

December 11, 2025

Luke LeMond
Site Manager
Solid Waste Program
State of Washington Dept. of Ecology
Central Regional Office
1250 West Alder St.
Union Gap, WA 98903-0009

Re: DTG Yakima – Agreed Order No. DE 21624 – Monthly Progress Letter – November

Dear Mr. LeMond:

In accordance with Section 7.3 of Agreed Order (AO) No. DE 21624, the following is a description of the actions taken during November 2025 to implement the requirements of this AO.

Activities:

On-site activities included weekly gas probe and every other week ambient monitoring. A regulatory review meeting was held on November 12, 2025. The monitoring data summary through November 2025 from Landfill Fire Control, Inc. (LFCI) is attached.

Parametrix, Inc. (Parametrix) progressed the Q3 groundwater report and the Q3 MTCA Technical Memorandum (TM).

Parametrix progressed the Thermistor/Well Installation TM.

On November 7, 2025, DTG provided a letter response to Ecology's proposed Interim Action.

On November 17, 2025, Ecology provided DTG a letter proposing a schedule for Interim Action next steps.

On, November 18, 2025, DTG perform a cover soil review in the MTCA area. The results of the review are included after the LFCI summary.

Deviations from Plans (if any):

The LFCI summary identifies concern for increased oxygen levels in the fill. This may be due to the thermistor installations and cut road access. There have been no observed cracking or surface deterioration.

Deviations Description from the Scope of Work and Schedule:

None.

All Data Received or Collected:

Ambient and gas probe data for gases and temperature were emailed, separately, to Ecology weekly after measurements were taken. Gas probe data was entered into the tracking spreadsheets and assessed by LFCI. The summary of the data has been included as an attachment.

Deliverables for the Upcoming Month:

Address

22745 29th Dr. SE, Ste 200,
Bothell, WA 98021

Contact

425 549 3000
dtgrecycle.com

Deliverables will include:

- Weekly ambient and gas probe data
- December Progress Report
- Thermistor/Well Installation TM
- Q3 MTCA TM
- Q3 Groundwater Report

Please contact me to discuss any of the above items.

Respectfully,



Ian Sutton
Sr. Director of Engineering
DTG Recycling
isutton@dtgrecycle.com

Enclosures: LFCI Data Update – November 2025

cc: mbrady@parametrix.com
steven.newchurch@co.yakima.wa.us



Providing a full range of landfill fire control and prevention services.

- Fire Safety Training
- Fire Safety Audits
- Fire Prevention and Response Plans
- Fire Extinguishment Strategies
- Fire Extinguishment Services
- Fire Monitoring
- Environmental Monitoring
- Forensic Investigations

December 10th, 2025

LFCIPRJ-2023-001

Mr. Ian Sutton, Director of Engineering
DTG Recycle
P.O. Box 14302 Mill Creek, WA 98082

By email: isutton@dtgrecycle.com

Re: Monthly Data Assessment Report DTG Yakima Landfill Fire Incident – November 2025

Dear Mr. Sutton,

LFCI has prepared a monthly review and update of gas and temperature monitoring data that is being collected at the DTG Recycle Landfill Fire in Yakima, Washington. The update includes maps showing the spatial distribution of temperature, carbon monoxide, and oxygen within the monitoring area and presents the data collected, highlighting trends and interpreting the results.

Following the continued slow signs of suppression observed in the past several months and a levelling trend observed in 2025, the month of November has exhibited this continued response even with the new thermistors that have been installed. Overall, CO and temperatures have been relatively stable or decreasing over the past month. Temperature in T-1 and GP-3 has continued the decreasing trend, but the newly installed T-4 has continued to indicate increased temperatures.

The elevated temperatures in T-4 are isolated from the other elevated areas although the temperatures are very similar. LFCI believes that this may have been a secondary hotspot when the fire was first detected, but the temperatures are following the same trends as GP-3 and T-1. This will continue to be closely monitored to confirm that this is not an active subsurface fire that needs additional cover.

When continuing to look at long term trends, the collected data has indicated that the subsurface smolder has become much less active since the soil cover was applied. A concern has been recognized with oxygen levels increasing throughout the past few months to highest levels observed to date in many wells (see spatial maps of O₂). November saw a drastic atmospheric pressure decrease followed by a drastic increase which may have forced more ambient air into the landfill. While LFCI was concerned that cover integrity may have been impacted by desiccation cracking, new road construction work and/or settlement induced stress cracking, inspections by Ian Sutton of DTG conducted on November 18th, 2025 has confirmed that the cover material is still intact, without cracking or serious erosion. Mr. Sutton agreed with LFCI's recommendation that soil cover that was excavated during construction of the access road for establishing the new monitors be enhanced. His report is appended.

Further to this, LFCI has noted a seasonal trend in oxygen levels, with elevated oxygen levels occurring in summer months and lower oxygen levels in winter months. It was previously

LANDFILL FIRE CONTROL INC.

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www.landfillfire.com



speculated that these trends were correlated with atmospheric pressure swings; however, as the highest oxygen levels are being observed in the summer months when average atmospheric pressures are low, and short term pressure swings are less intense, it is now believed that the reduced oxygen levels are more likely the result of frozen ground conditions and snow cover which inhibits air entry into the landfill in the winter months. This means that LFCI expects the winter months ahead to show decreased oxygen levels within the waste mass, which may be accompanied by further decreased temperature and CO levels. This has been indicated in November, with more wells showing levels lower than ambient air.

Plotting the temperature data in plan view clearly shows that the area affected by fire has markedly decreased over time. As stated in previous monthly updates, LFCI believes that the data shows a small smolder continues to be active near GP-3, and that the rate of combustion of the smolder is steadily decreasing, however slowly. Based on the extinguishment target of temperature dropping below 180°F, we continue to project that the fire will be declared extinguished within the year (summer 2026). However; if the temperature response continues to level off around 300 F, additional intervention may become necessary.

Furthermore; the area around T-4 will require continued close assessment and further suppression measures may become necessary if temperatures and/or CO levels continue to climb or stay at elevated levels with no sign of decreasing.

Based on this, LFCI recommends that monitoring continue on a weekly basis until it can be shown that CO levels in all locations have decreased to below 500ppm, once corrected for cross sensitivity effects. At that time, monitoring can be decreased for prevention purposes. Given the recent response and the reduced timeline now projected to extinguishment, LFCI is of the opinion that further intervention is not warranted at this time.

We trust that this report provides the information you require, and should you need anything else please don't hesitate to contact the undersigned.

Sincerely,

LANDFILL FIRE CONTROL INC.

Dr. Tony Sperling, P.Eng.
President



December 10th, 2025

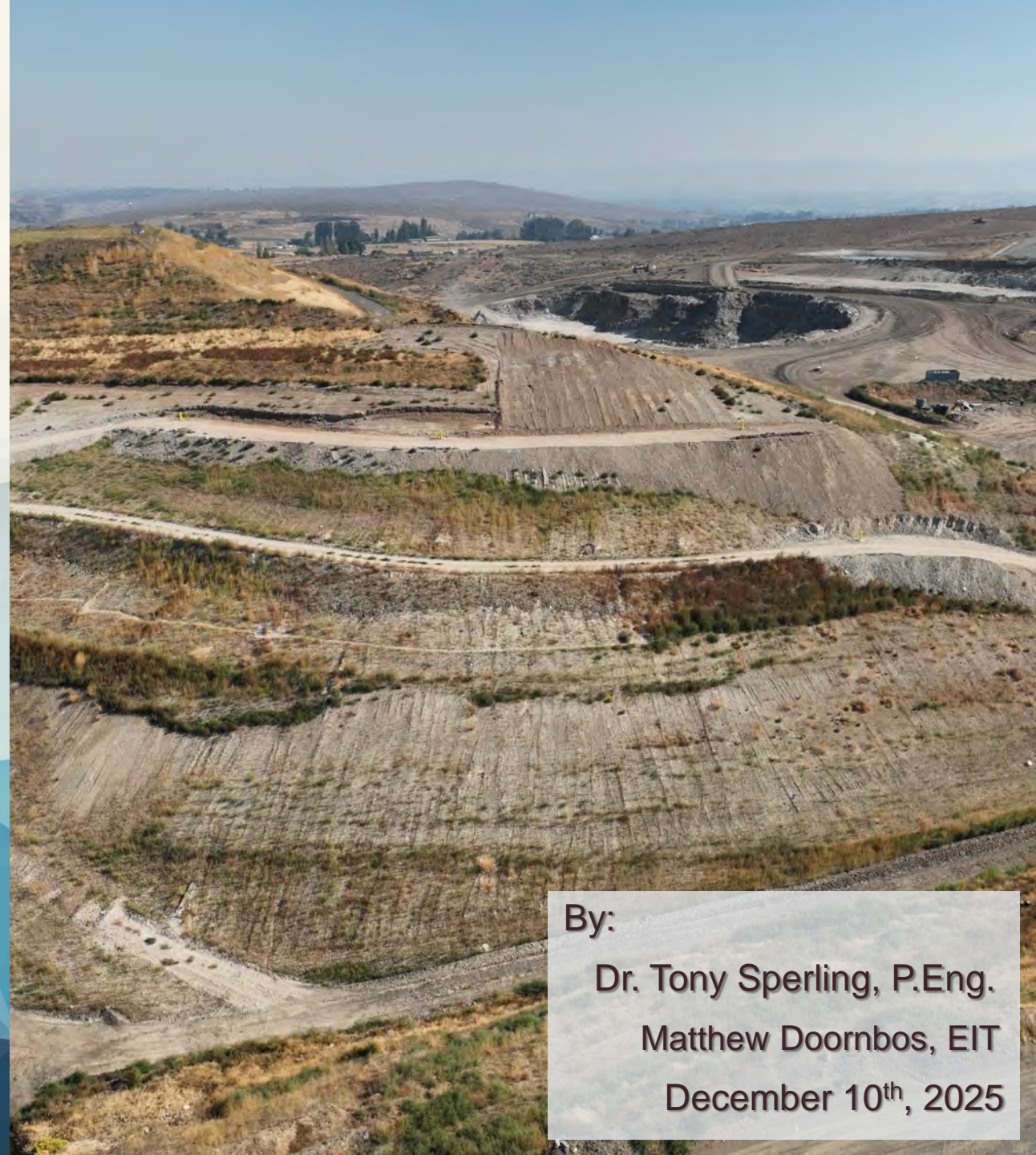
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DTG LPL LANDFILL FIRE INVESTIGATIONS AND MITIGATION

Monthly Monitoring Data Review
November 2025



By:

Dr. Tony Sperling, P.Eng.

Matthew Doornbos, EIT

December 10th, 2025

Introduction

BHP Locations

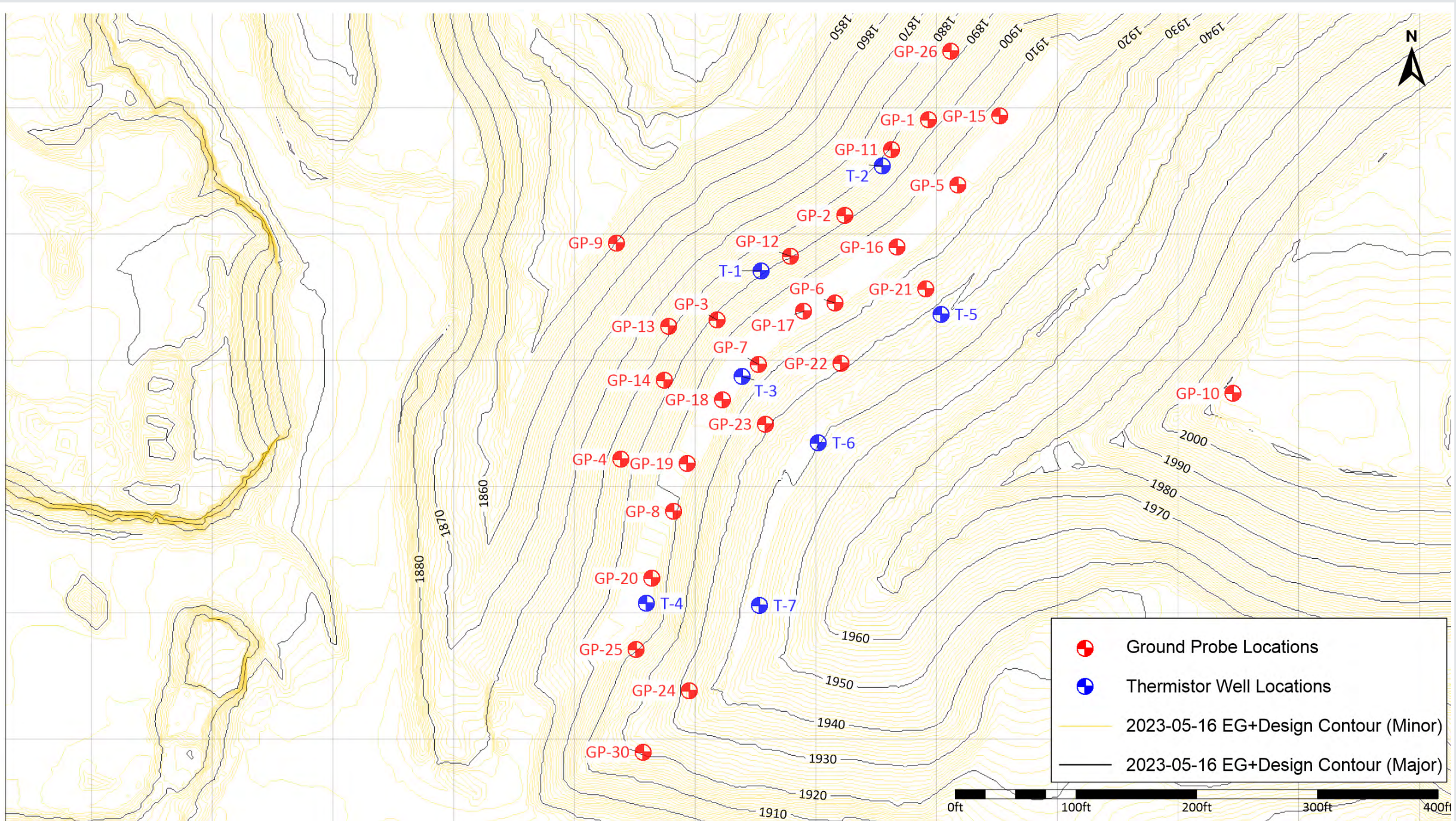
- There have been 31 Ground Probes installed, 3 of which are no longer monitored. 26 probes are monitored weekly, and 2 are monitored on a bi-weekly basis.
- Three thermistor wells were installed in mid-2023, which are monitored at varying depths to better determine the location of the hotspot.
- Four more thermistor wells were installed in mid-2025 to better determine the extent of the area with elevated temperatures as the fire comes closer to extinguishment.

Monitoring Data Review

- The monitoring locations are measured for levels of gas that would indicate a fire or increased thermal activity, including Carbon Monoxide, Oxygen, VOCs, Hydrogen, Hydrogen Sulfide, and Methane.
- In addition to gas levels, the temperature in each well is recorded.

Overall Interpretation





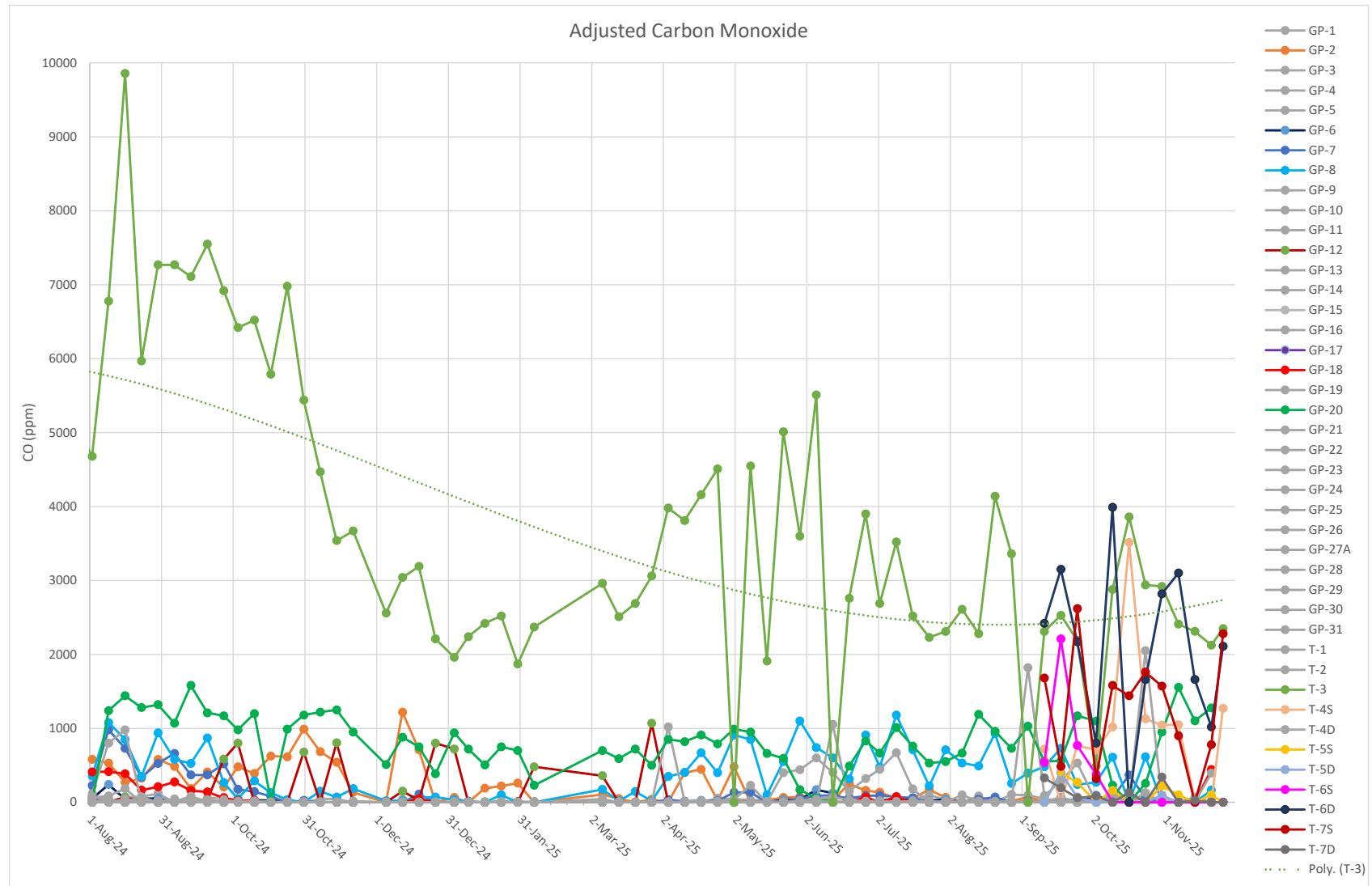
CO Adjusted for H2 Gas

Adjusted CO measurements have also shown somewhat increased but varying levels of carbon monoxide between January 2025 and early June 2025, followed by a decrease in June through August 2025. More recent measurements show adjusted CO for the highest wells around 2750ppm.

The newest thermistor wells are reading generally higher levels in the deeper readings compared to the shallower readings.

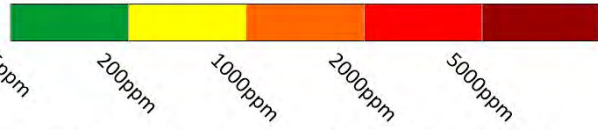
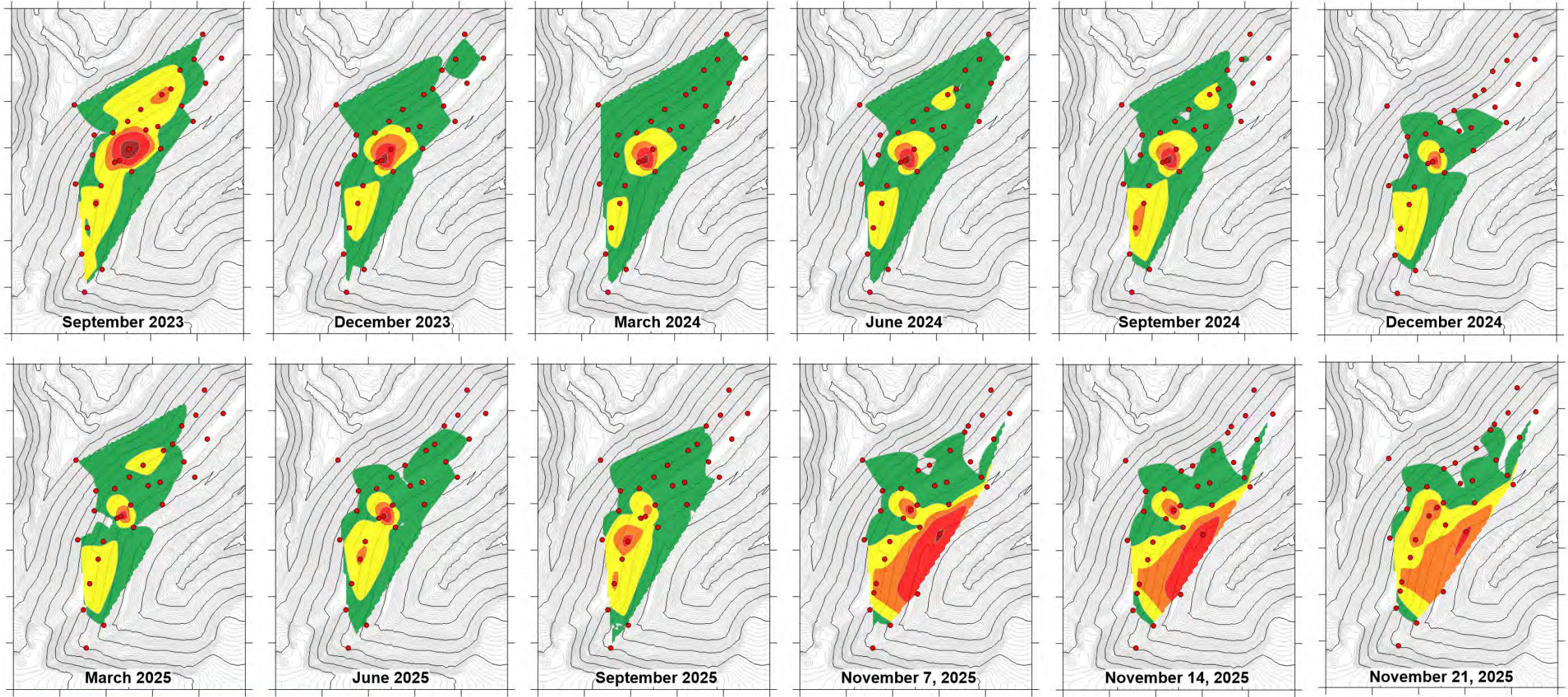
LFCI will continue to monitor the new thermistors to ensure that there are no concerning trends or elevated levels of Carbon Monoxide that might indicate a fire deeper within the waste mass.

The most recent CO heat map shows CO is generally steady across the site, but November saw decreases in the wells located higher up on the slope.



CO Levels by Individual Wells





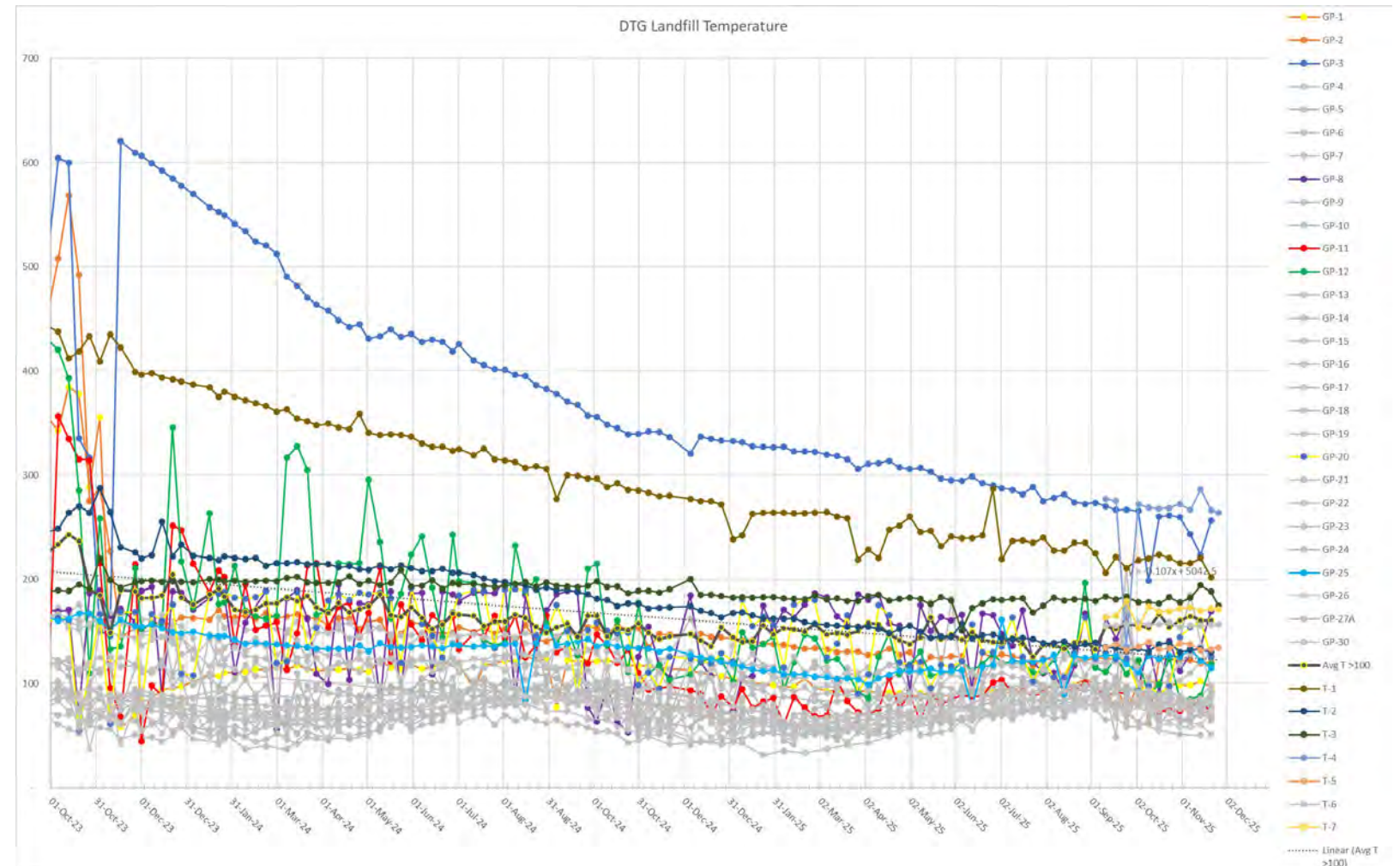
- Data taken from first monitoring event of each month unless noted otherwise
- Data has been interpolated between data points
- Datapoints (probe locations) represented in red
- CO levels are measured in ppm
- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

Temperature (F)

November saw continued decreasing temperatures in the hotter wells except for a sharp increase in GP-3 in the last monitoring event of November. This is similar to T-4 in October, which has fallen again to the previous decreasing levels.

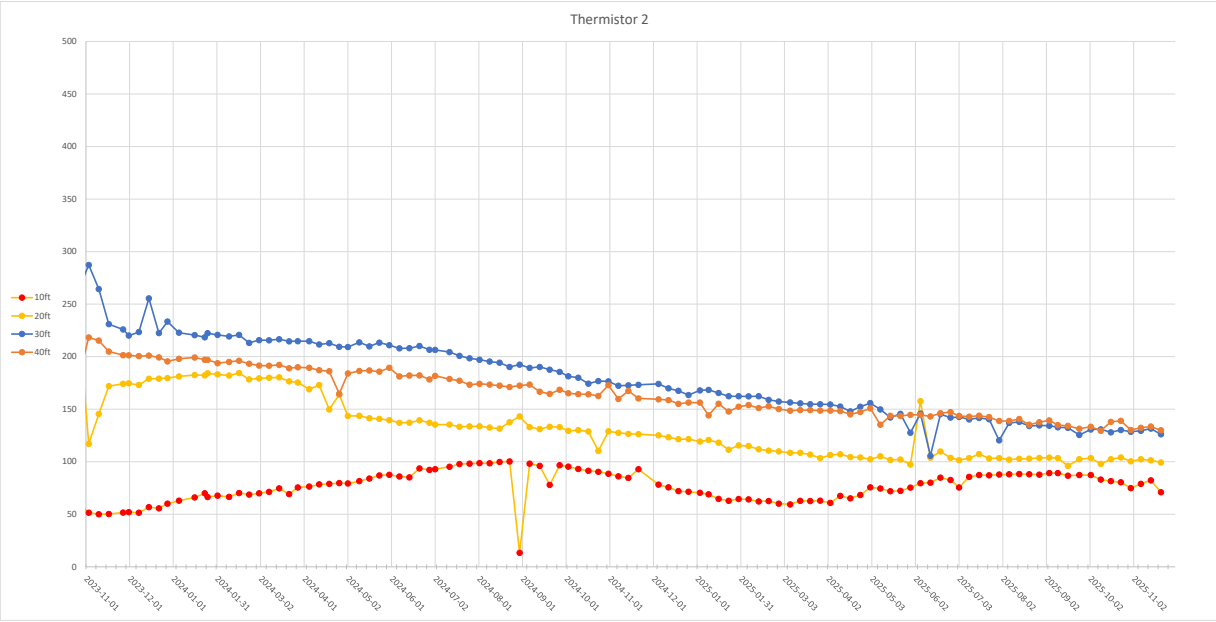
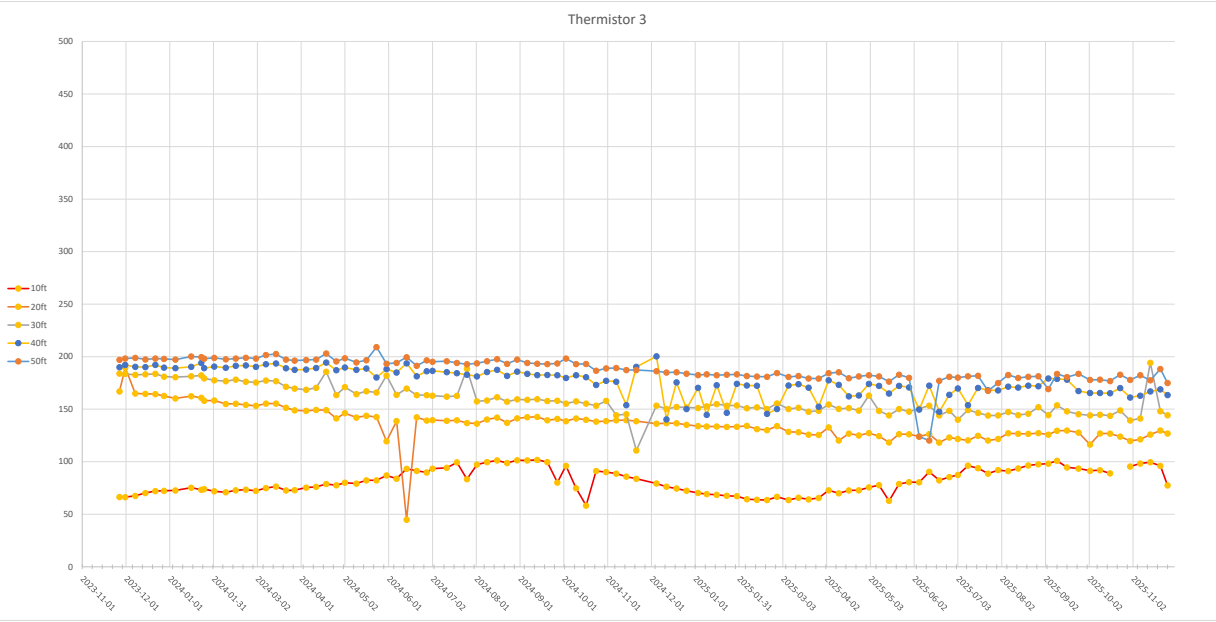
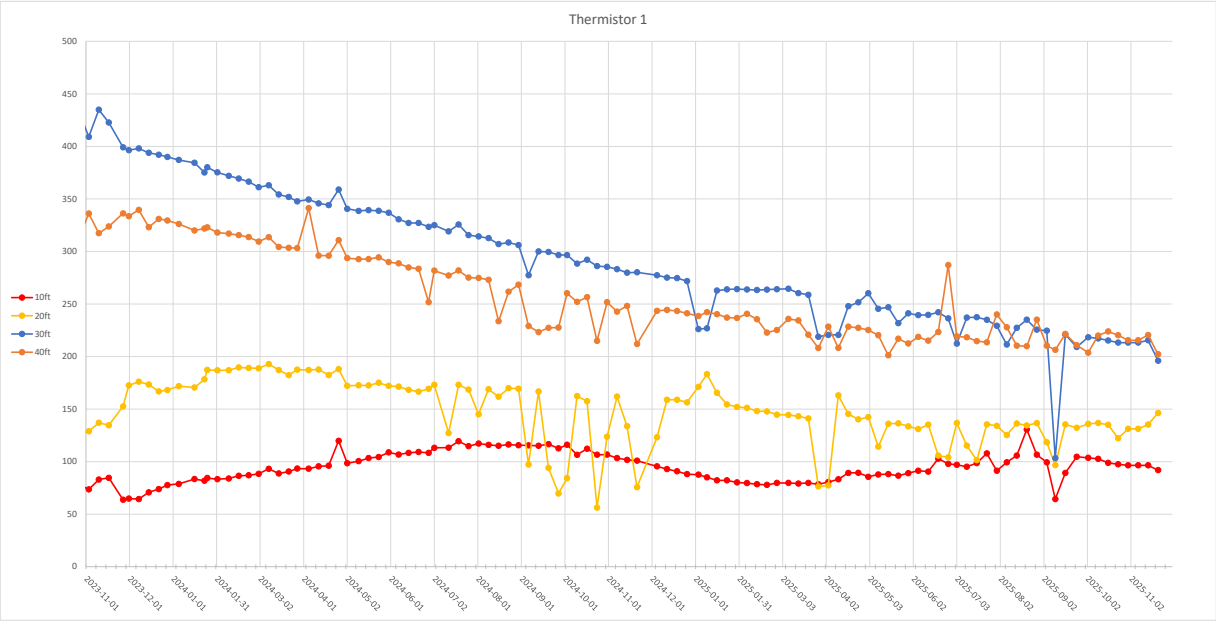
Similar to previous months, the trend line continues to show gradual cooling, with the wells reading above 100F showing some variation but seeming to be generally stable over the past month.

LFCI continues to see overall decreasing trends in the three hottest locations (GP-3, T-4, and T-1).



Thermistor Temperatures (T1-T3)

Thermistor temperatures are generally trending downward, but the rate of cooling appears to be slowing in T-1, which is the hottest well. There is a slight warming in T-3 at depth, which is believed to be on account of radiant heat effects. The shallowest well in T-3 at 10 ft. depth is showing a rapid drop in last reading, possibly due to seasonal winter weather as ambient temperatures decrease over the winter.



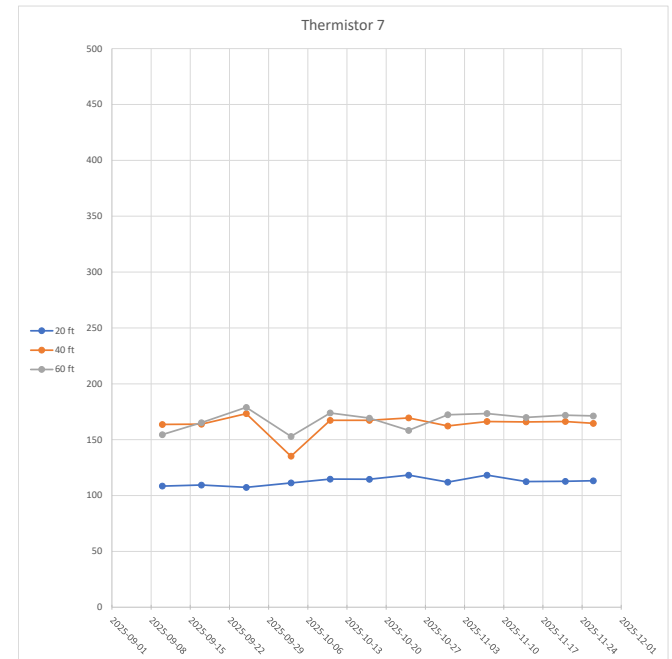
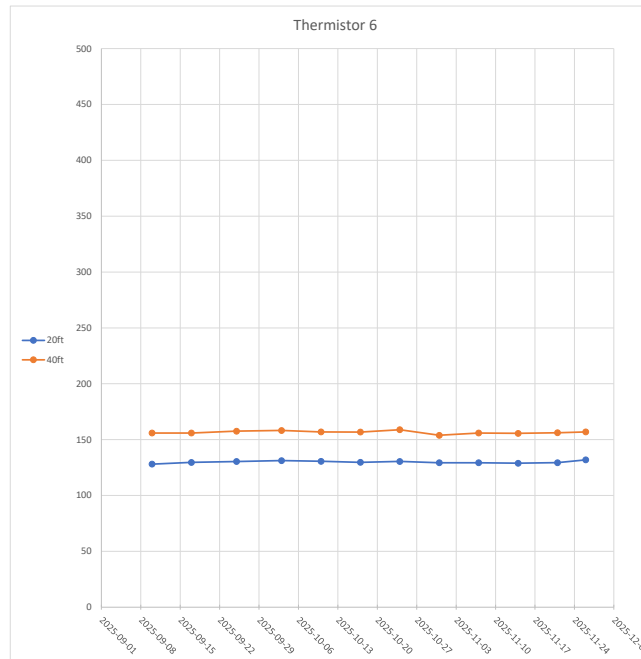
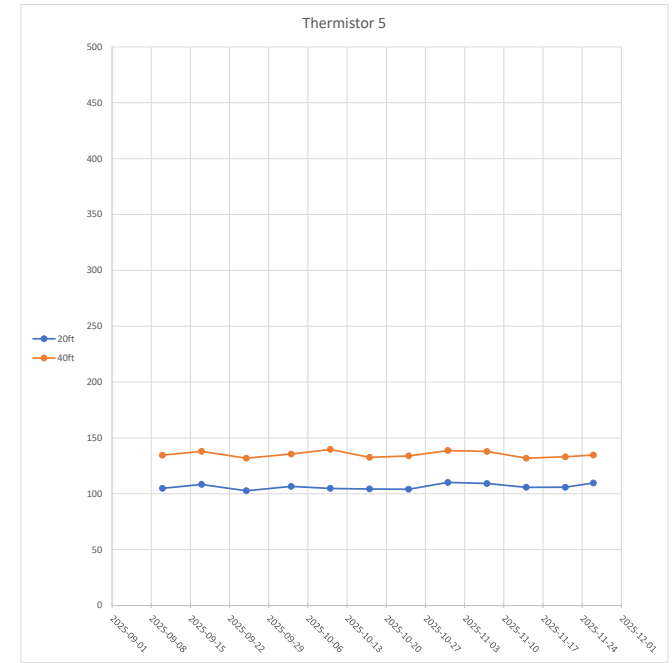
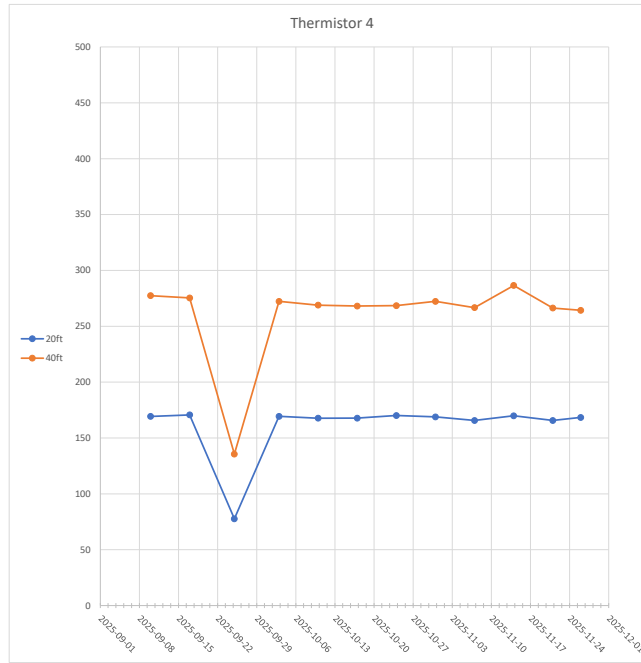
Thermistor Temperatures (T4-T7)

After three months of data, the new thermistor temperatures seem generally stable with no immediately visible trends. As time progresses and more data is available, LFCI will be able to identify any trends in the data, and make more definitive conclusions on the state of the hotspot within the landfill.

The observed temperatures in the wells of 100 to 150F are normal temperatures of aerobically active landfills and at the low end of temperatures seen across the site. However, T-4 is exhibiting elevated temperatures similar to that seen at the hotspot in GP-3. 275F is 135C, which is an abnormally high temperature indicative of nearby smoldering activity. T-4 is located in an area where a significant road cut was undertaken which may have compromised the thickness of the soil cover in that area, an area where historic venting of hot gases was previously noted. A review of the soil cover conditions by on site staff revealed that no waste was encountered during the thermistor installation efforts, but the remaining thickness of the cover was not confirmed. However, the surface of the area was inspected with an infra-red camera in November and the surface was found to be consistently around 40F with no elevated temperatures detected.

With the elevated CO readings in the area, the data suggests that the smolder in this area, which was at the edge of the soil application zone is becoming more active.

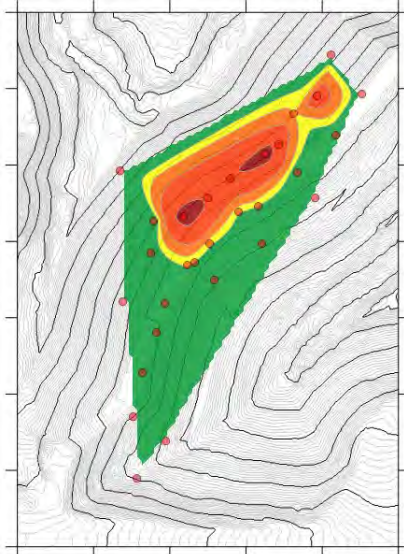
If continued increase in temperature or CO concentration continues, then expansion of the soil cover to suppress air entry will become necessary.



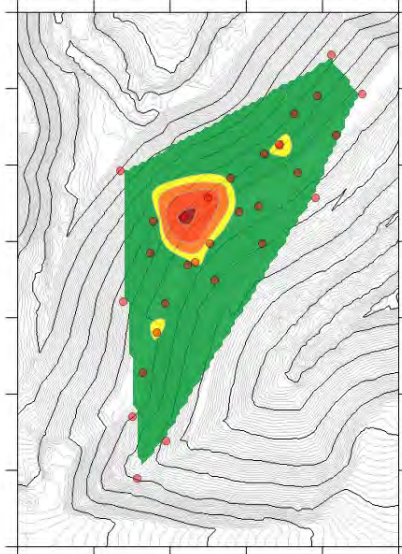
Heat Map Interpretation

The heat map shows that the main fire zone has been cooling well over time and that the smolder is being effectively contained. However, a new hot zone is developing in the southern portion of the site around T-4 and GP-20. During LFCI's initial site inspection active smoke and elevated temperatures were noted in that area. We are concerned that the road cuts recently undertaken have opened up an air intrusion pathway which has increased oxygen availability and re-initiated the smolder in that area.

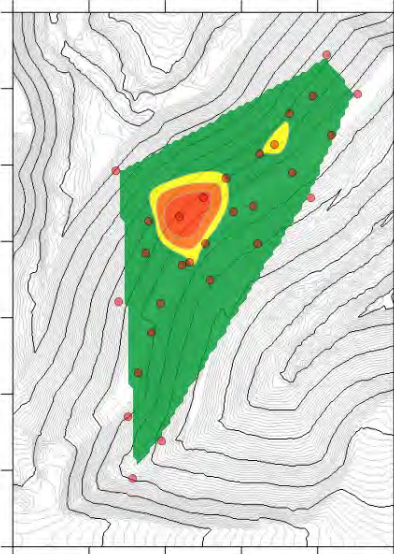
In consultation with DTG staff, LFCI recommends that additional fill be placed against the exposed slopes created during thermistor installation.



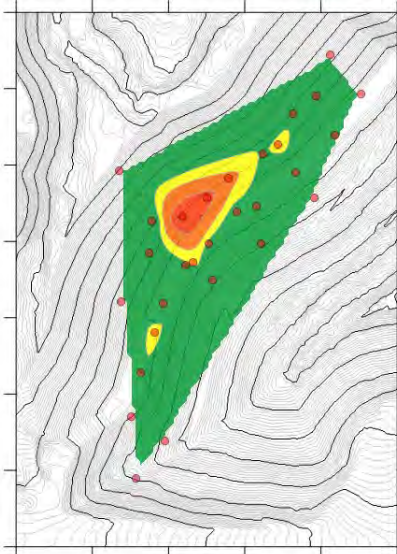
September 2023



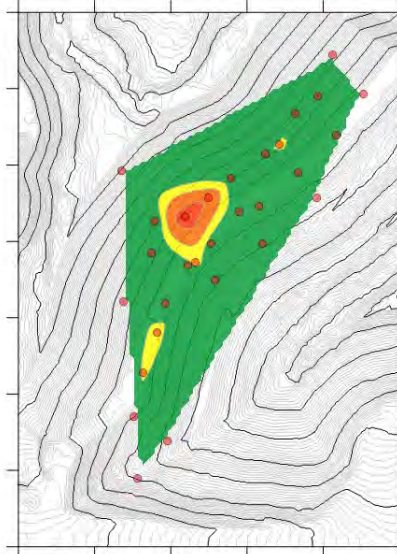
December 2023



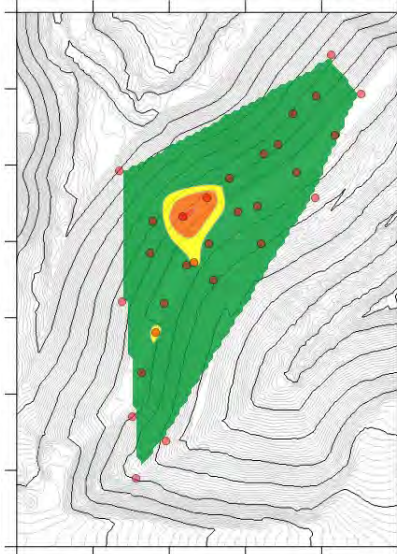
March 2024



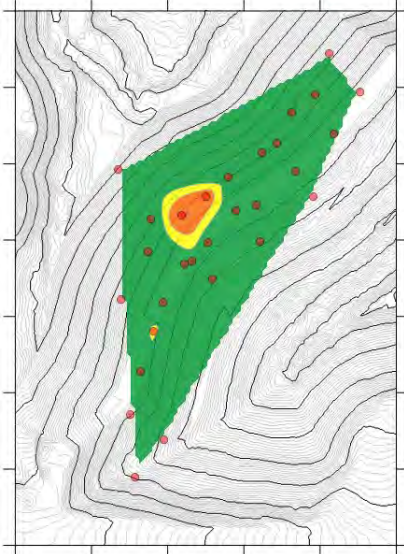
June 2024



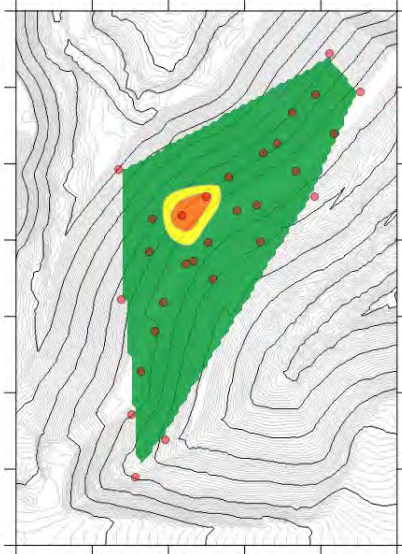
September 2024



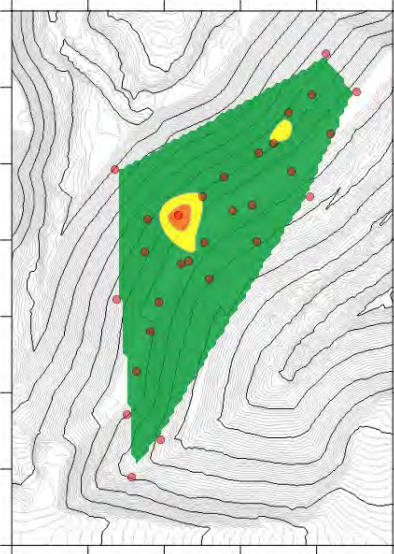
December 2024



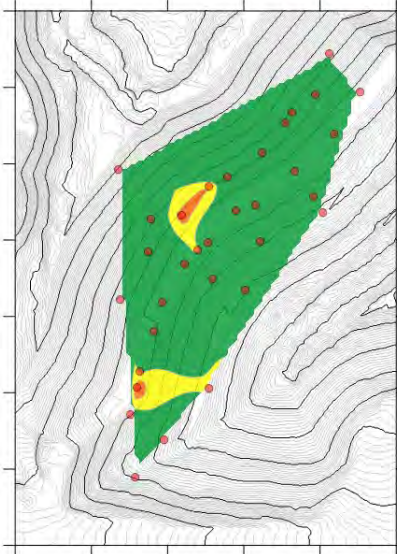
March 2025



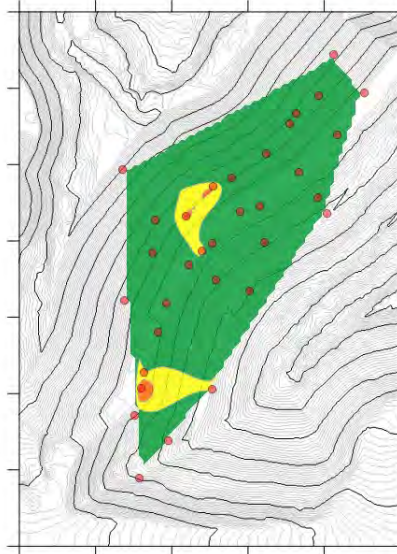
June 2025



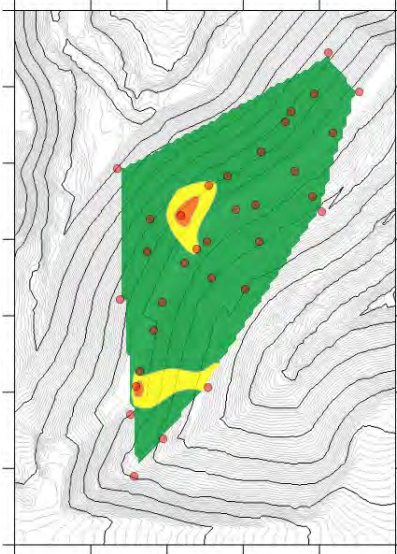
September 2025



November 7, 2025



November 14, 2025



November 21, 2025



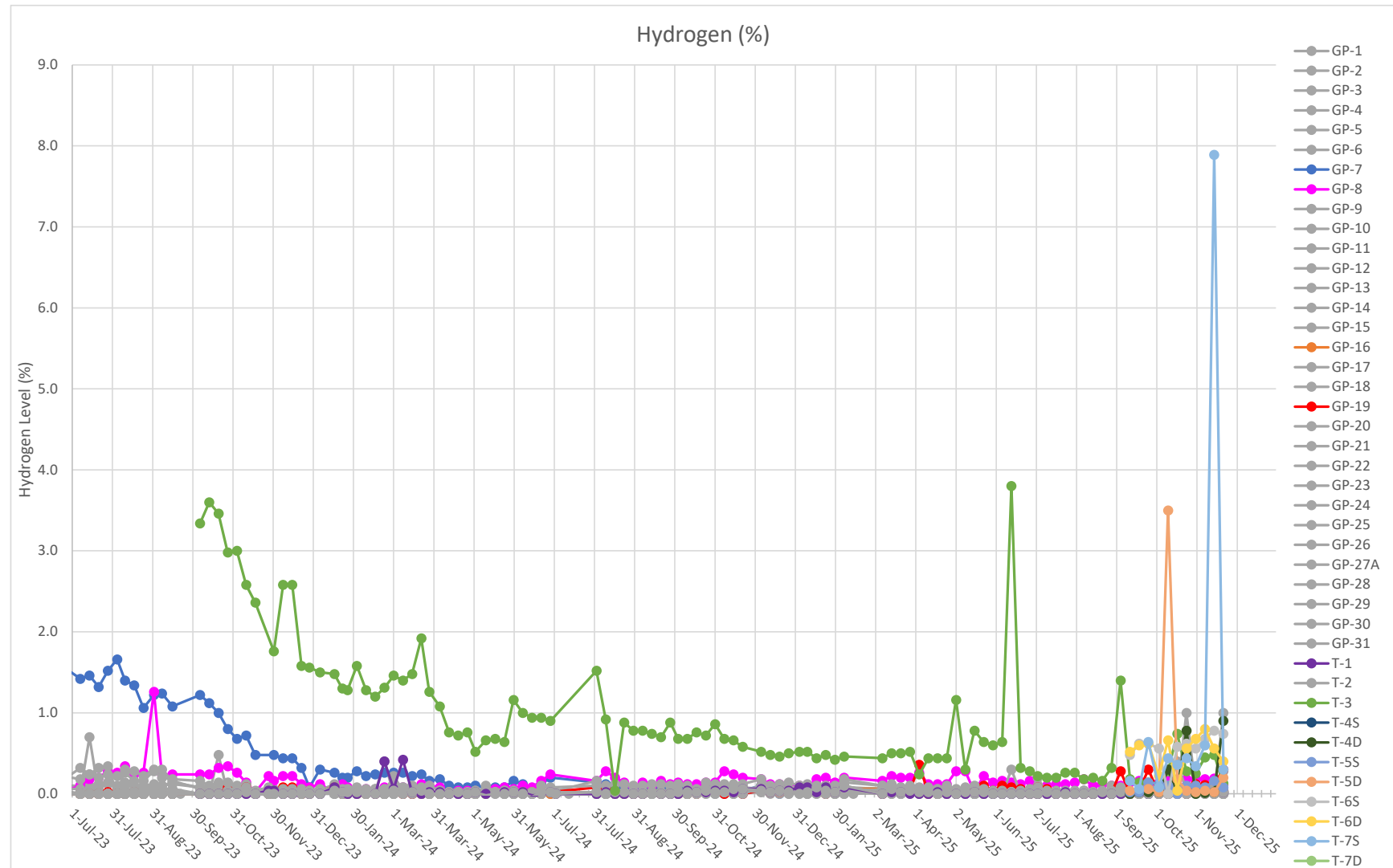
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- Data has been interpolated between data points
- Datapoints (probe locations) represented in red
- Temperatures are measured in degrees Fahrenheit
- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

Hydrogen

The hydrogen measurements in T-3 have risen slightly to 0.3% since September, but continue to exhibit overall stable trends.

The new thermistor wells have recorded varying hydrogen levels, with T-6S and T-6D exhibiting higher levels around 0.7%. As more data becomes available, it will be important to monitor these trends.

Hydrogen remains very low in all other wells except for single high monitoring point of 7.9% in T-7S on November 14.



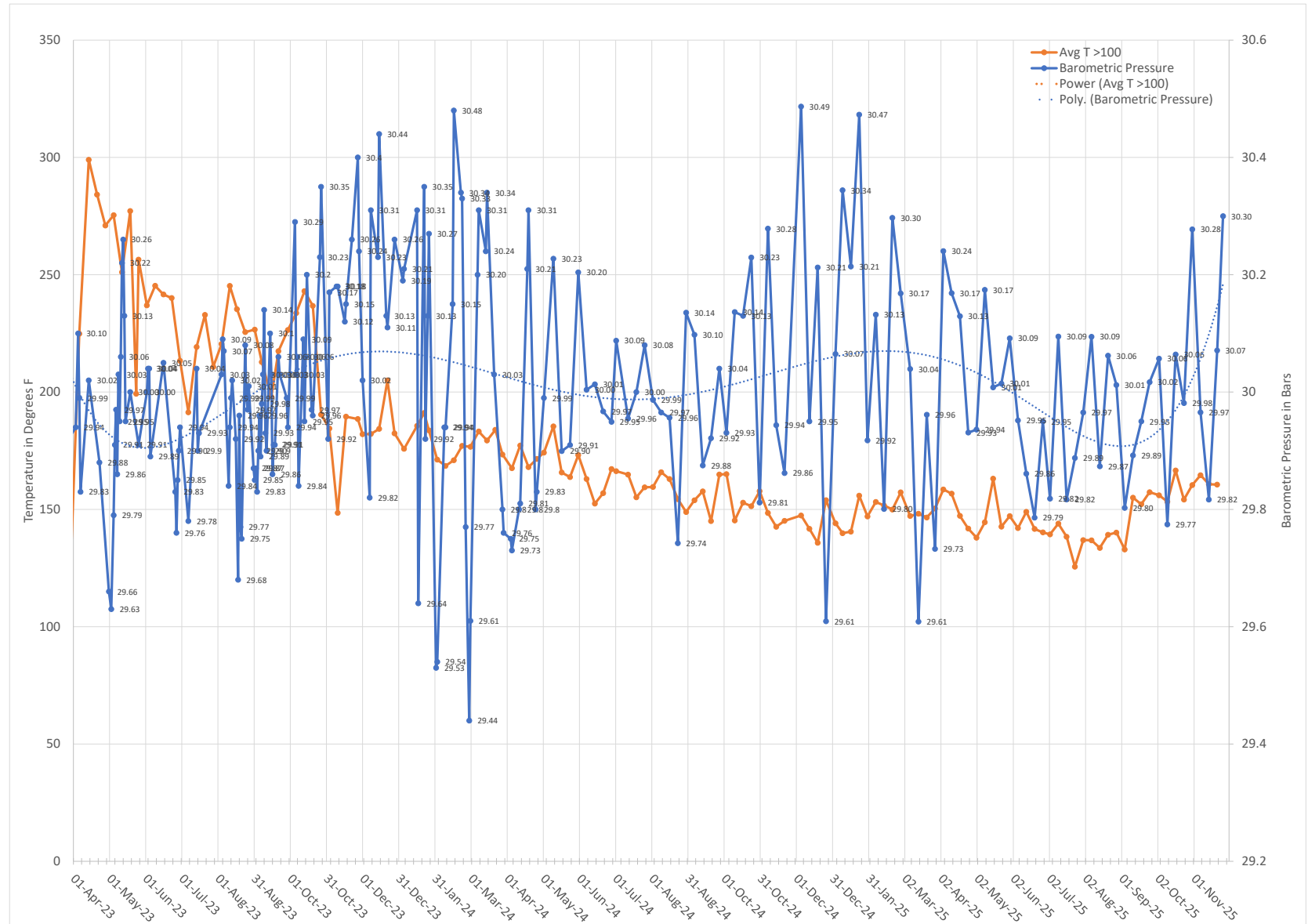
Barometric Pressure

As LFCI expected, the site is continuing to experience higher pressures as the winter season continues.

Based on past pressure trends, it is anticipated that this high-pressure environment will continue from September through to March, which may result in more oxygen availability. This may cause some increase in fire activity throughout the winter.

On the other hand, formation of a snowpack and ground freezing should inhibit air entry which should result in a decrease in smolder activity.

As the season is changing, it will be even more important to ensure that the cover system is properly maintained to prevent excess oxygen from entering the waste.



Oxygen

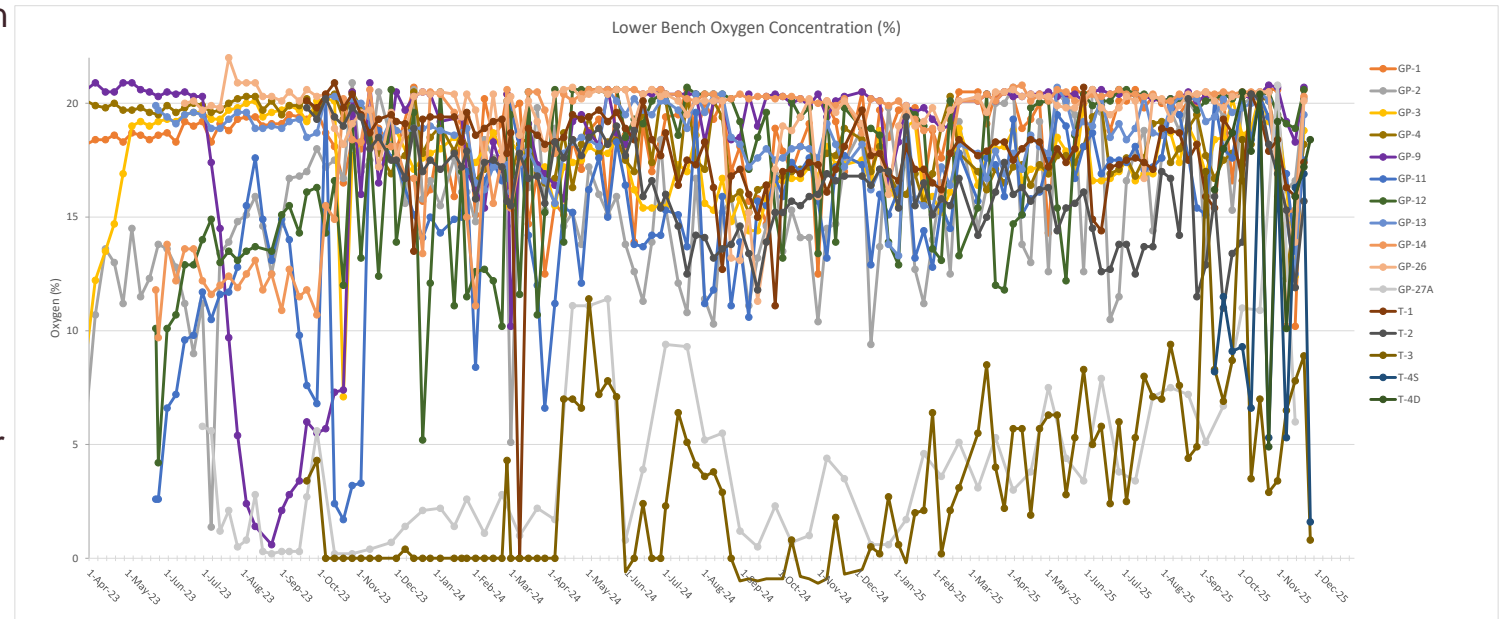
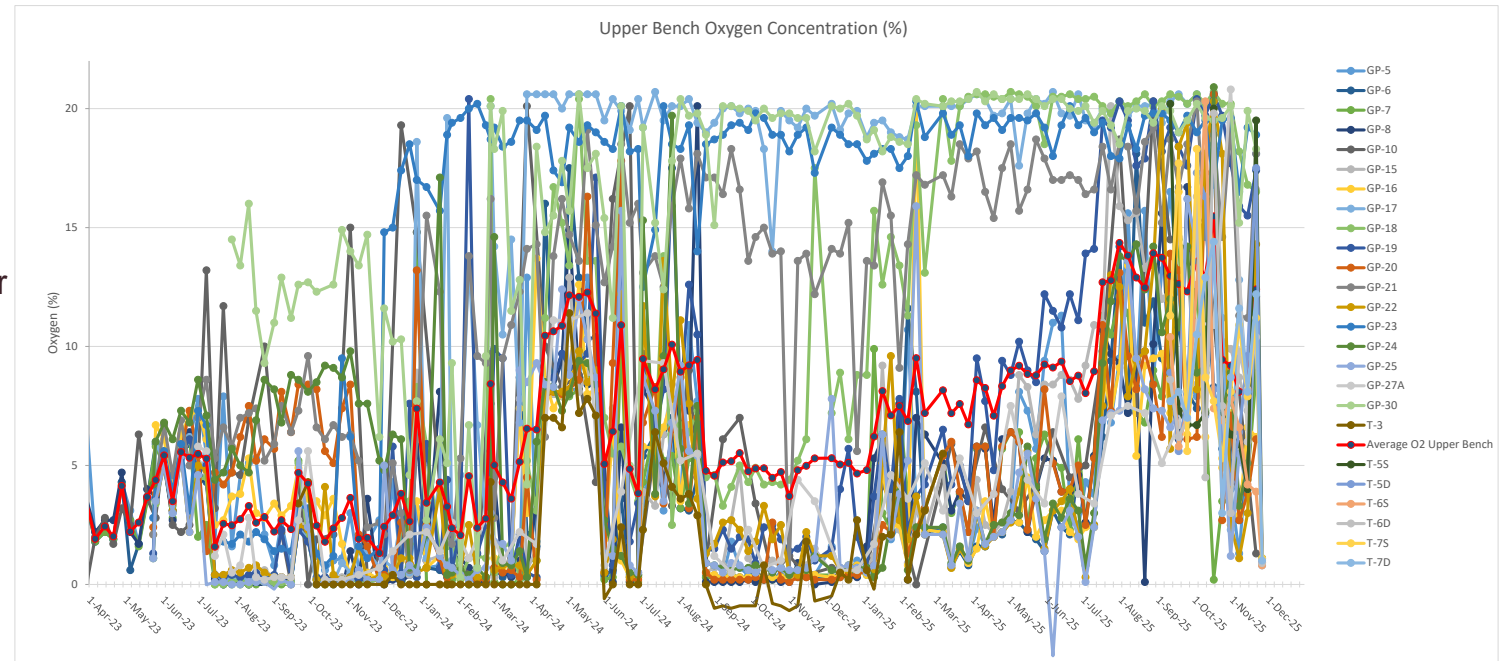
The oldest portion of the landfill is likely relatively inert and biologically inactive, producing very little methane. As a result, the pore space is full of atmospheric air leading to the generally high oxygen concentrations. In plan view, oxygen levels have been increasing since January of 2025.

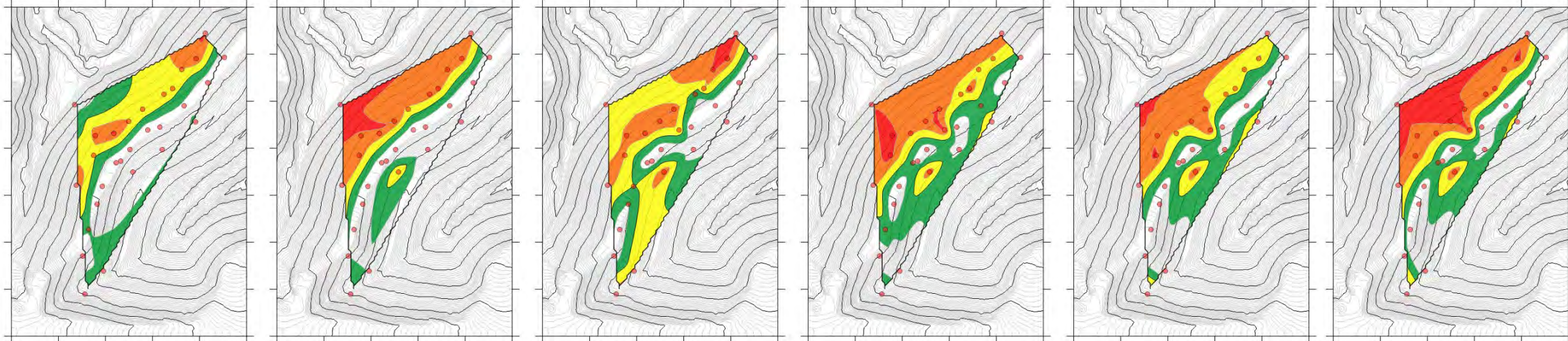
Oxygen levels in many of the GPs in the upper bench appear to oscillate seasonally, with higher oxygen levels in the summer months. Initially, it was suspected this was related to atmospheric pressure swings; however, the highest average pressure and greatest swings occur in the winter, while highest oxygen levels occur in the summer. It is now theorized that oxygen entry in the winter is inhibited by snow cover and frozen soil.

An incursion of atmospheric air has been detected in upper bench oxygen concentrations starting July 1, 2025. Areas on the plan view that were consistently green (<10% O₂) have changed to yellow (<15% O₂) or orange (<20% O₂). Such a trend has been detected previously starting April 1, 2024. Both events were preceded by very large fluctuations in atmospheric pressure of up to 1 Bar.

April 2024 triggered a smolder resurgence based on CO, as did Jan 1 2025 O₂ increase. The July 1 2025 increase seems to have caused a similar increase.

The surface of the fire area was examined for evidence of air intrusion such as cracks or erosion rills, and no evidence of air intrusion was found.





September 2023

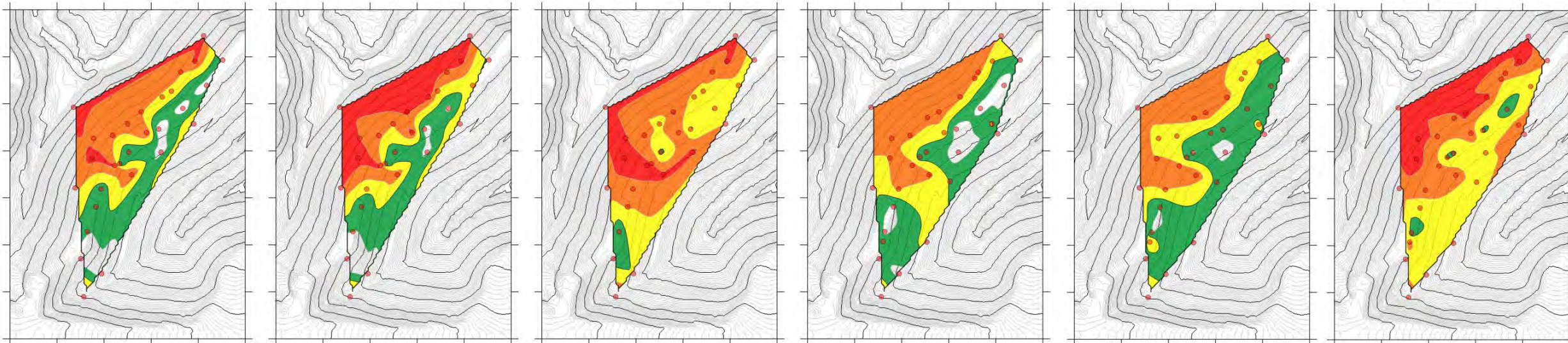
December 2023

March 2024

June 2024

September 2024

December 2024



March 2025

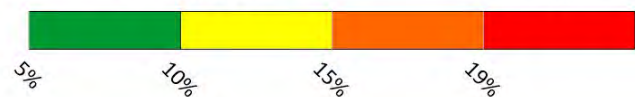
June 2025

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November 14, 2025

November 21, 2025



- Data taken from first monitoring event of each month unless noted otherwise

- Data has been interpolated between data points

- Datapoints (probe locations) represented in red

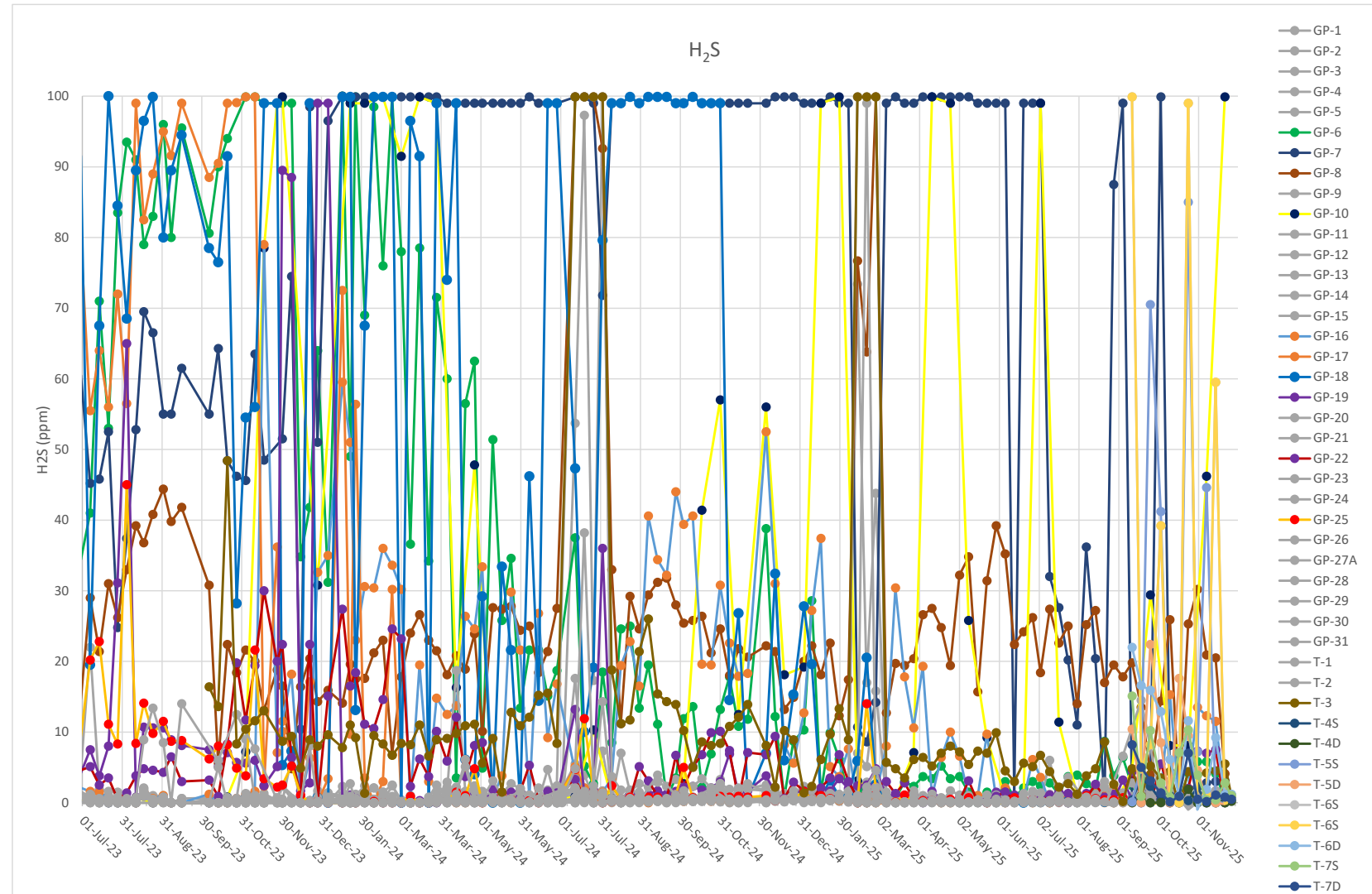
- O2 levels are measured in percent composition of sampled gas

- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

Hydrogen Sulfide

H₂S data continues to be noisy, likely affected by atmospheric pressure fluctuation. Most locations are low, and historically high wells (GP-7, GP-10) have also lowered to 20ppm.

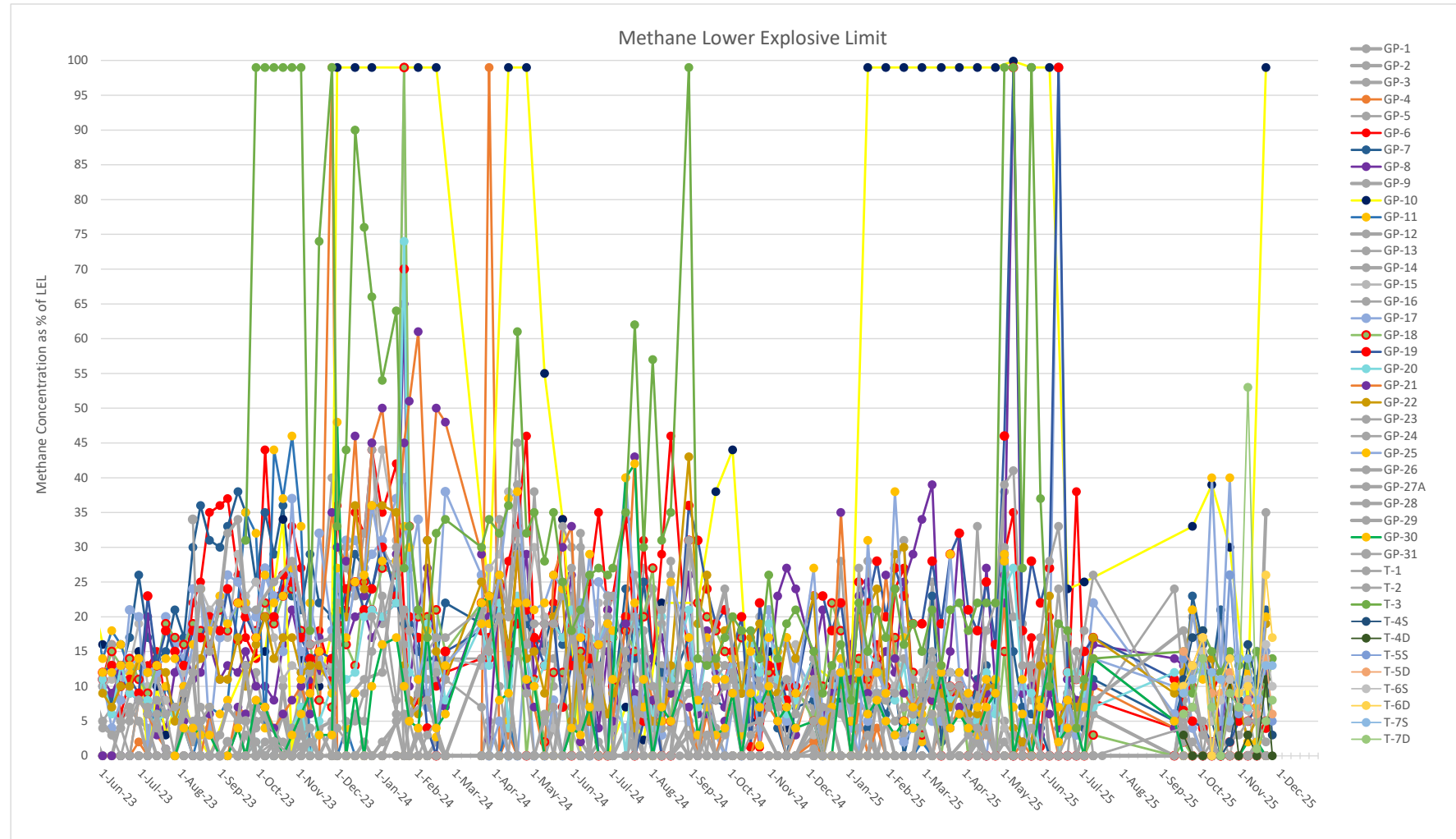
As mentioned previously, it is possible that the H₂S sensors are being impacted by CO cross interference. This seems to be confirmed as CO concentrations are decreasing, and the reported H₂S concentrations are dropping as well.



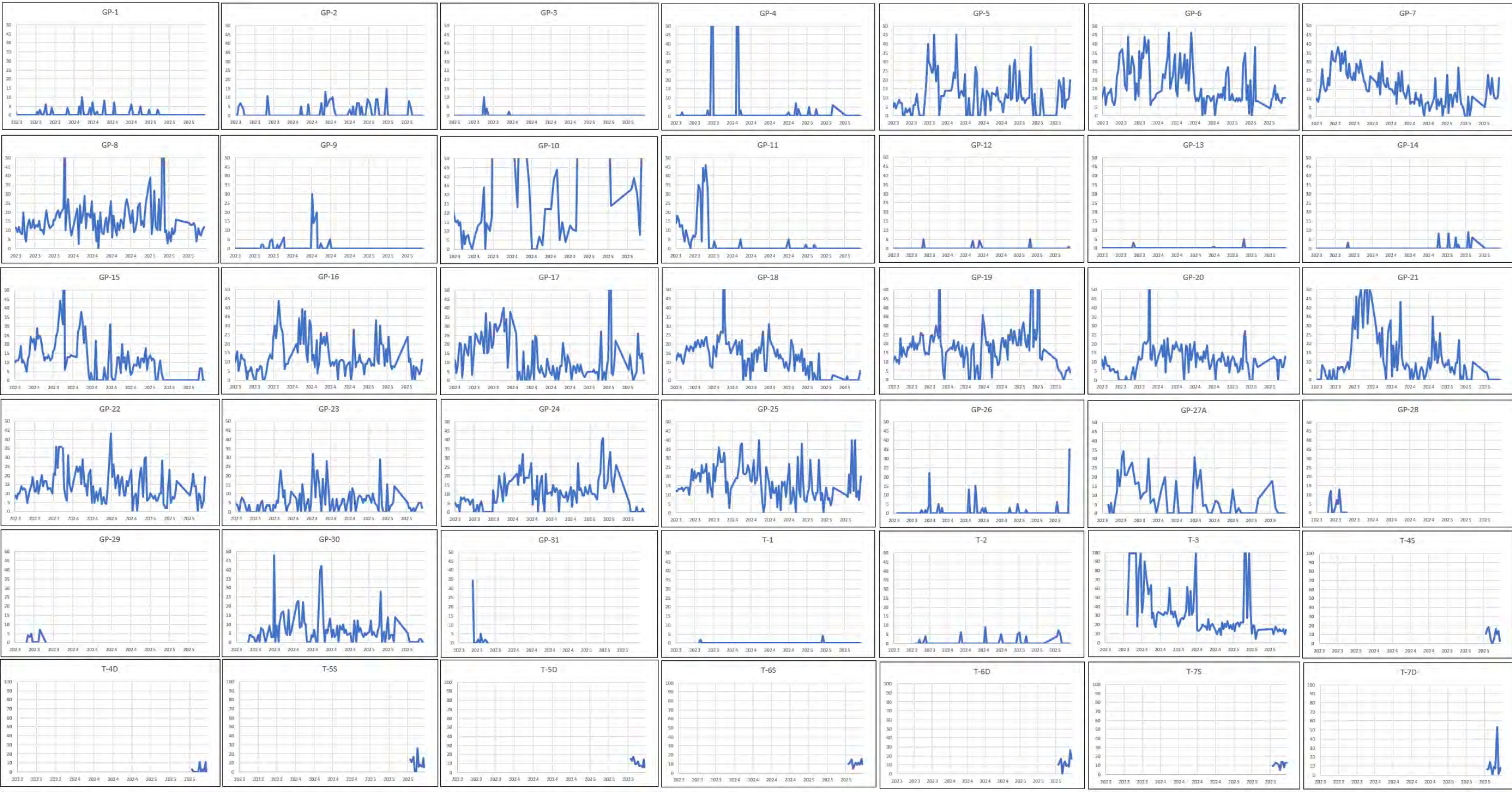
Lower Explosive Limit

Several data points are fluctuating wildly – the direct methane composition is a better indicator of levels within the landfill.

As LEL is measured with the MultiRAE, the last three monitoring events were not recorded in July, but since resuming levels have been similar to those previously recorded with most monitoring points reporting below 20% of the LEL.



LEL for individual GP

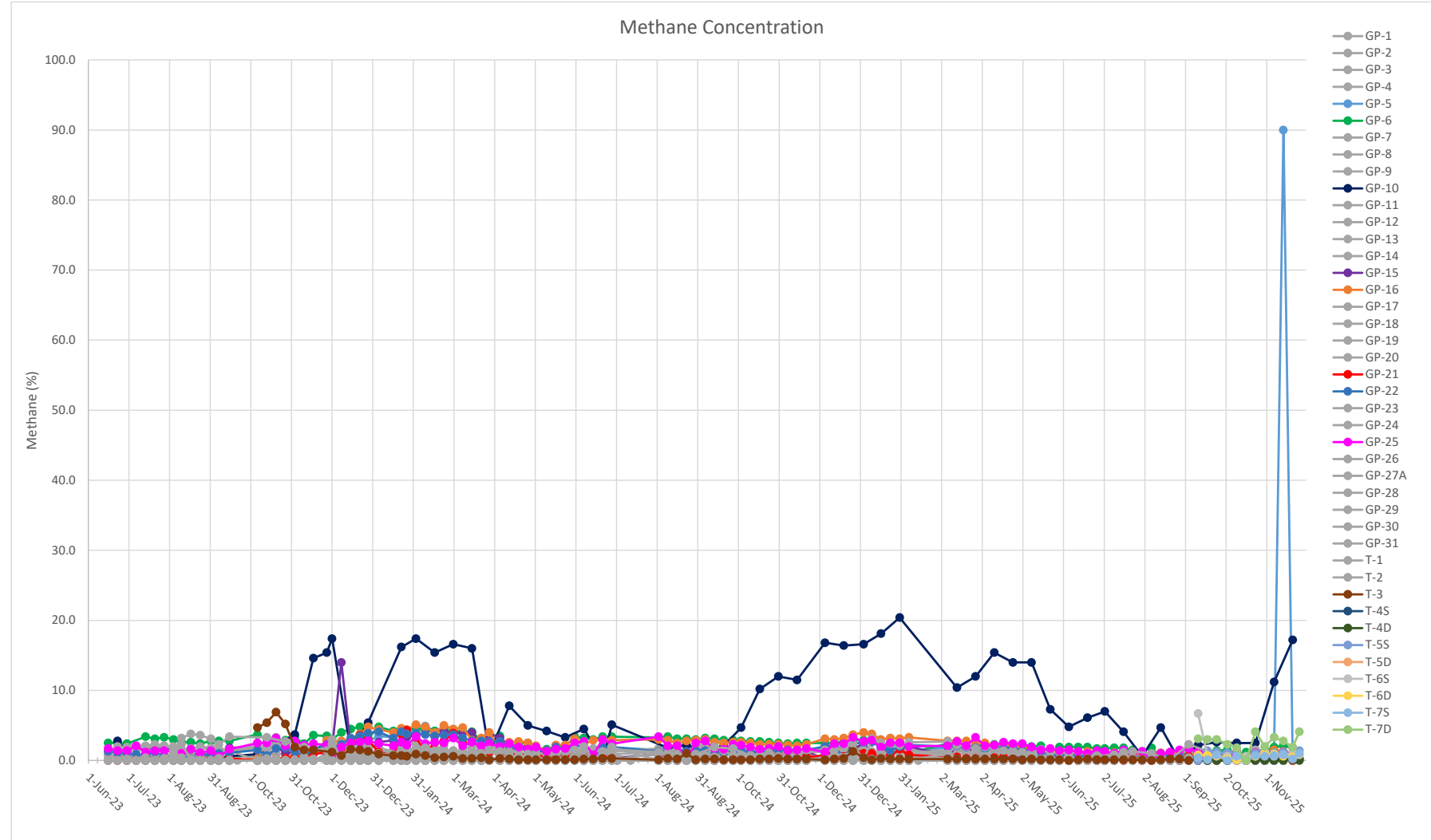


Methane

Methane levels for most wells are converging between 0 and 2.5% indicating that landfill is not biologically active.

Only well GP-10 has been indicating higher methane concentrations, and as shown as recently increased to 17% in November.

There appears to be a seasonal fluctuation with high methane levels occurring in Jan of each year in crest monitor GP-10. The cause is unclear, but LFCI believes this is possibly due to freezing or snow pack on the landfill surface preventing methane from escaping.

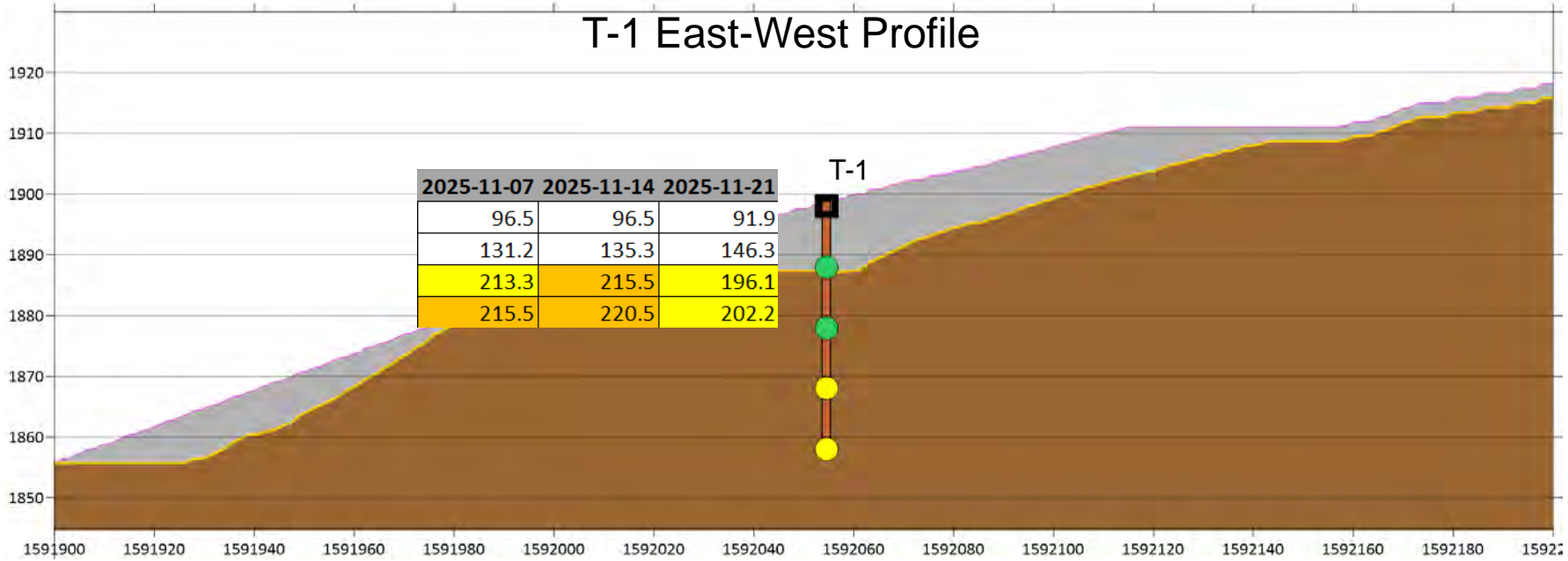




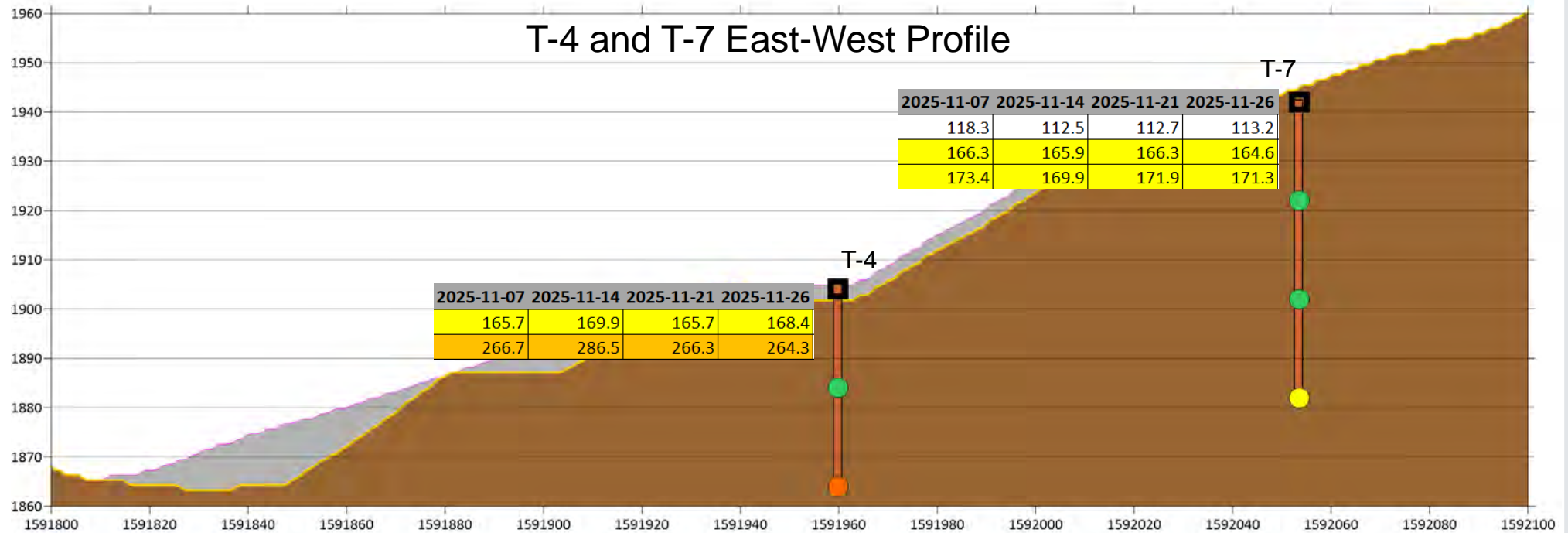
● High Temp (>200) □ High CO ▲ High H2S ▼ High VOC



T-1 East-West Profile



T-4 and T-7 East-West Profile



Data Interpretation

LFCI believes that suppression efforts continue to work, but slowly after the initial decrease in fire activity. CO levels and temperatures have decreased dramatically since cover fill was placed. Temperatures initially decreased, but have levelled off to a slower cooling trend since December 2024, as have most gas concentrations. The temperature graphs indicate that the cooling is following a trend similar to a logarithmic decay model.

Temperatures have dropped significantly all around to Dec. 2024 when the trend has shifted to a steady condition, with minimal changes occurring. In November of 2025, temperatures of the hottest well (GP-3) have continued to decrease at a slow but steady rate.

In LFCI's experience, CO has been the best indicator of suppression at other landfill sites. CO in T-3 has risen between Jan and May 2025, and again decreased June-mid August. In November, CO has exhibited varying measurements, but seems to hover around 3750ppm.

High O2 continues to fluctuate seasonally as a result of increased soil cover permeability during summer months when ground is not frozen. The recent increases in O2 starting July 1, 2025 are of some concern but November has seen some decrease in oxygen compared to other recent months. As atmospheric pressure has been increasing, large ambient pressure swings have been noted, and the cover soil has been inspected and no major concerns found. Additional cover is recommended in area of T-4 where cover soil was excavated to make room for developing the new wells.

LFCI believes that the waste continues to smolder underneath GP-3 and T-1 (elevated temperature) but the rate of smolder is steadily decreasing. Also, a 'chimney' effect is occurring, causing higher levels of indicator gases at T-3, GP-8 and GP-20.

Of greatest concern at this time is the sign of active smolder developing around T-4. If increases in CO and temperature continue then additional suppression measures may become necessary in that area.

MTCA Area Surface Review
Rocky Top Environmental
Limited Purpose Landfill
Agreed Order DE 21624



Background

On Tuesday, November 18, 2025, a surface review of the Model Toxics Control Act (MTCA) area was performed by Ian Sutton. The surface review of the suppressive cover soil was conducted to assess site conditions and determine if areas need restoration.

Findings

The site was walked and reviewed from approximately 10:30a to 11:30a. The visual review also incorporated the use of a Flir infra-red camera. The infra-red readings of the surface temperature were consistently around 40 degrees F, with no elevated temperatures detected.

The visual results confirmed the soil cover intact. There were only a few minor, shallow rill locations where some finer surface soil particles had eroded. These locations were generally at the base of slope where soil cover is the thickest. No cracks, irregular settlement, or vents that would be attributable to the subsurface fire were observed.

During the installation of Thermistors T-4 through T-7, drill rig access required slope disturbance. Excavation for road development only exposed soil, and not refuse. Depth to refuse was not verified.

See the photos below with representative cover soil photographs.

Recommendations

The primary recommendation is to provide additional fill against the face of exposed thermistor installation cut slopes.

At the T-4 location, additional soil cover should also be placed along the southwest Phase 1 ridgeline to make sure the cover soil extends beyond the ridge.

Address

22745 29th Dr. SE, Ste 200,
Bothell, WA 98021

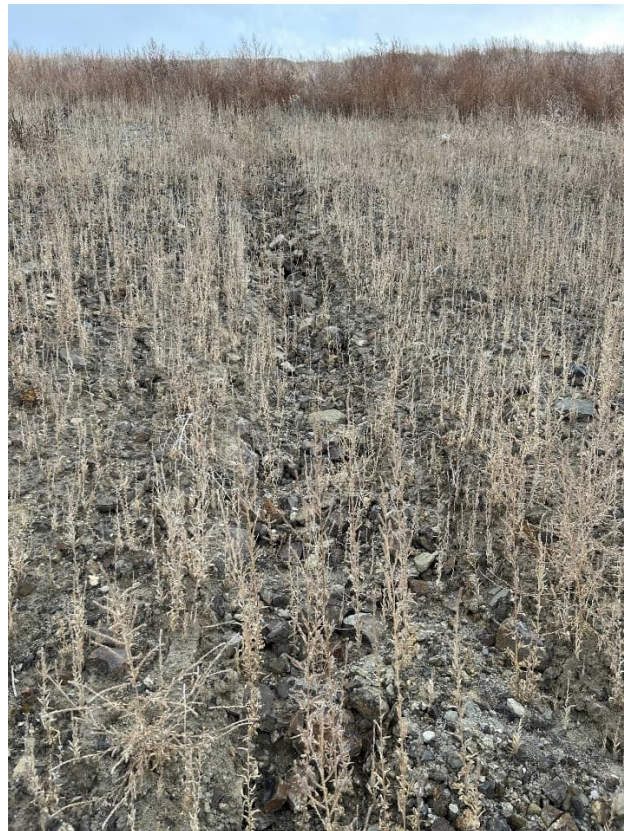
Contact

425 549 3000
dtgrecycle.com





Typical Cover Soil Surfaces



Example Rill



Thermistor T-4 Installation Access



Typical Thermistor Installation Access Exposed Face