

# **Bridgeton Landfill, LLC**

## **Weekly Data Submittals**

**Required by Section 52.F of Agreed Order, Case No. 13SL-CC01088  
Effective May 13, 2013**

### **Contents:**

**Attachment A – Leachate Levels in Leachate Collection Sumps  
Attachment B – Temperature Monitoring Probe Analytical Charts  
Attachment C – Gas Interceptor Wellhead Temperature Graphs  
Attachment D – Gas Well GEW-54 Wellhead Temperature**

### **Provided Separately:**

- Leachate Level in Leachate Collection Sump Raw Data Excel Spreadsheet**
- Temperature Monitoring Probe Raw Data Excel Spreadsheet**
- Gas Interceptor Well Reading Raw Data Excel Spreadsheet**

**October 8, 2013**

## **Commentary on Data**

### **Attachment A – Leachate Levels in Leachate Collection Sumps**

LCS-1 appears to be compromised (bent or collapsed) partially down so it is not possible to insert a full-depth pump; however, a Blackhawk pump was installed above the compromise elevation on September 25, 2013 allowing for leachate removal. Conditions in LCS-3C settled down, allowing placement of a Blackhawk pump on September 20, 2013. LCS-4B still exhibits excess pressure and liquid ejection, so has not been fitted with a pump; however, the conditions are resulting in leachate removal from that location.

The other leachate collection sumps appear to be operating properly with measured leachate levels below the required pumping levels.

### **Attachment B – Temperature Monitoring Probe Analytical Charts**

The following TMPs indicated virtually identical or lower temperature profiles than previous week(s): TMP-1, -2, -3, -4, -5, -6, -7, -11, -12, -13, and -14.

TMP-9 and -10 appears to have warmed slightly in the past couple of weeks.

The 129' and 149' depth intervals in TMP-13 are no longer functioning. In addition, the 9' depth interval in TMP-13 appears to be compromised as evidenced by forensic voltage tests on the interval. A replacement for TMP-13 is planned to be installed when three new TMPs are installed pending location approval of MDNR.

### **Attachment C – Gas Interceptor Wellhead Temperature Graphs**

The following GIWs indicated virtually identical or trending lower wellhead temperatures as recent previous week(s): GIW-1, -2, -3, -4 -5, -6, -9, -10, -11, -12, and -13. GIW -7, -8, and -11 showed a recent warming trend.

The water circulation cooling loop is still temporarily in place in GIW-4; therefore, the graph for GIW-4 indicates the temporarily cooled wellhead gas temperature. We will continue this trial cooling for a short period, while continuing temperature monitoring, and then reinstall the pump to restore GIW-4 to its previous state.

GIW-3 has experienced a drop in temperature but it is not known if this is attributable any potential influence of GIW-4.

### **Attachment D – Gas Well GEW-54 Wellhead Temperature**

This attachment was first added to the weekly data report on July 23, 2013 to track wellhead temperature in GEW-54 which is located in the North Quarry, has historically exhibited somewhat elevated temperatures, and which, on June 18, 2013, exhibited a wellhead temperature of 155°F.

As seen in Attachment D, the most recent wellhead temperature is 144° F. The past four weekly monitoring events indicate a 141-151° F temperature range which is within the range of fluctuation experienced over the past several months.

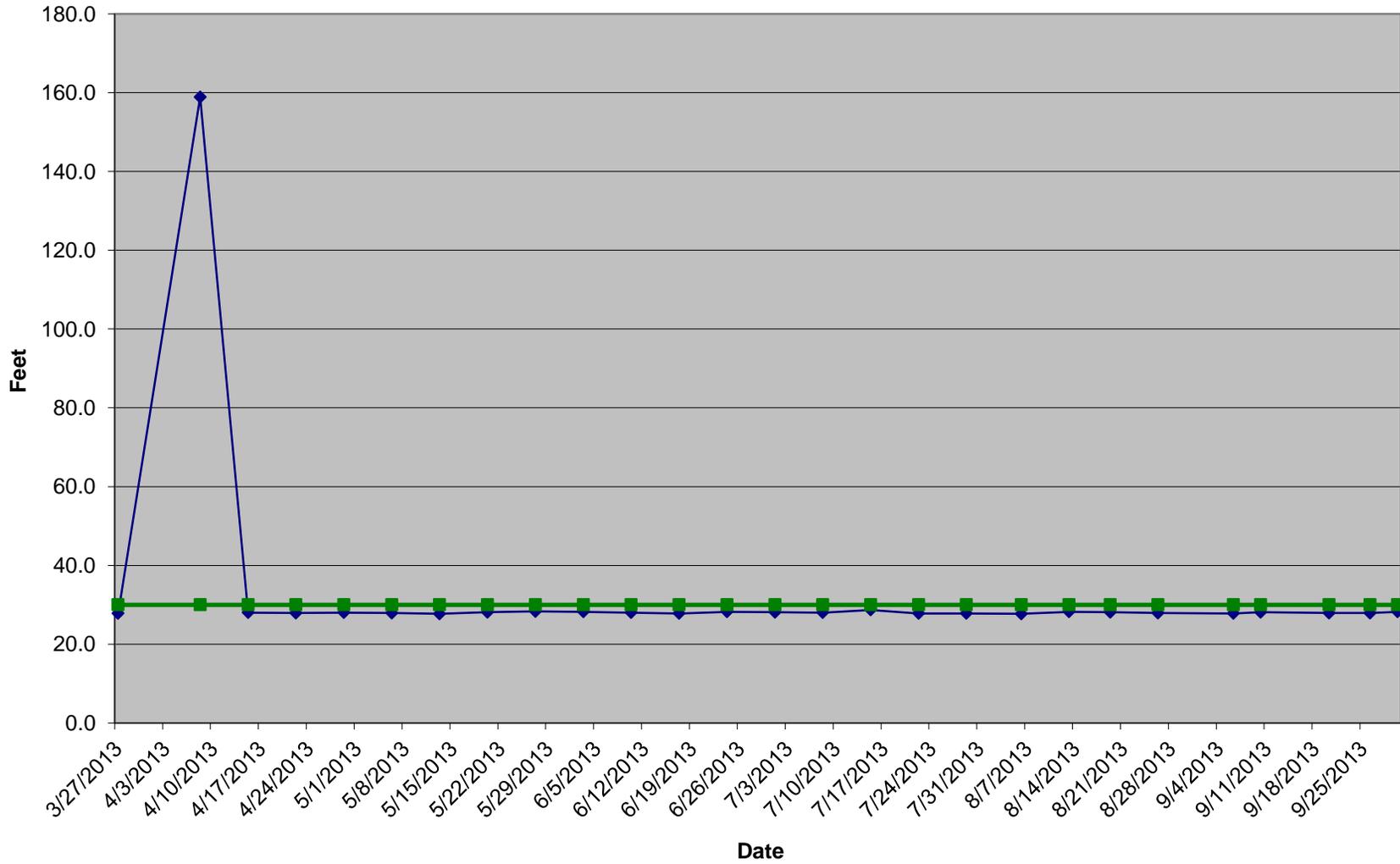
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**ATTACHMENT A**

**LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS**

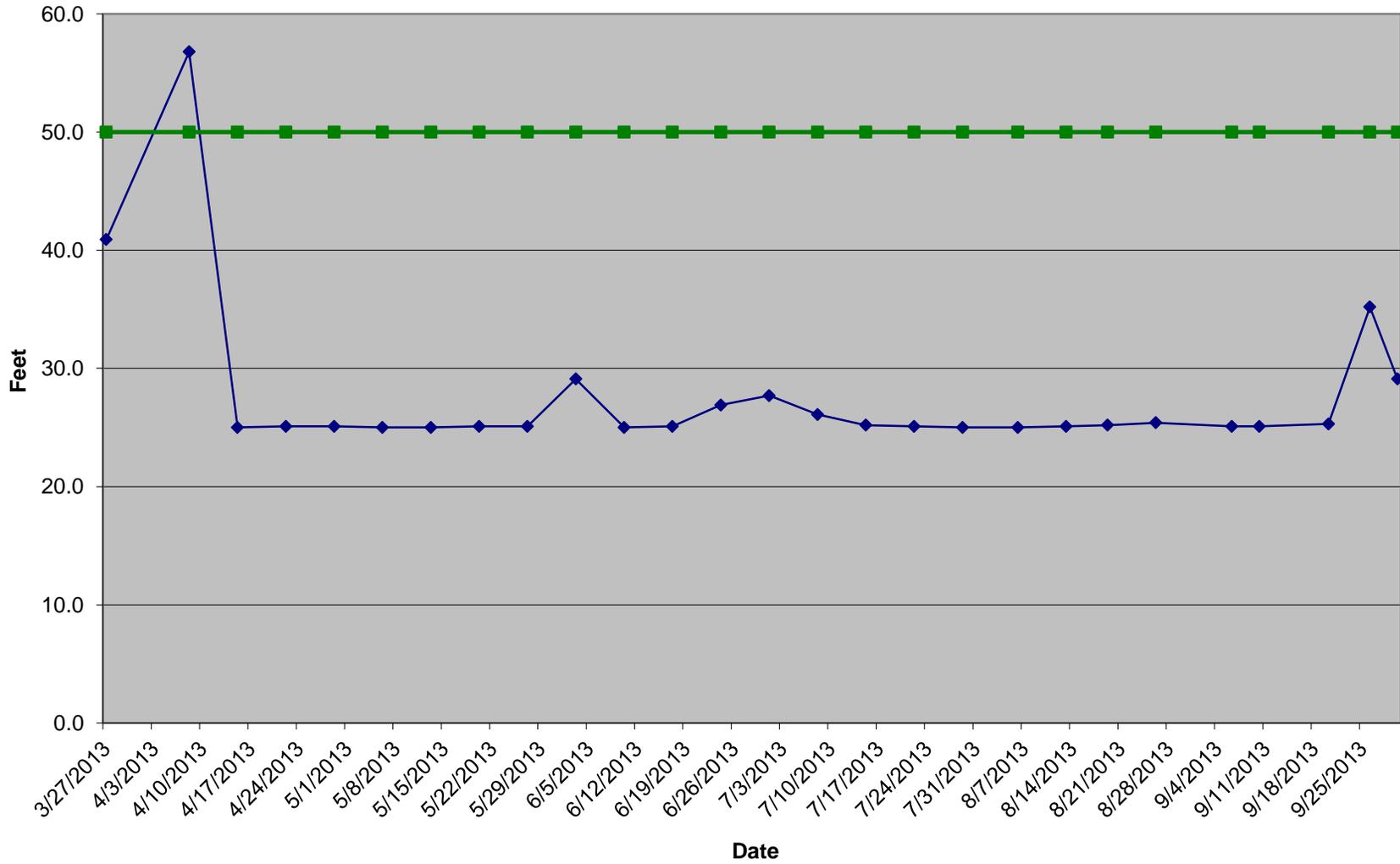
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### LCS-2D Liquid Level Above Quarry Floor



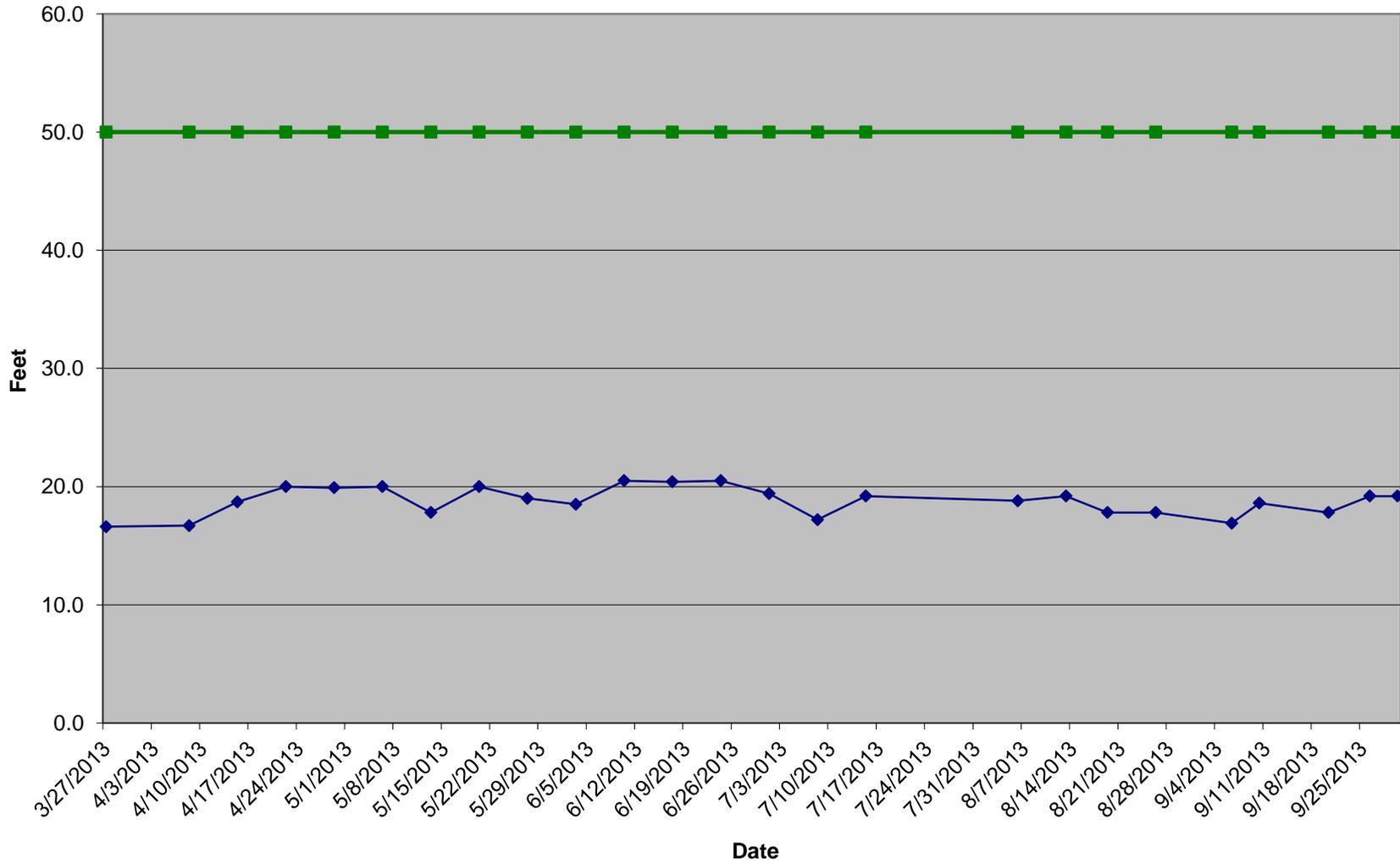
◆ Height of Liquid (Ft.)      ■ Compliance Level (Ft. Above Quarry Floor)

### LCS-5A Liquid Level Above Quarry Floor



◆ Height of Liquid (Ft.)      ■ Compliance Level (Ft. Above Quarry Floor)

### LCS-6B Liquid Level Above Quarry Floor



◆ Height of Liquid (Ft.)      ■ Compliance Level (Ft. Above Quarry Floor)

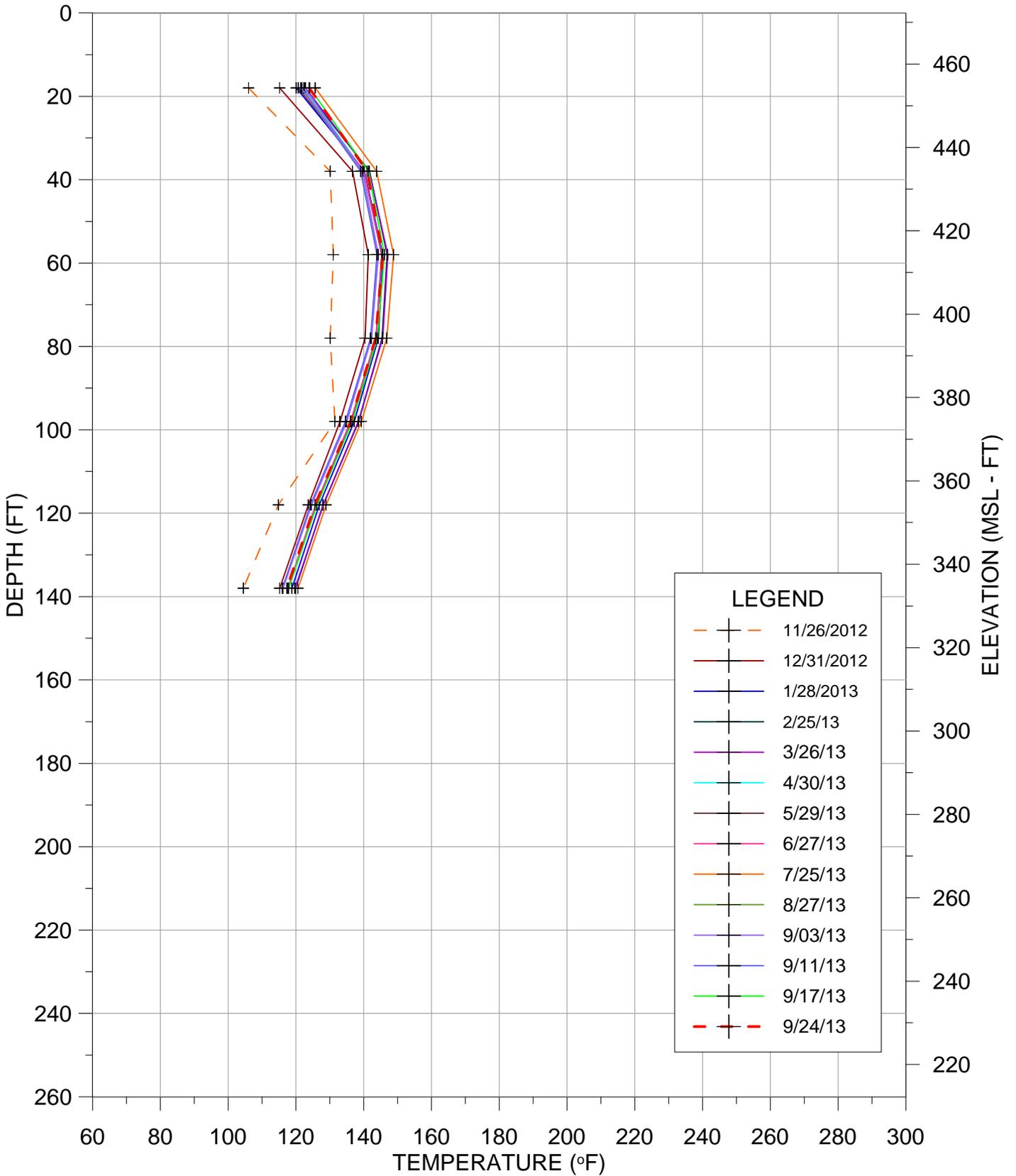
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**ATTACHMENT B**

**TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS**

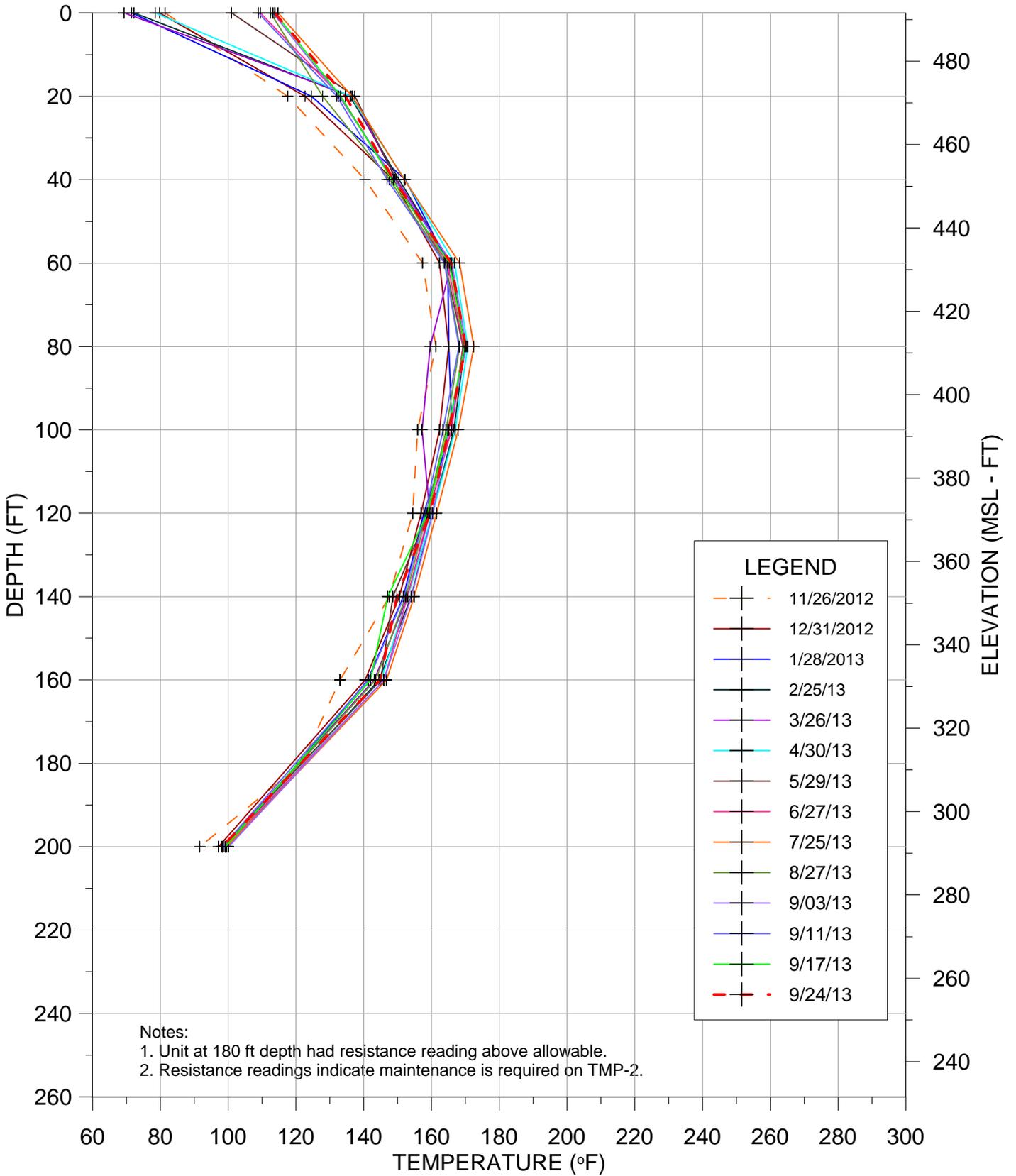
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# TMP-1



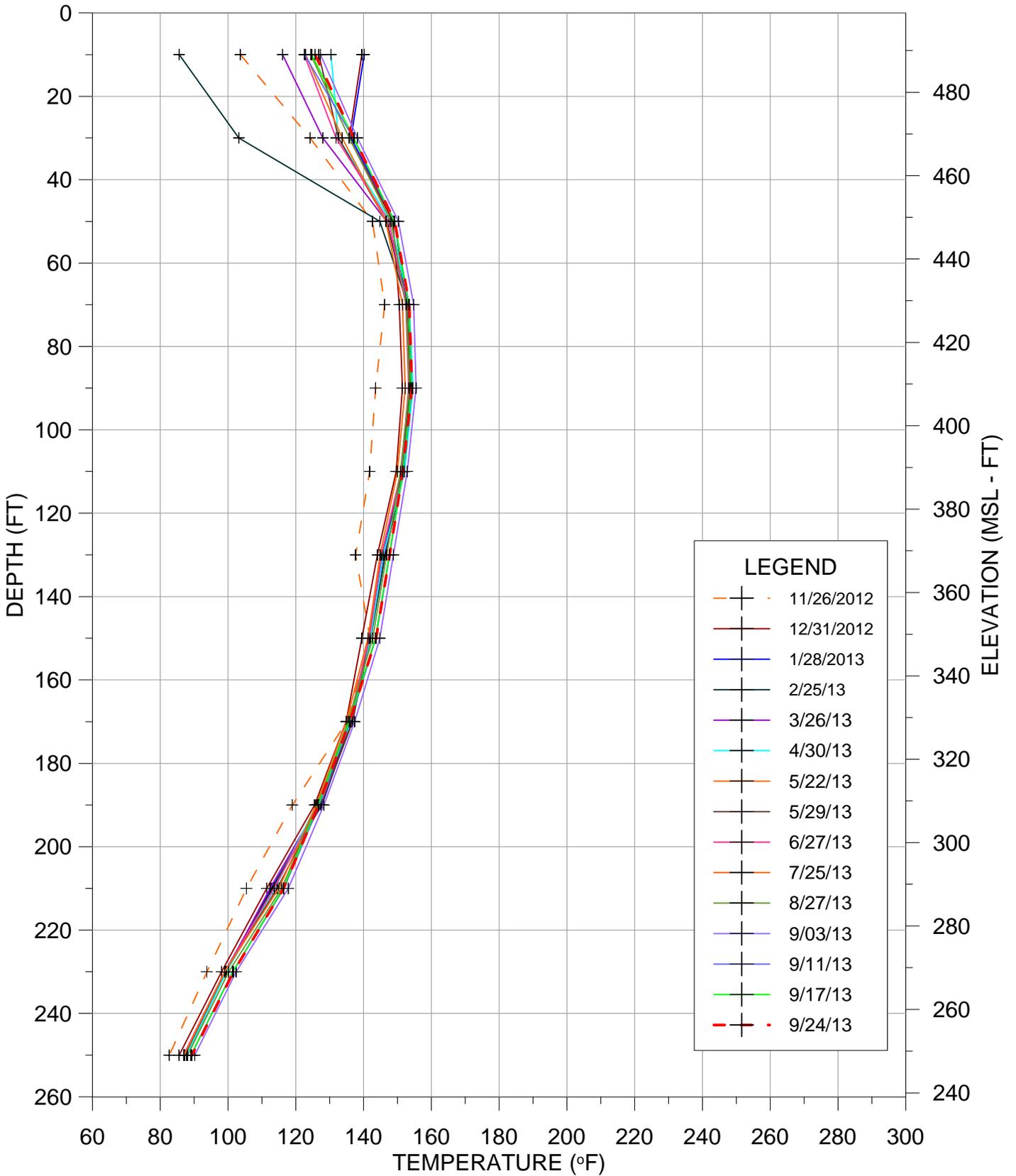
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-2



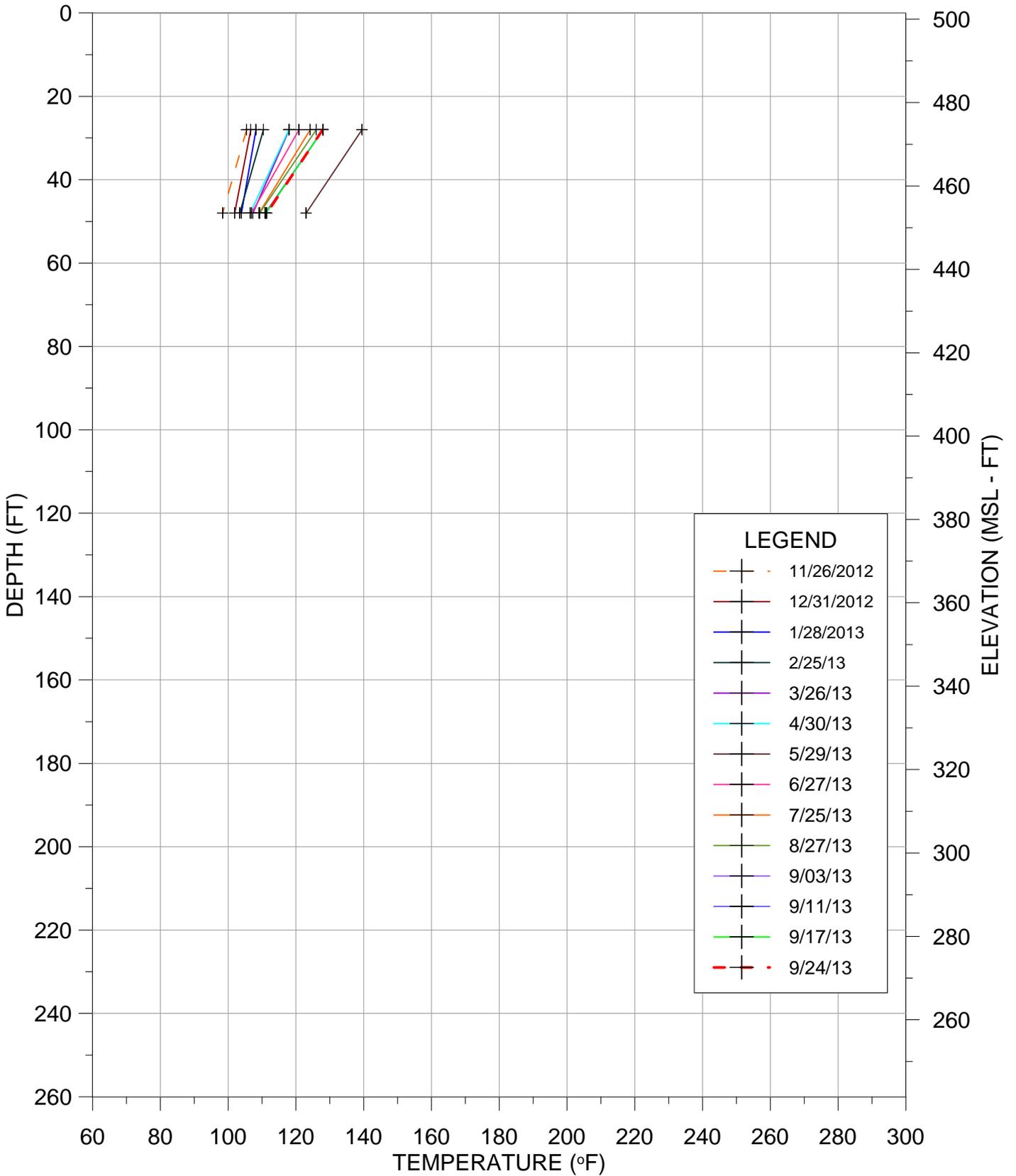
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-3



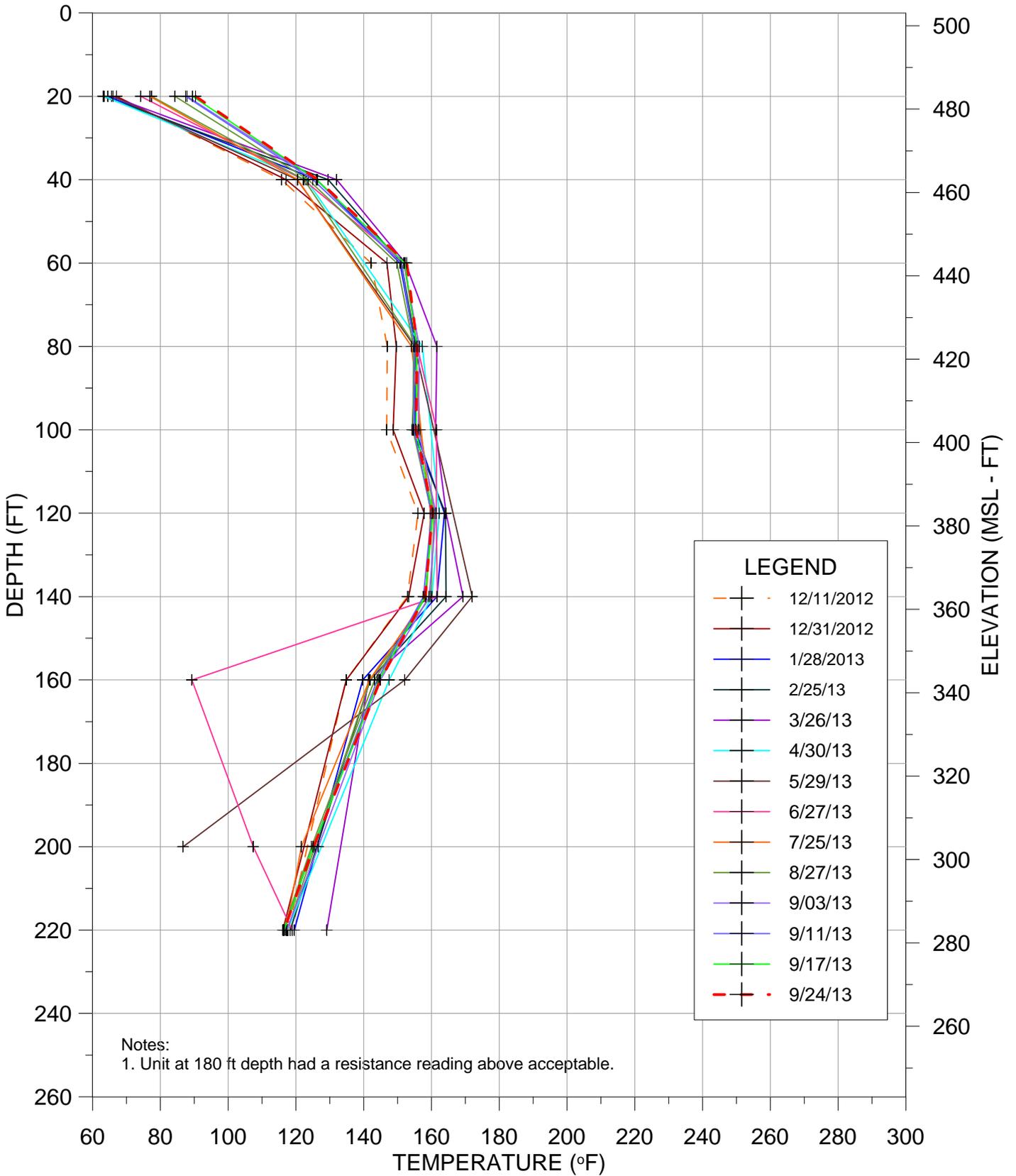
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-4



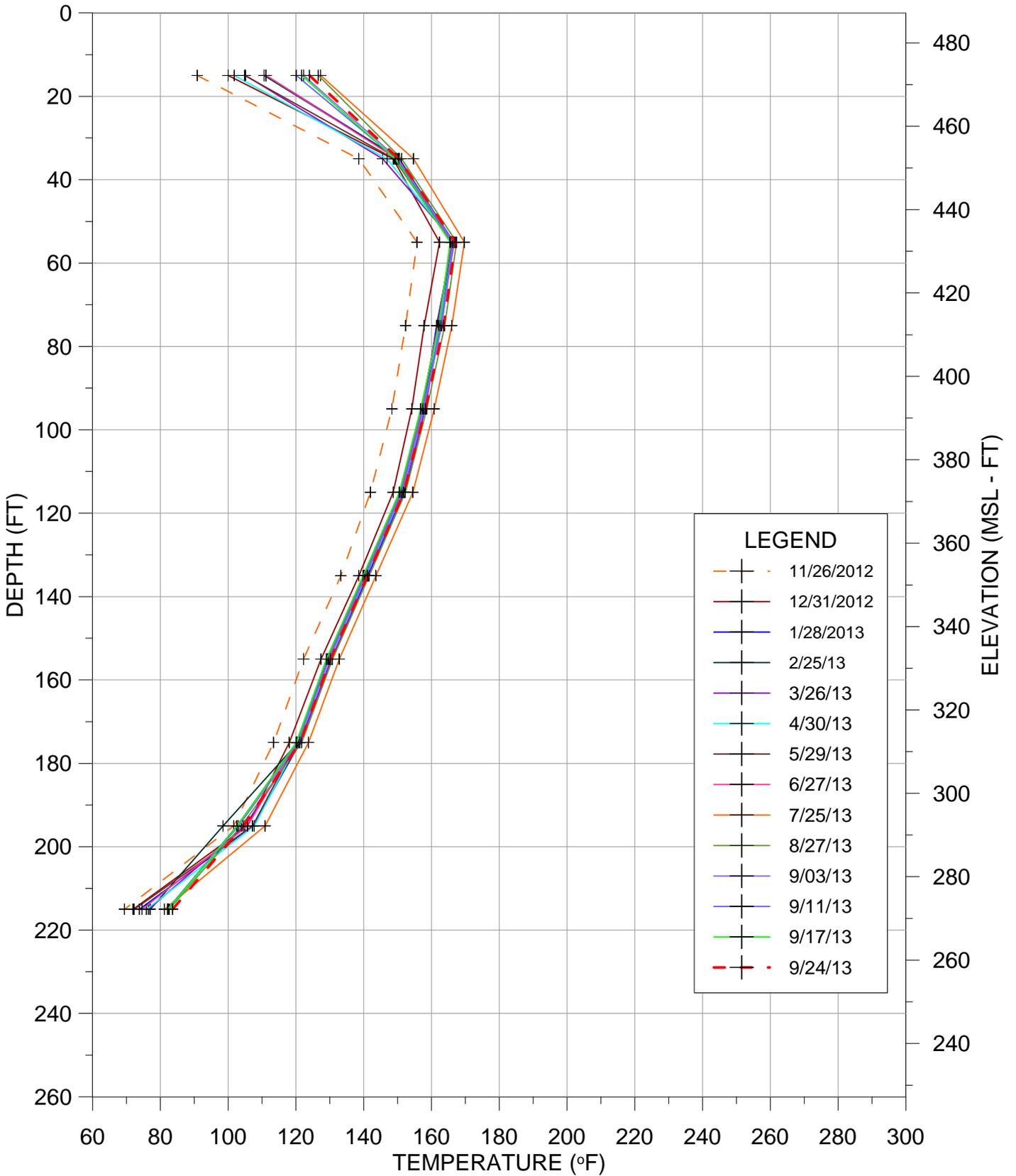
TEMPERATURE VS DEPTH  
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# TMP-5



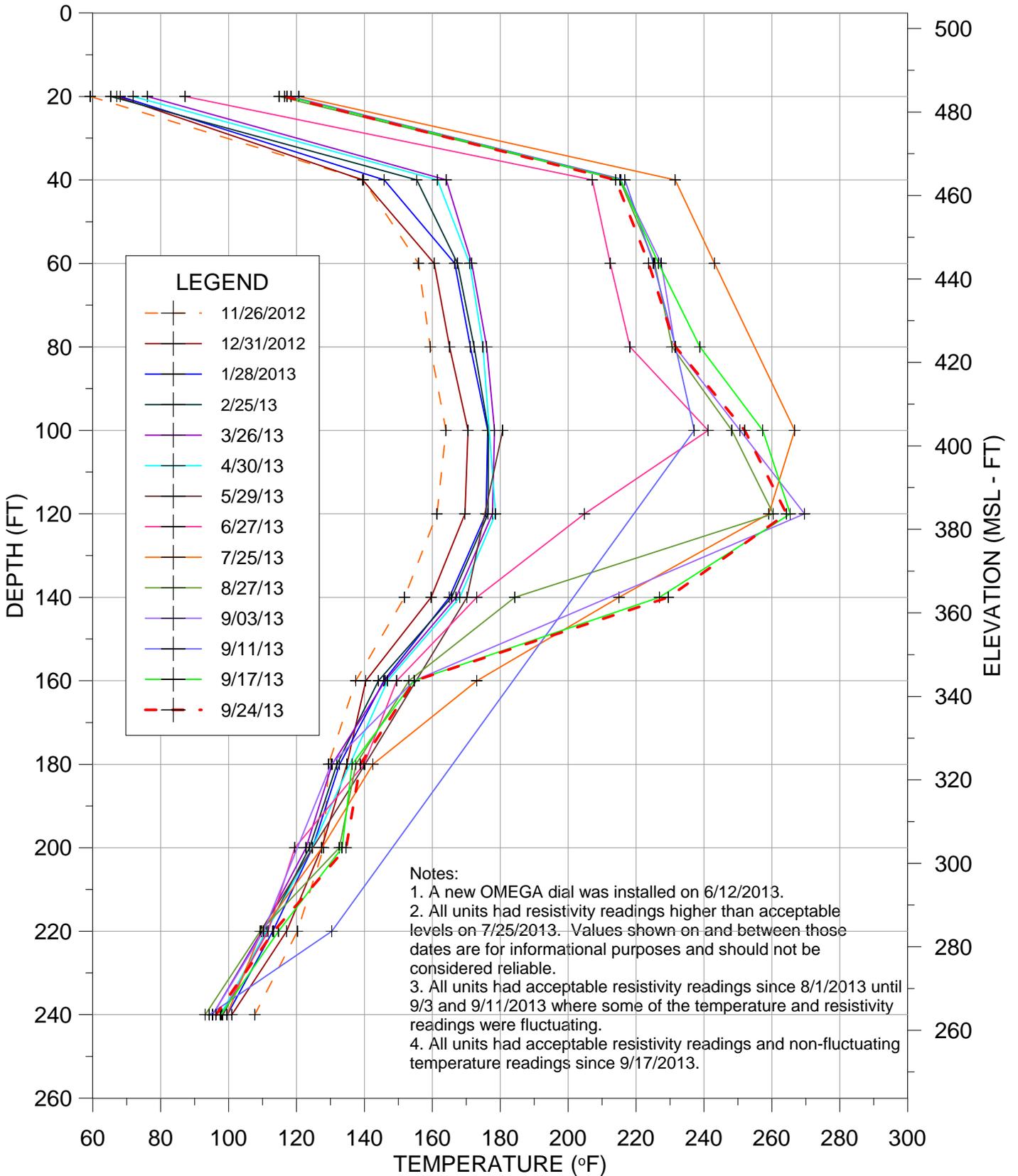
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-6



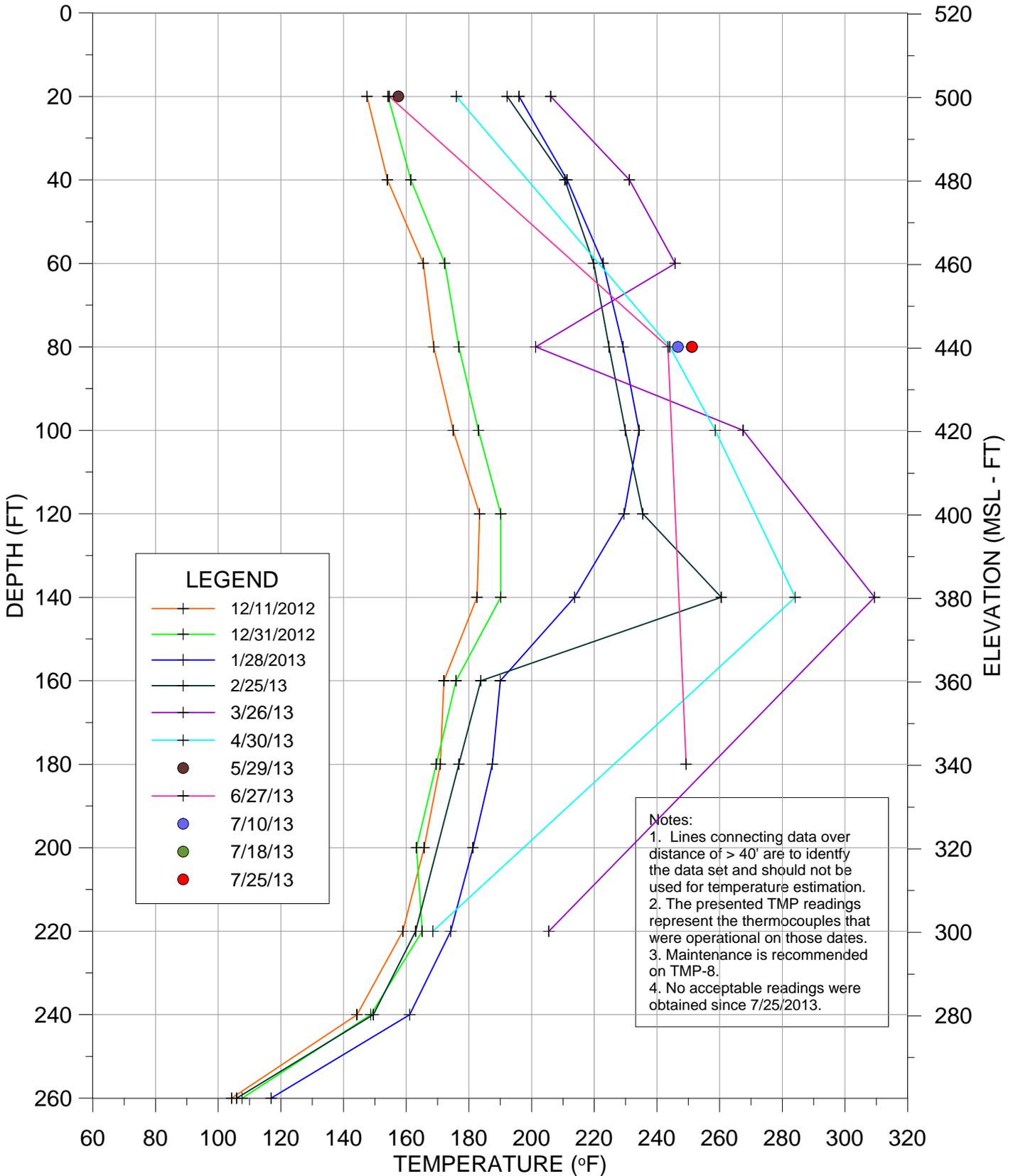
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-7R



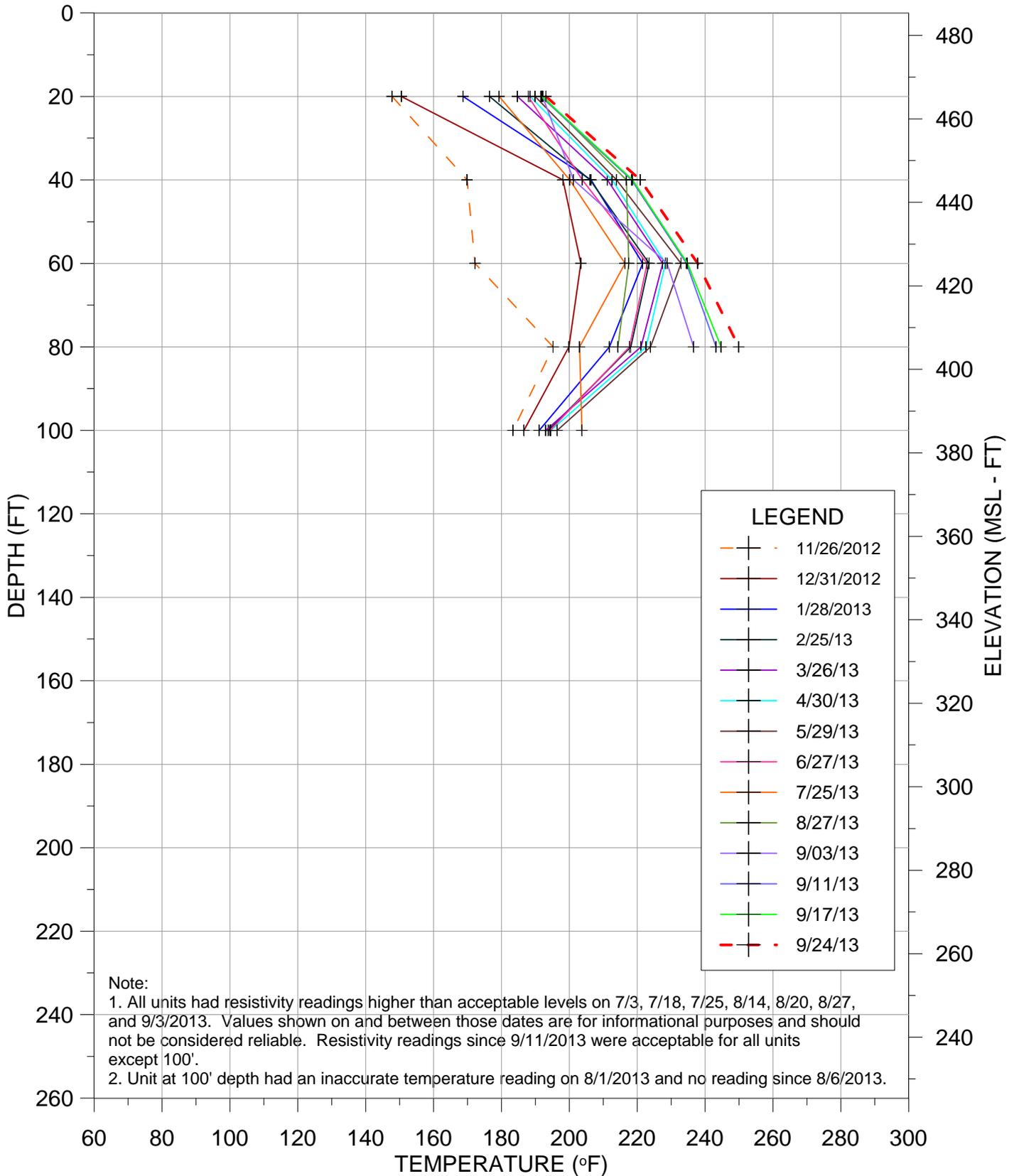
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-8



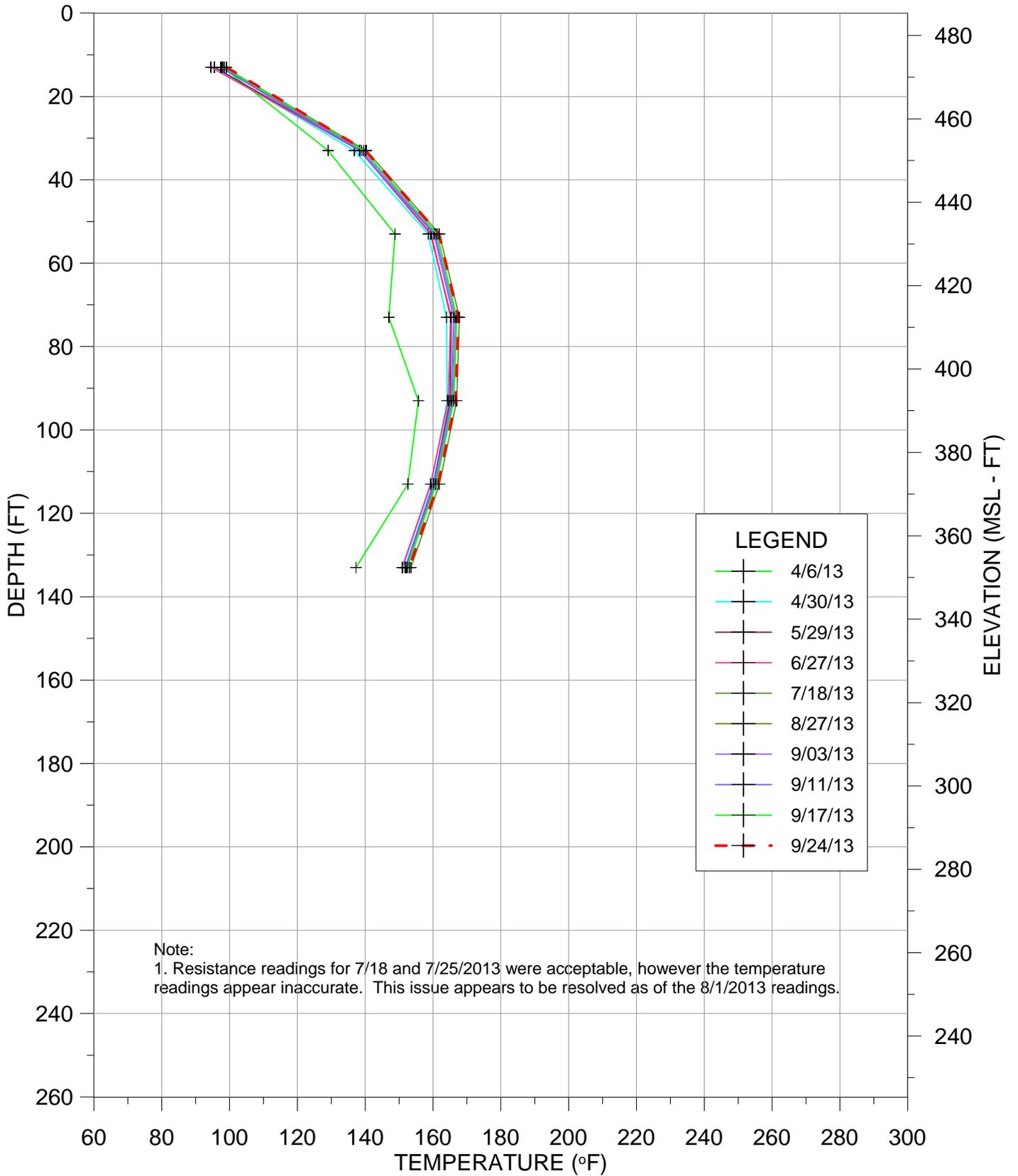
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-9



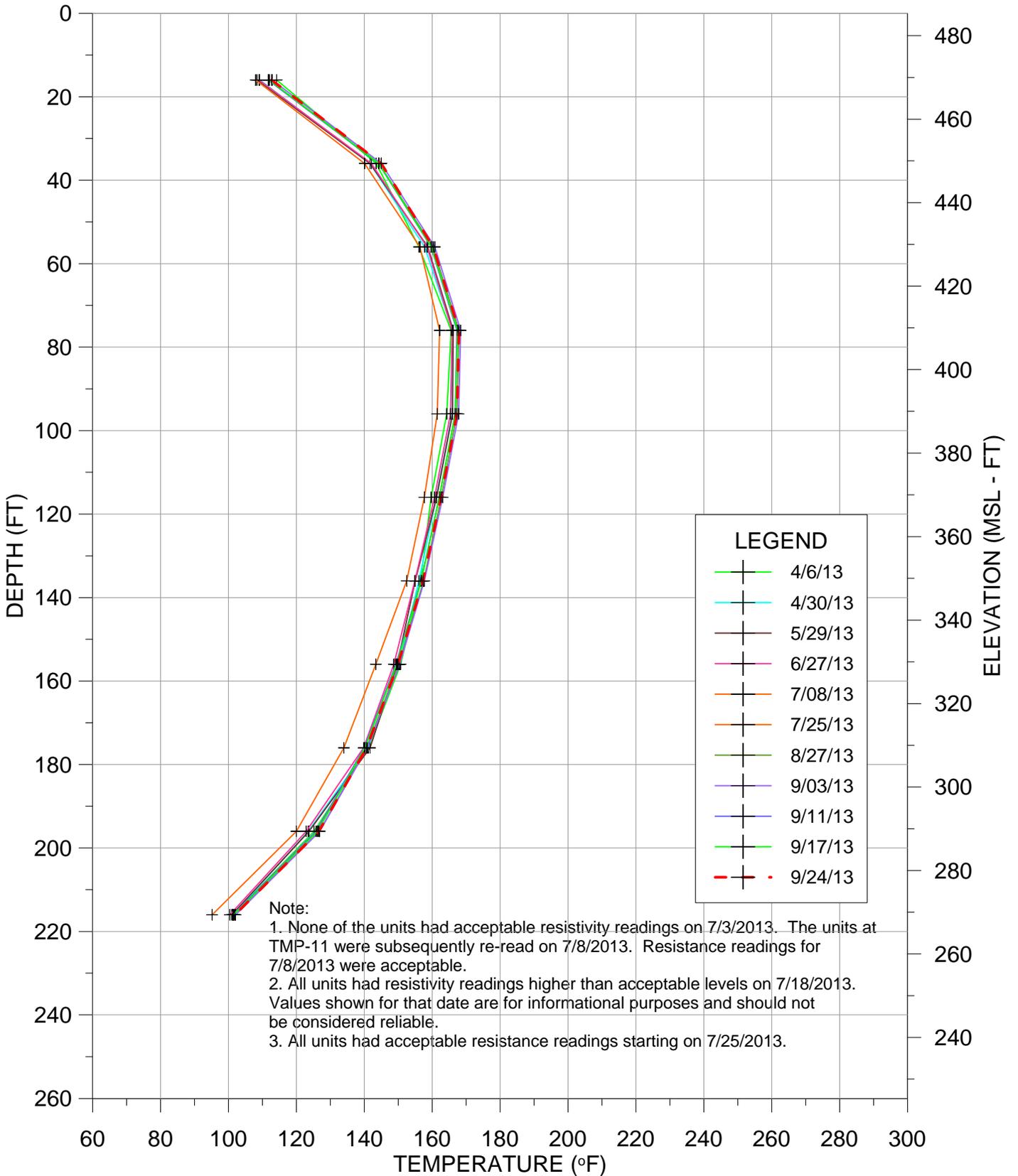
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-10



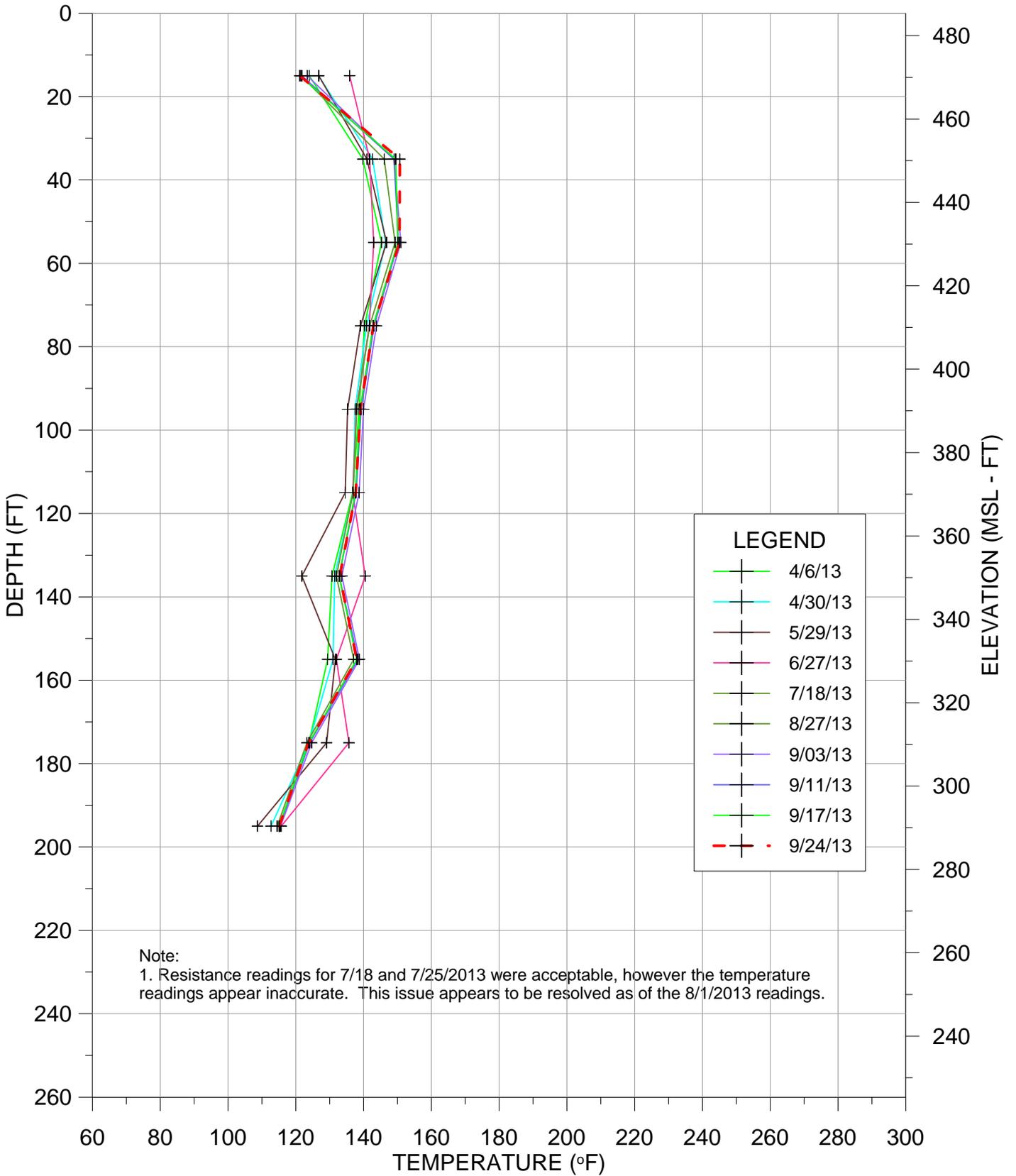
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-11



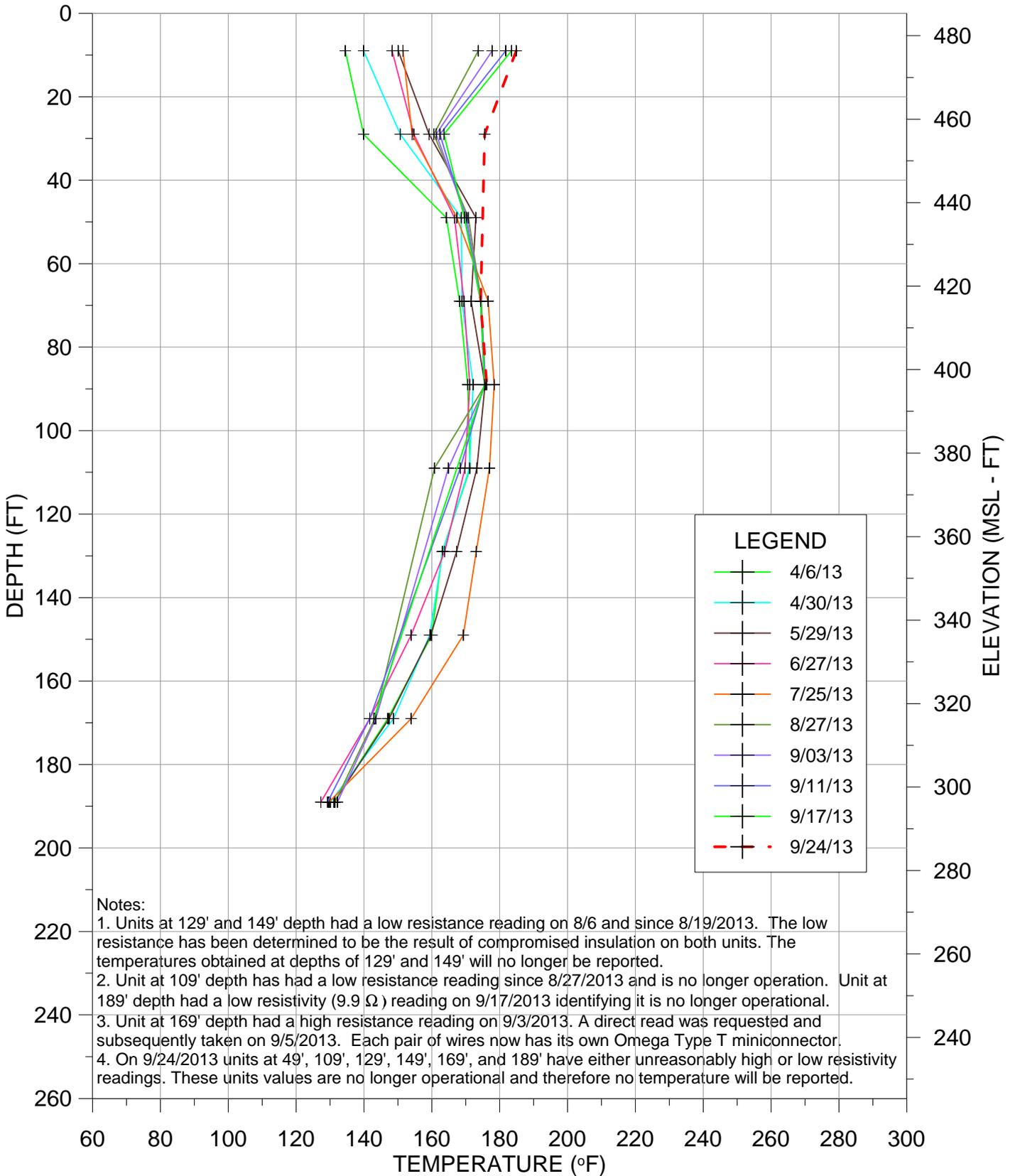
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-12



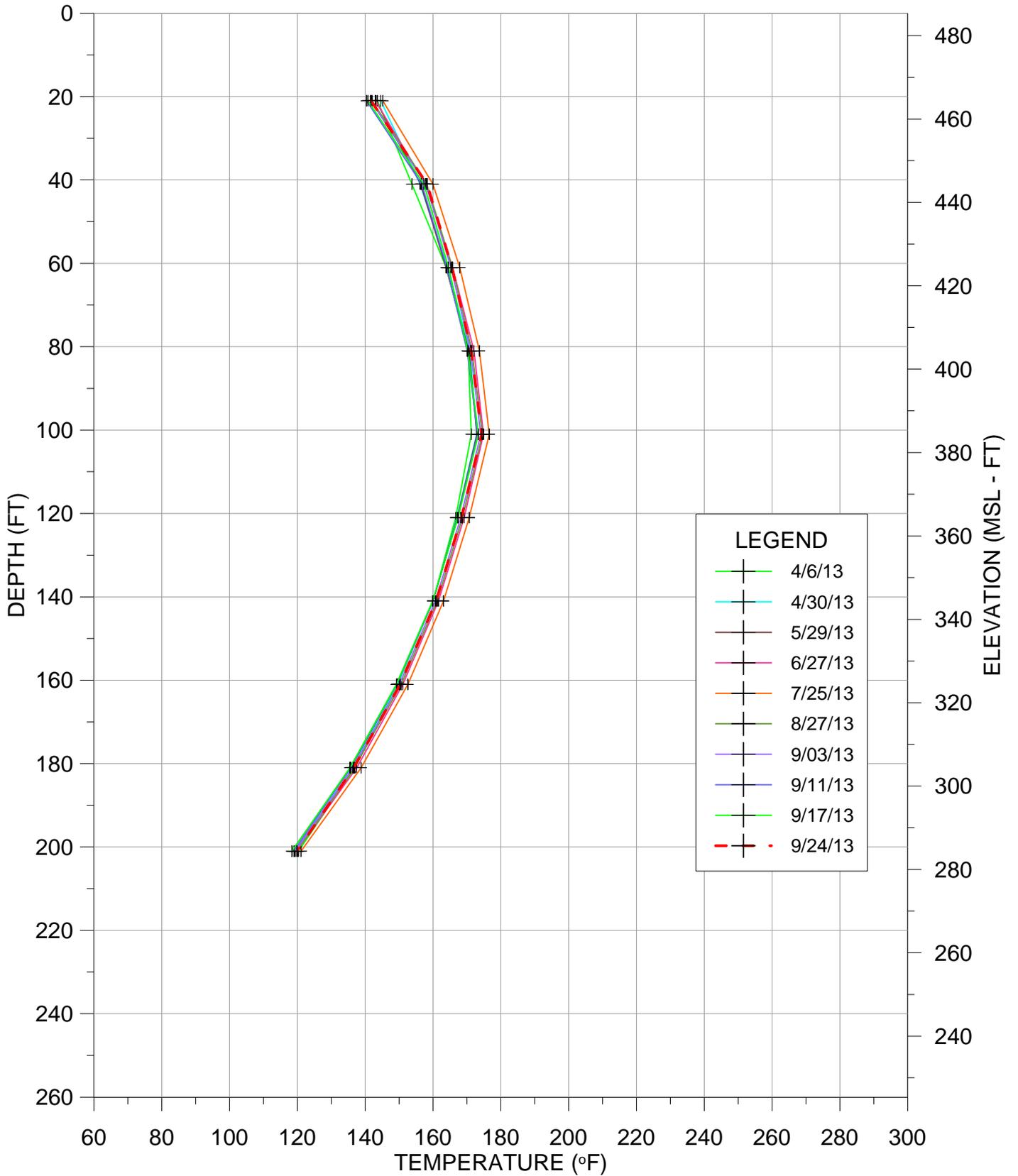
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-13



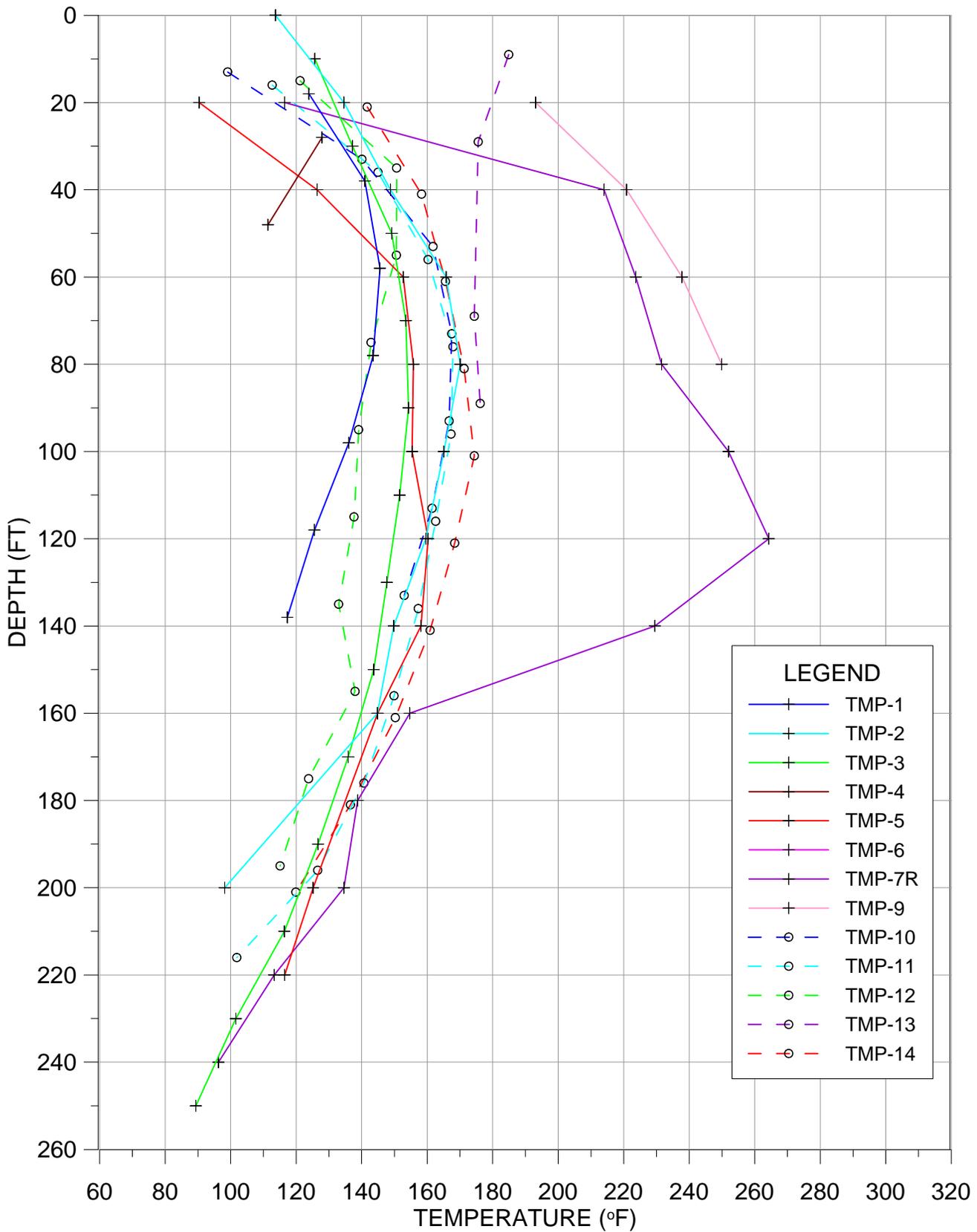
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-14



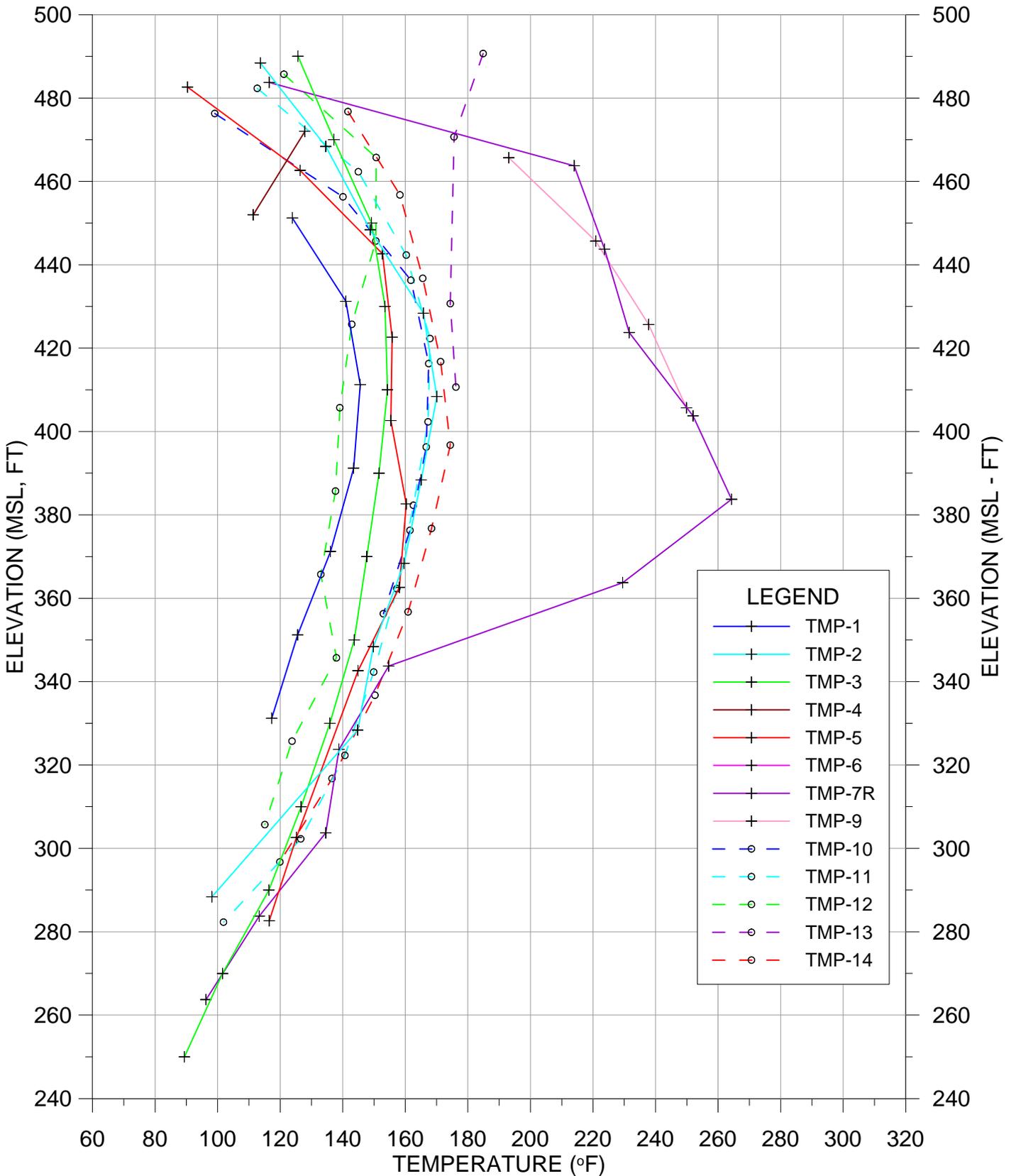
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 9/24/2013 -DEPTH



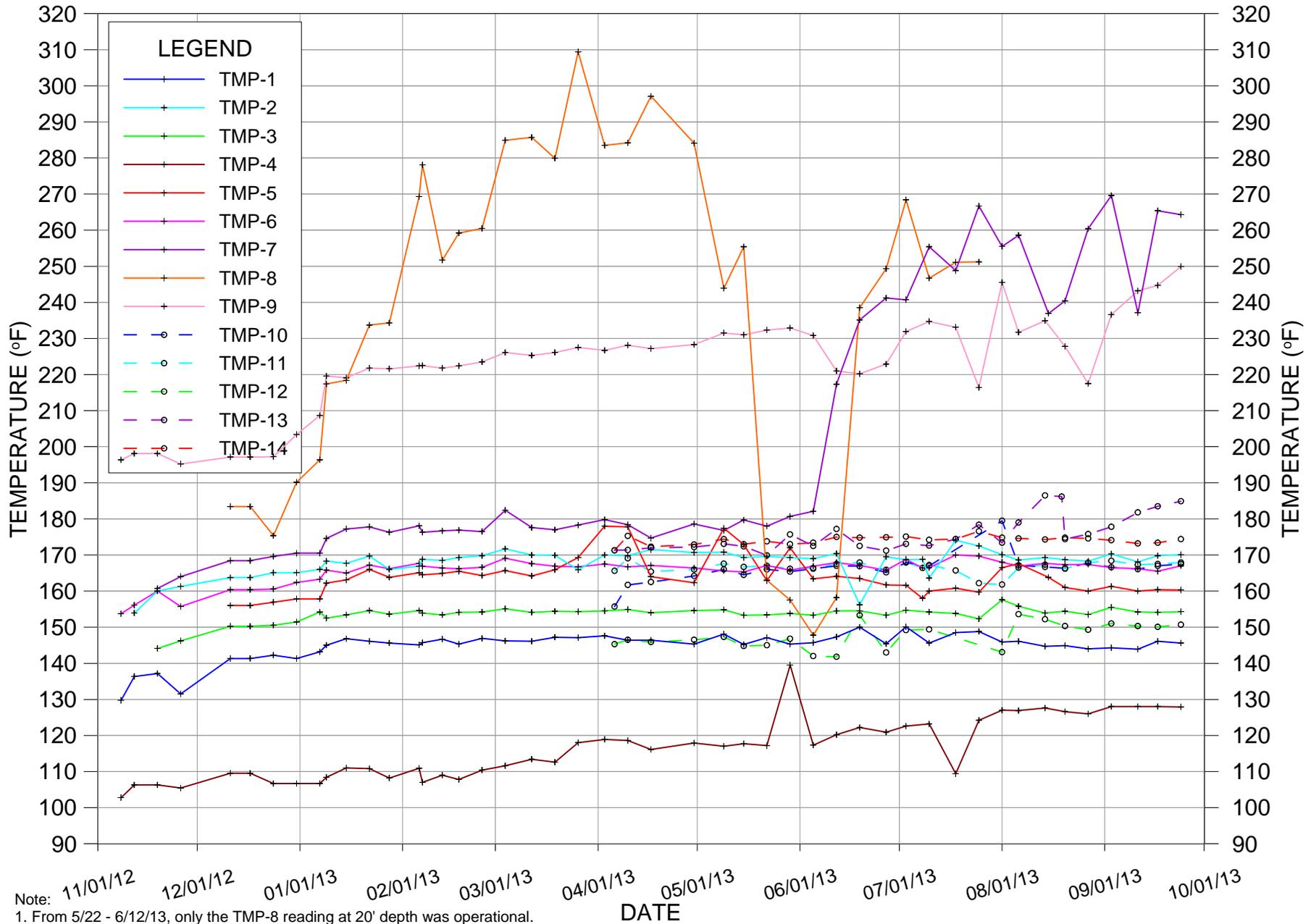
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 9/24/2013 - ELEVATION



TEMPERATURE VS ELEVATION  
BRIDGETON LANDFILL

# MAXIMUM TEMPERATURES



Note: 11/01/12 12/01/12 01/01/13 02/01/13 03/01/13 04/01/13 05/01/13 06/01/13 07/01/13 08/01/13 09/01/13 10/01/13

- From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational. No valid readings were obtained for TMP-8 since 8/1/2013.
- A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more valid readings.
- No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
- End terminals were replaced just prior to the 8/6/2013 readings with type T Omega connectors (part # SMPW-CC-T-M) on all TMPs except for TMP-8.

**TEMPERATURE VS TIME  
BRIDGETON LANDFILL**

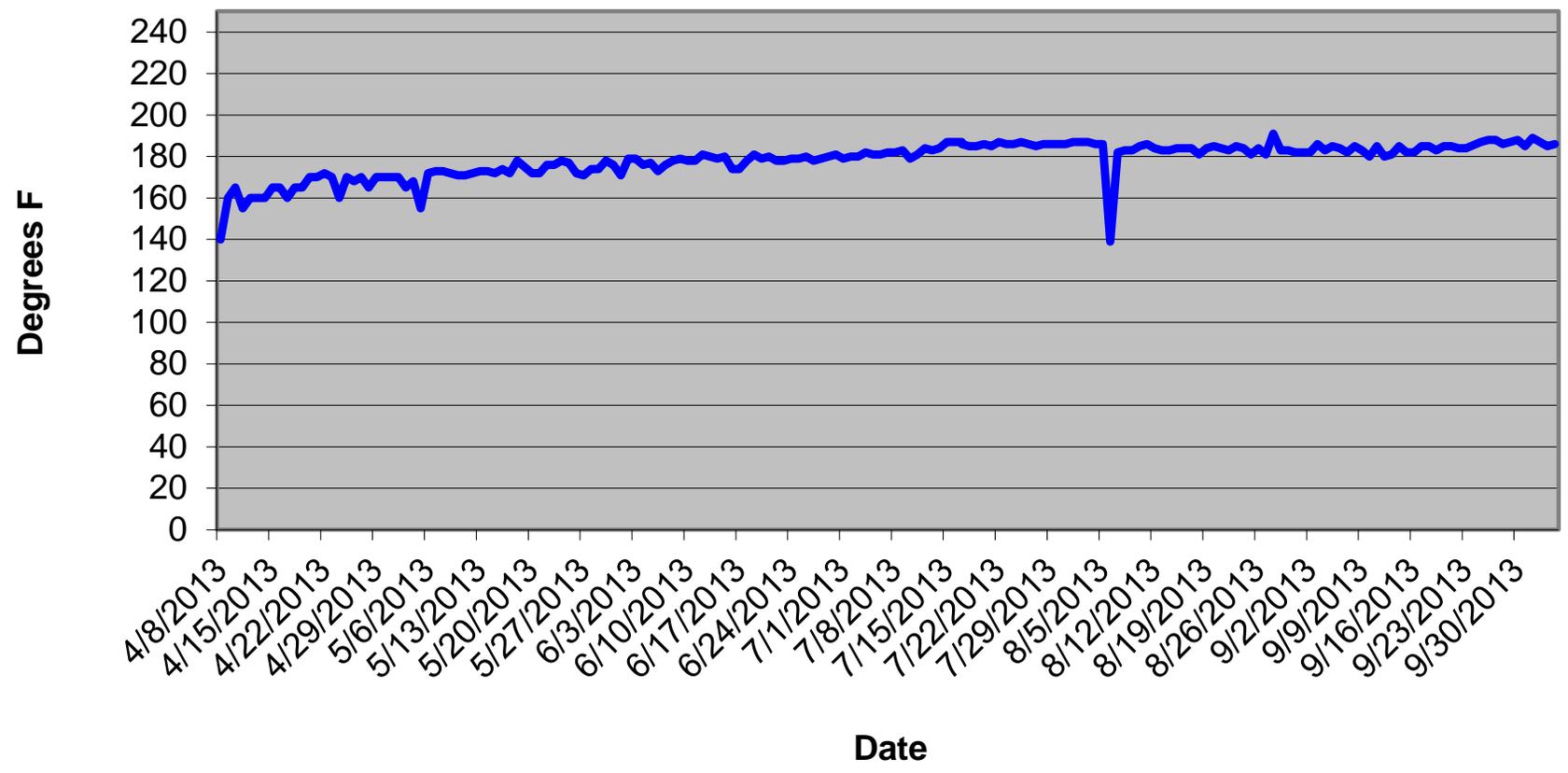
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**ATTACHMENT C**

**GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS**

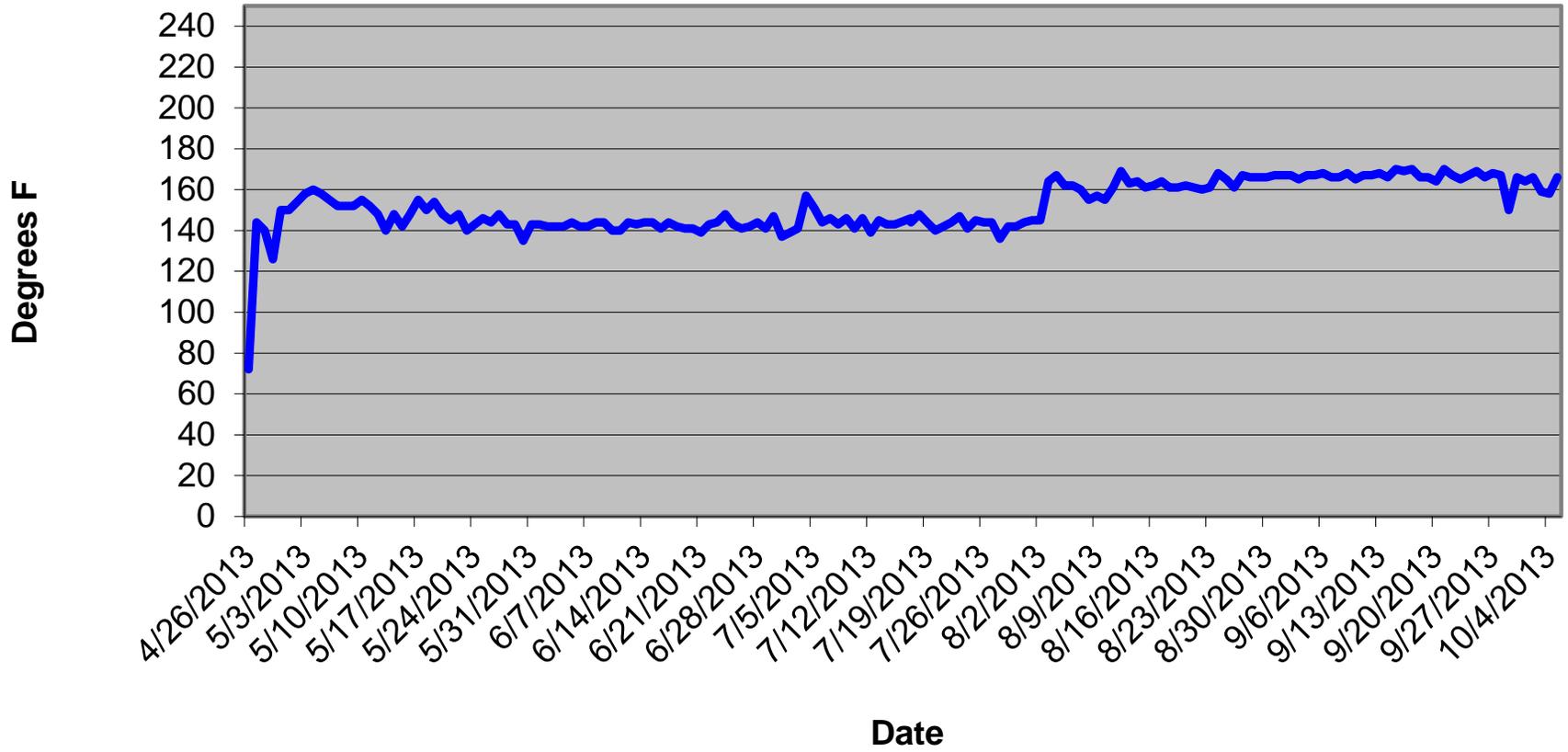
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### GIW-1 Wellhead Temperatures



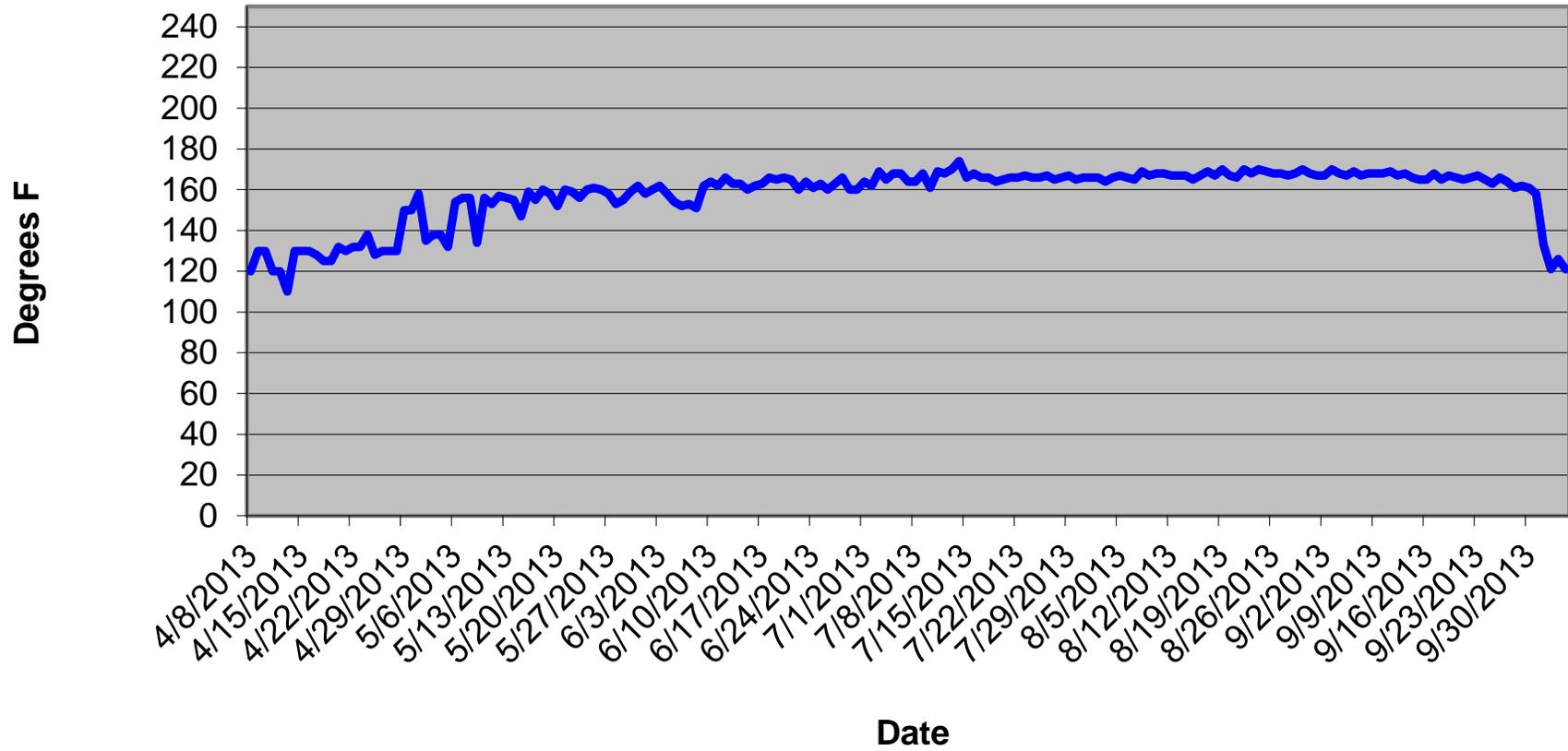
Wellhead Temp. (F)

### GIW-2 Wellhead Temperatures



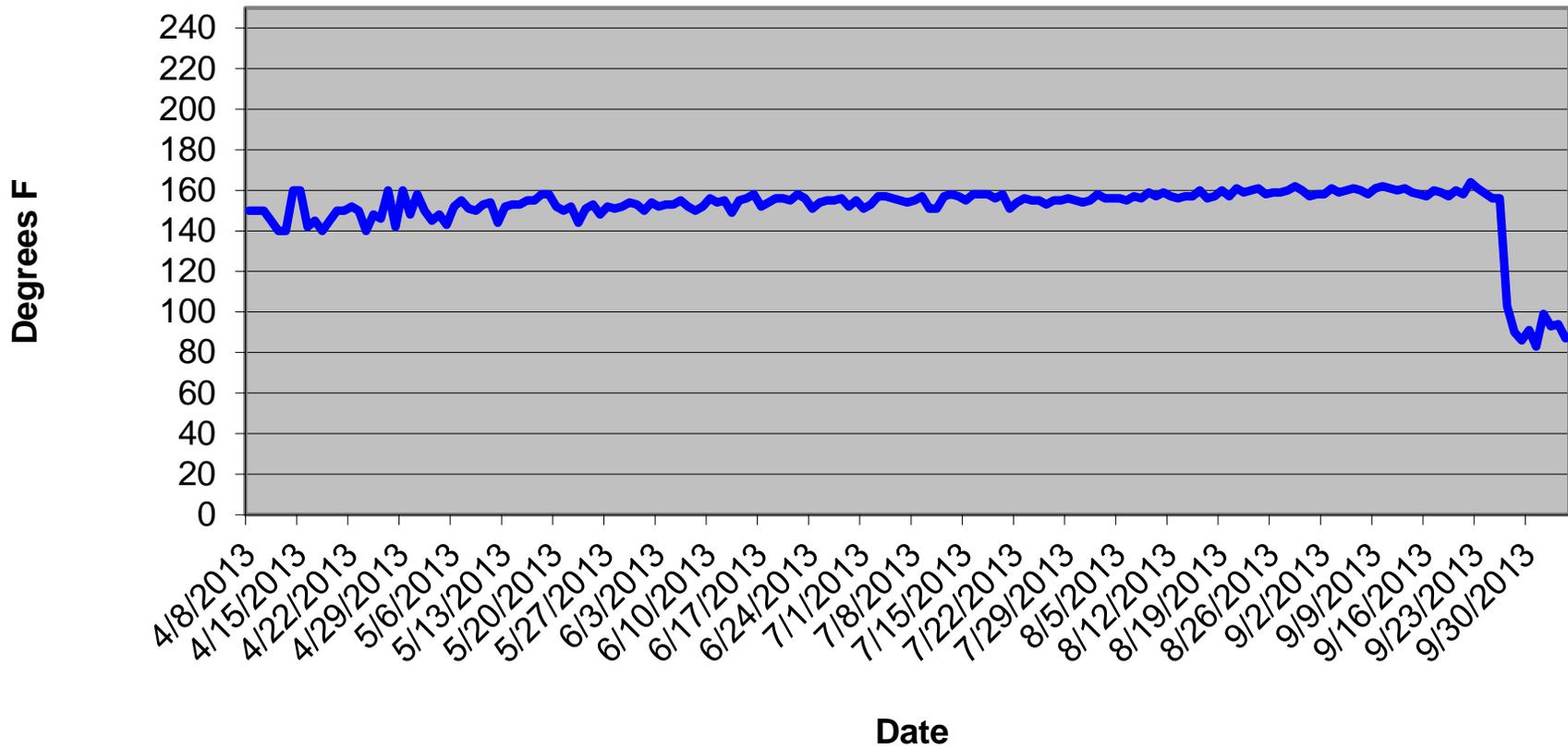
Wellhead Temp. (F)

### GIW-3 Wellhead Temperatures



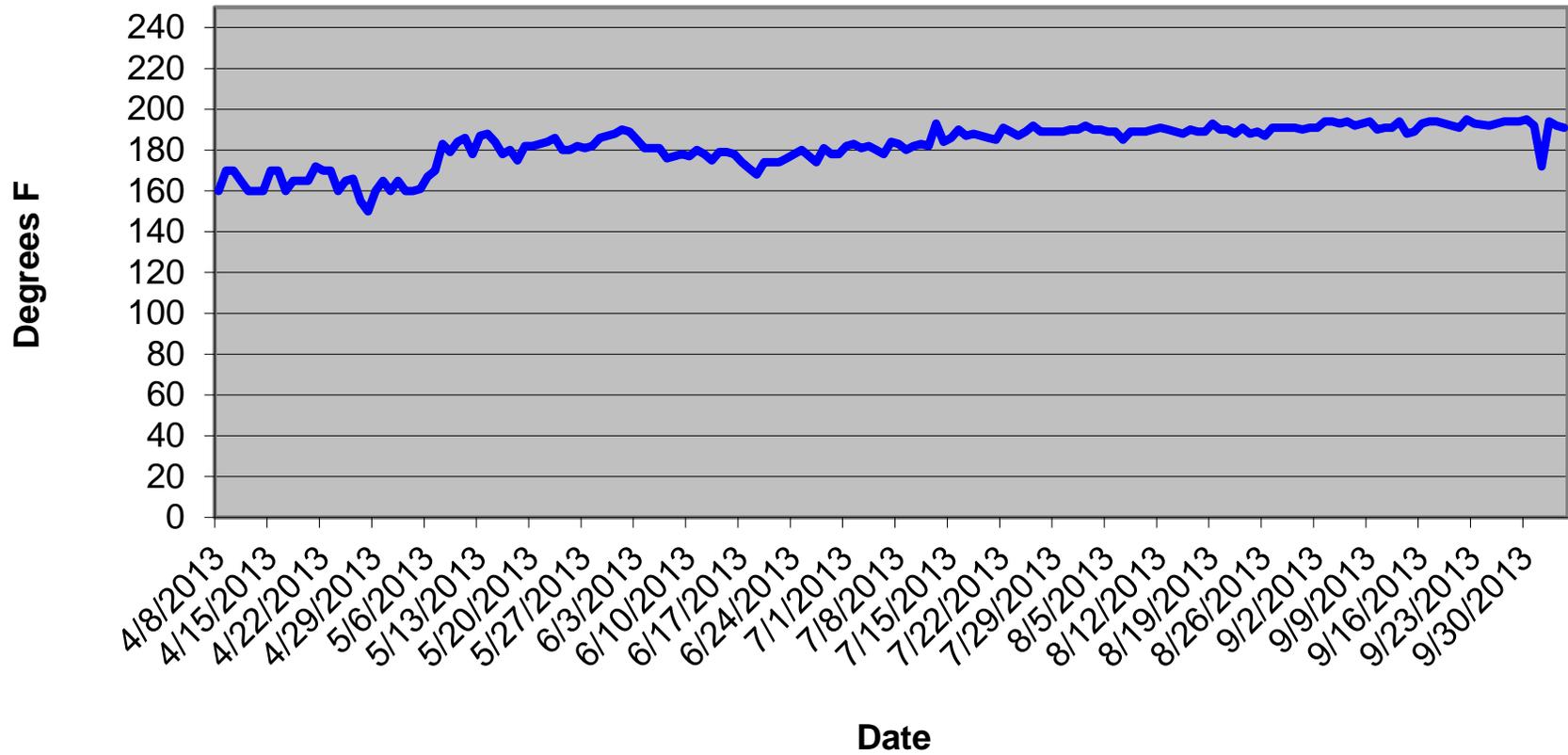
Wellhead Temp. (F)

### GIW-4 Wellhead Temperatures



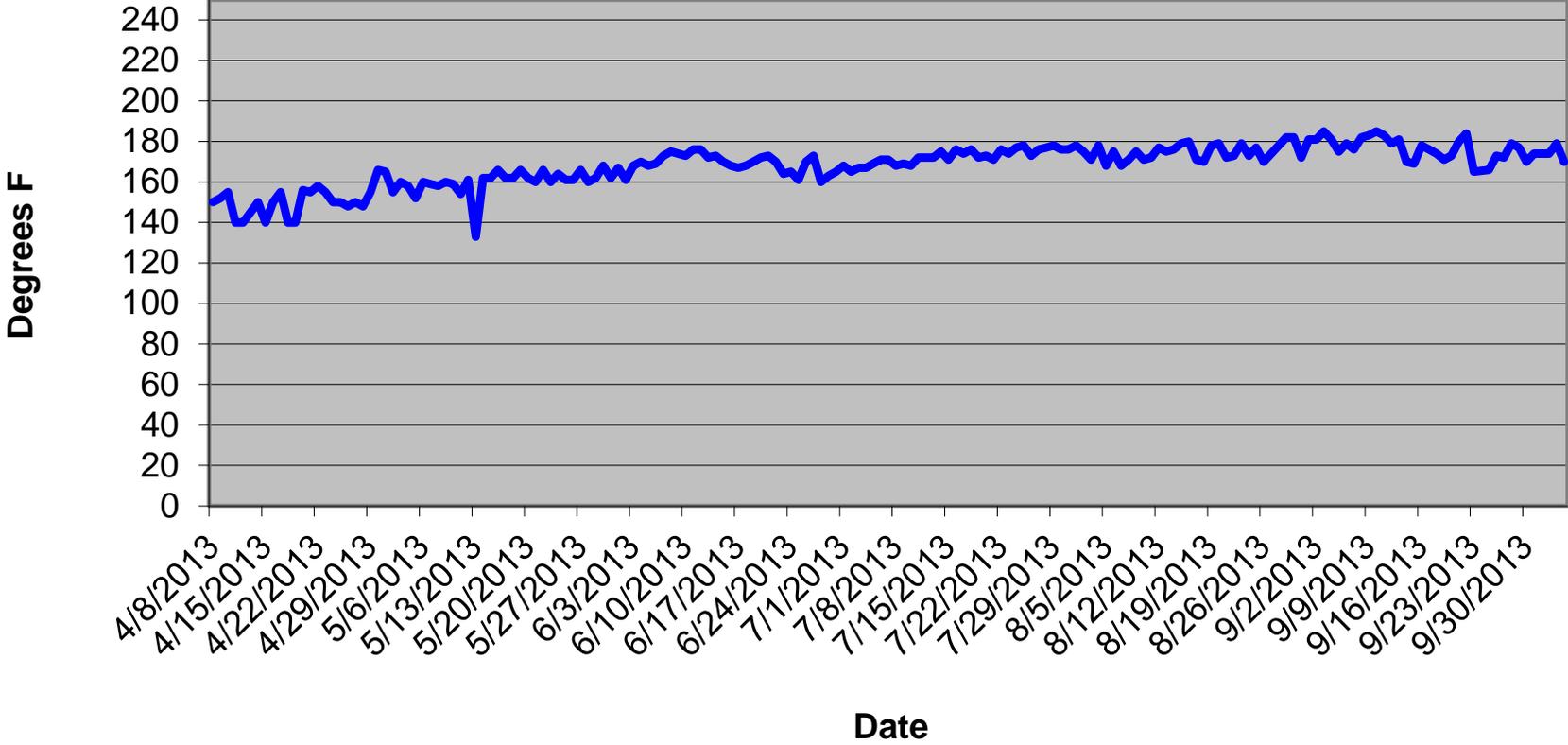
Wellhead Temp. (F)

### GIW-5 Wellhead Temperatures



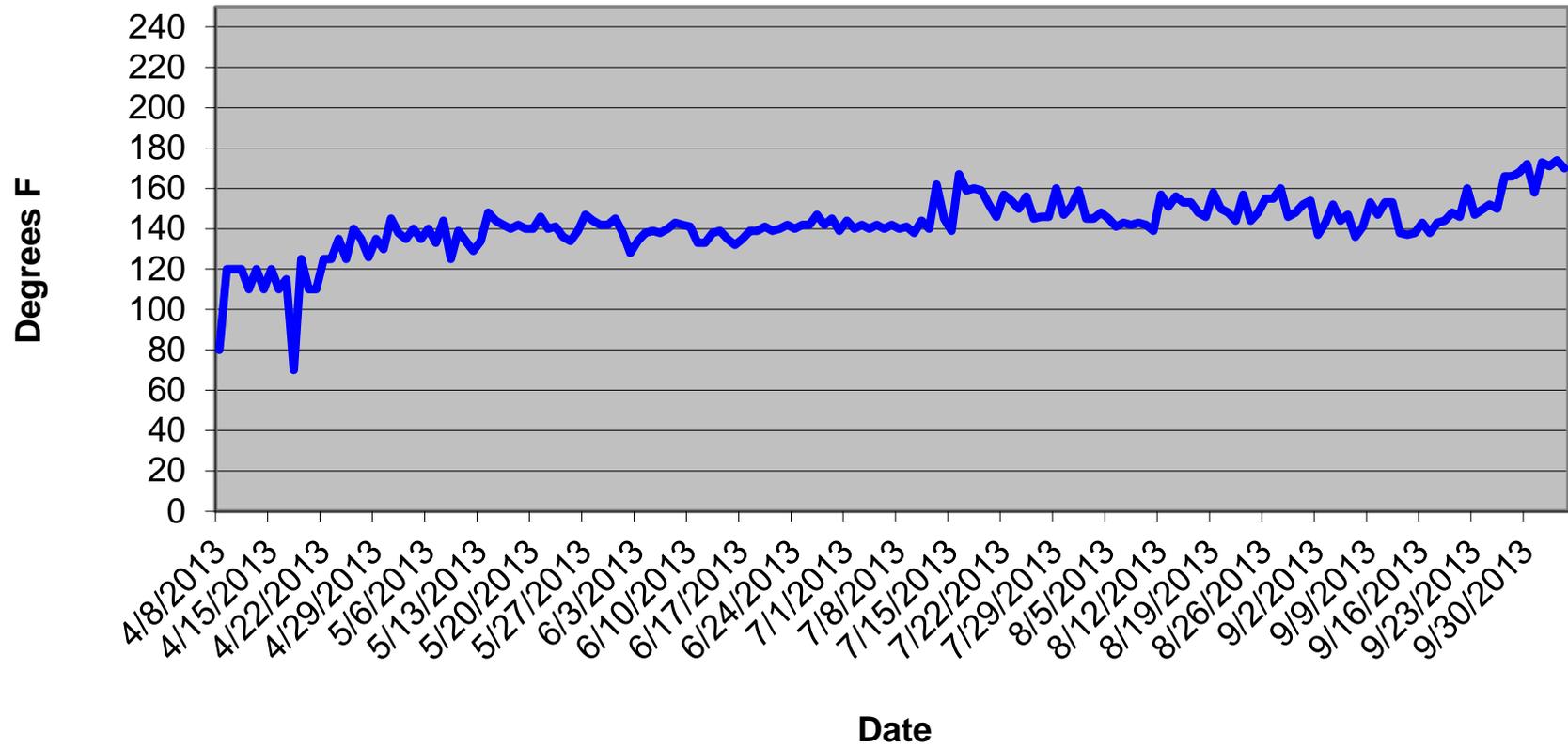
Wellhead Temp. (F)

# GIW-6 Wellhead Temperatures



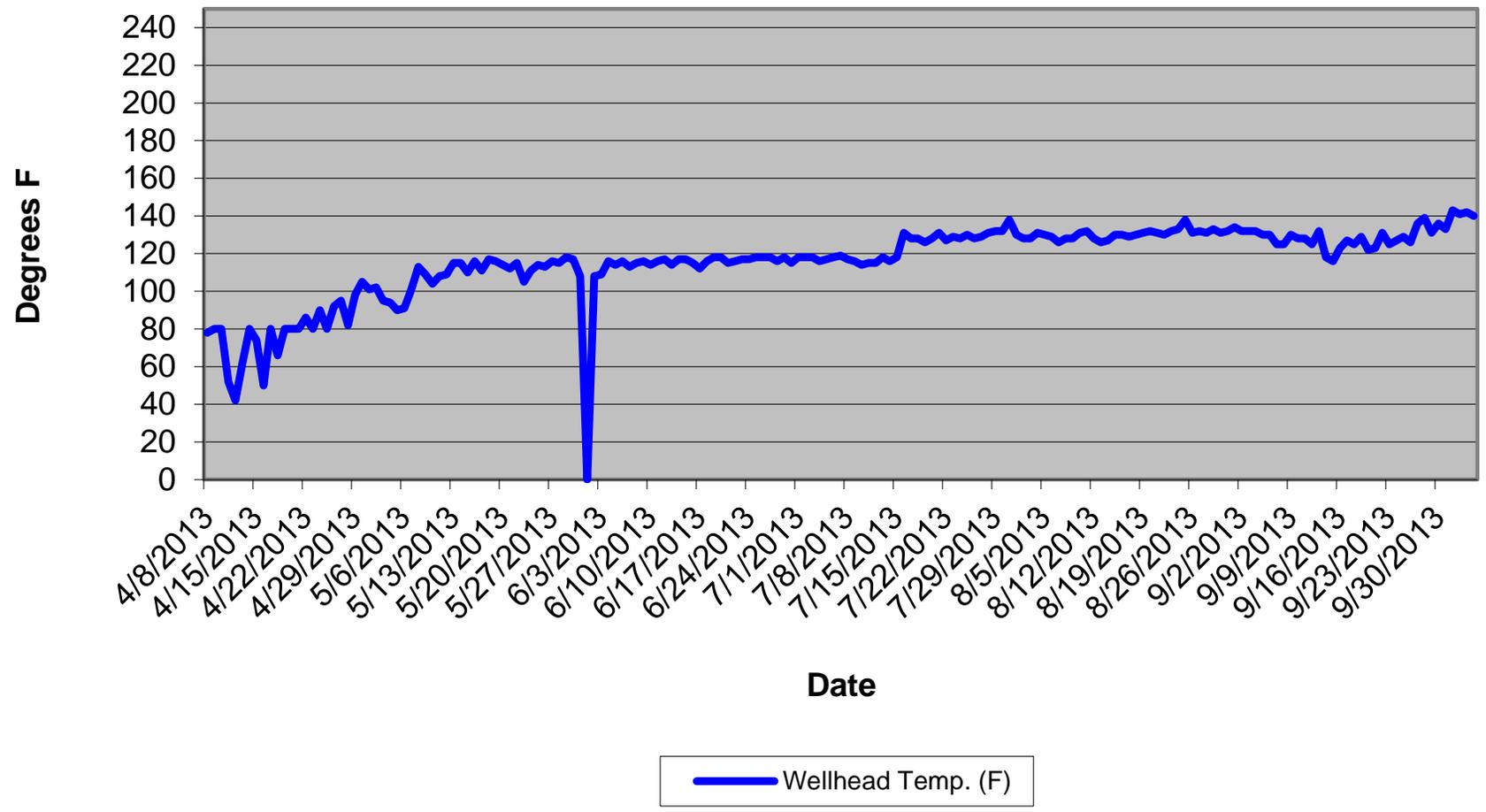
Wellhead Temp. (F)

### GIW-7 Wellhead Temperatures

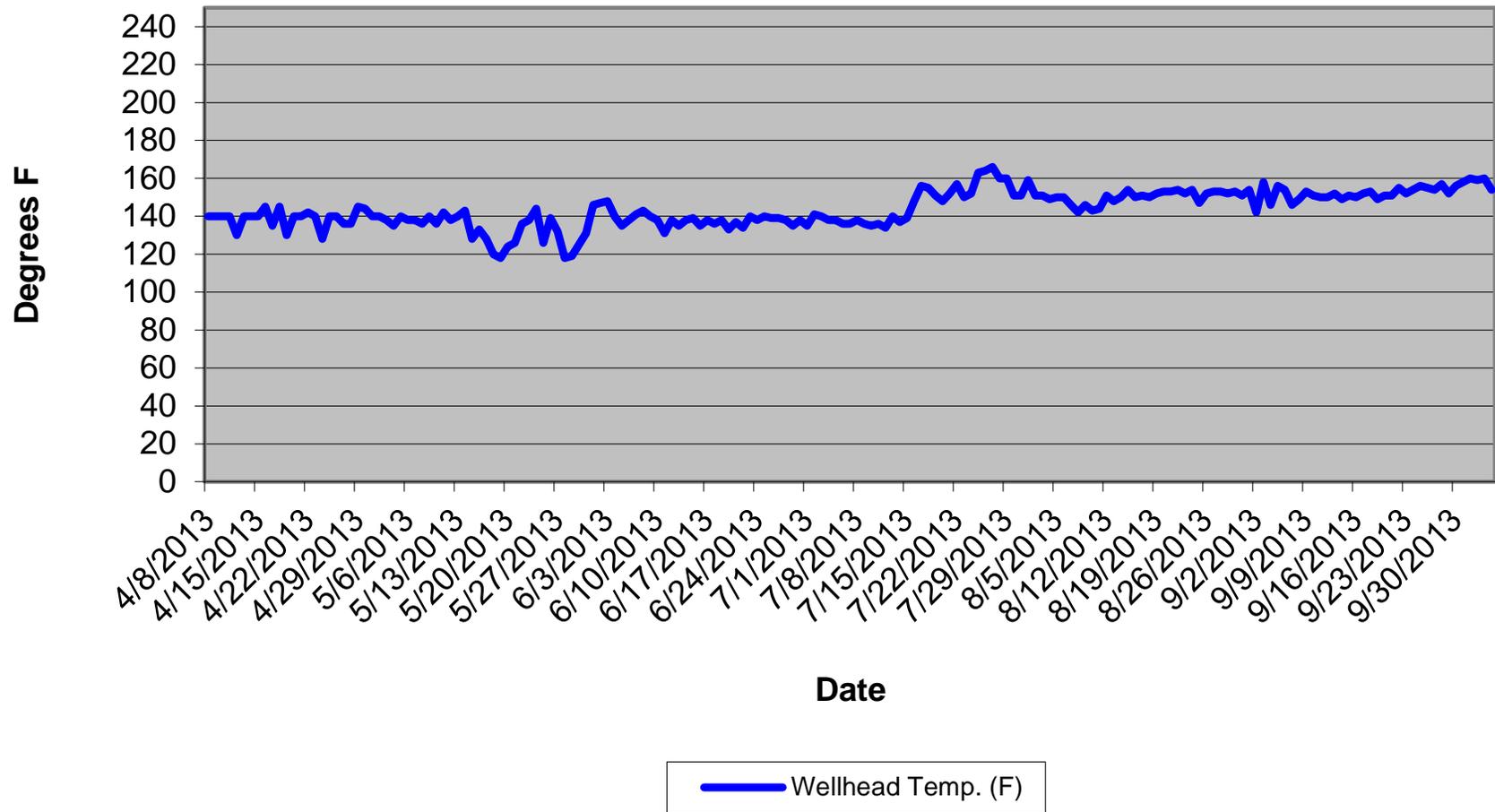


Wellhead Temp. (F)

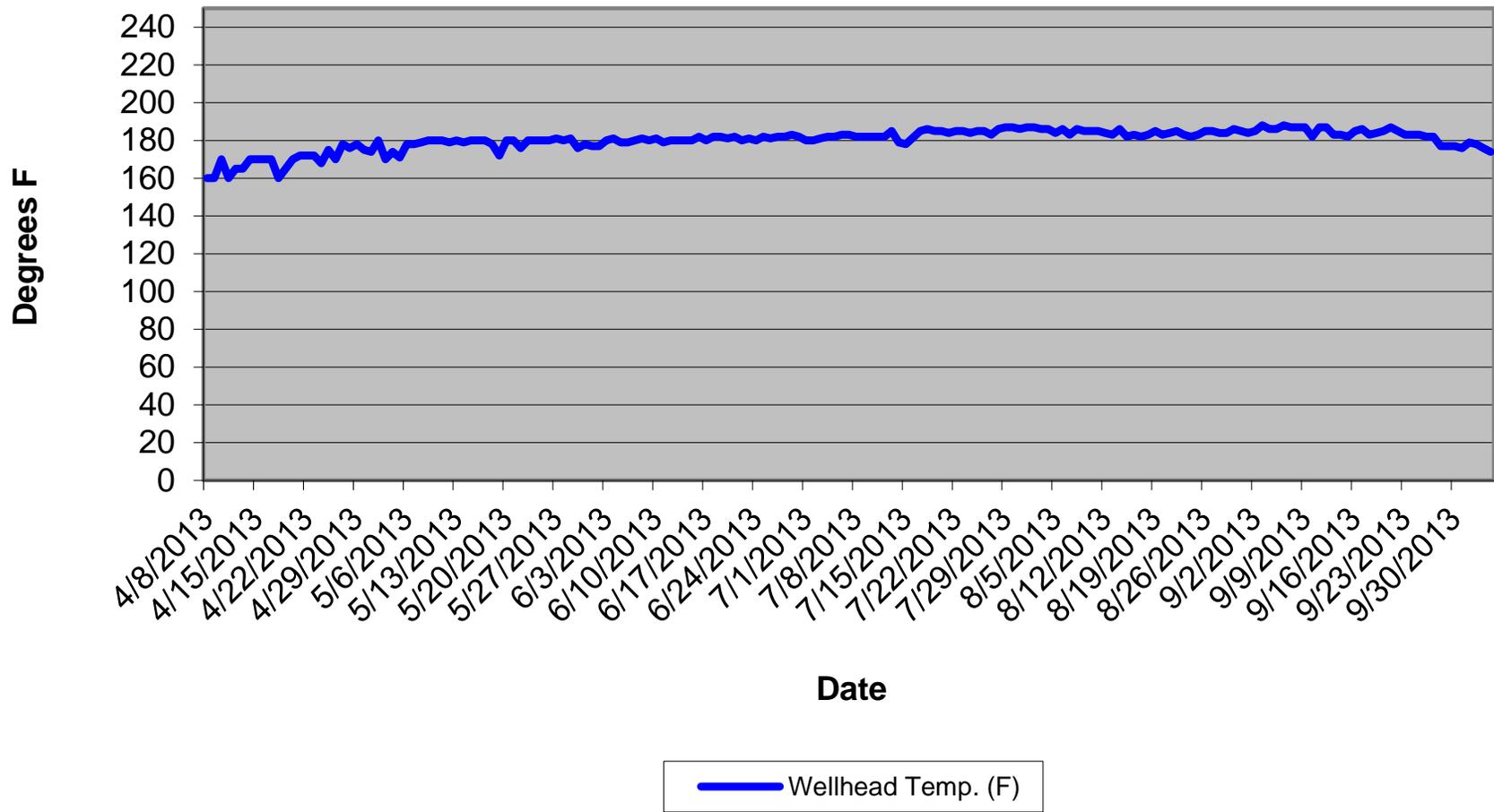
### GIW-8 Wellhead Temperatures



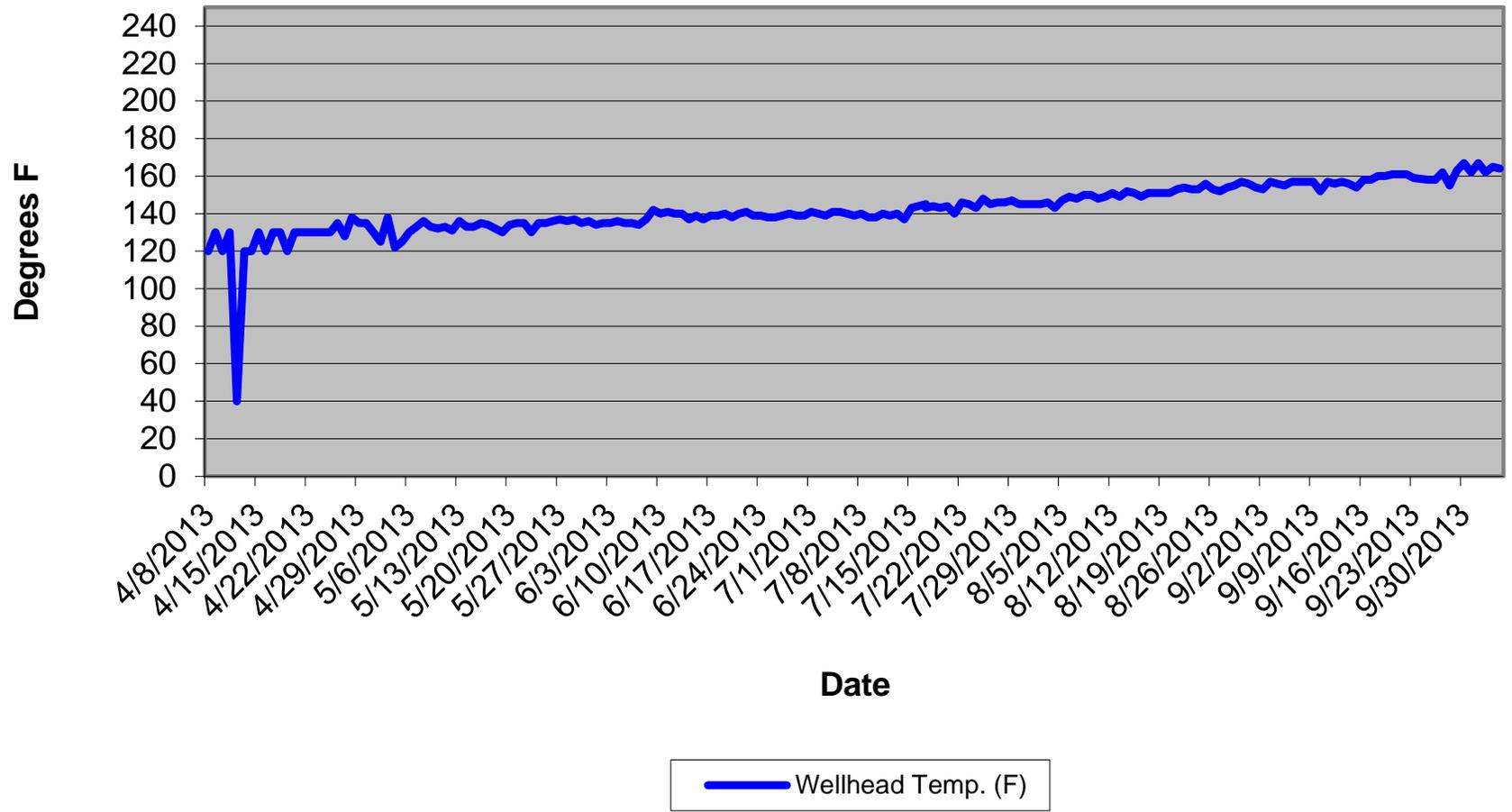
### GIW-9 Wellhead Temperatures



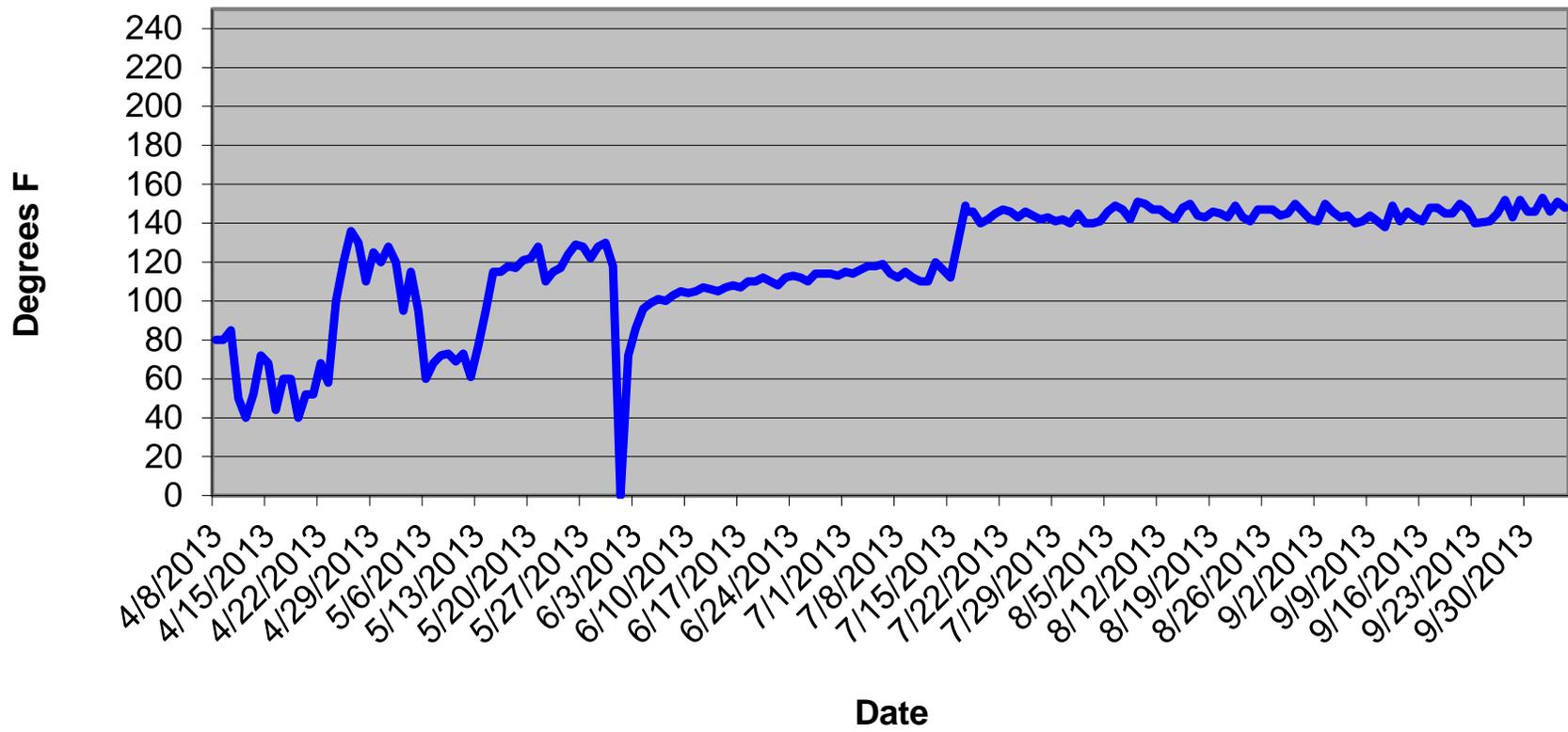
### GIW-10 Wellhead Temperatures



### GIW-11 Wellhead Temperatures

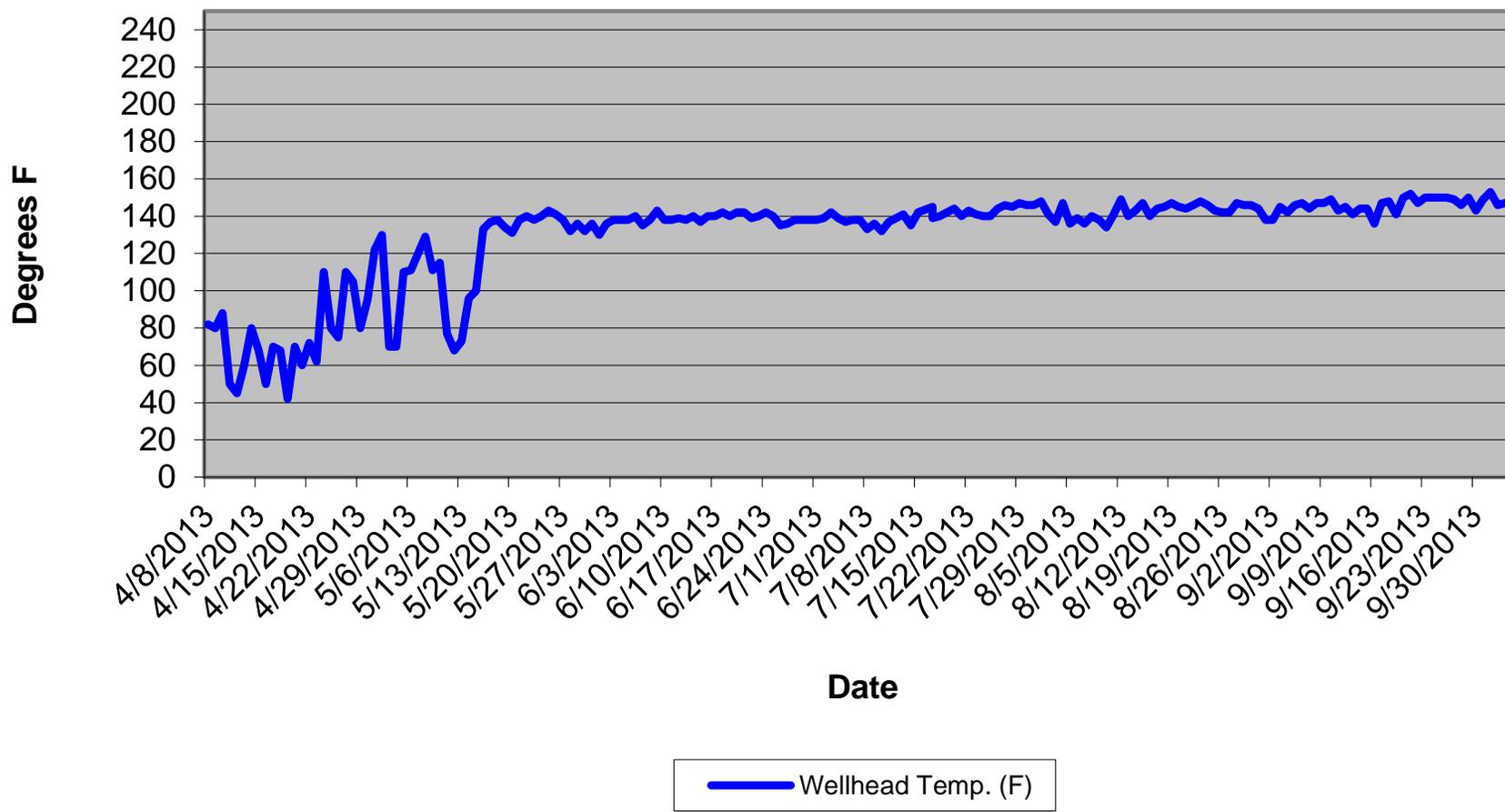


### GIW-12 Wellhead Temperatures



Wellhead Temp. (F)

### GIW-13 Wellhead Temperatures



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**ATTACHMENT D**

**GAS WELL GEW-54 WELLHEAD TEMPERATURE**

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## Weekly Wellhead Temperature Monitoring of GEW-54 (North Quarry)

<u>Date</u>	<u>Time</u>	<u>Temperature Reading</u>
7/22/13	5:11 PM	149° F
7/30/13	9:30 AM	148° F
8/05/13	8:51 PM	152° F
8/12/13	11:57 AM	144° F
8/19/13	7:23 AM	143° F
8/26/13	7:45 AM	143° F
9/02/13	12:30 PM	146° F
9/09/13	11:12 AM	143° F
9/17/13	8:07 AM	151° F
9/23/13	8:10 AM	146° F
9/30/13	7:40 AM	141° F
10/07/13	11:30 AM	144° F