June 20, 2025
File No. 27223197

MEMORANDUM

TO: Republic Services

FROM: James Walsh, P.E., BCEE, SCS Engineers

SUBJECT: Rebuttal to Public Comments Received June 2025
To Benton County Planning & Zoning Commission
On Landfill Fire Potential at Coffin Butte Landfill
From Valley Neighbors for Environmental Quality and Safety

This memorandum is to address various comments submitted by Valley Neighbors for Environmental Quality and Safety (VNEQS) on Coffin Butte Landfill, Pages 27-30, on landfill fire risk. In each case we will repeat the comment verbatim, followed by an SCS rebuttal.

#1: FACTUALLY INCORRECT STATEMENT BY CONSULTANT JAMES WALSH:
"The landfill accepts only MSW (Municipal Solid Waste)"
IN FACT, the facility also accepts "special waste," industrial waste, and C&D (Construction & Demolition) waste. C&D waste is known to be more likely to spontaneously combust.
SCS REBUTTAL: The statement we made above in italics was not meant to be misleading. The characterization of MSW often also includes special waste, industrial waste, and C&D. ODEQ characterizes Coffin Butte as a "municipal solid waste landfill" and that classification is allowed to receive special waste, industrial waste, and C&D. C&D waste in a modern MSW sanitary landfill like Coffin Butte is no more likely to combust than other wastes received. There is no evidence that any approved and accepted waste stream at Coffin Butte Landfill is ever likely to spontaneously combust.

#2. FACTUALLY INCORRECT STATEMENT BY CONSULTANT WALSH:
"The landfill does not accept hazardous waste."
IN FACT, there are no audits of waste, and no penalties for landfilling hazardous waste.
SCS REBUTTAL: The statement we made above in italics is factually correct. Controls on wastes received at Coffin Butte are robust. First, hazardous wastes are tightly regulated by federal and state law at the generator and transport levels. In addition, Republic Services has a rigorous company-wide Waste Acceptance Program that would exclude any hazardous wastes, as well as many other wastes not regulated that Republic views as potentially problematic to the landfill. There are federal and state penalties that apply to generators, transporters, and lastly landfills if any hazardous waste were to slip through to the landfill. Thus, it is very difficult for hazardous waste to reach the Coffin Butte Landfill. In addition, all waste transporters to Coffin Butte Landfill are pre-

registered and their wastes pre-approved by Republic. Lastly, site operators observe waste deposits upon placement at the working face, and any unacceptable wastes are spotted, isolated, and removed.

#3. FACTUALLY INCORRECT STATEMENT BY CONSULTANT WALSH:
"Robust waste approval checks are in place."
IN FACT, there is no oversight of any kind, and when alerted to the presence of hazardous waste in a load, the landfill operator permits disposal of hazardous waste (see Doug Pollock testimony). Any "robust" oversight of disposal would presumably preclude human corpses from being disposed of at the landfill (corpse of Kaylee Birdzell, 2022; remains of Kara Tayler, 2023)
SCS REBUTTAL: The statement we made above in italics is factually correct. Neither ODEQ nor the landfill operator allows regulated hazardous waste to be disposed at Coffin Butte, regardless of the circumstances. Robust waste approvals are in place. See the rebuttal on hazardous and other potentially problematic wastes above. There is additional detailed evidence from Republic in the record elsewhere to support this.

#4. FACTUALLY INCORRECT STATEMENT BY CONSULTANT WALSH:
"Waste disposal is limited to a 1/2 acre working face."
IN FACT, the landfill working face shown on GIS is typically 1.5-2.5 acres (see testimony, Mason Leavitt). More working face = higher fire risk
SCS REBUTTAL: The Applicant addressed this issue in its submission dated June 12, 2025.

#5. FACTUALLY INCORRECT STATEMENT BY CONSULTANT WALSH:
"Daily cover is applied at the close of each business day."
IN FACT, see testimony and photographs, Mark Yeager, and testimony, Roger Orton: daily cover is not consistently applied at the close of each business day. When applied, "alternate daily cover" is often poorly-applied tarps with large gaps that allow for combustion air infiltration.
SCS REBUTTAL: Daily cover is a policy of the landfill. The Applicant will address any occasional departures from this policy. Coffin Butte uses a combination of soil and tarps as daily cover. The use of tarps as an "alternate daily cover" at Coffin Butte has been approved by ODEQ. By definition, approved alternate daily cover is daily cover. There may be some small gaps between tarps. The goal for any daily cover is to cover as much of the daily waste deposits as possible to reduce exposure to atmosphere and oxygen. Tarps as daily cover at Coffin Butte achieve that goal, meeting the state of the practice for the regulated landfill industry, sufficiently reducing the risk of exposure to atmosphere and the risk of fires, to the same extent as soil daily cover.

#6. FACTUALLY INCORRECT STATEMENT BY CONSULTANT WALSH:
"There are three plausible fire scenarios (working face/grassed area/gas well fire."
IN FACT, there are many, many more plausible fire scenarios, including many that would endanger lives and property well beyond the area of the landfill itself:

- PLAUSIBLE SCENARIO 1: a dumped "hot load" (fire burning in the garbage truck, so to minimize truck damage the driver dumps the entire load by the side of the road...a recent

"hot load" dump caused the deadly Sandalwood fire in California that destroyed 70+ structures and resulted in two fatalities);
SCS REBUTTAL: This would be either a working face fire or a grass fire – two of the plausible scenarios already identified. If this were to occur on the landfill property, it would be quickly identified and extinguished.

• PLAUSIBLE SCENARIO 2: Lightning strike (see testimony, Virginia Scott);
SCS REBUTTAL: This would be likely be a grass fire, one of the plausible scenarios.

• PLAUSIBLE SCENARIO 3: Burning embers from a fire burning elsewhere rain down upon the landfill, igniting it. Fire experts tell area residents that this is THE MOST LIKELY scenario for a fire emergency: that a wildfire elsewhere lofts airborne embers into the area, starting fires there;
SCS REBUTTAL: This would likely be a grass fire, one of the plausible scenarios. The likelihood of this is low, and the risk and consequences would be no worse than on any other grassed area in the County. Moreover, the likelihood of timely detection and response is far higher at Coffin Butte Landfill than with other rural and unobserved grassed (or otherwise vegetated) areas.

• PLAUSIBLE SCENARIO 4: Exploding lithium batteries (see testimony, Virginia Scott, & OPB article, "*Exploding lithium batteries are causing fires in Oregon's landfills*");
SCS REBUTTAL: Batteries are excluded from working face disposal and have a designated separate collection area at the landfill. Batteries are not landfilled. If they did get through to the working face, and ignited, they would be manageable as a working face fire, which is already addressed.

• PLAUSIBLE SCENARIO 5: Electrical short ignites fire in garbage truck in the compressed natural gas fueling area (see "Corvallis Fire Instagram account");
SCS REBUTTAL: This has never happened and the likelihood it could is very low. If it did occur, such trucks are isolated on a hard surface, and physically separate from anything else that could ignite. And such a fire would be immediately identified and responded to by on-site staff, who would quickly extinguish the fire.

• PLAUSIBLE SCENARIO 6: "Subsurface Reaction" (the term of art used by the Applicant's fire consultant, Mr. James Walsh to describe spontaneous combustion deep in the landfill mass). In his 2015 expert testimony on the Bridgeton, Missouri fire (we will use the term "fire" rather than "SSR"), the Applicant's fire expert, Mr. Walsh, stated: "There is no known way to prevent the SSR from developing or to stop it." That SSR (or "fire") has now been burning in the Bridgeton landfill for 15 years. There are known risk factors, however, and one of them is having incinerator ash in the landfill; Coffin Butte has been accepting ash from the incinerator in Marion County for years. Another is accepting construction and demolition debris.

SCS REBUTTAL: THE SSR that was identified at Bridgeton Landfill is not a fire. A fire is shallow, aerobic, oxidation, and requires the presence of significant quantities of oxygen. An SSR is deep, anaerobic, lacking oxygen, and assuredly not a fire. An SSR is extremely rare. Plus, temperatures are recorded monthly at all extraction wells at Coffin Butte Landfill, allowing for detection of elevated temperatures in the waste – a way to detect a possible subsurface fire or SSR. All such recorded temperatures to date at Coffin Butte are under the limits prescribed by the MSW landfill NSPS regulations. There is and has been no evidence of an SSR (or underground waste fire) at Coffin Butte and there is no material risk of one developing. Conditions at Bridgeton are entirely different than those at Coffin Butte. Ash alone will not create an SSR.

POTENTIAL CODE CITATIONS – FIRE:

53.215 (1) FIRE SERIOUSLY INTERFERE WITH USES ON ADJACENT PROPERTY

There has been testimony (Erin Bradley & Joel Geier) regarding the threat fire on the landfill posed in 2024 to nearby properties

SCS REBUTTAL FOR THIS COMMENT AND ALL ALLEGED "POTENTIAL CODE VIOLATIONS" BELOW:

This is a list of highly speculative, highly unlikely scenarios. My prior reports, including my June 6, 2025 submission, do not support the outcomes suggested by VNEQS. As an expert in this field, I stand by the conclusion that operations at Coffin Butte, including the proposed expansion, do not present a significant fire risk.

53.215 (1) FIRE SERIOUSLY INTERFERE WITH CHARACTER OF THE AREA

A fire that destroyed structures and forests would result in a significant impact in the character of the area, as can be seen from before/after photographs taken in the aftermath of various Oregon fires in 2020

53.215 (2) FIRE UNDUE BURDEN ON PUBLIC IMPROVEMENTS

A fire that started at the landfill could damage public improvements, including power and water infrastructure.

53.215 (2) FIRE UNDUE BURDEN ON PUBLIC IMPROVEMENTS, EGRESS

If there is an artificial canyon made out of methane-generating garbage on either side of Coffin Butte Road, a fire that started elsewhere and spread to the landfill (via burning embers) could prevent Coffin Butte Road from being a safe egress route for Valley residents

53.215 (1) FIRE UNDUE BURDEN ADAIR FIRE: DANGEROUSLY STEEP SLOPES

The Applicant has told the EPA that the surface of the existing landfill is too steep, and dangerous for EPA personnel to walk over with hand-held air quality monitoring devices. But fire personnel will have to access these same surfaces. Steep and dangerous surfaces are a threat to the life and safety of firefighting personnel and an undue burden.

53.215 (1) FIRE UNDUE BURDEN ADAIR FIRE: ADDITIONAL 59 ACRES OF SURFACE ON WHICH FIRES MIGHT IGNITE

The increase in the landfill surface area is 145% of existing landfill footprint, without taking slopes into account (like the roof of a building, the surface area of the landfill is greater than its footprint). An increased surface area of 45% is a material amount and poses a threat to the life and safety of firefighting personnel and an undue burden.

53.215 (1) FIRE UNDUE BURDEN ADAIR FIRE: ADDITIONAL 10,000,000 CUYD OF METHANE-GENERATING WASTE IN PLACE

The proposal will increase waste in place by 140% over existing waste-in-place. More waste-in-place means more methane. Methane is currently being released as fugitive emissions from the landfill in explosive concentrations. An increased amount of 40% is a material amount of explosive methane and is a threat to the life and safety of firefighting personnel and an undue burden

53.215 (1) FIRE UNDUE BURDEN ADAIR FIRE: GEOMETRY OF THE PROPOSAL

The proposal will create an artificial canyon made of garbage on either side of Coffin Butte Road, each side of which will producing methane at explosive levels. The new topography will intensify fires moving uphill and increase wind speed if a fire ignites on either side of the artificial canyon. Fighting fires in an artificial canyon made of methane-producing garbage is a threat to the life and safety of firefighting personnel and an undue burden.

53.215 (1) FIRE UNDUE BURDEN CORVALLIS & BENTON COUNTY RFD's

Hot loads could be dumped by the side of any road in Benton County where there is garbage truck traffic to the landfill. Therefore, a fire like the deadly Sandalwood fire could ignite anywhere and could pose an undue burden to firefighting personnel.

53.215 (1) LANDFILL NOT CONSIDERED IN COMMUNITY WILDFIRE PROTECTION PLAN – UNDUE BURDEN ON BENTON COUNTY COMMUNITY DEVELOPMENT STAFF

Benton County staff did not incorporate the landfill in the CWPP. The reason given was inadequate experience and that it was "a task too large to undertake" by Benton County staff.[21]

[21] Email, Inga Williams to Nancy Whitcombe, 3/18/2022 "I don't see how I can include this in CWPP as I have no experience in the topic and it would be a task too large to undertake for what is in the final dra stages. It may be that it could be included as a task to be worked on in future year updates."

53.215 (1) FIRE UNDUE BURDEN – PROPERTIES IN THE LANDFILL AREA

Hot loads are most likely to be dumped on roadsides in the landfill area. In fact, in the early 2000's a "hot load" was dumped north of the landfill. Therefore, a fire like the deadly Sandalwood fire could ignite in that area and pose an undue burden of fire risk
to residents and their properties.

53.215 (1) FEMA DOCUMENT ON LANDFILL FIRES

The FEMA document "LANDFILL FIRES THEIR MAGNITUDE, CHARACTERISTICS, AND MITIGATION" states:

> *"Landfill fires are particularly challenging to the fire service. A large landfill fire normally requires numerous personnel and a significant period of time before it is contained. Both of these circumstances can strain a jurisdiction, particularly one dependent on volunteer staffing."*

So, per FEMA, a large landfill fire would particularly strain Adair RFD. This document continues, regarding Mr. Walsh's recommendation of water tanker mitigation:

> *"The use of water to suppress landfill fires is controversial. The application of large volumes of water may actually exacerbate a fire by contributing to the process of aerobic decomposition*."

It goes on in some detail about underground fires that can begin via spontaneous combustion. Applicant's consultant, Mr. James Walsh, failed to mention such fires as a 'plausible fire scenario' for Coffin Butte. However, regarding the Bridgeton landfill fire, Mr. Walsh opined that there was 'no known way' to prevent that type of landfill fire or to stop it. Per FEMA:

> *"Fires, particularly those underground, can undermine the integrity of the landfill, which could cause a collapse under the weight of landfill employees, firefighters, or equipment."*[22]

[22] FEMA, all quotes from "LANDFILL FIRES [etc]" pages 1, 15, 16

SCS REBUTTAL: We are well familiar with the FEMA document cited. FEMA often creates large debris piles from disaster cleanups. Waste in those can be left uncovered for months. Understandably, FEMA has had issues with fires in those large uncovered debris piles. However, FEMA has no operating experience with a modern MSW sanitary landfill like Coffin Butte Landfill, much less its fire potential or reality. Like any modern MSW landfill, Coffin Butte Landfill covers its waste each night, and never has large areas of uncovered waste exposed for months at a time. Coffin Butte has far less fire potential than that reported and experienced by FEMA. The fires that can and have occurred at Coffin Butte are much smaller than what FEMA has experienced with large completely uncovered debris piles.

We previously addressed support from Adair Fire in the SCS rebuttals of June 6, 2025. Coffin Butte and Adair Fire had a meeting in March 2025 to discuss and plan to work together when needed going forward. At that time, Adair Fire indicated they looked forward to continuing support to the landfill. The landfill appreciates that support, when needed. It should be noted that most fires are handled by on-site staff and Adair Fire's support is not needed. When Adair Fire has responded, their support, combined with the current on-site capabilities of Coffin Butte Landfill, has proved plenty sufficient to quickly extinguish the fire.

As to underground fires threatening the surface integrity of the landfill and endangering fire fighters, such large fires at depth simply do not occur at a modern sanitary landfill. Spontaneous combustion and fire spread can not occur at depth in such a landfill. Unlike debris piles, the underground waste in a modern MSW sanitary landfill is well compacted and very dense. It is infeasible to have sufficient oxygen to create or expand an underground landfill fire at Coffin Butte

Landfill. With that, the surface integrity of any modern MSW sanitary landfill like Coffin Butte is not threatened.

Lastly, we would agree the use of water to extinguish large landfill fires is not desirable. Water should be primary for grass fires only. We cited soil as primary for both working face fires and gas extraction well fires, as is standard practice among modern MSW sanitary landfills. The size of a fire at depth in Coffin Butte Landfill as is suggested here is simply not plausible for the above reasons.