

**From:** [Ken Eklund](#)  
**To:** [Benton Public Comment](#)  
**Subject:** I Oppose LU-24-027: Republic's fire report doesn't address subsurface fires, ETLF risk  
**Date:** Tuesday, May 6, 2025 2:03:07 PM  
**Attachments:** [KE Testimony Elevated Temp Landfills.pdf](#)

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Benton County Planning Commissioners  
c/o Planning Division 4500 SW Research Way, Corvallis, OR 97333  
May 6, 2025

**RE: Please Deny LU-24-027, the Conditional Use Permit Application Regarding Landfill Expansion**

Dear Chair Fowler and Members of the Benton County Planning Commission:

I call your attention to an omission in the applicant's Burden of Proof regarding fire hazards: there's no discussion of a type of fire that's unique to landfills, the subsurface fire.

As you'll see in the attached Explainer, subsurface fires ("exothermic chemical reactions") disrupt the landfill's ability to serve the community and can turn into major health risks for the area.

You'll also see that Coffin Butte Landfill is a candidate for the onset of such an event, as it has several high-risk factors present such as incinerator ash, a history of landfill gas leaks, and a history of surface fires (documented elsewhere).

I ask that you deny this land use application – thank you,

Ken Eklund, writerguy

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and other storymaking games

# **ELEVATED TEMPERATURE LANDFILLS, SUBSURFACE LANDFILL FIRES**

## **an explainer**

### **EXOTHERMIC REACTIONS**

Landfills can host unique kinds of “fires” (heat-generating chemical reactions) that begin or travel deep within the landfill and can be functionally impossible to extinguish. These fires fundamentally change the normal landfilling operations and usually lead to increased levels of toxins released in landfill gas and in leachate, both of which have been known to erupt out of the landfill itself. Elevated temperatures can also drastically degrade the durability of the membranes used as liners, causing them to prematurely fail.

### **AT-RISK LANDFILLS**

The onset of these fires are not well understood; there is currently no reliable way to predict the onset of this kind of fire. There are known risk factors, though, including:

- Wet conditions in the landfill
- incinerator ash mixed with municipal solid waste
- partially extinguished surface fires
- landfill gas leaks
- exothermic chemical reactions

All of these risk factors are present at Coffin Butte Landfill:

- The dump has very wet conditions. It exported 40 million gallons of leachate in 2024.
- The dump has been disposing of incinerator bottom and fly ash from the Covanta Incinerator for many years. The dump uses this ash as daily cover, i.e. it is spread over the municipal solid waste at the end of each working day.
- The dump operators acknowledge there are surface fires on a regular basis, but keep no records of them. Most notably, a surface fire at the working face in 2024 was only partially extinguished by dump operators and re-erupted after workers had gone home, requiring local fire response.
- The dump is under legal action by the EPA to investigate excessive leaks of landfill gas. A 2024 EPA inspection revealed an uncapped gas well, which was venting landfill gas out and allowing air to oxygenate the dump interior.
- The dump is the repository for at-risk substances for exothermic chemical reactions, as it received an unknown amount of industrial waste from the Teledyne Wah Chang metals plant in Albany before it was closed and became a Superfund site. Articles from the time disclose that this industrial waste included radium chloride (radioactive) and various forms of magnesium (reactive). Low-level waste from the Wah Chang Superfund cleanup went to an unnamed local landfill.

## EFFECT OF A FIRE ON LANDFILL OPERATIONS: CHIQUITA CANYON LANDFILL

The Chiquita Canyon Landfill outside Castaic, California, is a case study of the real-life effects of such a fire.

From Newsweek, Feb 1, 2024:

Deep within the Chiquita Canyon Landfill site near Santa Clarita, to the north of Los Angeles, a fire has been burning, releasing noxious gases and vapors that have left local residents smelling foul odors and led to a multiagency task force to be formed to address the issue.

Hazardous chemicals such as benzene—a carcinogen—and dimethyl sulfide, which is considered acutely toxic, have been detected being emitted at the landfill site, along with a host of other compounds, as discarded substances in the landfill mix and react with one another, raising concerns about the impact to locals' health that the emissions could have if not addressed soon.

...

Benzene can cause skin and eye irritations, but can also cause genetic defects and cancer. Prolonged or repeated exposure to the chemical can cause damage to the organs. Glass described it as "a nasty and very common industrial chemical" that gave the sweet smell to gasoline, but became problematic the more someone is exposed to it.

Dimethyl sulfide can cause skin, eye and lung irritation as a vapor, as well as dizziness and asphyxiation.

The EPA, which is leading the multiagency effort, has said that, as well as those two chemicals, chloromethane, carbon disulfide, toluene, hexane, tetrachloroethane, styrene and acrylonitrile have been detected at the landfill site. All are considered hazardous, if not toxic.

A South Coast Air Quality Management District (SCAQMD) spokesperson told *Newsweek* that "elevated levels" of hydrogen sulfide and benzene have been detected through sampling in the nearby community, as well as at the landfill site.

Glass said that the emissions would be a concern for workers on the landfill site, and that air monitoring would keep track of the levels around nearby housing, but suggested that residents should watch out for their sense of smell getting used to the odors, which was a person's "first warning sign."

"You can become desensitized to them and fail to smell them or detect them by odor—even when they're there, if you're having a lot of exposure to them—so residents in the area should also be concerned about that," he said.

[\(link\)](#)

From The LA Times, Feb 23, 2024:

Federal officials have ordered operators of Chiquita Canyon landfill to take immediate steps to protect human health and the environment, saying the smoldering Castaic facility poses an imminent danger to nearby communities due to noxious odors and hazardous liquid waste.

The action taken Thursday by the U.S. Environmental Protection Agency comes amid growing calls to shut down the facility.

“This order reflects EPA’s commitment to ensuring landfill operators mitigate noxious odors and comply with federal law to prevent public exposure to hazardous wastes,” said EPA Pacific Southwest Regional Administrator Martha Guzman. “Today’s order is the result of local, state, and federal collaboration to better protect the health of nearby residents as well as the surrounding environment.”

The source of the growing crisis is a heat-generating chemical reaction that probably began deep within the landfill in May of 2022. Extreme heat and growing pressure within the dump have caused piping-hot, contaminated water to spill onto the surface, or occasionally erupt like a geyser.



Sarah Olaguez joins residents of Val Verde and Castaic in Hasley Canyon Park calling for the Chiquita Canyon Landfill to be closed. (Allen J. Schaben/Los Angeles Times)

This polluted water has contained cancer-causing benzene above federal standards, making it liquid hazardous waste, according to environmental regulators. Officials have also raised concerns that toxic fumes are drifting into neighboring communities and polluted water has been discharged into nearby waterways due to heavy rains.

([link](#))

From Cal Matters, March 14, 2025:

For more than two years, Assemblymember [Pilar Schiavo](#)'s constituents have been complaining to her about the stench and fumes they've been breathing since trash buried at the Chiquita Canyon Landfill in Southern California ignited and never stopped burning.

Schiavo, a Democrat representing the Santa Clarita Valley north of Los Angeles, [decided to spend the night](#) as a guest of one of the [639-acre landfill's](#) closest neighbors. She wanted to experience for herself what life is like for [the hundreds of people who've complained](#) about the noxious fumes since the underground chemical reaction started below the Castaic landfill in May 2022.

It's not known what caused the chemical reaction, but a state official said this week the burn zone had grown underground to an estimated 90 acres. As the landfill belches a stench like rotten milk, residents allege chemical emissions are making them sick. And it could keep burning for years.

When she arrived in Val Verde, it didn't take long before Schiavo got a pounding headache. Her skin felt itchy. When she woke up the following day, she was disturbed to get her first bloody nose in years, she said.

"People are getting sick," Schiavo said [in a video diary](#) taken on her phone during her stay last fall. "People are being barricaded in their homes, and not opening windows and doors and not letting kids come out and play on trampolines because they're afraid of breathing the air. ... We have to get people out of here and keep them safe."

...

In June, the [U.S. EPA also cited](#) the landfill company for violating various regulations intended to safeguard human health. The company is facing potential civil penalties of up to \$59,114 for each day of violation.

"EPA cannot comment on ongoing investigations, including assessment of penalties," EPA spokesperson Joshua Alexander said in an email.

([link](#))

## RISKS OF ELEVATED TEMPERATURES OMITTED FROM APPLICANT'S FIRE REPORT

Republic's Fire Report does not mention the risk of a subsurface fire. It does have a section on gas well fires, which are one of the ways in which subsurface fires get started:

7. MFA/LFCI Comment: For Gas Well Fires, LFCI recommends preventive monitoring, including monitoring for CO levels, targeted maximum oxygen concentrations, and balancing gas levels to prevent aerobic decomposition. In addition, the Applicant should provide standard operating procedures for handling high-temperature wells and specify operating temperature thresholds.

SCS Response: Current procedures or preventive monitoring to detect developing gas well fires in place now, are extraordinarily robust and more than sufficient to detect and prevent gas well fires. First, the site abides by the U.S. EPA's NSPS regulations. These rules prescribe routine monthly monitoring of all gas wells for pressure, temperature, and oxygen. NSPS sets limits for each of those three parameters as a way to detect early on the potential to develop a gas well fire. Second, the landfill's parent Republic Services has a 205-page SOP document specifically for landfill gas management. Several sections in that SOP address the prevention, detection, and mitigation of gas well fires. Coffin Butte Landfill follows that SOP. Third, all Republic Services landfills including Coffin Butte enter all landfill gas monitoring results into an advanced database system for monitoring and managing landfill gas systems. That software is SCSeTools, and it automatically detects any exceedances of the NSPS Standards on gas well fires, and in fact also spots early trends toward a possible gas well fire before actual exceedances occur, so that mitigation measures can be employed early on.

Highlighting mine. The EPA is currently auditing the dump operator to determine whether or not the dump operator is indeed abiding by EPA regulations. Also, as documented elsewhere, the EPA's Air Enforcement Officer for this Region, during an inspection of the landfill, discovered a gas well that was completely uncapped. This would have been introducing a large amount of oxygen into the interior of the landfill. The operator at the time stated that the gas collection system showed normal conditions. It's not known how long the well had been uncapped, but it is clear that the system that is being cited here failed to detect it in any timely way. One thing that's conspicuous by its absence: Republic has not brought forth any monitoring logs showing that the uncapping was a recent event. So it's reasonable to assume that either (a) it was not a recent event, or (b) the software doesn't actually detect events like this, or (c) both.

I'll also note that I have been looking at the dump's monthly monitoring reports for years now, and pressure/temperature are not regularly reported in them.

#### SUMMARY

Subsurface fires ("exothermic chemical reactions") are a significant fire risk at Coffin Butte Landfill, which has many of the currently known major risk factors. The applicant does not address subsurface fires but rather seems resistant to any question of its current protocols. The onset of a subsurface fire would likely be of severe impact to the surrounding area. A landfill expansion would increase the surface area of the landfill (fire entry points) by about 35%, the intake volume (fire entry point) by 68%, and waste-in-place (ignition source, fuel) by 20%, increasing this undocumented risk. The applicant has not met its Burden of Proof regarding the subsurface fire risks at Coffin Butte Landfill.

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May 6, 2025

Good evening Chair Fowler and Planning Commissioners. I'm Ken Eklund, I live at Three Seven Three Four Zero Moss Rock Drive in Benton County.

Thank you, Carol, Catherine, Betsy, and David, for gifting me more time to speak.

First, I'll read you testimony about fire hazards on Carol's behalf:

DATE RECEIVED:	05-06-25
FROM:	Ken Eklund
PHONE OR EMAIL:	futureeverything@ writerguy.com



My name is Carol McClelland Fields, and I live at 37326 Soap Creek Rd. About four miles from Coffin Butte Landfill.

I strongly oppose Republic Services' application to expand the landfill. I urge the Planning Commission to deny this application.

Benton County has a number of official initiatives dedicated to **assessing the wildfire risks associated with wildland-urban interface areas and identifying strategies to reduce those risks – most notably**, the Benton County Vision for Wildfire Management and the Community Wildfire Protection Plan. Oregon State Law places a significant focus on Wildland-Urban Interface areas that have **“sufficient fuels (including combustible fuels and infrastructure) to generate a conflagration.”**

**Unfortunately, there is a Garbage-Truck-Sized Hole in Benton County's vision for managing wildfires.** The Community Wildfire Protection Plan inventories the high voltage powerlines in this region, but somehow misses the fact that there's a **methane-belching landfill** in the Northern Forest Area **that has a documented pattern of landfill equipment and working face fires.**

**In my written testimony, I have an email transcript that shows that Coffin Butte Landfill was INTENTIONALLY LEFT OUT of the Community Wildfire Protection Plan – because staff didn't understand what the fire risks were.**

**Benton County cannot afford to make a decision to expand the landfill without a full understanding of the fire risks associated with landfills.**

**The current landfill is an immense Flammable Target for airborne embers from nearby fires and a Source of airborne embers that will only get bigger if the expansion is approved. The risk and threat of fire cannot be minimized or dismissed. In my written testimony, I provide more details about landfill fires and local fires in the last two years.**

**Any operations plan for Coffin Butte Landfill put forth by the applicant can't erase the enhanced fire risk in our region.**

**The flammable, explosive nature of the landfill's gas plumes and the toxic consequences of any fire there creates a dangerous scenario for a devastating, irrevocable change to the character of our area.**

**A sizable fire at the landfill would put undue burden on fire and emergency management services, and on local and regional residents forced to flee the flames or the plumes of toxic smoke from a landfill fire.**

I strongly oppose Republic Services' application to expand the landfill. I urge the Planning Commission to deny this application. Thank you.

That's testimony from Carol McClelland Fields.

Commissioners,

I want to take you back in time, to less than a year ago, when the EPA Air Enforcement Officer for this Region arrived with her team at the dump, to continue the EPA's investigation of Coffin Butte Landfill. She reports: *There's a strong landfill odor. The landfill operators assure me that all systems show normal.*

So now the inspectors walk out onto the landfill at random and find – leak after leak. They are finding a reportable leak once every three minutes on average. For an hour. And then they come across a landfill gas well that's just completely uncapped. It's beyond leaking, it's just venting landfill gas straight into the atmosphere.

How long has that well been uncapped?  
Unknown, All systems are normal. How many other wells are like this? Unknown. All systems are normal. How much gas is coming out? The Air Enforcement Officer measures it at 12% methane – which is 240 times the limit.

I think our main takeaway here is that the dump operators were correct. Their gas collection system was operating normally. It's normal for Coffin Butte Landfill to have dozens of leaks and at least one that's super-emitting. Every independent survey of the dump shows this. No reason to expect the expansion will be any different.



The volume of these landfill gas emissions drive many serious problems at the dump – most notably: odor, climate damage, toxics pollution and fire. I’m going to talk about the first three of these, but remember, these are like ~~three~~<sup>the</sup> heads on the same multi-headed dragon, that dragon being, landfill gas.

Odor. The applicant’s odor report uses an “industry standard” to estimate how much landfill gas is leaking out for people to smell. It doesn’t use a figure specific to Coffin Butte Landfill. So, needless to say I hope, this odor report is invalid. They’re not grounding this study on the volume of gas actually leaking out of the dump, they’re using some industry average instead.

For obvious reasons, I would say. In response to community complaints, the EPA inspected the dump in 2022, and found over 60 leaks, four at explosive levels. And then an EPA Air Enforcement team returned in 2024, as I told you; they found 41 leaks, three at explosive levels, plus that uncapped well. EPA Air Enforcement then served an EPA Clean Air Act Section 114 process on the dump in early 2025. These aren't things that happen to your "average" landfill.

The applicant's odor model doesn't account for any of this. It also doesn't account for the landfill expansion's increase in the dump's total surface area, 35% more, which would lead to a proportional increase in gas emissions from leaks, nor the expansion's increase in intake volumes, 68% more, which would likewise lead to a proportional increase in landfill gas generation.

For all these reasons, I suggest the applicant has failed their Burden of Proof for odor.

Likewise for methane pollution. Climate damage. As you know, methane is a pernicious greenhouse gas and as we've seen, Coffin Butte Landfill leaks a lot of it and is going to leak more. Climate damage meets your review criteria in many ways, but I'll focus on one: by reducing the disaster assistance service available to the area.

As you know, climate damage is accelerating the number and severity of disasters nationally, draining disaster response resources. And the people who are losing out are the people in rural areas.



We're seeing this happen already with the LA fires. People in major metro areas get disaster assistance, people outside metro areas don't.

So, the climate damage from landfill gas is increasing the risk of disaster in our area, and by also increasing the incidence of disaster nationally, it's also decreasing our likelihood of getting help when we need it. This disparity will only accelerate as climate shifts get more extreme and disaster funds get exhausted.

Let's move on to toxics damage. When I smell the landfill, what is it that I'm smelling? What's in landfill gas? Too many things even to list, it turns out, some pretty evil stuff, so again I'll focus on just one, one we all know by now: PFAS.

*study in  
Florida -  
I will get  
the Commission  
that reference*

Studies show that these “forever chemicals” get airborne and escape the dump in landfill gas. They’re not destroyed by burning – they’re called “forever” for a reason – so they’re coming out of the stack at the power plant, at the flare, and of course out of leaks or gas wells that are left uncapped.

This PFAS is steadily accumulating in the surrounding environment. Which really drags down the character of our area. And torpedoed the idea that the dump will someday export landfill gas into the natural gas system – I mean, no one wants PFAS delivered straight into their home.

Odor, methane, toxics – Republic’s burden of proof fails in all of these, and all of them go against the character of the area.

Speaking of “character” – Commissioners, I think the word “character” is being tortured in the application. The application would have you believe there’s a “visual character” which is a small area around the landfill. And the “odor character” is 90 square miles. The “methane character” is *we haven’t been fined*. And so on. These are all snapshots: they have no past, and no future.

Commissioners, that’s no one’s idea of “character.” Character is one thing, not separate things, and it’s built over time, it’s not a snapshot. The character of an area is the understanding that people acquire about that area, through all their experiences of it. And it’s more than its physical forms. Character is first and foremost a social value. I’m a writer professionally, so I’ve thought about character A LOT.



By “social value,” I mean there are things that are “in character,” and things that are not. You bike down Soap Creek Road and you see farms and trees and people’s rural houses. There are horses in a pasture. Here’s a vineyard. Somebody waves at you, you wave back. You can ride like that for forty miles. That’s character.

And when you continue on and see trash piled along the road, you think, *that doesn’t belong here*. And when you see a mountain of garbage draped in tattered plastic, you say, *that doesn’t belong here either*. And when you’re biking through EE Wilson and you smell that chemically smell, you say, *that’s wrong. That’s out of character*.

Or, rather, you say I hope that's out of character. We need to do something about these wrong things. We need to have less of them. Or else they will become the new character of this area. And what Republic is proposing in this expansion application, is not to have less of those wrong things, but more. Roughly 50% percent more, in fact, year by year. And for longer.

Commissioners, you live here. You know the character of this area. Which is why the law has chosen you to make the decisions you do about land, and given you the word “character” to base your decisions on, and the word “discretion” to support what you decide. These are your words, don't let them be tortured. Set them free.

A word about Conditions of Approval. Commissioner Biscoe has expressed that Conditions of Approval on the dump have never been enforced, and you all heard for yourselves that there's no enforcement mechanism in place and none contemplated. I can assure you this is true. I'm speaking now from my experience as past Chair of the county Disposal Site Advisory Committee.

The reality is, Commissioners, you have only a clean decision before you: Approve, or Deny. Nothing in the middle. Anything in the middle continues the status quo, which poses an undue burden upon the community. Anything in the middle is saying that we are the sheriff of this lawless town but with no badge and no gun.

Your criteria enjoin you from Approving an application that imposes an undue burden, so if you feel the application must have Conditions, you should properly and promptly vote Deny.

You know, I ballparked how much it's cost the community to resist Republic's attempts to expand the landfill so far. Volunteers have put in about **one point two** million dollars' worth of time. In case you were wondering how undue that burden has been so far.

Getting close to the end. I have just one more thing. I want to speak up for the land. That 59 acres.



Right now it's a few industrial buildings but mostly wild woods on shady slopes. There's nothing wrong with it. The herons love it. Take away the open trash heaps which bring too many eagles, and our "species of concern" will be back in their rookeries raising chicks.

It just seems incredible to me that because a company would like to despoil this bit of land for their profit, that such a thing could happen. I kinda thought we were past the days of robber barons and strip-mining.

It just seems incredible to me that someone can look at this piece of land and say, "you know what your community needs? For us to dig a 150-foot deep hole here and fill it with other people's garbage until it's higher than the hills." Which is what it will be, and how it will be, permanently. Forever and ever, amen.



Of course, we are past the days of robber barons and strip-mining. We have two things now that weren't present then. One, we have the knowledge of how these things turn out. We can remember. There is no Peabody Coal Company anymore, once it was huge. The only thing left of it now are the folk songs about how it "tortured the timber and ruined the land."

The other thing we have now is, we have a Planning Commission. People from here who can look at the evidence and decide what's truly best for our community. Who can do what's best for the land. Who can listen to what the land says about character.

Thank you for your attention. Deny this application. I'm happy to answer any questions.