



Everything you need to know about your Digital Data Logger - Daily Use

LogTag[®] VFC 400

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Section I: Placement of DDL Parts



Do:

1. Place the vial and stand in the middle of the refrigerator or freezer along side of the vaccines.
2. Secure the wires to the shelf and wall with the supplied zip ties so the vial does not move.



Don't:

1. DO NOT place the vial close to the wall, in the back of the unit, or under the fan that blows cold air. This will influence the temperature reading.

Bracket Placement Outside Unit



Place the data logger at eye level on the front of the storage unit next to your temperature log.

Using Zip Ties and Brackets



Zip Tie



Bracket Placement Outside Unit



Place glycol bottle in the fridge/freezer for **at least 1.5 hours** prior to starting your logger to allow the solution to reach the appropriate temperature.

SECTION II: The Recorder

- Alarm Triggers
- Display Overview
- Current Display
- Buttons
- Reviewing Min/Max



Alarm Triggers

The alarm will be triggered when temperatures are:

Refrigerator:



High
Alarm

Above 46°F
after 60 minutes

Above 8°C
after 60 minutes



Low
Alarm

Below 36°F
after 15 minutes

Below 2°C
after 15 minutes

Freezer:



High
Alarm

Above 5°F
after 60 minutes

Above -15°C
after 60 minutes



Low
Alarm

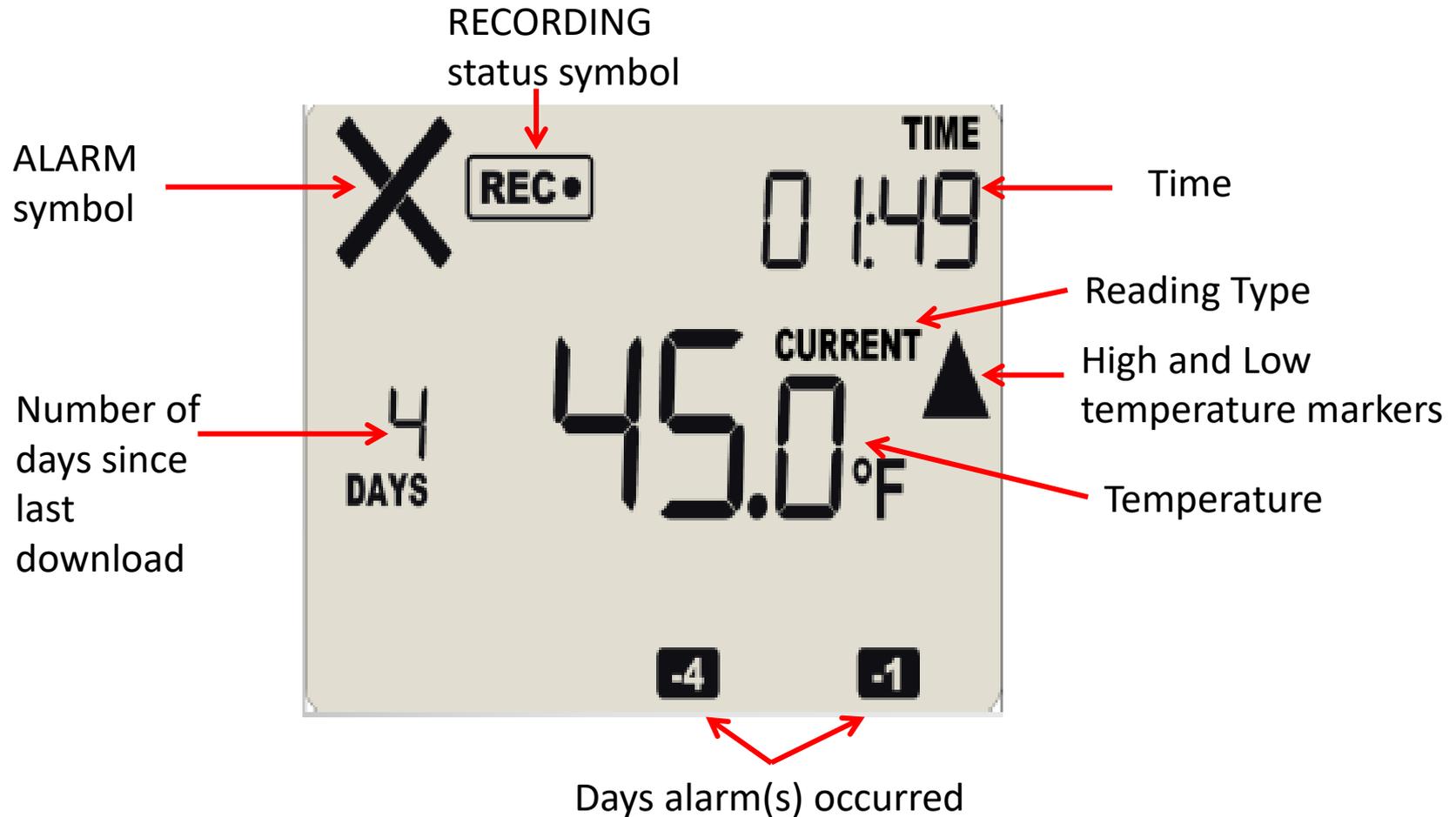
Below -40°F
after 15 minutes

Below -40°C
after 15 minutes

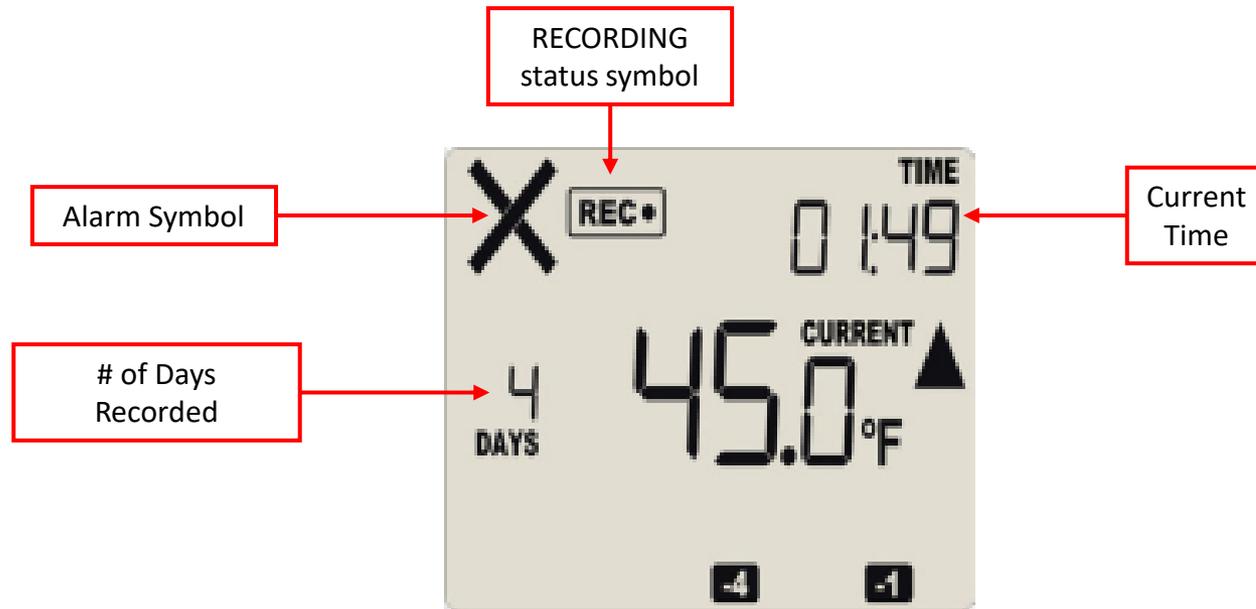
NOTE: If you see an alarm, take **IMMEDIATE*** action.

***SEE PAGES 27-30** to evaluate immediate action response

Display Overview



Display Overview



of Days Since Last Download

- Displays the total number of days recorded.
- The LogTag will stop recording temps when the memory is full (30 days). Data needs to be downloaded at least once a month.

Alarm Symbol

- Indicates whether an alarm is occurring.
- X shows that there is an alarm.
- ✓ shows that there is no alarm.

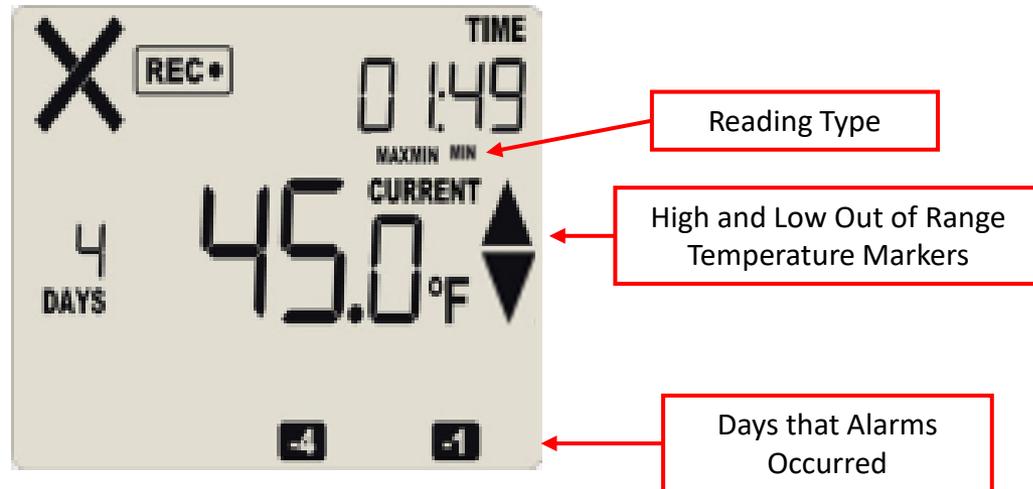
RECORDING status symbol

- REC• indicates your logger is actively recording temperature data

Current Time

- Indicates the time of day.

Display Overview



Out of Range Temp Markers

- Appears when the temperature goes out of range.

Reading Type

- MAX = warmest reading in a 24 hour period.
- MIN = coldest reading in a 24 hour period.
- CURRENT= the current temperature reading.

Alarm Indicator

- Displays which day an alarm was triggered due to a temperature above or below range (going backwards from today). Download the data immediately and send to the VFC Program.

Buttons



Review/Mark Button

- Pressing button will place logger into review mode and see min/max temperatures
- Press button again while in review mode will allow you to review up to 30 days of min/max temperatures.
- This action places an inspection mark in the log if recording is active. Every time you push the button, the inspection marks validate your twice daily temp checks.

Start/Clear/Stop Button

- HOLD down the button (3 seconds) until ready/stopped goes away to start your recording.
- HOLD down the button (3 seconds) until REC • goes away to stop your recording.

Buttons



Reviewing Min/Max



Pressing the Review button displays today's maximum temperature.

Pressing the Review button a second time displays today's minimum temperature.

Pressing the Review button a third time displays yesterday's maximum temperature.

Pressing the Review button a fourth time displays yesterday's minimum temperature.

Review min/max at least **TWICE** each day.

Min/max temps automatically reset at midnight each day.

You can review the minimum and maximum temperatures from every day since the last time that you downloaded.

This actions places and inspection mark  in the log

The screen will revert back to the current display after 30 seconds

SECTION III: The Download



- Stop Recorder
- The Download
- Start Recorder

Stop Recorder



Recording*

1. Press and hold the Stop button until the word “STOPPED” appears (1-2 seconds)

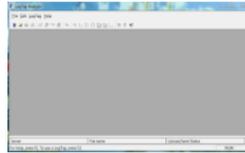
Stopped*

2. Disconnect the recorder from the cord.

*Recording, stopped, starting, and ready refer to the “state indicators” on the display screen.

The Download

1. Open the LogTag program by double clicking on the icon  on the desktop to open grey screen:

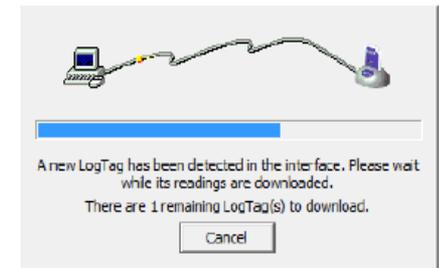


2. Connect the USB Interface cradle to the computer:
(If it is not already connected)

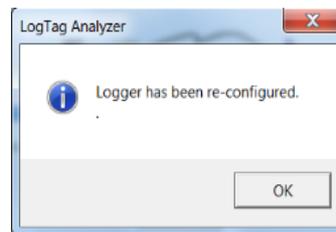


3. Insert recorder into cradle:

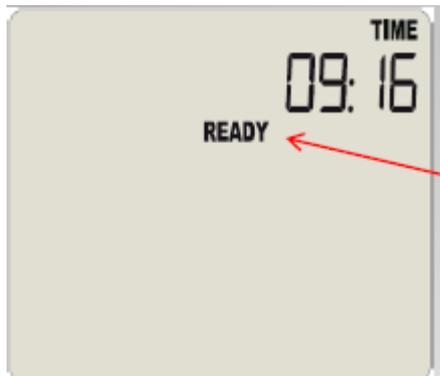
Data is automatically downloaded and saved. You will see this animation:



4. Click OK when you are notified that the recorder has been reconfigured:



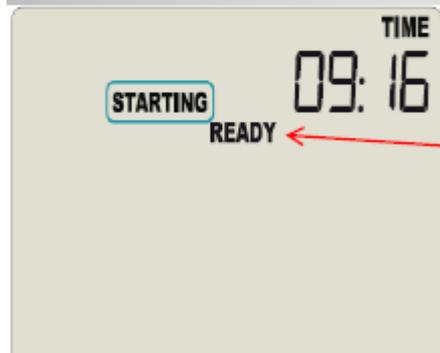
Start Recorder



Ready*

1. Return/Reconnect the recorder to its corresponding sensor connector **IMMEDIATELY** after download.

Make sure you are attaching the refrigerator to refrigerator and freezer to freezer.



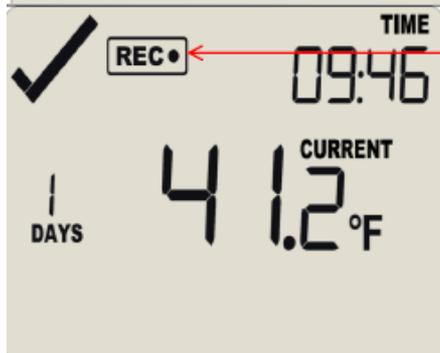
2. Press and hold the Start button.

Observe the STARTING icon appear.

3. Release the Start button when the READY icon disappears

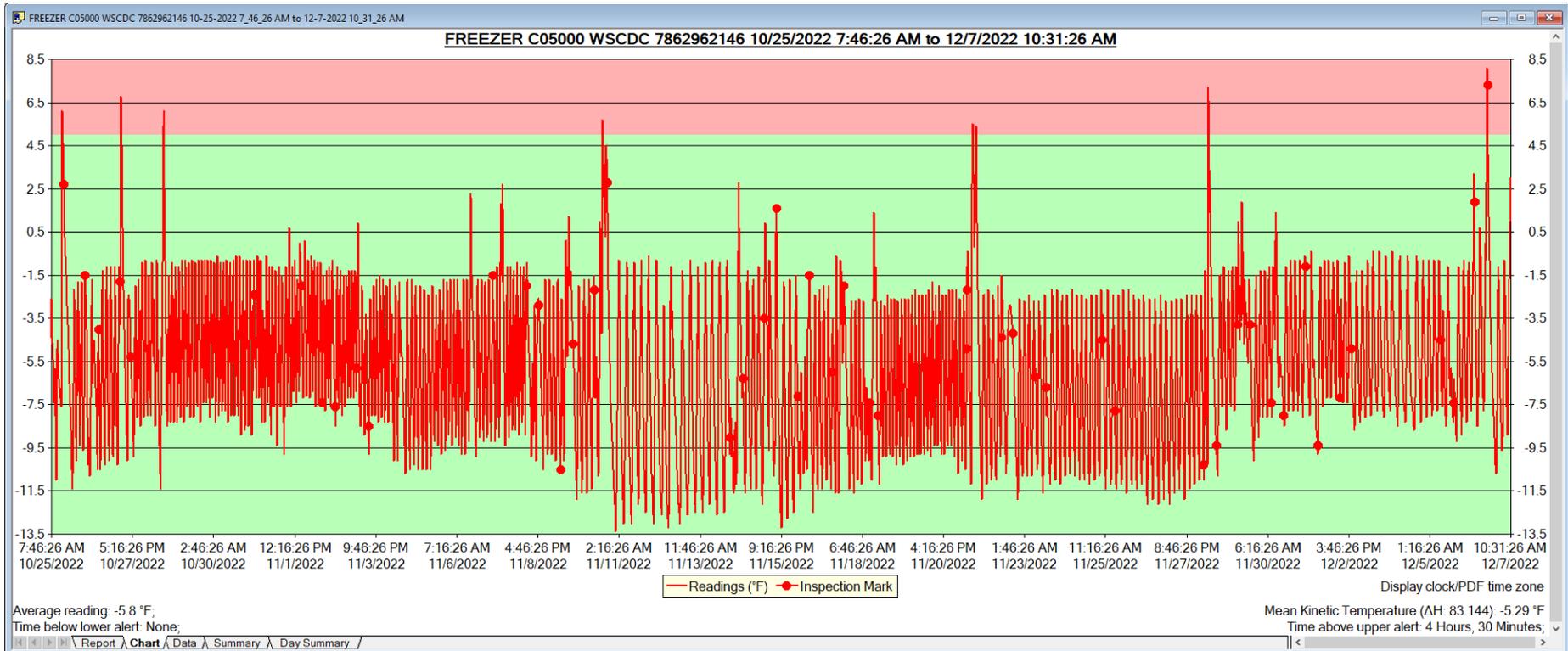
- Will not start if the button is held for more than 2 seconds after READY disappears
- Will not start if button is released before READY disappears

4. READY and STARTING will disappear, and the symbol REC● will be shown



Recording*

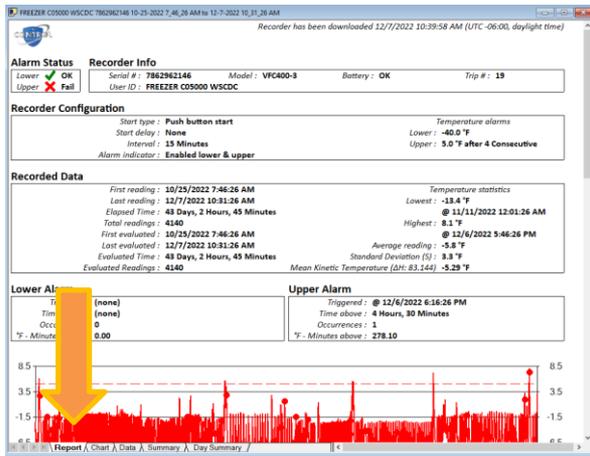
SECTION IV: The Data



- Analyze Data
- Zoom
- Email Data
- Save and Retrieve Data

Analyze Data

Data can be viewed 5 different ways:



Report *

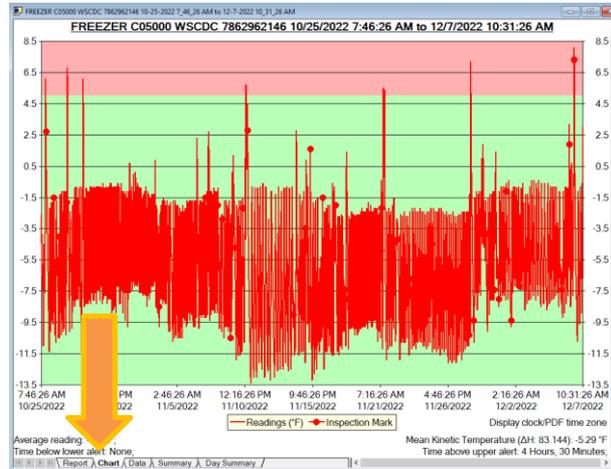


Chart *

Index	Date	Time	Elapsed Time	Readings (°F)
1	10/25/2022	7:46:26 AM	00:00:00	-4.4
2	10/25/2022	8:01:26 AM	00:15:00	-2.6
3	10/25/2022	8:16:26 AM	00:30:00	-3.8
4	10/25/2022	8:31:26 AM	00:45:00	-4.7
5	10/25/2022	8:46:26 AM	01:00:00	-4.7
6	10/25/2022	9:01:26 AM	01:15:00	-5.4
7	10/25/2022	9:16:26 AM	01:30:00	-6.5
8	10/25/2022	9:31:26 AM	01:45:00	-6.9
9	10/25/2022	9:46:26 AM	02:00:00	-7.4
10	10/25/2022	10:01:26 AM	02:15:00	-6.7
11	10/25/2022	10:16:26 AM	02:30:00	-5.8
12	10/25/2022	10:31:26 AM	02:45:00	-6.9
13	10/25/2022	10:46:26 AM	03:00:00	-8.0
14	10/25/2022	11:01:26 AM	03:15:00	-9.2
15	10/25/2022	11:16:26 AM	03:30:00	-10.3
16	10/25/2022	11:31:26 AM	03:45:00	-11.0
17	10/25/2022	11:46:26 AM	04:00:00	-7.4
18	10/25/2022	12:01:26 PM	04:15:00	-4.9
19	10/25/2022	12:16:26 PM	04:30:00	-4.5
20	10/25/2022	12:31:26 PM	04:45:00	-5.1
21	10/25/2022	12:46:26 PM	05:00:00	-5.4
22	10/25/2022	1:01:26 PM	05:15:00	-6.0
23	10/25/2022	1:16:26 PM	05:30:00	-6.3
24	10/25/2022	1:31:26 PM	05:45:00	-6.5
25	10/25/2022	1:46:26 PM	06:00:00	-6.7

Data *

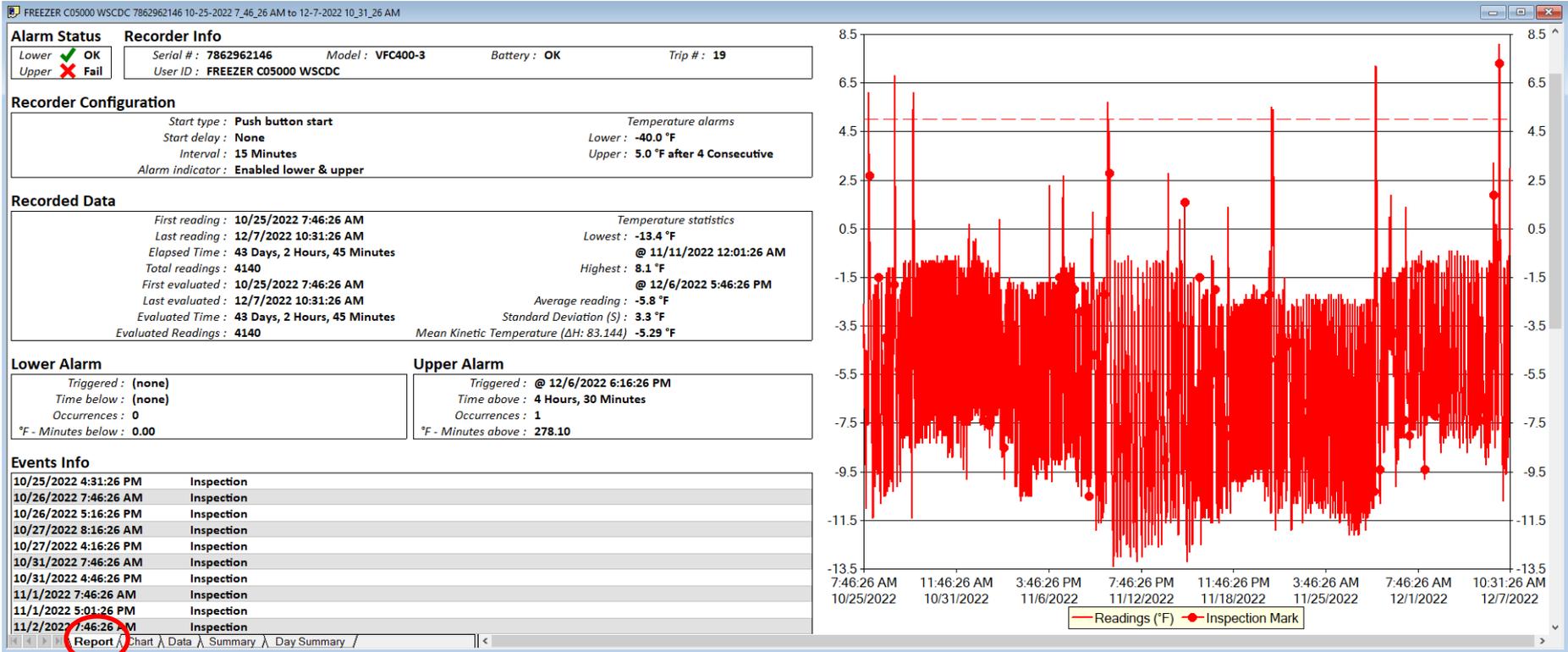
Summary

Day	Date	Alarm	Max. reading (°F)	Time above/equal upper alert	Min. reading (°F)	Time below/equal lower alert
0	12/7/2022		3.0		-10.7	
-1	12/6/2022		8.1	1 Hour	-10.3	
-2	12/5/2022		-0.8		-9.2	
-3	12/4/2022		-0.6		-8.7	
-4	12/3/2022		-0.4		-8.1	
-5	12/2/2022		-0.6		-8.7	
-6	12/1/2022		-0.4		-9.8	
-7	11/30/2022		1.4		-8.5	
-8	11/29/2022		1.9		-10.1	
-9	11/28/2022		7.2	45 Minutes	-11.2	
-10	11/27/2022		-2.4		-12.1	
-11	11/26/2022		-2.2		-12.1	
-12	11/25/2022		-2.2		-11.4	
-13	11/24/2022		-2.2		-11.2	
-14	11/23/2022		-2.2		-11.6	
-15	11/22/2022		-1.5		-11.9	
-16	11/21/2022		5.5		-11.9	
-17	11/20/2022		-1.8		-9.9	
-18	11/19/2022		-2.2		-10.3	
-19	11/18/2022		1.4		-11.6	
-20	11/17/2022		-0.6		-11.6	
-21	11/16/2022		-1.5		-12.8	
-22	11/15/2022		1.6		-13.2	
-23	11/14/2022		2.8		-12.5	
-24	11/13/2022		-0.8		-12.6	

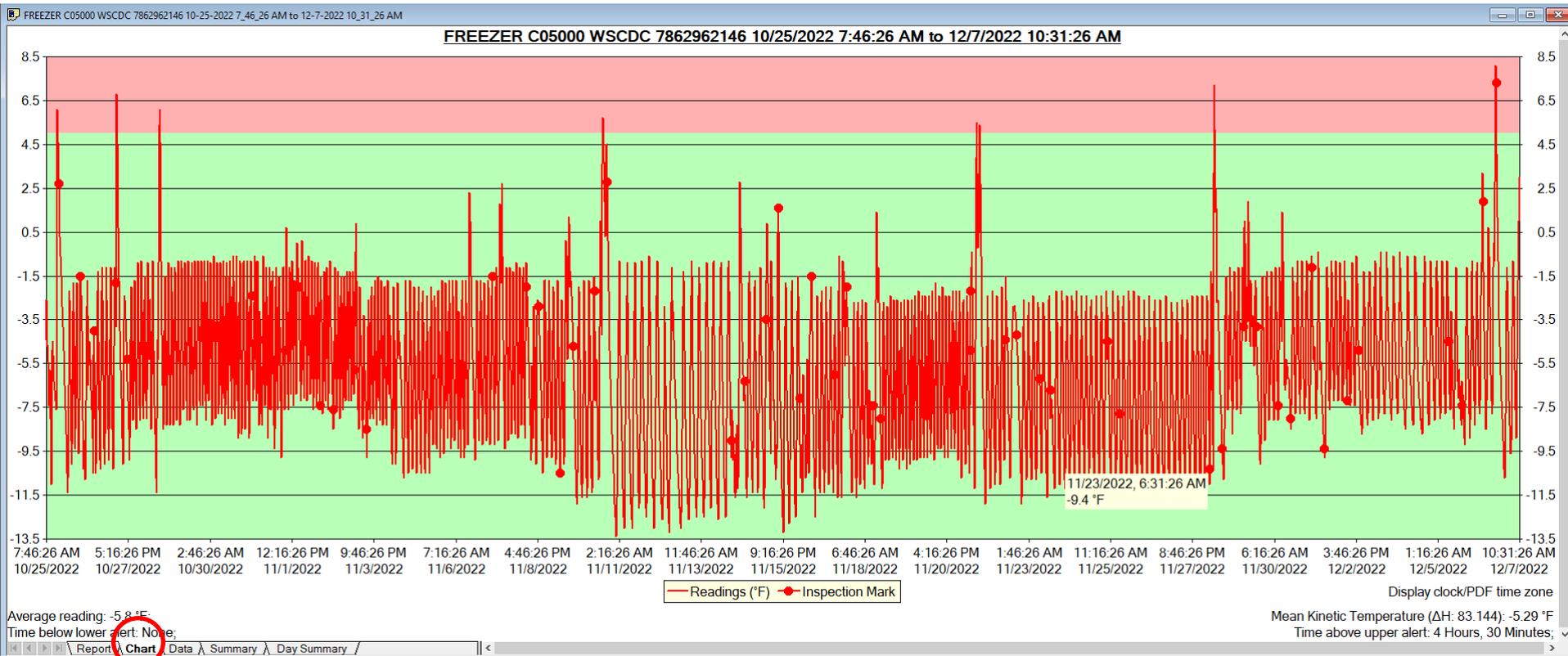
Day Summary

*In this manual, we will only discuss the Report, Chart, and Data tabs

Report



Chart



- Chart Title will include VFC PIN #, Clinic name, Refrigerator/Freezer, date and time started recording and date and time finished recording.
- Temperatures recorded in the pink zone are too warm, green is good, and blue is too cold.
- The red dots show when the review button was pressed.

Data

- Blue temperatures are too cold
- Black temperatures are good
- Red temperatures are too warm

Pink highlights show when the Review button is pressed

Index	Date	Time	Elapsed Time	Readings (°F)
31	4/4/2013	12:25:32 PM	03:00:00	15.4
32	4/4/2013	12:31:32 PM	03:06:00	26.4
33	4/4/2013	12:37:32 PM	03:12:00	38.7
34	4/4/2013	12:43:32 PM	03:18:00	47.1
35	4/4/2013	12:49:32 PM	03:24:00	54.0
36	4/4/2013	12:55:32 PM	03:30:00	56.3
37	4/4/2013	1:01:32 PM	03:36:00	54.5
38	4/4/2013	1:07:32 PM	03:42:00	52.3
39	4/4/2013	1:13:32 PM	03:48:00	50.5
40	4/4/2013	1:19:32 PM	03:54:00	48.9
41	4/4/2013	1:25:32 PM	04:00:00	47.5
42	4/4/2013	1:31:32 PM	04:06:00	46.4
43	4/4/2013	1:37:32 PM	04:12:00	45.3
44	4/4/2013	1:43:32 PM	04:18:00	44.6
45	4/4/2013	1:49:32 PM	04:24:00	43.9
46	4/4/2013	1:55:32 PM	04:30:00	43.3

Email Data

After some initial practice emailing data, you will only email your data to the VFC program when there is an ALARM

Steps:

1. Log on to your email account and “compose” a new email.
2. Enter chicagovfc@cityofchicago.org in the “to”.
3. Attach the file illustrating the alarm by clicking on the paper clip icon  and selecting the appropriate file
 - Your files automatically download and save to the computer based on  r initial set up. Talk to your IT person about where your files are saved to.
 - Files are usually saved under “Documents” and then “My LogTag Data.”
 - If your practice has a shared drive, it may also be saved under there.

Sending Data

Email data to chicagovfc@cityofchicago.org

- **Only need to send data when there is an ALARM**
- **Still need to download frequently for your records**

What to include in email:

1. VFC PIN

- COXXXX

2. Brief description of ALARM

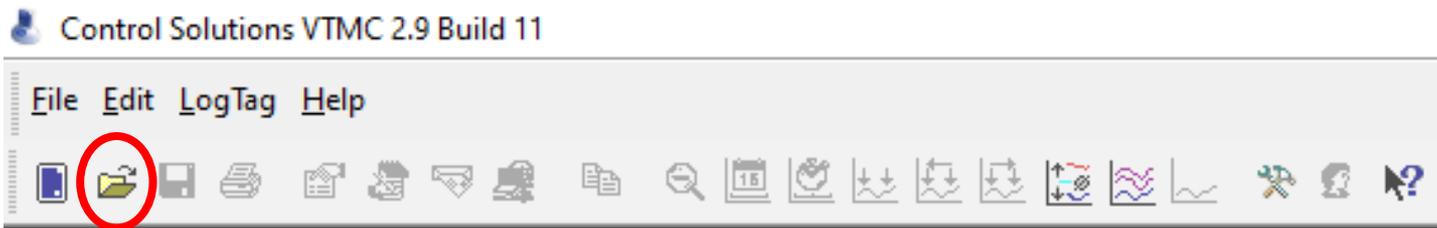
- Low alarm occurred over the weekend

3. Direct call-back number

- In case urgent action required

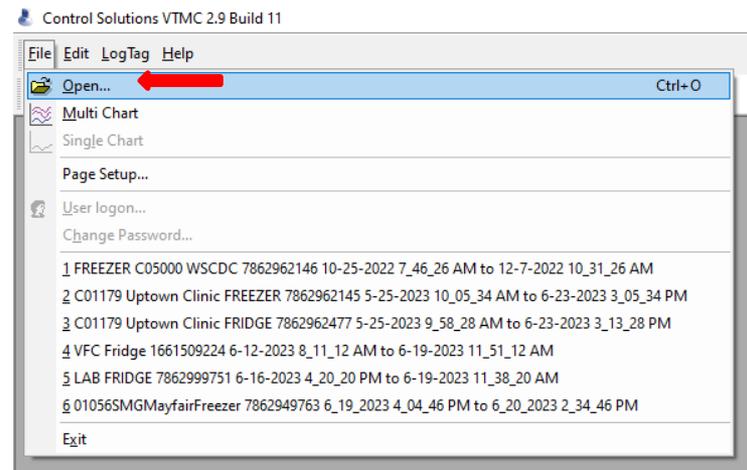
Retrieve Previously Saved Data

- To retrieve previously saved data:
 1. On the toolbar of the grey screen, choose the **Open Folder** icon:



This will display the file open window to allow you to locate and open LogTag files that contain previously saved LogTag readings.

- **OR** select **File**; choose **Open**



SECTION V: Alarms



- Take Immediate Action
- Evaluating Alarms
- Action Steps
- Clearing an Alarm

Take IMMEDIATE Action



When you see an alarm, you must take **IMMEDIATE** action!
Use PAGES 28-29 to evaluate your immediate action response.

Evaluating Refrigerator ALARMS

High Alarm

Above 46°F or 8°C for 60 min.

This may be related to the defrost cycle of your appliance. **Wait no more than 60 min and check to see if the temperature has returned to the proper range.**

If NOT, Take action steps listed on page 30

Low Alarm

Between 33 and 36°F for less than 15 min (between 0.5 and 2°C for less than 15 min).

1. **Download** the LogTag data and follow the action steps on the next page. Email to chicagovfc@cityofchicago.org and describe what happened in the body of the email.
2. **Adjust** the refrigerator to a warmer temperature and carefully monitor the temperature until it has returned to the proper range.

Low Alarm

Below 32°F or 0°C for 15 min.

STOP USING THE VACCINES and take action steps listed on page 30

Evaluating Freezer ALARMS

High Alarm

Above 5°F or -15°C for 60 min.

Wait no more than 60 min and check to see if the temperature has returned to the proper range.

If NOT, Take action steps listed on page 30

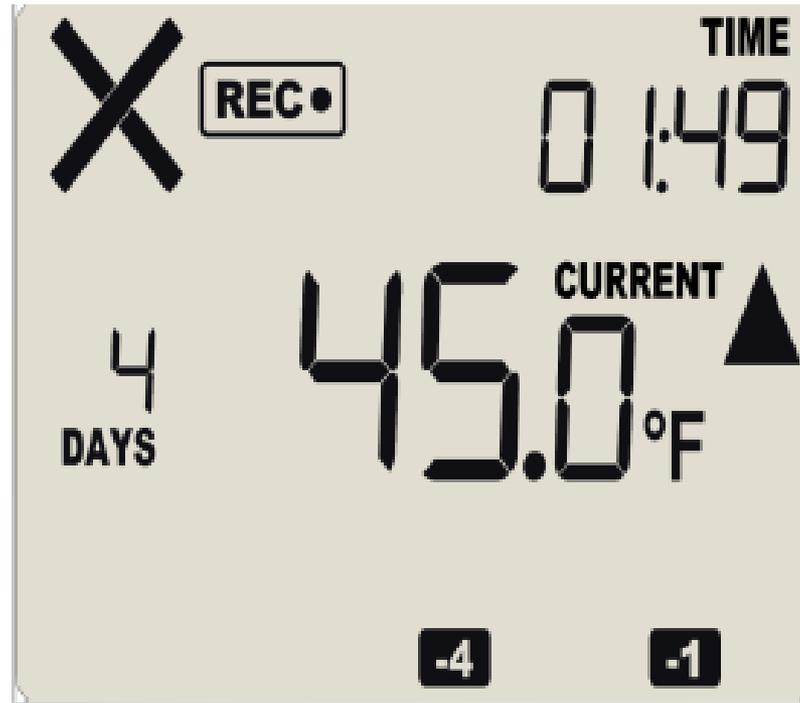
Low Alarm

No low alarm (Although a low alarm was set, your freezer will never cold enough to trigger the alarm).

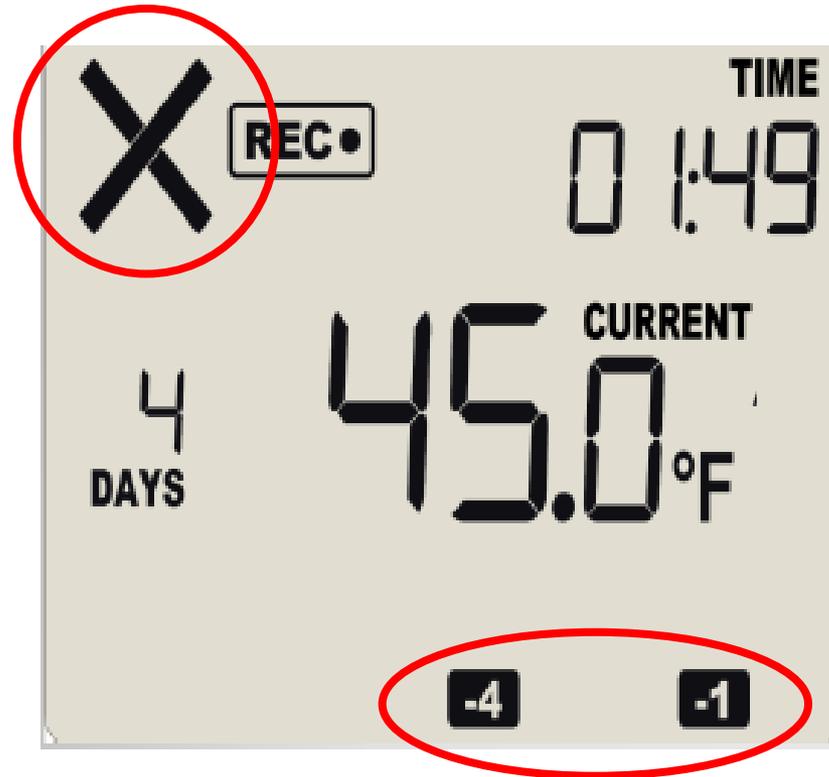
Action Steps- To be Completed for all ALARMS

1. Immediately store vaccines at proper temperature (if needed, move to another appliance).
2. Immediately download the data and analyze it by using the guidelines listed on page 29. Email the data to the Vaccine Management Unit at chicagovfc@cityofchicago.org.
***Note:** when emailing the data, please explain why there was a temperature excursion in the body of the email.
3. If needed, adjust the storage unit's temperature accordingly and make notes on your temperature log. Make adjustments known to other staff working with this unit.

Example 1:



Example 1:



1. Download data immediately
2. Send to Chicago VFC (chicagovfc@cityofchicago.org)

Example 2:

LogTag

Recorder has been downloaded 4/14/2017 2:39:43 PM (UTC -06:00, daylight time)

Alarm Status Recorder Info

Low	<input checked="" type="checkbox"/> Fail	Serial # : 1860919869	Model : TRED30-7R	Battery : OK	Trip # : 3
High	<input checked="" type="checkbox"/> Fail	User ID :			

Recorder Configuration

Start type : Push button start	Temperature alarms
Start delay : None	Lower : 35.0 °F
Interval : 15 Minutes	Upper : 46.0 °F after 4 Consecutive
Alarm indicator : Enabled lower & upper	

Recorded Data

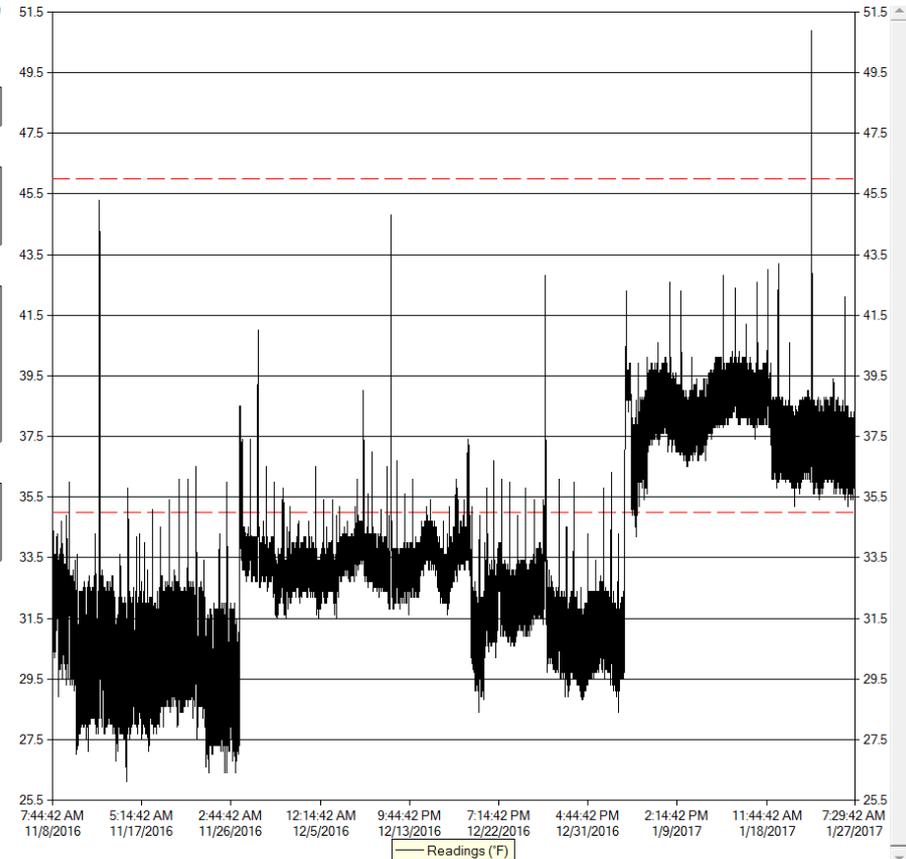
First reading : 11/8/2016 7:44:42 AM	Temperature statistics
Last reading : 1/27/2017 7:29:42 AM	Lowest : 26.1 °F
Elapsed Time : 79 Days, 23 Hours, 45 Minutes	@ 11/15/2016 4:59:42 PM
Total readings : 7680	Highest : 50.9 °F
First evaluated : 11/8/2016 7:44:42 AM	@ 1/22/2017 11:59:42 PM
Last evaluated : 1/27/2017 7:29:42 AM	Average reading : 33.7 °F
Evaluated Time : 79 Days, 23 Hours, 45 Minutes	Standard Deviation (S) : 3.3 °F
Evaluated Readings : 7680	Mean Kinetic Temperature : 34.11 °F

Low Alarm

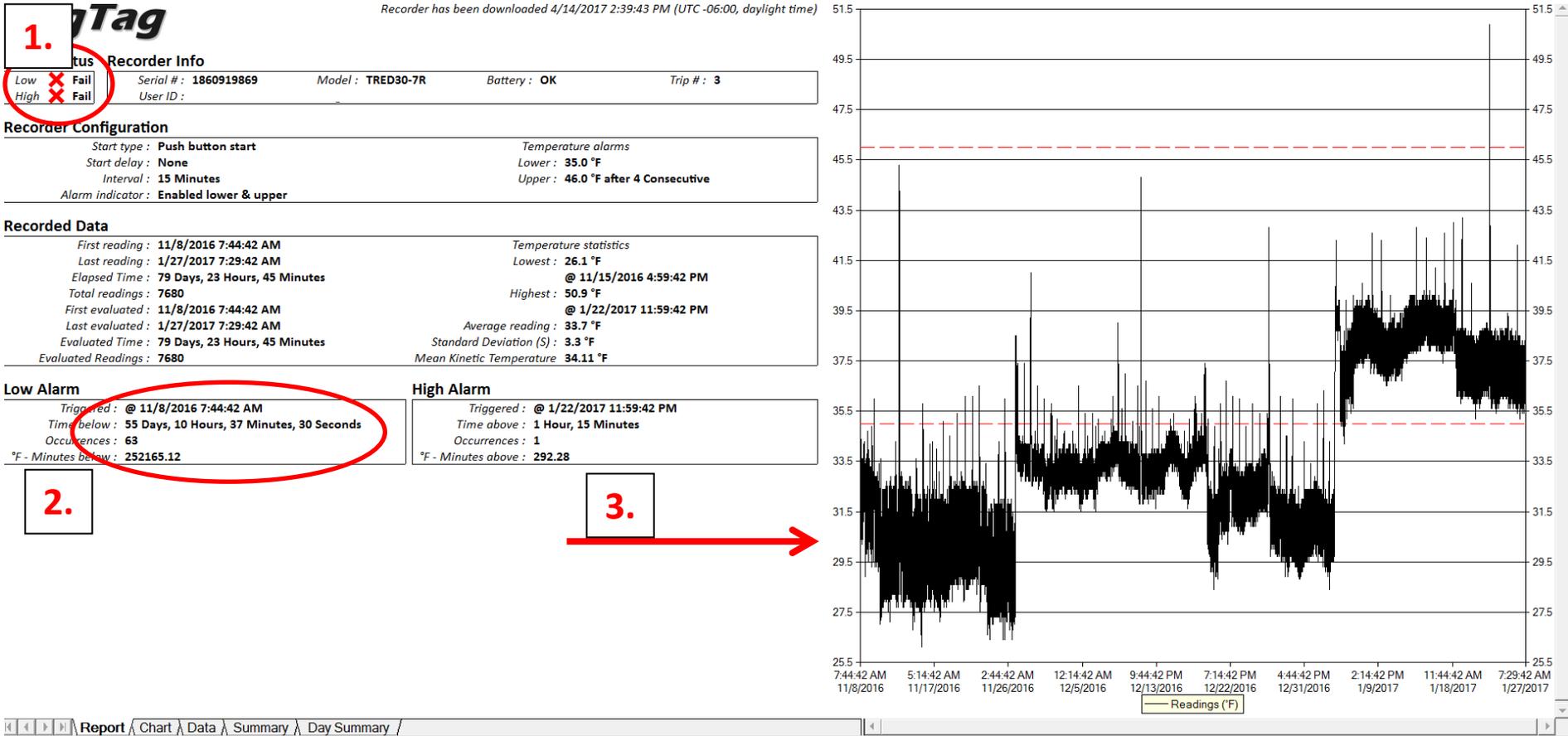
Triggered : @ 11/8/2016 7:44:42 AM
Time below : 55 Days, 10 Hours, 37 Minutes, 30 Seconds
Occurrences : 63
°F - Minutes below : 252165.12

High Alarm

Triggered : @ 1/22/2017 11:59:42 PM
Time above : 1 Hour, 15 Minutes
Occurrences : 1
°F - Minutes above : 292.28

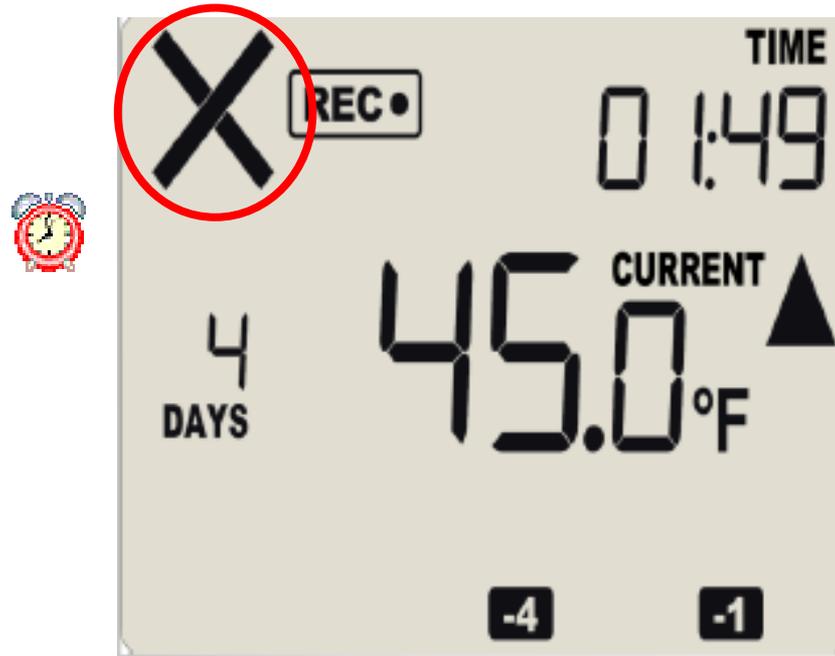


Example 2:



1. 2 "X" indicators showing ALARM (low and high)
2. Low alarm section shows temperatures below low alarm for 55+ days
3. Graph: No red inspection marks, temps below lower limit

Clearing an Alarm



Alarms are ONLY cleared when the data logger is put into its cradle and the data is downloaded into the computer.

SECTION VI: Wrap-Up

- Review
- Changing the Battery
- Recalibration
- Next Steps
- Resources
- Back-up DDL



Temp Logs vs. DDL Data

Temp Logs

Refrigerator Temperature Log Month/Year (Days 1-15) _____
Refrigerator Location _____
Recorder Name _____
Pin number _____

Record CURRENT, MIN, and MAX temperatures twice a day. Complete steps 1-3

File this log at the end of the month and keep it for 3 years

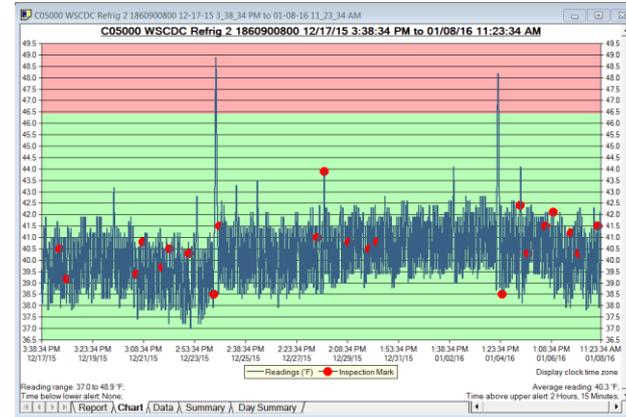
Staff Initials	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Time	am	pm	pm												
Current															
MIN															
MAX															

Read the current temperature on thermometer display and record on the temp log.
Review the minimum and maximum temperatures and record on the temp log.

Evaluate temperatures. If temperatures are in the DANGER zones (see zones below), take immediate action described below.

-4° & Lower, -5°, -6°, -7°, -8°, -9°, -10°, -11°, -12° DANGER ZONE - TOO COLD	2° 3° 4° 5° 6° 7° 8° THESE TEMPERATURES ARE OK	9° 10° 11° 12° 13° 14° 15° 16° & Higher DANGER ZONE - TOO HOT
If you ever see temps in this danger zone: ➢ Put a "do not use vaccine" sign on the refrigerator ➢ Store vaccine at proper temperature (transfer to another appliance if needed) ➢ Alert your supervisor and download the data. Send to dlhansen@icarehawaii.gov ➢ Document the date and actions you take on the Vaccine Storage Troubleshooting Record (VSTR)	Vaccine Storage Best Practices: ➢ Store vaccine at midpoint of recommended range. 5°C ➢ Place thermometer in a central area of the unit directly with the vaccines ➢ Do not place thermometer or vaccine in the door, near or against the walls, close to vents, or on the floor of the unit	If you ever see temps in this danger zone: ➢ Alert your supervisor immediately ➢ Wait no more than 60 min and check to see if the temperature has returned to the proper range ➢ If temps are still in DANGER ZONE after 60 minutes, download the data and email to dlhansen@icarehawaii.gov ➢ Document the date and actions you take on VSTR

DDL Data



- Updated **TWICE** daily
- **FAXED** when ordering Vaccine
 - *Since last order*
- **ENTERED** into ICARE

- Downloaded at least **ONCE A MONTH**
- **EMAILED** when **ALARM** occurs
- **PRINTED** reports for QAR
 - *3 months of reports*

Changing the Battery

LogTag uses a watch battery type CR2032

1. Remove the sticker where the calibration information is printed (Figure 1.)
2. Remove battery compartment cover by turning the cover with a coin or the new battery
3. Remove the battery with a paper clip and replace the battery* (Figure 3.)
4. Replace the battery compartment cover and the calibration sticker



Figure 1.



Figure 2.

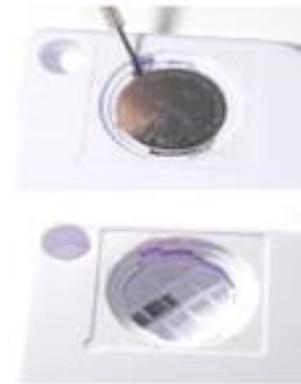


Figure 3.

***Note:** It may be challenging to remove the battery. Use a paper clip to help. DO NOT use a pen or pencil as this can damage the battery holder.

Recalibration

It will be the provider's responsibility to get their data logger recalibrated when the certificate of calibration expires.

- The calibration on the LogTags expire after 2 years. Recalibration is about \$40/each per recorder (recalibration and battery change. Turn around time averages about 3 days.)
In the mean time: please use your backup thermometer to record temperatures
- Recalibration Instructions can be found on the Chicago HAN.
- In order to receive an automatic recalibration notification from Control Solutions, send an email with the following information to sales@vfcdataloggers.com:
 1. State/Certificate Name (*"Chicago, IL/City of Chicago Public Health Immunization Program"*)
 2. Company Name (practice name)
 3. Contact and Email information
 4. Phone Number
 5. Logger ID number (found on calibration sticker)

Note: Control Solutions will not share, distribute, or sell this information with anyone

DDLs in Chicago

As of January 2018, CDC will require that back-up thermometers be continuous recording devices (DDLs)

To meet VFC Program requirements the device must be equipped with:

1. A temperature probe
2. An active temperature display that can be easily read from the outside of the unit
3. The capacity for continuous monitoring and recording capabilities where the data can be routinely downloaded

Additional recommended features:

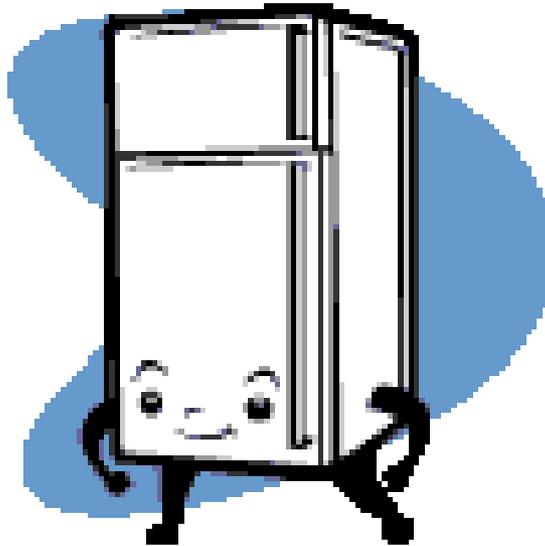
- Alarm for out-of-range temperatures
- Current, minimum, and maximum temperatures display
- Low battery indicator
- Accuracy of +/- 1°F (0.5°C)
- Memory storage of at least 4,000 readings
- Reading rate at a maximum time interval of every 30 minutes
- Use of a probe that best reflects the temperature of the vaccine (such as a buffered probe)

Other Helpful Resources

- View the LogTag® User Guide:
 1. Double click icon () to open the grey screen.
 2. Select **Help**
 3. Choose **User Guide**

- LogTag® Technical Support: (888) 311-0636

Thank You!



On-going help and support:

Primary Contact: Vaccine Management Unit - (312) 746-5385

Email: chicagovfc@cityofchicago.org

Alternative Contacts:

Kevin Hansen - (312) 746-9330

Control Solutions - 1(888) 311-0636

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