July 8, 2025

Via E-Mail
Eric Morofuji
Environmental Health Specialist
Los Angeles County Department of Public
Health Local Enforcement Agency
Environmental Programs Division
5050 Commerce Drive
Baldwin Park, California 91706
emorofuji@ph.lacounty.gov

Re: Chiquita Canyon, LLC Analysis of June 10, 2025 FLIR Survey in Response to the December 24, 2024 LEA Letter Regarding Milestone 2B Compliance, Chiquita Canyon Landfill

Dear Mr. Morofuji:

Chiquita Canyon, LLC ("Chiquita") hereby provides this analysis of the June 10, 2025 aerial Forward Looking Infrared ("FLIR") survey of the geosynthetic cover area of the Chiquita Canyon Landfill ("Landfill") in response to the December 24, 2024 letter from the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency ("LEA").

Aerial FLIR Survey of the Geosynthetic Cover

As previously discussed in Chiquita's November 12, 2024 response to the LEA, Chiquita engaged Sniffer Robotics, Inc. ("Sniffer") to perform aerial FLIR surveys of the geosynthetic cover area of the Landfill via radiometric thermal imagery. Sniffer performed the most recent FLIR survey on June 10, 2025. A radiometric thermal camera measured the temperature of the surface by interpreting the intensity of the infrared signal reaching the camera. As explained in Chiquita's November 12, 2024 letter to the LEA (transmitting the October 2024 survey), certain variables such as ambient temperature, humidity, dew on the geosynthetic cover, rain, the color of surface objects, and solar insolation can affect the accuracy and quality of these surveys. Considering these variables, Chiquita noted that the FLIR technology

appears to be detecting heat data not accurately representing potential fissures or tension cracks. Chiquita therefore continues to have significant concerns about the reliability and accuracy of this technology for the purpose of identifying fissures and tension cracks.

Chiquita has prepared this analysis of the June 10, 2025 survey to address the LEA's requests in its December 24, 2024 letter. Sniffer's survey report is included as **Attachment A**. As requested in the LEA's letter, Sniffer's report shows GPS coordinates and quantitative thermal data. In addition, Chiquita has investigated each area previously identified by the LEA and marked as Areas A through E in Figure 1 of CalRecycle's November 25, 2024 letter.

Area A

The area designated by the LEA as "Area A" appears to be in grid 150. The Sniffer data reference points in Area A for the June 10, 2025 survey are points 01–06.[1] As discussed in Chiquita's previous submittals for past surveys, there is active gas collection occurring in this area. Chiquita's Gas Collection and Control System ("GCCS") conveys warm gas to the Landfill's flares, as designed. There is a high concentration of GCCS piping in this area relative to the rest of the Landfill, including multiple vertical paths (landfill gas wellheads), horizontal paths (landfill gas header lines), and conveyance lines that remove hot gases and liquids from the north slope of the Landfill. It is expected that the GCCS system will have higher temperatures in this area, particularly given the higher concentration of GCCS infrastructure. The June 2025 survey shows that the area is improving—there are only six (6) reference points within the Area A boundary in this survey as compared to ten (10) in the April 2025 survey, showing that at the time of the survey, the Landfill's GCCS infrastructure was concentrating hot gas and liquids through the piping as needed.

Area B

The area designated by the LEA as "Area B" appears to be in grid 185. The Sniffer data reference point in Area B for the June 10, 2025 survey is point 13. Please note that, as with the April 2025 survey, Sniffer's thermal camera did not detect any elevated temperatures in Area B, one of the areas of interest previously identified in the LEA's and CalRecycle's letters. Nevertheless, Sniffer included reference point 13 and thermal images, photographs, and GPS coordinates in accordance with the LEA's directive to track trends in Area B over time. As with the nearby Area A, GCCS infrastructure is highly concentrated in this area. As discussed in Chiquita's previous submittals for past surveys, because the GCCS system is designed to convey the landfill gas from the north slope to the flares, we may expect to see elevated

[1] Reference point 01 is adjacent to the LEA's designated Area A. A gas extraction well is located here which, as described above, would be expected to exhibit higher temperatures.

temperatures here, particularly given the higher concentration of GCCS infrastructure. As discussed in Chiquita's previous submittals, this area was previously subject to elevated temperatures where the integrity of the dirt cover was previously compromised, which may explain the elevated temperatures in the October 2024 survey. Chiquita repaired the dirt cover, reinstalled the geomembrane cover, and performed related work during the fourth quarter of 2024 to address this issue.

Since October 2024, the maximum temperatures noted in this area have decreased dramatically from between 152–154 degrees down to about 55 degrees (compare reference points 23 and 25 in the October 2024 thermal images report to reference point 13 in the June 2025 thermal images report). The last two surveys did not result in heat signatures in this area, and a comparison of the April 2025 and June 2025 thermal images in Area B indicates further decrease in temperature in Area B, with the average detected temperature decreasing about six (6) degrees and the maximum detected temperature decreasing about twenty-four (24) degrees (compare reference point 19 in the April 2025 thermal images report to reference point 13 in the June 2025 thermal images report).

Area C

The area designated by the LEA as "Area C" appears to be in grid 181. The Sniffer data reference point in Area C for the June 10, 2025 survey is point 07. As discussed in Chiquita's previous submittals for past surveys, this area is along the western portion of the Landfill, where the reaction is closer to the surface relative to the rest of the reaction area, meaning elevated temperatures are closer to the surface and therefore more readily detected by the radiometric thermal camera. In late April to early May 2024, Chiquita installed a horizontal collector for the GCCS system in this area and the nearby Area D in order to collect additional hot gas for conveyance to the flares and thereby further mitigate elevated temperatures in this area.

A comparison of the April 2025 and June 2025 thermal images in Area C indicates a decrease of about nine (9) degrees in average temperature in that area and maximum detected temperature decreasing almost twenty-seven (27) degrees (compare reference point 17 in the April 2025 thermal images report to reference point 07 in the June 2025 thermal images report).

Area D

The area designated by the LEA as "Area D" appears to be in grid 181. The Sniffer data reference point within Area D for the June 10, 2025 survey is 10. Please note that Sniffer's thermal camera did not detect any elevated temperatures in Area D, one of the areas of interest previously identified in the LEA's and CalRecycle's letters. Nevertheless, Sniffer included reference point 10 and thermal images, photographs, and GPS coordinates in accordance with the LEA's directive to track trends in Area D

over time. The horizontal collector for the GCCS discussed above in Area C also runs through Area D. As discussed in Chiquita's previous submittals for past surveys, Chiquita installed the horizontal collector for the GCCS system in this area and the nearby Area C in order to collect additional hot gas for conveyance to the flares and thereby further address elevated temperatures in this area.

The FLIR technology captured a smaller overall area in the June 2025 survey as compared to the April 2025 survey. The maximum temperature noted in that area was 109.8°F, and the elevated temperatures were concentrated to only the conveyance line of the GCCS system.

Area E

The area designated by the LEA as "Area E" appears to be in grid 177. The Sniffer data reference point within Area E for the June 10, 2025 survey is 11. An abandoned gas well, well CV-2302, exists within Area E and is photographed on PDF page 14 of Attachment A under "Reference # 11." Additional gas wells and dewatering pumps were installed in the area to replace CV-2302. However, as discussed in previous survey analyses, the abandoned borehole for CV-2302 may be continuing to emit heat to the surface, which may explain the elevated temperatures detected in the area. The other gas wells and pumps installed in the area continue to remove hot gas and liquids from the Landfill.

Nevertheless, the maximum temperature detected in the thermal images for this area decreased over twenty-two (22) degrees since the April 2025 survey (compare reference point 16 in the April 2025 thermal images report to reference point 11 in the June 2025 thermal images report).

Other Areas

On the whole, the June 2025 survey detected fewer heat signatures than the April 2025 survey (eleven total detections in June compared to eighteen total in April). Reference points 08, 09, and 12 were detected outside of Areas A – E. As acknowledged by CalRecycle in its November 25, 2024 letter, FLIR surveys can detect heat sources that may or may not be significant. Similarly, Chiquita believes that these three (3) reference points detected during the June 2025 survey indicate heat sources that are not significant. Reference points 08 and 09 were likely detected because they are in an area densely populated with gas collection wells and pipes. The elevated temperatures detected in reference point 08 are in close proximity or directly over landfill gas piping, which collects and distributes hot landfill gases (see thermal image labeled "Reference # 08" in the June 2025 thermal inspection report). Similarly, reference point 09 depicts a small area directly over a shallow landfill gas collector and vacuum line (see thermal image labeled "Reference # 09" in the June 2025 thermal inspection report). Reference point 12 is in the location of a condensate collection sump, which collects liquids that form in the landfill gas conveyance lines of the

GCCS, and includes a large infrastructure of black HDPE pipes on top of surrounding white liner.[2] In addition, fluctuations in the surface temperatures as detected by FLIR may be influenced by operational changes, including changes to the landfill gas or leachate capture and conveyance.

Preliminary Conclusions

The Sniffer survey results do not show an increase in intensity or expansion of the reaction. Rather, the results demonstrate that the GCCS system is functioning as designed, and conveying hot liquids and gas through the GCCS system as designed. In addition, the FLIR technology detected no heat signatures in two of the five areas of concern: Areas B and D, showing progress in collecting more of the hot LFG underneath these lined areas. Chiquita will continue to evaluate the data in the upcoming August 2025 survey.[3]

Regards,

Steve Cassulo
District Manager
Chiquita Canyon, LLC

Attachment: Sniffer Robotics, Inc., Emission Study Thermal Report (dated June 17, 2025)

cc: John Perkey, Waste Connections
Robert Ragland, Los Angeles County Department of Public Health
Liza Frias, Los Angeles County Department of Public Health
Nichole Quick, M.D., Los Angeles County Department of Public Health
Shikari Nakagawa-Ota, Los Angeles County Department of Public Health
Robert Ragland, Los Angeles County Department of Public Health
Mark Como, Los Angeles County Department of Public Health
Ken Habaradas, Los Angeles County LEA

[2] This location was also discussed in the February 2025 survey and analysis.

[3] Given the delay caused by the Hughes Fire and the related evacuation, and the resulting rescheduling of the January 2025 survey to February 2025, Chiquita requested in its February 28, 2025 letter to the LEA that the remaining three FLIR surveys be conducted in April 2025, June 2025, and August 2025. Note that the LEA's February 28, 2025 Inspection Report (received by Chiquita on May 29, 2025) states, "The remaining surveys are due in April, June, and August 2025." As a point of clarification, the remaining surveys are being conducted in the months noted therein and provided, along with Chiquita's analysis, to the LEA the following month, per Chiquita's February 28, 2025 letter.

Karen Gork, Los Angeles County LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, Senior Deputy County Counsel
Emiko Thompson, Los Angeles County Department of Public Works
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Milasol Gaslan, Los Angeles Regional Water Quality Control Board
Terrence Mann, South Coast AQMD
Tyler Holybee, United States Environmental Protection Agency
Allison Watanabe, United States Environmental Protection Agency
Laura Friedl, United States Environmental Protection Agency

Attachment A

Waste Connections Chiquita Canyon
Project: 2025 06 Emission Study
Job: Emission Study
Report Submitted June 17, 2025

Emission Study Thermal Report

Information presented within provides results from the emissions monitoring inspection performed by technicians with Sniffer Robotics, Inc. associated with the emission study site and date listed herein.

This report provides details of peak temperature locations as determined by the SnifferDRONE™. Report details include: coordinate locations, date and time of data collection, measured peak temperatures (Fahrenheit), additional notes, map(s) displaying locations of peaks, and photographic documentation of peaks.

Key

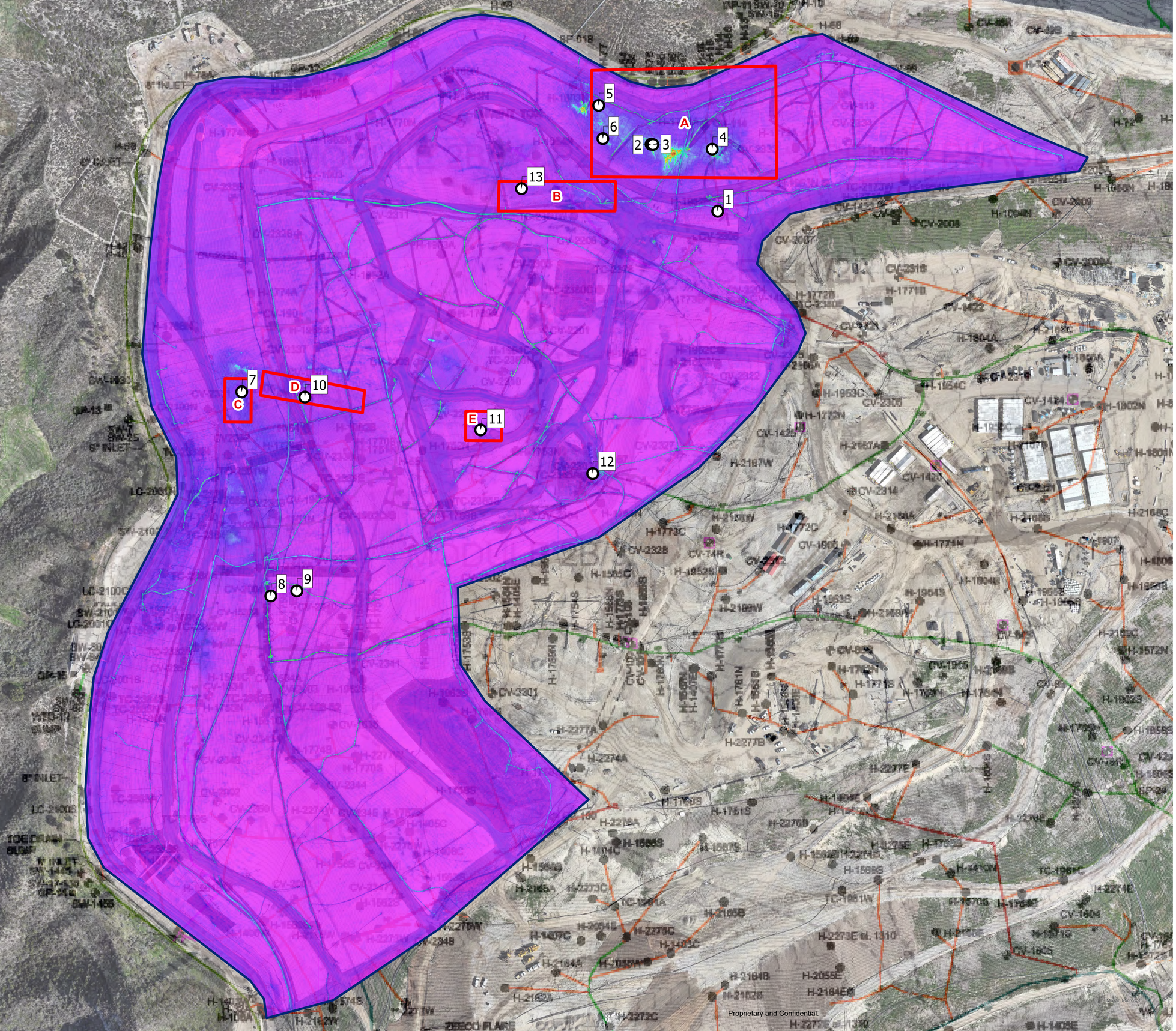
Peak Temperature ≥ 70 °F
Peak Temperature < 70 °F

This daily report is not meant for compliance purposes and only intended for customer review.

WEATHER CONDITIONS		
	Date:	**10-Jun**
	Sky:	Clear Sky
	Ground:	Dry
	Temperature:	84 °F
	Wind Direction:	NW
	Wind Speed:	3 MPH
	Barometric Pressure:	30.36"
	Humidity:	46%

LOCATION DETAILS			**INSPECTION RESULTS**				
Ref	**SnifferDRONE Lat**	**SnifferDRONE Long**	**Date (UTC)**	**Time (UTC)**	**Class**	**Peak Temperature °F**	**Notes**
1	34.43626	-118.64761	6/10/2025	7:55	Thermal Imagery	***134.1***	
2	34.43699	-118.64768	6/10/2025	7:56	Thermal Imagery	***166.6***	
3	34.43699	-118.64768	6/10/2025	7:56	Thermal Imagery	***167.0***	
4	34.43691	-118.64767	6/10/2025	7:56	Thermal Imagery	***159.3***	

LOCATION DETAILS			INSPECTION RESULTS				
Ref	**SnifferDRONE Lat**	**SnifferDRONE Long**	**Date (UTC)**	**Time (UTC)**	**Class**	**Peak Temperature °F**	**Notes**
5	34.43700	-118.64819	6/10/2025	7:56	Thermal Imagery	***158.0***	
6	34.43700	-118.64819	6/10/2025	7:56	Thermal Imagery	***130.6***	
7	34.43496	-118.65099	6/10/2025	7:58	Thermal Imagery	***108.9***	
8	34.43424	-118.65087	6/10/2025	7:59	Thermal Imagery	***109.4***	
9	34.43421	-118.65082	6/10/2025	7:59	Thermal Imagery	***143.1***	
10	34.43523	-118.65055	6/10/2025	8:00	Thermal Imagery	***109.8***	
11	34.43504	-118.64936	6/10/2025	8:00	Thermal Imagery	***151.2***	
12	34.43480	-118.64862	6/10/2025	8:01	Thermal Imagery	***166.6***	
13	34.43627	-118.64840	6/10/2025	8:05	Thermal Imagery	***57.7***	



Chiquita Canyon Discrete Thermal Image Locations over Thermal Reflectance, as Recorded by the SnifferDRONE™

Jun 10, 2025

Notes:
1. Basemap: High resolution RGB orthophoto provided by Waste Connections dated 2025 04 02
2. As-Built provided by SCS Engineers dated Dec 2023
3. Projected Coordinate System: WGS 1984 UTM Zone 11 N
4. Proprietary and Confidential.

N

0 50 100 200
Feet

Thermal Reflectance
171 F
10 F
Image Location

Reference # 01

Measurements

SQ1	Max	134.1 °F
	Min	-5.1°F
	Average	64.6 °F
Sp1		115.3 °F
Sp2		87.4°F

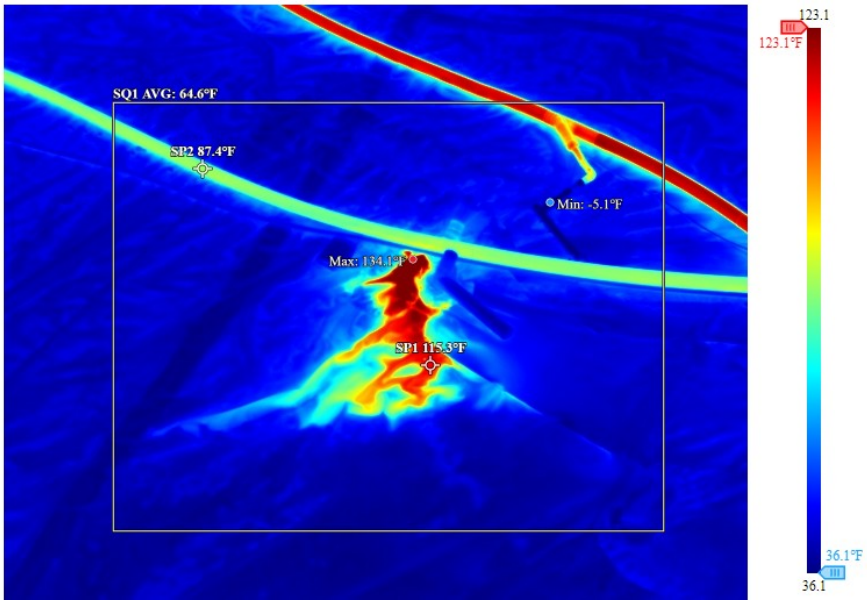
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 51.5" N34° 26' 10.65"

6/10/2025 07:55:09 AM



DJI_20250610075509_0001_T

Reference # 02

Measurements

SQ1	Max	166.6 °F
	Min	38.7 °F
	Average	102.7 °F
Sp1		142.2°F
Sp2		97.2 °F
Sp3		156.2 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 53.23" N34° 26' 12.04""

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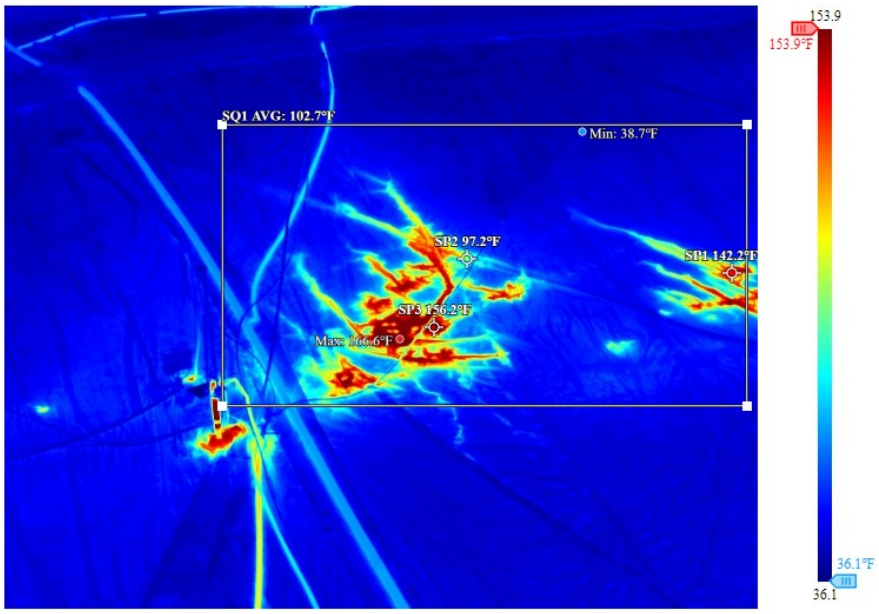

DJI_20250610075615_0004_T.JPG

Reference # 03

Measurements

SQ1	Max	167.0 °F
	Min	40.1 °F
	Average	103.6 °F
Sp1		159.1°F
Sp2		96.3 °F
Sp3		149.9 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 53.18" N34° 26' 12.03"

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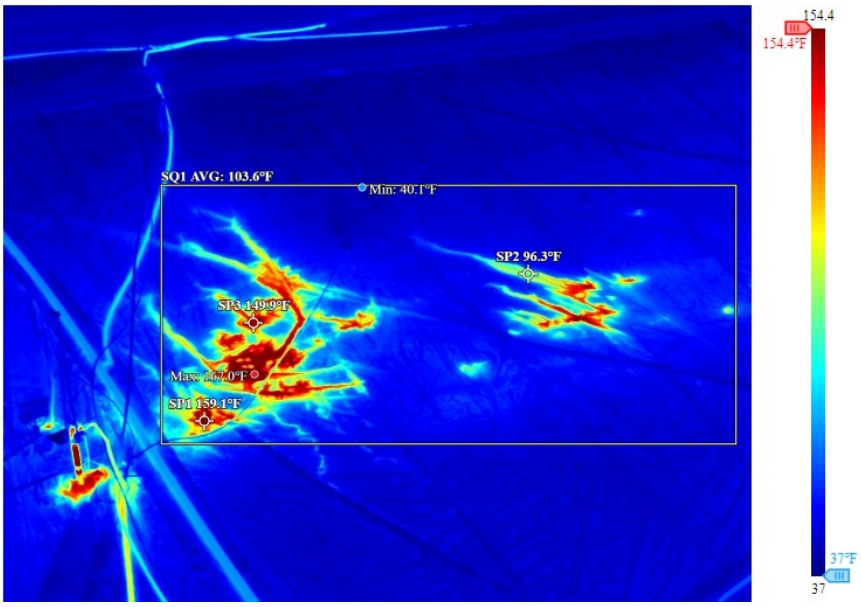

DJI_20250610075620_0005_T.JPG

Reference # 04

Measurements

SQ1	Max	159.3 °F
	Min	38.7 °F
	Average	99.0 °F
Sp1		98.1 °F
Sp2		122.5 °F
Sp3		75.6 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 51.67" N34° 26' 11.96"

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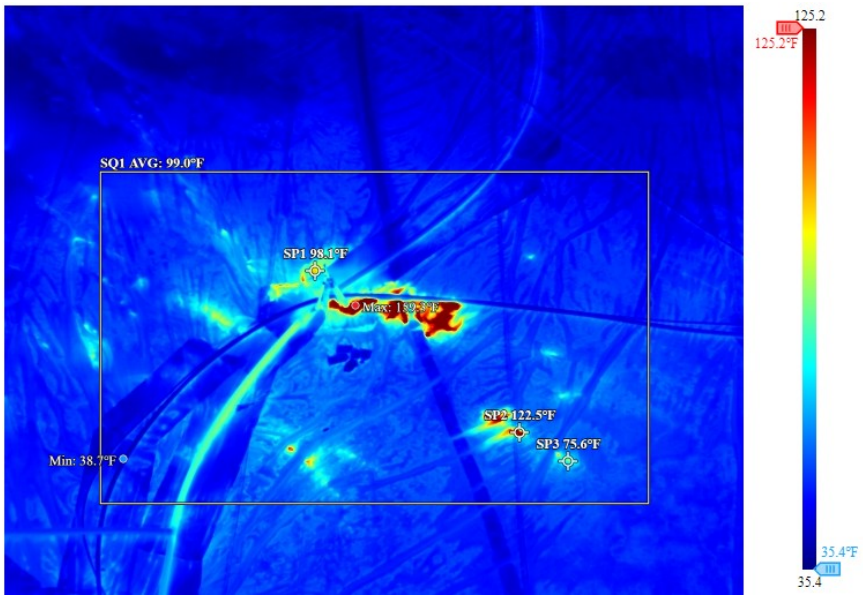

DJI_20250610075634_0006_T.JPG

Reference # 05

Measurements

SQ1	Max	158.0 °F
	Min	36.0 °F
	Average	97.0 °F
Sp1		137.7 °F
Sp2		94.6 °F
Sp3		94.3 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 54.58" N34° 26' 12.84"

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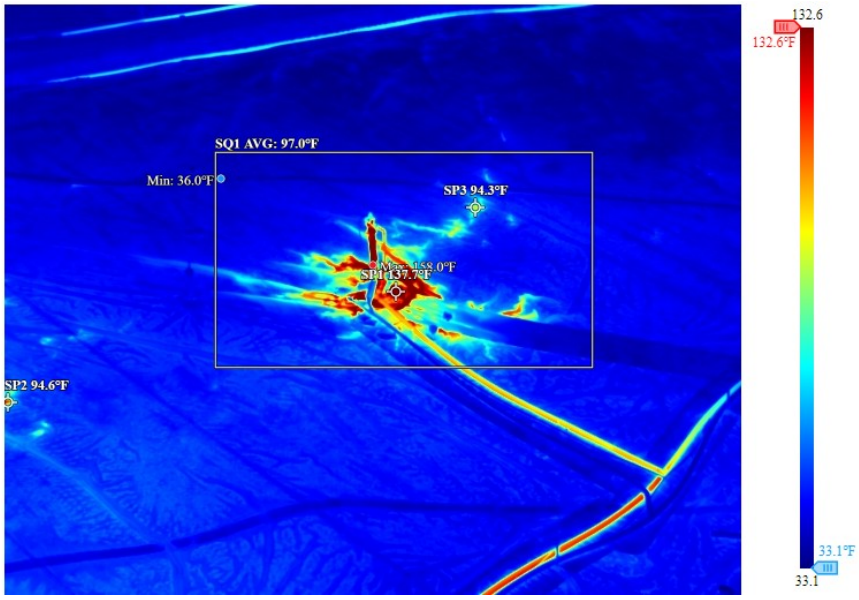


DJI_20250610075653_0007_T.JPG

Reference # 06

Measurements

SQ1	Max	130.6 °F
	Min	42.1 °F
	Average	86.4 °F
Sp1		112.1 °F
Sp2		91.8 °F
Sp3		71.6 °F

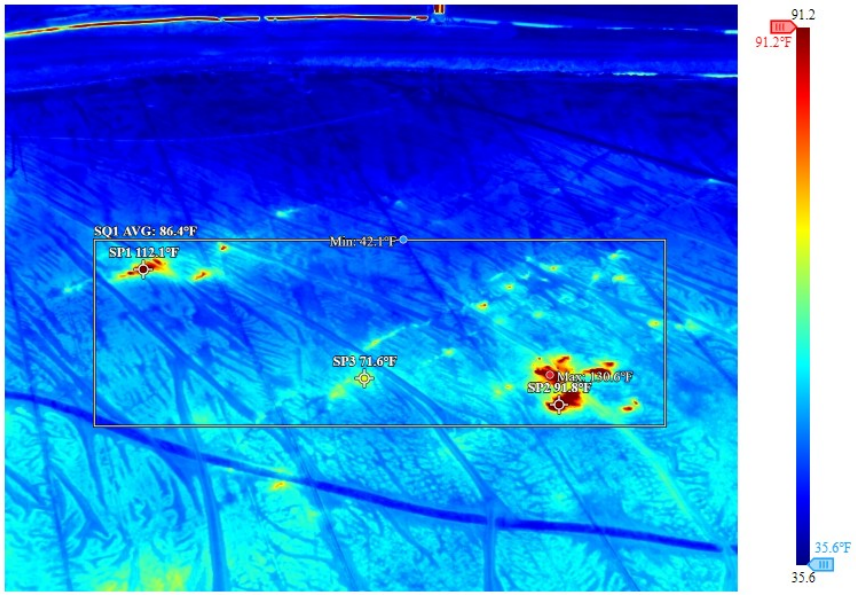
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 54.46" N34° 26' 12.14""

6/10/2025 07:56:56 AM



DJI_20250610075656_0008_T.JPG

Reference # 07

Measurements

SQ1	Max	108.9 °F
	Min	31.6 °F
	Average	70.3 °F
Sp1		81.1 °F
Sp2		58.5 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 39' 3.55" N34° 26' 6.67"

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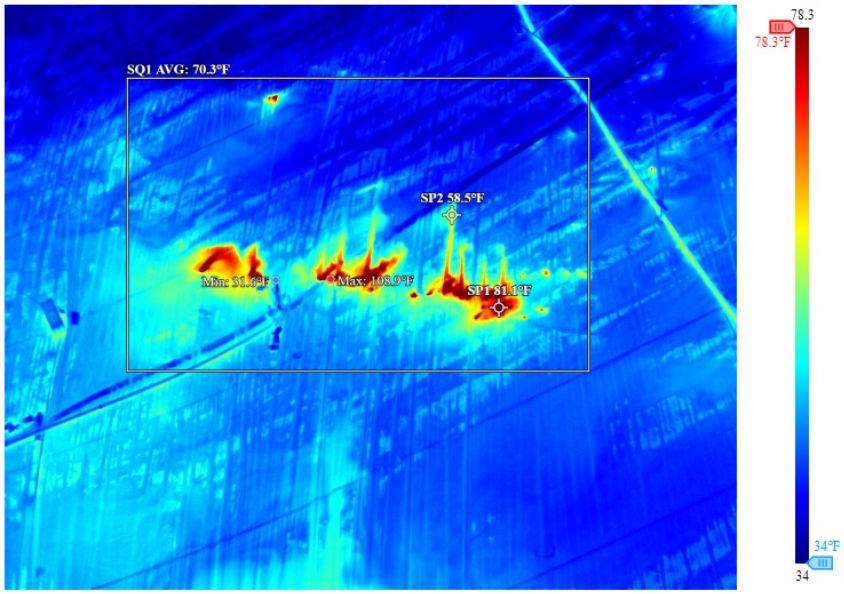


DJI_20250610075829_0010_T.JPG

Reference # 08

Measurements

SQ1	Max	109.4 °F
	Min	39.7 °F
	Average	74.5 °F
Sp1		72.0 °F

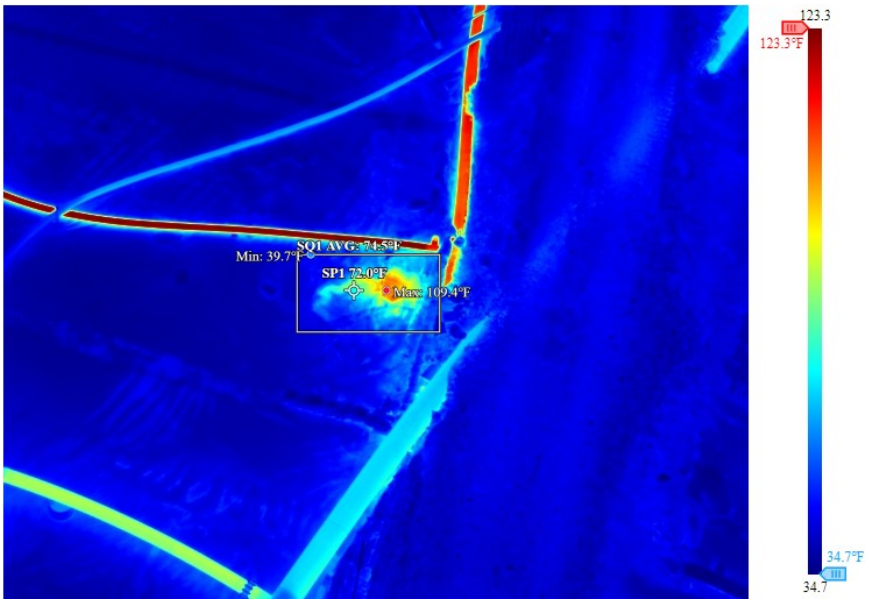
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 39' 2.72" N34° 26' 2.37"

6/10/2025 07:59:13 AM



DJI_20250610075913_0011_T.JPG

Reference # 09

Measurements

SQ1	Max	143.1 °F
	Min	18.3 °F
	Average	80.8 °F
Sp1		113.2 °F
Sp2		100.0 °F

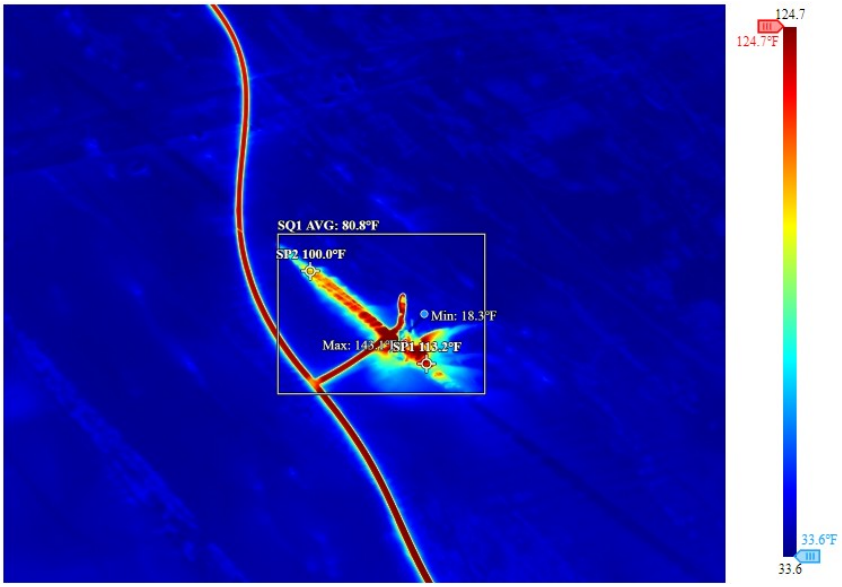
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 39' 2.06" N34° 26' 2.49"

6/10/2025 07:59:23 AM



DJI_20250610075923_0013_T.JPG

Reference # 10

Measurements

SQ1	Max	109.8°F
	Min	19.9 °F
	Average	64.9 °F
Sp1		83.7 °F
Sp2		61.0 °F
Sp3		38.7 °F
Sp4		81.0 °F

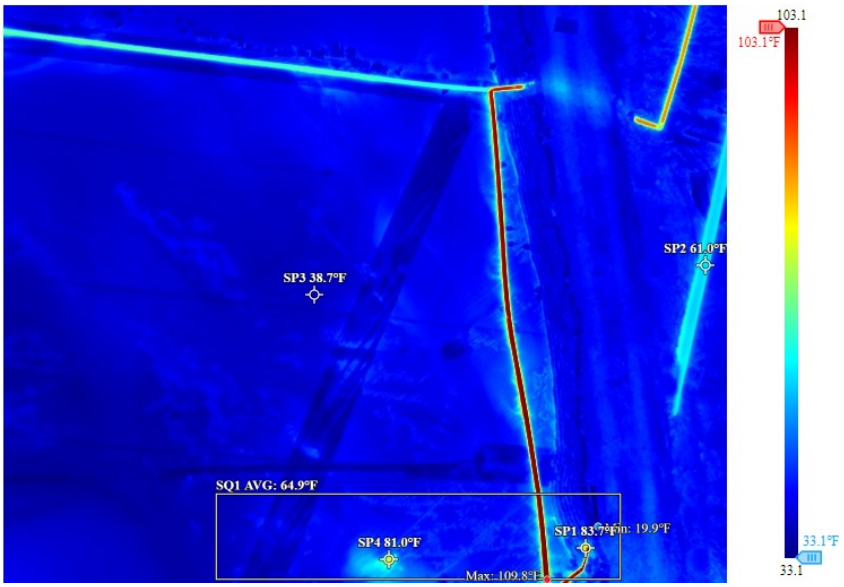
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 39' 1.94" N34° 26' 6.59"

6/10/2025 08:00:15 AM



DJI_20250610080015_0014_T.JPG

Reference # 11

Measurements

SQ1	Max	151.2 °F
	Min	35.1 °F
	Average	93.2 °F
Sp1		100.9 °F
Sp2		85.6 °F
Sp3		121.3 °F
Sp4		81.1 °F

Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 57.45" N34° 26' 5.59"

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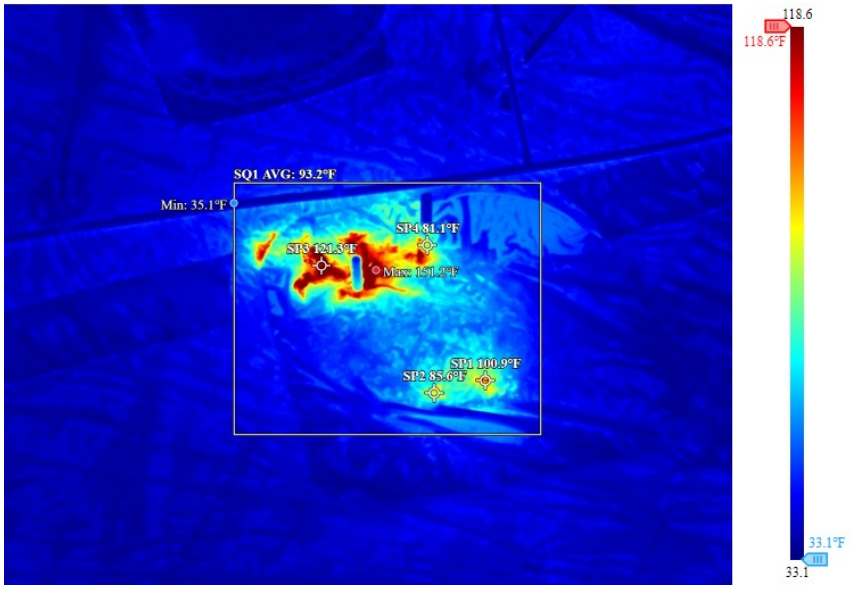


DJI_20250610080049_0015_T.JPG

Reference # 12

Measurements

SQ1	Max	166.6 °F
	Min	34.2 °F
	Average	100.4 °F
Sp1		161.1 °F
Sp2		132.1 °F
Sp3		109.0 °F

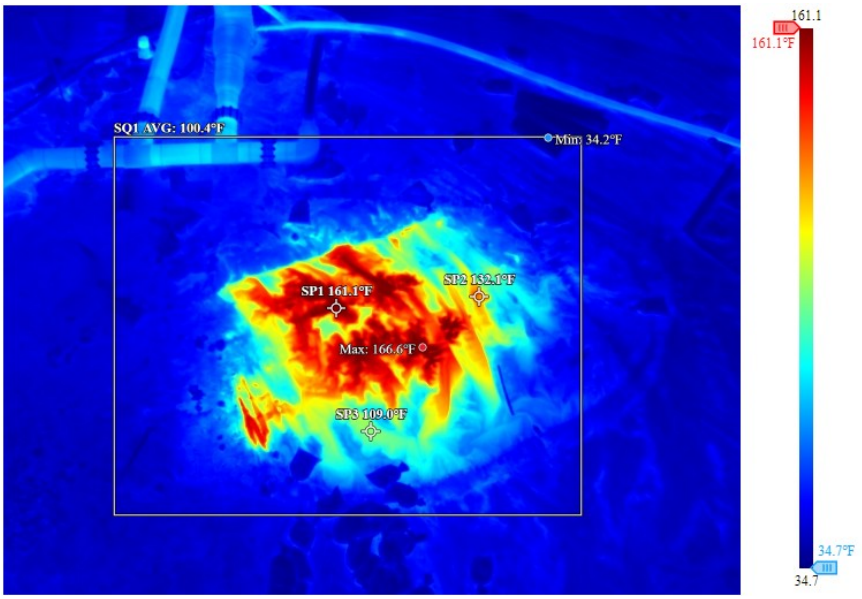
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 54.58" N34° 26' 5.07"

6/10/2025 08:01:22 AM



DJI_20250610080122_0016_T.JPG

Reference # 13

Measurements

SQ1	Max	54.7 °F
	Min	34.7°F
	Average	44.6 °F
Sp1		50.2 °F
Sp2		47.3 °F
Sp3		46.8 °F

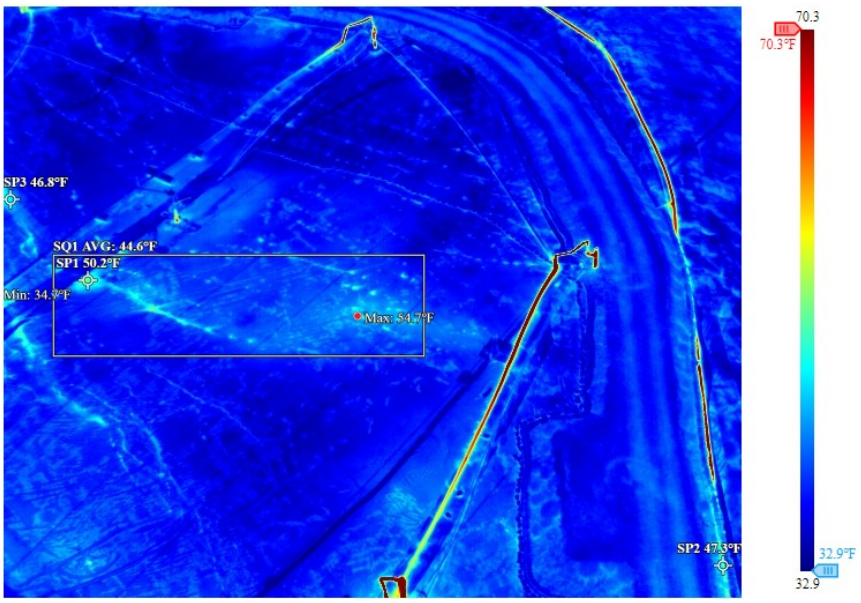
Parameters

Emissivity	1
Refl. temp.	73.4 °F

Geolocation

Location	W118° 38' 56.51" N34° 26' 11.06"

6/10/2025 08:05:40 AM



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