

City of Galena Landfill – Permit #738

Subsurface Landfill Fire Action Plan

Prepared by: Jordan Disposal LLC

Date: March 25, 2026

1. Purpose

This Action Plan outlines the procedures, controls, and safety measures to identify, excavate, extinguish, and monitor a subsurface landfill fire located at the City of Galena C&D Landfill.

2. Background

- A subsurface fire was identified on **March 5, 2026** during excavation for installation of a trial gas venting system.
- Evidence included:
 - Charred material approximately **3 ft below surface**
 - Detectable heat
 - Odor consistent with combustion
- Site visits:
 - **KDHE:** March 10, 2026
 - **EPA:** March 11–12, 2026
- Location:
 - West side of landfill
 - Approx. **100–200 yards west of active face**
 - Area previously filled approximately **2–3 years ago**

3. Objectives

- Fully extinguish all smoldering and heat-generating material
- Prevent fire spread or flare-up due to oxygen exposure
- Minimize odor impacts to surrounding community
- Maintain compliance with KDHE directives
- Establish ongoing monitoring to prevent recurrence

4. Scope of Work

- Estimated remaining effort: **~40 machine hours**
- Estimated duration: **~5 working days** (weather-dependent)
- Work will be completed in **phases aligned with south wind conditions**

5. Excavation & Extinguishment Methodology

5.1 Excavation Approach

- Continue excavation toward **east (toward heat source core)**
- Backfill completed areas to the **west side of excavation**
- Work conducted in **controlled strips / isolated cells**
 - Allows same-day:
 - Excavation
 - Extinguishment
 - Reburial

5.2 Fire Suppression Process

1. Identify **veins of charred or heated material**
2. Excavate material carefully to limit oxygen introduction
3. Spread material adjacent to excavation zone
4. Apply water using water truck
5. Mechanically mix with soil until:
 - No visible smoke
 - No heat remains
6. Confirm extinguishment before reburial

5.3 Water Management

- **No direct flooding of excavation pit**
- Water applied **only to excavated material**
- Prevents:
 - Leachate issues
 - Steam-driven fire spread

6. Backfilling & Final Cover

- Extinguished material placed in **west side of excavation**
- Covered with:
 - Intermediate cover soil
 - Final **clay cap seal layer**
- Where possible and practical, daily closure of active work zones required

7. Equipment & Resources

- Large excavator
- Dozer
- Water truck
- Dirt stockpiles staged for:
 - Backfill
 - Emergency smothering berms

Operations pause during water truck refilling

8. Environmental & Operational Controls

8.1 Wind Restrictions (KDHE Requirement)

Work may only proceed when:

- Wind direction: **S, SSE, or SSW**
- Wind speed: **5–20 mph (preferred)**

8.2 Work Stop Conditions

Operations will immediately stop if:

- Wind shifts to **N, NE, or NW**
- Wind speed drops below **~3 mph**
- Wind exceeds **25 mph**

8.3 Odor Control

- Work conducted only under conditions that carry odors **away from Galena**
- Daily work zones minimized to reduce exposed waste

9. Health & Safety Plan

9.1 H₂S Monitoring

All personnel equipped with:

- Personal **H₂S gas monitors with audible alarms**

9.2 Exposure Limit (NIOSH-Based)

- Maximum exposure: **10 ppm (10-minute ceiling limit)**
- If ≥ 10 ppm:
 - Immediate evacuation required
- No time-weighted averaging permitted

9.3 Work Positioning

- Operators remain **upwind of excavation area where possible**

9.4 Fire Risk Controls

- Avoid mass excavation (limits oxygen introduction)
- Berms constructed around site
- Soil staged for emergency smothering

10. Work Phasing Strategy

Due to:

- Wind restrictions
- Increased seasonal landfill activity

Work will be completed in **phases**, targeting:

- One controlled section per approved weather window
- Completion of excavation + extinguishment + closure in same day where possible

11. Monitoring & Verification

11.1 During Operations

- Continuous visual monitoring for:
 - Smoke
 - Heat
 - Odor
- Daily documentation:
 - Photos
 - Weather conditions
 - Work logs

11.2 Post-Completion Monitoring

- Weekly inspections including:
 - Surface temperature checks
 - Settlement observation
 - Crack formation tracking

11.3 Re-Activation Trigger

If any of the following occur:

- Elevated temperatures
- Settlement/depression
- Surface cracking

The excavation and extinguishment plan will be **re-implemented immediately**

12. Reporting & Communication

- KDHE will be notified:
 - Upon completion of work
 - If total effort exceeds estimated **40 hours**
- Daily logs maintained for:
 - Operations
 - Weather
 - Safety conditions

13. Contingency Measures

- Immediate shutdown under unsafe wind conditions
- Emergency soil cover available for flare-up
- Controlled excavation sequencing to prevent fire escalation

14. Current Status

- Approximately **50% of affected area excavated**
- Fire believed to be approaching **core heat source**
- Operations ongoing under controlled methodology

From: [Joseph Hacker \[KDHE\]](#)
To: [Mads Gisselbaek](#)
Cc: [Walter Mack \[KDHE\]](#); [Doug Cole \[KDHE\]](#); [Heather Merritt \[KDHE\]](#); [Maria Ianc \[KDHE\]](#); [Charles Bowers \[KDHE\]](#); [Joseph Akomolafe \[KDHE\]](#); [Michelle Murphy](#)
Bcc: t.roberts@galenaks.gov
Subject: RE: Fire action plan
Date: Thursday, March 26, 2026 10:59:00 AM
Attachments: [image002.png](#)
[image003.png](#)

Mads,

Thank you for the submitted Subsurface Landfill Fire Action Plan. The changes have addressed our comments. This action plan is approved, and I am adding it to your permit file.

Please keep us informed on the progress of the smoldering and excavation. I'll be in contact with you and Michelle soon to plan another site visit.

Thank you.

Joseph Hacker, PE
Environmental Engineer, Unit Supervisor; Solid Waste Landfills
Bureau of Waste Management, KDHE
Kansas Department of Health and Environment
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(785) 291-3746
Joseph.Hacker@ks.gov



From: Mads Gisselbaek <mads@jordandisposal.com>
Sent: Wednesday, March 25, 2026 1:00 PM
To: Joseph Hacker [KDHE] <Joseph.Hacker@ks.gov>
Cc: Walter Mack [KDHE] <Walter.Mack@ks.gov>; Doug Cole [KDHE] <Doug.Cole@ks.gov>; Heather Merritt [KDHE] <Heather.Merritt@ks.gov>; Maria Ianc [KDHE] <Maria.Ianc@ks.gov>; Charles Bowers [KDHE] <Charles.Bowers@ks.gov>; Joseph Akomolafe [KDHE] <Joseph.Akomolafe@ks.gov>; Michelle Murphy <Michelle@jordandisposal.com>
Subject: Re: Fire action plan

EXTERNAL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Please see attached updated fire action plan.

Last week we completed another portion of the excavation and refilled the western part of pit excavated with the 'treated' and extinguished debris that was excavated, soaked and mixed with dirt. This process moving forward will limit the area exposed at any time, as well as allow us to work in smaller sections to be able to excavate, treat, and re-bury in sections to allow stopping for weather or wind change.

Let me know if you have any further comments or requirements,

Kind regards

Mads

[per the City Attorney instruction Feb 3rd 2026, not to communicate directly with any City Personnel, the City of Galena are not copied on this email]

Mads Gisselbaek

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On Mar 23, 2026, at 1:36 PM, Joseph Hacker [KDHE] <Joseph.Hacker@ks.gov> wrote:

Mads,

We have reviewed the draft landfill fire action plan and had the following comments:

- Please make the following corrections:
 - KDHE was on site on March 10th and EPA was there on March 11th-12th
 - The plan states that the fire is 1000 yards to the west of the active face of the landfill. I assume this is a typo, as it was closer to 100 yards.
 - The plan should overtly spell out that the fire will be extinguished until all the smoldering, smoking, and burning ceases, in order to match the following statement from their current FOP

a. In the case of a confined fire, the landfill crew will extinguish the fire using fire extinguishers. For larger fires, the City of Galena volunteer fire department is to be notified. Fire fighting is to continue until all smoldering, smoking, and burning ceases. If a fire occurs, KDHE is to be notified within one working day, and a written report regarding the fire is to be sent to KDHE within one week.

- For clarity, use the term “south wind” instead of “southerly”
- Establish a maximum time-weighted exposure limit of H2S for employees. Example: NIOSH recommends a 10-minute ceiling limit of 10ppm.
- The plan estimated 40 hours of machine time to complete the project. If after this 40 hours the work is not nearing completion, the work may continue but Jordan Disposal must notify KDHE-BWM and update us of the current progress within one business day.

Please make these corrections and resubmit the draft landfill fire action plan.

How is the progress on finding the source of the smoldering going? Are you seeing any changes?

Thank you for the update.

Joseph Hacker, PE

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From: Mads Gisselbaek <mads@jordandisposal.com>
Sent: Tuesday, March 17, 2026 9:31 PM
To: Heather Merritt [KDHE] <Heather.Merritt@ks.gov>
Cc: Michelle Murphy <Michelle@jordandisposal.com>
Subject: Fire action plan

EXTERNAL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Dear Heather,

Please see attached a draft action plan - if you have any comments, concerns or wish any changes be made please let me know,

Kind regards

Mads

Mads Gisselbaek

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