

# **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**

### **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**

**April 15, 2014**

## **Commentary on Data**

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

LCS -2,-3D -5, -6 were operational during the weekly reporting period.

LCS-4B still exhibits excess pressure and liquid ejection, so it has not been fitted with a pump; however, the conditions are resulting in leachate removal from that location. The option of utilizing a progressive-cavity pump at this location is being evaluated.

The transducer in LCS-3D is currently not working. Measurement devices are currently being evaluated for use in LCS-3D and -1.

Repairs for LCS-1 are scheduled to be completed in April.

### **Temperature Monitoring Probe Analytical Charts**

The following TMPs indicated consistent or lower temperature profiles than previous week(s): TMP-1,-2,-3,-4,-6,-7R,-8, -9, -10,-11 and -12.

TMP -14 has shown slightly higher temperatures recently at shallow depths from the surface. The higher temperatures at these locations are scheduled for evaluation. The evaluation will include conductivity measurements of suspect points with adjacent thermocouple wires and direct measurements of respective thermocouple wires. These readings appear to be irregular compared with readings at lower elevations in the same temperature monitoring probe and with historic temperature profiles at the facility. The thermocouple at 35 ft. of TMP-12 will be included in this evaluation. The results of the aforementioned evaluation is scheduled to be completed this week.

Irregular resistivity readings appear to be attributed to the irregular resistivity in the thermocouples. This is prevalent at multiple depths within TMP-5 and -13. Consistent with MDNR's direction, the weekly reports exclude data that is not validated. TMP-5 and -13 have irregular resistivity at multiple depths recently, therefore these charts have not been included. Recently a few data connections at TMP-5 have shown more reasonable resistivity than previously measured. These ports are scheduled for direct evaluation. Once the evaluation has been completed, a determination of the validity of the data will be completed. Pursuant to the evaluation, previous weekly data deemed to be reasonable will be presented.

### **Gas Interceptor Wellhead Temperature Graphs**

The fluctuation in wellhead gas temperatures can be attributed to variation in available vacuum, gas flow and ambient temperatures at the respective well.

All gas interceptor wells remained relatively consistent or lower with regards to gas wellhead temperature measured at each location excluding GIW-9. GIW-9 showed a slight increase in wellhead temperature as measured in one data point. The oxygen level in GIW-3 and 8 has been reduced with regular maintenance. The previously detected oxygen is believed to be a result of minor cracks or leaks in the above-ground infrastructure.

The water circulation cooling loop is currently installed in GIW-4. The cooling loop was operational for the reporting week.

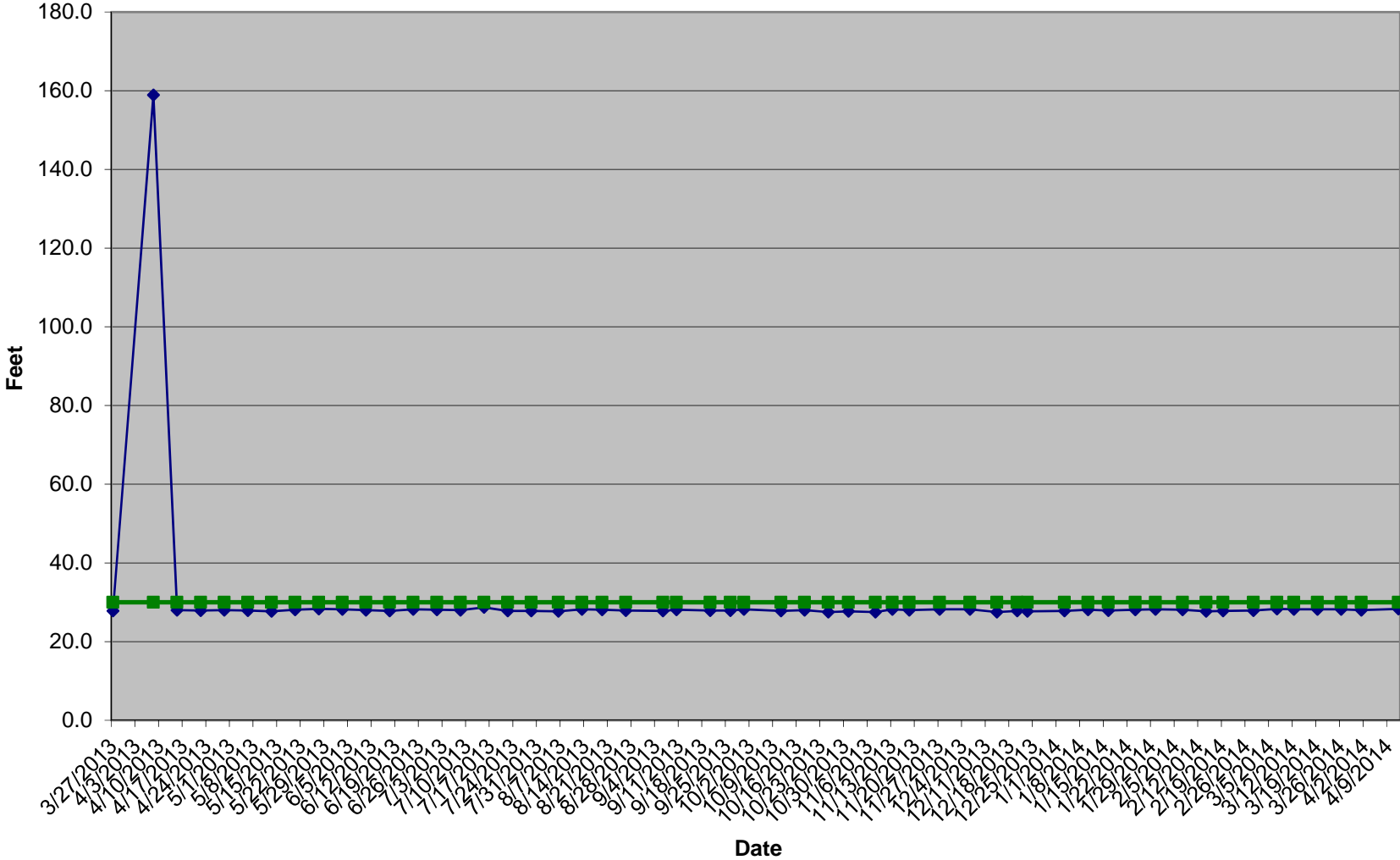
---

**ATTACHMENT A**

**LEACHATE LEVELS IN LEACHATE COLLECTION SUMPS**

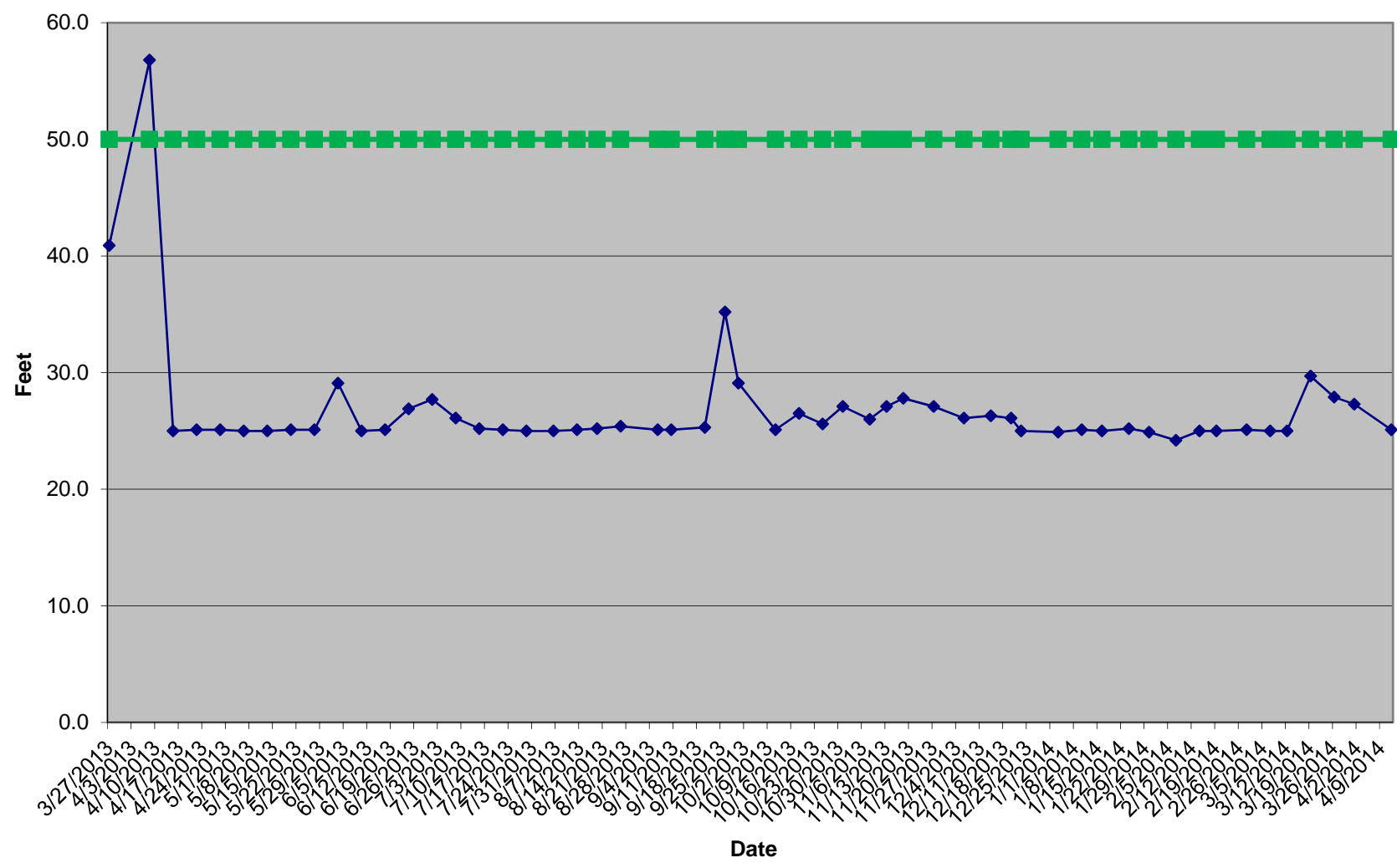
---

# LCS-2D Liquid Level Above Quarry Floor



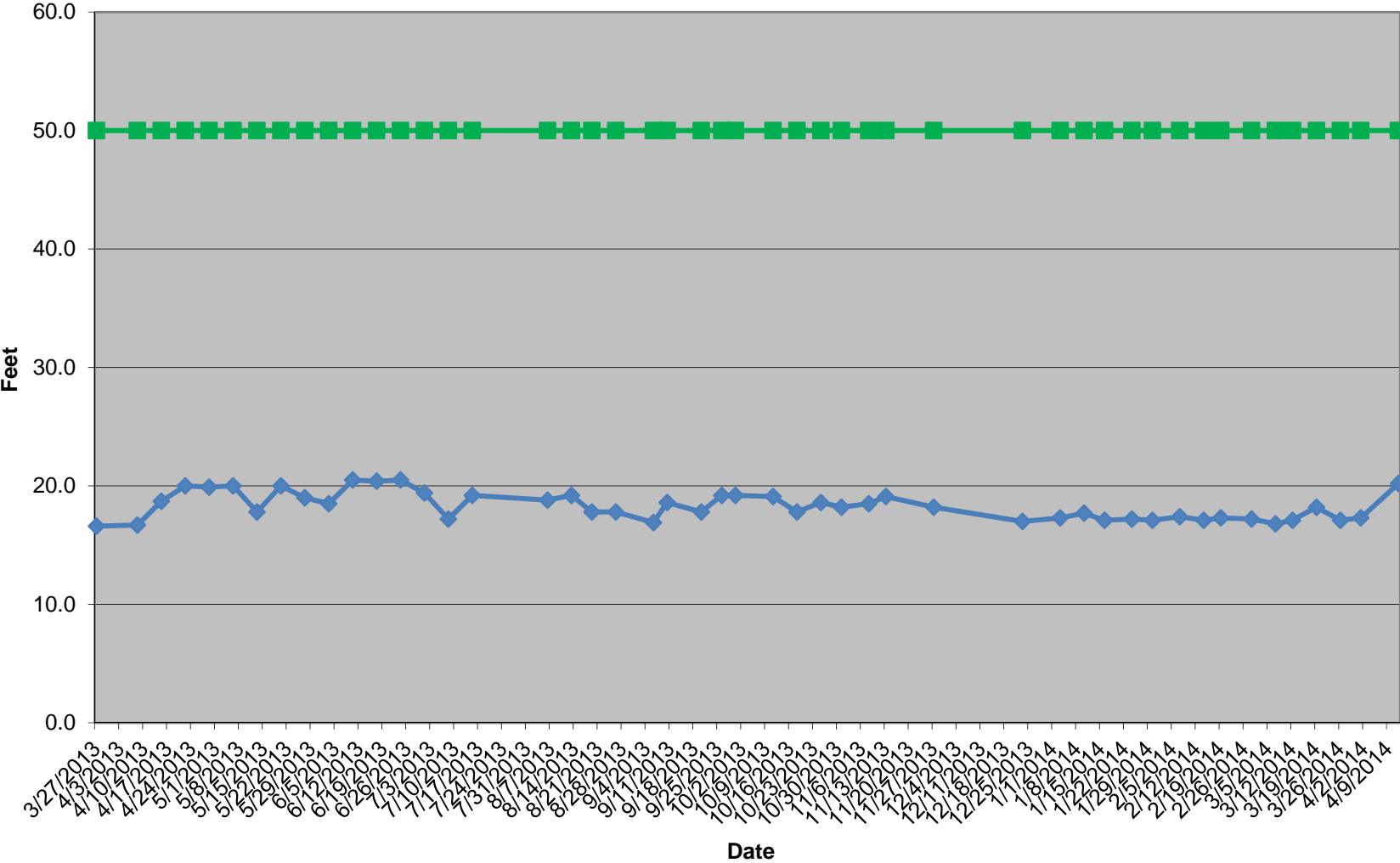
—◆— Height of Liquid (Ft.)      —■— Compliance Level (Ft. Above Quarry Floor)

### 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)

---

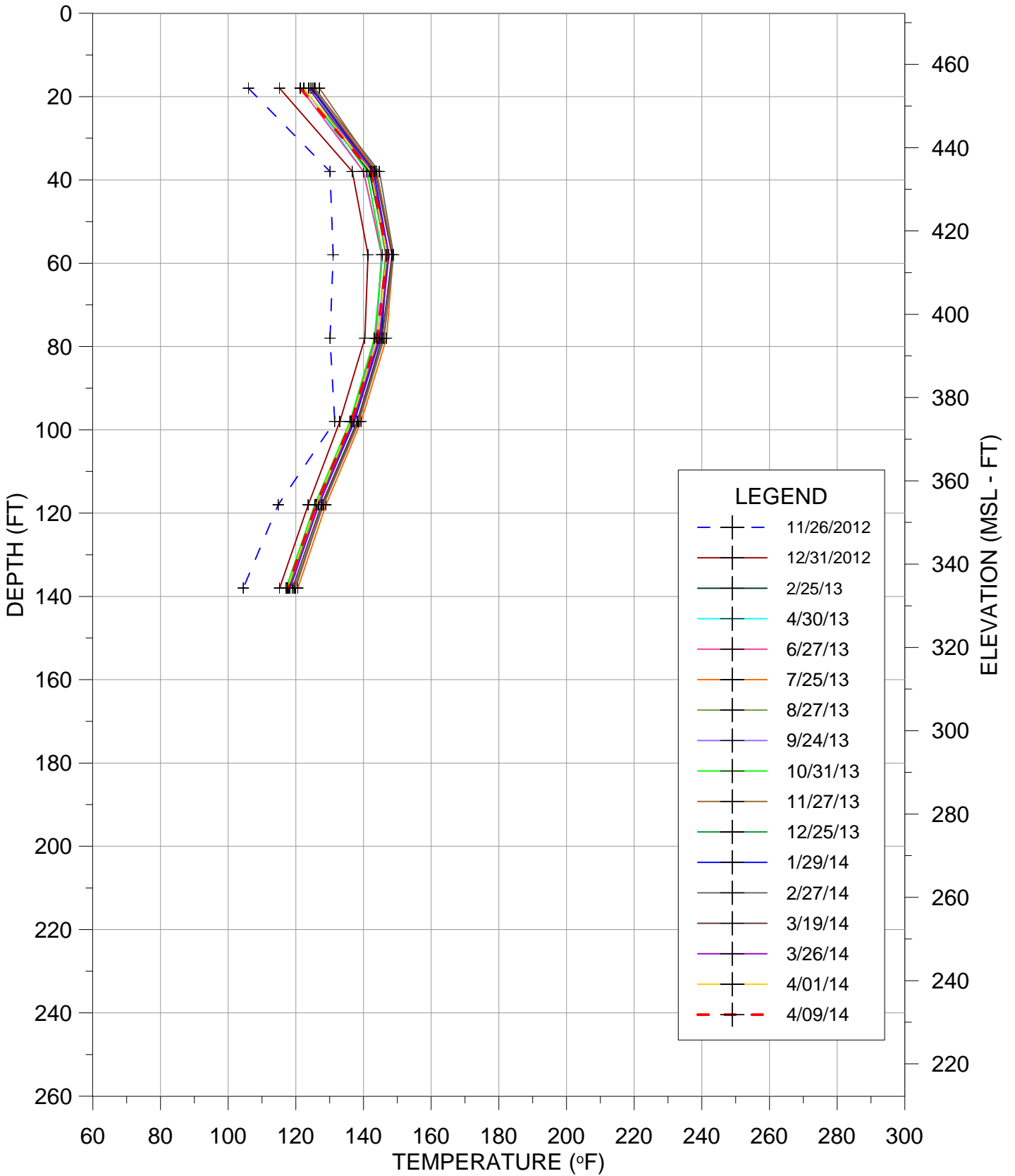
**ATTACHMENT B**

**TEMPERATURE MONITORING PROBE ANALYTICAL CHARTS**

---

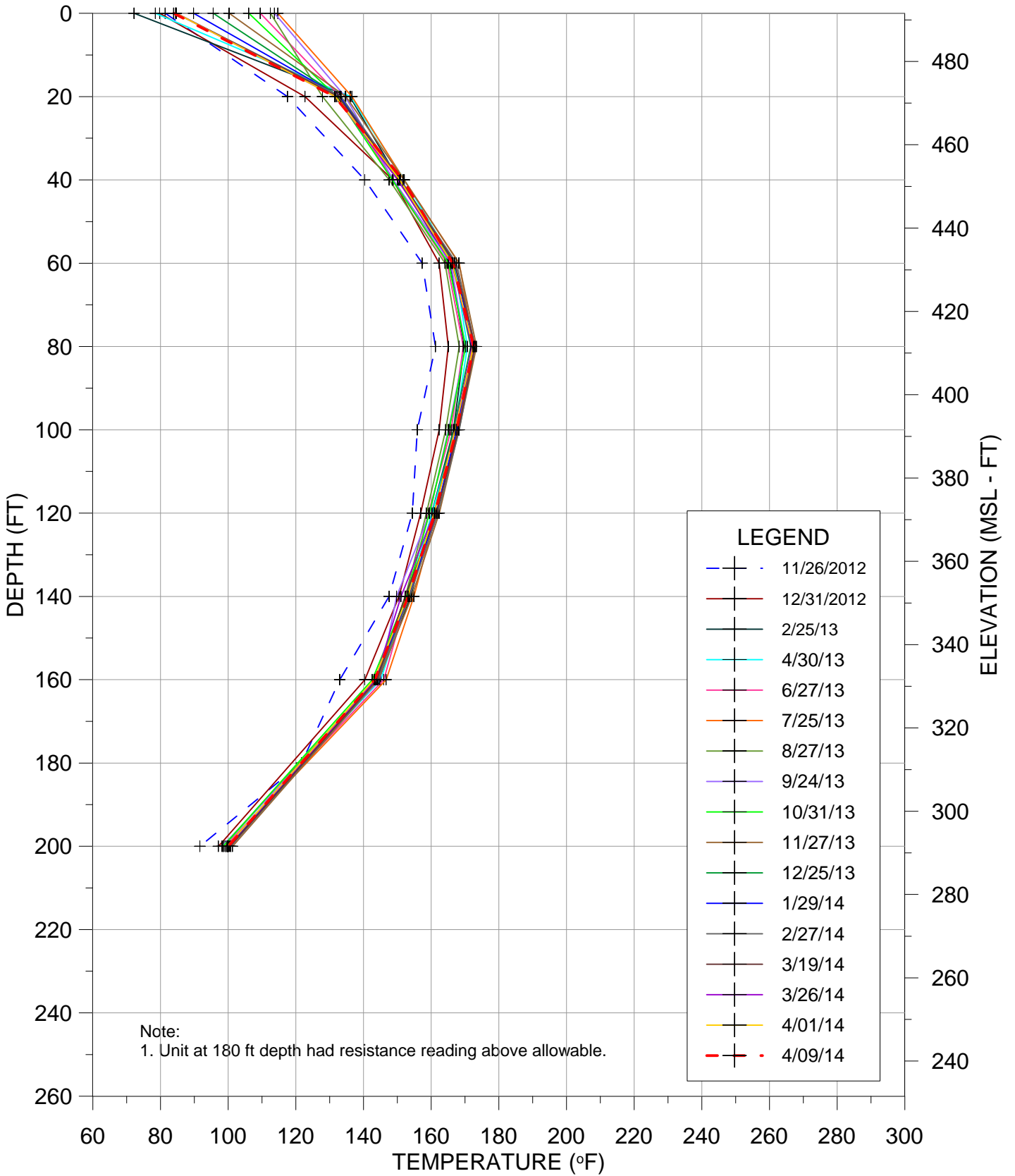


# TMP-1



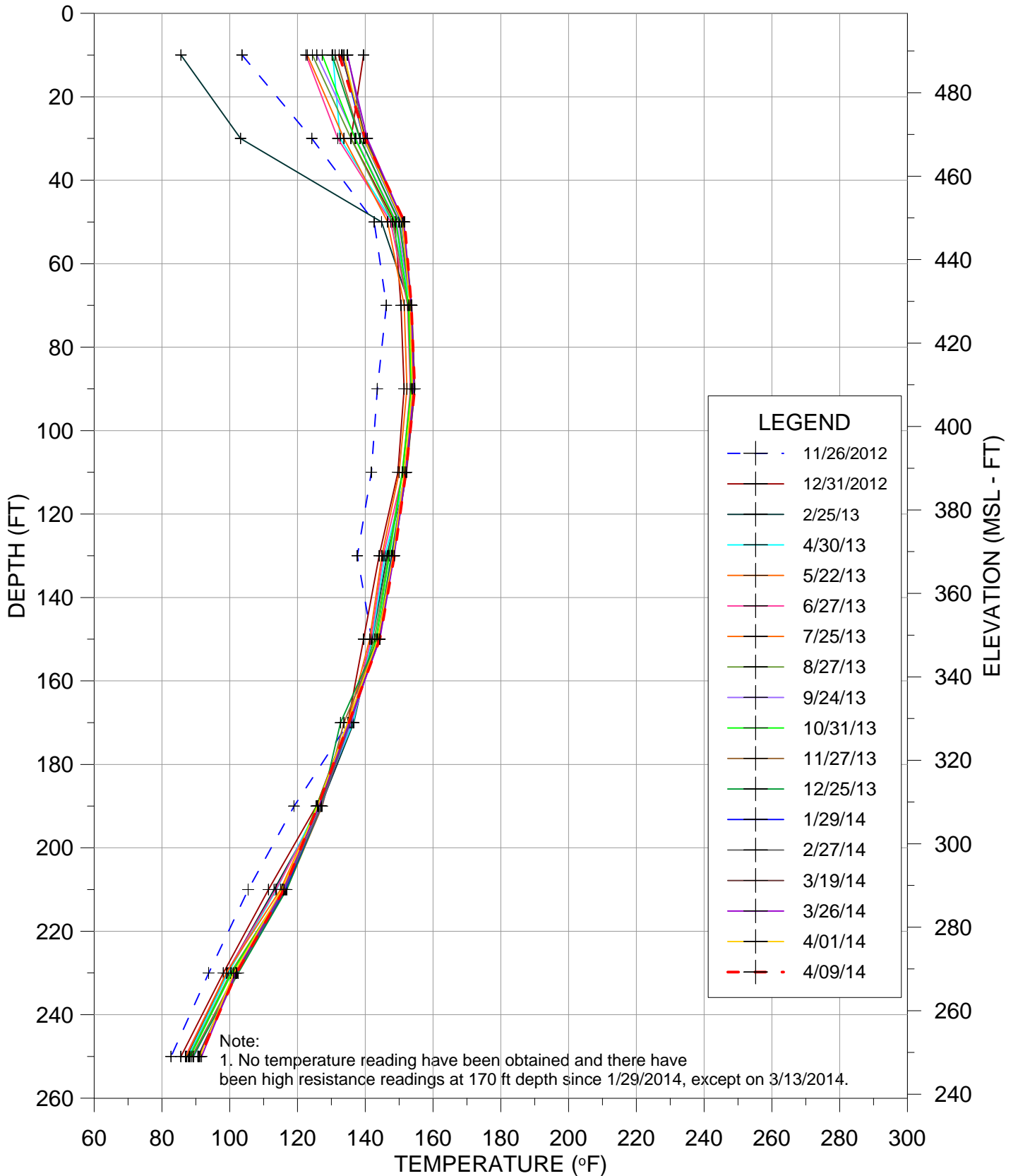
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-2



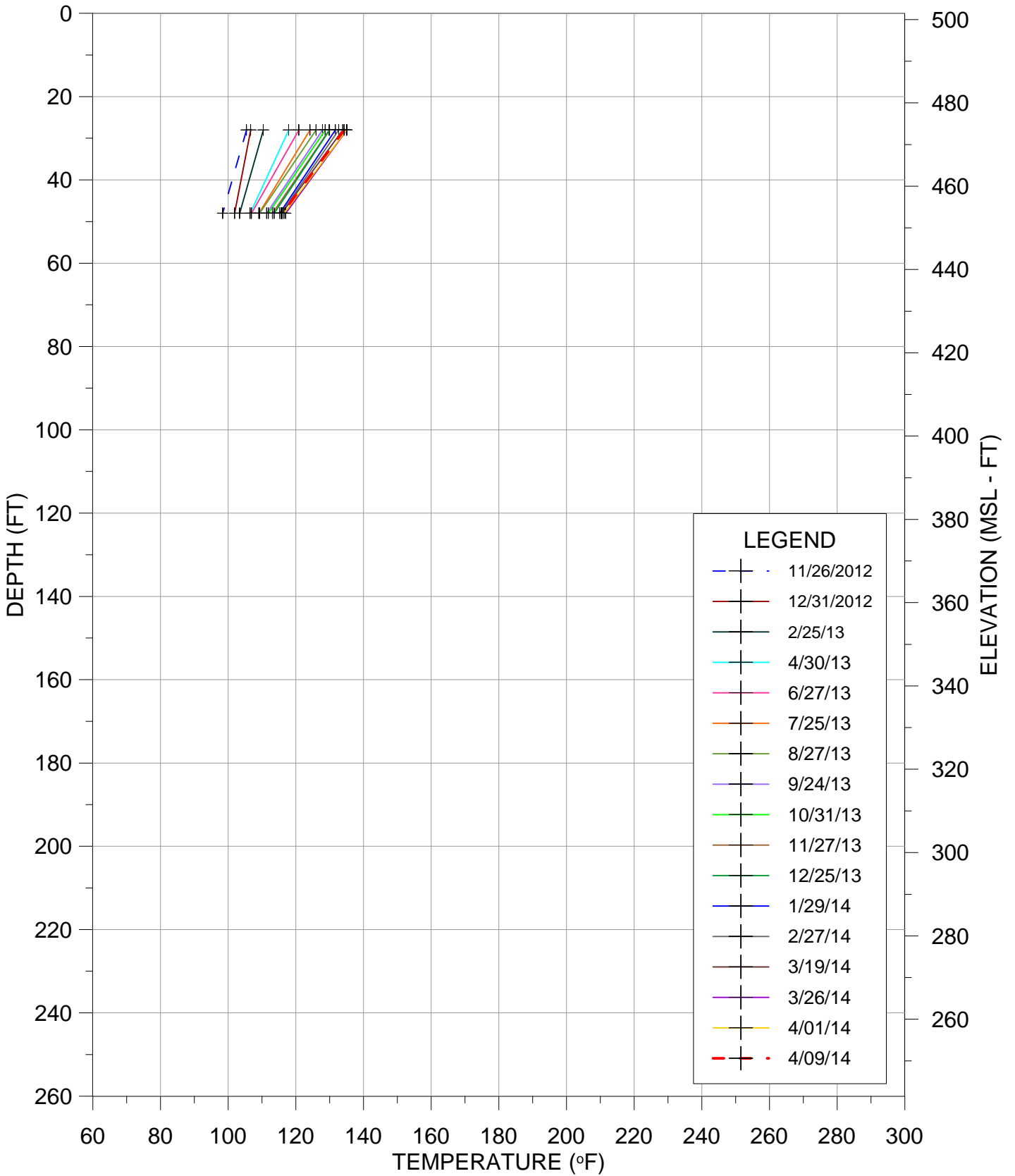
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-3



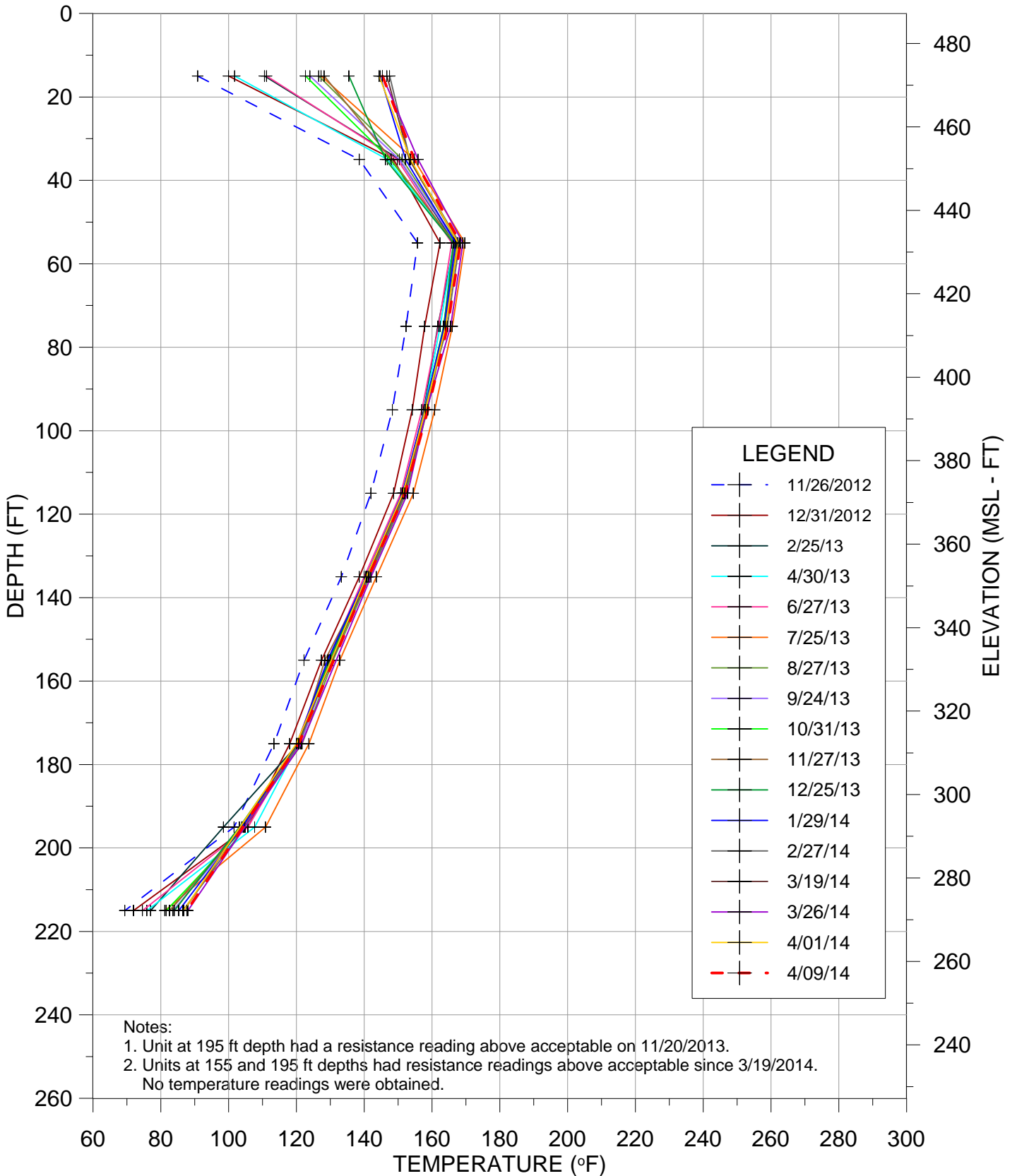
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-4



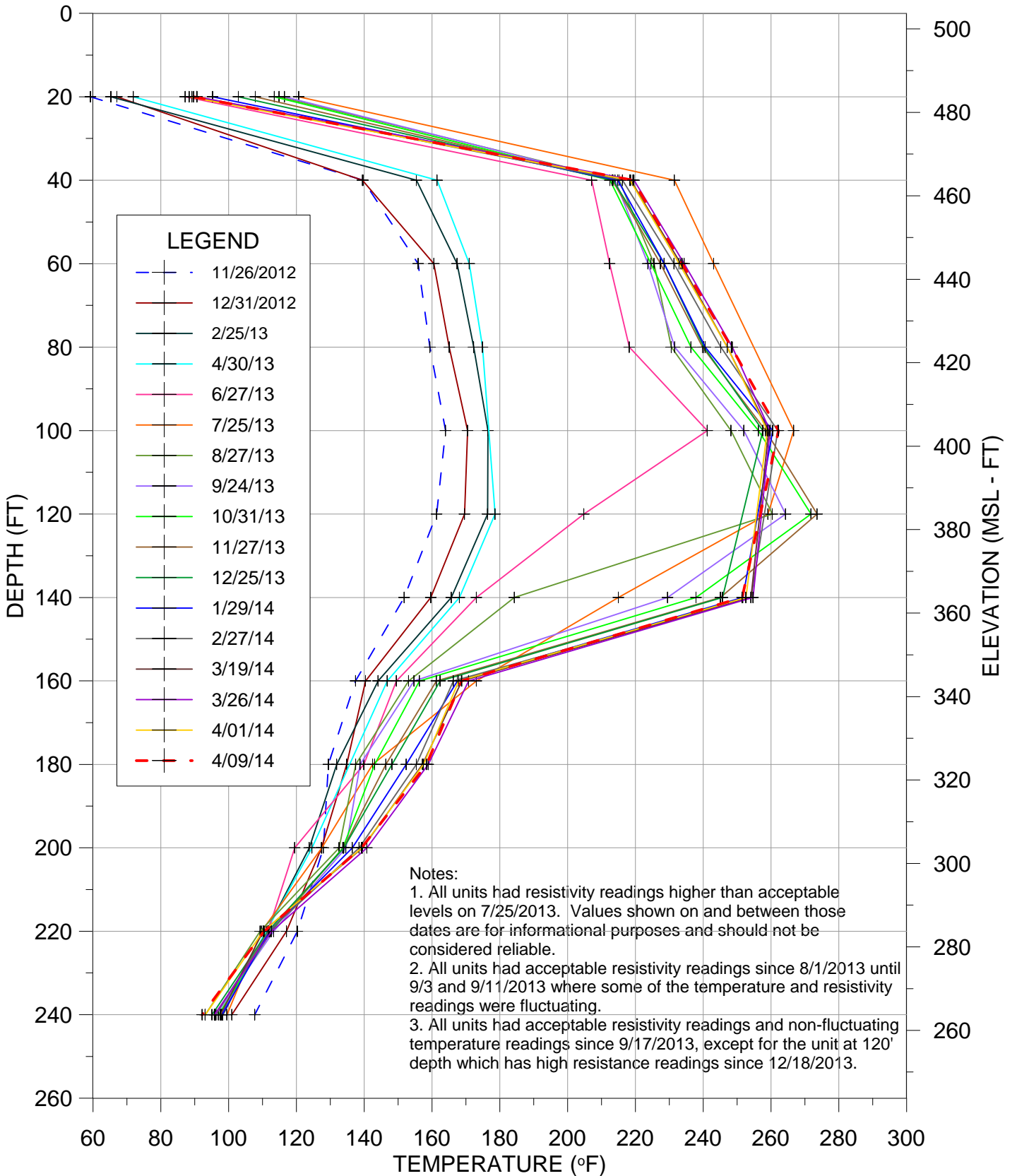
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-6



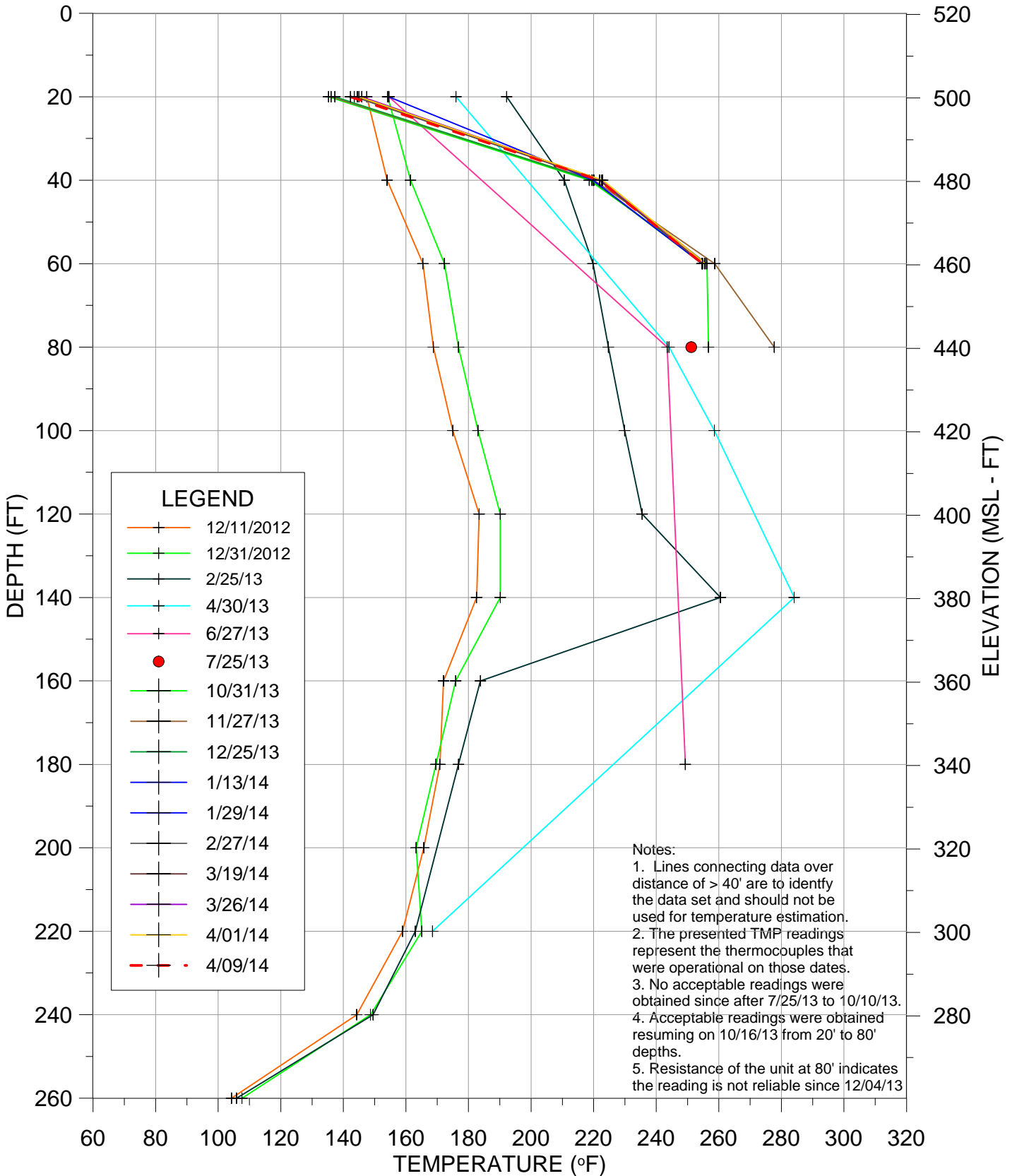
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-7R



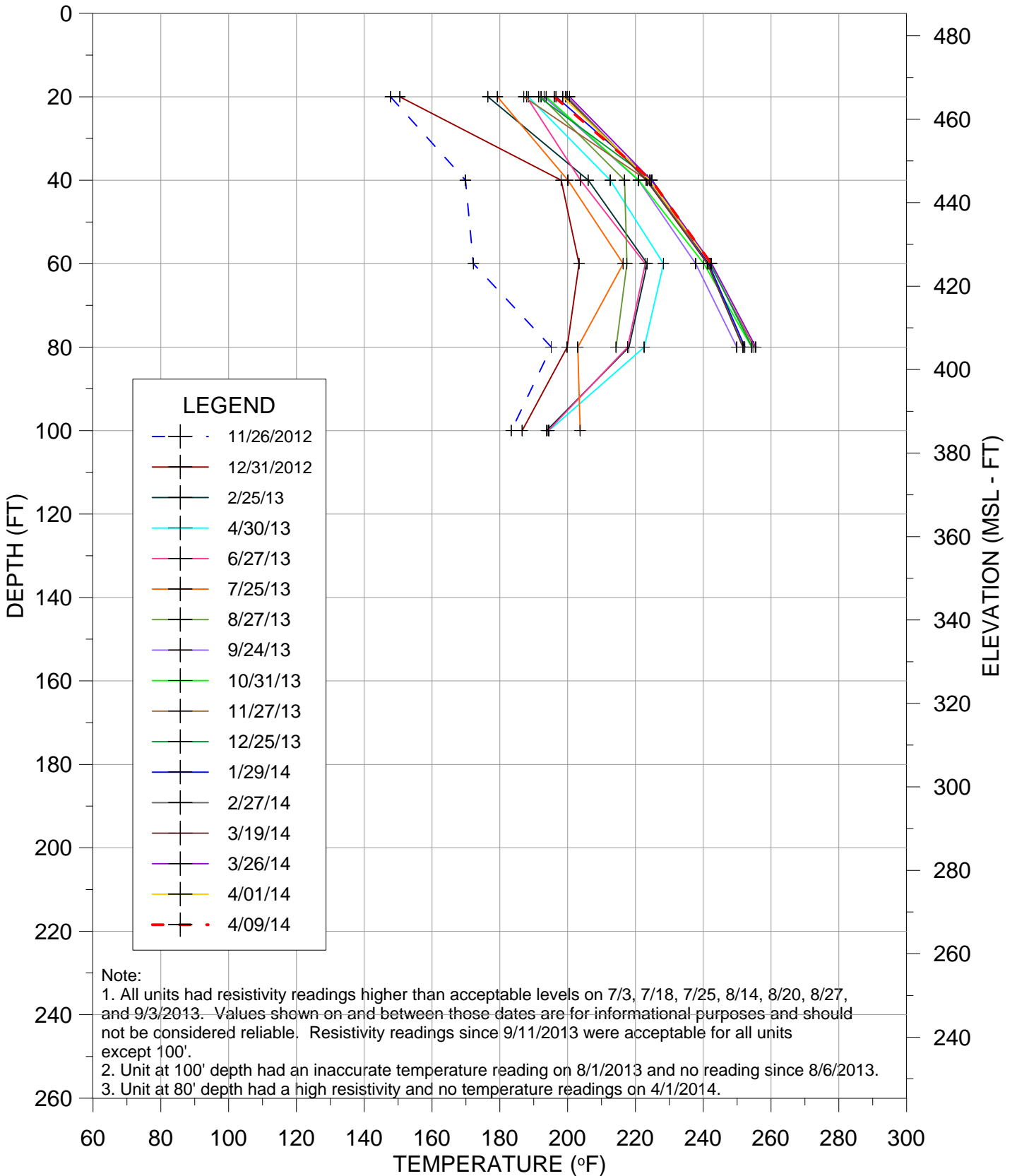
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-8



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

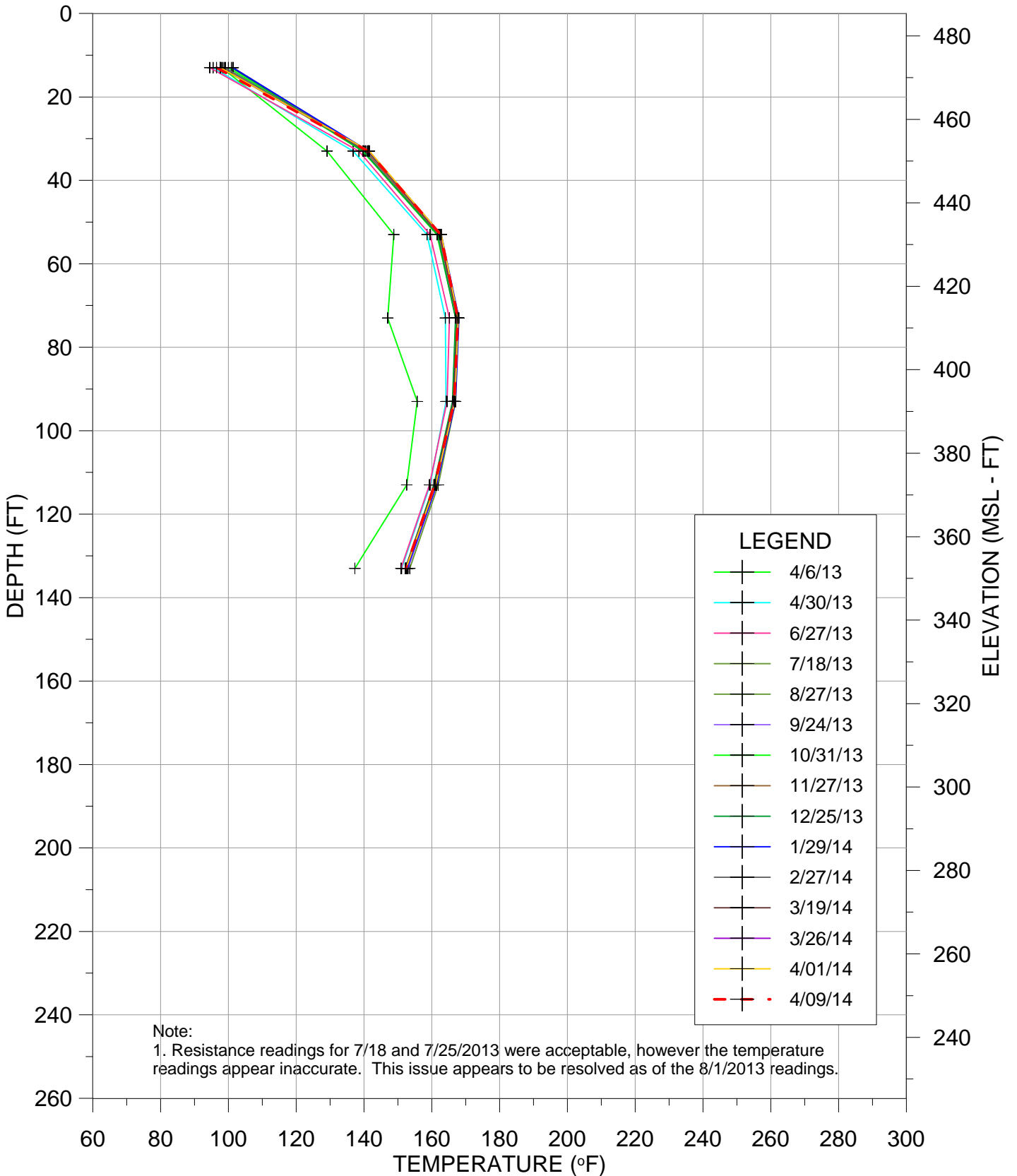
# TMP-9



TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

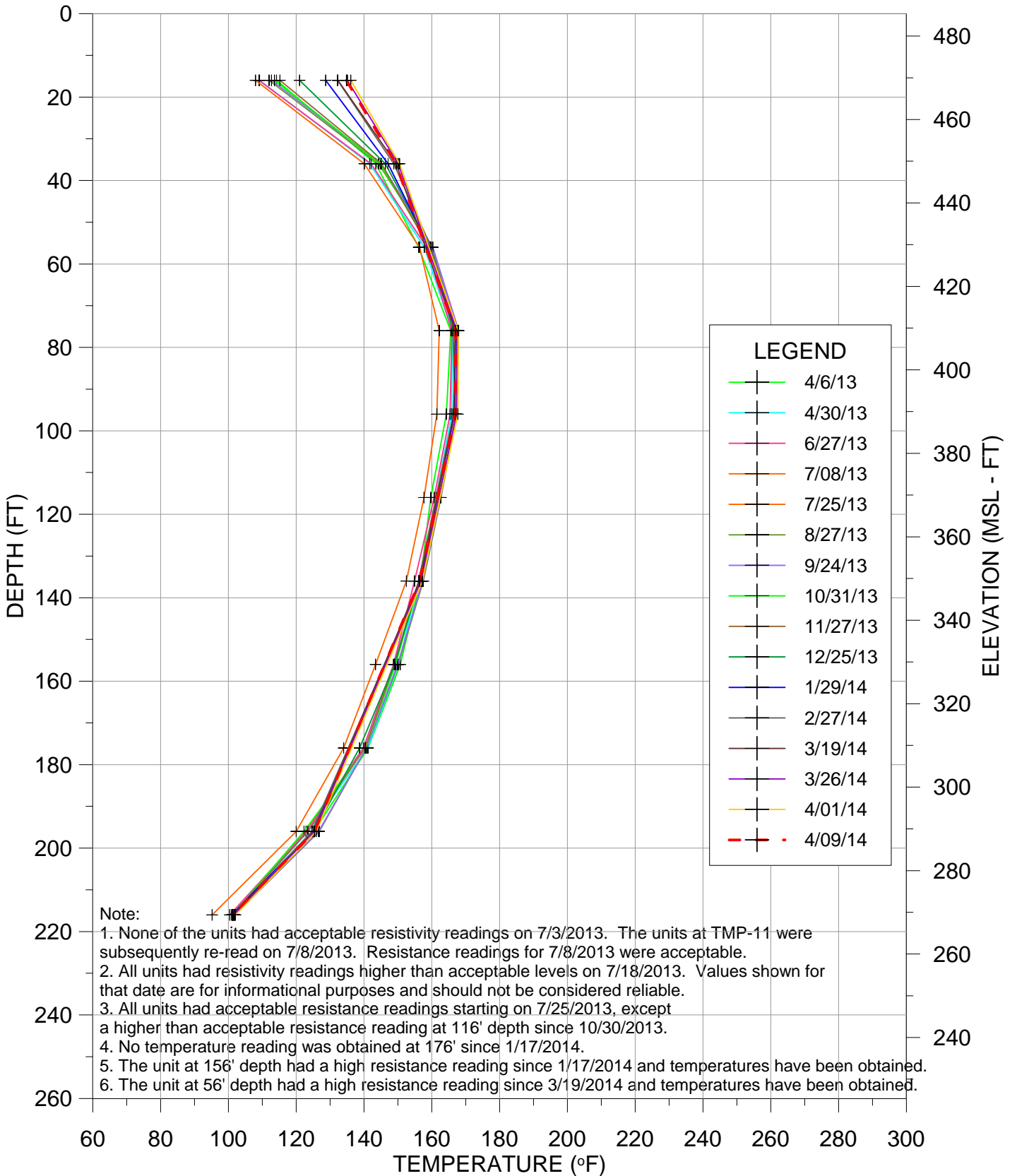


# TMP-10



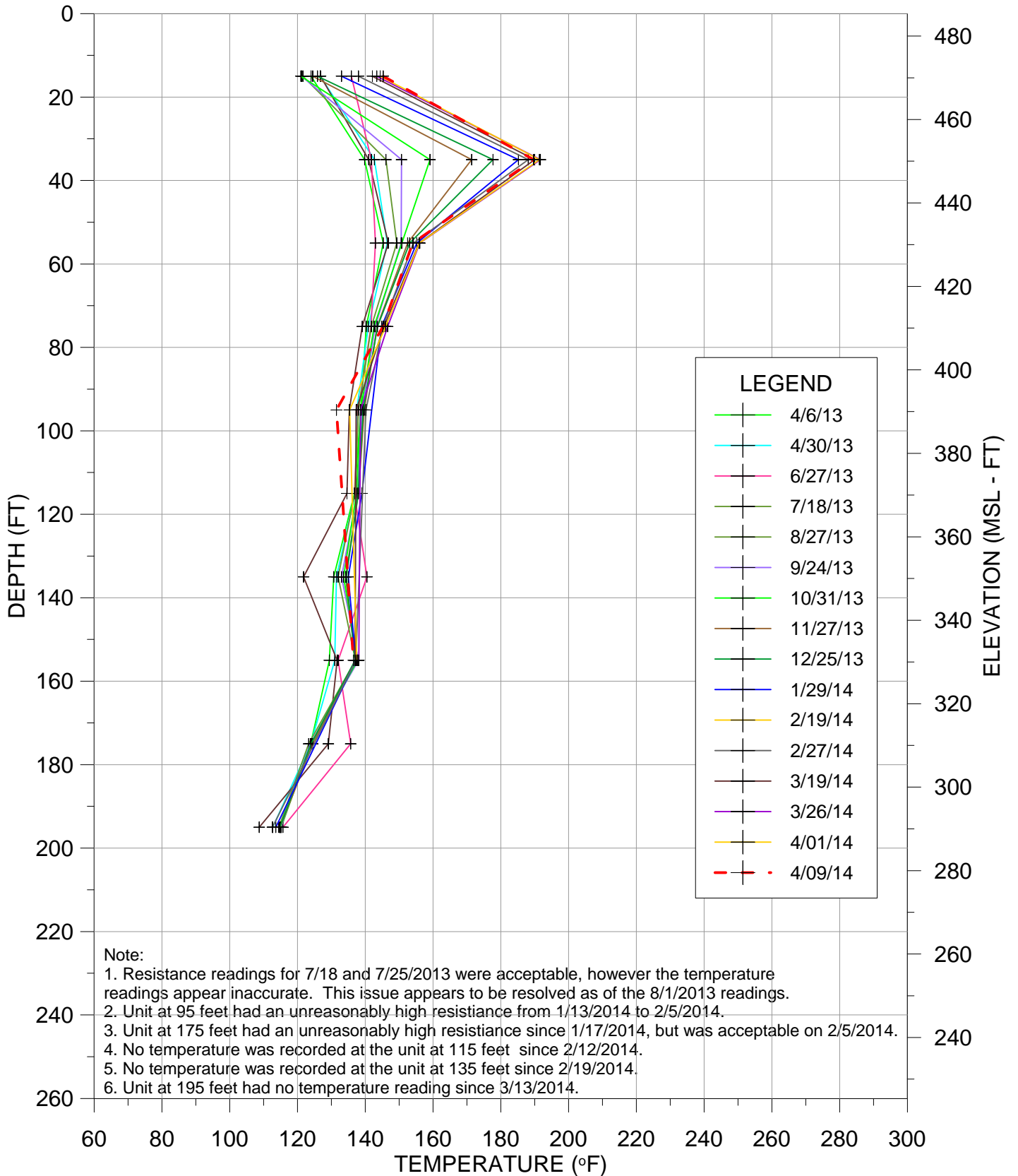
TEMPERATURE VS DEPTH  
 BRIDGETON LANDFILL

# TMP-11



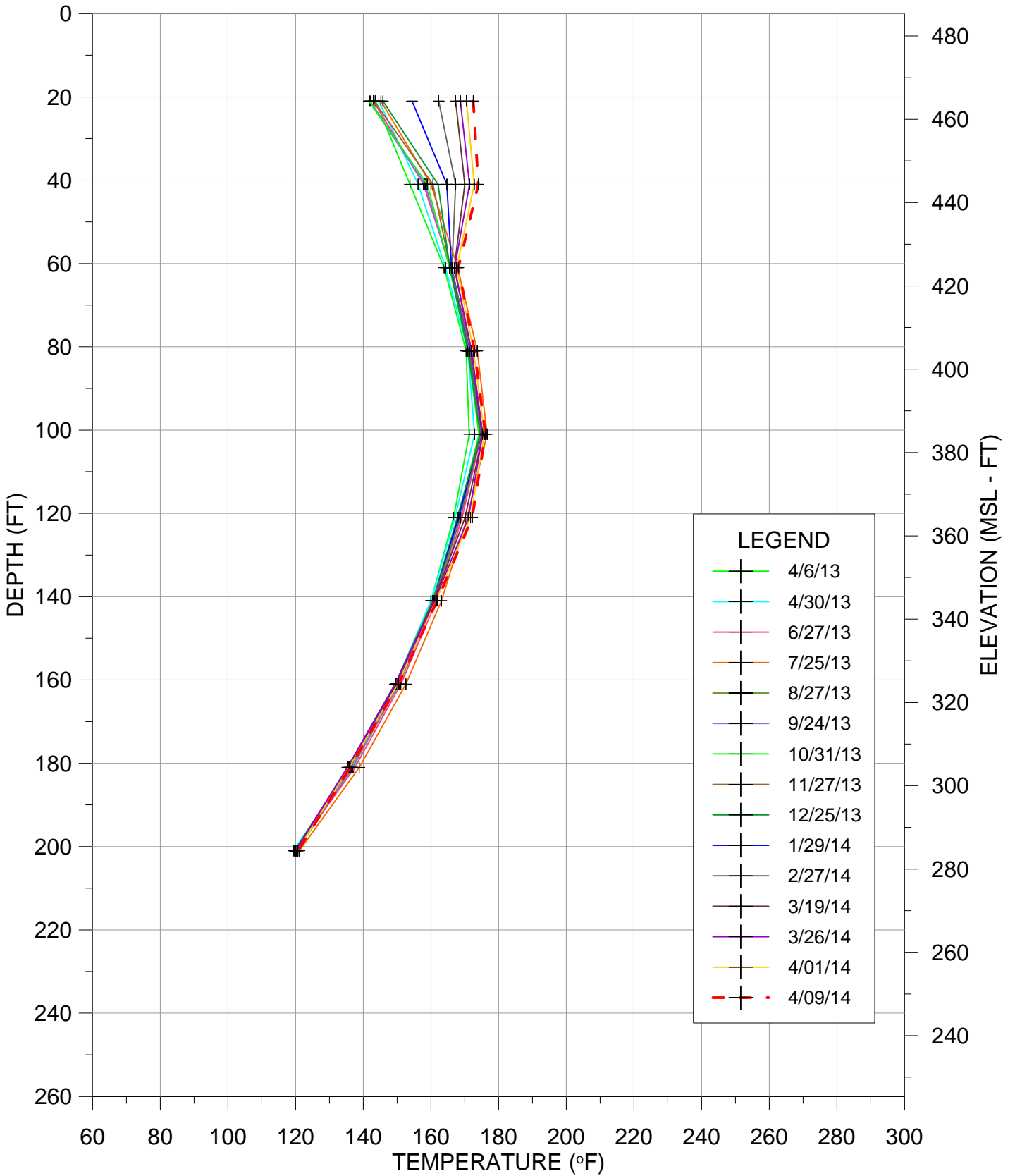
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-12



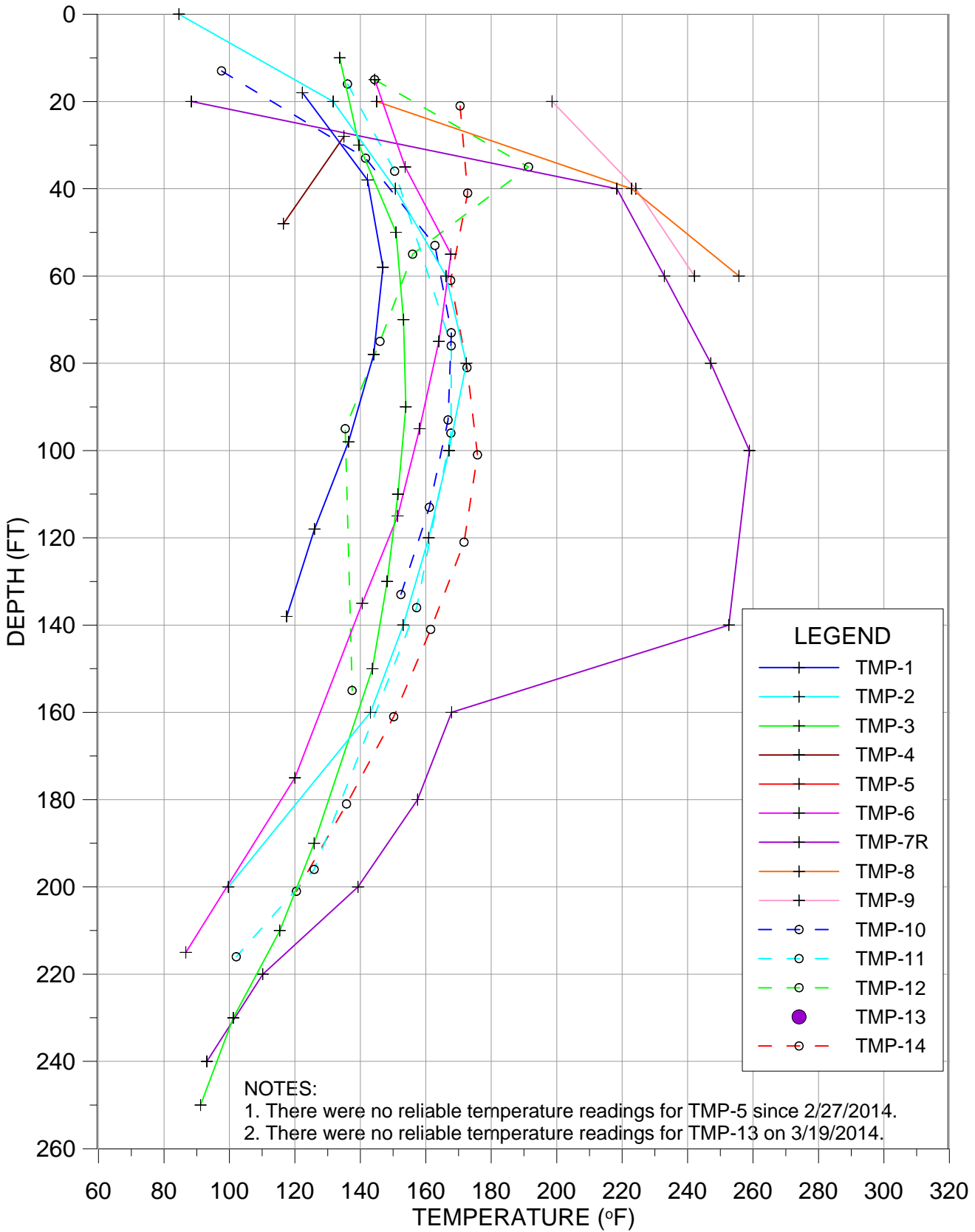
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# TMP-14



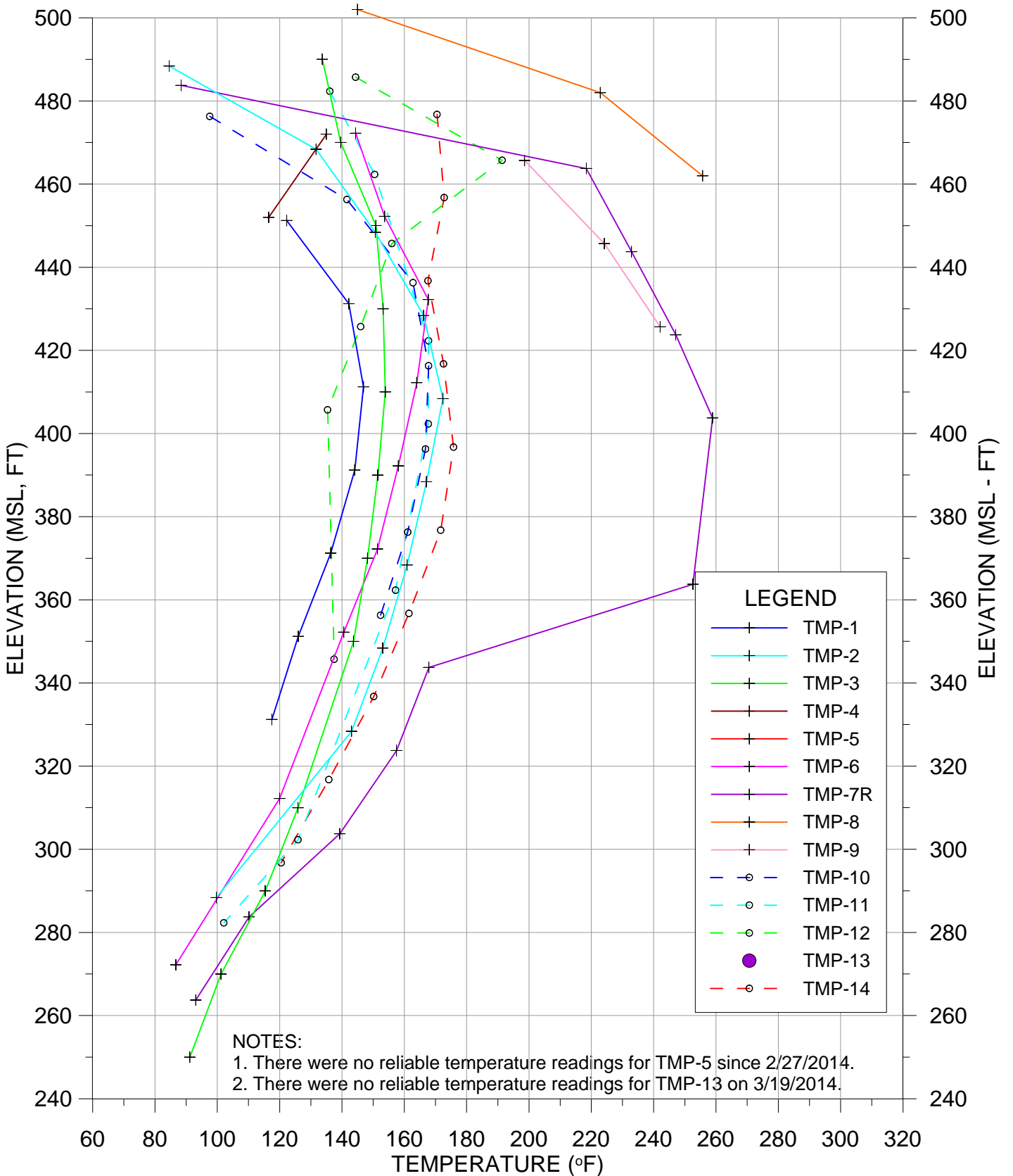
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 04/09/2014 -DEPTH



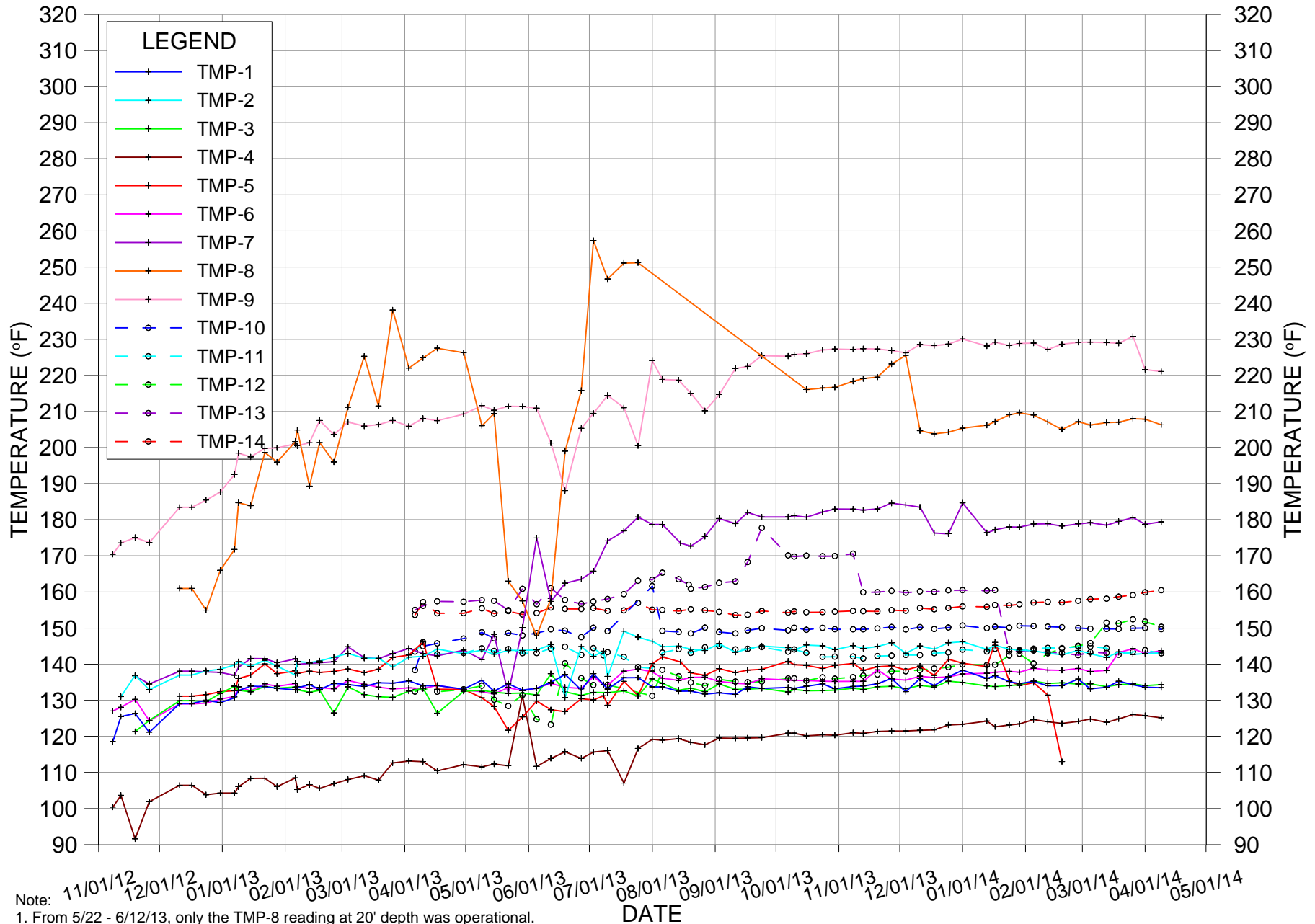
TEMPERATURE VS DEPTH  
BRIDGETON LANDFILL

# 04/09/2014 - ELEVATION



NOTES:  
 1. There were no reliable temperature readings for TMP-5 since 2/27/2014.  
 2. There were no reliable temperature readings for TMP-13 on 3/19/2014.

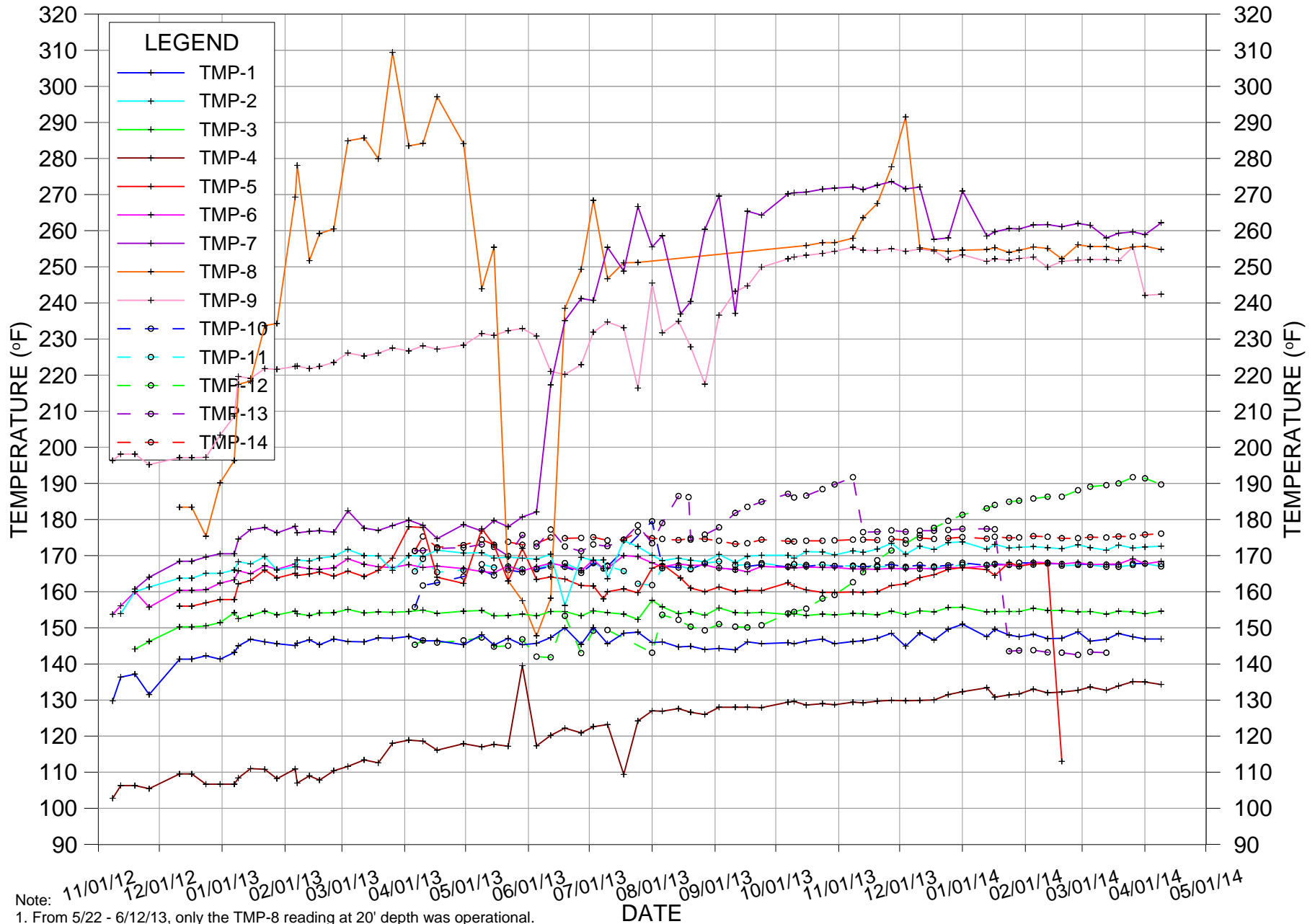
# AVERAGE TEMPERATURES



TEMPERATURE VS TIME  
BRIDGETON LANDFILL

- 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 11/01/13 12/01/13 01/01/14 02/01/14 03/01/14 04/01/14 05/01/14
1. From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational.  
No valid readings were obtained for TMP-8 from 8/1 to 10/10/2013. Valid readings from 20' to 40' resumed on 10/16/2013.
  2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more valid readings.
  3. No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
  4. 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.

# 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 11/01/13 12/01/13 01/01/14 02/01/14 03/01/14 04/01/14 05/01/14

1. From 5/22 - 6/12/13, only the TMP-8 reading at 20' depth was operational. No valid readings were obtained for TMP-8 from 8/1 to 10/10/2013. Valid readings from 20' to 40' resumed on 10/16/2013.
2. A new OMEGA dial was installed at TMP-7R on 6/12/2013 enabling more valid readings.
3. No valid readings were obtained for TMP-10 and TMP-12 on 7/18/2013 or 7/25/2013.
4. 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



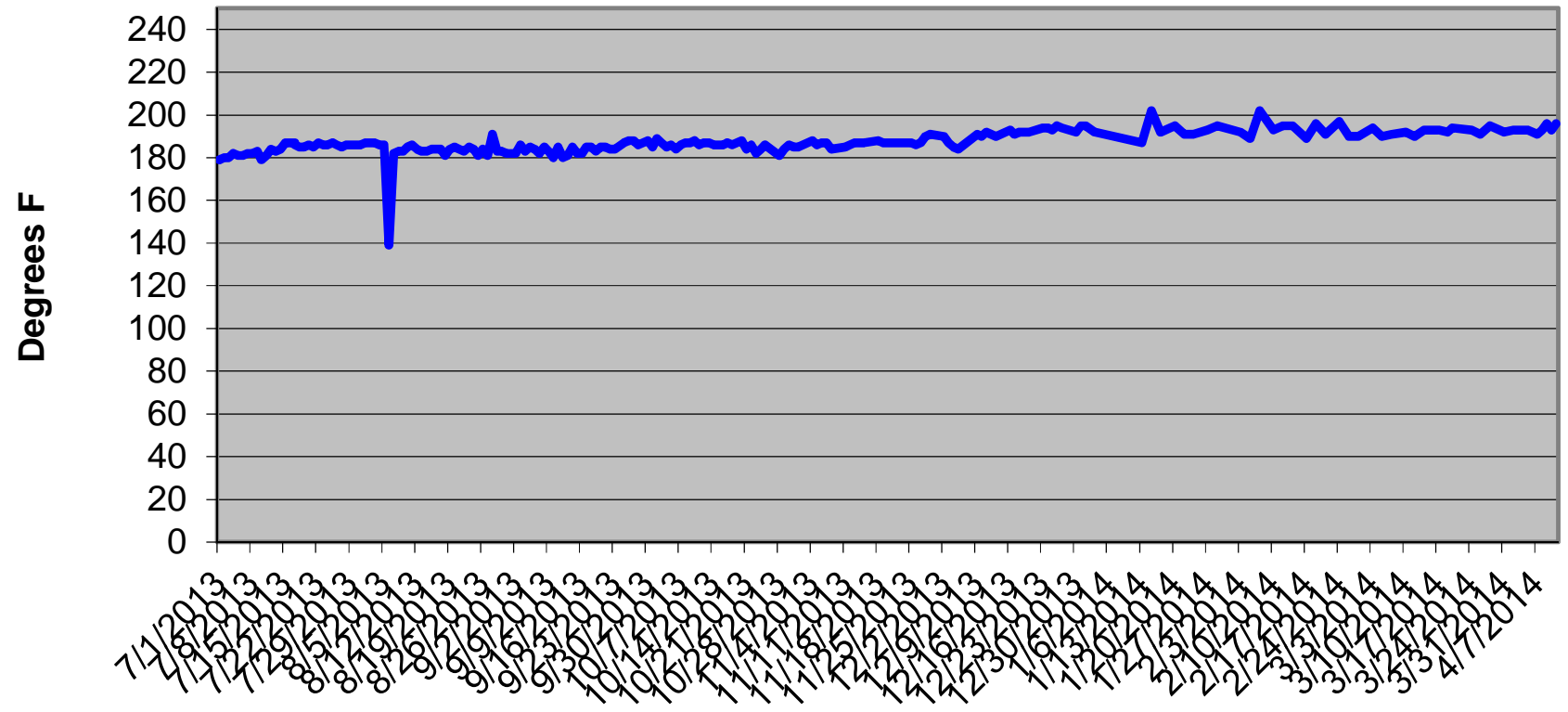
---

**ATTACHMENT C**

**GAS INTERCEPTOR WELLHEAD TEMPERATURE GRAPHS**

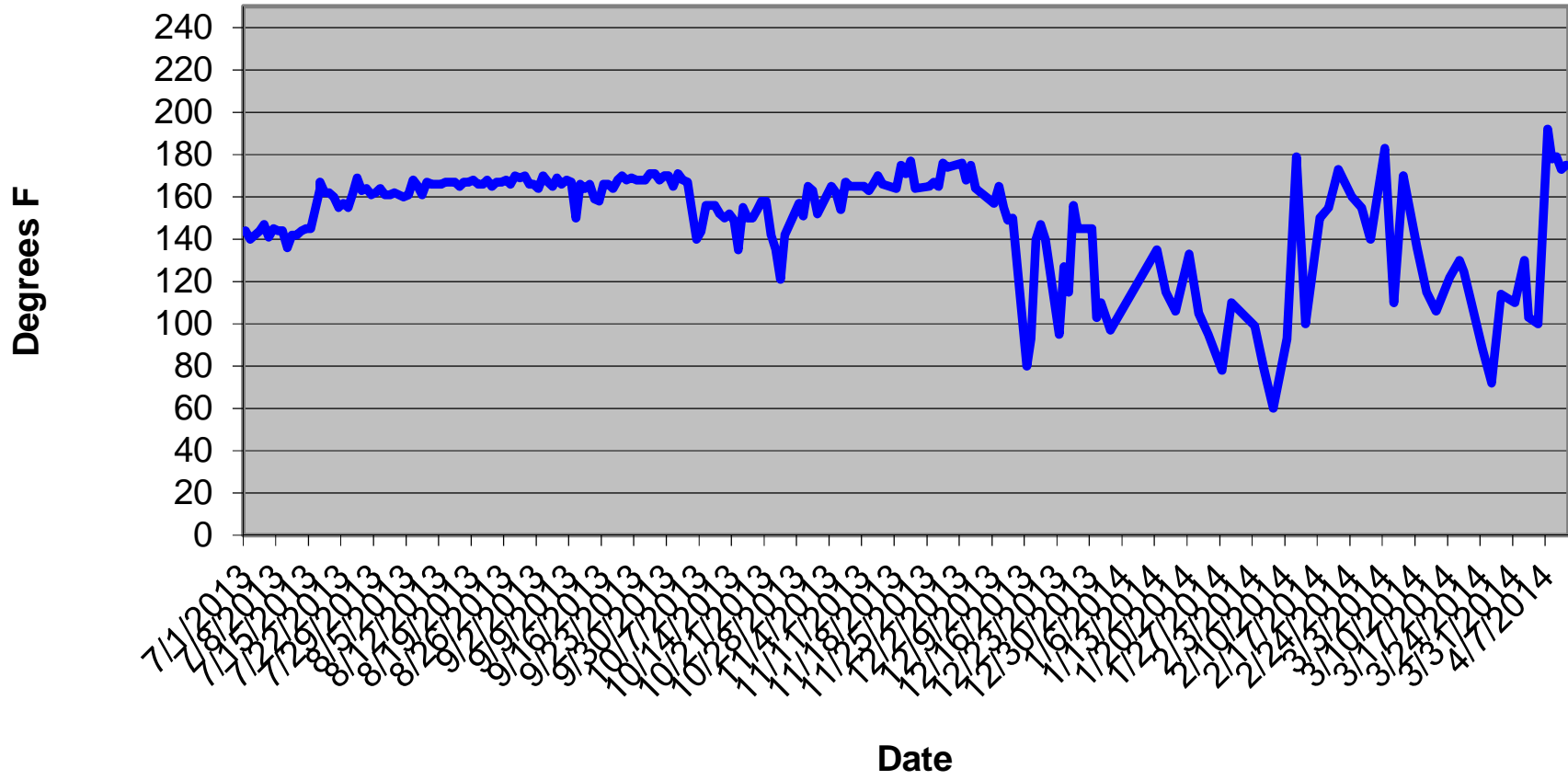
---

# GIW-1 Wellhead Temperatures



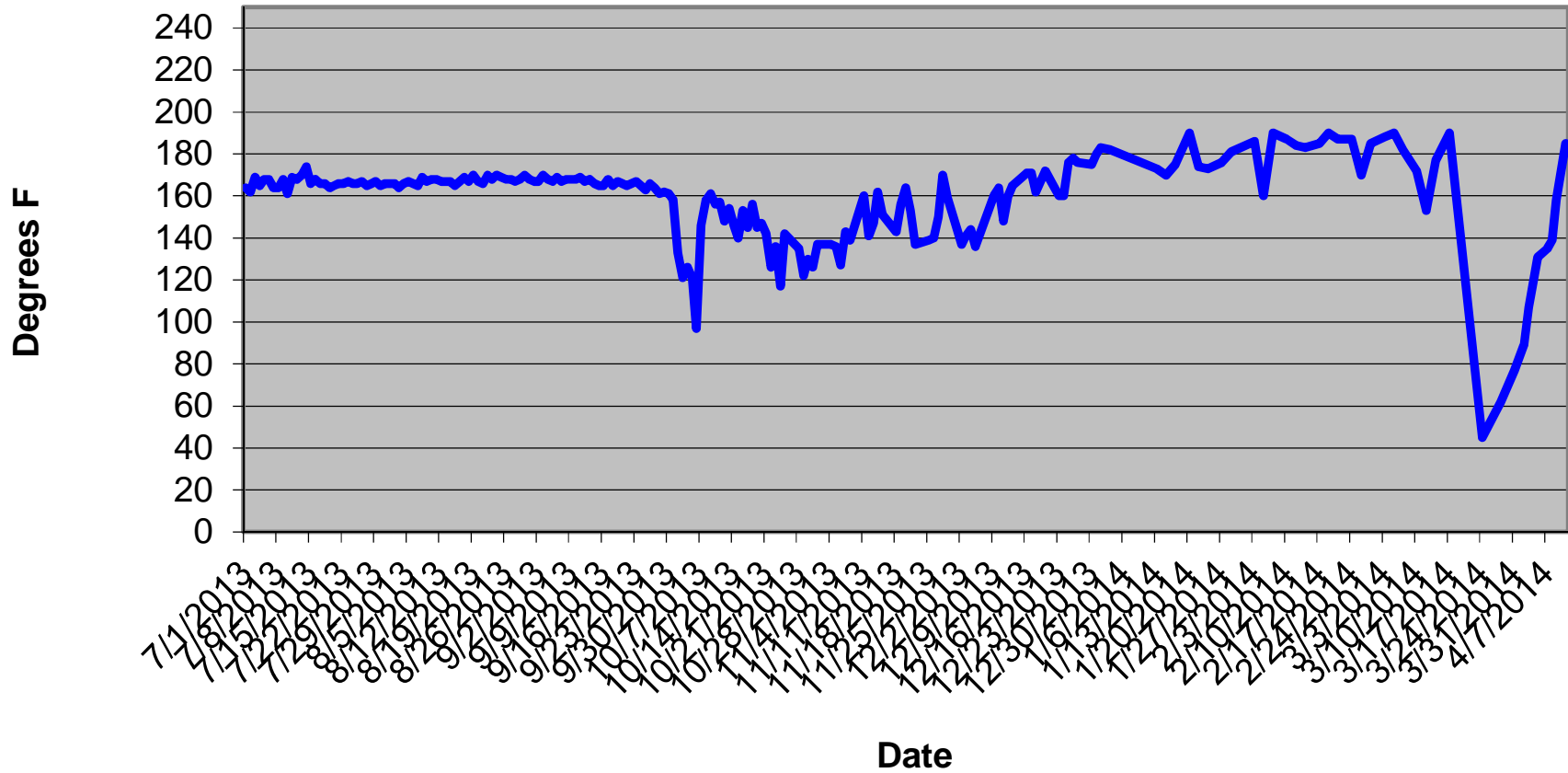
Wellhead Temp. (F)

# GIW-2 Wellhead Temperatures



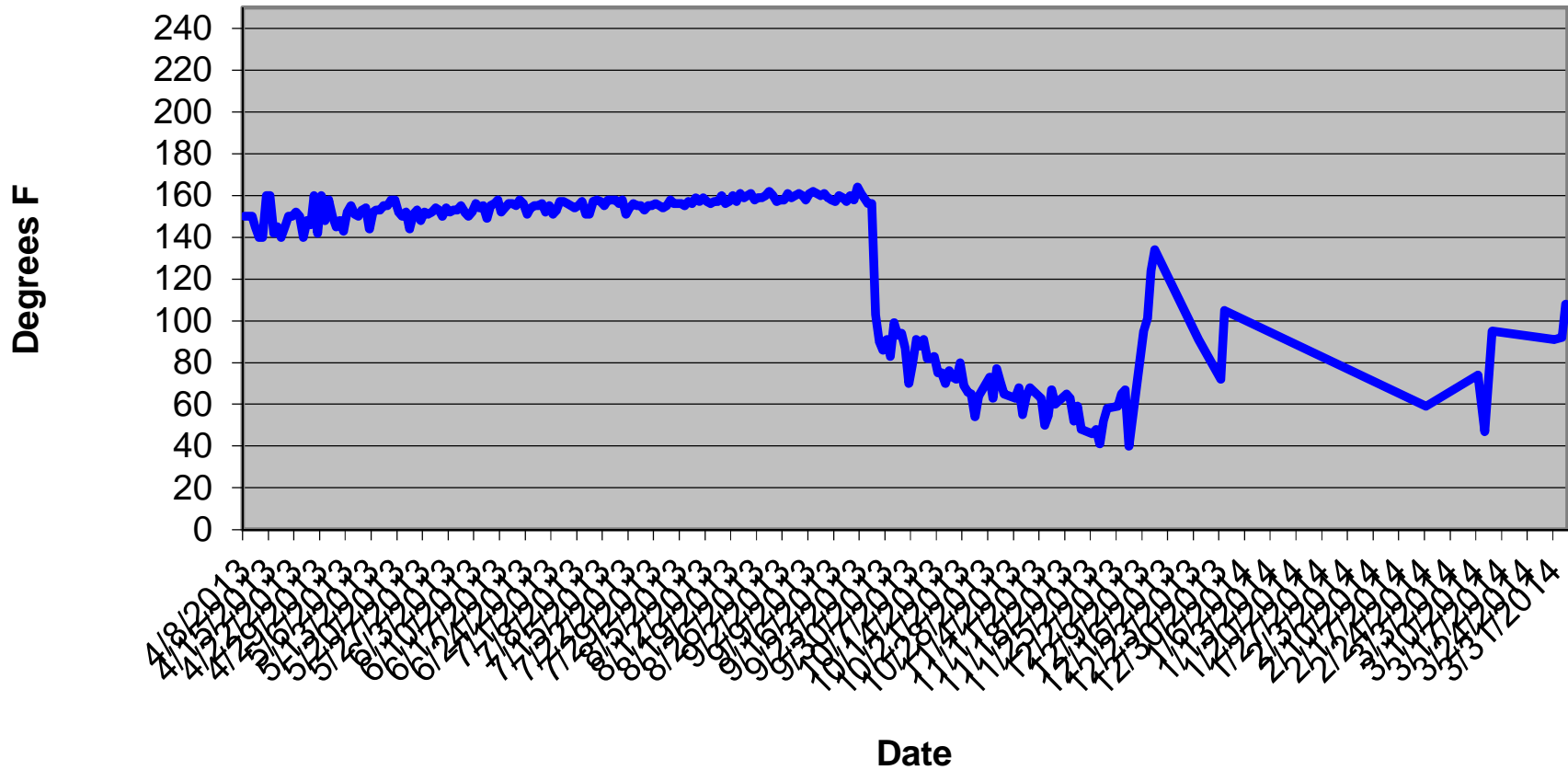
Wellhead Temp. (F)

# GIW-3 Wellhead Temperatures



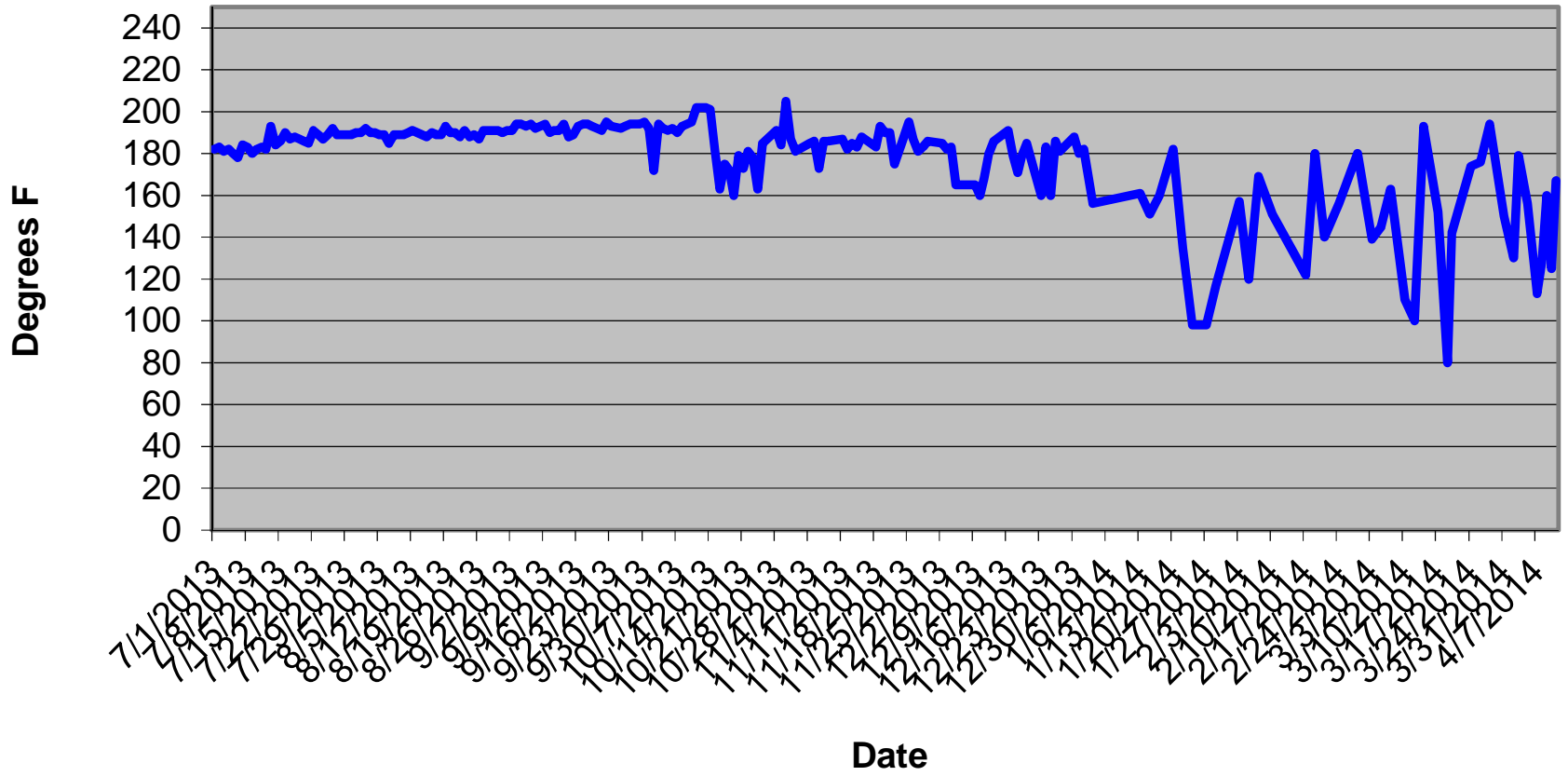
Wellhead Temp. (F)

# GIW-4 Wellhead Temperatures



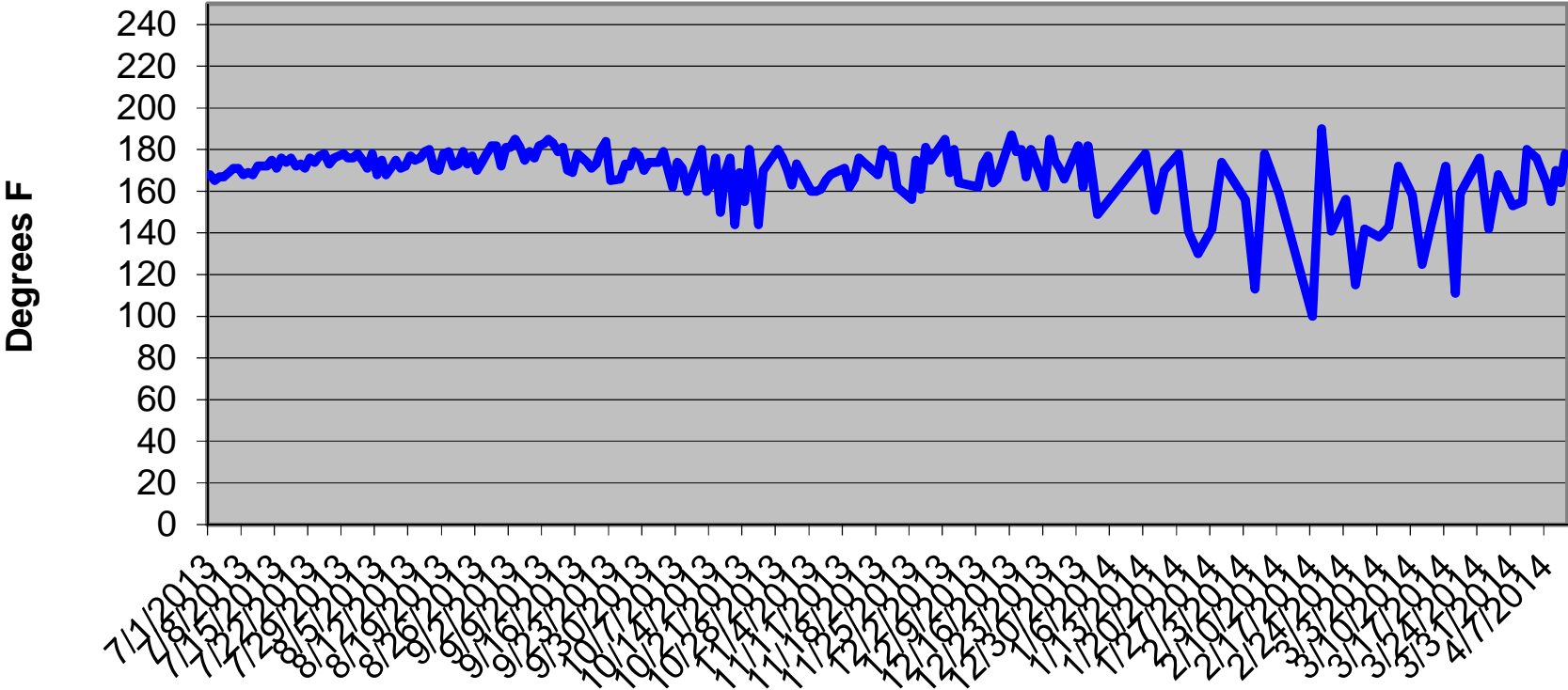
Wellhead Temp. (F)

# GIW-5 Wellhead Temperatures



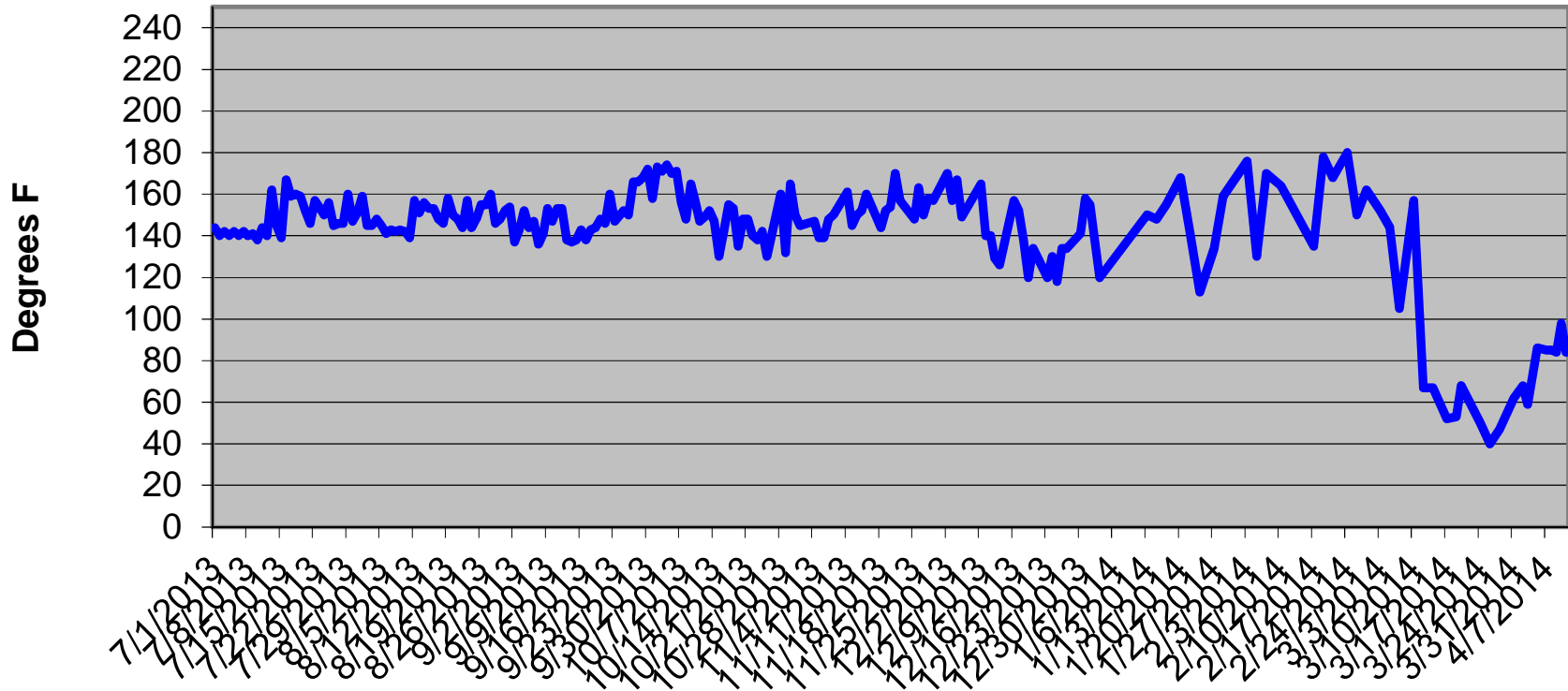
Wellhead Temp. (F)

# GIW-6 Wellhead Temperatures



Wellhead Temp. (F)

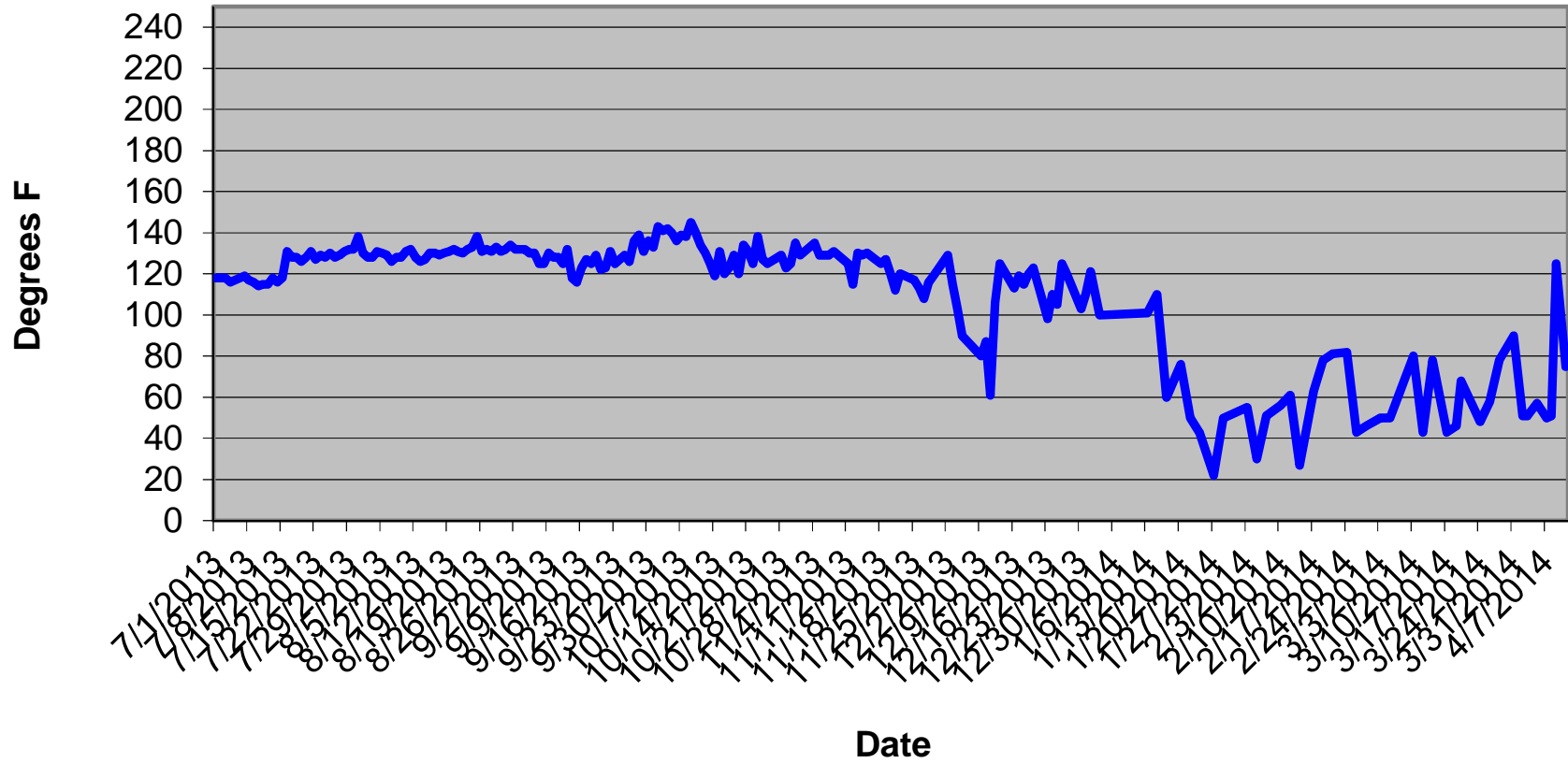
### GIW-7 Wellhead Temperatures



Wellhead Temp. (F)

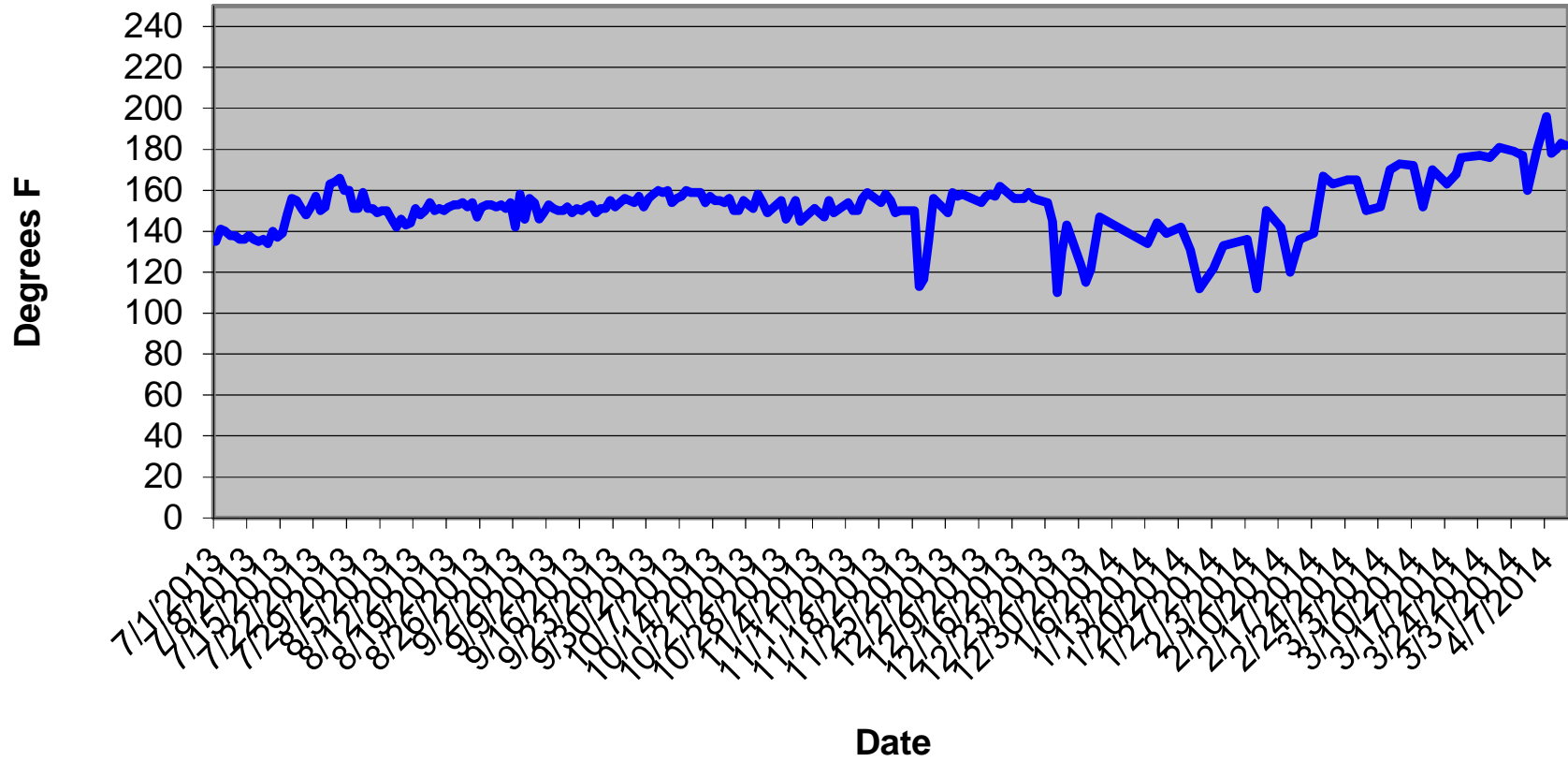


### GIW-8 Wellhead Temperatures



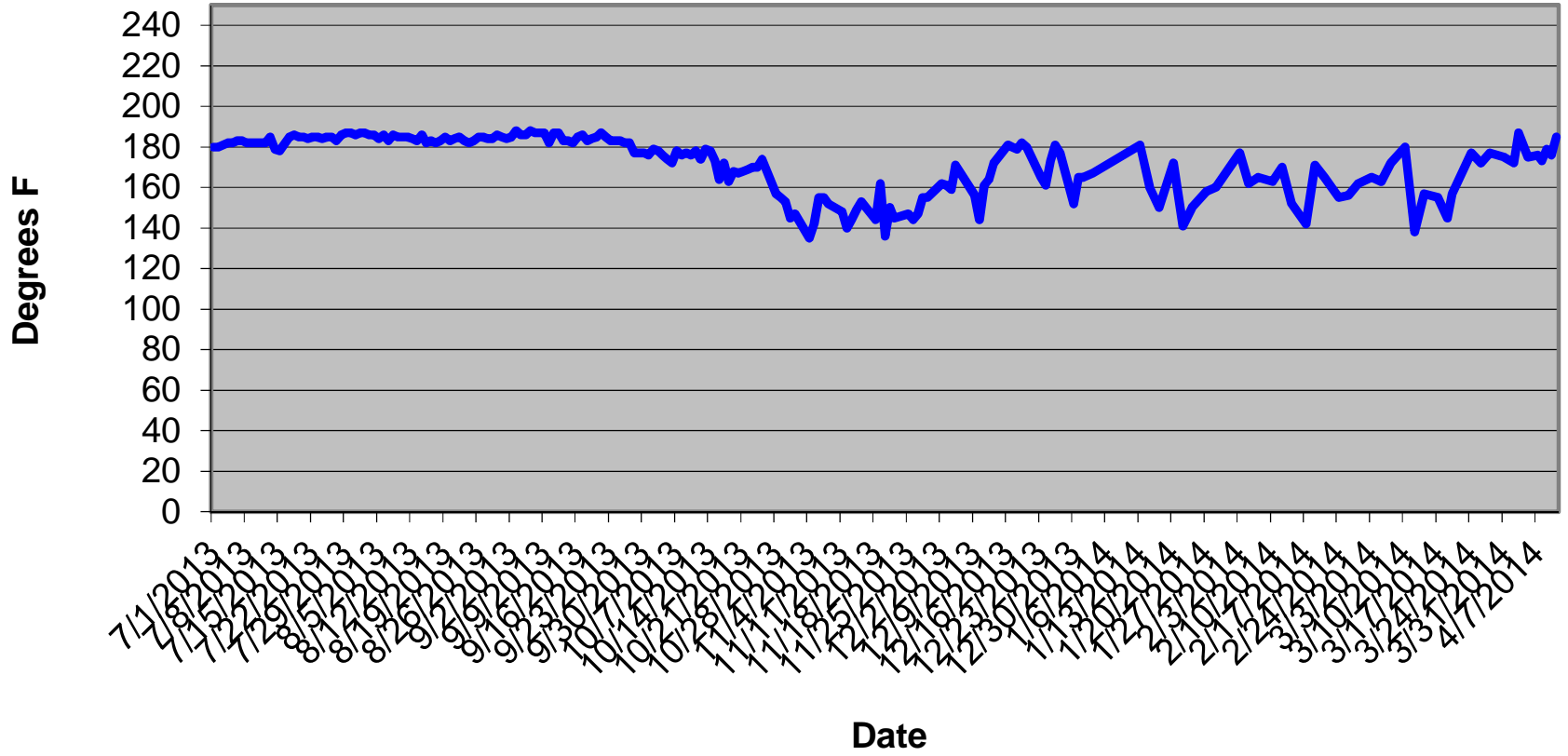
Wellhead Temp. (F)

# GIW-9 Wellhead Temperatures



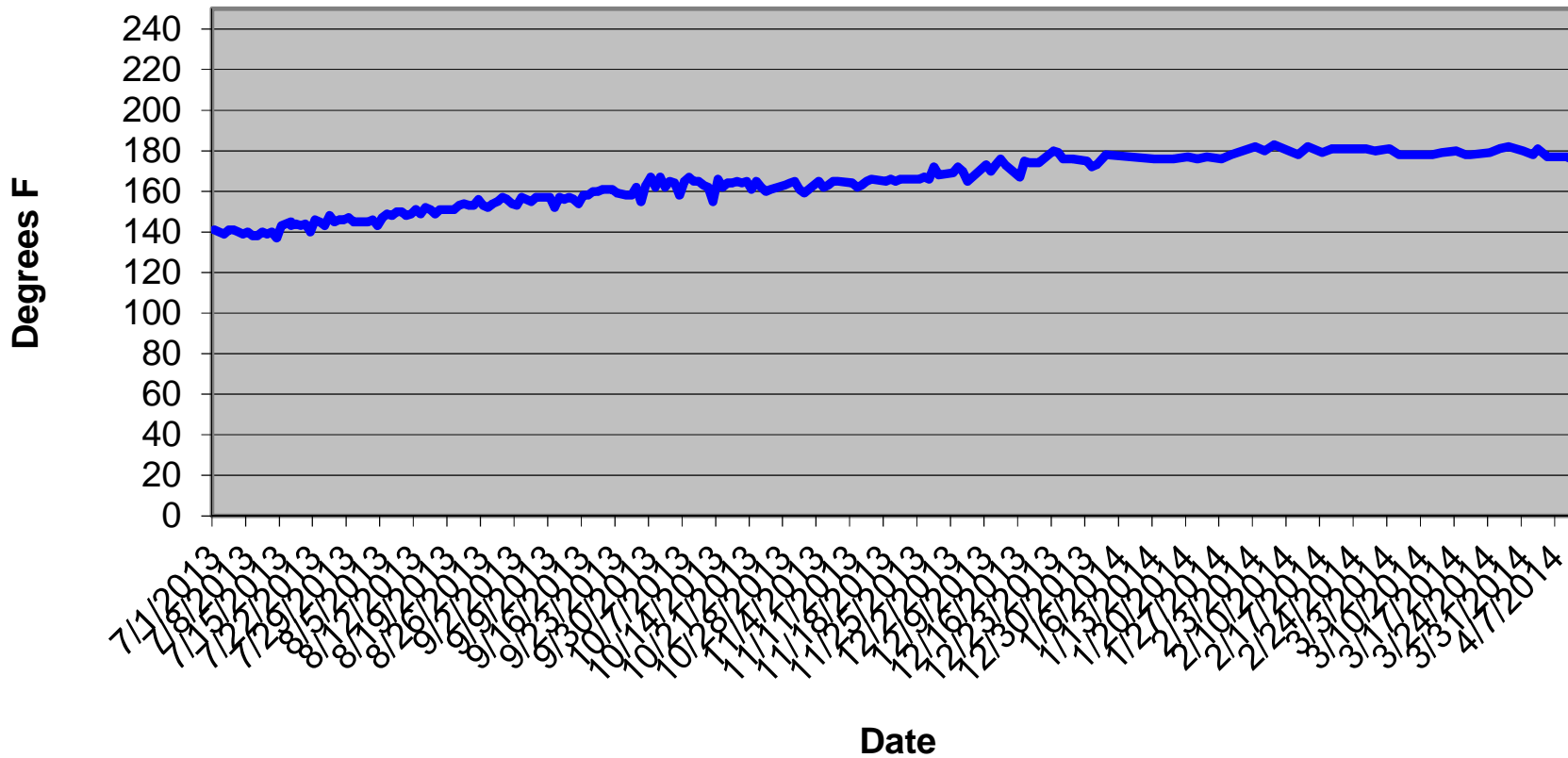
Wellhead Temp. (F)

# GIW-10 Wellhead Temperatures



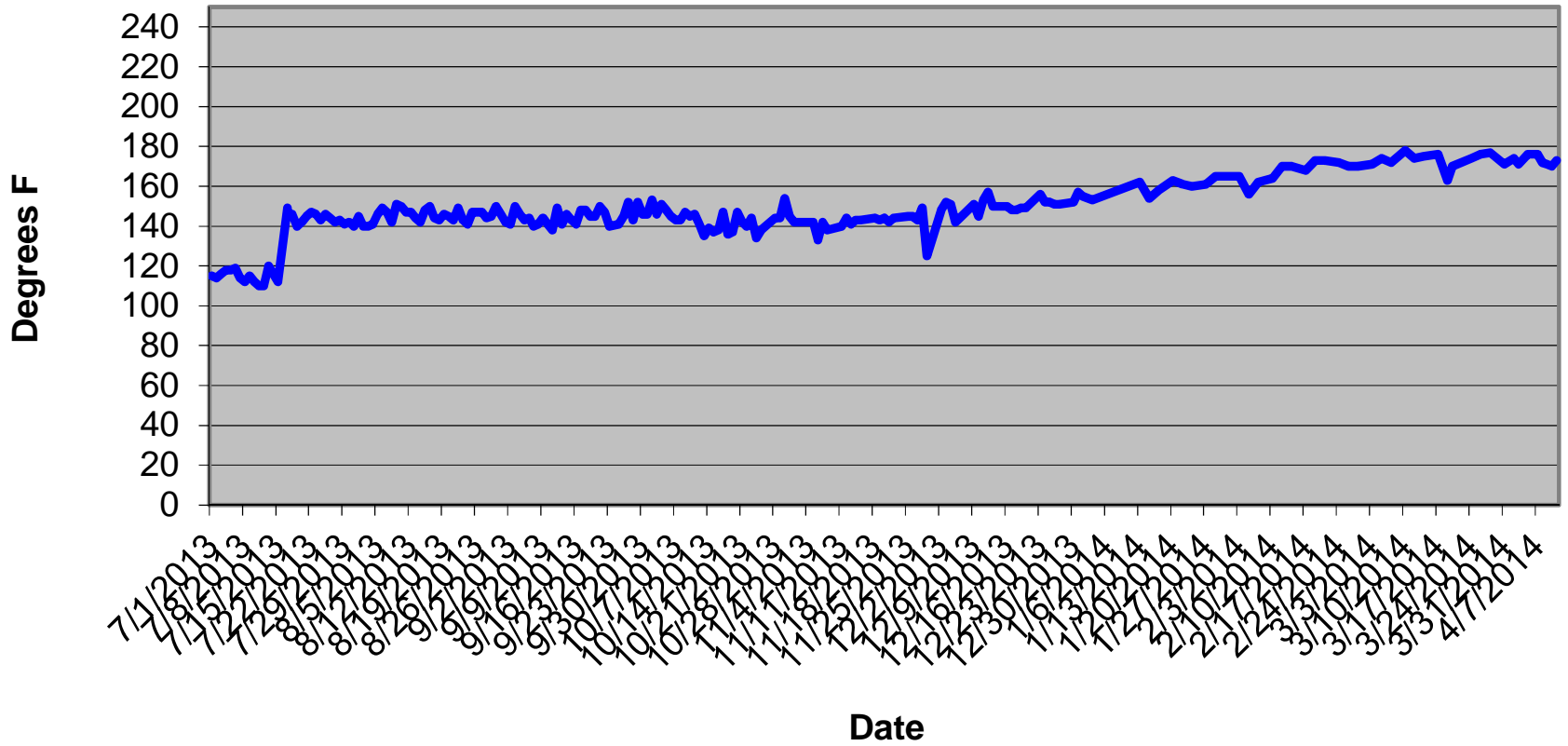
Wellhead Temp. (F)

### GIW-11 Wellhead Temperatures



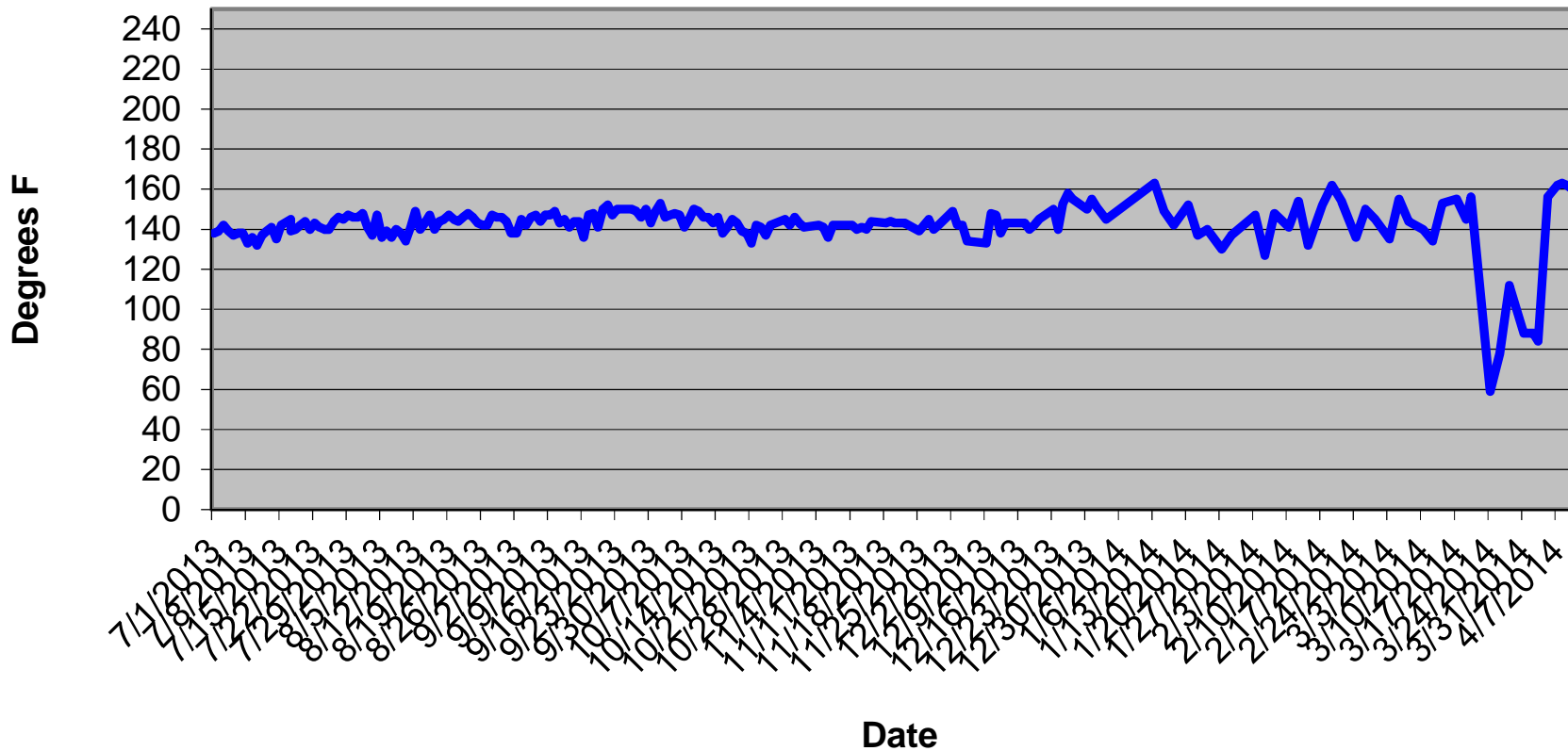
Wellhead Temp. (F)

# GIW-12 Wellhead Temperatures



Wellhead Temp. (F)

### GIW-13 Wellhead Temperatures



Wellhead Temp. (F)