

October 16, 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 – September

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 September 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 in September 2025. The monitoring data summary through September 2025 from Landfill Fire Control, Inc. (LFCI) is attached.

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

The Q2 groundwater report was submitted September 3, 2025.

The Q2 MTCA technical memorandum was submitted September 3, 2025.

The Q3 LFG and H₂S monitoring was performed on September 3, 2025 with results submitted September 5, 2025

Deviations from Plans (if any):

The LFCI September summary identifies concern for increased oxygen levels in the fill. This may be due to the thermistor installations and cut road access. Thermistor installation was completed in August and the cut road will be backfilled.

The August 14-15 gas probe testing included review of the MTCA area surface with no indications of cracking or venting identified.

Deviations Description from the Scope of Work and Schedule:

SUMMA canister air sampling was delayed due to ambient regional wildfire smoke.

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.

Address

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

Contact

425 549 3000
dtgreecycle.com

Deliverables for the Upcoming Month:

Deliverables will include:

- Weekly ambient and gas probe data
- October Progress Report
- Thermistor/Well Installation TM
- SUMMA canister air sampling
- Q4a groundwater sampling

Please contact me to discuss any of the above items.

Respectfully,



Ian Sutton
Director of Engineering
DTG Recycle
isutton@dtgrecycle.com

Enclosures: LFCI Data Update – September 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

October 15th, 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 – September 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 September has exhibited a mixed response on account of a substantive air incursion event that started on July 1, 2025. Overall, CO and temperatures continue to trend downward, particularly in GP-3, the hottest probe. Thermistor response in T-1 has continued the decreasing trend, with T-3 indicating slight temperature increases.

When looking at long term trends, the collected data has indicated that the subsurface smolder has become much less active since the soil cover was applied. Temperature and other parameters have all indicated a decrease in fire activity, with CO once again low and decreasing.

A concern has been recognized with oxygen levels increasing throughout the month to highest levels observed to date in many wells (see spatial maps of O₂). September 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.

As well, 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.

LANDFILL FIRE CONTROL INC.

#8-1225 East Keith Rd., North Vancouver, BC – V7J 1J3
P: (604)-986-7723 E: sperling@sperlinghansen.com
www.landfillfire.com



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 currently 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.

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 time line 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

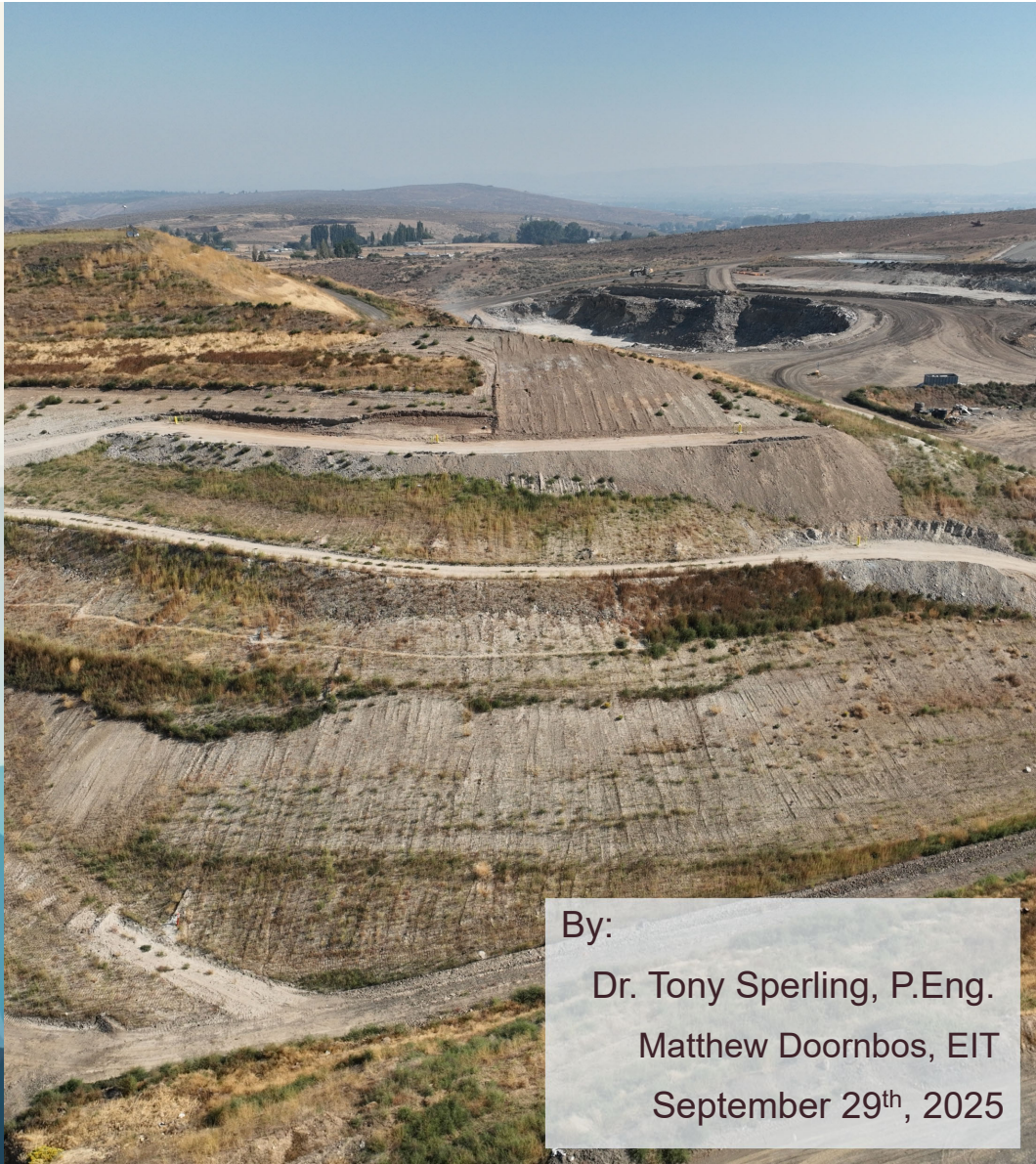


October 15th, 2025



DTG LPL LANDFILL FIRE INVESTIGATIONS AND MITIGATION

Monthly Monitoring Data Review
September 2025



By:
Dr. Tony Sperling, P.Eng.
Matthew Doornbos, EIT
September 29th, 2025

Introduction

BHP Locations

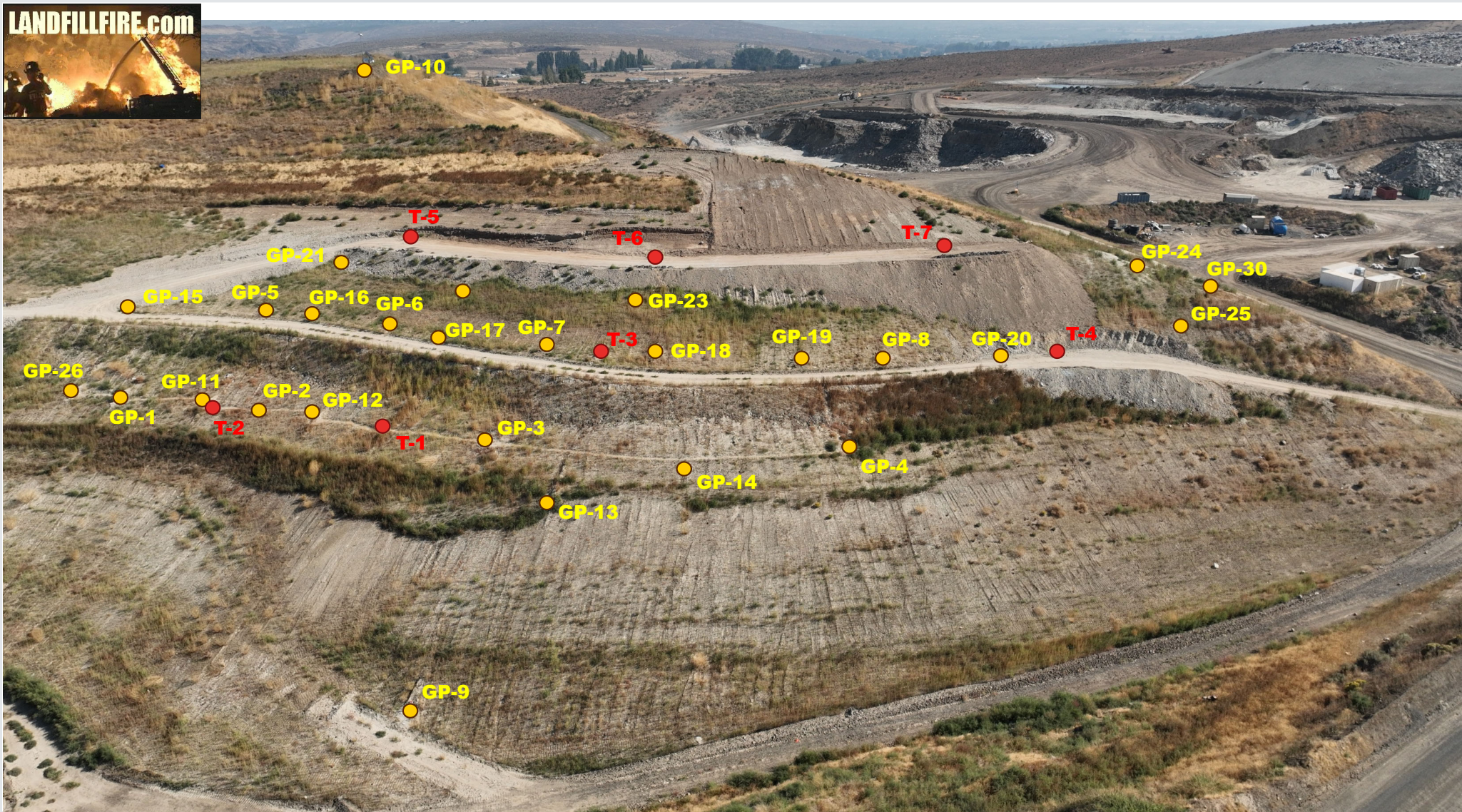
- There have been 31 Ground Probes installed, 3 of which are no longer monitored. 26 probes are monitored weekly, and 2 are monitored on a bi-weekly basis.
- Three thermistor wells were installed in mid-2023, which are monitored at varying depths to better determine the location of the hotspot.
- Four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

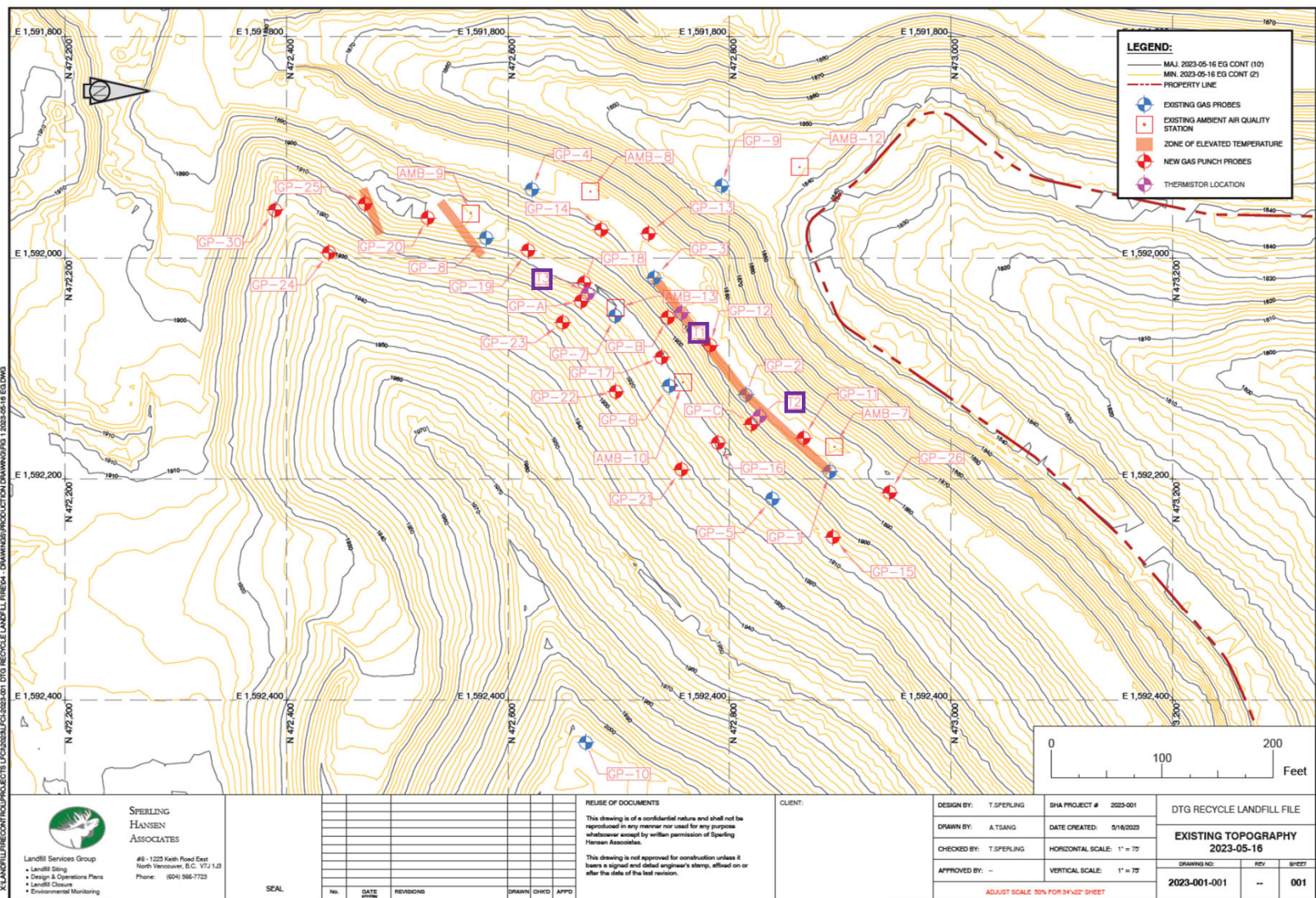
Monitoring Data Review

- 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





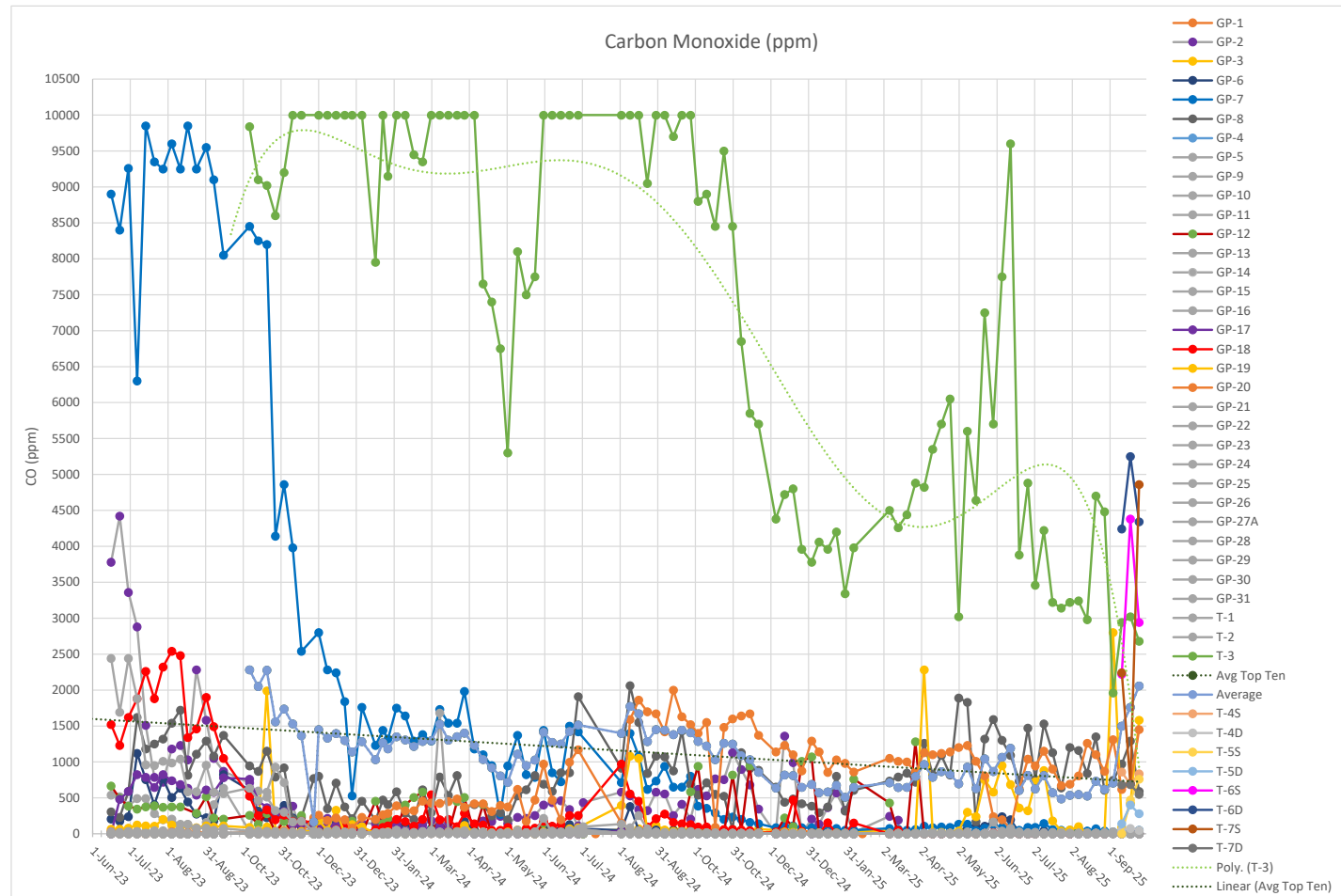


Carbon Monoxide

The month of September saw Carbon Monoxide levels fall in T-3 from the previously recorded 4500ppm down to around steady 3000ppm 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.

Three of the newly installed thermistors (T-6D, T-6S, and T-7S) all have elevated levels of CO compared to the other regular GPs.

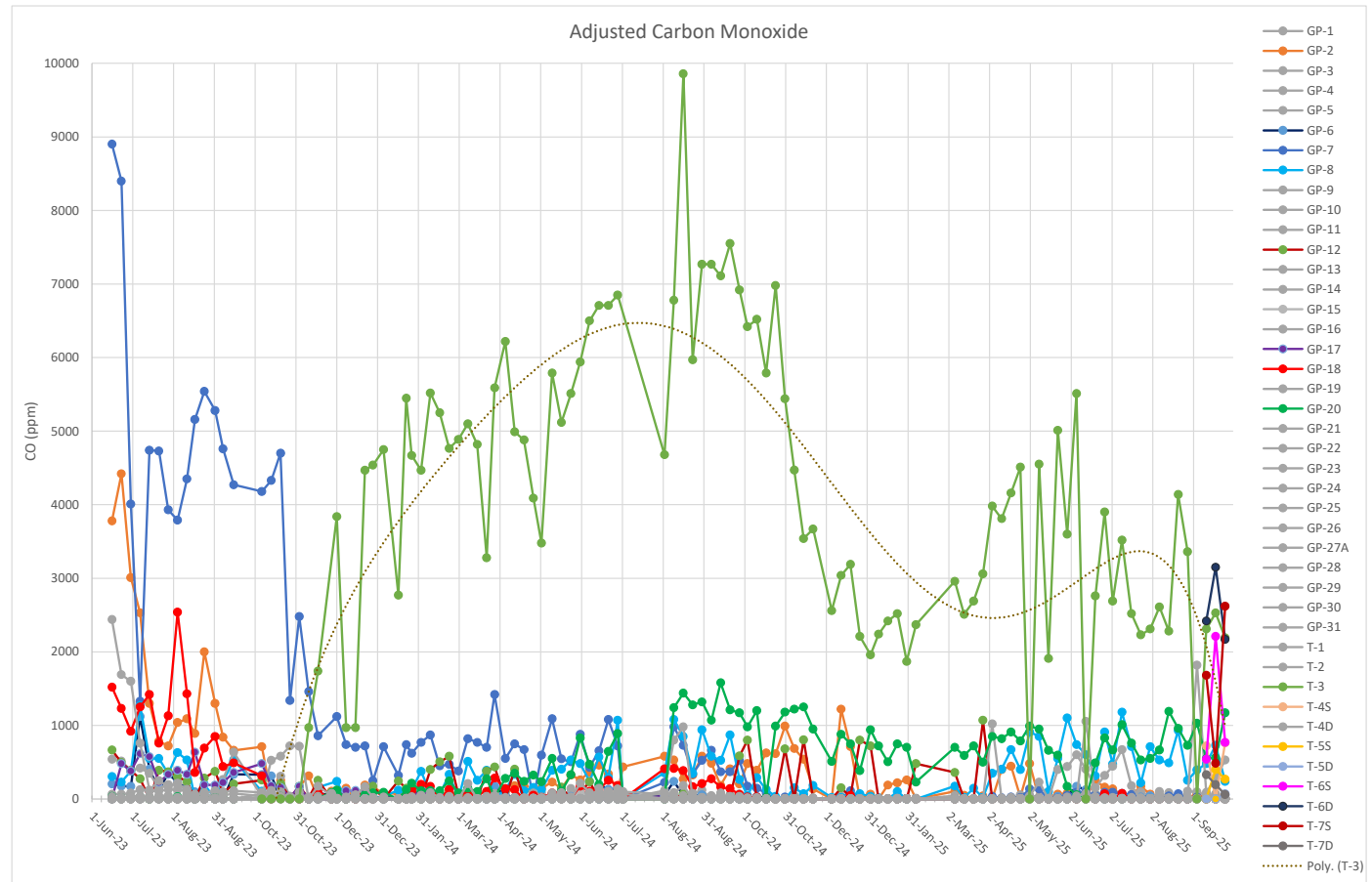


CO Adjusted for H2 Gas

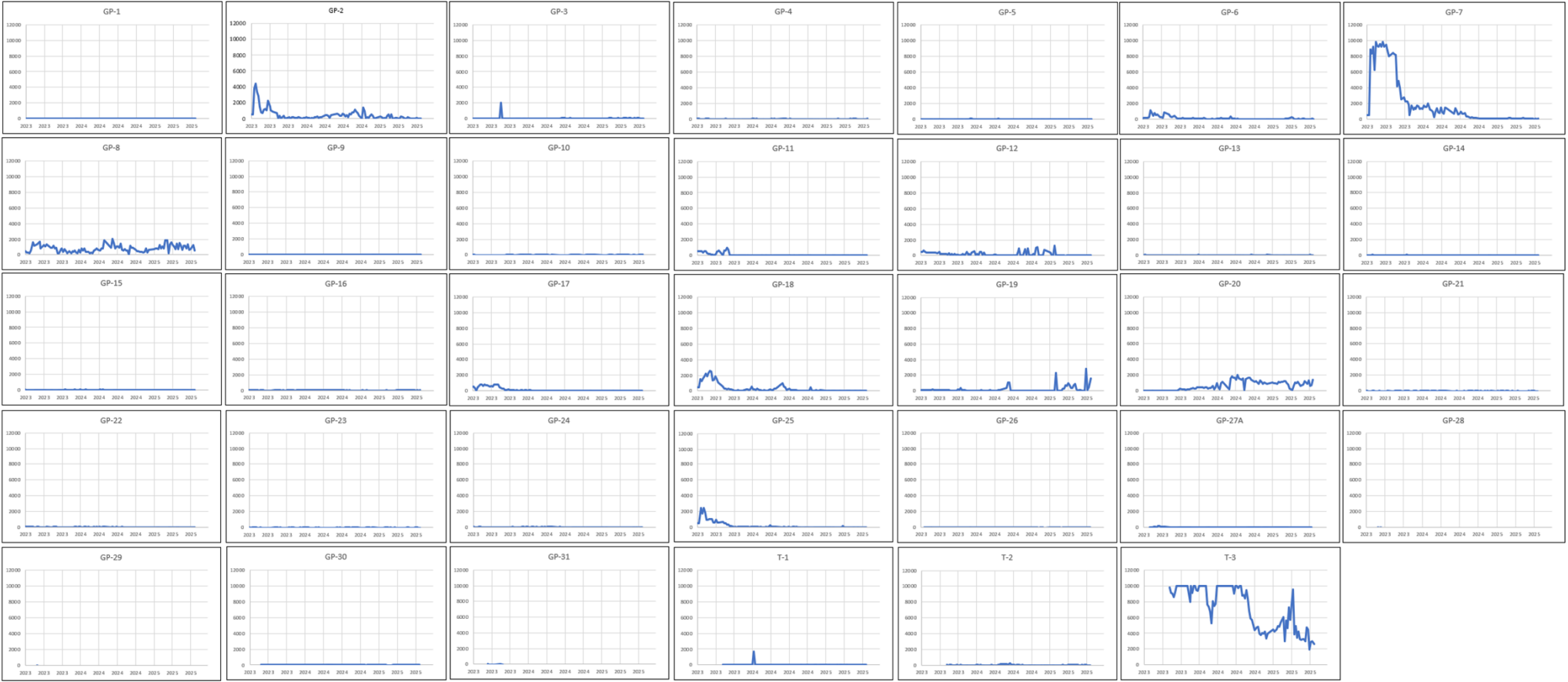
Adjusted CO measurements have also shown somewhat increased but varying levels of carbon monoxide between January 2025 and early June 2025, followed by a decrease June through August 2025. More recent measurements show adjusted CO for the highest wells around 2500ppm.

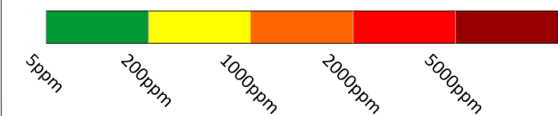
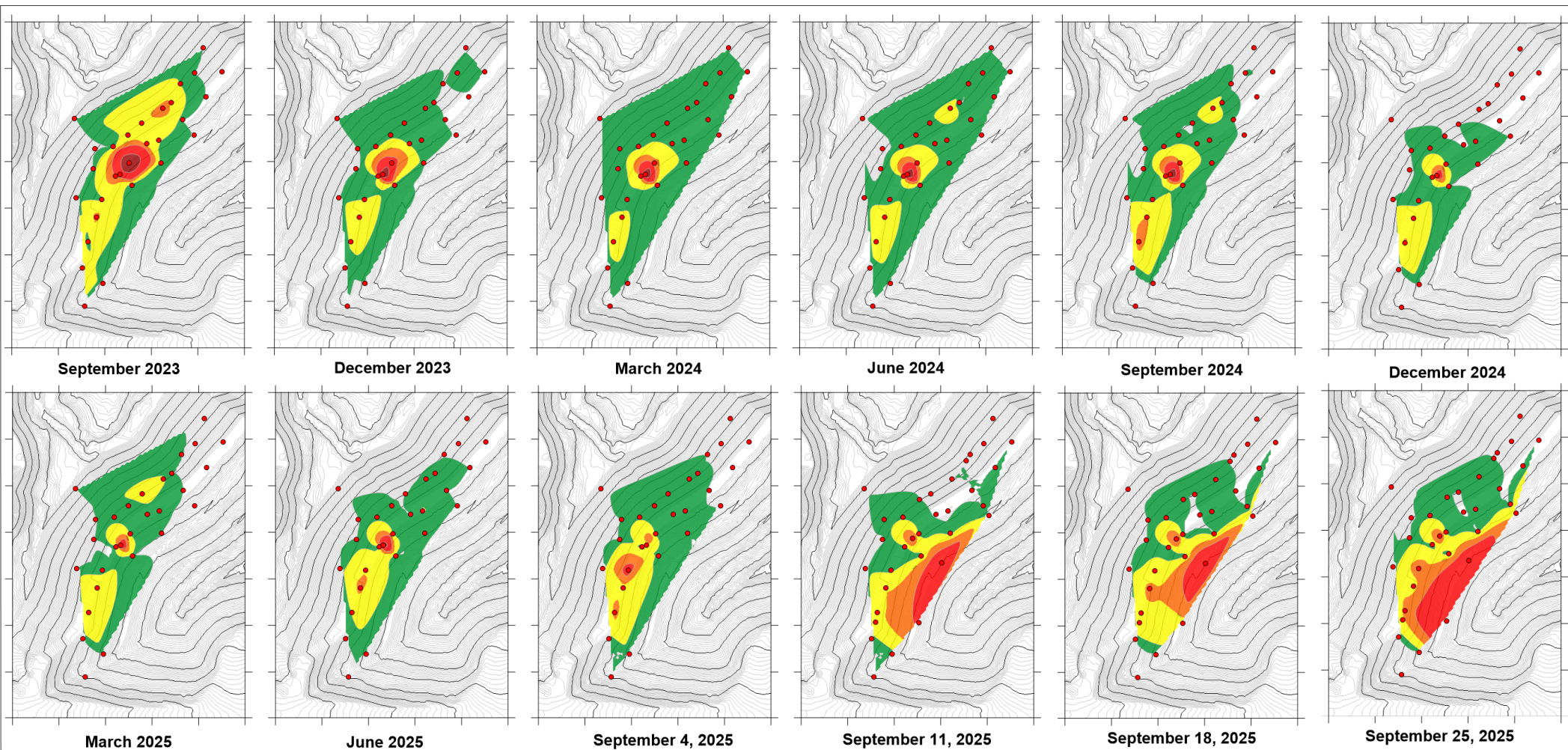
SHA will continue to monitor the new thermistors to ensure that there is no concerning trends or elevated levels of Carbon Monoxide that might indicate a fire deeper within the waste mass.

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





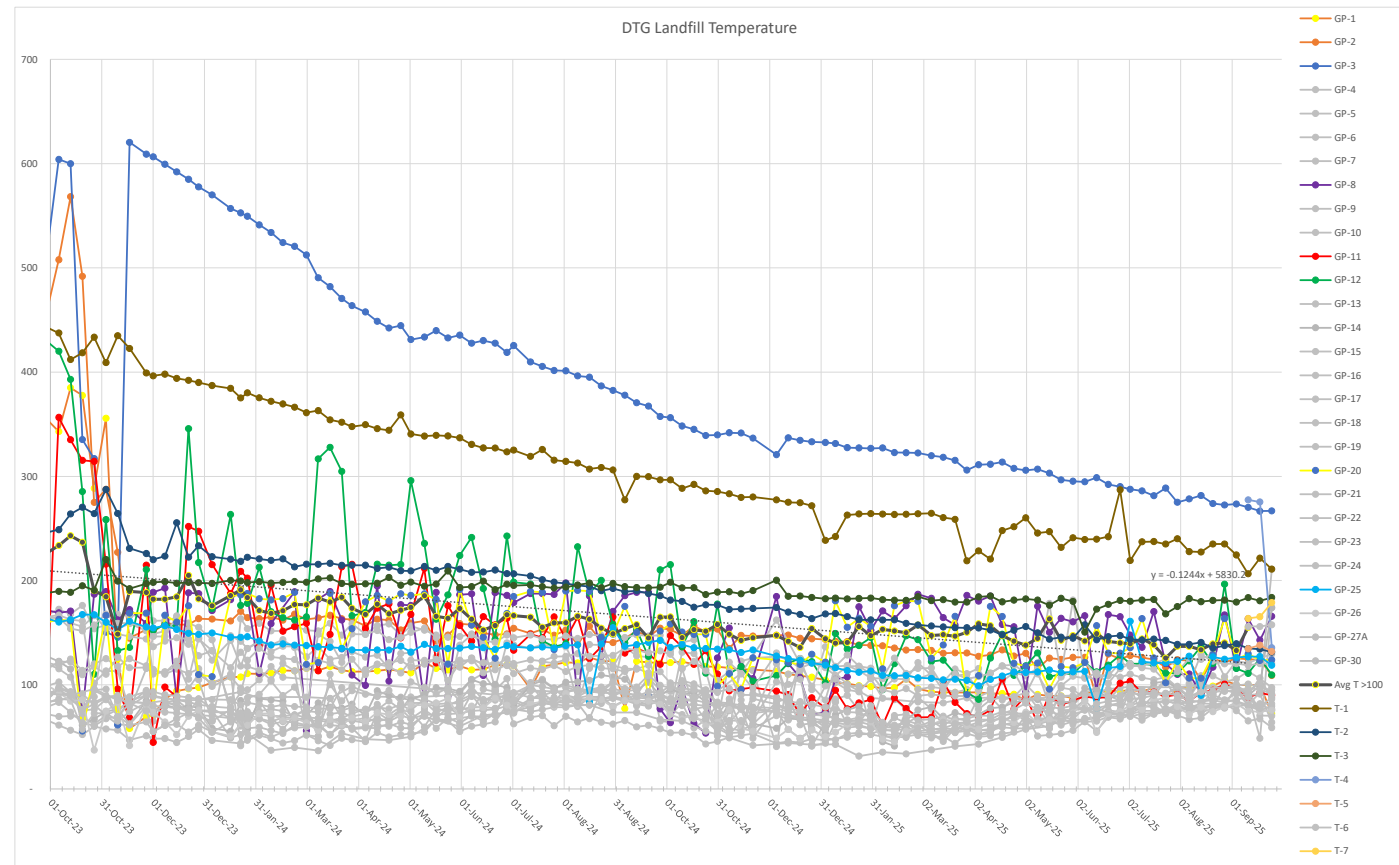
- Data taken from first monitoring event of each month unless noted otherwise
- Data has been interpolated between data points
- Datapoints (probe locations) represented in red
- CO levels are measured in ppm
- Ground contours are of existing ground at beginning of project, with design contours added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

Temperature (F)

September saw continued decreasing temperatures in GP-3, the hottest well, with temperatures continuing to record increasingly lower temperatures, down to 266F at the end of September.

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.

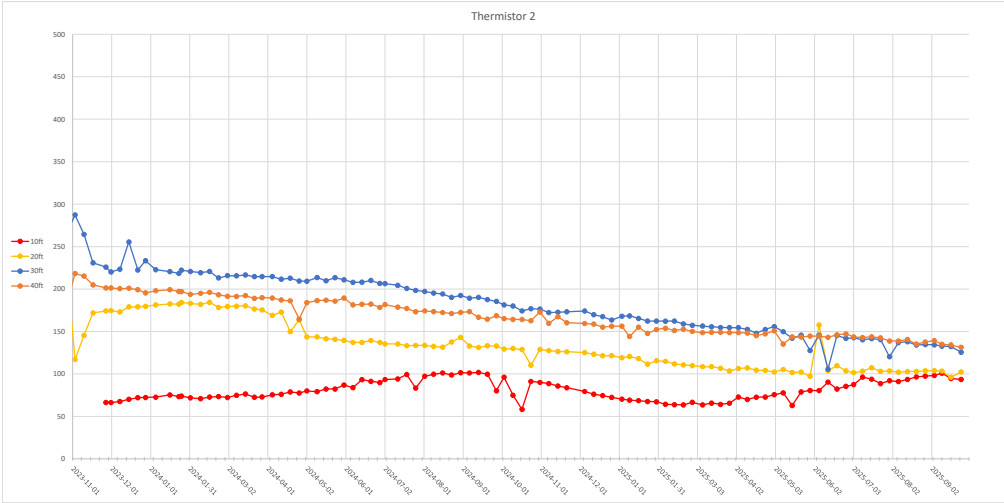
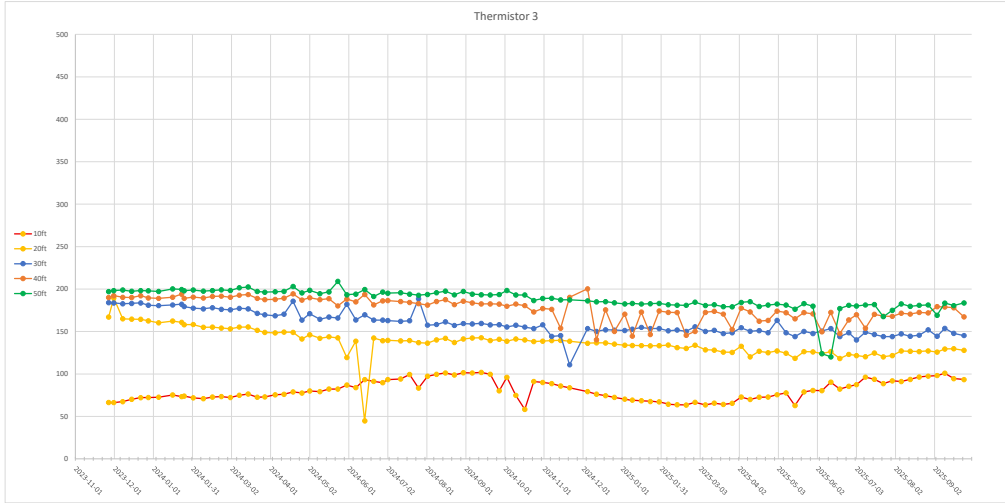
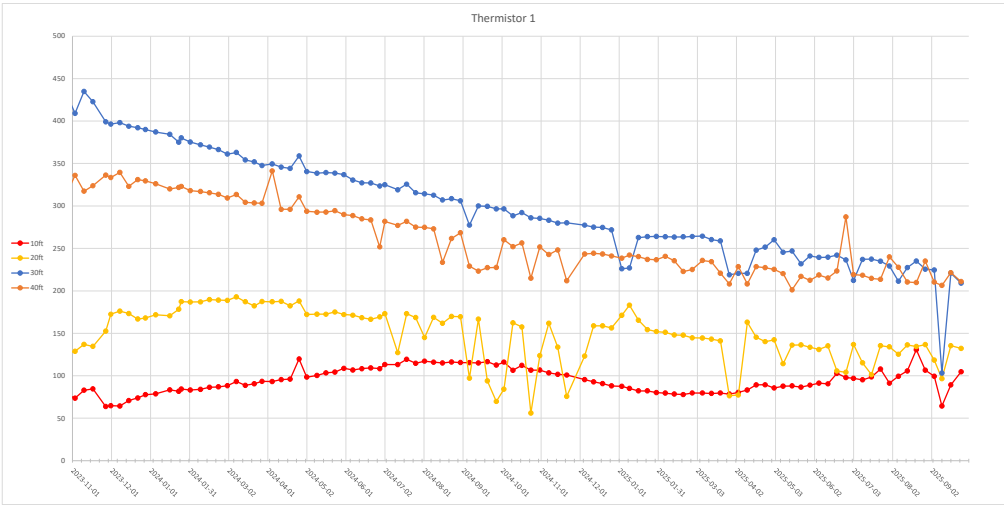
LFCI has now added the maximum recorded temperature for each thermistor well to the graph. This shows that GP-3 and T-1 are the hottest wells but both continue to exhibit decreasing trends.



Thermistor Temperatures (T1-T3)

Thermistor temperatures are mostly stable, with a slight downward trend in T-1 and T-2, however; the rate of cooling is decreasing, especially in T-1. Consideration should be given to installing a dedicated thermistor on T-1 at 20 ft, as the oscillations seen at depths of 20 and 30ft feet indicate there may be issues with the measurements.

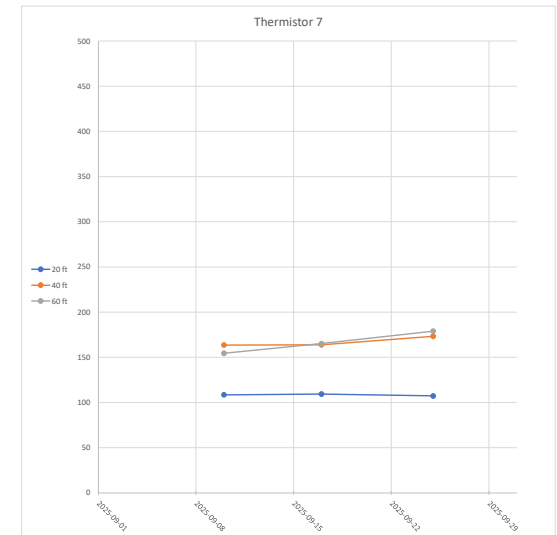
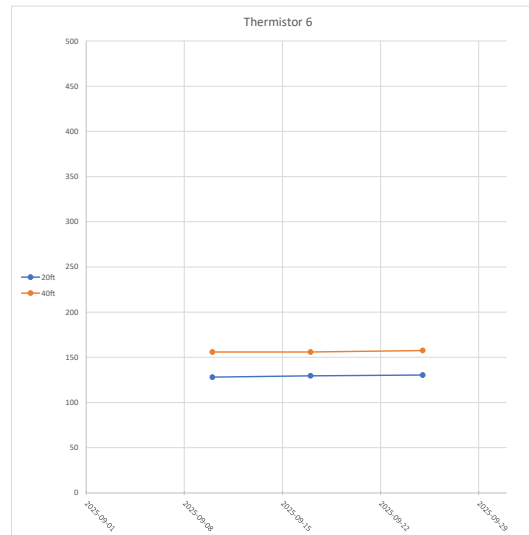
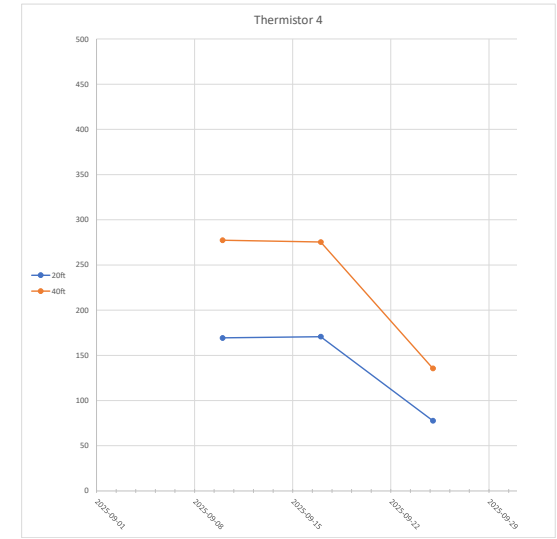
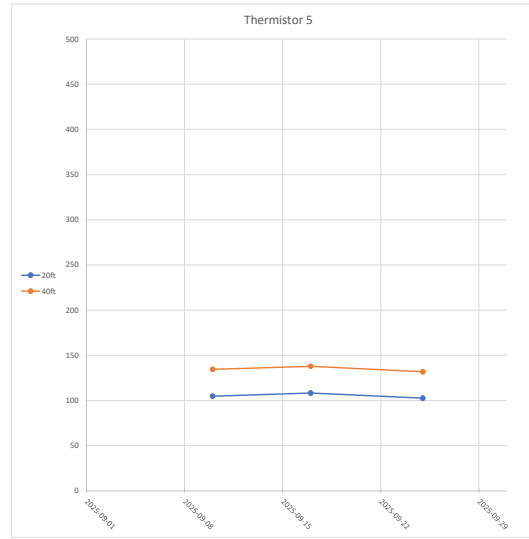
There is a slight increase in T-3, which SHA expects to decrease as the ambient temperatures decrease over the winter.

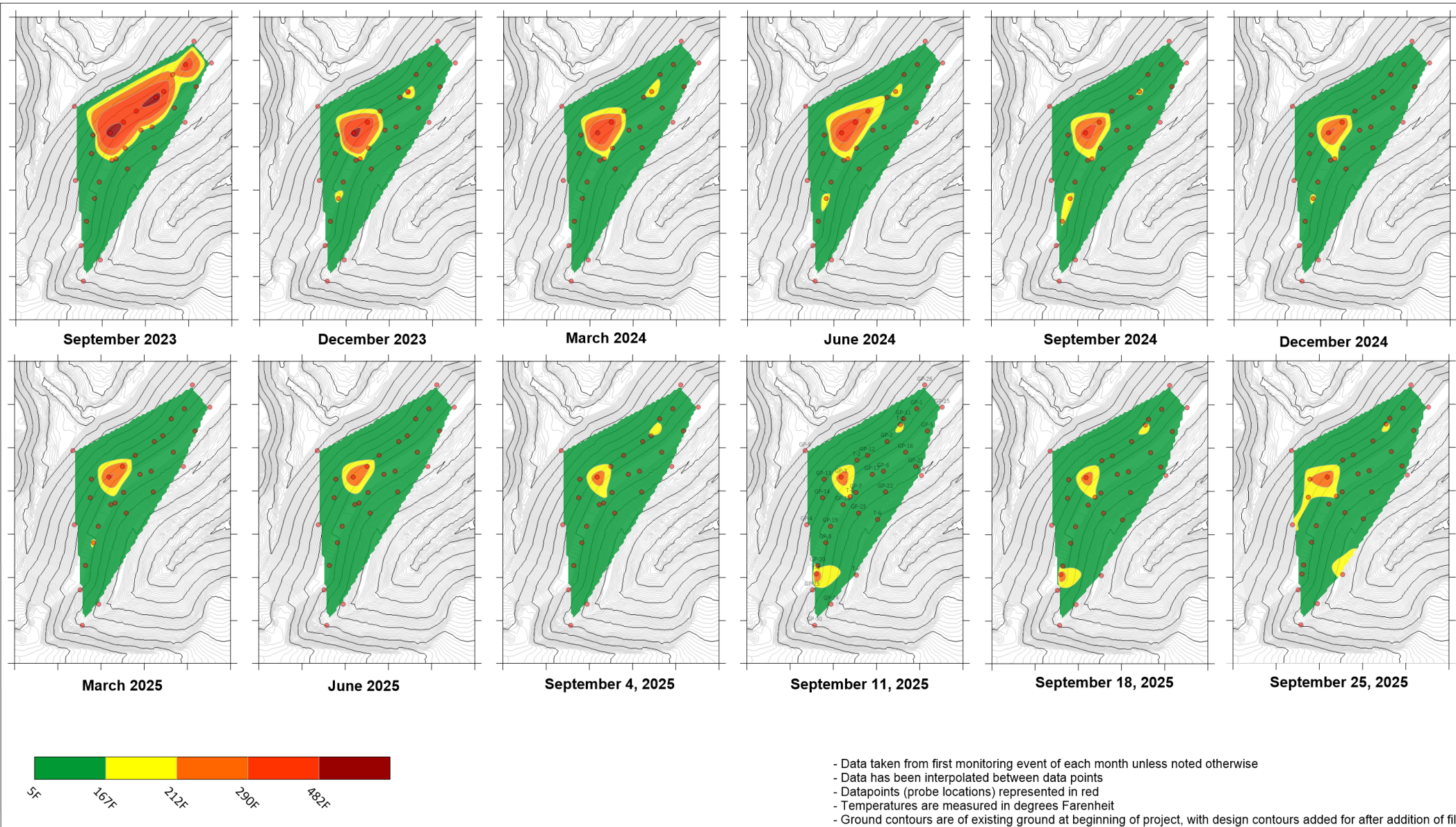


Thermistor Temperatures (T4-T7)

With only three weeks of data, the new thermistor temperatures seem stable, with some slight increase in T-7 and a significant decrease in temperatures in T-4. 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. There is no fire in the area intercepted by these wells.



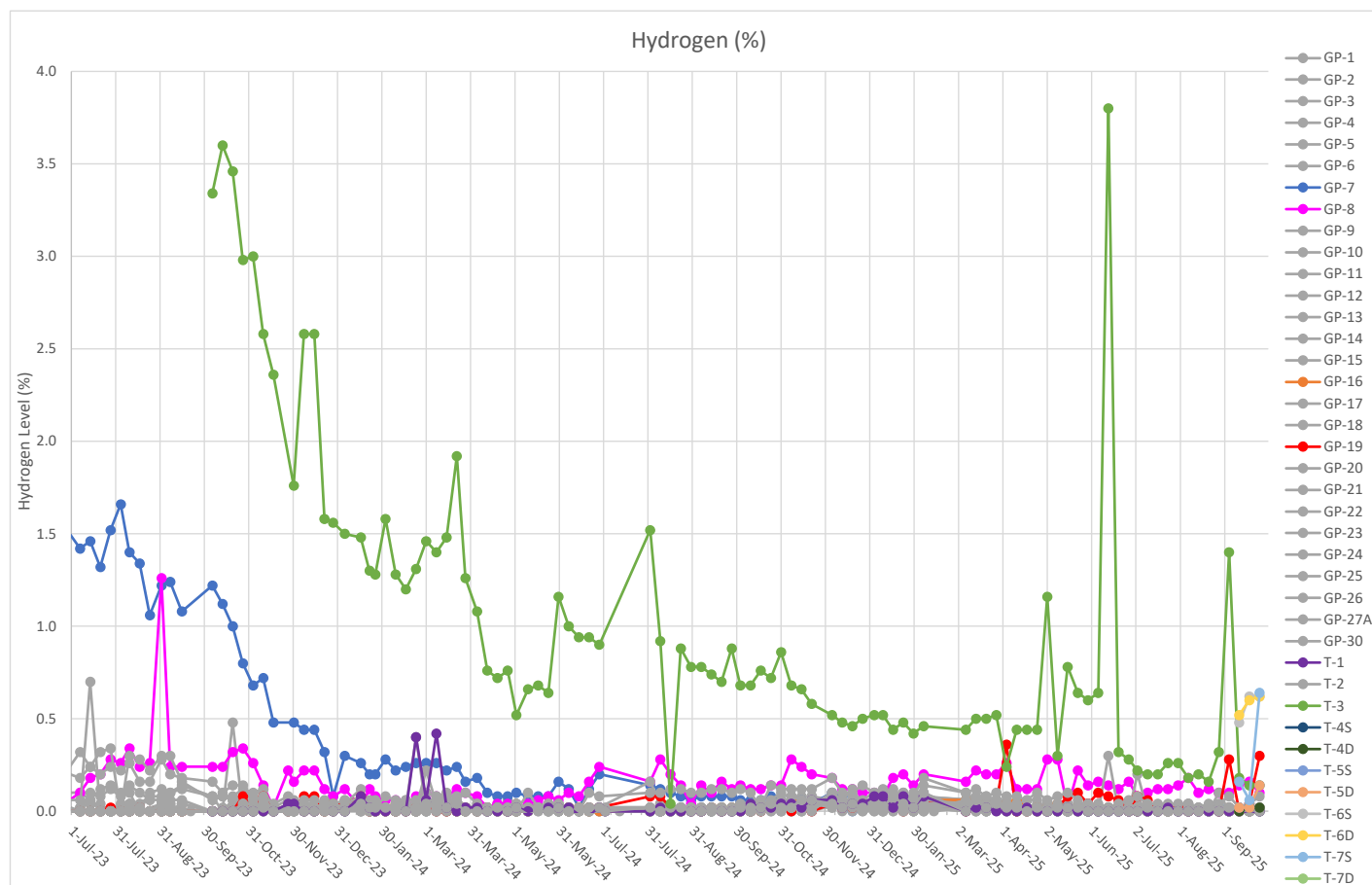


Hydrogen

The hydrogen measurements in T-3 have dropped to an all-time low at 0.1% after a brief spike up to 1.4% at the beginning of September.

The new thermistor wells have recorded varying hydrogen levels, with T-7D, T-6S, and T-6D having higher levels around 0.6%. As more data becomes available, it will be important to monitor these trends.

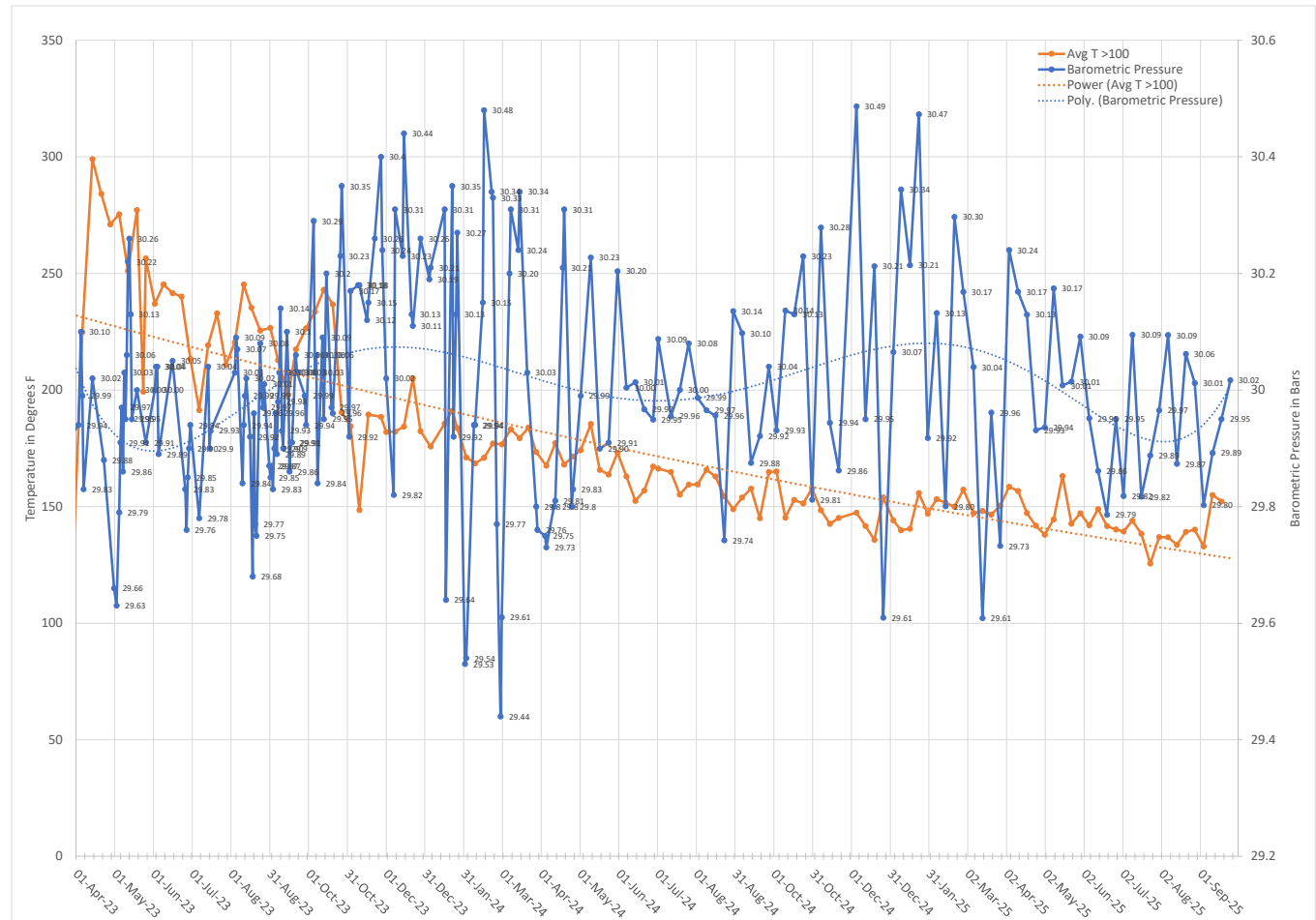
Hydrogen remains very low in all other wells. Production of H₂ is often observed with smoldering waste. LFCI believes that the level of H₂ dropping continues to indicate that the fire is less active.



Barometric Pressure

The site continues to see a decreasing atmospheric pressure over the summer, and LFCI believes that we are starting to see the upwards swing as the season changes.

Based on past pressure trends, we anticipated this low pressure environment from April through to September, which resulted in the expected less oxygen availability. This has seemingly had the desired effect of providing less oxygen to fuel the fire, as temperatures have continued to decrease. Now that 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

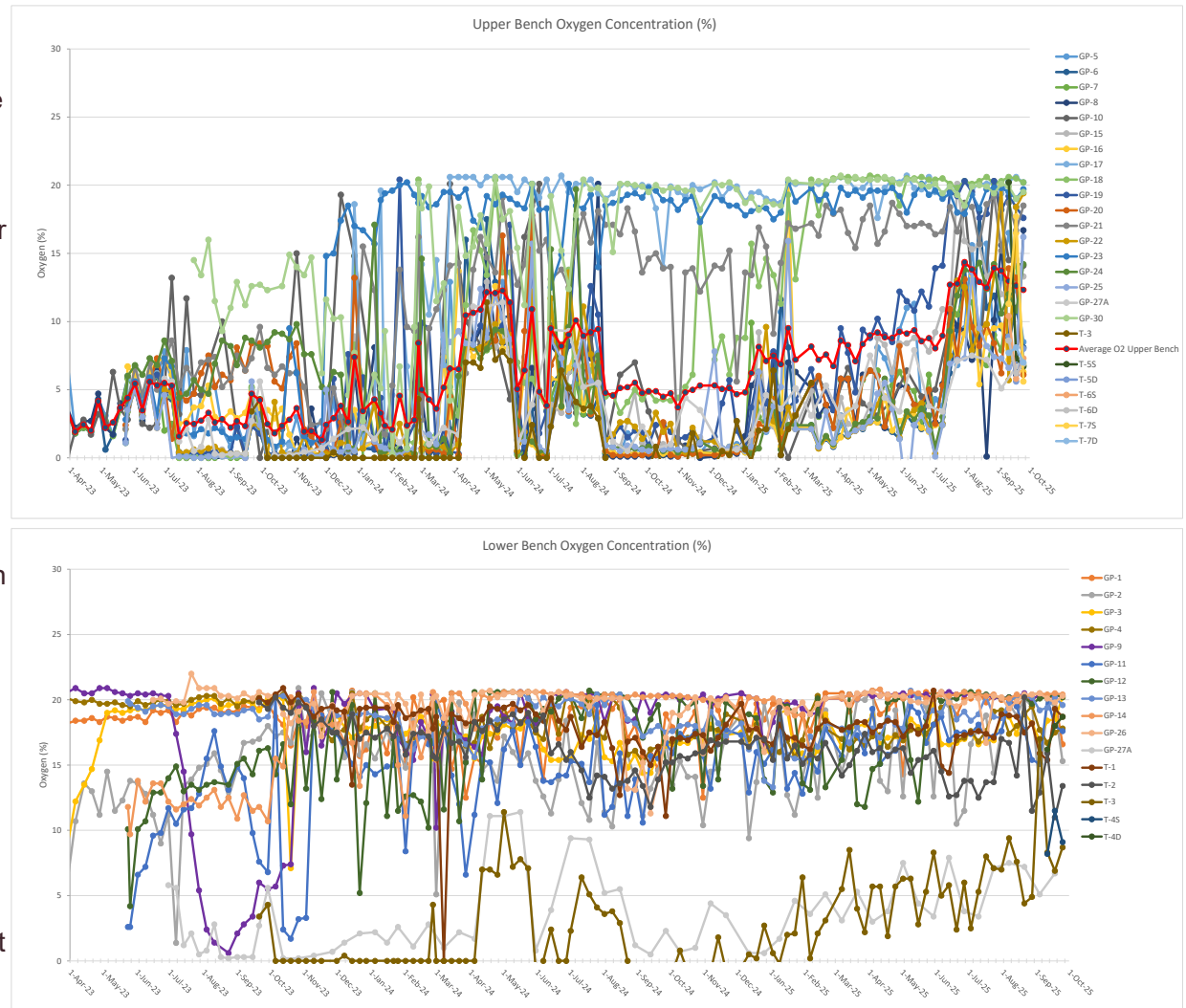
The oldest portion of the landfill is likely relatively inert and biologically inactive, producing very little methane. As a result, the pore space is full of atmospheric air, leading to the generally high oxygen concentrations. In plan view, oxygen levels have been increasing since January of 2025.

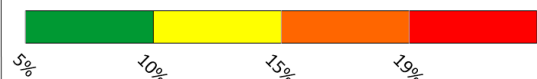
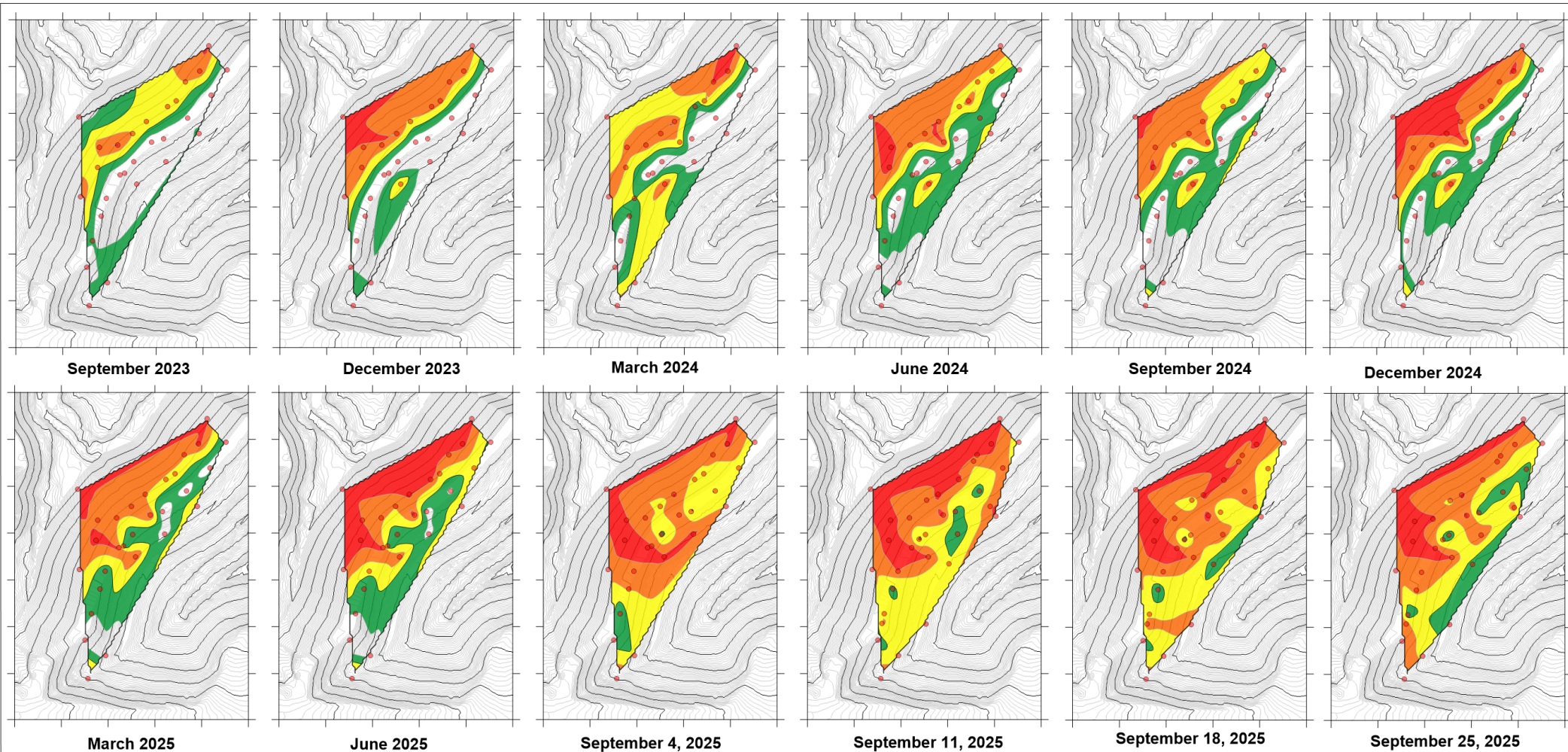
Oxygen levels in many of the GPs in the upper bench appear to oscillate seasonally, with higher oxygen levels in the summer months. Initially, it was suspected this was related to atmospheric pressure swings; however, the highest average pressure and greatest swings occur in the winter, while highest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

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.





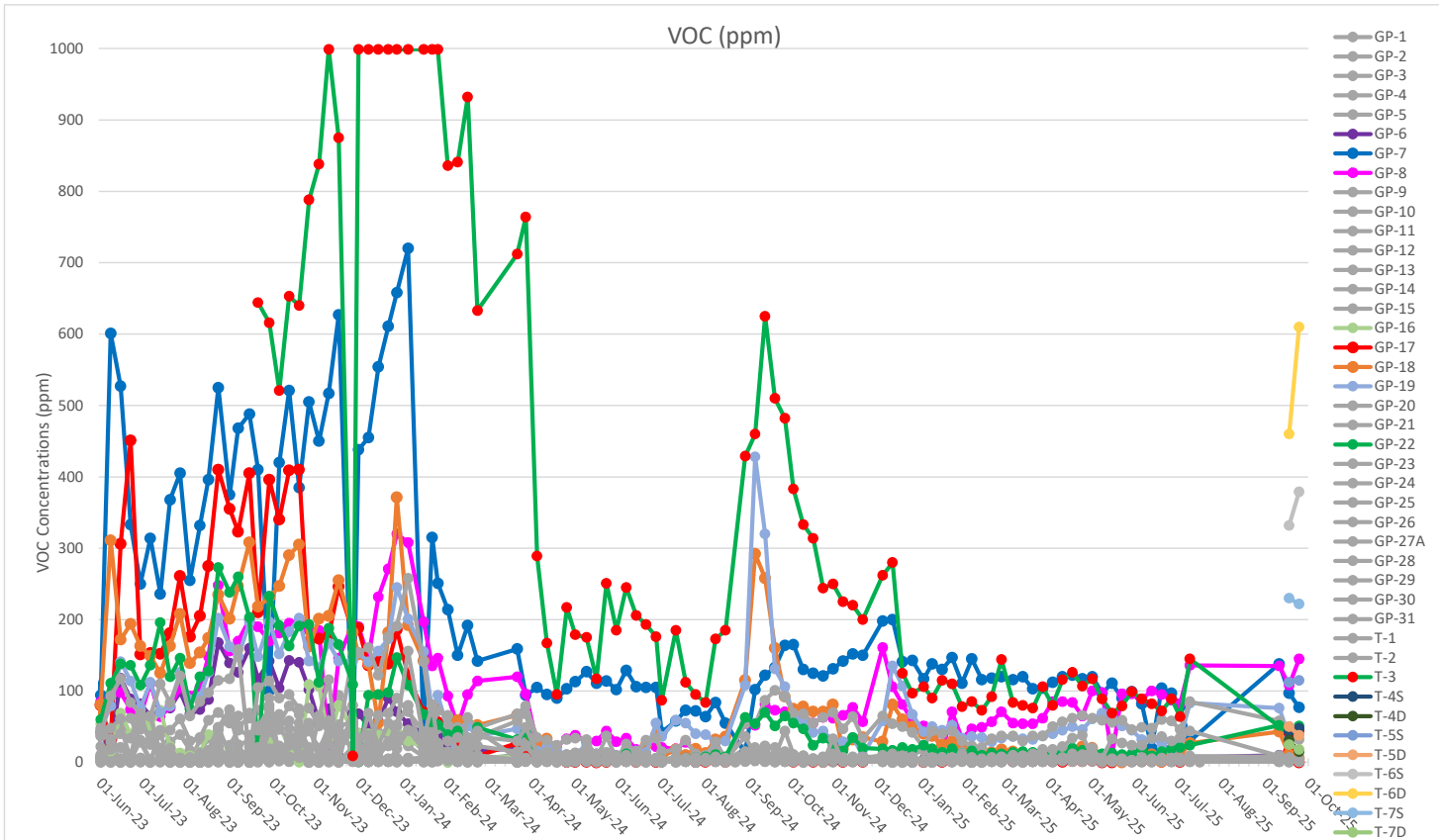
- Data taken from first monitoring event of each month unless noted otherwise
- Data has been interpolated between data points
- Datapoints (probe locations) represented in red
- O2 levels are measured in percent composition of sampled gas
- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

Volatile Organic Compounds

Through June and the first monitoring event of July, VOC levels have continued a modest declining trend with the highest concentrations in several wells around 100ppm.

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.

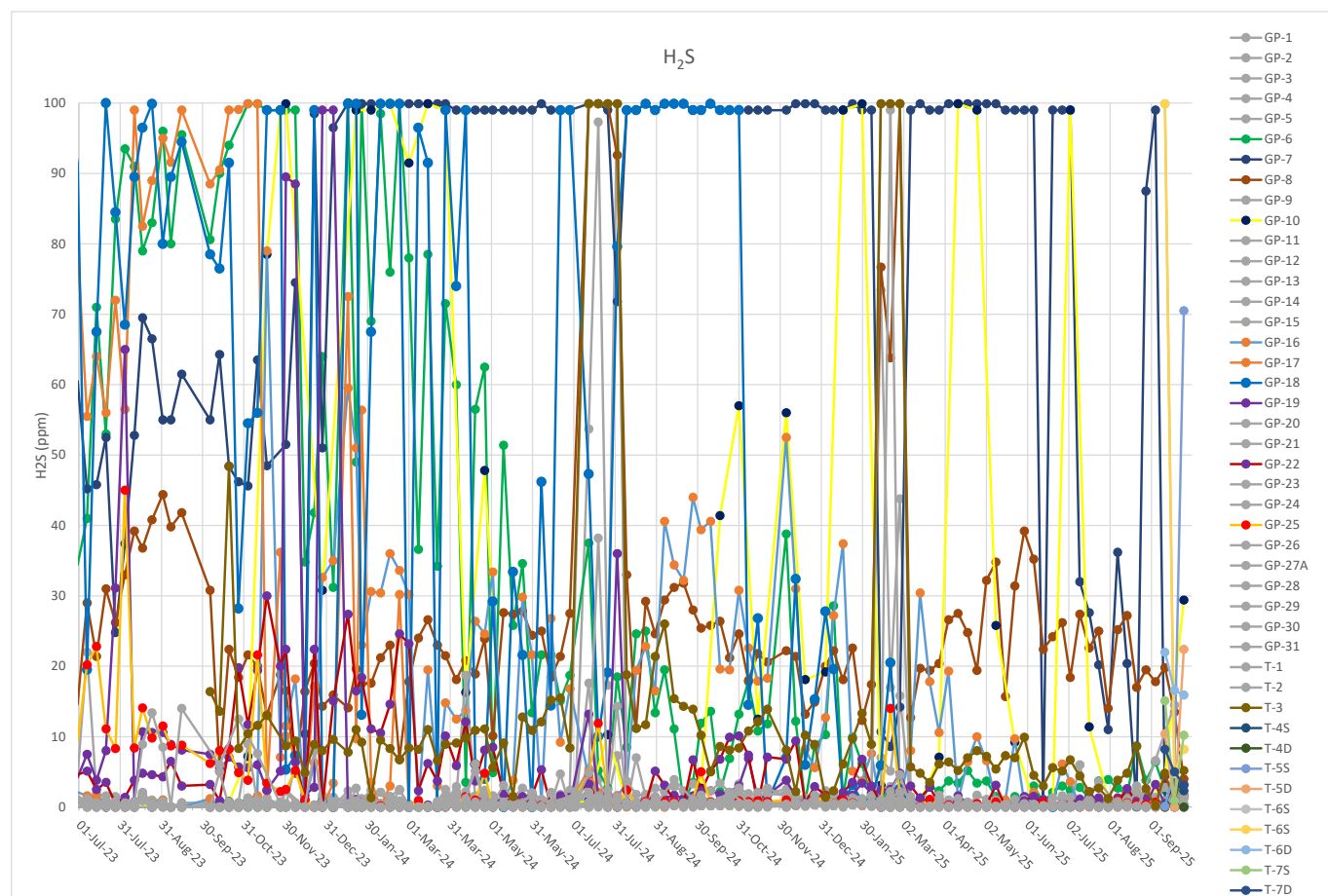
Now that VOCs are measured again, the levels are somewhat similar to what they were in July, but several of the new thermistor wells (T-6 and T-7) are exhibiting higher levels of emissions. LFCI will continue to monitor for any concerning trends.



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.

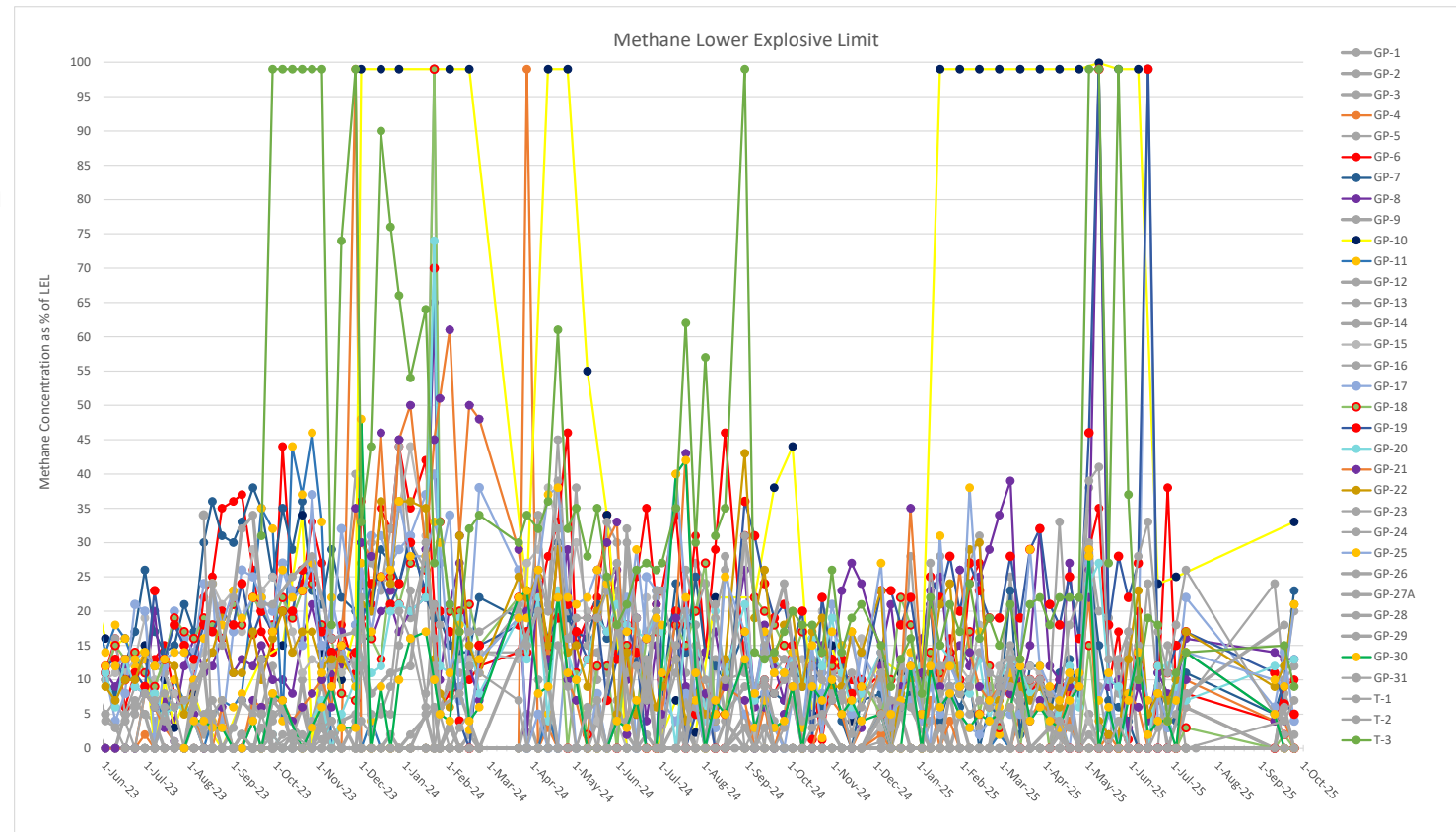
As mentioned previously, it is possible that the H₂S sensor is being impacted by CO cross interference. With CO concentration decreasing, reported H₂S concentration is dropping as well.



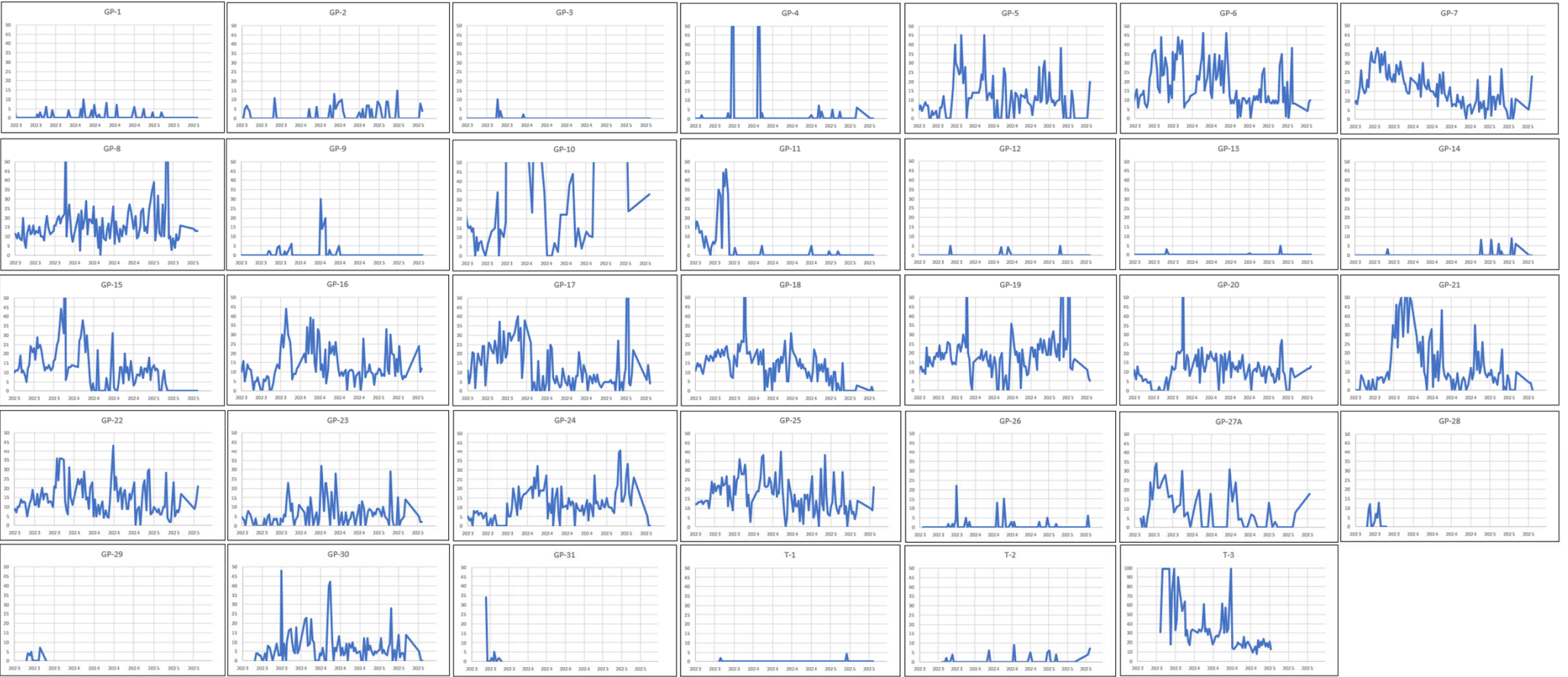
Lower Explosive Limit

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.



LEL for individual GP

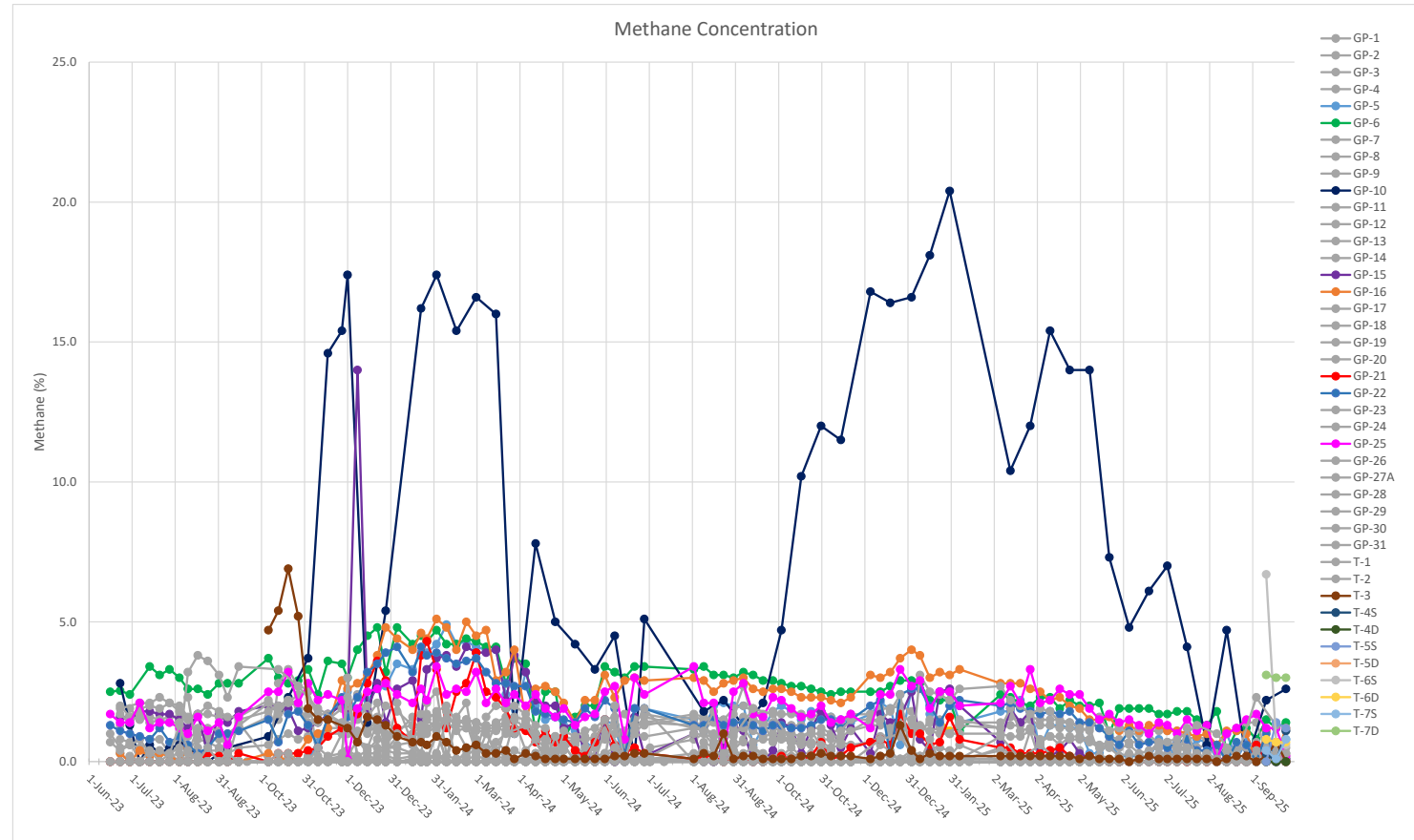


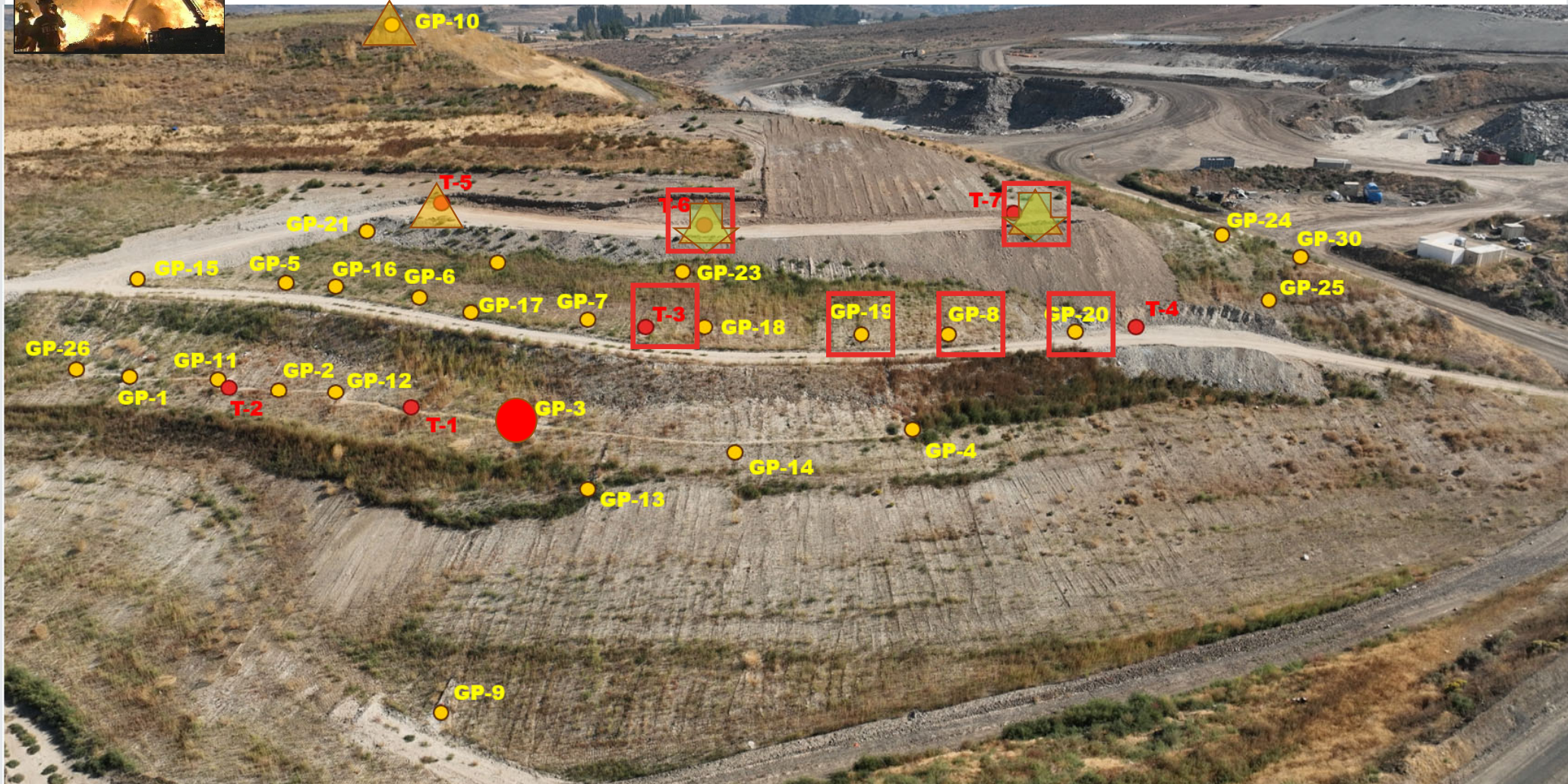
Methane

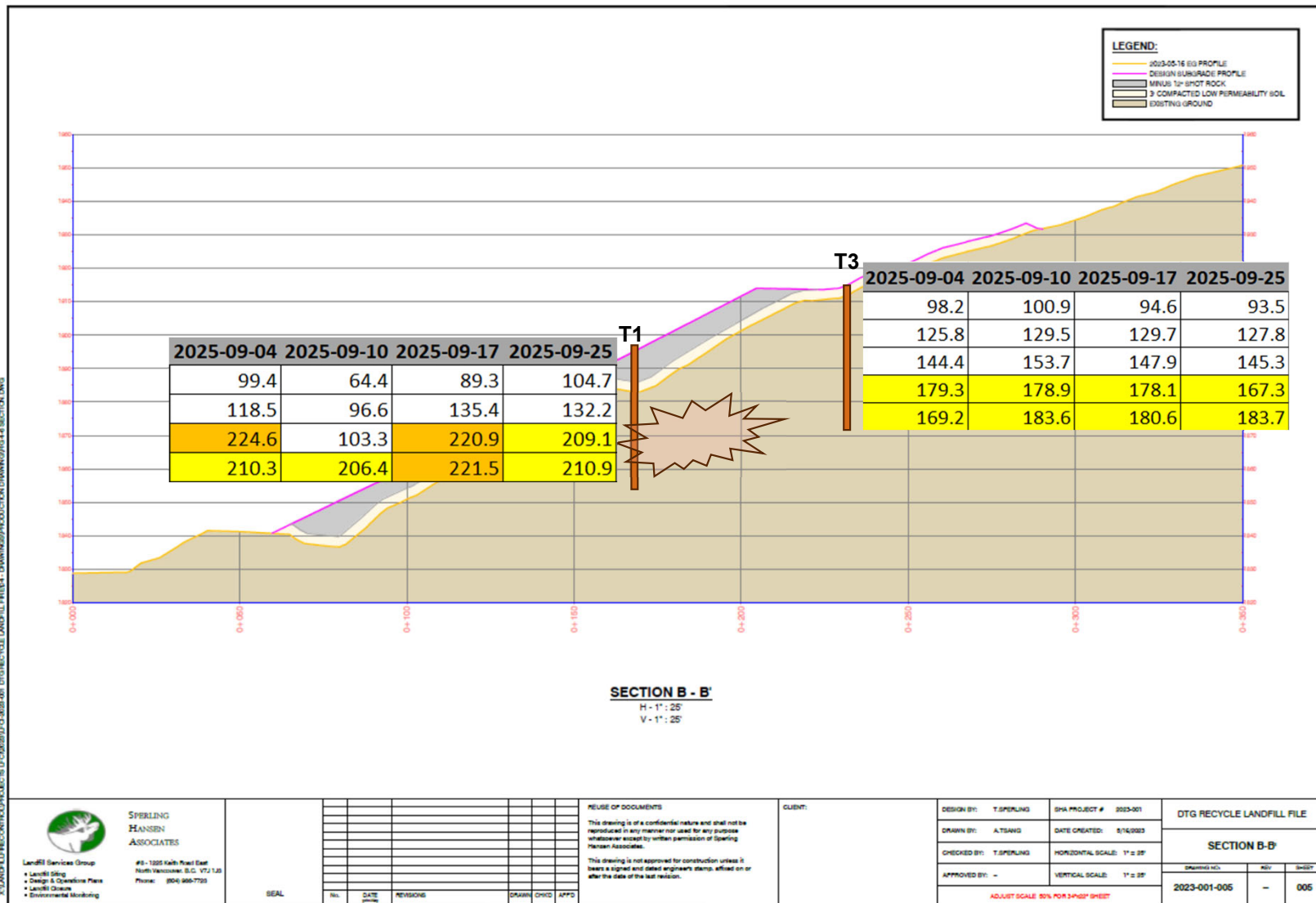
Methane levels for most wells are converging between 0 and 2.5% indicating that landfill is not biologically active.

Only well GP-10 has been indicating higher methane concentrations, but has recently fallen down to less than 1%. T-6 and T-7, also located on the landfill ridge, are indicating higher levels of methane than other monitoring locations.

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.







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. Current seasonal warming may be contributing to slowing the cooling trend, as seen in the lower temperature wells over the summer of 2025.

Temperatures have dropped significantly all around to Dec. 2024 when the trend has shifted to a steady condition, with minimal changes occurring. In September, 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 September, CO has continued exhibit overall decreasing trends, but the new thermistors indicate higher CO levels in the higher portions of the landfill.

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.