June 29, 2026

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 – May

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 May 2026 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 May 2026. The monitoring data summary through May 2026 from Landfill Fire Control, Inc. (LFCI) is attached.

Draft Interim Action Work Plan (IAWP) comments were received from Ecology on May 7.

The Q1 groundwater monitoring report was progressed.

Deviations from Plans (if any):
None.

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:

- Weekly ambient and gas probe data
- June Progress Report
- Q1 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 – May 2026

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

June 24th, 2026 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 – May 2026

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 May has continued to exhibit some signs of this slow response with relatively stable and slowly decreasing temperatures. Temperature in T-1 and GP-3 has continued the decreasing trend, and the recently installed T-4 has continued to indicate higher but decreasing temperatures. These high temperatures have started decreasing again following a brief heating trend between mid February and late March, particularly in GP-3.

The elevated temperatures in T-4 are isolated from the other elevated areas although the temperatures are very similar. LFCI believes that there is a secondary hot spot in the area of T-4, with smolder gases migrating up slope to be detected at T-6 and T-7. The temperature in T-4 is following the same trends as GP-3 and T-1.

Through close monitoring of the area, the extended high CO and temperatures have lead LFCI to recommend additional cover in that area to address the slopes that were cut into to install T-4. Since the soil was placed in, CO and temperature have continued to slowly decline although April has seen an increase in general CO levels and this will be observed closely through the current monitoring program to ensure action is taken if necessary.

When considering the 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). This suggests that the soil cover may be dessicating and cracking to some degree.

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 LFCI expects the upcoming spring months to show increasing oxygen levels within the waste mass.

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 smolder activity in this area is steadily decreasing, however slowly. Based on the extinguishment target of temperature dropping below 180°F, on account of the flattening of the temperature curves of the hottest wells, we are now projecting that the fire will be declared extinguished mid year 2027 if no further intervention is taken to inhibit air entry. Also, the increasing CO concentrations around T-4 at T-6 and T-7 indicate that further soil application may be required in that area.

Based on this assessment, 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 continues to have the professional 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.

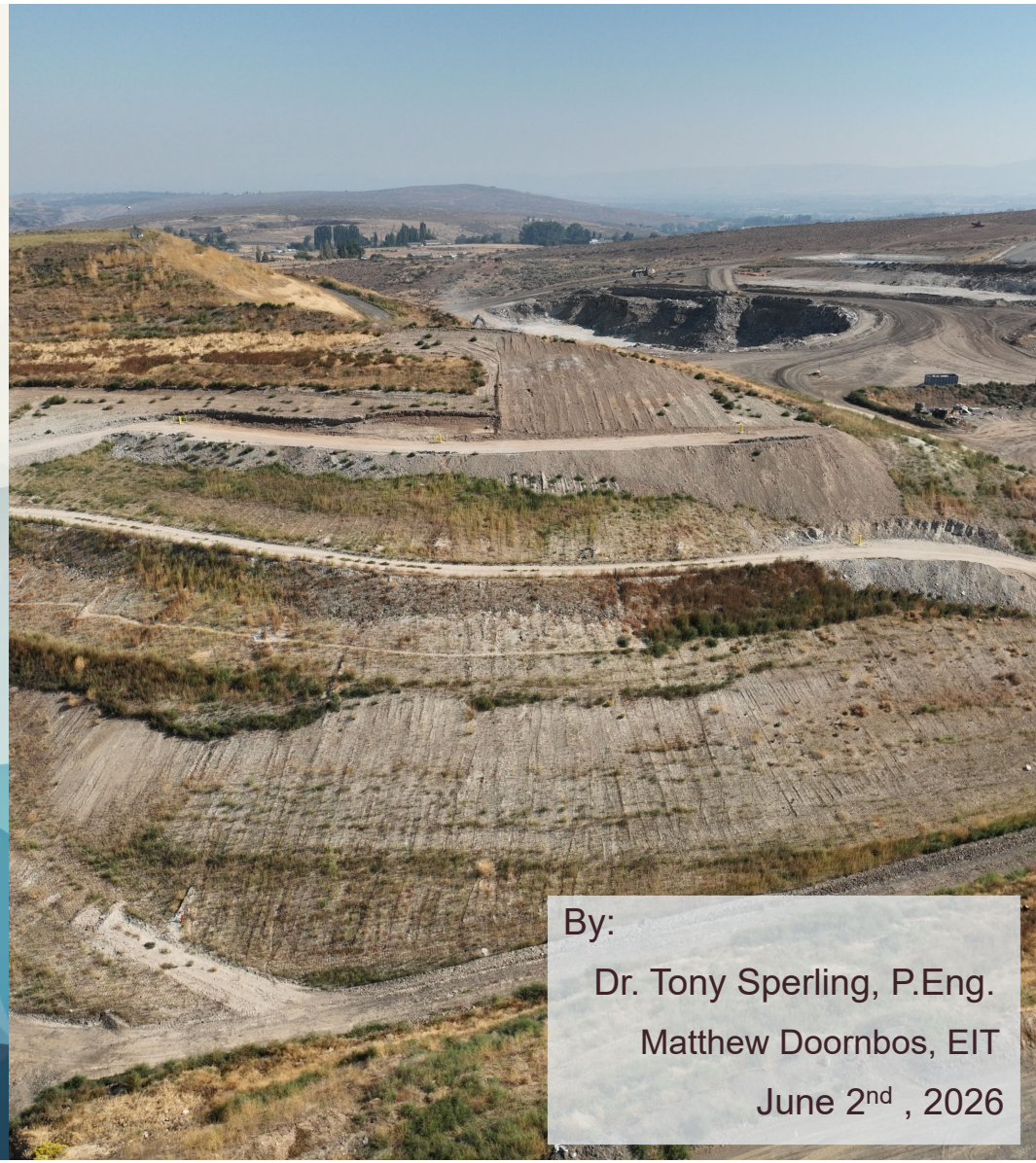
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. SPERLING

Dr. Tony Sperling, P.Eng. *June 24th, 2026*
President

DTG LPL LANDFILL FIRE INVESTIGATIONS AND MITIGATION

Monthly Monitoring Data Review

May 2026



By:

Dr. Tony Sperling, P.Eng.

Matthew Doornbos, EIT

June 2nd , 2026

Introduction

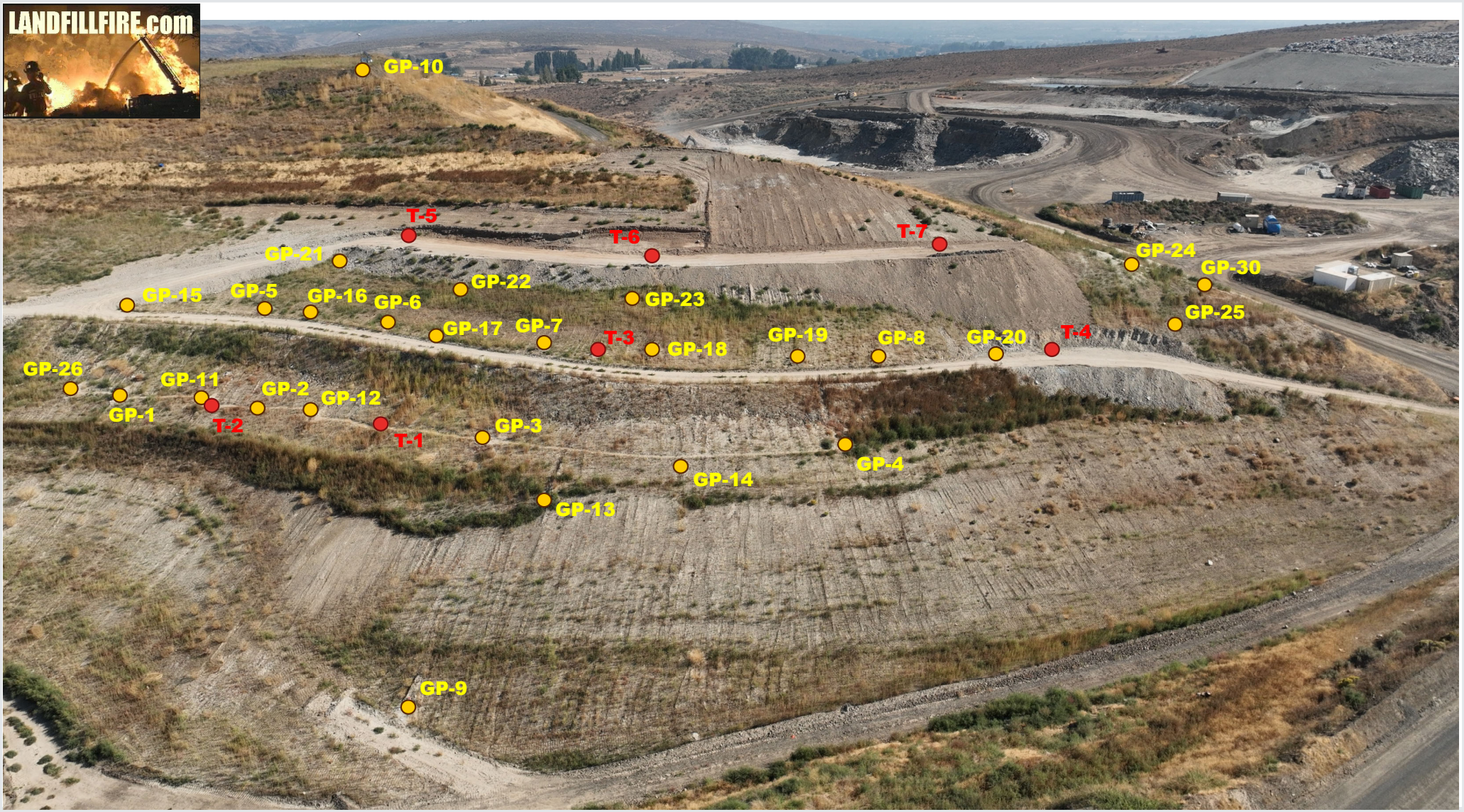
BHP Locations

- 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


LANDFILLFIRE.com
GP-10
T-5
T-6
T-7
GP-21
GP-22
GP-23
GP-24
GP-30
GP-15
GP-5
GP-16
GP-6
GP-17
GP-7
T-3
GP-18
GP-19
GP-8
GP-20
T-4
GP-25
GP-26
GP-11
GP-2
GP-12
GP-1
T-2
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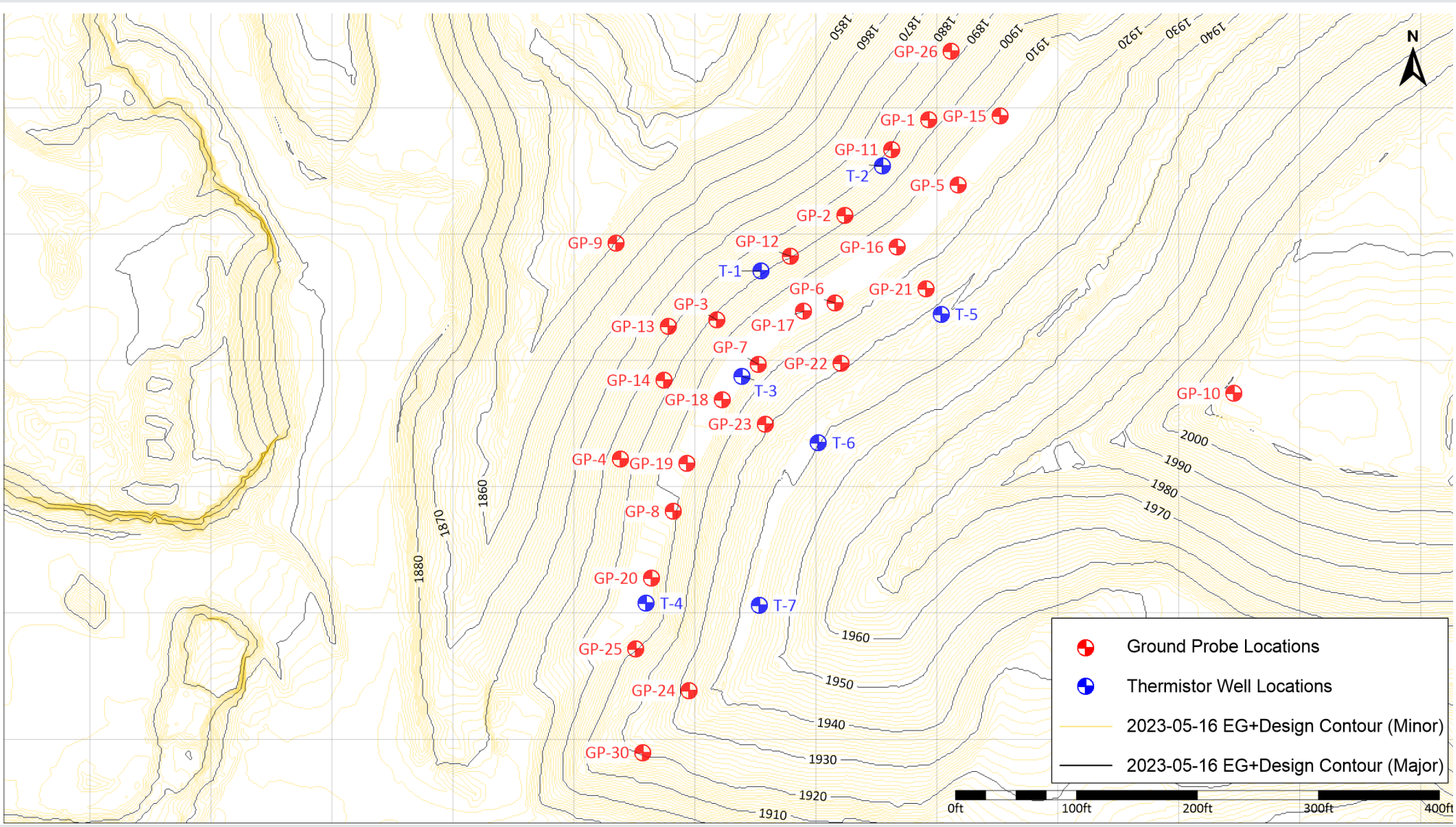
GP-3
GP-4
GP-14
GP-13
GP-9



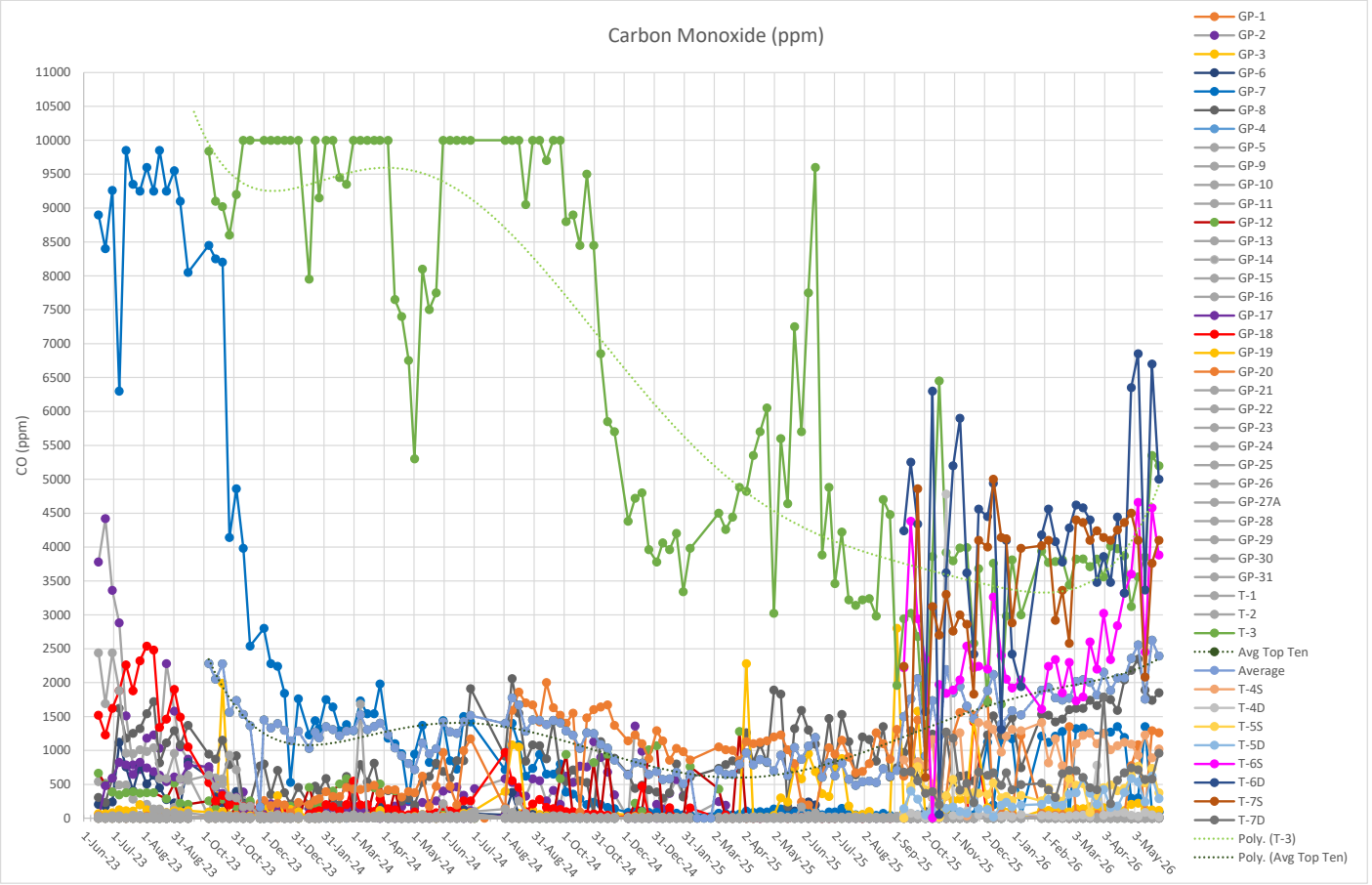
N
GP-26
GP-1
GP-15
GP-11
T-2
GP-5
GP-2
GP-9
GP-12
GP-16
T-1
GP-6
GP-21
GP-3
T-5
GP-13
GP-17
GP-7
GP-22
GP-14
T-3
GP-18
GP-10
GP-23
T-6
GP-4
GP-19
GP-8
GP-20
T-4
T-7
GP-25
GP-24
GP-30
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1960
1950
1940
1930
1920
1910
2000
1990
1980
1970
1860
1870
1880
Ground Probe Locations
Thermistor Well Locations
2023-05-16 EG+Design Contour (Minor)
2023-05-16 EG+Design Contour (Major)
0ft
100ft
200ft
300ft
400ft

Carbon Monoxide

During the month of May the average CO level in all wells stayed approximately the same, but the average of the ten highest wells has increased during this month.

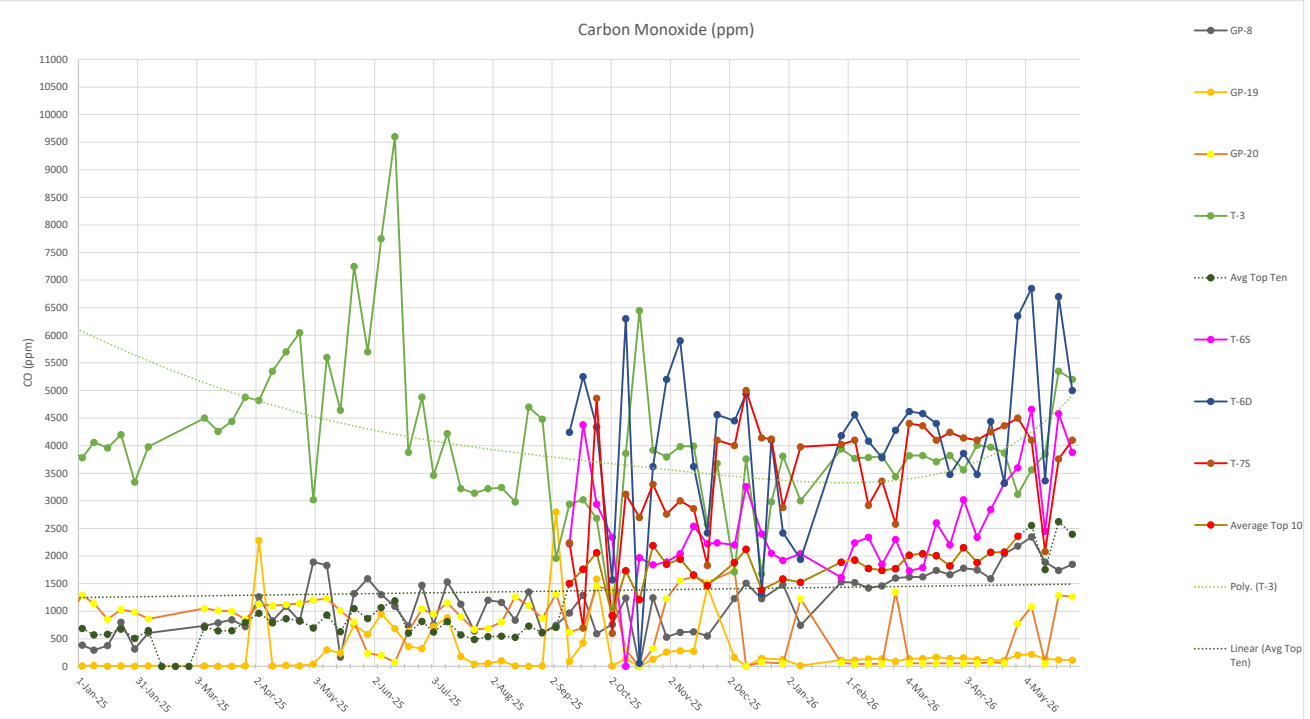
In particular, CO concentration in T-6D has remained high and is now at similar levels as T-3 around 5,250ppm.

The average of the highest 10 wells was continues to remain high after last month, with the average remaining around 2,500.



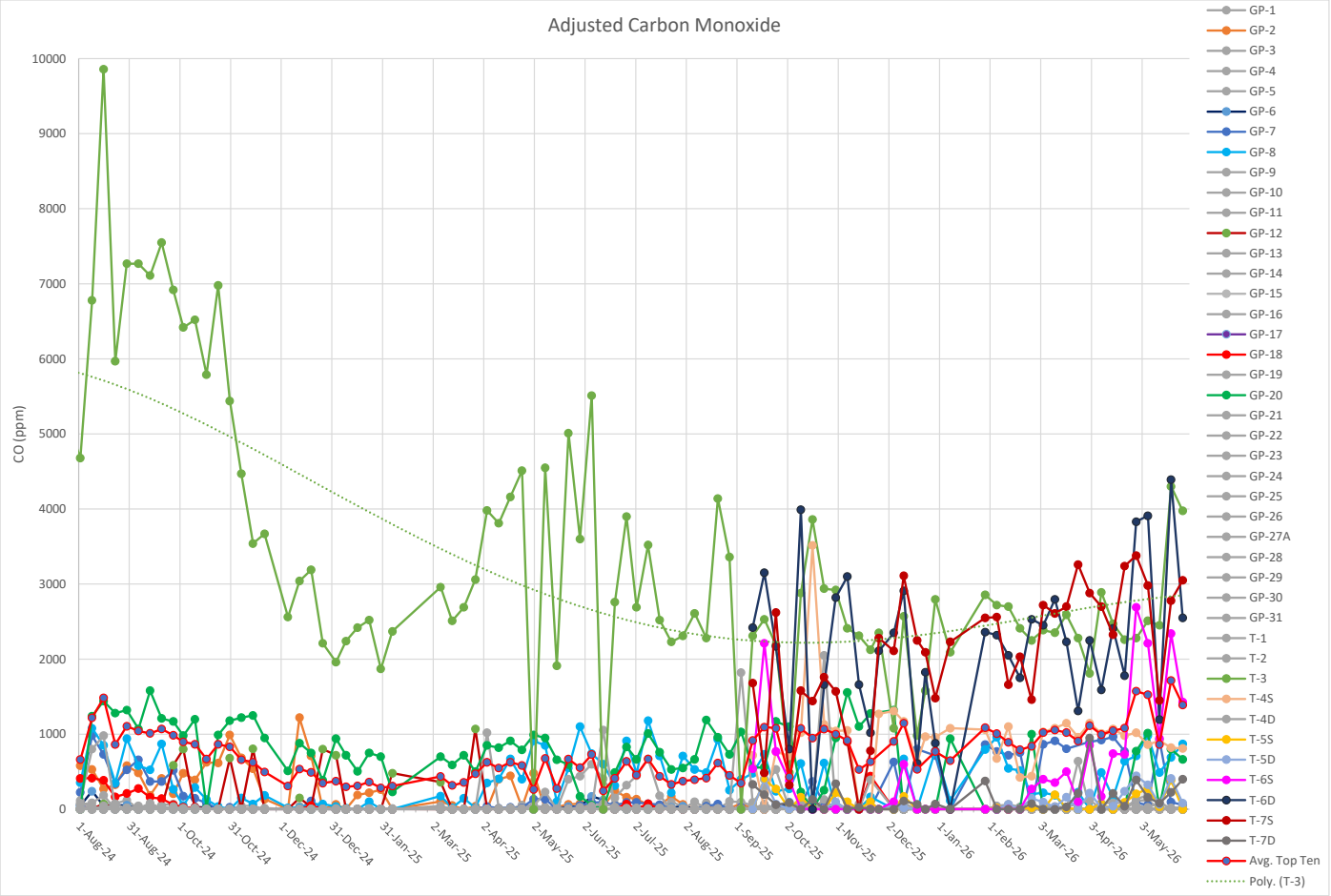
Carbon Monoxide 10 Highest

The 10 wells with the highest CO also show a general increase in CO over the past month of monitoring data. The most obvious increases are in T-6D, T-6S, T-7S, and GP-8 which are in the upper area of the slope.



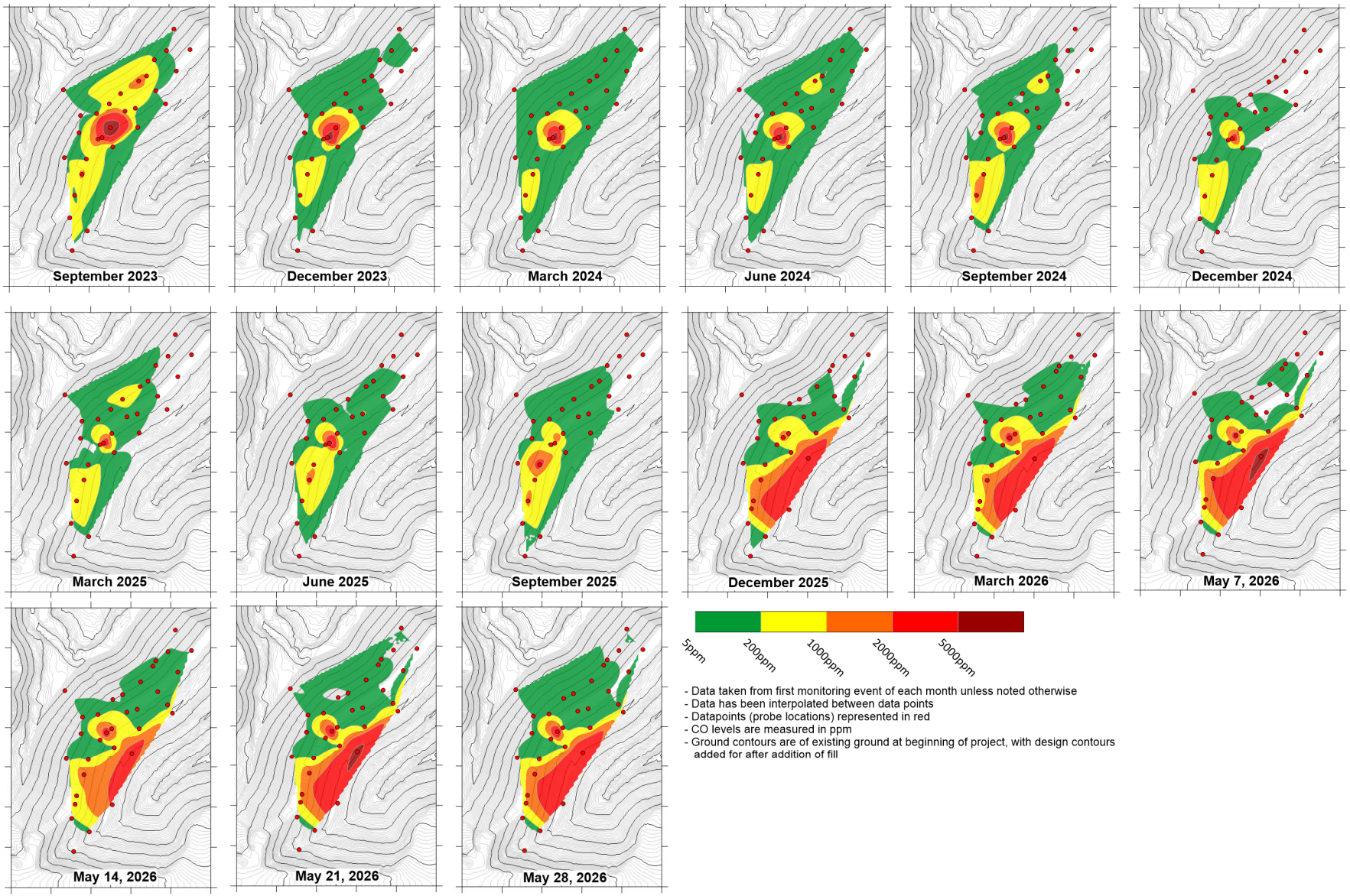
CO Adjusted for H2 Gas

Adjusted CO measurements have been relatively stable since Sept. 2025 when the new wells were introduced, with some oscillations. An increase in adjusted CO has been noted in T-7S starting in October, 2025 and in T-6S and T-6D in the first readings during May of 2026. The increases in CO suggest increased smolder activity in the southern area in the vicinity of T-6 and T-7. These high levels have generally continued through the rest of May.



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

LFCI Temperature Scale

LFCI uses this temperature scale to evaluate subsurface temperature data.

Currently, the highest recorded temperature at the site is 250.6F, at GP-3 which is in the middle range of the “Suspected Subsurface Exothermic Reaction in MSW”, indicative of a very gradual smolder.

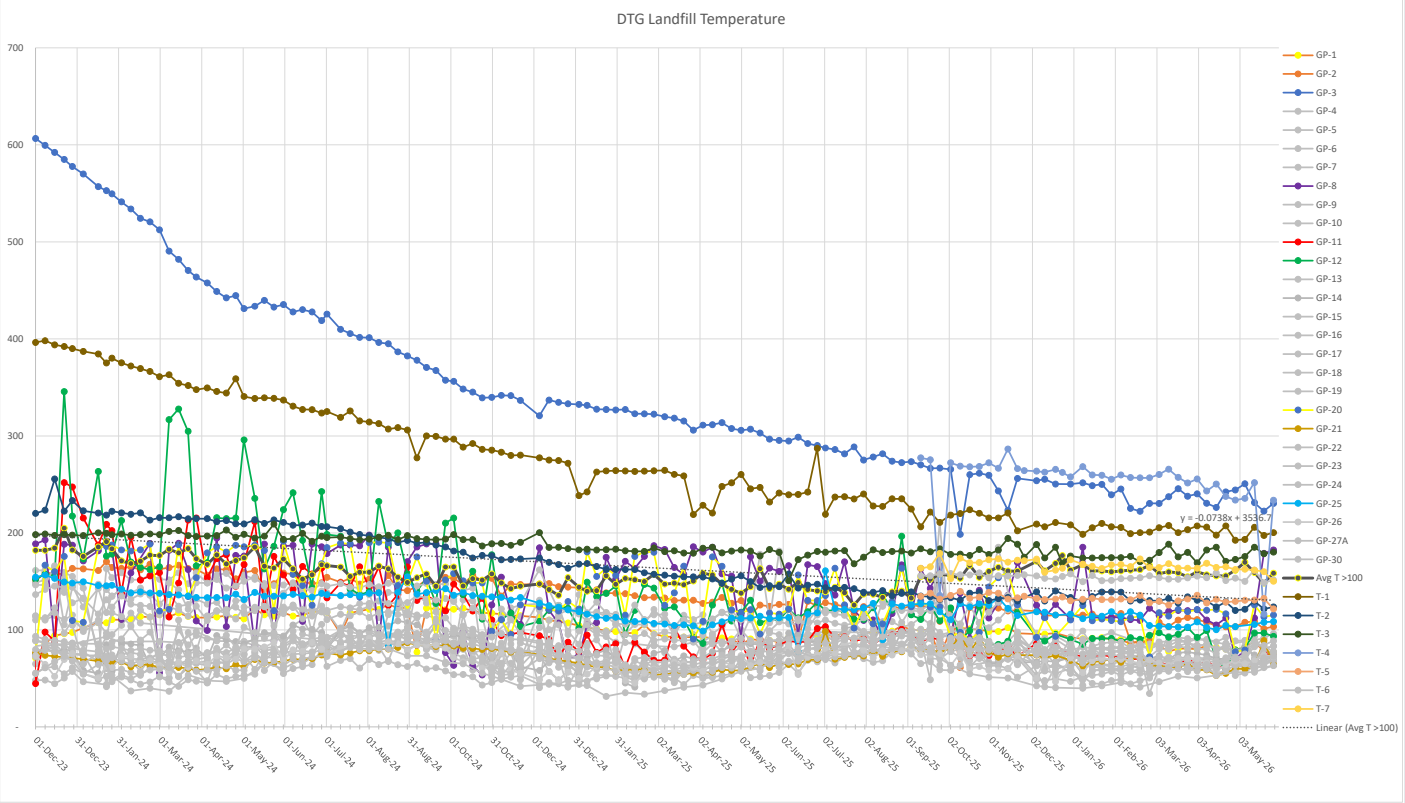
This well is on a steady cooling trend, with temperatures decreasing from a high of 600F.

Fahrenteit Deg F	Celcius Deg C			
1,832	1,000	Fire		Fire
1,382	750			
932	500			
608	320		Upper Limit of Torrefaction (low temp. Pyrolysis)	
601	316		Wood ignites spontaneously	
500	260	Exothermic Deay of Wood		Exothermic Pyrolysis
400	204			
392	200			
392	200		Minimum temperature for Industrial Water Gas Shift Reaction (fast)	
324	162		Melting point of EVOH Resin	
300	149			
290	143	Suspected Subsurface Exothermic Reaction in MSW		Possible Exothermic Reactions
280	138			
270	132		Melting point of HDPE Liner (125 to 130C)	
260	127			
250	121			
240	116			
230	110			
220	104		Trigger Temperature for Exothermic Chemical Activity (104C)	
212	100		Boiling Point of Water	
210	99	Heat Transfer and Exothermic Metal Oxidation		Chemical Heating Up
200	93			
190	88			
180	82			
176	80		Maximum Biological Temperature per LFCI experience	
175	79		Trigger for Elevated Temperatures in Gas Extraction Wells	
170	77			
167	75	Aerobic Biological Decomposition	Upper Limit of Aerobic Biologic Decomposition Temps.	Aerobic Warm
165	74		Maximum temperature for methanogenesis	
160	71			
150	66			
145	63		Temperature to which vaiance issued for running hot wells	
140	60			
131	55	Anaerobic Biological Decomposition	NSPS standard for maximum temperature in well	Anaerobic Normal
130	54			
120	49			
110	43			
100	38			
90	32			
80	27			
70	21			
60	16			

Temperature (F)

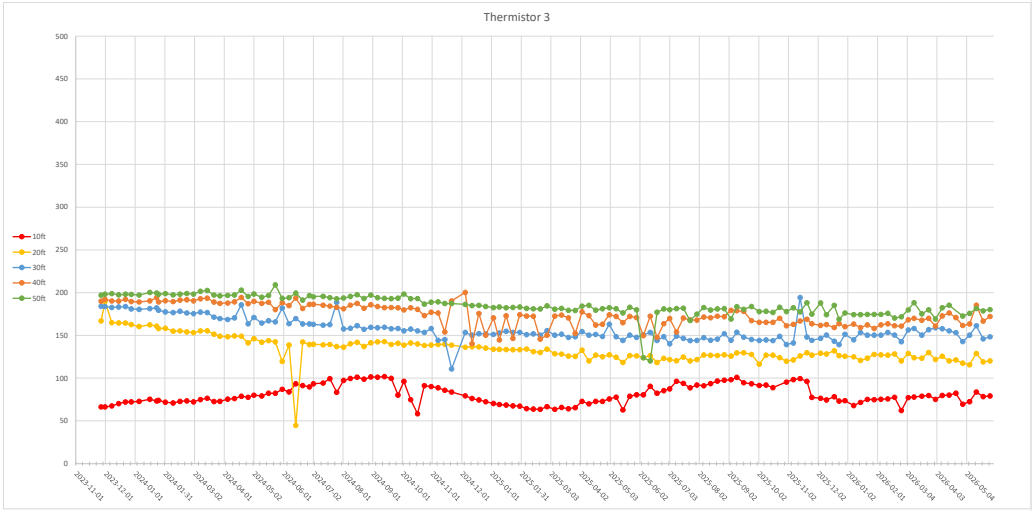
May monitoring saw the continued decreasing temperature trend in GP-3 and T-4 (the hottest wells). The low temperature wells (gray) continue to show the expected seasonal trend.

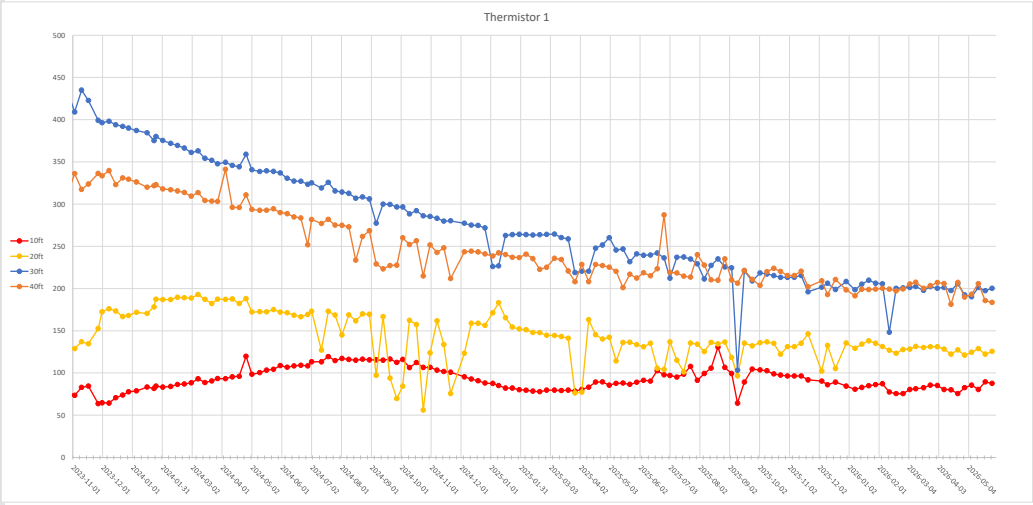
LFCI continues to see overall decreasing trends in the three hottest locations (GP-3, T-4, and T-1). The late increases that have now started decreasing are not of major concern at this time but will be monitored closely to ensure decreasing trends continue.

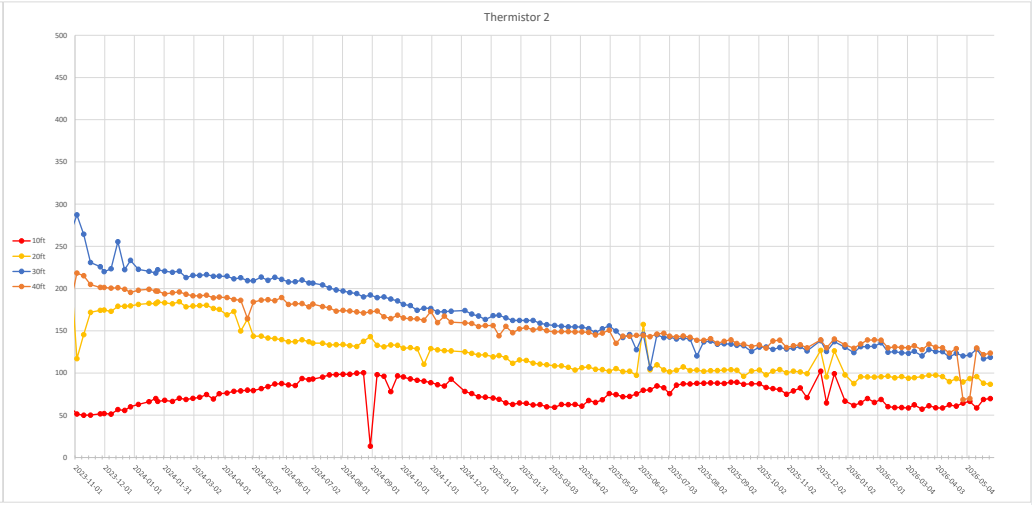


Thermistor Temperatures (T1-T3)

Thermistor temperatures are generally trending downward, but the rate of cooling appears to be slowing in T-1, which was historically the hottest well. T-2 and T-3 temperatures are all trending downward as well. Shallow locations in all three thermistor wells continue to show seasonal warming and cooling trends. With all temperatures in the thermistors dropping below 200F, temperatures are now below the boiling point of water, and in the chemical heating up zone, no longer indicative of exothermic activity.



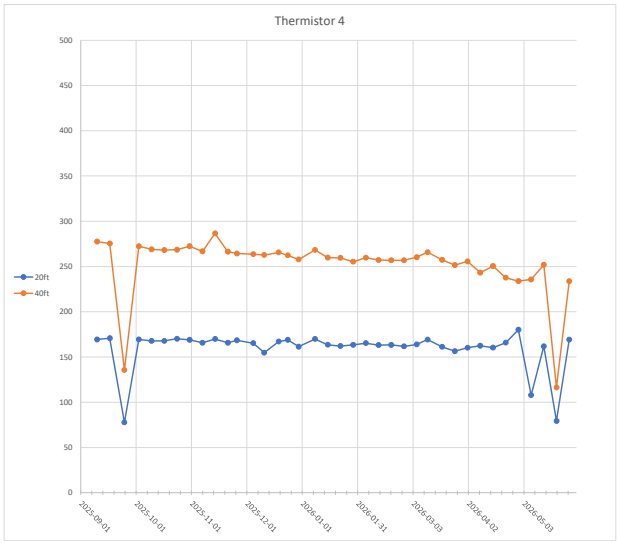


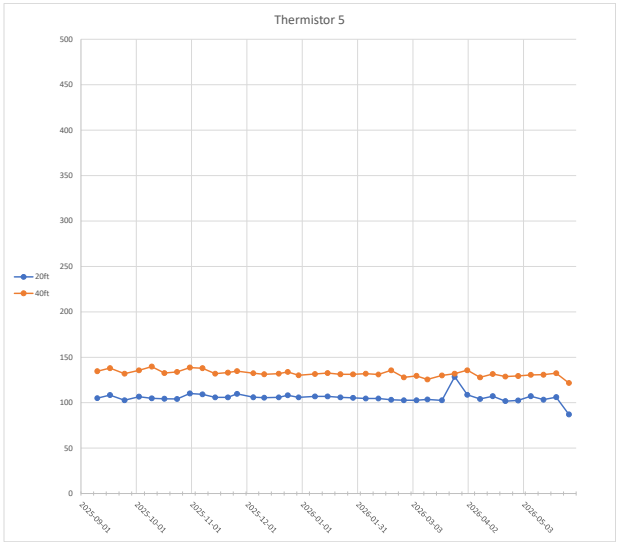


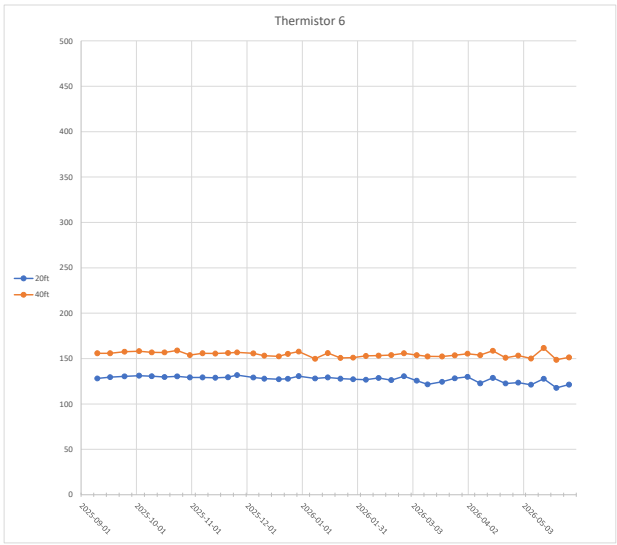
Thermistor Temperatures (T4-T7)

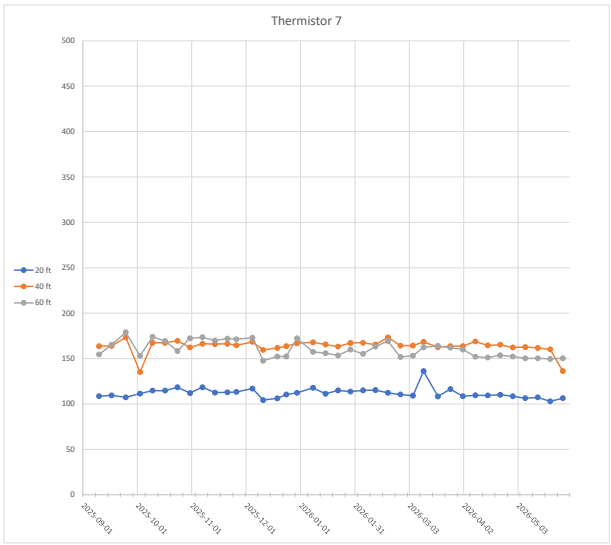
The thermistors installed in 2025 seem to exhibit mostly stable trends, with little fluctuation in temperature seen over the 8 months of monitoring. T-4 has shown a gradual decrease in temperature over time, while other wells remain at the same level (but at cooler temperatures) throughout the monitoring period.

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. 238F is 114C, which is still an abnormally high temperature and indicative of nearby smoldering activity.





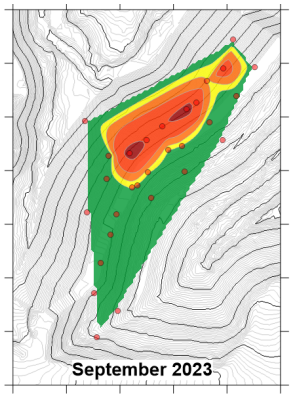


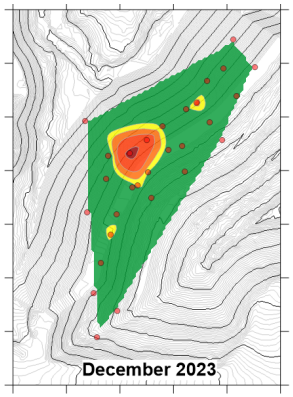


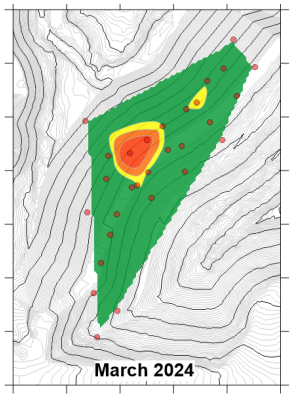
Heat Map Interpretation

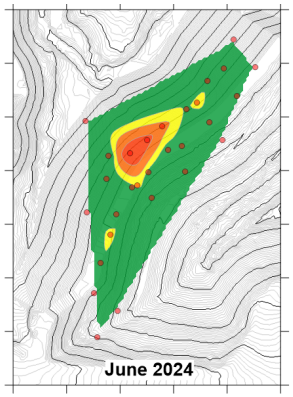
The heat map shows that the main fire zone has been cooling over time and that the smolder is being effectively contained. However, a new hot zone has been identified in the southern portion of the site around T-4 and GP-20 since late 2025. During LFCI's initial site inspection active smoke and elevated temperatures were noted in that area, and this area was covered with soil as part of the initial fire response. LFCI has been concerned that the road cuts recently undertaken had opened up an air intrusion pathway which has increased oxygen availability and re-initiated the smolder in that area.

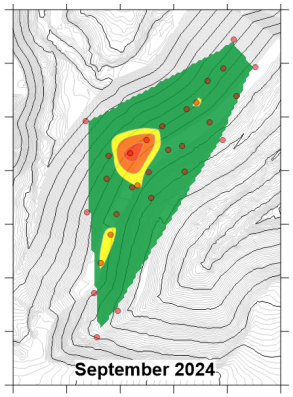
In consultation with DTG staff, LFCI recommended that additional fill be placed against the exposed slopes created during thermistor installation. This recommendation was then implemented and temperatures continued to fall through the February and March monitoring events. However; as discussed above, the May monitoring events have again seen an increase in CO concentrations around T-6, T-7 and GP-8 in the upper southern quadrant of the landfill. This area should be monitored closely during June to determine if additional oxygen suppression intervention is necessary.

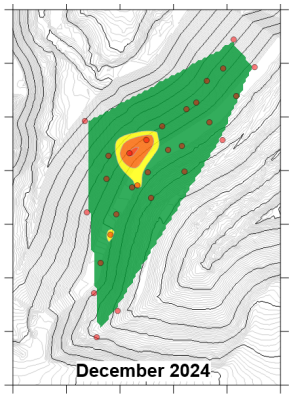


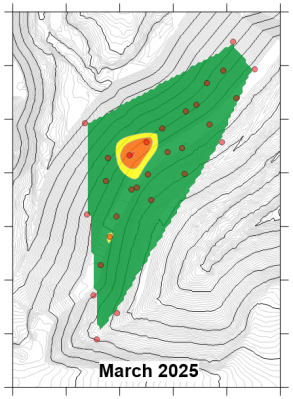


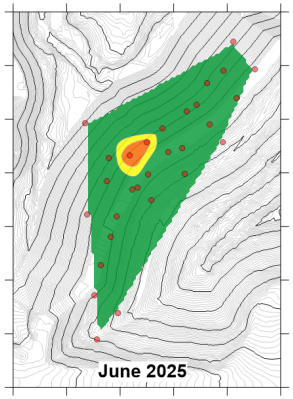


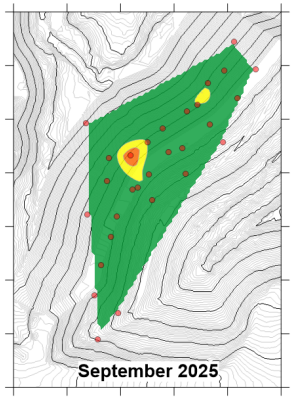


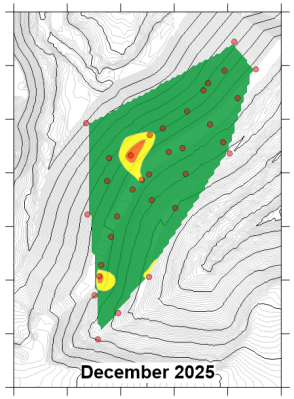


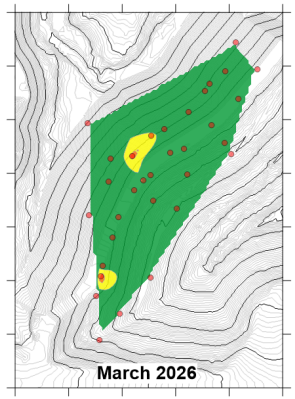


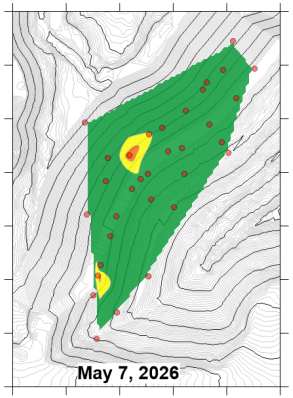


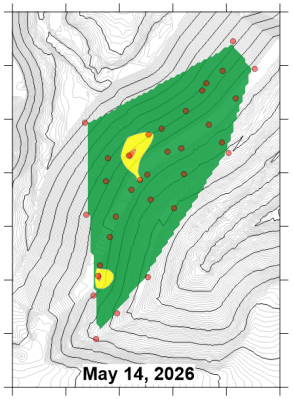


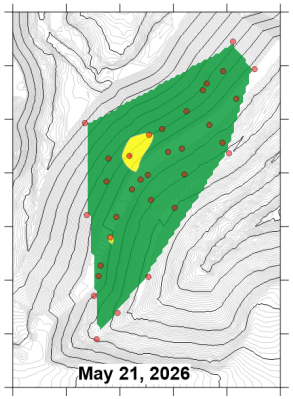


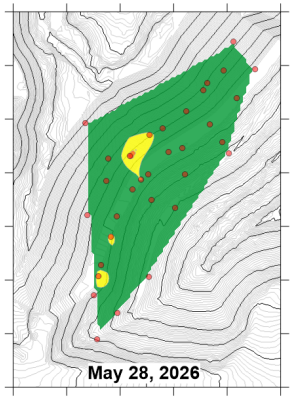












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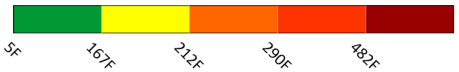
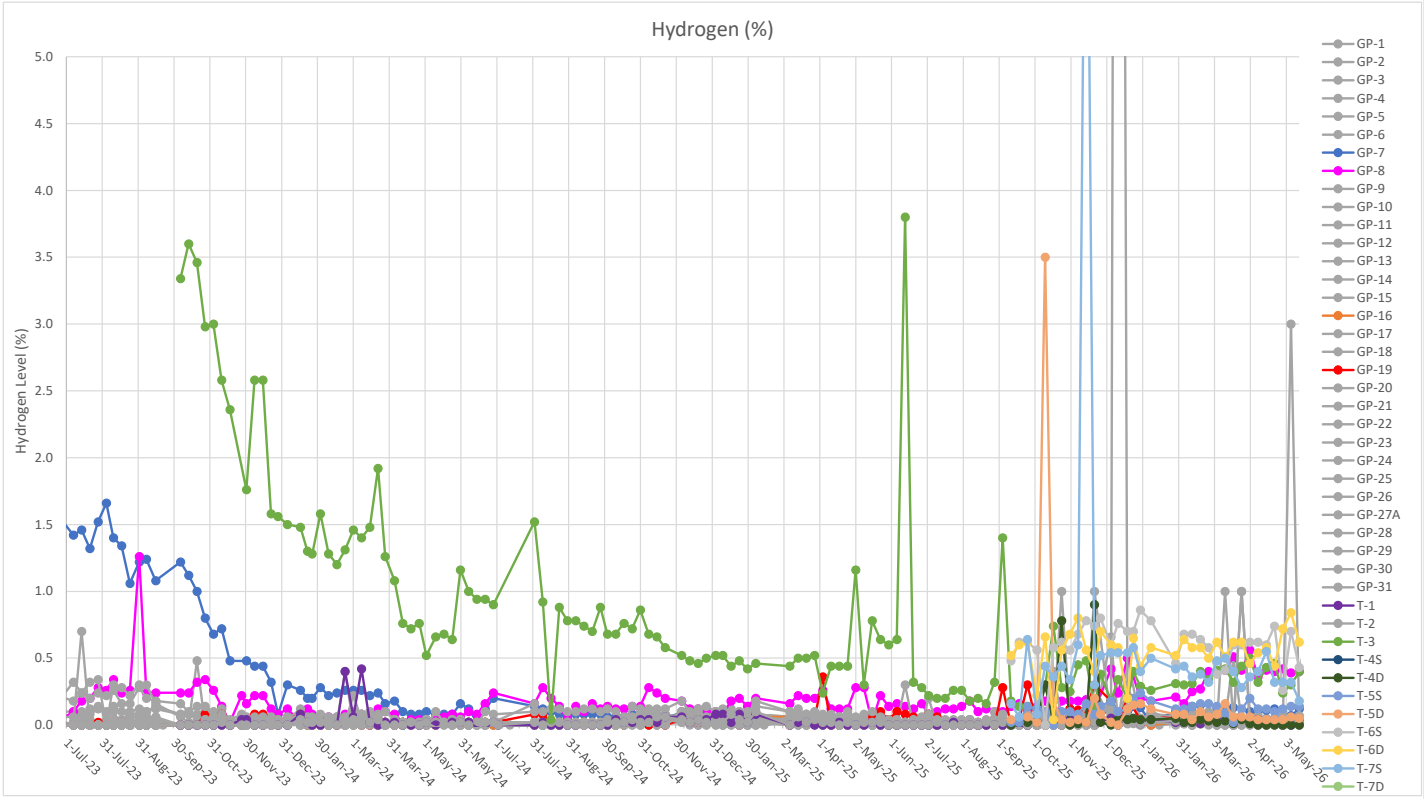


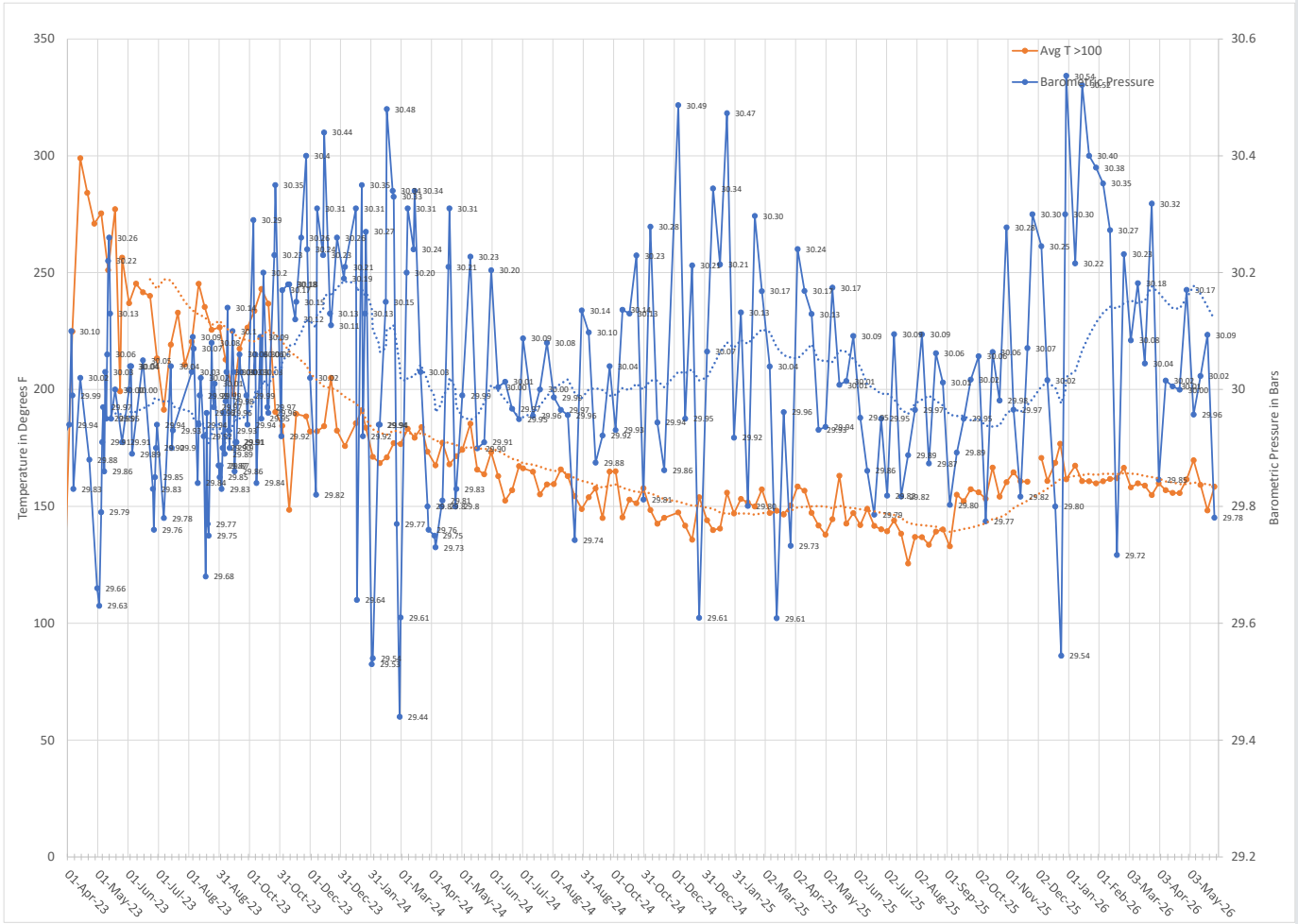
Hydrogen

The hydrogen measurements through May have maintained the relatively stable trend previously seen in the higher reading wells (T-6, GP-8, T-7). Hydrogen remains very low in all other wells. Hydrogen gas is one of the products of smolder activity, with the data indicating that a low level smolder continues to be active in the area.



Barometric Pressure

As LFCI expected, the high-pressure environment at the site has decreased through April and May, which may result in less oxygen availability provided there are no major short term pressure swings such as that experienced in late December, 2025.



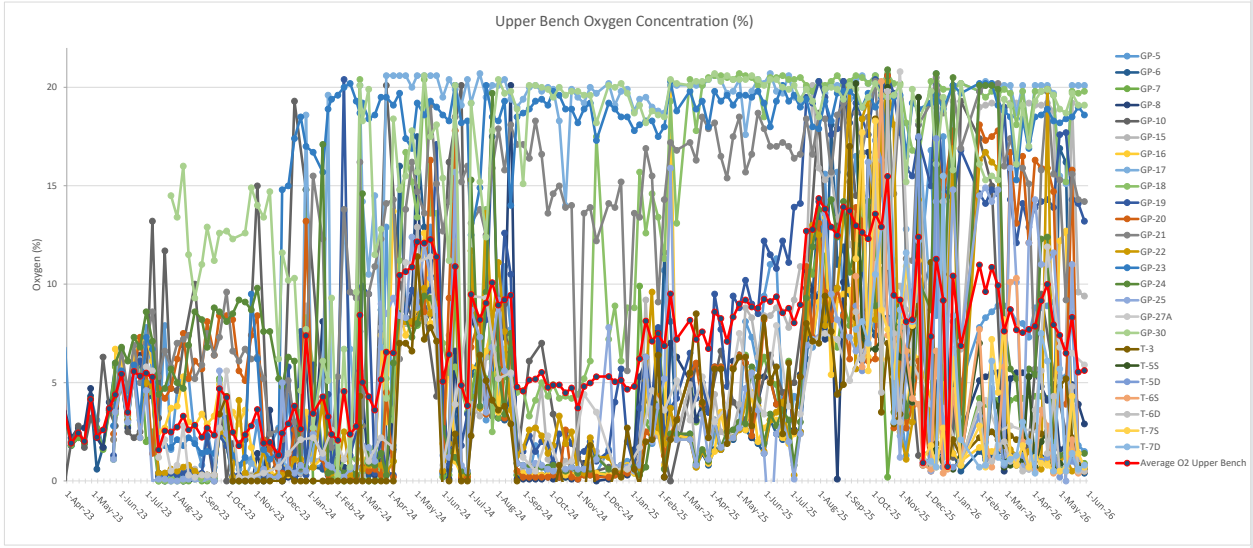
Oxygen

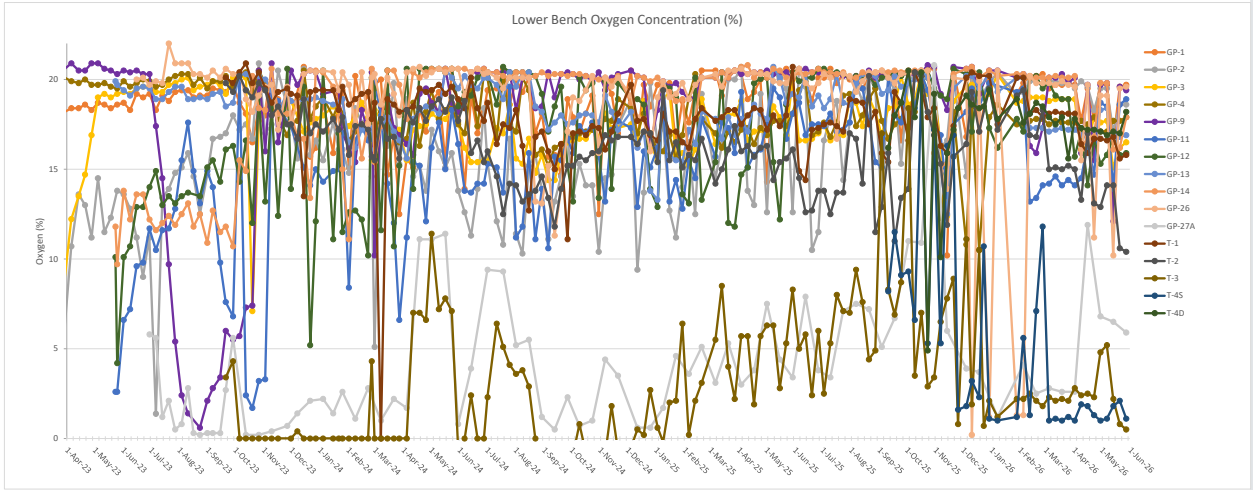
The oldest portion of the landfill is relatively inert and biologically inactive, producing very little methane. As a result, the pore space is full of atmospheric air leading to the generally high oxygen concentrations. The time series plots are difficult to read due to large swings in some of the wells, however in plan view, oxygen levels appear to have been increasing since January of 2025.

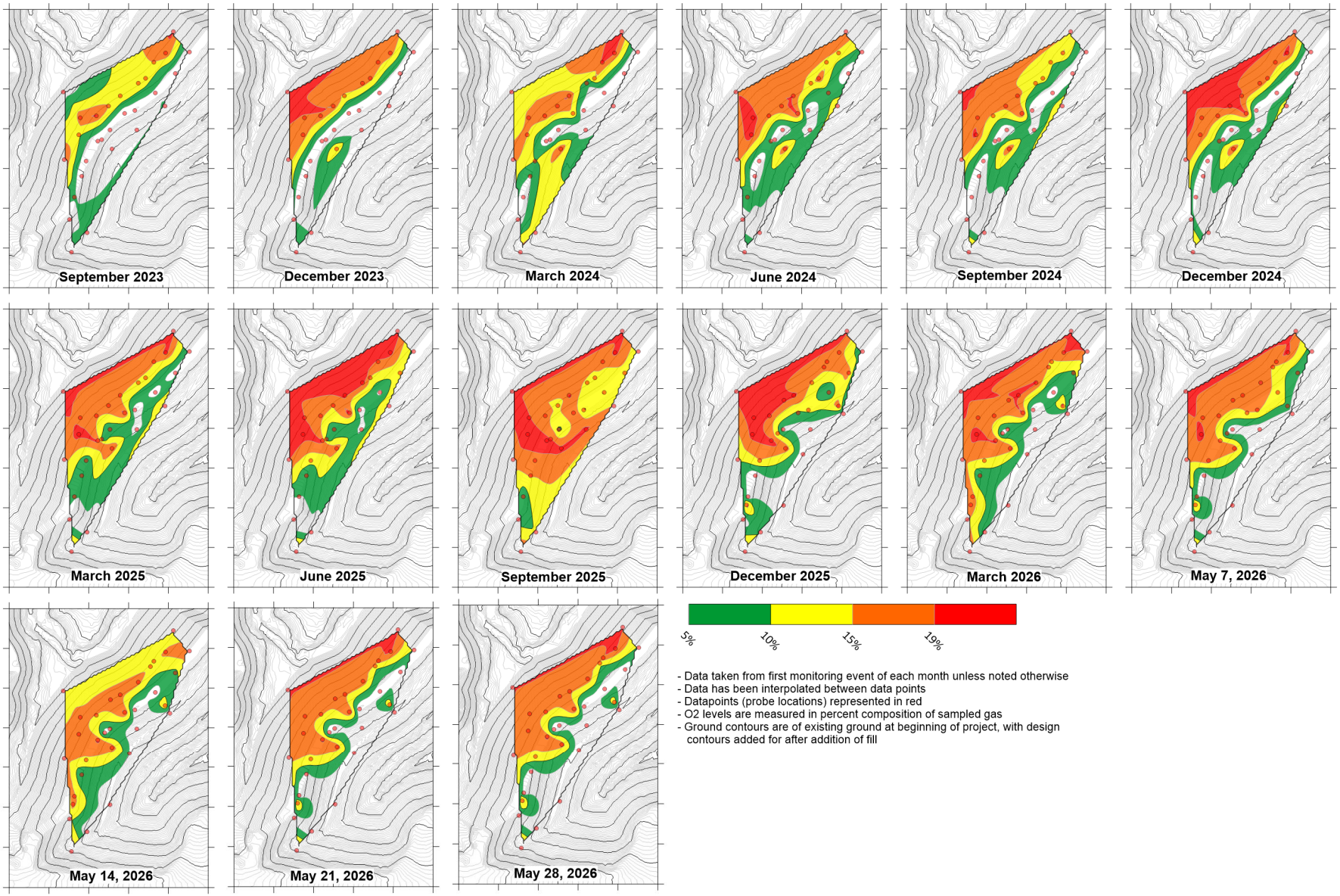
The red line with black markers represents average O2 concentrations in the Upper Bench. Although there is a seasonal oscillation with higher O2 levels in May through August each year, the general trend has been upward, with winter O2 levels averaging 3% in winter 2023, 5% in winter 2024, and 10% in winter 2025.

There are two possible explanations for the increasing O2 levels. One is that the soil cover is becoming desiccated over time, allowing more air entry into the subsurface. The other possibility is that as the smolder is becoming less and less active, oxygen that was previously consumed by smolder activity is no longer being consumed and oxygen levels are slowly increasing because there is very little biological activity within the landfill due to bone dry conditions subsurface and relatively inert C&D waste.

LFCI is of the opinion that at this time, the landfill would benefit from capping of the landfill surface which would completely inhibit oxygen entry during pressure swing cycles.







- 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

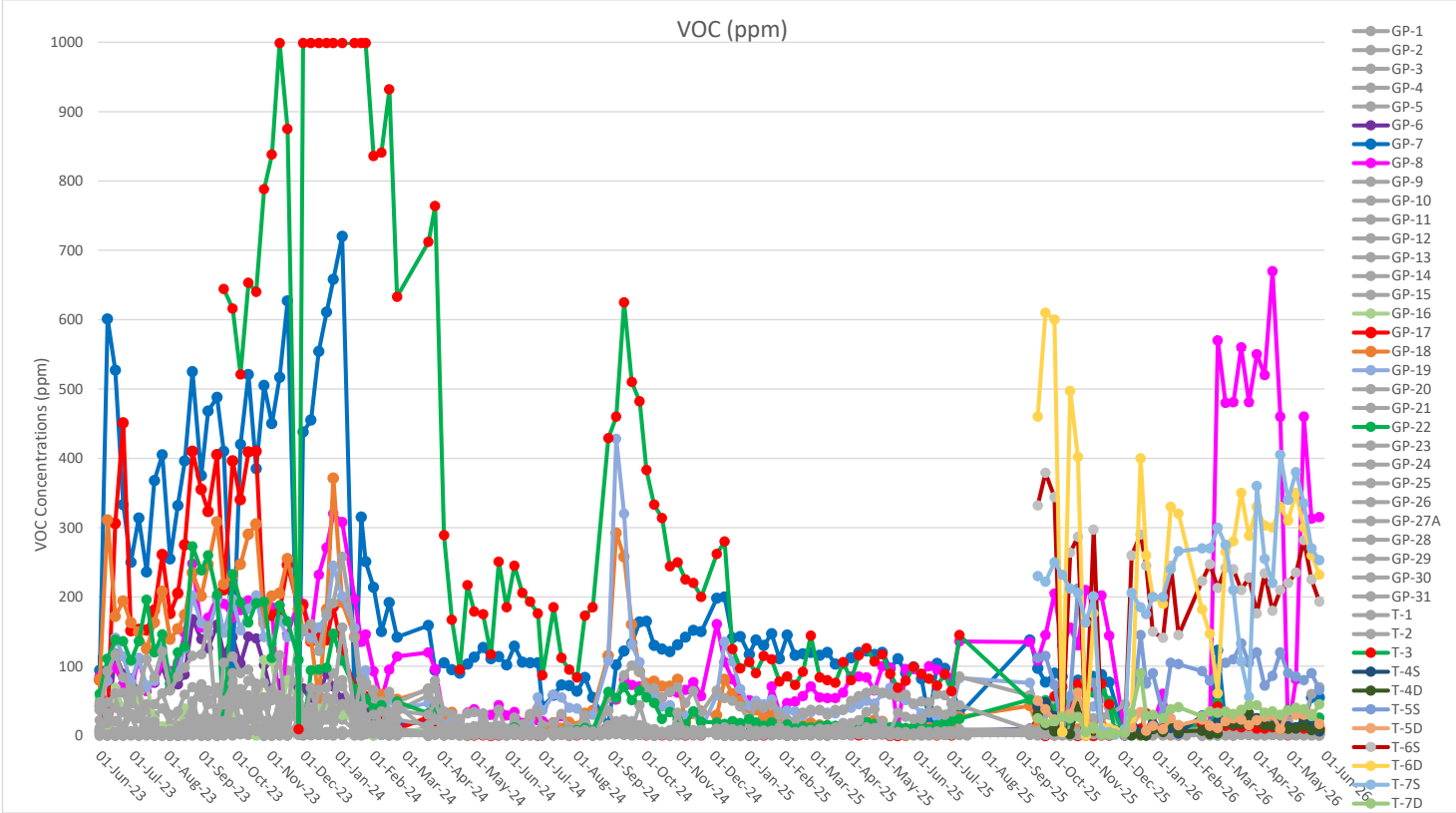
Volatile Organic Compounds

T-6 and T-7 are now the two locations showing the highest VOC levels, with the shallow portion of T-7 and the deep portion of T-6 indicating these levels.

As T-6 and T-7 are deep in the landfill, they are less impacted by dilution effects of atmospheric air cycling in and out of the landfill during pressure swings. Higher VOC concentrations can be expected to some degree.

GP-8 was previously high through March and over the last two events of April VOC levels in that well have decreased to near zero, however levels have risen again to around 300ppm.

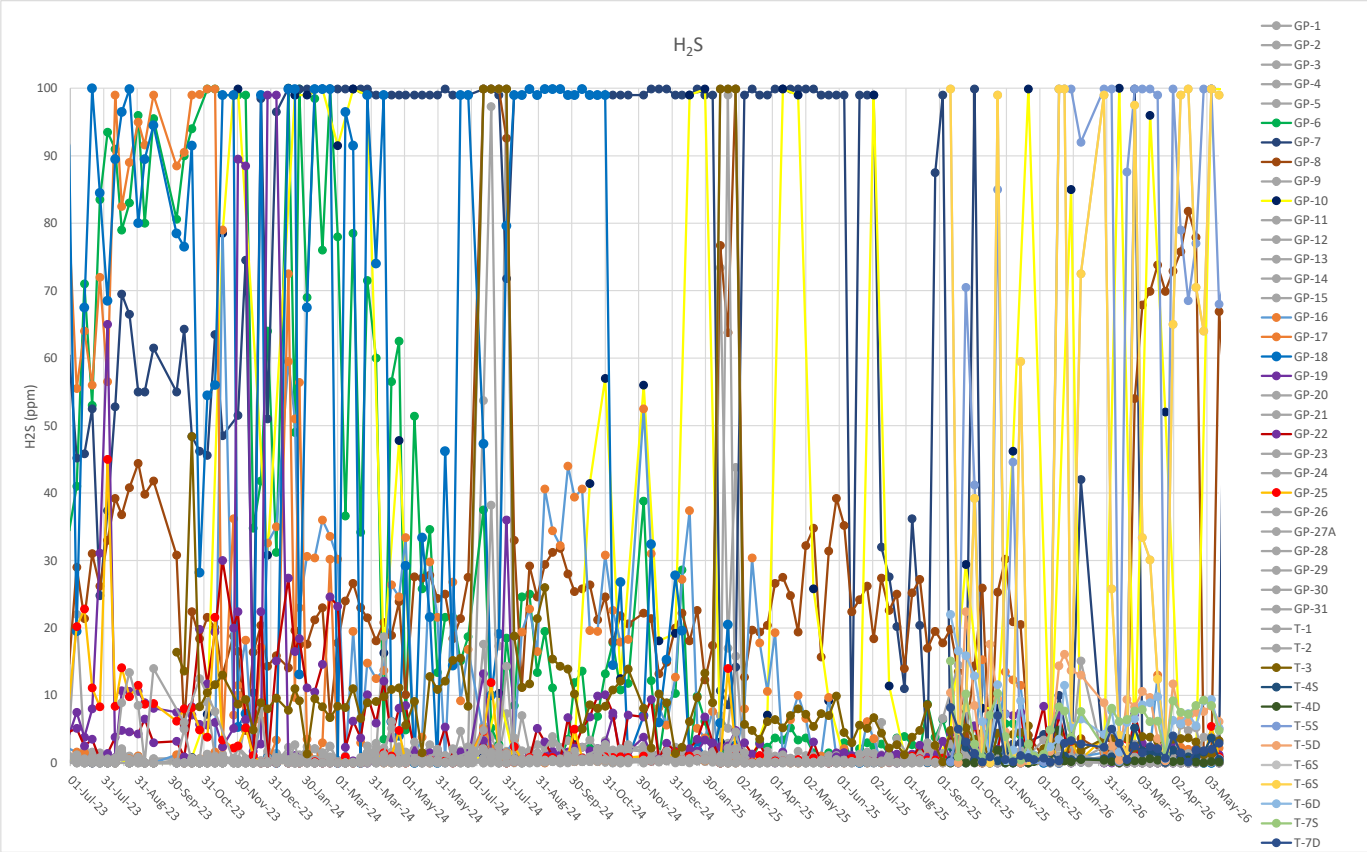
VOC emissions are often related to subsurface landfill fires. The fact that VOC emissions have declined and stayed low for the past several months are a strong indication that the smolder around GP-8 has become less active.



Hydrogen Sulfide

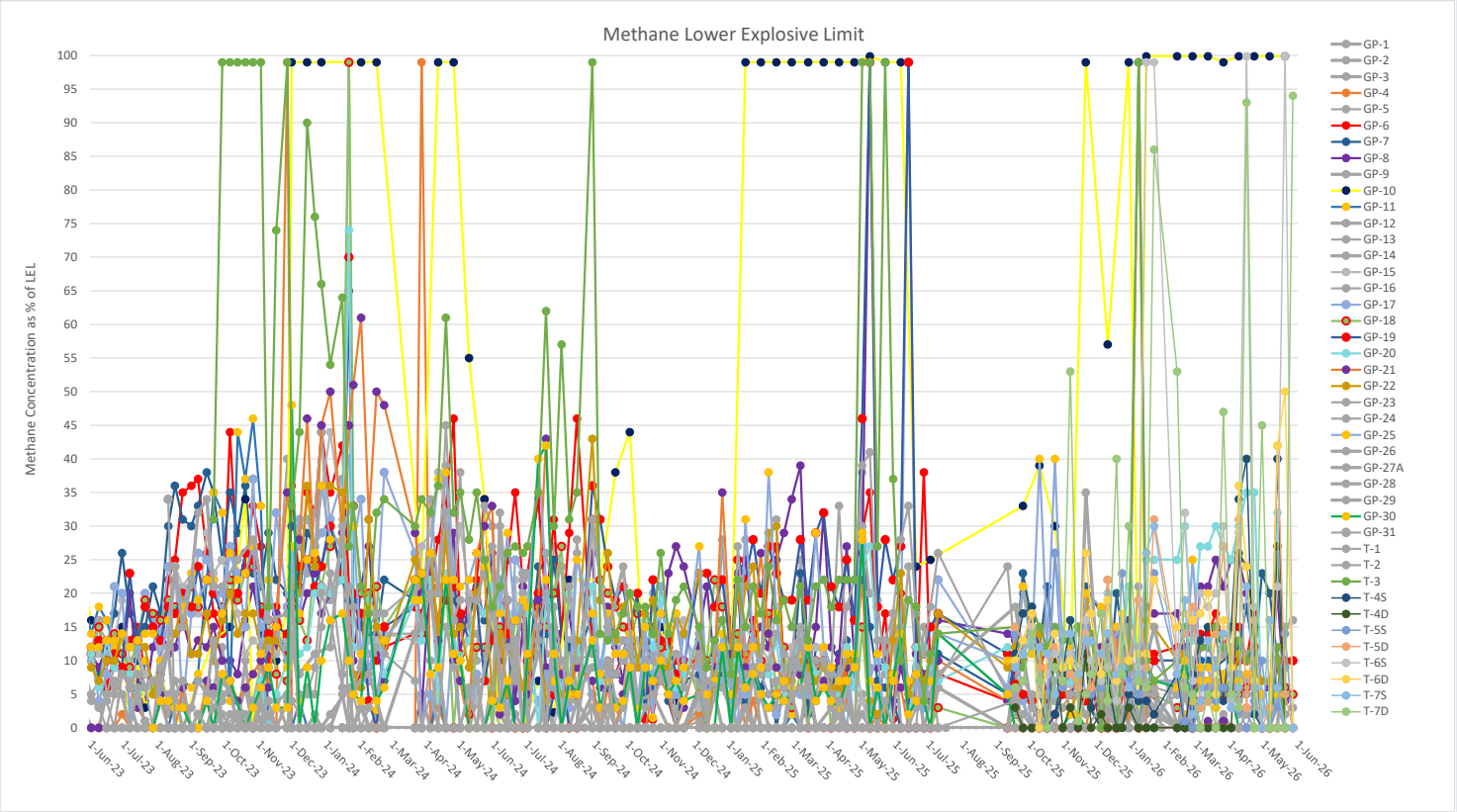
H_2S data continues to be noisy, likely affected by atmospheric pressure fluctuation. Most locations are low, but some locations such as T-5S and T-6S continue to fluctuate wildly. GP-8 previously increased in March from close to 0 up to around 80ppm through April, but has now fallen in May to 50ppm.

As mentioned previously, it is possible that the H_2S sensors are being impacted by CO cross interference. This seems to be confirmed as overall CO concentrations are decreasing, and the reported H2S concentrations are dropping as well.

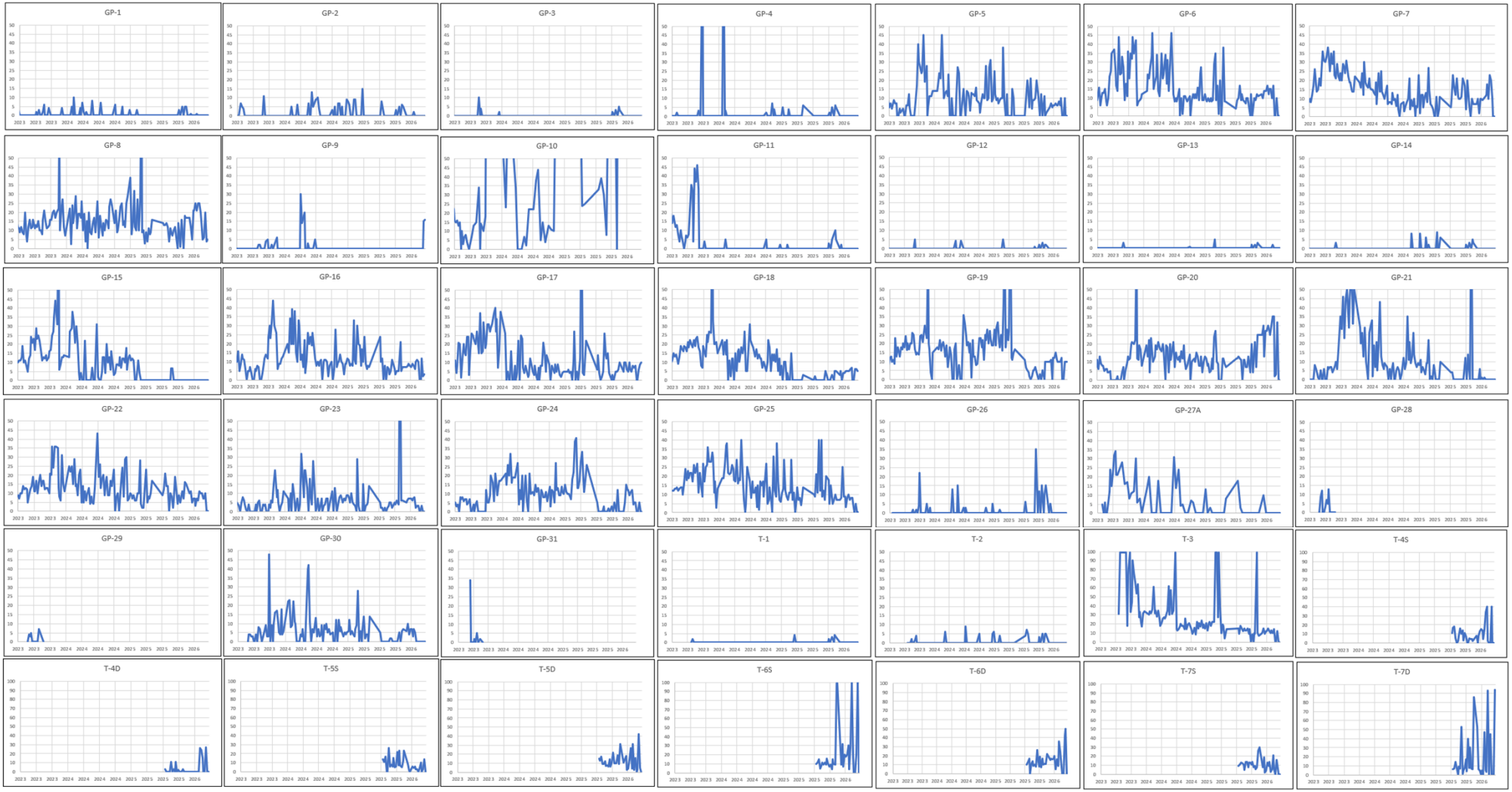


Lower Explosive Limit

Several data points are fluctuating wildly – the direct methane composition is a better indicator of levels within the landfill. Most monitoring points are reporting below 20% of the LEL.



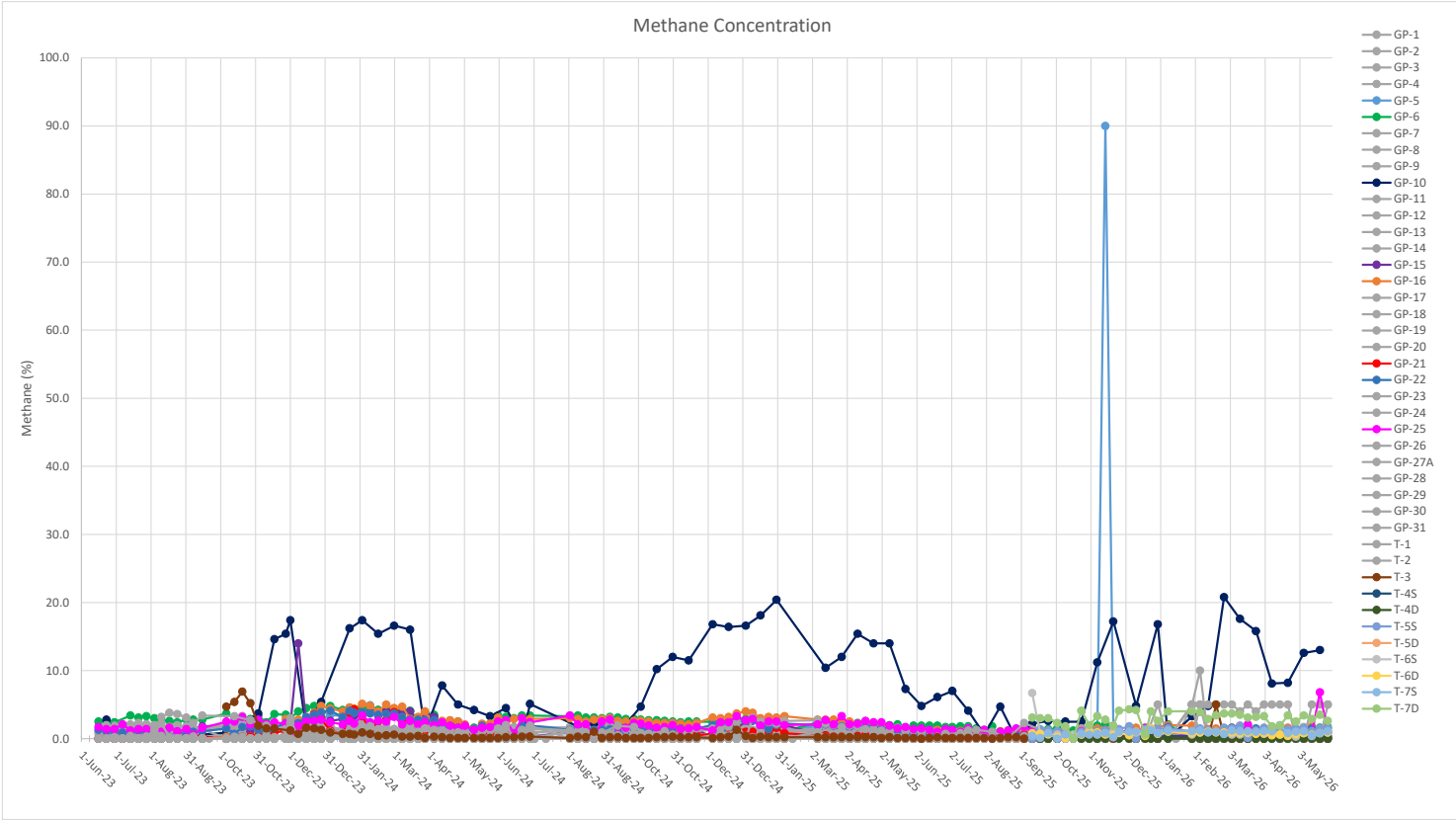
LEL for individual GP

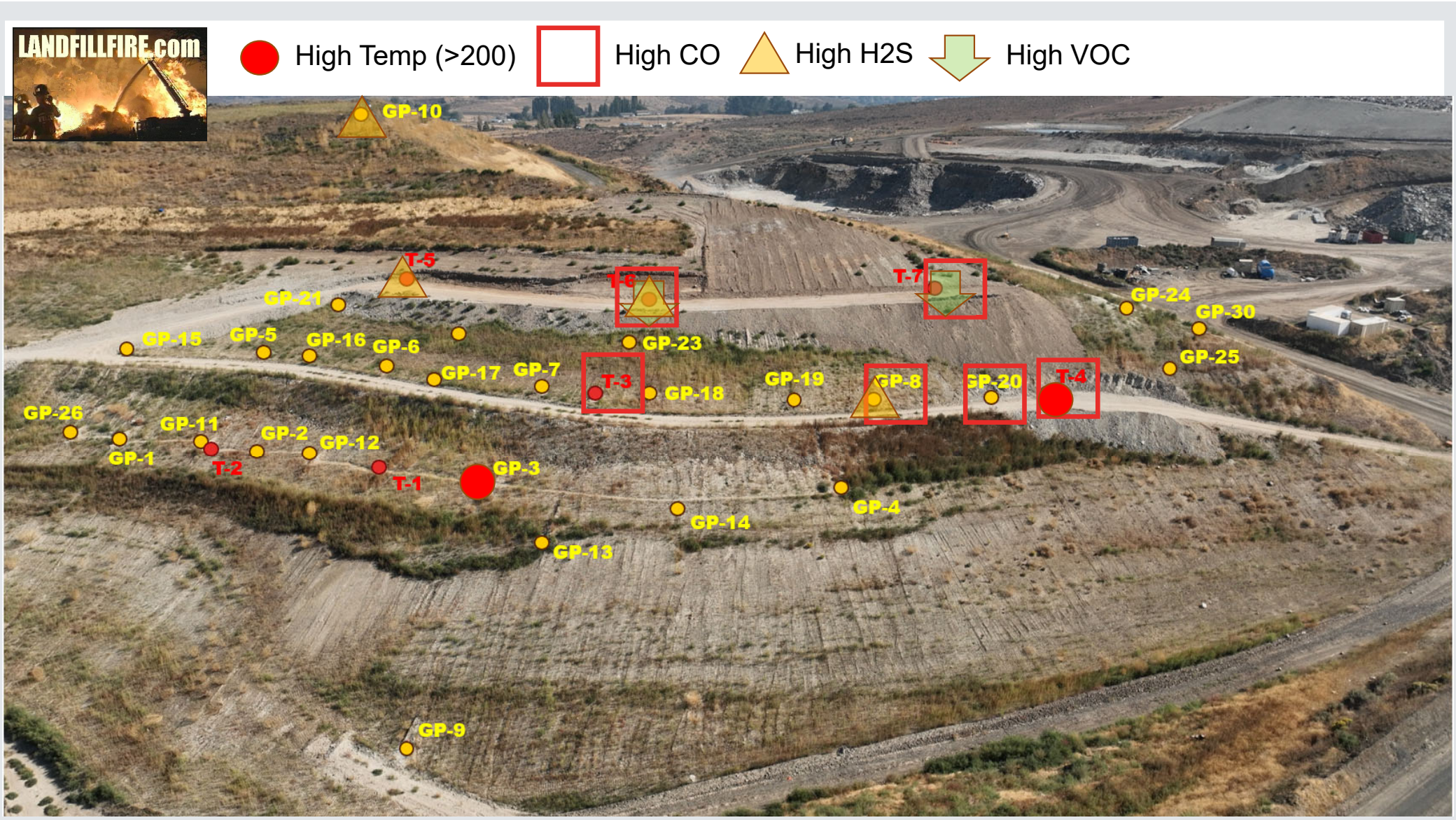


Methane

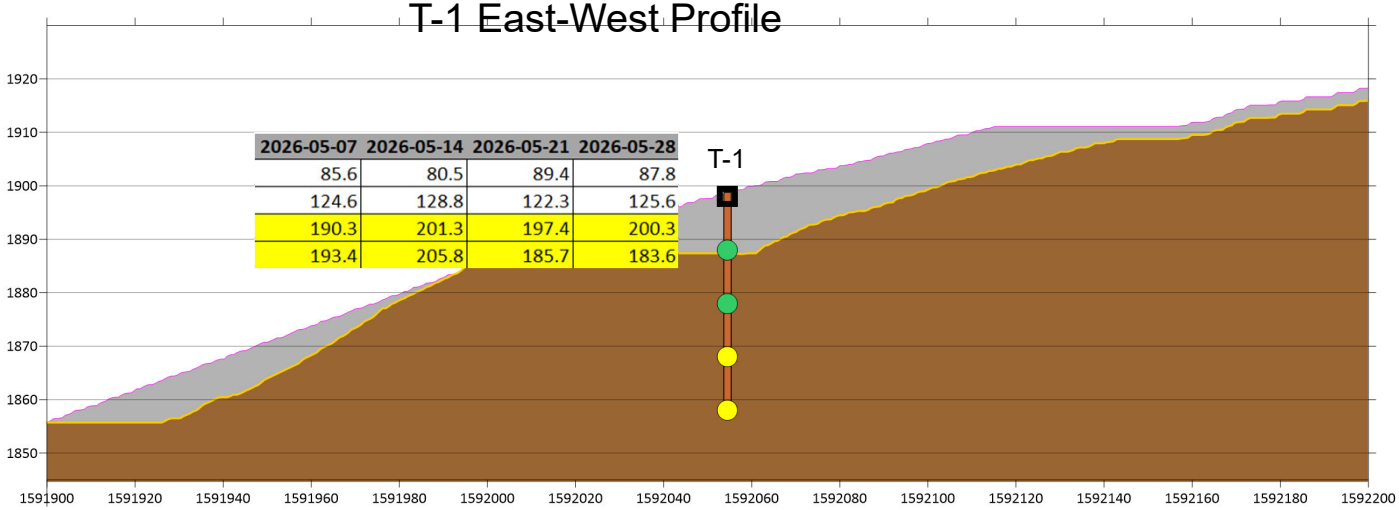
Methane levels for most wells are converging between 0 and 2.5% indicating that landfill is not biologically active. Only well GP-10 has been indicating consistently higher methane concentrations.

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 snowpack on the landfill surface preventing methane from escaping. This pattern is appearing again as the new year advances, and it is expected that the methane concentration in this well will fall over the next few months.



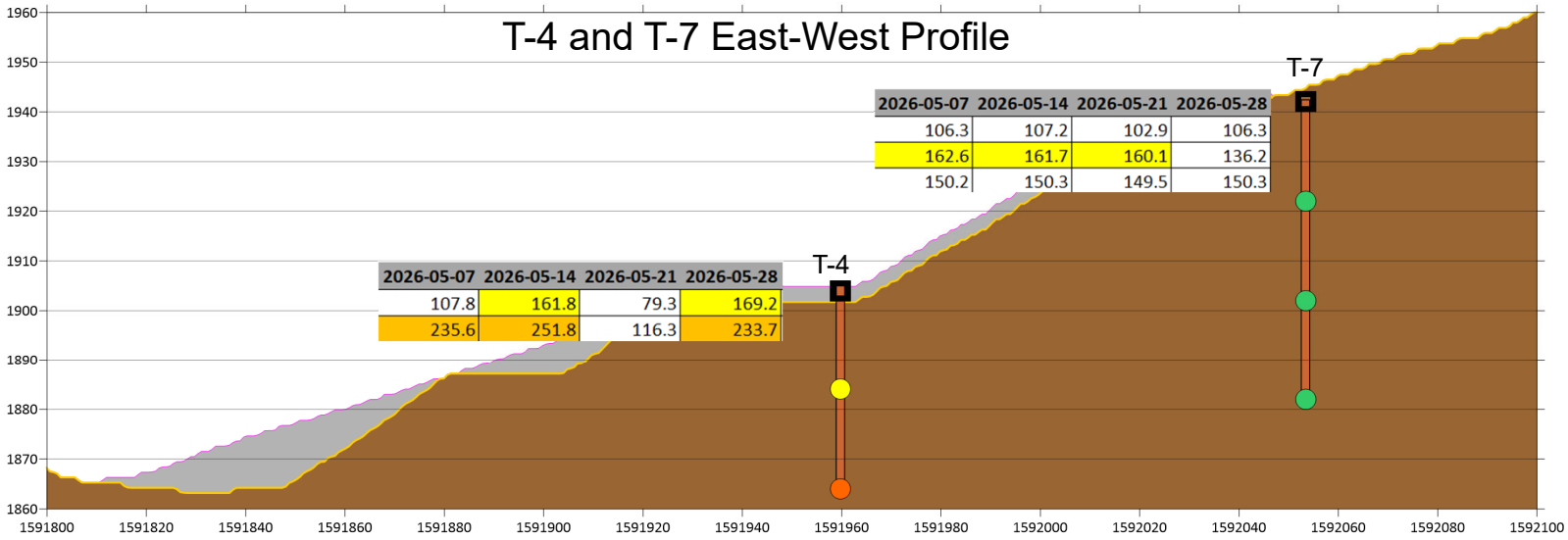

LANDFILLFIRE.com
High Temp (>200)
High CO
High H2S
High VOC
GP-10
T-5
T-6
T-7
GP-21
GP-15
GP-5
GP-16
GP-6
GP-23
GP-24
GP-30
GP-25
GP-17
GP-7
T-3
GP-18
GP-19
GP-8
GP-20
T-4
GP-26
GP-11
GP-2
GP-12
GP-1
T-2
T-1
GP-3
GP-4
GP-14
GP-13
GP-9

T-1 East-West Profile



2026-05-07	2026-05-14	2026-05-21	2026-05-28
85.6	80.5	89.4	87.8
124.6	128.8	122.3	125.6
190.3	201.3	197.4	200.3
193.4	205.8	185.7	183.6

T-4 and T-7 East-West Profile



2026-05-07	2026-05-14	2026-05-21	2026-05-28
107.8	161.8	79.3	169.2
235.6	251.8	116.3	233.7

2026-05-07	2026-05-14	2026-05-21	2026-05-28
106.3	107.2	102.9	106.3
162.6	161.7	160.1	136.2
150.2	150.3	149.5	150.3

Data Interpretation

LFCI believes that suppression efforts continue to work, but slowly after the initial decrease in smolder 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 exponential decay model.

In LFCI's experience, CO has been the best indicator of suppression at other landfill sites and is effective at indicating subsurface smolder activity at this site as well. Currently, the hot spot around T-3 is becoming less active with CO levels that were as high a 9,500 decreasing to 3,000 ppm in that monitor. Drilling of the new monitoring wells in 2025 identified elevated CO levels in T-6 and T-7. LFCI uses a concentration of 1,000 ppm as the primary indicator of active smolder activity. At this time, T-6D, T-7S, T-6S are all elevated above 3,000 ppm and indicating increasing trends over the past month.

Elevated VOC levels in T-6D, T-6S and T-7D is consistent with elevated CO readings, indicating that that the smolder is most active in the southern area at this time.

Temperature tracking is indicating that the subsurface is cooling over time and size of the hot spots is consistently shrinking, indicating that the smolder is becoming less active over time.

High O2 continues to fluctuate seasonally, but appears to be on an increasing trend over time. At this time LFCI is unsure whether the trend in increasing O2 is due to the soil cover becoming more pervious over time due to dessication cracking, or whether the fact that the major smolder has been effectively suppressed, the rate of oxygen consumption in the subsurface has been decreased, resulting in an increase in O2 over time.

As atmospheric pressure has been increasing, large ambient pressure swings have been noted, and the cover soil has been inspected and no major concerns were found. Additional cover was placed in the area of T-4 where cover soil was excavated to make room for developing the new wells.

Based on temperature, CO and VOC readings, LFCI believes that the main smolder around T-1 and GP-3 is less and less active, and main smolder activity is now in the southern quadrant around T-4.