

September 10, 2026
File No. 01204123.21-13

Mr. Baitong Chen
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Subject: Monthly Reaction Mitigation Area Boundary Determination
Chiquita Canyon Landfill – Castaic, California

Dear Mr. Chen:

In accordance with Condition Nos. 9(a) and 9(b) of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (Landfill or Facility) (Case No. 6177-4), as last modified on June 3, 2026, SCS Engineers (SCS), on behalf of Chiquita Canyon, LLC (Chiquita), has prepared this data-determined Reaction Mitigation Area boundary determination for August 2026 considering the following criteria:

- Vertical landfill gas (LFG) wellhead temperatures (greater than 160 degrees Fahrenheit).
- Temperature monitoring probe (TMP) measurements (greater than 170 degrees Fahrenheit for more than 3-weeks at any depth).
- Landfill gas quality and methane to CO₂ ratio (CH₄:CO₂) (methane concentrations of less than 30 percent in conjunction with CH₄:CO₂ ratios less than 1.0).
- Landfill gas concentration of carbon monoxide (CO) (greater than 1,500 ppm), to the extent measured.
- Landfill gas concentration of hydrogen (H₂) (greater than 2 percent by volume), to the extent measured.
- Landfill settlement (18 inches or greater within a 60-day period).
- Pressurized leachate releases.

These parameters have been subjected to a cumulative evaluation within each individual landfill surface grid within the Main Canyon (i.e., excluding grids 1 through 29 as well as grids 105 through 144), including all landfill gas wells, temperature probes, and other characteristics within that grid's area. For each individual landfill grid that is contiguous to the prior month's Reaction Mitigation Area, where any three or more parameters listed above are present at the time of evaluation, including any combination of wells, temperature probes, or areas within the grid, the Reaction Mitigation Area boundary depicted on the Reaction Mitigation Area map (**Attachment A**) includes such landfill grid(s).

For each individual landfill grid that is not contiguous to the prior month's Reaction Mitigation Area, if the three parameters present include a temperature parameter (the first or second parameter listed above), then the grid has been added to the Reaction Mitigation Area. For each individual landfill grid



that is not contiguous to the prior month's Reaction Mitigation Area, if the three parameters present do not include a temperature parameter, then Chiquita conducted field testing for CO using colorimetric tubes and for H₂ using field instrumentation. If field testing confirmed the presence of either CO or H₂ at concentrations in excess of the lower limits of the instrumentation (100 ppm for CO and 1 percent by volume for H₂), then a sample of the LFG was obtained from the wellhead and subjected to lab analytical testing using U.S. EPA Method ALT-144 for CO and ASTM Method D-1946 for H₂. If the lab testing confirmed that either of these parameters exceed the values listed above, then the grid has been added to the Reaction Mitigation Area.

In addition to the parameters listed above, the following factors were also considered in determining the Reaction Mitigation Area boundary, applying the same individual landfill grid-based methodology described above:

- Leachate seeps;
- Odor characteristics;
- Wellheads experiencing conditions which would be expected to result in a pressurized leachate release (e.g., elevated pressure, elevated temperature, liquid flow through wellhead); and
- Waste cuttings according to borehole drilling logs.

Supporting evidence, including documentation of which parameters were met or exceeded for each individual landfill grid, field testing and laboratory results (if applicable), explanation for the determination, Reaction Mitigation Area boundary, Reaction Mitigation Area map (if applicable), isothermal gradient range map consisting of wellhead temperature measurements, wellhead carbon monoxide range map, wellhead hydrogen range map, wellhead CH₄:CO₂ ratio range map, monthly landfill settlement isopach maps and 60-day isopach map, wellhead and temperature probe map with surface grids displayed, and vertical temperature profiles for temperature probes is being hereby submitted to the South Coast Air Quality Management District.

Attachment A presents the Drawing, titled "Reaction Mitigation Area Map", which depicts the Reaction Mitigation Area boundary as prescribed in Condition No. 9(a), which corresponds to the limits of Cells 1/2A, 2B/3, 4, and Module 2B/3/4 P2, as a solid black line. The Drawing also depicts the Condition No. 9(b) data-determined Reaction Mitigation Area as a dashed magenta line.

REACTION MITIGATION AREA BOUNDARY

Based on the parameters and considerations above, the Reaction Mitigation Area boundary includes those grids corresponding to the area encompassed by last month's data-driven Reaction Mitigation Area boundary determination, excluding Grid No. 169 and including Grid Nos. 33, 37, and 79.

Settlement Evaluation

Based on input from Chiquita, the changes in landfill surface elevations that occurred between July 1, 2026 and September 2, 2026 in the following select grids was affiliated with various circumstances other than actual settlement, as described below:

- Grid Nos. 35, 39, 83, 214, and 219 – Attributed to earthwork, grading, and stripping of intermediate cover in preparation for ethylene vinyl alcohol (EVOH) geomembrane cover deployment.
- Grid No. 30 – Attributed to LFG header pipe regrading,
- Grid No. 46 – Attributed to removal of aggregate from an existing stockpile.
- Grid Nos. 62 and 63 – Attributed to removal of multiple geosynthetic material rolls from an existing stockpile.
- Grid Nos. 87, 96, 97, and 194 – Attributed to earthwork and grading affiliated with road construction.
- Grid Nos. 198, 199, 217, and 218 – Attributed to daily cover soil material movement at the working face for internally generated waste.

While it is recognized that some settlement in these areas may have occurred, the factors identified above are believed to be the predominant contributors to the elevation changes experienced during July and August. Accordingly, the changes in landfill surface elevations in these grids were not considered to exhibit the landfill settlement criteria during this monthly exercise.

Parameters in Contiguous Grids

- Grid No. 169 is surrounded by Grid Nos. 168, 170, 174, and 203, all of which were included in last month's Reaction Mitigation Area boundary along with Grid No. 169. During August, the monitoring data demonstrated that only two parameters conformed to the criteria, which were methane concentrations of less than 30 percent in conjunction with CH₄:CO₂ ratios less than 1.0 at wells CV-2341 and CV-24050. Accordingly, Grid No. 169 is being excluded from the Reaction Mitigation Area boundary for this month.
- Grid No. 33 is positioned north of Grid No. 34 and southeast of Grid No. 82, both of which were included in last month's Reaction Mitigation Area boundary. The grid contains two horizontal collectors (H-1806B and H-1956B) that exhibited methane concentrations of less than 30 percent in conjunction with CH₄:CO₂ ratios less than 1.0. Grid No. 33 also contains TP-37, which exhibited a temperature of greater than 170 degrees Fahrenheit for more than three weeks. Accordingly, Grid No. 33 is being included in the Reaction Mitigation Area boundary for this month as a contiguous surface grid.
- Grid No. 37 is positioned west of Grid No. 41, north of Grid No. 38, and northeast of Grid No. 34, all of which were included in last month's Reaction Mitigation Area boundary. The grid

contains three wells and horizontal collectors (CV-95, CV-24220, and H-1958S) that exhibited methane concentrations of less than 30 percent in conjunction with CH₄:CO₂ ratios less than 1.0. Accordingly, Grid No. 37 is being included in the Reaction Mitigation Area boundary for this month as a contiguous surface grid.

Parameters in Non-Contiguous Grids

- Grid No. 79 is surrounded by Grid Nos. 72, 73, 74, 75, and 78, none of which were included in last month's Reaction Mitigation Area boundary. The grid contains four horizontal collectors (H-01, H-02, H-03, and H-04), three of which exhibited methane concentrations of less than 30 percent in conjunction with CH₄:CO₂ ratios less than 1.0. On August 25, 2026, field testing was performed to measure CO and H₂ concentrations in accordance with SOFA Condition No. 9(b). Because the H₂ concentrations exceeded the lower detection limit of the field instrumentation at all four wellheads, LFG samples were obtained and subjected to lab analysis. Based on laboratory sampling for CO and H₂ concentrations conducted at these wellheads, these four collectors exhibited H₂ concentrations greater than 2 percent by volume. Accordingly, Grid No. 79 is being included in the Reaction Mitigation Area boundary for this month as a non-contiguous surface grid.

CONCLUSION

As presented on the Drawing included as **Attachment A**, and for the reasons described above, the extent of the data-determined Reaction Mitigation Area (dashed magenta line) includes Cells 1/2A, 2B/3, 4, and Module 2B/3/4 P2 as decreed in the SOFA (solid black line), and Grid Nos. 33, 34, 37, 38, 41, 53, 76, 77, 79, 81, 82, and 145 through 149.

The maximum temperature measurements recorded at the 40 in-situ waste temperature monitoring probes during the month are presented in **Attachment B** in graphical format. The LFG wellhead temperatures recorded at the extraction wells for the entire Landfill footprint are reflected on the isothermal gradient range map presented as **Attachment C**. The CH₄:CO₂ ratios measured at the LFG wellheads in the vicinity of the data-driven Reaction Mitigation Area boundary are depicted on the range map presented as **Attachment D**. The H₂ concentrations measured at the LFG wellheads in the vicinity of the data-driven Reaction Mitigation Area boundary are depicted on the range map presented as **Attachment E**. The CO concentrations measured at the LFG wellheads in the vicinity of the data-driven Reaction Mitigation Area boundary are depicted on the range map presented as **Attachment F**. The landfill surface settlement isopach values measured on a monthly basis and 60-day basis in the vicinity of the data-driven Reaction Mitigation Area boundary are depicted on the range map presented as **Attachment G**. The field testing and lab sampling results for H₂ and CO concentrations at wells positioned within non-contiguous surface grids that did not exhibit a temperature criterion, which are included in the Reaction Mitigation Area boundary this month, are included in **Attachment H**, as applicable.

Please contact either of the undersigned if you have questions or require additional information.

Sincerely,



Robert E. Dick, PE, BCEE
Senior Vice President
SCS Engineers



Patrick S. Sullivan, BCES, CCP
Senior Vice President
SCS Engineers

RED/PSS

cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD

Enclosures:

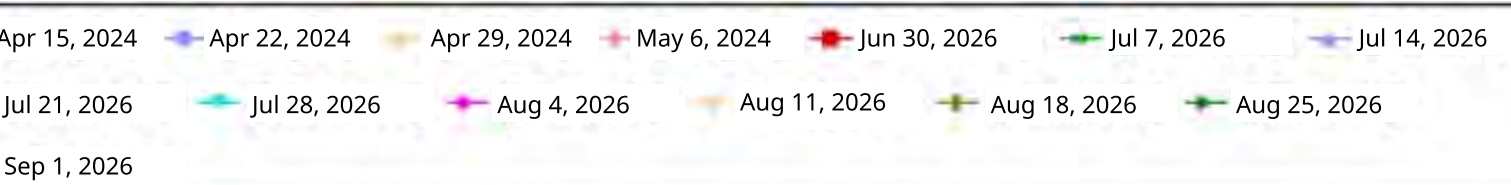
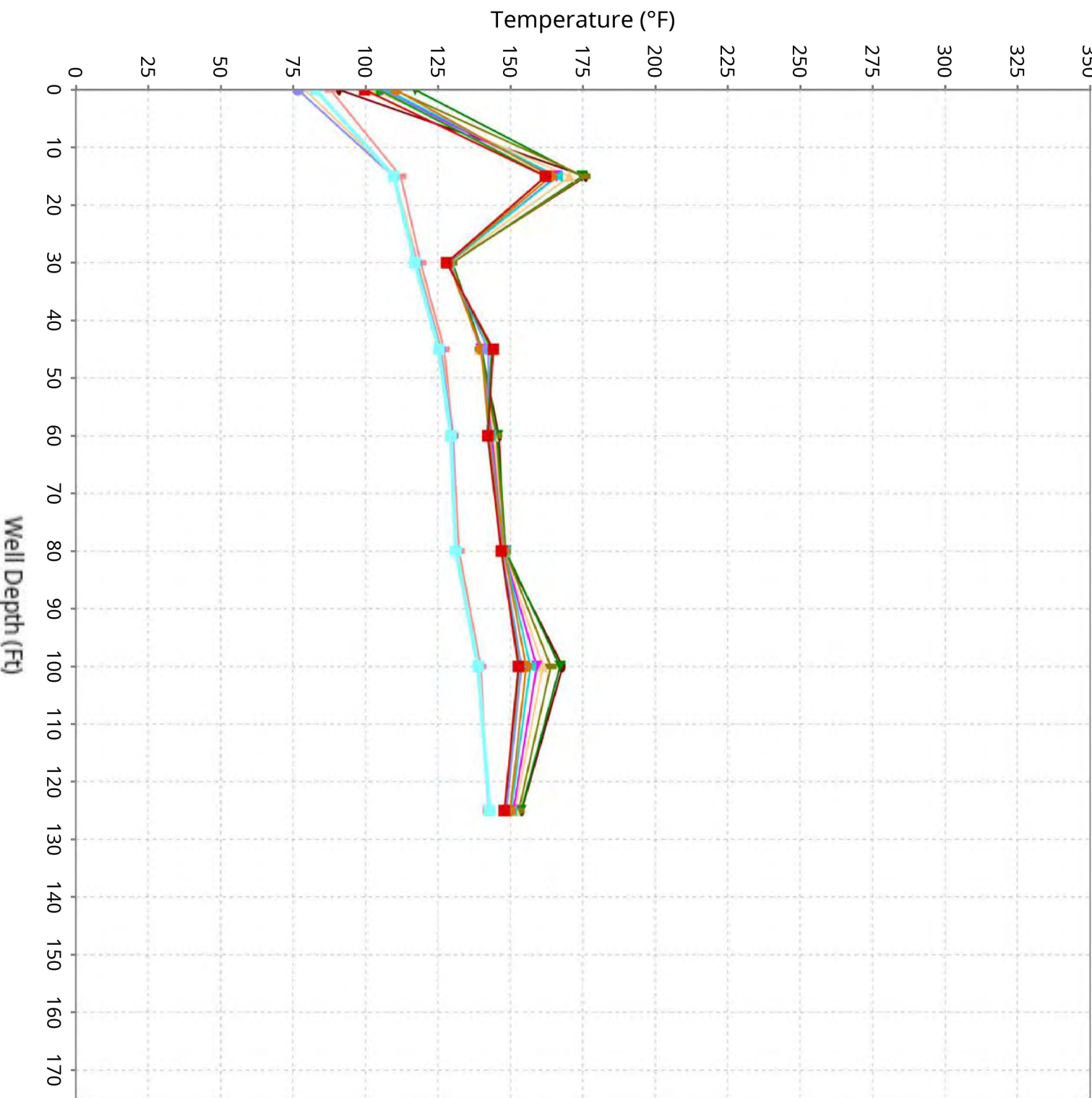
- Attachment A – Reaction Mitigation Area Map
- Attachment B – In-Situ Waste Temperature Monitoring Probe Data
- Attachment C – Isothermal Gradient Range Map
- Attachment D – Wellhead Methane-to-Carbon Dioxide Ratio Range Map
- Attachment E – Wellhead Hydrogen Range Map
- Attachment F – Wellhead Carbon Monoxide Range Map
- Attachment G – Settlement Isopach Range Maps
- Attachment H – Wellhead Hydrogen and Carbon Monoxide Field Testing / Lab Sampling Data

Attachment B

In-Situ Waste Temperature Monitoring Probe Data

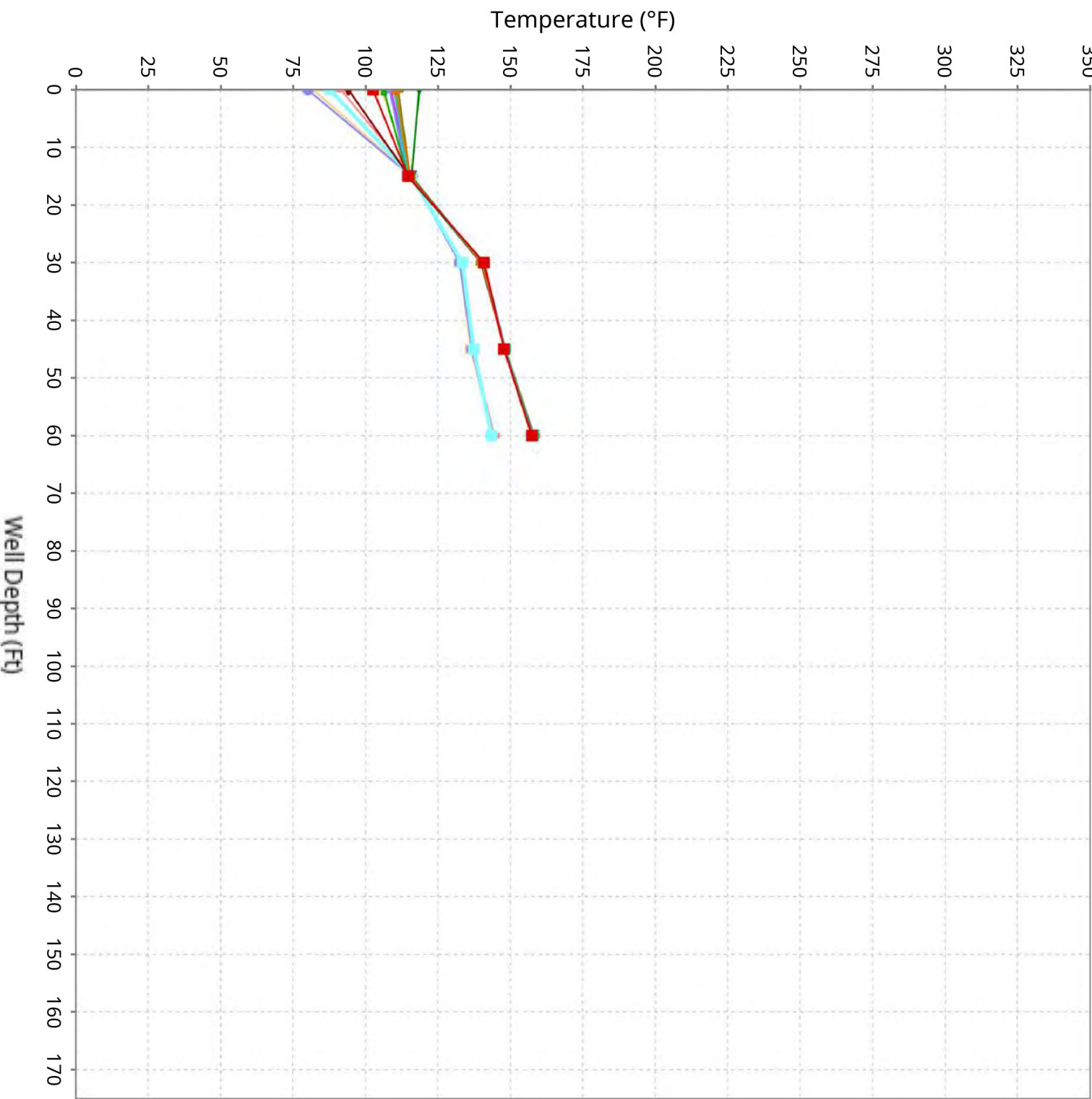
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-1

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



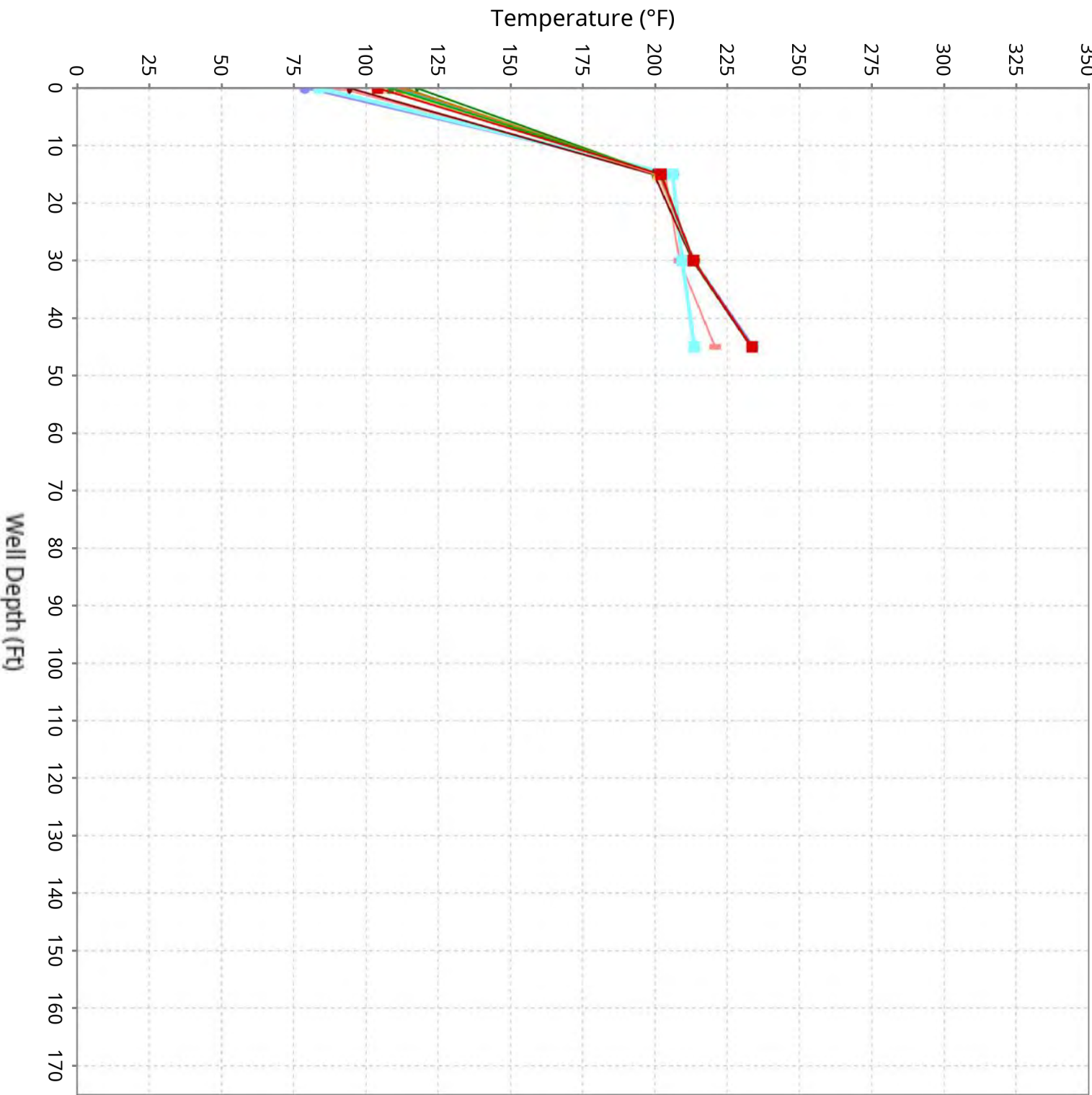
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-2

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



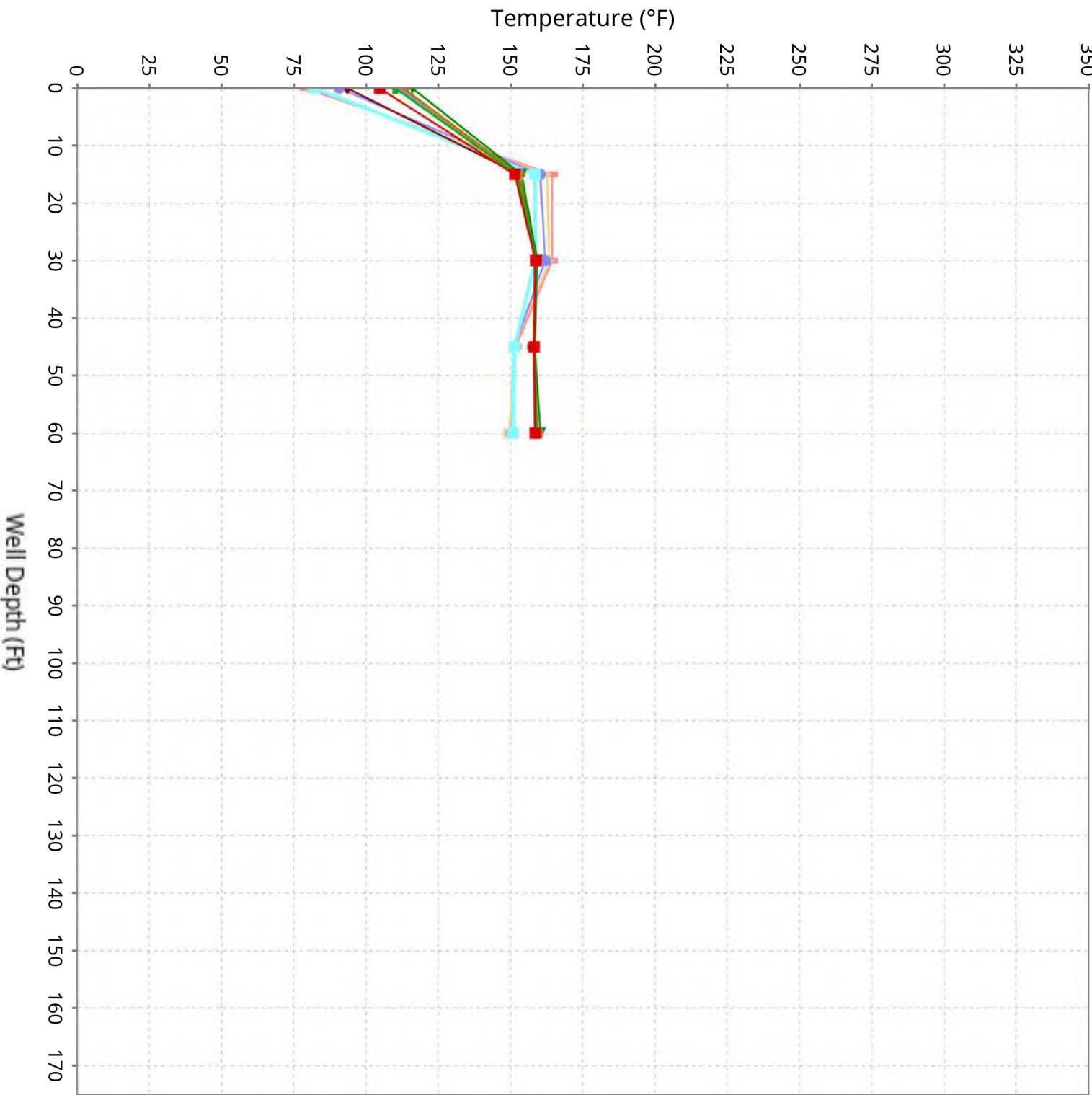
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-3

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



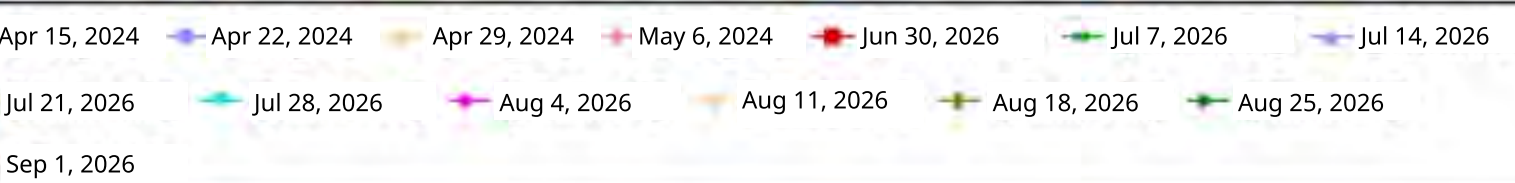
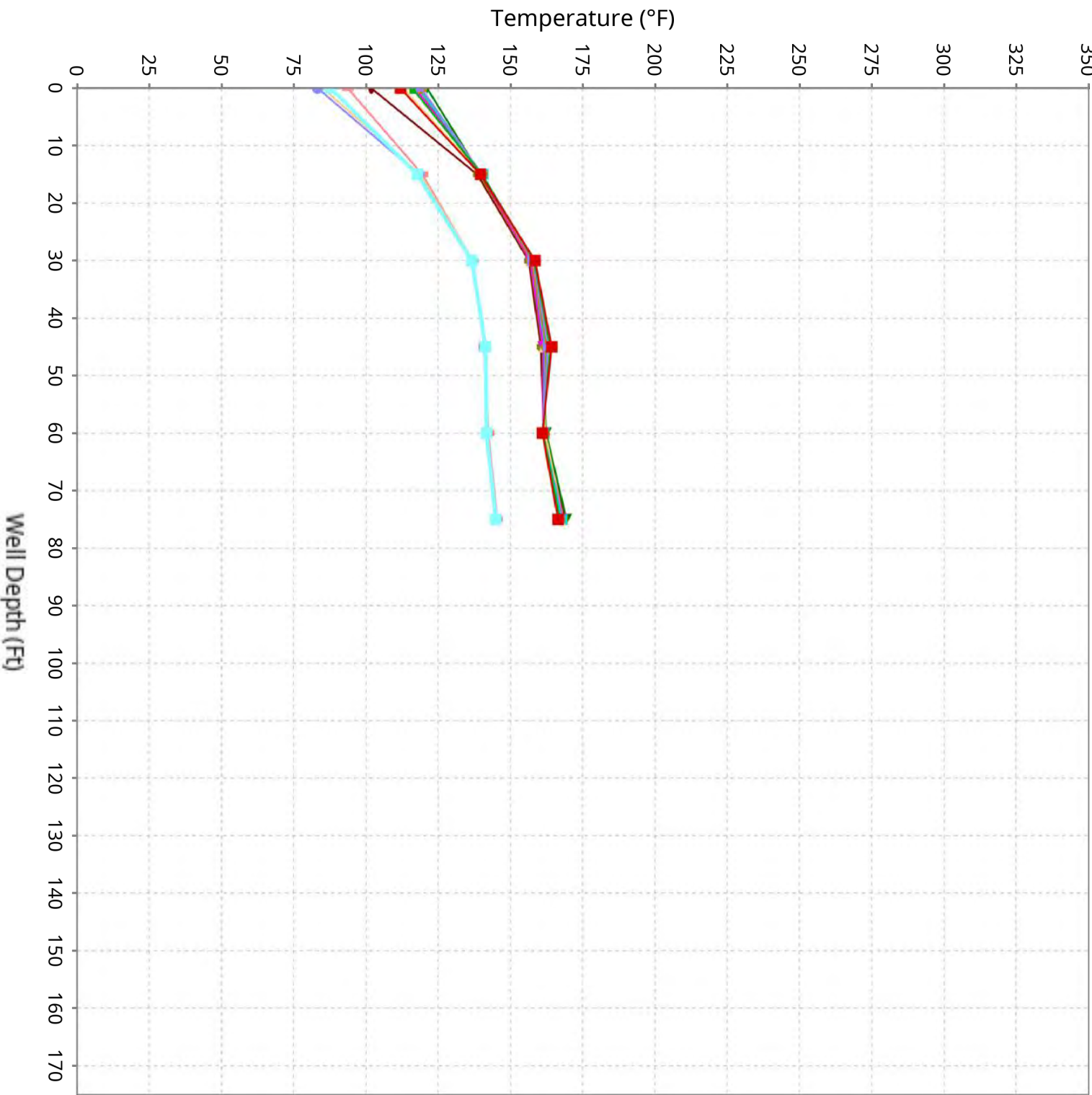
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-4

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



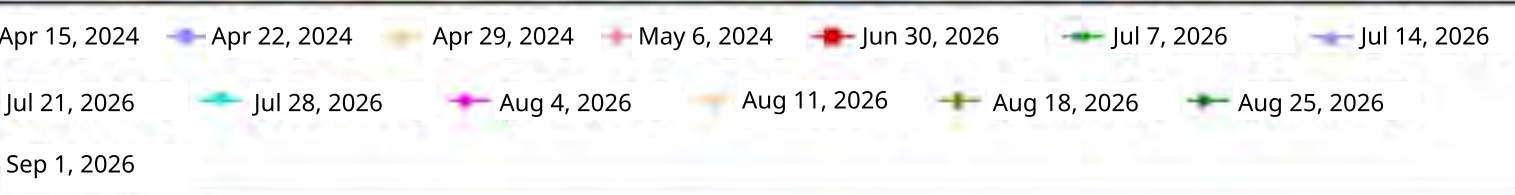
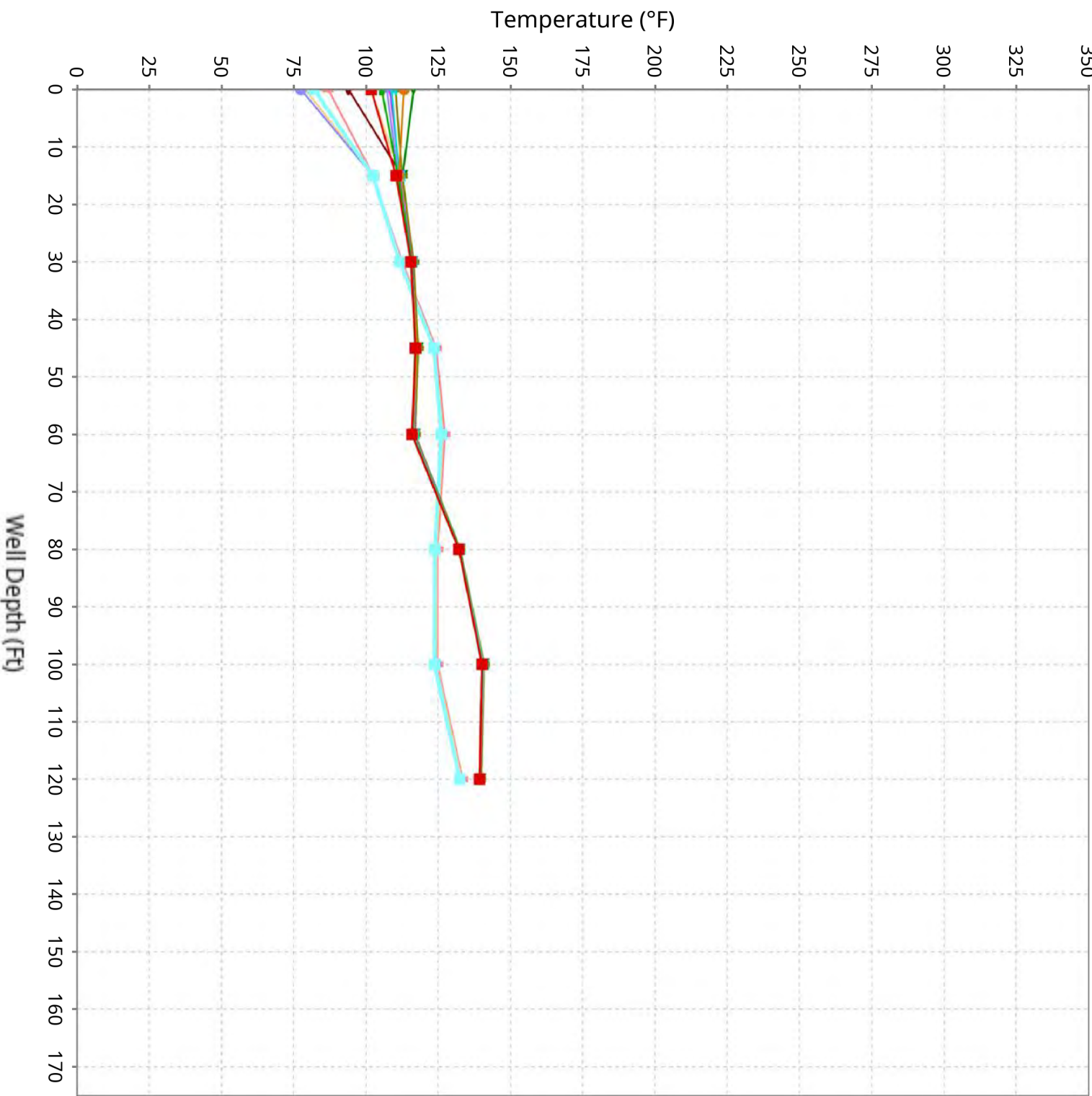
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-5

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



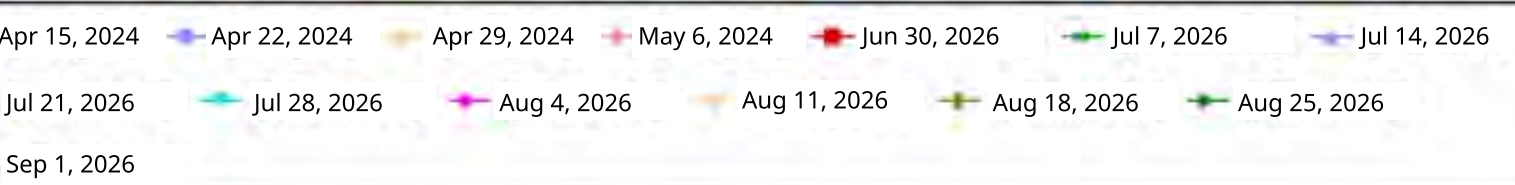
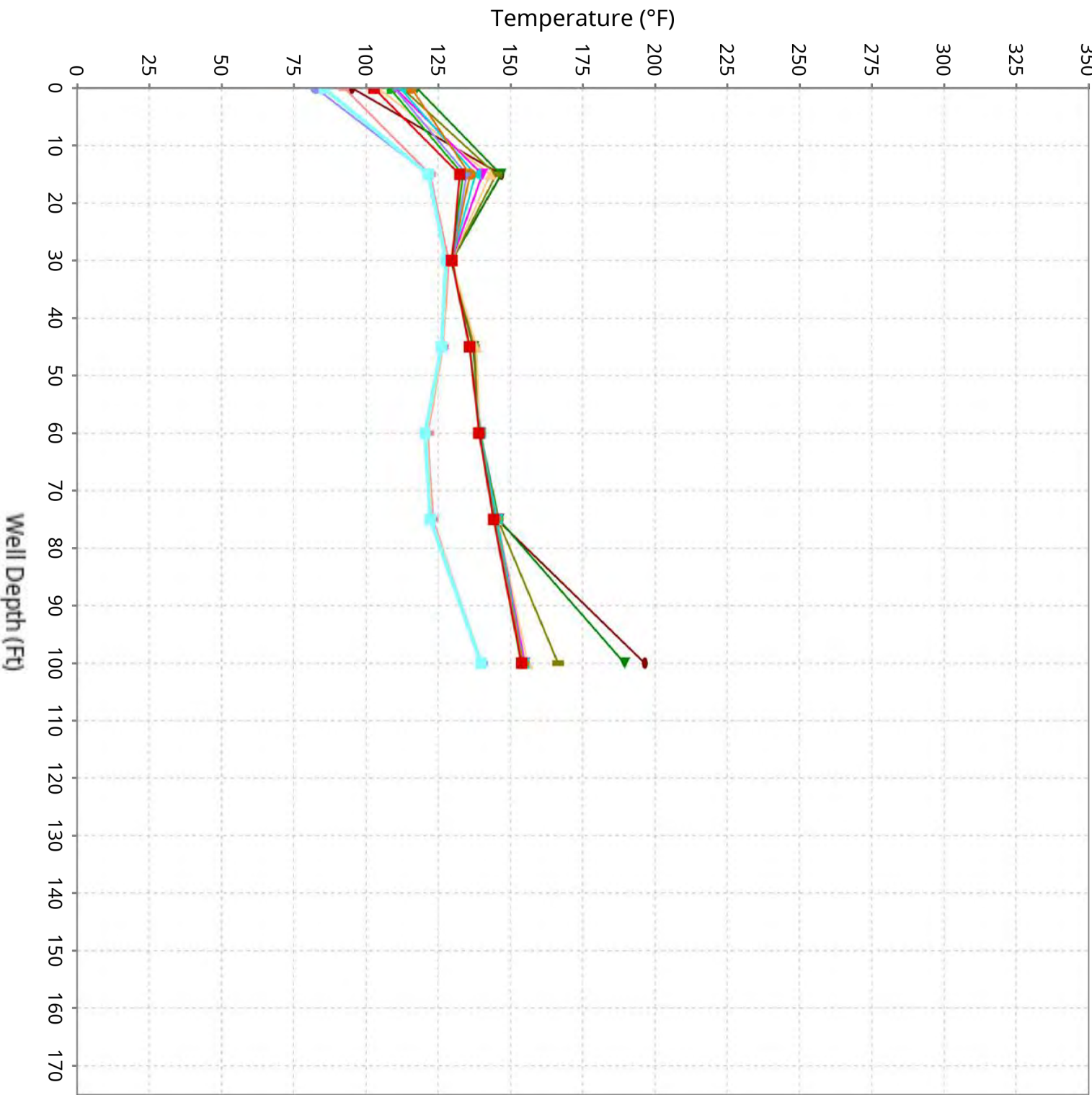
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-6

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



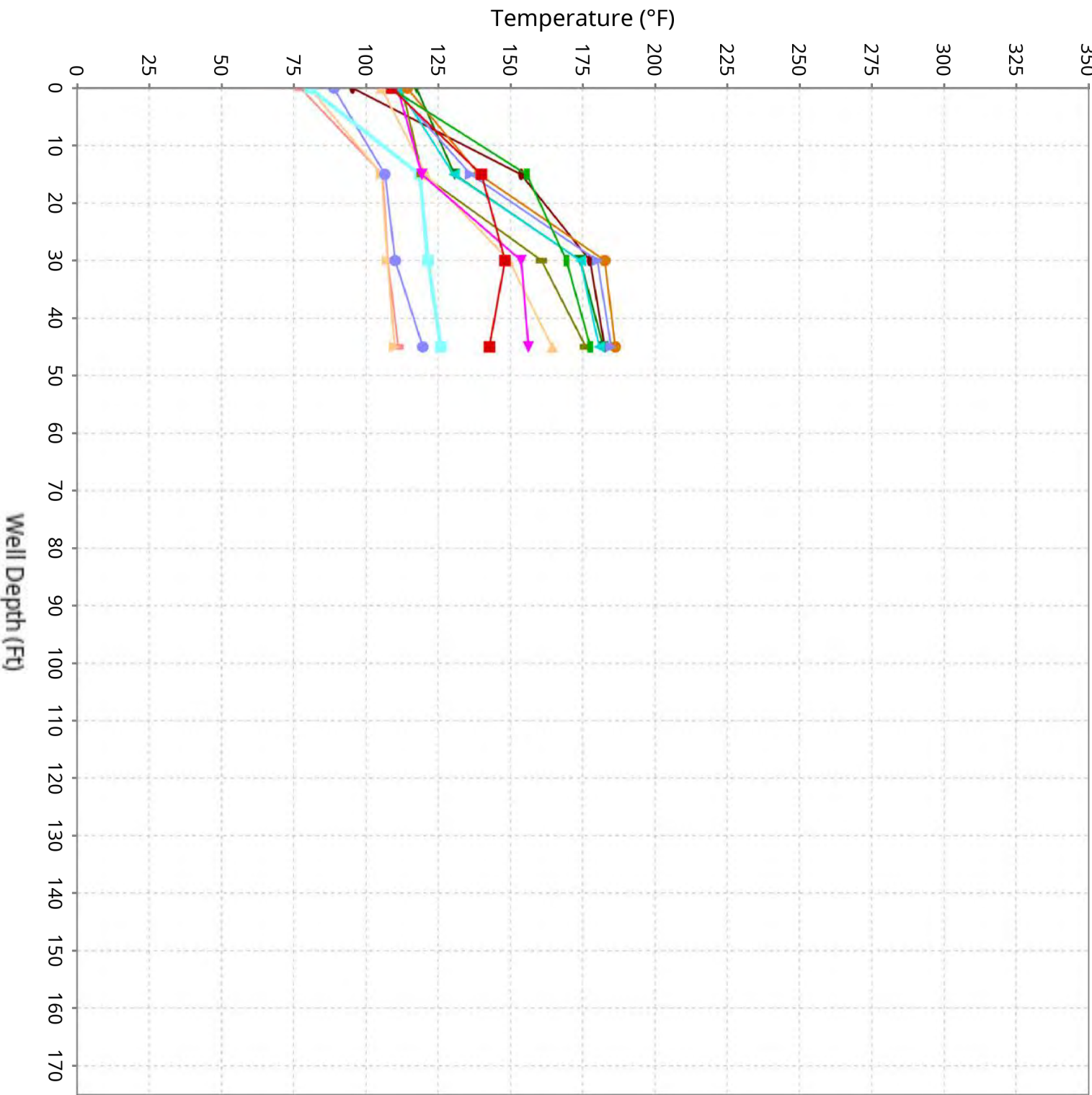
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-7

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



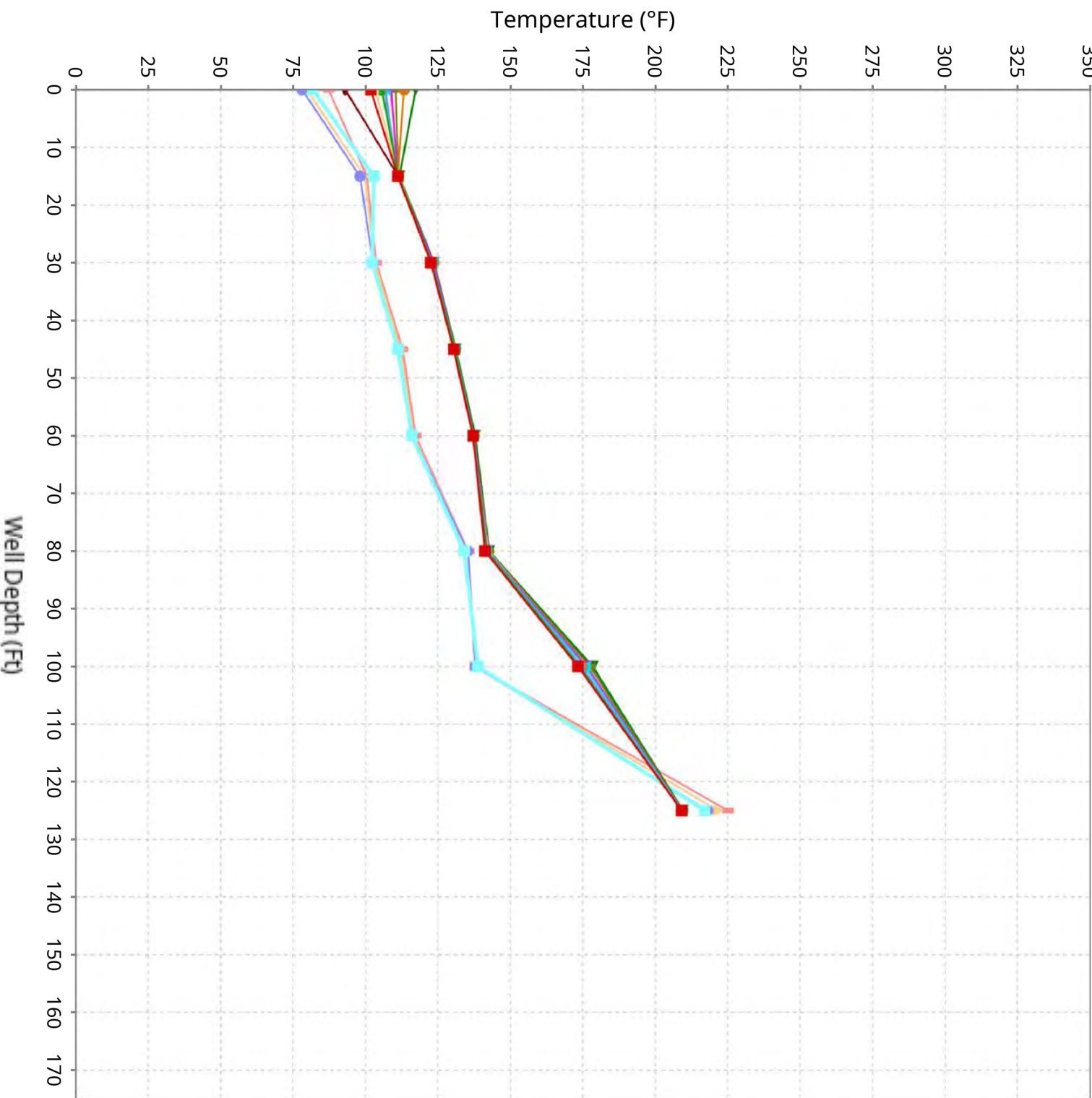
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-8

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



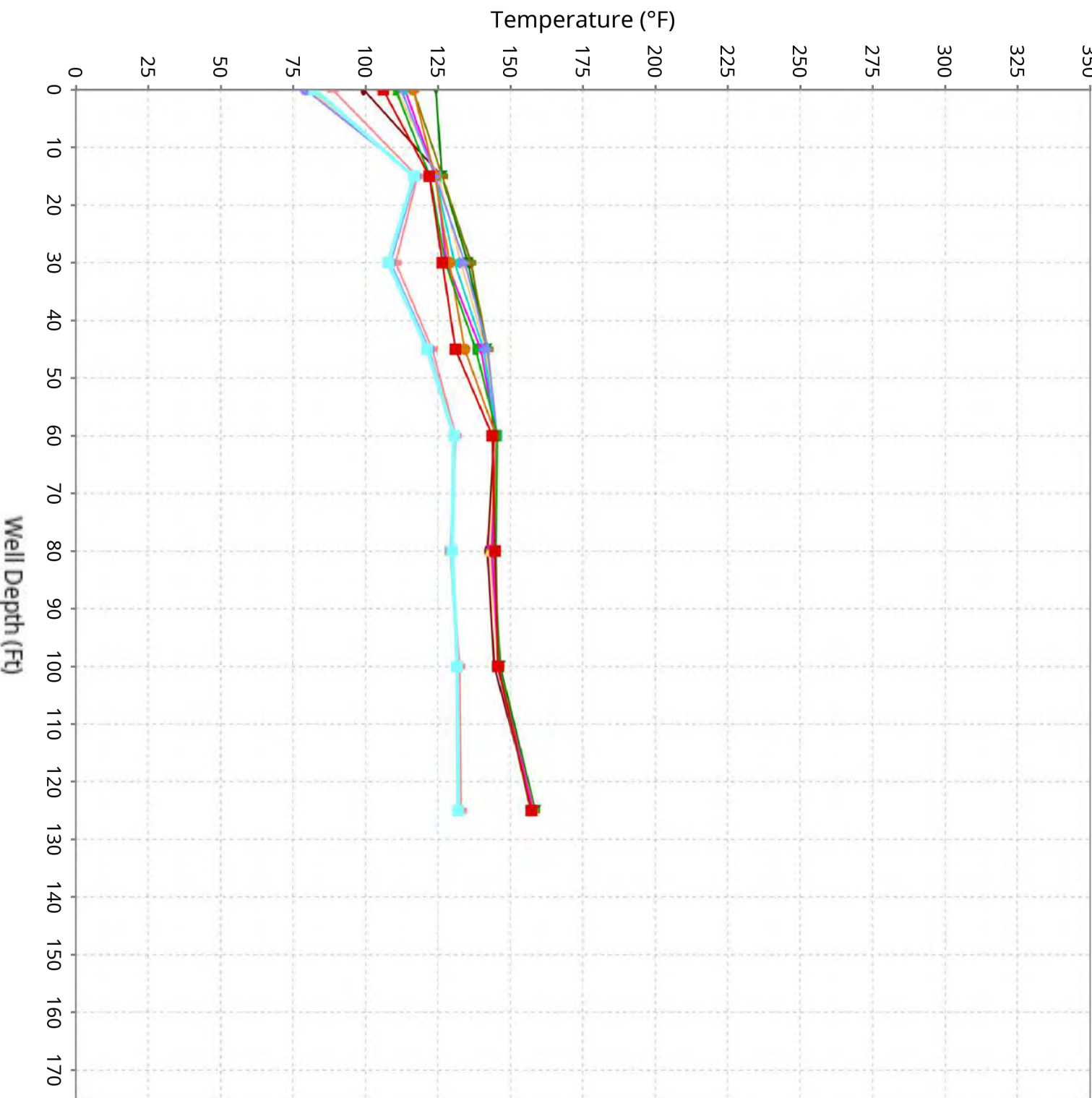
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-9

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



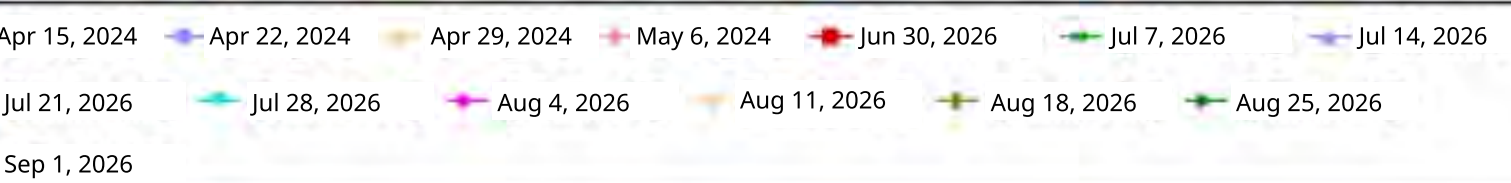
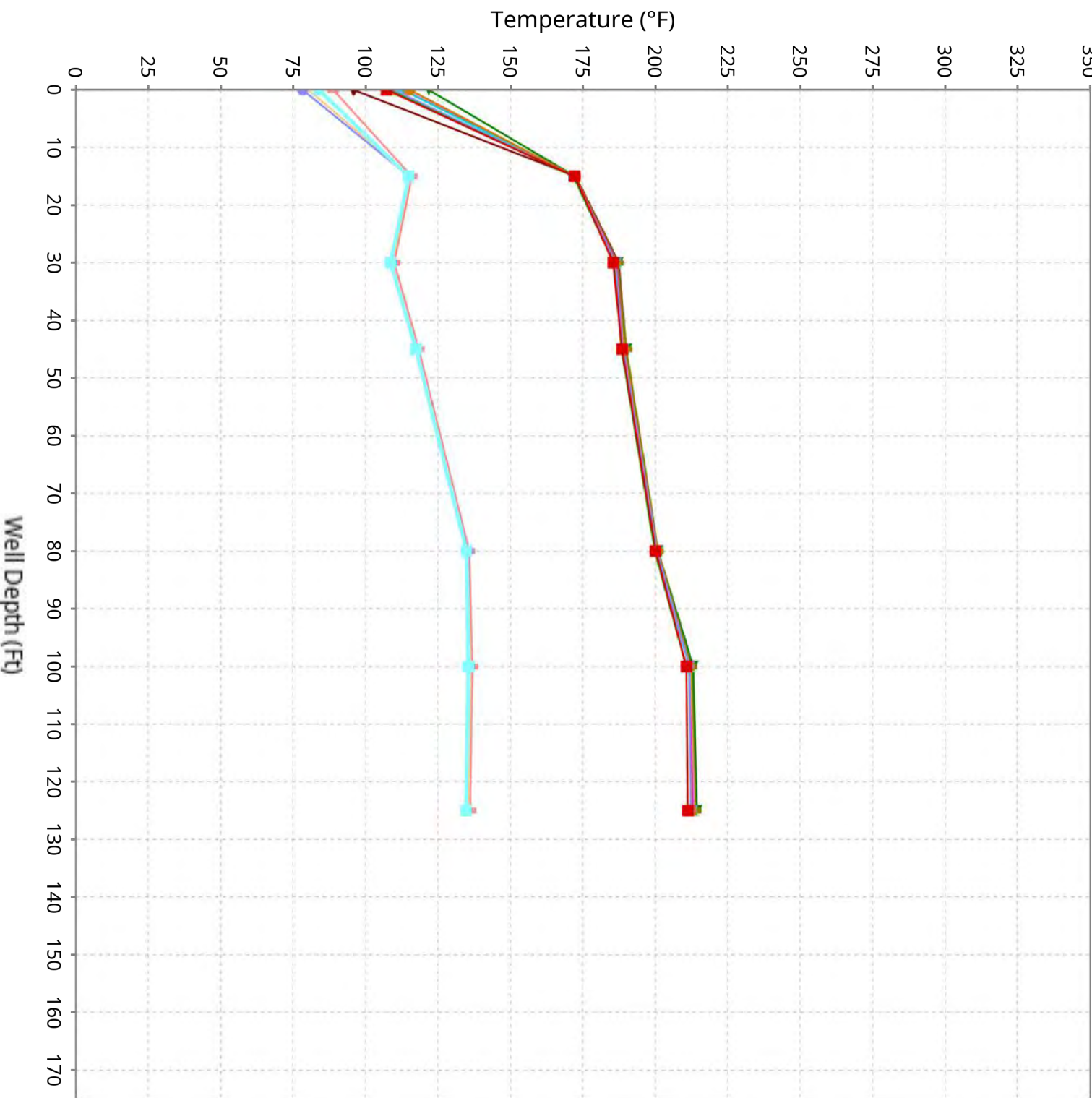
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-10

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



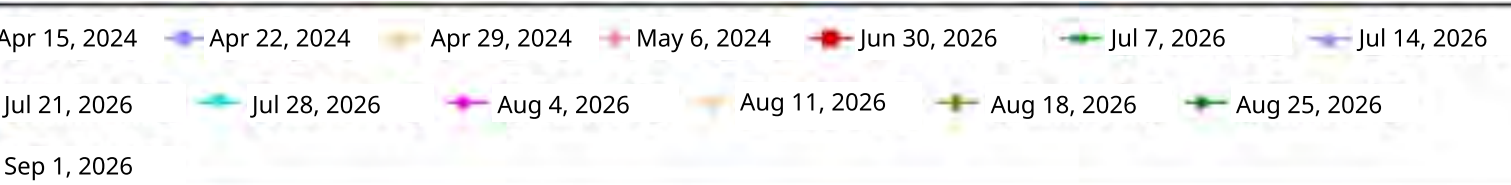
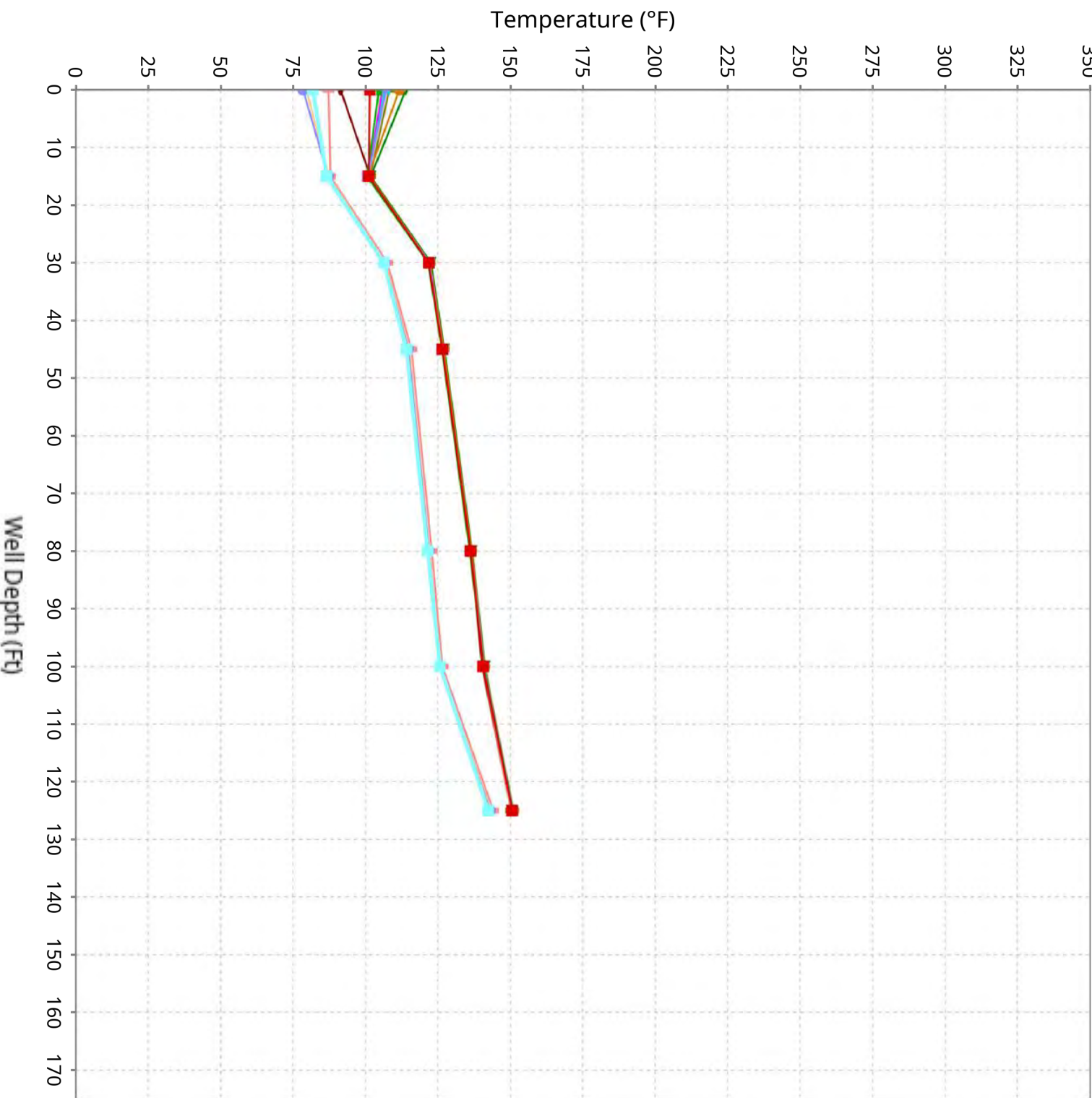
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-11

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



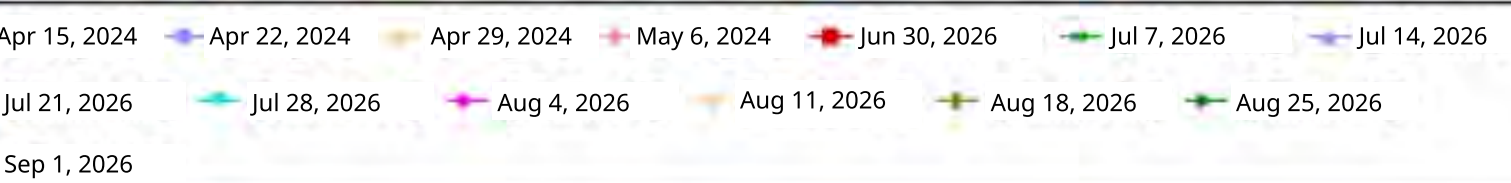
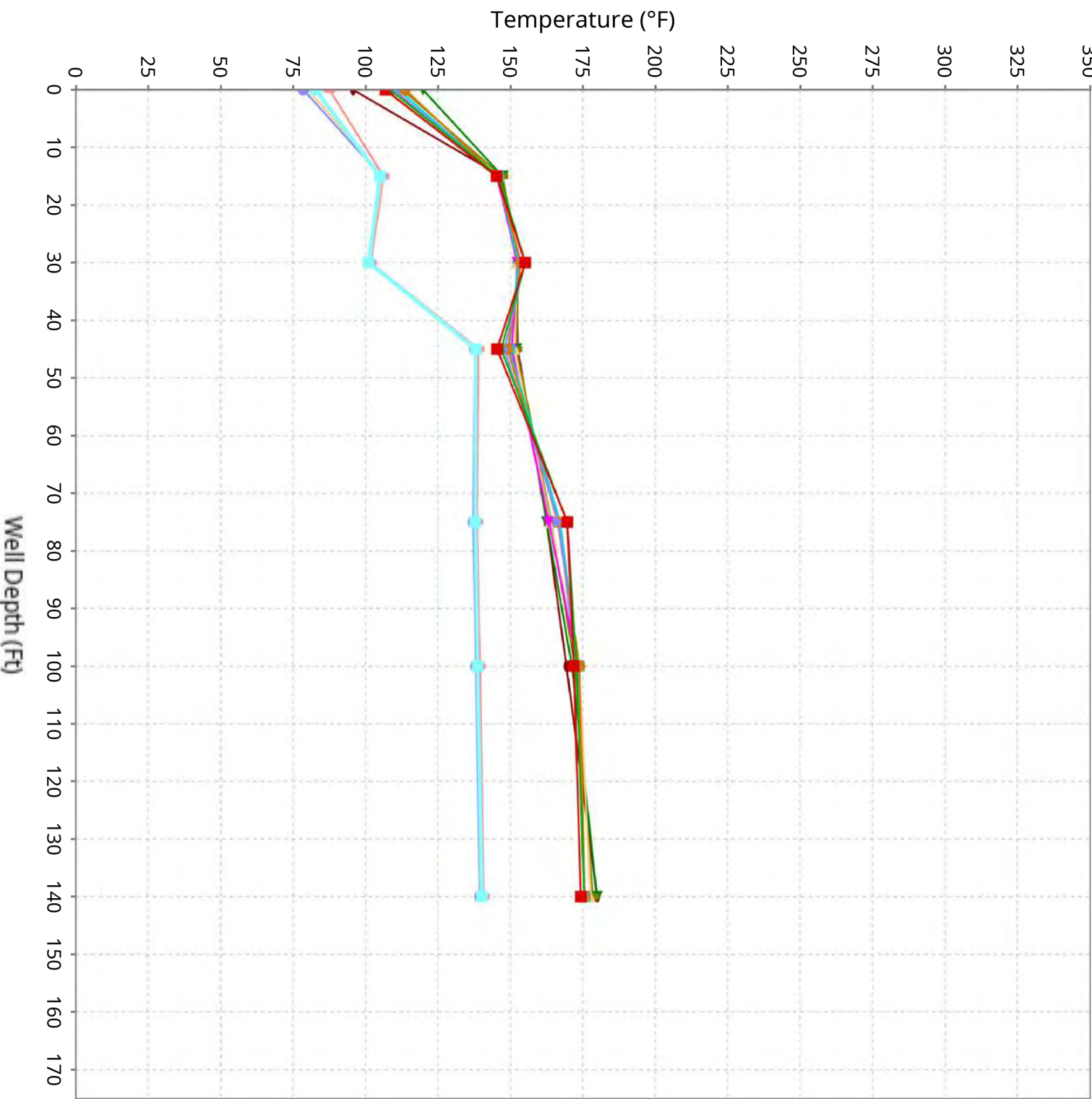
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-12

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



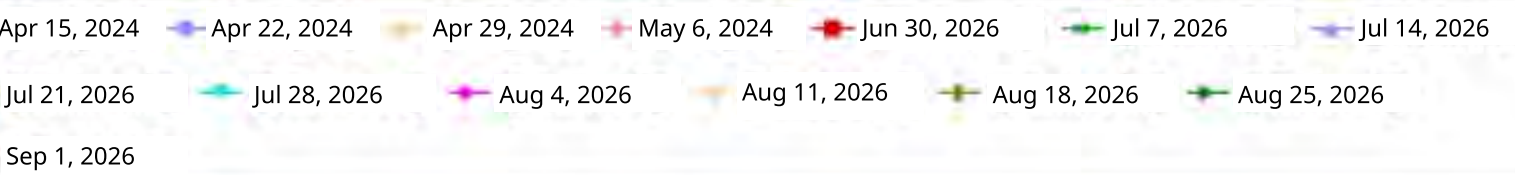
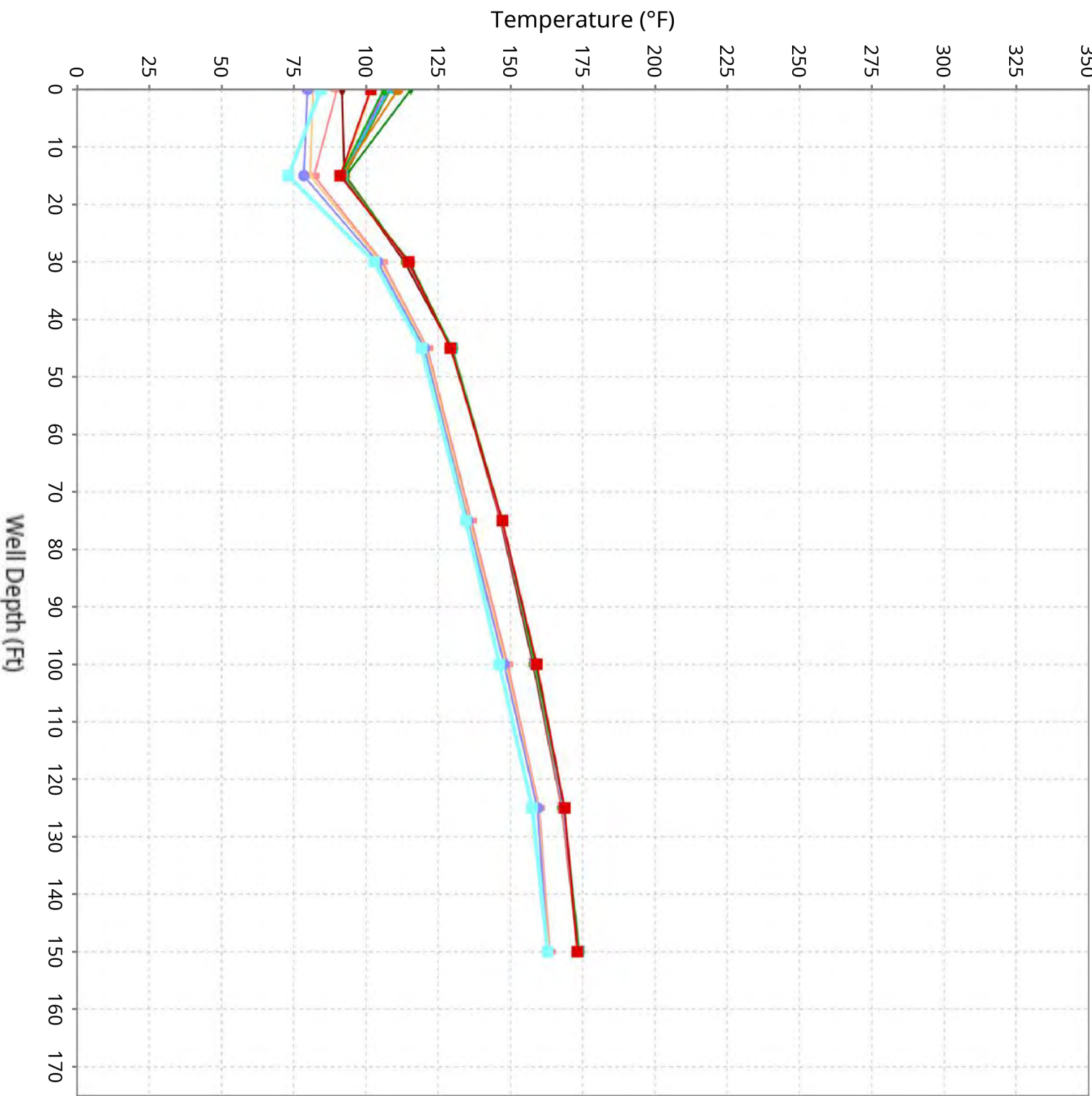
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-13

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



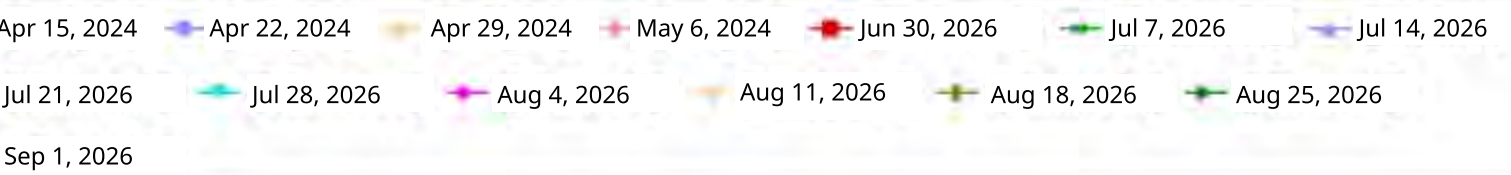
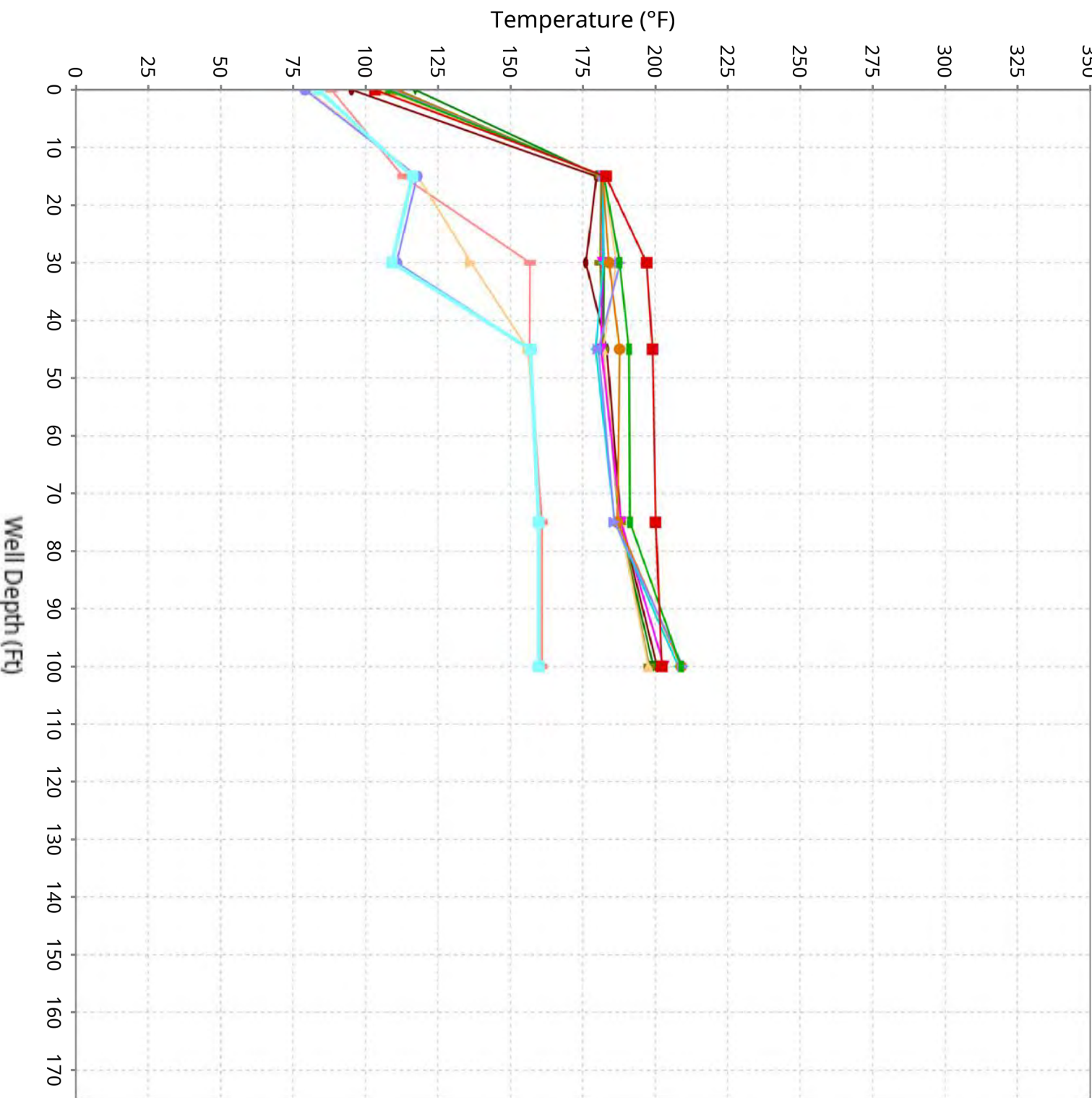
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-14

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



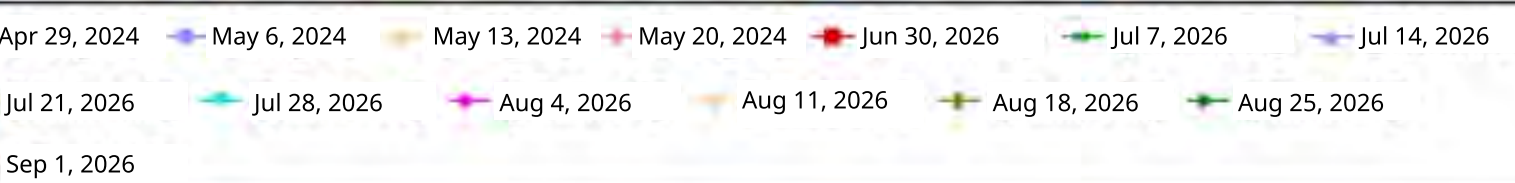
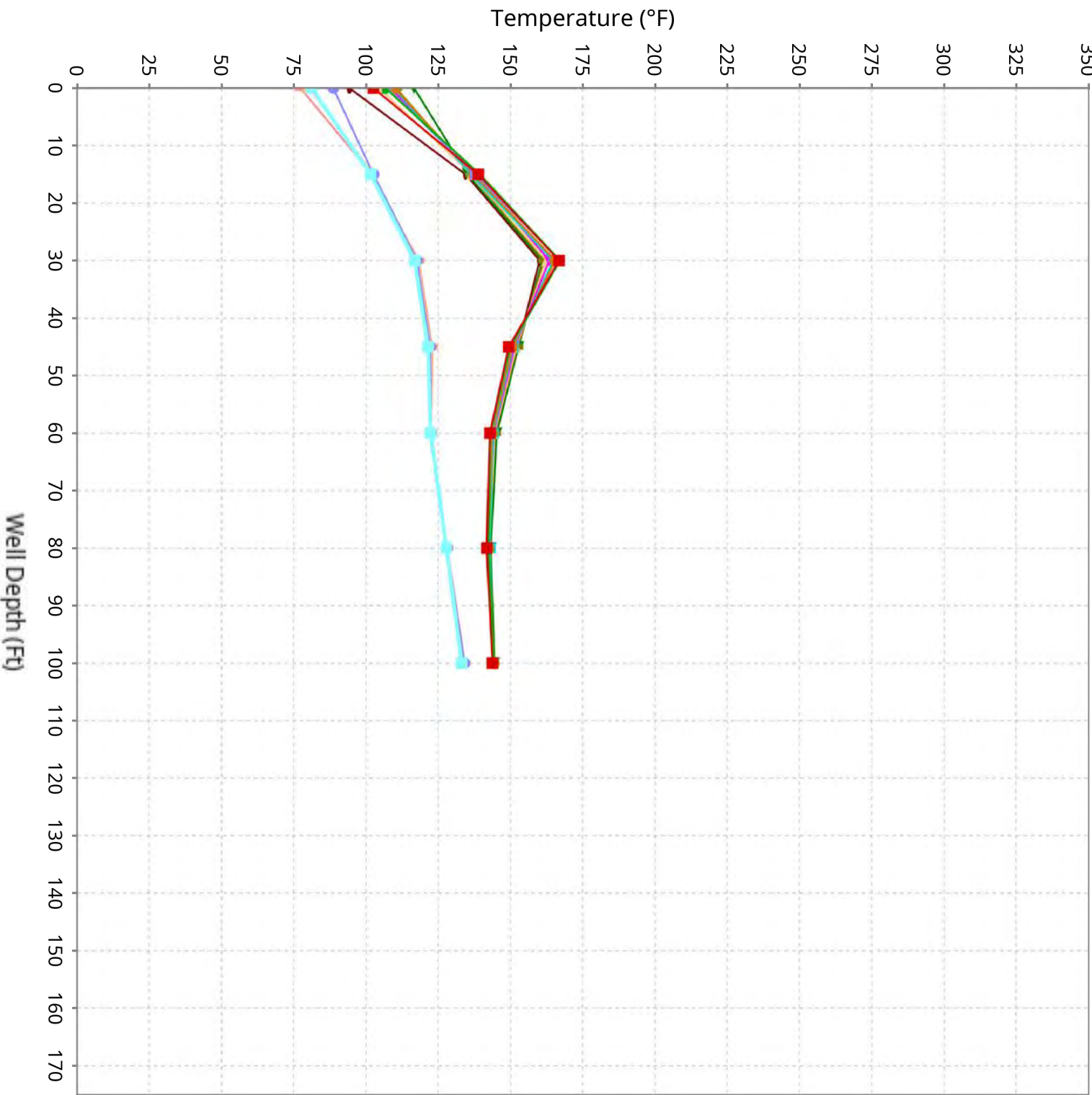
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-15

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



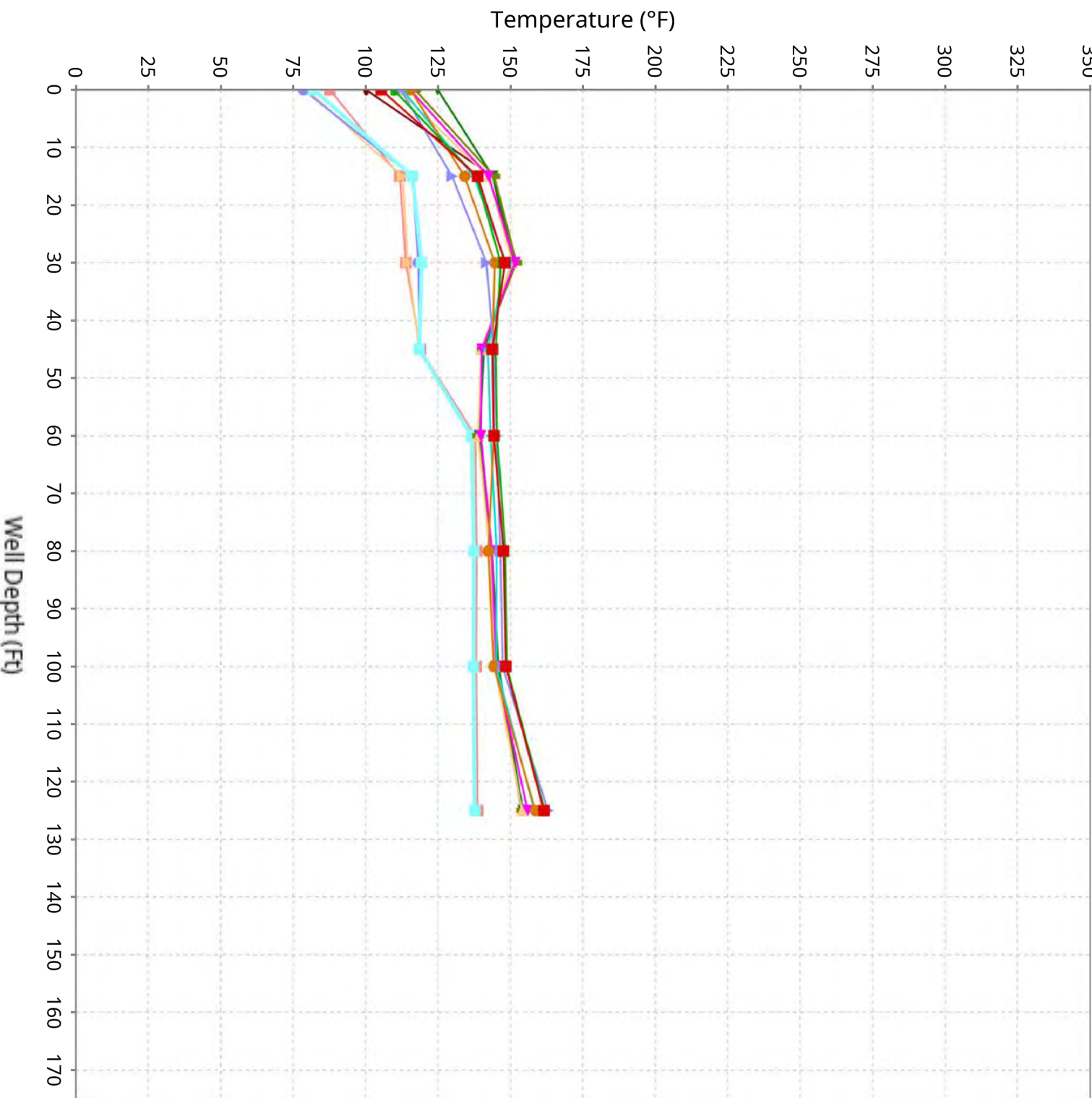
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-16

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



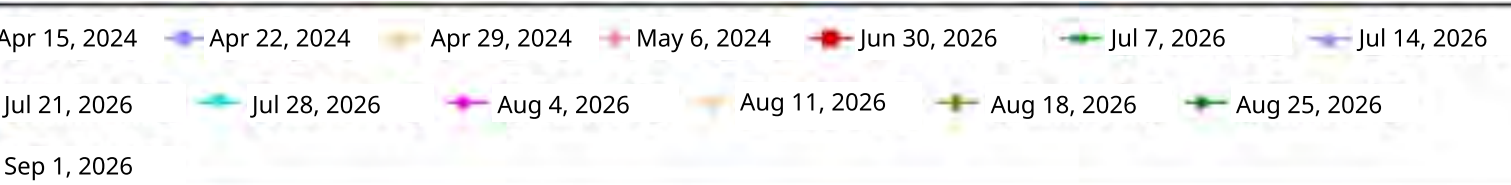
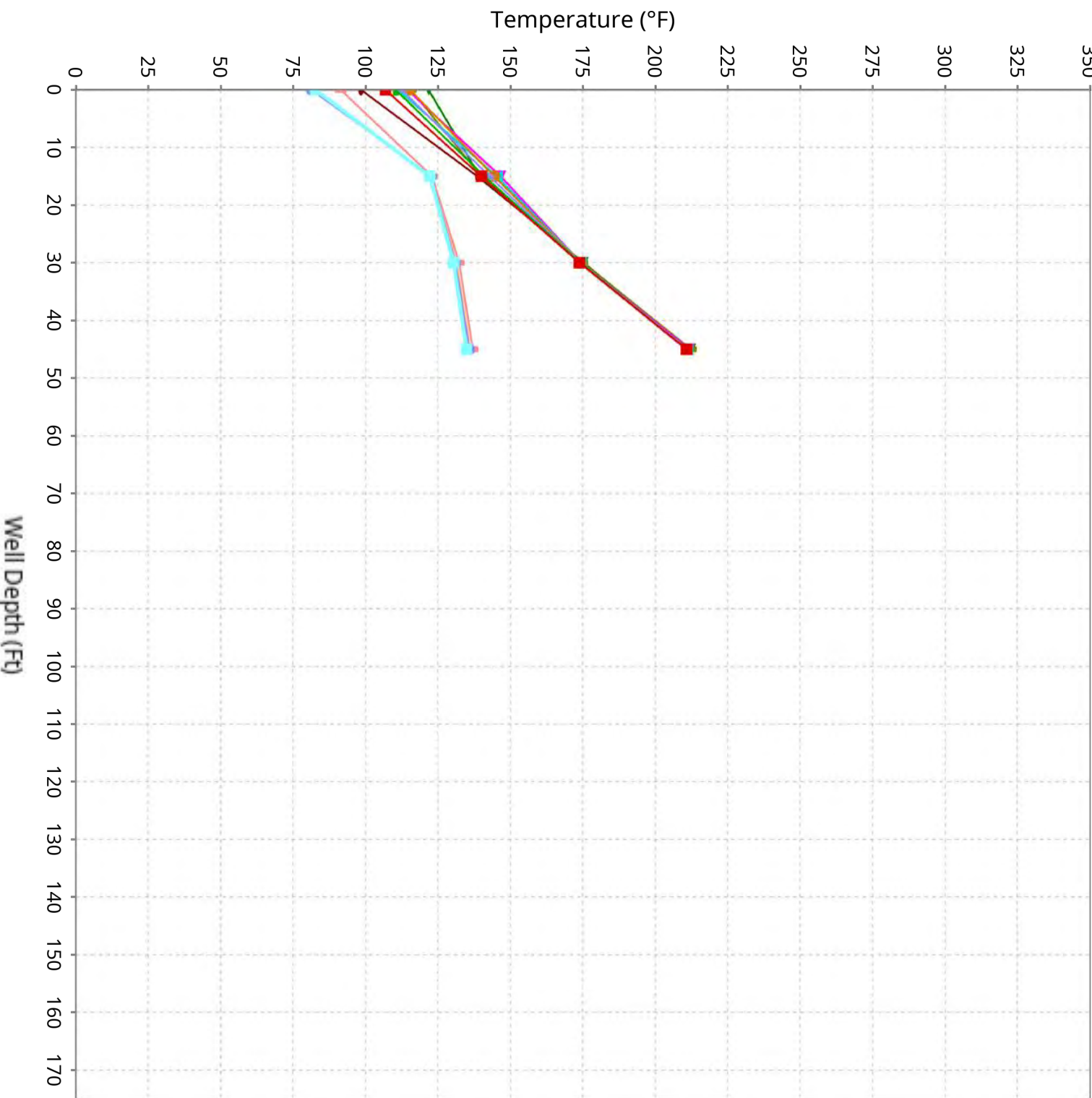
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-17

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



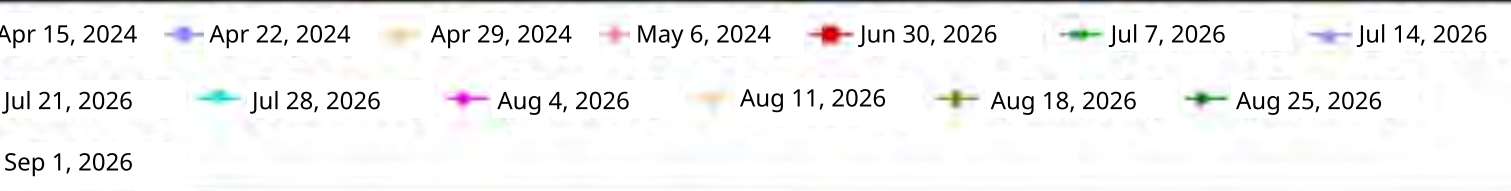
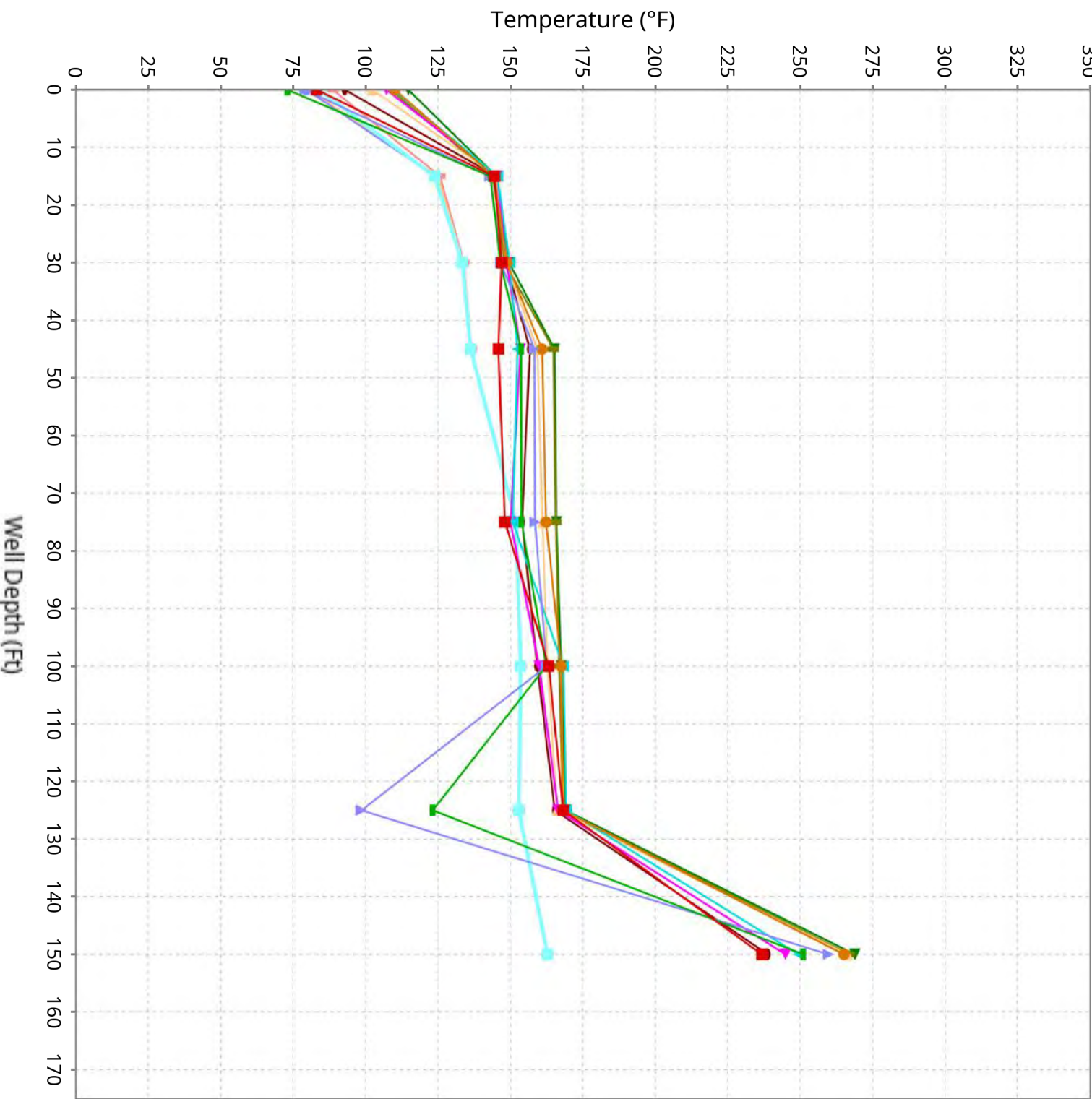
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-18

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



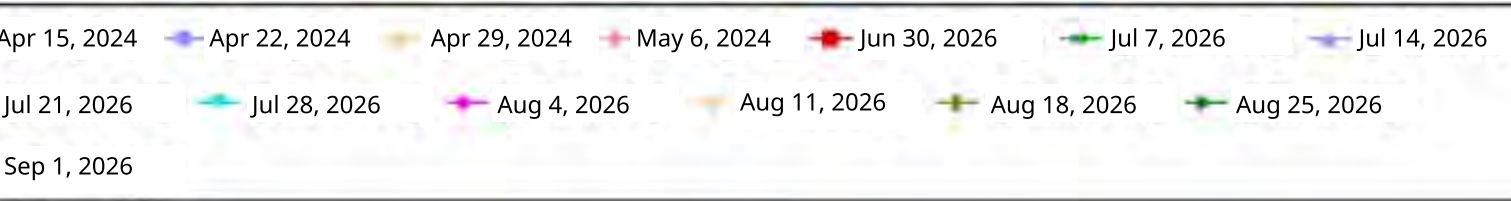
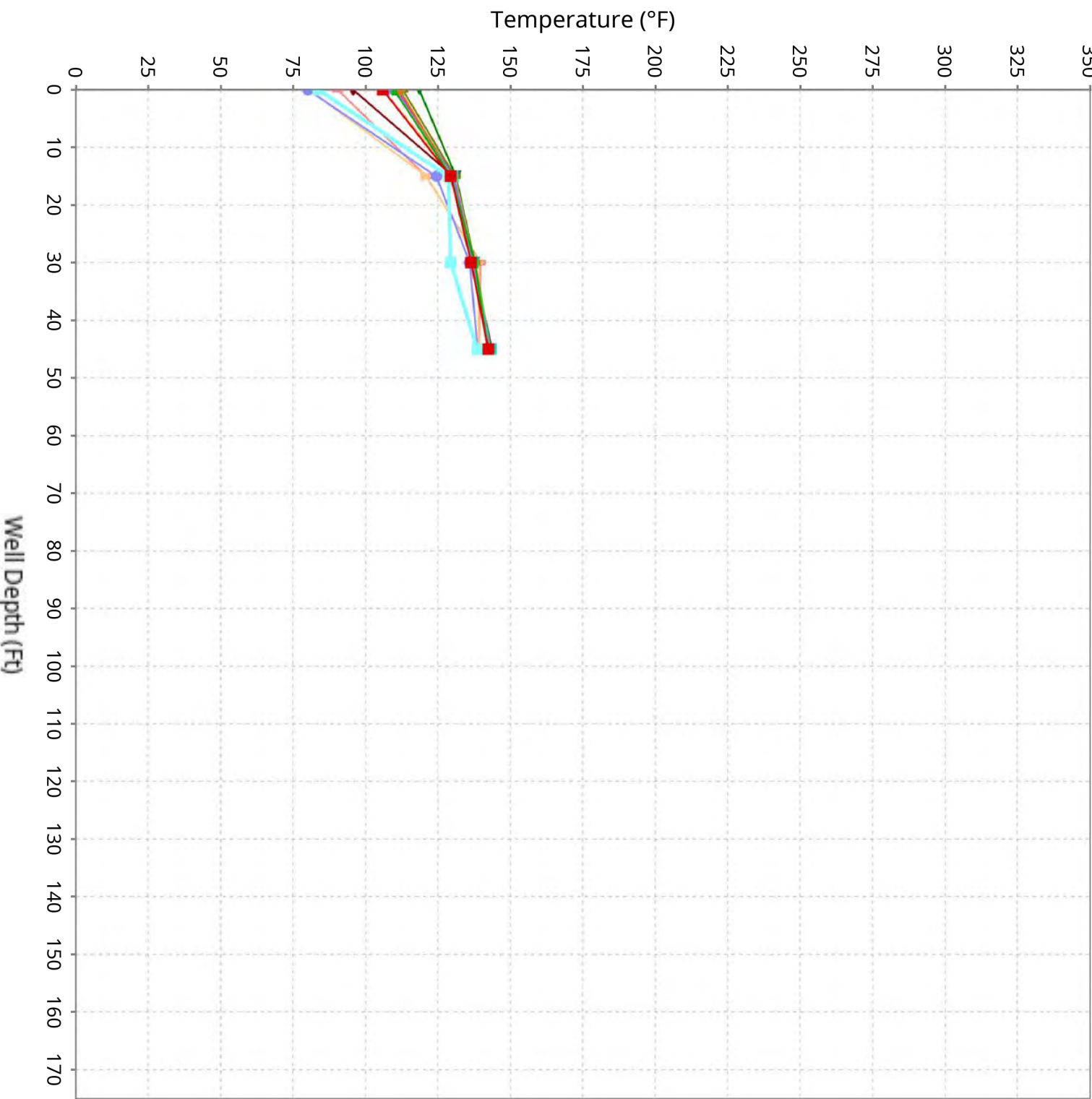
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-19

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



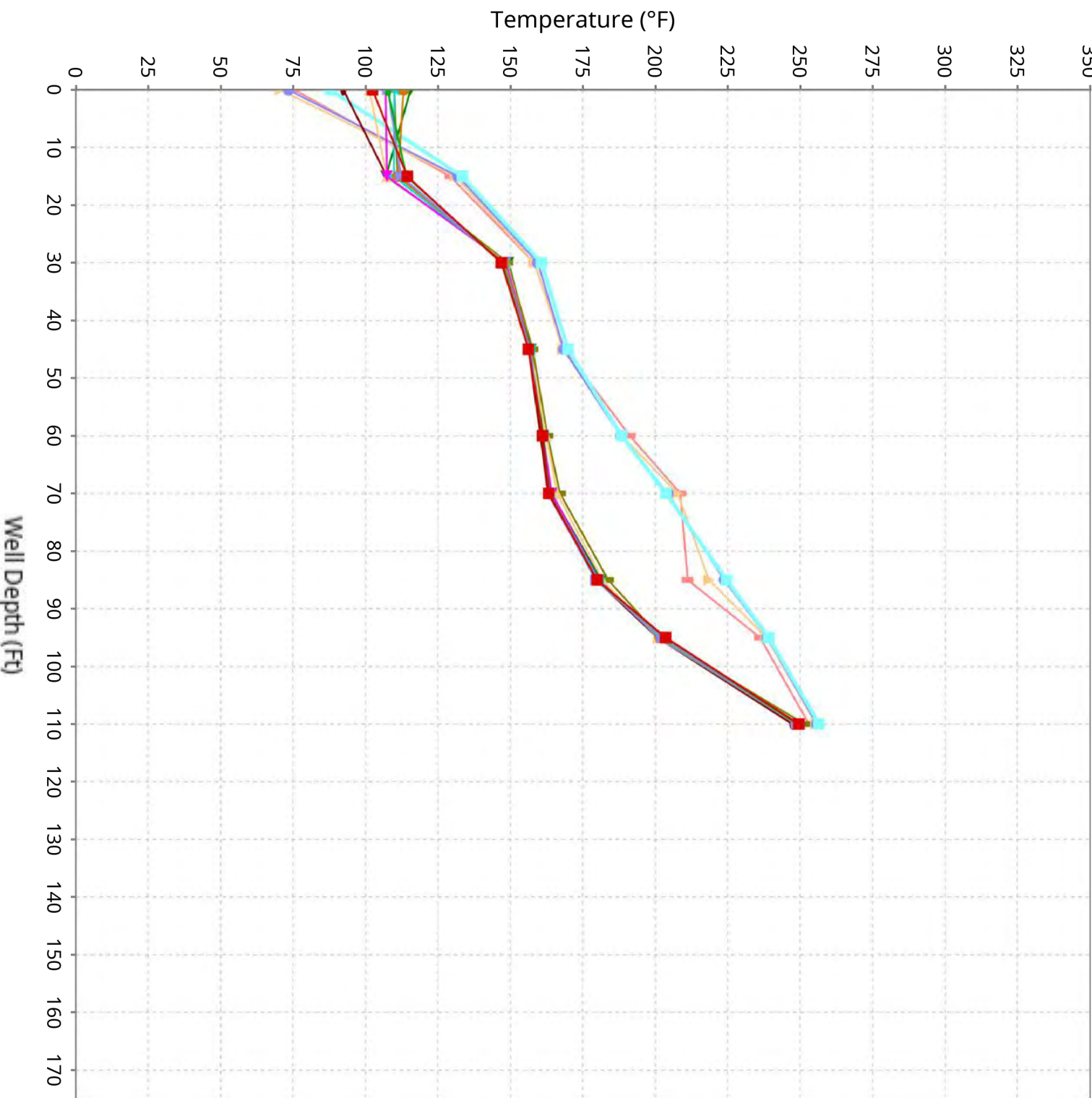
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-20

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



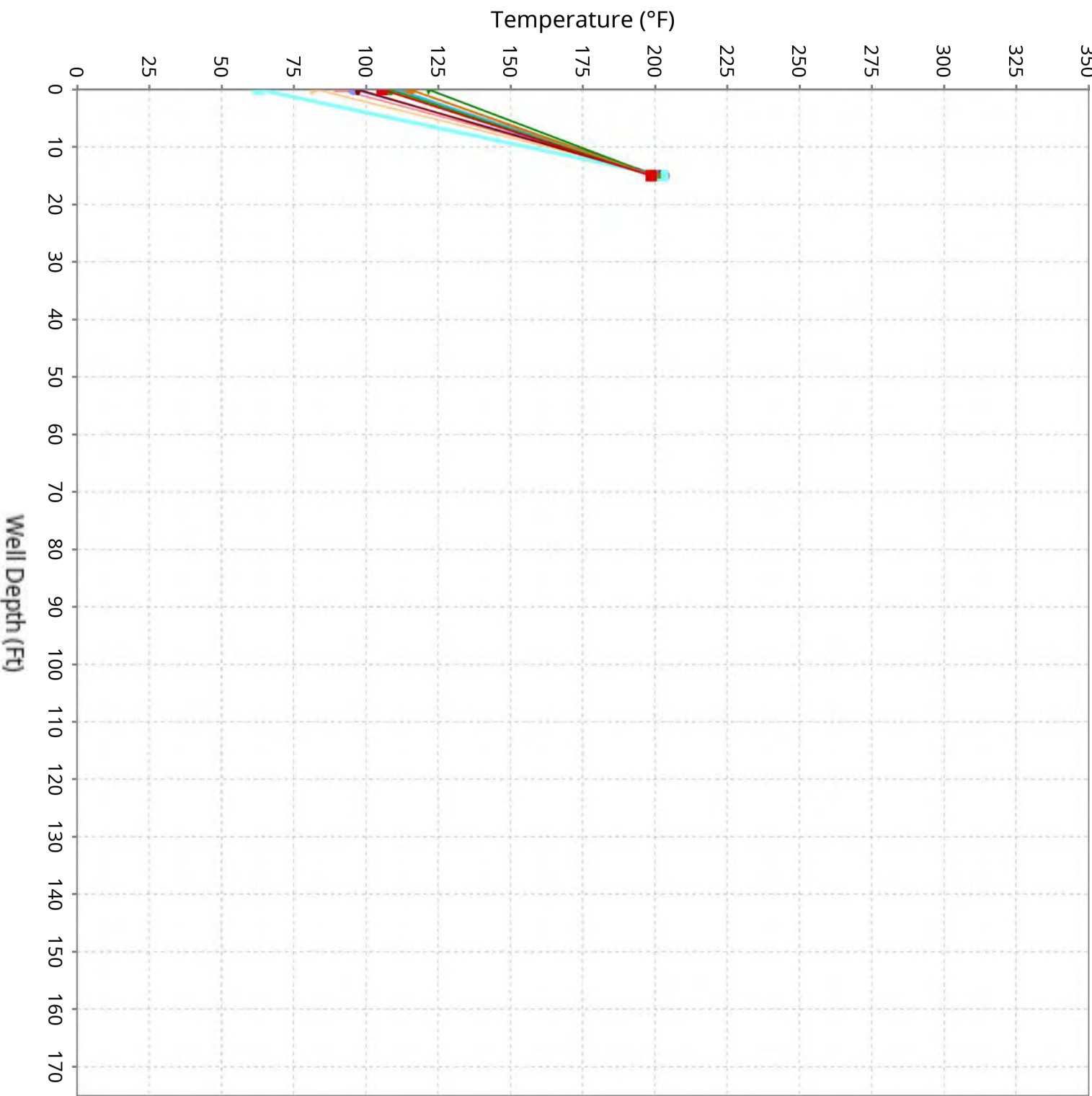
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-21

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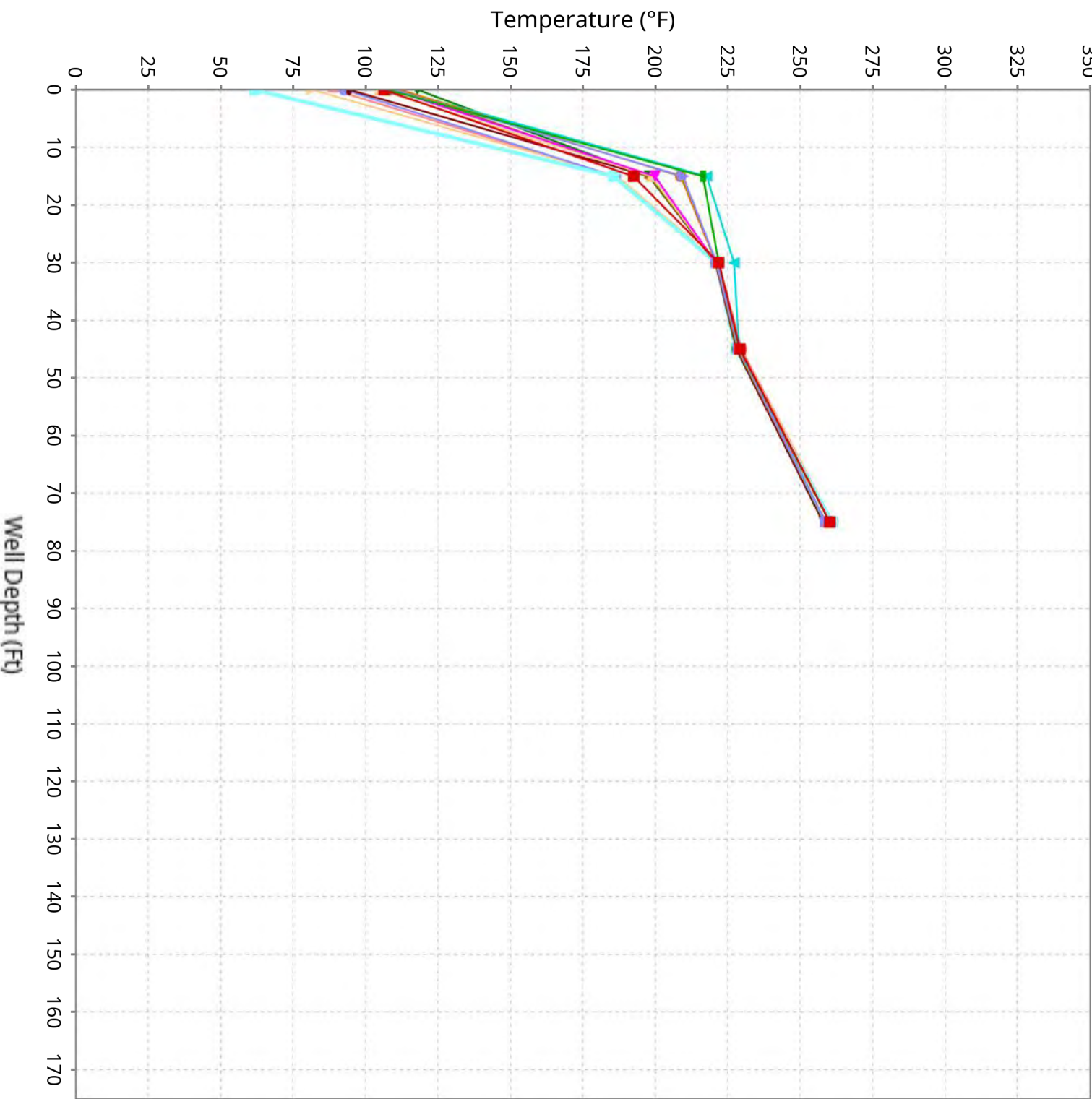
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-22

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



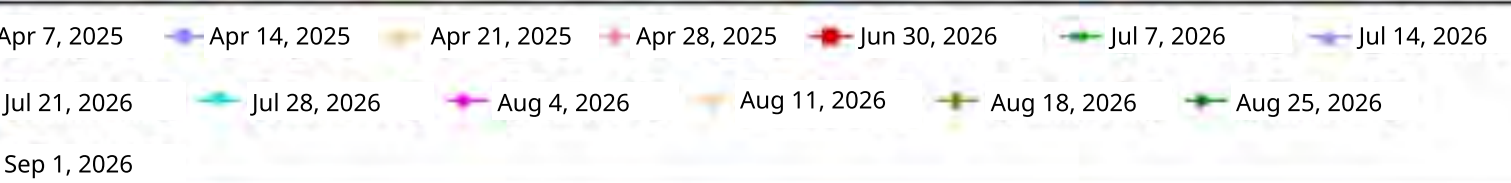
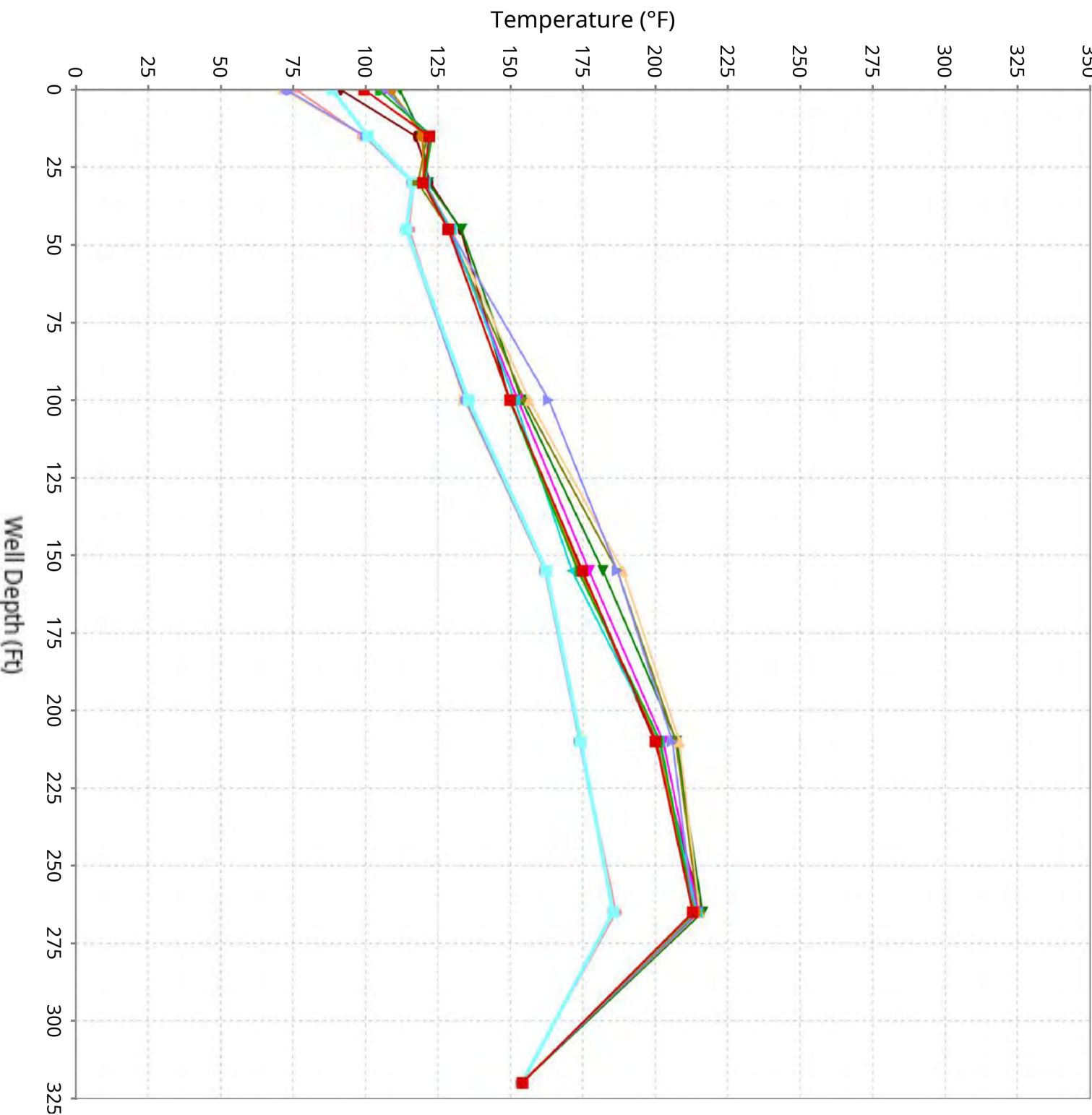
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-23

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



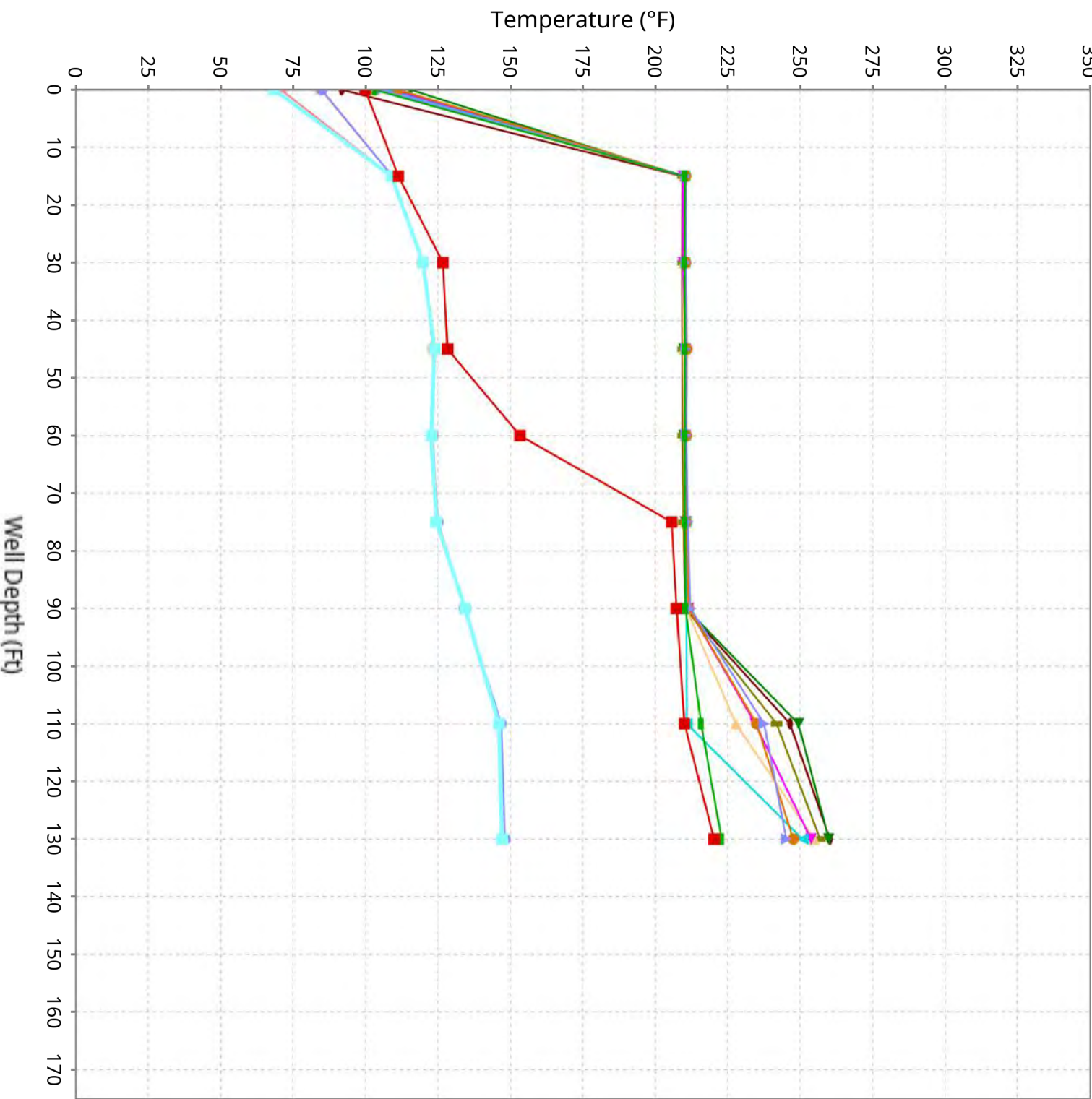
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-24

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



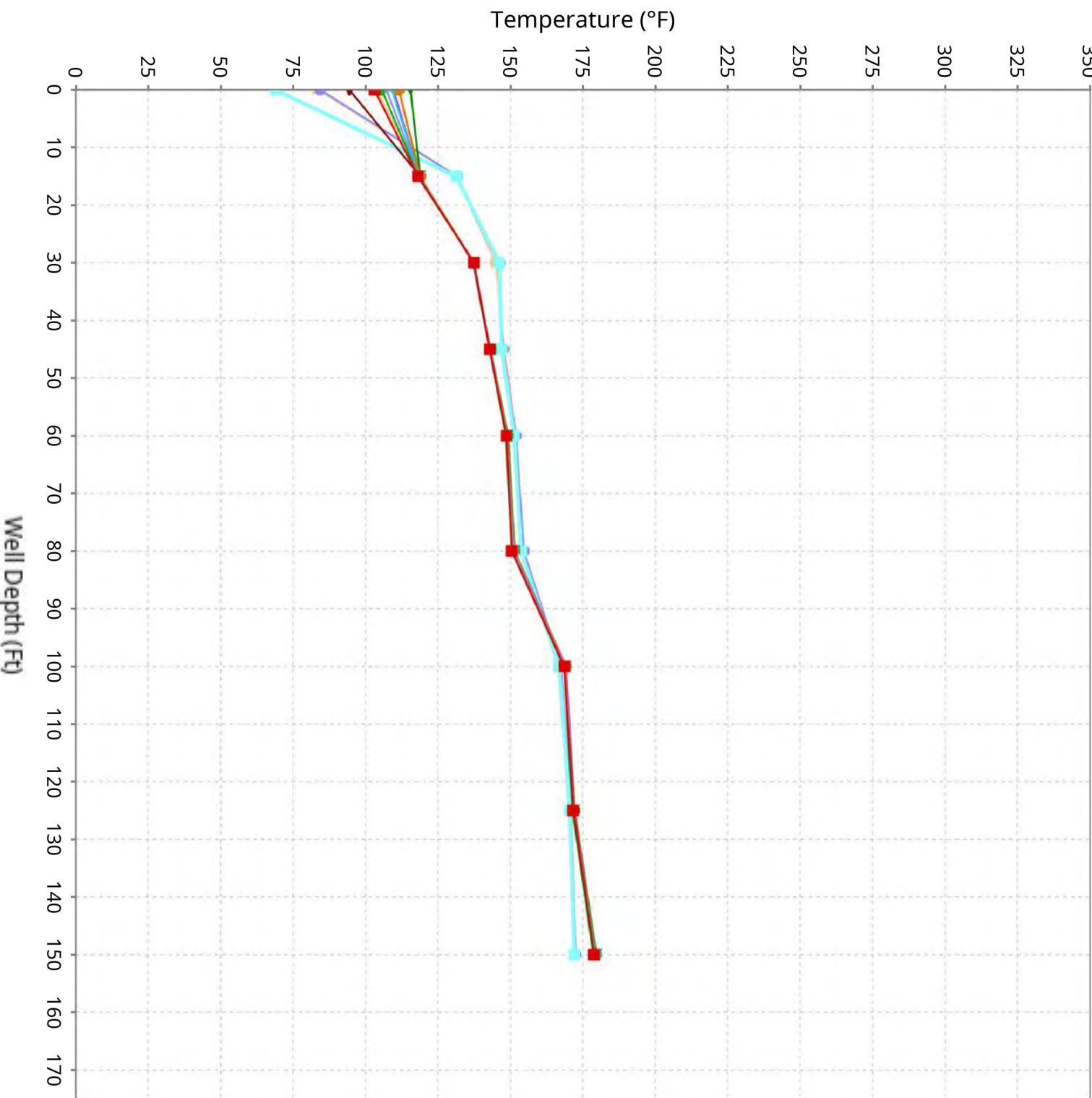
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-25

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



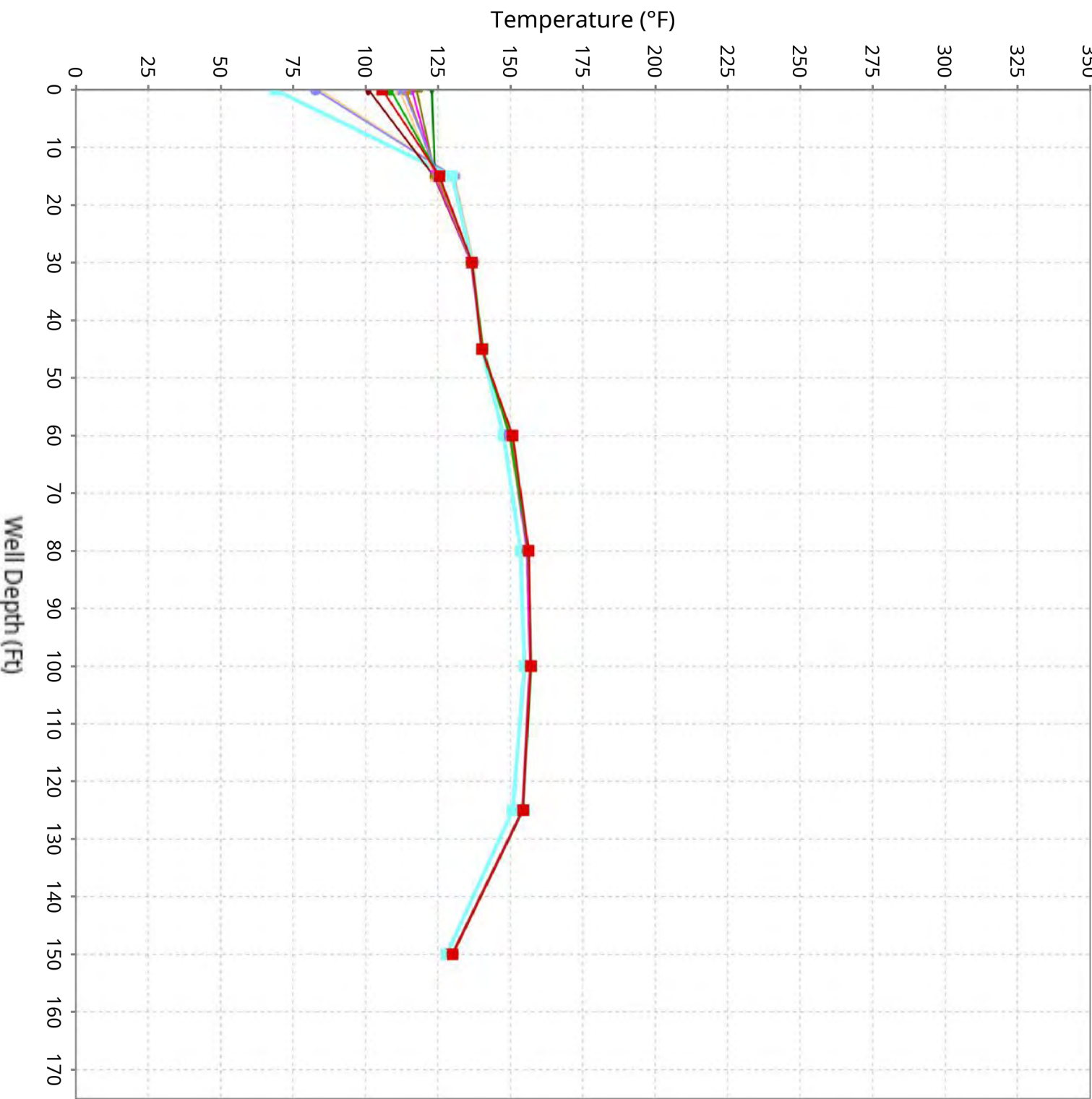
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-26

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



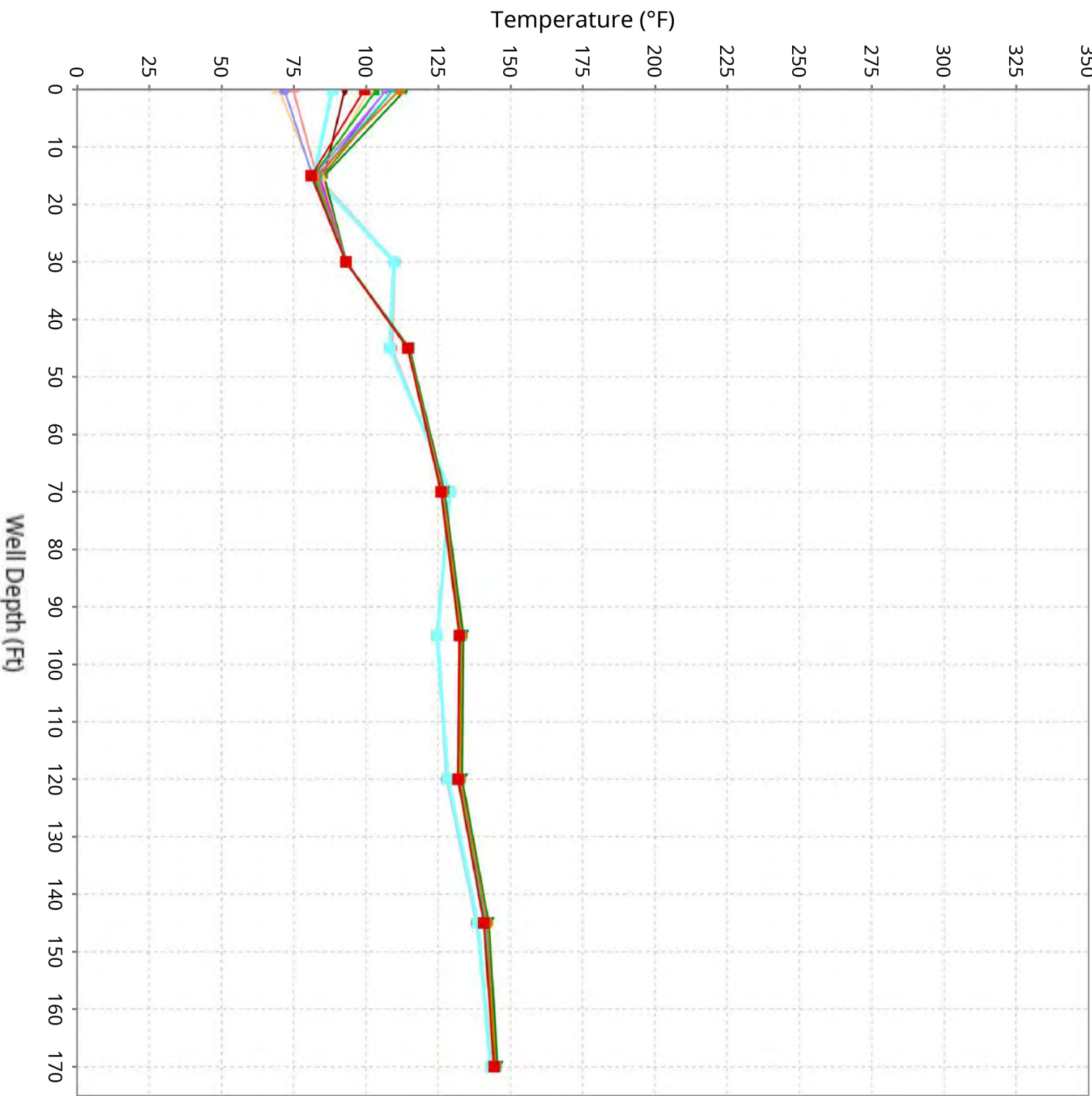
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-27

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



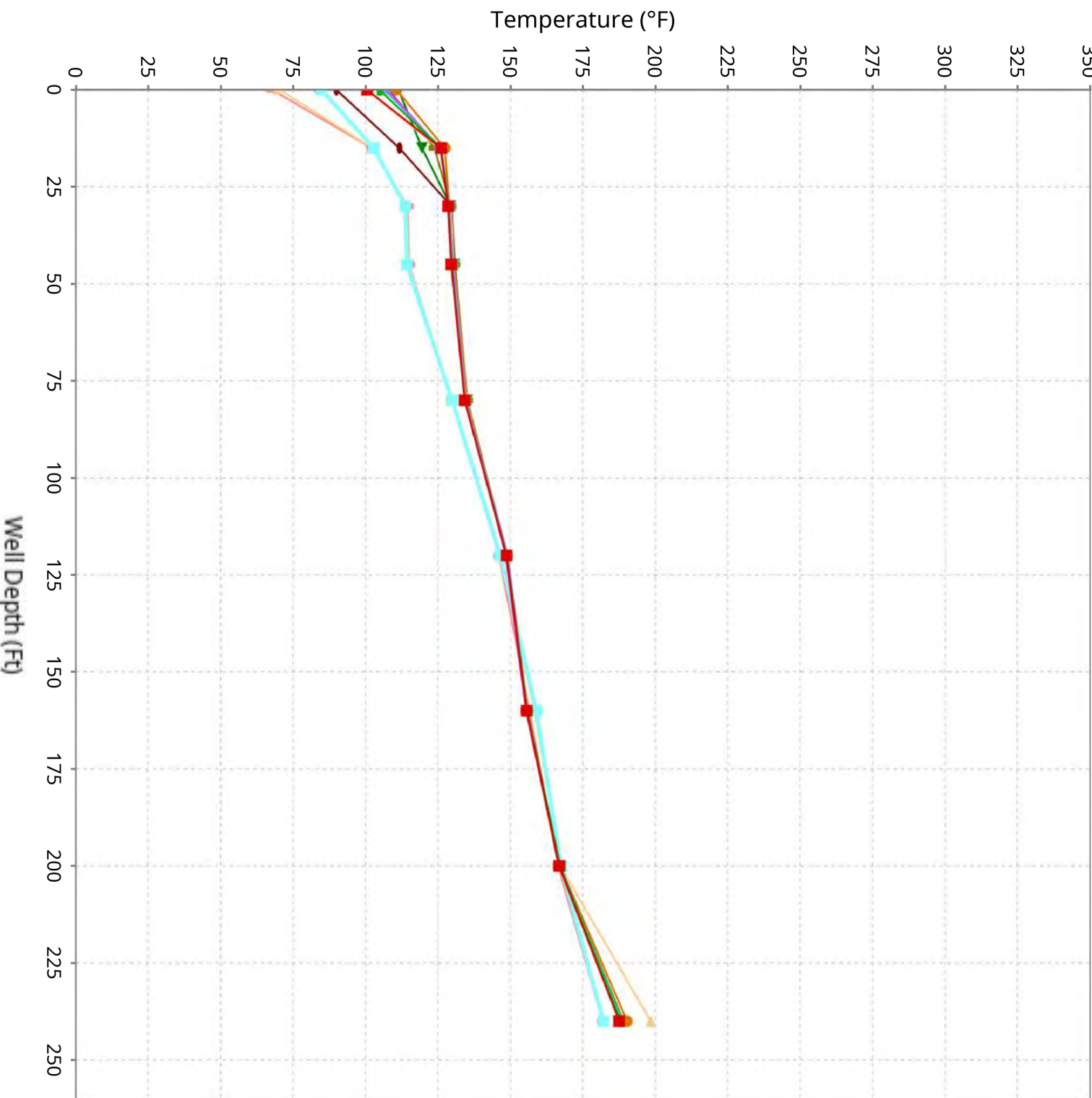
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-28

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



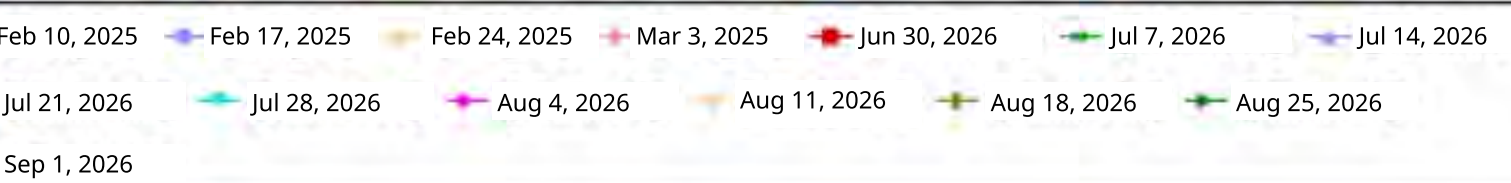
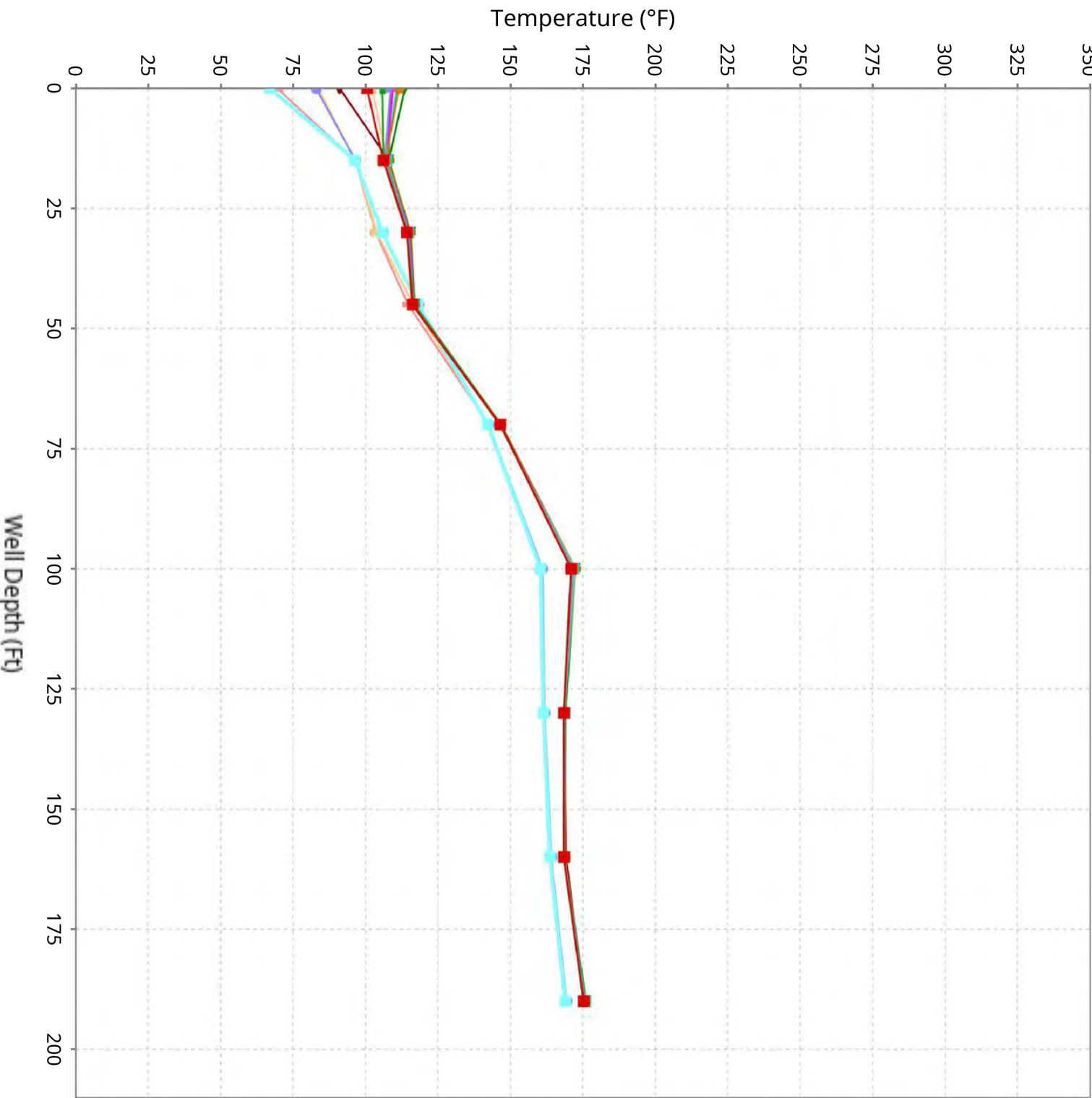
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-29

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



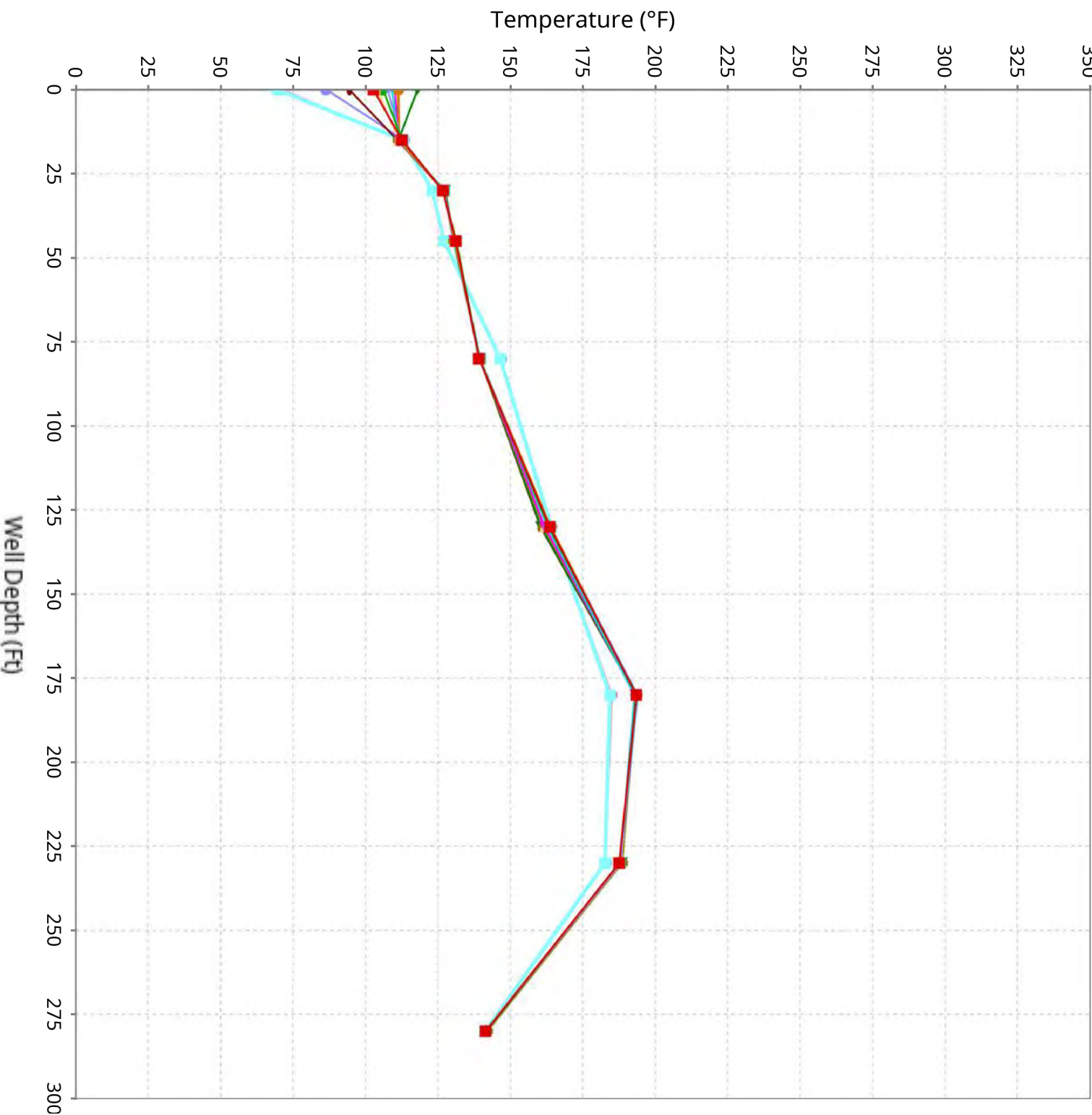
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-30

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



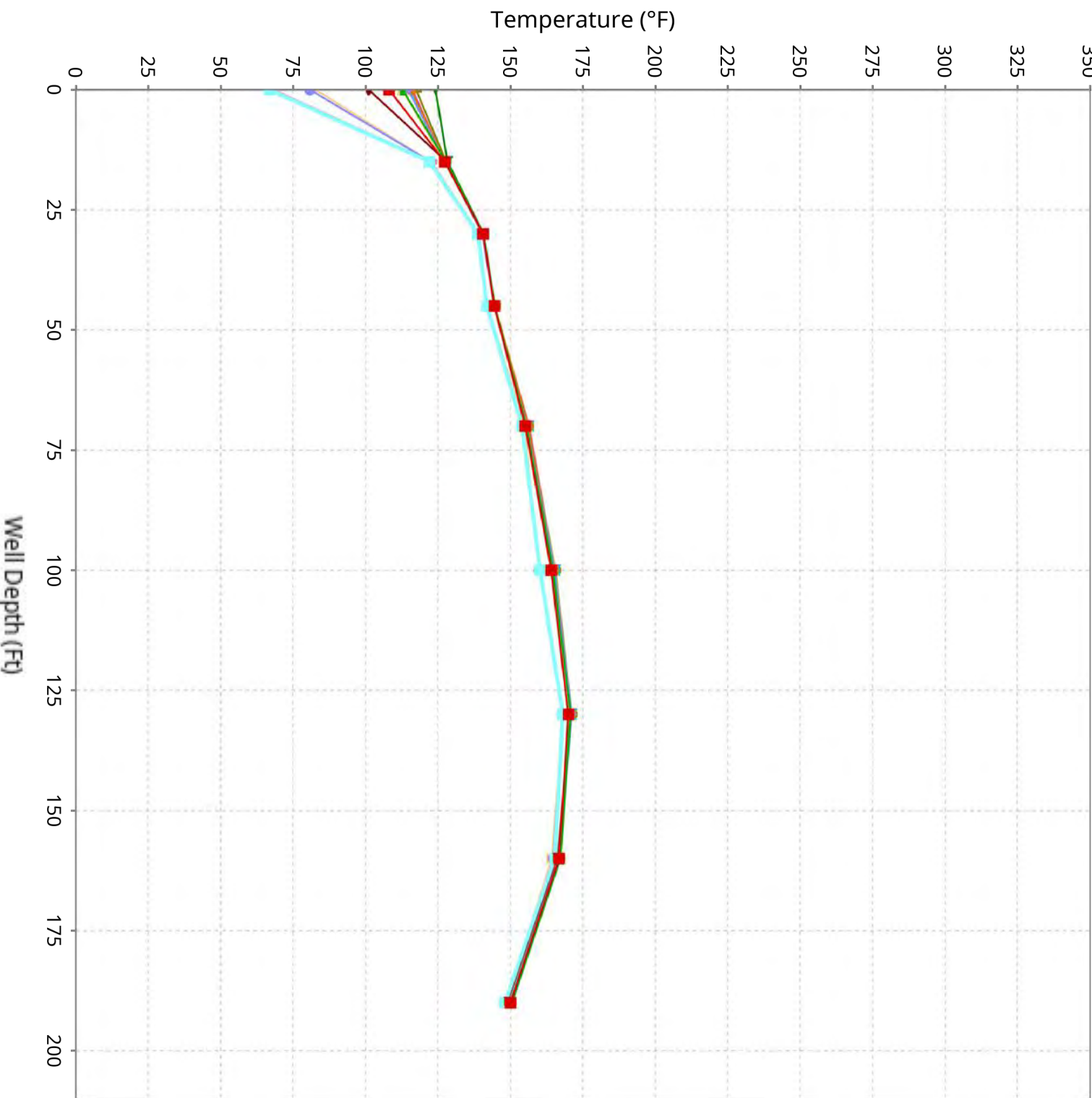
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-31

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



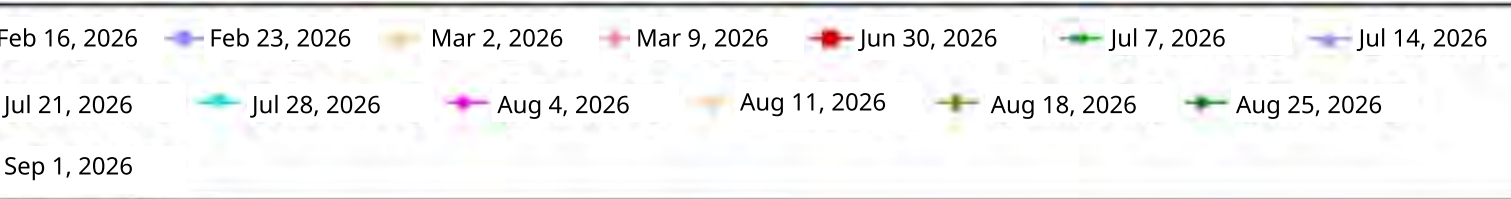
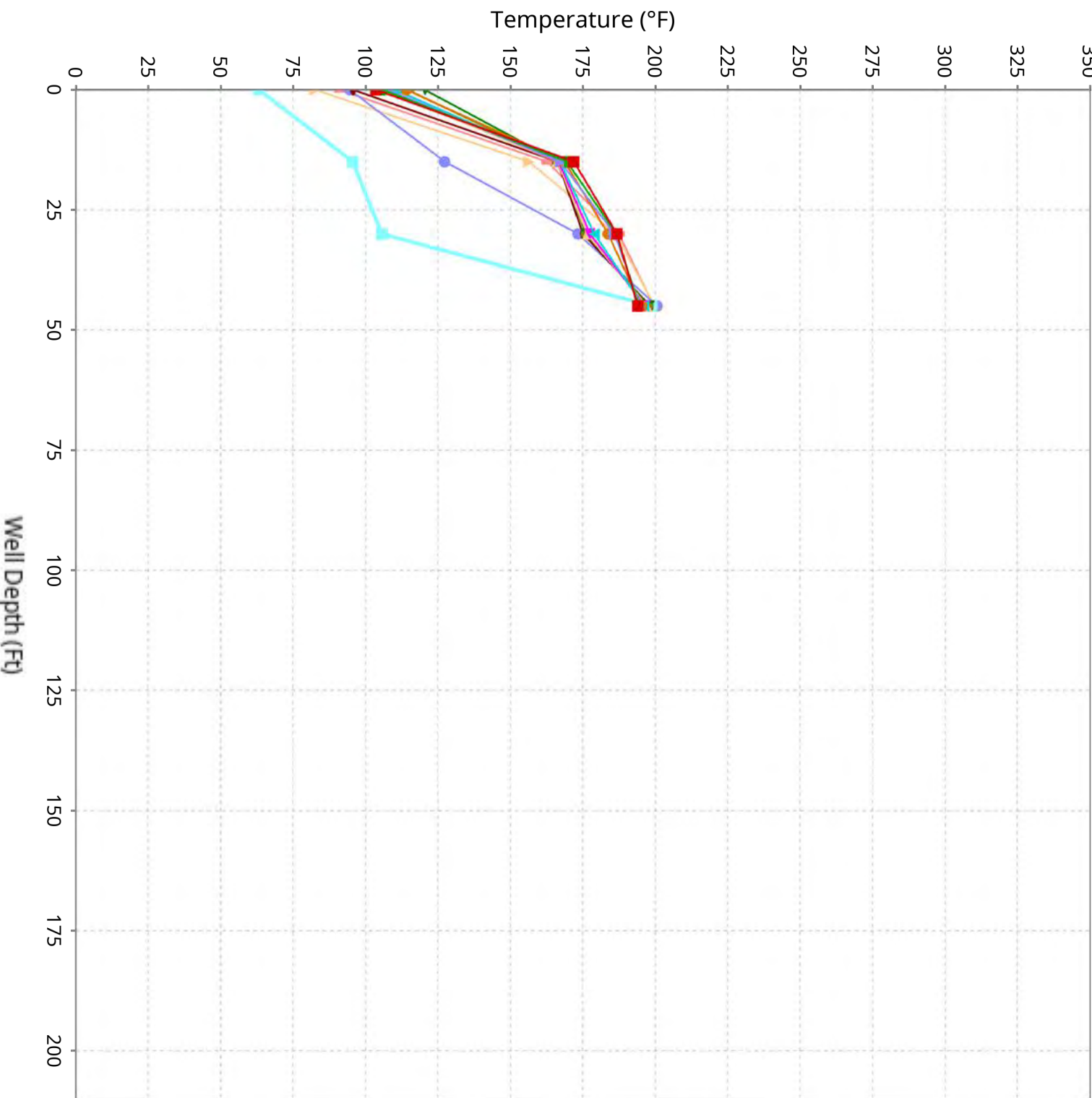
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-32

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



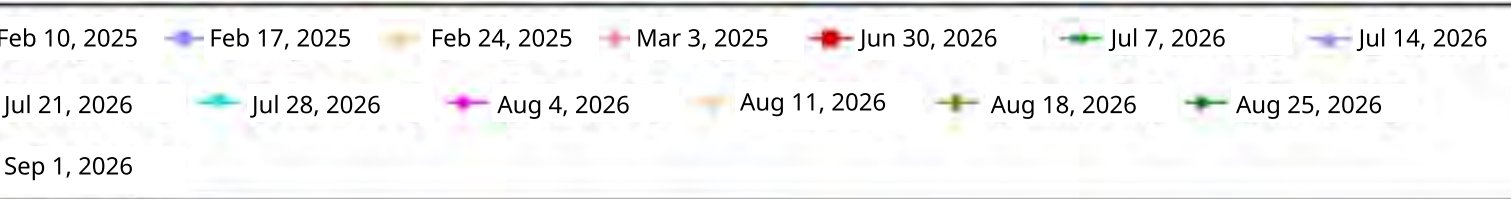
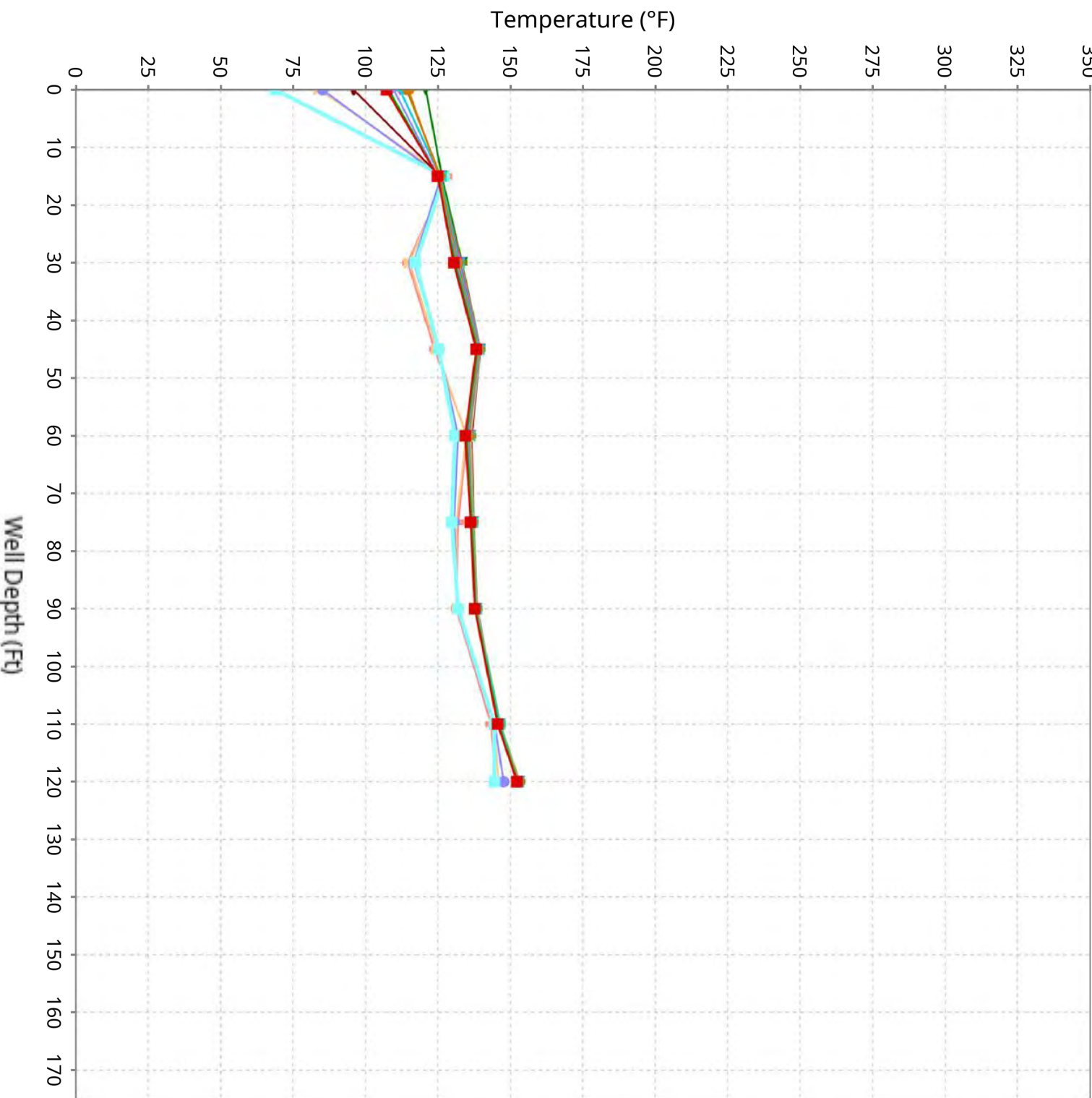
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-33

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



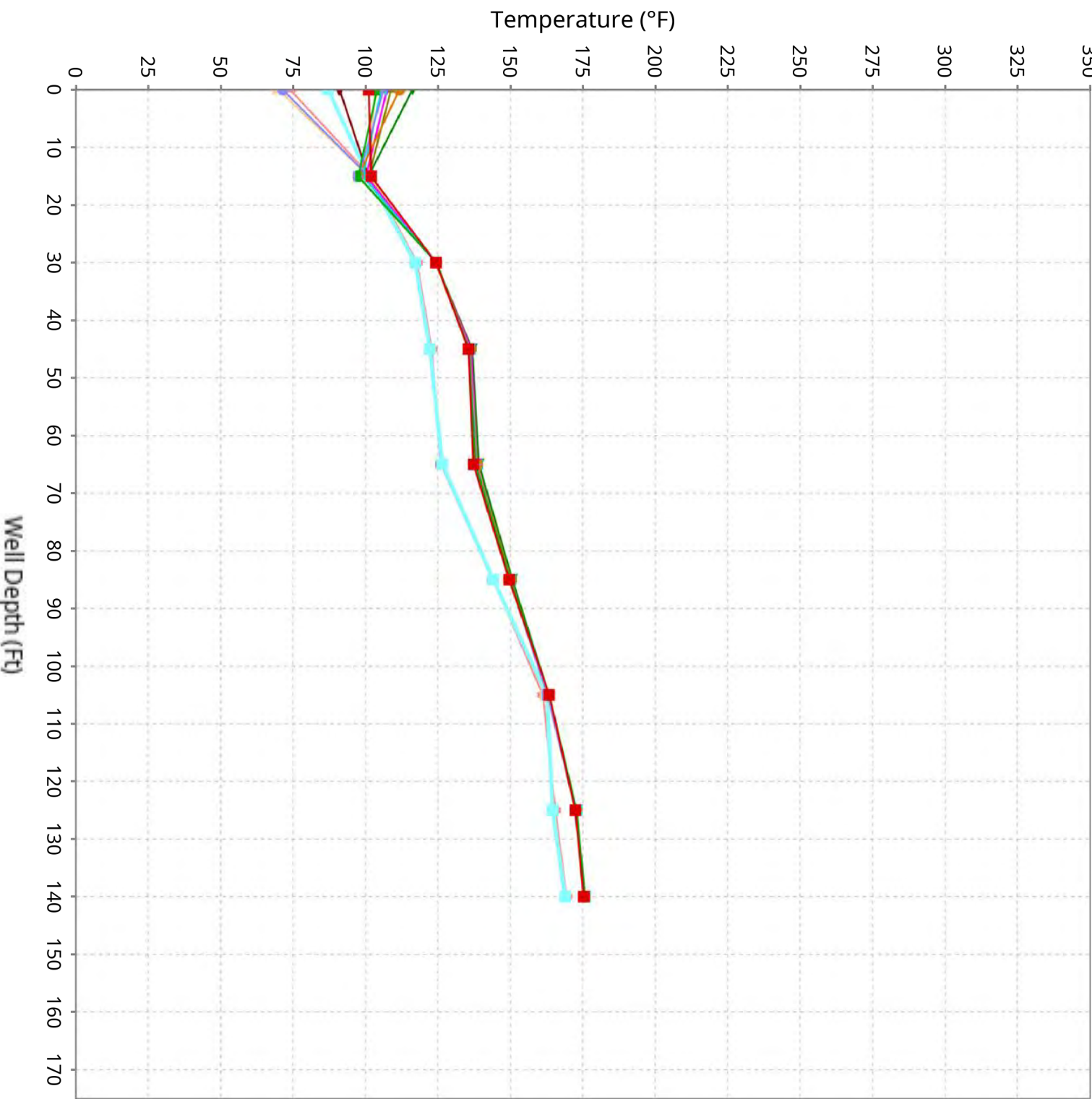
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-34

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



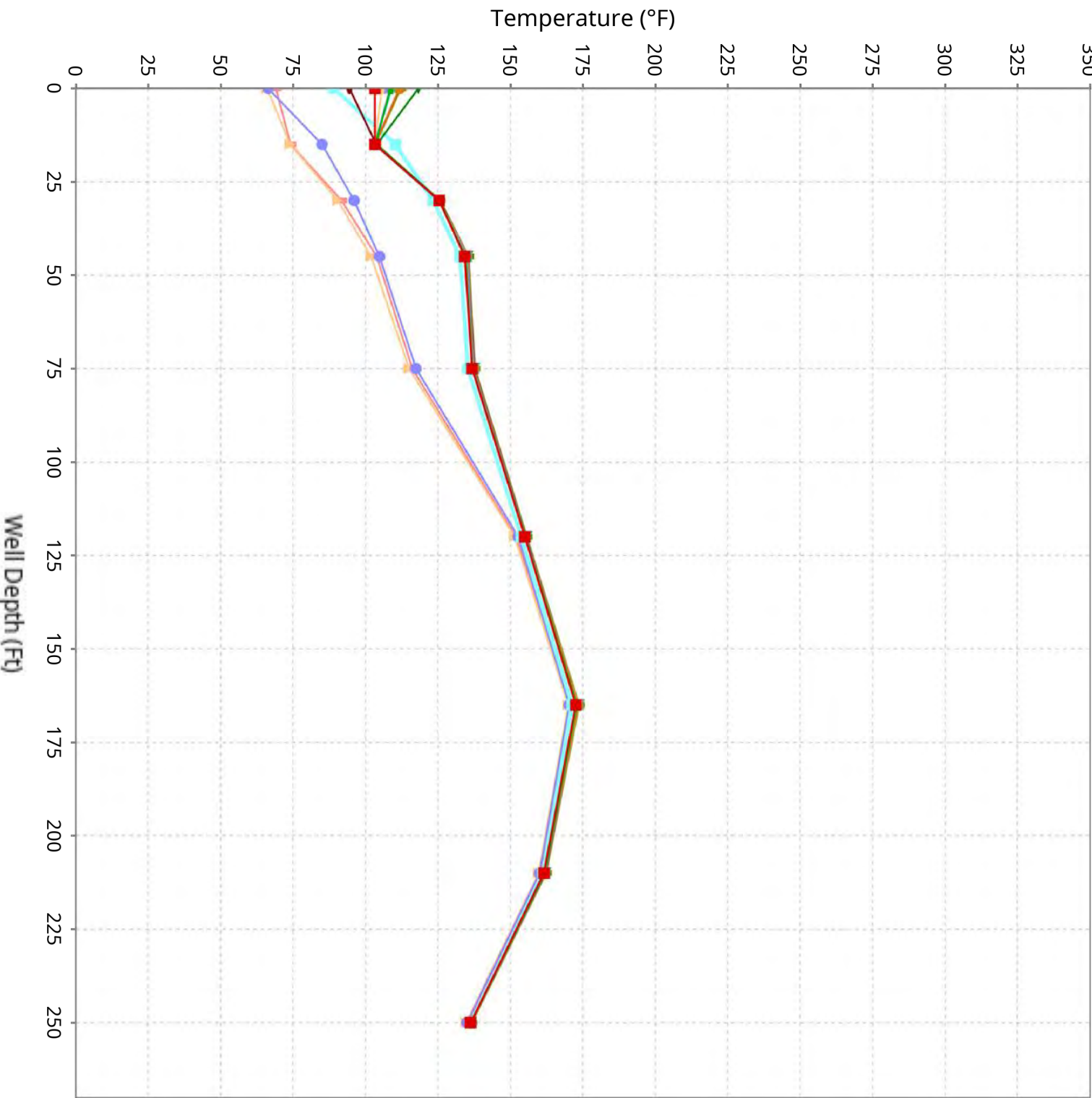
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-35

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



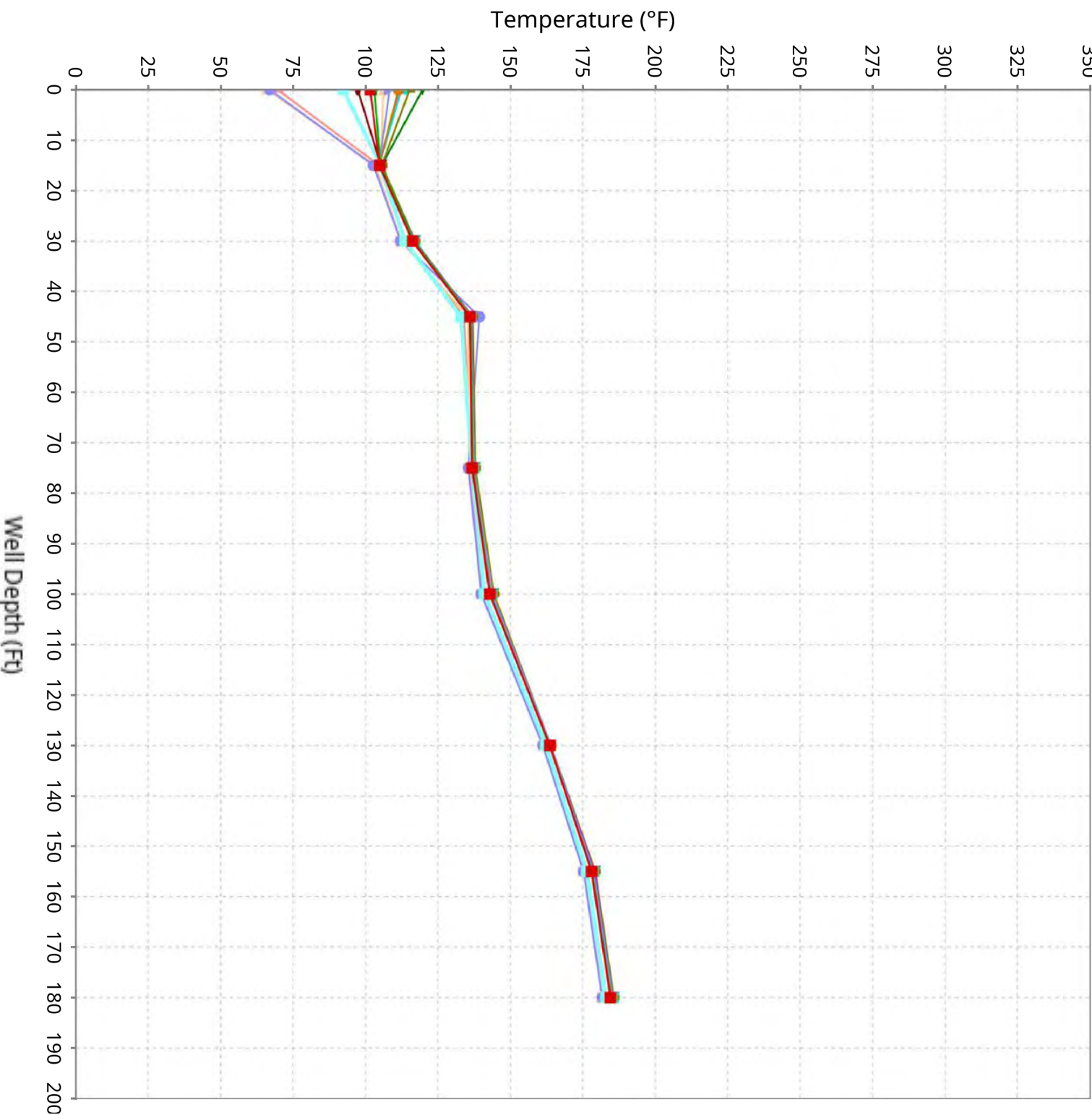
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-36

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-37

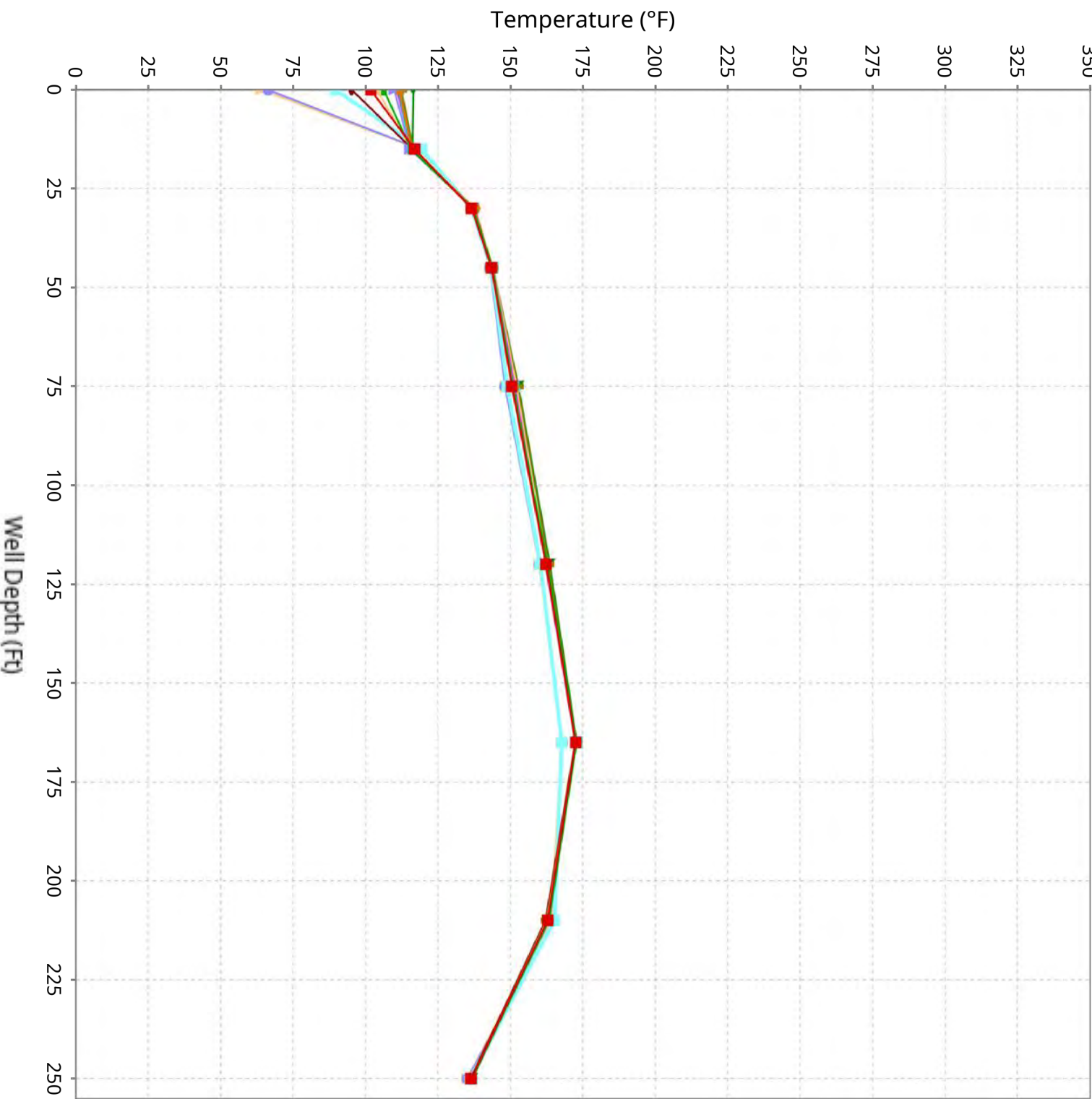
Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



- Dec 15, 2025
- Dec 22, 2025
- Dec 29, 2025
- Jan 5, 2026
- Jun 30, 2026
- Jul 7, 2026
- Jul 14, 2026
- Jul 21, 2026
- Jul 28, 2026
- Aug 4, 2026
- Aug 11, 2026
- Aug 18, 2026
- Aug 25, 2026
- Sep 1, 2026

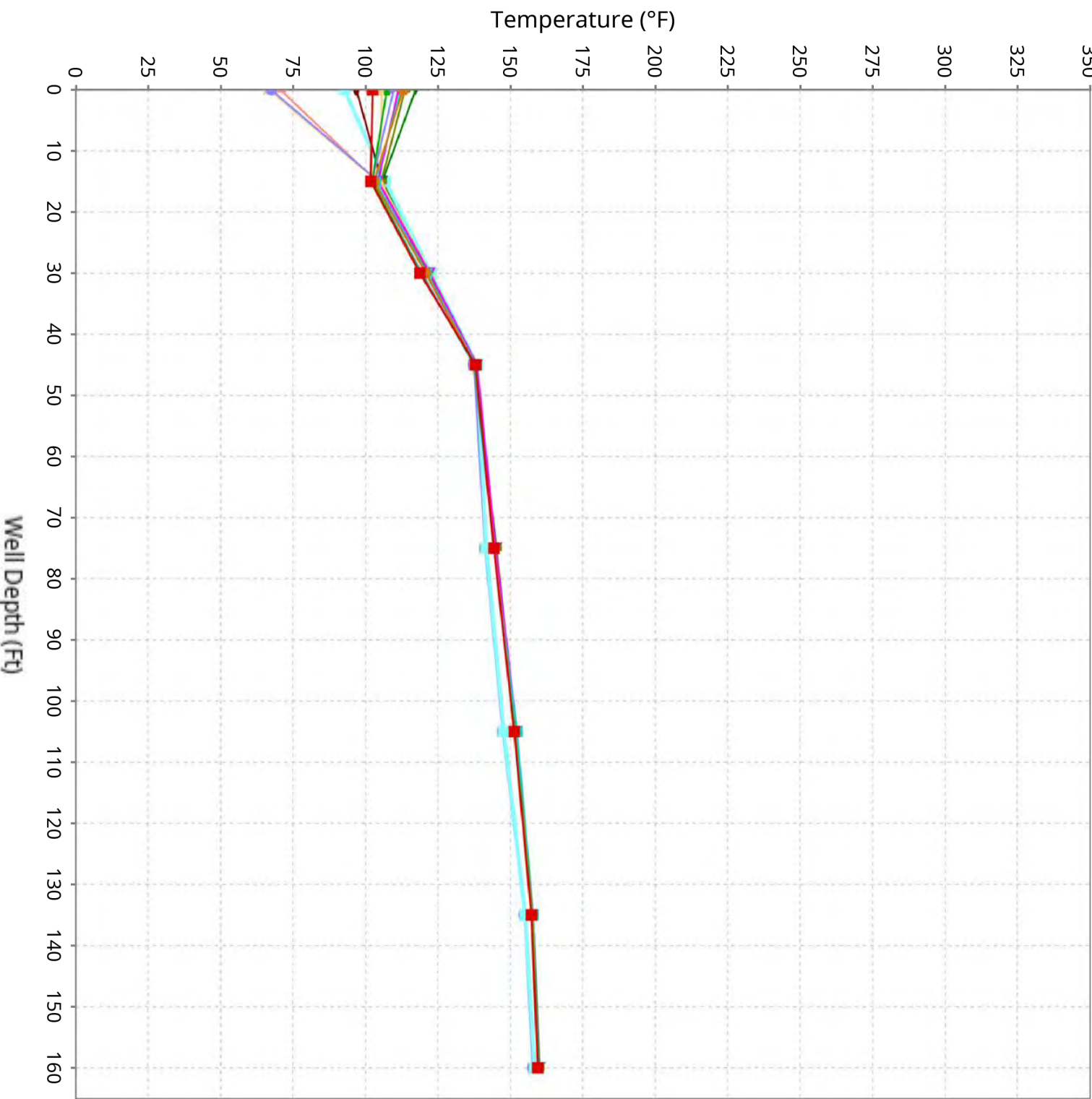
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-38

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



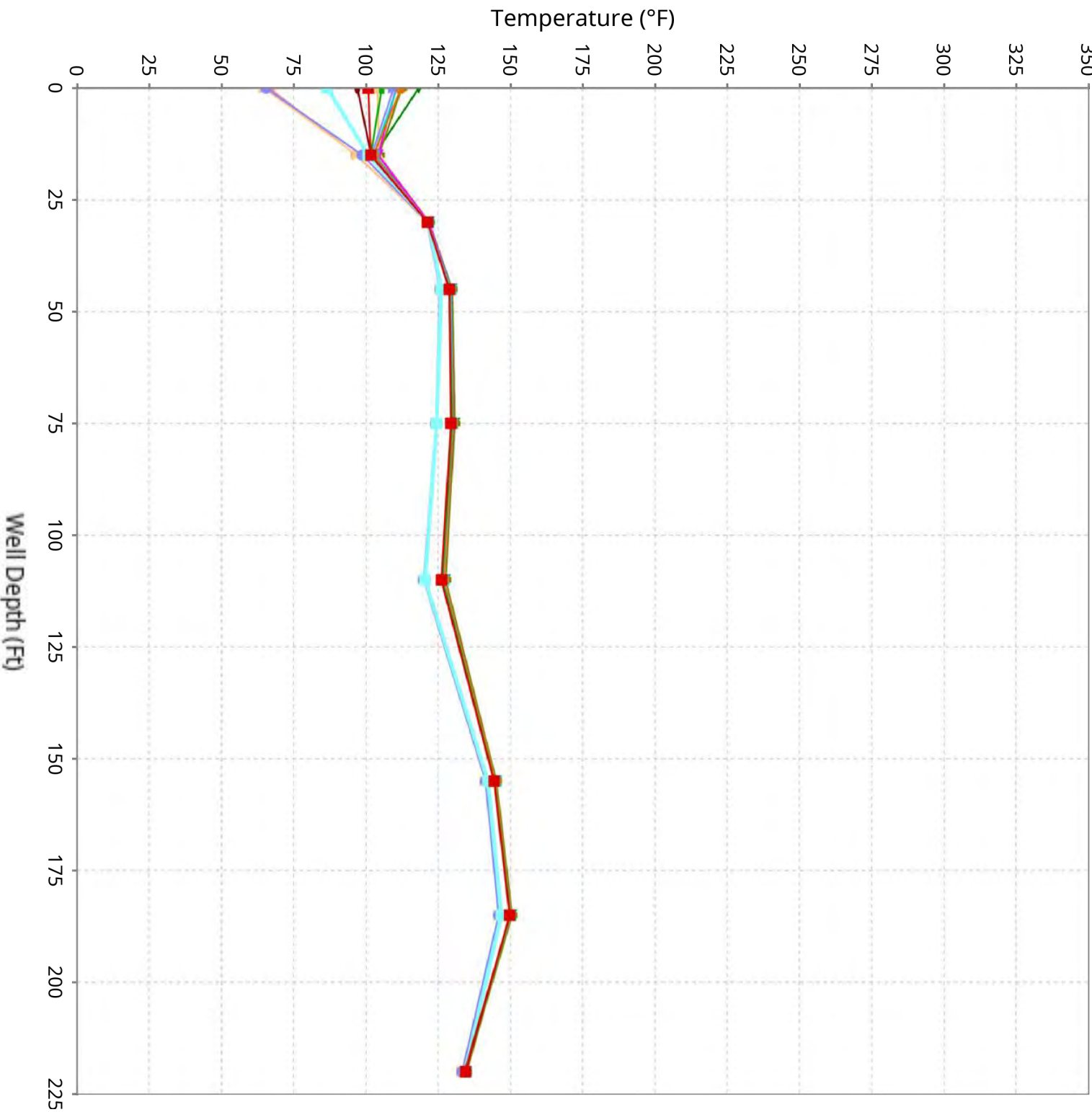
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-39

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



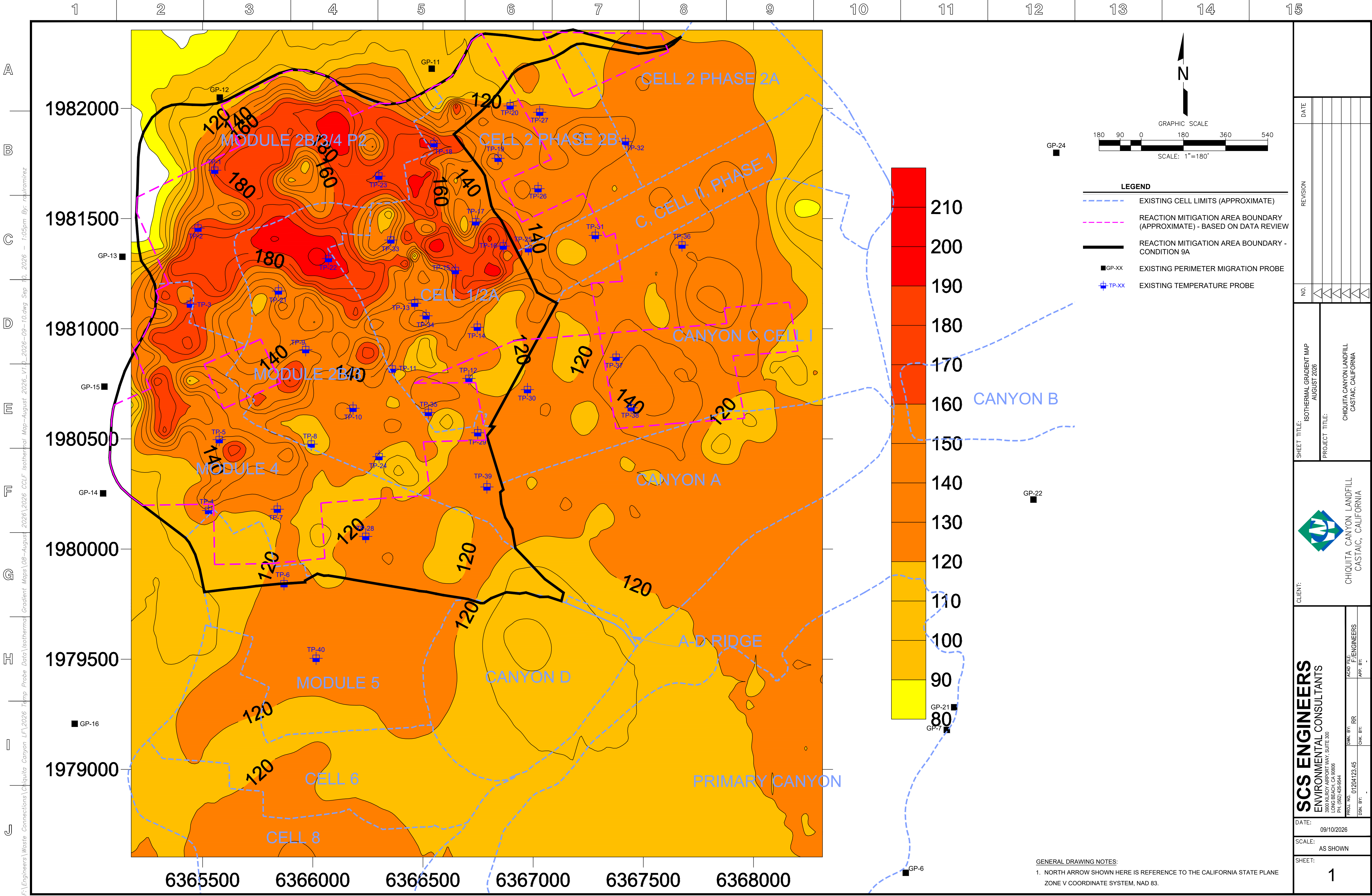
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-40

Maximum weekly data for initial 4-weeks of operation compared to the latest 10-weeks



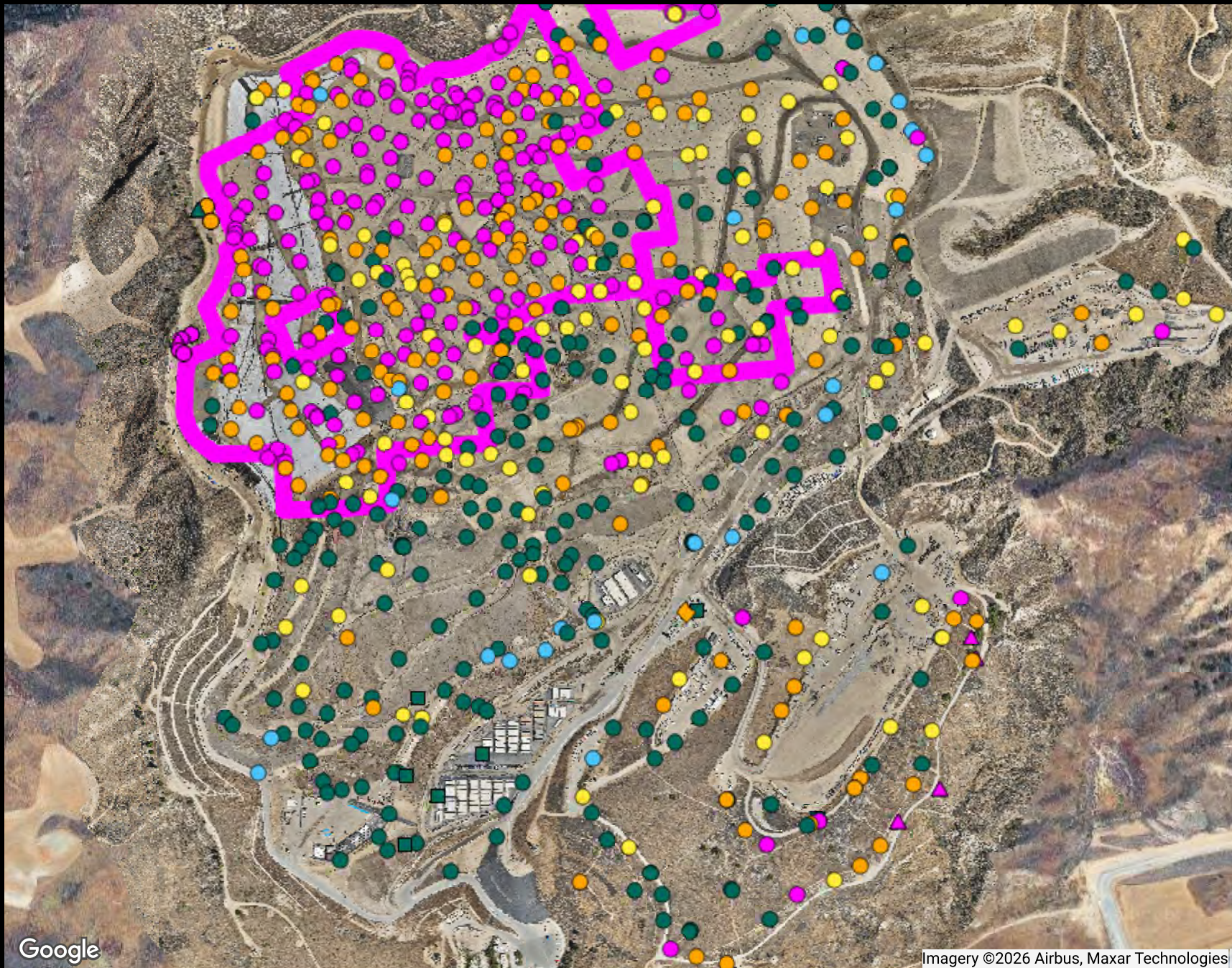
Attachment C

Isothermal Gradient Range Map



Attachment D

Wellhead Methane-to-Carbon Dioxide Ratio Range Map



Ranges Mapped			# Points
	>=	<	
	>= 0	< 0.5	266
	>= 0.5	< 0.9	195
	>= 0.9	< 1.1	113
	>= 1.1	< 1.5	267
	>= 1.5	< 100	30

Point Type Legend

- ▽ calibration record
- ◇ flare-engine-ghg
- △ monitoring probe
- sample port
- well

Chiquita Canyon Landfill
Range Map
Parameter: CH₄/CO₂ Ratio (mid range)
Analysis Method: Maximum
Date Range: 08/01/2026 - 08/31/2026
Map generation date : 09/10/2026



Attachment E

Wellhead Hydrogen Range Map



Ranges Mapped

				# Points
	>= 0	and <	20000	33
	>= 20000	and <	50000	10
	>= 50000	and <	100000	31
	>= 100000	and <	999999	74

Point Type Legend

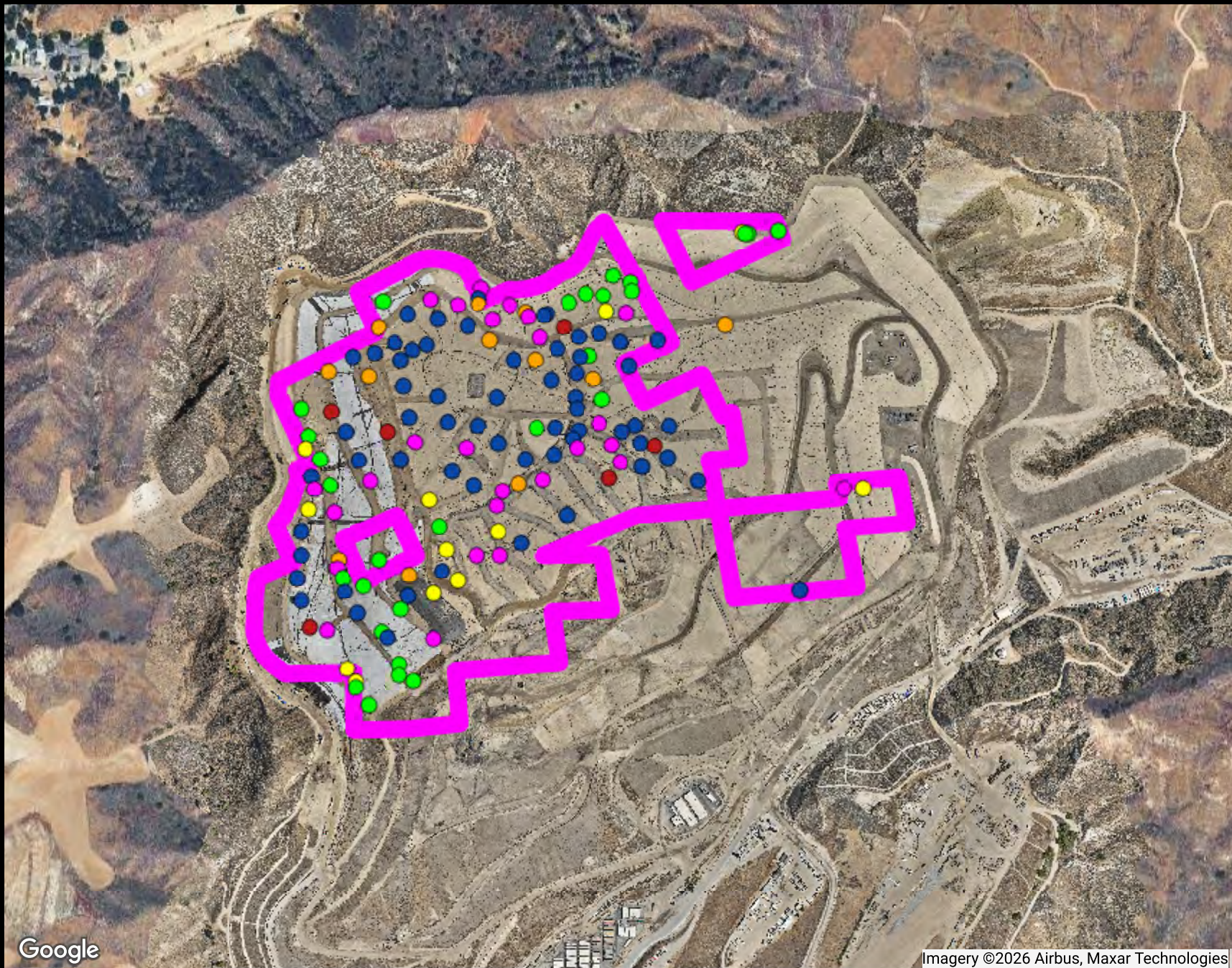
-  calibration record
-  flare-engine-ghg
-  monitoring probe
-  sample port
-  well

The range values noted above are in units of parts per million (ppm). Divide by 10,000 to convert these values to units of percent by volume



Attachment F

Wellhead Carbon Monoxide Range Map



Ranges Mapped				# Points
>= 0	and	< 500		28
>= 500	and	< 1000		12
>= 1000	and	< 1500		12
>= 1500	and	< 2000		26
>= 2000	and	< 5000		61
>= 5000	and	< 100000		6

Point Type Legend

- ▽ calibration record
- ◇ flare-engine-ghg
- △ monitoring probe
- sample port
- well

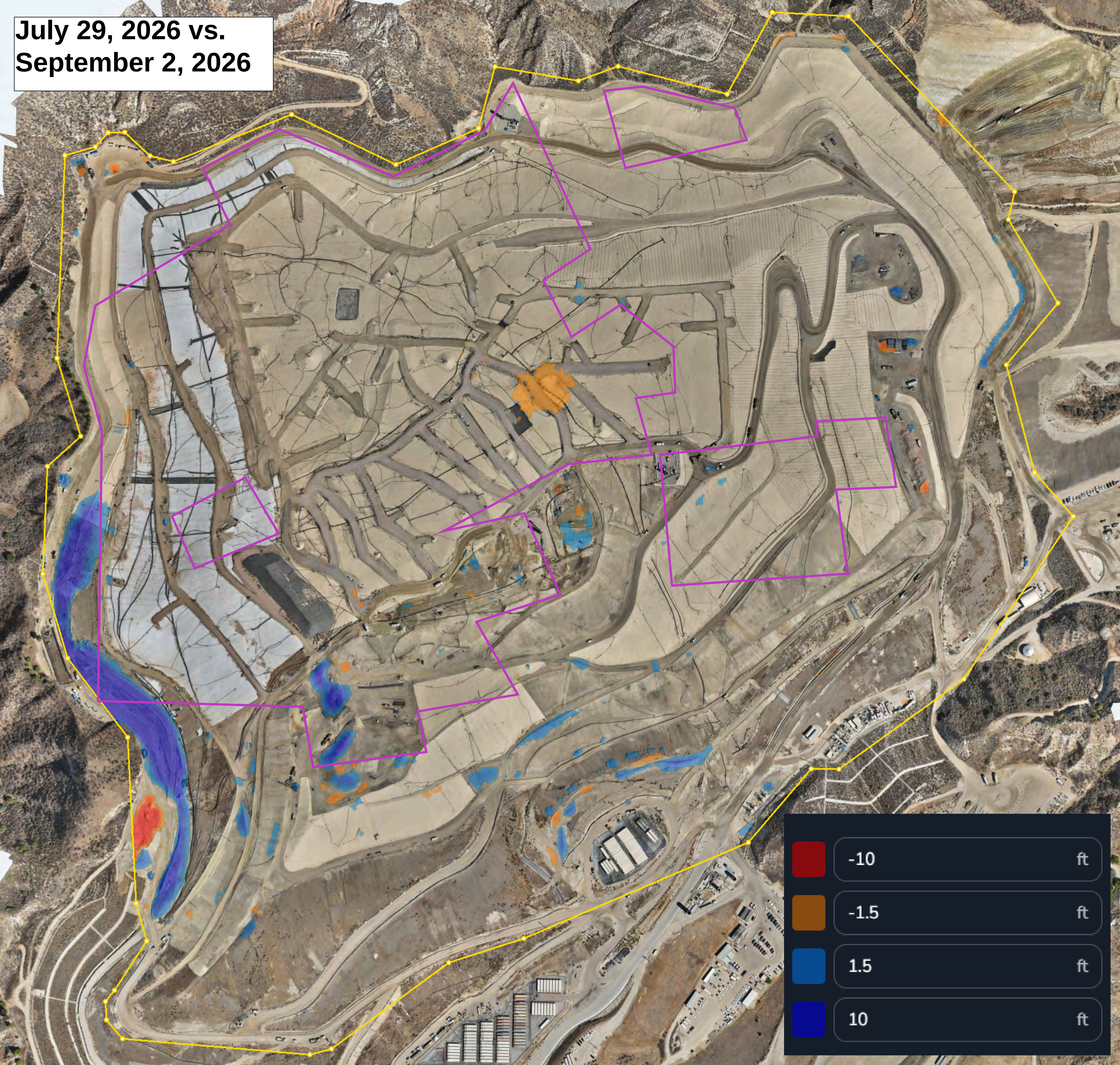
Chiquita Canyon Landfill
Range Map
Parameter: CO LAB (mid range)
Analysis Method: Maximum
Date Range: 08/01/2026 - 08/31/2026
Map generation date : 09/10/2026



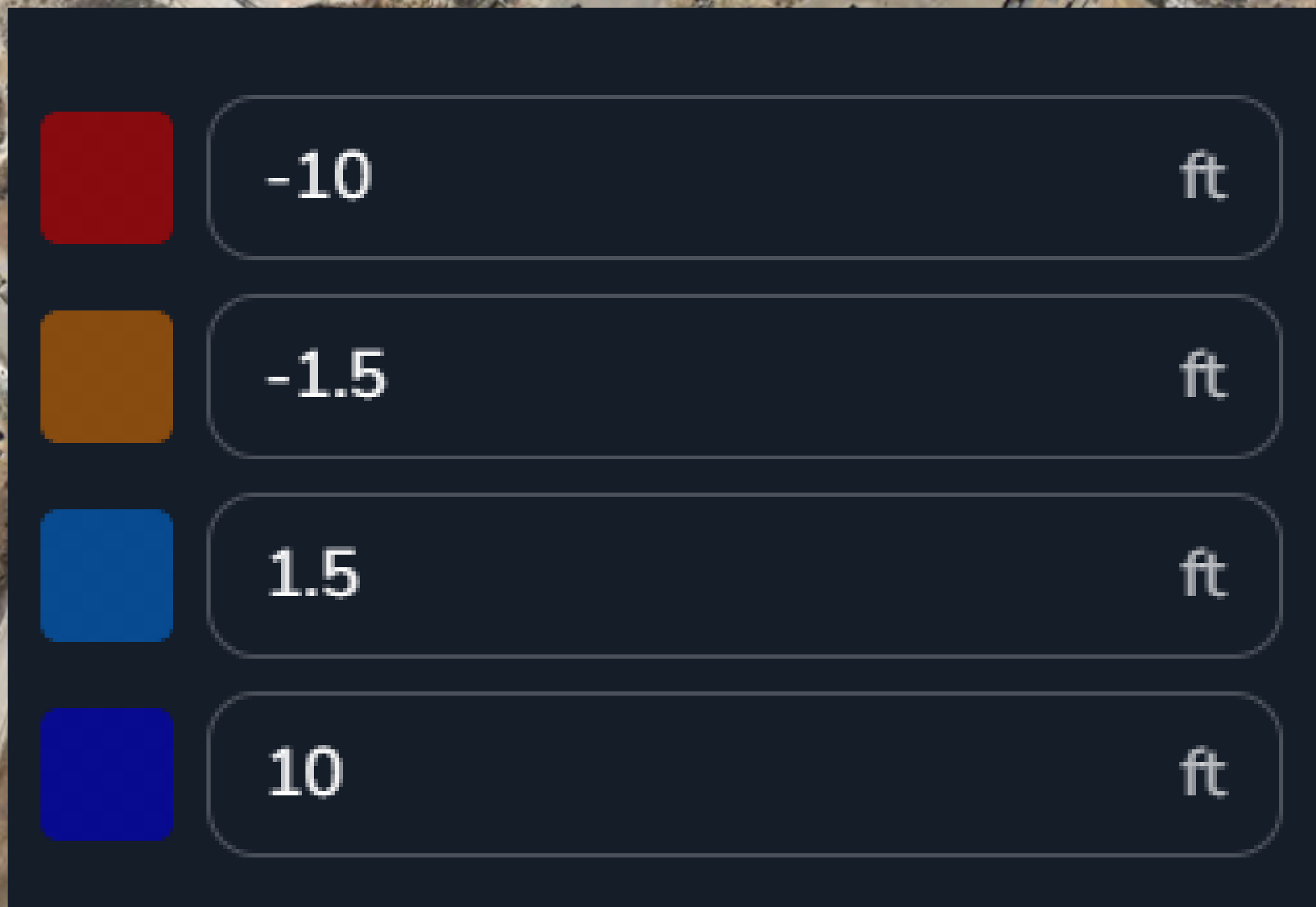
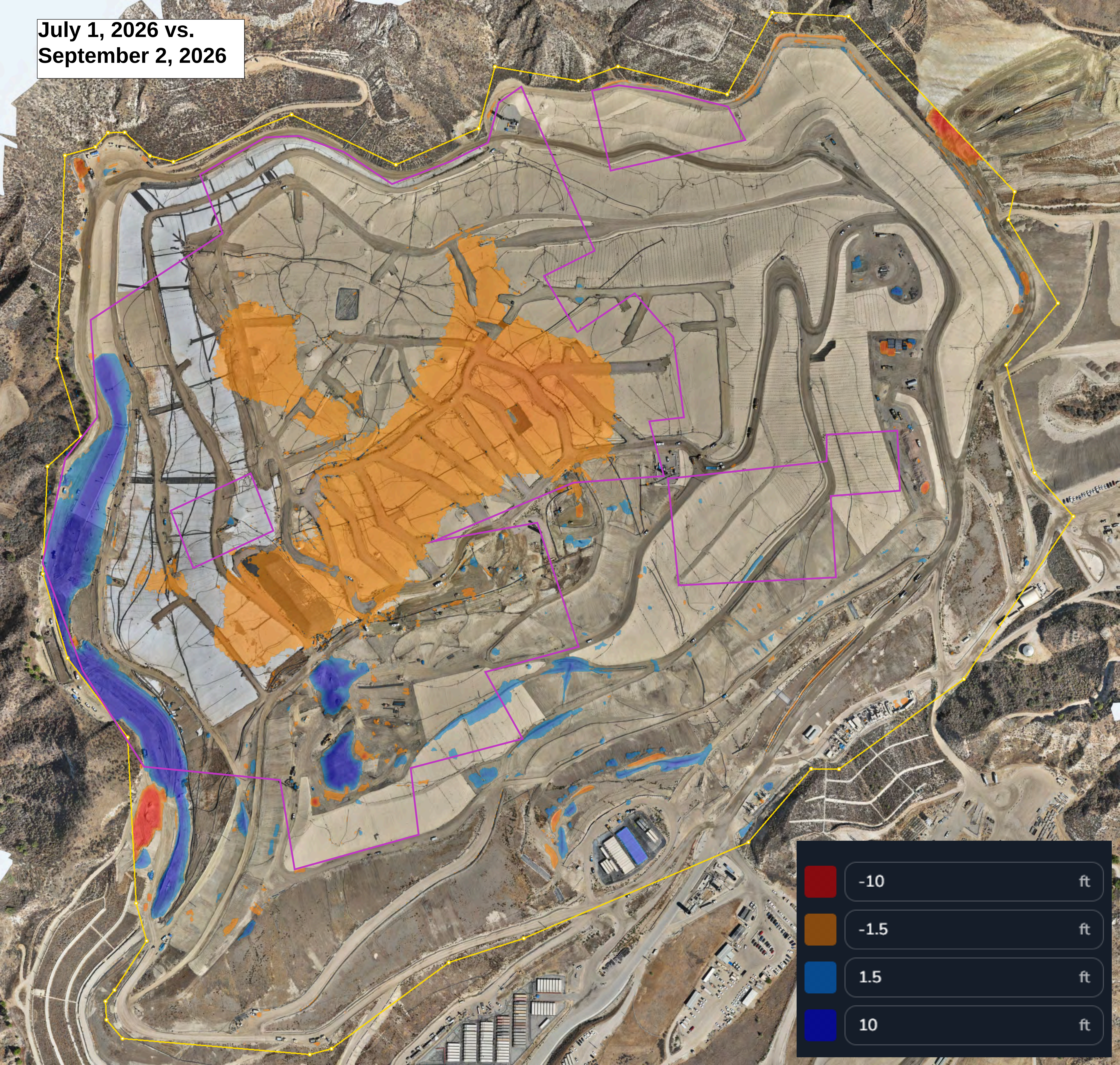
Attachment G

Settlement Isopach Range Maps

July 29, 2026 vs.
September 2, 2026



July 1, 2026 vs.
September 2, 2026



Attachment H

Wellhead Hydrogen and Carbon Monoxide Field Testing /

Lab Sampling Data

Landfill Gas Wellhead Hydrogen (H2) and Carbon Monoxide (CO) Concentrations August 2026 Field Testing & Laboratory Sampling Data for Non-Contiguous Surface Grids Chiquita Canyon Landfill					
Point ID	Point Name	Field H2	Lab H2	Field CO	Lab CO
		Concentration [% by volume]	Concentration (% by volume)	Concentration [ppmv]	Concentration (ppmv)
CHIWH001	H-01	40.7	39.02	0	298.0
CHIWH002	H-02	33.2	30.04	0	327.0
CHIWH003	H-03	2.3	0.12	0	40.7
CHIWH004	H-04	39.2	42.07	0	957.0