

November 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 – October

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 October 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 not held in October 2025. The monitoring data summary through October 2025 from Landfill Fire Control, Inc. (LFCI) is attached.

The week of October 6, Parametrix, Inc. (Parametrix) performed the Limited Remedial Investigation Work Plan gas sampling.

On October 15, 2025, Ecology provided DTG a letter proposing an Interim Action. On October 16, 2025, DTG and Ecology has a Teams call to discuss the AO progress and the proposed Interim Action.

The annual aerial survey was performed the week of September 22, 2025.

The Q4a groundwater sampling was performed the week of October 20, 2025.

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:

Deliverables will include:

Address

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

Contact

425 549 3000
dtgreecycle.com

- Weekly ambient and gas probe data
- November Progress Report
- Thermistor/Well Installation TM
- Q3 Groundwater Report
- DTG Proposed Interim Action Response
- Aerial Survey Comparison

Please contact me to discuss any of the above items.

Respectfully,



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

Enclosures: LFCI Data Update – October 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

November 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 – October 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 October has exhibited a mixed response especially within the new thermistors that have been installed. Overall, CO and temperatures have been relatively stable over the past month. Temperature in T-1 and GP-3 has continued the decreasing trend, with T-4 indicating slight temperature increases.

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). October saw overall atmospheric pressure increases which may have forced more ambient air into the landfill, but LFCI is still concerned that cover integrity may have been impacted by desiccation cracking, new road construction work and/or settlement induced stress cracking. LFCI recommends that the cover integrity be inspected for signs of cracks and remedial action implemented quickly.

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 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

LANDFILL FIRE CONTROL INC.

#8-1225 East Keith Rd., North Vancouver, BC – V7J 1J3

P: (604)-986-7723 E: spierling@spierlinghansen.com

www.landfillfire.com



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.

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.

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

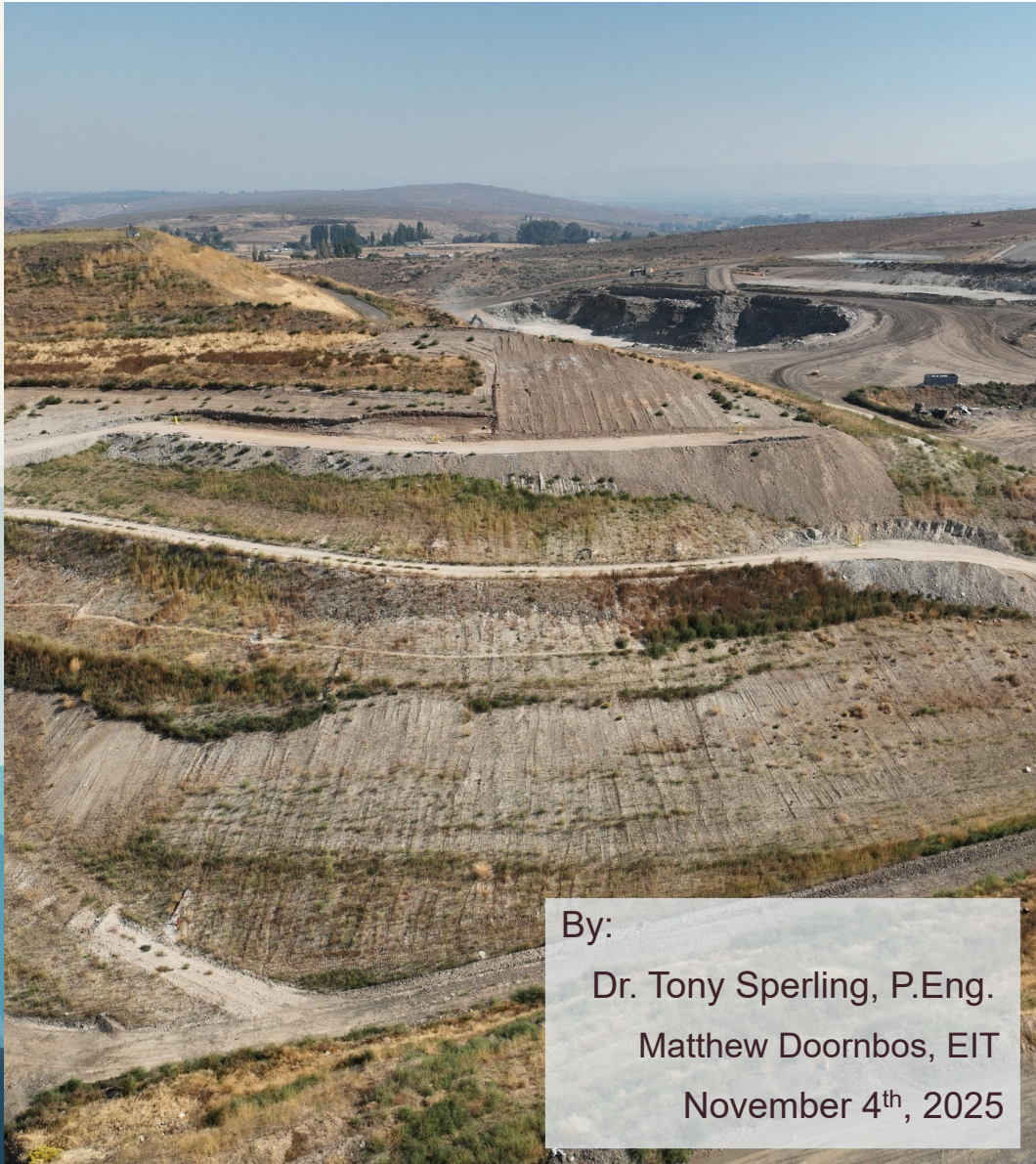


November 10th, 2025



DTG LPL LANDFILL FIRE INVESTIGATIONS AND MITIGATION

Monthly Monitoring Data Review
October 2025



By:
Dr. Tony Sperling, P.Eng.
Matthew Doornbos, EIT
November 4th, 2025

Introduction

BHP Locations

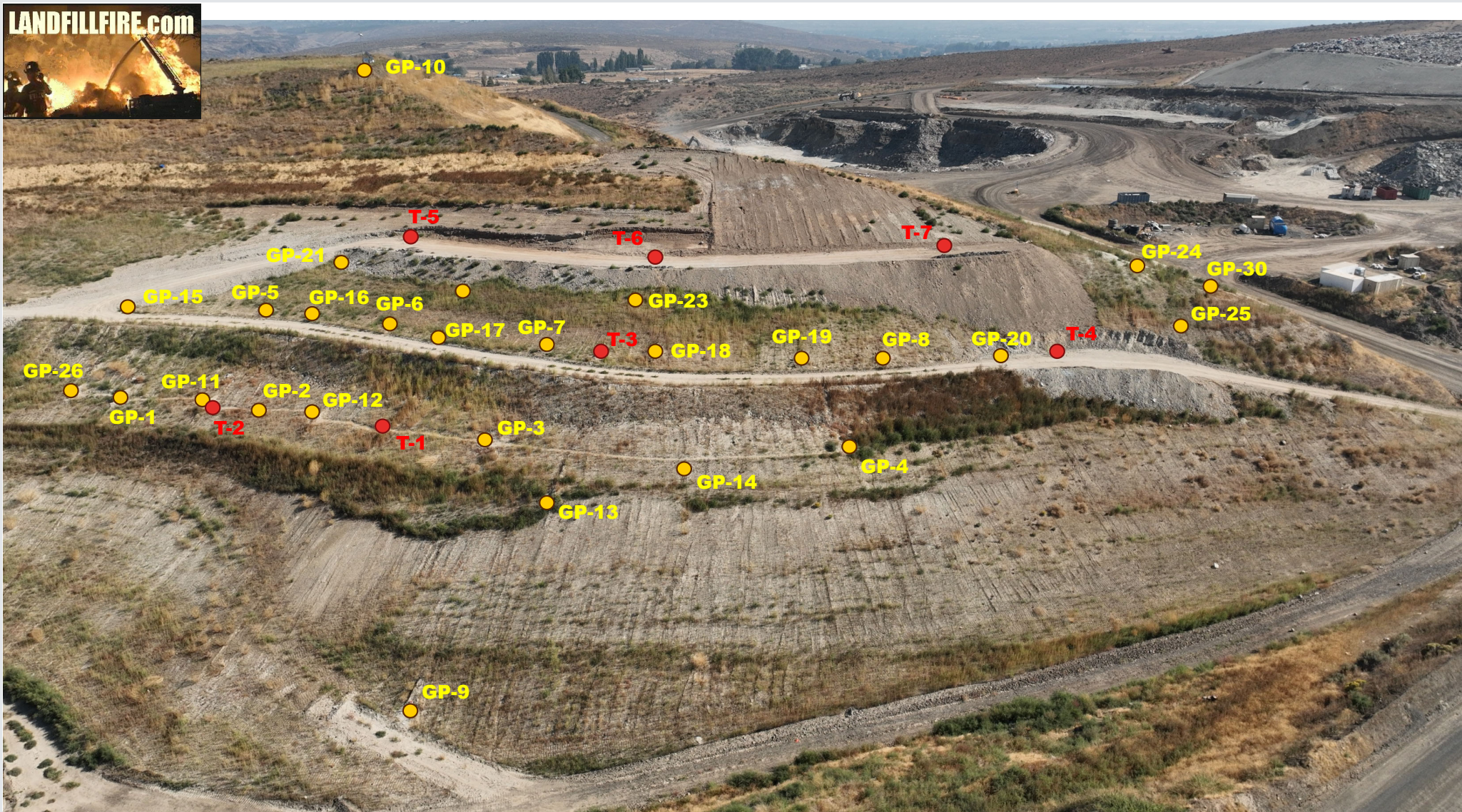
- There have been 31 Ground Probes installed, 3 of which are no longer monitored. 26 probes are monitored weekly, and 2 are monitored on a bi-weekly basis.
- Three thermistor wells were installed in mid-2023, which are monitored at varying depths to better determine the location of the hotspot.
- Four 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.

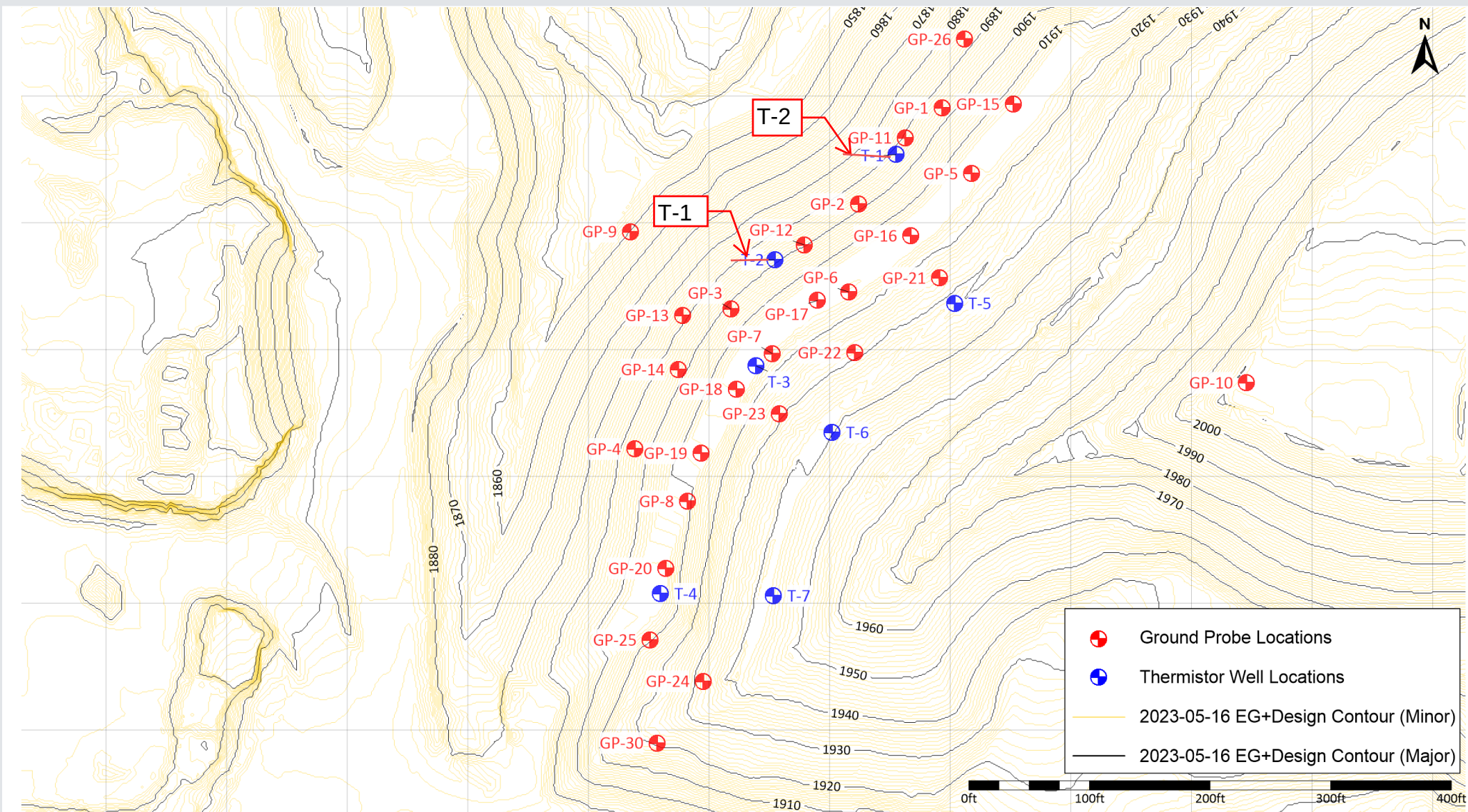
Monitoring Data Review

- 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



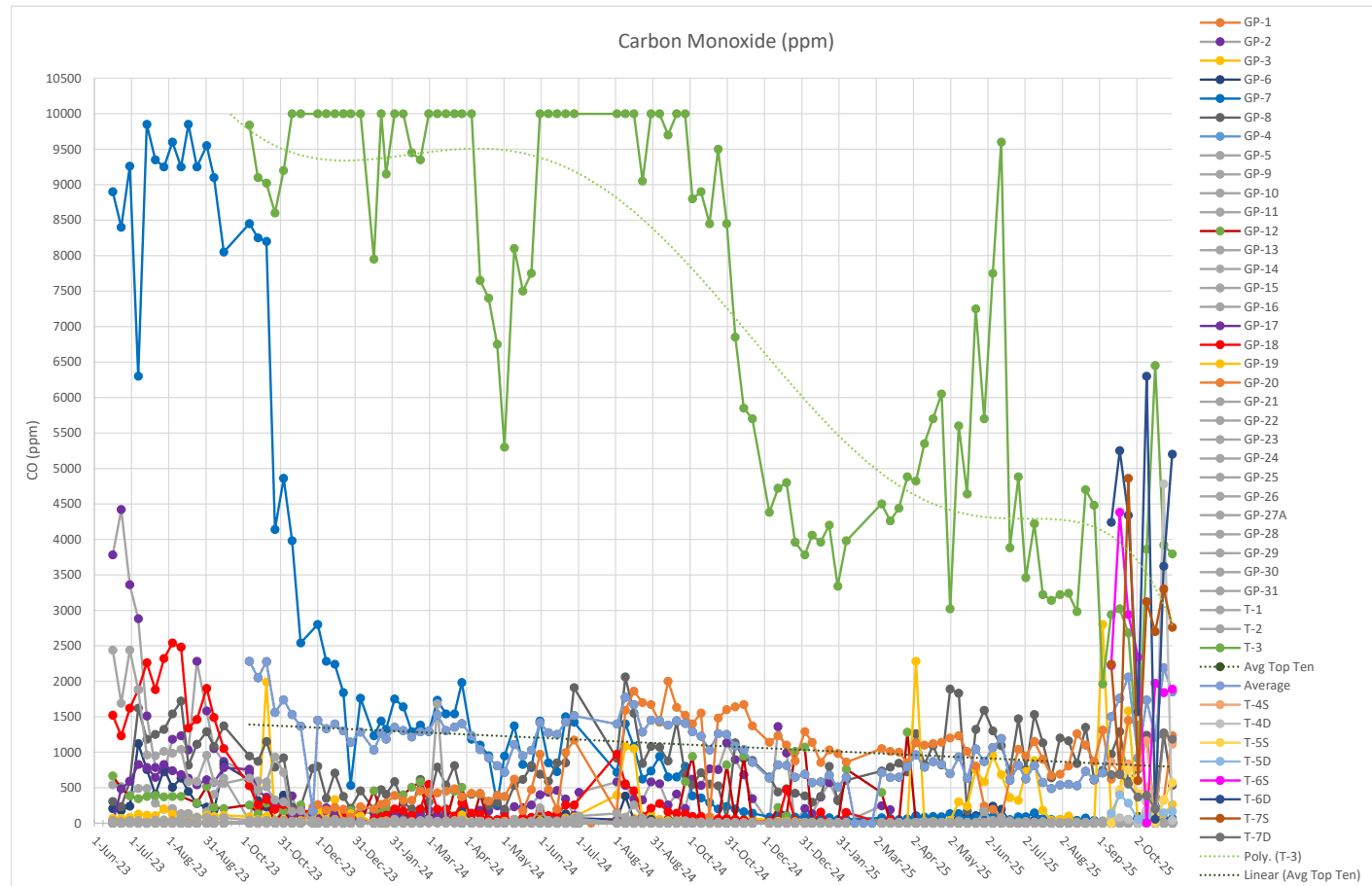




Carbon Monoxide

The month of October saw varied CO levels in the previously monitored T-3 thermistor. These levels are varying between an all-time low of 910ppm and 6450ppm, with other measurements around 3750ppm, similar to recently measured levels.

The average CO across the top 10 wells has been decreasing steadily since soil application commenced, with a slight increase since January 2025, correlating with increased pressure oscillations that push more atmospheric air into the landfill. This slight increase has now returned to declining trends, even with the higher CO levels in the newly installed thermistor wells.



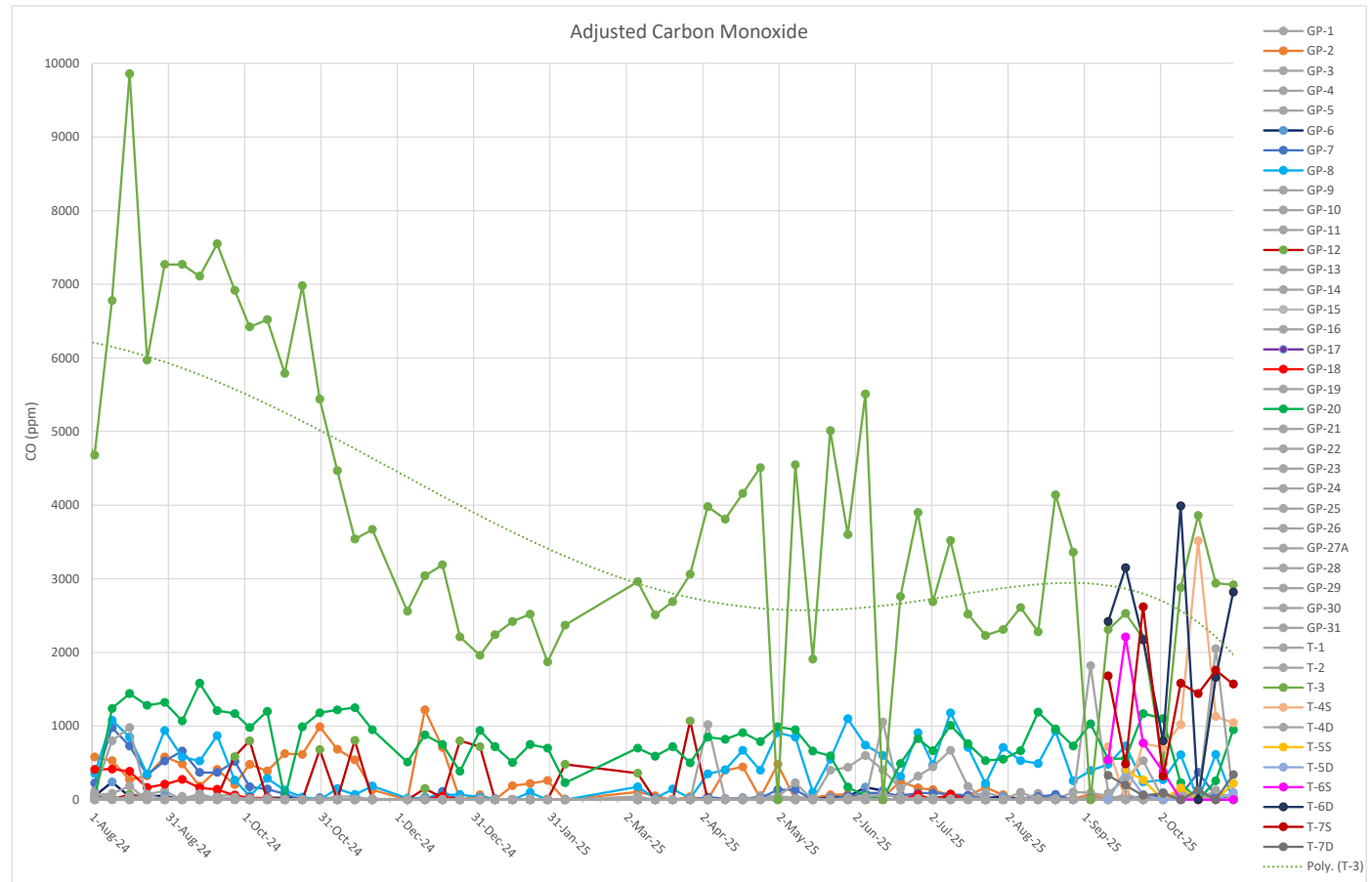
CO Adjusted for H2 Gas

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 June through August 2025. More recent measurements show adjusted CO for the highest wells around 3000ppm.

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

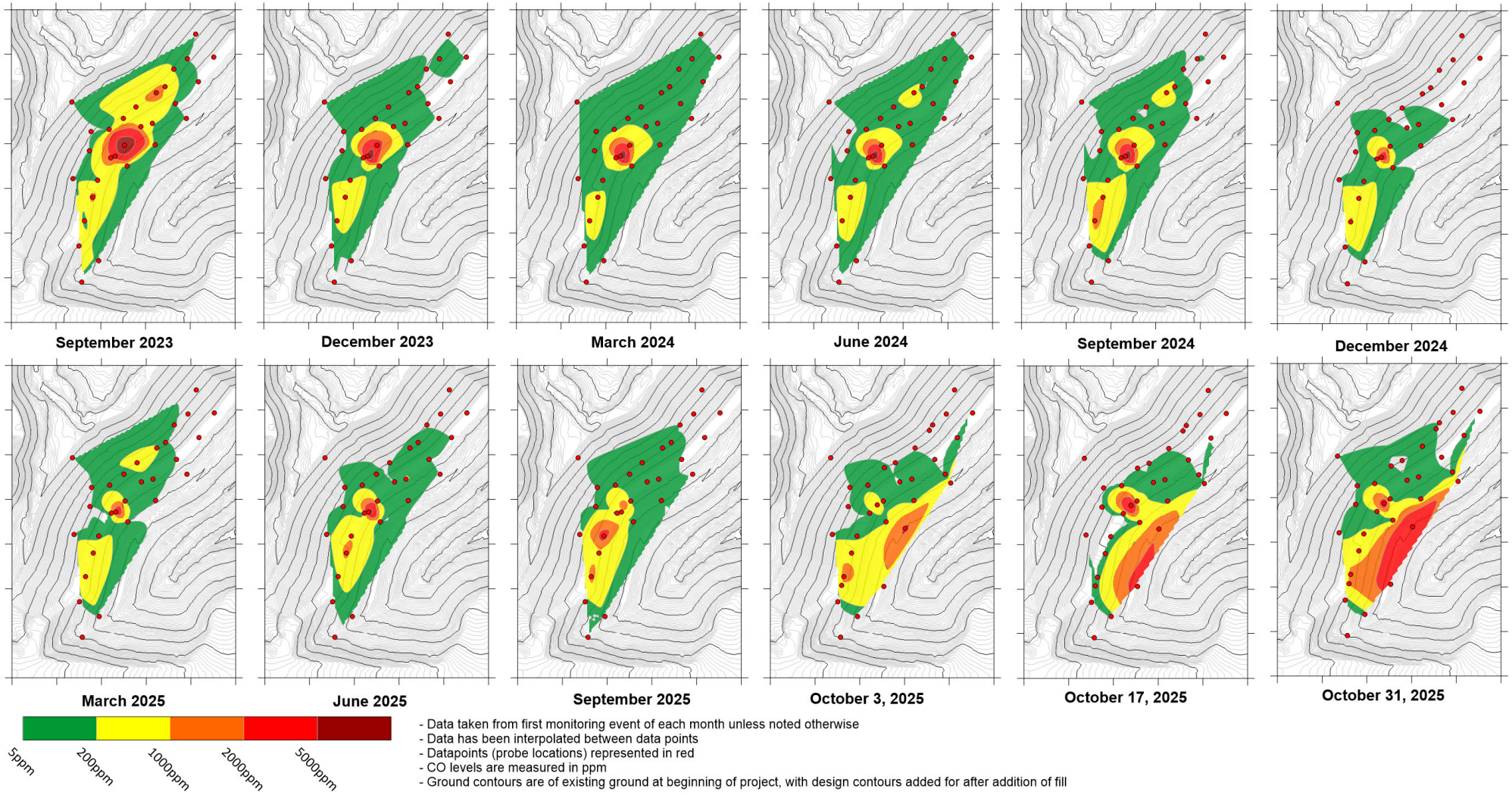
SHA will continue to monitor the new thermistors to ensure that there is no concerning trends or elevated levels of Carbon Monoxide that might indicate a fire deeper within the waste mass.

The most recent CO heat map shows CO is generally steady across the site, but increasing somewhat in the newly installed up-slope wells.



CO Levels by Individual Wells



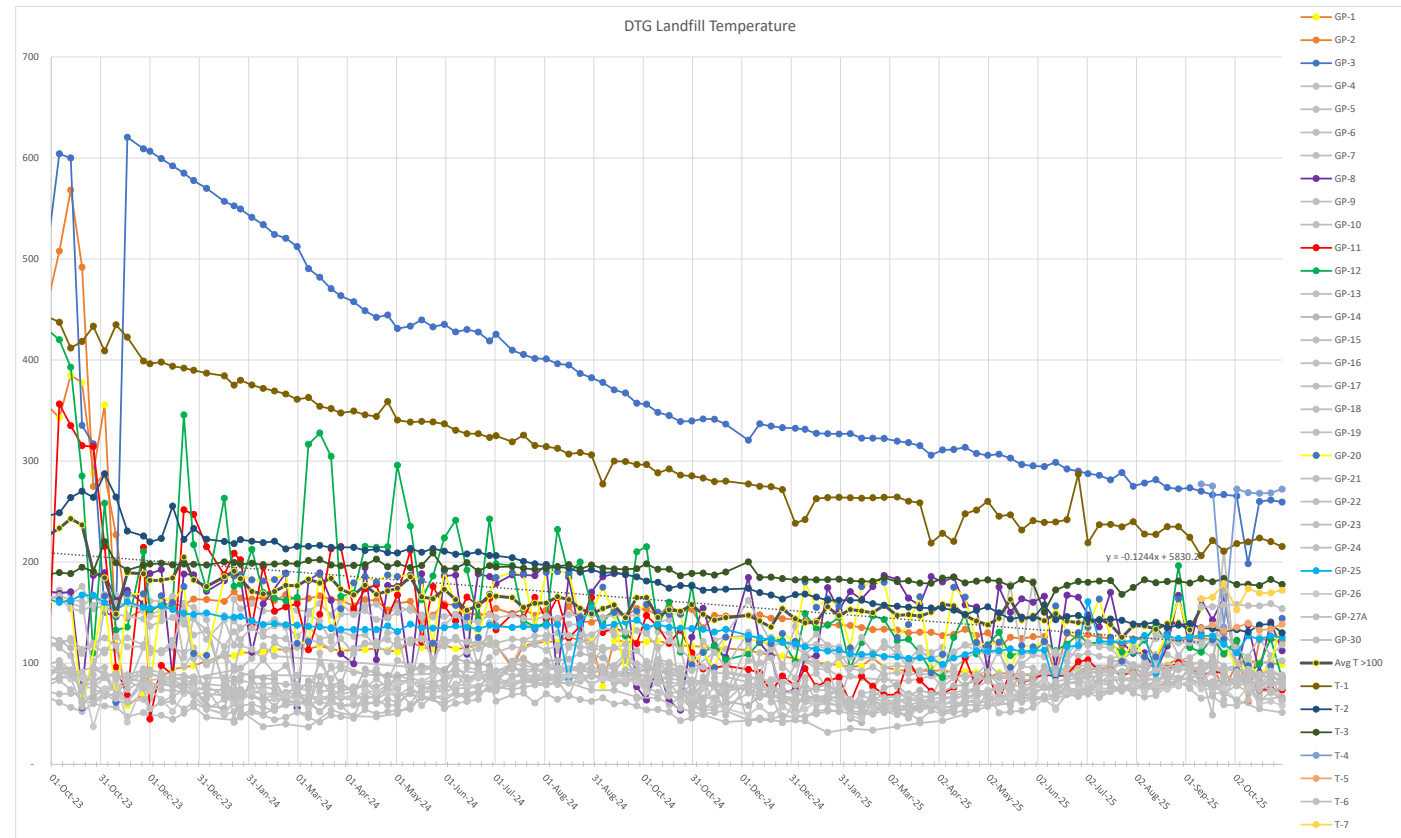


Temperature (F)

October saw continued decreasing temperatures in the hotter wells except for T-4, which showed a small increase in the last monitoring event.

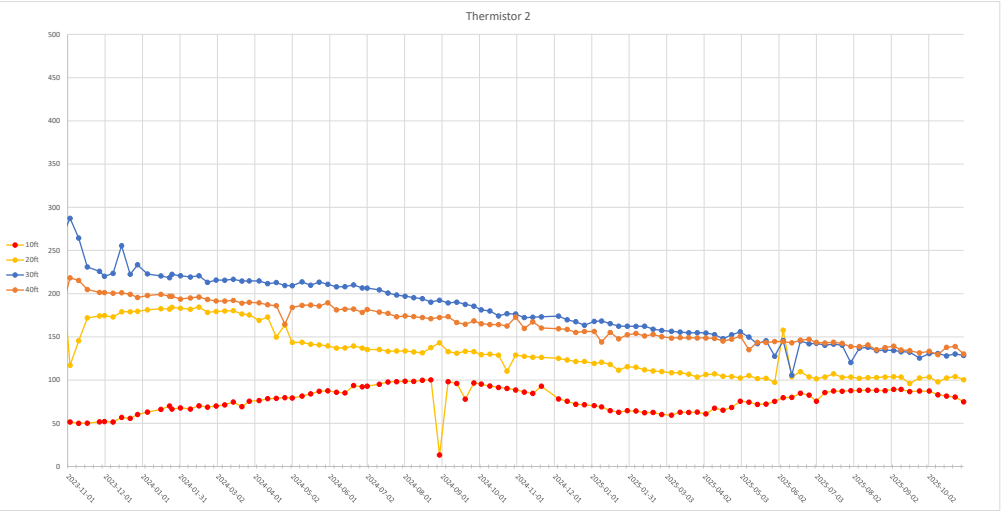
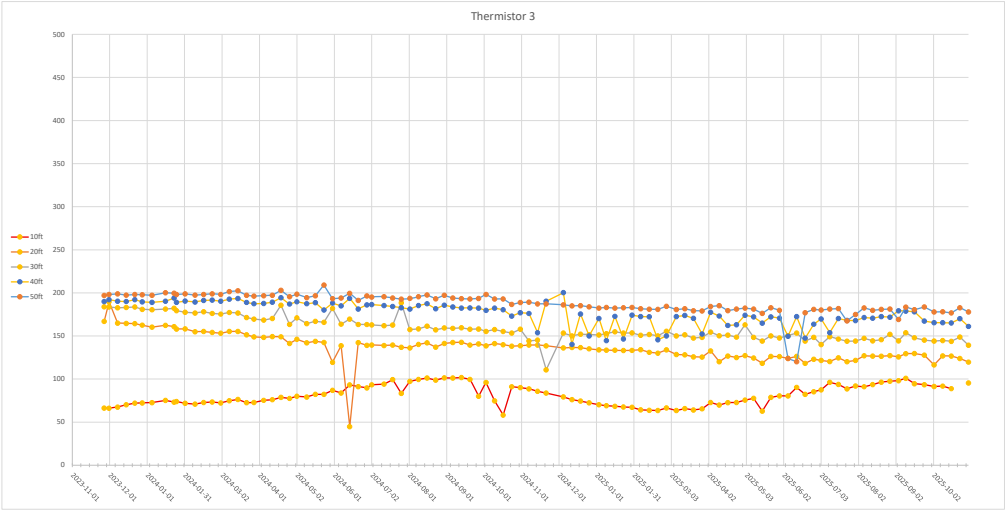
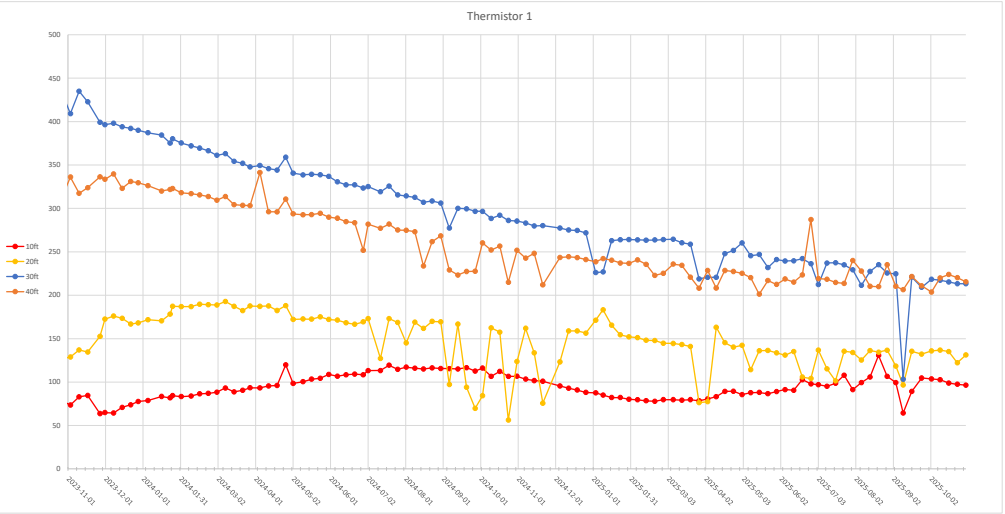
Similar to previous months, the trend line continues to show gradual cooling, with the wells reading above 100F showing some variation but seeming to be generally stable over the past month.

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 mostly stable, with the continued downward trend in T-1 and T-2. There is a slight increase in T-3, which SHA expects to decrease as the ambient temperatures decrease over the winter.



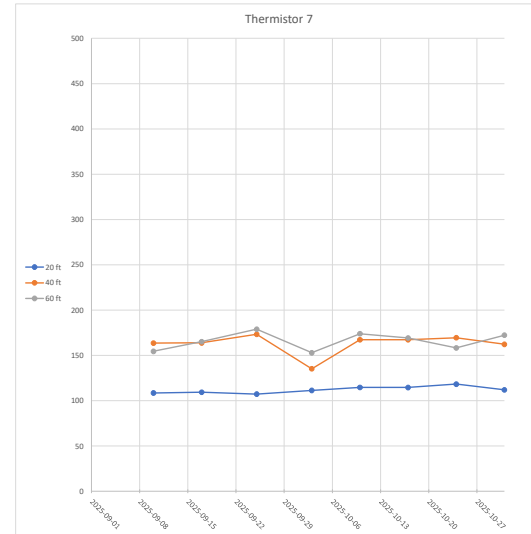
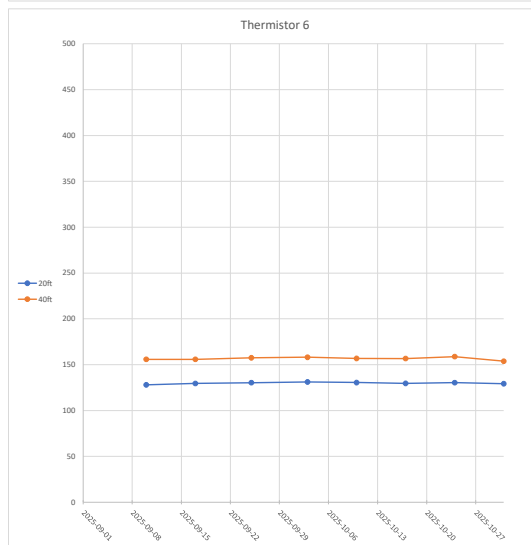
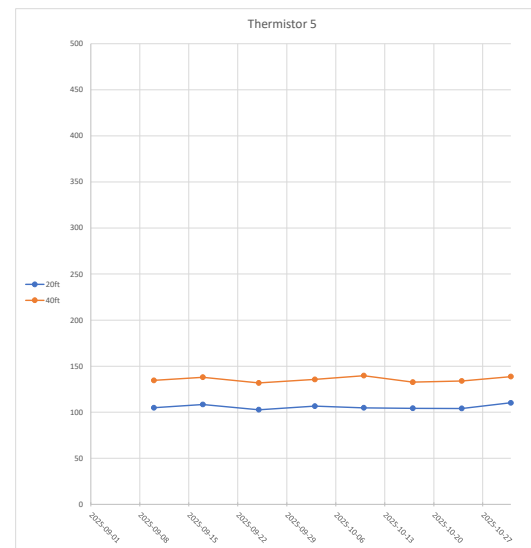
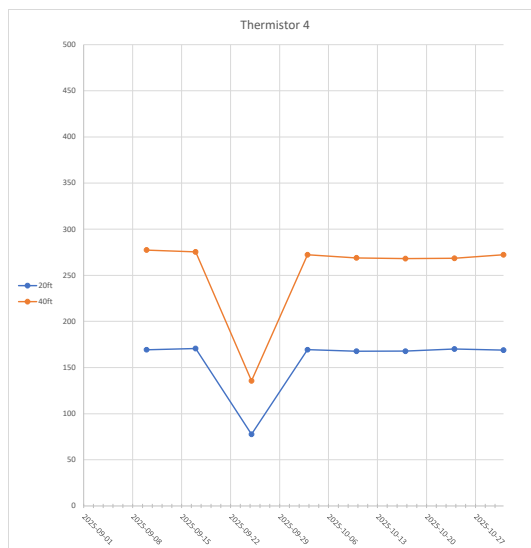
Thermistor Temperatures (T4-T7)

With only two months of data, the new thermistor temperatures seem stable, with some variability in T-7 and general stability in the other three wells. 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, this is an abnormally high temperature indicative of nearby smouldering activity. T-4 is located in an area where a significant road cut was undertaken which compromised the thickness of the soil cover in that area, an area where historic venting of hot gases was previously noted.

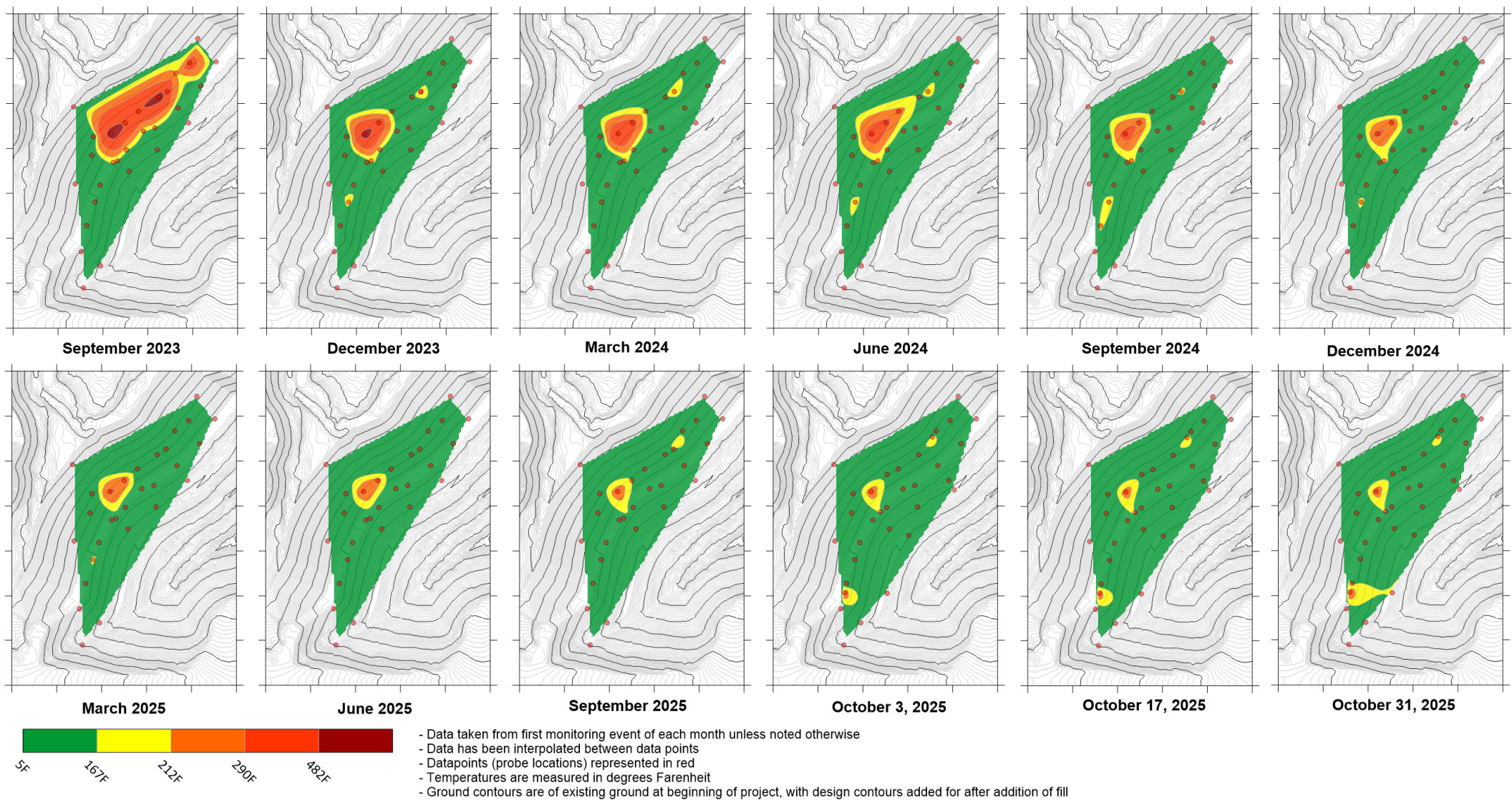
With the elevated CO readings in the area, the data suggests that the smoulder in this area, which was at the edge of the soil application zone is becoming more active.

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 smoulder 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 smoulder in that area.

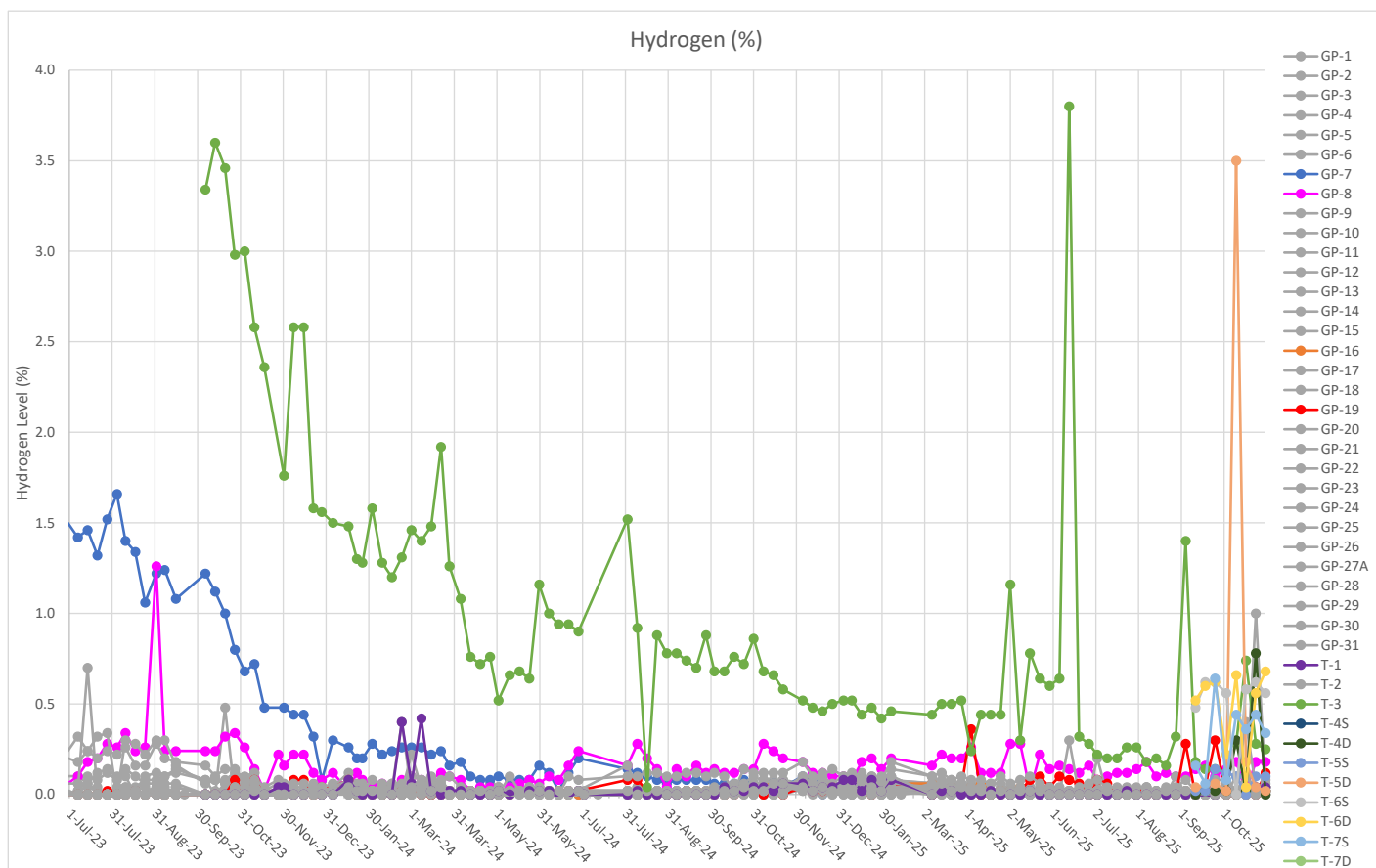


Hydrogen

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 0.6%. As more data becomes available, it will be important to monitor these trends.

Hydrogen remains very low in all other wells except for brief increases recorded during only a single monitoring event. Production of H₂ is often observed with smoldering waste. LFCI believes that the level of H₂ dropping continues to indicate that the fire is less active.



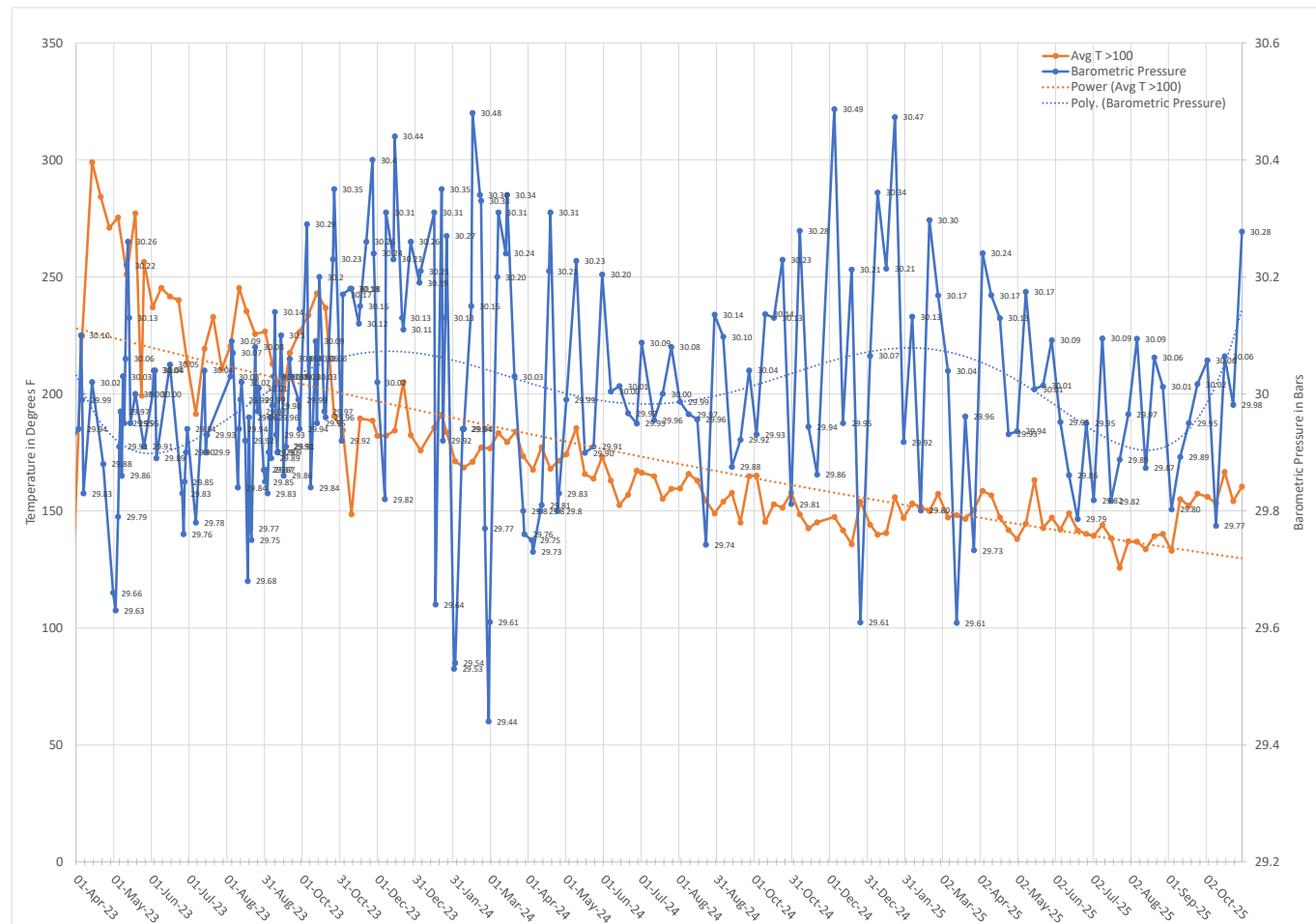
Barometric Pressure

As LFCI expected, the site is now experiencing an increase in pressures as the winter season begins.

Based on past pressure trends, we anticipate this high pressure environment from September through to March, which may result in more oxygen availability. This may cause some increase in fire activity throughout the winter.

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.

On other hand, snow and frozen ground may reduce oxygen availability.



Oxygen

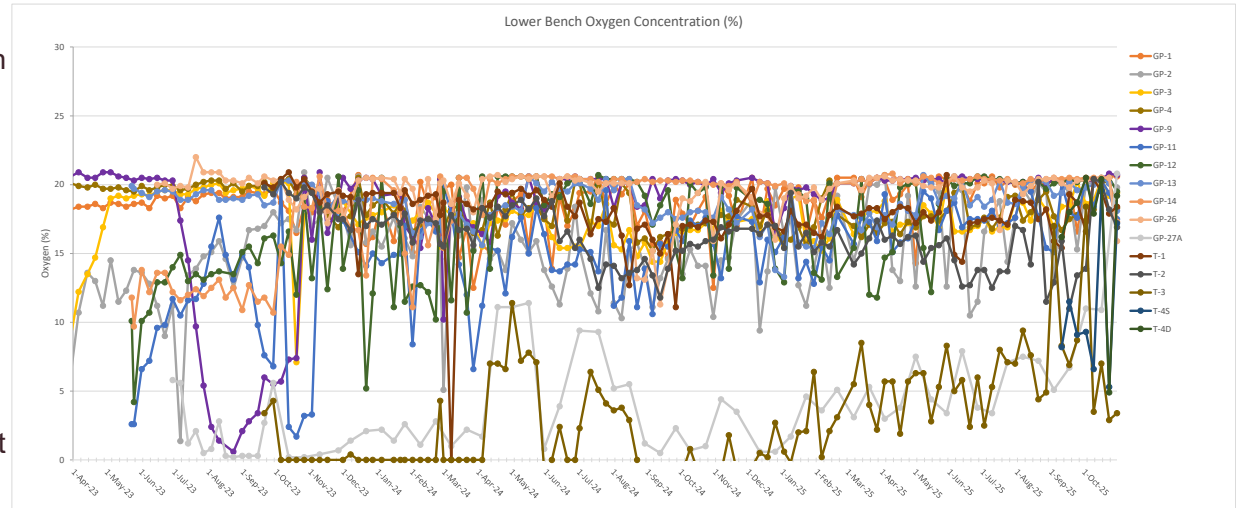
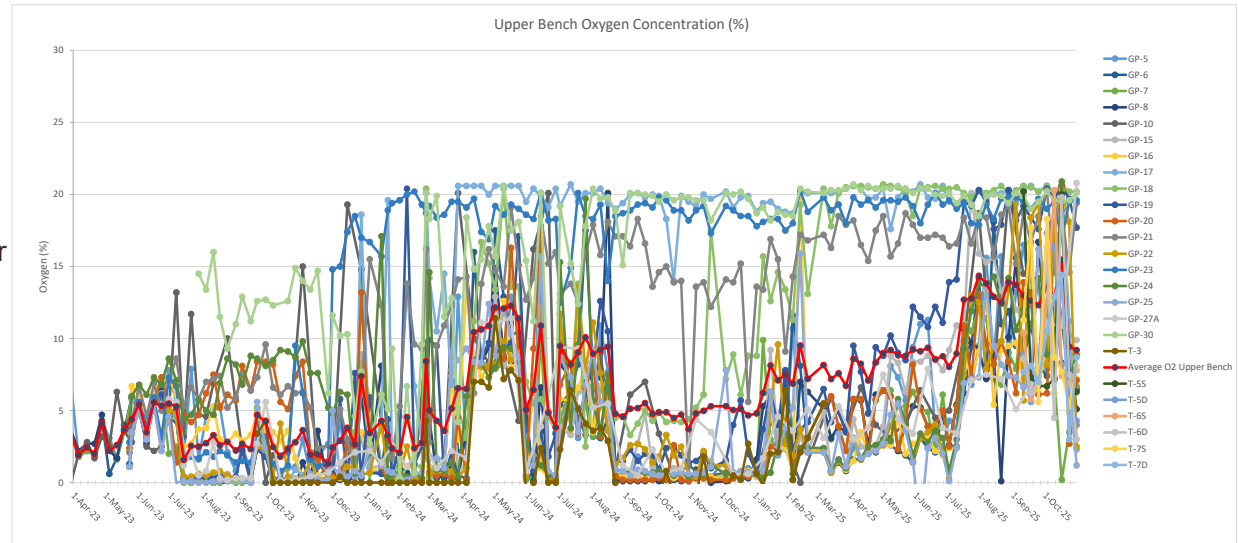
The oldest portion of the landfill is likely relatively inert and biologically inactive, producing very little methane. As a result, the pore space is full of atmospheric air leading to the generally high oxygen concentrations. In plan view, oxygen levels have been increasing since January of 2025.

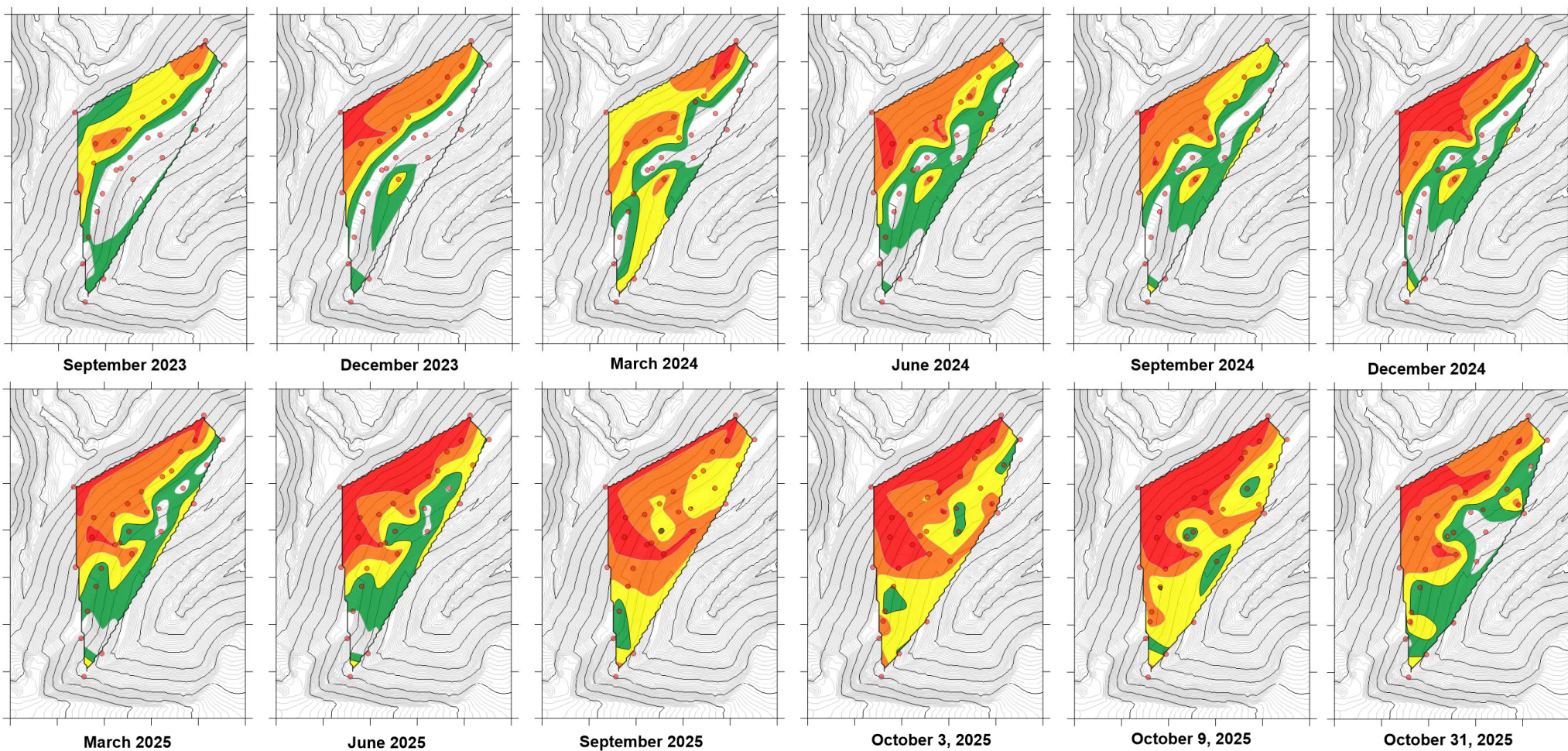
Oxygen levels in many of the GPs in the upper bench appear to oscillate seasonally, with higher oxygen levels in the summer months. Initially, it was suspected this was related to atmospheric pressure swings; however, the highest average pressure and greatest swings occur in the winter, while highest 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 should be checked for settlement and dessication cracks that could be allowing more air entry.





- 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

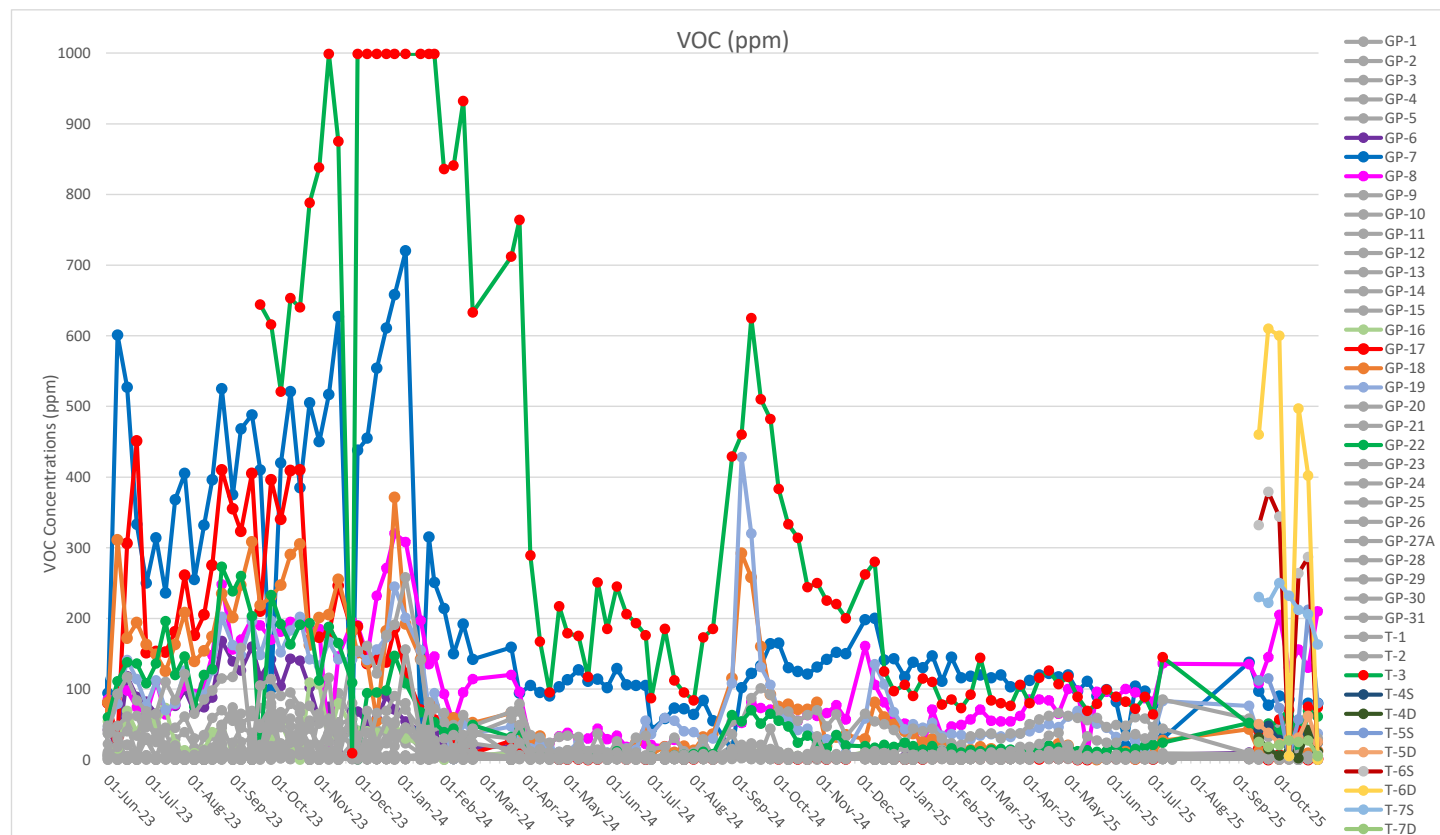
*October 17 exhibited oxygen levels close to 20%, following a pressure increase.
October 9 has been used instead to better reflect actual conditions.

Volatile Organic Compounds

Since monitoring of VOC's has resumed in September of this year and the new thermistors have been added, VOC have been higher than previously recorded, but have now fallen to levels around 200ppm or lower.

VOC emissions are often related to subsurface landfill fires. The fact that VOC emissions have declined and stayed low for the past several months are a strong indication that the fire is inactive.

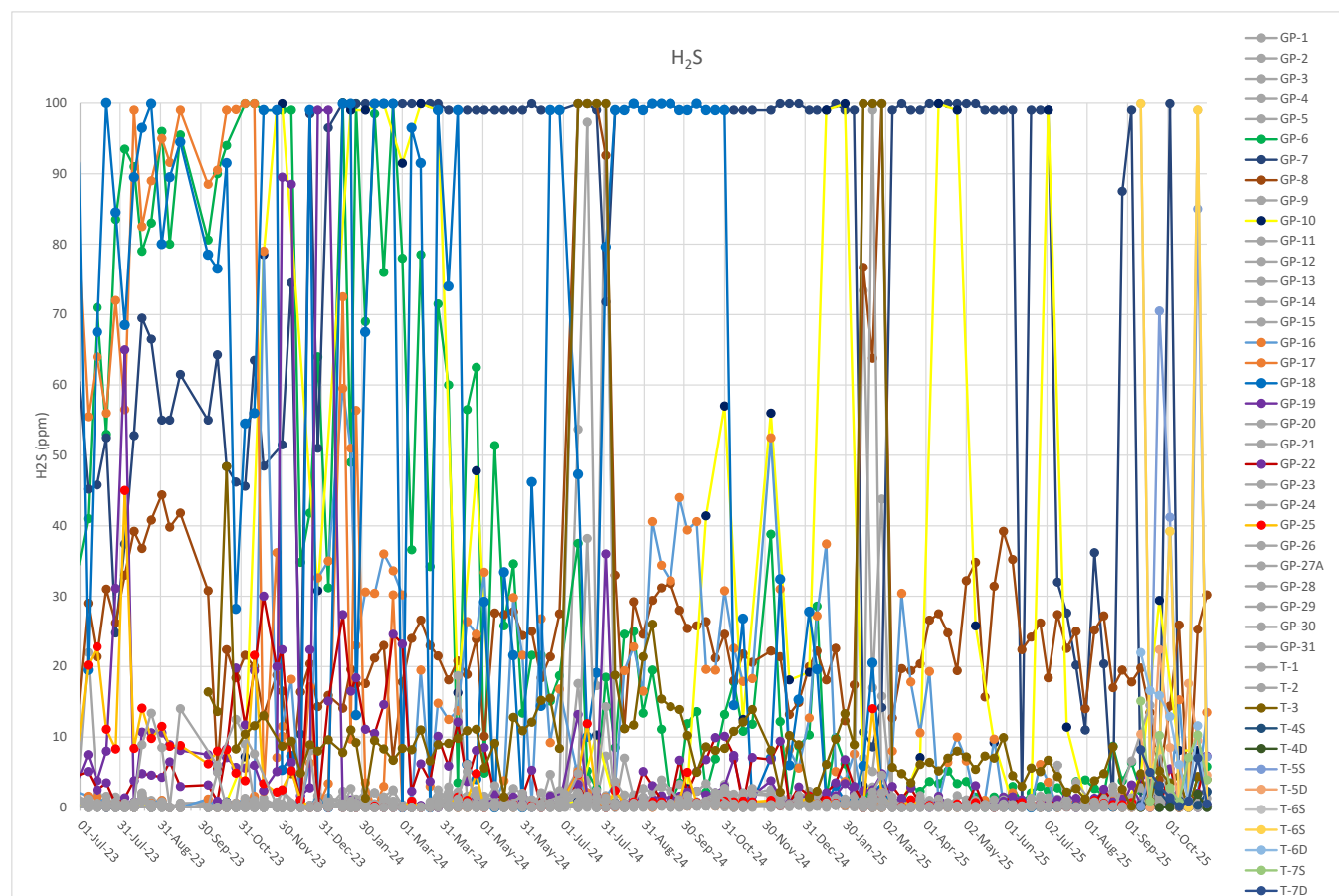
Now that VOCs are measured again, the levels are somewhat similar to what they were in July, but several of the new thermistor wells (T-6 and T-7) are exhibiting higher levels of emissions. LFCI notes that these have now fallen to 200ppm or lower, and will continue to monitor to confirm the decreasing trend continues.



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.

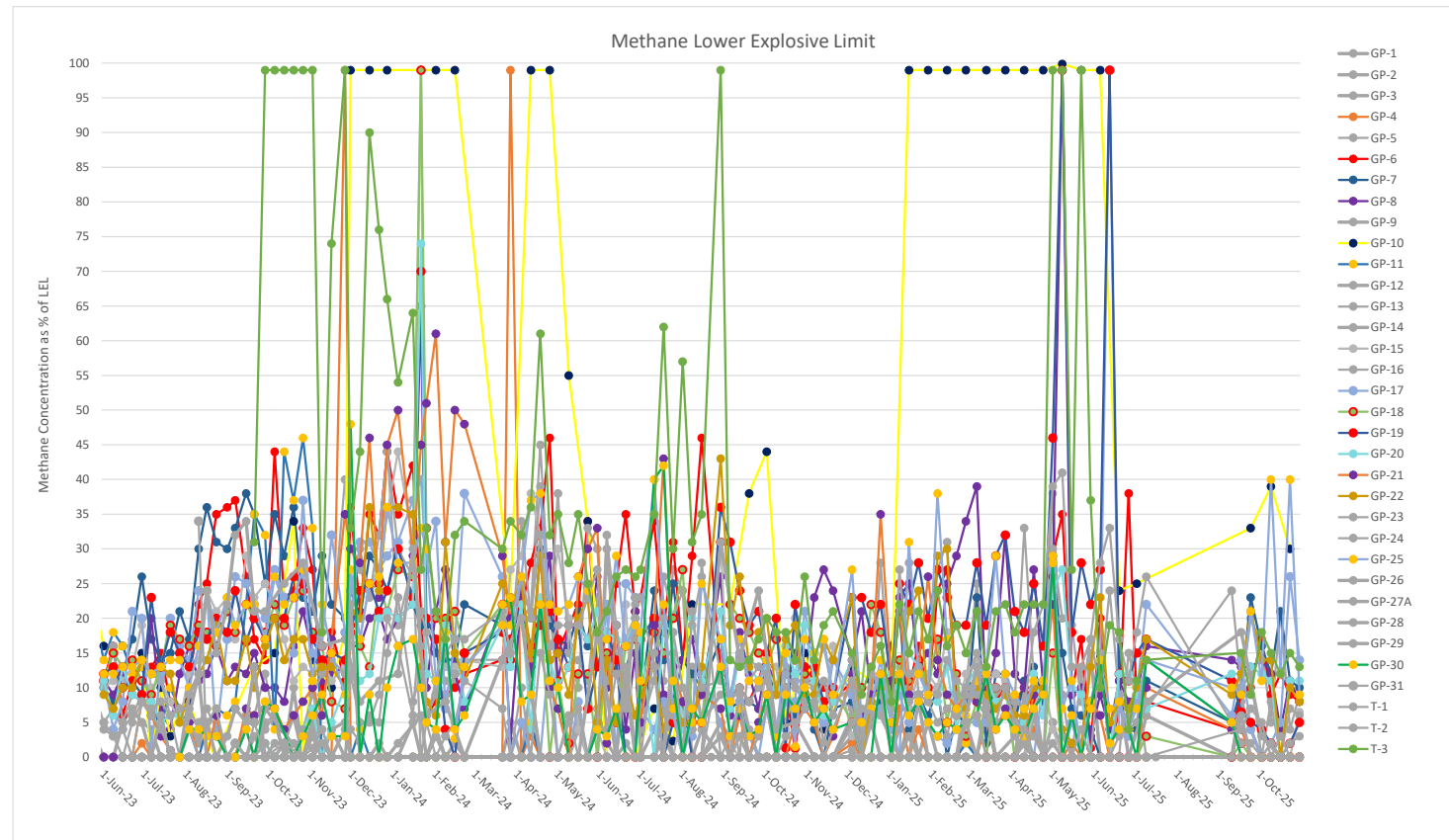
As mentioned previously, it is possible that the H₂S sensor is being impacted by CO cross interference. This seems to be confirmed as CO concentrations are decreasing, and the reported H₂S concentration is dropping as well.



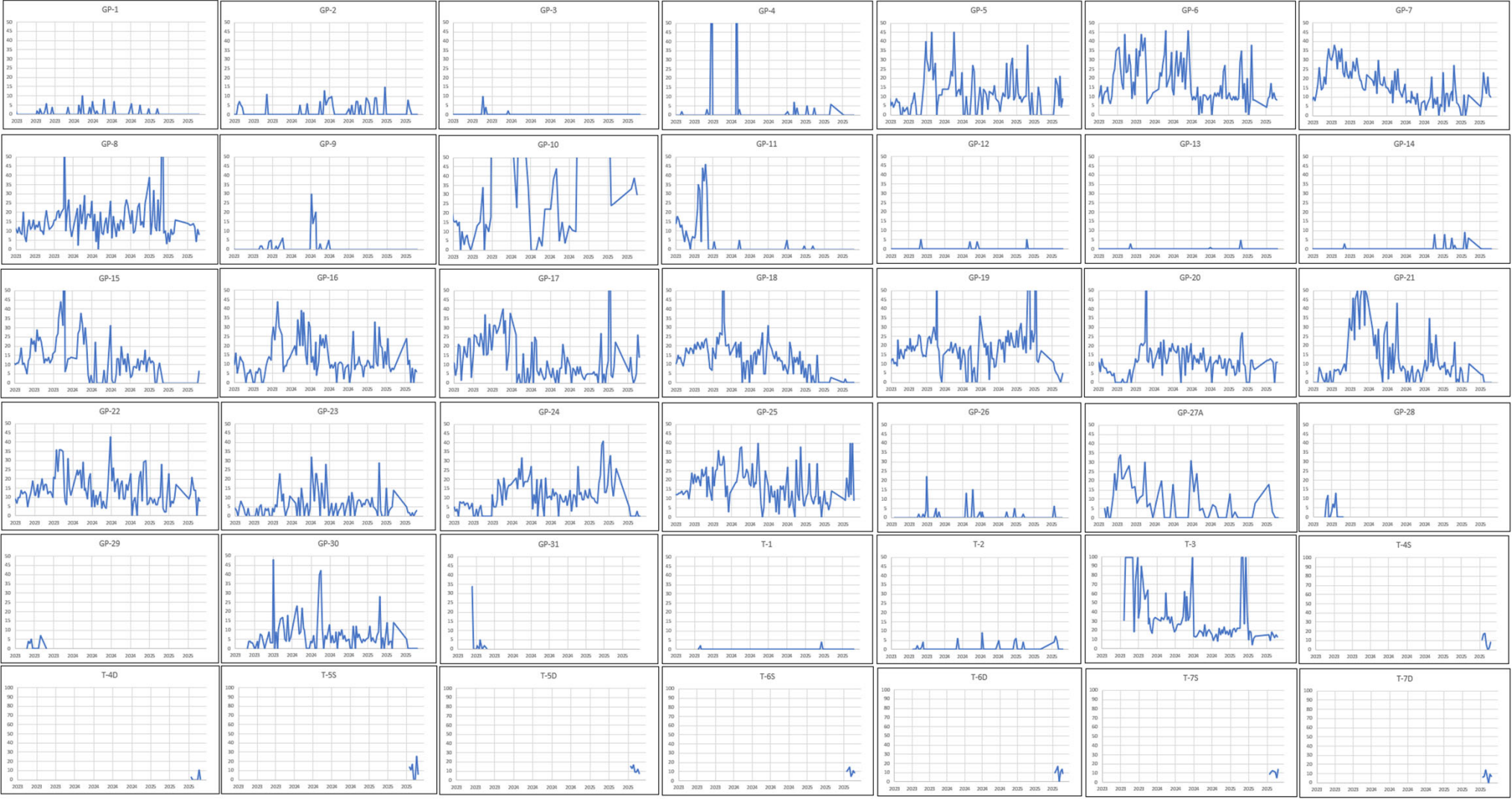
Lower Explosive Limit

Many 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.



LEL for individual GP

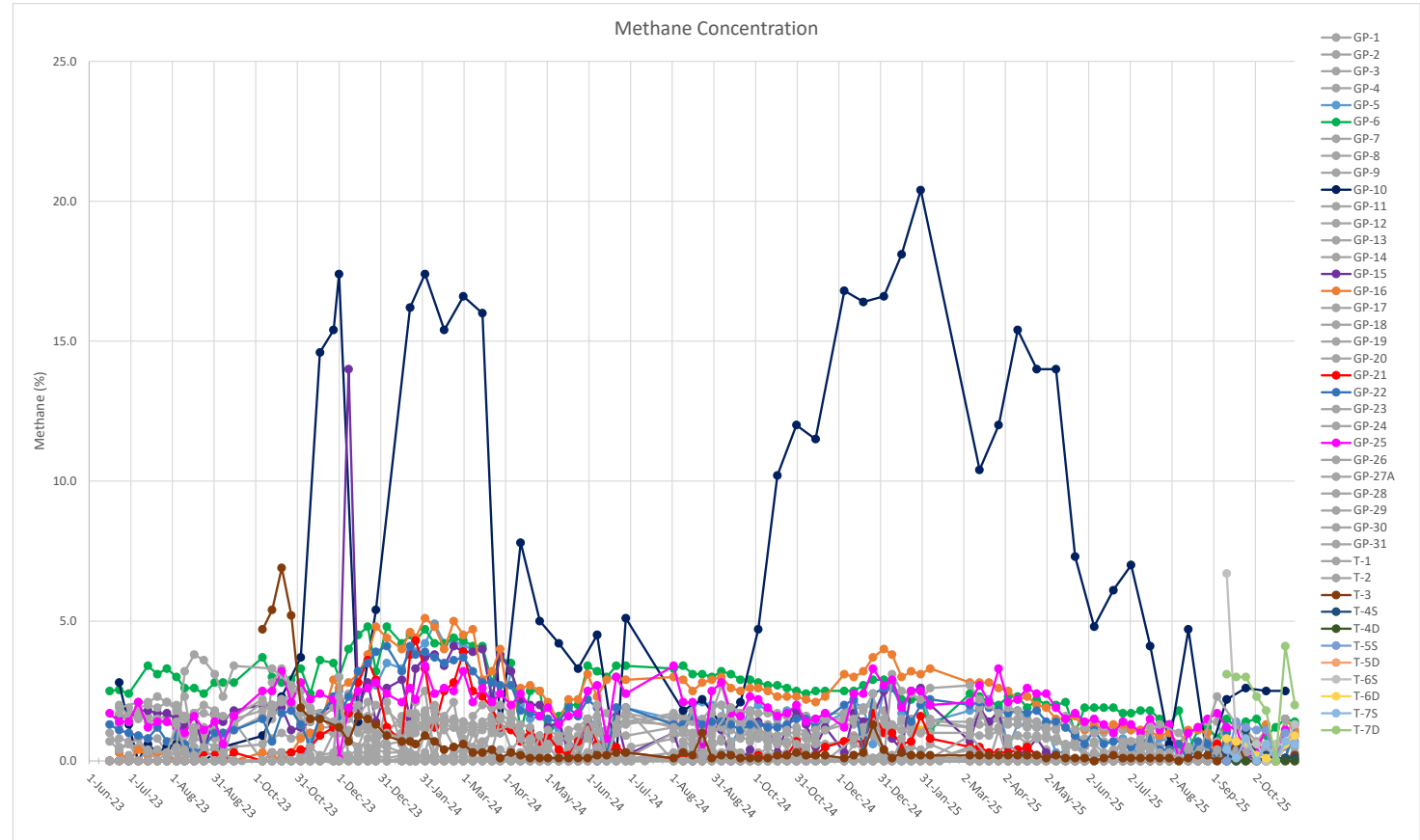


Methane

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

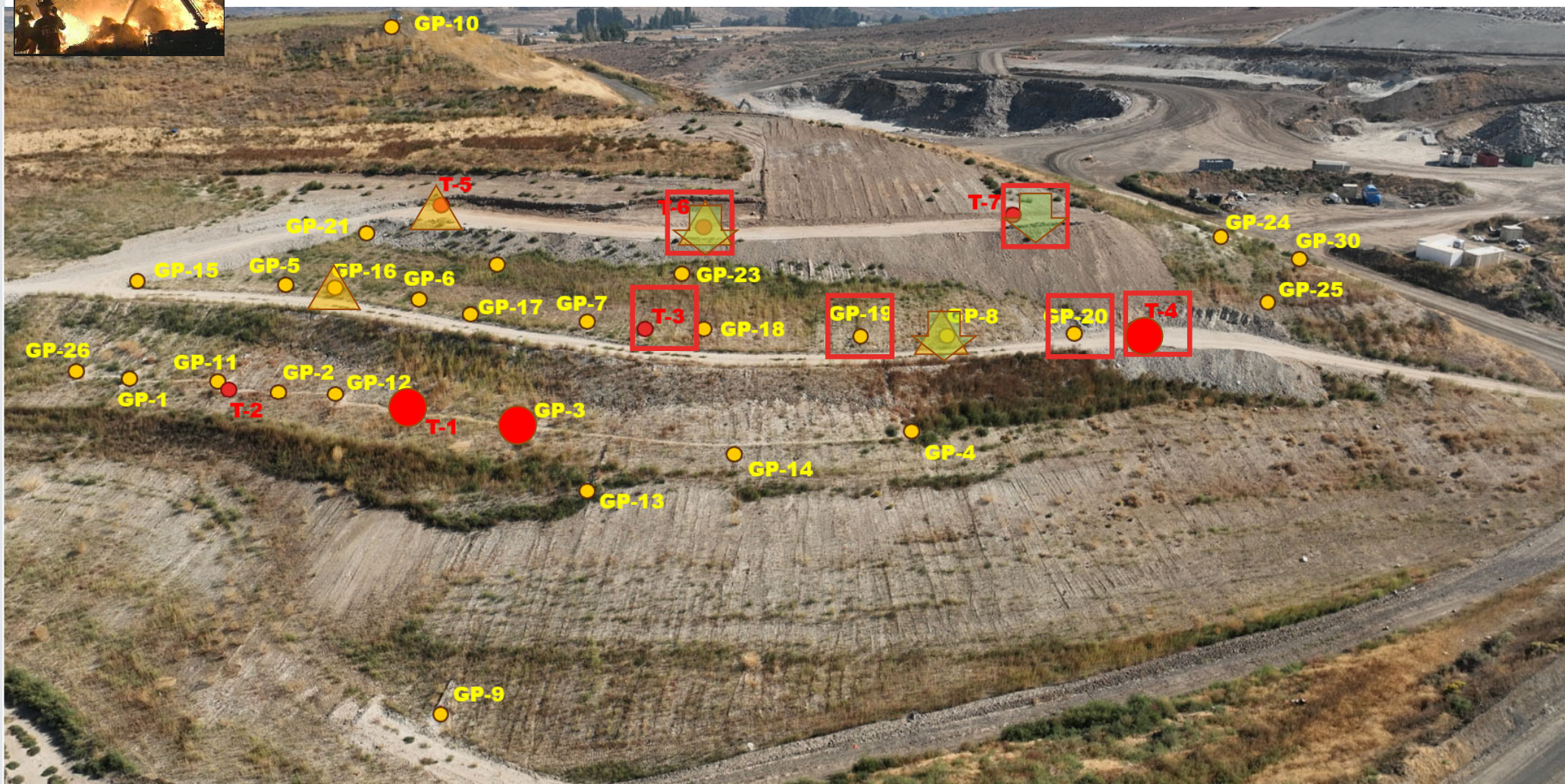
Only well GP-10 has been indicating higher methane concentrations, but has recently fallen down to less than 1. T-7 was previously the highest well, but has fallen to 0% in October, then risen before falling again to 2%.

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, LFCI believes this is possibly due to freezing or snow pack on the landfill surface.



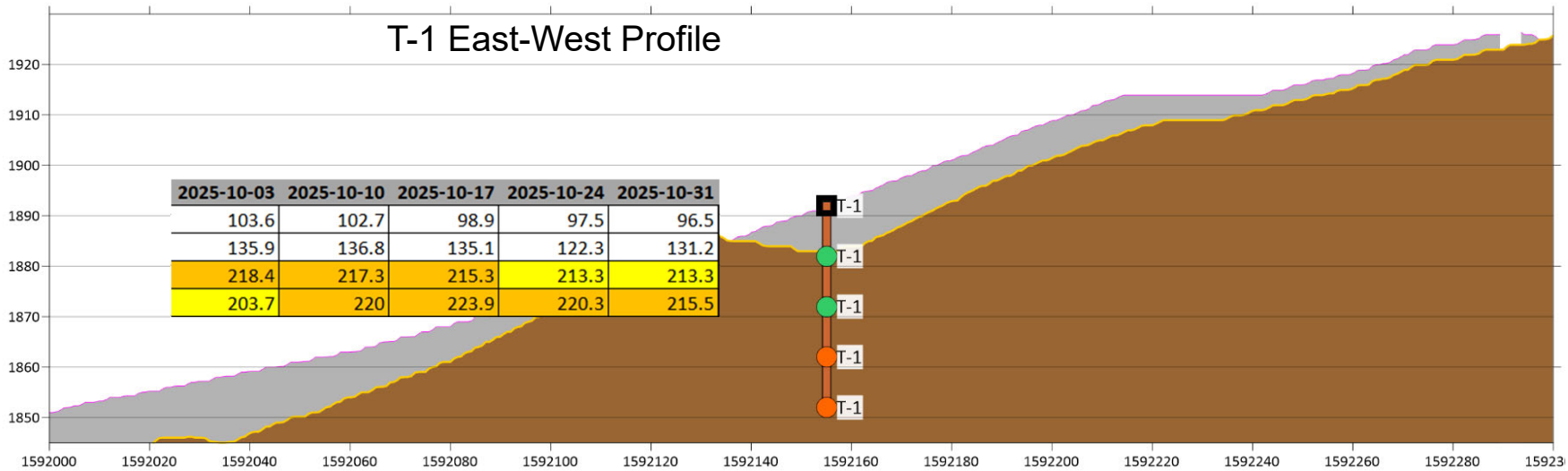


● High Temp (>200) □ High CO ▲ High H₂S ▼ High VOC



T-1 East-West Profile

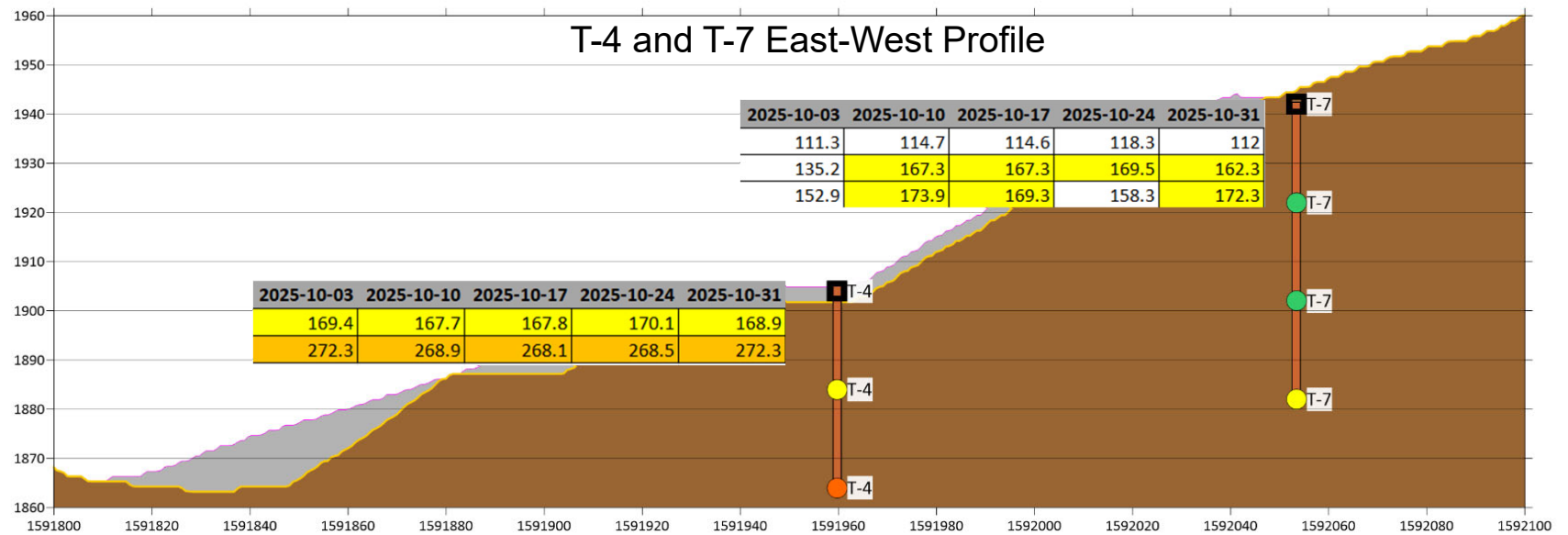
2025-10-03	2025-10-10	2025-10-17	2025-10-24	2025-10-31
103.6	102.7	98.9	97.5	96.5
135.9	136.8	135.1	122.3	131.2
218.4	217.3	215.3	213.3	213.3
203.7	220	223.9	220.3	215.5



T-4 and T-7 East-West Profile

2025-10-03	2025-10-10	2025-10-17	2025-10-24	2025-10-31
111.3	114.7	114.6	118.3	112
135.2	167.3	167.3	169.5	162.3
152.9	173.9	169.3	158.3	172.3

2025-10-03	2025-10-10	2025-10-17	2025-10-24	2025-10-31
169.4	167.7	167.8	170.1	168.9
272.3	268.9	268.1	268.5	272.3



Data Interpretation

LFCI believes that suppression efforts continue to work, but slowly. 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 October, temperatures of the hottest well (GP-3) have continued to decrease at a slow but steady rate.

In LFCI 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, 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 concern. As atmospheric pressure has been declining and no large pressure swings noted, LFCI is concerned about possibility decreasing effectiveness of soil cover due to desiccation or settlement cracking. **Cover integrity should be inspected and repaired as required.**

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 smoulder developing around T-4. If increases in CO and temperature continue then additional suppression measures may become necessary in that area.