each year we utilize an extensive network of geosynthetic covers to better capture the rain and reduce the impact it has on decomposing waste. These covers reduce the volume of leachate that is produced and then must be treated, which saves energy, reduces costs, and is better for the environment. In addition, the landfill has a robust groundwater monitoring system comprised of 35 wells, which are regularly checked to ensure peak performance and compliance with our regulatory permits.

This year we also plan a \$100,000 project that will add additional areas of membrane cover to better divert storm water.

Methane and the EPA

We understand there has been significant discourse about methane emissions at Coffin Butte Landfill. The following two slides provide a detailed overview of the events of the past 18 months. We hope they also rectify confusion regarding the status of our discussions with federal regulators and our ongoing mitigation efforts.

We have included the below timeline of events to provide transparency and clarity on the events to date.



2023 ANNUAL REPORT UPDATES – METHANE AND THE EPA

EPA SURFACE EMISSIONS MONITORING

Republic Services is the first U.S. recycling and solid waste services provider to have its emissions reduction target approved by the Science Based Targets Initiative (SBTi). At our core, we are a sustainability company, and we understand the community’s concerns about methane emissions.

It’s important to note that Coffin Butte is no different than other landfills across the country when it comes to EPA inspections. The current administration has included landfills as part of its strategic plan to mitigate climate change by reducing methane– a known greenhouse gas.

EPA’s priorities have resulted in increased inspections across the U.S., and a key focus of those inspections is Surface Emissions Monitoring.

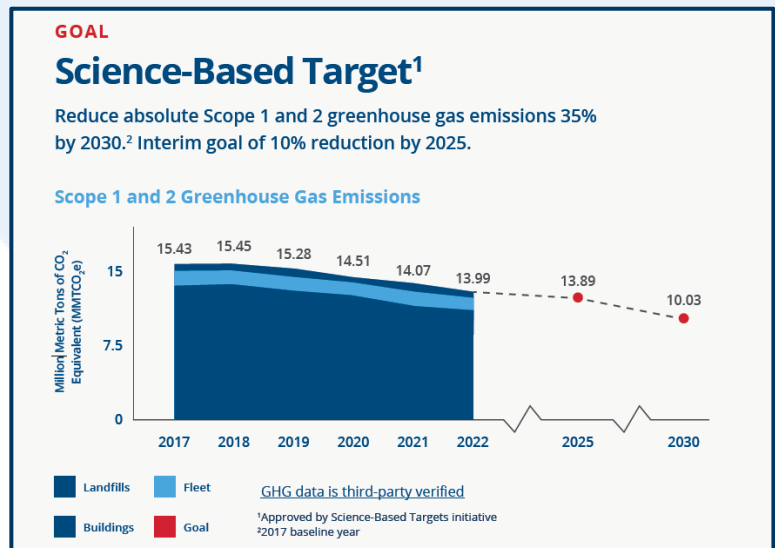
Compliance is high priority for Republic Services and the waste industry. As such, industry representatives sat down with the EPA to clarify its approach and expectations. EPA representatives indicated that they will sometimes go beyond the regulations while conducting monitoring so they can bring to our attention the areas in which we can improve.

2022 CORRECTIVE ACTIONS

Republic Services took immediate corrective action following the 2022 EPA inspection, including adding cover soil and additional soil along the edges of tarps.

We strengthened seals around the gas collection piping and completed work on an expansion of the Landfill’s gas collection and control system, adding 6 new vertical wells and 9 horizontal well collectors.

As of this submittal, the EPA has given us no indication that it is not satisfied with those mitigation efforts.

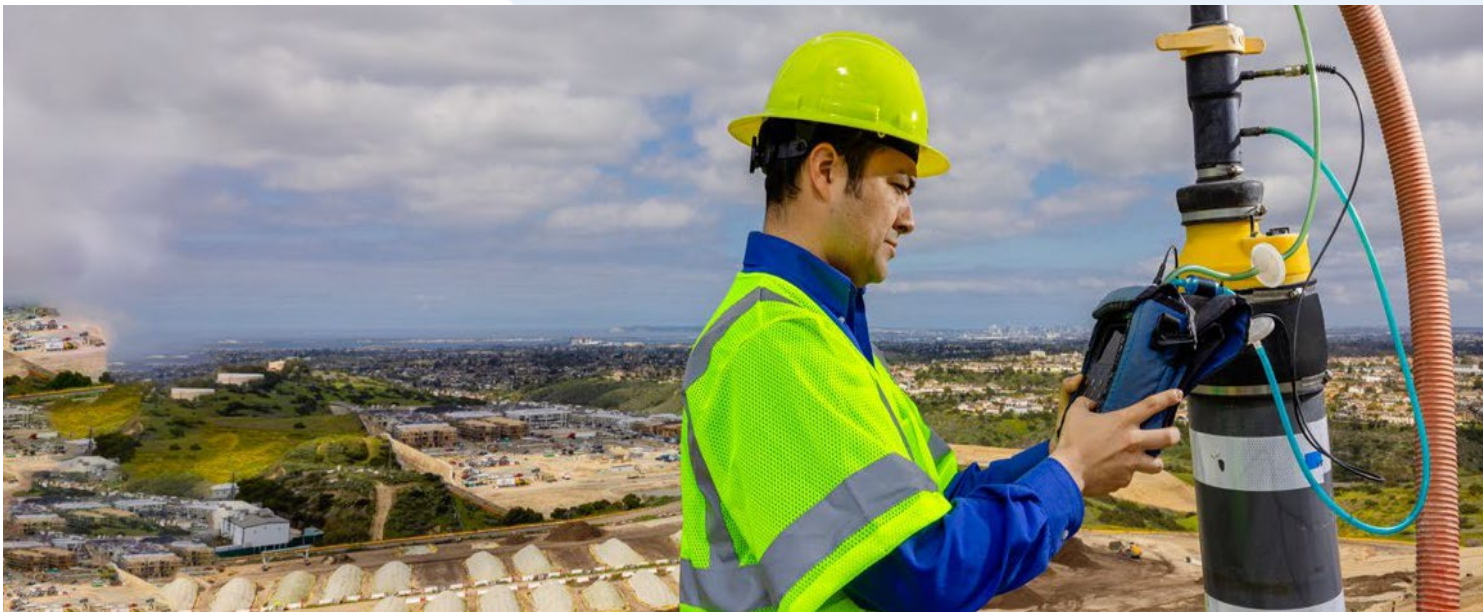


2023 REPORT UPDATES – METHANE AND THE EPA

2024 INSPECTION

In June 2024, Coffin Butte was the subject of a no-notice inspection by the EPA. Once again, inspectors conducted surface emissions monitoring at the landfill. While we have not received the EPA's final report from that inspection, we do know that inspectors noted 41 surface exceedances. The Landfill has already taken corrective actions, including patching tears in the cover tarps and, once again, expanding the Landfill's gas collection and control system.

At the time of the June emissions monitoring, EPA inspectors said Coffin Butte was not the subject of an enforcement action.



In addition to the Landfill's gas control and collection system, Coffin Butte diverts methane-producing organics out of the waste stream by processing more than 140,000 tons of organic material each year at the Pacific Region Compost facility.

The landfill also partners with PNGC power to generate electricity from gas produced at the site – enough to power 4,000 homes.

ENCLOSED FLARE

Coffin Butte also utilizes flares to burn off excess gas as part of its gas collection system. On July 10, 2024, DEQ sent a pre-enforcement warning letter to the Landfill stating that it needed to replace the existing flare system with a new, enclosed flare to meet regulatory requirements.

That flare has been installed, the old flare has been decommissioned, and testing on the new flare will be completed in the coming weeks.

Infrastructure (continued)



Understanding and Managing PFAS

Because PFAS is ubiquitous in the products we all use, it is present in landfills, including at Coffin Butte. It eventually ends up in landfill leachate – a byproduct of waste decomposition that results from rainwater filtering through waste mass – and is properly collected and pumped to an on-site storage tank. From there, leachate is safely transported to the Corvallis and Salem wastewater treatment plants (WWTPs) – along with other wastewater – where it is treated and discharged per regulatory guidelines.

Some key facts about PFAS at Coffin Butte are below:

- **Coffin Butte does not generate PFAS; instead, it receives it.** Our main focus is safely managing PFAS through proper landfill operations and partnering with the DEQ to ensure compliance
- Little can be done to reduce PFAS in leachate at the landfill, but **manufacturers can reduce future levels by limiting the chemicals in manufactured products**
- **Coffin Butte works closely with our partners – the Cities of Corvallis and Salem, and their WWTPs – to treat leachate generated at the Landfill**
- The 29.7M gallons of **leachate generated by Coffin Butte in 2023 is a small percentage of the overall wastewater treated** at our partners' facilities. The **landfill is in compliance** with its permits and regulatory requirements.

Coffin Butte remains engaged at the state and local levels and continues working with DEQ and WWTPs as regulations evolve. We are committed to serving this community safely and providing a sustainable disposal solution centered on environmental responsibility.

Environmental Impact and Monitoring

Annual Environmental Monitoring Report (Groundwater)

Valley Landfills, Inc., as owner and operator of Coffin Butte Landfill, is committed to being a good neighbor and a steward of the environment. We prioritize safe and responsible operations, sustainability, and collaboration with regulators at the local, state and federal level.

In 2023, Coffin Butte landfill was inspected six times by a variety of agencies, including DEQ's Division of Material Management, Metro Regional Government, and the cities of Corvallis and Salem. In addition, we submitted annual, semi-annual, quarterly and monthly reports to federal, state and local regulators, in accordance with our operational and environmental permits.

The landfill is – and remains – in compliance with its permits and regulatory requirements and was not issued any notices of violation by EPA or the Oregon Department of Environmental Quality in 2023.

The following section of the annual report provides a summary of the water quality monitoring activities at the landfill. Environmental monitoring and reporting is required by Coffin Butte's solid waste disposal permit number 306, which is issued and administered by the Oregon DEQ.

Coffin Butte Landfill conducted groundwater sampling in April and October 2023 and completed its annual environmental testing of leachate produced by all active and closed waste disposal cells.

No significant changes in water quality were measured. We test for 60 volatile organic compounds in our wells along the west-side compliance boundary, and all concentrations were below primary drinking water standards. This includes well MW-12S, which is located on the edge of Cell 1, and is the barometer for ensuring that the remediation efforts enacted in the 1990s continue to be effective.

Sampling shows that the long-term trend for tetrachloroethene (PCE) at that same well also continues to decrease. Other VOC concentrations have declined to trace levels at west-side compliance wells and several inorganic parameters were present above background concentrations. Since the landfill cover was installed on Cells 1/1A in 1996 and landfill gas removal wells were installed in Cell 1 in 1994, the number and concentrations of VOCs have declined.

Downgradient of the former Closed Landfill, groundwater quality trends are stable as well. The contaminants in these areas were from the waste deposited in the old "Burn Dump." Coffin Butte completed the removal of this waste in 2022, eliminating the source of the contaminates. Based on the age of the landfill and completion of source removal, it is expected that the residual low level impacts will diminish with time. In addition, piezometer P-9, a monitoring well that's used to measure water levels to create the groundwater contour maps, was re-drilled and replaced on July 26, 2023.

At the compliance boundary for Cells 4 and 5 on the east side, the primary drinking water standard for arsenic was exceeded, but these concentrations represent natural background conditions. In other words, these wells are newer, and we are required to test for existing materials (including hard metals, such as arsenic) in the water to establish a baseline. These results do not represent a compliance issue at the landfill.

We have re-attached the arsenic memo, previously submitted to Benton County on February 15, 2024, as "Appendix D" to this report.

Environmental Impact (continued)

Sampling results at MW-26 and MW-27 were below statistically calculated site-specific limits (SSLs) for most of the indicator parameters. Manganese was marginally above the limit at MW-27 for both sampling events. An exceedance for magnesium and manganese occurred at MW-26 in April, but concentrations returned to normal and below the SSLs in October. DEQ does not require action because monitoring is only required if three results from a single well exceed the SSLs.

Annual Environmental Monitoring Report (Groundwater)

Leachate production for the water year 2022-2023 was estimated at approximately 29.7 million gallons. This was generated by Cells 1 through 5 during the water year ending September 30, 2023. VLI continues to monitor the secondary leachate collection systems (SLCS) beneath Cells 2, 3, 4, and 5 .

The text portion of the Annual Environmental Monitoring Report (AEMR), trend plots for groundwater quality parameters described above, and data tables for east side groundwater monitoring wells are presented in Appendix A. The remaining tables, figures and appendices discussed in the text portion of the report are on file at the Benton County Health Department.

Annual Environmental Monitoring Report (Leachate Management)

The AEMR includes information and data from the leachate management program. Leachate production and management for the water-year October 2022 to September 2023 is discussed in the report. The text portion of the leachate report can be found in section 3.4 of the AEMR.

Again, this is on file at the Benton County Health Department.



Title V Air Monitoring Report

While we discussed our gas collection system in detail earlier in this report, it's important to talk specifically about our compliance with our air monitoring (Title V) permit. Air emissions generated at the Coffin Butte Landfill in 2023 were detailed in a report to DEQ using forms and templates that the agency provided. Highlights are included here:

1. The air emissions generated in 2023 were less than the plant site emission limits (PSELs) allowed under the Title V Operating Permit.
2. There were no deviations from the Title V Operating Permit conditions.
3. The landfill did not receive any odor complaints from the public in 2023.

However, DEQ gave us an accounting of nine odor complaints it received during the calendar year. These complaints were compiled and sent to us on three occasions, as noted on the chart that appears on the following page. This marks a significant decrease from 2022, when DEQ sent a total of 30 odor complaints, compiled and sent on three separate occasions.

Occupational Safety and Health Administration

Coffin Butte will continue to engage with the county in a timely and transparent fashion when it comes to key inspections and other noteworthy landfill operations. As you are aware, Coffin Butte was inspected twice in the last twelve months by OSHA representatives. These inspections occurred in October 2023 and February 2024 and resulted in three citations and fines totaling \$580.

All concerns were immediately addressed, including OSHA’s request that we provide additional respiratory safety training for our employees. While that training has already been completed, Coffin Butte has taken the additional – and voluntary – step to hire a third-party industrial hygienist to conduct air monitoring around the landfill. We will follow up when those results become available.

Coffin Butte places the highest priority on worker safety, and we are committed to providing a safe environment for our employees.

Coffin Butte Landfill Odor Notices

Coffin Butte makes every effort to control the potential for offsite odor and takes all odor complaints seriously. During previous community engagement, stakeholders requested that Coffin Butte and the County work together to create an improved process for receiving, tracking and resolving complaints, including odor.

We are happy to work with the County on this effort. Because we can investigate more effectively if the report is received in real time, we have created a new odor reporting portal on our website, coffinbuttelandfill.com.

The portal allows residents to notify us, via email, if they detect odor that they believe could be attributed to the landfill, and includes key informational fields, including location, time of day and ambient weather or air conditions.

Month	2016	2017	2018	2019	2020	2021	2022	2023
January	2	0	0	0	0	0	0	0
February	0	0	0	0	2	2	25*	0
March	0	0	0	0	0	0	0	0
April	0	0	0	1	1	0	0	0
May	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	4**	0
September	0	0	0	0	0	1	0	1
October	0	0	0	0	1	0	0	0
November	0	0	0	0	0	1	0	2
December	0	0	0	0	0	1	1	6***

*DEQ sent single notification of 25 complaints received between 11/8/21 and 2/7/22

**DEQ sent single notification of 4 odor complaints received from 7/1/22 to 8/16/22

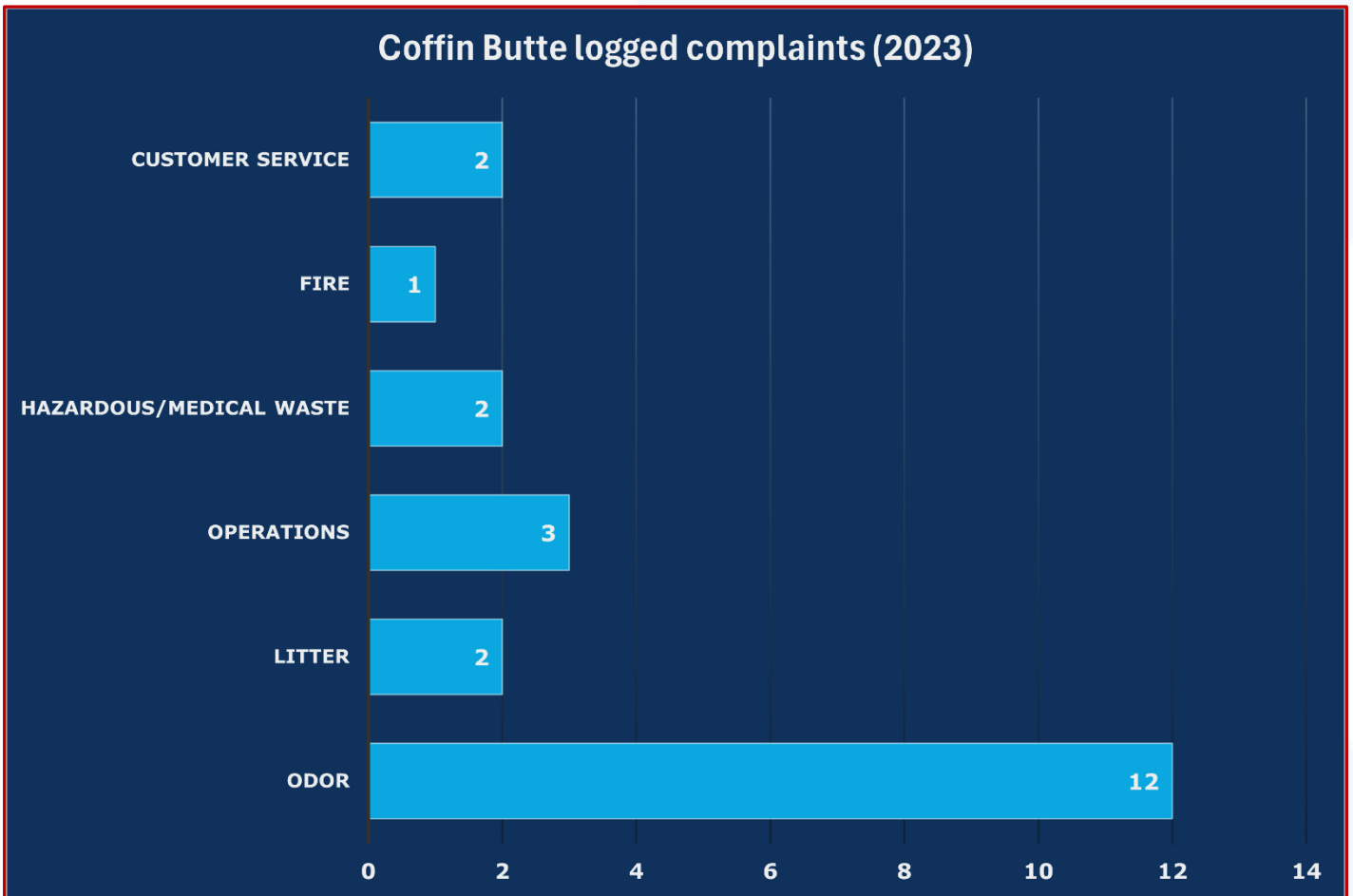
***DEQ sent a single notification of 6 odor complaints in December 2023.

Odor complaints

As noted on the previous page, there is not a single, comprehensive system for receiving and following up on operation-related complaints at Coffin Butte Landfill.

In addition to the DEQ logs, Benton County provided Coffin Butte Landfill with an excel spreadsheet detailing 22 odor complaints received during calendar year 2023. The chart below shows a breakdown of those complaints.

Approximately 54 percent related to odor concerns. These comments were submitted to the county in various ways, including telephone, email and via public comment during SWAC and DSAC committee meetings. (Note: The "other" category doesn't include odor. These comments focused on operating hours, lighting and noise.)



Data provided by Benton County

We never want – nor should we have – offsite odor. We work aggressively to control odor onsite and minimize offsite impacts. As stated elsewhere in the report, we are continually investing in the landfill’s gas control and collection system to ensure we capture as much gas as possible.

2023 REPORT UPDATES - ODOR

ODOR MITIGATION

Our other major tool in controlling odors is ensuring that daily cover is in place, as required by our permit. Daily cover is a layer of soil, usually six inches deep, or an alternative cover approved by DEQ and placed over all compacted refuse received during the day.

In addition to reducing odors, daily cover helps prevent water entry, controls both insects and animals feeding on the refuse and reduces wind-blown debris traveling from the working face.

Finally, we keep our working face (the area in which we are actively depositing waste) very small; this helps minimize potential offsite impacts from our daily operations.

COMPLAINT LOG BREAKDOWN

At right is a complete accounting of operational complaints/concerns logged by Benton County in 2023.

Below, is a list of Coffin Butte’s ongoing mitigation efforts that directly address some of these concerns.

-  One to two roadside cleanups per month
-  Special waste screening and manifests
-  Six annual hazardous household waste events (four in Benton County and two in Linn County)
-  Waste disposal spot checks
-  Third-party wildlife study to evaluate Great Heron Rookeries
-  550 acres dedicated to preservation and non-landfill operations

Table 1 – 2023 Coffin Butte Landfill Community Concerns Log

Table 1 - 2023 Coffin Butte Landfill Community Concern Log				
#	Date	Concern Summary	Received By	Status
1	1/5/2023	Glass collection inconsistent	Written comment	Responded
2	1/11/2023	Landfill Lighting impacting Wildlife and CUP	Written comment	Responded
3	1/12/2023	Methane Smell at Landfill	Written comment	Responded
4	2/26/2023	Roadside Litter and debris along Hwy 99	Written comment	Received
5	2/27/2023	Lack of communication and response from collection franchisee regarding disruption in collection service due to Snow storm	Written comment	Responded (by BOC)
6	5/22/2023	Unsecured garbage from Republic vehicle, roadside tire fragments from Republic vehicle, landfill odor, exposed uncovered waste at landfill	Written comment	Received by staff, and Republic Services was included on email
7	7/26/2023	Drilling sounds near landfill property	Written comment	Initial Site Visit Complete, Follow up complaint received and responded
8	9/14/2023	Types of waste accepted at the landfill	Written comment	Received
9	9/14/23	Coffin Butte odors	Written comment	Received, Responded
10	9/27/2023	Landfill operating outside of CUP allowed business hours, Noise	Written comment	Received, Responded
11	10/6/23	HHW at CVHS	Written comment	Received, Responded
12	10/31/2023	Smoke/fire at PRC	Written comment	Received, Responded
13	11/17/2023	Landfill odor	Phone call	Received, Responded
14	11/17/2023	Landfill odor	Phone call	Received, Responded
15	11/19/2023	Landfill odor	Written comment	Received, Responded
16	11/19/23	Landfill odor	Written comment	Received, Responded
17	12/1/2023	Landfill odor	Phone call	Received, Responded
18	12/13/23	Coffin Butte odors	Phone call	Received, Responded
19	12/21/23	Coffin Butte odors	Phone call	Received, Responded
20	12/23/23	Coffin Butte odors and pollution	Written comment	Received, Responded
21	12/25/23	Coffin Butte odors	Written comment	Received, Responded
22	12/28/23	Coffin Butte odors	Written comment	Received, Responded

Summary of Landfill Users

(By County of Origin)

SUMMARY OF LANDFILL USERS BY COUNTY OF ORIGIN

Coffin Butte Landfill Tonnage by Type and County - Total for Year 2023

County	Vehicles	Commercial							Public			Alternate Daily Cover				Compost	
		MSW	C&D	Asbestos	Agricultural Waste	Industrial Waste	Sludge	Totals	MSW	Other	Totals	Contaminated Soil	Covanta Ash	Shaker Fines	Totals	Yard Waste Received	Compost Sales (Yds)
Benton	43,210	50,791.66	7,672.54	124.90	2.21	18,025.69	-	76,617.00	9,432.29	-	9,432.29	16,024.73	-	-	16,024.73	2,686.70	715.30
Linn	31,644	79,294.20	4,209.07	159.41	95.77	32,139.44	12,504.38	128,402.27	6,021.67	-	6,021.67	5,179.93	-	-	5,179.93	923.15	50.00
Polk	16,626	40,388.34	1,567.19	122.61	892.71	2,402.03	6,218.74	51,591.62	3,367.85	-	3,367.85	2,286.80	-	-	2,286.80	250.00	68.25
Marion	12,094	213,992.44	519.86	276.56	108.43	5,616.35	40.66	220,554.30	973.46	-	973.46	6,445.89	25,199.96	-	31,645.85	76.90	12.00
Lane	2,207	4,184.63	150.20	3.50	-	23,781.64	-	28,119.97	50.56	-	50.56	16,343.08	-	-	16,343.08	0.56	4.00
Tillamook	1,609	29,378.48	-	0.02	1,695.73	727.94	7,335.06	39,137.23	71.14	-	71.14	-	-	-	-	-	-
Yamhill	4,518	95,502.05	259.41	20.87	1,251.94	416.28	-	97,450.55	474.37	-	474.37	25.07	-	-	25.07	3.12	-
Lincoln	5,264	44,661.45	111.82	67.04	-	42,384.61	63,932.31	151,157.23	80.03	-	80.03	719.89	-	-	719.89	1.81	-
Coos	7	-	-	-	-	-	4.57	4.57	-	-	-	48.96	-	-	48.96	-	-
Pierce, WA	21	1.11	-	-	314.81	17.31	-	333.23	-	-	-	-	-	-	-	-	-
Washington	6,956	178,437.10	0.47	45.82	171.72	281.70	-	178,936.81	1.26	-	1.26	-	-	2,788.72	2,788.72	-	-
Jackson	5	0.62	-	-	-	0.07	-	0.69	-	-	-	5.11	-	-	5.11	-	-
Multnomah	221	2,556.81	-	52.75	-	394.60	-	3,004.16	-	-	-	414.85	-	-	414.85	-	-
Douglas	396	10,969.37	-	5.17	-	1.90	-	10,976.44	4.74	-	4.74	149.99	-	-	149.99	-	-
Clackamas	1,053	13,503.89	2.78	175.59	1,656.56	2,382.62	2,245.84	19,967.28	5.97	-	5.97	3.54	-	-	3.54	-	-
Columbia	1	-	-	6.73	-	-	-	6.73	-	-	-	-	-	-	-	-	-
Curry	1	-	-	-	-	-	-	-	-	-	-	9.11	-	-	9.11	-	-
Jefferson	1	-	-	-	1.42	-	-	1.42	-	-	-	-	-	-	-	-	-
Clatsop	21	0.05	-	-	-	598.00	-	598.05	-	-	-	0.20	-	-	0.20	-	-
Lake	5	0.57	-	-	-	-	-	0.57	-	-	-	-	-	-	-	-	-
Cowlitz, WA	11	-	-	-	-	281.14	-	281.14	-	-	-	-	-	-	-	-	-
Deschutes	7	0.80	-	15.43	-	-	-	16.23	-	-	-	1.01	-	-	1.01	-	-
Baker	269	3.92	-	412.39	-	1,781.63	2.50	2,200.44	-	-	-	1,101.17	-	-	1,101.17	1.70	-
Malheur	2	1.19	-	-	-	-	-	1.19	-	-	-	-	-	-	-	-	-
Josephine	2	0.26	-	-	-	-	-	0.26	-	-	-	5.33	-	-	5.33	-	-
Misc. County	20	-	-	-	-	0.27	-	0.27	576.39	-	576.39	0.15	-	-	0.15	-	-
Clark, WA	135	0.10	-	-	-	1,794.64	-	1,794.74	-	-	-	-	-	-	-	-	-
Totals	126,306							1,011,154.39			21,059.73				76,753.49		

Landfill Environment Trust Fund

Environmental responsibility is one of our core values.

The Environmental Trust Fund was created more than 20 years ago as a mechanism to safeguard long-term environmental health at the site.

The Landfill Franchise Agreement specifies how the Trust Fund is to be maintained and requires that all accrued earnings and interest remain in the Trust. The value of the fund tends to ebb and flow with the economy but has increased significantly since its inception.

- The Value of the Environmental Trust on 12/31/2023 was **\$16,868,032**.
- The Value of the Environmental Trust on 12/31/2022 was **\$14,443,964**.
- The Value of the Environmental Trust on 12/31/2021 was **\$16,224,175**.
- The Value of the Environmental Trust on 12/31/2020 was **\$14,646,697**.
- The Value of the Environmental Trust on 12/31/2019 was **\$12,919,311**.
- The Value of the Environmental Trust on 12/31/2018 was **\$10,622,923**.

A copy of the Certificate of Liability Insurance, showing Benton County as an additional insured is presented in Appendix C.



Environmental and Regulatory Permits

Permit Number	Permit Type	Permit Terms	Renewal Date	Enforcement Actions - 2020	Comments
SWDP # 306	Solid Waste	10 Year	June 30, 2030	None	
# 1200Z	NPDES Stormwater	5 Year	June 30, 2026	None	
#101545	NPDES Leachate Treatment	5 Year	September 30, 2017	None	Renewal Application Submitted-Administratively Extended
#02-9502	Title V Air Quality	5 Year	October 1, 2014	None	Renewal Application Submitted-Administratively Extended
#5	Industrial Wastewater Discharge	2 Year	May 31, 2025	None	City of Corvallis Leachate Disposal
#8679	Wastewater Discharge Permit	5 Year	December 31, 2027	None	City of Salem Leachate Disposal

Summary of Customer Complaints

Valley Landfills, Inc. 2023 Complaint Log

This table was compiled from the verbal complains logged at both Coffin Butte Landfill and the Pacific Region Compost scale houses.

Month	Price	Public Tipping Area (Coffin Butte)	Other	Pacific Region Compost	Monthly Total
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	1	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	1	0	0
September	0	0	0	0	0
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0

Pacific Region Compost Activity



Pacific Region Compost (PRC) operates under a Solid Waste Disposal Site Permit (Composting Facility No. 1418) issued by the Oregon Department of Environmental Quality (DEQ) on January 2, 2020.

The permit allows PRC to compost Food Waste (Type III Feed Stocks). Below is a list of the inbound and outbound materials at PRC in 2022 and 2023.

PRC did see a drop in both materials processed and in compost sales in 2023, compared with the previous year. This is due largely to the termination of a customer contract. We are actively seeking/engaging with potential customers in 2024.

Summary of Pacific Region Compost Activity 2023								
Recycling							Sales	
	Green Waste		Urban Wood Waste		Food Waste		Hog Fuel	Compost
	Cubic Yards	Tons	Cubic Yards	Tons	Residential (Tons)	Commercial (Tons)	Tons	Cubic Yards
Inbound	124,211.00	0.00	0.00	0.00	0.00	2,959.00		
Outbound							0.00	49,685.00
Totals	124,211.00	0.00	0.00	0.00	0.00	2,959.00	0.00	49,685.00

Summary of Pacific Region Compost Activity 2022								
Recycling							Sales	
	Green Waste		Urban Wood Waste		Food Waste		Hog Fuel	Compost
	Cubic Yards	Tons	Cubic Yards	Tons	Residential (Tons)	Commercial (Tons)	Tons	Cubic Yards
Inbound	141,868.00	0.0	0.00	0.00	0.00	2,890.00		
Outbound							0.00	78,485.50
Totals	141,868.00	0.00	0.00	0.00	0.00	2,890.00	0.00	78,485.50

Pacific Region Compost Odor Notices

The PRC received, responded to and documented 0 odor notifications in 2023.

Pacific Region Compost Odor Notices								
Month	2016	2017	2018	2019	2020	2021	2022	2023
Jan	5	2	2	1	0	0	0	0
Feb	7	2	0	0	1	0	0	0
Mar	12	3	0	0	0	0	0	0
Apr	18	3	2	0	3	0	0	0
May	15	10	5	3	7	1	0	0
Jun	2	2	0	4	5	1	1	0
Jul	6	1	0	2	5	3	1	0
Aug	2	1	0	1	3	0	0	0
Sep	0	0	0	3	0	1	0	0
Oct	1	2	1	5	1	0	0	0
Nov	2	0	0	4	0	1	0	0
Dec	3	0	4	9	0	0	0	0
Total	73	26	14	32	25	7	2	0

Appendix A

Annual Environmental Monitoring Report (AEMR) and Executive Summary Trend Plots



REPUBLIC
SERVICES

Sustainability in Action

**Table 4-2: Comparison Sampling Results with SSLs//East Side Compliance Wells
2023 Annual Environmental Monitoring Report – Coffin Butte**

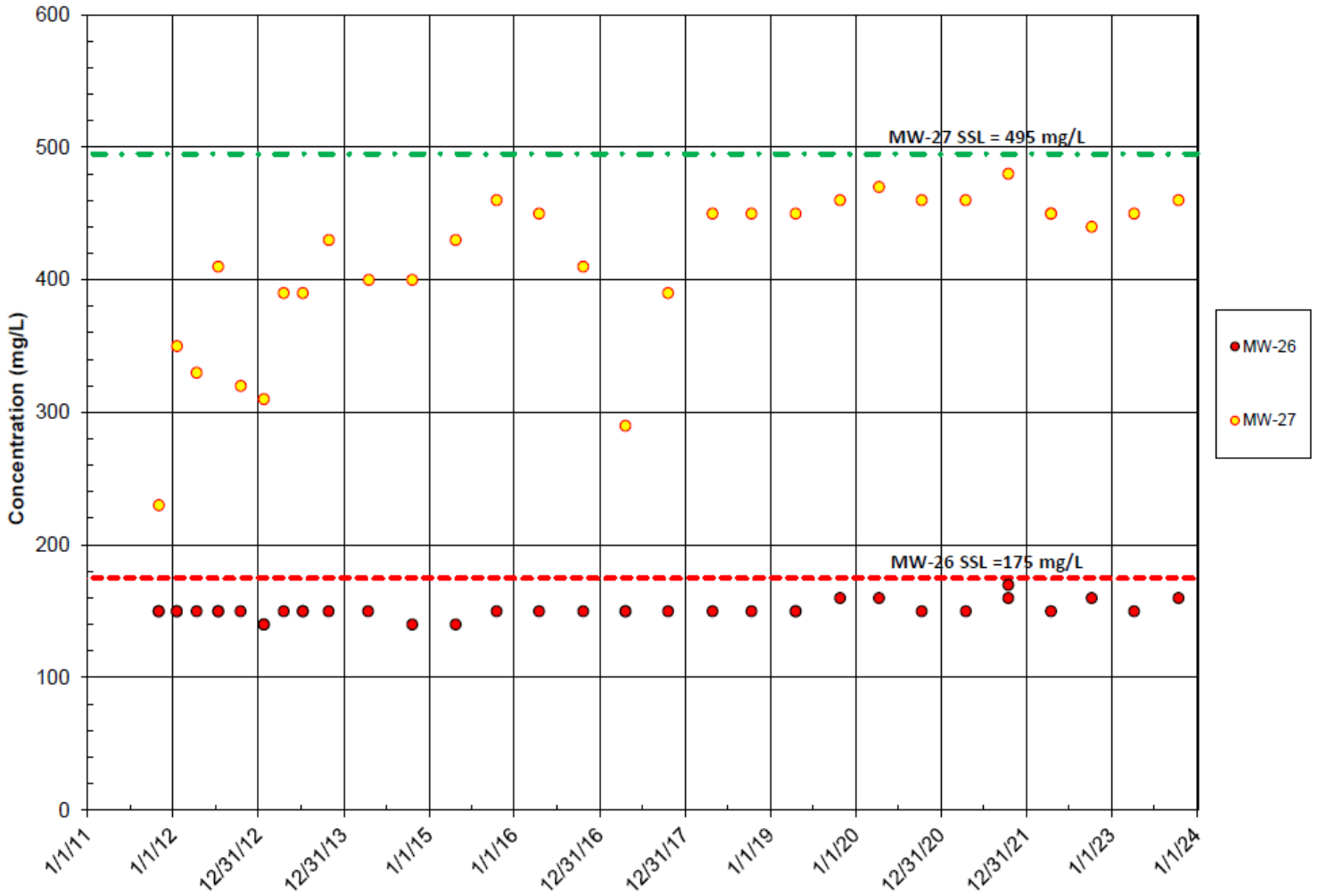
	Units	Indicator Parameters							
		Bicarbonate Alkalinity	Chloride	TDS	Calcium	Iron	Magnesium	Manganese	Sodium
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)
MW-26	SSL	175	6.2	246	32	4.5	10.1	0.74	30
	4/15/14	150	5.6	180	23	0.35	8.3	0.46	28
	4/15/14 DEQ	142	6.2	192	24.7	0.401	9.1	0.534	27.8
	10/21/14	140	5.5	190	24	0.51	9.8	0.64	29
	4/25/15	140	6.1	190	23	0.29	9.3	0.45	28
	10/17/15	150	5.9	200	26	1.1	9.9	0.66	30
	4/16/16	150	5.8	180	24	0.19	9.1	0.53	27
	10/22/16	150	5.6 J	190	24	0.53	9.4	0.65	26
	4/21/17	150	6.0	180	24	0.36	8.6	0.41	27
	10/20/17	150	5.4	210	23	0.51	10.0	0.62	27
	4/28/18	150	6.2	190	24	0.17	8.1	0.37	25
	10/12/18	150	5.7	190	25	0.37	9.3	0.56	25
	4/19/19	150	5.2	190	26	0.13	10.0	0.25	27
	10/26/19	160	5.2	200	23	0.44	9.0	0.67	25
	4/12/20	160	4.4	200	26	0.28	9.8	0.69	26
	10/9/20	150	5.3	180	26	0.61	10.0	0.79	27
	4/16/21	150	6.3	200	24	0.21	8.4	0.46	26
	10/15/21	170	5.6	190	26	0.51	10.0	0.71	27
	10/15/21 (dup)	160	5.6	190	25	0.50	9.9	0.70	26
	4/16/22	150	4.7	200	24	0.18	9.2	0.32	26
	10/7/22	160	5.9	180	24	0.50	9.2	0.68	25
	4/7/23	150	5.0	140	28	0.97	11.0	0.87	30
	10/14/23	160	4.9	190	26	0.35	10.0	0.61	27
MW-27	SSL	495	15.0	499	100	17.6	46	8.9	44.4
	4/18/14	400	11	420	88	16	41	8.1	40
	10/21/14	400	12	460	87	13	39	6.8	40
	4/25/15	430	13	470	86	13	42	8.2	40
	10/17/15	460	13	490	92	13	41	8.2	42
	4/16/16	450	13	480	86	5.3	40	7.2	37
	10/22/16	410	12 J	440	79	4.9	34	6.8	35
	4/21/17	290	15	310	45	0.49	19	3.1	28
	10/20/17	390	14	430	61	4.0	29	5.4	32
	4/28/18	450	14	460	71	5.1	31	6.8	35
	10/12/18	450	14	460	82	9.0	35	7.9	35
	4/19/19	450	13	470	87	8.9	40	9.1	37
	10/26/19	460	12	470	80	3.3	34	7.6	35
	4/12/20	470	10	470	91	8.6	38	9.4	36
	10/9/20	460	13	480	89	8.7	38	9.7	37
	4/16/21	460	14	480	87	7.6	37	9.5	36
	10/15/21	480	13	470	89	5.7	39	9.6	37
	4/16/22	450	10	480	91	8.1	39	11	38
	10/7/22	440	14	460	85	6.3	36	9.6	35
	4/7/23	450	12	430	91	2.9	39	9.5	40
	10/14/23	460	13	480	94	7.4	41	11	38

Note:

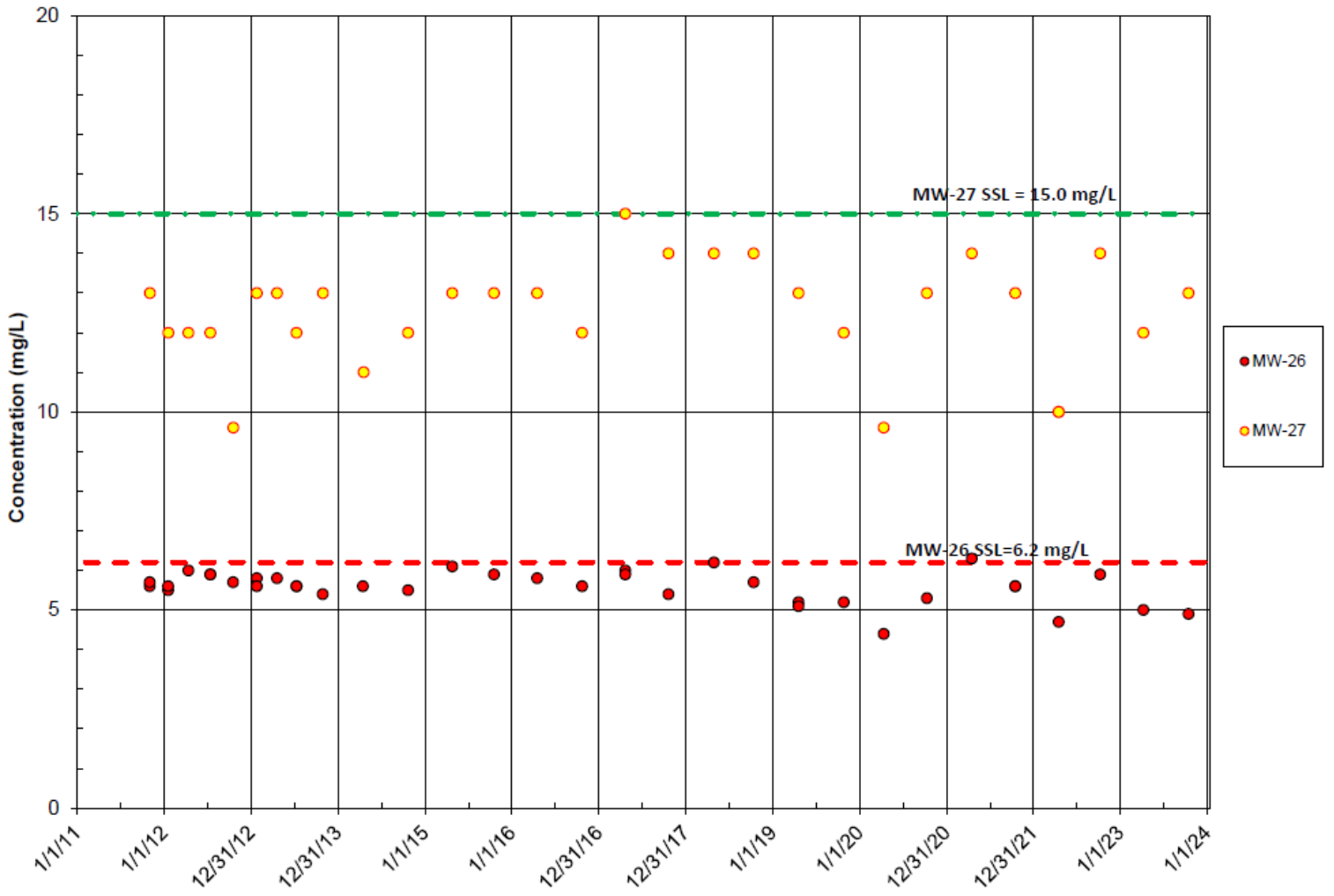
SSL: site specific limit; J: estimated value.

Bold Values: above SSL.

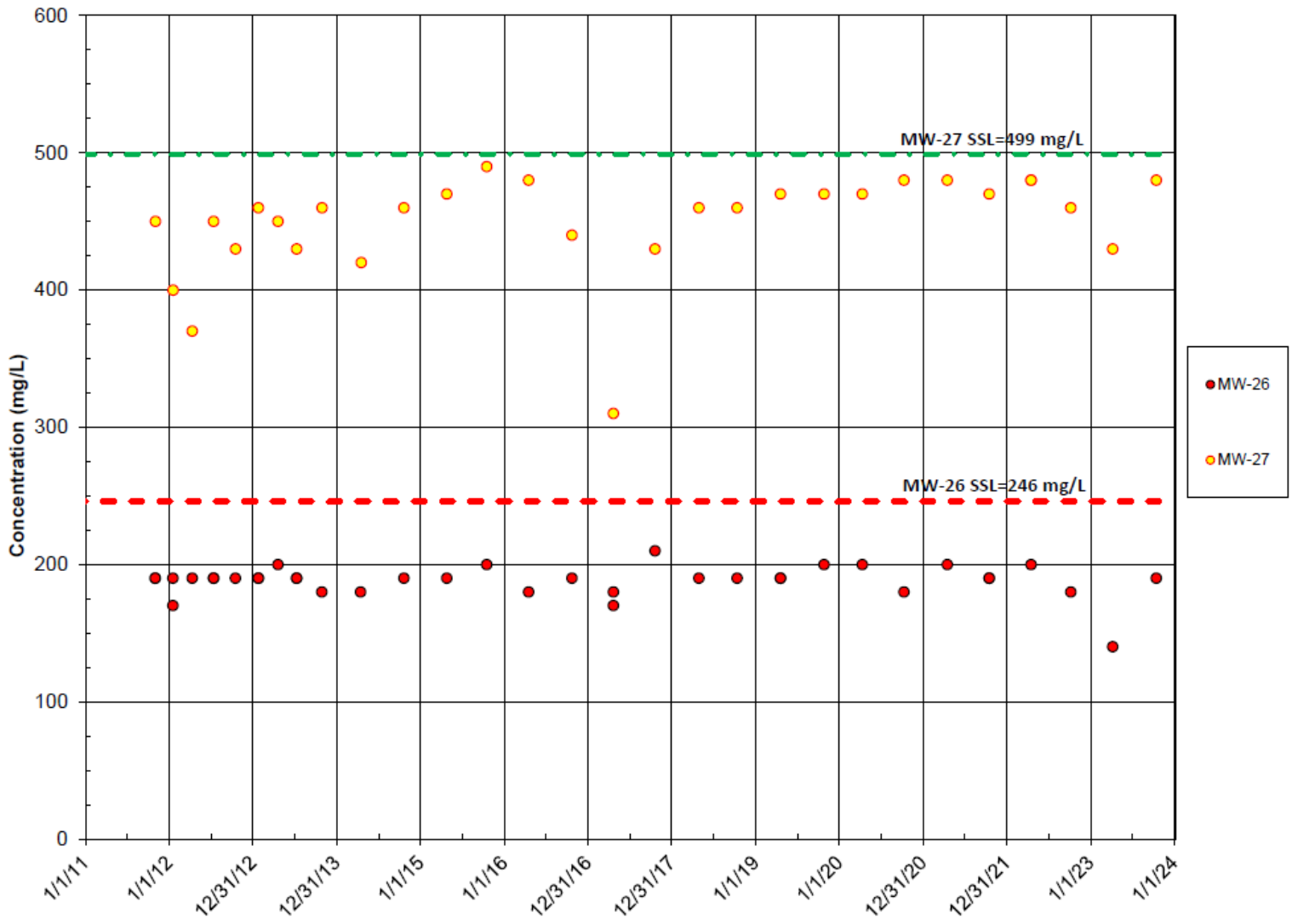
Coffin Butte Landfill
East-Side Wells: Bicarbonate Alkalinity



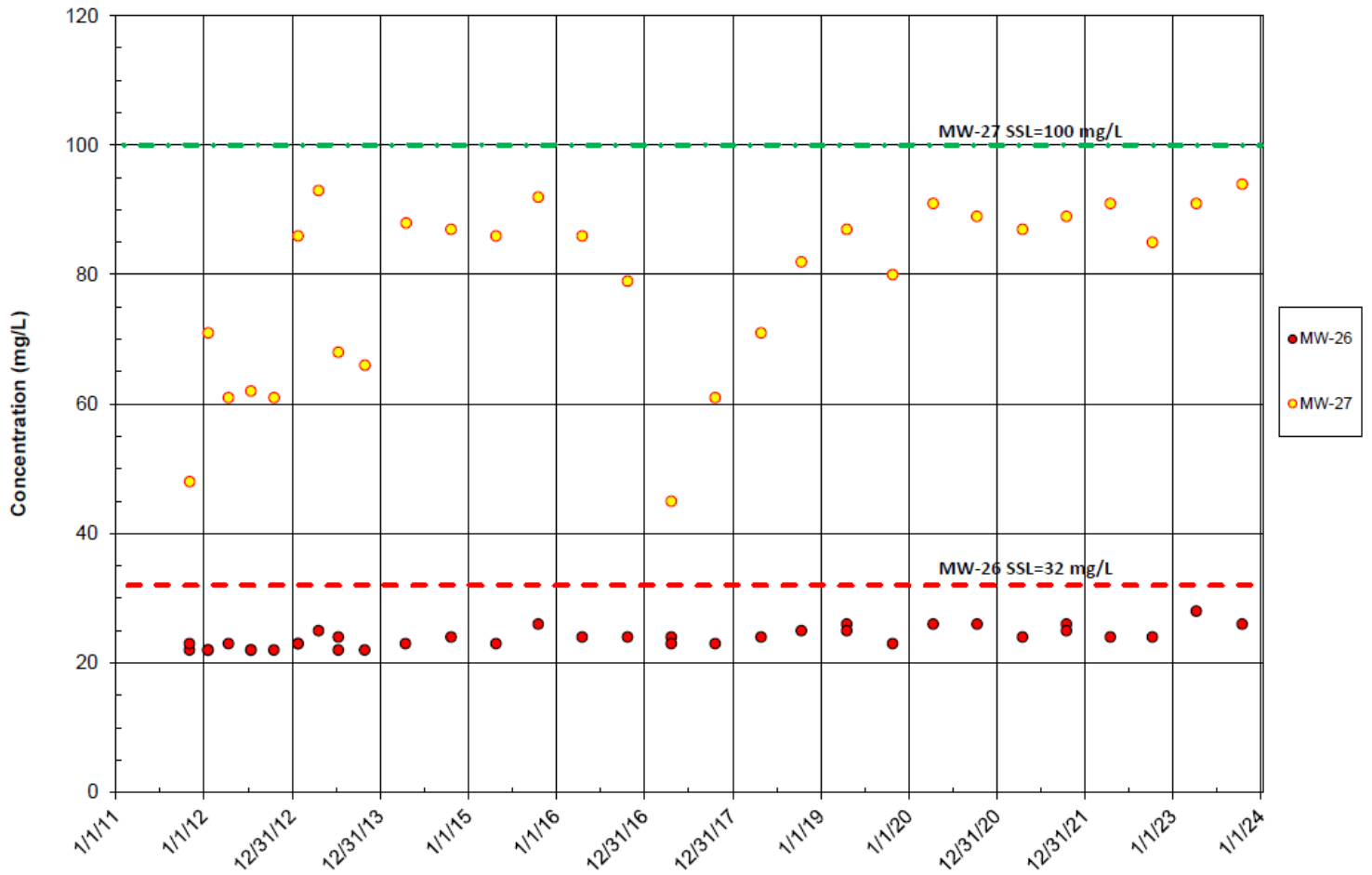
Coffin Butte Landfill East-Side Wells: Chloride



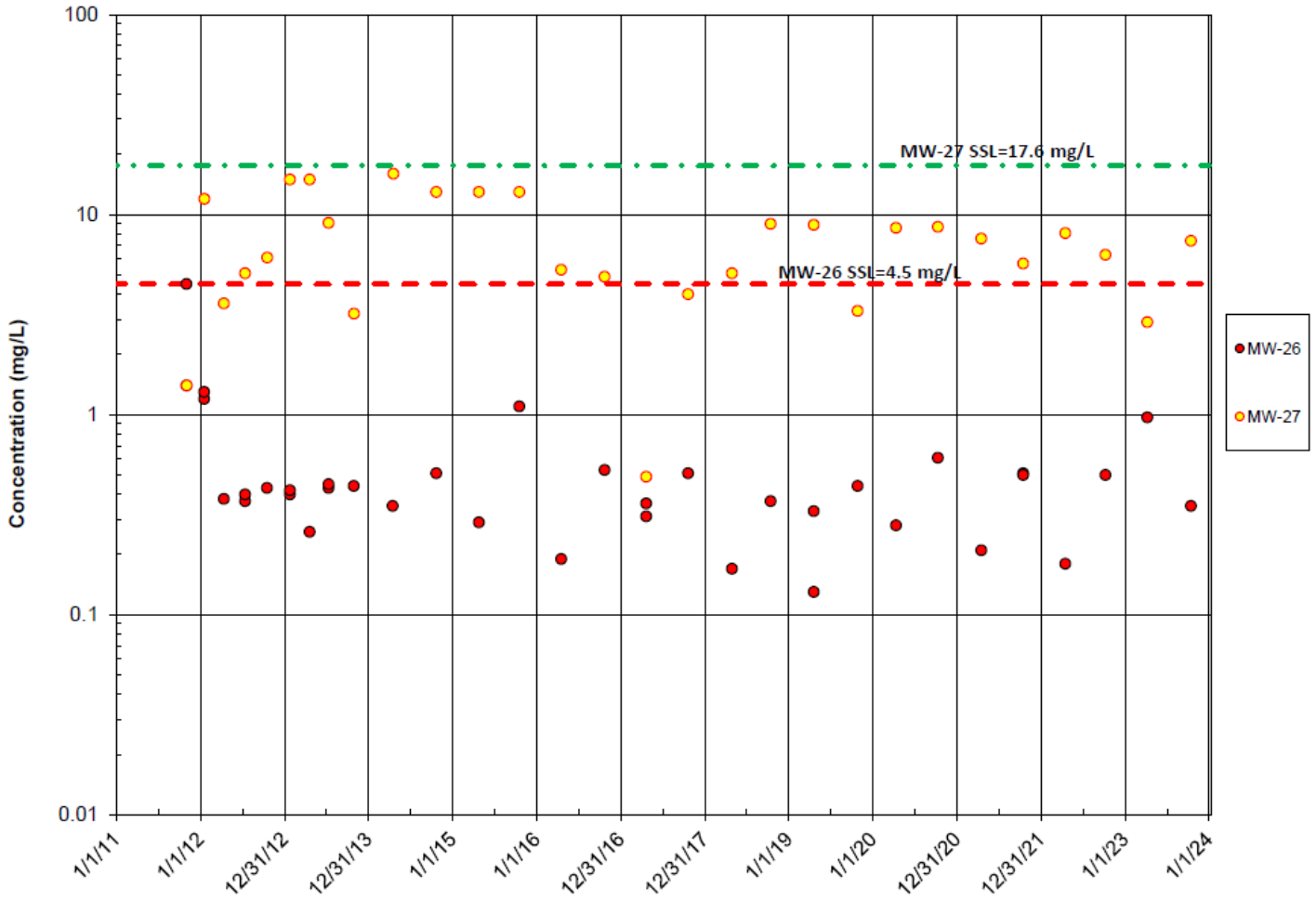
Coffin Butte Landfill East Side Wells: Total Dissolved Solids



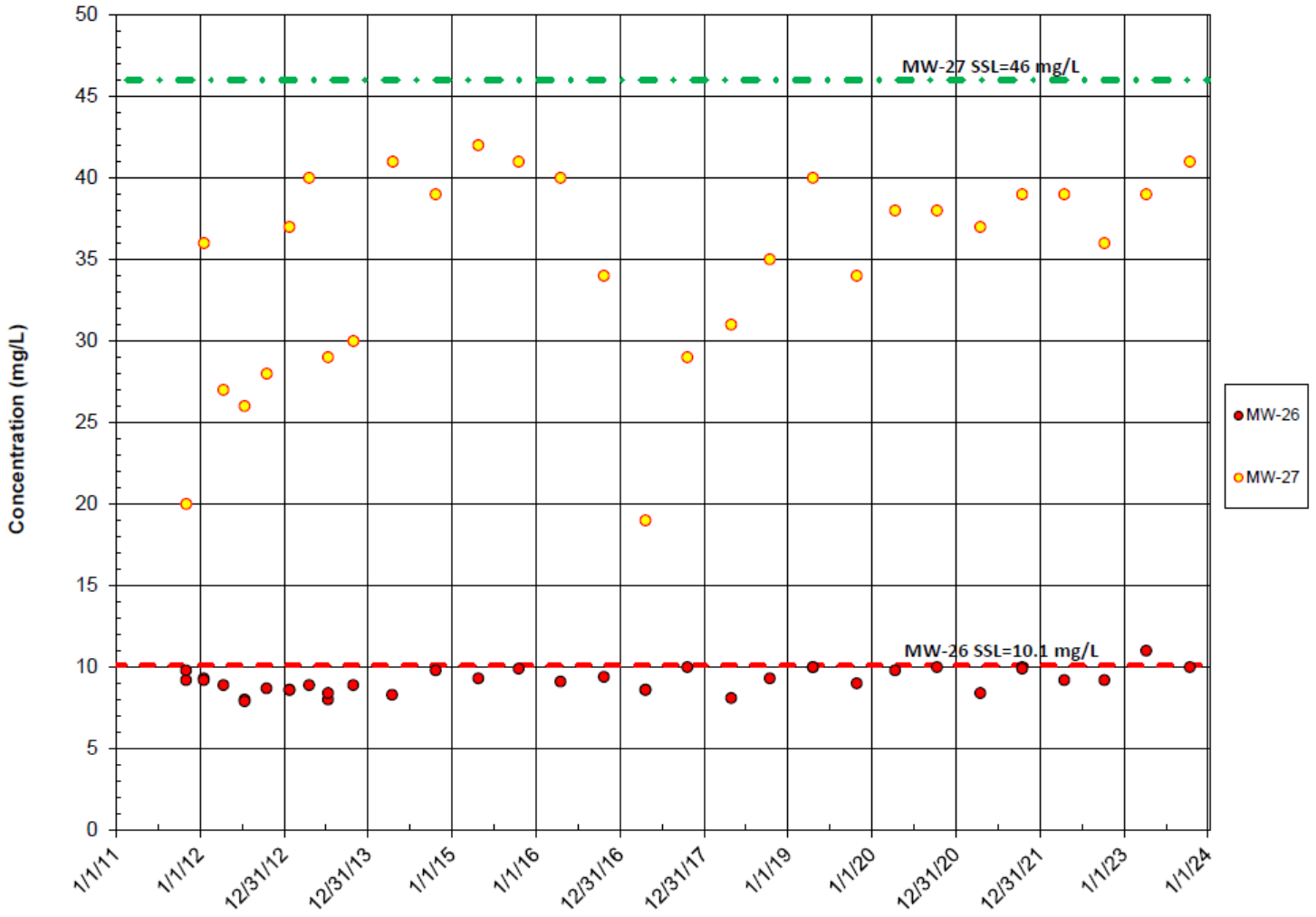
Coffin Butte Landfill
East-Side Wells: Calcium



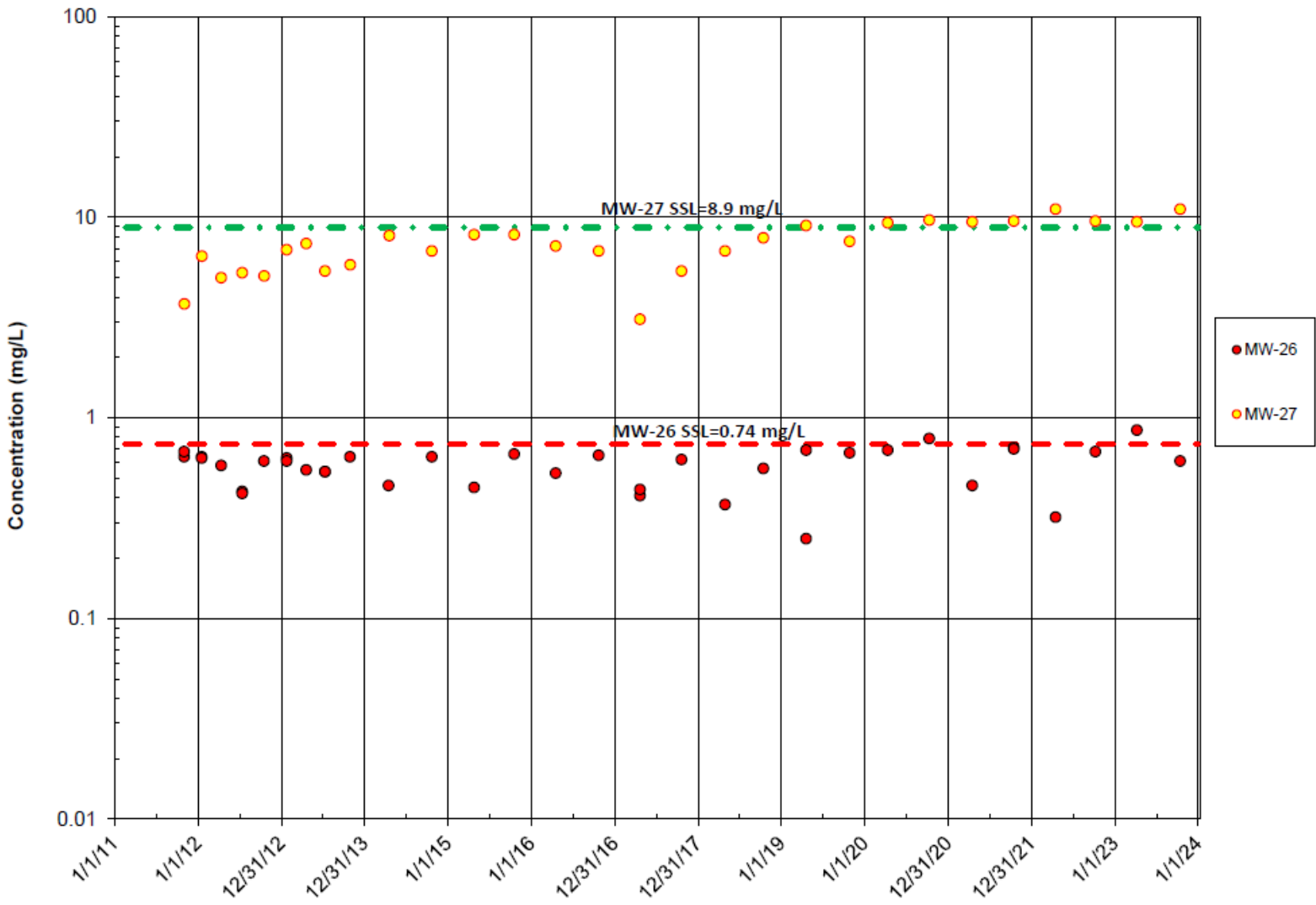
Coffin Butte Landfill East-Side Wells: Iron



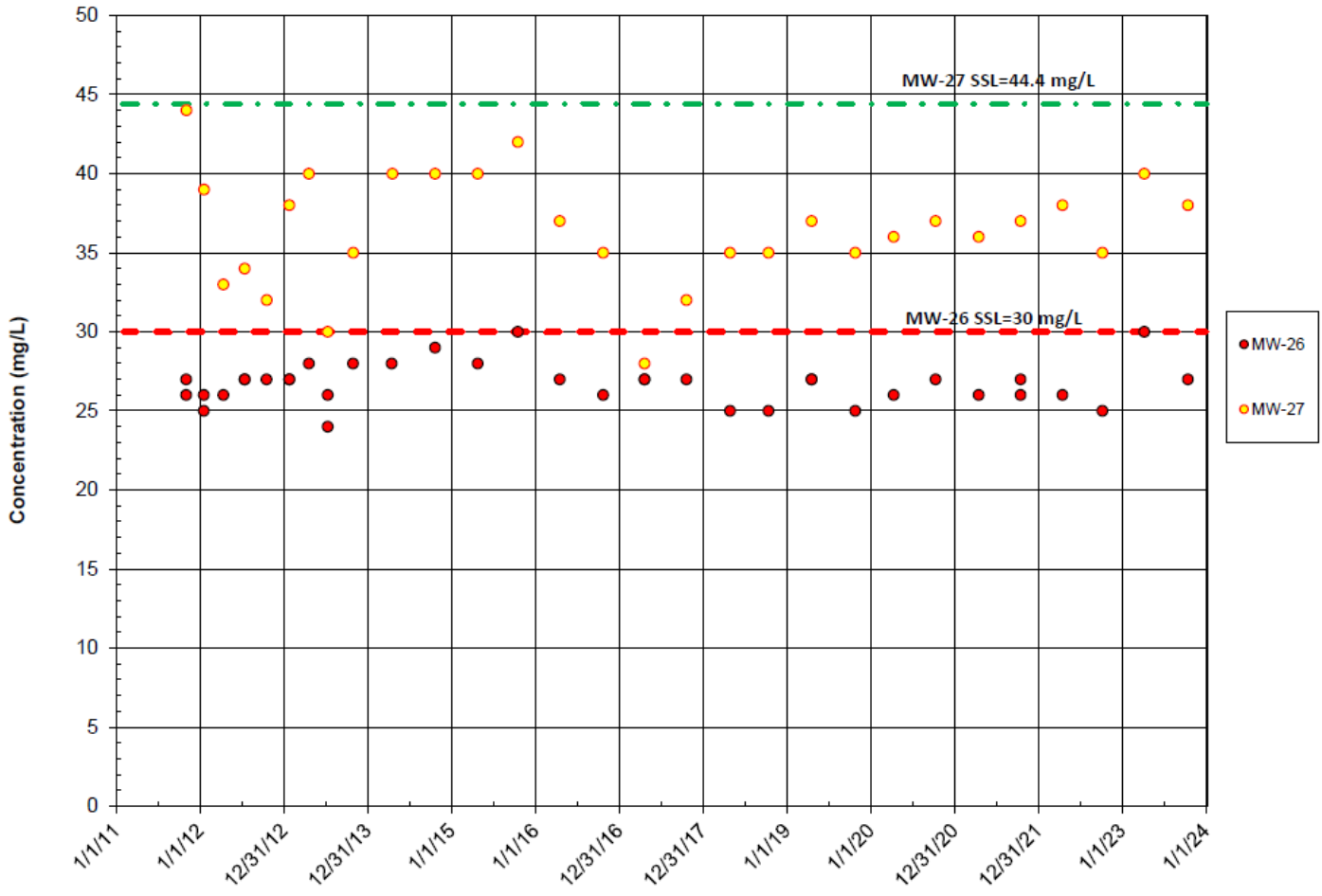
Coffin Butte Landfill East-Side Wells: Magnesium



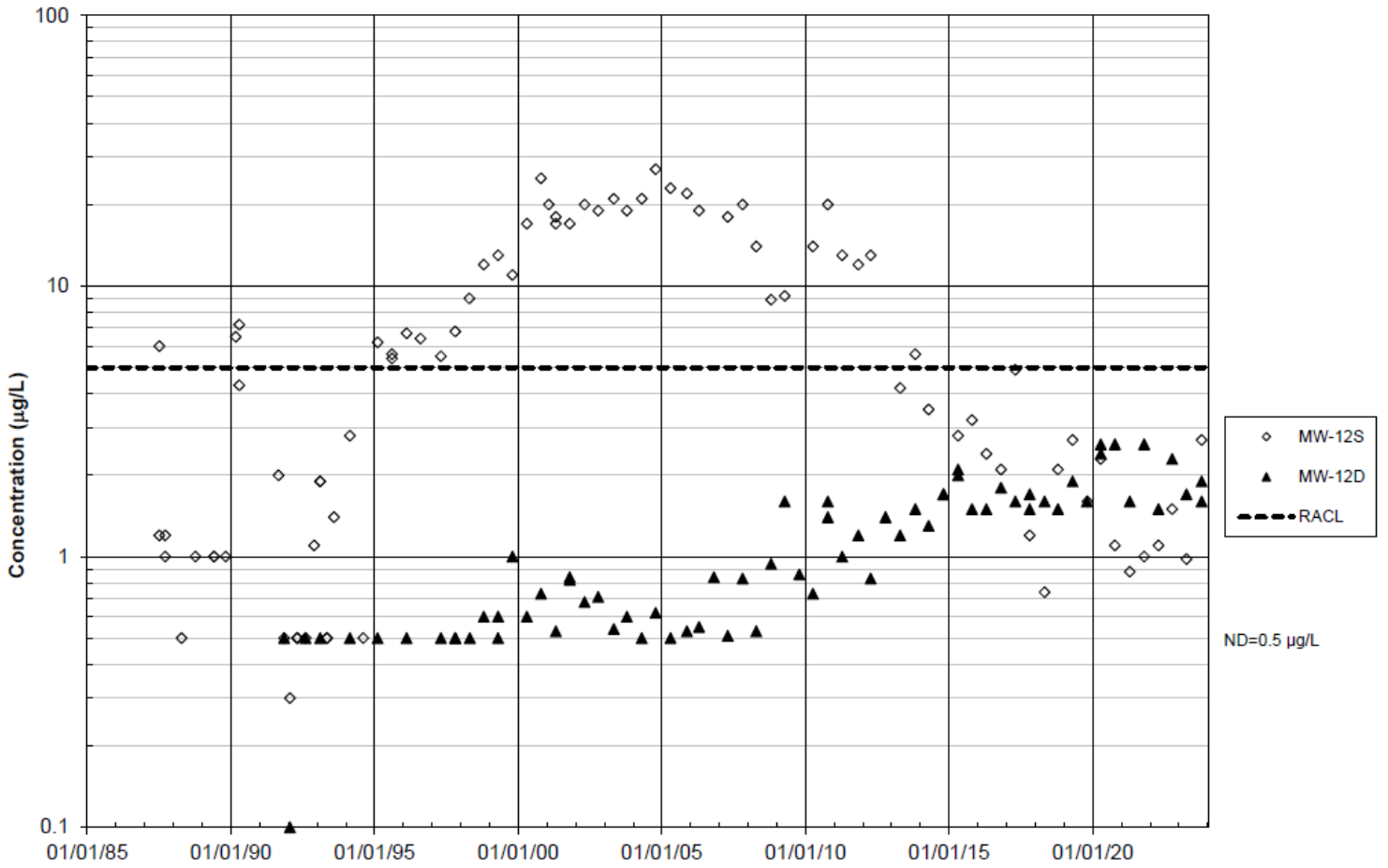
Coffin Butte Landfill East-Side Wells: Manganese



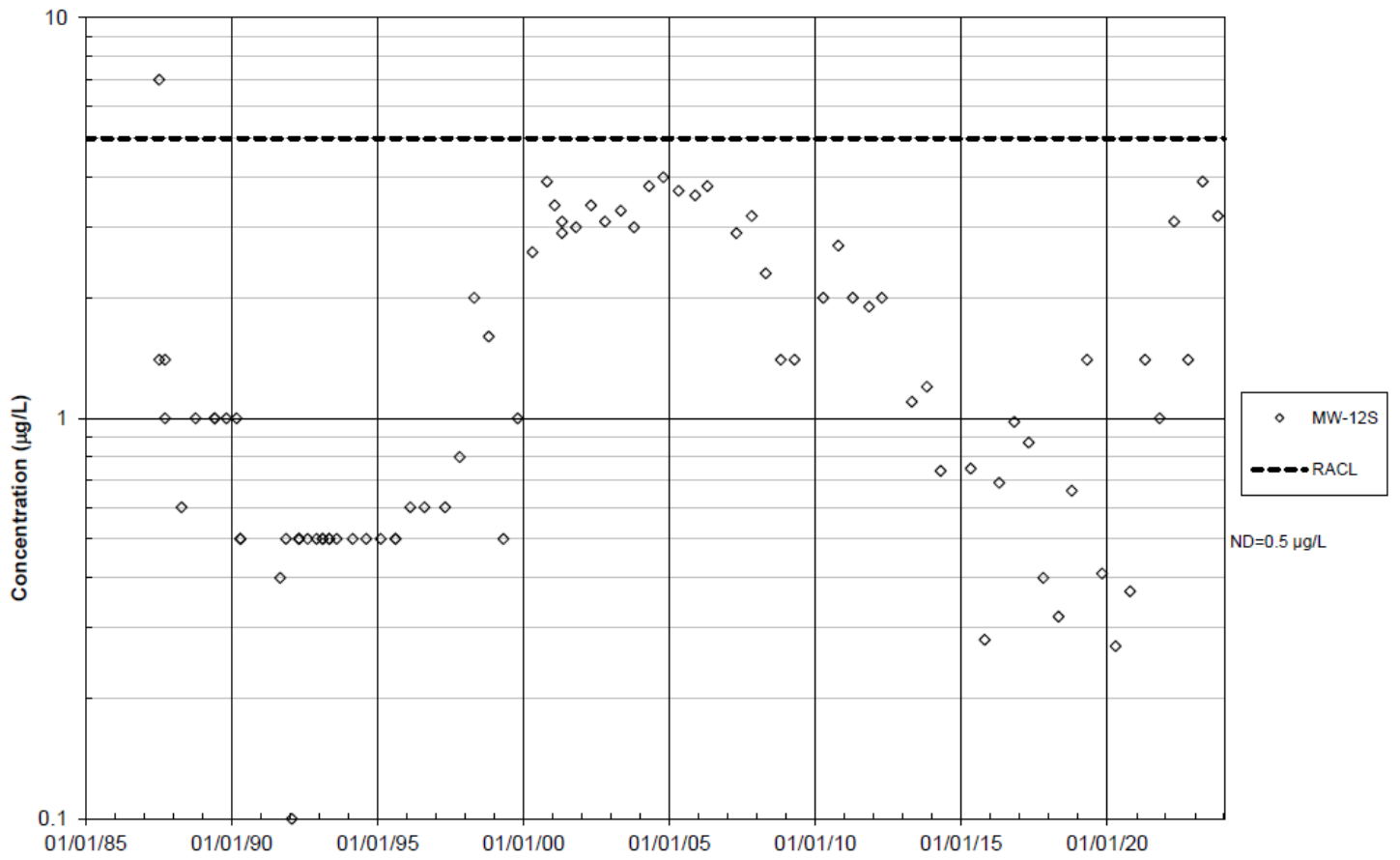
Coffin Butte Landfill
East-Side Wells: Sodium



Coffin Butte Landfill
MW-2S/12S and MW-2D/12D: PCE



Coffin Butte Landfill
MW-2S and MW-12S: TCE



Appendix B

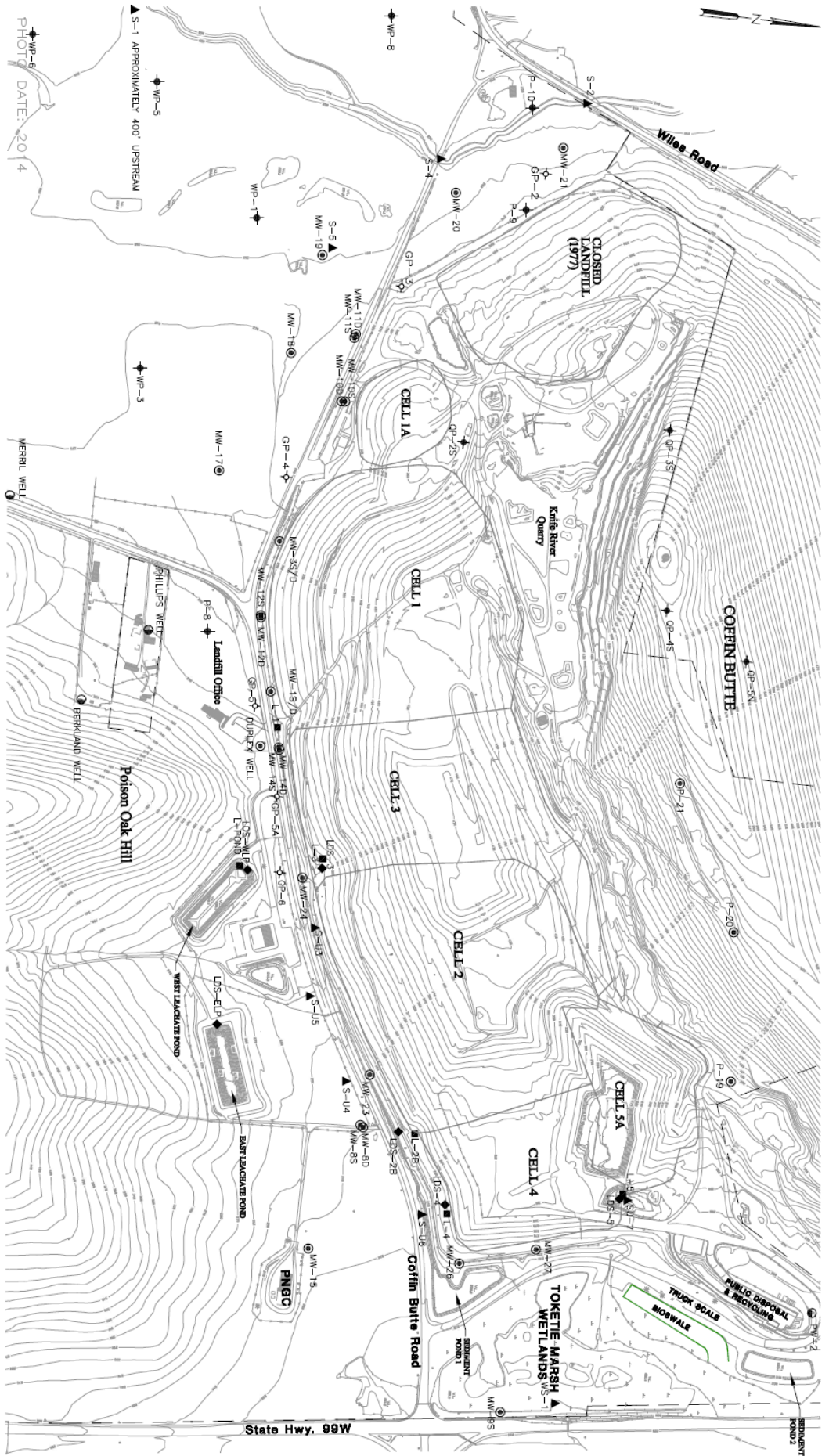
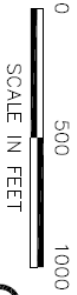
Site Map and Well Locations



REPUBLIC[®]
SERVICES

Sustainability in Action

- MONITORING WELL/PIEZOMETER
- ⊕ OBSERVATION WELL/PIEZOMETER
- ⊙ LANDFILL WATER SUPPLY WELL
- ⊖ GAS PROBE
- PRIVATE WELL
- ◼ LEACHATE SLUMP
- ◆ LEAK DETECTION SYSTEM
- ▲ SURFACE WATER MONITORING STATION



Tuppan Consultants LLC
 460 Second Street, Suite 103
 Lake Oswego, Or 97034
 Ph. 503.675.1335

DATE: 6-26-14
 DWN: GH
 APP: GH
 REV:
 PROJECT NO. WI-001-005

Site Map and Monitoring Locations
 FIGURE 2-1
 COFFIN BUTTE LANDFILL
 BENTON COUNTY, OREGON

Appendix C

Certificate of Insurance



REPUBLIC
SERVICES

Sustainability in Action



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
06/30/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER CANNON COCHRAN MANAGEMENT SERVICES, INC. 17015 NORTH SCOTTSDALE ROAD SCOTTSDALE, AZ 85255	CONTACT NAME:																					
	PHONE (A/C No.Ext): _____ FAX (A/C No.Ext): _____ E-MAIL ADDRESS: <u>certificateteam@cmsi.com</u>																					
	<table border="1"> <thead> <tr> <th colspan="2">INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: ACE American Insurance Co.</td> <td></td> <td>22667</td> </tr> <tr> <td>INSURER B: Indemnity Insurance Co. of North America</td> <td></td> <td>43575</td> </tr> <tr> <td>INSURER C: Illinois Union Insurance Company</td> <td></td> <td>27960</td> </tr> <tr> <td>INSURER D: ACE Property & Casualty Insurance Company</td> <td></td> <td>20699</td> </tr> <tr> <td>INSURER E:</td> <td></td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A: ACE American Insurance Co.		22667	INSURER B: Indemnity Insurance Co. of North America		43575	INSURER C: Illinois Union Insurance Company		27960	INSURER D: ACE Property & Casualty Insurance Company		20699	INSURER E:			INSURER F:		
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INSURER A: ACE American Insurance Co.		22667																				
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INSURER C: Illinois Union Insurance Company		27960																				
INSURER D: ACE Property & Casualty Insurance Company		20699																				
INSURER E:																						
INSURER F:																						
INSURED REPUBLIC SERVICES, INC. 18500 N. ALLIED WAY PHOENIX, AZ 85054																						

COVERAGES **CERTIFICATE NUMBER: 2335137** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER: _____			HDO G47334433	06/30/2023	06/30/2024	EACH OCCURRENCE \$ 5,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 5,000,000 MED EXP (Any one person) PERSONAL & ADV INJURY \$ 5,000,000 GENERAL AGGREGATE \$ 30,000,000 PRODUCTS -COMP/OP AGG \$ 20,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			ISA H10735786	06/30/2023	06/30/2024	COMBINED SINGLE LIMIT (Ea accident) \$ 10,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
D	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			G46782148 007	06/30/2023	06/30/2024	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
B A A A C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/>	N/A	WLR C50710397 - AOS WLR C50710324 - OR SCF C5071049A - WI WCU C50710555 - OH XS TNS C66934172 - TX NS/XS	06/30/2023 06/30/2023 06/30/2023 06/30/2023 06/30/2023	06/30/2024 06/30/2024 06/30/2024 06/30/2024 06/30/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 3,000,000 E.L. DISEASE -EA EMPLOYEE \$ 3,000,000 E.L. DISEASE -POLICY LIMIT \$ 3,000,000
	<input checked="" type="checkbox"/> Contractor's Pollution Liability:			See page 2 for details	06/30/2023	06/30/2024	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Division Number: 4125 - Named Insured Includes: Valley Landfills, Inc. - Dba: Coffin Butte LF

CERTIFICATE HOLDER

Benton County, Oregon, Chairman of the Board of Commissioners


408 SW Monroe Avenue, Suite 111
PO Box 3020

Corvallis, OR 97339-3020
United States

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE





ADDITIONAL REMARKS SCHEDULE

AGENCY		NAMED INSURED	
POLICY NUMBER See First Page		REPUBLIC SERVICES, INC. 18500 N. ALLIED WAY PHOENIX, AZ 85054	
CARRIER See First Page	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS

CERTIFICATE NUMBER: 2335137

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM.

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

The following provisions apply when required by written contract. As used below, the term certificate holder also includes any person or organization that the insured has become obligated to include as a result of an executed contract or agreement.

GENERAL LIABILITY:

Certificate holder is Additional Insured including on-going and completed operations when required by written contract.
 Coverage is primary and non-contributory when required by written contract.
 Waiver of Subrogation in favor of the certificate holder is included when required by written contract.

AUTO LIABILITY:

Certificate holder is Additional Insured when required by written contract.
 Coverage is primary and non-contributory when required by written contract.
 Waiver of Subrogation in favor of the certificate holder is included when required by written contract.

WORKERS COMPENSATION AND EMPLOYERS LIABILITY:

Waiver of Subrogation in favor of the certificate holder is included when required by written contract where allowed by state law.

Stop gap coverage for ND and WA is covered under policy no. WLR C50710397 and stop gap coverage for OH is covered under policy no. WCU C50710555 as noted on page 1 of this certificate.

TEXAS EXCESS INDEMNITY AND EMPLOYERS LIABILITY:

Insured is a registered non-subscriber to the Texas Workers Compensation Act. Insured has filed an approved Indemnity Plan with the Texas Department of Insurance which offers an alternative in benefits to employees rather than the traditional Workers Compensation Insurance in Texas. The excess policy (#TNS C66934172) shown on this certificate provides excess Indemnity and Employers Liability coverage for the approved Indemnity Plan.

Contractual Liability is included in the General Liability and Automobile Liability coverage forms. The General Liability and Automobile Liability policies do not contain endorsements excluding Contractual Liability.

Separation of Insured (Cross Liability) coverage is provided to the Additional Insured, when required by written contract, per the Conditions of the Commercial General Liability Coverage form and the Automobile Liability Coverage form.

Umbrella/Excess Liability provides additional limits over the underlying General Liability, Automobile Liability and Employer's Liability policies shown on this certificate.

Contractor's Pollution Liability Details of Cover:

Steadfast Insurance Company (Zurich) (NAIC # 26387) - Policy No. PEC 0792830-00 - \$25MM -- 06/30/23 - 06/30/24

Applicable to Contractor's Pollution Liability Coverage Parts Only:
 \$25,000,000 - Damage Limit for Each Occurrence, Claim or Pollution Condition
 \$25,000,000 - Claims Expense Limit for Each Claim
 \$25,000,000 - General Aggregate Limit
 \$25,000,000 - Claims Expense Aggregate Limit

Applicable to Professional Liability Coverage Parts Only:
 \$25,000,000 - Damage Limit for Each Claim or Wrongful Act
 \$25,000,000 - Claims Expense Limit for Each Claim
 \$25,000,000 - General Aggregate Limit

Appendix D

Arsenic Memo



REPUBLIC
SERVICES

Sustainability in Action



Sustainability in Action

To: Benton County Commissioners

Date: 2/15/2024

Dear Commissioner Augerot,

During Republic Services' annual report presentation on Feb. 6, you asked that we follow up with you on three topics. In this email, I'd like to address your questions regarding arsenic levels in the monitoring wells at Coffin Butte Landfill. Thank you for giving me the time and opportunity to come back to you with additional information.

We noted in our landfill annual report (page 9) that "the primary drinking water standard for arsenic was exceeded" at the compliance boundary for Cells 4 and 5 on the landfill's east side, but that these "concentrations represent natural background conditions."

This week, we asked our Coffin Butte Landfill consultant, Eric Tuppan, for additional detail. Tuppan, a registered geologist, and owner/operator of Tuppan Consultants, LLC., has 40 years of industry experience. He founded his Oregon-based geology, hydrogeology, and environmental consulting firm consulting firm in 2003.

In summary:

- The presence of arsenic in soil and rock in Oregon has been documented by the Oregon Department of Environmental Quality with background concentrations specific to geographic regions.
- In the Portland Basin, the background concentration is 8.8 milligrams per kilogram; in the Cascade Range it is 19 milligrams per kilogram; and in the South Willamette Valley (where Coffin Butte is located) it is 18 milligrams per kilogram.
- Arsenic has been detected in three areas of the landfill since sampling first began in 1991. These are described in the text that follows.
- There is no data to suggest that the existing arsenic levels are anything other than what is naturally occurring in the soil, or that leachate is impacting the environment or public health.

As you noted during the Feb. 6 meeting, there was a seepage event that occurred at the Landfill in the 1990s. Valley Landfills Inc. (VLI) discovered this issue in 1994, after groundwater monitoring samples in well MW-23, located on the south side of Cell 2, showed elevated levels of arsenic.

At the time of the investigation, VLI determined that increased concentrations of arsenic, chloride, sodium, and bicarbonate were due to leachate seeping from the south slope of Cell 2. Corrective measures, including excavating the south slope of the landfill and installing a gravel drain, fixed the issue and allowed groundwater quality to recover over time.



Sustainability in Action

The groundwater sampling referenced in our 2022 annual report was taken from two wells on the eastern side of the landfill, more than 1,000 feet away from the well that's located south of Cell 2.

These two compliance wells, which were installed in 2011, have had stable arsenic readings for the past 20 years, averaging 14.2 micrograms per liter at one site, and 13.3 micrograms per liter for the other.

Both these averages are consistent with the background concentrations of arsenic in the Willamette Valley, as documented by the Department of Environmental Quality. The steady readings over time indicate there have been no leachate releases or impacts on groundwater at these locations.

Arsenic testing at Coffin Butte initially began in April 1991, in well MW-S9 on the landfill's northeast side. This third location has historically had higher concentrations of arsenic, ranging from 27 to 41.8 micrograms per liter over the past 30 years.

However, it is important to note that the initial sampling at this well – which established baseline arsenic levels in background concentrations - occurred prior to the completion of Cell 2 construction or any landfilling on the east side of Coffin Butte.

Because this well is more than 1,800 feet away from MW-23, and because sampling occurred prior to the construction of Cell 2, it is implausible for the readings at this location to have been impacted by leachate.

Coffin Butte conducts groundwater sampling twice a year, in April and October, in a set number of locations as outlined in our DEQ-approved Environmental Monitoring Plan. That plan also specifies the frequency of testing at each well. The most recent sampling at well MW-S9 occurred in 2019 in collaboration with DEQ; it is set to be tested again later this year.

As noted in our 2022 annual report, the Landfill was inspected seven times by a variety of agencies, including the EPA, DEQ's Division of Material Management, DEQ's Division of Air Quality and the cities of Corvallis and Salem. In addition, we submitted annual, semi-annual, quarterly, and monthly reports to federal, state, and local regulators. Coffin Butte remains in compliance with all our permits and regulatory requirements.

I hope this email provides you with the information you requested. Should you have any follow-up questions, please don't hesitate to contact me directly at grough@republicservices.com.

Thank you,
Ginger Rough, Sr. Manager for Public Affairs



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