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Test Monitoring Center

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GM Reference Test Activity

Reference tests completed 04/01/2025 – 09/30/2025

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Summary of Tests

- GMAER – Aeration continues to trend mild at about the same level since 2019
- GMOD – All parameters in control. Reference oil GMOD02-2 introduced.
 - ICF's introduced for batch 10 hardware
- GMOEE – Severity trending at or near historic level
- GMSPI3 – Severity trending at or near historic level
- GMTC – Near target this period (two test results reported)

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Calibrated Labs and Stands*

Test	Labs	Stands
GMOD	2	2
GMAER	2	3
GMOEE	2	4
GMSPi3	1	2
GMTC	1	1

*As of 09/30/2025

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GMAER

October 2025

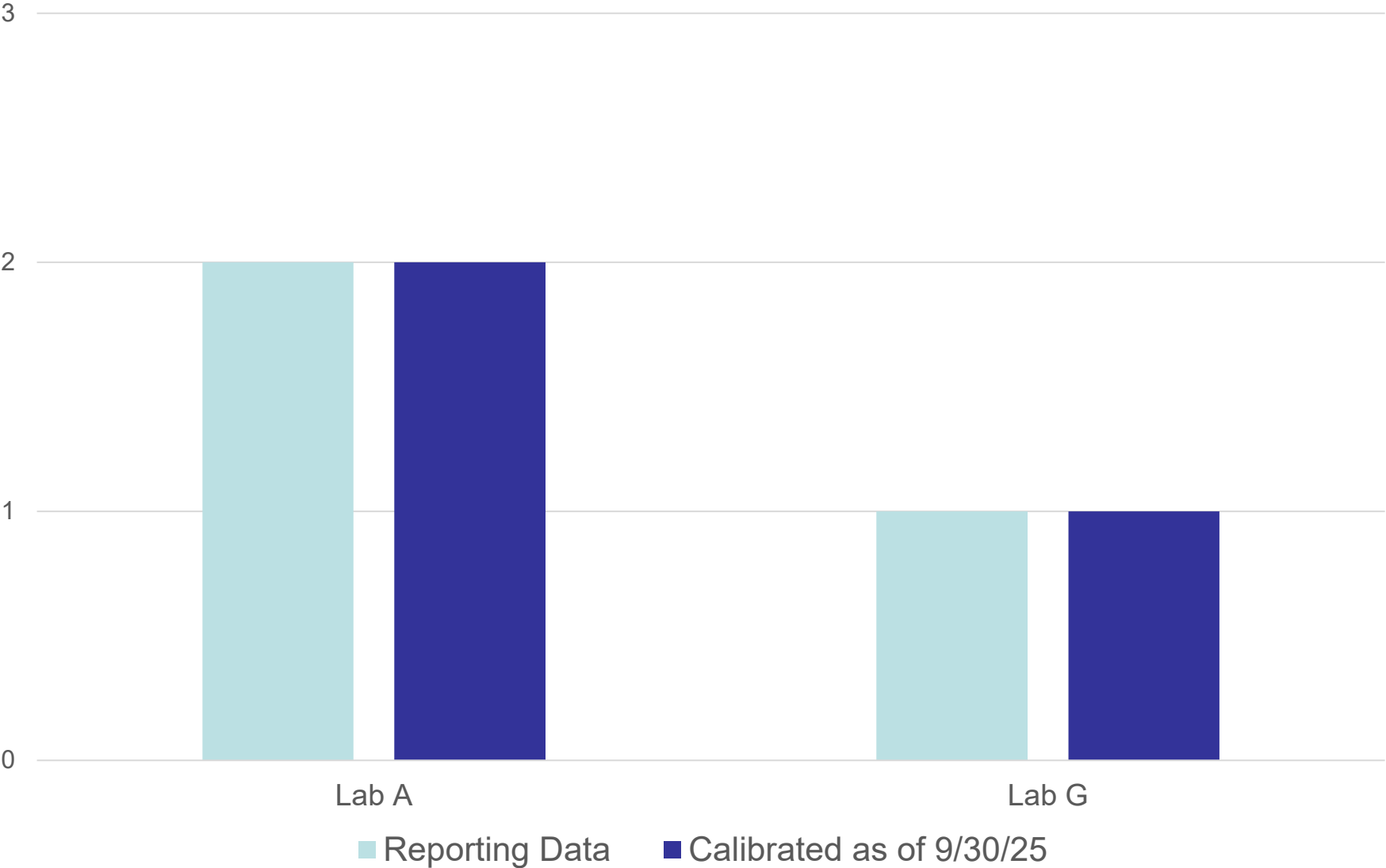
Summary of Activity

- Two calibrated stands in two laboratories
- Aeration continues to trend mild at about the same level since 2019

GMAER Activity

Test Status	Validity Code	#
Acceptable Calibration Test	AC	4
Total		4

Calibrated Labs and Stands



GMAER - Failed Tests

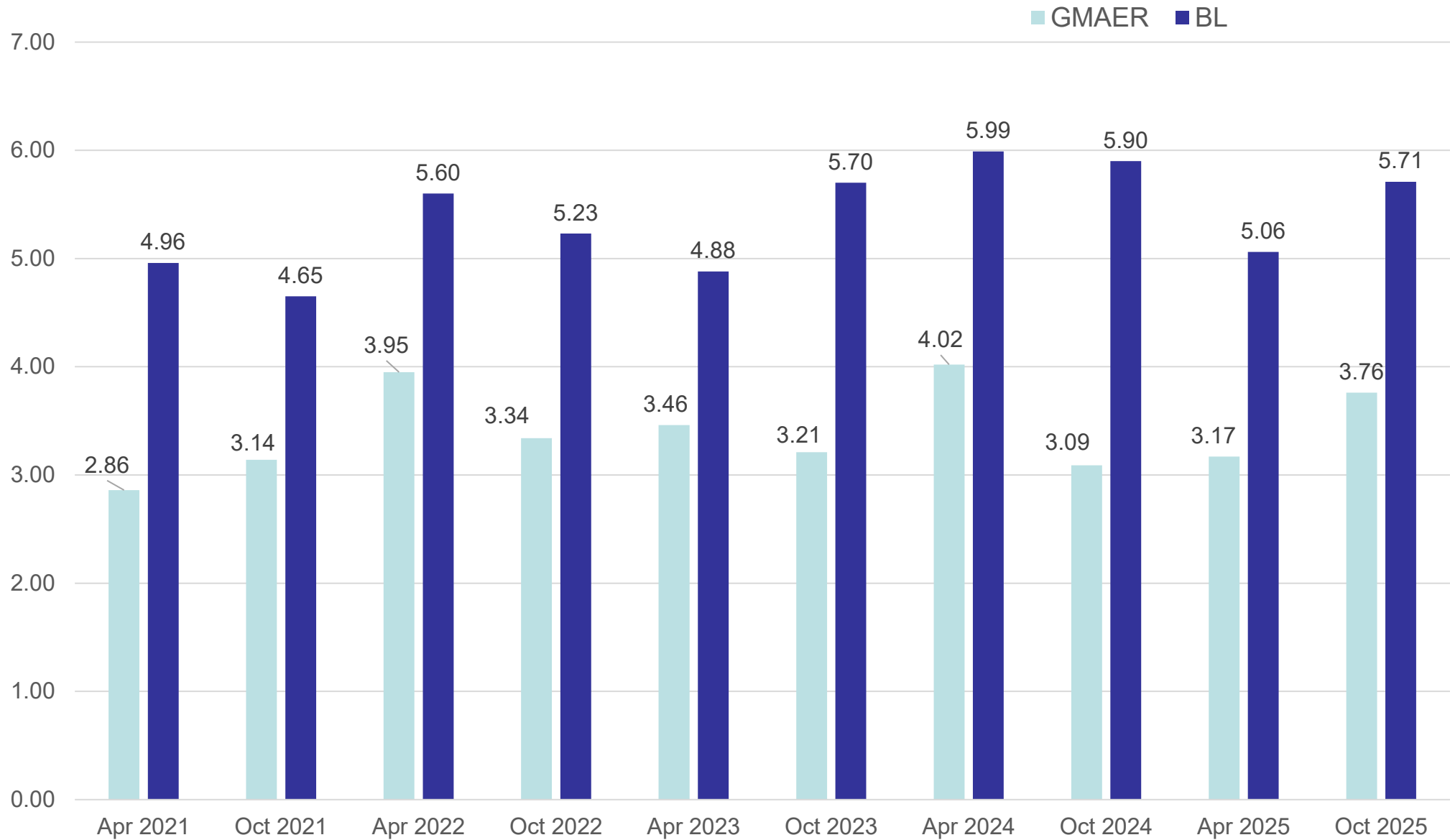
Test Status	#
No failed tests	-
Totals	0

GMAER - Lost Tests*

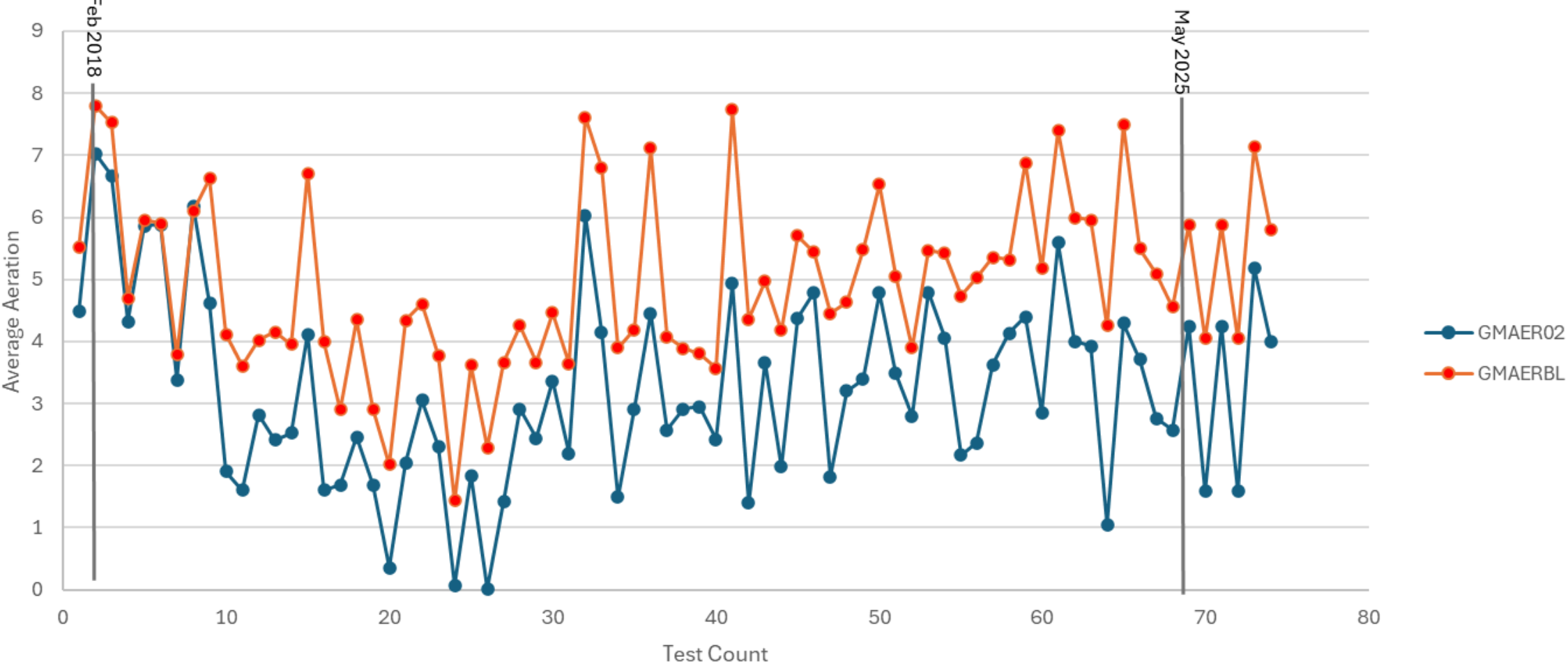
Test Status	#
No lost tests this reporting period	-
Totals	0

*Invalid and aborted tests

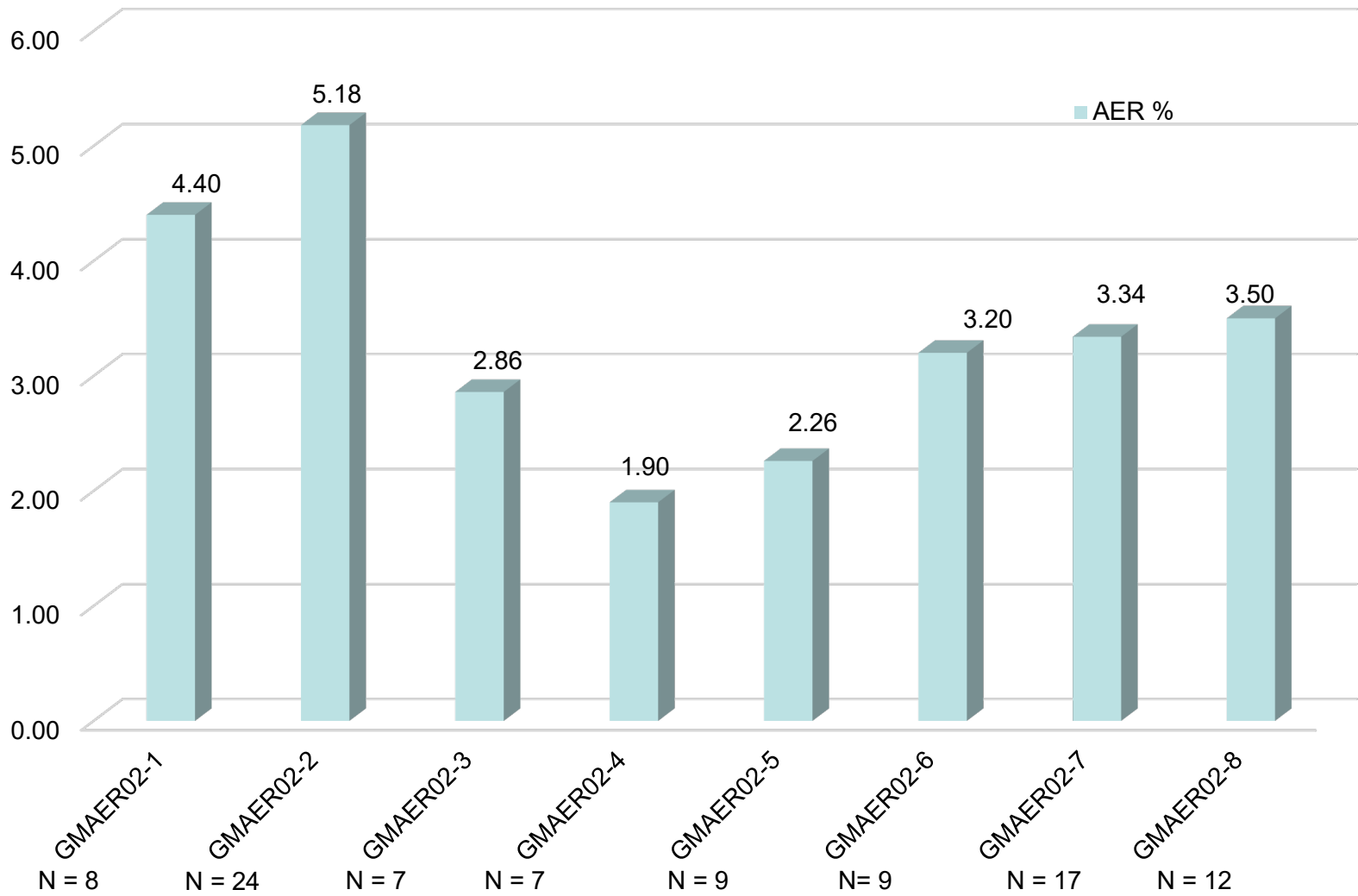
Average Aeration by Report Period



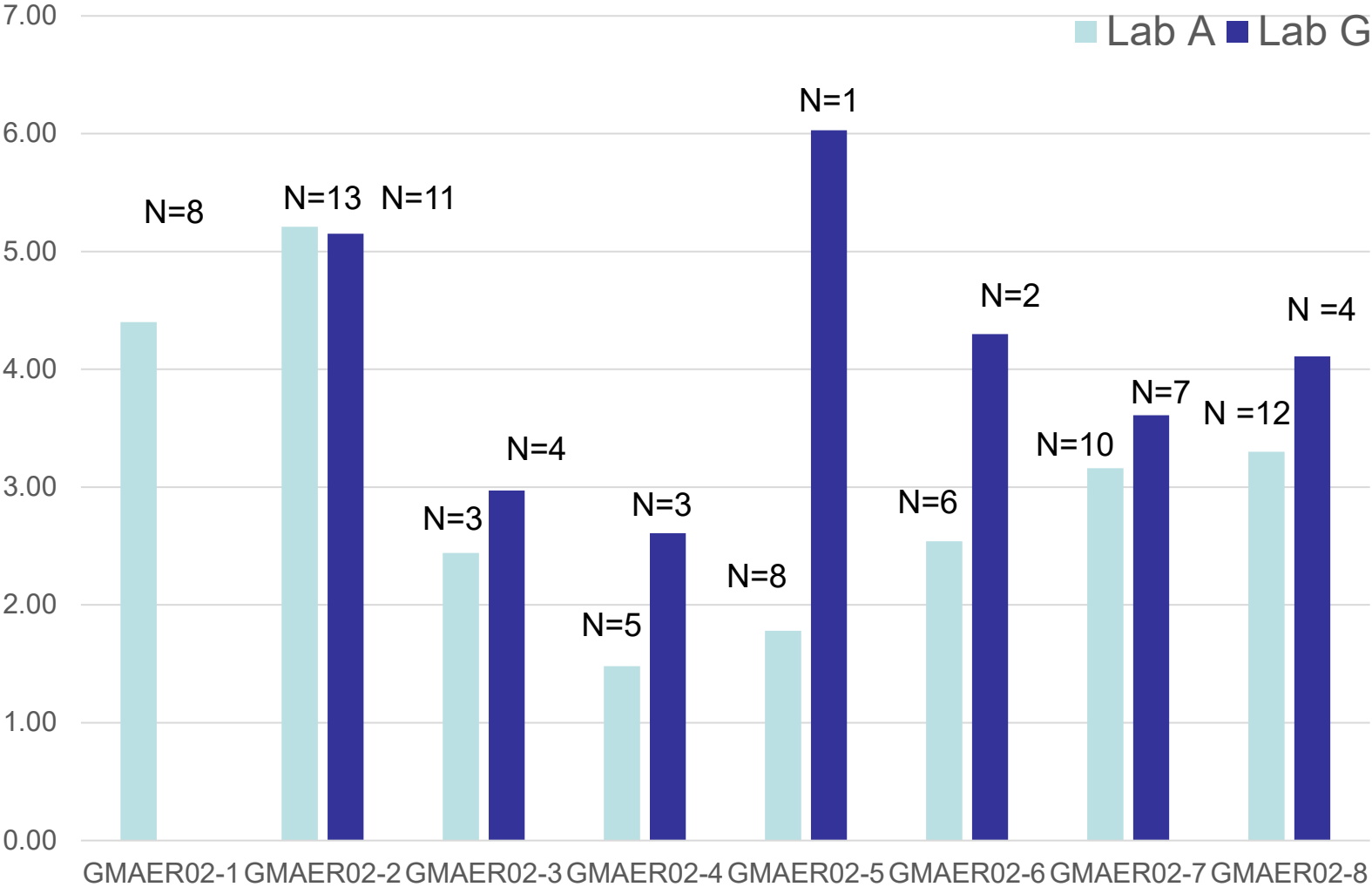
GM Aeration Test
GAER02 and GAERBL Reference Test Results



Average AER by Reference Oil Batch



Average Aeration by Lab and Reference Oil Blend



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GMOD

October 2025

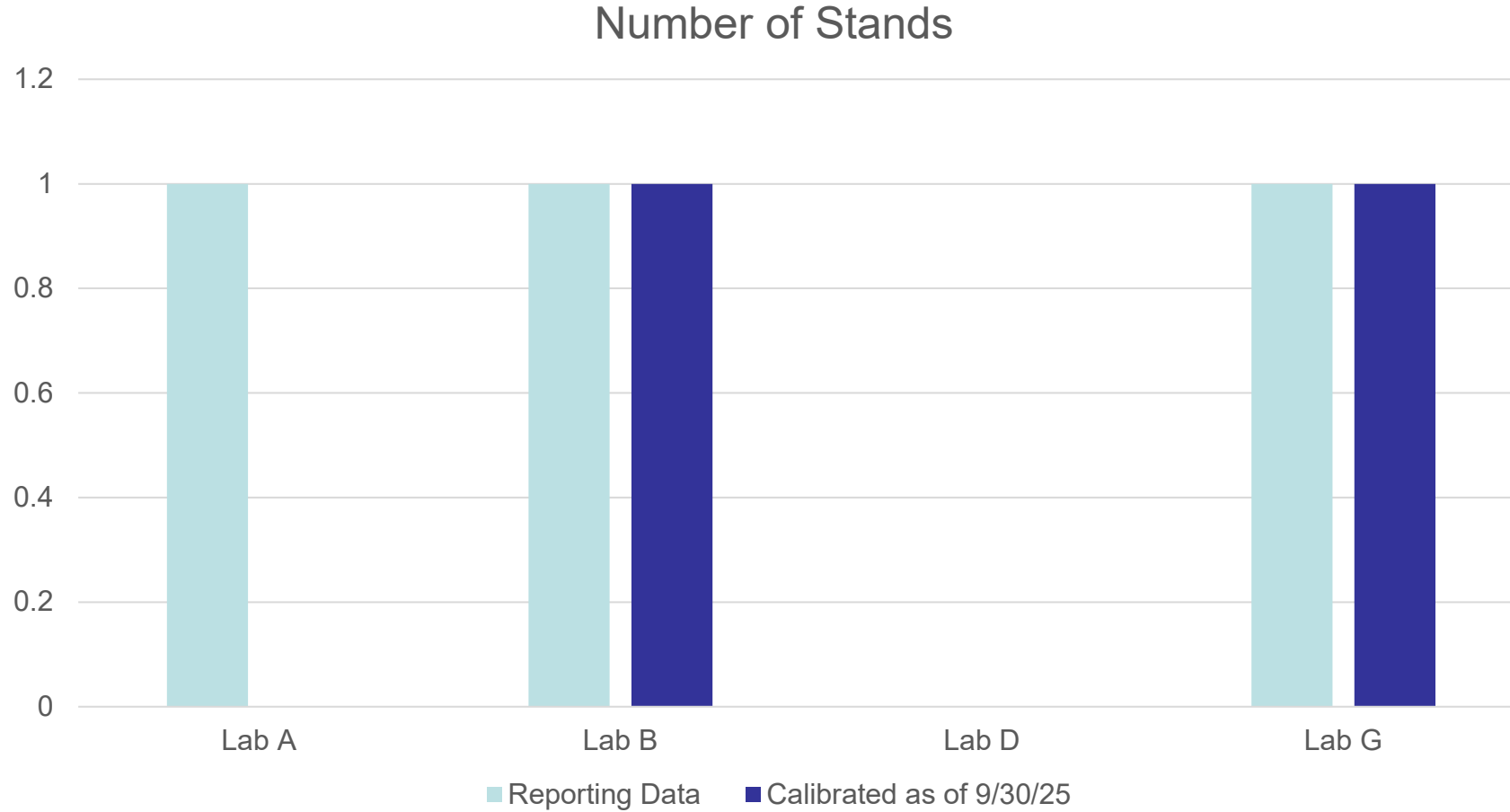
Summary of Activity

- Three calibrated stands in three laboratories
 - Lab D stand is not referenced
 - Lab B reference their stand this reporting period, but has since gone out of reference
- Reference oils
 - GMOD02-2 was introduced this period.
 - Industry Correction Factors Added for Batch 10 pistons.
 - See [Info Letter 25-1](#) for details
- All parameters in control for severity and precision

GMOD Activity

Test Status	Validity Code	#
Acceptable Calibration Test	AC	4
Un-Acceptable Calibration Test	OC	1
Total		5

GMOD Test Stands



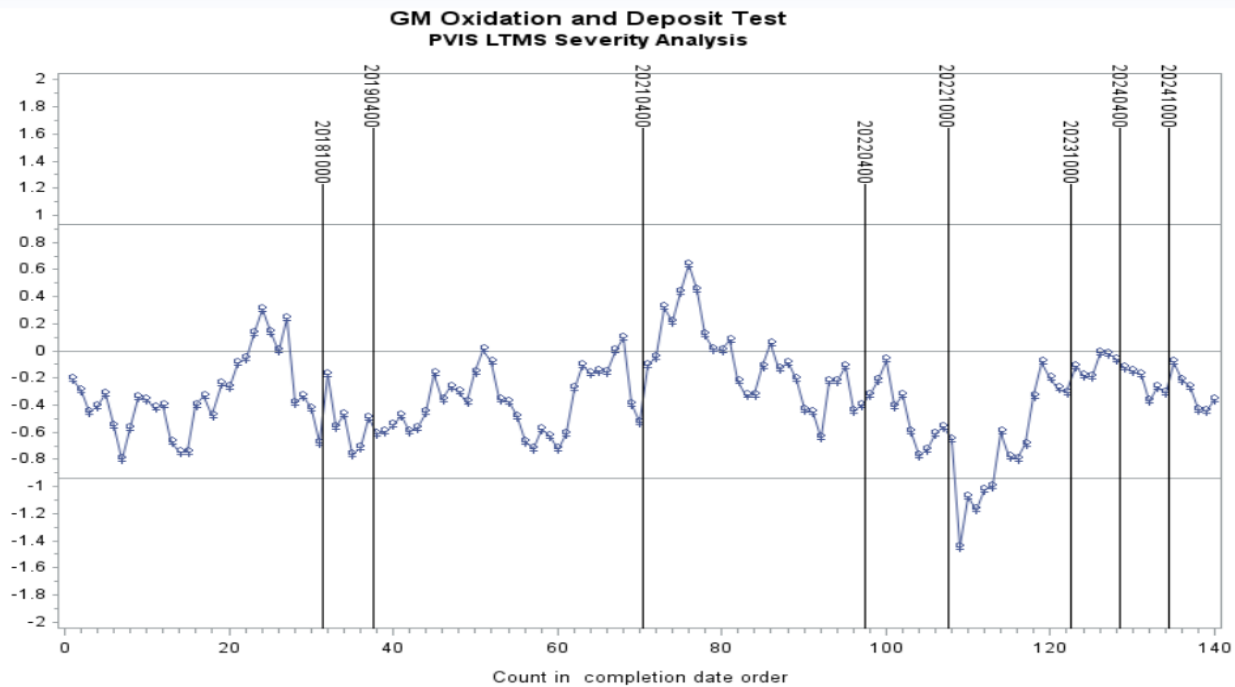
GMOD - Failed Tests

Test Status	#
PVIS Mild	1
Total	1

GMOD – Lost Tests

Test Status	#
No lost test this reporting period	
Total	0

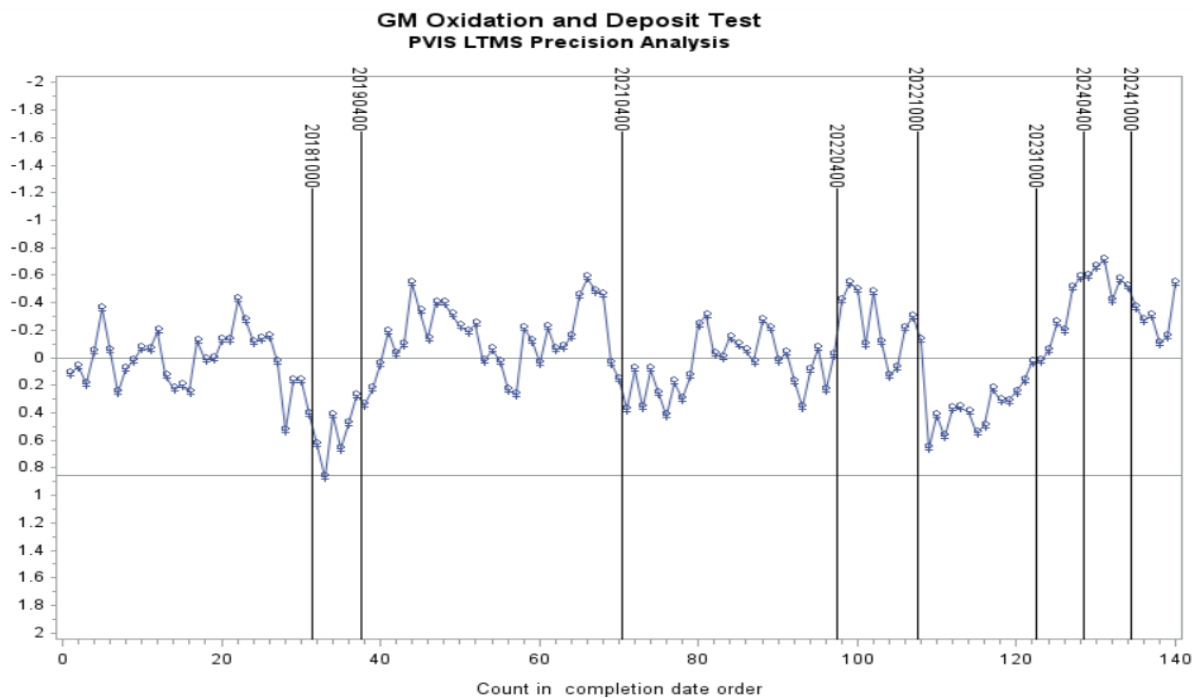
standard deviation units



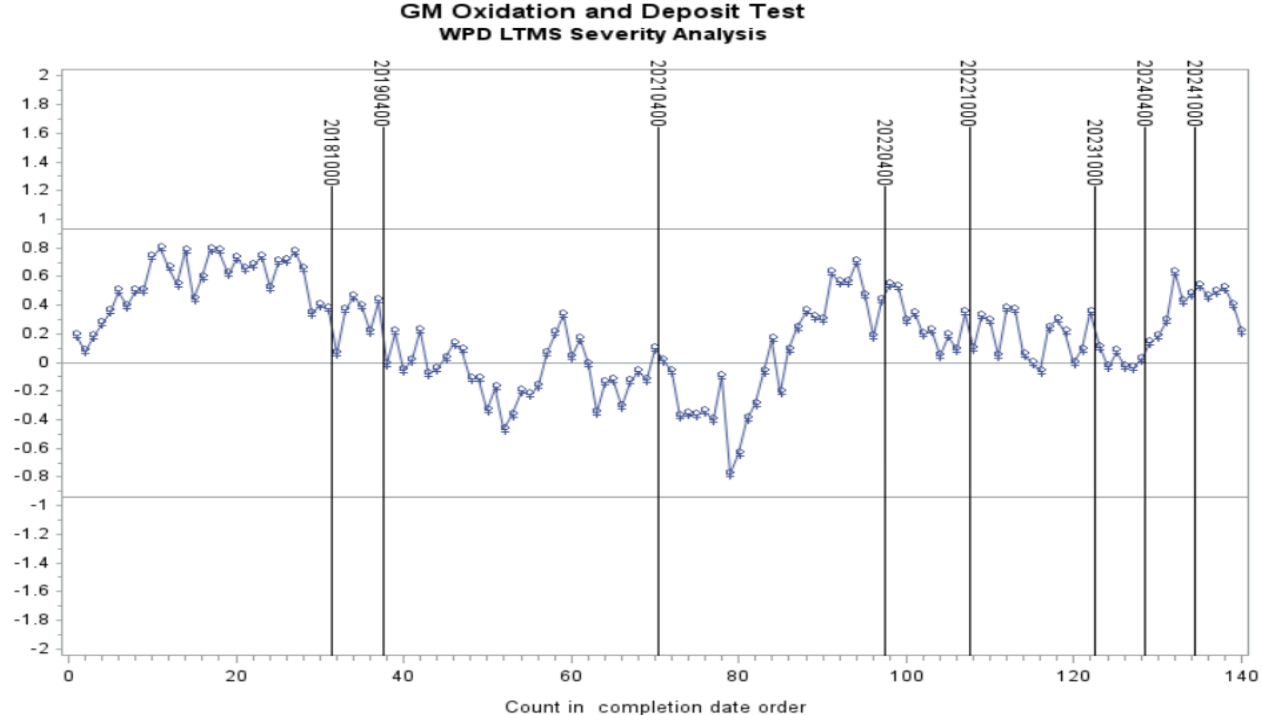
PVIS Severity / Precision

- PVIS was in control for both severity and precision

standard deviation units



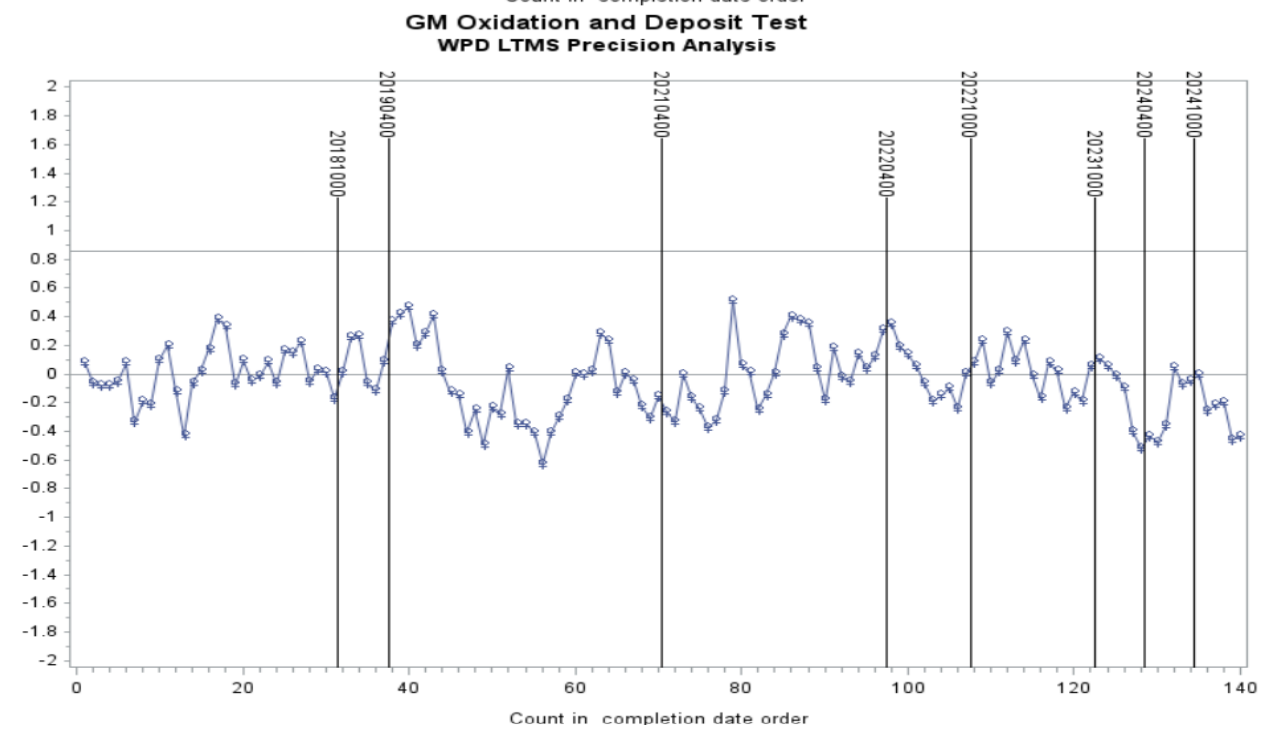
Standard Deviation Units



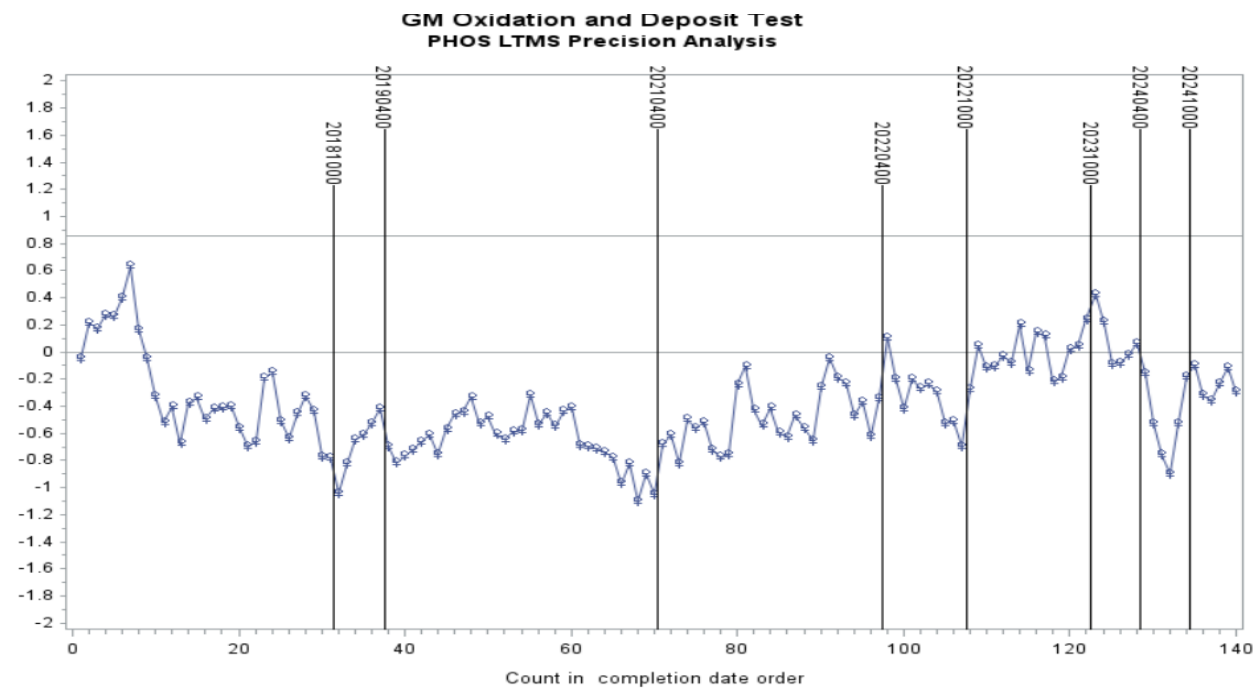
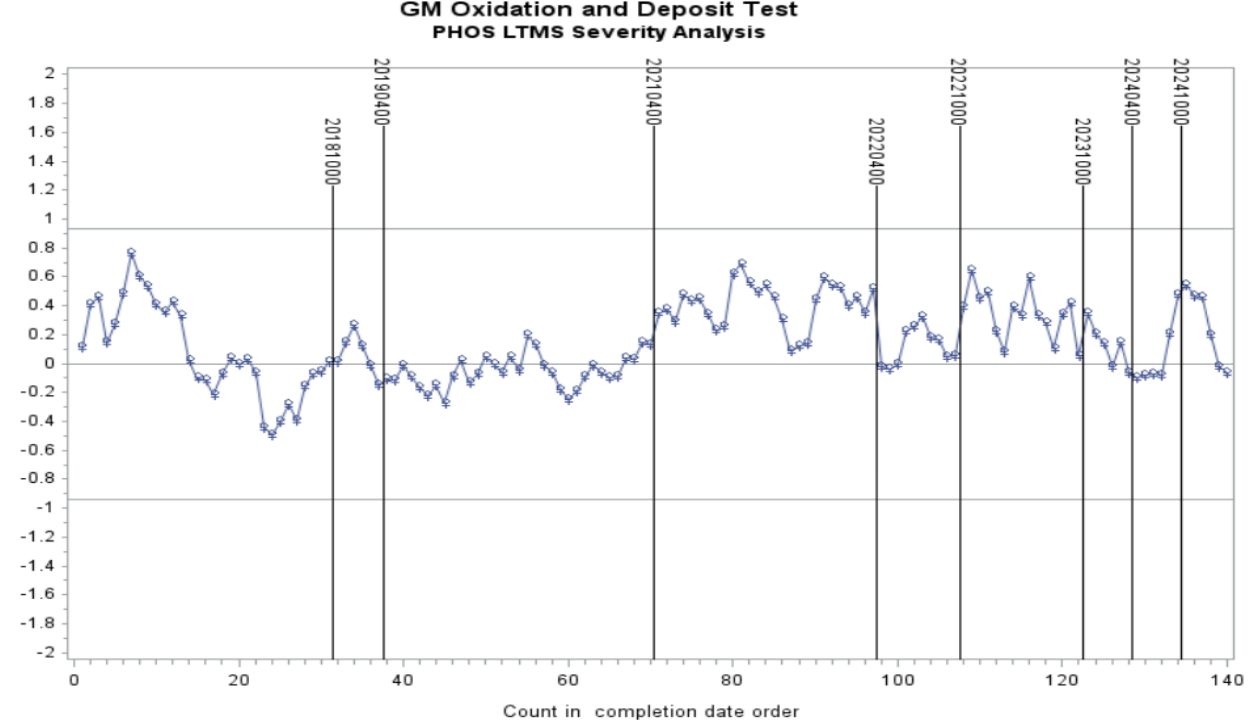
WPD Severity / Precision

- WPD is in control for severity and precision

Standard Deviation Units



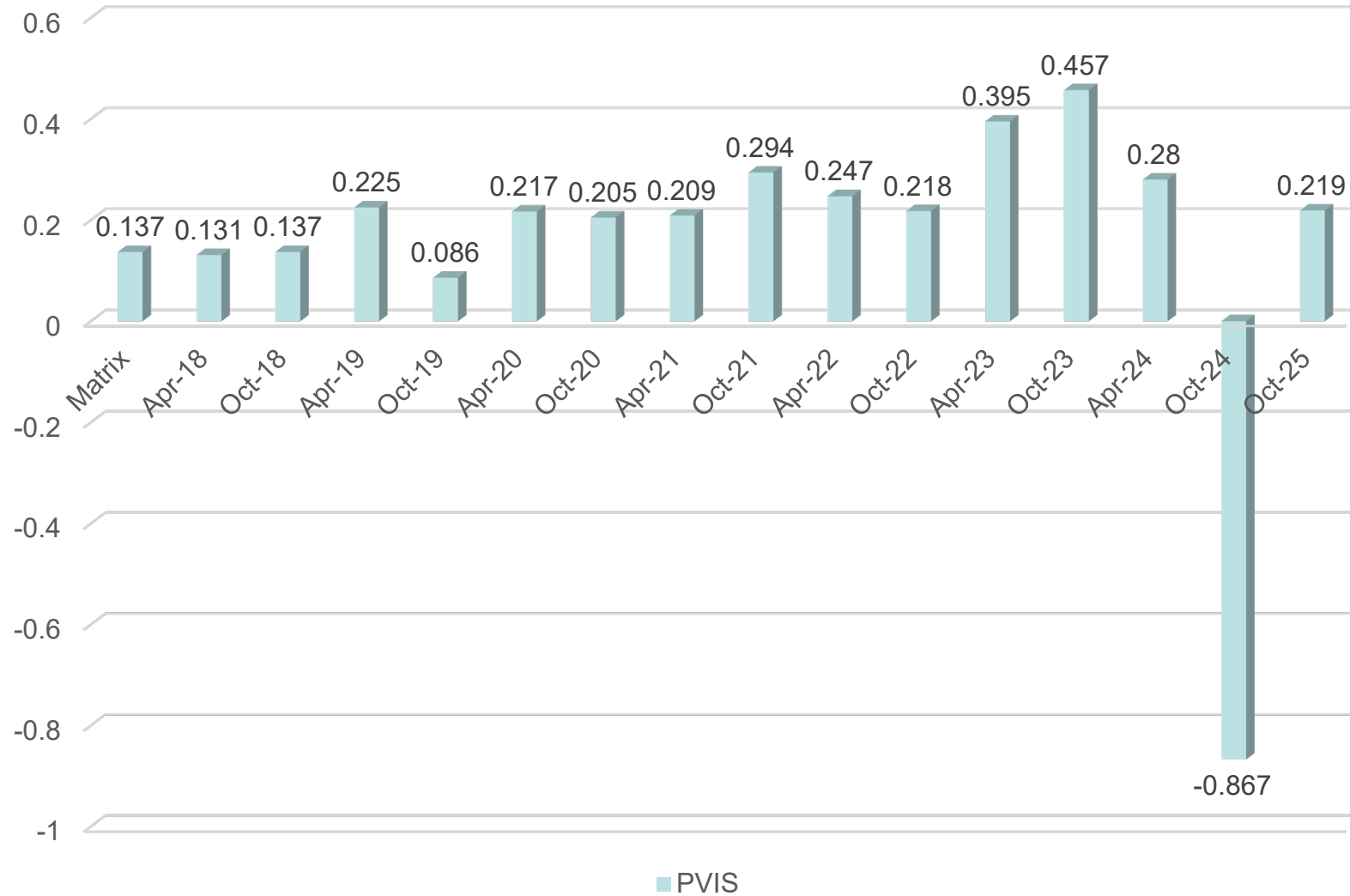
Standard Deviation Units



PHOS Severity / Precision

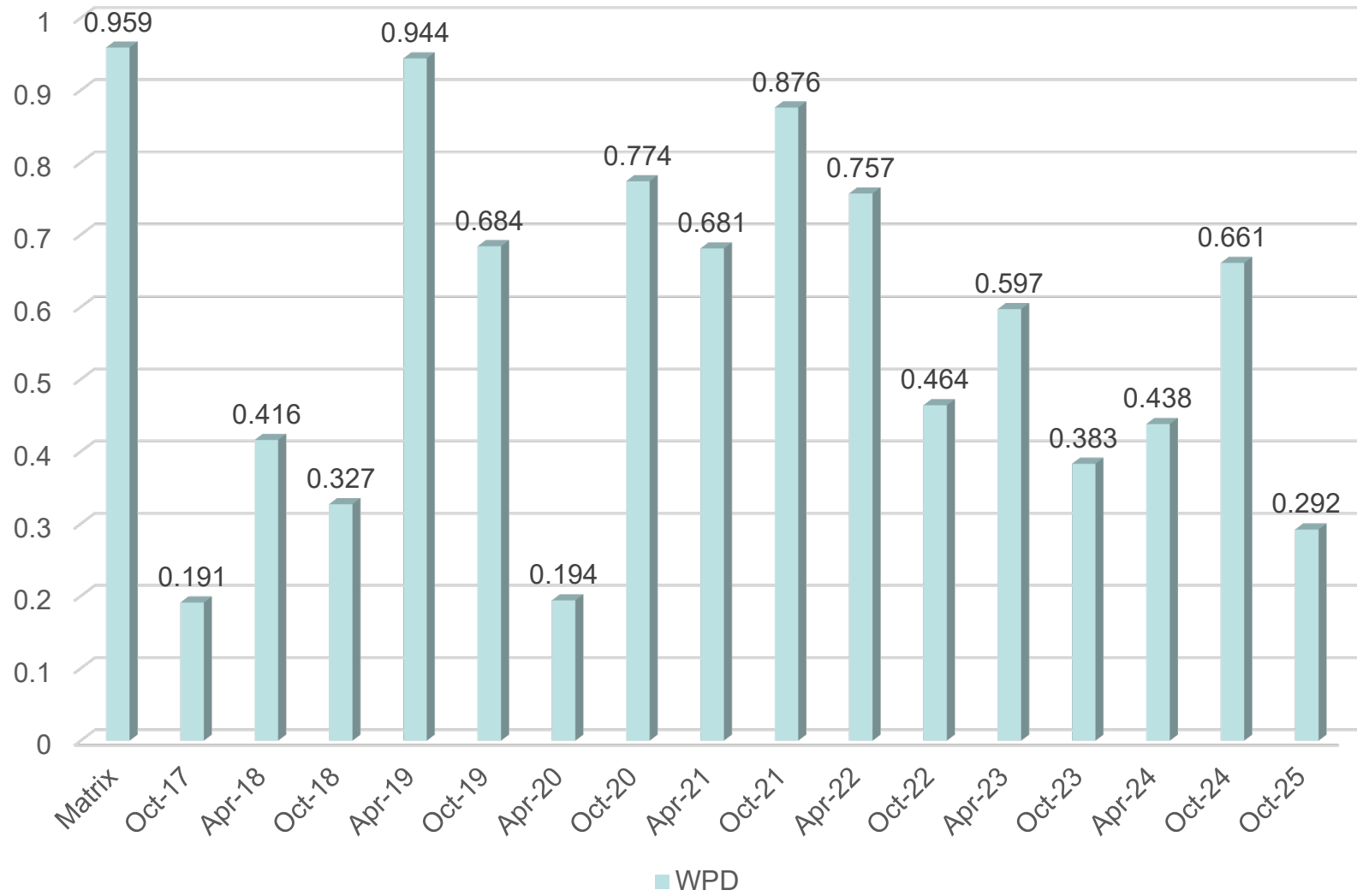
- PHOS is in control for severity and precision

PVIS – Pooled s Values by Report Period

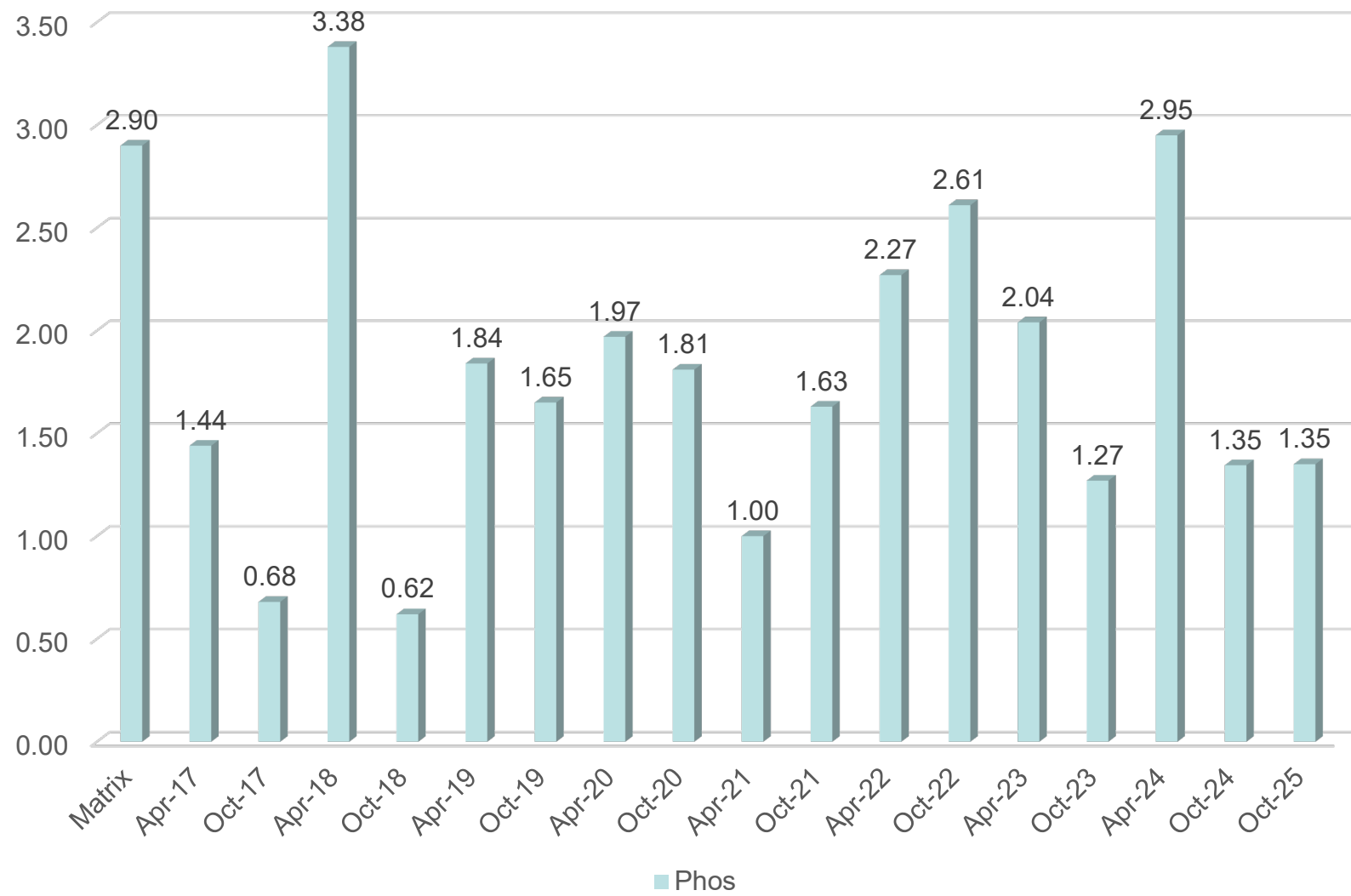


PVIS estimates calculated in transformed units

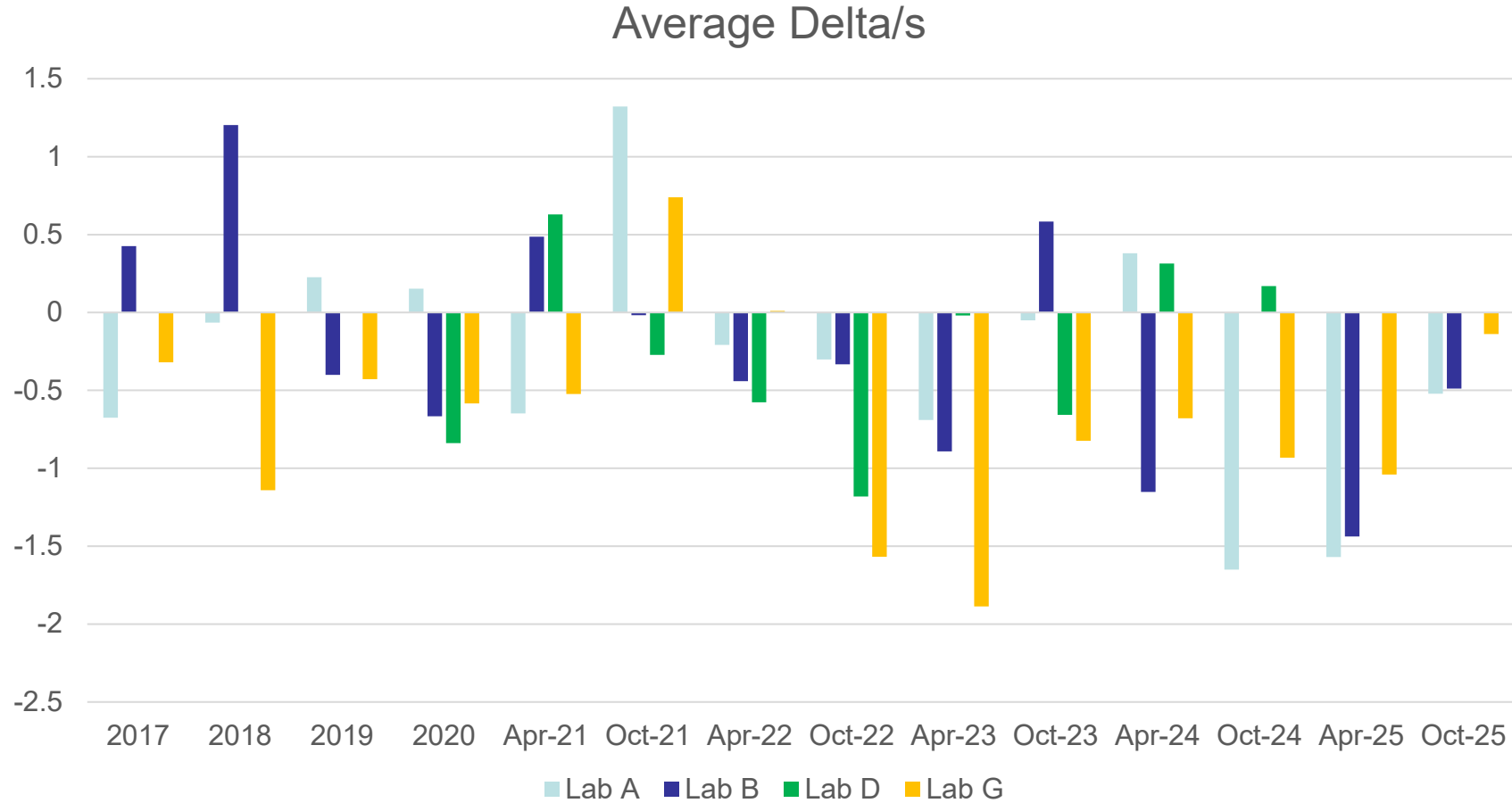
WPD – Pooled s Values by Report Period



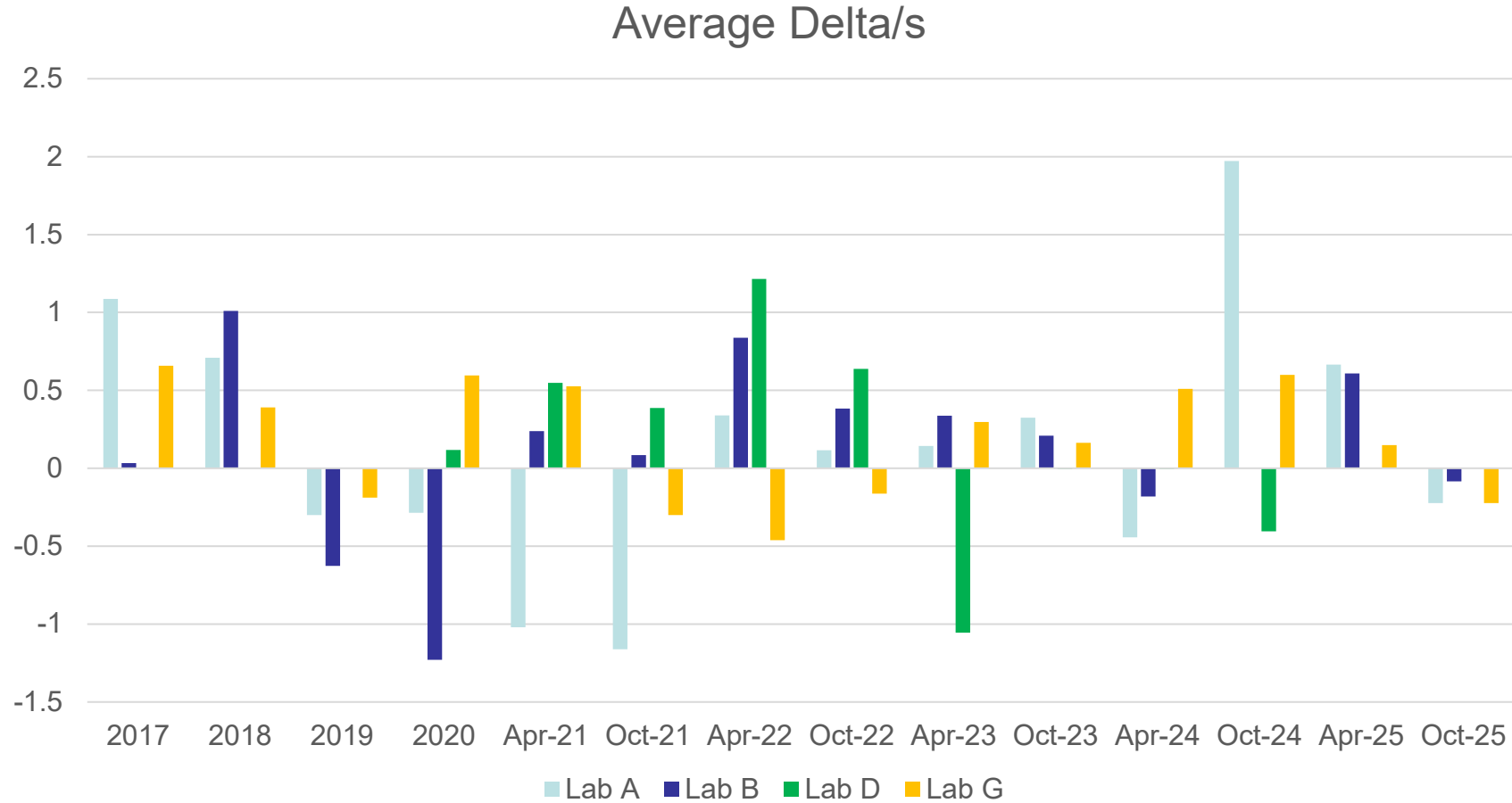
PHOS – Pooled s Values by Report Period



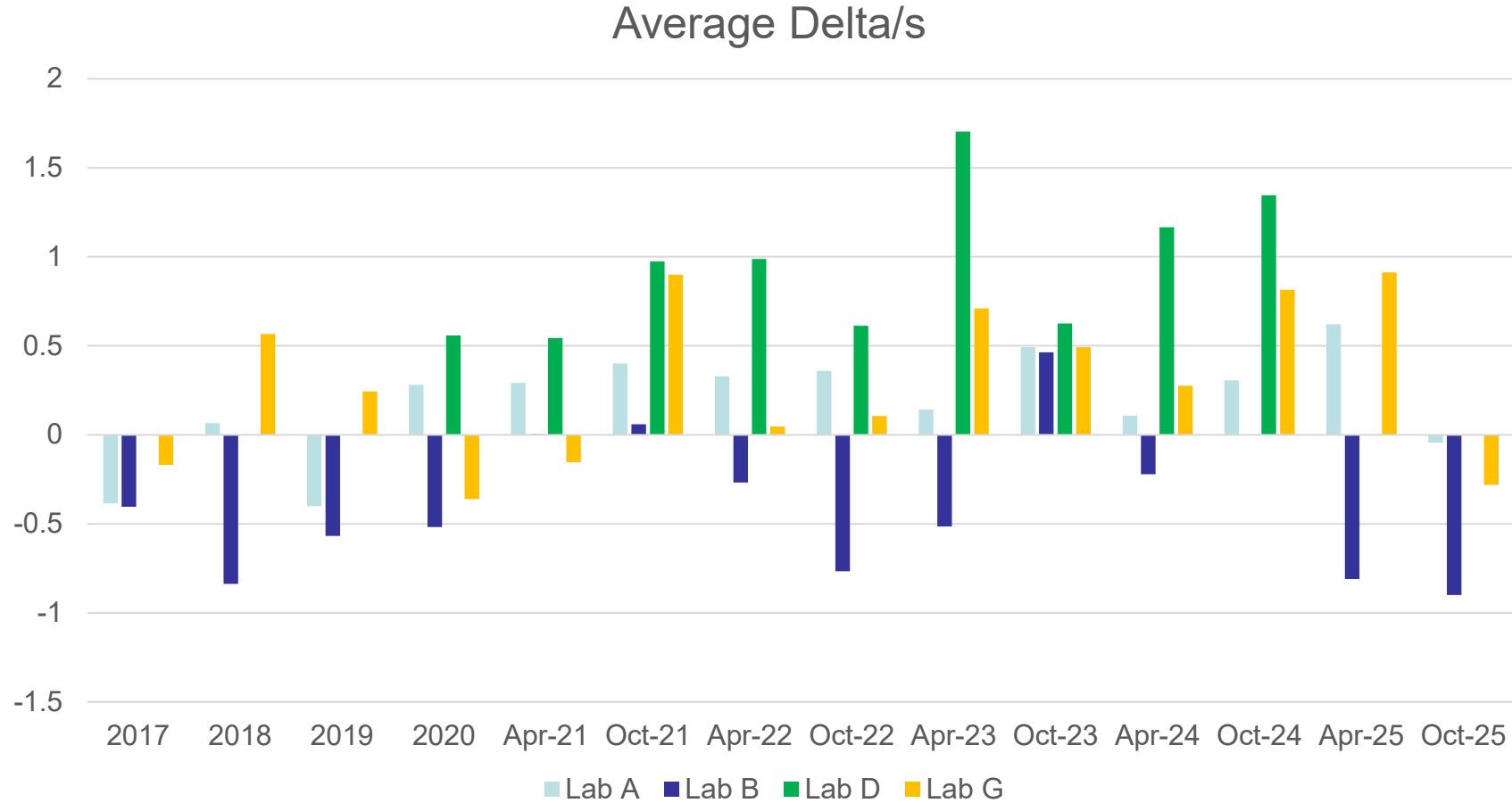
Average delta/s by Lab % Viscosity Increase



Average delta/s by Lab Weighted Piston Deposits



Average delta/s by Lab % Phosphorus Retention



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GMOEE

October 2025

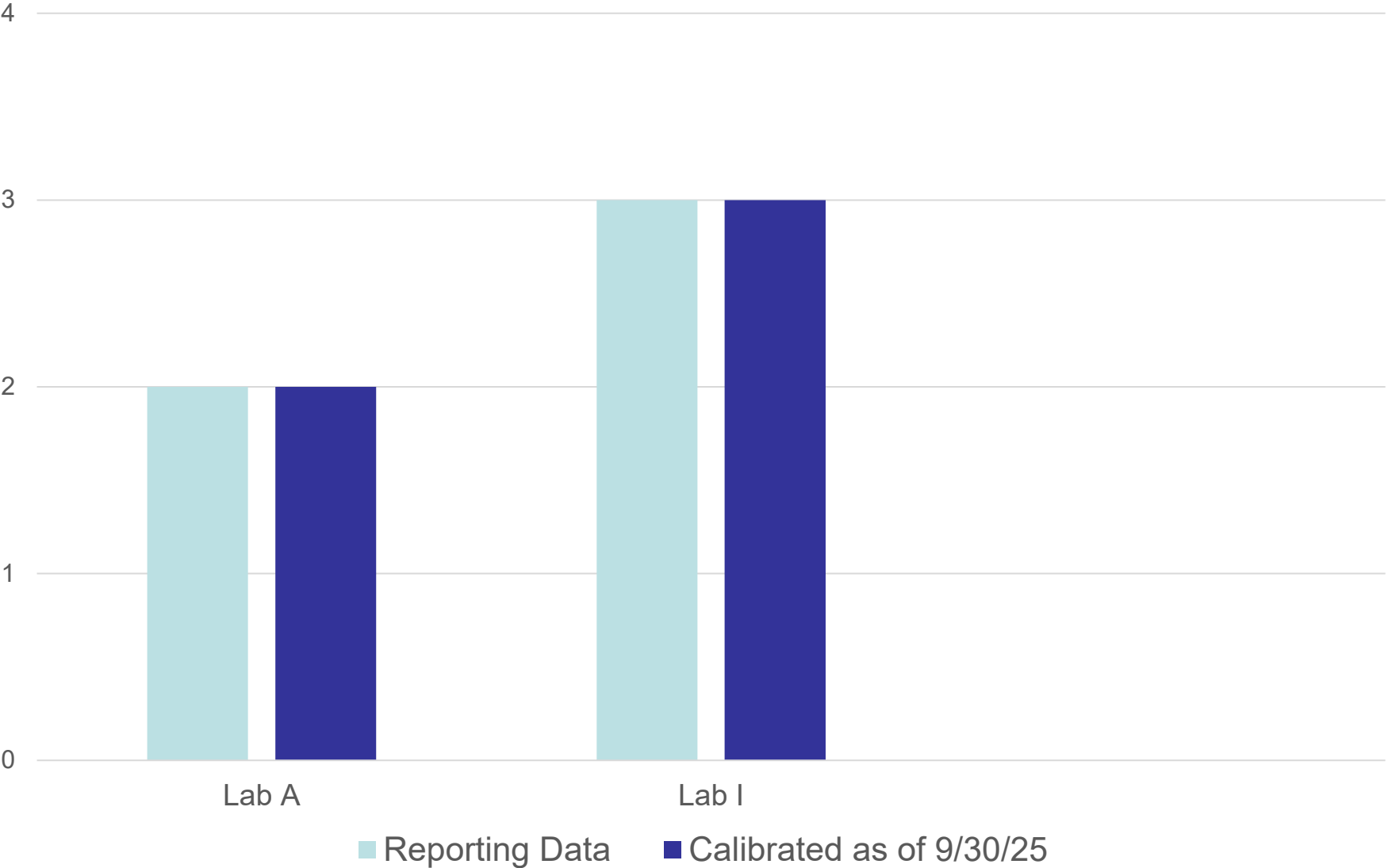
Summary of Activity

- 2 calibrated laboratories
- No failing tests this reporting period.

GMOEE Activity

Test Status	Validity Code	#
Acceptable Calibration Test	AC	3
Statistically Unacceptable Calibration Test	OC	0
Total		3

Calibrated Labs and Stands



GMOEE - Failed Tests

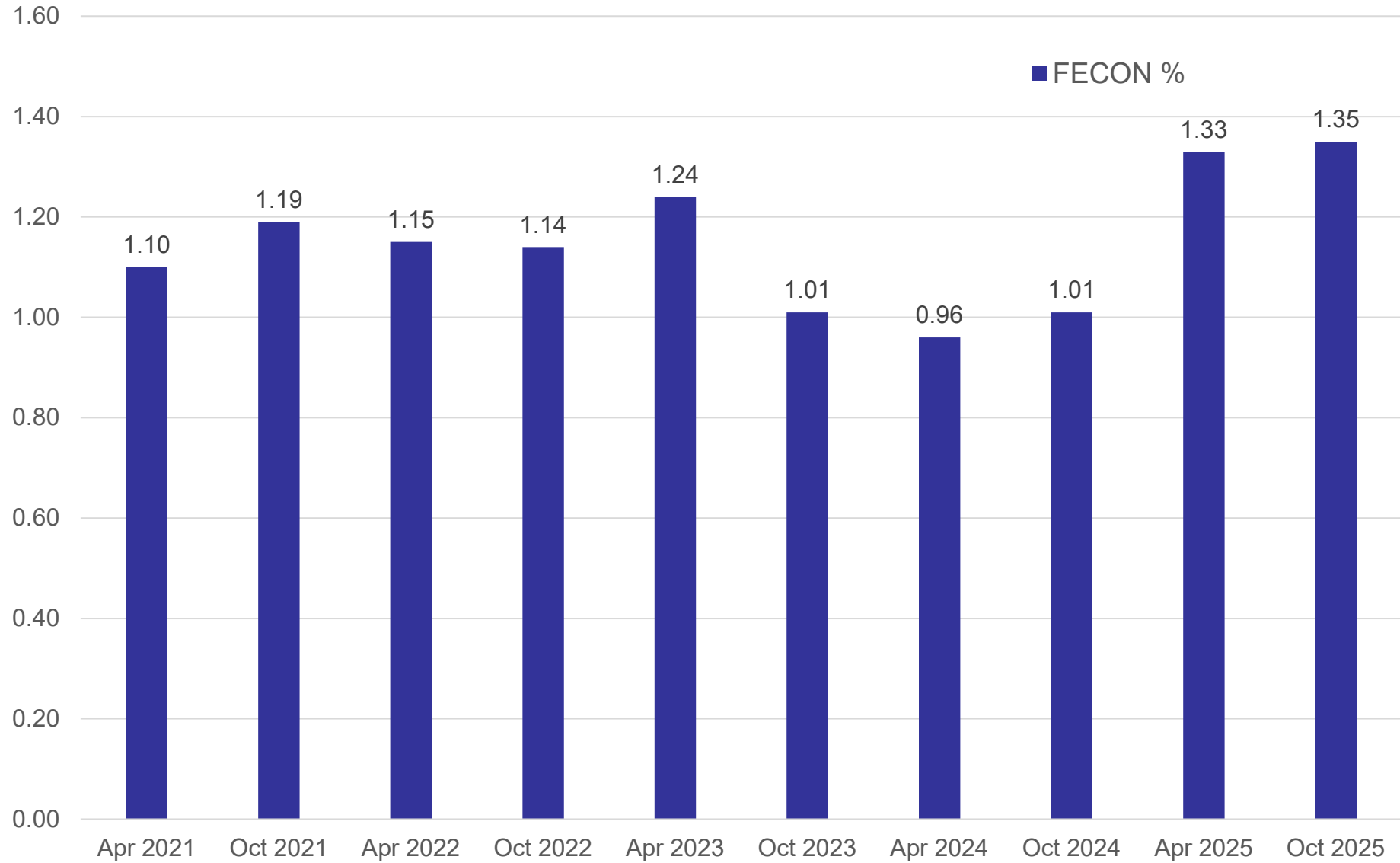
Test Status	#
No failing tests this reporting period	0
Totals	0

GMOEE - Lost Tests*

Test Status	#
No Lost Tests	-
Totals	0

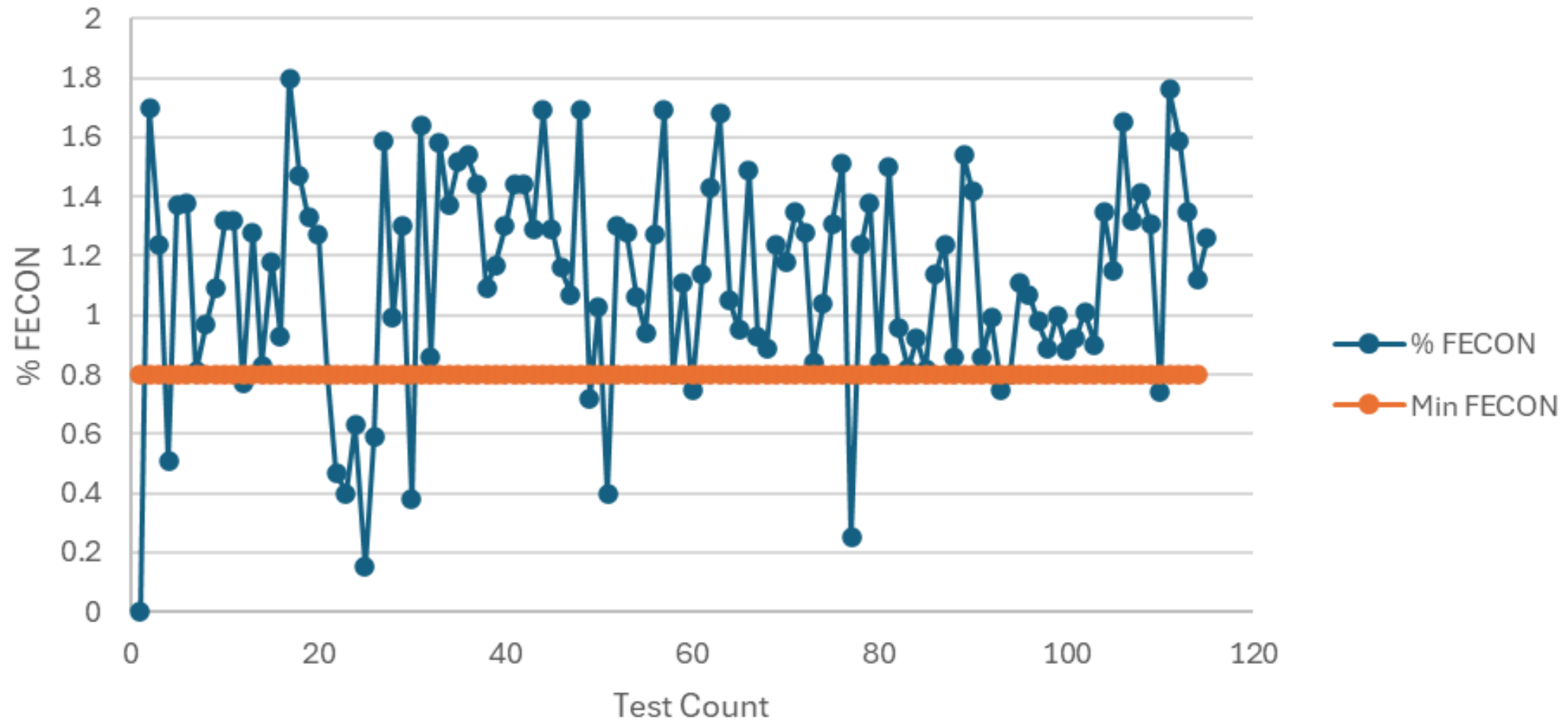
*Invalid and aborted calibration tests

Average AVFECON (%) by Report Period



GM Fuel Economy Test

% FECON vs. Min FECON Reference Test Results



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GMSP13

October 2025

Summary of Activity

- 30 tests were reported this period.
- There were no lost or failing tests this report period.

GMSPi3 Activity

Test Status	Validity Code	#
Acceptable Calibration Test*	AC	30
Statistically Unacceptable Calibration Test	OC	0
Invalid Calibration Test	LC	0
Terminated Early Calibration Test	XC	0
Total		30

GMSP13 - Failed Tests

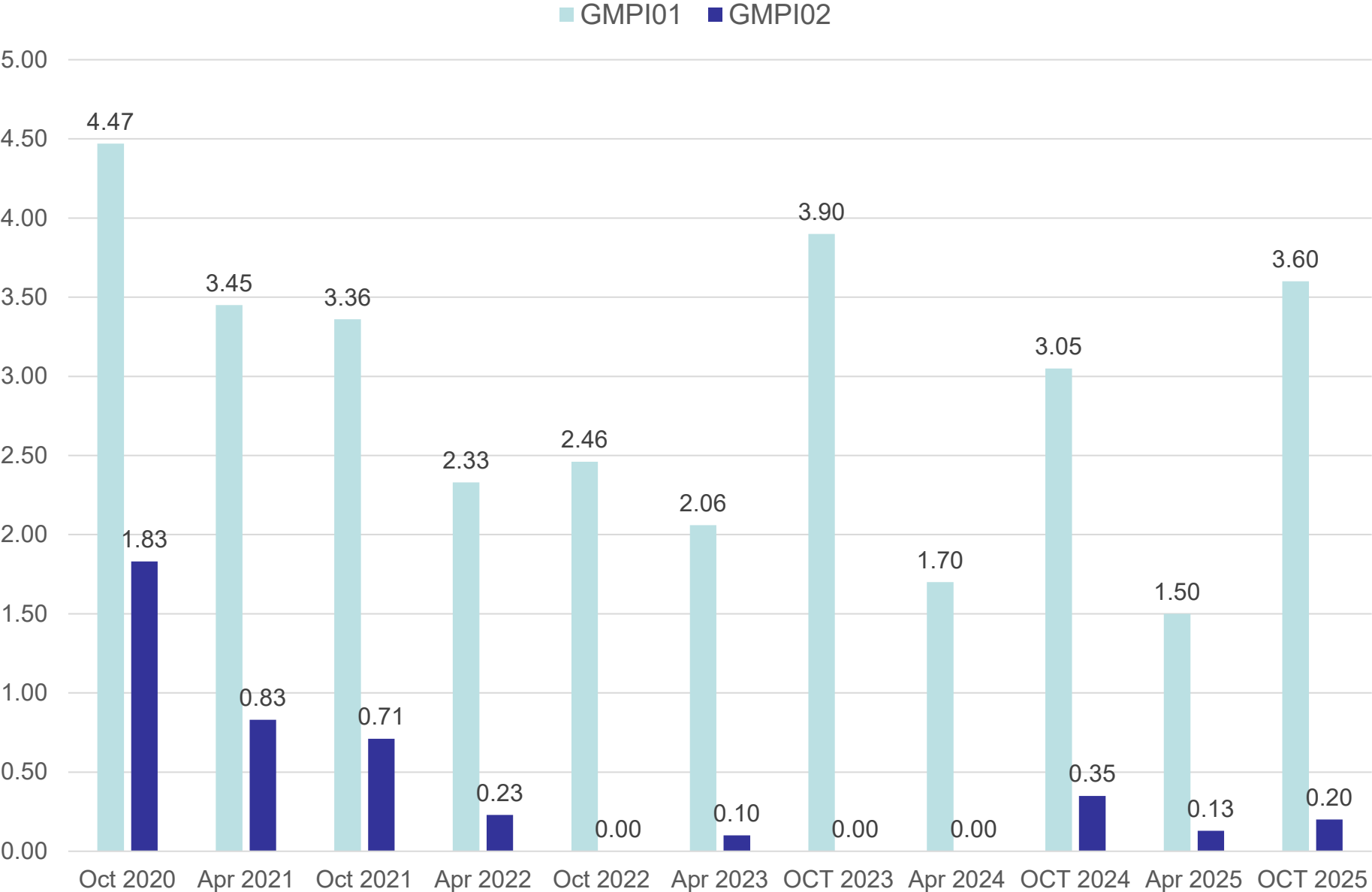
Test Status	#
No failed test this period	-
Totals	0

GMSPi3 - Lost Tests*

Test Status	#
No failed tests this period	-
Totals	0

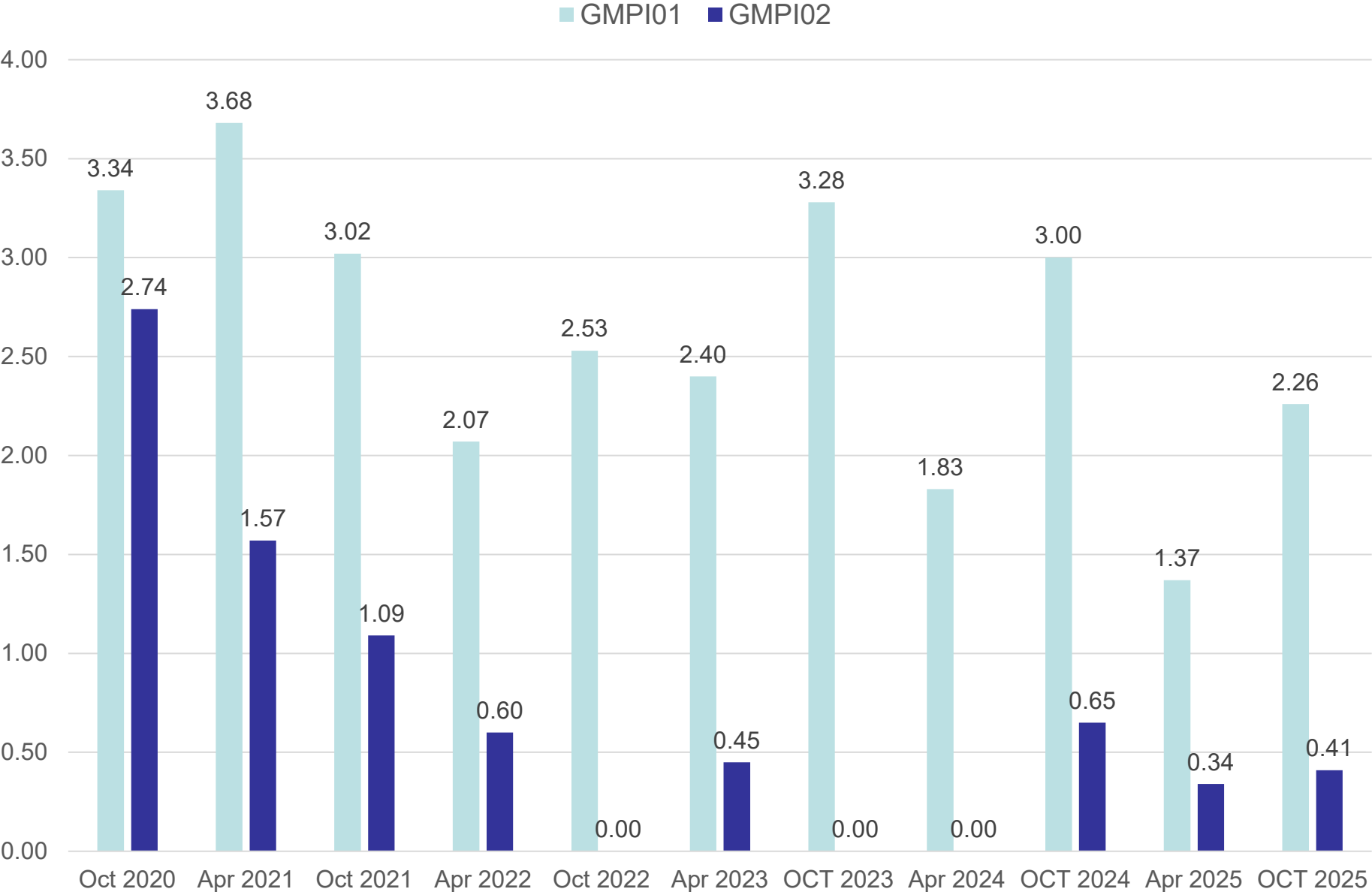
*Invalid and aborted tests

Average TPICBEVT by Report Period



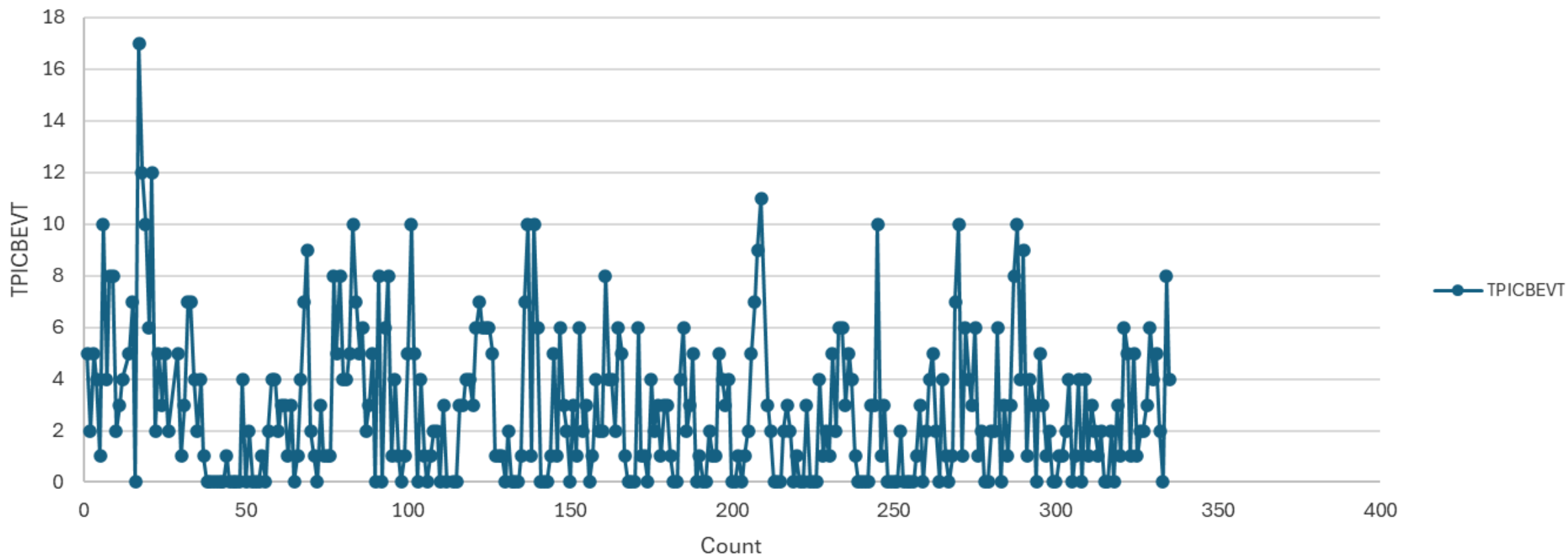
Oct 2020 averages include non-blind development tests

Standard Deviation of TPICBEVT by Report Period

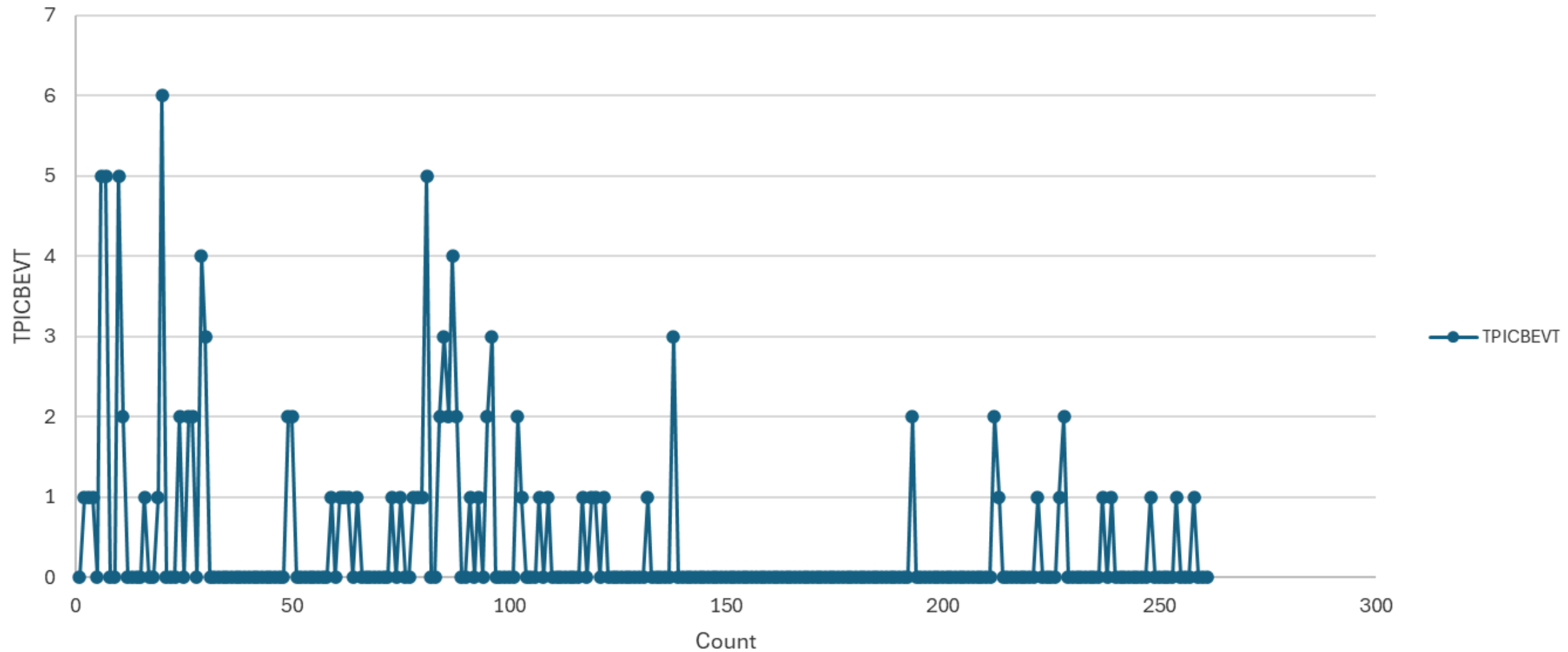


Oct 2020 standard deviations include non-blind development tests

GMPI01 Reference Test Results



GMPI02 Reference Test Results



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GMTC

October 2025

Summary of Activity

- One reference tests reported this period
 - Resulted in test stand calibration
 - One result on reference oil TC01-1

GMTC Activity

Test Status	Validity Code	#
Acceptable Calibration Test	AC	1
Statistically Unacceptable Calibration Test	OC	0
Aborted Calibration Test	XC	0
Total		1

GMTC - Failed Tests

Test Status	#
No failed tests	-
Totals	0

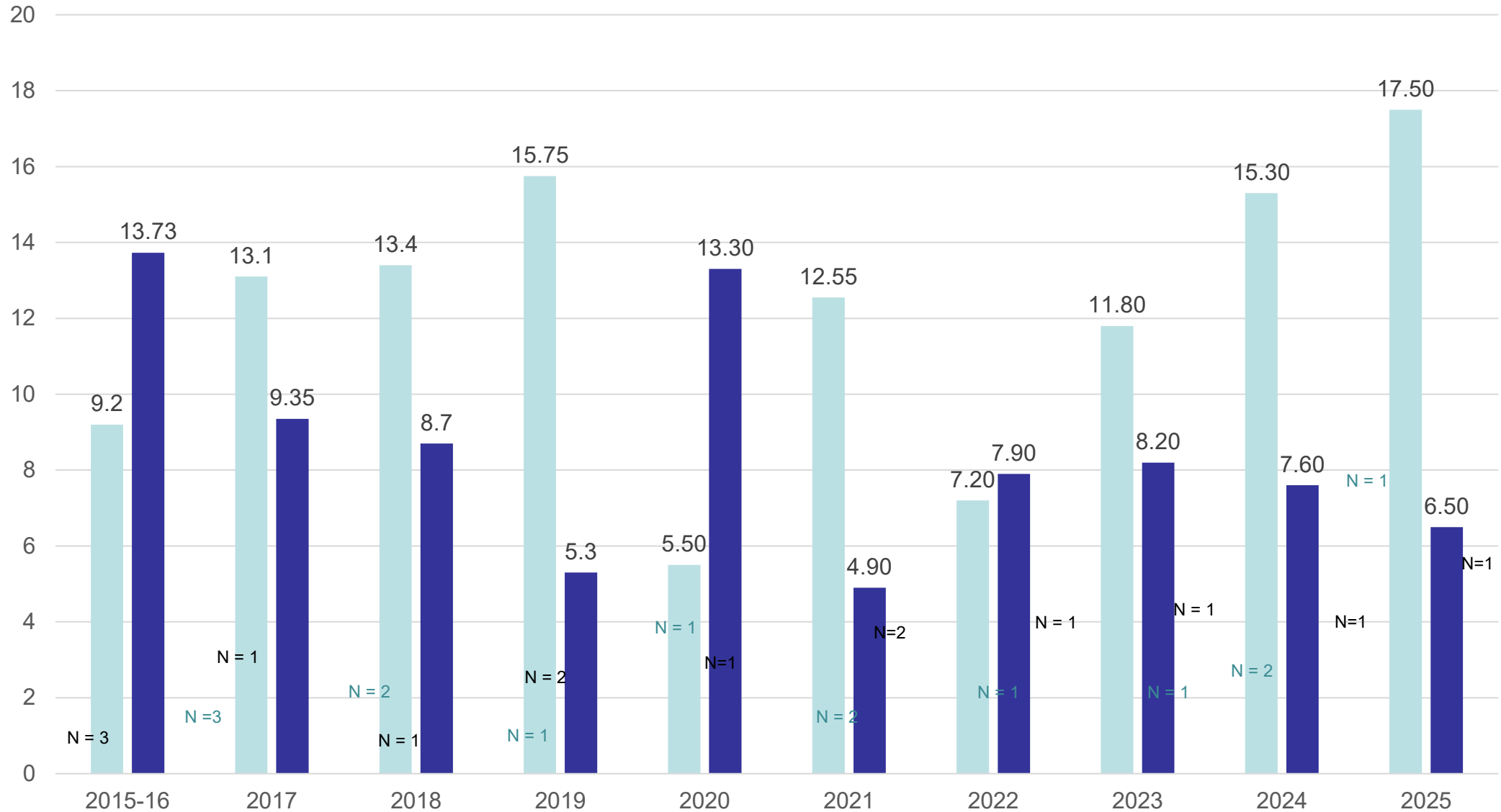
GMTC - Lost Tests*

Test Status	#
No lost tests	-
Totals	0

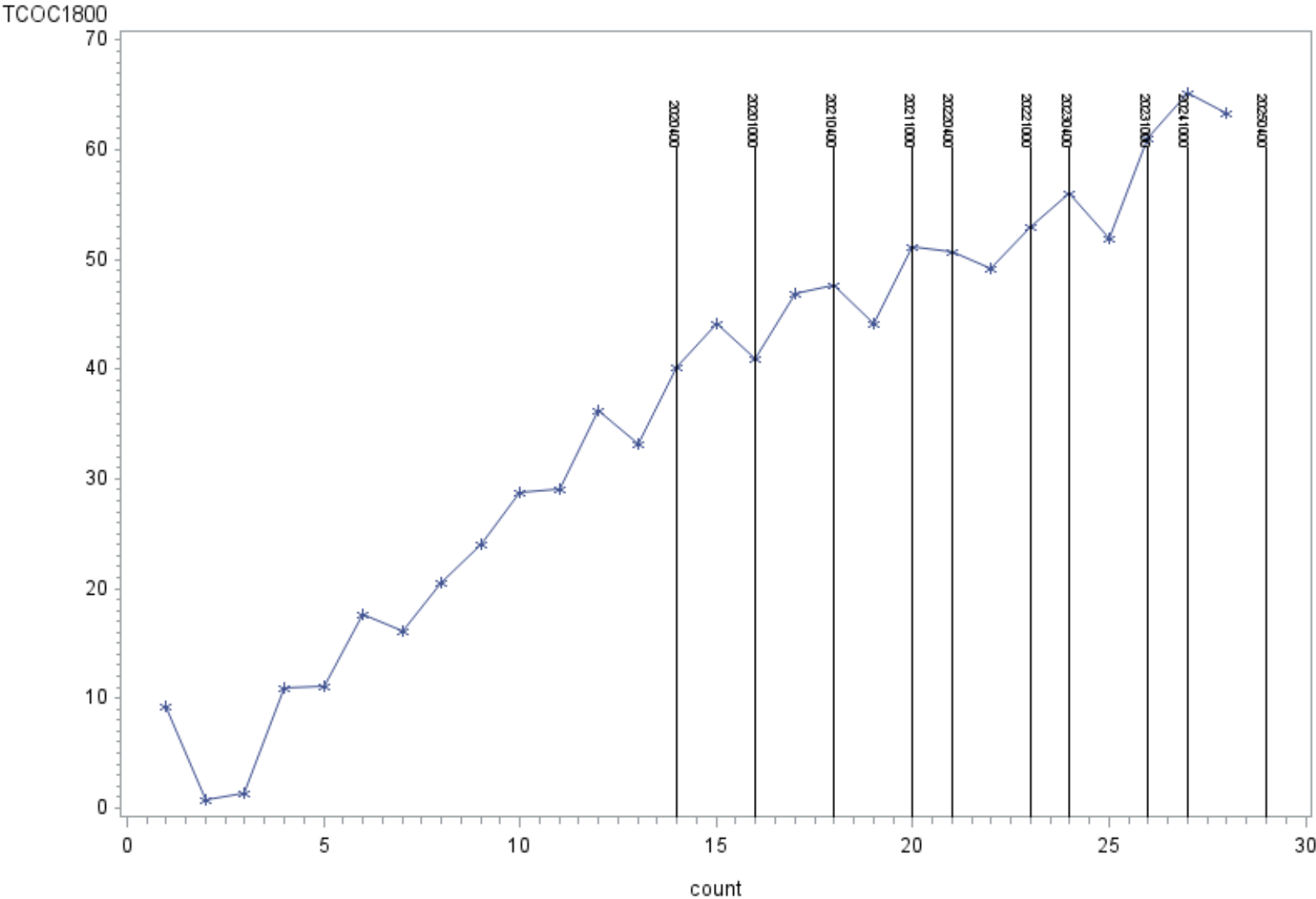
*Invalid and aborted tests

Average TCOC1800 by Report Period

GMTC01 GMTC02



GM Turbo Coking Test
TCOC 1800 Summation Delta Reference Test Results



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Lab Visits

October 2025

TMC/GM Lab Visits

Test	Number of Labs Visited
GMAER	2
GMOD	2
GMOEE	1
GMSPi3	1
GMTC	1

Lab Visit Issues

No significant items identified this period

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Oil Inventory

October 2025

Reference Oil Inventory Estimated Life

<u>Original Blend</u>	<u>Section</u>	<u>Oil</u>	<u>Tests</u>	<u>Year</u>	<u>Blend Quantity</u>	<u>TMC Inventory</u>	<u>Estimated Life</u>	<u>Comment</u>
434	PCMO	434-3	IIIH, GMOD	2017	980	420	4	
GMAER02	PCMO	GMAER02-8	GMAER	2023	160	43.22	1	Small batch oil
GMAERBL	PCMO	GMAERBL-9	GMAER	2022	532	0	0.5	Reblend requested
GMAERBL	PCMO	GMAERBL-10	GMAER	2024	545	141	1	reblend of GMAERBL-9
GMOD01	PCMO	GMOD01-2	GMOD	2023	302	242	5	
GMOD02	PCMO	GMOD02-1	GMOD	2015	320	13.3	1	Replaced by GMOD02-2
GMOD02	PCMO	GMOD02-2	GMOD	2023	298	269	5	
GMPI01	PCMO	GMPI01-4	GMSPi3	2021	530	259	4	
GMPI02	PCMO	GMPI02-3	GMSPi3	2020	530	76	1	
GMPI02	PCMO	GMPI02-4	GMSPi3	2022	584	584	> 5	
GMTC01	PCMO	GMTC01-1	GMTC	2014	110	0		
GMTC02	PCMO	GMTC02-1	GMTC	2015	144	52	4	
GMVFEBL02	PCMO	GMVFEBL02-2	GMOEE	2021	3402	378	1	Distributed in drum quantity
GMVFEHR01	PCMO	GMVFEHR01-2	GMOEE	2022	2120	1719	> 5	

* The inventory of 434-3 should last considerably longer as IIH has decreased quantity shipped from 4 gallons to 2.5 gallons.



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