BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 A.M. Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

I, Robert E. Dick, declare as follows:

1. I am of sufficient age and am competent to testify in this proceeding. I make this declaration based upon personal knowledge and am competent to testify to the facts set forth herein.

Background and Experience

2. As discussed in detail in my prior declarations in Case No. 6177-4, I serve as the Senior Vice President and Solid Waste Division Leader and Business Unit Director for SCS Engineers ("SCS") and have worked with SCS for approximately 34 years. I am a licensed professional engineer with over 34 years' experience on civil and environmental engineering projects related to solid waste management. My work focuses largely on municipal solid waste ("MSW") landfills like the Chiquita Canyon Landfill (the "Landfill").

3. I was retained by Chiquita Canyon, LLC ("Chiquita") to provide expert consulting services related to managing the elevated temperature landfill ("ETLF") conditions currently being experienced by the Landfill and its resulting impacts, including odors and liquids. I serve on the Reaction Committee as the subject matter expert for chemical reaction(s) within landfills, which can result in atypical landfill conditions, such as heat accumulation, certain changes in landfill gas and

leachate composition, distinct odors, accelerated settlement, formation of significant subsurface pressures, and elevated levels of hydrogen, dimethyl sulfide, and non-methane organic compounds.

4. This declaration is made for the August 17 and 20, 2024 status and modification hearing on the Stipulated Order for Abatement with the South Coast AQMD, most recently modified on April 24, 2024.

No evidence the reaction is intensifying.

5. As explained in my prior declarations, the Landfill is experiencing the typical symptoms of an ETLF event, including elevated temperatures, increased production of landfill gas and liquids, changes in landfill gas and liquids/leachate composition, distinct odors, accelerated settlement, and significant subsurface pressures. Based on the Reaction Committee's monthly analyses of parameters, which provide a basis for the Committee to determine whether the ETLF is expanding, the Reaction Committee has not identified evidence that indicates the reaction is expanding. The reaction remains confined to its existing boundaries, which have been delineated in the Reaction Committee's monthly determination reports beginning in October 2023.

Assessment and Evaluation of the ETLF Event

6. Chiquita continues to undertake numerous actions to assess, evaluate, measure, and investigate the ETLF event and its potential causes. As described in my prior declarations, these actions include measuring and tracking concentrations of landfill gas compounds, including sulfur compounds, methane, and hydrogen; measuring and tracking landfill gas wellhead pressures and temperatures; conducting odor surveillance in the neighboring communities; enhancing the community air monitoring program; measuring and tracking liquid quantities collected, treated, and disposed offsite; measuring and tracking landfill surface settlement rates; measuring in-situ waste temperatures; and recording other operational data and field conditions. Each of these actions continues to provide Chiquita with information on the status of the ETLF event, and based on the data received, it appears that the ETLF event is not propagating beyond its historical limits.

7. The number and position of landfill gas wellheads that have consistently recorded temperatures greater than 160 degrees Fahrenheit since September 2023 are relatively constant, despite some fluctuations in wellhead gas temperatures, which are most likely due to the deactivation and

reactivation of dewatering pumps in the vertical wells as the geosynthetic cover has been installed over the top deck of the Reaction Area. These dewatering efforts, which accomplish the removal of heat through liquid extraction, can cause fluctuations in the temperatures of wells because heat is likely to initially increase when liquid levels within a well are lowered. Because observed temperature fluctuations have not exhibited a sustained increasing temperature trend over the course of the months analyzed, the Reaction Committee concluded such fluctuations involving periodic higher well temperatures do not indicate an expansion of the reaction and may indicate that dewatering efforts are successful in lowering liquid levels in the wells.

8. Recent monthly determinations show some wells outside the delineated reaction area boundary exhibited an inverted methane-to-carbon dioxide ratio as well as hydrogen concentrations greater than two percent by volume. However, these wells did not also exhibit atypical heat and elevated temperatures that would indicate that the reaction has expanded to these wells. Wells exhibiting the inverted methane-to-carbon dioxide ratio and elevated hydrogen concentrations should not be characterized as exhibiting evidence of a reaction in isolation, or based exclusively on this parameter. The Reaction Committee analyzes multiple parameters, such as the presence of heat as well as increased pressure and flow, in conjunction with the gas composition parameter. The presence of atypical heat (greater than anaerobic digestion temperatures) in conjunction with these parameters would suggest that the well may be experiencing characteristics of the reaction, but without such heat, the Reaction Committee would hesitate to conclude that the waste materials immediately adjacent to the well were being affected by the reaction. The Reaction Committee will, however, continue to observe data recorded at those wells carefully over the next few months to assess whether this represents a continuing trend, at which time the Reaction Committee may re-evaluate this conclusion. Because the monitoring data at these wells did not continue to demonstrate similar gas quality in these wells over the following months, the Reaction Committee has not identified evidence of trends indicating an expansion of the Reaction Area to encompass such wells.

9. Settlement of a landfill surface is sometimes expressed as a change in surface elevation during a specified timeframe, such as 3 feet per year. Because the change in surface elevation at any point is related to the total waste depth at that point, settlement rate is often discussed in terms of strain

and the typical unit for strain values is percent per unit time. The landfill surface area exhibiting accelerated settlement rates (i.e., strain value) has been relatively constant since September 2023. During the past five months, there is evidence that the settlement rate is slowing compared to the settlement rates measured in 2023. This further indicates that the location of the ETLF event has remained relatively unchanged during this period. While an accelerated settlement rate is one parameter considered in assessing whether the reaction has expanded to new areas, a change in settlement rate may be attributed to other circumstances not necessarily affiliated with a reaction, such as dewatering activities. Also, in certain instances a change in landfill surface elevation may not be attributed to settlement at all. For example, on May 14, 2024 Chiquita reported to the Local Enforcement Agency ("LEA") the presence of increased settlement in the south and east areas of the Landfill. However, Chiquita researched this occurrence extensively and attested that the change in surface elevation of that area was not attributed to settlement, and was not attributed to an expansion of the reaction, but instead was associated with the earthwork to regrade the landfill surface and promote positive drainage in preparation for geomembrane cap placement. For these reasons, the Reaction Committee has not identified long-term trends or definitive evidence that the settlement rate data exhibits evidence of expansion of the ETLF.

10. Since January 17, 2024, the Reaction Committee, led by me, has continued to evaluate the size of the Reaction Area on a monthly basis (see **Condition 9(a) and (b)**). Each month, we review data compiled from the preceding month, including landfill gas wellhead temperatures, the composition of the landfill gas (e.g., concentrations of methane, nitrogen, and carbon dioxide), the concentration of hydrogen in the landfill gas, the settlement rate of the landfill surface (e.g., instances of pronounced and dramatic atypical settlement), first hand observations of leachate quantities and characteristics of odor, drill cuttings from the bore holes in relation to the drilling of wells, and the data from the temperature monitoring probes required by the LEA and installed in April 2024. Based on this data, we determine the boundaries of the area of the Landfill affected by the reaction, which we refer to as the "data-driven Reaction Area." We then compare this area to the boundaries of the Reaction Area as defined in **Condition 9(a)**, initially and still by the boundary of Cells 1/2A, 2B/3, 4, and Module 2B/3/4 P2, and make a determination as to whether the boundaries of the Reaction Area need to change.

11. Each month, I submit a report to South Coast AQMD on behalf of the Reaction Committee presenting our determination. These reports include a narrative summary of our review and determination, and a revised map of the data-driven Reaction Area, outlined in magenta dashed lines, and the Reaction Area, outlined in solid black lines. Since my last declaration, I have submitted these reports to South Coast AQMD on May 7, 2024, June 7, 2024, July 5, 2024, and August 7, 2024. Correct and true copies of these reports are attached to this declaration as **Exhibits A through D.**

12. The Reaction Committee's monthly analyses of data parameters associated with the reaction have informed the Reaction Committee's conclusions as to the limits of the Reaction Area boundary. These monthly analyses are discussed in the foregoing paragraphs.

13. For the May 2024 determination regarding the April 2024 data, we reviewed the limited initial temperature measurements recorded by the newly installed temperature monitoring probes. Three of the twenty probes (TP-2, 3, and 9) are located within the estimated extent of ETLF conditions (dashed magenta line), and thirteen probes are positioned adjacent to (within 200 feet) of this boundary. The initial temperatures recorded by the probes were relatively cooler compared to values recorded at other ETLF sites. For these reasons, we concluded there was no basis to modify the boundary of the Reaction Area.

14. Regarding the June 2024 determination on the May 2024 data, we investigated whether the reactivation of dewatering pump operations throughout the wellfield, which primarily commenced in April and continued throughout May, had any definitive impact on the reaction area boundaries. We concluded it did not. Certain wells positioned to the east of the Reaction Area boundary where pumping was reactivated demonstrated some increased hydrogen content in the landfill gas ("LFG") being extracted. However, these wells did not exhibit elevated temperatures, so we concluded there was no evidence of increased heat that is typical with ETLF conditions present at these wells. In addition, the in-situ waste temperatures for May 2024 were again relatively cooler compared to values recorded at other ETLF sites, and so we found no basis to expand the boundary of the Reaction Area.

15. For the July and August 2024 determinations on the June and July 2024 data, the temperatures recorded by the thirteen temperature probes located outside of the boundary of the Reaction Area were again not indicative of a subsurface reaction, which is consistent with temperature

measurements recorded in April and May 2024. The June 2024 data showed no vertical wells positioned outside the Reaction Area boundary exhibiting hydrogen concentrations over two percent (except for one well positioned to the north which is believed to be intercepting gas collected from within the Reaction Area by horizontal wells in close proximity). The July 2024 data showed four vertical wells positioned to the southeast outside the reaction area boundary exhibiting hydrogen concentrations over two percent. Each of these four wells is located adjacent to an existing horizontal well, and we believe they are intercepting gas collected from within the reaction area by horizontal wells in close proximity. Similar to the May data, none of the wells that exhibited some increased hydrogen content in the LFG in the June and July data also demonstrated atypical heat in June and July. Therefore, we found no basis to expand the boundary of the Reaction Area based on June and July data. We will continue to closely scrutinize LFG hydrogen concentrations during future months.

16. The monthly boundary assessment exercises for the period of January through July have resulted in consistency of the delineated area affected by the reaction, which are good indications that the ETLF event is being contained and managed and is not expanding. Further efforts to address the ETLF event are anticipated to continue to remove heat and relieve pressure, which are expected to eventually diminish the ETLF conditions.

Actions Taken to Mitigate the ETLF Event

17. Chiquita continues to take numerous actions to slow and stop the ETLF event and to alleviate the potential impacts of the ETLF event, both under the Modified Stipulated Order, and in coordination with Chiquita's other regulators, including the U.S. Environmental Protection Agency ("EPA"). To summarize, since the April 24, 2024 hearing, Chiquita has:

- Installed 121 new or replacement vertical landfill gas wells as of August 8, 2024, for a total of 193 vertical wells installed since December 6, 2023;
- Installed 59 dewatering pumps as of August 8, 2024, for a total of 71 dewatering pumps installed. 59 of the 71 dewatering pumps are in operation as of August 8, 2024. The remaining 12 pumps have been temporarily deactivated while the geosynthetic cover is being installed over the area;

- Continued to install the geosynthetic cover over portions of the Reaction Area, for a total of 41 acres installed as of August 8, 2024;
- Continued to install well boot seals in the Reaction Area; and
- Completed the installation of 20 temperature monitoring probes in and around the Reaction Area.

Compliance with the April Modified Stipulated Order

18. There have been no changes to the composition of the Reaction Committee since the April hearing. As such, no further notifications have been submitted pursuant to **Condition 12**.

19. As required by **Condition 12(f),** Chiquita is hosting a monthly virtual meeting with all members of the Reaction Committee and South Coast AQMD technical staff to provide an update on the progress of work and planned work. Chiquita provides an agenda to South Coast AQMD no later than ten calendar days prior to each meeting, and posts on its Odor Mitigation webpage a summary of the meeting, including responses to any recommendations made, within twenty days after each meeting. The first meeting was held on March 26, 2024; thereafter, meetings were held on April 26, 2024, May 29, 2024, June 26, 2024, and July 24, 2024. The next meeting will be held in August 2024. True and correct copies of the agenda and meeting summaries from April through June are attached to this declaration as **Exhibits E through G**. The agenda and meeting summary from July will be submitted within twenty days after the July 24, 2024 meeting.

20. As required by **Conditions 12, 26, and 32**, the Reaction Committee has conducted many investigations and studies into the cause of the landfill reaction, the impact of air pollutant emissions from sources at the Landfill, interim measures to limit malodorous emissions, and corrective measures to mitigate and abate the landfill reaction. The table below provides a summary of the main reports, their respective statuses, and the Reaction Committee member in charge of each report. Additional reports and updates prepared and submitted by the Reaction Committee are not included in this table. As required by and consistent with **Condition 12(h),** Chiquita posts all Reaction Committee reports on its Odor Mitigation webpage.

Condition Number	Report Description	Status	Expert
12(g)(i)	A report on known and possible methods for effective treatment of dimethyl sulfide ("DMS") and preventative mechanisms for DMS formation in landfill gas.	Submitted on 4/30/2024 as required.	Pat Sullivan
12(g)(ii)	A report on the cause of the alleged chemical reaction(s) resulting in the elevated well temperatures, elevated levels of DMS formation in the landfill gas, and formation of elevated levels of non-methane organic compounds in the landfill gas, in addition to solutions to slow and stop the reaction(s) in the landfill.	Submitted on 12/8/2023 as required.	Bob Dick
12(g)(iii)	A report on the feasibility and availability of continuous community emission monitoring system to conduct continuous monitoring and provide estimates of DMS concentrations at the facility fence line and within the affected community.	Submitted on 12/1/2023 as required.	Pat Sullivan
12(g)(iii)	A workplan for the installation of and operation of the continuous community emission monitoring system for DMS concentrations if monitoring is feasible.	The DMS Committee determined that continuous monitoring is not feasible. Notified SCAQMD on 12/31/2023.	Pat Sullivan
12(g)(iv)	A report on landfill best management practices and alternative methods to minimize the release of fugitive surface gas and minimize odors from fugitive surface gas, including cover practices at the Reaction Area and working face, and how best to address related odorous emissions	Submitted on 11/6/2023 as required.	Neal Bolton
12(g)(v)	A report on the known health risks from acute and long–term exposure to DMS, including any action levels from other public health or government entities, and including a summary of recommended actions for persons exposed to DMS for acute and long–term durations.	Submitted on 1/15/2024 as required.	Dr. Pablo Sanchez-Soria

12(g)(vi)	A report on the health impacts from ongoing and long–term exposure to hydrogen sulfide, or other speciated sulfur compounds, and any other hazardous air pollutants.	Submitted on 8/1/24 as required.	Dr. Pablo Sanchez-Soria, Dr. Rick Pleus
12(g)(vii)	A report on the development of a model to estimate the rate of liquid generation and the total quantity of liquid existing within the landfill waste mass at any given time.	Submitted on 6/25/24 as required.	Neal Bolton
12(g)(viii)	An investigation into the existing landfill gas collection and conveyance piping materials, alternative landfill gas collection and conveyance piping materials, and current landfill conditions to determine appropriate piping for the current and expected future temperature conditions.	Submitted on 6/1/24 as required.	Srividhya Viswanathan
12(i)	A report documenting the findings of the initial flux chamber study conducted pursuant to the direction of the Los Angeles County Department of Public Health.	Submitted on 10/31/2023 as required.	Pat Sullivan
12(i)	A protocol for an additional flux chamber study for methane, non-methane organic compounds, toxic air contaminants, total reduced sulfur, and speciated sulfur compounds to determine the surface flux throughout the landfill.	Submitted on 12/29/2023 as required.	Pat Sullivan
12(i)	A report documenting the findings of the additional flux chamber study, including the differences between the initial and additional studies.	Submitted on 6/3/24 as required.	Pat Sullivan
26	A report on the feasibility of temporary containment measures for the purposes of controlling leachate and possible discharges of pressurized leachate when drilling additional holes for wells, liquid pumps, temperature devices, or other purposes.	Submitted on 3/12/24 as required.	Neal Bolton
32, 32(a)	An air modeling report on odor and emission transport of odors from the landfill, including the identification of effective techniques to remedy potential odor impacts on the nearby	Submitted on 12/1/23 as required.	Neal Bolton

	community, an evaluation of the efficacy of odor control measures, and a recommendation on whether additional modeling is recommended to fully address the current odor circumstances at the landfill and potential odor impacts on the nearby community.		
32(b)	A proposal for an additional air modeling study.	Submitted on 1/15/24 as required.	Neal Bolton
32(b)(ii), 32(c)	A revised air modeling study proposal according to the comments received from South Coast AQMD.	Submitted on 5/8/24 with a further revision submitted on 5/16/24 as required.	Neal Bolton
32(c)	A final written report on the additional air modeling.	In progress.	Neal Bolton
70	A report on the landfill's current landfill gas generation and projected landfill gas generation for the next five calendar years.	Submitted on 6/28/24 as required.	Pat Sullivan

21. Chiquita continues to post reports and information submitted to the South Coast AQMD and its other regulators on its Odor Mitigation webpage in the manner required by **Condition 39**. Chiquita is also continuing to translate the information into Spanish. Once Chiquita finalizes a report or submits information to a regulator, it submits the report or information to a translation service capable of providing translations of legal documents. Subsequent reports posted on the webpage are sent to a translation service within two business days of posting on the webpage, and are translated and uploaded to the webpage within two business days of receipt from translation service. Once received, Chiquita posts the translated information on its webpage.

22. In accordance with **Condition 50**, Chiquita will implement the Master Work Plan submitted to EPA under the Unilateral Administrative Order ("UAO") (Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05). The UAO requires the submission of monthly progress reports following EPA approval of the Master Work Plan. Because the Master Work Plan has not yet been finalized, Chiquita has not yet submitted any progress reports. Once the Master Work Plan is approved, Chiquita will submit any monthly progress reports submitted to EPA to South Coast AQMD.

23. As required by **Condition 66**, Chiquita must install and operate a real-time, remote monitoring system which must, at minimum, monitor well pressure and landfill gas temperature at

different well depths (shallow, middle, deep). The Reaction Committee submitted recommendations regarding installation of the remote monitoring system to South Coast AQMD by April 19, 2024, as required. The recommendations addressed issues concerning monitoring of fixed gases, oxygen, methane, and carbon dioxide, as well as wellfield tuning/optimization and well liquid level monitoring. The report presenting these recommendations identified numerous potential circumstances that may affect the viability, functionality, and capabilities of the instrumentation and equipment to perform as intended under the conditions that the LFG wellfield remote monitoring system will be subjected to. Accordingly, it is prudent to install the instrumentation and equipment in a limited subset of existing LFG extraction wells as a "proof of concept" demonstration program before attempting to deploy this instrumentation into the remaining LFG extraction components that exist within the Reaction Area. This will enable confirmation of appropriate material and equipment selection as well as actual installation process and operational protocols that will reduce the risk of potential future malfunction or damage of the system components. Contracts to install and operate the monitoring were finalized by June 21, 2024, in compliance with Condition 66.

24. Consistent with my prior declaration, Steve Cassulo, District Manager, continues to serve as the Inspection Liaison in accordance with **Condition 67**.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to my personal knowledge. Executed on August 9, 2024 in Powhatan, Virginia.

Robert E. Dick, P.E., B.C.E.E

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **EXHIBIT A TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 am Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

May 7, 2024
File No. 01204123.21-13

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

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

Dear Mr. Chen:

In accordance with Condition Nos. 9a and 9b of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (Landfill or Facility) (Case No. 6177-4), the Reaction Committee has reviewed newly acquired applicable data recorded during the month of April 2024, considered revisions of the estimated extent of elevated temperature landfill (ETLF) conditions exhibited at the subject Facility (referred to as the "Reaction Area" limits), and has prepared this determination on potentially revising the Reaction Area map.

Attachment A presents the Drawing, titled "Reaction Area Map", prepared by SCS Engineers (SCS) and dated 5/6/24. The Drawing depicts the Reaction Area boundary as prescribed in Condition No. 9a, 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 estimated extent of ETLF conditions being experienced at the site based on the Reaction Committee's review of scientific data as a dashed magenta line.

The Reaction Committee scrutinized the data recorded during April 2024 and prior months to investigate whether the reactivation of dewatering pump operations throughout the wellfield, which mostly occurred in April 2024, had any definitive impact on the Reaction Area boundaries. There was no evidence that reactivation of dewatering pump operations impacted the reaction area boundaries.

The Reaction Committee also reviewed the limited initial temperature measurements recorded by the newly installed temperature monitoring probes. Five (5) of the twenty (20) probes (TP-2, 3, 4, 9, and 16) are located within the estimated extent of ETLF conditions (dashed magenta line), and ten (10) probes are positioned adjacent to (within 200 feet) of this boundary. The initial temperatures recorded by the probes are relatively cooler compared to values recorded at other ETLF sites, and it is the Committee's opinion that they do not substantiate a decision to expand the boundary of the reaction area at this time.

As presented on the Drawing included as **Attachment A**, the estimated extent of ETLF conditions (dashed magenta line) is fully contained within the Reaction Area boundary decreed in the SOFA (solid black line). Because the ETLF conditions are fully contained within the Reaction Area boundary and have not expanded into a new cell, the Reaction Committee finds no basis to modify the Reaction Area boundary at this time. Please note the following:

- The rationale that would serve as the basis for considering adjustments and modifications to the Reaction Area boundary (or the determination to maintain the decreed boundary), include:

    - Landfill gas (LFG) wellhead temperatures in excess of approximately 160 degrees Fahrenheit.

    - Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH_4:CO_2) ratios less than 1.0.

    - The concentration of hydrogen (H_2) in the LFG measured greater than 2 percent by volume.

    - Accelerated settlement of the landfill surface, defined as approximately 6 inches or greater within a 60-day period, and cracks in landfill cover.

    - First-hand observations of Landfill and/or SCS engineering, construction, and operations and maintenance (O&M) field personnel who are on-site related to: 1) atypical excess leachate quantities (presence and quantity of liquids); 2) instances of pressurized liquids emitting from the landfill surface, from boreholes during drilling, and from LFG wells; and, 3) the characteristics of the odors originating from the select areas of the waste footprint (often described as "chemical-like" and distinctly different from typical LFG or landfill working face odors).

    - Observations of subsurface waste conditions and characteristics as noted on borehole drilling logs for recently installed new wells and/or probes.

    - Initial subsurface temperatures recorded at the in-situ waste temperature probes that were commissioned in April 2024.

There was no dissenting opinion among the Reaction Committee members regarding this monthly determination. Supporting data is presented on the Drawing included as **Attachment A.** The temperature measurements recorded at the 20 in-situ waste temperature monitoring probes during April are presented in **Attachment B** in graphical format. Efforts to download these initial measurements from the electronic database and recordkeeping platform into a tabular spreadsheet format for submittal to the South Coast Air Quality Management District under separate cover have been initiated and are ongoing.

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

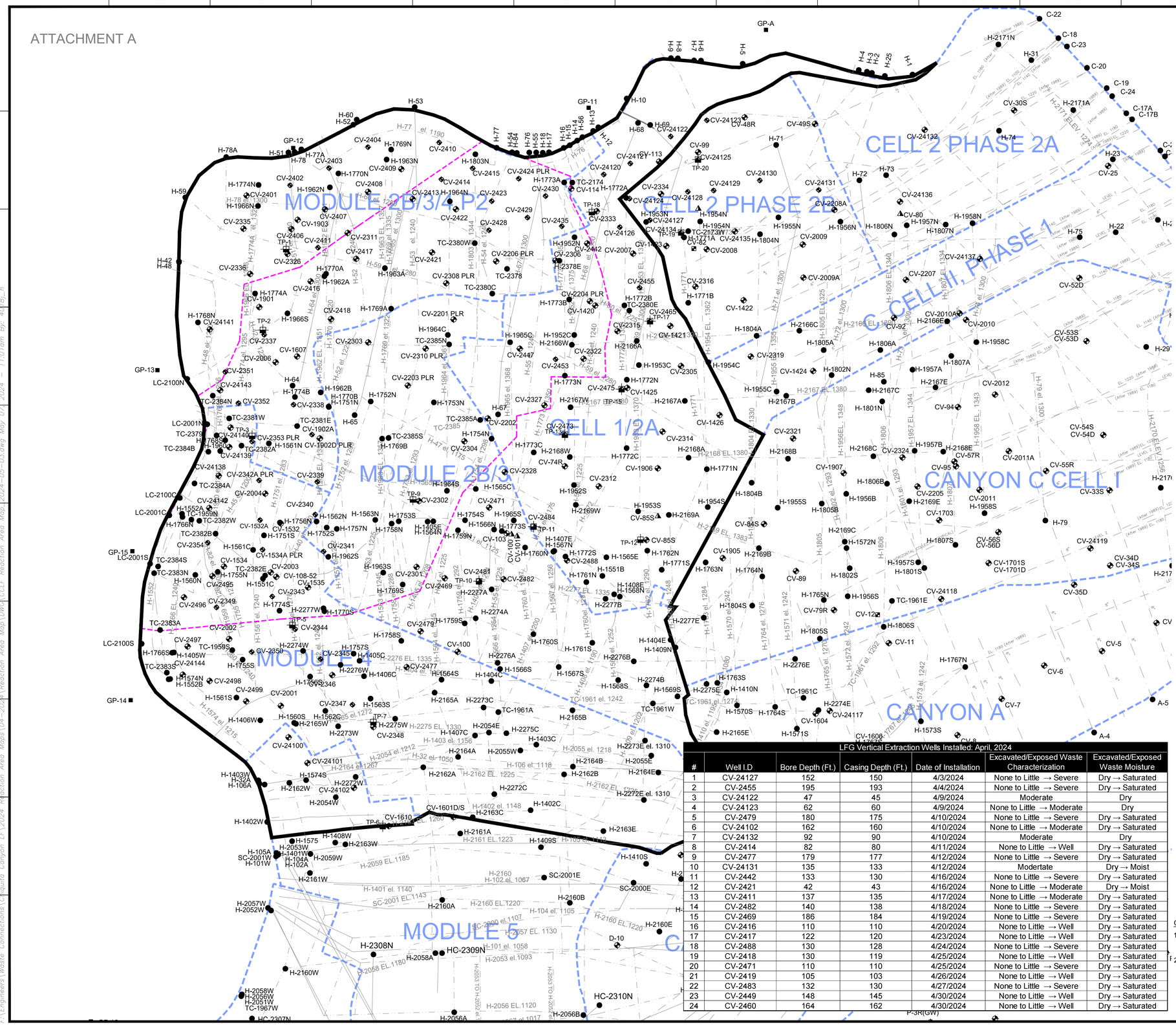
RED/PSS

cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD
Pablo Sanchez Soria, PhD, CIH, CTEH
Neal Bolton, PE, Blue Ridge Services, Inc.
Richard Pleus, PhD, Intertox
Srividhya Viswanathan, PE, SCS Engineers

Enclosure:

Attachment A – Reaction Area Map
Attachment B – In-Situ Waste Temperature Monitoring Probe Data

ATTACHMENT A



LEGEND

- EXISTING CELL LIMITS (APPROXIMATE)
- CV-XX EXISTING VERTICAL WELLS
- CV-XX PLR EXISTING VERTICAL WELL - PRESSURIZED LEACHATE RELEASE
- CV-XX EXISTING VERTICAL WELLS BELOW-GRADE
- H-XX EXISTING HORIZONTAL WELLS
- CV-XX EXISTING REMOTE VERTICAL WELLHEAD
- GP-XX EXISTING PERIMETER MIGRATION PROBE
- TP-XX EXISTING TEMPERATURE PROBE
- EXISTING HORIZONTAL COLLECTOR - SOLID
- EXISTING HORIZONTAL COLLECTOR - PERFORATED
- EXISTING HISTORIC HORIZONTAL COLLECTOR
- REACTION AREA BOUNDARY (APPROXIMATE) - BASED ON DATA REVIEW
- REACTION AREA BOUNDARY - CONDITION 9A

LFG Vertical Extraction Wells Installed: April, 2024

#	Well I.D	Bore Depth (Ft.)	Casing Depth (Ft.)	Date of Installation	Excavated/Exposed Waste Characterization	Excavated/Exposed Waste Moisture
1	CV-24127	152	150	4/3/2024	None to Little → Severe	Dry → Saturated
2	CV-2455	195	193	4/4/2024	None to Little → Severe	Dry → Saturated
3	CV-24122	47	45	4/9/2024	Moderate	Dry
4	CV-24123	62	60	4/9/2024	None to Little → Moderate	Dry
5	CV-2479	180	175	4/10/2024	None to Little → Severe	Dry → Saturated
6	CV-24102	162	160	4/10/2024	None to Little → Moderate	Dry → Saturated
7	CV-24132	92	90	4/10/2024	Moderate	Dry
8	CV-2414	82	80	4/11/2024	None to Little → Well	Dry → Saturated
9	CV-2477	179	177	4/12/2024	None to Little → Severe	Dry → Saturated
10	CV-24131	135	133	4/12/2024	Modertate	Dry → Moist
11	CV-2442	133	130	4/16/2024	None to Little → Severe	Dry → Saturated
12	CV-2421	42	43	4/16/2024	None to Little → Moderate	Dry → Moist
13	CV-2411	137	135	4/17/2024	None to Little → Moderate	Dry → Saturated
14	CV-2482	140	138	4/18/2024	None to Little → Severe	Dry → Saturated
15	CV-2469	186	184	4/19/2024	None to Little → Severe	Dry → Saturated
16	CV-2416	110	110	4/20/2024	None to Little → Well	Dry → Saturated
17	CV-2417	122	120	4/23/2024	None to Little → Well	Dry → Saturated
18	CV-2488	130	128	4/24/2024	None to Little → Severe	Dry → Saturated
19	CV-2418	130	119	4/25/2024	None to Little → Well	Dry → Saturated
20	CV-2471	110	110	4/25/2024	None to Little → Severe	Dry → Saturated
21	CV-2419	105	103	4/26/2024	None to Little → Well	Dry → Saturated
22	CV-2483	132	130	4/27/2024	None to Little → Severe	Dry → Saturated
23	CV-2449	148	145	4/30/2024	None to Little → Well	Dry → Saturated
24	CV-2460	164	162	4/30/2024	None to Little → Well	Dry → Saturated

GENERAL DRAWING NOTES:

1. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
2. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE / REVISION / NO.

SHEET TITLE: REACTION AREA MAP
APRIL, 2024

PROJECT TITLE: CHIQUITA CANYON LANDFILL
CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL
CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

ACAD FILE: F:\ENGINEERS
APP. BY: WCH
DWN. BY: SRMUH
CHK. BY: JH/WCH
PROJ. NO. 01204123.35
DSN. BY: -

DATE: 05/06/2024

SCALE: AS SHOWN

SHEET: 1

ATTACHMENT B

Solid Waste Borehole Temperature Profiles Over 6 Weeks

for April 15, 2024 to May 1, 2024

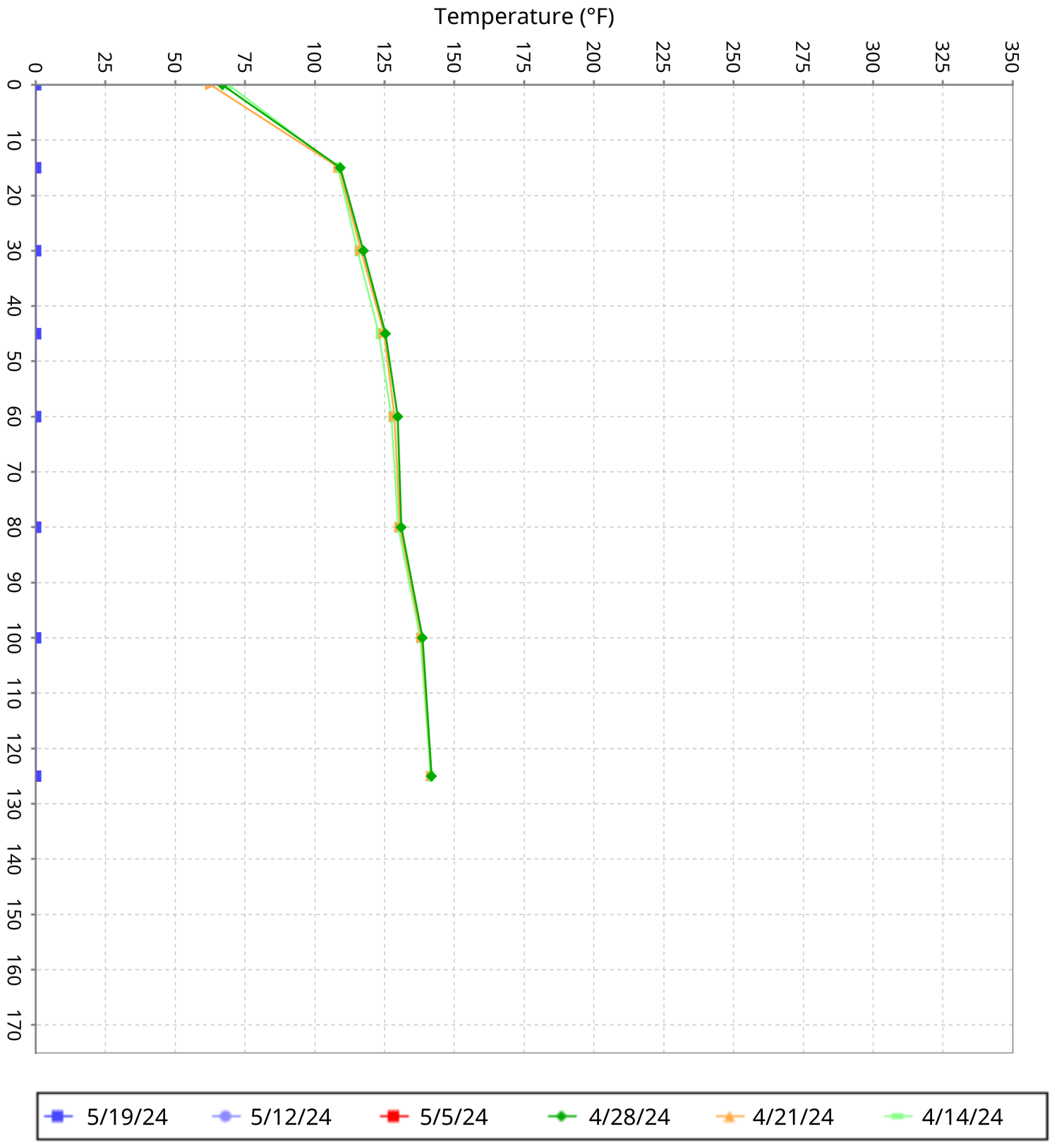
SCS ENGINEERS

07224053.00 | May 1, 2024

274 Granite Run Drive
Lancaster, PA 17601
717-550-6330

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

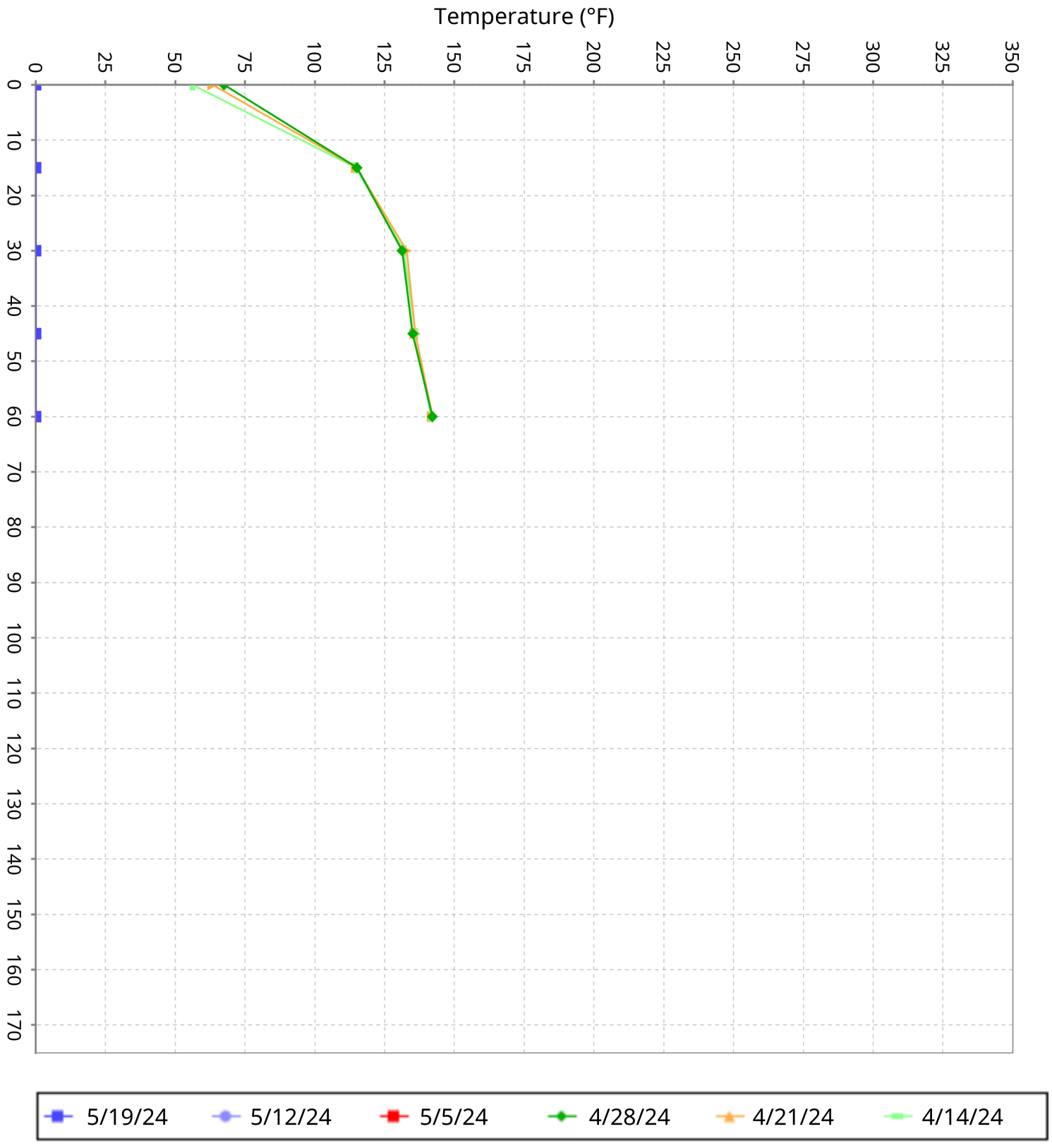
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

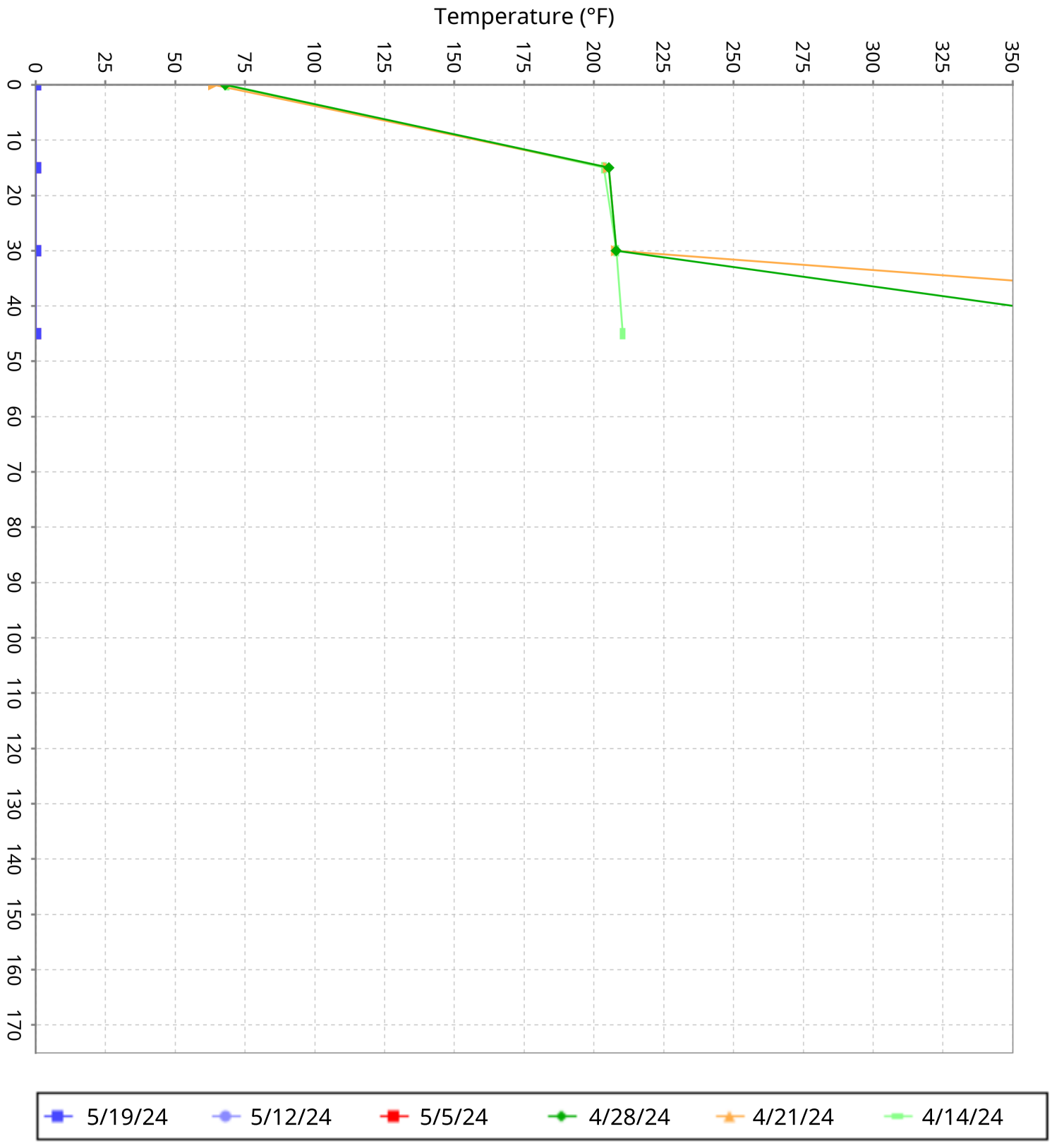
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

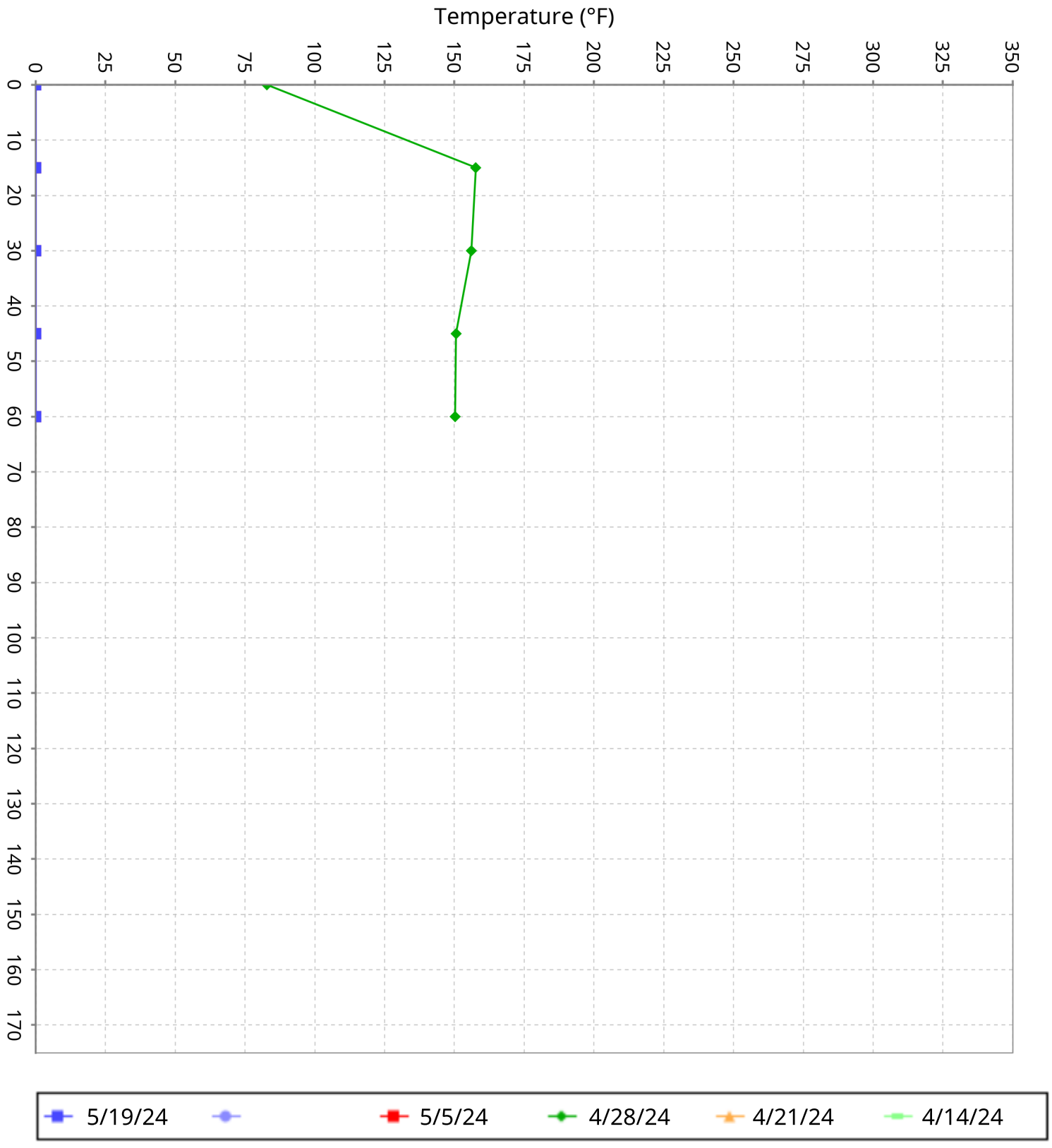
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

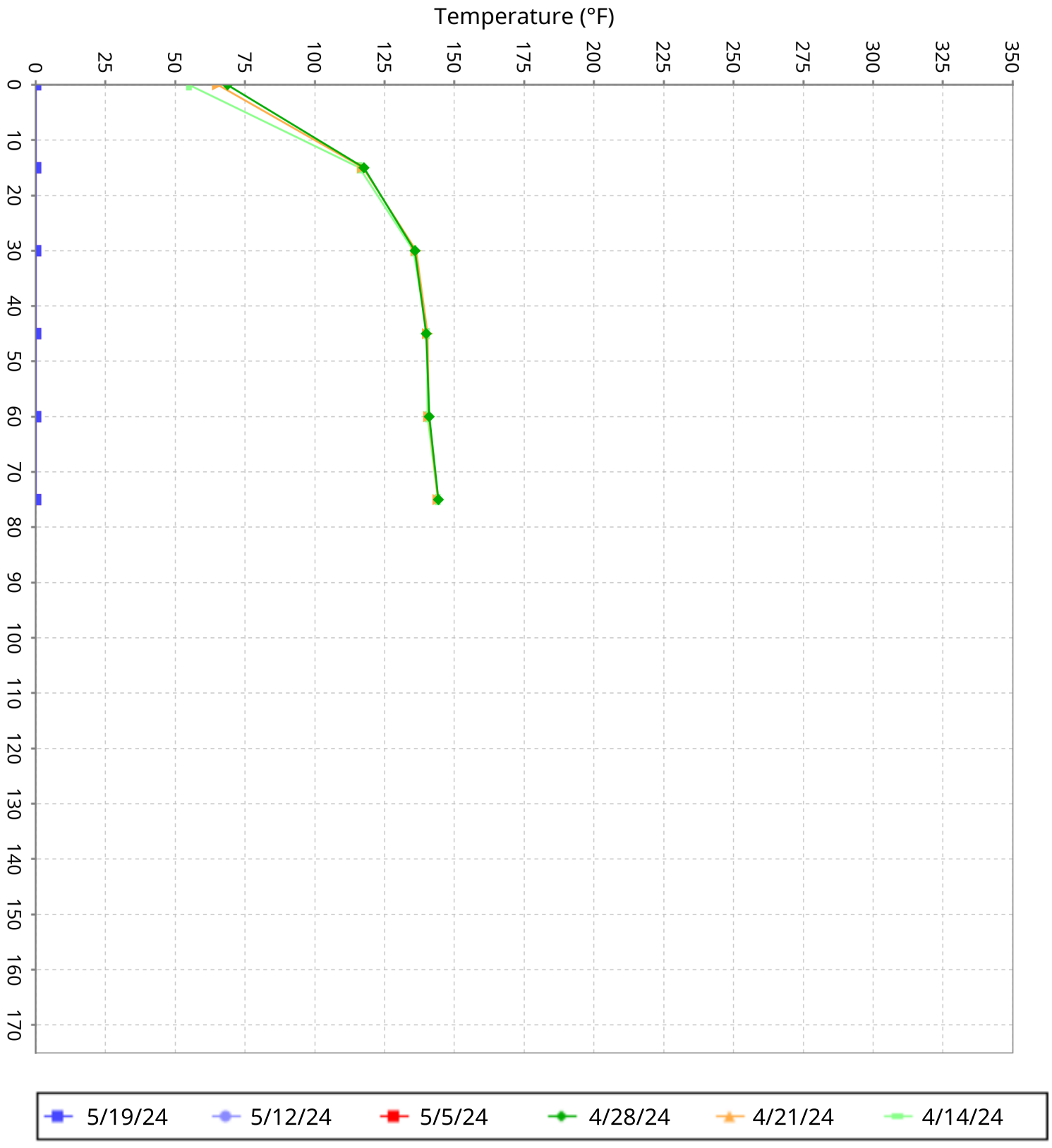
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

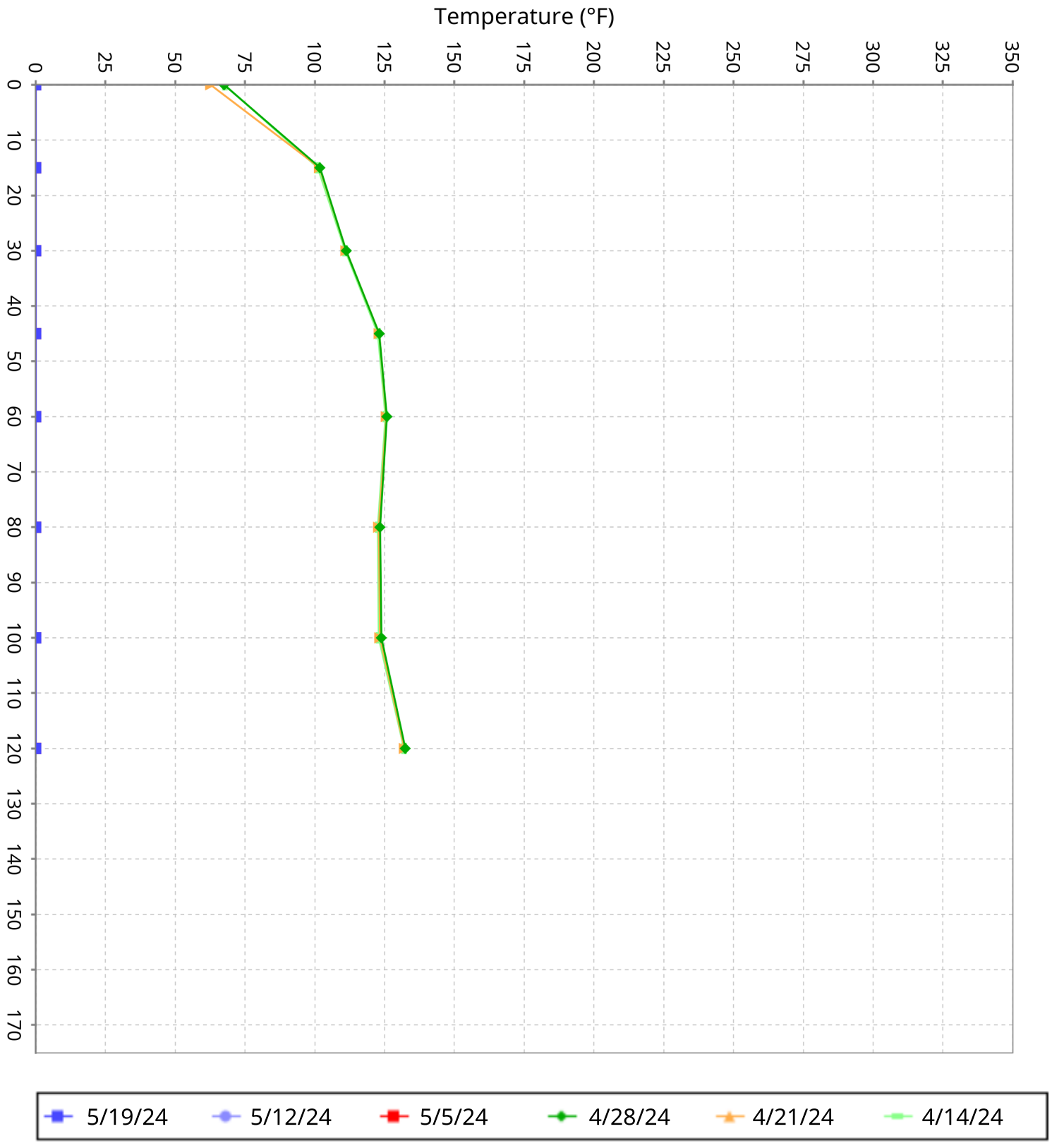
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

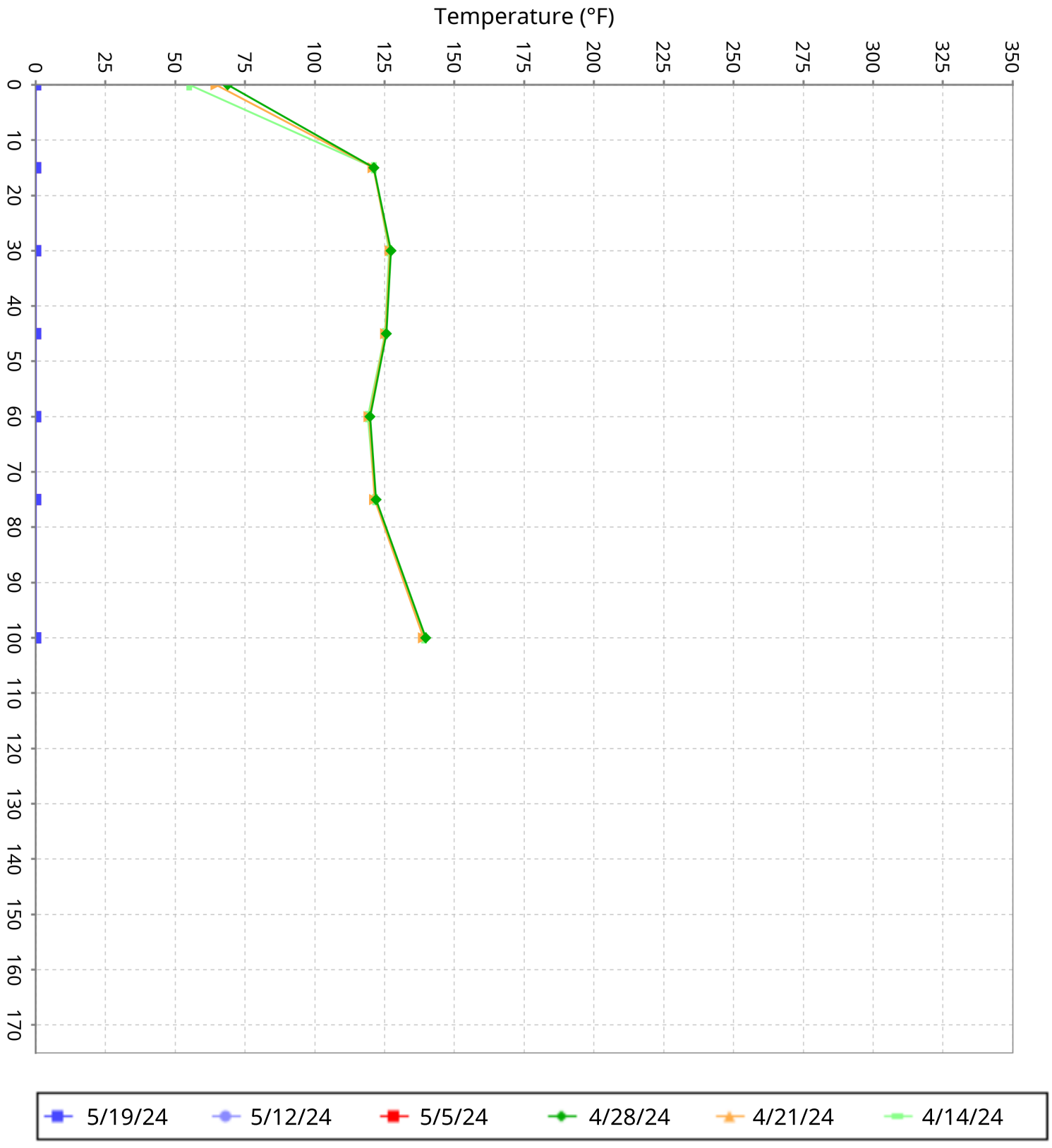
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

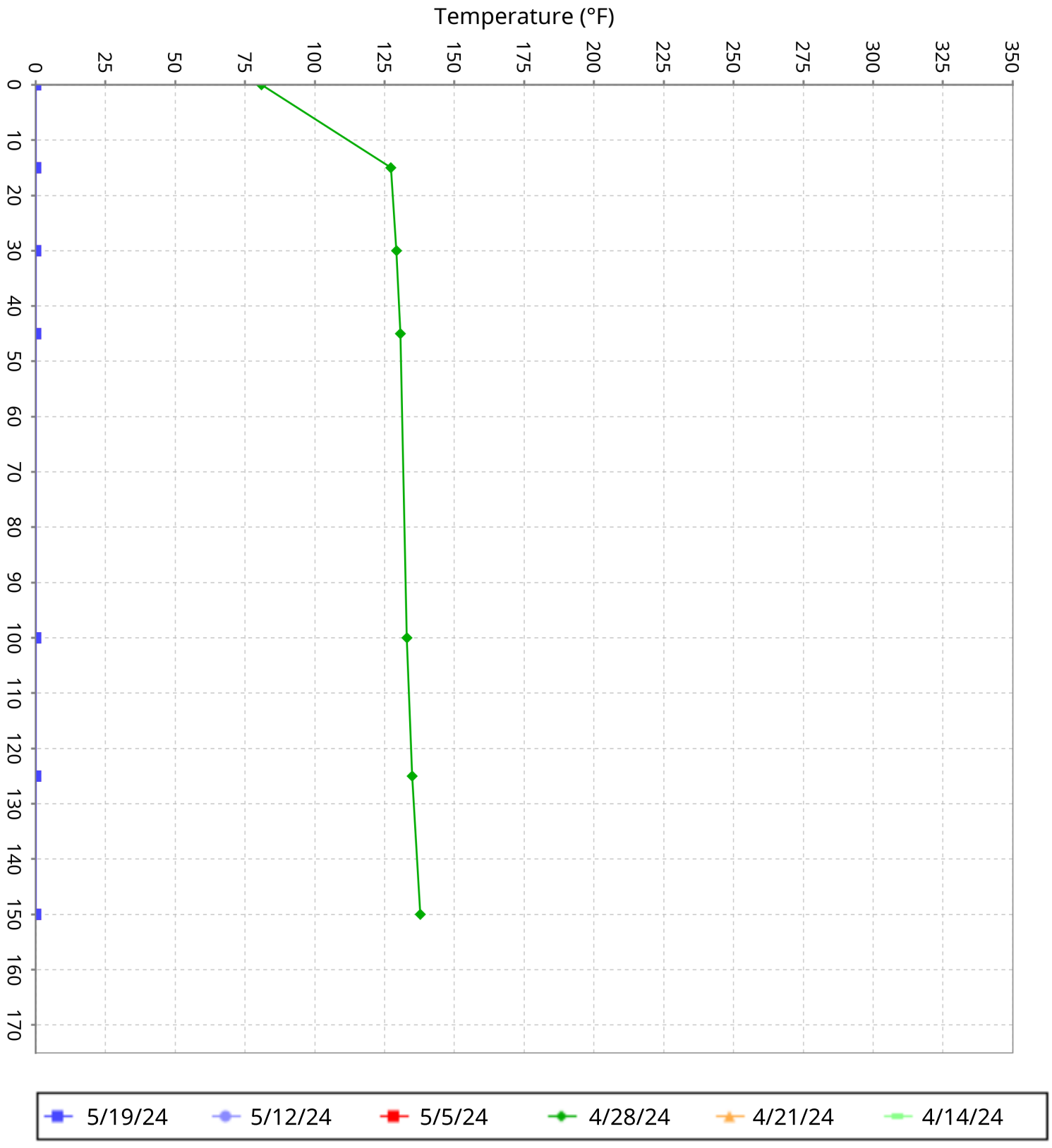
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

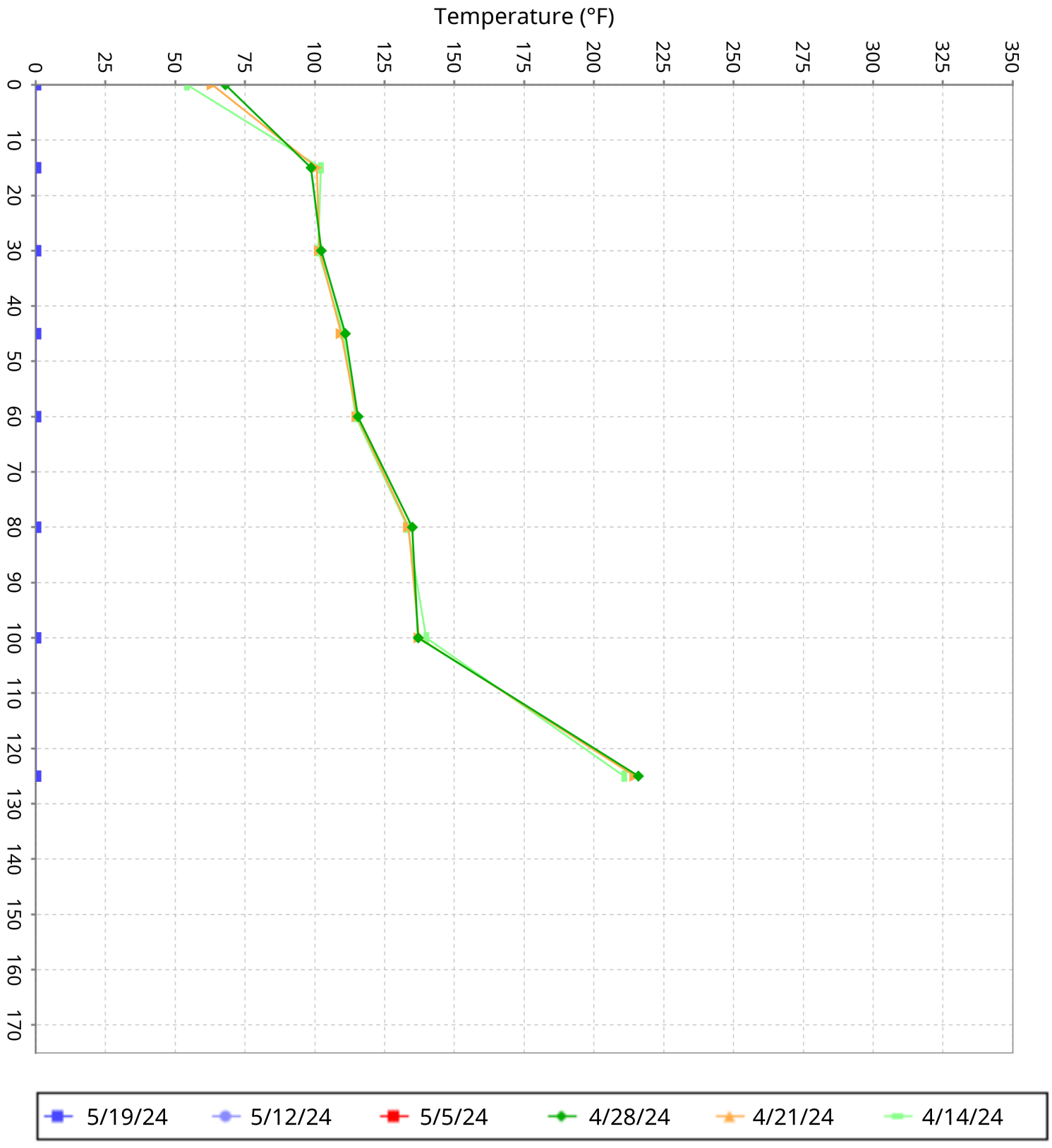
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

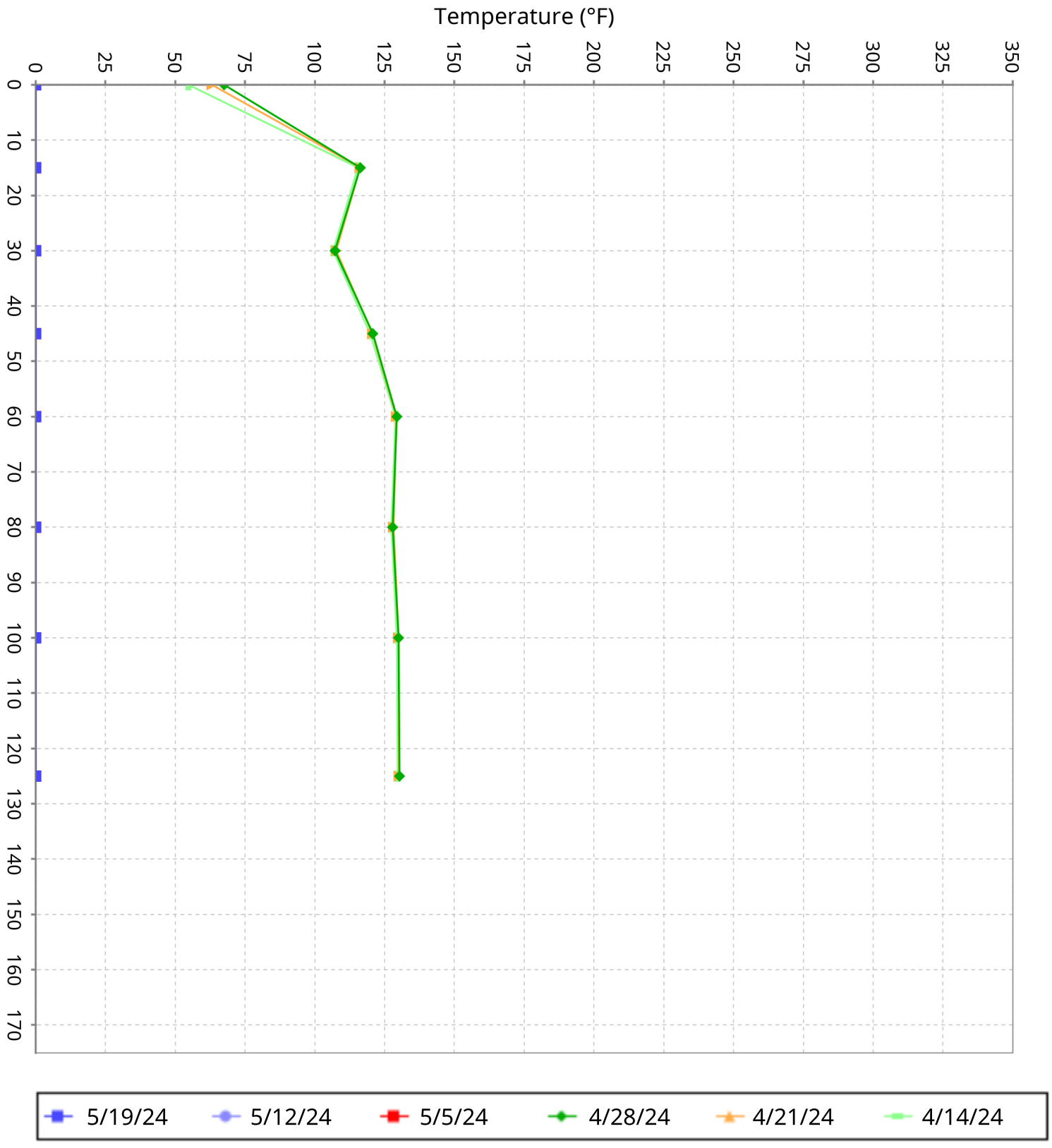
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

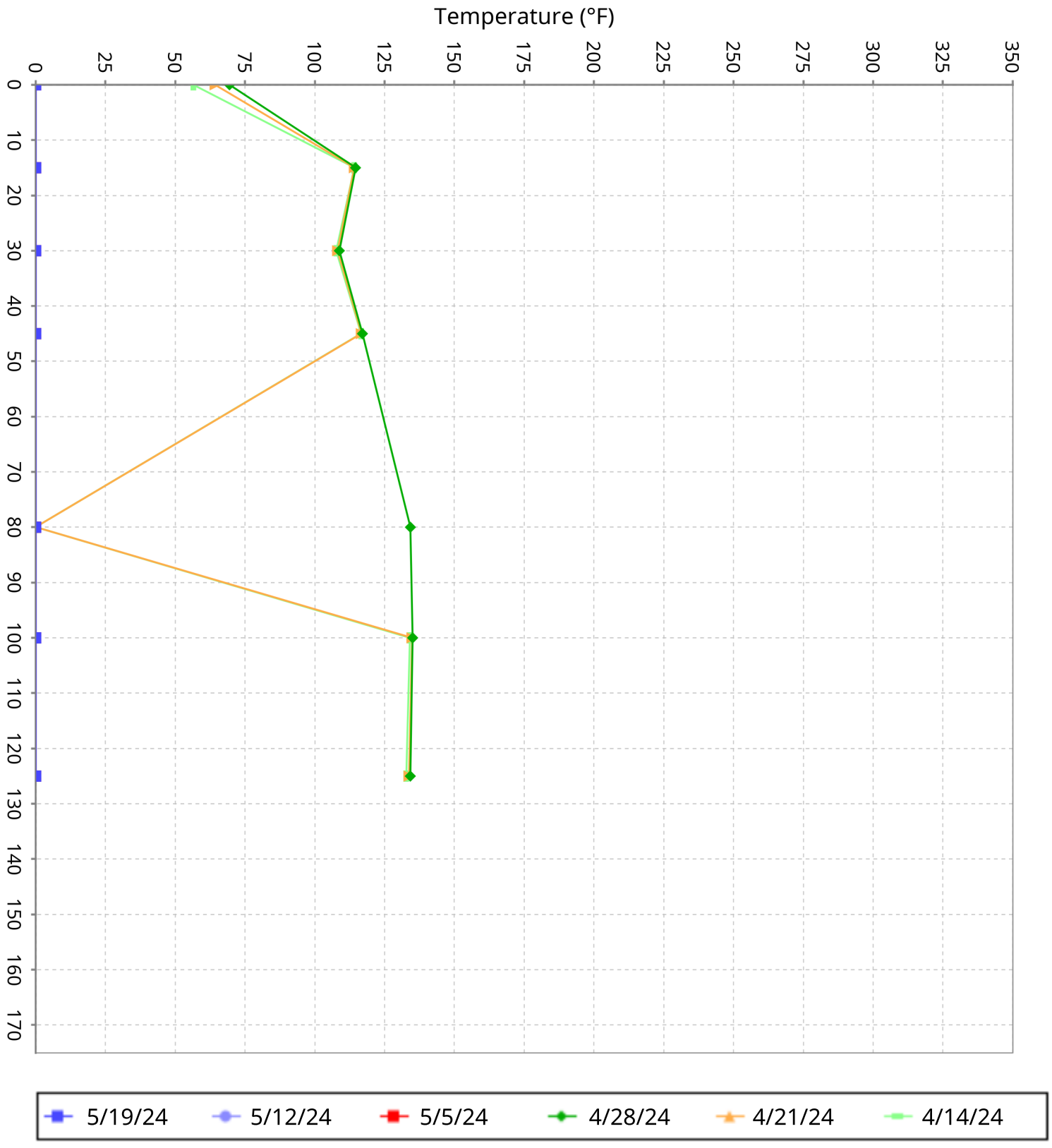
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

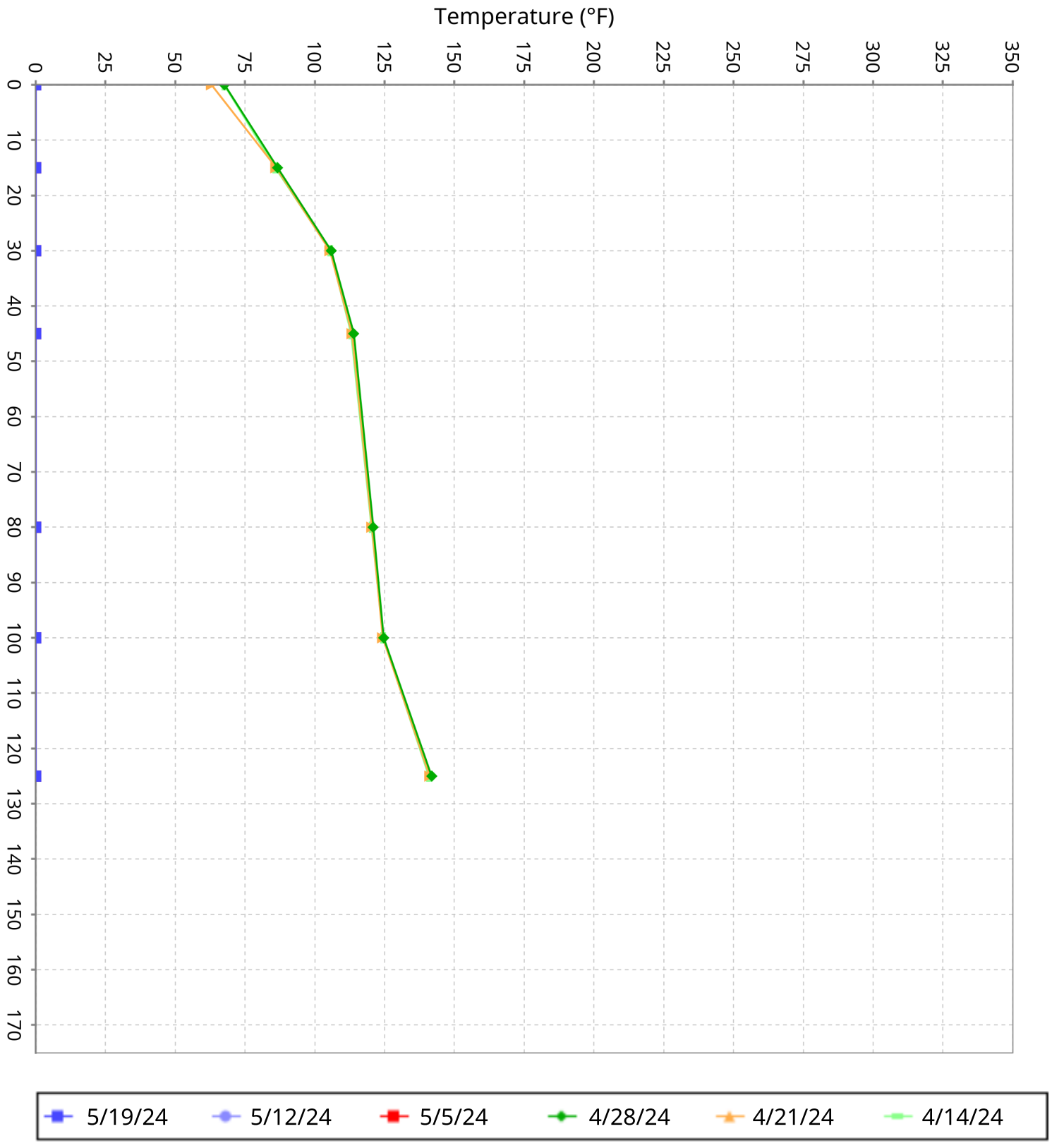
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

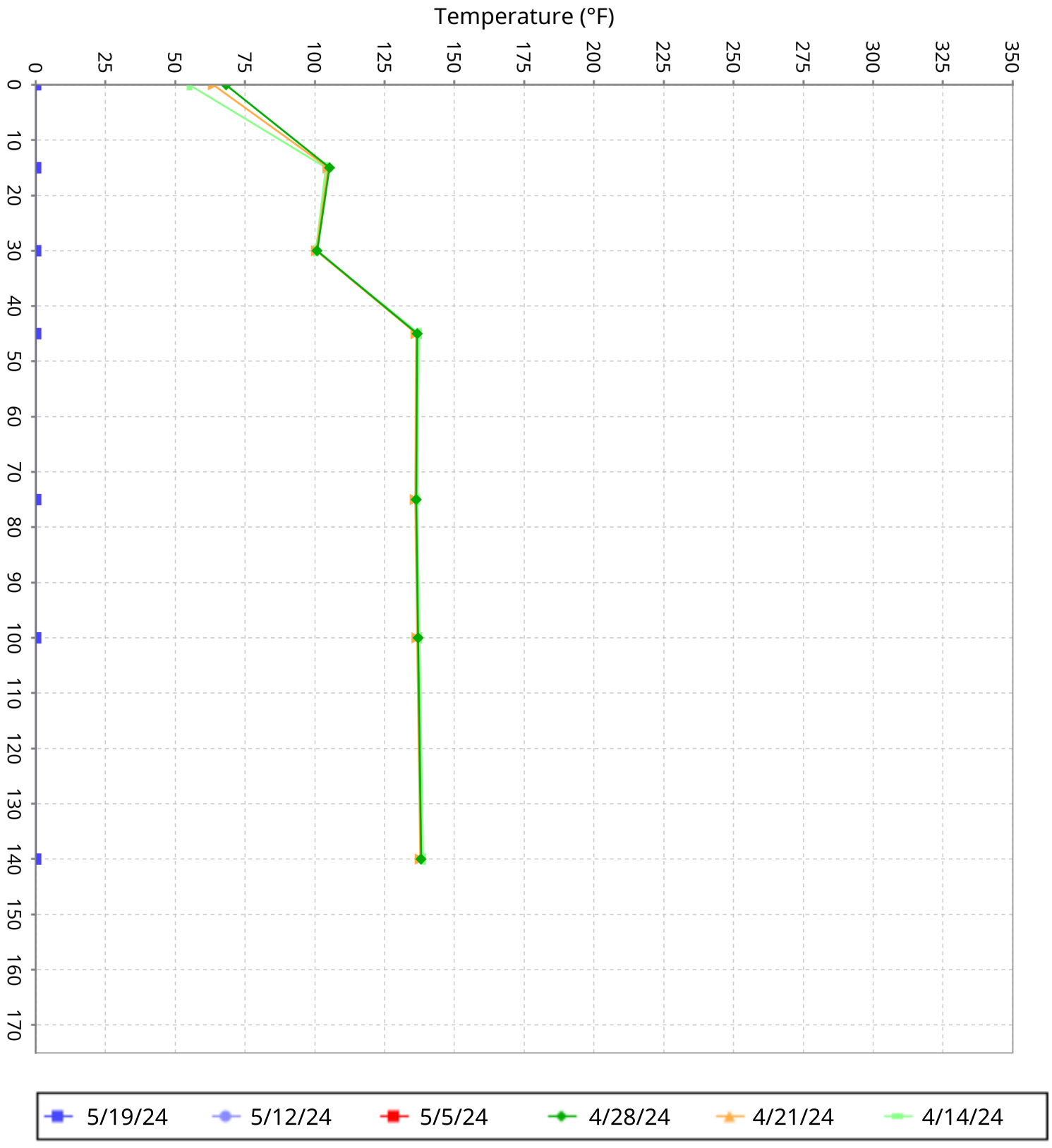
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

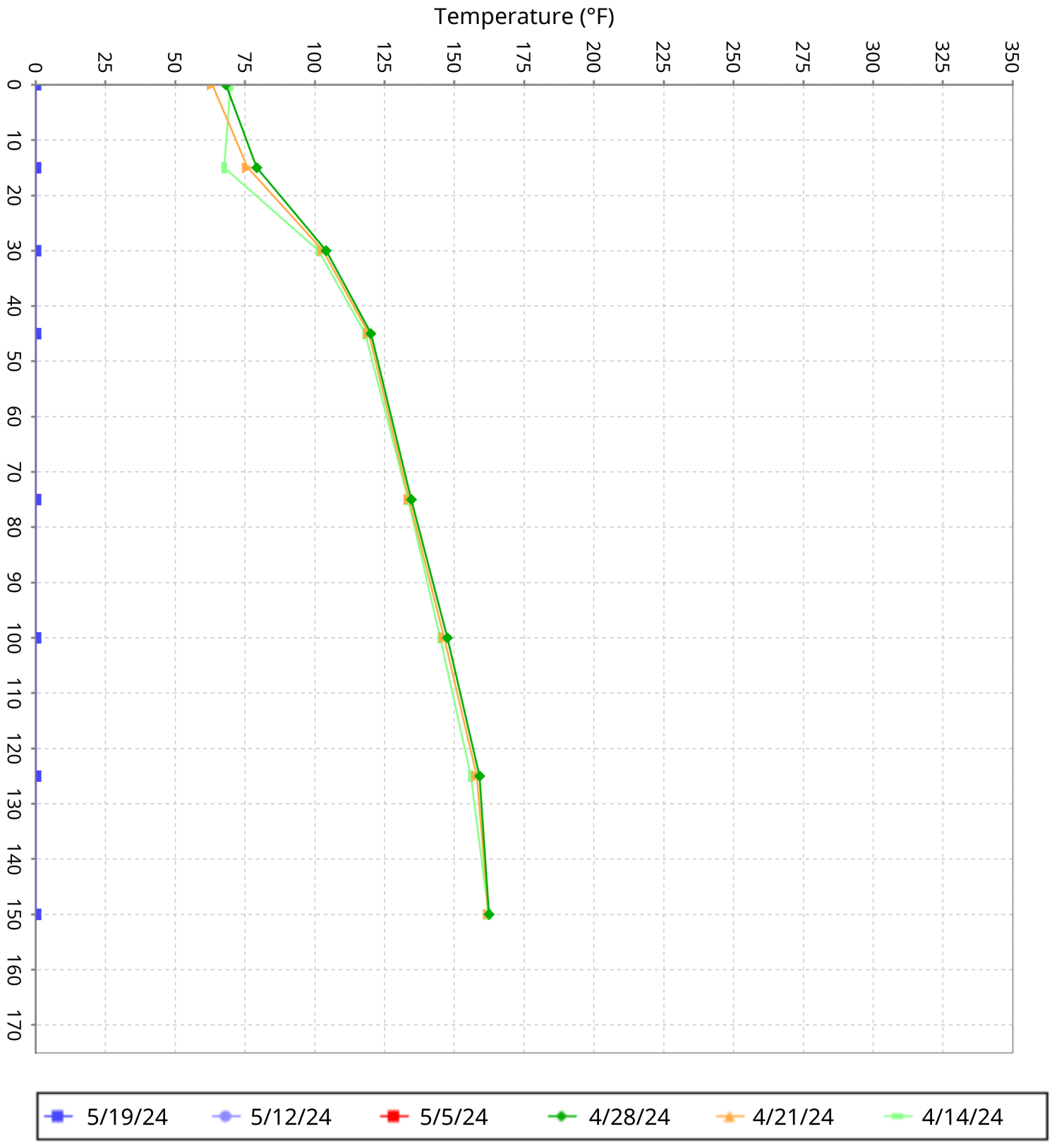
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

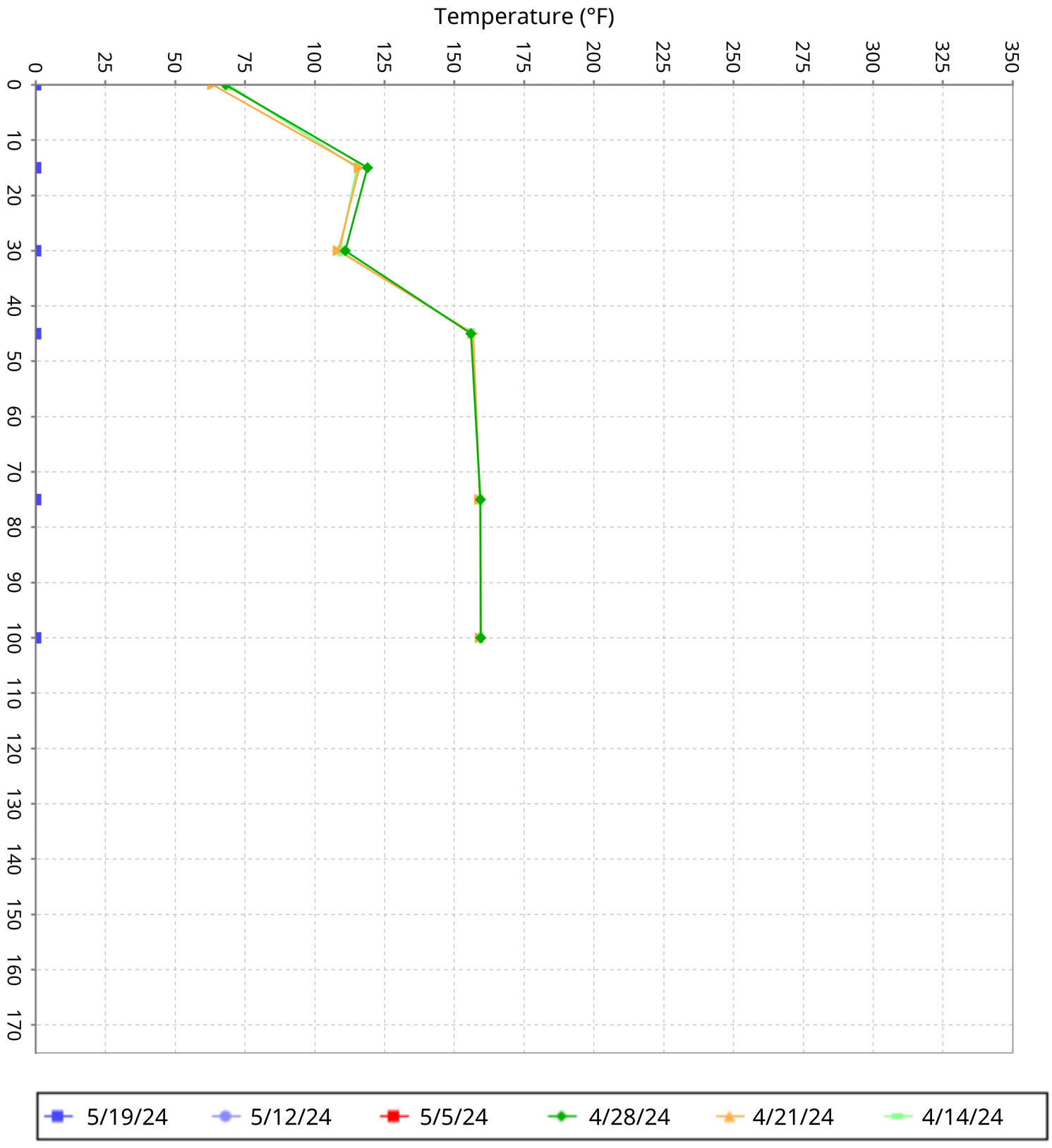
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

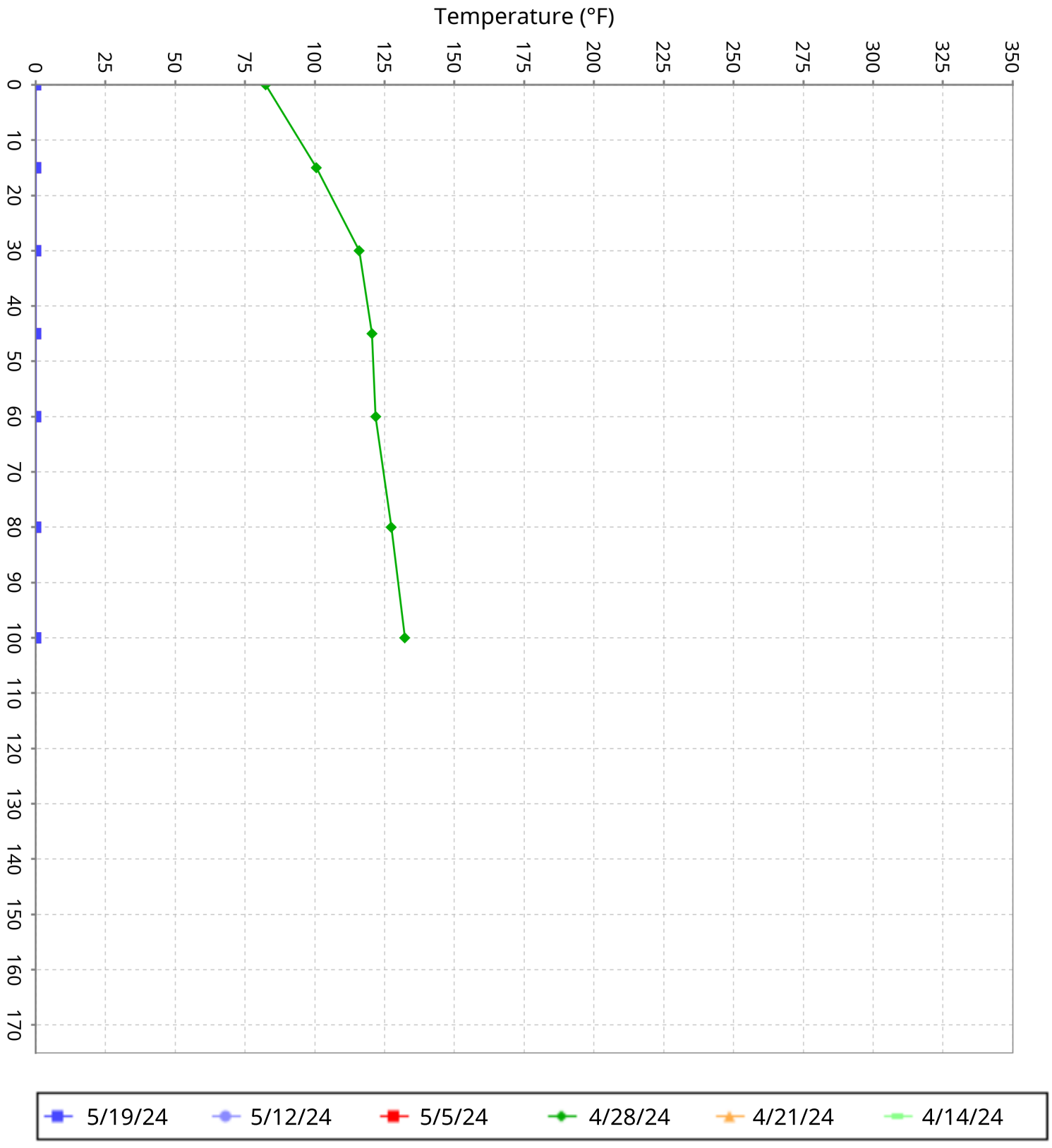
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

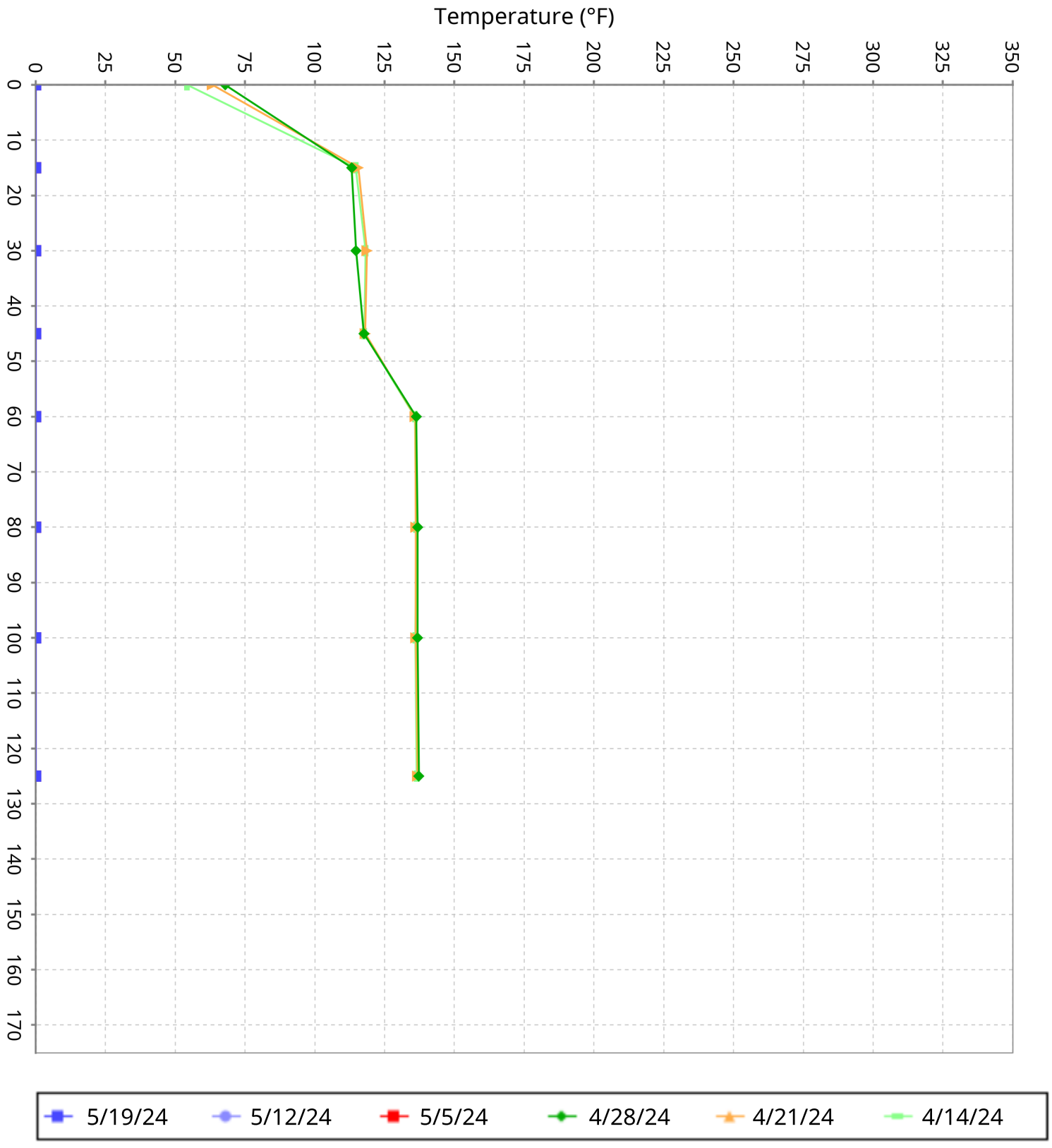
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

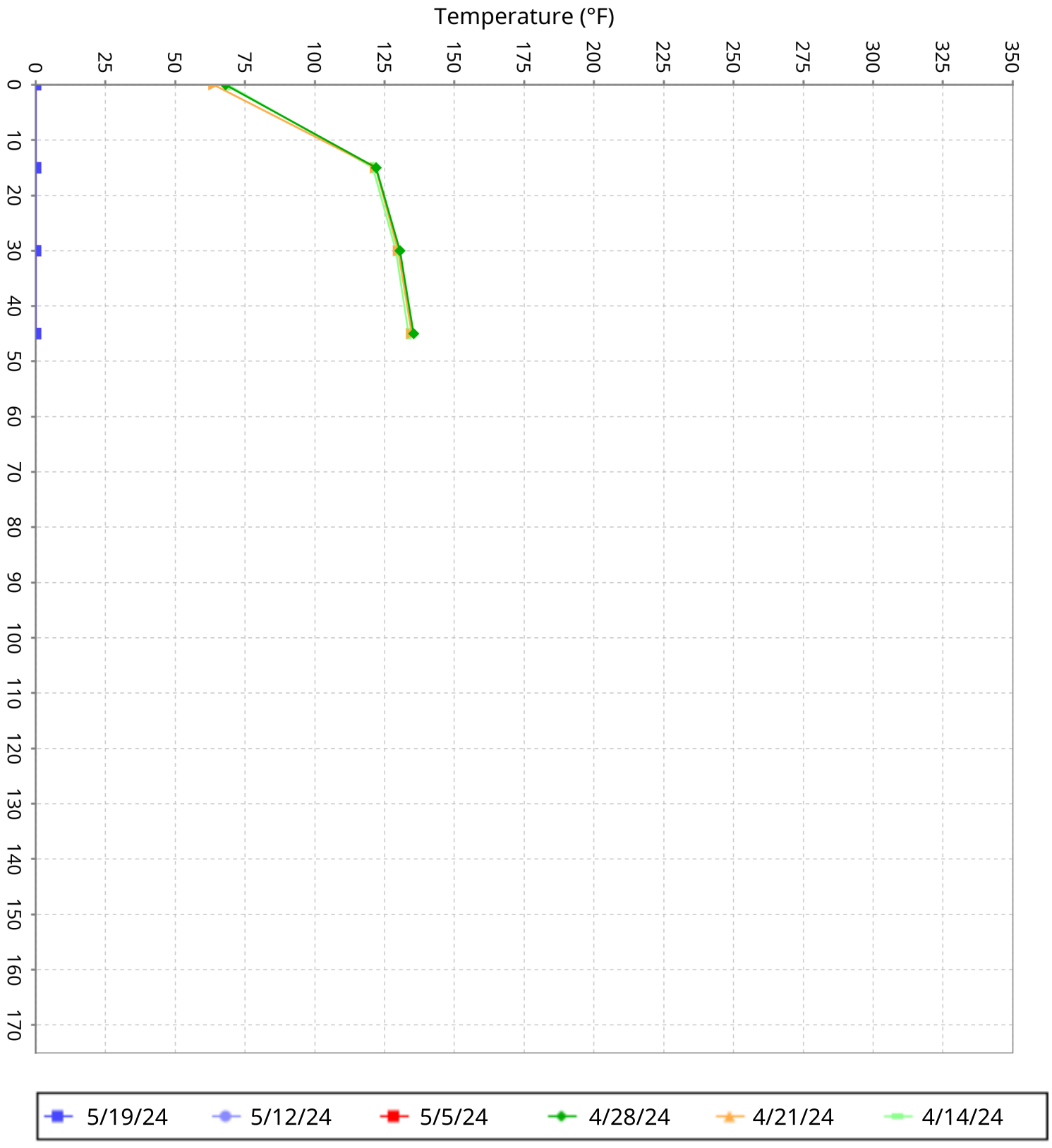
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

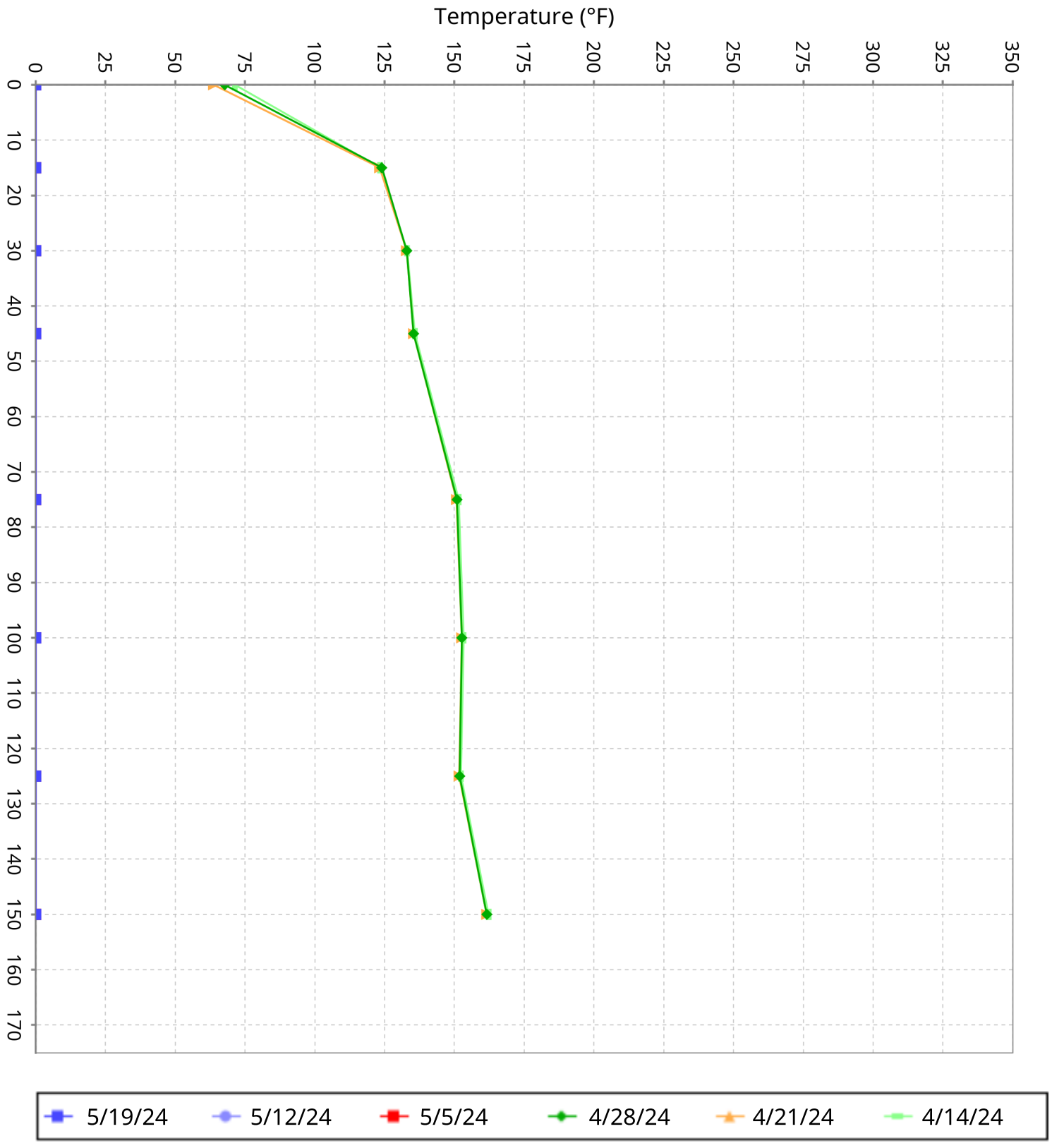
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

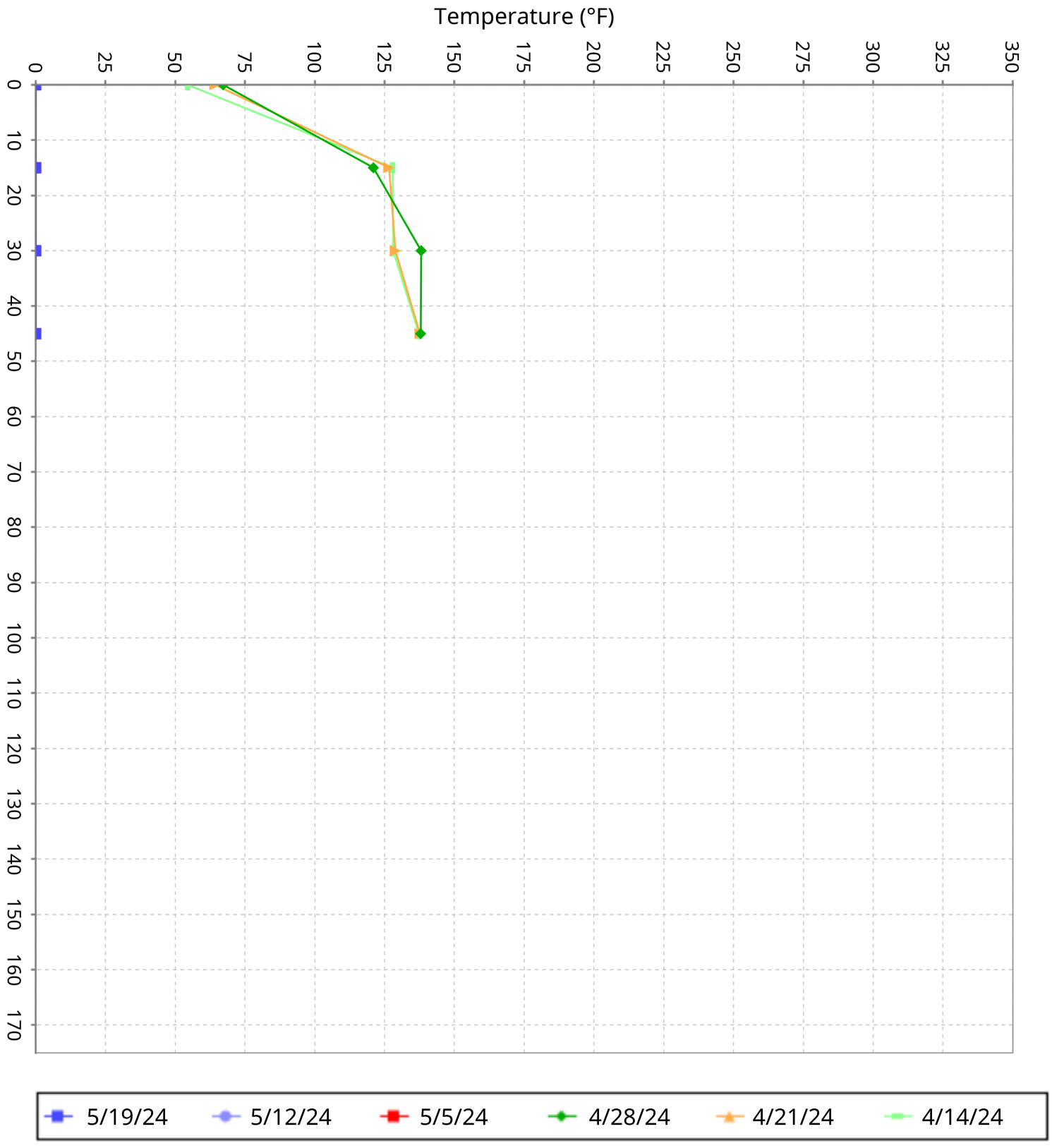
Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

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

Average data for April 15, 2024 to May 1, 2024



SCS ENGINEERS

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Petitioner,

vs.

CHIQUITA CANYON, LLC a Delaware Corporation,
[Facility ID No. 119219]

Respondent.

Case No. 6177-4

EXHIBIT B TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.

Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150

Hearing Date: August 17 and 20, 2024
Time: 10:00 am
Place: Santa Clarita Performing Arts Center
College for the Canyons
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

June 7, 2024
File No. 01204123.21-13

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

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

Dear Mr. Chen:

In accordance with Condition Nos. 9a and 9b of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (Landfill or Facility) (Case No. 6177-4), the Reaction Committee has reviewed newly acquired applicable data recorded during the month of May 2024, considered revisions of the estimated extent of elevated temperature landfill (ETLF) conditions exhibited at the subject Facility (referred to as the "Reaction Area" limits), and has prepared this determination on potentially revising the Reaction Area map.

Attachment A presents the Drawing, titled "Reaction Area Map", prepared by SCS Engineers (SCS) and dated 6/7/24. The Drawing depicts the Reaction Area boundary as prescribed in Condition No. 9a, 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 estimated extent of ETLF conditions being experienced at the site based on the Reaction Committee's review of scientific data as a dashed magenta line.

The Reaction Committee scrutinized the data recorded during May 2024 and prior months to investigate whether the reactivation of dewatering pump operations throughout the wellfield, which primarily commenced in April and continued throughout May, had any definitive impact on the Reaction Area boundaries. Certain wells positioned to the east of the reaction area boundary where pumping was reactivated demonstrated some increased hydrogen content in the LFG being extracted based on laboratory analyses performed during May. However, these wells did not exhibit elevated temperatures, so there was no evidence of increased heat that is typical with ETLF conditions present at these wells. Accordingly, there does not appear to be definitive evidence that reactivation of dewatering pump operations impacted the reaction area boundaries.

The Reaction Committee also reviewed the temperature measurements recorded by the newly installed temperature monitoring probes. Three (3) of the twenty (20) probes (TP-2, 3, and 9) are located within the estimated extent of ETLF conditions (dashed magenta line), and thirteen (13) probes are positioned adjacent to (within 200 feet) of this boundary. The temperatures recorded by the probes are relatively cooler compared to values recorded at other ETLF sites, and it is the Committee's opinion that they do not substantiate a decision to expand the boundary of the reaction area at this time.

As presented on the Drawing included as **Attachment A**, the estimated extent of ETLF conditions (dashed magenta line) is fully contained within the Reaction Area boundary decreed in the SOFA (solid black line). Because the ETLF conditions are fully contained within the Reaction Area boundary

and have not expanded into a new cell, the Reaction Committee finds no basis to modify the Reaction Area boundary at this time. Please note the following:

- The rationale that would serve as the basis for considering adjustments and modifications to the Reaction Area boundary (or the determination to maintain the decreed boundary), include:

  - Landfill gas (LFG) wellhead temperatures in excess of approximately 160 degrees Fahrenheit.

  - Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH_4:CO_2) ratios less than 1.0.

  - The concentration of hydrogen (H_2) in the LFG measured greater than 2 percent by volume.

  - Accelerated settlement of the landfill surface, defined as approximately 6 inches or greater within a 60-day period, and cracks in landfill cover.

  - First-hand observations of Landfill and/or SCS engineering, construction, and operations and maintenance (O&M) field personnel who are on-site related to: 1) atypical excess leachate quantities (presence and quantity of liquids); 2) instances of pressurized liquids emitting from the landfill surface, from boreholes during drilling, and from LFG wells; and, 3) the characteristics of the odors originating from the select areas of the waste footprint (often described as “chemical-like” and distinctly different from typical LFG or landfill working face odors).

  - Observations of subsurface waste conditions and characteristics as noted on borehole drilling logs for recently installed new wells and/or probes.

  - Subsurface temperatures recorded at the in-situ waste temperature probes during May 2024.

There was no dissenting opinion among the Reaction Committee members regarding this monthly determination. Supporting data is presented on the Drawing included as **Attachment A.** The temperature measurements recorded at the 20 in-situ waste temperature monitoring probes during May are presented in **Attachment B** in graphical format. Efforts to download these initial measurements from the electronic database and recordkeeping platform into a tabular spreadsheet format for submittal to the South Coast Air Quality Management District under separate cover have been initiated and are ongoing.

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

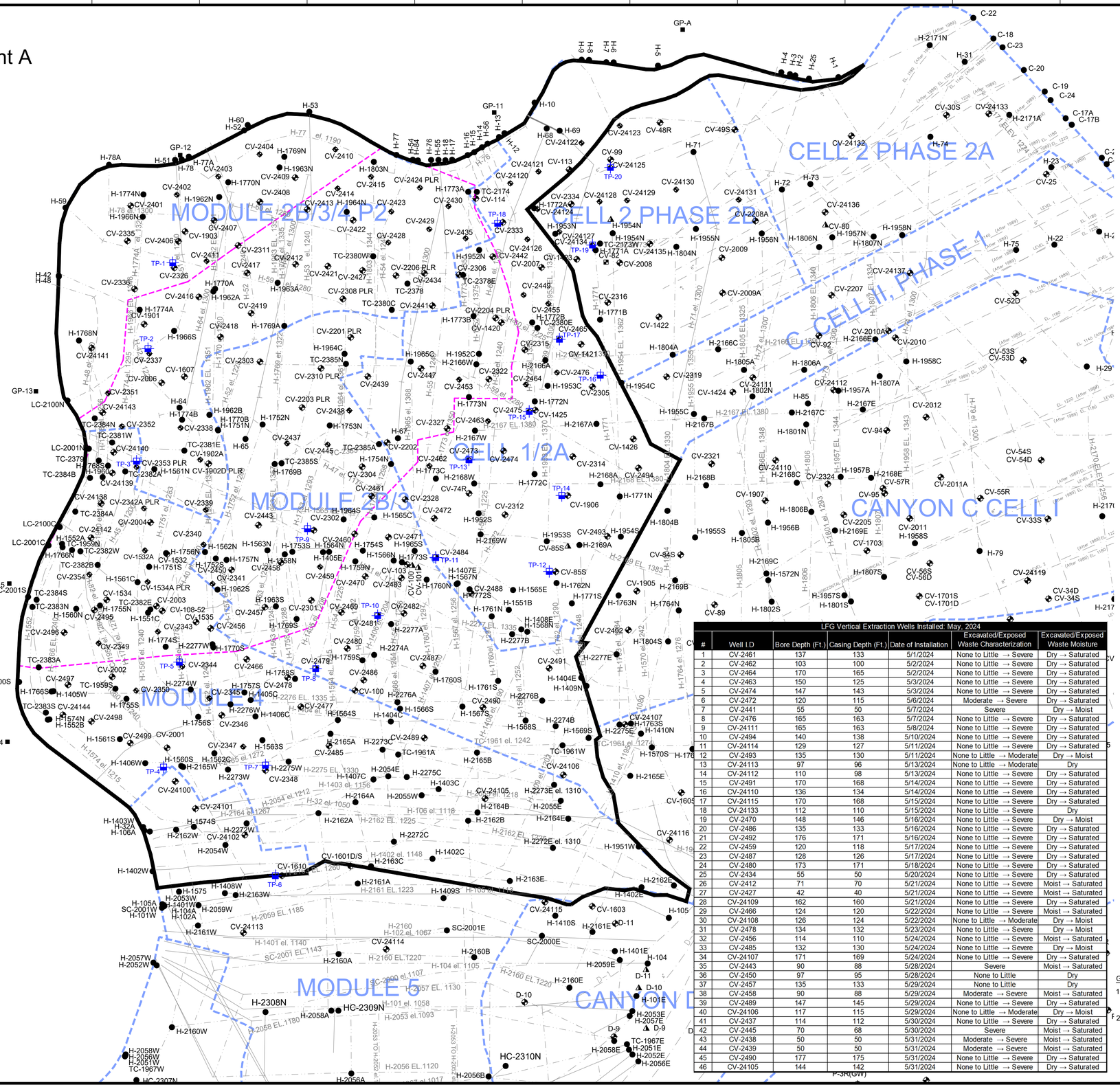
RED/PSS

cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD
Pablo Sanchez Soria, PhD, CIH, CTEH
Neal Bolton, PE, Blue Ridge Services, Inc.
Richard Pleus, PhD, Intertox
Srividhya Viswanathan, PE, SCS Engineers

Enclosure:

Attachment A – Reaction Area Map
Attachment B – In-Situ Waste Temperature Monitoring Probe Data

Attachment A



N

GRAPHIC SCALE

150 75 0 150 300 450

SCALE: 1"=150'

LEGEND

- EXISTING CELL LIMITS (APPROXIMATE)
- CV-XX EXISTING VERTICAL WELLS
- CV-XX PLR EXISTING VERTICAL WELL - PRESSURIZED LEACHATE RELEASE
- CV-XX EXISTING VERTICAL WELLS BELOW-GRADE
- H-XX EXISTING HORIZONTAL WELLS
- CV-XX EXISTING REMOTE VERTICAL WELLHEAD
- GP-XX EXISTING PERIMETER MIGRATION PROBE
- TP-XX EXISTING TEMPERATURE PROBE
- EXISTING HORIZONTAL COLLECTOR - SOLID
- EXISTING HORIZONTAL COLLECTOR - PERFORATED
- EXISTING HISTORIC HORIZONTAL COLLECTOR
- REACTION AREA BOUNDARY (APPROXIMATE) - BASED ON DATA REVIEW
- REACTION AREA BOUNDARY - CONDITION 9A

LFG Vertical Extraction Wells Installed: May, 2024

#	Well I.D	Bore Depth (Ft.)	Casing Depth (Ft.)	Date of Installation	Excavated/Exposed Waste Characterization	Excavated/Exposed Waste Moisture
1	CV-2461	137	133	5/1/2024	None to Little → Severe	Dry → Saturated
2	CV-2462	103	100	5/2/2024	None to Little → Severe	Dry → Saturated
3	CV-2464	170	165	5/2/2024	None to Little → Severe	Dry → Saturated
4	CV-2463	150	125	5/3/2024	None to Little → Severe	Dry → Saturated
5	CV-2474	147	143	5/3/2024	None to Little → Severe	Dry → Saturated
6	CV-2472	120	115	5/6/2024	Moderate → Severe	Dry → Saturated
7	CV-2441	55	50	5/7/2024	Severe	Dry → Moist
8	CV-2476	165	163	5/7/2024	None to Little → Severe	Dry → Saturated
9	CV-24111	165	163	5/8/2024	None to Little → Severe	Dry → Saturated
10	CV-2494	140	138	5/10/2024	None to Little → Severe	Dry → Saturated
11	CV-24114	129	127	5/11/2024	None to Little → Severe	Dry → Saturated
12	CV-2493	135	130	5/11/2024	None to Little → Moderate	Dry → Moist
13	CV-24113	97	96	5/13/2024	None to Little → Moderate	Dry
14	CV-24112	110	98	5/13/2024	None to Little → Severe	Dry → Saturated
15	CV-2491	170	168	5/14/2024	None to Little → Severe	Dry → Saturated
16	CV-24110	136	134	5/14/2024	None to Little → Severe	Dry → Saturated
17	CV-24115	170	168	5/15/2024	None to Little → Severe	Dry → Saturated
18	CV-24133	112	110	5/15/2024	None to Little → Severe	Dry
19	CV-2470	148	146	5/16/2024	None to Little → Severe	Dry → Moist
20	CV-2486	135	133	5/16/2024	None to Little → Severe	Dry → Saturated
21	CV-2492	176	171	5/16/2024	None to Little → Severe	Dry → Saturated
22	CV-2459	120	118	5/17/2024	None to Little → Severe	Dry → Saturated
23	CV-2487	128	126	5/17/2024	None to Little → Severe	Dry → Saturated
24	CV-2480	173	171	5/18/2024	None to Little → Severe	Dry → Saturated
25	CV-2434	55	50	5/20/2024	None to Little → Severe	Dry → Saturated
26	CV-2412	71	70	5/21/2024	None to Little → Severe	Moist → Saturated
27	CV-2427	42	40	5/21/2024	None to Little → Severe	Moist → Saturated
28	CV-24109	162	160	5/21/2024	None to Little → Severe	Dry → Saturated
29	CV-2466	124	120	5/22/2024	None to Little → Severe	Moist → Saturated
30	CV-24108	126	124	5/22/2024	None to Little → Moderate	Dry → Moist
31	CV-2478	134	132	5/23/2024	None to Little → Severe	Dry → Moist
32	CV-2456	114	110	5/24/2024	None to Little → Severe	Moist → Saturated
33	CV-2485	132	130	5/24/2024	None to Little → Severe	Dry → Moist
34	CV-24107	171	169	5/24/2024	None to Little → Severe	Dry → Saturated
35	CV-2443	90	88	5/28/2024	Severe	Moist → Saturated
36	CV-2450	97	95	5/28/2024	None to Little	Dry
37	CV-2457	135	133	5/29/2024	None to Little	Dry
38	CV-2458	90	88	5/29/2024	Moderate → Severe	Moist → Saturated
39	CV-2489	147	145	5/29/2024	None to Little → Severe	Dry → Saturated
40	CV-24106	117	115	5/29/2024	None to Little → Moderate	Dry → Moist
41	CV-2437	114	112	5/30/2024	None to Little → Severe	Dry → Saturated
42	CV-2445	70	68	5/30/2024	Severe	Moist → Saturated
43	CV-2438	50	50	5/31/2024	Moderate → Severe	Moist → Saturated
44	CV-2439	50	50	5/31/2024	Moderate → Severe	Moist → Saturated
45	CV-2490	177	175	5/31/2024	None to Little → Severe	Dry → Saturated
46	CV-24105	144	142	5/31/2024	None to Little → Severe	Dry → Saturated

GENERAL DRAWING NOTES:

1. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
2. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE

REVISION

NO.

SHEET TITLE: REACTION AREA MAP MAY, 2024

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

ACAD FILE: ENGINEERS
DWN. BY: SRM/JH
APP. BY: WCH
CHK. BY: JH/WCH
PROJ. NO. 01204123.35
DSN. BY: -

DATE: 06/07/2024

SCALE: AS SHOWN

SHEET: 1

Solid Waste Borehole Average Temperature Profiles Over 6 Weeks

for April 25, 2024 to June 5, 2024

SCS ENGINEERS

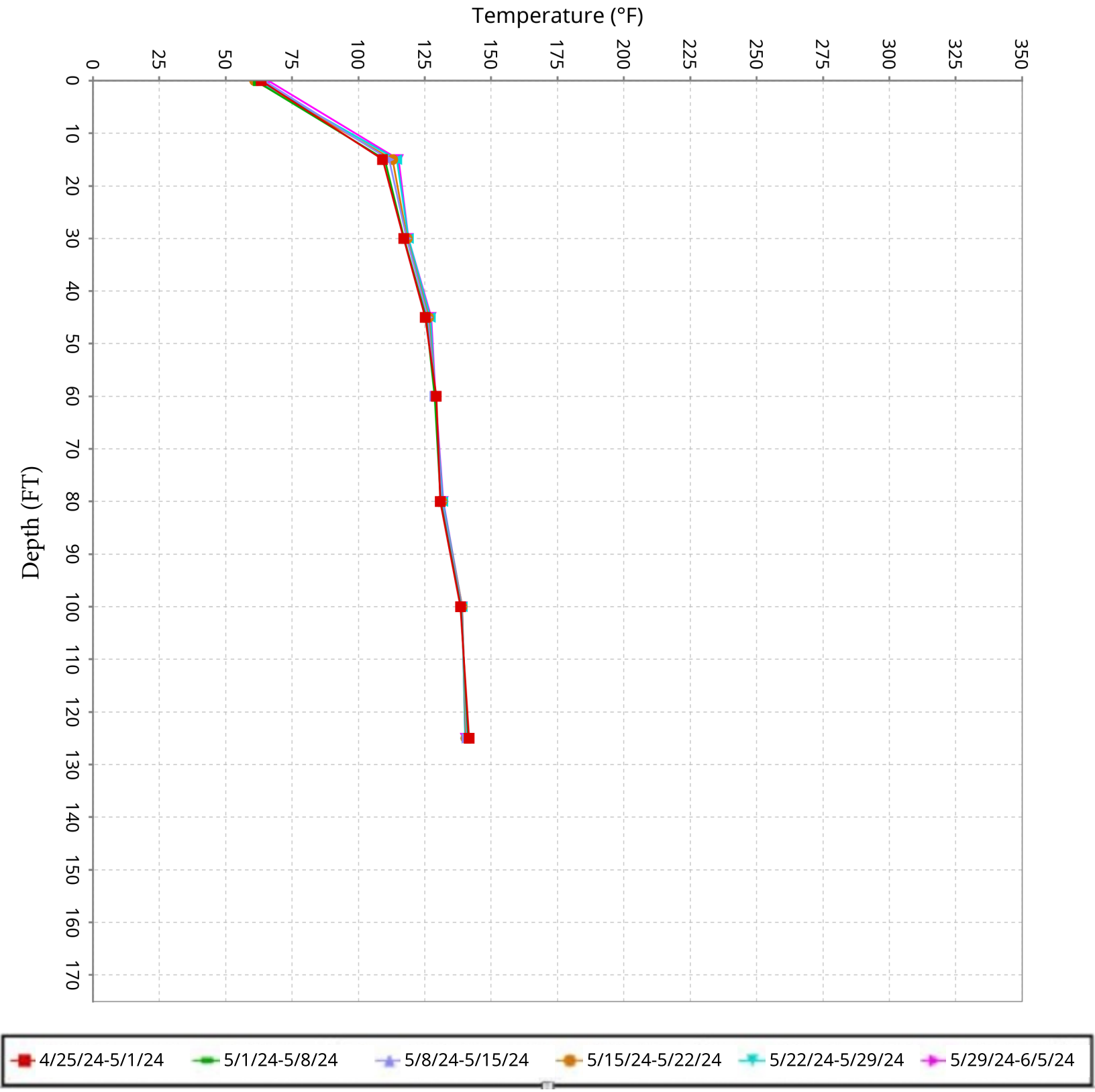
07224053.00 | June 6, 2024

274 Granite Run Drive
Lancaster, PA 17601
717-550-6330

Note: Data represents the arithmatic mean of the available temperature readings for the specified date.

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

Average data for April 25, 2024 to June 5, 2024

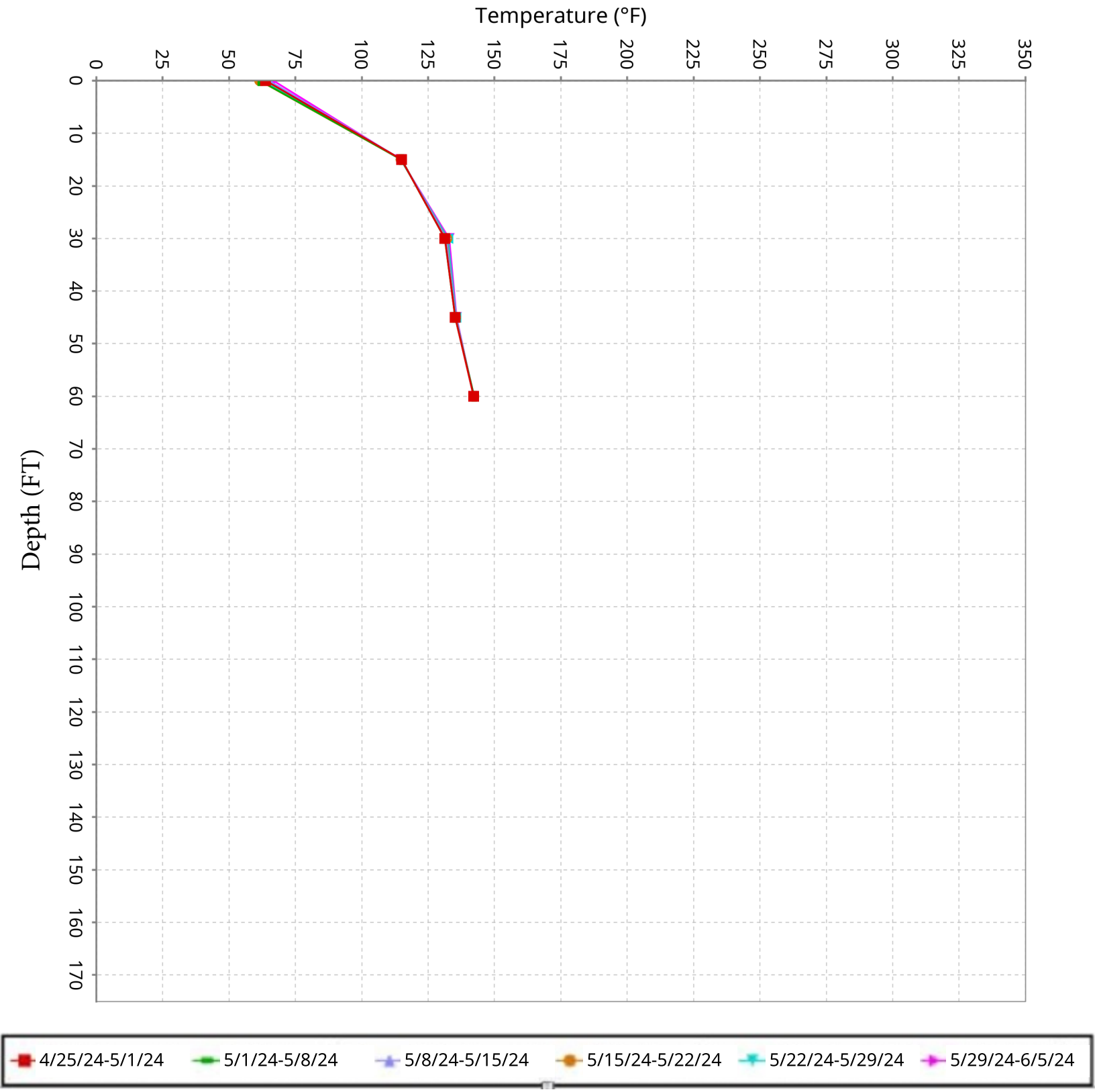


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

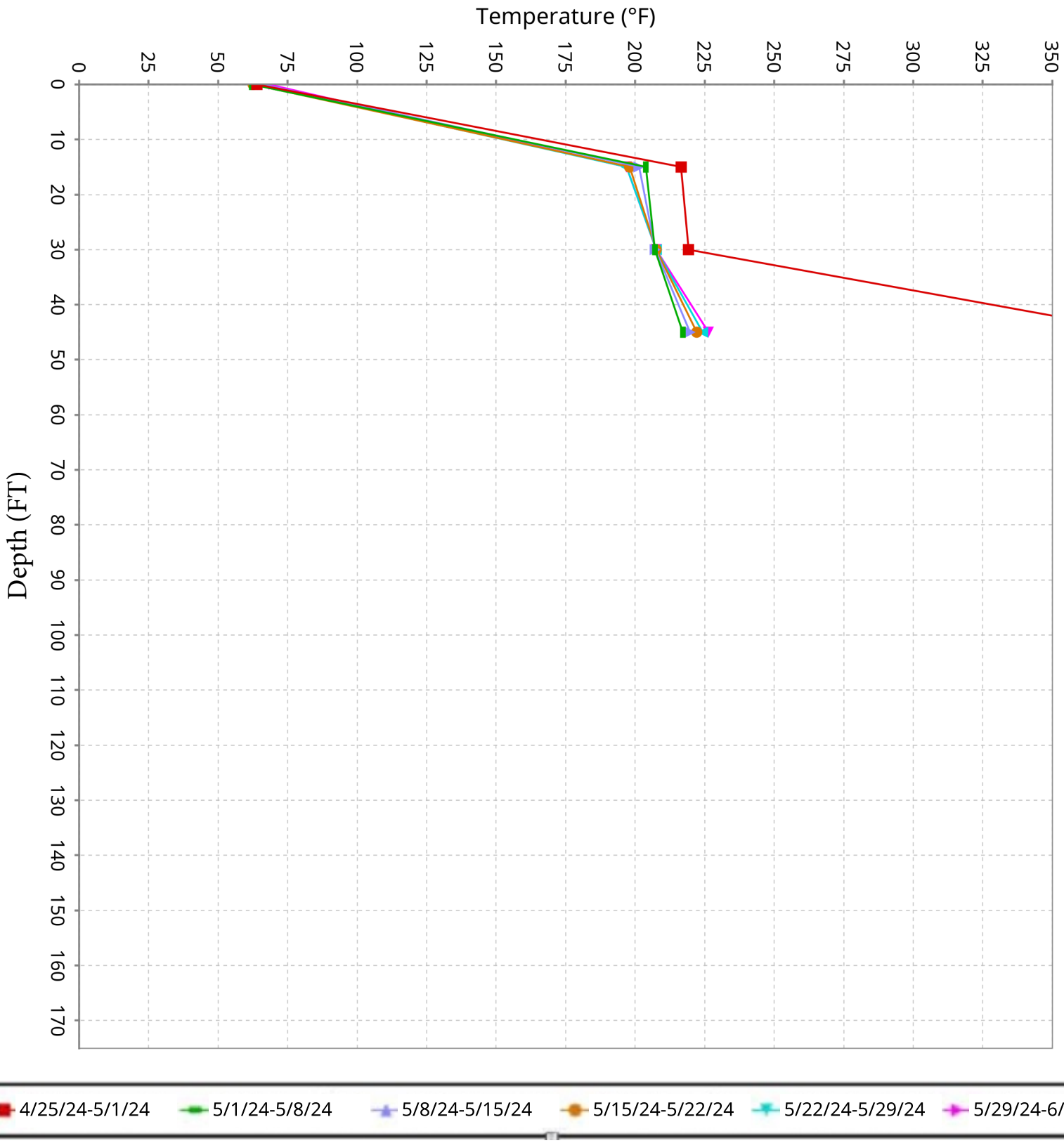
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

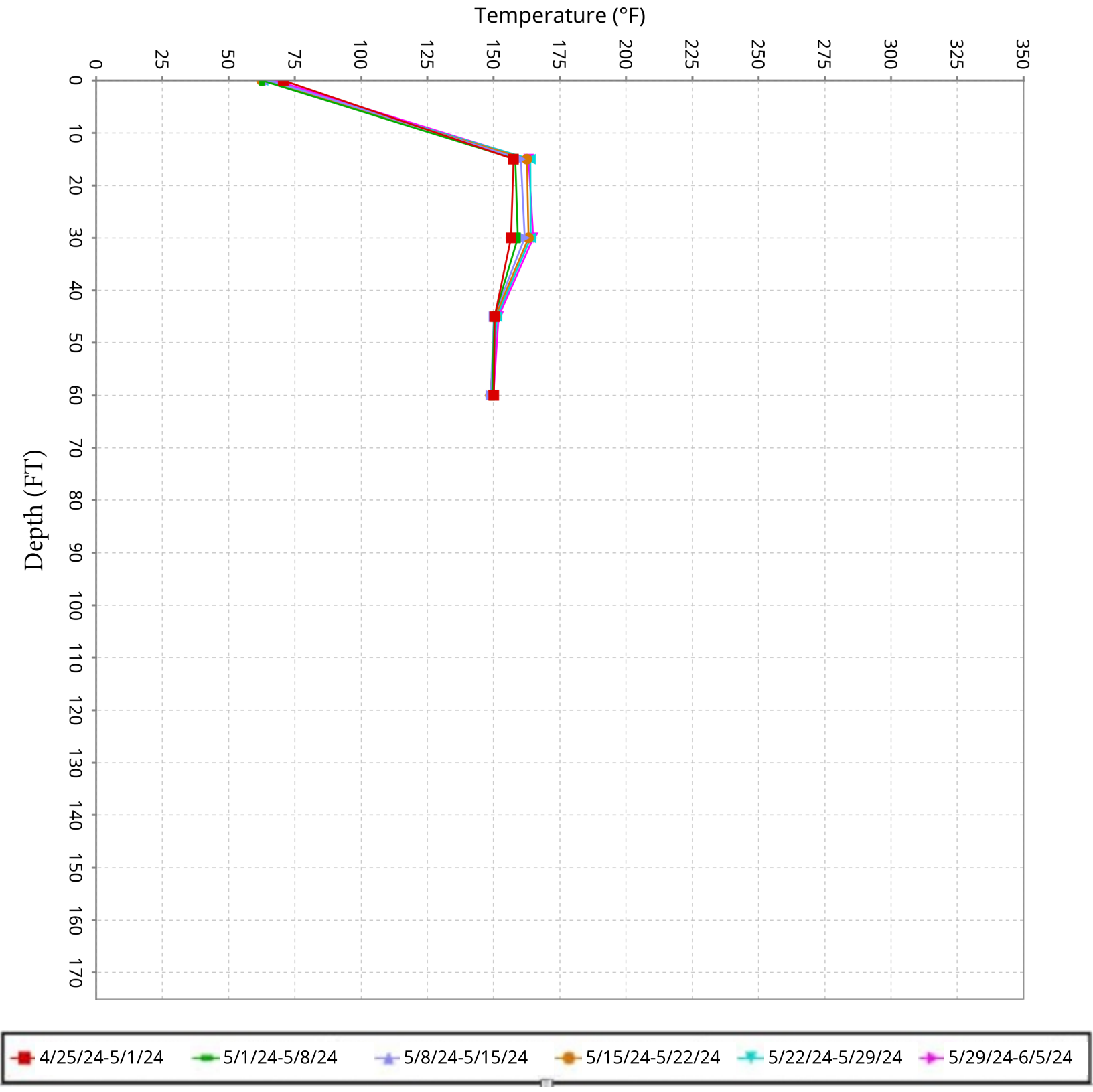
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

Average data for April 25, 2024 to June 5, 2024

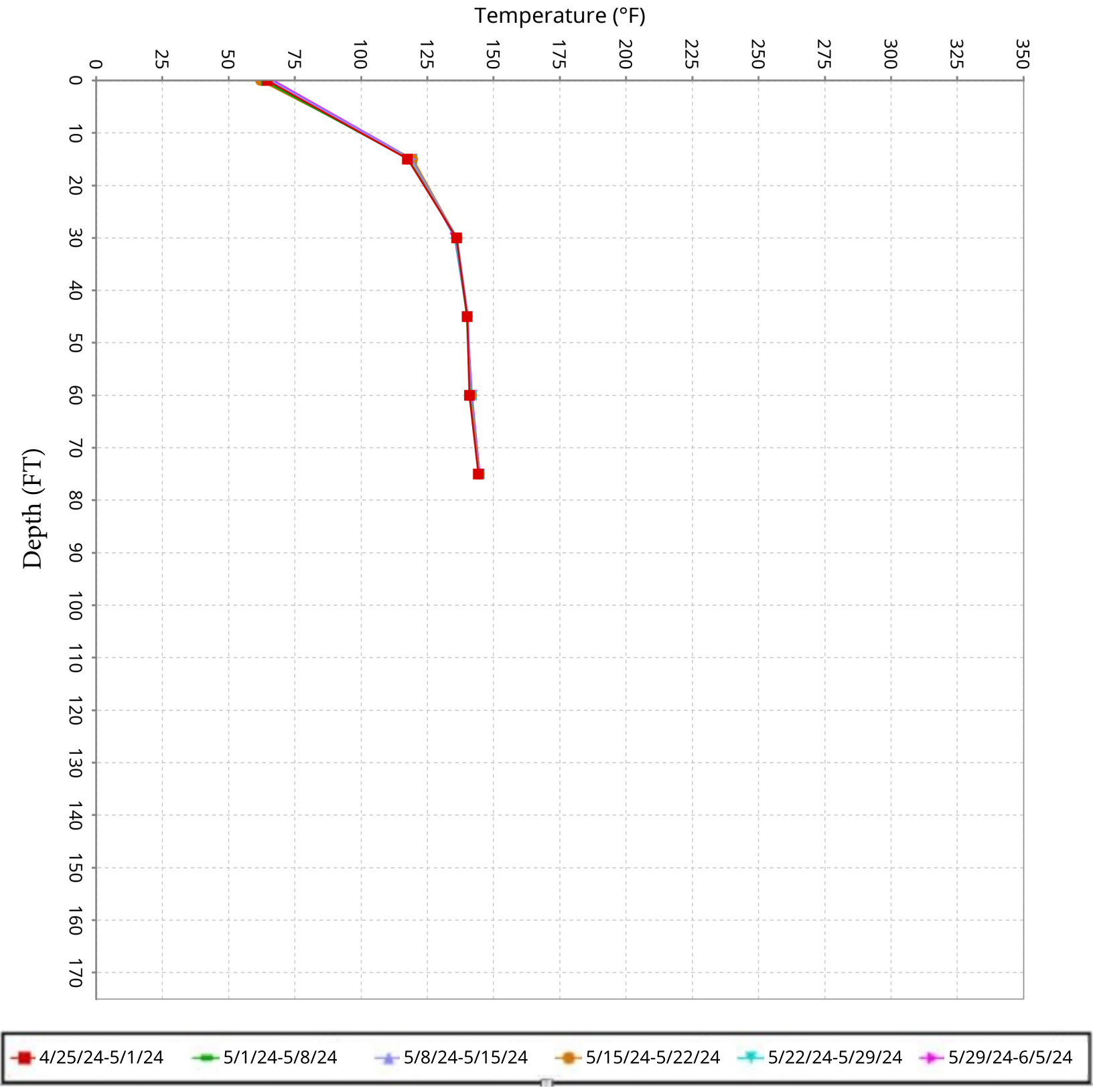


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

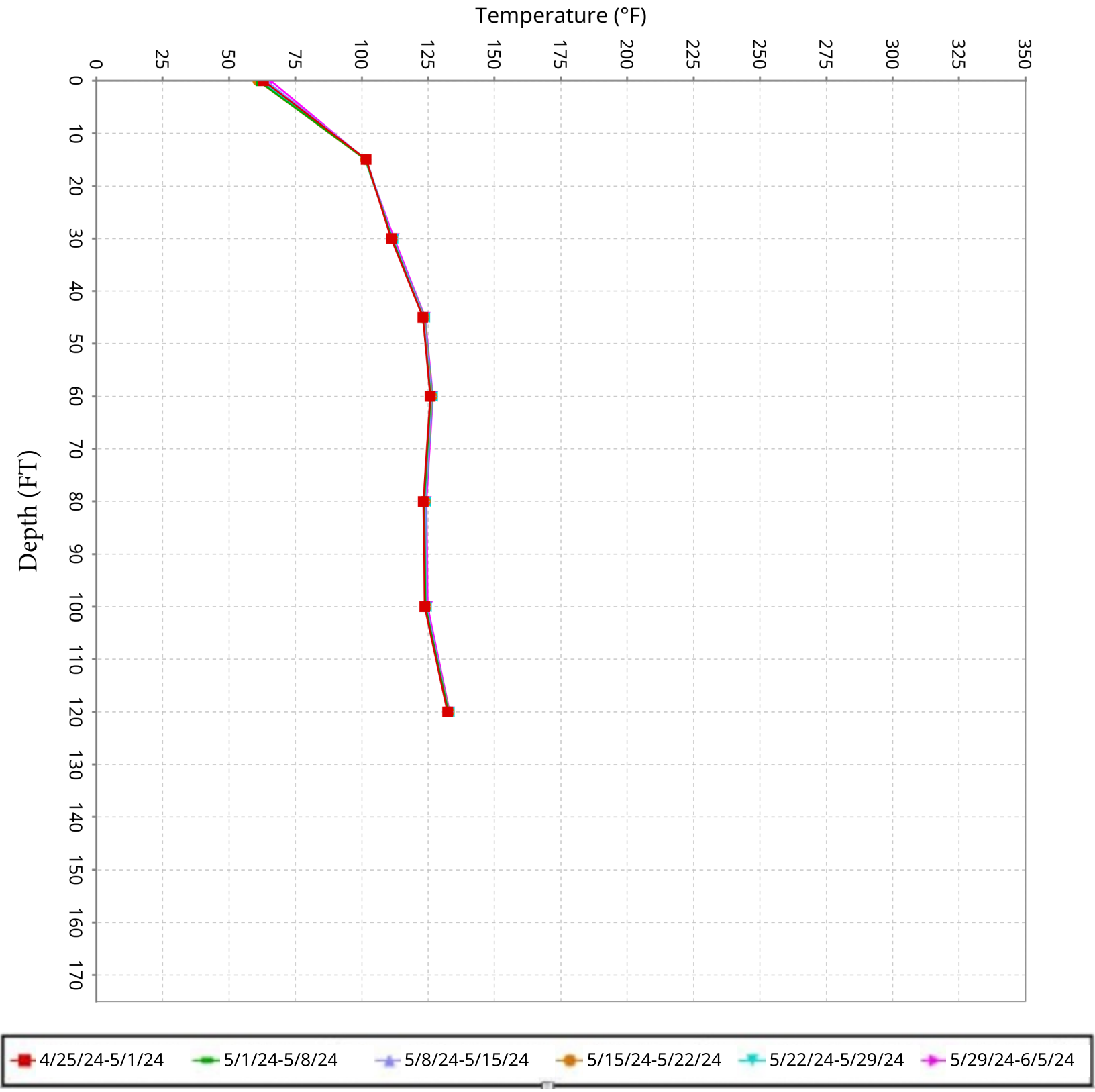
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

Average data for April 25, 2024 to June 5, 2024

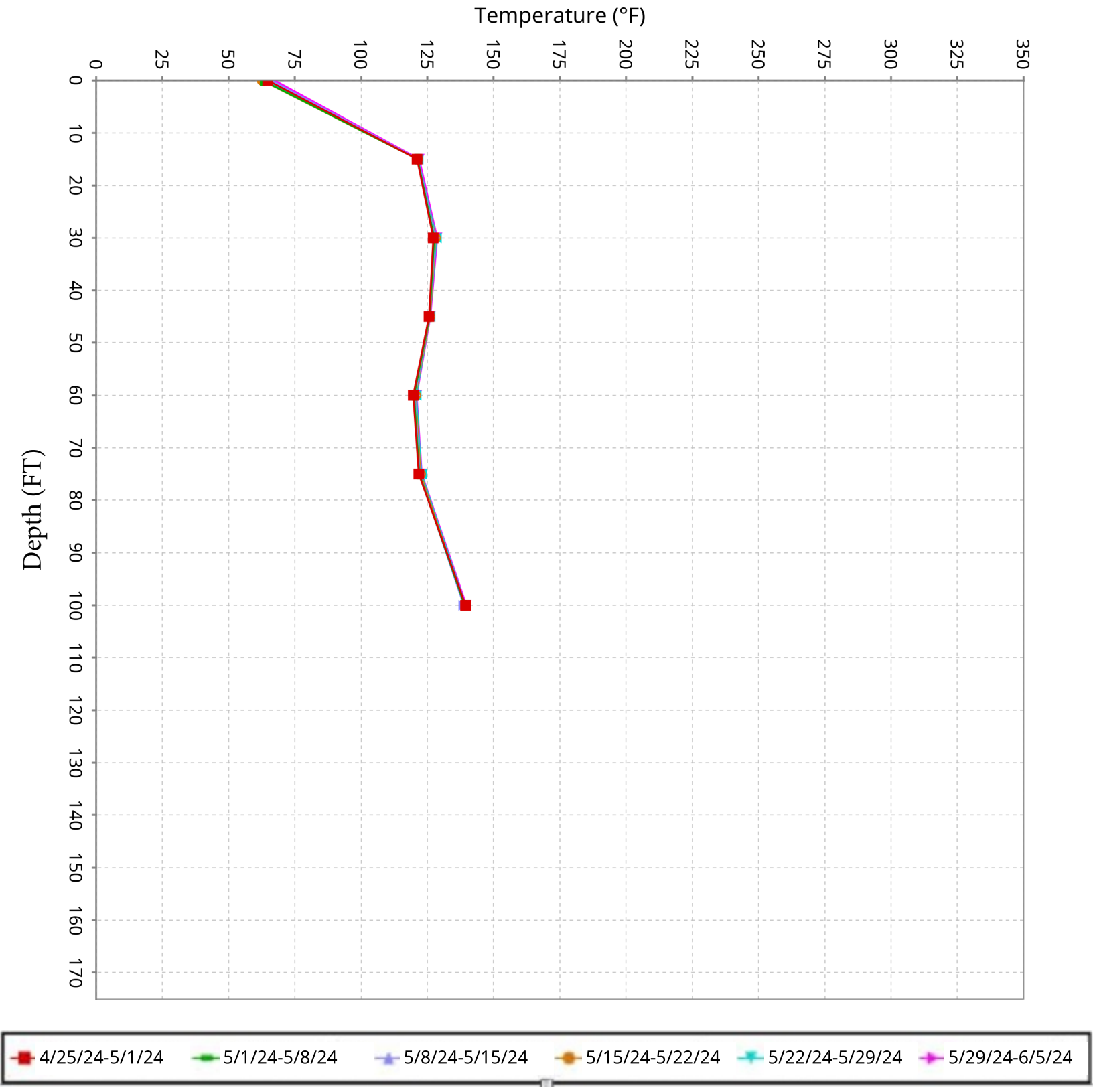


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

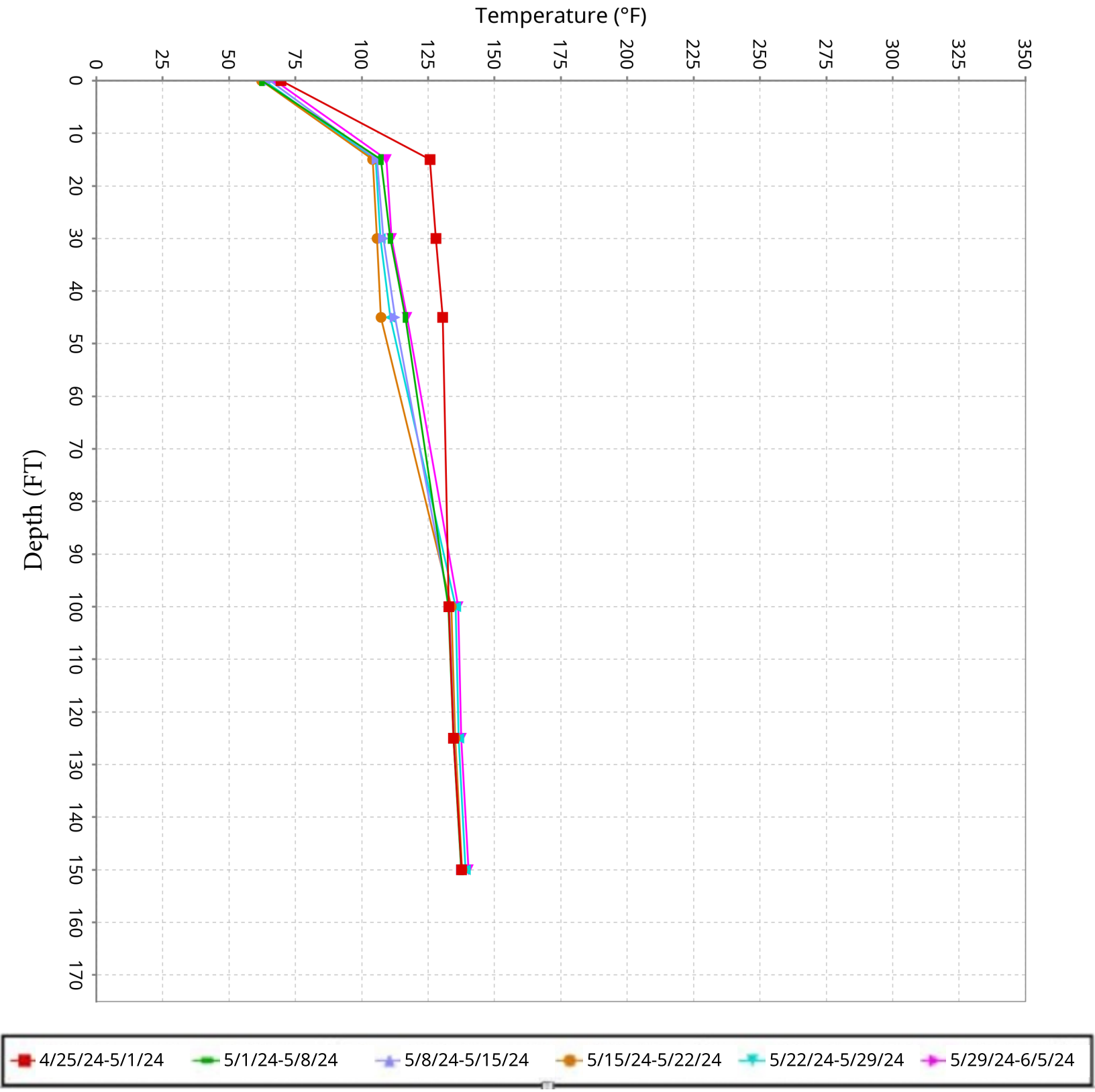
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

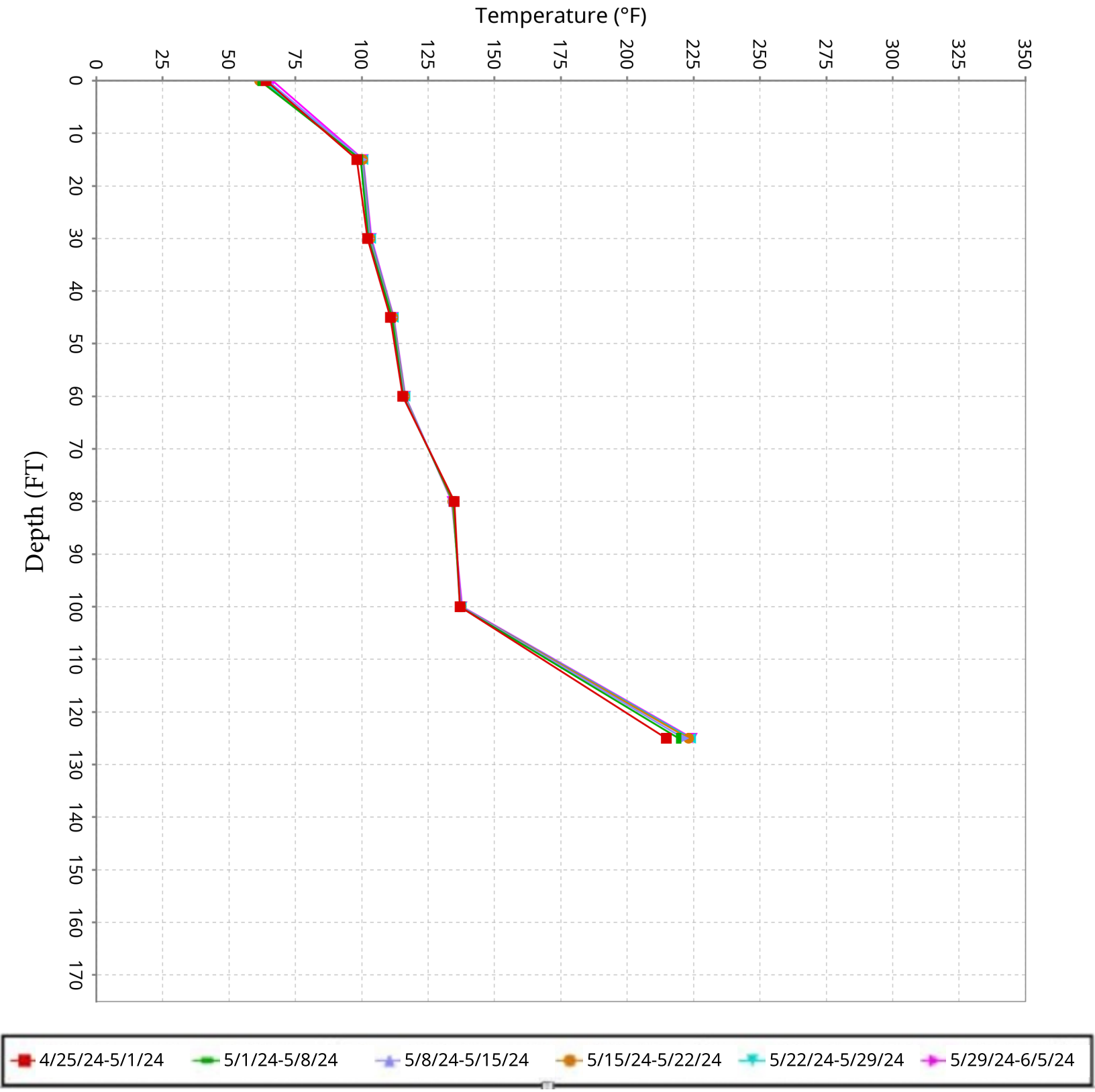
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

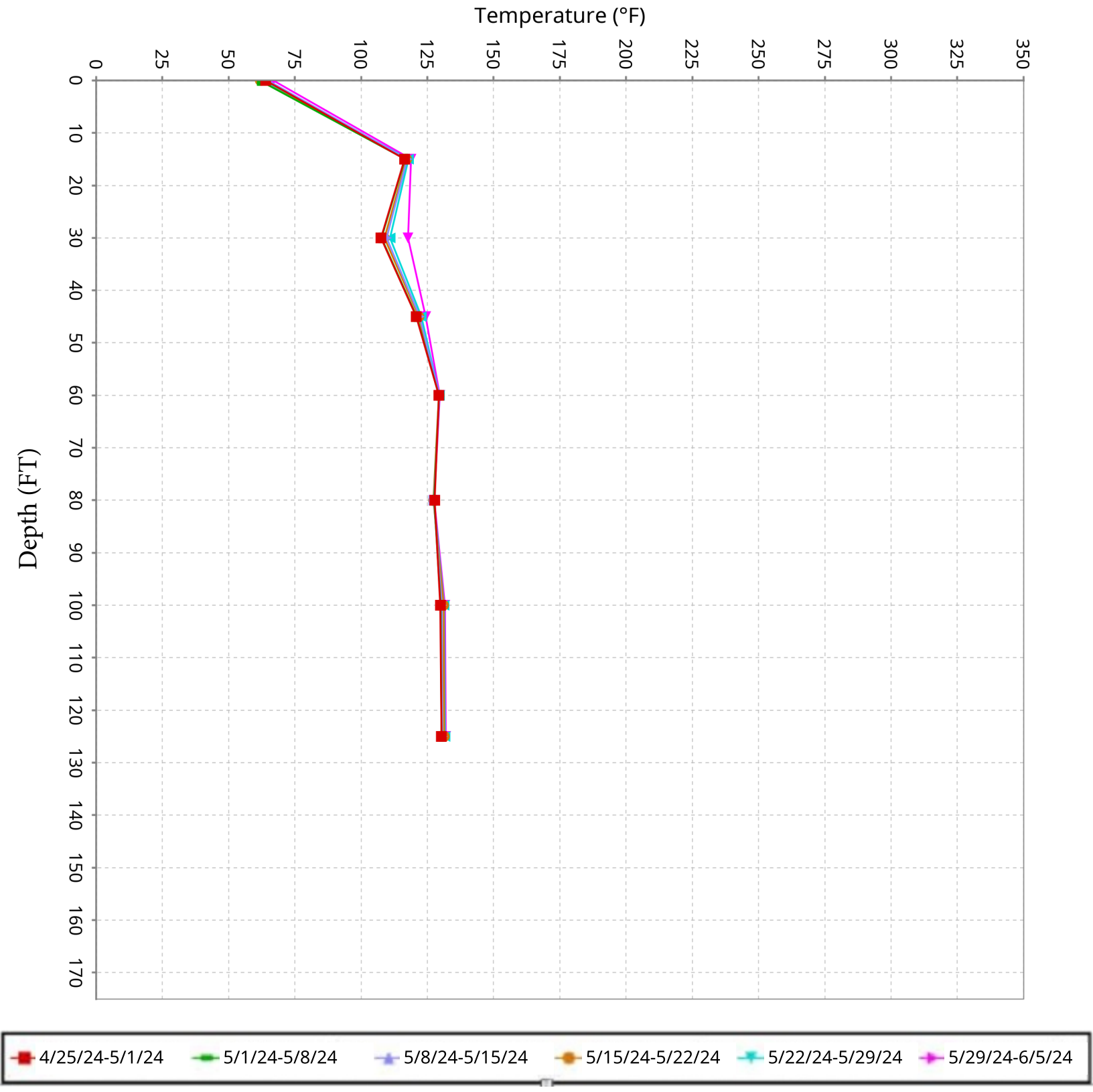
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

Average data for April 25, 2024 to June 5, 2024

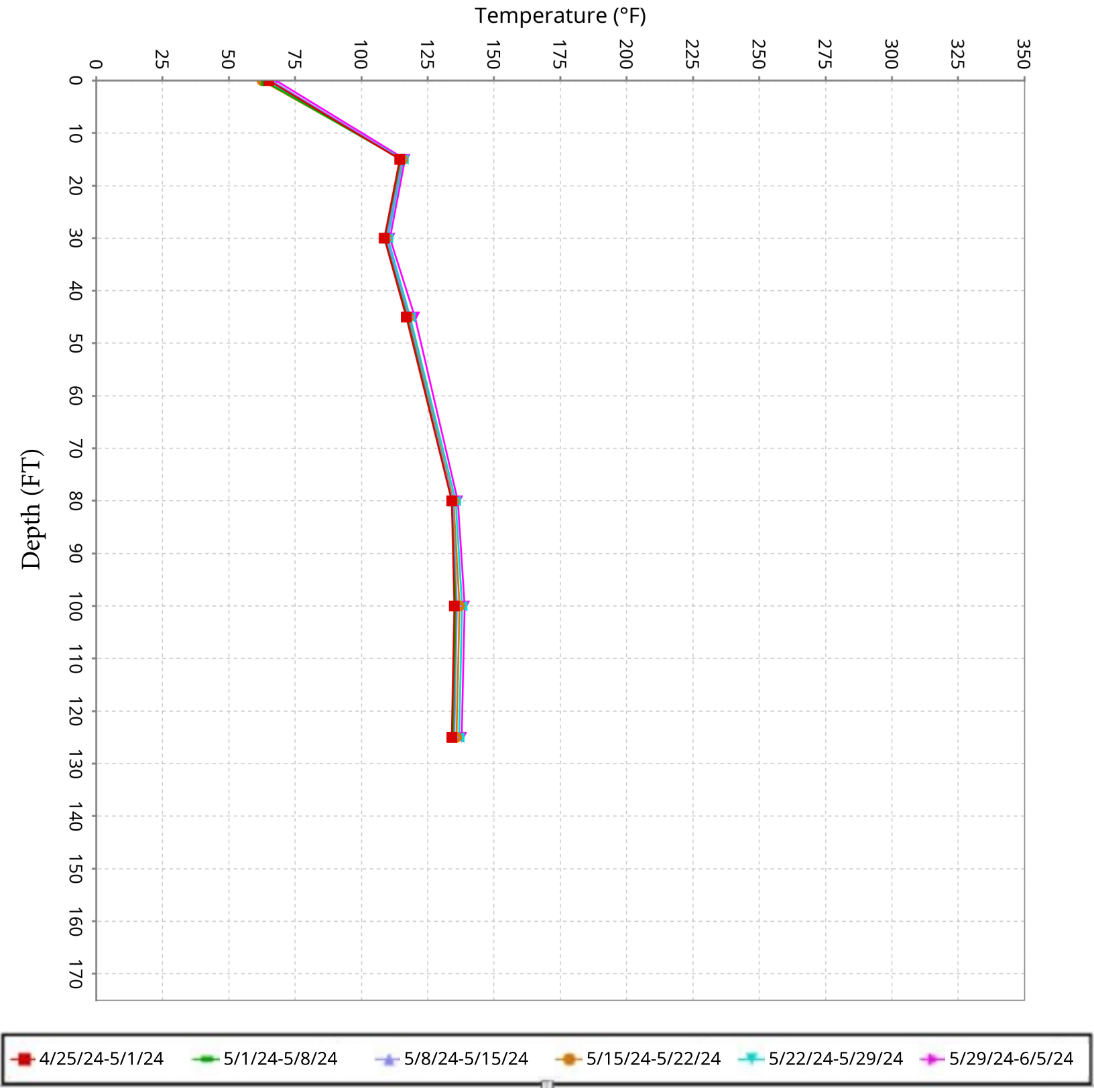


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024

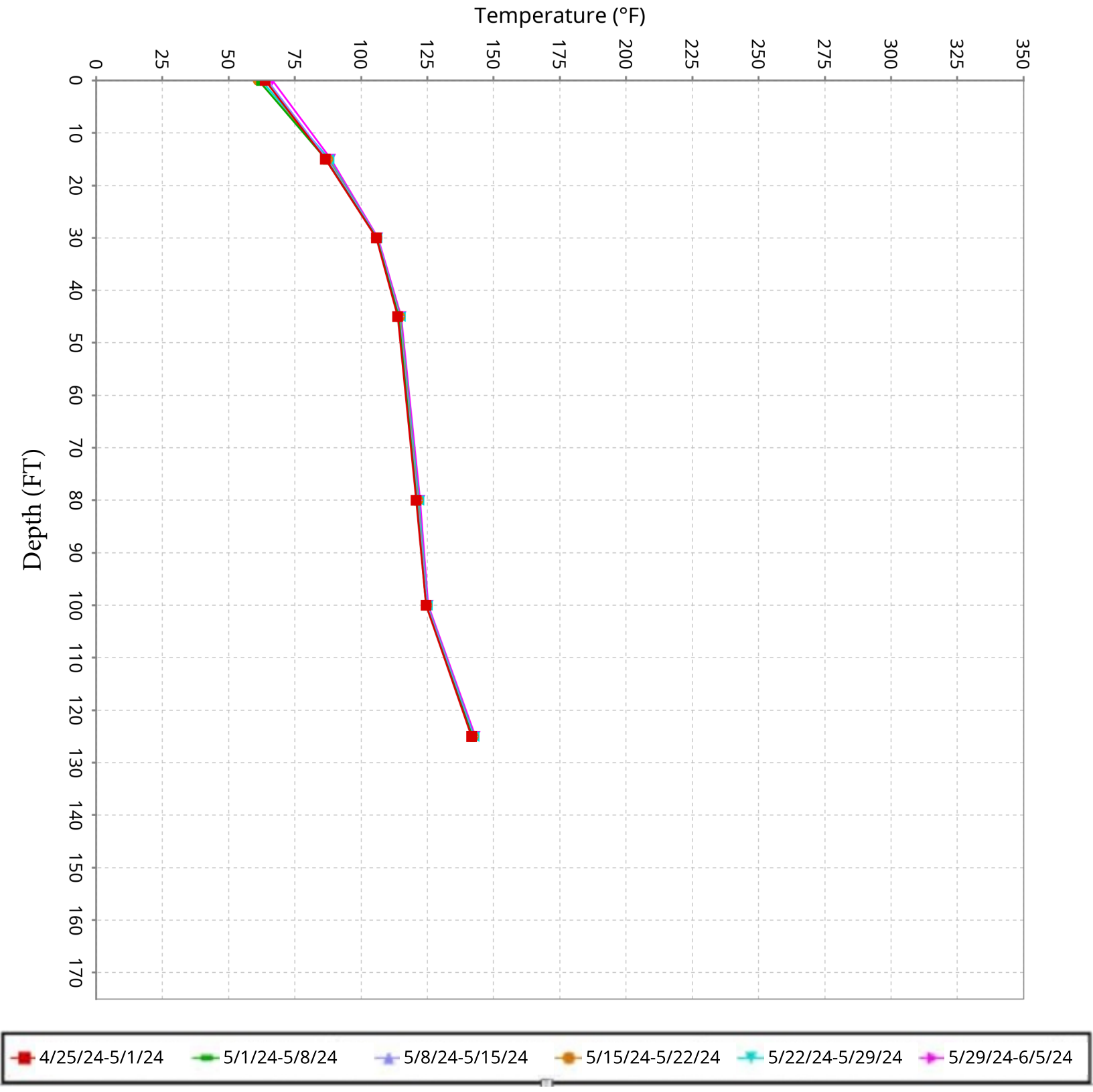


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024

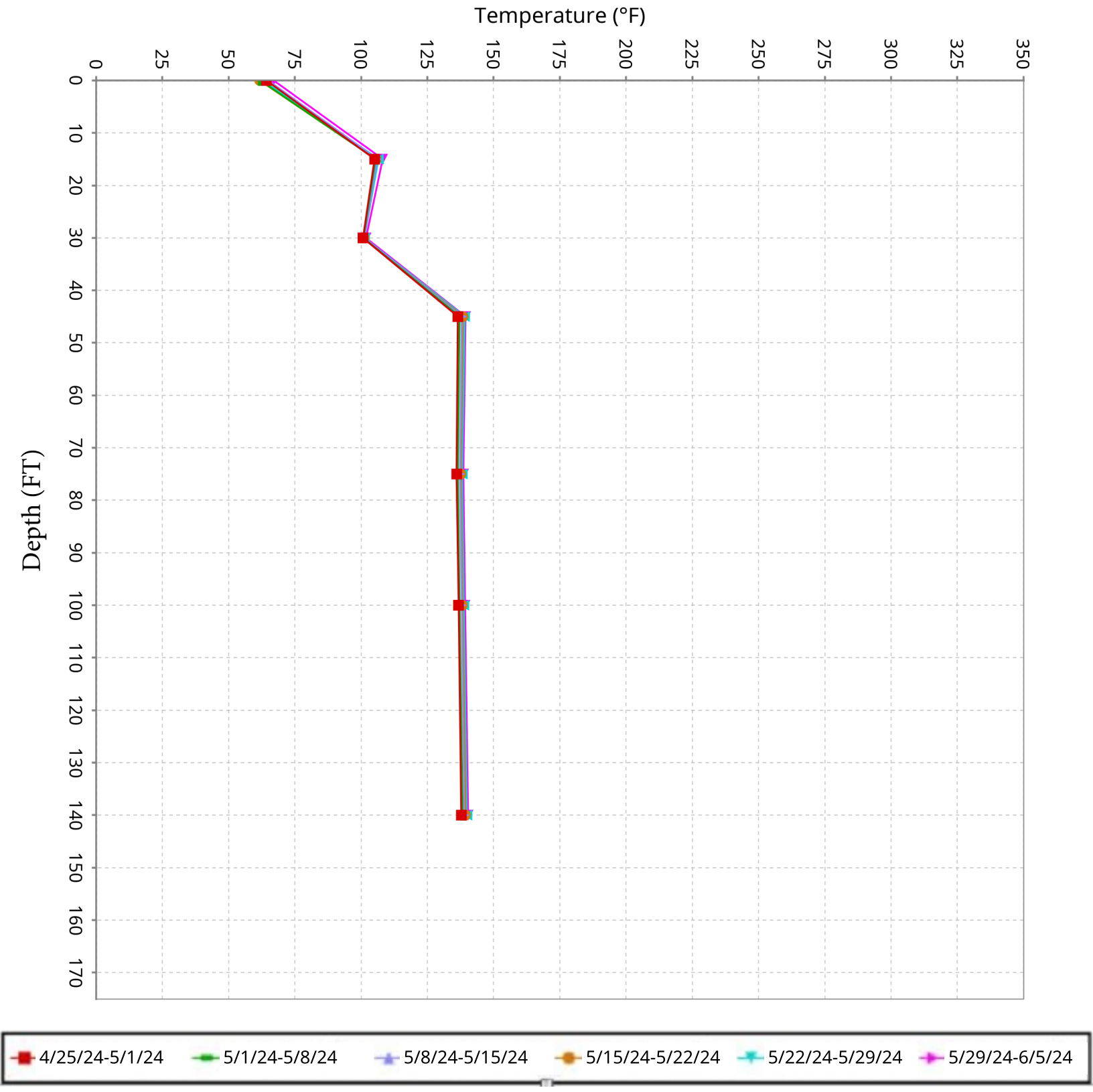


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024

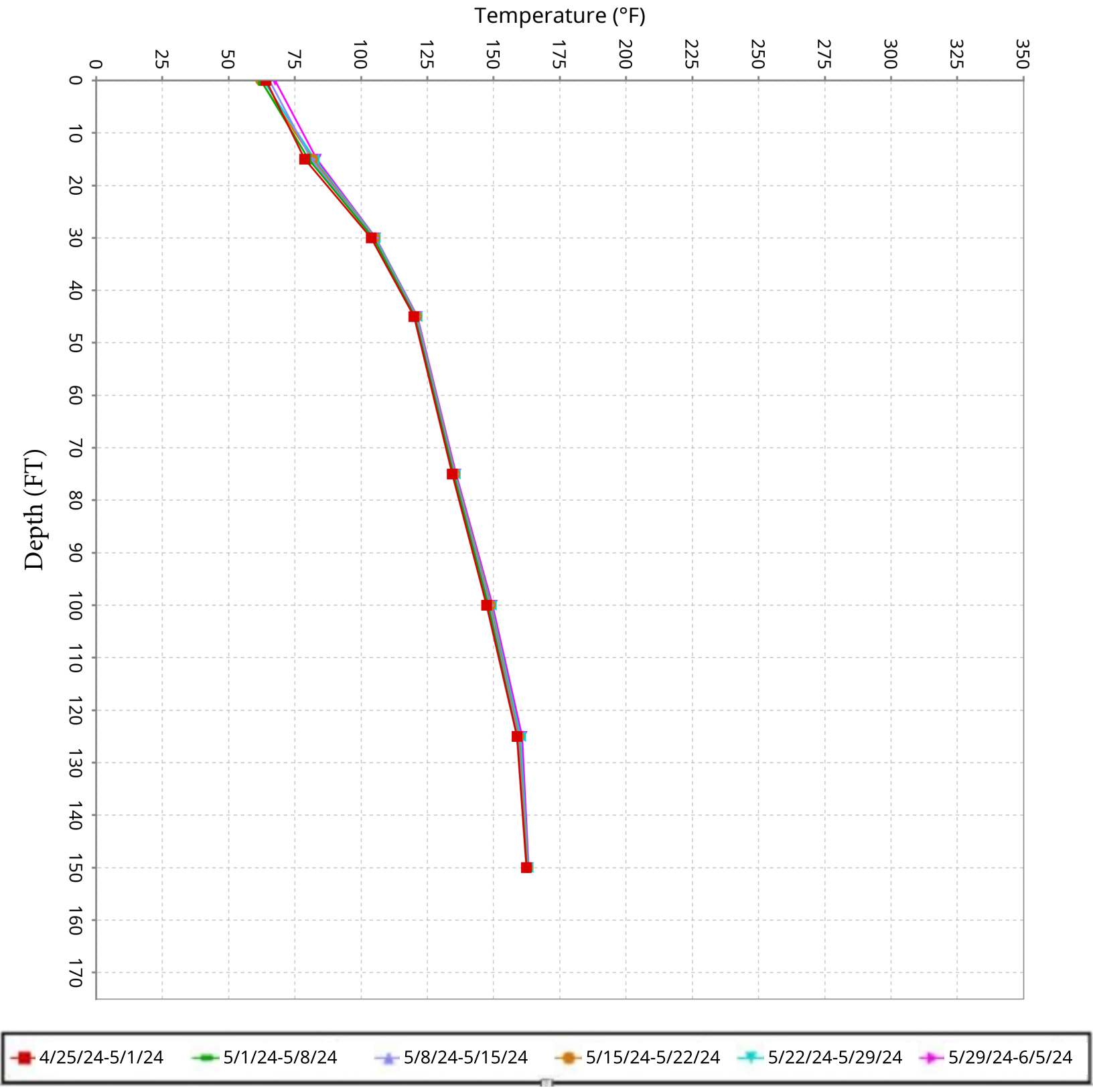


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024

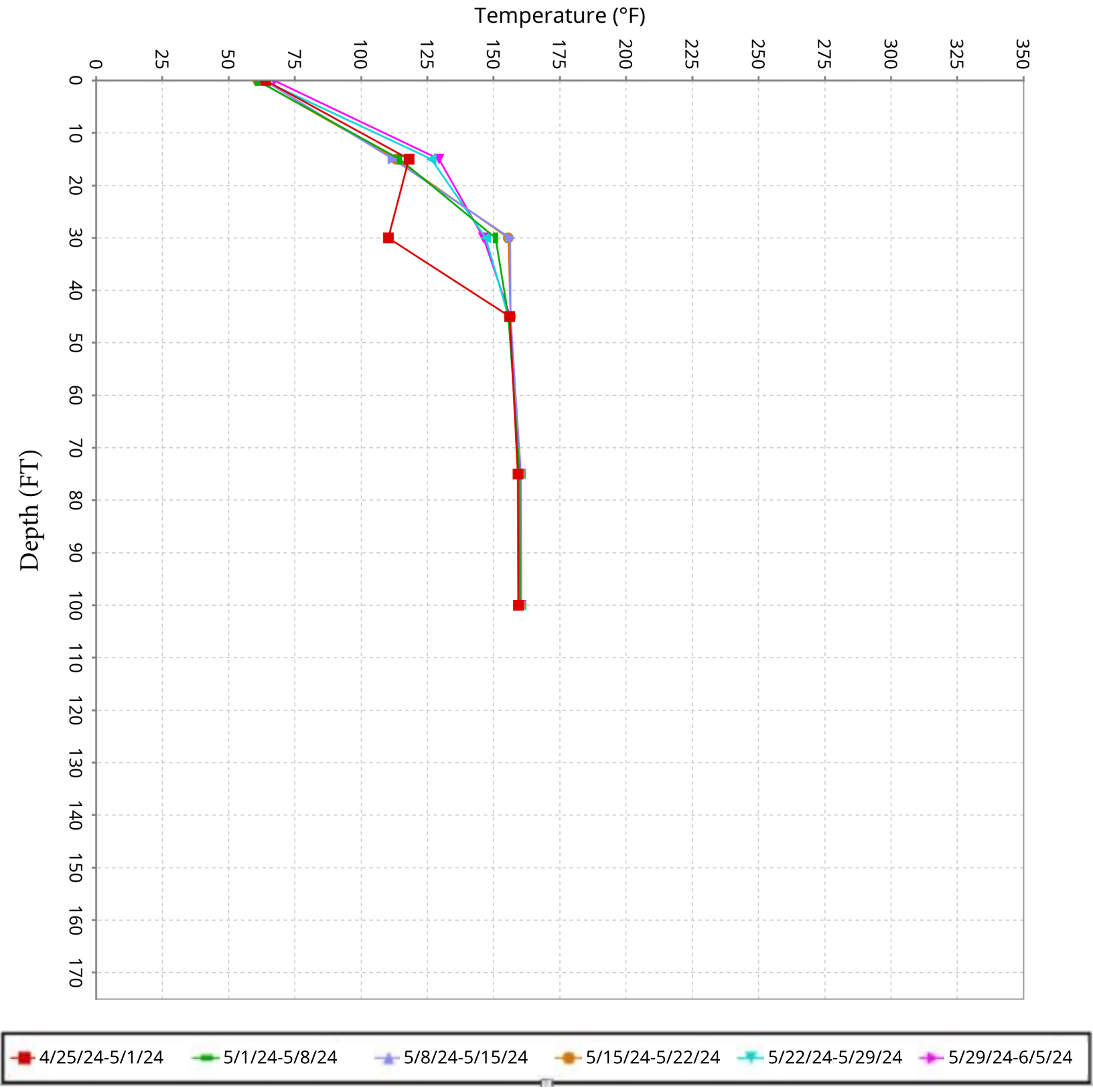


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

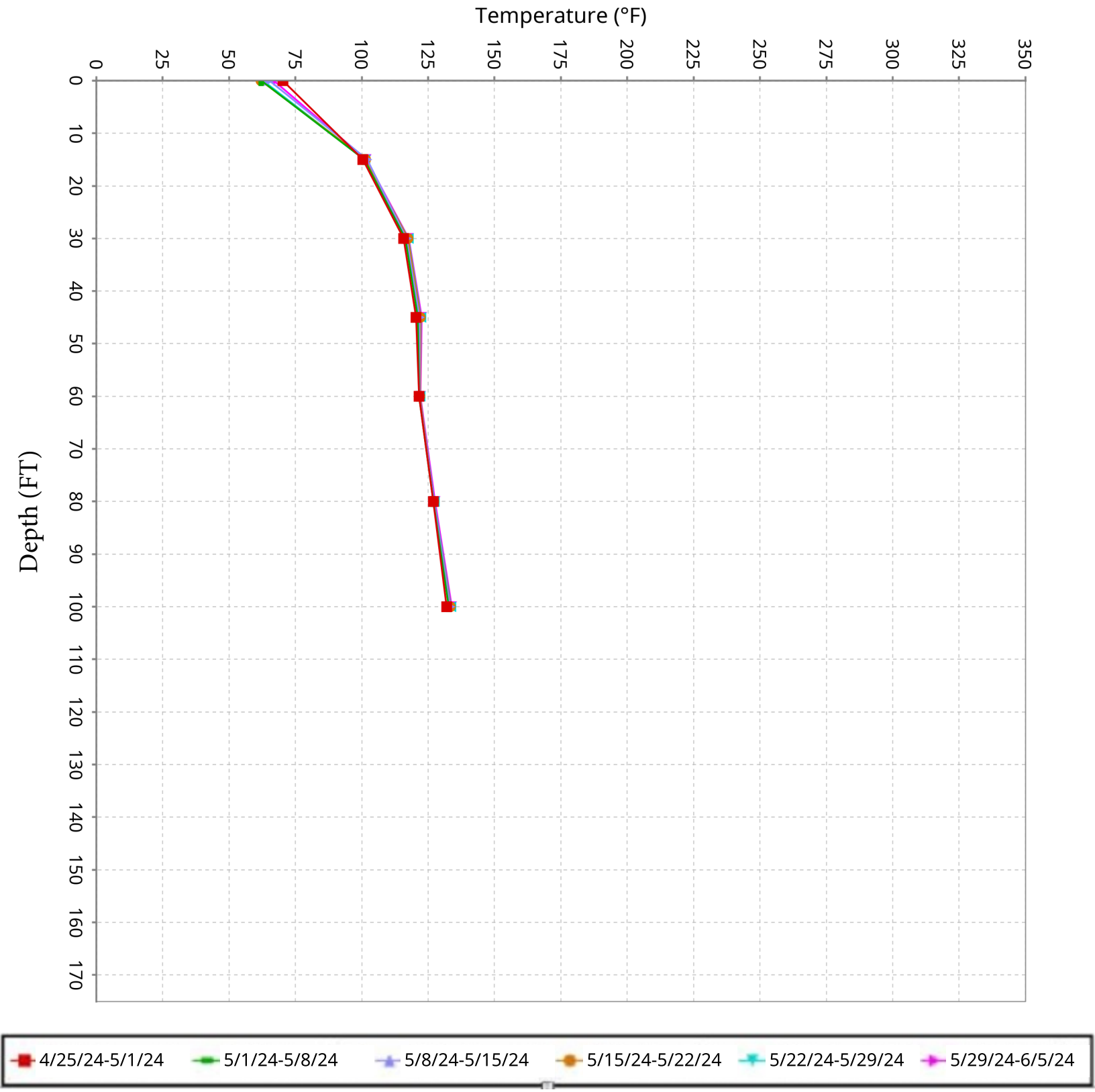
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

Average data for April 25, 2024 to June 5, 2024

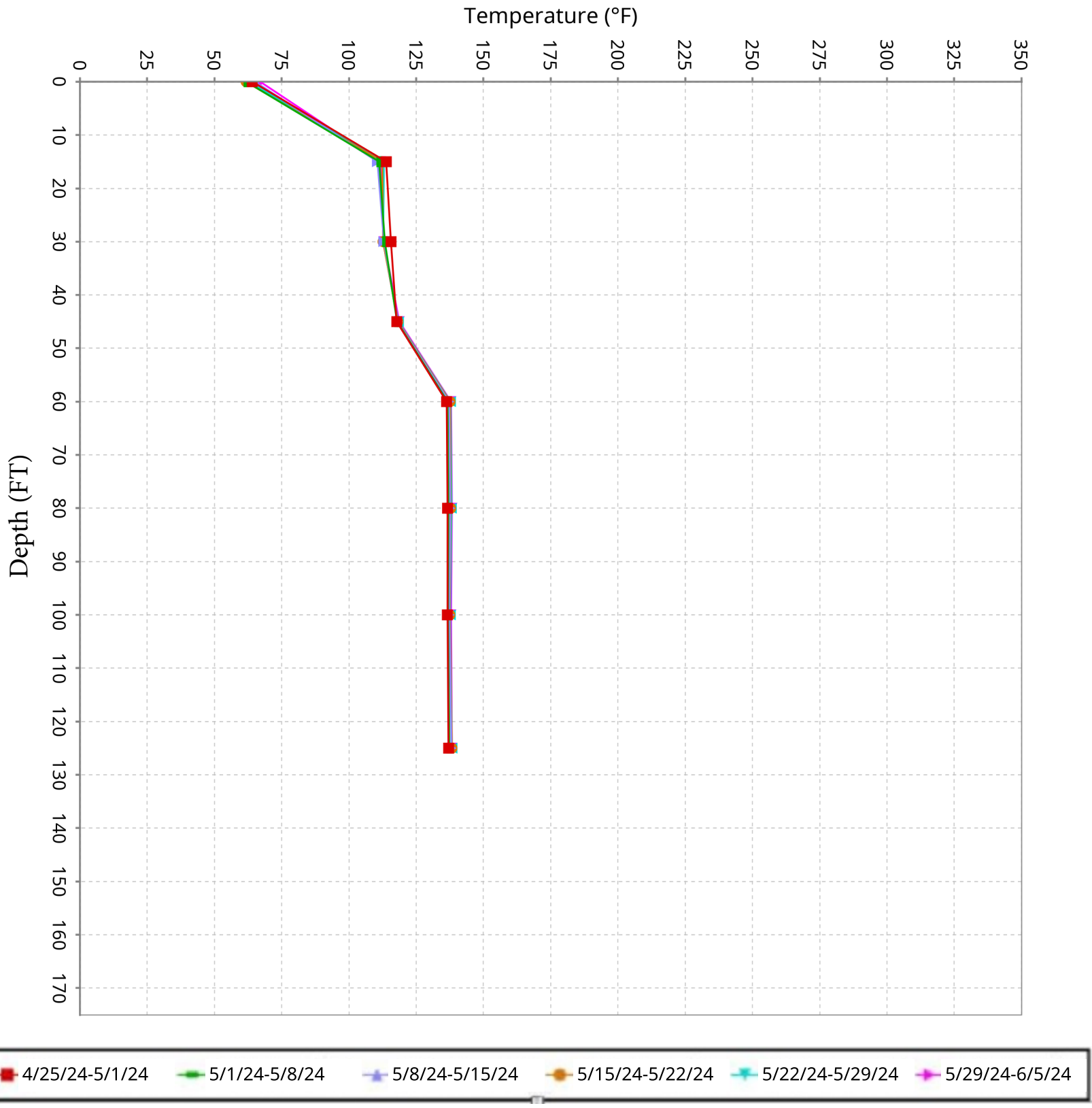


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024

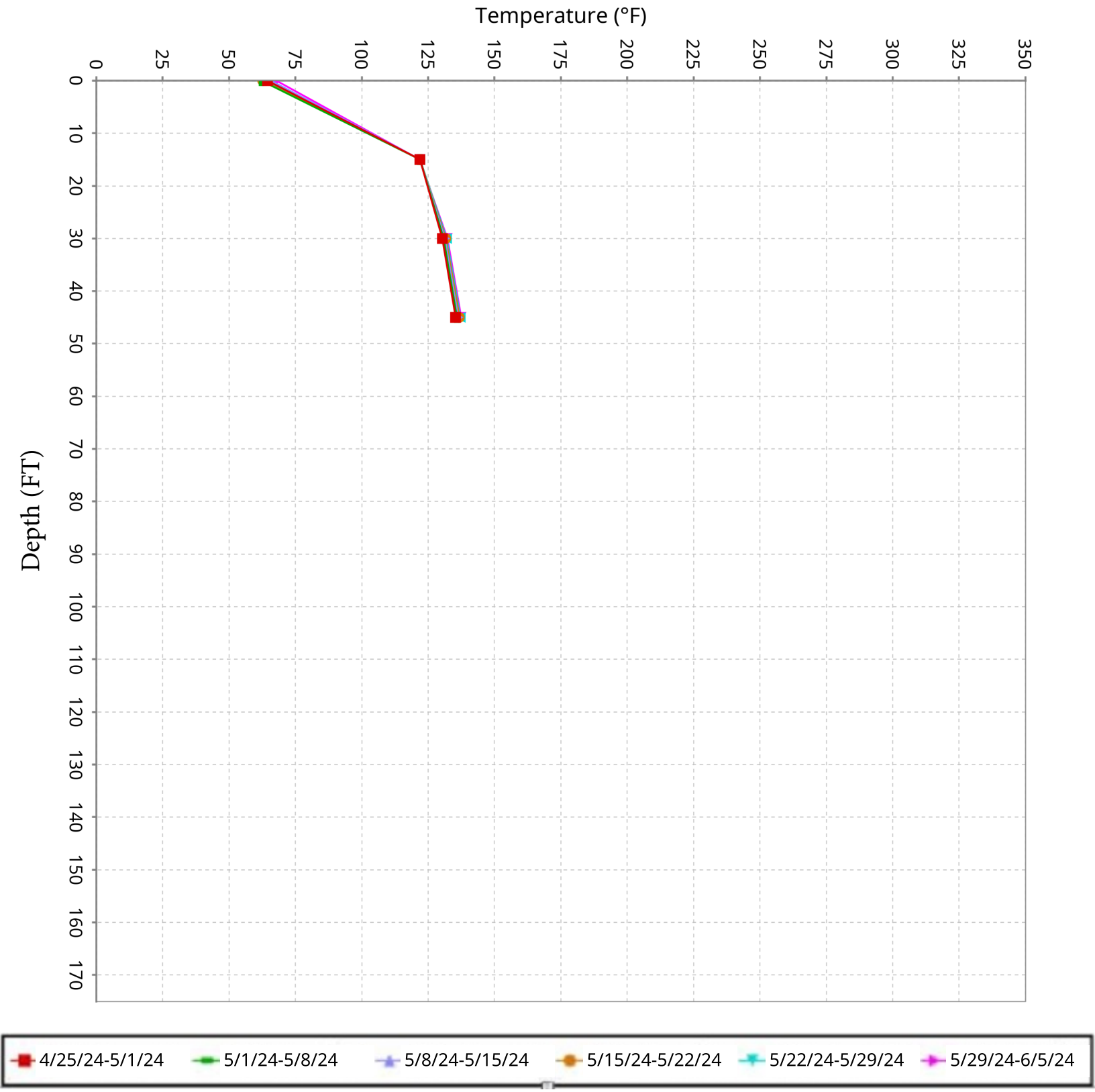


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

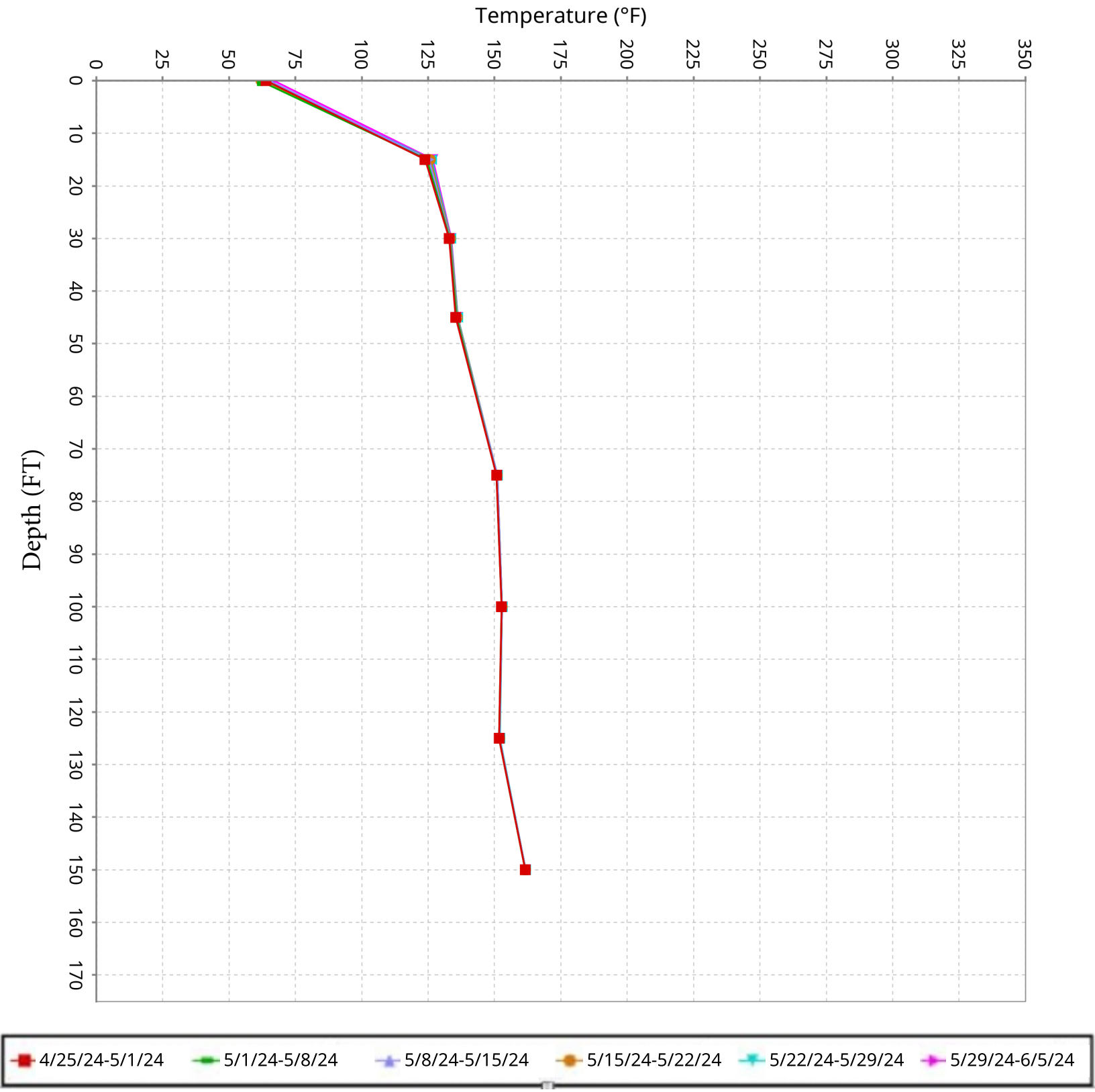
Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

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

Average data for April 25, 2024 to June 5, 2024

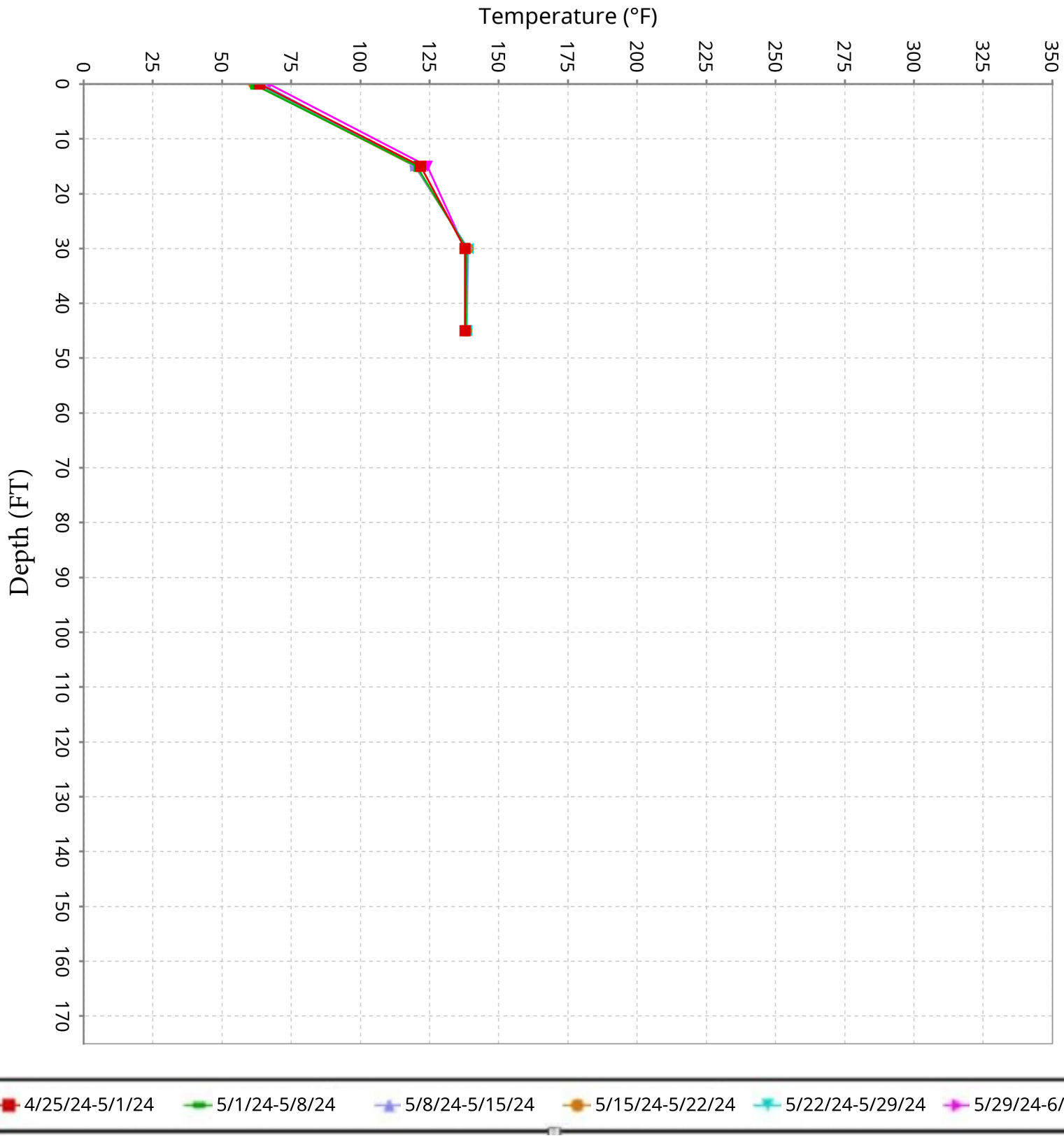


Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

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

Average data for April 25, 2024 to June 5, 2024



Note: Data represents the arithmetic mean of the available temperature readings for the specified date range.

SCS ENGINEERS

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **EXHIBIT C TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 am Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

July 5, 2024
File No. 01204123.21-13

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

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

Dear Mr. Chen:

In accordance with Condition Nos. 9a and 9b of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (Landfill or Facility) (Case No. 6177-4), the Reaction Committee has reviewed newly acquired applicable data recorded during the month of June 2024, considered revisions of the estimated extent of elevated temperature landfill (ETLF) conditions exhibited at the subject Facility (referred to as the "Reaction Area" limits), and has prepared this determination on potentially revising the Reaction Area map.

Attachment A presents the Drawing, titled "Reaction Area Map", prepared by SCS Engineers (SCS) and dated 7/2/24. The Drawing depicts the Reaction Area boundary as prescribed in Condition No. 9a, 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 estimated extent of ETLF conditions being experienced at the site based on the Reaction Committee's review of scientific data as a dashed magenta line.

The Reaction Committee reviewed the temperature measurements recorded during June 2024 by the in-situ temperature monitoring probes. Three (3) of the twenty (20) probes (TP-2, 3, and 9) are located within the estimated extent of ETLF conditions (dashed magenta line), and thirteen (13) probes are positioned adjacent to (within 200 feet) of this boundary. Similar to data recorded during the previous month, the temperatures recorded by the 13 probes outside of the boundary during June 2024 are not indicative of a subsurface reaction, and it is the Committee's opinion that they do not substantiate a decision to expand the boundary of the reaction area at this time.

The Reaction Committee also evaluated the concentration of hydrogen in landfill gas (LFG) during June 2024. Recall that certain wells positioned to the east of the reaction area boundary (where dewatering pumping was reactivated) had demonstrated some increased hydrogen content in the LFG during the Reaction Committee's review of the May 2024 data. The Reaction Committee had noted in its review of the May 2024 data that these wells did not exhibit elevated temperatures, such that there was no evidence of the increased heat that is typical with ETLF conditions present at these wells. The June 2024 data shows there are no vertical wells positioned outside the reaction area boundary exhibiting hydrogen concentrations over 2% (except for one well positioned to the north which is believed to be intercepting gas collected from within the reaction area by horizontal wells in close proximity). Similarly, none of the wells that exhibited some increased hydrogen content in the LFG in May demonstrated atypical heat present in June. Accordingly, the Reaction Committee reaffirms last month's determination to not adjust the boundary of the reaction area. The Reaction Committee will continue to monitor LFG hydrogen concentrations closely during future months.

As presented on the Drawing included as **Attachment A**, the estimated extent of ETLF conditions (dashed magenta line) is fully contained within the Reaction Area boundary decreed in the SOFA (solid black line). Because the ETLF conditions are fully contained within the Reaction Area boundary and have not expanded into a new cell, the Reaction Committee finds no basis to modify the Reaction Area boundary at this time. Please note the following:

- The rationale that would serve as the basis for considering adjustments and modifications to the Reaction Area boundary (or the determination to maintain the decreed boundary), include:

    - LFG wellhead temperatures in excess of approximately 160 degrees Fahrenheit.

    - Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH_4:CO_2) ratios less than 1.0.

    - The concentration of hydrogen (H_2) in the LFG measured greater than 2 percent by volume.

    - Accelerated settlement of the landfill surface, defined as approximately 6 inches or greater within a 60-day period, and cracks in landfill cover.

    - First-hand observations of Landfill and/or SCS engineering, construction, and operations and maintenance (O&M) field personnel who are on-site related to: 1) atypical excess leachate quantities (presence and quantity of liquids); 2) instances of pressurized liquids emitting from the landfill surface, from boreholes during drilling, and from LFG wells; and, 3) the characteristics of the odors originating from the select areas of the waste footprint (often described as “chemical-like” and distinctly different from typical LFG or landfill working face odors).

    - Observations of subsurface waste conditions and characteristics as noted on borehole drilling logs for recently installed new wells and/or probes.

    - Subsurface temperatures recorded at the in-situ waste temperature probes during June 2024.

There was no dissenting opinion among the Reaction Committee members regarding this monthly determination. Supporting data is presented on the Drawing included as **Attachment A.** The maximum temperature measurements recorded at the 20 in-situ waste temperature monitoring probes during June are presented in **Attachment B** in graphical format. The electronic database and recordkeeping platform enables these measurements to be downloaded into a tabular spreadsheet format, which can be submitted to the South Coast Air Quality Management District under separate cover, if requested.

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

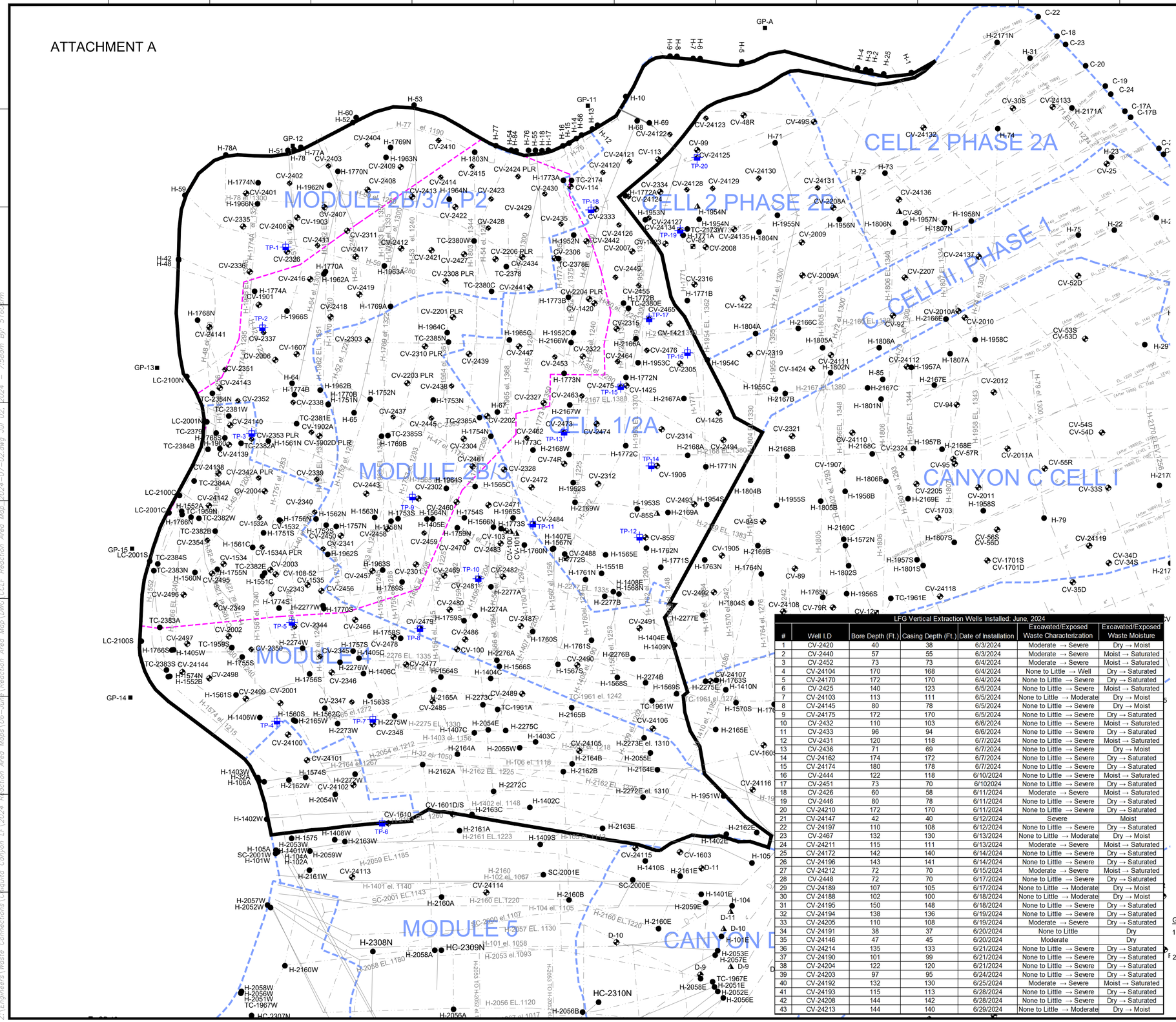
RED/PSS

cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD
Pablo Sanchez Soria, PhD, CIH, CTEH
Neal Bolton, PE, Blue Ridge Services, Inc.
Richard Pleus, PhD, Intertox
Srividhya Viswanathan, PE, SCS Engineers

Enclosure:

Attachment A – Reaction Area Map
Attachment B – In-Situ Waste Temperature Monitoring Probe Data

ATTACHMENT A



N

GRAPHIC SCALE

150 75 0 150 300 450

SCALE: 1"=150'

LEGEND

- EXISTING CELL LIMITS (APPROXIMATE)
- CV-XX EXISTING VERTICAL WELLS
- CV-XX PLR EXISTING VERTICAL WELL - PRESSURIZED LEACHATE RELEASE
- CV-XX EXISTING VERTICAL WELLS BELOW-GRADE
- H-XX EXISTING HORIZONTAL WELLS
- CV-XX EXISTING REMOTE VERTICAL WELLHEAD
- GP-XX EXISTING PERIMETER MIGRATION PROBE
- TP-XX EXISTING TEMPERATURE PROBE
- EXISTING HORIZONTAL COLLECTOR - SOLID
- EXISTING HORIZONTAL COLLECTOR - PERFORATED
- EXISTING HISTORIC HORIZONTAL COLLECTOR
- REACTION AREA BOUNDARY (APPROXIMATE) - BASED ON DATA REVIEW
- REACTION AREA BOUNDARY - CONDITION 9A

LFG Vertical Extraction Wells Installed: June, 2024

#	Well I.D	Bore Depth (Ft.)	Casing Depth (Ft.)	Date of Installation	Excavated/Exposed Waste Characterization	Excavated/Exposed Waste Moisture
1	CV-2420	40	38	6/3/2024	Moderate → Severe	Dry → Moist
2	CV-2440	57	55	6/3/2024	Moderate → Severe	Moist → Saturated
3	CV-2452	73	73	6/4/2024	Moderate → Severe	Moist → Saturated
4	CV-24104	170	168	6/4/2024	None to Little → Well	Dry → Saturated
5	CV-24170	172	170	6/4/2024	None to Little → Severe	Dry → Saturated
6	CV-2425	140	123	6/5/2024	None to Little → Severe	Moist → Saturated
7	CV-24103	113	111	6/5/2024	None to Little → Moderate	Dry → Moist
8	CV-24145	80	78	6/5/2024	None to Little → Severe	Dry → Moist
9	CV-24175	172	170	6/5/2024	None to Little → Severe	Dry → Saturated
10	CV-2432	110	103	6/6/2024	None to Little → Severe	Moist → Saturated
11	CV-2433	96	94	6/6/2024	None to Little → Severe	Dry → Saturated
12	CV-2431	120	118	6/7/2024	None to Little → Severe	Moist → Saturated
13	CV-2436	71	69	6/7/2024	None to Little → Severe	Dry → Moist
14	CV-24162	174	172	6/7/2024	None to Little → Severe	Dry → Saturated
15	CV-24174	180	178	6/7/2024	None to Little → Severe	Dry → Saturated
16	CV-2444	122	118	6/10/2024	None to Little → Severe	Moist → Saturated
17	CV-2451	73	70	6/10/2024	None to Little → Severe	Dry → Saturated
18	CV-2426	60	58	6/11/2024	Moderate → Severe	Moist → Saturated
19	CV-2446	80	78	6/11/2024	None to Little → Severe	Dry → Saturated
20	CV-24210	172	170	6/11/2024	None to Little → Severe	Dry → Saturated
21	CV-24147	42	40	6/12/2024	Severe	Moist
22	CV-24197	110	108	6/12/2024	None to Little → Severe	Dry → Saturated
23	CV-2467	132	130	6/13/2024	None to Little → Moderate	Dry → Moist
24	CV-24211	115	111	6/13/2024	Moderate → Severe	Moist → Saturated
25	CV-24172	142	140	6/14/2024	None to Little → Severe	Dry → Saturated
26	CV-24196	143	141	6/14/2024	None to Little → Severe	Dry → Saturated
27	CV-24212	72	70	6/15/2024	Moderate → Severe	Moist → Saturated
28	CV-2448	72	70	6/17/2024	None to Little → Severe	Dry → Saturated
29	CV-24189	107	105	6/17/2024	None to Little → Moderate	Dry → Moist
30	CV-24188	102	100	6/18/2024	None to Little → Moderate	Dry → Moist
31	CV-24195	150	148	6/18/2024	None to Little → Severe	Dry → Saturated
32	CV-24194	138	136	6/19/2024	None to Little → Severe	Dry → Saturated
33	CV-24205	110	108	6/19/2024	Moderate → Severe	Dry → Saturated
34	CV-24191	38	37	6/20/2024	None to Little	Dry
35	CV-24146	47	45	6/20/2024	Moderate	Dry
36	CV-24214	135	133	6/21/2024	None to Little → Severe	Dry → Saturated
37	CV-24190	101	99	6/21/2024	None to Little → Severe	Dry → Saturated
38	CV-24204	122	120	6/21/2024	None to Little → Severe	Dry → Saturated
39	CV-24203	97	95	6/24/2024	None to Little → Severe	Dry → Saturated
40	CV-24192	132	130	6/25/2024	Moderate → Severe	Moist → Saturated
41	CV-24193	115	113	6/28/2024	None to Little → Severe	Dry → Saturated
42	CV-24208	144	142	6/28/2024	None to Little → Severe	Dry → Saturated
43	CV-24213	144	140	6/29/2024	None to Little → Moderate	Dry → Moist

GENERAL DRAWING NOTES:

1. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
2. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE

REVISION

NO.

SHEET TITLE: REACTION AREA MAP JUNE, 2024

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

ACAD FILE: ENGINEERS
DWN. BY: SRM/JH
CHK. BY: JH/WCH
APP. BY: WCH
PROJ. NO. 01204123.35
DSN. BY: -

DATE: 07/02/2024

SCALE: AS SHOWN

SHEET: 1

Solid Waste Borehole Maximum Temperature Profiles Over 6 Weeks

for May 23, 2024 to July 3, 2024

From June 27, 2024, through July 3, 2024, all temperatures recorded and presented herein have stayed stable with previous week temperatures with no sensors showing major increases or decreases in temperature within the landfill and no sensors having any anomalies, outliers, data gaps, or malfunctions. There were no recorded temperature increases in the TMP field of 20°F or greater within 48 hours or 10°F increased in a week.

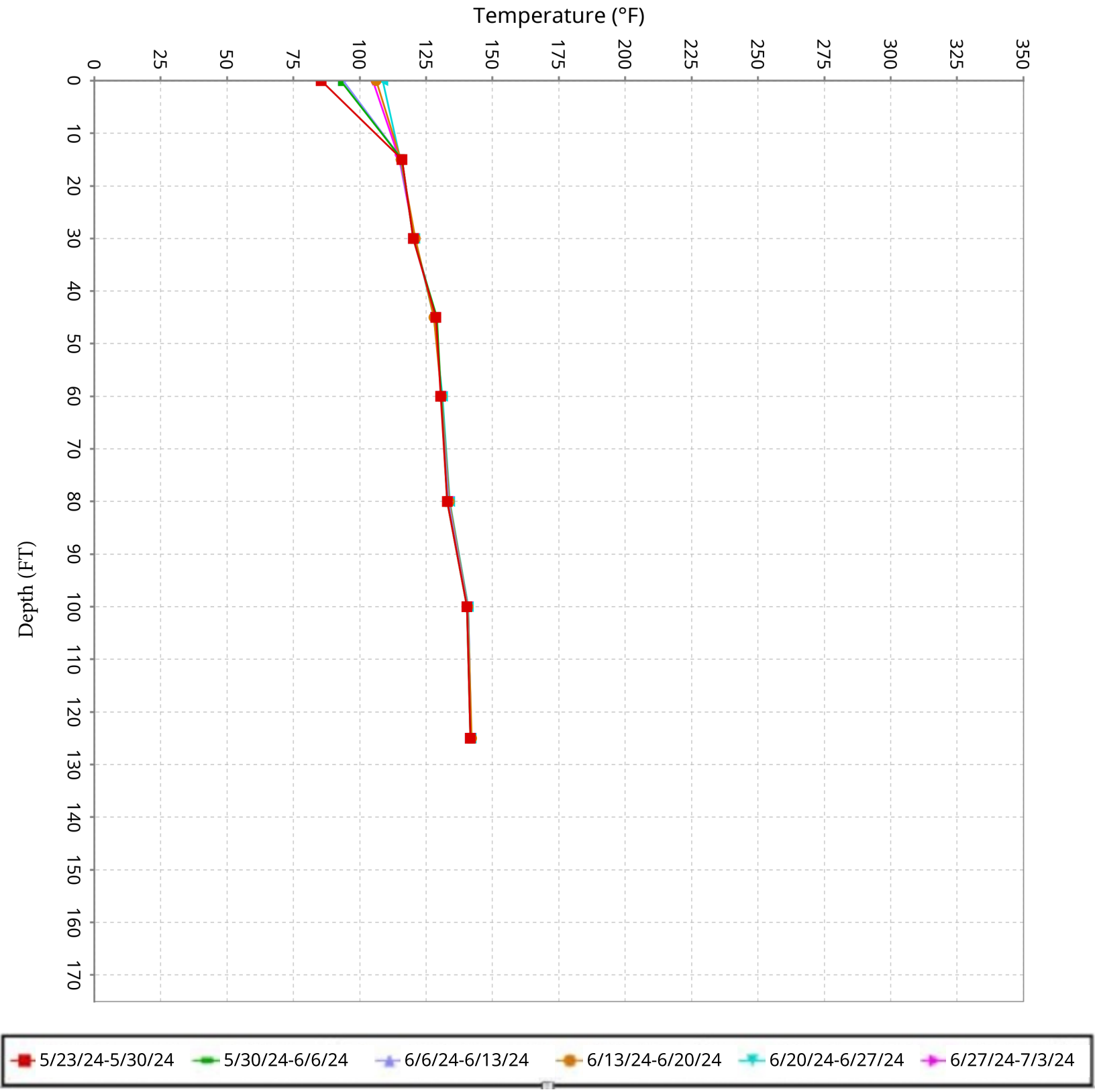
SCS ENGINEERS

07224053.00 | July 3, 2024

274 Granite Run Drive
Lancaster, PA 17601
717-550-6330

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

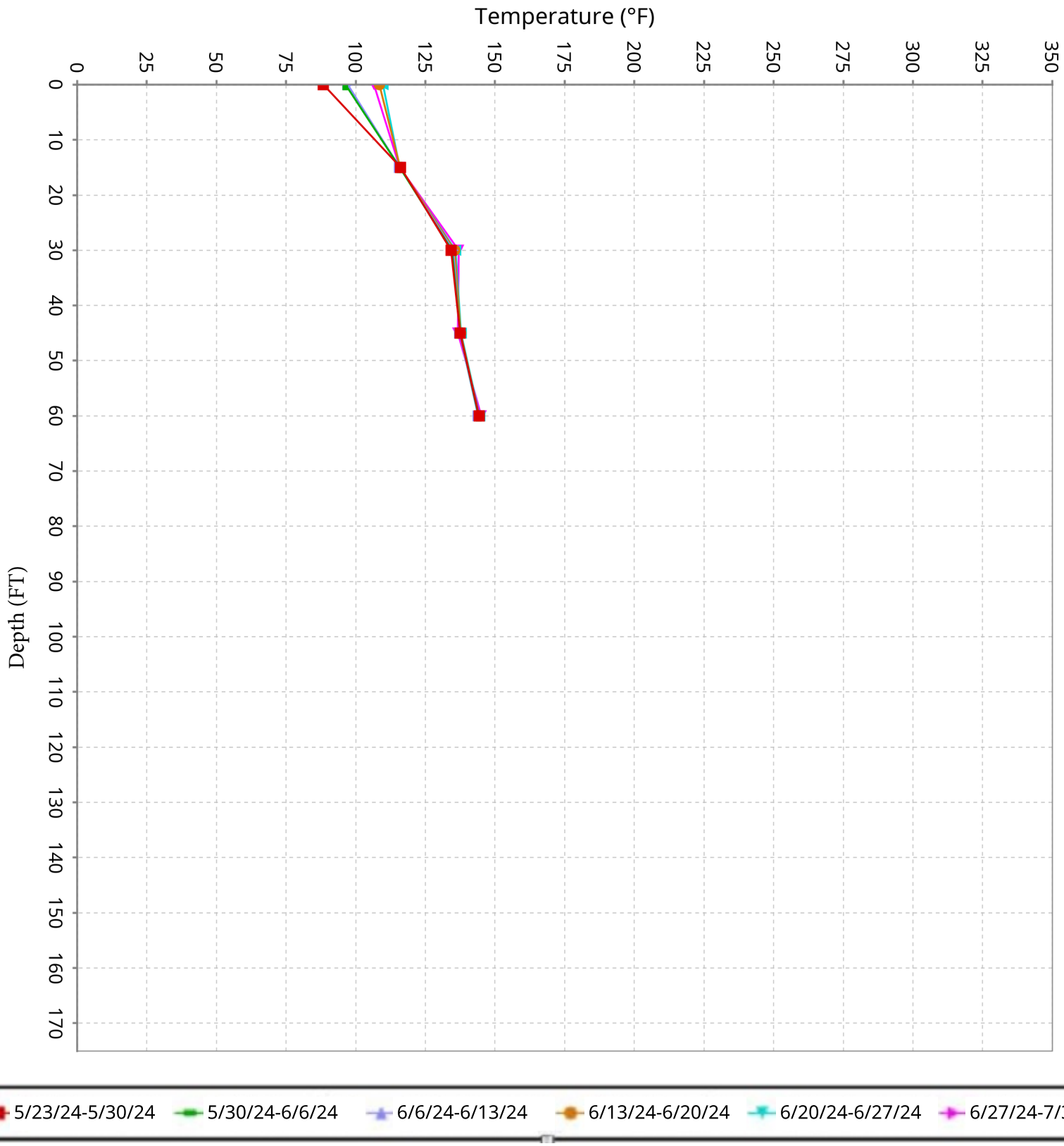
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

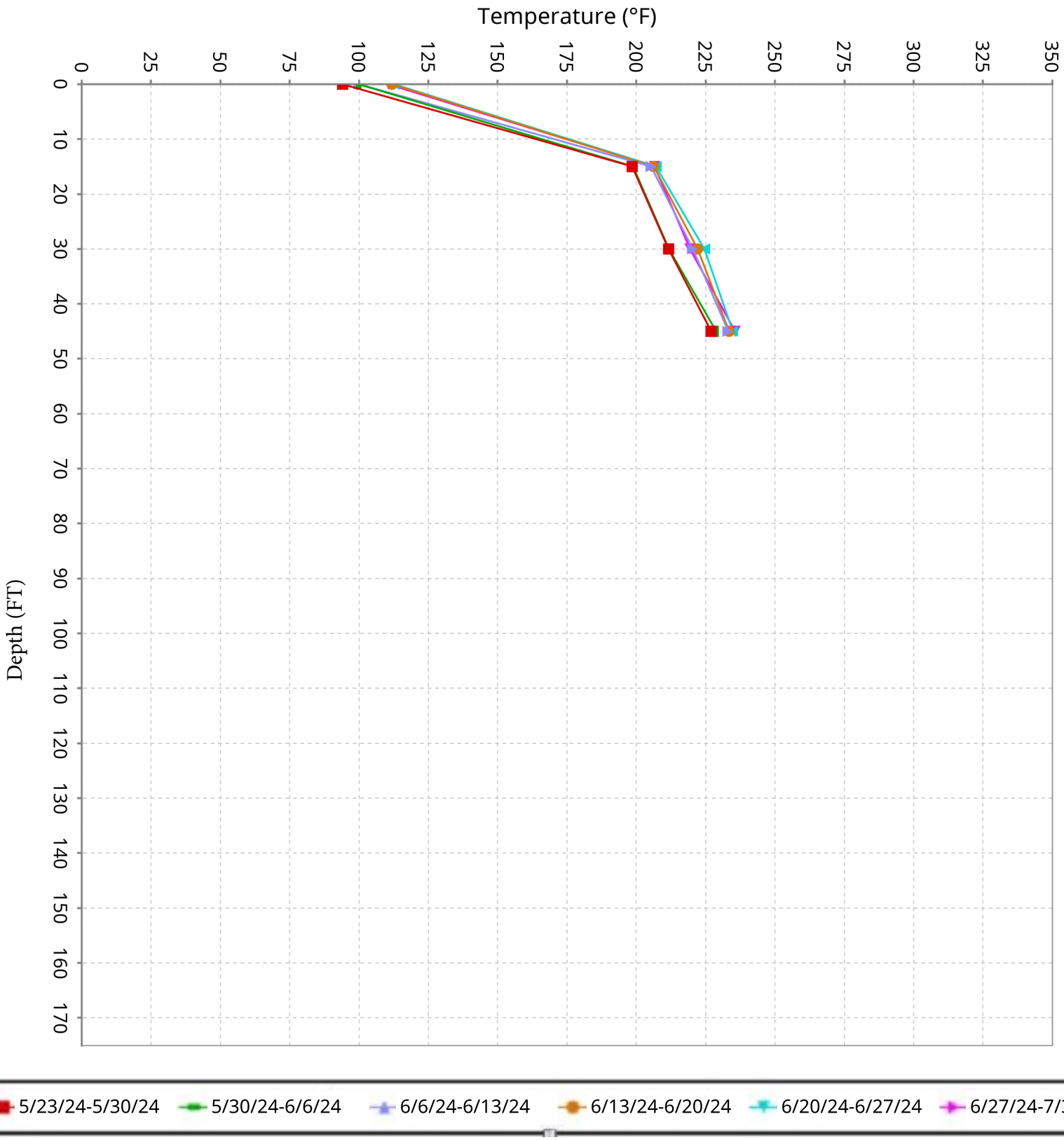
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

Maximum data for May 23, 2024 to July 3, 2024



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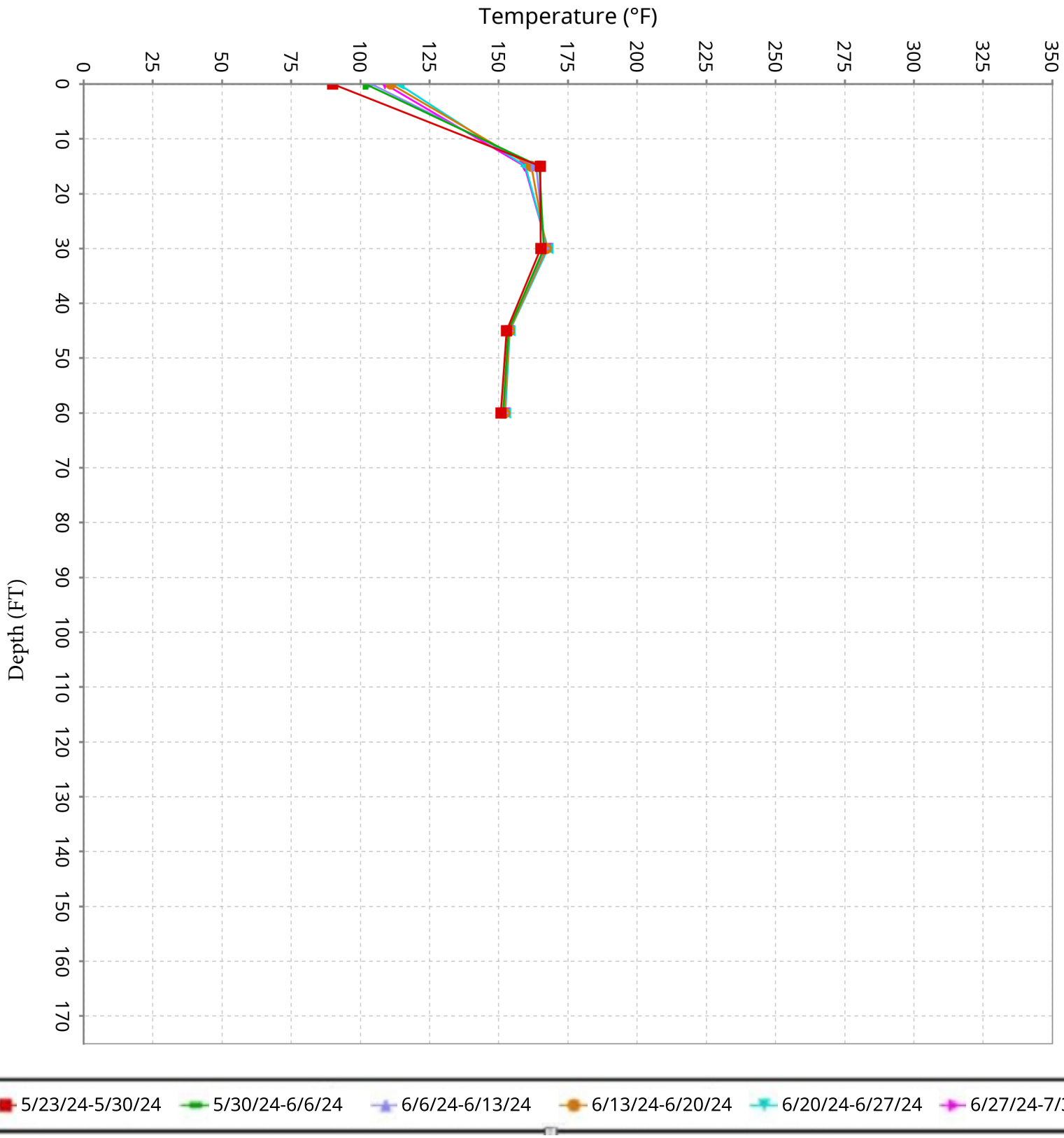
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-4

Maximum data for May 23, 2024 to July 3, 2024



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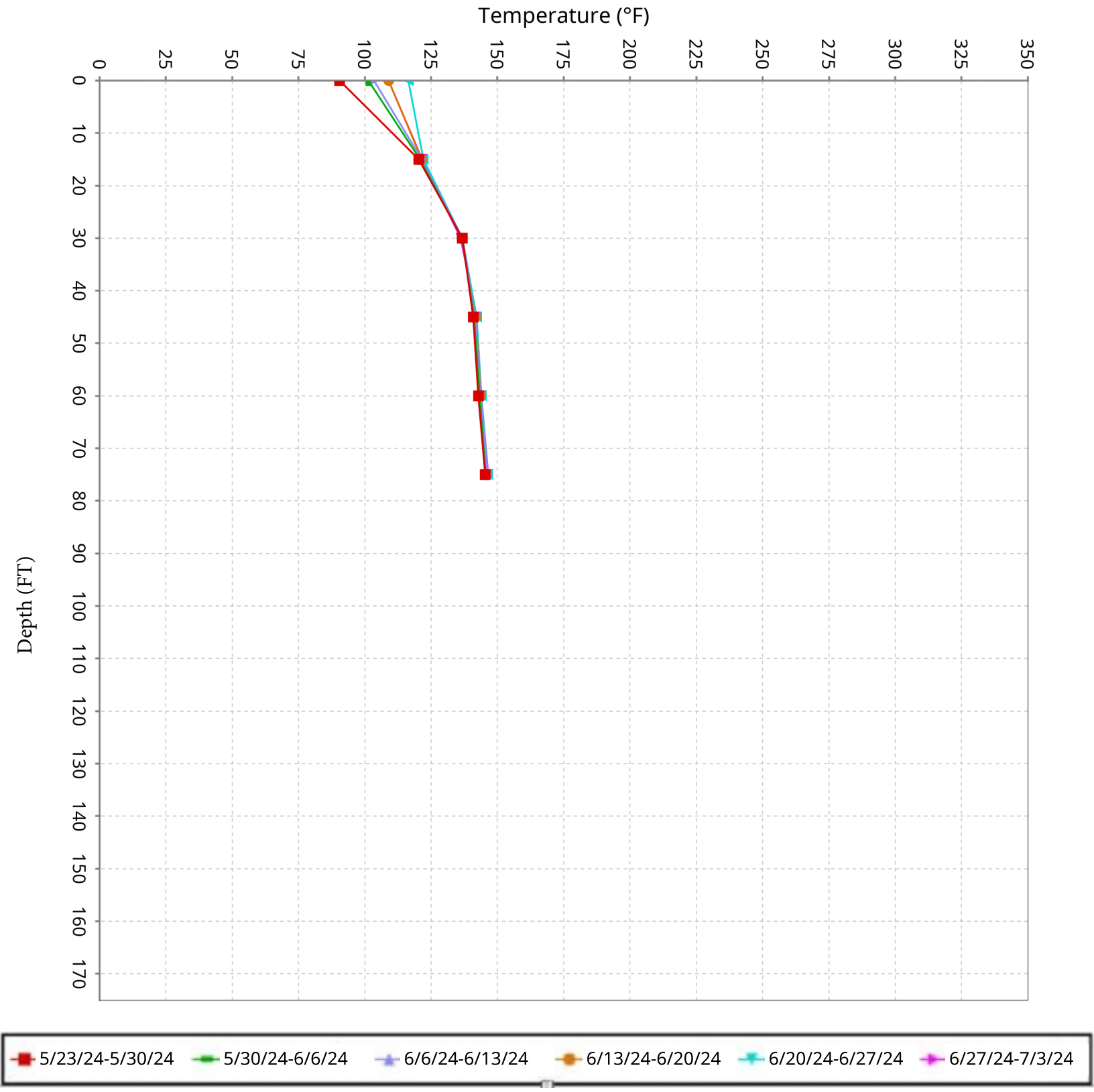
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-5

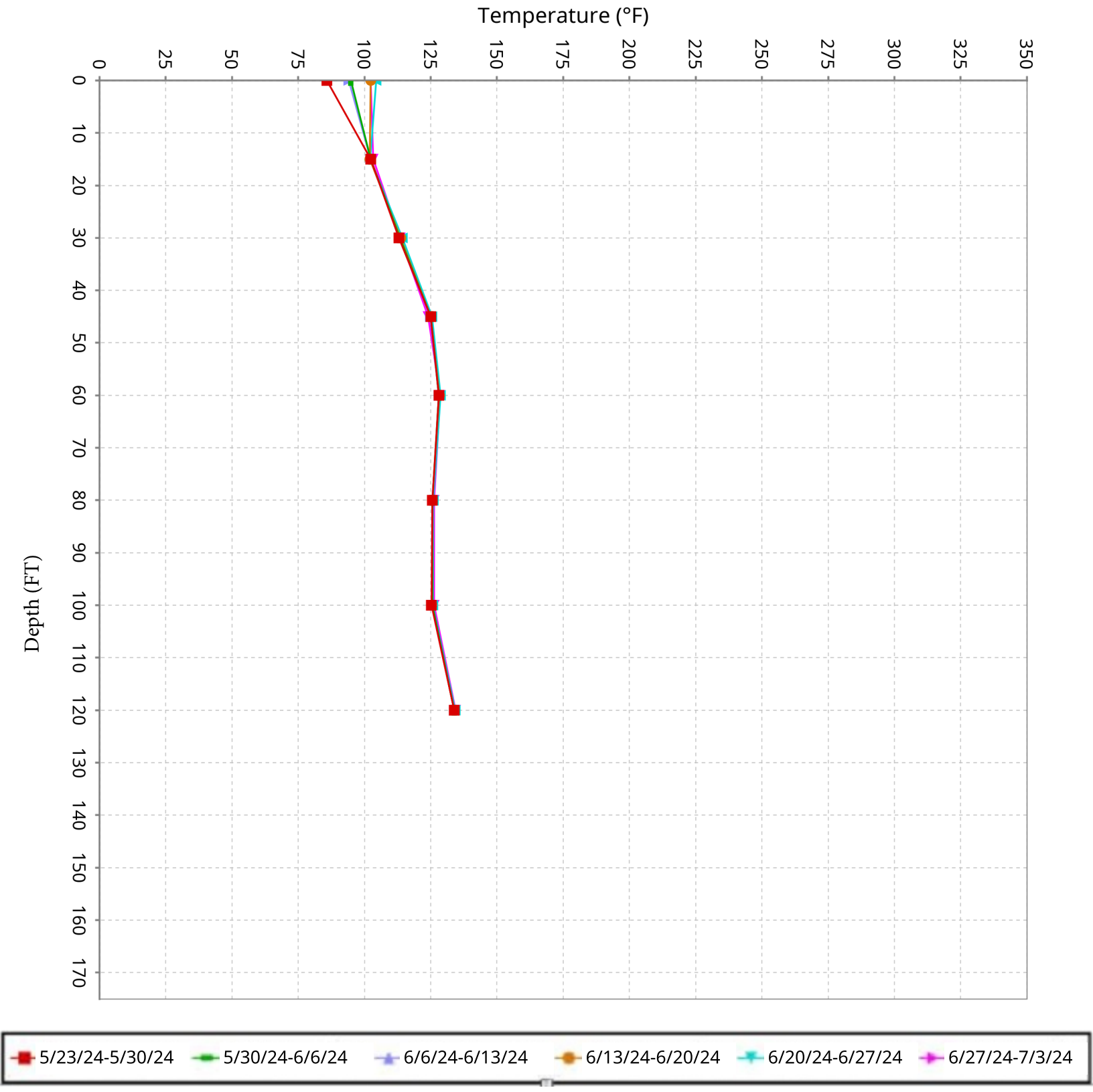
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

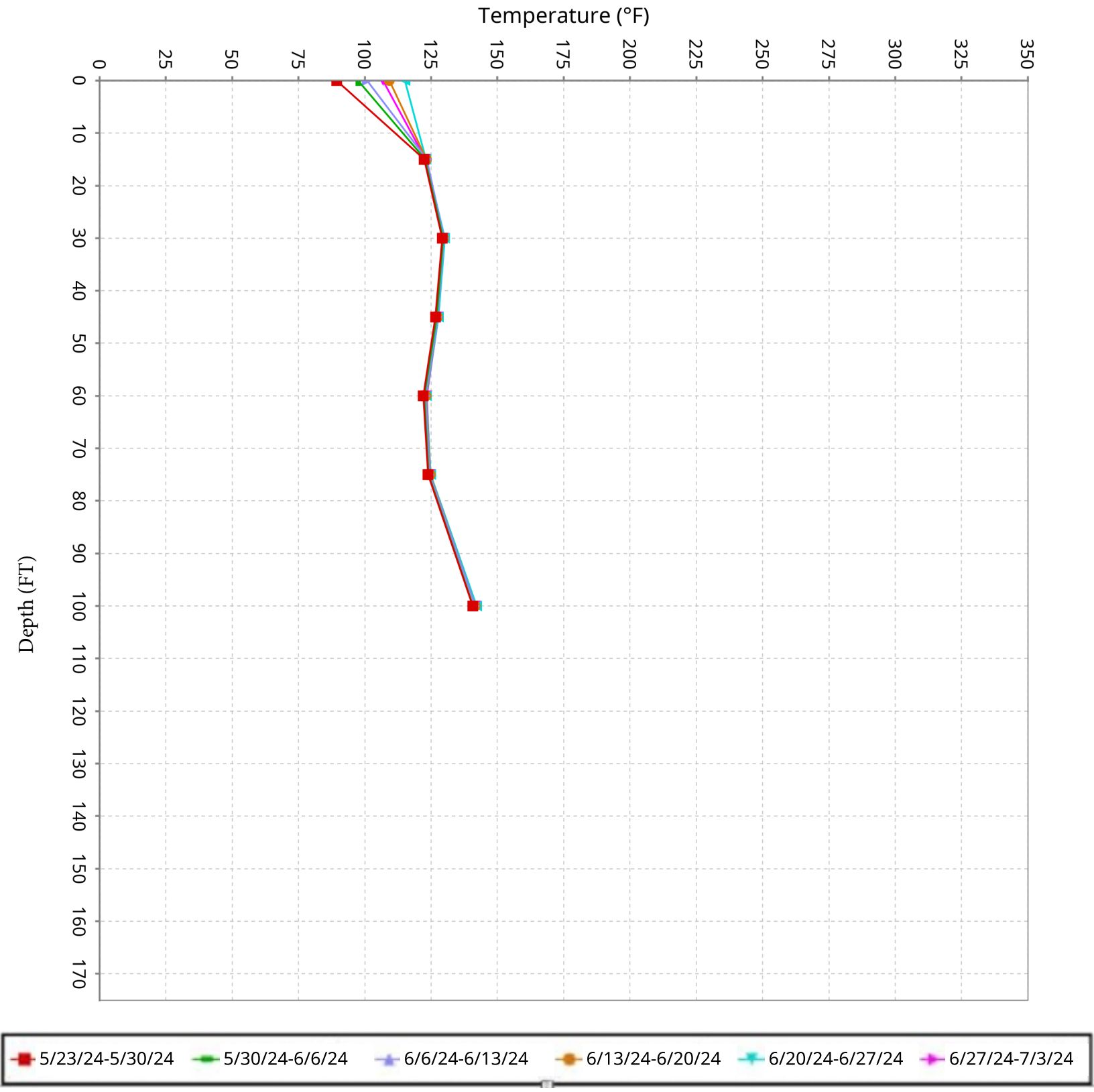
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

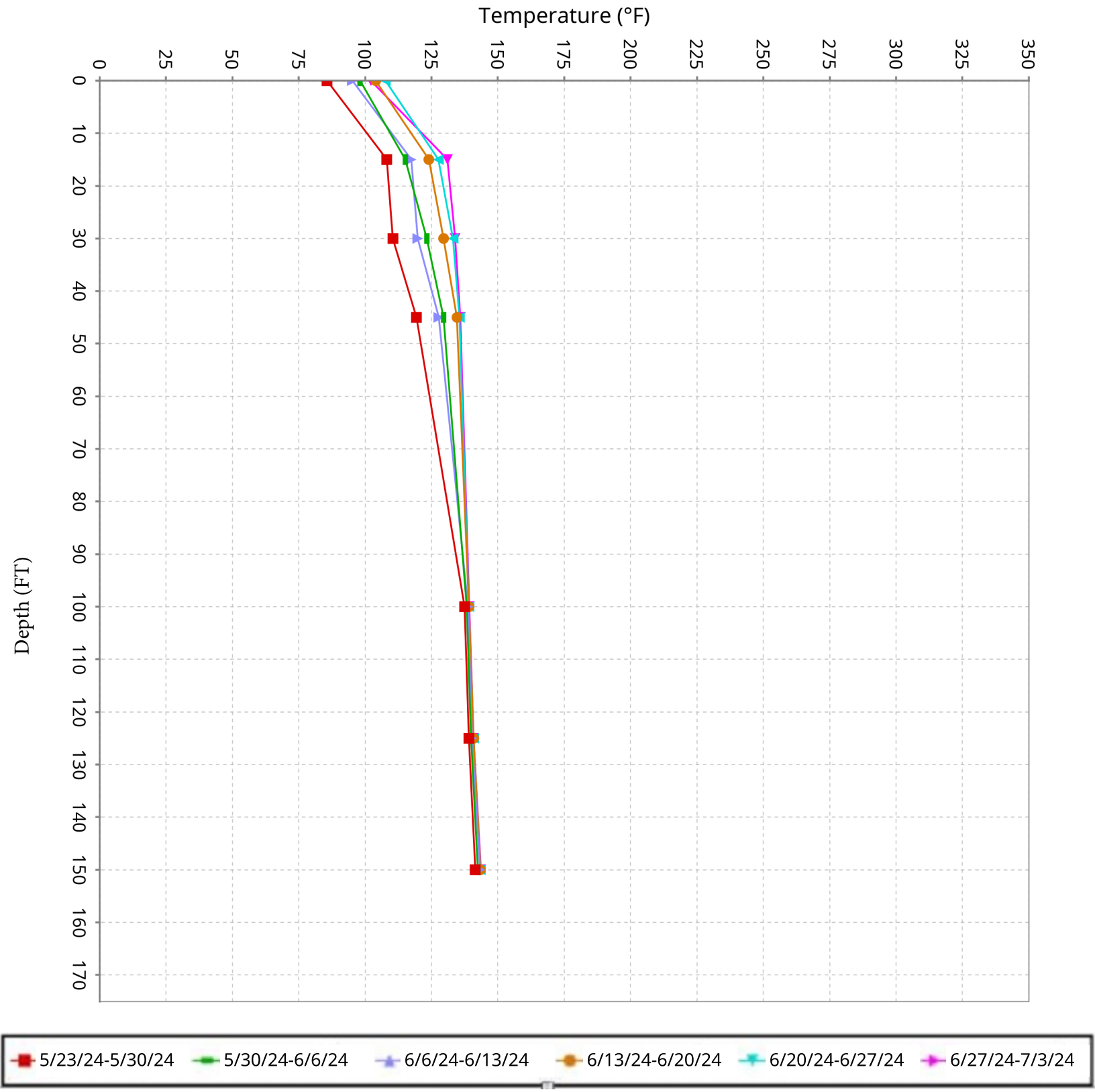
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

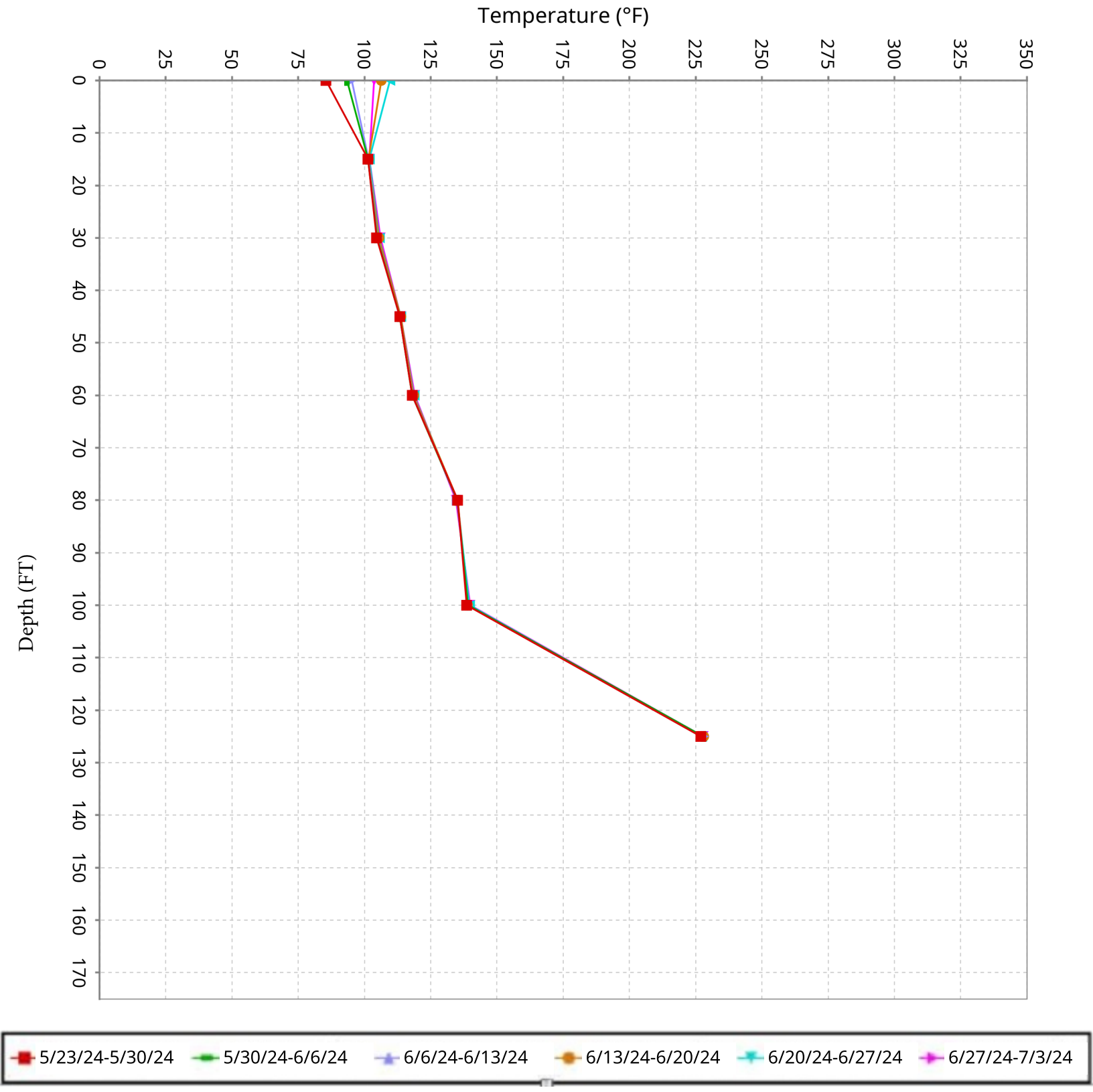
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

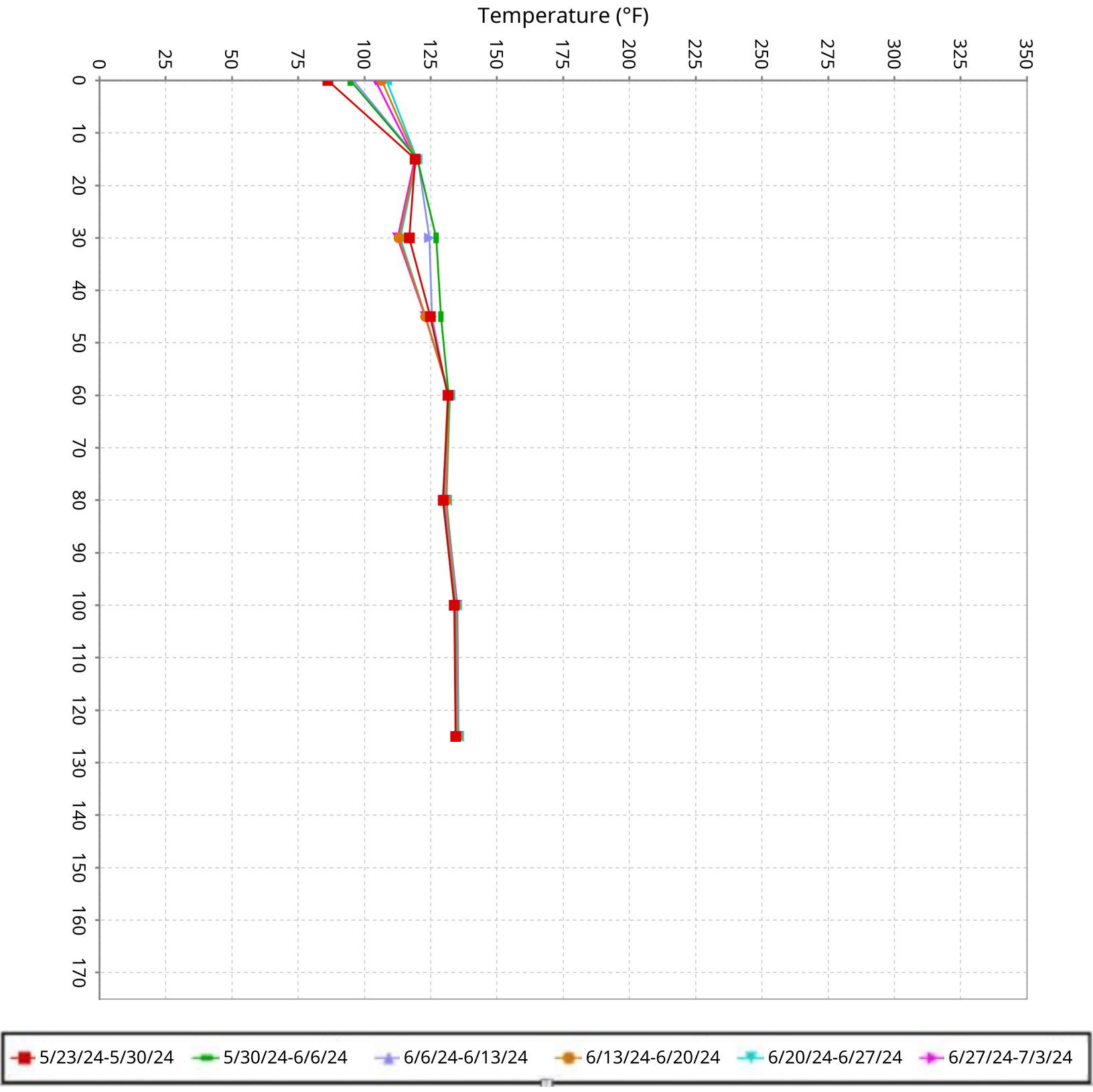
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

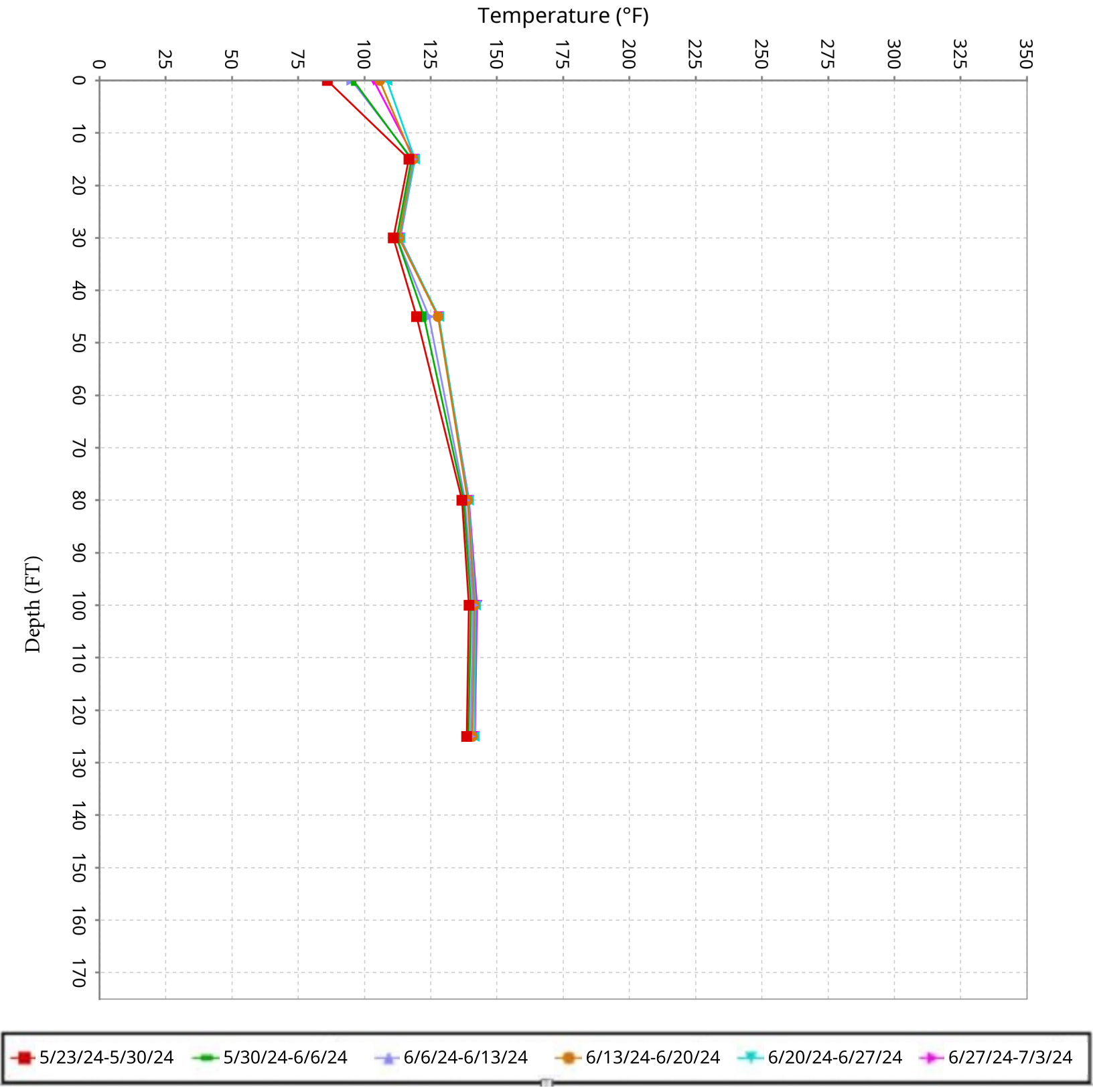
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

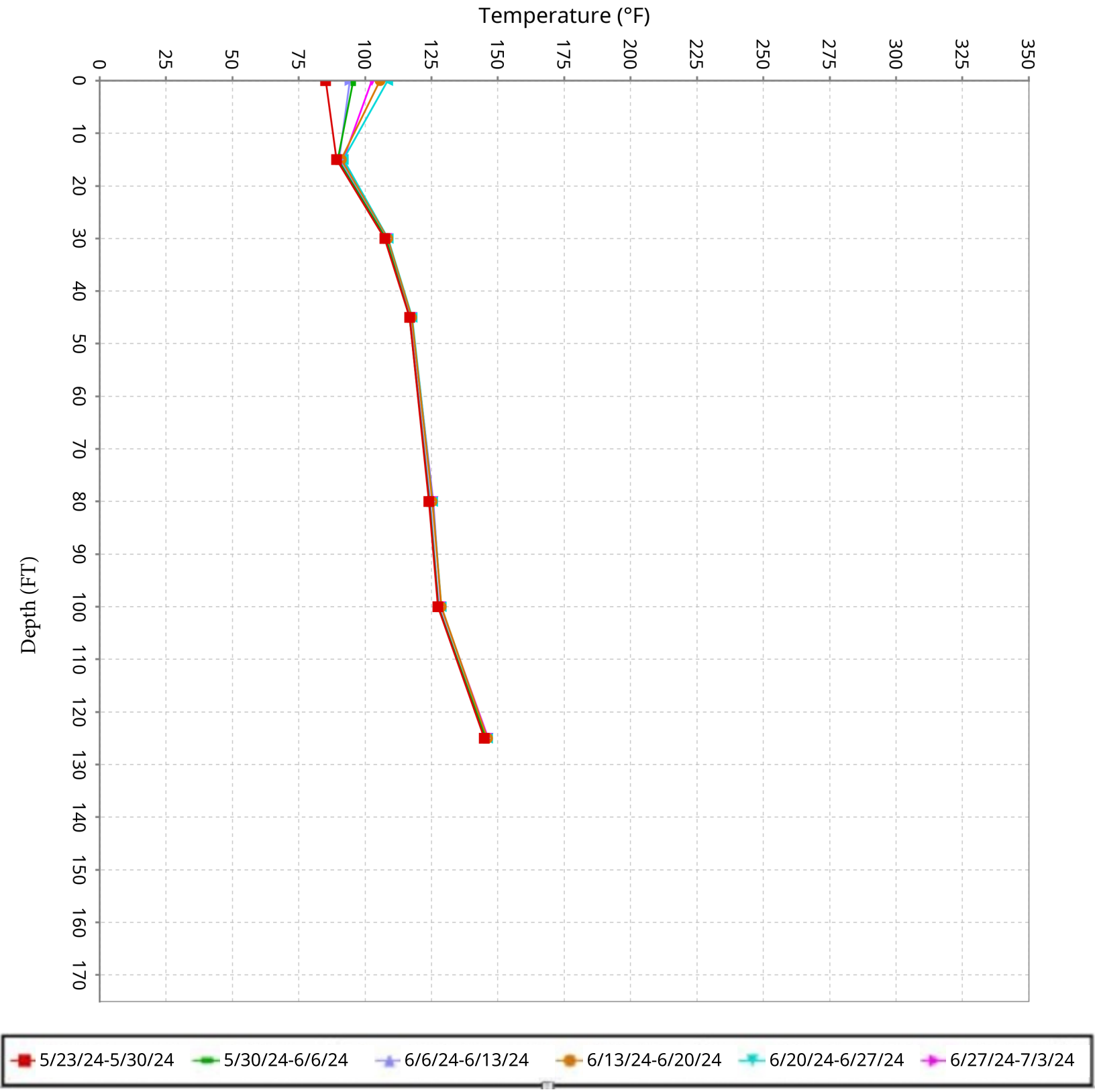
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

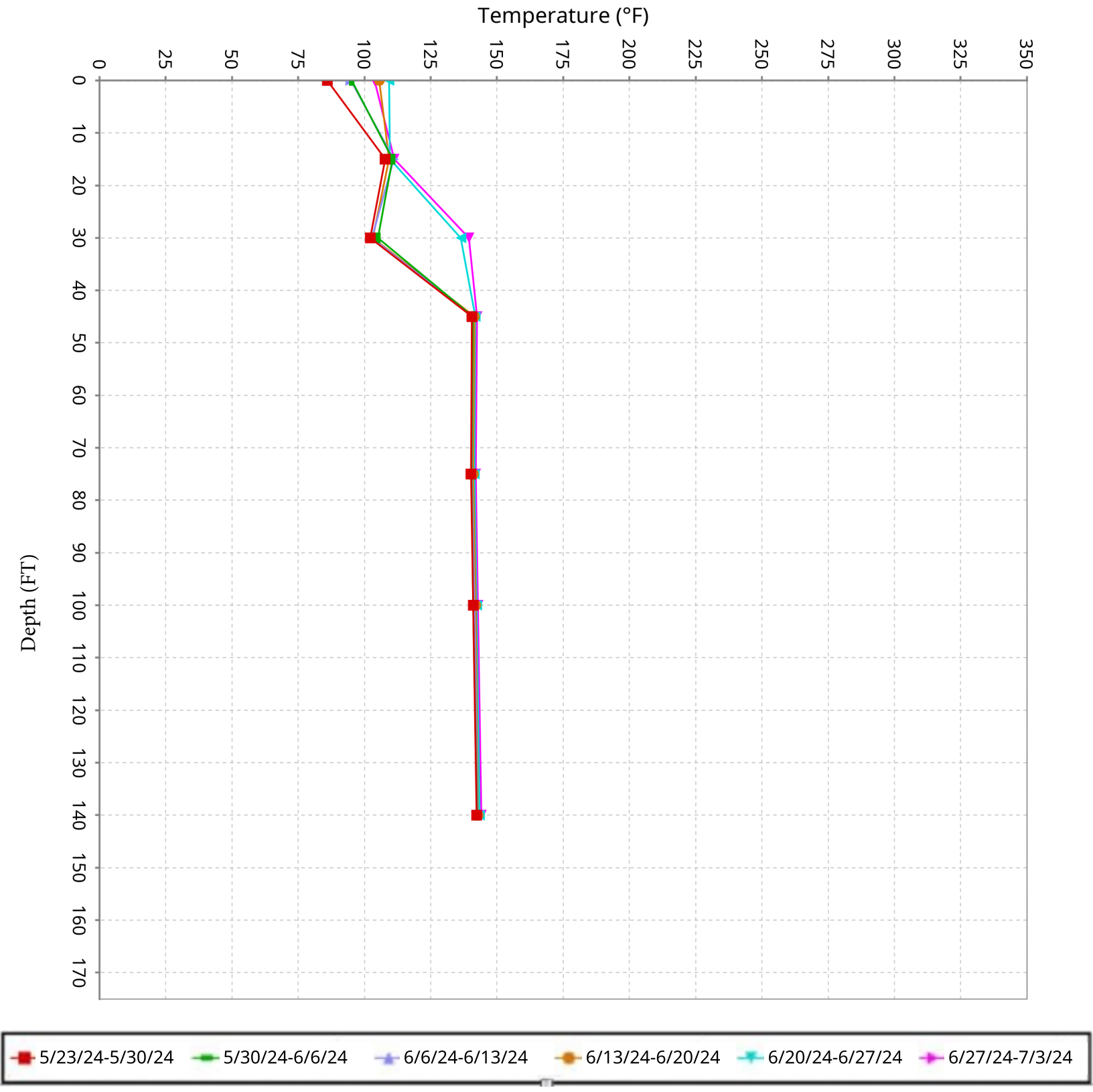
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

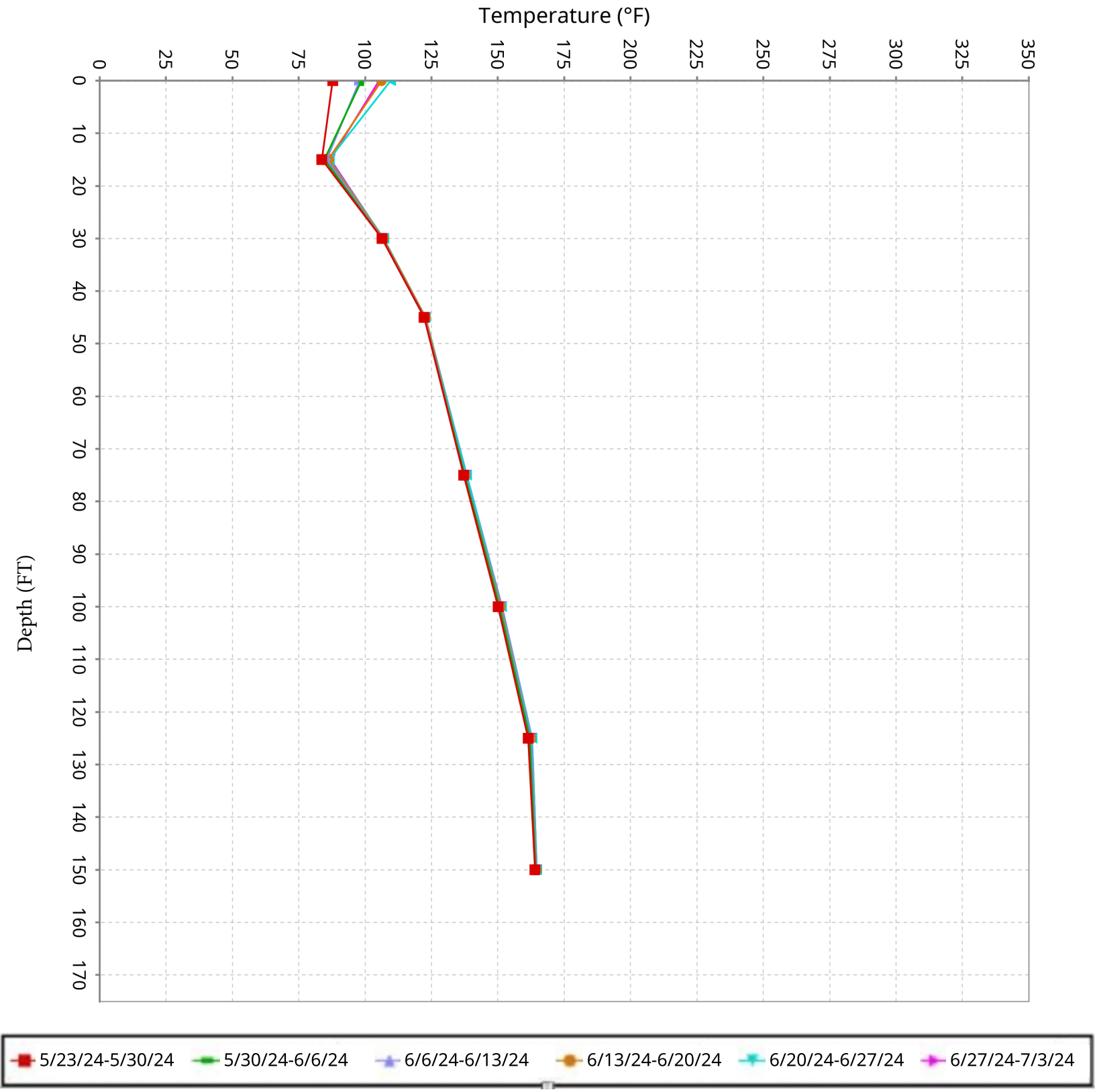
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

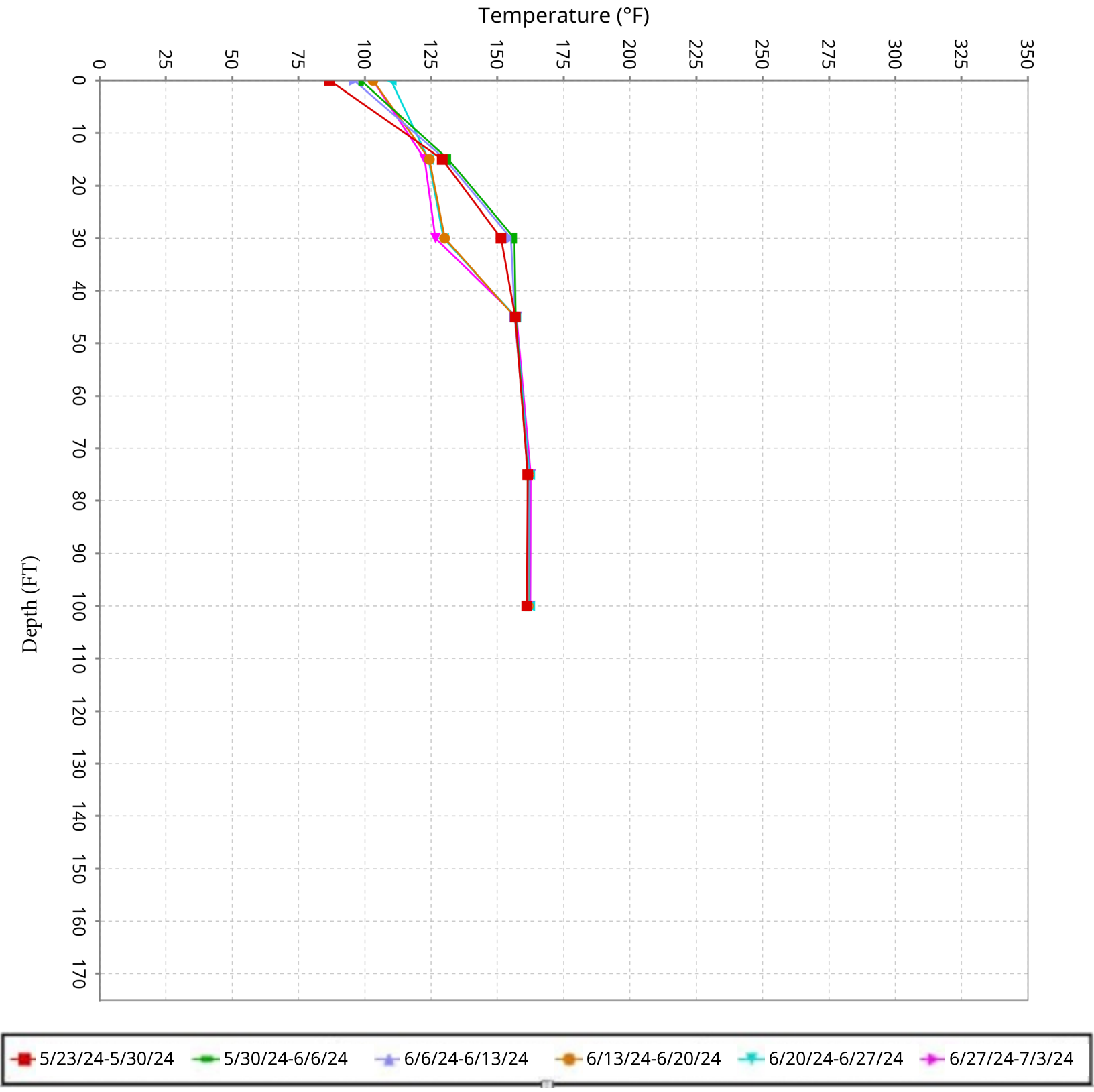
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

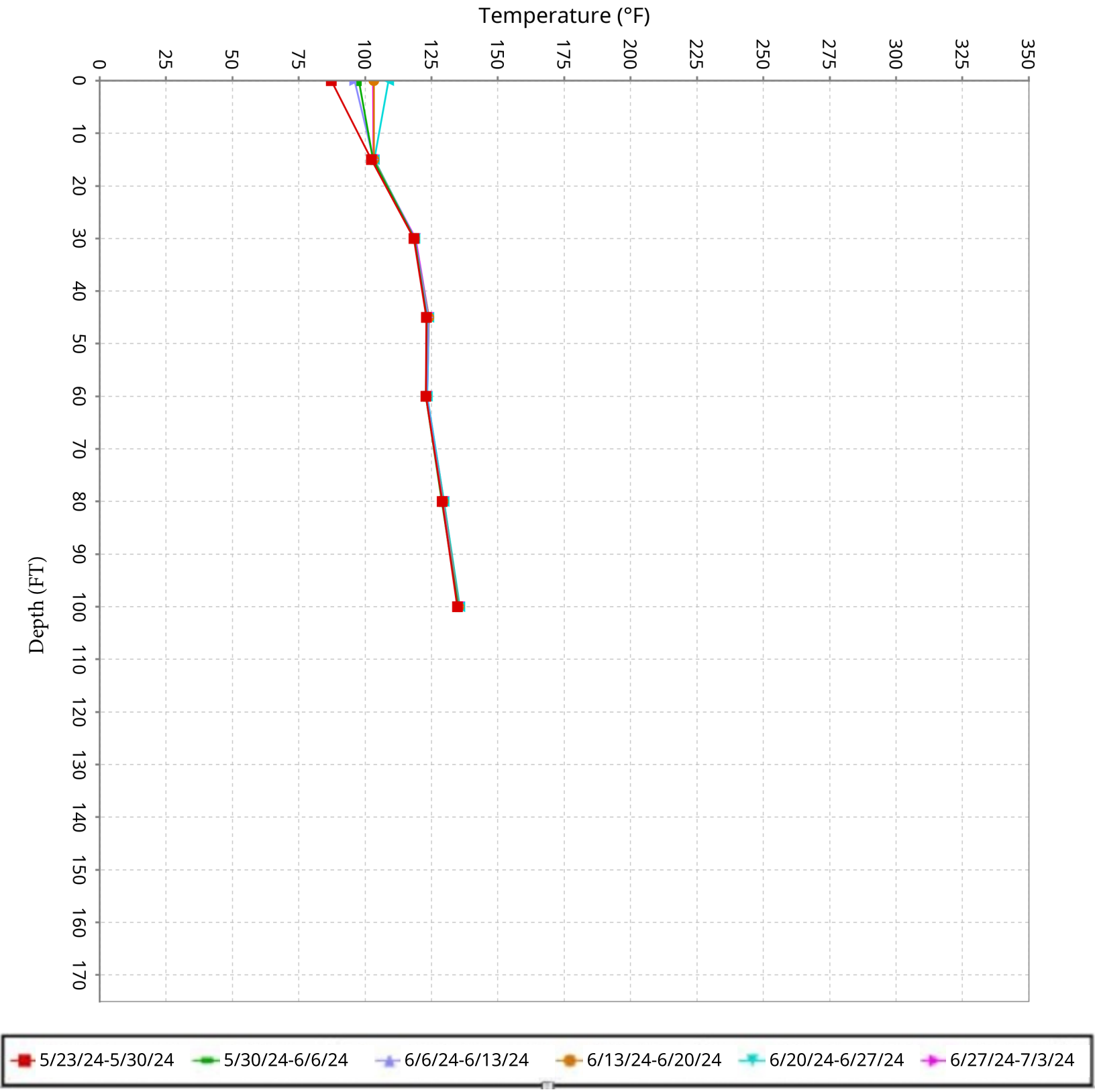
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

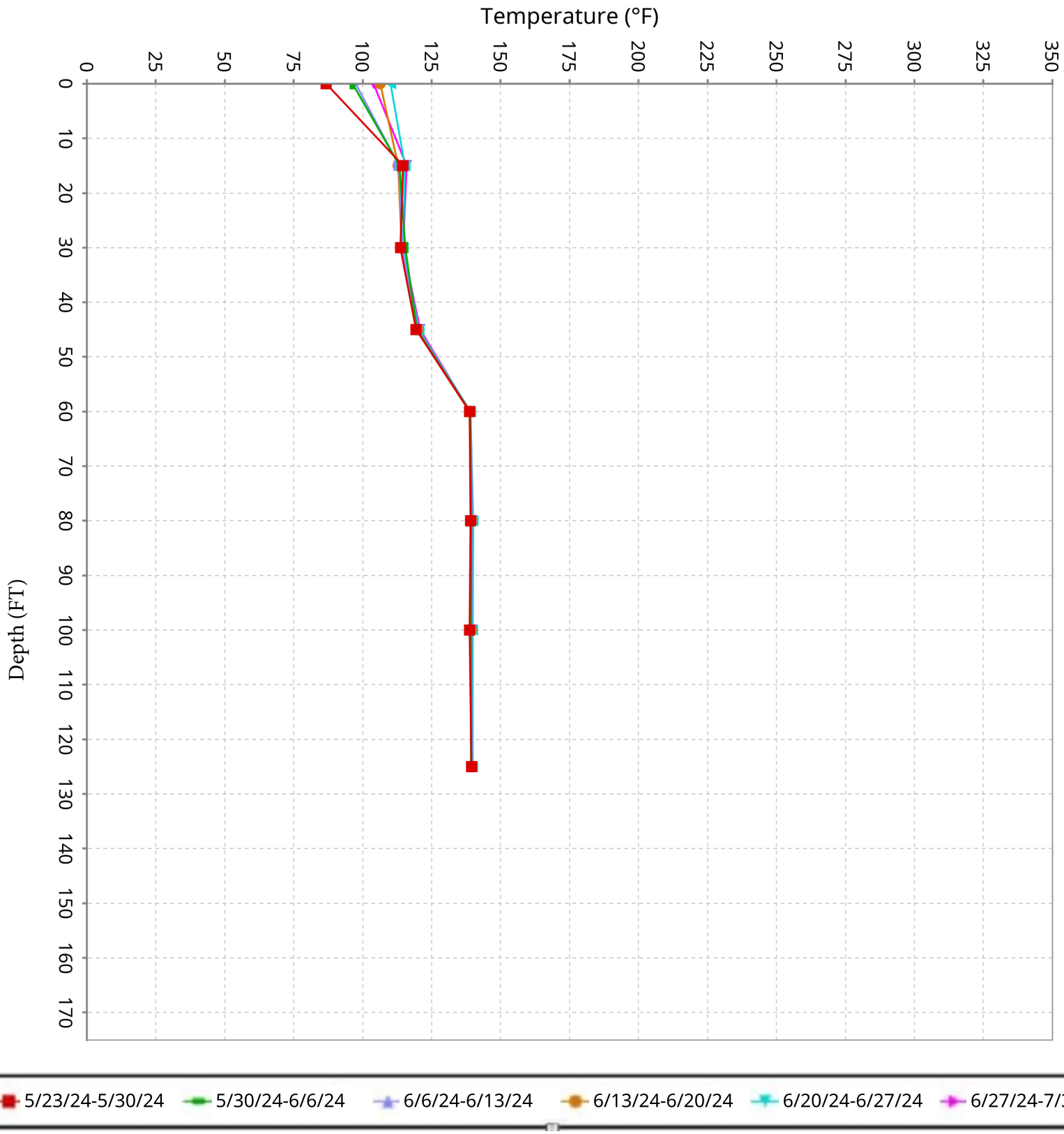
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

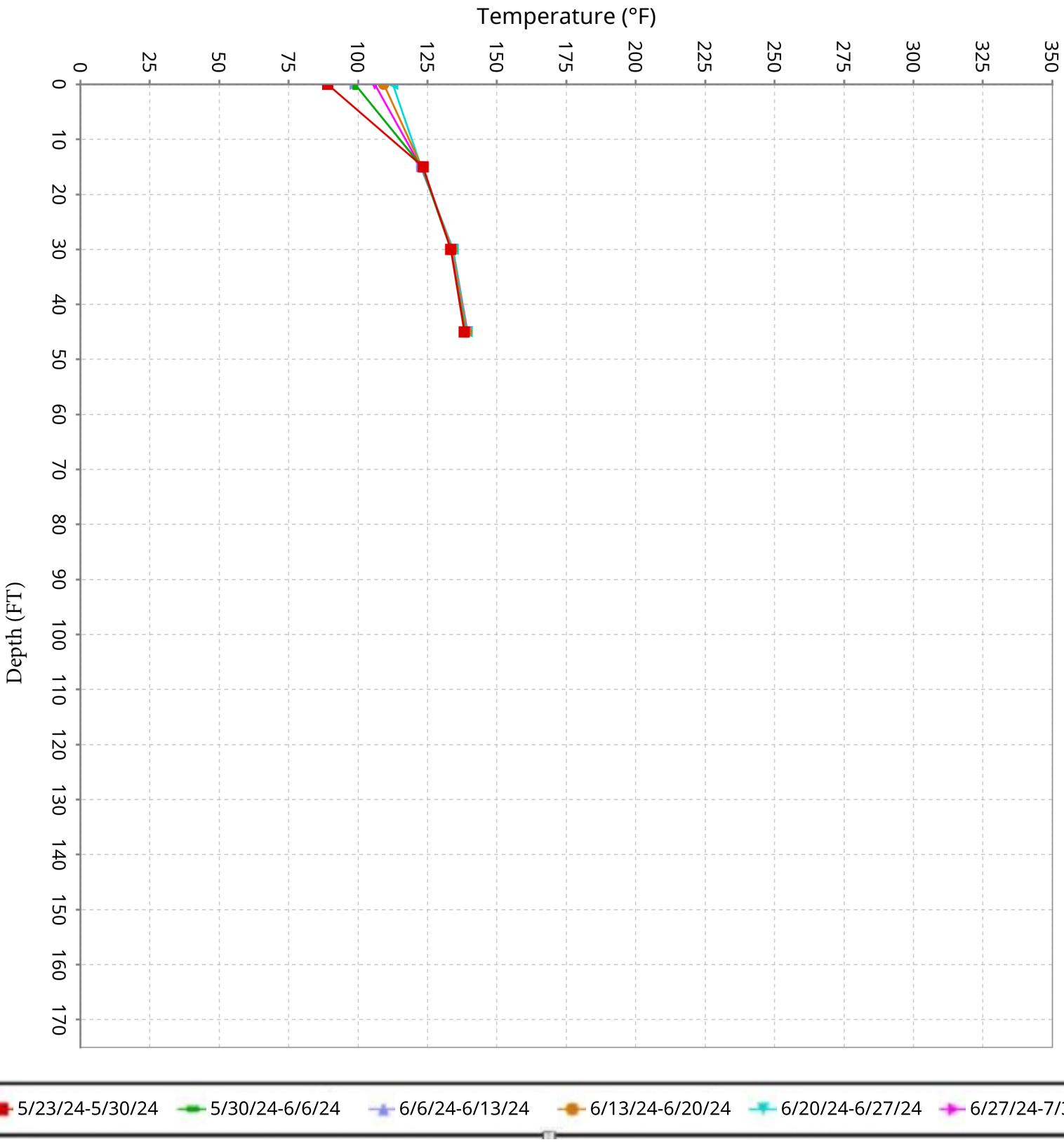
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

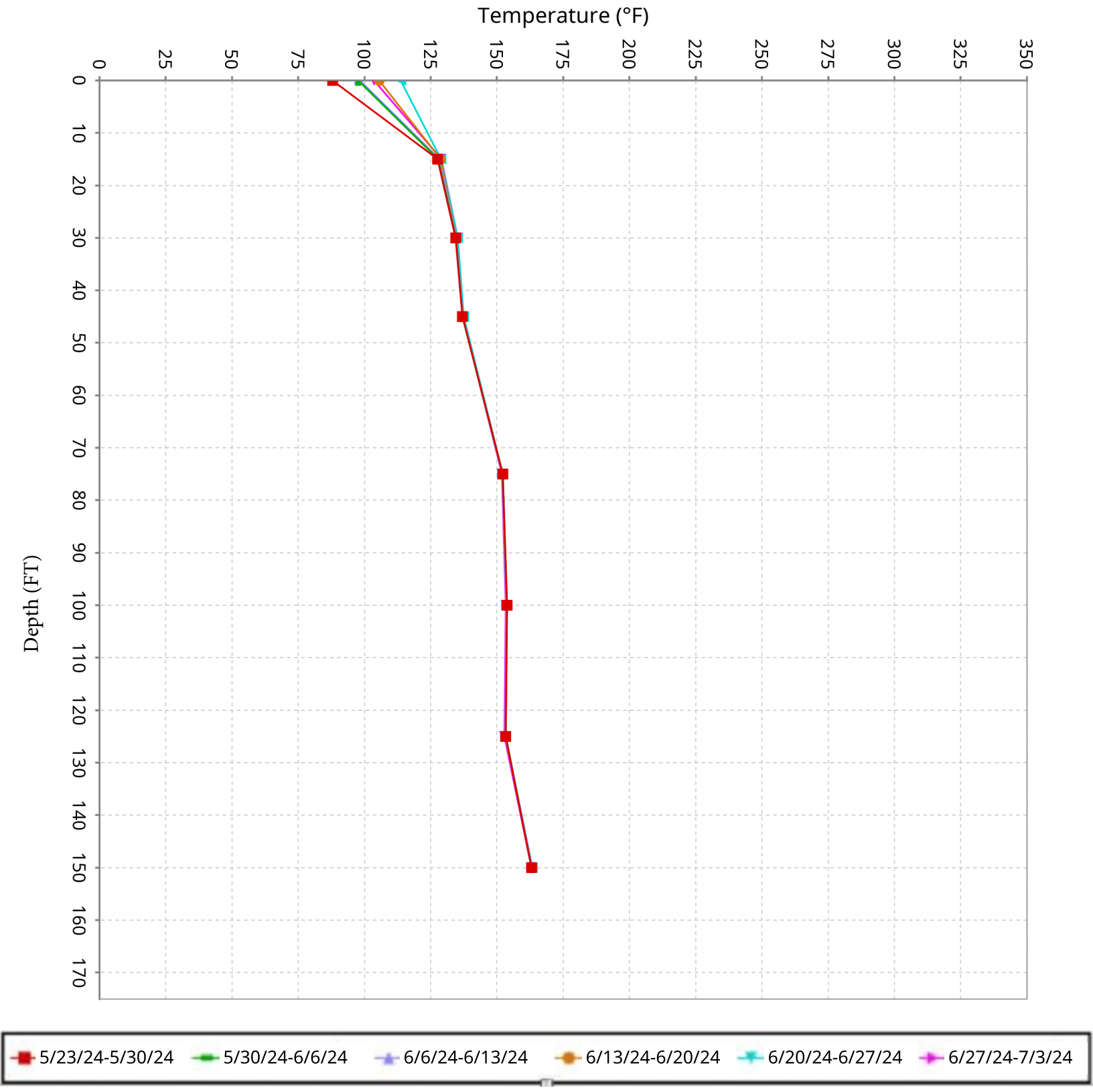
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

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

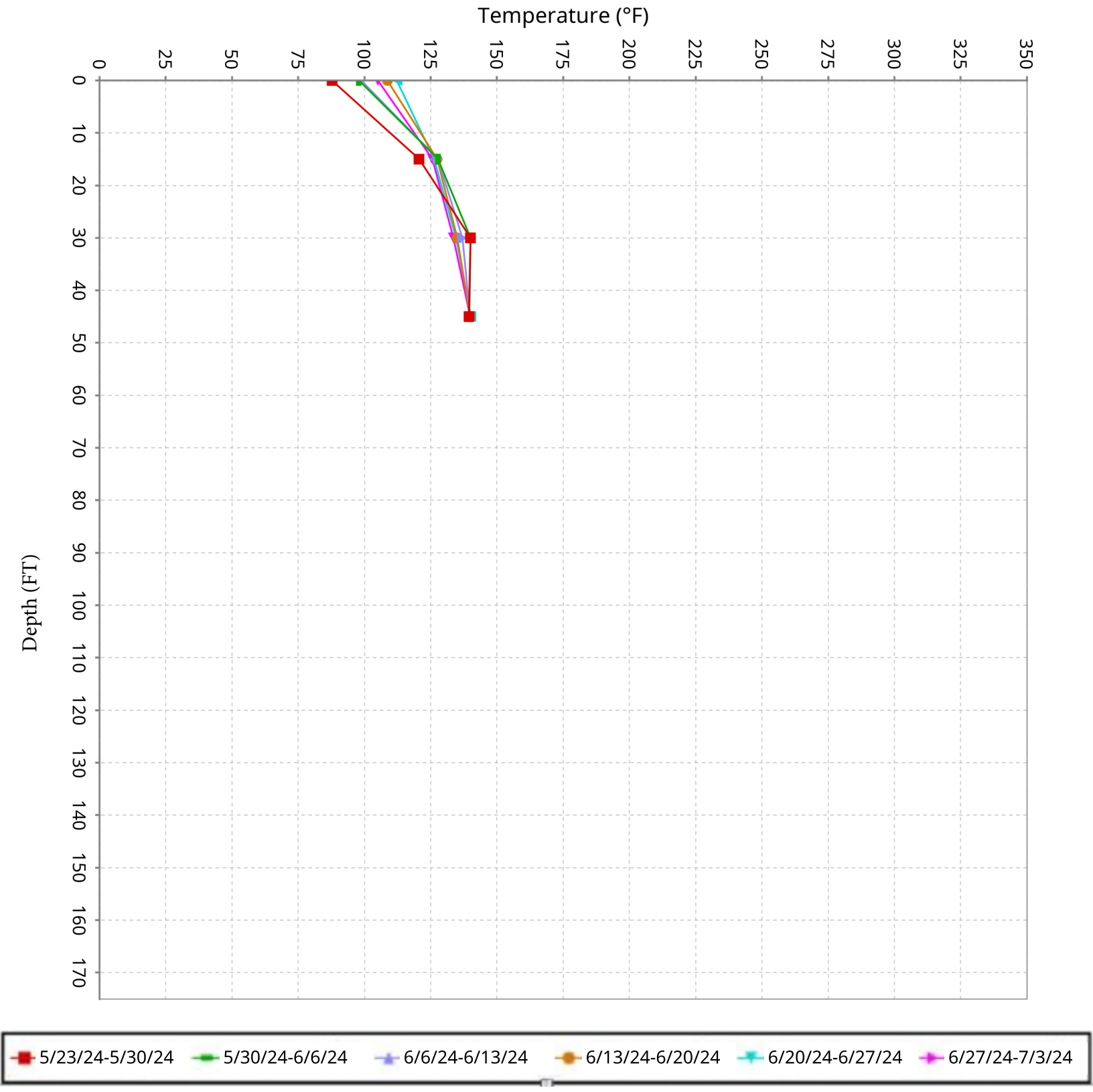
Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

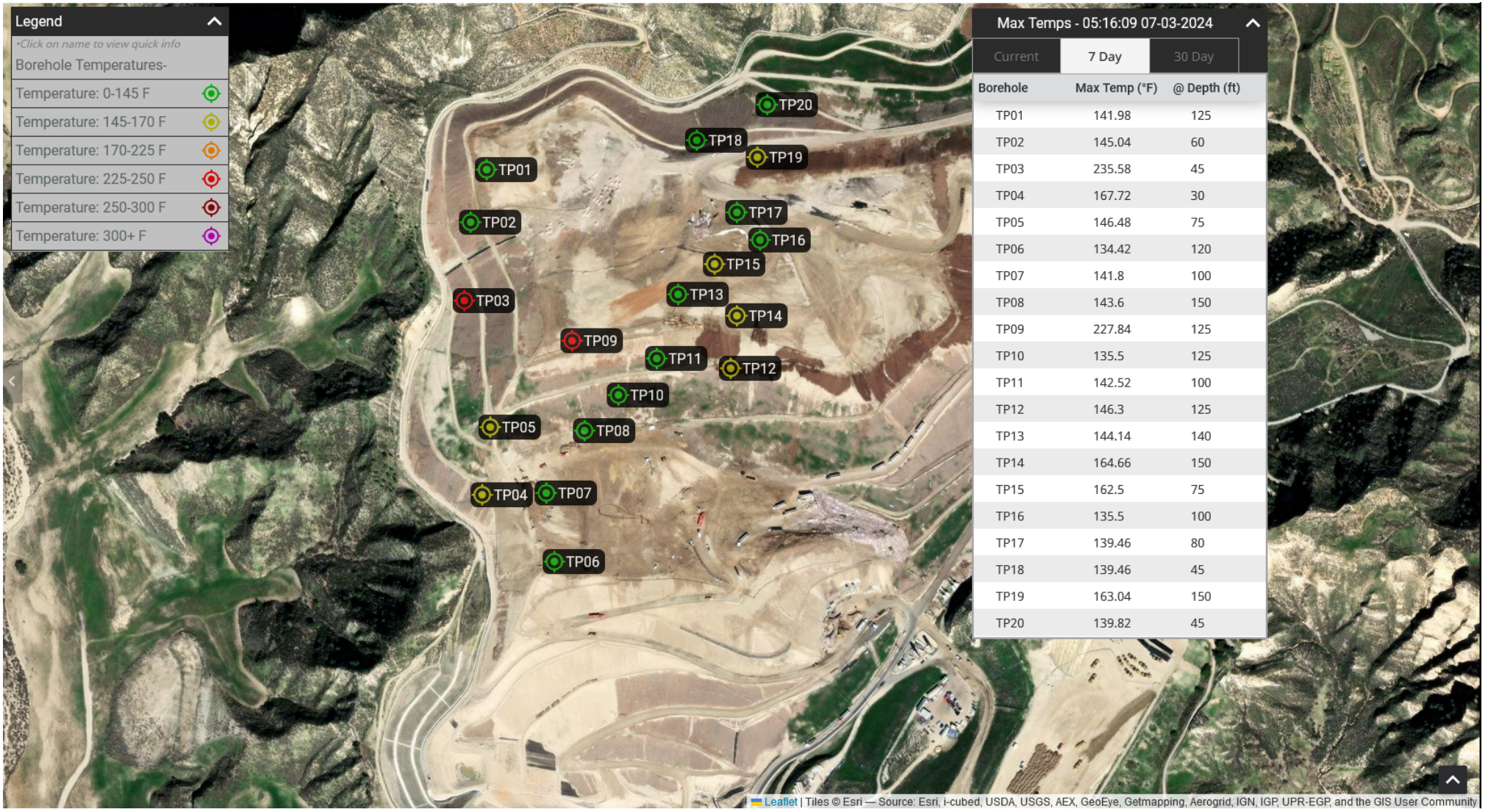
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-20

Maximum data for May 23, 2024 to July 3, 2024



SCS ENGINEERS

Maximum Vertical Temperature Map from Temperature Probes at Chiquita Landfill



Max Temps - 05:16:09 07-03-2024

Current | 7 Day | 30 Day

Borehole	Max Temp (°F)	@ Depth (ft)
TP01	141.98	125
TP02	145.04	60
TP03	235.58	45
TP04	167.72	30
TP05	146.48	75
TP06	134.42	120
TP07	141.8	100
TP08	143.6	150
TP09	227.84	125
TP10	135.5	125
TP11	142.52	100
TP12	146.3	125
TP13	144.14	140
TP14	164.66	150
TP15	162.5	75
TP16	135.5	100
TP17	139.46	80
TP18	139.46	45
TP19	163.04	150
TP20	139.82	45

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Petitioner,

vs.

CHIQUITA CANYON, LLC a Delaware Corporation,
[Facility ID No. 119219]

Respondent.

Case No. 6177-4

EXHIBIT D TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.

Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150

Hearing Date: August 17 and 20, 2024
Time: 10:00 am
Place: Santa Clarita Performing Arts Center
College for the Canyons
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

August 7, 2024
File No. 01204123.21-13

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

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

Dear Mr. Chen:

In accordance with Condition Nos. 9a and 9b of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (Landfill or Facility) (Case No. 6177-4), the Reaction Committee has reviewed newly acquired applicable data recorded during the month of July 2024, considered revisions of the estimated extent of elevated temperature landfill (ETLF) conditions exhibited at the subject Facility (referred to as the "Reaction Area" limits), and has prepared this determination on potentially revising the Reaction Area map.

Attachment A presents the Drawing, titled "Reaction Area Map", prepared by SCS Engineers (SCS) and dated 8/2/24. The Drawing depicts the Reaction Area boundary as prescribed in Condition No. 9a, 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 estimated extent of ETLF conditions being experienced at the site based on the Reaction Committee's review of scientific data as a dashed magenta line.

The Reaction Committee reviewed the temperature measurements recorded during July 2024 by the in-situ temperature monitoring probes. Three (3) of the twenty (20) probes (TP-2, 3, and 9) are located within the estimated extent of ETLF conditions (dashed magenta line), and thirteen (13) probes are positioned adjacent to (within 200 feet) of this boundary. Similar to data recorded during the previous months, the temperatures recorded by the 13 probes outside of the boundary during July 2024 are not indicative of a subsurface reaction, and it is the Committee's opinion that they do not substantiate a decision to expand the boundary of the reaction area at this time.

The Reaction Committee also evaluated the concentration of hydrogen in landfill gas (LFG) during July 2024. Recall that certain wells positioned to the east of the reaction area boundary (where dewatering pumping was reactivated) had demonstrated some increased hydrogen content in the LFG during the Reaction Committee's review of the May 2024 data; however, these wells did not sustain these hydrogen concentrations when monitored in June 2024. The Reaction Committee had noted in its review of the May and June 2024 data that these wells did not exhibit elevated temperatures, such that there was no evidence of the increased heat that is typical with ETLF conditions present at these wells. The July 2024 data indicates there are four vertical wells positioned to the southeast outside the reaction area boundary exhibiting hydrogen concentrations over 2%; however, similar to the May and June data, none of the four wells that exhibited some increased hydrogen content in the LFG during July are demonstrating atypical heat present. Each of the four wells is located adjacent to an existing horizontal well and they are believed to be intercepting gas collected from within the reaction area by horizontal wells in close proximity. Accordingly, the Reaction Committee does not believe an adjustment to the boundary of the reaction

area is merited at this time. The Reaction Committee will continue to monitor LFG hydrogen concentrations closely during future months.

As presented on the Drawing included as **Attachment A**, the estimated extent of ETLF conditions (dashed magenta line) is fully contained within the Reaction Area boundary decreed in the SOFA (solid black line). Because the ETLF conditions are fully contained within the Reaction Area boundary and have not expanded into a new cell, the Reaction Committee finds no basis to modify the Reaction Area boundary at this time. Please note the following:

- The rationale that would serve as the basis for considering adjustments and modifications to the Reaction Area boundary (or the determination to maintain the decreed boundary), include:

  - LFG wellhead temperatures in excess of approximately 160 degrees Fahrenheit.

  - Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH_4:CO_2) ratios less than 1.0.

  - The concentration of hydrogen (H_2) in the LFG measured greater than 2 percent by volume.

  - Accelerated settlement of the landfill surface, defined as approximately 6 inches or greater within a 60-day period, and cracks in landfill cover.

  - First-hand observations of Landfill and/or SCS engineering, construction, and operations and maintenance (O&M) field personnel who are on-site related to: 1) atypical excess leachate quantities (presence and quantity of liquids); 2) instances of pressurized liquids emitting from the landfill surface, from boreholes during drilling, and from LFG wells; and, 3) the characteristics of the odors originating from the select areas of the waste footprint (often described as “chemical-like” and distinctly different from typical LFG or landfill working face odors).

  - Observations of subsurface waste conditions and characteristics as noted on borehole drilling logs for recently installed new wells and/or probes.

  - Subsurface temperatures recorded at the in-situ waste temperature probes during June 2024.

There was no dissenting opinion among the Reaction Committee members regarding this monthly determination. Supporting data is presented on the Drawing included as **Attachment A.** The maximum temperature measurements recorded at the 20 in-situ waste temperature monitoring probes during July are presented in **Attachment B** in graphical format. The electronic database and recordkeeping platform enables these measurements to be downloaded into a tabular spreadsheet format, which can be submitted to the South Coast Air Quality Management District under separate cover, if requested.

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

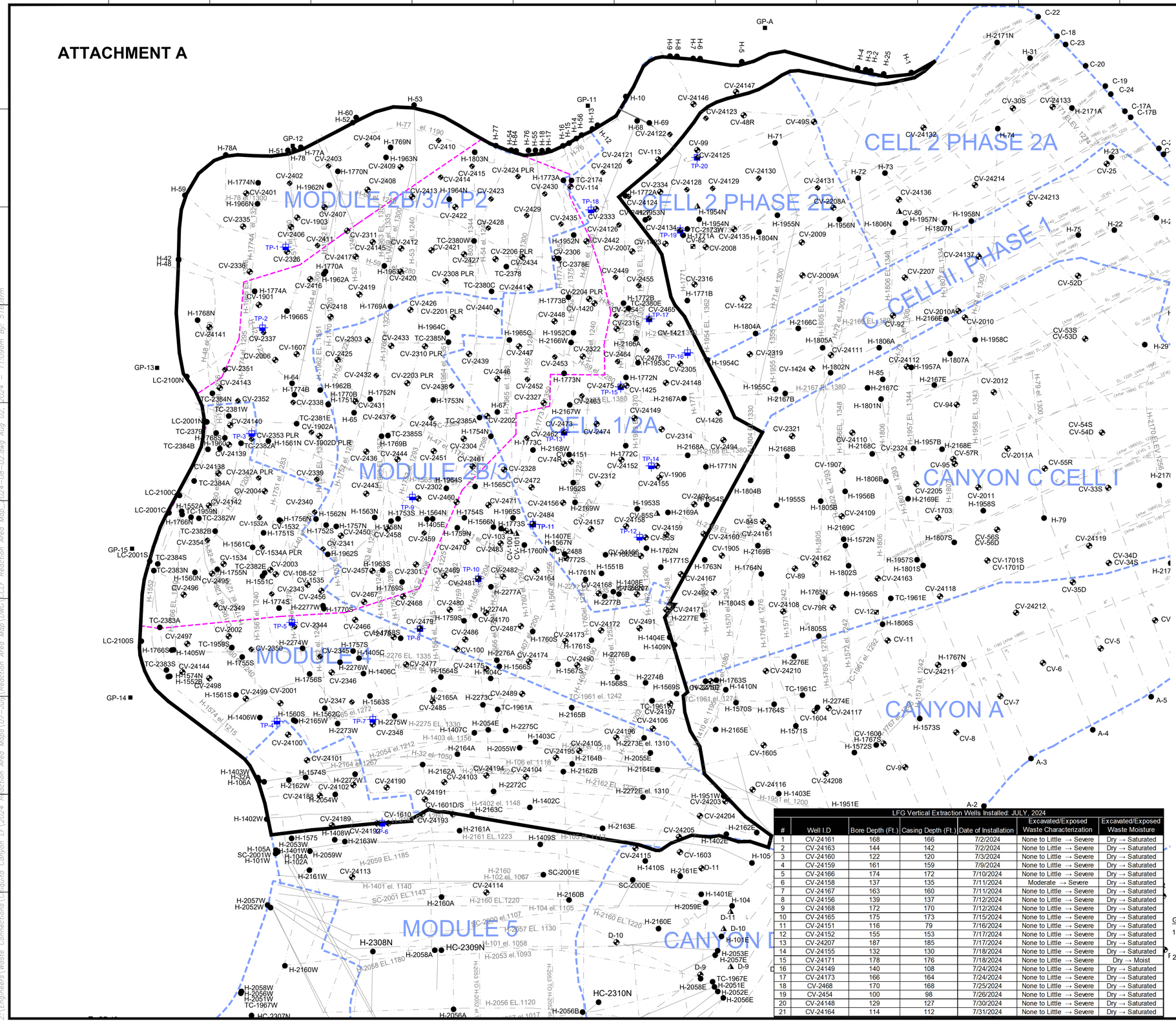
RED/PSS

cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD
Pablo Sanchez Soria, PhD, CIH, CTEH
Neal Bolton, PE, Blue Ridge Services, Inc.
Richard Pleus, PhD, Intertox
Srividhya Viswanathan, PE, SCS Engineers

Enclosure:

Attachment A – Reaction Area Map
Attachment B – In-Situ Waste Temperature Monitoring Probe Data

ATTACHMENT A



LFG Vertical Extraction Wells Installed: JULY, 2024

#	Well I.D	Bore Depth (Ft.)	Casing Depth (Ft.)	Date of Installation	Excavated/Exposed Waste Charactenization	Excavated/Exposed Waste Moisture
1	CV-24161	168	166	7/2/2024	None to Little → Severe	Dry → Saturated
2	CV-24163	144	142	7/2/2024	None to Little → Severe	Dry → Saturated
3	CV-24160	122	120	7/3/2024	None to Little → Severe	Dry → Saturated
4	CV-24159	161	159	7/9/2024	None to Little → Severe	Dry → Saturated
5	CV-24166	174	172	7/10/2024	None to Little → Severe	Dry → Saturated
6	CV-24158	137	135	7/11/2024	Moderate → Severe	Dry → Saturated
7	CV-24167	163	160	7/11/2024	None to Little → Severe	Dry → Saturated
8	CV-24156	139	137	7/12/2024	None to Little → Severe	Dry → Saturated
9	CV-24168	172	170	7/12/2024	None to Little → Severe	Dry → Saturated
10	CV-24165	175	173	7/15/2024	None to Little → Severe	Dry → Saturated
11	CV-24151	116	79	7/16/2024	None to Little → Severe	Dry → Saturated
12	CV-24152	155	153	7/17/2024	None to Little → Severe	Dry → Saturated
13	CV-24207	187	185	7/17/2024	None to Little → Severe	Dry → Saturated
14	CV-24155	132	130	7/18/2024	None to Little → Severe	Dry → Saturated
15	CV-24171	178	176	7/18/2024	None to Little → Severe	Dry → Moist
16	CV-24149	140	108	7/24/2024	None to Little → Severe	Dry → Saturated
17	CV-24173	166	164	7/24/2024	None to Little → Severe	Dry → Saturated
18	CV-2468	170	168	7/25/2024	None to Little → Severe	Dry → Saturated
19	CV-2454	100	98	7/26/2024	None to Little → Severe	Dry → Saturated
20	CV-24148	129	127	7/30/2024	None to Little → Severe	Dry → Saturated
21	CV-24164	114	112	7/31/2024	None to Little → Severe	Dry → Saturated

GENERAL DRAWING NOTES:

1. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
2. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE
REVISION
NO.

SHEET TITLE: REACTION AREA MAP JULY, 2024
PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA
CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

PROJ. NO. 01204123.35
DSN. BY: -
DWN. BY: SRM/JH
CHK. BY: JH/WCH
APP. BY: WCH
ACAD FILE/ENGINEERS

DATE: 08/02/2024
SCALE: AS SHOWN
SHEET: 1

Z:\Engineers\Waste Connections\Chiquita Canyon_LF\2024 Reaction Area Maps\07-July\Reaction Area Map_DWG\RCLF Reaction Area Map_2024-08-02.dwg Aug 02, 2024 - 11:09am By: 516psm

ATTACHMENT B

Solid Waste Borehole Maximum Temperature Profiles Over 6 Weeks

for June 14, 2024 to July 25, 2024

From July 19, 2024, through July 25, 2024, all temperatures recorded and presented herein have stayed stable with previous week temperatures with no sensors showing major increases or decreases in temperature within the landfill and no sensors having any anomalies, outliers, data gaps, or malfunctions. There were no recorded temperature increases in the TMP field of 20°F or greater within 48 hours or 10°F increased in a week.

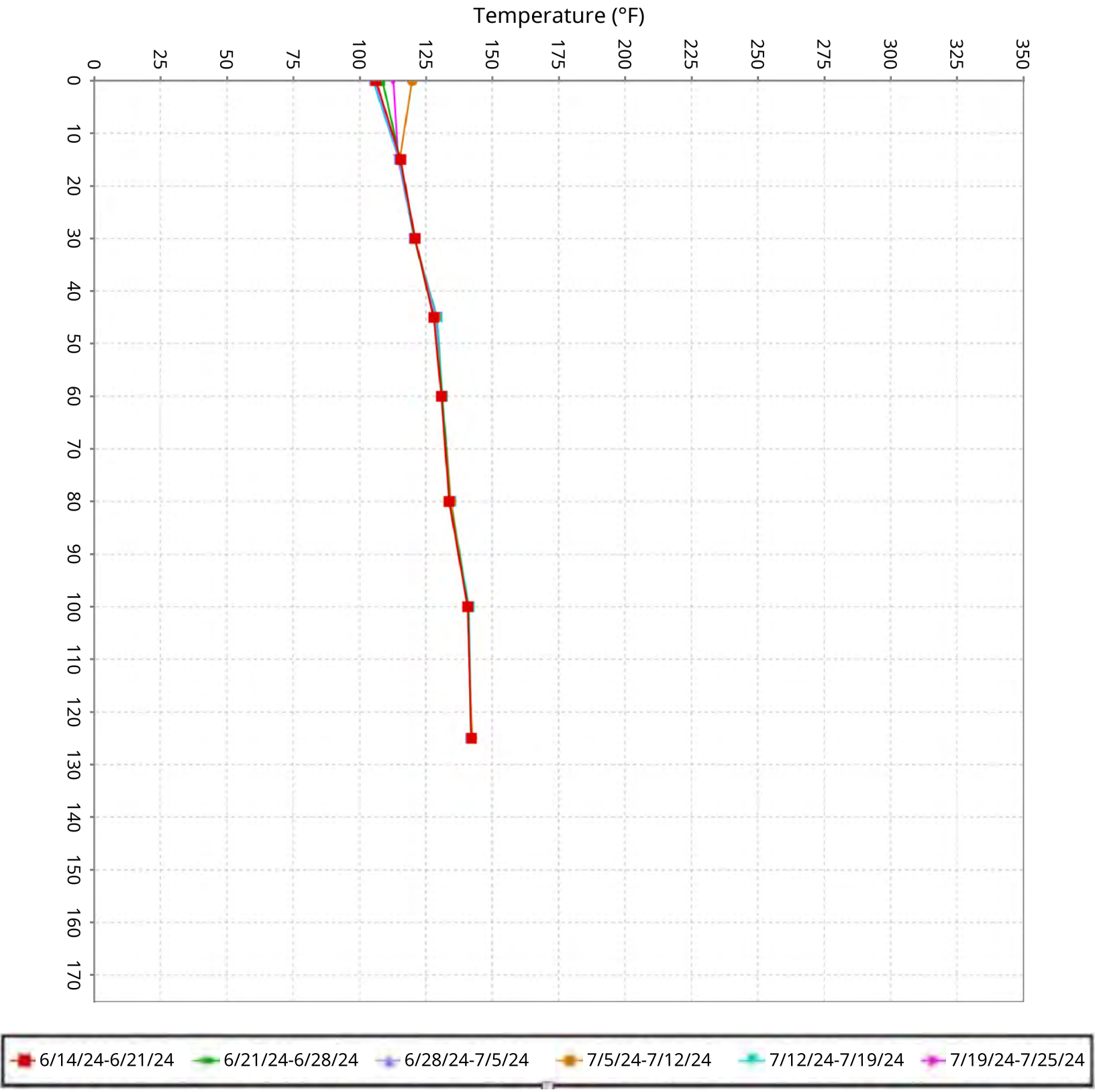
SCS ENGINEERS

07224053.00 | July 25, 2024

274 Granite Run Drive
Lancaster, PA 17601
717-550-6330

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

Maximum data for June 14, 2024 to July 25, 2024



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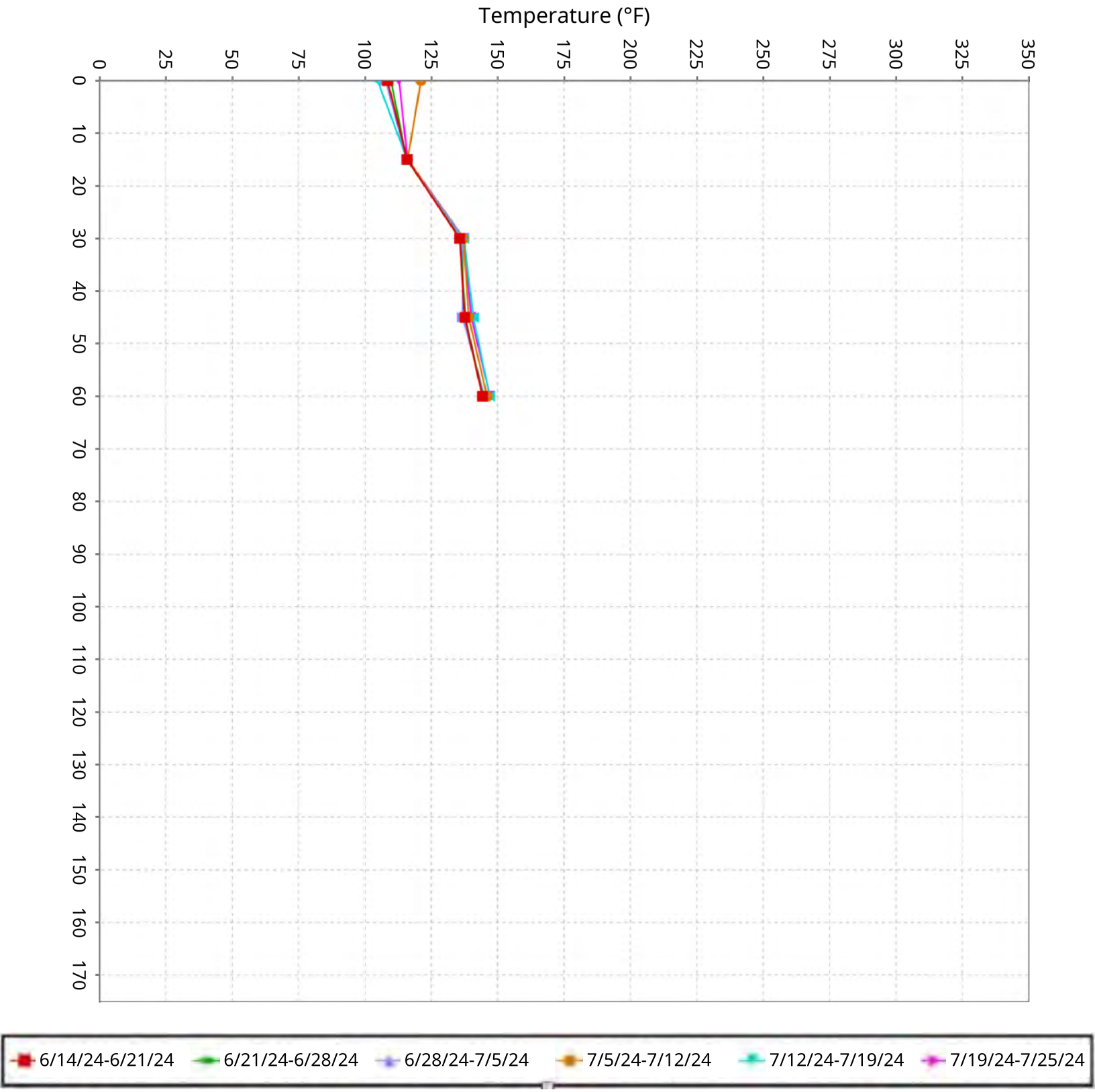
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-2

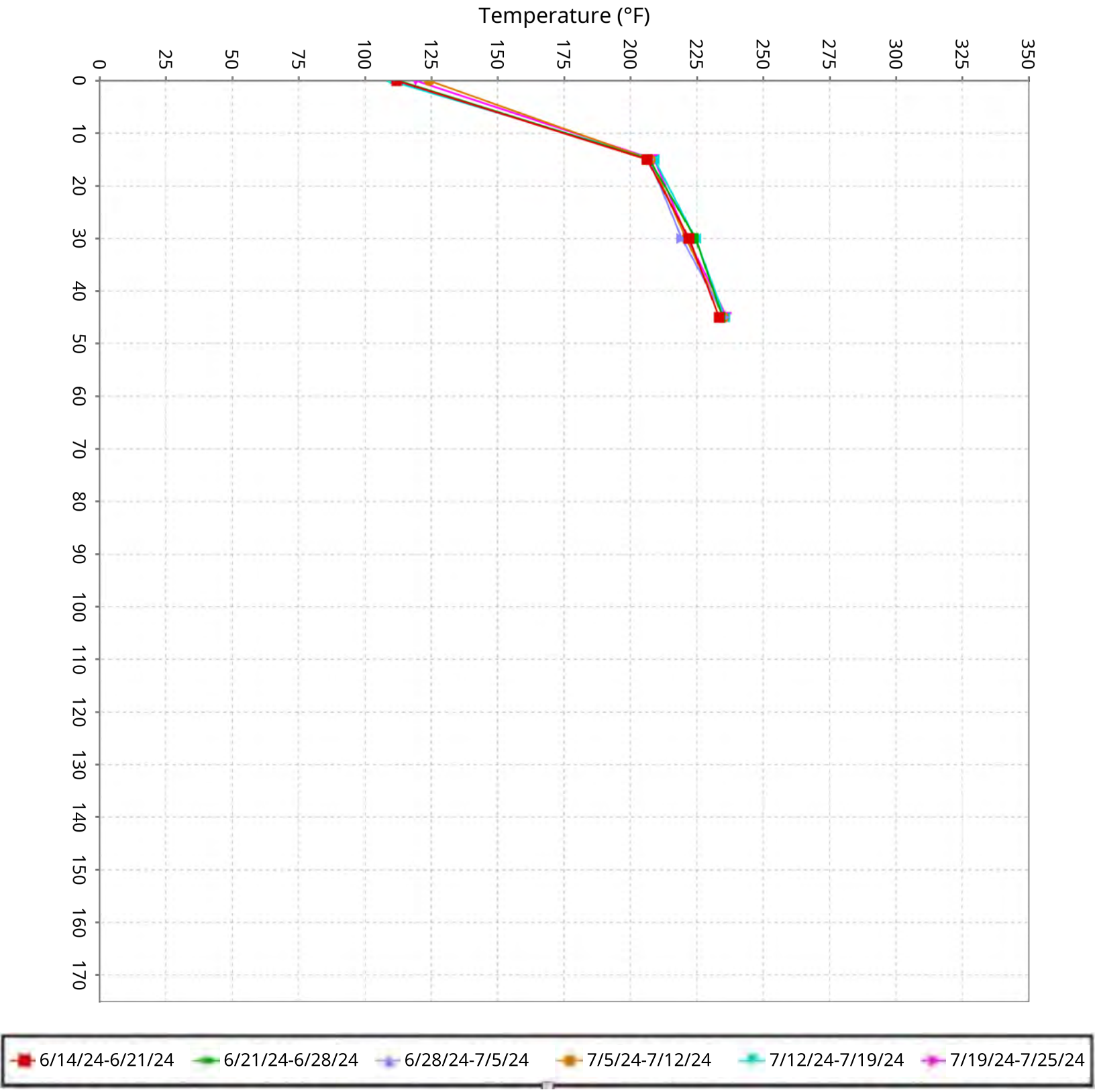
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

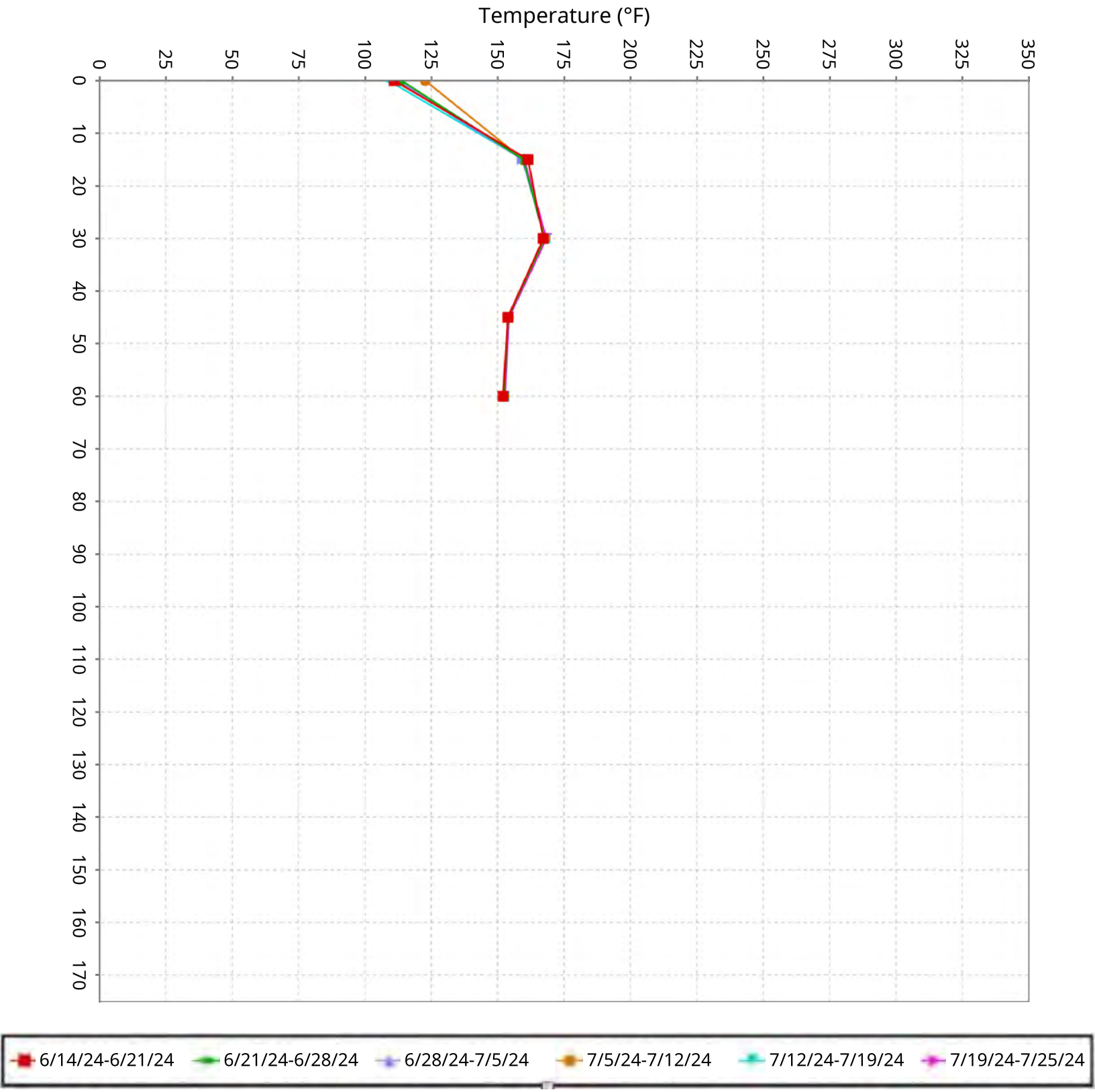
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

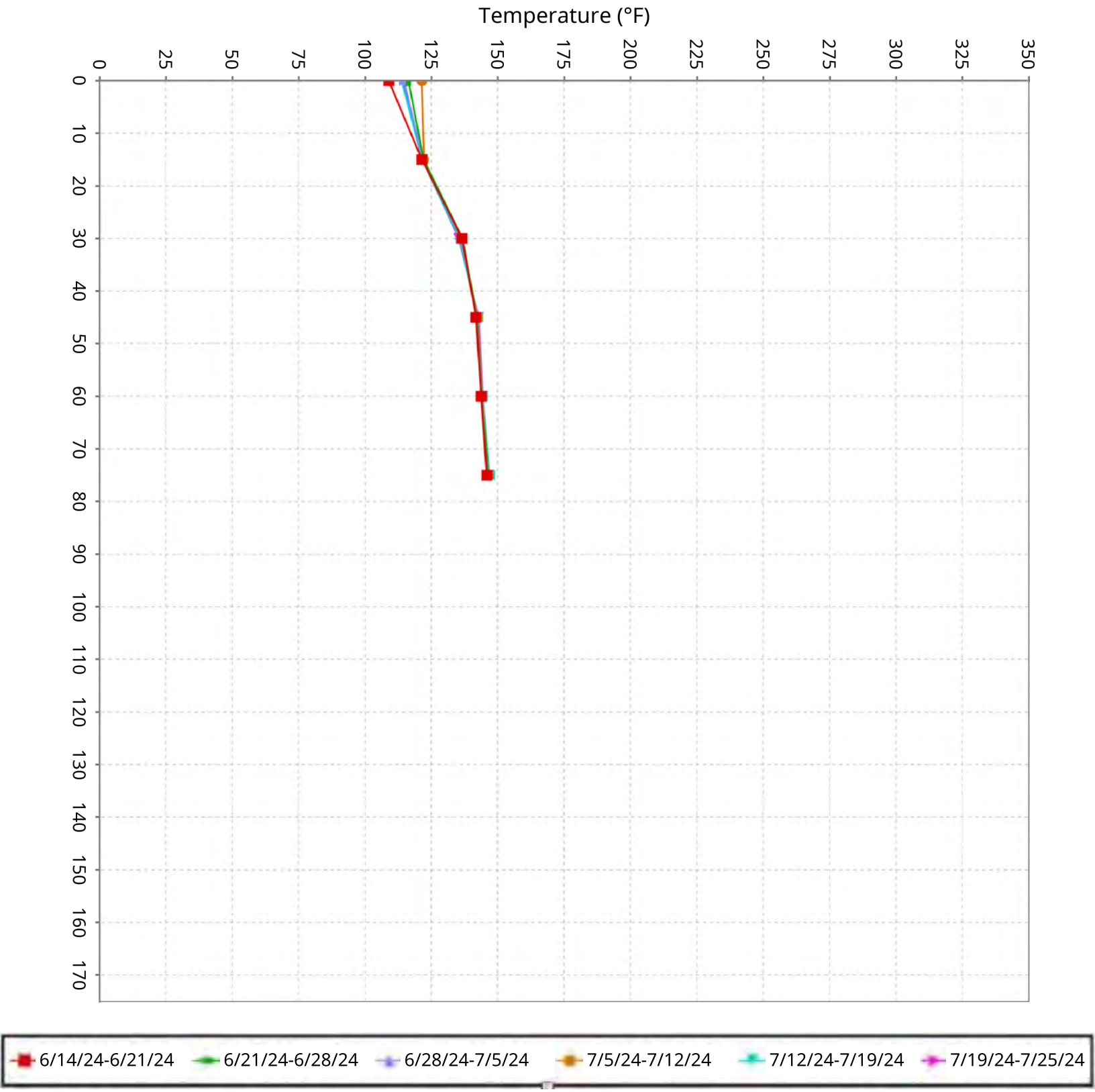
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

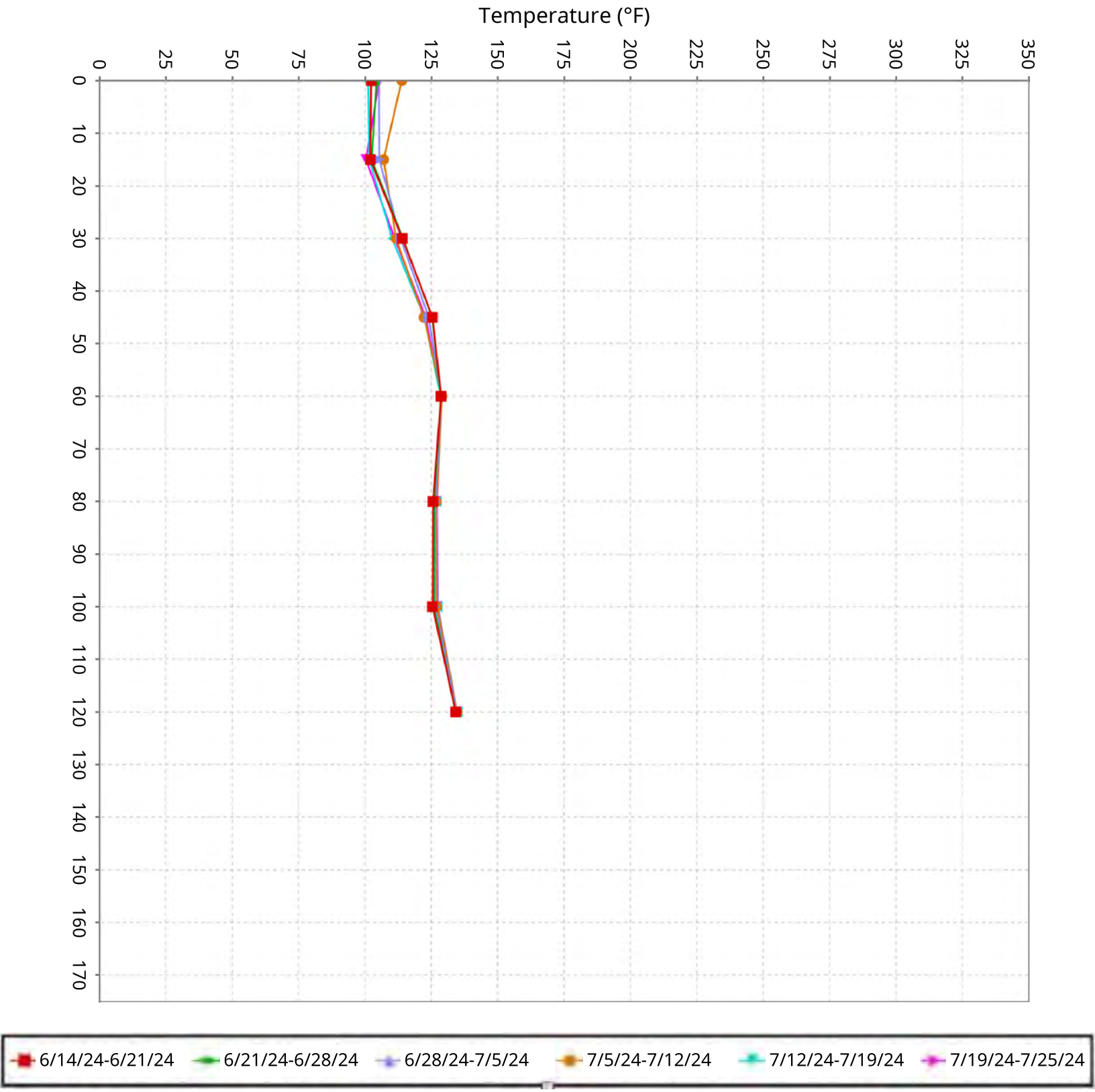
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

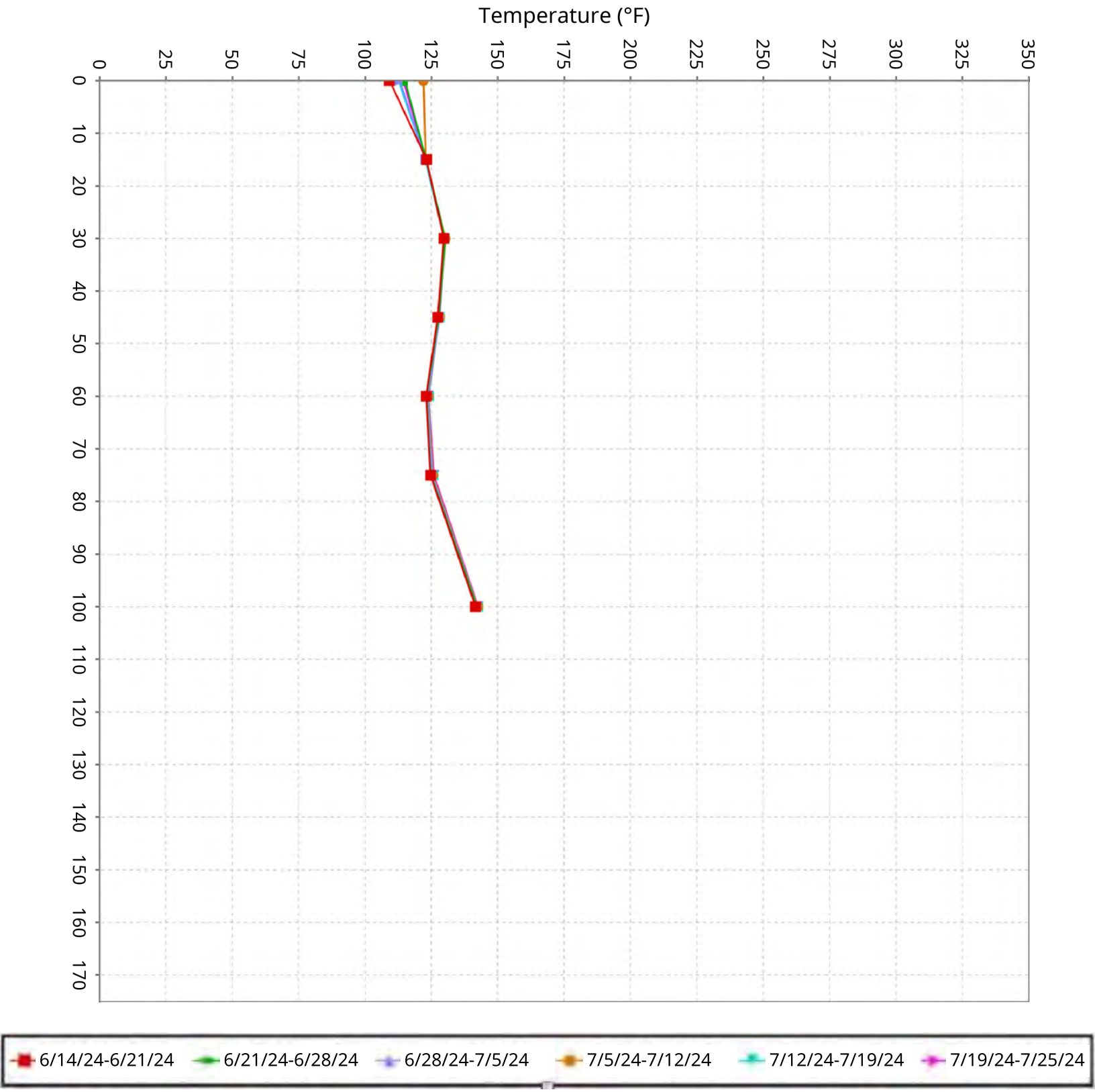
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

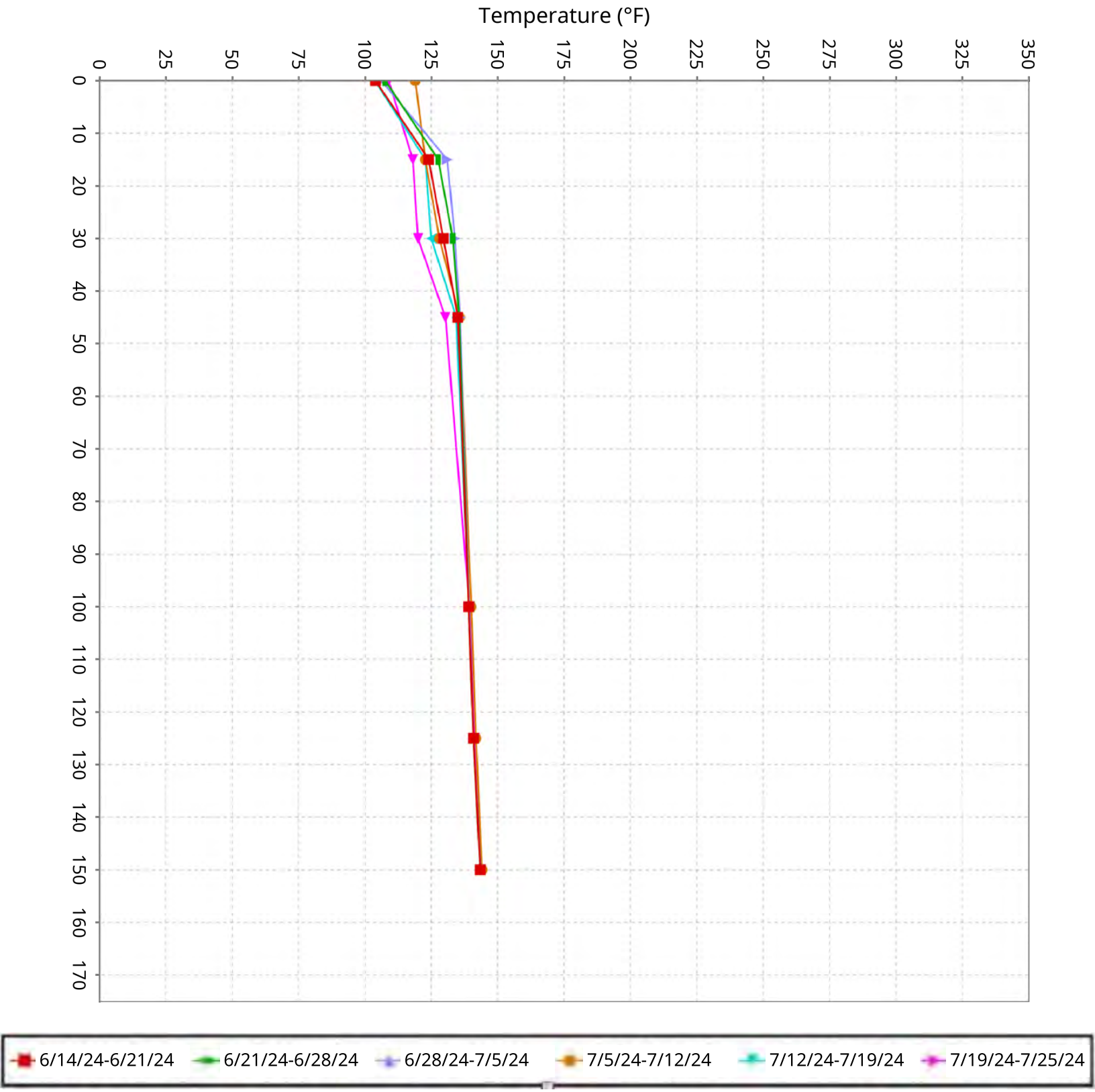
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

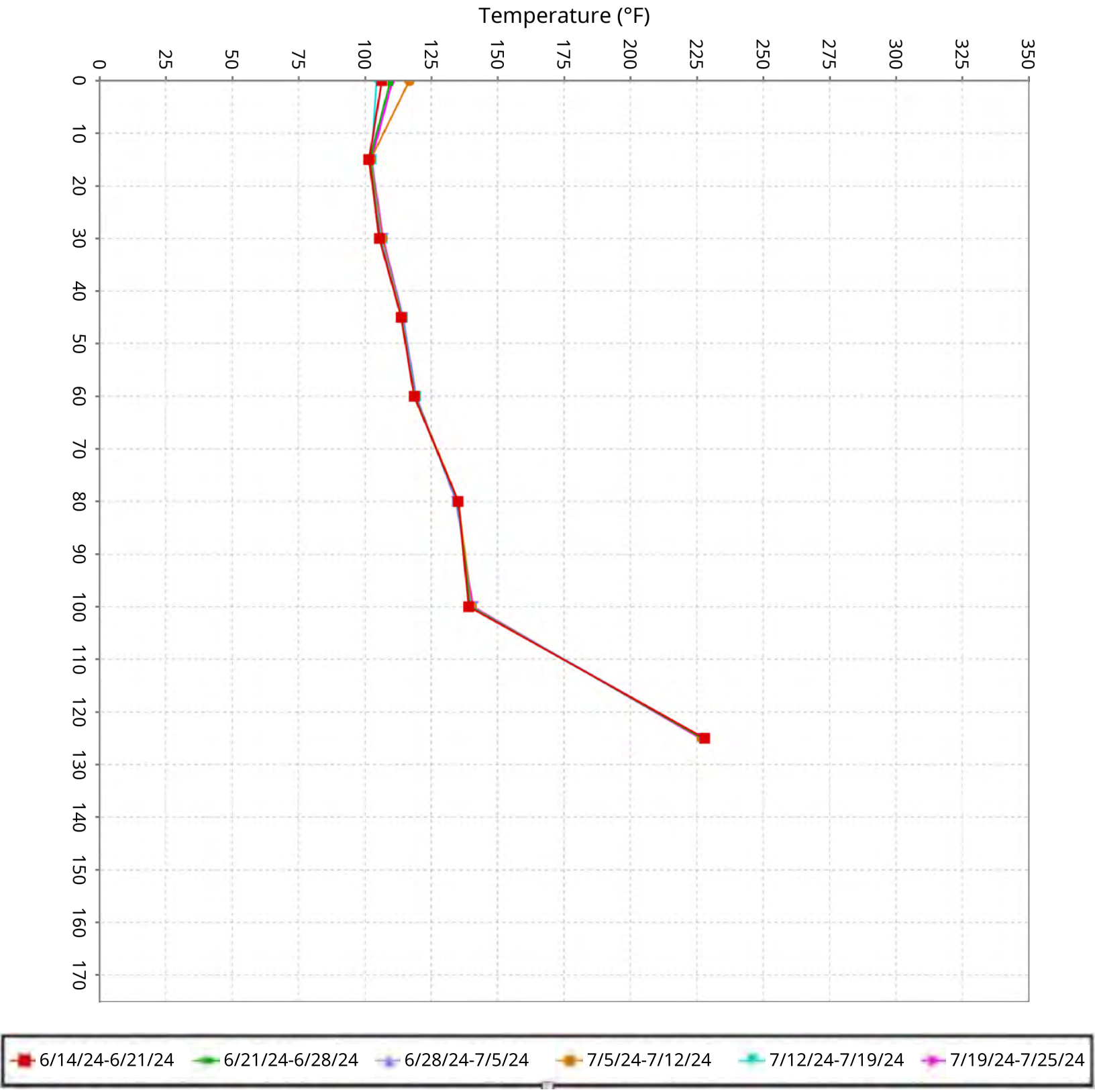
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

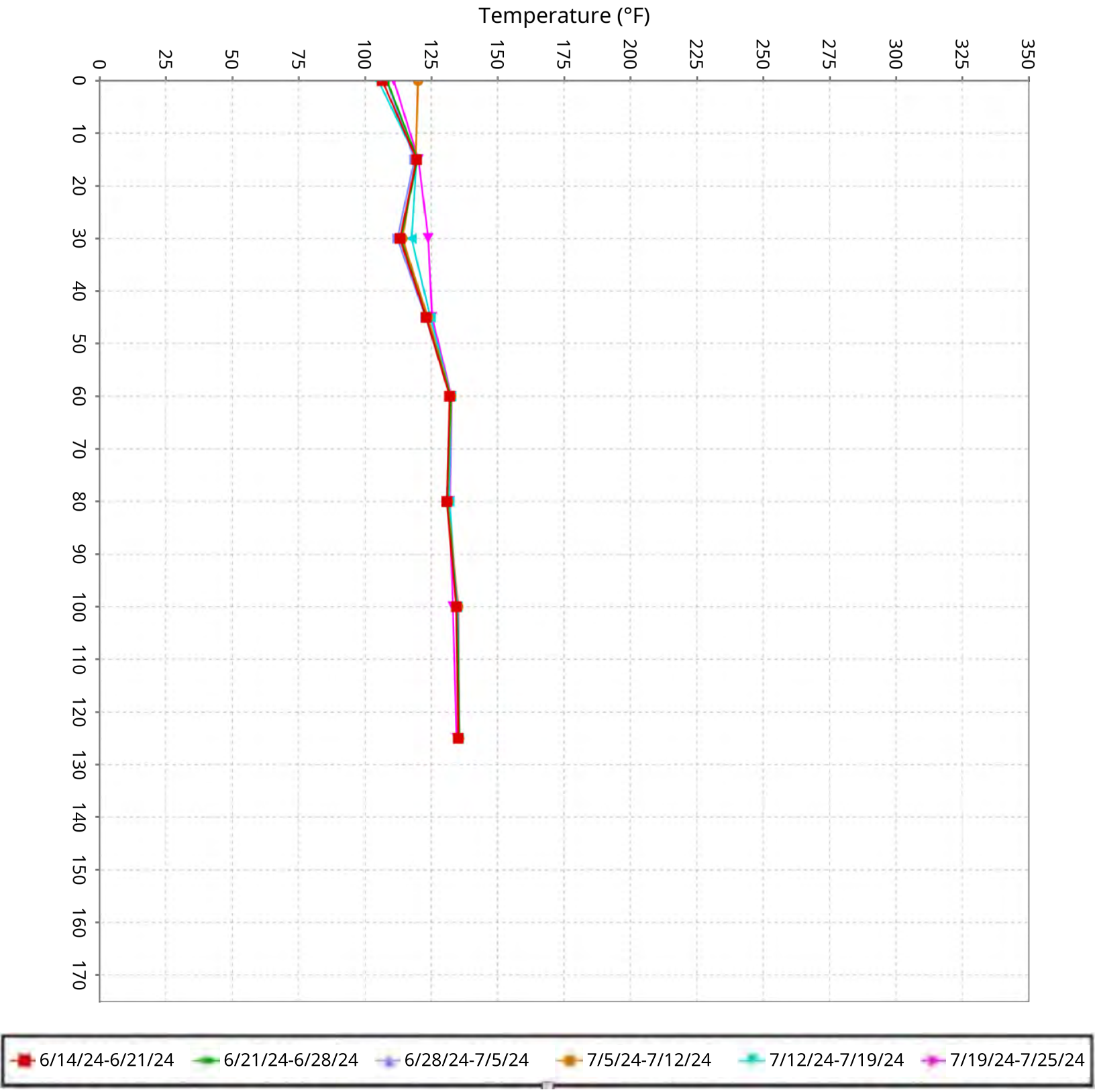
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

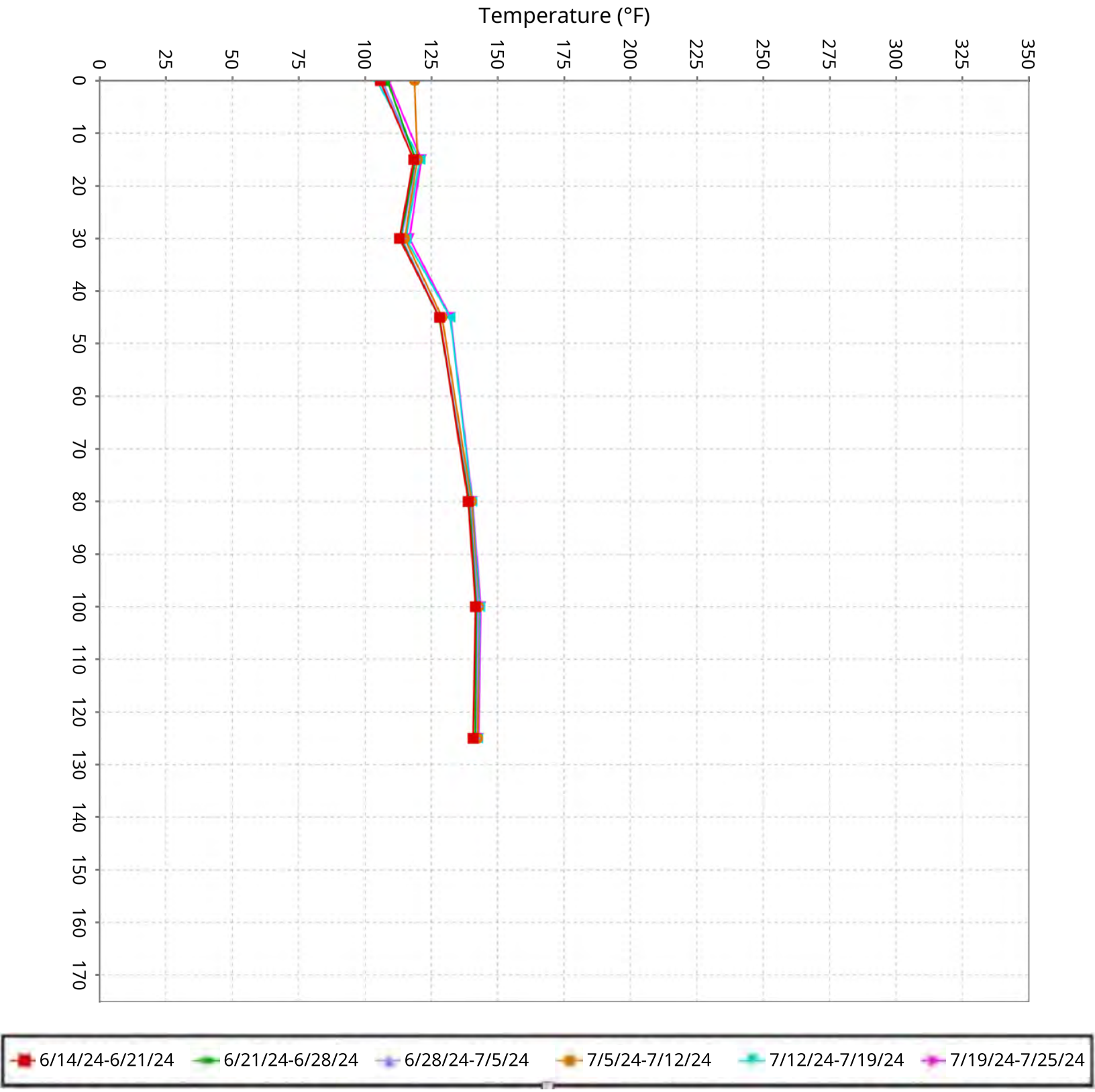
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

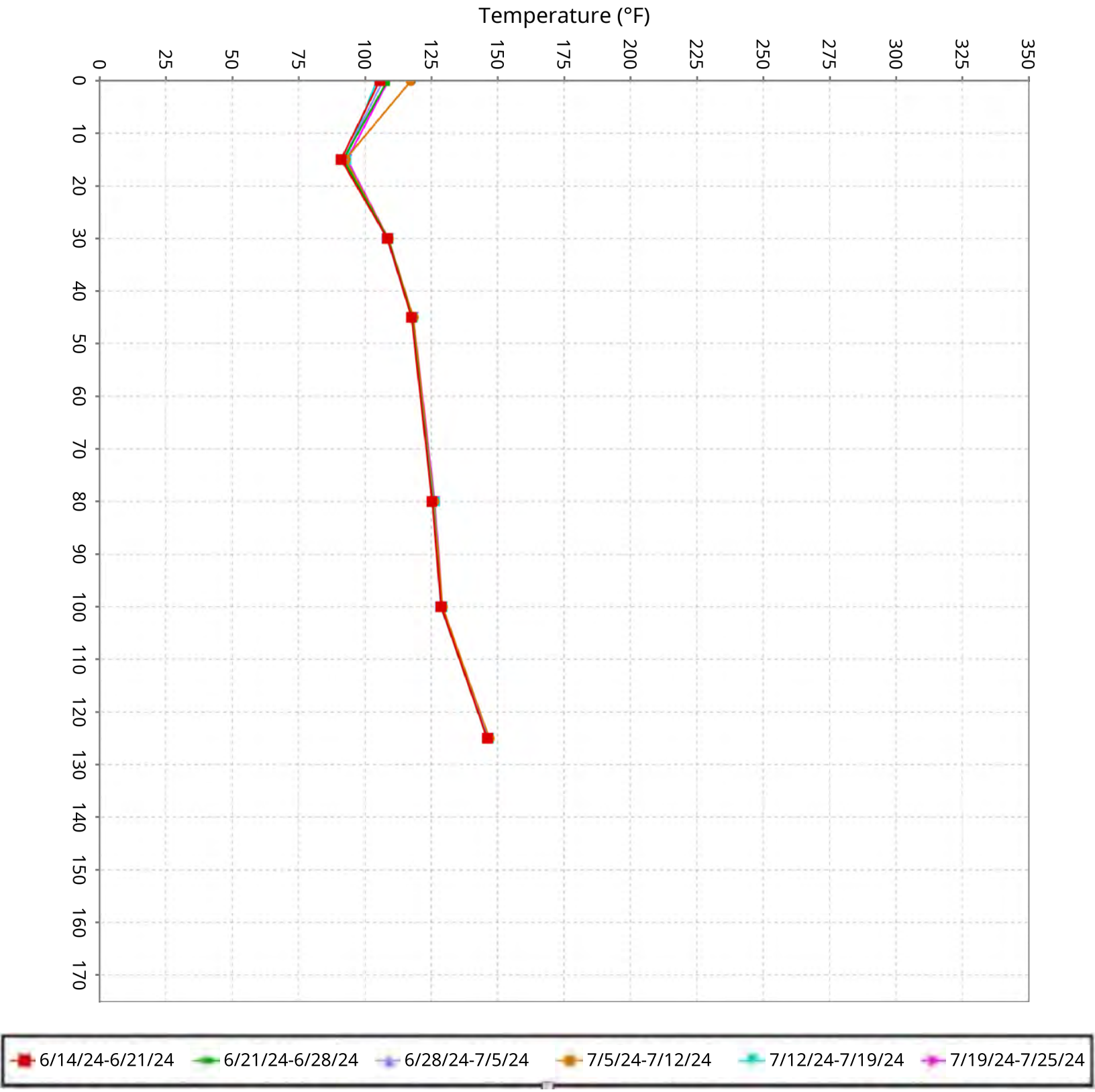
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

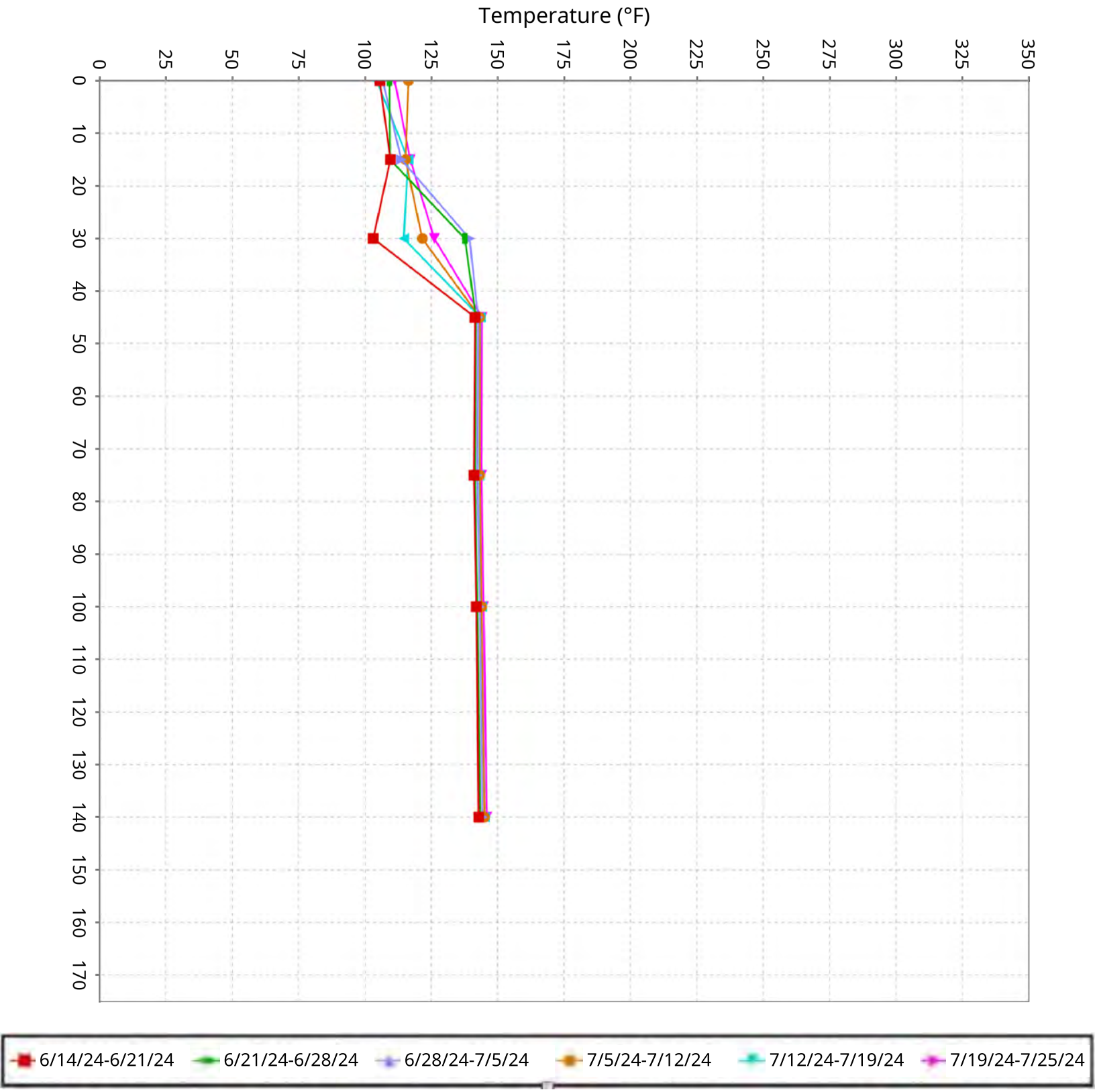
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

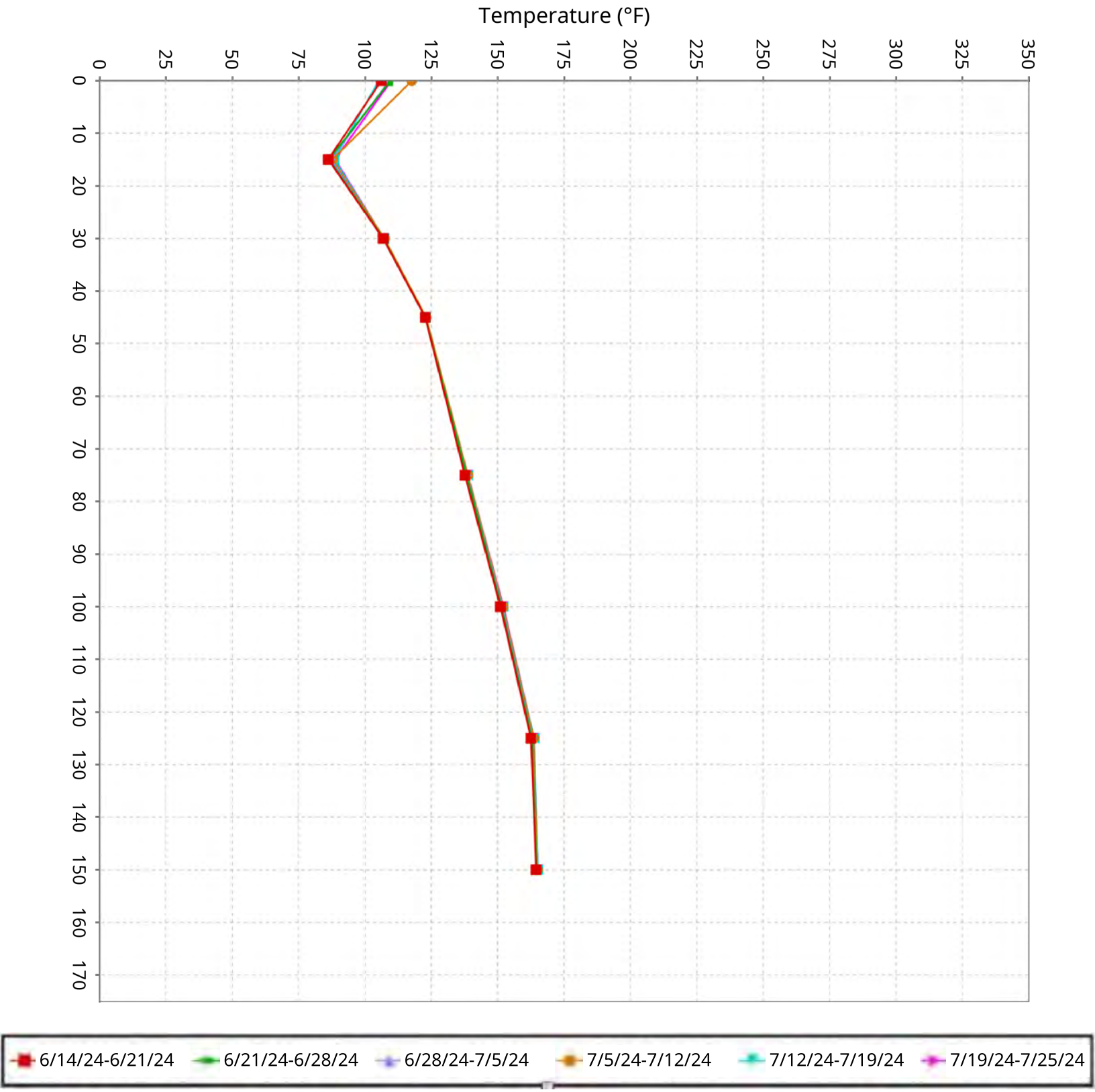
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

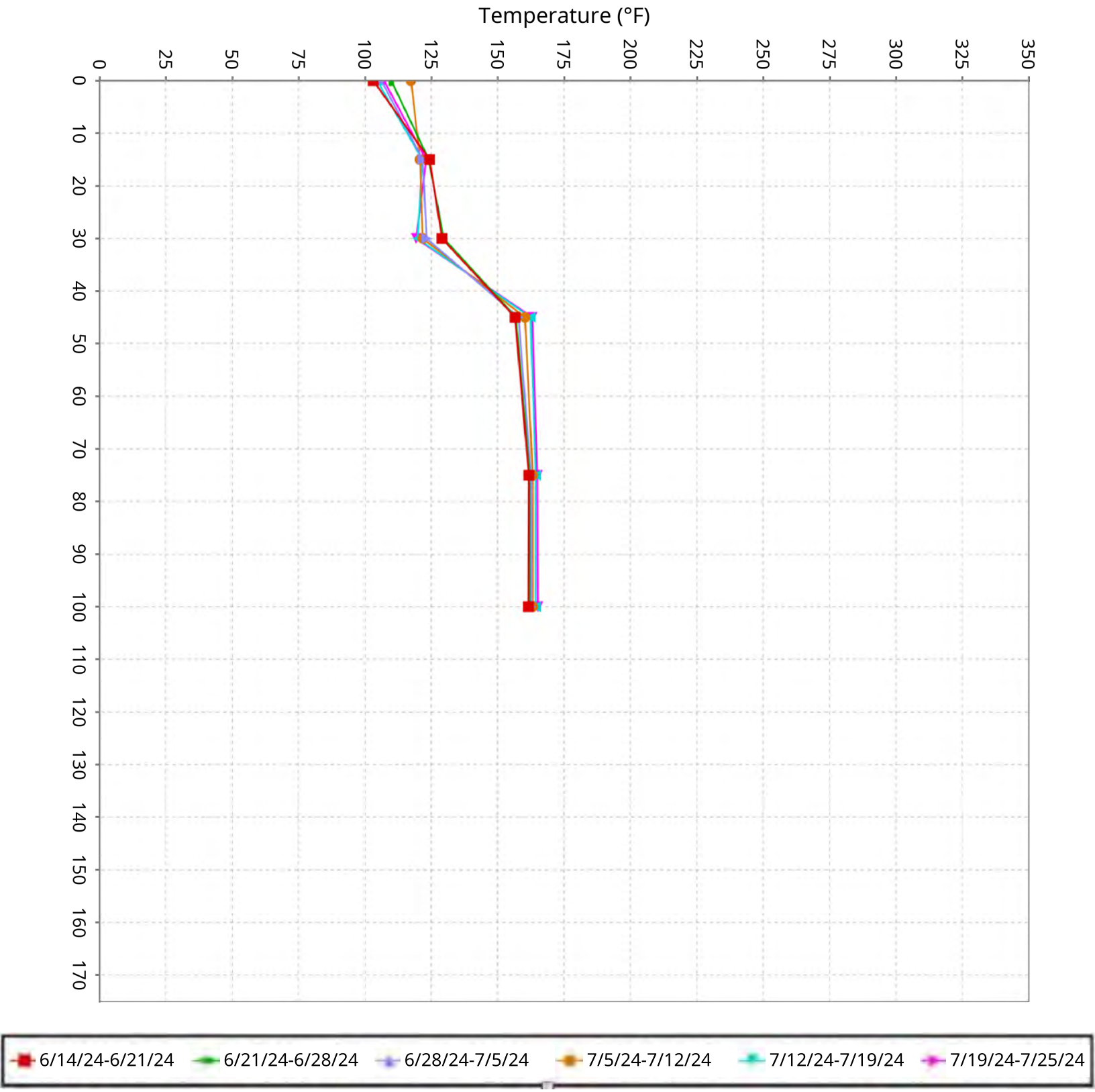
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

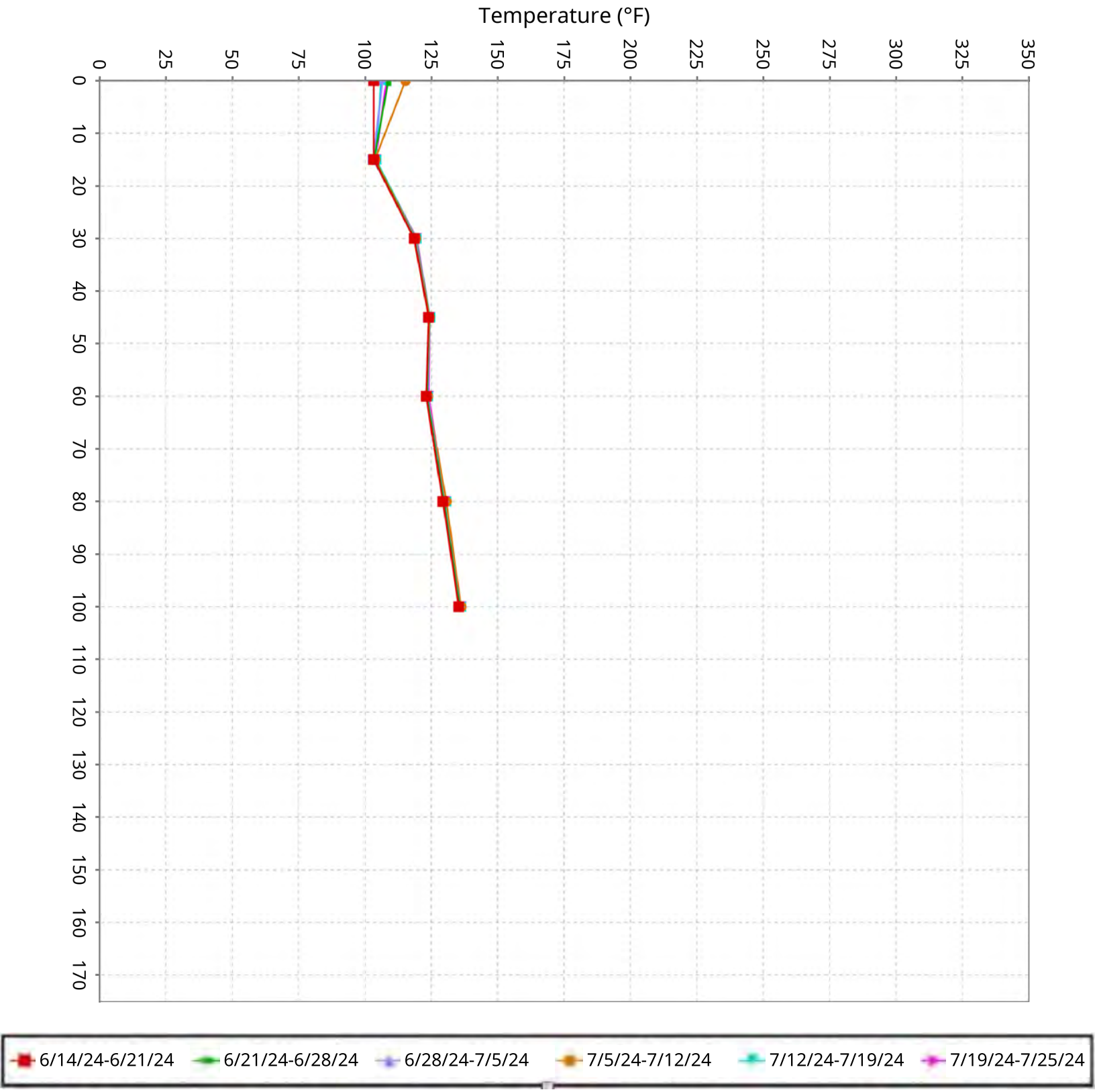
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

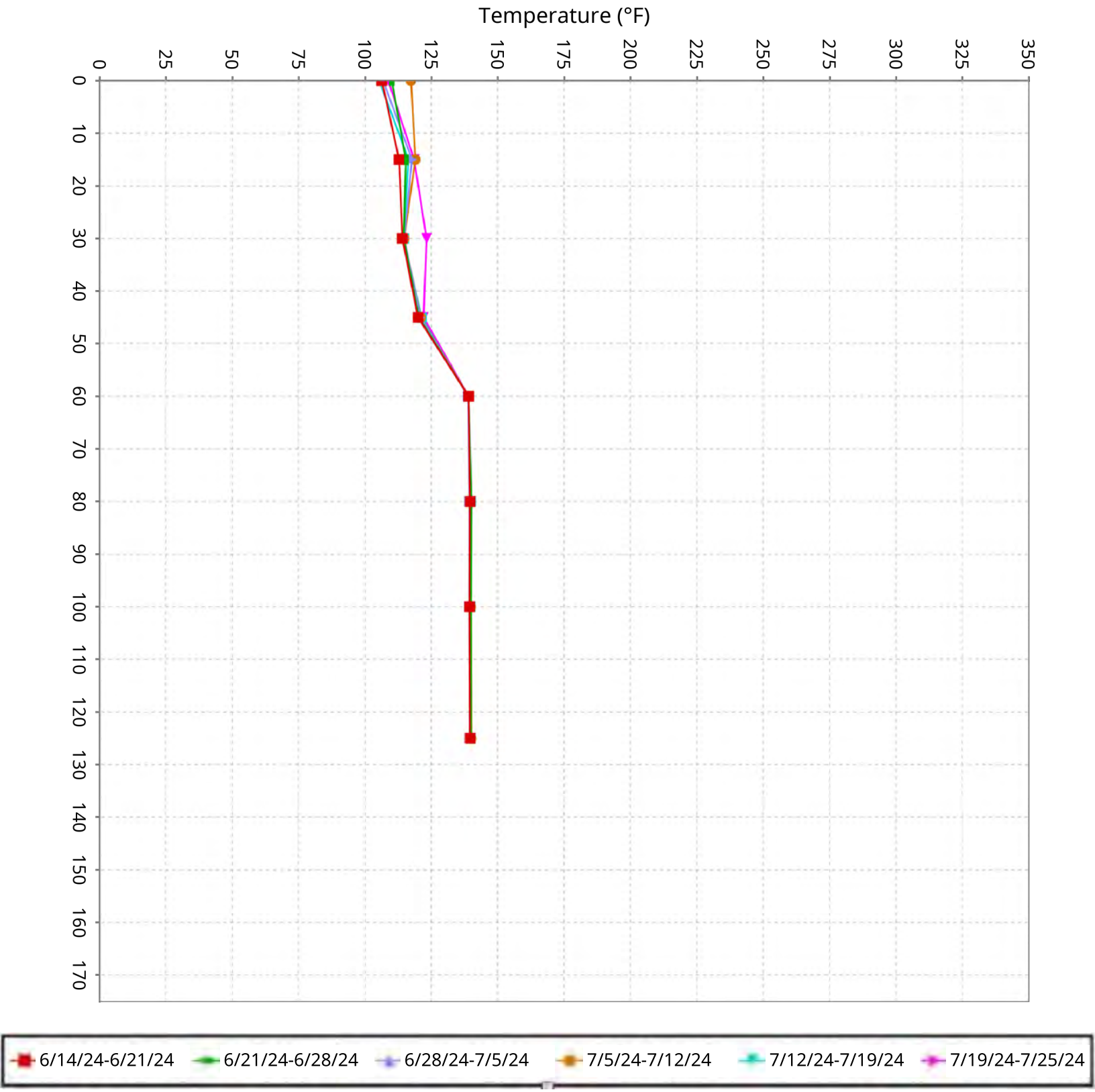
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

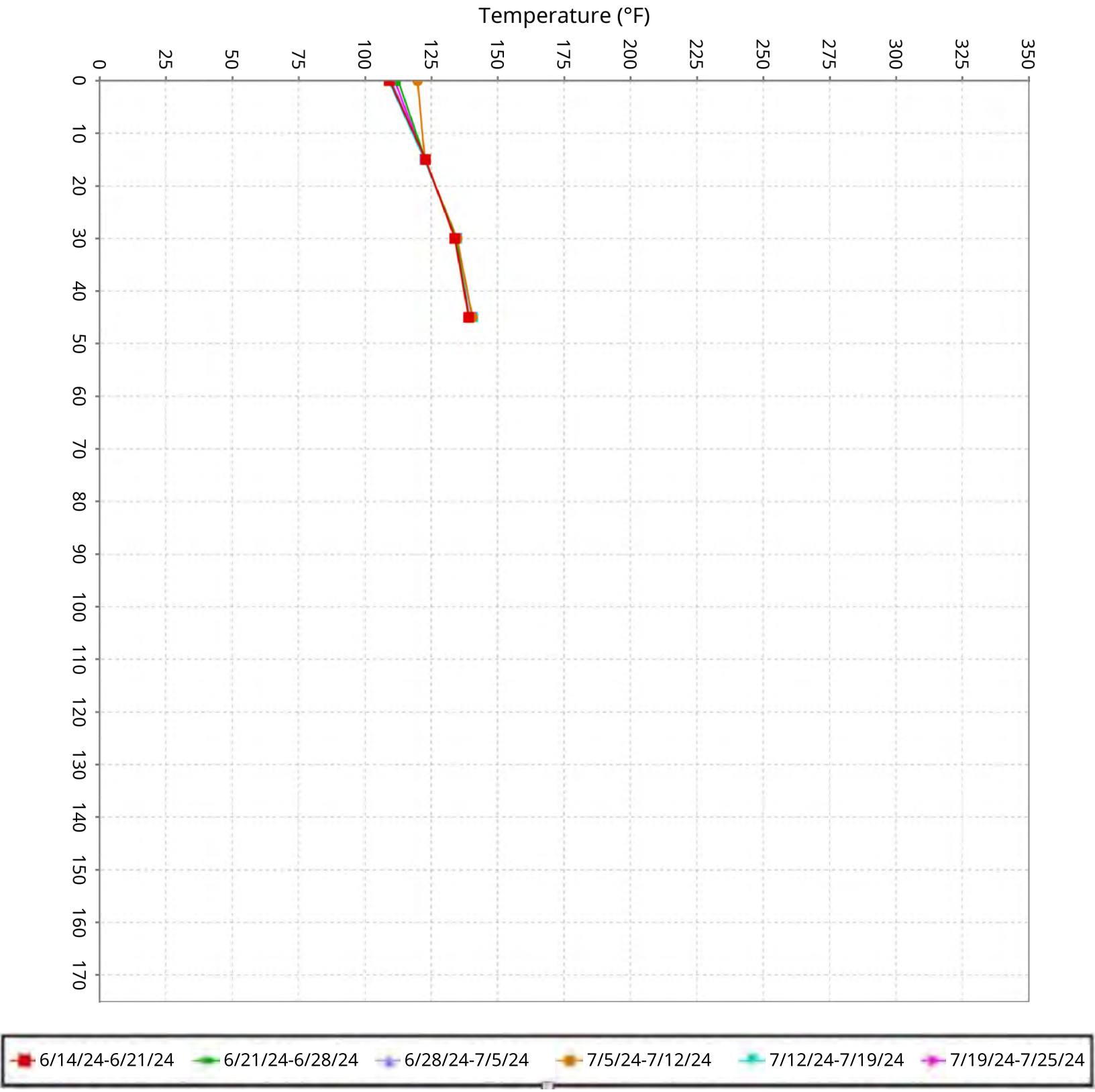
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

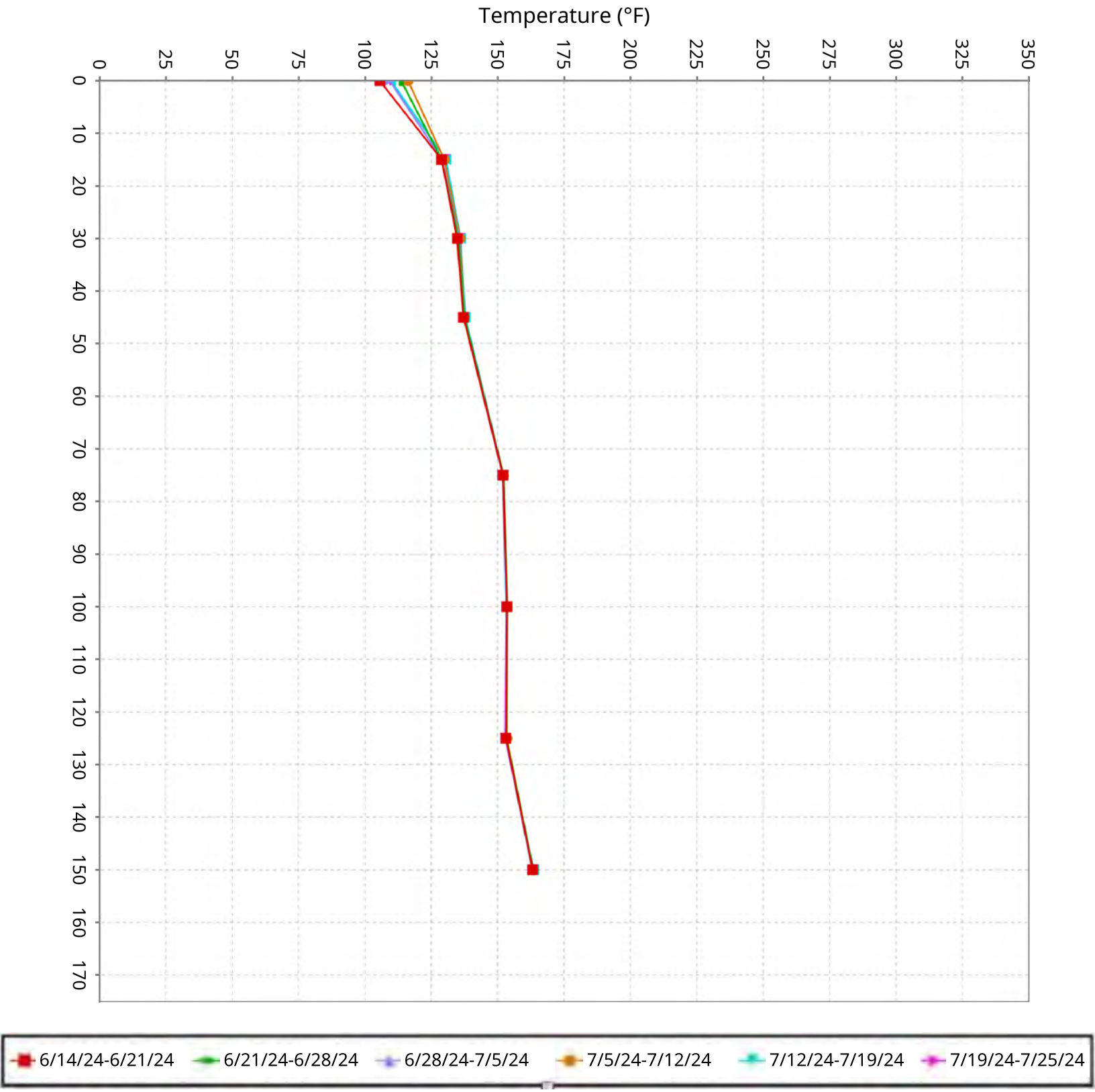
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

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

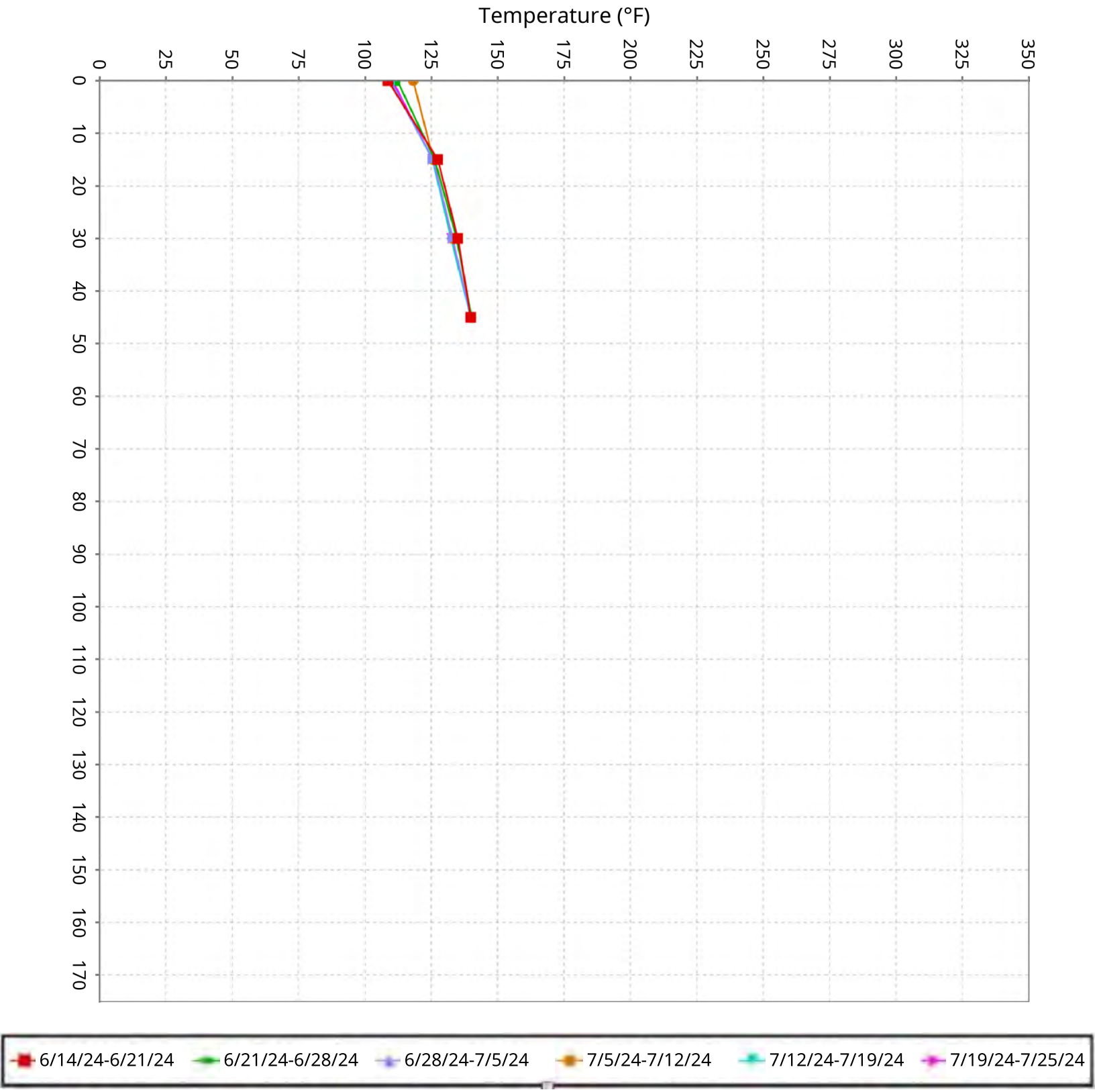
Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

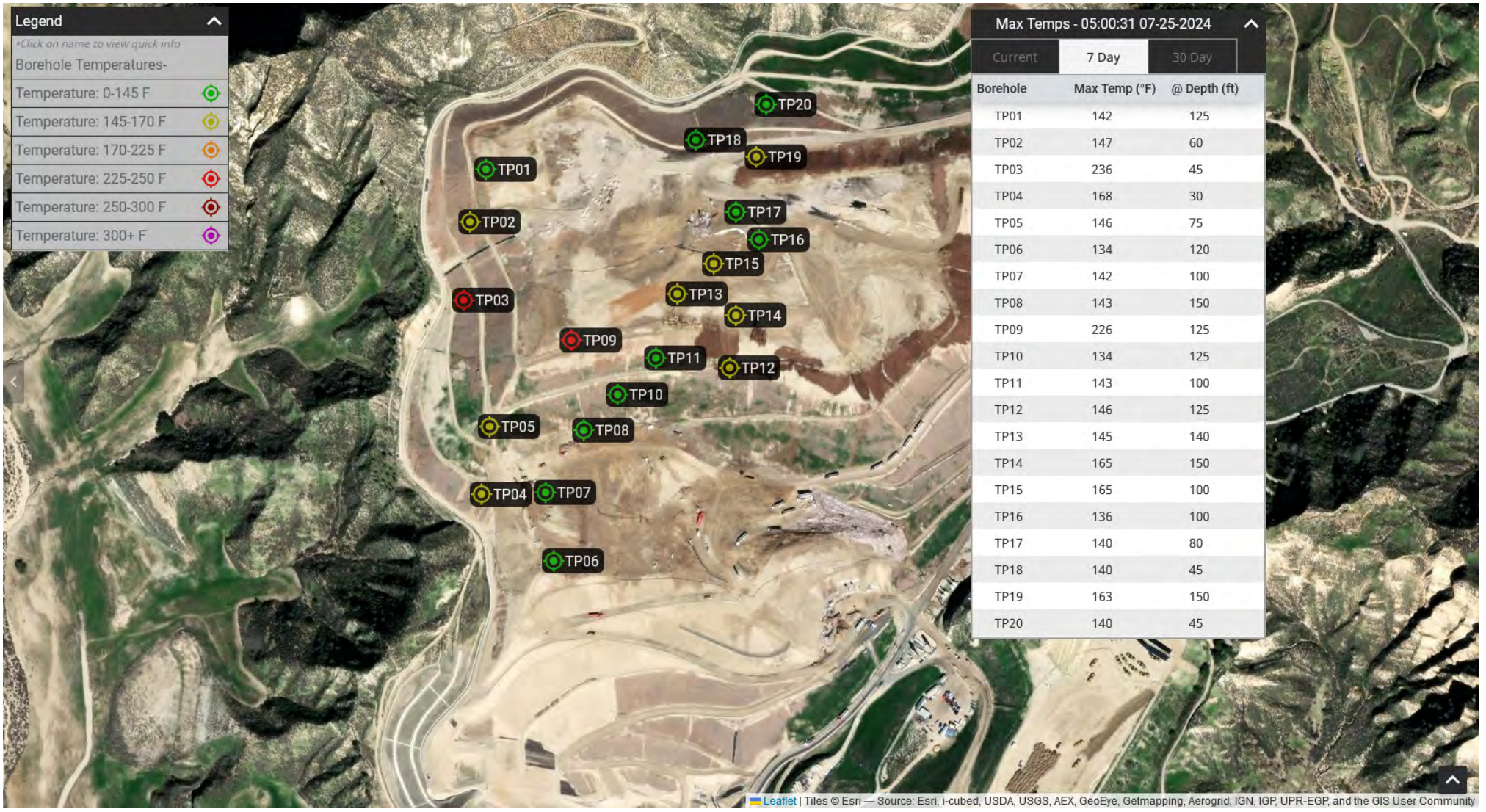
Vertical Temperature Profiles from Temperature Probes at Chiquita Landfill for TP-20

Maximum data for June 14, 2024 to July 25, 2024



SCS ENGINEERS

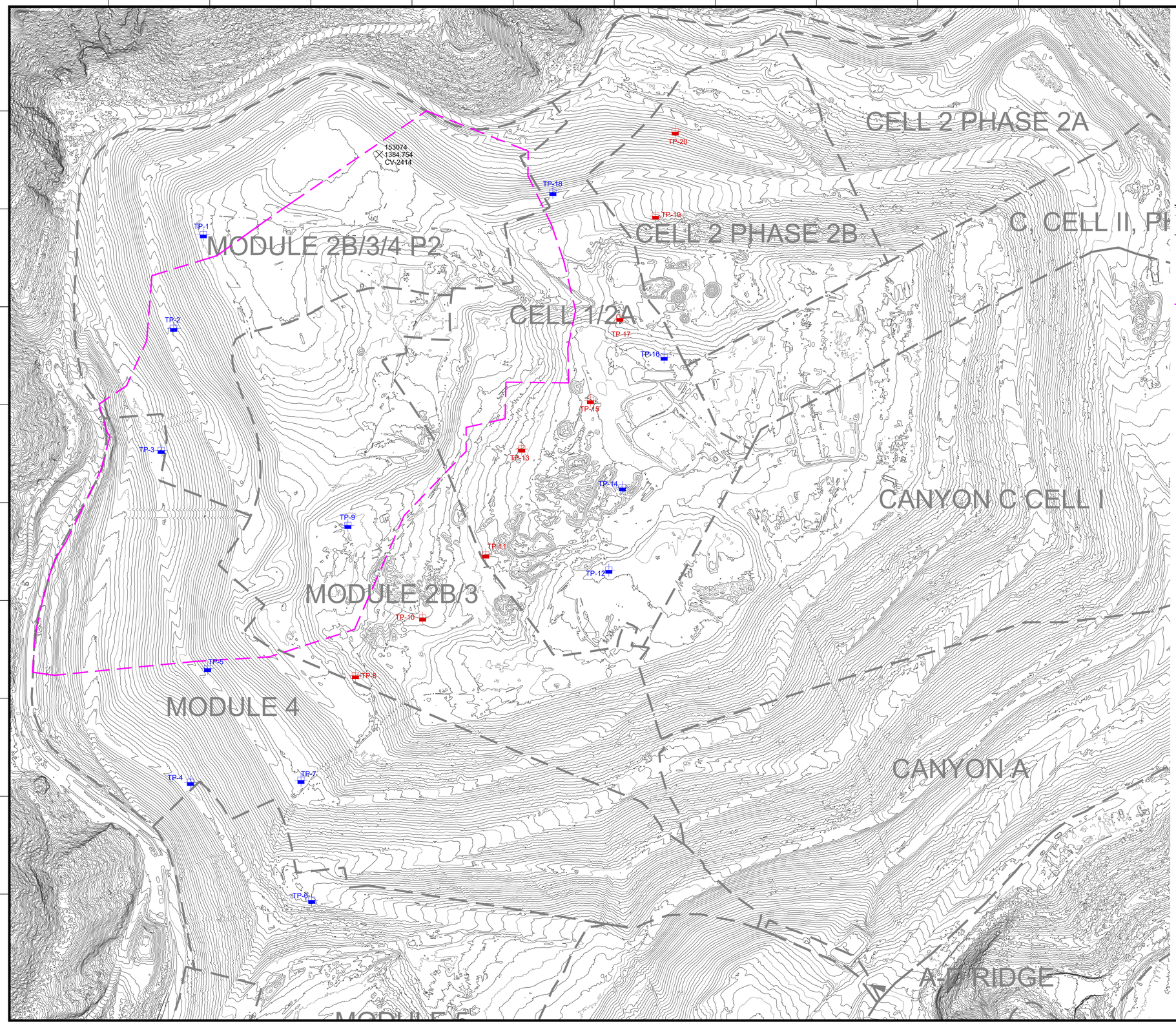
Maximum Vertical Temperature Map from Temperature Probes at Chiquita Landfill



Max Temps - 05:00:31 07-25-2024

Current | 7 Day | 30 Day

Borehole	Max Temp (°F)	@ Depth (ft)
TP01	142	125
TP02	147	60
TP03	236	45
TP04	168	30
TP05	146	75
TP06	134	120
TP07	142	100
TP08	143	150
TP09	226	125
TP10	134	125
TP11	143	100
TP12	146	125
TP13	145	140
TP14	165	150
TP15	165	100
TP16	136	100
TP17	140	80
TP18	140	45
TP19	163	150
TP20	140	45



N

GRAPHIC SCALE

130 65 0 130 260 390

SCALE: 1"=130'

LEGEND

1150	EXISTING TOPOGRAPHIC CONTOUR
	EXISTING CELL LIMITS (APPROXIMATE)
TP-XX	INSTALLED TEMPERATURE PROBES - STANDALONE
TP-XX	INSTALLED TEMPERATURE PROBES INSTALLED WITHIN WELL CASING
	REACTION AREA BOUNDARY (APPROX) - BASED ON DATA REVIEW

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLER. AERIAL PHOTOGRAPHY DATED JUNE 12, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.

NO.	REVISION	DATE

SHEET TITLE: OVERALL INSTALLED TEMPERATURE PROBE SITE PLAN

PROJECT TITLE: TEMPERATURE PROBE INSTALLATION PROJECT CHIQUITA LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX. (562) 427-0805

PROJ. NO: 01204123.35 | DSN. BY: JH/SRM | DWN. BY: AEK | CHK. BY: WCH | APP. BY: WCH

ACAD FILE: ENGINEERS

DATE: 06/14/2024

SCALE: AS SHOWN

SHEET: 1

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **EXHIBIT E TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 am Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

Chiquita Canyon, LLC – Case No. 6177-4
Reaction Committee & South Coast Air Quality Management District Monthly Meeting
Friday, April 26, 2024 at 2:00 pm PT

AGENDA

I. Leachate Updates (leachate seeps and dewatering updates)
   Presentation Leaders – Neal Bolton & Vidhya Viswanathan

II. Landfill Gas Well Expansion Updates
   Presentation Leader – Vidhya Viswanathan

III. Air Monitoring Updates (28-day Air Monitoring Study, enhanced air monitoring, MicroGCs)
   Presentation Leaders – Pablo Sanchez-Soria, Dr. Rick Pleus & Pat Sullivan

IV. Reaction Area (e.g., temperatures, settlement)
   Presentation Leader – Bob Dick

V. Permitting
   Presentation Leader – Pat Sullivan

MEETING SUMMARY

Attendees: *Reaction Committee & Chiquita—Neal Bolton, Bob Dick, Ray Huff, Rick Pleus, Pablo Sanchez-Soria, Pat Sullivan, Vidhya Viswanathan, Leigh Barton, Jake Duginski*

South Coast Air Quality Management District (SCAQMD)—Nathaniel Dickel, Stephen Dutz, Larry Israel, Ryan Mansell, Andrea Polidori, Kathryn Roberts, Amanda Sanders, Angela Shibata, Jason Aspell

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I. Leachate Updates (leachate seeps and dewatering updates)

a. Mr. Bolton presented on the continuation of some leachate seeps, but noted that the site has not experienced a measurable increase in seep locations or severity in conjunction with the shutdown of wellfield dewatering pumps. However, pumping is still important. The presence of leachate seeps seems to correlate with precipitation. No pressurized leachate releases (PLRs) have occurred since January, and the January event was minor in nature. The site could potentially encounter additional PLRs with continued drilling into the Reaction Area. Site personnel continue to gather more data. Approximately 14 acres of geosynthetic cover has been installed so far.

b. Ms. Viswanathan presented on the status of the dedicated dewatering pumps installed, which currently number 40 pumps in the wellfield and 20 pumps in sumps. There are approximately 247 leachate frac tanks on-site. A discussion regarding leachate treatment also occurred.

II. Landfill Gas Well Expansion Updates

a. Ms. Viswanathan presented on Chiquita's drilling strategy, which has to-date been to surround the Reaction Area. Ms. Viswanathan shared the drawing of wellfield drilling accomplished to-date. The drawings submitted on 4/19/24 under Condition 15a and b will need to be updated due to the new modifications to the Stipulated Order.

III. Air Monitoring Updates (28-day Air Monitoring Study, enhanced air monitoring, MicroGCs)

a. Mr. Sanchez-Soria provided an overview of the 28-day Air Monitoring Study, which concluded on March 31, and explained the hand-held field instrumentation data. He also addressed the PTR van data and provided an explanation of procedures and intent for analysis.

    i. Request: Dr. Polidori requested the raw data from the odor survey.

        1. Response: The odor survey data has been shared with SCAQMD. Mr. Sanchez-Soria can provide the data to Mr. Polidori as needed.

b. Dr. Pleus provided an overview of his general approach to an odor assessment and addressed physiological effects versus toxicological effects. There was a follow-up discussion on data.

c. Mr. Sullivan shared a drawing that depicted locations of the air monitoring stations (both on-site and off-site) and distinguished where the new MicroGCs are positioned. Mr. Sullivan also shared a matrix summarizing the various types of air monitoring.

IV. Reaction Area (e.g., temperatures, settlement)

a. Mr. Dick addressed the following topics as part of his prepared remarks: (1) why the Reaction Area didn't expand with the pump shutdown; (2) what to expect when pumps are reactivated; and (3) what to expect when in-situ temperature probe data is aggregated.

    i. Recommendation: Ms. Shibata requested a numerical value of month-over-month settlement to be presented in each of these monthly meetings.

        1. Response: The Reaction Committee will begin presenting the requested settlement metrics during these monthly meetings.

V. Permitting

a. Mr. Sullivan provided an explanation of permitting under the various modifications to the Stipulated Order and commented on several specific conditions. Mr. Sullivan led a discussion on the landfill gas generation analysis requirements and future flare permitting. A clarification on the schedule for permitting Flare #4 was also addressed.

i. Outstanding Question: Ms. Shibata asked whether any testing of leachate treatment by ECT2 had been conducted onsite and if so, what equipment was tested and what were the processes tested.

    1. Response: No testing of leachate treatment by ECT2 has been conducted onsite. ECT2 has been conducting testing of Chiquita's leachate offsite at ECT2's research lab in North Carolina.

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **EXHIBIT F TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 am Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

Chiquita Canyon, LLC – Case No. 6177-4
Reaction Committee & South Coast Air Quality Management District Monthly Meeting
Wednesday, May 29, 2024 at 3:00 pm PT

AGENDA

I. Leachate Updates (leachate seeps)
   Presentation Leader – Neal Bolton

II. Reaction Area (e.g., temperatures, settlement)
   Presentation Leader – Bob Dick

III. Leachate Updates (dewatering updates)
   Presentation Leader – Vidhya Viswanathan

IV. Landfill Gas Well Expansion Updates
   Presentation Leader – Vidhya Viswanathan

V. Air Monitoring Updates (28-day Air Monitoring Study, notifications, enhanced air monitoring)
   Presentation Leaders – Pablo Sanchez-Soria, Rick Pleus & Pat Sullivan

VI. Permitting
   Presentation Leader – Pat Sullivan

MEETING SUMMARY

Attendees: *Reaction Committee, SCS & Chiquita—Neal Bolton, Bob Dick, Rick Pleus, Pablo Sanchez-Soria, Pat Sullivan, Vidhya Viswanathan, Bill Haley, Leigh Barton, Jake Duginski*

South Coast Air Quality Management District (SCAQMD)—Stephen Dutz, Larry Israel, Baitong Chen, Lizabeth Gomez, Christina Ojeda, Gerardo Vergara, Andrea Polidori, Kathryn Roberts, Mary Reichart, Ryan Mansell

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I. Leachate Updates (leachate seeps)

a. Mr. Bolton presented on the status of leachate seeps observed and reported onsite. Per Mr. Bolton, there have not been many leachate seeps to report. He expects that as we get into the drier period, we will likely see fewer seeps. Mr. Bolton noted that there have also been a few leachate leaks, but that they are not related to the reaction and were mitigated quickly.

i. Outstanding Question: Ms. Roberts requested that Chiquita respond to SCAQMD's prior email on the facility's investigation of the leachate leaks.

1. Response: Chiquita responded to SCAQMD's email on its investigation of the leaks on June 3, 2024.

II. Reaction Area (e.g., temperatures, settlement)

a. Mr. Dick presented on the current status of the reaction, focusing in particular on an analysis of recent settlement and temperature data. Mr. Dick shared that all landfills experience differential settlement as consolidation of the waste happens, and certainly over deeper areas than shallower. At reaction landfills, we are looking at accelerated and atypical settlement to get more information on the reaction. Mr. Dick shared recent settlement data and noted that settlement is occurring in the reaction area, but not outside. That indicates that we targeted the right area.

b. Mr. Dick also shared the in-situ temperature probe results for TP-1, TP-5, TP-8 and TP-10. He noted that in the reaction area, we are not seeing cooling of the waste mass, but we are not seeing warming of the waste either.

III. Leachate Updates (dewatering updates)

a. Ms. Viswanathan presented on the status of the dedicated dewatering pumps installed, which currently number 53 pumps in the wellfield. Due to the ongoing geomembrane capping project, pumps are being actively removed, and re-installed as soon as capping work in the area is completed. Ms. Viswanathan also stated that there are approximately 251 leachate tanks on-site and that carbon treatment is ongoing.

IV. Landfill Gas Well Expansion Updates

a. Ms. Viswanathan presented on the status of the landfill gas well expansion project. Between April and May 24, 2024, approximately 34 new wells had been installed. There are currently 4 drill rigs on site, coordinating around the capping project.

b. Mr. Bolton also shared that there have been no additional pressurized leachate releases and that about 18.5 acres of geomembrane cap were in place as of a few days ago.

V. Air Monitoring Updates (28-day Air Monitoring Study, notifications, enhanced air monitoring)

a. Dr. Sanchez-Soria provided an overview of the notification system for exceedances of the OEHHA RELs for hydrogen sulfide and benzene that CTEH has been developing.

i. Recommendation: Mr. Dutz recommended that the public have the ability to provide a phone number and receive alerts over their phones.

1. Response: Chiquita is considering this recommendation.

ii. Outstanding Question: In a series of questions about the design of the 28-day health study, Mr. Dutz asked whether PAHs were ever measured previously.

1. Response: No, PAHs have not been measured in air previously at Chiquita.

iii. Outstanding Question: Mr. Dutz asked whether PAHs have ever been a concern elsewhere for ETLF landfills.

1. Response: Polycyclic Aromatic Hydrocarbons (PAHs) are a category of chemical compounds that include numerous individual chemical constituents, such as naphthalene, anthracene, and phenanthrene, to name only a few. Previous sampling and analysis of landfill gas at certain other landfill facilities experiencing ETLF conditions has been performed using USEPA Method TO-15, which does include naphthalene as one of the more common and prevalent individual PAH chemicals, but is not a suitable method to comprehensively detect and measure PAHs as an entire category of compounds. Accordingly, based on the Committee's prior experience at other ETLF facilities, we are unaware of elevated concentrations of PAHs being recognized as a critical concern.

b. Dr. Pleus shared that they have obtained air data from CTEH and SCS and have begun evaluating the data sets from an odor perspective.

a. Mr. Sullivan shared an updated map and chart of the air monitoring program and described recent updates to the program, including the installation of additional microGCs at 8 locations.

b. Mr. Sullivan also shared that they are still on schedule for a June 3 submission of the flux chamber study.

VI. Permitting

a. Mr. Sullivan presented on the current permitting status of the various permits required by the Stipulated Order for Abatement.

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Petitioner,

vs.

CHIQUITA CANYON, LLC a Delaware Corporation,
[Facility ID No. 119219]

Respondent.

Case No. 6177-4

EXHIBIT G TO DECLARATION OF ROBERT E. DICK, P.E., B.C.E.E.

Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150

Hearing Date: August 17 and 20, 2024
Time: 10:00 am
Place: Santa Clarita Performing Arts Center
College for the Canyons
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

Chiquita Canyon Landfill, LLC
Reaction Committee & SCAQMD Staff Monthly Meeting
Wednesday, June 26, 2024 at 1:00 pm PT

AGENDA

I. Leachate Updates (leachate seeps & dewatering updates)
   Presentation Leader – Neal Bolton & Vidhya Viswanathan

II. Landfill Gas Well Expansion Updates
   Presentation Leader – Vidhya Viswanathan

III. Public Health & Air Monitoring Updates (health study, notifications, enhanced air monitoring)
   Presentation Leaders – Pablo Sanchez-Soria, Rick Pleus & Pat Sullivan

IV. Reaction Area (e.g., temperatures, settlement)
   Presentation Leader – Bob Dick

V. Permitting
   Presentation Leader – Pat Sullivan

MEETING SUMMARY

Attendees: *Reaction Committee, SCS & Chiquita—Neal Bolton, Bob Dick, Rick Pleus, Pablo Sanchez-Soria, Pat Sullivan, Vidhya Viswanathan, Bill Haley, Leigh Barton*

South Coast Air Quality Management District (SCAQMD)— Chris Chen, Nathaniel Dickel, Lizabeth Gomez, Larry Israel, Ryan Mansell, Andrea Polidori, Mary Reichert, Amanda Sanders, Angela Shibata, Gerado Veraga

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I. Leachate Updates (leachate seeps & dewatering updates)

a. Mr. Bolton presented on the status and locations of leachate seeps observed and reported onsite in June 2024. Mr. Bolton also led a discussion of the status of the installation of the geosynthetic cover, noting that approximately 35 acres have been capped to date, and they were expecting to reach 38 acres by Friday, June 28.

b. Ms. Viswanathan presented on the installation of dewatering pumps. As of June 21, there were 64 pumps online in the wellfield and 23 pumps operating in sumps. She also noted that dewatering infrastructure is being disconnected and reconnected as the geosynthetic cover continues to be installed over the area.

II. Landfill Gas Well Expansion Updates

a. Ms. Viswanathan presented on the status of the landfill gas well expansion project and noted that the landfill gas drilling is also having to navigate the cover installation. She stated that 161 wells have been installed since the Stipulated Order went into effect, and they are on track to meet the Stipulated Order deadlines for well density. She also discussed some of the challenges with drilling the wells in and around the reaction area to the desired depth, and the plans for replacing such wells.

III. Public Health & Air Monitoring Updates (health study, notifications, enhanced air monitoring)

a. Mr. Sanchez-Soria noted that the health study is in progress. They are in the process of going through the data from the 28-day air study and preparing the health impacts report due August 1. He also noted that the notification system is now in place. Following up on a recommendation from the last meeting, he noted that it is possible to have text notifications.

b. Mr. Pleus also provided an update on the health study. His team is evaluating the data received from the other air monitoring consultants and are in the process of incorporating that data into a report that will be attached to Mr. Sanchez-Soria's report.

c. Mr. Sullivan provided an update on the enhanced air monitoring program and the installation of the microGCs and SO2 monitors. He also provided an update on the calibration of the new H2S monitors, and discussed the permitting and power issues at each of the locations. Mr. Sullivan also presented on the website updates that are ongoing based on feedback received from SCAQMD and the U.S. Environmental Protection Agency.

IV. Reaction Area (e.g., temperatures, settlement)

a. Mr. Dick led a discussion on the current status of the reaction and the Reaction Committee's continued conclusion that the reaction is stable and consistent in terms of its geographic location within the waste mass. He noted that they are not seeing any indications of ETLF conditions beyond the current boundaries that would cause them to be concerned that the reaction is expanding. Mr. Dick also discussed the in-situ temperature monitoring probes, focusing in particular on TP-1, TP-8, and TP-9, noting that there are a large number of probes that are well below the NESHAP trigger threshold and indicate normal temperatures for methanogenesis. Mr. Dick also discussed the effectiveness and efficiency of the gas collection system and the capping effort. Finally, Mr. Dick provided an update on settlement data, noting that there appears to be a reduction in the settlement rate over the past few months.

V. Permitting

a. Mr. Sullivan led a discussion on the status of the permit applications that have been submitted and are in the process of being submitted. He also discussed the results of the additional flux chamber study and some recommendations coming out of the resulting report.

Requests for Written Follow-Up

1. Ms. Sanders requested a change to the formatting of a table on Mr. Bolton's slide.

   A revised version of Mr. Bolton's powerpoint presentation with the units corrected in one of the charts is attached to this summary.

2. Ms. Reichert asked whether Chiquita is planning on re-evaluating the need for deeper well depths and, if so, what data and parameters will be evaluated to make this determination.

   Chiquita will be examining overall gas quality (e.g., methane, hydrogen, temperature) as well as liquids levels within the wells.

3. Ms. Reichert requested a map that shows an additional layer where discoloration of the exposed geomembrane cap is occurring.

   An aerial image of the landfill that delineates the approximate location of the discoloration of the geosynthetic cover is attached to this summary.

4. Ms. Sanders and Ms. Shibata requested additional information on the cleaning of leachate tanks, including a description of the procedures and protocols (e.g., process flow) to the extent that information is not already included in an application to SCAQMD.

   Chiquita is collecting this information and will incorporate it into a permit application or modification as appropriate.

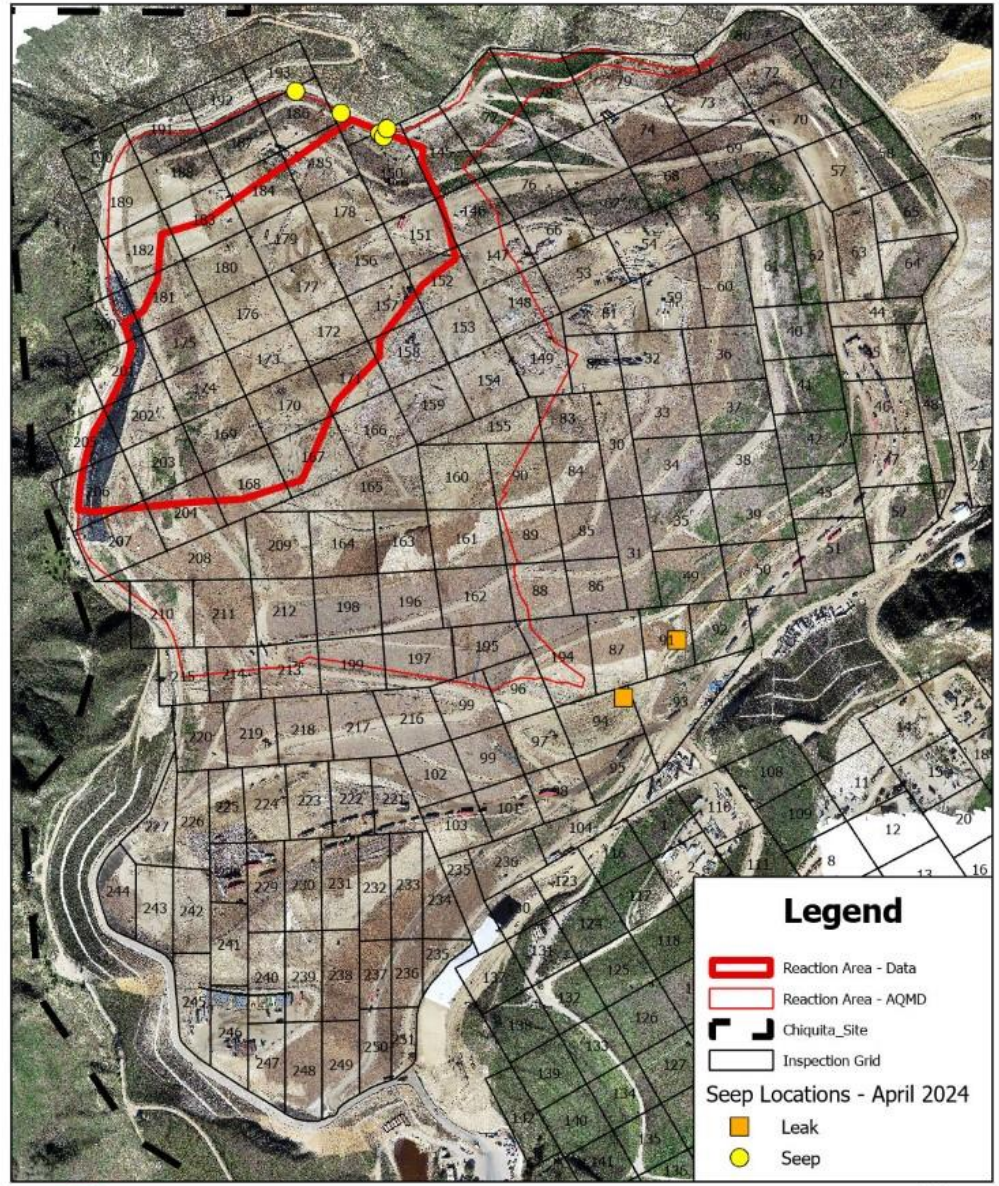
5. Ms. Sanders asked about the upcoming source test for Flare #1 and whether expedited review of the source test protocol had been requested.

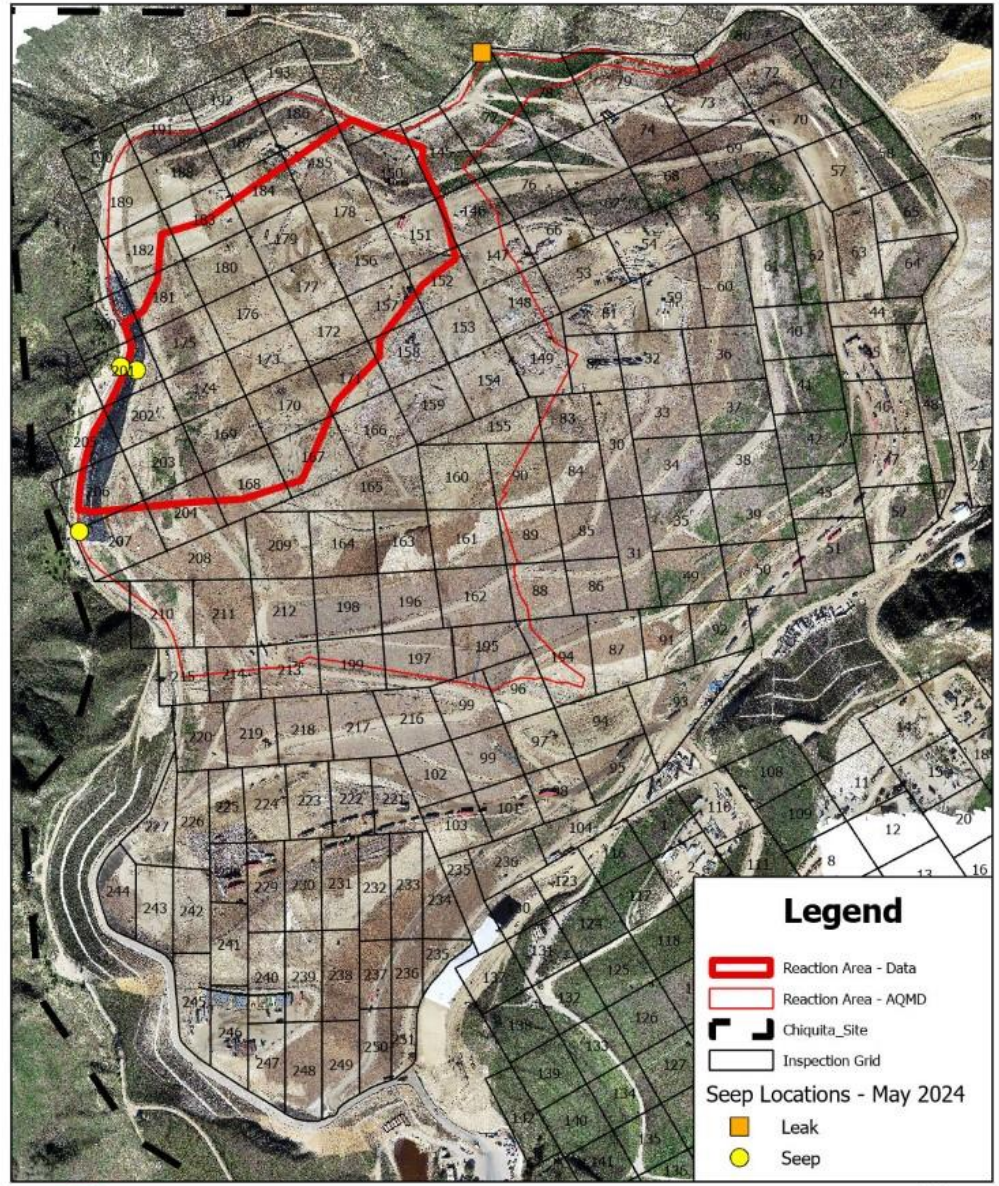
   Chiquita submitted the protocol documentation within the timeframe allowed by Chiquita's permit and the anniversary date of the previous test and subsequently requested expedited review as requested. SCAQMD conditionally approved the test protocol.

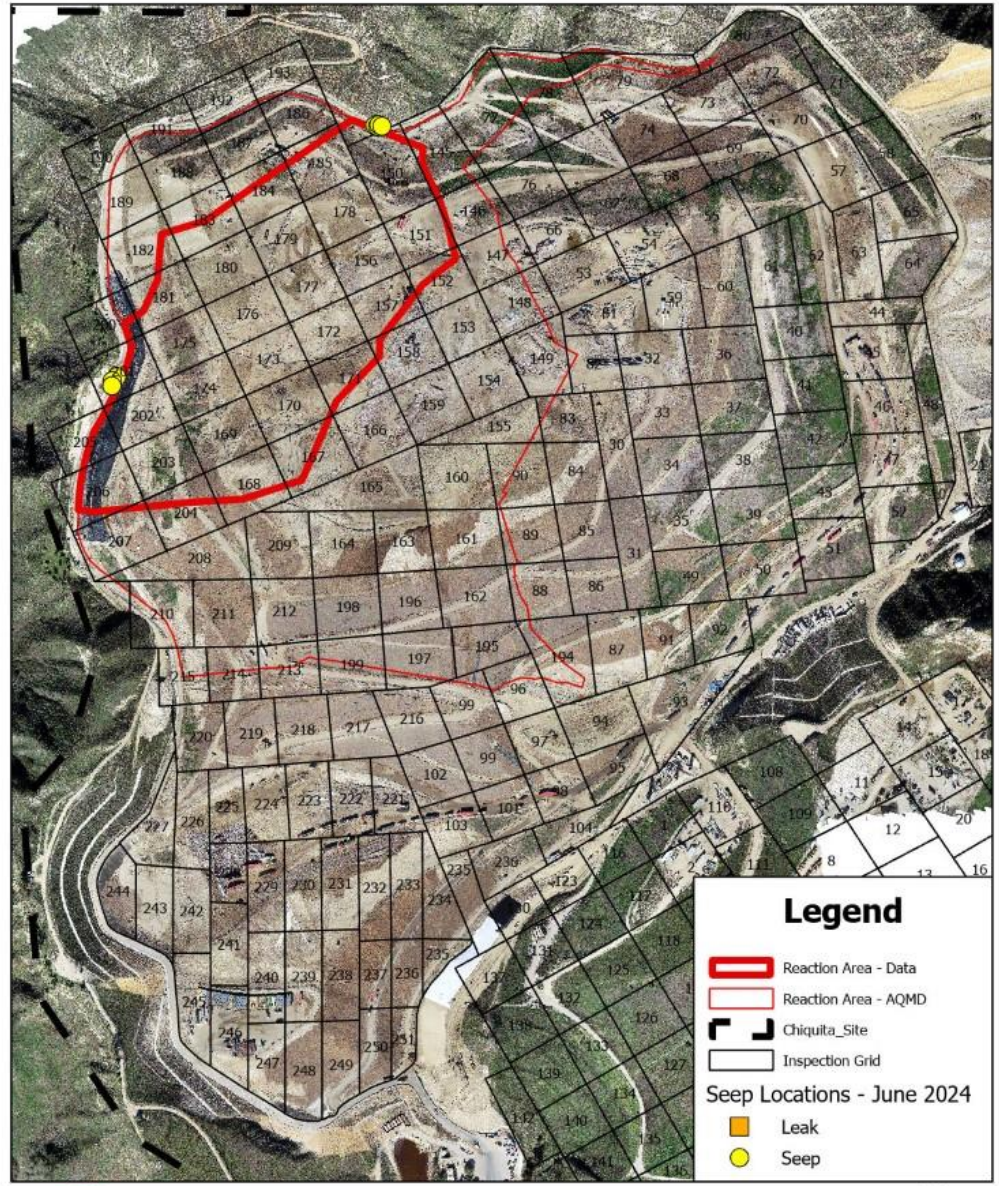
Chiquita Canyon Landfill

AQMD Update on Leachate Seeps and Geomembrane Capping

June 26, 2024


Legend
Reaction Area - Data
Reaction Area - AQMD
Chiquita_Site
Inspection Grid
Seep Locations - April 2024
Leak
Seep
0
312.5
625
1,250 Feet
N
Leachate Seep Locations
April 2024


Legend
Reaction Area - Data
Reaction Area - AQMD
Chiquita_Site
Inspection Grid
Seep Locations - May 2024
Leak
Seep
0
312.5
625
1,250 Feet
Leachate Seep Locations
May 2024
N

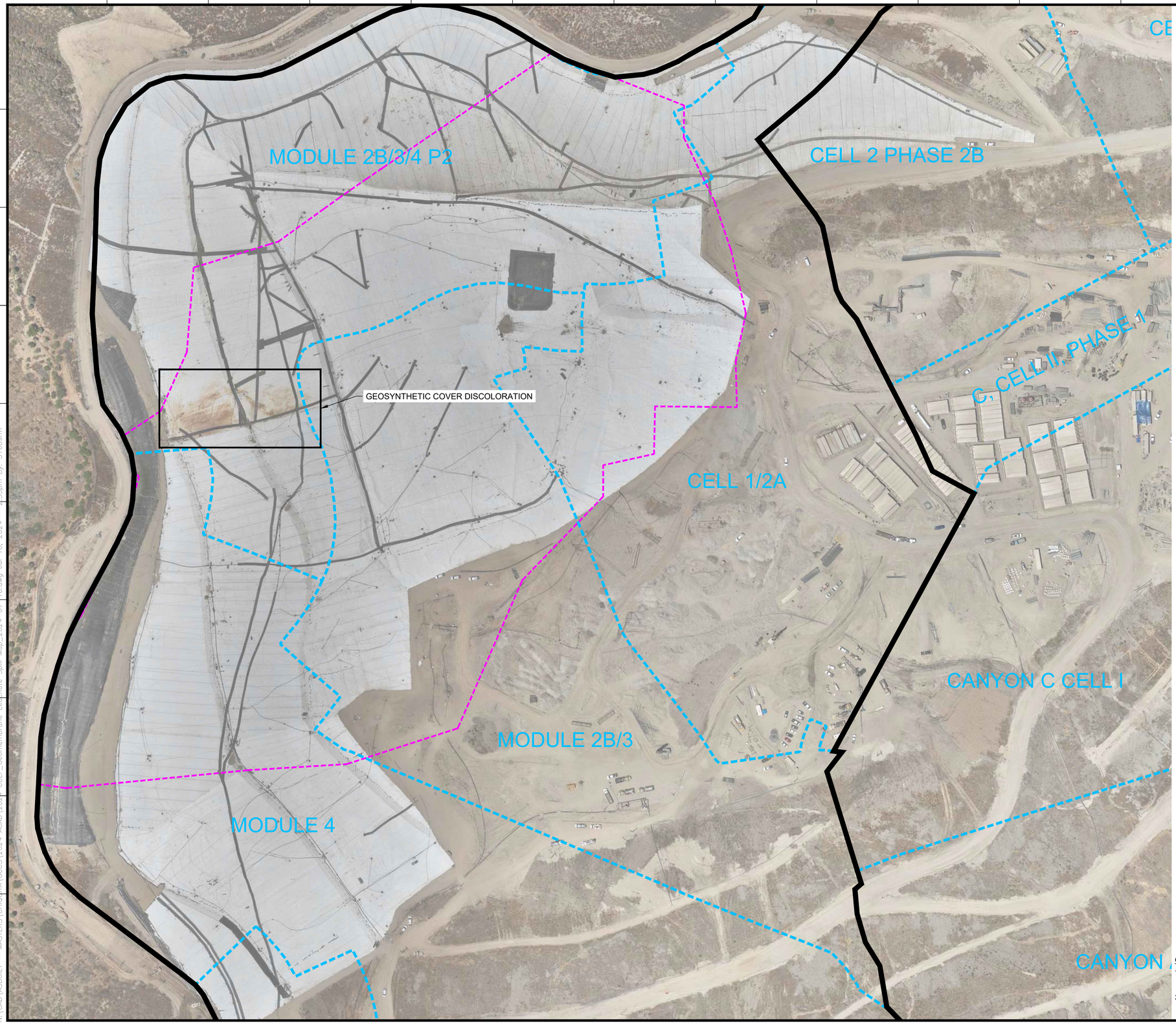

Legend
Reaction Area - Data
Reaction Area - AQMD
Chiquita_Site
Inspection Grid
Seep Locations - June 2024
Leak
Seep
0
312.5
625
1,250 Feet
N
Leachate Seep Locations
June 2024

Leachate Seeps Reported in June 2024

Date	Time of Inspection	Type of Discharge	Volume *(gallons)*	Location	In Drainage Channel	Notes
10-Jun-24	8:09 AM	Seep	1-5	West Slope - 201	No	Installed soil berm and covered seep with soil. Access is difficult because it was under the scrim
11-Jun-24	8:14 AM	Seep	21-50	West Slope - 201	No	Seep continued from June 10th. It was contained with another berm and covered with fresh soil. Access is difficult because it was under the scrim
11-Jun-24	1:14 PM	Seep	21-50	West Slope - 201	No	Standing leachate had spread onto the perimeter road. Impacted dirt was removed and a larger berm constructed to contain seep, and fresh soil added to the area. Access is difficult because it was under the scrim
16-Jun-24	7:55 AM	Seep	11-20	North Slope - 150	No	Created a soil berm to temporarily contain the seep until the maintenance crew is onsite tomorrow during operating hours. The seep is being monitored until then.
16-Jun-24	1:11 PM	Seep	11-20	North Slope - 150	No	Added additional fresh soil to the rea to temporarily contain the seep until the maintenanc crew is onsite tomorrow during operating hours. The seep is being monitored until then.

Approximately 35.93 acres have been capped as of 6/26/2024.

Expecting to have 38 acres by Friday, 6/28/2024



N

GRAPHIC SCALE

100 50 0 100 200 300

SCALE: 1"=100'

LEGEND

- EXISTING CELL LIMITS (APPROXIMATE)
- REACTION AREA BOUNDARY (APPROXIMATE) - BASED ON DATA REVIEW
- REACTION AREA BOUNDARY - CONDITION 9A

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLOR. AERIAL PHOTOGRAPHY DATED JULY 10, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.

DATE

REVISION

NO.

SHEET TITLE: EXISTING GEOMEMBRANE MAP

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
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PROJ. NO. 01204123.35 | DWN. BY: SRM | CHK. BY: - | APP. BY: - | ACAD FILE: FIELD SERVICES | DSN. BY: -

DATE: 07/16/2024

SCALE: AS SHOWN

SHEET: 1

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