



# ***Test Monitoring Center***

<https://www.astmtmc.org>

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

**April 2022**

# HTCBT Test Activity\*

Test Status	Validity Code	Number of Tests
Acceptable Calibration Test	AC	291
Failed Calibration Test	OC	14
Operationally Invalid, by lab	LC	1
Aborted Calibration Test	XC	4
Acceptable Shakedown Run	NN	3
Unacceptable Shakedown Run	MN	1
<b>Total</b>		<b>314</b>

- 9 labs reported data
- **Unable to coordinate with SP chair to add HTCBT to the LTMS**

\*October 1, 2021 – March 31, 2022

**Test Monitoring Center**  
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# HTCBT Failed Tests

Failed Parameter	Number of Tests
Severe Lead Concentration	7
Mild Copper Concentration	3
Severe Copper & Lead Concentration	4
<b>Total</b>	<b>14</b>

# HTCBBT Failed Tests by Lab

Failed Parameter	LTMS Lab							#
	A	E	G	I	V	BB	BC	
Severe Lead Concentration	1	0	4	2	0	0	0	7
Mild Copper Concentration	0	0	2	1	0	0	0	3
Severe Copper & Lead Concentration	0	0	1	0	0	1	2	4
Total	1	0	7	3	0	1	2	14

# HTCBT Lost Tests\*

Status	Cause	#
Invalid	Temperature Controller Malfunction	2
Invalid	Airflow Control Problems	0
Invalid	Improper Coupon	0
Invalid	Power Outage	3
Invalid	Sample Contamination	0
<b>Total</b>		<b>5</b>

\*Invalid and aborted calibration tests

# HTCBBT Lost Tests by Lab

Cause	LTMS Lab						#
	A	B	G	I	P	V	
Temperature Controller Malfunction	0	0	0	1	0	1	2
Power Outage	0	0	2	0	1	0	3
Total	0	0	2	1	1	1	5

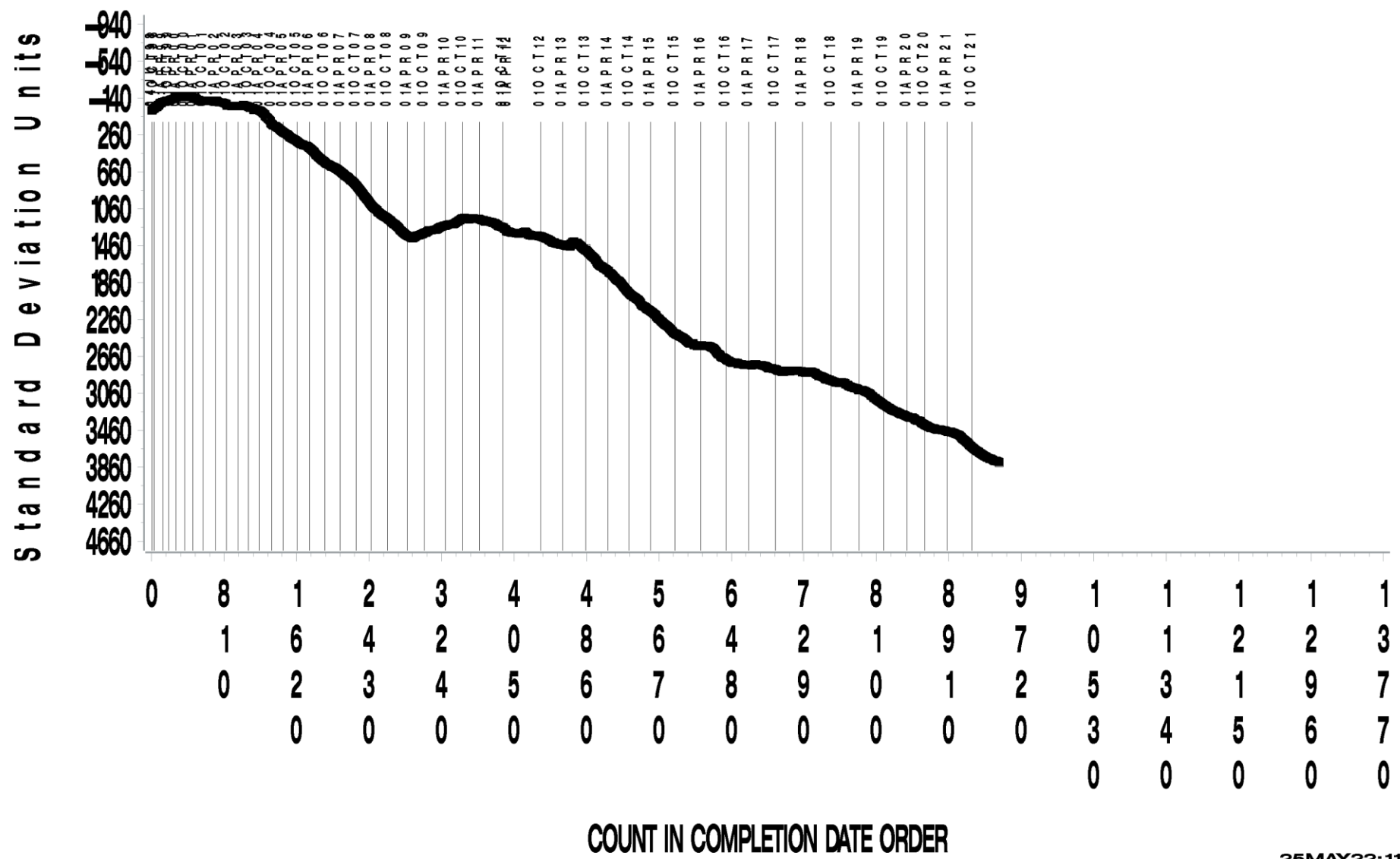
# HTCBT Test Severity

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

COPPER CHANGE (ppm)

CUSUM Severity Analysis

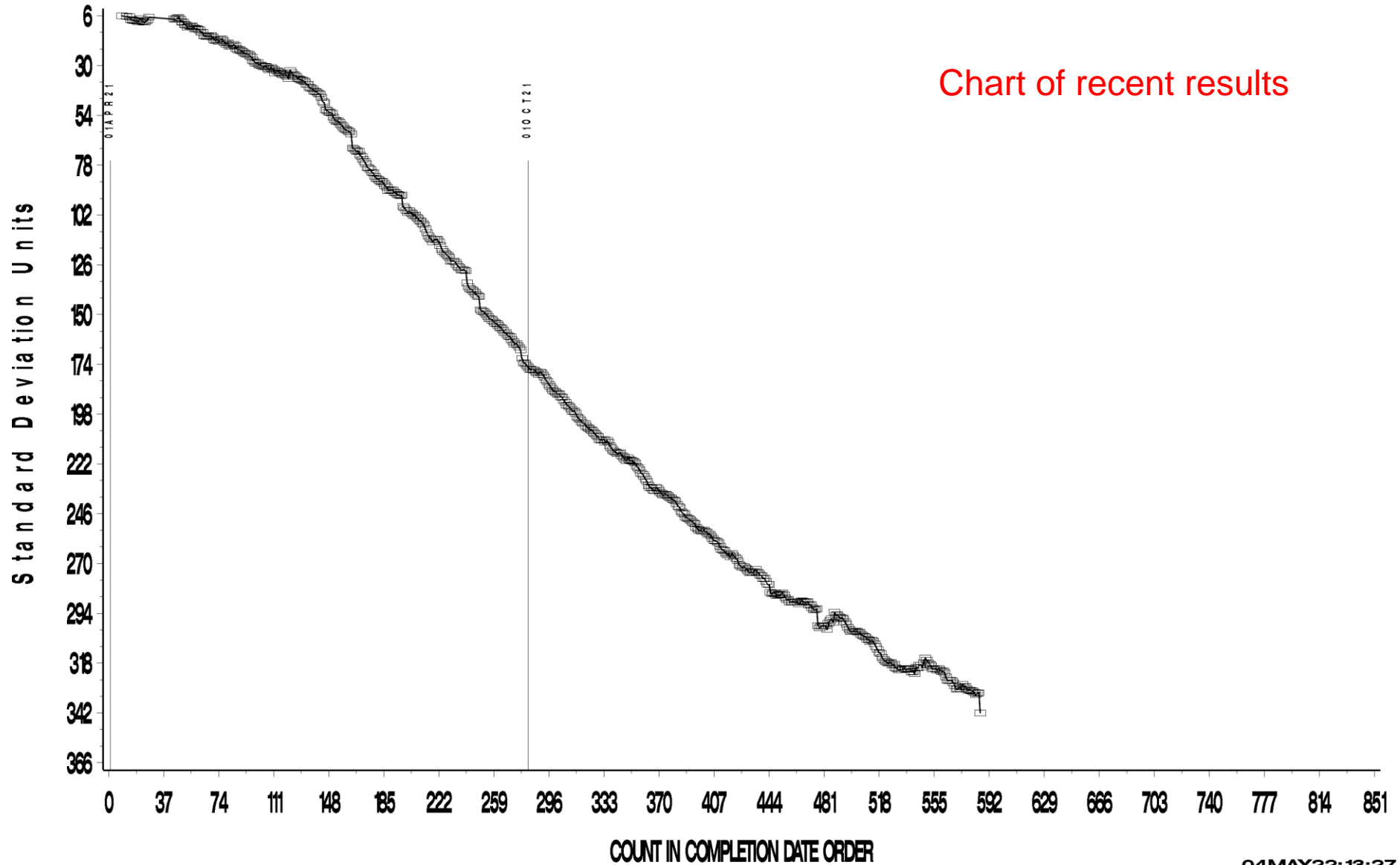
Historical Chart





COPPER CHANGE (ppm)

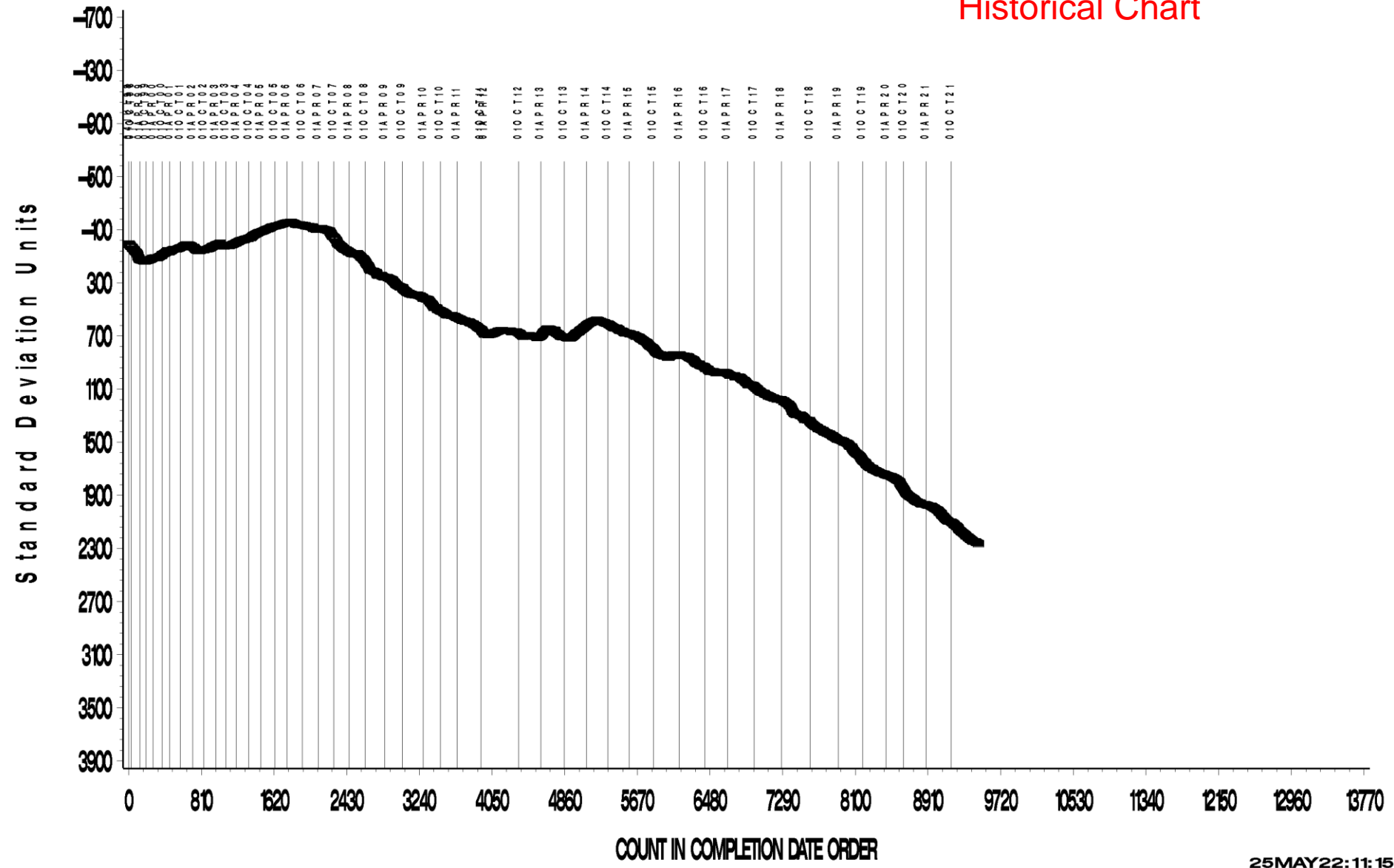
CUSUM Severity Analysis



LEAD CHANGE (ppm)

CUSUM Severity Analysis

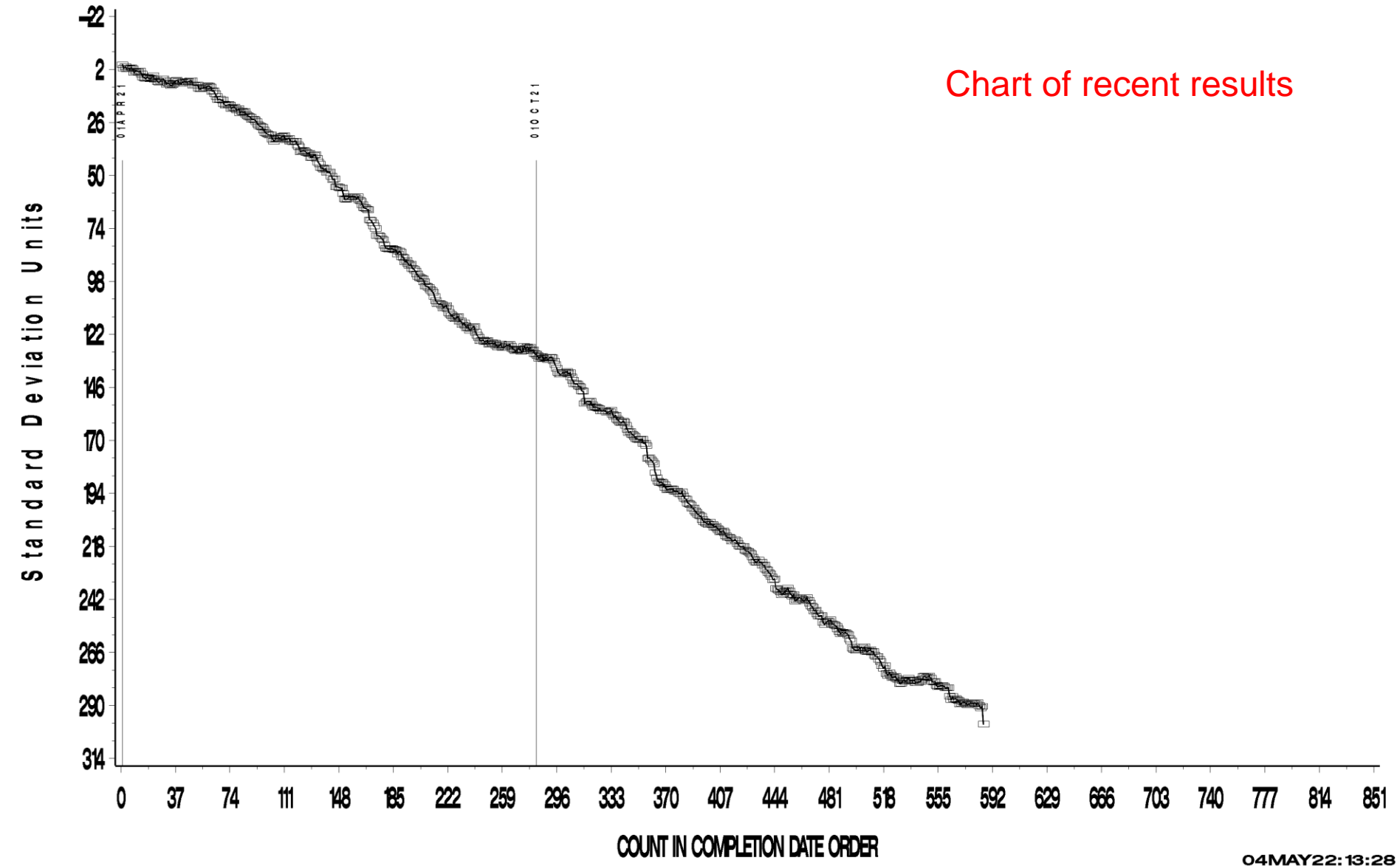
Historical Chart



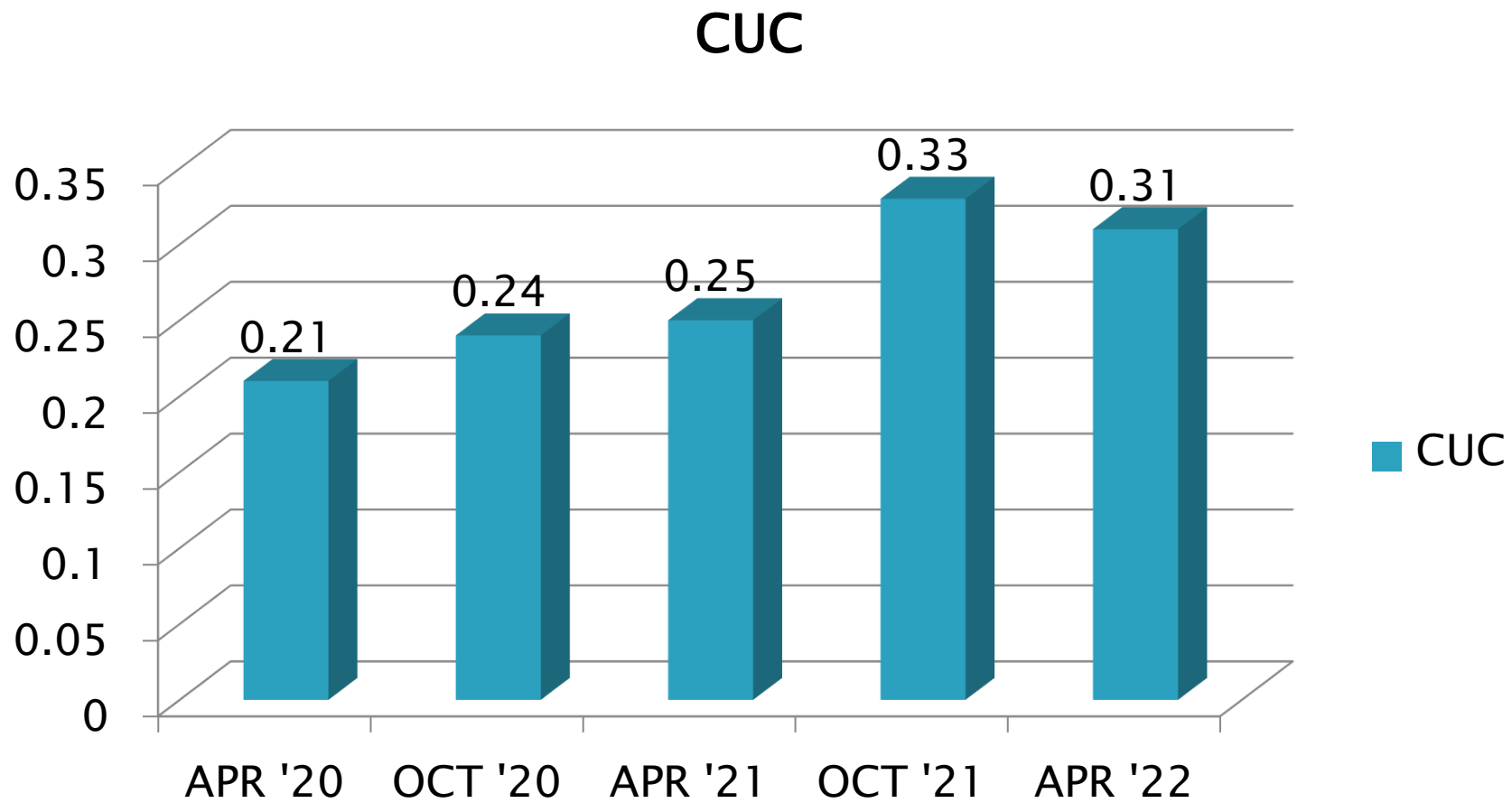
LEAD CHANGE (ppm)

CUSUM Severity Analysis

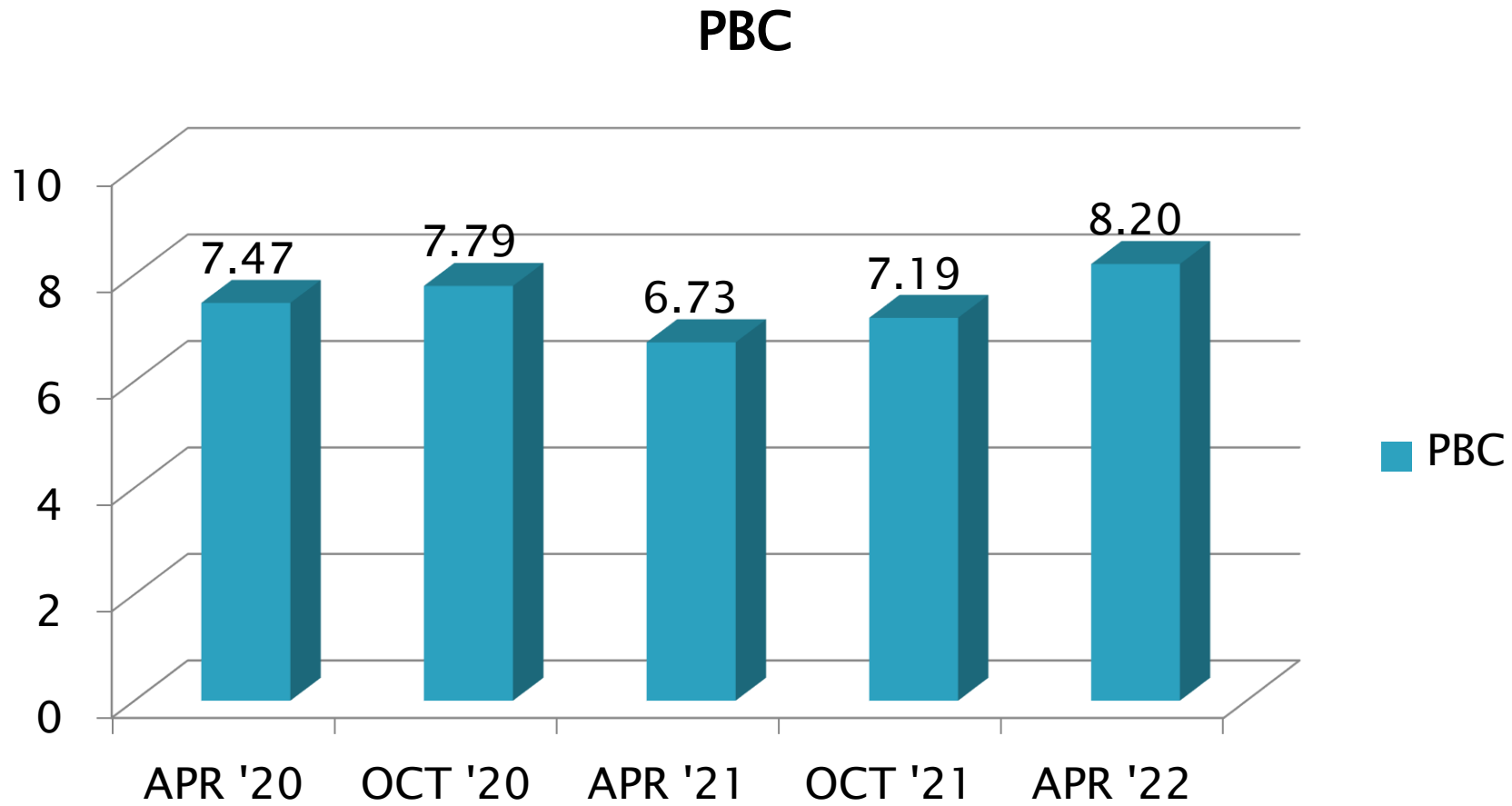
Chart of recent results



# HTCBT Precision Estimates



# HTCBT Precision Estimates



# 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	7.2	4.2	95	<1 year
1005-5	8.4 (remaining in reserved drum - Additional oil available at the TMC)	7.0	187	1.5 years

- Re-blended oil 44-5 available at the TMC. Must be introduced by the Surveillance Panel

# Statistical Review

- ▶ The Surveillance Panel requested review of acceptance bands for reference oil 1005–5
- ▶ The Industry Statistician Team completed a detailed review of the HTCBT data
- ▶ An adjustment to the acceptance bands was not recommended
- ▶ Suggestions were made to review and analyze lab and instrument variability



# Miscellaneous Information

- ▶ Available on TMC Website:
  - Oil Assignment Request and Test File Upload
  - Live Reference Test Data Bases
  - Surveillance Panel Meeting Minutes
- ▶ <https://www.astmtmc.org/>



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