June 4, 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 – 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 2025 to implement the requirements of this AO.

Activities:

On-site activities included weekly gas probe and every other week ambient monitoring. The once per month regulatory review meeting was held on May 22, 2025. The monitoring data summary through May 2025 from Landfill Fire Control, Inc. (LFCI) is attached.

Q2A groundwater monitoring was performed on May 7, 2025.

Ecology assessed the LPL with a thermal drone on May 8, 2025.

Gregory Drilling completed the drilling of MW-11S on May 29, 2025 and completed well construction on May 30, 2025. Then drilling mobilized to MW-S1.

Access was developed in the MTCA area for drilling of the new thermistors.

Deviations from Plans (if any):
None.

Deviations Description from the Scope of Work and Schedule:
Drilling has been progressing slower than plan.

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
dtgrecycle.com

Deliverables for the Upcoming Month:
Deliverables will include:

- Weekly ambient and gas probe data
- June Progress Report
- LFG monitoring is scheduled for June 4, 2025
- Ecology may provide the drone assessment results
- Q1 Groundwater Report

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 – May 2025

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

June 5th, 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 – May 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 April, the month of May has exhibited variable trends in temperature and gas composition. The past month has seen the rate of overall cooling decrease, with lower temperature wells increasing overall.

The availability of increased O2 and the seasonal warming has likely initiated a slight uptick in thermal activity and CO concentration, and we will pay close attention to see if the downward trend reestablishes itself through the next month as average atmospheric pressures are expected to decrease over the summer months.

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, but CO has increased in the past two months and May has not shown a significant increase or decrease.

Per LFCI's fire control plan, monitoring can be reduced to once every two weeks once CO levels drop below 500 ppm and the fire can be declared extinguished after CO concentration is below 200 ppm.

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 one year. 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.

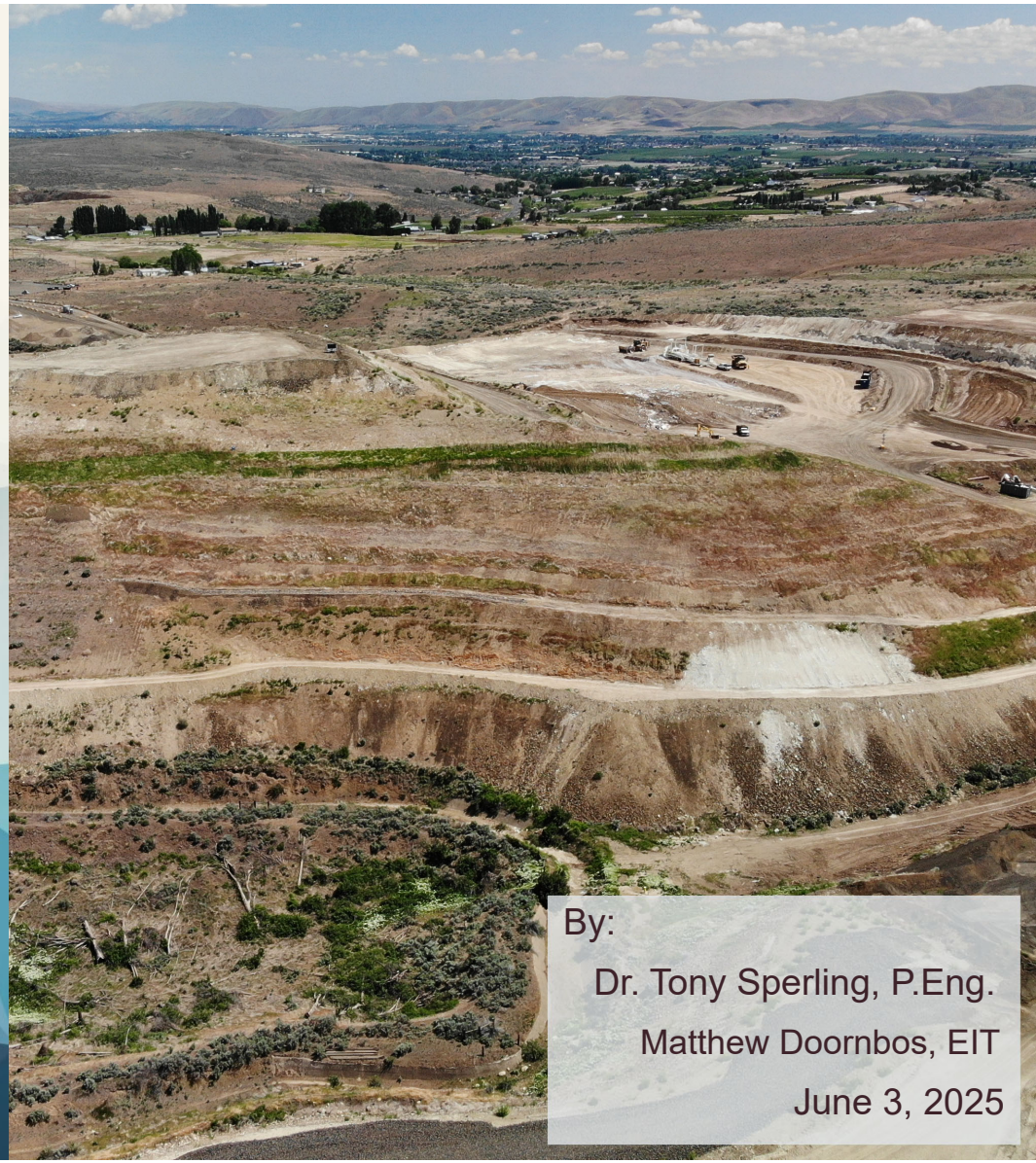
Dr. Tony Sperling, P.Eng.
President

June 5th, 2025

DTG LPL LANDFILL FIRE INVESTIGATIONS AND MITIGATION

Monthly Monitoring Data Review

May 2025



By:

Dr. Tony Sperling, P.Eng.

Matthew Doornbos, EIT

June 3, 2025

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LANDFILLFIRE.com
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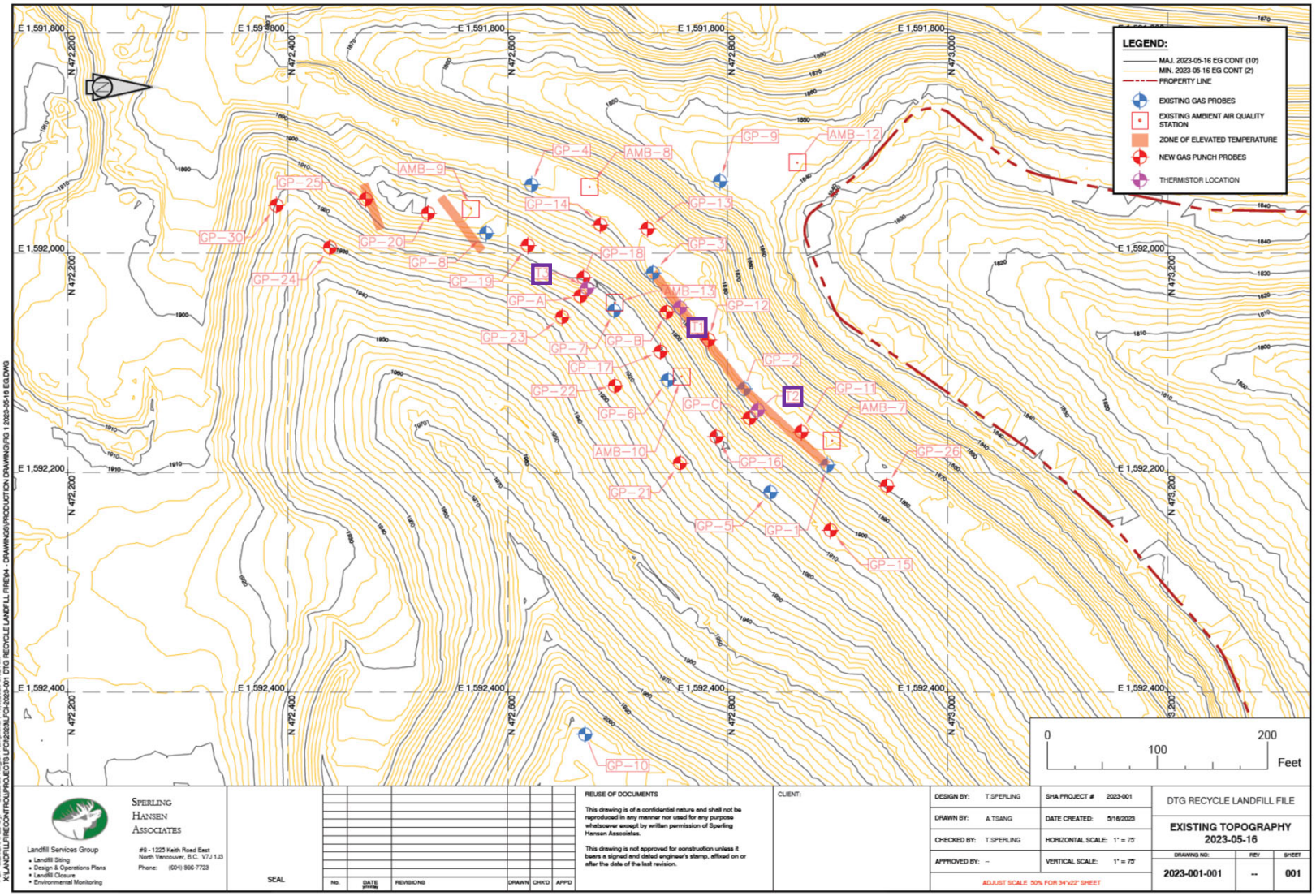

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Landfill Services Group
- Landfill Siting
- Design & Operations Plans
- Landfill Closure
- Environmental Monitoring

#8 - 1225 Keith Road East
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Phone: (604) 986-7723

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No.	DATE plotted	REVISIONS	DRAWN	CHKD	APP'D

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DESIGN BY:	T.SPERLING	SHA PROJECT #	2023-001
DRAWN BY:	A.TSANG	DATE CREATED:	5/16/2023
CHECKED BY:	T.SPERLING	HORIZONTAL SCALE:	1" = 75'
APPROVED BY:	--	VERTICAL SCALE:	1" = 75'

ADJUST SCALE 30% FOR 34"x22" SHEET

DTG RECYCLE LANDFILL FILE

EXISTING TOPOGRAPHY 2023-05-16

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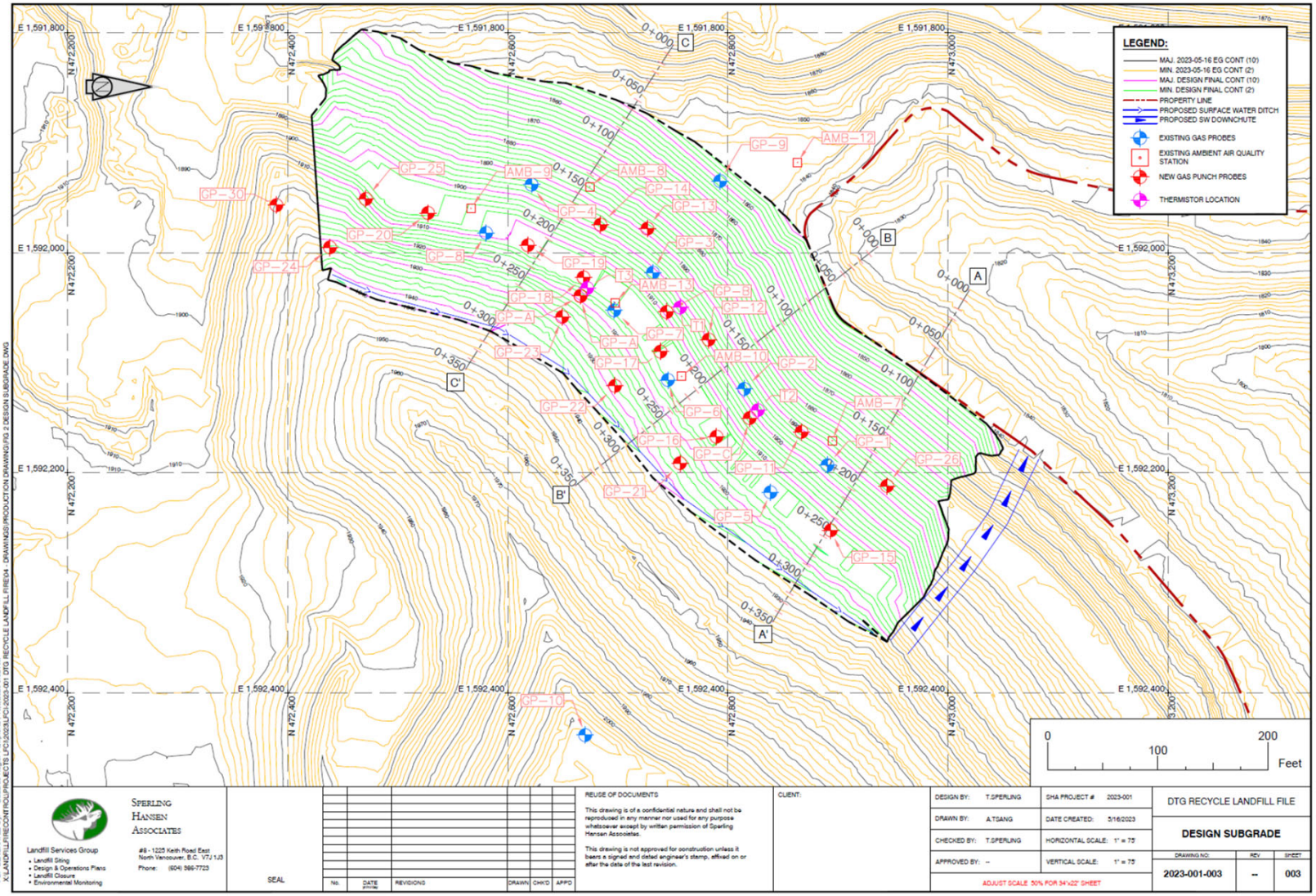

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ADJUST SCALE 50% FOR 34"x22" SHEET

DTG RECYCLE LANDFILL FILE

DESIGN SUBGRADE

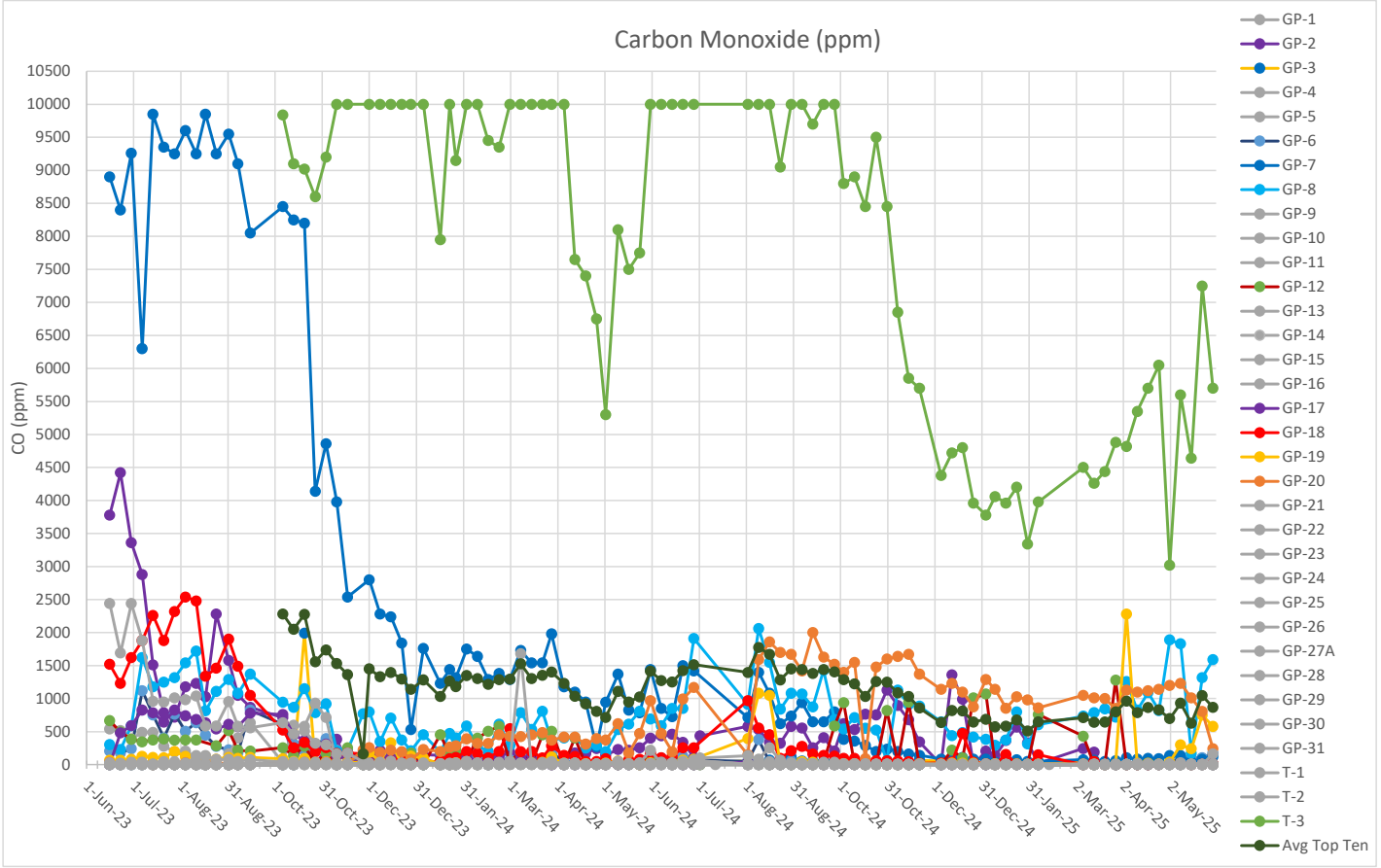
DRAWING NO:	REV	SHEET
2023-001-003	--	003

Carbon Monoxide

The month of May saw a continued but unsteady increase in CO levels, with T-3 starting at 6050ppm, going up to 7250ppm in the second last event of May, then dropping down to 5700ppm in the latest monitoring event.

Part of rise is likely attributable to increased hydrogen and H2S readings which result in cross contamination of sensors.

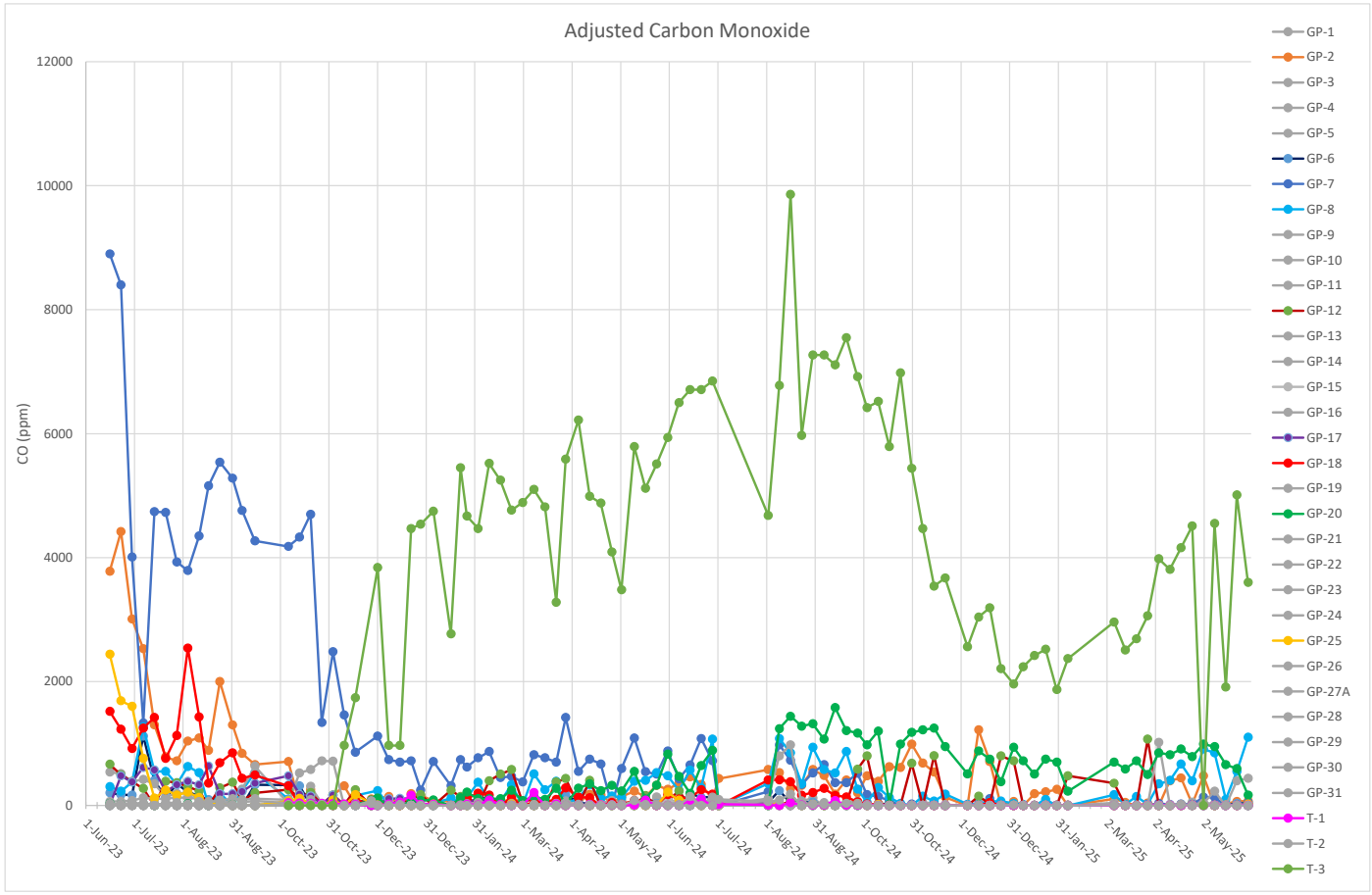
The average CO across the top 10 wells has been decreasing steadily since soil application commenced, with a slight increase since January, 2025, correlating with increased pressure oscillations that push more atmospheric air into the landfill. The recent unsteady measurements also follow pressure swings over the past month.



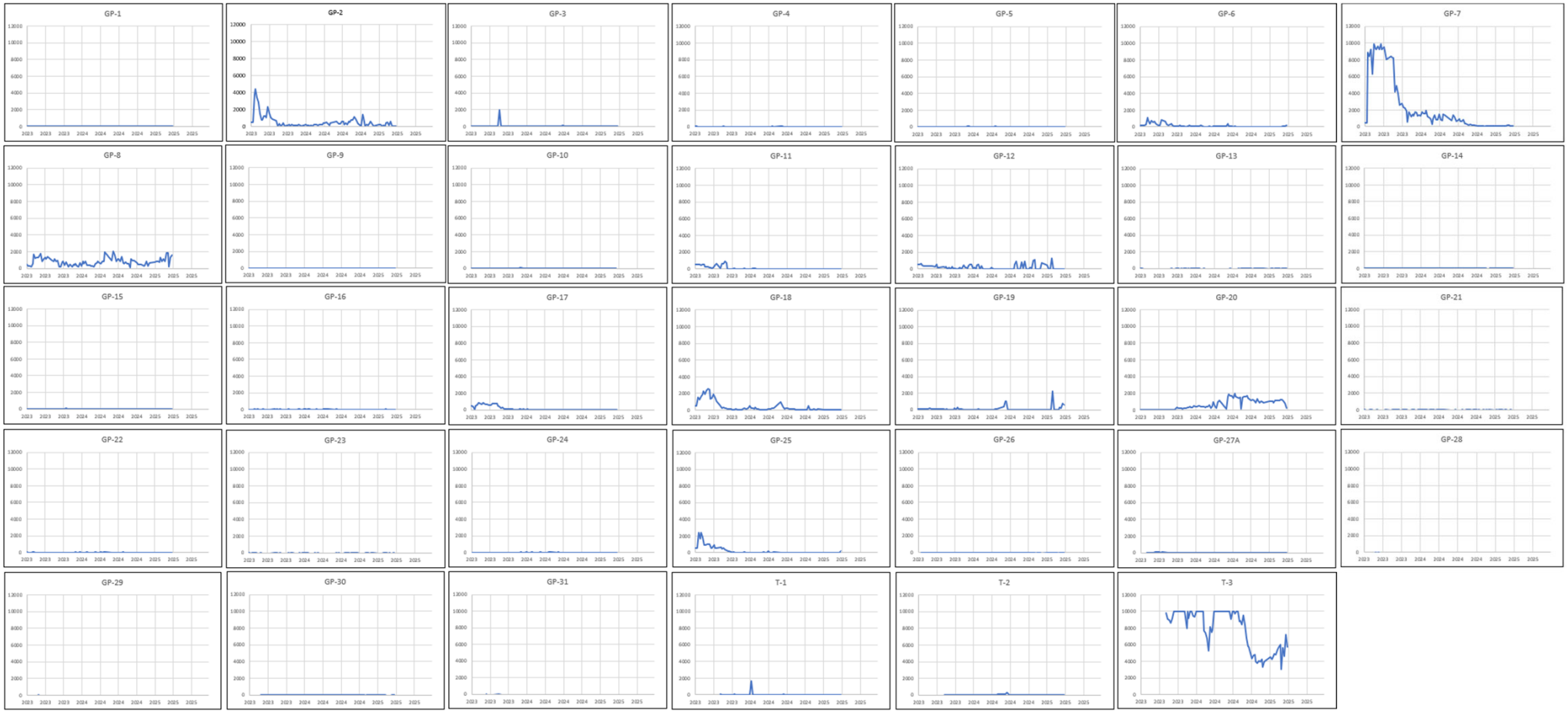
CO Adjusted for H2 Gas

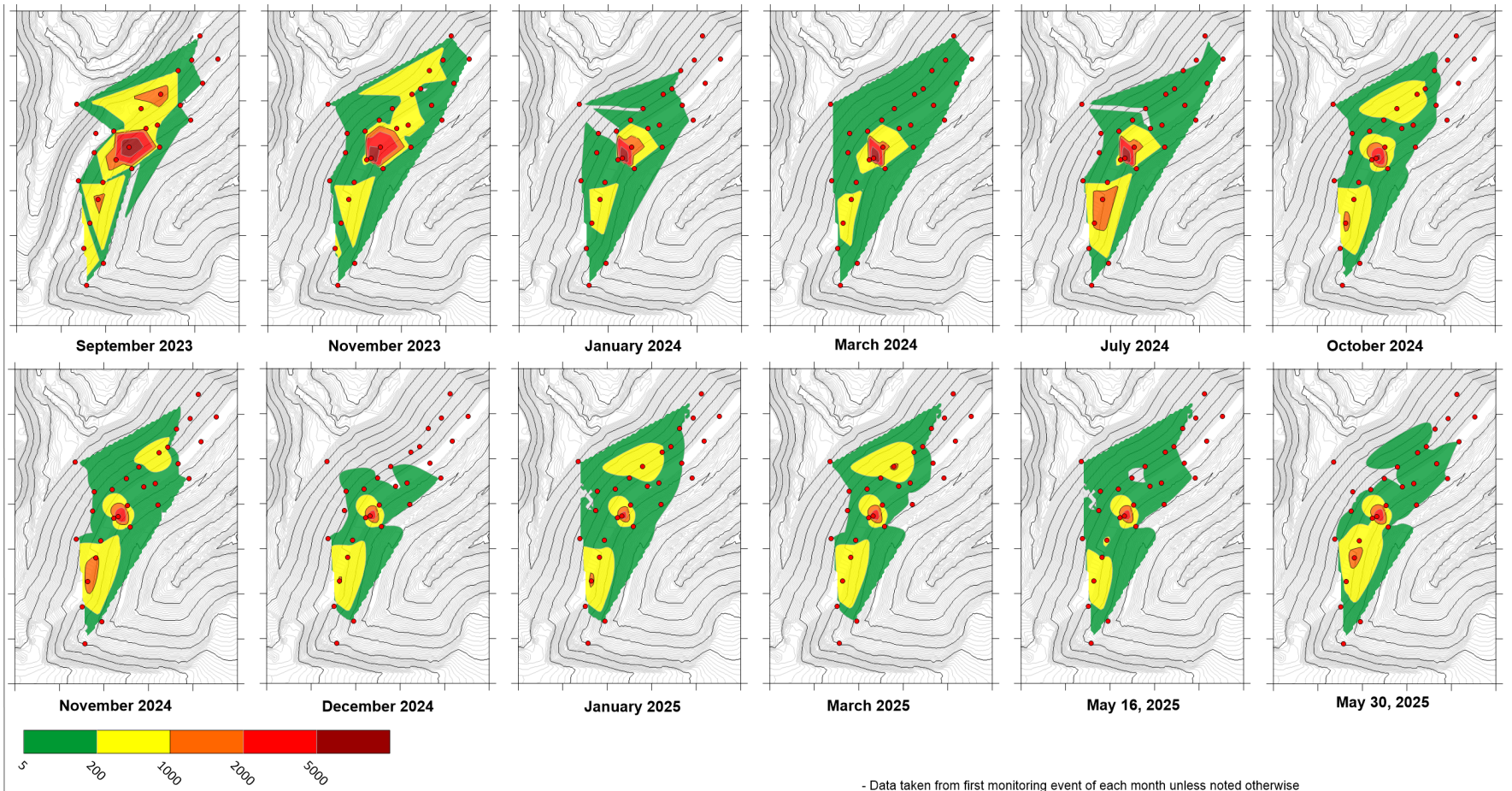
Adjusted CO measurements to find the ‘best case scenario’ are also showing increased levels of carbon monoxide.

Scrubbing any possible hydrogen interference shows similar unsteady levels with an apparent increase over the past month.



CO Levels by Individual Wells





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

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DTG Recycle

DESIGN BY:	T. SPERLING
DRAWN BY:	M. DOORNBOS
DATE CREATED:	2025/6/3
SHA PROJECT #	LFCI-2023-001

DTG RECYCLE LANDFILL FIRE

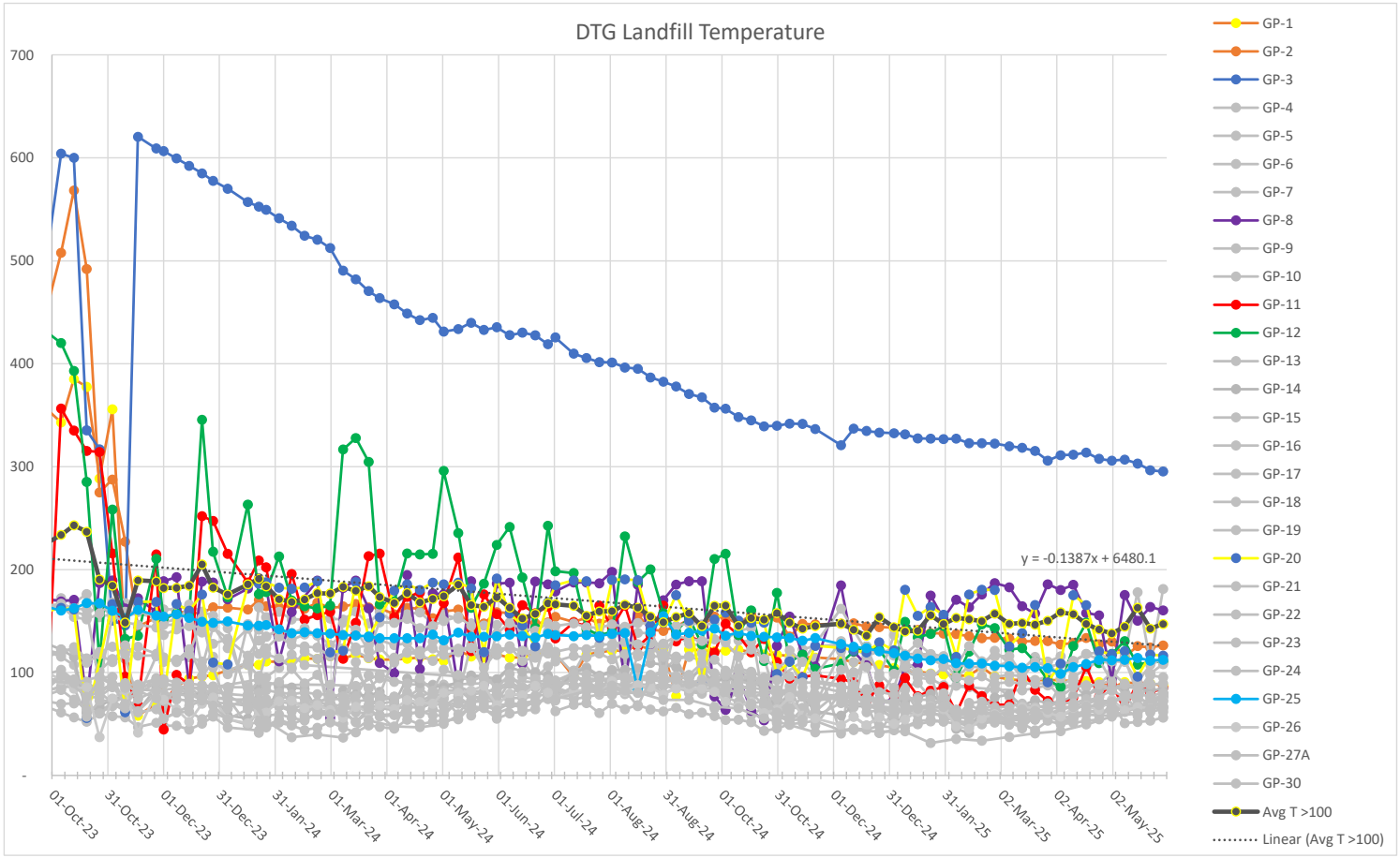
MONTHLY MONITORING SUMMARY SPATIAL MAPS - CO

DRAWING NO.	REV	SHEET
LFCI-2023-001-05-CO	1	1

Temperature (F)

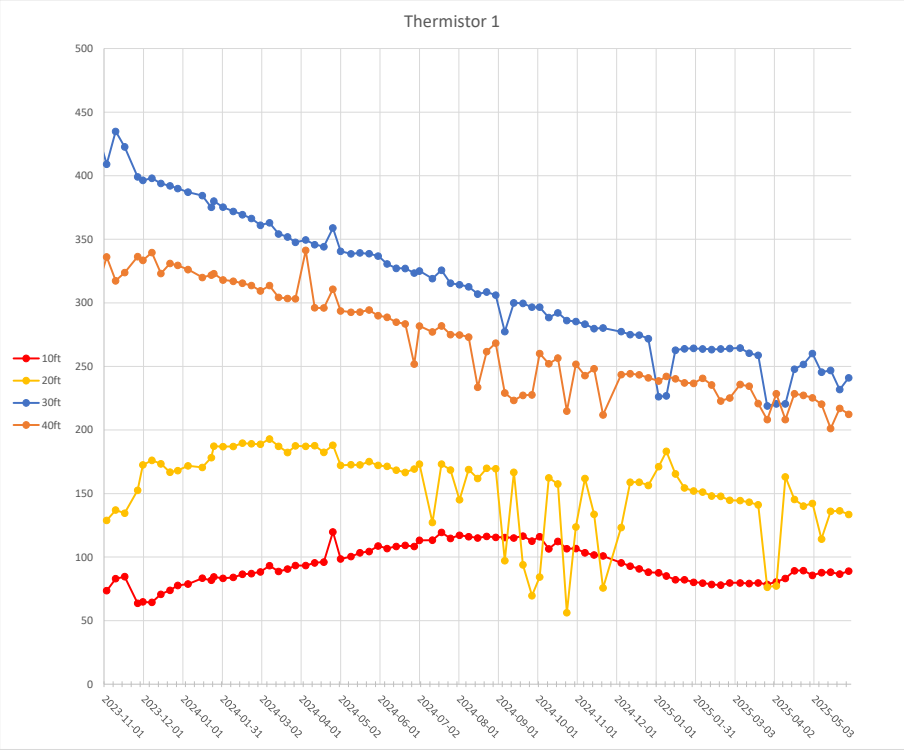
May saw continued decreasing temperatures in GP-3, the hottest well, with temperatures falling to 295F and a gradual cooling trend in GP-8 with significant fluctuations.

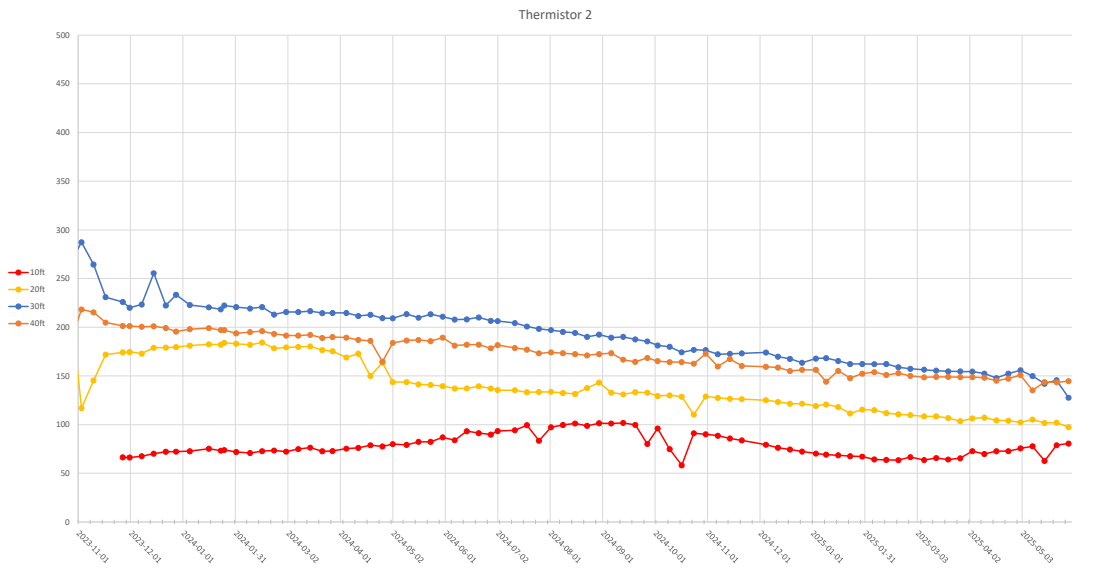
The trend line continues to show gradual cooling. However, temperatures across the wells above T>100F increased slightly at a rate of 0.3F per day over the month of May on account of the large atmospheric pressure fluctuations.

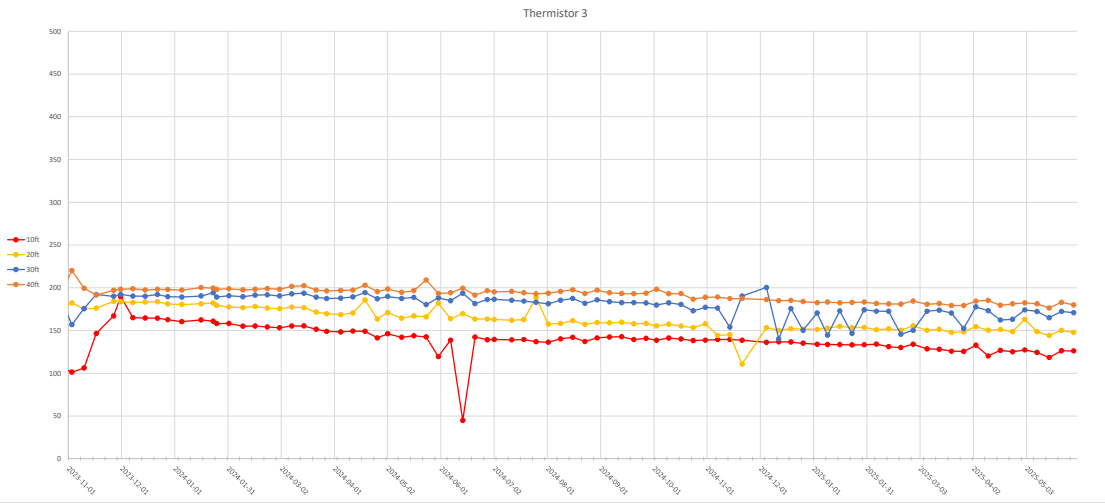


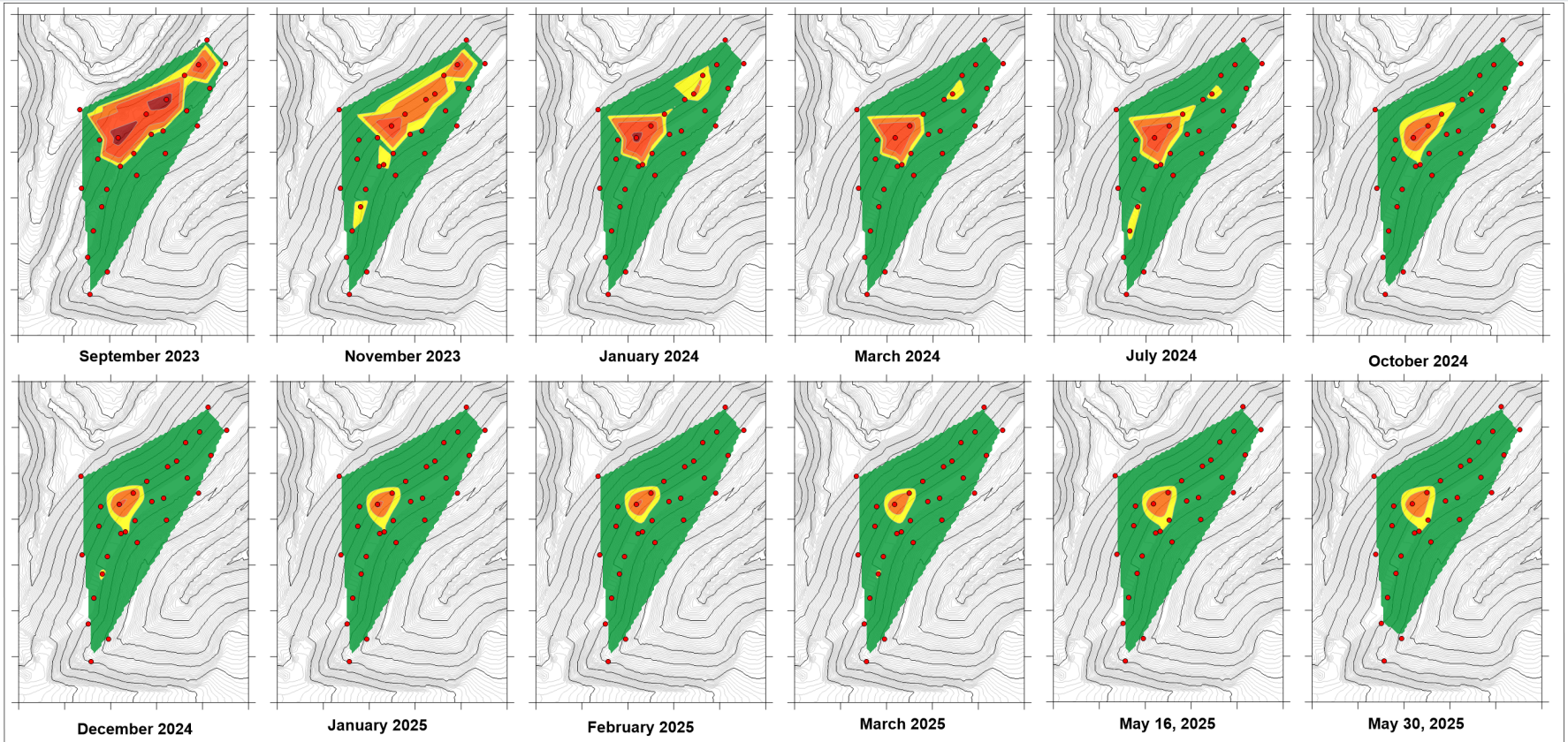
Thermistor Temperatures

Thermistor temperatures are mostly stable, with a slight downward trend in T-1, T-2 and T-3, 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.









- 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
- Temperatures are measured in Degrees F
- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

No.	DATE yr/m/day	REVISIONS	DRAWN	CHK'D	APP'D

DESIGN BY:	T. SPERLING
DRAWN BY:	M. DOORNBOS
DATE CREATED:	2025/06/03
SHA PROJECT #	LFCI-2023-001

DTG RECYCLE LANDFILL FIRE

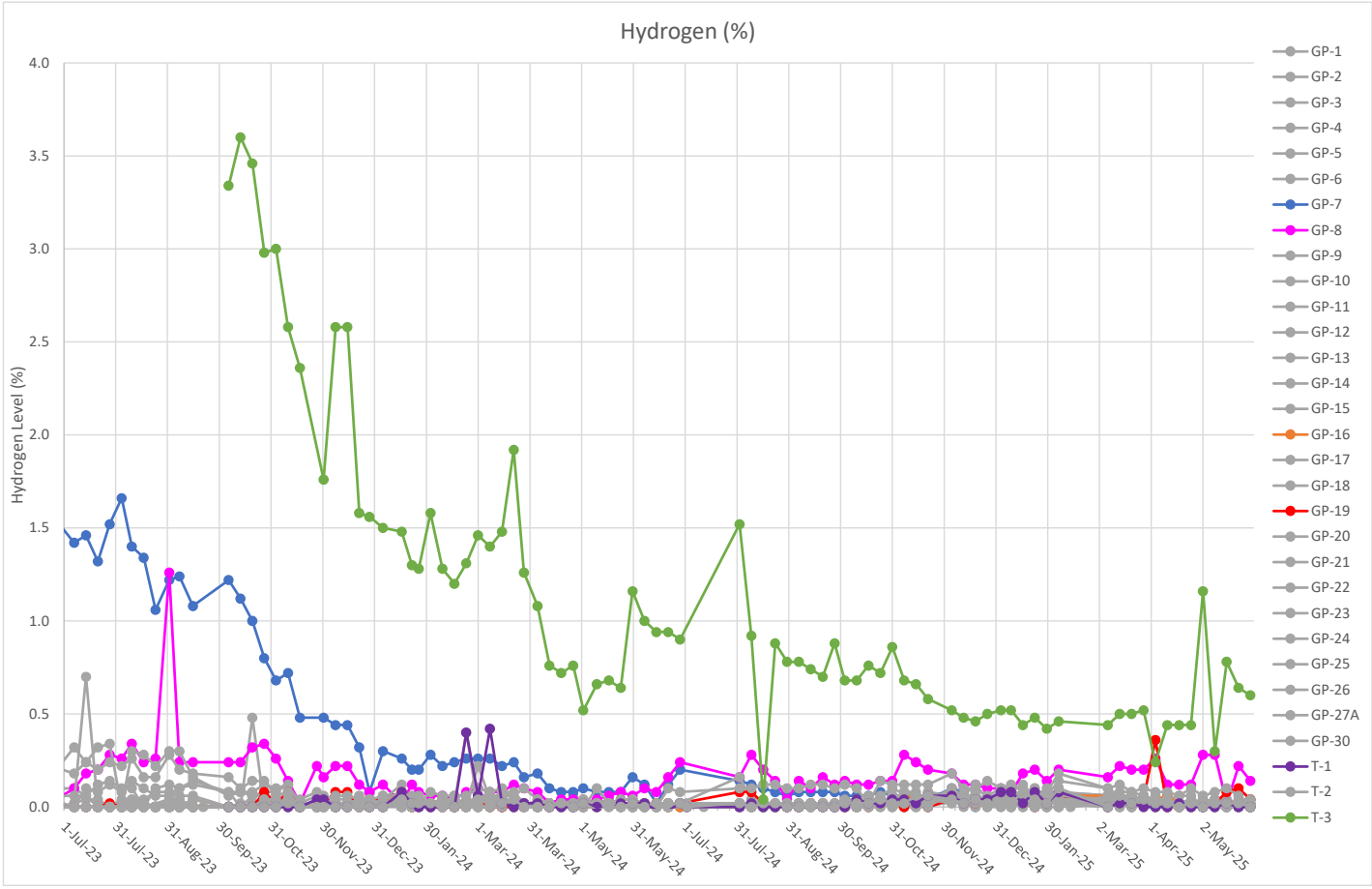
MONTHLY MONITORING SUMMARY SPATIAL MAPS - TEMPERATURE

DRAWING NO.	REV	SHEET
LFCI-2023-001-05-TEMP	1	1

Hydrogen

Hydrogen has increased to over 1% for a single monitoring event in May, but seems to now be decreasing back to the stable 0.4% seen in April.

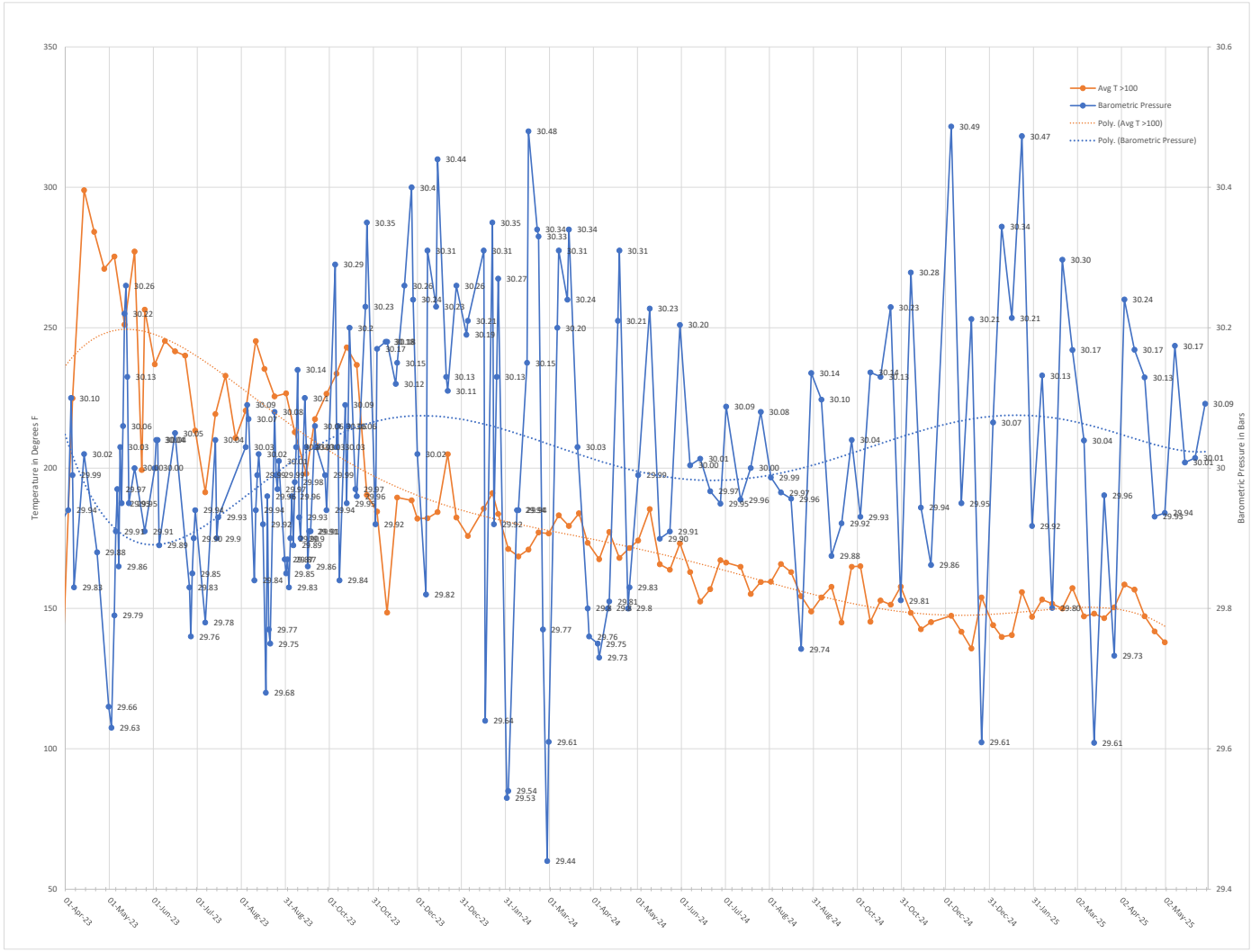
Hydrogen remains very low in all other wells. Production of H_2 is often observed with smoldering waste. LFCI believes that the level of H_2 dropping continues to indicate that the fire is less active.



Barometric Pressure

The site observed decreasing atmospheric pressure in May, but the the month started with a 0.2 bar increase in pressure, that was preceeded by a very large pressure increase in early April of 0.5 bar.

Based on past pressure trends, we anticipate a low pressure environment from April through to September, which should result in less oxygen availability. This should translate to less oxygen available to feed the smoulder.

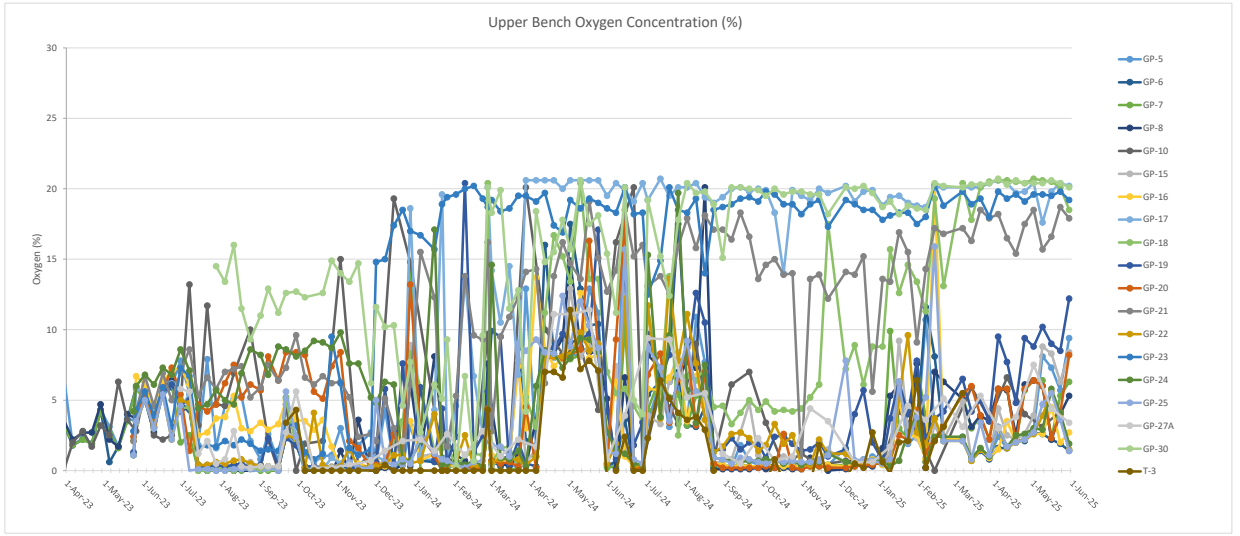


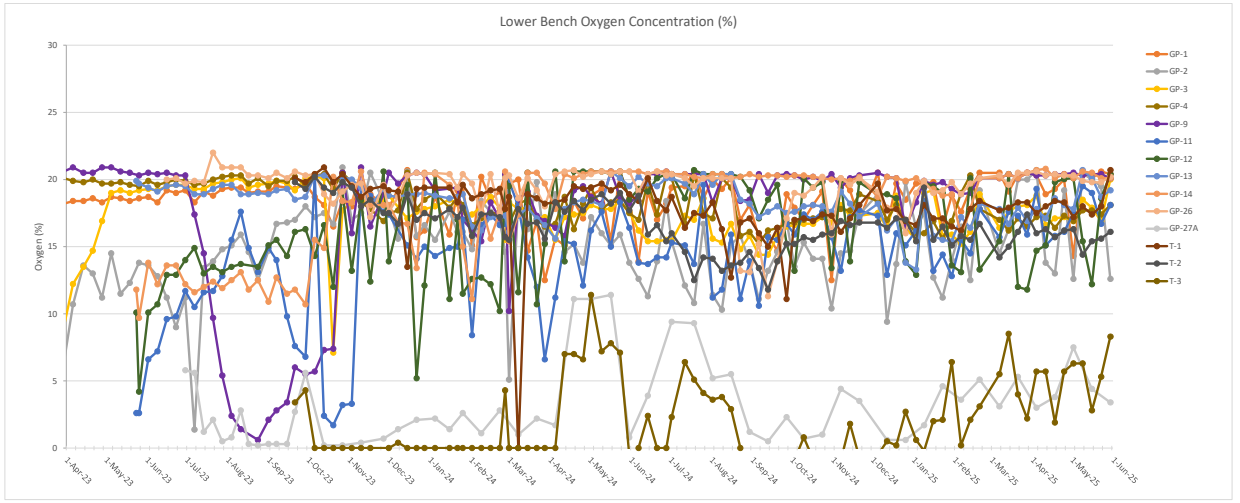
Oxygen

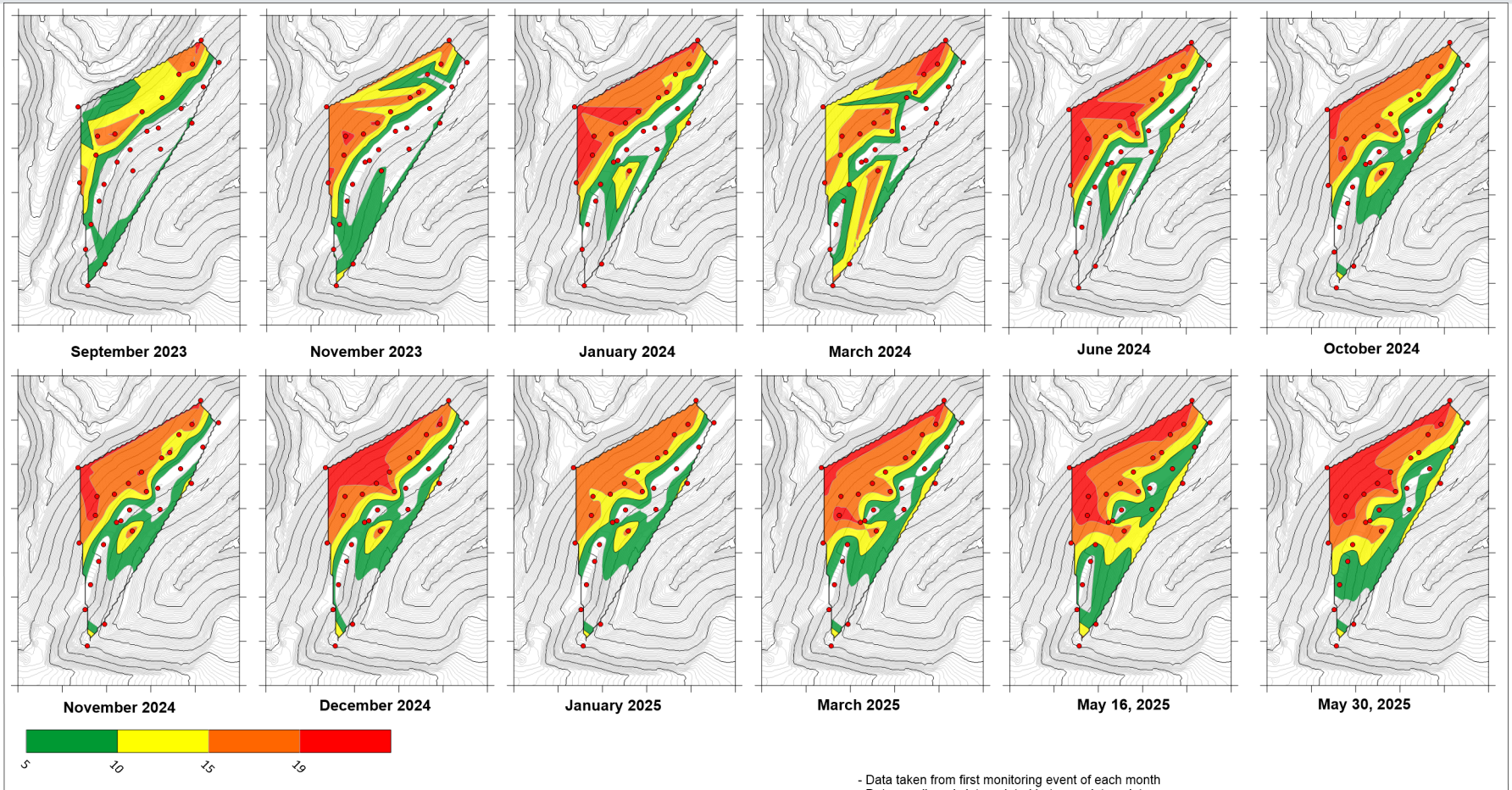
The oldest portion of the landfill is likely relatively inert and biologically inactive, producing very little methane. As a result, the pore space is full of atmospheric air, leading to the generally high oxygen concentrations. In plan view, oxygen levels have been increasing since Jan, 2025.

Some GPs likely susceptible to swings in pressure – LFCI believes this is causing the spikes.

Noted that higher levels of oxygen in GP-9 at landfill toe (>20%) are causing the spatial maps to be somewhat skewed, indicating air intrusion throughout the toe of the landfill. This is likely not a true portrayal of O2 levels within the fill; however, there has been an increase in concentrations throughout the monitored area over the past few months, most likely due to the very high atmospheric pressure and significant pressure swings







- Data taken from first monitoring event of each month
- Data was linearly interpolated between data points
- Datapoints (probe locations) represented in red
- O2 levels are measured in % composition
- Ground contours are of existing ground at beginning of project, with design contours added for after addition of fill

No.	DATE yr/m/day	REVISIONS	DRAWN	CHK'D	APP'D

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DESIGN BY:	T. SPERLING
DRAWN BY:	M. DOORNBOS
DATE CREATED:	2025/06/03
SHA PROJECT #	LFCI-2023-001

DTG RECYCLE LANDFILL FIRE

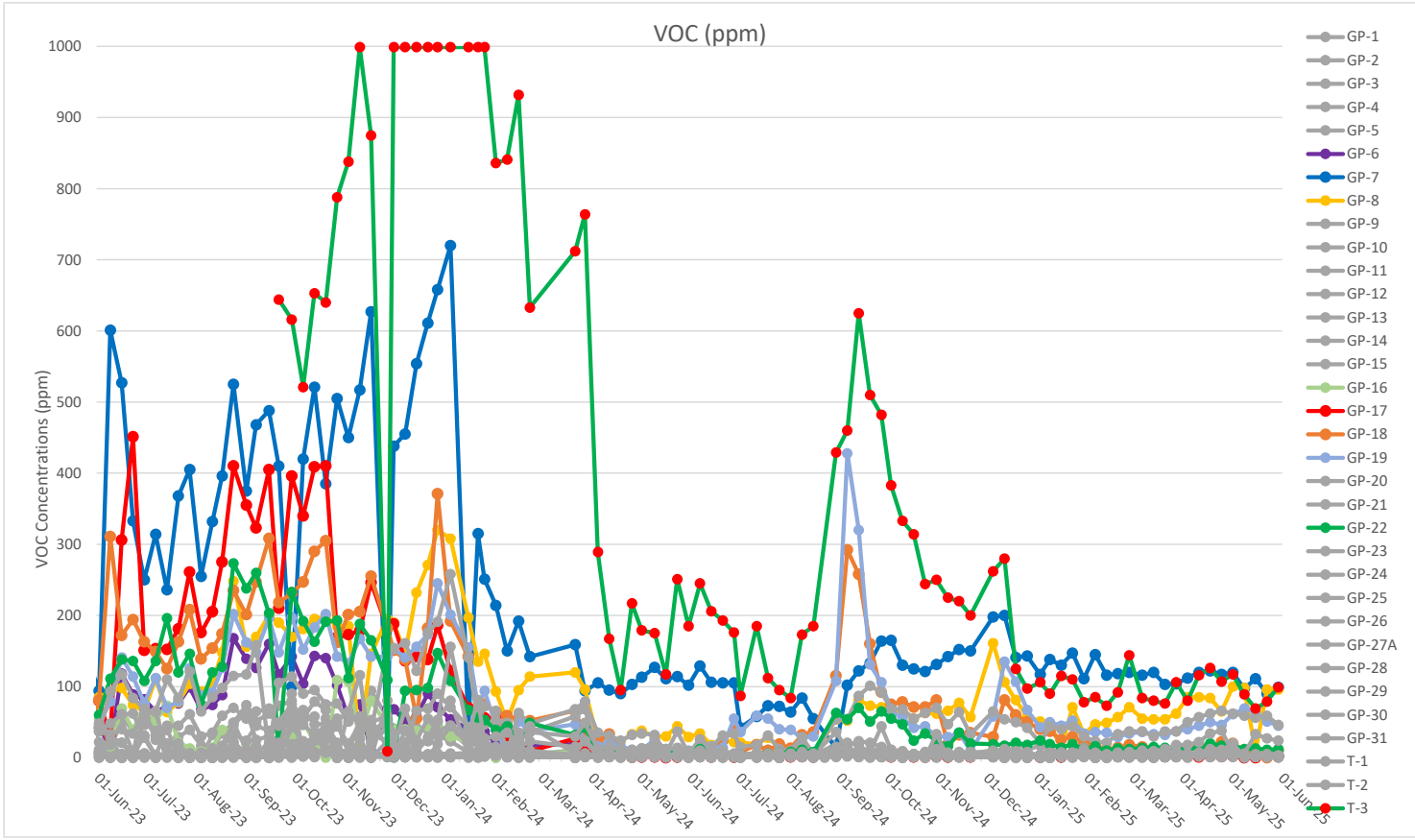
MONTHLY MONITORING SUMMARY SPATIAL MAPS - O2

DRAWING NO.	REV	SHEET
LFCI-2023-001-05-O2	1	1

Volatile Organic Compounds

Through May, VOC levels continued to be stable with the highest concentrations in GP-7 and T-3 around 100ppm.

VOC emissions are often related to subsurface landfill fires. The fact that VOC emissions have declined is a strong indication that the rate of combustion is rapidly decreasing.

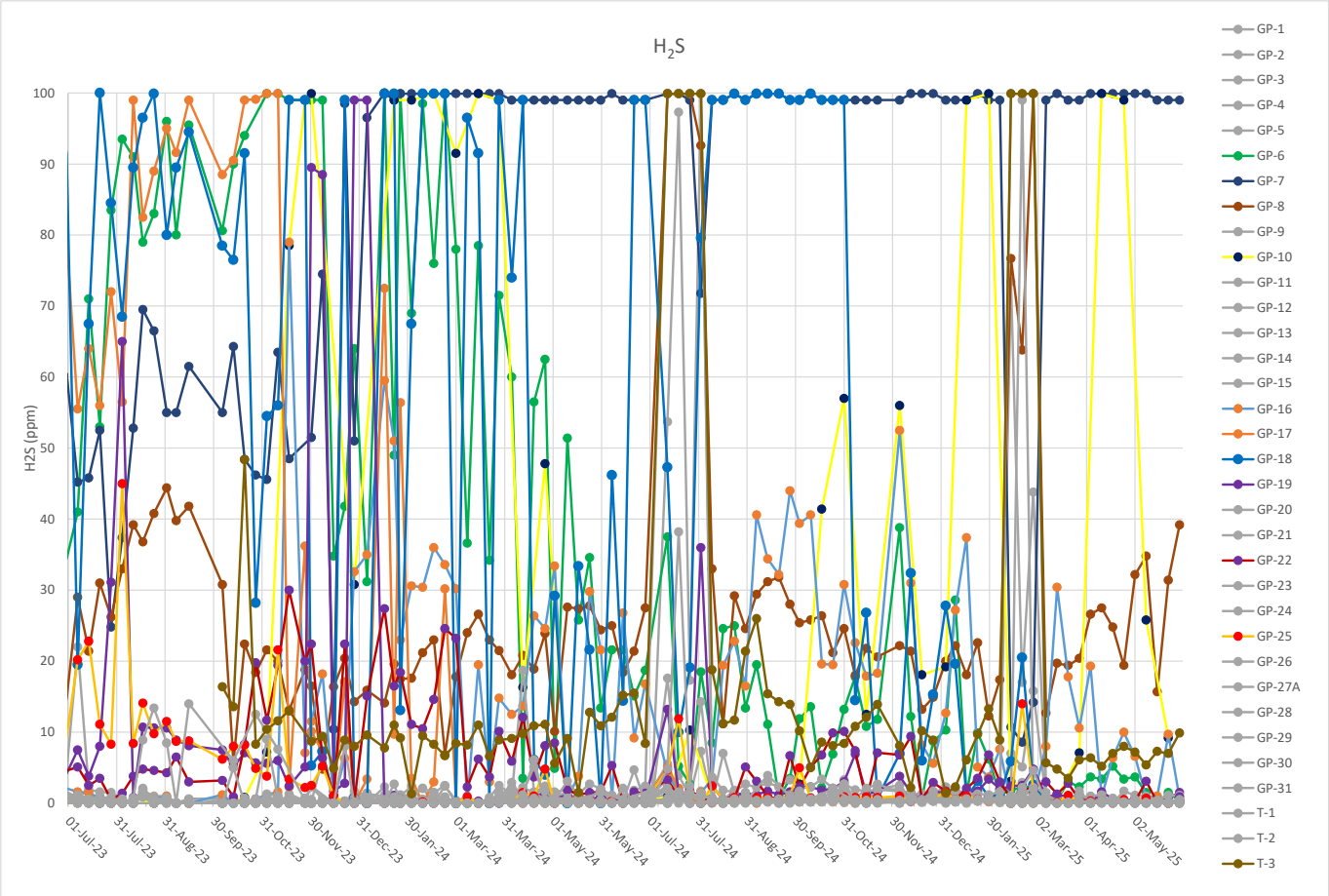


Hydrogen Sulfide

H_2S data continues to be noisy, likely affected by atmospheric pressure fluctuation.

Most locations are low, but GP-7 remains high as it has historically.

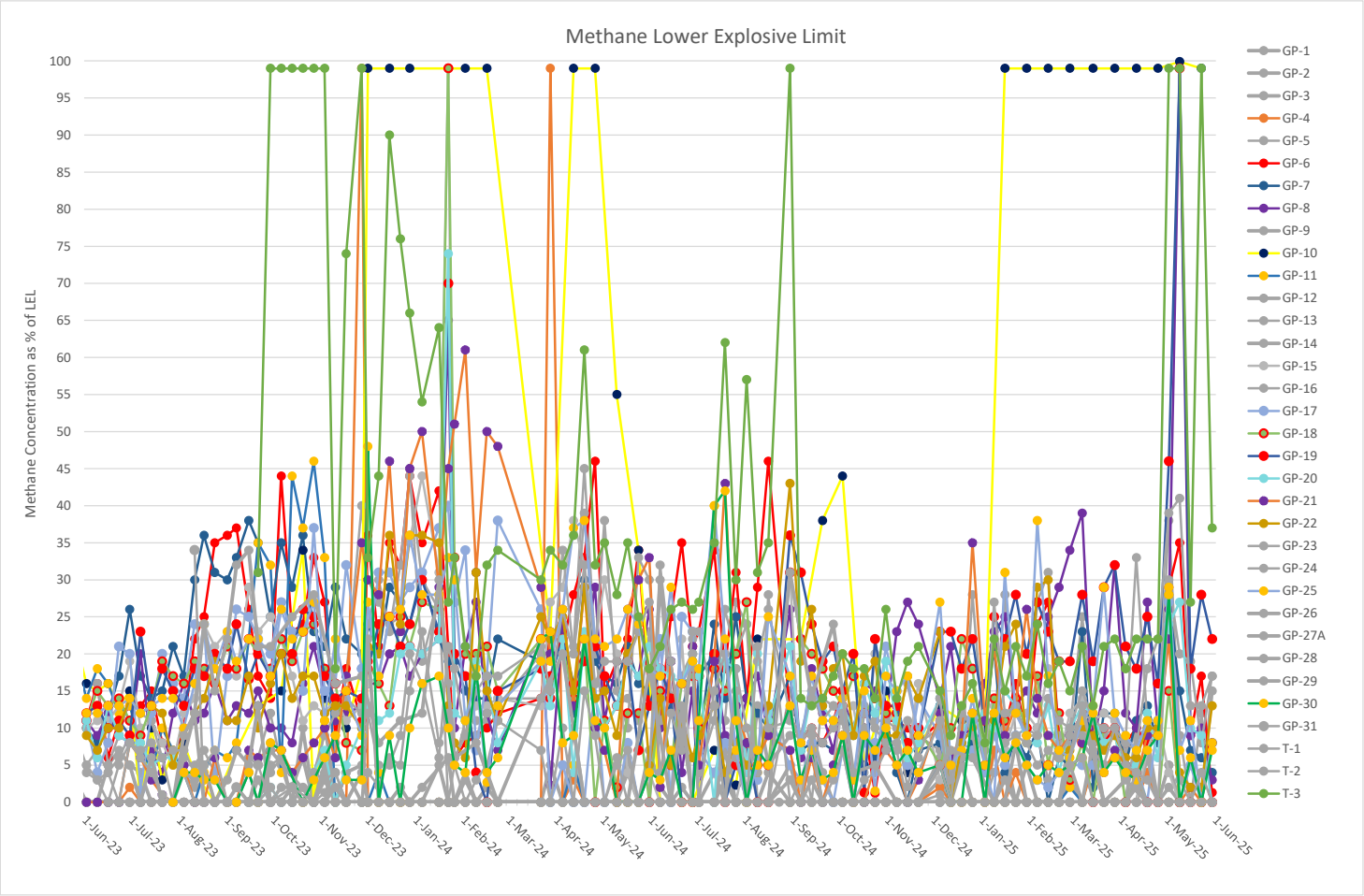
As mentioned previously, it is possible that the H_2S sensor is being impacted by CO cross interference. With CO concentration decreasing, reported H2S concentration is dropping as well.



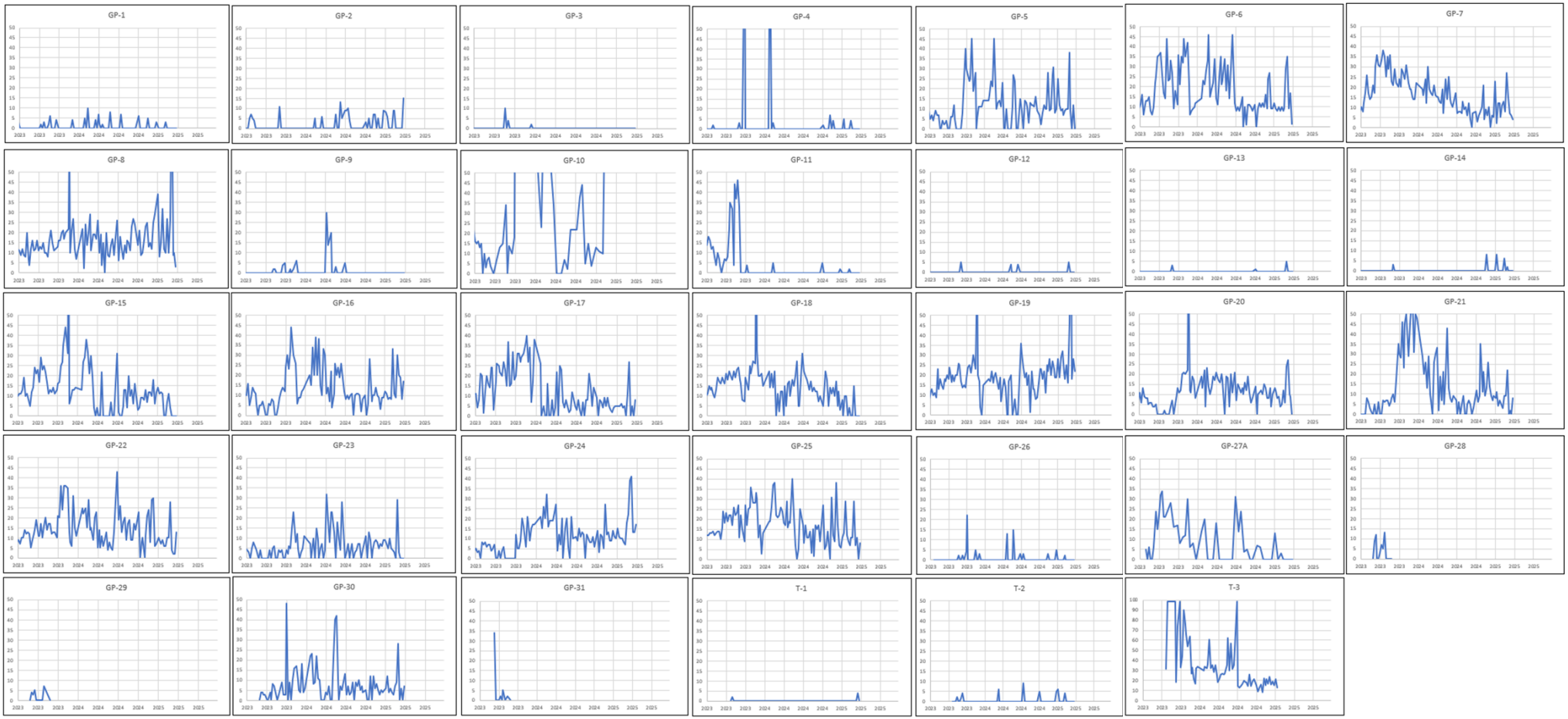
Lower Explosive Limit

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

Sudden increase in several many wells at the beginning of May, all of which have fallen to previous, if not slightly elevated, levels.



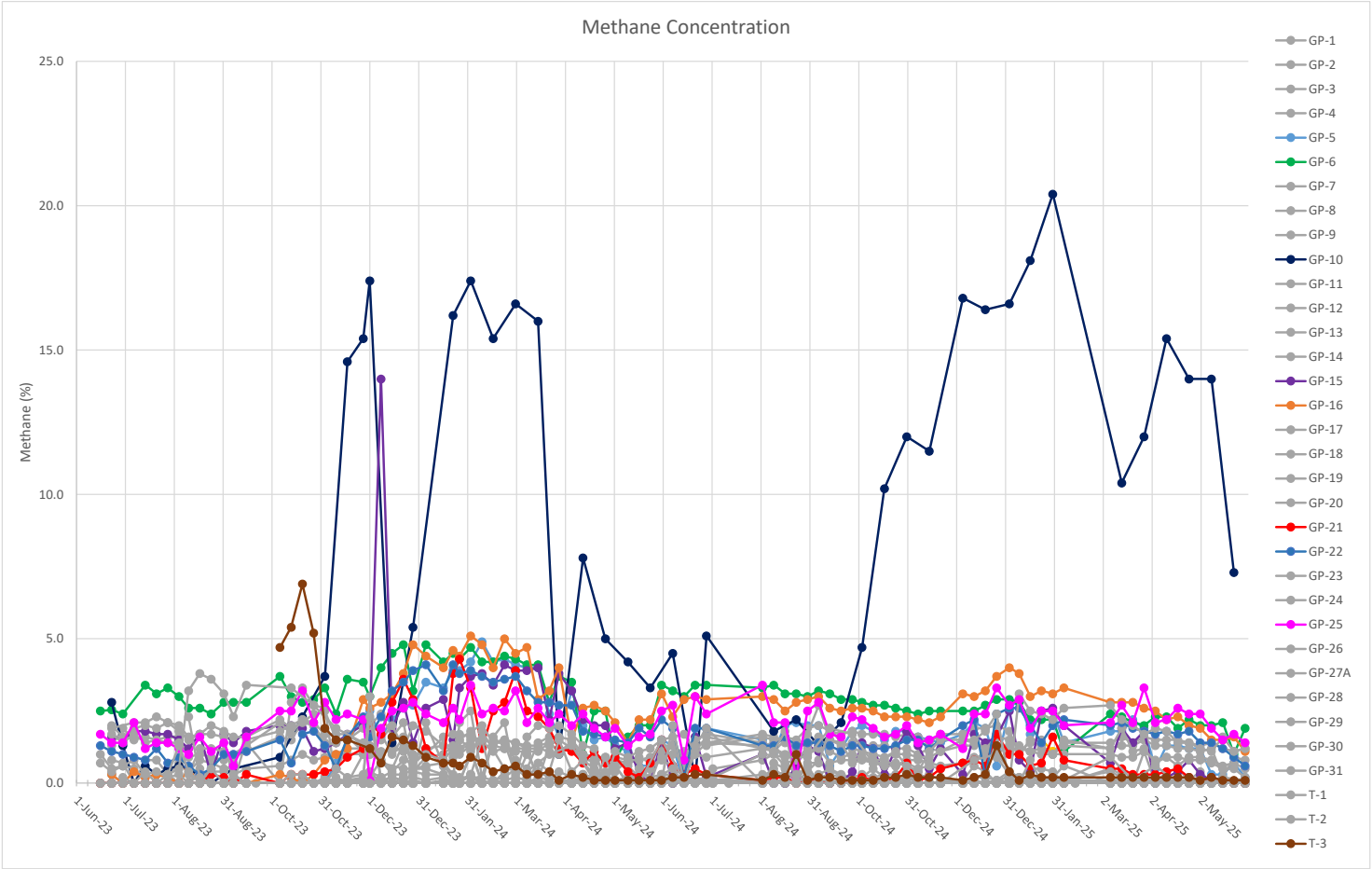
LEL for individual GP



Methane

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

Only well GP-10 is indicating higher methane - high concentrations are typically observed at this well as it is affected by more recently placed waste that is still in process of decomposition.

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GP-10
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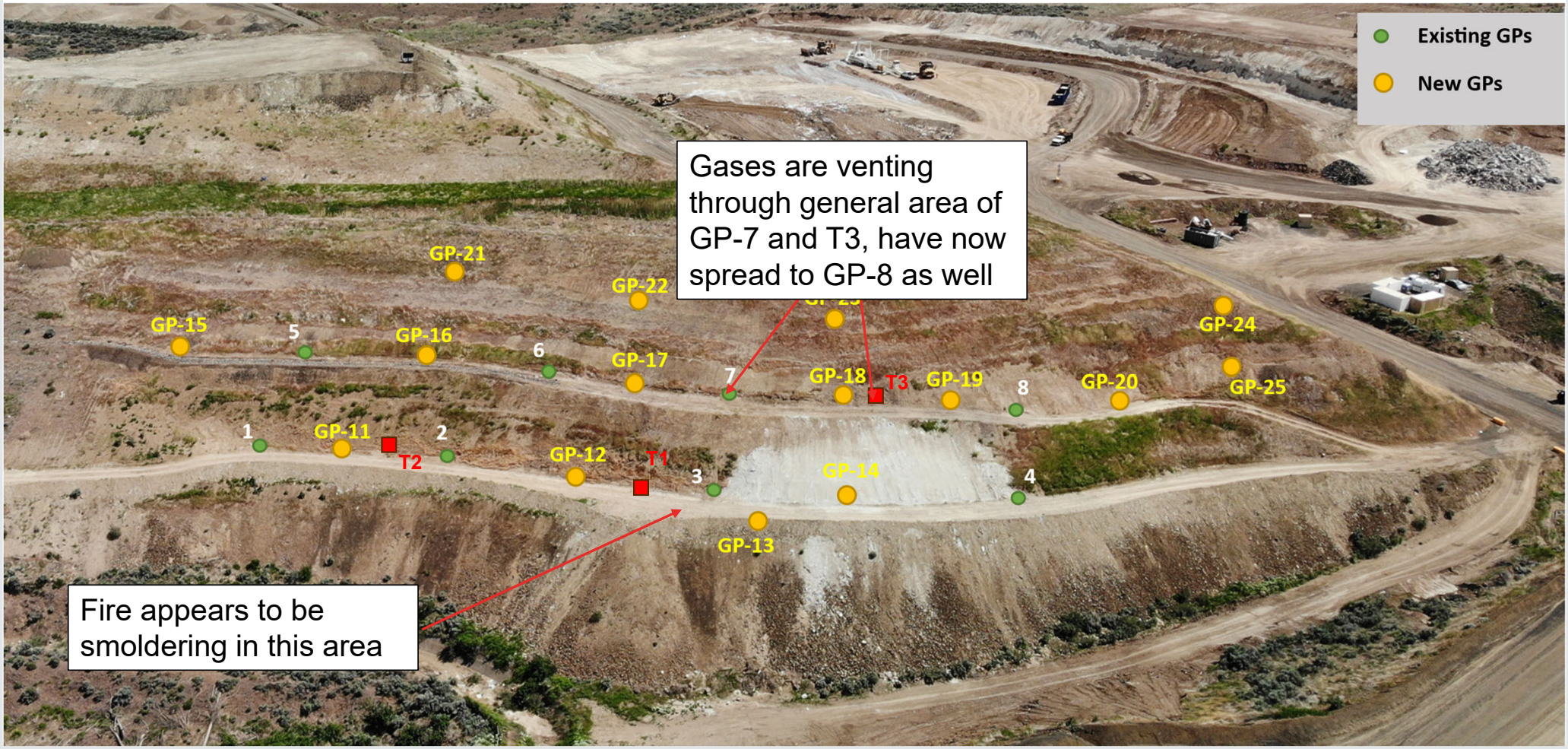
Existing GPs
New GPs

Fire Path


Existing GPs
New GPs
Gases are venting through general area of GP-7 and T3, have now spread to GP-8 as well
Fire appears to be smoldering in this area
GP-21
GP-22
GP-15
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GP-16
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GP-17
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GP-18
T3
GP-19
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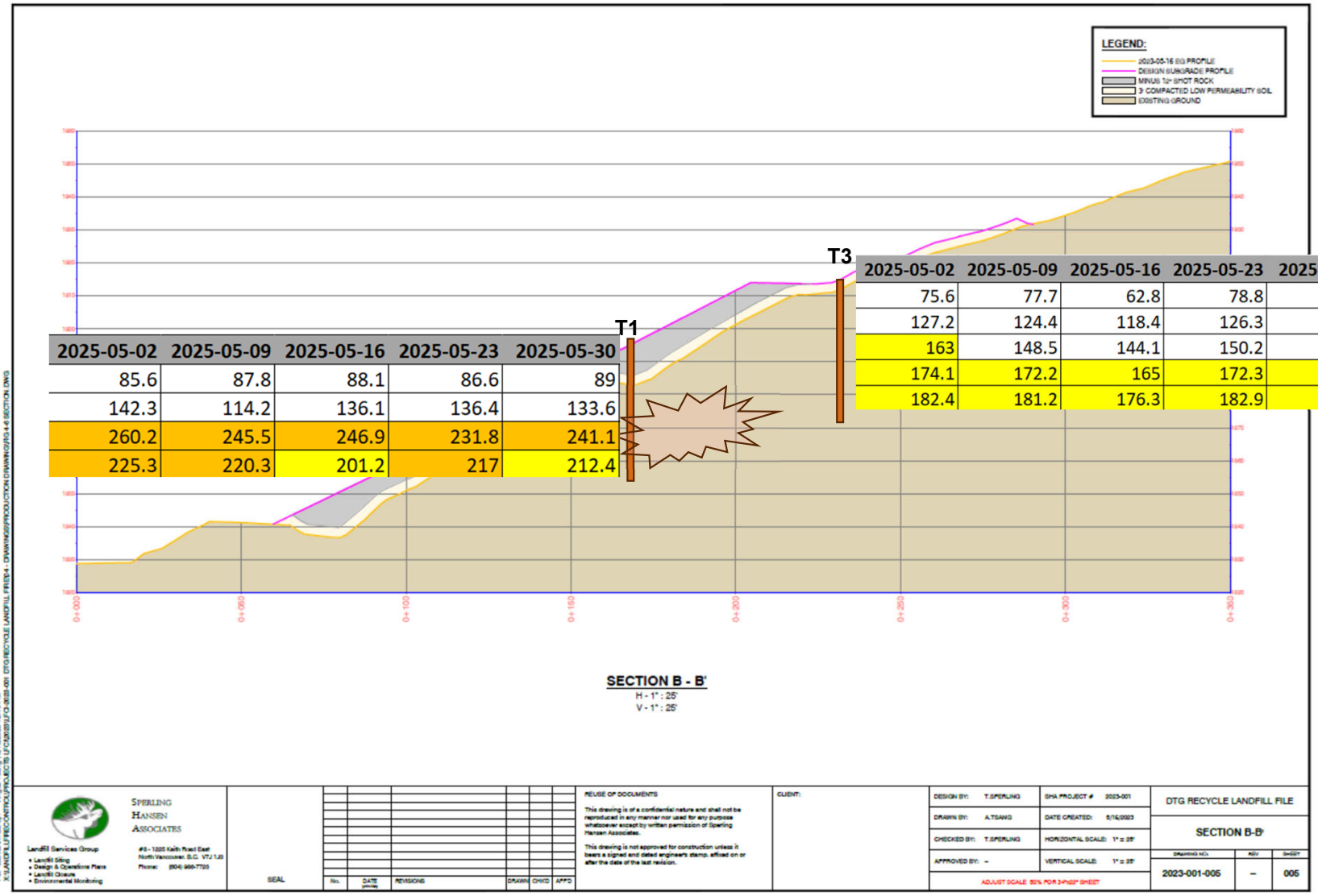

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142.3	114.2	136.1	136.4	133.6
260.2	245.5	246.9	231.8	241.1
225.3	220.3	201.2	217	212.4

2025-05-02	2025-05-09	2025-05-16	2025-05-23	2025-05-30
75.6	77.7	62.8	78.8	80.6
127.2	124.4	118.4	126.3	126.1
163	148.5	144.1	150.2	147.7
174.1	172.2	165	172.3	170.8
182.4	181.2	176.3	182.9	179.9

SECTION B - B'

H - 1" : 25'

V - 1" : 25'

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APPROVED BY:	–	VERTICAL SCALE:	1" = 25'

ADJUST SCALE 50% FOR 24"x32" SHEET

DTG RECYCLE LANDFILL FILE

SECTION B-B'

DRAWING NO.	REV	SHEET
2023-001-005	–	005

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 since Dec. 2024 as have gas concentrations. Current seasonal warming may be contributing to slowing the cooling trend, as seen in the lower temperature wells over the summer of 2024.

Temperatures have dropped significantly all around to Dec. 2024 when the trend has shifted to a steady condition, with minimal changes occurring. In May, temperatures the highest well (GP-3) have continued to decrease at a slow but steady rate. The plan view mapping shows cooling trend across the entire area, and the rate of cooling is decreasing. The average rate over the past month was actually an increase of 0.3 degrees F per day.

In LFCI experience, CO has been best indicator of suppression at other landfill sites. CO in T-3 has risen since it's dramatic decrease in November-December of 2024. In the last few months CO levels in T-3 have continued to ramp up, indicating that the subsurface hot spot at that location may be warming up, but unsteady measurements in May do not provide conclusive evidence.

High O2 continues to fluctuate - this is likely due to large atmospheric pressure swings and pervious waste mass allowing entry of ambient air.

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 and GP-7 and GP-8.