



A Program of ASTM International

# ***Test Monitoring Center***

<http://astmtmc.cmu.edu>

## **ASTM Reference Testing Semi-Annual Report ASTM D6594 – HTCBT**

October 2020

# HTCBT Test Activity\*

Test Status	Validity Code	Number of Tests
Acceptable Calibration Test	AC	188
Failed Calibration Test	OC	8
Operationally Invalid, by lab	LC	4
Acceptable Shakedown Run	NN	4
Unacceptable Shakedown Run	MN	4
<b>Total</b>		<b>208</b>

- 8 labs reported data
- Working to coordinate with SP chair to add HTCBT to the LTMS

\*April 1, 2020 – September 31, 2020

# HTCBT Failed Tests

Failed Parameter	Number of Tests
Severe Lead Concentration	2
Severe Copper Concentration	1
Severe Copper & Lead Concentration	3
Mild Copper Concentration	1
Mild Copper Concentration & Severe Lead Concentration	1
<b>Total</b>	<b>8</b>

# HTCBBT Failed Tests by Lab

Failed Parameter	LTMS Lab				#
	A	E	I	V	
Severe Lead Concentration	0	1	0	1	2
Severe Copper Concentration	1	0	0	0	1
Severe Copper & Lead Concentration	3	0	0	0	3
Mild Copper Concentration	0	0	1	0	1
Mild Copper Concentration & Severe Lead Concentration	1	0	0	0	1
<b>Total</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>

# HTCBT Lost Tests\*

Status	Cause	#
Invalid	Heater Malfunction	1
Invalid	Airflow Control Problems	1
Invalid	Sample Contamination	1
Invalid	Improper Coupon Preparation	1
<b>Total</b>		<b>4</b>

\*Invalid and aborted calibration tests

# HTCBBT Lost Tests by Lab

Cause0	LTMS Lab				#
	E	G	I	L	
Heater Malfunction	0	0	1	0	1
Airflow Control Problems	0	1	0	0	1
Sample Contamination	1	0	0	0	1
Improper Coupon Preparation	0	0	0	1	1
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>

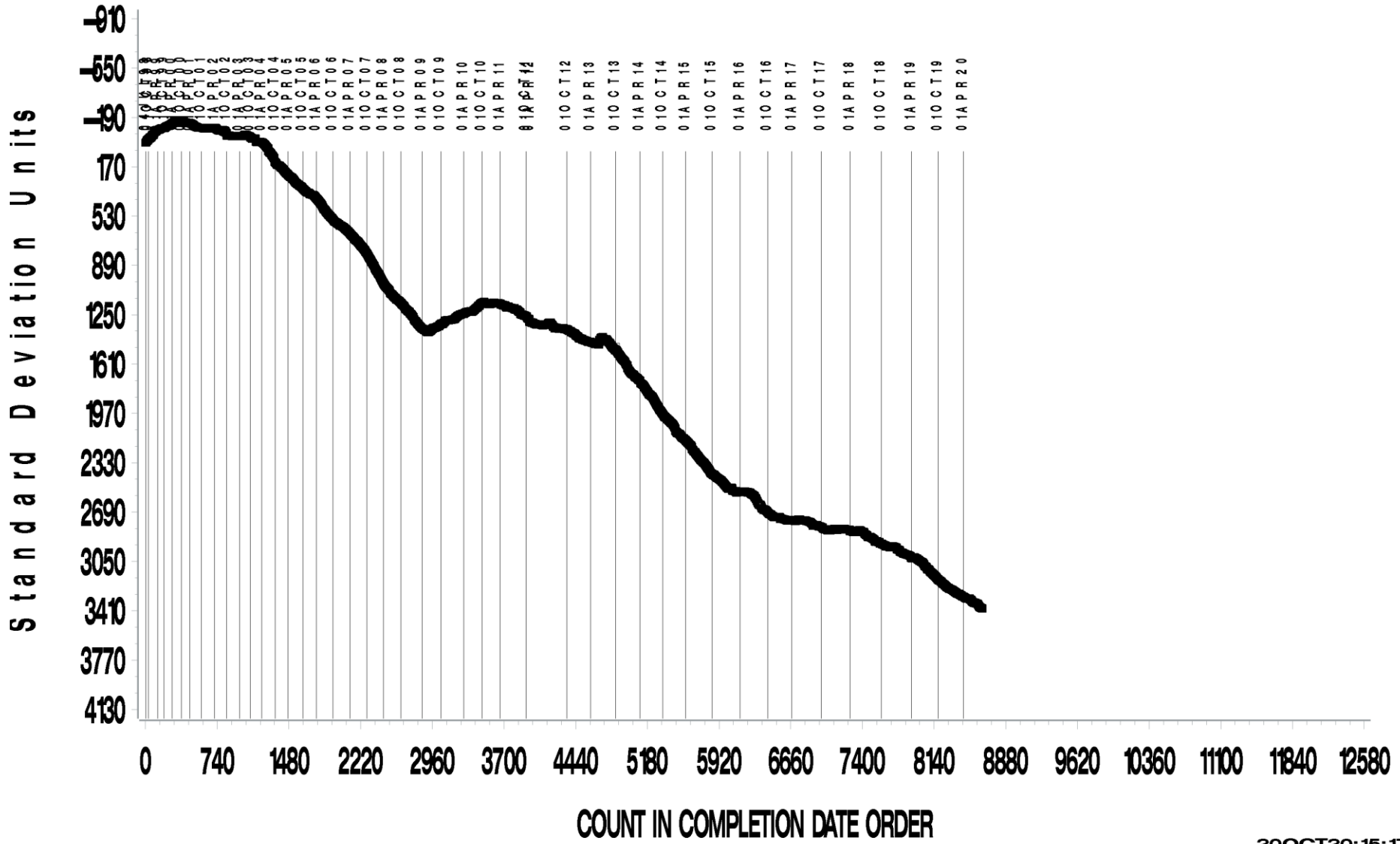
# HTCBT Test Severity

- ▶ Copper concentration trending severe
- ▶ Lead concentration trending severe

COPPER CHANGE (ppm)

CUSUM Severity Analysis

Historical Chart

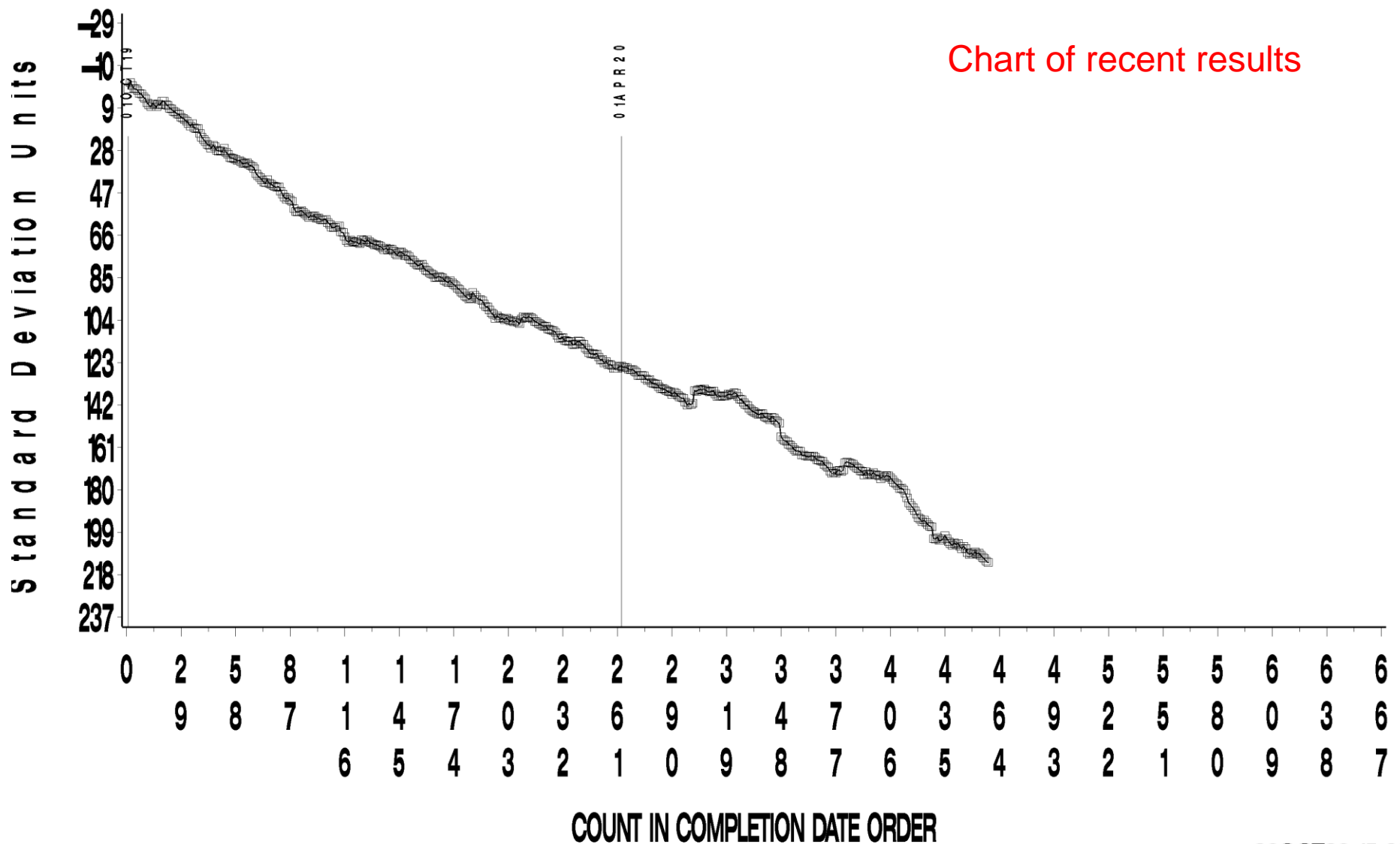




COPPER CHANGE (ppm)

CUSUM Severity Analysis

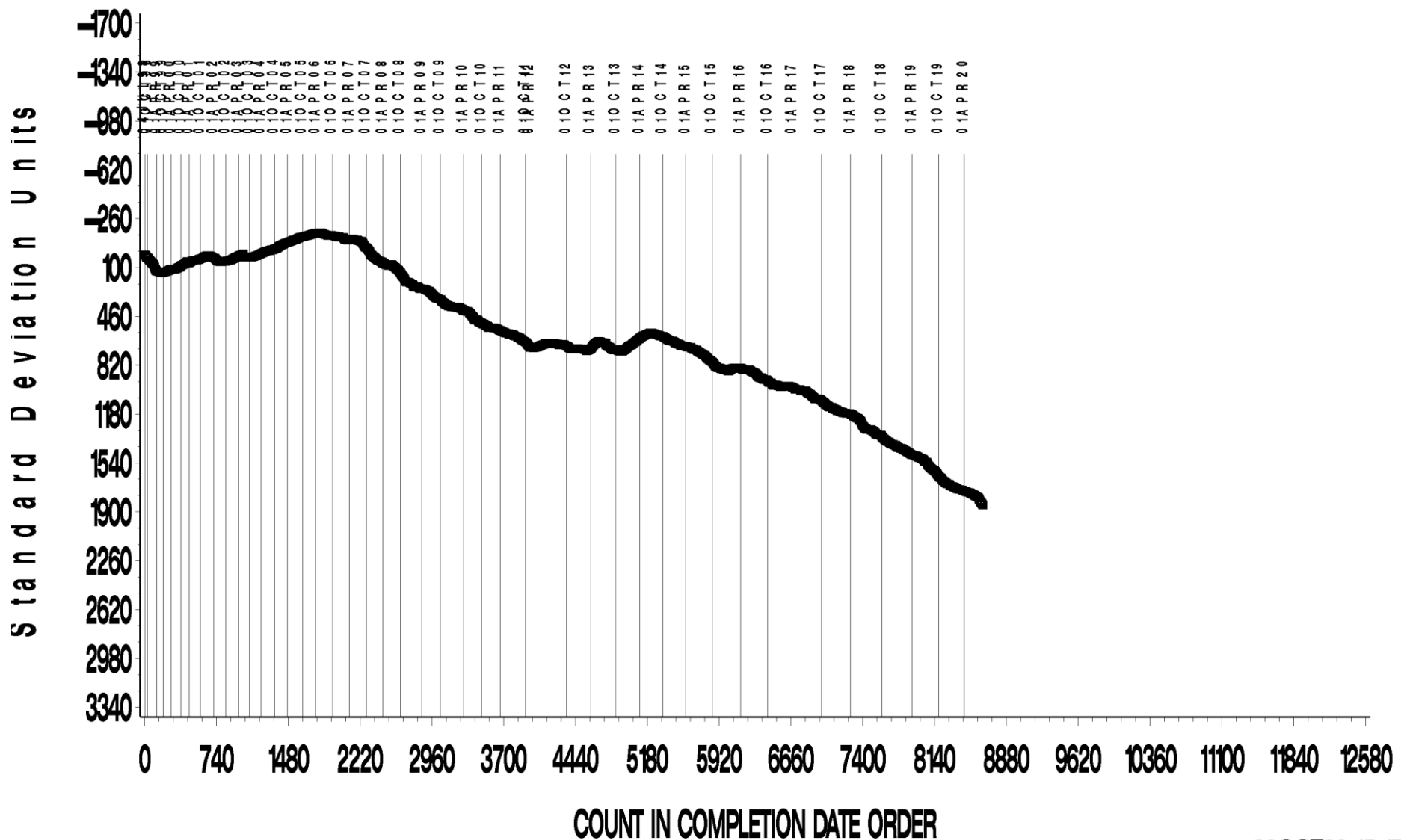
Chart of recent results



LEAD CHANGE (ppm)

CUSUM Severity Analysis

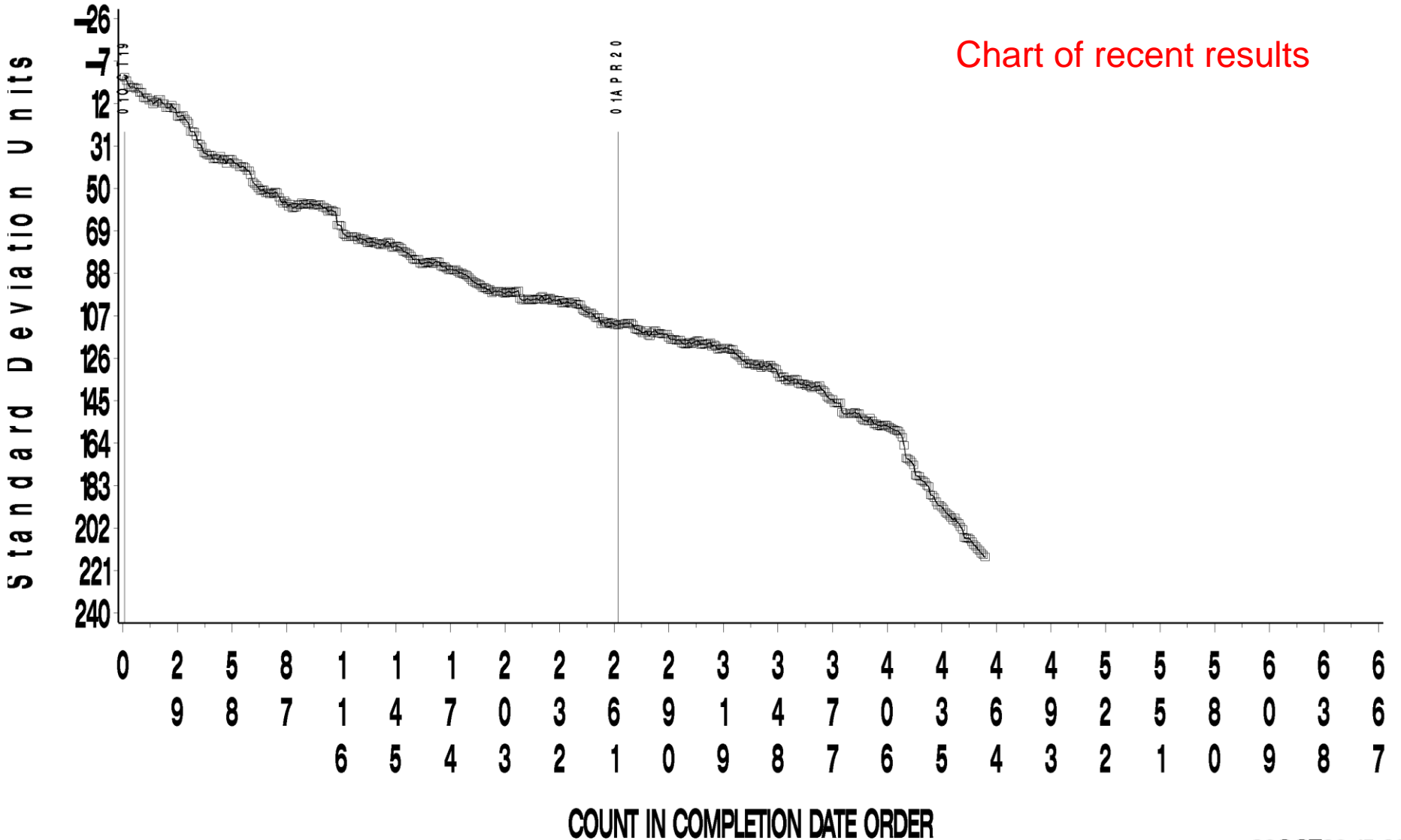
Historical Chart



LEAD CHANGE (ppm)

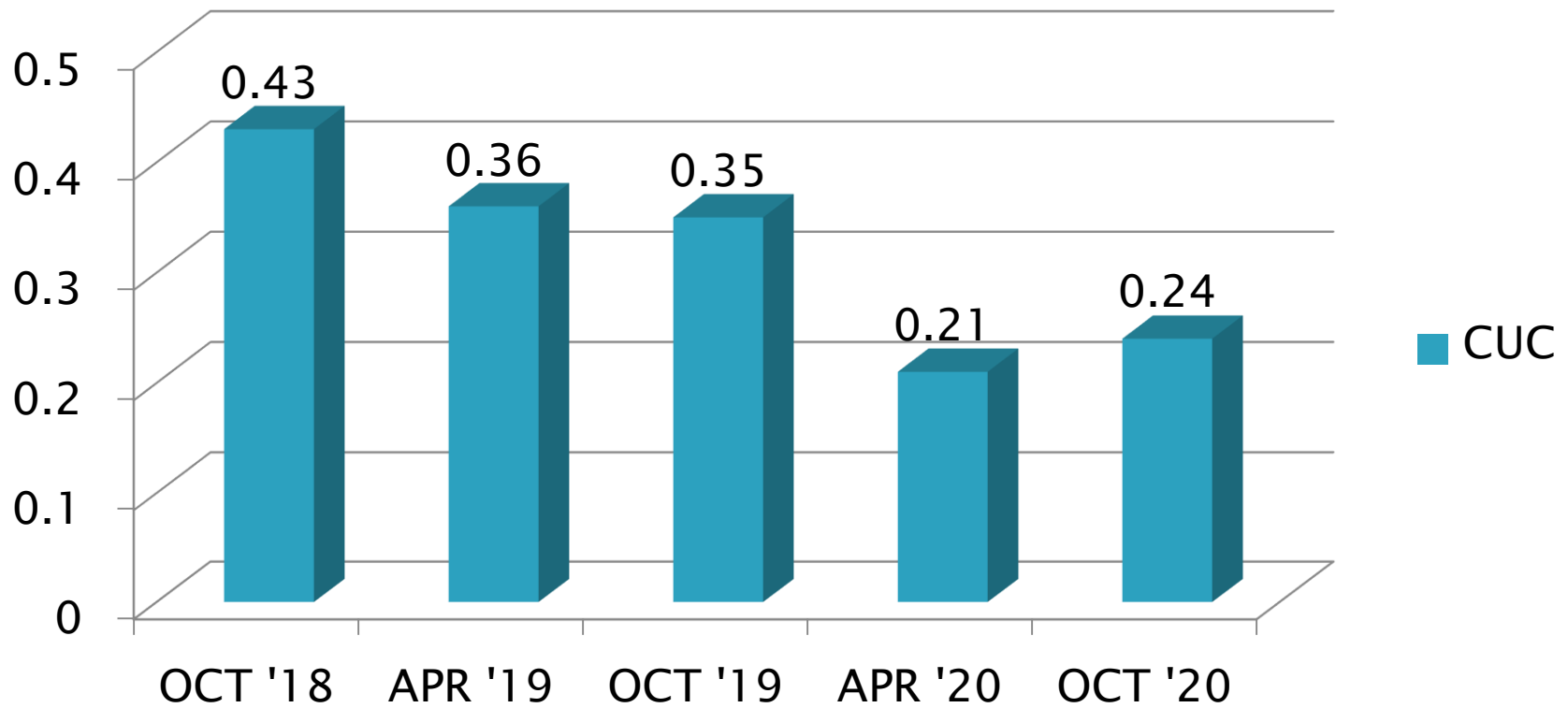
CUSUM Severity Analysis

Chart of recent results



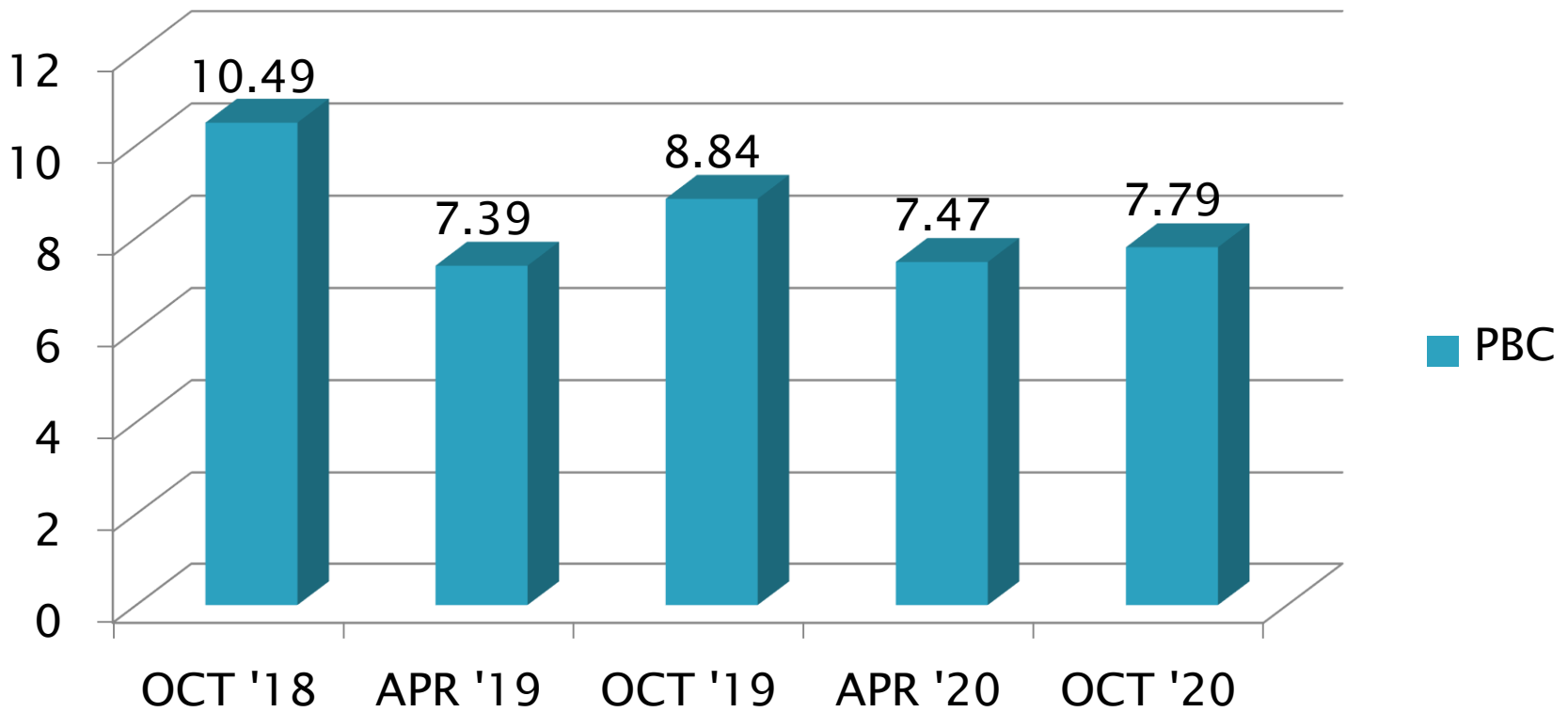
# HTCBT Precision Estimates

CUC



# HTCBT Precision Estimates

PBC



# Information Letters\*

Test	Date	IL	Topic
			No information letters this period.

\*Available from TMC Website

# Reference Oil Inventory Estimated Life

Oil	TMC Inventory (gallons)	Quantity Shipped in last 6 months (gallons)	Lab Inventory (samples)	Estimated Life
44-4	16.8	2.3	110	2.5 years
1005-5	32.2	5.3	246	3 years

# Miscellaneous Information

- ▶ Available on TMC Website:
  - Oil Assignment Request and Test File Upload
  - Live Reference Test Data Bases
  - Surveillance Panel Meeting Minutes
- ▶ [www.astmtmc.cmu.edu](http://www.astmtmc.cmu.edu)





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