Groundwater Construction Monitoring Report – July 2025 to February 2026

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Parklife Metro D&C

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Groundwater Construction Monitoring Report – July 2025 to February 2026

Western Sydney Airport SSTOM

Parklife Metro D&C

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GROUNDWATER CONSTRUCTION MONITORING REPORT – JULY 2025 TO FEBRUARY 2026

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CONTENTS

1. INTRODUCTION 1
1.1 Project Background 1
1.2 Objectives 1
1.3 Project Overview 2
1.4 Project Construction Status 4
2. GROUNDWATER MONITORING PROGRAM REQUIREMENTS 5
2.1 Monitoring Program 5
2.2 Groundwater monitoring network 6
2.3 Methodology 5
2.3.1 Groundwater Levels 5
2.3.2 Groundwater sampling methodology 10
2.3.3 Quality Assurance and Quality Control 12
3. COMPLIANCE REVIEW 12
3.1 VWP replacement and Rectification 12
3.2 Additions to Monitoring Well Network 13
4. EXISTING ENVIRONMENT 13
4.1 Topography 13
4.2 Rainfall and Climate 13
4.3 Geological Setting 15
4.4 Hydrogeological Setting 15
4.5 Groundwater Dependent Ecosystems 16
5. PERFORMANCE CRITERIA 17
5.1 Groundwater Level Trigger Development 17
5.1.1 Groundwater Level Trigger Criteria 18
5.2 Groundwater Quality Performance Criteria 20
5.3 GDE and Salinity Performance Criteria 23
6. GROUNDWATER MONITORING RESULTS 24
6.1 Groundwater Levels 24
6.1.1 Trigger Exceedances 24
6.2 GDE Monitoring 27
6.2.1 Groundwater levels 27
6.2.2 EC Monitoring 29
6.2.3 GDE Ecological Monitoring 29

6.3 Groundwater Quality 31
6.3.1 Field Parameters 31
6.3.2 Site Specific Trigger Exceedances 32
6.3.3 Groundwater quality in replacement wells 34
6.3.4 Trend Analysis 39
6.3.5 Data Validation 52
7. GROUNDWATER INFLOWS 53
7.1 Groundwater Inflows 53
7.1.1 Wastewater Treatment, Reuse, Disposal and Reporting 53
7.1.2 Groundwater Inflows at St Marys 54
7.1.3 Groundwater Inflows at Claremont Meadows 54
7.1.4 Groundwater inflows at APDS and ATL (Inclusive of BRG and BRD) 55
7.2 Total Project Groundwater Take 55
8. CONCLUSIONS 55
8.1 Groundwater Levels 56
8.2 Groundwater Quality 56
8.3 Groundwater inflows 57
8.4 Recommendations 57
9. REFERENCES 59

LIST OF TABLES

Table 1-1: SSTOM Works Activity Schedule 4
Table 2-1: Active Monitoring Wells in Program 0
Table 2-2: Wells Removed from Program 3
Table 2-3: Gauging Results 6
Table 2-4: Accessed VWPs 8
Table 2-5: Electrical Conductivity and Level Monitoring Locations 9
Table 2-6: Groundwater Sampling Methodology 10
Table 2-7: List of wells and analytical suites 11
Table 3-1: VWP Maintenance Works 13
Table 4-1: Annual Rainfall Data – Badgerys Creek AWS (67108) 14
Table 4-2: Annual Rainfall Data – Penrith Lakes AWS (67113) 14
Table 4-3: Rainfall Events Exceeding 20 mm Across the Monitoring Period 14
Table 4-4: Standing Water Levels Monitored at Metro Stations (from PLM, 2023b) 16
Table 5-2: Groundwater Level Traffic Light Level Trigger System 18
Table 5-3: Groundwater quality action triggers 21
Table 5-4: Preliminary EC and Groundwater Level SSTVs for Continuous Monitoring of GDEs 23
Table 6-1: Trigger Level Assessment 26
Table 6-2: Groundwater level monitoring at GDEs 27

Table 6-3: GDE groundwater salinity monitoring....29
Table 6-4: Mean percent canopy cover (AMBS, 2024) Survey Transect Canopy Cover (%)....30
Table 6-5: Site Specific groundwater quality trigger exceedances – February 2026 results....33
Table 6-6: Airport Business Park - Water Quality Exceedances....36
Table 6-7: Airport Terminal - Water Quality Exceedances....37
Table 6-8: Mann-Kendall Statistical Analysis – Groundwater quality....40
Table 7-1: Summary of wastewater treatment, reuse, disposal and reporting Water....53
Table 7-2: Groundwater influent to WTPs....54
Table 7-3: Summary of groundwater to liquid waste disposal in this reporting period....54
Table 8-1: Issues identified and recommendations....57

LIST OF FIGURES

Figure 1-1: Project Alignment, Station and Facility Locations....3
Figure 4-1: Average and monthly rainfall at Badgerys Creek and Penrith Lakes – historical and 2026....15
Figure 5-1: Groundwater Level Trigger Actions....18
Figure 6-1: Predicted extent of greater than 2m drawdown (blue line) and vegetation monitoring locations (Adapted from AMBS (2026))....30
Figure 6-2: Groundwater field pH along the alignment by aquifer....31
Figure 6-3: Boxplot and scatterplot of groundwater field and laboratory pH....32
Figure 6-4: Dissolved zinc concentration in groundwater from well SBT-GW-1042 at Orchard Hills....42
Figure 6-5: Dissolved zinc concentration in groundwater from well SBT-GW-1017 at St Marys....42
Figure 6-6: Dissolved zinc concentration in groundwater from SBT-GW-1021 at St Marys....43
Figure 6-7: Total nitrogen concentration in groundwater from SBT-GW-3003-C-R at the Airport Business Park....44
Figure 6-8: Total nitrogen in groundwater from SBT-GW-4003 at Bringelly....45
Figure 6-9: Total phosphorus in groundwater from SBT-GW-4003 at Bringelly....45
Figure 6-10: Total nitrogen in groundwater from SBT-GW-1030 at Claremont Meadows....46
Figure 6-11: Total nitrogen in groundwater from SBT-GW-1808 at Orchard Hills....46
Figure 6-12: Total phosphorus in groundwater from SBT-GW-3012-C at the Airport Terminal....47
Figure 6-13: Average total phosphorus concentrations from SBT-GW-1016 at St Marys....48
Figure 6-14: pH trend of groundwater at SBT-GW-1042 at Orchard Hills....49
Figure 6-15: pH trend in groundwater at SBT-GW-1002 at St Marys....49
Figure 6-16: pH trend in groundwater at SBT-GW-1017 at St Marys....50

APPENDICES

APPENDIX A : LIMITATIONS

APPENDIX B : FIGURES

APPENDIX C : TABLULATED RESULTS

APPENDIX D : VWP HYDROGRAPHS

APPENDIX E : GDE HYDROGRAPHS AND EC TRENDS

APPENDIX F : MANN KENDALL ANALYSIS (WATER QUALITY)

APPENDIX G : ANALYTICAL LABORATORY CERTIFICATES

APPENDIX H : CALIBRATION CERTIFICATES .....

APPENDIX I : DATA VALIDATION REPORT .....

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
ABP	Airport Business Park
AEC	Areas of Environmental Concern
ANZECC (2000)	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
ANZG (2018)	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
APDS	Airport Dive Structure
ASS	Acid Sulphate Soil
AS/NZS	Australia/New Zealand Standards
ATL	Airport Terminal
AWS	Automatic Weather Station
BoM	Bureau of Meteorology
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CEMP	Construction Environmental Management Plan
CLM	Claremont Meadows
CoC	Chain of custody
Conditions	Minister's Conditions of Approval
CoPC	Contaminants of Potential Concern
CPBG	CPB Contractors Ghella Joint Venture
DO	Dissolved oxygen
DPIE	Department of Planning, Housing and Infrastructure (NSW)
EC	Electrical conductivity
Eh	Redox potential
EPL	NSW Environment Protection Licence under the Protection of the Environment Operations Act 1997.
GDE	Groundwater Dependent Ecosystem
GME	Groundwater Monitoring Event
GMP	Groundwater Management Procedure
GWL	Groundwater Level
GWMP	Groundwater Monitoring Program
IP	oil/water interface probe
LNAPL	light non-aqueous phase liquid
LOR	Limit of Reporting
mAHD	Elevation in metres with respect to the Australian Height Datum
mbgl	metres below ground level
mBTOC	metres Below Top of Casing

Acronyms/Abbreviations	Definition
NATA	National Association of Testing Authority
OHE	Orchard Hills Evacuation
PAH	Polycyclic Aromatic Hydrocarbons
PFAS	Per- and Polyfluoroalkyl Substances
PLM	Parklife Metro
Parklife Metro D&C	Parklife Metro Design and Construct. Consists of Webuild S.P.A, Siemens Mobility Pty Ltd and Richard Crookes Constructions Pty Ltd. Responsible for the construction of SSTOM Works
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SAC	Site Assessment Criteria
SBT	Station Boxes and Tunnelling
SCAW	Surface and Civil Alignment Works
SF	Service Facility
SMWSA	Sydney Metro Western Sydney Airport
SRNs	Sample Request Notifications
SSI	State Significant Infrastructure
SSTV	Site-Specific Trigger Value
SSTOM	Stations, Systems, Trains, Operations and Maintenance
SWL	Standing water level
SWMP	Soil and Water Management Sub-plan
TBM	Tunnel Boring Machine
TDS	Total dissolved solids
Tetra Tech	Tetra Tech Coffey Pty Ltd
TOC	Total organic carbon
TRH	Total recoverable hydrocarbons
µS/cm	Micro-Siemens per centimetre
VOC	Volatile organic compounds
VWP	Vibrating Wire Piezometer
WSA	Western Sydney Airport
WSI	Western Sydney International
WQA	Water Quality Assessment
WTP	Water Treatment Plant

1. INTRODUCTION

Sydney Metro has engaged Parklife Metro D&C (PLM) for the design and construction of the Stations, Systems, Trains, Operations and Maintenance works (SSTOM) for the Western Sydney Airport (WSA) project (the Project). The Project includes the construction of a new 23 km metro rail line that will link the existing Sydney Trains suburban T1 Western Line at St Mary's Station in the north to Bradfield in the south (Figure 1-1).

This Biannual Groundwater Monitoring Report has been prepared by Tetra Tech Coffey Pty Ltd (Tetra Tech) on behalf of PLM to report on the fourth round of groundwater monitoring completed by PLM, and compare the results to baseline groundwater conditions as well as the adopted performance criteria as outlined in Section 6 of the Groundwater Monitoring Program (GWMP, SMWSASSM-PLD-1NL-PC-PLN-000022 Rev03.01, dated 28 January 2026).

This report summarises the groundwater level and groundwater quality monitoring undertaken between July 2025 and February 2026, and comparison to baseline trigger levels as outlined in the GWMP (PLM, Rev03.01). This report includes:

- Groundwater level and electrical conductivity data from July 2025 to January/February2026.
- Groundwater quality monitoring results from sampling undertaken in January/February 2026.

1.1 PROJECT BACKGROUND

The Sydney Metro Western Sydney Airport Project (the Project) has transitioned through several project phases including:

- Station Boxes and Tunnelling Works (SBT) and Surface and Civil Alignment Works (SCAW) which included the design and construction of the northern tunnels between Orchard Hills and St Mary's and the southern tunnels between Western Sydney International (WSI) and the new Bradfield (previously Aerotropolis) station. It also included excavation works for four station boxes, two intermediate service facilities and turn back excavations and stub tunnels for future extensions to the railway network. Handover of the entire project alignment to PLM was completed in January 2025.
- The scope of SSTOM works by PLM, which are outlined in Section 1.3, are expected to be completed in 2027.

This report addresses groundwater monitoring requirements , as detailed in the GWMP Rev03.01, for off-airport work sites under the State Significant Infrastructure 10051 Planning Approval (SSI 10051) – Modification 2 (dated 20 December 2024), and on-airport site as required by the Western Sydney Airport (WSA) – Airport Plan and Sydney Metro WSA Soil and Water Construction and Environmental Management Plan (CEMP), Rev 3 – Off-Airport (Sydney Metro, 2023).

1.2 OBJECTIVES

This Biannual Groundwater Monitoring Report has been prepared for works completed in accordance with the requirements of the GWMP (PLM, Rev03.01), as summarised in the sections below. The current groundwater monitoring network is detailed in Table 2-1 with groundwater monitoring locations shown on Figures B1 to B8 in Appendix B.

1.3 PROJECT OVERVIEW

The scope of the SSTOM works comprises:

- Construction of six new stations (St Marys, Orchard Hills, Luddenham, Airport Business Park, Airport Terminal and Bradfield)
- Construction of two temporary service shafts at Claremont Meadows and Bringelly
- Installation of tracks, signalling, mechanical and electrical systems
- Supplying new driverless trains
- Construction of a stabling and maintenance facility (SMF) at Orchard Hills
- Operation and maintenance of the line and its assets
- Handback of operations and maintenance at the end of SSTOM works

The alignment includes tunnels and civil structures, including a viaduct, bridges, and surface and open cut troughs between two tunnel sections.

This monitoring program addresses the groundwater risks at the following locations associated with the deep, bulk excavations and tunnelling works that were constructed under the SBT scope of works:

- Northern Tunnels (between Orchard Hills and St Marys).
- Southern Tunnels (between Western Sydney International (WSI) and Bradfield).
- Four station boxes with temporary ground support at St Mary's, Orchard Hills, Airport Terminal (on-airport) and Bradfield.
- Two temporary service shafts, one for each tunnel sections at Claremont Meadows (CLM) and Bringelly (BRG).

The six stations, two service facilities and the SMF are shown on Figure 1-1 (and on figures in Appendix B).

Groundwater monitoring includes recording groundwater levels, and sampling and analysis to assess groundwater quality. Groundwater monitoring has been undertaken at the station precincts of St Marys, Airport Business Park, Airport Terminal, Orchard Hills, Bradfield, and the two service shafts at Bringelly and Claremont Meadows. Luddenham Station is not included in the groundwater monitoring event as construction works do not include excavation below the water table.

Airport Business Park (ABP), as described in the SBT groundwater monitoring reports, refers to the tunnel portal dive structure just to the southwest of the ABP station location. In this groundwater monitoring report, the tunnel dive structure is referred to as the Airport Dive Structure (APDS) and ABP only describes the station location. As works at ABP station are generally within a cutting and have not involved major subsurface excavations, potential groundwater interactions and impacts are only due to works associated with the tunnel dive structure.

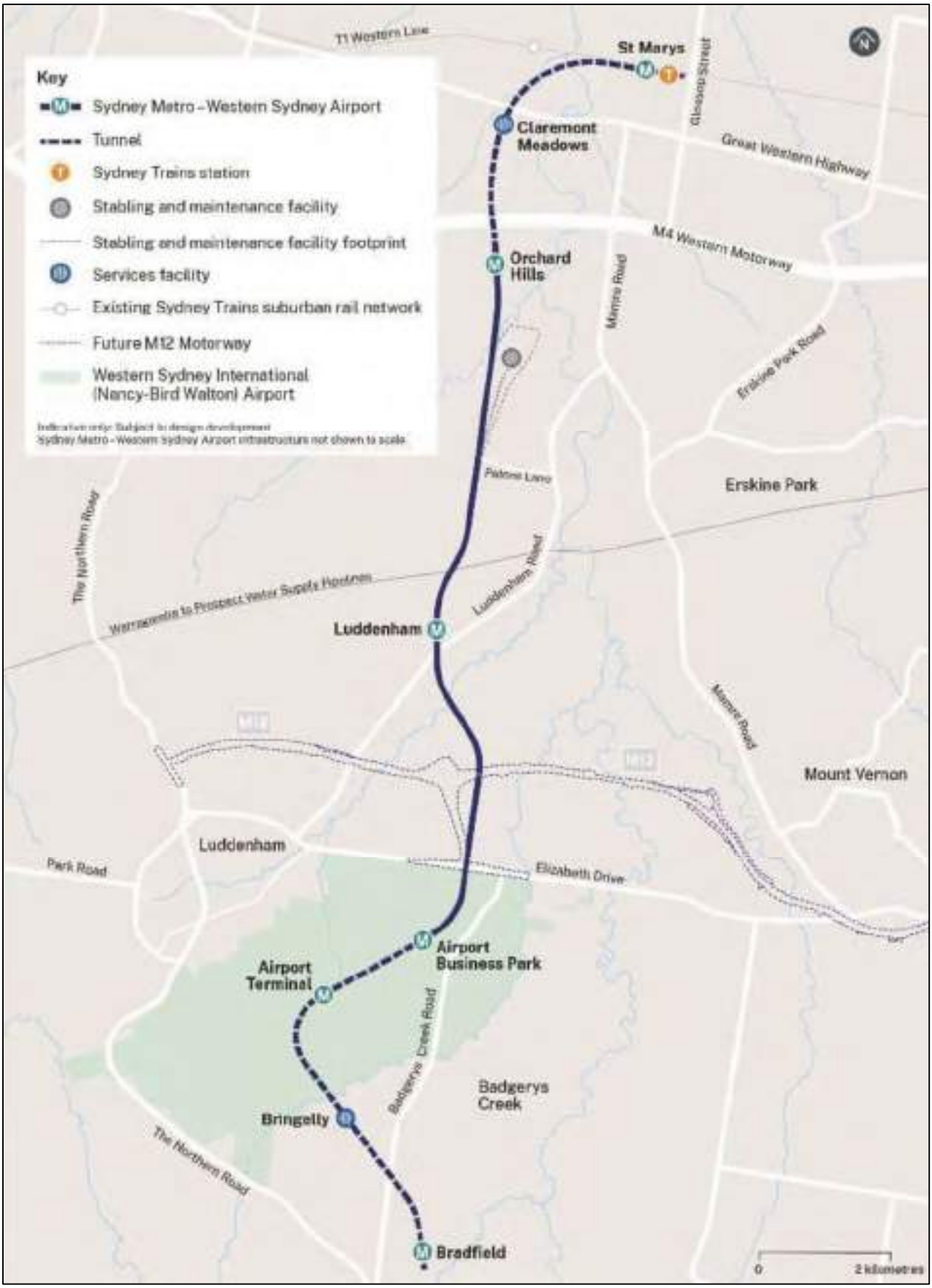

Figure 1-1: Project Alignment, Station and Facility Locations

1.4 PROJECT CONSTRUCTION STATUS

A summary of SSTOM works completed throughout the monitoring period with activities that have the potential to influence groundwater levels and/or quality is provided in Table 1-1.

Groundwater inflows to station box excavations are predicted to draw down the local water table, with temporary construction dewatering to continue until station boxes are hydrostatically tanked.

Table 1-1: SSTOM Works Activity Schedule

Works Within Deep Excavation Areas	Start Date	Finish Date
St Marys		
Station box walls	July 2024	December 2025
Station box structural completion/close forecast. Final tanked structure	-	Anticipated June 2026
Claremont Meadows Service Facility		
Works ongoing within existing structure until final closure	-	Anticipated July 2026
Northern Running Tunnel		
Rail installation and all associated works within existing final tunnel structure as handed over by the SBT contractor	January 2025	Anticipated December 2026
Orchard Hills		
Station Box Walls	September 2023	September 2025
Station box structural completion/close forecast. Final tanked structure	-	December 2025
Airport Business Park		
Works at the ABP station site have limited potential to interact with groundwater as generally within a cutting with no major subsurface excavations. Works are discussed here for completeness.	-	Ongoing
Airport Portal Dive Structure		
Waterproofing membrane within station box	December 2024	December 2025
Station box walls	January 2025	July 2025
Station box structural completion/close forecast. Final tanked structure	-	September 2025
Airport Terminal		
Station walls	December 2024	November 2025
Station box structural completion/close forecast. Final tanked structure	-	June 2026
Bringelly Service Facility		
Works ongoing within existing structure until final closure	January 2025	July 2026
Southern Running Tunnel		
Rail installation and all associated works within existing final tunnel structure as handed over by the SBT contractor	January 2026	Anticipated December 2026
Bradfield		
Station box walls completed	August 2024	November 2025
Station box structural completion/close forecast. Final tanked structure	-	Anticipated May 2026

2. GROUNDWATER MONITORING PROGRAM REQUIREMENTS

2.1 MONITORING PROGRAM

The GWMP (PLM, Rev03.01) was prepared and will be implemented during construction to meet requirements C13, C14 and C16 of the Conditions of Approval for Sydney Metro – Western Sydney Airport (SSI 10051).

As the two new stations within the WSI site (Airport Terminal and Airport Business Park) are managed under the WSA – Airport Plan and Sydney Metro WSA Soil and Water CEMP, the requirements of this plan are also considered in the GWMP and this report, as is applicable to SSTOM works.

The GWMP (PLM, Rev03.01) is part of the Groundwater Management Procedure, which is an Appendix to the Soil and Water Management Sub-Plan (SWMP) (Ref: SMWSASSM-PLD-PLN-000020, PLM, 2024). The GWMP describes the process of groundwater monitoring to understand the impacts of SSTOM works on groundwater levels and/or changes in groundwater quality.

The technical content and details included in the GWMP were adopted from the SBT Groundwater Monitoring Program (SMWSASBT-CPG-SWD-SW000-GE-RPT-040404) prepared by CPB Contractors Ghella Joint Venture (CPBG). This monitoring report also references the various monitoring reports carried out under both the SBT GWMP and GWMP (PLM, Rev03.01), specifically:

- Tetra Tech Major Projects (2023), Baseline Groundwater Report (Project-wide) Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040405.
- Tetra Tech (2024a), Biannual Groundwater Monitoring Report July 2023 to November 2023. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040410.
- Tetra Tech (2024b), Biannual Groundwater Monitoring Report December 2023 to June 2024. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040419.
- Tetra Tech (2025a); Biannual Groundwater Monitoring Report June 2024 to December 2024. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040426
- ADE Consulting Group (2024) Biannual Groundwater Monitoring Report – December 2023 to August 2024 SMWSASSM-PLD-SWD-SW000-WA-RPT-000003, dated 13/03/2025
- ADE Consulting Group (2025a) Biannual Groundwater Monitoring Report – September to November 2024 SMWSASSM-PLD-SWD-SW000-WA-RPT-000004, dated 15/04/2025
- ADE Consulting Group (2025b) Groundwater Monitoring Report – December 2024 to July 2025 SMWSASSM-PLD-SWD-SW000-WA-RPT-000006, dated 29/10/2025

Groundwater monitoring responsibilities for the Project were progressively transferred to PLM as SBT works were completed. All work areas were handed over to PLM by January 2025, therefore the entire groundwater network is the subject of this monitoring report.

Updates to the GWMP (PLM, Rev03.01) are made annually in accordance with the process described in the plan, and as agreed with Sydney Metro and the SSTOM Environmental Representative (ER) for the project.

2.2 GROUNDWATER MONITORING NETWORK

The complete monitoring network is detailed in the GWMP (PLM, Rev03.01), with locations monitored for this reporting period detailed in Table 2-1. Monitoring locations which have been removed from the network, and the reason for their removal, are summarised in Table 2-2 and in Appendix C of the GWMP (PLM, Rev03.01).

The GWMP includes monitoring of groundwater levels (GWL) using data loggers in groundwater wells, and pore pressure data using vibrating wire piezometers (VWPs). This includes groundwater monitoring wells positioned near Groundwater Dependent Ecosystems (GDEs), where time series electrical conductivity (EC) measurements and groundwater levels are recorded using dataloggers. Groundwater quality (WQA) is monitored at targeted locations, with groundwater sampled for the measurement of field parameters and laboratory analysis.

All monitoring activities followed the methodologies detailed in the GWMP (PLM, Rev03.01).

Table 2-1: Active Monitoring Wells in Program

Site	Location ID	Alternative Location ID	Monitoring Well Type[1]	Node Serial Number[2]	Comments
St Marys	SBT-GW-1001-S	-	WQA	-	-
	SBT-GW-1002	-	GWL / WQA	-	-
	SBT-GW-1005-S	SBT-GW-1005A	WQA	55561	Groundwater level datalogging not required
	SBT-GW-1016	-	GWL / WQA	-	-
	SBT-GW-1017	-	GWL / WQA	-	-
	SBT-GW-1021	-	GWL / WQA	21205345	-
	SMGW-BH-A401	-	GWL / WQA	-	-
	SWD-TU100-17275-VWP01-A	SBT-GW-1001-S	GWL	56021	-
	SWD-TU100-17275-VWP01-B	SBT-GW-1001-S	GWL	56021	-
	SWD-TU100-17443-VWP03-A	SBT-GW-1005-S	GWL	55566	-
	SWD-TU100-17443-VWP03-B	SBT-GW-1005-S	GWL	55566	-
TBM Tunnel - South Creek	SMGW-BH-A107	-	GWL / GDE	107	-
	SBT-GW-1030	-	GWL / WQA		-
	SBT-GW-1804	-	GWL / GDE	1804	-
Claremont Meadows	SBT-GW-1024	-	GWL / WQA	-	-
	SBT-GW-1805	-	GWL / WQA / GDE	63312	-
	SWD-TU100-20071-VWP06-A	SBT-GW-1028	GWL / GDE	55485	Well manually gauged, logger and sensors were not present, possibly removed or fallen to the bottom of the well.
	SWD-TU100-20071-VWP06-B	SBT-GW-1028	GWL / GDE	55485	
	SWD-TU100-19957-VWP05-01 SWD-TU100-19957-VWP05-02 SWD-TU100-19957-VWP05-03	SBT-VWP-1402	GWL	54704	-
	SWD-TU100-19992-VWP06-01 SWD-TU100-19992-VWP06-02 SWD-TU100-19992-VWP06-03	SBT-VWP-1403	GWL	64166	Accessed and downloaded by Tetra Tech on 18/02/2026. Previously reported as destroyed (ADE 2026 and GWMP PLM 2025).
Orchard Hills	SBT-GW-1042	-	GWL / WQA	62455	-
	SBT-GW-1048-R	-	WQA	-	-
	SBT-GW-1063	-	GWL / WQA / GDE	63339	-

Site	Location ID	Alternative Location ID	Monitoring Well Type[1]	Node Serial Number[2]	Comments
	SBT-GW-1806	-	GWL / WQA	-	-
	SBT-GW-1807	-	GWL / WQA	-	-
	SBT-GW-1808	-	GWL / WQA	-	-
	SMGW-BH-A315-R	-	GWL / WQA / GDE	1315	-
	SBT-VWP-1404	SWD-TU150- 22010-VWP02	GWL / GDE	89034	-
Airport Business Park	ABP-TD300-VWP-02	-	GWL	77622	Located at adjacent to northwest corner of dive structure.
	ABP-TD300-VWP-03	-	GWL	77655	Located adjacent to southeast corner of dive structure.
	SBT-VWP-3401-R	SWD-TU300-33565-VWP02-R	GWL	-	No logger is installed at this location. Manual gauge only. Replacement installed July 2025.
	SBT-GW-3003-A-R	-	GWL / WQA	30031	Well dry.
	SBT-GW-3003-B-R	-	GWL / WQA	30032	-
	SBT-GW-3003-C-R	-	GWL / WQA	30033	-
Airport Terminal	SBT-GW-3006-R	-	GWL / WQA / GDE	-	-
	SBT-GW-3012-A	-	GWL / WQA	-	-
	SBT-GW-3012-B	-	GWL / WQA	-	-
	SBT-GW-3012-C	-	GWL / WQA	-	-
	SBT-GW-3022	-	GWL / WQA	-	-
	SBT-VWP-3402	ATL-SN350-VWP01-01 ATL-SN350-VWP01-02 ATL-SN350-VWP01-03 ATL-SN350-VWP01-04	GWL	54960	Also known as SWD-TU300-34874-VWP03-01 - 04
Western Sydney Airport - FS01	SBT-GW-4000	-	GWL / GDE	-	Gauged only. No logger present, and currently blocked and unable to be sampled
	SMGW-BH-C320	-	GWL / WQA	-	-
Bringelly SF	SBT-GW-4003	-	GWL / WQA	-	-
	SBT-GW-4005	-	GWL / WQA	-	-
	SBT-GW-4800	-	GWL / WQA	-	-
	SBT-GW-4801	-	GWL / WQA	-	-

Site	Location ID	Alternative Location ID	Monitoring Well Type[1]	Node Serial Number[2]	Comments
	SBT-GW-4802	-	GWL / WQA	-	-
Bradfield	SBT-GW-4008	-	GWL / WQA / GDE	-	-
	SBT-GW-4014-R	-	GWL / WQA	-	-
	SBT-GW-4017-R	-	GWL / WQA	-	-
	SBT-GW-4021	-	GWL / WQA / GDE	-	-
	SBT-GW-4803-R	-	GWL / WQA	-	-
	SBT-VWP-4403-R	SWD-TU400-39287-VWP01-R	GWL / WQA	4403	-
	SBT-VWP-4404	SWD-TU400-39340-VWP02	GWL	-	-
	SBT-VWP-4405	SWD-TU400-39532-VWP03	GWL	60786	Previously reported as destroyed. Will be added back into GWMP in next update.

Notes:

1: GWL: *Groundwater Level (monitored with manual dips / loggers),* ***WQA****: Water Quality Assessment (i.e., sampling to assess water chemistry),* ***GDE:*** *Groundwater Dependent Ecosystem (monitoring related to ecosystems that are dependent upon groundwater).*

2*: Serial numbers of the node serial numbers present at each well by downloaded from by Tetra Tech Coffey.*

Table 2-2: Wells Removed from Program

Site	Location ID	Alternative Logger ID	Monitoring Well Type[1]	Comments[2]
St Marys	SBT-VWP-1401	SWD-TU100-17720-VWP04	GWL	Data was specific for wall design during SBT
	SBT-GW-1001	-	GWL	Destroyed. Removed from network
	SBT-GW-1019R3	-	GWL / WQA	Destroyed by SBT and removed from network
	SMGW-BH-A360	-	GWL / WQA	Not required to be monitored
	SBT-GW-1803	-	GWL / WQA	Never located on site. Suspected destroyed
Cross passage / Tunnel (XPN13)	SBT-GW-1031	-	GWL / WQA	SBT Recommended no ongoing monitoring. Removed from network
TBM Tunnel South	SMGW-BH-A105S	GWL / GDE	GWL / GDE	SBT Recommended no ongoing monitoring. Removed from network
Claremont Meadows	SBT-GW-1028	-	GWL / GDE	Destroyed. Removed from network
Orchard Hills	SBT-GW-1037 (S)	SWD-TU150-21965-VWP01-A	GWL	Destroyed. Removed from network
	SBT-GW-1037 (N)	SWD-TU150-21965-VWP01-B	GWL	Destroyed. Removed from network
	SBT-VWP-1405	SWD-TU150-22115-VWP03	GWL	Destroyed. Removed from network
	SBT-GW-1043	SWD-TU150-22193-VWP05-A SWD-TU150-22193-VWP05-B	GWL	Could not be located. Presumed destroyed. Removed form network.
	SWD-TU150-22205-VWP06	-	GWL	Destroyed. Removed from network
	SWD-TU150-22205-VWP07	-	GWL	No monitoring records from SBT
	SMGW-BH-A315	-	GWL	Destroyed and replaced by SMGW-BH-A315-R
	SBT-GW-1048	-	GWL / WQA	Destroyed and replaced by SBT-GW-1048-R
Airport Business Park	SBT-GW-3003-A	-	GWL / WQA	Replaced by SBT-GW-3003-A-R
	SBT-GW-3003-B	-	GWL / WQA	Replaced by SBT-GW-3003-B-R
	SBT-GW-3003-C	-	GWL / WQA	Replaced by SBT-GW-3003-C-R
	SBT-VWP-3401	SWD-TU300-33565-VWP02	GWL	Replaced by SBT-VWP-3401-R
	ABP-TD300-VWP01	-	GWL	Logger broken – removed from network
	ABP-TD300-VWP04	-	GWL	Logger broken – removed from network
Airport Terminal	SBT-GW-3006	-	GWL / WQA	Replaced by SBT-GW-3006-R
	ATL-SN350-VWP02	SWD-TU300-34893-VWP04-01 SWD-TU300-34893-VWP04-02	GWL	Destroyed – Removed from Network

Site	Location ID	Alternative Logger ID	Monitoring Well Type[1]	Comments[2]
		SWD-TU300-34893-VWP04-03 SWD-TU300-34893-VWP04-04		
Airport Terminal – Temp Shaft	SBT-VWP-3404	SWD-TU351-35209-VWP01	-	Destroyed. Removed from network
	SBT-VWP-3405	SWD-TU351-35240-VWP02	-	Destroyed. Removed from network
Western Sydney Airport - FS01	SMGW-BH-C321	-	GWL / WQA	Destroyed. Removed from network
	SMGW-BH-C330	-	GWL / WQA	Destroyed. Removed from network
Bringelly SF	SBT-VWP-4400	SWD-TU351-37371-VWP04	GWL	Destroyed. Removed from network
	SBT-VWP-4401	SWD-TU351-37371-VWP05	GWL	Destroyed. Removed from network
	SBT-VWP-4402	SWD-TU351-37371-VWP06	GWL	Destroyed. Removed from network
Bradfield	SBT-GW-4010	-	GWL / WQA / GDE	Never located onsite. Suspected destroyed
	SBT-VWP-4403-R	SWD-TU400-39287-VWP01	GWL	Replaced
	AEC-SN450-EW-VWP07	-	GWL	Never located onsite. Suspected destroyed
	SBT-GW-4803	-	GWL / WQA	Replaced by SBT-VWP-4803-R
	SBT-GW-4017	-	GWL / WQA	Replaced by SBT-GW-4017-R
	SBT-GW-4014	SBT-GW-4014-S	GWL / WQA	Replaced by SBT-VWP-4014-R

Notes:

1: GWL: *Groundwater Level (monitored with manual dips / loggers),* ***WQA****: Water Quality Assessment (i.e., sampling to assess water chemistry),* ***GDE:*** *Groundwater Dependent Ecosystem (monitoring related to ecosystems that are dependent upon groundwater).*

2: *Comments derived from GWMP Appendix C.*

2.3 METHODOLOGY

The groundwater monitoring methodology was in accordance with the GWMP (Rev03.01). The GWMP includes procedures for the collection of continuous and discrete groundwater monitoring data, including all quality assurance/quality control (QA/QC) requirements. Specifically, the methodology provides an approach for collection and assessment of the following environmental datasets:

- Groundwater level as metres below the top of casing (mBTOC) groundwater and Australian Height Datum (mAHD) (as manual measurements and datalogger download);
- Groundwater quality at key locations (field water quality measurement and sample collection for laboratory analysis);
- Groundwater salinity as EC (field water quality measurement and datalogger download); and,
- Quality assurance/quality control procedures for collecting and managing environmental datasets.

The purpose for collecting this groundwater data is to identify any potential impacts to groundwater receptors during construction (and later during operation stage, if required) of the Project.

The groundwater sampling methodology was generally in compliance with the following Australian Guidance:

- AS/NZS 5667.1:1998: Water Quality – Sampling Part 1: Guidance on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples (Reconfirmed 2016).
- AS/NZS 5667.11:1998: Water Quality – Sampling Part 11: Guidance on Sampling of Groundwaters (Reconfirmed 2016).
- Sundaram, B., Wallace, L., Feitz, A. J., de Caritat, P., Ransley, T., Schroder, I., Boreham, C. J. and Sohn, J. 2024. Groundwater Sampling and Analysis: A Field Guide - 2nd Edition. Record 2024/33. Geoscience Australia, Canberra. https://dx.doi.org/10.26186/149678

All groundwater monitoring and continuous level logger downloads were undertaken between 29 January 2026 to 05 March 2026 by suitably qualified and experienced environmental consultants from Tetra Tech.

The project area and monitoring precincts are presented on Figure B1, Appendix B. The location of monitoring wells sampled/gauged and VWPs downloaded are presented on Figures B2 to B8, Appendix B for St Marys, Claremont Meadows, Orchard Hills, Airport Terminal and Airport Business Park, Bringelly, and Bradfield, respectively.

2.3.1 Groundwater Levels

2.3.1.1 Manual Gauging

Manual gauging of groundwater levels was undertaken in groundwater monitoring wells prior to sample collection. Gauging comprised placing an electronic groundwater level interface probe (IP) down the monitoring well and measured the depth of water from a known reference (surveyed) point, typically the top of the PVC well casing. Measurements were recorded to the nearest millimetre and recorded as metres below the top of casing (mBTOC) and later converted to mAHD. Well details including co-ordinates, screened interval, lithology intersected, monitored depth and standing water level (SWL) are presented in Table 2-3, along with VWP sensor IDs, and nodes.

Table 2-3: Gauging Results

Site	Well ID	Easting	Northing	TOC mAHD	Screen Interval mAHD	Lithology Screened	SWL mbtoc	SWL mAHD	Date/Time Sampled	Total Well Depth (mBTOC)
St Marys	SBT-GW-1002	294464.6	6261979.9	42.605	34.6 - 40.6	Residual/ Bedrock	4.32	38.29	03/02/2026 11:46:00 AM	8.1
	SBT-GW-1001-S	294435.2	6261848.3	48.827	40.8 - 46.8	Residual/ Bedrock	3.01	45.82	2/04/2026 12:35:00 PM	8.6
	SBT-GW-1005-S	294262.4	6261825.2	44.195	36.2 - 42.2	Residual/ Bedrock	6.15	38.05	04/02/2026 1:11:00 PM	8.9
	SBT-GW-1016	293905.8	6261847.7	36.122	26.1 - 31.1	Residual/ Bedrock	3.61	32.51	03/02/2026 9:17:00 AM	10.9
	SBT-GW-1017	293946.1	6262114.9	32.475	22.5 - 30.5	Residual/ Bedrock	2.61	29.87	03/02/2026 10:05:00 AM	6.0
	SBT-GW-1021	293847.8	6262056.4	33.906	25.6 - 31.6	Residual/ Bedrock	2.99	30.92	03/02/2026 11:09:00 AM	8.9
	SMGW-BH-A401	294106.3	6261997.8	36.51	27.5 - 33.5	Residual/Bedrock	5.65	30.86	03/02/2026 10:34:00 AM	9.0
TBM Tunnel South Creek	SMGW-BH-A107	292413.0	6261713.0	22.5	-3.5 – 3.5	Bedrock	2.32	20.18	03/02/2026 3:16:00 PM	26.0
Claremont Meadows	SBT-GW-1805	292046.7	6261326.1	27.296	18.3 - 24.3	Residual	2.85	24.45	03/022026 1:17:00 PM	9.0
	SBT-GW-1024	292108.9	6261303	28.506	16.5 - 25.5	Alluvium/Bedrock	3.65	24.86	03/02/2026 2:08:00 PM	11.2
	SBT-GW-1030	291872.1	6260654	40.808	20.8 - 25.8	Bedrock	2.33	38.48	02/02/2026 9:32:00 AM	5.2
Orchard Hills	SBT-GW-1042	291874.7	6259123.7	40.069	32.1 - 38.1	Alluvium	2.99	37.08	02/02/2026 11:07:00 PM	10.6
	SBT-GW-1048-R	291938.3	6258986.8	39.967	32.0 – 38.0	Alluvium/Bedrock	2.83	37.14	02/02/2026 3:29:00 PM	9.4
	SBT-GW-1063	292193.5	6258861.3	31.558	20.6 – 29.6	Alluvium/bedrock	4.75	26.81	01/02/2026 11:57:00 AM	12.0
	SBT-GW-1806	291755.3	6258999.8	42.957	19.0 – 28.0	Bedrock	12.94	30.02	02/02/2026 4:35:00 PM	24.8
	SBT-GW-1807	291901.4	6258843.1	37.479	21.5 - 27.5	Bedrock	8.98	28.50	02/02/2026 3:02:00 PM	17.4
	SBT-GW-1808	291902.3	6258845.2	37.455	32.5 - 35.5	Residual	0.73	36.73	02/02/2026 2:50:00 PM	10.0
	SMGW-BH-A315-R	291750.4	6258871.4	41.761	31.8 – 37.8	Residual/Bedrock	2.37	39.39	02/02/2026 12:40:00 PM	6.3
Airport Business Park	SBT-GW-3003A-R	290426.0	6248383.2	67.846	62.8 – 65.8	Alluvium/fill	dry	-	30/01/2026 2:12:00 PM	6.3
	SBT-GW-3003B-R	290426.0	6248383.2	67.735	54.7 – 57.7	Shale	8.74	59.00	30/01/2026 2:38:00 PM	14.5
	SBT-GW-3003C-R	290426.0	6248383.2	67.637	45.6 – 48.6	Sandstone	9.54	58.10	30/01/2026 2:49:00 PM	23.5
	SBT-VWP-3401-R	290583.0	6248505.0	65.02	48.5 – 53.5	Bedrock	6.36	58.56	05/03/2026 4:33:00 PM	10.0
	SBT-GW-3012-A	289133.2	6247685.6	83.958	76.0 – 82.0	Bedrock	4.86	79.10	29/01/2026 11:38:00 AM	9.0

Site	Well ID	Easting	Northing	TOC mAHD	Screen Interval mAHD	Lithology Screened	SWL mbtoc	SWL mAHD	Date/Time Sampled	Total Well Depth (mBTOC)
Airport Terminal	SBT-GW-3012-B	289134.8	6247682.9	83.9	67.9 - 73.9	Bedrock	13.94	69.96	29/01/2026 11:07:00 AM	17.2
	SBT-GW-3012-C	289136.4	6247680.3	83.777	57.8 - 63.8	Bedrock	21.49	62.29	29/01/2026 10:46:00 AM	27.3
	SBT-GW-3022	289446.1	6247614.1	77.776	62.8 – 74.8	Bedrock	7.72	70.06	30/01/2026 01:15:00 PM	10.9
	SBT-GW-3006-R	289353.2	6247825.7	84.38	49.3 – 55.3	Bedrock	20.93	63.45	30/01/2026 12:14:00 PM	36.0
Western Sydney Airport	SBT-GW-4000	289140.5	6246360.3	72.235	59.2 – 69.7	Bedrock	3.91	68.32	29/01/2026 09:54:00 AM	18.4
	SMGW-BH-C320	289629.3	6246534.9	66.47	57.5 – 63.5	Bedrock	3.76	62.71	29/01/2026 09:15:00 AM	12.9
Bringelly	SBT-GW-4003	289518.7	6245851.2	71.932	64.9 - 69.9	Residual/Bedrock	9.06	62.87	01/02/2026 9:40:00 AM	18.2
	SBT-GW-4005	289666.8	6245749.6	73.613	53.6 - 53.6	Bedrock	12.81	60.80	01/02/2026 8:57:00 AM	18.4
	SBT-GW-4800	289626.6	6245830.0	71.432	64.4 - 69.4	Residual/ Bedrock	7.07	64.36	01/02/2026 10:27:00 AM	12.9
	SBT-GW-4801	289580.1	6245835.6	71.372	55.4- 67.4	Residual/ Bedrock	10.75	60.62	01/02/2026 10:06:00 AM	17.9
	SBT-GW-4802	289583.3	6245761.2	74.348	58.4 - 70.4	Bedrock	14.42	59.93	01/02/2026 9:23:00 AM	18.1
Bradfield	SBT-GW-4021	291112.5	6243748.0	62.847	54.0 - 63.0	Alluvium/Bedrock	3.25	59.60	28/01/2026 11:12:00 AM	5.8
	SBT-GW-4017-R	290805.8	6243870.8	71.334	59.3 – 61.3	Residual	8.47	62.86	29/01/2026 01:20:00 PM	13.5
	SBT-VWP-4403-R	290677.0	6244222.3	73.228	61.7 – 67.7	Bedrock	13.02	60.21	29/01/2026 01:40:00 PM	18.0
	SBT-GW-4803-R	290621.1	6244162.8	74.214	61.7 – 67.7	Bedrock	9.06	65.15	29/01/2026 14:18:00 PM	12.0
	SBT-GW-4014_S-R	290624.4	6243980.9	73.975	59.9 – 68.9	Residual/Bedrock	13	60.98	29/01/2026 12:11:00 PM	14.0
	SBT-GW-4008	290230.0	6244991.9	78.269	50.3 – 56.3	Bedrock	14.25	64.02	28/01/2026 10:00:00 AM	28

2.3.1.2 Vibrating Wire Piezometers (VWPs)

Data was downloaded during late January and early February 2026 from existing VWPs as detailed in Table 2-4.

Table 2-4: Accessed VWPs

Site	Location ID	Alternative Logger ID	Node Serial Number	Ground RL (mAHD)	Sensor Depth (mAHD)
St Marys	SBT-GW-1001-S	SWD-TU100-17275-VWP01-A	56021	49.155	15.16
		SWD-TU100-17275-VWP01-B		49.155	20.16
	SBT-GW-1005-S	SWD-TU100-17443-VWP03-A	55561	44.557	13.56
		SWD-TU100-17443-VWP03-B		44.557	18.56
	SMGW-BH-A401	SWD-TU100-17720-VWP04	21205345	36.407	13.41
Claremont Meadows	SBT-GW-1028	SWD-TU100-20071-VWP07-A SWD-TU100-20071-VWP07-b	55485	30.813	2.81 7.81
	SBT-GW-1804	-	1084	23.38	16.5 (Level) 16.0 (EC)
	SBT-GW-1805	-	63312	27.296	18.8 (Level) 17.8 (EC)
	SBT-VWP-1402	SWD-TU100-19957-VWP05 – 01	54704	26.872	6.00
		SWD-TU100-19957-VWP05 – 02	54704	26.872	11.00
		SWD-TU100-19957-VWP05 – 03	54704	26.872	17.50
	SBT-VWP-1403	SWD-TU100-19992-VWP06-01	64166	26.948	6.00
		SWD-TU100-19992-VWP06-02	64166	26.948	11.00
		SWD-TU100-19992-VWP06-03	64166	26.948	17.50
	SMGW-BH-A107	-	107	22.5	-3.28 (Level) -3.78 (EC)
Orchard Hills	SBT-GW-1042	-	62455	40.069	31.88 (Level) 31.18 (EC)
	SBT-GW-1063	-	63339	31.558	21.4 (Level) 20.4 (EC)
	SMGW-BH-A315-R	-	1315	41.96	32.26
	SBT-VWP-1404	SWD-TU150-22010-VWP02	89034	38.810	22.81
Airport Business Park	APB-TD300	APB-TD300-VWP-02	77142	62.87	56.28
		APB-TD300-VWP-03	77120	62.916	56.30
	SBT-GW-3003-A-R	-	30031	67.846	63.226
	SBT-GW-3003-B-R	-	30032	67.735	54.665
	SBT-GW-3003-C-R	-	30033	67.637	45.597
Airport Terminal	SBT-GW-3006-R	-	3006	84.38	49.39
	SBT-VWP-3402	ATL-SN350-VWP01-01	54960	84.6	60.00
		ATL-SN350-VWP01-02		84.6	64.00
		ATL-SN350-VWP01-03		84.6	68.00
		ATL-SN350-VWP01-04		84.6	73.00
Bradfield	SBT-VWP-4403-R	SWD-TU400-39287-VWP01-R	4403	73.228	57.078
	SBT-VWP-4404	SWD-TU400-39340-VWP02	N/A	71.031	55.83

Site	Location ID	Alternative Logger ID	Node Serial Number	Ground RL (mAHD)	Sensor Depth (mAHD)
	SBT-VWP-4405	-	60786	73.797	55.17
	SN8803	Unknown well with node 8803, possibly SBT-BH-4013. To be used as a replacement for SBT-VWP-4404 which will soon be destroyed.	8803	N/A	N/A

Downloaded data was converted to groundwater levels based on sensor depth, pore water or transducer sensor calibration information, and cross-checked with manually gauged water levels in groundwater wells. Additional conductivity data was downloaded from loggers SBT-GW-3003-A-R, ST-GW-3003-B-R and SBT-GW-3003-C-R at ABP and groundwater pressure and EC data downloaded from loggers SBT-GW-1042 and SBT-GW-1063 at Orchard Hills. Data was downloaded using Worldsensing App V2.15.1 and Hoboware (SMGW-BH-A401). Details of where data was unable to be downloaded from several loggers is outlined in Section 3.

2.3.1.3 Continuous Electrical Conductivity / Groundwater Level Monitoring

As detailed in Section 6.2.4 of the GWMP (Rev03.01), electrical conductivity (EC) and groundwater level data is continuously logged at five locations for EC and eight locations for level to monitor potential risks to GDEs during the construction phase of the project. EC is also manually measured at all other monitoring well locations where access permits.

The monitoring wells required to be monitored for EC and water level are listed in Table 2-5. Since the initial GWMP, site conditions have changed with some monitoring wells removed from the program, destroyed or replaced. Monitored time series groundwater levels and EC results are discussed in Section 6.2, and groundwater quality in Section 6.3

Table 2-5: Electrical Conductivity and Level Monitoring Locations

Site	Location ID	Screened Unit	Level SSTV (mAHD)	EC SSTV (uS/cm)
Claremont Meadows	SBT-GW-1805	Residual	21.5	3,650
	SBT-GW-1028	Residual	24.7	
	SWD-TU100- 20071-VWP07-A (instead of SBT-GW-1028 in asbestos exclusion zone)	Residual (VWP)	24.9	-
Orchard Hills	SWD-TU150- 22010-VWP02 / SBT-VWP-1404	Bedrock	31.0	
	SBT-GW-1042	Alluvium	33.0	18,600
	SBT-GW-1063	Alluvium / Bedrock	24.3	19,940
	SMGW-BH-A315-R	Alluvium / Bedrock	36.9	4,317 *(amended SSTV recommended of 35,700, 1.5 x historical 23,800)*
Airport Business Park	SBT-GW-3003-A-R	Bedrock	- [1]	Well was dry[1]
	SBT-GW-3003-B-R	Bedrock	- [1]	- [1]
	SBT-GW-3003-C-R	Bedrock	- [1]	- [1]
Airport Terminal	SBT-BH-3006-R	Bedrock	- [1]	- [1]
Bradfield	SBT-VWP-4403-R	Bedrock	- [1]	- [1]
	SBT-GW-4021	Alluvium/Bedrock	59.1	33,000

1. Not GDE monitoring location – monitored for level and water quality as discussed in Sections 6.1 and 6.2

2.3.2 Groundwater sampling methodology

The groundwater sampling methodology adopted for the monitoring event is summarised in Table 2-6, and is consistent with the GWMP (PLM, Rev03.01). The analytical suite for each sample is summarised in Table 2-7.

Table 2-6: Groundwater Sampling Methodology

Activity	Details
Well gauging	Thirty-eight existing and accessible groundwater monitoring wells were gauged using an oil / water interface probe (IP) to measure SWL, presence of any light non-aqueous phase liquid (LNAPL) and total well depths. Wells were gauged to the nearest mm from the top of the well casing. Well details including coordinates, screened interval, lithology, monitored depth and SWL are presented in Table 2-3.
Groundwater quality parameters	Water quality parameters were recorded using a YSI Quatro Pro Plus multi probe water quality meter with the following parameters recorded: • pH • Electrical conductivity • Redox potential • Temperature • Dissolved oxygen • Turbidity Recorded groundwater quality parameters are presented in Appendix C, Table 1.
Sampling	An existing HydraSleeve™ was present in each of the wells within the well screen depth. Samples were collected from the top of the HydraSleeve™ by pouring groundwater (slowly to minimise the loss of VOCs) into the appropriately preserved laboratory supplied sample bottles, so as to preserve and reuse the HydraSleeve™. Upon completion of sample collection, the sampling equipment was returned to their respective wells to within the screen depths. For all groundwater sample bottles, care was taken to minimise agitation, with no headspace in sample bottles collected for volatile or semi-volatile analytes. Sampling information including the date and time of sampling, well condition, total well depth and depth to groundwater, field parameters including odour, colour, sheen and any other observations made during sampling were logged digitally using ArcGIS FieldMaps and ALS Compass. Where PFAS analysis was required, nitrile gloves were replaced directly prior to sampling and PFAS bottles were filled first and stored separately within their own zip-lock bag.
Preservation	All samples were stored on ice in insulated cool boxes while on site and in transit to the laboratory under chain of custody (COC) protocols. Samples were delivered to the ALS laboratory in Smithfield under COC procedures. ALS are National Association of Testing Authority (NATA) accredited for the analyses performed. COCs and Sample Request Notifications (SRNs) are provided together with the analytical laboratory certificates in Appendix G.
Laboratory analysis	All groundwater samples were analysed for the base analytical suite as follows: • Field parameters (pH, EC, total dissolved solids (TDS), redox and temperature) • Total organic carbon (TOC) • Major cations (calcium, magnesium, sodium, potassium) • Major anions (chloride, sulphate and speciated alkalinity) • Dissolved metals (aluminium, arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, zinc) • Total metals (aluminium, cobalt, iron, manganese) • Nutrients (ammonia, nitrate, nitrite, total Kjeldahl nitrogen, total nitrogen, total phosphorous, reactive phosphorous. Additional analytes were included where compounds were detected and/or exceeded the adopted site assessment criteria in the baseline assessment: • Total Recoverable Hydrocarbons (TRH) • Benzene, Toluene, Ethylbenzene, Xylene (BTEX) • Phenols • Per- and Polyfluoroalkyl Substances (PFAS) (short suite) • Volatile Organic Compounds (VOCs), only at St Marys as discussed in Section 6.4. Nominated wells and their respective sampling suites are outlined in Table 2-7.
Equipment Decontamination	Non-disposable equipment was decontaminated with Liquinox and rinsed with deionised water between each sample location.

Activity	Details
Field Duplicate Samples	Field QC samples were taken at rate of 1 per 20 primary water samples and analysed to assess the precision and accuracy of the primary laboratory. For wells which were analysed for PFAS, duplicate field QC samples were collected at a higher frequency.
Trip Blank and Trip Spike	One trip blank and one trip spike was taken during the sampling event and analysed by ALS.

Table 2-7: List of wells and analytical suites

Site	Location ID	Date Sampled	Lab Report	Analytical Suite
St Marys	SBT-GW-1001-S	04 Feb 2026	ES2603584	Base
	SBT-GW-1002	04 Feb 2026	ES2603584	Base
	SBT-GW-1005-S	04 Feb 2026	ES2603584	Base
	SBT-GW-1016	04 Feb 2026	ES2603584	Base, TRH/BTEX, PFAS
	SBT-GW-1017	05 Feb 2026	ES2603707	Base, TRH/BTEX, PFAS
	SBT-GW-1021	04 Feb 2026	ES2603584	Base, Phenols, PFAS
	SMGW-BH-A401	04 Feb 2026	ES2603584	Base, TRH/BTEX, PFAS
Claremont Meadows	SBT-GW-1024	03 Feb 2026	ES2603450	Base, TRH/BTEX, PFAS
	SBT-GW-1805	03 Feb 2026	ES2603450	Base, PFAS
	SMGW-BH-A107	03 Feb 2026	ES2603450	Base
Claremont Meadows XPN13	SBT-GW-1030	03 Feb 2026	ES2603450	Base, PFAS
Orchard Hills	SBT-GW-1048-R	02 Feb 2026	ES2603450	Base
	SMGW-BH-A135-R	02 Feb 2026	ES2603450	Base, TRH/BTEX, PFAS
	SBT-GW-1042	03 Feb 2026	ES2603450	Base
	SBT-GW-1063	02 Feb 2026	ES2603450	Base
	SBT-GW-1806	02 Feb 2026	ES2603450	Base, TRH/BTEX
	SBT-GW-1807	02 Feb 2026	ES2603450	Base
	SBT-GW-1808	02 Feb 2026	ES2603450	Base
Airport Business Park	SBT-VWP-3401-R	29 Jan 2026	ES2603043	Base
	SBT-GW-3003-A-R	-	Dry	Base
	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	Base
	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	Base
Airport Terminal	SBT-GW-3012-a	29 Jan 2026	ES2603043	Base
	SBT-GW-3012-b	30 Jan 2026	ES2603043	Base, TRH
	SBT-GW-3012-c	30 Jan 2026	ES2603043	Base
	SBT-GW-3022	30 Jan 2026	ES2603043	Base, TRH
	SBT-GW-3006-R	30 Jan 2026	ES2603043	Base
Western Sydney Airport	SMGW-BH-C320	30 Jan 2026	ES2603043	Base, TRH/BTEX, PFAS
	SBT-GW-4000	-	Blocked	Base, TRH/BTEX
Bringelly	SBT-GW-4003	02 Feb 2026	ES2603450	Base, TRH, BTEX, PFAS
	SBT-GW-4005	02 Feb 2026	ES2603450	Base
	SBT-GW-4800	02 Feb 2026	ES2603450	Base
	SBT-GW-4801	02 Feb 2026	ES2603450	Base
	SBT-GW-4802	02 Feb 2026	ES2603450	Base
Bradfield	SBT-GW-4008	29 Jan 2026	ES2603043	Base
	SBT-GW-4014-R	29 Jan 2026	ES2603043	Base, PFAS

Site	Location ID	Date Sampled	Lab Report	Analytical Suite
	SBT-GW-4017-R	29 Jan 2026	ES2603043	Base, TRH/BTEX, PFAS
	SBT-VWP-4403-R	29 Jan 2026	ES2603043	Base, TRH/BTEX
	SBT-GW-4803-R	29 Jan 2026	ES2603043	Base
	SBT-GW-4021	29 Jan 2026	ES2603043	Base

1: Base Analytical Suite as detailed in Table 19 of the GWP (PLM, Rev03.01)

2: - Unable to be sampled during current monitoring event, as discussed in Section 3

2.3.3 Quality Assurance and Quality Control

Quality assurance (QA) and quality control (QC) measures implemented during sampling and field data collection to ensure data integrity are detailed in Section 7 of the GWMP. The measures outlined in the GMP included:

- Using NATA accredited laboratories for sample analysis.
- Using Chain of Custody (CoC) procedures between sample collection in the field and subsequent reception of the sample by the laboratory. CoC documentation included the sample type and code, analysis required, collection data, sampler and sample receiver(s).
- Implementing appropriate sample handling and storage protocols, including using laboratory supplied containers, keeping samples chilled during storage and transport, and ensuring samples are received in good condition within specified holding times by the laboratory.
- Adopting a consistent program of quality control sampling for fieldwork, including:
    - Collection of duplicate and triplicate samples at an average frequency of one sample per twenty primary samples (an overall ratio of 1:10 where PFAS sampled in accordance with NEMP 2.0).
    - Collection of rinsate blanks to measure the effectiveness of decontamination procedures.
    - Collection of trip blanks to assess the adequacy of sample storage and transport procedures in preventing cross contamination.

3. COMPLIANCE REVIEW

Non-compliances for the current monitoring period include:

- SBT-GW-3003-B-R (APDS) could not be sampled as it was dry.
- SBT-GW-4000 (WSI) could not be sampled as it contained an unknown "diver" logger and peristaltic pump tubing that blocked access for sampling.
- SWD-TU100-20071-VWP07 (Claremont Meadows, adjacent to SBT-GW-1028 and asbestos exclusion zone) was not downloaded as unable to be identified in field.
- SBT-VWP-4404 water damaged and unable to be downloaded (discussed below)
- GDE monthly monitoring was not undertaken during this monitoring round, and has now commenced

3.1 VWP REPLACEMENT AND RECTIFICATION

During the monitoring works, several of the VWPs were found to be damaged and unable to be downloaded. Rectification works completed are outlined in Table 3-1.

Table 3-1: VWP Maintenance Works

Site	Logger (Well ID)	Comment	Maintenance Notes	Last Data Point Available from logger
Claremont Meadows	SBT-GW-1804	Downloaded data	Replaced 4x batteries, resealed with unit with magic gel.	31/01/2026 18:00
	SBT-GW-1805	Downloaded data	Replaced 4x batteries.	11/02/2026 17:00
	SMGW-BH-A107	Downloaded data	Replaced 4x batteries.	15/04/2025 19:00
Orchard Hills	SBT-GW-1042	Downloaded data	Replaced 4x batteries.	10/01/2026 17:00
Airport Business Park	ABP-TD300-VWP01 ABP-TD300-VWP02 ABP-TD300-VWP03 ABP-TD300-VWP04	Water damage to multiple loggers	All four loggers were found to be water damaged as the units had not been properly resealed, allowing water ingress. Data was retrieved from one logger (identified to be VWP03 by matching the serial number 77662) with the last available data point from 02/08/2025. Loggers replaced on 05/03/2026. New serial numbers: VWP01 - 118987 (previously 77664) VWP03 (previously 77627).	02/08/2025 - VWP03 node 77662
Bradfield	SBT-VWP-4404	Unable to download - possible water damage	Unit dead. Not replaced as understood area is to be converted to road and VWP destroyed. Replacement likely to be required.	N/A
	SBT-VWP-4403-R	Unable to connect and download	Unit dead. Logger replaced, with 4x batteries and resealed with gel.	N/A
	SBT-VWP-4405	Logger accessed and logging restarted	Sensor was unplugged and unit set to external power. Installed new battery, reconnected logger and resealed.	25/08/2024 14:00
	SN8803	**Data downloaded**	**Restarted logger, installed new battery. Logger case was installed incorrectly. Location ID to be confirmed. May be replacement for SBT-VWP-4404.**	**20/03/2025 11:00**

3.2 ADDITIONS TO MONITORING WELL NETWORK

In addition to the wells routinely monitored for the biannual GME, Tetra Tech was also requested to sample monitoring wells SBT-GW-1030 and SMGW-BH-A107, which are listed in Table 20 of the GWMP (PLM, Rev03.01) to be sampled as required.

4. EXISTING ENVIRONMENT

4.1 TOPOGRAPHY

The landscape along the 23 km alignment is relatively flat overall. However, elevation gradually rises from about 40 mAHD at St Marys to around 80 mAHD at the Airport Terminal. This pattern of relief is typical of terrain underlain by Bringelly Shale.

4.2 RAINFALL AND CLIMATE

Sydney has a temperate climate with no distinct dry season, although rainfall is slightly higher during autumn and winter. Monthly rainfall, evaporation, and rainfall surplus/deficit at the Badgerys Creek Automatic Weather

Station (AWS; Station 67108) are summarised in Table 4-1. The rainfall difference represents the monthly surplus or deficit relative to evaporation, and together these values reflect long-term average conditions.

Since 2020, rainfall has generally been above historical averages, indicating a sustained wet period. An exception occurred in 2024, which was the driest year in this period, with rainfall approximately 70–80% of other recent years.

Long-term trends indicate that mean rainfall peaks in late summer to early autumn (February–March) and is lowest from late winter to early spring (July–September). Evaporation is highest in November and December, lowest in June, and exceeds mean rainfall in all months.

Table 4-1: Annual Rainfall Data – Badgerys Creek AWS (67108)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall Mean[1]	80.9	105.2	105.6	52	41.2	54.7	34.7	39.1	35.9	56	69.3	55.8	730.4
Rainfall 2026	149.6	82.6	74.0	-	-	-	-	-	-	-	-	-	-
Difference	68.7	-22.6	-31.6	-	-	-	-	-	-	-	-	-	-
Evaporation [2]	160	110	140	110	70	55	70	90	110	160	180	180	1435

Notes:

1: Rainfall average derived from annual rainfall from 1995 – 2025 for Badgerys Creek Station 67108 accessed April 2026.

2: Evaporation is sourced from the Bureau of Meteorology (BoM), based on Australia-wide open pan evaporation mapped from data collected between 1975 and 2005.

Table 4-2: Annual Rainfall Data – Penrith Lakes AWS (67113)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall Mean[1]	95.9	118.2	104.9	57.6	39.9	44.5	37.9	32.1	30.9	52.3	80.7	63.3	758.2
Rainfall 2026	148.8	147.2	144.2	-	-	-	-	-	-	-	-	-	-
Difference	52.9	29	39.3	-	-	-	-	-	-	-	-	-	-

Notes:

1: Rainfall average derived from annual rainfall from 1995 – 2025 for Penrith Lakes station 67113 accessed April 2026.

At Badgerys Creek (Table 4-1), rainfall in January 2026 exceeded the long-term monthly average, but was below average in February and March. In contrast, rainfall at Penrith Lakes AWS (Station 67113; Table 4-2) was above average for all three months (January to March 2026).

A review of daily rainfall data for the monitoring period (July 2025 to February 2026) shows five significant rainfall events (>20 mm) at Badgerys Creek and seven at Penrith Lakes. These events are likely to represent major groundwater recharge periods (see Table 4-3).

Table 4-3: Rainfall Events Exceeding 20 mm Across the Monitoring Period

Date	Badgerys Creek Rainfall (mm)	Penrith Lakes Rainfall (mm)
02/07/2025	38	48
02/08/2025	-	21.6
21/08/2025	40.4	34
11/09/2025	22	48.8
12/12/2025	-	21
18/01/2026	105	100.8
02/02/2026	33	-
27/02/2026	-	43.6

These higher rainfall events were distributed throughout the monitoring period. The most significant event occurred on 18 January 2026, when 105 mm was recorded at Badgerys Creek and 100.8 mm at Penrith Lakes. This event likely represents a major groundwater recharge episode, contributing to increased groundwater levels and pressures prior to sampling in February 2026.

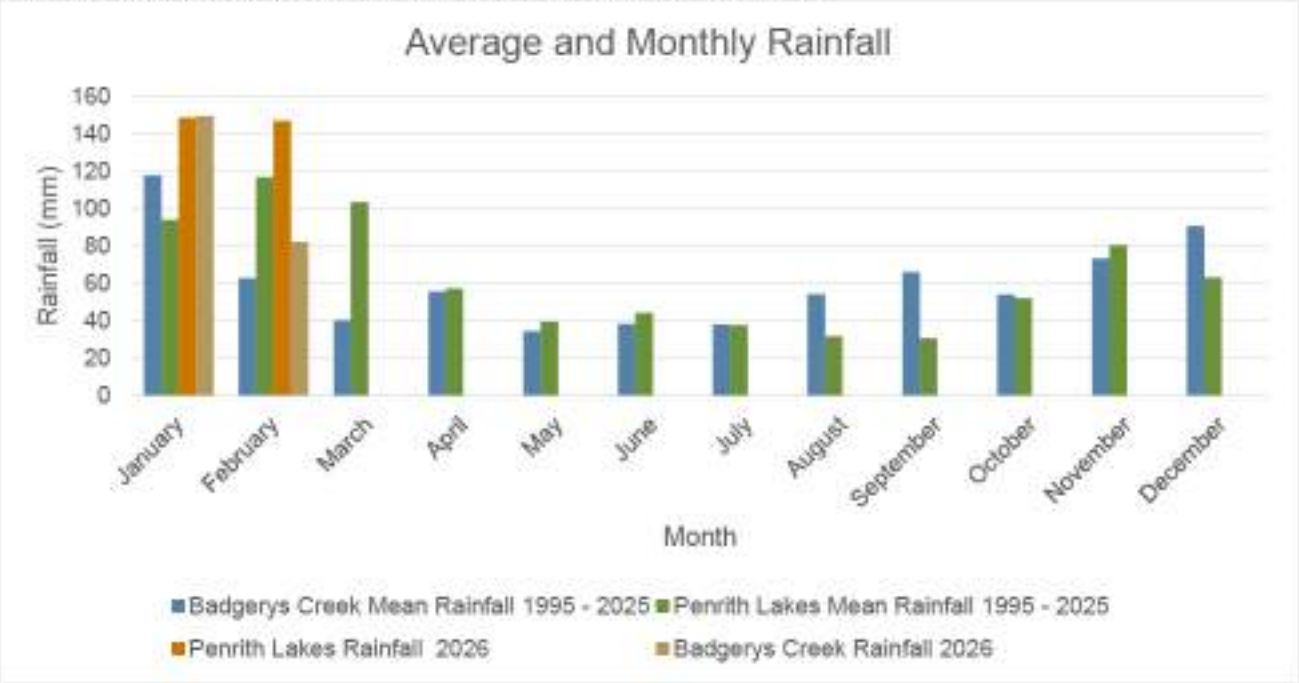

Figure 4-1: Average and monthly rainfall at Badgerys Creek and Penrith Lakes – historical and 2026

4.3 GEOLOGICAL SETTING

The Project alignment is located within the Cumberland and Penrith Basins, part of the broader Permian–Triassic Sydney Basin, a major structural trough extending north through the Gunnedah and Bowen Basins. Regionally, the geology is dominated by the mid-Triassic Wianamatta Group, with the underlying Hawkesbury Sandstone, Narrabeen Group, and Illawarra Coal Measures exposed in surrounding areas such as the Blue Mountains.

Three key geological units influence hydrogeology along the alignment:

- *Alluvial deposits (Quaternary)*: These occur along waterways such as South Creek and typically comprise discontinuous layers of sand, silt, and clay, with occasional sandy or gravelly zones associated with past flood events or paleochannels. These deposits overlie the Bringelly Shale along major creek lines.
- *Weathered bedrock*: Derived from the Bringelly Shale, this unit includes residual soil, extremely weathered rock, and highly weathered rock. Residual soils are typically silty clays of variable thickness, generally thicker toward the northern part of the alignment. Highly weathered zones are often fractured, iron-stained, and of low strength.
- *Bedrock (Bringelly Shale)*: The primary underlying formation (approximately 150 m thick), characterised by sub-horizontal, laminated, carbonaceous shale interbedded with laminated siltstone, and occasional sandstone layers that may form local ridgelines.

4.4 HYDROGEOLOGICAL SETTING

The Project area contains two main aquifer systems: a fractured bedrock aquifer within the Wianamatta Group (including Bringelly Shale) and Hawkesbury Sandstone, and shallow Quaternary alluvial aquifers associated

with South Creek and its tributaries. Localised perched groundwater may also occur within the low-permeability, clay-rich weathered bedrock and residual soils.

The *alluvial aquifers* consist of sands, silts, clays, and occasional gravels along drainage lines. These zones typically act as areas of groundwater discharge, although they may receive recharge from rainfall and, during high-flow periods, from surface water. In dry periods, discharge from the underlying bedrock can increase salinity in these shallow systems.

The *residual soils*, derived from weathered Bringelly Shale, are predominantly clayey with low permeability. As a result, rainfall tends to move laterally or form perched water rather than significantly recharging deeper aquifers. Recharge to the underlying bedrock is therefore limited, estimated at only 1–2% of annual rainfall.

The *bedrock aquifer* is a heterogeneous, fractured system where groundwater flow occurs mainly through joints, bedding planes, and fractures. The Bringelly Shale has low intrinsic permeability, although interbedded sandstone layers can locally enhance flow. Groundwater in this system is often semi-confined to confined in low-lying areas due to the overlying clay-rich soils. Salinity is influenced by accumulated salts in soils and bedrock, derived from atmospheric deposition and evapotranspiration processes.

Groundwater flow is largely controlled by topography, with recharge occurring via rainfall infiltration and discharge to creeks. Flow directions generally follow surface gradients toward major waterways such as South Creek, Badgerys Creek, and Duncans Creek. Groundwater levels are typically shallow (within ~5 m of the surface) near drainage lines and deeper in elevated areas. Flow patterns are complex, with downward gradients in upland areas and potential upward gradients near creeks, where deeper saline groundwater can discharge into surface water systems.

The depth to groundwater along the alignment is variable and typically shallow as outlined in PLM, 2023b and summarised in Table 4-4.

Table 4-4: Standing Water Levels Monitored at Metro Stations (from PLM, 2023b)

Standing water levels monitored at Metro Stations	Standing Water Level (mbgl) / (mAHD)
St Marys	1.7 - 7.7 / 26.7 to 36
Claremont Meadows	1.6 – 2.4 / 24.9 – 25.6
Orchard Hills	4.1 – 5.7 / 36.3 to 38.1
Bringelly Service Facility	2.8 – 7.4 / not available
Bradfield	1.8 – 5.0 / 57.6 to 67

Groundwater within the Project alignment has the potential to be contaminated from former and current land-use practices including agricultural use, industrial use, fuel and chemical storage, landfills and the use of hazardous building materials. The Environmental Impact Statement identified 53 areas of environmental concern (AEC) along the alignment that could impact groundwater quality. Potential sources of contamination, and investigations undertaken by SBT to address identified data gaps and to inform baseline groundwater conditions, are detailed in the Baseline Groundwater Assessment undertaken for the project (Tetra Tech 2023). Contaminants including chlorinated hydrocarbons, petroleum hydrocarbons and PFAS were identified along the Project alignment. These contaminants have the potential to cause environmental degradation and pose a risk to construction workers during construction.

4.5 GROUNDWATER DEPENDENT ECOSYSTEMS

GDEs are communities of plants, animals and other organisms whose extent and life processes rely wholly or partially on groundwater, such as wetlands and vegetation beside creek systems. Most wetland communities

and many river systems have some degree of dependence on groundwater. GDEs within 10 km of the Project alignment have been identified in or near to the project footprint by PLM (2023a) and include:

- South Creek and associated tributaries.
- Cumberland Plain Woodland in the Sydney Basin Bioregion.
- River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and Southeast Corner Bioregions.
- Shale Gravel Transition Forest in the Sydney Basin Bioregion.
- Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and Southeast Corner Bioregions.

The GWMP (PLM, Rev03.01) requires monitoring of terrestrial GDEs that have been identified at or near:

- Claremont Meadows within residual soils.
- Orchard Hills within alluvium.
- Bradfield within alluvium.

Time series monitoring of EC has been conducted at these sites to monitor groundwater quality at these GDEs (Section 6.2).

5. PERFORMANCE CRITERIA

Performance criteria or triggers for groundwater levels, GDEs and groundwater quality are outlined in the GWMP (PLM, Rev03.01). The trigger are consistent with those previously adopted by SBT to ensure consistency across the long-term project groundwater monitoring program. The basis and justification for the selected trigger levels are outlined and summarised in this section, noting that trigger criteria have not been established for all monitoring locations.

5.1 GROUNDWATER LEVEL TRIGGER DEVELOPMENT

Groundwater level triggers have been established to manage potential impacts associated with drawdown from temporary dewatering during construction. These trigger levels may be refined over time as construction progresses and additional monitoring data becomes available.

A traffic light system has been adopted, based on baseline groundwater conditions and predicted drawdown from the works. Figure 5-1 explains the proposed actions corresponding to each trigger level exceedance.

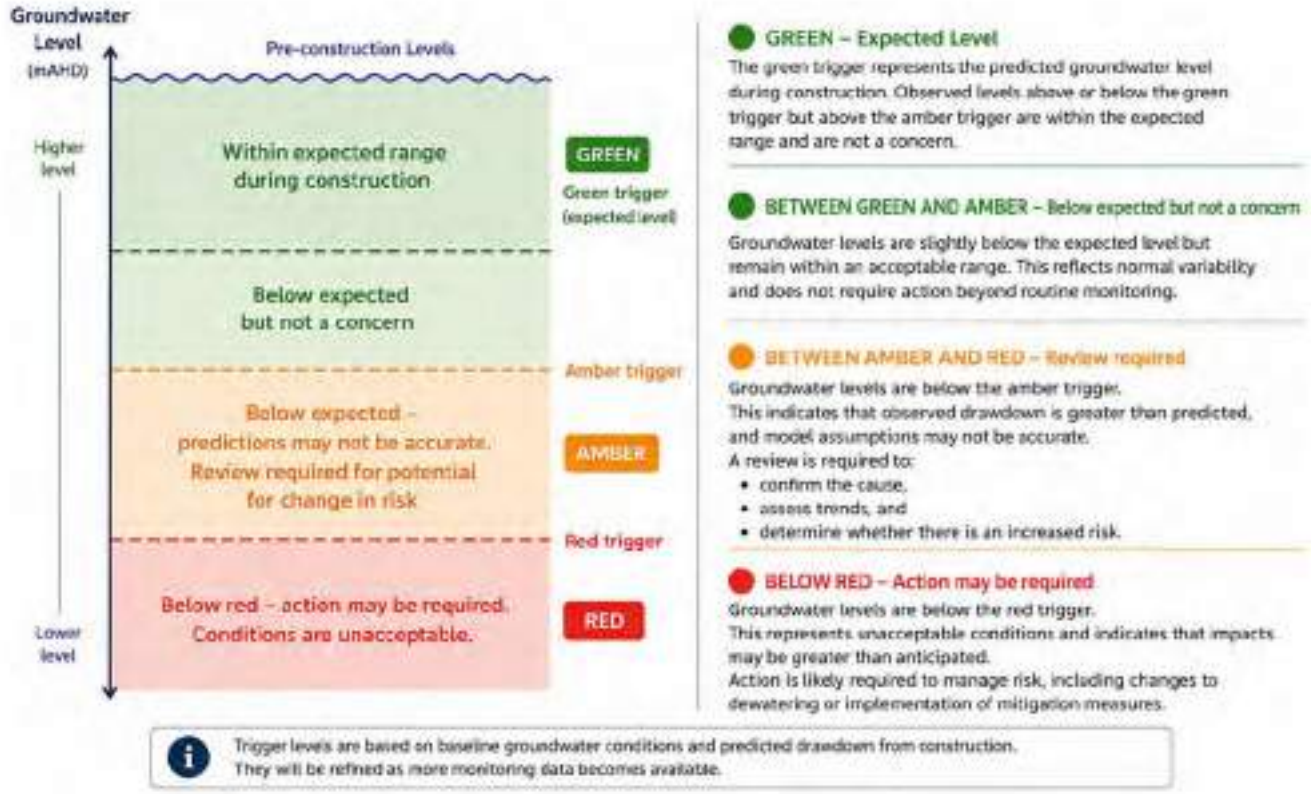

Figure 5-1: Groundwater Level Trigger Actions

5.1.1 Groundwater Level Trigger Criteria

Groundwater level triggers (green, amber and red) for the monitoring wells and VWPs monitored in this investigation are presented in

Table 5-1, along with sensor depth or screen intervals and predevelopment groundwater level ranges.

Table 5-1: Groundwater Level Traffic Light Level Trigger System

Site	Location ID	Alternative Logger ID	Monitoring VWP Sensor Depth or well screen interval (mAHD)	Pre-construction groundwater level range (mAHD)	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling (mAHD)		
					Green	Amber	Red
St Marys	SBT-GW-1001-S	SWD-TU100-17275-VWP01-A	15.15	42 to 43.3	35.0	34.5	34.0
		SWD-TU100-17275-VWP01-B	20.15	42 to 43.3	35.0	34.5	34.0
	SBT-GW-1005-S	SWD-TU100-17443-VWP03-A	13.56	26.6 to 32.8	19.9	19.4	18.9
		SWD-TU100-17443-VWP03-B	18.56	28 to 34	21.3	20.8	20.3
Claremont Meadows	SBT-GW-1805	-	18.3 to 24.3	24.7 to 25.6	21.5	21.0	20.5
	SBT-GW-1028	SWD-TU100-20071-VWP07-A	2.813	26.9 to 27	25.4	24.9	24.4
		SWD-TU100-20071-VWP07-B	7.813	27.1 to 27.3	25.6	25.1	24.6
	SMGW-BH-A107	-	-4.44 to 3.46	20.9 to 21.6	20.8	20.3	19.8

Site	Location ID	Alternative Logger ID	Monitoring VWP Sensor Depth or well screen interval (mAHD)	Pre-construction groundwater level range (mAHD)	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling (mAHD)		
					Green	Amber	Red
TBM Tunnel – South Creek	SBT-GW-1804	-	16.0 to 19.0	18.7 to 19	18.5	18.0	17.5
Orchard Hills	SBT-VWP-1404	SWD-TU150-22010-VWP02	22.81	33.8 to 35.3	31.5	31.0	30.5
	SBT-GW-1042	-	32.1 to 38.1	37.7 to 37.8	33.5	33.0	32.5
	SMGW-BH-A315-R	-	32.3 to 38.3	38.8 to 40	37.4	36.9	36.4
	SBT-GW-1063	-	20.6 to 29.6	25.4 to 25.7	24.8	24.3	23.8
Airport Business Park	SBT-GW-1063	-	20.6 to 29.6	25.4 to 25.7	24.8	24.3	23.8
		ABP-TD300-VWP02	56.277	59.8 – 61.7	Note 1	Note 1	Note 1
		ABP-TD300-VWP03	56.296	60 – 62.2	Note 1	Note 1	Note 1
		ABP-TD300-VWP04	55.123	60.5 – 62.7	Note 1	Note 1	Note 1
Airport Portal	SBT-VWP-3401-R	SWD-TU300-33565-VWP02-R	52.466	55.2 to 64	50.3	49.8	49.3
Airport Portal / Cross passage XPS01 (APDS)	SBT-GW-3003-A-R	-	63.7 to 63.9	60.0	59.5	59.0	62.7 to 65.7
	SBT-GW-3003-B-R	-	55 to 63	51.3	50.8	50.3	54.4 to 57.4
	SBT-GW-3003-C-R	-	59.4 to 59.6	55.7	55.2	54.7	45.3 to 48.3
Airport Terminal	SBT-GW-3006-R	-	49.3 to 55.3	72.9 to 74.6	65.0	64.5	64.0
	SBT-VWP-3402	SWD-TU300-34874-VWP03-01	60	74.2 to 74.6	Note 1	Note 1	Note 1
		SWD-TU300-34874-VWP03-02	64	74.2 to 74.6	Note 1	Note 1	Note 1
		SWD-TU300-34874-VWP03-03	68	74.4 to 74.6	Note 1	Note 1	Note 1
		SWD-TU300-34874-VWP03-04	73	74.8 to 75.2	Note 1	Note 1	Note 1
Western Sydney Airport	SBT-GW-4000	-	59.2 to 69.7	70.5 to 70.9	70.5	70.0	69.5
Bradfield	SBT-VWP-4403-R	WD-TU400-39287-VWP01-R	57.506	67 to 67.6	60.3	59.8	59.3
	SBT-VWP-4404	SWD-TU400-39340-VWP02	65.6 to 66.8	55.6	55.6	55.1	54.6
	SBT-GW-4021	-	**51.9 to 60.9**	**59.8 to 59.9**	**59.6**	**59.1**	**58.6**

Notes:

1: Purpose of monitoring asset is wall design where drawdown is not the critical design case.

5.2 GROUNDWATER QUALITY PERFORMANCE CRITERIA

The baseline groundwater quality data was initially screened based on the following criteria:

- ANZECC/ARMCANZ 2000 relevant physical and chemical stressors
- ANZG (2018) 95% species protection criteria for freshwater water, with criteria for toxicants known to bioaccumulate assessed based on the 99% species protection criteria
- PFAS National Environmental Management Plan (NEMP 3.0) 99% species protection values
- Australian Standard AS2159 – 2009 Piling design and installation have also been considered to assess potential groundwater aggressivity risks posed by groundwater to underground concrete and steel structures
- Discharge concentration limits negotiated with EPA as detailed in L2.4 of Environmental Licence (EPL 21672 held by SBT, with same discharge limit conditions applied to EPL 21807 for SSTOM works)
- Airports (Environment Protection) Regulations 1997 (AEPR) guidelines (on-airport locations only).

Site-specific groundwater quality action triggers have been developed for select locations where baseline assessment (Tetra Tech 2023) identified groundwater contamination may be within the area predicted to be influenced by construction related drawdown, and either:

- Above laboratory detection levels for TPH and PFAS, or
- 10 x NSW Environmental Protection Licence (EPL) for contaminants of potential concern (CoPC) which typically exceed the EPL along the alignment (i.e. aluminium, cadmium, copper, zinc, total nitrogen and total phosphorus).

Site specific triggers are based on the detection of CoPC concentration above the baseline maximum, with action trigger levels for metals relating to filtered metal concentrations.

For sentinel wells, and for any CoPC where baseline concentrations are less than 10 x the EPL limit but still exceed the initial screening criteria, potential adverse changes are assessed using a statistical trend test (Mann–Kendall), rather than well- and analyte-specific action triggers.

Where replacement wells have been installed, data from the initial wells was used to provide context for exceedances, but not for trend analysis as it is not directly comparable.

If a statistically significant increasing trend is identified, the baseline concentration range will be reviewed. A trigger level will then be reported where the construction monitoring concentration exceeds 250% of the maximum historical concentration.

Following a trigger exceedance, the investigation may include the following:

- Further monitoring to confirm groundwater conditions (increased frequency).
- Assessment to identify if the exceedance represents an adverse change in risk profile and a remedial response is required (refer to Section 7.9.1 of the SWMP, PLM 2023b), or if the Action Trigger level should be revised or implemented in a sentinel well for the CoPC triggered.

Where trigger exceedances are identified, and concentrations are outside the background range for groundwater along the alignment, the monitoring program will also be reviewed as required.

Site specific trigger levels developed for selected water quality contaminants are provided in Table 5-2.

Table 5-2: Groundwater quality action triggers

Monitoring Zone	Location ID	Aluminium	Cadmium	Copper	Zinc	pH	Total N	Total P	Total PFAS	TRH / BTEXN	Other	Trend only
Units	-	mg/L	ug/L	ug/L	ug/L	pH	mg/L	mg/L	ug/L	-	-	-
St Marys	SBT-GW-1001-S	>24.4	>81	>2,600		<4.5						
	SBT-GW-1002	>2.1	>29	>172		<4.0						
	SBT-GW-1005-S											✓
	SBT-GW-1016				>236		>29.8	>10.1	>0.032	BTEXN: >9ug/L		
	SBT-GW-1017						>47.4	>33.2	>0.0102	TPH >C_{10}: >500ug/L		
	SBT-GW-1021										Phenol: >31ug/L	
	SBT-GW-1347C *											✓
	SMGW-BH-A401	>3	>3,240	>235		<4.6	>3.75		>0.021			
TBM Tunnel South Creek	SMGW-BH-A107											✓
Cross passage / Tunnel (XPN13)	SBT-GW-1030	>7.5	>26	>542		<4.4			>0.13			
Claremont Meadows	SBT-GW-1024								>0.09	TPH C_6-C_9: >2,100ug/L		
	SBT-GW-1805						>6.6	>19.9				
Orchard Hills	SBT-GW-1806		>8.1	>47		11-11.2				BTEXN: >4ug/L		
	SBT-GW-1807											✓
	SBT-GW-1063											✓
	SBT-GW-1808	>2.26	>79	>478		<3.65						
	SMGW-BH-A315-R				>240				>0.034	TPH >C_{10}: >260ug/L		
	SBT-GW-1042	>1.9			>2,182	<4.5	>183					
	SBT-GW-1048-R		>2.7		>833							

Monitoring Zone	Location ID	Aluminium	Cadmium	Copper	Zinc	pH	Total N	Total P	Total PFAS	TRH / BTEXN	Other	Trend only
Portal / Cross passage XPS01 (APDS)	SBT-GW-3003-A-R											✓
	SBT-GW-3003-B-R											✓
	SBT-GW-3003-C-R											✓
Airport Terminal	SBT-GW-3006-R											✓
	SBT-GW-3012-A-R											✓
	SBT-GW-3012-B-R											✓
	SBT-GW-3012-C-R											✓
	SBT-GW-3022									TPH >C_{10}: >3,300ug/L		
Western Sydney Airport	SBT-GW-4000						>5.4			TPH >C_{10}: >1,620ug/L	Toluene: >46ug/L	
	SMGW-BH-C320								>0.5		Toluene: >34ug/L	
Bringelly SF	SBT-GW-4003									TPH C_9-C_{14}: >20ug/L		
	SBT-GW-4005								>0.01			
	SBT-GW-4800						>2.2					
	SBT-GW-4801											✓
	SBT-GW-4802											✓
Bradfield	SBT-GW-4008											✓
	SBT-GW-4014-R								>0.002			
	SBT-GW-4017_R								>0.0145	TPH >C_{10} >880ug/L; TPH C_6-C_9: >40ug/L		
	SBT-GW-4021						>28.3	>16.2				
	SBT-GW-4803-R											✓

* Reported in monthly St Marys PRB Mitigation Reports

5.3 GDE AND SALINITY PERFORMANCE CRITERIA

Site specific trigger values (SSTVs) have been established based on baseline groundwater level and quality monitoring data.

These SSTVs are intended to indicate potential changes in salinity. A management response will be initiated if any of the following criteria are met:

- EC data exceeds the SSTV over a period of three months and displays an increasing trend, or
- EC data exceeds the SSTV by more than 150% at any time.

Preliminary SSTVs for EC and groundwater levels are summarised in Table 5-3.

Table 5-3: Preliminary EC and Groundwater Level SSTVs for Continuous Monitoring of GDEs

Area	Bore ID	Screened unit	Installed screen / sensor depth (mBGL)	Baseline EC range (µS/cm)	Preliminary EC SSTV (µS/cm)	Baseline level (mAHD)	Preliminary level SSTV (mAHD)
Claremont Meadows	SBT-GW-1805	Residual	3–9	2,480–3,100	3,650	24.7–25.6	21.5
	SWD-TU100-20071-VWP07-A	Residual	2.8 (VWP)	No sampling as site is a surrogate for SBT-GW-1028 which is within asbestos exclusion zone		26.9–27.0	24.9
Orchard Hills	SBT-GW-1042	Alluvium	2–8	11,900–12,400	18,600	37.7–37.8	33.0
	SWD-TU150-22010-VWP02/ SBT-VWP-1404	Bedrock	16 (VWP)	-	-	33.8–35.3	31.0
	SBT-GW-1063	Alluvium/ Bedrock	2–11	11,650–13,293	19,940	25.4–25.7	24.3
	SMGW-BH-A315-R	Alluvium/ Bedrock	4–10	1,842–2,878	4,317*	38.8–40.0	36.9
Bradfield	SBT-GW-4021	Alluvium/ Bedrock	2–11	21,400–22,000	33,000	59.8–59.9	59.1

6. GROUNDWATER MONITORING RESULTS

Groundwater monitoring locations are shown on figures B1 to B8 in Appendix B.

Groundwater monitoring results for the January/February 2026 GME are presented in the following appendices:

- Appendix C – Tabulated Analytical Results
- Appendix D – VWP Hydrographs (showing groundwater levels and trigger values)
- Appendix E – GDE Hydrographs and EC Trends
- Appendix F – Statistical analysis of groundwater quality - Mann Kendall Analysis

Identified trigger exceedances for groundwater levels and quality are discussed in Section 6.1 and 6.3 respectively.

6.1 GROUNDWATER LEVELS

Groundwater levels are monitored via manual gauging and data loggers in monitoring wells, and using pore pressure in grouted VWPs. Monitored groundwater level results relative to mAHD are presented in Table 2-3, with VWP and monitoring well hydrographs presented in Appendices D and E.

Review of these hydrographs indicates that the major rainfall events as outlined in Section 4.2 have very little influence on groundwater levels.

6.1.1 Trigger Exceedances

Monitoring wells and VWPs with groundwater level trigger levels are detailed in

Table 5-1, with a comparison of current groundwater level to triggers provided in Table 6-1**.**

A monitoring result is considered non-compliant if groundwater levels fall below the red trigger threshold, prompting corrective actions (refer Figure 3). These actions include investigating the cause of the decline, assessing whether fluctuations are attributable to seasonal variation, and determining if further intervention is required. Green trigger levels are the expected groundwater level during construction. When the levels are between green and amber, levels are below expected but not considered to be a concern. When levels fall below the Amber trigger level, a review is needed as the difference between expected and observed indicates predictions were not accurate, and a review is required to assess if levels indicate a potential adverse change in risk. Below the red trigger, action is required.

Groundwater level triggers based on predicted post-excavation conditions (as outlined in PLM, 2024) were not exceeded at any monitoring locations (wells and VWPs) during this GME, with the exception of SBT-GW-3006-R.

At St Marys, groundwater levels at two locations to the south of the station box (GW-1001 & GW-1005) were above the trigger levels, indicating no management measures are required. The continuation of monitoring is recommended until the station box is hydrostatically tanked and the risk of groundwater drawdown is removed.

The groundwater level in SMGW-BH-A107, while still 0.12 m below the amber trigger, has recovered over 8 metres from the low of 12 mAHD reported in June 2024 when XP N9 was being constructed. As groundwater levels are now close to pre-construction conditions, and the ecological survey conducted at the time in 2024 concluded that there had been no observable impact, no action is warranted in response to the minor exceedance of the amber trigger.

At Claremont Meadows as data was not available in level and GDE monitoring location SWD-TU100-20071-VWP07-A (monitored in place of SBT0GW-1028 in asbestos zone), levels were instead assessed using the multi-level VWPs at SBT-VWP-1403 in comparison to pre-development levels. This is a conservative assessment as SBT-VWP-1403 is closer to the excavation, and reported drawdown of over 8 metres during construction. Groundwater levels in all three VWPs have now recovered by at least 5 metres, and are either in, or within 0.2 metres, of the pre-construction range. Despite the significant recovery close to the excavation, there were no trigger exceedances when groundwater levels at SWD-TU100-20071-VWP07-A were last reported (ADE, 2025b), however levels will continue to be monitored.

At Orchard Hills groundwater levels in all four trigger wells are above the green level (refer hydrographs in Appendix E). At SBT-VWP-1404 the groundwater level has ranged from below the red trigger level between June and August 2024, before recovering during 2025. In late 2025, groundwater levels decreased again to near the red trigger level prior to recovering within 0.1 metre of the green trigger level in January 2026. Consequently, no management measures are required other than continuing monitoring to ensure levels remain consistent.

At Airport Business Park, nested monitoring wells GW-3003A/B/C were replaced in July 2025 and the former trigger levels have been applied. Review of the groundwater levels indicates that the shallow well (GW-3003A) is dry. The SWL in intermediate well (GW-3003B-R) is 58.995 mAHD and deep monitoring well (GW-3003C-R) is 58.097 m AHD, indicating that levels do not exceed the triggers and the previous trigger levels are appropriate. Monitoring has been increased at this location to quarterly to confirm levels in these replacement wells.

At Airport terminal, a red trigger exceedance (64 mAHD) was reported at SBT-GW-3006-R with water level being gauged at 63.45 mAHD. This location replaced SBT-GW-3006 in July 2025 and was relocated approximately 100 m to the northwest where contours indicate groundwater levels are lower, and is significantly closer to the station box where greater drawdown was predicted. As trigger levels have been adopted from the previous well location these may not be reflective of the new location. It is therefore recommended that trigger levels previously developed for SBT-VWP-3403 (ATL-SN350-VWP02-01) be adopted instead as this VWP was screened closer to the depth of SBT-GW-3006, and was closer to the station box, as is SBT-GW-3006-R. Proposed revised trigger levels for SBT-GW-3006-R based on original triggers for ATL-SN350-VWP01-01 are included in Table 6-1. Based on the green trigger level for ATL-SN350-VWP02-01 of 56.9 mAHD, the current level in SBT-GW-3006-R is within the predicted range and is compliant. In addition, the hydrograph for SBT-GW-3006-R indicates that groundwater levels have increased more than 1.5 metres over the four months from November 2025 to February 2026, indicating that groundwater levels are recovering in this area.

SBT-GW-4000 was installed to monitor groundwater conditions during construction of tunnel cross-passage XP-13 between Bringelly and the Airport Terminal. Groundwater levels have been recorded at this location since September 2023, prior to the commencement of WSA-related construction works.

Since installation, groundwater levels have shown an overall declining trend. However, some recovery was initially observed, with SBT reporting that “monitoring data to September 2024 indicates groundwater levels were recovering in the two months following completion of the cross passage.” The most recent measurement on 30 January 2026 indicates a groundwater level of 68.32 mAHD which although still exceeds the red trigger of 69.5 mAHD, is an increase of approximately 0.4 m from the previous level recorded of 67.91 mAHD on 9 July 2025 (ADE, 2025b). This indicates a potential stabilisation in levels noting no further groundwater-influencing construction activities are being undertaken by PLM. Gauging is recommended to increase in frequency to quarterly whilst ongoing groundwater level assessment is undertaken.

At Bradfield (SBT-GW-4021), groundwater levels were previously between the amber and red trigger levels, but are now at the green level, indicating groundwater is recovering. Similarly, at SBT-VWP-4403-R, the groundwater level was within 0.1m of the green level. Continuous monitoring at SBT-VWP-4004 (refer to hydrograph, Appendix D) was water damaged and has not recorded data since late 2024.

Table 6-1: Trigger Level Assessment

Site	Location ID	Alternative Logger ID	TOC mAHD	SWL mAHD	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling (mAHD)			Trigger Level
					Green	Amber	Red	
St Marys	SWD-TU100-17275-VWP01-A	-	48.8	45.82	35	34.5	34	Green
	SWD-TU100-17275-VWP01-B	-	48.8	38.04	35	34.5	34	Green
	SWD-TU100-17443-VWP03-A	-	44.2	37.78	19.9	19.4	18.9	Green
	SWD-TU100-17443-VWP03-B	-	44.2	37.78	21.3	20.8	20.3	Green
TBM Tunnel – South Creek	SMGW-BH-A107	-	22.5	20.18	20.8	20.3	19.8	Amber
	SBT-GW-1804	-	20.7	19.73	18.5	18	17.5	Green
	SBT-GW-1805	-	27.3	24.45	21.5	21	20.5	Green
Claremont Meadows	SBT-GW-1028	SWD-TU100-20071-VWP07-A	30.81	-	25.4	24.9	24.4	#N/A
		SWD-TU100-20071-VWP07-B	30.81	-	25.6	25.1	24.6	#N/A
	SBT-VWP-1403	SWD-TU100-19992-VWP06-01[1]	26.95	20.02	Pre-development groundwater range: 20.2 to 25			Green
		SWD-TU100-19992-VWP06-02[1]	26.95	20.07	Pre-development groundwater range: 20.2 to 25			Green
		SWD-TU100-19992-VWP06-03[1]	26.95	23.57	Pre-development groundwater range: 20.6 to 25			Green
Orchard Hills	SBT-VWP-1404	SWD-TU150-22010-VWP02	38.8	31.42	31.5	31	30.5	Green
	SBT-GW-1042	-	40.1	37.08	33.5	33	32.5	Green
	SMGW-BH-A315-R	-	42.3	39.39	37.4	36.9	36.4	Green
	SBT-GW-1063	-	31.6	26.81	24.8	24.3	23.8	Green

Site	Location ID	Alternative Logger ID	TOC mAHD	SWL mAHD	Trigger levels based on anticipated groundwater level at completion of excavation and tunnelling (mAHD)			Trigger Level
					Green	Amber	Red	
Airport Portal	SBT-VWP-3401-R	SWD-TU300-33565-VWP02-R	65.02	58.56	50.3	49.8	49.3	Green
Airport Portal / Cross passage XPS01 (APDS)	SBT-GW-3003-A-R	-	67.846	Dry	60	59.5	59	Green[1]
	SBT-GW-3003-B-R	-	67.735	59.00	51.3	50.8	50.3	Green
	SBT-GW-3003-C-R	-	67.637	58.10	55.7	55.2	54.7	Green
Airport Terminal	SBT-GW-3006-R	-	84.38	63.45	65 (56.9 [2])	64.5 (56.4 [2])	64 (55.9 [2])	Red
Western Sydney Airport	SBT-GW-4000	-	72.235	68.32	70.5	70	69.5	Red
Bradfield	SBT-VWP-4403-R	WD-TU400-39287-VWP01-R	73.228	60.21	60.3	59.8	59.3	Green
	SBT-VWP-4404	-	-	Logger Destroyed	55.6	55.1	54.9	#N/A
	SBT-GW-4021	-	62.847	59.60	59.6	59.1	58.6	Green

[1] Levels in SWD-TU100-19992-VWP06 compared to pre-development range as data not available for SWD-TU100-20071-VWP07-A

2. Proposed revised trigger levels for SBT-GW-3006-R based on original triggers for ATL-SN350-VWP01-01, closer to the station box

6.2 GDE MONITORING

6.2.1 Groundwater levels

Groundwater levels are monitored at six locations to assess for potential impacts to GDEs, with Table 6-2 providing a summary of manually gauged groundwater levels, and comparison to SSTVs.

Table 6-2: Groundwater level monitoring at GDEs

Precinct	Well ID	Screened lithology	Screen/sensor depth		SWL (mAHD) / status	SSTV (mAHD)
			mBGL	mAHD		
Orchard Hills	SBT_GW-1042	alluvium	2.0 - 8.0	32.1 – 38.1	37.079	33.0
Orchard Hills	SBT-GW-1063	alluvium/ bedrock	10.7 – 11.0	20.6 – 29.6	26.808	24.3
Orchard Hills	SMGW-BH-A315R	alluvium/ bedrock	3.0 – 9.0	32.3 – 38.3	39.391	36.9
Orchard Hills	SBT-VWP-1404	alluvium/ bedrock	17.47	22.81	31.11	31.0

[1] Note total well depth on 61.4 mAHD but location was gauged at 62.37 mAHD during April 2026 GME indicating levels are above green level.

Precinct	Well ID	Screened lithology	Screen/sensor depth		SWL (mAHD) / status	SSTV (mAHD)
			mBGL	mAHD		
Bradfield	SBT-GW-4021	alluvium/ bedrock	1.9 – 10.9	51.9 – 60.9	59.597	59.1
Claremont Meadows	SBT-GW-1805	residual	3 - 9	18.3 – 24.3	24.446	21.5

Claremont Meadows

At SBT-GW-1805, the monitored groundwater level of 24.446 mAHD exceeded the SSTV of 21.5 mAHD, indicating no exceedance of site specific trigger.

Groundwater levels at GDE monitoring location SWD-TU100-20071-VWP07-A were not available for this monitoring round as well was not able to be located during the monitoring event, but has now been identified as discussed in Section 2.2. As a conservative approach, levels were assessed using nearby multi-level VWPs at SBT-VWP-1403, which is closer to the excavation and previously recorded drawdown exceeding 8 m during construction. Groundwater levels at this location have since recovered by at least 5 m and are now within, or up to 0.2 m of, pre-construction levels. Given this recovery, and no prior trigger exceedances at SWD-TU100-20071-VWP07-A (ADE, 2025b), conditions at Claremont Meadows are considered to not exceed the triggers.

This increasing trend suggests groundwater levels are recovering, and with construction works at Claremont Meadows forecast to continue until April 2026, further gauging of SWD-TU100-20071-VWP07-A will be completed during the April 2026 quarterly round and the next biannual round in July 2026.

Orchard Hills

There are three monitoring wells (Orchard Hills SMGW-BH-A315-R, GW1042 and GW1063) that were continuously monitored for groundwater levels to monitor any impacts near GDEs. Dataloggers were downloaded in January/February 2026 with all available historical data since 2023 shown on hydrographs in Appendix E, including EC data.

At BH-A315R, the recorded groundwater level of 39.931 mAHD exceeded the SSTV of 36.9 mAHD. Although this is a replacement well installed in July 2025, groundwater levels appear to have recovered and are steadily increasing since monitoring resumed, likely due to completion of advanced station box construction at the Orchard Hills station box. Continued monitoring is recommended to confirm stabilisation or ongoing recovery.

At SBT_GW-1042, the groundwater level of 37.079 mAHD exceeded the SSTV of 33.0 mAHD, indicating compliance. Time-series data (August 2023 to January 2026) shows minor fluctuations, with levels consistently above the SSTV.

At SBT_VWP-1404, the groundwater level of 31.11 mAHD is above the SSTV of 31.0 mAHD, indicating compliance. Time-series data (February 2023 to January 2026) shows levels were below the SSTV between mid-2023 to late 2025, before recovering. Due to the SSTV exceedances, ecological monitoring of GDEs in the area has been conducted since 2023 (discussed below in Section 6.2.3).

At SBT_GW-1063, the groundwater level of 26.808 mAHD exceeded the SSTV of 24.3 mAHD, indicating compliance. Time-series data (April 2023 to February 2026) shows some variability but remains consistently above the SSTV.

Bradfield

At Bradfield SBT-GW-4021, the monitored groundwater level 59.597 mAHD was above the SSTV of 59.1 mAHD, indicating compliance.

6.2.2 EC Monitoring

Groundwater EC (salinity) data was collected adjacent to GDEs at Claremont Meadows, Orchard Hills and Bradfield. The results of manual salinity monitoring collected during the January/February 2026 GME and SSTVs are summarised in Table 6-3. Graphs of data logged EC over time are also provided in Appendix E.

Table 6-3: GDE groundwater salinity monitoring

Precinct	Well ID	SSTV (µS/cm)	Salinity (µS/cm) (Field)
Claremont Meadows	SBT-GW-1805	3,650	1,972
Orchard Hills	SBT_GW-1042	18,600	11,487
Orchard Hills	SBT-GW-1063	19,940	4,825
Orchard Hills	SMGW-BH-A315R	4,317	2,809
Bradfield	SBT-GW-4021	33,000	2,954

Based on field measured groundwater EC, SSTVs were not exceeded during the current monitoring period in GDE monitoring wells.

6.2.3 GDE Ecological Monitoring

Vegetation surveys have been conducted to monitor the canopy cover at the Orchard Hills GDEs since May 2023 (AMBS, 2026). The location of the vegetation surveys is shown in Figure 6-1.

Four of vegetation surveys were undertaken on behalf of SBT in May/June 2023 (before groundwater levels decreased), October 2023 after levels in SWD-TU150-22010-VWP02 decreased, and in June and October 2024. The surveys have been continued by PLM, with the seventh round of monitoring was conducted in March 2026 at the established previously locations. The full ecological report is included in Appendix E, with the survey results summarised in and discussed below.

Monitoring was conducted along three transects comparing study (potential groundwater drawdown) and control areas, assessing canopy cover and shrub condition over time. Results show that canopy cover and vegetation health have generally remained stable, with no significant differences between study and control areas. Observed variations are largely attributed to natural climatic fluctuations (e.g. rainfall and temperature changes), seasonal effects, and external disturbances such as fire.

Bush regeneration works between Surveys 6 and 7 significantly influenced results, particularly by reducing exotic shrub cover and altering vegetation composition, especially in the control transect. Despite some localised changes (e.g. slight canopy decrease in the control area and minor shrub condition variability), statistical analysis found no evidence that groundwater drawdown is impacting vegetation. Overall, the monitoring indicates that vegetation condition is not being adversely affected by the project, though continued six-monthly monitoring is recommended to detect any longer-term impacts.

Table 6-4: Mean percent canopy cover (AMBS, 2024) Survey Transect Canopy Cover (%)

	Canopy Cover (mean %)						
Survey No.	**Survey 1**	**Survey 2**	**Survey 3**	**Survey 4**	**Survey 5**	**Survey 6**	**Survey 7**
T/S 1 (study)	77	62	75	73	72	75	81
T/S 2 (control)	70	63	74	71	76	80	78
T/S 3 (study)	35	36	34	37	37	38	40
T/S 4 (control)	53	51	52	52	51	59	61

The ongoing surveys were initiated in response to drawdown of over 8 m in late 2023 in SWD-TU150-22010-VWP02 (SBT-GW-1404), outside of the predicted drawdown zone, which exceeded the groundwater level trigger. Groundwater levels SBT-GW-1404 have been variable over time, but have now increased, and were above the SSTV when gauged in January 2026, and confirmed based on data logged levels in the well (hydrograph is included in Appendix D).

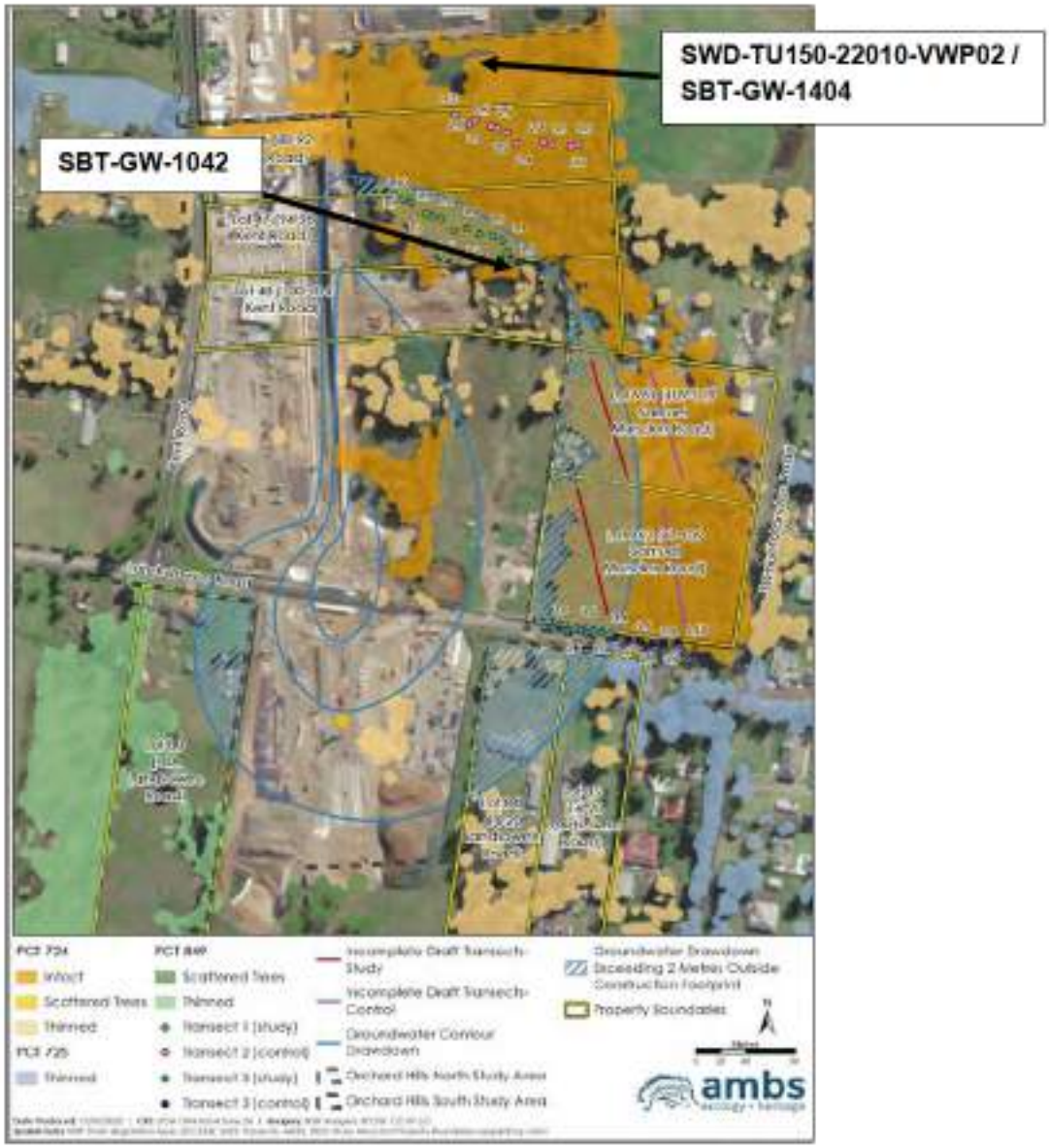

Figure 6-1: Predicted extent of greater than 2m drawdown (blue line) and vegetation monitoring locations (Adapted from AMBS (2026))

6.3 GROUNDWATER QUALITY

6.3.1 Field Parameters

Water quality field parameters were measured at each monitoring well when sampled, and included pH, EC, DO, redox potential and temperature, with results included in Table 1, Appendix C. Water from the Hydrasleeve™ was poured directly into the water quality meter capsules and the parameters monitored immediately after withdrawal of the groundwater from the well.

Measurements for the 37 monitoring wells sampled were taken with a calibrated Solinst water quality meter, The calibration certificate for the water quality meter is presented in Appendix H.

pH

Field pH values across the monitoring area and at specific sites were variable even in wells that were screened in the same aquifer (Figure 6-2), ranging from an acidic pH of 4.48 to near neutral pH 7.38 at St Marys in SBT-GW-1001-S to a near neutral pH of 6.91 to alkaline pH of 9.04 from groundwater at the Airport Terminal in SBT-GW-3006-R. The latter is a replacement well and also recorded a high pH (of 9.33) in the previous biannual report. As expected, it is likely that local geology also plays a role in the pH and groundwater geochemistry.

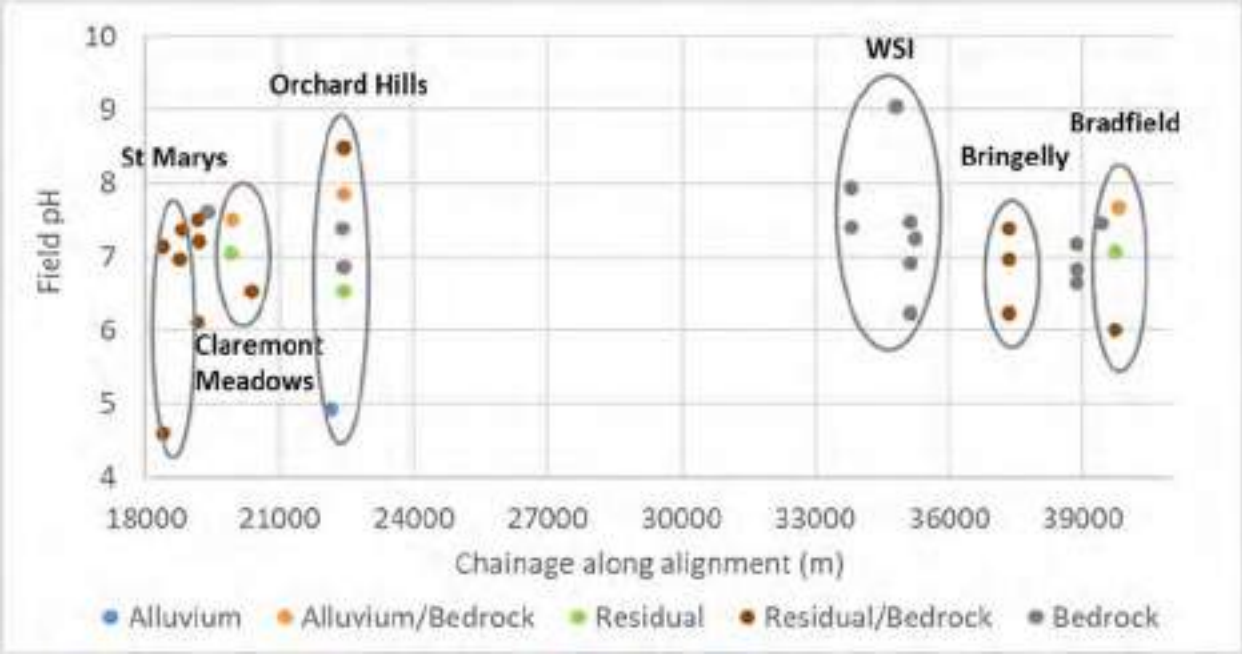

Figure 6-2: Groundwater field pH along the alignment by aquifer

Overall, pH conditions range from acidic to slightly alkaline, with most values between 6 and 8. This is consistent with previous monitoring events and baseline conditions in the Bringelly Shale, which are influenced by sulfate mineralisation. No clear relationship between pH and aquifer material was identified, although lower pH values were generally associated with wells screened across both residual soils and bedrock.

Although no trigger exceedances were identified for pH (discussed in following sections), changes in pH have been considered on a well specific basis when assessing trend or trigger exceedances for metals due to the influence of groundwater pH on metal mobilisation.

Comparison of field and laboratory pH shows a strong correlation, with laboratory results showing a slightly wider range (Figure 6-3).

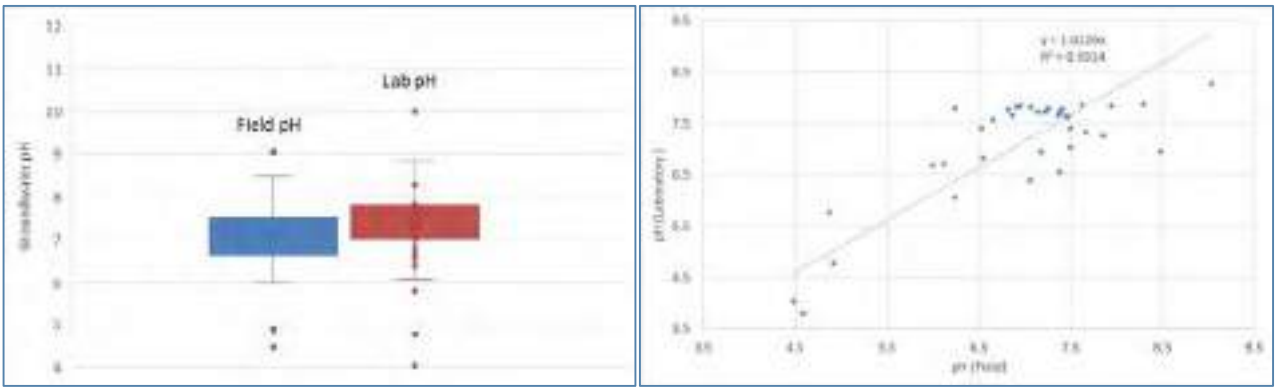

Figure 6-3: Boxplot and scatterplot of groundwater field and laboratory pH

Electrical Conductivity

Electrical conductivity (EC) was measured in 37 monitoring wells, with additional continuous data collected from three dataloggers near GDEs (Section6.2.2).

In this monitoring round, EC ranged from 1,175 µS/cm (St Marys: SBT-GW-1021) to 30,390 µS/cm (Orchard Hills: SBT-GW-1048-R), comparable to the previous biannual maximum (30,391 µS/cm). This represents an increase in the minimum EC compared to the previous round (367 µS/cm at Airport Terminal: SBT-BH-3006).

Groundwater salinity ranges from fresh to saline, consistent with expected variability in the Bringelly Shale.

Dissolved Oxygen

Dissolved oxygen ranged from 1.4 mg/L (Airport Terminal - SBT-GW-3006R) to 8.1 mg/L (Claremont Meadows - SBT-GW-1024). While some wells show well-oxygenated conditions typical of unconfined aquifers, others exhibit low dissolved oxygen, suggesting more reducing conditions.

Redox Potential

Redox potential (Eh) ranged from -124.6 mV (Airport Terminal: SBT-GW-3006-R) to 963.11 mV (Bringelly SF: SBT-GW-4802). While many results were positive, indicating mildly to moderately oxidising conditions, 13 of 37 measurements were negative, reflecting localised reducing environments.

Positive Eh values are broadly consistent with higher dissolved oxygen concentrations, whereas negative values align with lower DO and may indicate reducing conditions influenced by sulphide-bearing shale.

Temperature

Groundwater temperatures ranged from 17.7 to 30°C reflecting variability in aquifer conditions, including depth, recharge influence, and potential influence of ambient seasonal temperatures once samples bought to the surface.

6.3.2 Site Specific Trigger Exceedances

Groundwater quality data collected between 29th January and 5th February 2026 has been compared to the trigger levels presented in Table 5-2 with exceedances detailed in Table 6-5.

A summary of laboratory analytical results, and comparison to the initial screening guideline values, is presented in Table 1, Appendix C.

Table 6-5: Site Specific groundwater quality trigger exceedances – February 2026 results

Well ID		SMGW-BH-A401	SBT-GW1024	SBT-GW-1042	SMGW-BH-A315-R
Site		St Marys	Claremont Meadows	Orchard Hills	Orchard Hills
Filtered Al (mg/L)	Trigger	-	-	>1.9	-
	Feb 2026 Result	-	-	2.04	-
Filtered Cadmium (µg/L)	Trigger	-	-	-	-
	Feb 2026 Result	-	-	-	-
Filtered Copper (µg/L)	Trigger	-	-	-	-
	Feb 2026 Result	-	-	-	-
Filtered Zinc (µg/L)	Trigger	>235	-	-	>240
	Feb 2026 Result	852	-	-	584
Total N (mg/L)	Trigger	-	-	-	-
	Feb 2026 Result	-	-	-	-
Total P (mg/L)	Trigger	>3.75	-	-	-
	Feb 2026 Result	4.51	-	-	-
Total PFAS (µg/L)	Trigger	-	>0.09	-	-
	Feb 2026 Result	-	0.1	-	-
TRH/BTEXN (µg/L)	Trigger	-	-	-	-
	Feb 2026 Result	-	-	-	-
Other (µg/L)	Trigger	-	-	-	-
	Feb 2026 Result	-	-	-	-

Note: dash (-) denotes that either no site-specific criteria or criteria was not exceeded, refer Table 5-2.

Site specific groundwater quality triggers were exceeded at four of the 37 locations monitored for groundwater quality during construction monitoring.

At Orchard Hills in SBT-GW-1042 the dissolved aluminium concentration slightly exceeded the site-specific trigger value of 1.9 mg/L, with a concentration of 2.04 mg/L recorded on 3 February 2026. Elevated aluminium levels have been previously observed at this location and are likely associated with increased metal solubility under low pH conditions (pH 4.92, slightly below the guideline value of 5.0).

pH appears to be trending upward over time in SBT-GW-1042, from a low of 3.3 in November 2024, which may lead to reduced aluminium solubility. Continued monitoring is recommended to confirm this trend and to identify any future increases in dissolved aluminium that may require remedial action.

Other wells at Orchard Hills, SMGW-BH-A315-R exceeded the zinc criteria of 240 µg/L with a dissolved zinc concentration of 584 µg/L recorded on 2nd February 2026. This well is screened within alluvium/bedrock to the southwest of the construction site. The groundwater pH was alkaline (pH 8.48), suggesting that elevated zinc concentrations are unlikely to be pH-driven, as zinc is typically less soluble under these conditions. As the cause of the elevated zinc remains unclear and Mann-Kendall analysis indicates a stable trend, continued monitoring is recommended to determine whether this represents a persistent issue or an isolated spike.

At St Marys (SMGW-BH-A401) the filtered zinc concentration of 852 µg/L exceeded the trigger value of 235 µg/L. With a near-neutral pH of 6.96, the elevated zinc is unlikely to be solely pH-driven and may instead reflect natural variability or the influence of above-average rainfall in January 2026. Total phosphorus was also elevated (4.51 mg/L), exceeding the trigger value of 3.75 mg/L. This may indicate infiltration of nutrient-

rich surface water influencing groundwater quality at this location. Continued monitoring is recommended to assess trends and confirm the cause of these exceedances.

One well at Claremont Meadows (SBT- GW1024) marginally exceeded the set trigger (0.09 µg/L) for total PFAS (0.1 µg/L). It is possible the increased rainfall in January has flushed the PFAS in the unsaturated zone into the shallow alluvium/bedrock aquifer where this well is screened.

In summary the exceedances recorded are minor and could be attributed to several factors including increased metal solubility due to naturally low pH conditions, fluctuating rainfall conditions, variable lithology and natural variation. PLM construction works are not considered to have impacted groundwater quality.

6.3.3 Groundwater quality in replacement wells

As there is insufficient data to assess trends in replacement wells, and current site specific trigger values may not be appropriate, groundwater quality in replacement wells has been compared to that in the original wells, and the screening criteria used to assess existing groundwater conditions (refer Section 5.2).

6.3.3.1 Airport Business Park

At Airport Business Park groundwater quality monitoring was conducted in nested wells SBT-GW-3003A/B/C and in SBT-VWP-3410-R (SBT-3401-R). It is noted that SBT-GW-3003A was dry and could not be sampled. Water quality exceedances in November 2025 (sampled by ADE) and January 2026 GME (sampled by Tetra Tech Coffey) are summarised in Table 6-6.

The table shows exceedances when compared to the guideline values and text in colour has been compared to baseline data that was collected in November 2022. Comparison with these data is useful in determining if water quality is similar to groundwater prior to construction and wells that have analytes with red text shows that the specific analyte remain elevated when compared to water quality prior to construction. Data with the annotation [nb] denotes that there was no baseline data collected for these analytes and therefore no comparison has been made.

To assess trends, data from wells in the Airport Business Park monitoring zone was compared to the specified guidelines (as outlined in Section 5.2.2) as well as baseline data that was collected in November 2022. For all SBT replacement wells (-R), the baseline data from the original well was used. Below is a summary of wells in Table 6-6 with analytes still above the baseline data concentrations and those that have now returned to concentrations similar to those prior to construction. The exception is SBT-VWP-3410-R as this well does not have associated baseline data.

SBT-GW-3003B-R

Iron is higher than the guidelines and the baseline data (in January 2026). Analytes that are now below or close to baseline data (but still exceed the guidelines) are: total nitrogen, aluminium, iron and filtered manganese.

SBT-GW-3003C-R

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: aluminium, iron, filtered ion and nickel. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: total nitrogen and ammonia.

Water quality trends and exceedances are discussed in Section 6.3.4**.** In summary nutrient concentrations in groundwater appears to be impacted by historical land uses and groundwater appears to be leaking from the upper aquifers into lower aquifer. Metals including nickel and zinc are known to be naturally elevated within the groundwater of the Bringelly Shale, which is in part due to low pH values and increased metal solubility.

Analytes including total recoverable hydrocarbons, phenols, polyaromatic hydrocarbons and BTEX are not included in the analytical suite as required under the GWMP (PLM, Rev03.01).

6.3.3.2 Airport Terminal

At the Airport Terminal groundwater quality monitoring was conducted in SBT-BH-3006-R, the nested wells SBT-GW-3012A/B/C andSBT-GW-3022 and. Water quality exceedances are summarised in Table 6-7. As above, the table shows exceedances when compared to the guideline values and text in colour has been compared to baseline data that was collected in November 2022.

To assess trends for groundwater wells in the Airport Terminal monitoring zone, data was compared to the specified guidelines (as outlined in Section 5.2.2) as well as baseline data that was collected in November 2022. For all SBT replacement wells (-R), the baseline data from the original well was used. Below is a summary of wells in

SBT- BH-3006-R

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: field pH, lab pH, total nitrogen, ammonia as N filtered and iron. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: iron (which was above the baseline concentration in November 2025 but dropped below the baseline concentration in January 2026) and chromium.

SBT- GW-3012A

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: filtered ammonium and filtered zinc. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: field pH, total nitrogen, aluminium, chromium, filtered copper, iron, and nickel.

SBT- GW-3012B

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: filtered nickel and filtered zinc. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: total nitrogen, aluminium and iron.

SBT- GW-3012C

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: total nitrogen, total aluminium and iron (which have all increased significantly since November 2025), cadmium, chromium and filtered nickel. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: filtered ammonium as N and filtered zinc.

SBT-GW-3022

Analytes that are higher than the guidelines and the baseline data (in January 2026) are: filtered ammonia as N, chromium and filtered zinc. Analytes that are now below or close to baseline data (but still exceed the guidelines) are: total nitrogen, aluminium and iron.

Water quality trends and exceedances are discussed in Section 6.3.1. No site-specific trigger levels were exceeded as they were all Airport wells that are assessed by trend analysis for the analytes in Table 6-7.

In summary nutrient concentrations in groundwater appears to be impacted by historical land uses and are unlikely to be due to construction impacts. Metals including copper, nickel and zinc are known to be naturally elevated within the groundwater of the Bringelly Shale, which is in part due to low pH values and increased metal solubility. These exceedances are considered to be natural and not related to construction activities.

Analytes including phenols and polyaromatic hydrocarbons and are not included in the analytical suite as required under the PLM Groundwater Monitoring Program. Total recoverable hydrocarbons and BTEX were included in some of the Airport Terminal analytical suites but were below LOR.

Table 6-6: Airport Business Park - Water Quality Exceedances

Analyte (mg/L)	Nov 2025 SBT-GW-3003B-R	Jan 2026 SBT-GW-3003B-R	Nov 2025 SBT-GW-3003C-R	Jan 2026 SBT-GW-3003C-R	Nov 2025 SBT-VWP-3410-R	Jan 2026 SBT-VWP-3410-R	Guideline value	Guideline
Nitrogen (total)	0.8	1.4	4.1	6.9	0.9 nb	1.3 nb	0.1 mg/L	Airports 1997
Nitrogen (total)	0.8	1.4	4.1	6.4	0.9 nb	1.3 nb	0.5 mg/L	ANZECC 2000 SE Aust
Ammonia	NA	BG	NA	4.46	NA	BG	0.9 mg/L	ANZECC 2018 FW 95%
Ammonia as N (filtered)	BG	NA	4.1	NA	0.91 nb	NA	0.9 mg/L	ANZECC 2018 FW 95%
Phosphorus	0.4	NA	0.4	NA	0.2 nb	NA	0.005 mg/L	Airports 1997
Phosphorus	0.4 nb	NA	0.4	NA	0.4 nb	NA	0.05 mg/L	ANZECC 2000 SE Aust
Aluminium	4.5	2.13	5.7	8.63	3.6 nb	1.93 nb	0.1 mg/L	Airports 1997
Aluminium (filtered)	BG	BG	BG	BG	BG	0.91 nb	0.1 mg/L	Airports 1997
Chromium	NA	BG	NA	0.017	NA	BG	0.01 mg/L	Airports 1997
Copper	NA	0.009 nb	NA	0.038	NA	0.015 nb	0.002 mg/L	Airports 1997
Iron	17	13.2	20	26.5	8.2 nb	8.26 nb	1.0 mg/L	Airports 1997
Iron (filtered)	1.3	2.96	1.9	BG	1.6 nb	7.36 nb	1.0 mg/L	Airports 1997
Manganese	2.8	BG	BG	BG	BG	BG	1.9 mg/L	ANZECC 2018 FW 95%
Manganese (filtered)	2.3	BG	BG	BG	BG	BG	1.9 mg/L	ANZECC 2018 FW 95%
Nickel	NA	BG	NA	0.033	NA	0.027 nb	0.015 mg/L	Airports 1997
Nickel (filtered)	NA	BG	NA	BG	NA	0.017 nb	0.015 mg/L	Airports 1997
Lead	NA	0.005 nb	NA	0.017 nb	NA	0.006 nb	0.001 mg/L	Airports 1997
Lead	NA	0.005 nb	NA	0.017 nb	NA	0.006 nb	0.0034 mg/L	ANZECC 2018 FW 95%
Lead (filtered)	NA	BG	NA	BG	NA	0.003 nb	0.001 mg/L	Airports 1997
Zinc	NA	0.083 nb	NA	0.529 nb	NA	0.059 nb	0.005 mg/L	Airports 1997
Zinc	NA	0.083 nb	NA	0.529 nb	NA	0.059 nb	0.008 mg/L	ANZECC 2018 FW 95%
Zinc (filtered)	NA	BG	NA	BG	NA	0.037 nb	0.005 mg/L	Airports 1997
Zinc (filtered)	NA	BG	NA	BG	NA	0.037 nb	0.008 mg/L	ANZECC 2018 FW 95%

Note: BG denotes that the value is below the guideline value. NA denotes not analysed. Red text denotes that the value is above baseline data and blue text denotes that the value is close to or below baseline data. Annotation nb denotes that there was no baseline data to compare results to.

Table 6-7: Airport Terminal - Water Quality Exceedances

	Nov 2025 SBT-BH-3006-R	Jan 2026 SBT-BH-3006-R	Nov 2025 SBT-GW-3012A	Jan 2026 SBT-GW-3012A	Nov 2025 SBT-GW-3012B	Jan 2026 SBT-GW-3012B	Nov 2025 SBT-GW-3012C	Jan 2026 SBT-GW-3012C	Nov 2025 SBT-GW-3022	Jan 2026 SBT-GW-3022	Guideline value	Guideline
Field pH	NA	9.04	NA	6.24	NA	WG	NA	WG	NA	WG	6.5-9 pH units	**Airports 1997**
Lab pH	10.0	WG	NA	WG	WG	WG	WG	WG	WG	WG	6.5-9 pH units	**Airports 1997**
Lab pH	10.0	8.27	NA	WG	WG	WG	WG	WG	WG	WG	6.5-8 pH units	**ANZECC 2000 SE Aust**
Nitrogen (total)	4.3	5.0	NA	9.5	BG	1.5	7.4	14.0	2.0	2.5	0.1 mg/L	**Airports 1997**
Nitrogen (total)	4.3	5.0	NA	9.5	BG	1.5	7.4	14.0	2.0	2.5	0.5 mg/L	**ANZECC 2000 SE Aust**
Nitrogen (Total Oxidised)	BG	NA	NA	BG	0.04	NA	1.8	NA	1.4	NA	0.04 mg/L	**ANZECC 2000 SE Aust**
Ammonia as N	NA	4.76	NA	8.27	NA	BG	NA	1.91	NA	1.85	0.9 mg/L	**ANZECC 2018 FW 95%**
Ammonia as N (filtered)	4.4	NA	NA	NA	BG	NA	7.4	NA	BG	NA	0.9 mg/L	**ANZECC 2018 FW 95%**
Phosphorus	1.2 nb	NA	NA	NA	0.72 nb	NA	0.66 nb	NA	0.62 nb	NA	0.005 mg/L	**Airports 1997**
Phosphorus	1.2 nb	NA	NA	NA	0.72 nb	NA	0.66 nb	NA	0.62 nb	NA	0.5 mg/L	**ANZECC 2000 SE Aust**
Aluminium	18	0.22	NA	1.52	15	1.20	14	90.2	21	8.73	0.1 mg/L	**Airports 1997**
Aluminium (filtered)	BG	BG	NA	BG	BG	BG	BG	BG	0.06	BG	0.055 mg/L	**ANZECC 2018 FW 95%**
Arsenic	NA	BG	NA	BG	NA	BG	NA	0.09 nb	NA	BG	0.05 mg/L	**Airports 1997**
Cadmium	NA	BG	NA	BG	NA	BG	NA	0.0004	NA	BG	0.0002 mg/L	**Airports 1997**
Cadmium	NA	BG	NA	BG	NA	BG	NA	0.0004 nb	NA	BG	0.0002 mg/L	**ANZECC 2018 FW 95%**
Chromium	NA	0.013 nb	NA	0.01	NA	BG	NA	0.252	NA	0.023	0.01 mg/L	**Airports 1997**
Chromium (filtered)	NA	0.019	NA	BG	NA	BG	NA	BG	NA	BG	0.01 mg/L	**Airports 1997**
Copper	NA	BG	NA	0.006 nb	NA	0.005 nb	NA	0.403 nb	NA	0.010 nb	0.002 mg/L	**Airports 1997**

	Nov 2025 SBT-BH-3006-R	Jan 2026 SBT-BH-3006-R	Nov 2025 SBT-GW-3012A	Jan 2026 SBT-GW-3012A	Nov 2025 SBT-GW-3012B	Jan 2026 SBT-GW-3012B	Nov 2025 SBT-GW-3012C	Jan 2026 SBT-GW-3012C	Nov 2025 SBT-GW-3022	Jan 2026 SBT-GW-3022	Guideline value	Guideline
Copper (filtered)	NA	BG	NA	0.002	NA	BG	NA	BG	NA	BG	0.002 mg/L	**Airports 1997**
Iron	63	BG	NA	3.93	38	2.66	34	233	37	16	1 mg/L	**Airports 1997**
Manganese	BG	B	NA	BG	BG	BG	BG	3.21	BG	BG	1.9 mg/L	**ANZECC 2018 FW 95%**
Mercury	NA	BG	NA	BG	NA	BG	NA	0.0003 nb	NA	BG	0.0001 mg/L	**Airports 1997**
Nickel	NA	BG	NA	0.016	NA	WG	NA	0.224 nb	NA	0.022 nb	0.015 mg/L	**Airports 1997**
Nickel	NA	BG	NA	0.016 nb	NA	0.014 nb	NA	-	NA	0.22 nb	0.011 mg/L	**ANZECC 2018 FW 95%**
Nickel (filtered)	NA	BG	NA	BG	NA	0.02	NA	0.036	NA	BG	0.015 mg/L	**Airports 1997**
Lead	NA	BG	NA	0.004 nb	NA	0.003 nb	NA	0.144 nb	NA	0.023 nb	0.001 mg/L	**Airports 1997**
Lead	NA	BG	NA	0.004	NA	BG	NA	0.144	NA	0.023 nb	0.0034 mg/L	**ANZECC 2018 FW 95%**
Zinc	NA	BG	NA	0.074 nb	NA	0.020 nb	NA	0.969 nb	NA	0.170 nb	0.005 mg/L	**Airports 1997**
Zinc	NA	BG	NA	0.074 nb	NA	0.020 nb	NA	0.969 nb	NA	0.170 nb	0.008 mg/L	**ANZECC 2018 FW 95%**
Zinc (filtered)	NA	BG	NA	0.053	NA	0.013	NA	0.021	NA	0.010	0.005 mg/L	**Airports 1997**
Zinc (filtered)	NA	BG	NA	0.053	NA	0.013	NA	0.021	NA	0.010	0.008 mg/L	**ANZECC 2018 FW 95%**

N Note: BG denotes that the value is below the guideline value. NA denotes not analysed. WG denotes within guideline. Red text denotes that the value is above baseline data and blue text denotes that the value is close to or below baseline data. Annotation nb denotes that there was no baseline data to compare results to.

6.3.4 Trend Analysis

Historical water quality results for a selection of analytes using all available data has been statistically analysed used the Mann-Kendall statistic to assess trends. A summary of the trend analysis is provided in Table 6-8**,** with all statistical outputs provided in Appendix F.

To conduct the statistical analysis, a minimum of four time series results is required for a statistically valid result. In cases where the analytical result is below the limit of reporting (LOR) half the LOR values has been included in the dataset. Where all data for an analyte is LOR the outcome is assessed as stable. Analytes in the trend analysis have been selected based on previous exceedances of trigger values or consistent detections and historical data (GWMP) (PLM, Rev 03.01).

Trends for each analytes are discussed in Section 6.3.4.1 and by precinct in Section 6.3.4.2.

6.3.4.1 Analyte Trends

One of the major influences on metal concentrations is the relationship with pH whereas pH increases metal solubility decreases. The solubility coefficient for each metal is quite variable depending on the metal compound. In general, the following influences on metals are:

- Aluminium solubility increases with pH less than 6 and more than 8. The solubility also increases with increased temperature;
- Cadmium solubility decreases as pH increases, that is cadmium is more soluble in acidic conditions;
- Copper solubility generally decreases as pH increases, that is copper is more soluble in acidic conditions; and,
- Zinc solubility like aluminium increases in both alkaline and acidic conditions.

Groundwater pH, and how it has changed over the monitoring period, has therefore also been considered when reviewing metal trends.

Dissolved Aluminium

The majority of dissolved aluminium trends were stable or insufficient data. However, an increasing trend was observed at the Airport Business Park (SBT-GW-3003-C-R).

At SBT-GW-3003-C-R, dissolved aluminium concentrations have shown a gradual increase over time, rising from 10 µg/L in July 2025 to 20 µg/L in November 2025 and 30 µg/L in January 2026. Over the same period, pH has remained consistently above neutral (7.10–7.84). The cause of this increase is unclear; however, given the low concentrations, it is not currently considered a concern. Continued monitoring is recommended to determine whether this trend persists and warrants further investigation.

Although not exceeding a trigger, a widespread decreasing trend is evident across several groundwater monitoring locations, suggesting a shift in groundwater conditions.

At Orchard Hills the Mann-Kendall statistics suggest a decreasing trend in aluminium in three of the groundwater wells (SBT-GW-1806, SBT-GW-1807 and SBT-GW-1808) while other locations in this precinct were stable or had insufficient data. The concentration of filtered aluminium in SBT-GW-1806 and GW-1807 in all samples taken in 2023 was 100 µg/L, however in February 2026, the concentration was 10 µg/L. The filtered aluminium in SBT-GW-1808 has also been decreasing over time. In July 2023 the concentration was 2,260 µg/L, in September 2023 it was 260 µg/L and in February 2026 the concentration was 40 µg/L. This reduction corresponds with increasing pH (from 3.65 to 6.83), consistent with reduced aluminium solubility under near-neutral conditions. The aqueous solubility (and speciation) of aluminium is strongly pH dependent. For example, at low pH (acidic water) aluminium is present mostly in the form of Al^{3+} and therefore is high soluble and mobile. Around near-neutral pH (roughly pH 5.5–8, depending on conditions) aluminium tends to

Table 6-8: Mann-Kendall Statistical Analysis – Groundwater quality

Precinct	Well	Dissolved Aluminium	C10 - C40 (Sum of total)	C6 - C10	Dissolved Cadmium	Dissolved Copper	Naphthalene	Nitrogen (Total)	pH (lab)	Phenol	Phosphorus (Total)	Toluene	Trichloroethene	Dissolved Zinc
Airport Business Park	SBT-GW-3003-B-R	S	X	X	#	#	X	I	I	X	#	X	X	#
Airport Business Park	SBT-GW-3003-C-R	I	X	X	#	#	X	I	I	X	#	X	X	#
Airport Business Park	SBT-VWP-3401-R	S	#	#	S	S	#	#	I	#	#	#	#	#
Airport Terminal	SBT-GW-3006-R	#	X	X	#	#	X	#	#	X	#	X	X	#
Airport Terminal	SBT-GW-3012-A	S	S	S	S	S	S	S	S	S	I	S	S	S
Airport Terminal	SBT-GW-3012-B	S	S	S	S	S	S	D	S	S	S	S	S	S
Airport Terminal	SBT-GW-3012-C	S	S	S	S	S	S	S	S	S	I	S	S	S
Airport Terminal	SBT-GW-3022	S	S	S	S	S	S	S	S	#	S	S	#	S
Airport Terminal	SMGW-BH-C320	D	S	D	S	S	S	S	D	#	S	D	S	S
Bradfield	SBT-GW-4008	S	X	X	S	S	X	S	S	X	S	X	X	S
Bradfield	SBT-GW-4014-R	#	X	X	#	#	X	#	#	X	#	X	X	#
Bradfield	SBT-GW-4017	S	S	D	S	S	S	S	S	I	I	S	S	S
Bradfield	SBT-GW-4017-R	#	#	#	#	#	X	#	#	X	#	#	X	#
Bradfield	SBT-GW-4021	S	S	S	S	S	S	S	D	#	S	S	#	S
Bradfield	SBT-GW-4403	#	#	#	#	#	X	#	#	X	#	#	X	#
Bradfield	SBT-GW-4803	S	S	S	S	S	S	I	S	S	S	S	S	S
Bradfield	SBT-GW-4803-R	#	X	X	#	#	X	#	#	X	#	X	X	#
Bradfield	SBT-GW-4014-R	#	X	X	#	#	X	#	#	X	#	X	X	#
Bradfield	SBT-GW-4008	S	S	S	S	S	S	S	S	S	I	S	S	S
Bringelly	SBT-GW-4003	S	S	S	S	S	S	I	S	S	S	S	S	D
Bringelly	SBT-GW-4005	D	S	S	S	S	S	S	D	S	I	S	S	S
Bringelly	SBT-GW-4800	S	S	S	S	S	S	S	S	S	S	S	S	S
Bringelly	SBT-GW-4801	S	S	S	S	S	S	S	S	S	I	S	S	S
Bringelly	SBT-GW-4802	S	S	S	S	S	S	S	S	S	D	S	S	S
Claremont Meadows	SBT-GW-1024	S	S	D	D	I	S	S	I	S	S	S	S	S
Claremont Meadows	SBT-GW-1030	D	S	S	D	D	S	I	I	S	I	S	S	D
Claremont Meadows	SBT-GW-1805	S	S	S	S	S	S	D	S	S	D	S	S	S
Claremont Meadows	SMGW-BH-A107	S	S	S	S	S	S	S	I	#	S	S	#	S
Orchard Hills	SBT-GW-1042	S	S	S	S	I	X	S	D	S	S	S	S	I
Orchard Hills	SBT-GW-1048-R	#	X	X	#	#	X	#	#	X	#	X	X	#
Orchard Hills	SBT-GW-1063	S	S	S	S	S	S	S	D	S	S	S	S	S
Orchard Hills	SBT-GW-1806	D	S	S	S	D	S	S	D	S	S	D	S	D
Orchard Hills	SBT-GW-1807	D	S	S	D	S	S	S	S	S	S	S	S	D
Orchard Hills	SBT-GW-1808	D	#	#	S	S	S	I	I	#	I	S	#	D
Orchard Hills	SMGW-BH-A315	S	D	S	D	S	S	S	I	S	#	S	S	S
Orchard Hills	SMGW-BH-A315-R	#	#	#	#	#	X	#	#	X	X	#	X	#
St Marys	SBT-GW-1001-S	#	X	X	#	#	X	#	#	X	S	X	X	#
St Marys	SBT-GW-1002	S	S	S	S	D	S	S	D	S	I	S	S	D
St Marys	SBT-GW-1005-S	#	X	X	#	#	X	#	#	X	#	X	X	#
St Marys	SBT-GW-1016	S	D	D	S	S	D	D	S	S	D	D	S	D
St Marys	SBT-GW-1017	S	D	S	I	S	S	D	D	S	S	S	S	I
St Marys	SBT-GW-1021	S	S	S	S	S	S	D	D	D	S	S	S	I
St Marys	SMGW-BH-A401	D	S	S	S	S	S	S	I	S	I	S	S	S

Notes

# Insufficient Data	
I Increasing Trend	
D Decreasing Trend	
S Stable	No trend actually the result as in "Insufficient evidence"
X No Data	

precipitate as poorly soluble hydroxides (e.g., Al(OH)3) or form solid phases. At high pH (alkaline water) aluminium becomes soluble again as anionic aluminate species (e.g., $Al(OH)^{4-}$).

At Claremont Meadows, SBT-GW-1030 also shows a decreasing trend, despite some variability. Aluminium concentrations declined from 6,550 µg/L (December 2022) to 2,990 µg/L (September 2023), and generally reduced further through 2024–2026, reaching 220 µg/L in February 2026. This trend aligns with an overall increase in pH from acidic conditions (~4.4–4.7) to near-neutral (7.03).

At Western Sydney Airport (SMGW-BH-C320), a decreasing statistical trend is indicated; however, concentrations have remained consistently low (~10 µg/L) since 2021 (following an initial 50 µg/L result), with stable near-neutral pH (7.00–7.83), suggesting limited practical change.

At Bringelly, SBT-GW-4005 shows a marked decrease in aluminium from 460 µg/L (November 2022) to 100 µg/L (2025) and 10 µg/L (February 2026). This coincides with a reduction in pH from highly alkaline conditions (pH 11) to near-neutral (pH 7.77), consistent with aluminium becoming less soluble as conditions move away from strongly alkaline. Aluminium is amphoteric, whereby it is soluble as Al^{3+} at low pH, precipitates as neutral hydroxides near neutral pH, and becomes soluble again at high pH as the aluminate ion $Al(OH)^{4-}$. At pH 11 the equilibrium strongly favours the anionic, dissolved aluminate species. Also, filtered aluminium measurements (commonly <0.45 µm) include truly dissolved species and very small colloids. At neutral pH aluminium often forms particulate/colloidal hydroxides which are removed by filtration; at pH 11 it stays molecularly dissolved and passes the filter.

At St Marys, SMGW-BH-A401 also exhibits a decreasing trend, with aluminium concentrations reducing from 3,040 µg/L (December 2022) to 220 µg/L (October 2023) and 190 µg/L (February 2026). This corresponds with an increase in pH from 4.91 to 6.55, supporting reduced aluminium solubility under less acidic conditions.

Overall, the observed declines in aluminium concentrations are consistent with pH-driven changes in solubility, with movement toward near-neutral conditions reducing dissolved aluminium across multiple sites.

Dissolved Cadmium

Dissolved cadmium trends were variable and statistically were either stable, had insufficient data or were decreasing, with one well in St Marys (SBT-GW-1017) with a statistically increasing trend. However, the concentration has remained around 1-3 µg/L since 2022. Given these low concentrations, this trend is not considered a concern and does not warrant further investigation at this stage.

In January/February 2026 across the various precincts, samples that were analysed for disolved cadmium were typically low with all measuring on or below LOR (0.1 µg/L). Decreasing trends for cadmium were observed at two monitoring wells at Claremont Meadows (SBT-GW-1024 and SBT-GW-1030) and two at Orchard Hills (SBT-GW-1807 and SMGW-BH-A315-R). The highest historical concentration at these locations was 5 µg/L with all measuring <0.1 µg/L (LOR) in January/February 2026.

Dissolved Copper

Dissolved copper trends varied with the majority statistically either stable or with insufficient data.

Increasing concentrations of dissolved copper were observed at Claremont Meadows (SBT-GW-1024) and Orchard Hills (SBT-GW-1042). At SBT-GW-1024, concentrations rose slightly from 1 µg/L in December 2022 to 4 µg/L in February 2026. Similarly, SBT-GW-1042 increased from 11 µg/L in August 2022 to 14 µg/L in February 2026. Despite these upward trends, concentrations remain low and are not considered a concern.

Decreasing trends were observed in wells at Orchard Hills (SBT-GW-1806), Claremont Meadows (SBT-GW-1030) and St Marys (SBT-GW-1002). At monitoring well SBT-GW-1806 copper concentrations have been declined markedly from 470 and 10 µg/L in April/May 2023 to approximately 1 µg/L from November 2023 onwards. Similarly, SBT-GW-1002 showed a gradual decrease from a maximum of 29 µg/L in December 2022 to 11 µg/L in February 2026. At Claremont Meadows (SBT-GW-1030), filtered copper decreased from 22 µg/L in 2022 to 3 µg/L in 2026. These downward trends are not considered significant.

Dissolved Zinc

Dissolved zinc trends were generally stable or inconclusive across the monitoring network, with three wells (one at Orchard Hills and two at St Marys) showing increasing trends and seven (one at Bringelly, one at Claremont Meadows, three at Orchard Hills and two at St Marys) showing decreasing trends.

At Orchard Hills (SBT-GW-1042), zinc concentrations increased slightly from 147 µg/L in November 2022 to 211 µg/L in February 2026, while pH remained acidic (4.77–5.24). This trend may reflect enhanced zinc solubility under acidic conditions, which is consistent with the presence of zinc-bearing minerals (e.g. sphalerite) in the local geology. Despite the increase, concentrations remain relatively low and are not considered a concern.

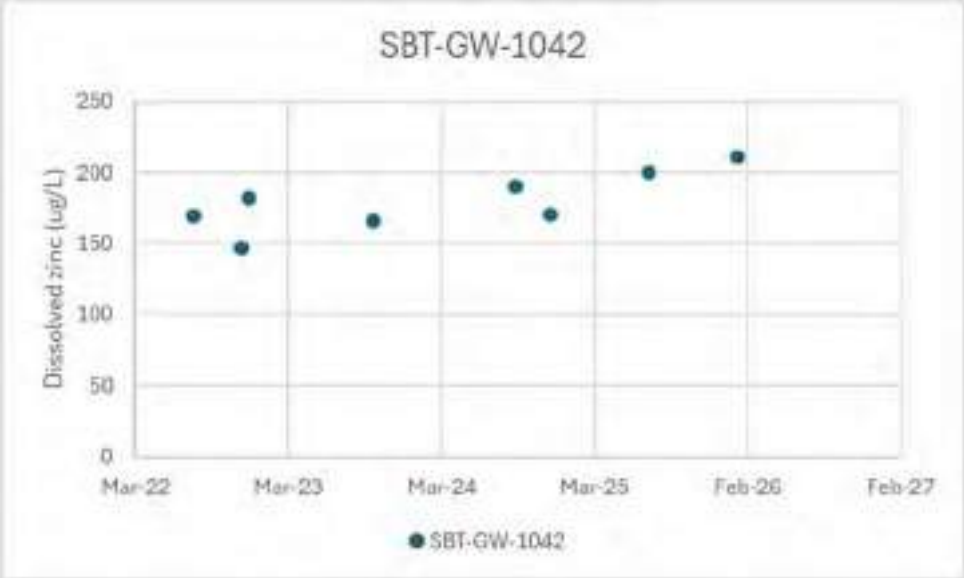

Figure 6-4: Dissolved zinc concentration in groundwater from well SBT-GW-1042 at Orchard Hills

At St Marys (SBT-GW-1017), zinc increased from 51 µg/L to 73 µg/L over the same period, although concentrations appear to have stabilised in recent samples (Figure 6-5). This trend may also be influenced by a gradual decrease in pH.

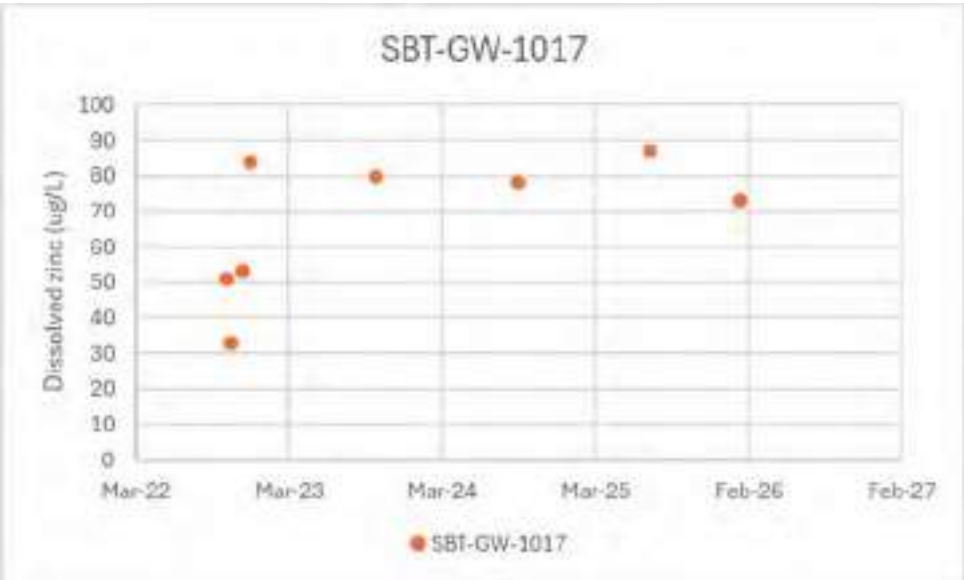

Figure 6-5: Dissolved zinc concentration in groundwater from well SBT-GW-1017 at St Marys

The other well at St Marys (SBT-GW-1021) recorded a maximum zinc concentration of 35 µg/L in October 2023, with a decrease to 5 ug/L in 2024, before concentrations increased again from late 2024 to 21 µg/L in February 2026. Again, these concentrations are relatively low and therefore are not current a concern.

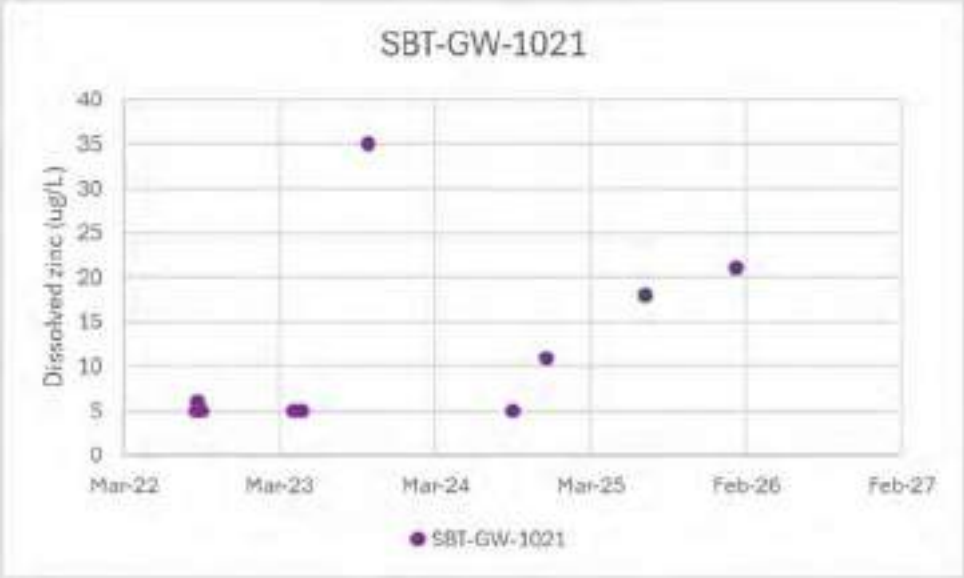

Figure 6-6: Dissolved zinc concentration in groundwater from SBT-GW-1021 at St Marys

These wells that were flagged to have increasing trends in filtered zinc, also had corresponding decreasing pH. It is likely influenced by decreasing pH, which can increase zinc solubility from the rock matrix. The higher-than-average rainfall in early 2026 and hence greater rainfall (fresh water) infiltration may be the reason for decreasing pH values. These increasing trends are not considered significant due to the relatively low magnitude of increase in the three wells.

At Bringelly (SBT-GW-4003) zinc concentrations decreased from 130 µg/L in July 2022 (pH up to 7.44 in November 2022 – no pH was taken in July 2022) to 7 µg/L in February 2026 (pH 7.66). There is a corresponding increase in pH and it's possible that some of the zinc may have started to change into an insoluble form (although this generally occurs at a pH of approximately 8). At Claremont Meadows (SBT-GW-1030) a decreasing trend was identified in zinc concentrations declining from 267 µg/L in December 2022 to 59 µg/L in February 2026. At the three wells at Orchard Hills SBT-GW-1806 zinc decreased from 51 µg/L in 2023 to 5 µg/L in February 2026. At SBT-GW-1807 zinc decreased from 50 µg/L in May 2023 to 9 µg/L in February 2026 and at SBT-GW-1808 zinc decreased from 478 µg/L in July 2023 to 5 µg/L in February 2026. The filtered zinc concentrations in both St Marys wells (SBT-GW-1002 and SBT-GW-1016) have significantly decreased over time. SBT-GW-1002 had a maximum concentration in October 2023 (194 µg/L) that decreased to 140 µg/L in February 2026. SBT-GW-1016 had a maximum concentration of 560 µg/L in July 2025 and decreased to 18 µg/L in February 2026.

Variations in zinc concentrations are likely to be natural variations, may potentially be in response to rainfall and groundwater recharge, and are not in response to construction works.

Total Nitrogen

Total nitrogen trends were variable with either stable, insufficient data, increasing (in six wells including two at the Airport Business Park (SBT-GW-3003-B-R and SBT-GW-3003-C-R), one at Bradfield (SBT-GW-4803 – however this well was replaced with SBT-GW-4803-R in July 2025 and there is insufficient data to undertake trend analysis), one at Bringelly (SBT-GW-4003), one at Claremont Meadows (SBT-GW-1030) and one at Orchard Hills (SBT-GW-1808)) and decreasing (in five wells including one at the Airport Terminal (SBT-GW-

3012-B), one at Claremont Meadows (SBT-GW-1805) and three at St Marys (SBT-GW-1016, SBT-GW-1017 and SBT-GW-1021)).

The Airport Terminal monitoring wells SBT-GW-3012A/B/C (shallow, medium and deep respectively) are nested to track any downward leakage of contaminants. In January 2026 SBT-GW-3012A was dry. At SBT-GW-3003-B-R total nitrogen concentrations increased from 1.1 mg/L in July 2025 to 1.4 mg/L in January 2026. This location appears to be impacted by historic land uses, including poultry and piggery operations due to this and the incremental increase, this does not warrant concern. If the trend continues to increase, further investigation should be undertaken.

Groundwater from SBT-GW-3003-C-R contained total nitrogen concentrations that increased from 5.5 mg/L in July 2025 to 6.4 mg/L in January 2026. Only three samples have been collected from this well (with the first being in July 2025). As the concentration of total nitrogen is relatively similar, and the sample size is small, further monitoring is needed to determine an accurate trend (Figure 6-7).

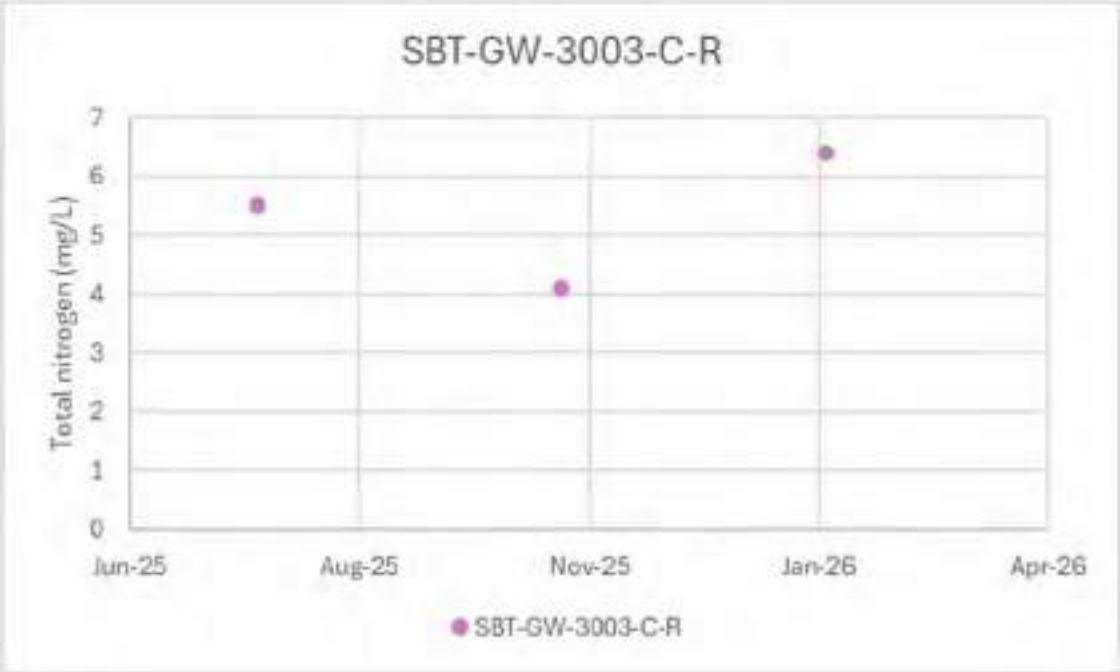

Figure 6-7: Total nitrogen concentration in groundwater from SBT-GW-3003-C-R at the Airport Business Park

The well at Bringelly (SBT-GW-4003) recorded a large total nitrogen (TN) concentration 17.8 mg/L in the February 2026 sampling event (Figure 6-8). Prior to this sample the TN concentration was relatively stable. There is a corresponding increase in total phosphorus (Figure 6-9). Given the heavy rainfall reported in January 2026, these increases may be due to a local source of nutrients being flushed into the groundwater due to heavy rainfall. Reassessment should be carried out following the next Biannual monitoring round in July 2026.

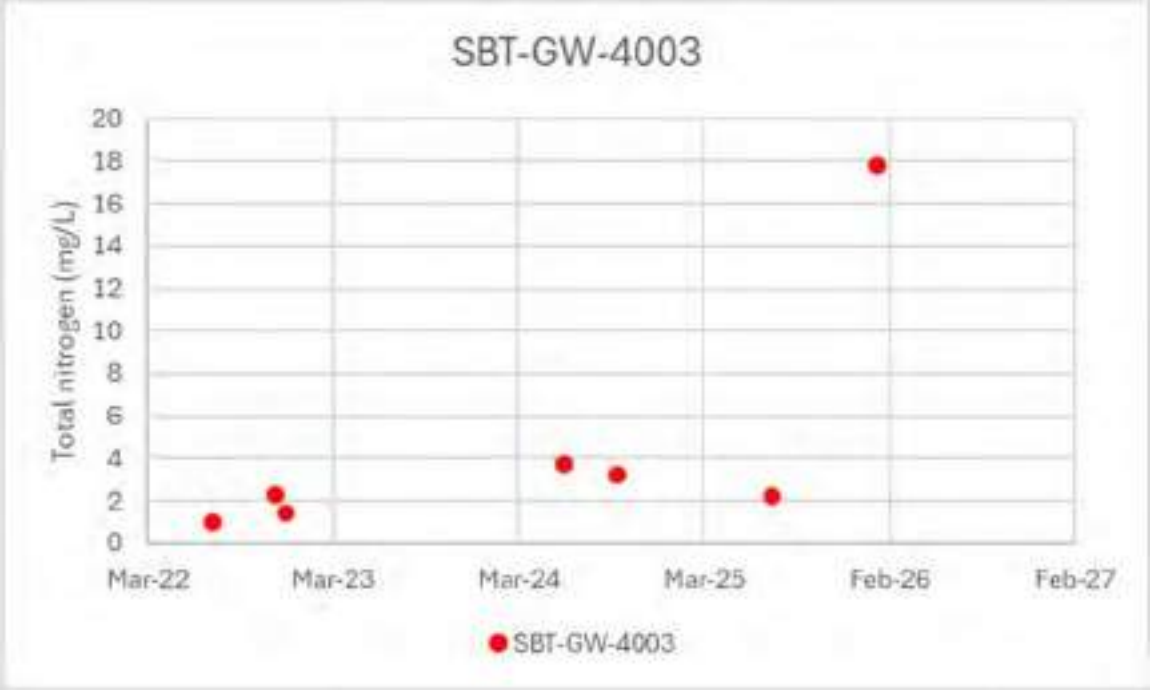

Figure 6-8: Total nitrogen in groundwater from SBT-GW-4003 at Bringelly

Figure 6-9: Total phosphorus in groundwater from SBT-GW-4003 at Bringelly

Total nitrogen at the well at Claremont Meadows (SBT-GW-1030) has been variable over time and according to Mann-Kendall has an increasing trend (Figure 6-10). The concentration measured in February 2026 (5.8 mg/L) although appears to be within historical variations but also the highest it has been since March 2024 (9.8 mg/L).

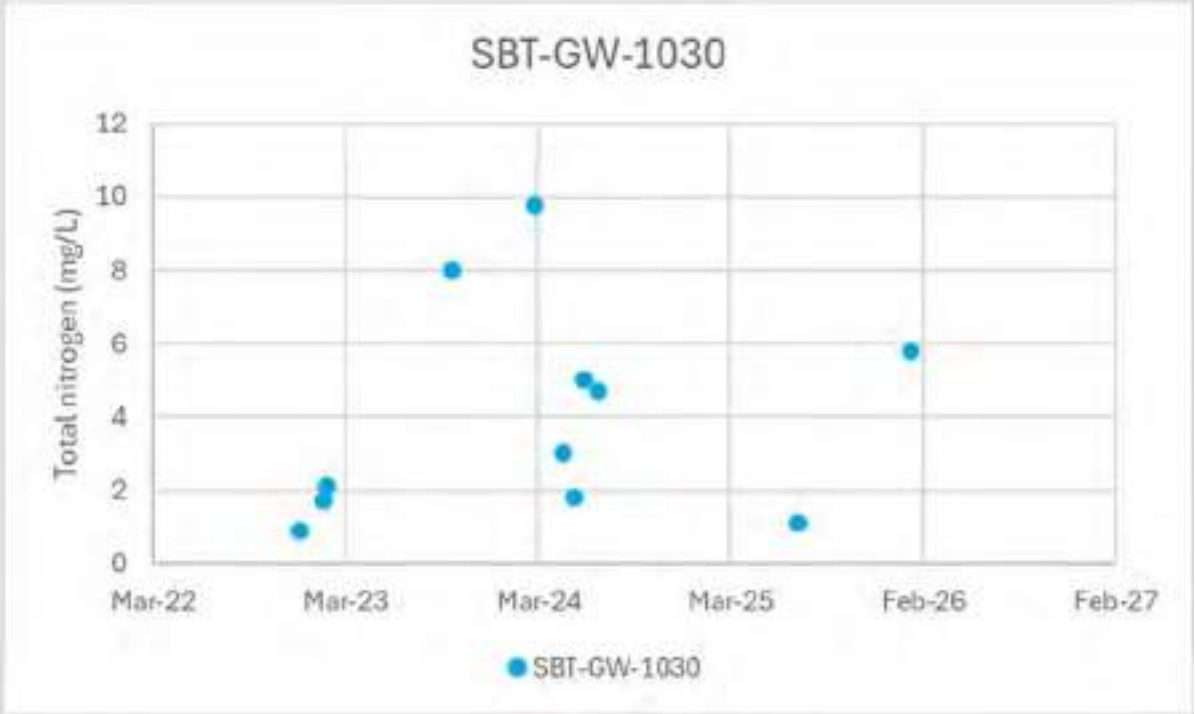

Figure 6-10: Total nitrogen in groundwater from SBT-GW-1030 at Claremont Meadows

The final location that has been observed to have an increasing trend is at Orchard Hills (SBT-GW-1808) (Figure 6-11). The concentration of TN has been relatively stable until November 2024 (9.1 mg/L) and in February 2026 (84 mg/L). This concentration is considered anomalous, and it is possible that the sample may have contained colloidal material as it was not filtered. Future data should be scrutinised to determine if this is an increasing trend or a one-off spike.

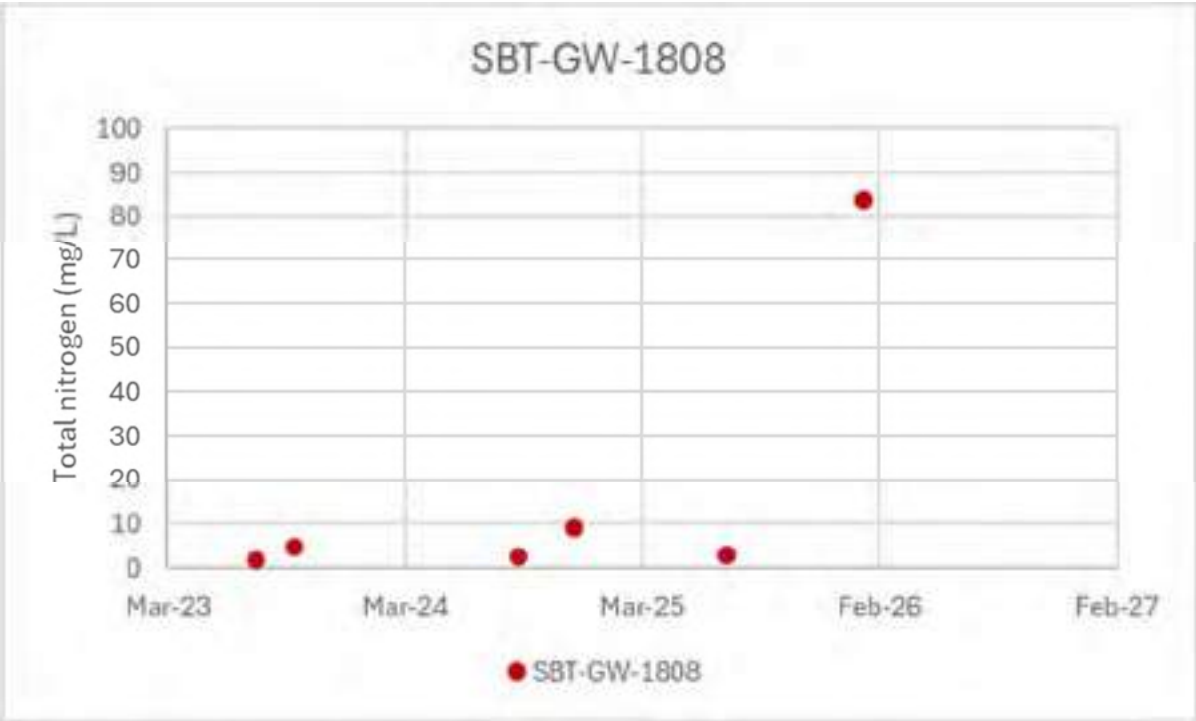

Figure 6-11: Total nitrogen in groundwater from SBT-GW-1808 at Orchard Hills

Locations where the TN concentration has a declining trend were recorded at the Airport terminal (SBT-GW-3012-B), and three wells at St Marys (SBT-GW-1016, SBT-GW-1017 and SBT-GW-1021). The reason for these declining trends is unknown but as the concentrations are declining, they are not of a concern.

Total Phosphorous

Ten increasing trends were identified for total phosphorous (TP). However, the majority of results showed that there was insufficient data to undertake the Mann-Kendall statistical analysis. Two wells at the Airport Terminal showed an increasing trend in TP. These were SBT-GW-3012-A (however as this well was dry when undertaking sampling in January/February 2026, the increasing trend has been discussed in the previous Biannual report) and SBT-GW-3012-C. Figure 6-12 shows that TP has been increasing over time, however the sample that was collected in January 2026 is slightly lower than the previous samples and therefore it possible that the concentration will decrease in the next sampling round. Future trends should be followed to determine if the trend decreases.

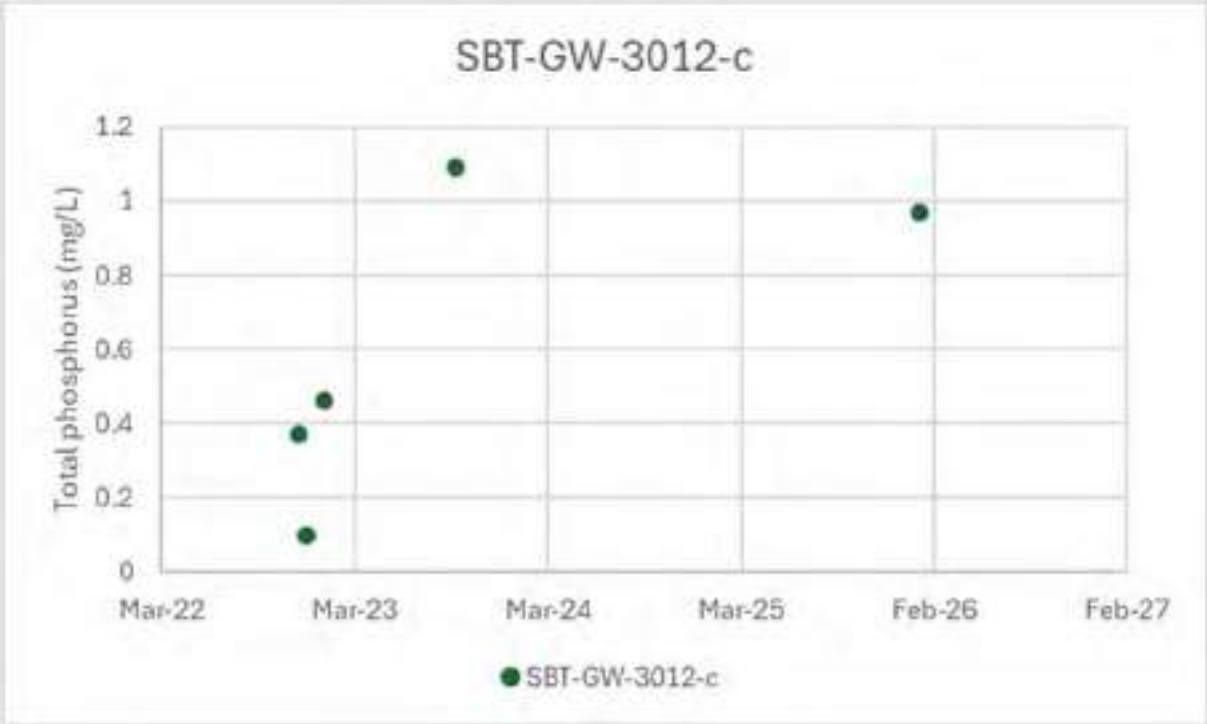

Figure 6-12: Total phosphorus in groundwater from SBT-GW-3012-C at the Airport Terminal

The well at Orchard Hills, SBT-GW-1808, showed an increasing trend in TP. In September 2023 TP was 0.3 mg/L however in January 2026 it was 15.7 mg/L. It is unclear if this is a one-off spike and further monitoring should be undertaken.

Mann-Kendall analysis identified the St Marys well, SBT-GW-1016 as having an increasing trend in TP (Figure 6-13). Historical data contains multiple results for the same sample date, therefore the data presented in Figure 6-13 has been averaged for each date. The concentration of TP in the sample collected in February 2026 is lower than previous results, so it's possible that the historical increasing trend is now decreasing. Future data will confirm the trend.

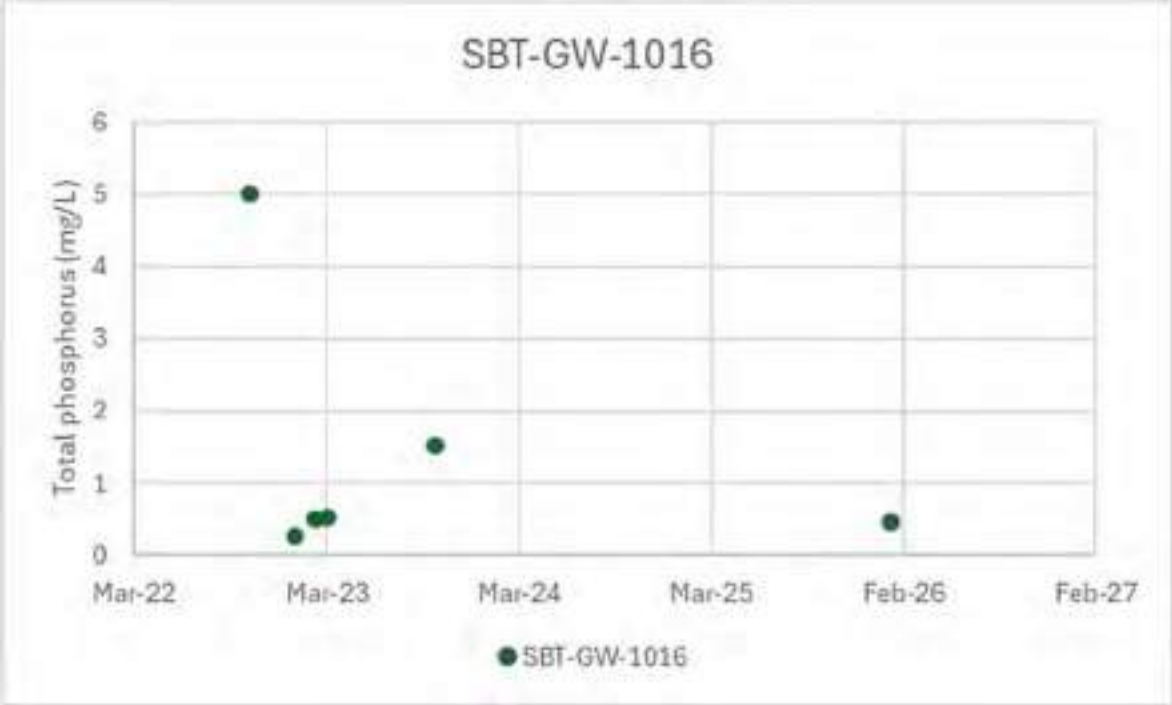

Figure 6-13: Average total phosphorus concentrations from SBT-GW-1016 at St Marys

Three wells (SBT-GW-4802 at Bringelly, SBT-GW-1805 at Claremont Meadows and SBT-GW-1016 at St Marys) showed a decreasing statistical trend for total phosphorus.

pH

pH trends were observed as variable. Nine monitoring wells recorded an increasing trend (becoming more alkaline), Three are located at Airport Business Park (SBT-GW-3003-B-R, SBT-GW-3003-C-R and SBT-VWP-3401-R) which all are still in the neutral to slightly alkaline range between pH 7-8, three at Claremont Meadows (SBT-GW-1024, SBT-GW-1030 and SMGW-BH-A107) which SBT-GW-1024 which was the lowest in December 2022 but was just above neutral with a pH of 7.41 in February 2026. SBT-GW-1030 also had a low pH of 4.71 in December 2022 but was neutral in February 2026 (pH 7.03) and SMGW-BH-A107 that measured an alkaline pH in June 2024 (9.01) but the sample collected in February 2026 was closer to neutral (7.85). Two wells at Orchard Hills (SBT-GW-1808 and SMGW-BH-A315-R) had an increasing trend. SBT-GW-1808 had an acidic pH in 2023 (3.65) however over time this has been increasing and the sample taken in February 2026 was near neutral (6.83). A similar trend was observed in SMGW-BH-A315-R (January 2026 the pH was 6.95). One St Marys well (SMGW-BH-A401) had an increasing trend measuring 6.55 in February 2026 (from a low of 4.65 in February 2023).

Unlike the chemical analytes, a decreasing trend in pH is of more concern as decreased pH conditions are related to increased metal solubility. These decreasing trends were monitored at Bradfield (SBT-GW-4021), Airport Terminal (SMGW-BH-C320), Bringelly (SBT-GW-4005), Orchard Hills (SBT-GW-1042, SBT-GW-1063 and SBT-GW-1806) and St Marys (SBT-GW-1002, SBT-GW1017 and SBT-GW-1021).

With the exception of SBT-GW-1042, SBT-GW-1002 and SBT-GW1017, all other wells with decreasing trends have close to neutral pHs (6.72 to 7.83).

SBT-GW-1042 at Orchard Hills has historically exhibited low pH, however, recent samples indicate a return toward baseline conditions recorded in 2022 (Figure 6-14). Low pH can enhance the dissolution of metals from surrounding geology, and this effect is reflected in this well, where dissolved aluminium exceeded the site-specific groundwater quality trigger during the January/February monitoring event (see Table 6-5).

Similarly, SBT-GW-1002 has acidic pH, however it seemed to have stabilised around pH 4 since December 2022 (Figure 6-15).

Figure 6-14: pH trend of groundwater at SBT-GW-1042 at Orchard Hills

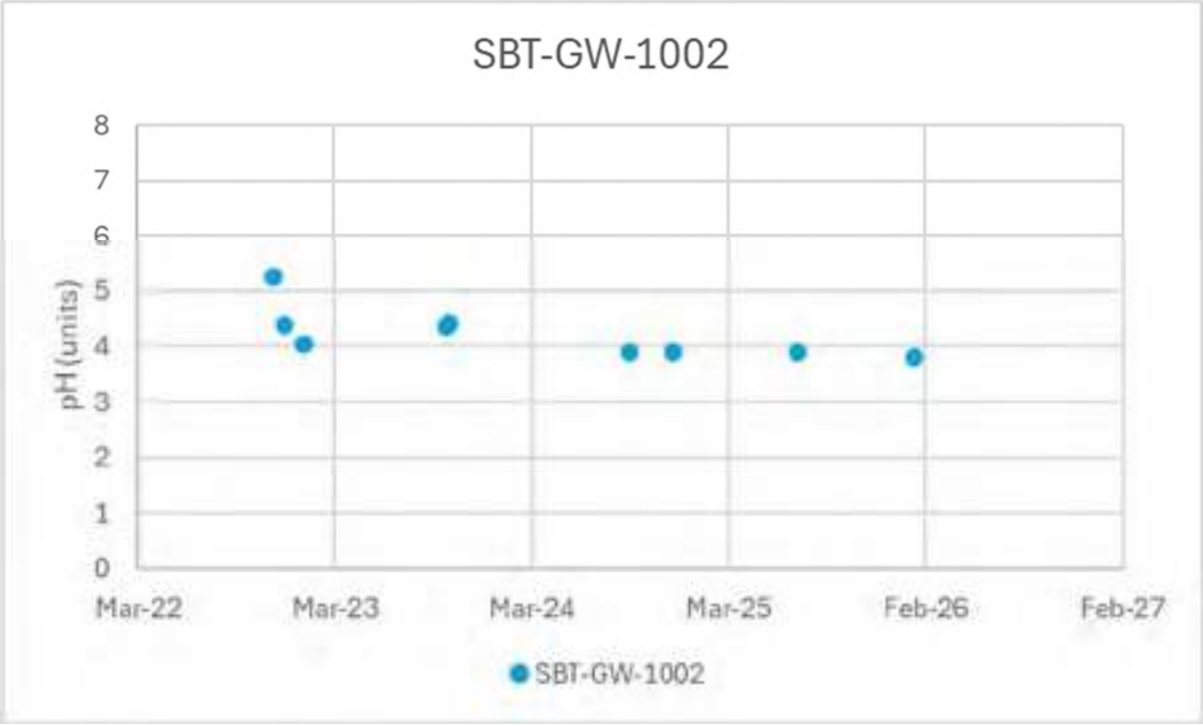

Figure 6-15: pH trend in groundwater at SBT-GW-1002 at St Marys

Finally, SBT-GW1017 shows a decreasing trend with the exception of the sample taken in February 2026 (Figure 6-16). Future data will determine if there is a continued decreasing trend in pH at this site or if the pH will return to pre-construction conditions.

Figure 6-16: pH trend in groundwater at SBT-GW-1017 at St Marys

Lower pH conditions are associated with increased metal solubility. However, the potential ecological risk is considered low, as metal concentrations generally remain within trigger values, including at sites where increasing trends have been observed.

TRH (C6-C9 and C10-C40)

There were no increasing trends identified by Mann-Kendall statistics for TRH (C6-C9 and C10-C40). Typically, trends were assessed as either stable or no trend over the monitoring period. Concentrations for TRH (C6-C9) were typically on LOR. Decreasing trends for TRH (C10-C40) were detected at six monitoring wells. These declining trends were identified at Western Sydney Airport (SMGW-BH-C320), Bradfield (GW-4017), Claremont Meadows ((SBT-GW-1024), Orchard Hills (SMGW-BH-A315-R) and St Marys (GW-1016 and GW-1017). In all cases the declining trends are due to relatively large concentrations being detected in 2022 or 2023, and have since declined to below LOR in February 2026.

Phenol, toluene, tetrachloroethene and naphthalene

An apparent increasing trend in phenol was identified at the Bradfield well (SBT-GW-4017) based on Mann–Kendall analysis, with a concentration of 2 µg/L (at the LOR) recorded in December 2022. This trend is likely an artefact of increasing laboratory limits of reporting (LORs) over time (from 0.001 mg/L to 0.002 mg/L), rather than a true increase in concentration.

Decreasing trends in toluene were observed at Western Sydney Airport (SMGW-BH-C320), Orchard Hills (SBT-GW-1806) and St Marys (SBT-GW-1016); however, these trends are also attributed to changes in LORs rather than actual reductions in concentration. In future GME rounds, toluene at these locations will be analysed using low-level phenolic methods to enable a more accurate assessment against trigger values.

6.3.4.2 Precinct Trends

Airport Terminal

At the Airport Terminal, the main observed trend was increasing total phosphorus in SBT-GW-3012-A and SBT-GW-3012-C, although SBT-GW-3012-A was dry during the most recent round and SBT-GW-3012-C showed a slight decrease in the latest sample, suggesting the trend may not continue. Total nitrogen in SBT-

GW-3012-B showed a decreasing trend, and concentrations are not currently considered a concern. Overall, the chemistry suggests limited evidence of progressive contamination, although phosphorus trends should continue to be tracked. The nested well arrangement at this precinct is useful for assessing vertical migration, but no strong evidence of downward contaminant movement was identified from the data provided.

Airport Business Park

Groundwater at the Airport Business Park was generally stable, with minor increases for some parameters. Filtered aluminium at SBT-GW-3003-C-R increased slightly from 10 µg/L in July 2025 to 30 µg/L in January 2026, although concentrations remain low. Total nitrogen also showed increasing trends at SBT-GW-3003-B-R and SBT-GW-3003-C-R, with concentrations rising from 1.1 to 1.4 mg/L and from 5.5 to 6.4 mg/L respectively; however these changes are minor. Continued monitoring is warranted, particularly at SBT-GW-3003-C-R due to the limited dataset. pH at the precinct has generally remained neutral to slightly alkaline, which may help limit metal mobility.

Bradfield

At Bradfield, the key observations were limited but included increasing total nitrogen at SBT-GW-4803, although this well was replaced by SBT-GW-4803-R in July 2025 and there is insufficient data for a robust trend analysis. A decreasing TRH (C10–C40) trend was identified at GW-4017, with concentrations falling from earlier elevated results to below LOR by February 2026. Phenol showed an apparent increasing trend at GW-4017, but this was likely influenced by increasing LORs rather than a true concentration increase. pH at SBT-GW-4021 showed a decreasing trend, which is of more geochemical relevance because lower pH can increase metal solubility, although no major associated exceedances were identified.

Orchard Hills

Orchard Hills displayed the most variable groundwater chemistry, with several analytes reflecting pH-driven geochemical changes. Filtered aluminium decreased at SBT-GW-1806, SBT-GW-1807 and SBT-GW-1808, with the strongest reduction at SBT-GW-1808 as pH increased from acidic conditions toward near-neutral values. Filtered zinc generally decreased at SBT-GW-1806, SBT-GW-1807 and SBT-GW-1808, although SBT-GW-1042 showed an increasing trend from 147 to 211 µg/L, likely reflecting mineral dissolution under persistently acidic conditions. Filtered copper increased slightly at SBT-GW-1042, but remained low. Total nitrogen increased at SBT-GW-1808, with a marked spike in February 2026 that may reflect colloidal material or a one-off event. Total phosphorus also increased at SBT-GW-1808, again suggesting either a transient event or localised input. pH trends at Orchard Hills were mixed, but several wells showed increases toward neutral conditions, which aligns with reduced aluminium mobility in most of the precinct.

St Marys

St Marys showed mixed groundwater responses, with several decreasing metal trends and some increasing nutrient trends. Filtered aluminium decreased at SMGW-BH-A401 from 3,040 µg/L in December 2022 to 190 µg/L in February 2026, corresponding with an increase in pH toward near-neutral conditions. Filtered copper decreased at SBT-GW-1002, while filtered zinc increased at SBT-GW-1017 and SBT-GW-1021 in the longer term but remained relatively low and not of concern. Several wells showed decreasing filtered zinc trends overall, likely influenced by recharge and natural variation rather than construction impacts. Total nitrogen showed decreasing trends at SBT-GW-1016, SBT-GW-1017 and SBT-GW-1021. Total phosphorus increased at SBT-GW-1016 historically, but the most recent result was lower, suggesting the trend may be reversing. pH trends were variable.

Bringelly

Groundwater quality at Bringelly shows improving metal concentrations but some nutrient increases. Filtered aluminium at SBT-GW-4005 decreased markedly (460 to 10 µg/L), consistent with a shift from highly alkaline to near-neutral pH. Filtered zinc at SBT-GW-4003 also declined (130 to 7 µg/L).

In contrast, total nitrogen increased sharply at SBT-GW-4003 (17.8 mg/L), with a corresponding rise in phosphorus, suggesting a localised nutrient input, likely influenced by rainfall and recharge. pH has generally moved toward neutral conditions.

Claremont Meadows

Claremont Meadows showed a general pattern of decreasing filtered aluminium and filtered copper, but increasing or variable nutrient behaviour at some wells. Filtered aluminium decreased substantially at SBT-GW-1030 from 6,550 µg/L in December 2022 to 220 µg/L in February 2026, likely reflecting the rise in pH from acidic to near-neutral conditions. Filtered copper also declined at SBT-GW-1030 from 22 µg/L in 2022 to 3 µg/L in 2026. Filtered cadmium was generally low and showed decreasing trends at SBT-GW-1024 and SBT-GW-1030. Total nitrogen at SBT-GW-1030 showed an increasing trend, although the recent value was lower than earlier peaks, indicating variability rather than a clear sustained rise. Total phosphorus at SBT-GW-1805 showed a decreasing trend. pH trends were generally upward, with several wells shifting from acidic to near-neutral conditions, which is consistent with reduced metal solubility.

Overall Precinct Comparison

Across all precincts, pH is the primary control on groundwater chemistry. Lower pH is associated with higher dissolved metals, particularly aluminium and, to a lesser extent, zinc and copper. As pH trends toward neutral, metal concentrations generally decrease.

Nutrients (total nitrogen and phosphorus) are more variable, with localised increases observed across multiple precincts. These are likely related to site-specific factors such as rainfall recharge or historical land use rather than construction impacts.

TRH concentrations are stable or decreasing, and apparent trends in phenol and toluene are attributed to analytical reporting limits rather than changes in groundwater quality.

6.3.5 Data Validation

As detailed in Section 7.10 of the GWMP, a data validation assessment was completed for samples collected during the groundwater monitoring round which is provided in Appendix I. Accuracy and precision measurements from the appropriate QC samples were compared with the analytical DQOs to assess the quality of the analytical data. The primary objective of the data validation process was to ensure that the data reported is suitable to be used to achieve the investigation objectives. In summary, some discrepancies were noted during the data validation review including:

- No triplicate or rinsate samples and insufficient trip blanks were collected during the field program which was an oversight by Coffey but not expected to impact the outcome of the assessment.
- Some RPD exceedances for field duplicates were obtained but meet the overall DQI’s as stated in the GWMP.

Based on the outcome of the data validation procedure employed, the overall quality of the analytical data is considered to be of an acceptable standard for interpretive use.

7. GROUNDWATER INFLOWS

7.1 GROUNDWATER INFLOWS

Groundwater data for the monitoring period has been provided by Parklife. Inflows to the water treatment plants (WTP) have been recorded to provide groundwater inflow volumes. Very minor volumes of groundwater removed as liquid waste for off-site disposal have also been included in the totals. At some locations groundwater has been transferred, via the tunnel, for treatment at a WTP. This is described further below.

Some surface water, derived from rainfall runoff over the excavation footprints and water from construction and washdown activities, has also been included in these recorded volumes. It is not possible to separate volumes of groundwater and surface water, however it is expected that rainfall in excavation areas is still contributing to surface water inflows. Over the monitoring period from August 2025 to January 2026, monthly rainfall totals fluctuated with January 2026 recording the highest rainfall (Badgerys Creek AWS 149.6 mm).

To minimise groundwater inflows station boxes have been constructed as tanked structures. Tunnels and cross passages have been completed by the SBT contractor and have been handed over to PLM. Minor defect rectification by SBT within the tunnels is ongoing. In this reporting period station box construction is yet to be completed although waterproofing membrane is complete at St Marys, Orchard Hills, Airport Portal Dive Structure (APDS), Airport Terminal (ATL) and Bradfield. Groundwater inflows into the station boxes and associated groundwater drawdown are likely to be experienced until the structure is tanked at which point groundwater levels are expected to rebound.

7.1.1 Wastewater Treatment, Reuse, Disposal and Reporting

Table 7-1 describes the WTP effluent, reuse and disposal associated with each site. Detail on the WTP inflow is provided in Table 7-2 and the minor liquid waste volumes from each site for the monitoring period has been tabulated further in Table 7-3 below.

Table 7-1: Summary of wastewater treatment, reuse, disposal and reporting Water

Treatment Plant	WTP Effluent Reuse / Disposal during reporting period
St Marys	Discharge to Sydney Water asset under Trade Waste Agreement 53206 continues. Samples at Trade Waste discharge point collected every 22 days. Results provided directly to Sydney Water within 21 days of sampling event. Volumes shown in Table 2.
Claremont Meadows	Discharge to Sydney Water asset under Trade Waste Agreement 53823 continues. Samples at Trade Waste discharge point collected every 22 days. Results provided directly to Sydney Water within 21 days of sampling event. Groundwater from Orchard Hills Station site is also accepted for treatment at the Claremont Meadows WTP.
Orchard Hills	A small volume from OHE Dive structure has been transferred via the tunnel to the Claremont Meadows WTP.
Airport Portal Dive Structure (CBP Airport Business Park Station Box Excavation)	WTP water re-used on-Airport for dust suppression.
Airport Terminal Station	All groundwater between Bradfield and the ATL Station Box, including the Bringelly service shaft, is treated through the WTP for reuse via dust suppression.

The monthly average of groundwater inflows and outflows across all sites are presented in Table 7-2 and Table 7-3 respectively.

Table 7-2: Groundwater influent to WTPs

Month	STM	CLM (incl OHE)	APDS	ATL (incl BRG &BRD)	Monthly Rainfall
Units	**kL**	**kL**	**kL**	**kL**	**kL**
Aug 2025	355.6	3796.2	3842.88	3123.3	100* 121.4**
Sept 2025	276.96	1229.7	2539.27	3378.4	38.4* 68.2**
Oct 2025	179.4	1572.6	3205.11	3597.1	8.6* 21.2**
Nov 2025	300.48	1322.96	3376.19	3322.96	49.2* 57.8**
Dec 2025	205.45	3200.22	2776.52	3824.65	39.6* 54**
Jan 2026	358.21	2663.33	2163.7	2216.34	148.8* 149.6**
Total	**1,676.13**	**13,785.01**	**17,903.67**	**19,462.75**	**384.6* 472.2****

* Penrith Lakes AWS (station 067113)

** Badgerys Creek AWS (Station 067108)

Table 7-3: Summary of groundwater to liquid waste disposal in this reporting period

	St Marys	CLM	OHE	APDS	ATL	Bringelly	Bradfield	Total
Volume (kL)	n/a	44	n/a	n/a	75	n/a	n/a	109

7.1.2 Groundwater Inflows at St Marys

Total inflows at St Marys for the monitoring period were 1,676 kL. Based on the monthly averages, the inflows at St Marys have some correlation with rainfall data. As reported in Table 7-1 Works Activity Schedule, the St Marys station box construction is progressing and the decline in groundwater volume is as anticipated. Water from the tunnel has also been diverted to the Claremont Meadows WTP during this reporting period as in-tunnel drainage is completed. It is anticipated groundwater inflows to the station box will continue to decline once the structure is hydrostatically tanked and groundwater levels rebound. Wastewater at St Marys continues to be discharged to Sydney Water under a Trade Waste agreement.

7.1.3 Groundwater Inflows at Claremont Meadows

Total inflows at Claremont Meadows for the monitoring period were 13,785 kL. Inflow sources to the WTP included tunnel construction water, groundwater seepage, surface water from Claremont Meadows site and minor volumes from Orchard Hills which also includes groundwater and construction water.

Wastewater at Claremont Meadows continues to be discharged to Sydney Water under a Trade Waste agreement.

7.1.4 Groundwater inflows at APDS and ATL (Inclusive of BRG and BRD)

Groundwater inflows recorded over the monitoring period at the Airport Portal Dive Structure (APDS) and Airport Terminal (ATL) are presented in Table 7-2.

Total inflows for the monitoring period at both airport sites was 37,366 kL. This volume includes water from Bringelly, Bradfield and the tunnel between Bradfield and ATL. This is less than half of the volume recorded for the previous reporting period from all four sites (84,935 kL) and is due to the progression of the station box construction, waterproofing and further diversion of rainwater. Based on the monthly averages, the inflows do not appear to correlate with monthly rainfall.

The inflow water has been processed through the on-airport WTPs and then re-used on site for dust suppression. It is anticipated groundwater inflows will continue to decline once the station box structures are progressively hydrostatically tanked.

7.2 TOTAL PROJECT GROUNDWATER TAKE

The total estimated annual groundwater take for the project (combining on-airport and off-airport components) during construction is about 240 ML/year (Sydney Metro, 2023). The total groundwater take for this monitoring period has been estimated based on the inflows to water treatment plants across the alignment as well as a very minor addition for groundwater taken off site for disposal as liquid waste. Treated groundwater from the water treatment plants has been reused for dust suppression or disposed via Sydney Water trade waste agreements. On-site wastewater including surface water, in-tunnel washdown activities and groundwater are collected together prior to either disposal or reuse. It is not possible to separate the groundwater from other water sources. The monthly volumes are therefore all assumed to be groundwater.

The sum of the total water take for the project managed by PLM during the monitoring period is 53 ML across the 6 month monitoring period. This compares to the previous (eight month) monitoring period which recorded a total of 110 ML. The volumes are well within the estimated groundwater take during construction of 240 ML/year.

It is anticipated groundwater inflows will continue to decline once the station boxes become fully hydrostatically tanked structures.

8. CONCLUSIONS

Groundwater monitoring undertaken between July 2025 and February 2026 indicates that groundwater levels, quality, and dependent ecosystems remain broadly stable, with no evidence of widespread or significant adverse impacts attributable to SSTOM construction activities.

The January/February 2026 Groundwater Monitoring Event (GME) included:

- Gauging and sampling of 37 groundwater monitoring wells for water quality analysis.
- Download of 16 vibrating wire piezometers (VWPs) (including multi-depth sensors).
- Download of three dataloggers for continuous groundwater level and electrical conductivity monitoring.
- Measurement of field parameters (pH, EC, DO, redox potential and temperature) at all sampled locations.
- Laboratory analysis for a comprehensive suite of analytes including metals, nutrients, hydrocarbons and PFAS.
- Preparation of hydrographs, EC trends and statistical (Mann–Kendall) trend analysis.

- Maintenance and rectification works at several monitoring locations, including battery replacement, resealing of loggers, and reinstatement of previously inaccessible wells.

In addition, several replacement wells installed in July 2025 (e.g. SBT-GW-3003-A/B/C-R, SBT-GW-3006-R, SMGW-BH-A315-R) were incorporated into the monitoring program, with instrumentation installed at key locations for ongoing monitoring.

8.1 GROUNDWATER LEVELS

Groundwater levels across the monitoring network were generally above the green trigger. Localised exceedances of amber or red triggers were observed at a small number of locations; however, these are interpreted to be associated with historical construction activities, local hydrogeological conditions, or regional influences, rather than ongoing SSTOM works.

Groundwater levels at locations where exceedances have previously been identified (Claremont Meadows, Orchard Hills and Bradfield) show evidence of recovery toward baseline conditions, consistent with the completion of bulk excavation and progressive tanking of structures.

No impacts to groundwater dependent ecosystems (GDEs) were identified, and ecological monitoring (AMBS, 2026) confirms that vegetation conditions remain stable and unaffected by groundwater drawdown.

8.2 GROUNDWATER QUALITY

Groundwater quality results indicate that most parameters remain consistent with baseline conditions and natural variability within the Bringelly Shale aquifer system. Site-specific trigger exceedances were identified at 4 out of 37 monitored locations, however these were generally minor, and are most likely attributable to natural variability, rainfall effects, lithological influences, and pH-related metal solubility rather than construction impacts.

- **Orchard Hills (GW-1042):** Dissolved aluminium slightly exceeded the site-specific trigger. This is consistent with historically low pH conditions that enhance aluminium mobility; however, pH is trending upward over time, which may reduce aluminium concentrations.
- **Orchard Hills (GW-1806):** pH remained alkaline but was well below the site-specific trigger range.
- **Orchard Hills (BH-A315-R):** Dissolved zinc exceeded the site-specific trigger. The cause remains unclear; however, the trend is currently stable and continued monitoring is recommended.
- **St Marys (BH-C320):** Filtered zinc and total phosphorus exceeded their respective criteria. These results may reflect rainfall-driven surface water infiltration and natural variability.
- **Claremont Meadows (SBT-GW1024):** Total PFAS marginally exceeded the trigger value, likely due to rainfall-related mobilisation of contaminants from the unsaturated zone into the aquifer.

Overall, the results do not indicate that PLM construction works have adversely affected groundwater quality, but ongoing monitoring is recommended to confirm observed trends. Trend analysis indicates:

- **Decreasing trends in metals (e.g. aluminium, zinc, copper)** at many locations, largely associated with pH trending toward neutral conditions.
- **Variable nutrient behaviour**, with localised increases in total nitrogen and phosphorus likely linked to rainfall recharge or historical land use.
- **No meaningful increasing trends in hydrocarbons or organic contaminants**, with apparent trends attributed to analytical detection limits.

Overall, the data indicate that **construction activities are not adversely impacting groundwater quality**, and observed variations are consistent with **natural processes and site-specific conditions**.

8.3 GROUNDWATER INFLOWS

Total groundwater inflows to water treatment plants during the reporting period were substantially lower than in previous periods. This reduction reflects the progression of construction activities, including completion of station box structures, installation of waterproofing membranes, and progressive tanking of excavations, all of which have reduced groundwater ingress to below-ground works.

Groundwater inflows recorded across the project also include contributions from rainfall-derived surface water and construction-related water; however, the overall declining trend indicates a reduced reliance on active dewatering as works advance toward completion. This is consistent with the construction program, where major excavations are nearing completion and permanent structures are being sealed.

The estimated groundwater take for the reporting period remains well below the predicted construction-phase extraction limits, demonstrating compliance with project approvals and groundwater management objectives.

Groundwater inflows are expected to continue to decline as remaining structures are fully tanked and hydrostatic conditions are re-established. As a result, groundwater levels are anticipated to stabilise and recover toward baseline conditions over time, further reducing the need for groundwater management and treatment.

8.4 RECOMMENDATIONS

Recommendations are provided in Table 8-1 based on the outcomes of the January/February 2026 groundwater monitoring event and assessment of historical trends.

These actions are intended to support ongoing compliance with the GWMP, maintain data quality, and ensure early identification of any potential groundwater impacts as construction progresses toward completion.

Table 8-1: Issues identified and recommendations

Monitoring Location / Precinct	Issue Identified	Recommendation	Timing / Priority
St Marys			
SMGW-BH-A315-R (Orchard Hills); SMGW-BH-C320 (St Marys)	Elevated zinc concentrations	Continue monitoring to determine if exceedances are persistent or transient	Ongoing
Claremont Meadows			
SWD-TU100-20071-VWP07-A/B (Claremont Meadows)	Logger not downloaded as location not identified	Attempt to identify location using GIS onsite If unable to be found continue use of surrogate monitoring SBT-VWP-1403	Ongoing
SBT-VWP-1402 & SBT-VWP-1403	Listed as being not included within monitoring program	Include in monitoring program and update GWMP	High – Next update of GWMP
Orchard Hills			
SBT-GW-1042 (Orchard Hills)	Elevated aluminium associated with low pH	Continue monitoring to confirm reduction as pH trends toward neutral	Ongoing
SBT-GW-1808 (Orchard Hills)	Anomalous total nitrogen result	Confirm with repeat sampling and assess potential sampling artefacts (e.g. turbidity)	High – Next GME
Airport Business Park			

Monitoring Location / Precinct	Issue Identified	Recommendation	Timing / Priority
SBT-GW-3003-A-R (Airport Business Park)	Well dry during monitoring event	Continue monitoring to confirm whether dry conditions are persistent or seasonal	Ongoing
SBT-VWP-3006-R (Airport Business Park)	Red trigger exceedance for level	Trigger levels previously developed for SBT-VWP-3403 (ATL-SN350-VWP02-01) be adopted for SBT-VWP-3006-R due to relocation of monitoring location closer to the station box.	High – Next Biannual and next update of GWMP
Western Sydney Airport			
SBT-GW-4000 (WSA)	Red trigger exceedance for level. Well also blocked and unable to be sampled for water quality.	Recommend increasing gauging frequency to quarterly Remove obstruction and reinstate sampling for next monitoring event.	High – Next GME
Bringelly			
SBT-GW-4003 (Bringelly)	Elevated total nitrogen and phosphorus	Undertake follow-up monitoring to confirm whether increases are rainfall-related or ongoing	High – Next GME
Bradfield			
SBT-VWP-4405 (TU400-39532-VWP03) (Bradfield)	Missed during previous monitoring events and thought to be destroyed. Identified during groundwater monitoring event for this Biannual.	To be reinstated into PLM GW Monitoring Program.	High – include in next GME and GWMP update
SBT-VWP-4404 (Bradfield)	Logger damaged / no recent data	Replace and/or decommission depending on ongoing monitoring requirements	Medium
SN8803	Identified within unknown well, possibly SBT-BH-4013.	Possible replacement well for SBT-VWP-4404 which is soon to be destroyed.	High – Next GME
Sitewide/General			
Claremont Meadows, Bradfield, Airport Terminal	Groundwater levels recovering following construction	Continue monitoring to confirm stabilisation and return to baseline conditions	Ongoing
Project-wide (QA/QC)	Occasional anomalous results	Continue QA/QC review and validation; resample where required	Ongoing
Project-wide (instrumentation)	Maintenance requirements for monitoring equipment	Maintain and service monitoring infrastructure (battery replacement, resealing, repairs)	Ongoing
Replacement wells (-R wells)	Limited data available for trend analysis	Continue monitoring to enable future trend assessment; review triggers when sufficient data is available	Ongoing
GDE monitoring locations	Continued requirement to assess ecological response	Continue six-monthly vegetation and EC monitoring	Ongoing

9. REFERENCES

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ADE (2025a) Biannual Groundwater Monitoring Report – September to November 2024 SMWSASSM-PLD-SWD-SW000-WA-RPT-000004, dated 15/04/2025

ADE (2025b) Groundwater Monitoring Report – December 2024 to July 2025 SMWSASSM-PLD-SWD-SW000-WA-RPT-000006, dated 29/10/2025

AMBS (2024) Orchard Hills Metro Station Vegetation Monitoring, Year 2: 4th Survey. Draft report issued to CPBG, (AMBS Reference 22039) dated October 2024

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Sydney Metro (2023) Sydney Metro Western Sydney Airport Soil and Water Construction Environmental Management Plan – final (Rev06), (Document Reference number: SM-21-00033458) dated 13 July 2023

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Tetra Tech (2024a), Biannual Groundwater Monitoring Report July 2023 to November 2023. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040410

Tetra Tech (2024b), Biannual Groundwater Monitoring Report December 2023 to June 2024. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040419

Tetra Tech (2025a); Biannual Groundwater Monitoring Report June 2024 to December 2024. Ref: SMWSASBT-CPG-SWD-SW000-GE-RPT-040426

Tetra Tech (2025b) Groundwater Monitoring Well Letter, Sydney Metro Western Sydney Airport SSTOM Project Sites. Ref: 754-SYDEN374937-L01-Rev01, dated 5 September 2025

APPENDIX A: LIMITATIONS

IMPORTANT INFORMATION ABOUT YOUR TETRA TECH COFFEY ENVIRONMENTAL REPORT

Introduction

This report has been prepared by Tetra Tech Coffey for you, as Tetra Tech Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice.

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Tetra Tech Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Tetra Tech Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Tetra Tech Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Tetra Tech Coffey should be kept appraised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statues and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Tetra Tech Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Tetra Tech Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Tetra Tech Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Tetra Tech Coffey prepared the report and has familiarity with the site, Tetra Tech Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Tetra Tech Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

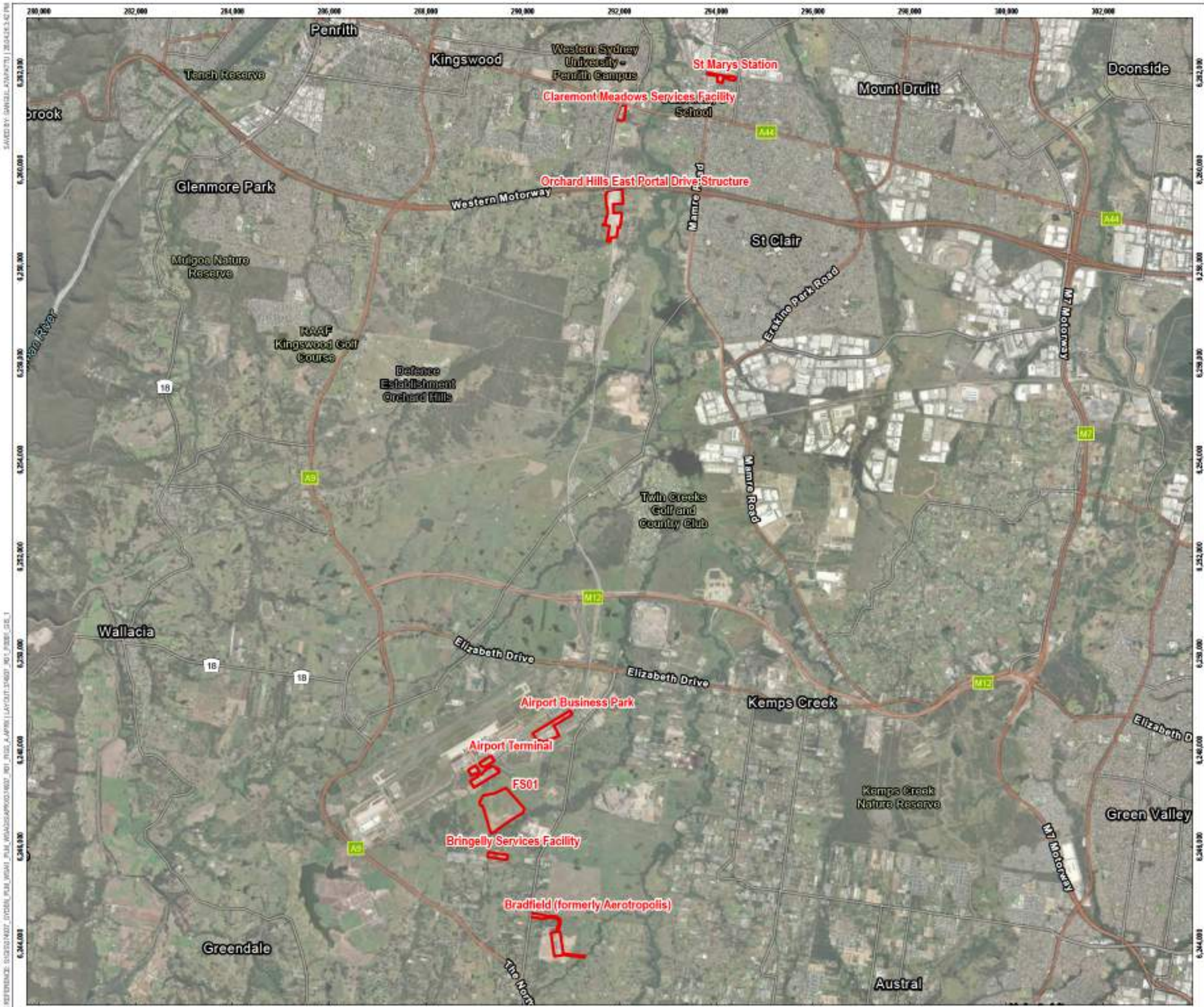
The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

This report should be reproduced in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

APPENDIX B: FIGURES



Parklife Metro D&C

LEGEND

- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site features from PLM
Imagery from ESRI Online.

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PROJECTION: **GDA2020 MGA Zone 56**

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B1

Overview map

TETRA TECH COFFEY

DATE: 29.04.26 PROJECT: 754-MELEN374937 FILE: 374937_R01_F0001_GIS

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Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

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SCALE 1:3,000
PAGE SIZE: A3
PROJECTION: GDA2020 MGA Zone 56

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B2

St Mary's Station
Sampling location plan

TETRA TECH COFFEY

DATE: 21.04.26 PROJECT: 754-MELEN374937 FILE: 374937_R01_F0002_GIS

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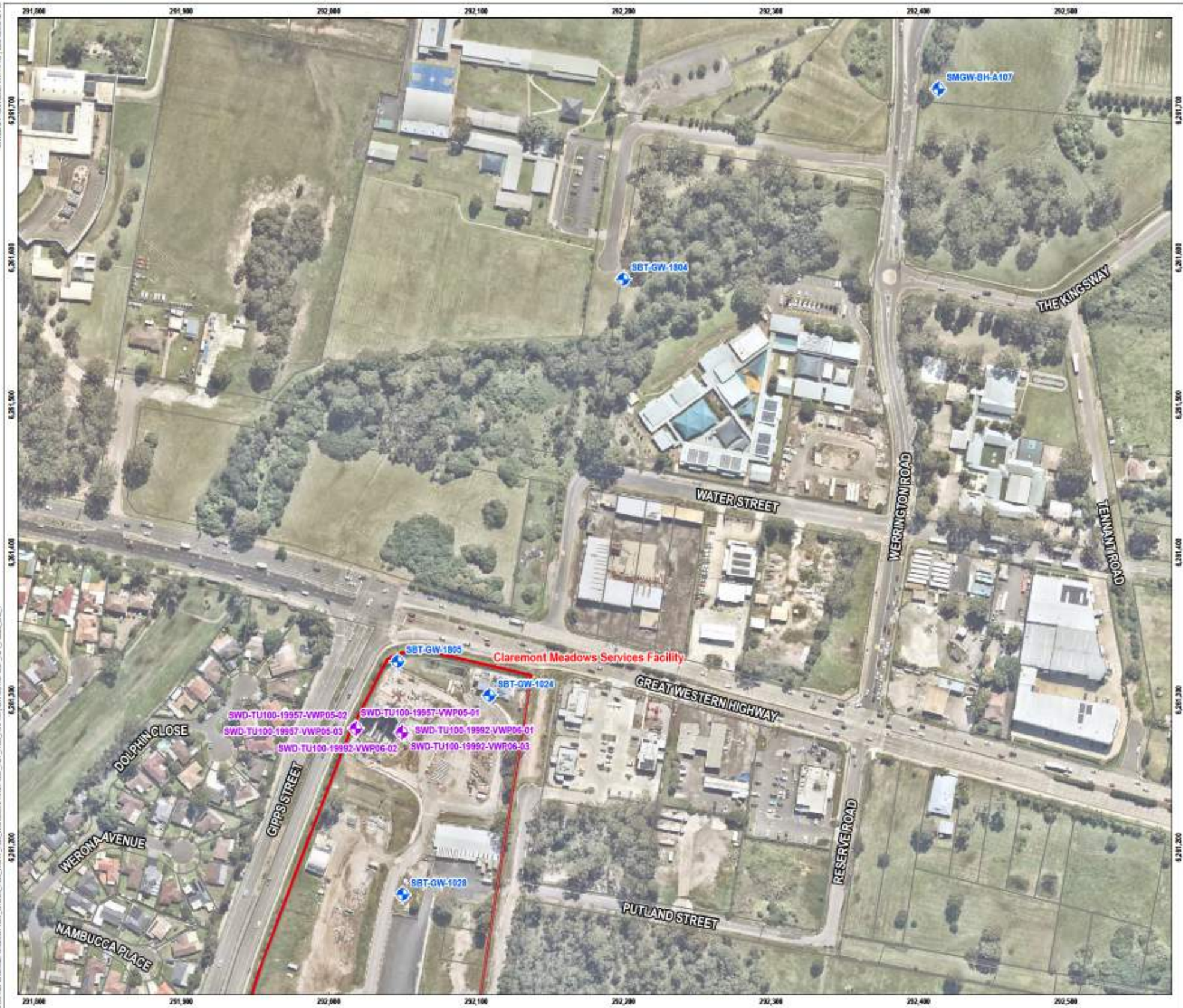

Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

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PAGE SIZE: A3
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PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B3

Claremont Meadows Services Facility Sampling location plan

TETRA TECH COFFEY

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Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

0 50 100 m

SCALE **1:5,000**
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PROJECTION: **GDA2020 MGA Zone 56**

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B4

Orchard Hills
Sampling location plan

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LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

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SCALE 1:5,000
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PROJECTION: GDA2020 MGA Zone 56

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B5

Airport Business Park
Sampling location plan

TETRA TECH COFFEY

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Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

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PAGE SIZE: **A3**
PROJECTION: **GDA2020 MGA Zone 56**

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B6

Airport Terminal
Sampling location plan

TETRA TECH COFFEY

DATE: 14.04.26 PROJECT: 754-MELEN374937 FILE: 374937_R01_FB006_GIS

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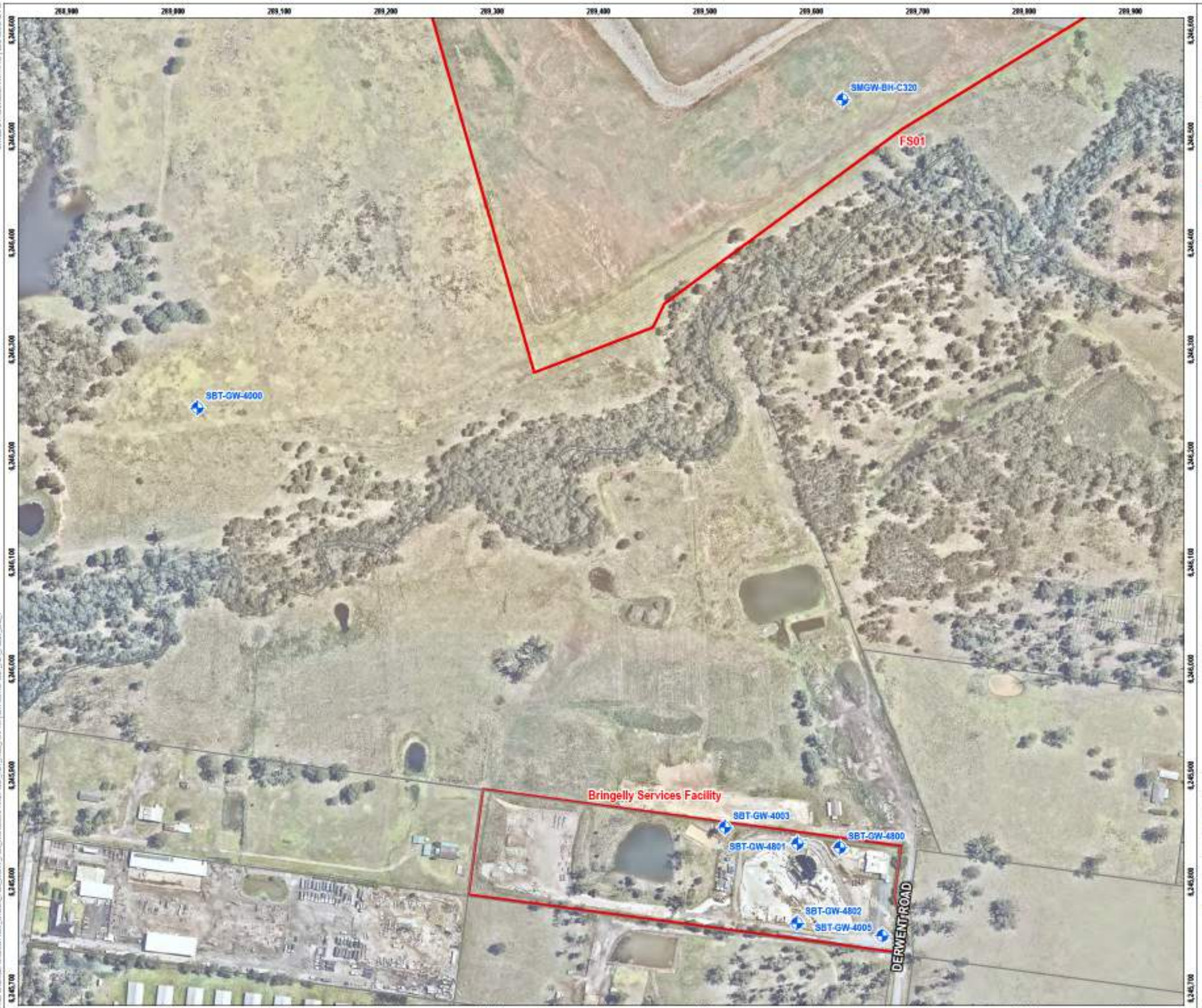

Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

0 50 100 m

SCALE **1:3,500**
PAGE SIZE: **A3**
PROJECTION: **GDA2020 MGA Zone 56**

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B7

Bringelly/FS01
Sampling location plan

TETRA TECH COFFEY

DATE: 21.04.26 PROJECT: 754.MELEN374937 FILE: 374937_R01_FB087_GIS

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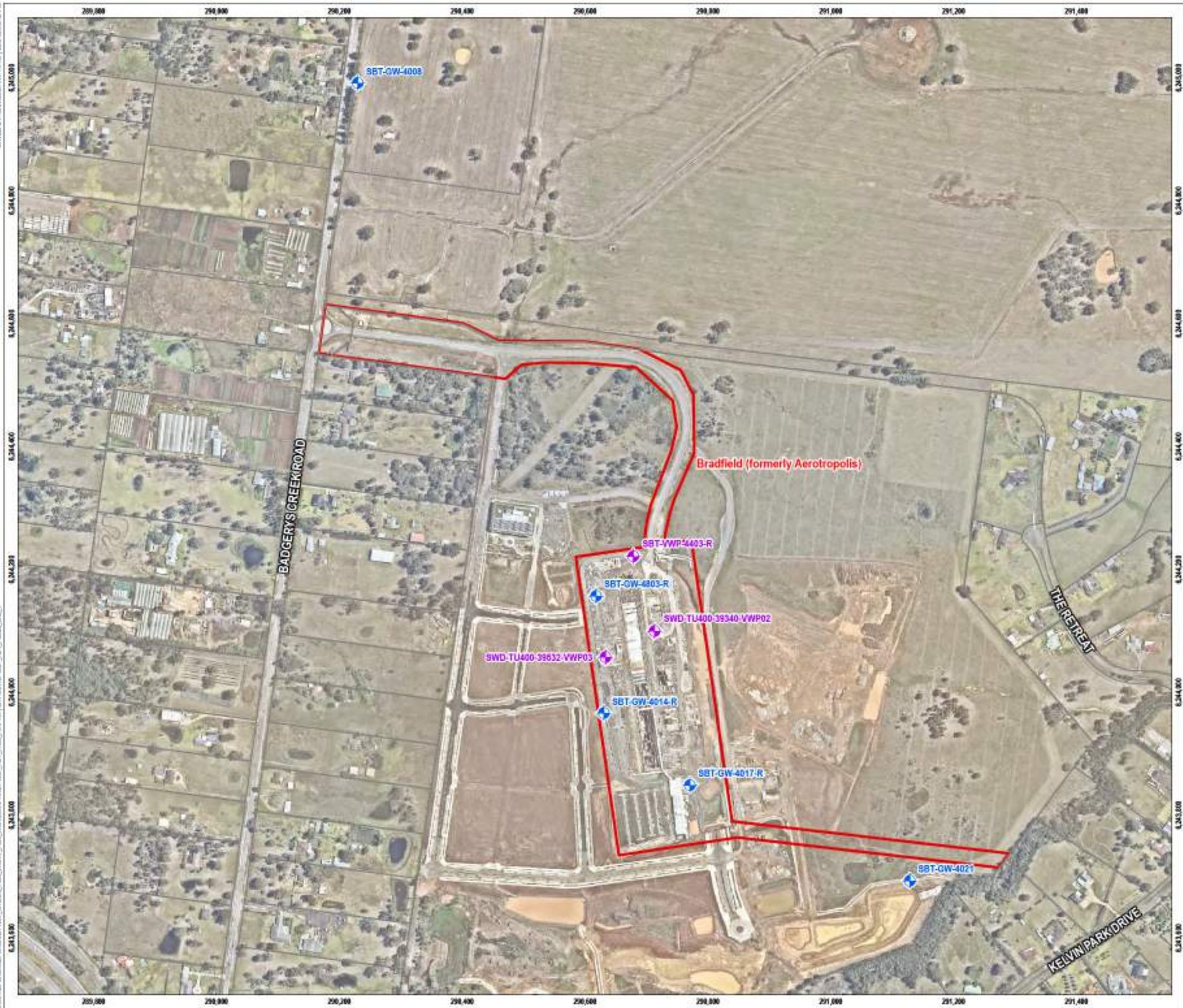

Parklife Metro D&C

LEGEND

- Groundwater location
- VWP location
- Cadastre
- Site boundary

SOURCE
Monitoring locations from PLM and Tetra Tech Coffey.
Site boundary from Tetra Tech Coffey.
Imagery from Nearmap (captured 17/03/2026).

0 100 200 m

SCALE **1:6,000**
PAGE SIZE: **A3**
PROJECTION: **GDA2020 MGA Zone 56**

PARKLIFE METRO D&C

BIANNUAL GROUNDWATER MONITORING REPORT
JULY 2025 TO FEBRUARY 2026

FIGURE B8

Bradfield (formerly Aerotropolis)
Sampling location plan

TETRA TECH COFFEY

DATE: 21.04.26 PROJECT: 754-MELEN374937 FILE: 374937_R01_F0008_GIS

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APPENDIX C: TABULATED RESULTS

								Field						Physical Parameters			Alkalinity					
								Depth to groundwater (measured)	Field pH	Redox Potential (Field)	Field Temperature	Specific Electrical Conductivity @ 25C	DO (Field)	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Calcium (filtered)	Chloride
								m	-	mV	C	µS/cm	mg/L	µS/cm	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL														1	10	0.01	1	1	1	1	1	1
ANZECC 2000 SE Aust Triggers - Lowland River								-	-	-	-	-	-	-	-	6.5-8	-	-	-	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS NEMP 2020 Freshwater 99%								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number																	
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584			3.01	4.48	261.3	24.4	24,731	3.77	25,900	20,900	4.03	<1	<1	<1	<1	30	9,010
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584			4.32	4.59	442.8	22.8	7,884	7.67	8,730	6,440	3.81	<1	<1	<1	<1	<1	3,030
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584			6.15	6.53	214.3	24.5	8,056	5.3	11,400	7,950	7.41	259	<1	259	<1	105	3,760
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584			3.61	6	146	20.6	26,591	4.94	5,700	4,340	6.69	33	<1	33	<1	42	1,610
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707			2.61	4.87	108.2	22.1	16,308	5.79	24,600	17,700	5.27	56	<1	56	<1	15	8,330
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584			2.99	6.12	417.6	30	1,175	5.7	1,820	1,710	6.72	26	<1	26	<1	28	90
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584			5.65	7.38	70.4	21.2	2,504	2.6	2,180	1,900	6.55	158	<1	158	<1	19	573
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450			2.32	7.62	-35.7	21.3	1,768	6.92	1,980	1,360	7.85	294	<1	294	<1	166	500
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450			3.65	7.5	321.7	23.3	2,109	8.1	3,660	2,220	7.41	162	<1	162	<1	56	997
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450			-	-	-	-	-	-	3,480	2,140	7.43	166	<1	166	<1	55	977
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450			2.33	7.5	-119.4	21.6	1,775	2.83	2,400	1,430	7.03	115	<1	115	<1	22	614
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450			2.85	7.06	-77.7	25	1,972	3.24	1,240	1,600	6.39	33	<1	33	<1	86	714
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450			2.99	4.92	174.4	22.4	11,487	2.2	14,400	9,180	4.77	<1	<1	<1	<1	5	5,120
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450			2.83	6.24	-38.3	22	30,910	4.04	31,000	23,300	6.06	39	<1	39	<1	53	9,560
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450			4.75	7.85	-115.4	20.1	4,825	4.36	4,580	2,740	7.26	254	<1	254	<1	31	1,250
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450			12.94	7.39	221.5	21.6	23,987	5.04	26,700	20,300	7.73	384	<1	384	<1	490	9,340
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450			8.98	6.86	36.8	21.6	28,129	4.9	28,500	20,900	7.66	731	<1	731	<1	281	9,950
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450			0.73	6.54	-100	22.7	13,362	2.82	6,970	8,960	6.83	213	<1	213	<1	23	4,400
Orchard Hills	SMGW-BH-A315-R	Normal	SMGW-BH-A315-R	02 Feb 2026	ES2603450			2.37	8.48	129.4	23.3	2,809	7.32	6,830	4,450	6.95	122	<1	122	<1	15	2,130
Orchard Hills	SMGW-BH-A315-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450			-	-	-	-	-	-	6,920	4,670	7.01	122	<1	122	<1	15	2,180
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043			8.74	7.41	-76.5	26.6	29,459	2.94	30,700	23,000	7.78	958	<1	958	<1	362	10,200
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043			9.54	7.94	-101	26.6	25,439	2.24	18,100	13,500	7.84	728	<1	728	<1	160	6,190
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043			6.36	8.29	-23.6	23	24,129	3.64	26,600	18,900	7.87	873	<1	873	<1	307	8,710
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043			20.93	9.04	-124.6	26.1	14,553	1.4	15,600	10,900	8.27	340	<1	340	<1	259	5,430
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043			4.86	6.24	224.4	23.8	2,262	3.96	22,800	19,700	7.79	242	<1	242	<1	468	7,900
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043			13.94	6.91	229.2	22.5	25,519	4.13	27,200	20,100	7.82	1,290	<1	1,290	<1	261	8,630
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043			21.49	7.47	119.5	23.2	22,942	3.92	26,500	20,900	7.63	581	<1	581	<1	521	8,640
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043			7.72	7.25	49.4	24.6	19,408	3.54	22,000	15,900	7.79	1,150	<1	1,150	<1	235	6,480
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450			9.06	7.37	80.6	17.7	14,994	3.94	19,300	13,800	7.66	1,050	<1	1,050	<1	157	6,090
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450			12.81	6.82	-65.3	17.7	25,247	3.46	26,500	19,600	7.77	960	<1	960	<1	407	8,960
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450			7.07	7.14	58.5	18.4	15,152	5.26	16,300	11,200	7.72	1,270	<1	1,270	<1	178	5,260
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450			10.75	7.22	111.4	18.8	15,969	4.82	17,000	11,700	7.72	652	<1	652	<1	280	5,630
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450			14.42	6.66	963.11	17.8	25,790	4.10	27,200	20,600	7.57	841	<1	841	<1	442	9,190
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043			3.76	6.96	88.2	20.9	25,228	3.0	26,900	19,900	7.83	902	<1	902	<1	319	8,620
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043			14.25	7.18	-71.9	22.7	21,067	2.85	2,120	1,250	6.95	141	<1	141	<1	5	558
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043			13	6.96	350.2	24.9	4,286	4.22	15,000	10,200	7.84	1,230	<1	1,230	<1	234	4,810
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043			8.47	7.07	52.2	21.6	15,003	3.01	16,700	10,800	7.81	1,140	<1	1,140	<1	261	5,540
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043			3.25	7.67	-119.2	-	2,954	5.08	2,520	1,720	7.34	163	<1	163	<1	16	706
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043			-	-	-	-	-	-	1,840	1,090	8.85	137	<1	119	19	10	484
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043			10.15	7.45	87.5	24.5	19,116	4.94	20,500	15,200	7.64	1,050	<1	1,050	<1	453	6,840

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

									Ions							Nutrients							
									Magnesium (filtered)	Potassium (filtered)	Sodium (filtered)	Sulfate as SO4 - Turbidimetric (filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Reactive Phosphorus as P (Orthophosphate as P) (filtered)	Phosphorus total
									mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									1	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.01	0.01
ANZECC 2000 SE Aust Triggers - Lowland River									-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs									-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-
PFAS NEMP 2020 Freshwater 99%									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number																		
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584	739	15	4,550	355	0.18	262	261	0.31	<0.01	<0.01	<0.01	29.3	29.3	<0.01	3.79
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584	156	3	1,490	199	7.10	89.6	77.7	0.07	0.09	0.09	<0.01	5.1	5.0	<0.01	1.20
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584	319	33	1,830	340	2.77	118	112	0.02	0.77	0.74	0.03	2.1	1.3	<0.01	0.10
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584	199	3	853	242	4.25	51.1	55.7	0.32	<0.01	<0.01	<0.01	2.6	2.6	<0.01	0.46
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707	528	2	3,850	662	8.27	250	212	0.08	<0.01	<0.01	<0.01	<2.0	<2.0	<0.01	<0.50
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584	15	7	324	715	2.99	17.9	16.9	0.01	4.71	4.71	<0.01	6.2	1.5	<0.01	0.14
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584	26	6	381	70	2.37	20.8	19.8	0.14	0.04	0.02	0.02	16.2	16.2	<0.01	4.51
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450	5	6	212	27	6.40	20.5	18.1	0.39	<0.01	<0.01	<0.01	3.5	3.5	0.10	0.34
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450	40	14	577	185	5.50	35.2	31.5	0.18	0.18	0.18	<0.01	0.8	0.6	0.02	0.21
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450	41	15	607	183	2.64	34.7	32.9	0.18	0.20	0.20	<0.01	0.7	0.5	0.02	0.18
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450	16	7	265	202	25.6	23.8	14.1	4.46	0.23	0.22	0.01	5.8	5.6	0.01	0.79
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450	48	8	285	54	2.53	21.9	20.8	0.34	1.91	1.91	<0.01	4.6	2.7	0.13	1.02
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450	302	4	2,720	169	1.52	148	144	0.19	113	113	0.02	114	0.5	<0.01	<0.01
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450	929	6	4,840	566	1.32	282	290	0.25	<0.01	<0.01	<0.01	0.4	0.4	<0.01	0.03
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450	81	5	775	191	2.62	44.3	42.1	0.56	<0.01	<0.01	<0.01	5.5	5.5	<0.01	0.44
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450	723	28	4,730	643	1.02	285	290	0.40	0.99	0.98	0.01	3.5	0.5	<0.01	<0.01
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450	862	17	4,120	741	8.01	311	265	1.05	0.40	0.13	0.27	1.5	1.1	<0.01	0.05
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450	256	7	1,860	23	11.0	129	103	0.15	<0.01	<0.01	<0.01	84.0	84.0	1.09	15.7
Orchard Hills	SMGW-BH-A315-R	Normal	SMGW-BH-A315-R	02 Feb 2026	ES2603450	322	11	2,530	226	34.4	67.2	138	0.05	<0.01	<0.01	<0.01	0.8	0.8	<0.01	0.09
Orchard Hills	SMGW-BH-A315-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450	333	11	2,600	230	34.6	68.7	142	0.05	0.01	0.01	<0.01	0.9	0.9	<0.01	0.08
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	982	36	5,930	1,080	4.13	329	358	0.39	<0.01	<0.01	<0.01	1.4	1.4	<0.01	0.97
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	537	51	3,220	307	0.51	196	194	4.46	1.50	1.50	<0.01	6.4	4.9	<0.01	0.42
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043	896	29	5,110	1,090	4.39	286	312	0.78	0.01	0.01	<0.01	1.3	1.3	<0.01	0.11
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043	129	48	2,880	44	3.40	161	150	4.76	<0.01	<0.01	<0.01	5.0	5.0	0.02	0.06
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043	252	58	4,150	73	0.68	229	226	8.27	1.16	1.14	0.02	9.5	8.3	0.01	0.21
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043	1,130	48	4,870	1,550	2.84	301	319	0.07	1.19	1.19	<0.01	1.5	0.3	<0.01	0.11
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043	525	71	4,890	18	5.19	256	284	1.91	11.5	11.5	0.03	14.0	2.5	<0.01	0.97
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043	700	40	4,060	971	4.43	226	247	1.85	0.02	0.02	<0.01	2.5	2.5	<0.01	0.61
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450	549	20	2,780	721	8.72	208	174	0.62	0.59	0.47	0.12	17.8	17.2	<0.01	4.49
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450	881	51	4,810	1,200	1.07	297	303	4.46	0.05	<0.01	0.05	4.6	4.6	0.12	0.39
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450	552	26	2,950	667	1.17	188	183	0.45	<0.01	<0.01	<0.01	0.4	0.4	<0.01	0.52
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450	415	28	3,000	801	2.50	189	179	1.36	0.02	0.01	0.01	1.6	1.6	<0.01	0.27
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450	930	48	4,850	1,200	1.60	301	311	1.27	7.52	7.48	0.04	9.0	1.5	<0.01	0.14
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043	846	11	4,920	678	4.27	275	300	0.06	0.95	0.95	<0.01	1.2	0.3	<0.01	0.12
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043	22	8	393	104	3.40	20.7	19.4	0.08	9.45	9.45	<0.01	12.0	2.5	<0.01	0.42
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043	462	44	2,680	468	0.77	170	167	0.87	2.60	2.36	0.24	3.7	1.1	<0.01	0.22
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043	425	39	3,190	363	0.31	187	188	2.49	0.08	0.05	0.03	2.7	2.6	<0.01	0.67
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043	22	3	487	73	1.69	24.7	23.9	0.14	<0.01	<0.01	<0.01	1.3	1.3	<0.01	0.31
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043	9	7	365	71	1.63	17.9	17.3	0.25	<0.01	<0.01	0.01	0.9	0.9	0.01	0.16
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043	985	38	3,220	977	2.18	234	245	0.24	0.46	0.44	0.02	1.3	0.8	<0.01	0.35

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

| | | |

											BTEX					
						Mercury (filtered)	Nickel	Nickel (filtered)	Lead	Lead (filtered)	Zinc	Zinc (filtered)	Aluminum	Aluminum (filtered)	Benzene	Ethylbenzene	Toluene	Xylenes Total	Xylene (o)	Xylenes (m & p)
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL						0.0001	0.001	0.001	0.001	0.001	0.005	0.005	0.01	0.01	0.001	0.002	0.002	0.002	0.002	0.002
ANZECC 2000 SE Aust Triggers - Lowland River						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs						0.0006	0.011	0.011	0.0034	0.0034	0.008	0.008	0.055	0.055	0.95	-	-	-	0.35	-
PFAS NEMP 2020 Freshwater 99%						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number															
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584	<0.0001	0.477	0.089	0.169	0.006	1.79	0.350	121	3.44	-	-	-	-	-	-
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584	<0.0001	0.046	0.032	0.014	0.006	0.183	0.140	15.7	1.49	-	-	-	-	-	-
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584	<0.0001	0.006	0.003	0.006	<0.001	0.029	0.008	1.42	<0.01	-	-	-	-	-	-
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584	<0.0001	0.060	0.001	0.023	<0.001	0.148	0.018	2.01	0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707	<0.0001	1.48	0.067	1.61	0.001	3.58	0.073	-	0.05	0.001	<0.002	<0.002	<0.002	<0.002	<0.002
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584	<0.0001	0.008	0.005	0.005	<0.001	0.063	0.021	2.34	0.04	-	-	-	-	-	-
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584	<0.0001	0.064	0.005	0.103	0.002	1.88	0.852	32.8	0.19	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450	<0.0001	0.011	0.007	0.005	<0.001	0.037	0.006	4.34	0.06	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450	<0.0001	0.013	0.006	0.004	<0.001	0.191	0.038	3.05	0.06	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450	<0.0001	0.013	0.007	0.003	<0.001	0.171	0.040	2.38	0.06	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450	<0.0001	0.233	0.008	0.222	<0.001	2.88	0.059	50.8	0.22	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450	<0.0001	0.037	0.011	0.045	<0.001	0.512	<0.005	20.2	0.02	-	-	-	-	-	-
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450	<0.0001	0.097	0.094	0.015	0.009	0.217	0.211	5.32	2.04	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450	<0.0001	0.373	0.322	0.007	0.001	0.717	0.229	3.01	0.83	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450	<0.0001	0.055	0.005	0.079	<0.001	0.587	0.007	27.8	0.06	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450	<0.0001	0.014	0.004	0.002	<0.001	0.032	<0.005	1.02	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450	<0.0001	0.009	0.012	0.003	<0.001	0.011	0.009	1.83	0.01	-	-	-	-	-	-
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450	<0.0001	0.011	0.010	0.012	<0.001	0.082	<0.005	7.50	0.04	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A31S-R	Normal	SMGW-BH-A31S-R	02 Feb 2026	ES2603450	<0.0001	0.027	0.049	0.009	<0.001	3.11	0.584	3.04	0.04	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Orchard Hills	SMGW-BH-A31S-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450	<0.0001	0.028	0.049	0.010	<0.001	3.16	0.567	4.17	0.04	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	<0.0001	0.008	<0.001	0.005	<0.001	0.083	<0.005	2.13	<0.01	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	<0.0001	0.033	0.005	0.017	<0.001	0.529	<0.005	8.63	0.03	-	-	-	-	-	-
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043	<0.0001	0.027	0.017	0.006	0.003	0.059	0.037	1.93	0.91	-	-	-	-	-	-
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.22	<0.01	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043	<0.0001	0.016	0.009	0.004	<0.001	0.074	0.053	1.52	<0.01	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043	<0.0001	0.014	0.020	0.003	<0.001	0.020	0.013	1.20	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043	<0.0001	0.224	0.036	0.144	<0.001	0.969	0.021	90.2	<0.01	-	-	-	-	-	-
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043	<0.0001	0.022	0.005	0.023	<0.001	0.170	0.010	8.73	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450	<0.0001	0.017	0.010	0.005	<0.001	0.027	0.007	3.07	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450	<0.0001	0.046	0.052	0.004	<0.001	0.053	0.009	2.11	<0.01	-	-	-	-	-	-
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450	<0.0001	0.032	0.013	0.018	<0.001	0.105	0.007	8.83	<0.01	-	-	-	-	-	-
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450	<0.0001	0.032	0.015	0.014	<0.001	0.064	0.009	5.36	<0.01	-	-	-	-	-	-
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450	<0.0001	0.029	0.023	0.010	<0.001	0.048	0.018	5.32	<0.01	-	-	-	-	-	-
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043	<0.0001	0.007	0.006	0.002	<0.001	0.023	0.009	1.31	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043	<0.0001	0.038	0.012	0.015	<0.001	0.114	0.022	11.6	0.03	-	-	-	-	-	-
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043	<0.0001	0.018	0.011	0.020	<0.001	0.062	0.049	0.42	<0.01	-	-	-	-	-	-
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043	<0.0001	0.013	0.005	0.020	<0.001	0.068	0.016	5.28	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043	<0.0001	0.133	0.001	0.130	<0.001	0.484	0.005	159	0.10	-	-	-	-	-	-
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043	<0.0001	0.007	<0.001	0.003	<0.001	0.227	0.037	4.00	0.50	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043	<0.0001	0.023	0.018	0.010	0.008	0.079	0.061	6.59	3.17	-	-	-	-	-	-

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

							Total Recoverable Hydrocarbons								Total Petroleum Hydrocarbons					Organic
						Total BTEX	Naphthalene (VOC)	F1 (C6-C10)	F1 (C6-C10) less BTEX	F2 (C10-C16 Hydrocarbons)	F3 (C16-C34 Hydrocarbons)	C34-C40	C10 - C40 (Sum of total)	F2 C10-C16 (minus Naphthalene)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	Total Organic Carbon (TOC)
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL						0.001	0.005	0.02	0.02	0.1	0.1	0.1	0.1	0.1	0.02	0.05	0.1	0.05	0.05	1
ANZECC 2000 SE Aust Triggers - Lowland River						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PFAS NEMP 2020 Freshwater 99%						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number															
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	3
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707	0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	19
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	4
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37
Orchard Hills	SMGW-BH-A315-R	Normal	SMGW-BH-A315-R	02 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	7
Orchard Hills	SMGW-BH-A315-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	8
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	<4
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	<4
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043	<0.001	<0.005	<0.02	<0.02	<0.1	0.19	<0.1	0.19	<0.1	<0.02	<0.05	0.19	<0.05	0.19	<4
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043	<0.001	<0.005	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

							Phenols											
							3/4-Methylphenol (m/p-cresol)	2,4-dimethylphenol	Phenol	2,4-dichlorophenol	4-chloro-3-methylphenol	2,6-dichlorophenol	Pentachlorophenol	2,4,6-trichlorophenol	2-nitrophenol	2-methylphenol	2-chlorophenol	2,4,5-trichlorophenol	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluorohexane sulfonic acid (PFHxS)
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L
EQL							0.002	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.01	0.00002	0.00001
ANZECC 2000 SE Aust Triggers - Lowland River							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs							-	-	0.32	0.16	-	-	0.01	0.02	-	-	0.49	-	-	-	-
PFAS NEMP 2020 Freshwater 99%							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number																
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584		<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-	-
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584		-	-	-	-	-	-	-	-	-	-	-	-	0.16	<0.00007	<0.00001
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	0.30	<0.00002	0.00004
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	0.05	<0.00007	0.00001
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	0.02	<0.00007	0.00001
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A31S-R	Normal	SMGW-BH-A31S-R	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
Orchard Hills	SMGW-BH-A31S-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00002	<0.00001
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00007	<0.00001
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00007	<0.00001
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.00007	<0.00001
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

						Per and polyfluoroalkyl substances										
						Perfluorooctanesulfonic acid (PFOS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL						0.00001	0.0001	0.00002	0.00002	0.00002	0.00001	0.00005	0.00005	0.00005	0.00005	0.00001
ANZECC 2000 SE Aust Triggers - Lowland River						-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% toxicant DGVs						-	-	-	-	-	-	-	-	-	-	-
PFAS NEMP 2020 Freshwater 99%						0.00000023	-	-	-	-	0.019	-	-	-	-	-
Monitoring Zone	Location Code	Sample Type	Field ID	Date	Lab Report Number											
St Marys	SBT-GW-1001-S	Normal	SBT-GW-1001-S	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1002	Normal	SBT-GW-1002	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1005-S	Normal	SBT-GW-1005-S	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-
St Marys	SBT-GW-1016	Normal	SBT-GW-1016	04 Feb 2026	ES2603584		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
St Marys	SBT-GW-1017	Normal	SBT-GW-1017	05 Feb 2026	ES2603707		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
St Marys	SBT-GW-1021	Normal	SBT-GW-1021	04 Feb 2026	ES2603584	-	-	-	-	-	-	-	-	-	-	-
St Marys	SMGW-BH-A401	Normal	SMGW-BH-A401	04 Feb 2026	ES2603584	0.00002	<0.0001	0.00007	0.00006	<0.00002	0.00001	<0.00005	<0.00005	<0.00005	<0.00005	0.00002
Northern Tunnels	SMGW-BH-A107	Normal	SMGW-BH-A107	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Claremont Meadows	SBT-GW-1024	Normal	SBT-GW-1024	03 Feb 2026	ES2603450	0.00006	0.0002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	0.00010
Claremont Meadows	SBT-GW-1024	Field_D	DUP02_030226	03 Feb 2026	ES2603450		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Claremont Meadows	SBT-GW-1030	Normal	SBT-GW-1030	03 Feb 2026	ES2603450		<0.0001	0.00002	<0.00002	<0.00002	0.00002	<0.00005	<0.00005	<0.00005	<0.00005	0.00001
Claremont Meadows	SBT-GW-1805	Normal	SBT-GW-1805	03 Feb 2026	ES2603450	0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	0.00002
Orchard Hills	SBT-GW-1042	Normal	SBT-GW-1042	03 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1048-R	Normal	SBT-GW-1048-R	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1063	Normal	SBT-GW-1063	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1806	Normal	SBT-GW-1806	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1807	Normal	SBT-GW-1807	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SBT-GW-1808	Normal	SBT-GW-1808	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Orchard Hills	SMGW-BH-A315-R	Normal	SMGW-BH-A315-R	02 Feb 2026	ES2603450		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Orchard Hills	SMGW-BH-A315-R	Field_D	DUP01_020626	02 Feb 2026	ES2603450		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Airport Business Park	SBT-GW-3003-B-R	Normal	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	Normal	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-VWP-3401-R	Normal	SBT-VWP-3401 add	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3006-R	Normal	SBT-GW-3006-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-a	Normal	SBT-GW-3012-A	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-b	Normal	SBT-GW-3012-B	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-c	Normal	SBT-GW-3012-C	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3022	Normal	SBT-GW-3022	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4003	Normal	SBT-GW-4003	02 Feb 2026	ES2603450		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Bringelly	SBT-GW-4005	Normal	SBT-GW-4005	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4800	Normal	SBT-GW-4800	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4801	Normal	SBT-GW-4801	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Bringelly	SBT-GW-4802	Normal	SBT-GW-4802	02 Feb 2026	ES2603450	-	-	-	-	-	-	-	-	-	-	-
Western Sydney Airport	SMGW-BH-C320	Normal	SMGW-BH-C320	30 Jan 2026	ES2603043		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Bradfield	SBT-GW-4008	Normal	SBT-GW-4008	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4014-R	Normal	SBT-GW-4014-R	29 Jan 2026	ES2603043		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Bradfield	SBT-GW-4017-R	Normal	SBT-GW-4017-R	29 Jan 2026	ES2603043		<0.0001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
Bradfield	SBT-GW-4021	Normal	SBT-GW-4021	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4403	Normal	SBT-GW-4403	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-
Bradfield	SBT-GW-4803-R	Normal	SBT-GW-4803-R	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-

Environmental Standards
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, 2018, ANZG (2018) Freshwater 95% toxicant DGVs
HEPA, January 2020, PFAS NEMP 2020 Freshwater 99%

					Field						Physical Parameters			Alkalinity							
					Depth to groundwater (measured)	Field pH	Redox Potential (Field)	Field Temperature	Specific Electrical Conductivity @ 25C	DO (Field)	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hardness (Filtered)	Calcium (Filtered)	Chloride
					m	-	mV	C	µS/cm	mg/L	µS/cm	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL											1	5	0.01	1	1	1	1	3	0.5	1
Airport Regulations - Water pollution - accepted limits - fresh water					-	6.5-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC 2000 SE Aust Triggers - Lowland River					-	-	-	-	-	-	-	-	6.5-8	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number																
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	-	-	-	-	-	-	-	15,000	7.7	800	<5	800	<5	3,800	240	11,000
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	8.74	7.41	-76.5	26.6	29,459	2.94	30,700	23,000	7.78	958	<1	958	<1	-	362	10,200
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	-	-	-	-	-	-	-	13,000	7.4	940	<5	940	<5	3,400	230	10,000
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	9.54	7.94	-101	26.6	25,439	2.24	18,100	13,500	7.84	728	<1	728	<1	-	160	6,190
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	-	-	-	-	-	-	-	10,000	7.6	680	<5	680	<5	4,000	240	7,300
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	6.36	8.29	-23.6	23	24,129	3.64	26,600	18,900	7.87	873	<1	873	<1	-	307	8,710
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	-	-	-	-	-	-	-	5,800	10.0	900	<5	440	460	890	72	4,000
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	20.93	9.04	-124.6	26.1	14,553	1.4	15,600	10,900	8.27	340	<1	340	<1	-	259	5,430
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	4.86	6.24	224.4	23.8	2,262	3.96	22,800	19,700	7.79	242	<1	242	<1	-	468	7,900
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	-	-	-	-	-	-	-	15,000	7.1	1,200	<5	1,200	<5	5,000	190	9,500
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	13.94	6.91	229.2	22.5	25,519	4.13	27,200	20,100	7.82	1,290	<1	1,290	<1	-	261	8,630
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	-	-	-	-	-	-	-	21,000	7.2	570	<5	570	<5	2,900	360	9,700
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	21.49	7.47	119.5	23.2	22,942	3.92	26,500	20,000	7.63	581	<1	581	<1	-	521	8,640
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	-	-	-	-	-	-	-	5,500	7.1	430	<5	430	<5	1,100	86	3,000
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	7.72	7.25	49.4	24.6	19,408	3.54	22,000	15,900	7.79	1,150	<1	1,150	<1	-	235	6,480

Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

					Ions								Nutrients							
					Magnesium (filtered)	Potassium (filtered)	Sodium (filtered)	Sulfate as SO4	Sulfate as SO4 - Turbidimetric (filtered)	Ionic Balance	Anions Total	Cations Total	Ammonia as N	Ammonia as N (filtered)	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrate (as NO3-N) (filtered)	Nitrite (as NO2-N)	Nitrite (as NO2-N) (filtered)	Nitrogen (Total)
					mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.5	0.5	0.5	1	1	0.01	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.1
Airport Regulations - Water pollution - accepted limits - fresh water					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
ANZECC 2000 SE Aust Triggers - Lowland River					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					-	-	-	-	-	-	-	-	0.9	0.9	-	-	-	-	-	-
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number																
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	780	40	5,900	1,400	-	-4.0	-	-	-	0.26	-	-	0.006	-	<0.005	0.8
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	982	36	5,930	-	1,080	4.13	329	358	0.39	-	<0.01	<0.01	-	<0.01	-	1.4
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	680	76	4,100	610	-	-12	-	-	-	4.1	-	-	<0.005	-	<0.005	4.1
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	537	51	3,220	-	307	0.51	196	194	4.46	-	1.50	1.50	-	<0.01	-	6.4
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	820	43	5,500	960	-	15	-	-	-	0.91	-	-	0.008	-	<0.005	0.9
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	896	29	5,110	-	1,090	4.39	286	312	0.78	-	0.01	0.01	-	<0.01	-	1.3
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	170	48	2,100	110	-	-9.0	-	-	-	4.4	-	-	<0.005	-	0.006	4.3
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	129	48	2,880	-	44	3.49	161	150	4.76	-	<0.01	<0.01	-	<0.01	-	5.0
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	252	58	4,150	-	73	0.68	229	226	8.27	-	1.16	1.14	-	0.02	-	9.5
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	1,100	65	5,600	1,900	-	2.0	-	-	-	0.04	-	-	0.04	-	<0.005	<0.1
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	1,130	48	4,870	-	1,550	2.84	301	319	0.07	-	1.19	1.19	-	<0.01	-	1.5
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	490	94	5,600	81	-	3.0	-	-	-	7.4	-	-	1.8	-	0.03	7.4
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	525	71	4,890	-	18	5.19	256	284	1.91	-	11.5	11.5	-	0.03	-	14.0
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	210	26	1,500	580	-	-9.0	-	-	-	0.40	-	-	1.4	-	0.01	2.0
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	700	40	4,060	-	971	4.43	226	247	1.85	-	0.02	0.02	-	<0.01	-	2.5

Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

																		Metals			
					Phosphorus	Total Kjeldahl Nitrogen (TKN)	Phosphorus total	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Copper	Copper (filtered)	Iron	Iron (filtered)	Manganese	Manganese (filtered)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.05	0.1	0.01	0.001	0.001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.001	0.001
Airport Regulations - Water pollution - accepted limits - fresh water					0.005	-	-	0.05	0.05	0.0002	0.0002	0.01	0.01	-	0.002	0.002	1	1	-	-
ANZECC 2000 SE Aust Triggers - Lowland River					0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					-	-	-	-	-	0.0002	0.0002	-	-	-	0.0014	0.0014	-	-	1.9	1.9
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number																
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	0.4	0.8	-	-	-	-	-	-	-	0.017	-	-	17	1.3	2.8	2.3
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	-	1.4	0.97	0.007	0.004	<0.0001	<0.0001	0.006	<0.001	0.006	0.009	<0.001	13.2	2.96	1.65	1.61
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	0.4	4.1	-	-	-	-	-	-	-	0.015	-	-	20	1.9	0.66	0.24
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	-	4.9	0.42	0.016	0.005	0.0001	<0.0001	0.017	<0.001	0.020	0.038	<0.001	26.5	0.22	0.718	0.131
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	0.2	0.9	-	-	-	-	-	-	-	0.015	-	-	8.2	1.6	1.2	1.2
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	-	1.3	0.11	0.023	0.018	<0.0001	<0.0001	0.003	0.002	0.025	0.015	<0.001	8.26	7.36	1.64	1.65
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	1.2	4.3	-	-	-	-	-	-	-	0.031	-	-	63	<0.05	1.7	<0.005
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	-	5.0	0.06	0.001	0.001	<0.0001	<0.0001	0.013	0.019	<0.001	<0.001	<0.001	0.86	<0.05	0.079	<0.001
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	-	8.3	0.21	0.018	0.012	<0.0001	<0.0001	0.010	<0.001	0.005	0.006	0.002	3.93	0.21	0.219	0.226
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	0.72	<0.1	-	-	-	-	-	-	-	0.017	-	-	38	<0.01	0.75	0.14
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	-	0.3	0.11	0.001	<0.001	<0.0001	0.0001	0.002	<0.001	0.004	0.005	<0.001	2.66	<0.05	0.176	0.113
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	0.66	7.8	-	-	-	-	-	-	-	0.018	-	-	34	0.73	0.9	0.58
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	-	2.5	0.97	0.090	<0.001	0.0004	<0.0001	0.252	<0.001	0.154	0.403	<0.001	233	0.59	3.21	0.448
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	0.62	0.6	-	-	-	-	-	-	-	0.025	-	-	37	0.16	0.75	0.14
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	-	2.5	0.61	0.012	<0.001	<0.0001	<0.0001	0.023	<0.001	0.024	0.010	<0.001	16.0	0.07	0.431	0.059

Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

												Inorganics						
					Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Lead	Lead (filtered)	Zinc	Zinc (filtered)	Aluminum	Aluminum (filtered)	Electrical Conductivity (Non Compensated)_	Reactive Phosphorus as P (Orthophosphate as P) (filtered)	Nitrogen (Total Oxidised)	Benzene	Ethylbenzene	Toluene
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.0001	0.0001	0.001	0.001	0.001	0.001	0.005	0.005	0.01	0.01	1	0.005	0.005	0.001	0.001	0.001
Airport Regulations - Water pollution - accepted limits - fresh water					0.0001	0.0001	0.015	0.015	0.001	0.001	0.005	0.005	0.1	0.1	-	-	-	0.3	0.14	0.3
ANZECC 2000 SE Aust Triggers - Lowland River					-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	-	-
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					0.0006	0.0006	0.011	0.011	0.0034	0.0034	0.008	0.008	0.055	0.055	-	-	-	0.95	0.08	0.18
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number																
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	4.5	<0.01	29,000	0.02	0.008	-	-	-
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	<0.0001	<0.0001	0.008	<0.001	0.005	<0.001	0.083	<0.005	2.13	<0.01	-	<0.01	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	5.7	0.02	24,000	0.007	<0.005	-	-	-
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	<0.0001	<0.0001	0.033	0.005	0.017	<0.001	0.529	<0.005	8.63	0.03	-	<0.01	-	-	-	-
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	-	-	-	-	-	-	-	-	3.6	<0.01	20,000	<0.005	0.01	<0.001	<0.001	<0.001
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	<0.0001	<0.0001	0.027	0.017	0.006	0.003	0.059	0.037	1.93	0.91	-	<0.01	-	-	-	-
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	18	<0.01	11,000	<0.005	0.009	-	-	-
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	0.22	<0.01	-	0.02	-	-	-	-
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	<0.0001	<0.0001	0.016	0.009	0.004	<0.001	0.074	0.053	1.52	<0.01	-	0.01	-	-	-	-
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	-	-	-	-	-	-	-	-	15	<0.01	26,000	0.01	0.04	-	-	-
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	<0.0001	<0.0001	0.014	0.020	0.003	<0.001	0.020	0.013	1.20	<0.01	-	<0.01	-	<0.001	<0.002	<0.002
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	-	-	-	-	-	-	-	-	14	0.01	25,000	0.007	1.8	-	-	-
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	0.0003	<0.0001	0.224	0.036	0.144	<0.001	0.969	0.021	90.2	<0.01	-	<0.01	-	-	-	-
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	-	-	-	-	-	-	-	-	21	0.06	9,700	0.005	1.4	-	-	-
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	<0.0001	<0.0001	0.022	0.005	0.023	<0.001	0.170	0.010	8.73	<0.01	-	<0.01	-	<0.001	<0.002	<0.002

Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

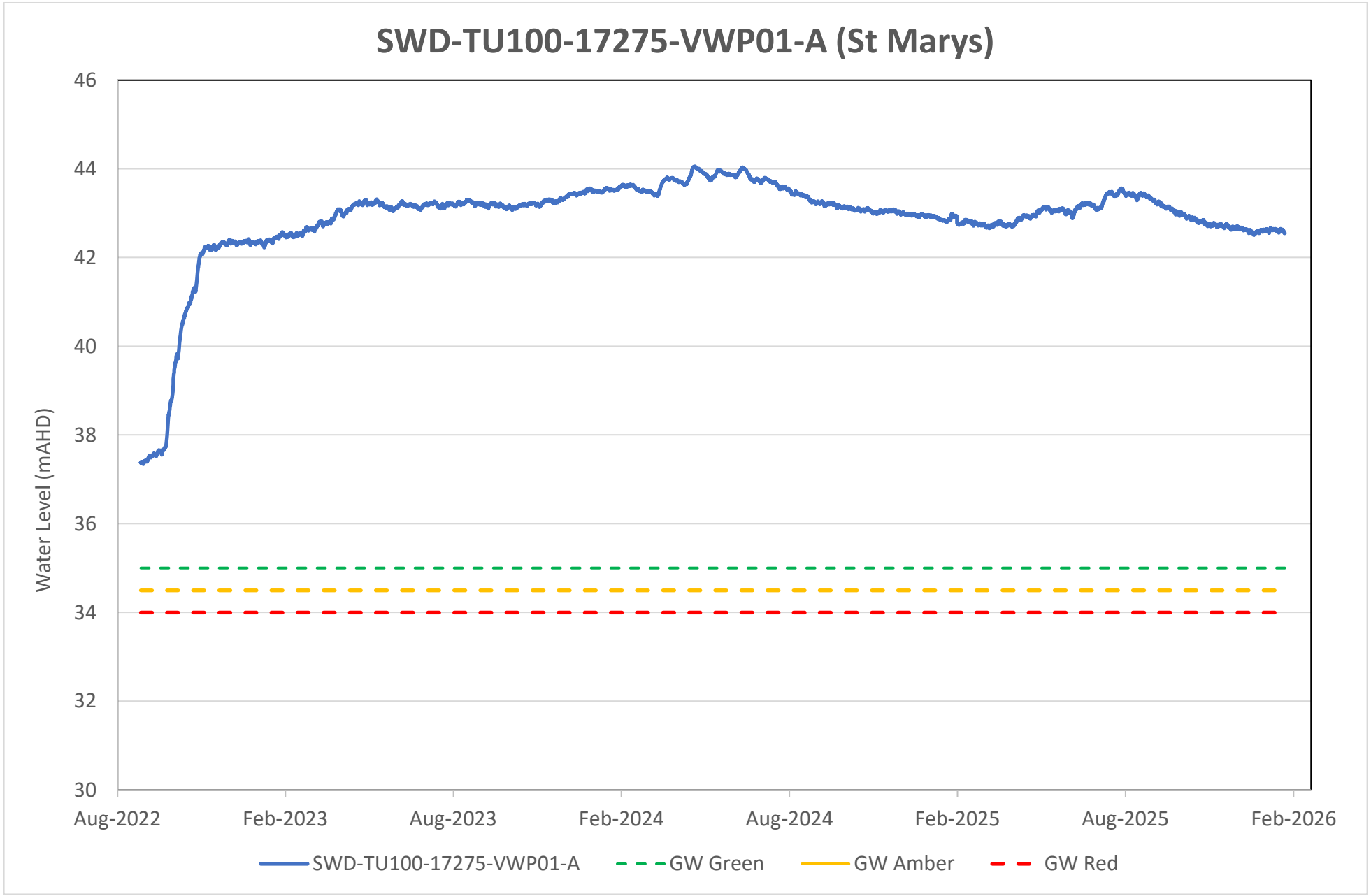
					BTEX					Total Recoverable Hydrocarbons							Total Petroleum Hydrocarbons			
					Xylenes Total	Xylene (o)	Xylenes (m & p)	Total BTEX	Naphthalene (VOC)	F1 (C6-C10)	F1 (C6-C10) less BTEX	F2 (C10-C16 Hydrocarbons)	F3 (C16-C34 Hydrocarbons)	C34-C40	C10 - C40 (Sum of total)	F2 C10-C16 (minus Naphthalene)	C6 - C9	C10 - C14	C15 - C28	C29-C36
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.002	0.001	0.002	0.001	0.001	0.01	0.01	0.05	0.1	0.1	0.05	0.05	0.01	0.05	0.1	0.05
Airport Regulations - Water pollution - accepted limits - fresh water					-	-	-	-	-	-	-	-	-	-	-	-	0.15	-	-	-
ANZECC 2000 SE Aust Triggers - Lowland River					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					-	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number																
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	-	<0.001	<0.002	-	<0.001	<0.01	<0.01	<0.05	<0.1	<0.1	<0.05	<0.05	<0.01	<0.05	<0.1	<0.1
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	-	-	-	-	-	-	-	<0.05	<0.1	<0.1	<0.05	-	-	<0.05	<0.1	<0.1
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	<0.002	<0.002	<0.002	<0.001	<0.001	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	-	-	-	-	-	-	-	<0.05	<0.1	<0.1	<0.05	-	-	<0.05	<0.1	<0.1
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	<0.002	<0.002	<0.002	<0.001	<0.001	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.1

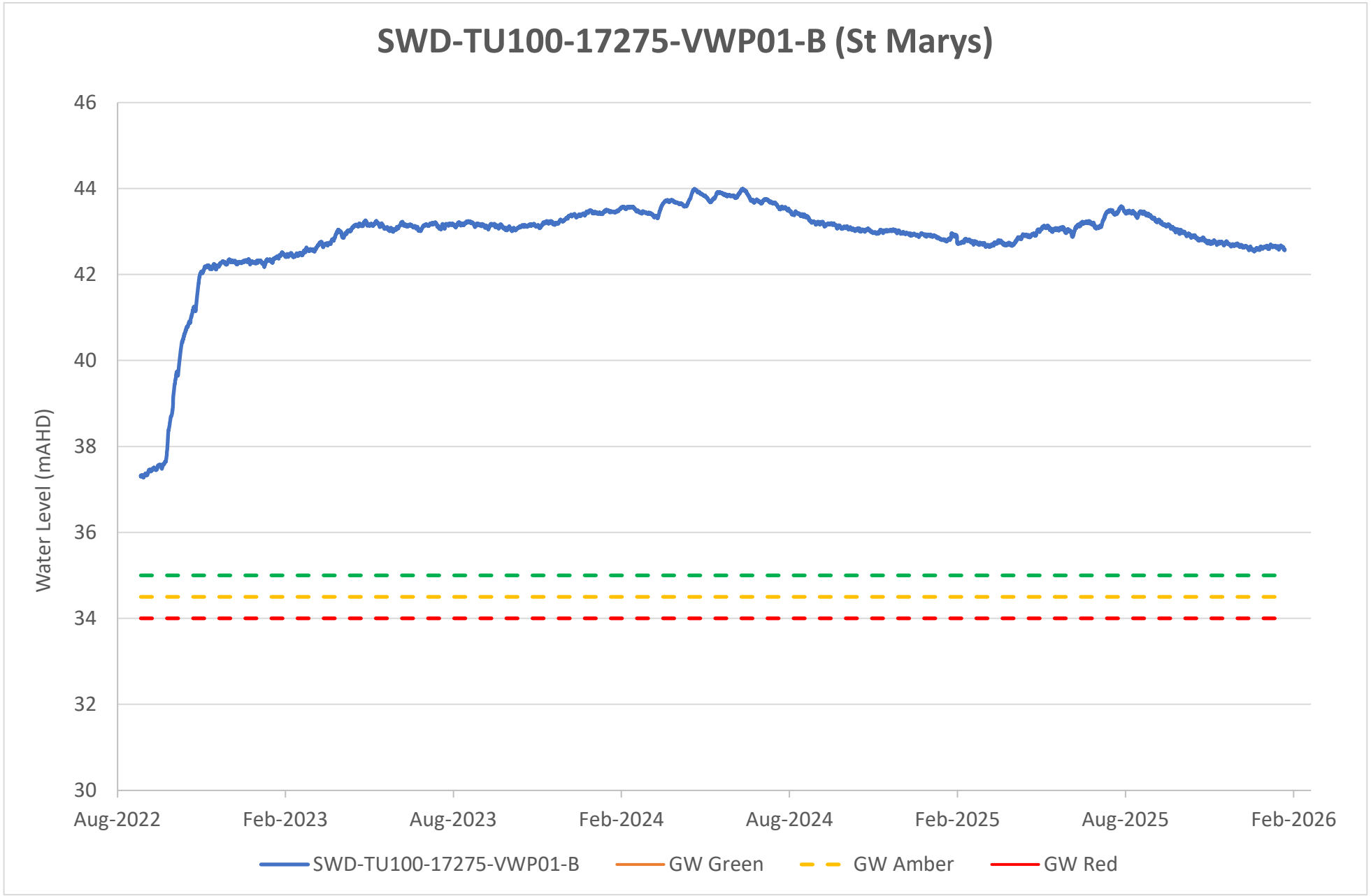
Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

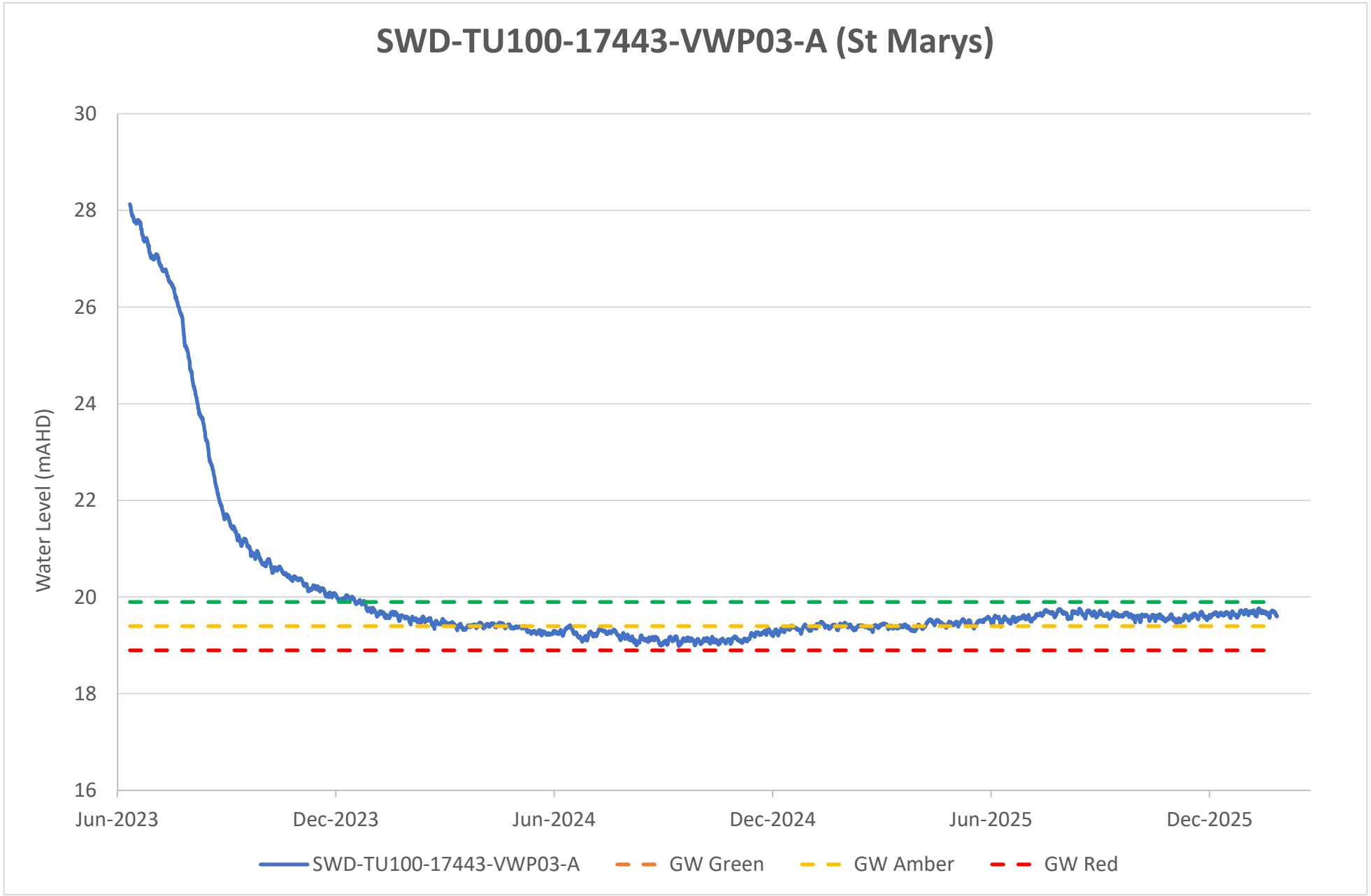
						Volatile Organic		Organic
					>C10 - C36 (Sum of total)	Methyl t-Butyl Ether (MTBE)	Nitrogen (Organic)	Total Organic Carbon (TOC)
					mg/L	mg/L	mg/L	mg/L
EQL					0.05	0.001	0.2	1
Airport Regulations - Water pollution - accepted limits - fresh water					0.6	-	-	-
ANZECC 2000 SE Aust Triggers - Lowland River					-	-	-	-
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs					-	-	-	-
Monitoring Zone	Location Code	Field ID	Date	Lab Report Number				
Airport Business Park	SBT-GW-3003-B-R	GW-3003B-R	05 Nov 2025	394944	-	-	0.5	33
Airport Business Park	SBT-GW-3003-B-R	SBT-GW-3003-B-R	30 Jan 2026	ES2603043	-	-	-	67
Airport Business Park	SBT-GW-3003-C-R	GW-3003C-R	05 Nov 2025	394944	-	-	<0.2	5
Airport Business Park	SBT-GW-3003-C-R	SBT-GW-3003-C-R	30 Jan 2026	ES2603043	-	-	-	10
Airport Business Park	SBT-VWP-3401-R	SBT-3401-R	06 Nov 2025	394944	<0.05	<0.001	<0.2	3
Airport Business Park	SBT-VWP-3401-R	SBT-VWP-3401 add	29 Jan 2026	ES2603043	-	-	-	10
Airport Terminal	SBT-GW-3006-R	BH-3006-R	05 Nov 2025	394944	-	-	<0.2	7
Airport Terminal	SBT-GW-3006-R	SBT-GW-3006-R	30 Jan 2026	ES2603043	-	-	-	5
Airport Terminal	SBT-GW-3012-a	SBT-GW-3012-A	29 Jan 2026	ES2603043	-	-	-	7
Airport Terminal	SBT-GW-3012-b	3012-B	06 Nov 2025	394944	<0.05	-	<0.2	3
Airport Terminal	SBT-GW-3012-b	SBT-GW-3012-B	30 Jan 2026	ES2603043	<0.05	-	-	<3
Airport Terminal	SBT-GW-3012-c	3012-C	06 Nov 2025	394944	-	-	0.4	3
Airport Terminal	SBT-GW-3012-c	SBT-GW-3012-C	30 Jan 2026	ES2603043	-	-	-	3
Airport Terminal	SBT-GW-3022	3022	05 Nov 2025	394944	<0.05	-	<0.2	11
Airport Terminal	SBT-GW-3022	SBT-GW-3022	30 Jan 2026	ES2603043	<0.05	-	-	5

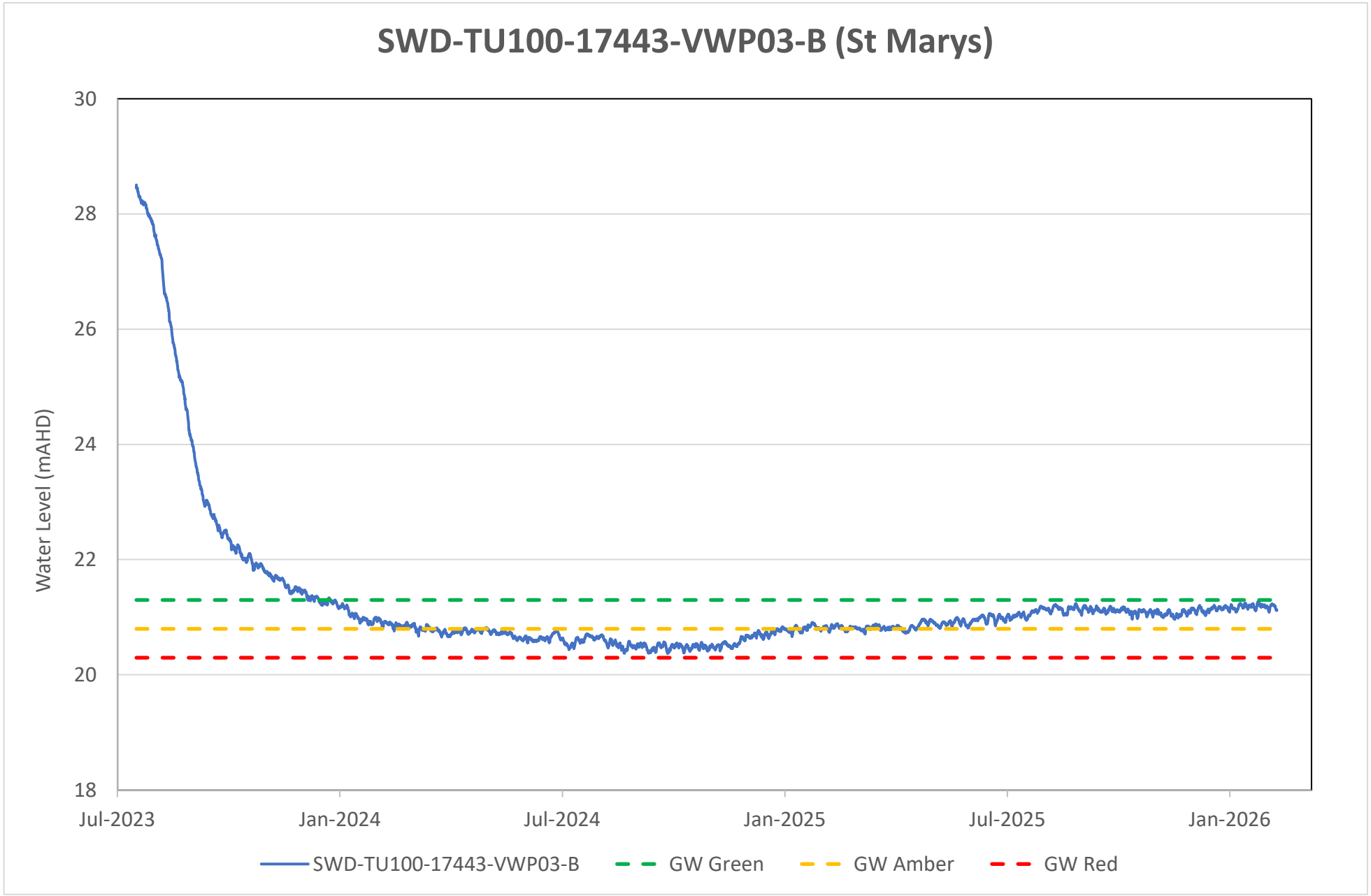
Environmental Standards
Office of Parliamentary Counsel, 12 October 2017, Airport Regulations - Water pollution - accepted limits - fresh water
DoE, 2000, ANZECC 2000 SE Aust Triggers - Lowland River
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs

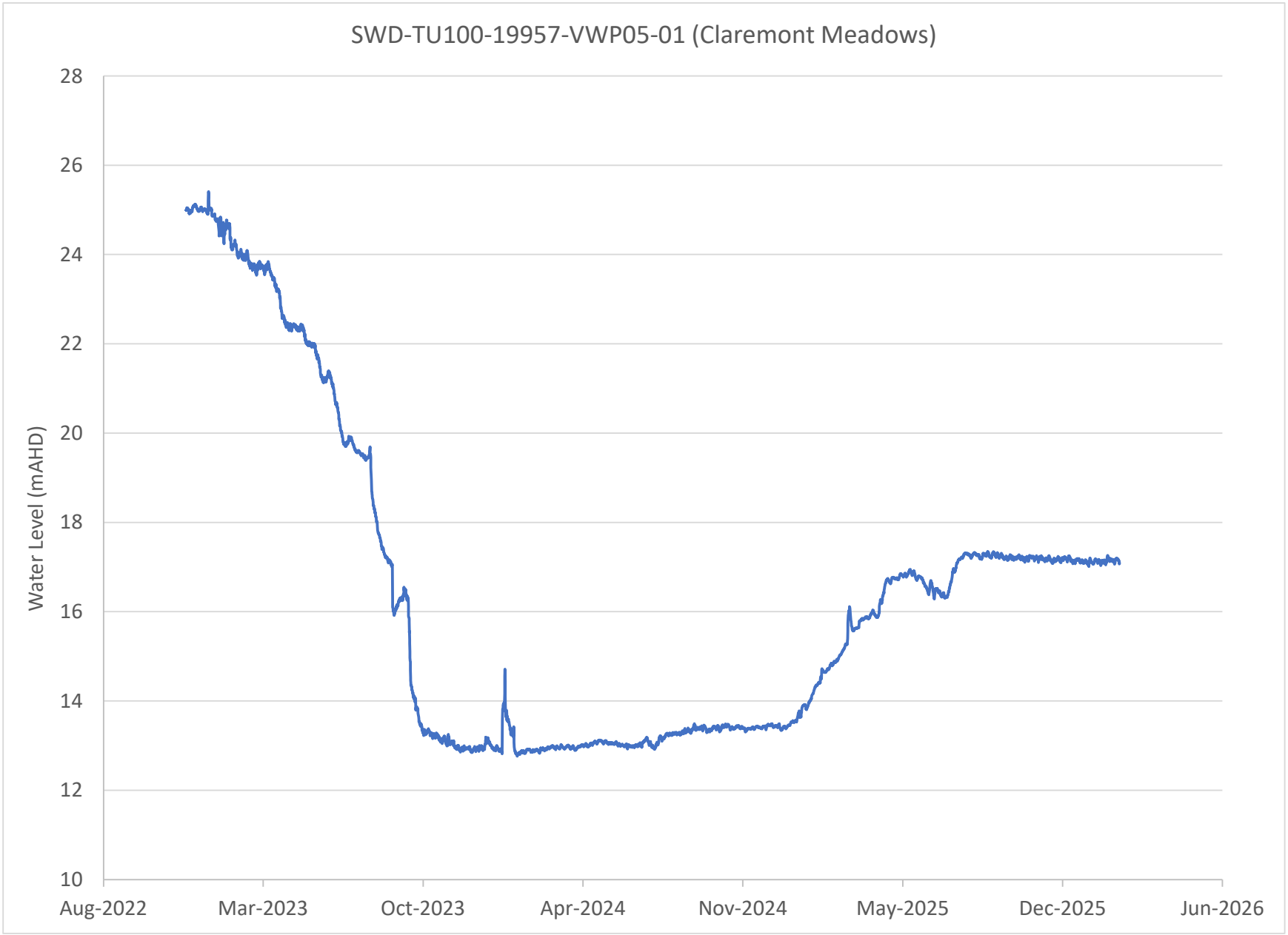
APPENDIX D: VWP HYDROGRAPHS

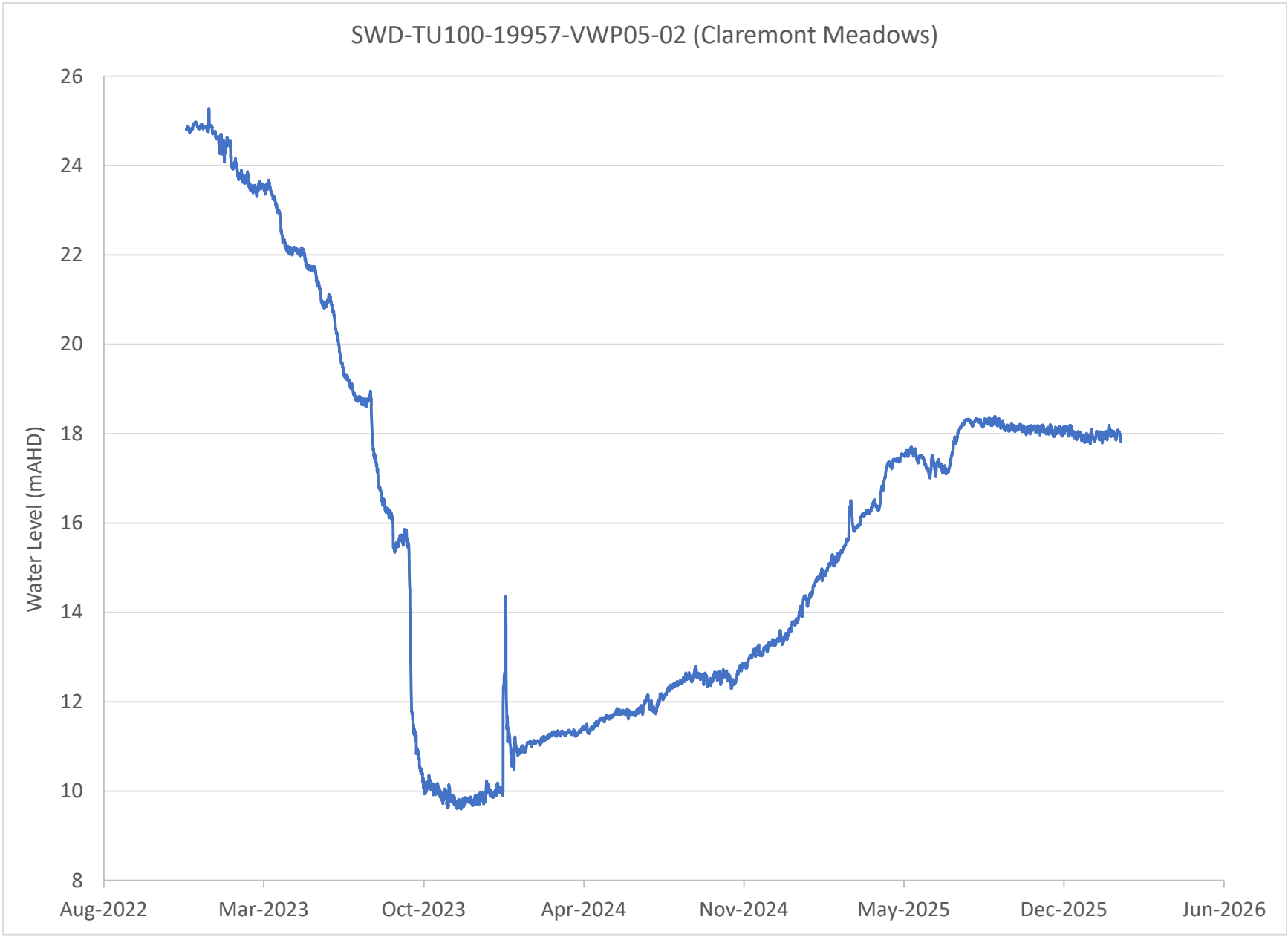

SWD-TU100-17275-VWP01-A (St Marys)
Water Level (mAHD)
46
44
42
40
38
36
34
32
30
Aug-2022
Feb-2023
Aug-2023
Feb-2024
Aug-2024
Feb-2025
Aug-2025
Feb-2026
SWD-TU100-17275-VWP01-A
GW Green
GW Amber
GW Red

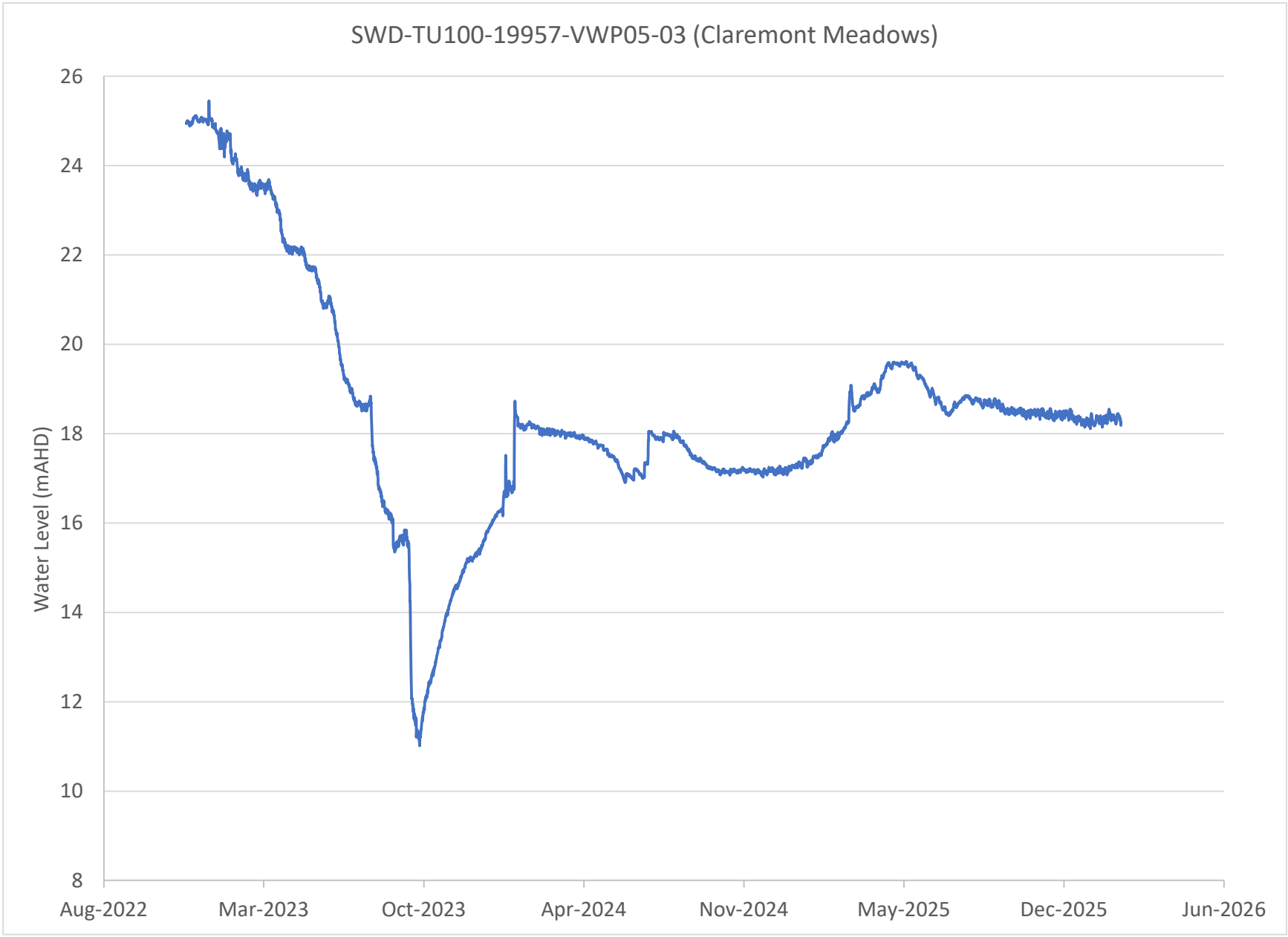

SWD-TU100-17275-VWP01-B (St Marys)
Water Level (mAHD)
46
44
42
40
38
36
34
32
30
Aug-2022
Feb-2023
Aug-2023
Feb-2024
Aug-2024
Feb-2025
Aug-2025
Feb-2026
SWD-TU100-17275-VWP01-B
GW Green
GW Amber
GW Red

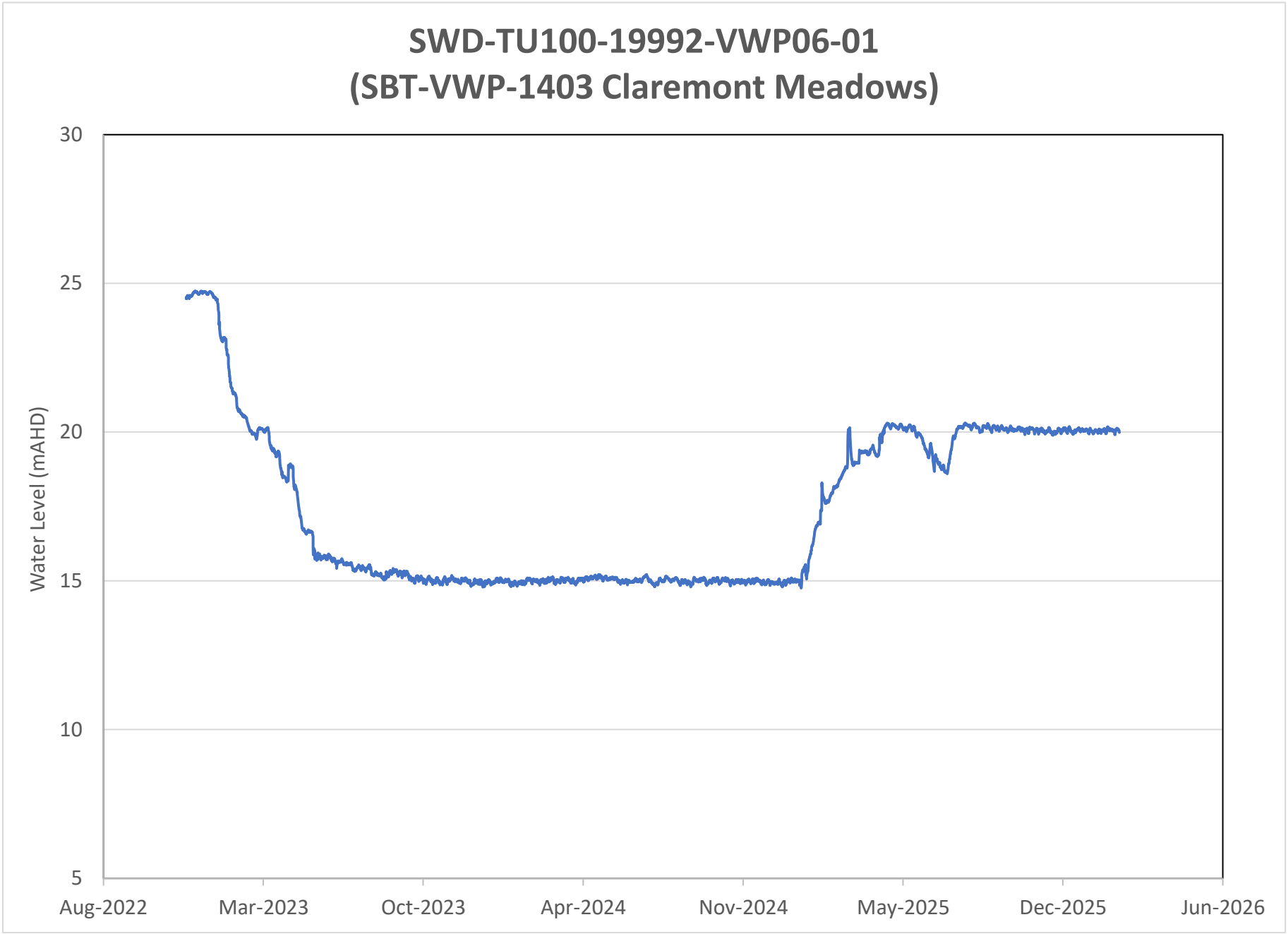

SWD-TU100-17443-VWP03-A (St Marys)
Water Level (mAHD)
30
28
26
24
22
20
18
16
Jun-2023
Dec-2023
Jun-2024
Dec-2024
Jun-2025
Dec-2025
SWD-TU100-17443-VWP03-A
GW Green
GW Amber
GW Red

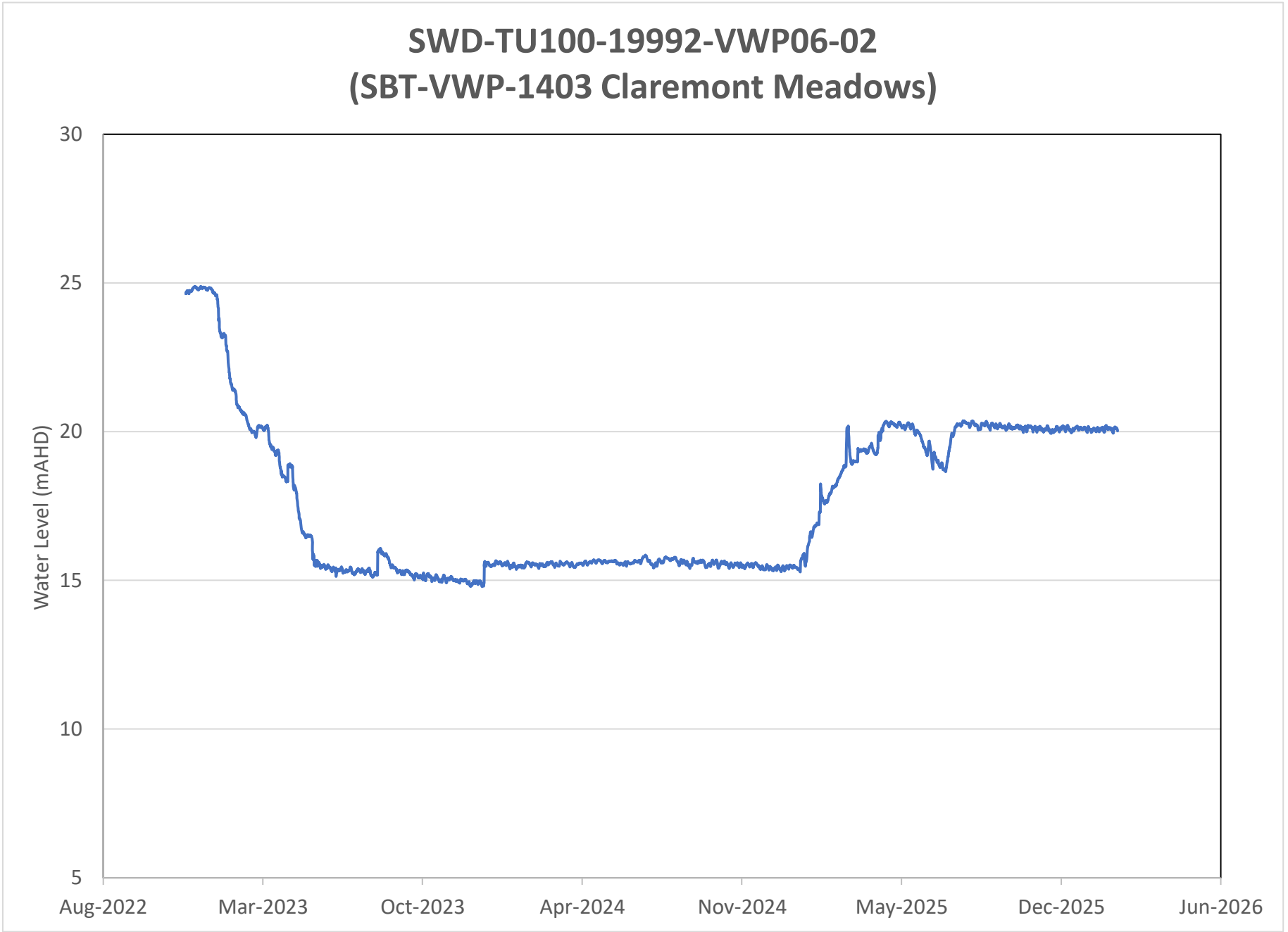

SWD-TU100-17443-VWP03-B (St Marys)
Water Level (mAHD)
30
28
26
24
22
20
18
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
SWD-TU100-17443-VWP03-B
GW Green
GW Amber
GW Red

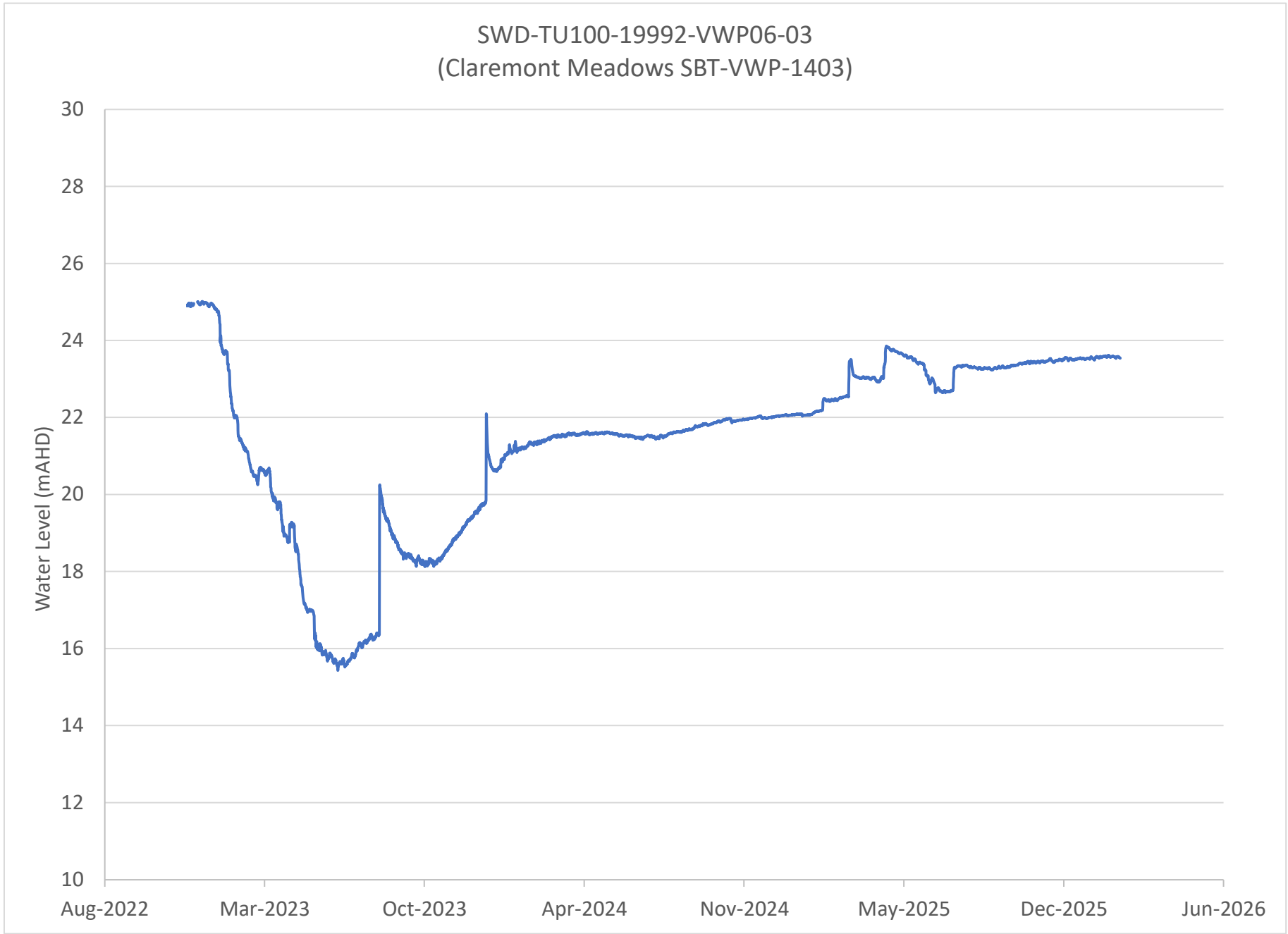

SWD-TU100-19957-VWP05-01 (Claremont Meadows)
Water Level (mAHD)
28
26
24
22
20
18
16
14
12
10
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

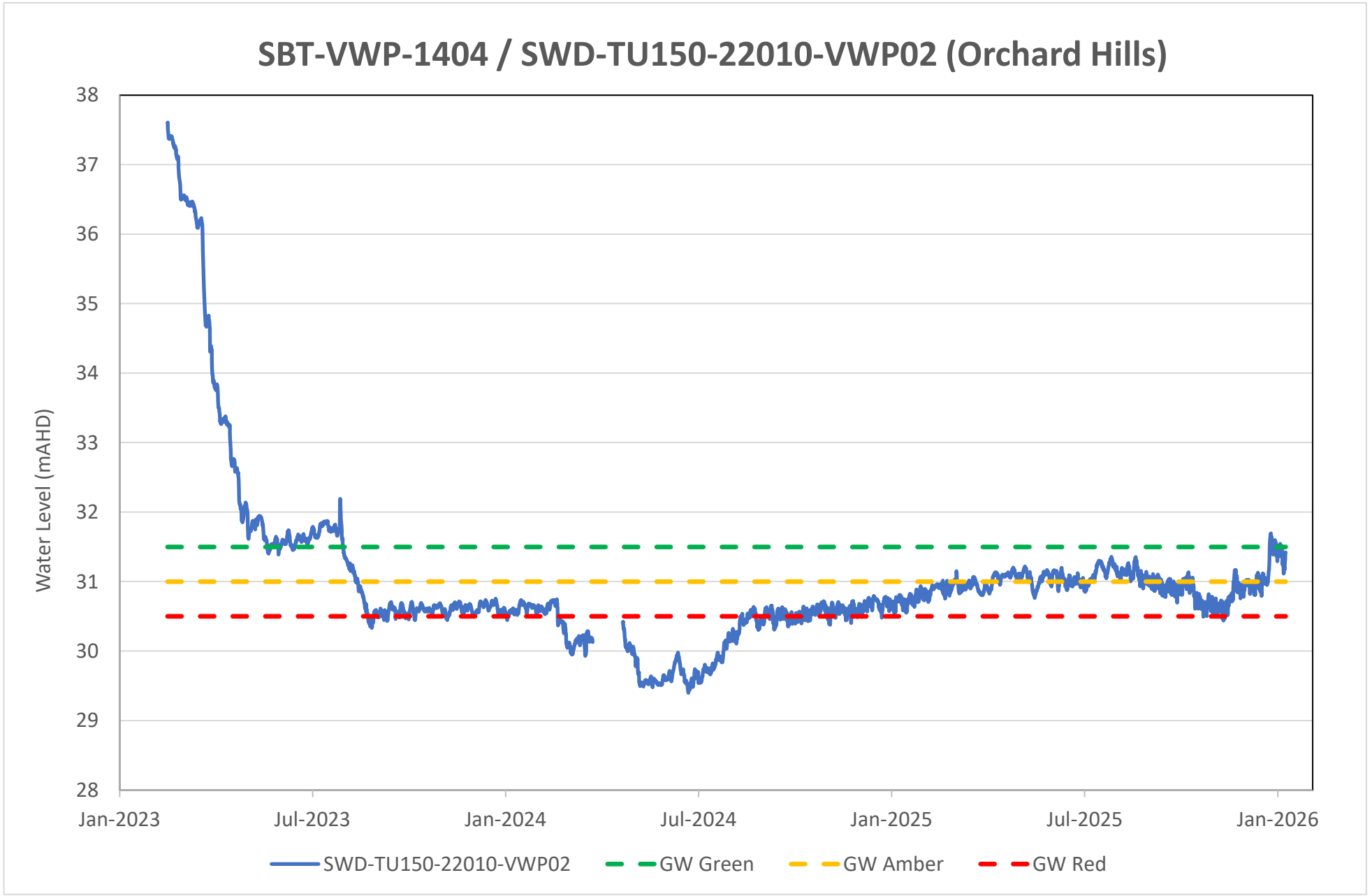

SWD-TU100-19957-VWP05-02 (Claremont Meadows)
Water Level (mAHD)
26
24
22
20
18
16
14
12
10
8
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

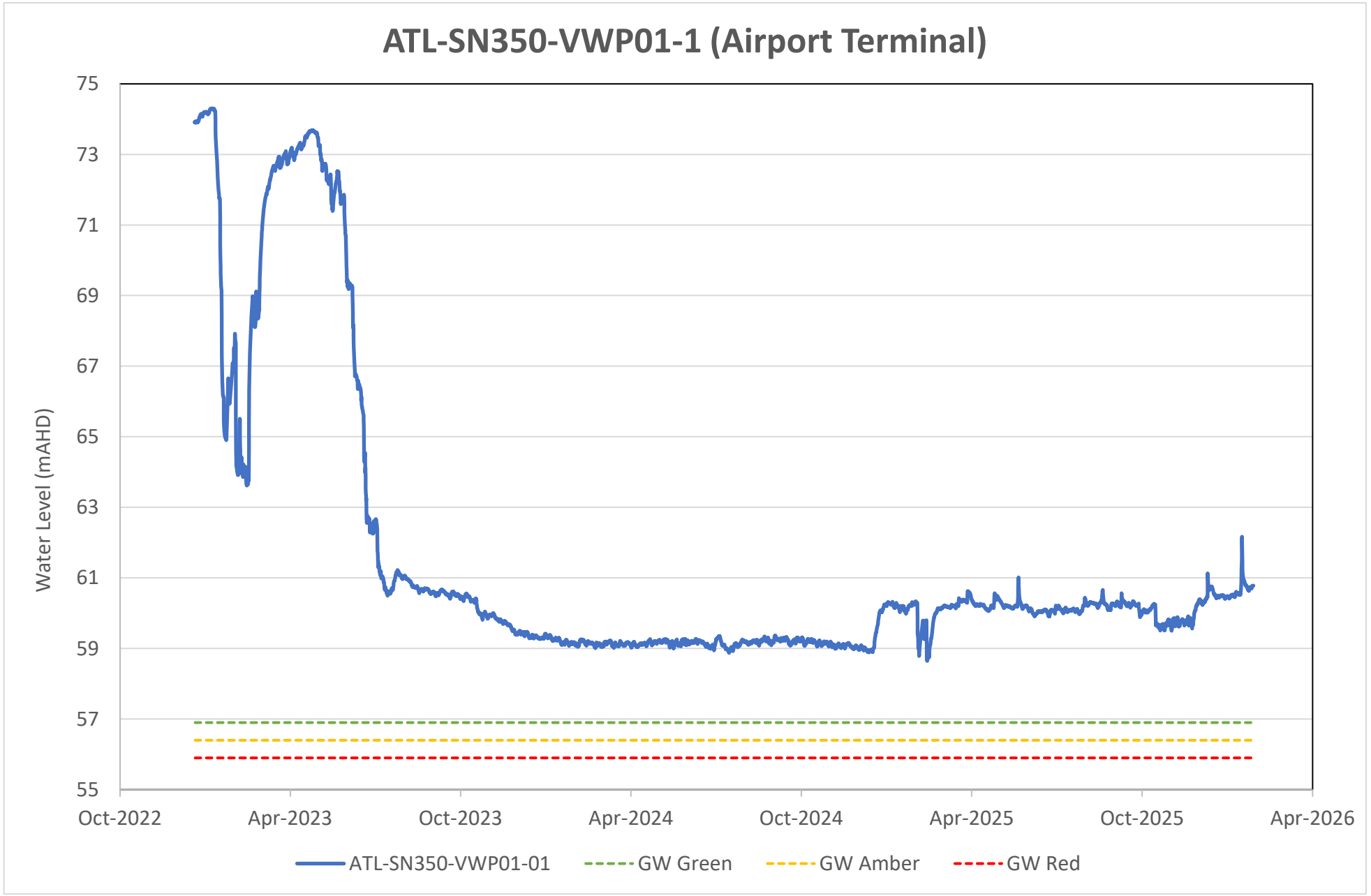

SWD-TU100-19957-VWP05-03 (Claremont Meadows)
Water Level (mAHD)
26
24
22
20
18
16
14
12
10
8
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

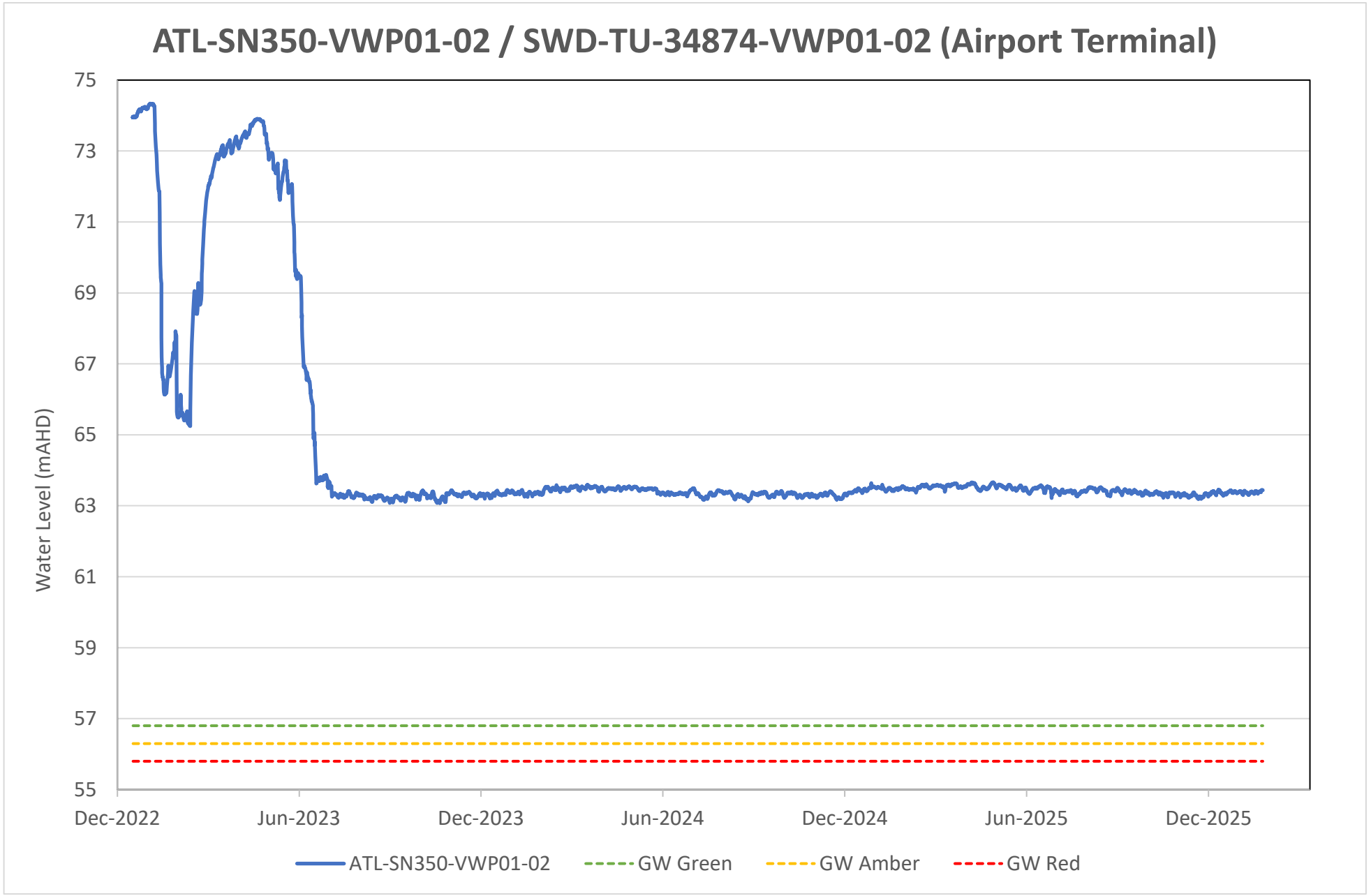

SWD-TU100-19992-VWP06-01
(SBT-VWP-1403 Claremont Meadows)
Water Level (mAHD)
30
25
20
15
10
5
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

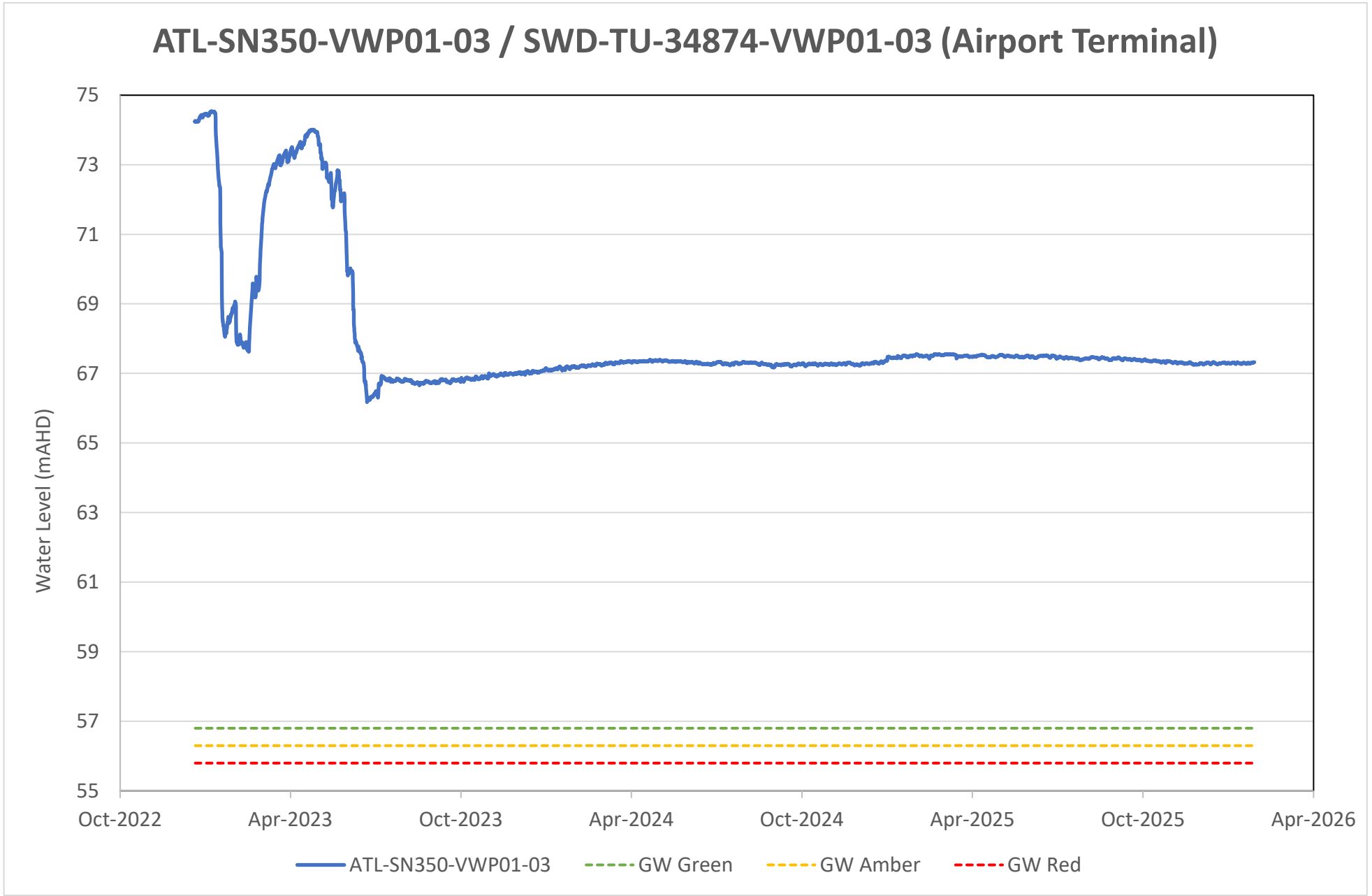

SWD-TU100-19992-VWP06-02
(SBT-VWP-1403 Claremont Meadows)
Water Level (mAHD)
30
25
20
15
10
5
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

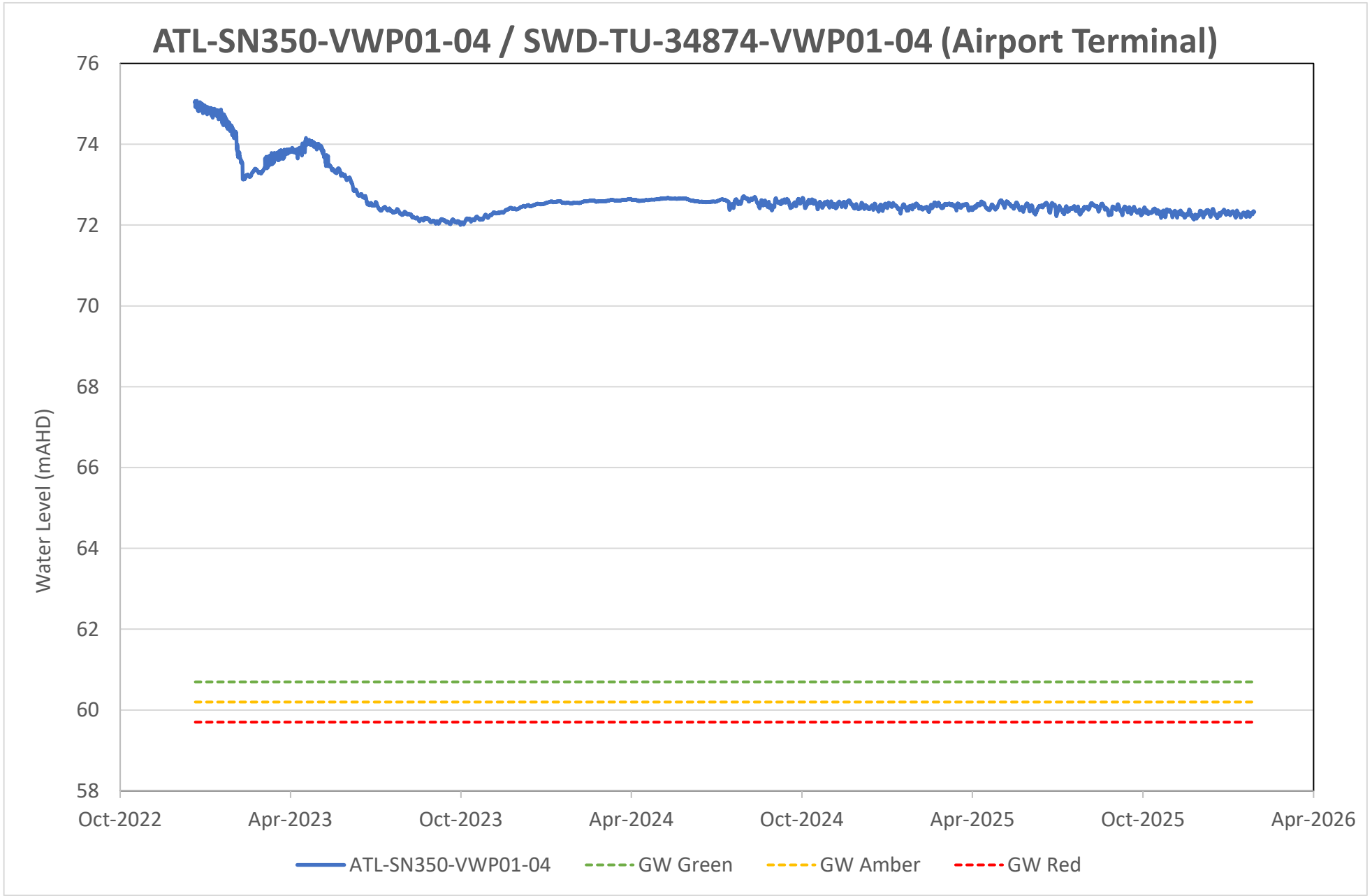

SWD-TU100-19992-VWP06-03
(Claremont Meadows SBT-VWP-1403)
Water Level (mAHD)
30
28
26
24
22
20
18
16
14
12
10
Aug-2022
Mar-2023
Oct-2023
Apr-2024
Nov-2024
May-2025
Dec-2025
Jun-2026

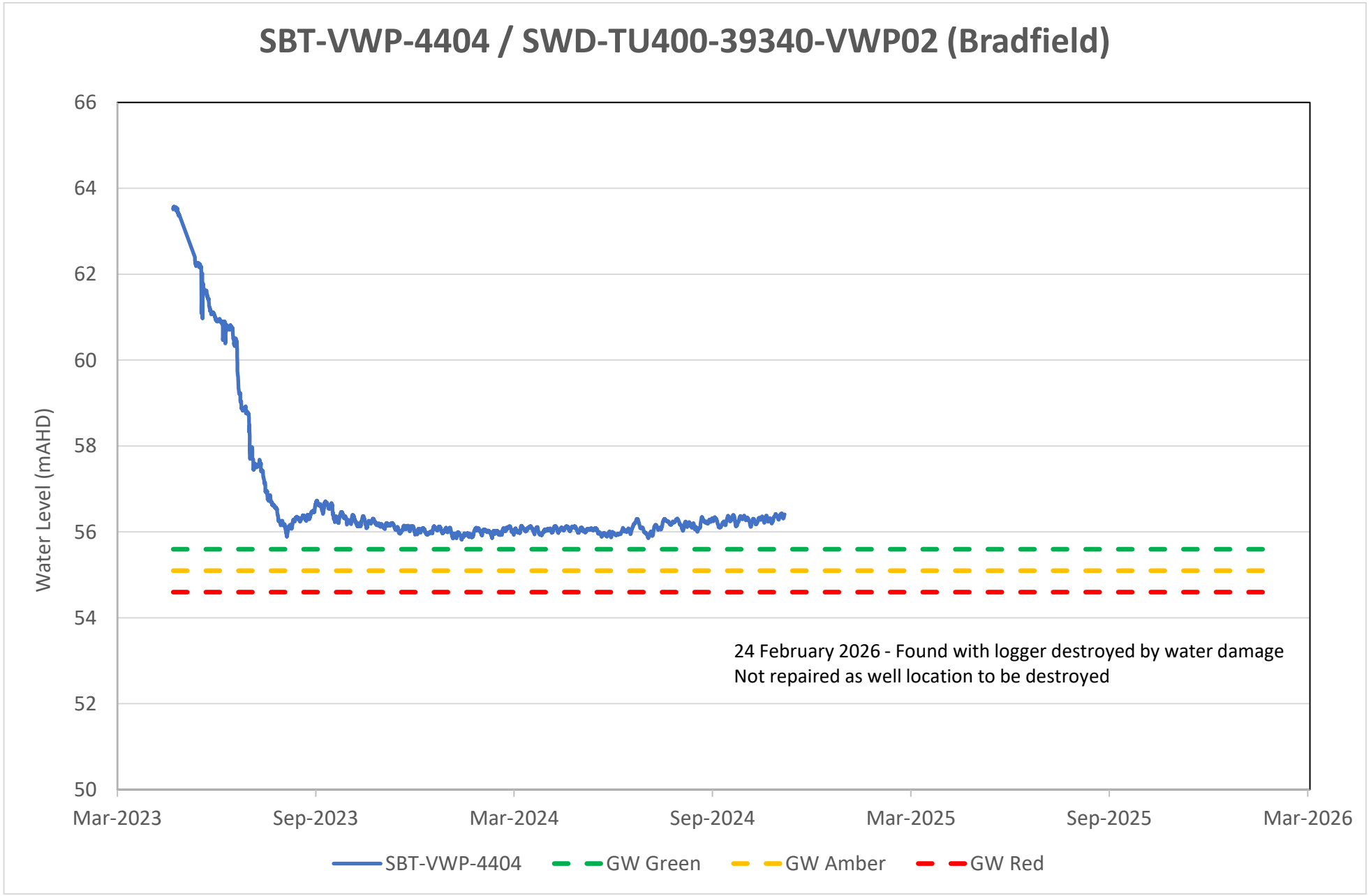

SBT-VWP-1404 / SWD-TU150-22010-VWP02 (Orchard Hills)
Water Level (mAHD)
38
37
36
35
34
33
32
31
30
29
28
Jan-2023
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
SWD-TU150-22010-VWP02
GW Green
GW Amber
GW Red


ATL-SN350-VWP01-1 (Airport Terminal)
Water Level (mAHD)
75
73
71
69
67
65
63
61
59
57
55
Oct-2022
Apr-2023
Oct-2023
Apr-2024
Oct-2024
Apr-2025
Oct-2025
Apr-2026
ATL-SN350-VWP01-01
GW Green
GW Amber
GW Red

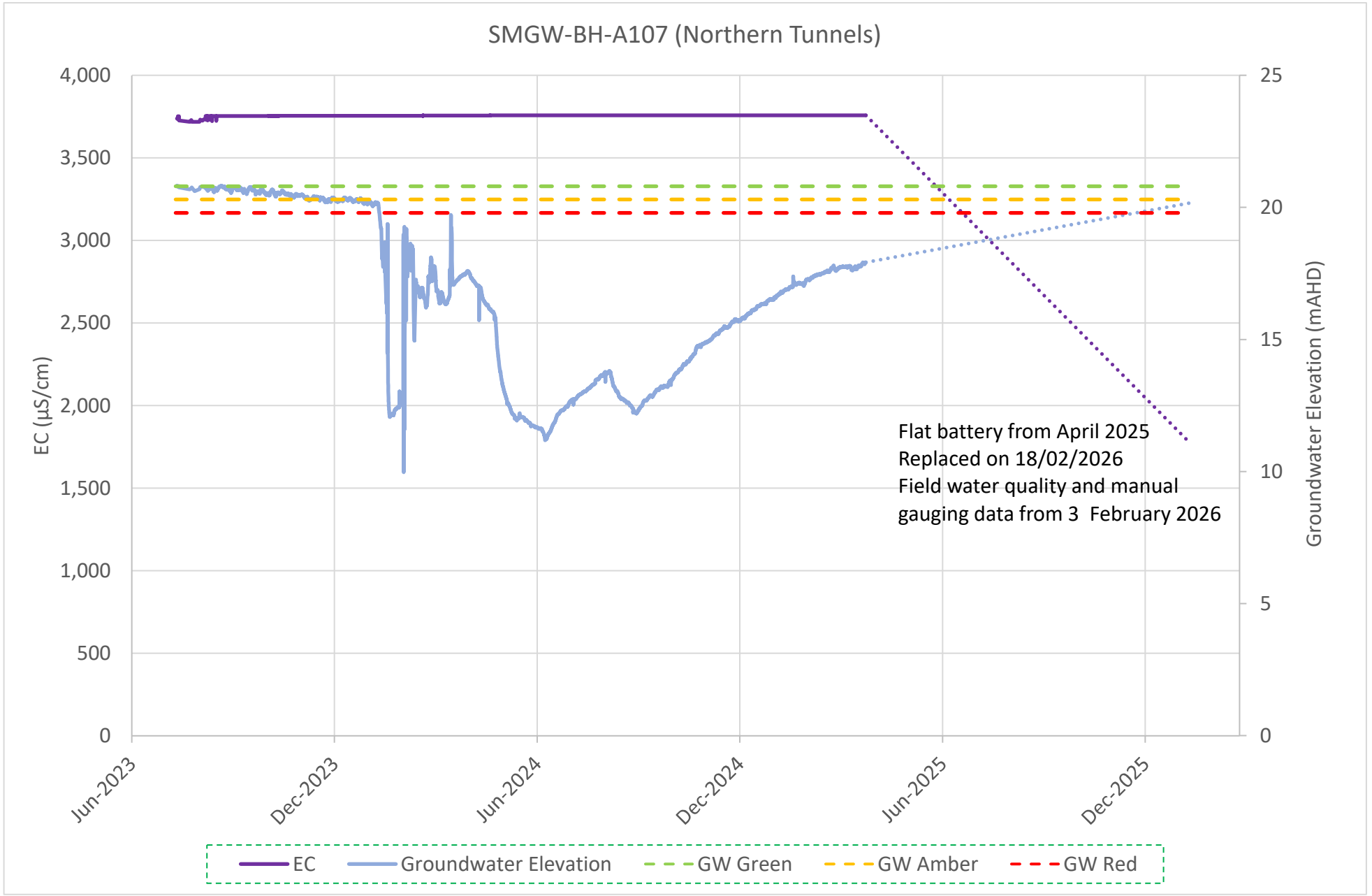

ATL-SN350-VWP01-02 / SWD-TU-34874-VWP01-02 (Airport Terminal)
Water Level (mAHD)
75
73
71
69
67
65
63
61
59
57
55
Dec-2022
Jun-2023
Dec-2023
Jun-2024
Dec-2024
Jun-2025
Dec-2025
ATL-SN350-VWP01-02
GW Green
GW Amber
GW Red

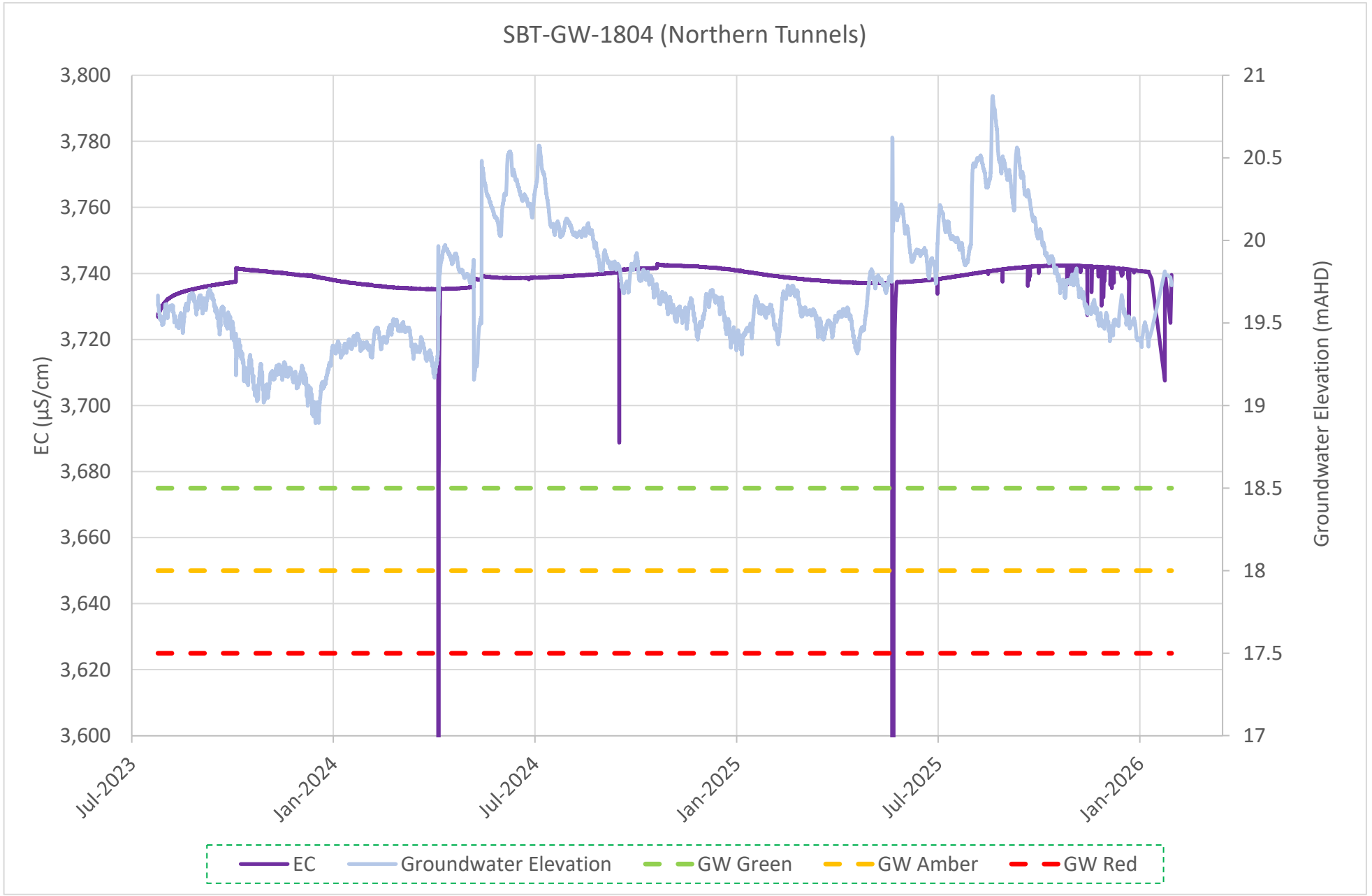

ATL-SN350-VWP01-03 / SWD-TU-34874-VWP01-03 (Airport Terminal)
Water Level (mAHD)
75
73
71
69
67
65
63
61
59
57
55
Oct-2022
Apr-2023
Oct-2023
Apr-2024
Oct-2024
Apr-2025
Oct-2025
Apr-2026
ATL-SN350-VWP01-03
GW Green
GW Amber
GW Red

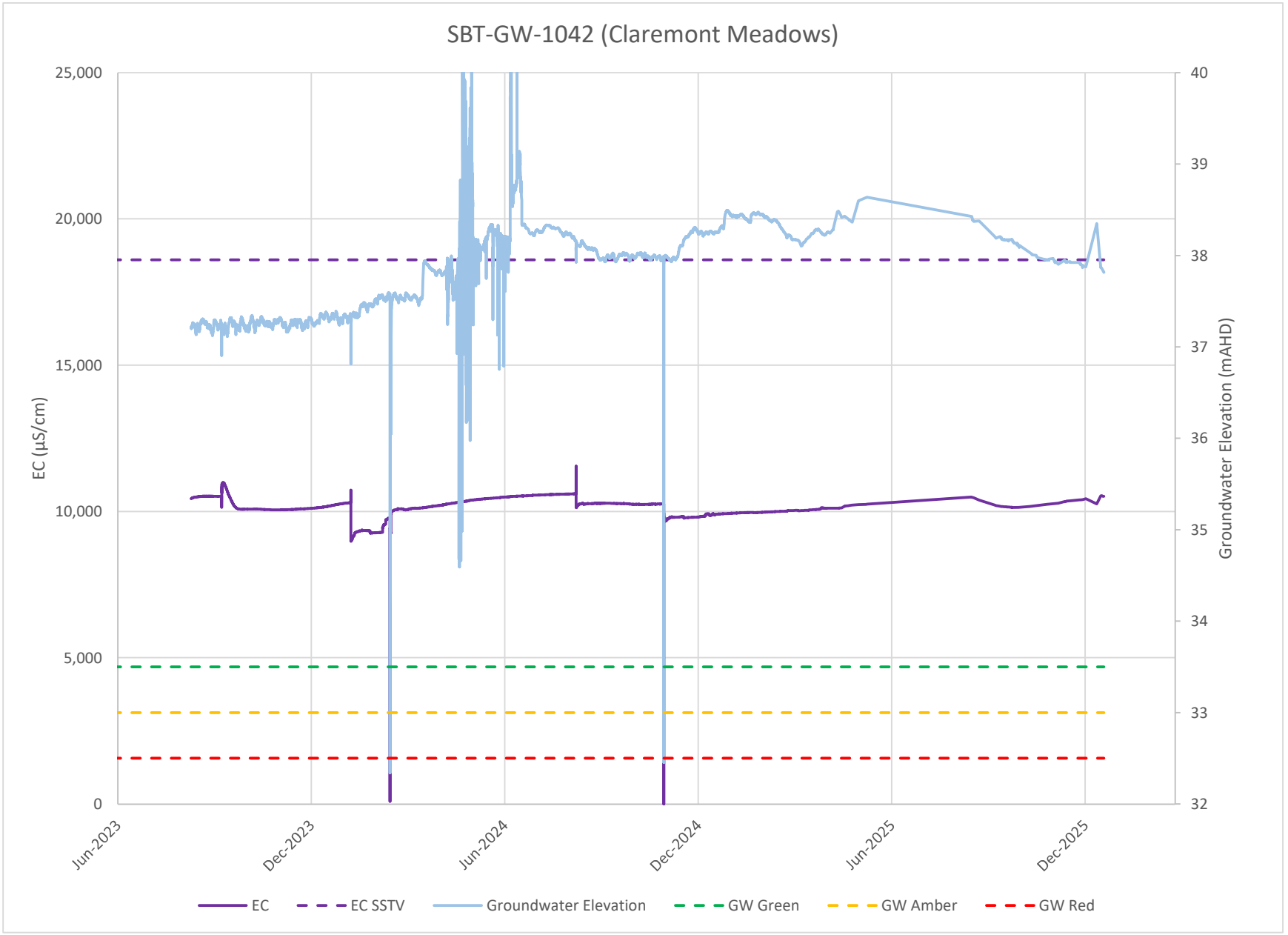

ATL-SN350-VWP01-04 / SWD-TU-34874-VWP01-04 (Airport Terminal)
Water Level (mAHD)
76
74
72
70
68
66
64
62
60
58
Oct-2022
Apr-2023
Oct-2023
Apr-2024
Oct-2024
Apr-2025
Oct-2025
Apr-2026
ATL-SN350-VWP01-04
GW Green
GW Amber
GW Red

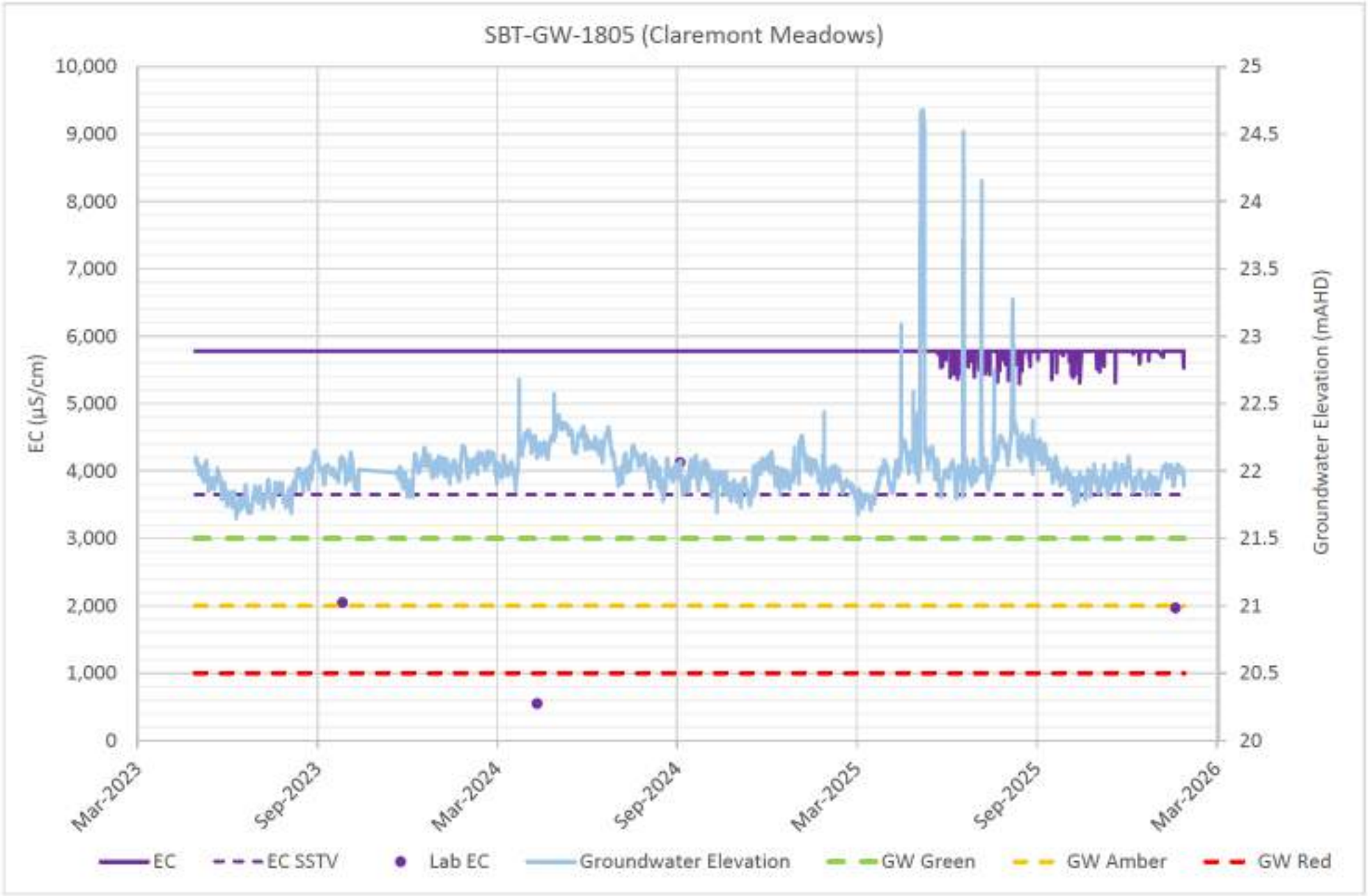

SBT-VWP-4404 / SWD-TU400-39340-VWP02 (Bradfield)
Water Level (mAHD)
66
64
62
60
58
56
54
52
50
Mar-2023
Sep-2023
Mar-2024
Sep-2024
Mar-2025
Sep-2025
Mar-2026
24 February 2026 - Found with logger destroyed by water damage
Not repaired as well location to be destroyed
SBT-VWP-4404
GW Green
GW Amber
GW Red

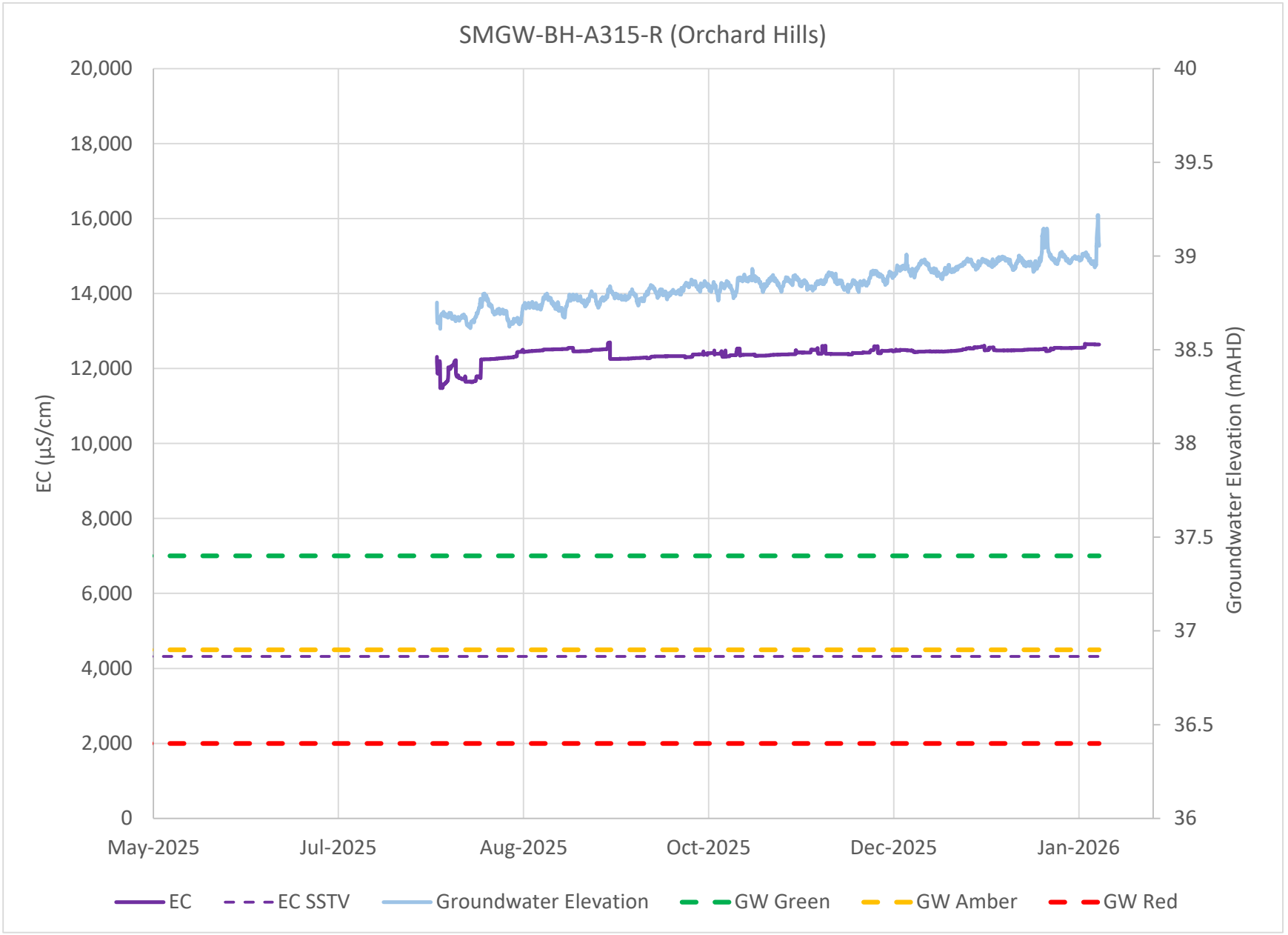
APPENDIX E: GDE HYDROGRAPHS AND EC TRENDS

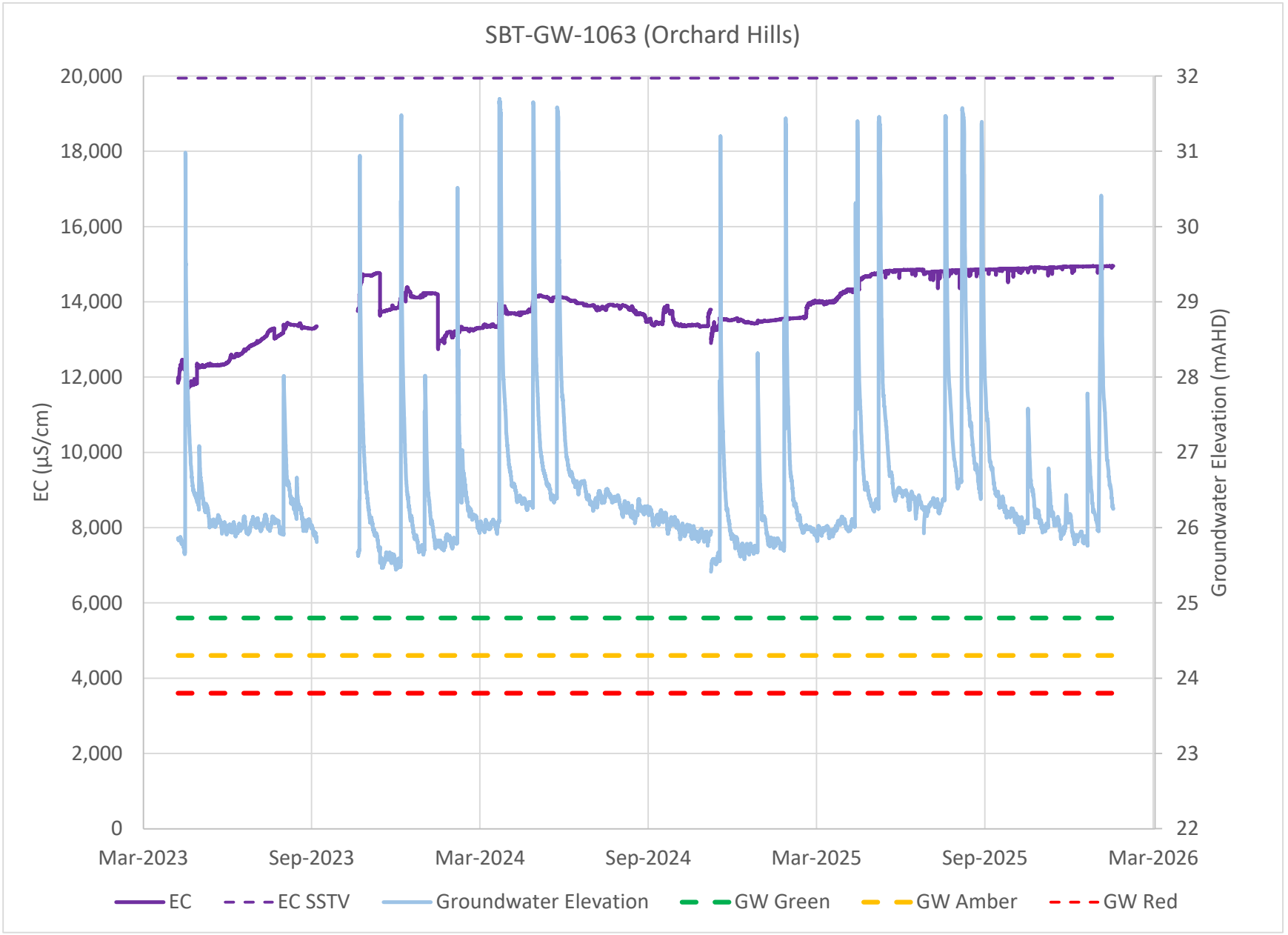

SMGW-BH-A107 (Northern Tunnels)
EC (µS/cm)
Groundwater Elevation (mAHD)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
25
20
15
10
5
0
Jun-2023
Dec-2023
Jun-2024
Dec-2024
Jun-2025
Dec-2025
Flat battery from April 2025
Replaced on 18/02/2026
Field water quality and manual gauging data from 3 February 2026
EC
Groundwater Elevation
GW Green
GW Amber
GW Red

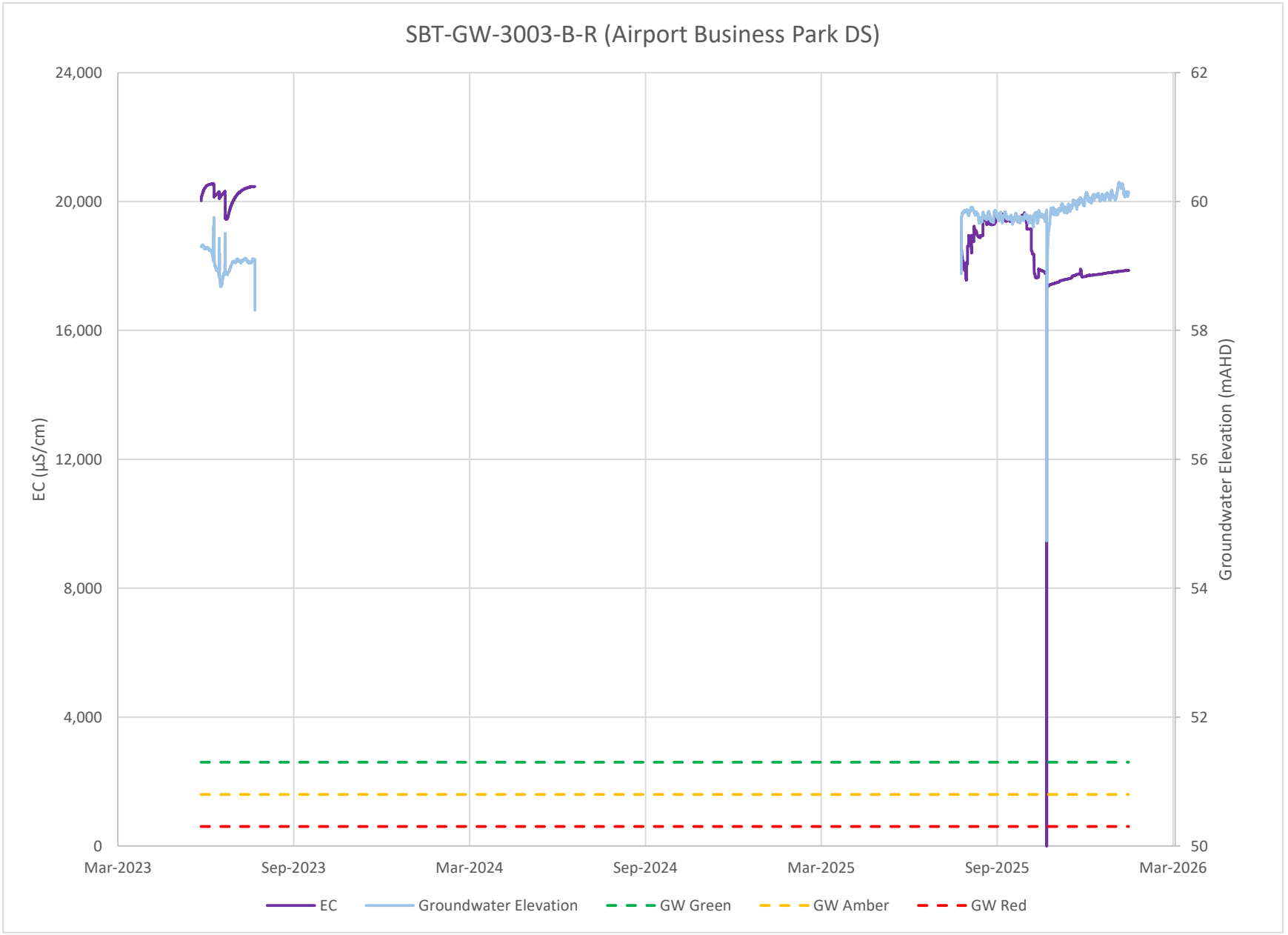

SBT-GW-1804 (Northern Tunnels)
EC (µS/cm)
Groundwater Elevation (mAHD)
3,800
3,780
3,760
3,740
3,720
3,700
3,680
3,660
3,640
3,620
3,600
21
20.5
20
19.5
19
18.5
18
17.5
17
Jul-2023
Jan-2024
Jul-2024
Jan-2025
Jul-2025
Jan-2026
EC
Groundwater Elevation
GW Green
GW Amber
GW Red

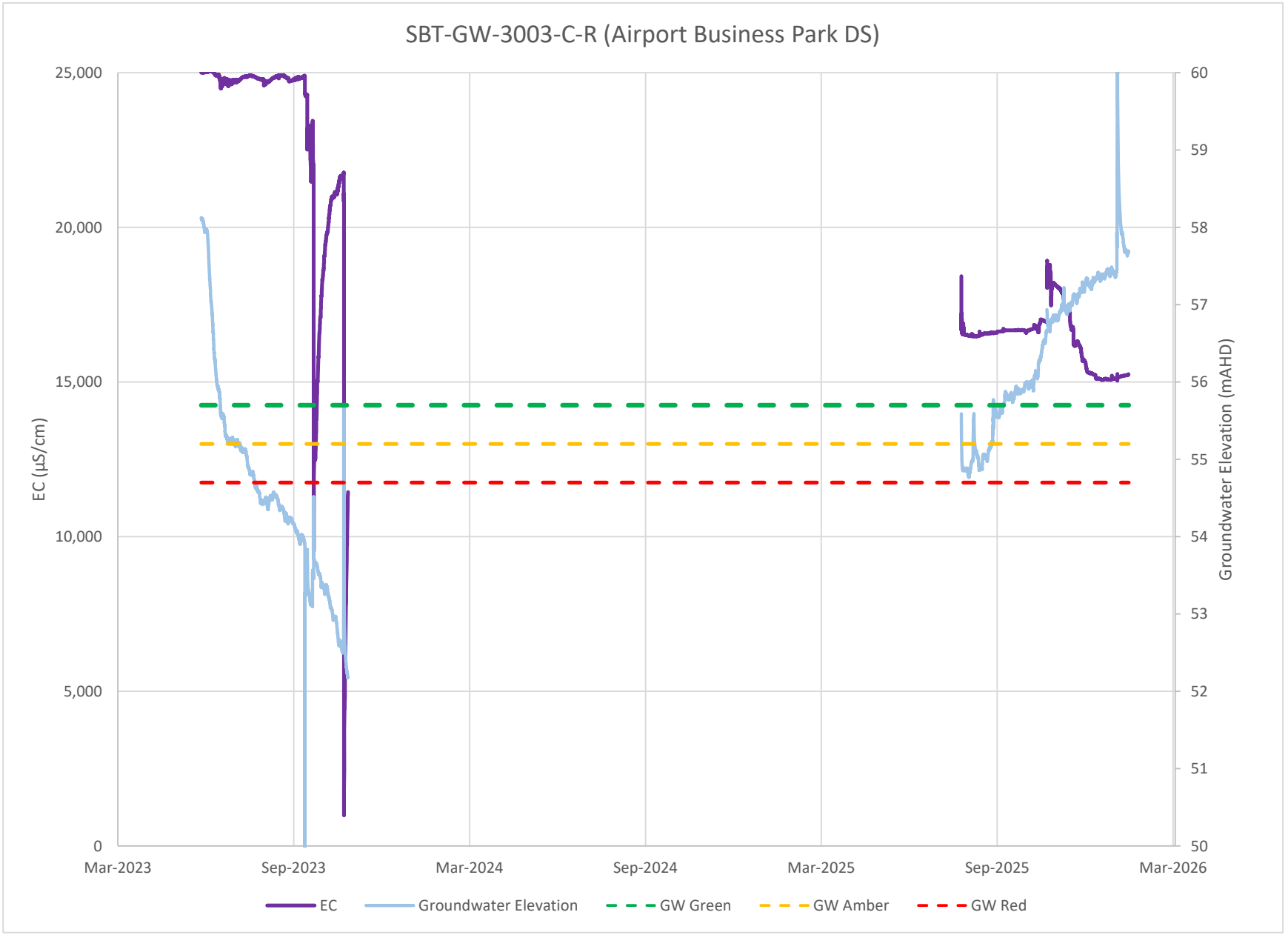

SBT-GW-1042 (Claremont Meadows)
EC (µS/cm)
Groundwater Elevation (mAHD)
25,000
20,000
15,000
10,000
5,000
0
40
39
38
37
36
35
34
33
32
Jun-2023
Dec-2023
Jun-2024
Dec-2024
Jun-2025
Dec-2025
EC
EC SSTV
Groundwater Elevation
GW Green
GW Amber
GW Red

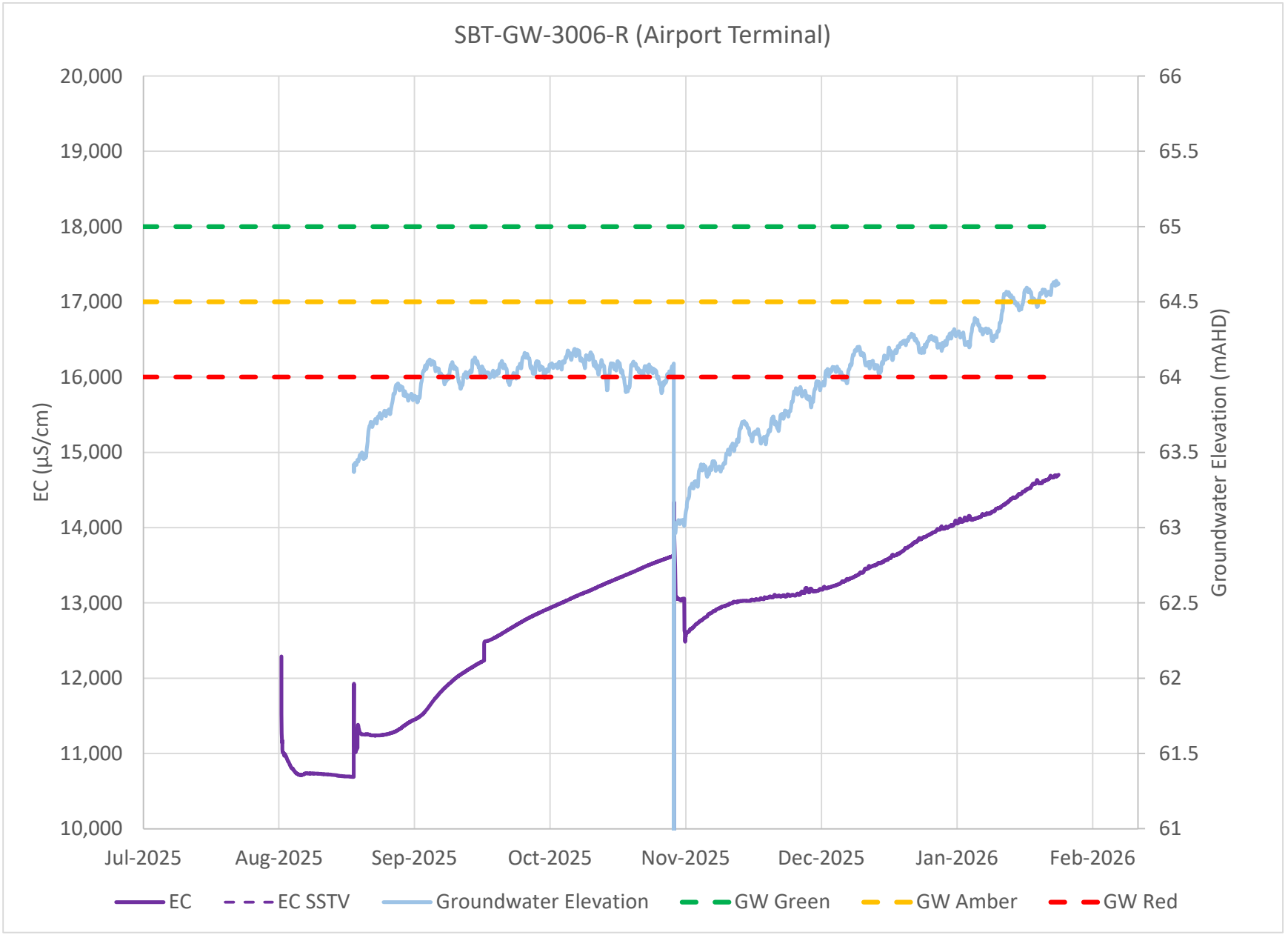

SBT-GW-1805 (Claremont Meadows)
EC (µS/cm)
Groundwater Elevation (mAHD)
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
25
24.5
24
23.5
23
22.5
22
21.5
21
20.5
20
Mar-2023
Sep-2023
Mar-2024
Sep-2024
Mar-2025
Sep-2025
Mar-2026
EC
EC SSTV
Lab EC
Groundwater Elevation
GW Green
GW Amber
GW Red


SMGW-BH-A315-R (Orchard Hills)
EC (µS/cm)
Groundwater Elevation (mAHD)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
40
39.5
39
38.5
38
37.5
37
36.5
36
May-2025
Jul-2025
Aug-2025
Oct-2025
Dec-2025
Jan-2026
EC
EC SSTV
Groundwater Elevation
GW Green
GW Amber
GW Red


SBT-GW-1063 (Orchard Hills)
EC (µS/cm)
Groundwater Elevation (mAHD)
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
32
31
30
29
28
27
26
25
24
23
22
Mar-2023
Sep-2023
Mar-2024
Sep-2024
Mar-2025
Sep-2025
Mar-2026
EC
EC SSTV
Groundwater Elevation
GW Green
GW Amber
GW Red


SBT-GW-3003-B-R (Airport Business Park DS)
24,000
20,000
16,000
12,000
8,000
4,000
0
EC (µS/cm)
62
60
58
56
54
52
50
Groundwater Elevation (mAHD)
Mar-2023
Sep-2023
Mar-2024
Sep-2024
Mar-2025
Sep-2025
Mar-2026
EC
Groundwater Elevation
GW Green
GW Amber
GW Red


SBT-GW-3003-C-R (Airport Business Park DS)
EC (µS/cm)
Groundwater Elevation (mAHD)
25,000
20,000
15,000
10,000
5,000
0
60
59
58
57
56
55
54
53
52
51
50
Mar-2023
Sep-2023
Mar-2024
Sep-2024
Mar-2025
Sep-2025
Mar-2026
EC
Groundwater Elevation
GW Green
GW Amber
GW Red


SBT-GW-3006-R (Airport Terminal)
EC (µS/cm)
Groundwater Elevation (mAHD)
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
66
65.5
65
64.5
64
63.5
63
62.5
62
61.5
61
Jul-2025
Aug-2025
Sep-2025
Oct-2025
Nov-2025
Dec-2025
Jan-2026
Feb-2026
EC
EC SSTV
Groundwater Elevation
GW Green
GW Amber
GW Red

Orchard Hills Metro Station Vegetation Monitoring, Year 4: 7th Survey

Prepared by AMBS Ecology & Heritage
for Parklife Metro D&C

FINAL

April 2026

AMBS Reference: 25559

AMBS Ecology & Heritage
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Approved by:	[redacted]

Executive Summary

AMBS Ecology & Heritage Pty Ltd has been commissioned by Parklife Metro D&C to undertake monitoring of the Groundwater Dependant Ecosystem (GDE) at Orchard Hills Metro Station identified in the Project Biodiversity Development and Assessment Report (BDAR). The monitoring is part of the Stations, Systems, Trains, Operations and Maintenance Works (SSTOM Project) of the Sydney Metro Western Sydney Airport. Prior to the SSTOM Project commencing, CPB Contractors Ghella Joint Venture (CPBG) was engaged by Sydney Metro to undertake Station Boxes and Tunnelling Works (SBT Project).

The monitoring program involves assessing canopy cover and shrub condition along three 100 metre transects. Transect 1 is situated within the study area of the GDE, Transect 2 is located in the control area, and Transect 3 extends across both the study and control areas.

The seventh round of monitoring within the longitudinal survey found no strong observable differences in shrub condition between study and control areas across all three transects. Bush regeneration works around Transects 1 and 2 between Surveys 6 and 7 substantially reduced exotic shrub biomass, particularly at Transect 2. Consequently, part of Transect 2 was excluded from analysis, and these works likely influenced canopy cover and shrub condition results for both Transects.

Statistical analysis found no significant variation in canopy cover between control and study groups between surveys. Variations in results between surveys are also likely within the range of natural climatic variation and are considered unlikely to be attributed to groundwater drawdown.

Contents

Executive Summary III
1 Introduction 5
2 Methods 5
3 Results 7
3.1 Canopy Cover 7
3.2 Shrub Condition 11
3.2.1 Transect 1 (study) *11*
3.2.2 Transect 2 (control) *11*
3.2.3 Transect 3 (study and control) *11*
4 Discussion 18
5 Conclusion 20
Bibliography 21
Appendix A 22

Tables

Table 3.1 Percent canopy cover at canopy monitoring points. 8
Table 3.2. ANOVA for LME with square root transformed Canopy Cover. 9
Table 3.3 Shrub monitoring notes - leaf cover and condition 13
Table 3.4 Shrub monitoring notes - presence of disease and flowering status 15
Table 4.1 Temperature and rainfall data during month preceding survey month 18

Plates

Plate 1 Bush regeneration works at Transect 2, nearby 2.7 (A) and at Transect 1, nearby 1.5 (B) 6
Plate 2. Example canopy cover monitoring photograph from Transect point 1.4 during baseline Survey 1 (A, 87%) Survey 2 (B, 76% cover) Survey 3 (C, 87% cover), Survey 4 (D, 87%), Survey 5 (E, 85%), Survey 6 (F, 88%) and Survey 7 (G, 85%). 10
Plate 3 Melaleuca decora (Transect 3 (study area), point 3.4) in good leaf cover and condition during baseline Survey 1 (A), in very poor leaf cover and condition in Survey 2 (B), in poor leaf cover and good condition in Survey 3 (C), in very poor leaf cover and poor condition in Survey 4 (D), in good leaf cover and condition in Survey 5 (E), in good leaf cover and condition in Survey 6 (F) and in good leaf cover and condition in Survey 7 (G). No signs of disease or flowering characteristics were observed in all six surveys. 17

Figures

Figure 3.1 Scatterplot of Canopy Cover +/- Standard Error by Survey Time and Group with Model Adjusted Mean in May 2023, October 2023, June 2024, October 2024, June 2025, October 2025 and March 2026. 9

1 Introduction

Parklife Metro D&C have been engaged by Sydney Metro to undertake detailed design and construction of the Stations, Systems, Trains, Operations and Maintenance (SSTOM Project) of the Sydney Metro Western Sydney Airport (the Project). Prior to the SSTOM Project commencing, CPB Contractors Ghella Joint Venture (CPBG) was engaged by Sydney Metro to undertake Station Boxes and Tunnelling Works (SBT Project). The Project forms part of the broader Sydney Metro network. It involves the construction and operation of a new 23 km metro rail line that extends from the existing Sydney Trains suburban T1 Western Line (at St Marys) in the north and the Aerotropolis (at Bringelly) in the south. The Project has been granted approval under section 5.19 of the *Environmental Planning and Assessment Act 1997* (EP&A Act) (CSSI 10051) and has an approved Flora and Fauna Management Plan (FFMP) (Parklife Metro D&C, 2023). Parklife Metro has appointed AMBS Ecology & Heritage Pty Ltd (AMBS) as the Project Ecologist for the SSTOM Project. This survey addresses the commitments made in Section 6.9 of the FFMP, 'Groundwater Dependant Ecosystem Management and Monitoring', in response to GW5 and GW6 of the Revised Environmental Mitigation Measures listed in the Revised Biodiversity Development Assessment Report (BDAR) (2021).

The FFMP notes that a Groundwater Dependant Ecosystem (GDE) was identified in the BDAR as occurring at the Orchard Hills box cut site. Modelled water table drawdown associated with construction of the Orchard Hills Metro Station was found to have the potential to impact areas of GDE outside of the approved Project Boundary. The FFMP defined a twice-yearly monitoring schedule to identify potential impacts of water drawdown associated with construction.

The Plant Community Type (PCT) of the site is mapped as PCT 724 *Castlereagh shale - gravel transition forest* (Parklife Metro D&C, 2023). This PCT has since been decommissioned and replaced with PCT 3320 *Cumberland Shale Plains Woodland* (DCCEEW, 2026) which is characterised by a canopy of *Eucalyptus tereticornis* (Forest Red Gum) and *Eucalyptus moluccana* (Grey Box), with Ironbarks *Eucalyptus crebra* (Narrow-leaved Ironbark) and *Eucalyptus fibrosa* (Red Ironbark) occasionally present, although prominent in localised areas. This change of PCT does not impact the current or future study design or execution.

AMBS is pleased to provide the results of the seventh survey in the longitudinal vegetation monitoring for a GDE at Orchard Hills Metro Station. This survey will be compared to the data recorded in previous surveys and against future monitoring surveys.

2 Methods

Access issues during transect establishment and baseline surveys rendered the initially planned four transects north of Lansdowne Road inaccessible. Consequently, three alternative locations were selected. Two transects were located west of Kent Road, one located in the groundwater drawdown contour (study area, Transect 1) and the other transect located just outside the predicted drawdown area (control area, Transect 2), though in the same Plant Community Type (PCT) and within the construction area of impact (Appendix A). The third transect (Transect 3) spans both the groundwater drawdown area (study area) and the control area, south of the four incomplete draft transects (Appendix A).

For the seventh monitoring Survey, AMBS ecologist Mikayla Cashion visited Orchard Hills Metro Station on the 12th of March 2026. Surveys revisited the three transects previously established in the baseline survey (Appendix A).

Monitoring points were resurveyed at each treatment area, positioned 10 metres (m) apart within a 100 m Transect (Appendix A). At each canopy monitoring point, a fisheye lens camera on a tripod was used to take canopy photos aligned north-south. However, at Transect 3, the presence of a fence obstructed the images, prompting the Surveyor to position the camera directly above the fence at an approximate 30-degree tilt.

During the survey at each monitoring point, mature shrubs, if present, were methodically resurveyed, and observations of leaf condition, cover, disease prevalence, and flowering status were recorded. Leaf cover was assessed using four categories: good (>70%), moderate (40 – 70%), poor (10 – 40%) and very poor (<10%). Leaf condition was differentiated into these four qualitative categories, determined by how healthy in colour and shape the leaves appeared. For instance, shrubs with wilting and browning leaves were classed as being in very poor condition. Additional photographs were taken to facilitate a comparative assessment of shrub condition between surveys.

Both control and study transects will continue to be monitored concurrently every six months for the duration of the project in order to compare any changes observed at each site. If similar changes in canopy cover and vegetation health are recorded in both study and control sites, it is more likely due to climatic conditions than groundwater drawdown at Orchard Hills Metro Station.

Between Surveys 6 and 7, bush regeneration works were undertaken around Transects 1 and 2 (Plate 1). Transect 2, with the highest cover of exotic shrubs, had the largest change in vegetation mass though most substantially between points 2.7 and 2.10. These four monitoring points were therefore excluded from analysis, and changes in vegetation due to this management activity are likely to have influenced results across both Transects. Bush regeneration works also resulted in the removal of several exotic monitored shrubs. In these instances, native shrubs at the same locations were selected for monitoring, and their condition was recorded for comparison with future surveys. This data is reported but not included in analysis for Survey 7.

Plate 1 Bush regeneration works at Transect 2, nearby 2.7 (A) and at Transect 1, nearby 1.5 (B)

At three monitoring points along Transect 3 (3.3, 3.7 and 3.10) shrubs were absent during baseline surveys. Post-fire recruitment of *Bursaria spinosa* has since occurred, and shrubs at these locations were selected and measured during Survey 7 to be compared to future monitoring results. As no measurements have previously been taken for these shrubs, changes in condition are not able to be assessed and they were therefore excluded from analyses in Survey 7.

During Surveys 1 to 6 the package *coveR* (Chianucci et al. 2022) was applied to the canopy photos to determine percent canopy cover. During Survey 7, canopy photos from Surveys 1 – 6 as well as

Survey 7 were subjected to analysis using the updated *coveR2* R package (Chianucci et al. 2023). A comparison of the output from *coveR2* found some discrepancies with previous results for Surveys 1 – 6 using *coveR*. While there are no differences to image processing between the two R packages, the embedded default image thresholding method was found to have changed from "Minimum" to "Otsu" in Surveys 2, 5 and 6. To make the results from analyses consistent across all surveys the “Minimum” method used in the baseline Survey 1 has been applied to data across all surveys and the output included in this report. This has resulted in slight changes to values recorded in previous reports for Surveys 2, 5 and 6. The ‘Minimum” threshold method will be applied to all future surveys.

A Linear Mixed-Effects Model (LME) was used to examine the relationship between Canopy Cover, Survey Time, and Group (Study Group, Control Group) while considering the potential variability associated with transect location as a random effect. For previous surveys the response variable, Canopy Cover, was square root transformed to meet the assumption of normality for residuals, however adjusting for additional data from Surveys 5 to 7, this was no longer required. The analysis was conducted using R version 4.5.3 (R Core Team, 2026), utilising the *lme4* R package for fitting the LME model (Bates et al., 2015). To assess the significance of fixed effects, an analysis of variance (ANOVA) was conducted using the car R package (Fox and Weisberg, 2026). A Shapiro-Wilk test was conducted on the residuals to verify the assumption of normality. Post-hoc analysis involved a Tukey HSD test using the *emmeans* R package (Lenth et al., 2026).

3 Results

3.1 Canopy Cover

Canopy at all transects was observed to be in good condition. In past surveys, post-fire dieback of several trees at monitoring point 3.2 (study) has been observed since Survey 3, and slight canopy dieback was observed at Transect 1 in Survey 2.

Following a decrease in mean canopy cover for Transect 1 (study) from 77% in Survey 1 to 66% in Survey 2, cover increased to 74% in Survey 3, slightly declined to 72% in Surveys 4 and 5, then increased to 75% in Survey 6 and 81% in Survey 7 (Table 3.2).

Transect 2 (control) showed a similar pattern, decreasing from 70% in Survey 1 to 65% in Survey 2, increasing to 74% in Survey 3, slightly decreasing to 71% in Survey 4, increasing to 76% in Survey 5 and 80% in Survey 6, however slightly decreased to 78% in Survey 7 (Table 3.2; Plate 1).

Mean canopy cover for Transect 3 has remained relatively consistent in the study area across Survey 1 (35%), Survey 2 (36%) and Survey 3 (34%), followed by an increase to 37% in Survey 4 which remained consistent in Survey 5 (37%) and increased slightly to 38% in Survey 6 and 40% in Survey 7 (Table 3.2).

The control area also had little variation in mean canopy cover until Survey 6, recording 53% in Survey 1, 54% in Survey 2, 52% in Survey 3, 52% in Survey 4, 51% in Survey 5 and to 59% in Survey 6, followed by a slight increase to 61% in Survey 7. During Survey 2, several outliers at Transect 3 where the presence of direct sunlight or a slight change in camera angle impacted the canopy cover value were inspected and ultimately included in the analysis.

Table 3.1 Percent canopy cover at canopy monitoring points.

Transect 1 (study area)								Transect 2 (control)								Transect 3 (study area & control)							
Point	% Cover							Point	% Cover							Point	% Cover						
	S1	S2	S3	S4	S5	S6	S7		S1	S2	S3	S4	S5	S6	S7		S1	S2	S3	S4	S5	S6	S7
1.0	76	66	75	75	78	80	84	2.0	56	47	57	52	58	52	72	3.0 (study area)	36	36	32	38	39	40	39
1.1	81	72	77	71	77	77	84	2.1	60	57	70	68	74	81	69	3.1 (study area)	38	39	39	39	40	39	42
1.2	85	81	81	72	75	84	88	2.2	70	69	81	74	80	83	86	3.2 (study area)	42	42	40	39	39	42	44
1.3	88	78	85	86	82	86	91	2.3	68	65	70	67	72	77	77	3.3 (study area)	32	33	29	31	34	32	43
1.4	87	76	87	87	85	88	85	2.4	77	70	82	77	83	86	89	3.4 (study area)	29	32	31	37	34	36	32
																T3 Mean % cover (study area)	35	36	34	37	37	38	40
1.5	85	71	82	76	74	82	83	2.5	75	71	79	76	80	86	82	3.5 (control)	70	65	70	59	60	74	77
1.6	71	54	60	64	58	57	79	2.6	67	60	70	65	68	76	70	3.6 (control)	46	50	44	49	44	47	51
1.7	60	50	60	60	57	63	66	2.7	69	65	74	72	80	80	69†	3.7 (control)	58	68	55	55	49	57	66
1.8	76	67	79	81	75	75	84	2.8	72	64	72	69	76	79	85†	3.8 (control)	79	85	80	78	77	90	88
1.9	78	67	79	72	78	81	85	2.9	76	71	84	83	86	89	83†	3.9 (control)	33	26	30	33	35	38	38
1.10	56	47	54	52	57	54	63	2.10	80	80	80	77	81	88	77†	3.10 (control)	34	28	32	35	38	47	45
T1 Mean % Cover	77	66	74	72	72	75	81	T2 Mean % Cover	70	65	74	71	76	80	78	T3 Mean % cover (control)	53	54	52	52	51	59	61

†Value excluded from mean and statistical analysis bush regeneration works impacting canopy cover

Statistical analysis indicated a significant difference between the Control and Study Groups (p = < 0.0001) and between Survey times (p = < 0.005; Figure 3.1; Table 3.1). However, the interaction between Group and Survey time did not reach statistical significance, suggesting that the observed change in Canopy Cover did not significantly differ between the Control and Study Groups (Table 3.2).

Post hoc analysis using a Tukey HSD test found the Control group to be significantly higher than the Study group in Survey 1 ($t^{2,212}$ = 2.976, p = 0.006), Survey 2 ($t^{2, 212}$ = 3.852, p = 0.0002), Survey 3 ($t^{2, 212}$ = 3.918, p = 0.0001), Survey 4 ($t^{2, 212}$ = 3.520, p = 0.0005), Survey 5 ($t^{2,212}$ = 4.174, p = <0.0001), Survey 6 ($t^{2, 212}$ = 4.867, p = < 0.0001) and Survey 7 ($t^{2, 212}$ = 3.601, p = < 0.0004) (Figure 3.1). Although some interactions between Surveys of different groups (Study and Control) reached statistical significance, no significant differences were found between Surveys within the Study group and Control group.

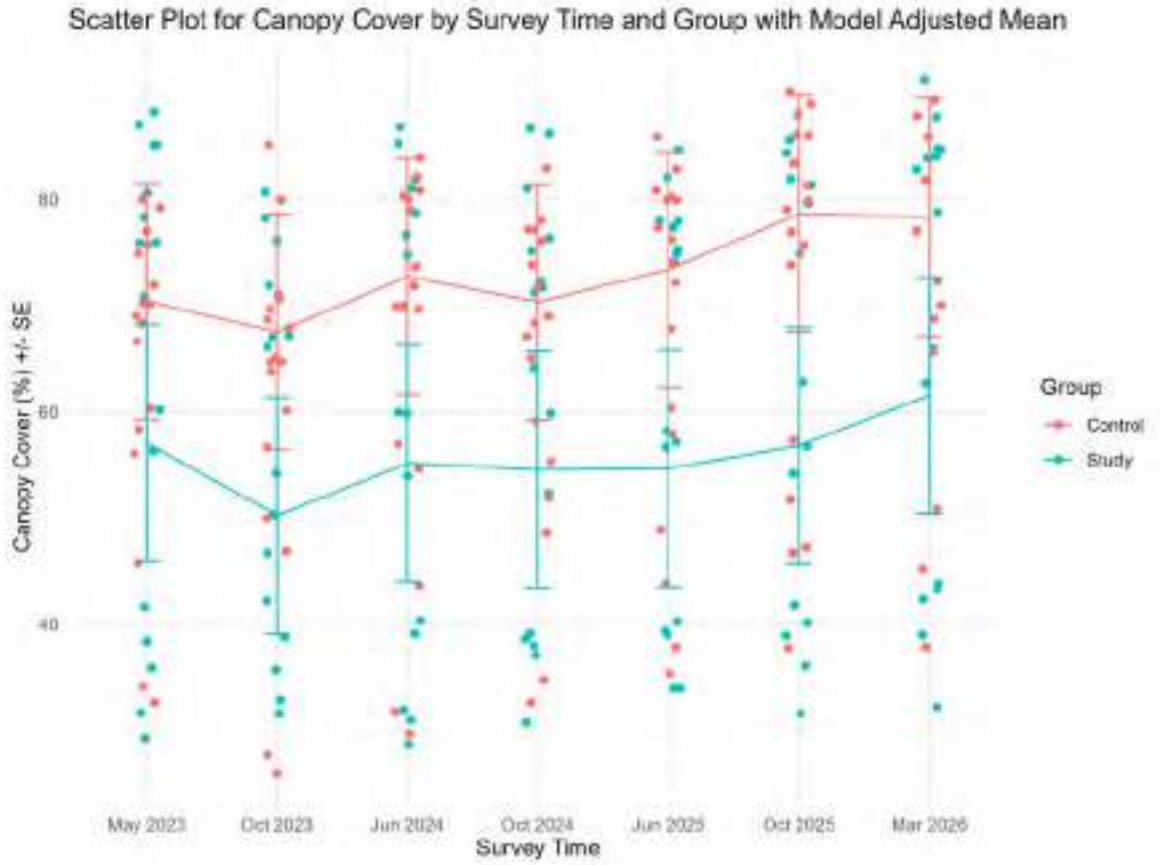

Figure 3.1 Scatterplot of Canopy Cover +/- Standard Error by Survey Time and Group with Model Adjusted Mean in May 2023, October 2023, June 2024, October 2024, June 2025, October 2025 and March 2026.

Table 3.2. ANOVA for LME with square root transformed Canopy Cover.

Fixed Effects	F Statistic	Degrees of Freedom	P
Group	53.83	1	< 0.0001***
Survey	1.59	6	0.005**
Group:Survey	0.21	6	0.85 n.s.

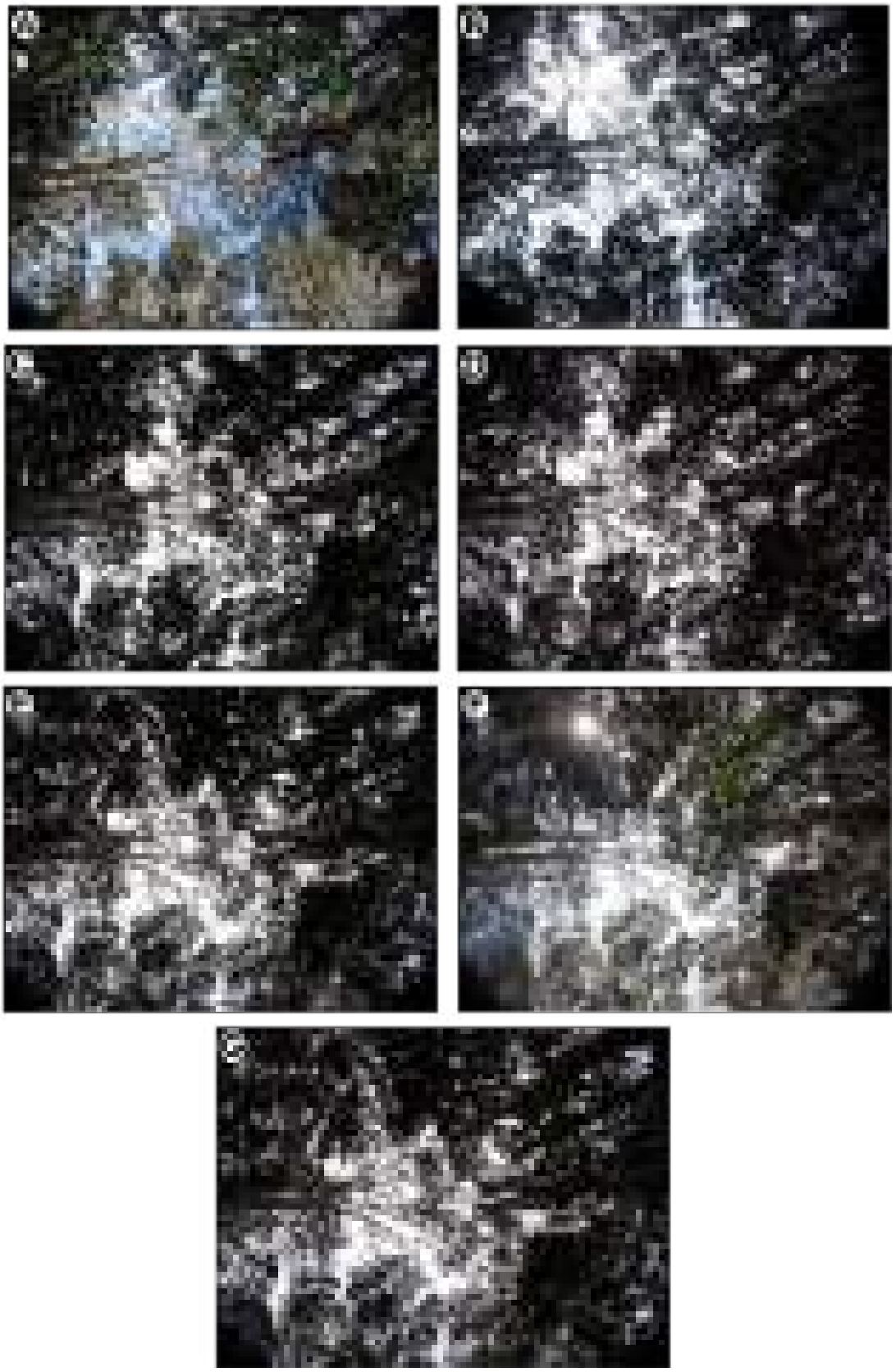

Plate 2. Example canopy cover monitoring photograph from Transect point 1.4 during baseline Survey 1 (A, 87%) Survey 2 (B, 76% cover) Survey 3 (C, 87% cover), Survey 4 (D, 87%), Survey 5 (E, 85%), Survey 6 (F, 88%) and Survey 7 (G, 85%).

3.2 Shrub Condition

3.2.1 Transect 1 (study)

Transect 1 (study) recorded a decrease in leaf cover across most monitored shrubs during Survey 2, followed by a slight gradual increase in Surveys 3 and 4 (Table 3.3). Survey 5 observed a slight decrease in shrub cover, and Survey 6 a slight increase.

During Survey 7 a general increase in shrub cover of *Bursaria spinosa* was observed around Transect 1. Further, bush regeneration works had taken place between surveys 6 and 7, whereby exotic species, primarily *Olea europea* (Olive), *Ligustrum lucidum* (Glossy privet) and *Ligustrum sinense* (Chinese privet) had been pulled/cut from the ground and placed into piles. The monitored exotic shrub at 1.10, *Solanum nigrum*, was also pulled out of the ground during bush regeneration works. A *Bursaria spinosa* individual was tagged and will be recorded during future monitoring events. Exotic vines *Araujia sericifera* (Moth Vine), *Rumex sagittatus* (Turkey Rhubarb) and *Passiflora morifolia* (Woodland Passionflower) were observed to be climbing native shrubs throughout the transect, though had likely been cut back in some areas by bush regenerators.

Excluding the new shrub at 1.10, monitored shrubs at Transect 1 did not vary considerably in leaf cover and condition since Survey 6. Two shrubs decreased and two shrubs increased in leaf cover while the remainder were consistent with the previous survey (Table 3.3). Leaf condition decreased for one shrub and increased for two shrubs (Table 3.3). No signs of disease were observed for all monitored shrubs, consistent with Survey 6 (Table 3.4). A higher occurrence of fruiting and flowering was observed compared to Survey 6 due to the current survey timing being more consistent with flowering and fruiting season for *Bursaria spinosa* (PlantNet, 2026) (Table 3.4).

3.2.2 Transect 2 (control)

Bush regeneration work around Transect 2 has meant a dense area of invasive shrubs between 2.10 and 2.7 have been removed and minor invasive shrub removal across the remainder of the transect has taken place, drastically reducing shrub cover in this area and resulting in monitored shrubs at points 2.9, 2.7 and 2.6 being removed. Native shrubs at each of these points have been tagged and will be and will be used and compared in future monitoring events.

Most of the monitored shrubs at Transect 2 continued to have good to moderate leaf cover and condition in Survey 7 and little change can be seen between each survey with the exception of exotic shrub *Olea europea* at 2.4, which was observed to be dying back in Survey 7 (Table 3.3).

Similar to Transect 1, no disease was observed on any monitored shrubs at Transect 2, and more shrubs were observed with flowering characteristics than in Survey 6 (Table 3.4). Most shrubs were fruiting due to the survey time coinciding with the optimal flowering/fruiting season for *Bursaria spinosa*.

Transect 2 consistently exhibits slightly higher average leaf cover than Transect 1 (study). In contrast, Transect 1 shrubs are higher in average leaf condition and have had slightly fewer shrubs observed with signs of disease across surveys.

3.2.3 Transect 3 (study and control)

Transect 3 showed a large decrease in leaf cover and condition from Surveys 1 to 2, with all monitored shrubs having very few leaves or appearing completely dead due to a fire (Table 3.3; Plate 3). During Survey 3 some shrubs were observed with regrowth, while others remained completely dead. Between Surveys 3 and 7, three shrubs (3.0, 3.2 and 3.4) in the study area have

improved in leaf cover and condition. The remaining four monitored shrubs in the control area and one in the study area have completely died.

The fence at Transect 3 limited the accuracy of assessing shrub condition due to separation from the monitored shrubs, resulting in no disease or presence of flowering parts found on any monitored shrubs.

Table 3.3 Shrub monitoring notes - leaf cover and condition

Point	Species	Leaf cover (Good [G], Moderate [M], Poor [P], Very Poor [VP])							Leaf condition (Good [G], Moderate [M], Poor [P], Very Poor [VP])						
		S1	S2	S3	S4	S5	S6	S7	S1	S2	S3	S4	S5	S6	S7
1.0	*Bursaria spinosa*	M	P	P	M	P	P	P	G	M	G	G	G	G	G
1.1	*Bursaria spinosa*	G	M	P	M	M	P	P	M	M	G	G	G	G	G
1.2	*Bursaria spinosa*	M	P	M	M	P	M	M	M	M	G	G	G	G	G
1.3	*Olea europea**	M	P	M	M	G	G	G	G	G	G	G	G	G	M
1.4	*Bursaria spinosa*	G	M	M	G	G	G	M	G	G	G	G	G	G	G
1.5	*Olea europea**	M	M	M	G	G	G	G	M	M	G	G	G	M	G
1.6	*Bursaria spinosa*	G	M	G	G	G	G	M	M	M	G	G	M	M	G
1.7	*Bursaria spinosa*	VP	VP	P	M	P	P	G	M	M	G	G	G	G	G
1.8	*Bursaria spinosa*	P	P	M	M	P	M	M	G	G	G	G	G	G	G
1.9	*Bursaria spinosa*	P	VP	P	P	P	M	G	M	VP	G	G	G	G	G
1.10	*Bursaria spinosa*†							G[a]							G[a]
Number "G"/ "N" (/11)		4	0	1	3	4	4	4/10	4	3	10	10	9	8	9/10
2.0	*Bursaria spinosa*	M	M	G	G	G	G	G	G	G	G	G	G	G	G
2.1	*Bursaria spinosa*	G	G	G	G	G	G	G	G	G	G	G	G	G	G
2.2	*Bursaria spinosa*	G	M	M	M	M	M	M	G	G	G	G	G	G	G
2.3	*Ligustrum sinense**	G	G	Not located **	G	G	G	M	G	G	Not located **	G	M	M	G
2.4	*Olea europea**	M	M	M	M	M	M	VP	G	G	G	M	M	G	VP
2.5	*Olea europea**	P	P	P	P	P	P	G	M	M	M	M	M	M	G
2.6	*Bursaria spinosa*†							G[a]							G[a]
2.7	*Bursaria spinosa*†							M[a]							G[a]

2.8	***Bursaria spinosa***	M	M	Not located **	M	G	G	G	G	G	Not located **	G	G	G	G
2.9	***Trema tomentosa*** [f]							G[a]							G[a]
2.10	***Bursaria spinosa***	G	G	G	G	G	G	G	G	G	M	M	M	M	G
Number "G"/ "N" (/11)		**5**	**4**	**4/9****	**5**	**6**	**6**	**5/8**	**7**	**7**	**4/9****	**5**	**4**	**6**	**7/8**
3.0 (study area)	***Bursaria spinosa***	G	VP	P	P	P	M	M	G	M	G	G	G	G	G
3.1 (study area)	***Acacia elongata***	G	VP-dead	VP-dead	VP-dead	VP-dead	VP-dead	VP- dead	G	VP-none	VP-dead	VP-dead	VP-dead	VP-dead	VP-dead
3.2 (study area)	***Bursaria spinosa***	M	VP	VP-dead	P	VP-dead	P	M	G	M	VP-dead	G	VP-dead	G	G
3.3 (study area)	***Bursaria spinosa***							G[b]							G[b]
3.4 (study area)	***Melaleuca decora***	G	VP	P	VP	G	G	G	G	M	G	P	G	G	G
Study: Number "G"/ "N" (/4)		**3**	**0**	**0**	**0**	**1**	**1**	**1/4**	**4**	**0**	**2**	**2**	**2**	**3**	**3/4**
3.5 (control)	***Bursaria spinosa***	M	VP	VP	VP	VP-dead	VP-dead	VP- dead	G	M	G	VP	VP-dead	VP-dead	VP-dead
3.6 (control)	***Bursaria spinosa***	M	VP	VP	P	VP-dead	VP-dead	M	G	P	G	G	VP-dead	VP-dead	VP-dead
3.7 (control)	***Bursaria spinosa***							G[b]							G[b]
3.8 (control)	***Bursaria spinosa***	VP	VP-dead	VP-dead	P	M	VP-dead	VP- dead	G	VP-none	VP-dead	G	G	VP-dead	VP-dead
3.9 (control)	***Bursaria spinosa***	M	VP-dead	VP	VP-dead	VP-dead	VP-dead	VP- dead	G	VP-none	G	VP (dead)	VP-dead	VP-dead	VP-dead
3.10 (control)	***Bursaria spinosa***							P[b]							G[b]
Control: Number "G"/ "N" (/4)		**0**	**0**	**0**	**0**	**0**	**0**	**0/4**	**4**	**0**	**3**	**2**	**1**	**0**	**0/4**

[a] excluded from analysis where a monitored shrub removed during bush regen has been replaced by a native shrub; [b] excluded from analysis, monitored shrub added where none previously present; * denotes an introduced species; ** shrub/s not located during survey and therefore not assessed

Table 3.4 Shrub monitoring notes - presence of disease and flowering status

Point	Species	Disease notes (Some Disease [SD], None [N])							Flower status						
		S1	S2	S3	S4	S5	S6	S7	S1	S2	S3	S4	S5	S6	S7
1.0	*Bursaria spinosa*	N	N	N	N	N	N	N	Buds	Buds	Buds	Buds	Buds	None	None
1.1	*Bursaria spinosa*	SD	SD	N	N	SD	N	N	Buds	Buds	None	Buds	Buds	Buds	None
1.2	*Bursaria spinosa*	N	N	N	N	N	N	N	None	None	None	None	None	None	Fruit
1.3	*Olea europea**	N	N	N	N	N	N	N	None	None	None	None	None	None	None
1.4	*Bursaria spinosa*	N	N	N	N	N	N	N	None	None	None	None	None	None	Flowers
1.5	*Olea europea**	SD	SD	N	N	N	N	N	None	None	None	None	None	None	None
1.6	*Bursaria spinosa*	N	N	N	N	N	N	N	None	Buds	None	Buds	None	None	None
1.7	*Bursaria spinosa*	N	N	N	N	N	N	N	Buds	None	None	None	None	None	Fruit
1.8	*Bursaria spinosa*	N	N	N	N	N	N	N	None	None	None	None	None	None	None
1.9	*Bursaria spinosa*	N	N	N	SD	N	N	N	Buds	None	None	None	None	None	Buds
1.10	*Bursaria spinosa*†							N*							None*
Number "G"/ "N" (/11)		8	9	11	10	10	11	10/10	-	-	-	-	-	-	-
2.0	*Bursaria spinosa*	N	N	N	N	N	N	N	None	Buds	Buds	Buds	Buds	None	Fruit
2.1	*Bursaria spinosa*	N	N	N	N	N	N	N	Buds	Buds	Buds	Buds	Buds	Buds	Fruit
2.2	*Bursaria spinosa*	N	N	N	N	N	N	N	Buds	Buds	Buds	Buds	Buds	None	Fruit
2.3	*Ligustrum sinense**	N	N	Not located **	N	SD	N	N	Fruit	Flowers	Not located **	Buds/Flowers	Fruit	Flowers	Fruit
2.4	*Olea europea**	N	N	N	N	N	N	N	None	None	None	None	None	None	None
2.5	*Olea europea**	N	N	N	N	N	N	N	None	None	None	None	Fruit	None	Fruit
2.6	*Bursaria spinosa**							N*							None*
2.7	*Bursaria spinosa**							N*							None*

2.8	***Bursaria spinosa***	N	N	Not located **	N	N	N	N	None	None	Not located **	Buds	None	None	Fruit
2.9	***Trema tomentosa****							N[a]							Fruit[a]
2.10	***Bursaria spinosa***	N	N	N	N	N	N	N	Buds	Buds	Buds	Buds	Buds	None	Fruit
Number "G"/ "N" (/11)		**9**	**8**	**8/9****	**8**	**8**	**11**	**8/8**	-	-	-	-	-	-	-
3.0 (study area)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.1 (study area)	***Acacia elongata***	N	N	N	N	N	N	N	Buds	None	None	None	None	None	None
3.2 (study area)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.3 (study area)	***Bursaria spinosa***[b]							N[b]							None[b]
3.4 (study area)	***Melaleuca decora***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
Study: Number "G"/ "N" (/4)		**4**	**4**	**4**	**4**	**4**	**4**	**4/4**	-	-	-	-	-	-	-
3.5 (control)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.6 (control)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.7 (control)	***Bursaria spinosa***[b]							N[b]							None[b]
3.8 (control)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.9 (control)	***Bursaria spinosa***	N	N	N	N	N	N	N	None	None	None	None	None	None	None
3.10 (control)	***Bursaria spinosa***[b]							N[b]							None[b]
Control: Number "G"/ "N" (/4)		**4**	**4**	**4**	**4**	**4**	**4**	**4/4**	-	-	-	-	-	-	-

[a] excluded from analysis where a monitored shrub removed during bush regen has been replaced by a native shrub; [b] excluded from analysis, monitored shrub added where none previously present;
* denotes an introduced species; ** shrub/s not located during survey and therefore not assessed

Plate 3 Melaleuca decora (Transect 3 (study area), point 3.4) in good leaf cover and condition during baseline Survey 1 (A), in very poor leaf cover and condition in Survey 2 (B), in poor leaf cover and good condition in Survey 3 (C), in very poor leaf cover and poor condition in Survey 4 (D), in good leaf cover and condition in Survey 5 (E), in good leaf cover and condition in Survey 6 (F) and in good leaf cover and condition in Survey 7 (G). No signs of disease or flowering characteristics were observed in all six surveys.

4 Discussion

Fire, an increase in temperature, and a decrease in rainfall between Surveys 1 and 2 likely contributed to a dieback in canopy and shrubs on all three transects. BOM station number 67084 (Orchard Hills Treatment Works) recorded monthly rainfall total of 13.6 mm for May 2023, compared to 12.2 mm in October 2023 (Table 4.1). Although there is little difference between these two periods, monthly rainfall in 2022 was considerably higher. Average rainfall reduced from a combined monthly total of 655.8 mm from May to October of 2022, to 126 mm within that same period in 2023. The large reduction in rainfall and increase in temperature that occurred between Surveys 1 and 2 likely resulted in a dieback of shrubs and canopy.

Variation in shrub and canopy cover is also expected due to the time of year the surveys were completed. Following this pattern, an increase in rainfall and a decrease in temperature between Surveys 2 and 3 likely lead to an increase in canopy and shrub cover, as well as regrowth of the burnt shrubs at Transect 3. A slight reduction in canopy cover at Transects 1 and 2 between Surveys 3 and 4 can likely be attributed to slight decrease in rainfall and increase in mean temperature. Survey 5 saw an increase in rainfall and a decrease in temperature, and recorded an increase in canopy cover for Transect 2, and little variation at Transects 1 and Transect 3. Survey 6 saw a decrease in rainfall and an increase in temperature, though saw an increase in canopy cover for both study and control areas.

Between Surveys 6 and 7 bush regeneration works have taken place around Transects 1 and 2. This large decrease in mass of exotic shrubs has impacted canopy cover and shrub condition data across both transects, though most notably in Transect 2 where there is a higher proportion of exotic shrubs. The area at Transect 2 with the largest reduction in shrub cover was excluded from analysis, however impacts to the remainder of the Transect has likely resulted in the decrease in canopy cover % seen for Transect 2. Several monitored shrubs were also excluded from analysis where they have been pulled out during bush regeneration works, and replaced with native shrubs to be used in future surveys.

Survey 7 was performed in March, outside of the usual Survey month for the first survey of the year (June) and saw an increase from Survey 6 in temperature and rainfall preceding the fieldwork. Canopy cover increased the most at Transect 1. Both study and control areas in Transect 3 increased in canopy cover and Transect 2 (control) decreased slightly. Little change was recorded in shrub condition, cover and presence of disease though an increase in flowering and fruiting was observed due to measurements being taken within the flowering season for *Bursaria spinosa*. A general increase in shrub cover in the area of Transect 1 was observed, possibly contributing to the increase in canopy cover.

Table 4.1 Temperature and rainfall data during month preceding survey month

Survey	Month preceding Survey	Mean maximum monthly temperature °C*	Monthly rainfall (mm)*
1	May 2023	20.7	13.6
2	September 2023	28.3	12.2
3	May 2024	17.5	63.6
4	September 2024	24.2	47.6
5	May 2025	21.2	132.6
6	September 2025	24.2	48.2
7	February 2026**	29.6**	147.2**

*Mean maximum monthly temperature and monthly rainfall total data from BOM Station number(67084 Orchard Hills Treatment Works NSW) ** Temperature and rainfall data from February 2026 from BOM Station number 67113 (Penrith Lakes AWS)

Limited access at Transect 3 has several impacts on survey results. As the consistency of the angle of the camera is not as easily maintained at Transect 3, slight changes in the framing of the images are likely to impact canopy cover values. While shrub cover has impacted average canopy cover in Transects 1 and 2, it has had very little impact on Transect 3 as the positioning of the camera largely excludes shrubs from the frame.

While monitored shrubs at Transect 2 (control) have exhibited slightly higher average leaf cover compared to those at Transect 1 (study) across Surveys, this disparity occurred during the baseline survey and is likely due to Transect 2's location in a wetter area with a creek line intersecting the transect. Further, species composition of the monitored shrubs is different across Transects 1 and 2, contributing to differences in flowering observations. The replacement of several shrubs at Transect 2 due to bush regeneration works with native shrubs has altered the species composition of monitored shrubs and is likely to improve average leaf cover and condition of Transect 2 in future surveys.

Previously, during Surveys 5 and 6 several cow pats were observed around Transect 2. While no impacts from livestock to the monitored shrubs were observed, there is a risk of potential impacts to shrub health in the future due to herbivory and trampling.

5 Conclusion

Bush regeneration works around Transects 1 and 2, seasonal weather changes and fire have had impacts on canopy cover and shrub condition across study and control areas. In Survey 7 Transect 2 (control) saw a slight decrease in canopy cover, likely a result of a larger reduction in exotic shrub mass during bush regeneration works than at Transect 1 (study).

Statistical analysis of the interaction between study and control groups with survey times revealed no significant change to canopy cover. Changes in shrub condition also revealed no strong observable difference between study and control areas across the three transects.

Future monitoring visits will be required to detect whether there are significant changes in canopy cover and/or shrub condition indicative of impacts to the GDE study area. Monitoring visits will continue to occur every six months, until the end of 2028.

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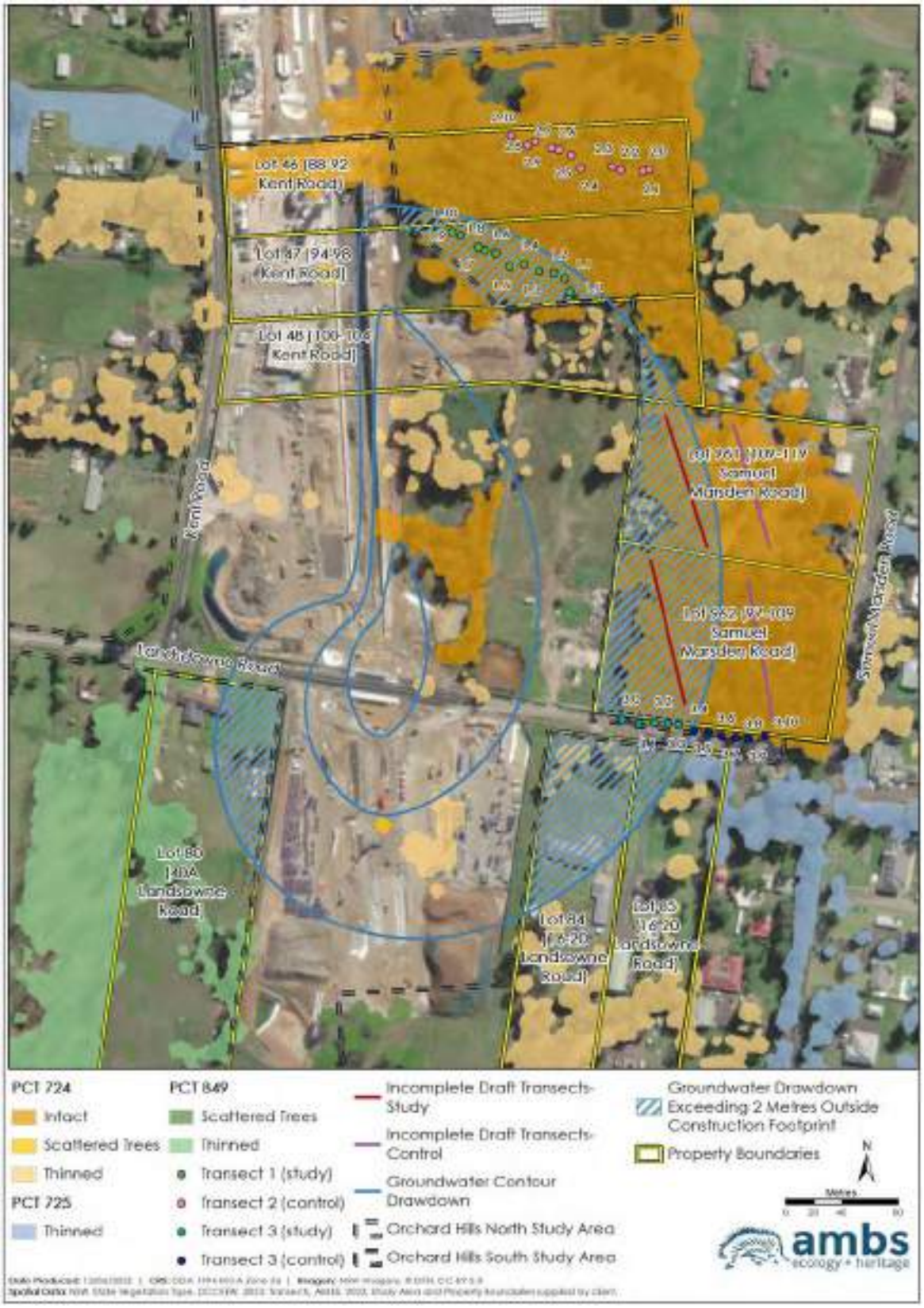
Appendix A

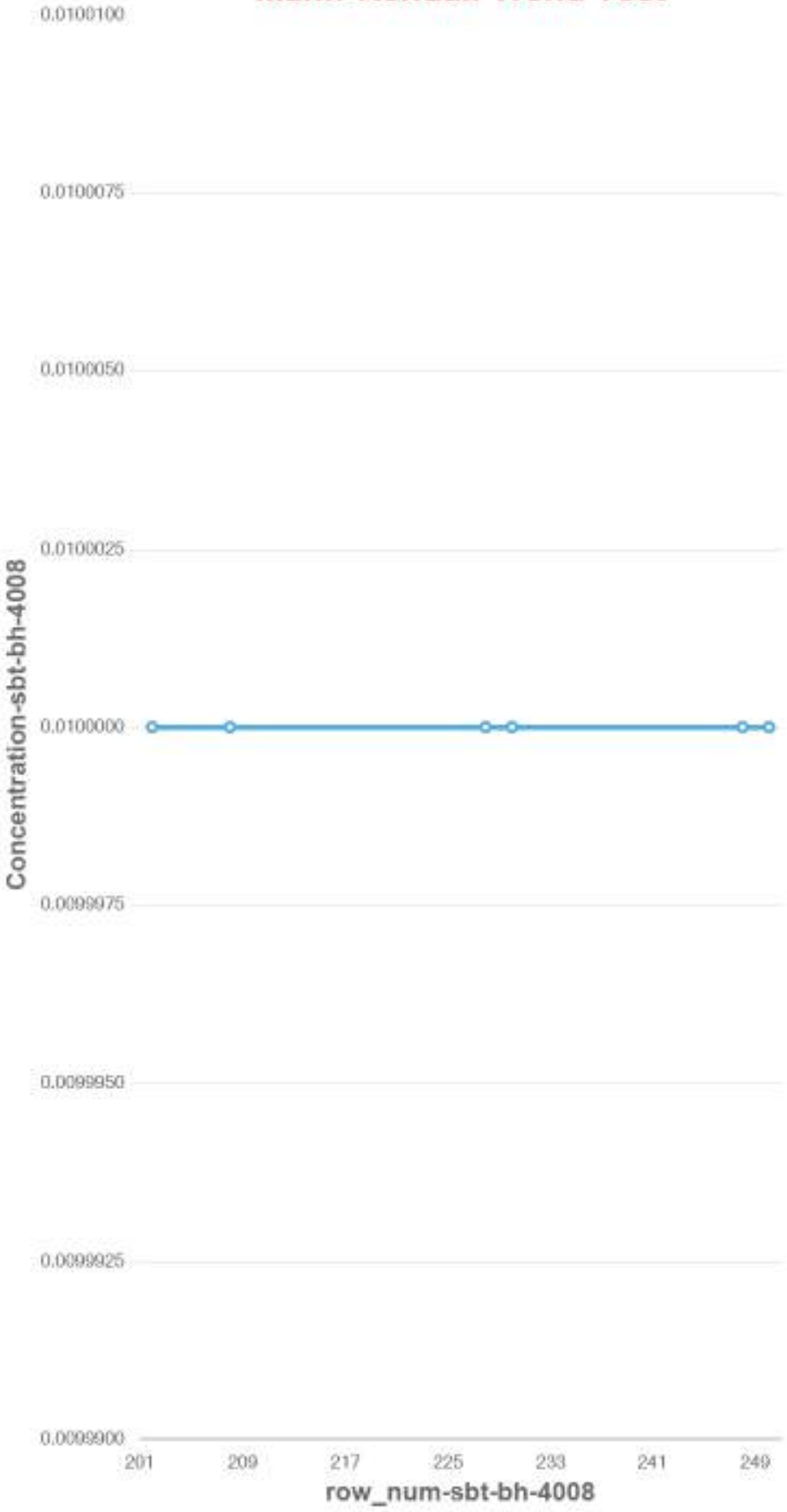
Map of Potential Groundwater Drawdown Impact Area and Monitoring Points at Orchard Hills Metro Station



APPENDIX F: MANN KENDALL ANALYSIS (WATER QUALITY)

F.1 ALUMINUM (FILTERED)

Mann-Kendall Trend Test

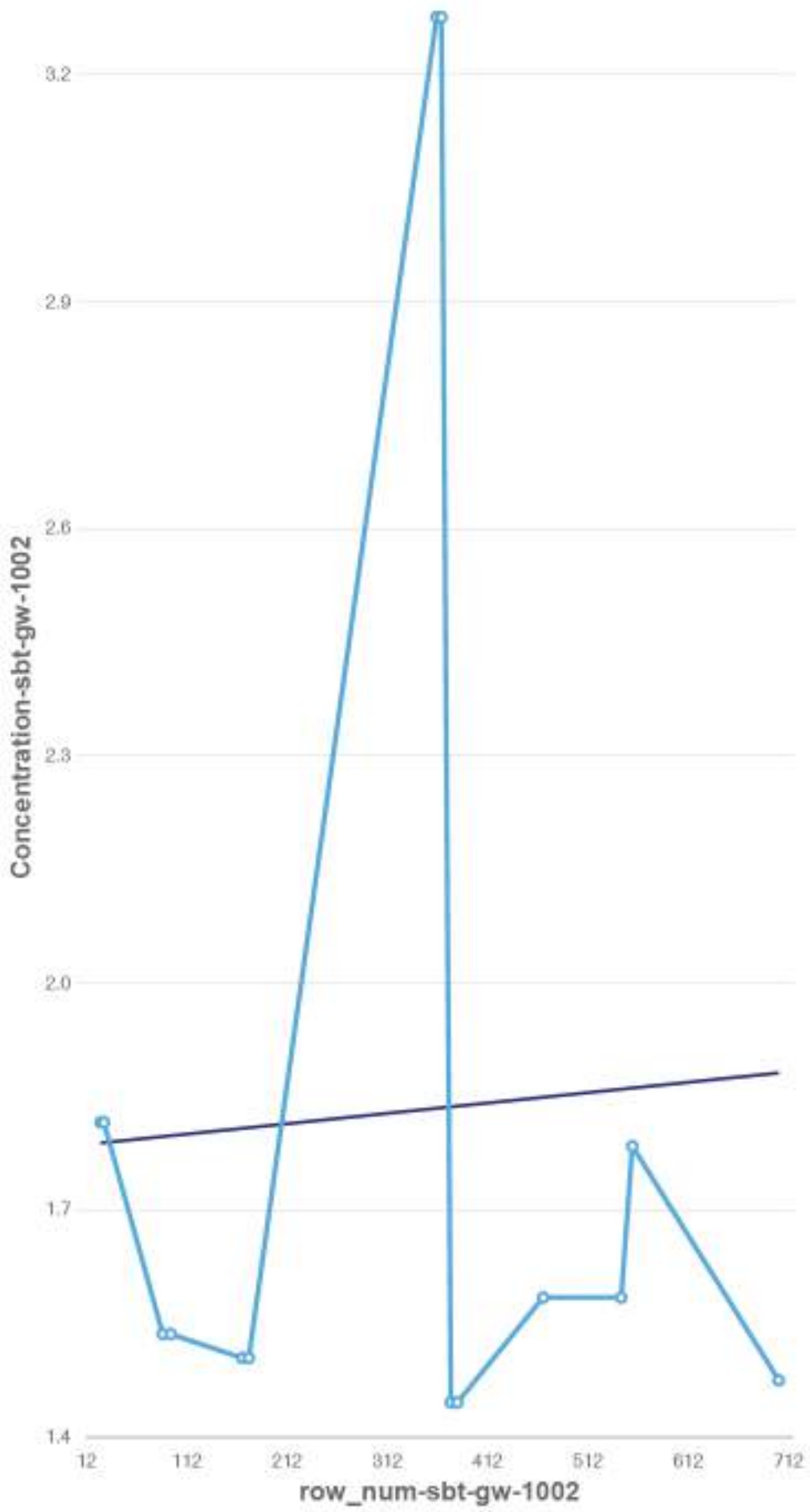


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0100

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

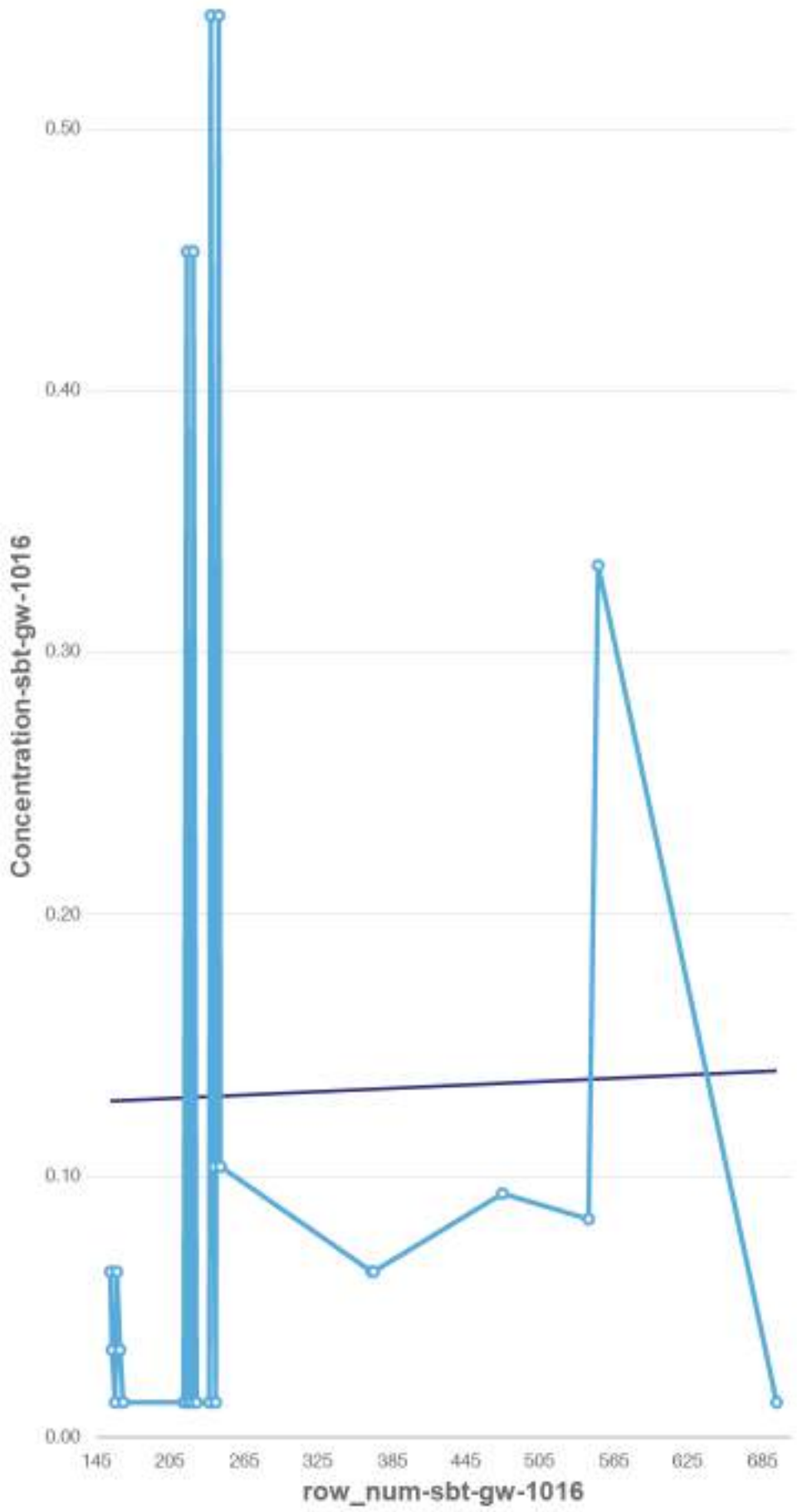


Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1016
Standardized Value of S	-0.8839
M-K Test Value (S)	-17
Tabulated p-value	0.1940
Approximate p-value	0.1884

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	1.7994

Insufficient statistical evidence of a significant trend at the specified level of significance.

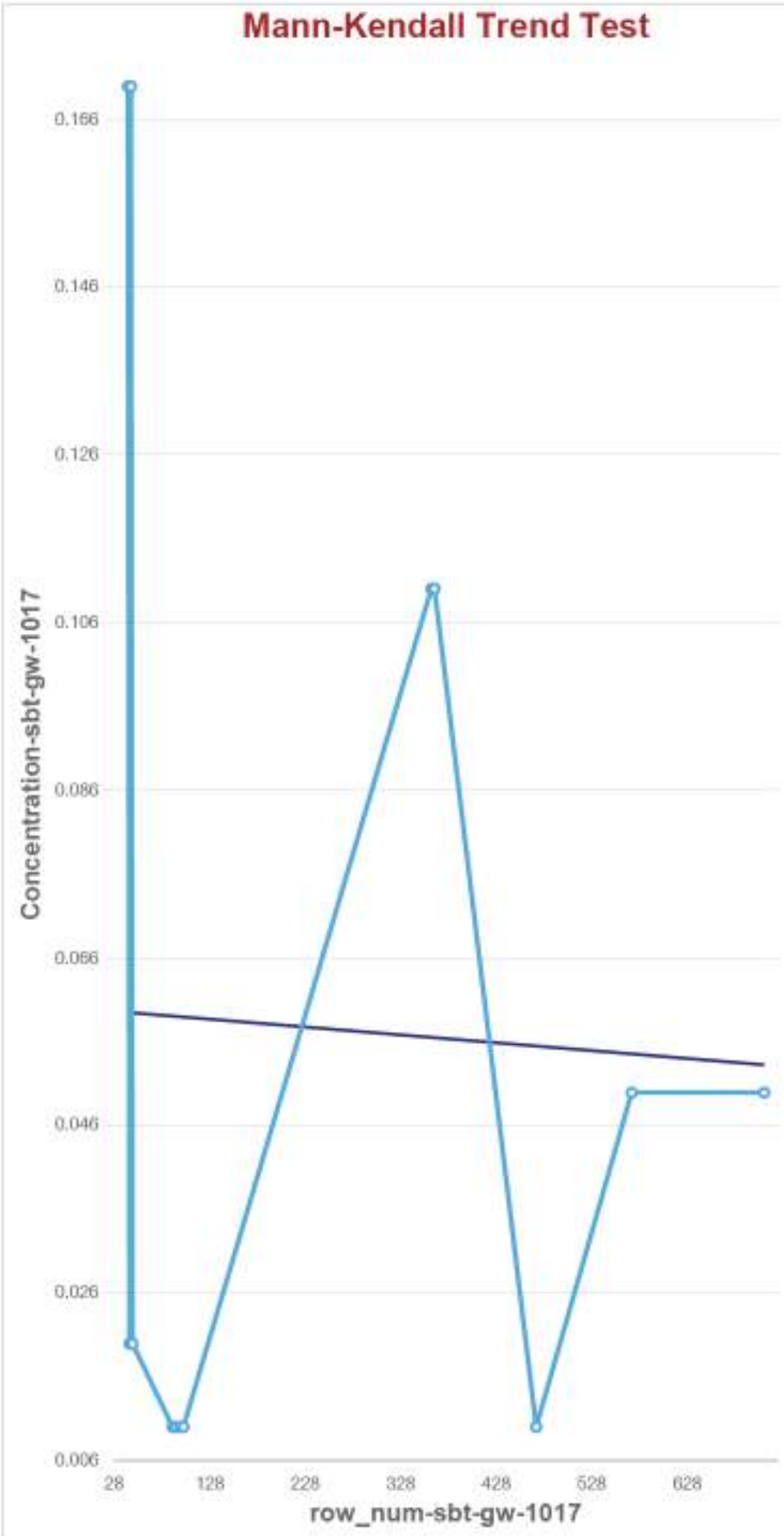
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	38.9957
Standardized Value of S	1.0514
M-K Test Value (S)	42
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.1465

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1219

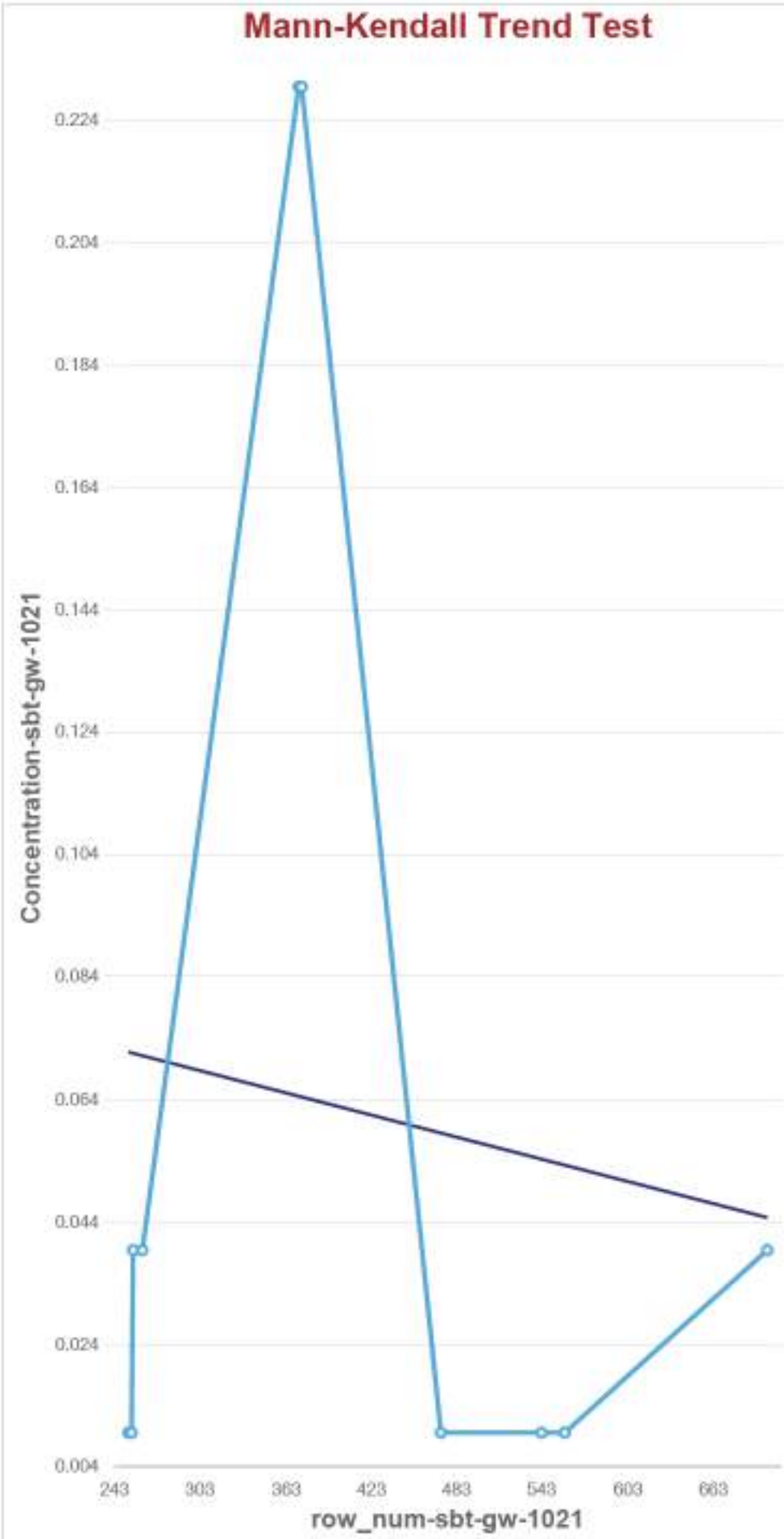
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	15.7480
Standardized Value of S	-0.5715
M-K Test Value (S)	-10
Tabulated p-value	0.2950
Approximate p-value	0.2838

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0599

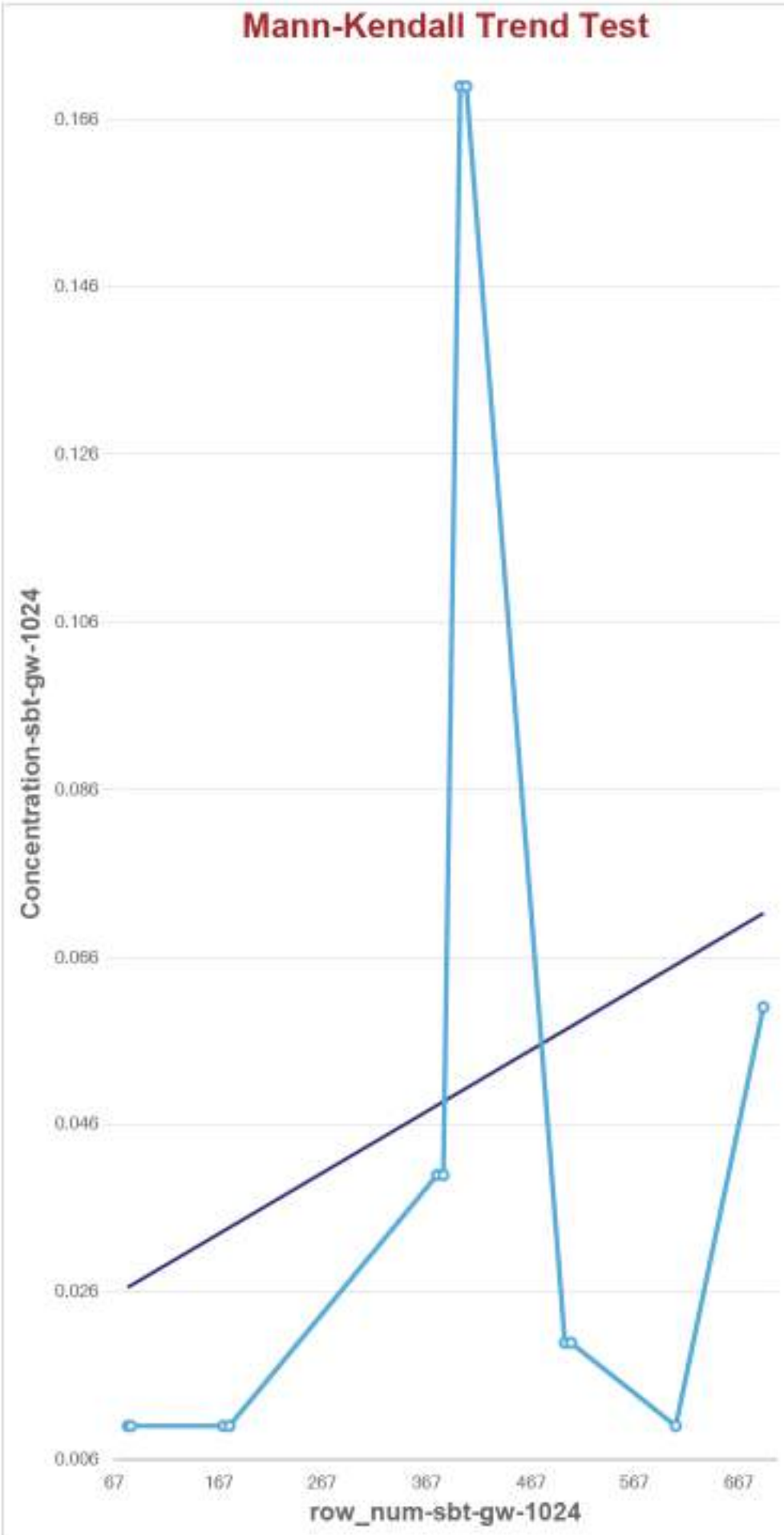
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.1817
Standardized Value of S	0.1964
M-K Test Value (S)	3
Tabulated p-value	0.4310
Approximate p-value	0.4221

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0874

Insufficient statistical evidence of a significant trend at the specified level of significance.

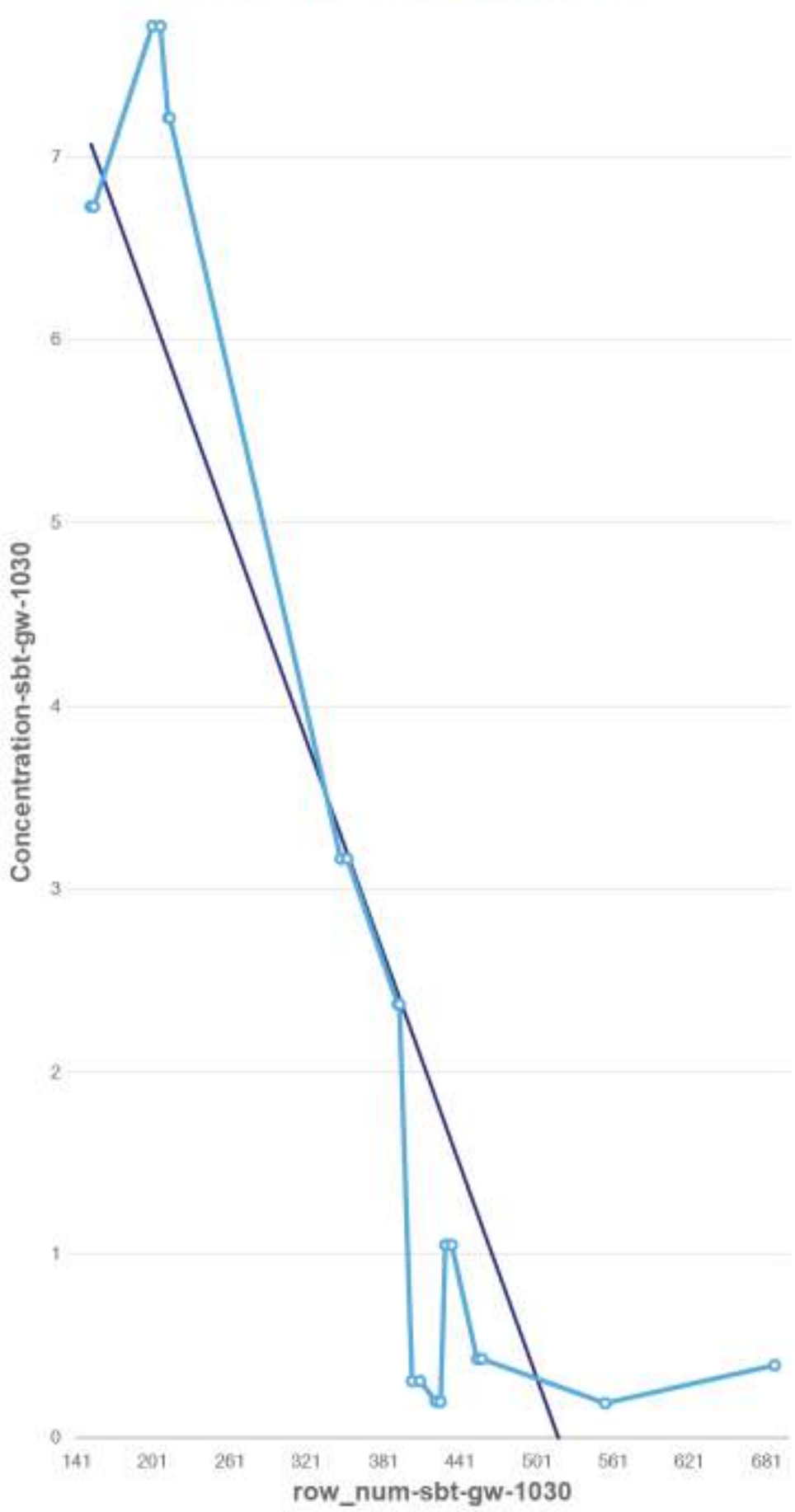


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.8924
Standardized Value of S	1.4396
M-K Test Value (S)	21
Tabulated p-value	0.0980
Approximate p-value	0.0750

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.0208

Insufficient statistical evidence of a significant trend at the specified level of significance.

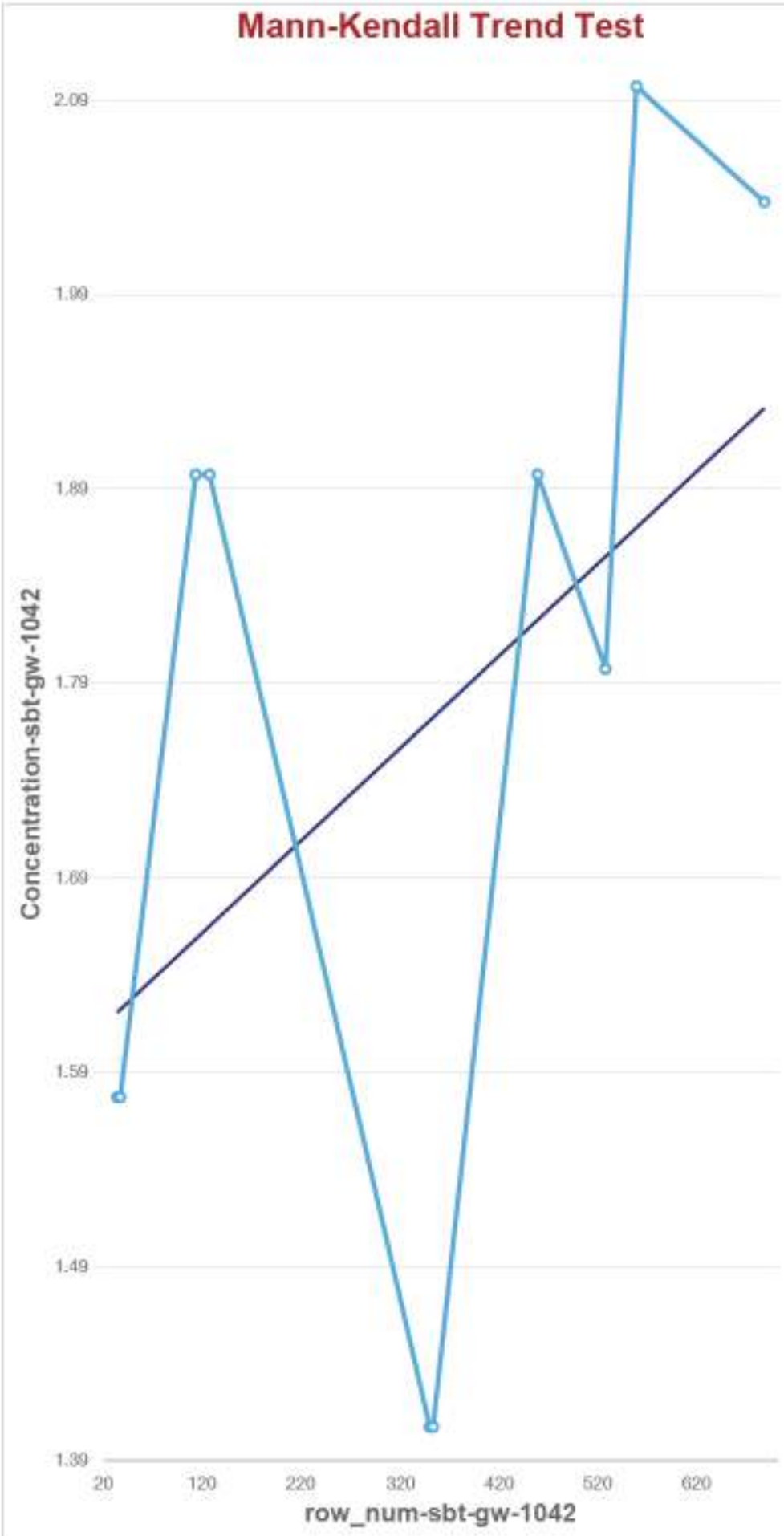
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6757
Standardized Value of S	-3.9771
M-K Test Value (S)	-123
Tabulated p-value	0.0000
Approximate p-value	0.0000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0194
OLS Regression Intercept	9.8382

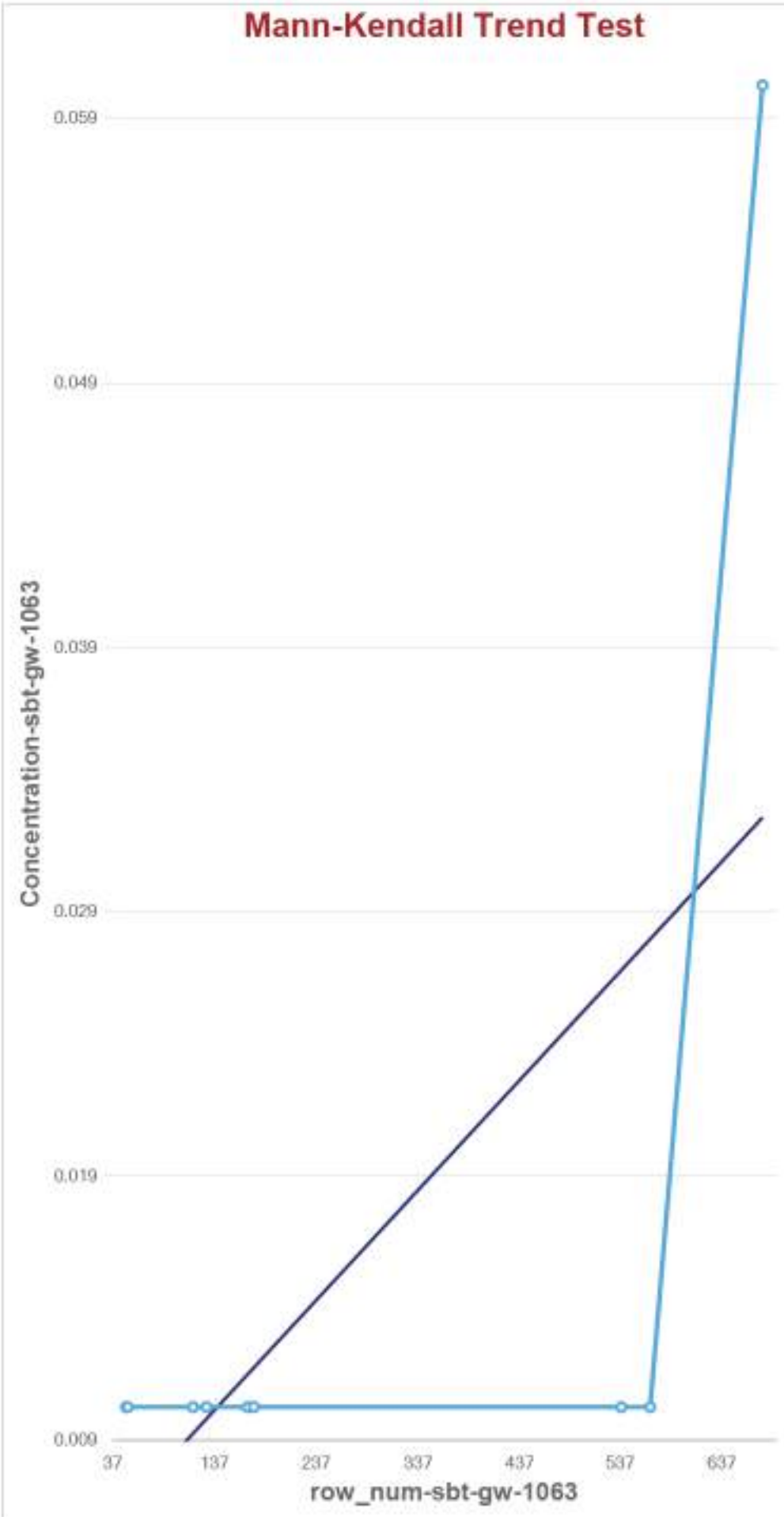
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.9240
Standardized Value of S	1.3731
M-K Test Value (S)	16
Tabulated p-value	0.0780
Approximate p-value	0.0849

OLS Regression Line (Blue)	
OLS Regression Slope	0.0005
OLS Regression Intercept	1.6075

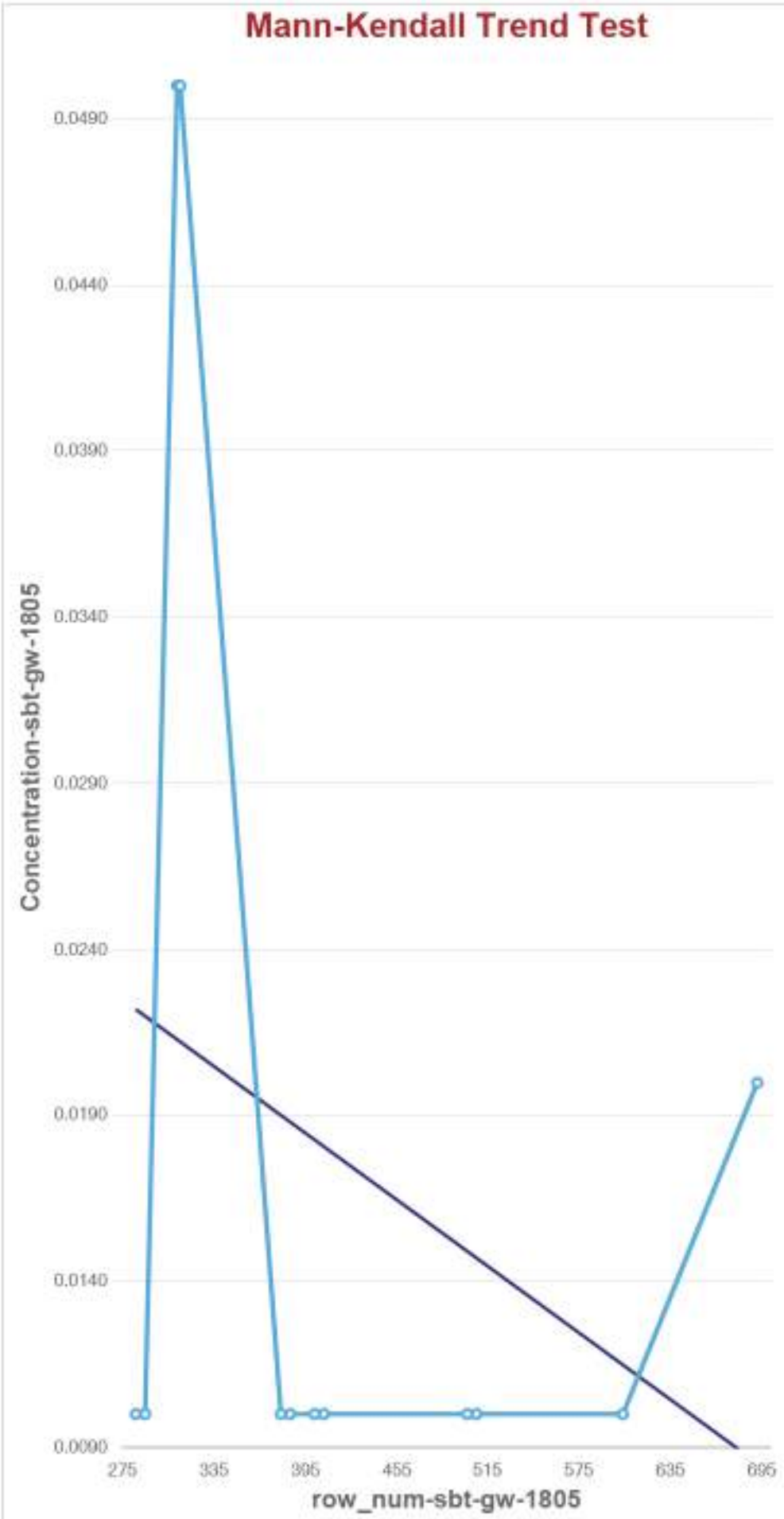
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.1640
Standardized Value of S	1.3555
M-K Test Value (S)	8
Tabulated p-value	0.2380
Approximate p-value	0.0876

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0041

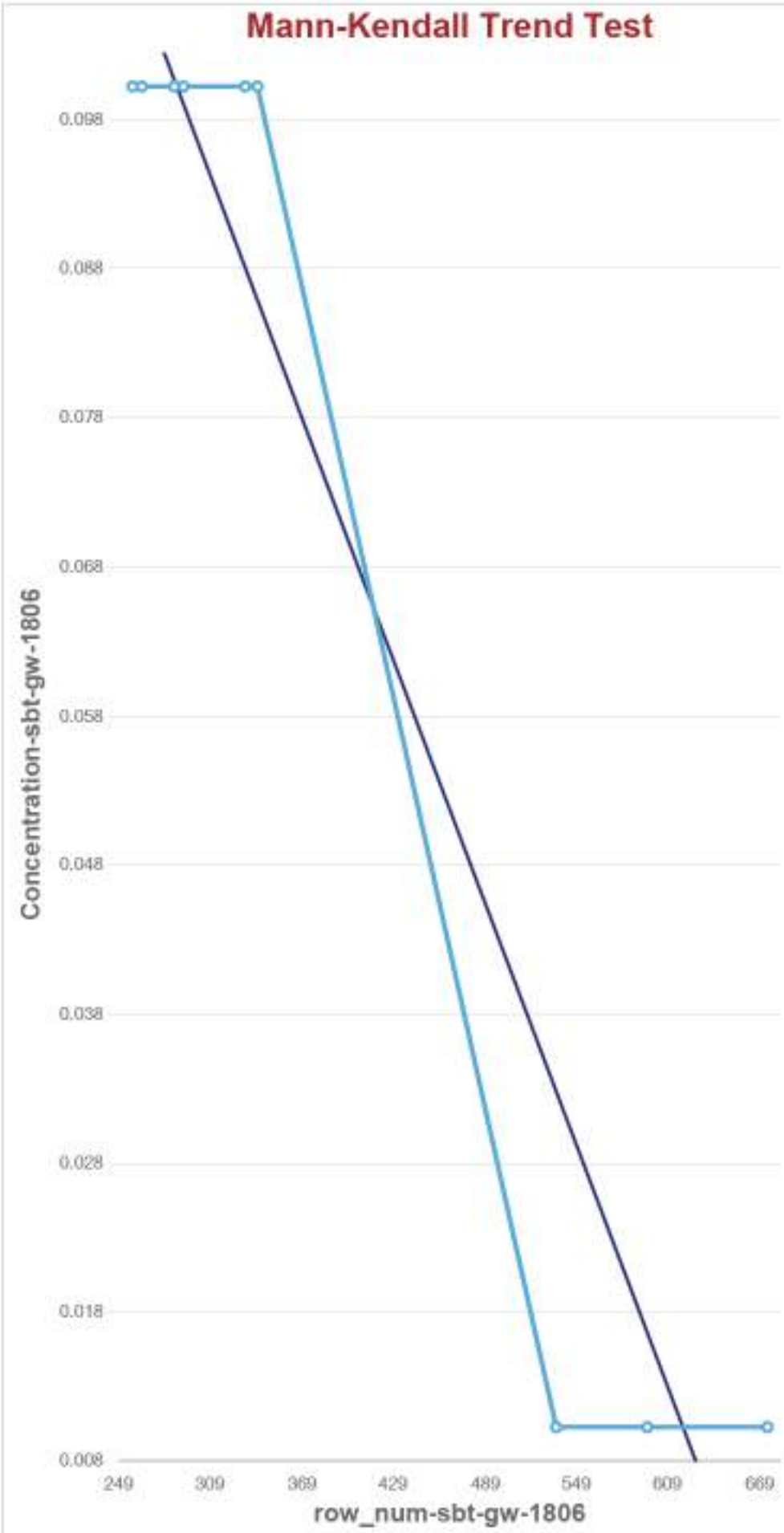
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.9392
Standardized Value of S	-0.1828
M-K Test Value (S)	-3
Tabulated p-value	0.4730
Approximate p-value	0.4275

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0316

Insufficient statistical evidence of a significant trend at the specified level of significance.



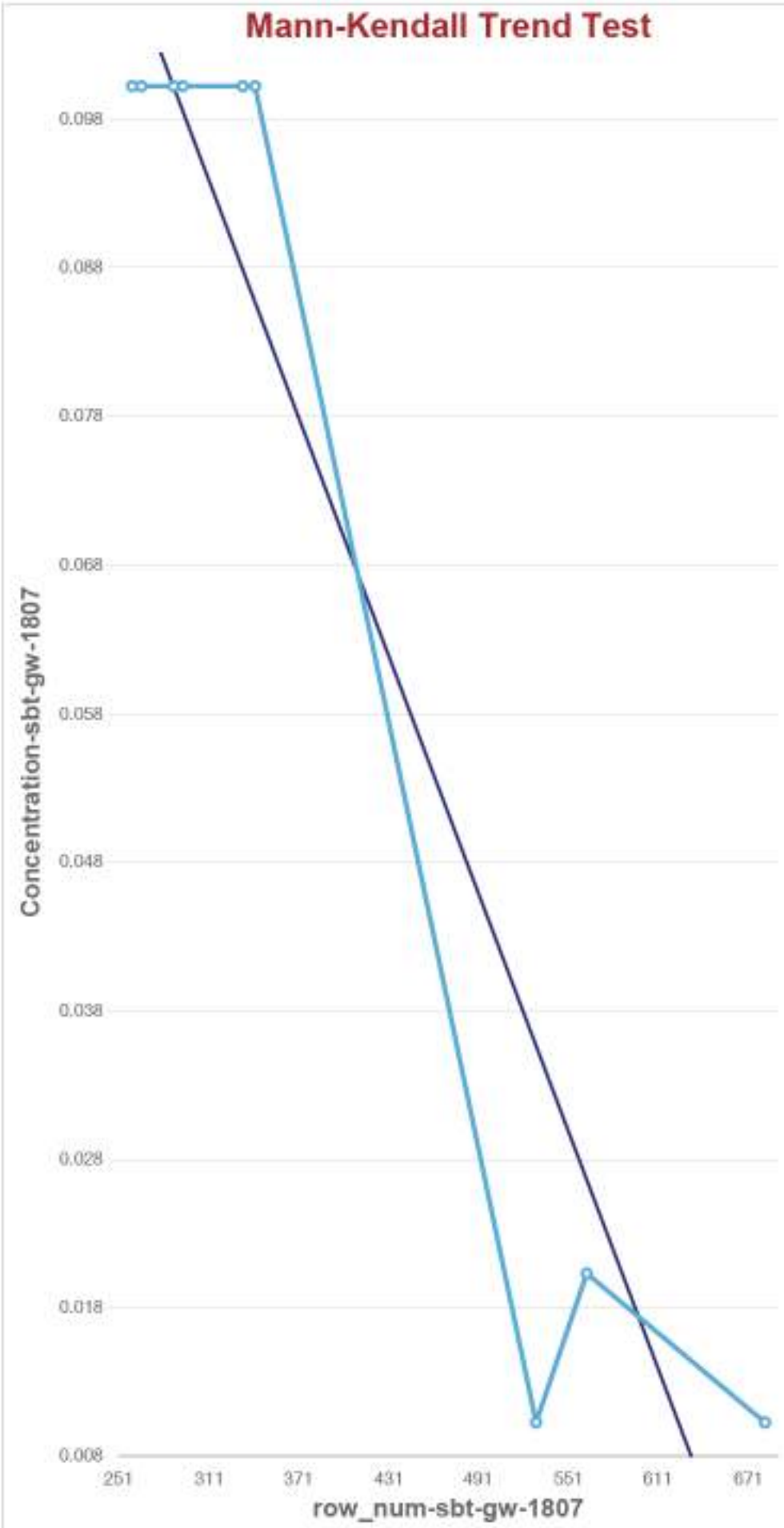
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.7460
Standardized Value of S	-2.1947
M-K Test Value (S)	-18
Tabulated p-value	0.0380
Approximate p-value	0.0141

OLS Regression Line (Blue)

OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1777

Statistically significant evidence of a decreasing trend at the specified level of significance.



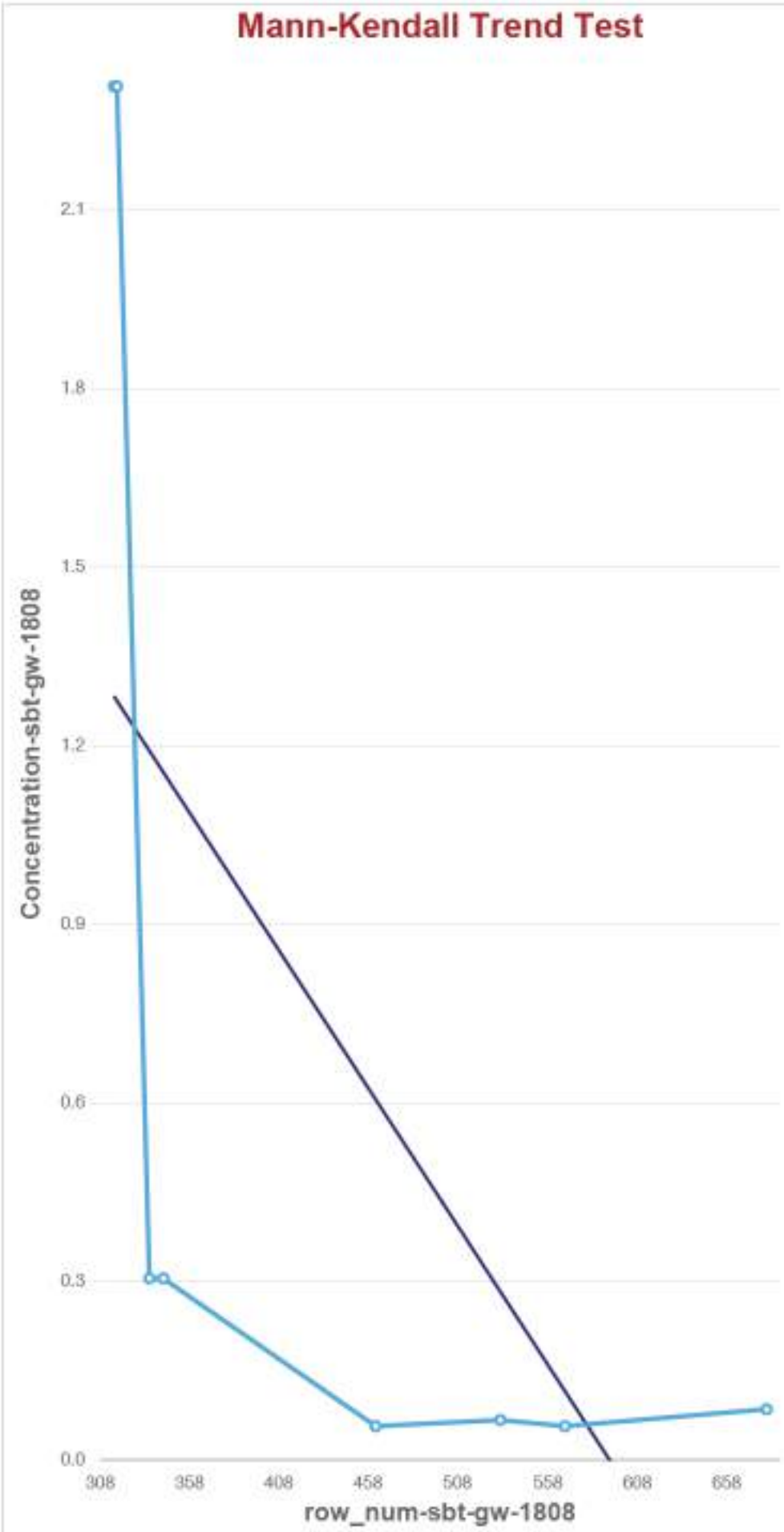
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9162
Standardized Value of S	-2.1475
M-K Test Value (S)	-18
Tabulated p-value	0.0380
Approximate p-value	0.0159

OLS Regression Line (Blue)

OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1766

Statistically significant evidence of a decreasing trend at the specified level of significance.

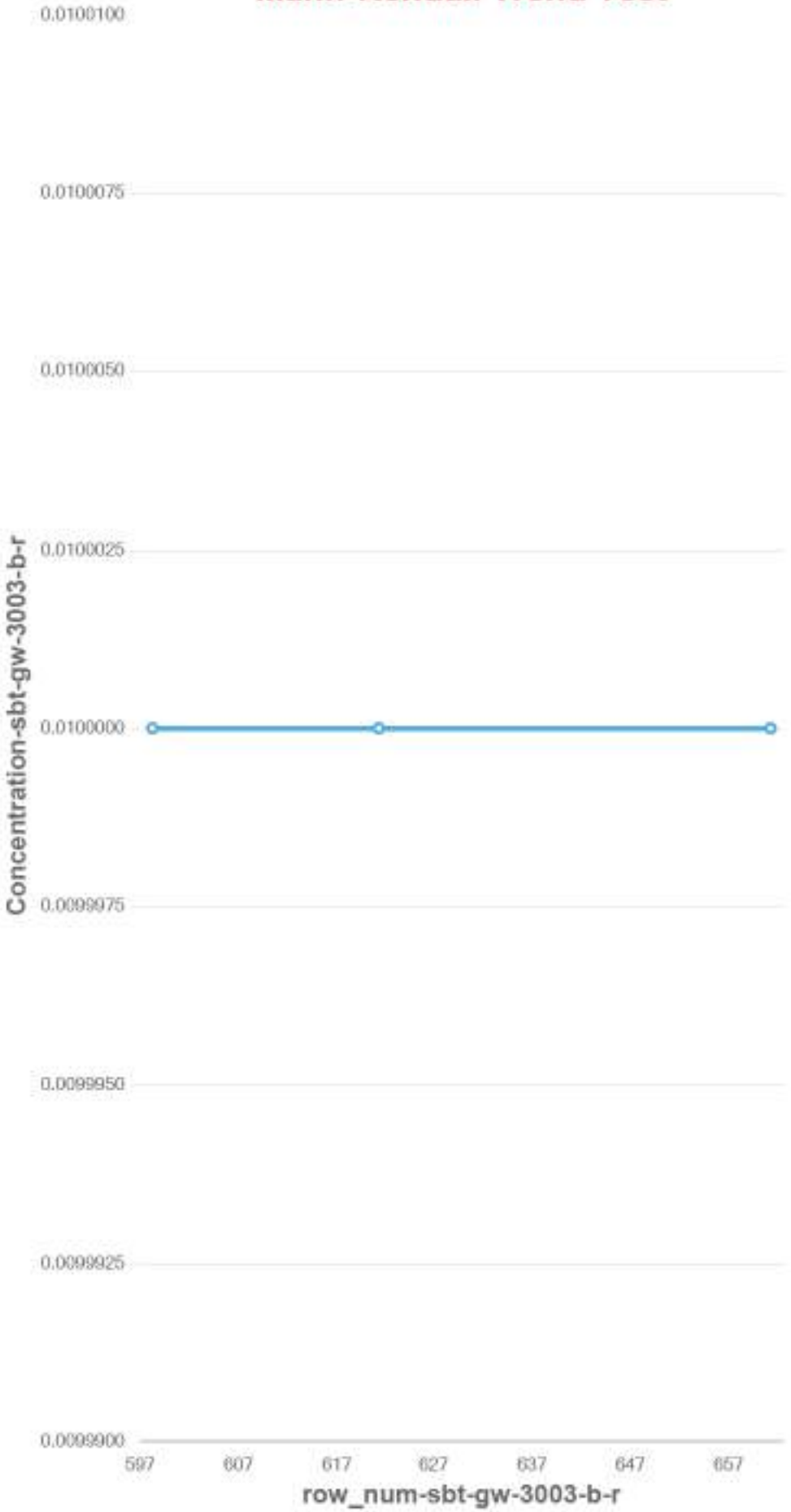


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.8951
Standardized Value of S	-2.0266
M-K Test Value (S)	-17
Tabulated p-value	0.0310
Approximate p-value	0.0214

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0046
OLS Regression Intercept	2.6999

Statistically significant evidence of a decreasing trend at the specified level of significance.

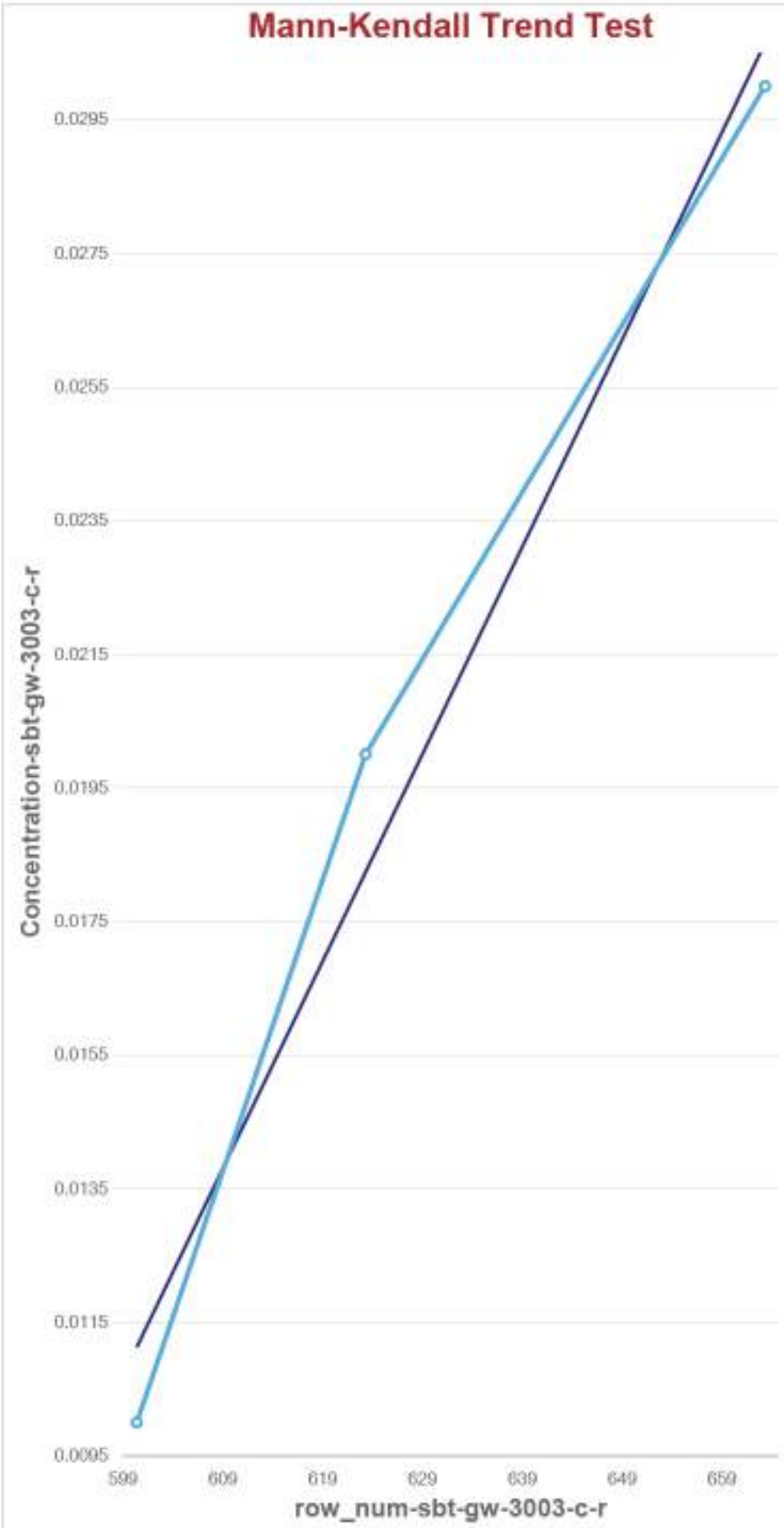
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0100

Insufficient statistical evidence of a significant trend at the specified level of significance.



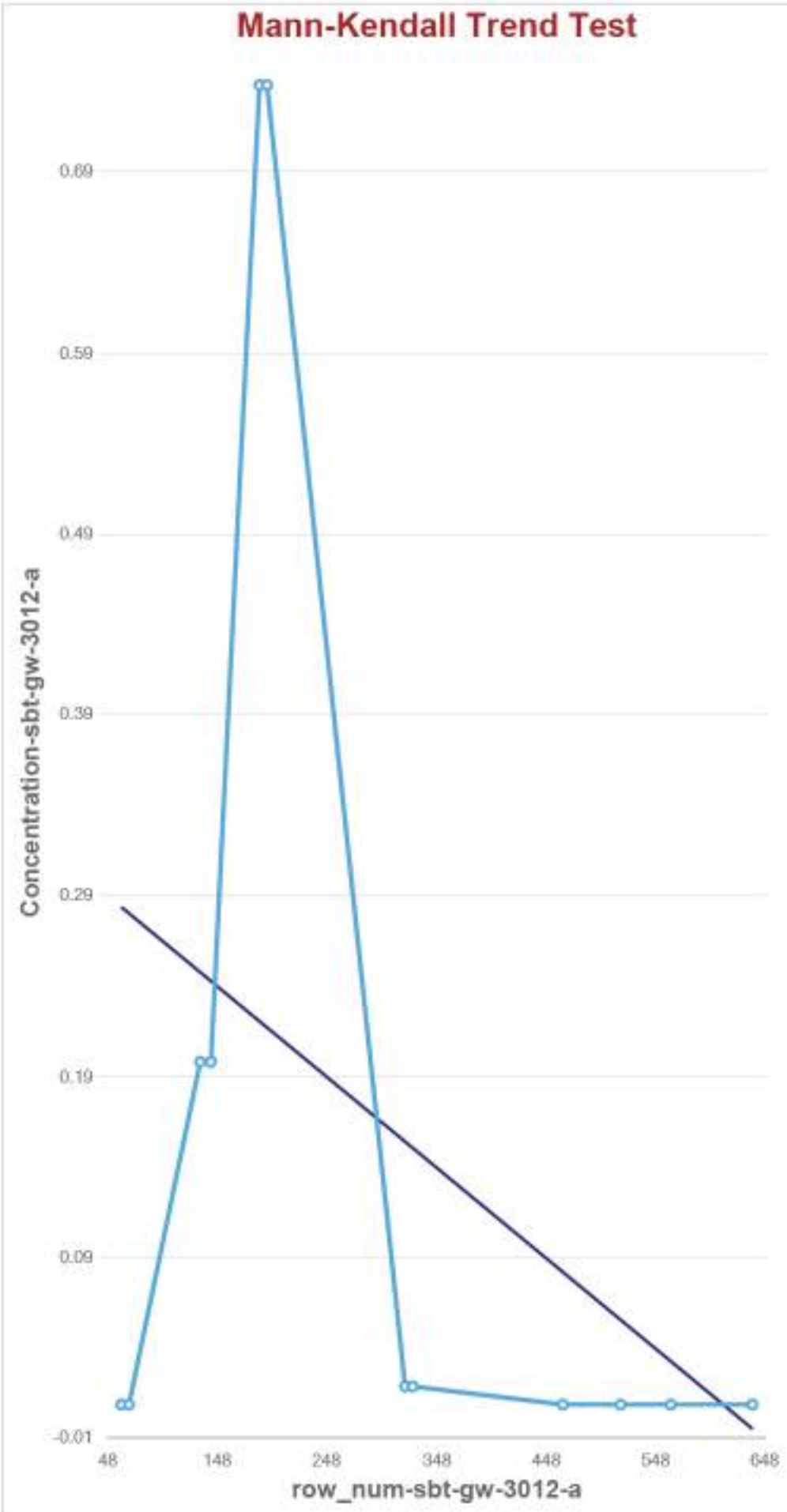
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

OLS Regression Line (Blue)

OLS Regression Slope	0.0003
OLS Regression Intercept	-0.1748

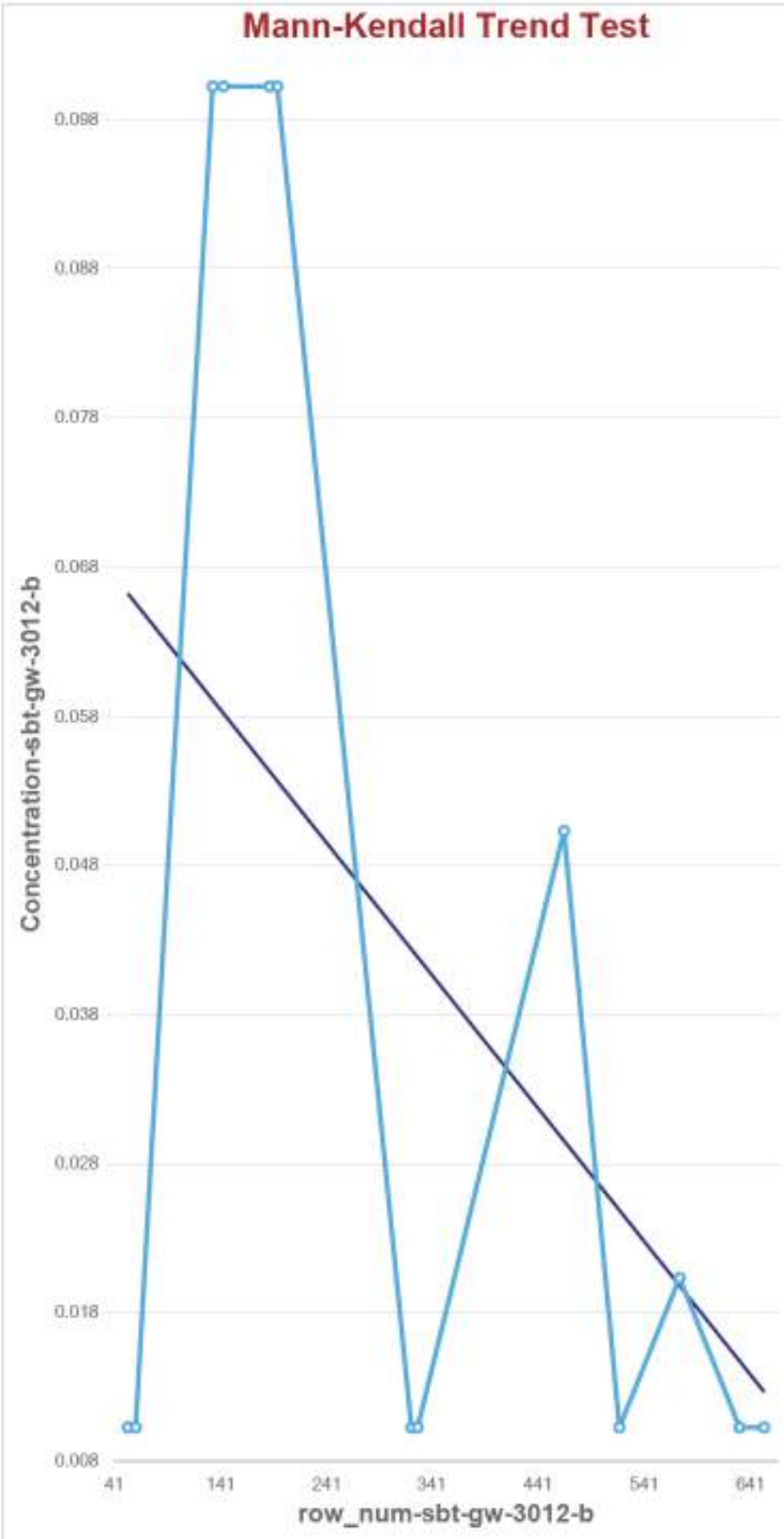
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.4660
Standardized Value of S	-1.1139
M-K Test Value (S)	-16
Tabulated p-value	0.1550
Approximate p-value	0.1327

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0005
OLS Regression Intercept	0.3152

Insufficient statistical evidence of a significant trend at the specified level of significance.



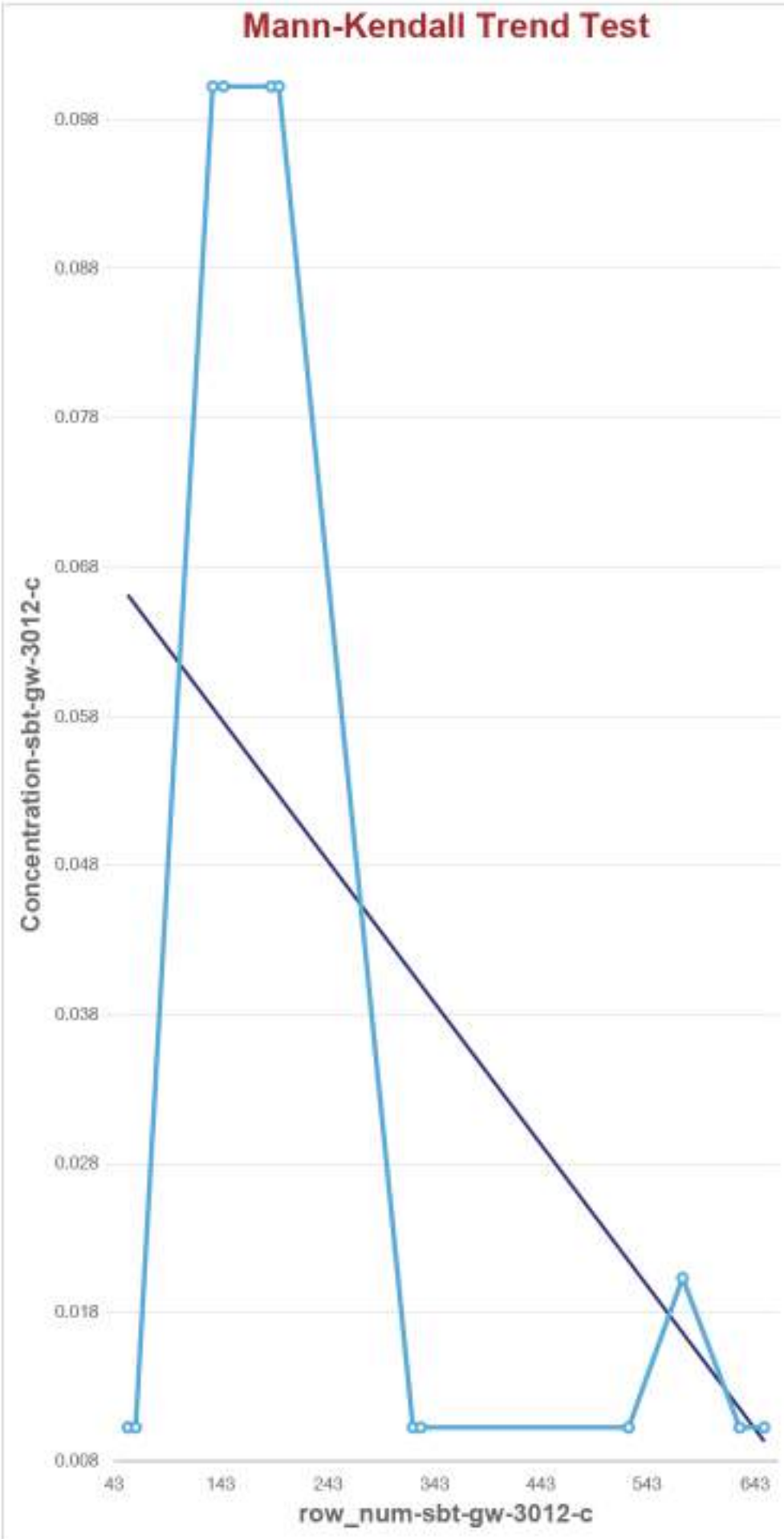
Mann-Kendall Trend Analysis

n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.6856
Standardized Value of S	-1.0895
M-K Test Value (S)	-17
Tabulated p-value	0.1840
Approximate p-value	0.1380

OLS Regression Line (Blue)

OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0708

Insufficient statistical evidence of a significant trend at the specified level of significance.



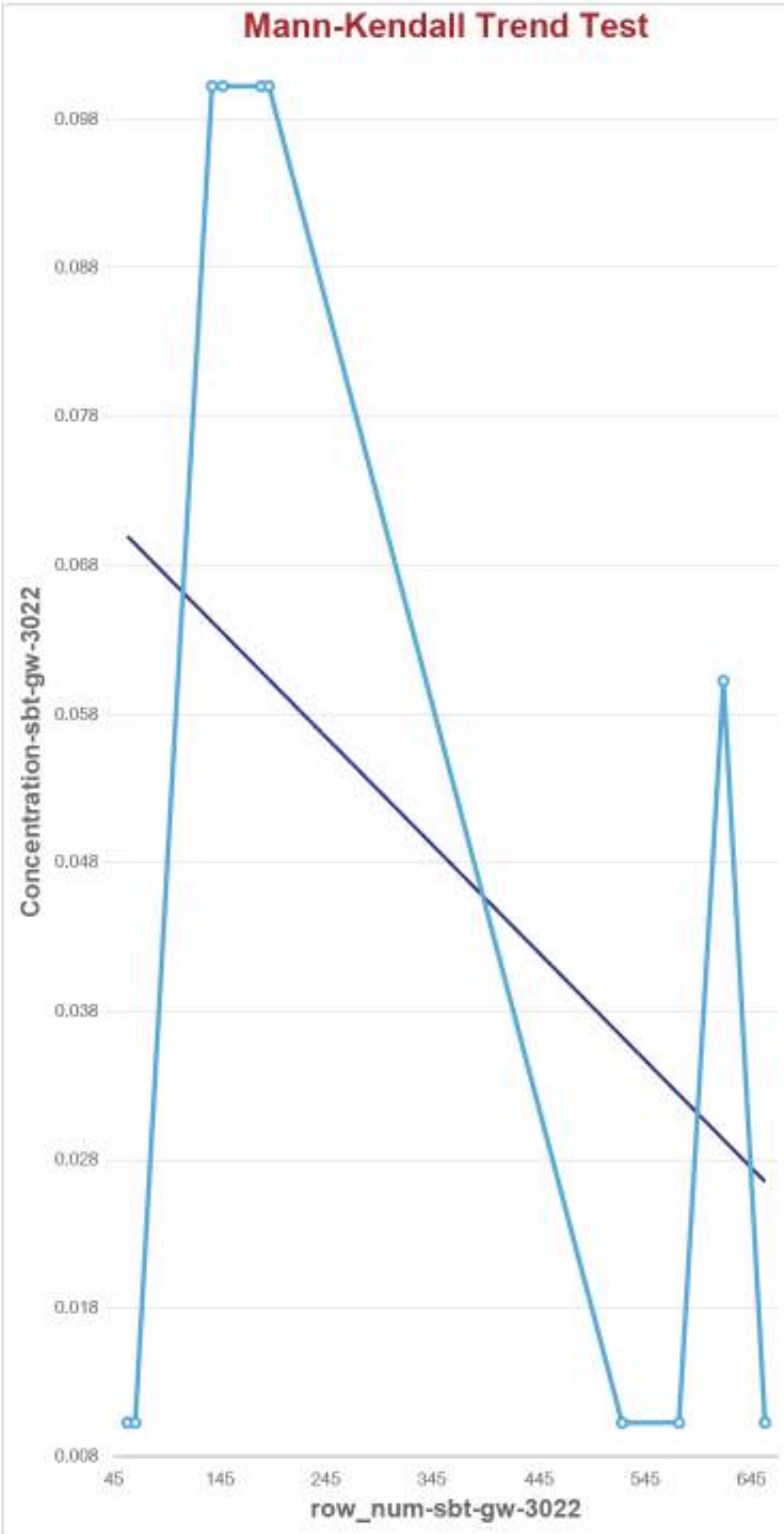
Mann-Kendall Trend Analysis

n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6359
Standardized Value of S	-0.9497
M-K Test Value (S)	-13
Tabulated p-value	0.2300
Approximate p-value	0.1711

OLS Regression Line (Blue)

OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0712

Insufficient statistical evidence of a significant trend at the specified level of significance.

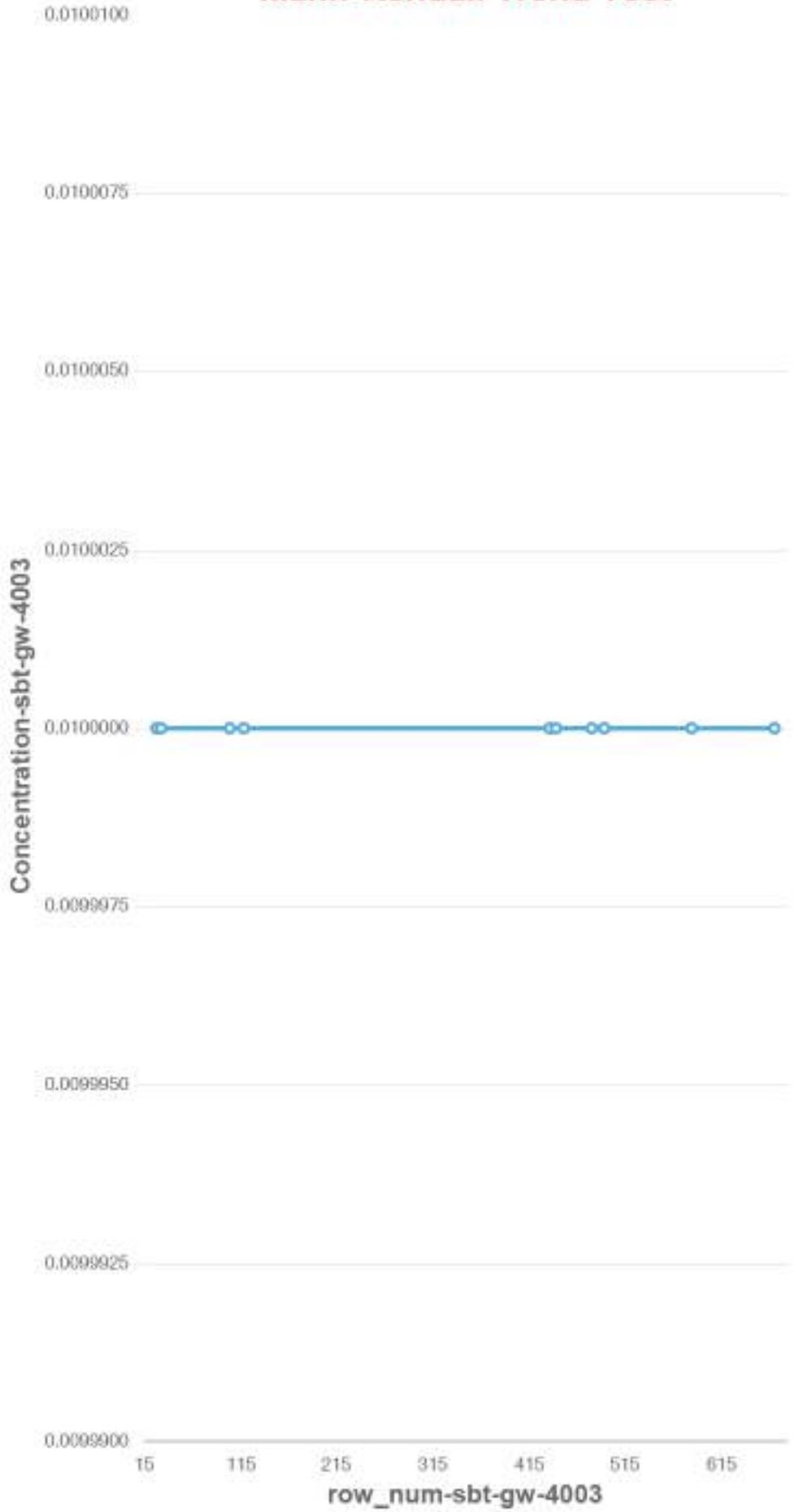


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.9833
Standardized Value of S	-0.4007
M-K Test Value (S)	-5
Tabulated p-value	0.3640
Approximate p-value	0.3443

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0738

Insufficient statistical evidence of a significant trend at the specified level of significance.

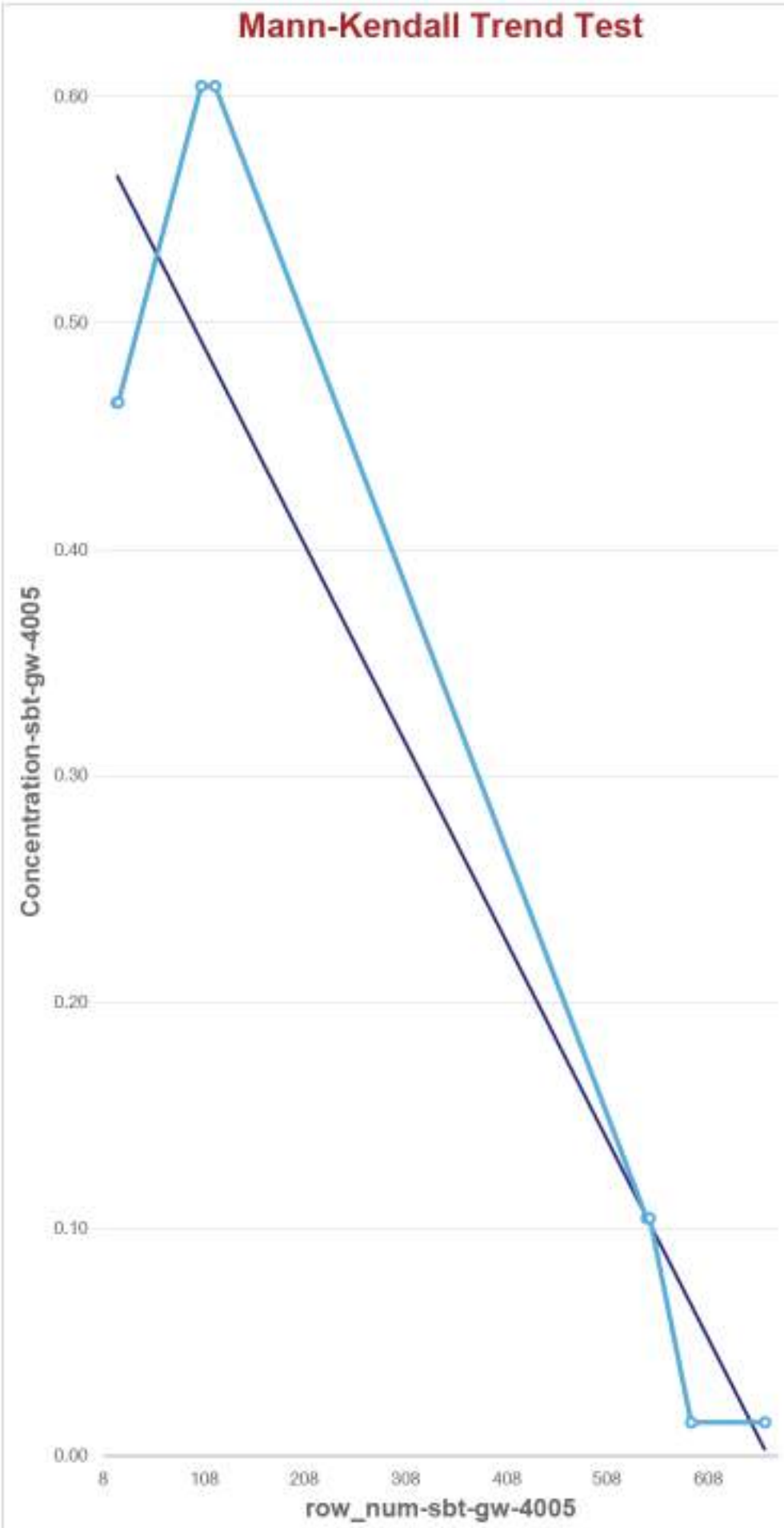
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0100

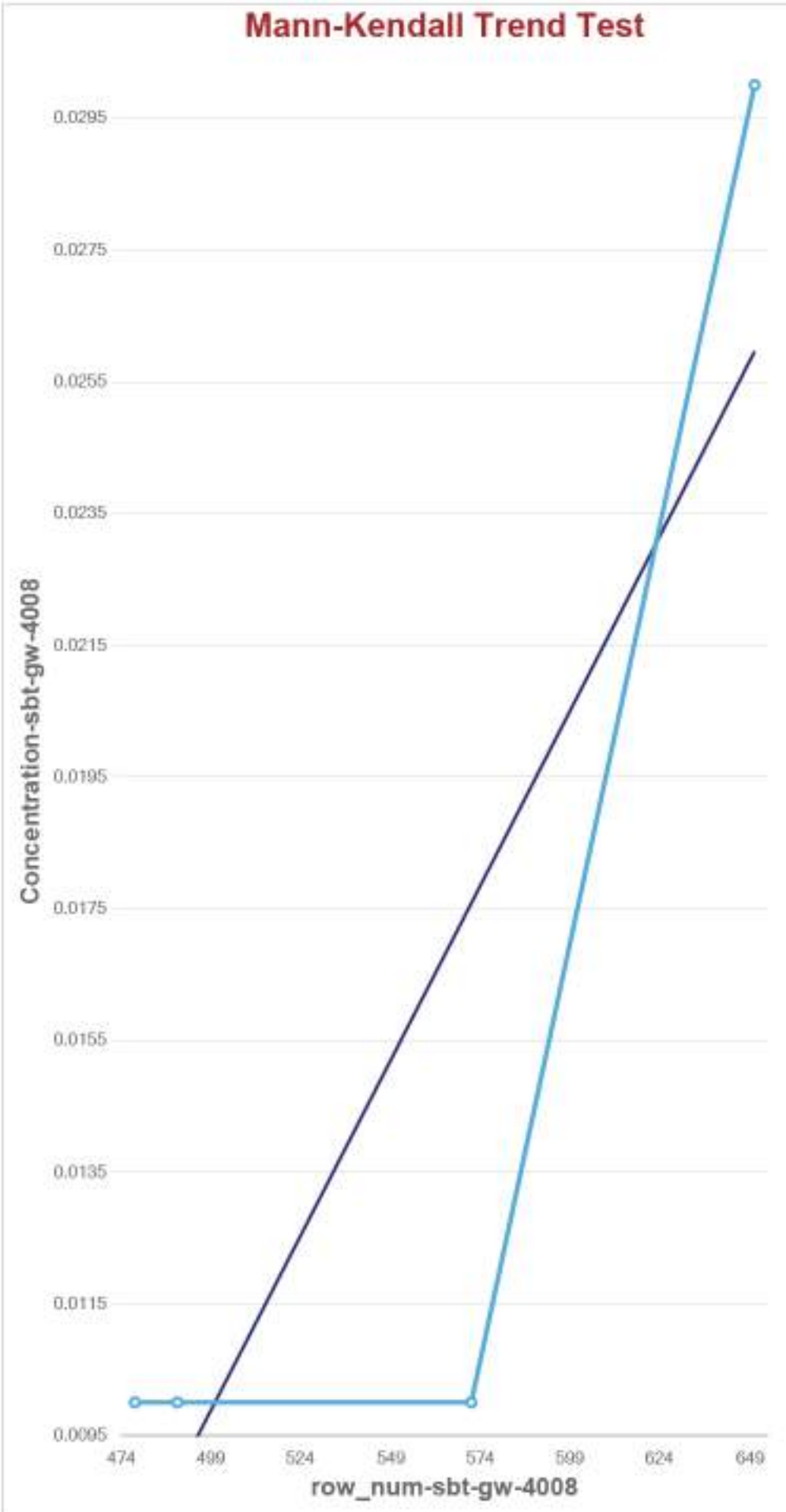
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.8316
Standardized Value of S	-1.9153
M-K Test Value (S)	-16
Tabulated p-value	0.0310
Approximate p-value	0.0277

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0009
OLS Regression Intercept	0.5796

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

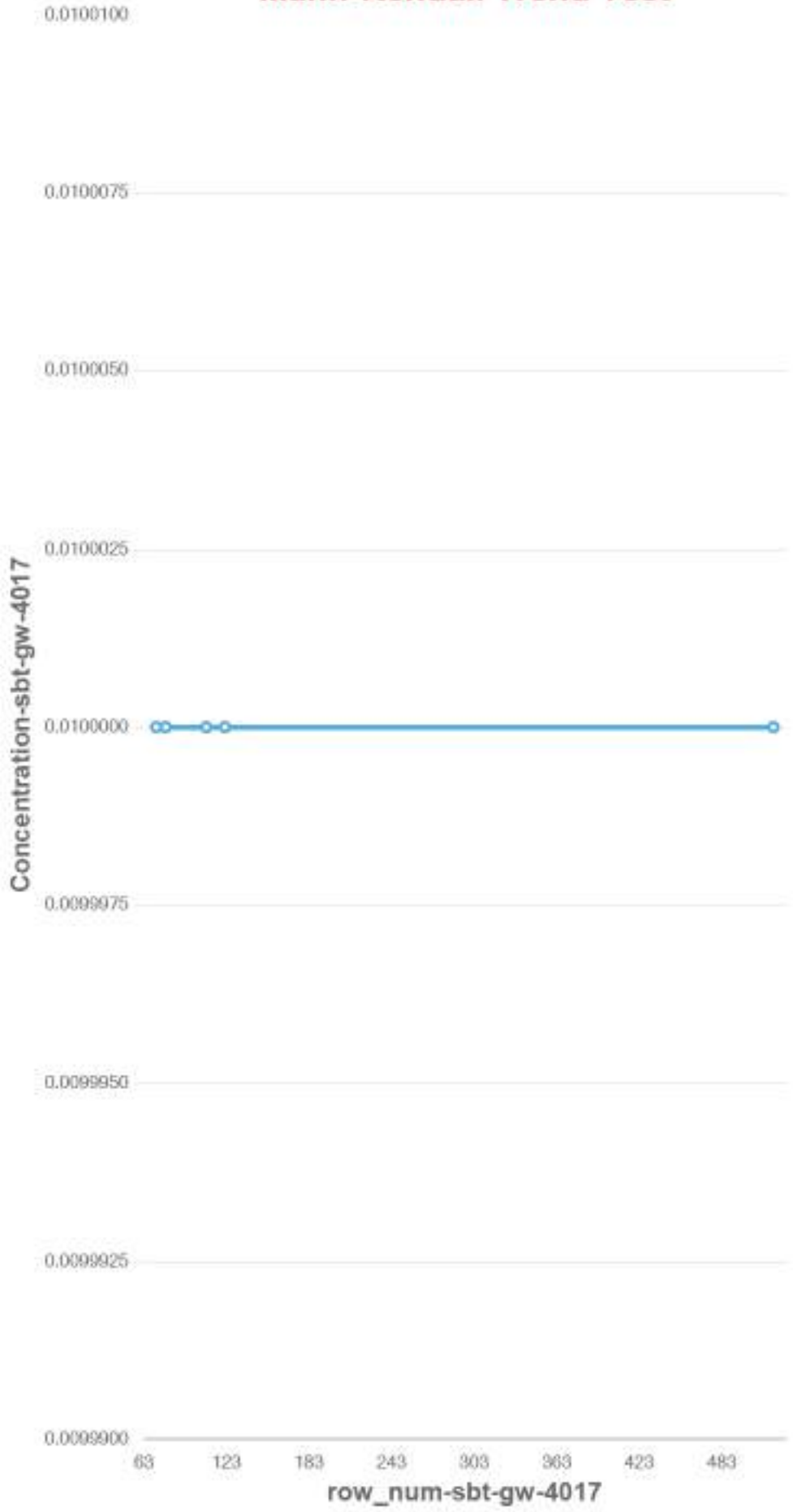
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.2361
Standardized Value of S	0.8944
M-K Test Value (S)	3
Tabulated p-value	0.3750
Approximate p-value	0.1855

OLS Regression Line (Blue)

OLS Regression Slope	0.0001
OLS Regression Intercept	-0.0432

Insufficient statistical evidence of a significant trend at the specified level of significance.

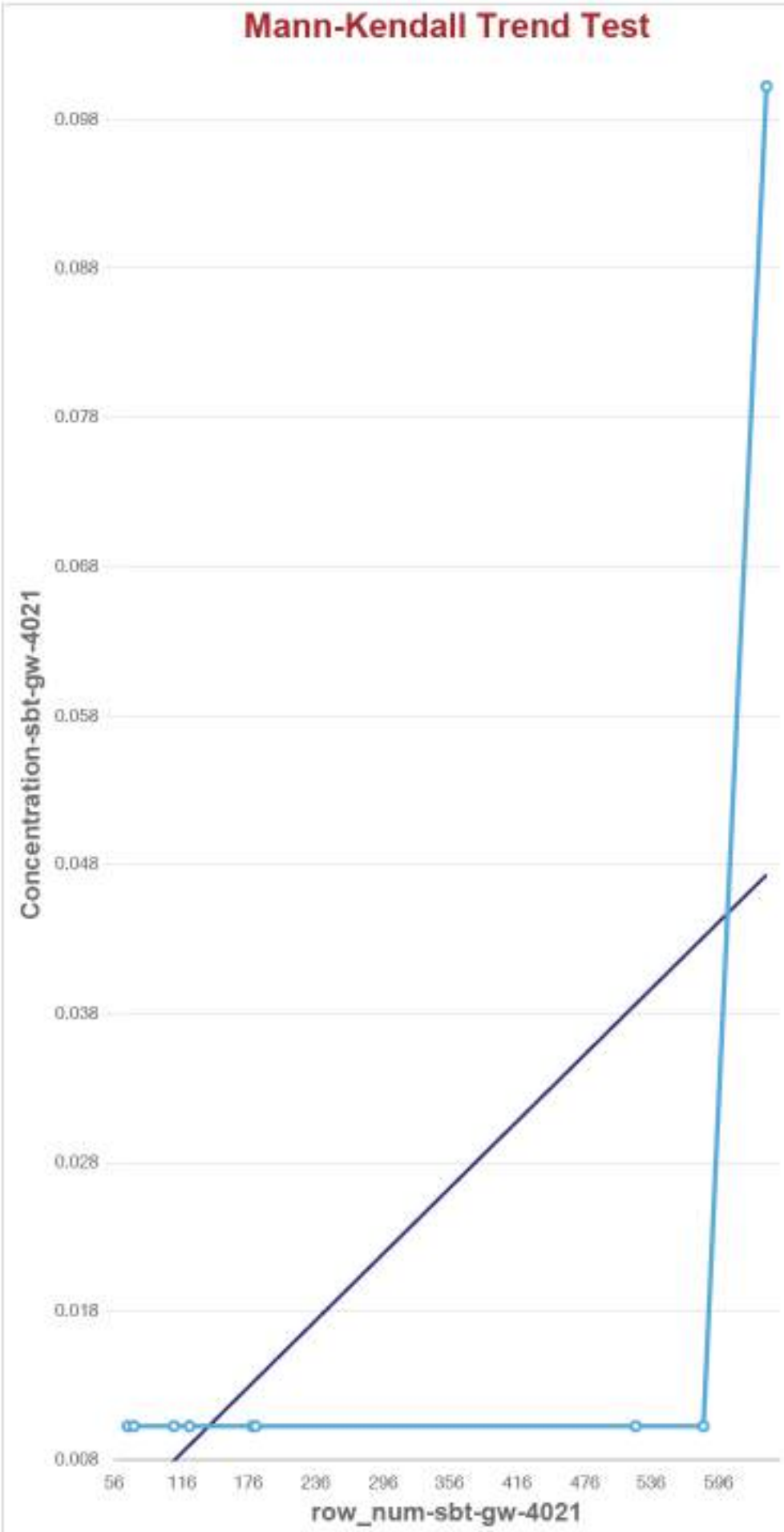
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5920
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0100

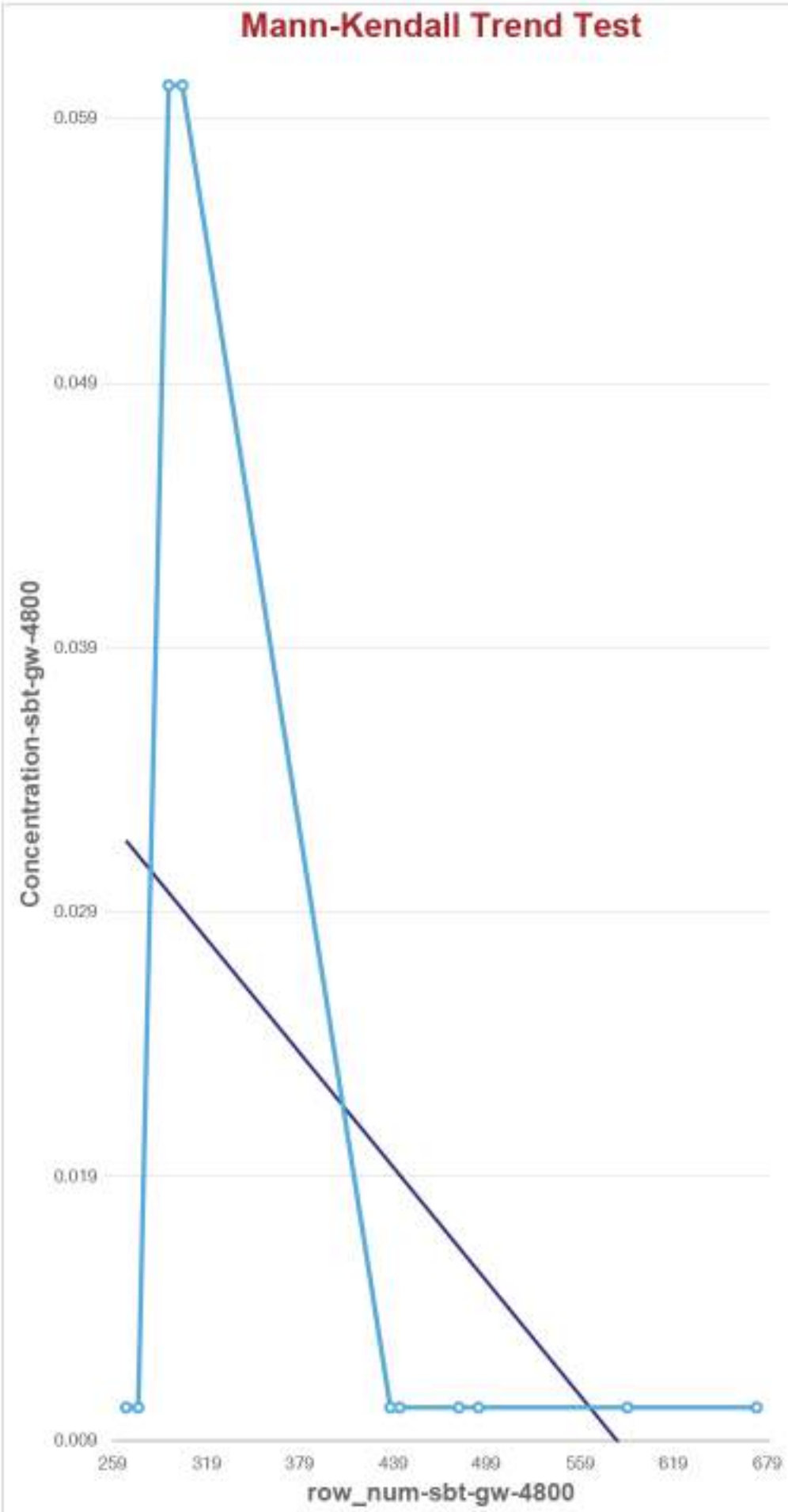
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.1640
Standardized Value of S	1.3555
M-K Test Value (S)	8
Tabulated p-value	0.2380
Approximate p-value	0.0876

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	-0.0005

Insufficient statistical evidence of a significant trend at the specified level of significance.

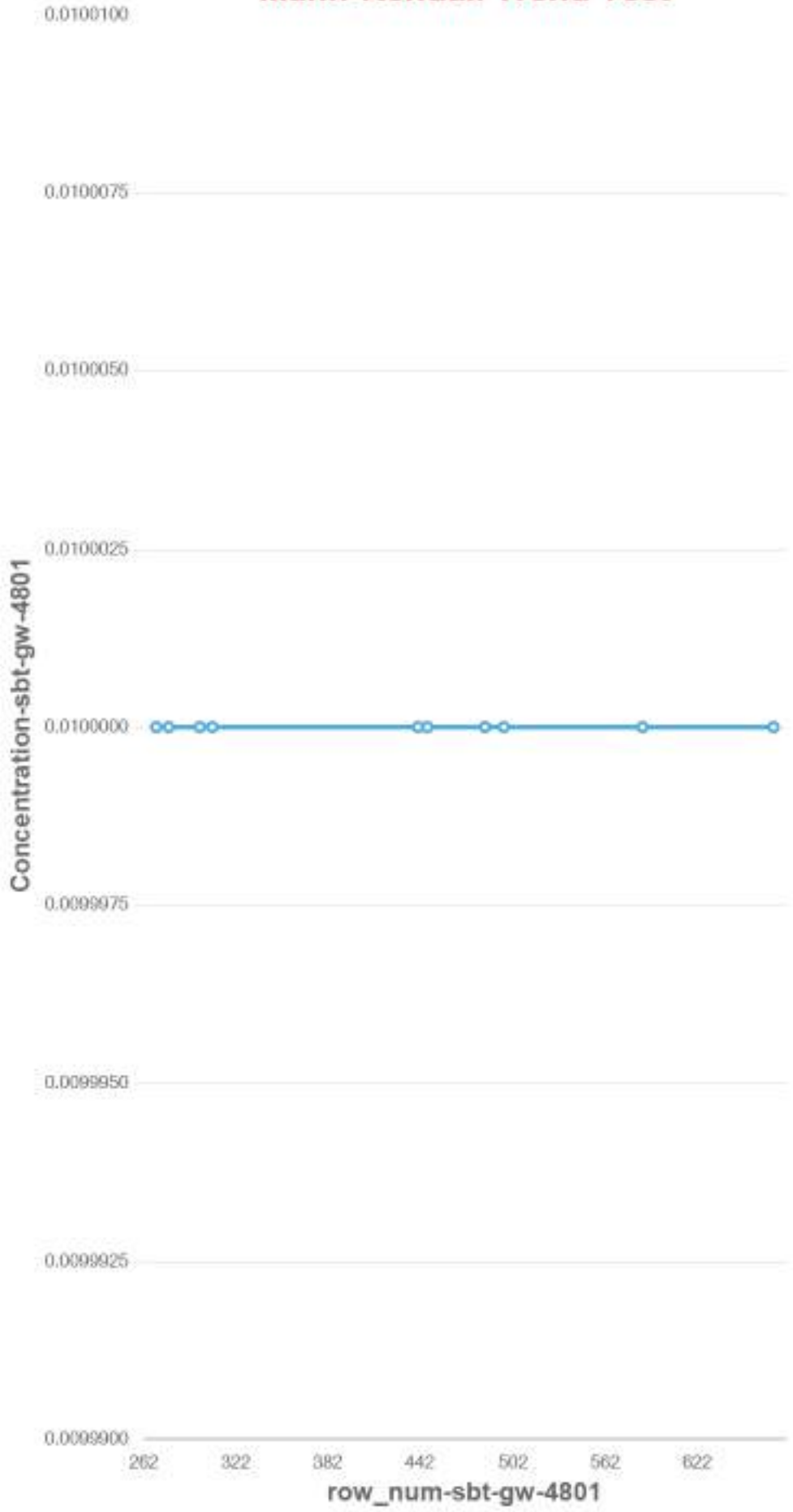


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.6594
Standardized Value of S	-0.9139
M-K Test Value (S)	-8
Tabulated p-value	0.2420
Approximate p-value	0.1804

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0508

Insufficient statistical evidence of a significant trend at the specified level of significance.

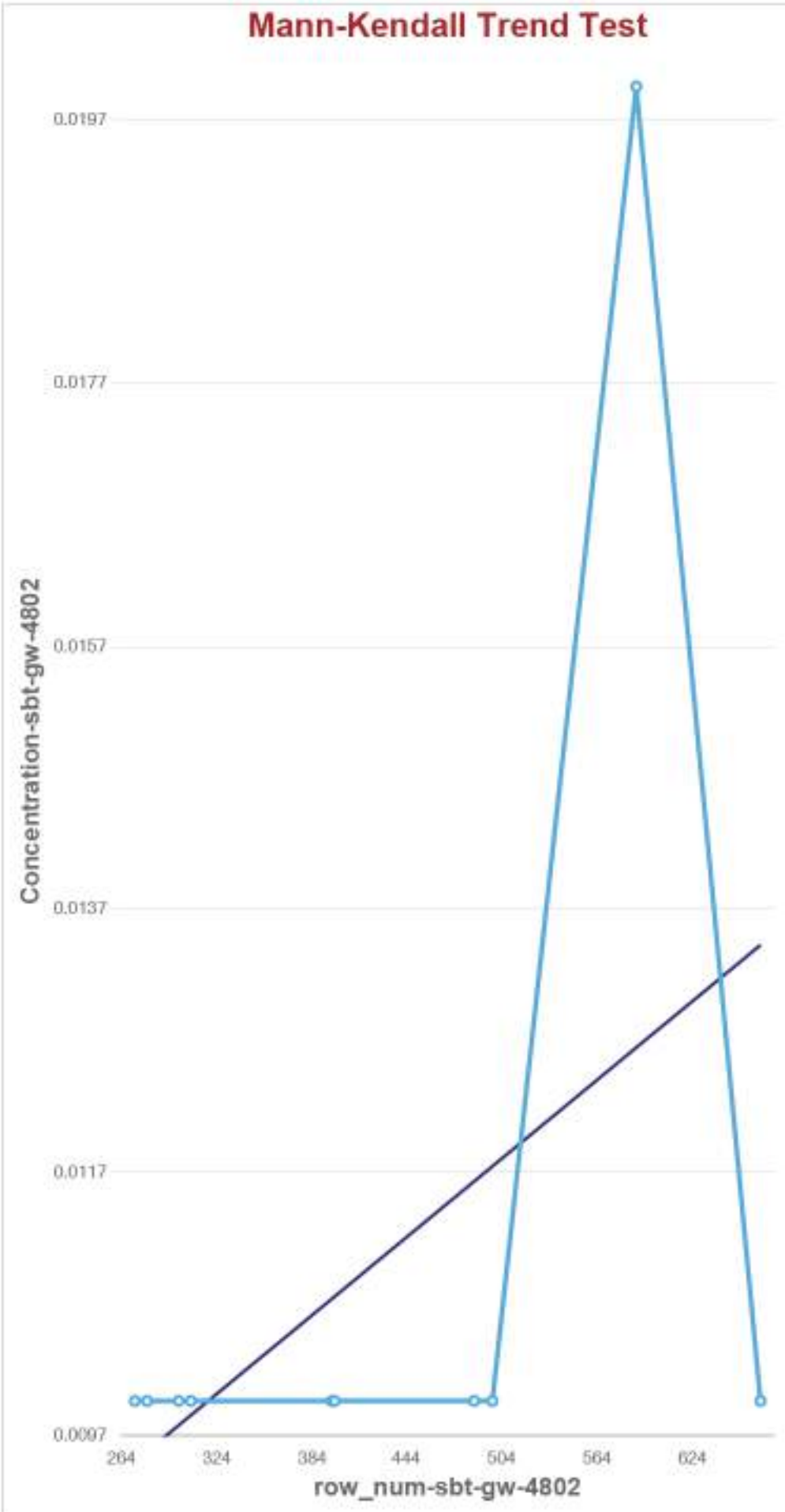
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0100

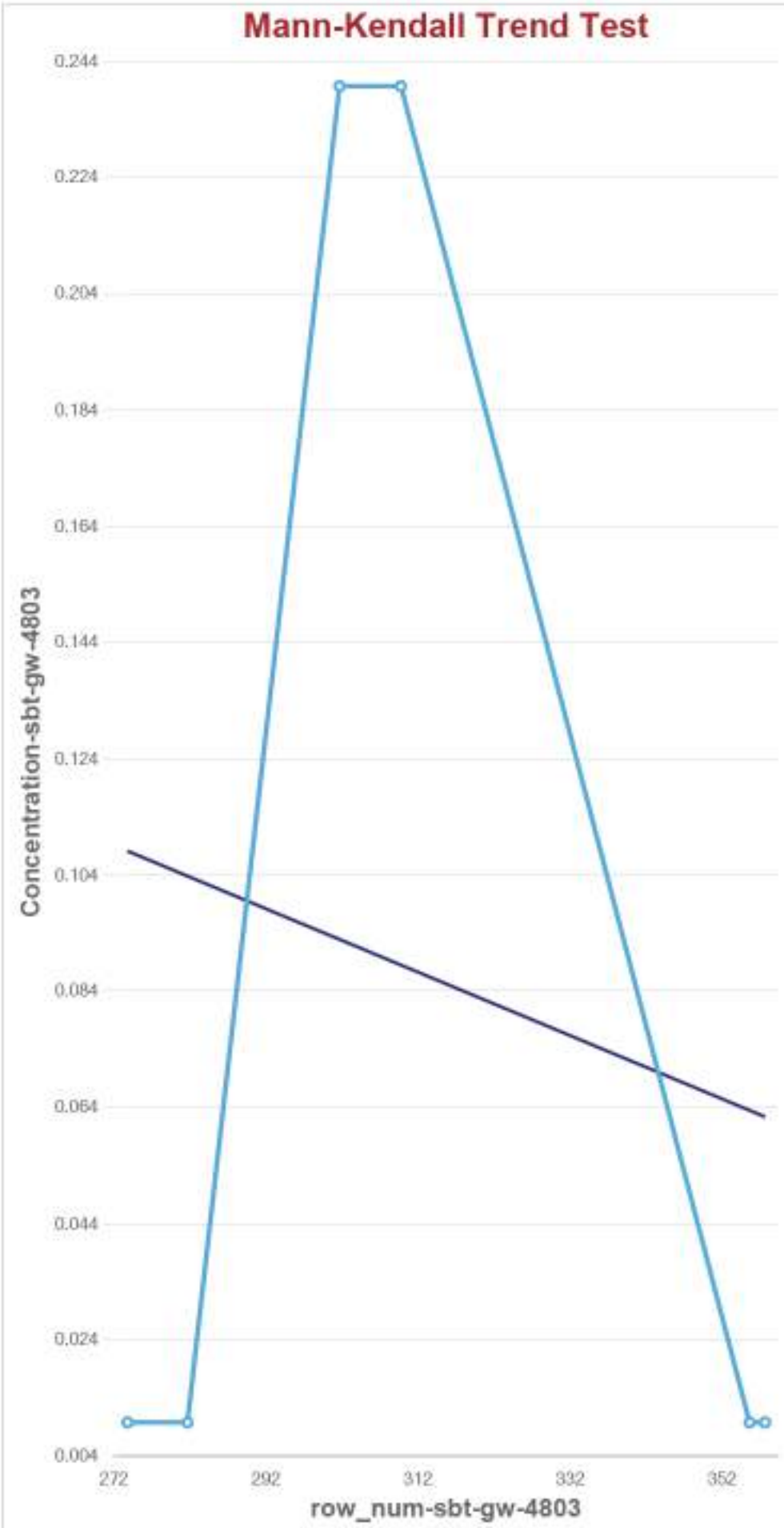
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	1.0445
M-K Test Value (S)	7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0068

Insufficient statistical evidence of a significant trend at the specified level of significance.



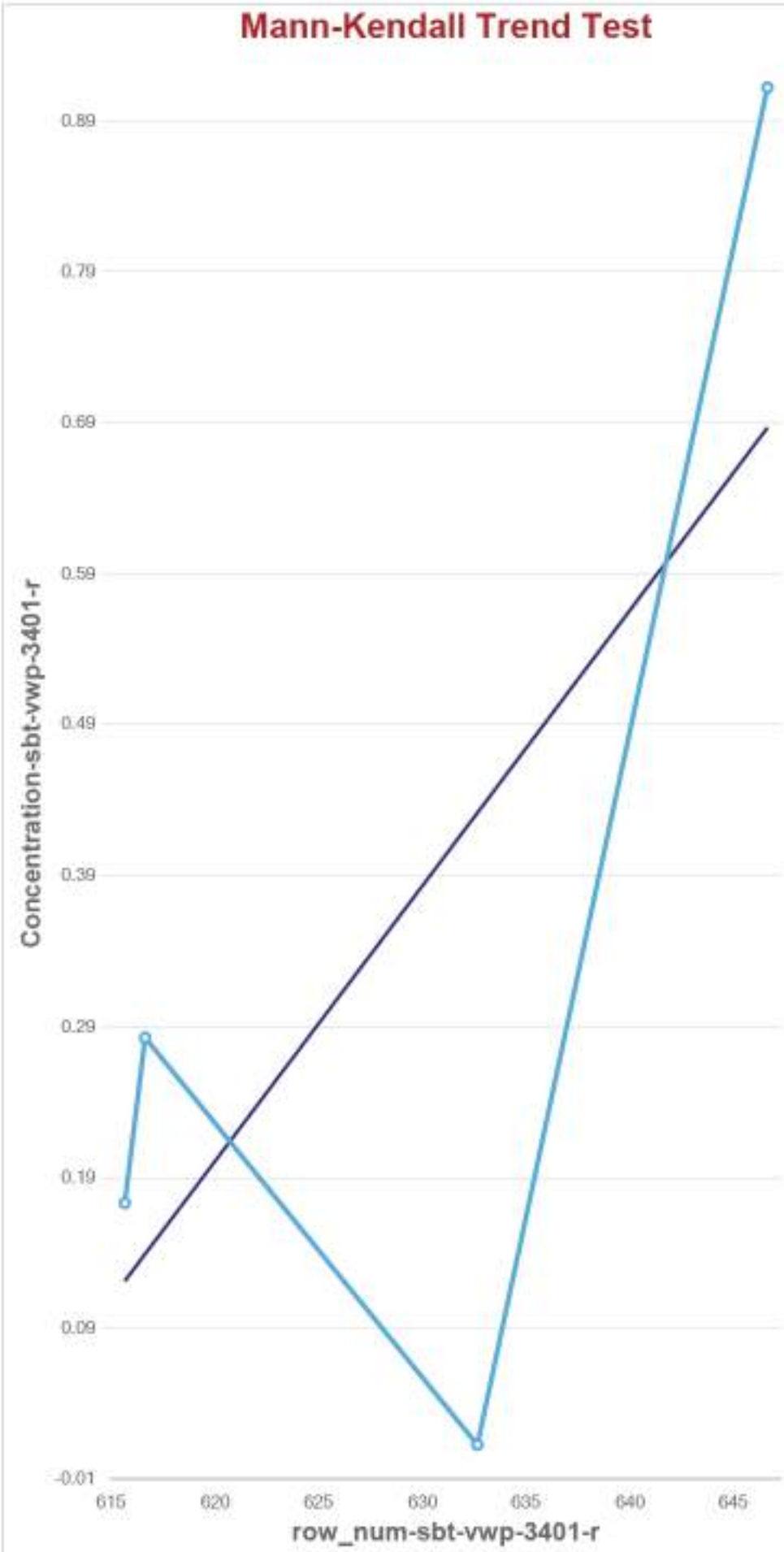
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.3205
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	-0.0005
OLS Regression Intercept	0.2573

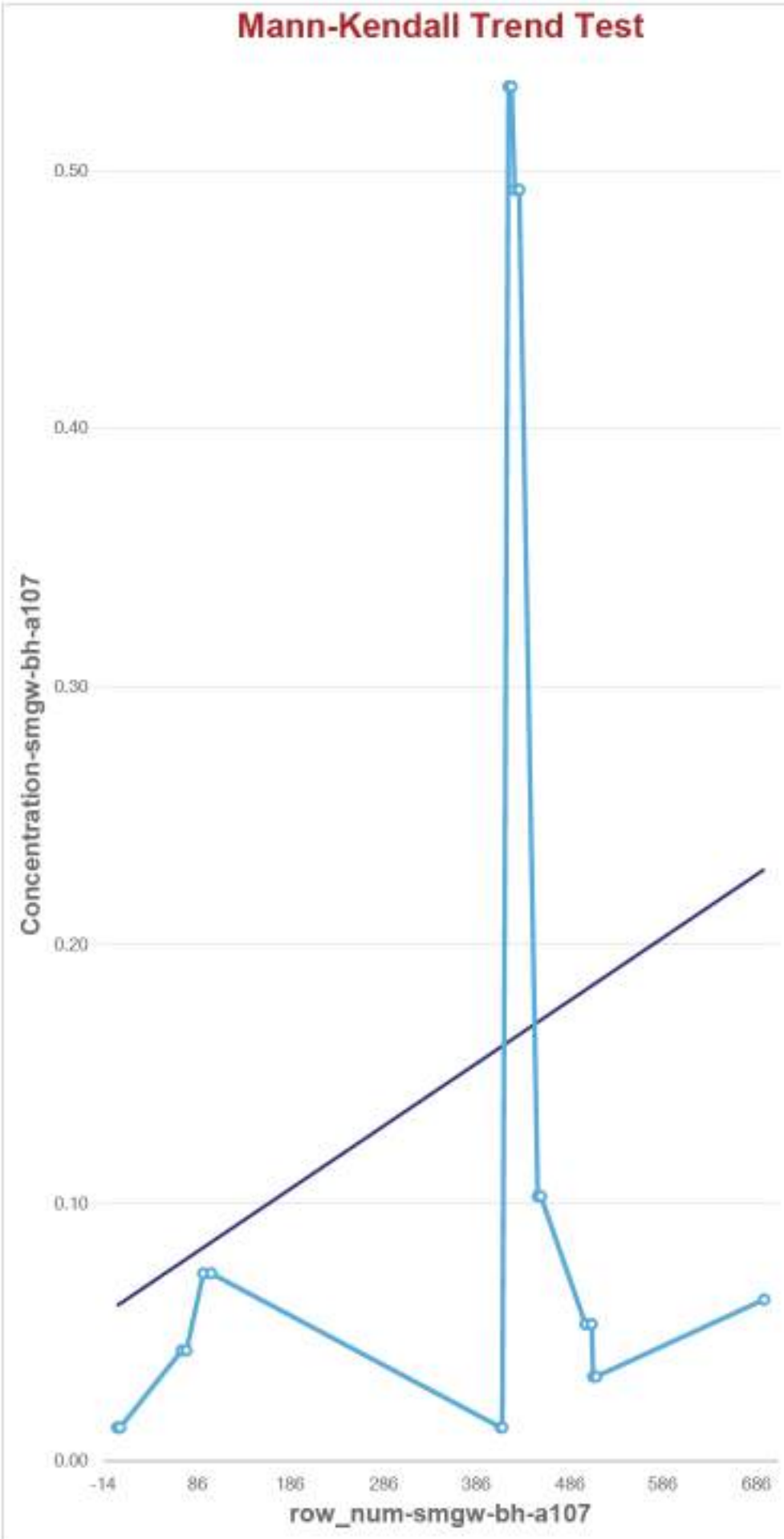
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.9439
Standardized Value of S	0.3397
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3670

OLS Regression Line (Blue)	
OLS Regression Slope	0.0183
OLS Regression Intercept	-11.1243

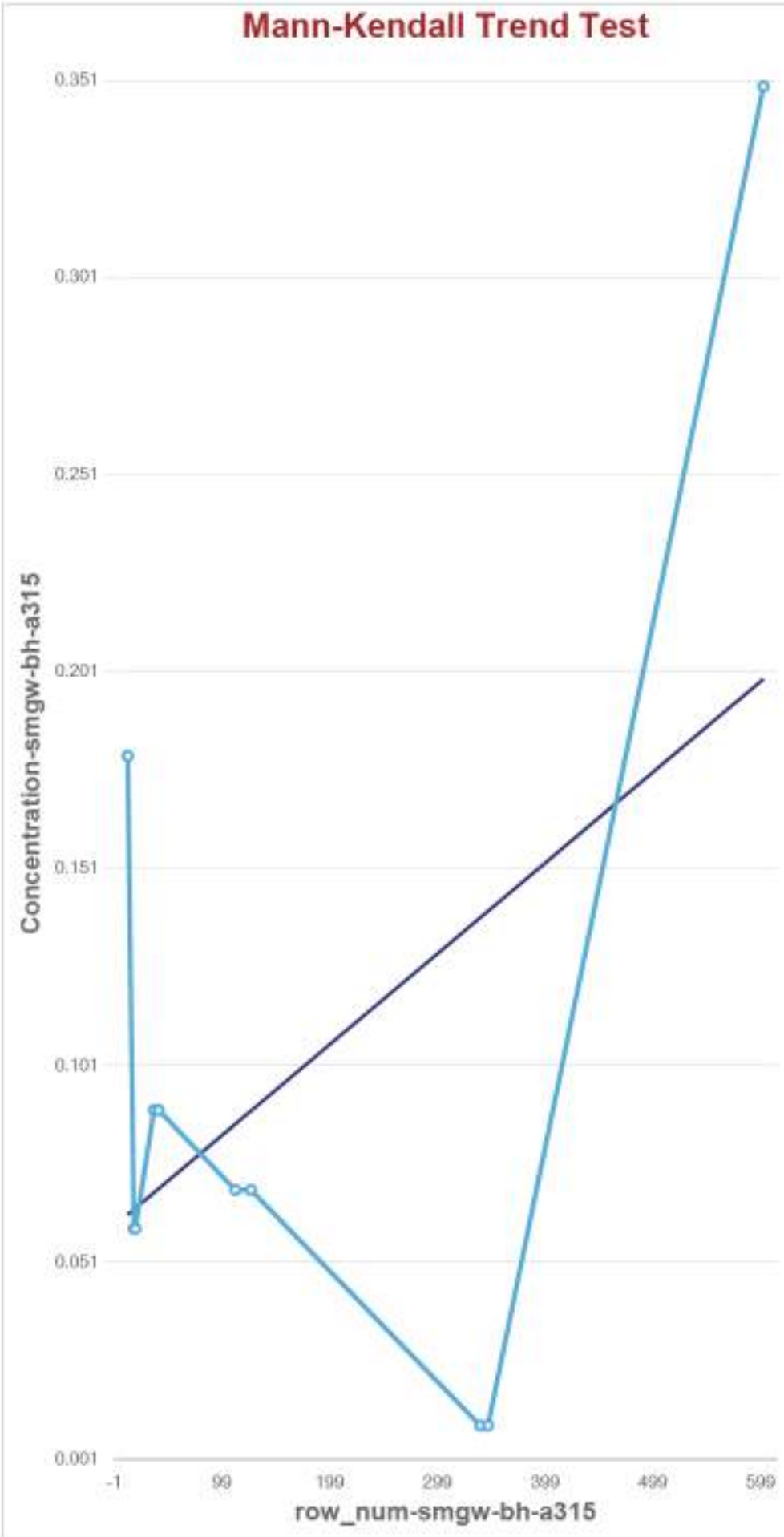
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.4357
Standardized Value of S	1.1828
M-K Test Value (S)	37
Tabulated p-value	0.1300
Approximate p-value	0.1184

OLS Regression Line (Blue)	
OLS Regression Slope	0.0002
OLS Regression Intercept	0.0571

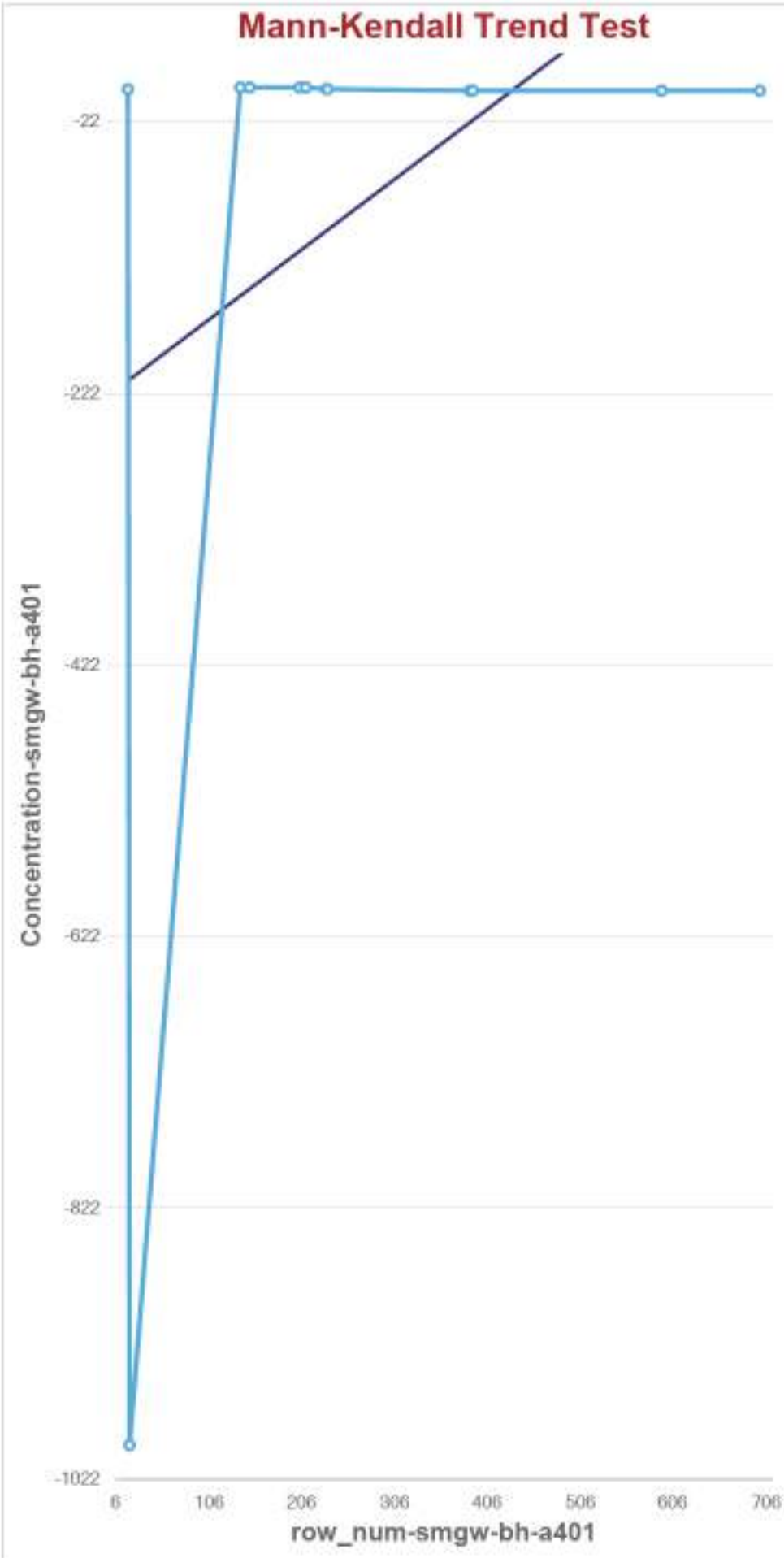
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-0.5455
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.2927

OLS Regression Line (Blue)	
OLS Regression Slope	0.0002
OLS Regression Intercept	0.0611

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

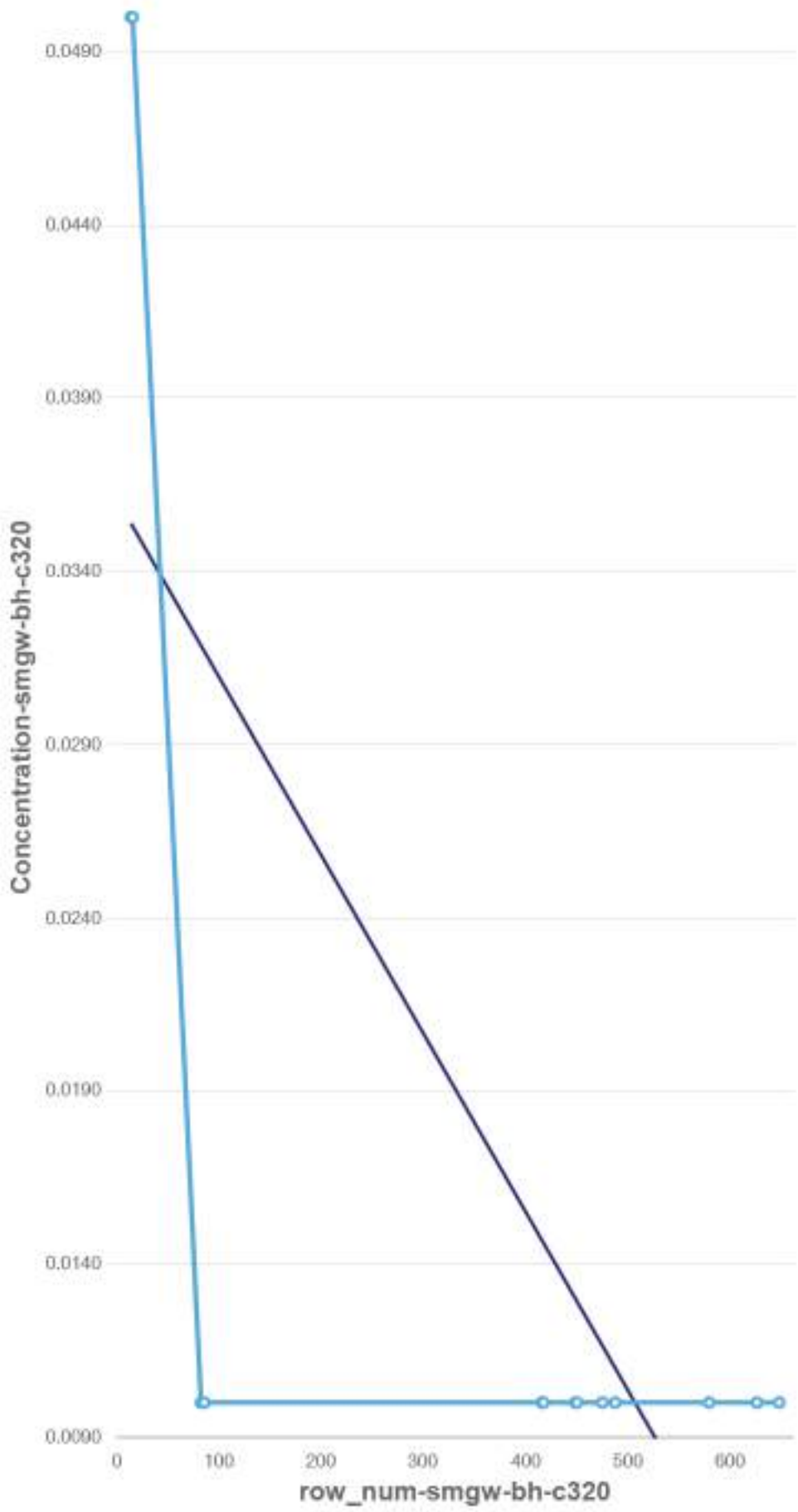
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4453
Standardized Value of S	-1.8691
M-K Test Value (S)	-28
Tabulated p-value	0.0310
Approximate p-value	0.0308

OLS Regression Line (Blue)

OLS Regression Slope	0.5173
OLS Regression Interoept	-223.1255

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

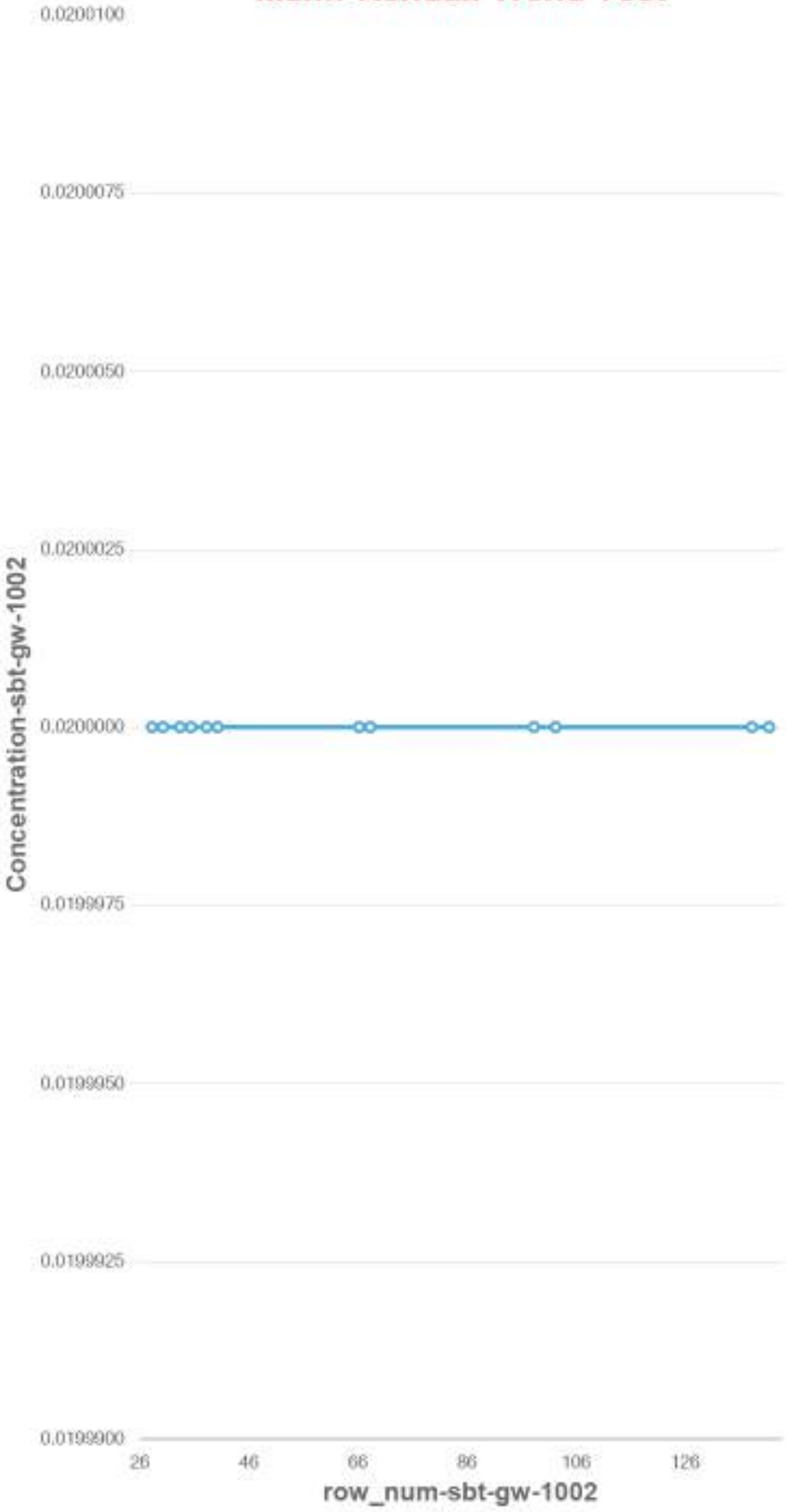


Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.8452
Standardized Value of S	-2.4912
M-K Test Value (S)	-33
Tabulated p-value	0.0400
Approximate p-value	0.0064

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0361

Statistically significant evidence of a decreasing trend at the specified level of significance.

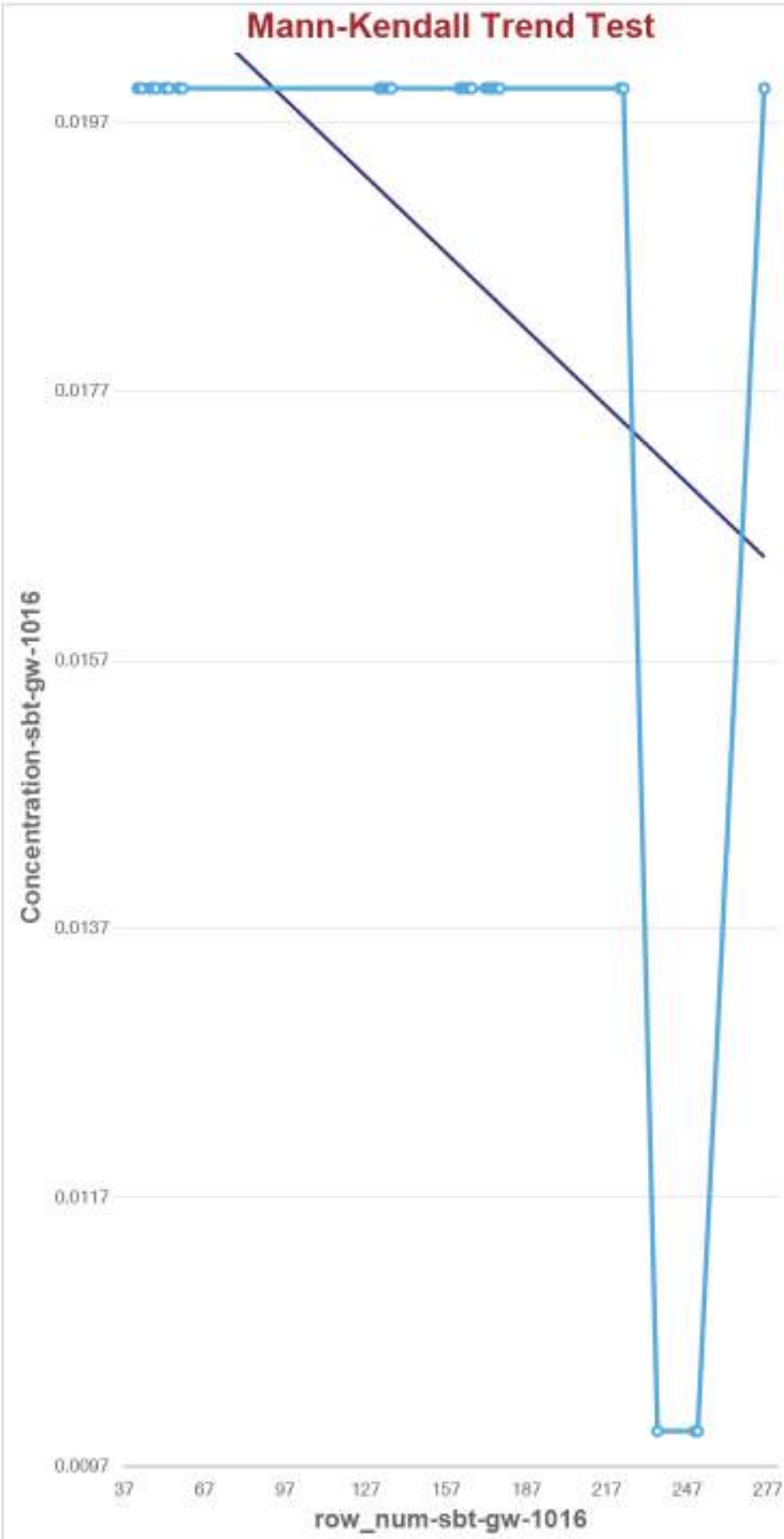
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5270
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.



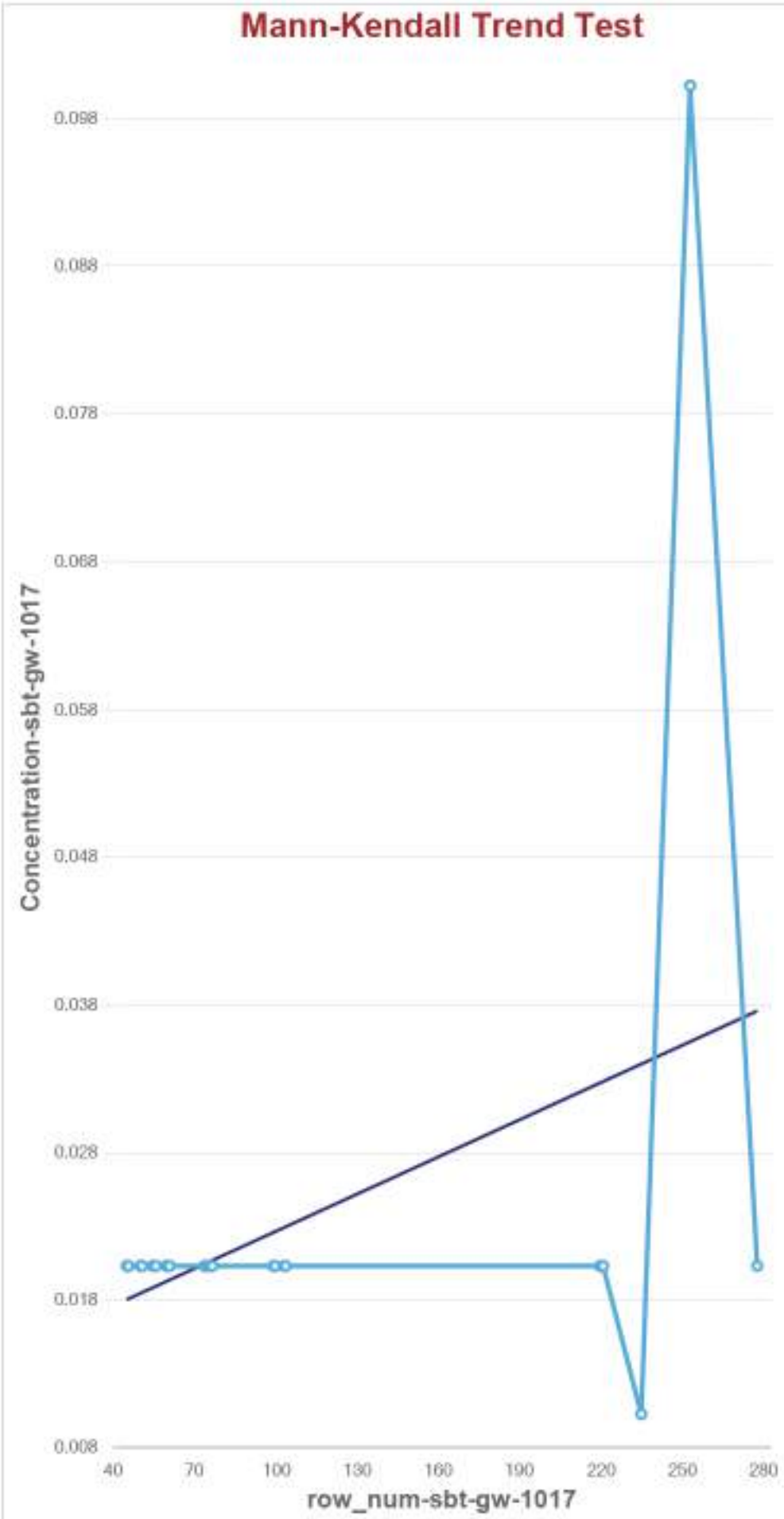
Mann-Kendall Trend Analysis

n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	34.9428
Standardized Value of S	-2.6329
M-K Test Value (S)	-93
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0042

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0218

Statistically significant evidence of a decreasing trend at the specified level of significance.

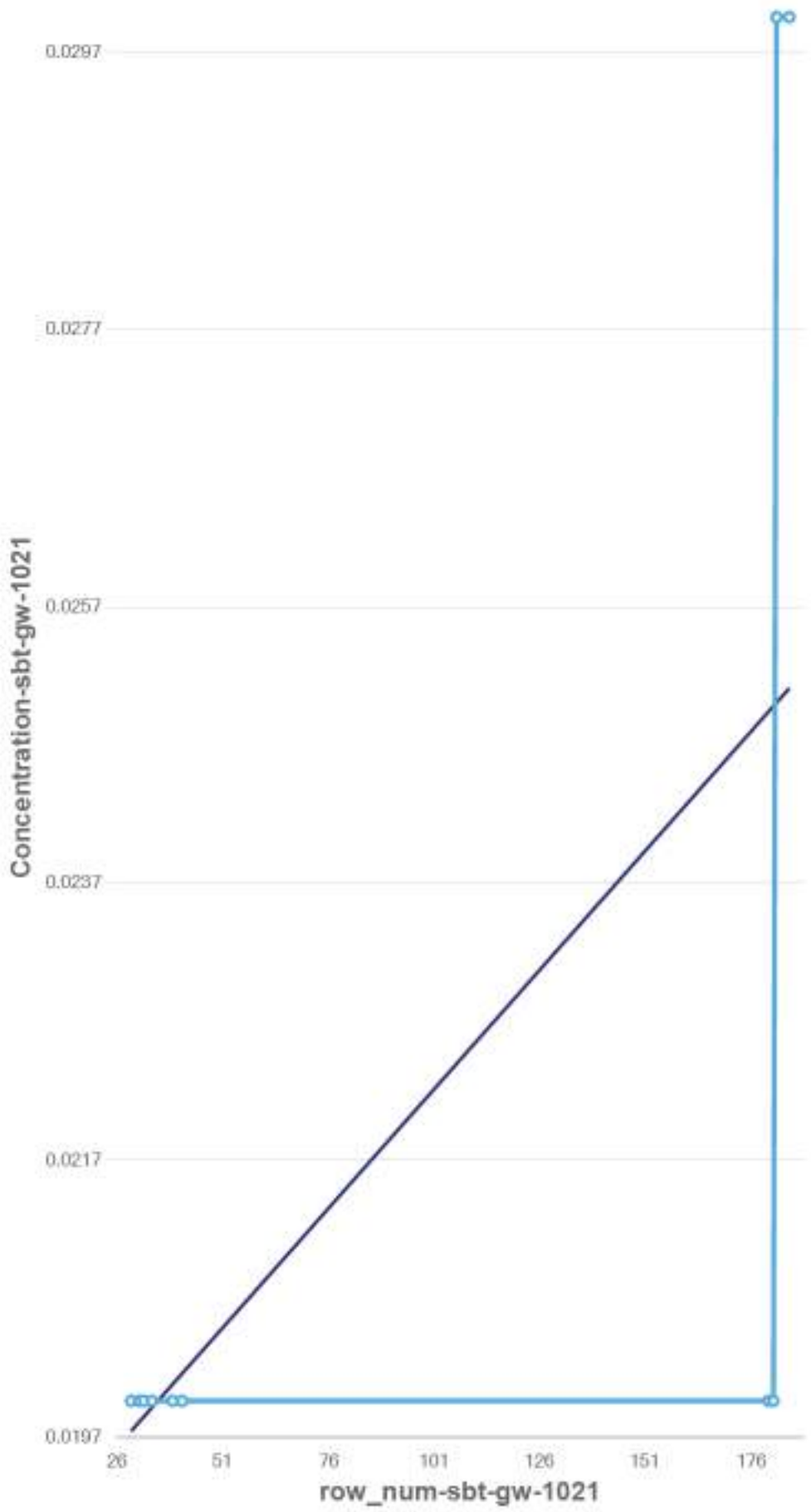


Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.7232
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5120
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.0140

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

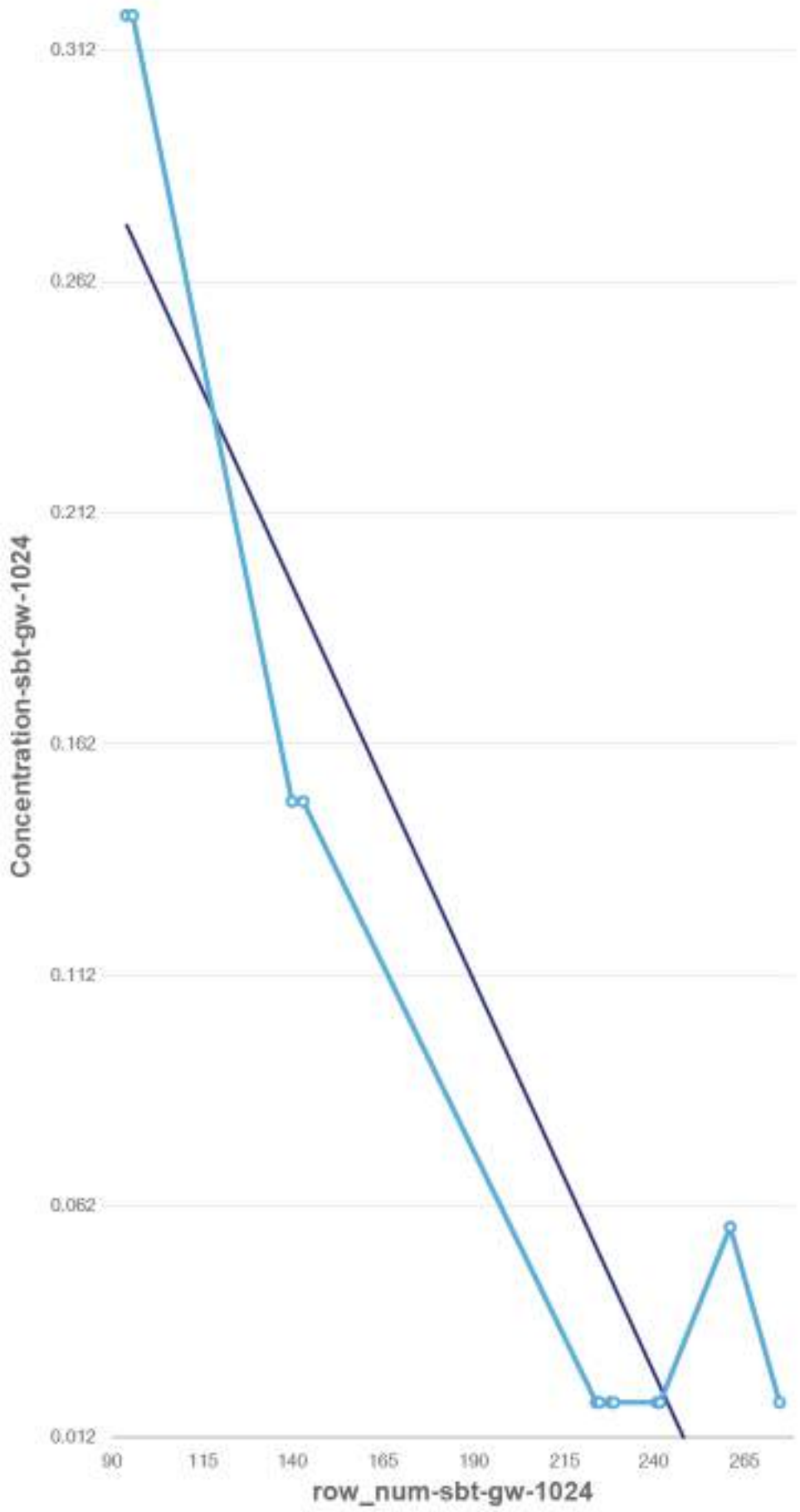


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.6594
Standardized Value of S	1.9584
M-K Test Value (S)	16
Tabulated p-value	0.0780
Approximate p-value	0.0251

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0188

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

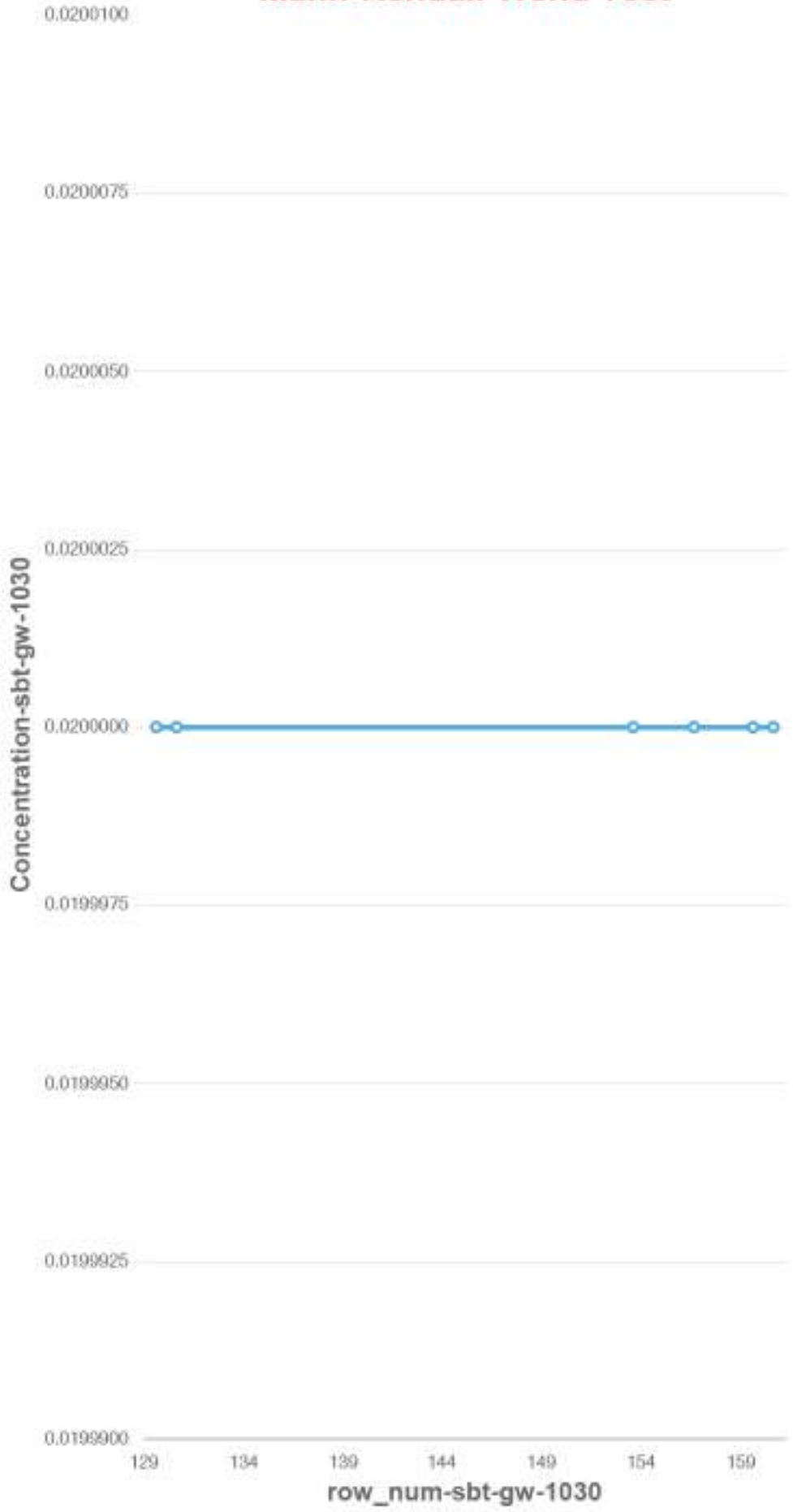


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.8970
Standardized Value of S	-2.3261
M-K Test Value (S)	-31
Tabulated p-value	0.0220
Approximate p-value	0.0100

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0017
OLS Regression Intercept	0.4348

Statistically significant evidence of a decreasing trend at the specified level of significance.

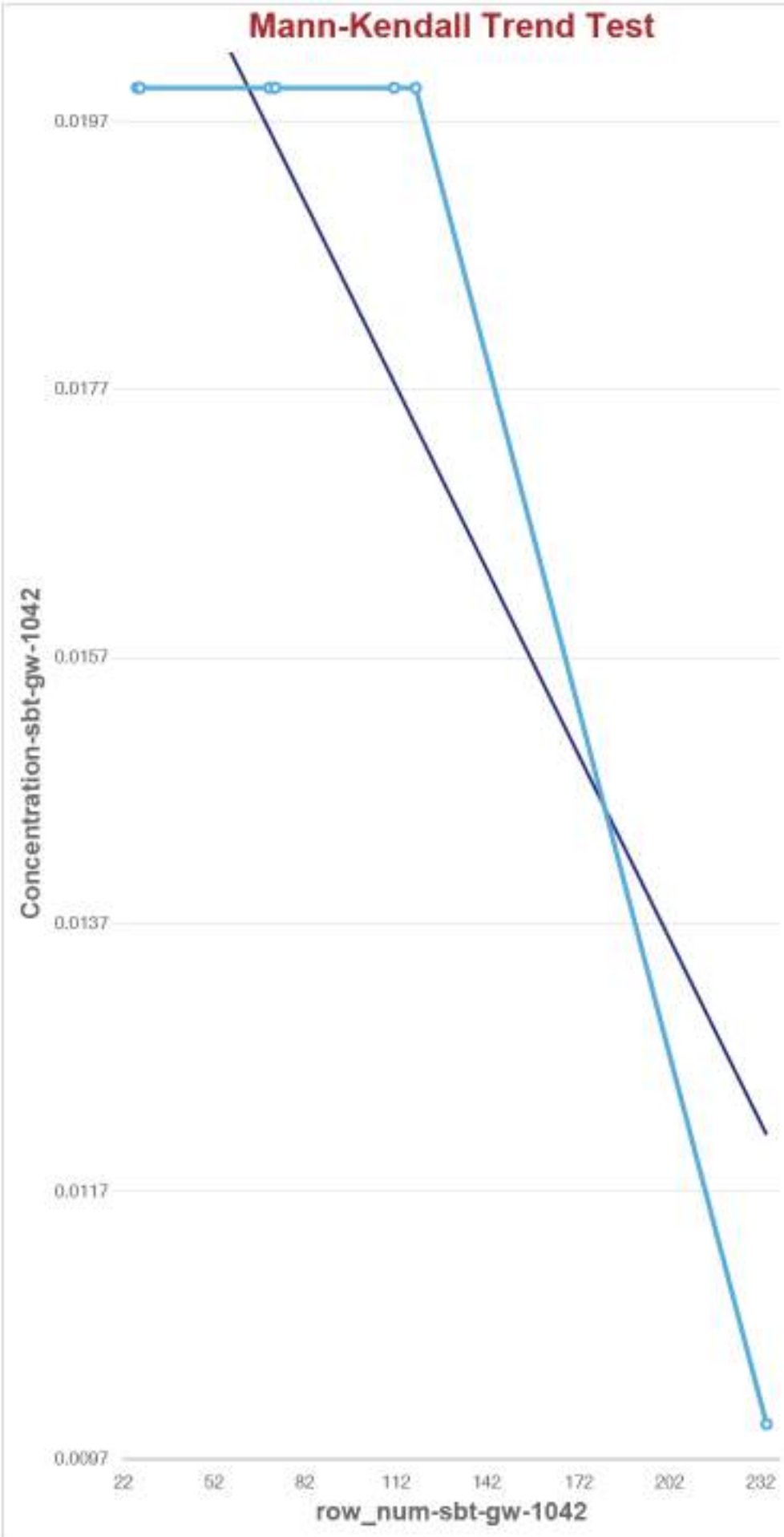
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

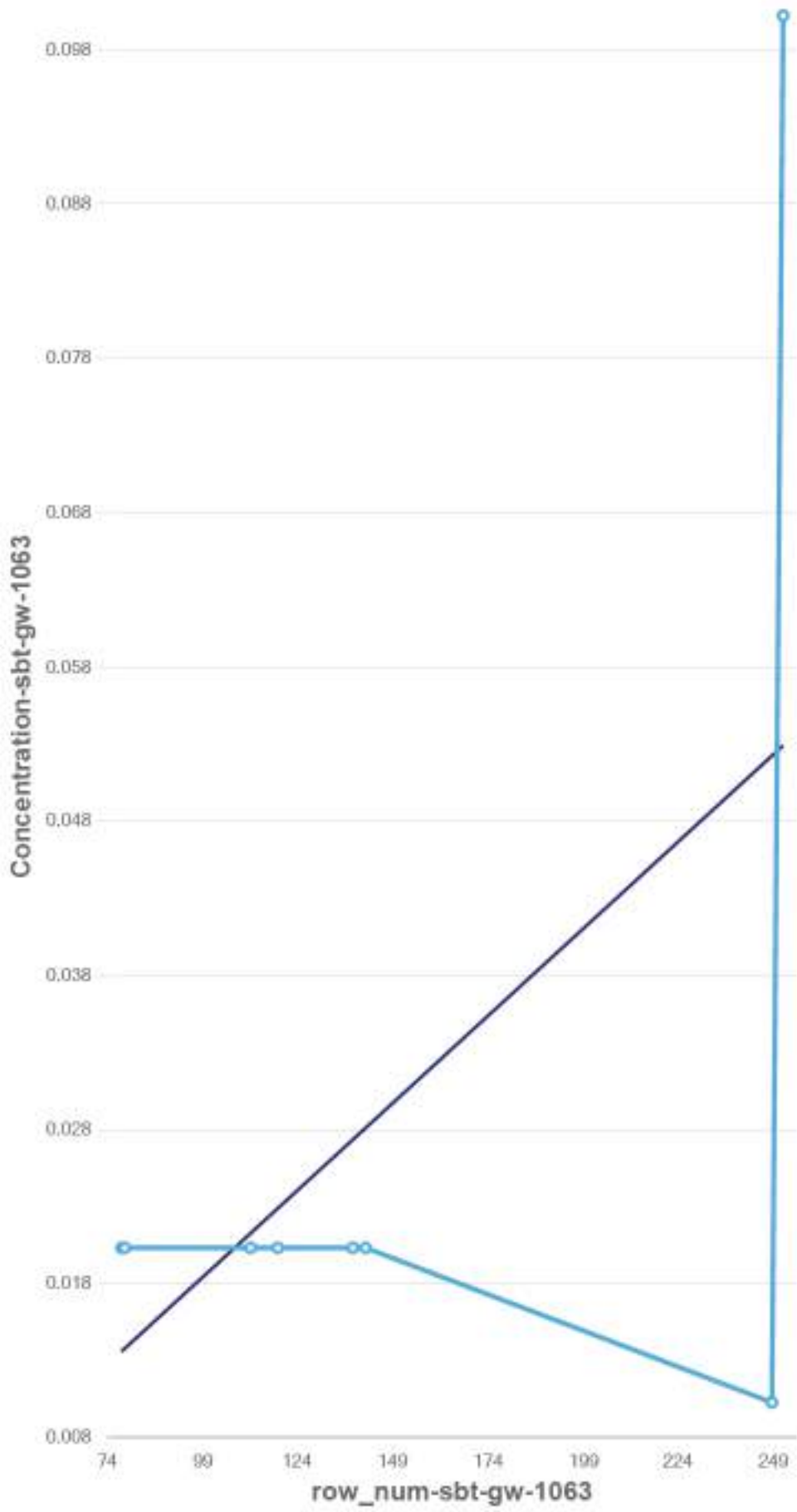
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	-1.2500
M-K Test Value (S)	-6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0229

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

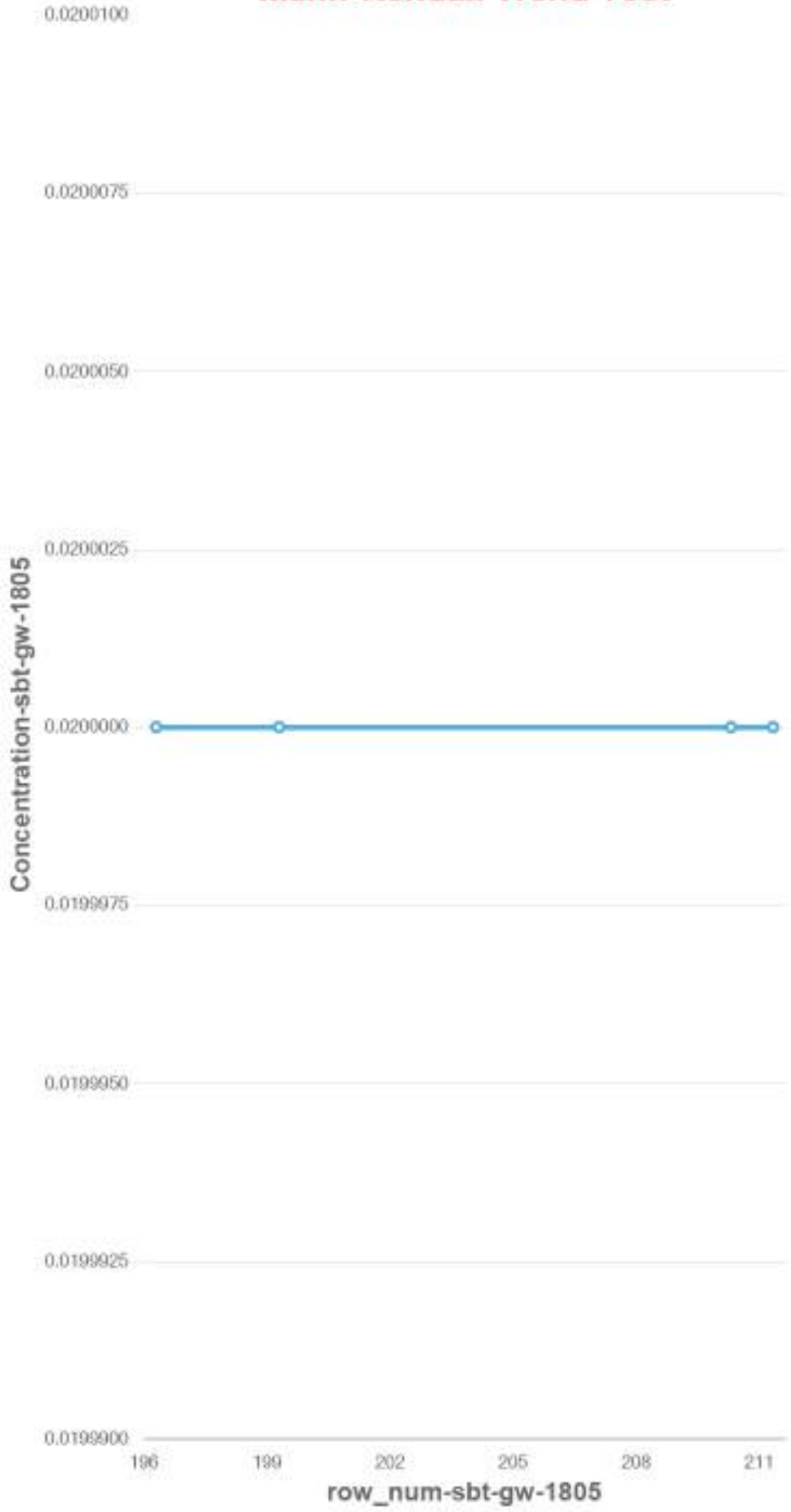


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.0828
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5480
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0002
OLS Regression Intercept	-0.0043

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test



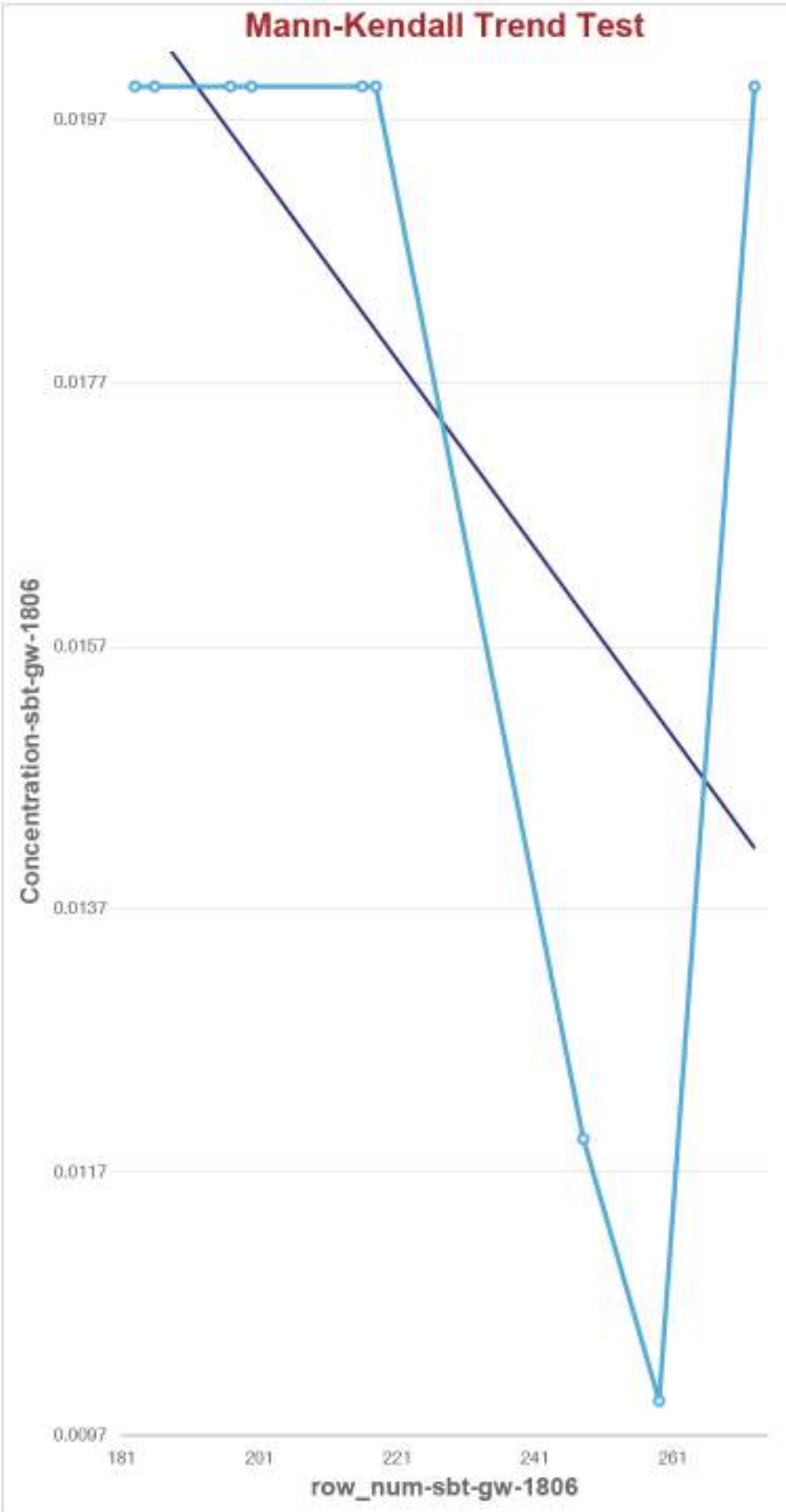
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

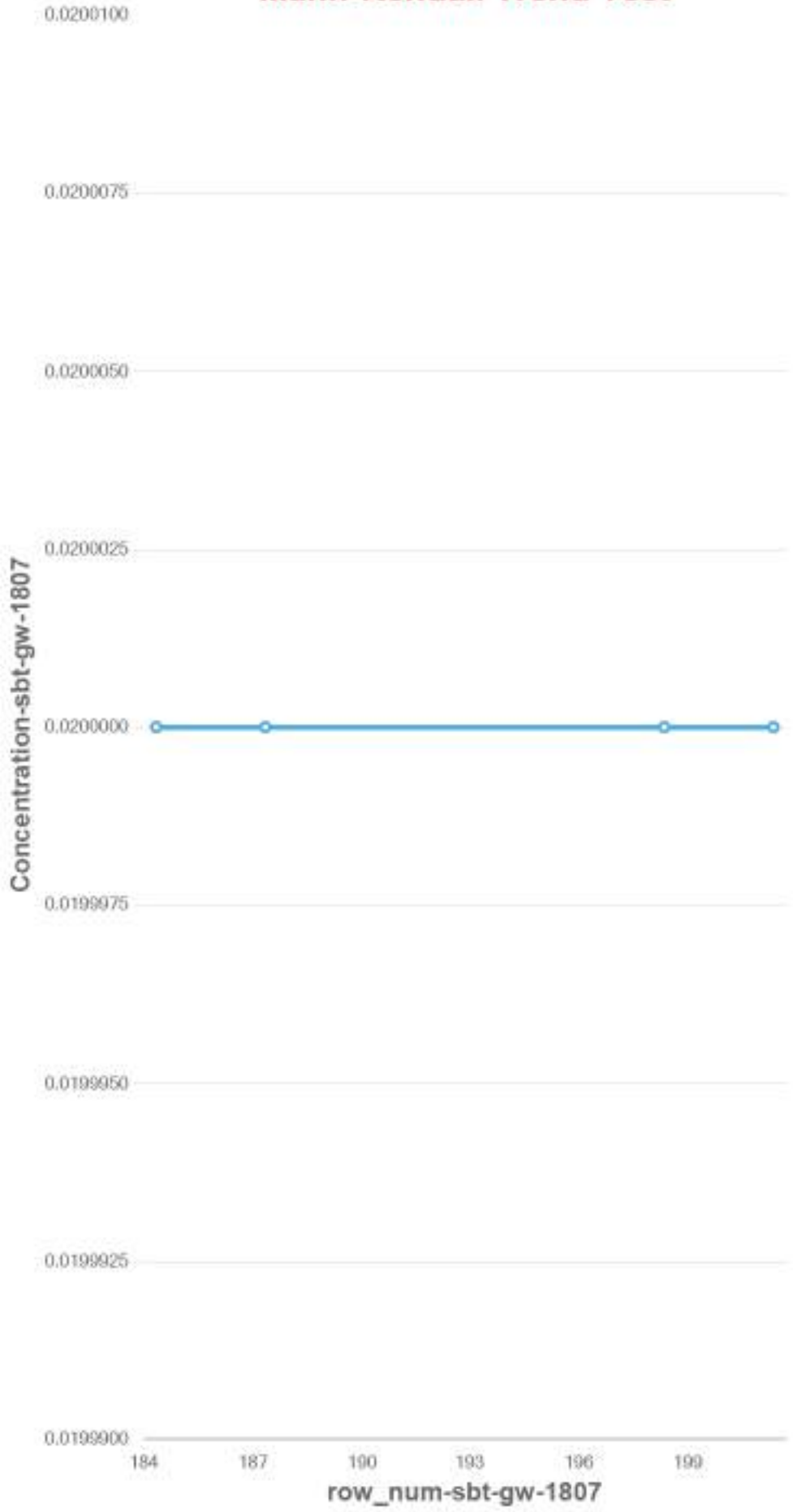


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-1.4484
M-K Test Value (S)	-11
Tabulated p-value	0.1790
Approximate p-value	0.0738

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0337

Insufficient statistical evidence of a significant trend at the specified level of significance.

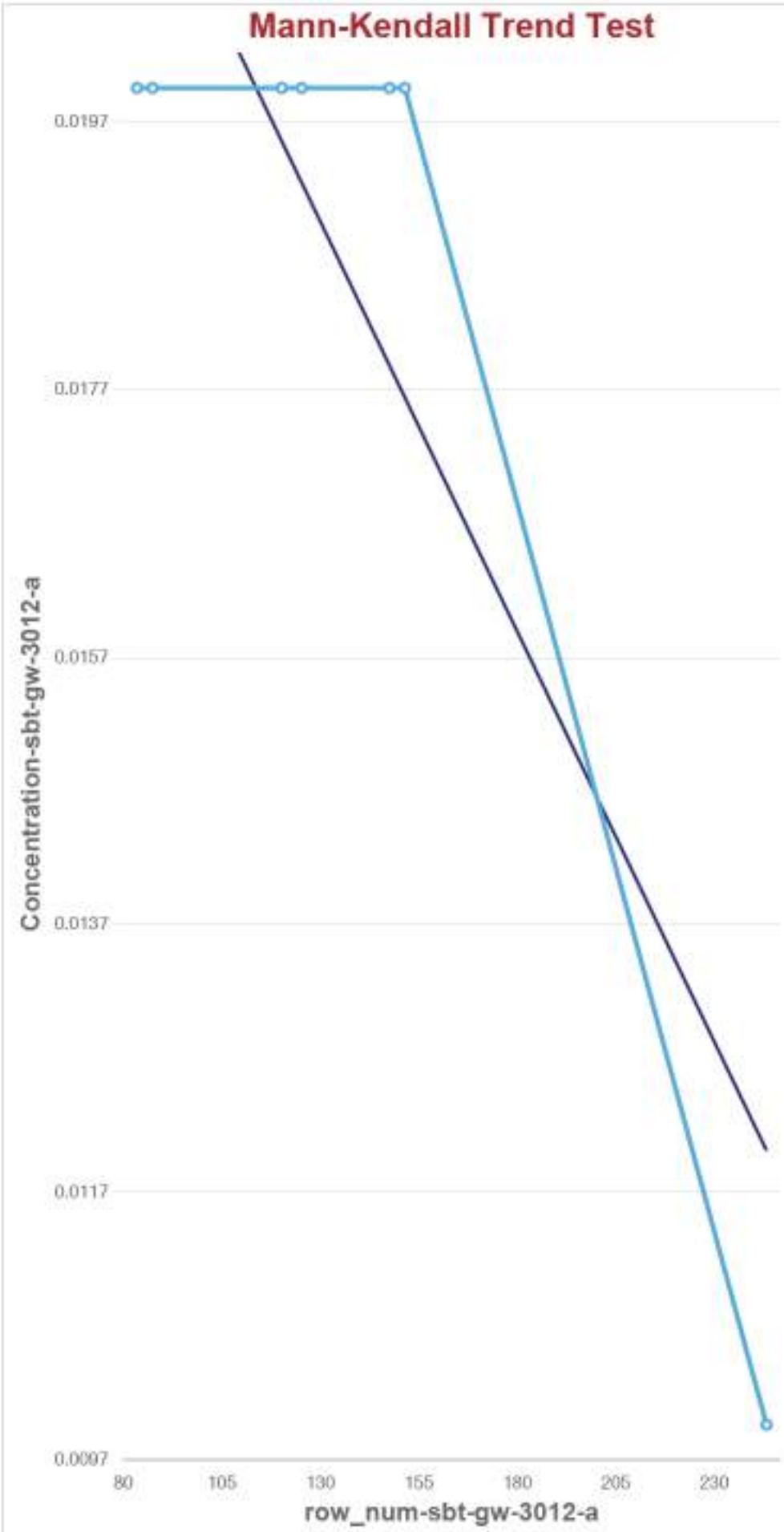
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.



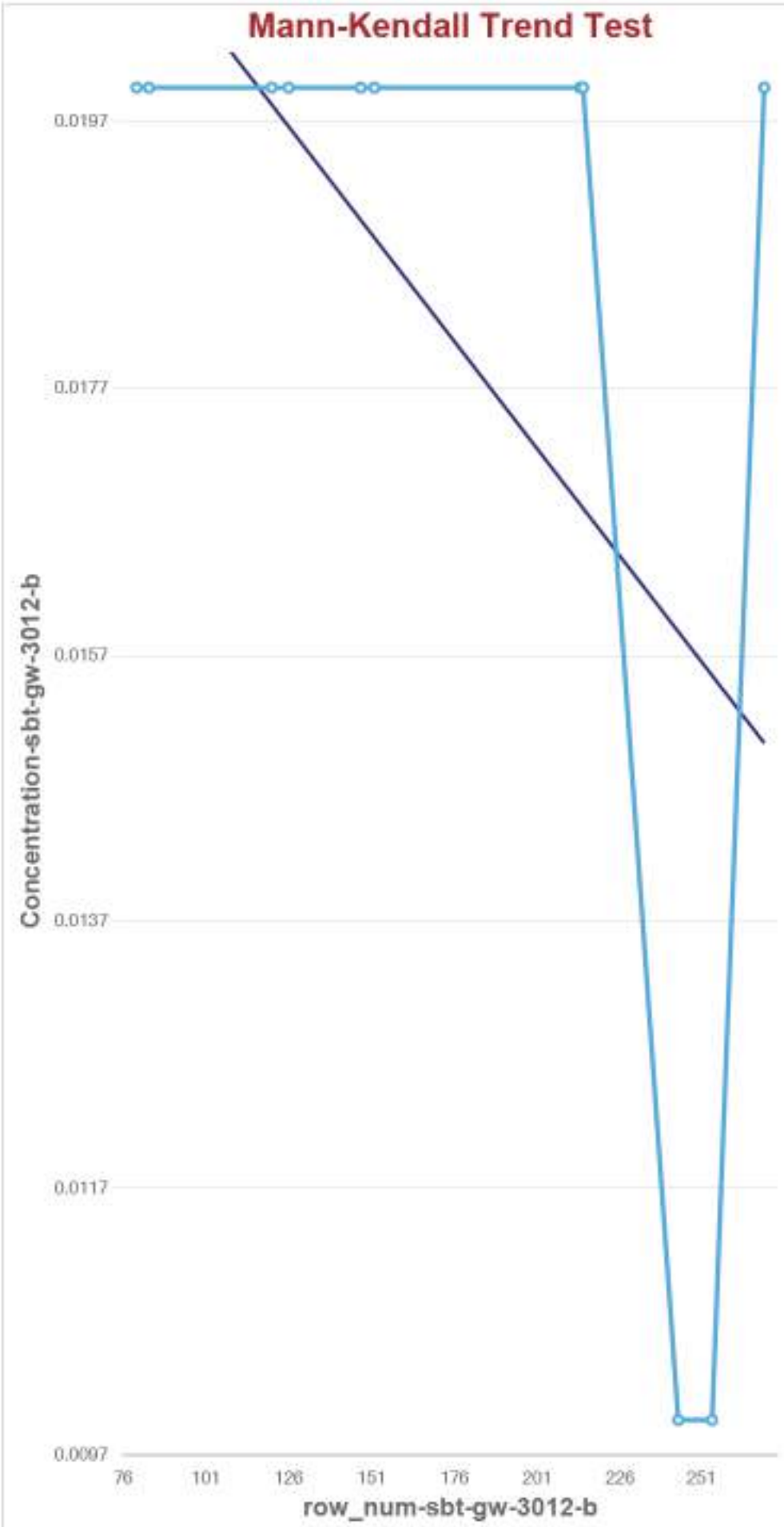
Mann-Kendall Trend Analysis

n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	-1.2500
M-K Test Value (S)	-6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)

OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0269

Insufficient statistical evidence of a significant trend at the specified level of significance.



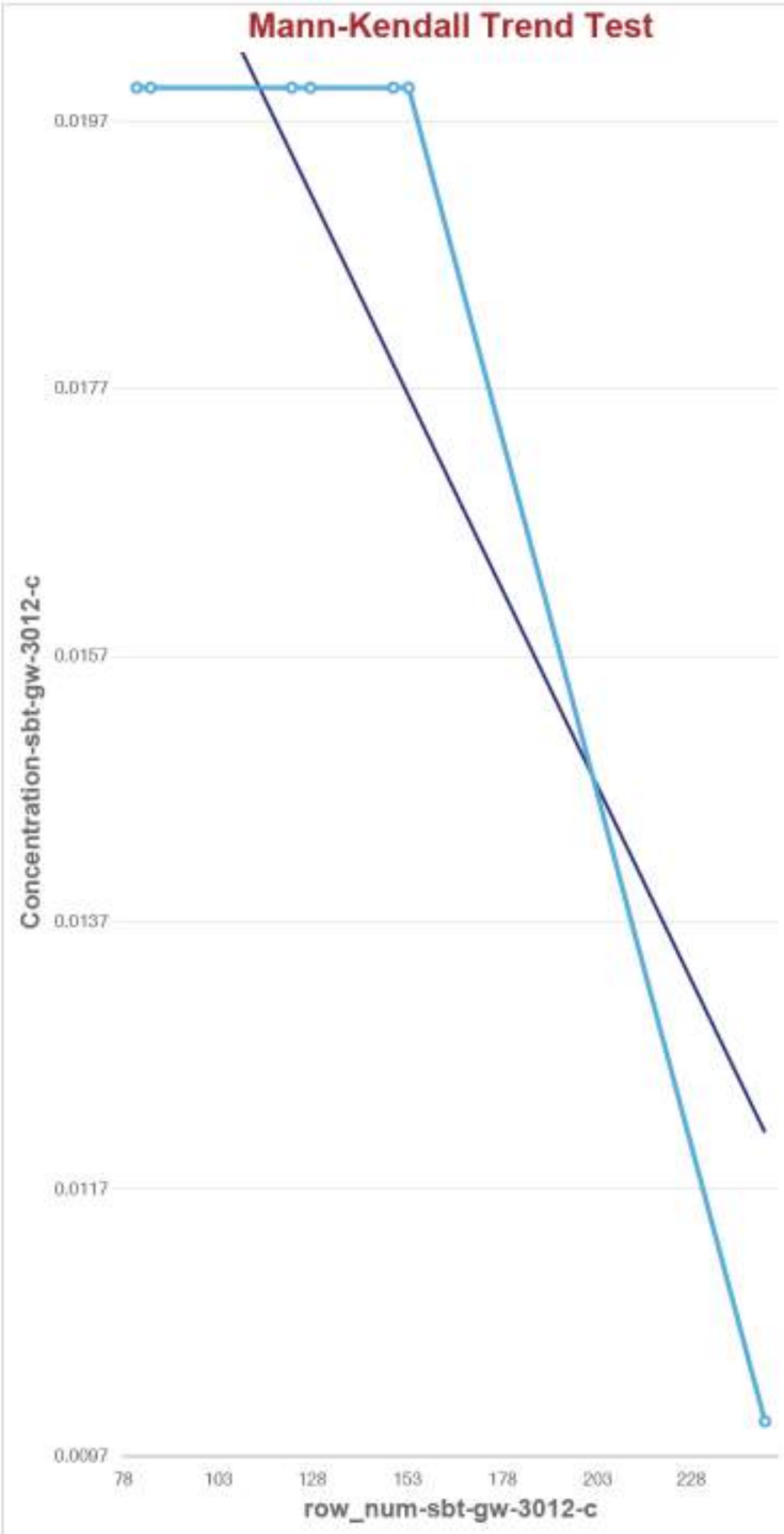
Mann-Kendall Trend Analysis

n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.4853
Standardized Value of S	-1.5321
M-K Test Value (S)	-14
Tabulated p-value	0.1410
Approximate p-value	0.0628

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0238

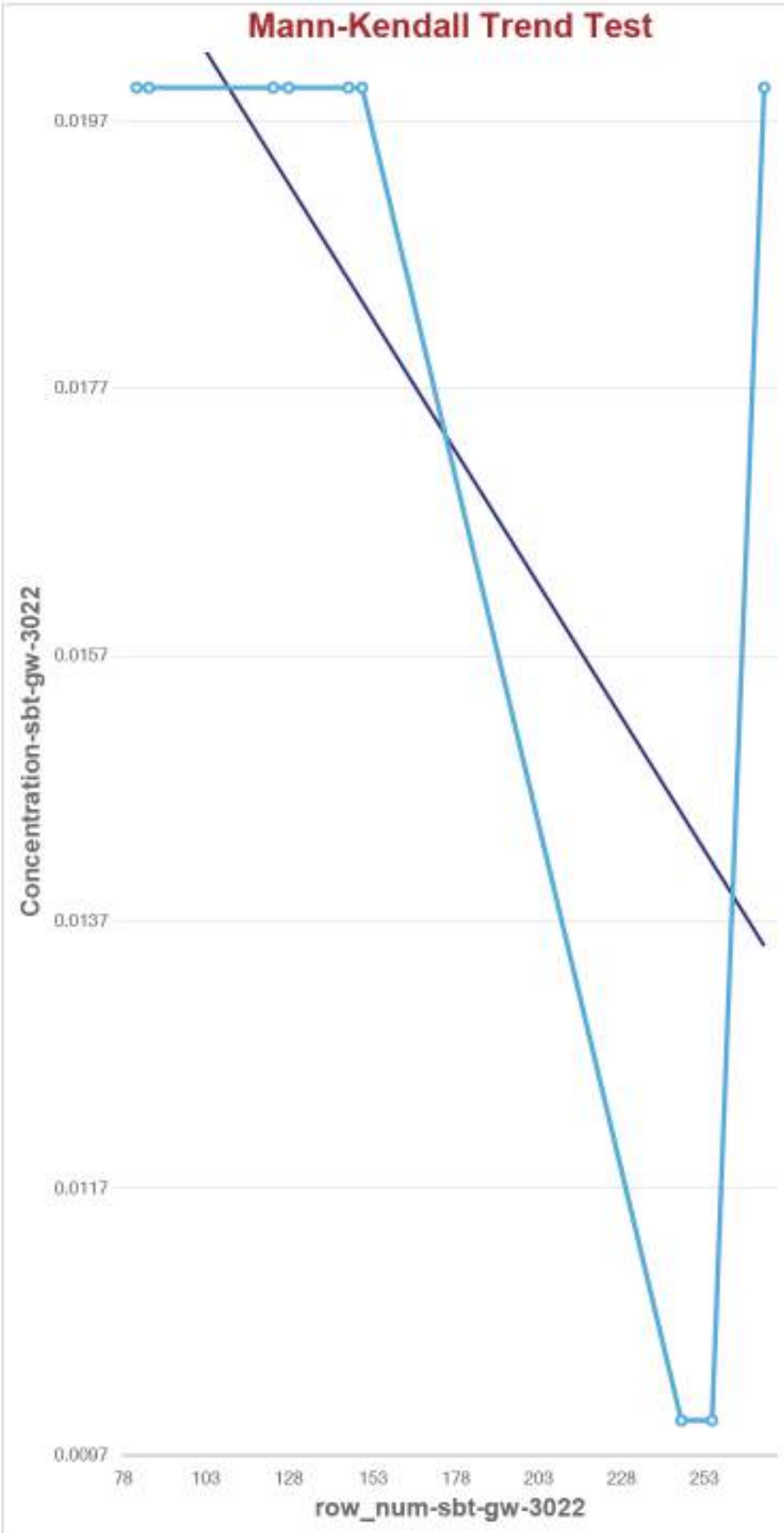
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	-1.2500
M-K Test Value (S)	-6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0266

Insufficient statistical evidence of a significant trend at the specified level of significance.



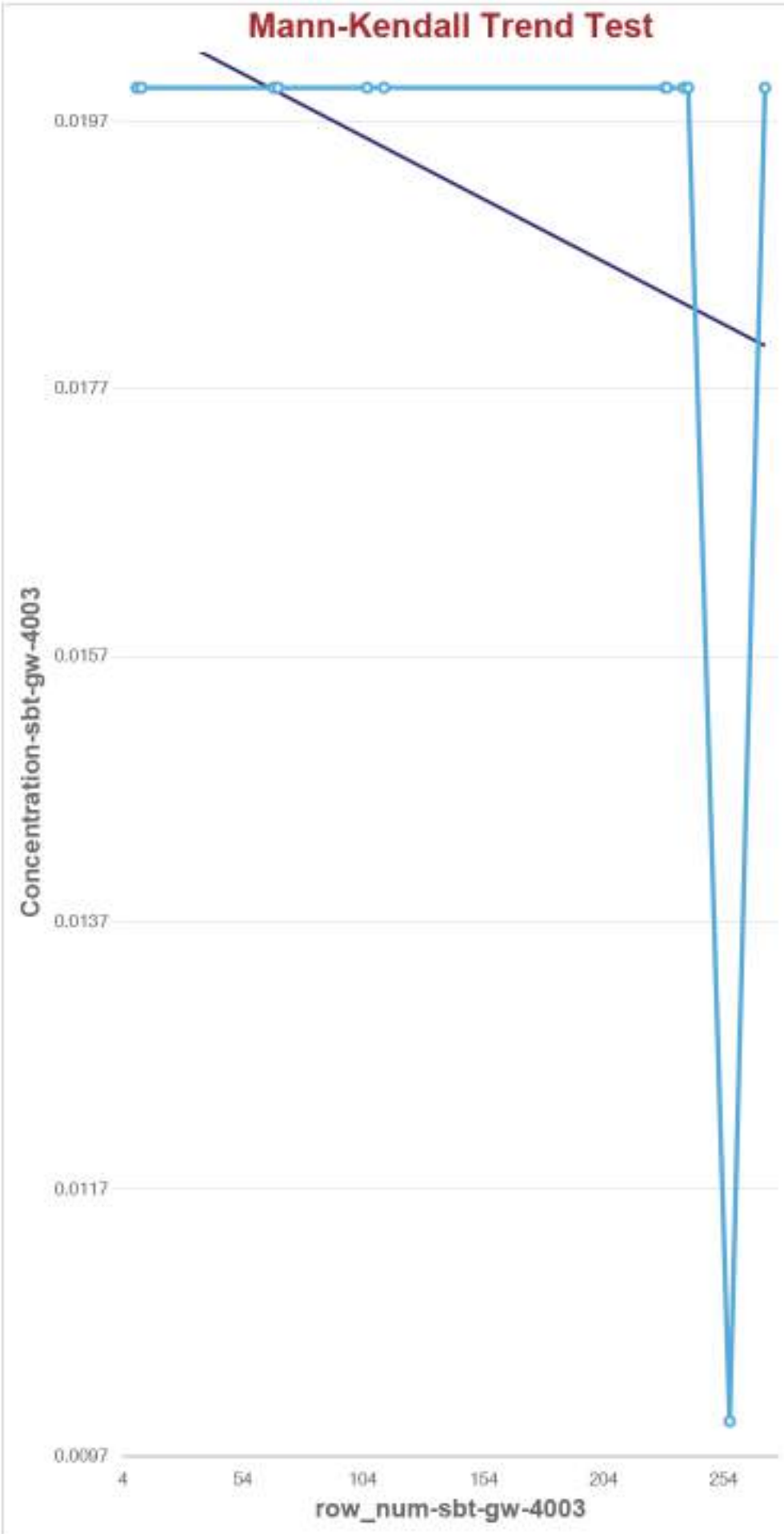
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.8313
Standardized Value of S	-1.3175
M-K Test Value (S)	-10
Tabulated p-value	0.1790
Approximate p-value	0.0938

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0244

Insufficient statistical evidence of a significant trend at the specified level of significance.

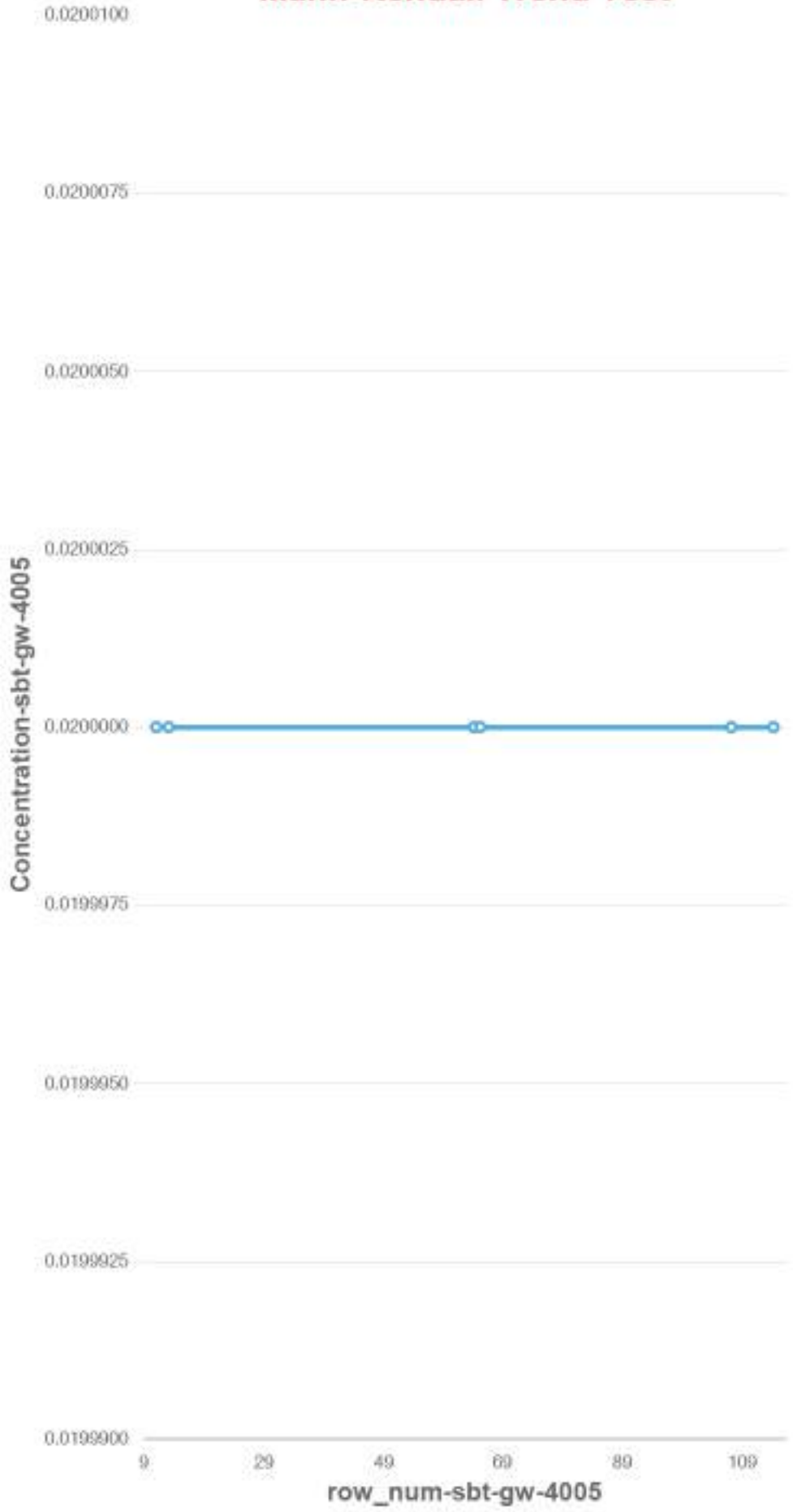


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-1.1587
M-K Test Value (S)	-9
Tabulated p-value	0.3190
Approximate p-value	0.1233

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0206

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

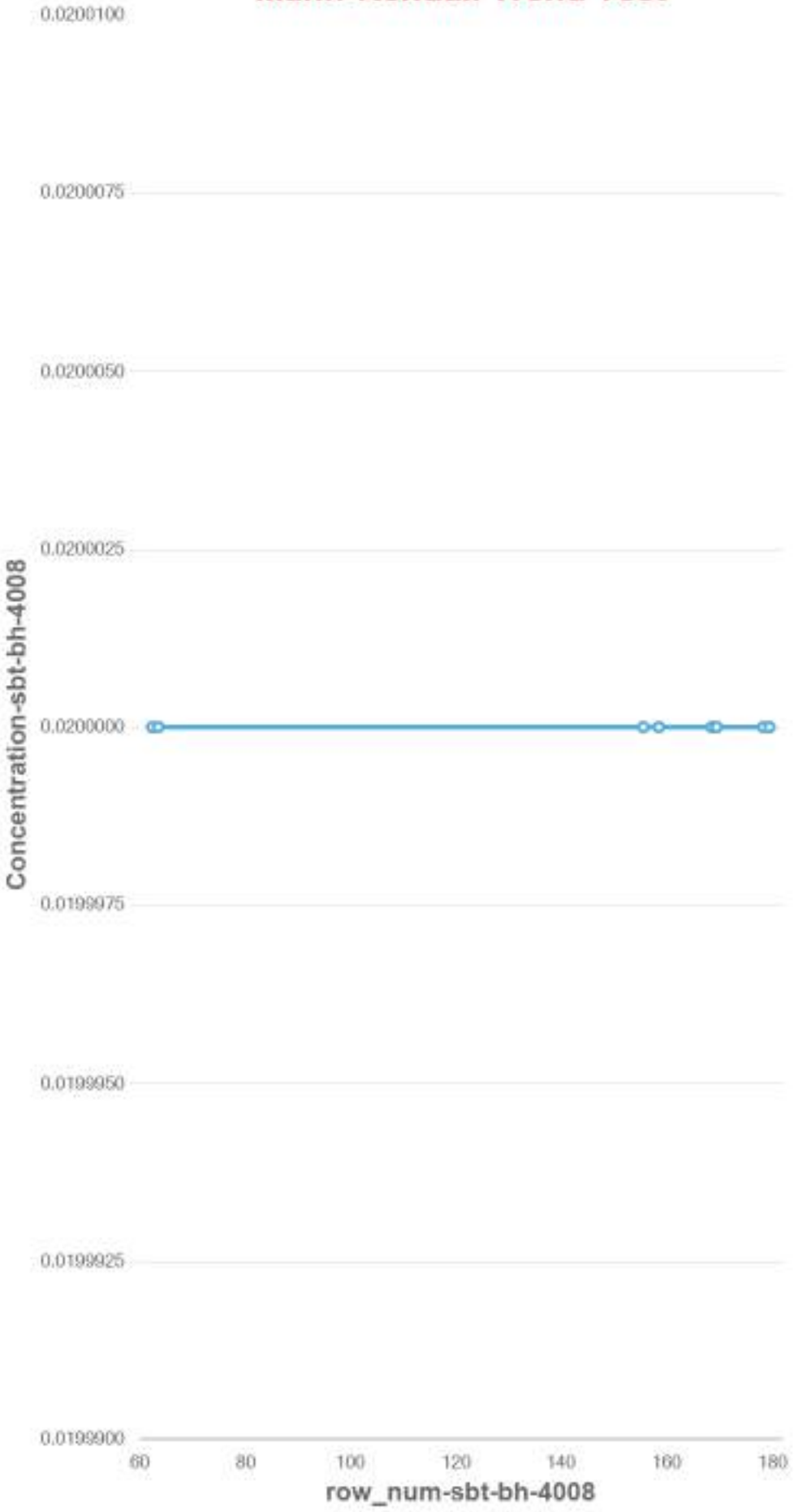


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

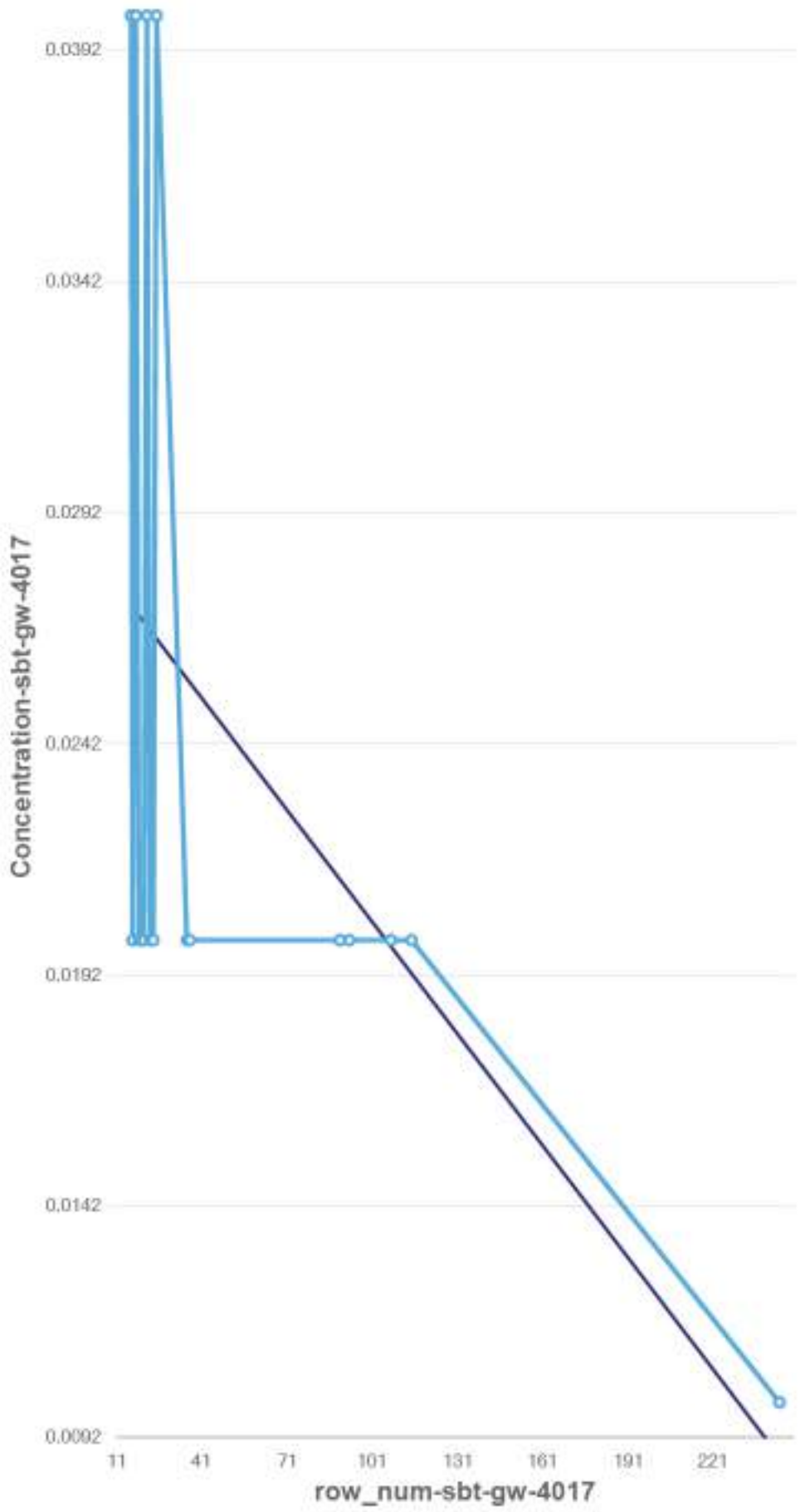


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

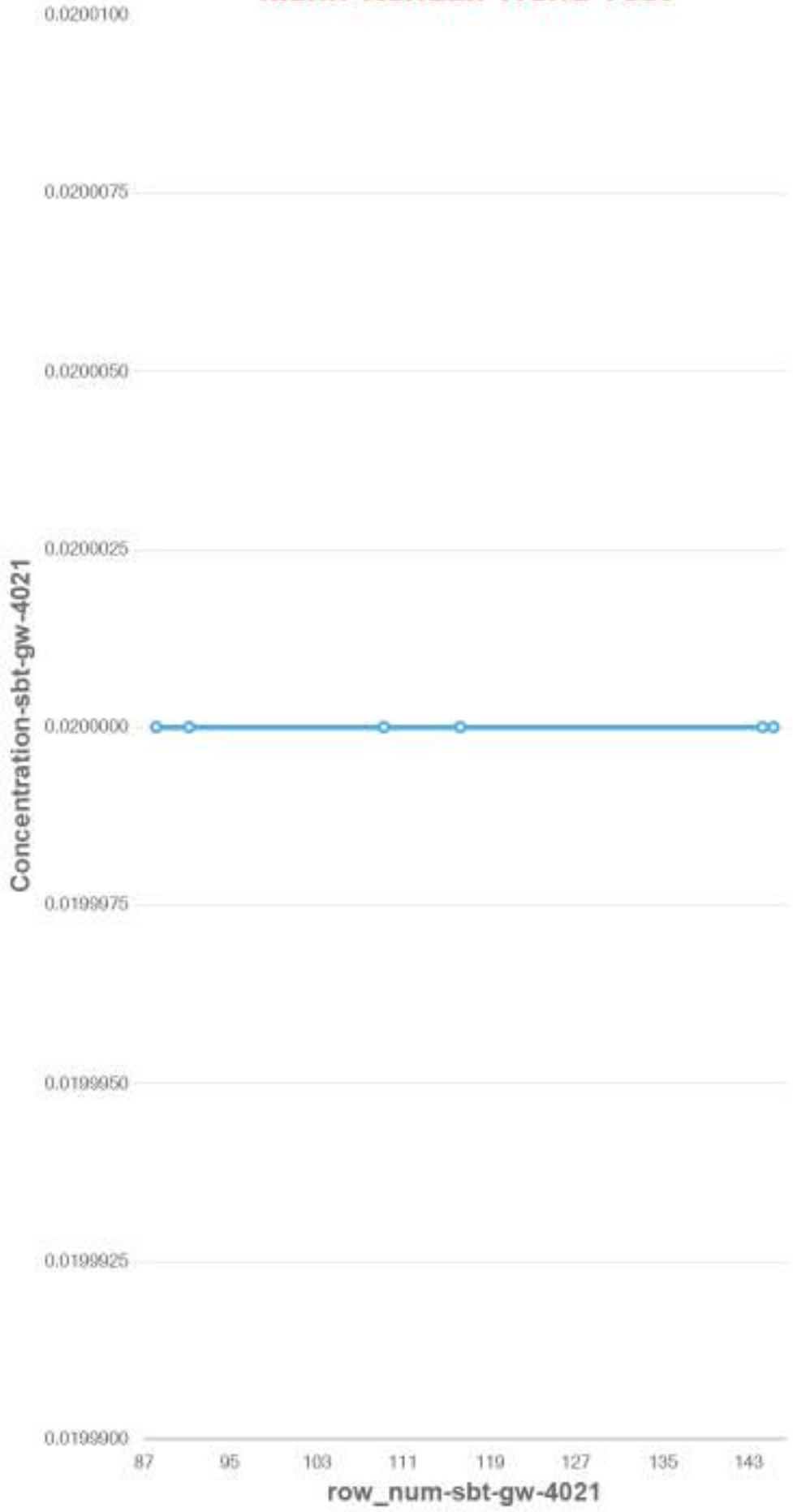


Mann-Kendall Trend Analysis	
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.1833
Standardized Value of S	-2.1373
M-K Test Value (S)	-42
Tabulated p-value	0.0460
Approximate p-value	0.0163

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0285

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

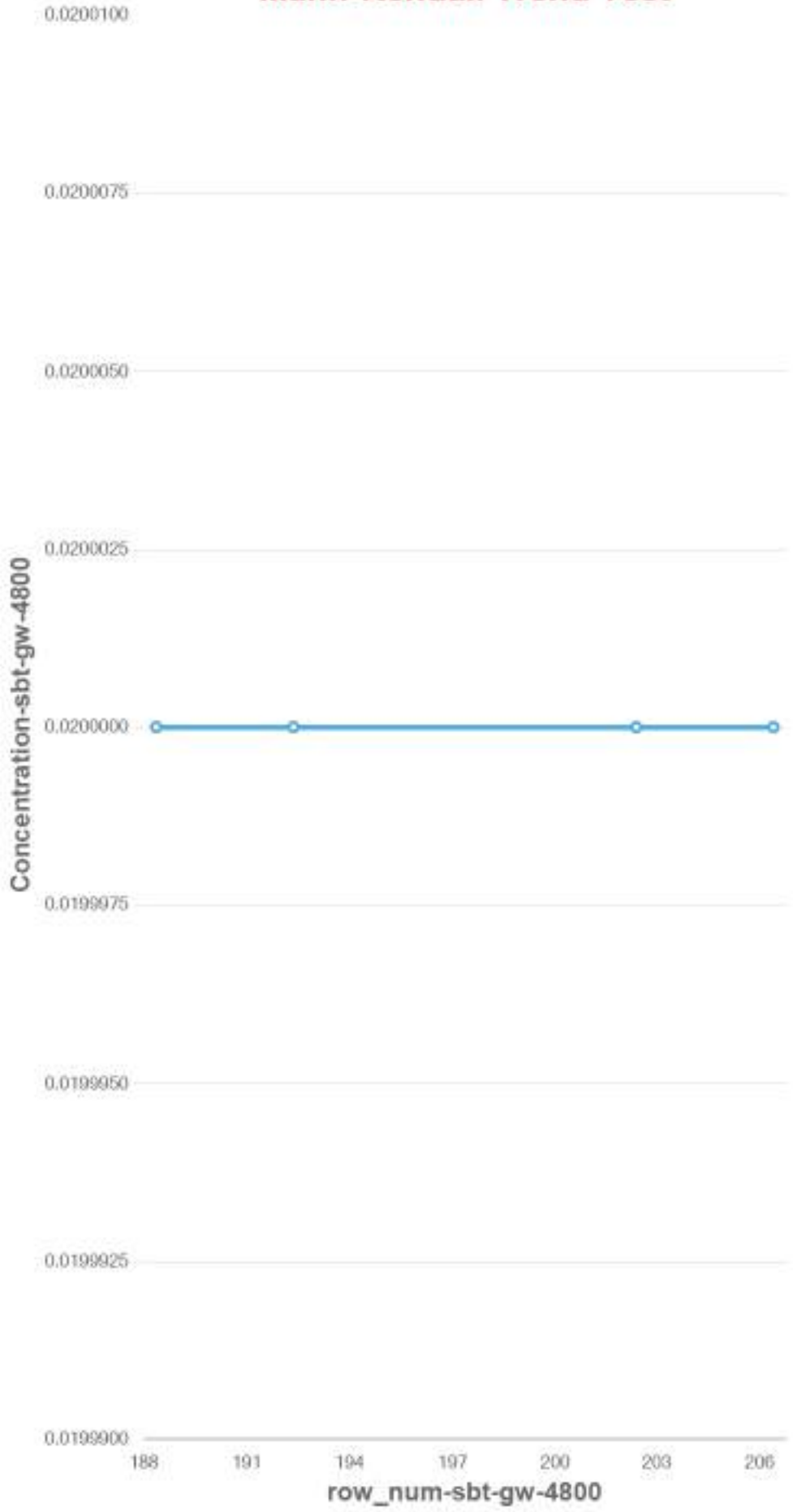


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

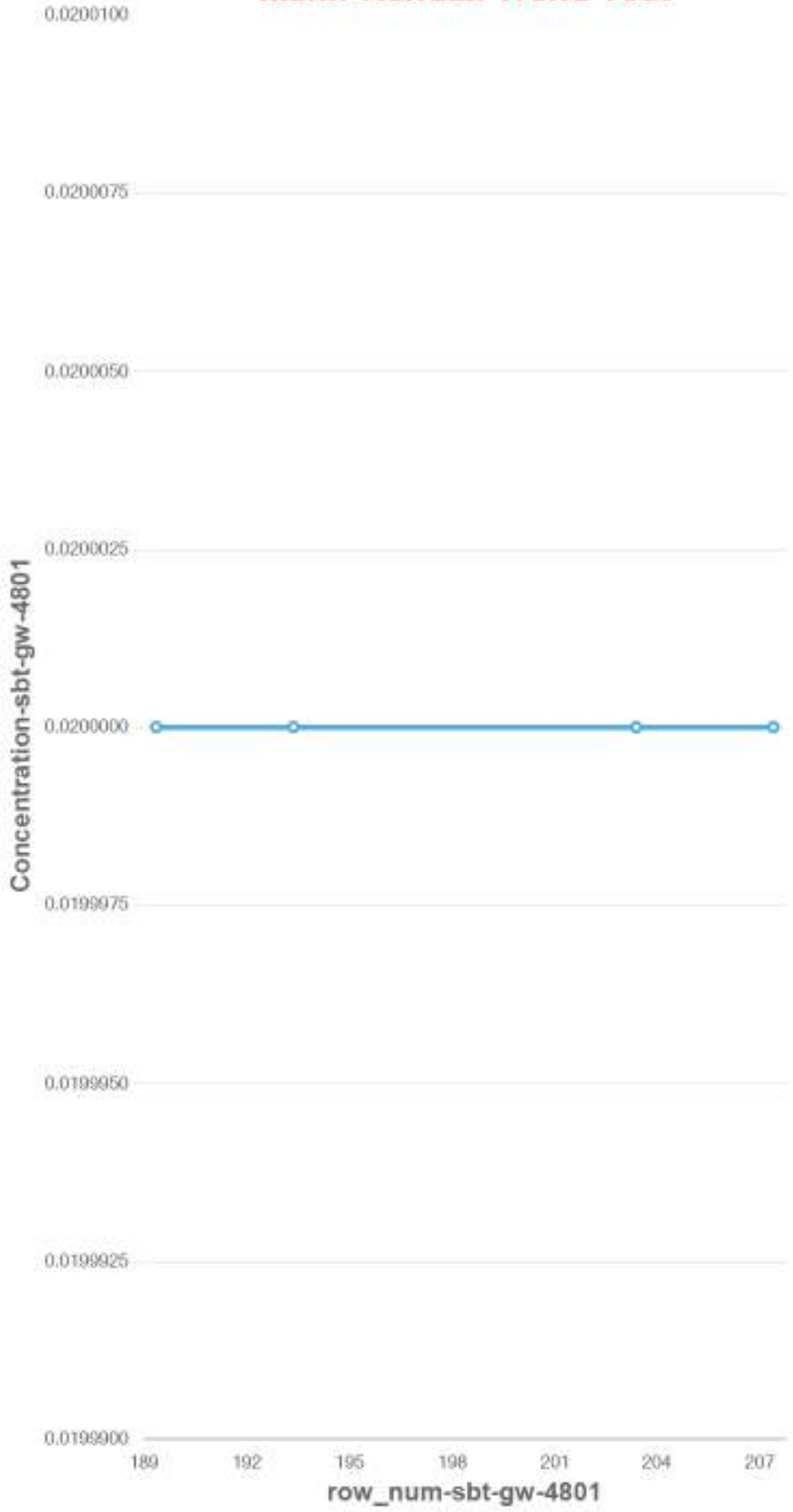


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

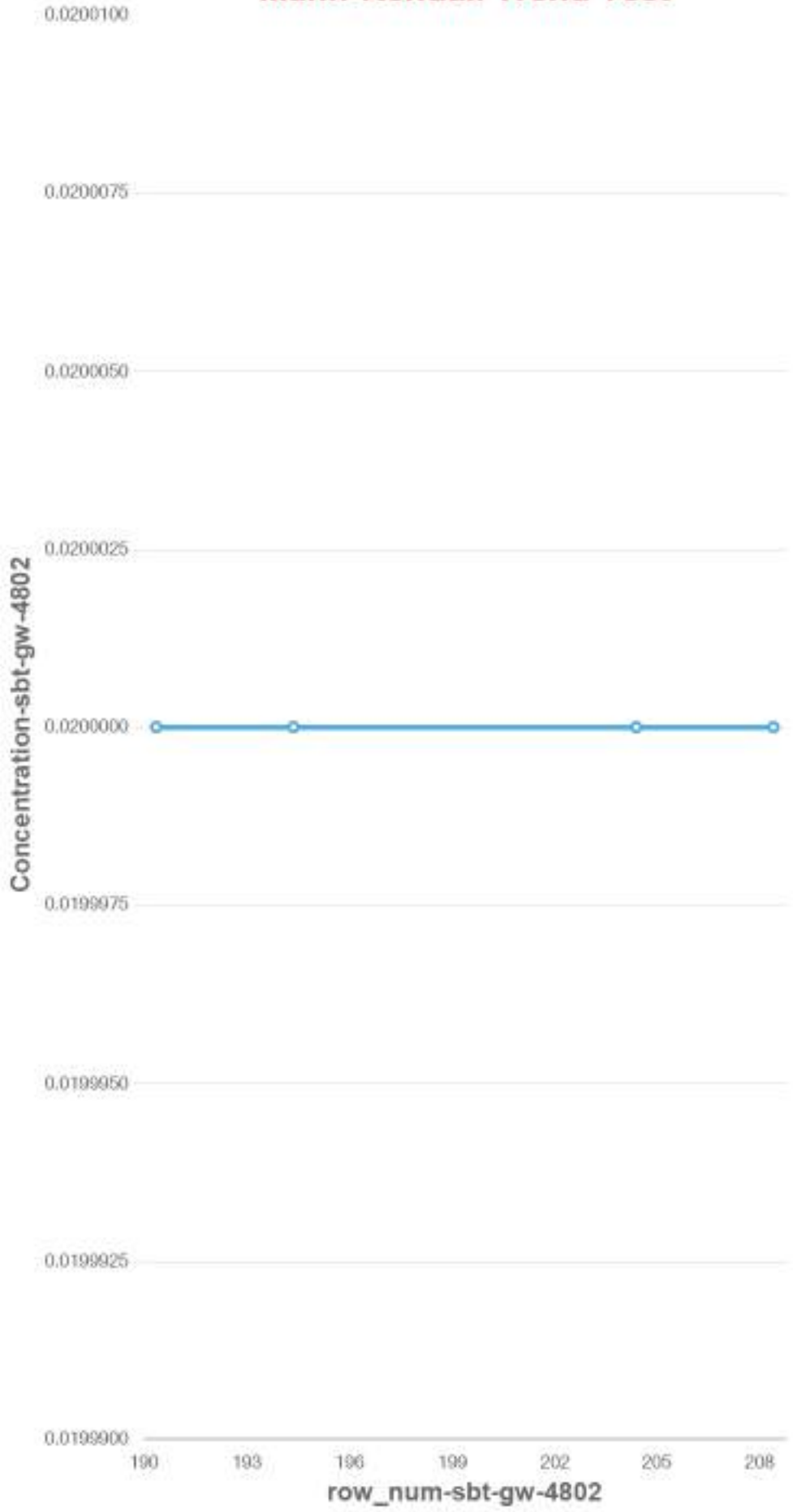


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test



Mann-Kendall Trend Analysis

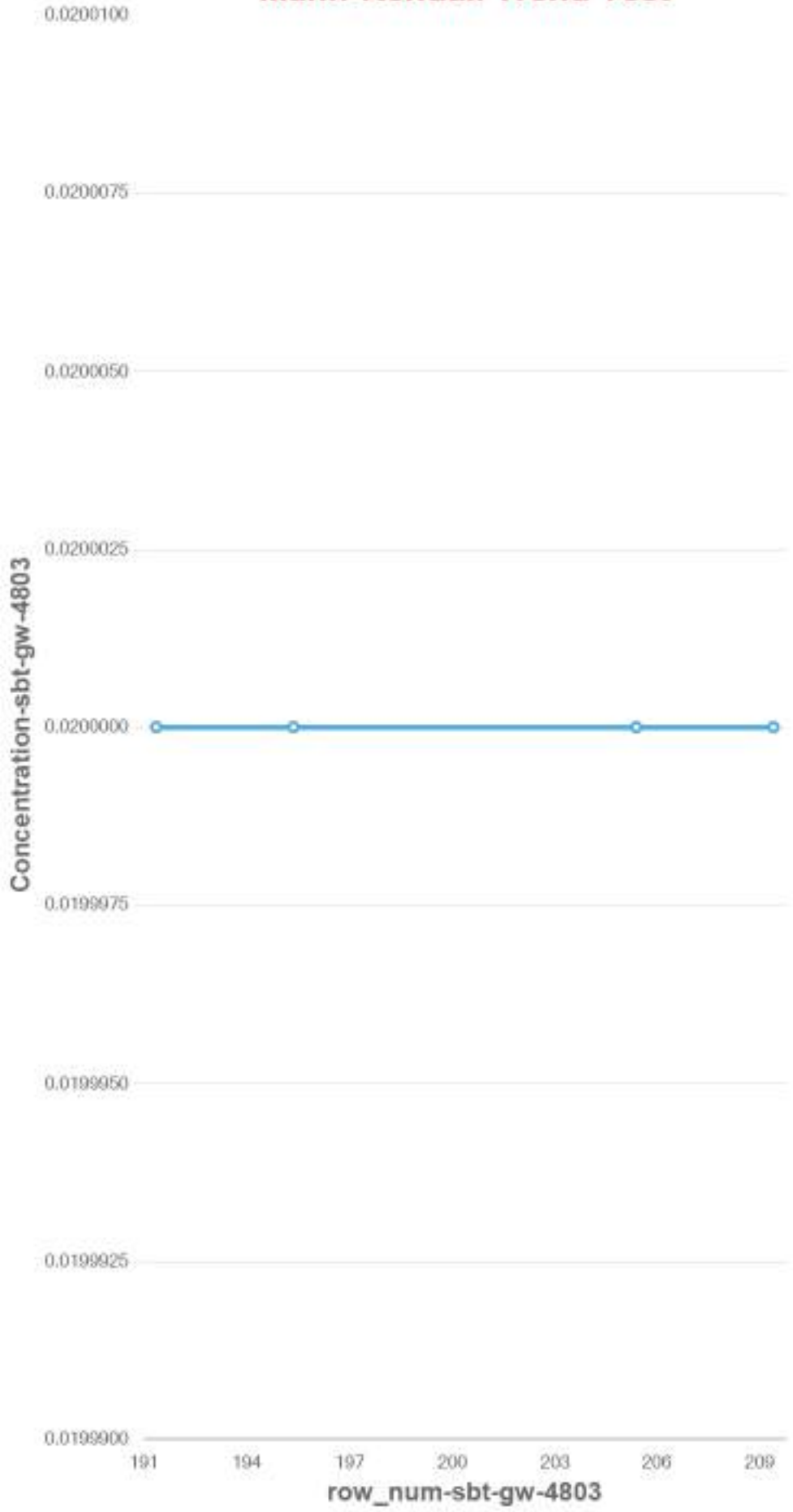
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.

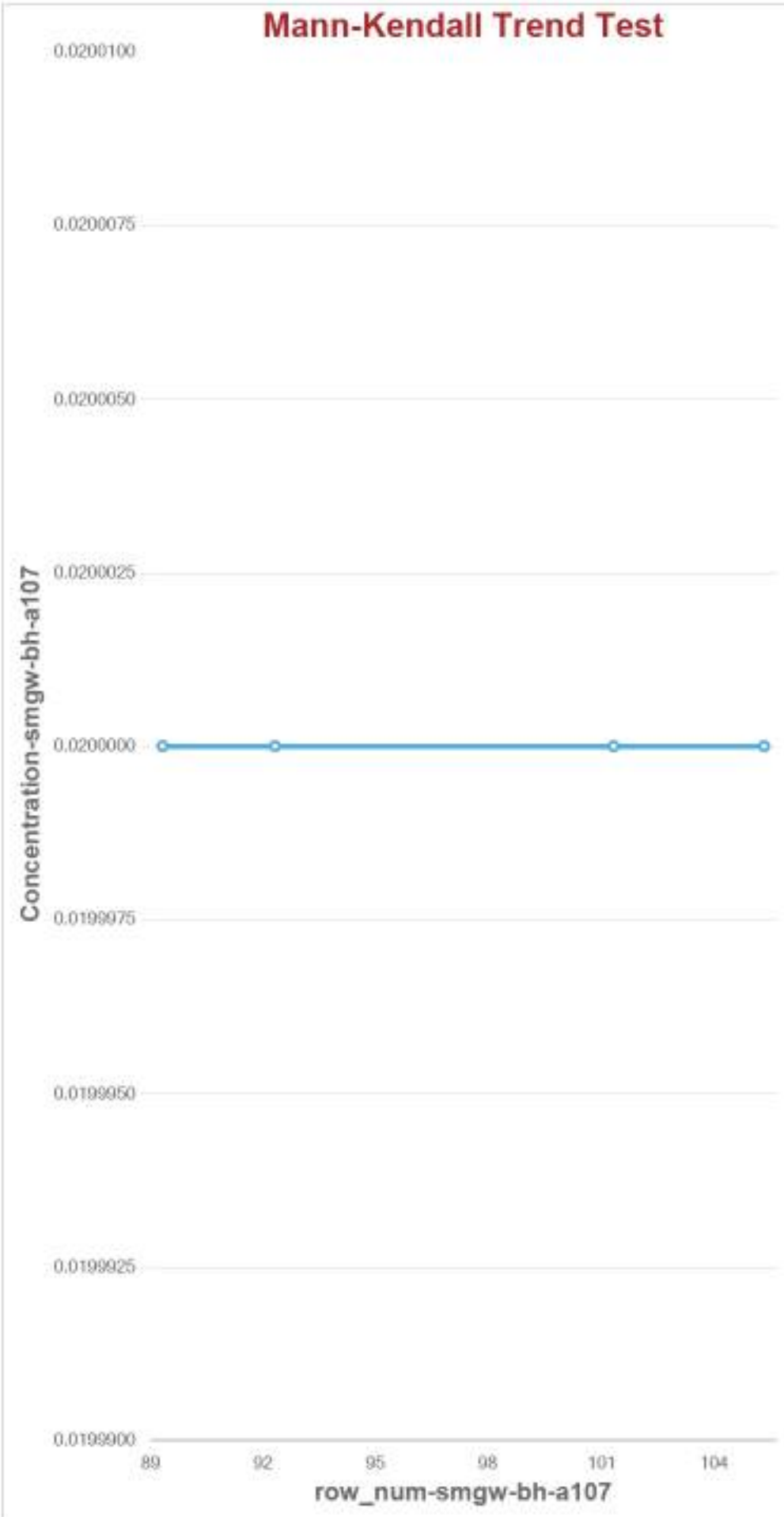
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

Insufficient statistical evidence of a significant trend at the specified level of significance.



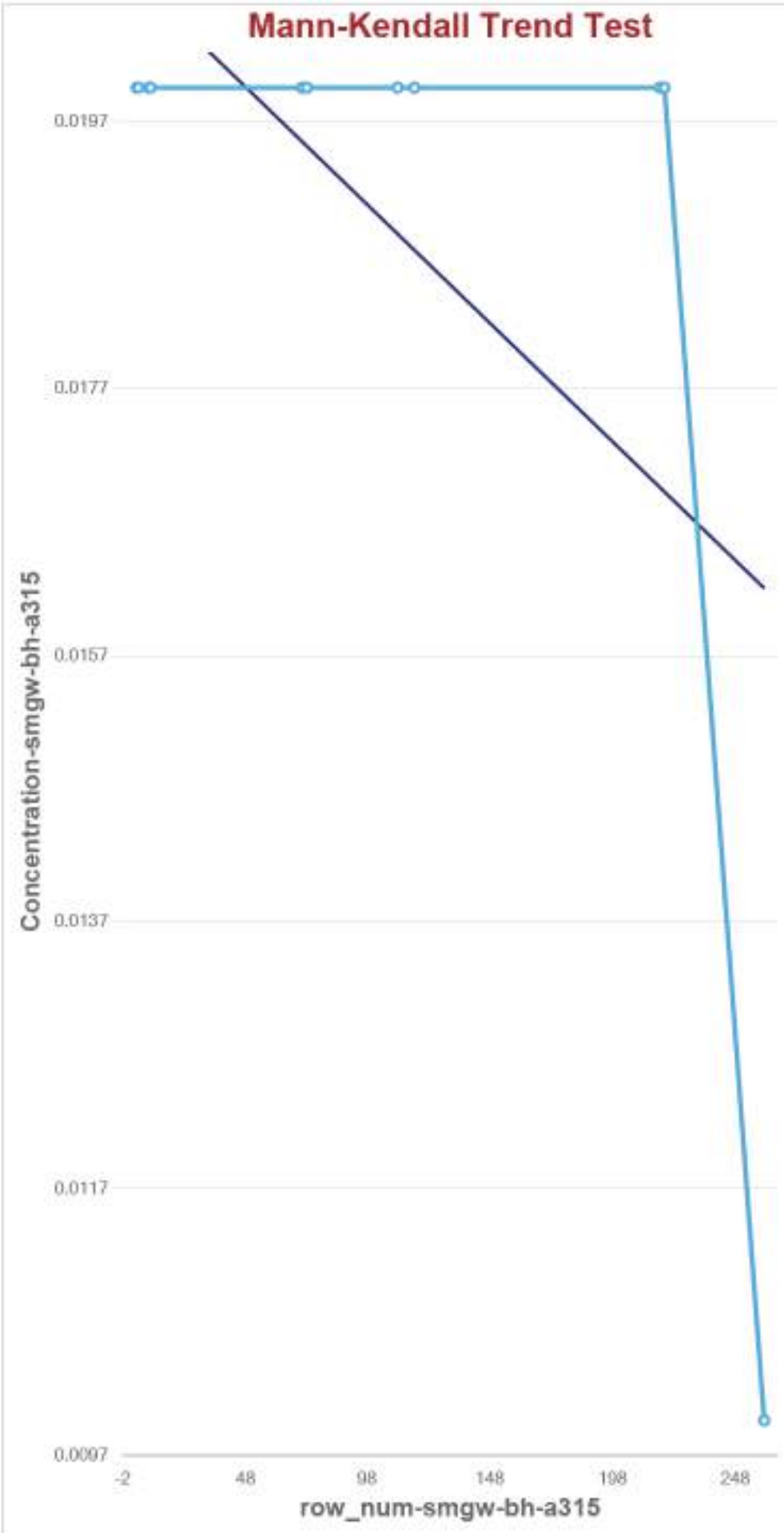
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0200

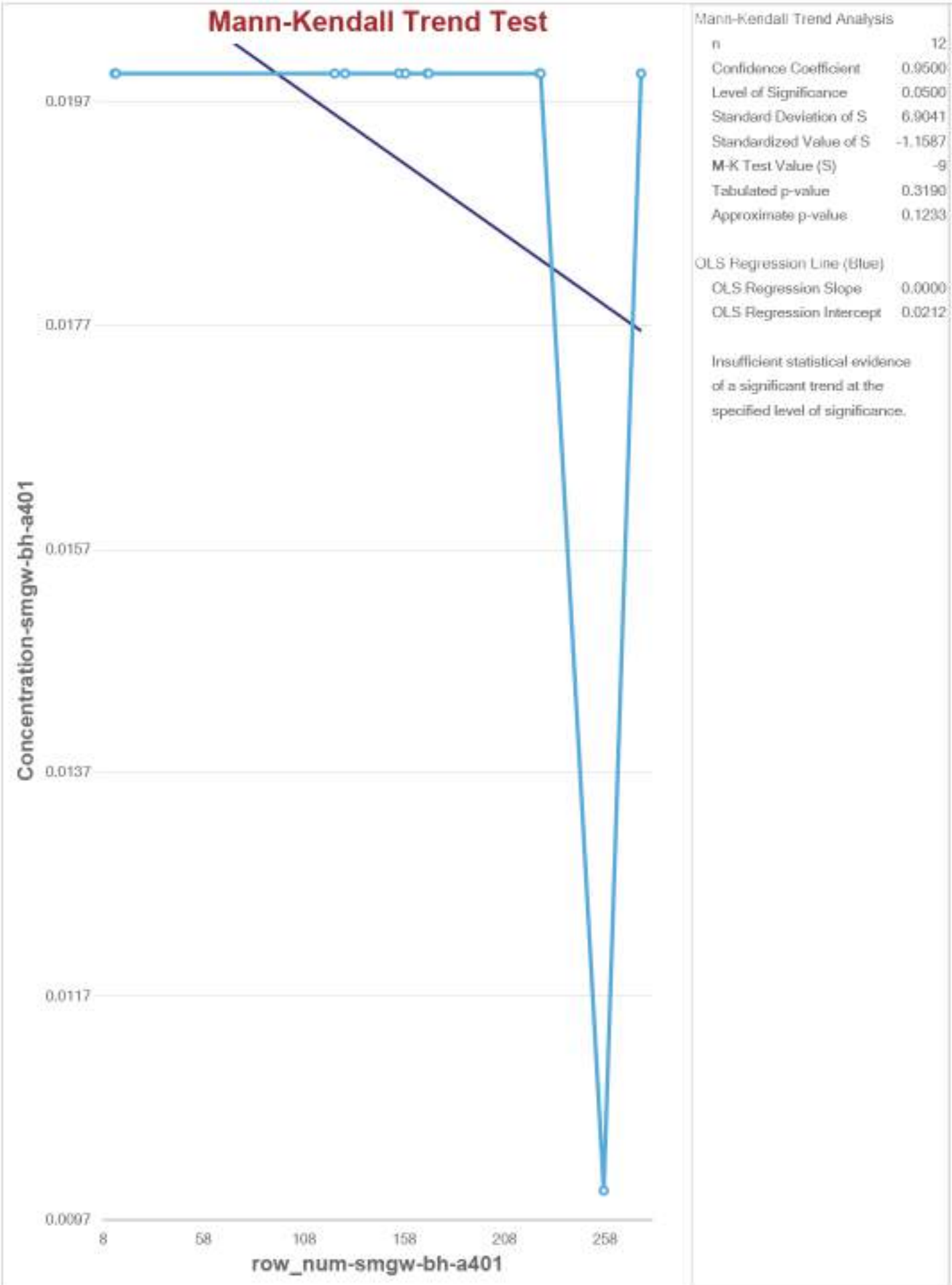
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.3246
Standardized Value of S	-1.4230
M-K Test Value (S)	-10
Tabulated p-value	0.2230
Approximate p-value	0.0774

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0208

Insufficient statistical evidence of a significant trend at the specified level of significance.

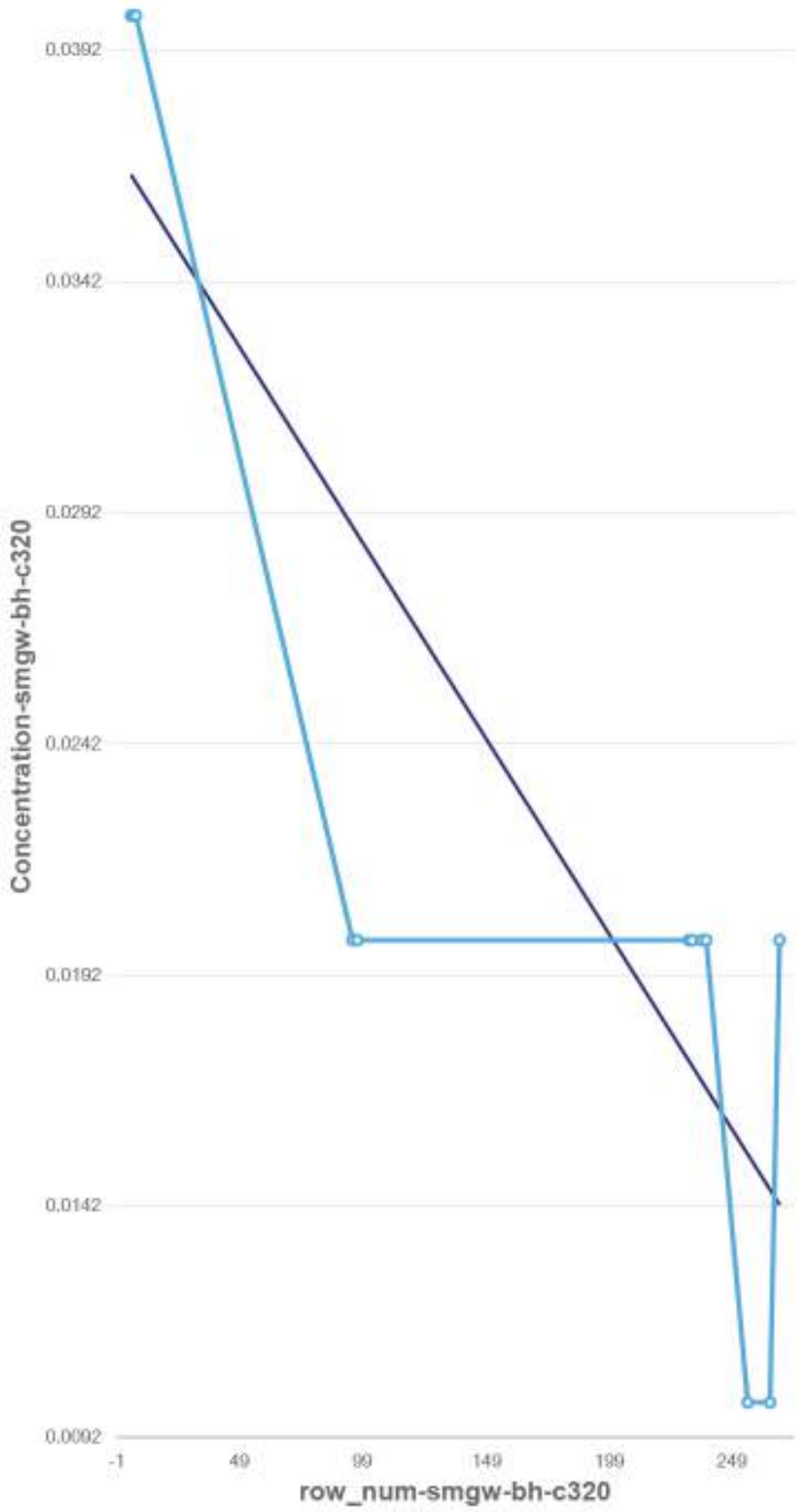


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-1.1587
M-K Test Value (S)	-9
Tabulated p-value	0.3190
Approximate p-value	0.1233

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0212

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

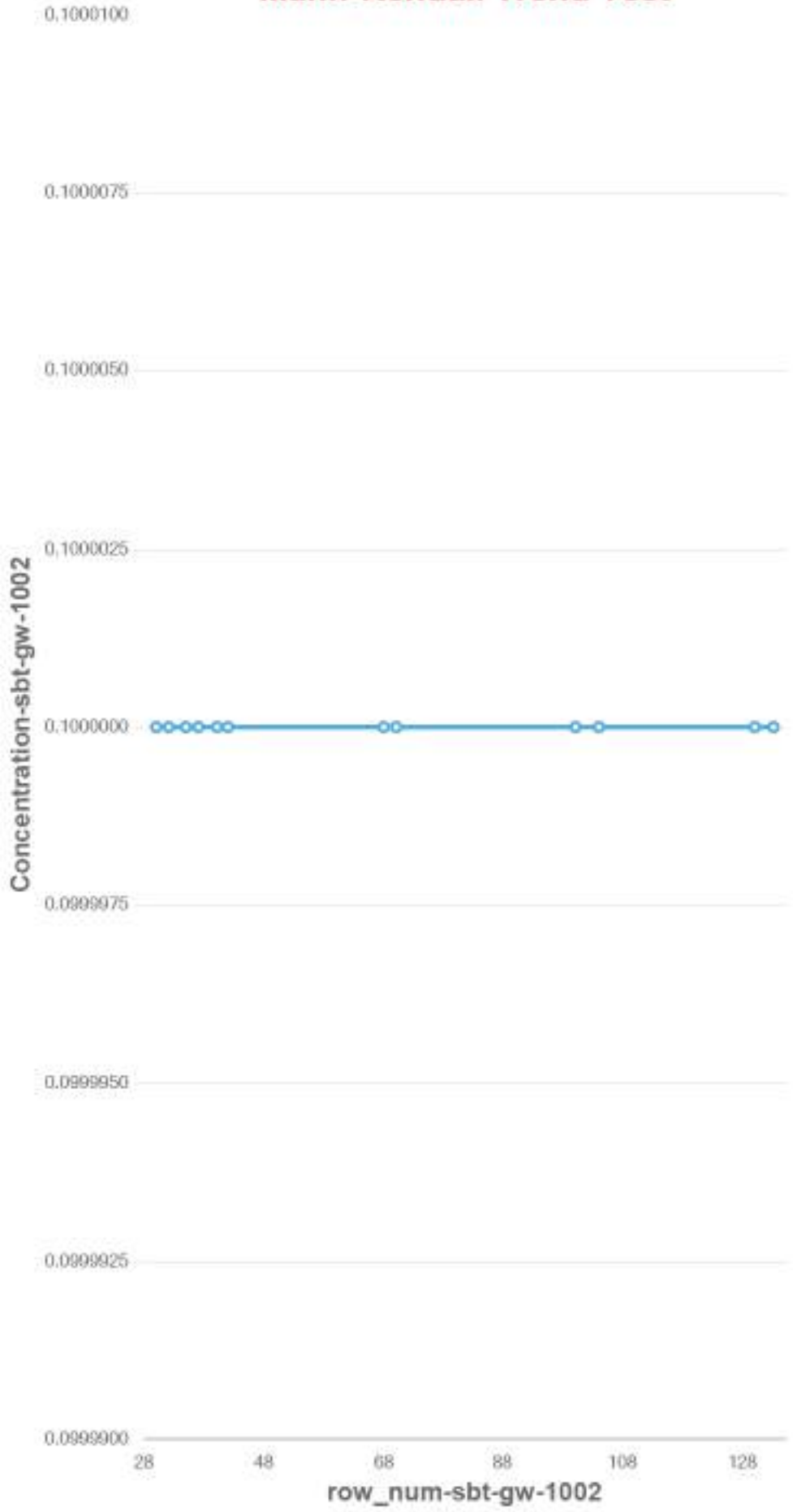


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.7932
Standardized Value of S	-2.8140
M-K Test Value (S)	-37
Tabulated p-value	0.0070
Approximate p-value	0.0024

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0370

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

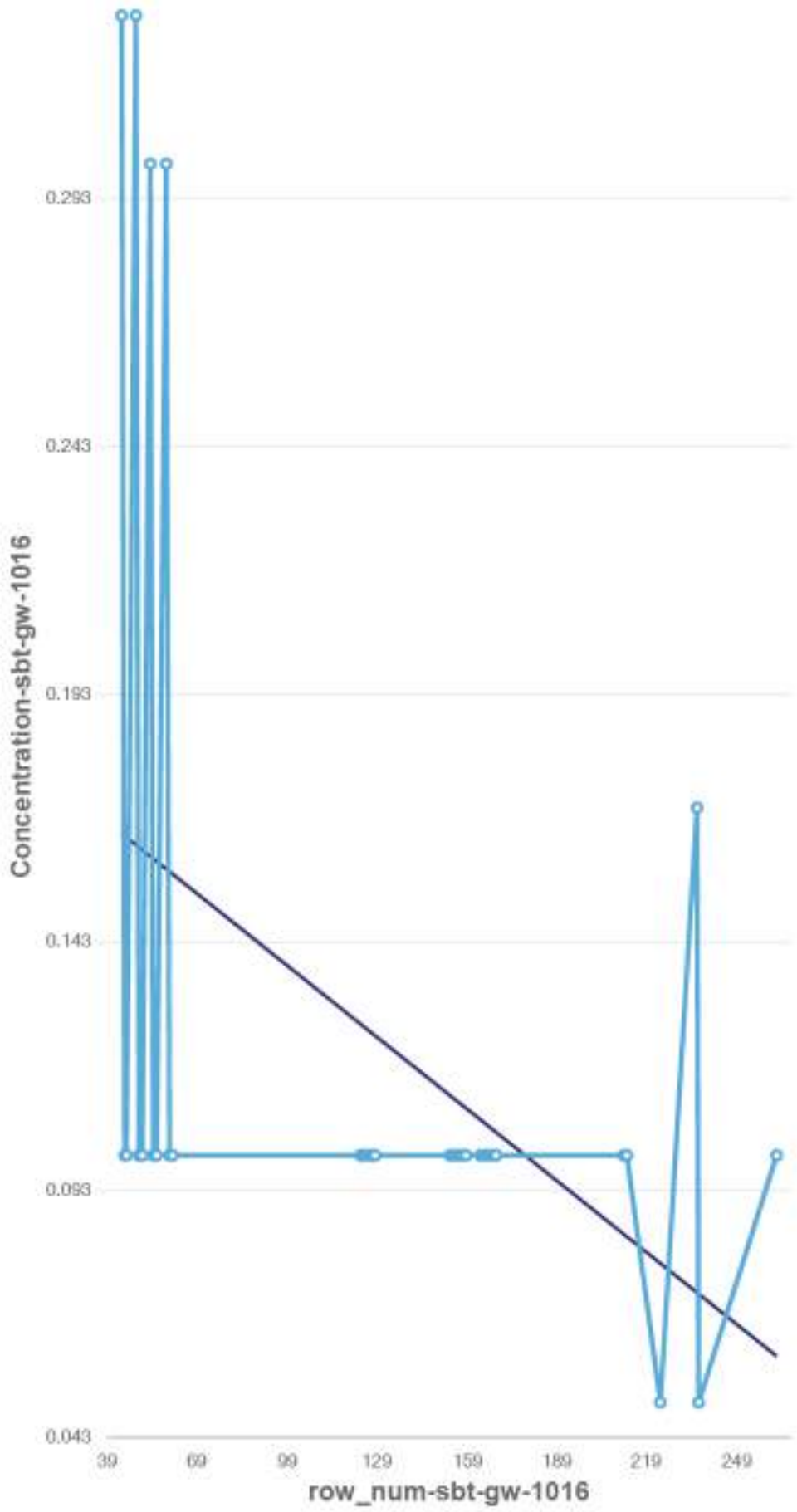


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5270
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

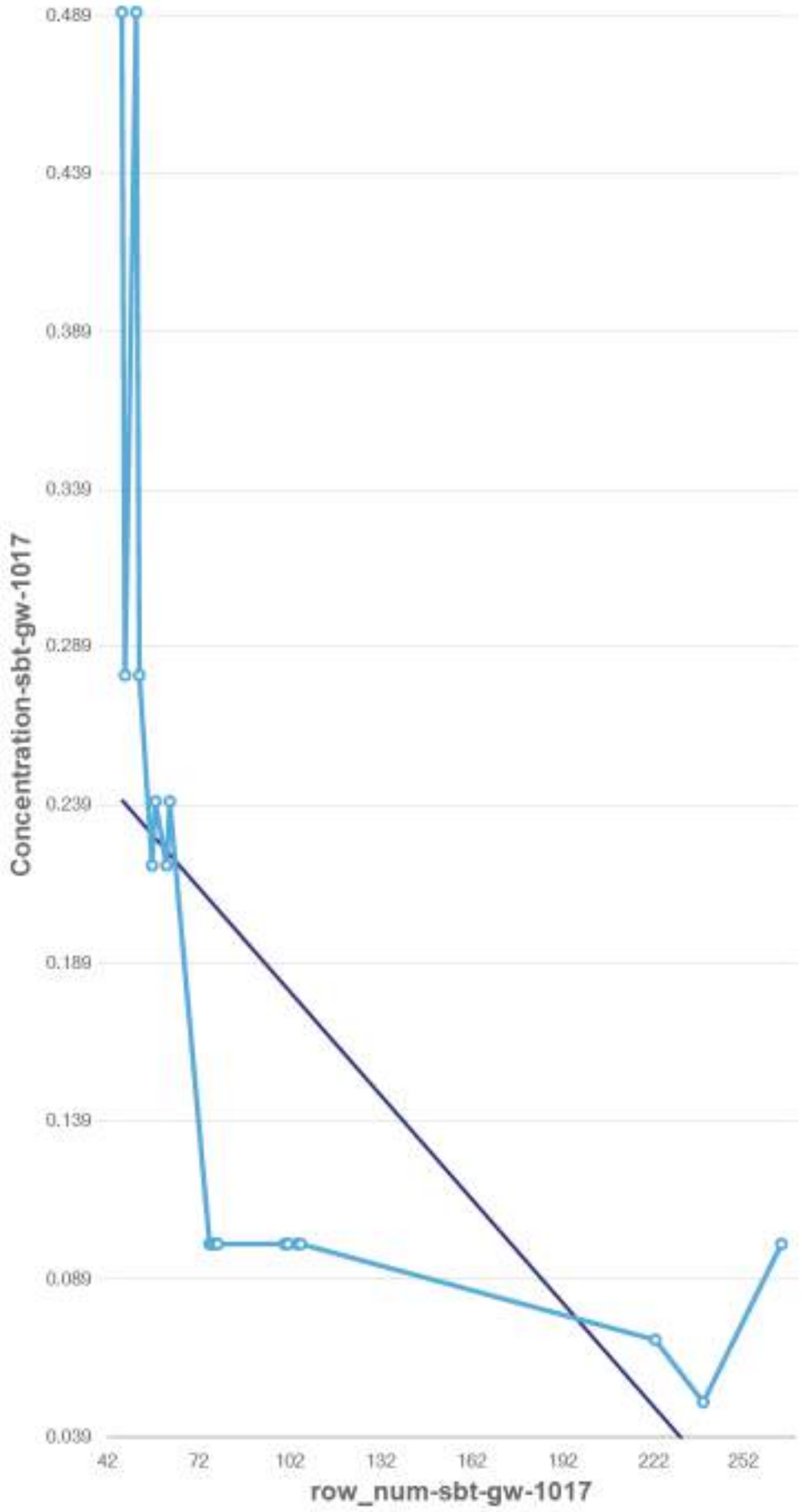


Mann-Kendall Trend Analysis	
n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	50.4480
Standardized Value of S	-2.6562
M-K Test Value (S)	-135
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0040

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0005
OLS Regression Intercept	0.1862

Statistically significant evidence of a decreasing trend at the specified level of significance.

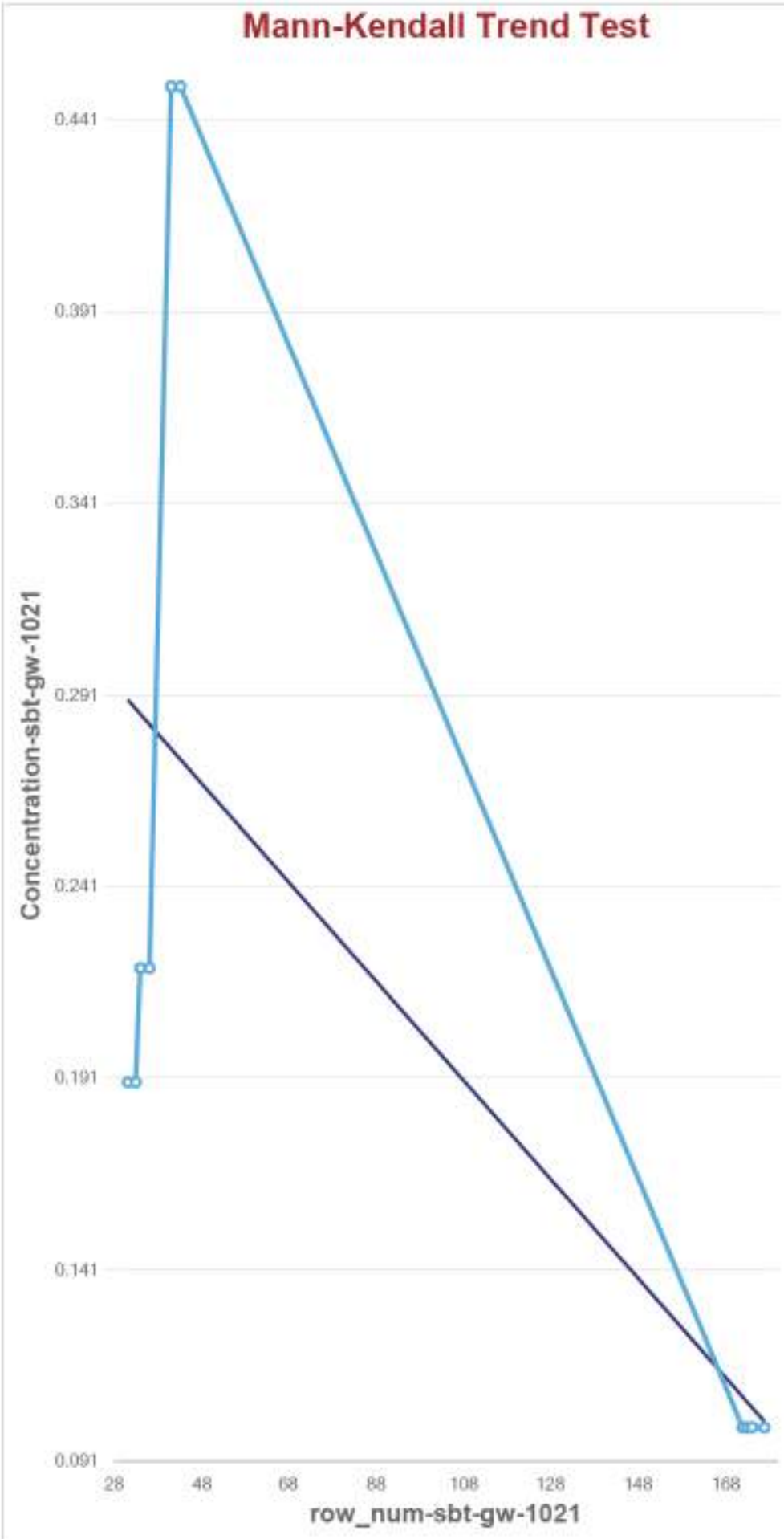
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	26.8514
Standardized Value of S	-4.3945
M-K Test Value (S)	-119
Tabulated p-value	0.0000
Approximate p-value	0.0000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0011
OLS Regression Intercept	0.2922

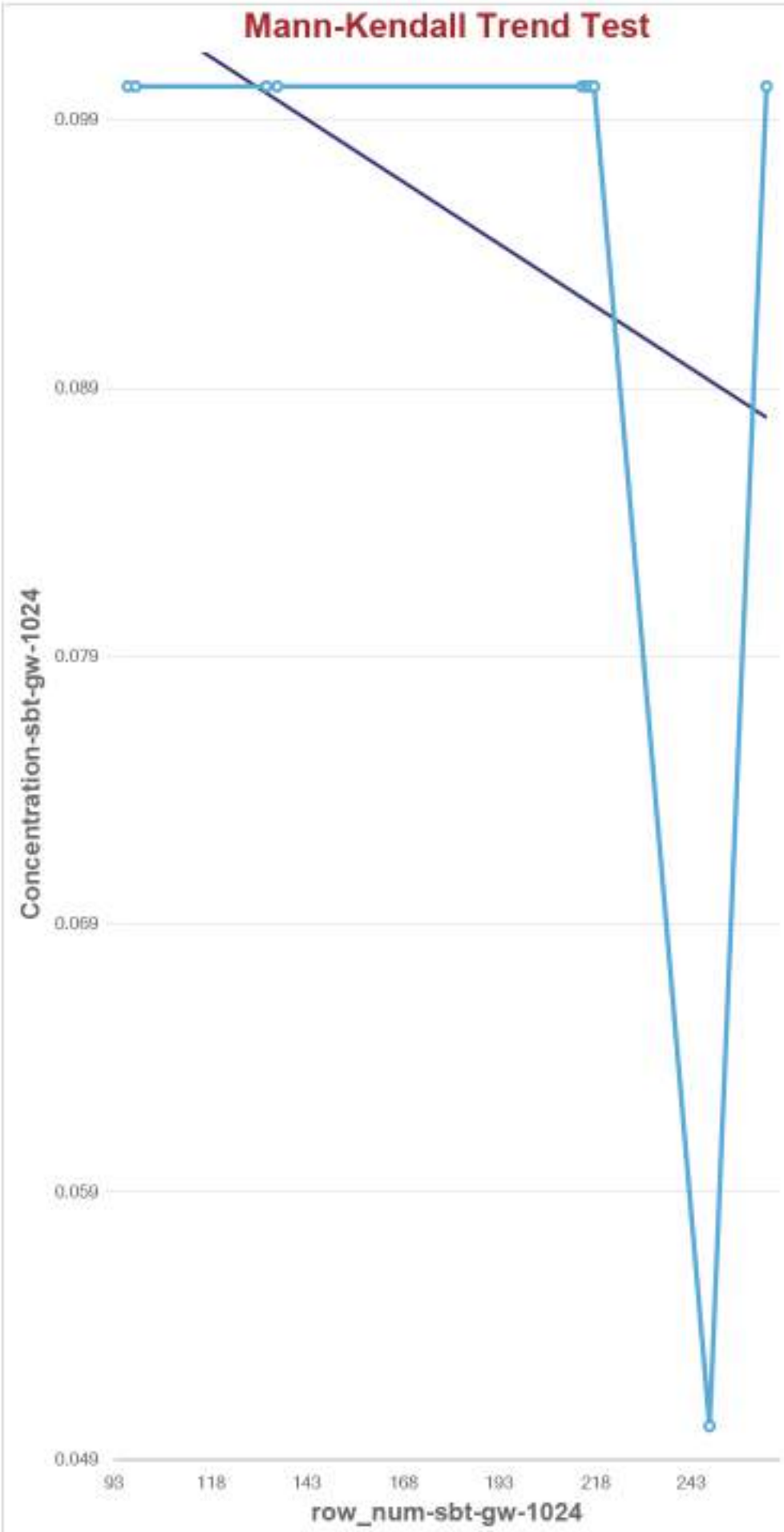
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6458
Standardized Value of S	-1.0333
M-K Test Value (S)	-12
Tabulated p-value	0.1460
Approximate p-value	0.1507

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0013
OLS Regression Intercept	0.3298

Insufficient statistical evidence of a significant trend at the specified level of significance.

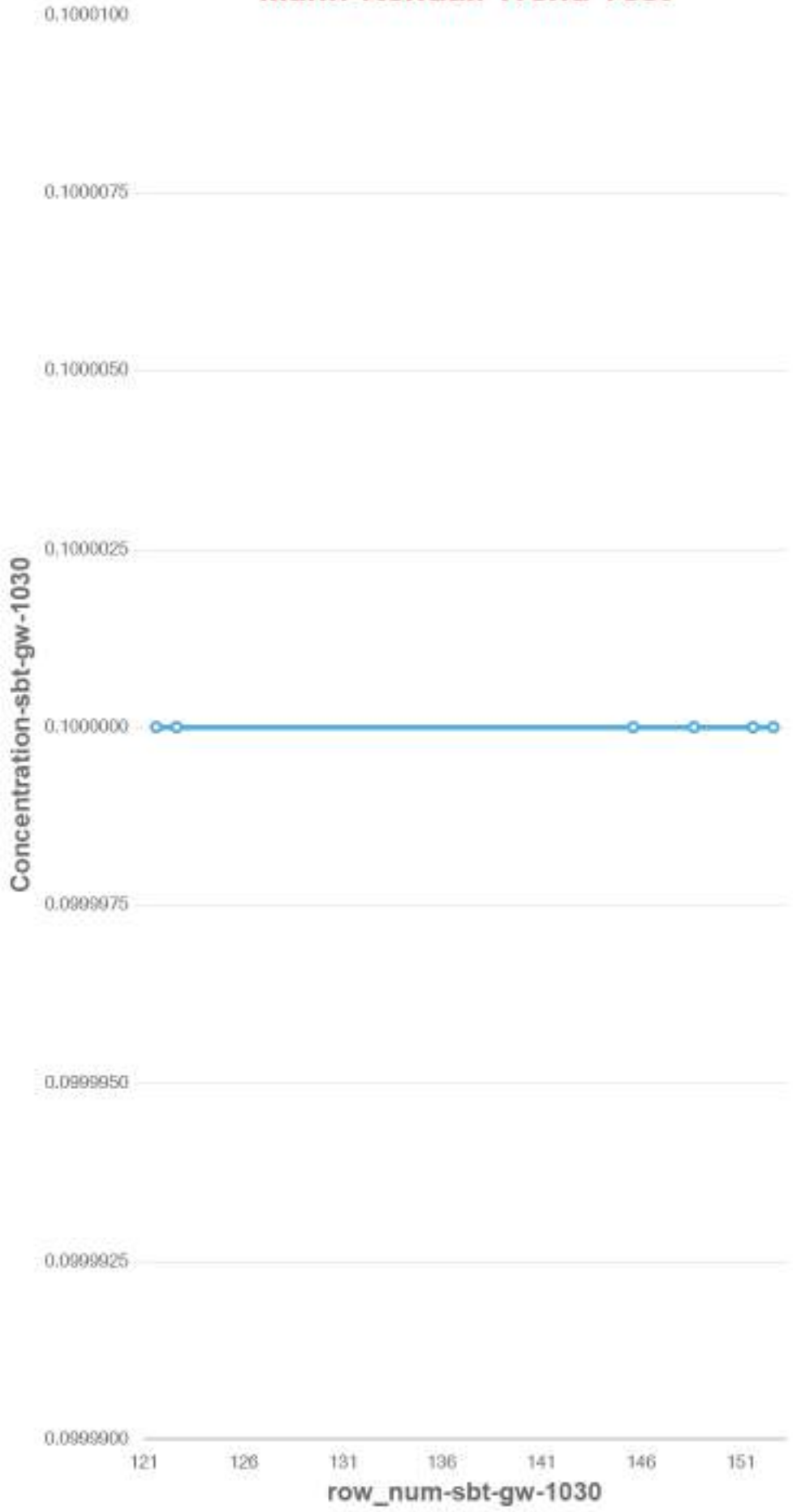


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	-1.0445
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.1121

Insufficient statistical evidence of a significant trend at the specified level of significance.

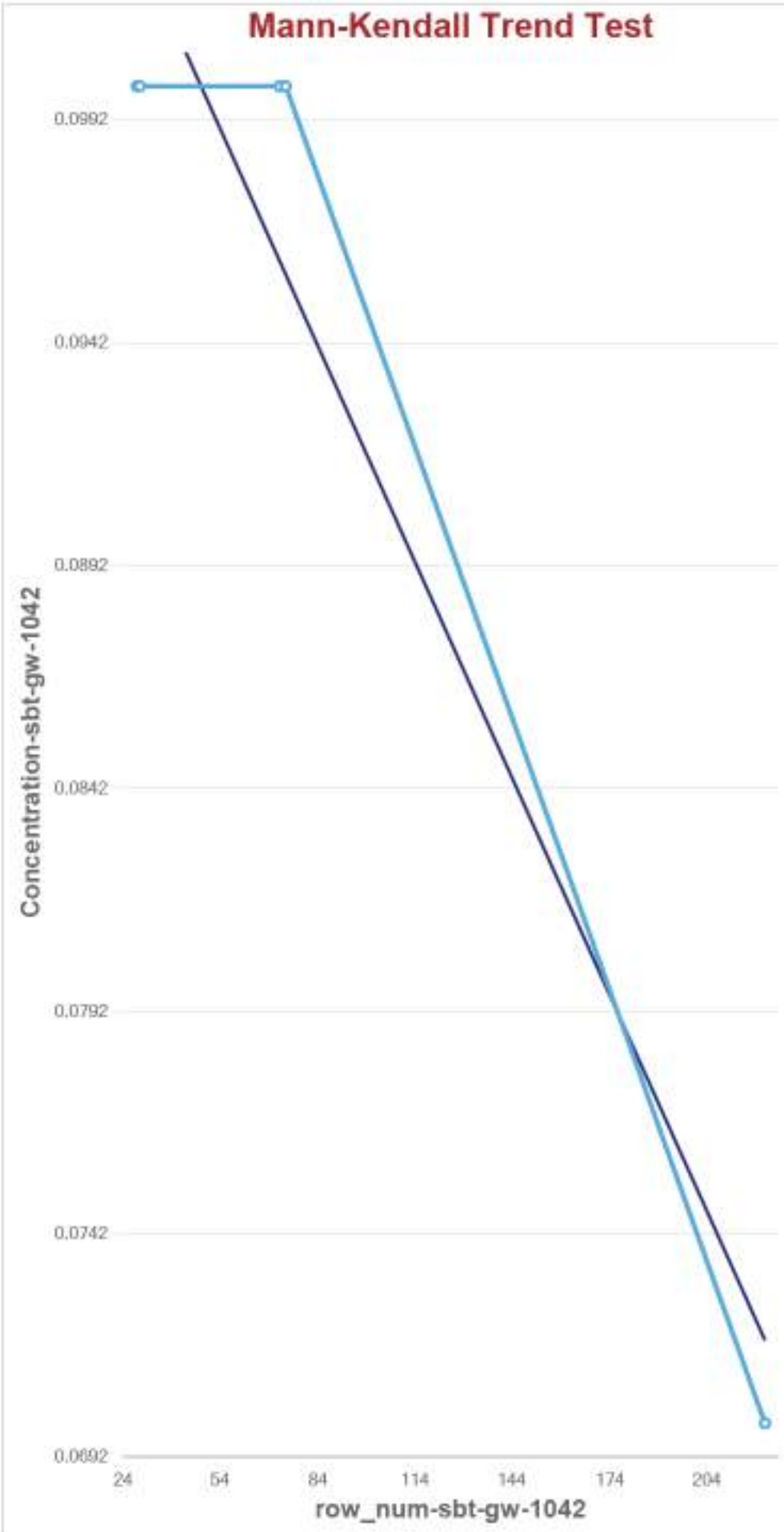
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

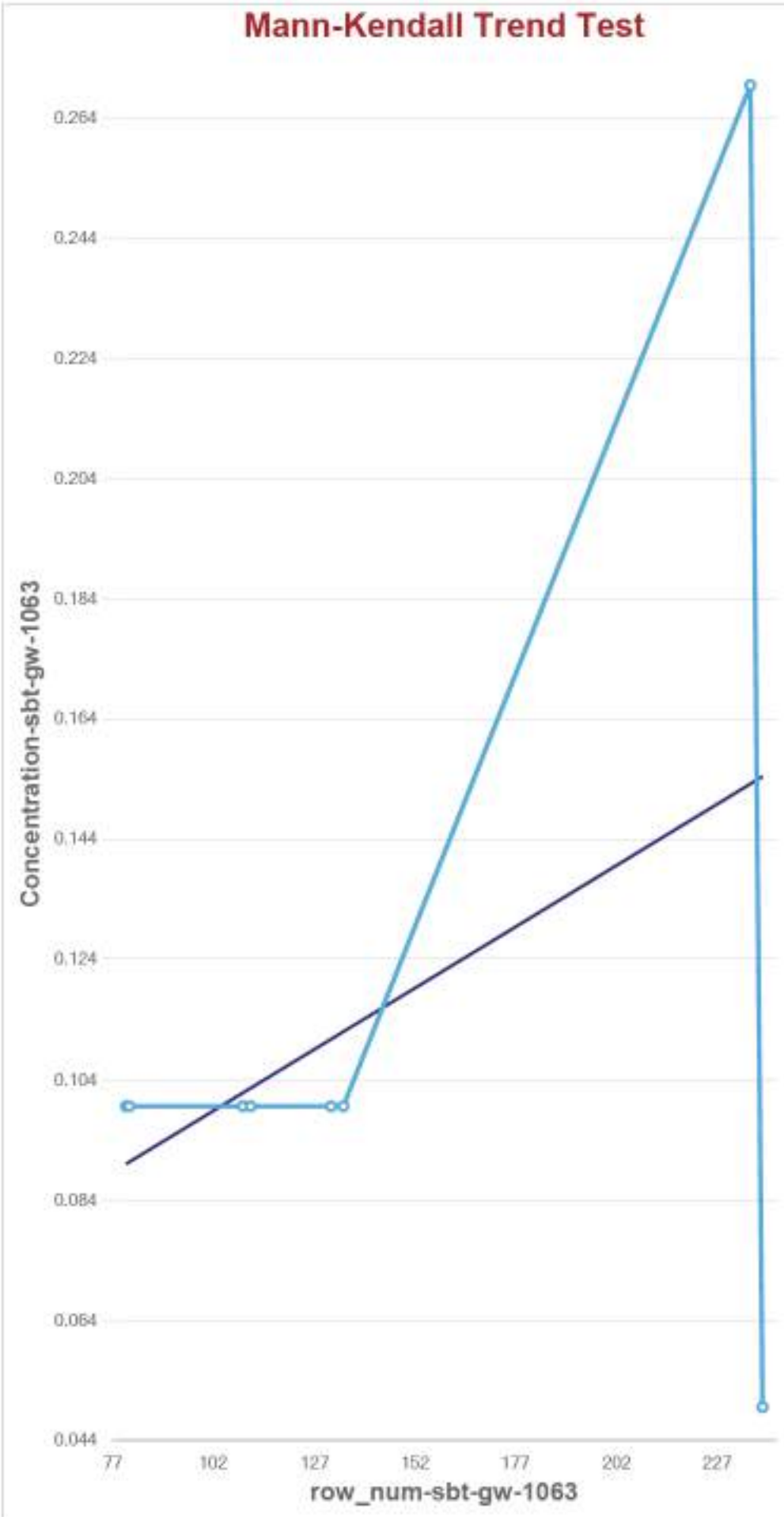
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.8284
Standardized Value of S	-1.0607
M-K Test Value (S)	-4
Tabulated p-value	0.2420
Approximate p-value	0.1444

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0002
OLS Regression Intercept	0.1077

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

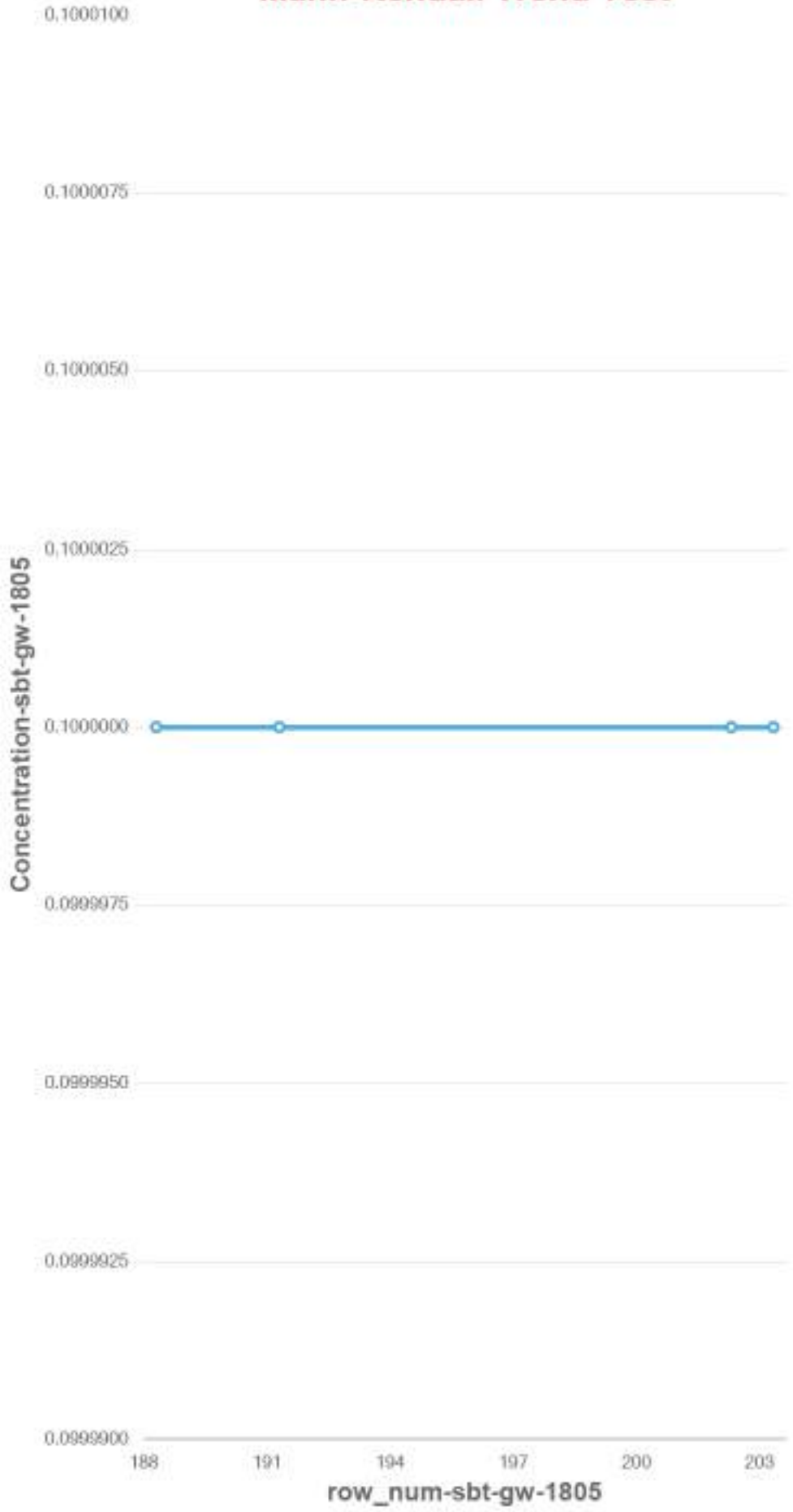
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.0828
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	0.5480
Approximate p-value	0.5000

OLS Regression Line (Blue)

OLS Regression Slope	0.0004
OLS Regression Intercept	0.0580

Insufficient statistical evidence of a significant trend at the specified level of significance.

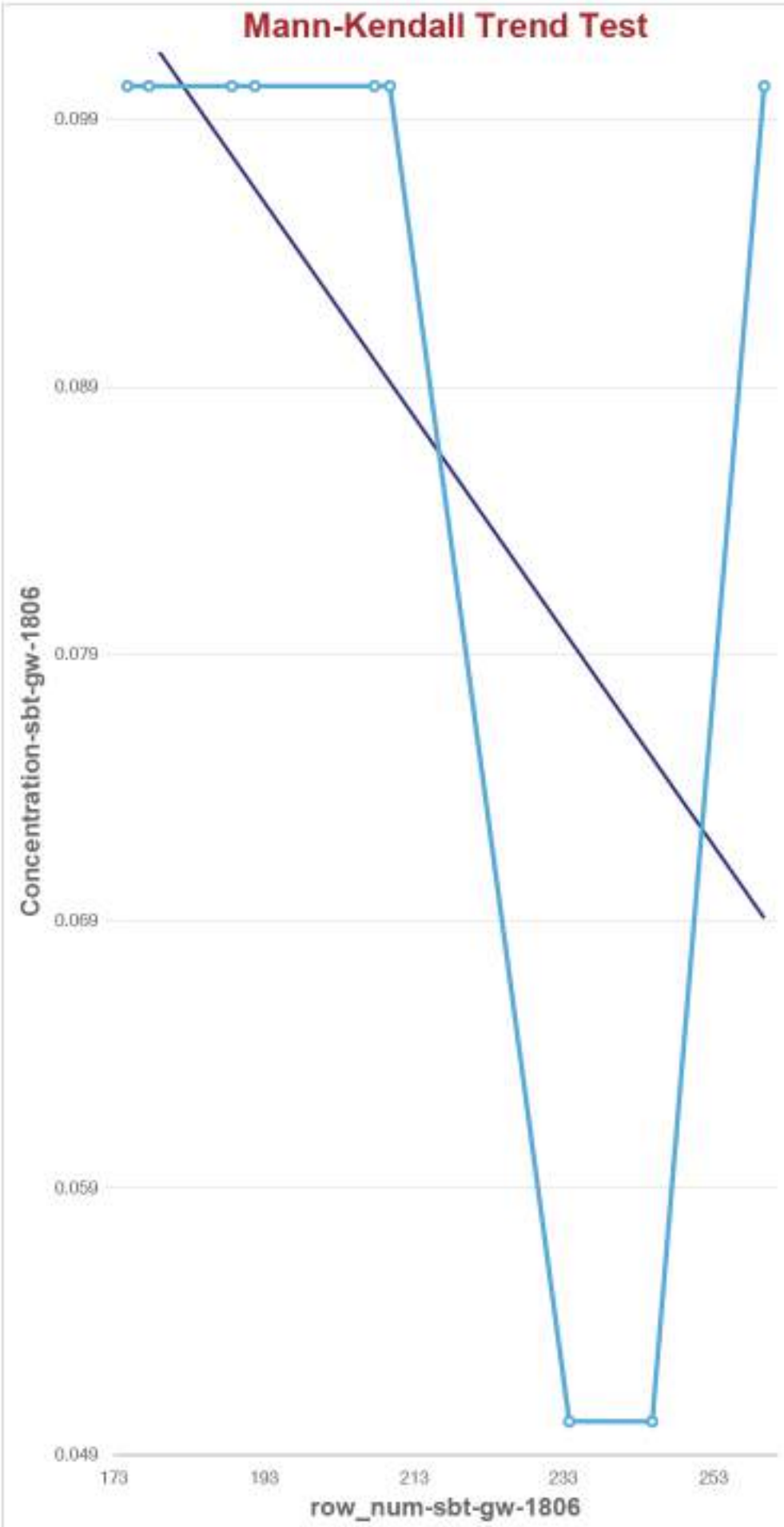
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

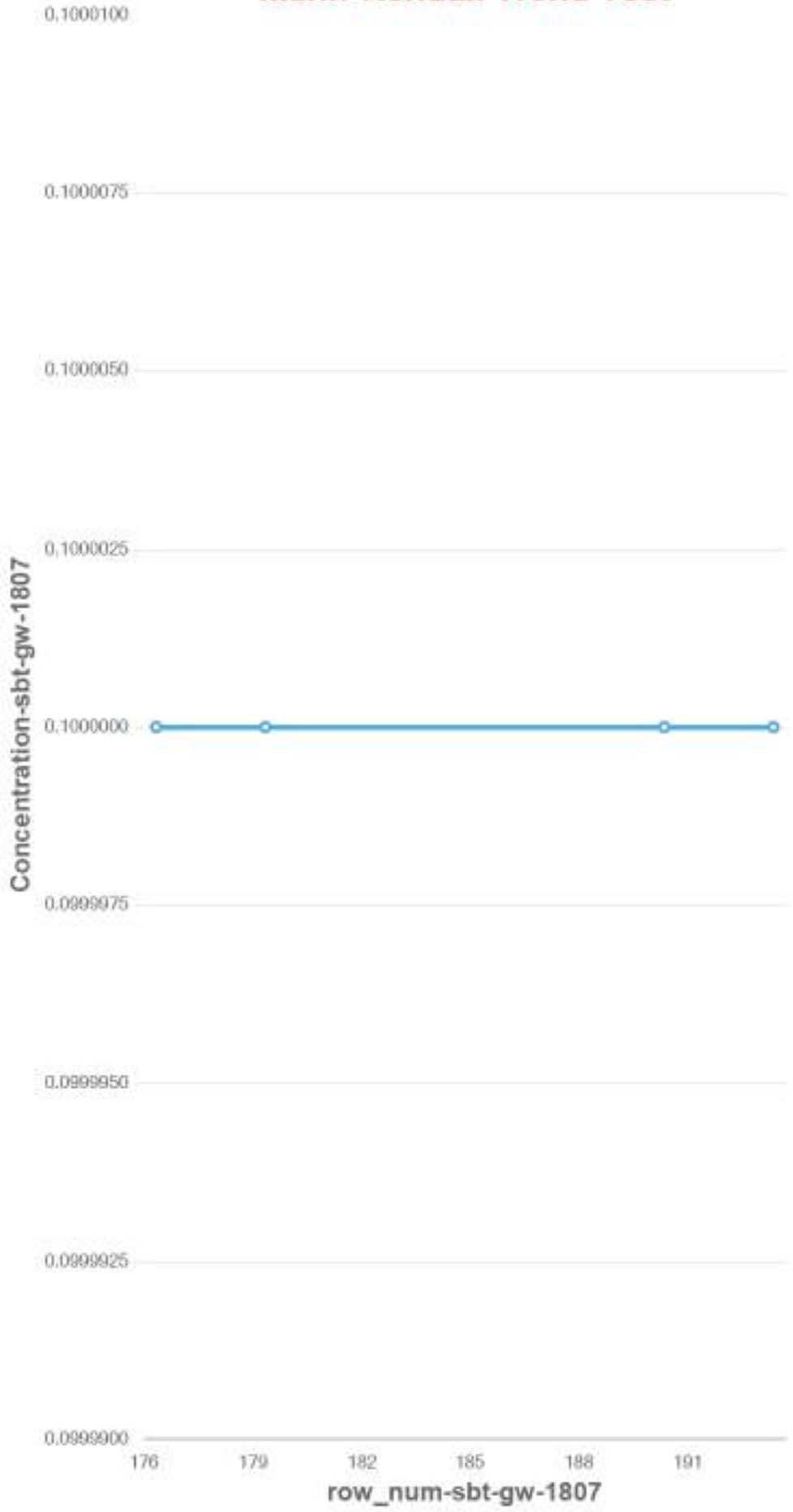


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.8313
Standardized Value of S	-1.3175
M-K Test Value (S)	-10
Tabulated p-value	0.1790
Approximate p-value	0.0938

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0004
OLS Regression Intercept	0.1733

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

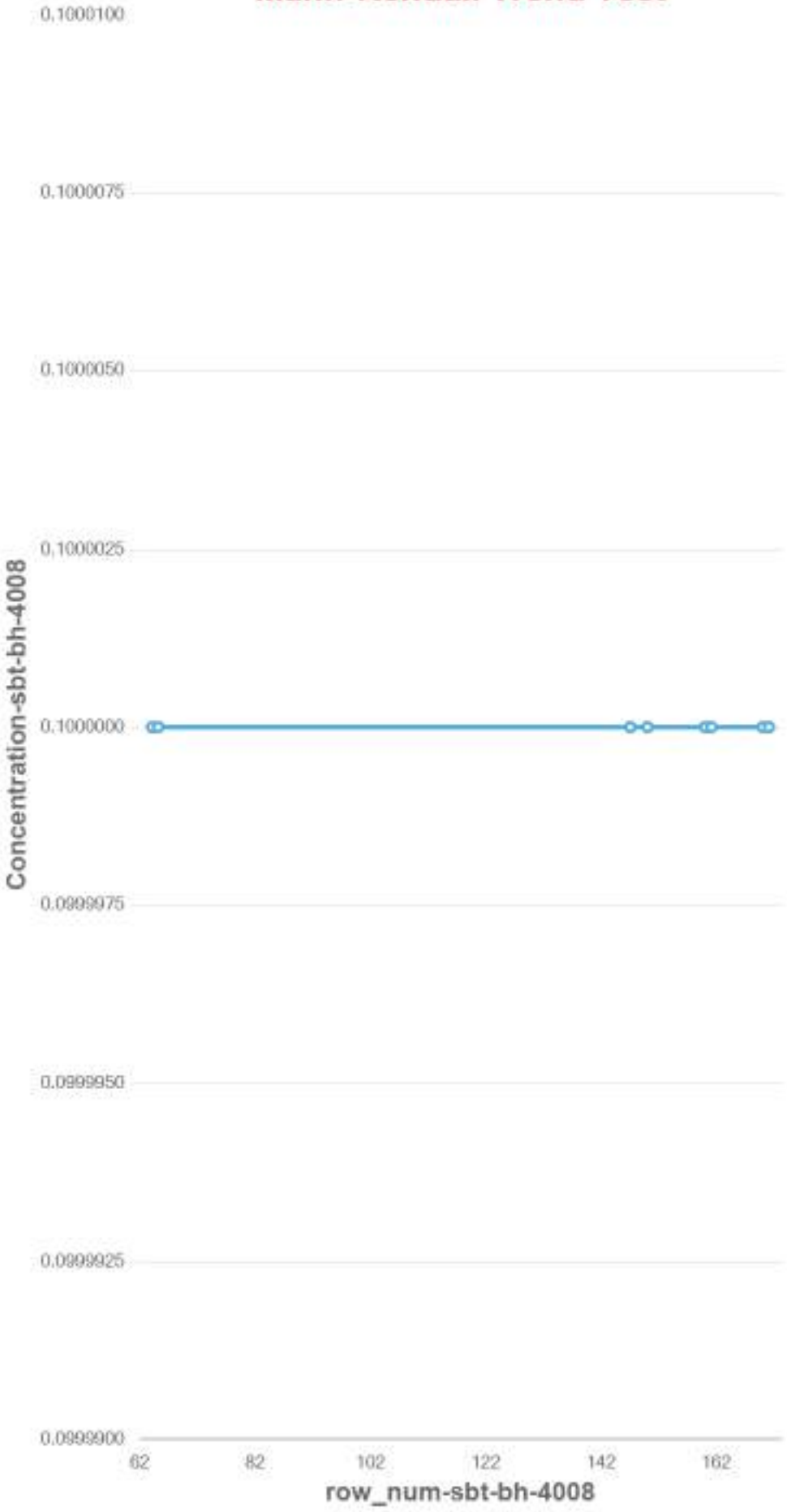


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

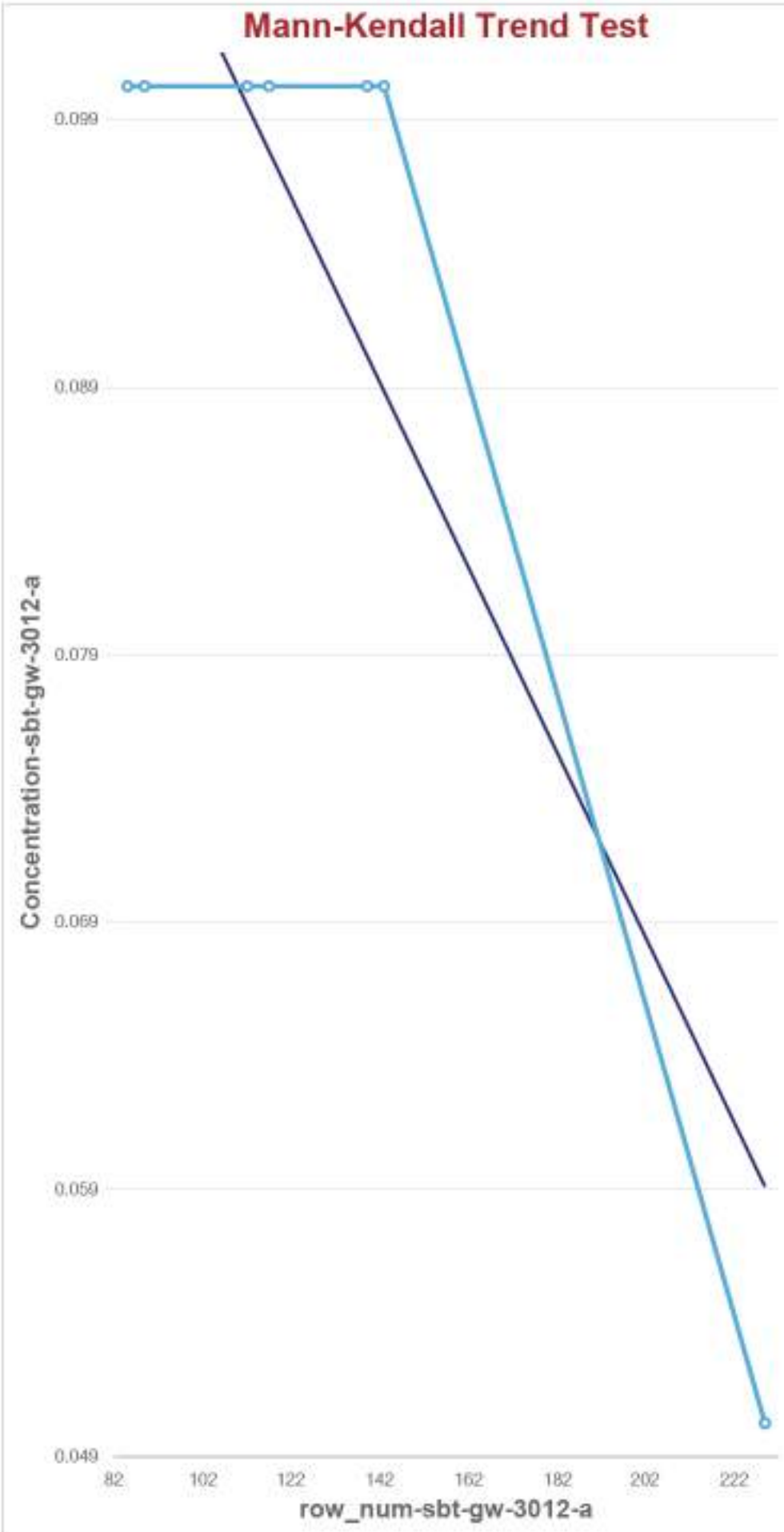
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

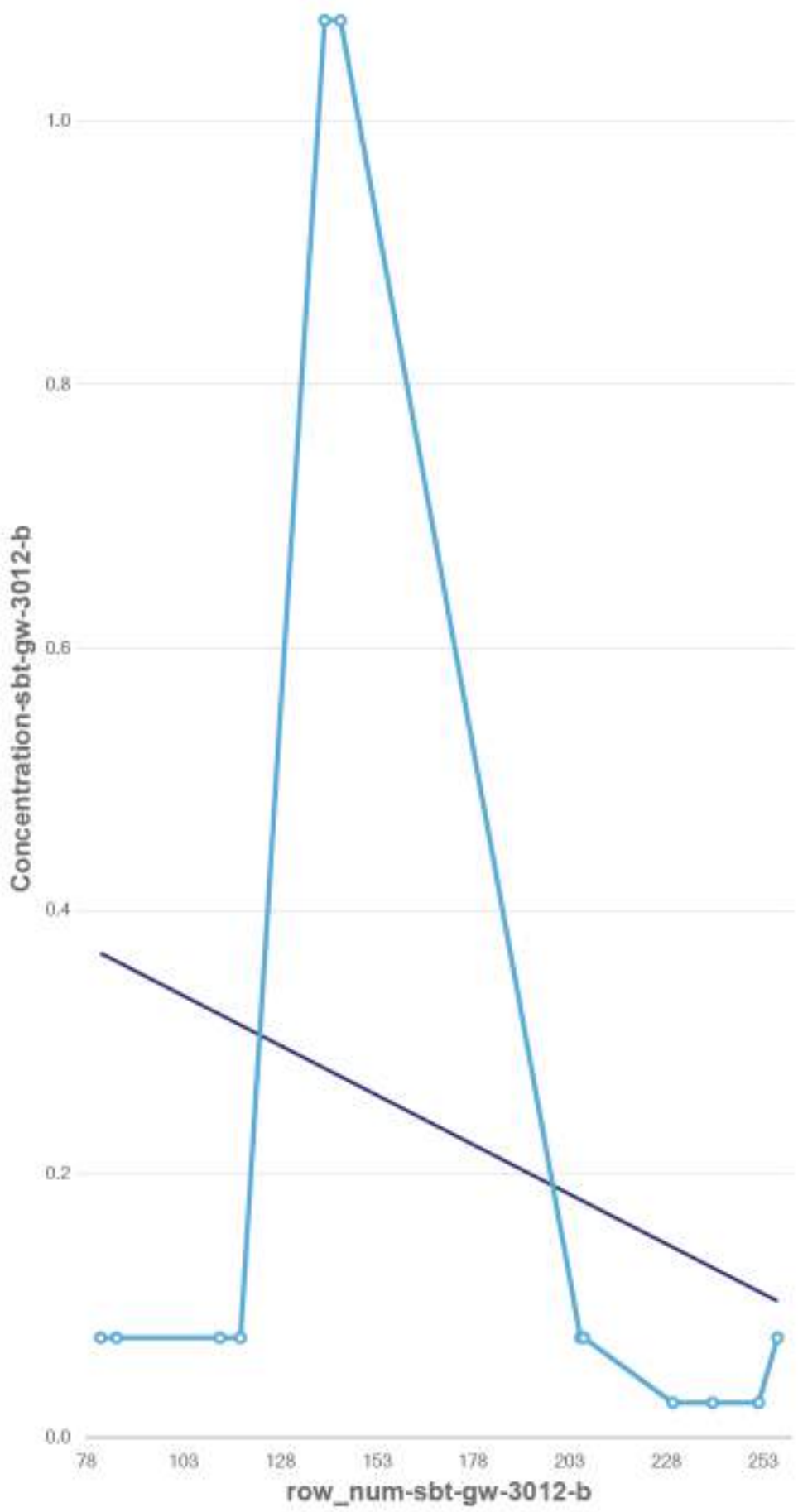


Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	-1.2500
M-K Test Value (S)	-6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1380

Insufficient statistical evidence of a significant trend at the specified level of significance.

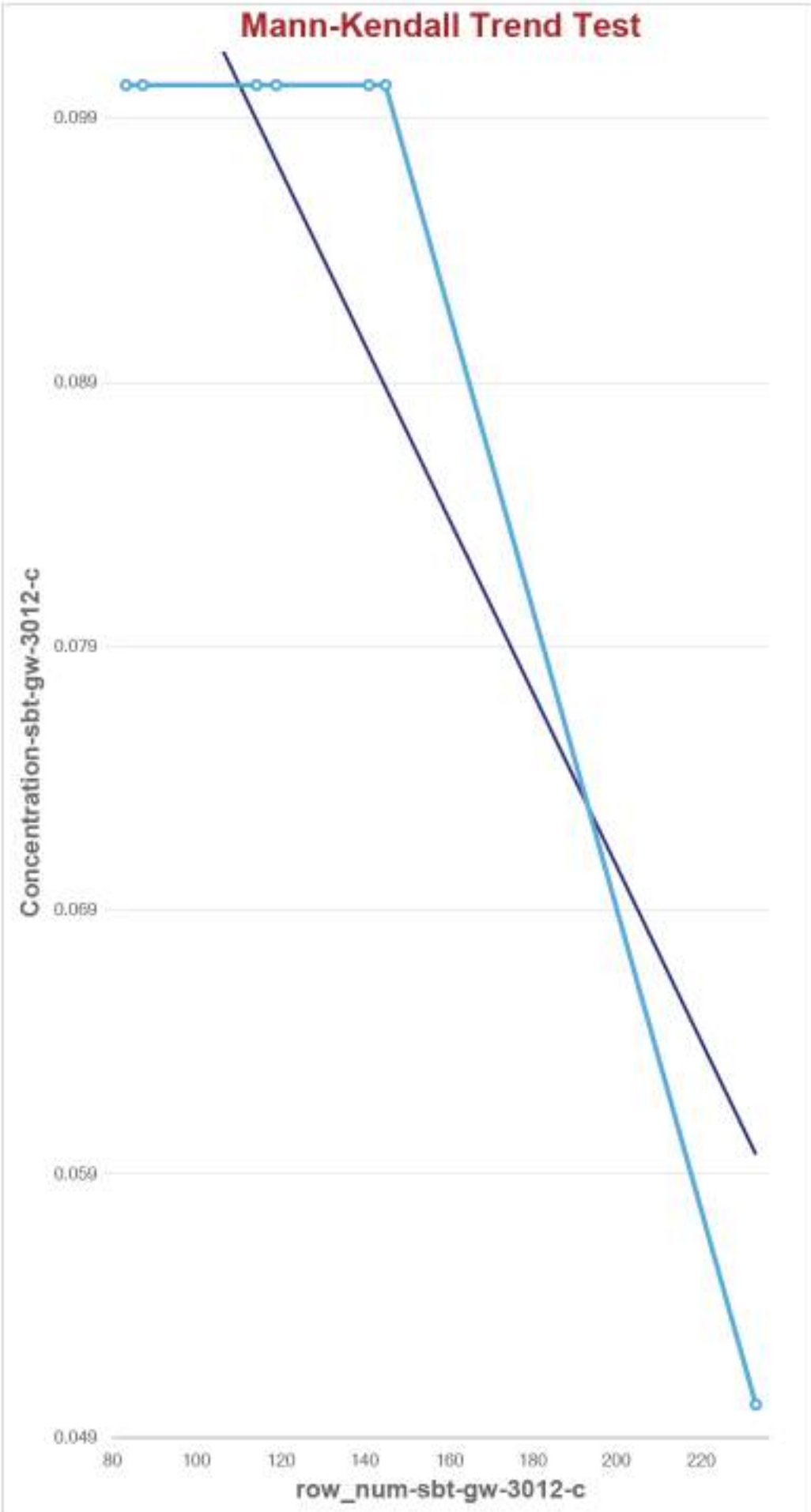
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.7932
Standardized Value of S	-1.4070
M-K Test Value (S)	-19
Tabulated p-value	0.1250
Approximate p-value	0.0797

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0015
OLS Regression Intercept	0.5152

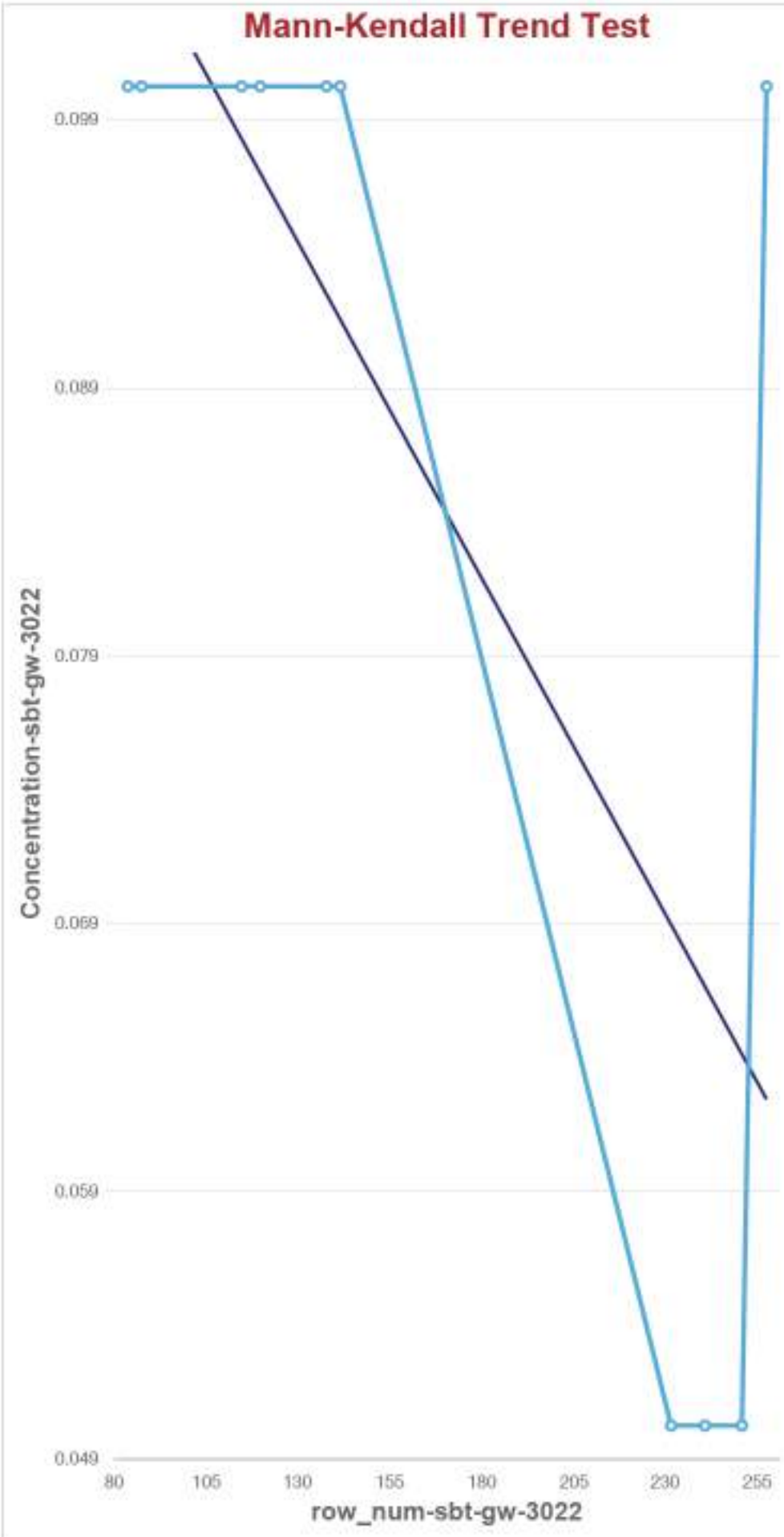
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	-1.2500
M-K Test Value (S)	-6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1363

Insufficient statistical evidence of a significant trend at the specified level of significance.



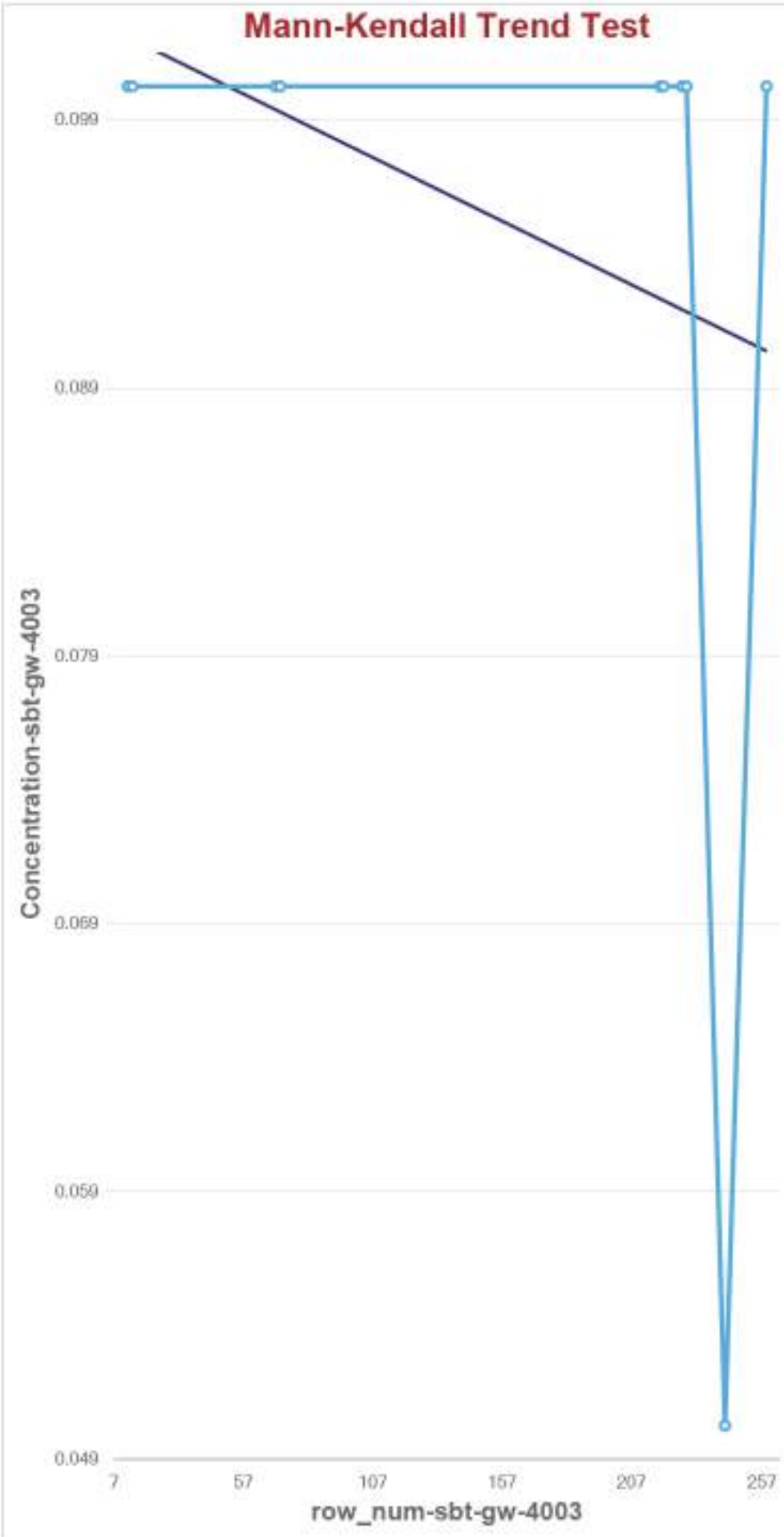
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.7750
Standardized Value of S	-1.5954
M-K Test Value (S)	-15
Tabulated p-value	0.1080
Approximate p-value	0.0553

OLS Regression Line (Blue)

OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1268

Insufficient statistical evidence of a significant trend at the specified level of significance.

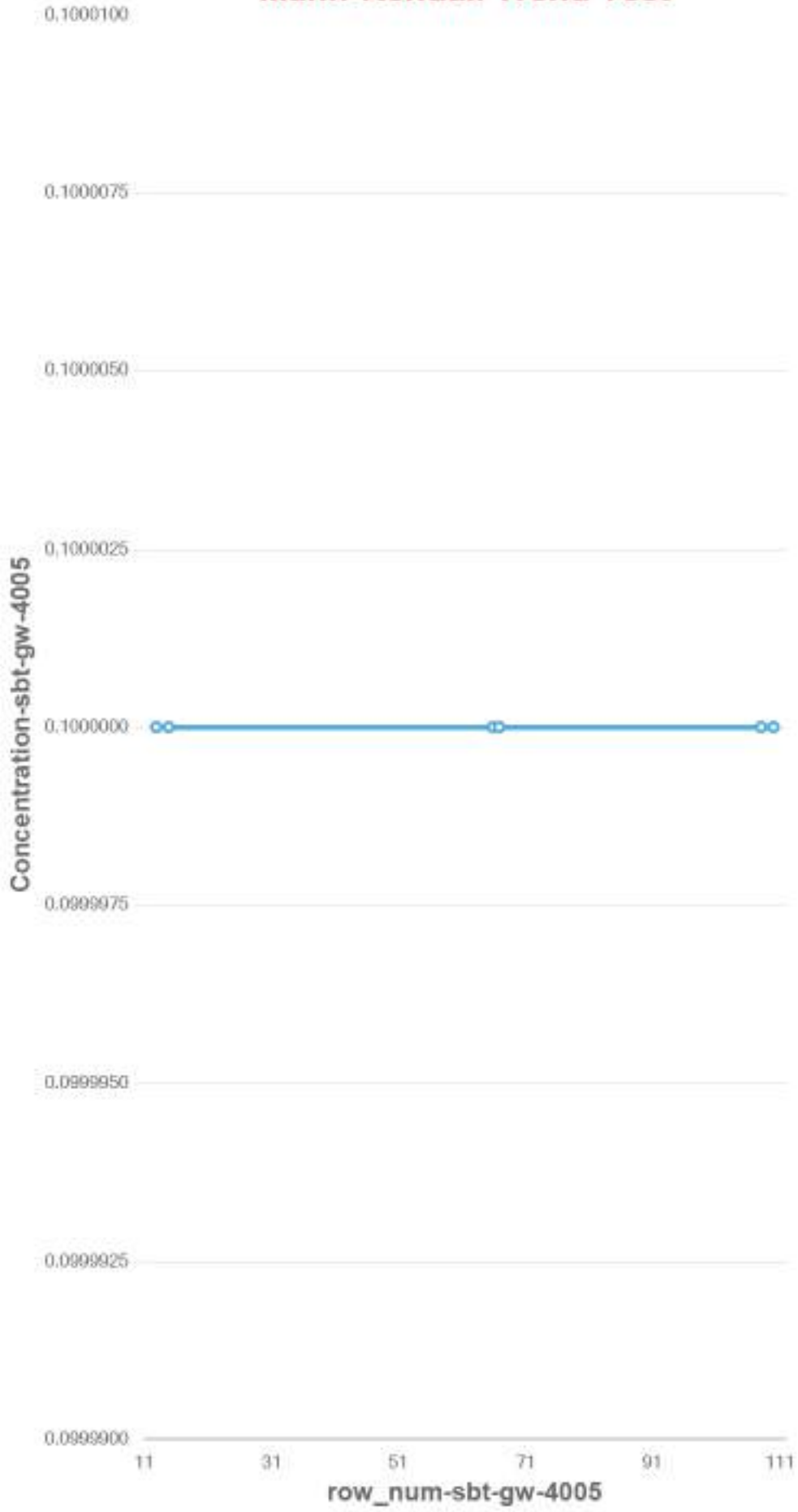


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	-1.0445
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1024

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

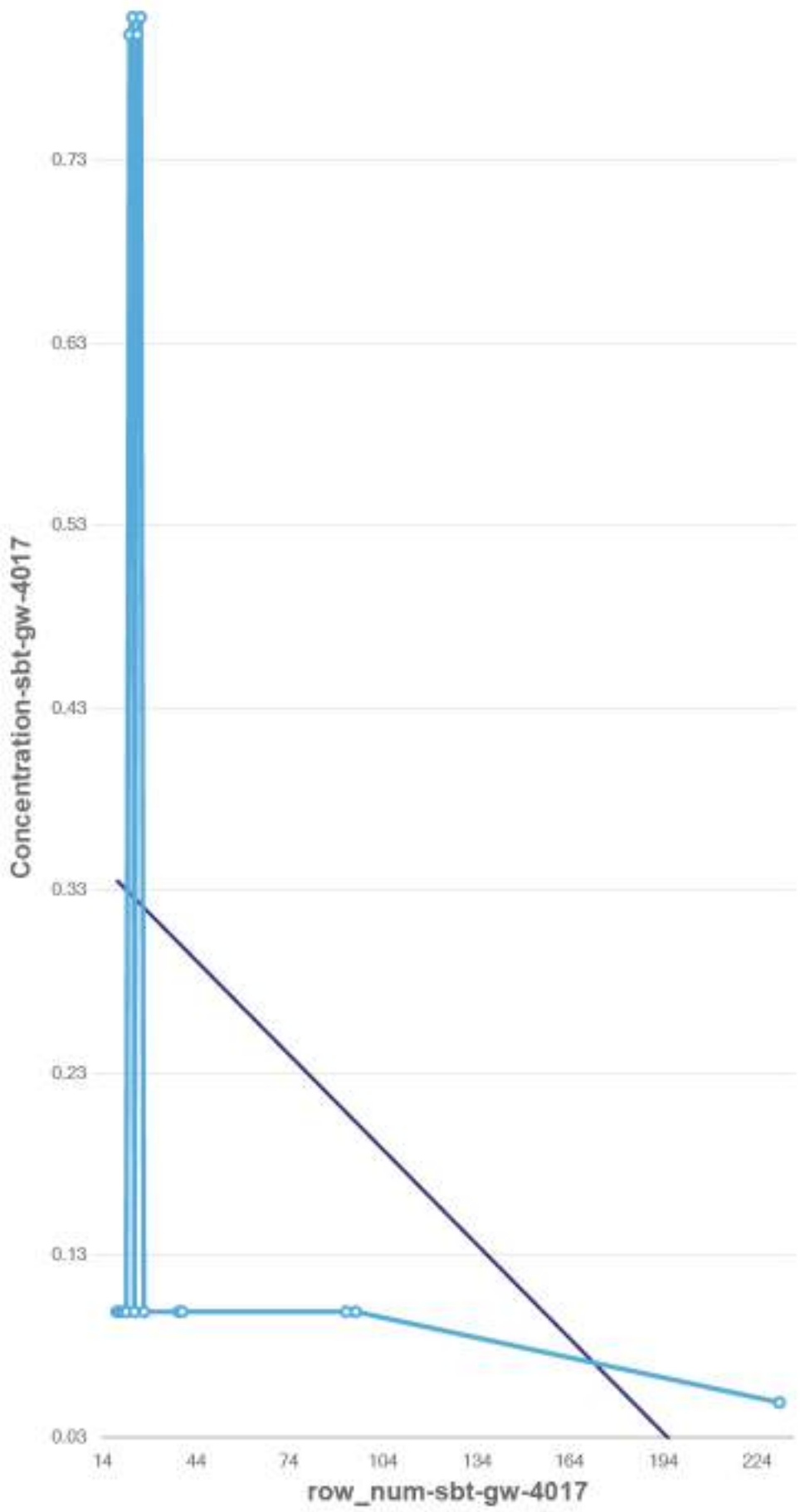


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

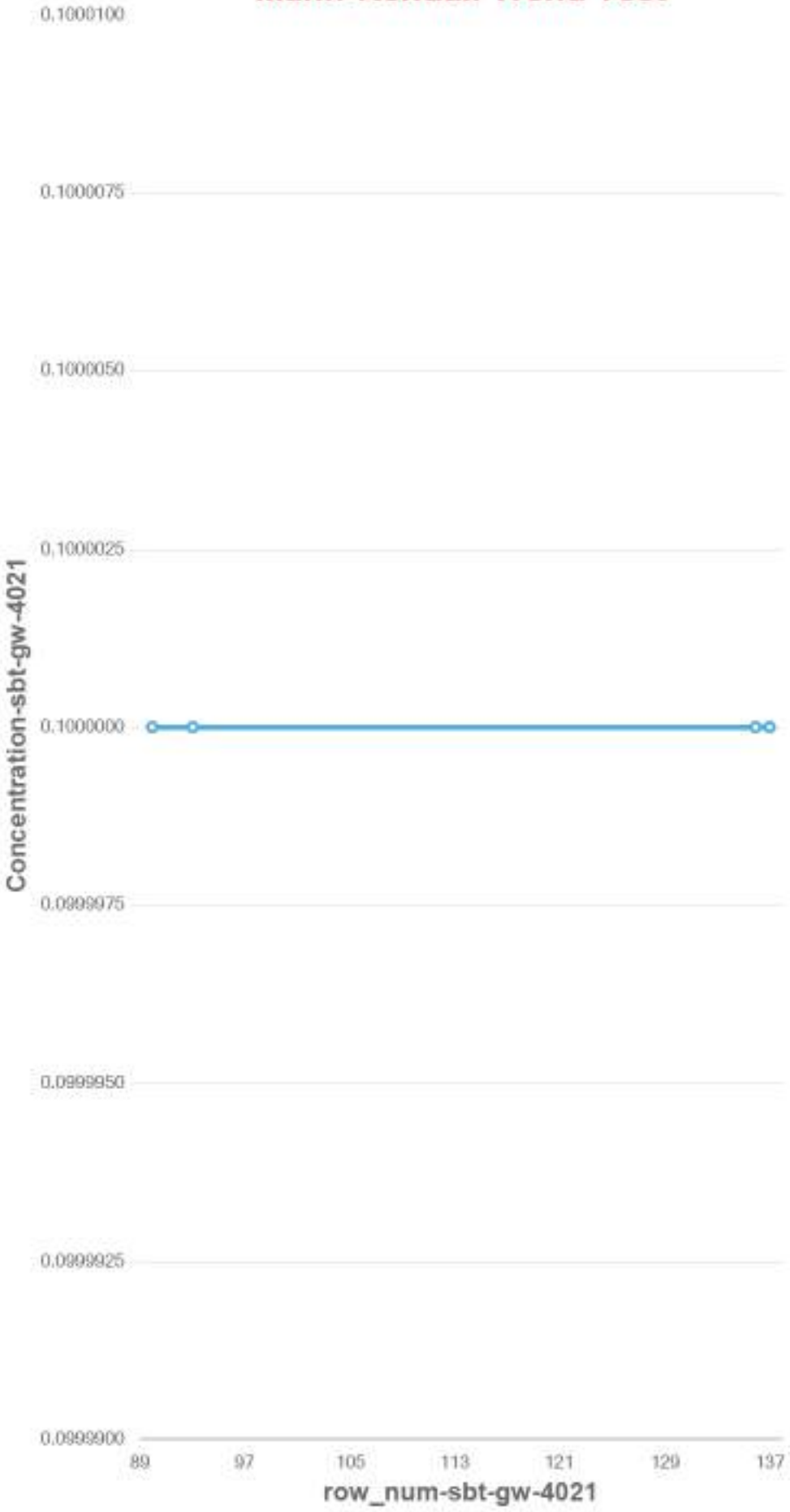


Mann-Kendall Trend Analysis	
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.7730
Standardized Value of S	-0.8943
M-K Test Value (S)	-16
Tabulated p-value	0.2180
Approximate p-value	0.1856

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0017
OLS Regression Intercept	0.3677

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

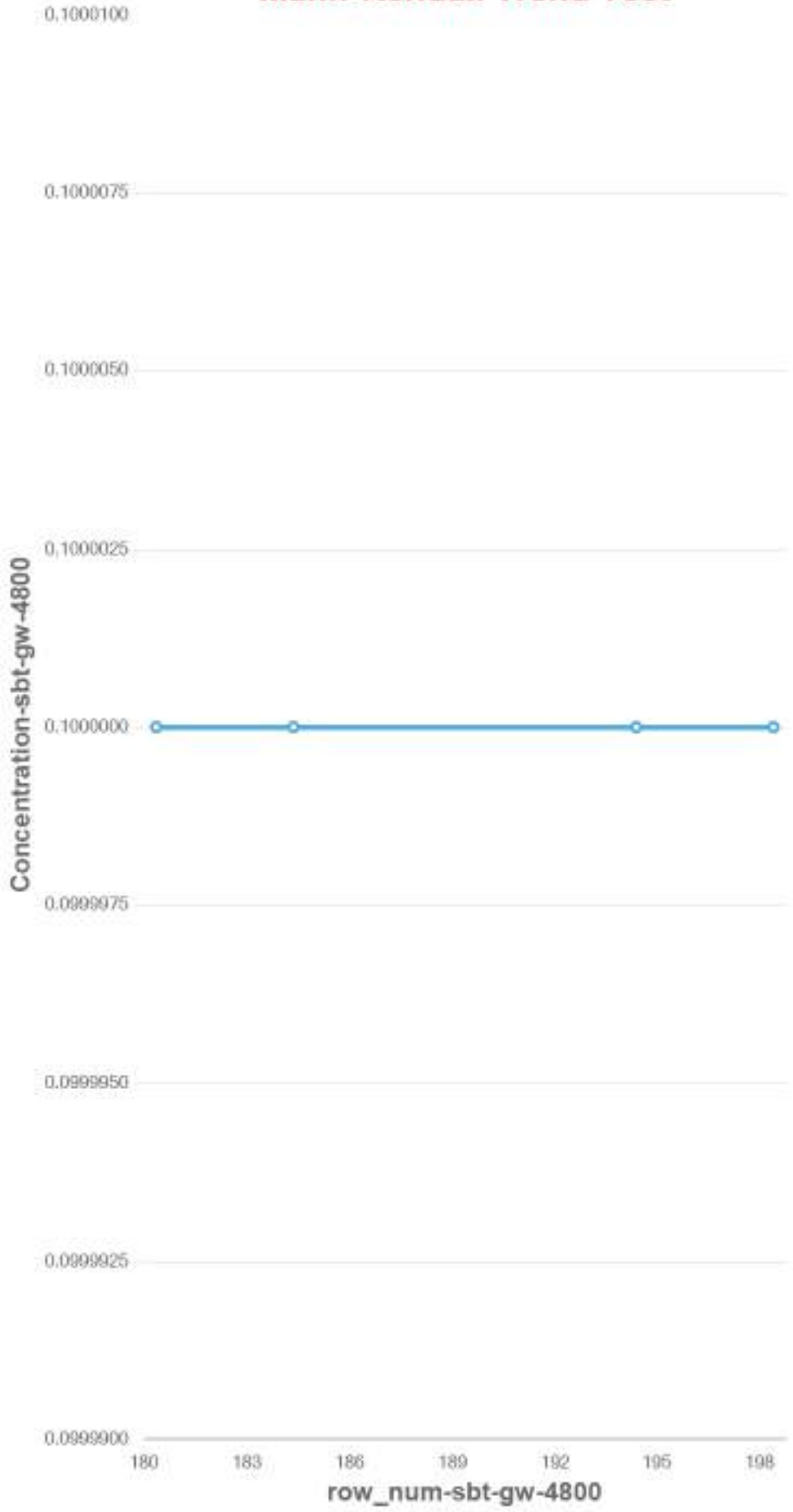


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

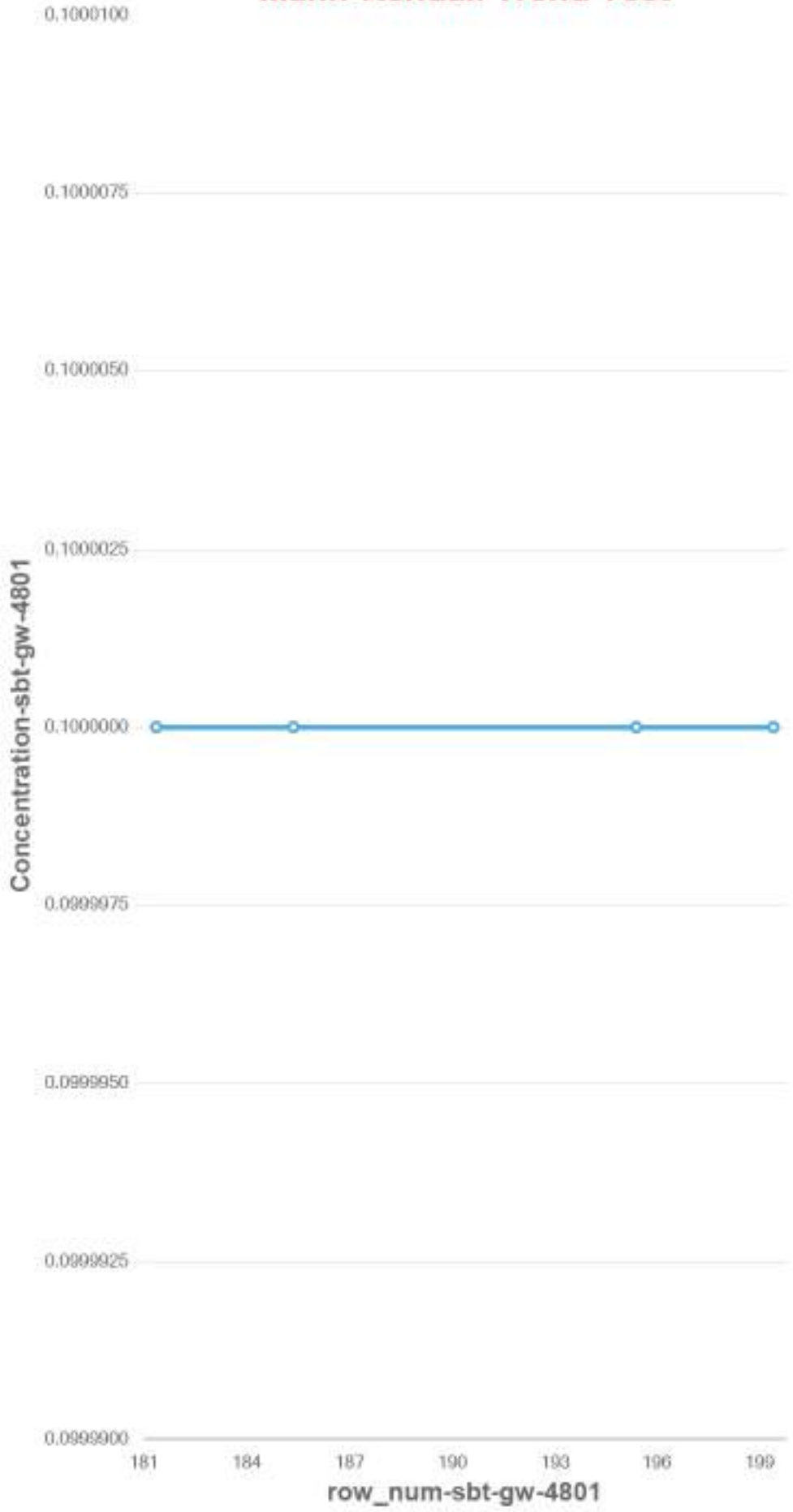


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

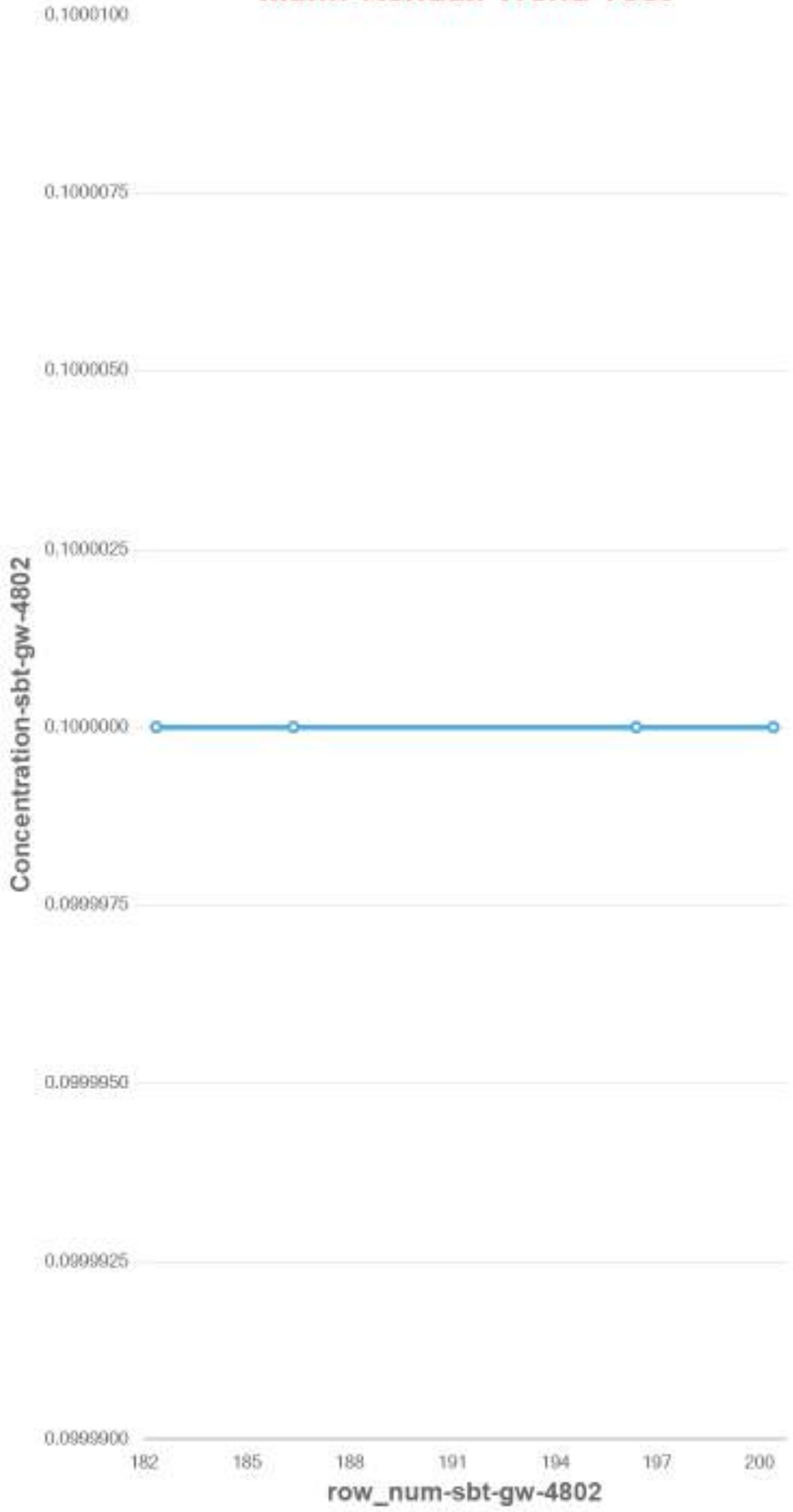


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

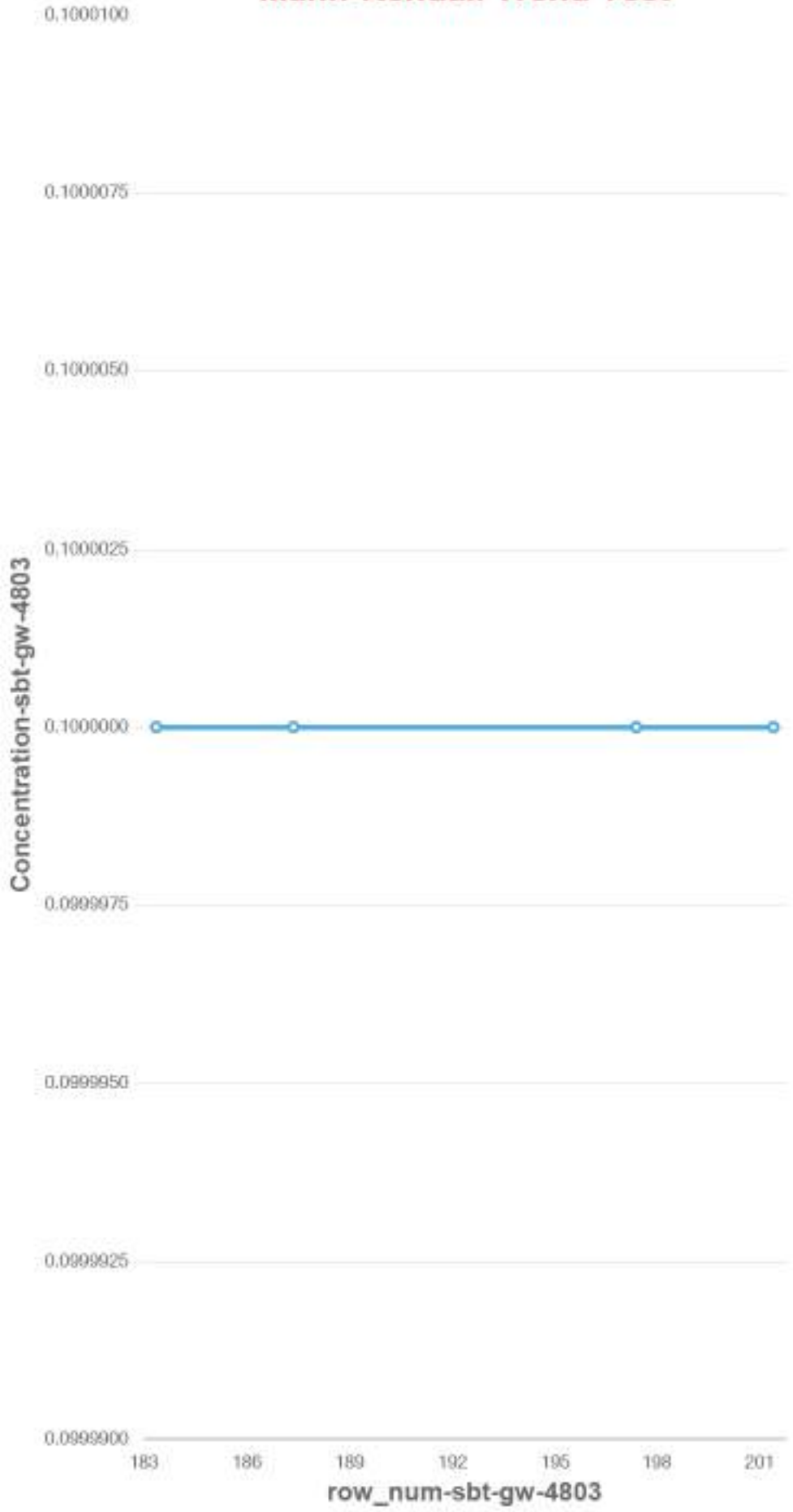


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

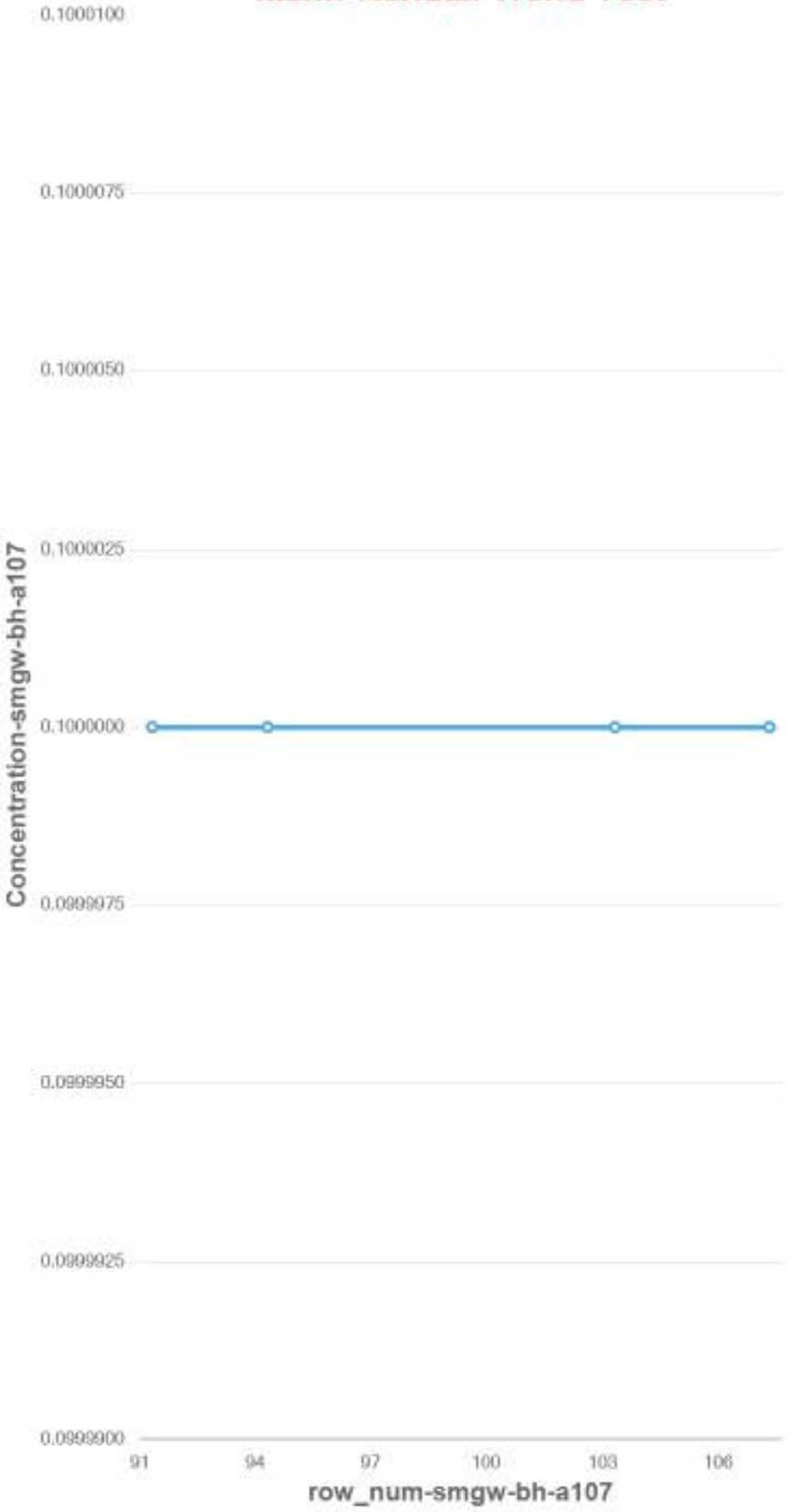


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

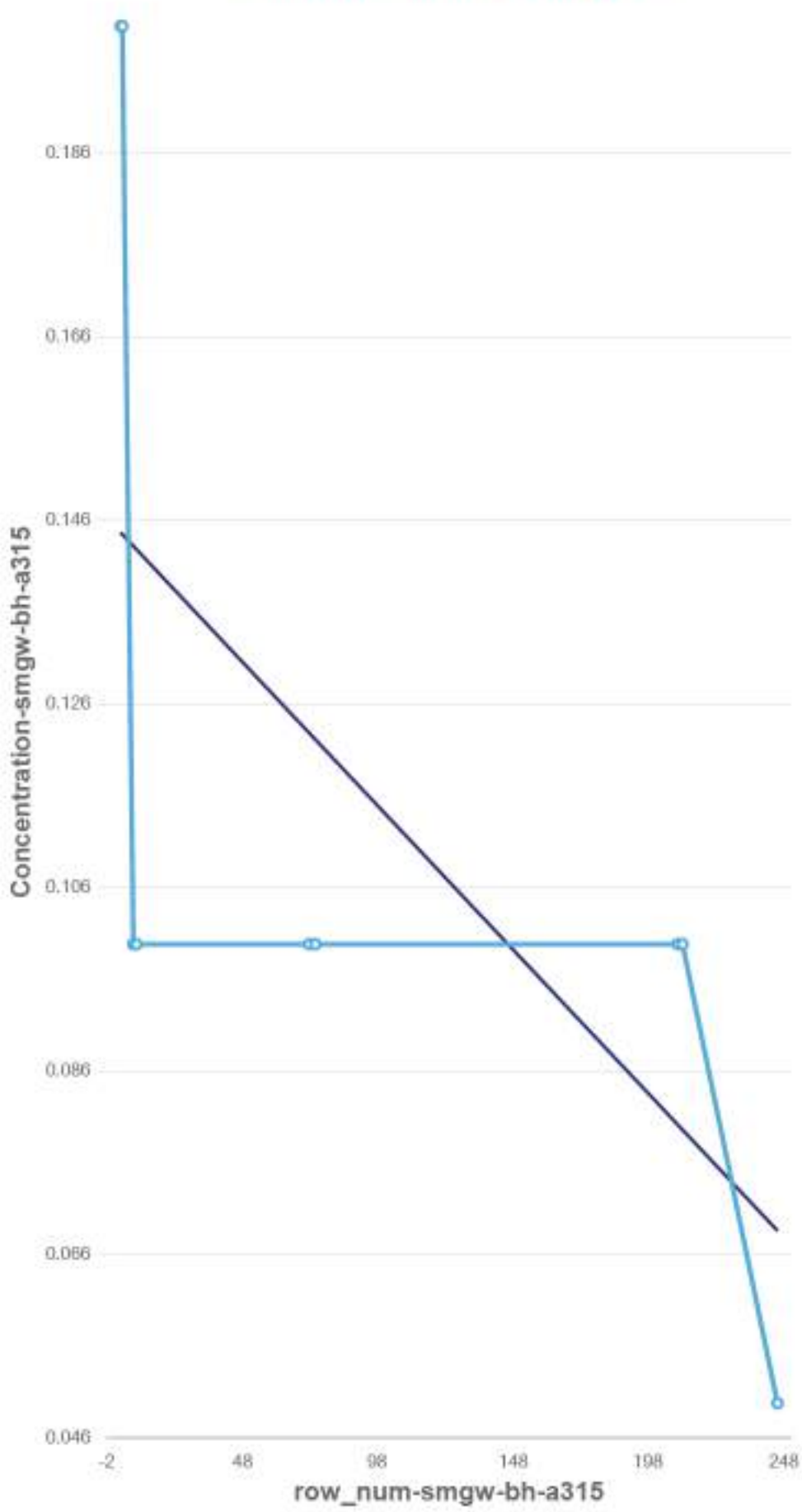


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1000

Insufficient statistical evidence of a significant trend at the specified level of significance.

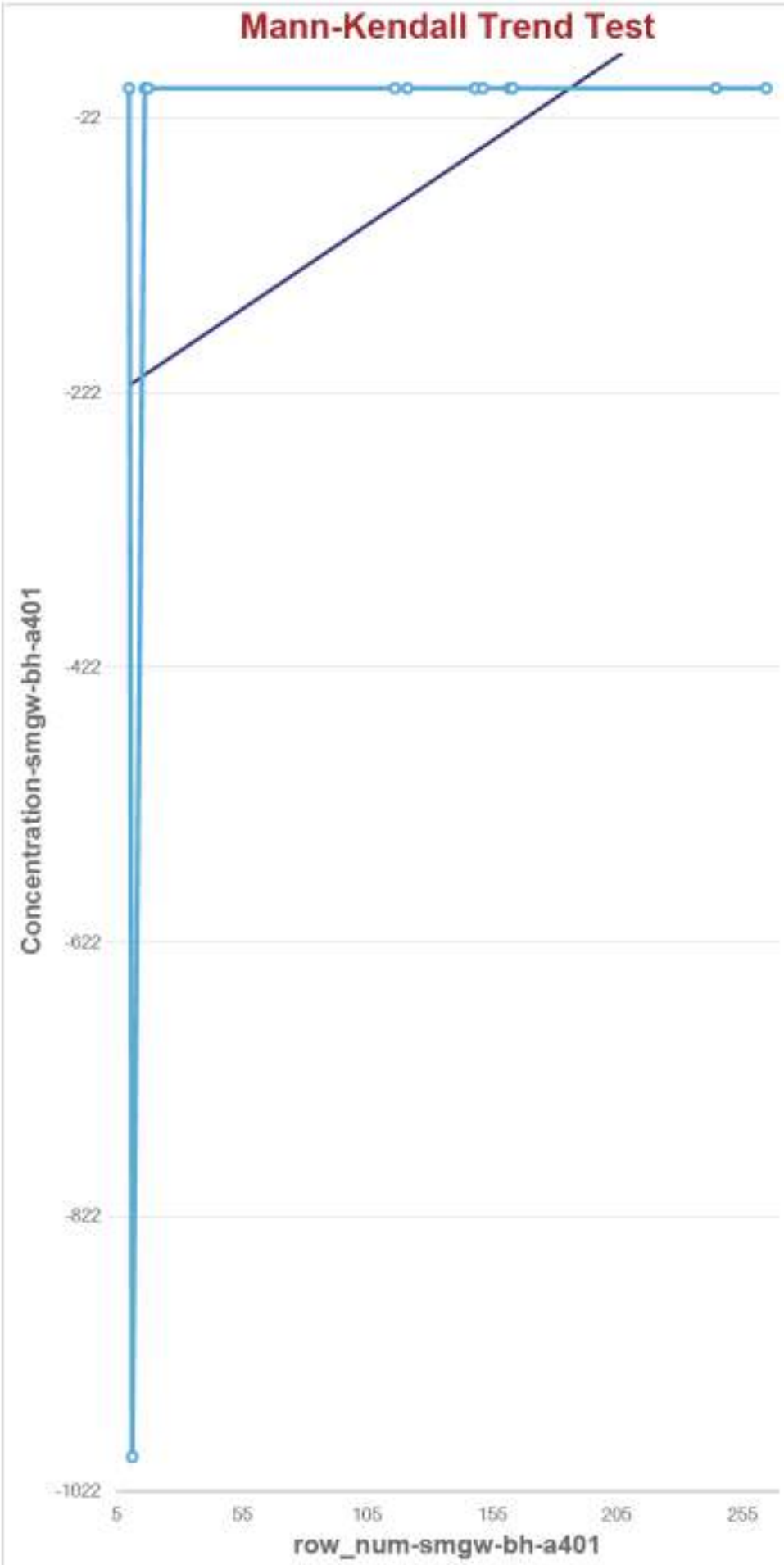
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9162
Standardized Value of S	-2.4001
M-K Test Value (S)	-20
Tabulated p-value	0.0220
Approximate p-value	0.0082

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1458

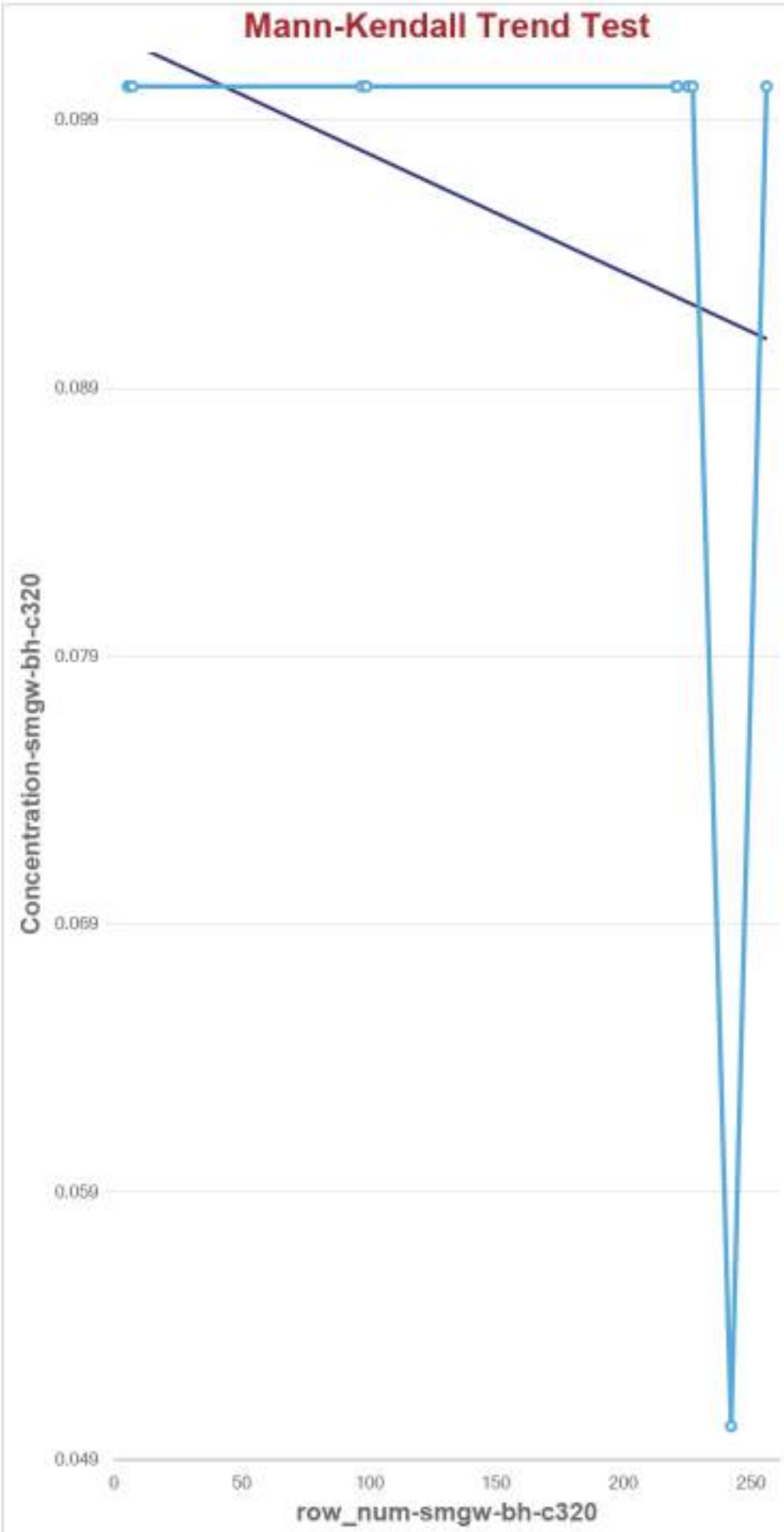
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3630
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5270
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	1.2348
OLS Regression Interoept	-229.4216

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

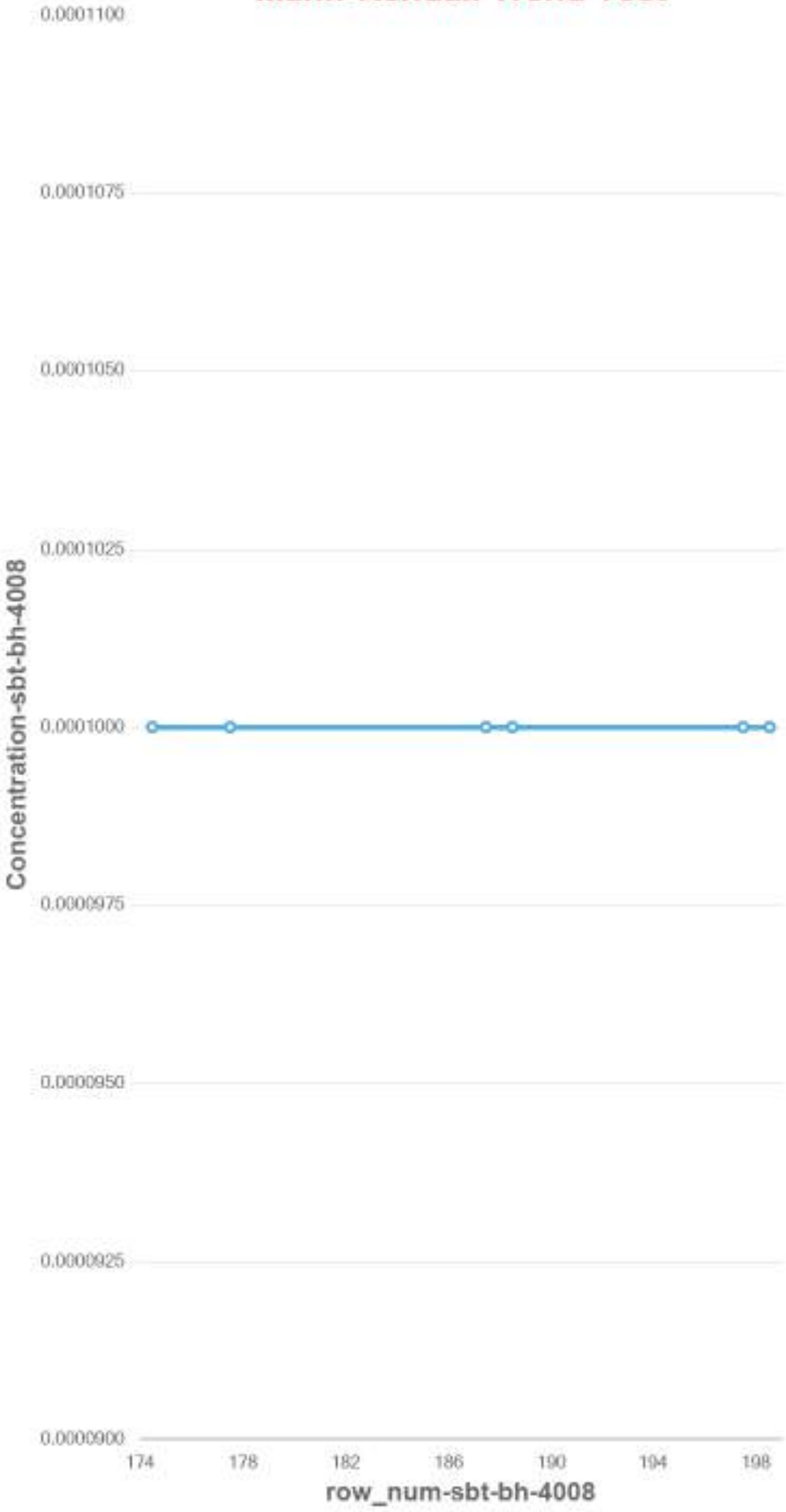
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.3246
Standardized Value of S	-1.1068
M-K Test Value (S)	-8
Tabulated p-value	0.2710
Approximate p-value	0.1342

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.1019

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

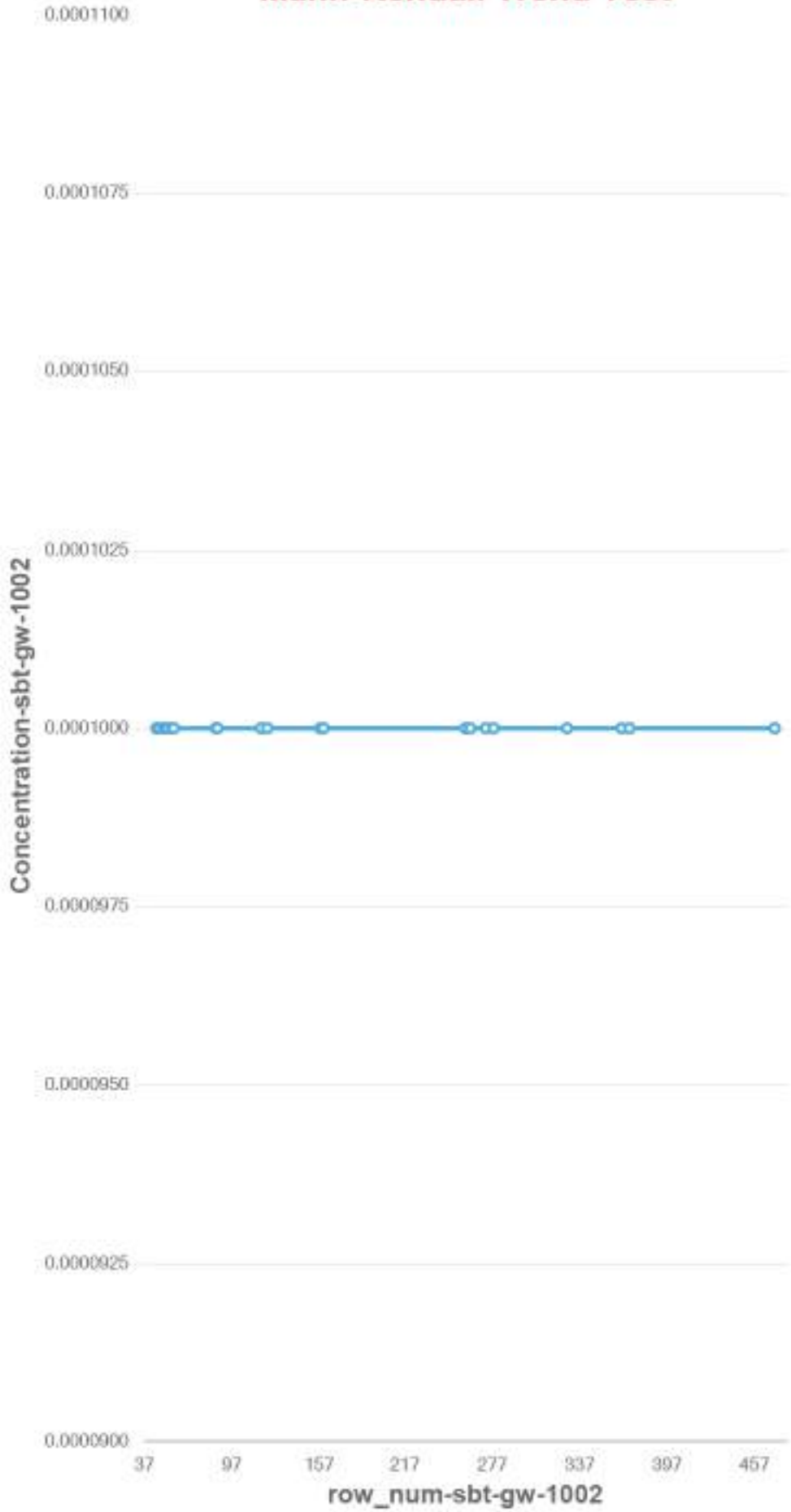


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

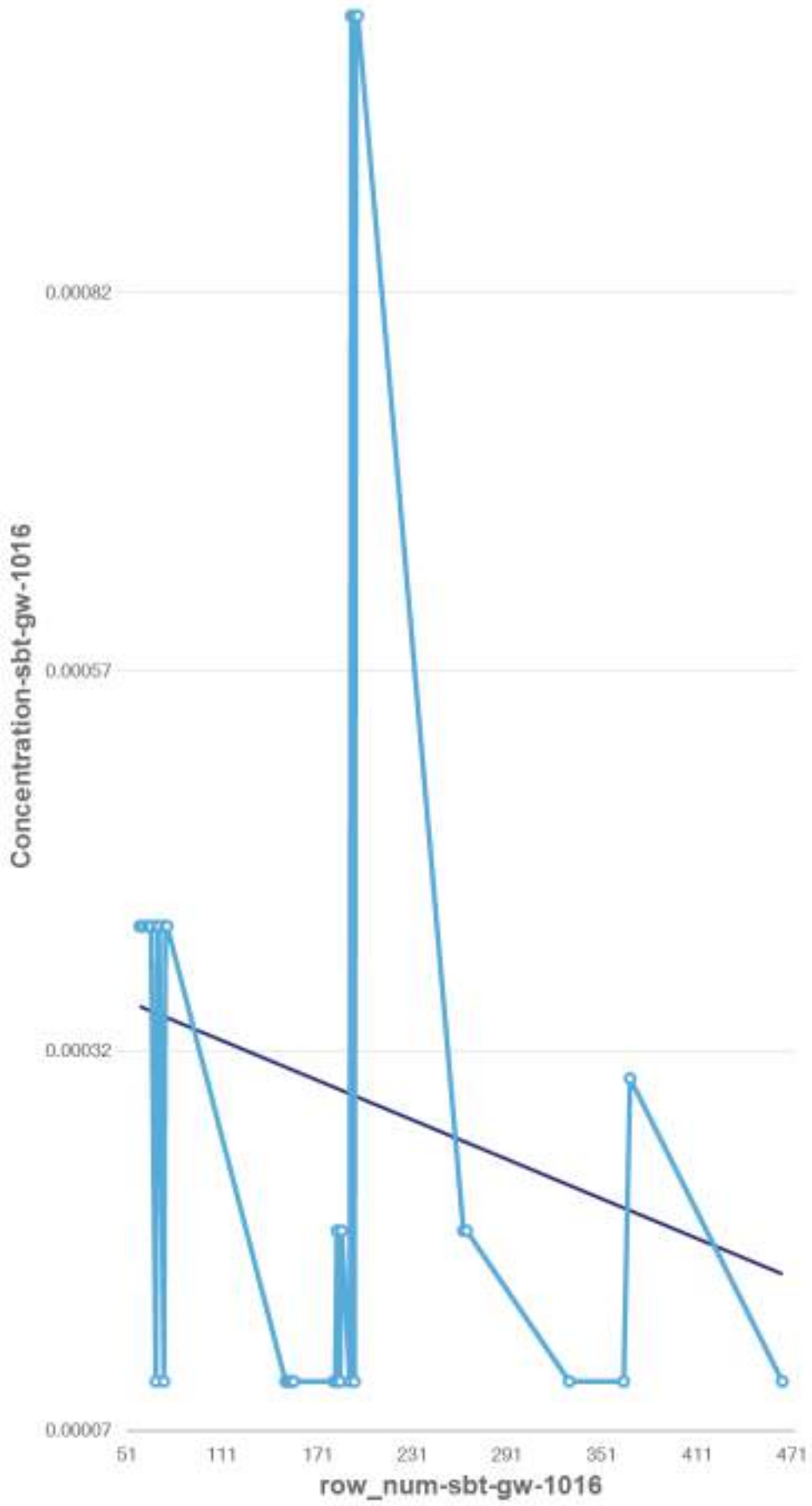


Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5130
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test



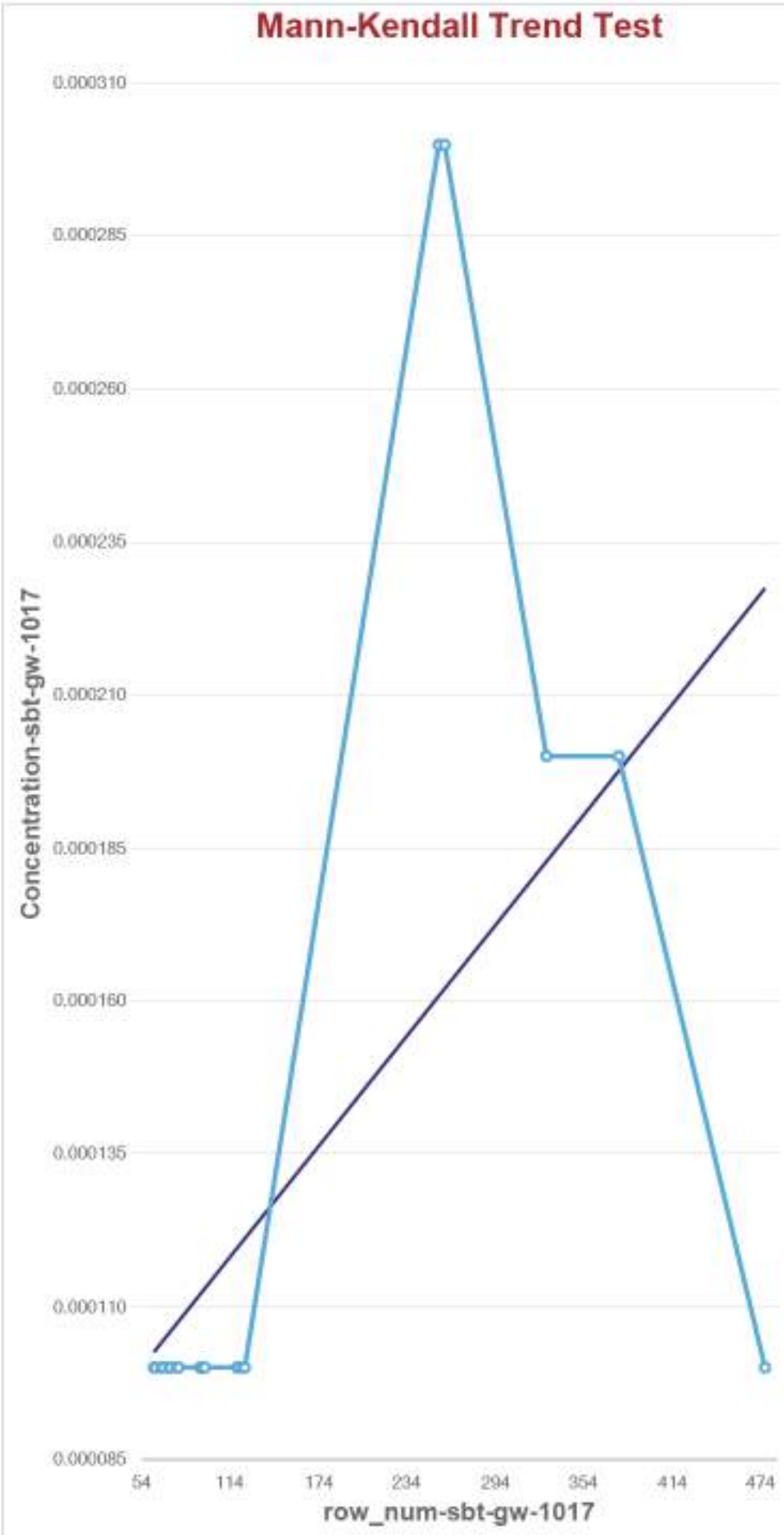
Mann-Kendall Trend Analysis

n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	68.2520
Standardized Value of S	-1.1721
M-K Test Value (S)	-81
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.1206

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0004

Insufficient statistical evidence of a significant trend at the specified level of significance.

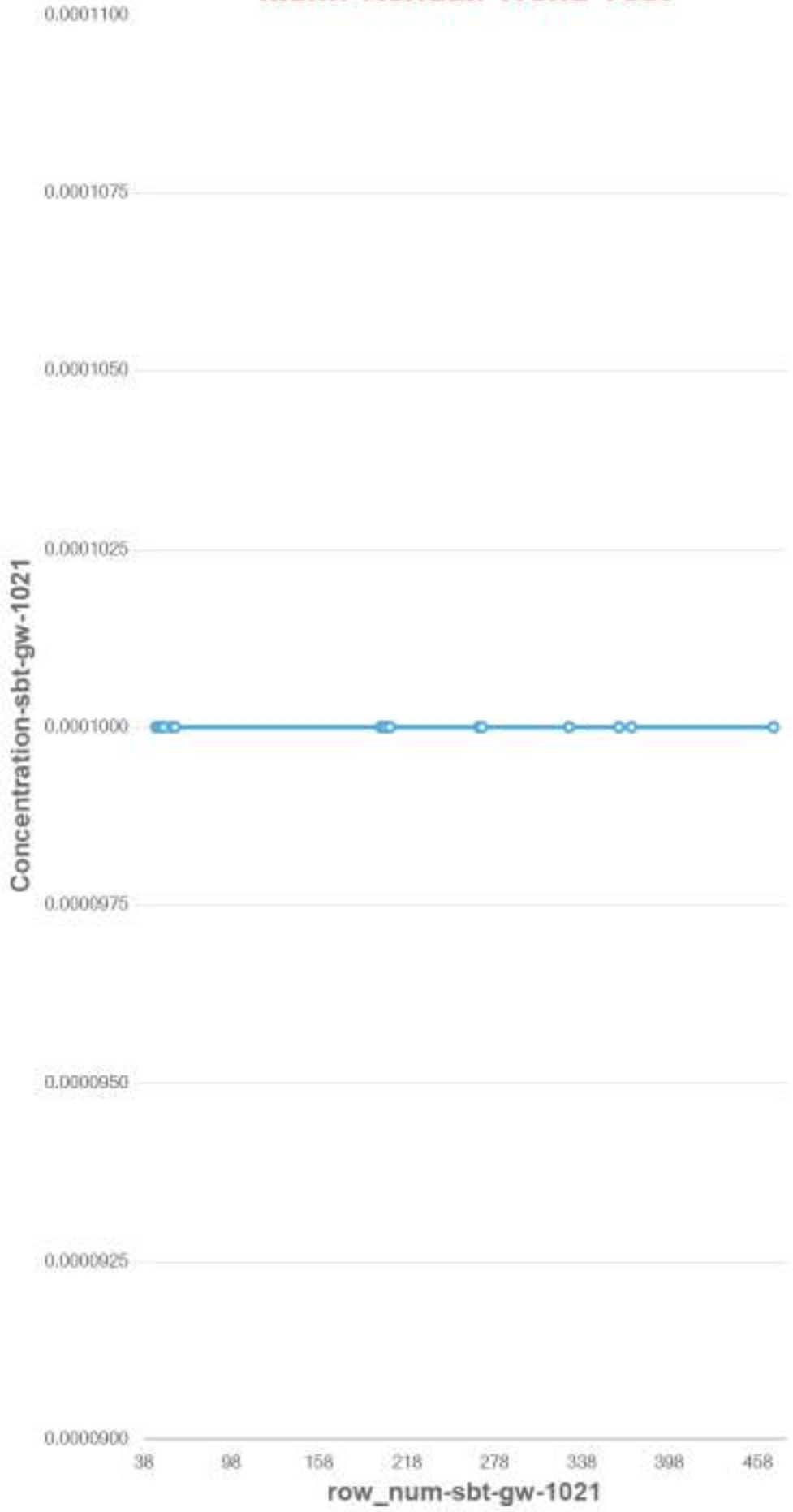


Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	22.4796
Standardized Value of S	2.4467
M-K Test Value (S)	56
Tabulated p-value	0.0490
Approximate p-value	0.0072

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Statistically significant evidence of an increasing trend at the specified level of significance.

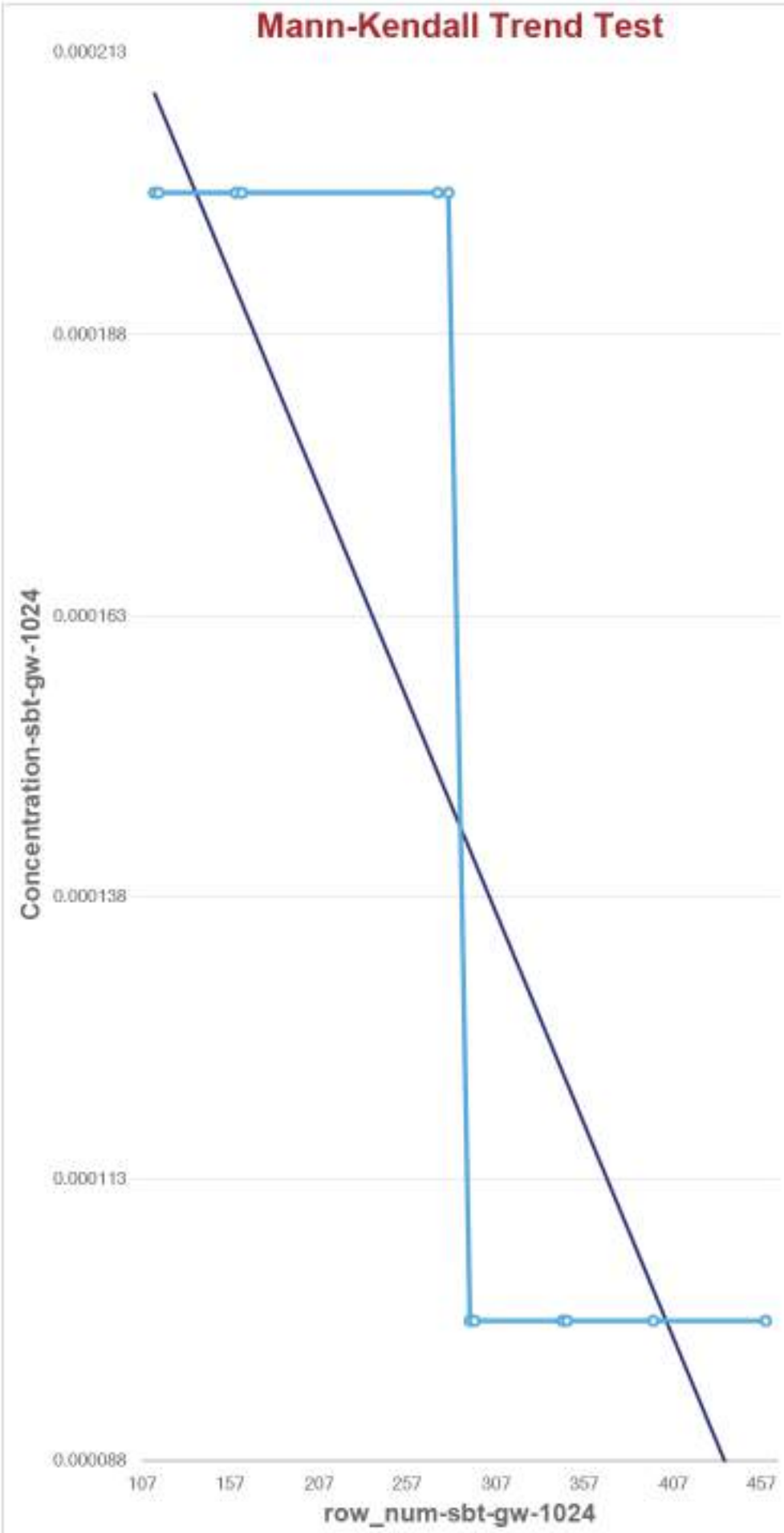
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5180
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

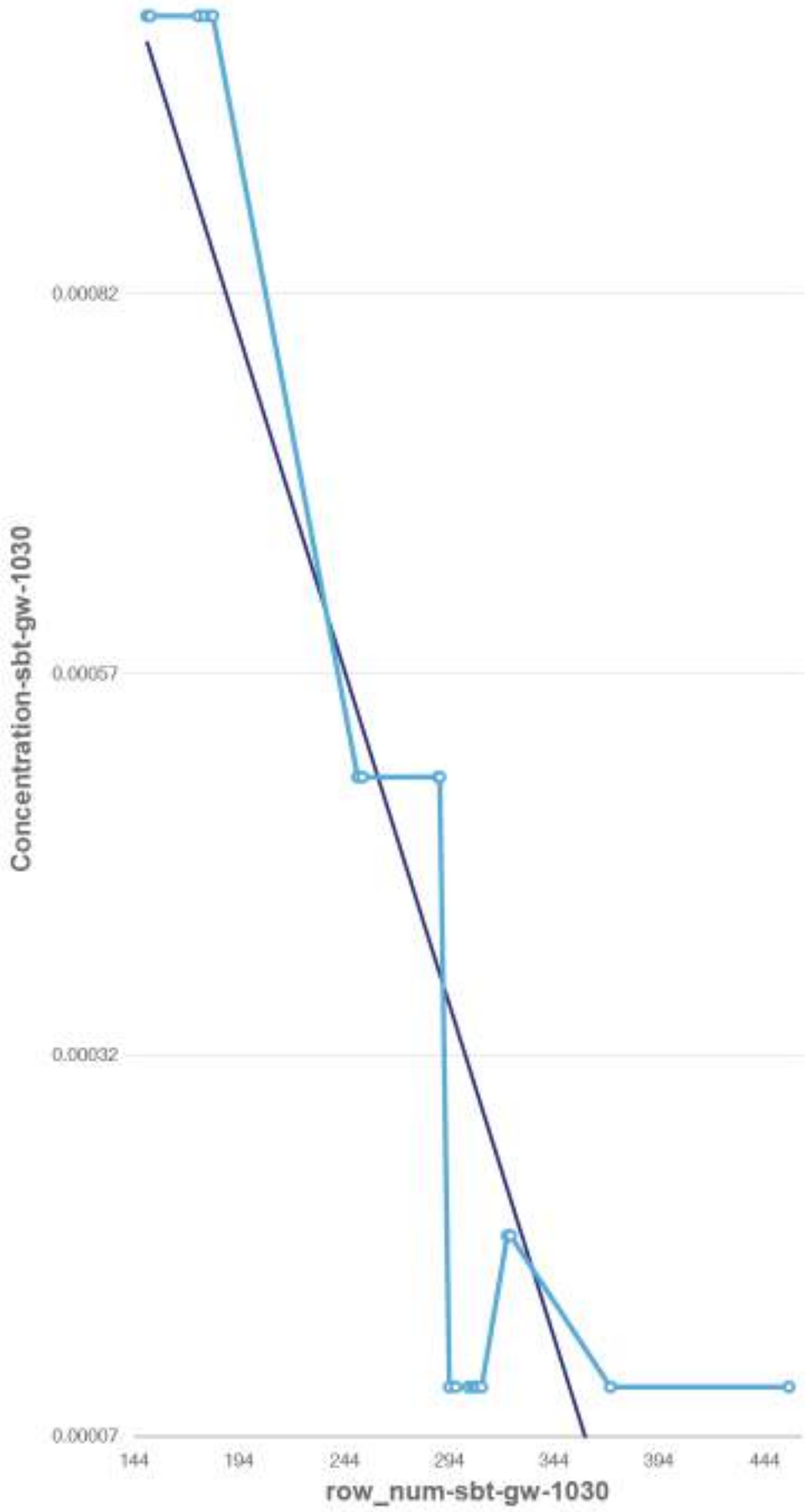


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.4900
Standardized Value of S	-2.8022
M-K Test Value (S)	-36
Tabulated p-value	0.0070
Approximate p-value	0.0025

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0003

Statistically significant evidence of a decreasing trend at the specified level of significance.

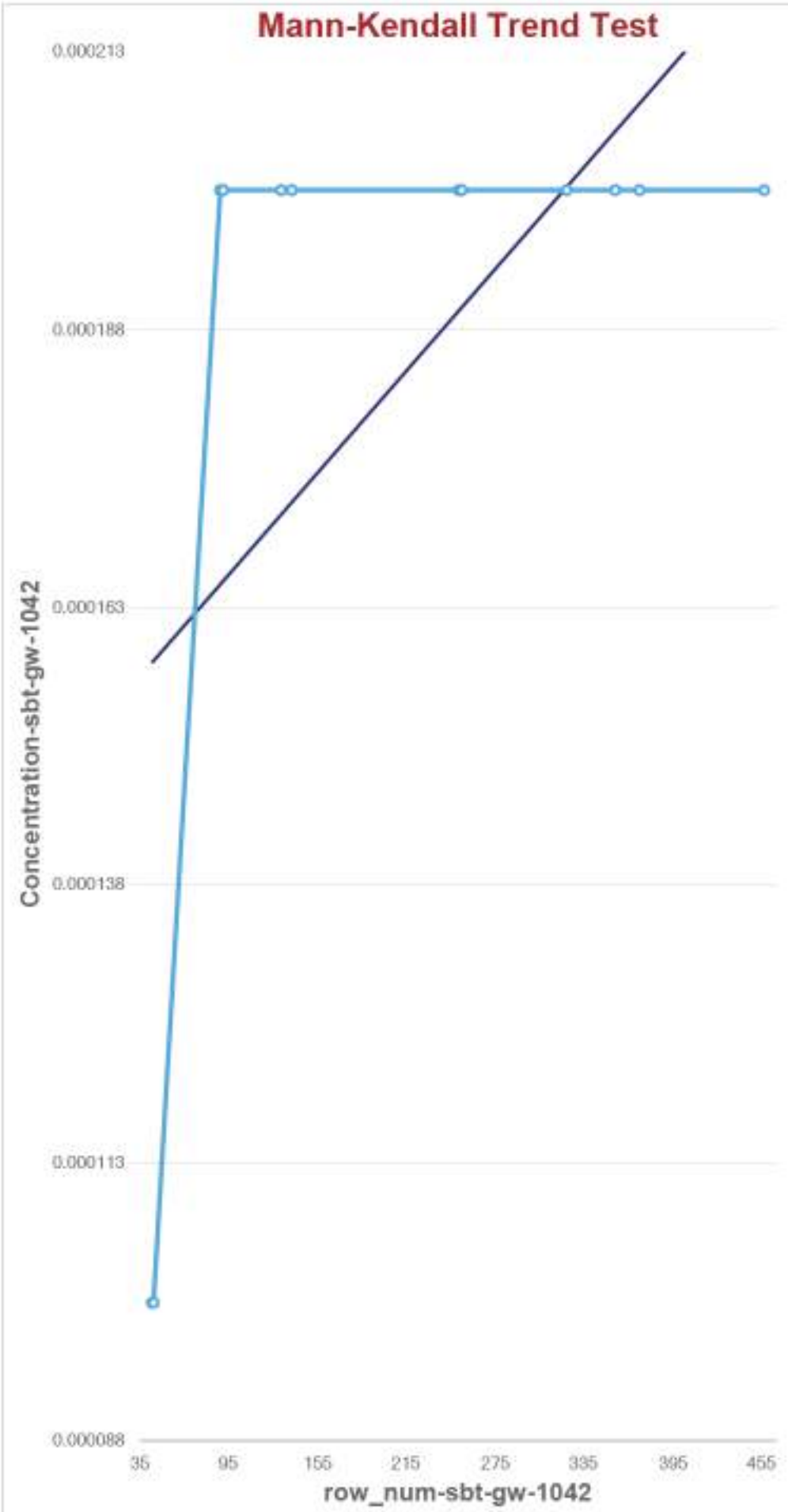
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	29.0975
Standardized Value of S	-3.9522
M-K Test Value (S)	-116
Tabulated p-value	0.0000
Approximate p-value	0.0000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0016

Statistically significant evidence of a decreasing trend at the specified level of significance.

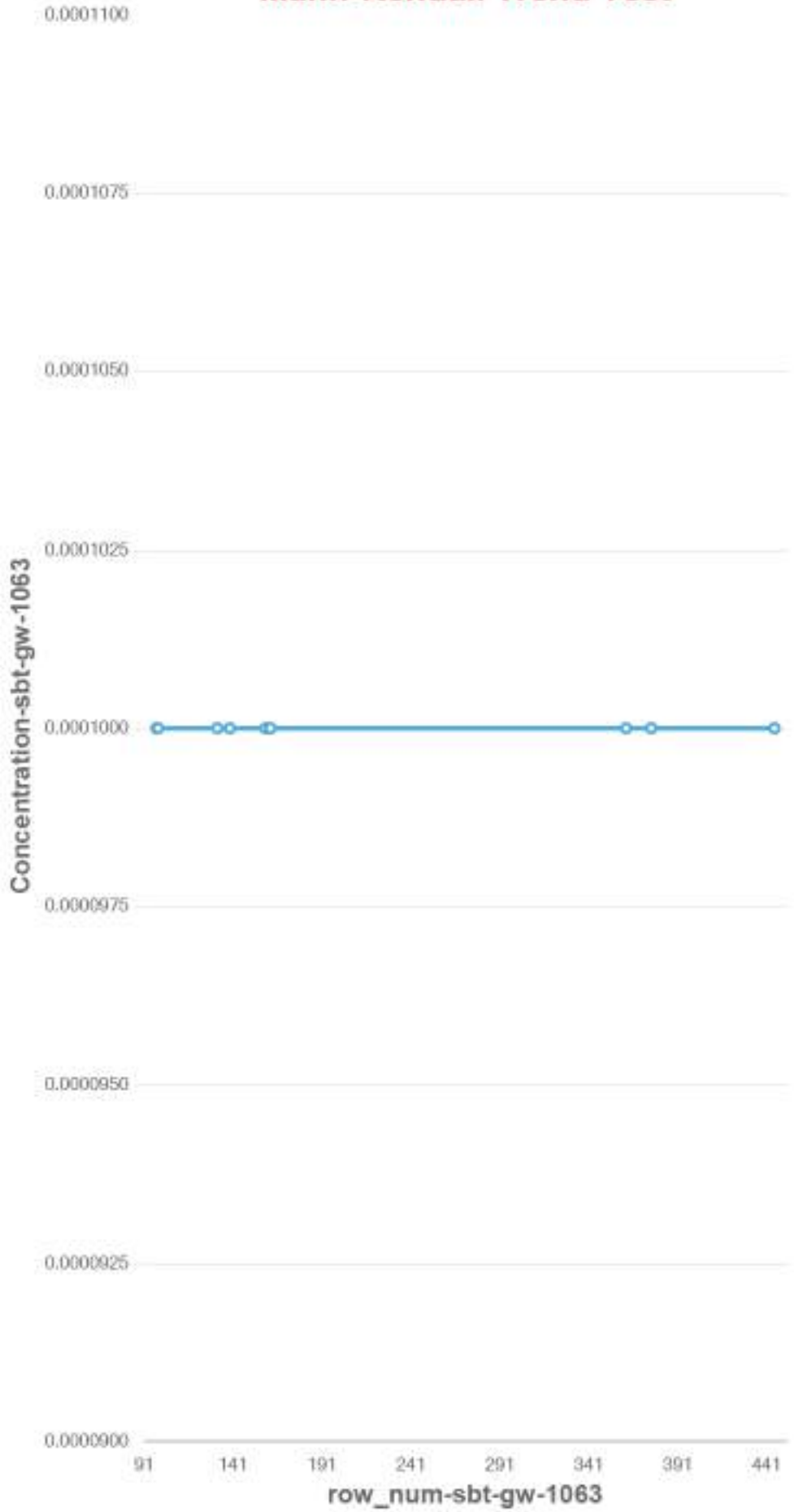


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3095
Standardized Value of S	2.0409
M-K Test Value (S)	20
Tabulated p-value	0.0980
Approximate p-value	0.0206

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

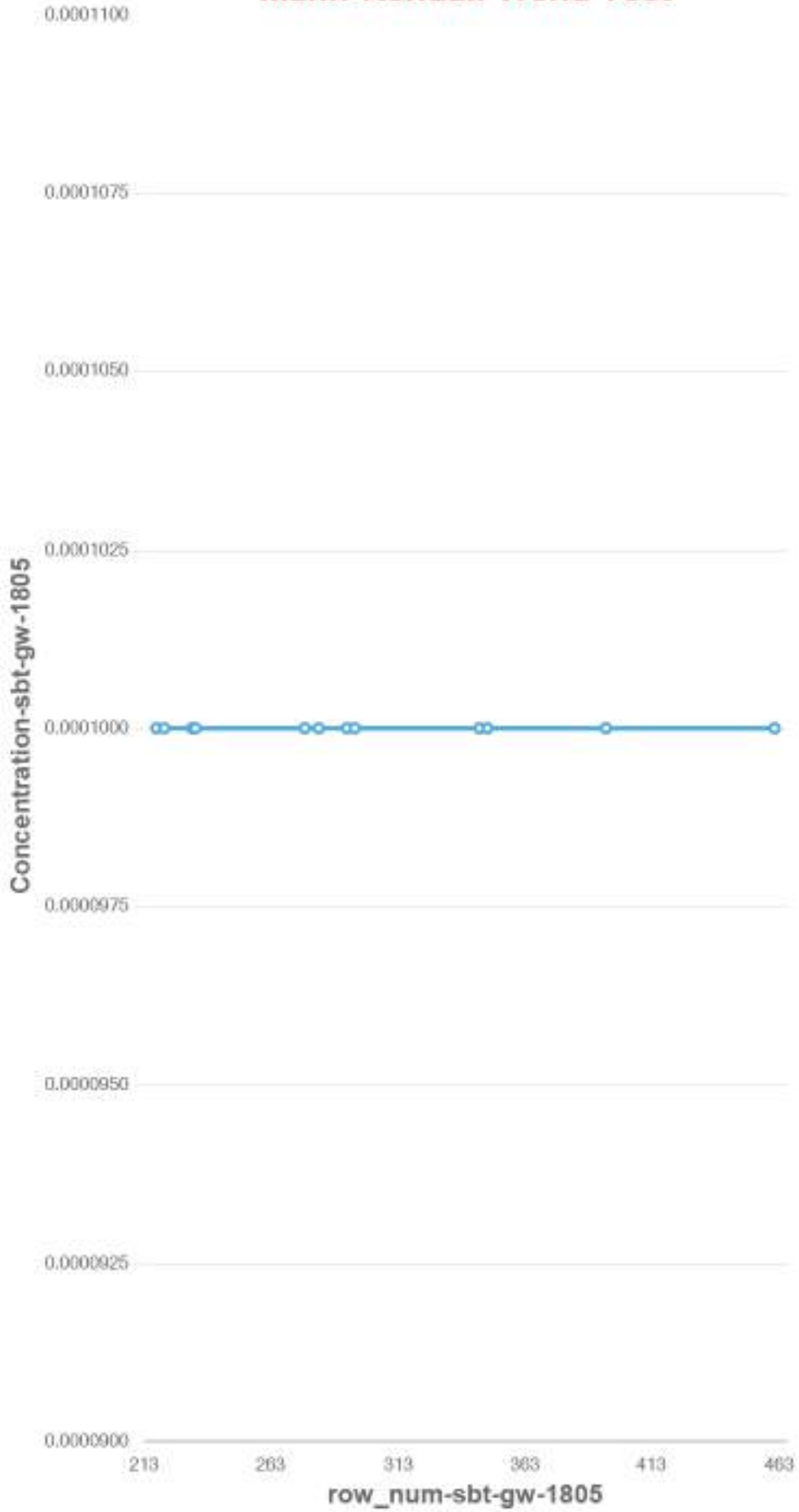


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5400
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

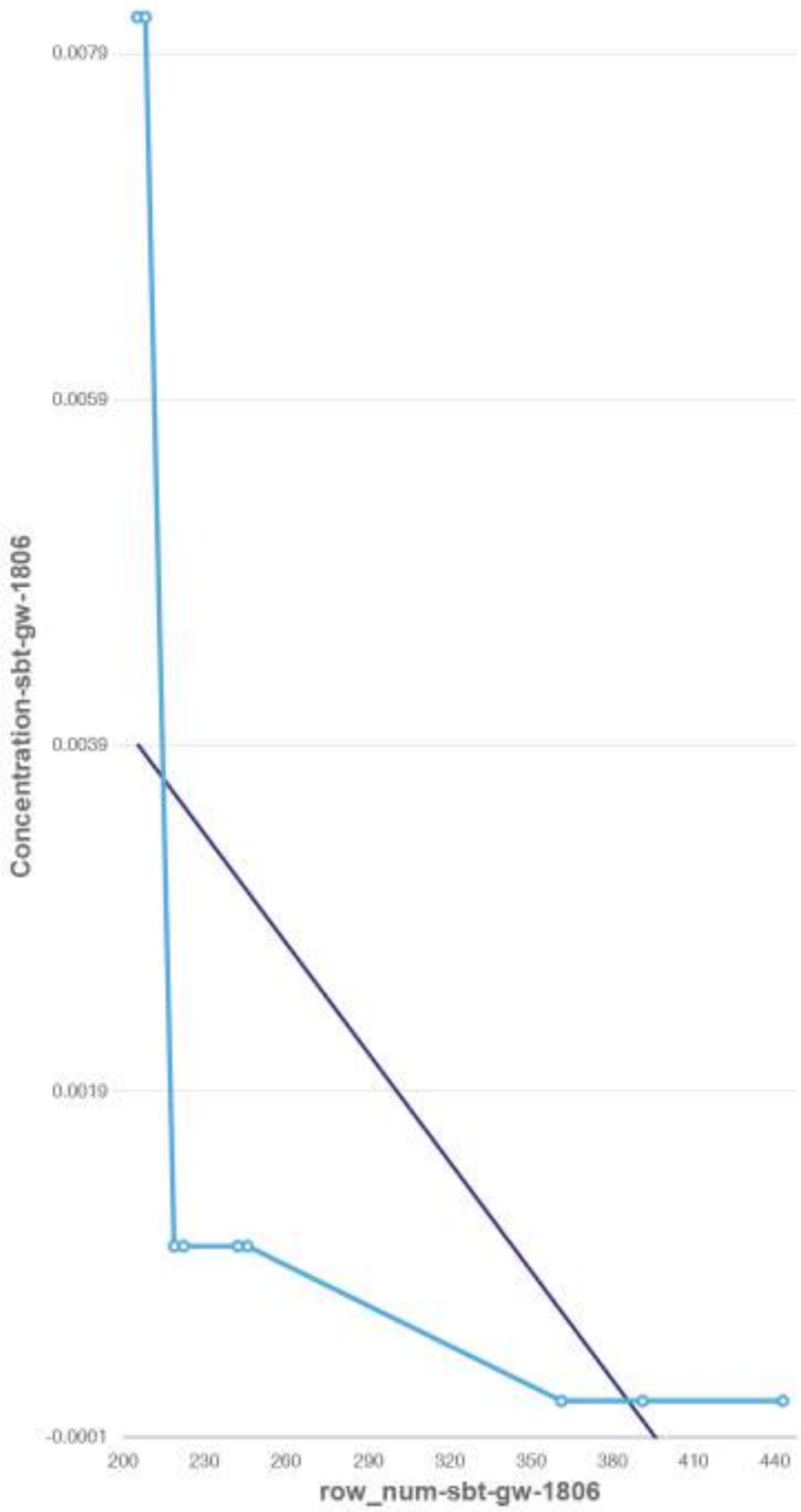


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5270
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

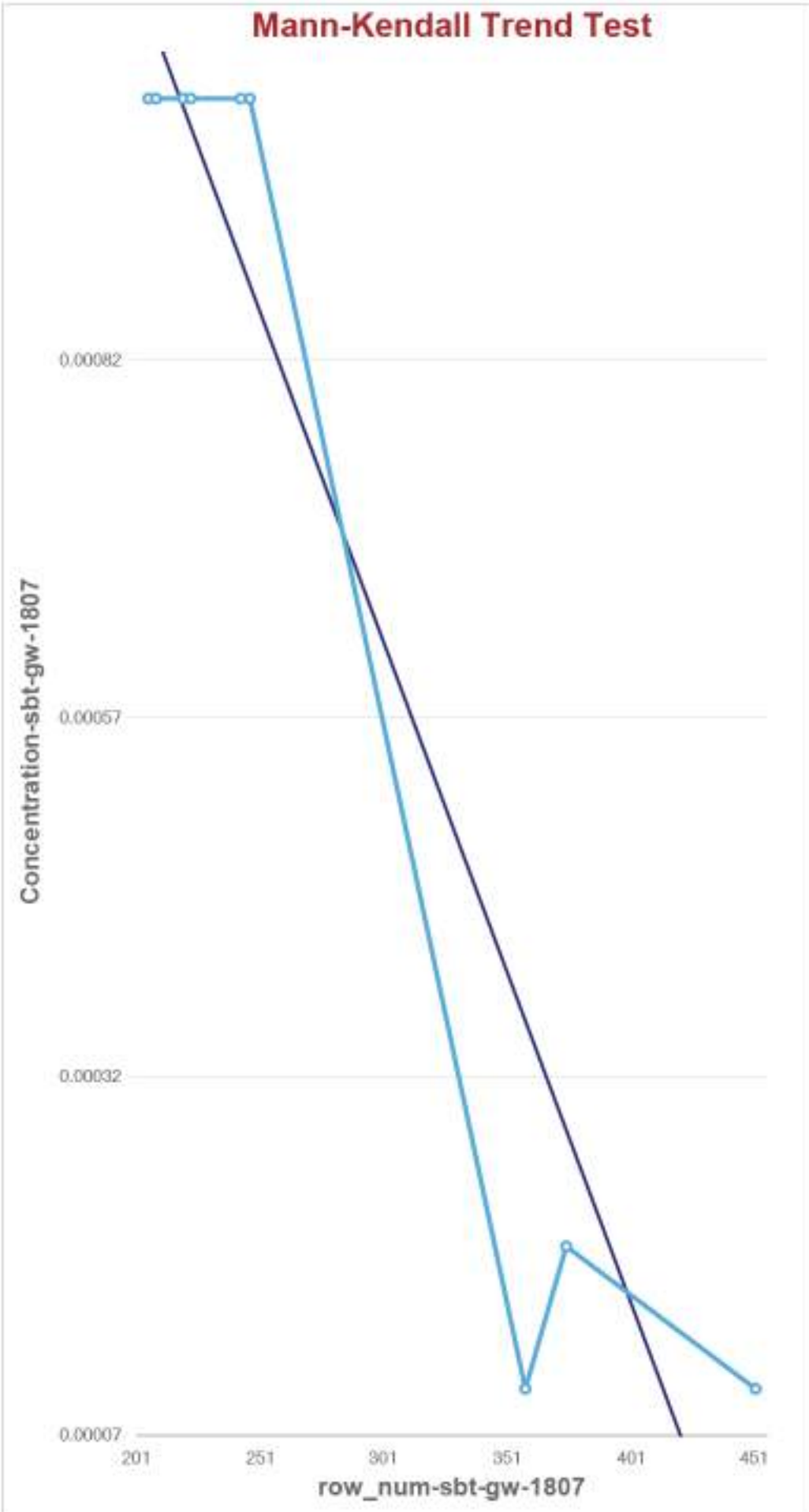
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.8694
Standardized Value of S	-2.8187
M-K Test Value (S)	-26
Tabulated p-value	0.0030
Approximate p-value	0.0024

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0082

Statistically significant evidence of a decreasing trend at the specified level of significance.



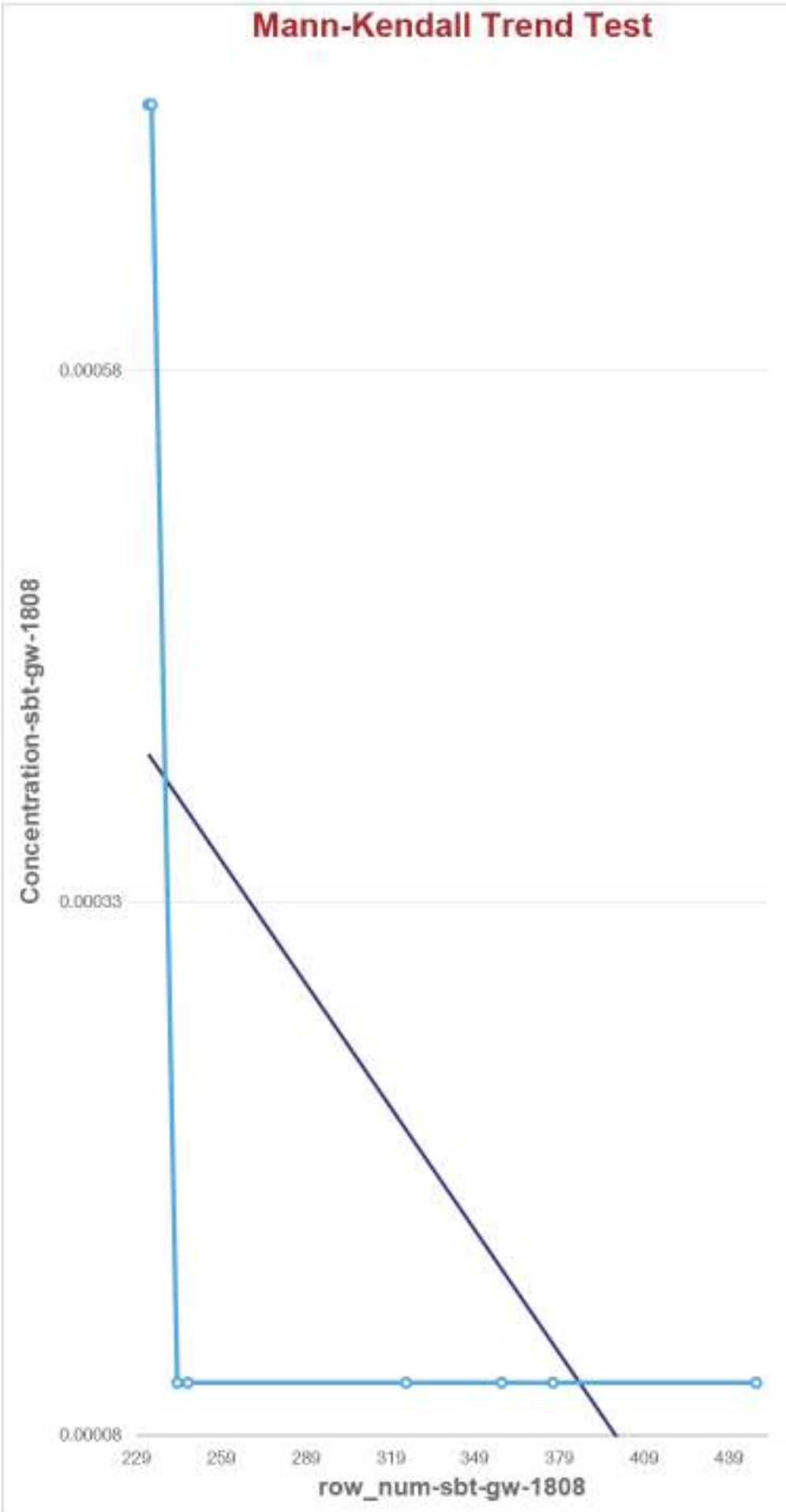
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9162
Standardized Value of S	-2.1475
M-K Test Value (S)	-18
Tabulated p-value	0.0380
Approximate p-value	0.0159

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Statistically significant evidence of a decreasing trend at the specified level of significance.

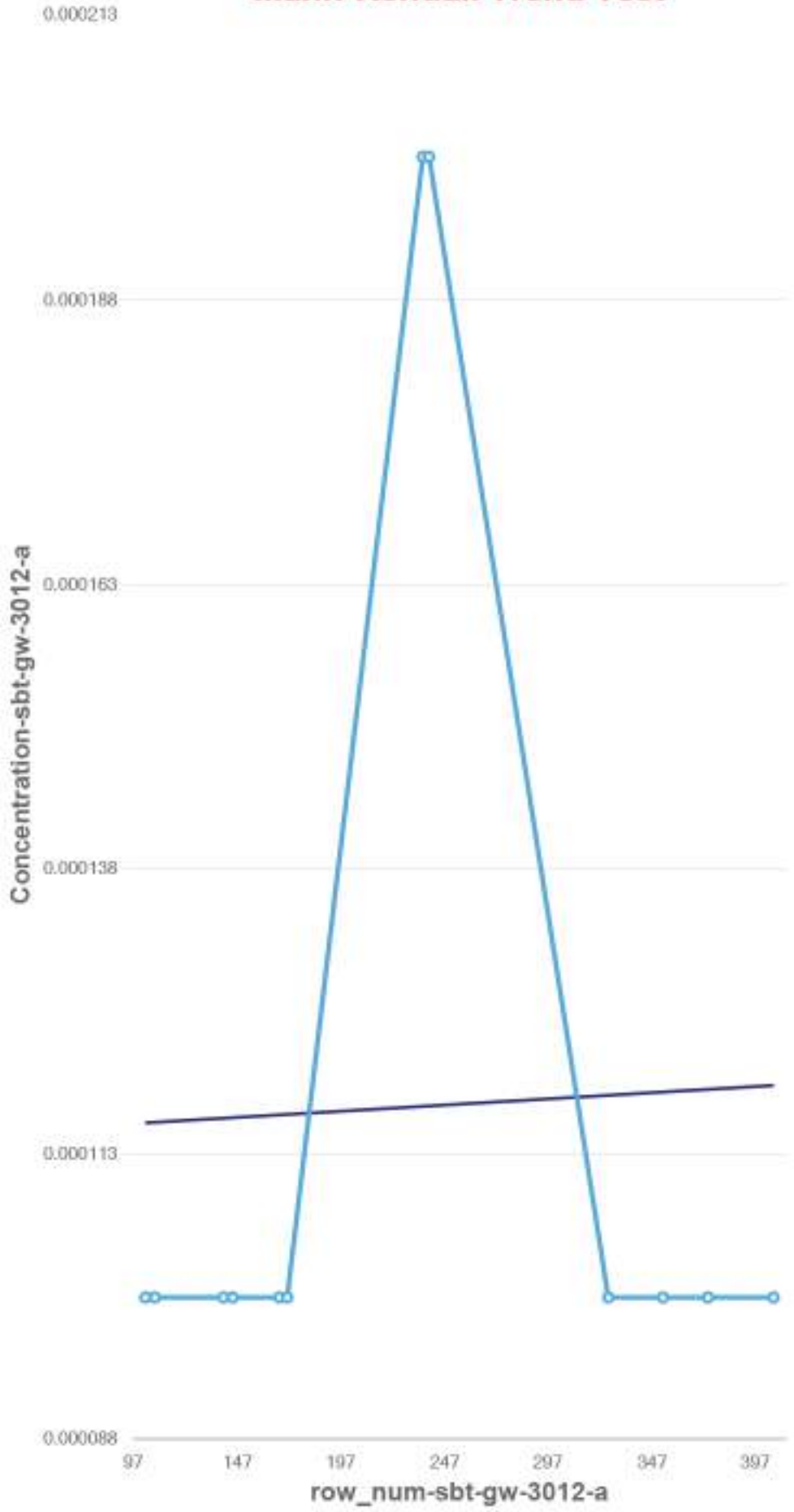


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.0000
Standardized Value of S	-1.8333
M-K Test Value (S)	-12
Tabulated p-value	0.0890
Approximate p-value	0.0334

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0008

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

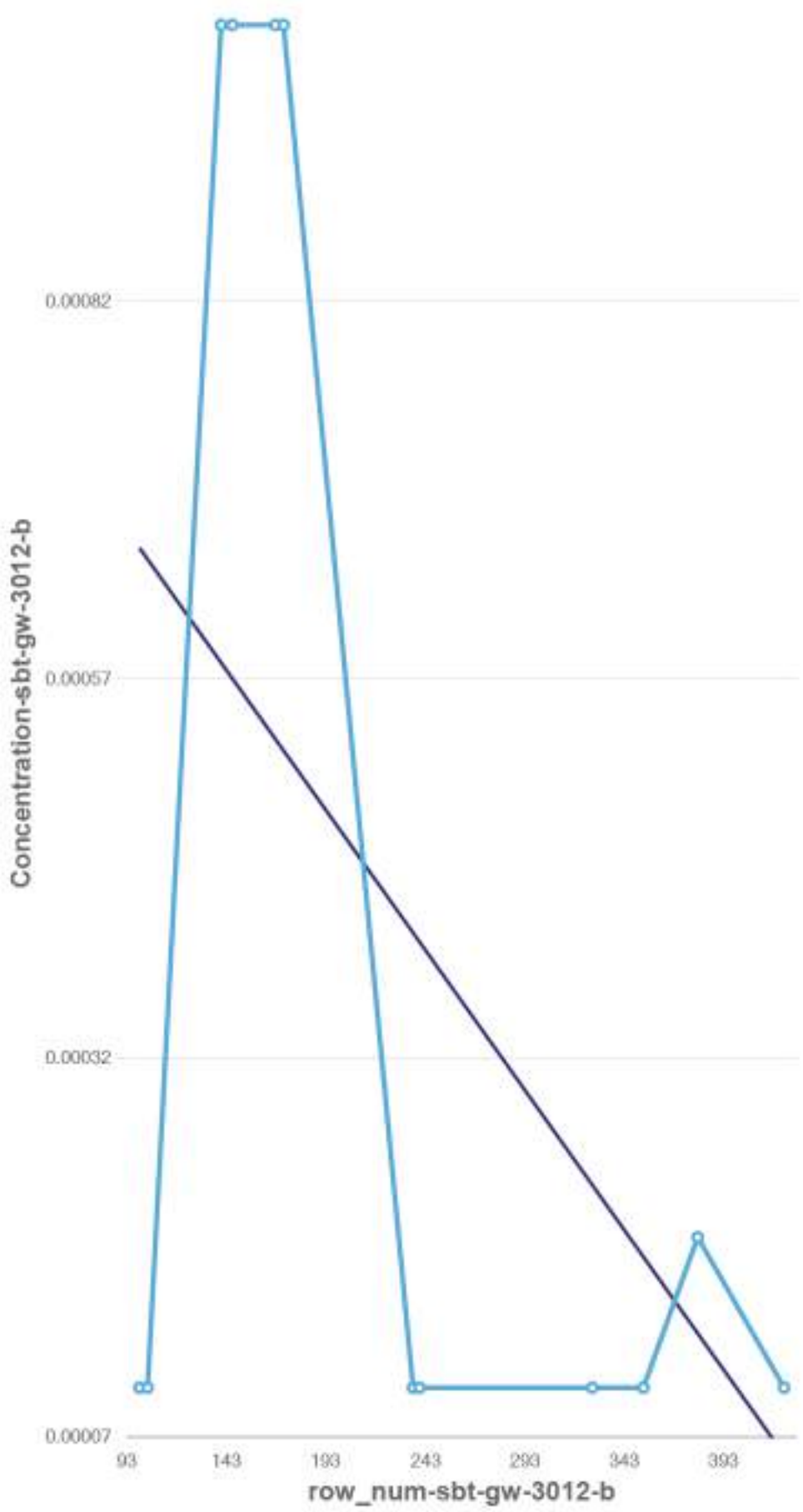


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3095
Standardized Value of S	0.3223
M-K Test Value (S)	4
Tabulated p-value	0.4200
Approximate p-value	0.3736

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

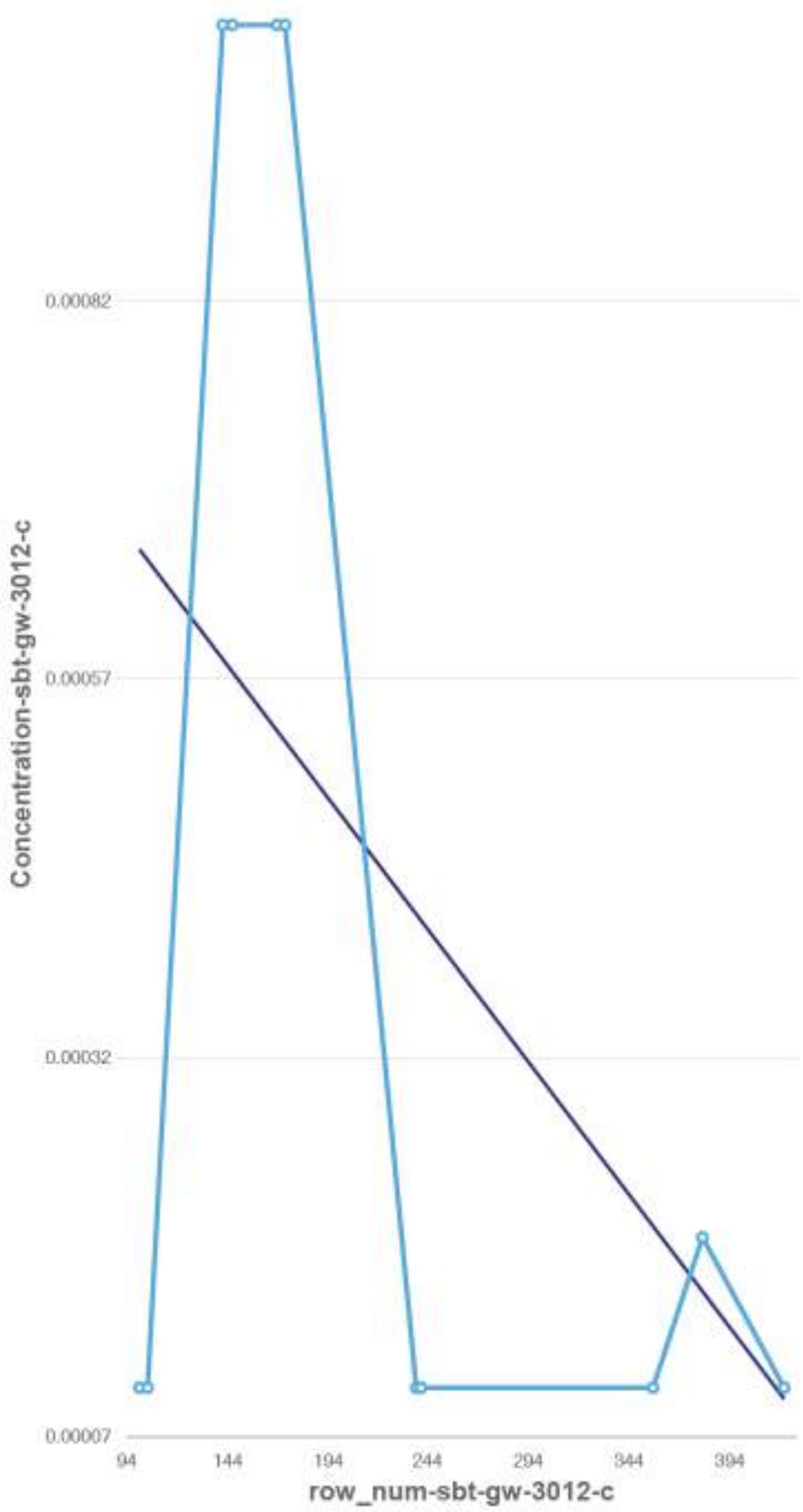


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6359
Standardized Value of S	-0.7914
M-K Test Value (S)	-11
Tabulated p-value	0.2730
Approximate p-value	0.2144

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0008

Insufficient statistical evidence of a significant trend at the specified level of significance.

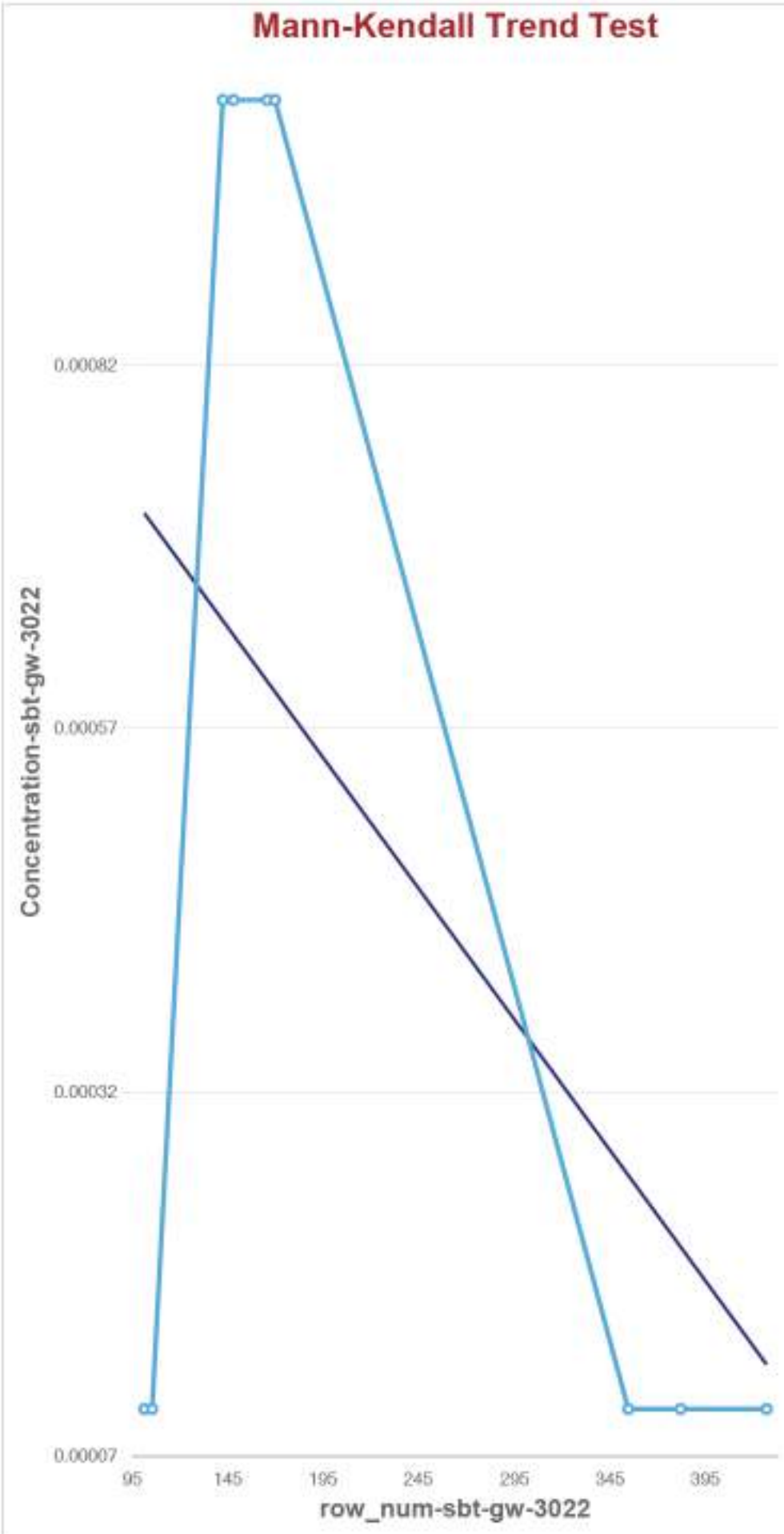
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.3137
Standardized Value of S	-0.6187
M-K Test Value (S)	-8
Tabulated p-value	0.2710
Approximate p-value	0.2681

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0008

Insufficient statistical evidence of a significant trend at the specified level of significance.

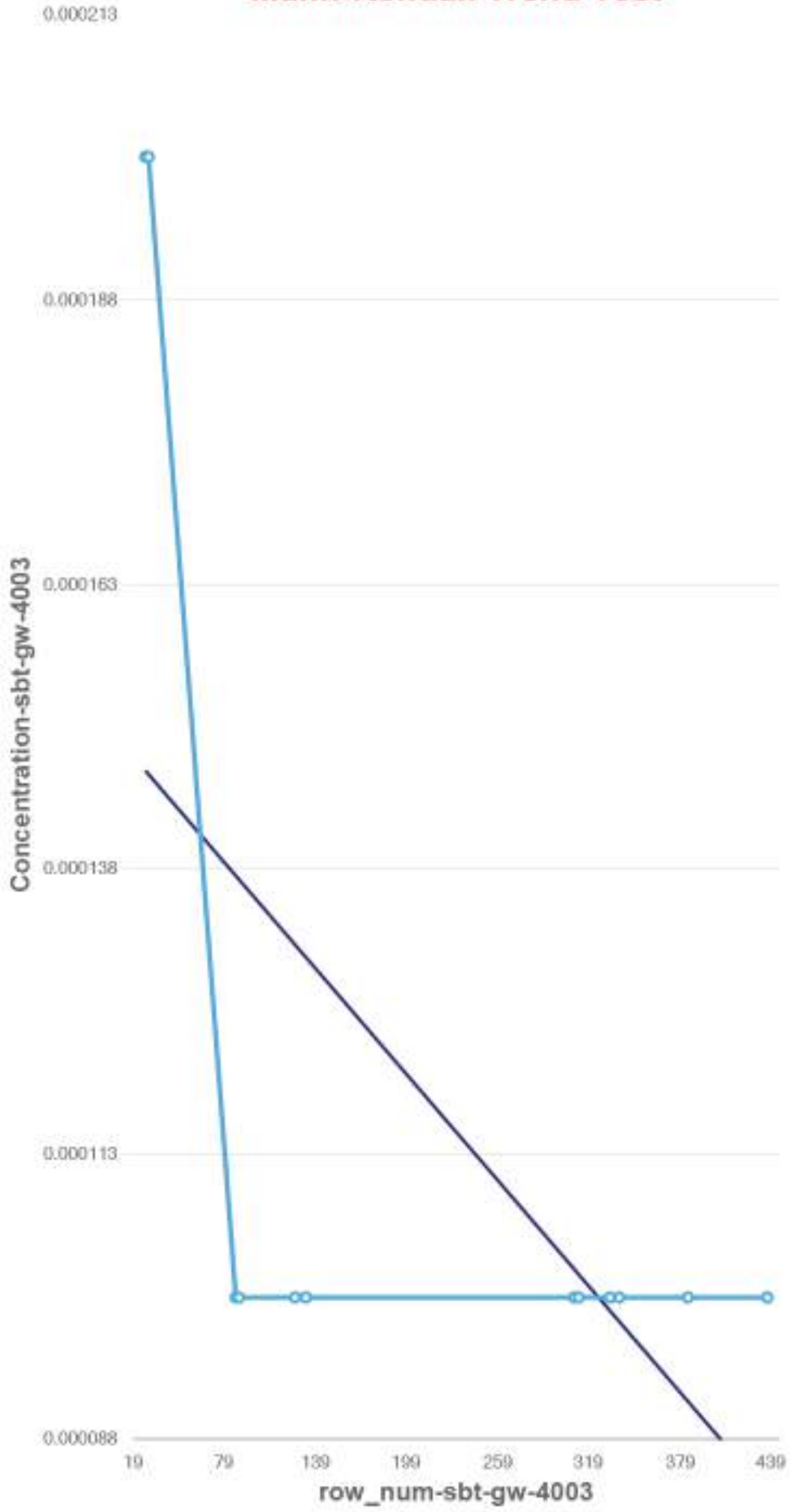


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.1650
Standardized Value of S	-0.3674
M-K Test Value (S)	-4
Tabulated p-value	0.3810
Approximate p-value	0.3567

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0009

Insufficient statistical evidence of a significant trend at the specified level of significance.

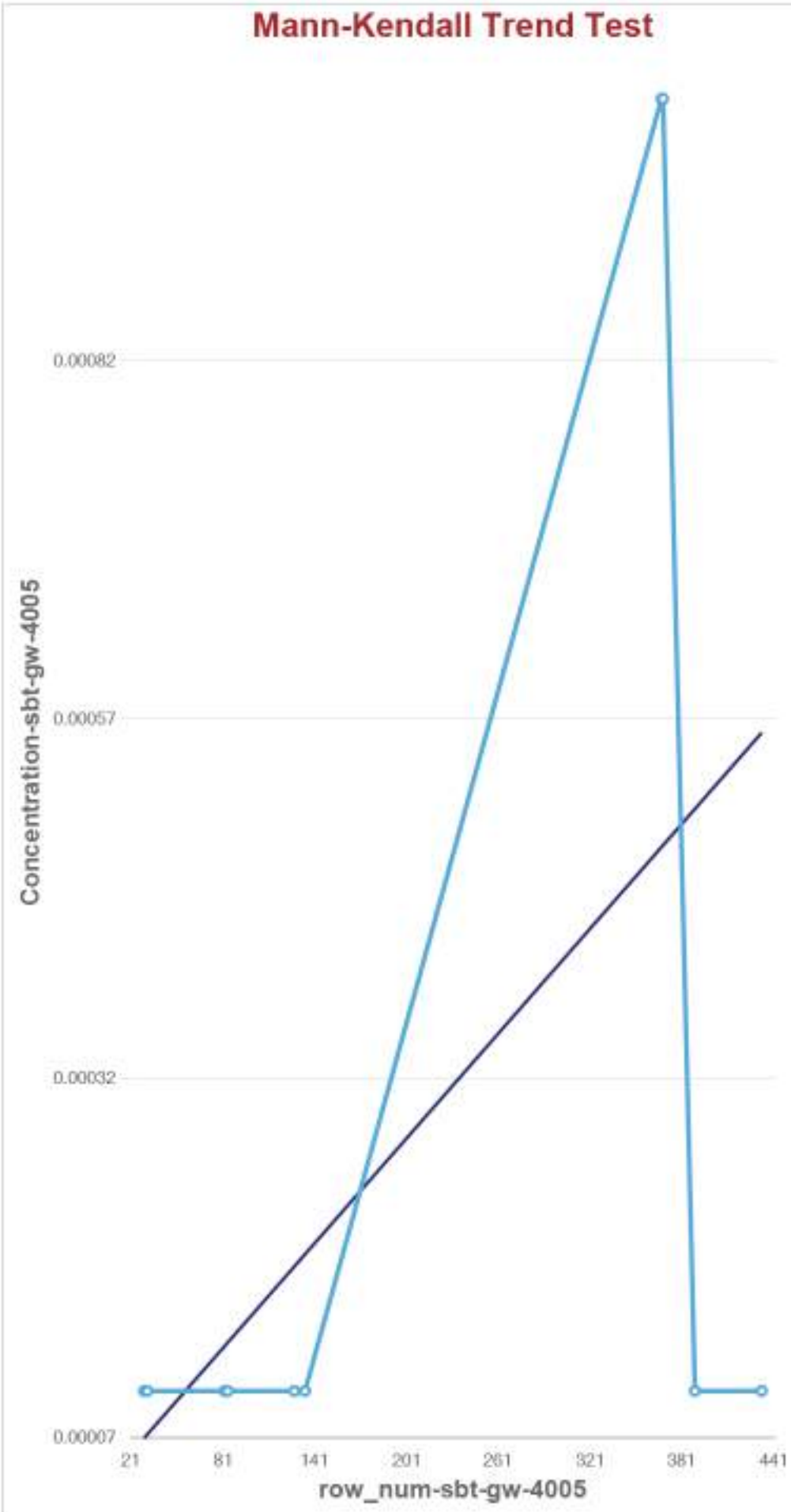
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3095
Standardized Value of S	-2.0409
M-K Test Value (S)	-20
Tabulated p-value	0.0980
Approximate p-value	0.0206

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Insufficient statistical evidence of a significant trend at the specified level of significance.

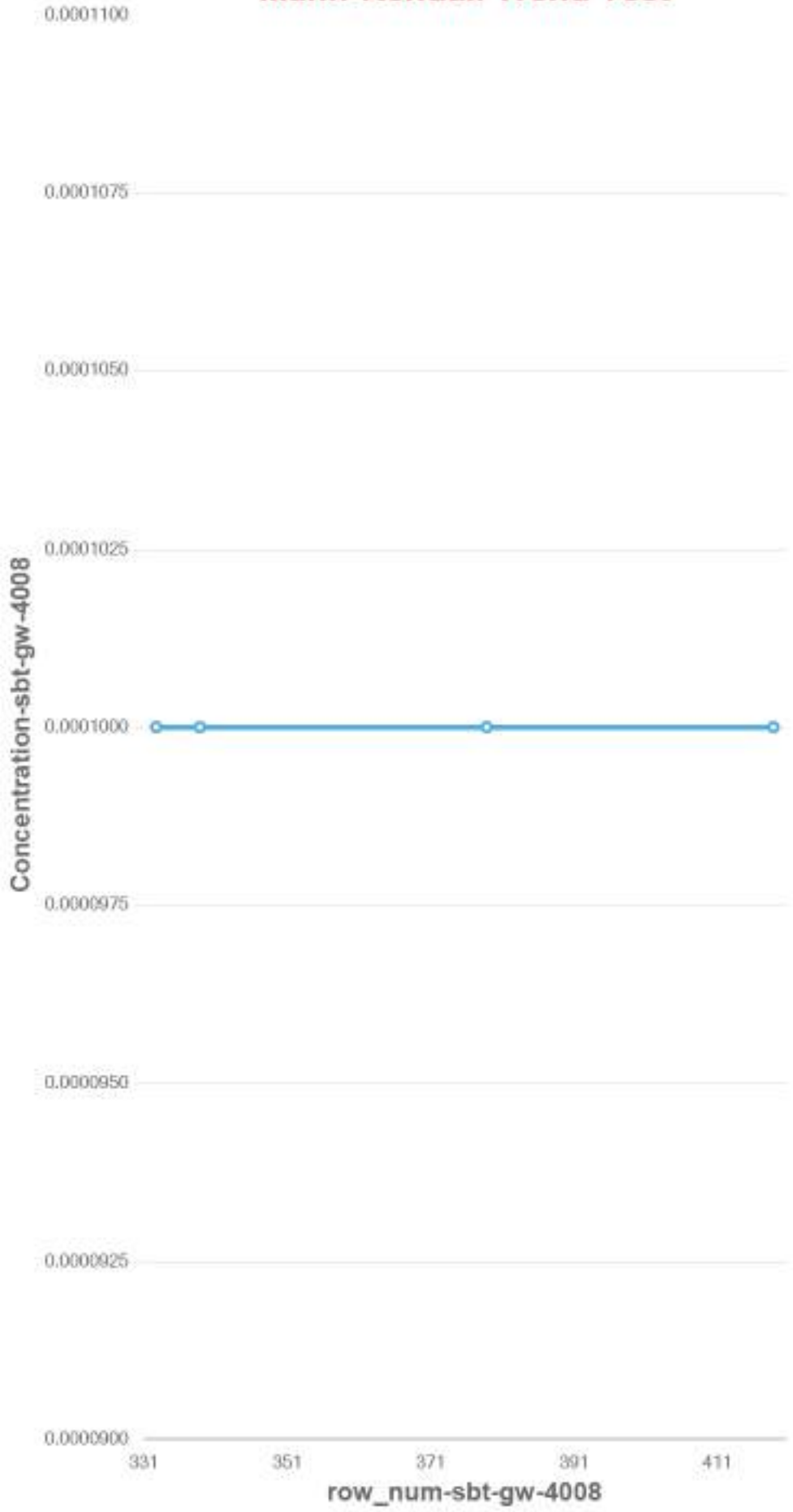


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.6594
Standardized Value of S	0.9139
M-K Test Value (S)	8
Tabulated p-value	0.2420
Approximate p-value	0.1804

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0000

Insufficient statistical evidence of a significant trend at the specified level of significance.

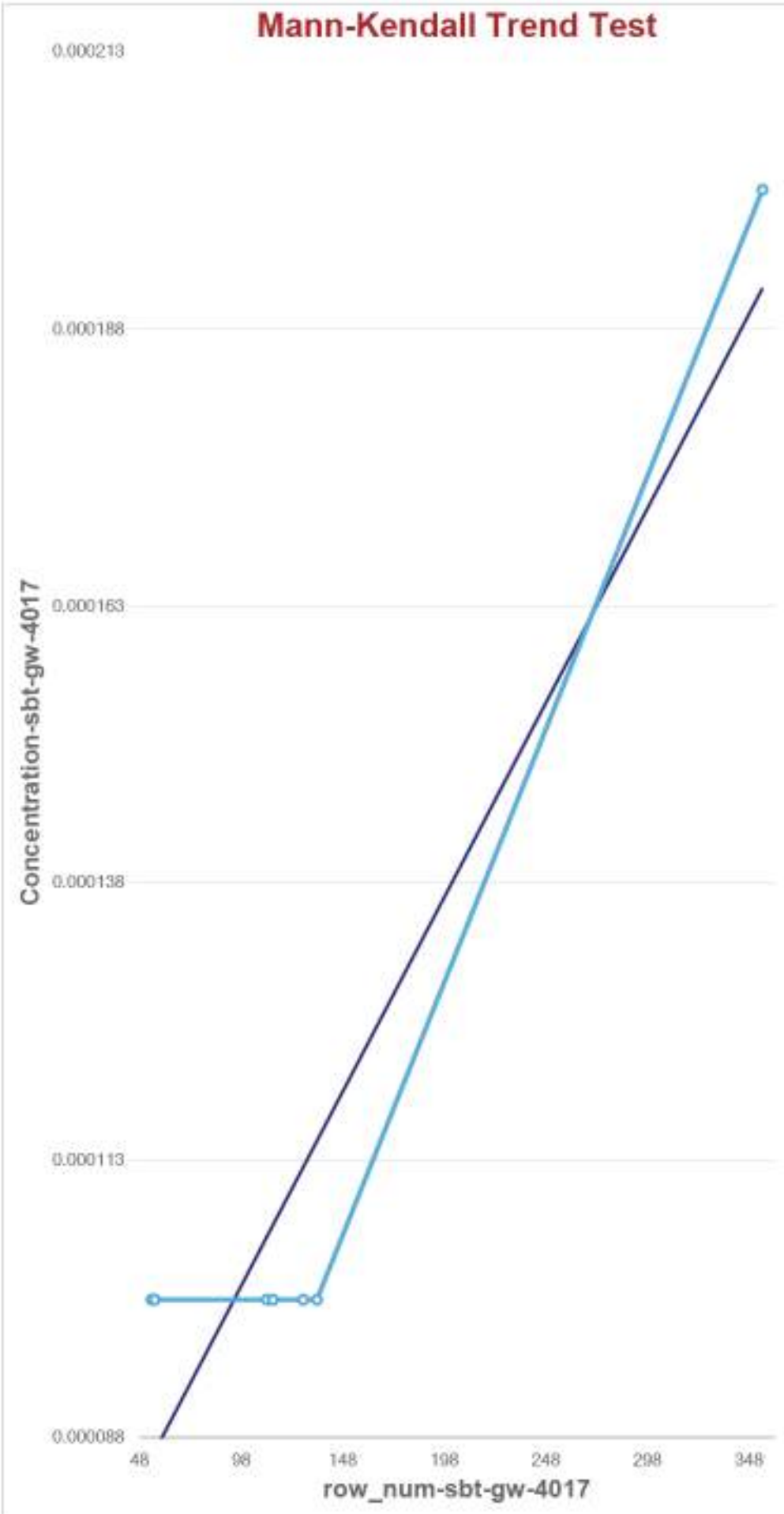
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

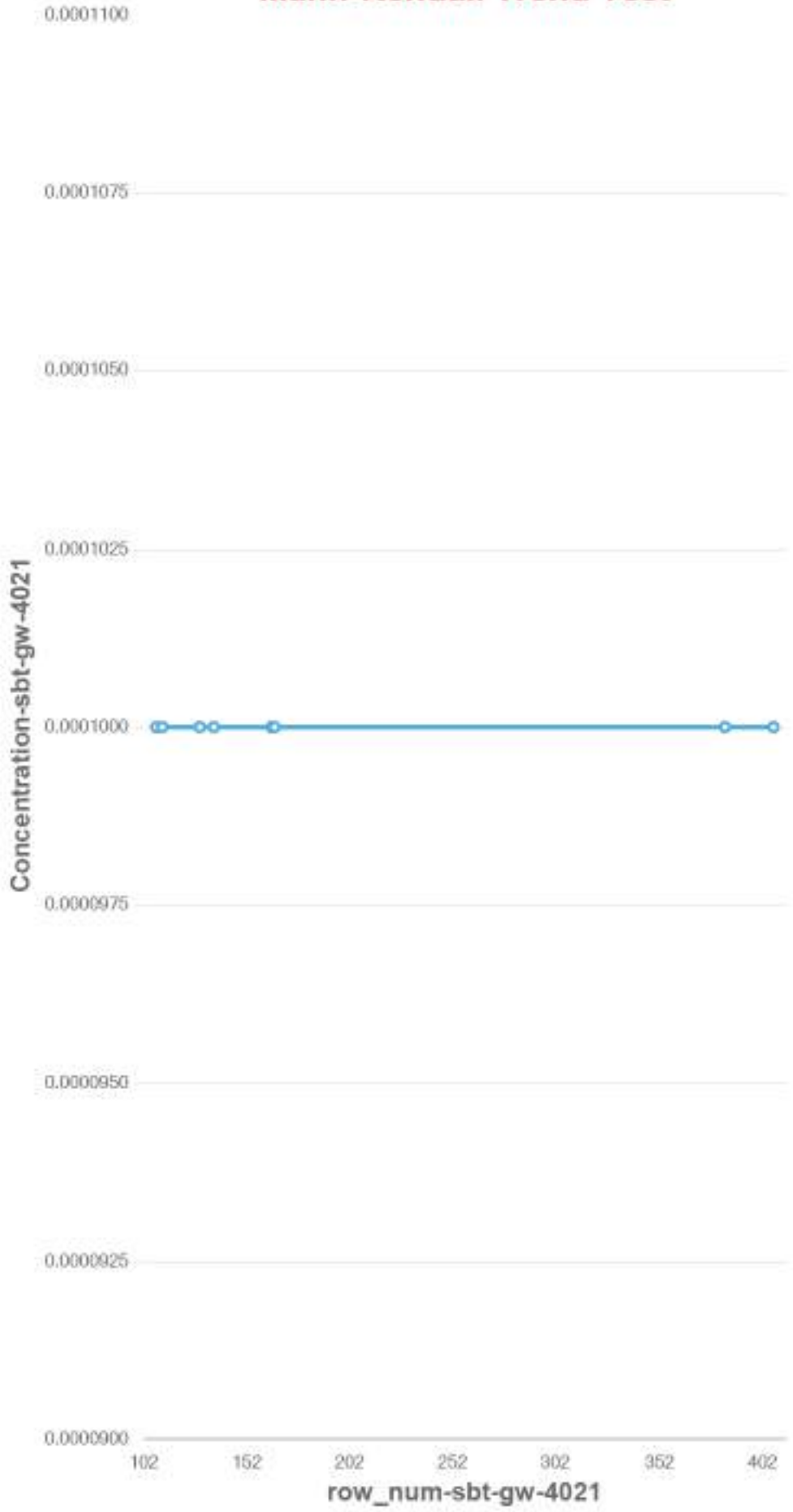


Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	1.2500
M-K Test Value (S)	6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

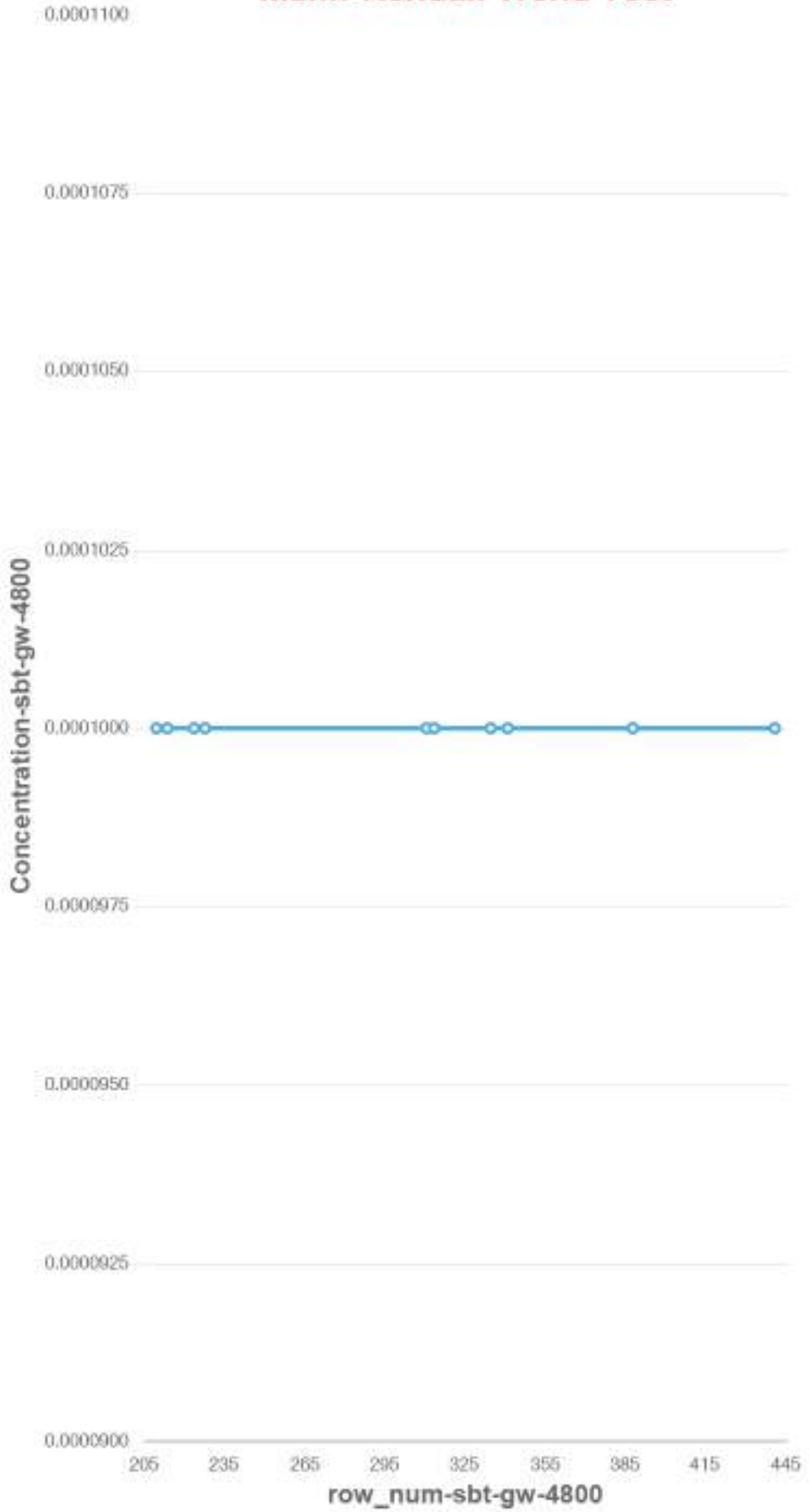


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

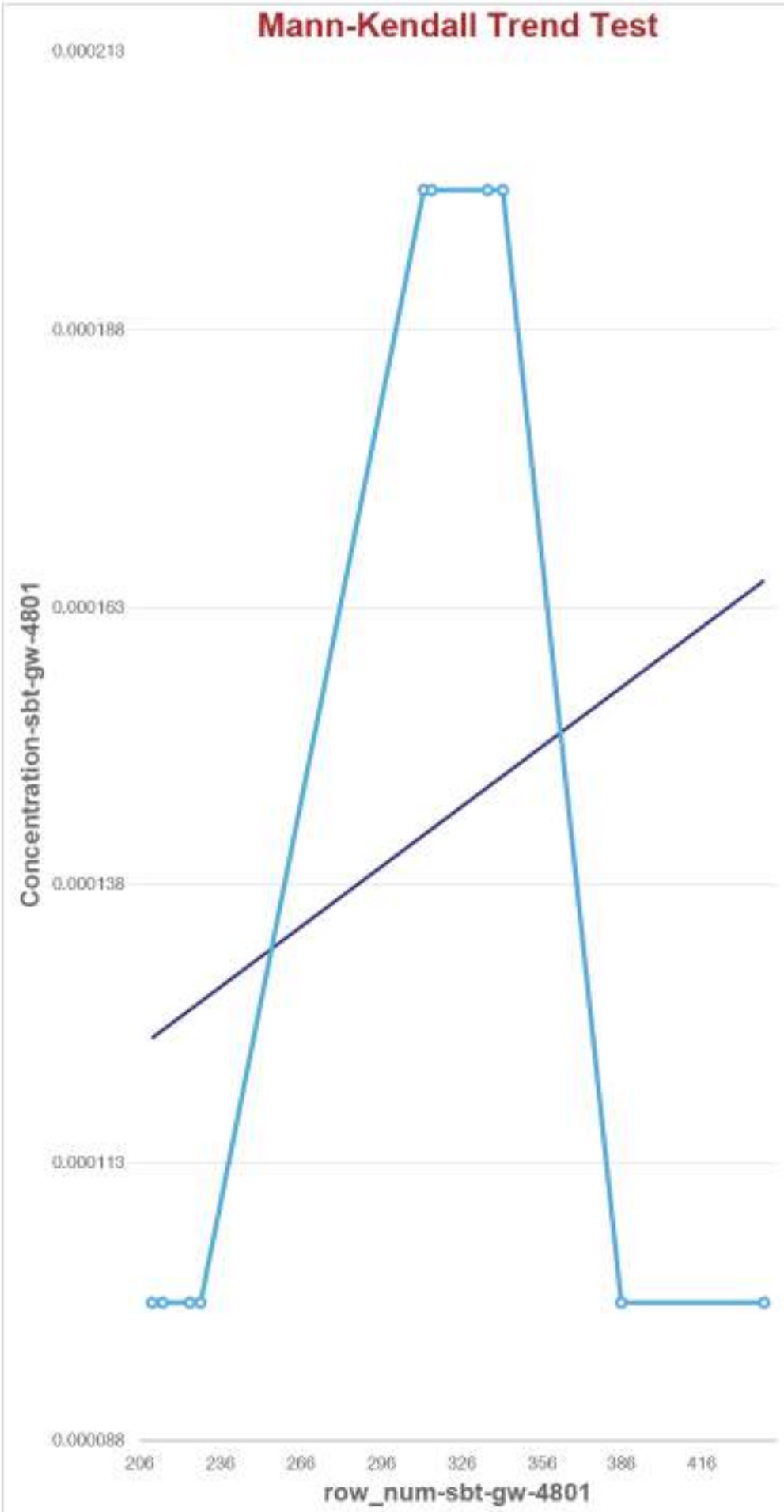
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

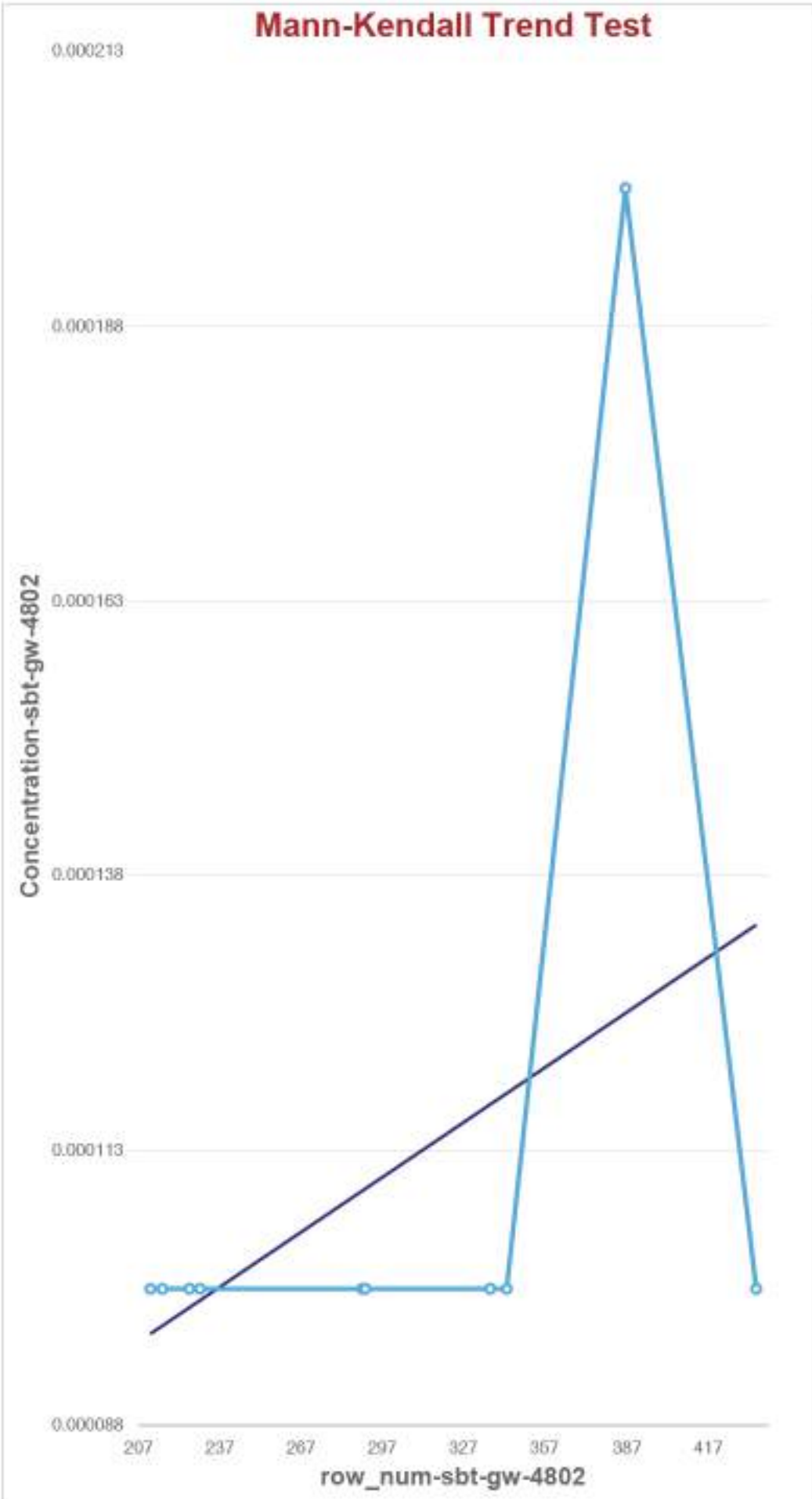
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	0.7462
M-K Test Value (S)	8
Tabulated p-value	0.2420
Approximate p-value	0.2278

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

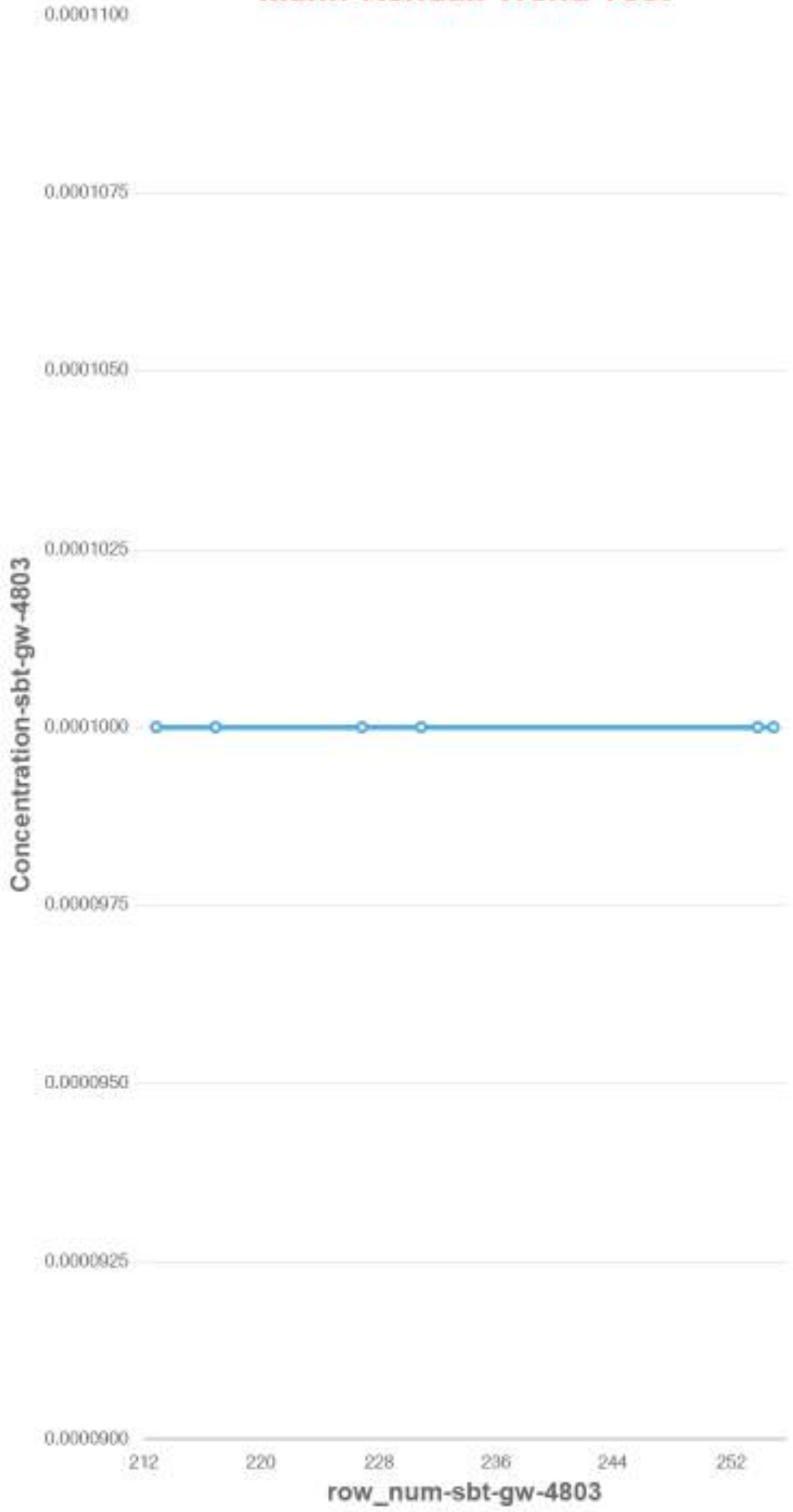


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	1.0445
M-K Test Value (S)	7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

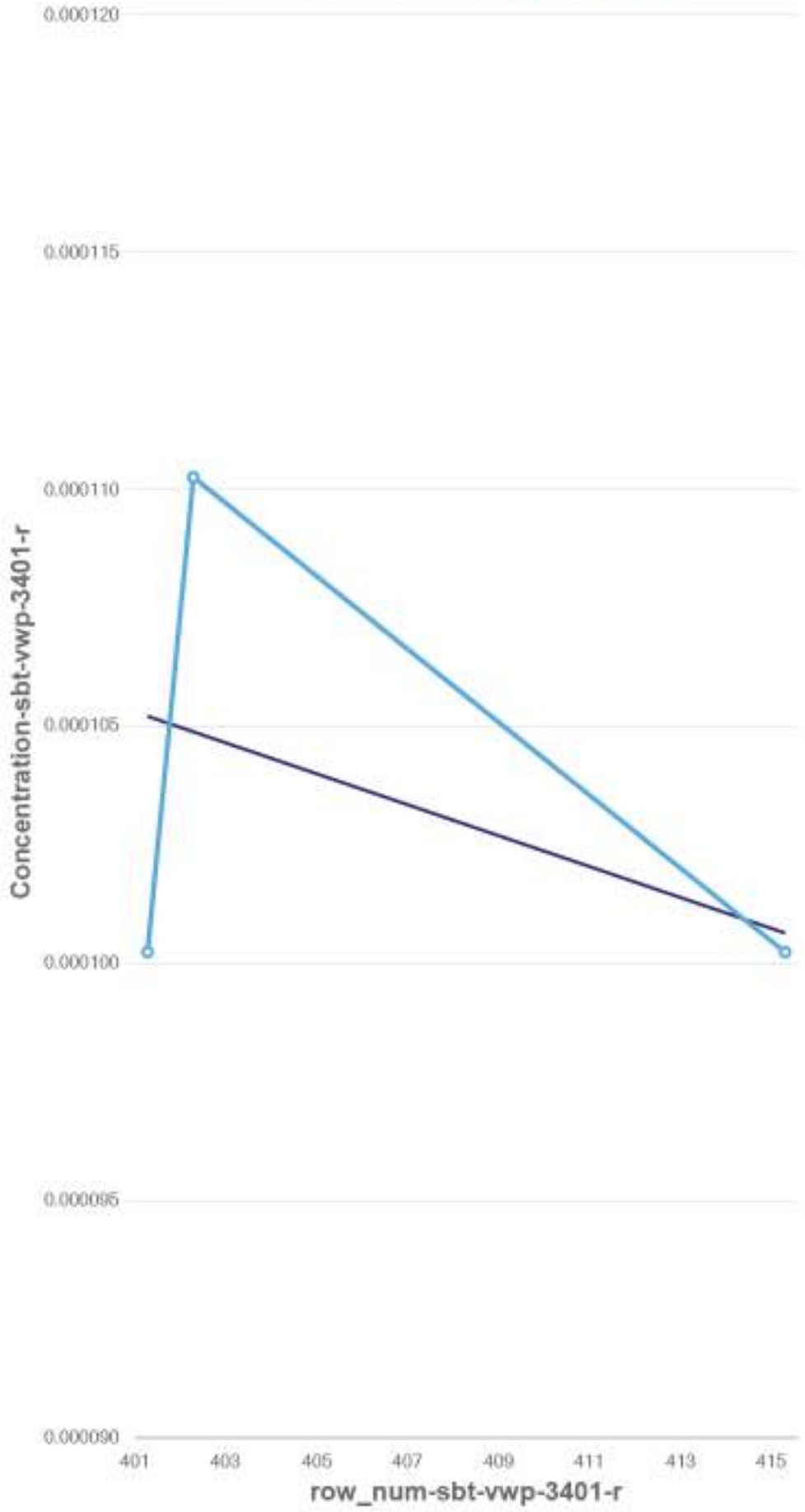


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

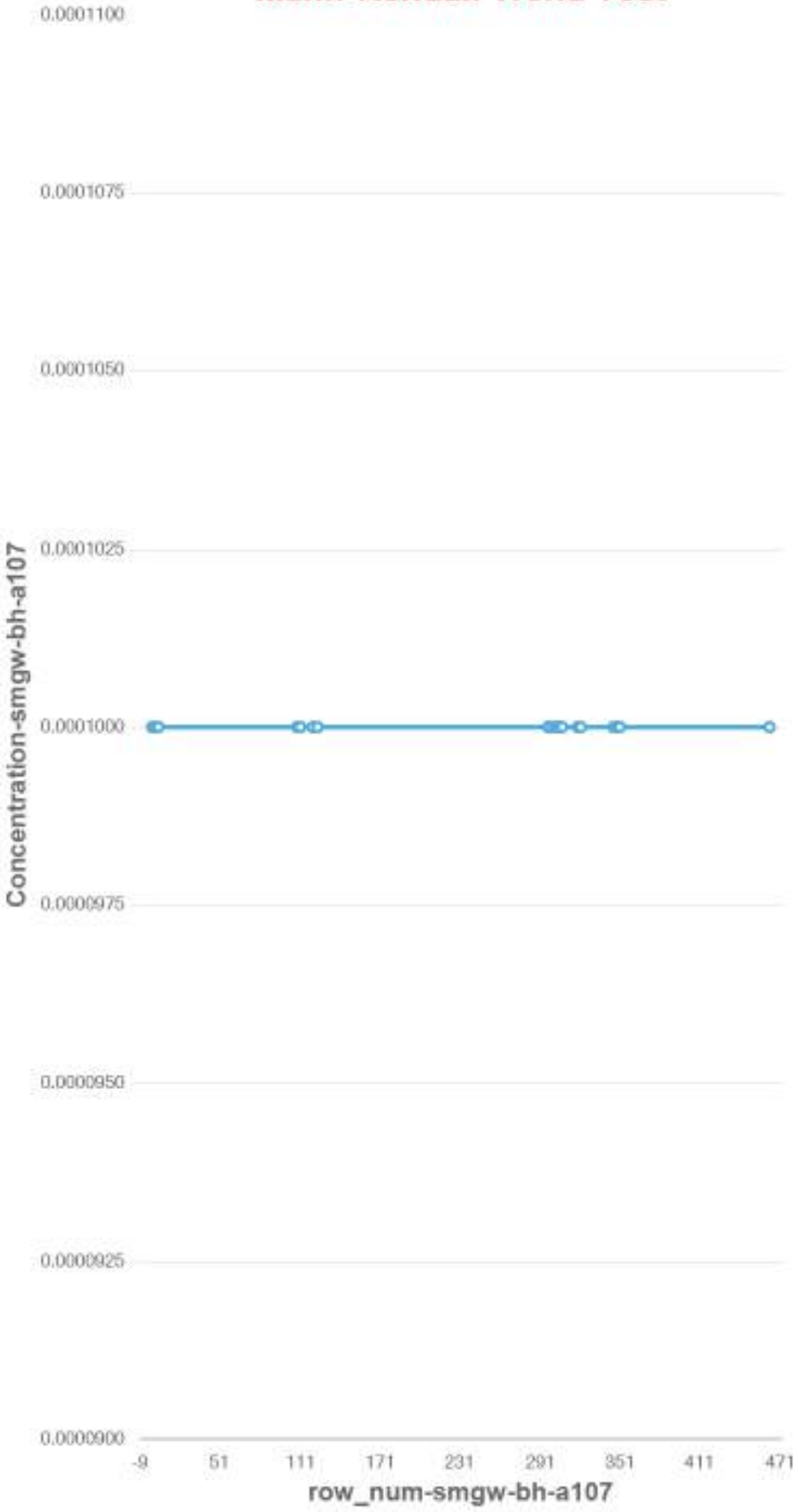


Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

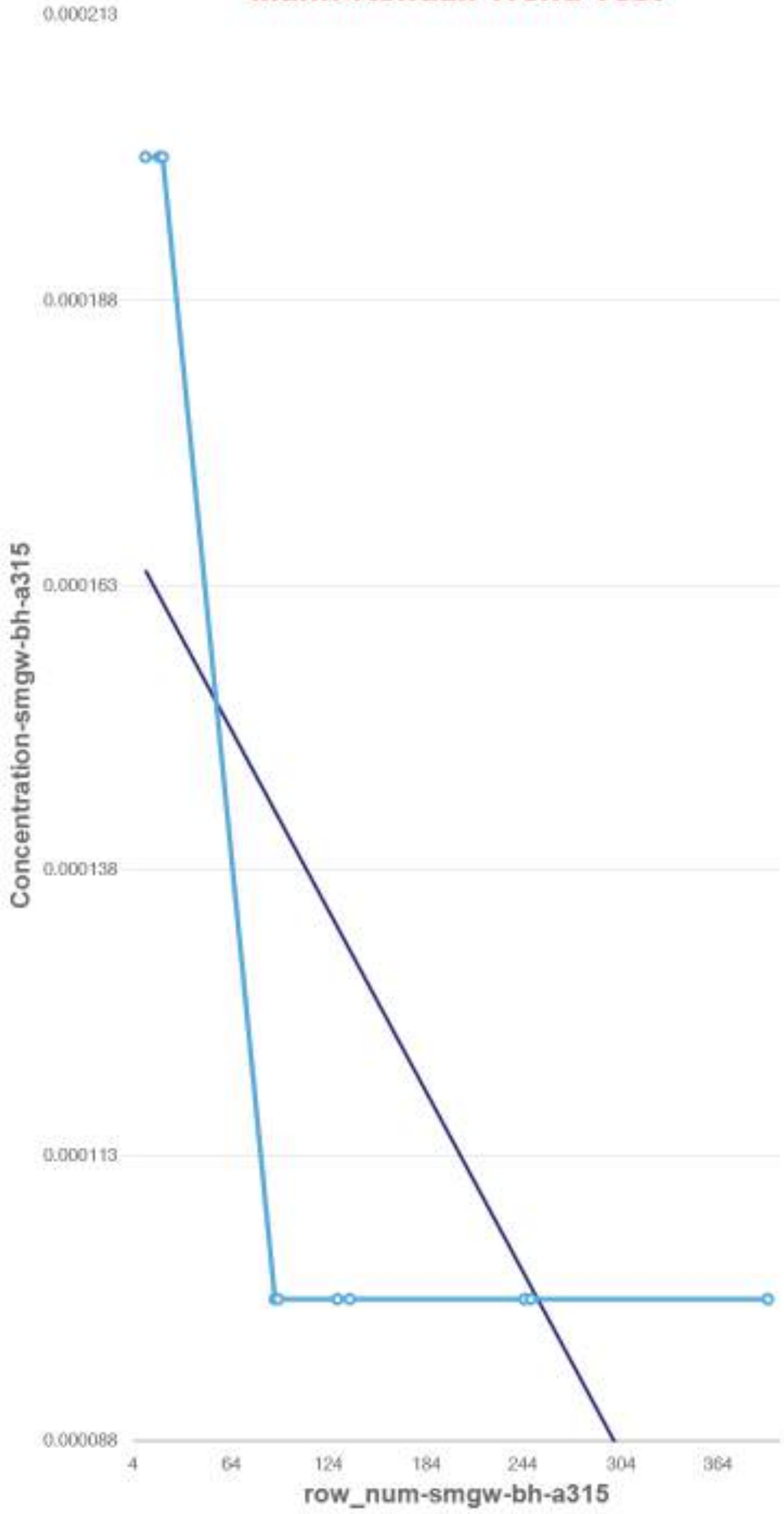


Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5130
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.

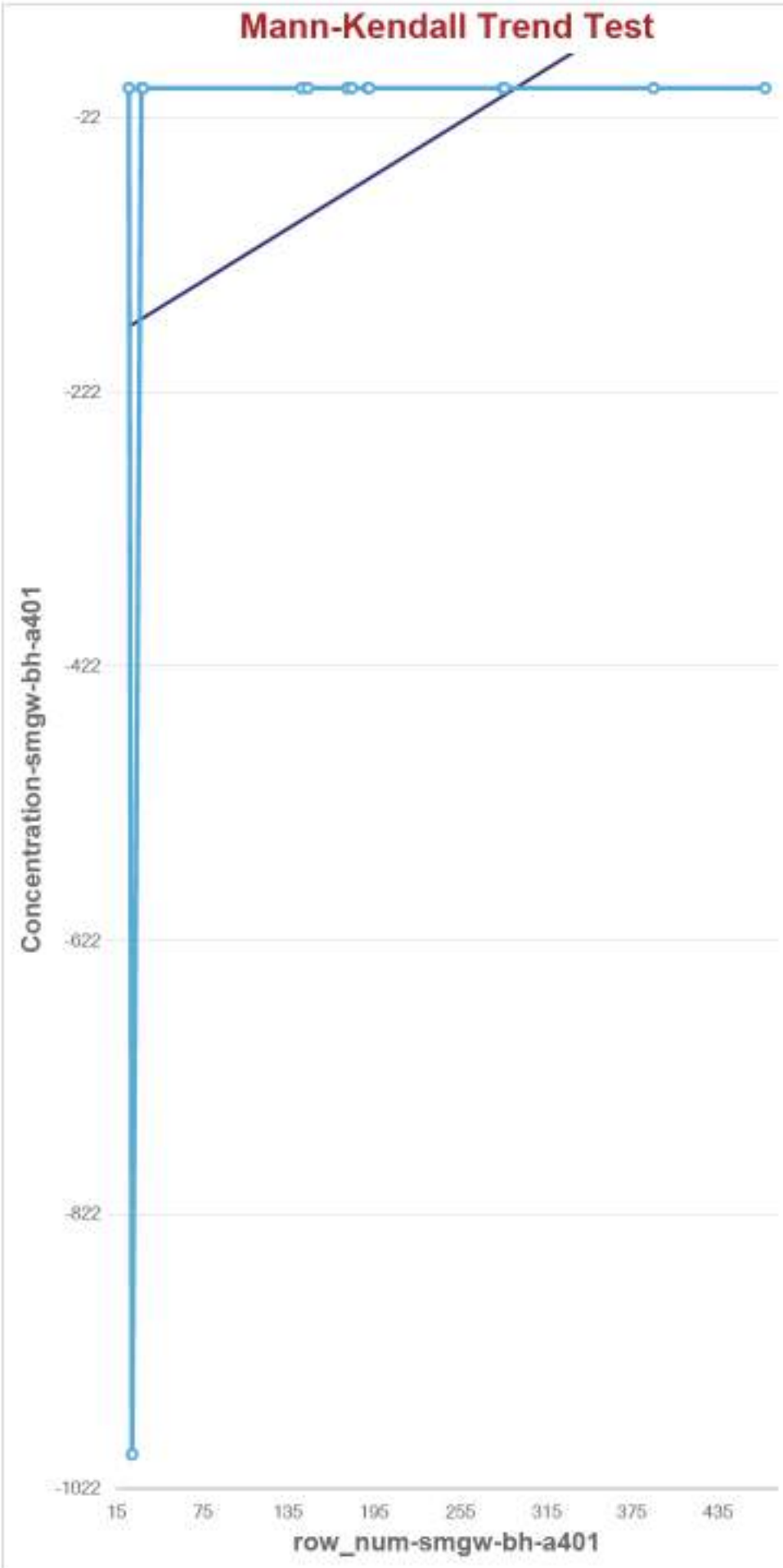
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.7750
Standardized Value of S	-2.2792
M-K Test Value (S)	-21
Tabulated p-value	0.0360
Approximate p-value	0.0113

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

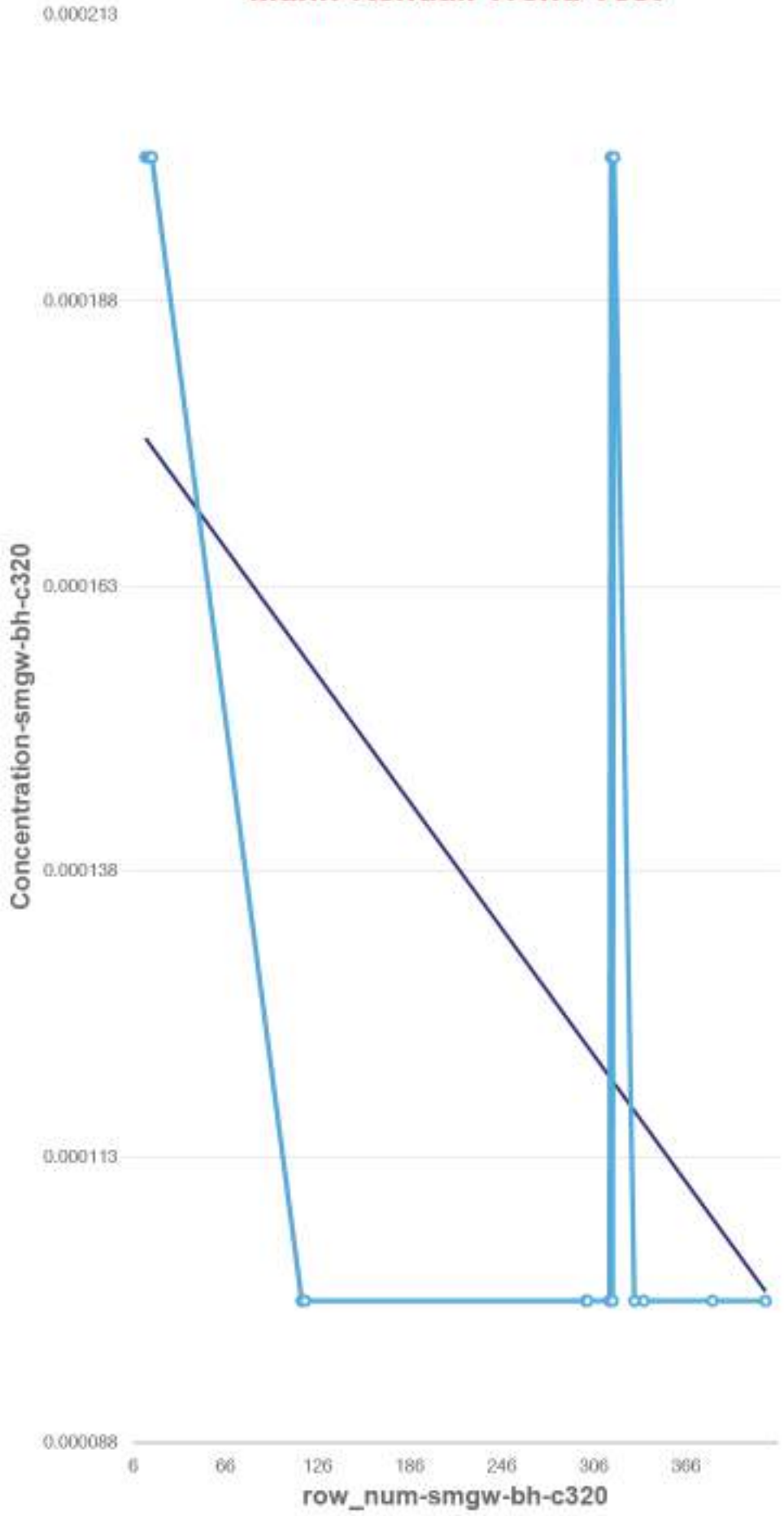
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	17.8419
Standardized Value of S	-1.2331
M-K Test Value (S)	-23
Tabulated p-value	0.1170
Approximate p-value	0.1088

OLS Regression Line (Blue)

OLS Regression Slope	0.6484
OLS Regression Interoept	-190.2885

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test



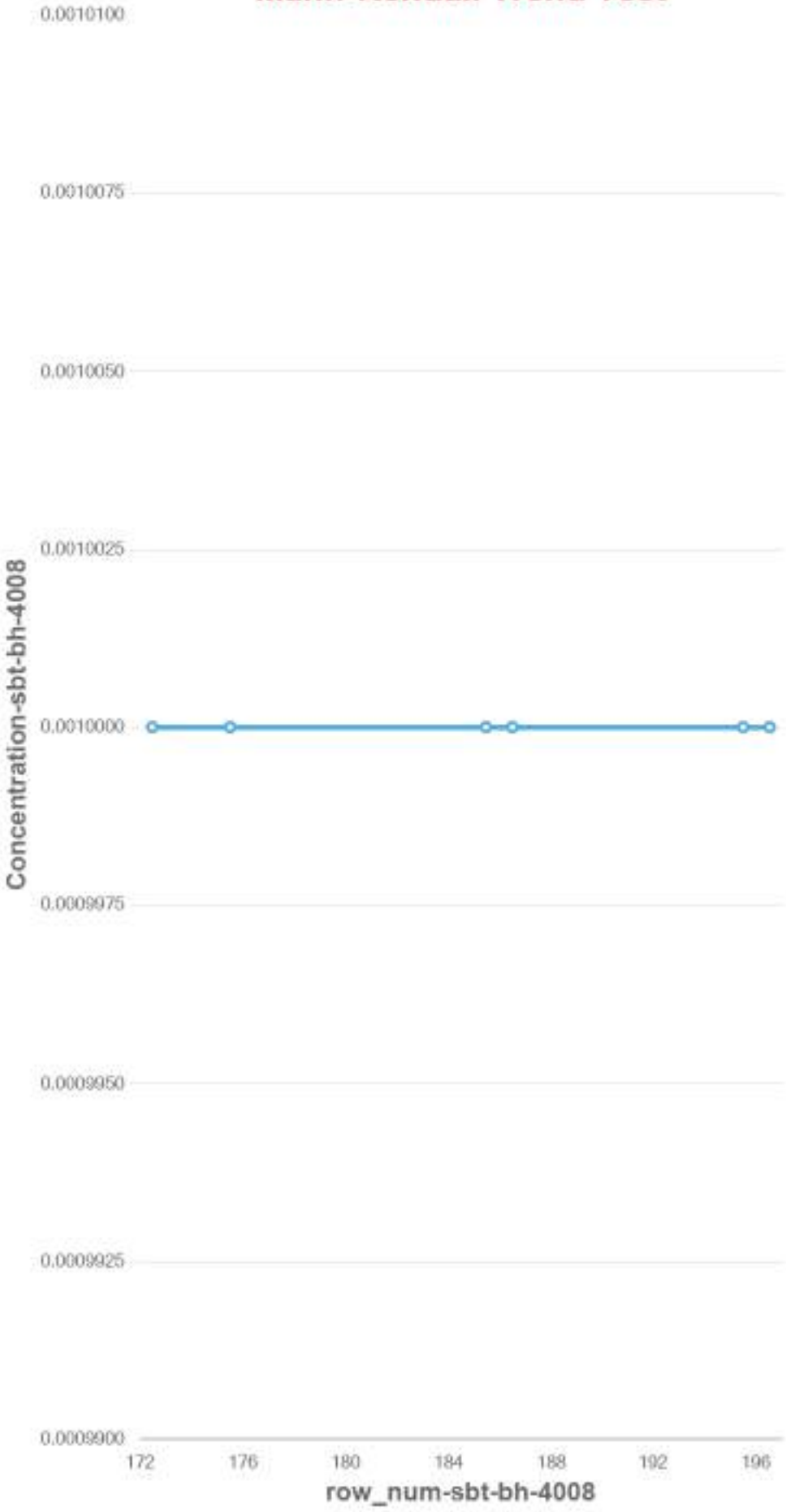
Mann-Kendall Trend Analysis	
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.3299
Standardized Value of S	-1.6534
M-K Test Value (S)	-28
Tabulated p-value	0.0840
Approximate p-value	0.0491

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Insufficient statistical evidence of a significant trend at the specified level of significance.

F.5 COPPER (FILTERED)

Mann-Kendall Trend Test

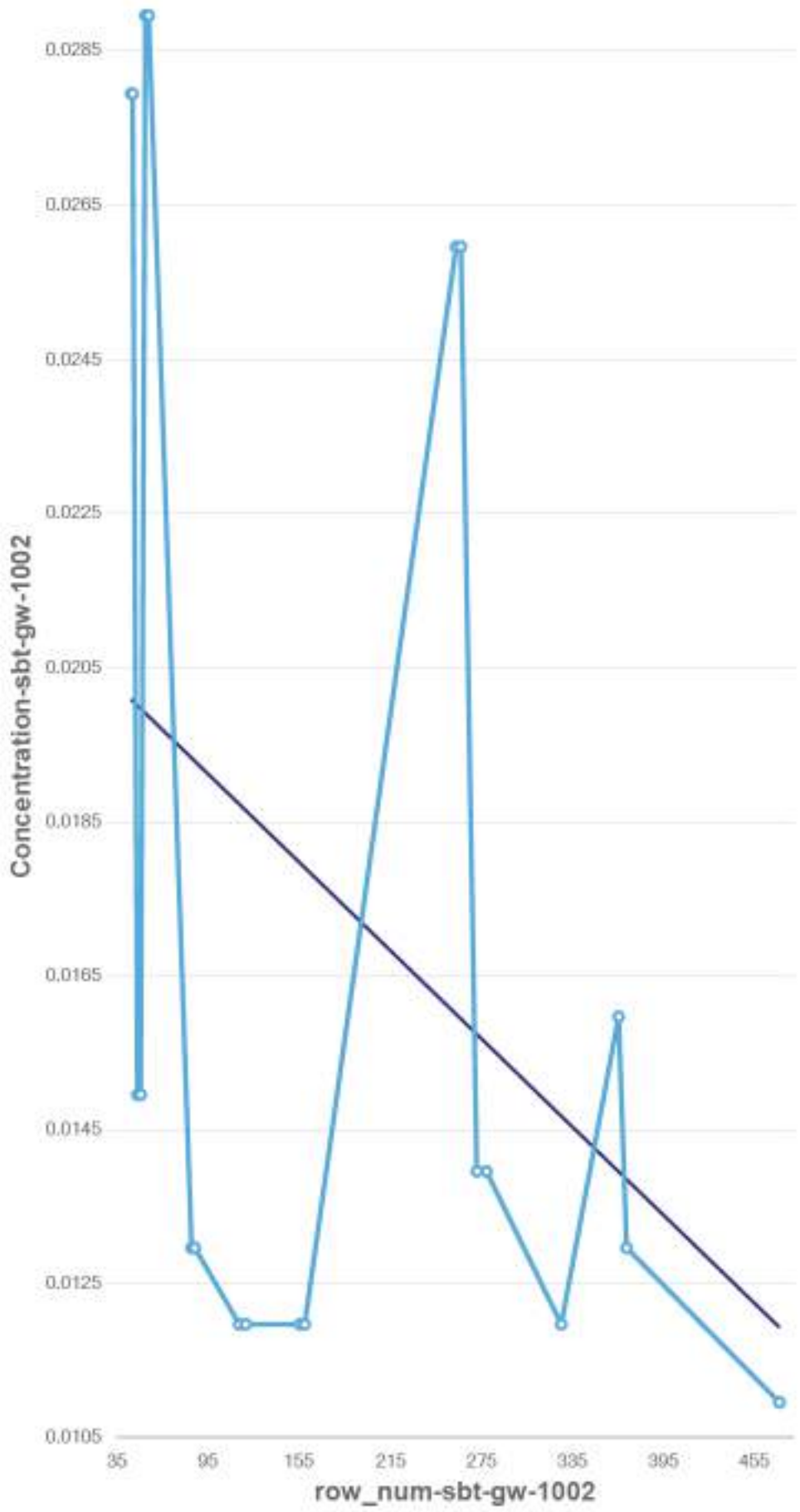


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0010

Insufficient statistical evidence of a significant trend at the specified level of significance.

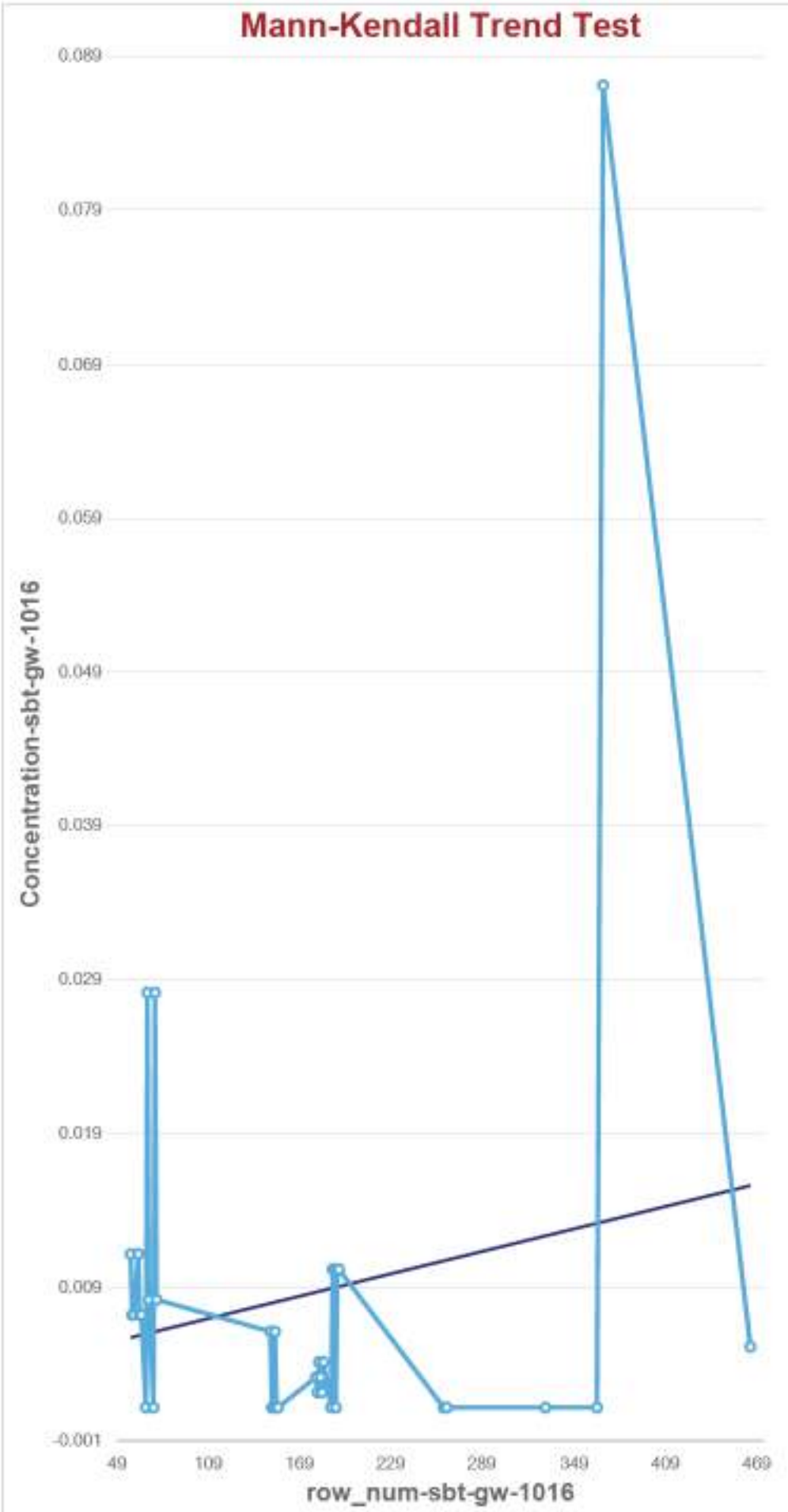
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.4083
Standardized Value of S	-2.2033
M-K Test Value (S)	-68
Tabulated p-value	0.0140
Approximate p-value	0.0138

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0210

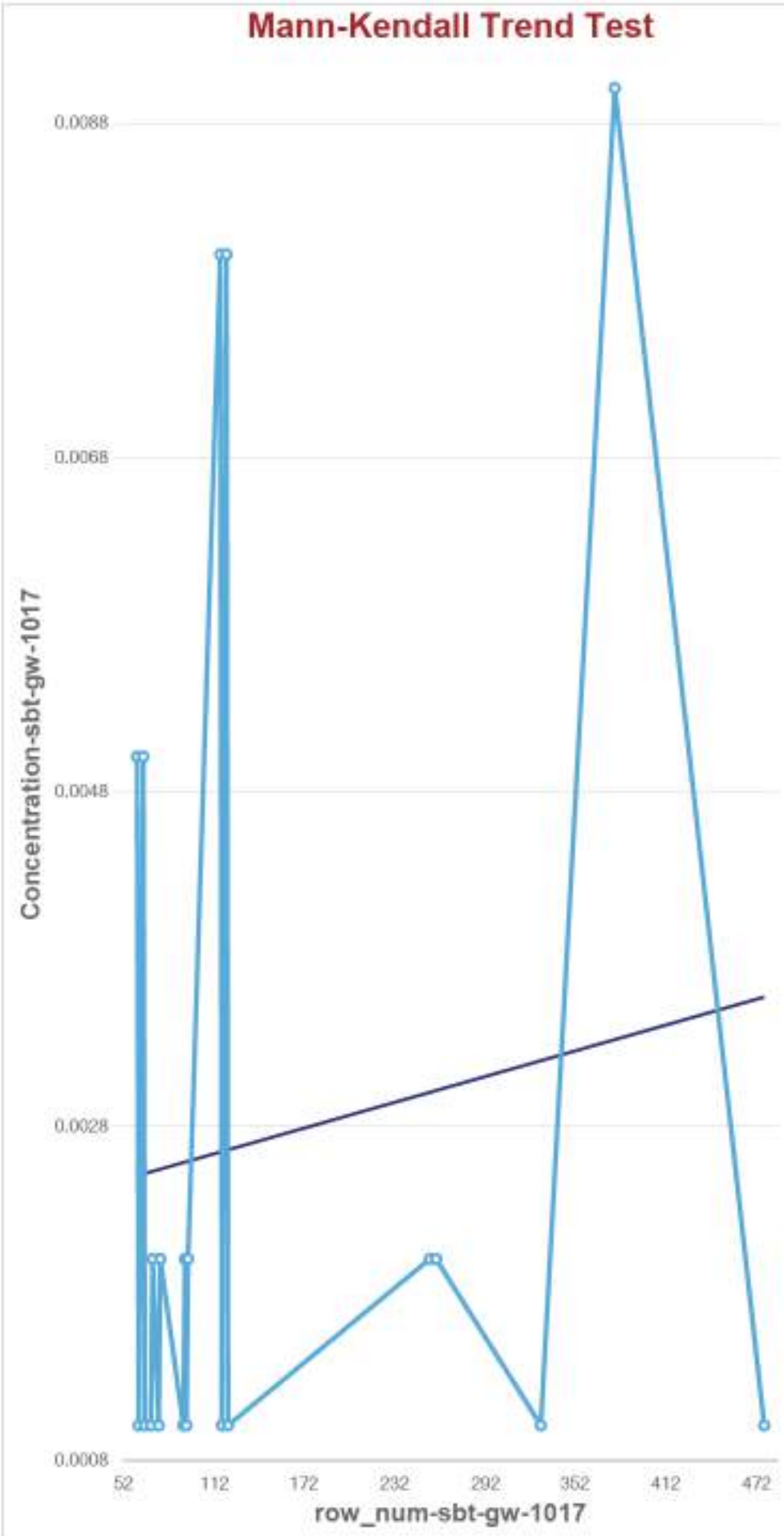
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	71.7844
Standardized Value of S	-1.5602
M-K Test Value (S)	-113
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0594

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0042

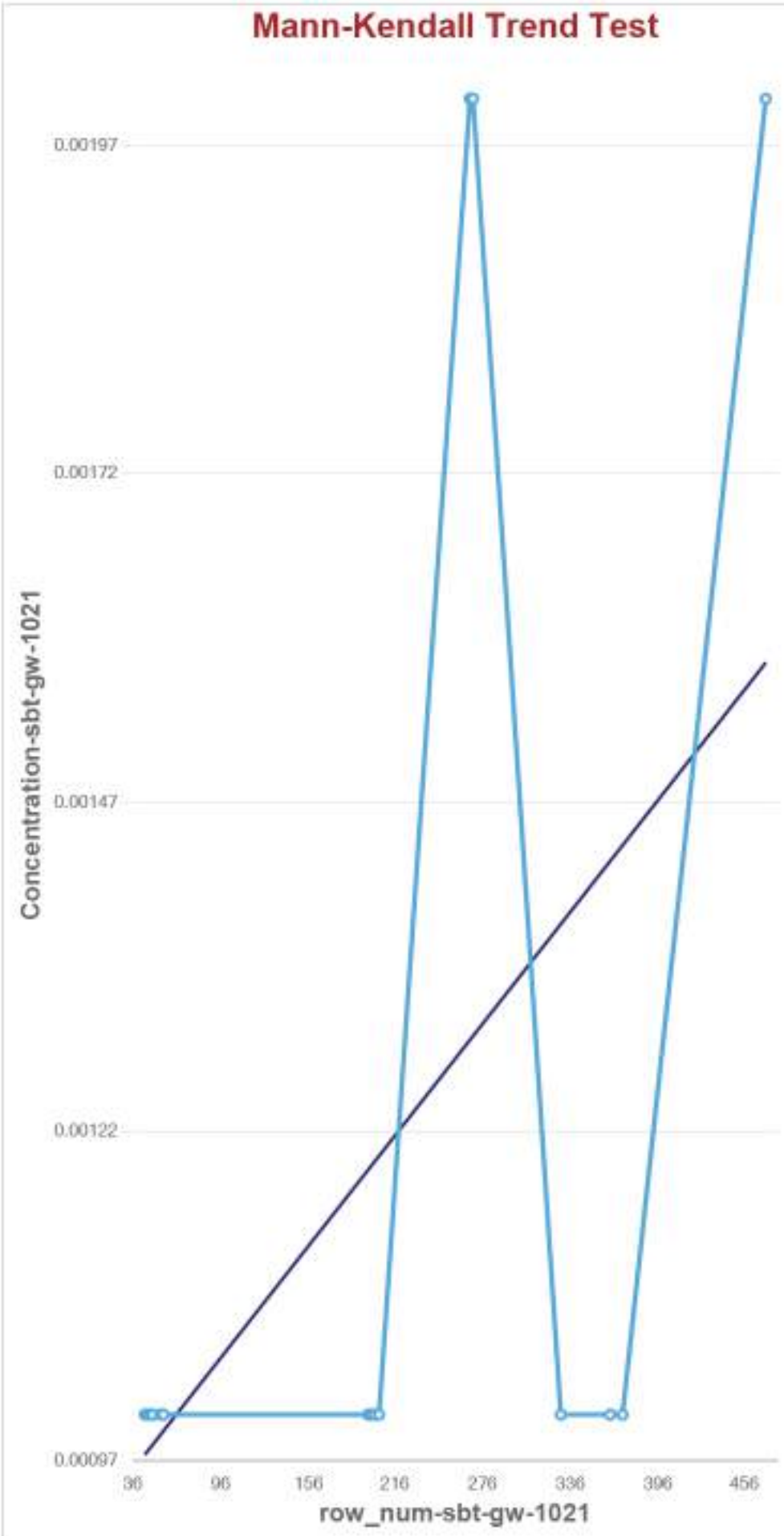
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6812
Standardized Value of S	0.2933
M-K Test Value (S)	10
Tabulated p-value	0.3940
Approximate p-value	0.3846

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0023

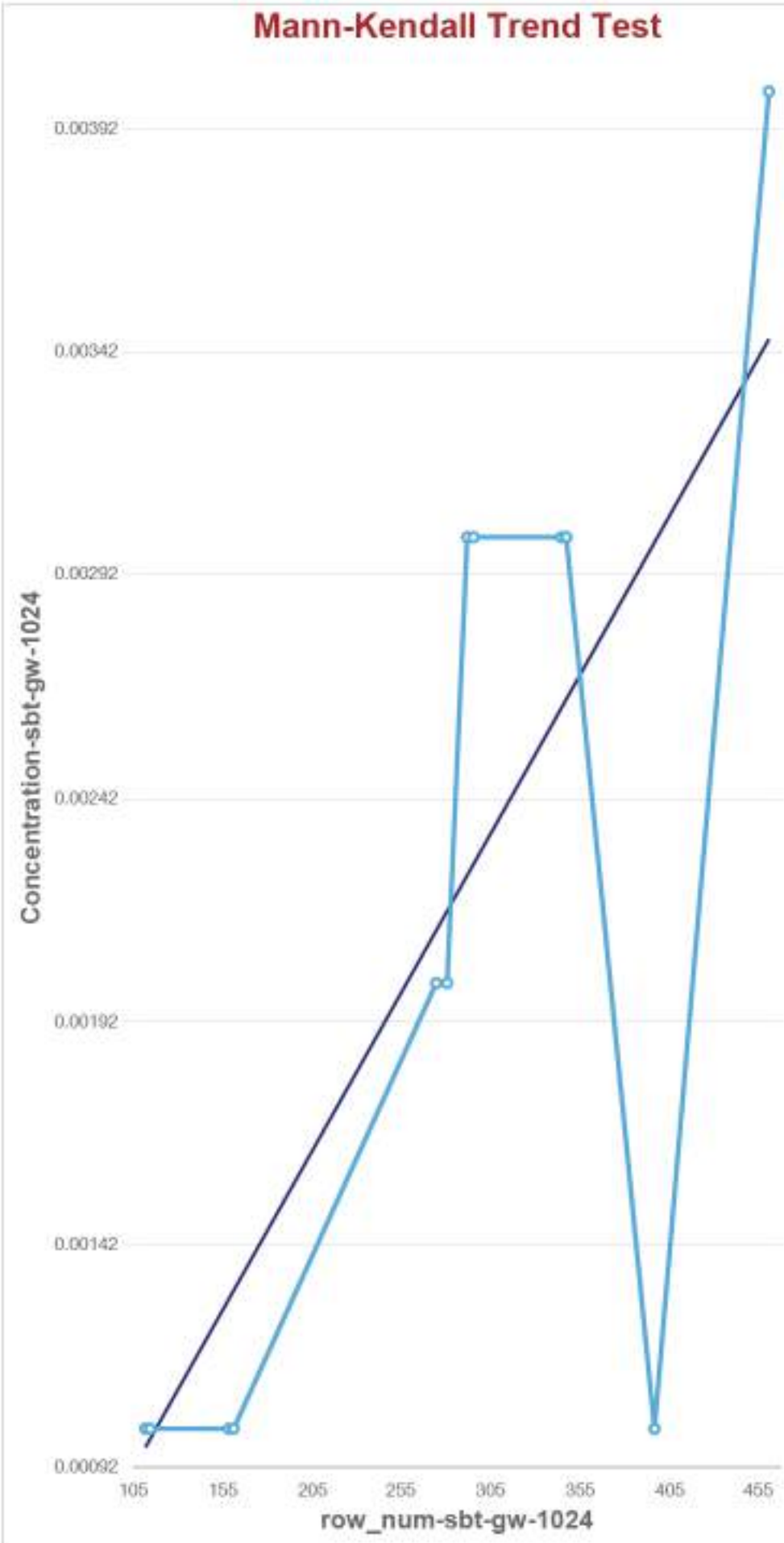
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.8661
Standardized Value of S	1.7489
M-K Test Value (S)	27
Tabulated p-value	0.1330
Approximate p-value	0.0401

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0009

Insufficient statistical evidence of a significant trend at the specified level of significance.

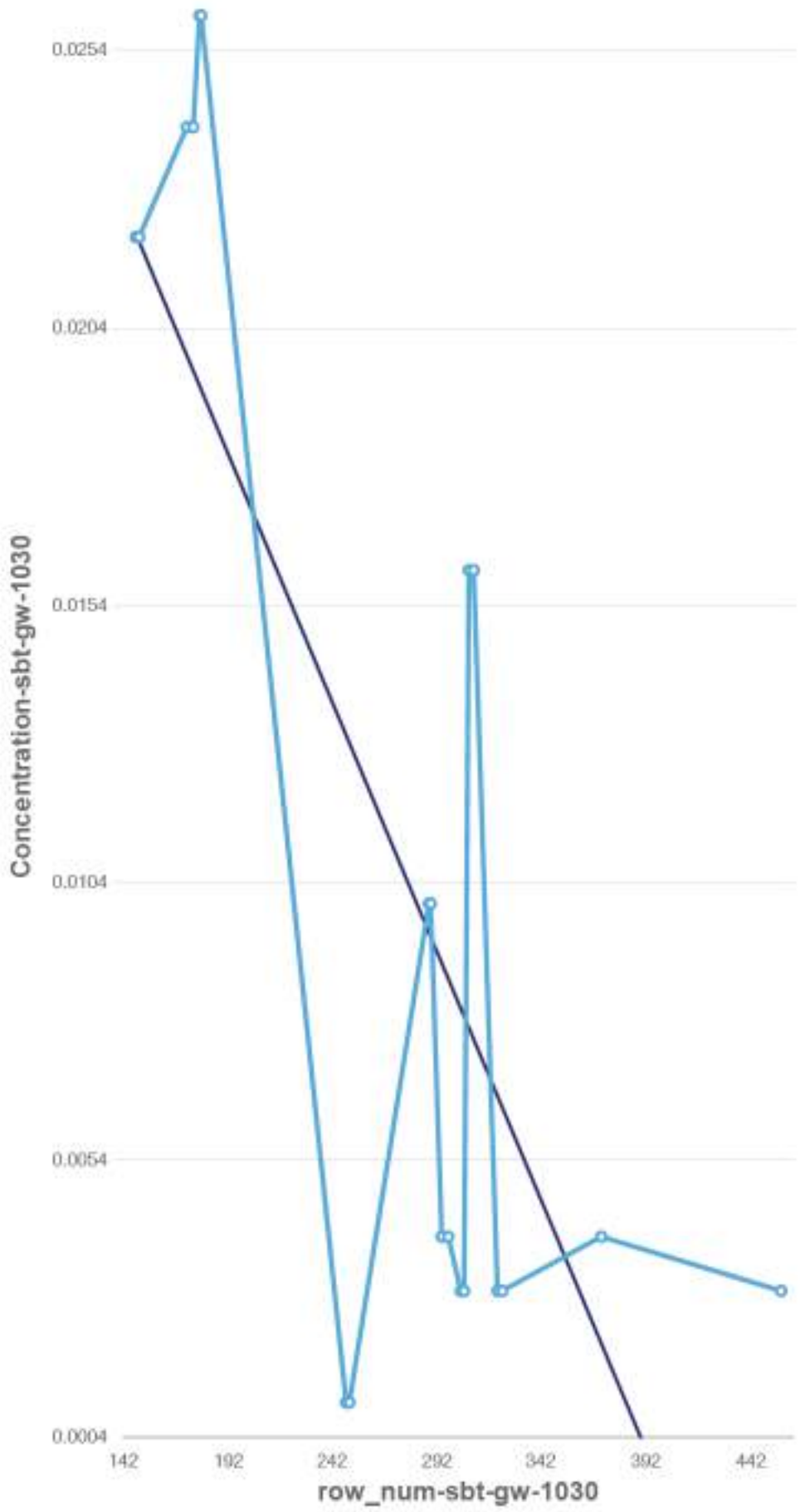


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.6504
Standardized Value of S	2.6373
M-K Test Value (S)	37
Tabulated p-value	0.0070
Approximate p-value	0.0042

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0002

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test

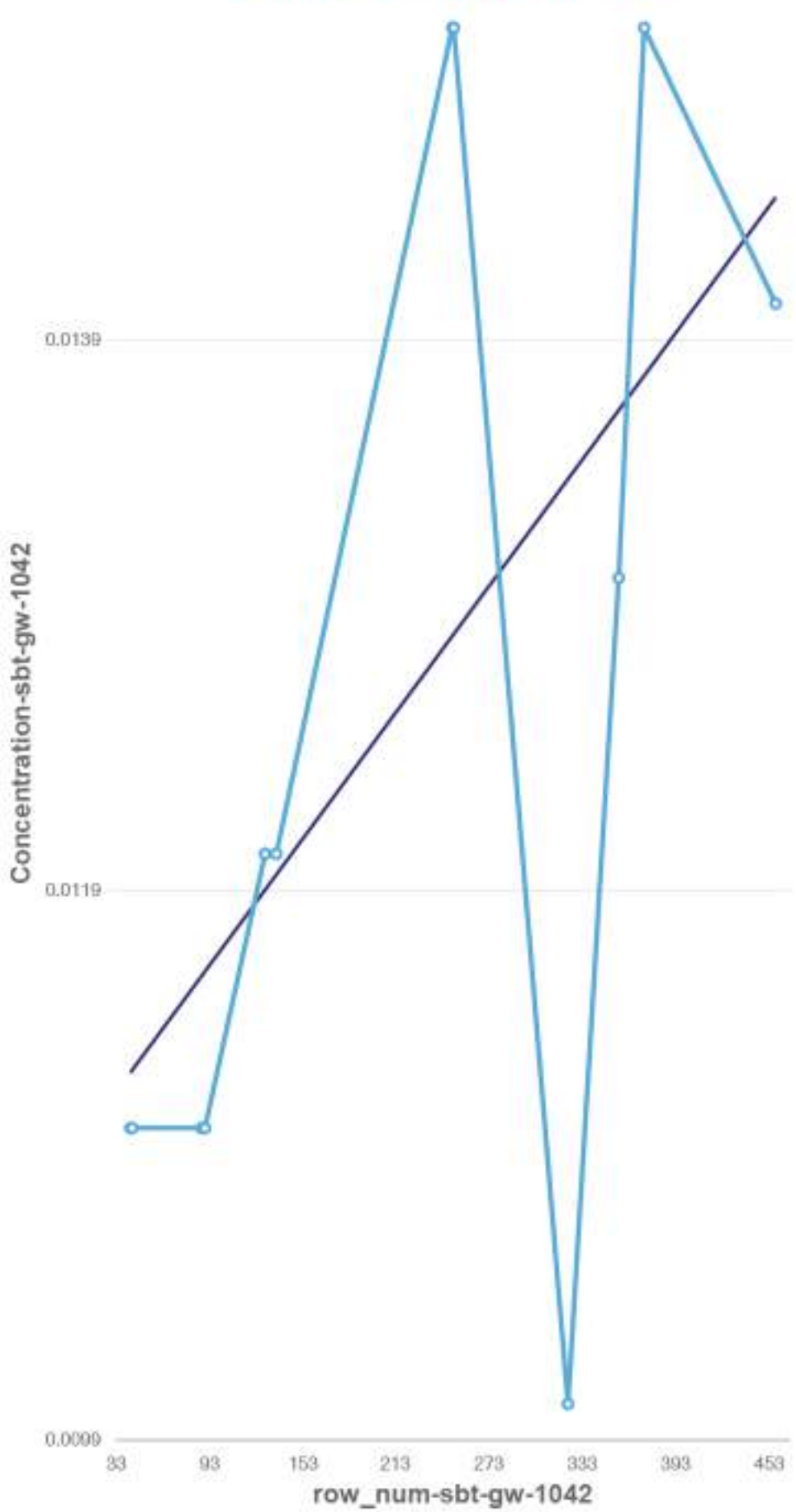


Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.3919
Standardized Value of S	-2.1716
M-K Test Value (S)	-67
Tabulated p-value	0.0170
Approximate p-value	0.0149

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0354

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

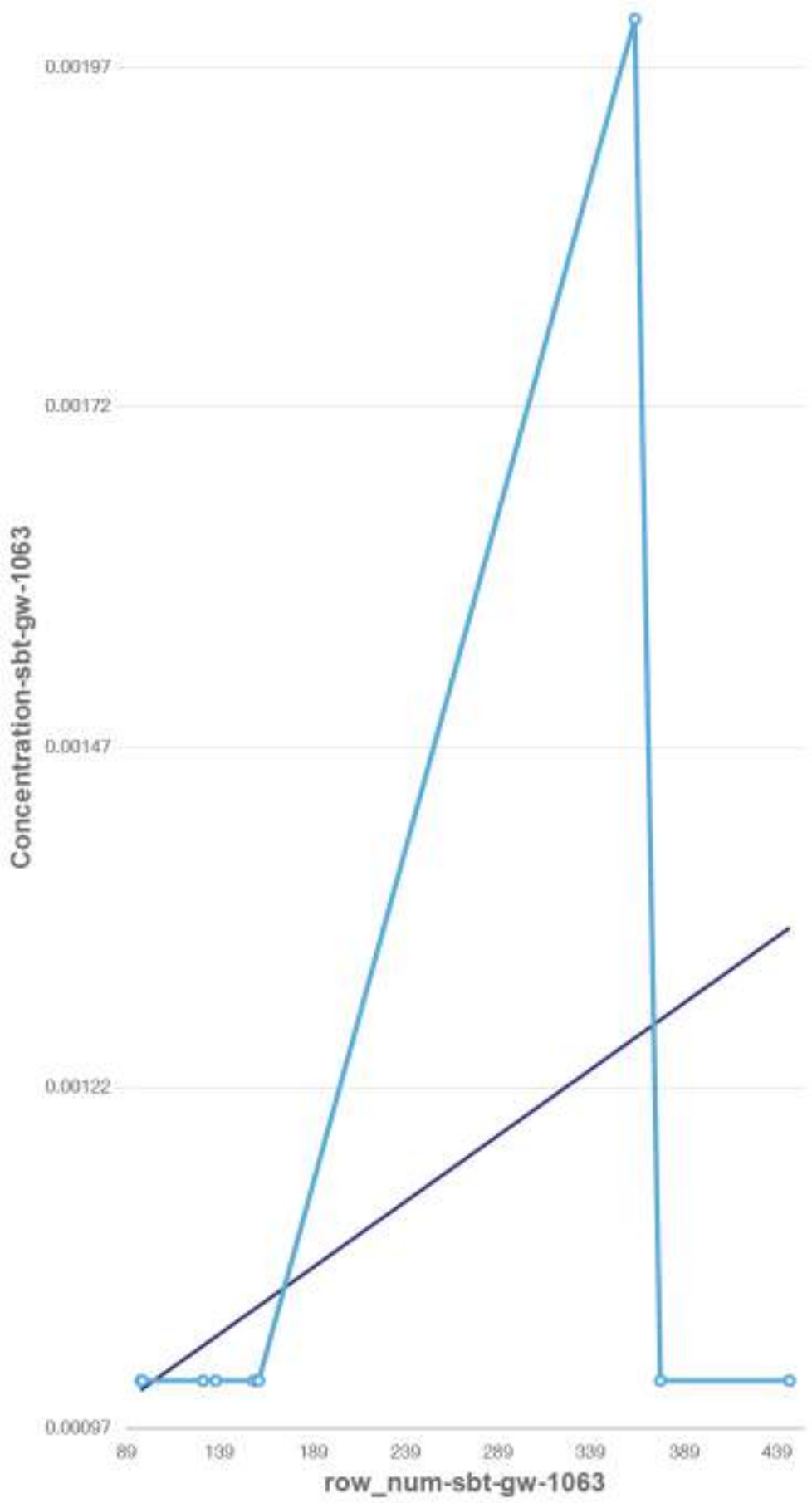


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.1185
Standardized Value of S	2.0540
M-K Test Value (S)	30
Tabulated p-value	0.0220
Approximate p-value	0.0200

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0109

Statistically significant evidence of an increasing trend at the specified level of significance.

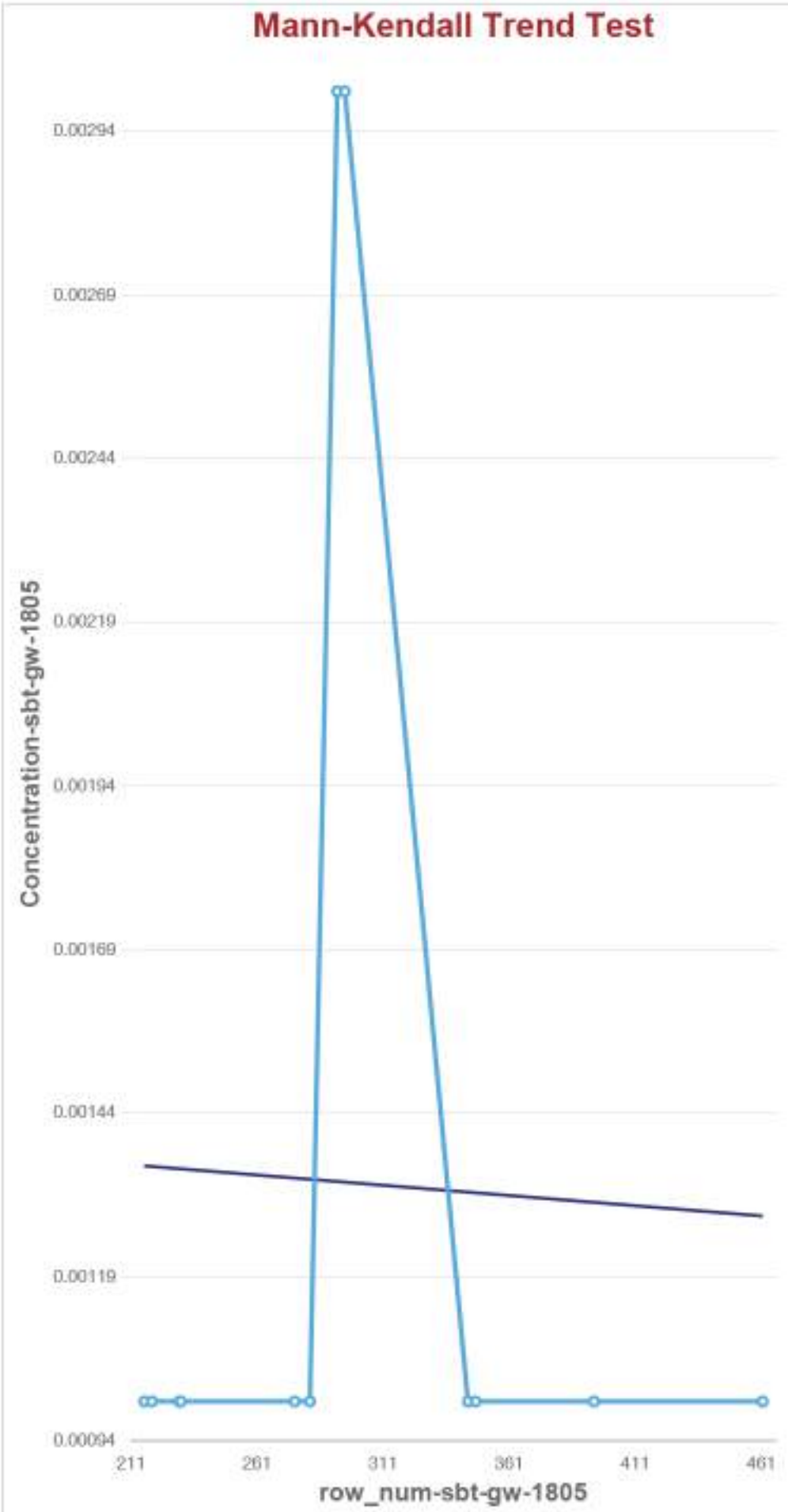
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.1640
Standardized Value of S	0.5809
M-K Test Value (S)	4
Tabulated p-value	0.3810
Approximate p-value	0.2806

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0009

Insufficient statistical evidence of a significant trend at the specified level of significance.

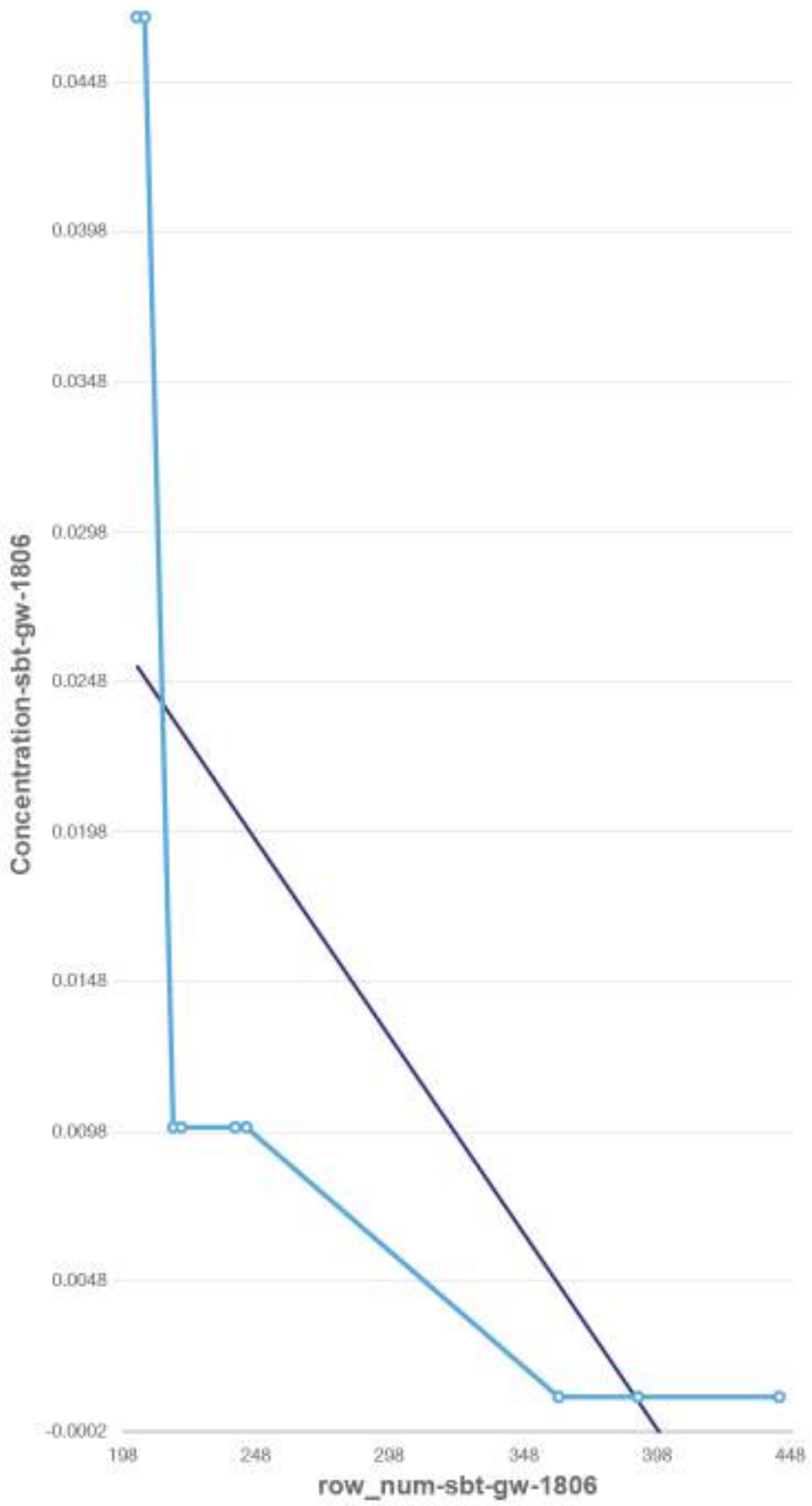


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3095
Standardized Value of S	0.3223
M-K Test Value (S)	4
Tabulated p-value	0.4200
Approximate p-value	0.3736

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0014

Insufficient statistical evidence of a significant trend at the specified level of significance.

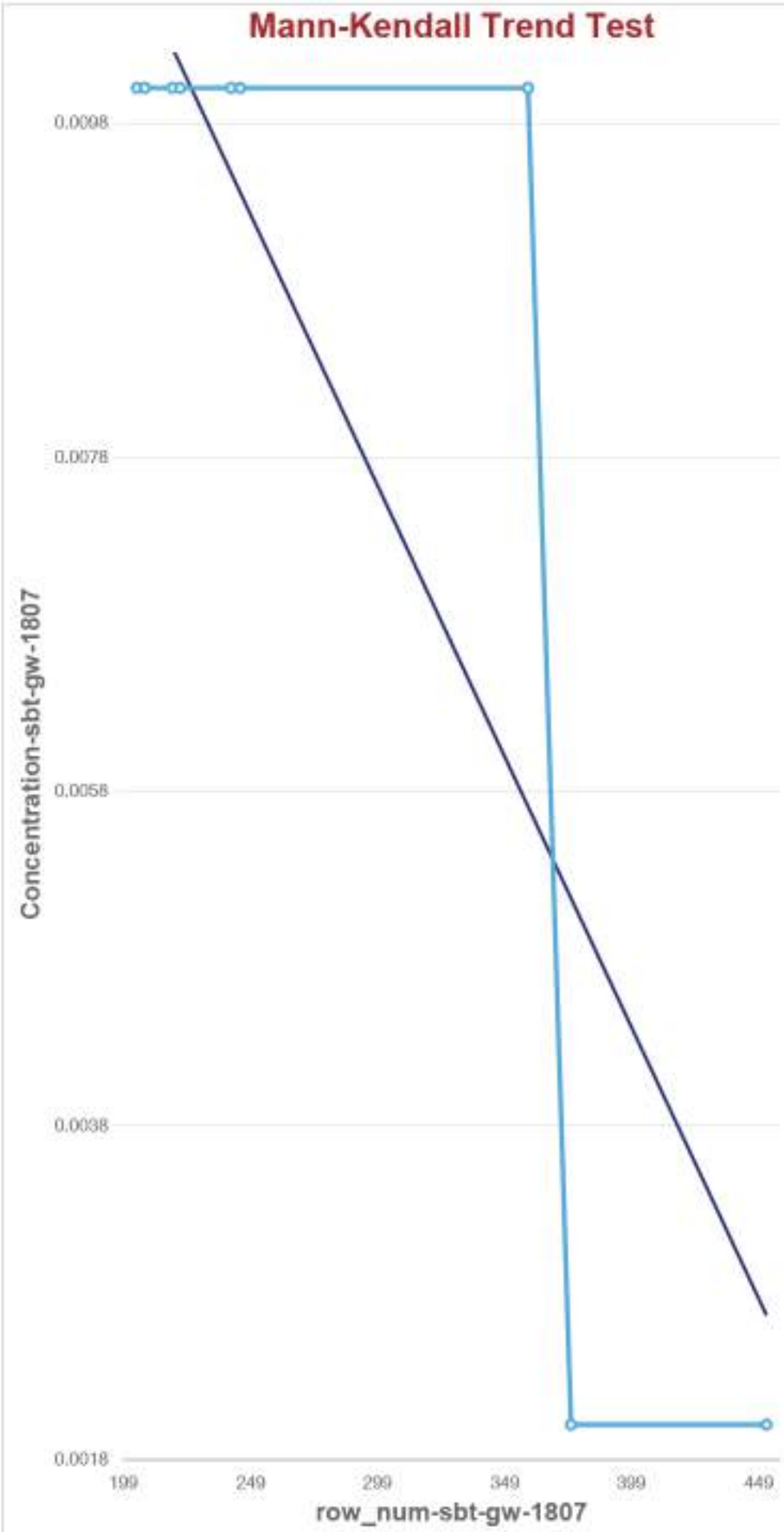
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.8694
Standardized Value of S	-2.8187
M-K Test Value (S)	-26
Tabulated p-value	0.0030
Approximate p-value	0.0024

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0518

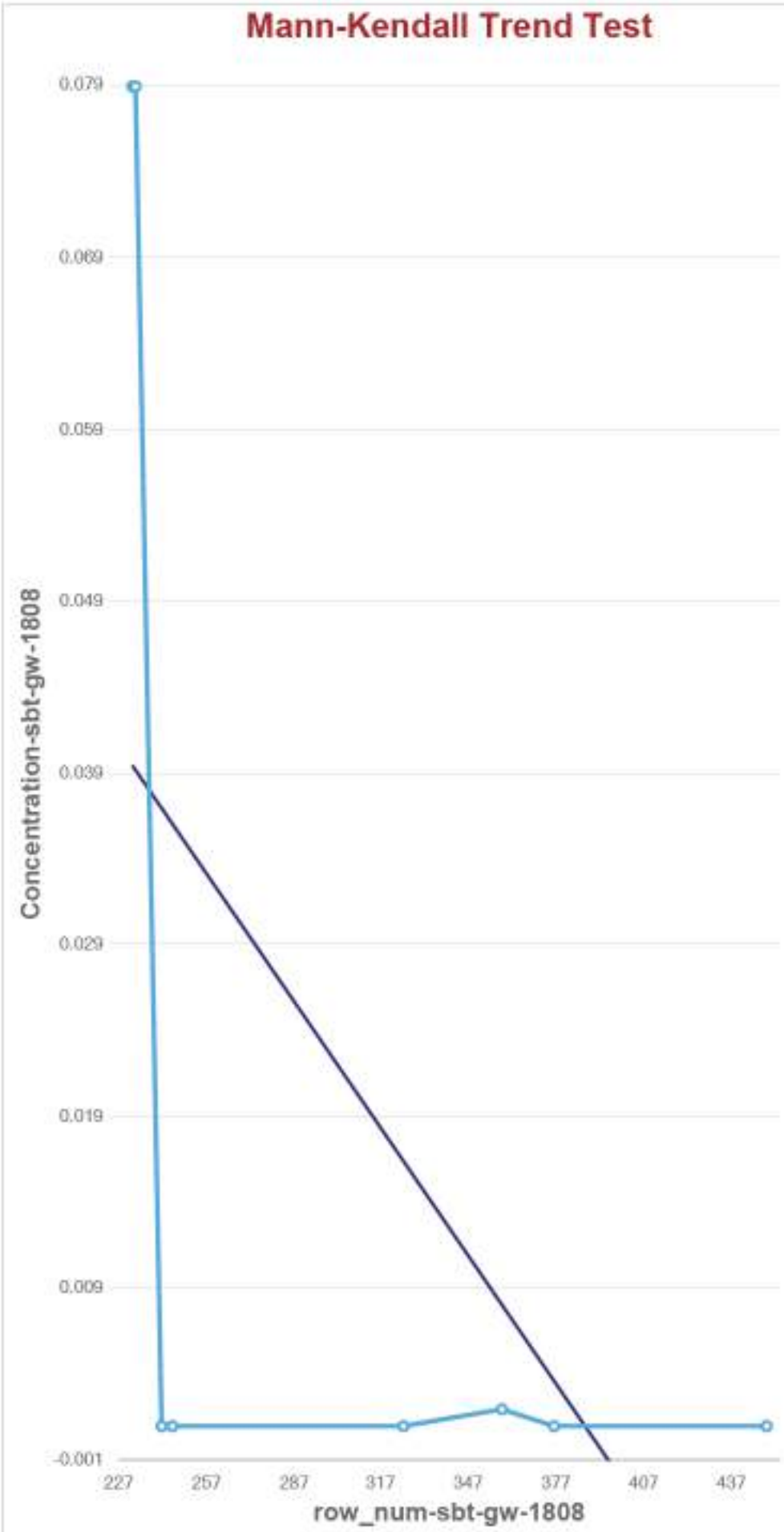
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.8313
Standardized Value of S	-1.9030
M-K Test Value (S)	-14
Tabulated p-value	0.0900
Approximate p-value	0.0285

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0173

Insufficient statistical evidence of a significant trend at the specified level of significance.

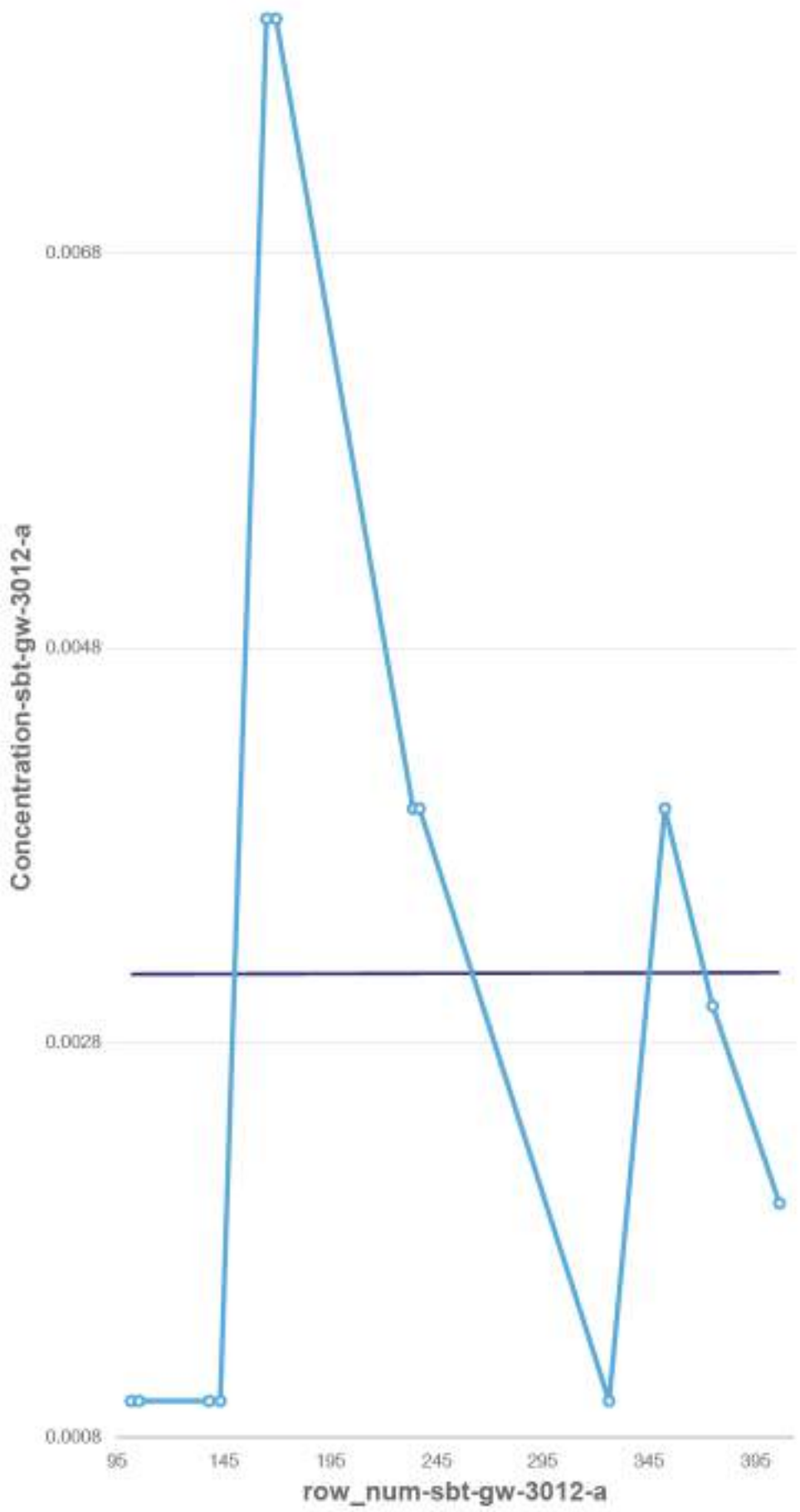


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-1.4484
M-K Test Value (S)	-11
Tabulated p-value	0.1380
Approximate p-value	0.0738

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0002
OLS Regression Intercept	0.0968

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

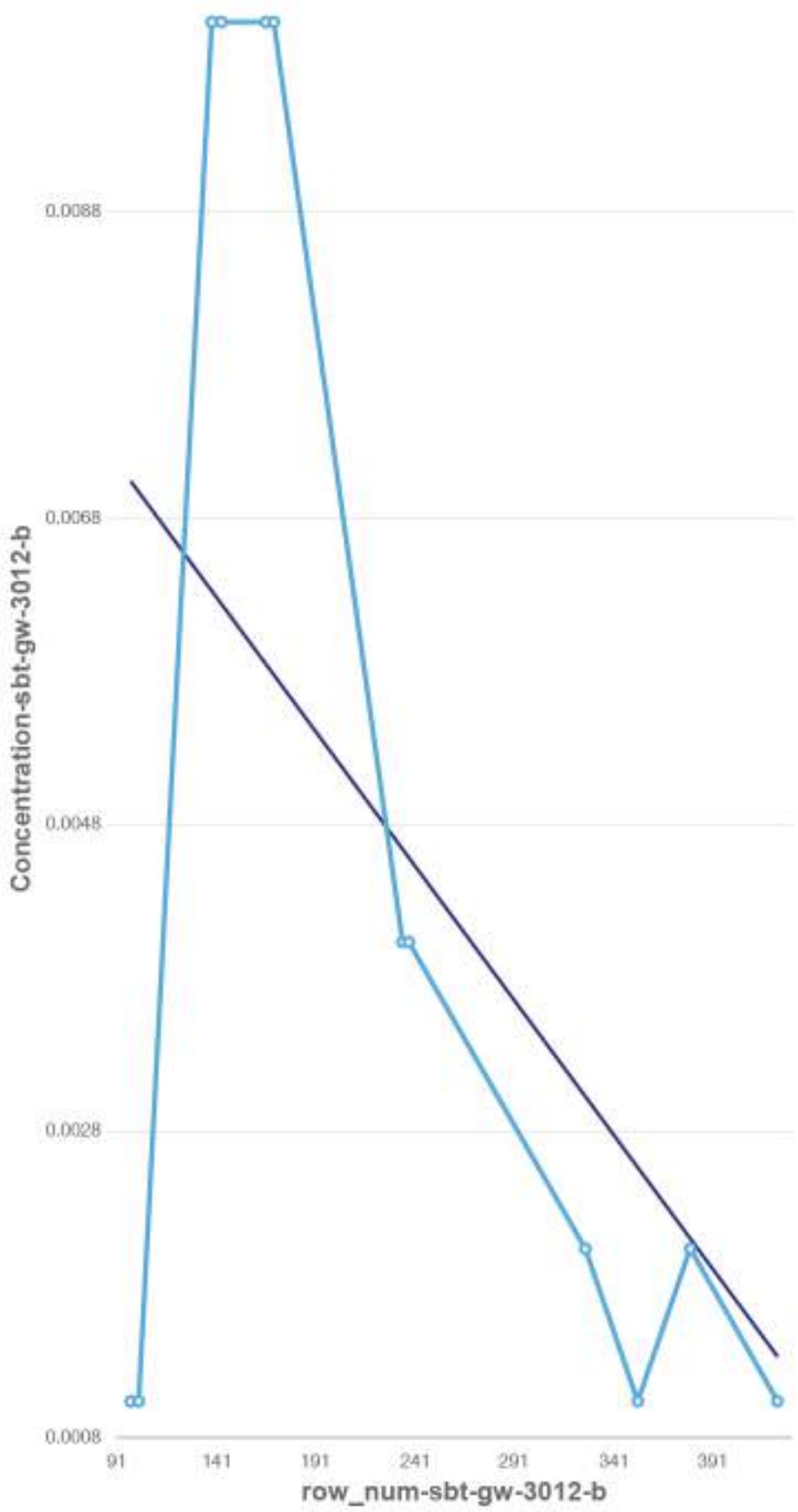


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.8323
Standardized Value of S	0.6506
M-K Test Value (S)	10
Tabulated p-value	0.2730
Approximate p-value	0.2576

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0032

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

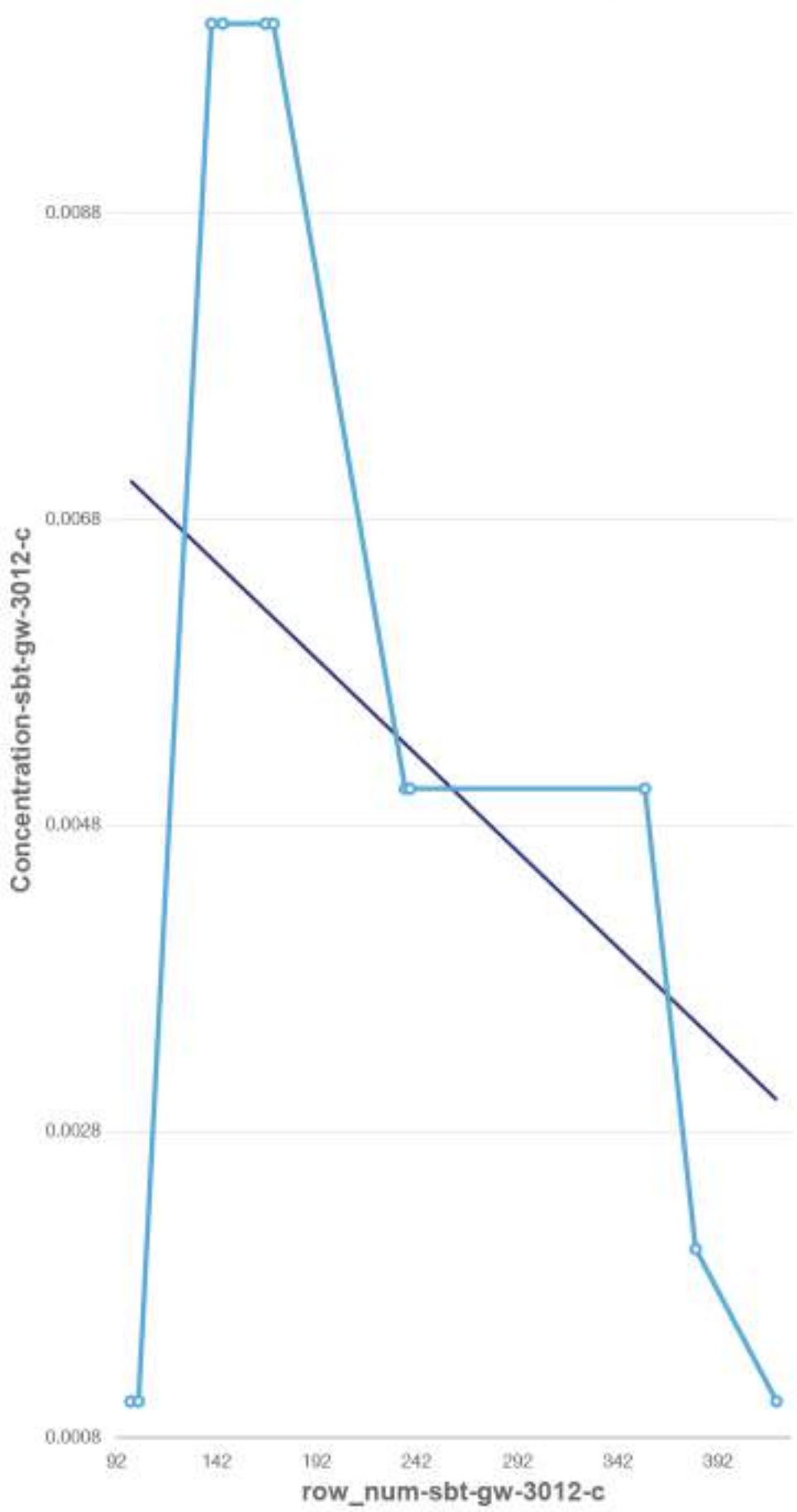


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.9044
Standardized Value of S	-1.2226
M-K Test Value (S)	-18
Tabulated p-value	0.1250
Approximate p-value	0.1107

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0087

Insufficient statistical evidence of a significant trend at the specified level of significance.

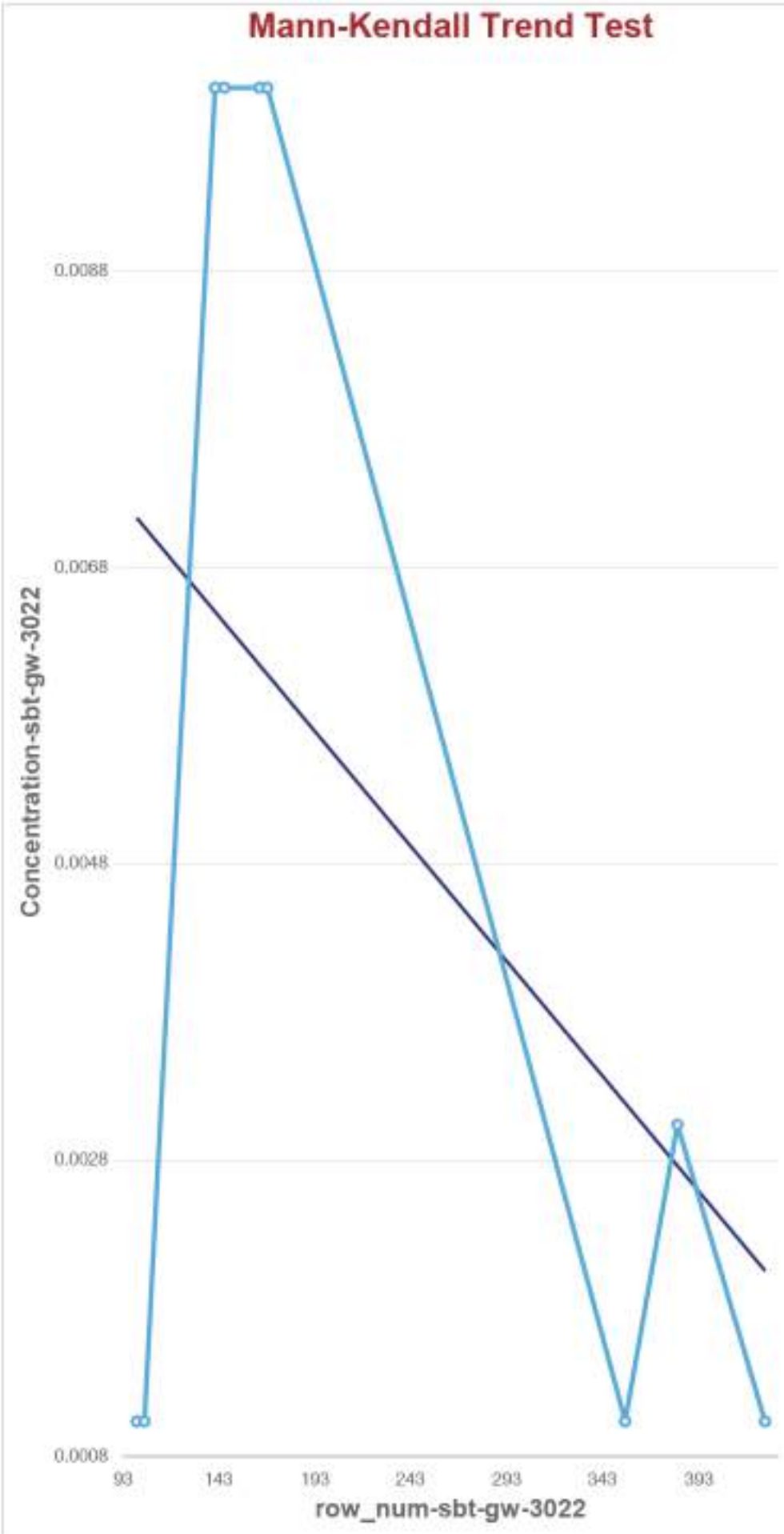
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.2066
Standardized Value of S	-0.8192
M-K Test Value (S)	-11
Tabulated p-value	0.2230
Approximate p-value	0.2063

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0083

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

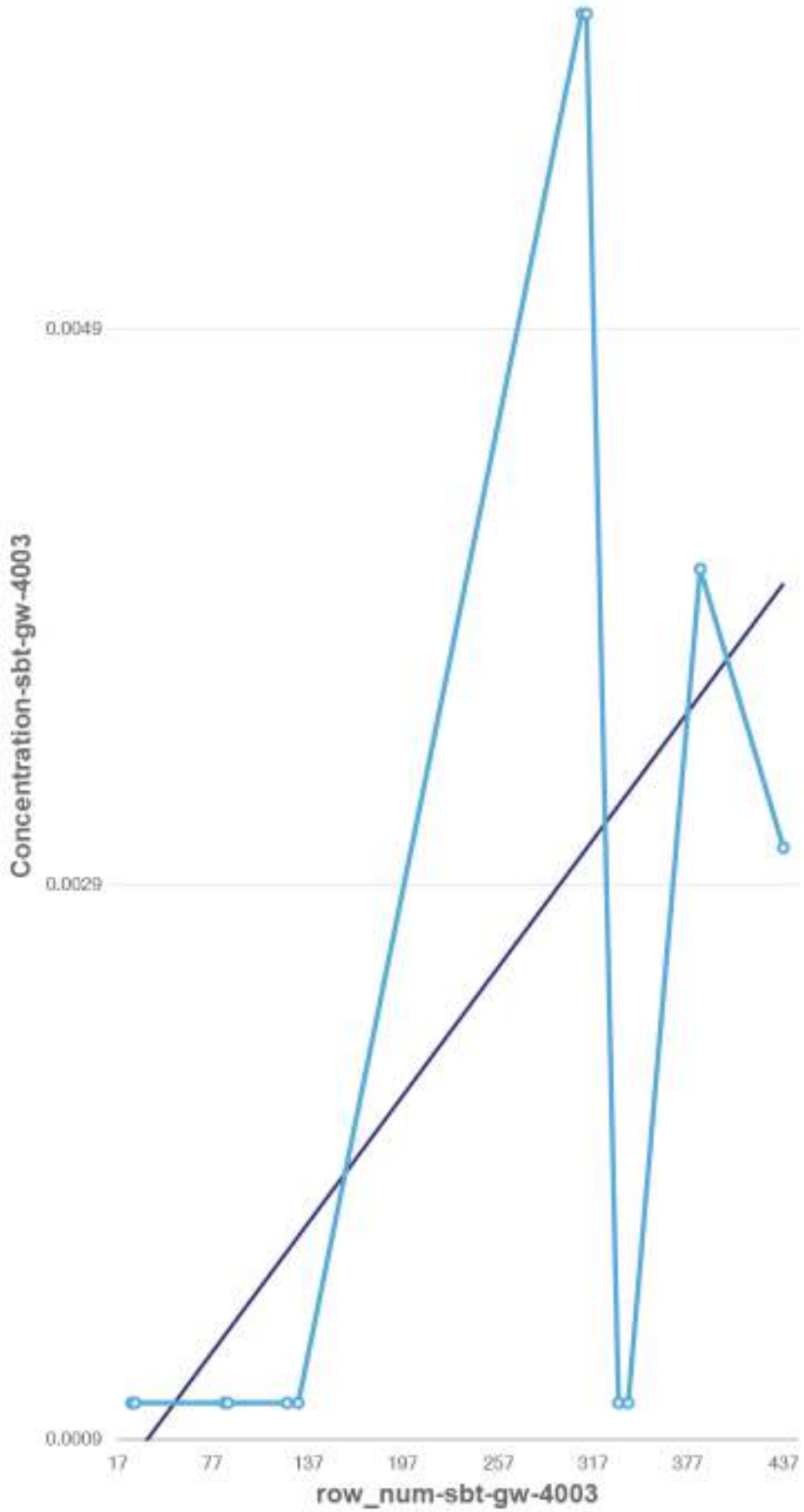
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.6410
Standardized Value of S	-0.1157
M-K Test Value (S)	-2
Tabulated p-value	0.4600
Approximate p-value	0.4539

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0086

Insufficient statistical evidence of a significant trend at the specified level of significance.

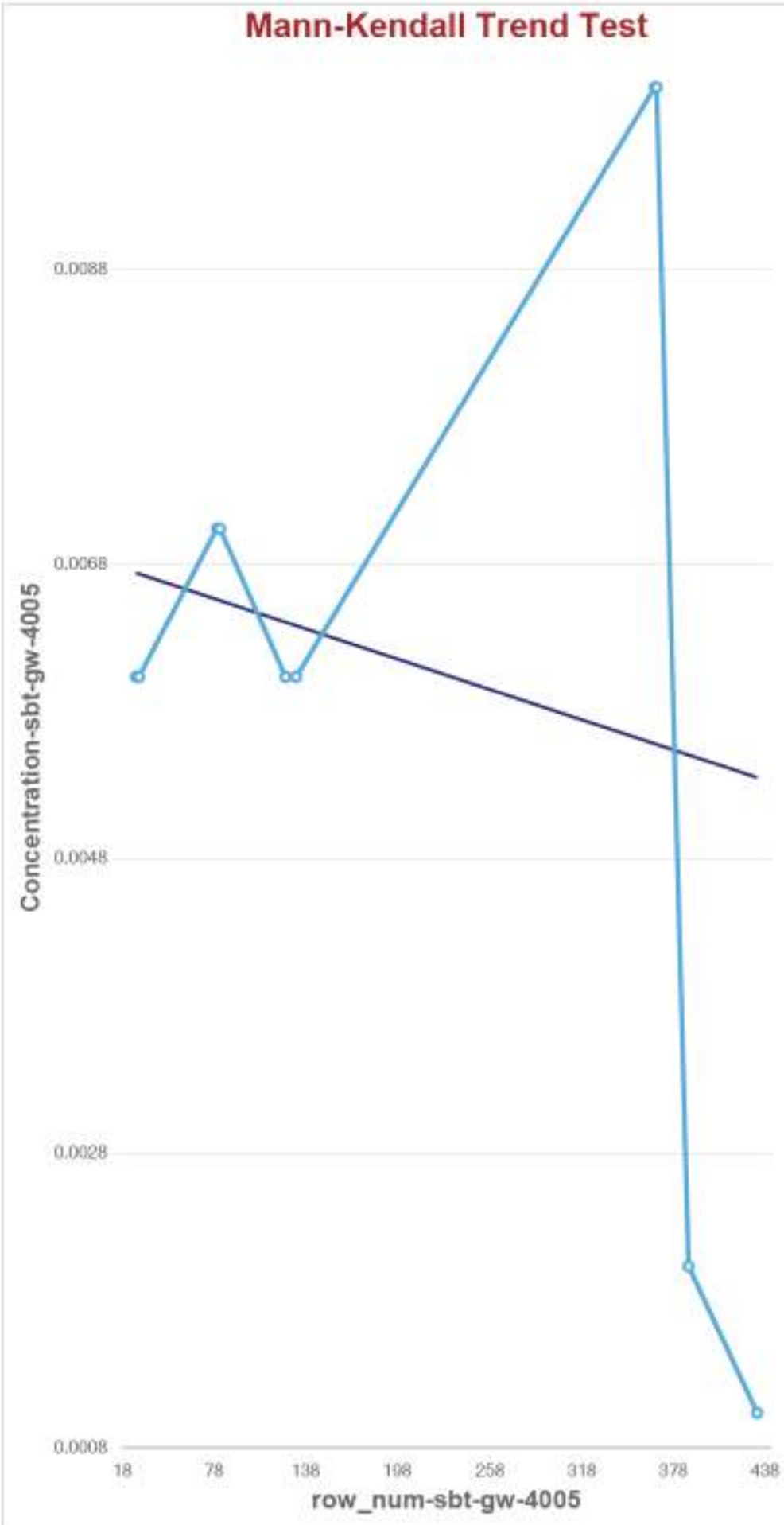
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.0968
Standardized Value of S	1.4880
M-K Test Value (S)	19
Tabulated p-value	0.1250
Approximate p-value	0.0684

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0006

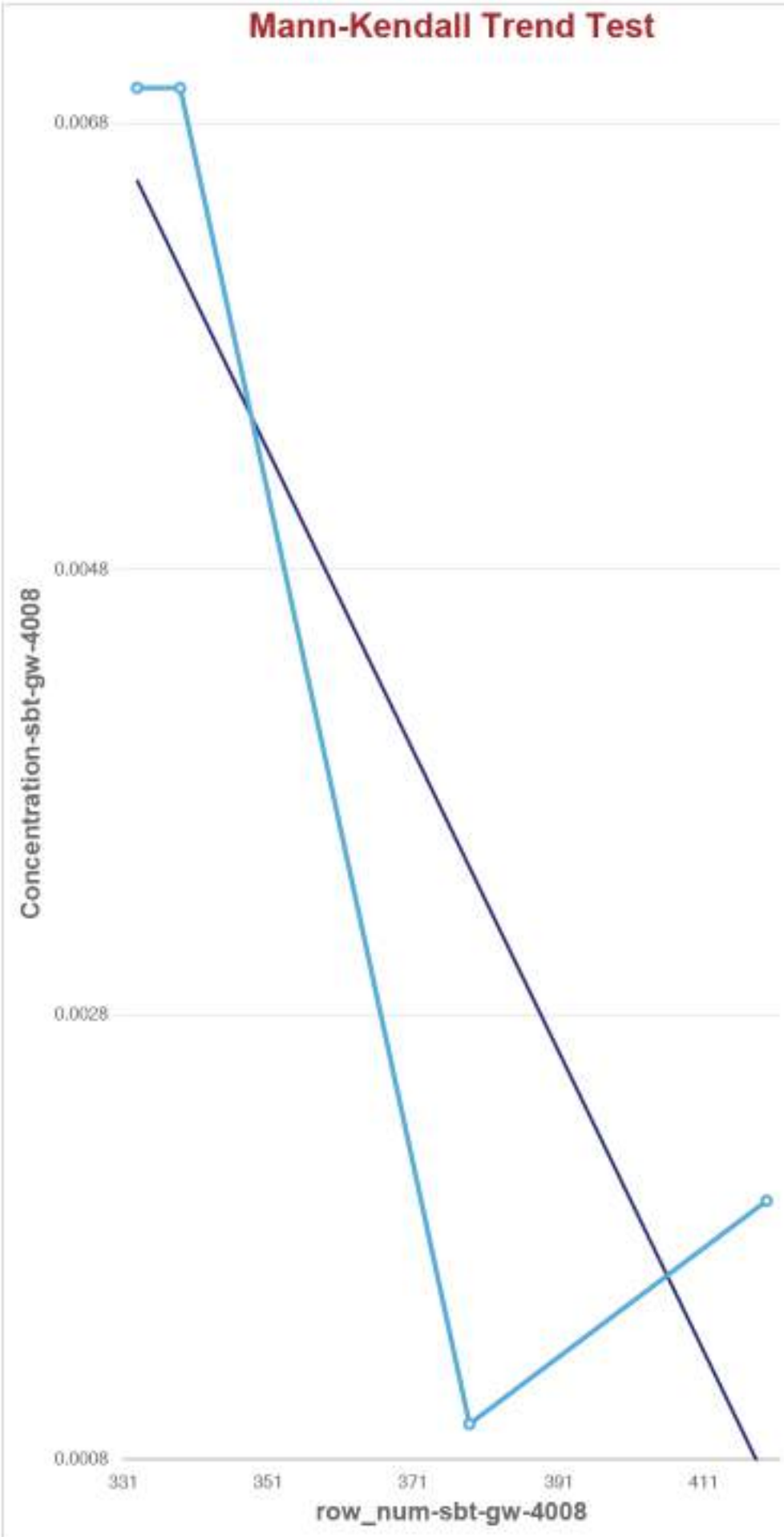
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6927
Standardized Value of S	-0.3741
M-K Test Value (S)	-5
Tabulated p-value	0.3640
Approximate p-value	0.3542

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0068

Insufficient statistical evidence of a significant trend at the specified level of significance.



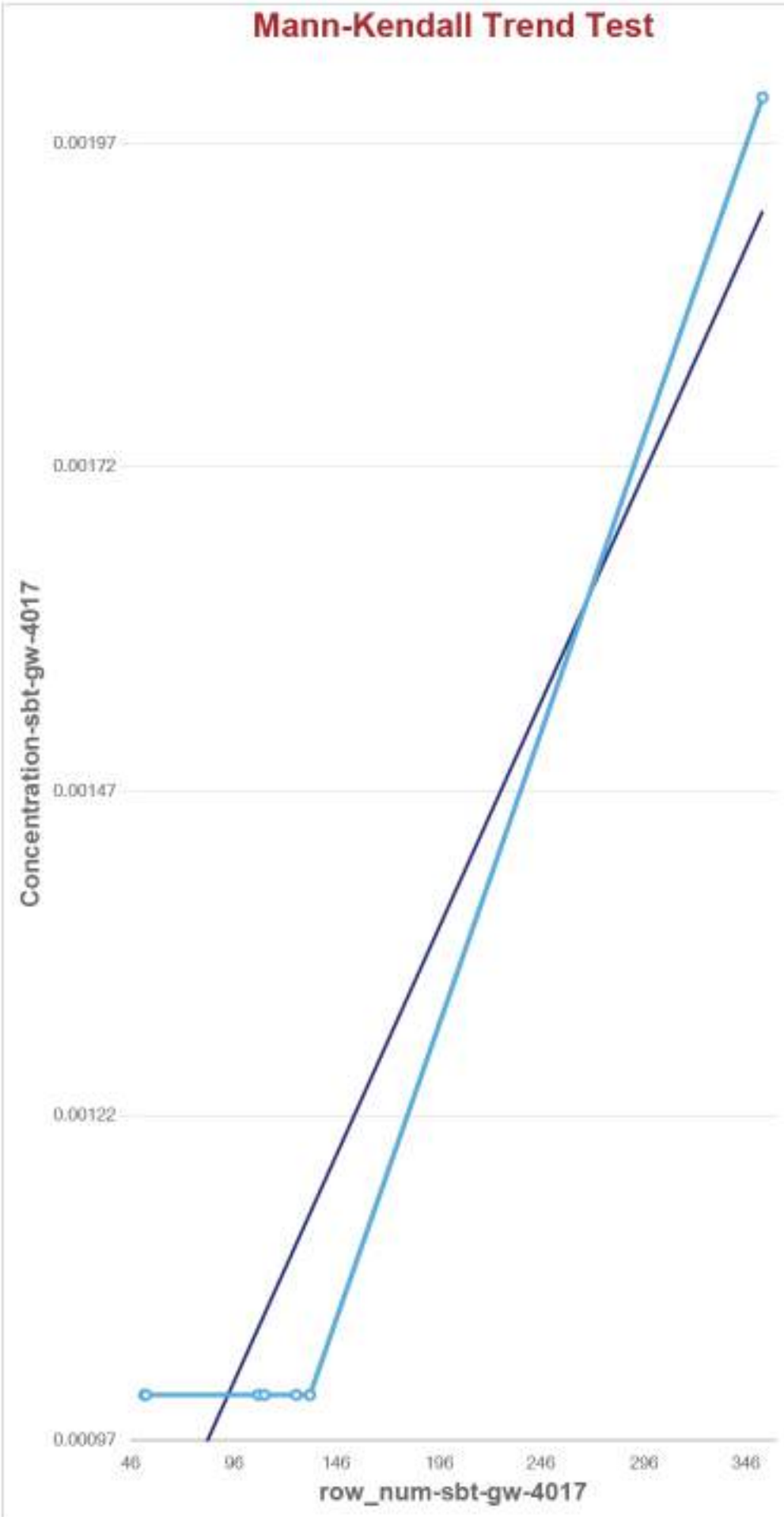
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-0.7223
M-K Test Value (S)	-3
Tabulated p-value	0.3750
Approximate p-value	0.2351

OLS Regression Line (Blue)

OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0290

Insufficient statistical evidence of a significant trend at the specified level of significance.

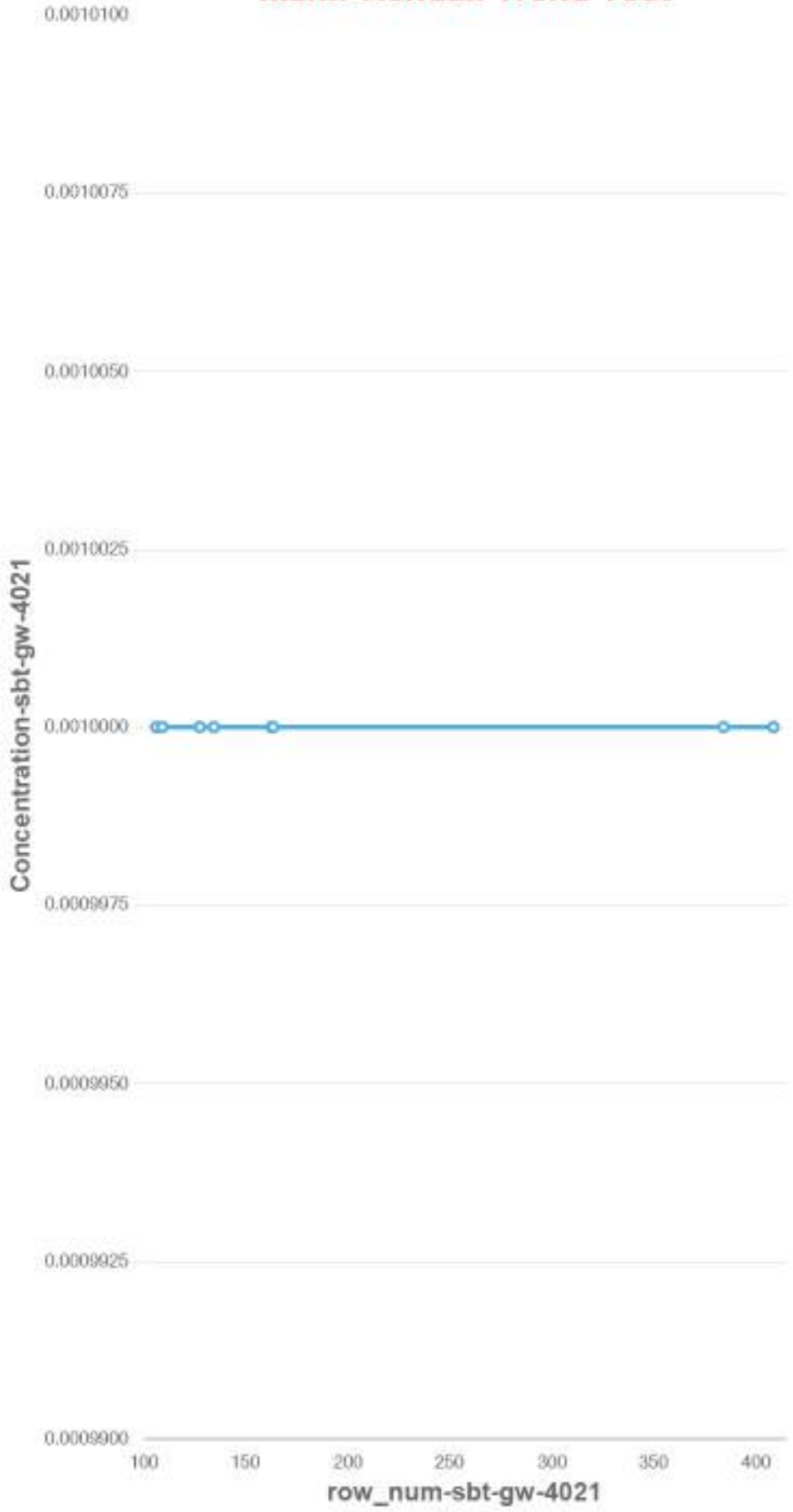


Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.0000
Standardized Value of S	1.2500
M-K Test Value (S)	6
Tabulated p-value	0.1910
Approximate p-value	0.1056

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0007

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

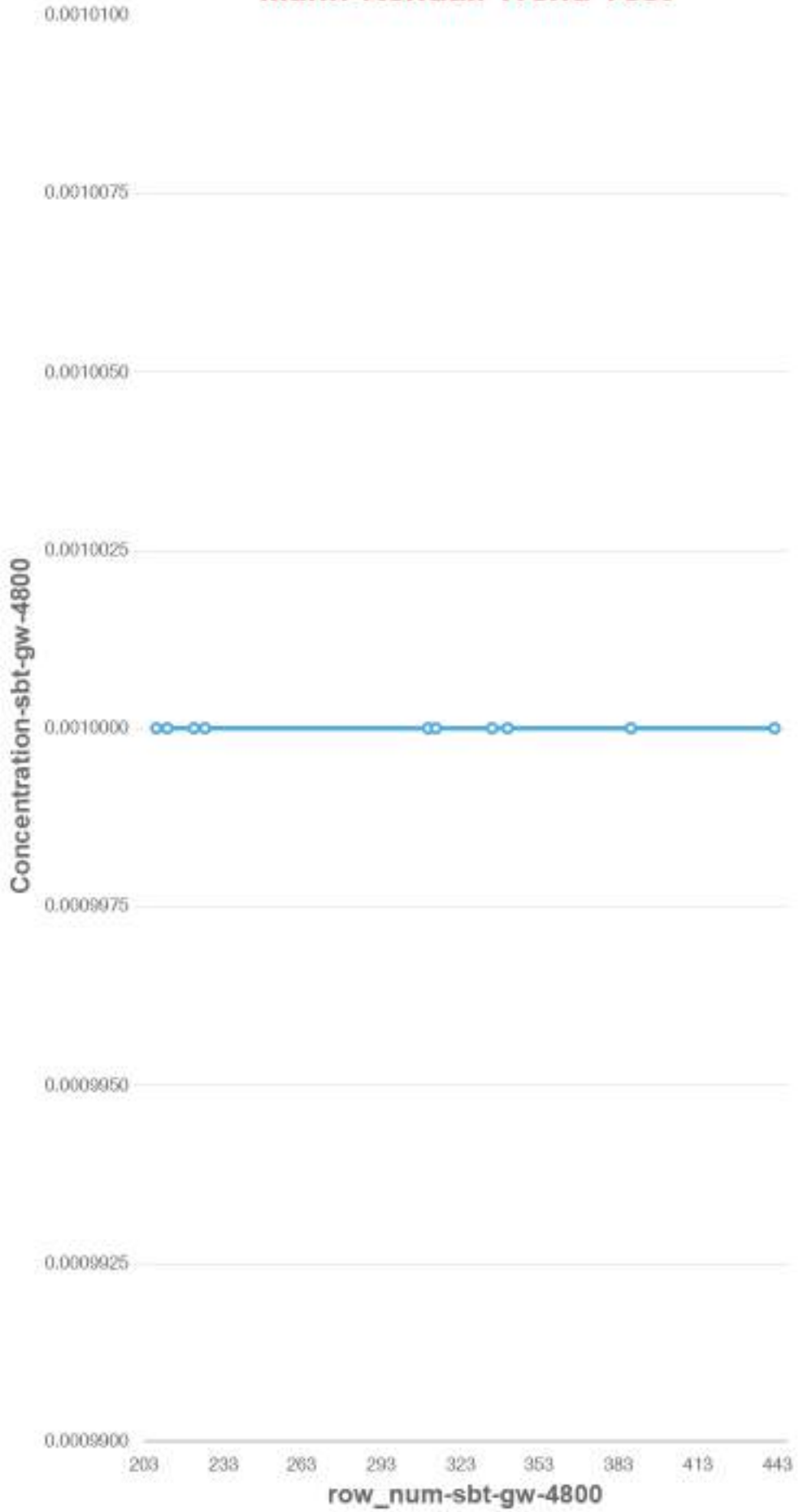


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0010

Insufficient statistical evidence of a significant trend at the specified level of significance.

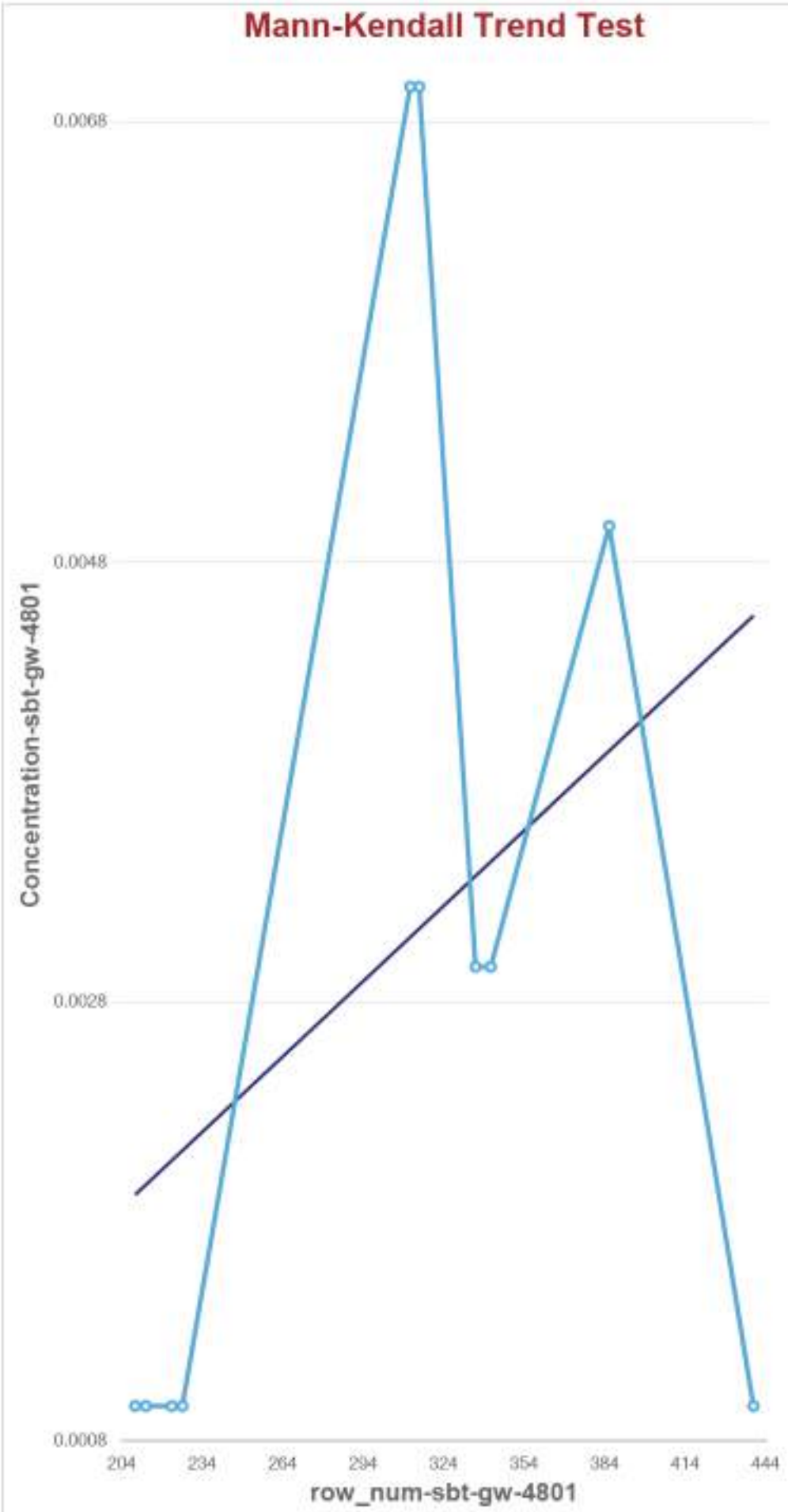
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0010

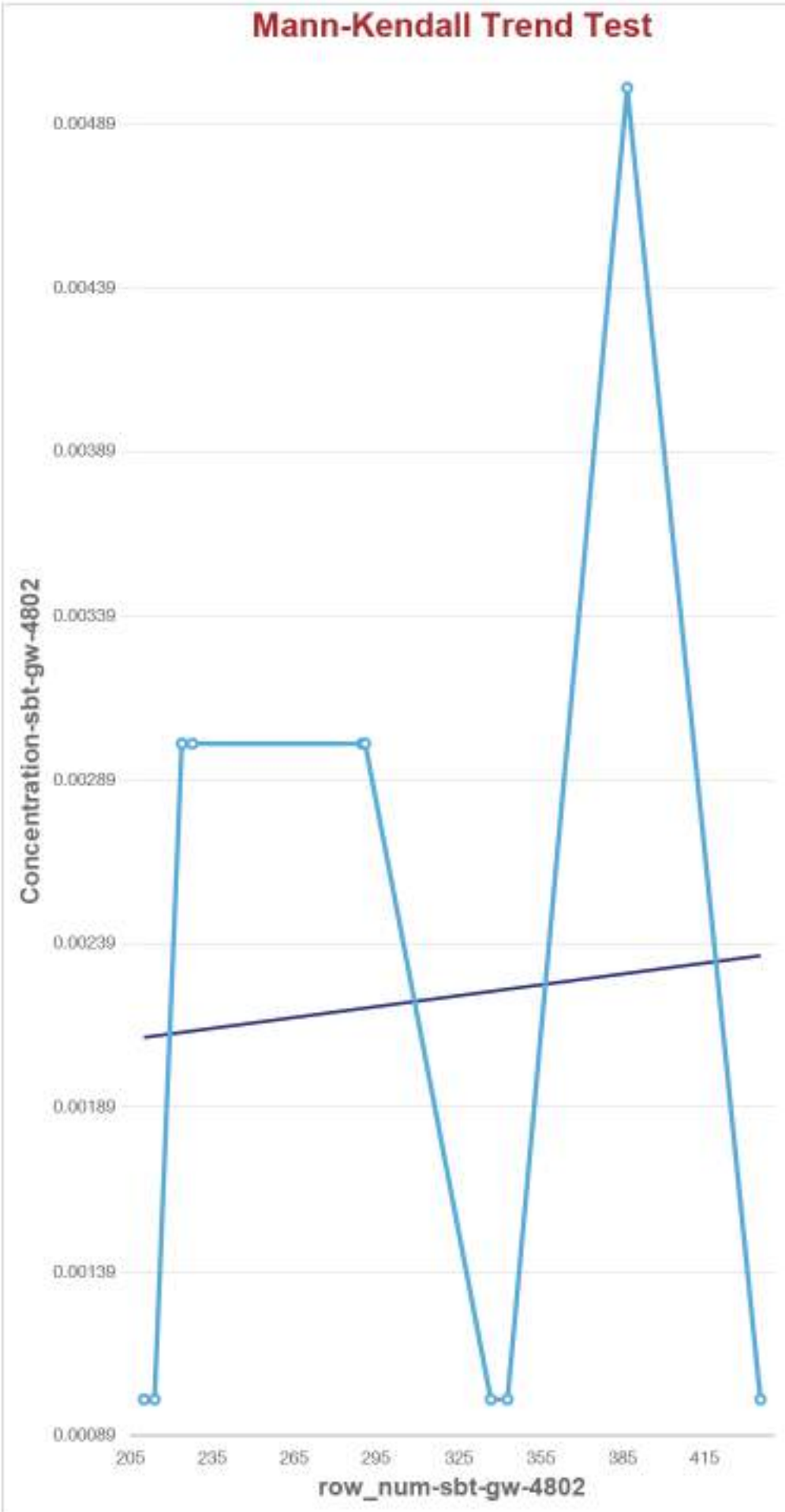
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.3118
Standardized Value of S	0.9698
M-K Test Value (S)	11
Tabulated p-value	0.1900
Approximate p-value	0.1661

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	-0.0004

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

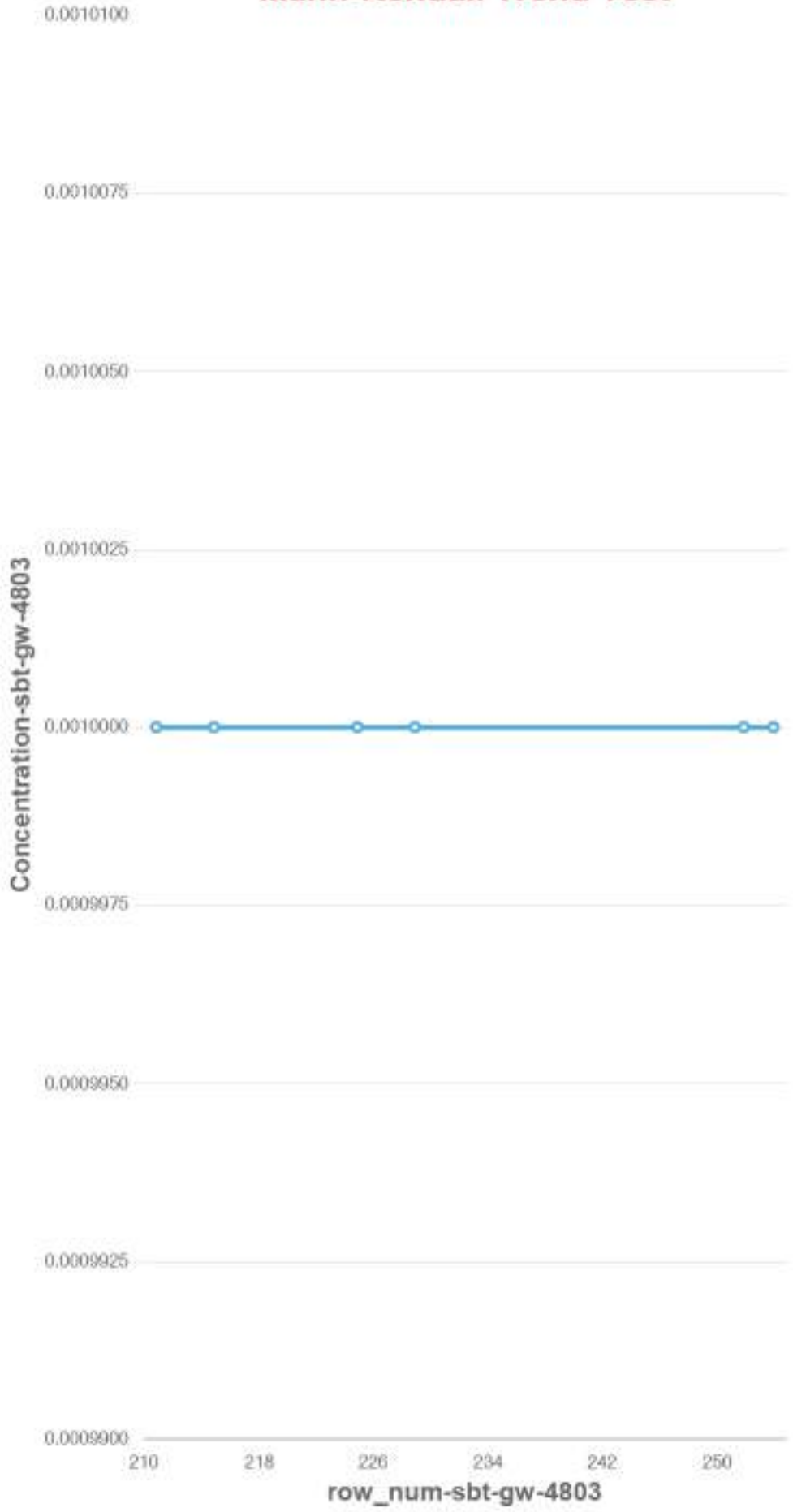
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.9833
Standardized Value of S	0.2003
M-K Test Value (S)	3
Tabulated p-value	0.4310
Approximate p-value	0.4206

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0019

Insufficient statistical evidence of a significant trend at the specified level of significance.

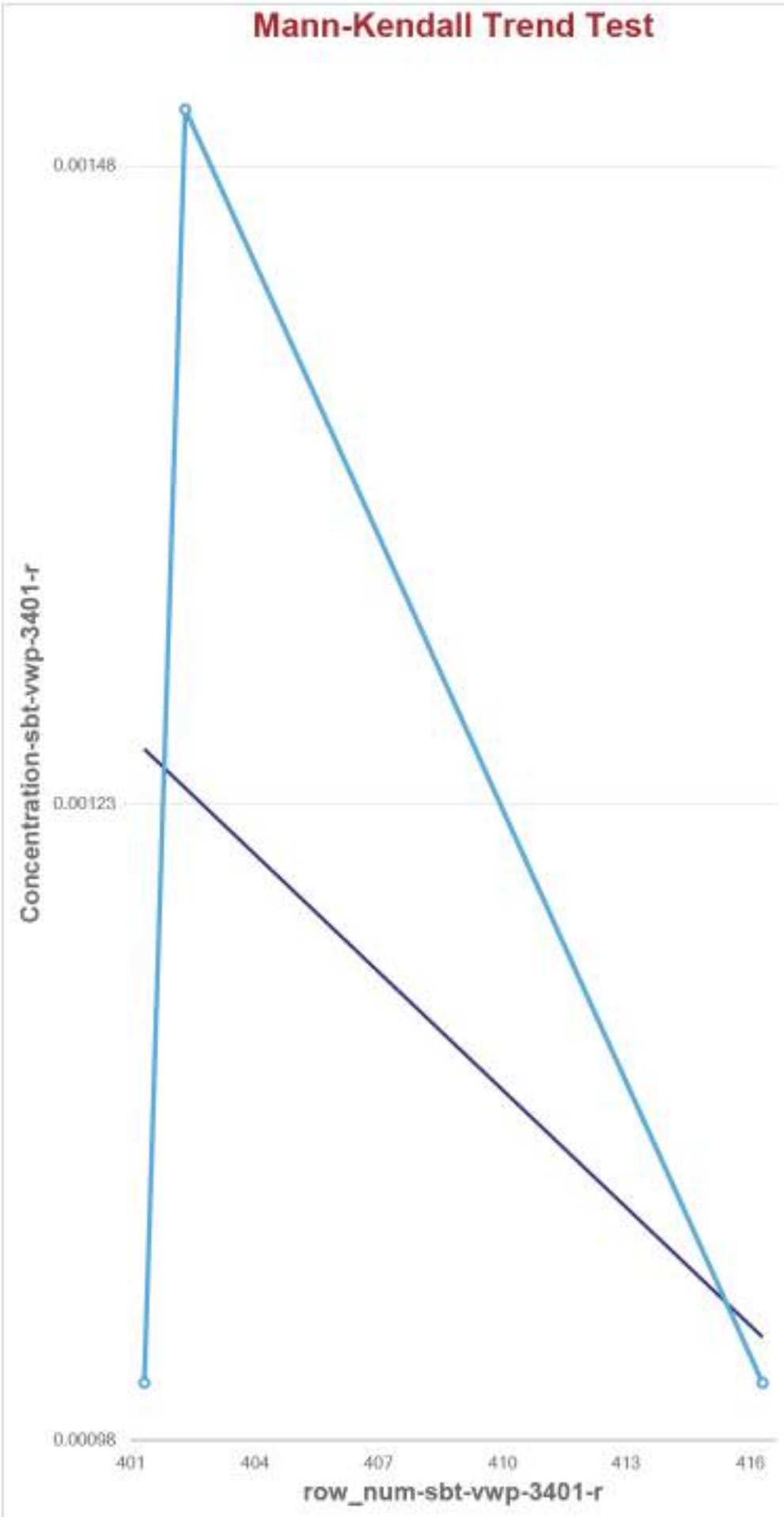
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0010

Insufficient statistical evidence of a significant trend at the specified level of significance.

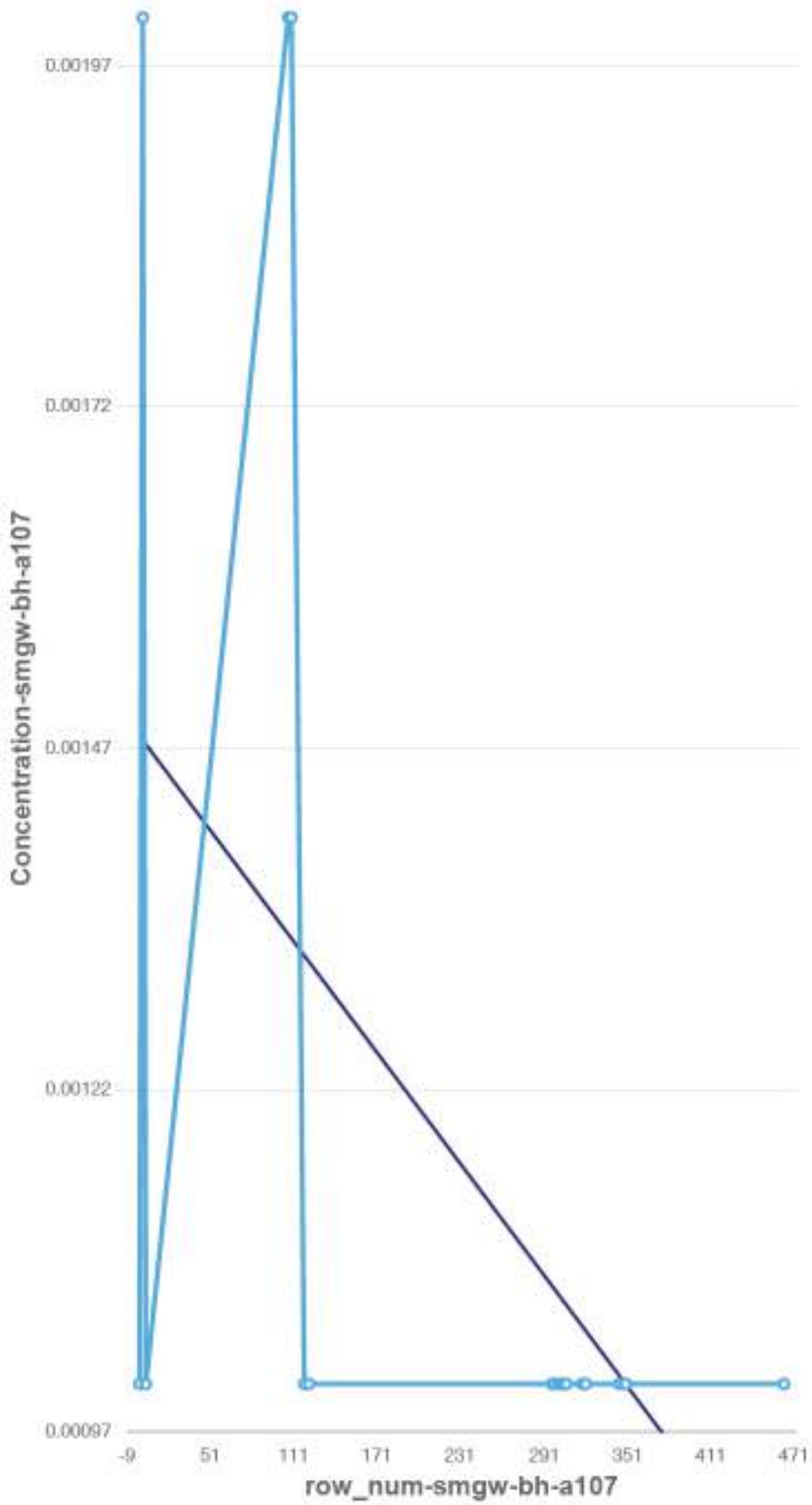


Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0074

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

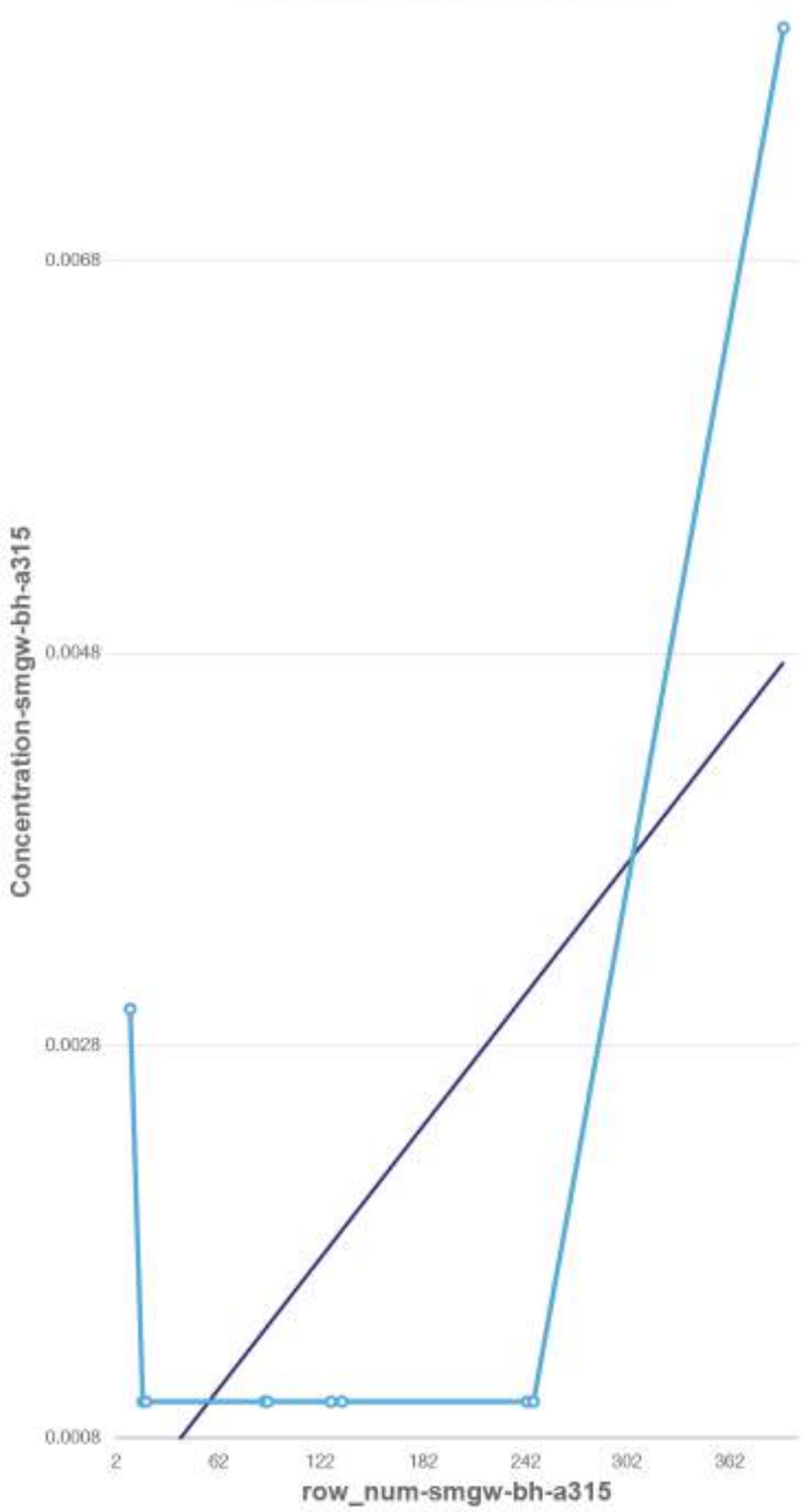


Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.8944
Standardized Value of S	-2.1170
M-K Test Value (S)	-41
Tabulated p-value	0.1040
Approximate p-value	0.0171

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0015

Insufficient statistical evidence of a significant trend at the specified level of significance.

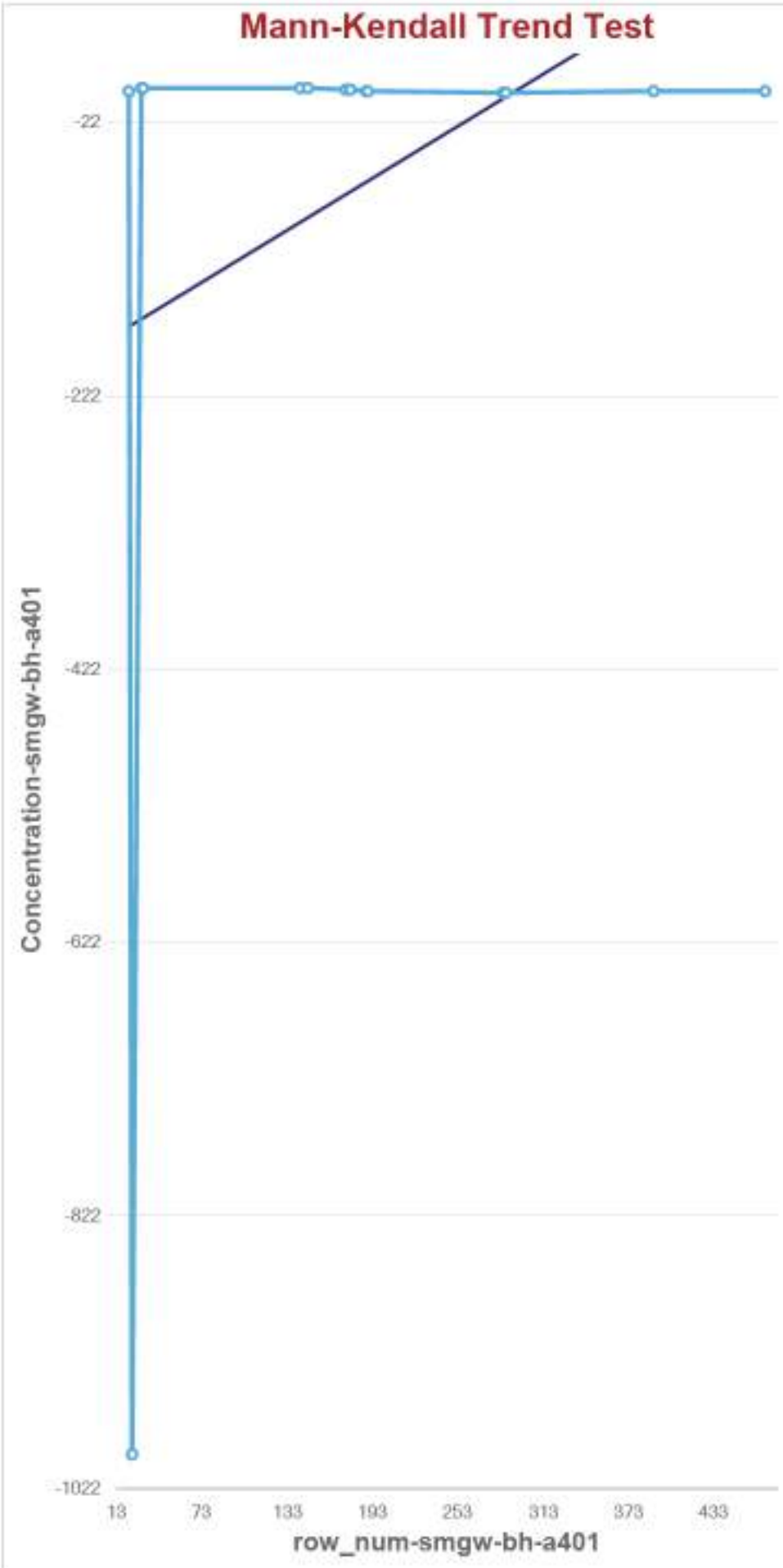
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.7244
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5000
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0004

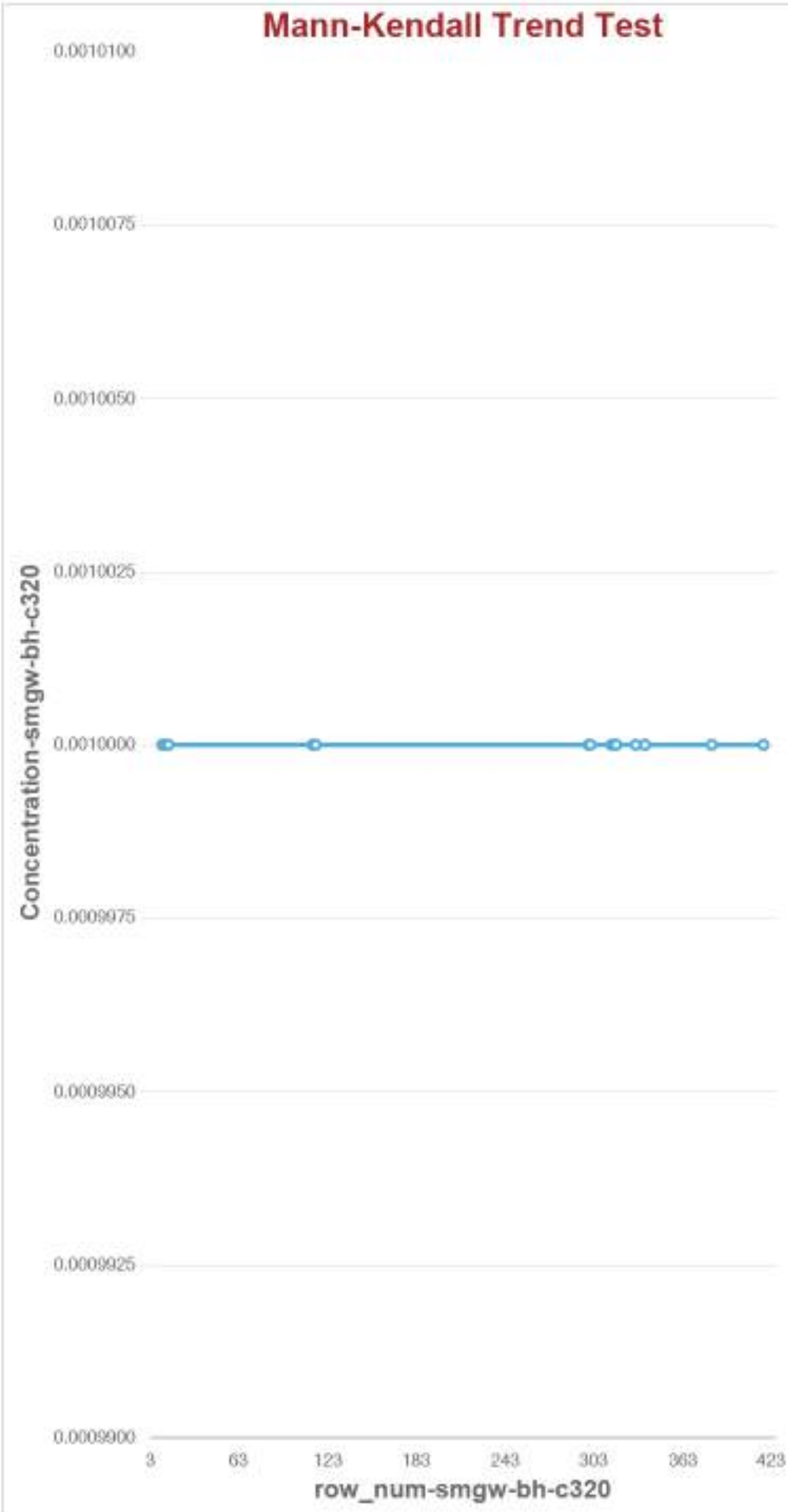
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1292
Standardized Value of S	-1.3790
M-K Test Value (S)	-26
Tabulated p-value	0.0790
Approximate p-value	0.0839

OLS Regression Line (Blue)	
OLS Regression Slope	0.6378
OLS Regression Interoept	-186.1365

Insufficient statistical evidence of a significant trend at the specified level of significance.

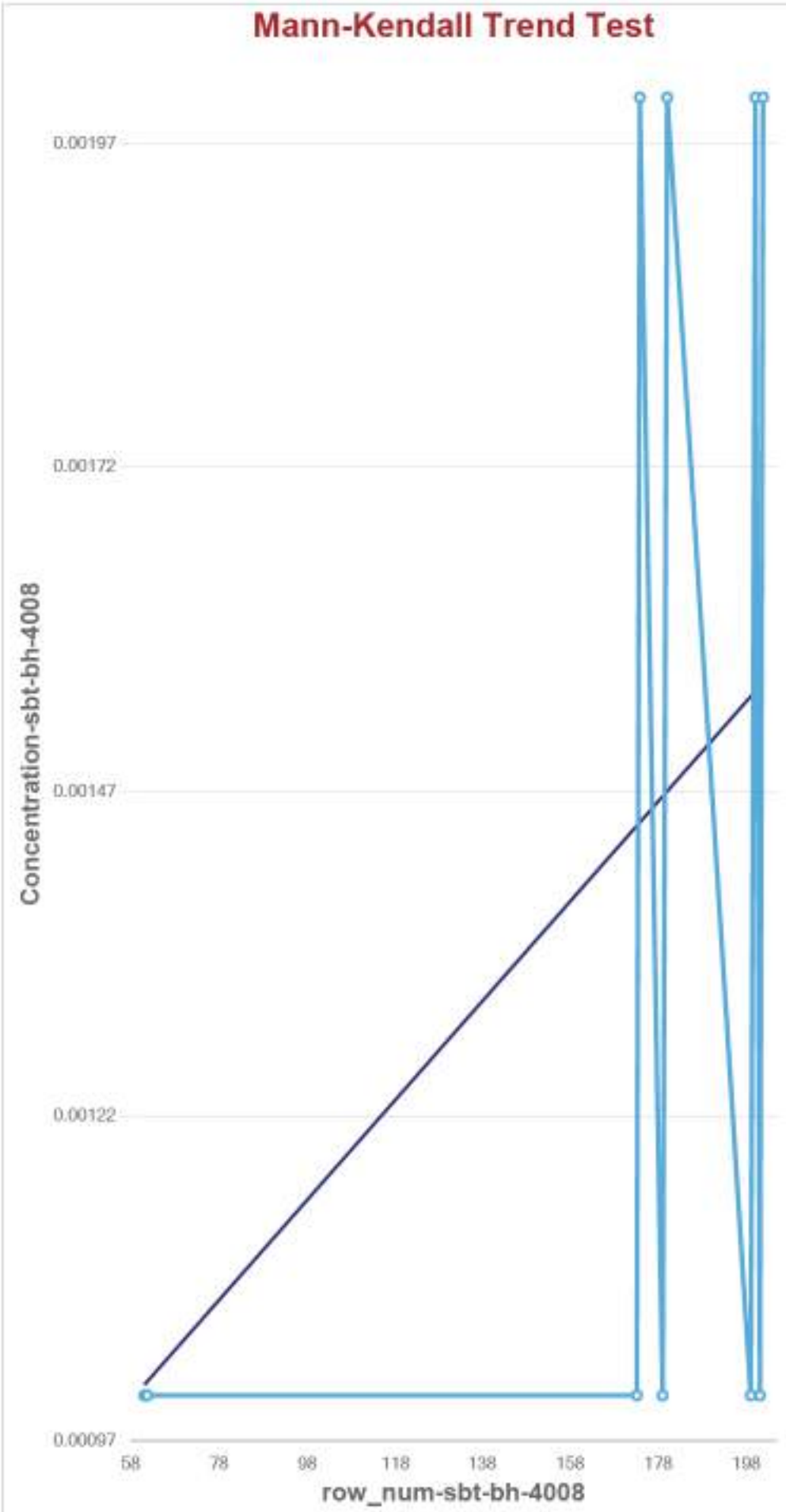


Mann-Kendall Trend Analysis	
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0010

Insufficient statistical evidence of a significant trend at the specified level of significance.

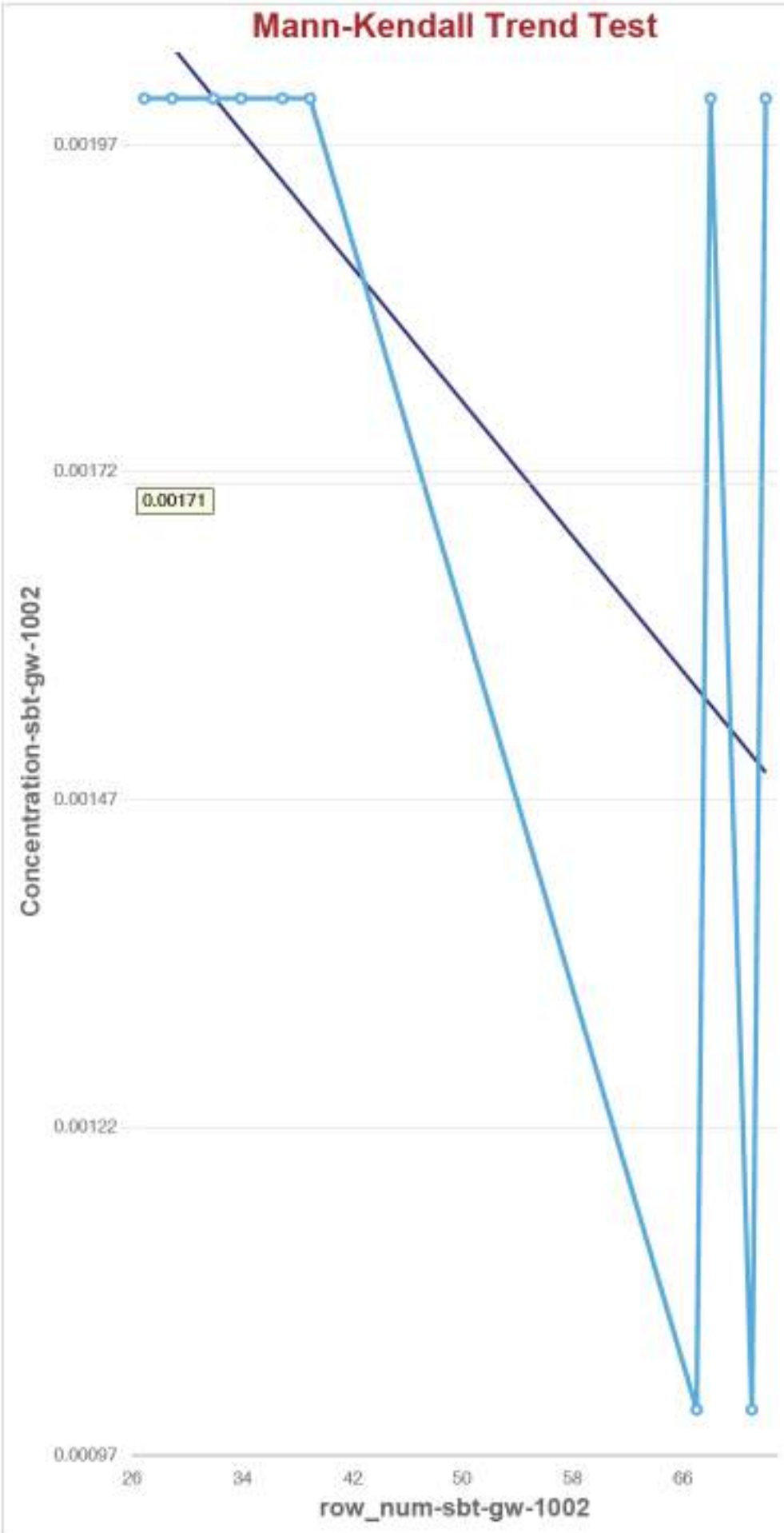
F.6 NAPHTHALENE



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	1.1726
M-K Test Value (S)	12
Tabulated p-value	0.1460
Approximate p-value	0.1205

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0008

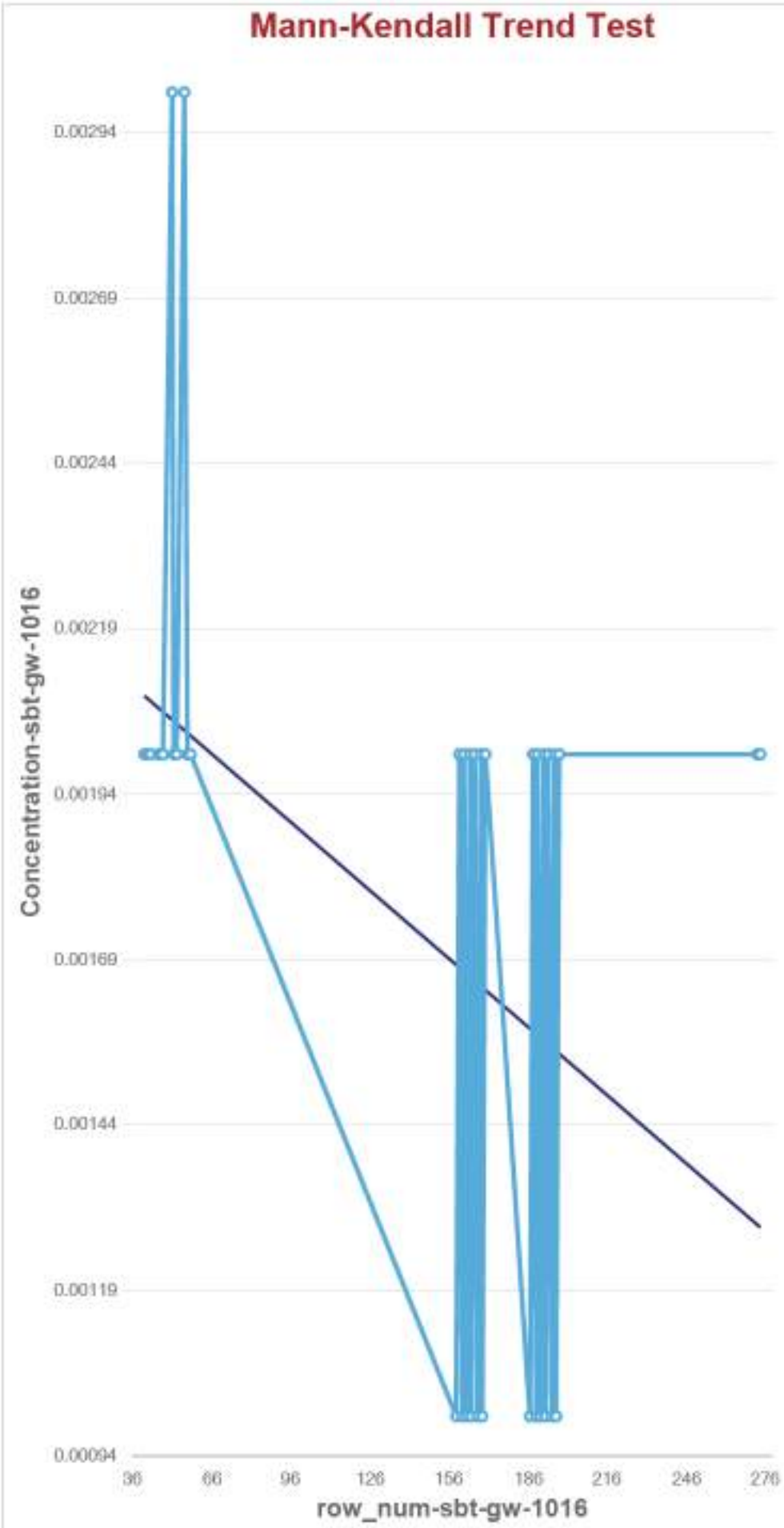
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.6594
Standardized Value of S	-1.1750
M-K Test Value (S)	-10
Tabulated p-value	0.1900
Approximate p-value	0.1200

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0024

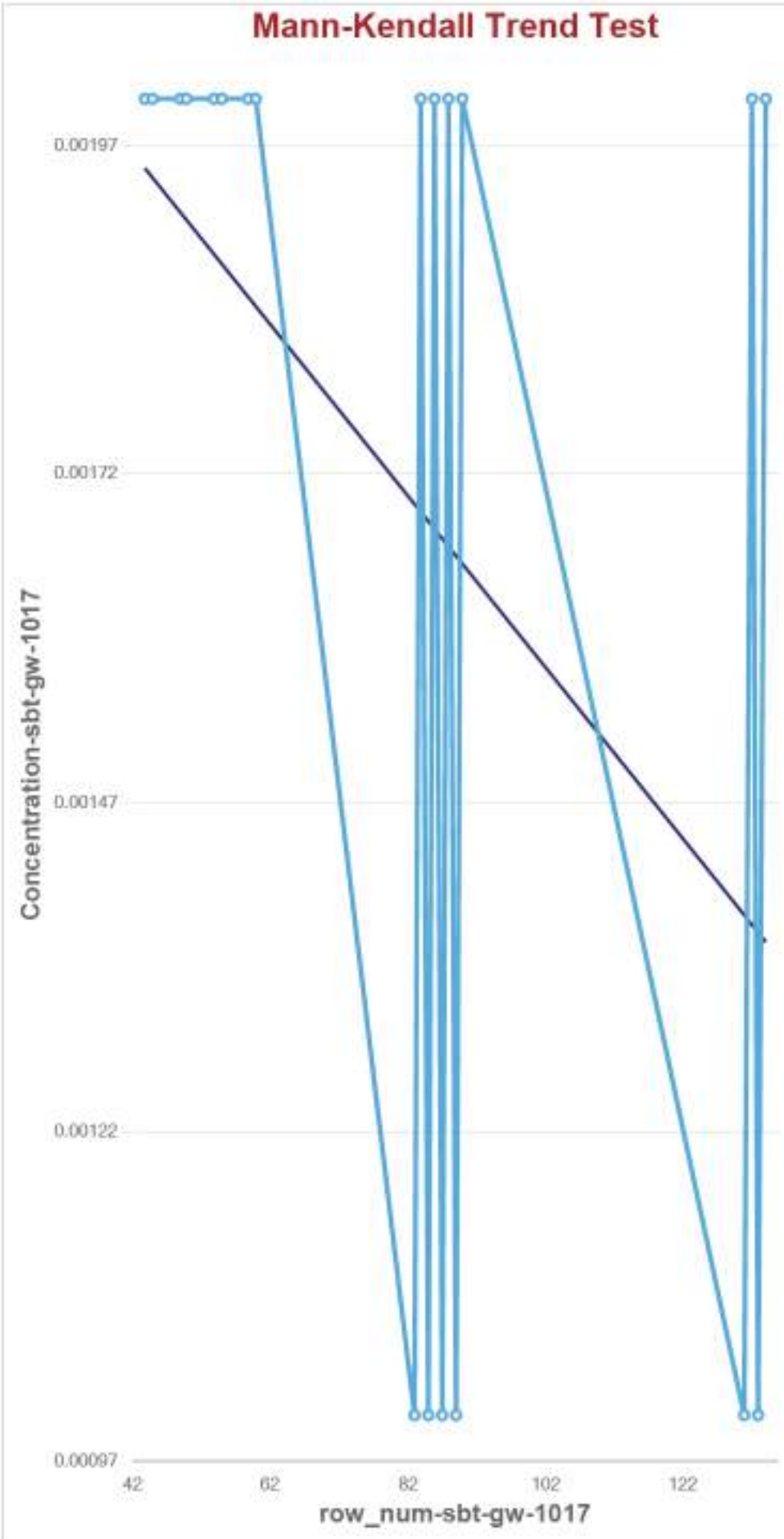
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	38
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	66.9925
Standardized Value of S	-1.8957
M-K Test Value (S)	-128
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0290

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

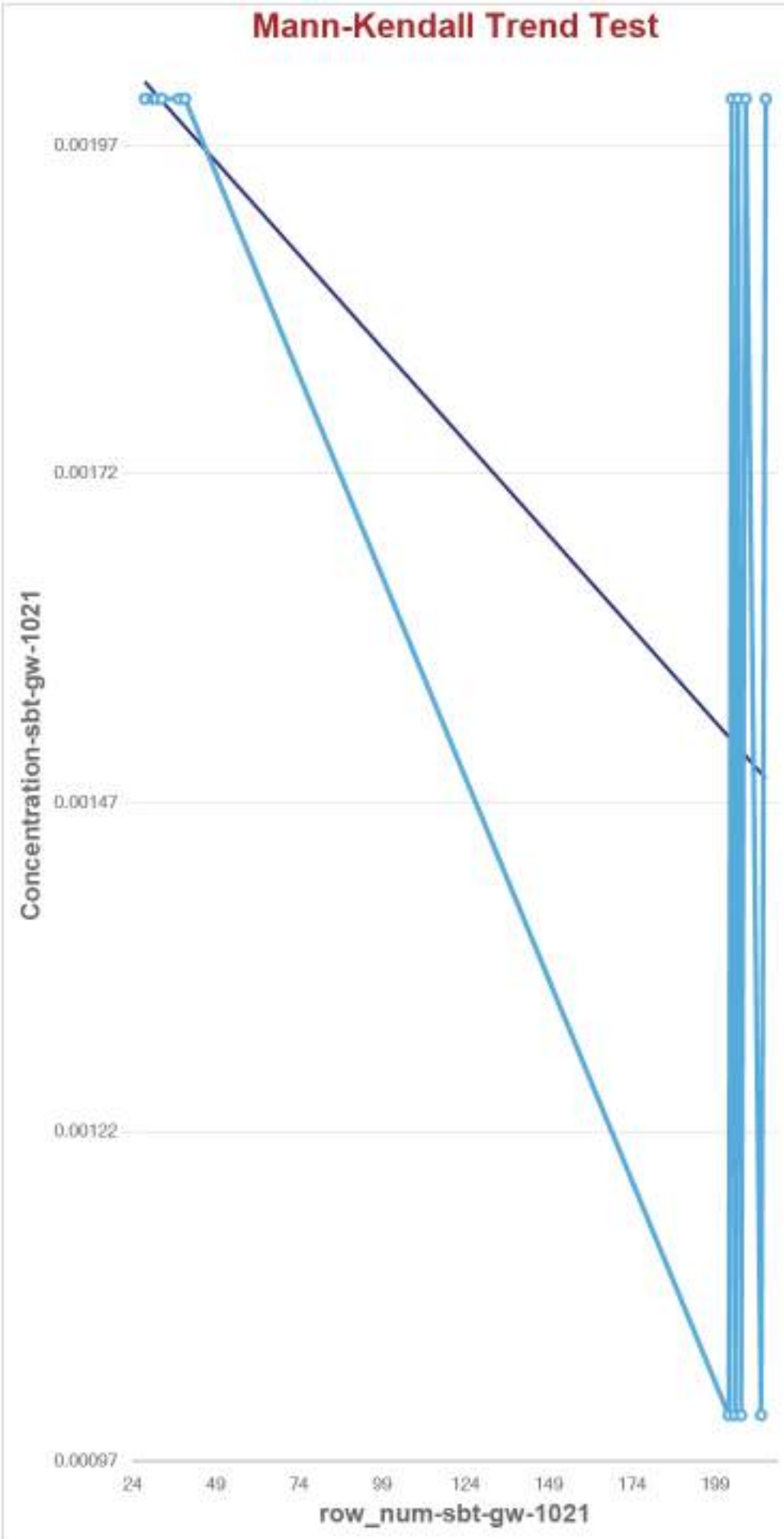
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	24.2487
Standardized Value of S	-1.6908
M-K Test Value (S)	-42
Tabulated p-value	0.0930
Approximate p-value	0.0454

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

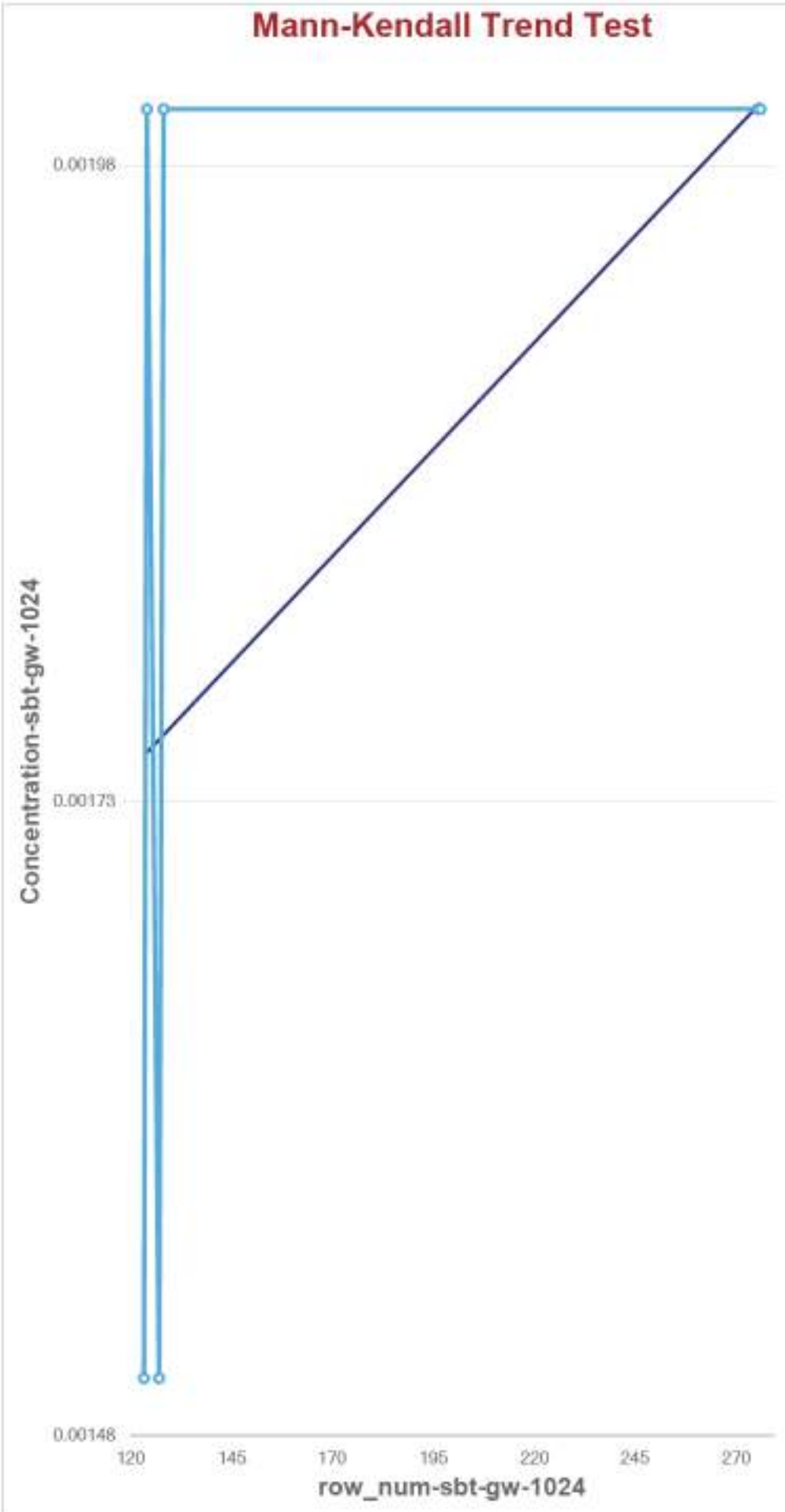
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.1421
Standardized Value of S	-1.3435
M-K Test Value (S)	-20
Tabulated p-value	0.1400
Approximate p-value	0.0896

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0021

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

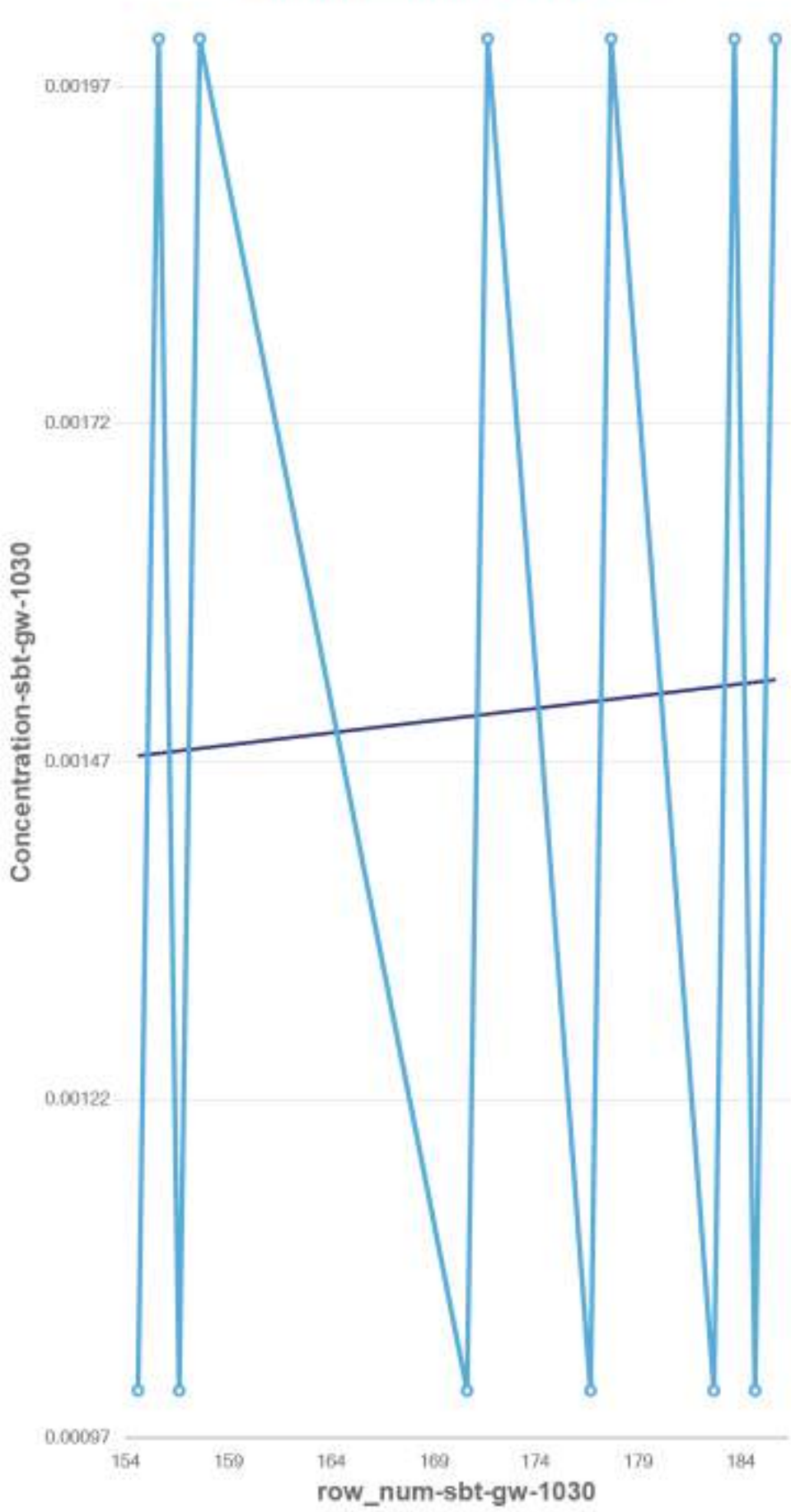
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.3205
Standardized Value of S	1.1573
M-K Test Value (S)	6
Tabulated p-value	0.1380
Approximate p-value	0.1236

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0015

Insufficient statistical evidence of a significant trend at the specified level of significance.

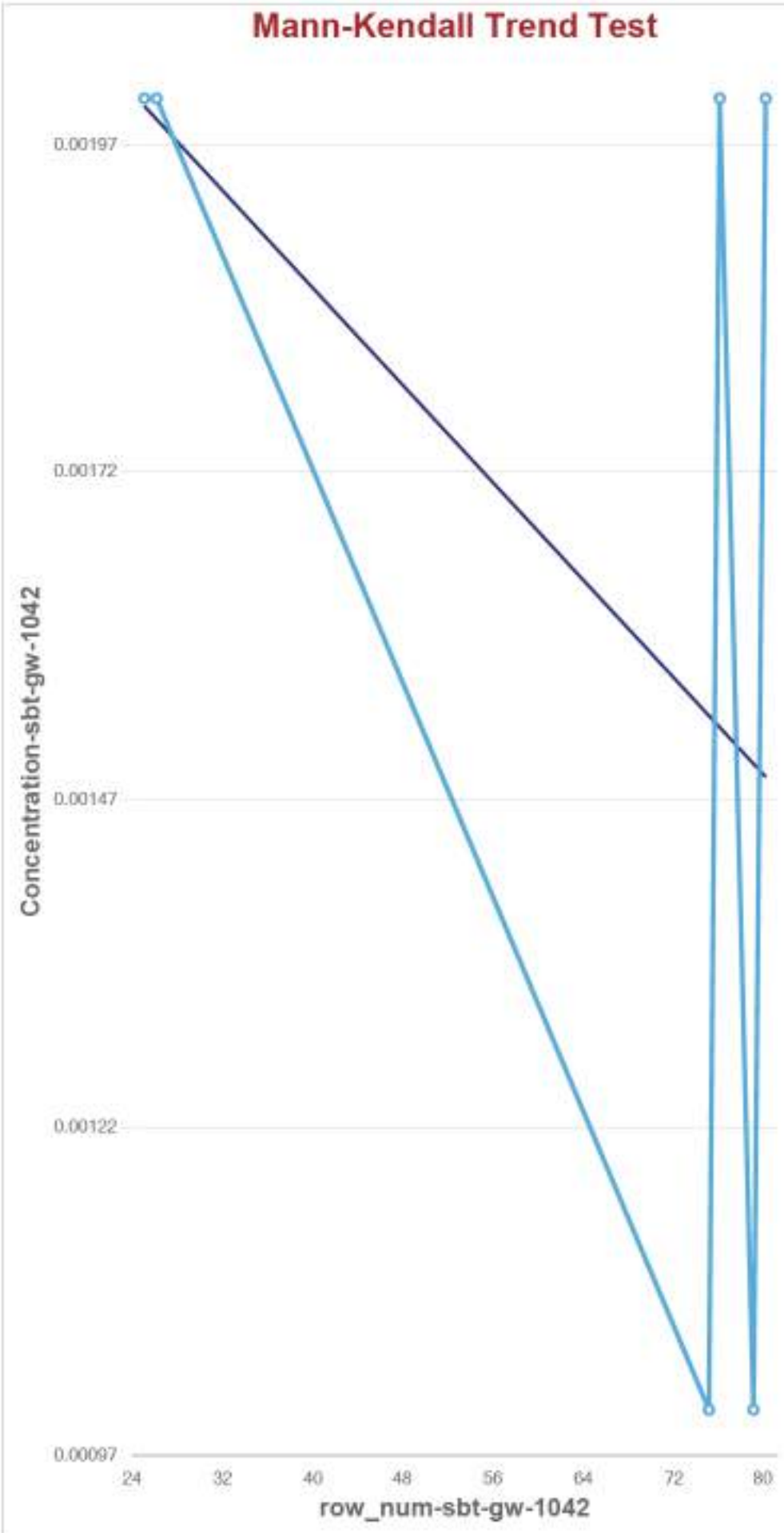
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.4900
Standardized Value of S	0.4003
M-K Test Value (S)	6
Tabulated p-value	0.3690
Approximate p-value	0.3445

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

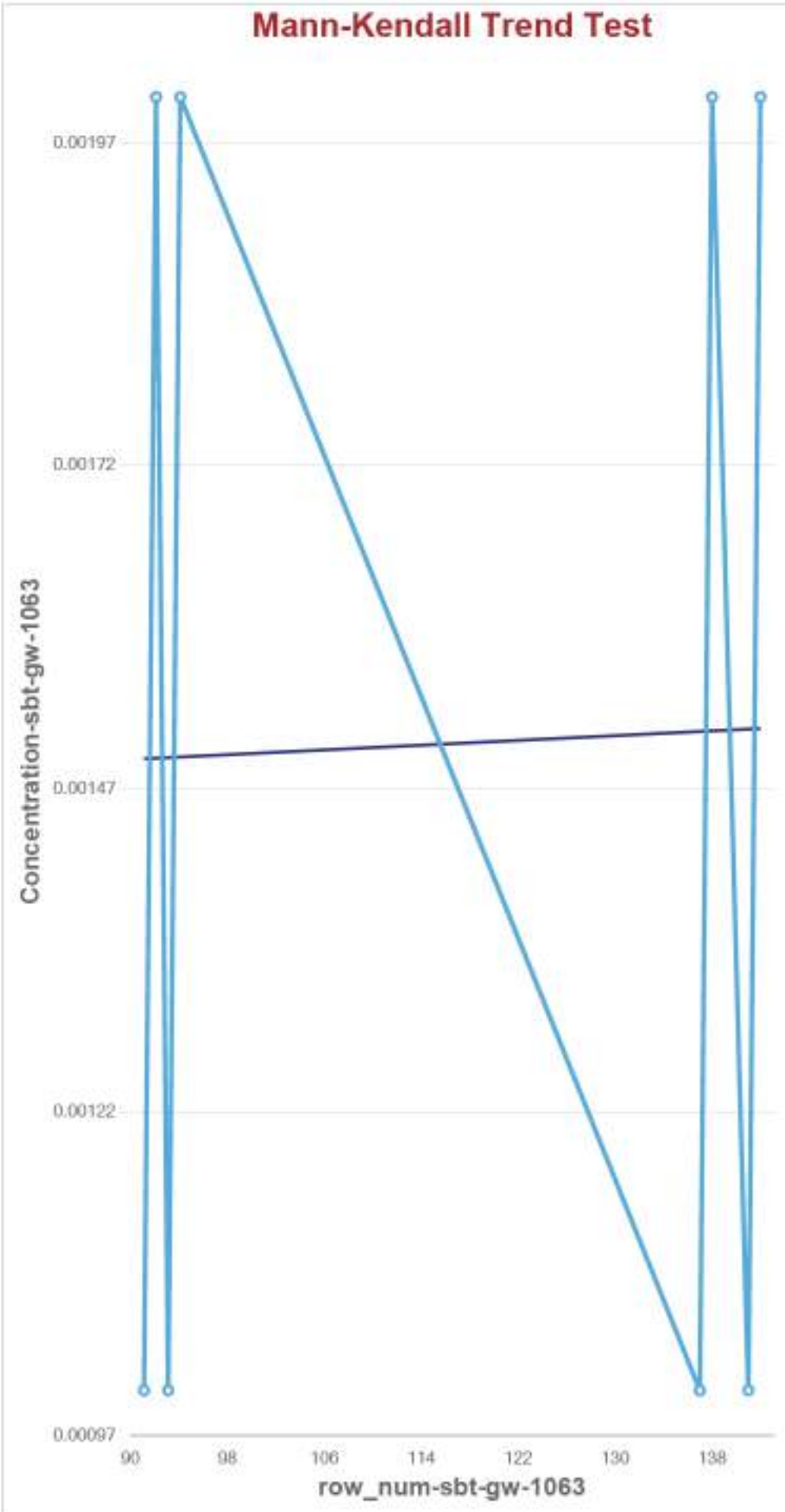
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.3205
Standardized Value of S	-0.2315
M-K Test Value (S)	-2
Tabulated p-value	0.3600
Approximate p-value	0.4085

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

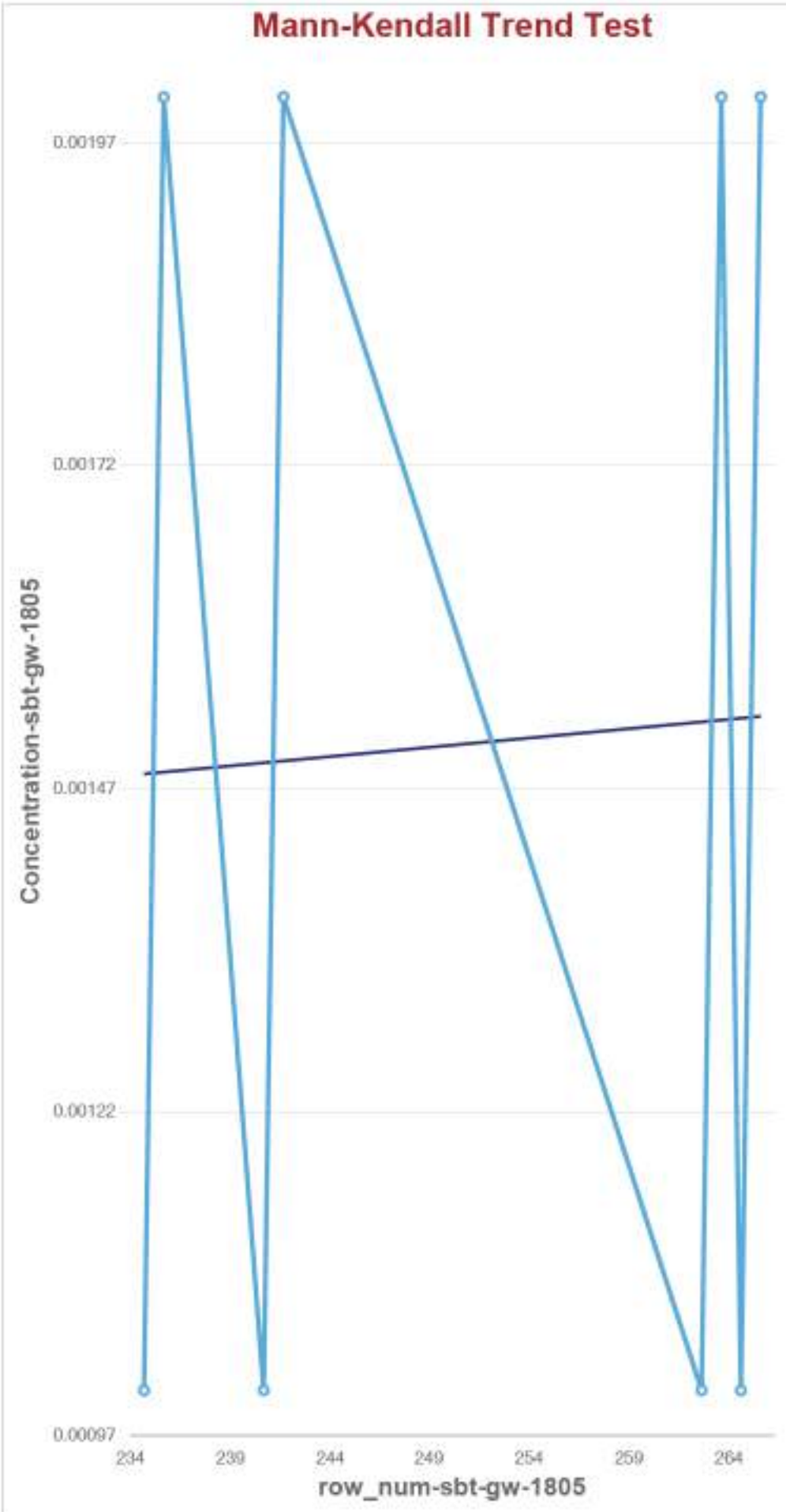
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0014

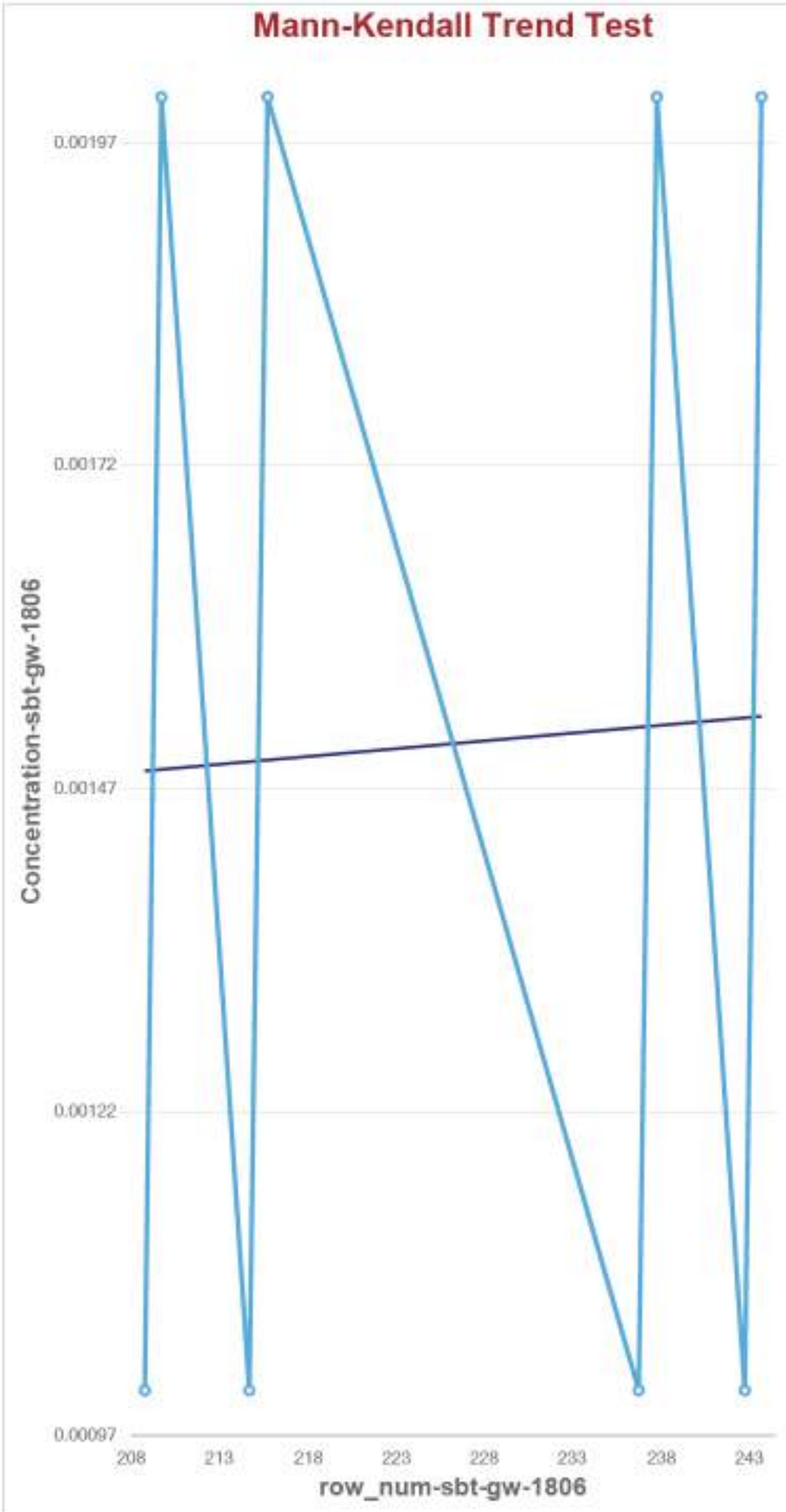
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0011

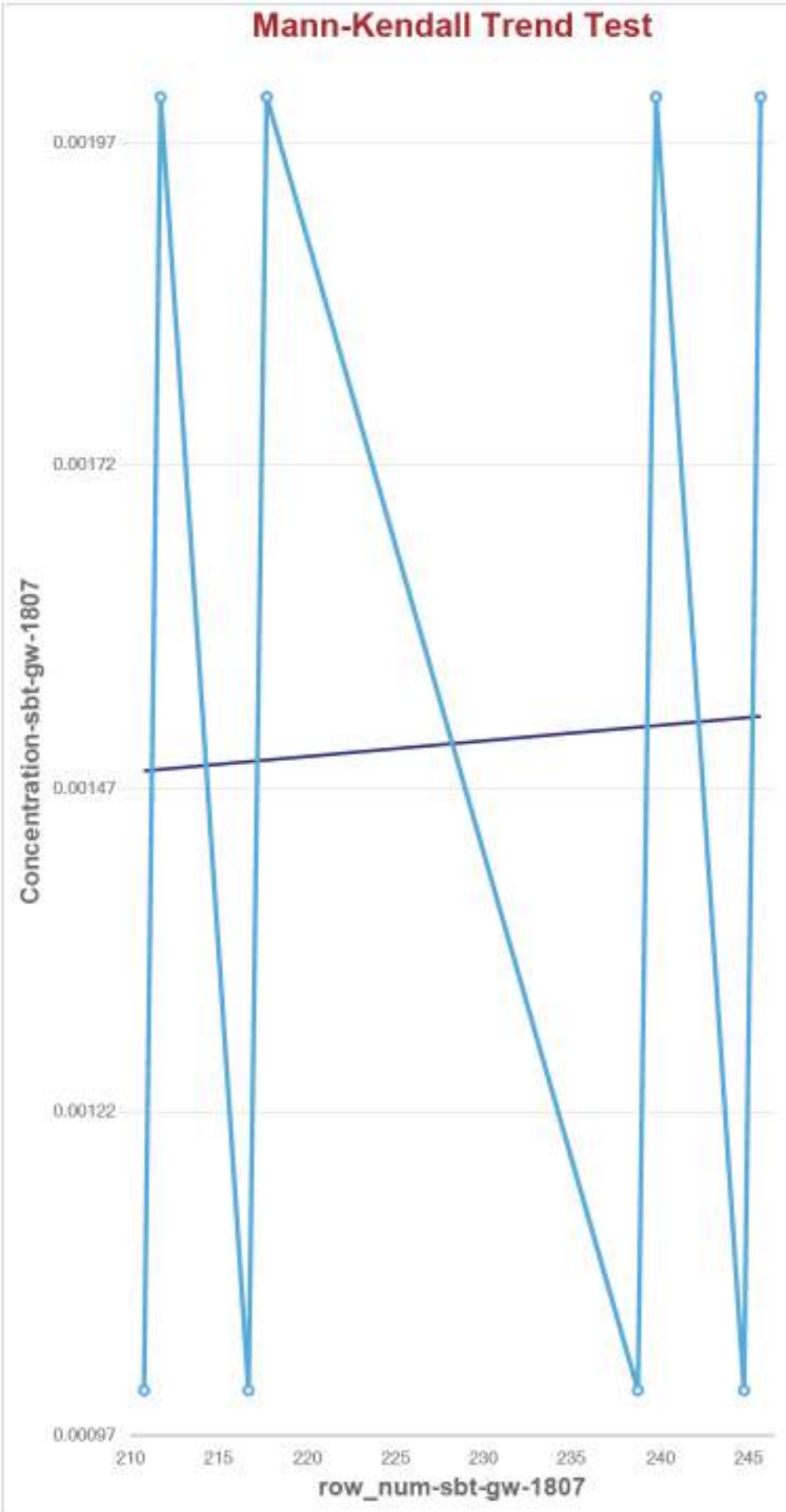
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

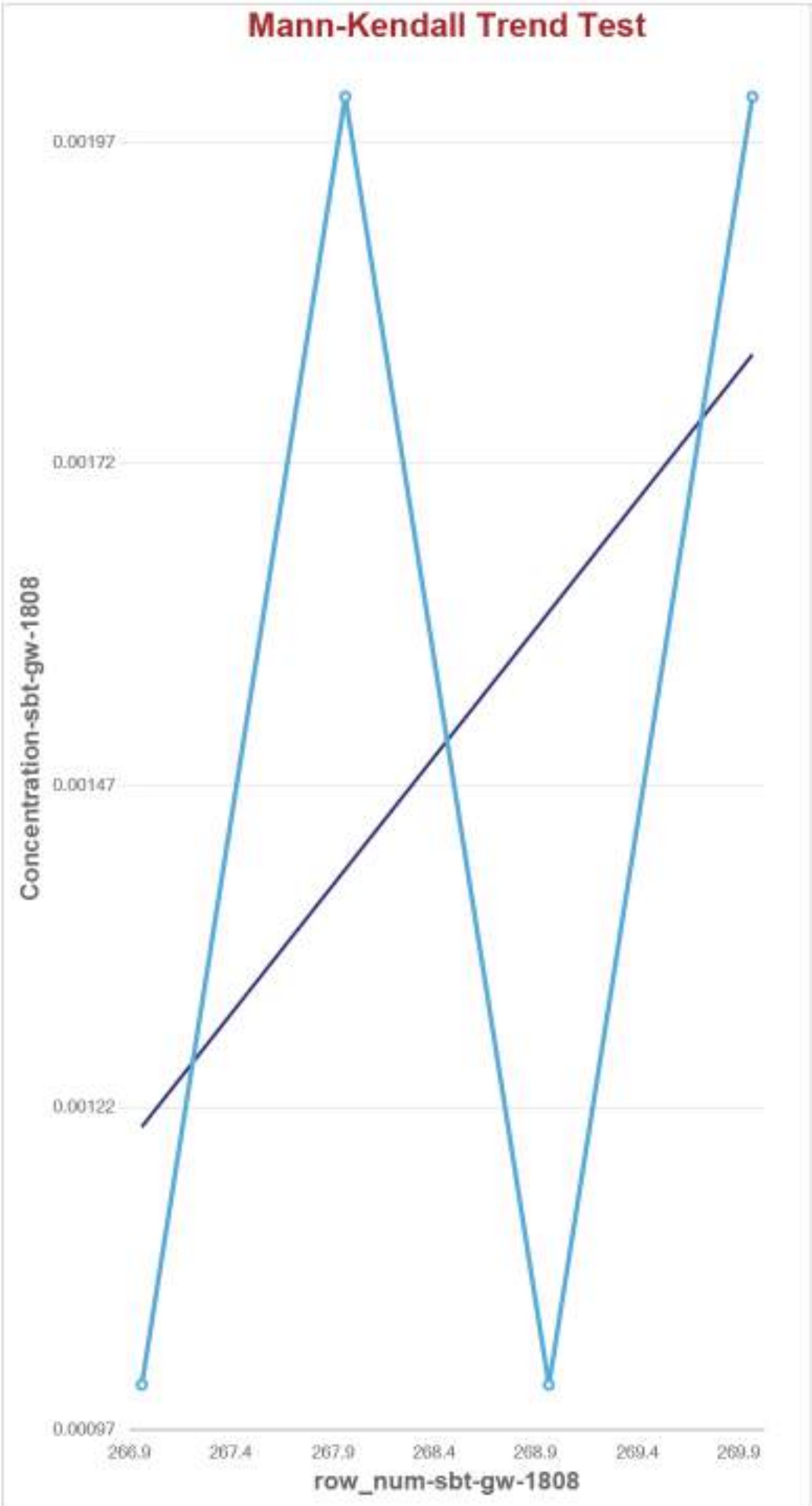
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

Insufficient statistical evidence of a significant trend at the specified level of significance.



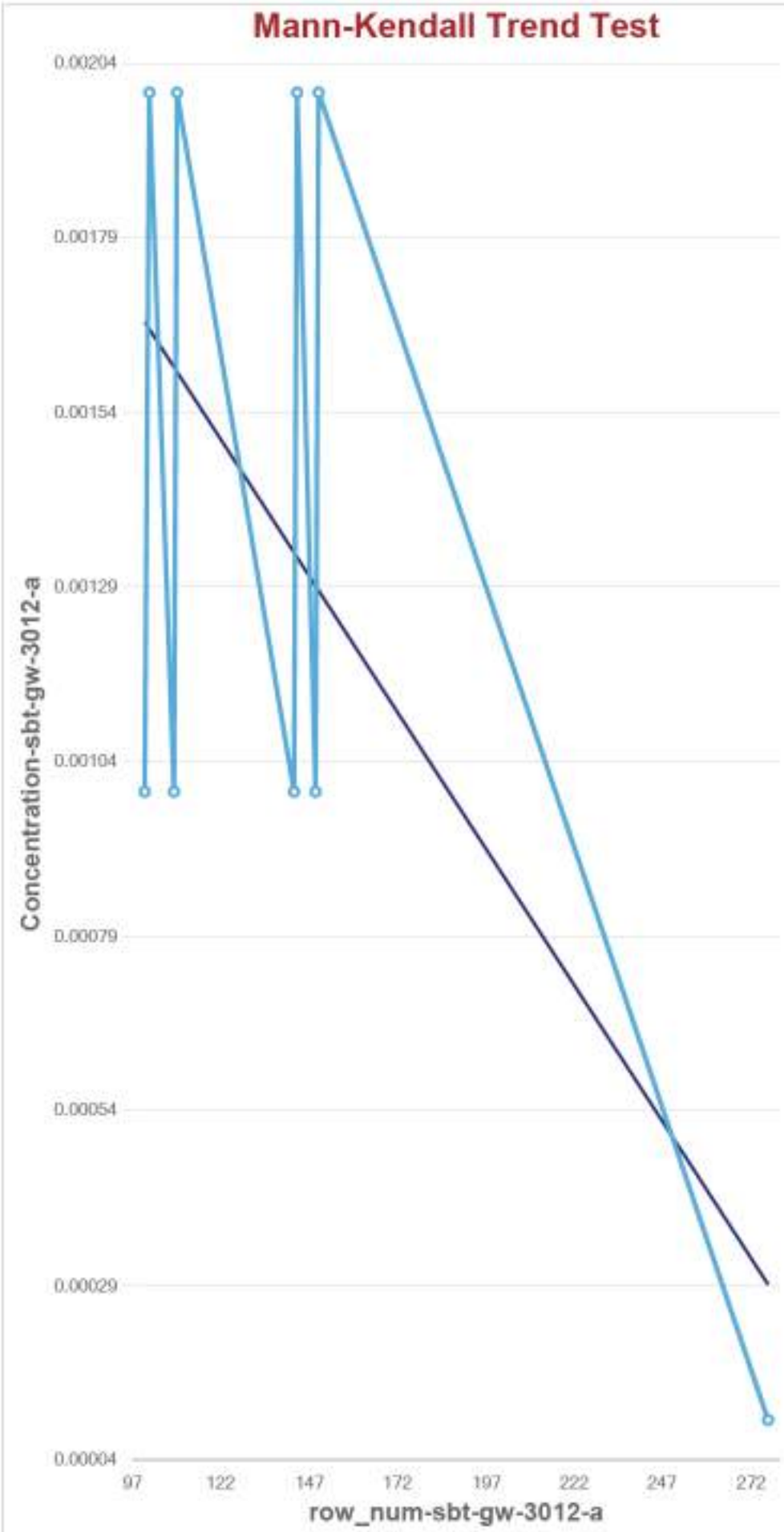
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.5820
Standardized Value of S	0.3873
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3493

OLS Regression Line (Blue)

OLS Regression Slope	0.0002
OLS Regression Intercept	-0.0522

Insufficient statistical evidence of a significant trend at the specified level of significance.



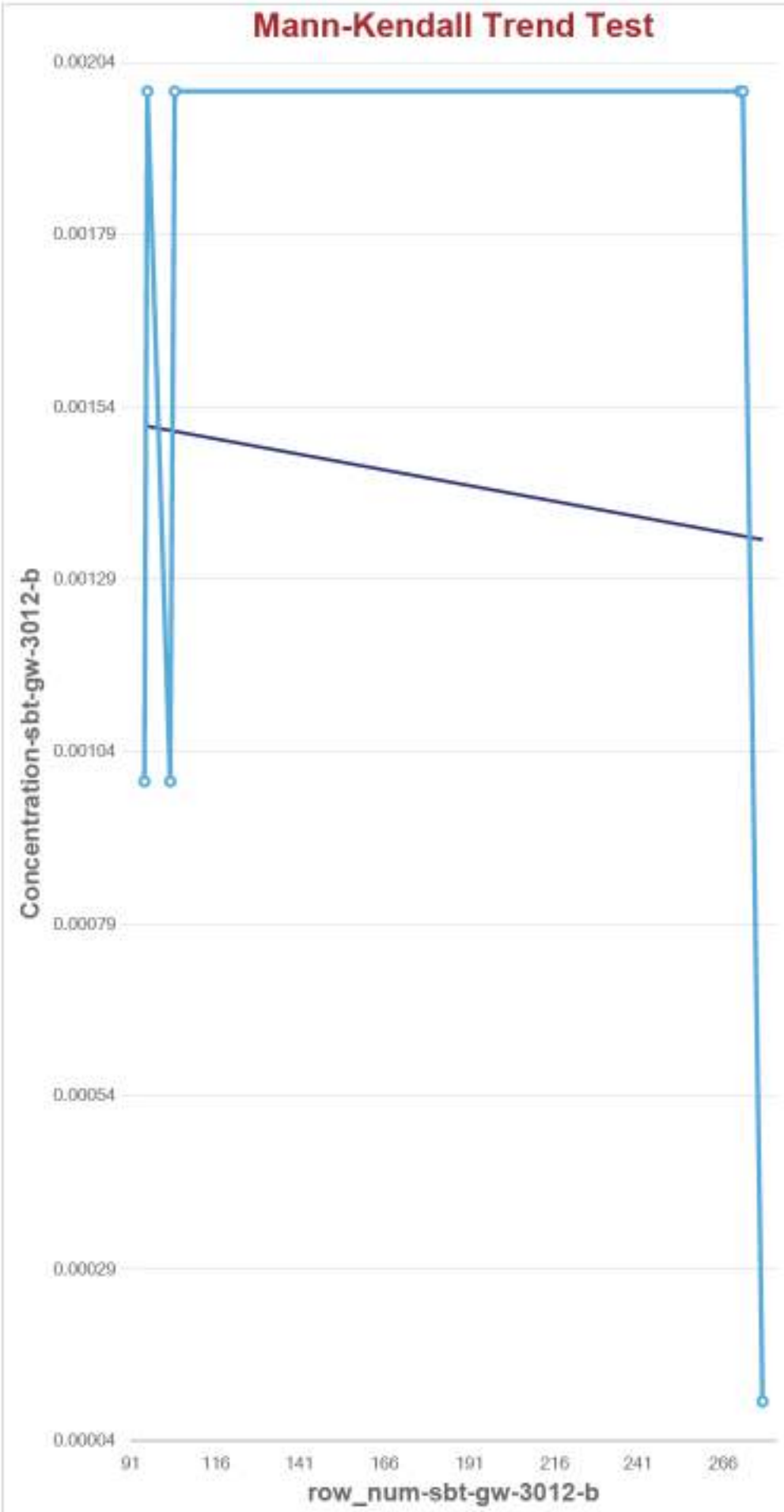
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.6410
Standardized Value of S	-0.3472
M-K Test Value (S)	-4
Tabulated p-value	0.3810
Approximate p-value	0.3642

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0025

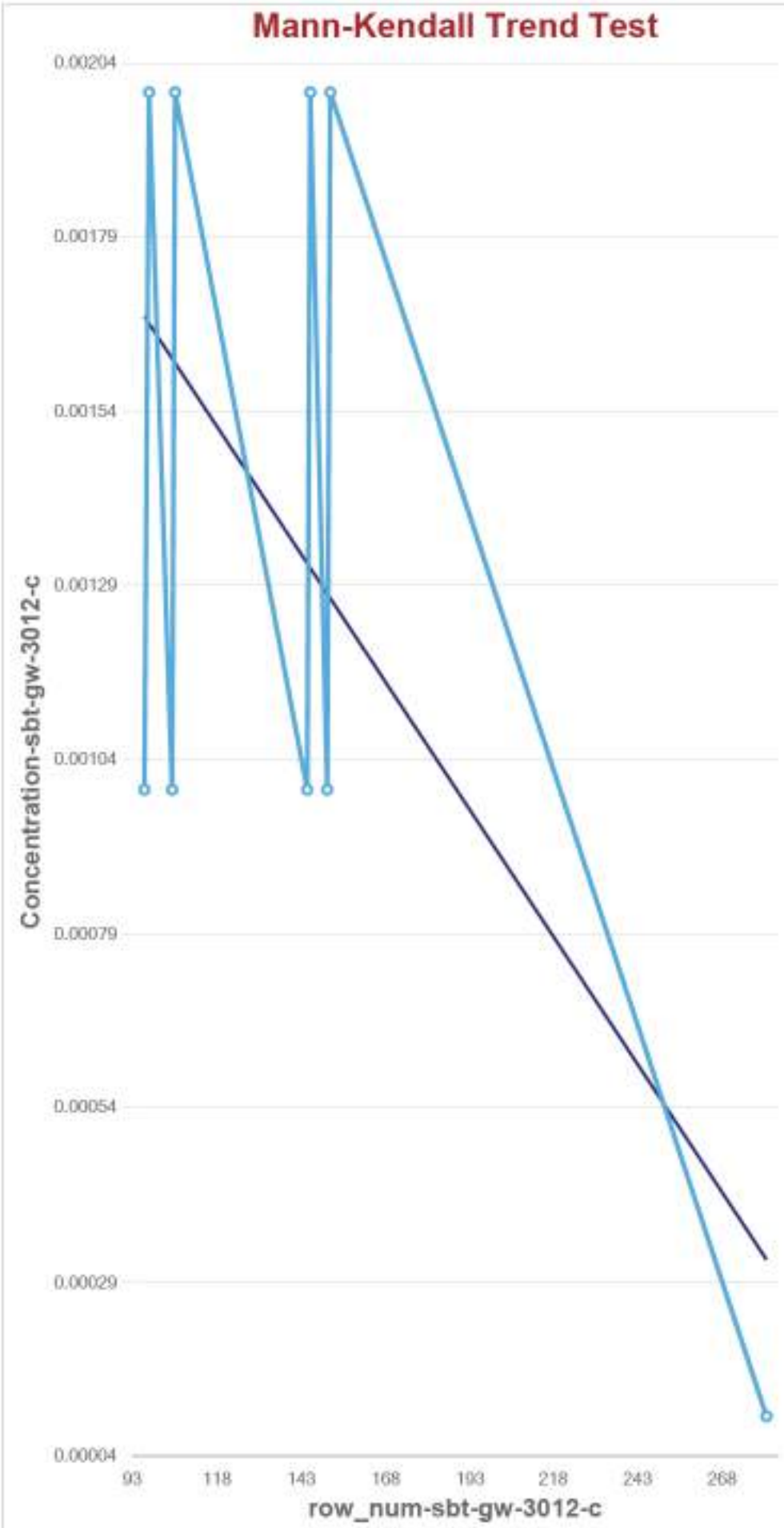
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.8878
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0016

Insufficient statistical evidence of a significant trend at the specified level of significance.



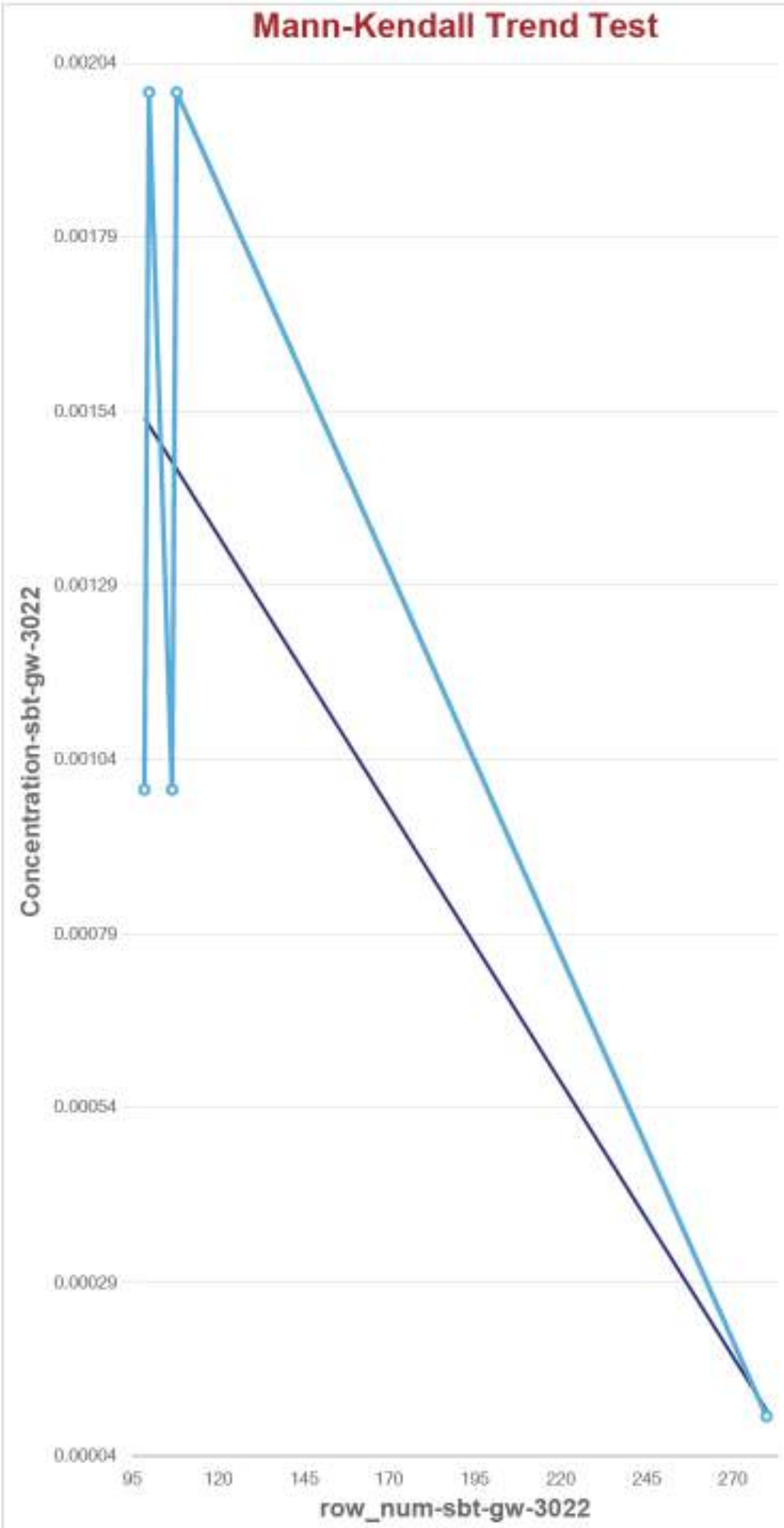
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.6410
Standardized Value of S	-0.3472
M-K Test Value (S)	-4
Tabulated p-value	0.3810
Approximate p-value	0.3642

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0024

Insufficient statistical evidence of a significant trend at the specified level of significance.



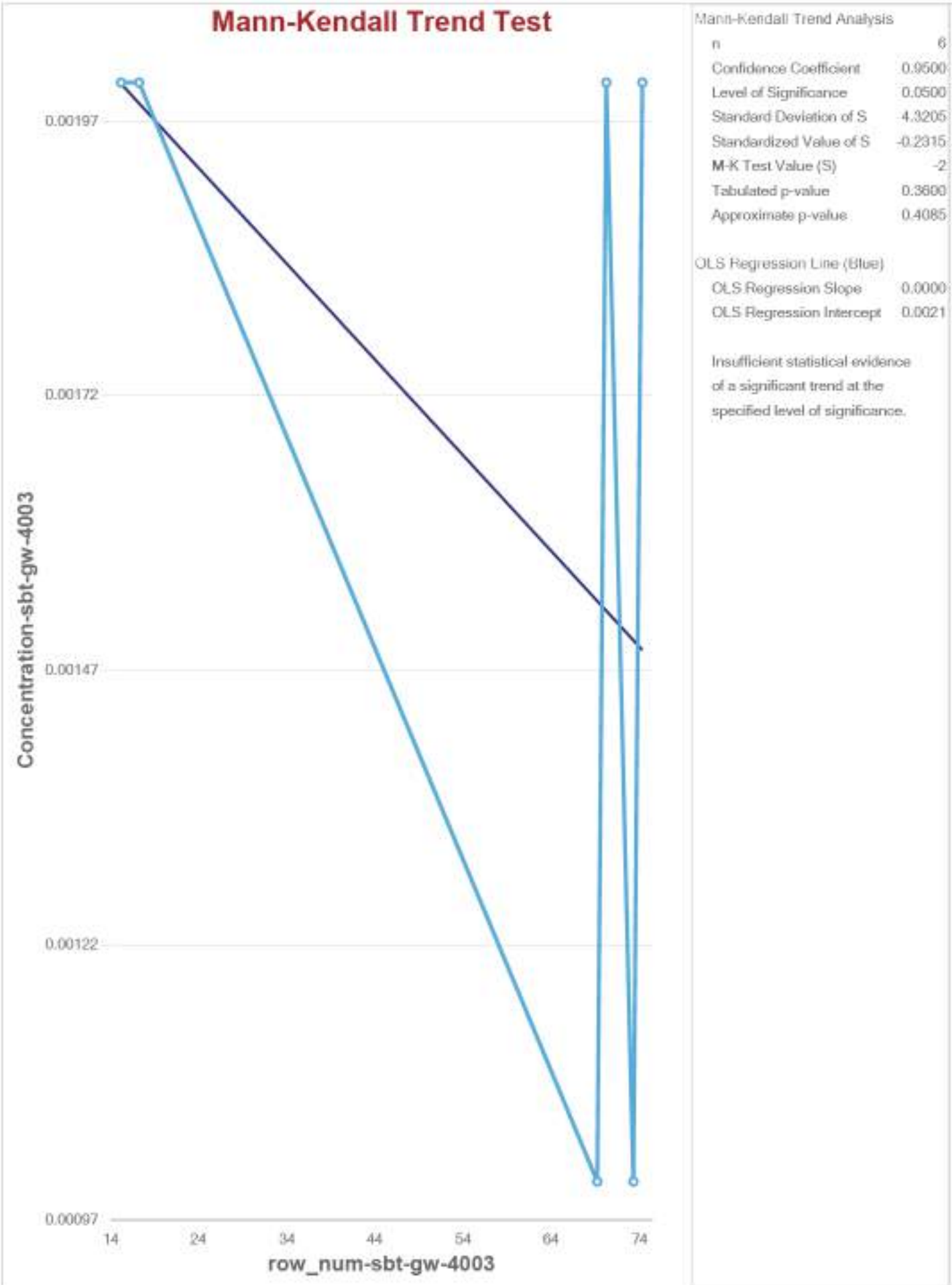
Mann-Kendall Trend Analysis

n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	3.8297
Standardized Value of S	-0.2611
M-K Test Value (S)	-2
Tabulated p-value	0.4080
Approximate p-value	0.3970

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0023

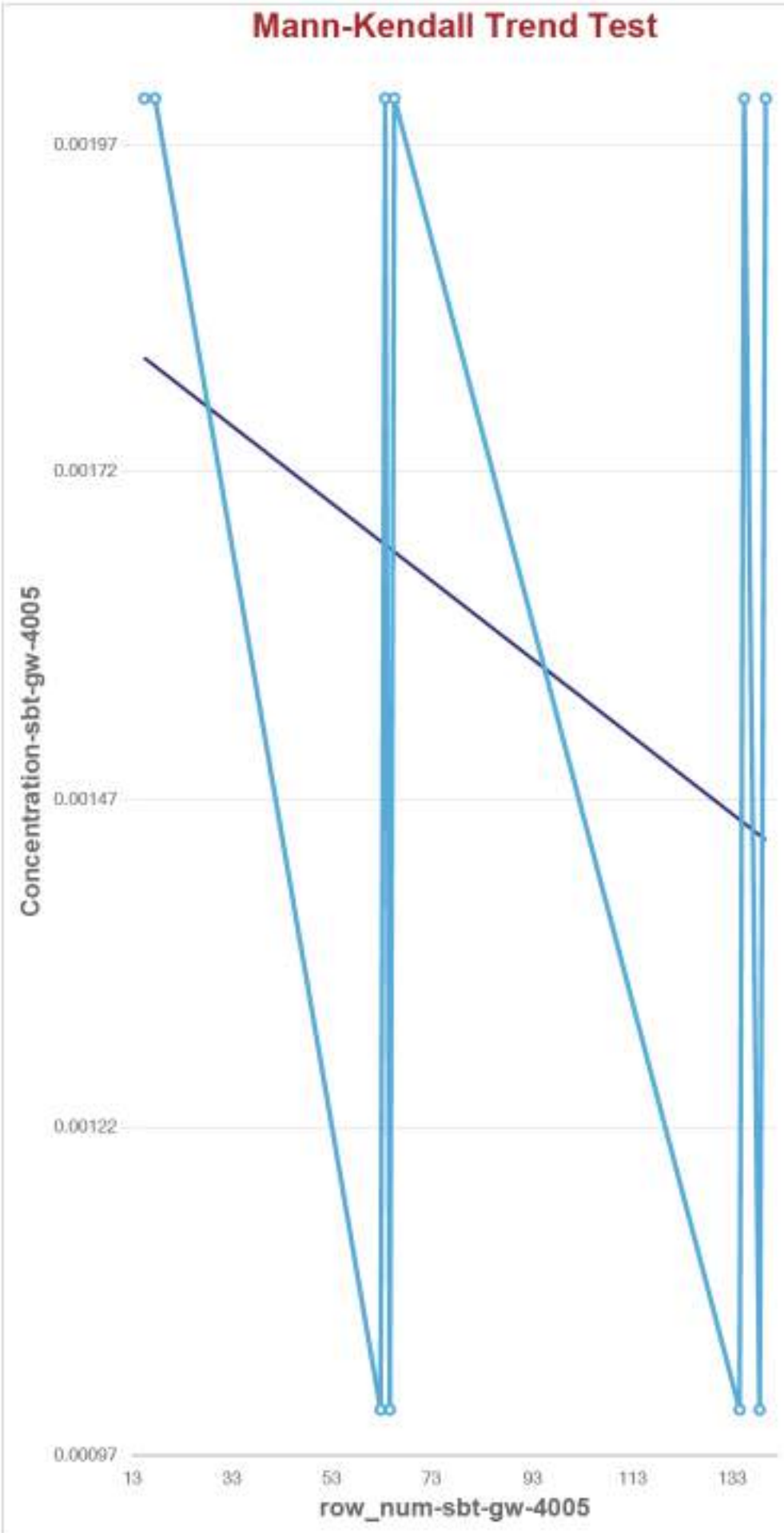
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.3205
Standardized Value of S	-0.2315
M-K Test Value (S)	-2
Tabulated p-value	0.3600
Approximate p-value	0.4085

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0021

Insufficient statistical evidence of a significant trend at the specified level of significance.



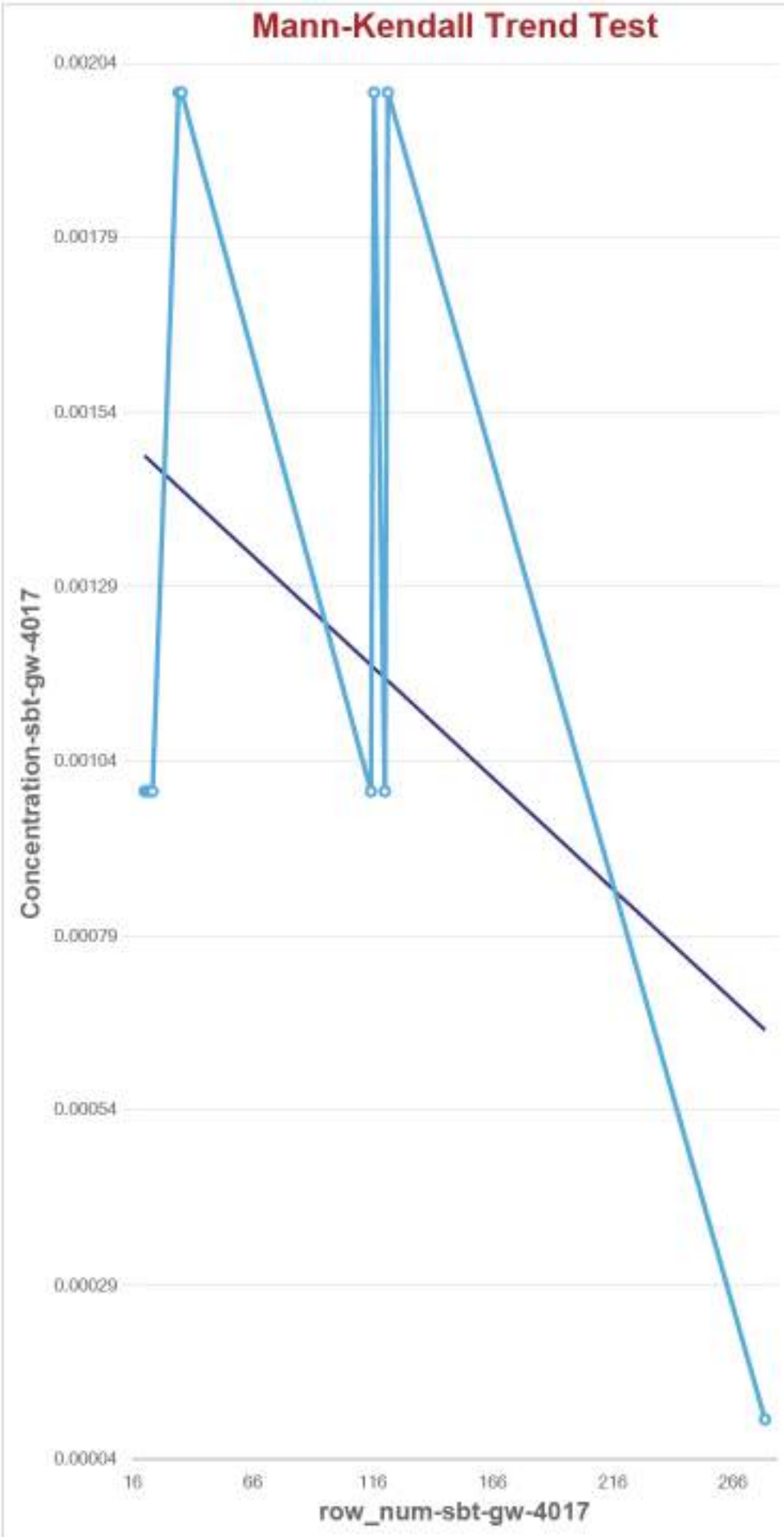
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	-0.3198
M-K Test Value (S)	-4
Tabulated p-value	0.3640
Approximate p-value	0.3746

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0018

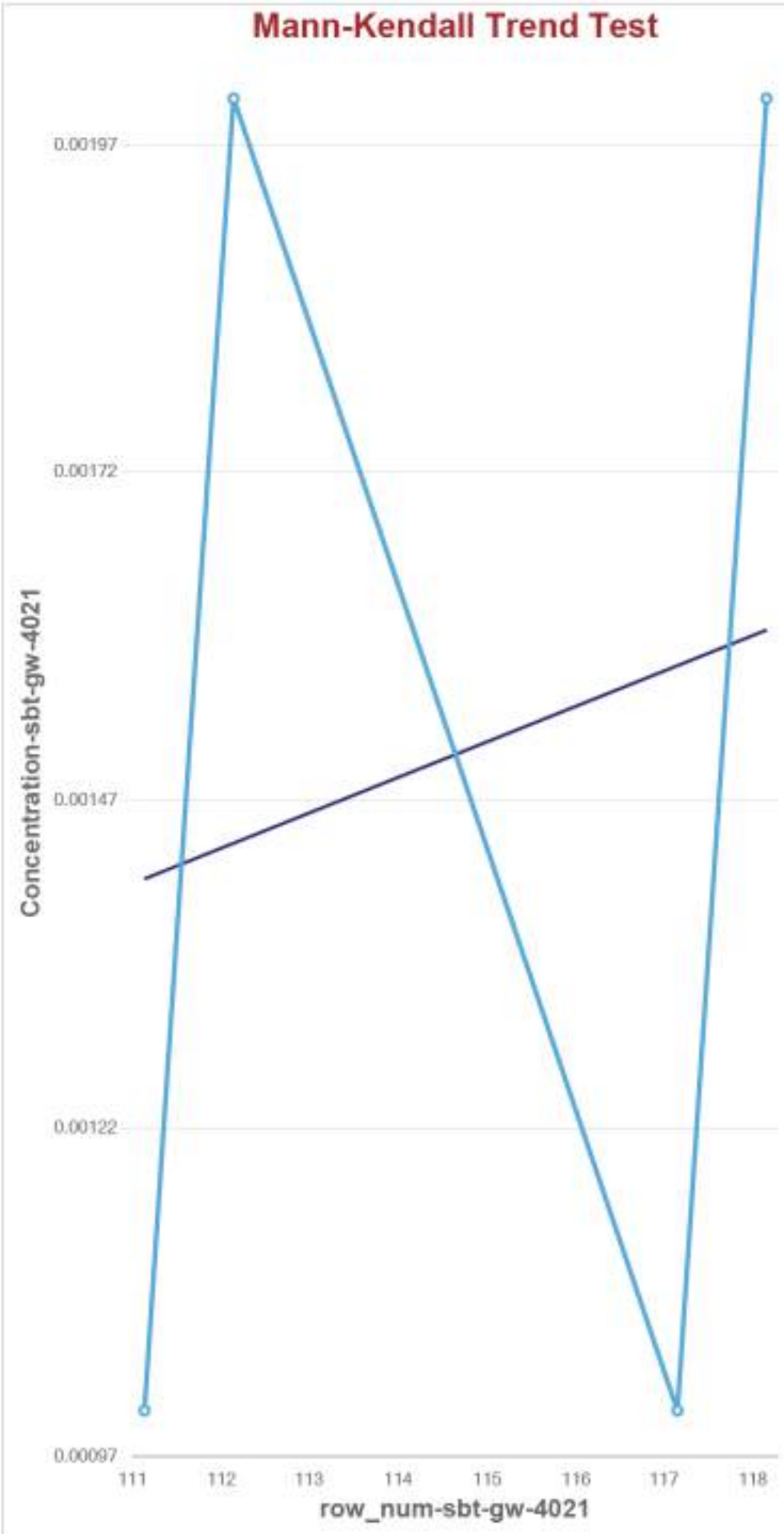
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.3137
Standardized Value of S	0.2652
M-K Test Value (S)	4
Tabulated p-value	0.3810
Approximate p-value	0.3954

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0015

Insufficient statistical evidence of a significant trend at the specified level of significance.



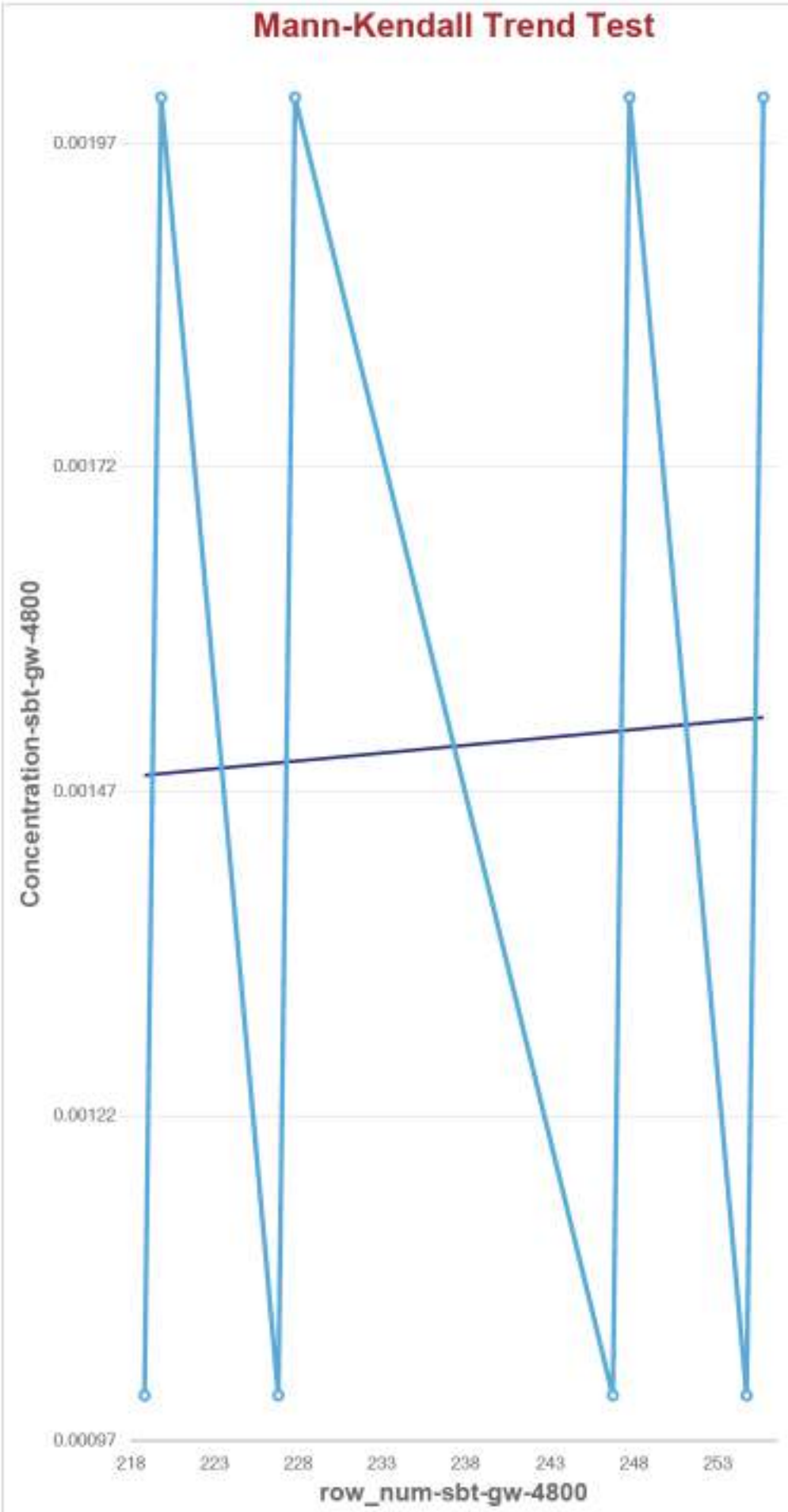
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.5820
Standardized Value of S	0.3873
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3493

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	-0.0016

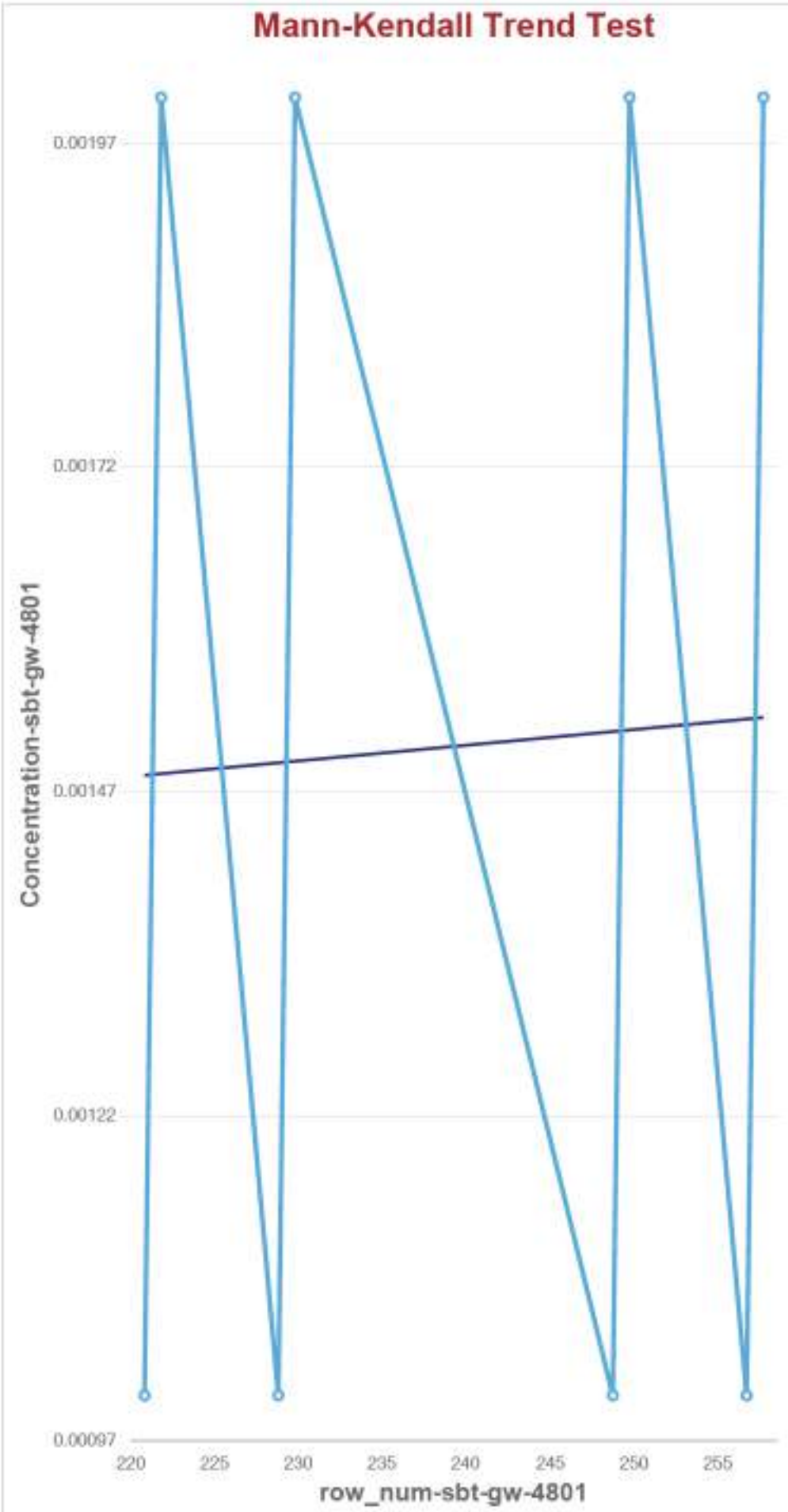
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

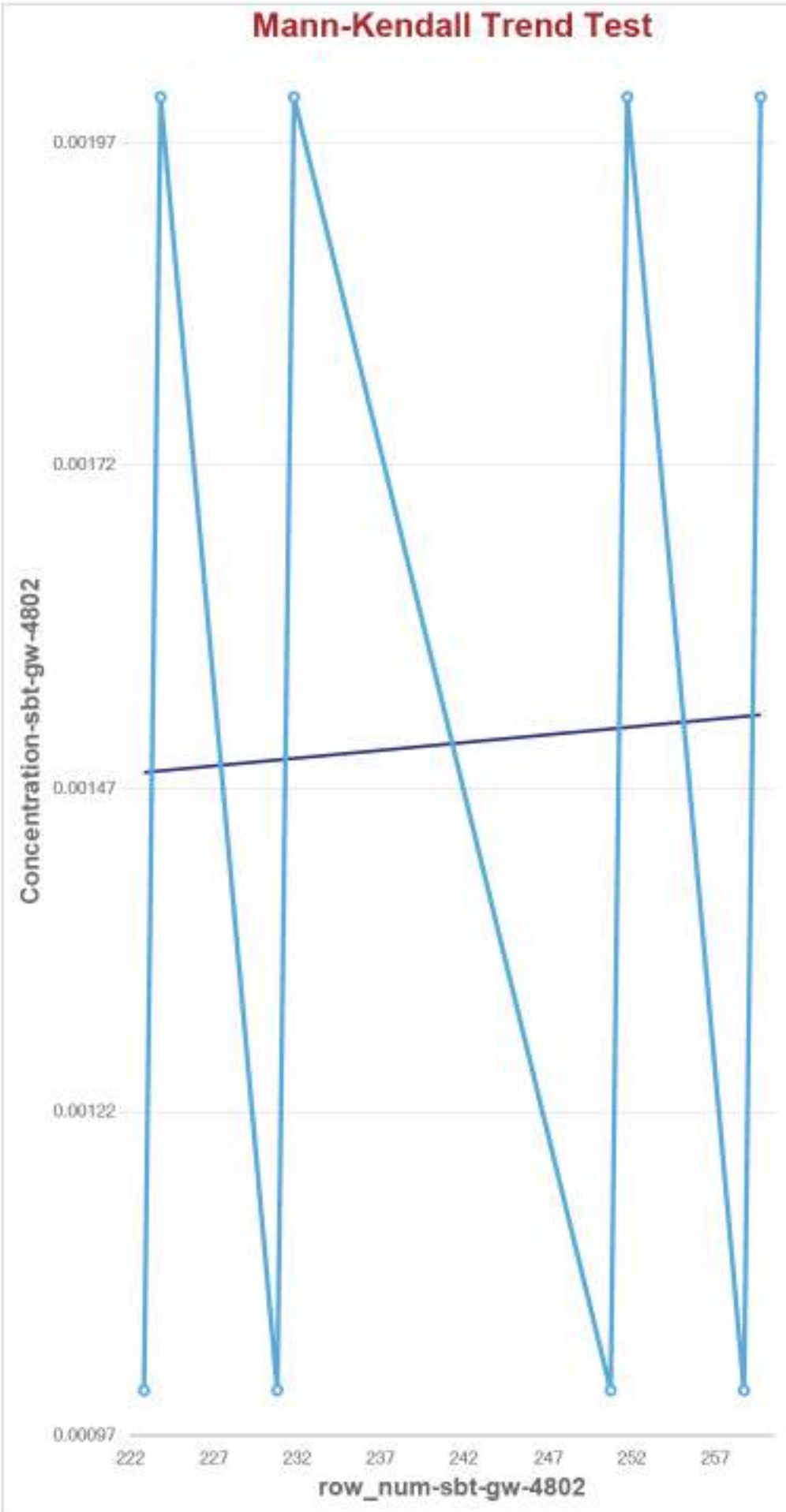
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

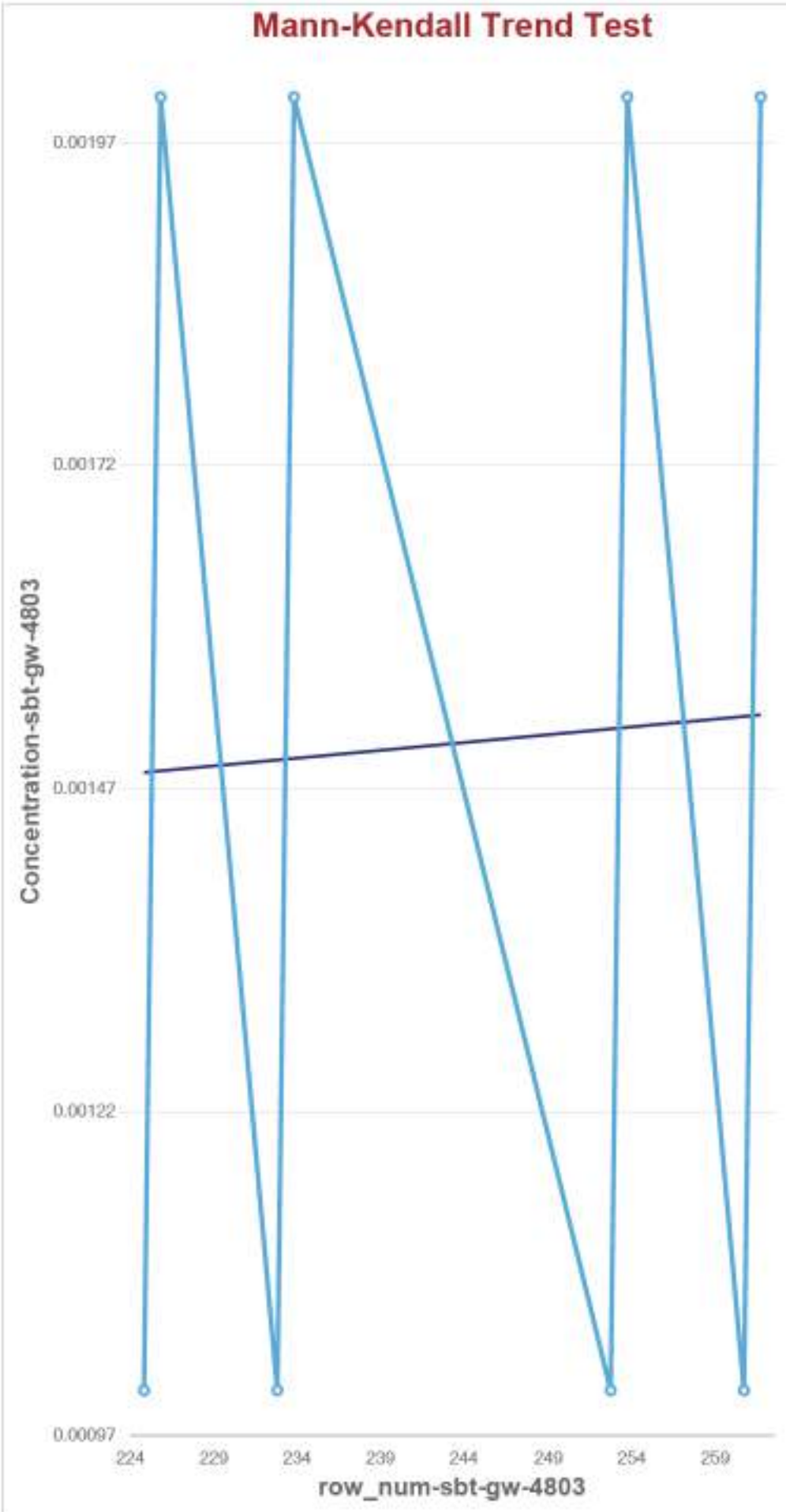
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

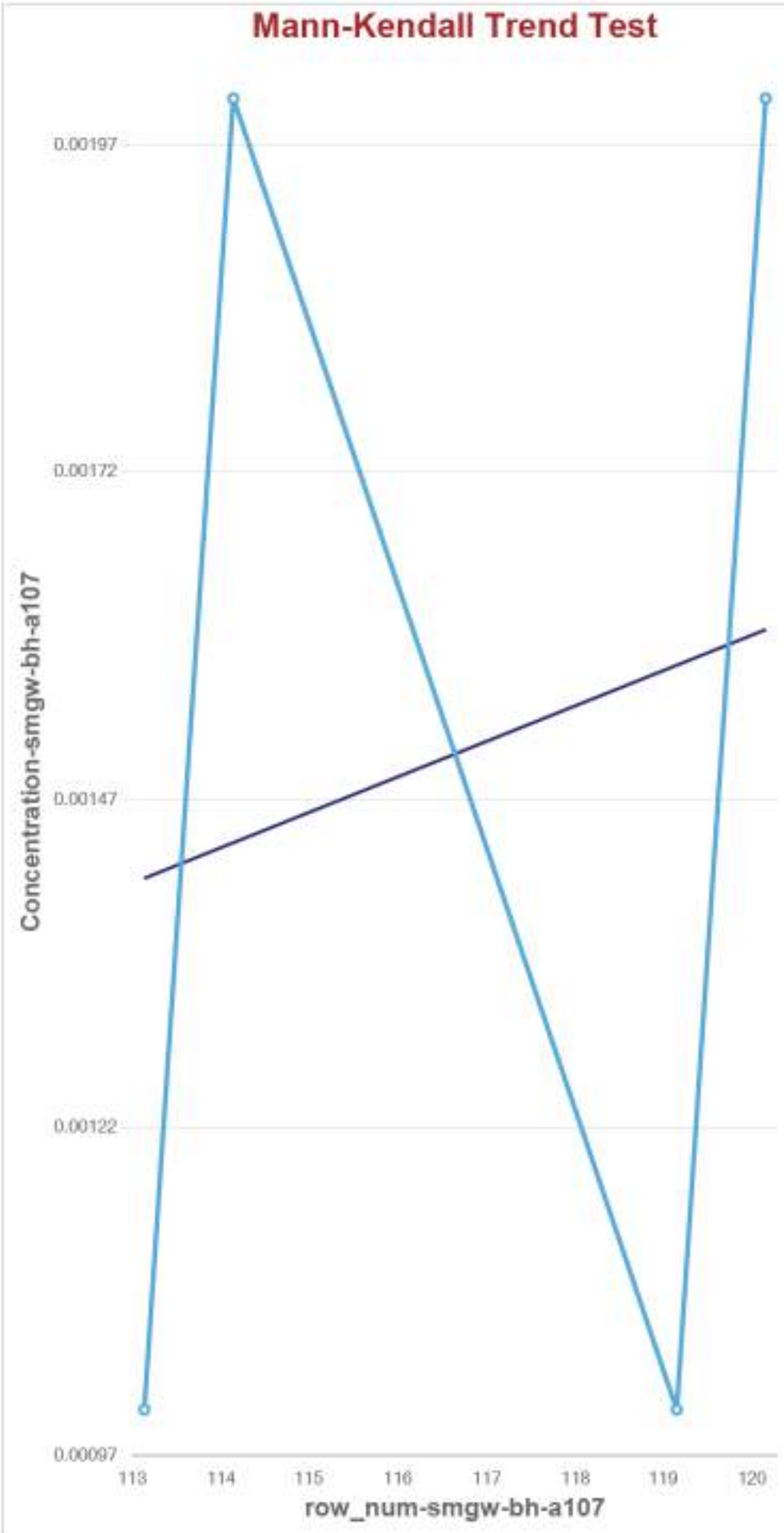
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	0.4330
M-K Test Value (S)	4
Tabulated p-value	0.3600
Approximate p-value	0.3325

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0012

Insufficient statistical evidence of a significant trend at the specified level of significance.



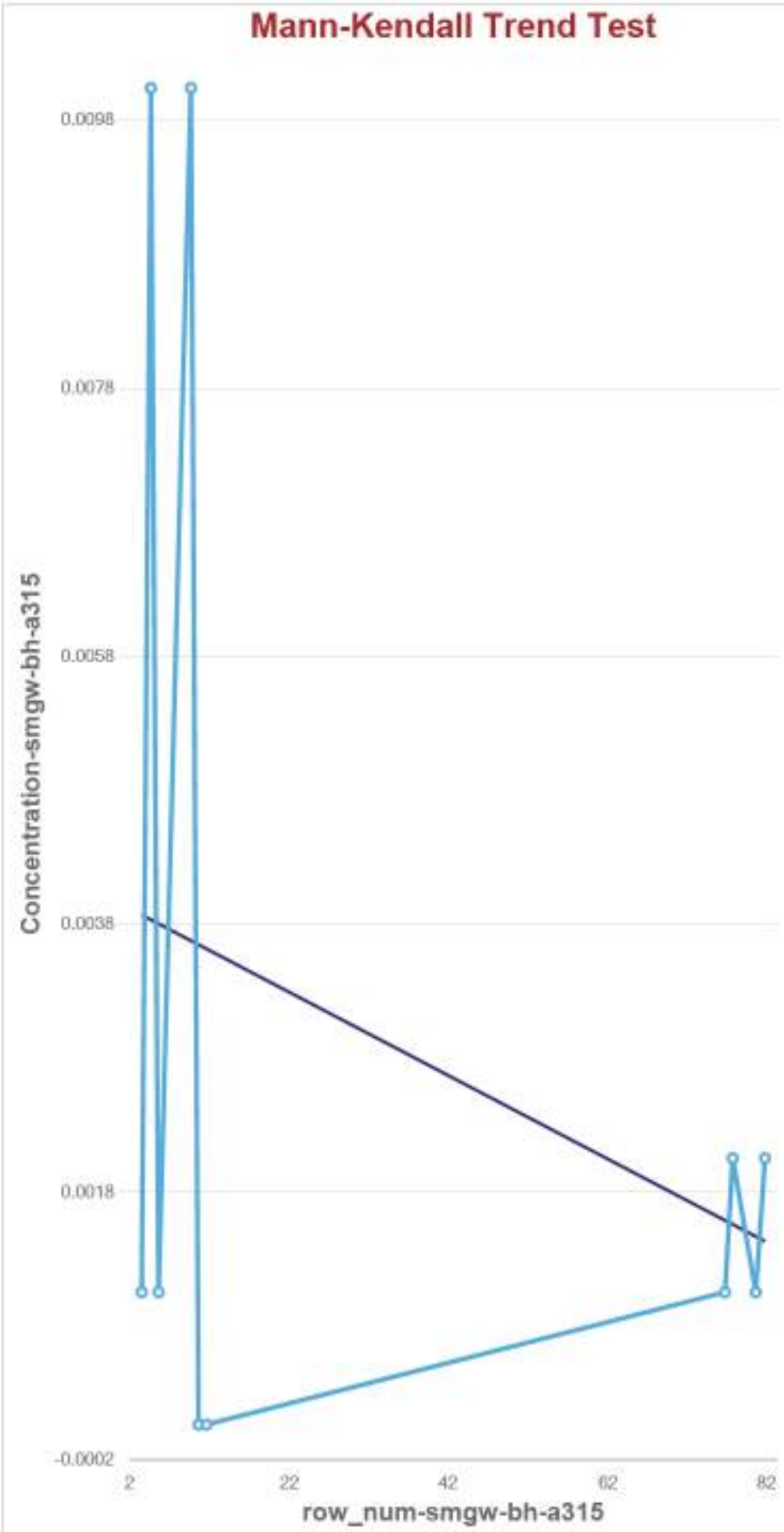
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.5820
Standardized Value of S	0.3873
M-K Test Value (S)	2
Tabulated p-value	0.3750
Approximate p-value	0.3493

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	-0.0016

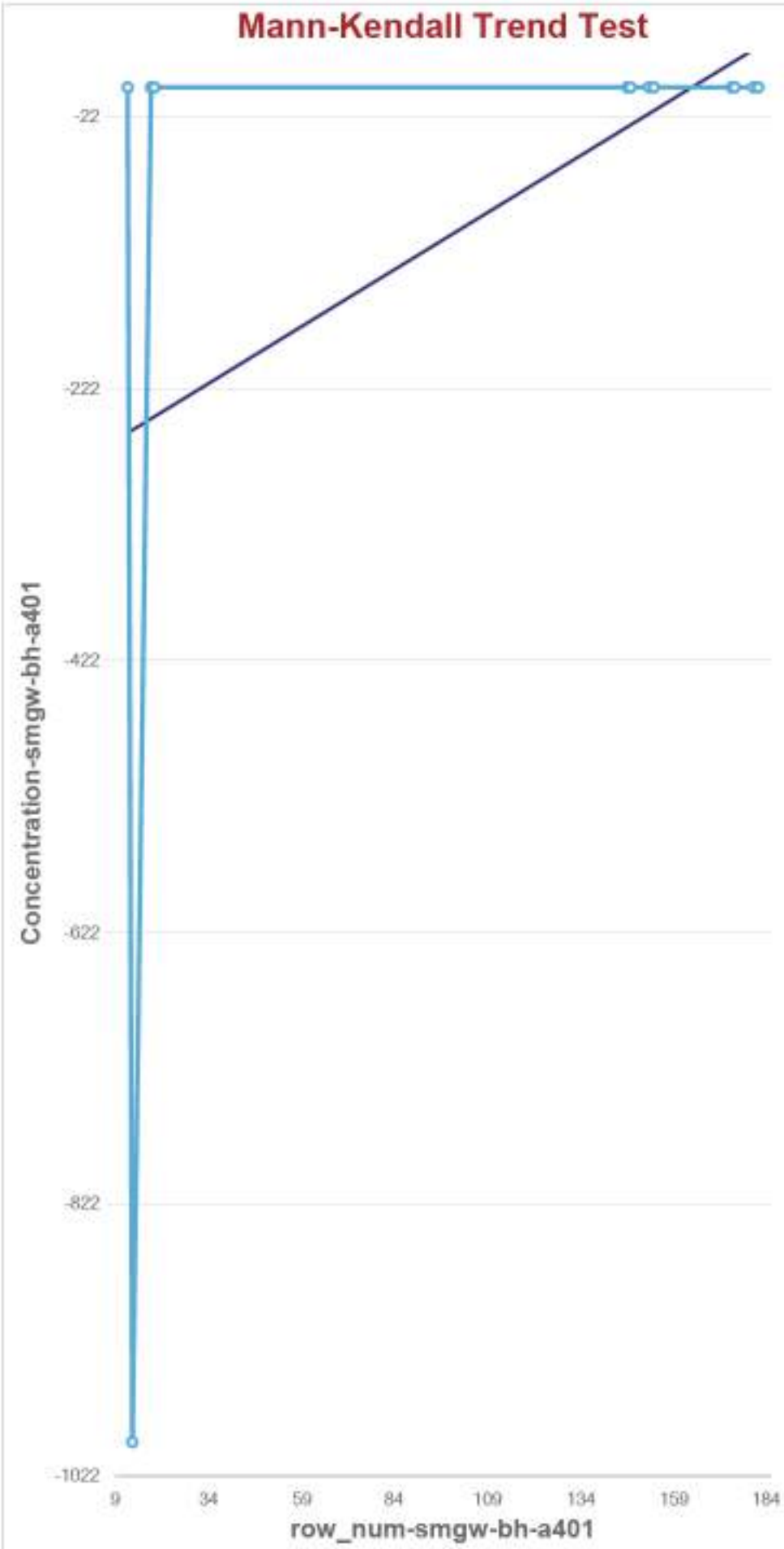
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6458
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0040

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

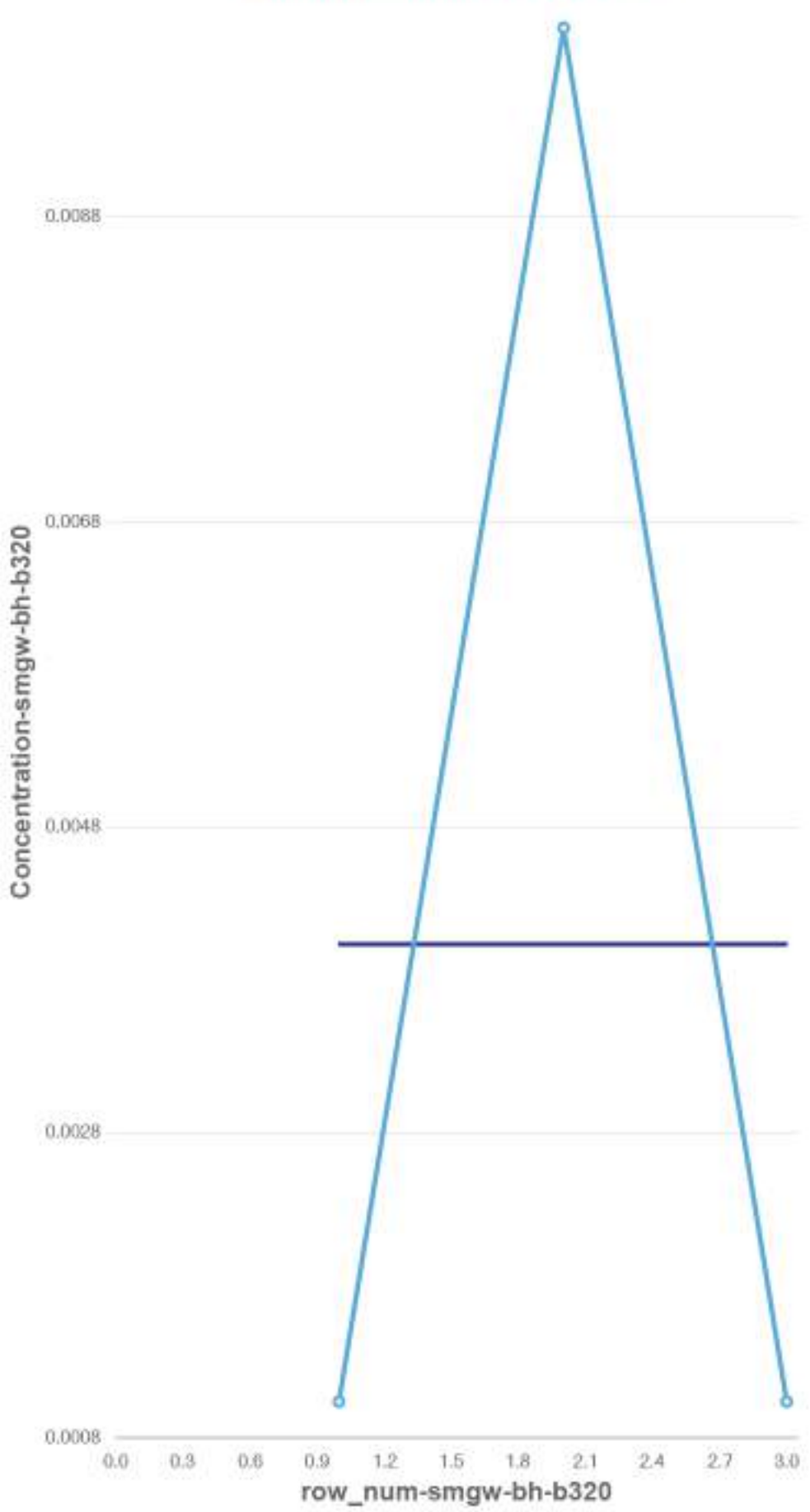
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	13.2539
Standardized Value of S	-0.3018
M-K Test Value (S)	-5
Tabulated p-value	0.4200
Approximate p-value	0.3814

OLS Regression Line (Blue)

OLS Regression Slope	1.6785
OLS Regression Interoept	-276.3934

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

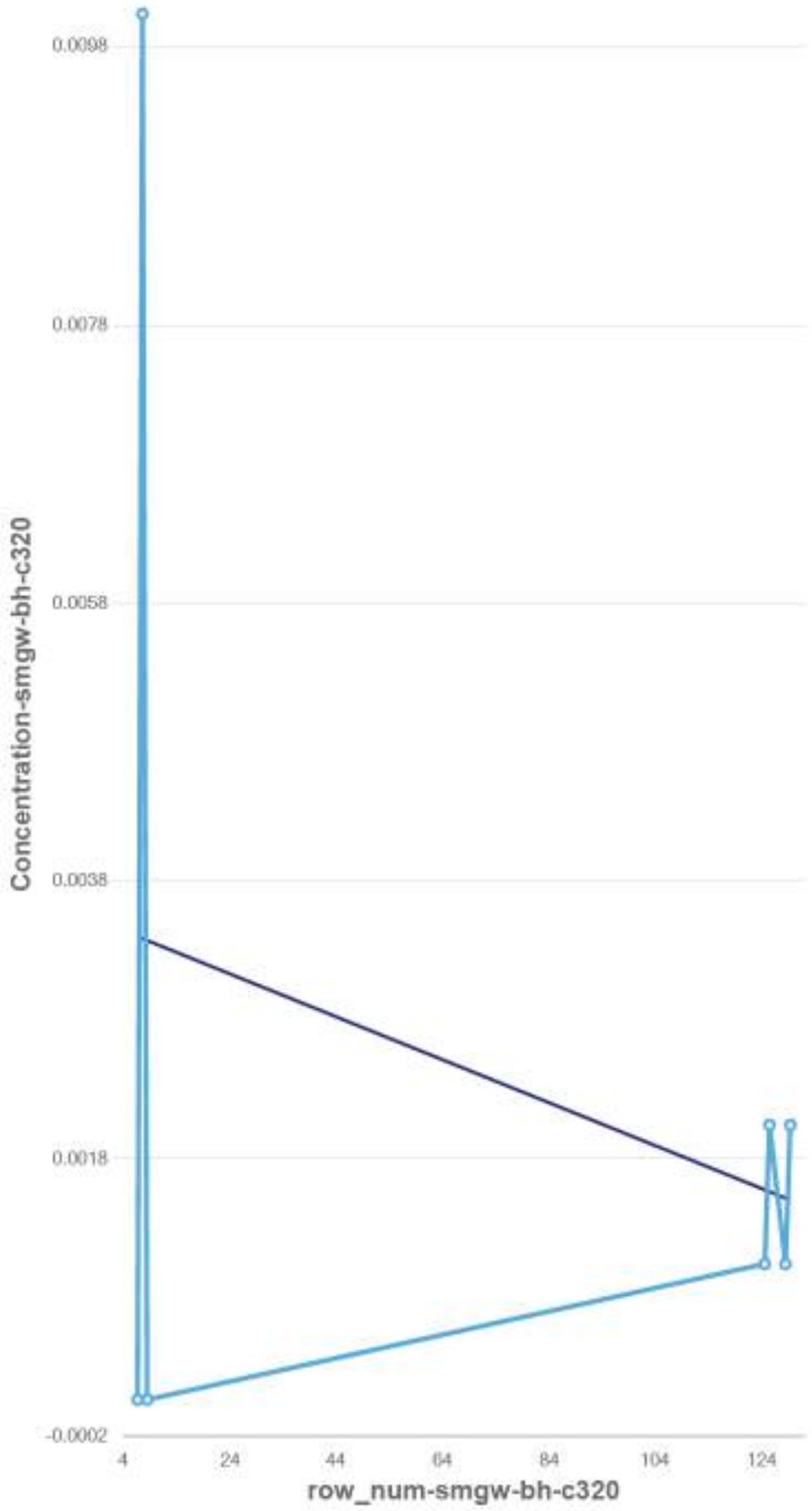


Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0040

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

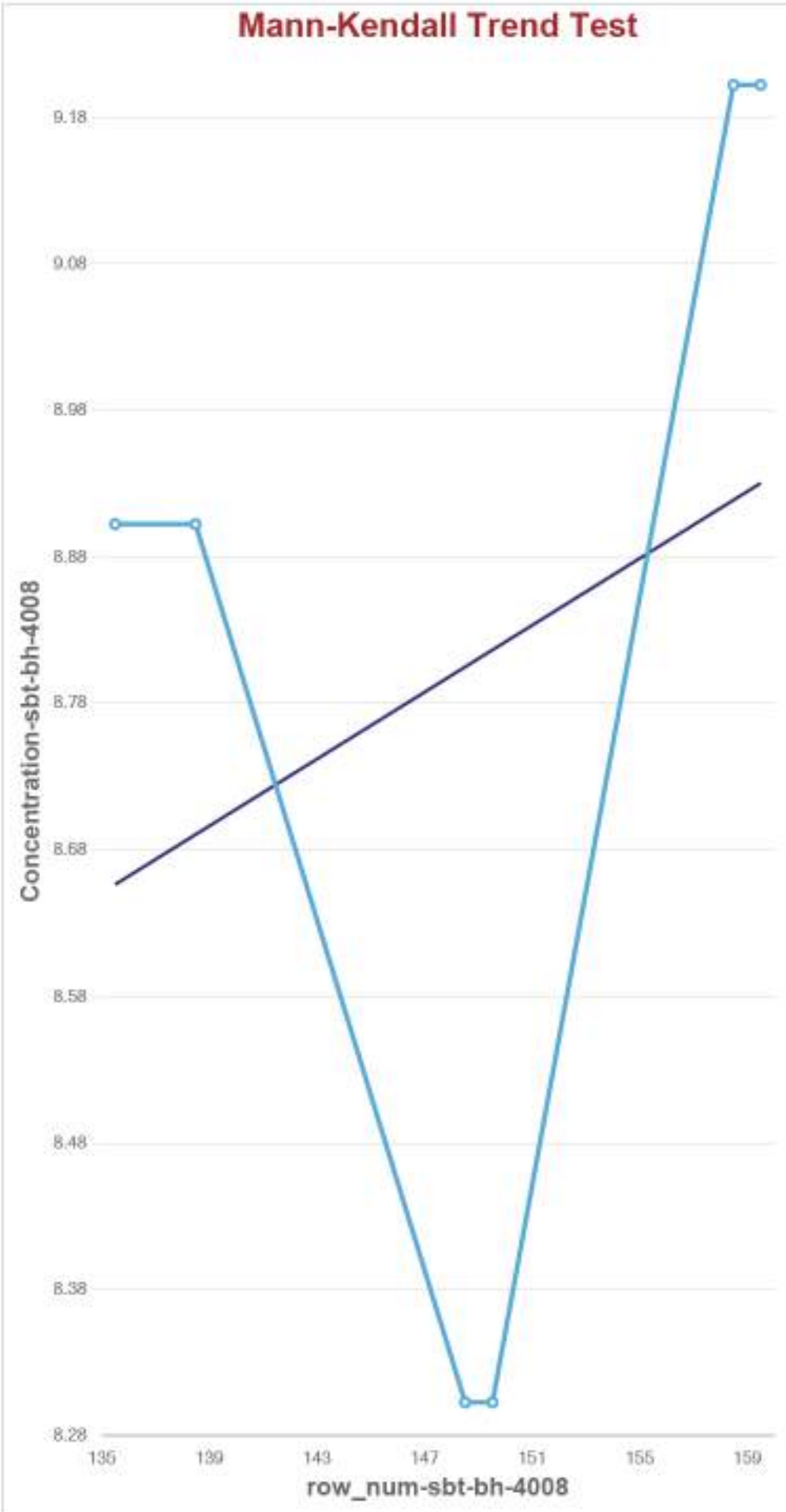


Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	0.7777
M-K Test Value (S)	6
Tabulated p-value	0.1910
Approximate p-value	0.2184

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0035

Insufficient statistical evidence of a significant trend at the specified level of significance.

F.7 NITROGEN (TOTAL)



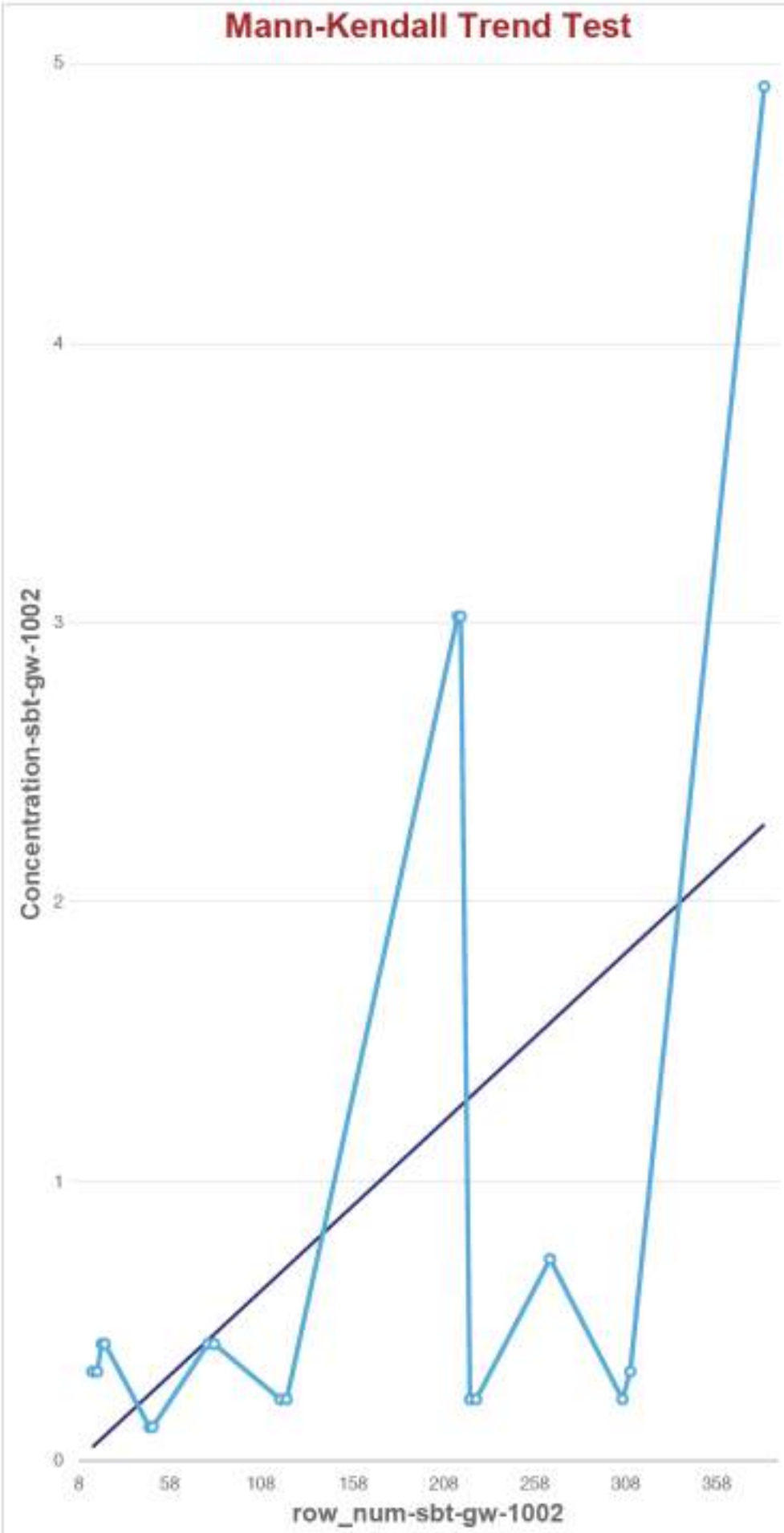
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	0.5960
M-K Test Value (S)	4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)

OLS Regression Slope	0.0114
OLS Regression Intercept	7.1019

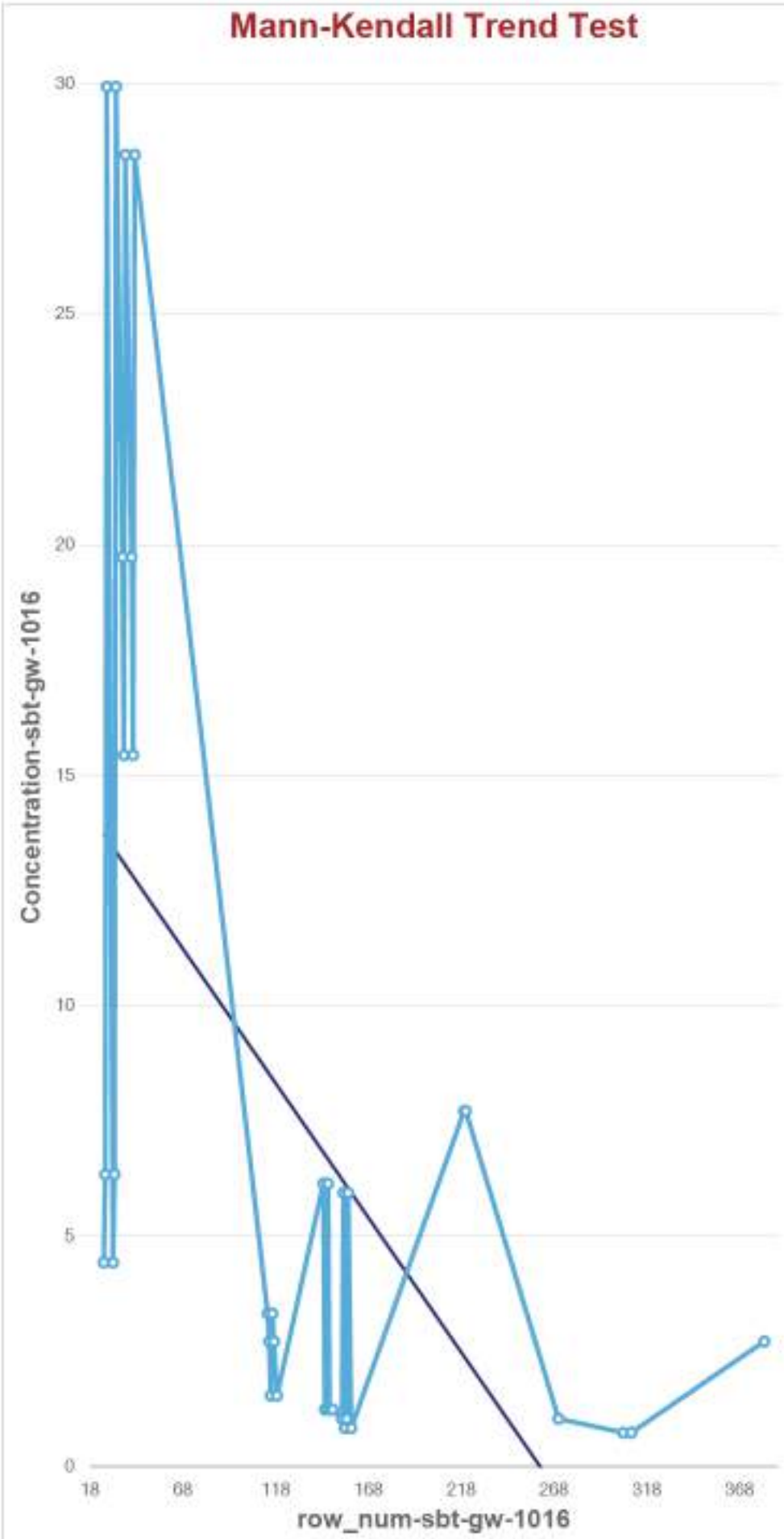
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	25.8070
Standardized Value of S	0.8912
M-K Test Value (S)	24
Tabulated p-value	0.1840
Approximate p-value	0.1864

OLS Regression Line (Blue)	
OLS Regression Slope	0.0061
OLS Regression Intercept	0.1327

Insufficient statistical evidence of a significant trend at the specified level of significance.

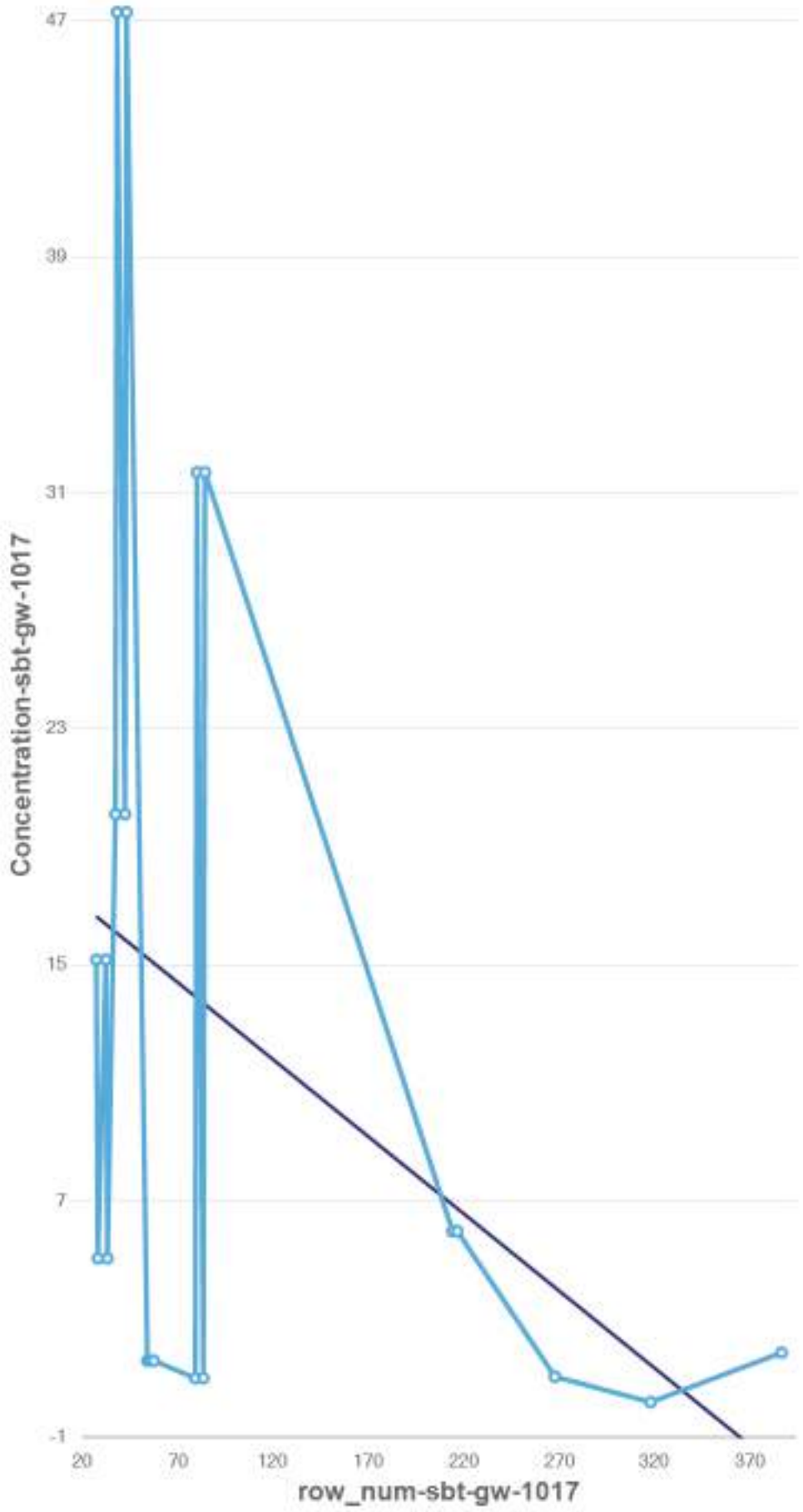


Mann-Kendall Trend Analysis	
n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	73.2189
Standardized Value of S	-4.1793
M-K Test Value (S)	-307
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0584
OLS Regression Intercept	15.0410

Statistically significant evidence of a decreasing trend at the specified level of significance.

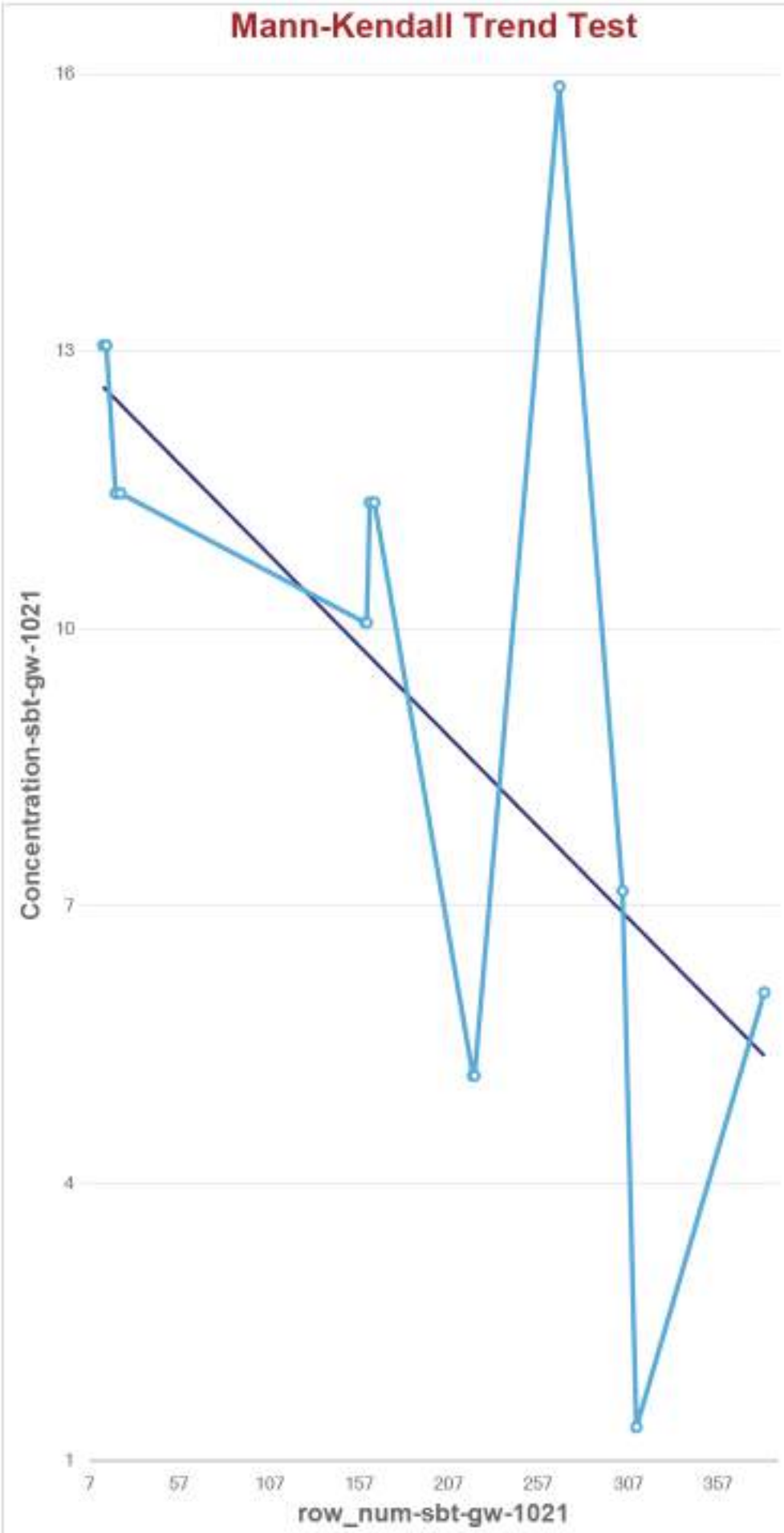
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.8786
Standardized Value of S	-1.7641
M-K Test Value (S)	-59
Tabulated p-value	0.0430
Approximate p-value	0.0389

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0524
OLS Regression Intercept	18.2039

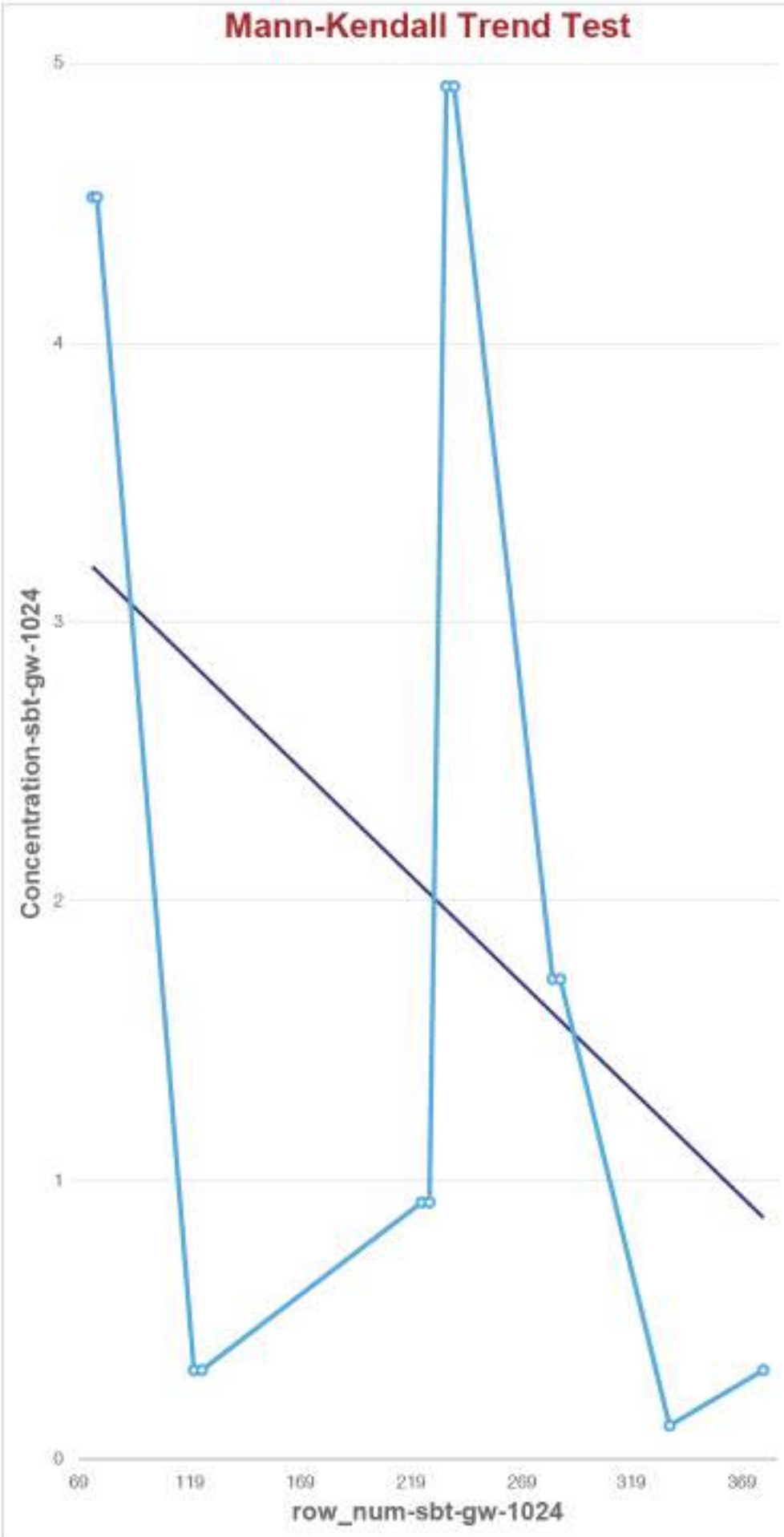
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1292
Standardized Value of S	-2.5925
M-K Test Value (S)	-48
Tabulated p-value	0.0030
Approximate p-value	0.0048

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0197
OLS Regression Intercept	13.0432

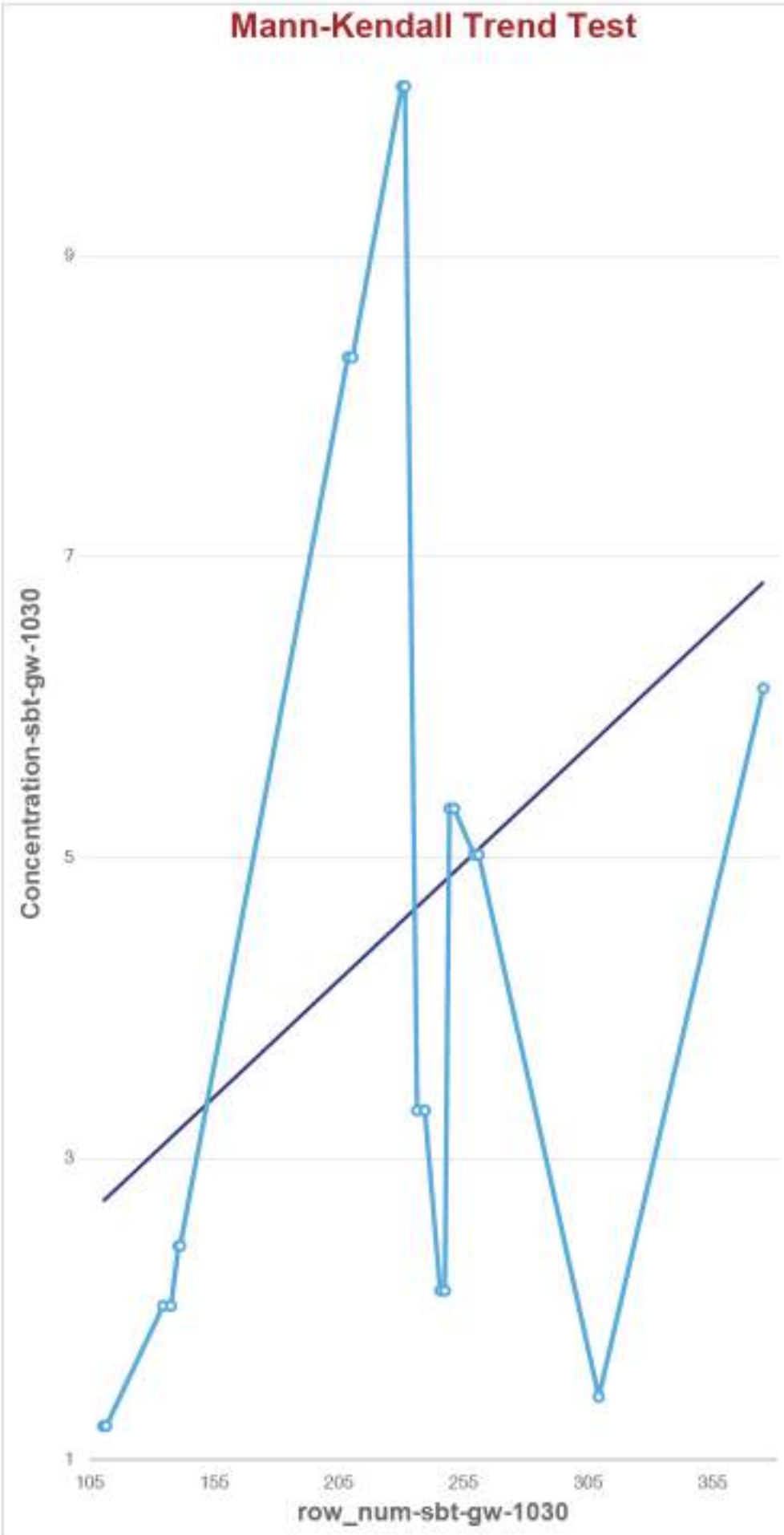
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.3178
Standardized Value of S	-0.5587
M-K Test Value (S)	-9
Tabulated p-value	0.3190
Approximate p-value	0.2882

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0077
OLS Regression Intercept	4.2542

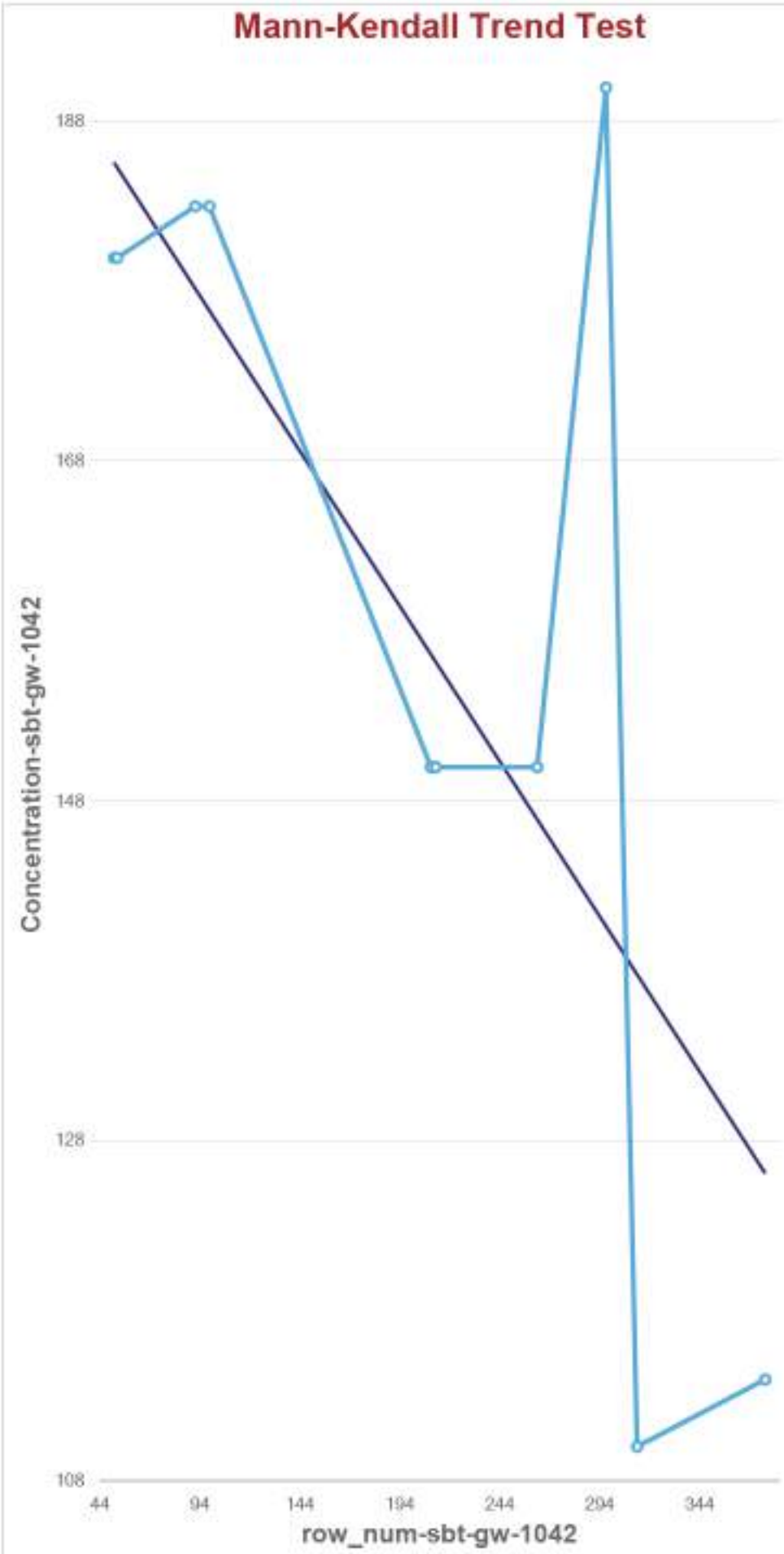
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6757
Standardized Value of S	1.6952
M-K Test Value (S)	53
Tabulated p-value	0.0490
Approximate p-value	0.0450

OLS Regression Line (Blue)	
OLS Regression Slope	0.0155
OLS Regression Intercept	0.6803

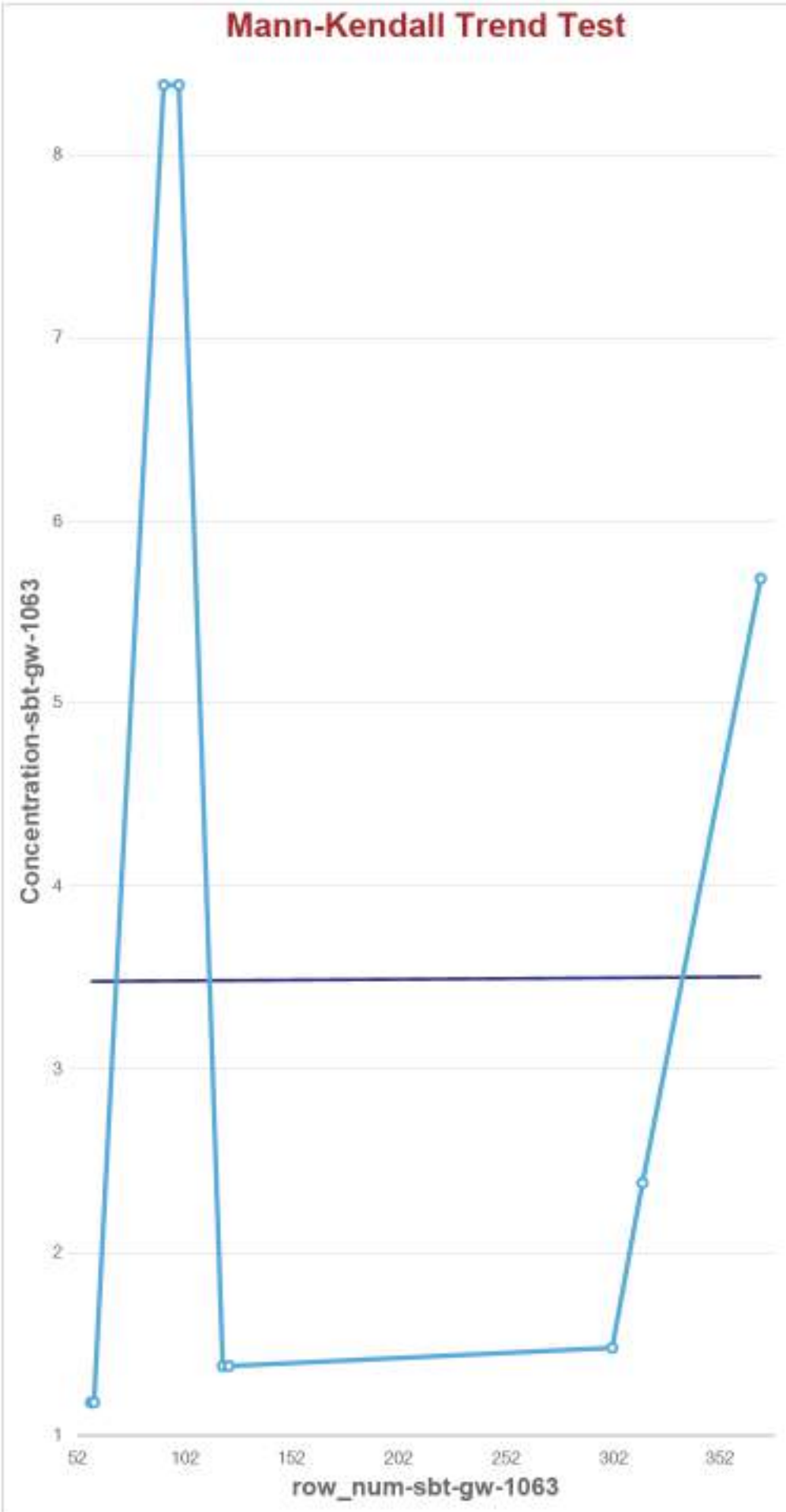
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.9240
Standardized Value of S	-1.3731
M-K Test Value (S)	-16
Tabulated p-value	0.0780
Approximate p-value	0.0849

OLS Regression Line (Blue)	
OLS Regression Slope	-0.1824
OLS Regression Interoept	194.8854

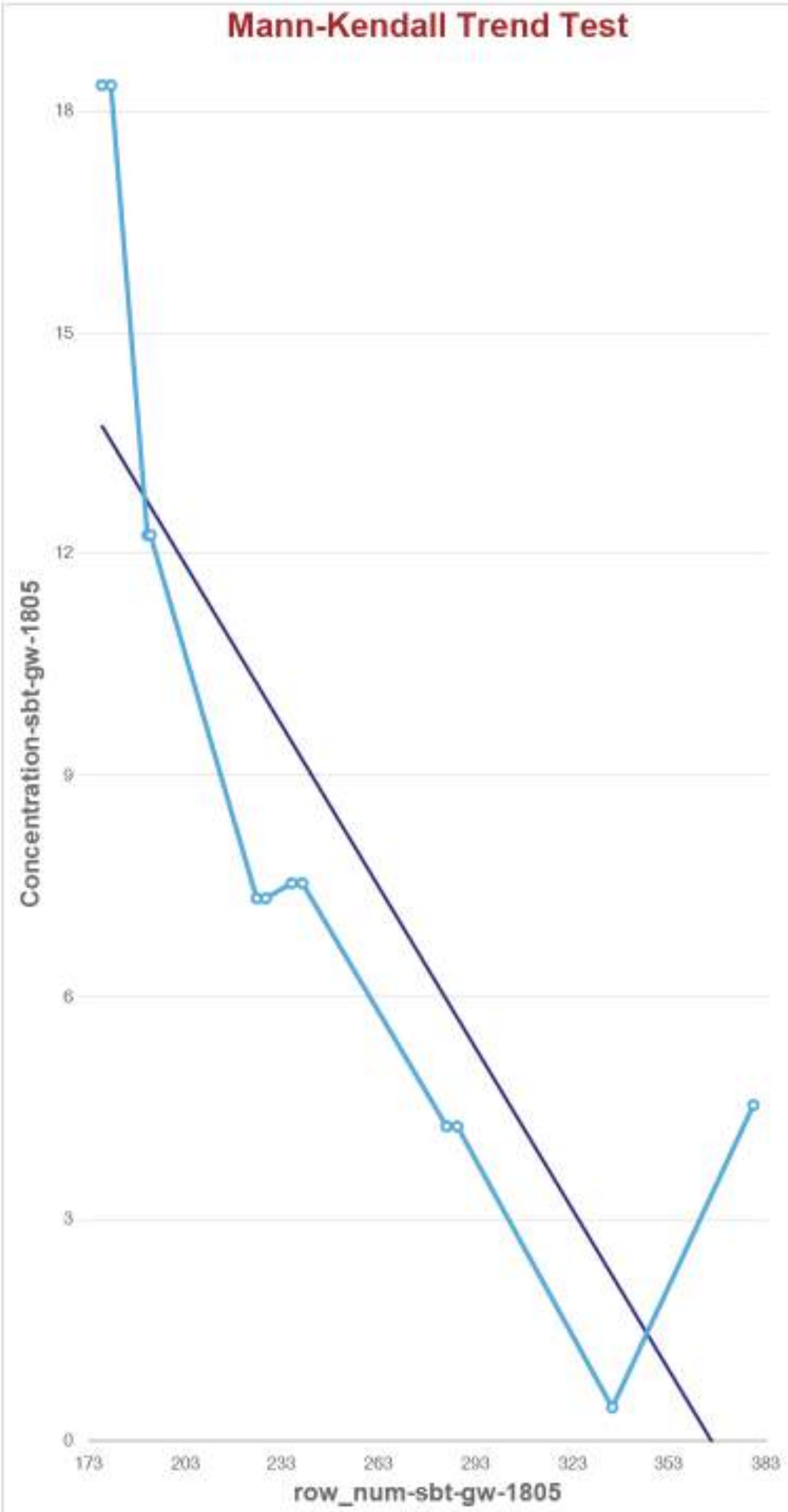
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	1.2720
M-K Test Value (S)	13
Tabulated p-value	0.1300
Approximate p-value	0.1017

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	3.2979

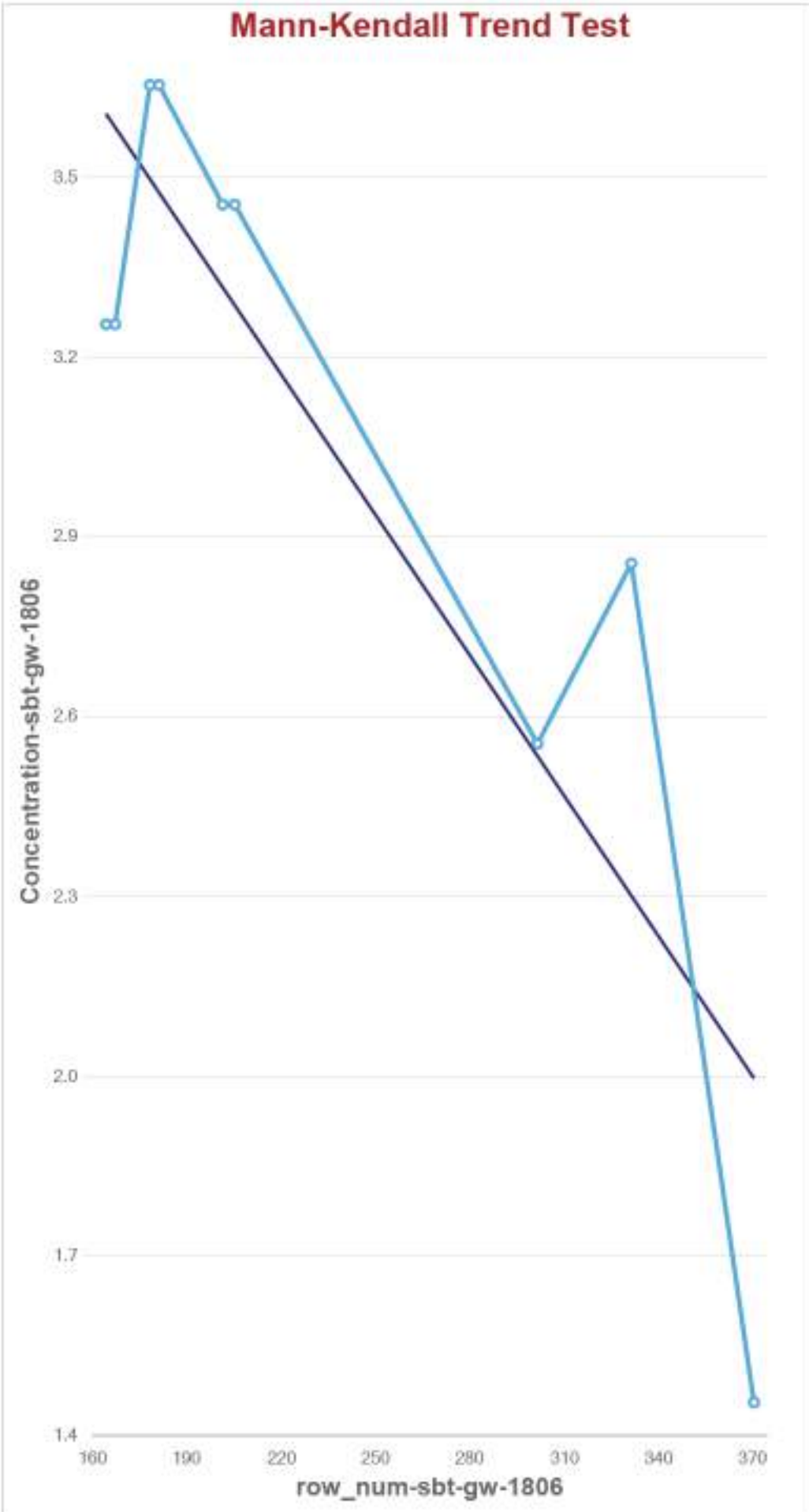
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4106
Standardized Value of S	-3.1921
M-K Test Value (S)	-47
Tabulated p-value	0.0000
Approximate p-value	0.0007

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0728
OLS Regression Intercept	26.6765

Statistically significant evidence of a decreasing trend at the specified level of significance.



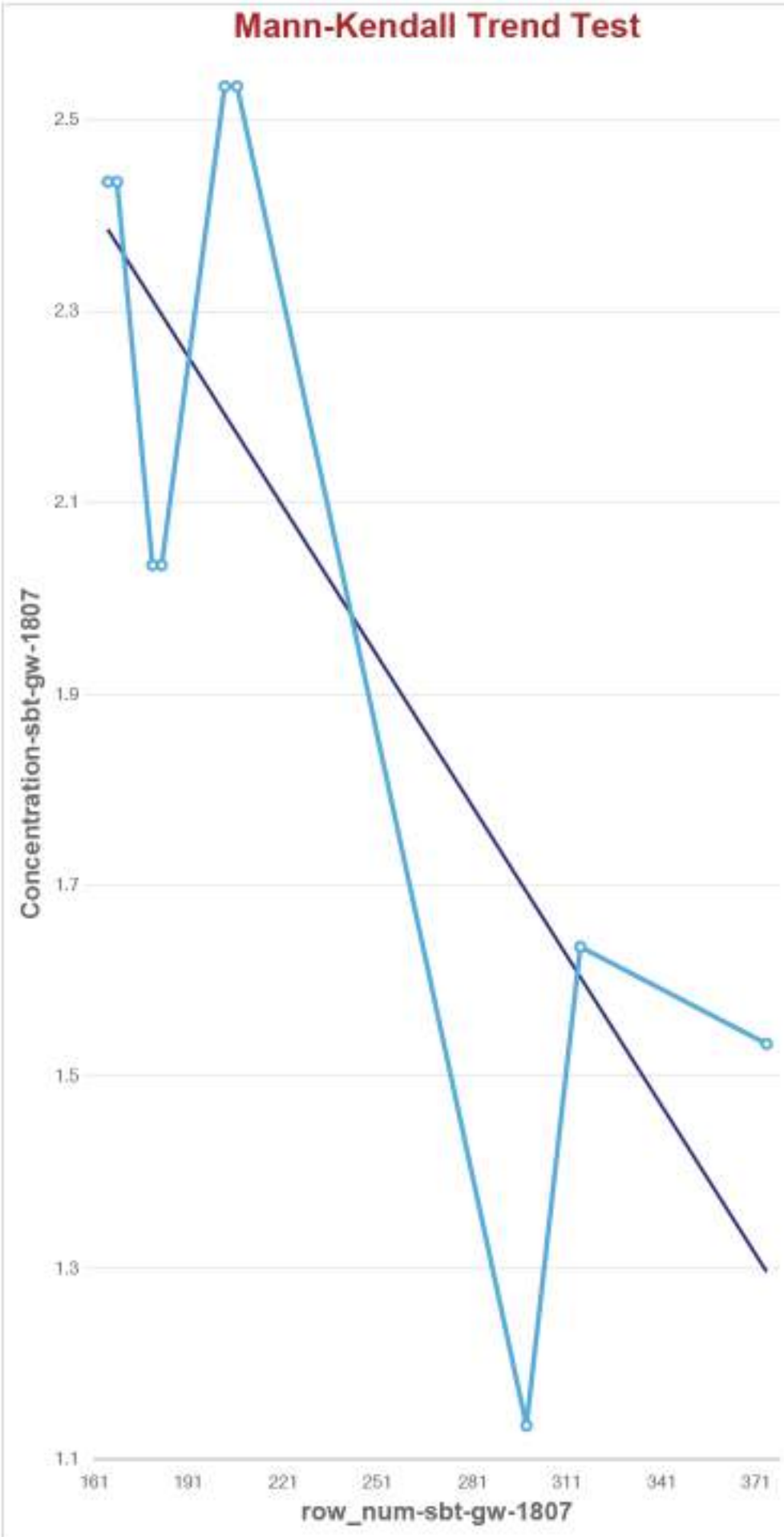
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-1.4840
M-K Test Value (S)	-15
Tabulated p-value	0.0900
Approximate p-value	0.0689

OLS Regression Line (Blue)

OLS Regression Slope	-0.0078
OLS Regression Intercept	4.9328

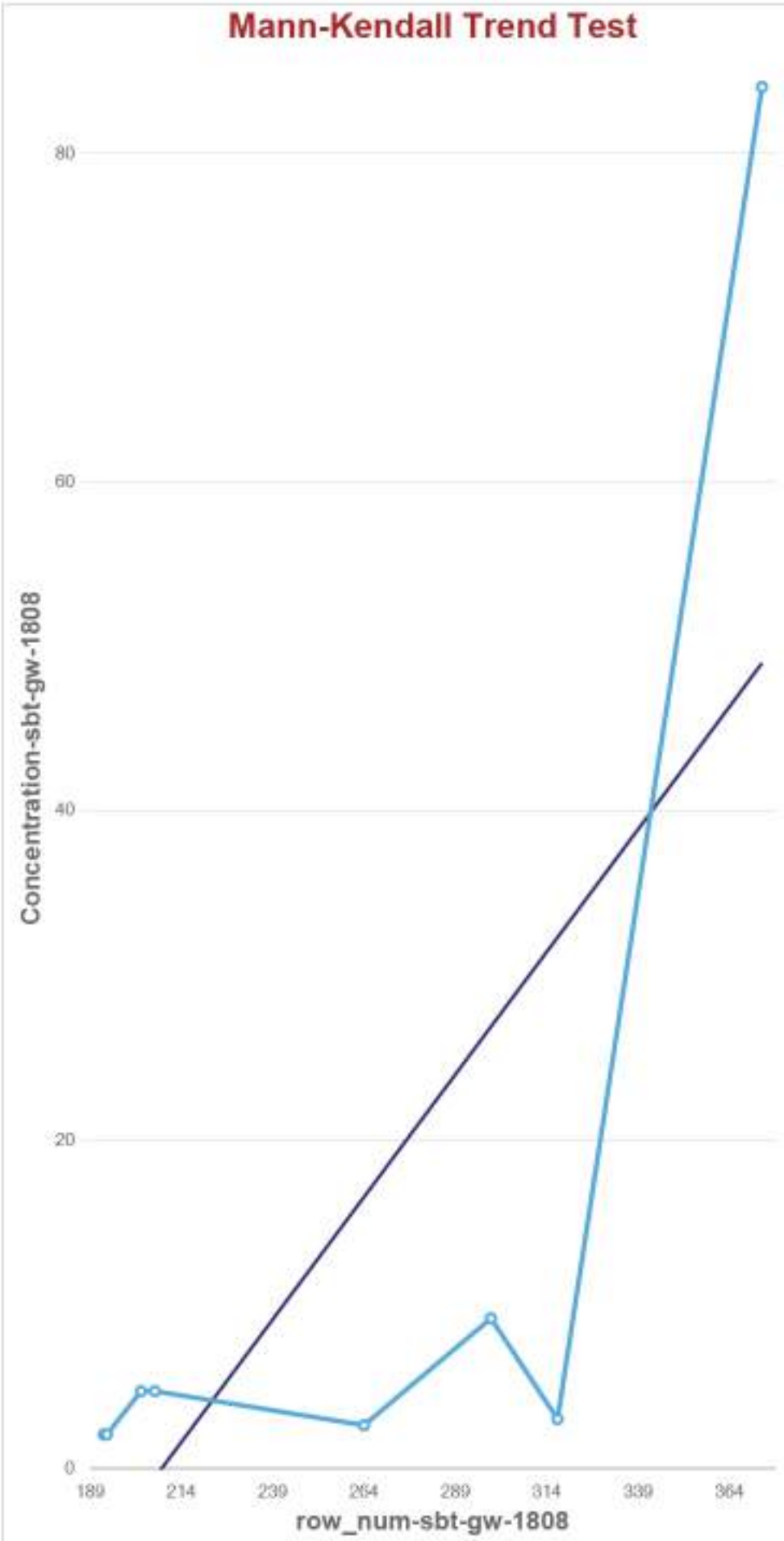
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-1.2720
M-K Test Value (S)	-13
Tabulated p-value	0.1300
Approximate p-value	0.1017

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0052
OLS Regression Intercept	3.2081

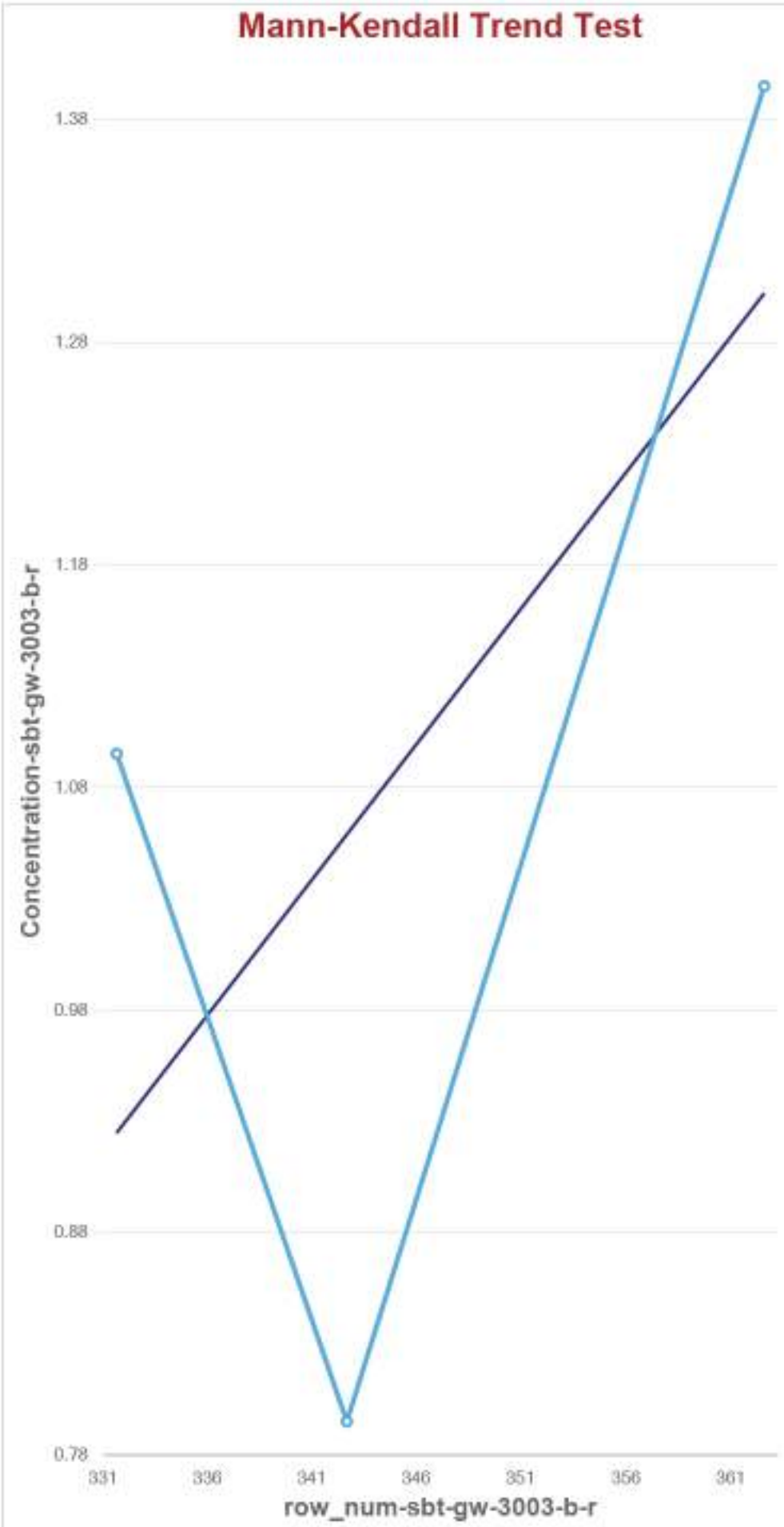
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9582
Standardized Value of S	1.8848
M-K Test Value (S)	16
Tabulated p-value	0.0310
Approximate p-value	0.0297

OLS Regression Line (Blue)	
OLS Regression Slope	0.2988
OLS Regression Intercept	-62.5617

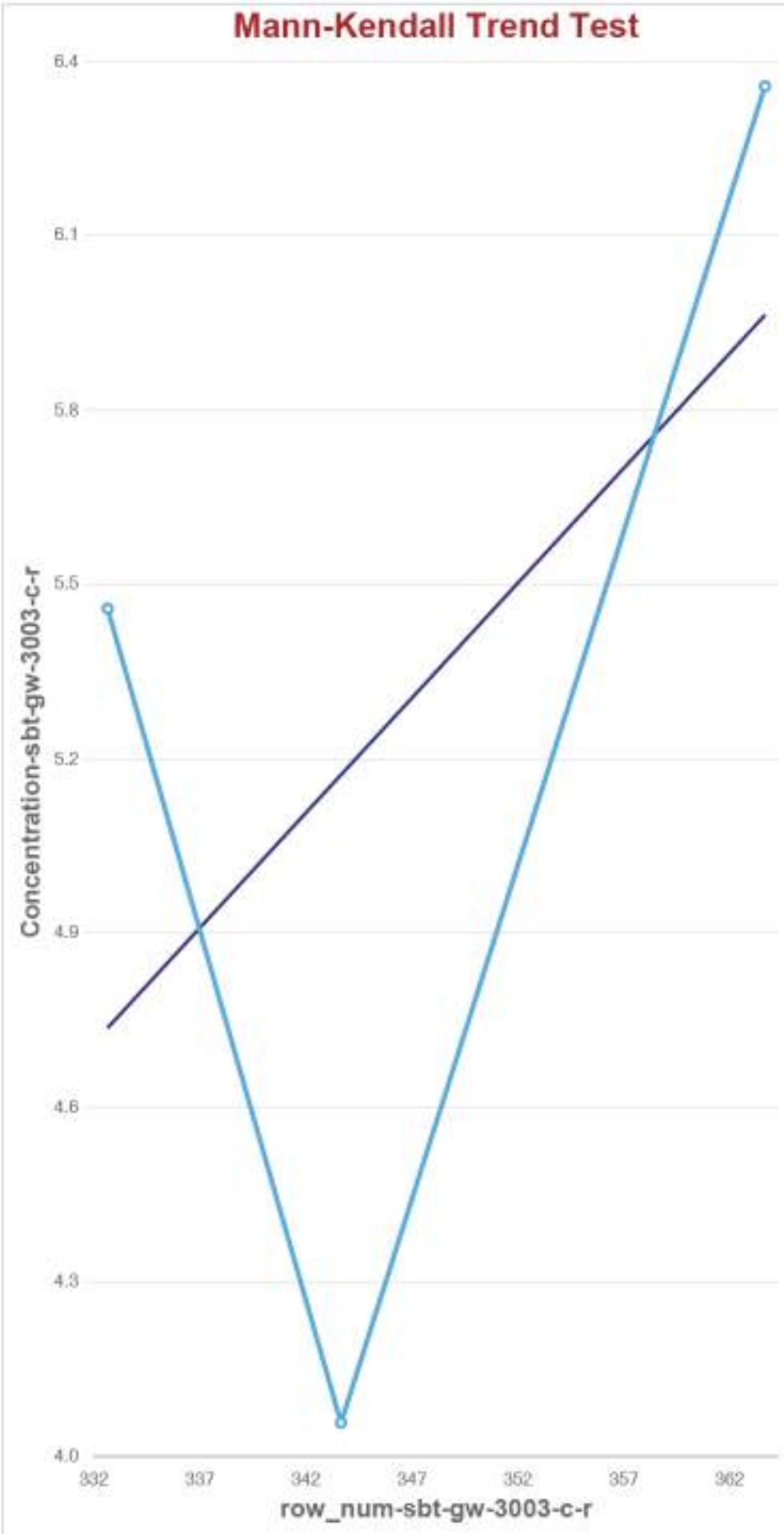
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0121
OLS Regression Intercept	-3.1024

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

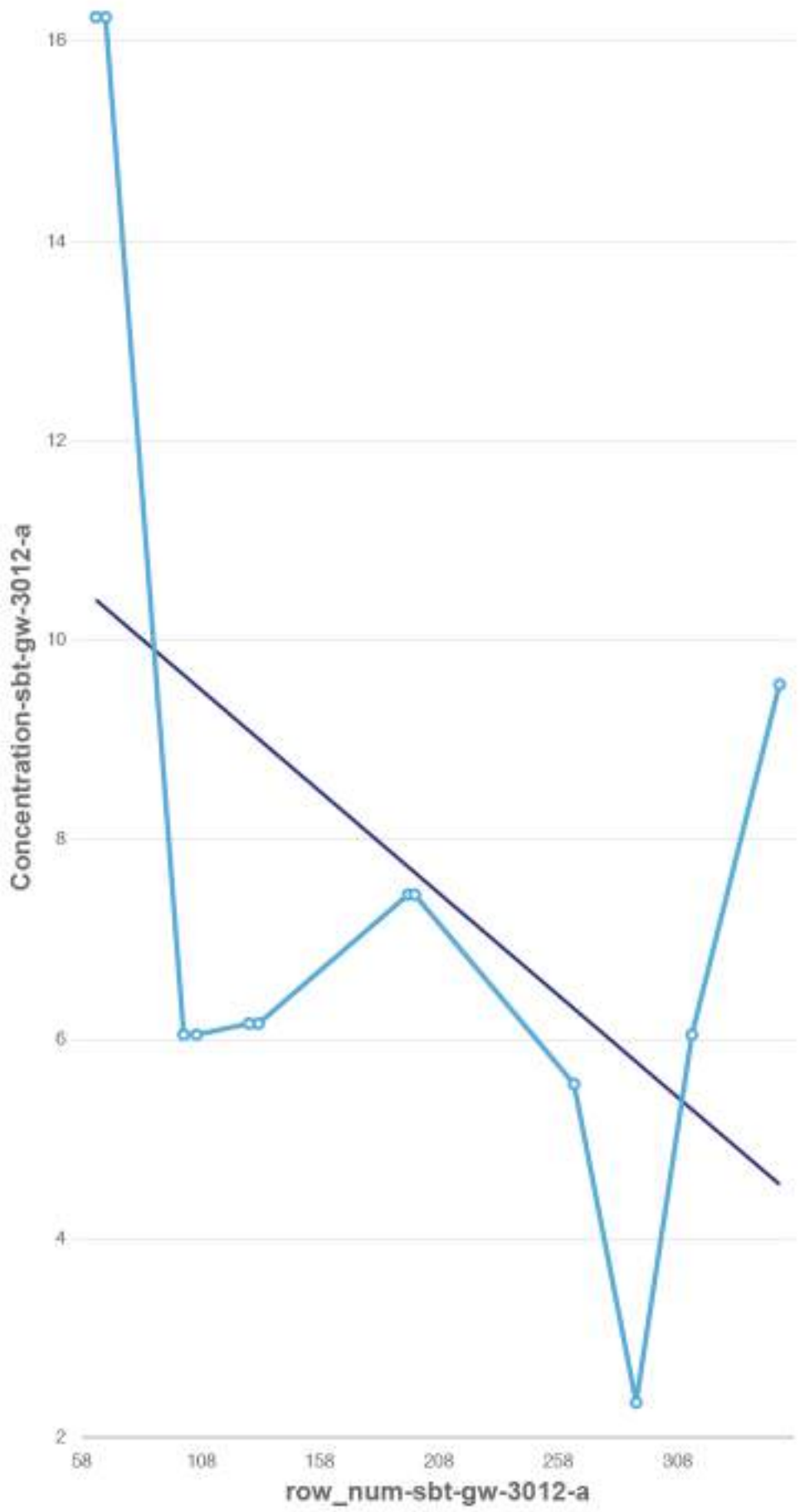
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	
Approximate p-value	0.5000

OLS Regression Line (Blue)

OLS Regression Slope	0.0395
OLS Regression Intercept	-8.3640

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

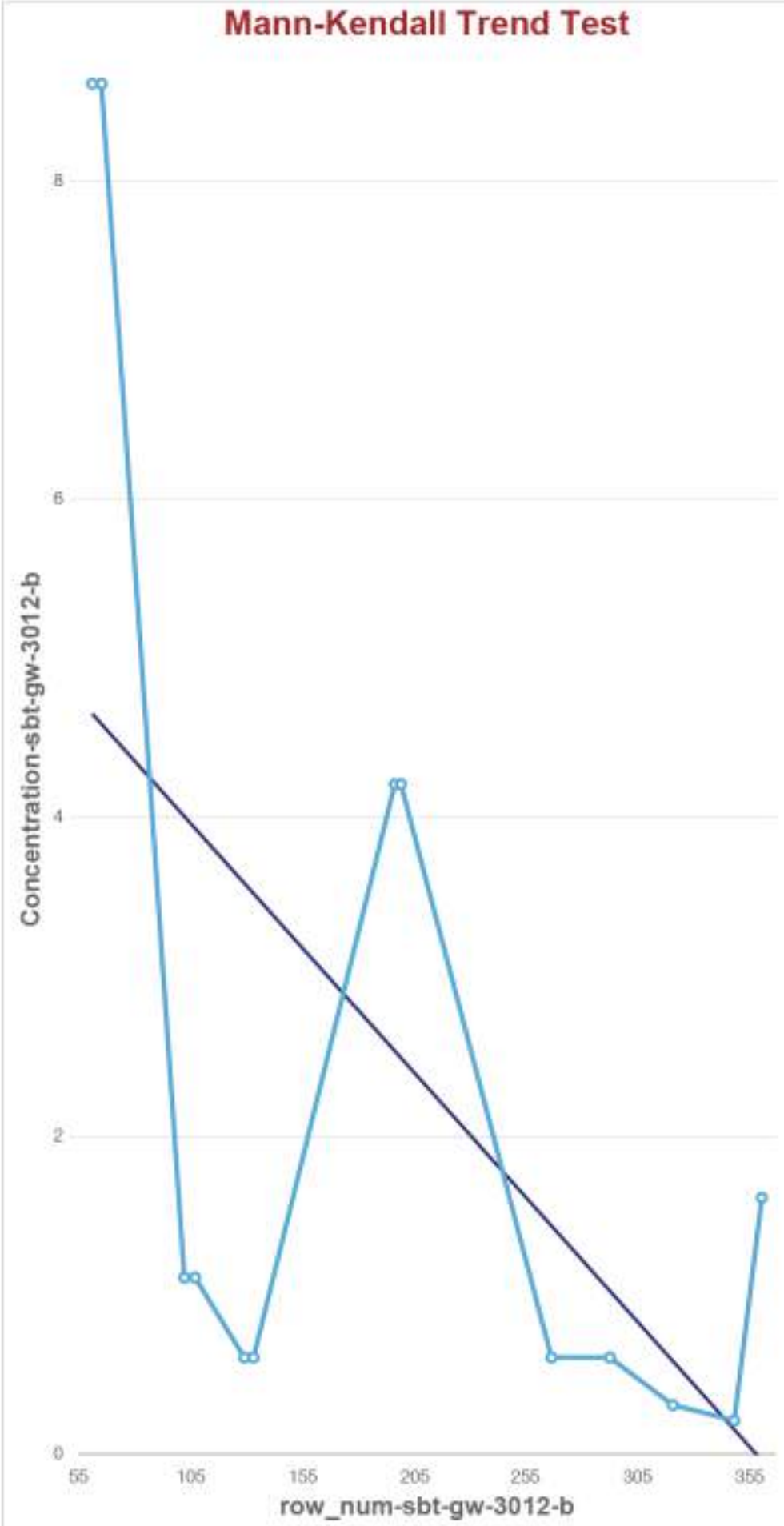


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.3527
Standardized Value of S	-0.9058
M-K Test Value (S)	-14
Tabulated p-value	0.1900
Approximate p-value	0.1825

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0204
OLS Regression Intercept	11.6618

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

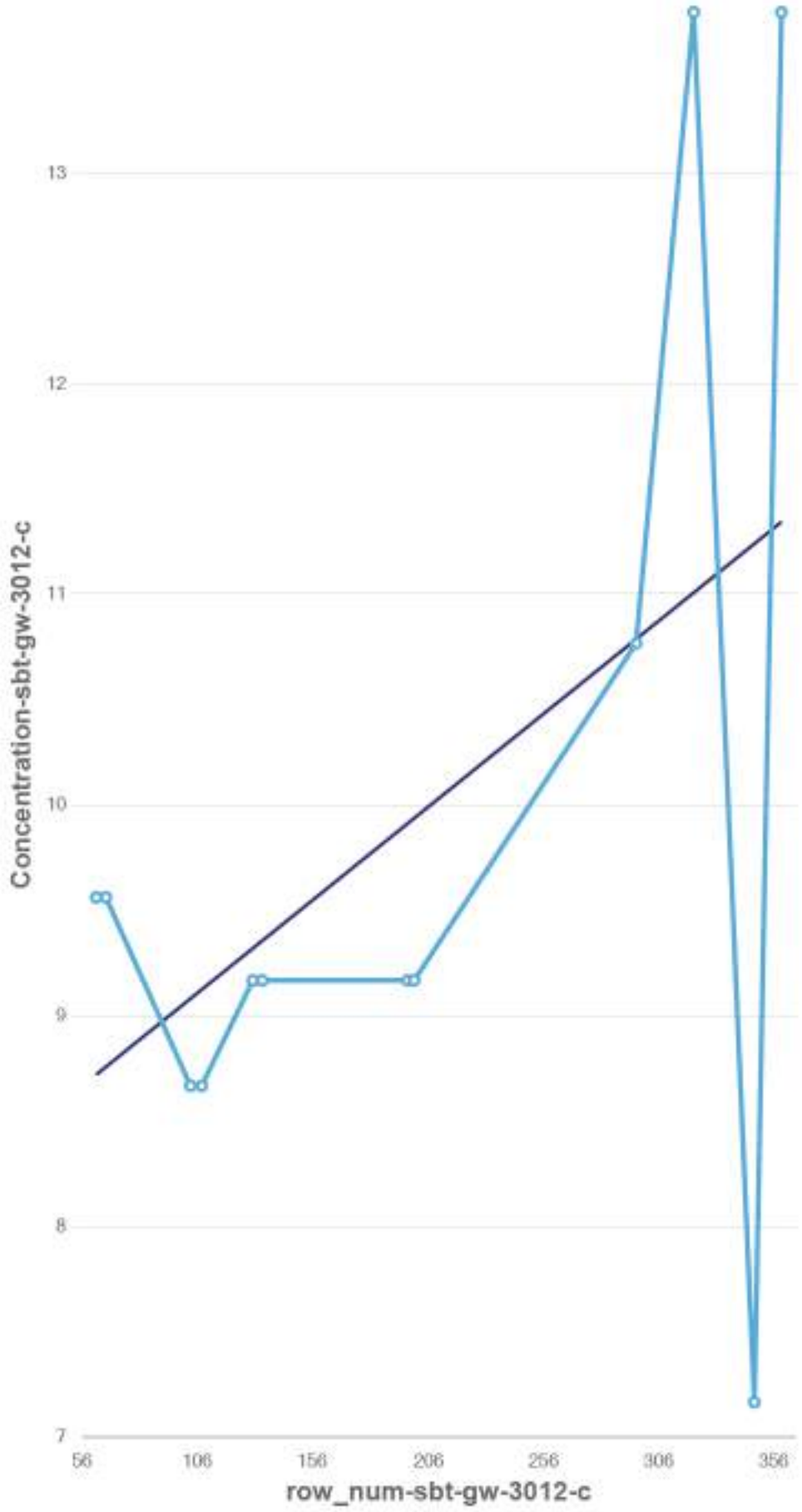


Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.0312
Standardized Value of S	-2.2456
M-K Test Value (S)	-37
Tabulated p-value	0.0150
Approximate p-value	0.0124

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0157
OLS Regression Intercept	5.4991

Statistically significant evidence of a decreasing trend at the specified level of significance.

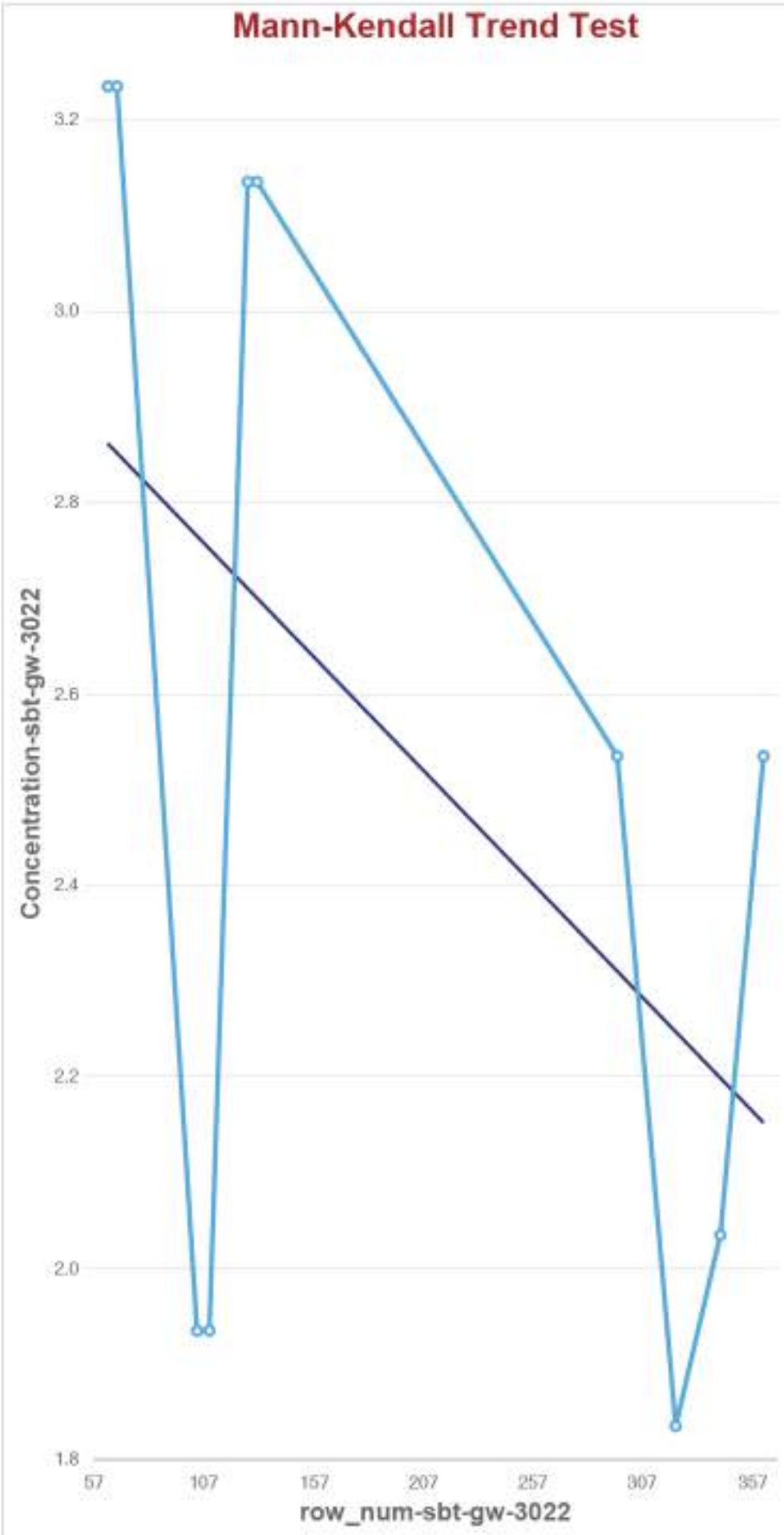
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.1774
Standardized Value of S	0.8464
M-K Test Value (S)	13
Tabulated p-value	0.2300
Approximate p-value	0.1987

OLS Regression Line (Blue)	
OLS Regression Slope	0.0088
OLS Regression Intercept	8.4047

Insufficient statistical evidence of a significant trend at the specified level of significance.

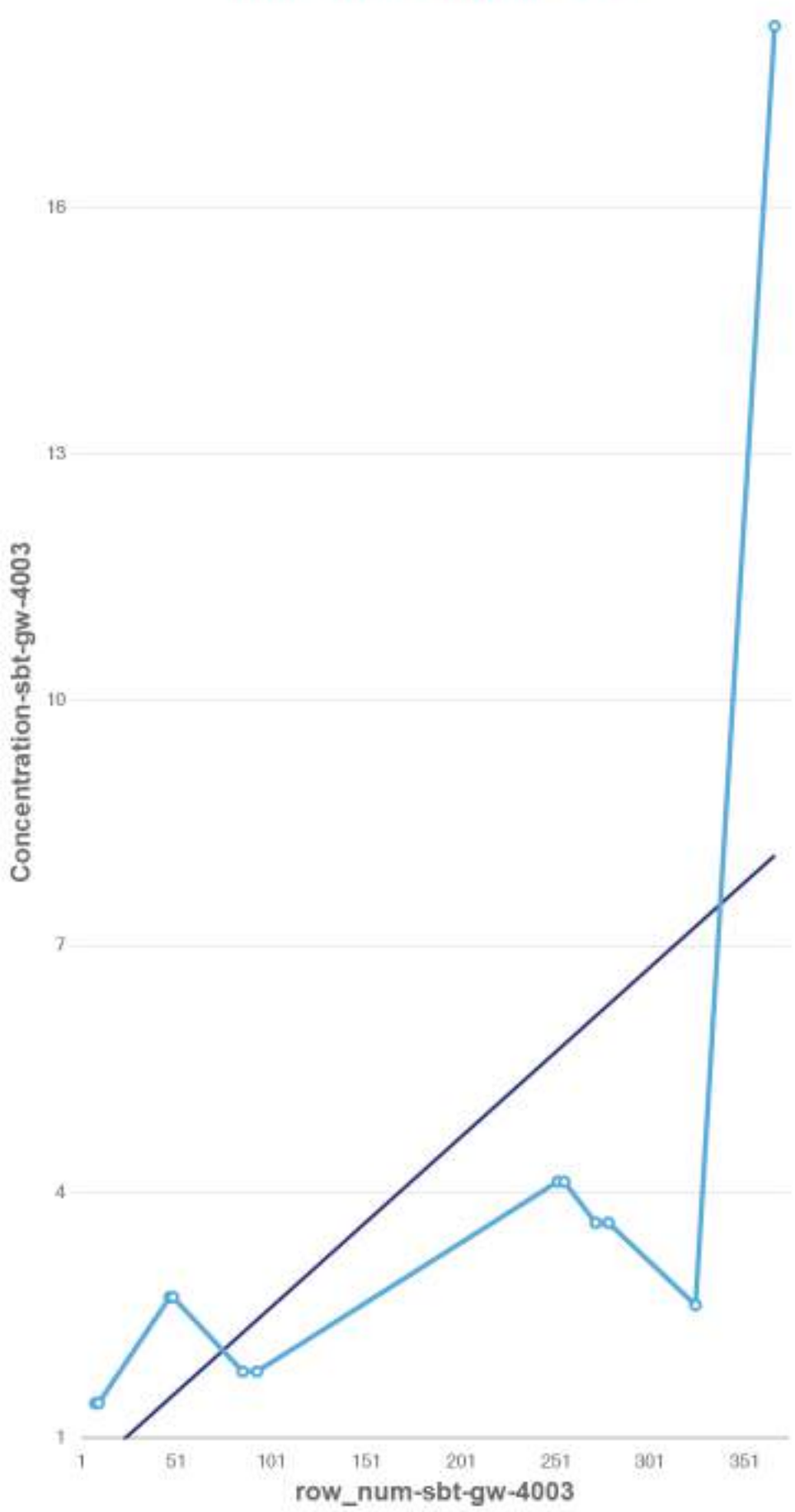


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-1.2727
M-K Test Value (S)	-15
Tabulated p-value	0.1080
Approximate p-value	0.1016

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0024
OLS Regression Intercept	2.9753

Insufficient statistical evidence of a significant trend at the specified level of significance.

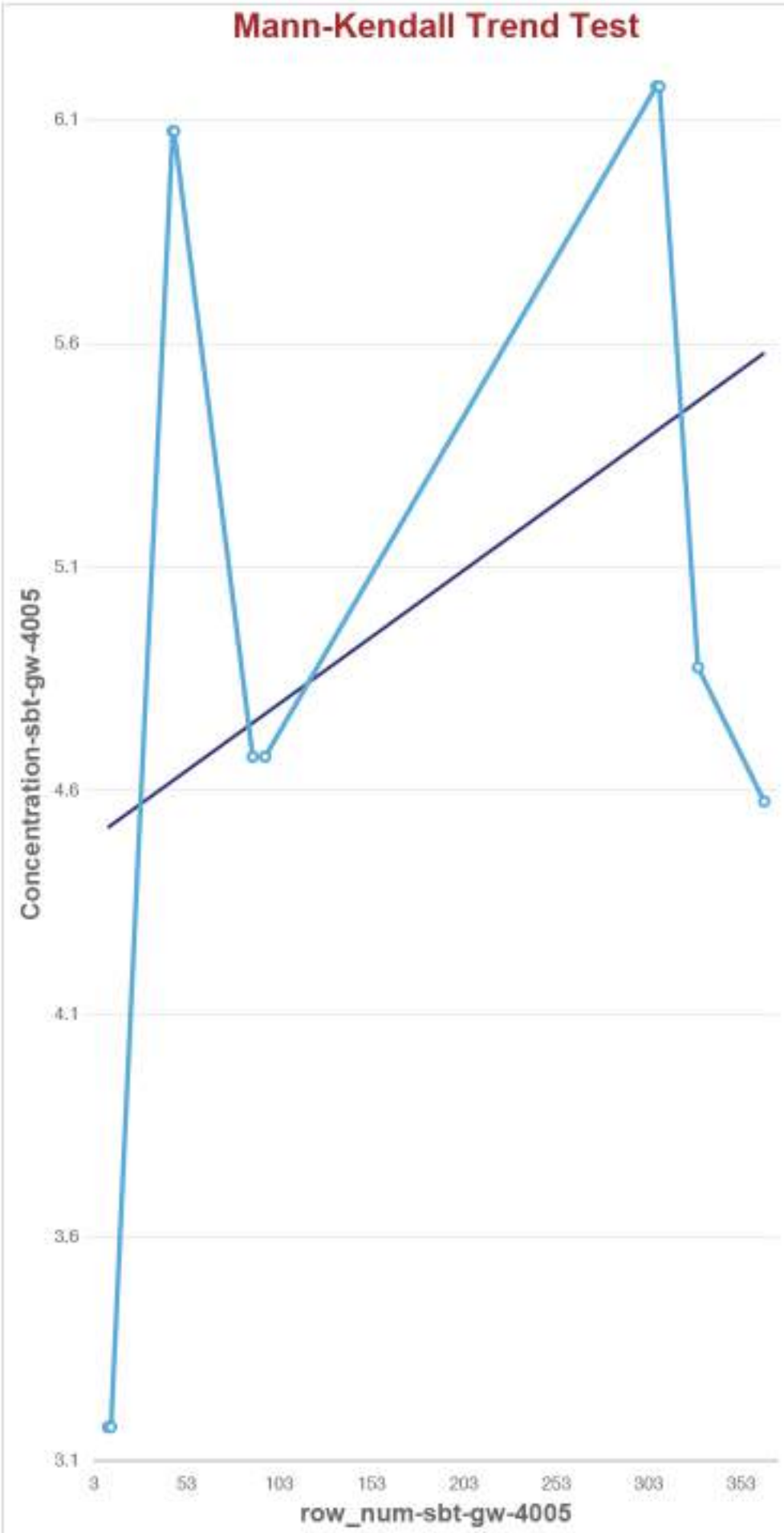
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4106
Standardized Value of S	2.2206
M-K Test Value (S)	33
Tabulated p-value	0.0160
Approximate p-value	0.0132

OLS Regression Line (Blue)	
OLS Regression Slope	0.0208
OLS Regression Intercept	0.0434

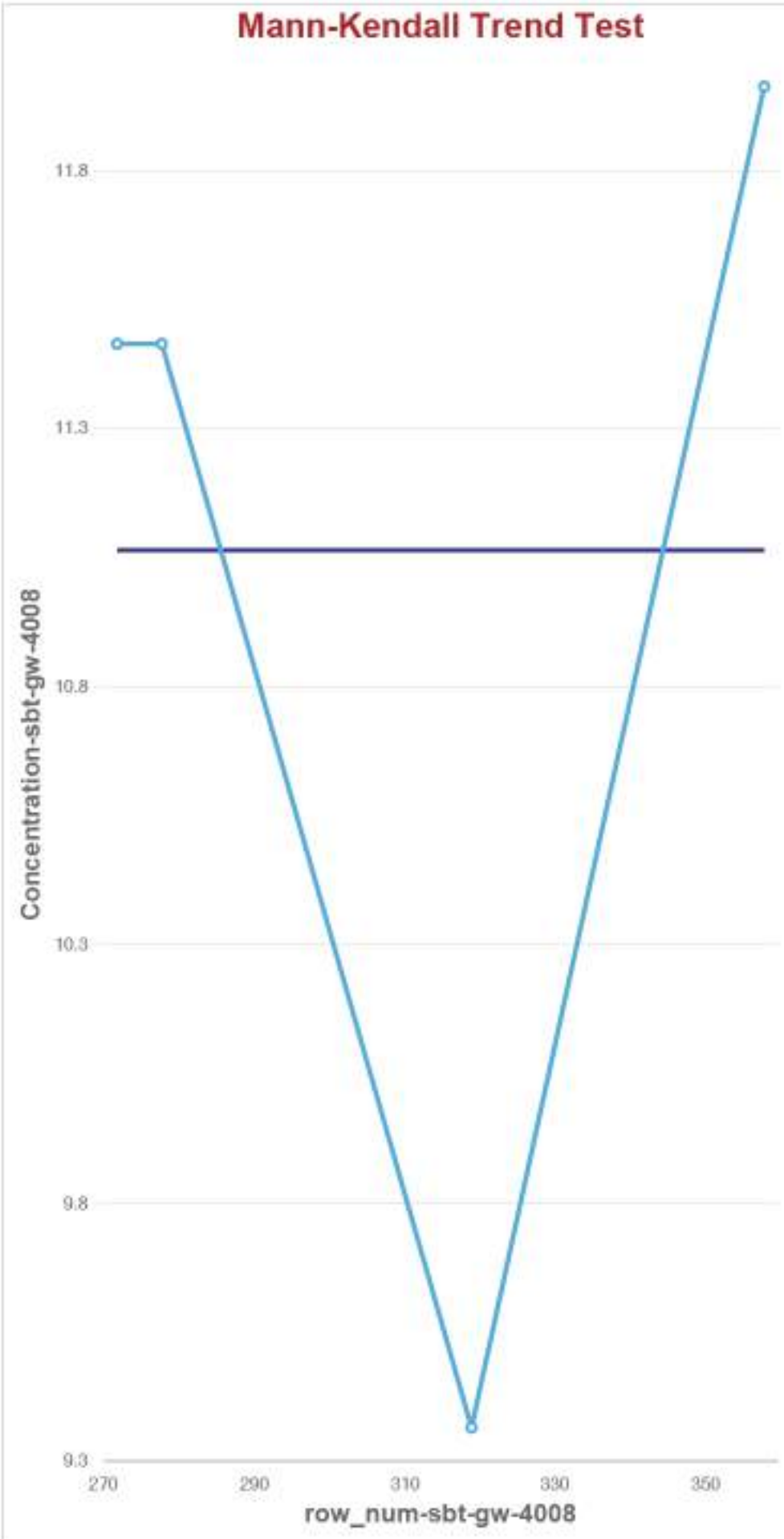
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	0.9091
M-K Test Value (S)	11
Tabulated p-value	0.1900
Approximate p-value	0.1817

OLS Regression Line (Blue)	
OLS Regression Slope	0.0030
OLS Regression Intercept	4.5099

Insufficient statistical evidence of a significant trend at the specified level of significance.



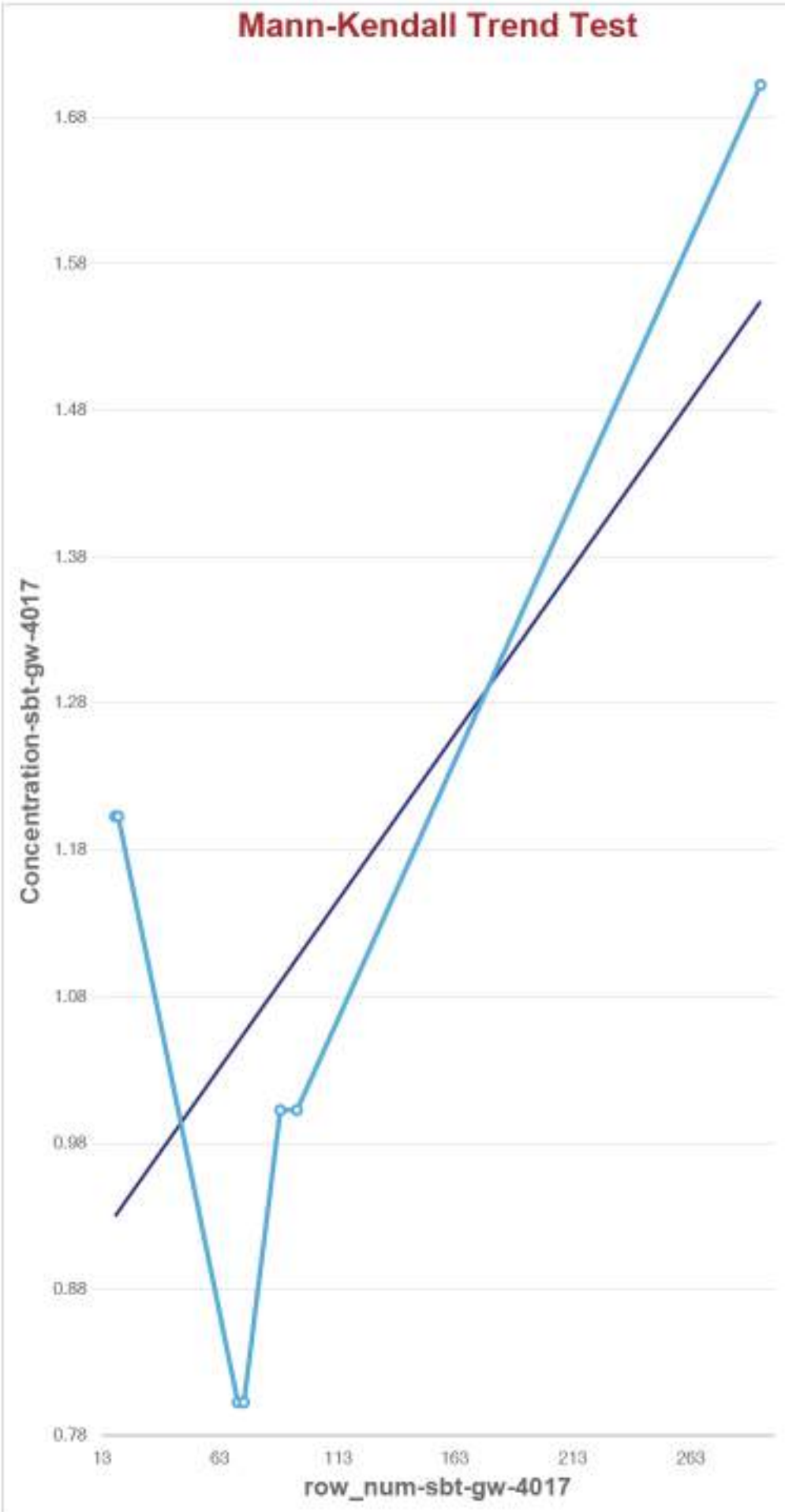
Mann-Kendall Trend Analysis

n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.6250
Approximate p-value	0.5000

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	11.1064

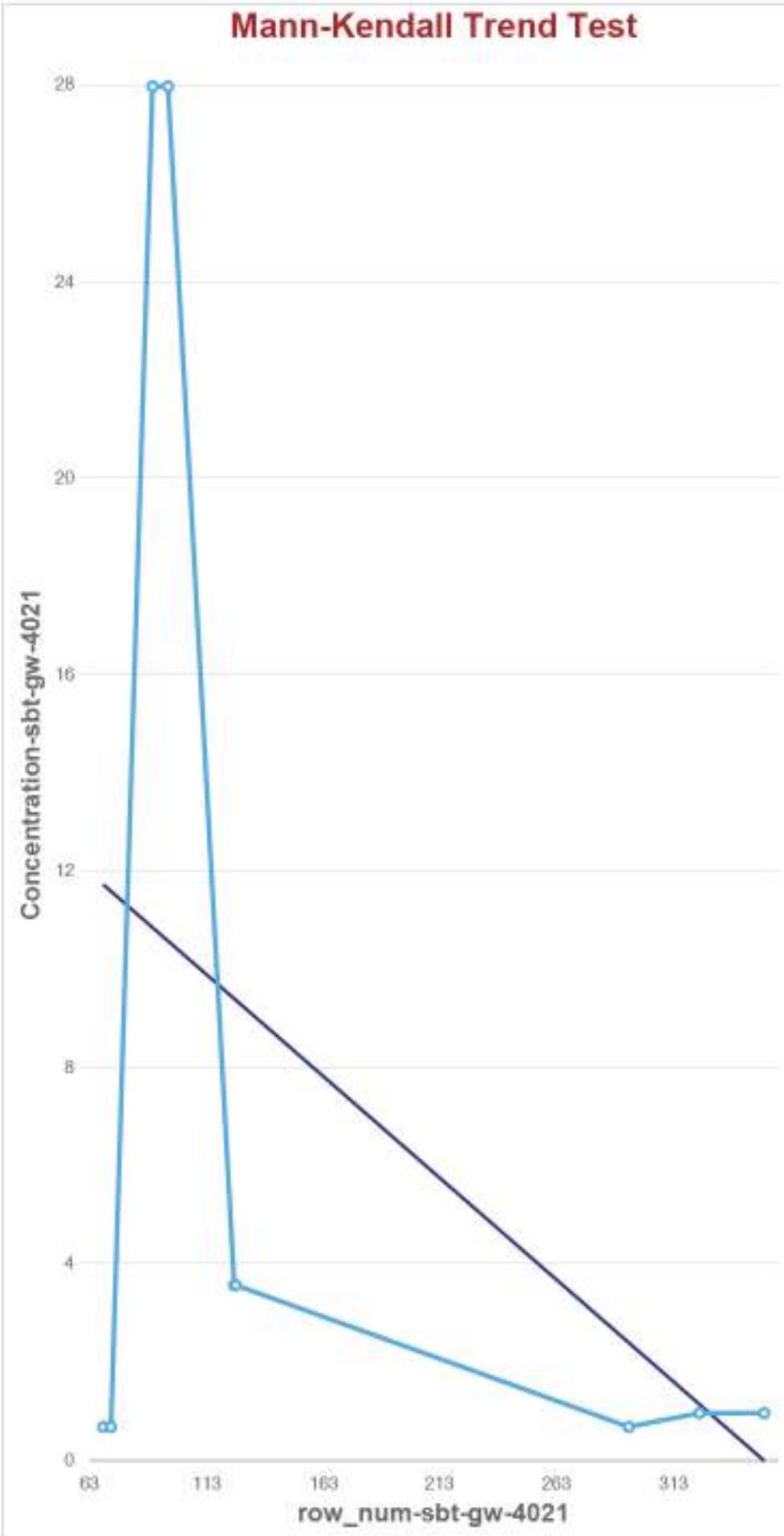
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	0.1555
M-K Test Value (S)	2
Tabulated p-value	0.3860
Approximate p-value	0.4382

OLS Regression Line (Blue)	
OLS Regression Slope	0.0023
OLS Regression Intercept	0.8845

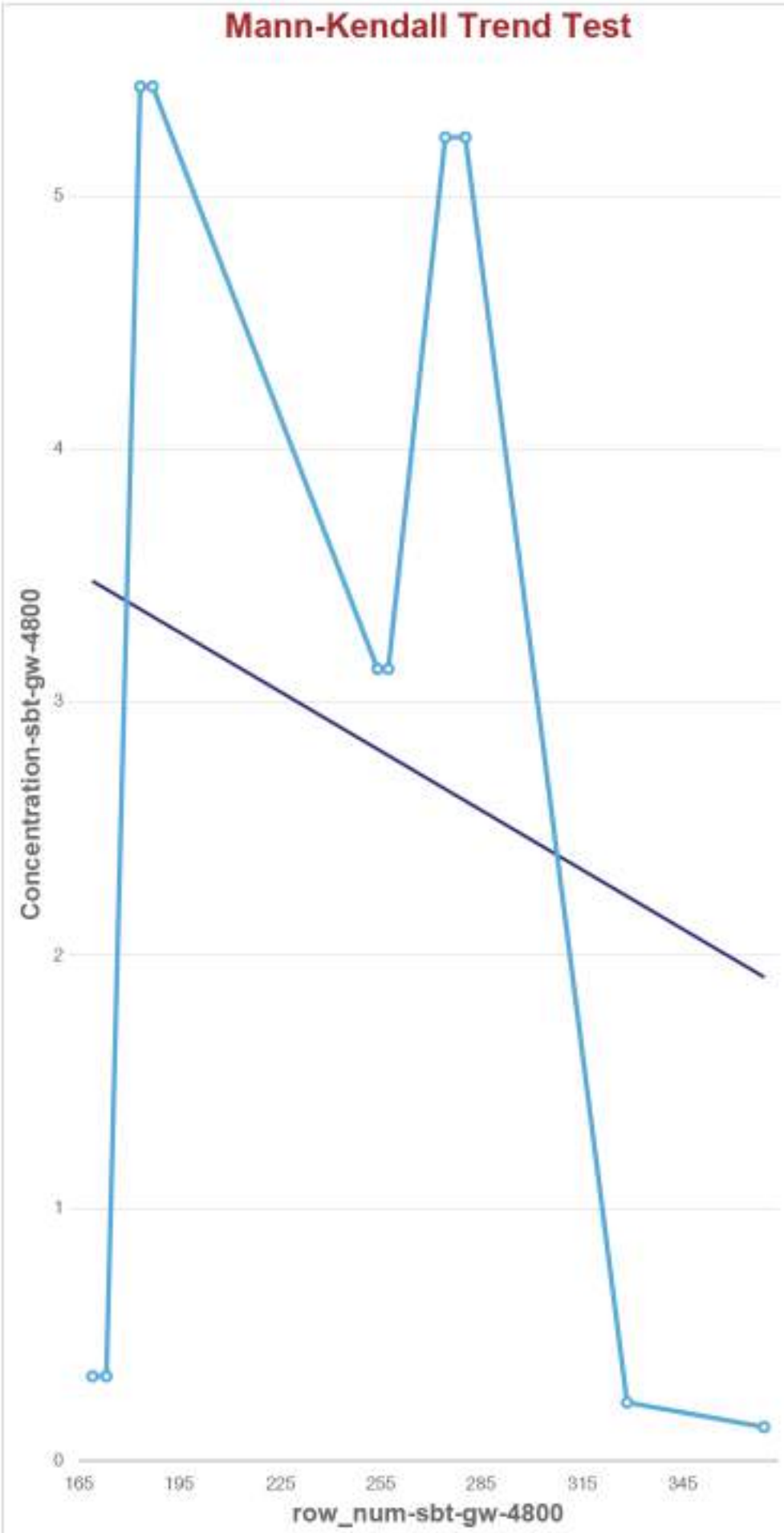
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.2376
Standardized Value of S	-0.1083
M-K Test Value (S)	-2
Tabulated p-value	0.4600
Approximate p-value	0.4569

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0415
OLS Regression Intercept	14.9118

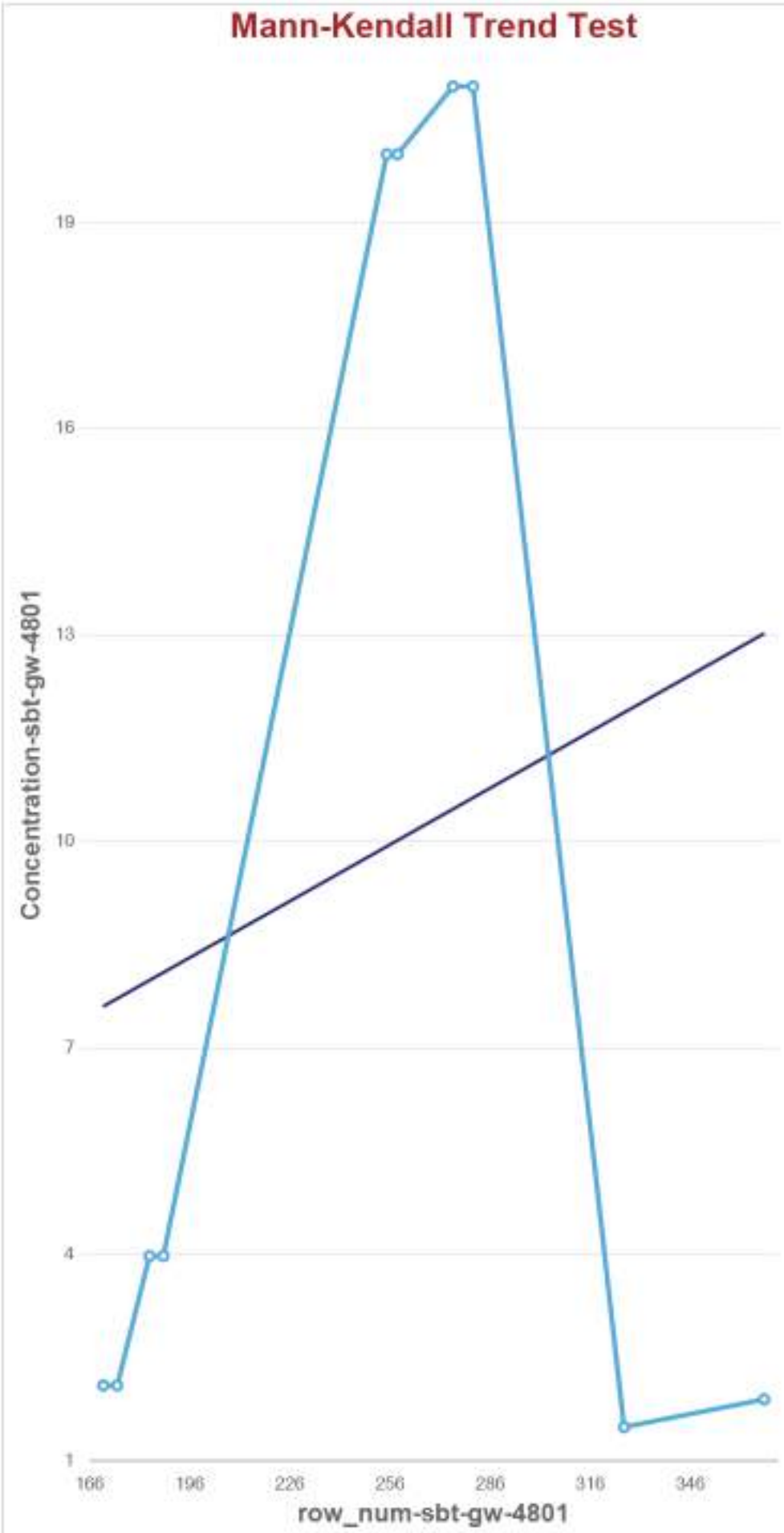
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-0.7273
M-K Test Value (S)	-9
Tabulated p-value	0.2420
Approximate p-value	0.2335

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0078
OLS Regression Intercept	5.0633

Insufficient statistical evidence of a significant trend at the specified level of significance.



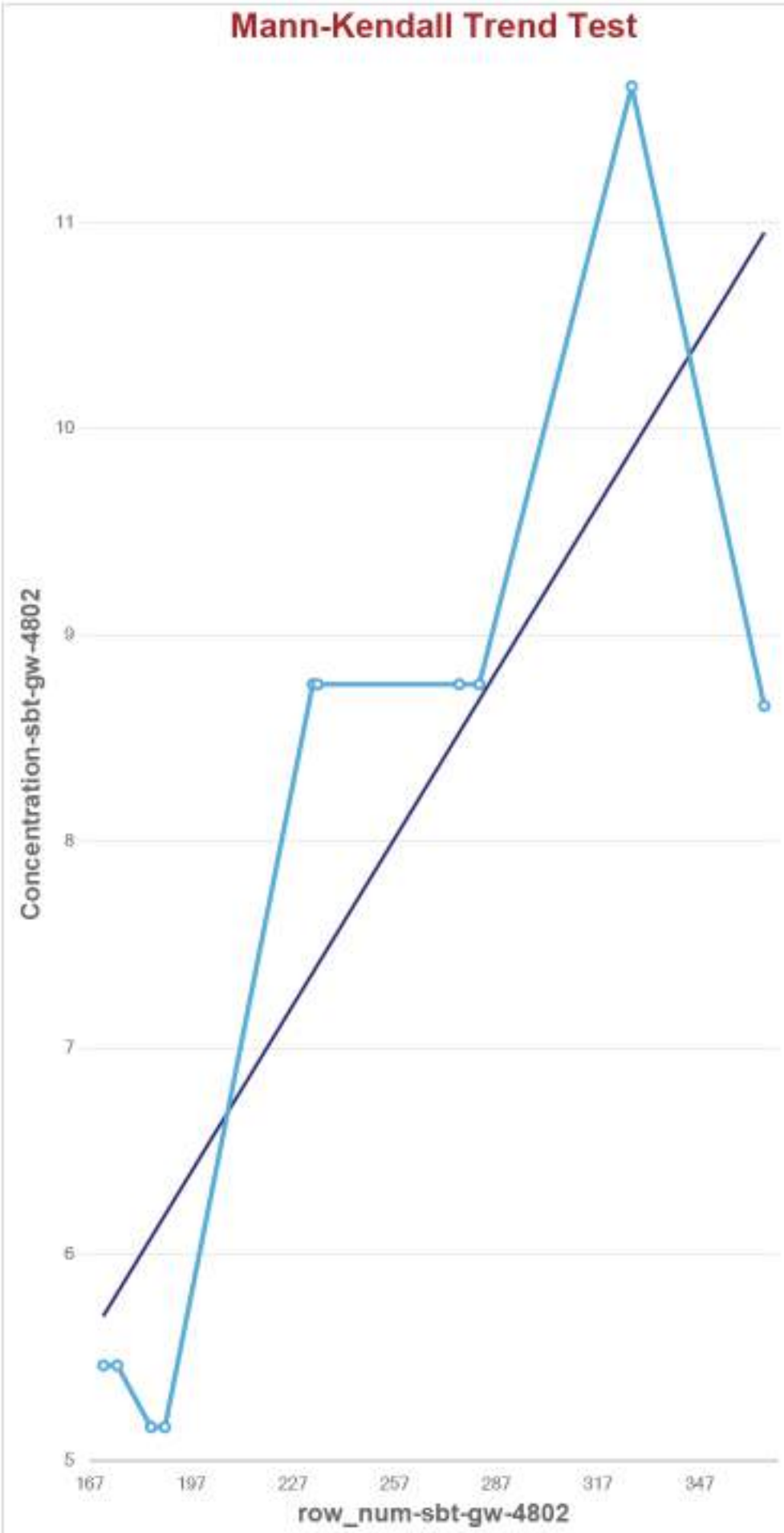
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	0.7273
M-K Test Value (S)	9
Tabulated p-value	0.2420
Approximate p-value	0.2335

OLS Regression Line (Blue)

OLS Regression Slope	0.0273
OLS Regression Intercept	2.6866

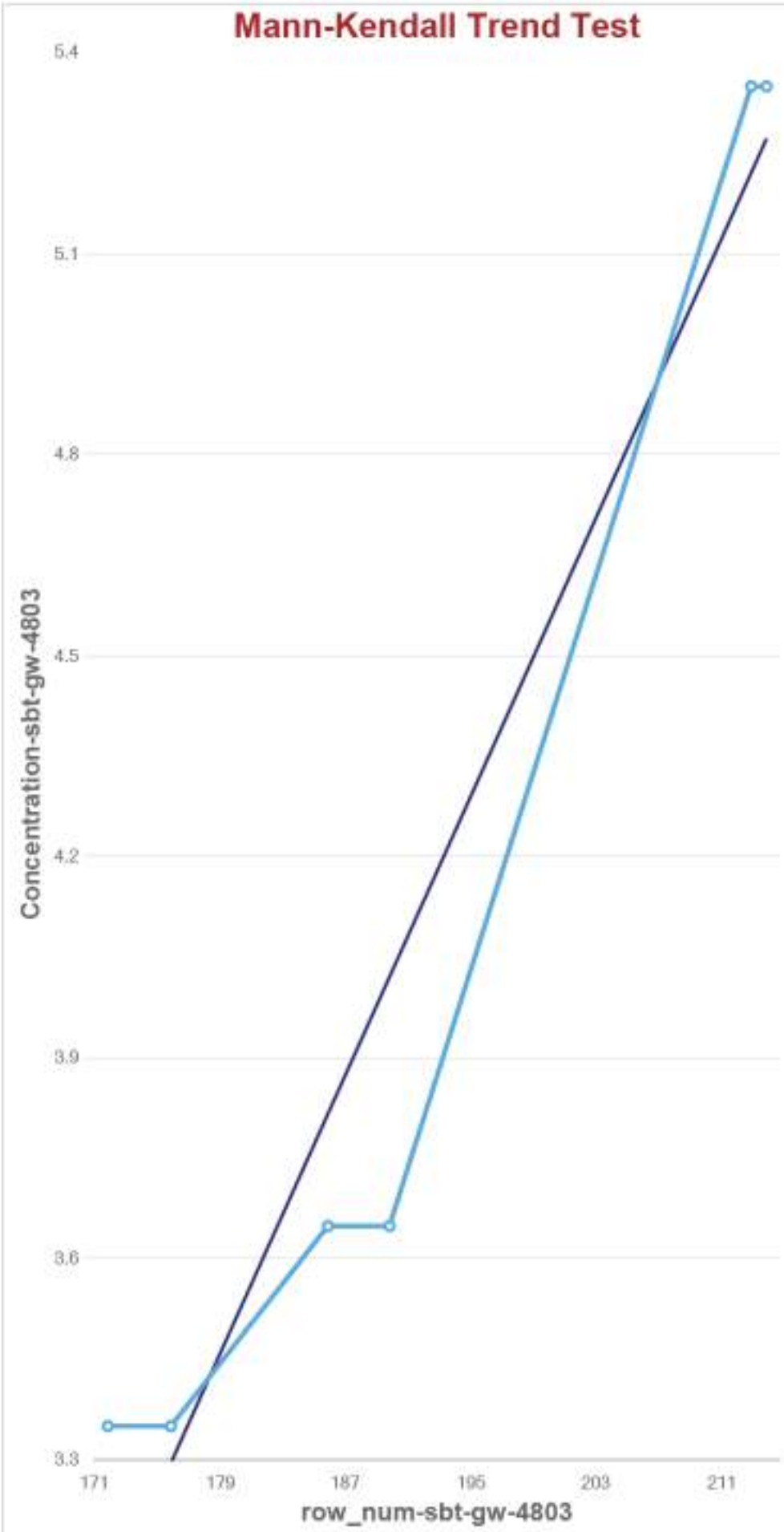
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6927
Standardized Value of S	1.6834
M-K Test Value (S)	19
Tabulated p-value	0.0540
Approximate p-value	0.0461

OLS Regression Line (Blue)	
OLS Regression Slope	0.0269
OLS Regression Intercept	1.4367

Insufficient statistical evidence of a significant trend at the specified level of significance.



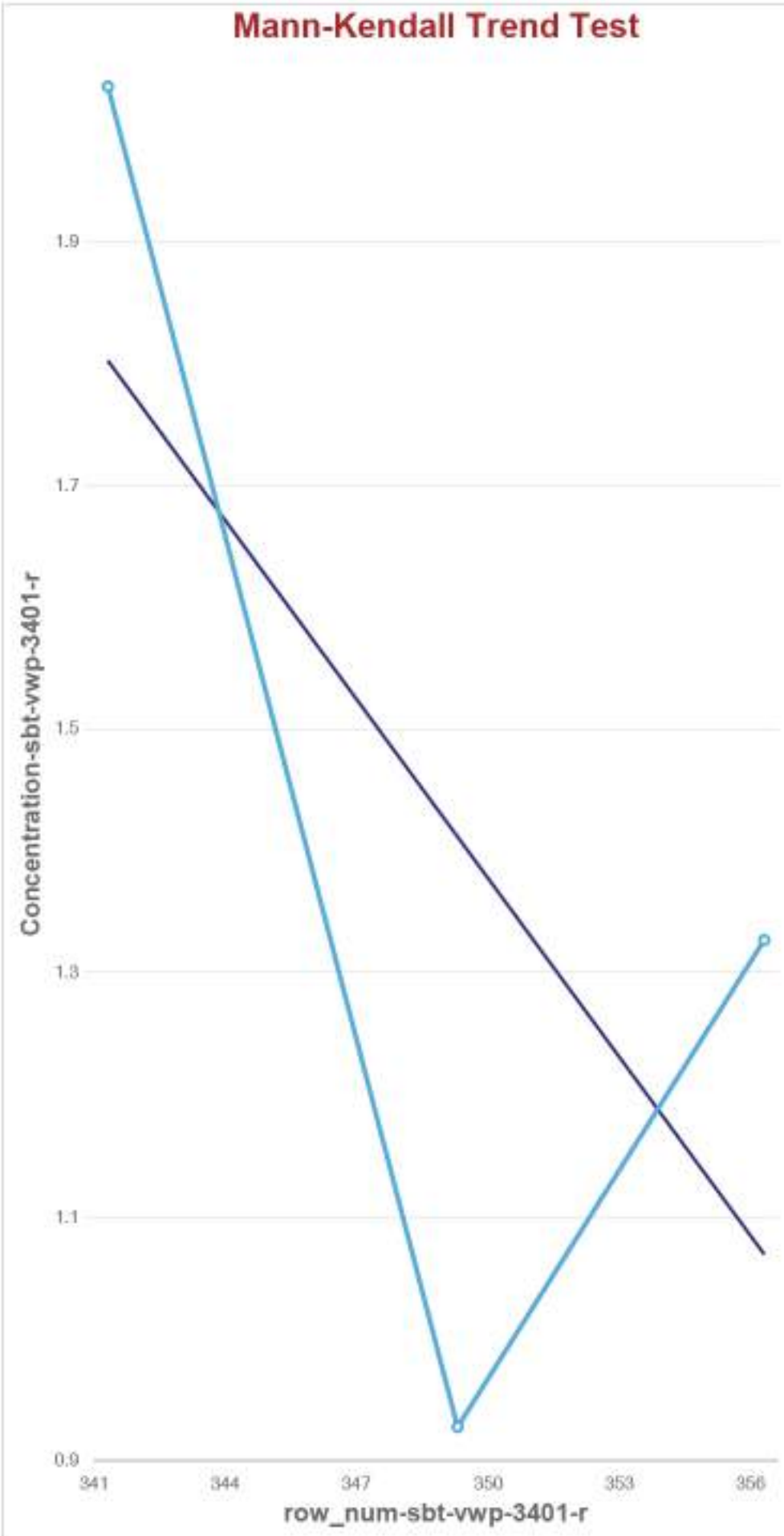
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	2.1855
M-K Test Value (S)	12
Tabulated p-value	0.0080
Approximate p-value	0.0144

OLS Regression Line (Blue)

OLS Regression Slope	0.0521
OLS Regression Intercept	-5.8185

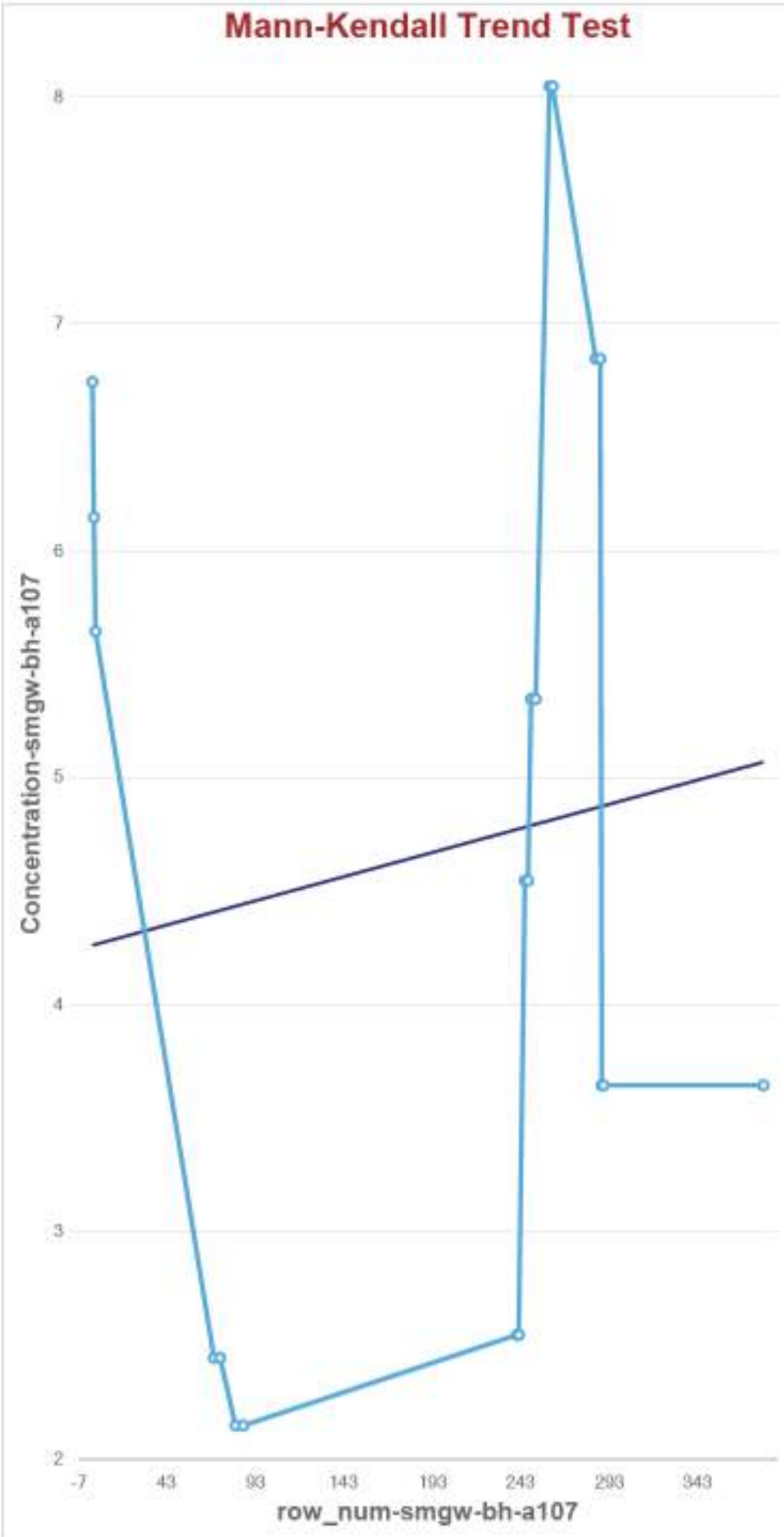
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0488
OLS Regression Intercept	18.4207

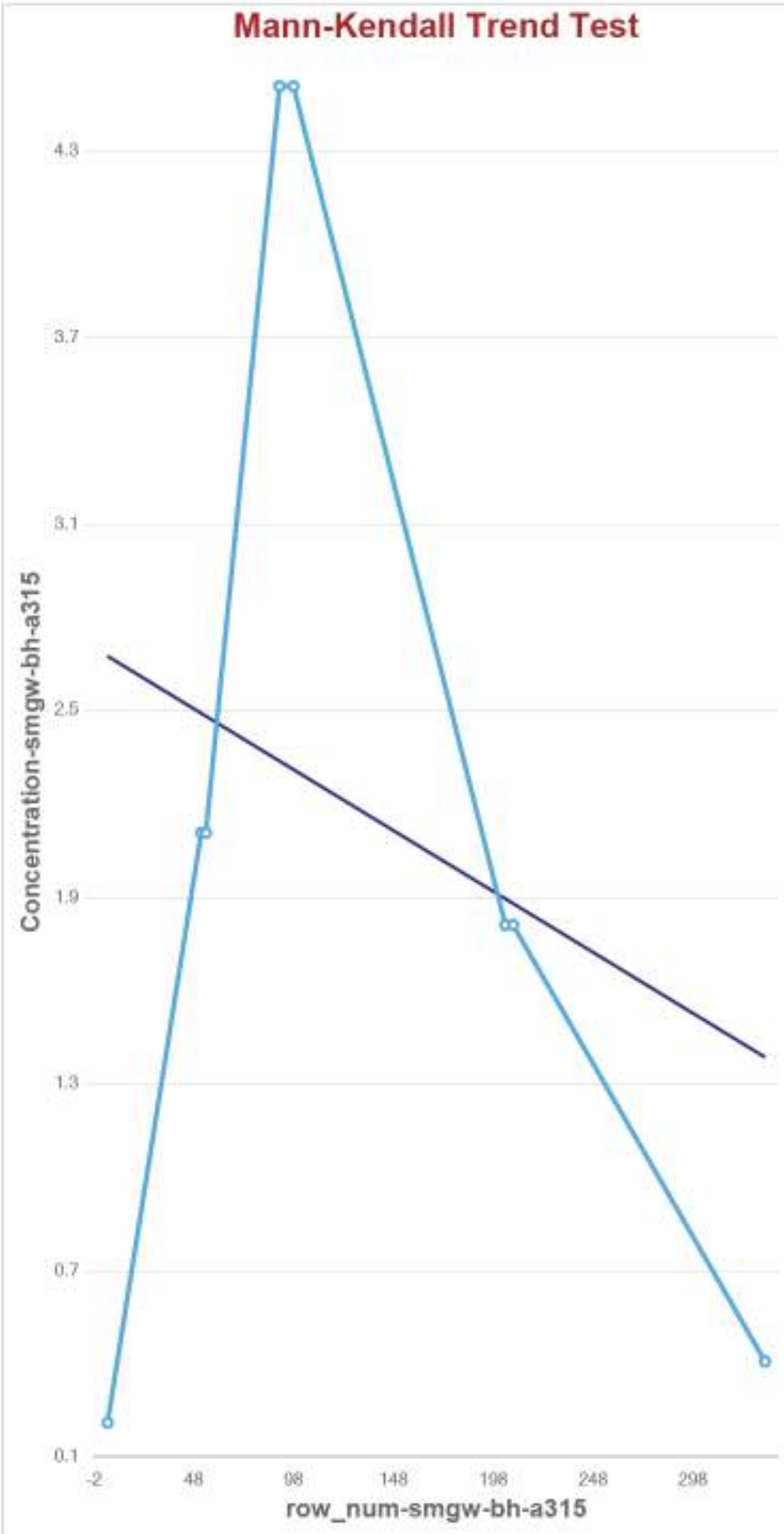
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6485
Standardized Value of S	1.0115
M-K Test Value (S)	32
Tabulated p-value	0.1590
Approximate p-value	0.1559

OLS Regression Line (Blue)	
OLS Regression Slope	0.0021
OLS Regression Intercept	4.1108

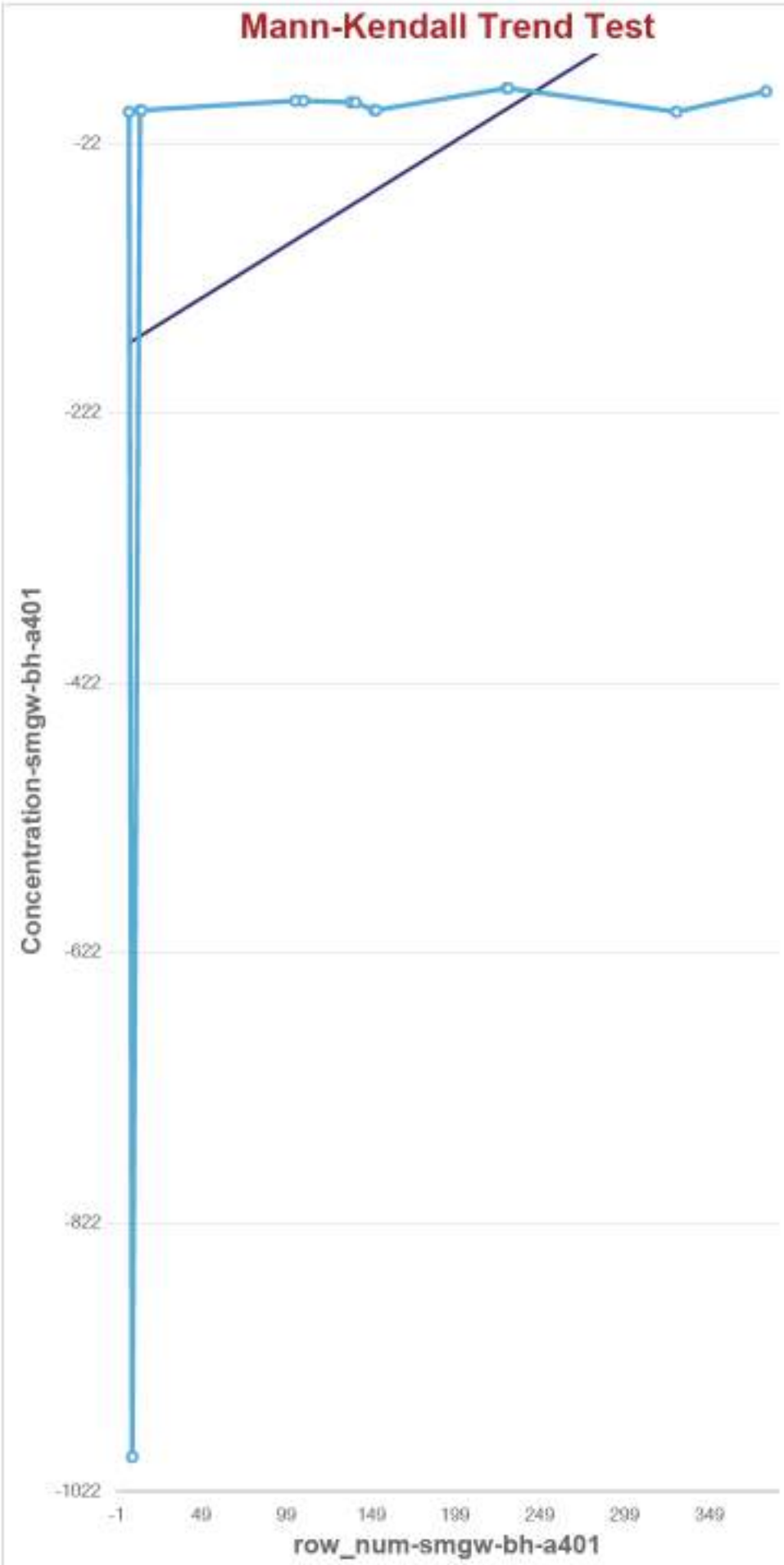
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.8951
Standardized Value of S	-0.2533
M-K Test Value (S)	-3
Tabulated p-value	0.4520
Approximate p-value	0.4000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0039
OLS Regression Intercept	2.6869

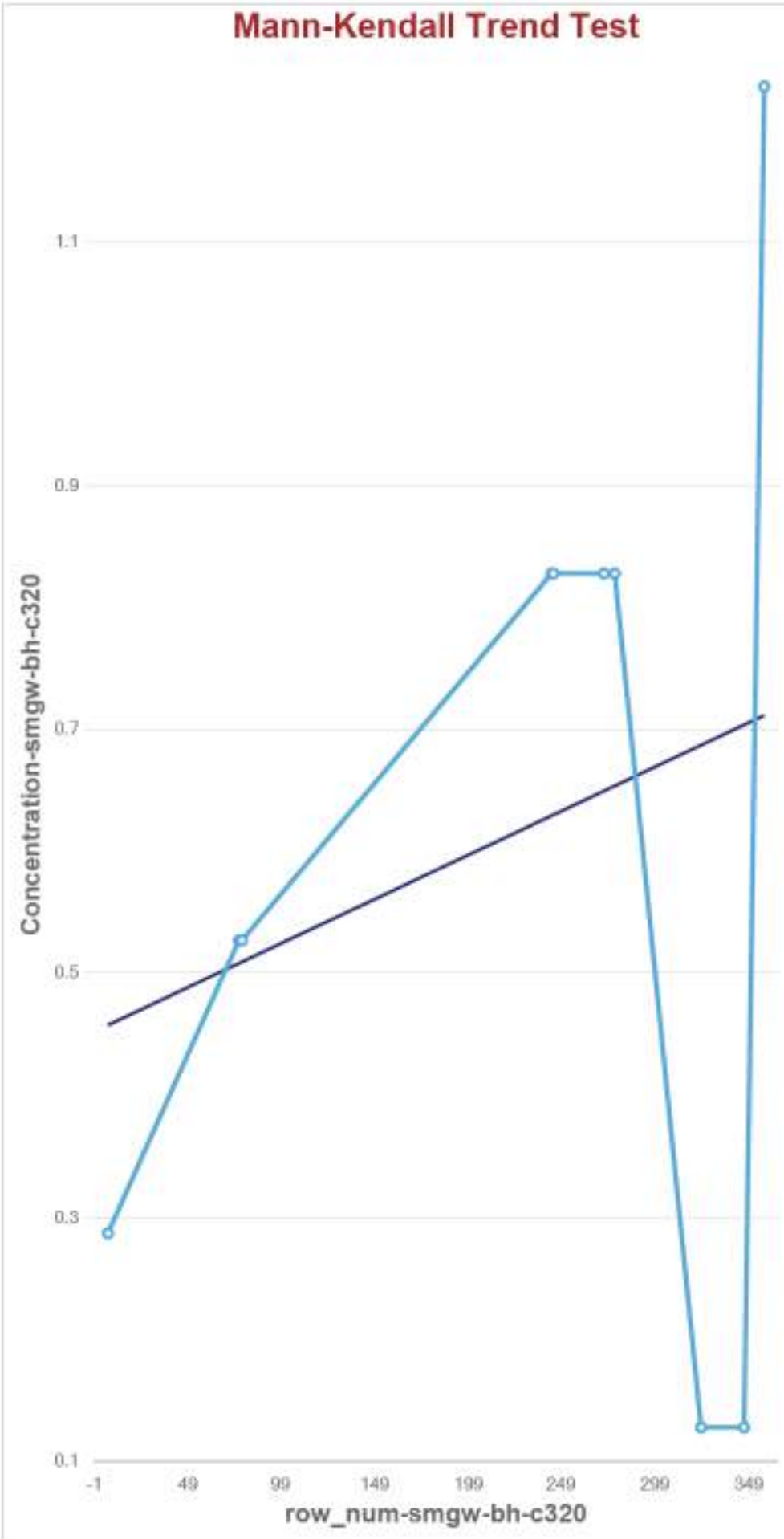
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.1292
Standardized Value of S	1.3790
M-K Test Value (S)	26
Tabulated p-value	0.0790
Approximate p-value	0.0839

OLS Regression Line (Blue)	
OLS Regression Slope	0.7820
OLS Regression Interoept	-176.3347

Insufficient statistical evidence of a significant trend at the specified level of significance.

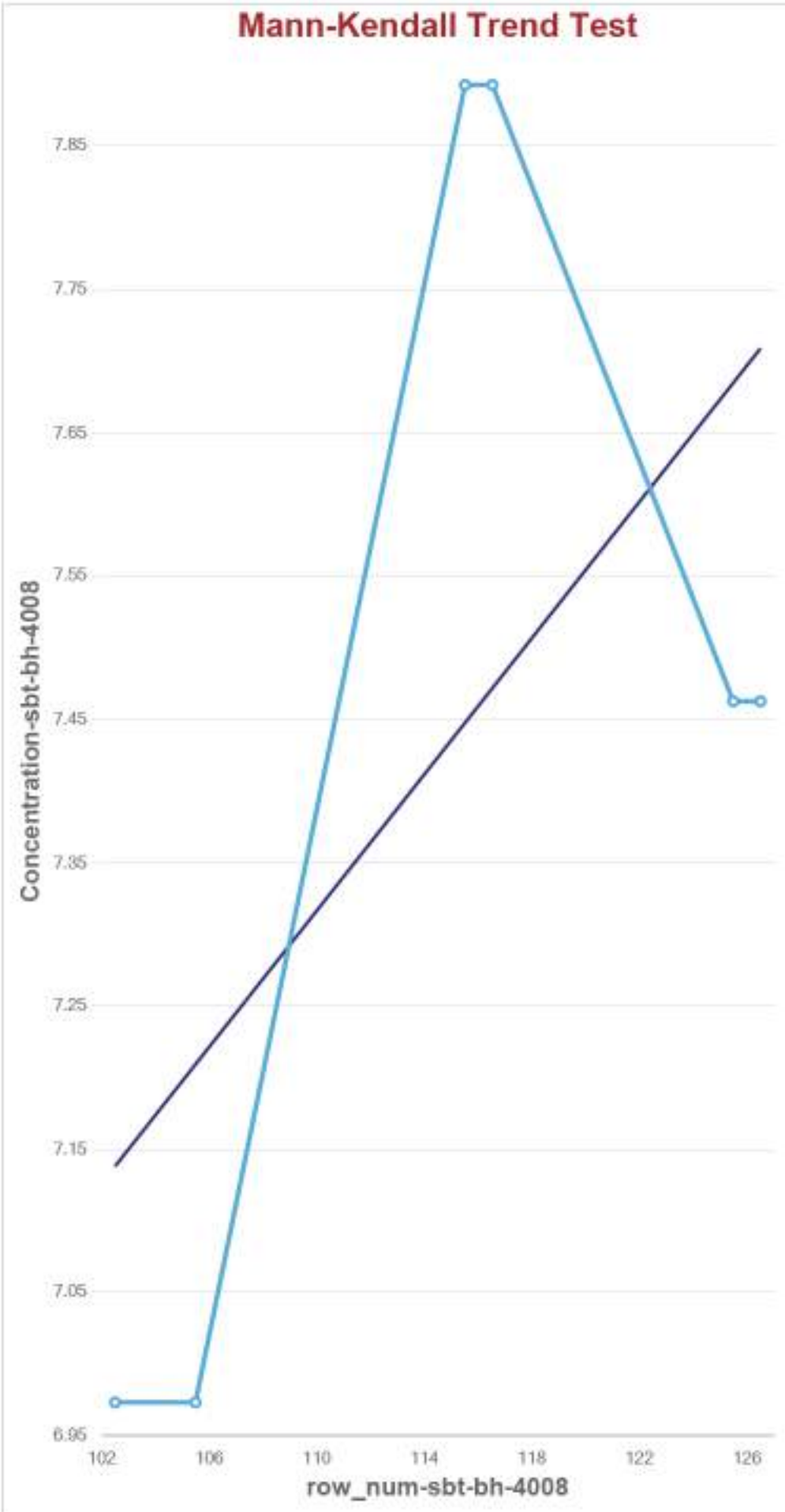


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6927
Standardized Value of S	0.7482
M-K Test Value (S)	9
Tabulated p-value	0.2420
Approximate p-value	0.2272

OLS Regression Line (Blue)	
OLS Regression Slope	0.0007
OLS Regression Intercept	0.4255

Insufficient statistical evidence of a significant trend at the specified level of significance.

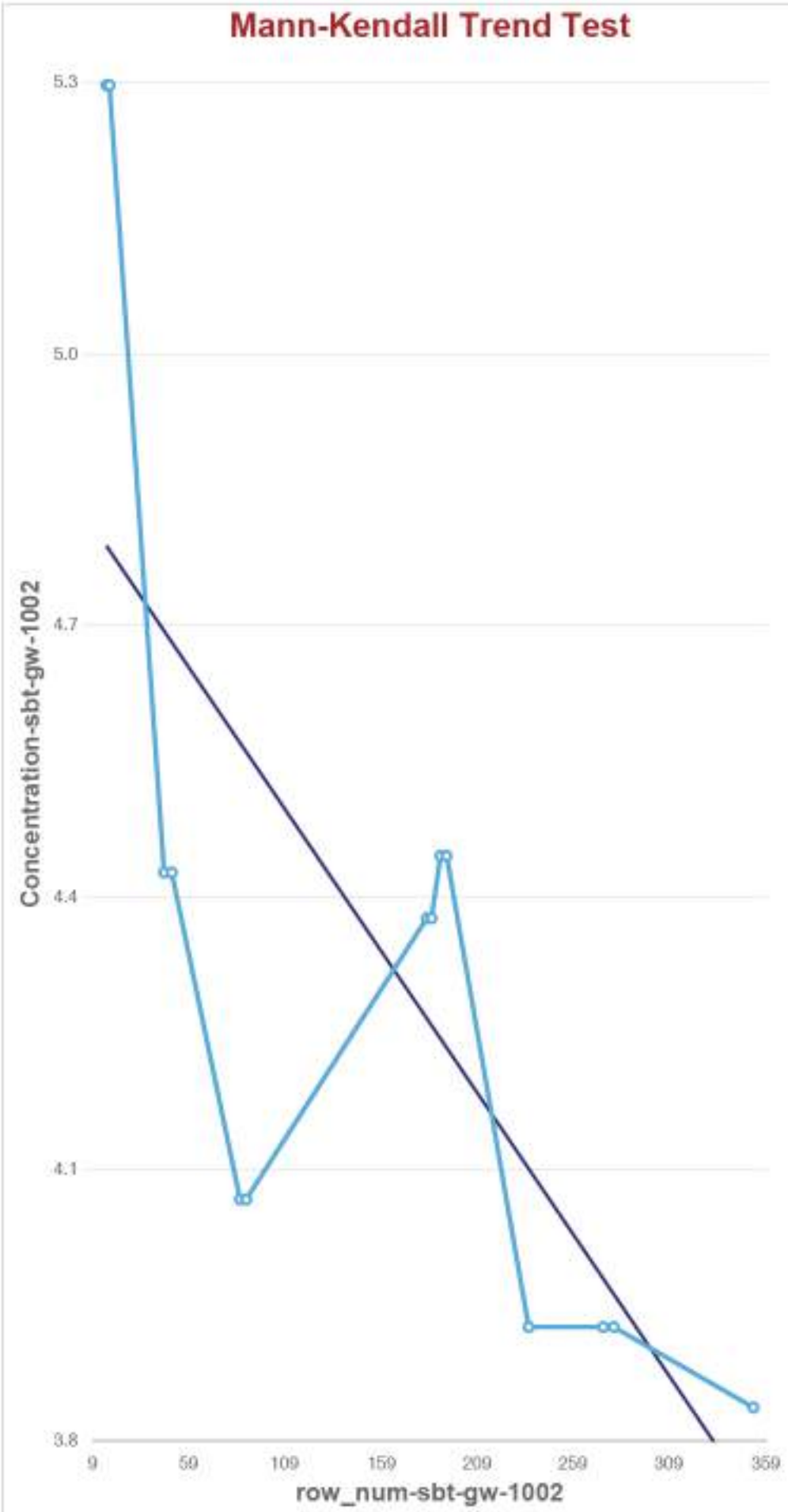
F.8 PH



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	0.5960
M-K Test Value (S)	4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)	
OLS Regression Slope	0.0238
OLS Regression Intercept	4.6836

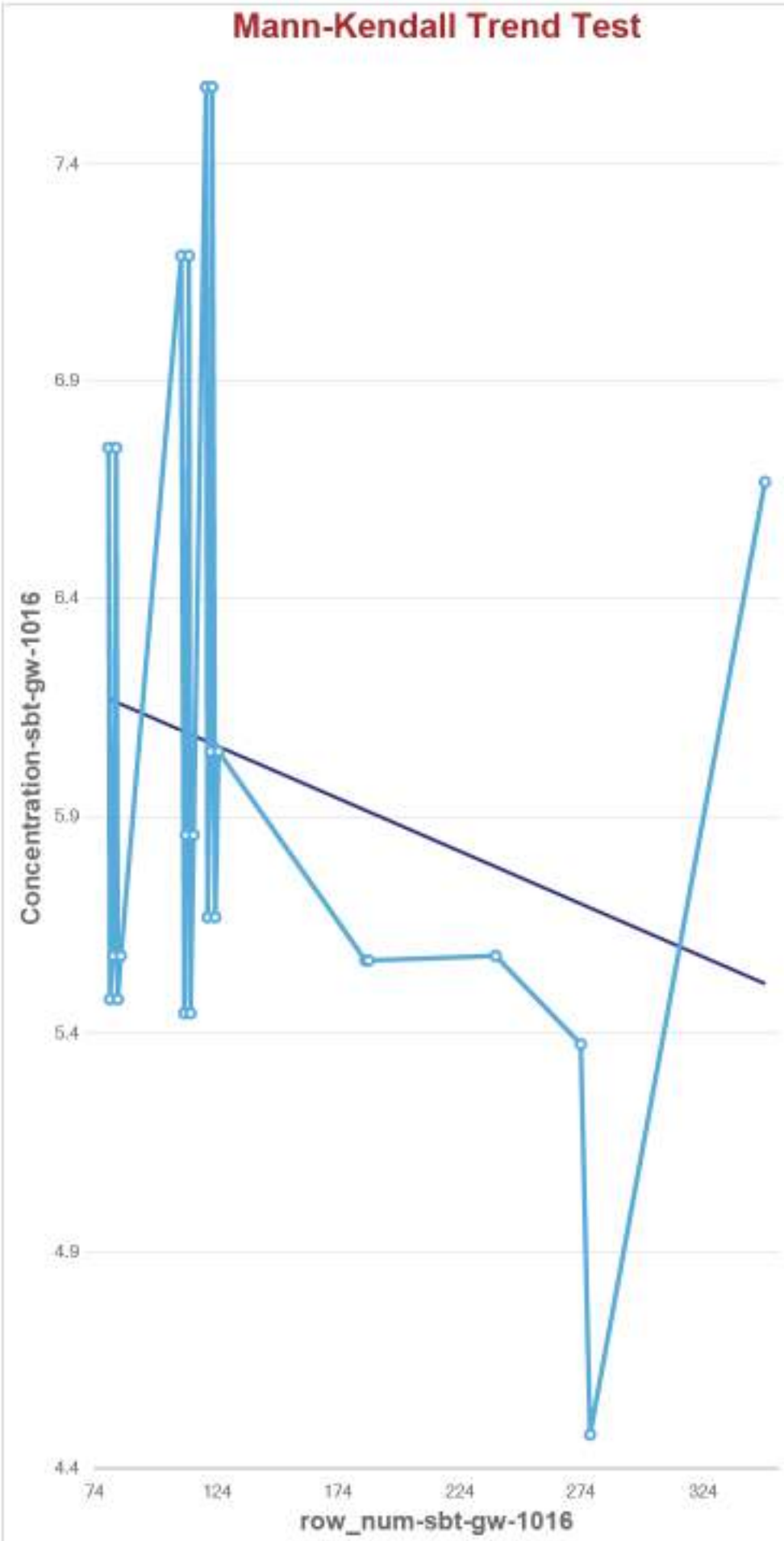
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	18.0278
Standardized Value of S	-2.7735
M-K Test Value (S)	-51
Tabulated p-value	0.0020
Approximate p-value	0.0028

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0031
OLS Regression Intercept	4.8114

Statistically significant evidence of a decreasing trend at the specified level of significance.



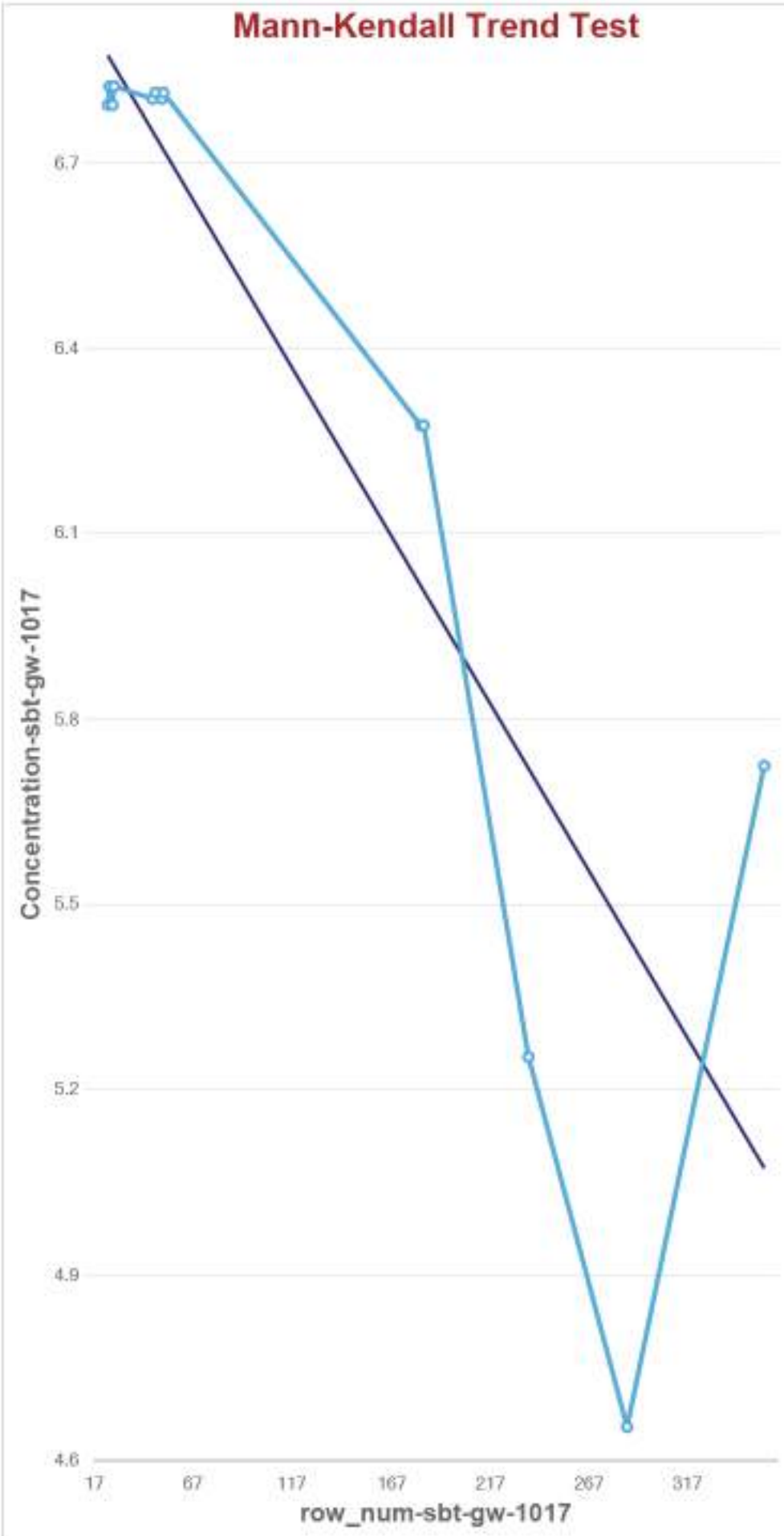
Mann-Kendall Trend Analysis

n	24
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	40.1580
Standardized Value of S	-0.6723
M-K Test Value (S)	-28
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.2507

OLS Regression Line (Blue)

OLS Regression Slope	-0.0024
OLS Regression Intercept	6.3848

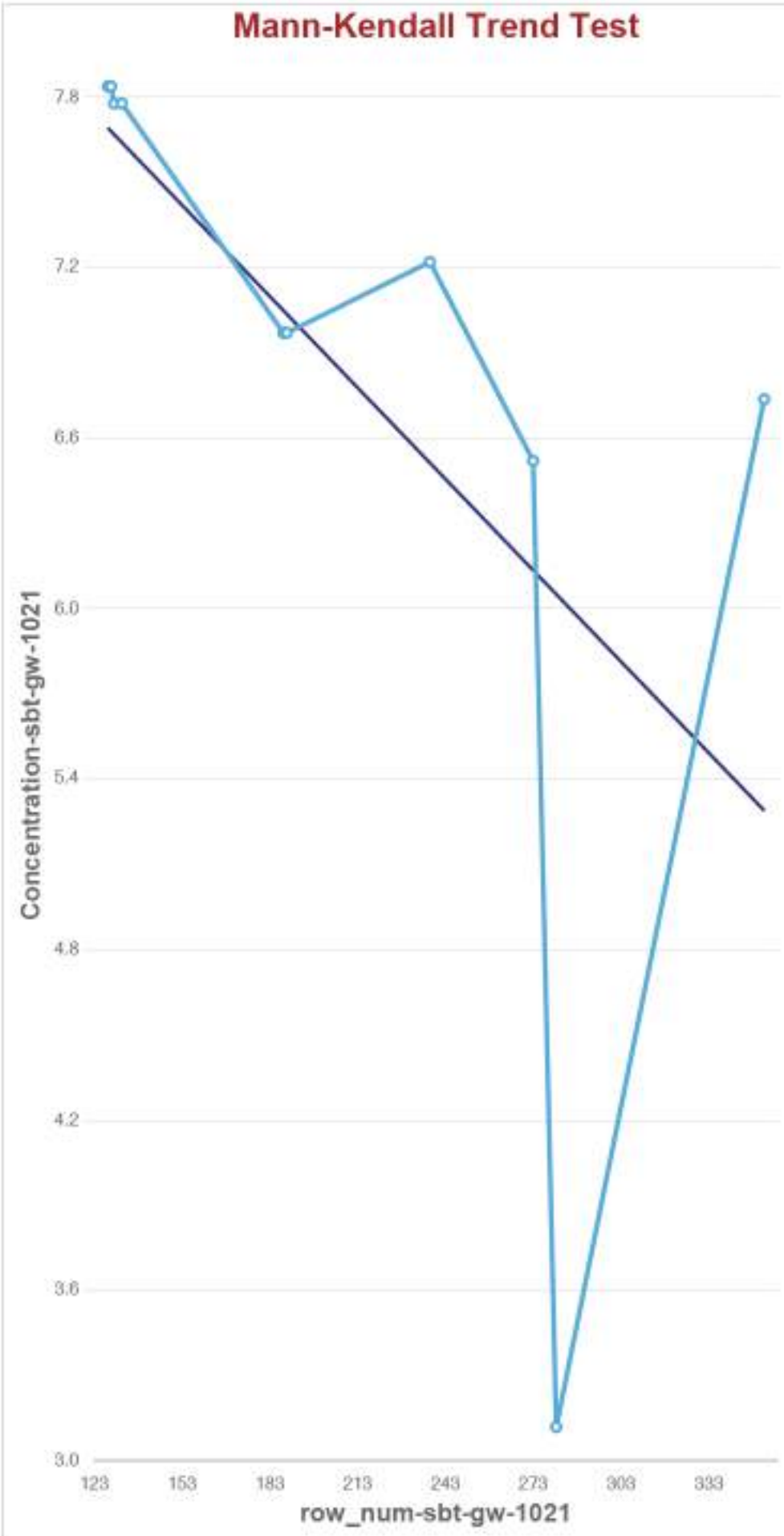
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.2378
Standardized Value of S	-2.4634
M-K Test Value (S)	-41
Tabulated p-value	0.0070
Approximate p-value	0.0069

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0054
OLS Regression Intercept	7.0483

Statistically significant evidence of a decreasing trend at the specified level of significance.



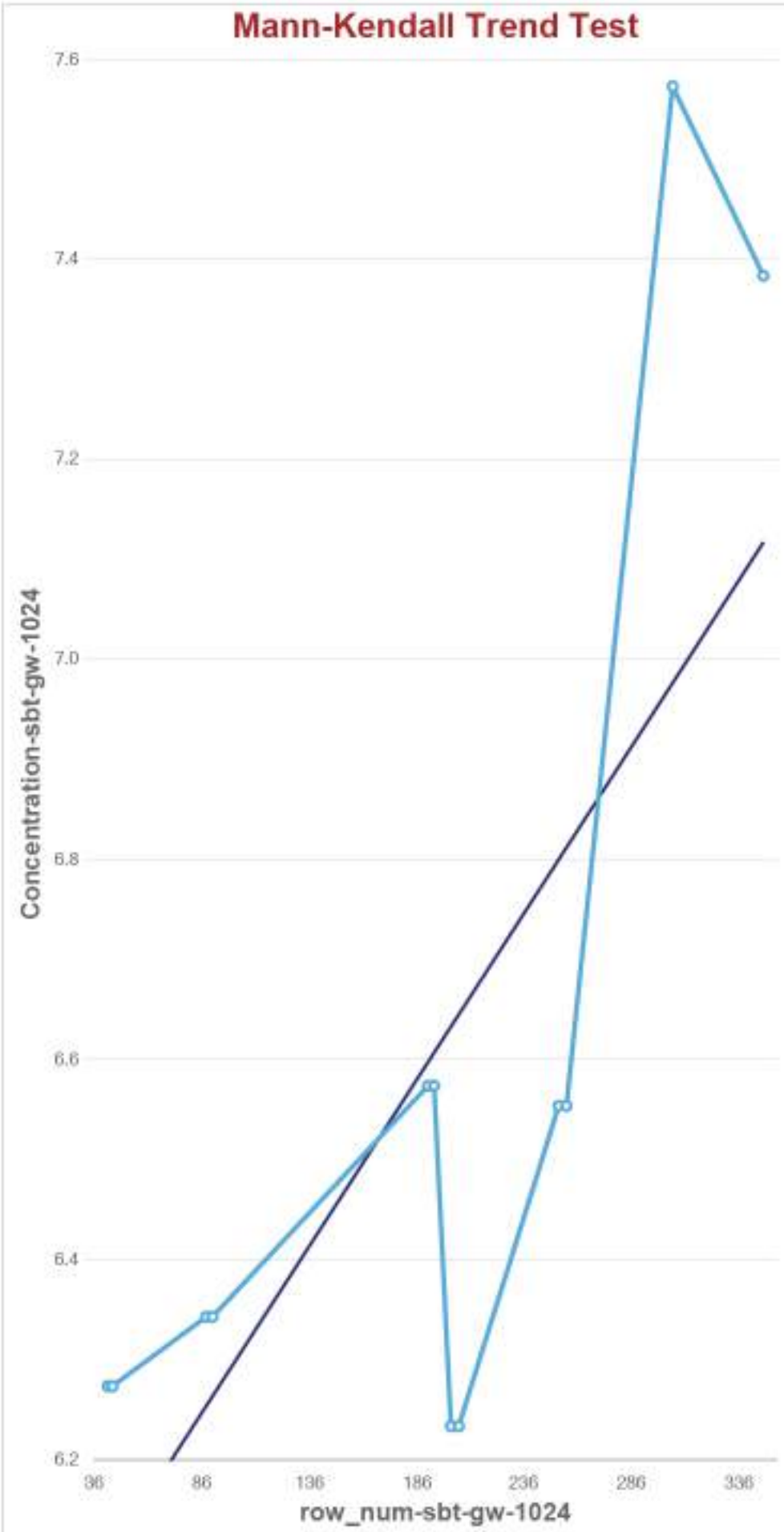
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0454
Standardized Value of S	-2.9877
M-K Test Value (S)	-34
Tabulated p-value	0.0000
Approximate p-value	0.0014

OLS Regression Line (Blue)

OLS Regression Slope	-0.0107
OLS Regression Intercept	9.0454

Statistically significant evidence of a decreasing trend at the specified level of significance.



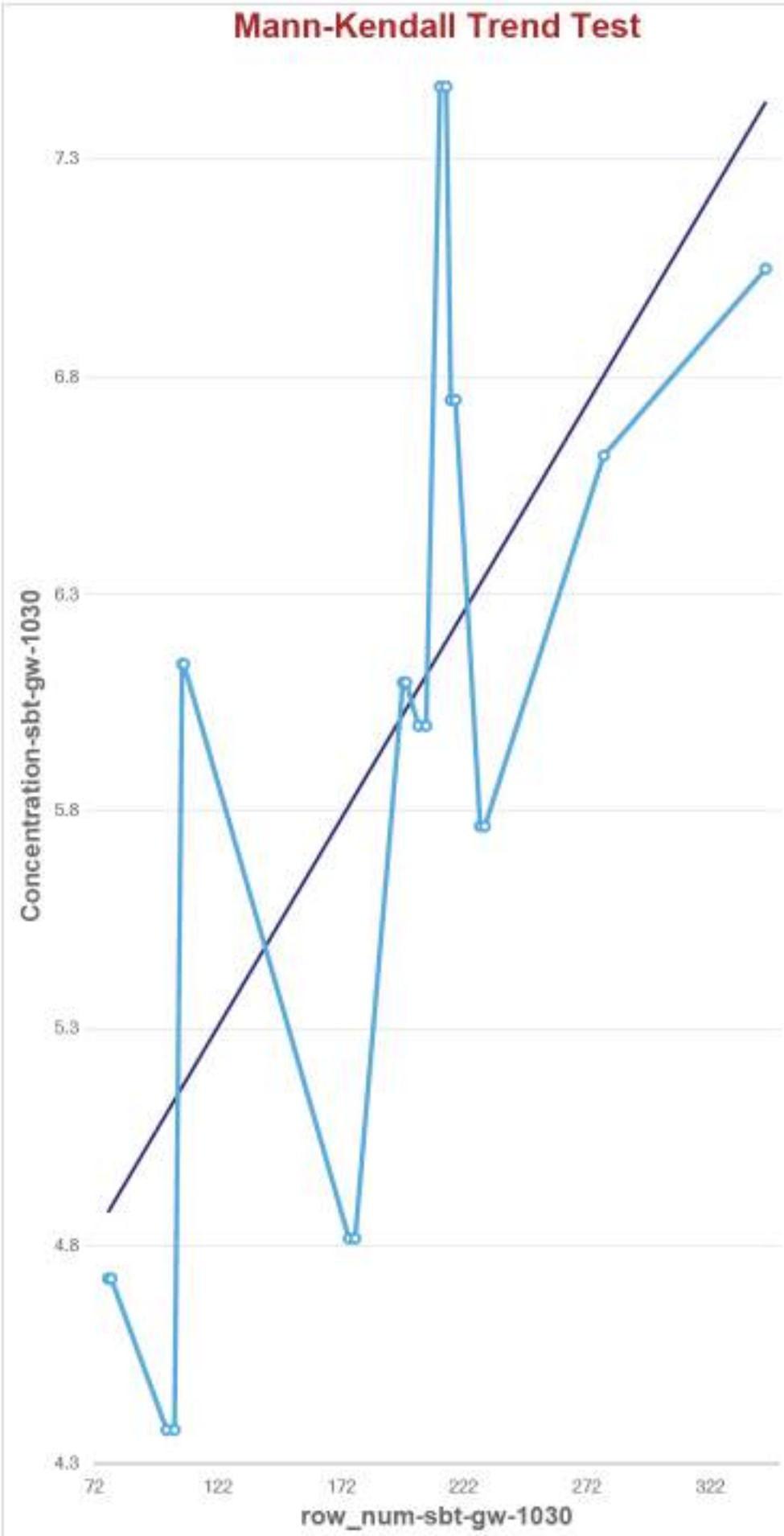
Mann-Kendall Trend Analysis

n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4106
Standardized Value of S	1.8042
M-K Test Value (S)	27
Tabulated p-value	0.0430
Approximate p-value	0.0356

OLS Regression Line (Blue)

OLS Regression Slope	0.0033
OLS Regression Intercept	5.9864

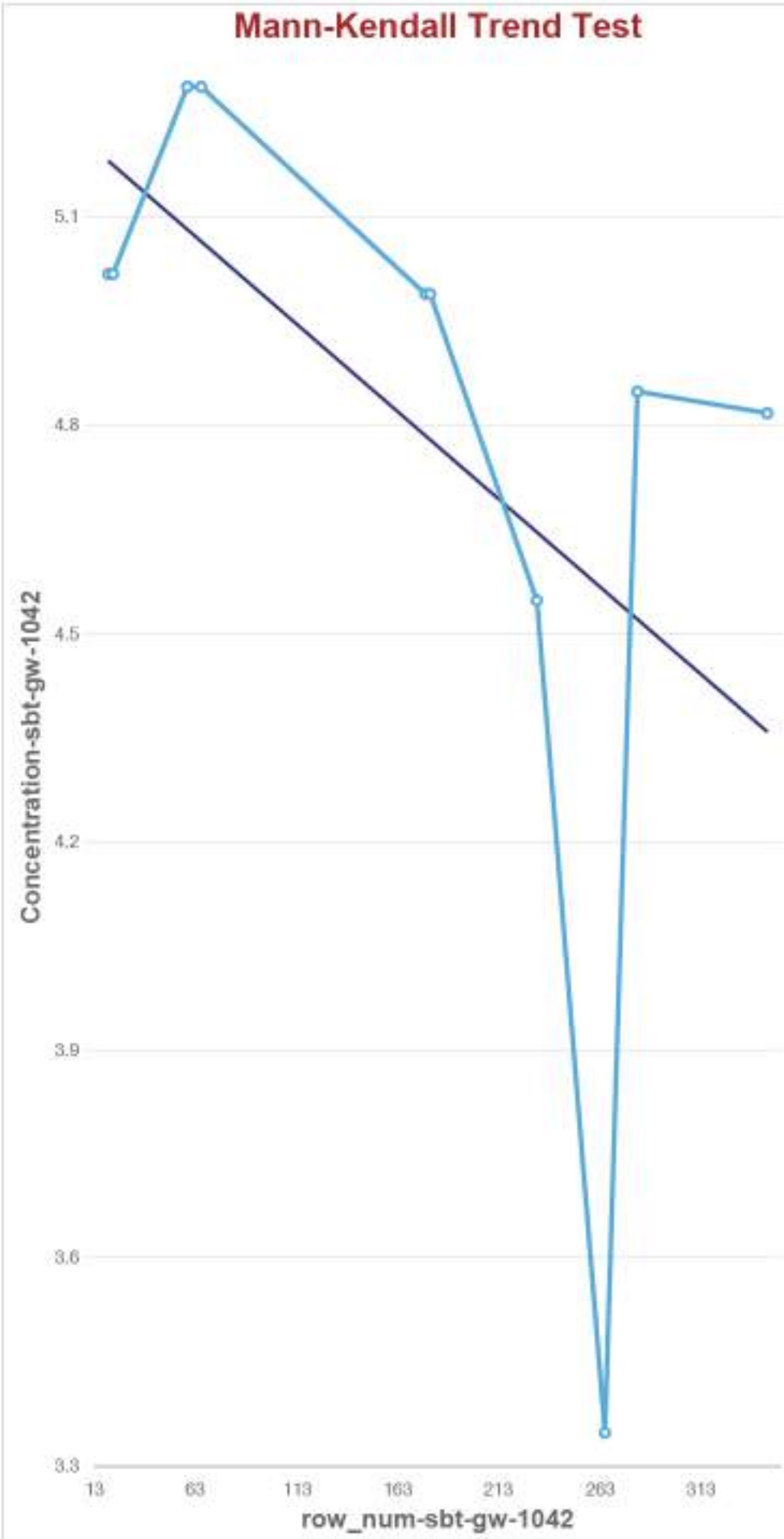
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6757
Standardized Value of S	2.6079
M-K Test Value (S)	81
Tabulated p-value	0.0050
Approximate p-value	0.0046

OLS Regression Line (Blue)	
OLS Regression Slope	0.0096
OLS Regression Intercept	4.1138

Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

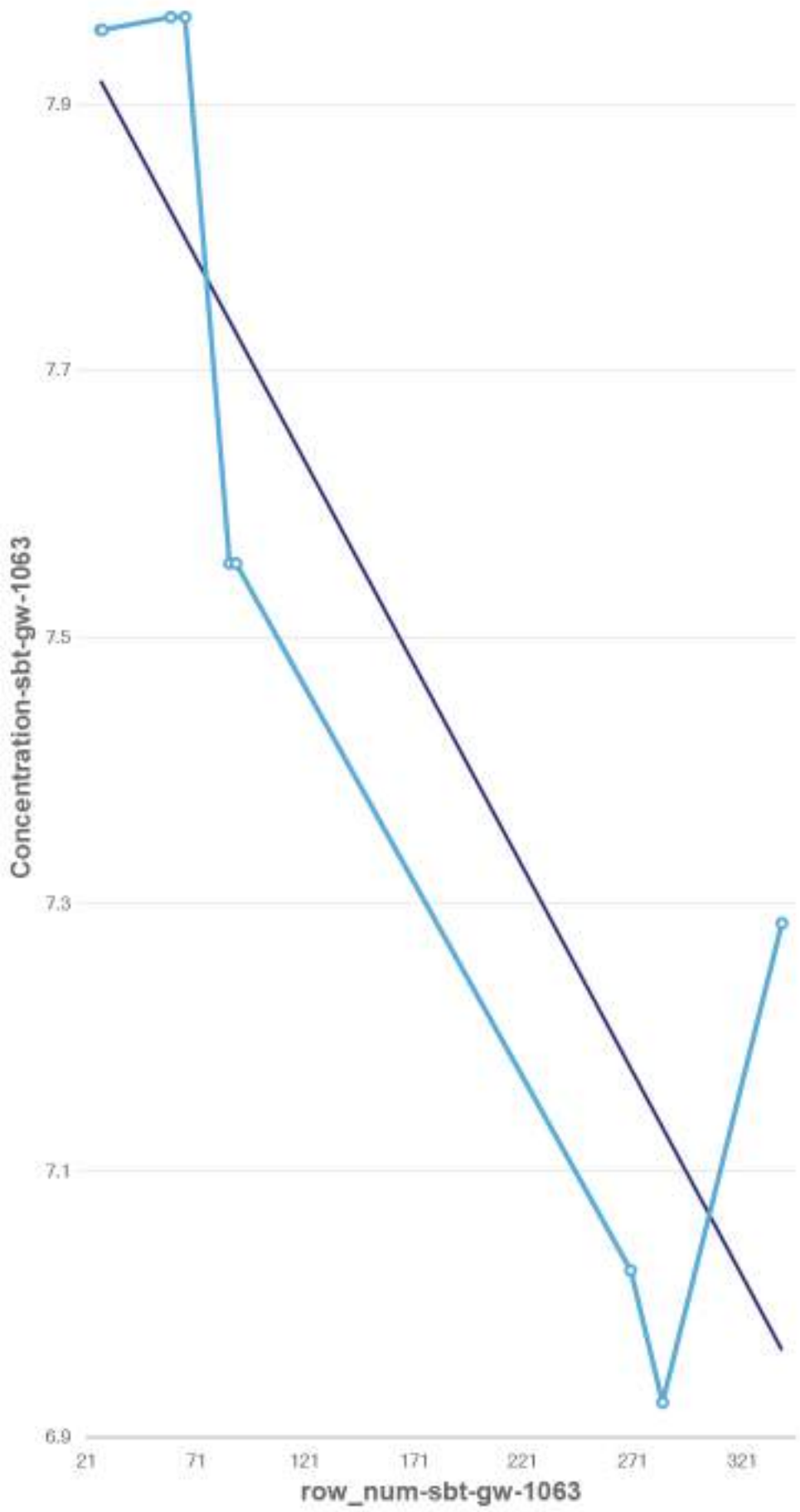
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0454
Standardized Value of S	-2.2634
M-K Test Value (S)	-26
Tabulated p-value	0.0080
Approximate p-value	0.0118

OLS Regression Line (Blue)

OLS Regression Slope	-0.0025
OLS Regression Intercept	5.1827

Statistically significant evidence of a decreasing trend at the specified level of significance.

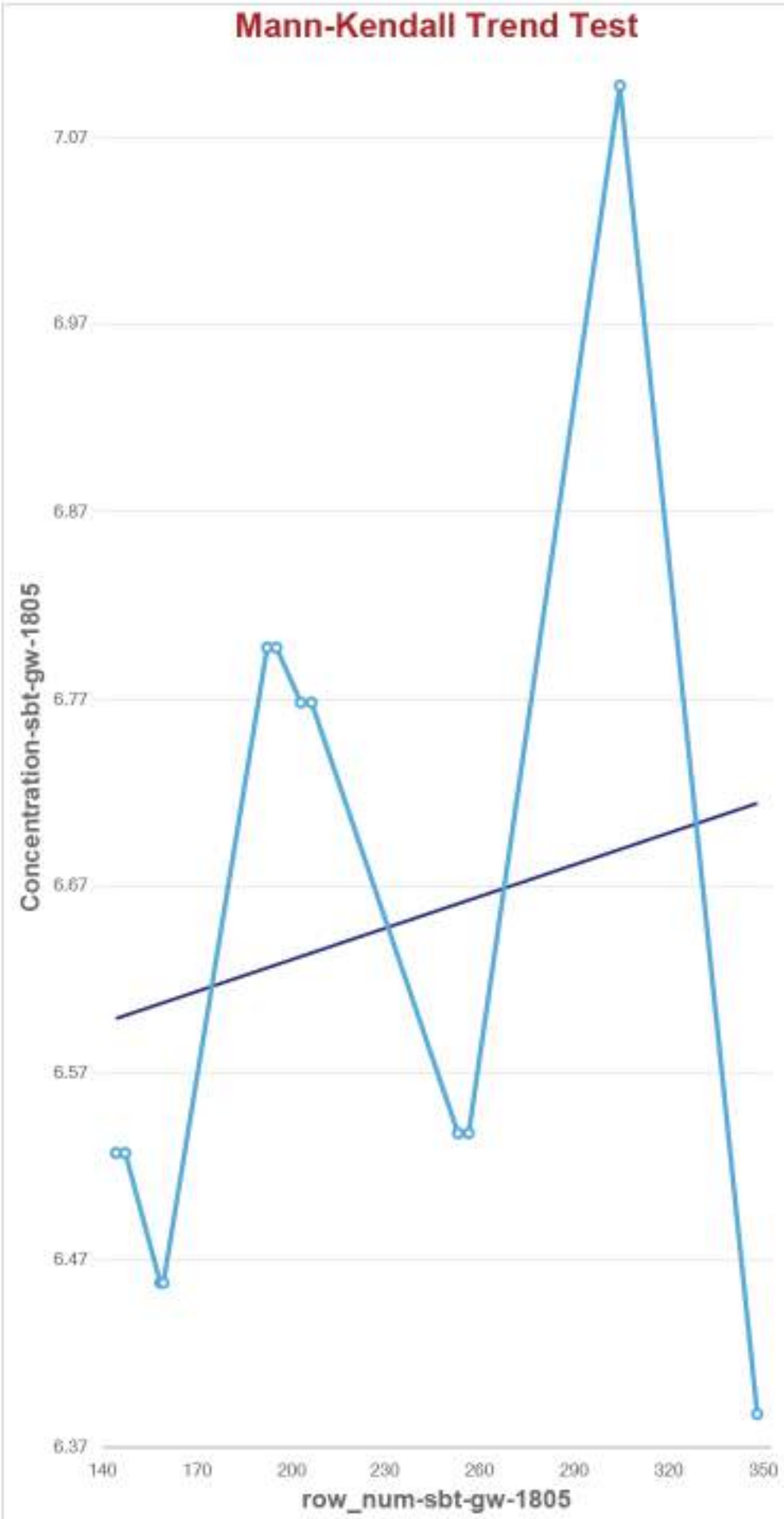
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-2.1200
M-K Test Value (S)	-21
Tabulated p-value	0.0220
Approximate p-value	0.0170

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0031
OLS Regression Intercept	7.9775

Statistically significant evidence of a decreasing trend at the specified level of significance.

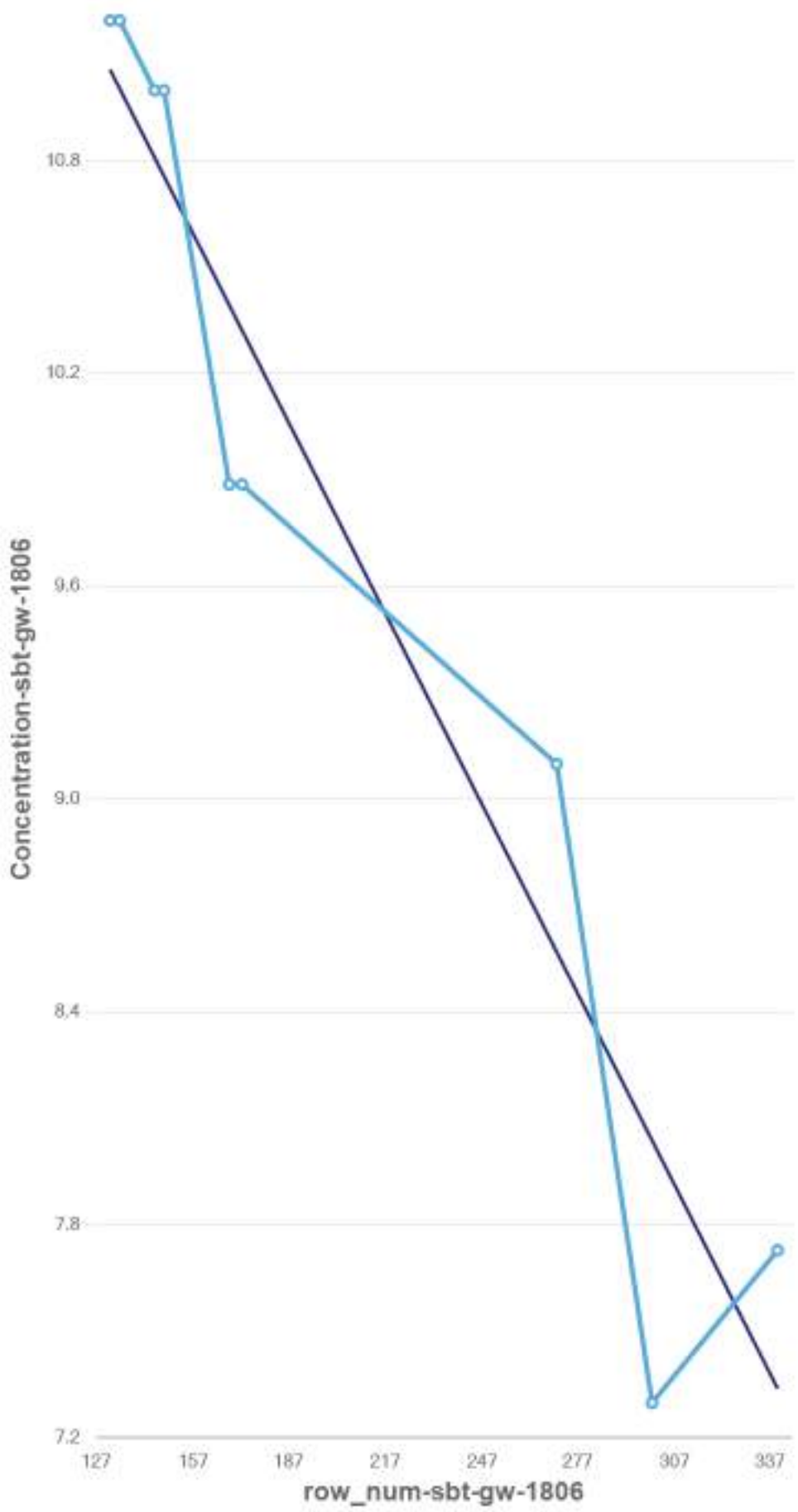


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4106
Standardized Value of S	0.4164
M-K Test Value (S)	7
Tabulated p-value	0.3690
Approximate p-value	0.3386

OLS Regression Line (Blue)	
OLS Regression Slope	0.0006
OLS Regression Intercept	6.5206

Insufficient statistical evidence of a significant trend at the specified level of significance.

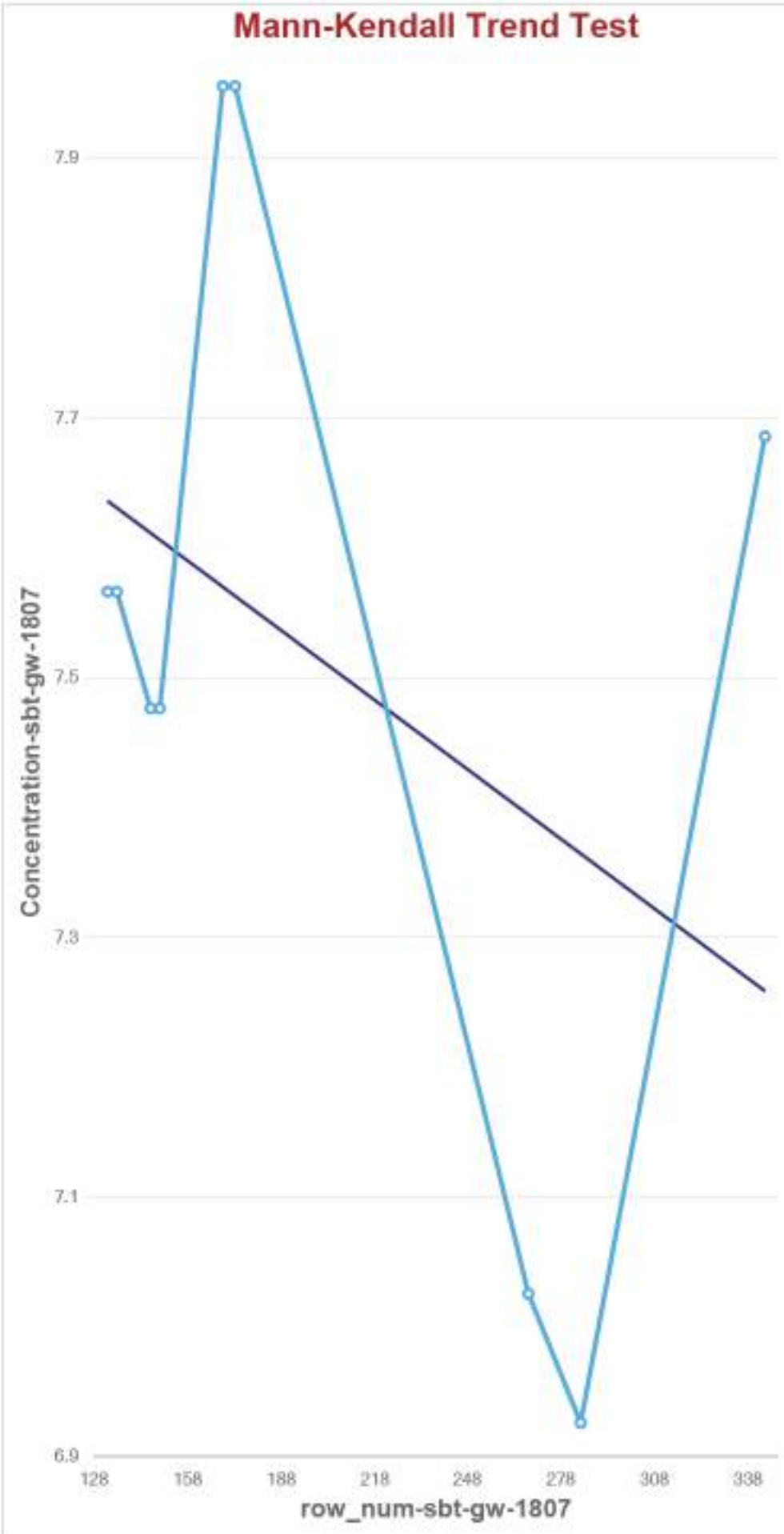
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-3.1800
M-K Test Value (S)	-31
Tabulated p-value	0.0000
Approximate p-value	0.0007

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0179
OLS Regression Intercept	13.4024

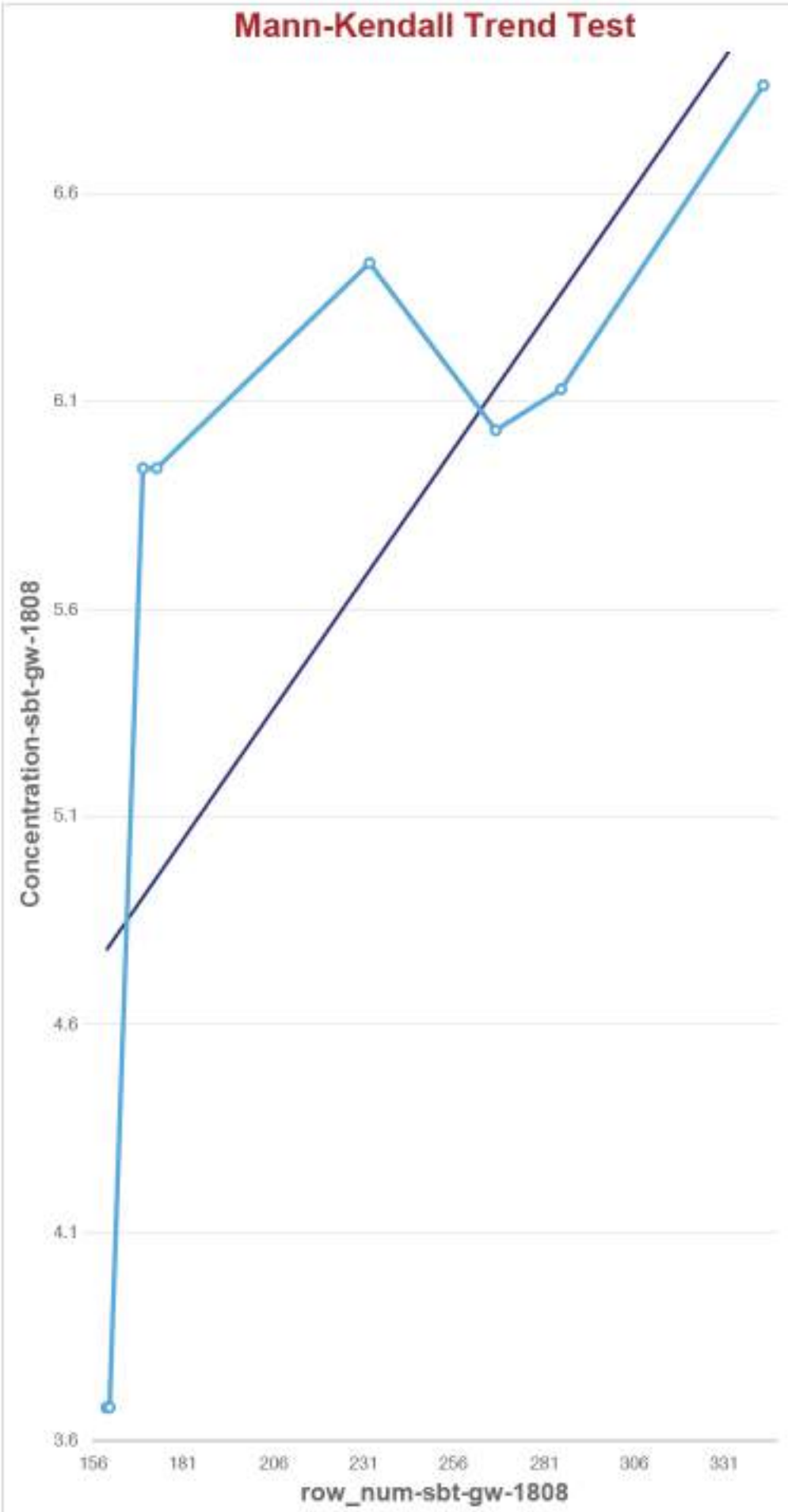
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-0.4240
M-K Test Value (S)	-5
Tabulated p-value	0.3810
Approximate p-value	0.3358

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0018
OLS Regression Intercept	7.8467

Insufficient statistical evidence of a significant trend at the specified level of significance.



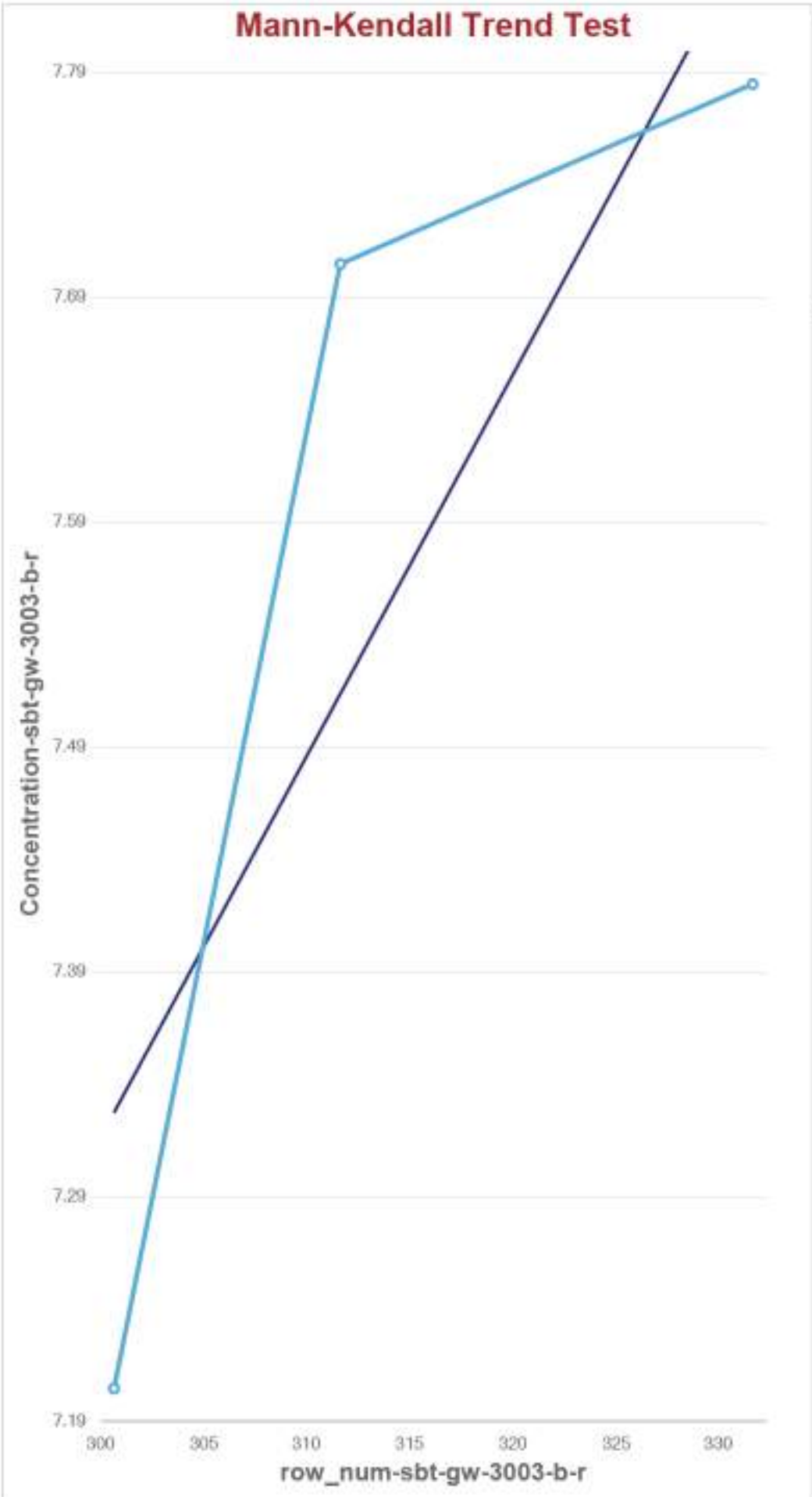
Mann-Kendall Trend Analysis

n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9582
Standardized Value of S	2.6388
M-K Test Value (S)	22
Tabulated p-value	0.0020
Approximate p-value	0.0042

OLS Regression Line (Blue)

OLS Regression Slope	0.0125
OLS Regression Intercept	2.7490

Statistically significant evidence of an increasing trend at the specified level of significance.



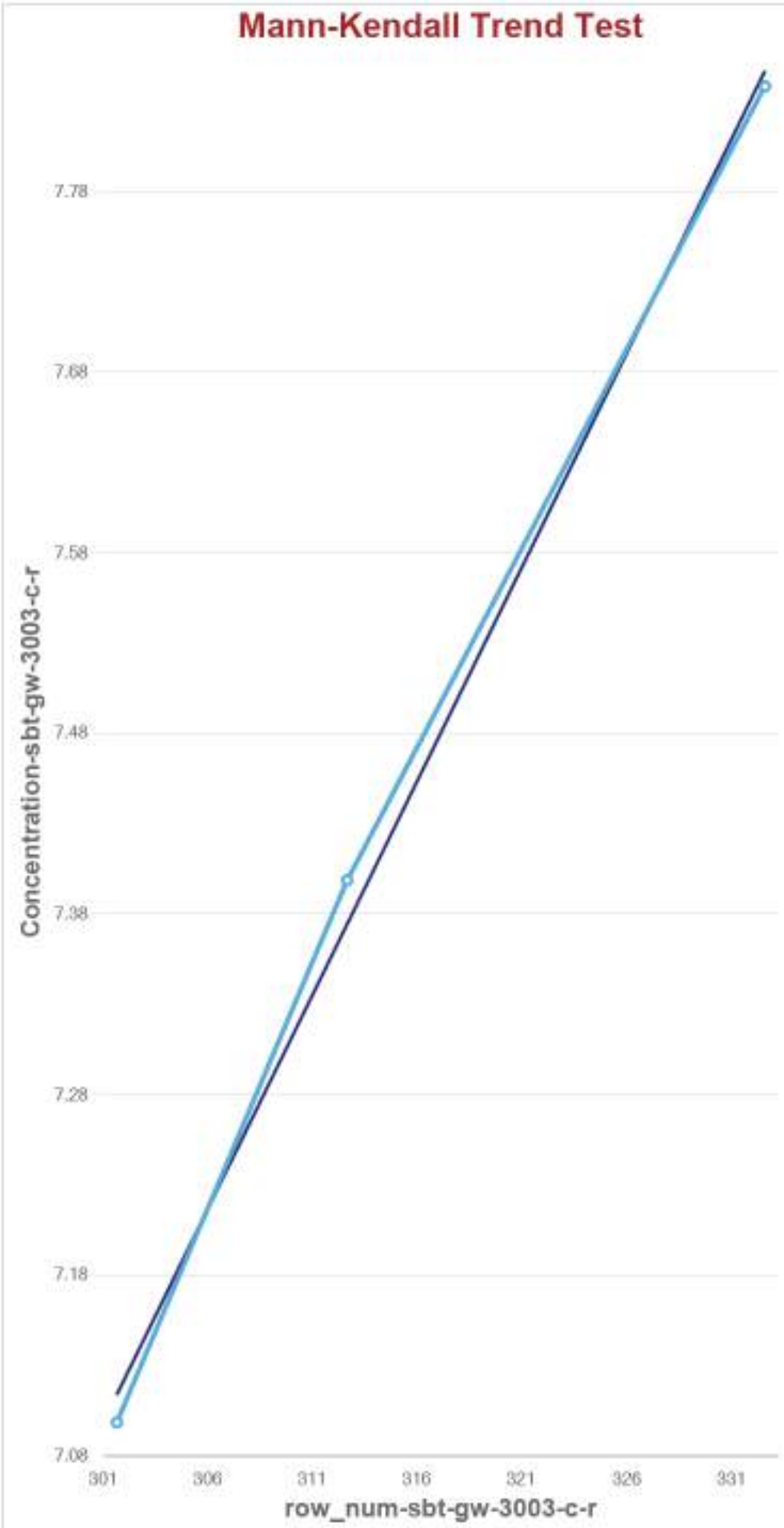
Mann-Kendall Trend Analysis

n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

OLS Regression Line (Blue)

OLS Regression Slope	0.0169
OLS Regression Intercept	2.2292

Insufficient statistical evidence of a significant trend at the specified level of significance.

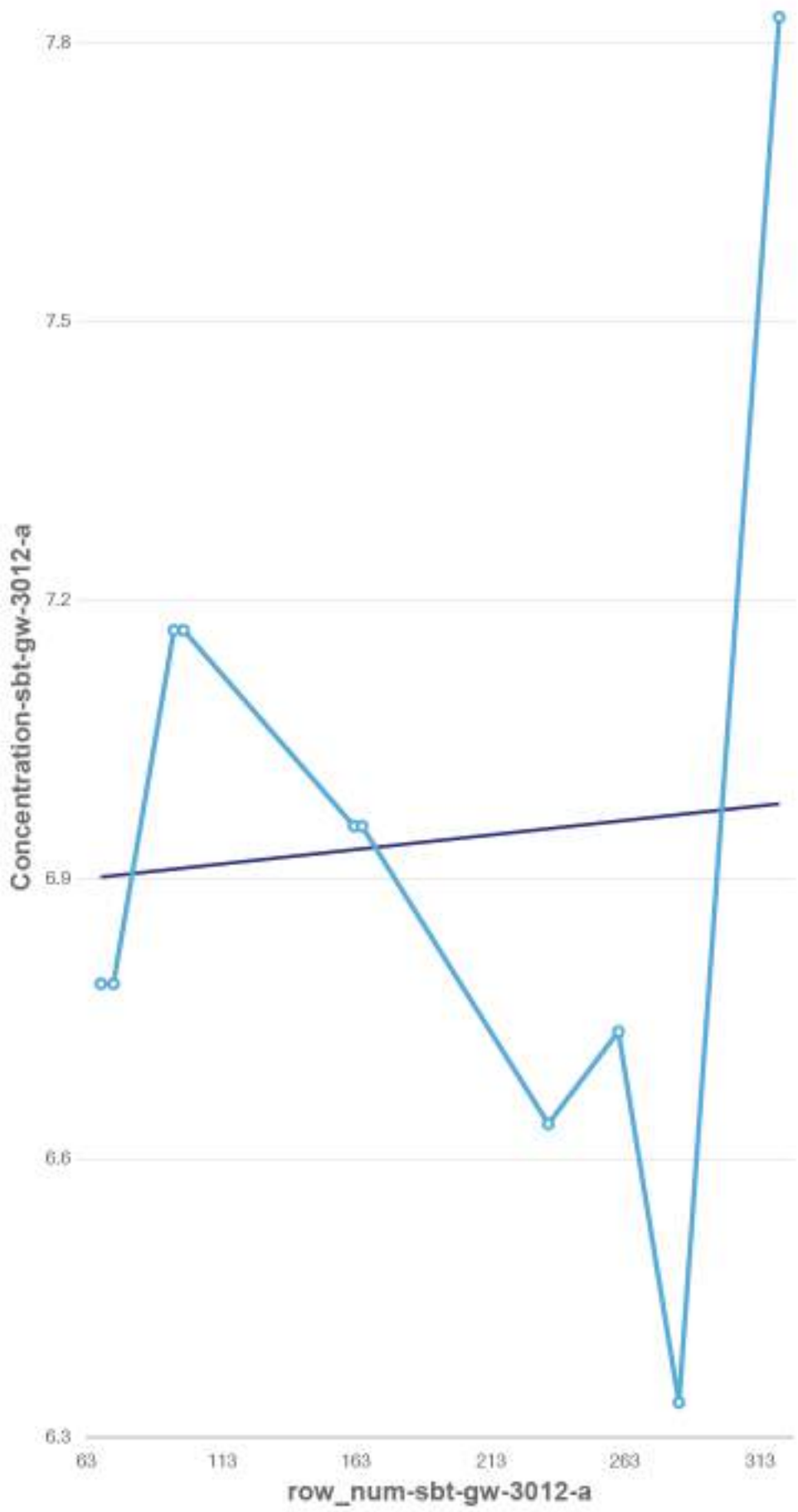


Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	0.0236
OLS Regression Intercept	-0.0248

Insufficient statistical evidence of a significant trend at the specified level of significance.

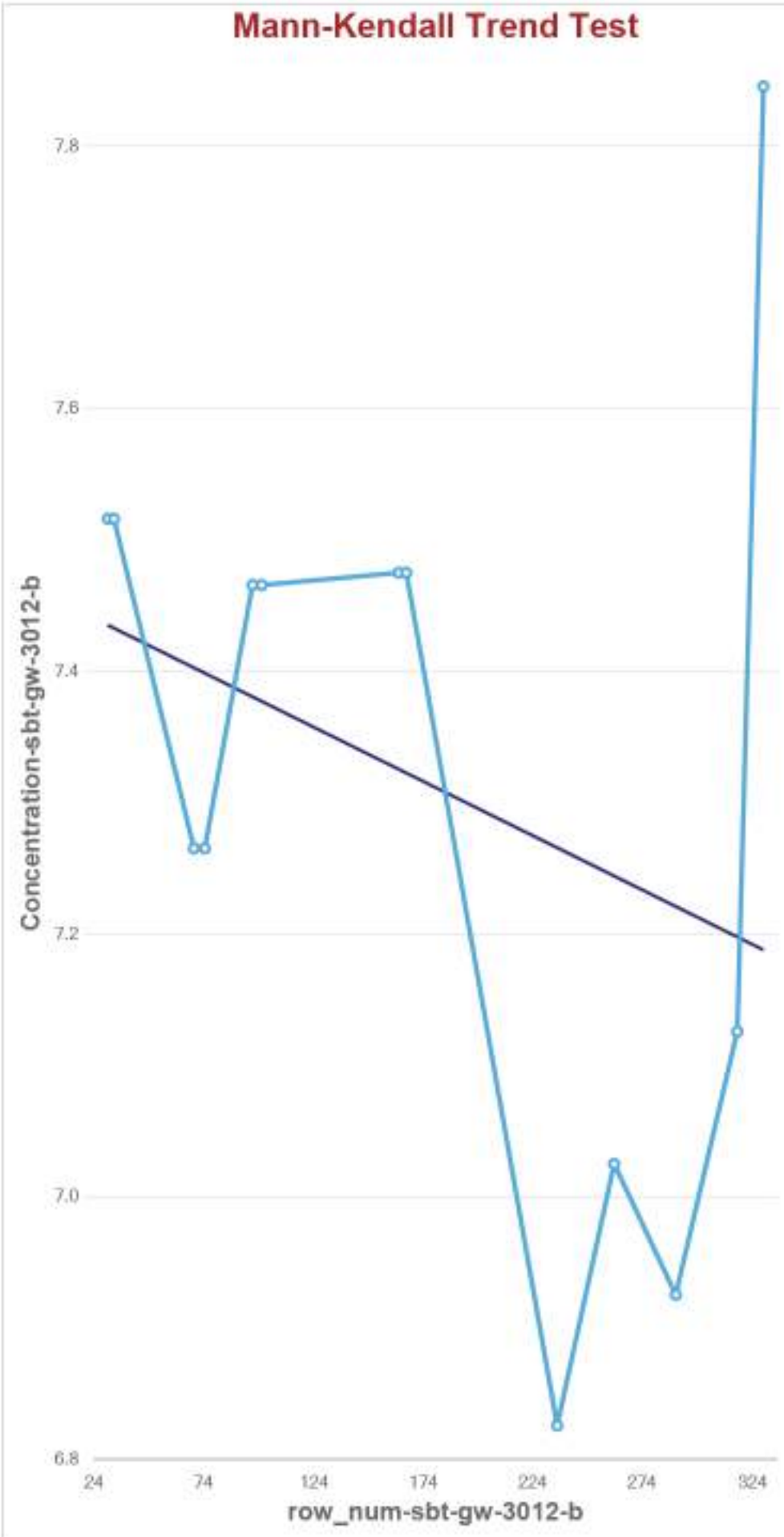
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0454
Standardized Value of S	-0.4527
M-K Test Value (S)	-6
Tabulated p-value	0.3000
Approximate p-value	0.3254

OLS Regression Line (Blue)	
OLS Regression Slope	0.0003
OLS Regression Intercept	6.8434

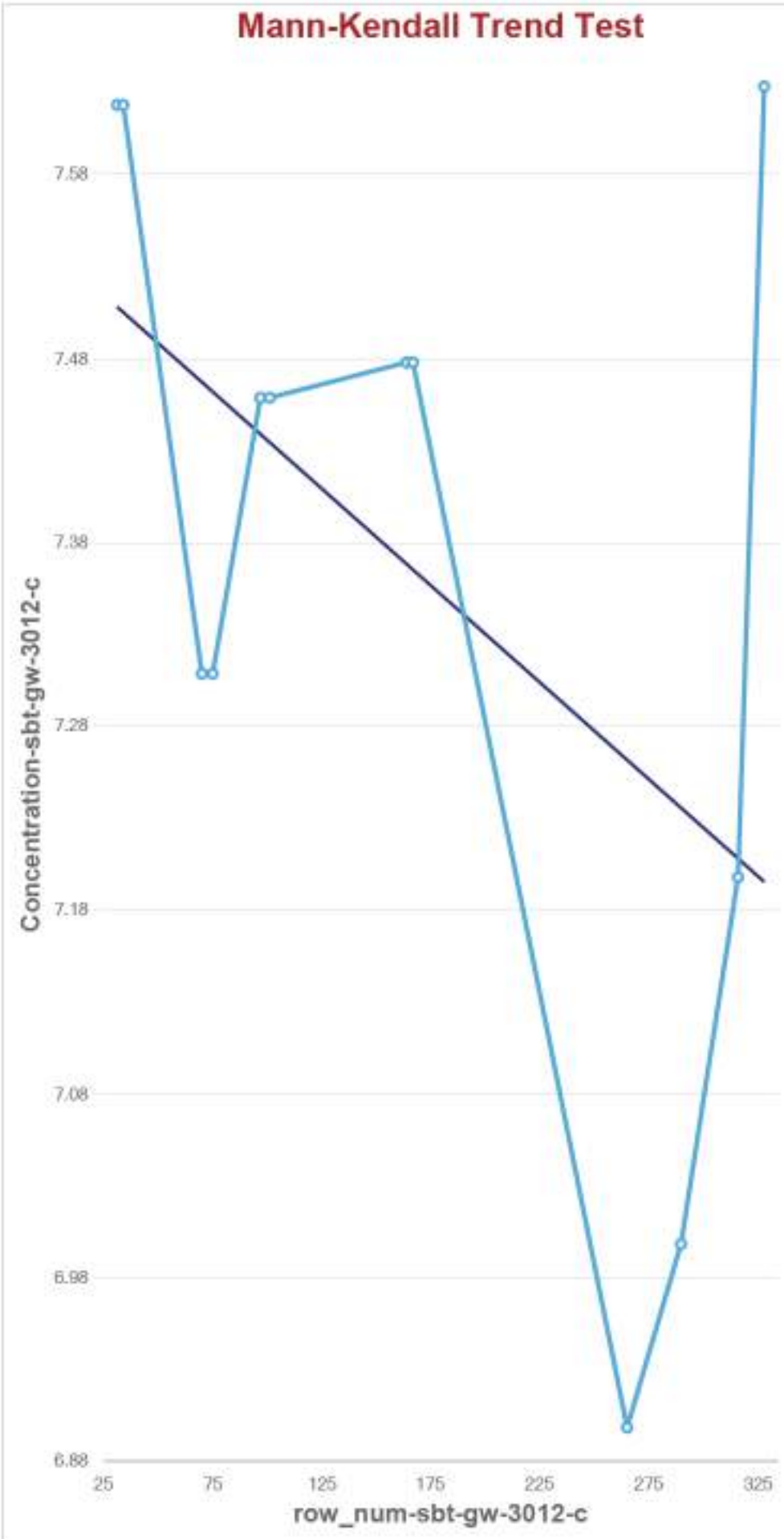
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.2686
Standardized Value of S	-0.9220
M-K Test Value (S)	-16
Tabulated p-value	0.1840
Approximate p-value	0.1783

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0008
OLS Regression Intercept	7.4342

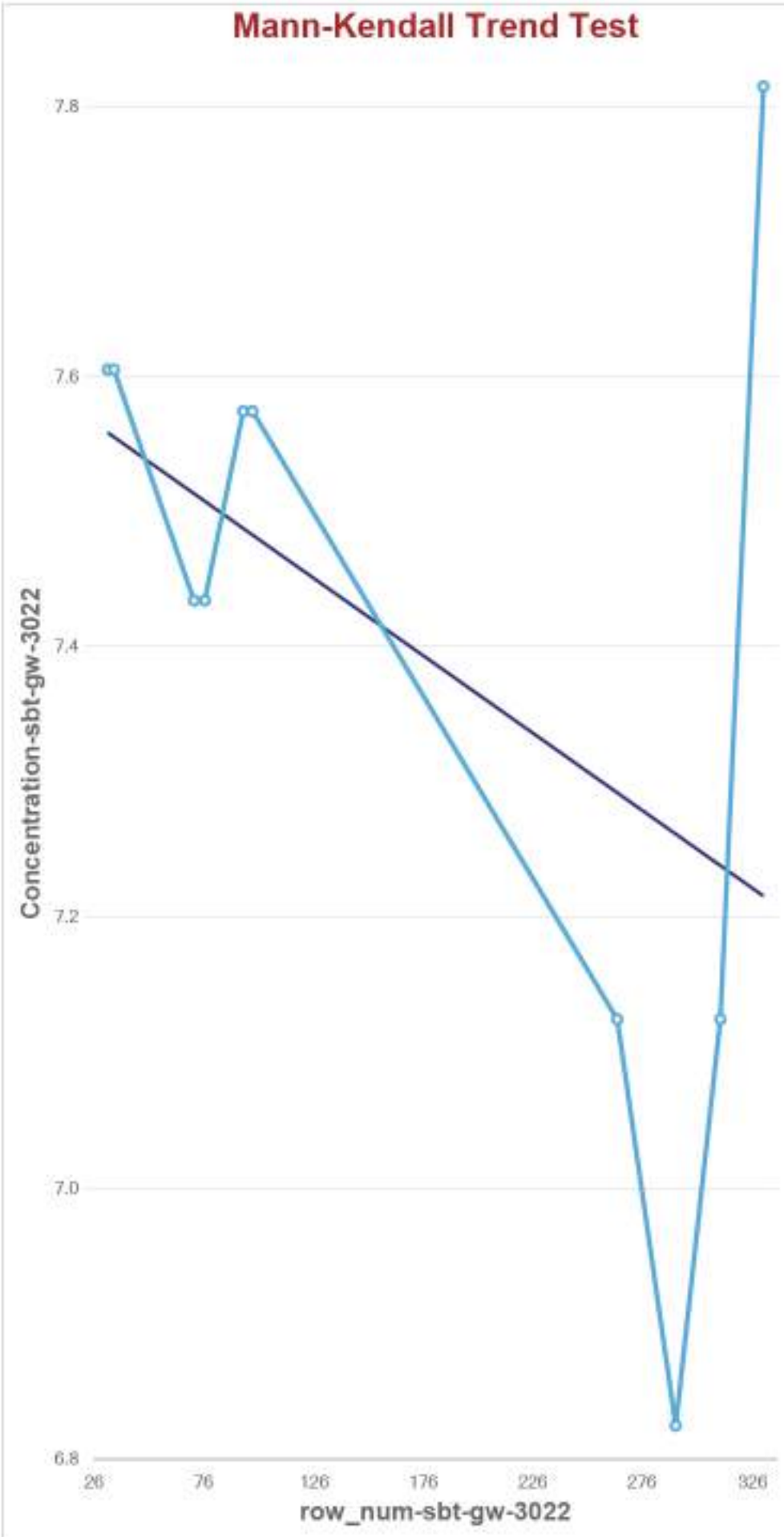
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4453
Standardized Value of S	-0.6230
M-K Test Value (S)	-10
Tabulated p-value	0.2730
Approximate p-value	0.2666

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0011
OLS Regression Intercept	7.5430

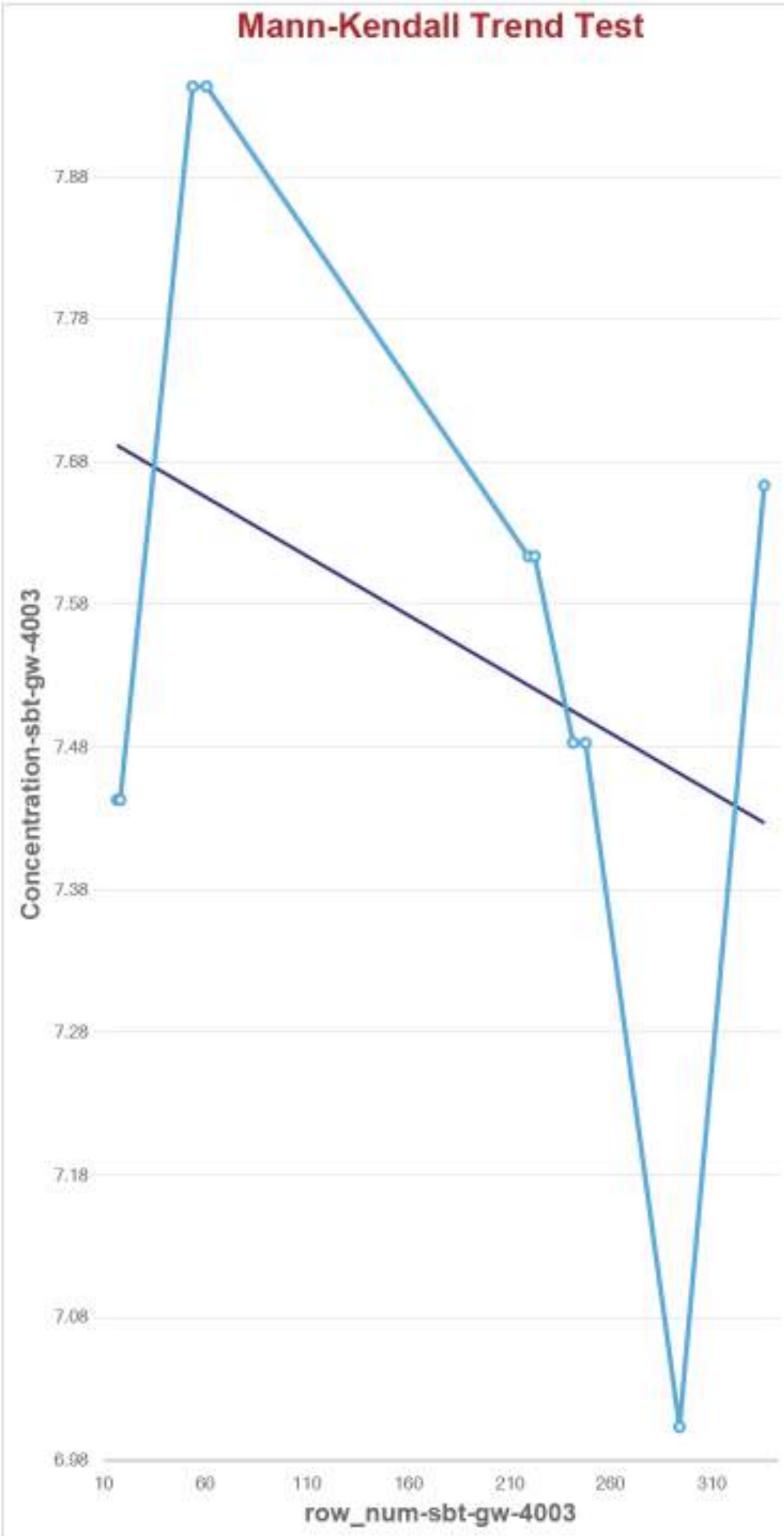
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-1.0909
M-K Test Value (S)	-13
Tabulated p-value	0.1460
Approximate p-value	0.1377

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0011
OLS Regression Intercept	7.5706

Insufficient statistical evidence of a significant trend at the specified level of significance.



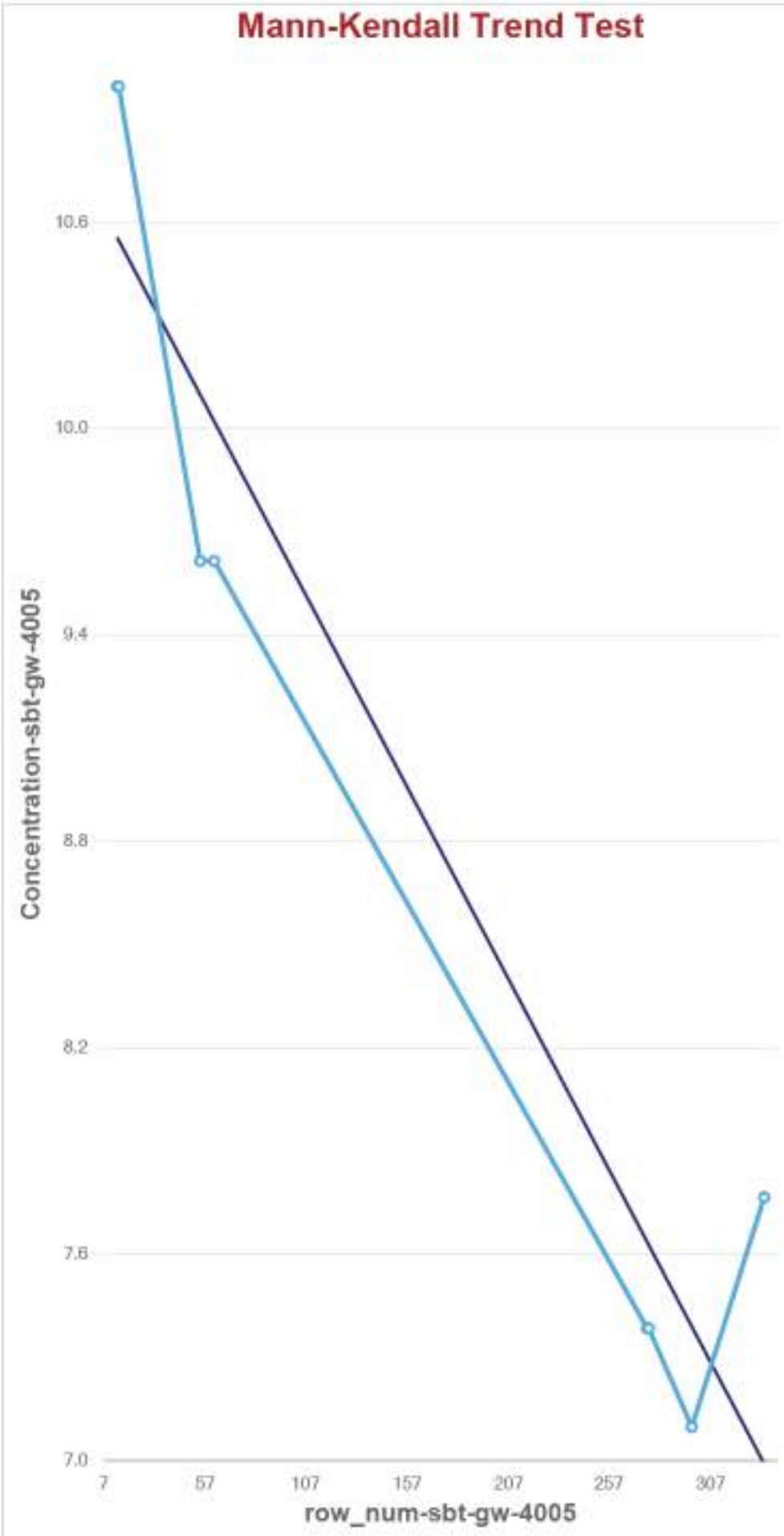
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-0.1818
M-K Test Value (S)	-3
Tabulated p-value	0.4310
Approximate p-value	0.4279

OLS Regression Line (Blue)

OLS Regression Slope	-0.0008
OLS Regression Intercept	7.7022

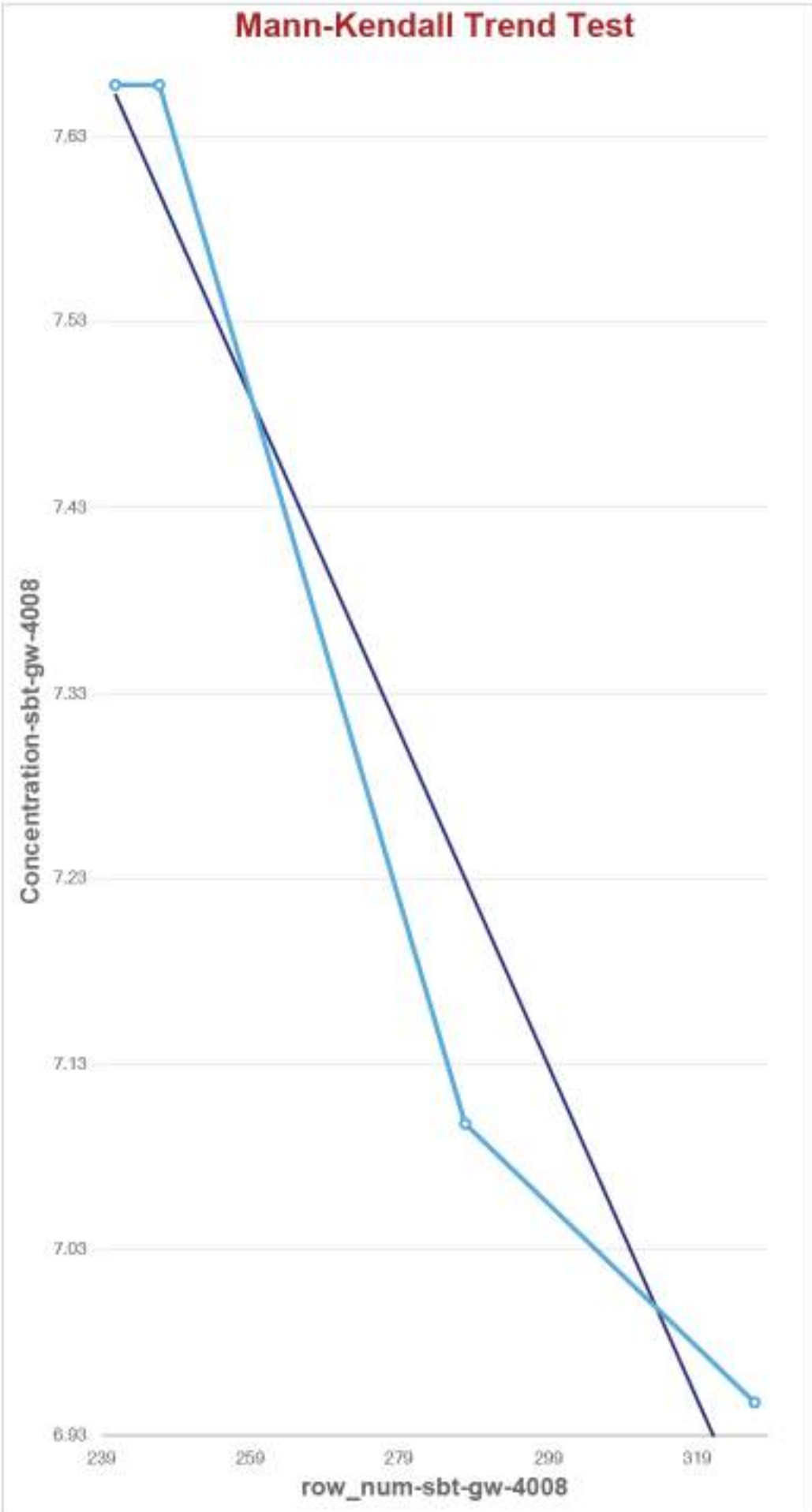
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.8951
Standardized Value of S	-2.2799
M-K Test Value (S)	-19
Tabulated p-value	0.0160
Approximate p-value	0.0113

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0112
OLS Regression Intercept	10.7176

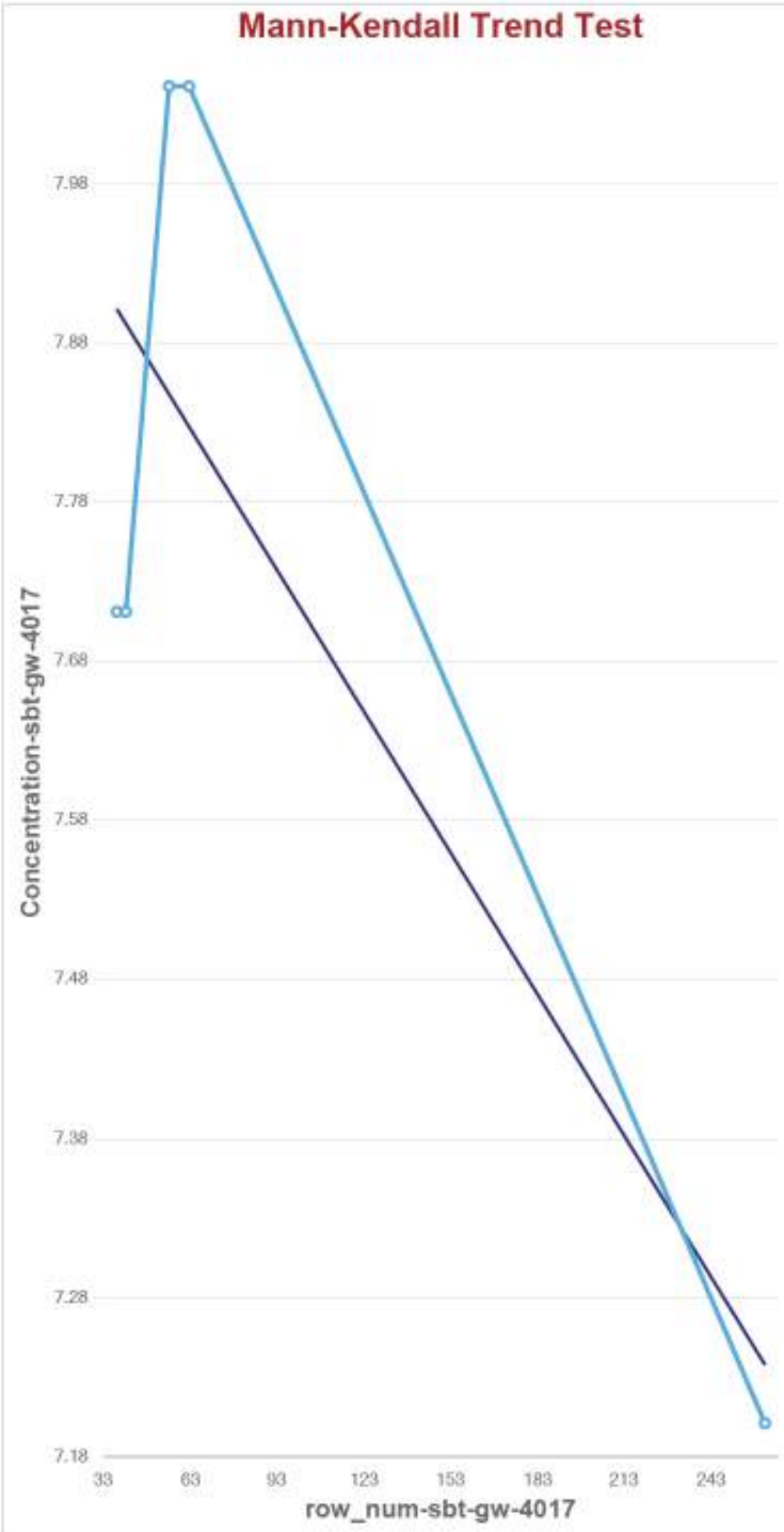
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	-1.4446
M-K Test Value (S)	-5
Tabulated p-value	0.1670
Approximate p-value	0.0743

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0090
OLS Regression Intercept	9.8214

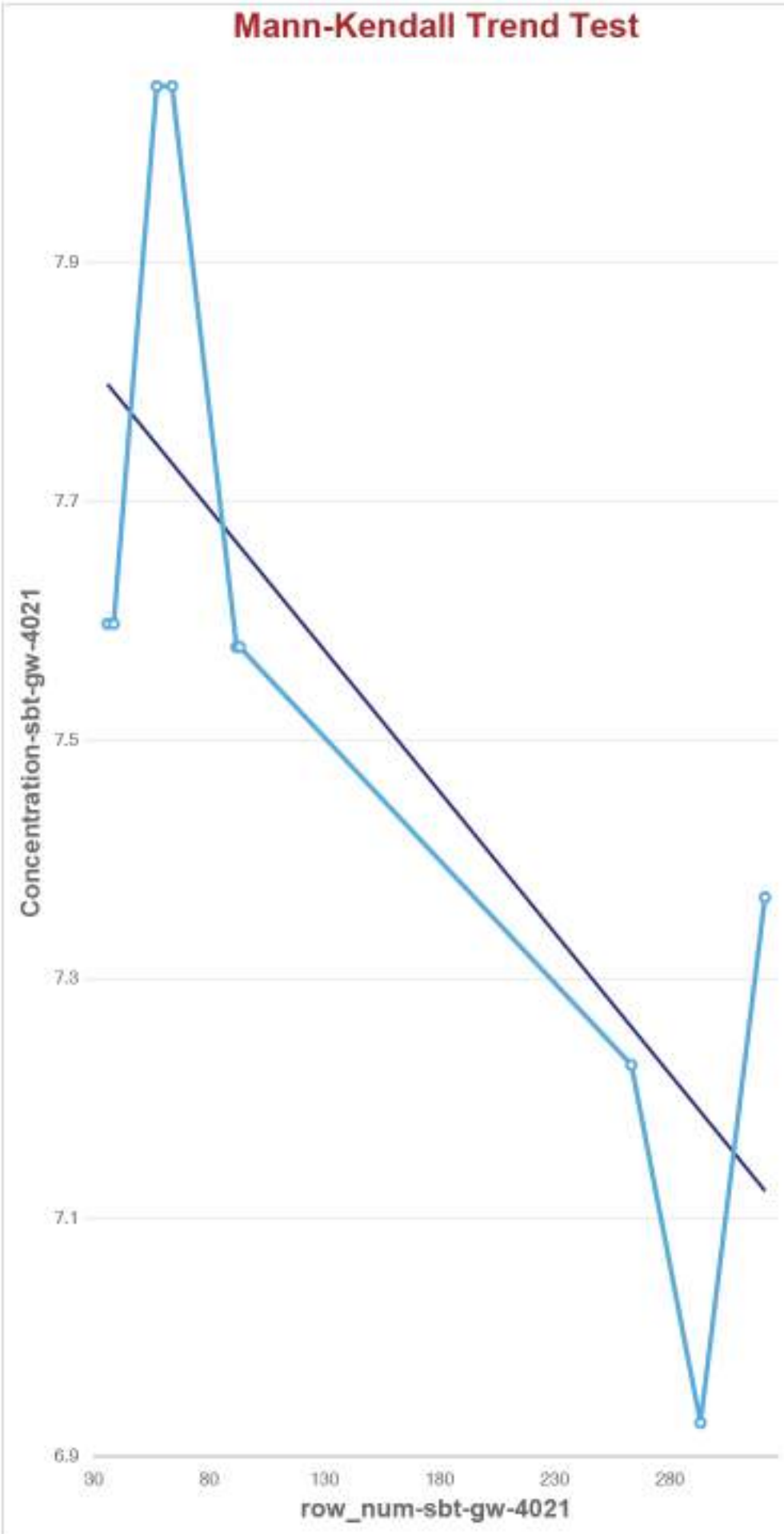
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	3.8297
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5920
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0030
OLS Regression Intercept	8.0122

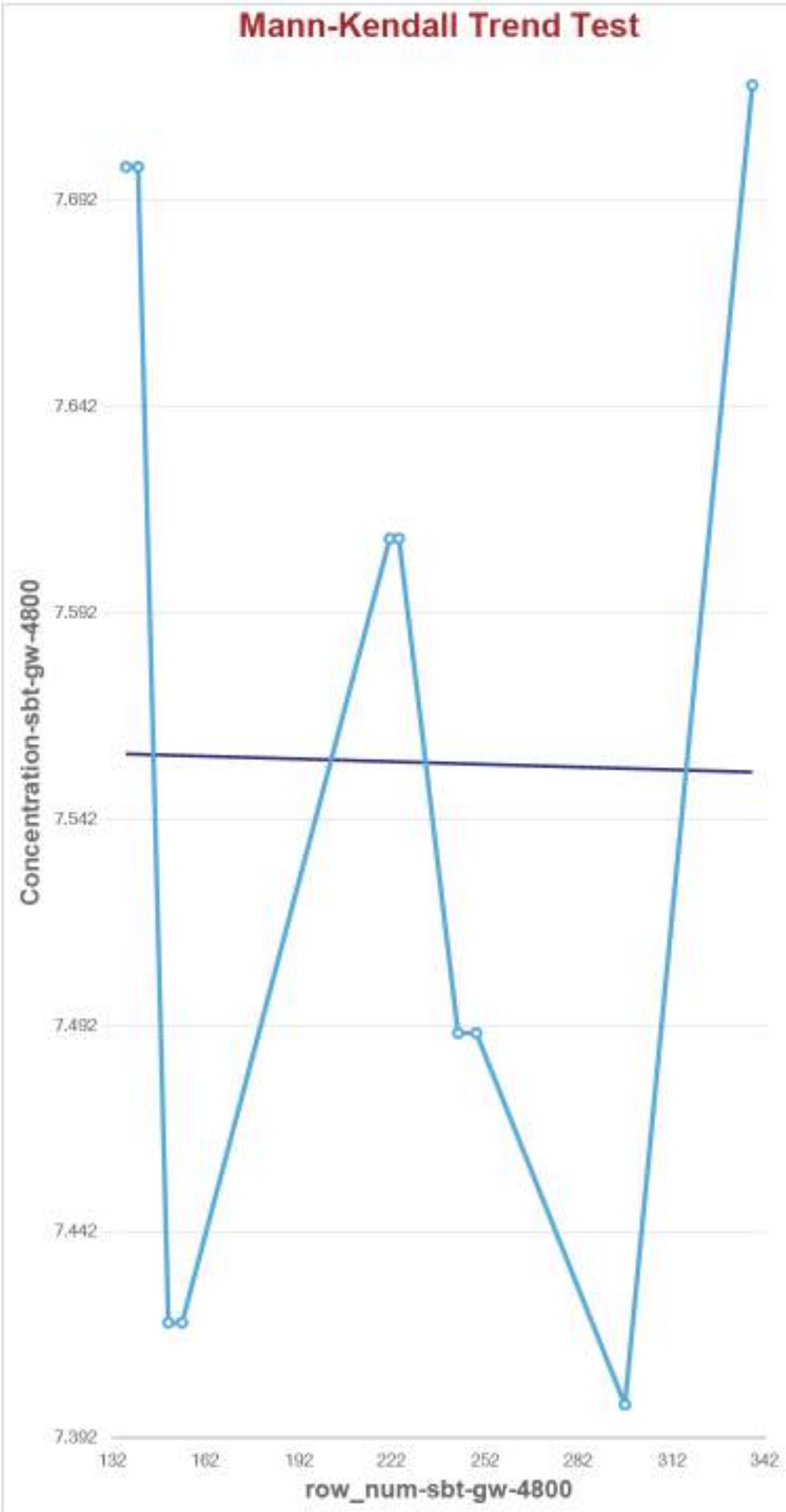
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.4340
Standardized Value of S	-2.1200
M-K Test Value (S)	-21
Tabulated p-value	0.0220
Approximate p-value	0.0170

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0024
OLS Regression Intercept	7.8556

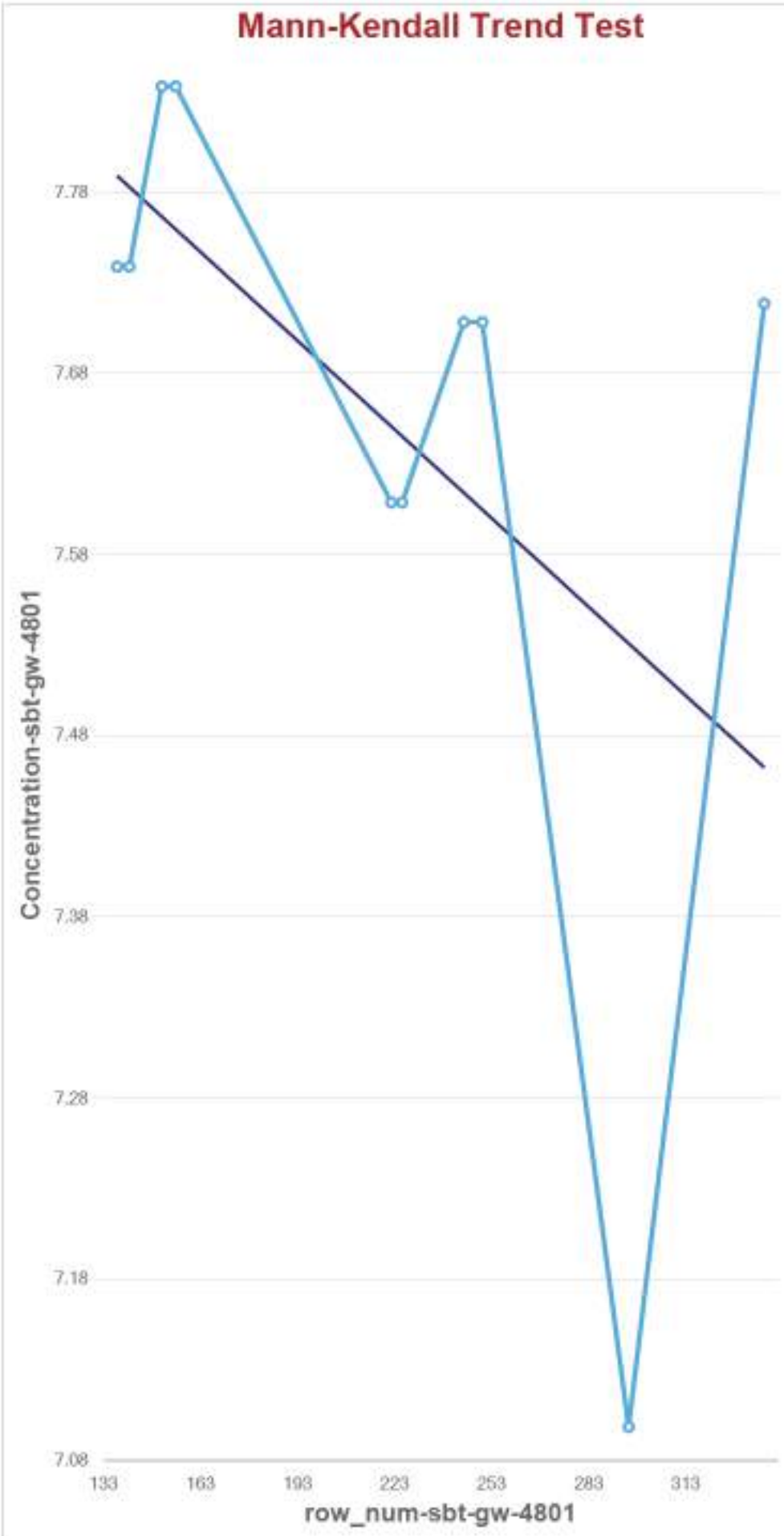
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-0.5455
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.2927

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	7.5606

Insufficient statistical evidence of a significant trend at the specified level of significance.



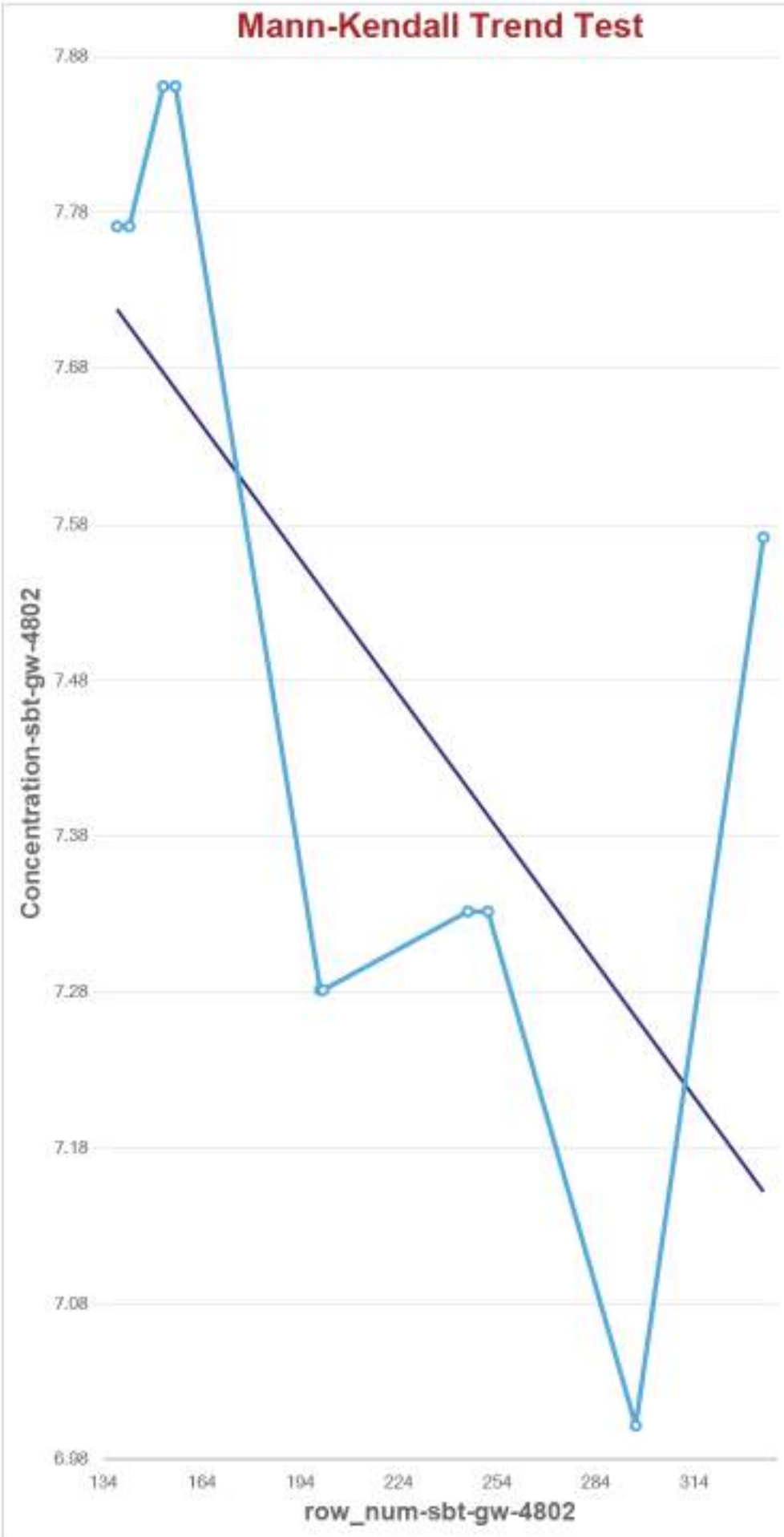
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-1.2727
M-K Test Value (S)	-15
Tabulated p-value	0.1080
Approximate p-value	0.1016

OLS Regression Line (Blue)

OLS Regression Slope	-0.0016
OLS Regression Intercept	8.0133

Insufficient statistical evidence of a significant trend at the specified level of significance.



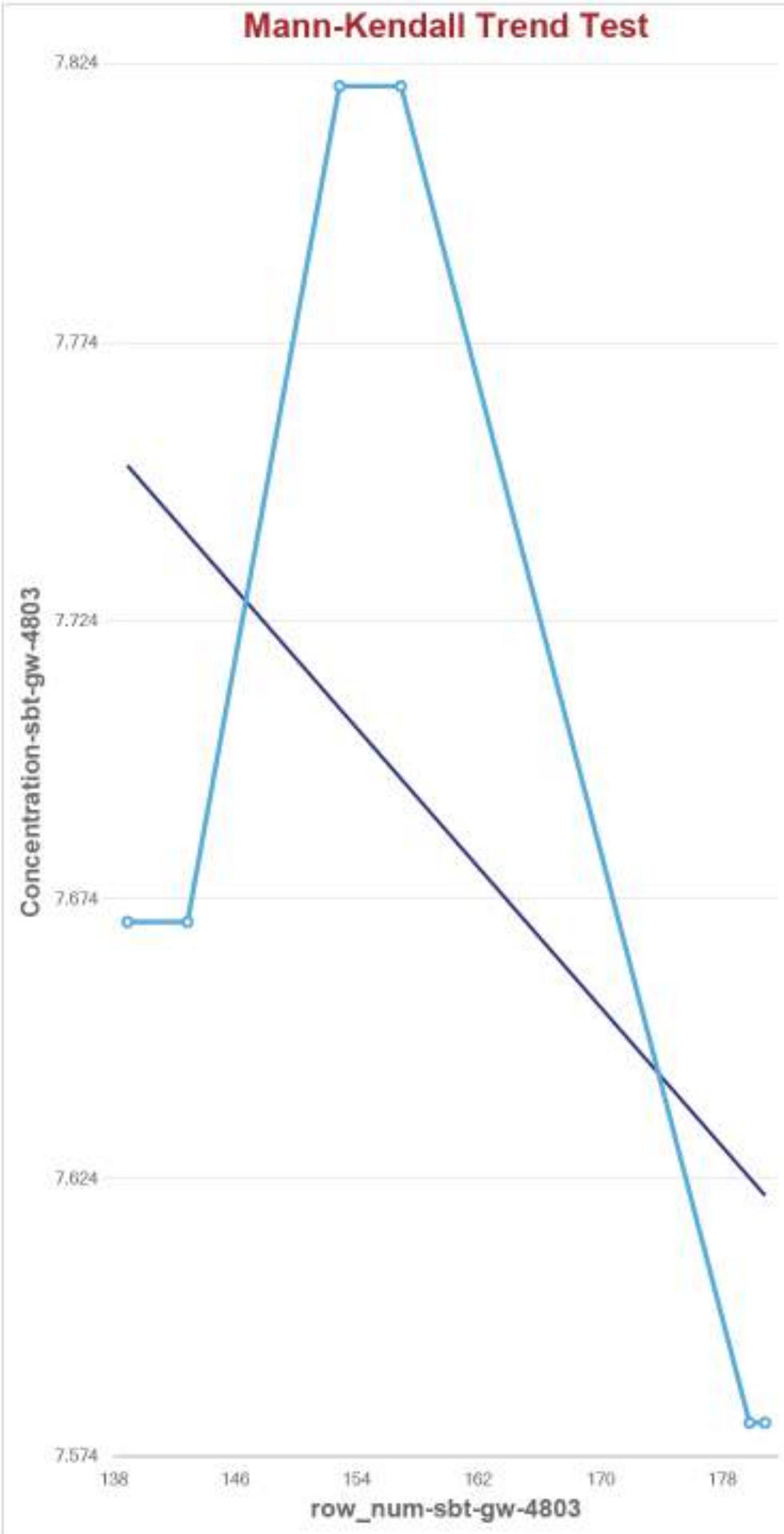
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-1.2727
M-K Test Value (S)	-15
Tabulated p-value	0.1080
Approximate p-value	0.1016

OLS Regression Line (Blue)

OLS Regression Slope	-0.0029
OLS Regression Intercept	8.1131

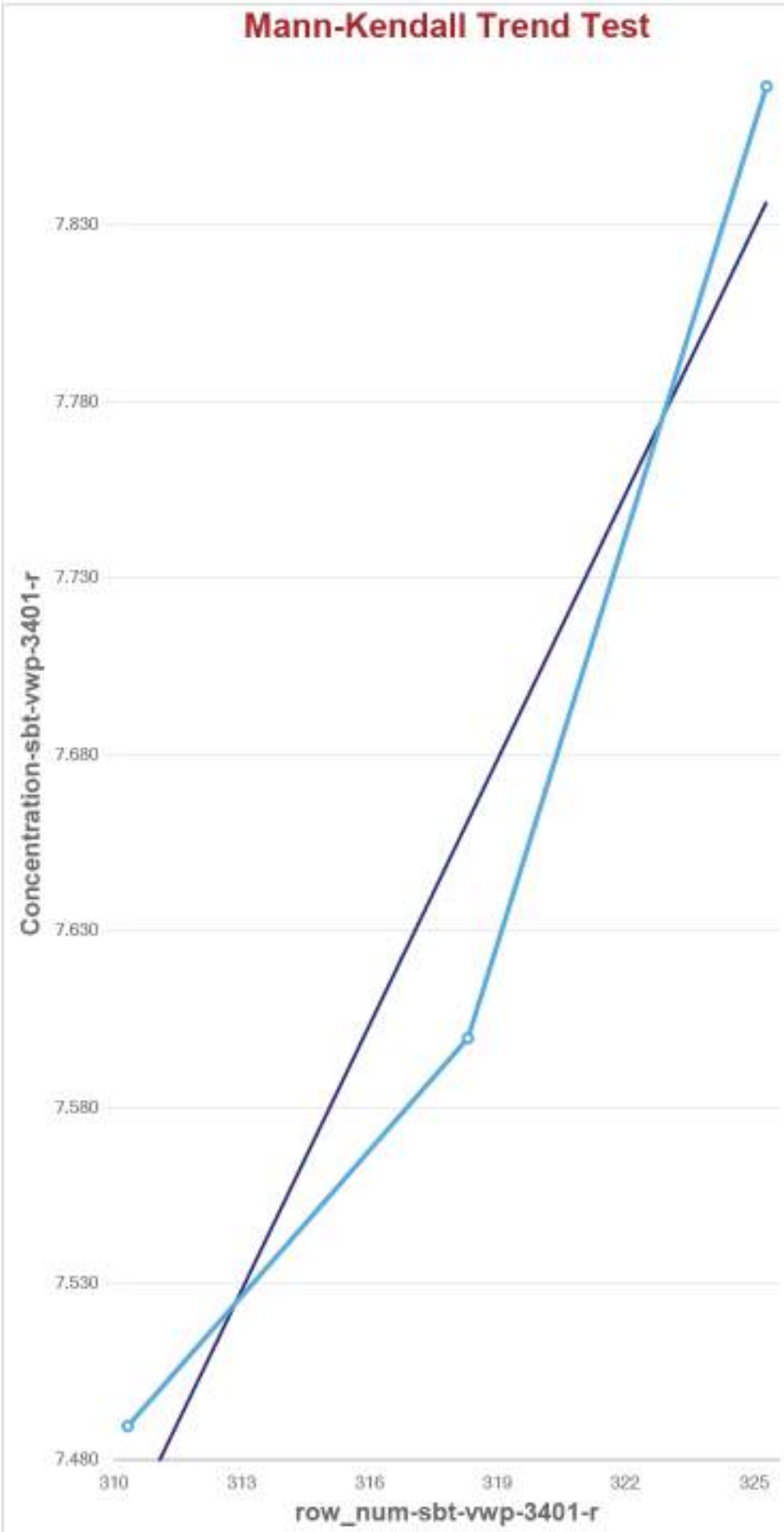
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	-0.5960
M-K Test Value (S)	-4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0031
OLS Regression Intercept	8.1849

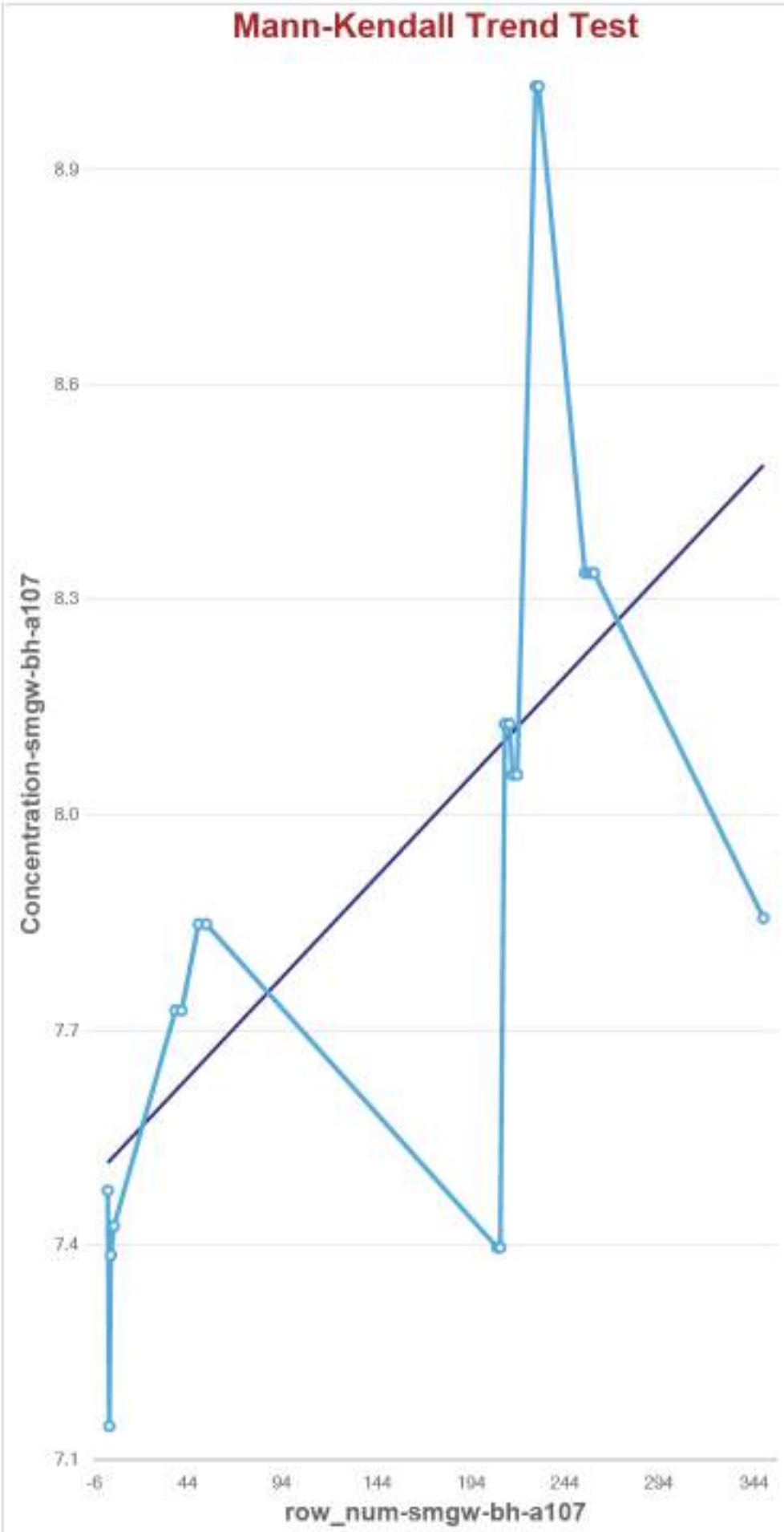
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	1.0445
M-K Test Value (S)	3
Tabulated p-value	
Approximate p-value	0.1481

OLS Regression Line (Blue)	
OLS Regression Slope	0.0251
OLS Regression Intercept	-0.3071

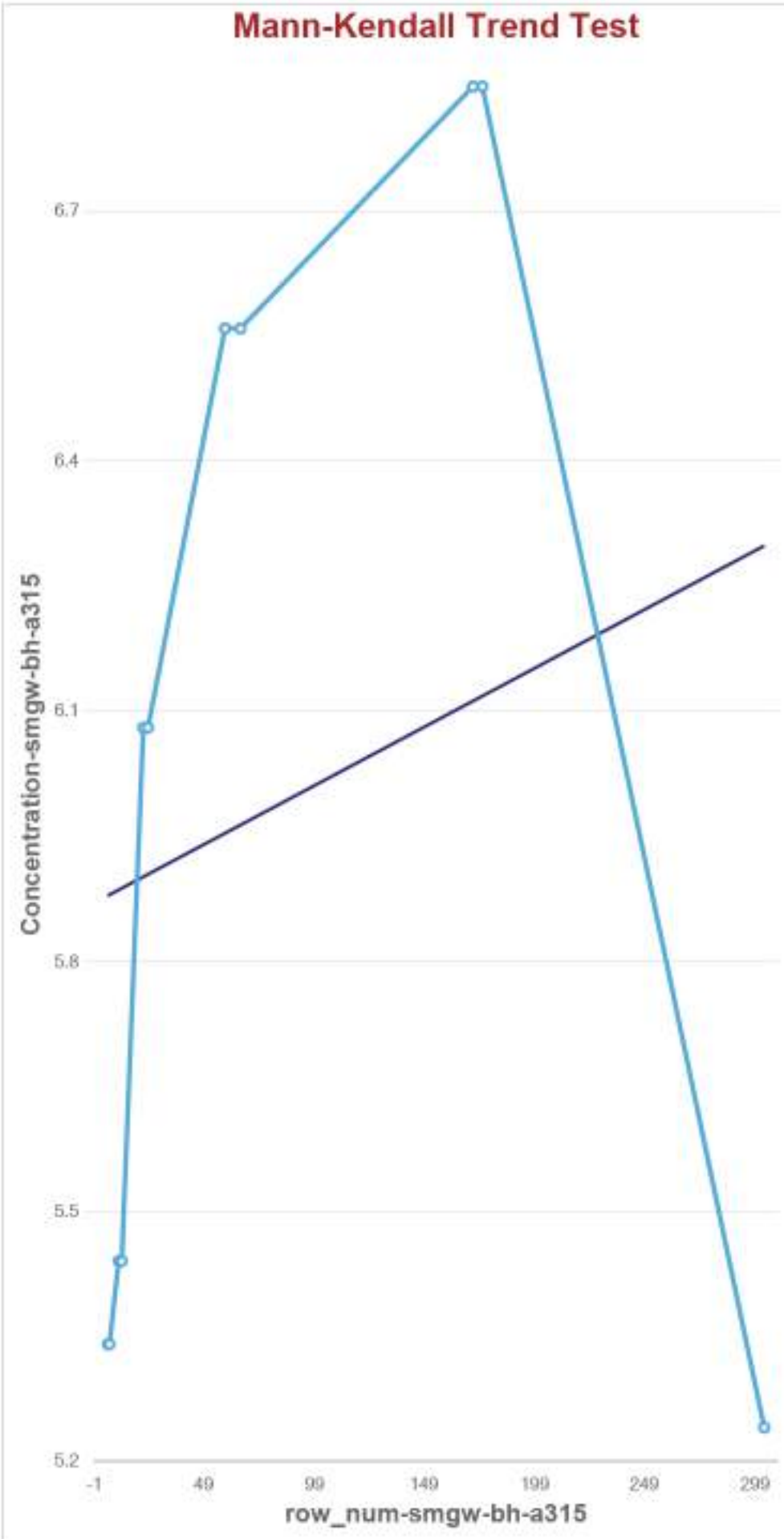
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.8938
Standardized Value of S	3.7393
M-K Test Value (S)	124
Tabulated p-value	0.0000
Approximate p-value	0.0001

OLS Regression Line (Blue)	
OLS Regression Slope	0.0028
OLS Regression Intercept	7.5046

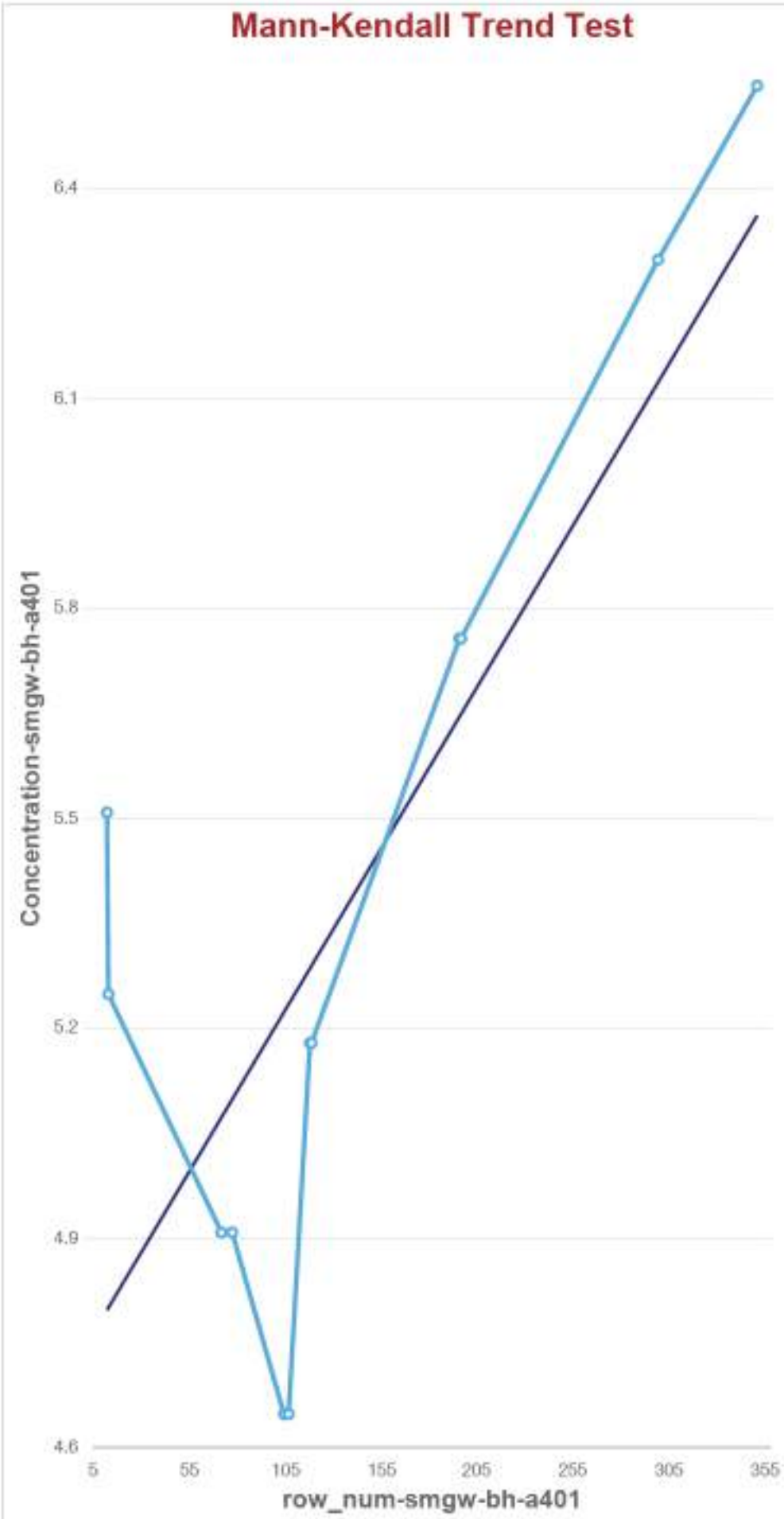
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6491
Standardized Value of S	2.2927
M-K Test Value (S)	30
Tabulated p-value	0.0080
Approximate p-value	0.0109

OLS Regression Line (Blue)	
OLS Regression Slope	0.0014
OLS Regression Intercept	5.8313

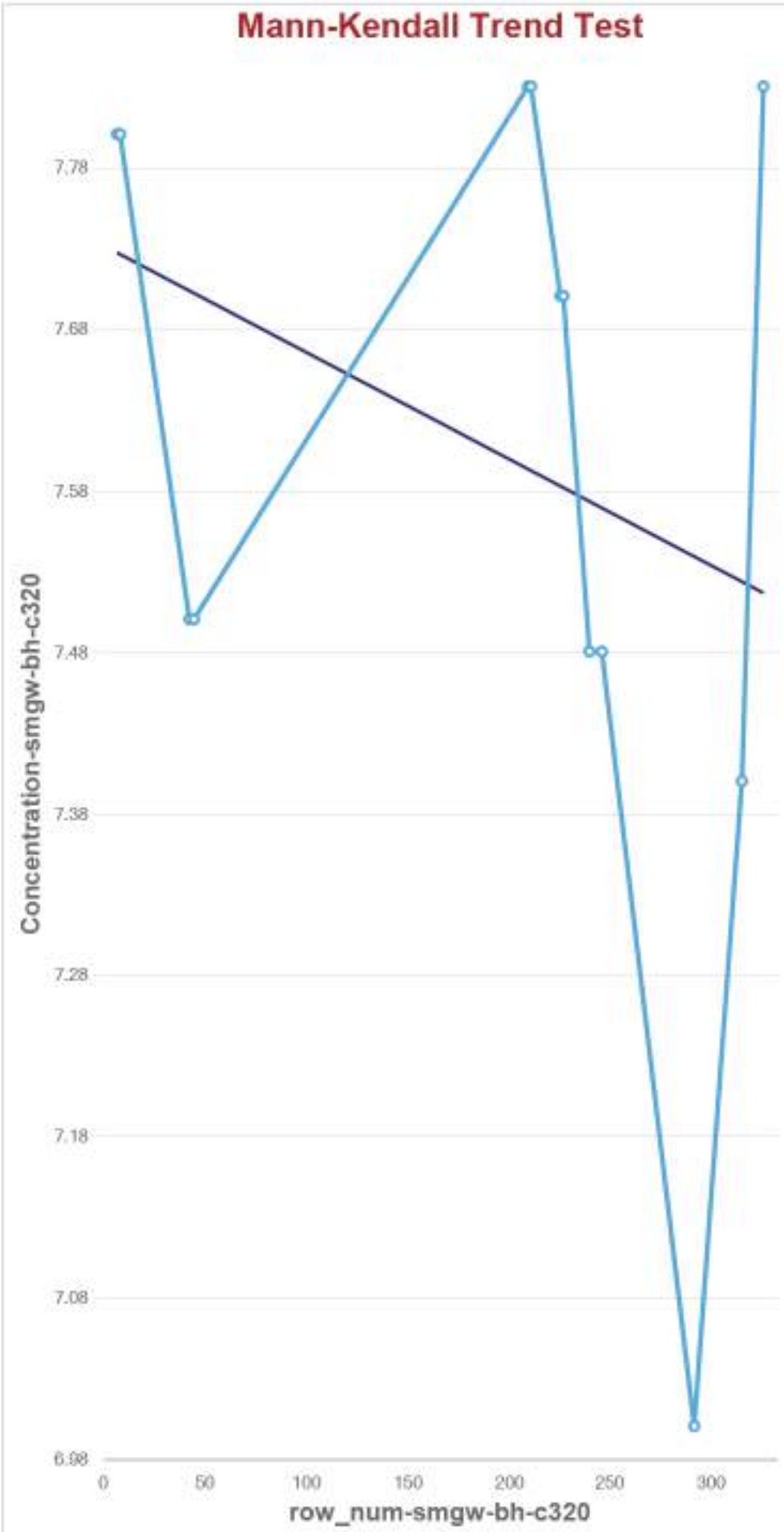
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4453
Standardized Value of S	1.8691
M-K Test Value (S)	28
Tabulated p-value	0.0310
Approximate p-value	0.0308

OLS Regression Line (Blue)	
OLS Regression Slope	0.0046
OLS Regression Intercept	4.7438

Statistically significant evidence of an increasing trend at the specified level of significance.



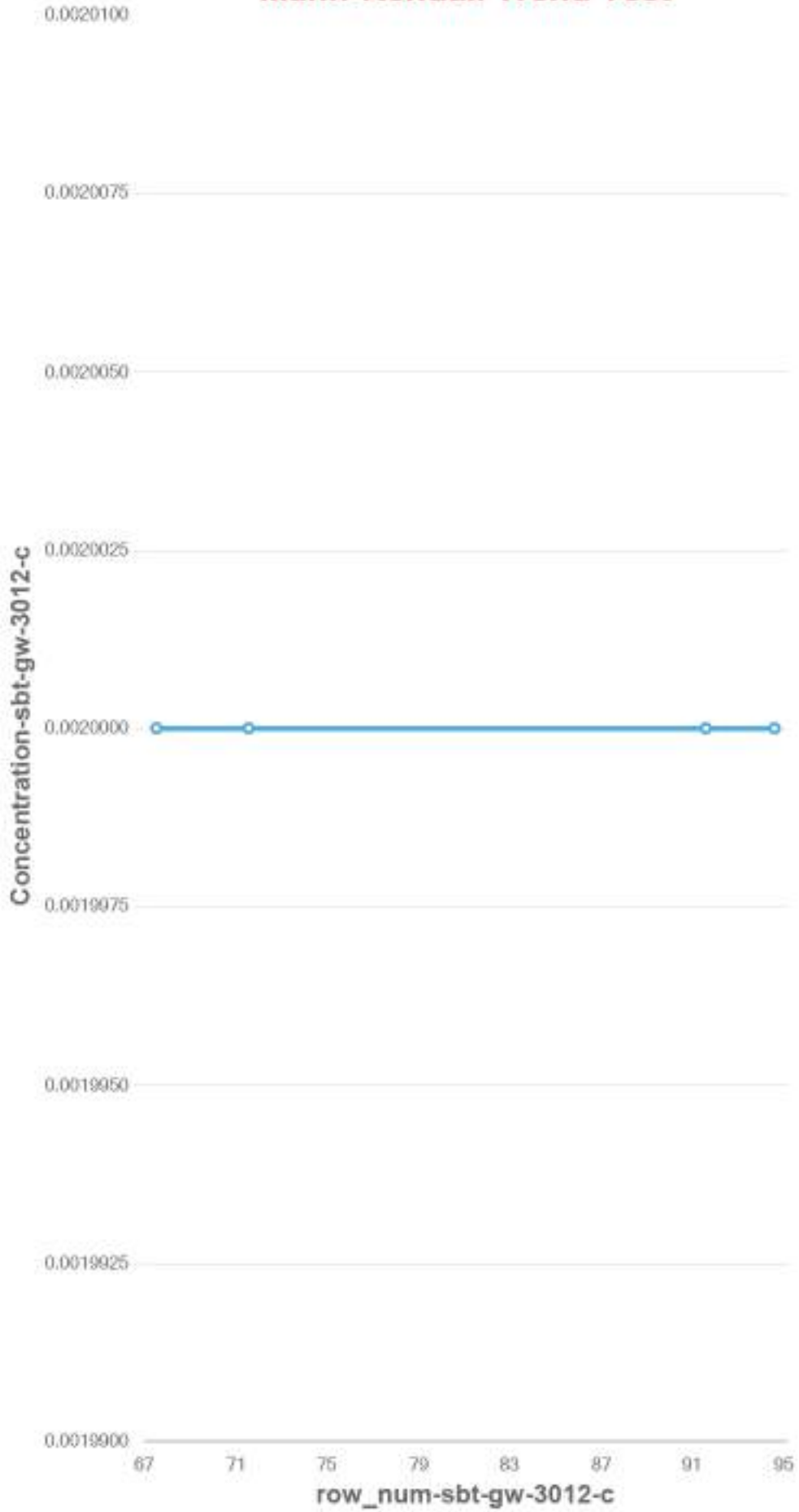
Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	17.9815
Standardized Value of S	-1.6128
M-K Test Value (S)	-30
Tabulated p-value	0.0500
Approximate p-value	0.0534

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0007
OLS Regression Intercept	7.7315

Statistically significant evidence of a decreasing trend at the specified level of significance.

F.9 PHENOL

Mann-Kendall Trend Test

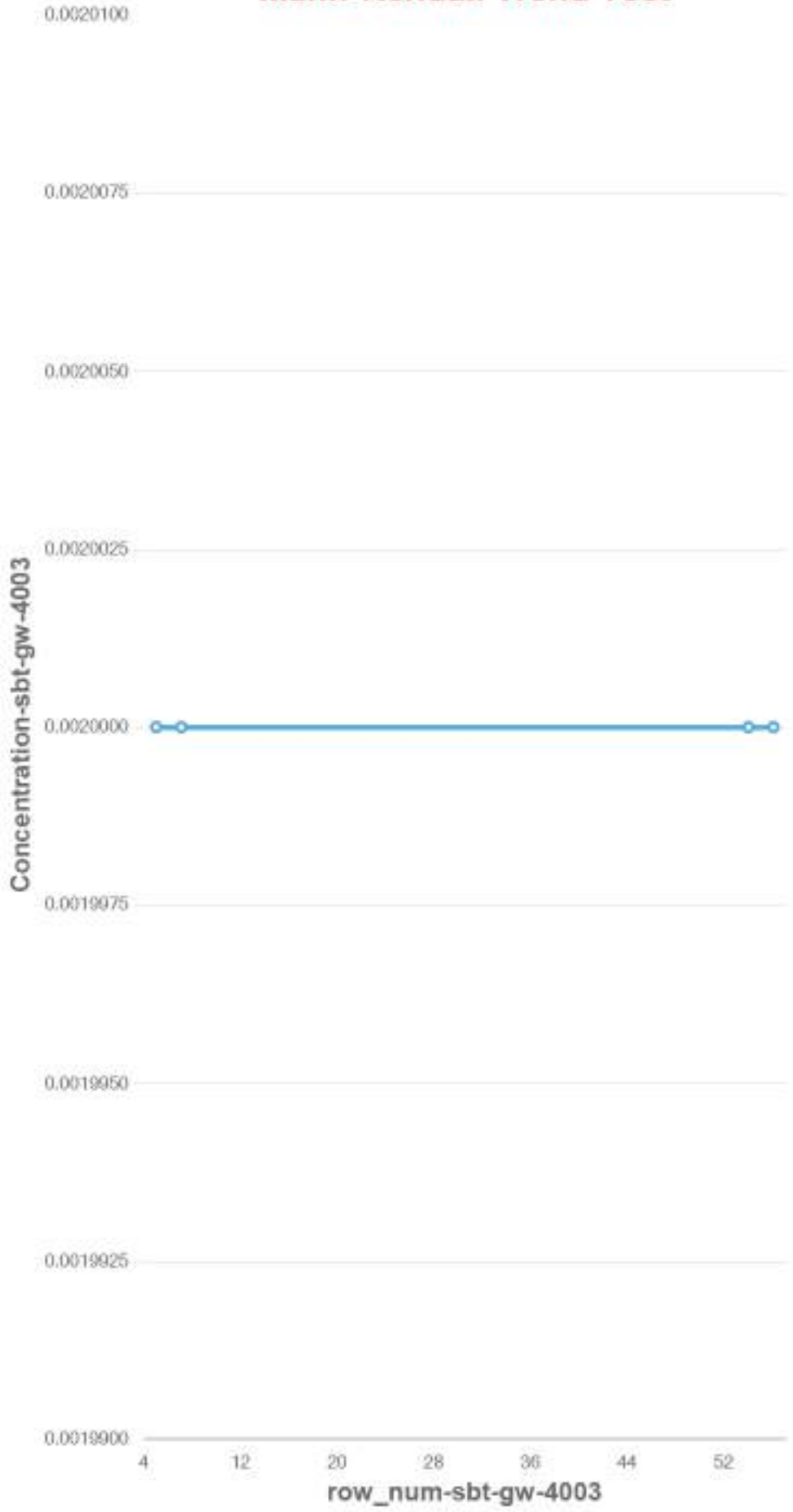


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

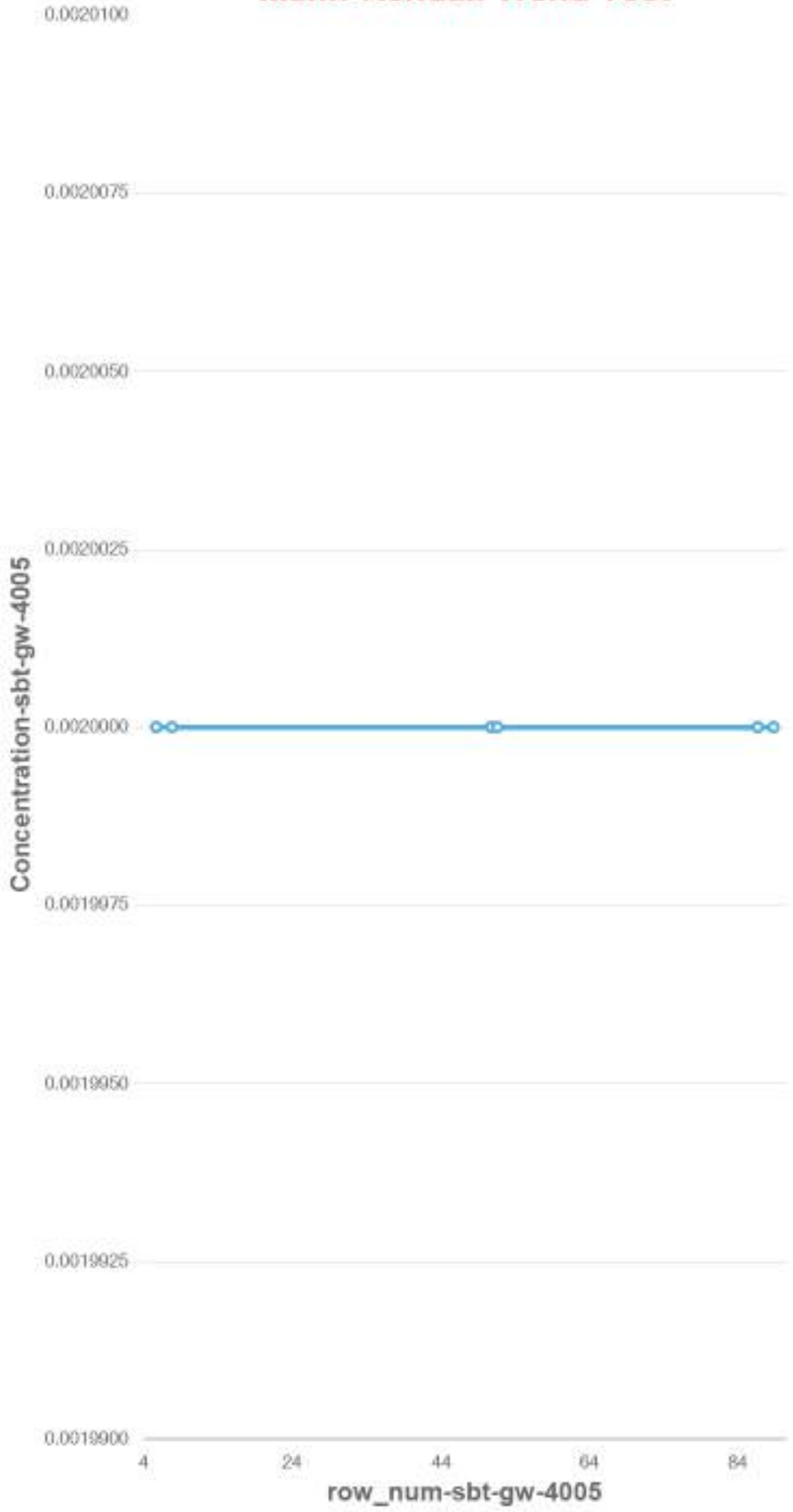


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

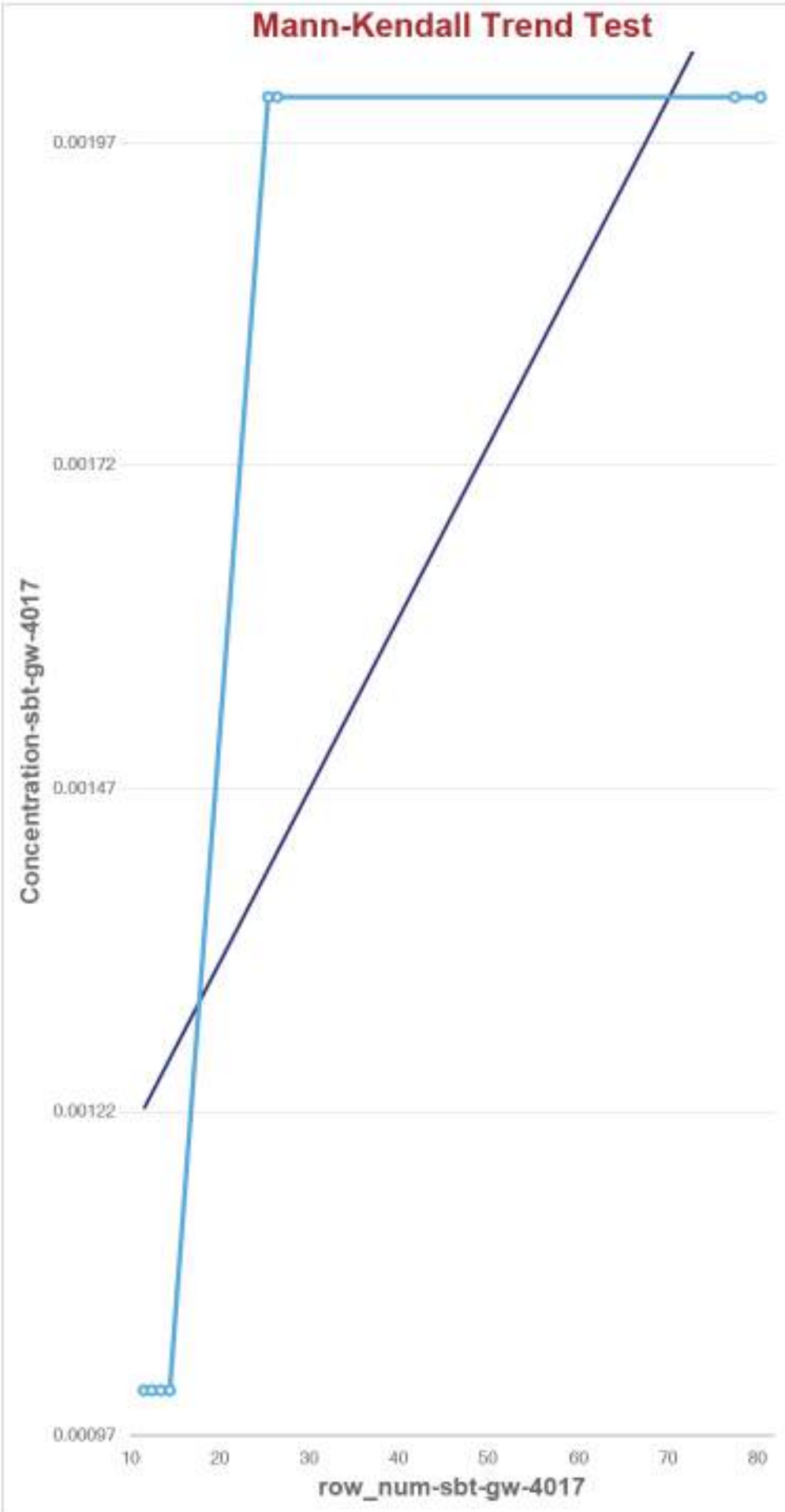
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

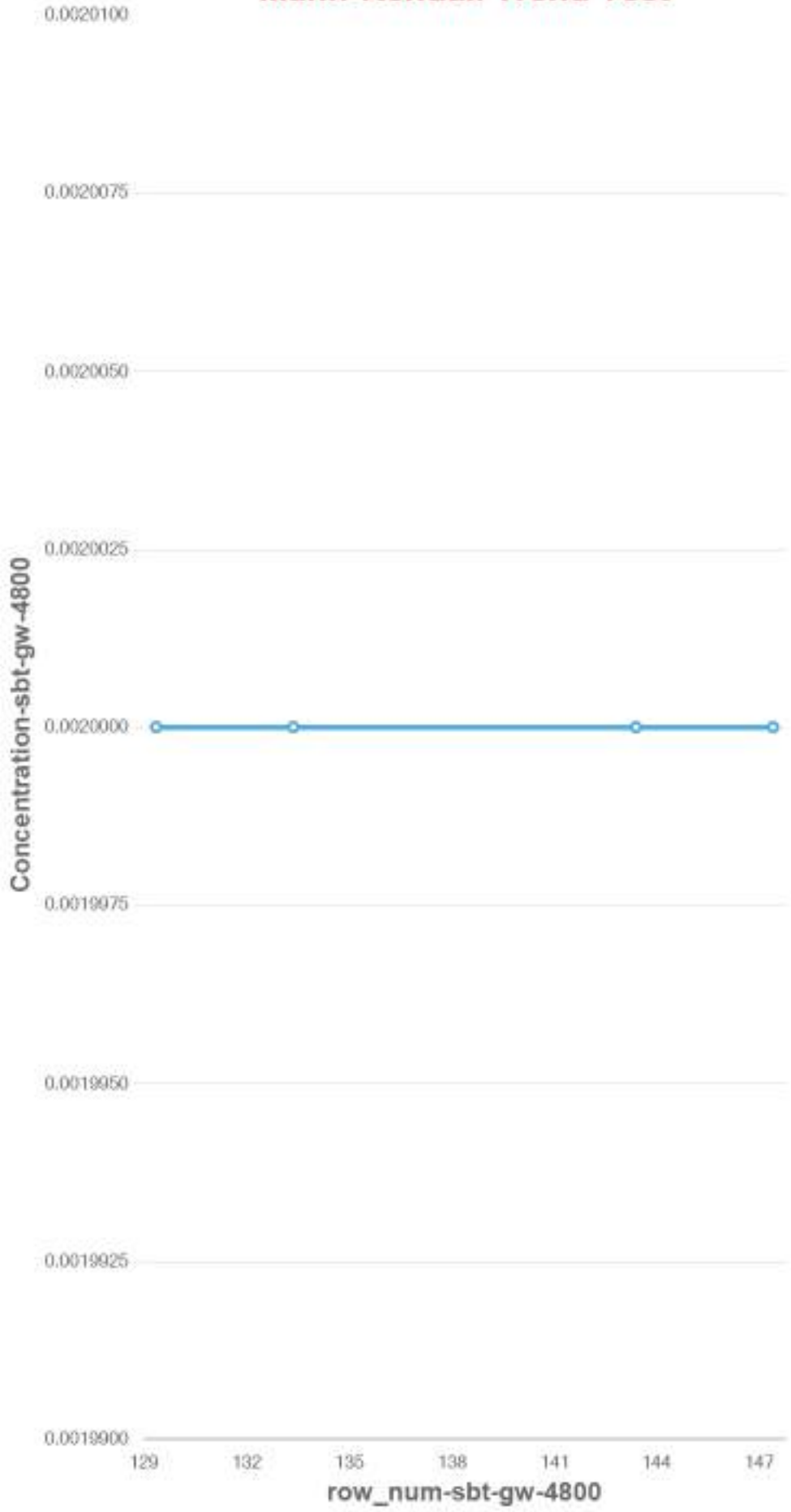
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9282
Standardized Value of S	2.1651
M-K Test Value (S)	16
Tabulated p-value	0.0310
Approximate p-value	0.0152

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0011

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test

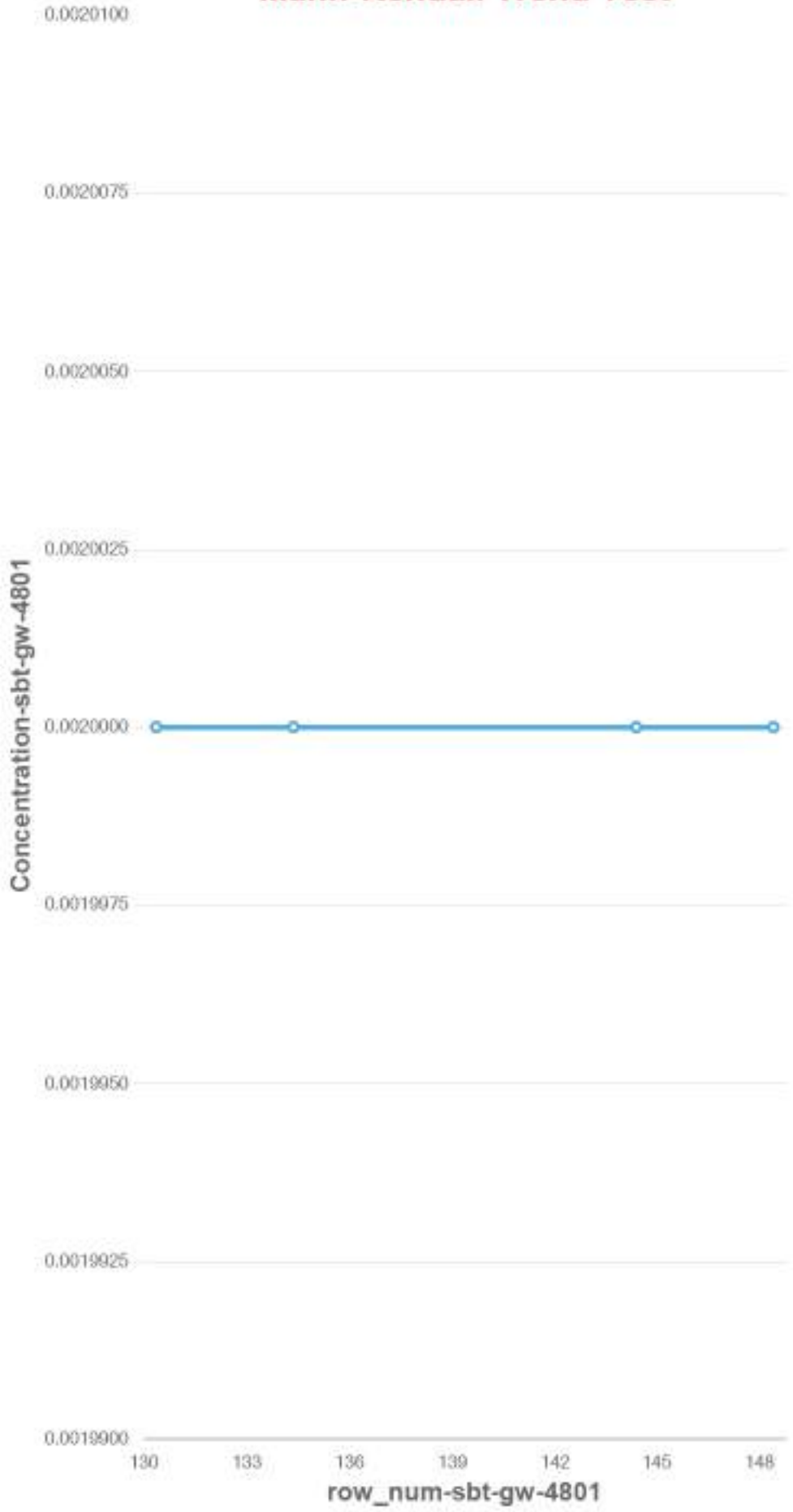


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

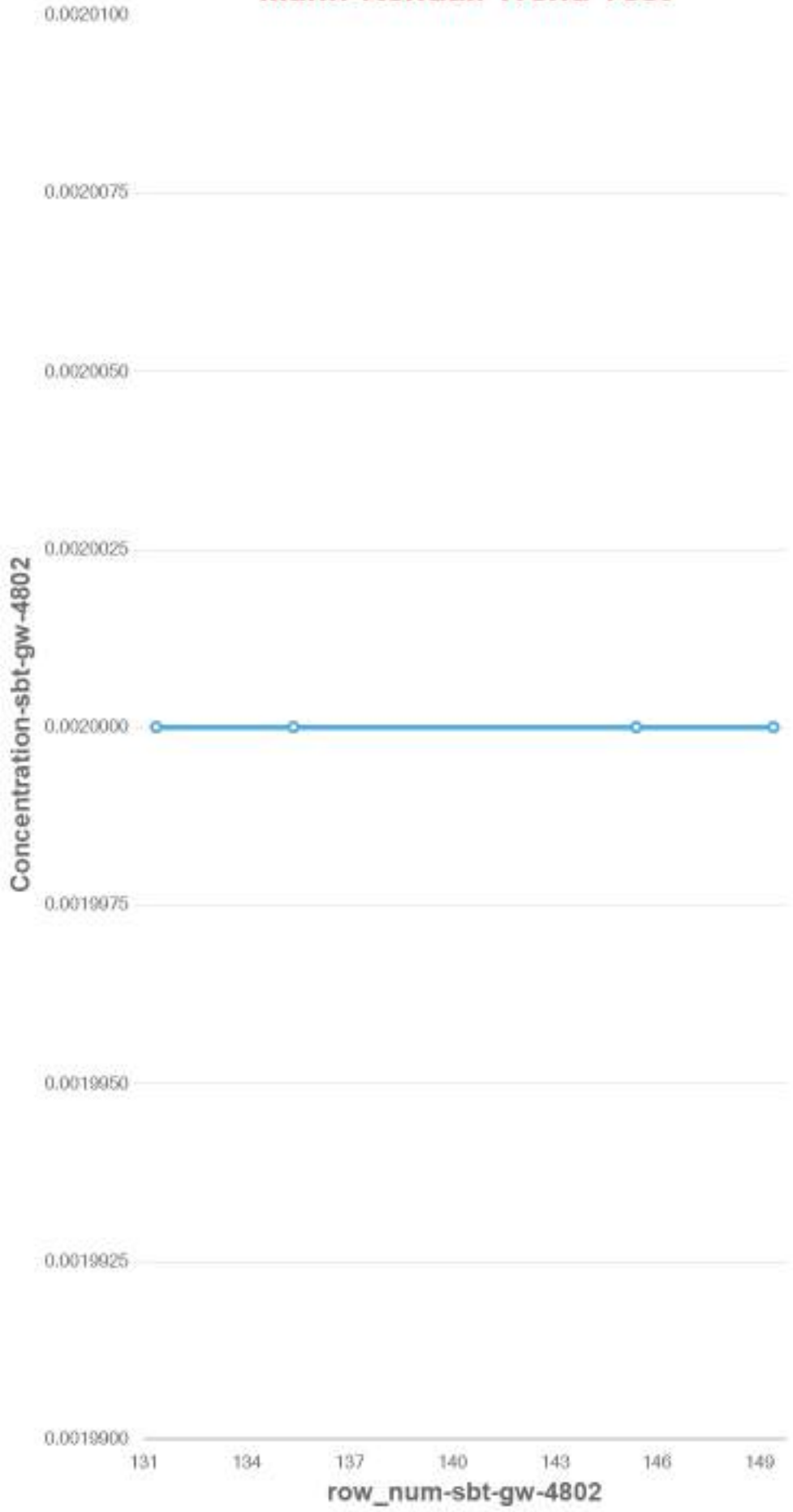


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

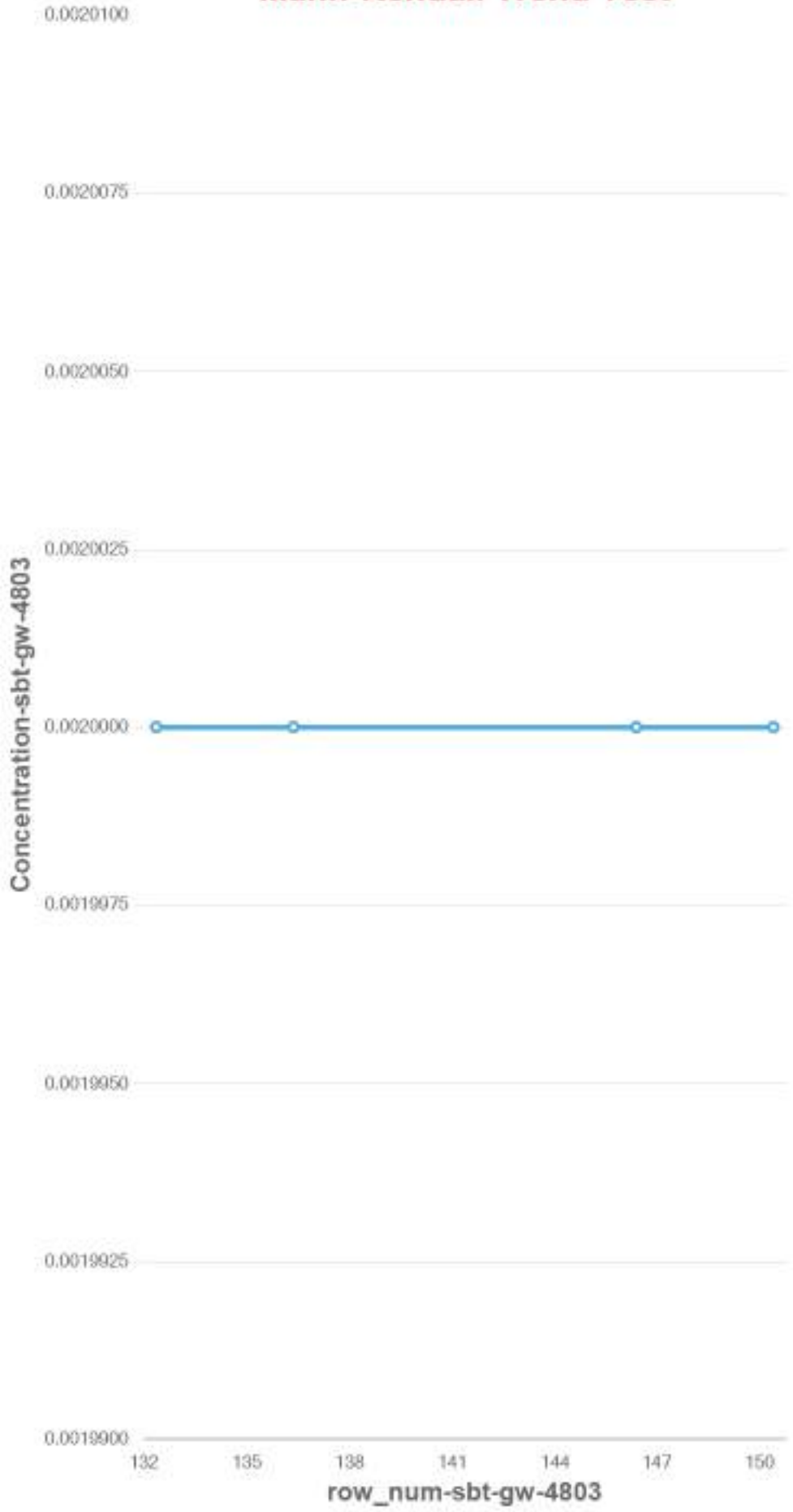


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

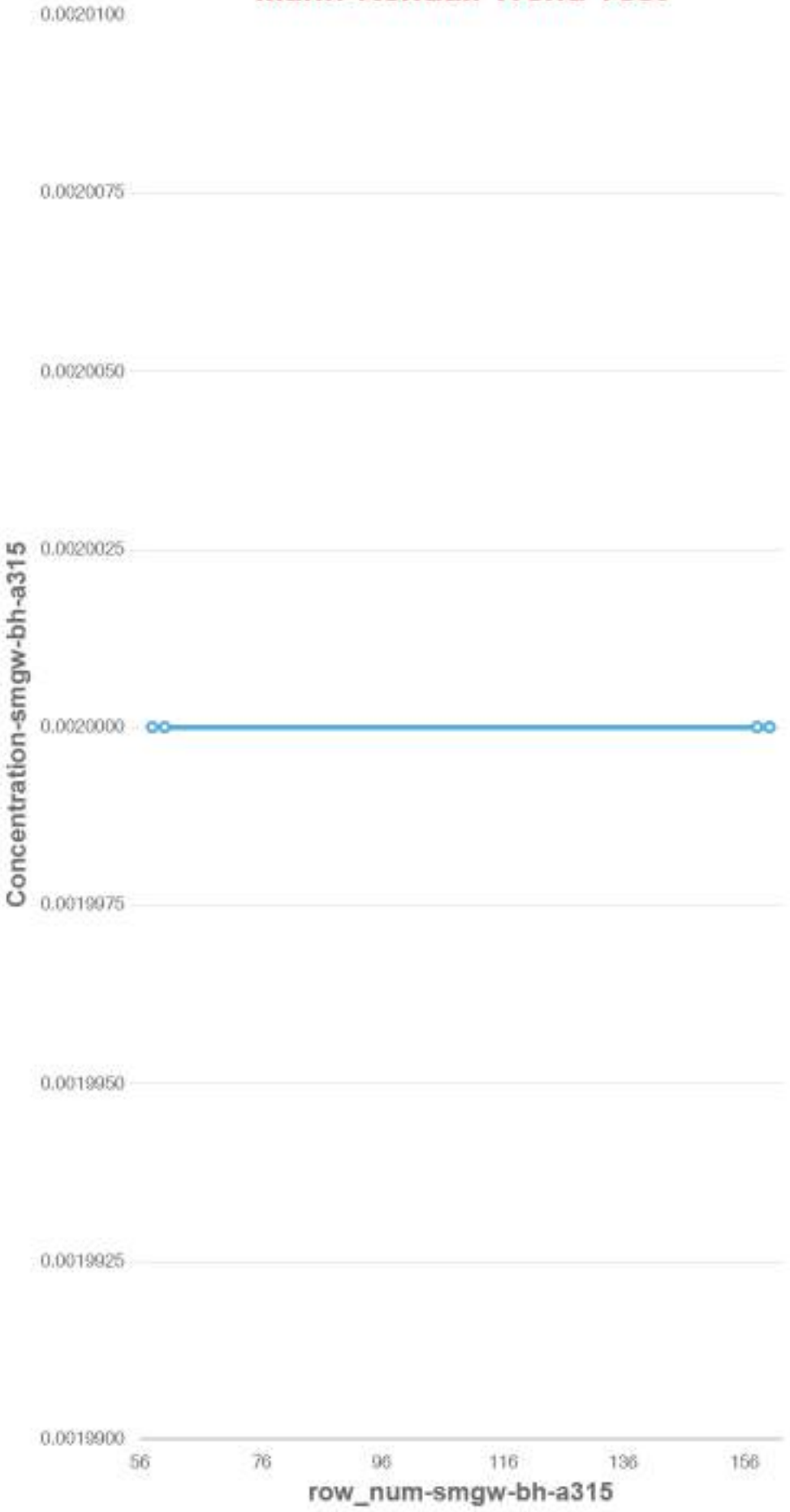


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

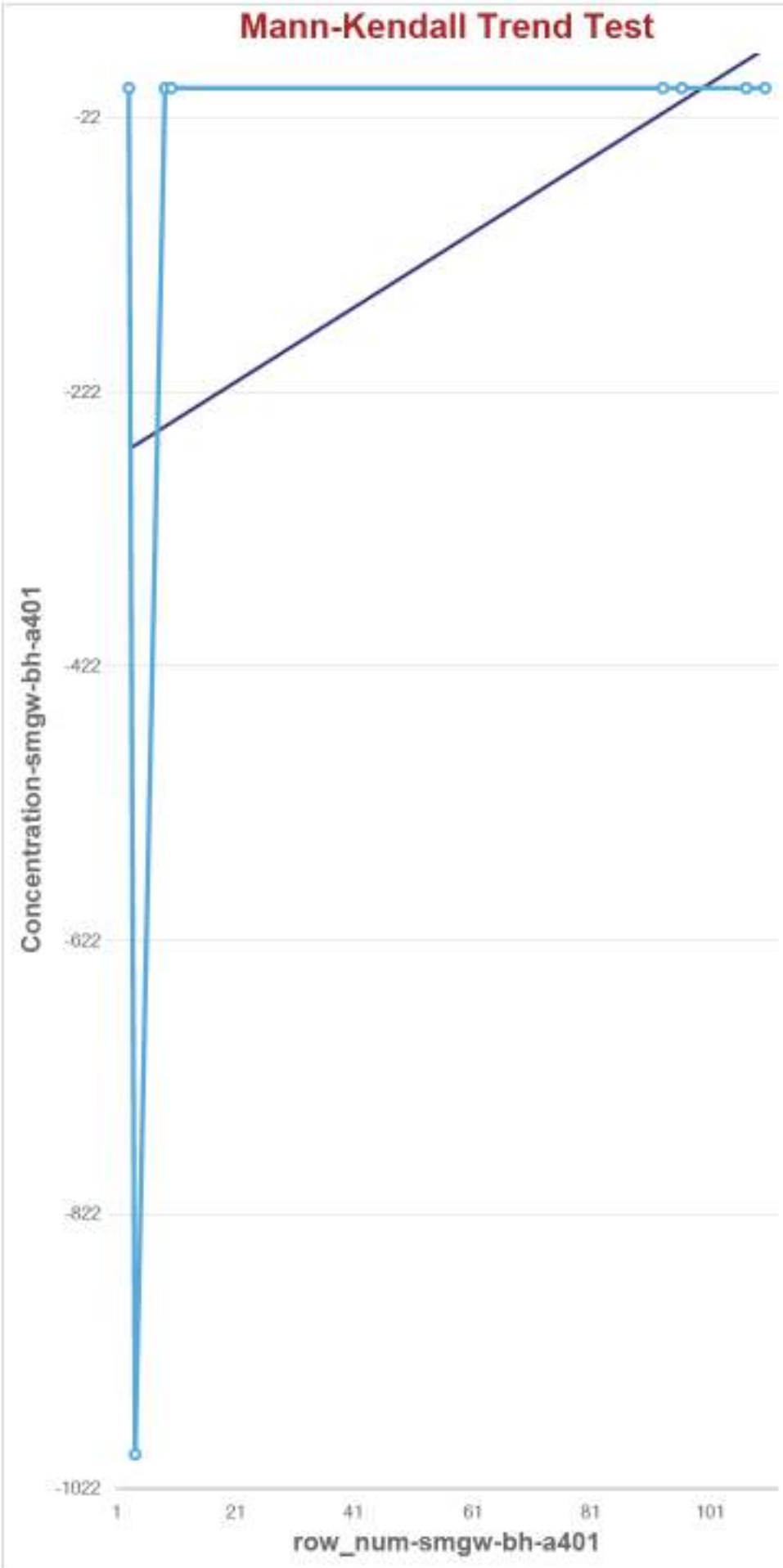
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

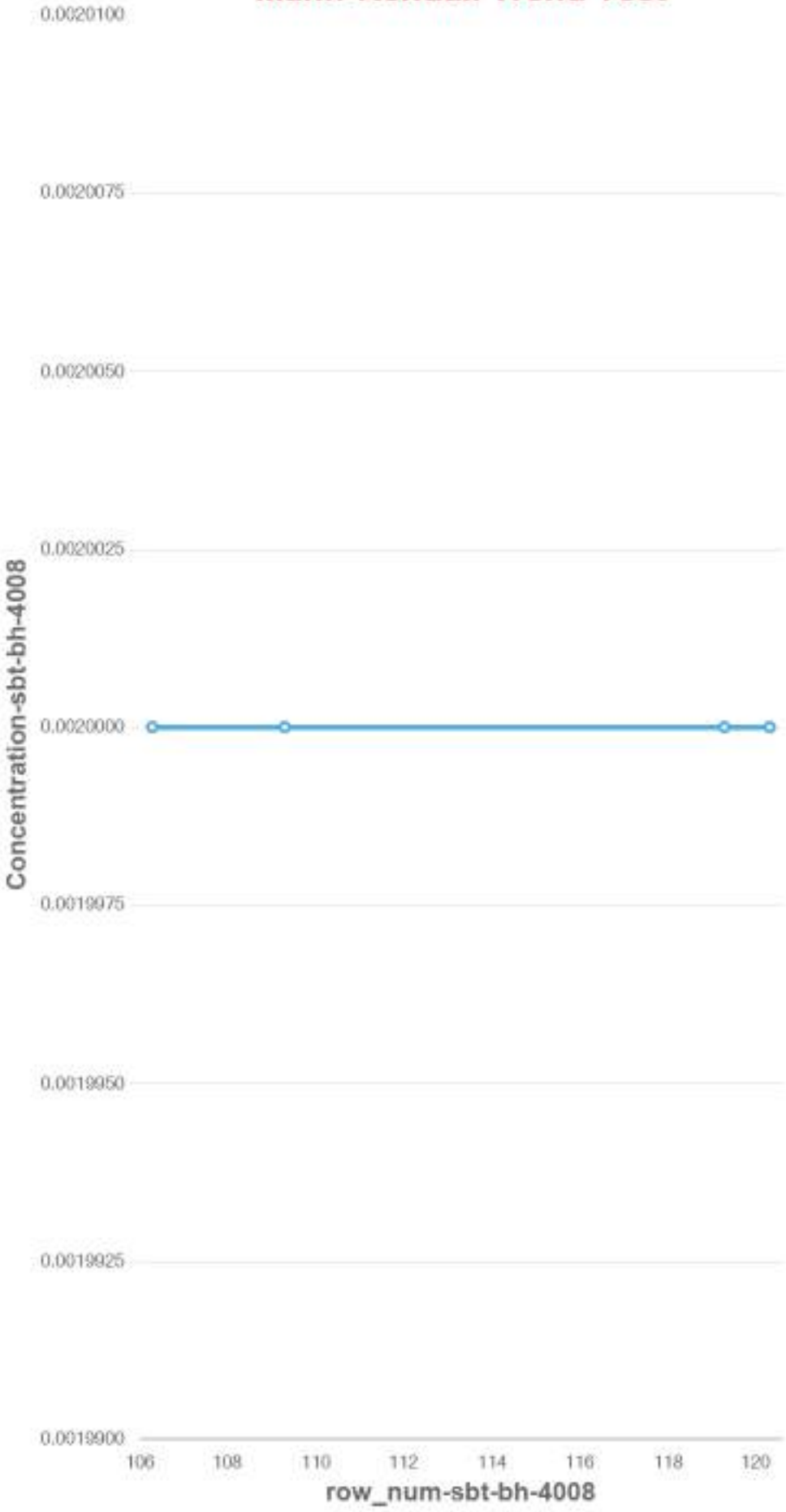
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.5826
Standardized Value of S	0.8729
M-K Test Value (S)	5
Tabulated p-value	0.3600
Approximate p-value	0.1914

OLS Regression Line (Blue)

OLS Regression Slope	2.7252
OLS Regression Interoept	-271.7862

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

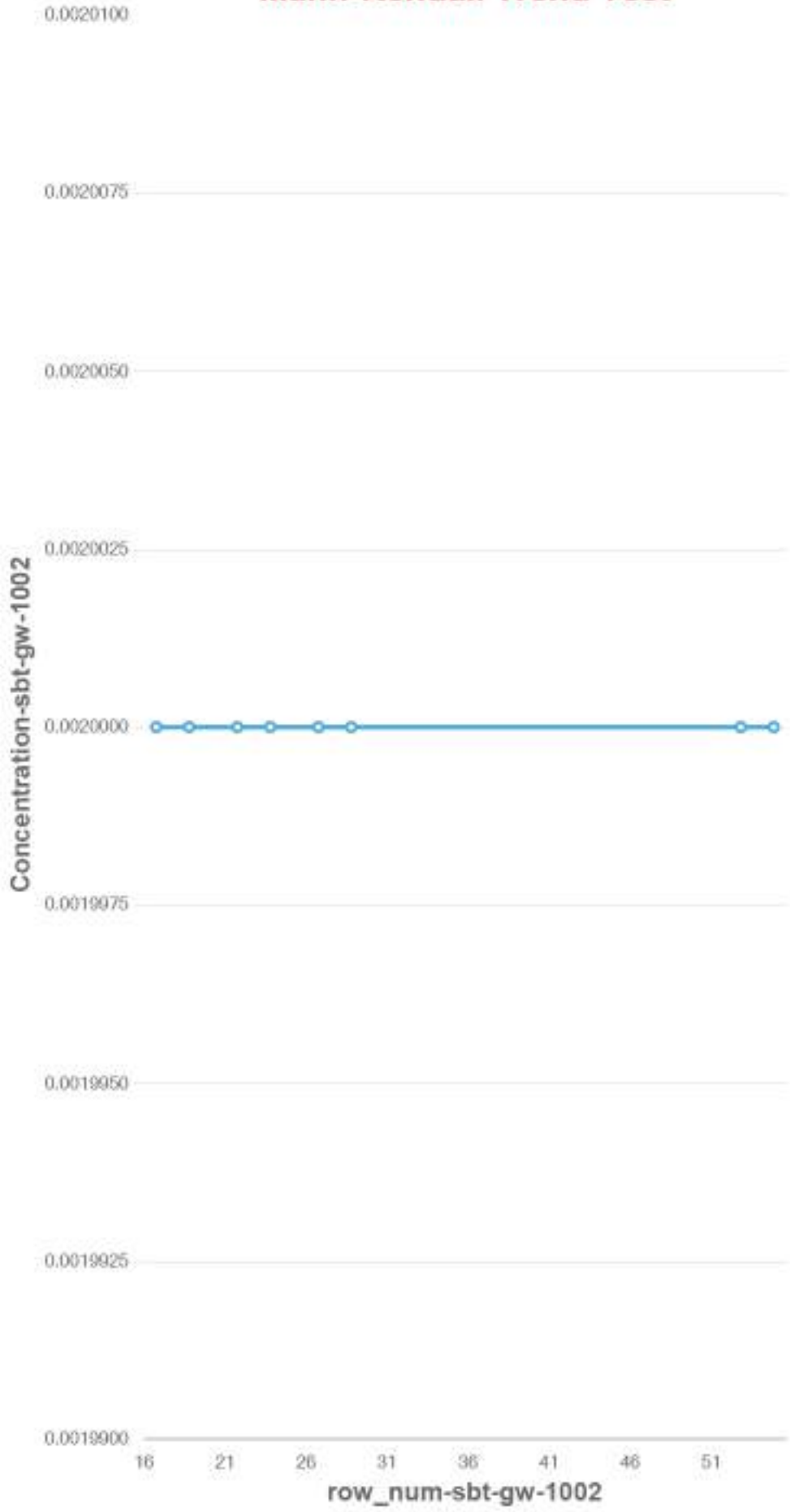


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

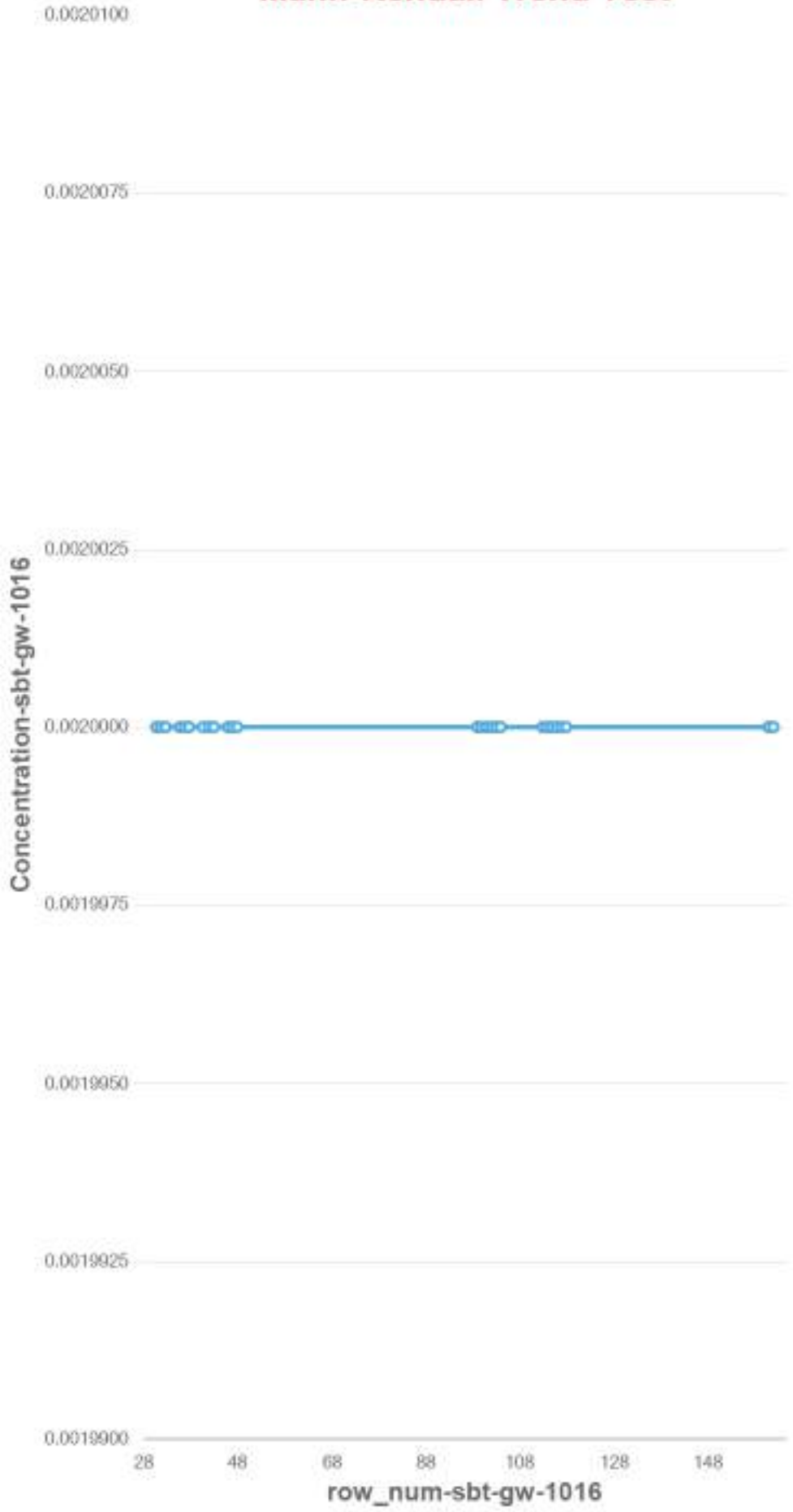


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

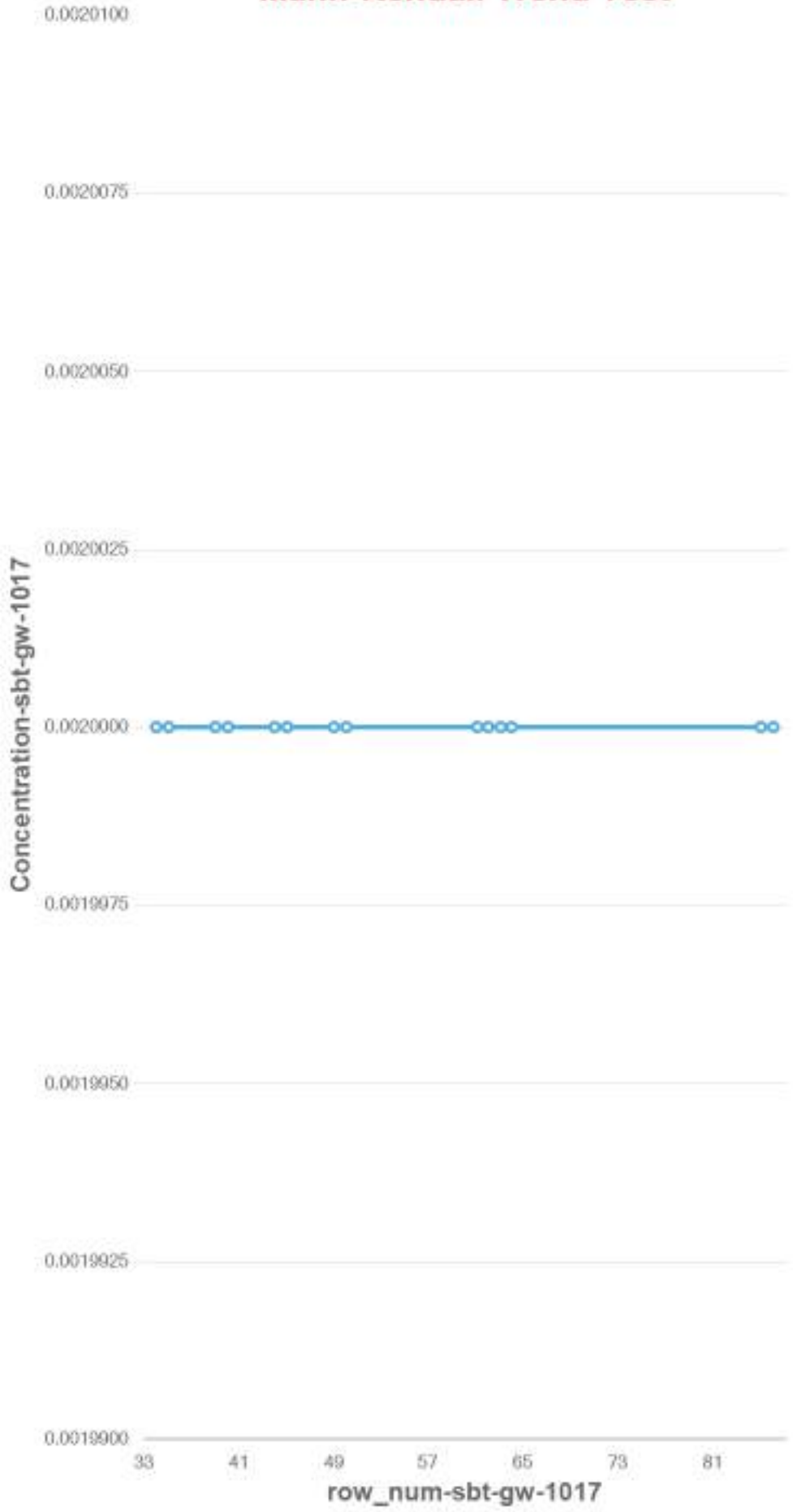


Mann-Kendall Trend Analysis	
n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Appx. Critical Value (0.05)	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

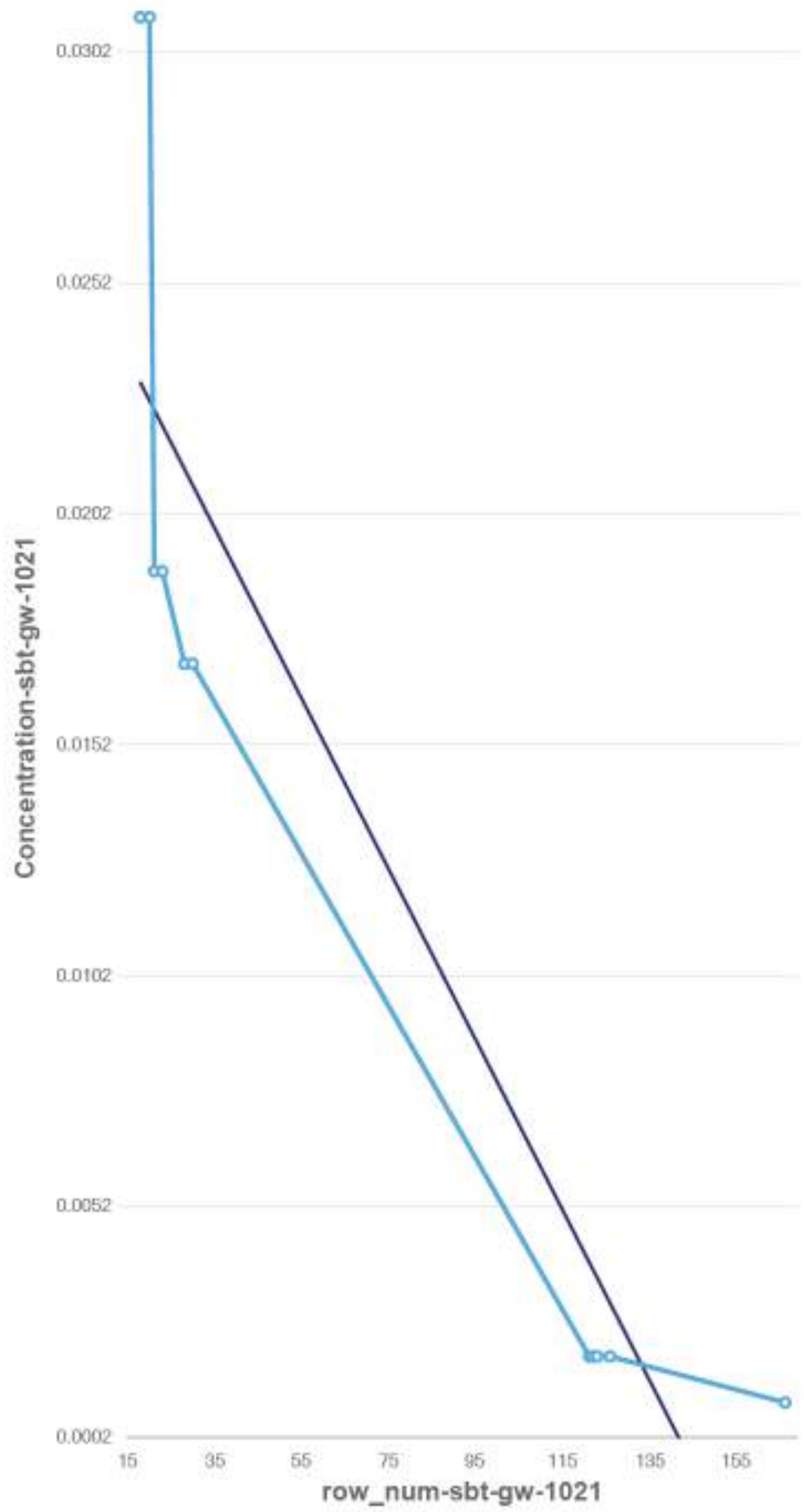


Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

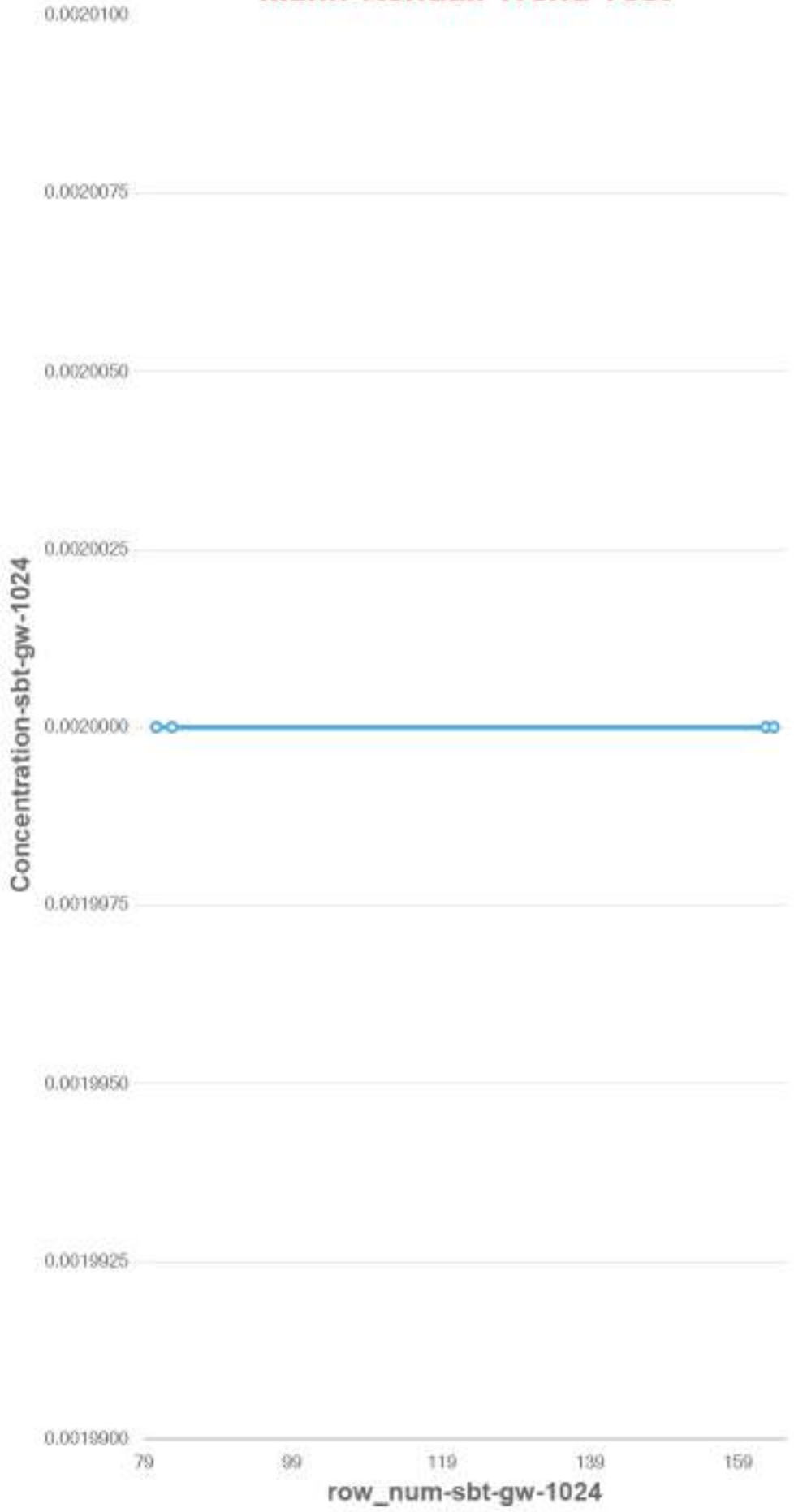


Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.3828
Standardized Value of S	-3.6341
M-K Test Value (S)	-46
Tabulated p-value	0.0000
Approximate p-value	0.0001

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0002
OLS Regression Intercept	0.0264

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

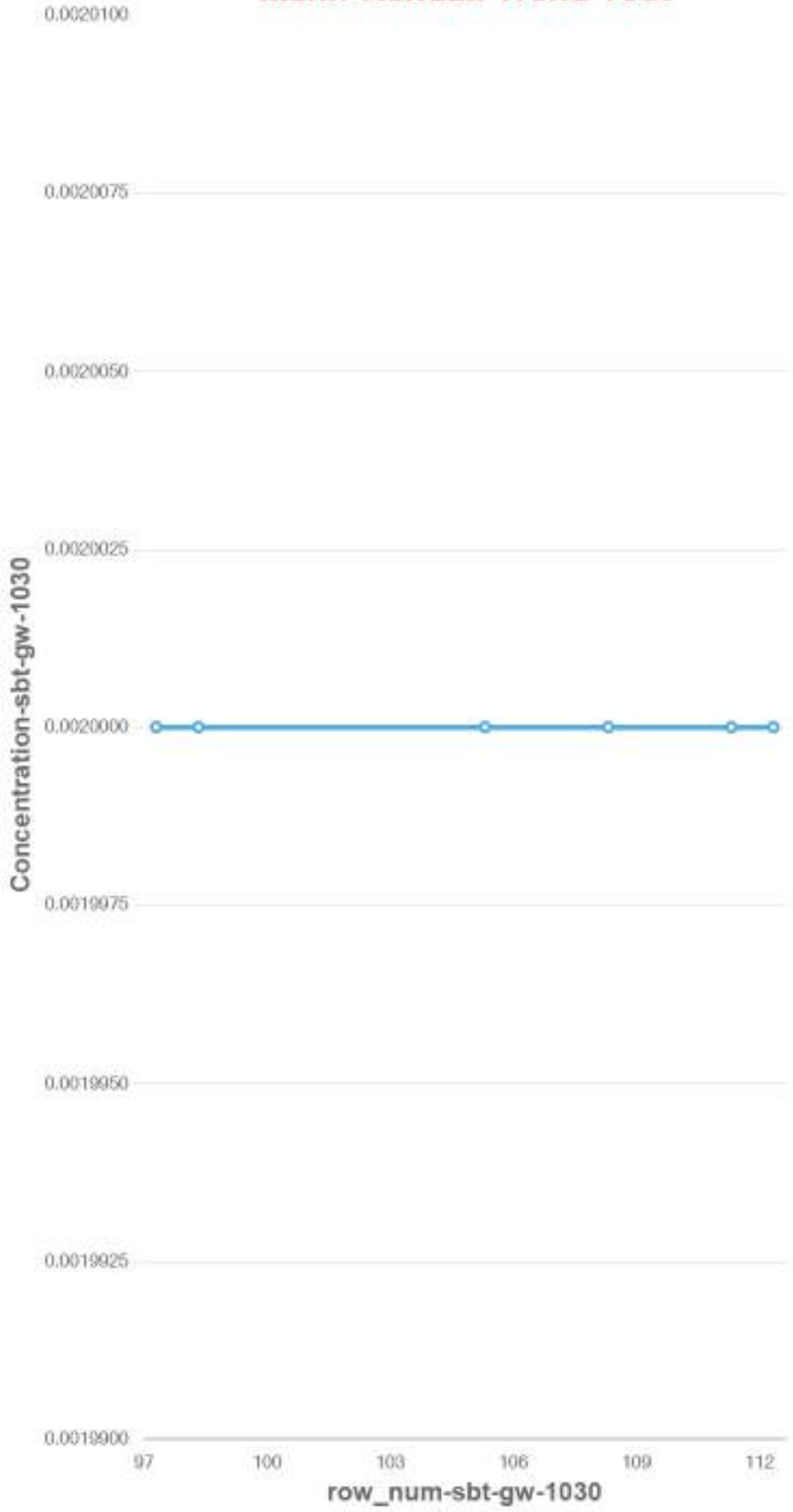


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

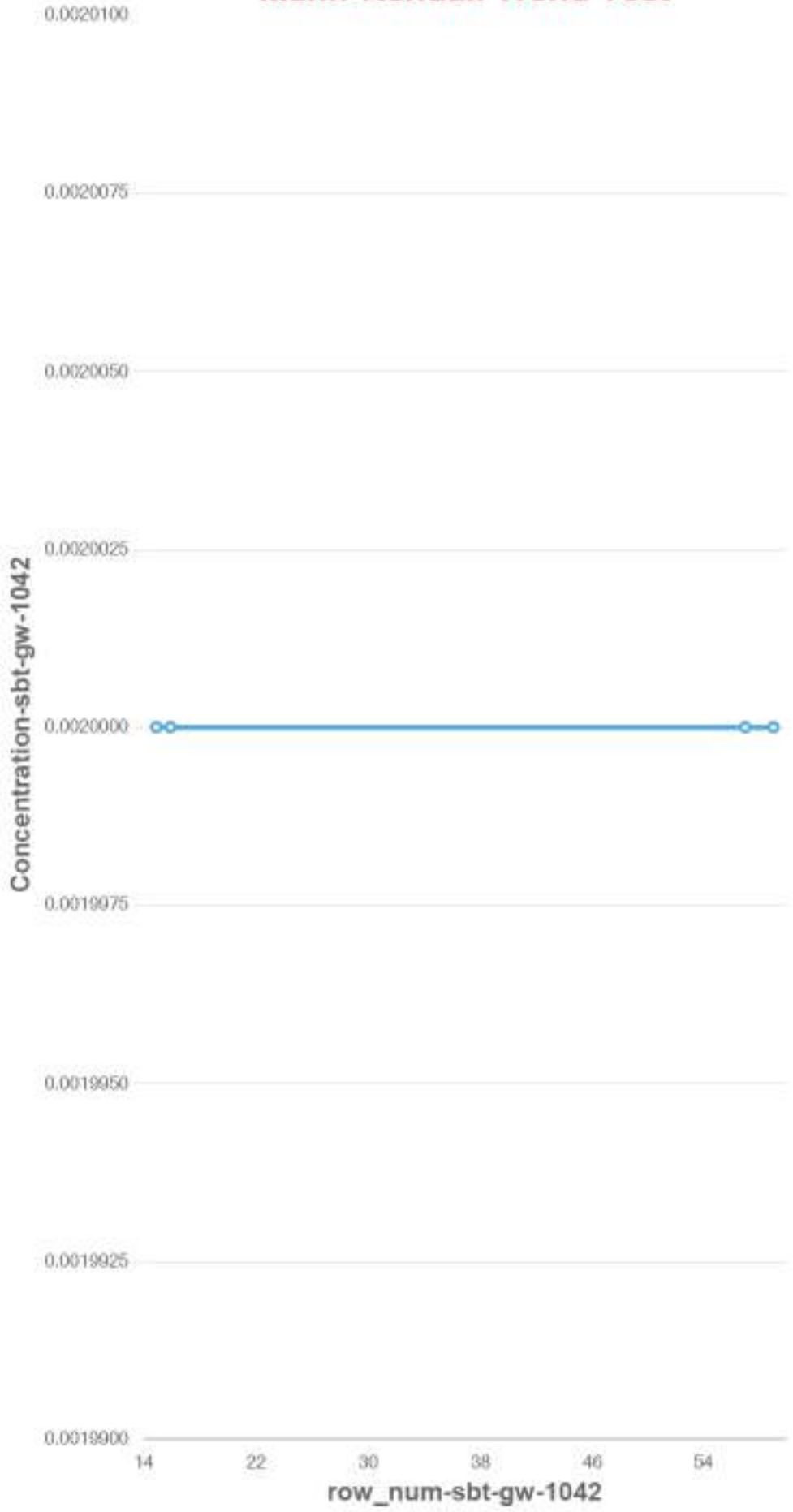


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

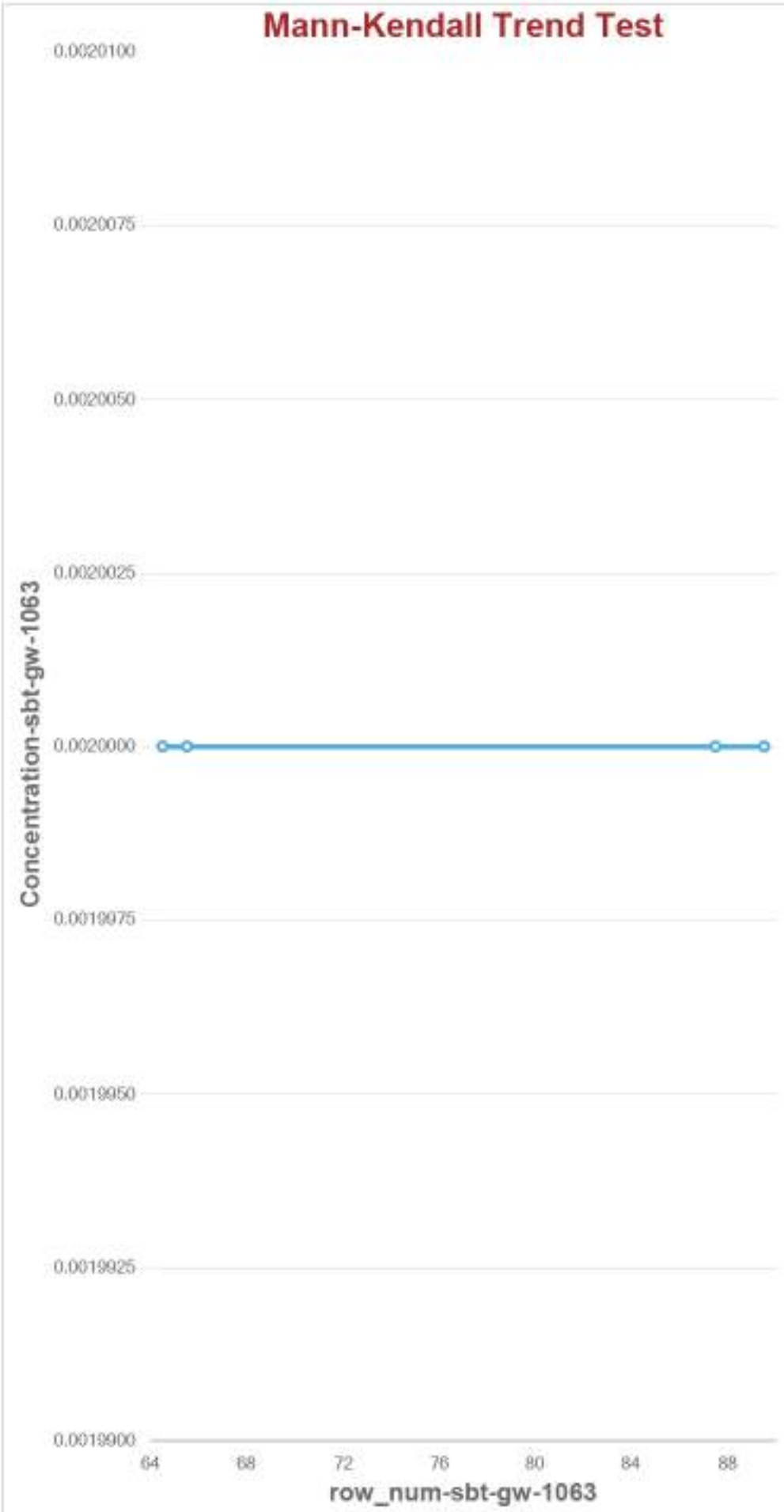
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

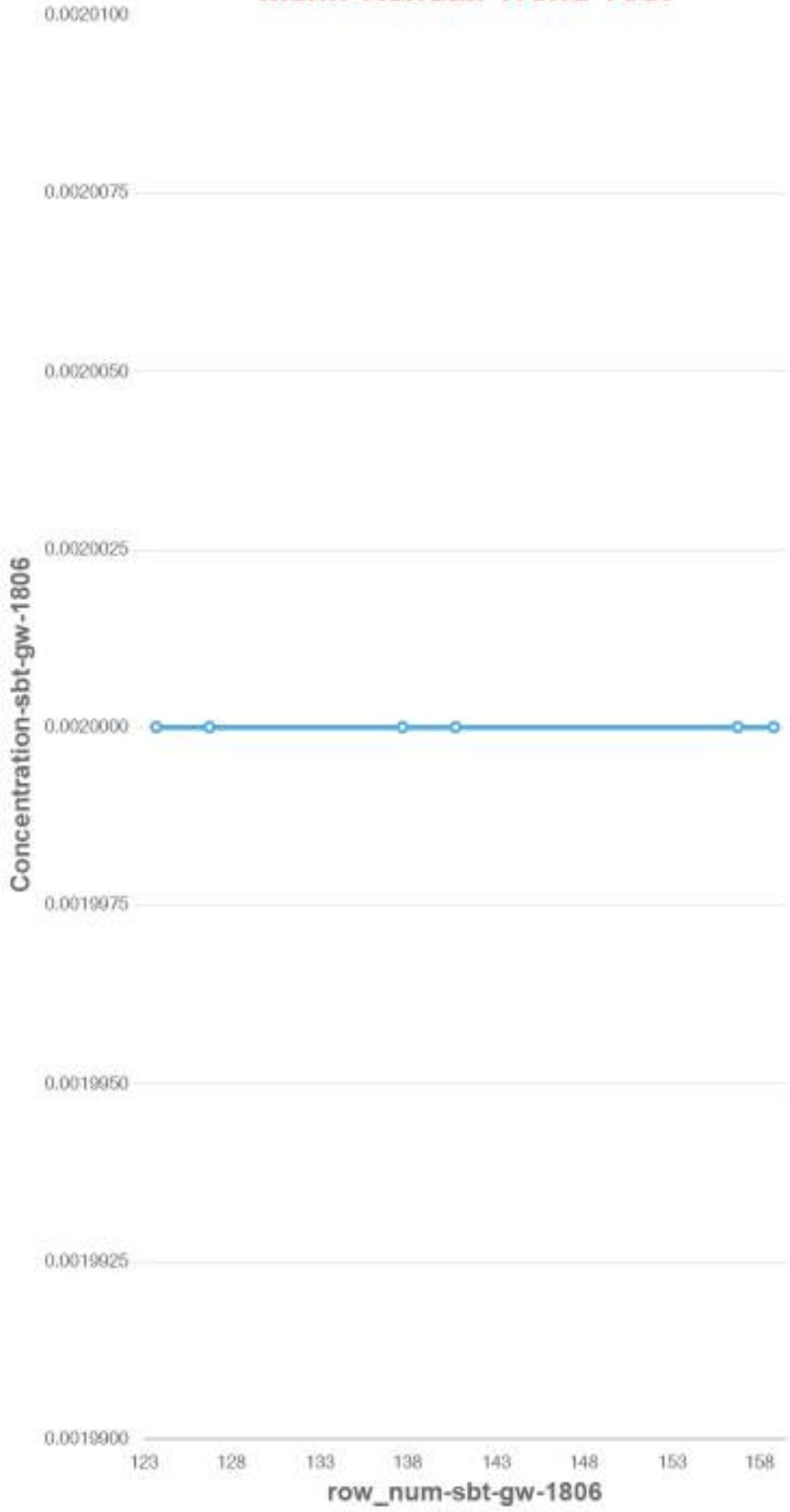
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

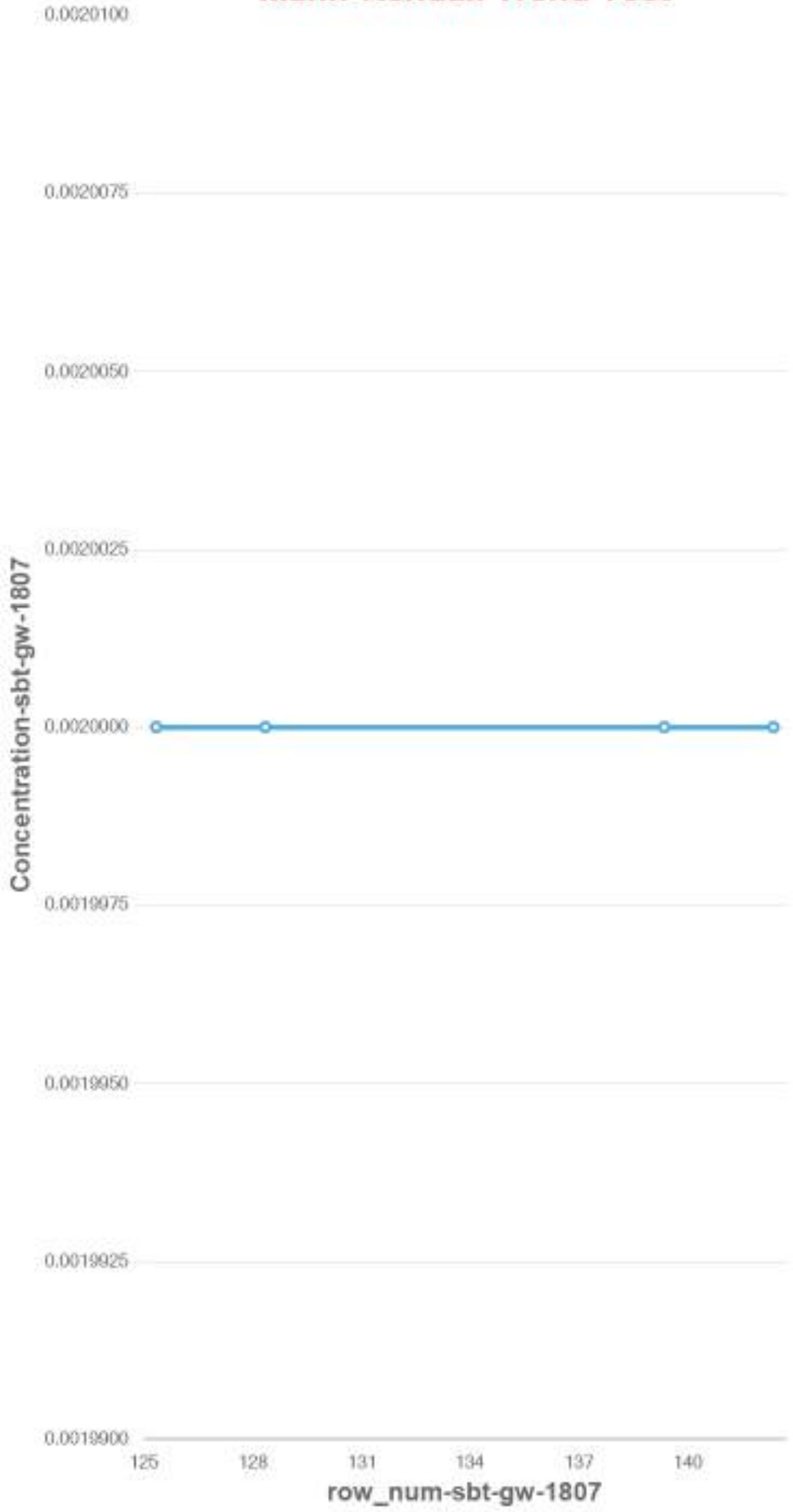


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

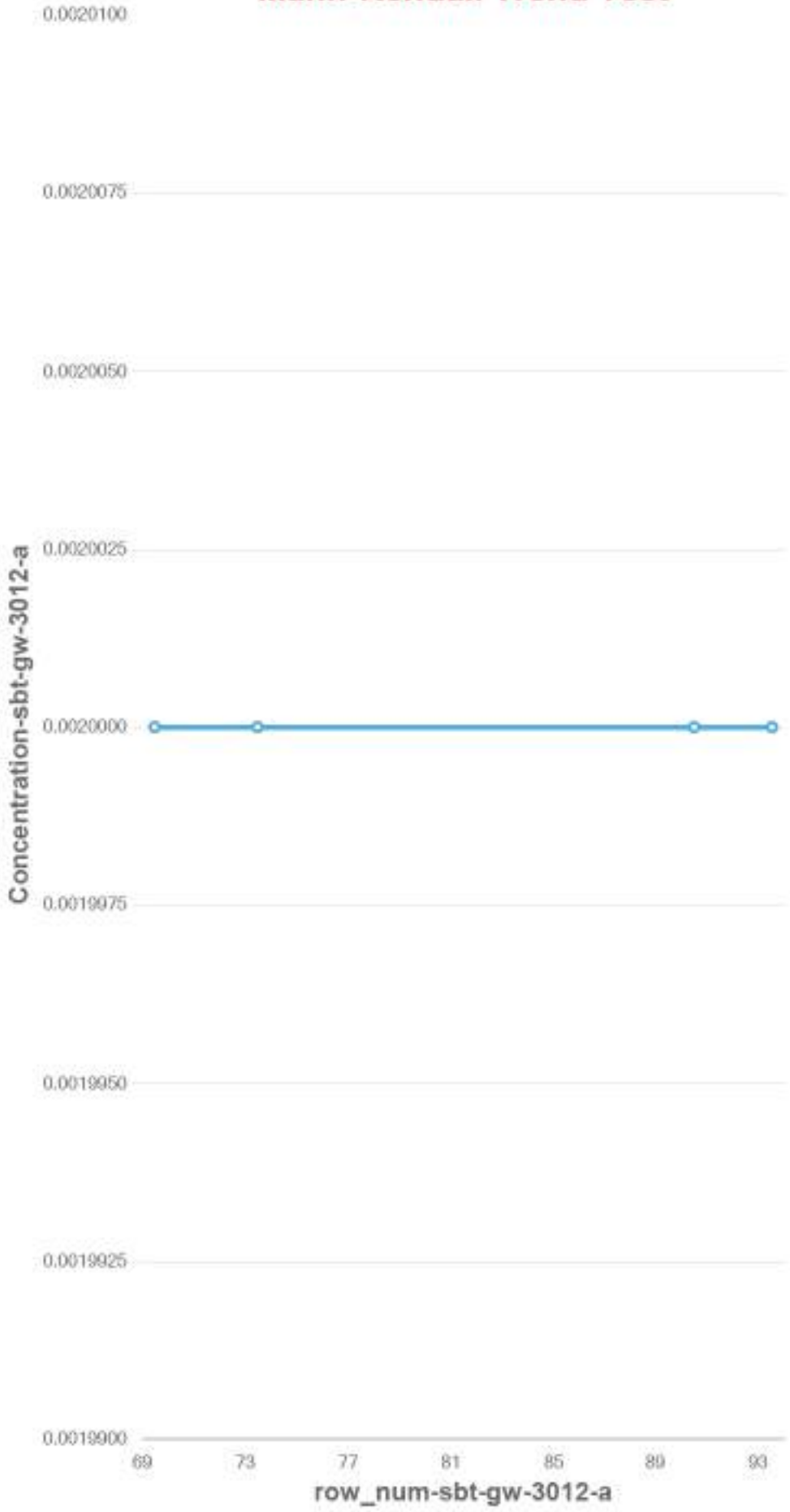


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

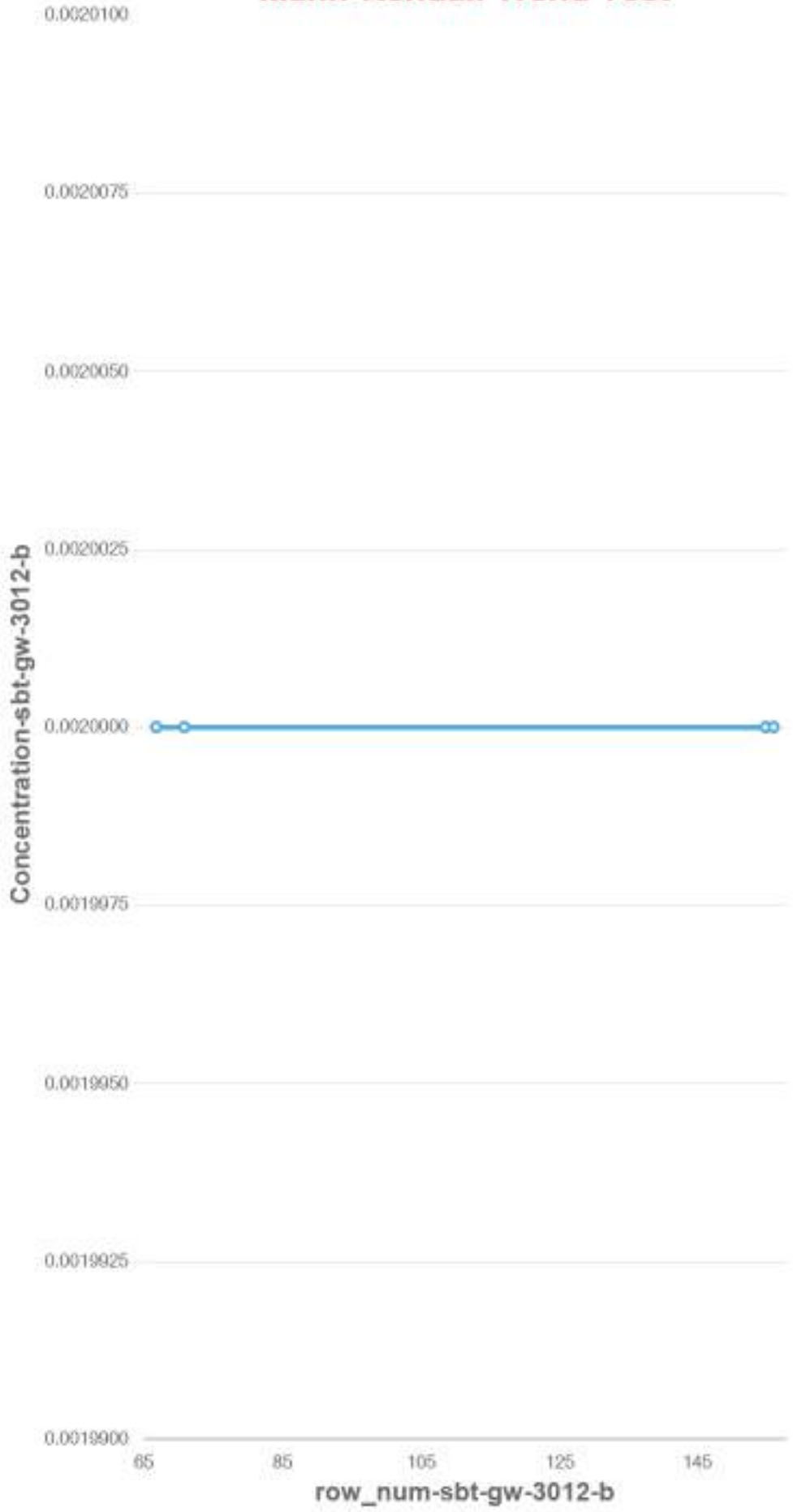


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

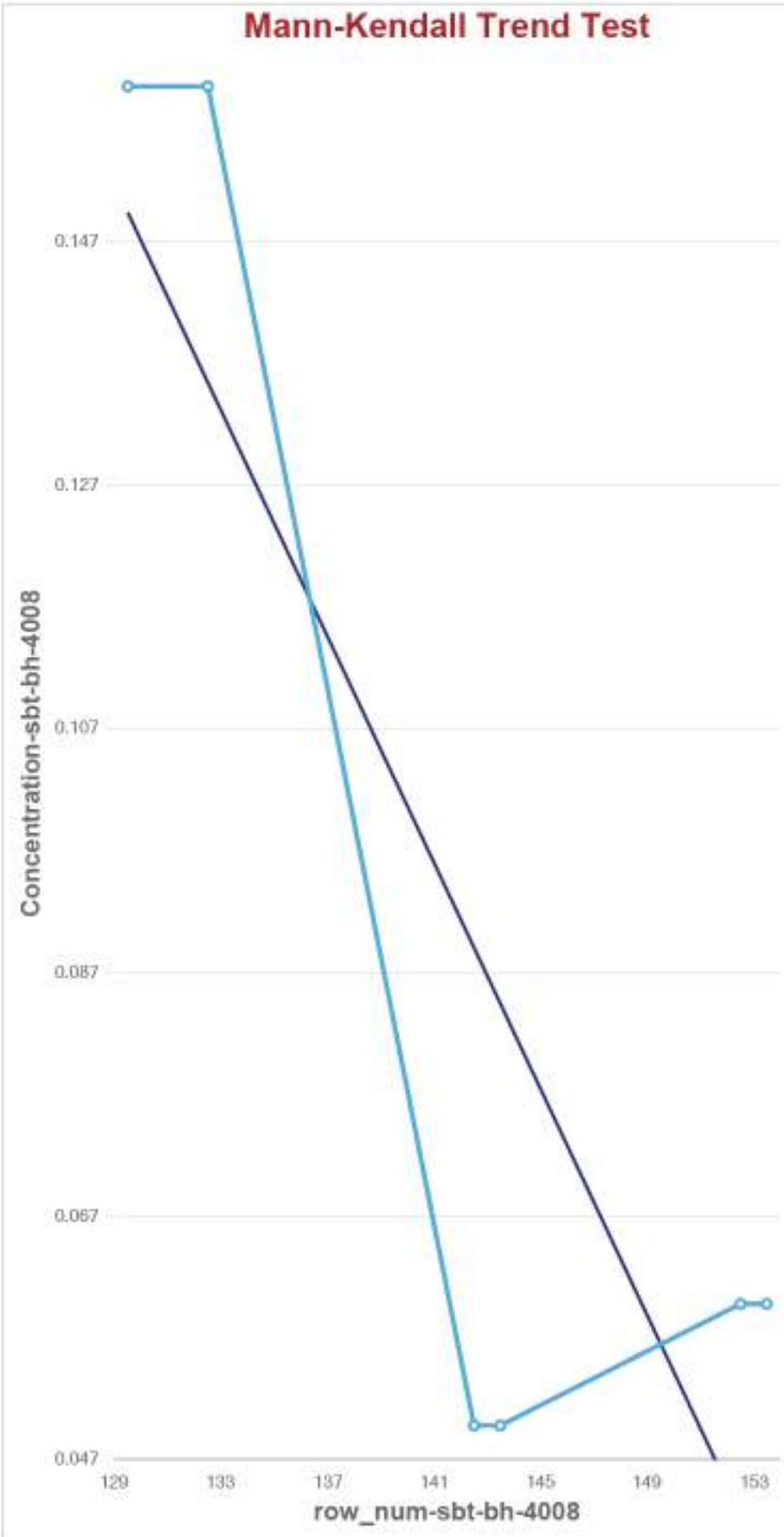


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

F.10 PHOSPHORUS (TOTAL)



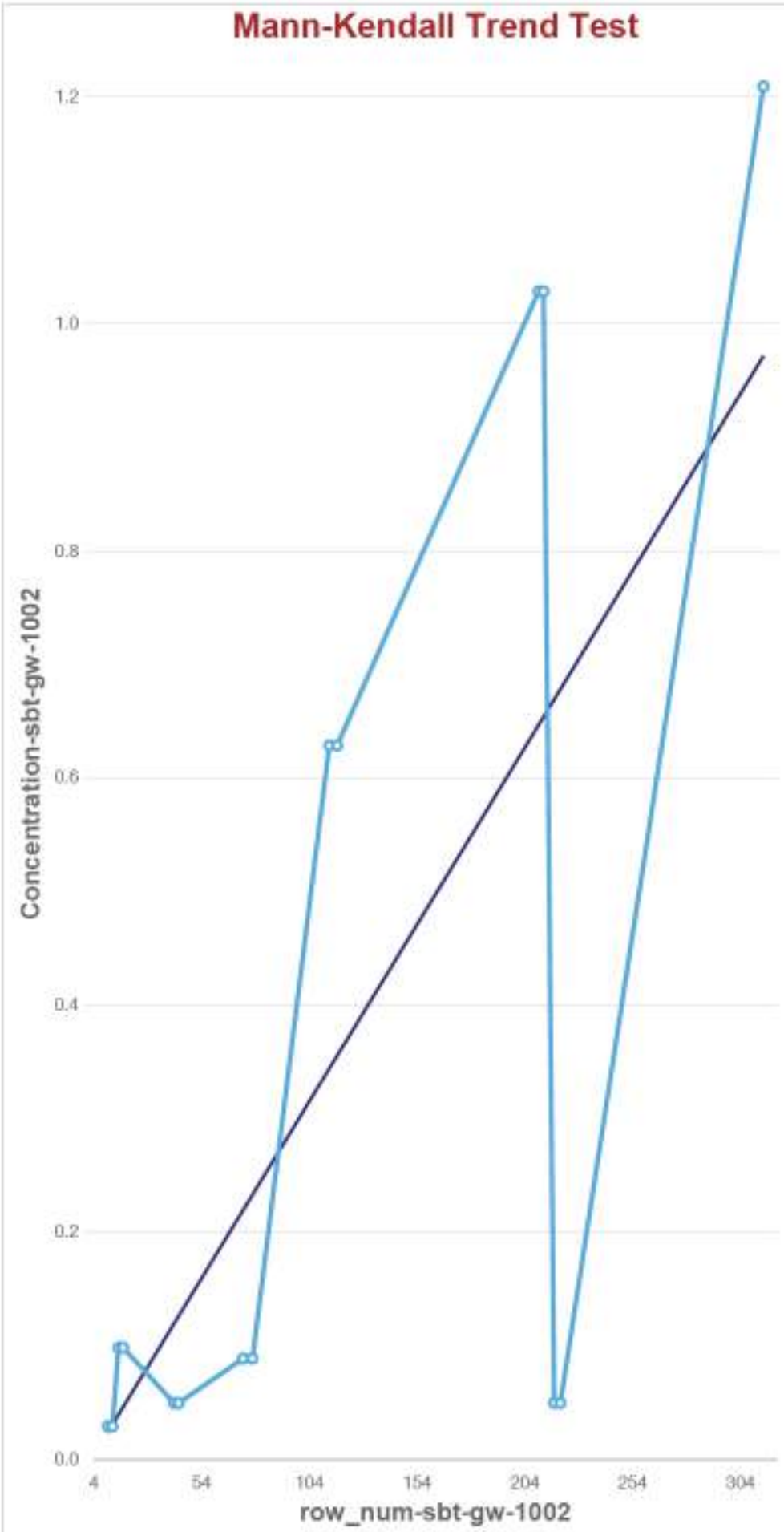
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	-0.5960
M-K Test Value (S)	-4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)

OLS Regression Slope	-0.0046
OLS Regression Intercept	0.7535

Insufficient statistical evidence of a significant trend at the specified level of significance.

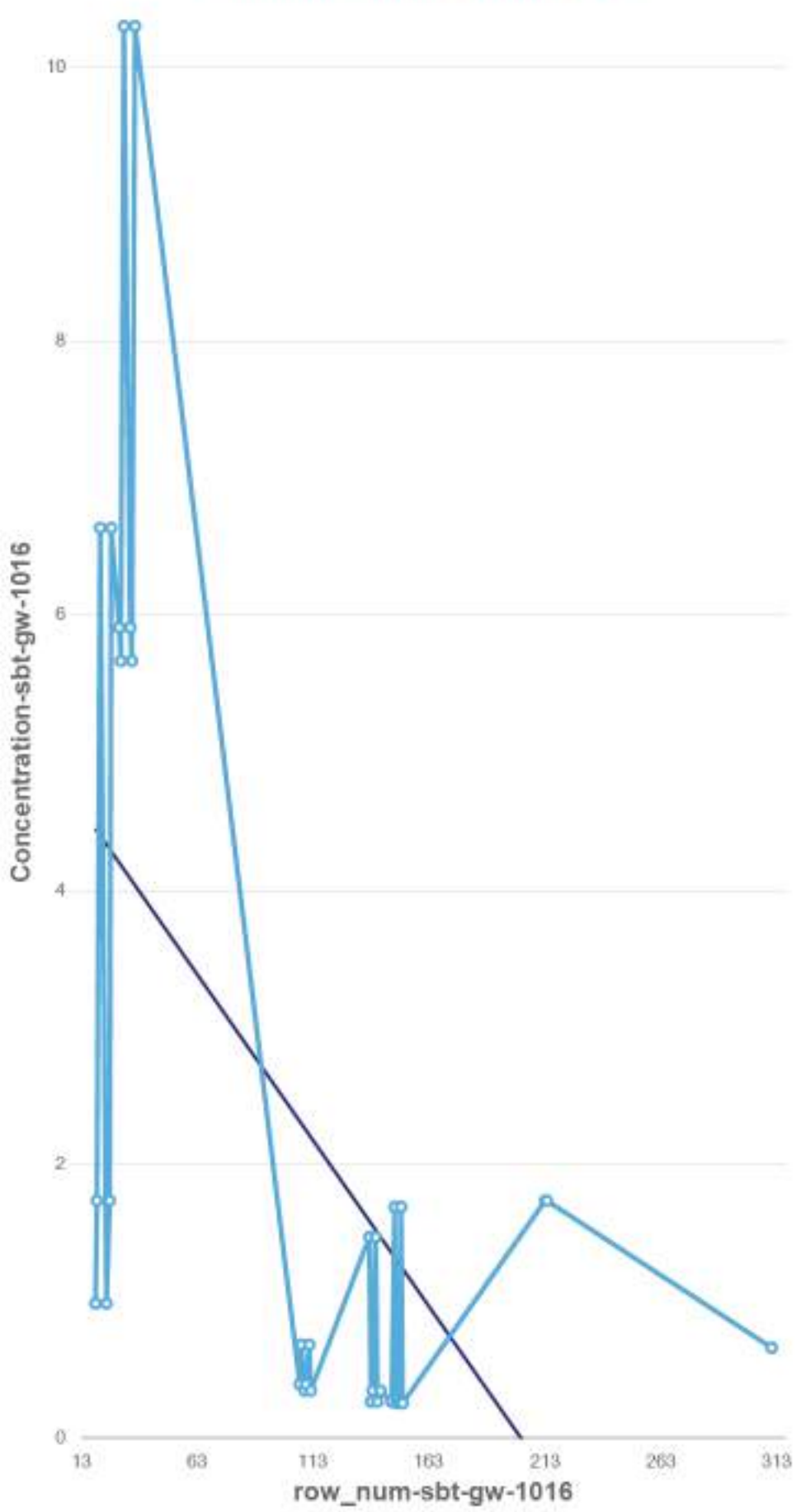


Mann-Kendall Trend Analysis	
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.8662
Standardized Value of S	2.2652
M-K Test Value (S)	46
Tabulated p-value	0.0100
Approximate p-value	0.0118

OLS Regression Line (Blue)	
OLS Regression Slope	0.0031
OLS Regression Intercept	-0.0170

Statistically significant evidence of an increasing trend at the specified level of significance.

Mann-Kendall Trend Test

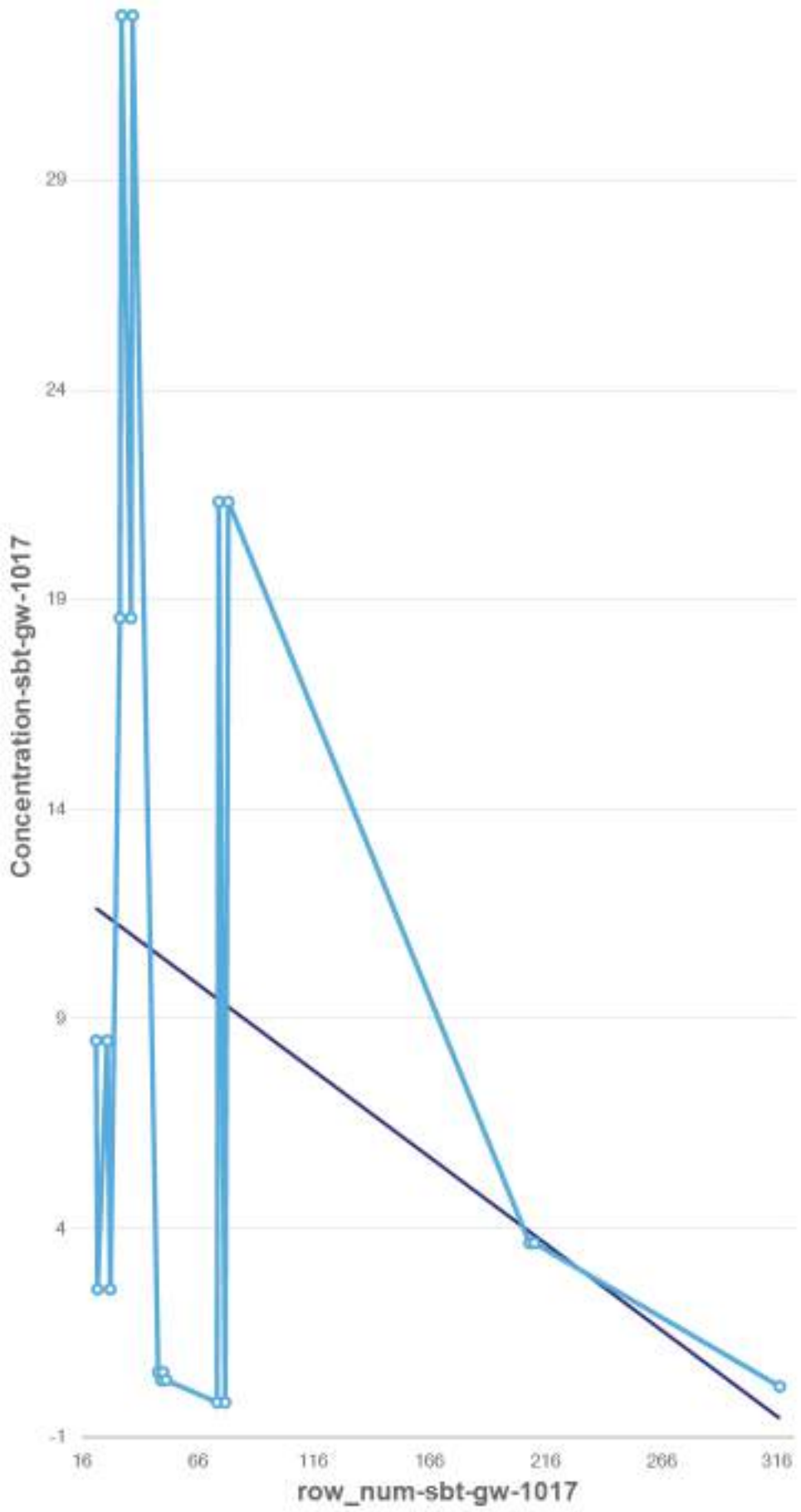


Mann-Kendall Trend Analysis	
n	33
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	64.3117
Standardized Value of S	-3.0010
M-K Test Value (S)	-194
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0013

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0242
OLS Regression Intercept	4.7032

Statistically significant evidence of a decreasing trend at the specified level of significance.

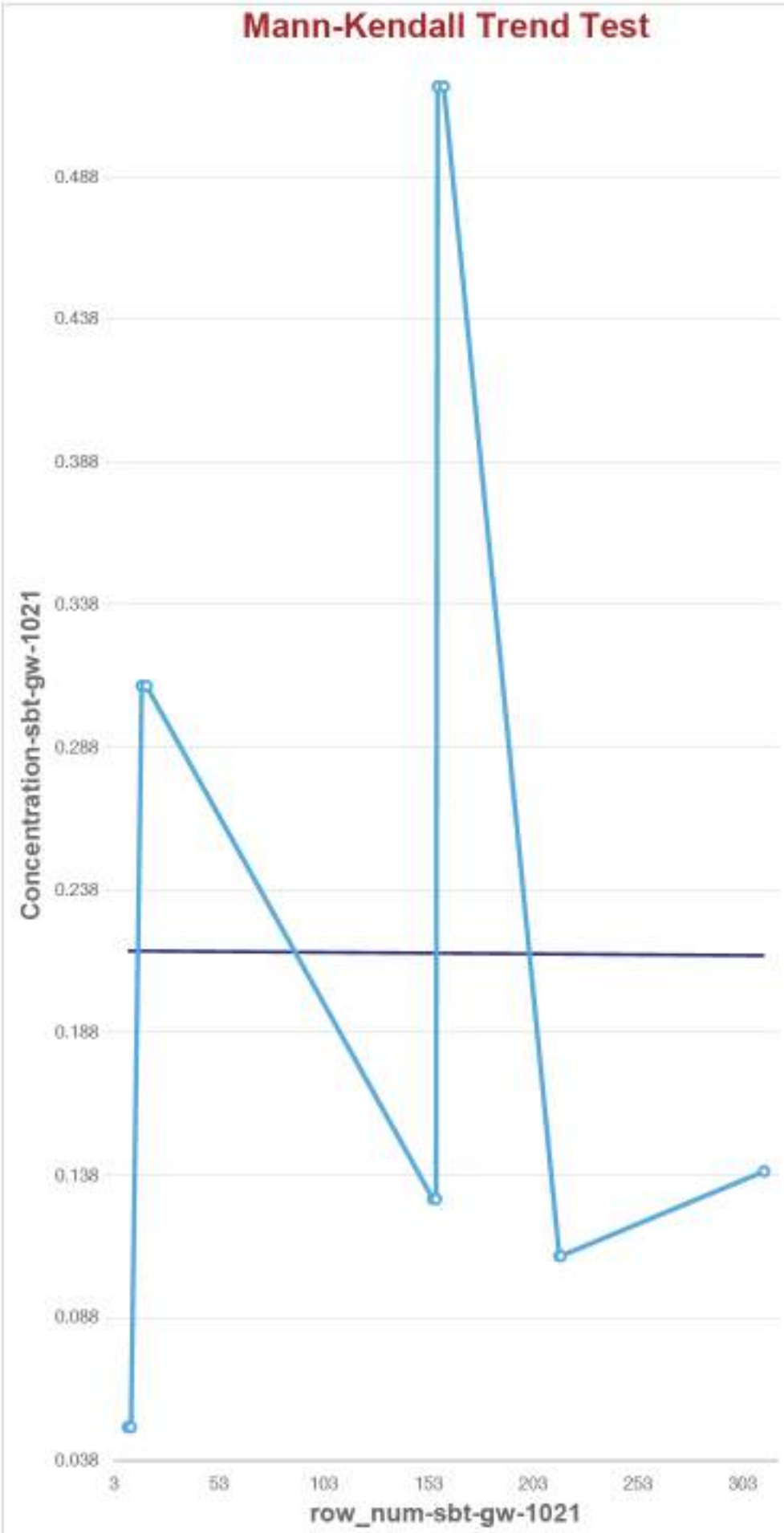
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.4253
Standardized Value of S	-1.3017
M-K Test Value (S)	-38
Tabulated p-value	0.0930
Approximate p-value	0.0965

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0413
OLS Regression Intercept	12.7885

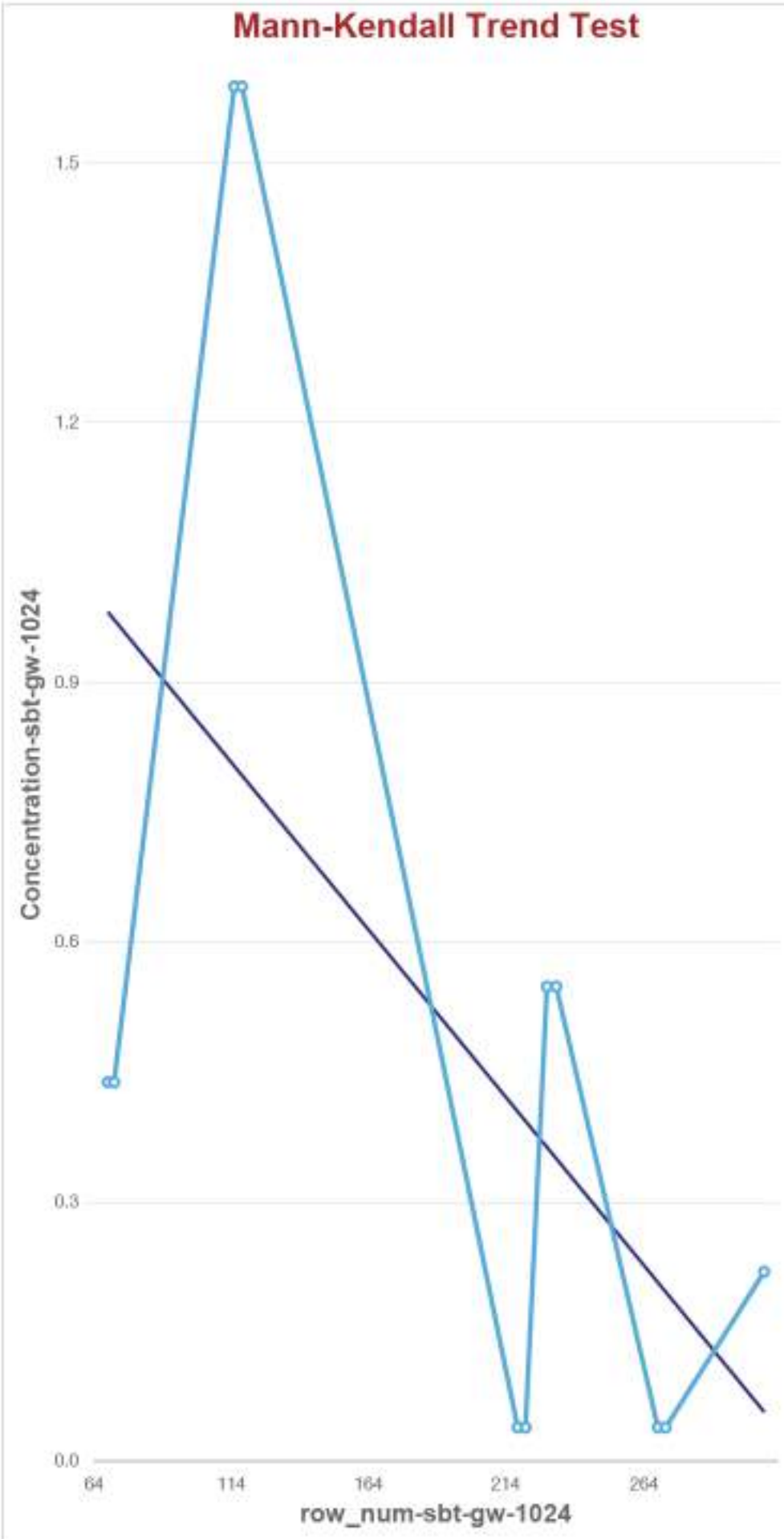
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6491
Standardized Value of S	0.7115
M-K Test Value (S)	10
Tabulated p-value	0.2230
Approximate p-value	0.2384

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.2170

Insufficient statistical evidence of a significant trend at the specified level of significance.

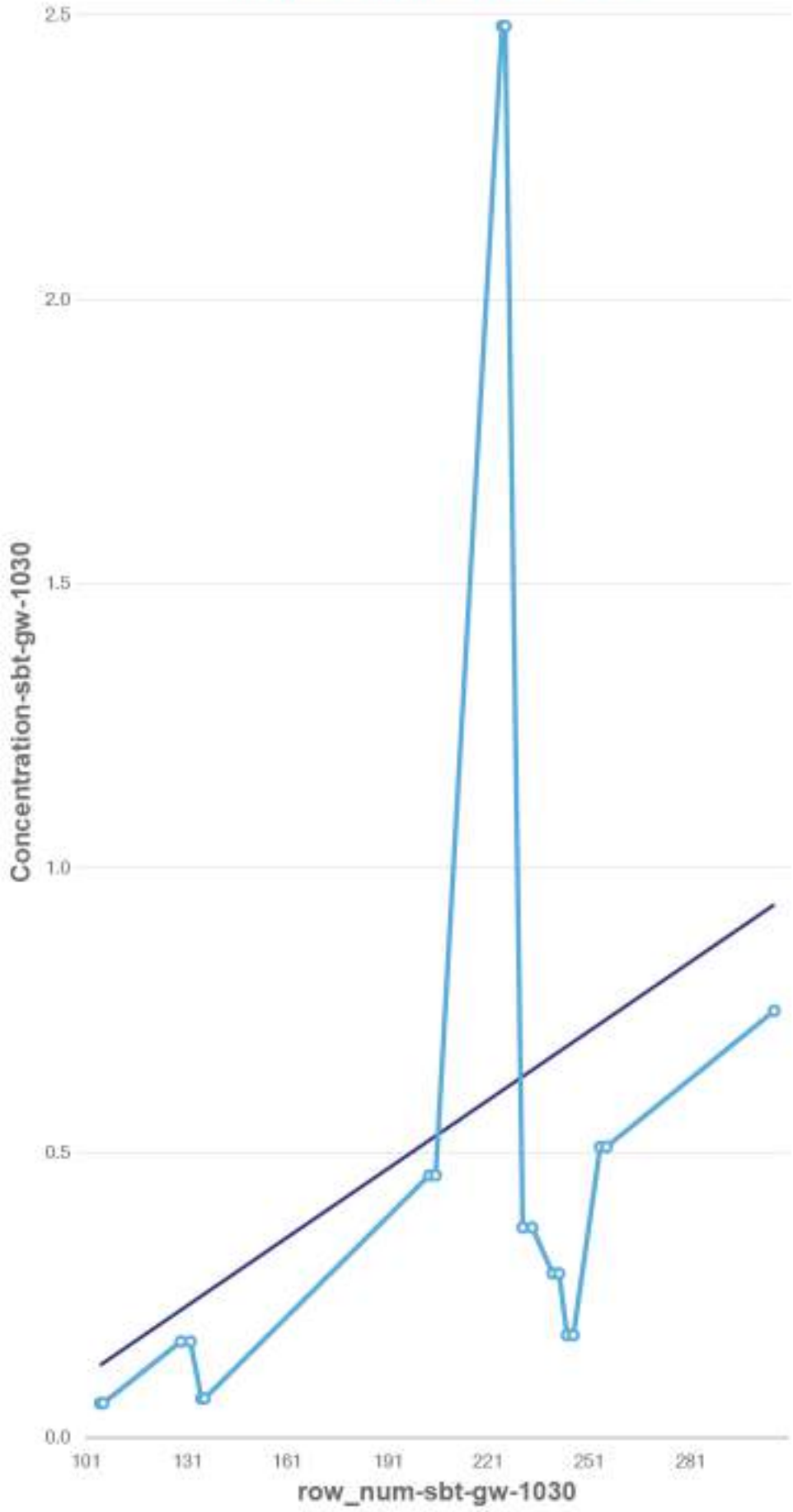


Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.3828
Standardized Value of S	-1.0498
M-K Test Value (S)	-14
Tabulated p-value	0.1410
Approximate p-value	0.1469

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0039
OLS Regression Intercept	1.2393

Insufficient statistical evidence of a significant trend at the specified level of significance.

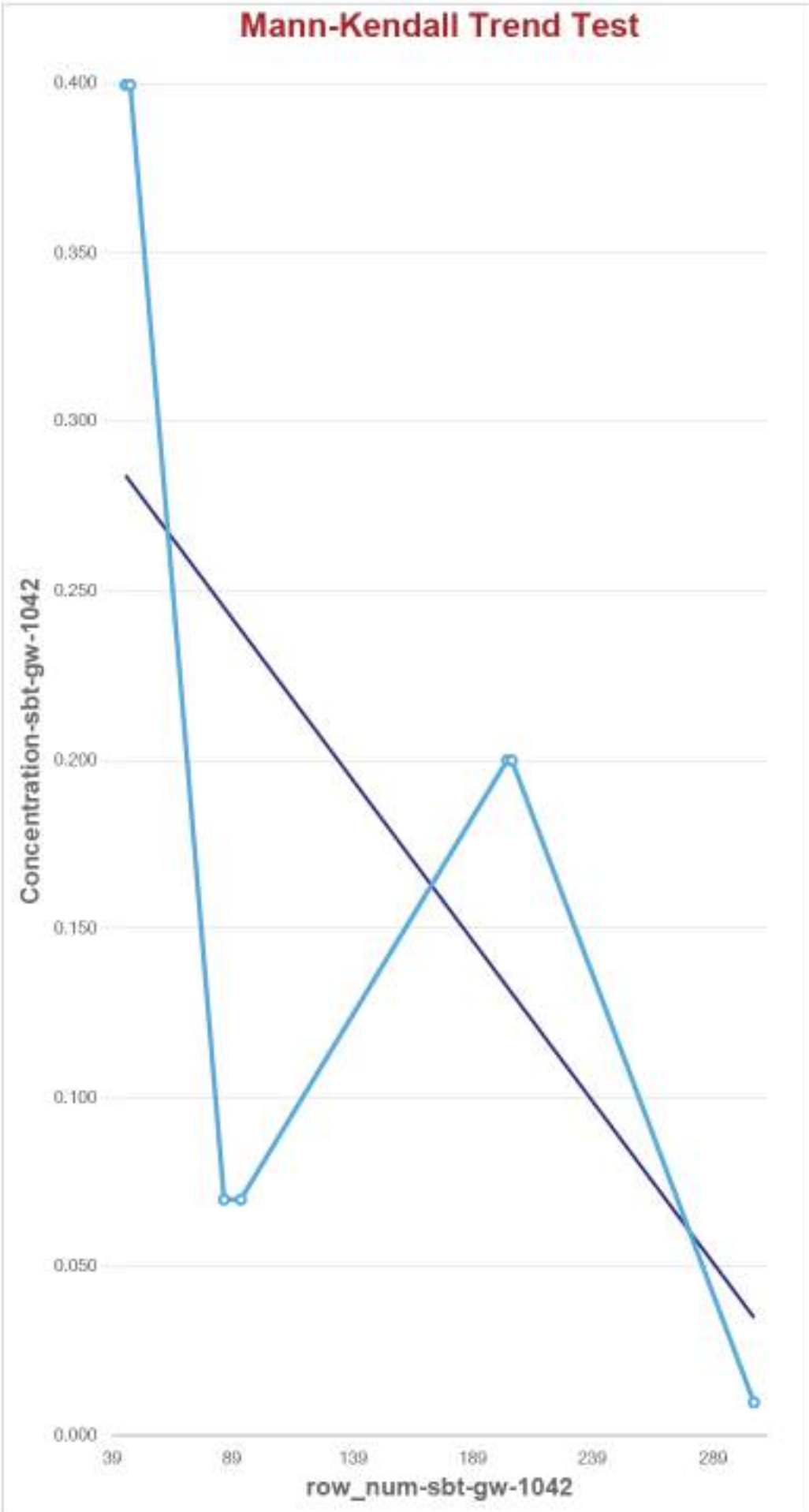
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.4253
Standardized Value of S	2.4274
M-K Test Value (S)	70
Tabulated p-value	0.0060
Approximate p-value	0.0076

OLS Regression Line (Blue)	
OLS Regression Slope	0.0040
OLS Regression Intercept	-0.2543

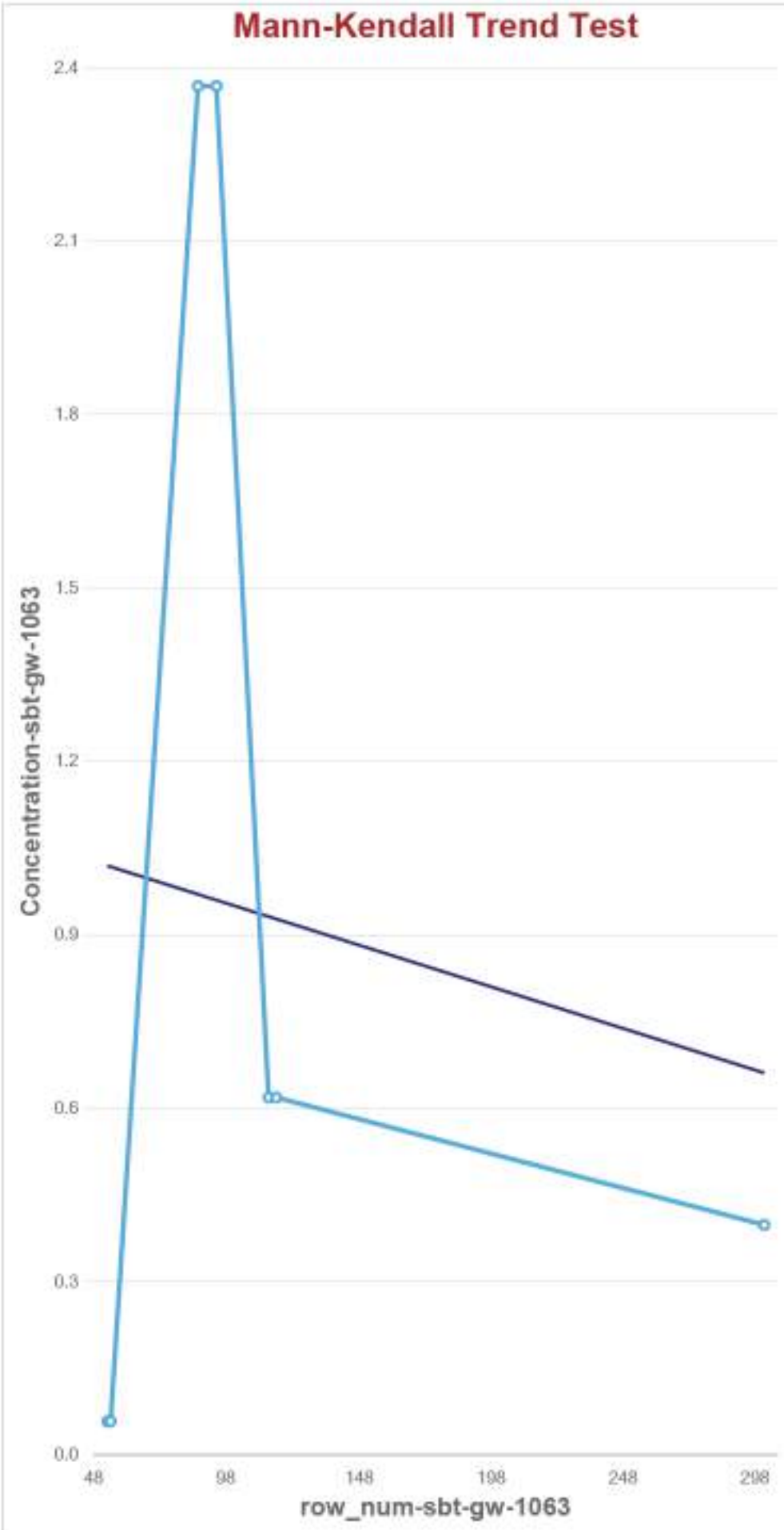
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	-1.3999
M-K Test Value (S)	-10
Tabulated p-value	0.0680
Approximate p-value	0.0808

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0009
OLS Regression Intercept	0.3269

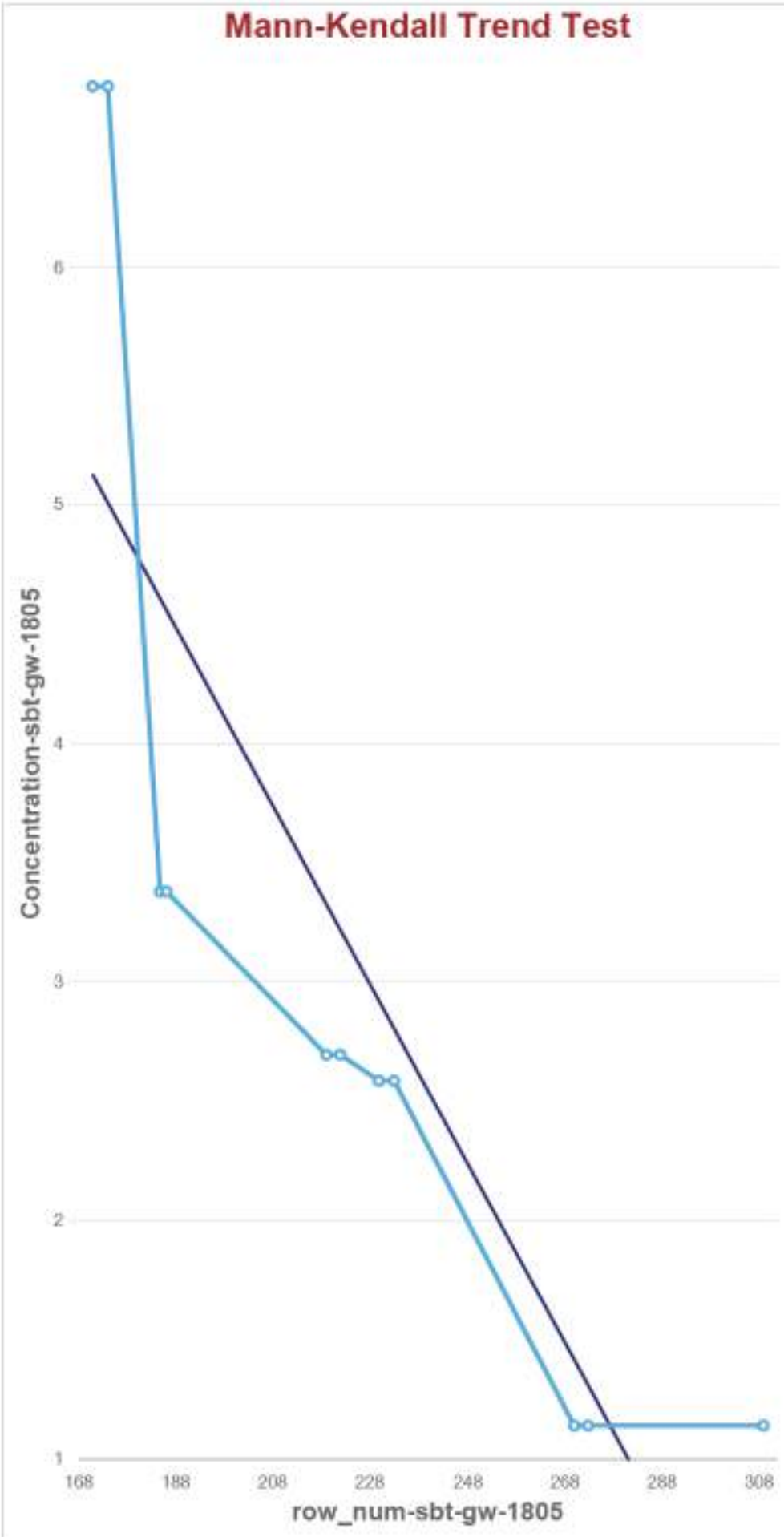
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	0.1555
M-K Test Value (S)	2
Tabulated p-value	0.3860
Approximate p-value	0.4382

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0014
OLS Regression Intercept	1.1372

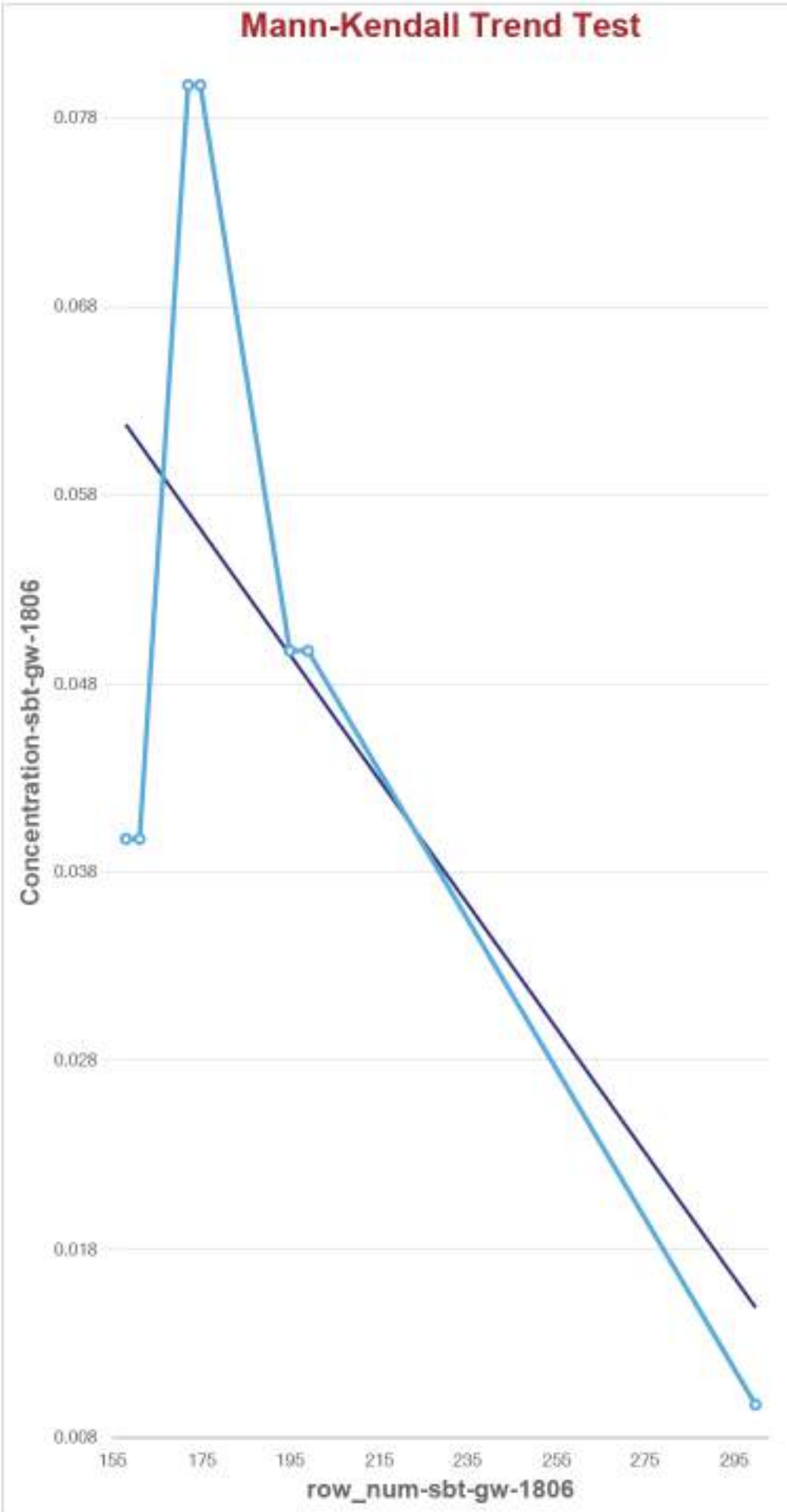
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.5433
Standardized Value of S	-3.7470
M-K Test Value (S)	-48
Tabulated p-value	0.0000
Approximate p-value	0.0001

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0375
OLS Regression Intercept	11.4288

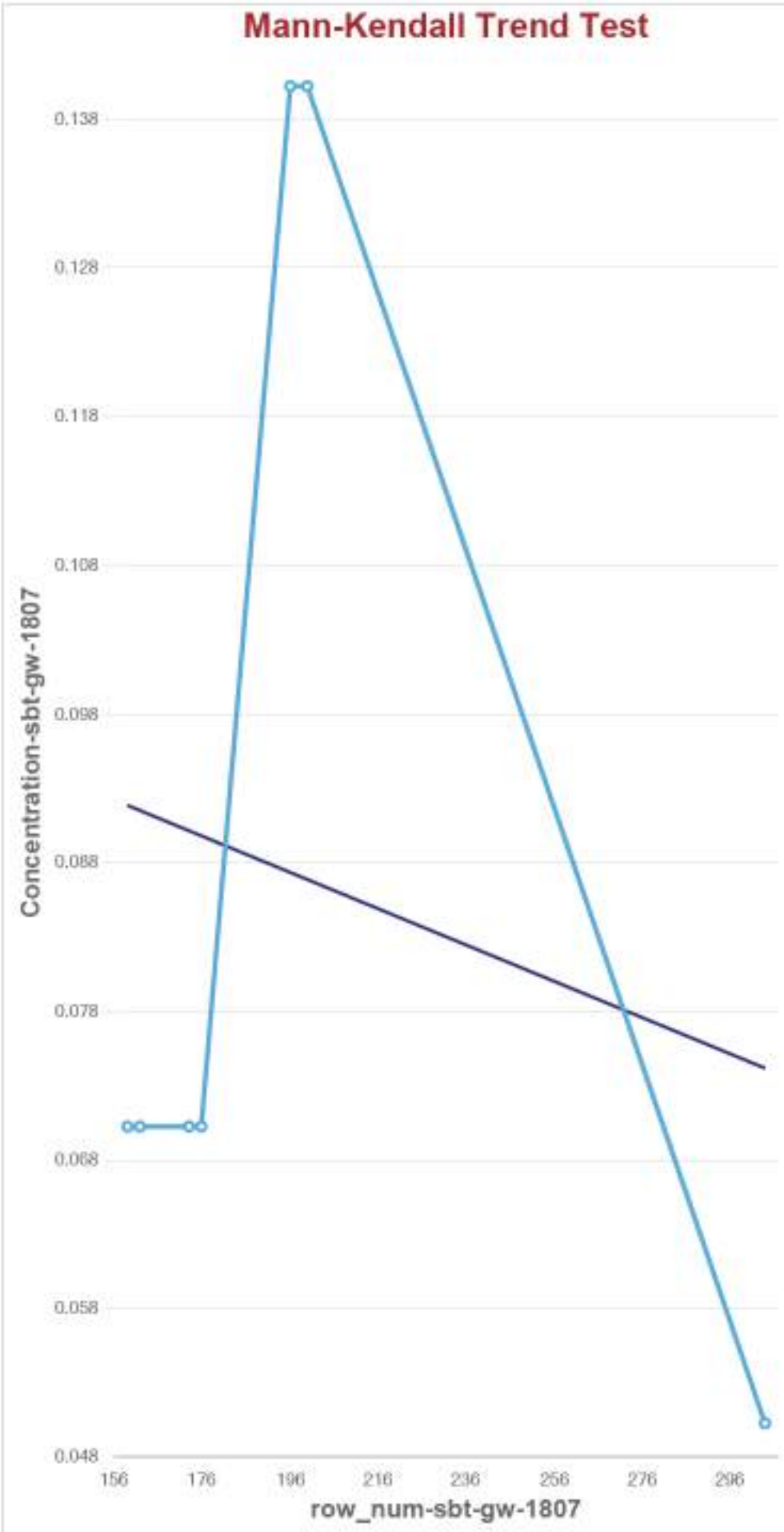
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	-0.1555
M-K Test Value (S)	-2
Tabulated p-value	0.3860
Approximate p-value	0.4382

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1141

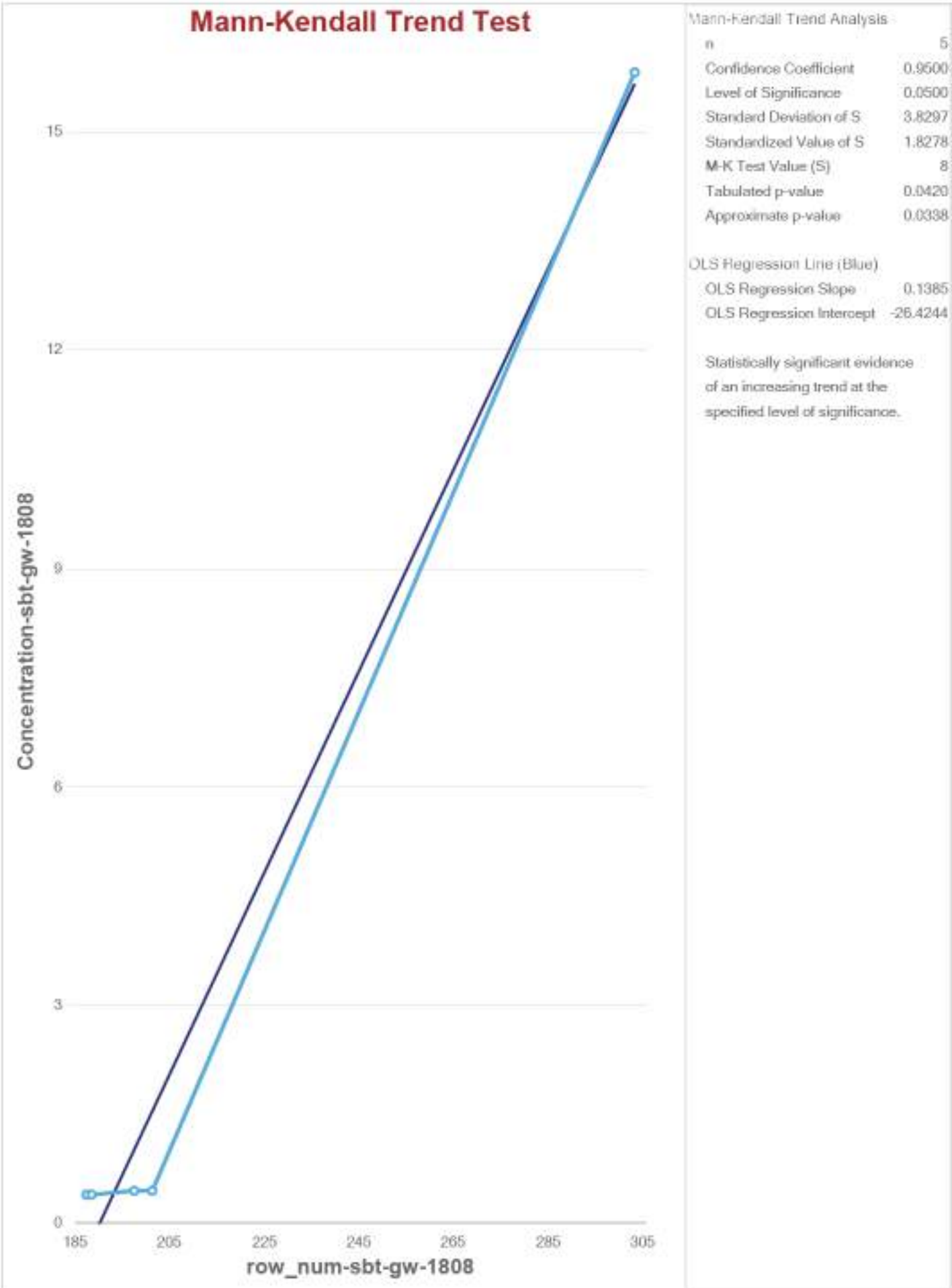
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.8878
Standardized Value of S	0.1698
M-K Test Value (S)	2
Tabulated p-value	0.3860
Approximate p-value	0.4326

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.1110

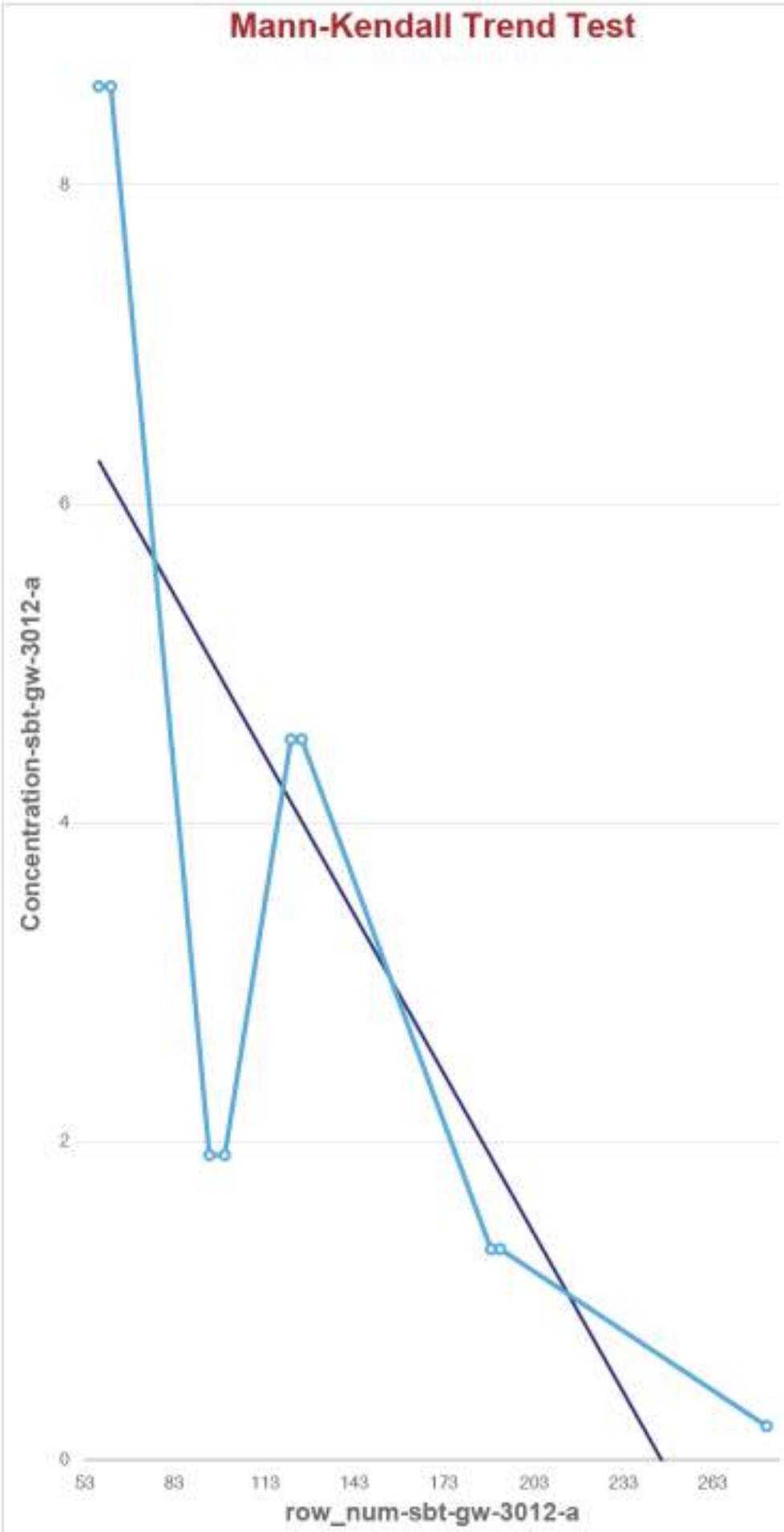
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	3.8297
Standardized Value of S	1.8278
M-K Test Value (S)	8
Tabulated p-value	0.0420
Approximate p-value	0.0338

OLS Regression Line (Blue)	
OLS Regression Slope	0.1385
OLS Regression Intercept	-26.4244

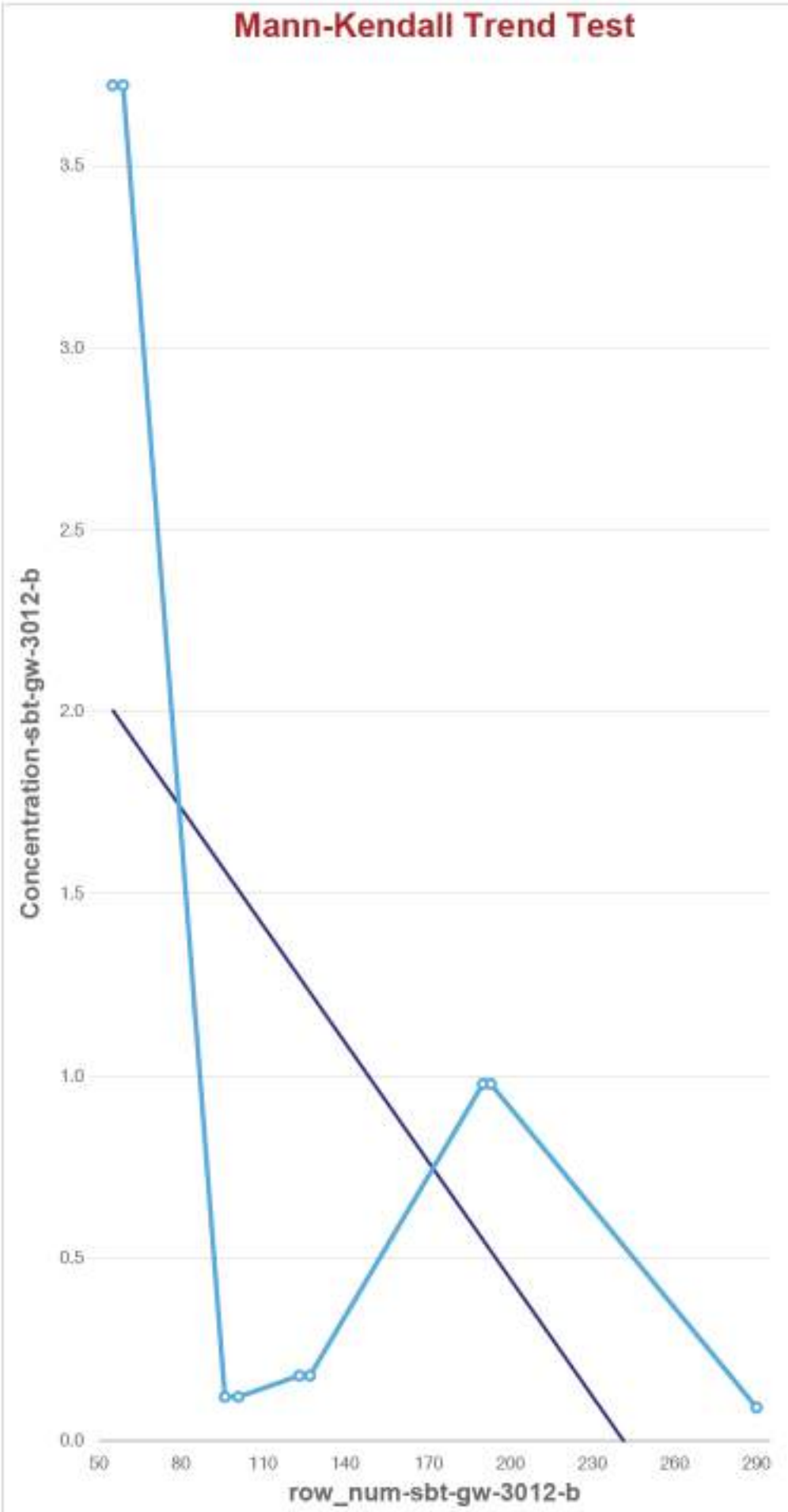
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	-2.4518
M-K Test Value (S)	-24
Tabulated p-value	0.0060
Approximate p-value	0.0071

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0334
OLS Regression Intercept	8.2037

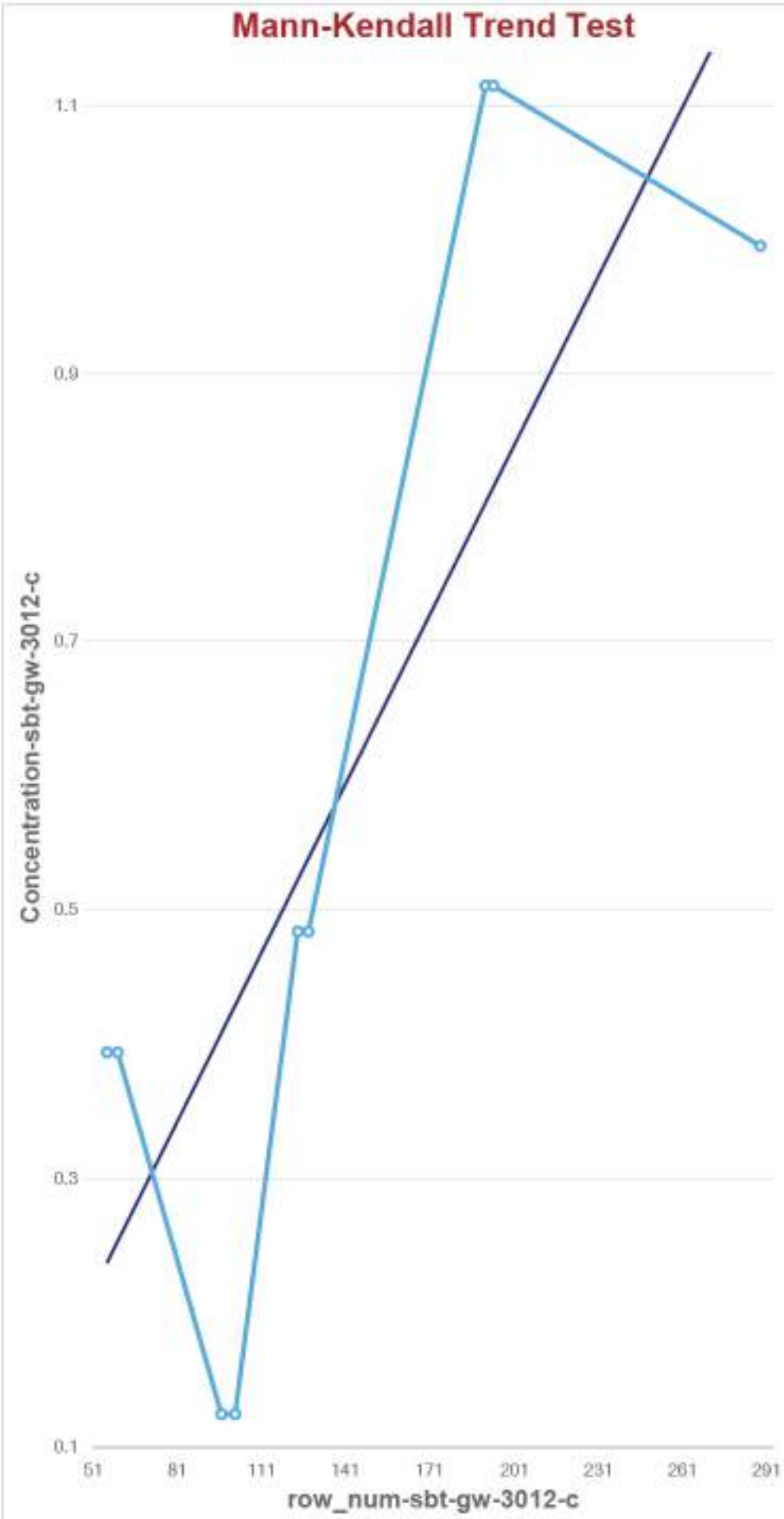
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	-0.7462
M-K Test Value (S)	-8
Tabulated p-value	0.2380
Approximate p-value	0.2278

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0108
OLS Regression Intercept	2.6177

Insufficient statistical evidence of a significant trend at the specified level of significance.



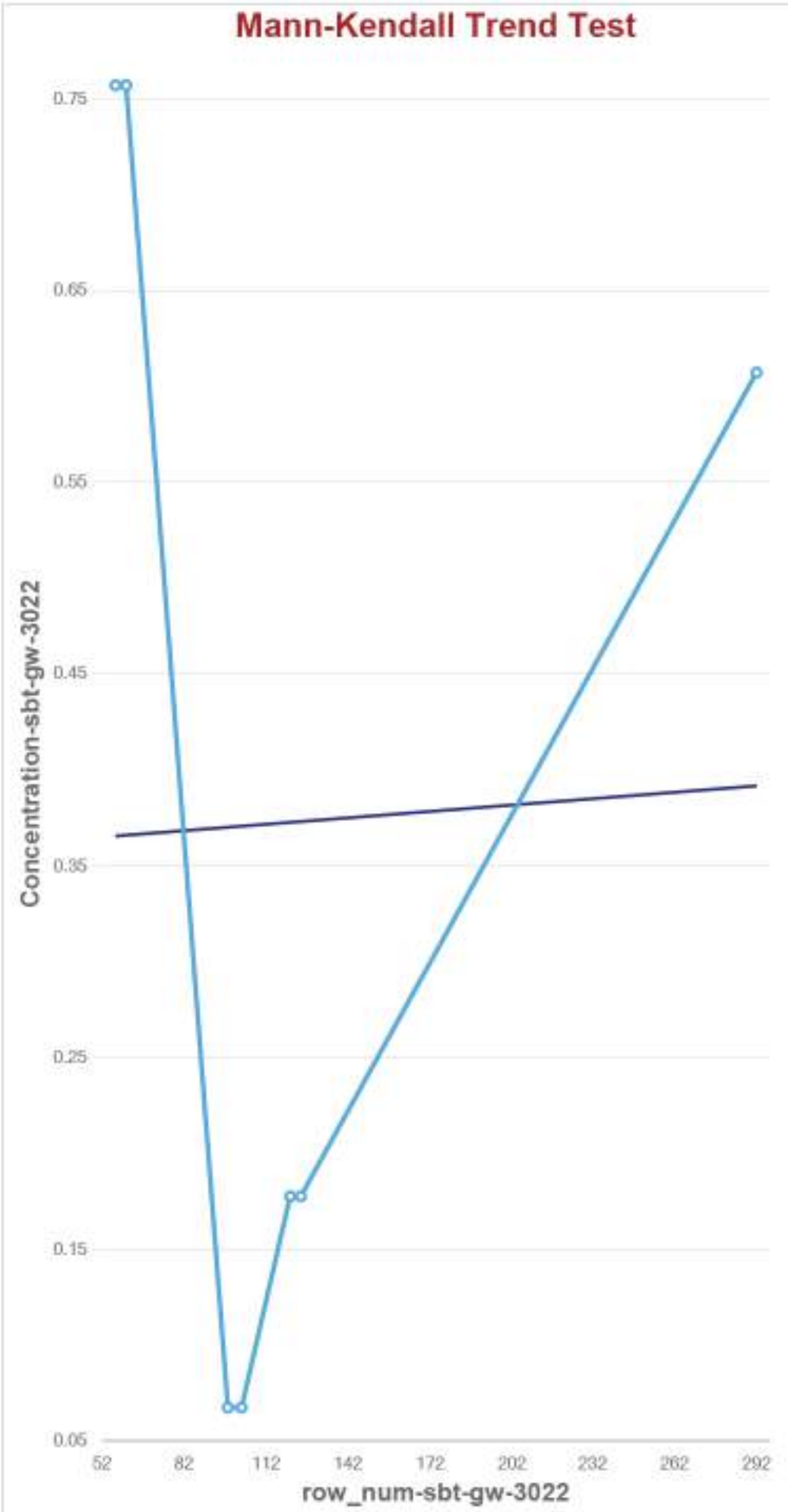
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	2.0254
M-K Test Value (S)	20
Tabulated p-value	0.0220
Approximate p-value	0.0214

OLS Regression Line (Blue)

OLS Regression Slope	0.0042
OLS Regression Intercept	-0.0213

Statistically significant evidence of an increasing trend at the specified level of significance.

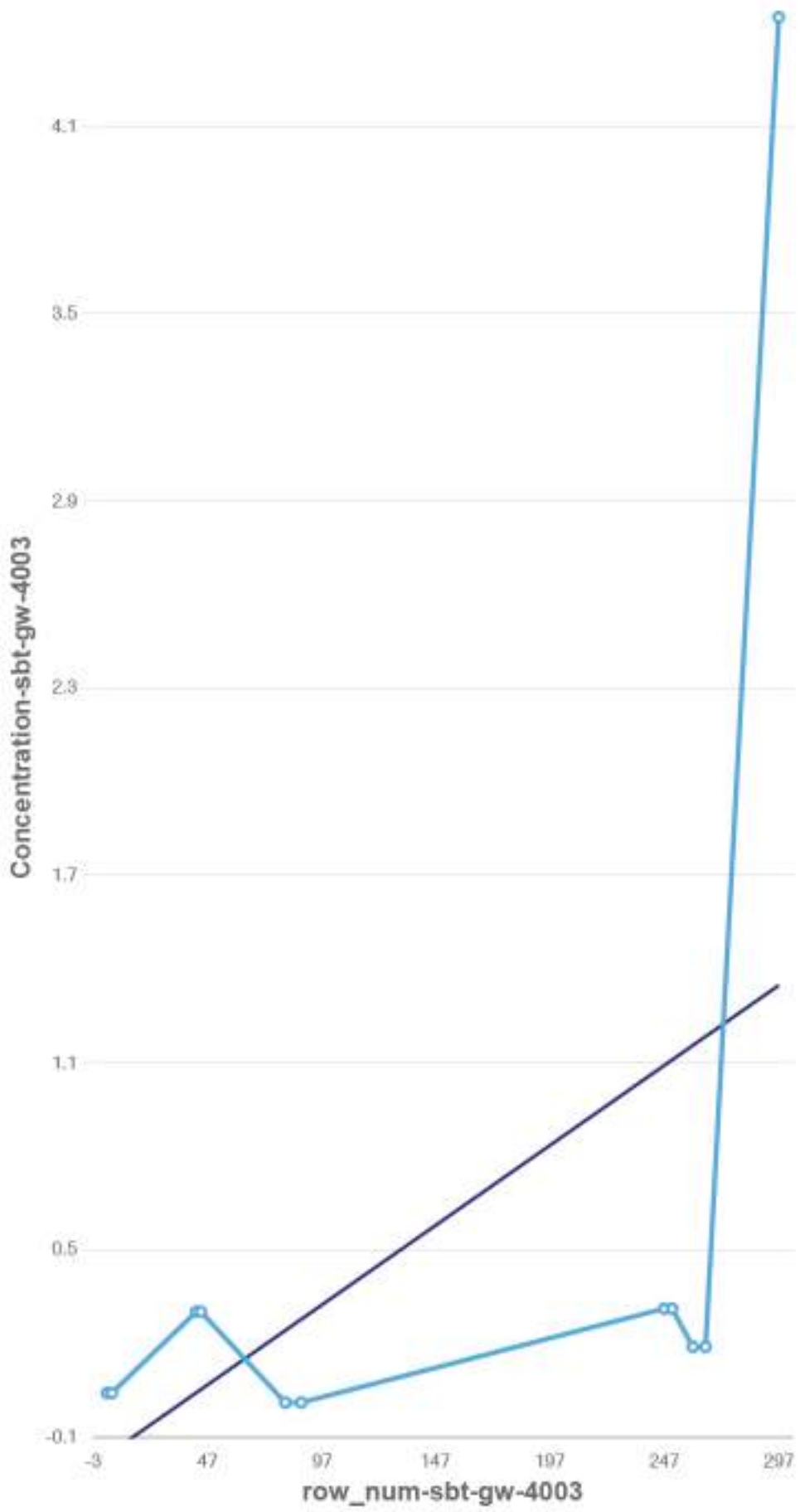


Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	-0.1555
M-K Test Value (S)	-2
Tabulated p-value	0.3860
Approximate p-value	0.4382

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.3622

Insufficient statistical evidence of a significant trend at the specified level of significance.

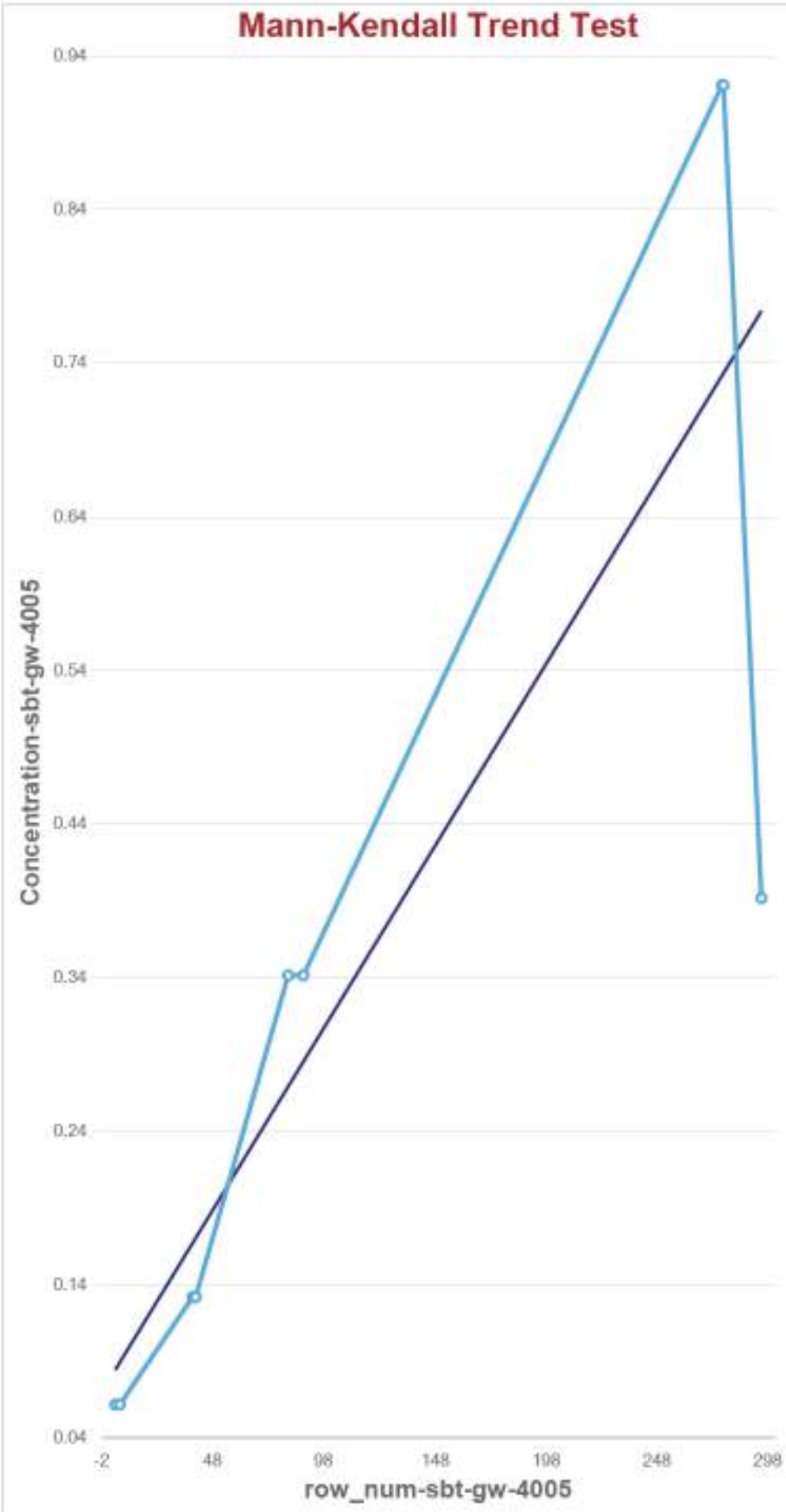
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6491
Standardized Value of S	1.3440
M-K Test Value (S)	18
Tabulated p-value	0.0820
Approximate p-value	0.0895

OLS Regression Line (Blue)	
OLS Regression Slope	0.0051
OLS Regression Intercept	-0.1401

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

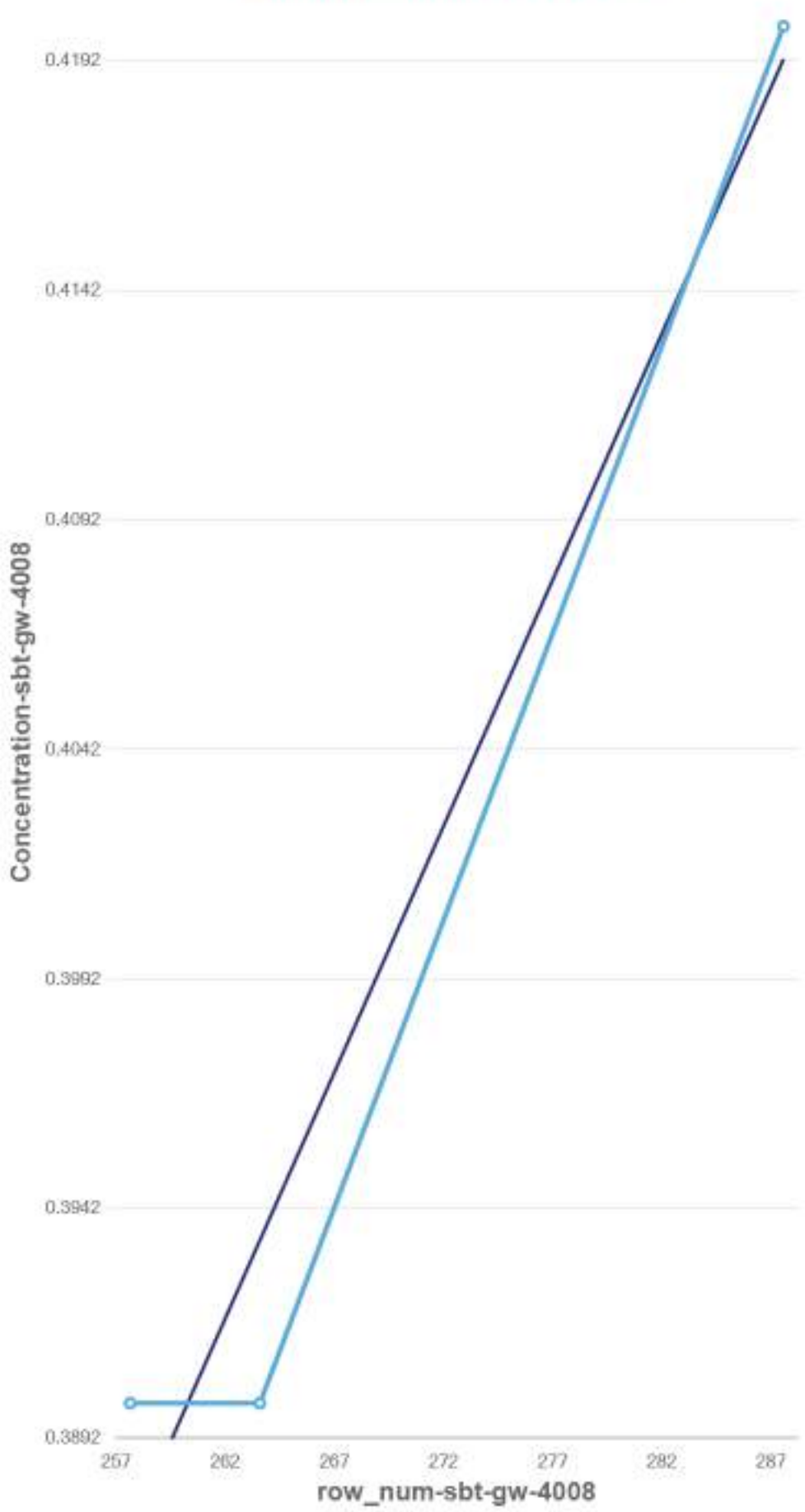
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	2.8782
M-K Test Value (S)	28
Tabulated p-value	0.0010
Approximate p-value	0.0020

OLS Regression Line (Blue)

OLS Regression Slope	0.0024
OLS Regression Intercept	0.0734

Statistically significant evidence of an increasing trend at the specified level of significance.

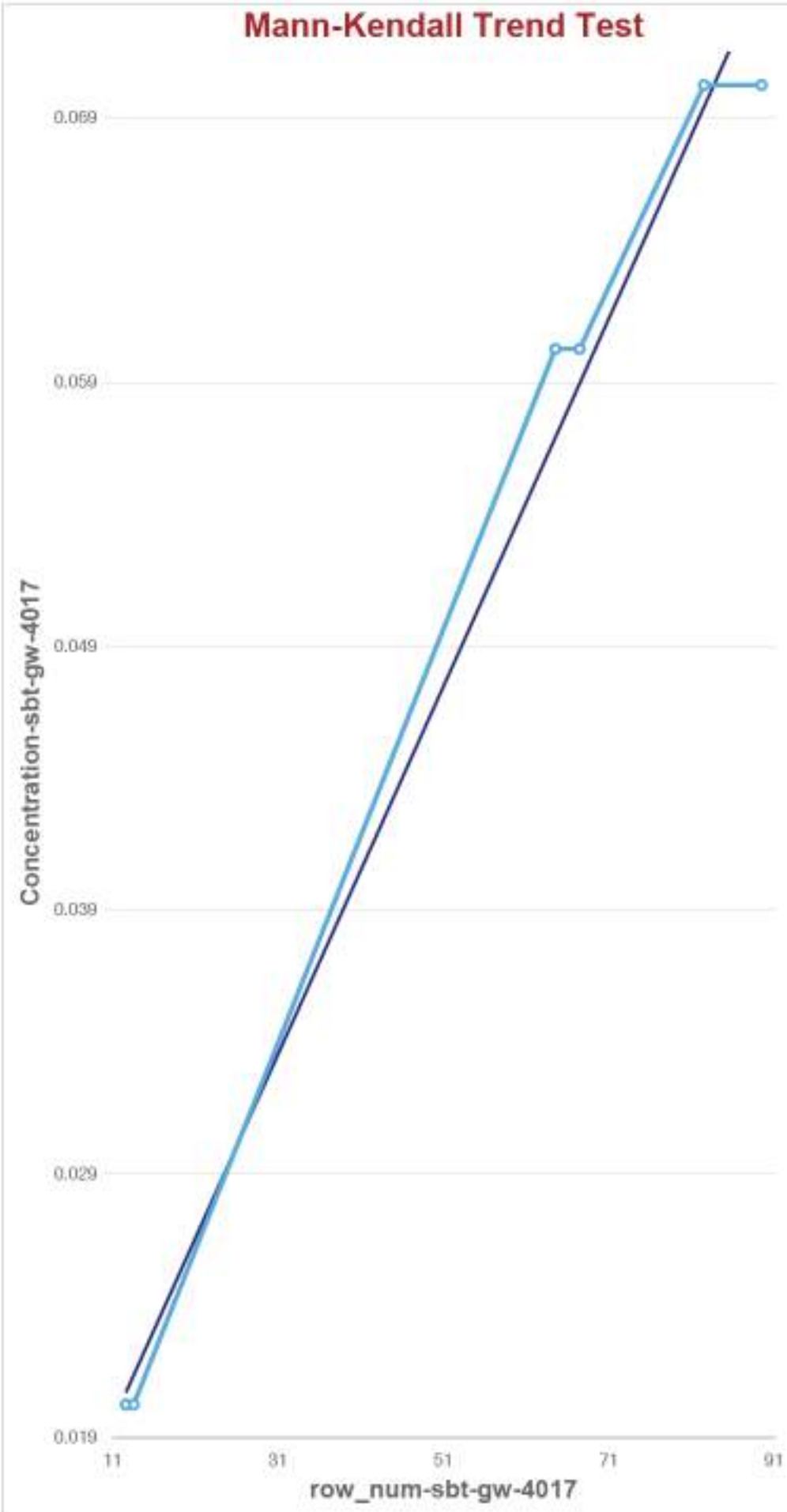
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.6330
Standardized Value of S	0.6124
M-K Test Value (S)	2
Tabulated p-value	
Approximate p-value	0.2701

OLS Regression Line (Blue)	
OLS Regression Slope	0.0011
OLS Regression Intercept	0.1107

Insufficient statistical evidence of a significant trend at the specified level of significance.



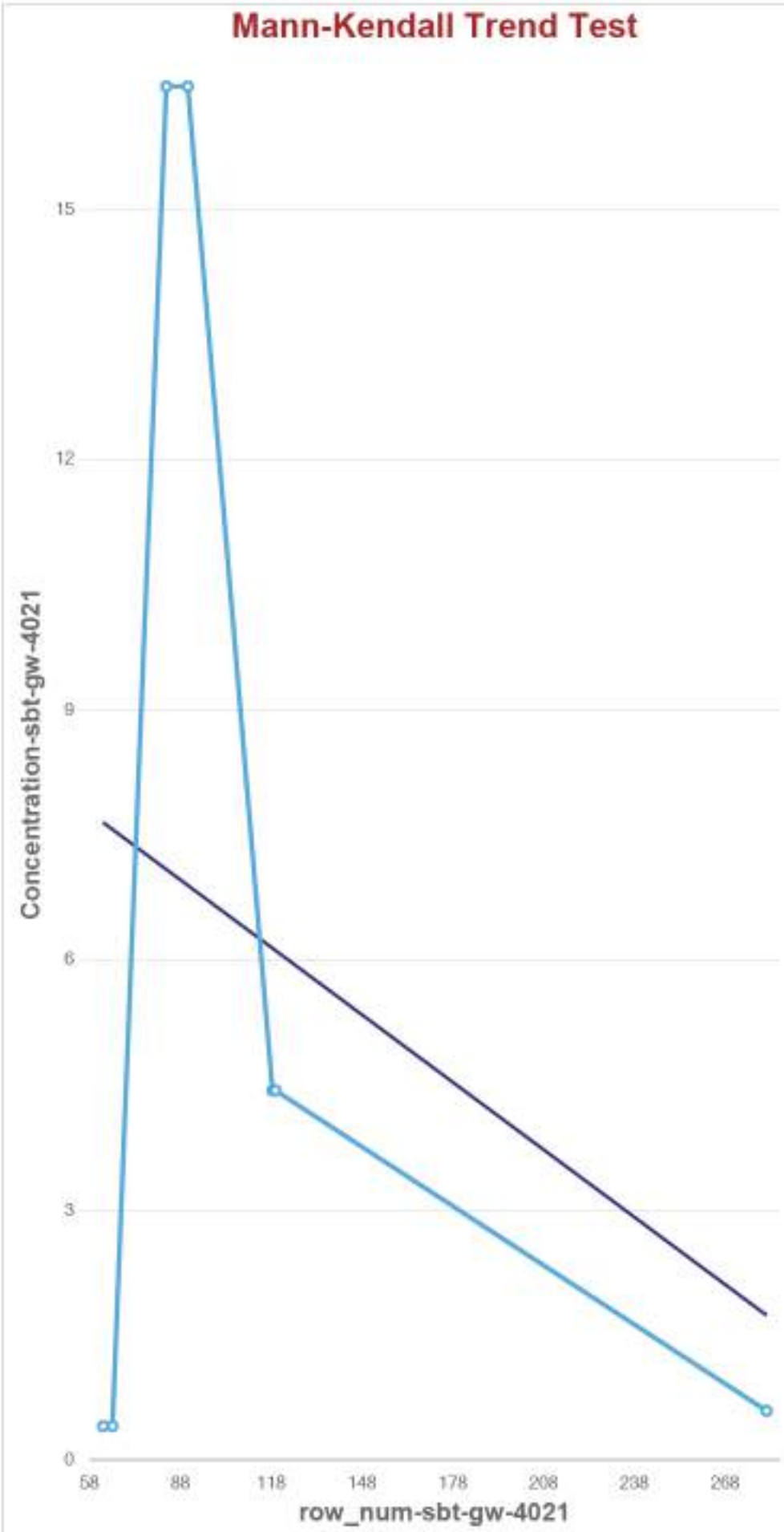
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	2.1855
M-K Test Value (S)	12
Tabulated p-value	0.0080
Approximate p-value	0.0144

OLS Regression Line (Blue)

OLS Regression Slope	0.0007
OLS Regression Intercept	0.0114

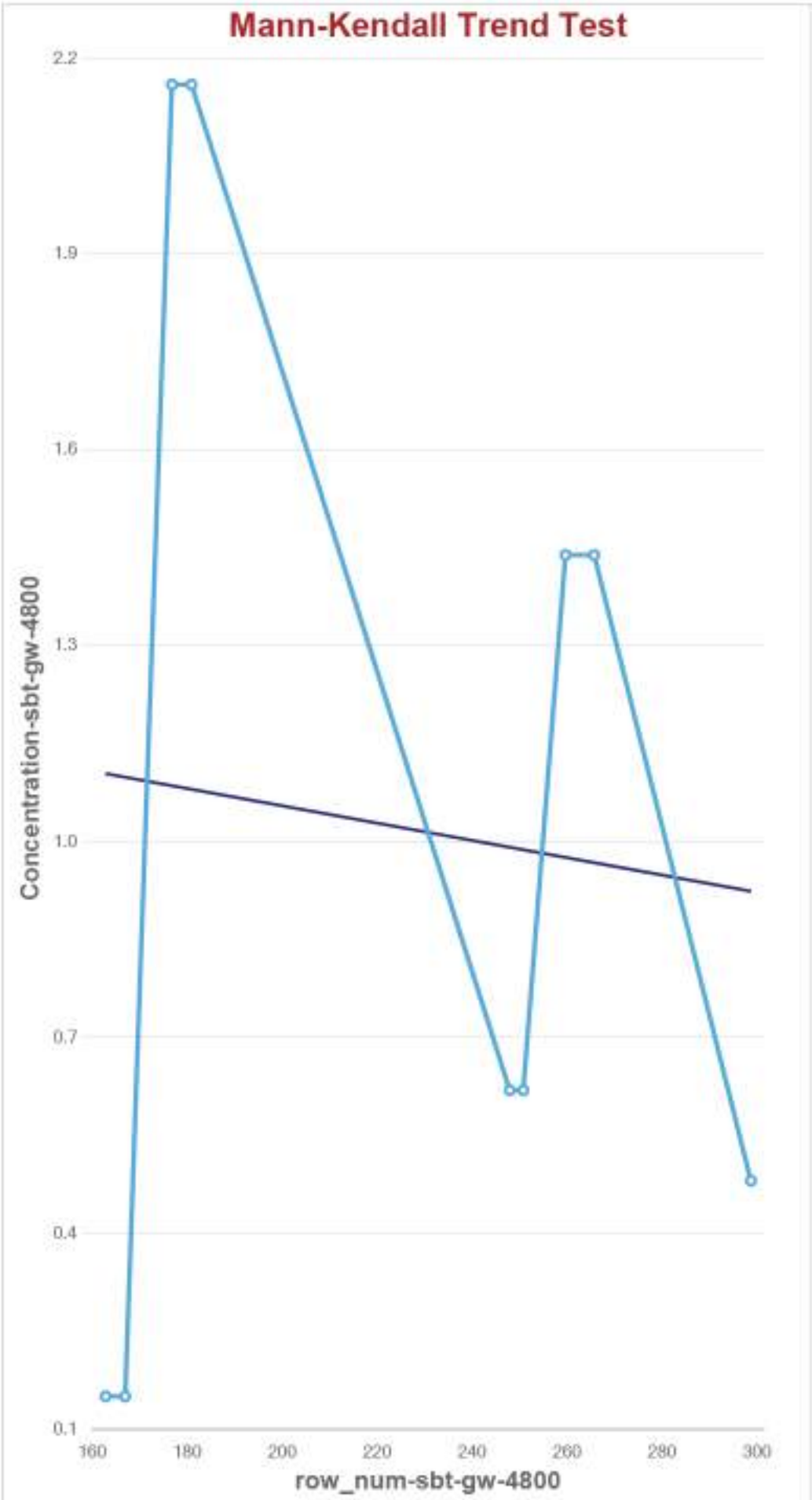
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	0.1555
M-K Test Value (S)	2
Tabulated p-value	0.3860
Approximate p-value	0.4382

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0270
OLS Regression Intercept	9.0748

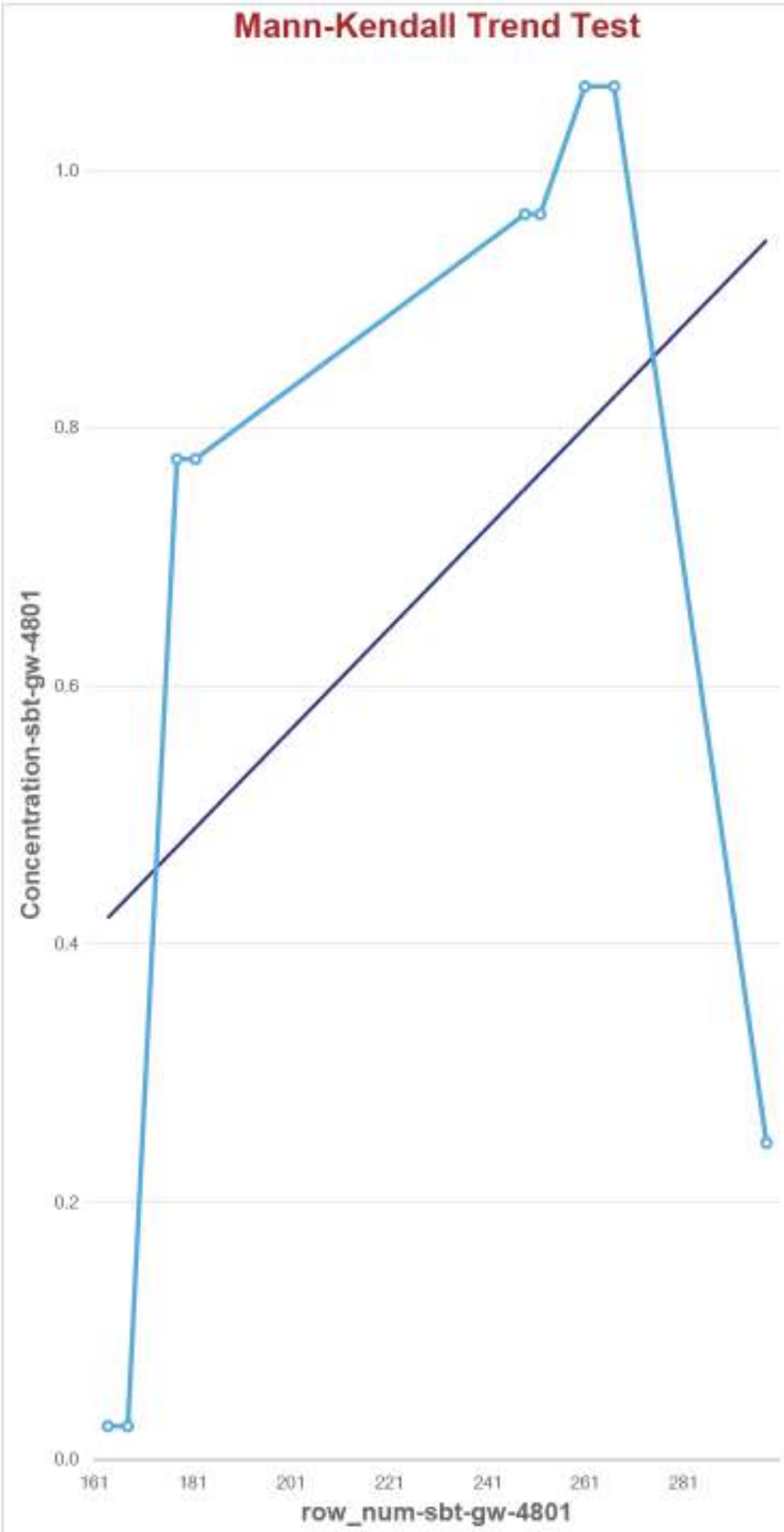
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	0.3198
M-K Test Value (S)	4
Tabulated p-value	0.3810
Approximate p-value	0.3746

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0013
OLS Regression Intercept	1.3630

Insufficient statistical evidence of a significant trend at the specified level of significance.

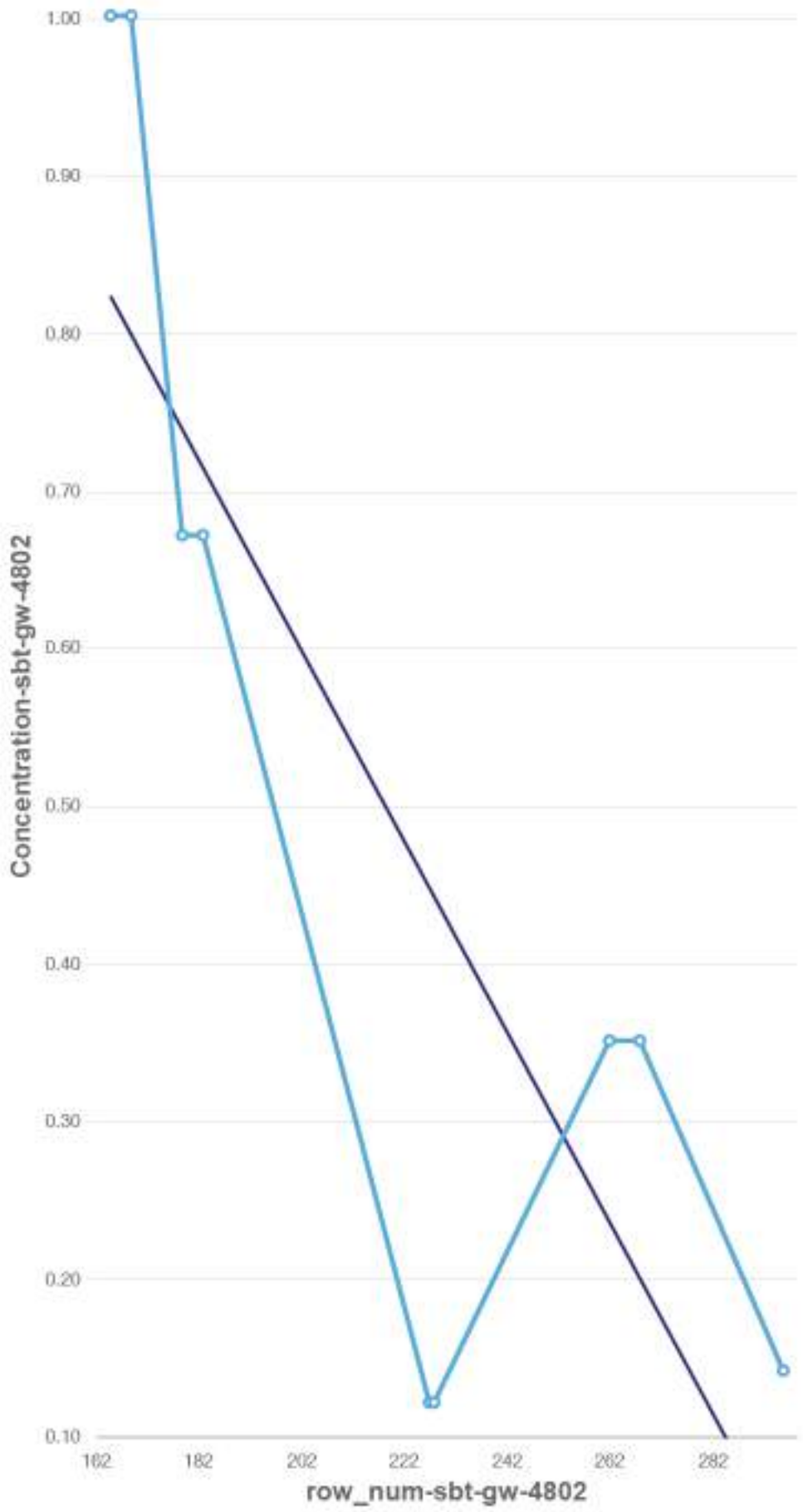


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	2.0254
M-K Test Value (S)	20
Tabulated p-value	0.0220
Approximate p-value	0.0214

OLS Regression Line (Blue)	
OLS Regression Slope	0.0039
OLS Regression Intercept	-0.2004

Statistically significant evidence of an increasing trend at the specified level of significance.

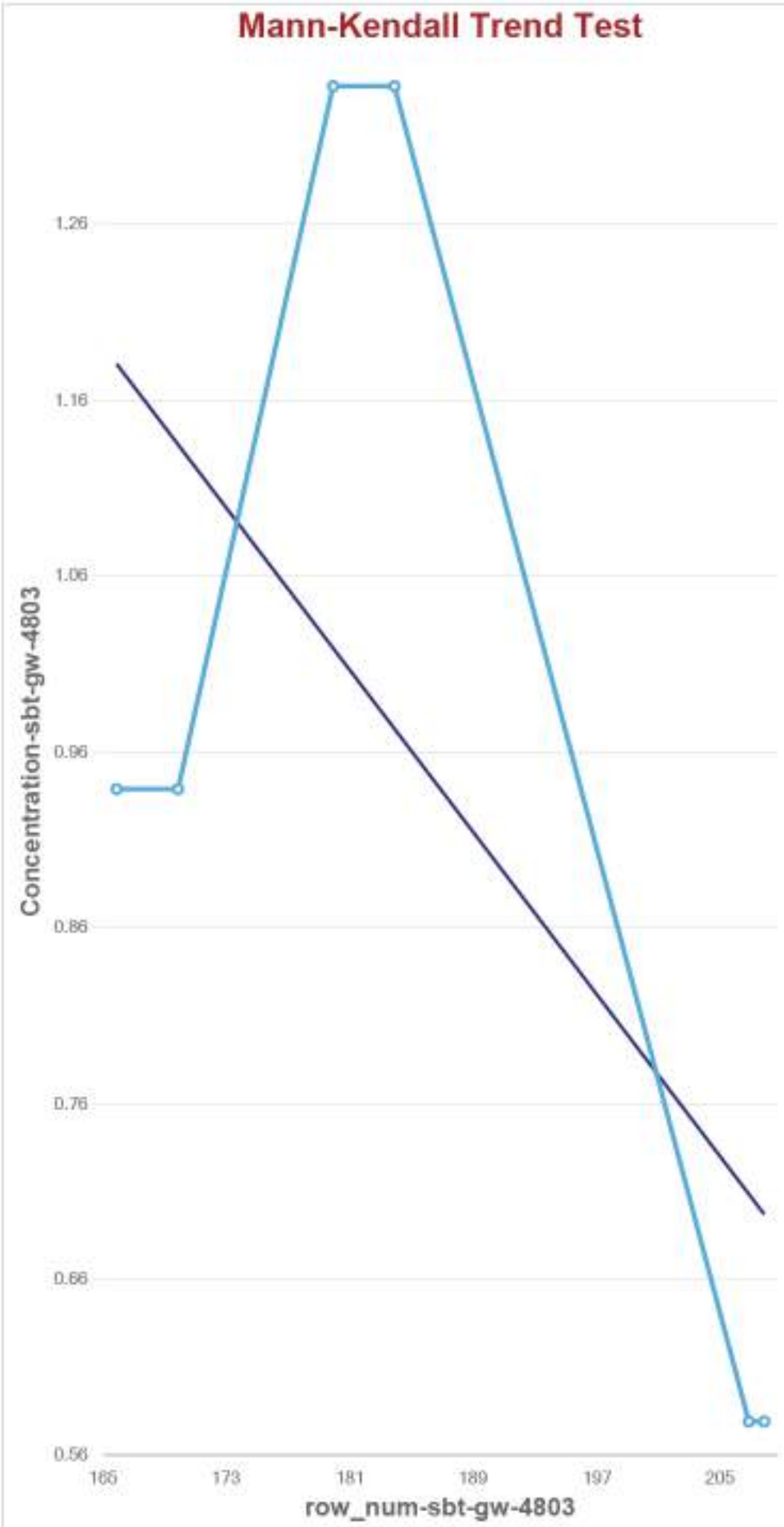
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.3808
Standardized Value of S	-2.0254
M-K Test Value (S)	-20
Tabulated p-value	0.0220
Approximate p-value	0.0214

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0061
OLS Regression Intercept	1.8215

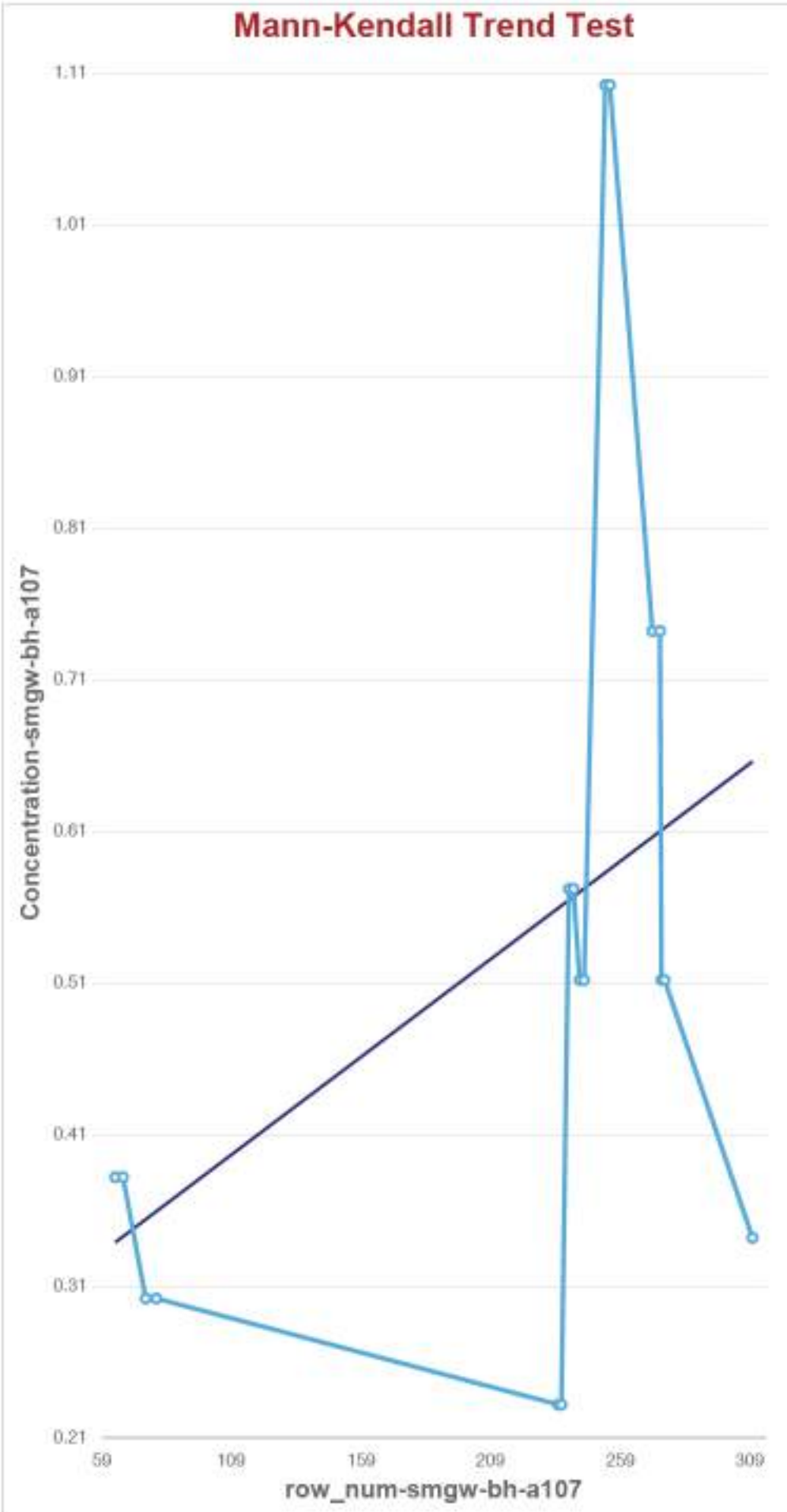
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	-0.5960
M-K Test Value (S)	-4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0115
OLS Regression Intercept	3.0935

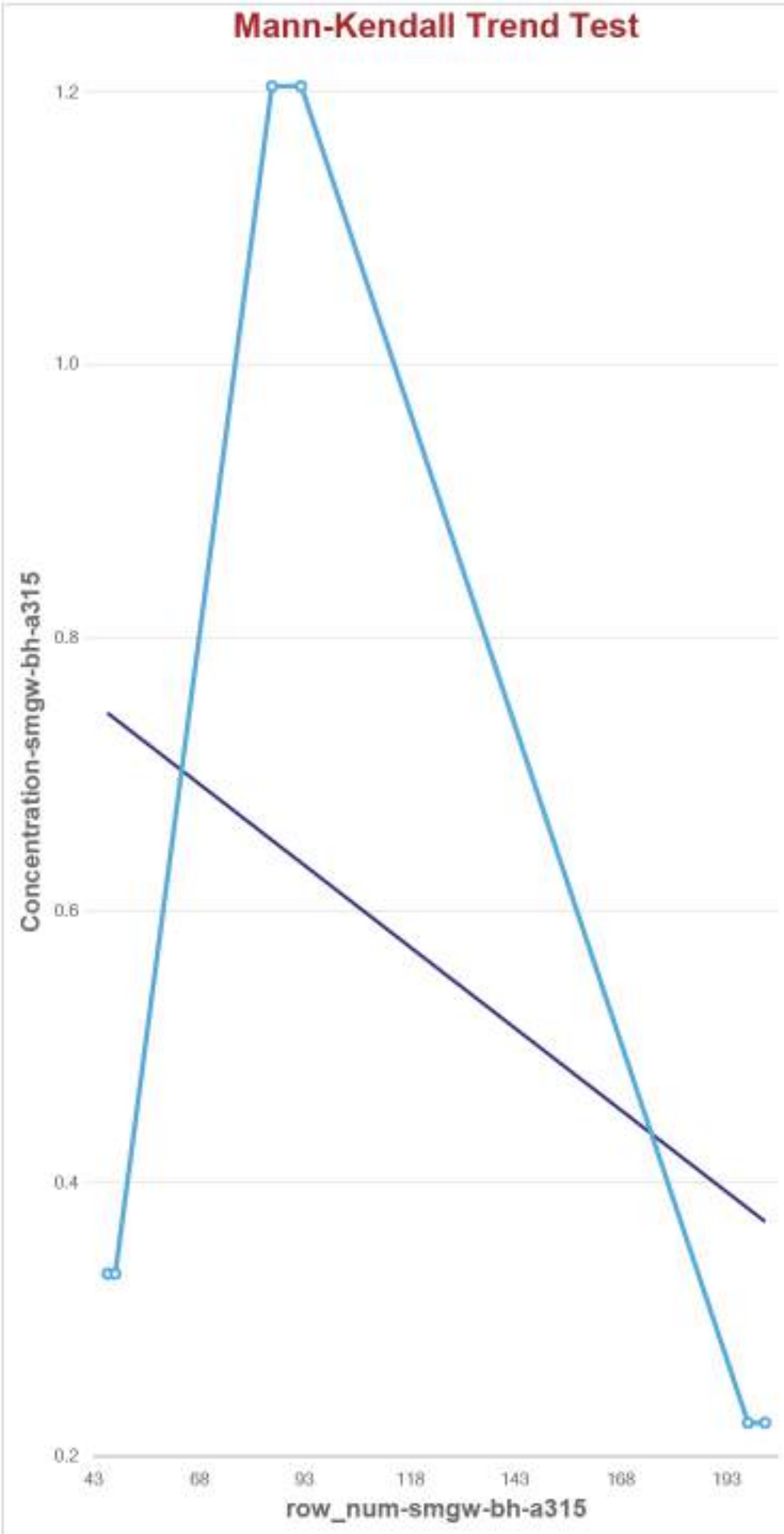
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	17
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	23.9722
Standardized Value of S	1.4600
M-K Test Value (S)	36
Tabulated p-value	0.0760
Approximate p-value	0.0721

OLS Regression Line (Blue)	
OLS Regression Slope	0.0013
OLS Regression Intercept	0.2543

Insufficient statistical evidence of a significant trend at the specified level of significance.



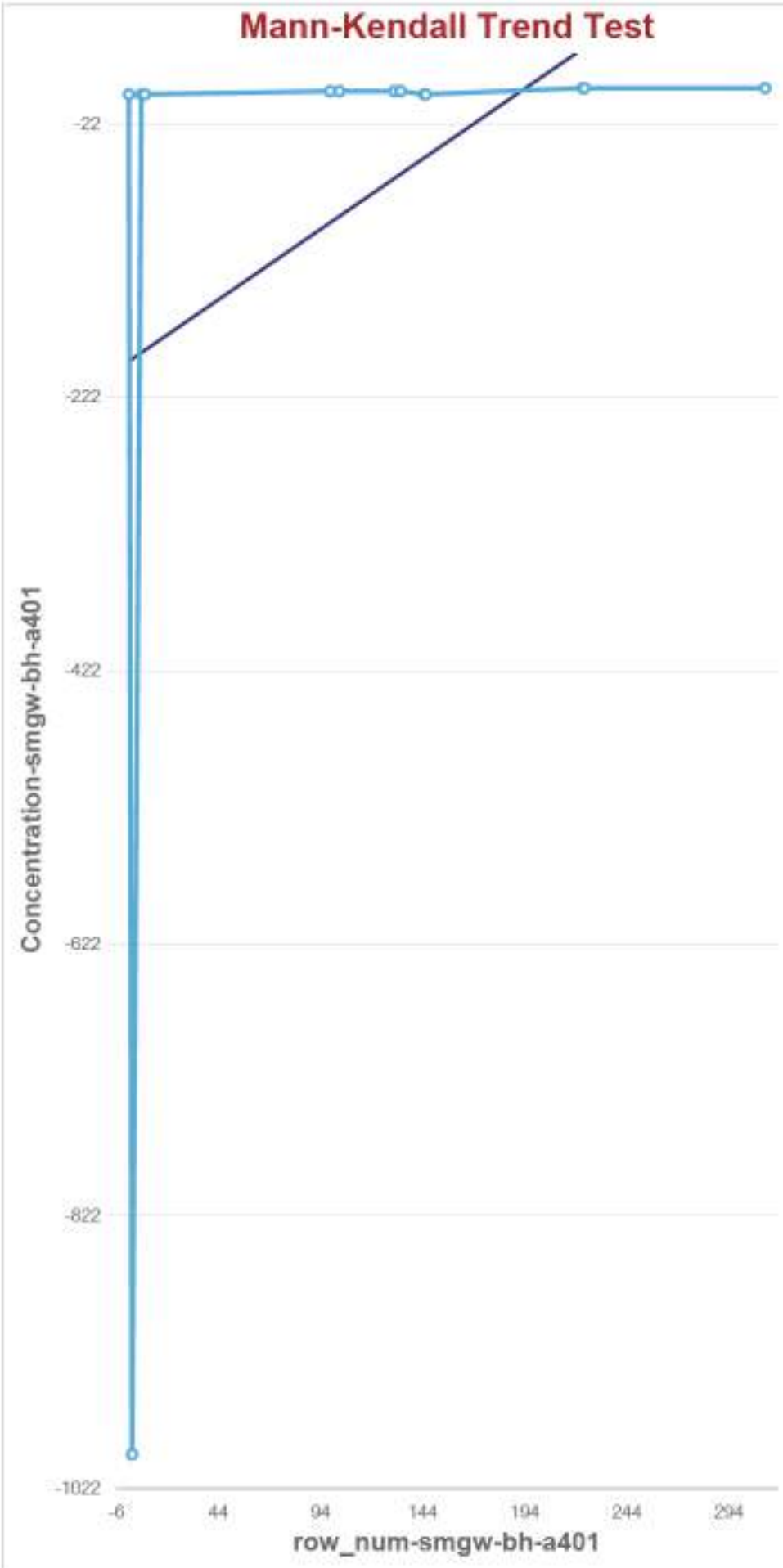
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	-0.5960
M-K Test Value (S)	-4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)

OLS Regression Slope	-0.0024
OLS Regression Intercept	0.8909

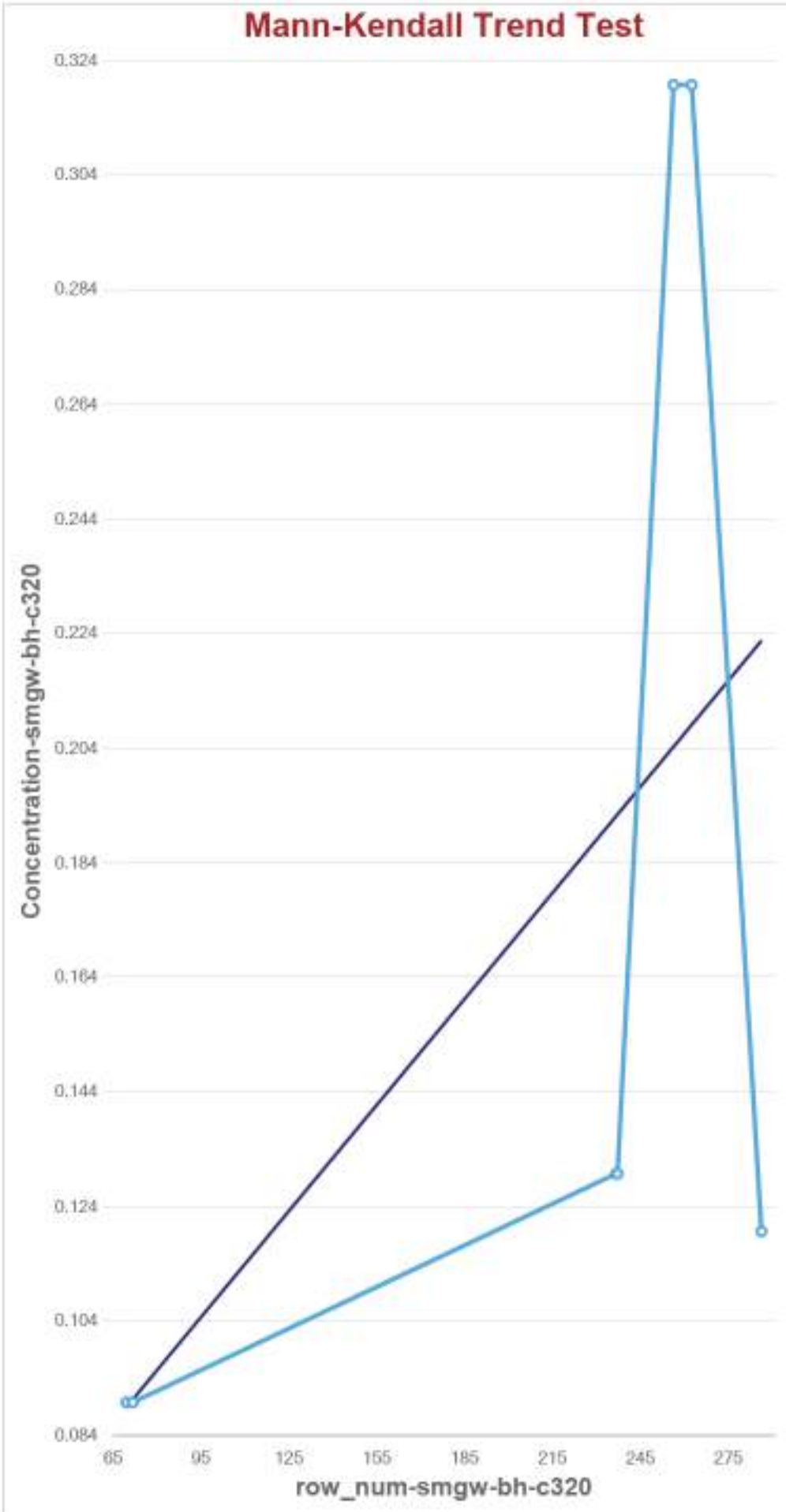
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	16.0312
Standardized Value of S	2.8694
M-K Test Value (S)	47
Tabulated p-value	0.0020
Approximate p-value	0.0021

OLS Regression Line (Blue)	
OLS Regression Slope	1.0327
OLS Regression Interoept	-196.6888

Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis

n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.4291
Standardized Value of S	1.3999
M-K Test Value (S)	10
Tabulated p-value	0.0680
Approximate p-value	0.0808

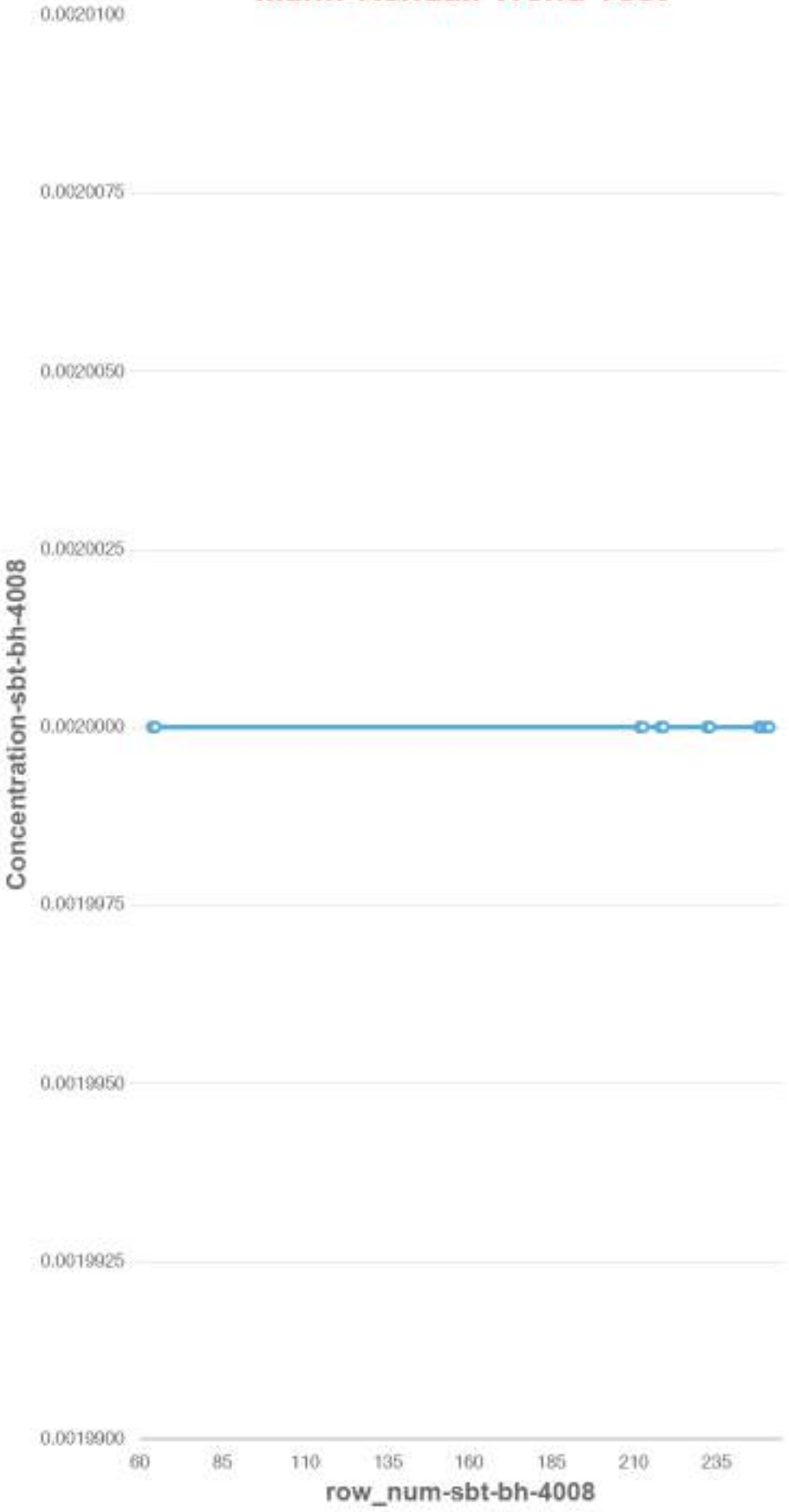
OLS Regression Line (Blue)

OLS Regression Slope	0.0006
OLS Regression Intercept	0.0463

Insufficient statistical evidence of a significant trend at the specified level of significance.

F.11 TOLUENE

Mann-Kendall Trend Test

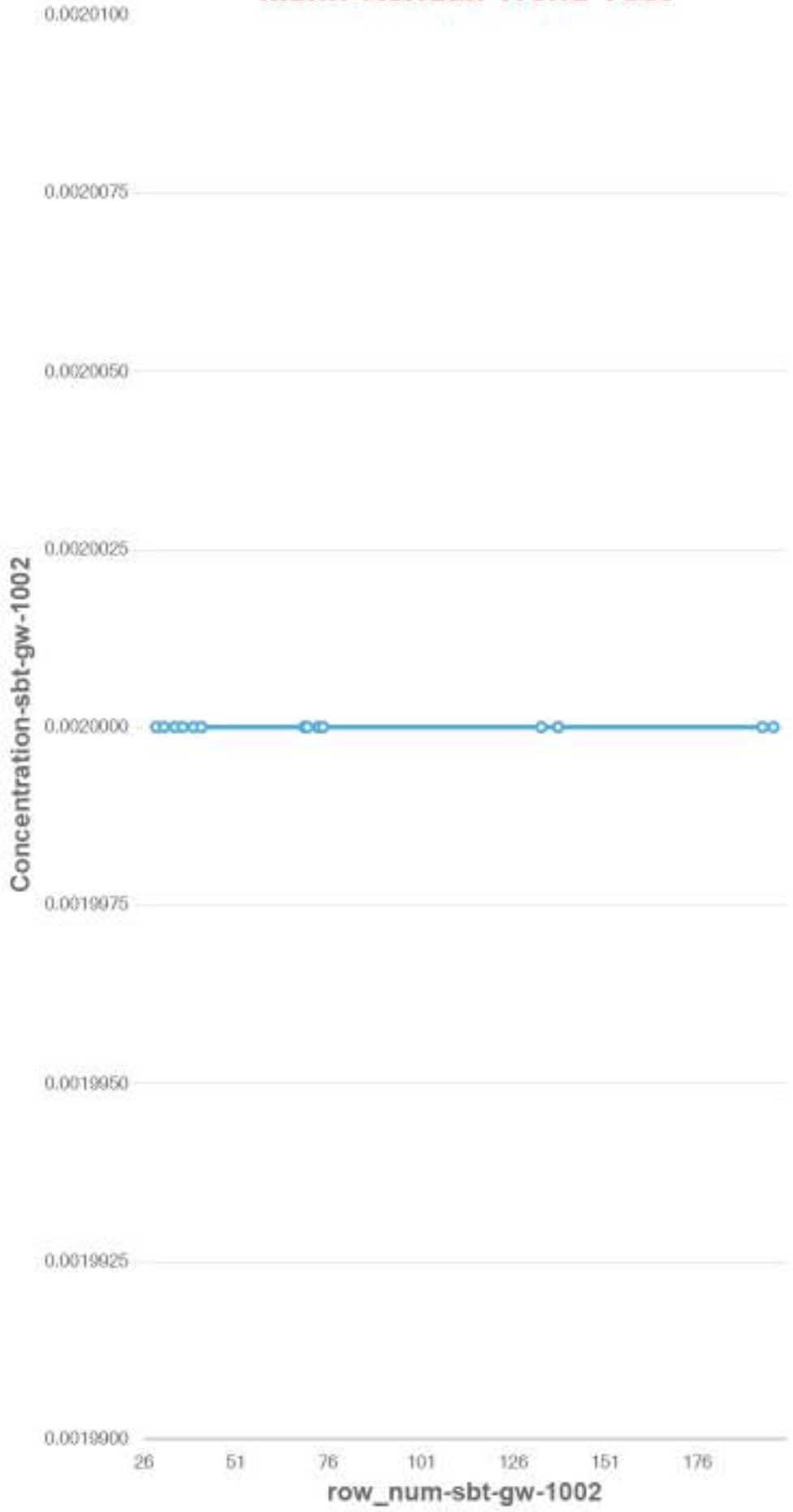


Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5270
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

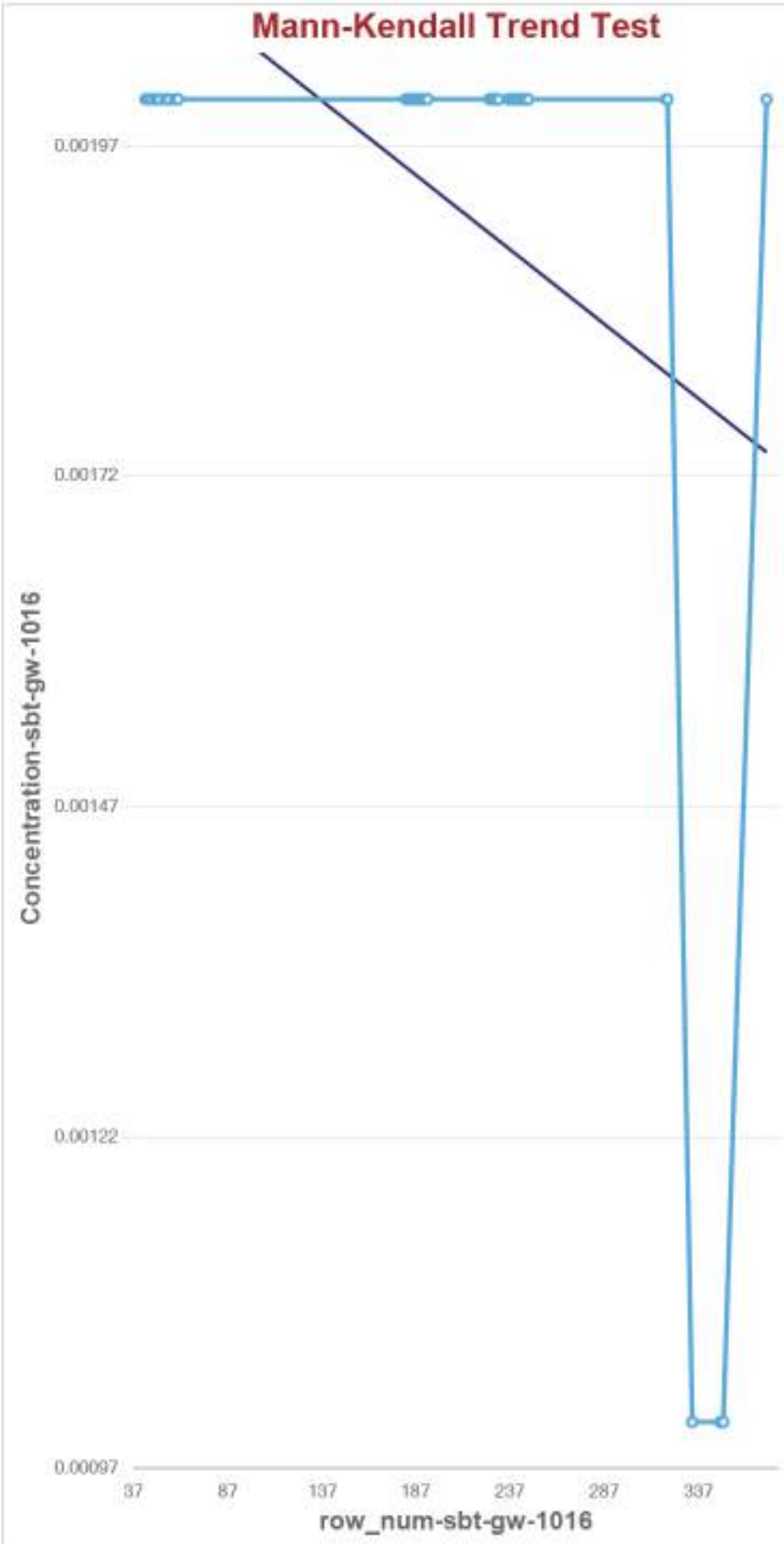
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

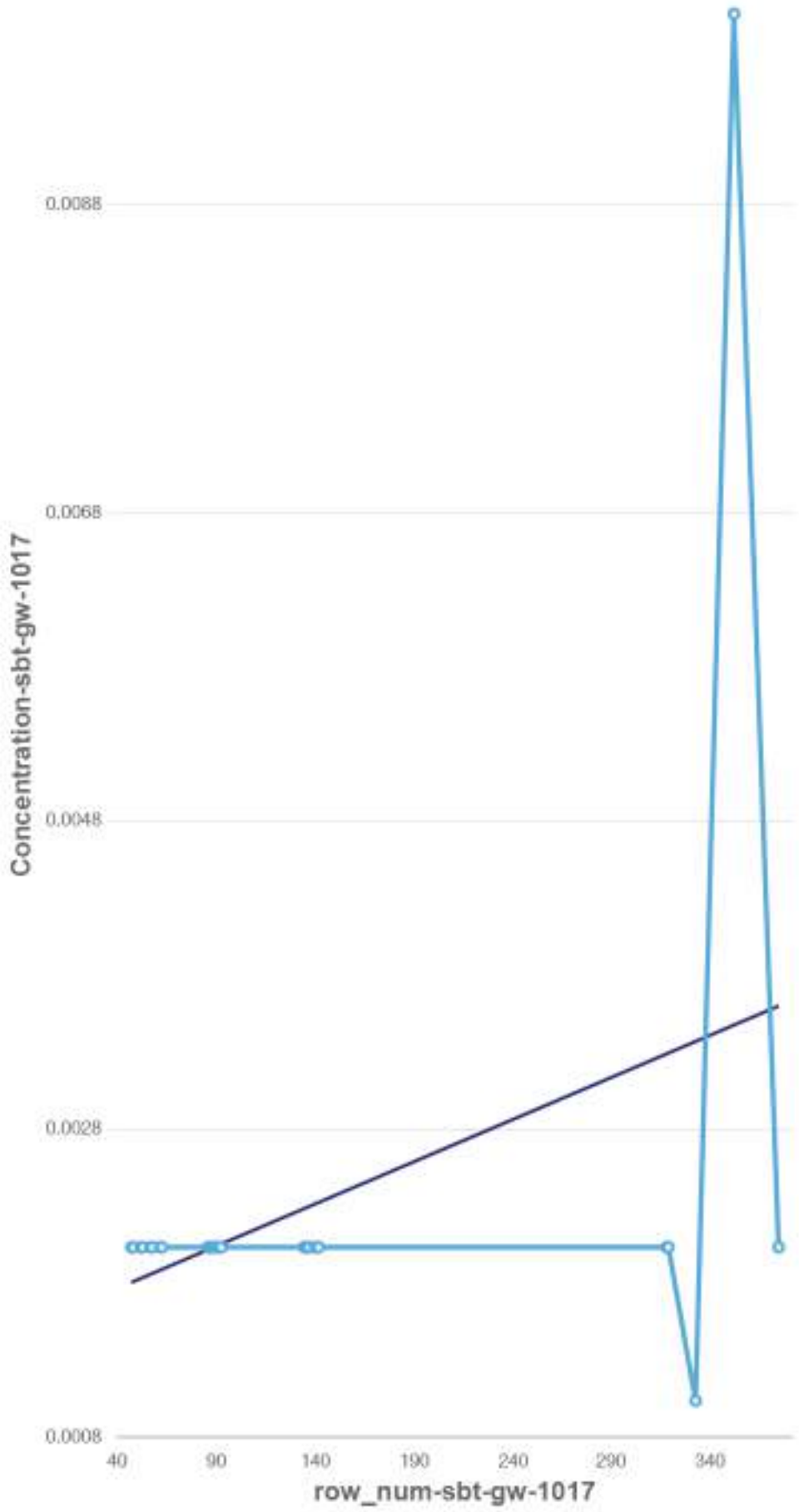
n	48
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	46.9574
Standardized Value of S	-2.7259
M-K Test Value (S)	-129
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0032

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

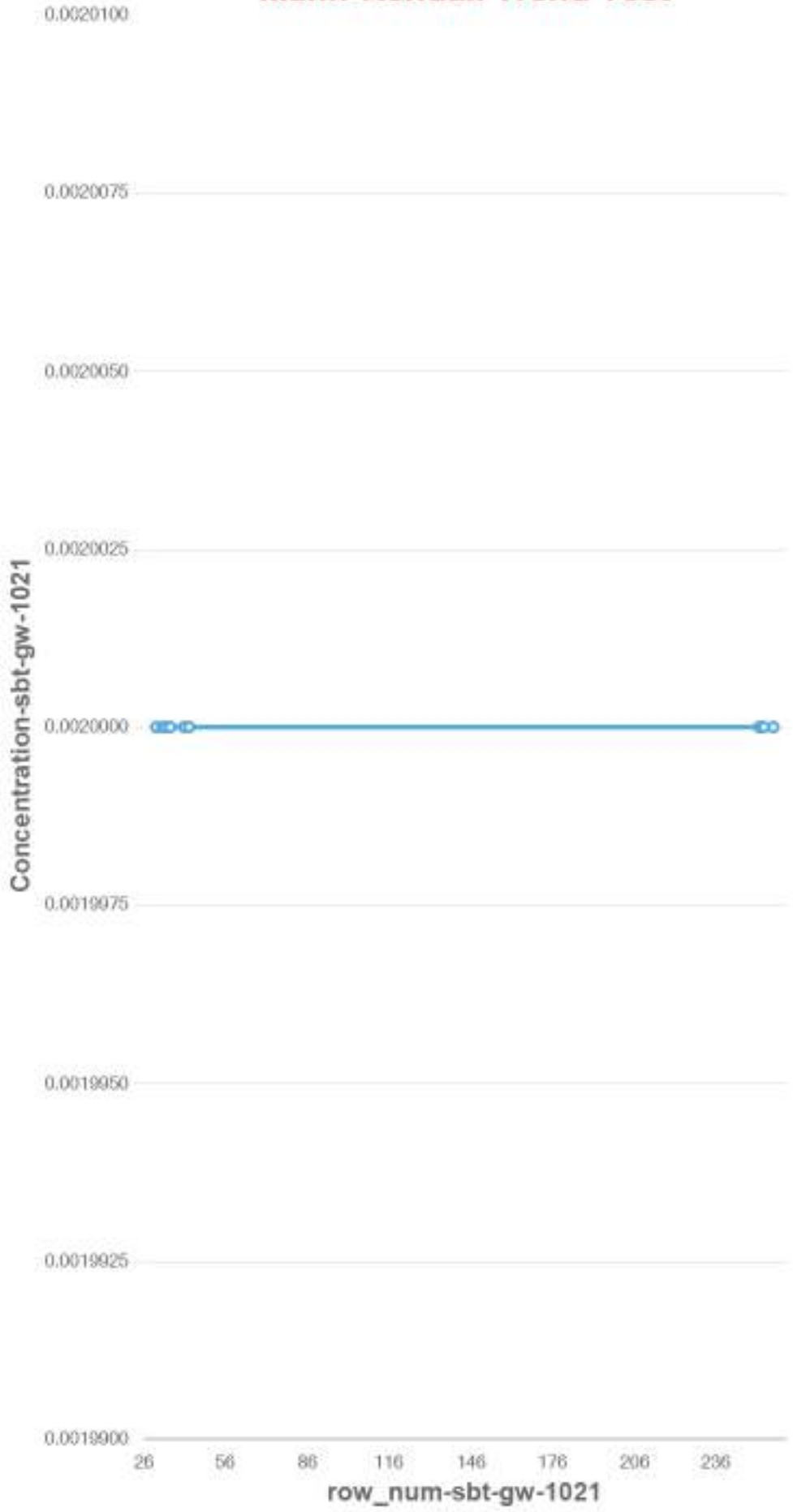


Mann-Kendall Trend Analysis	
n	27
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	21.6256
Standardized Value of S	0.0000
M-K Test Value (S)	1
Appx. Critical Value (0.05)	1.6449
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0015

Insufficient statistical evidence of a significant trend at the specified level of significance.

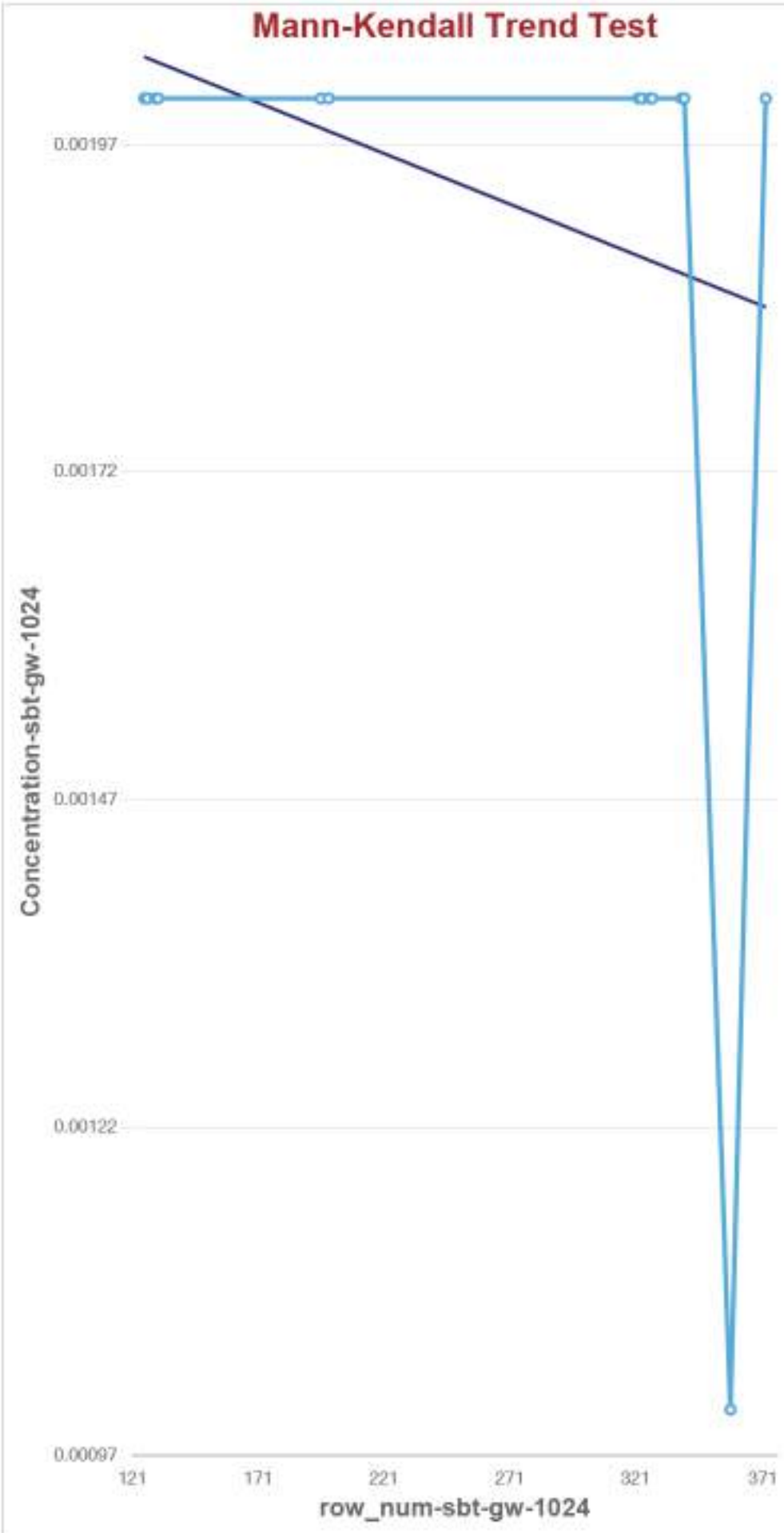
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

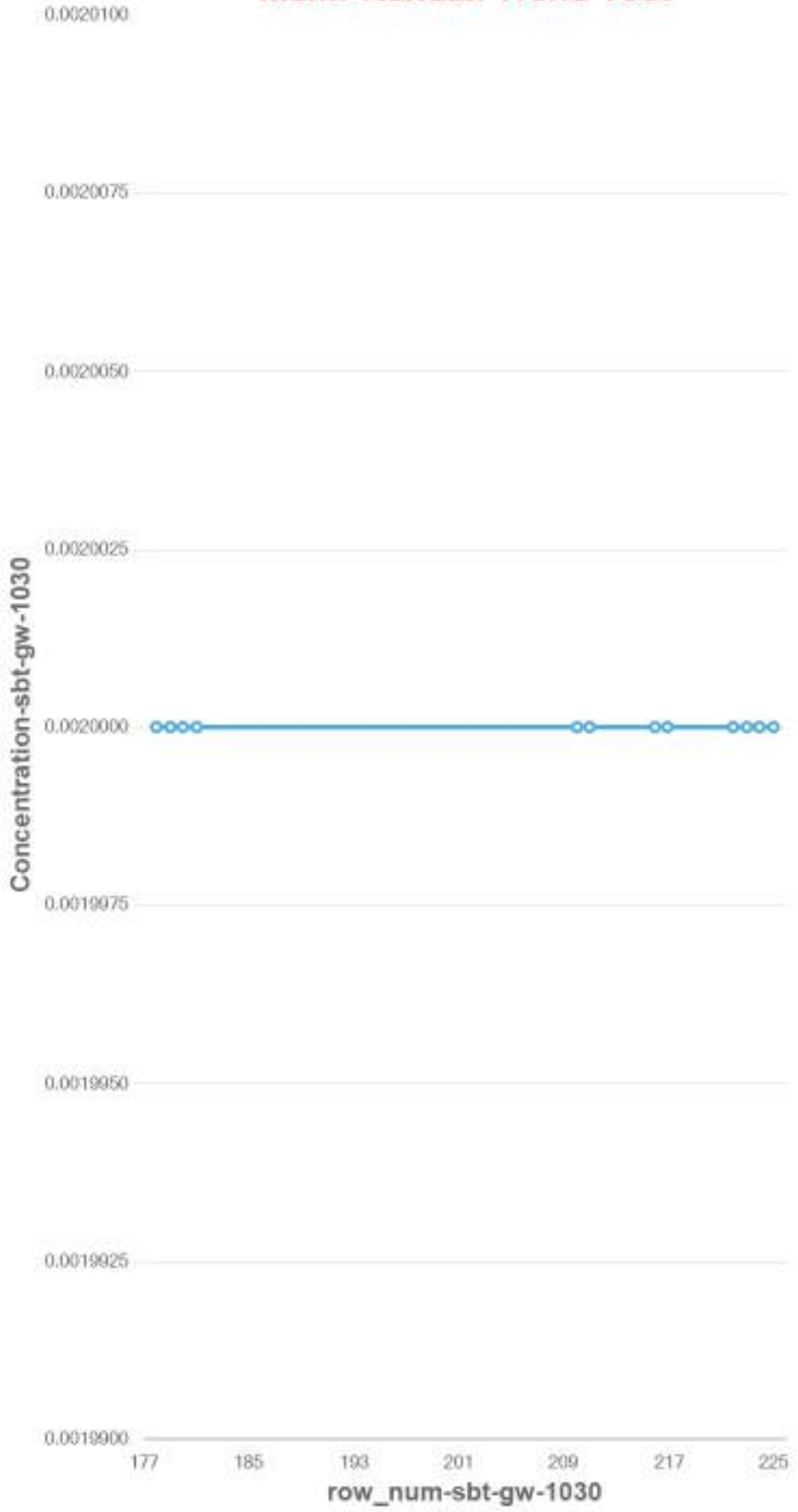


Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.0623
Standardized Value of S	-1.2403
M-K Test Value (S)	-11
Tabulated p-value	0.2950
Approximate p-value	0.1074

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0021

Insufficient statistical evidence of a significant trend at the specified level of significance.

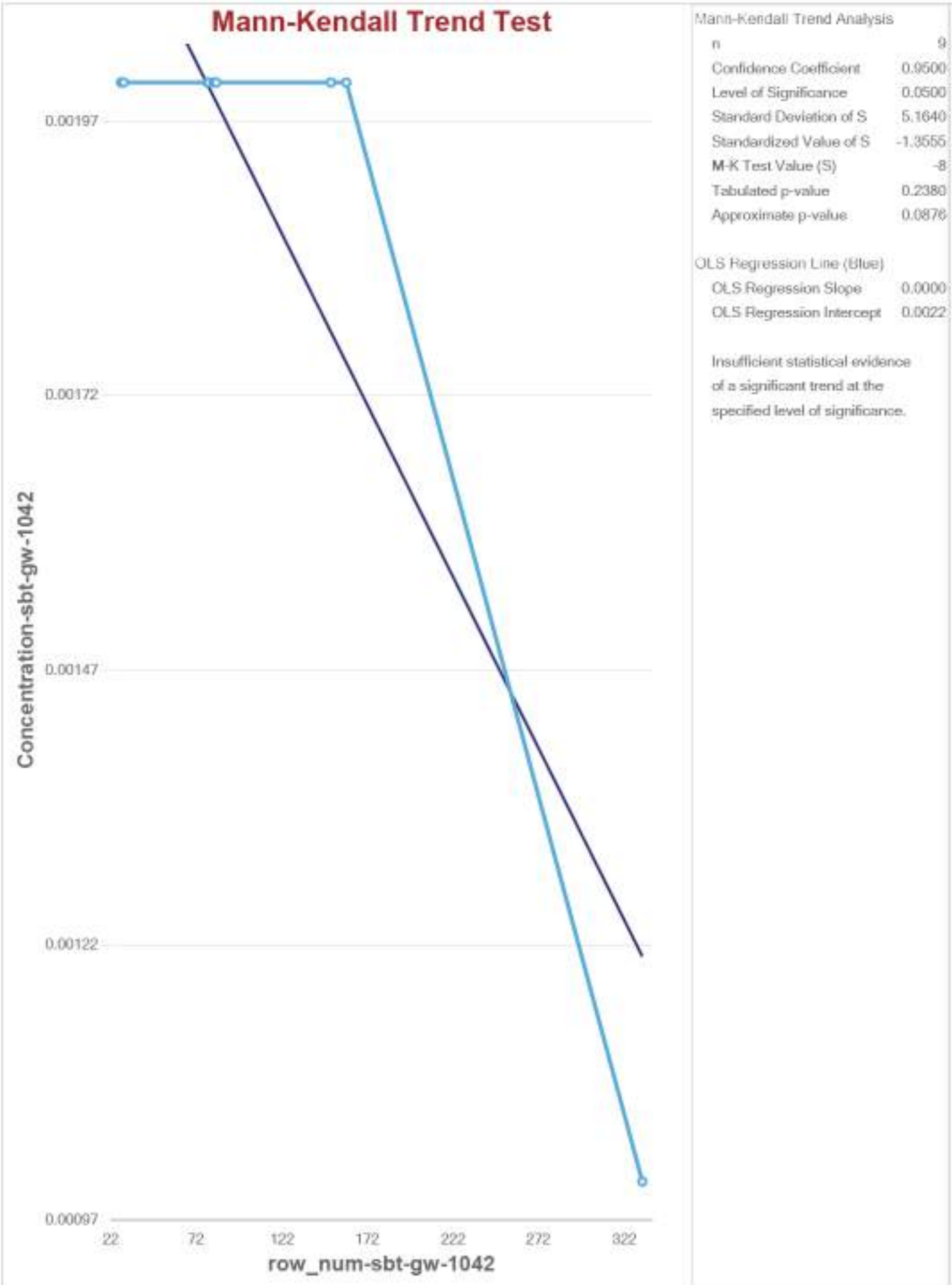
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5270
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

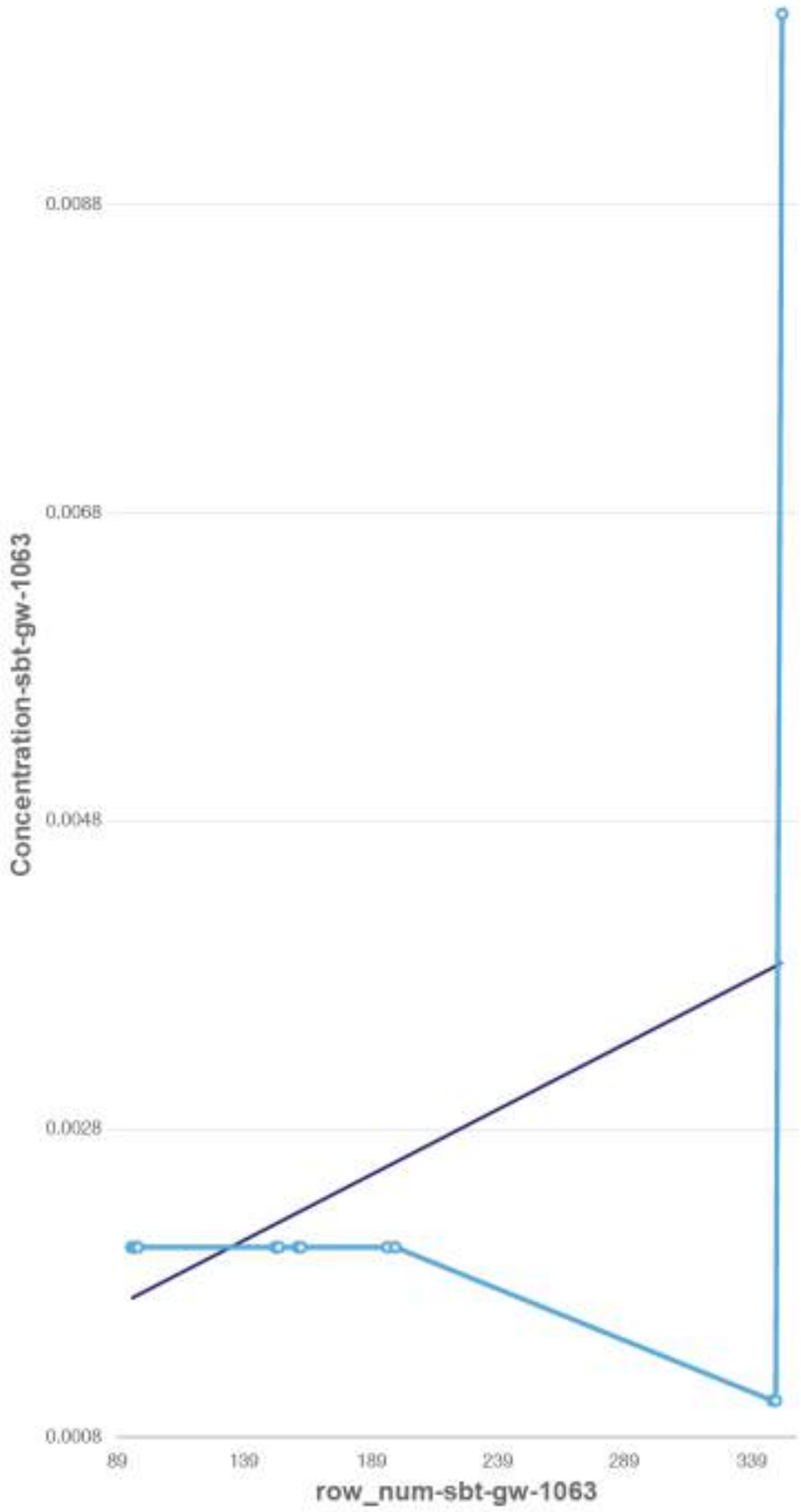


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.1640
Standardized Value of S	-1.3555
M-K Test Value (S)	-8
Tabulated p-value	0.2380
Approximate p-value	0.0876

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

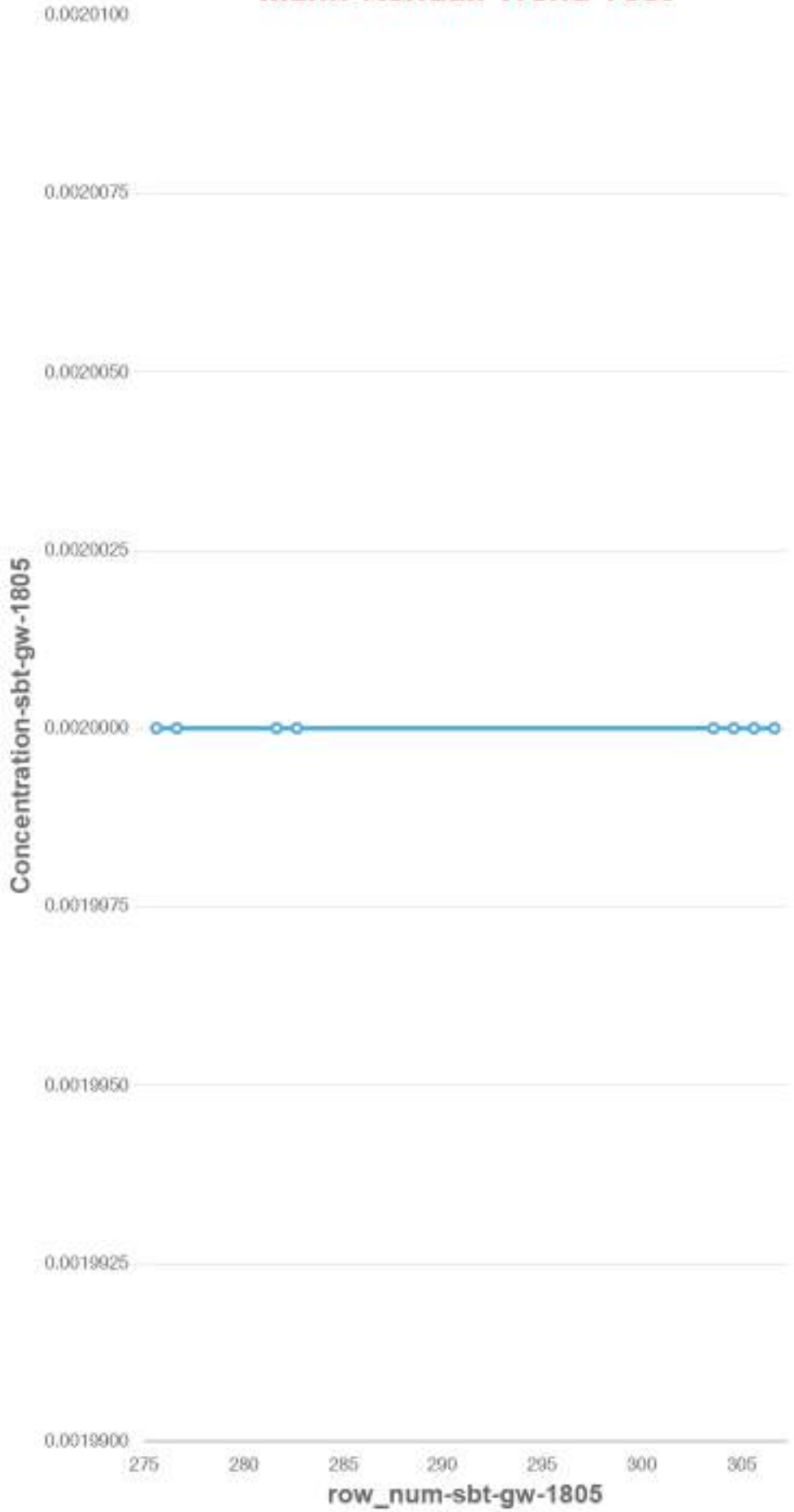


Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.9443
Standardized Value of S	-0.5861
M-K Test Value (S)	-8
Tabulated p-value	0.3380
Approximate p-value	0.2789

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0009

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

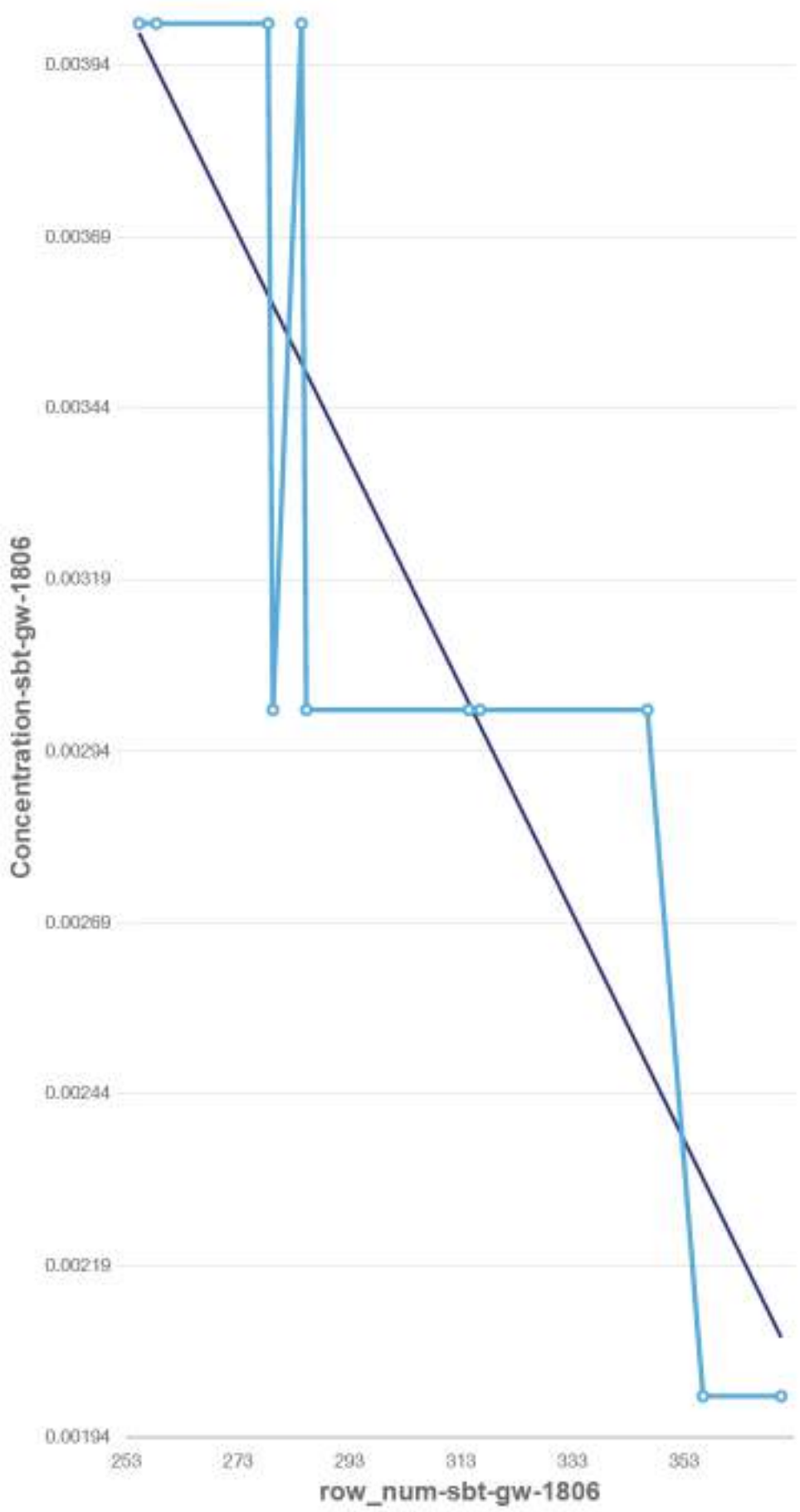


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

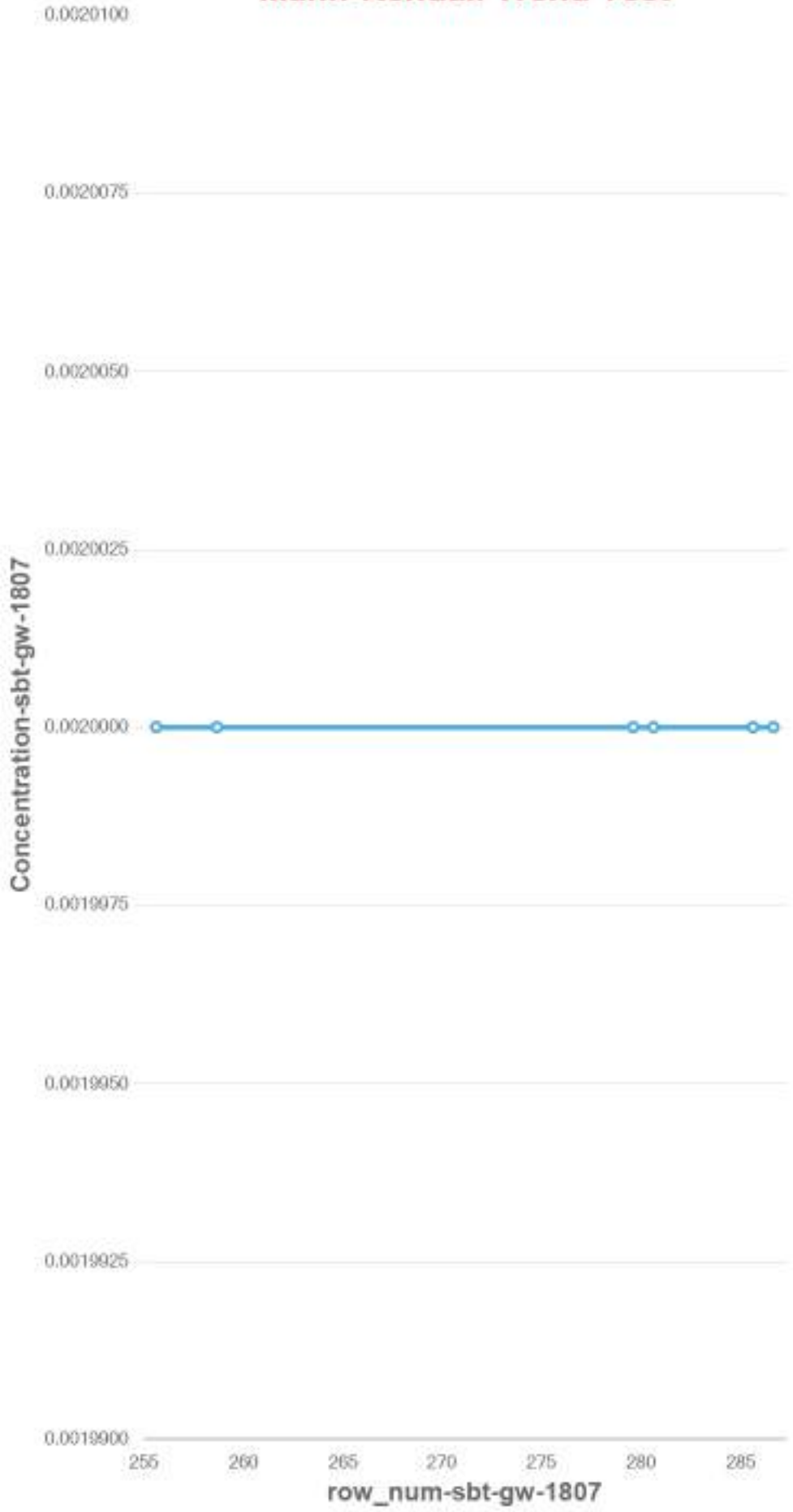


Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.7757
Standardized Value of S	-2.9722
M-K Test Value (S)	-36
Tabulated p-value	0.0020
Approximate p-value	0.0015

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0082

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test

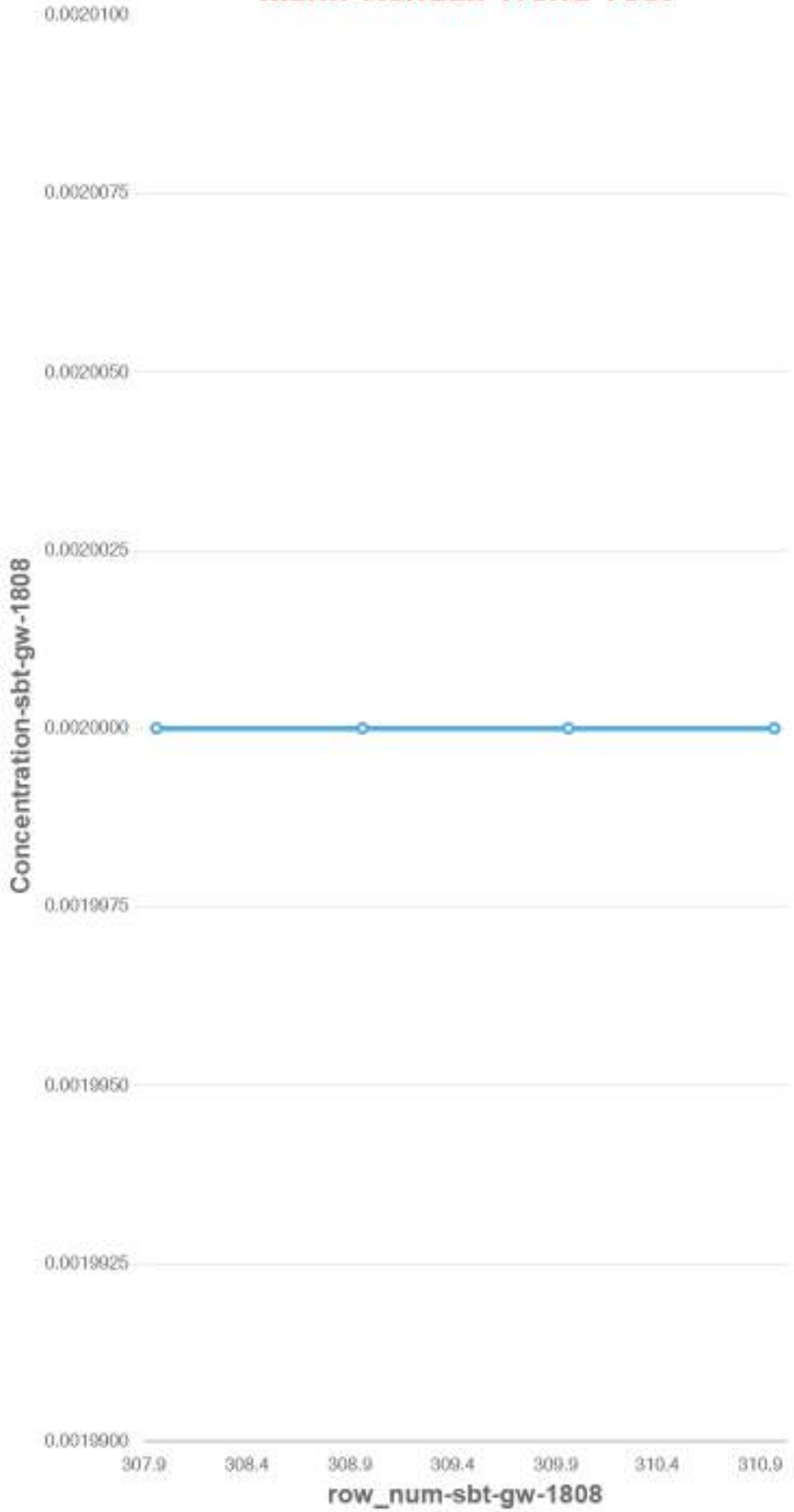


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

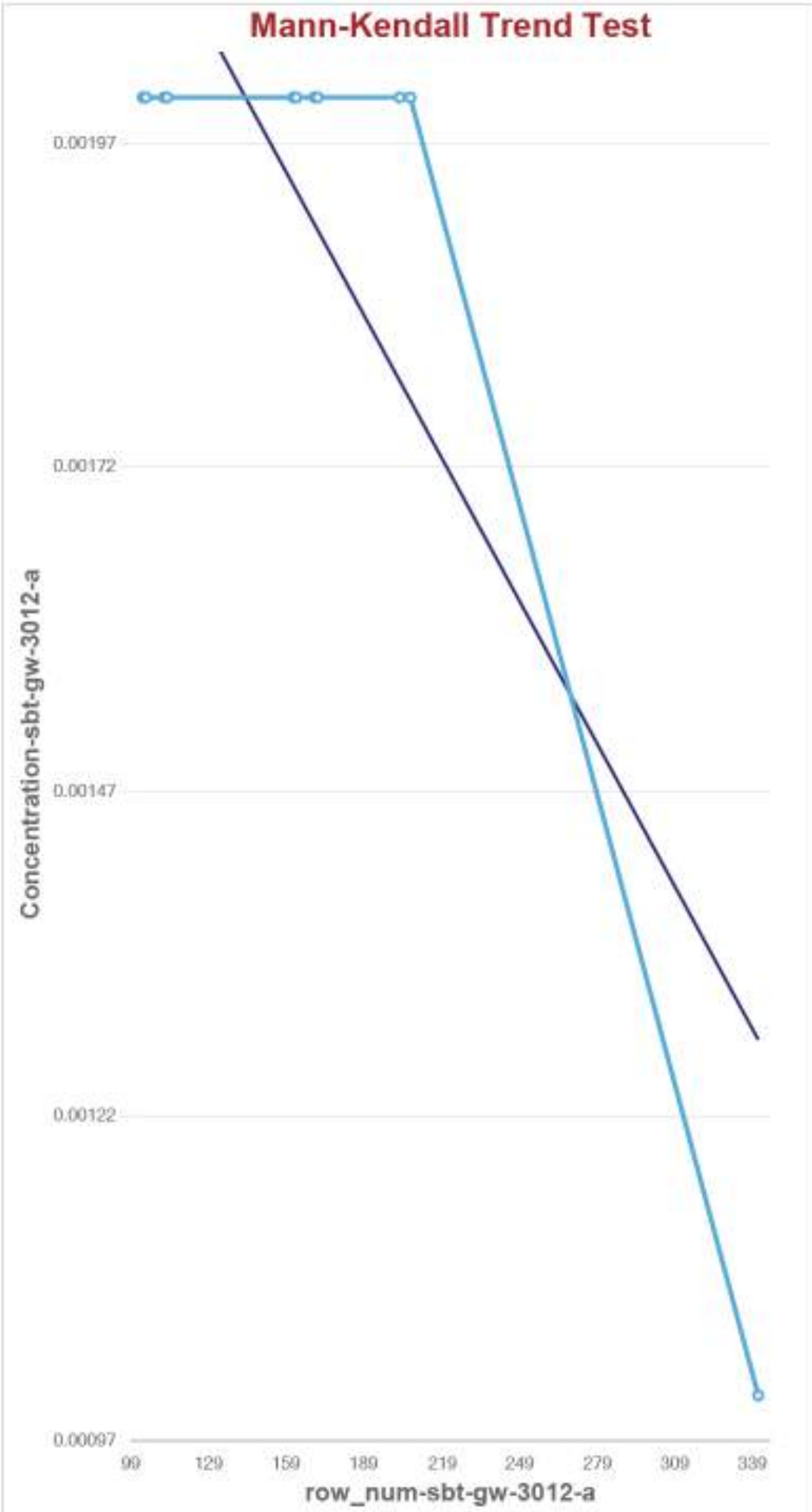
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

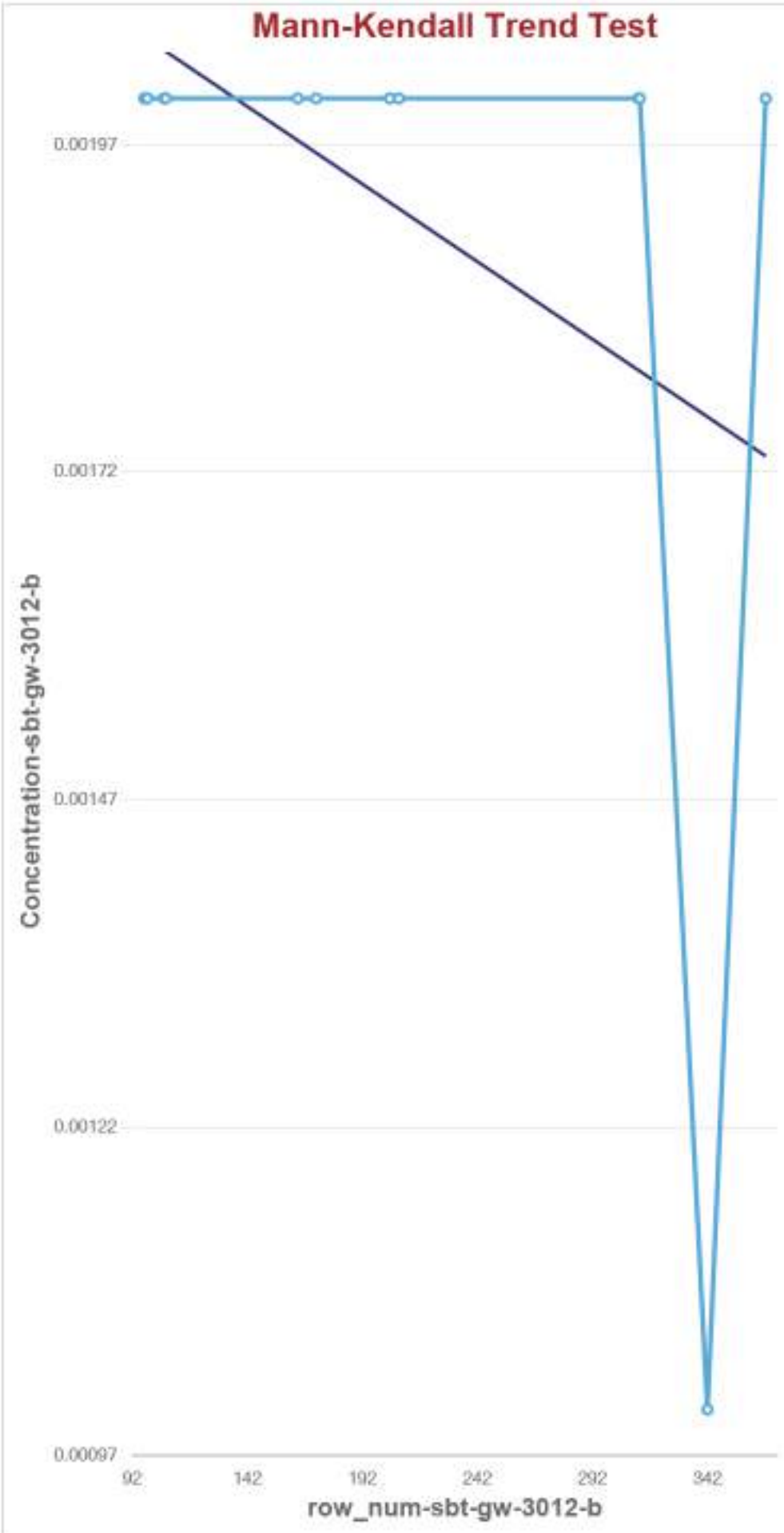
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.3246
Standardized Value of S	-1.4230
M-K Test Value (S)	-10
Tabulated p-value	0.2230
Approximate p-value	0.0774

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0025

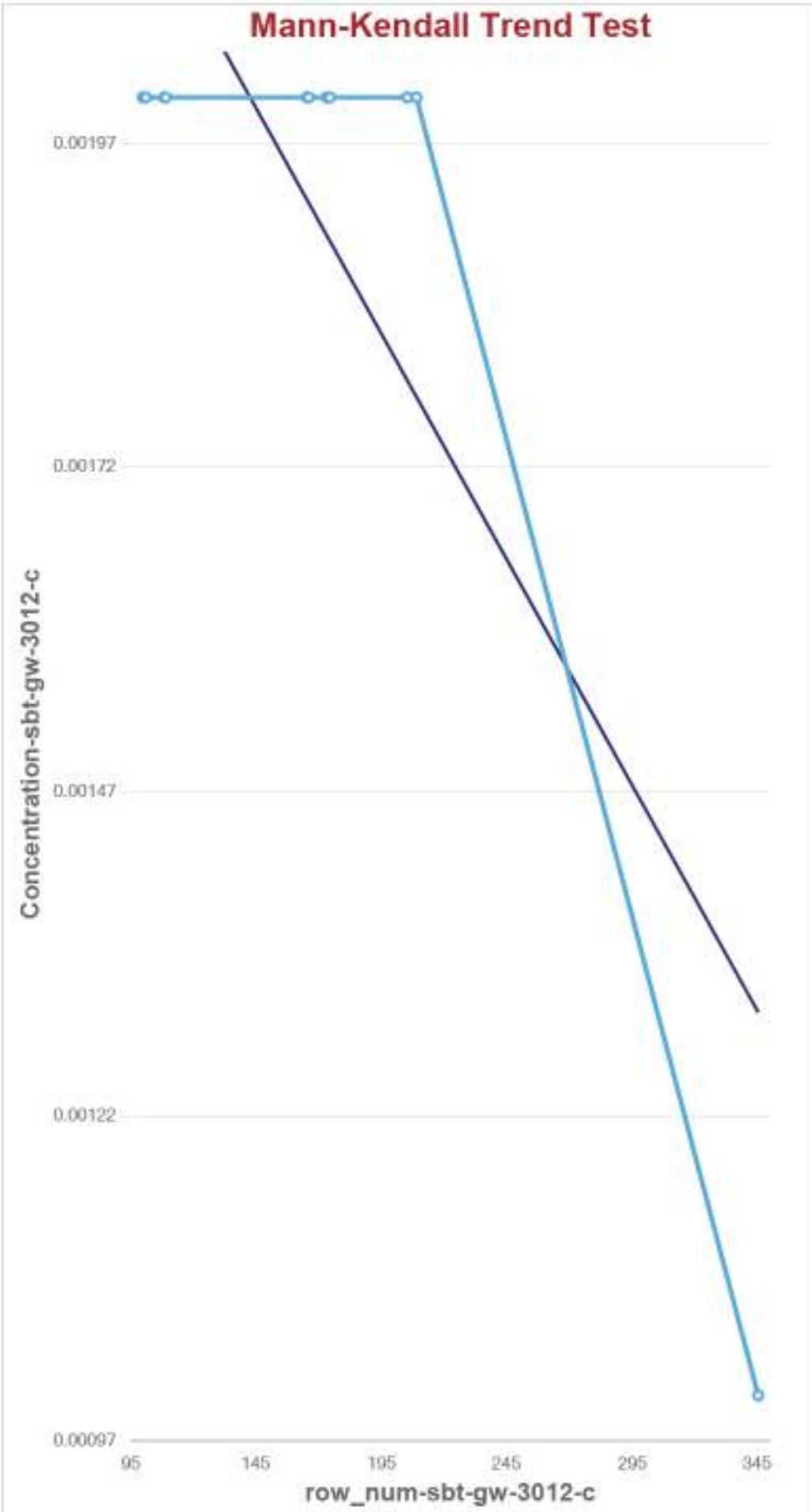
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-1.1587
M-K Test Value (S)	-9
Tabulated p-value	0.3190
Approximate p-value	0.1233

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

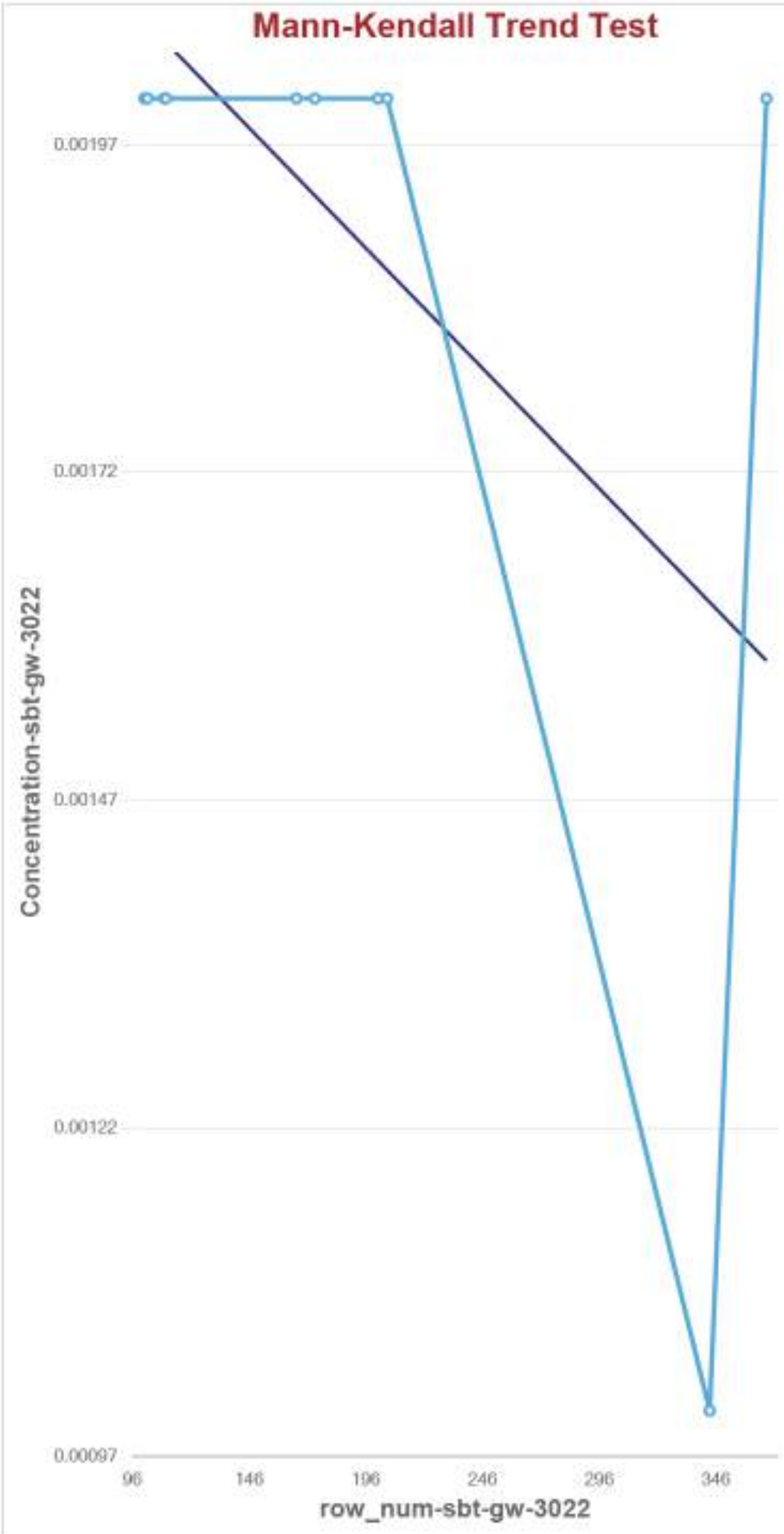
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.3246
Standardized Value of S	-1.4230
M-K Test Value (S)	-10
Tabulated p-value	0.2230
Approximate p-value	0.0774

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0025

Insufficient statistical evidence of a significant trend at the specified level of significance.



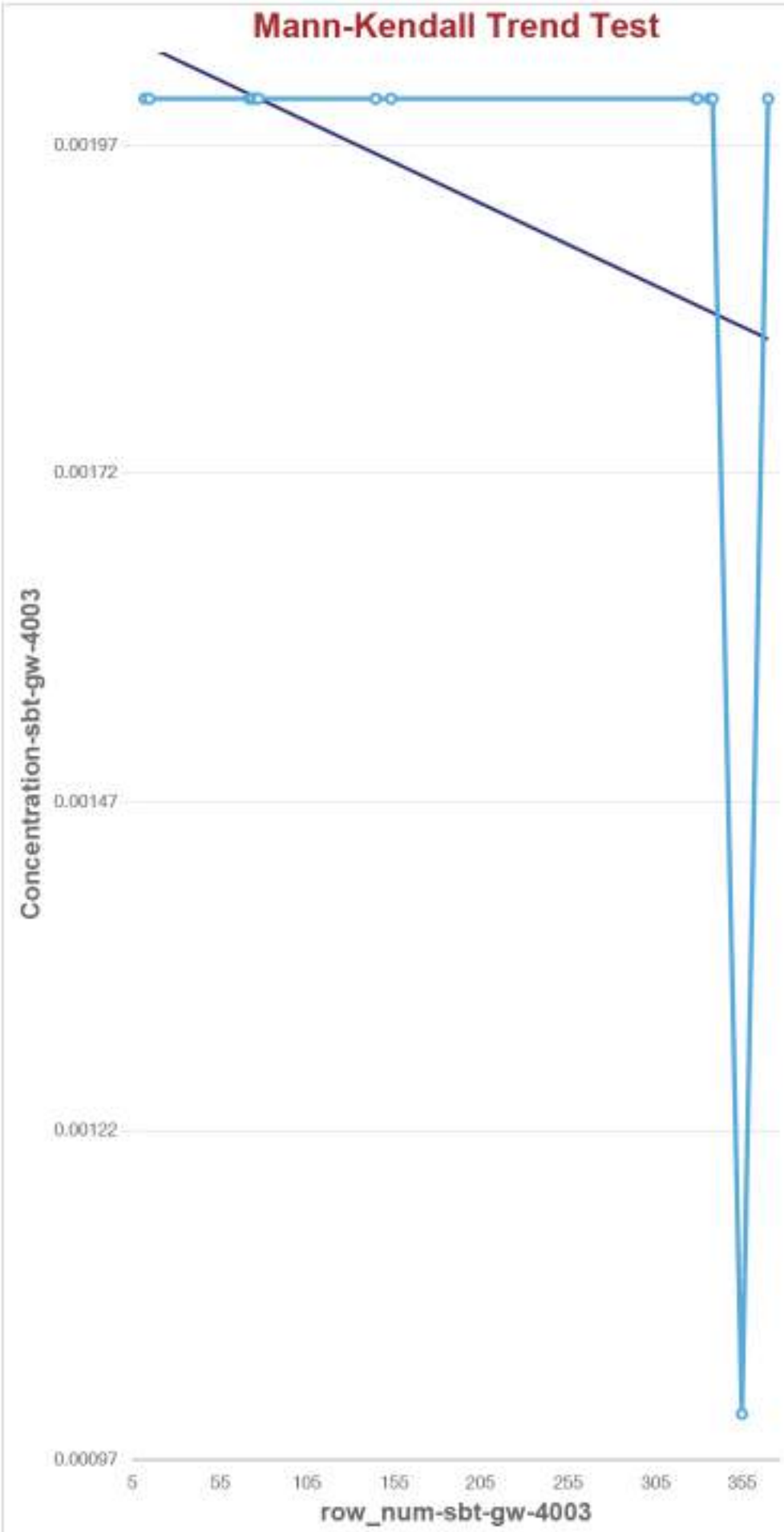
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	-1.0445
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0022

Insufficient statistical evidence of a significant trend at the specified level of significance.

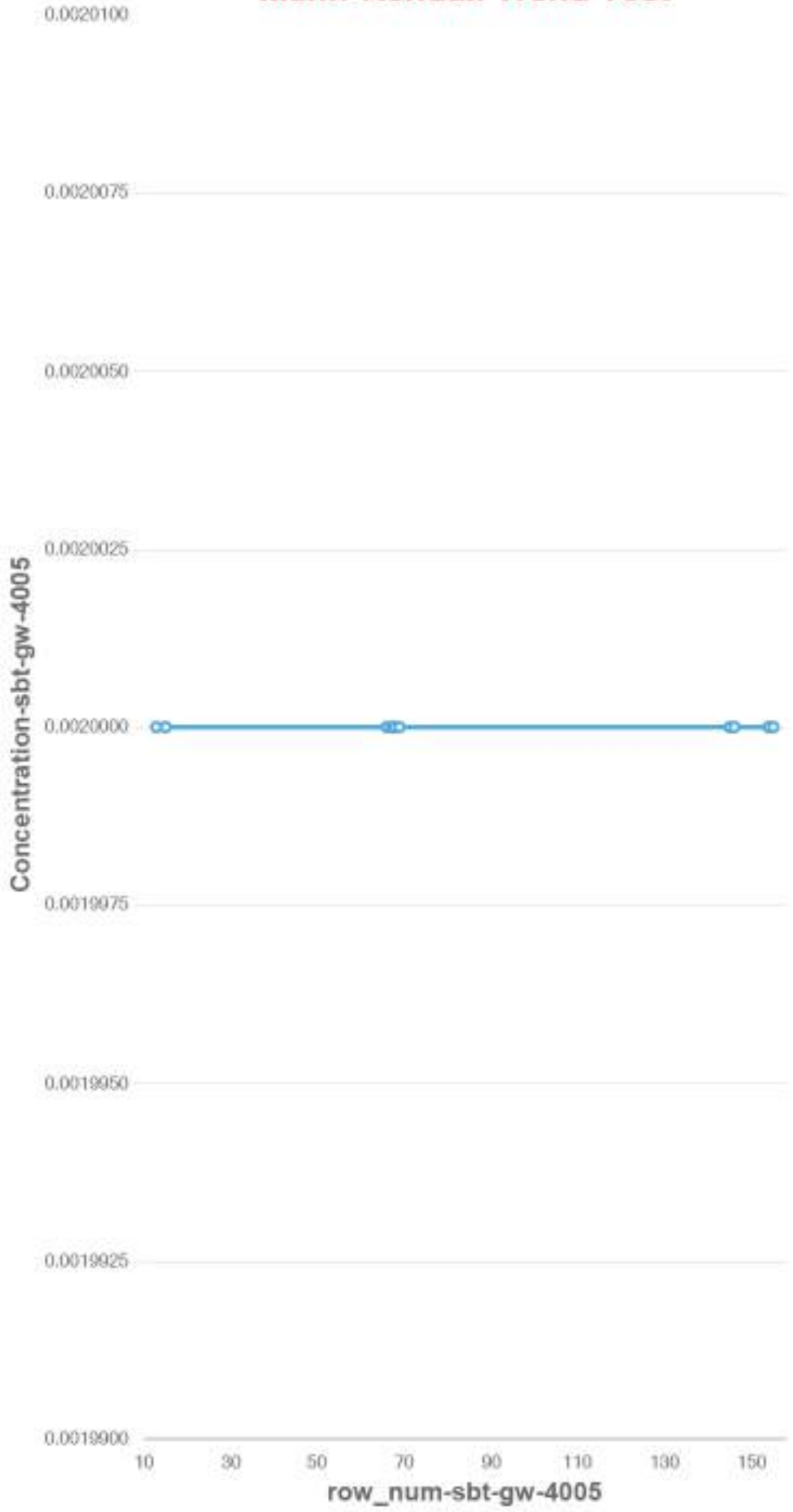


Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	8.0623
Standardized Value of S	-1.2403
M-K Test Value (S)	-11
Tabulated p-value	0.2950
Approximate p-value	0.1074

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

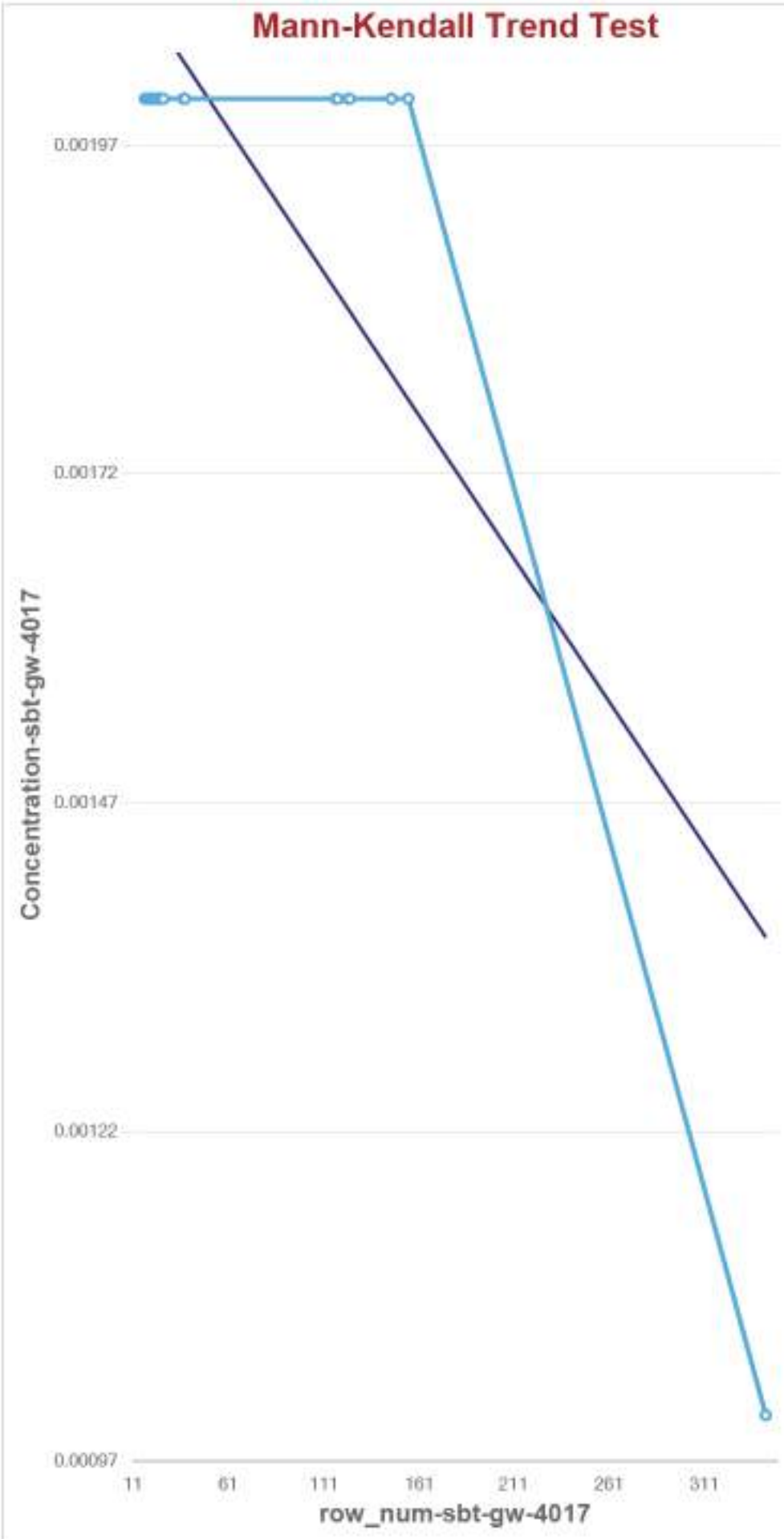
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

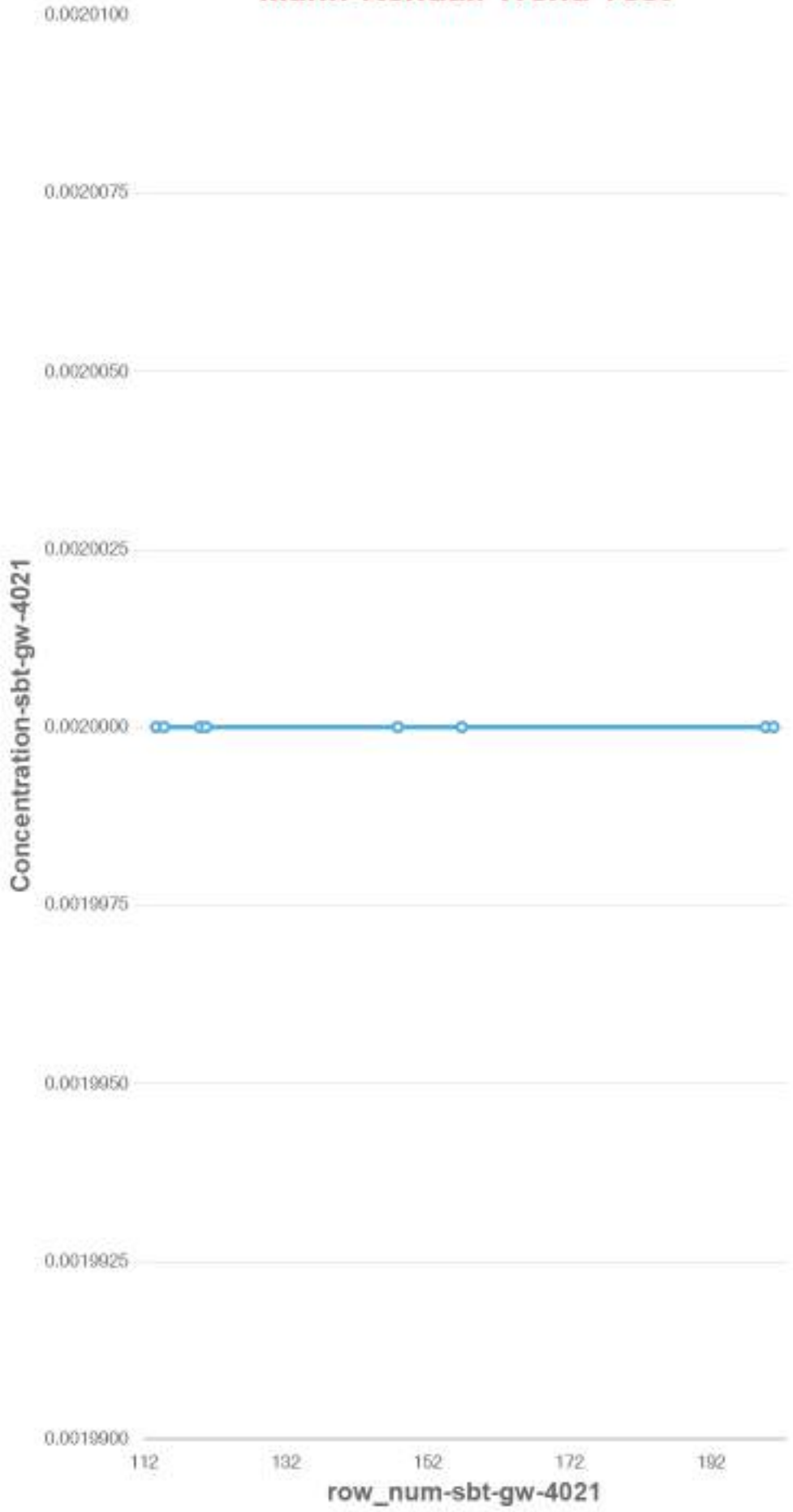


Mann-Kendall Trend Analysis	
n	19
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.9545
Standardized Value of S	-1.5519
M-K Test Value (S)	-18
Tabulated p-value	0.2670
Approximate p-value	0.0603

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0021

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

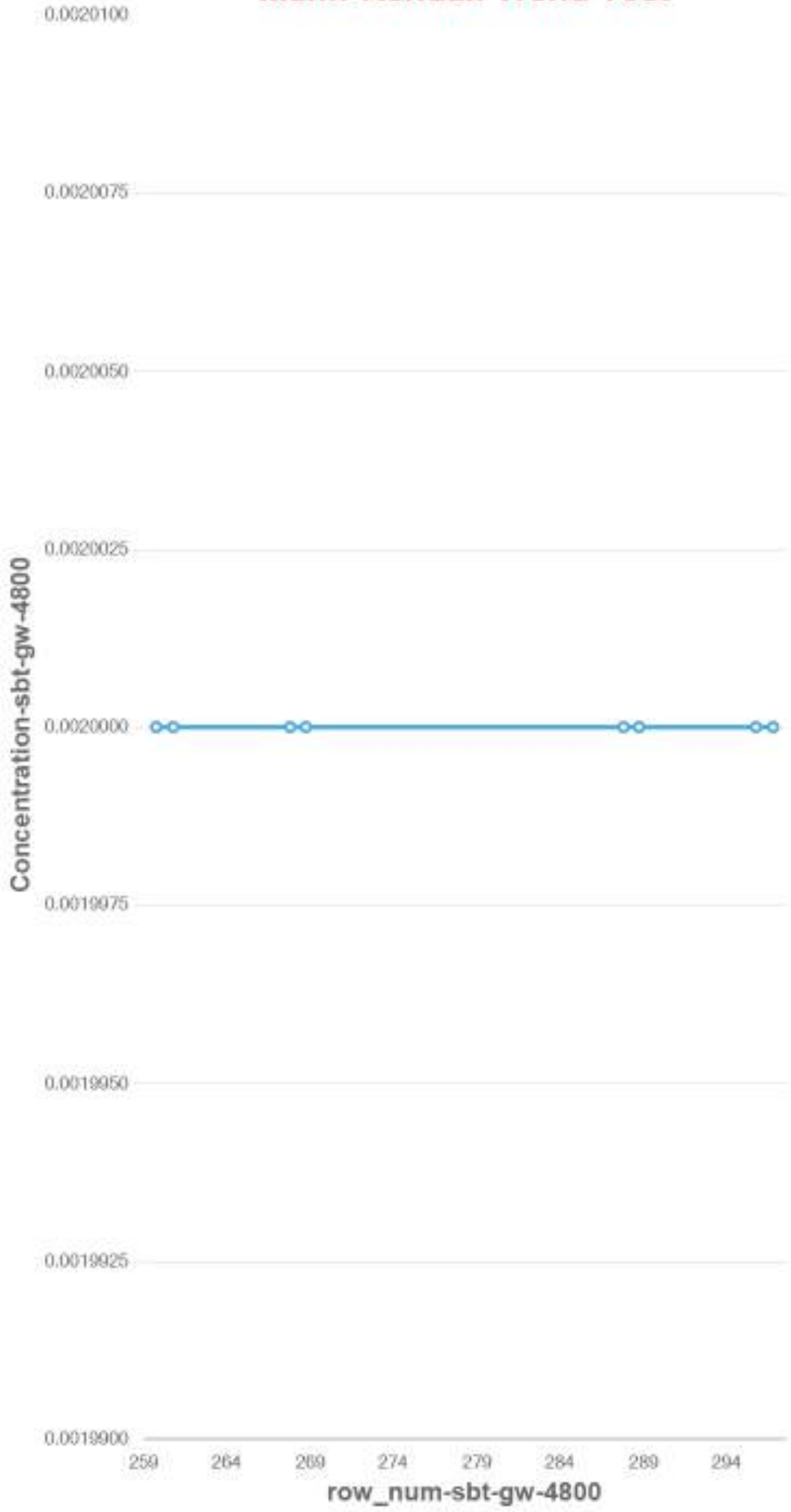


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

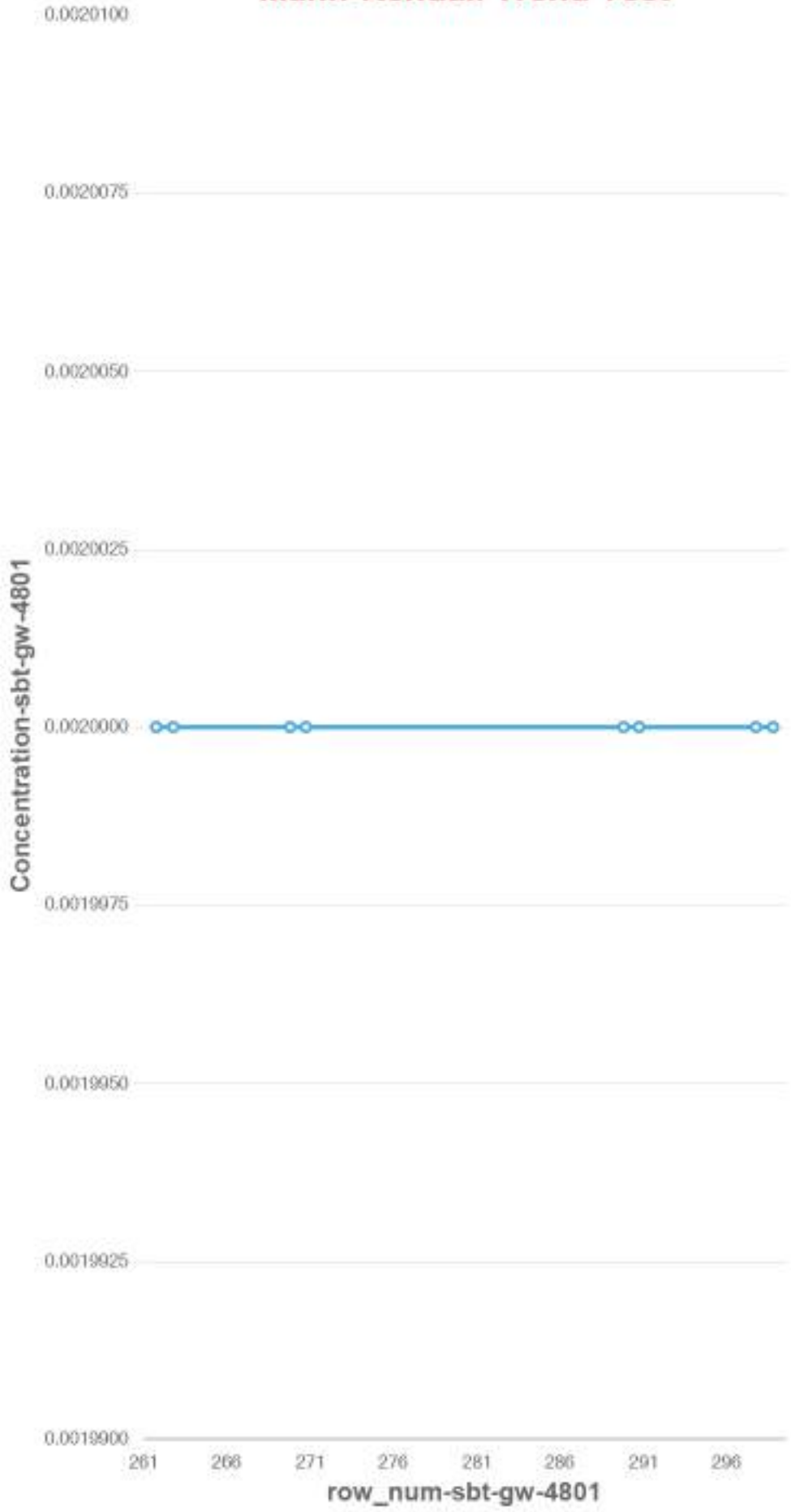


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

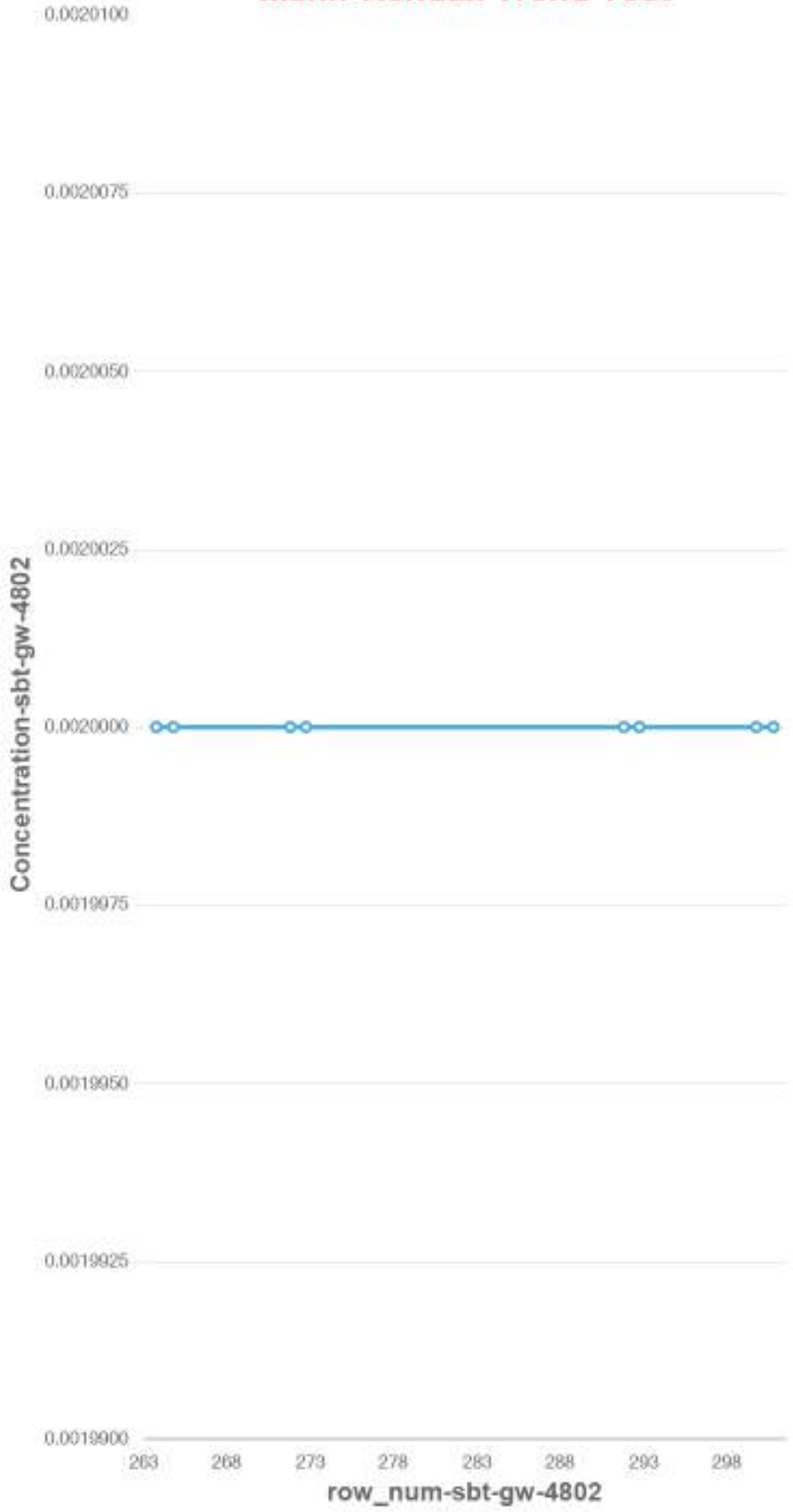


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

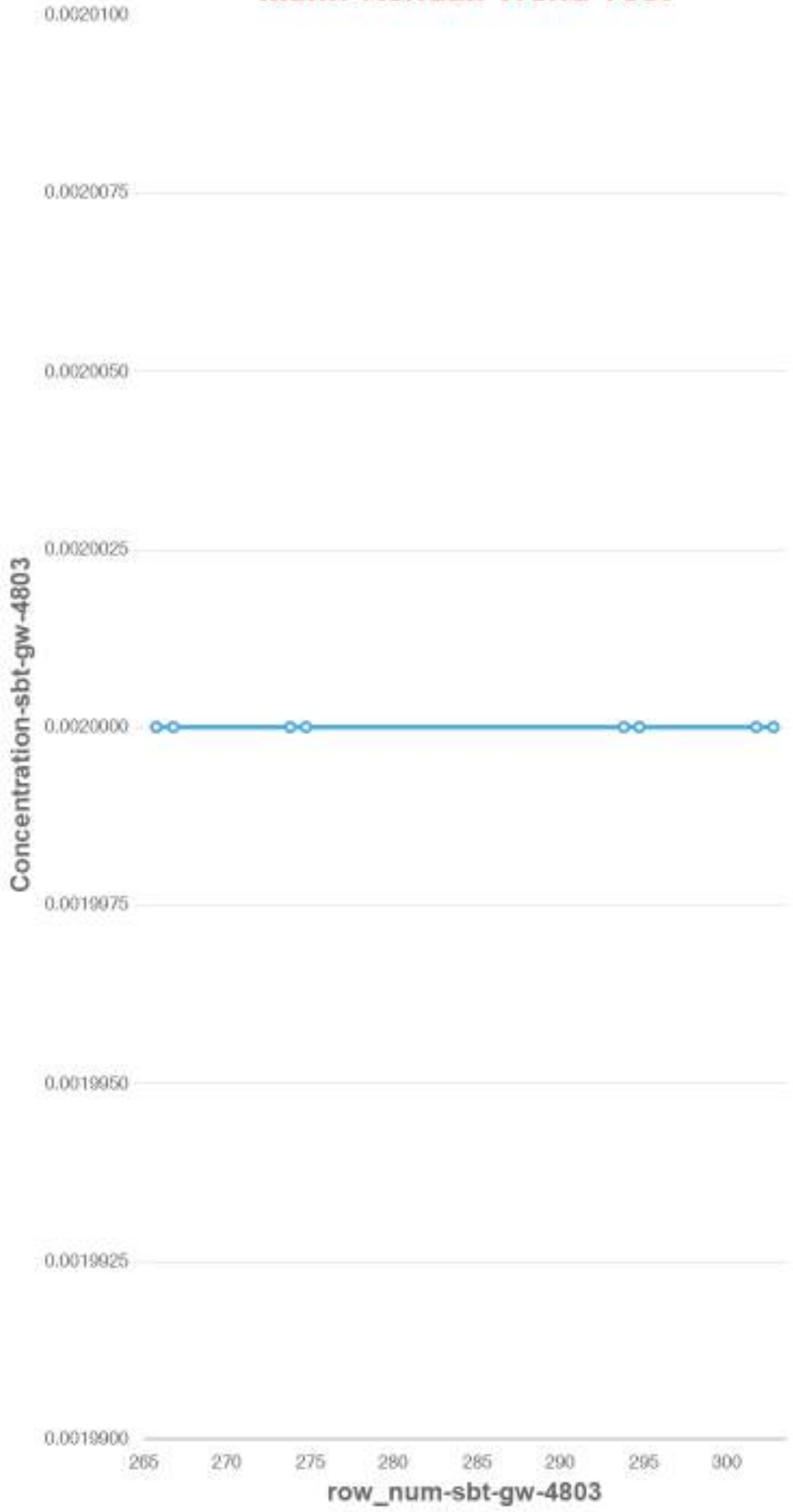


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

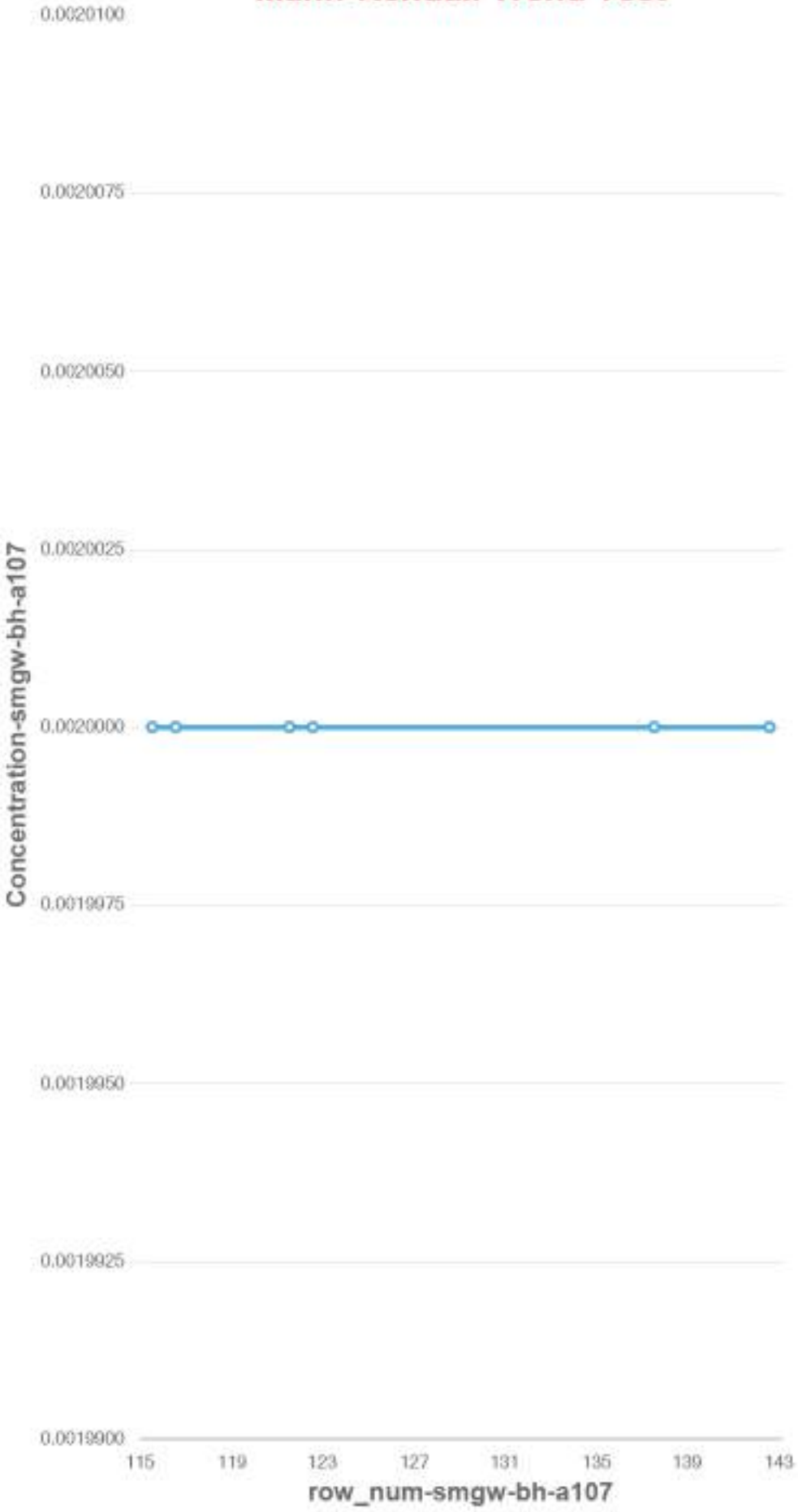


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

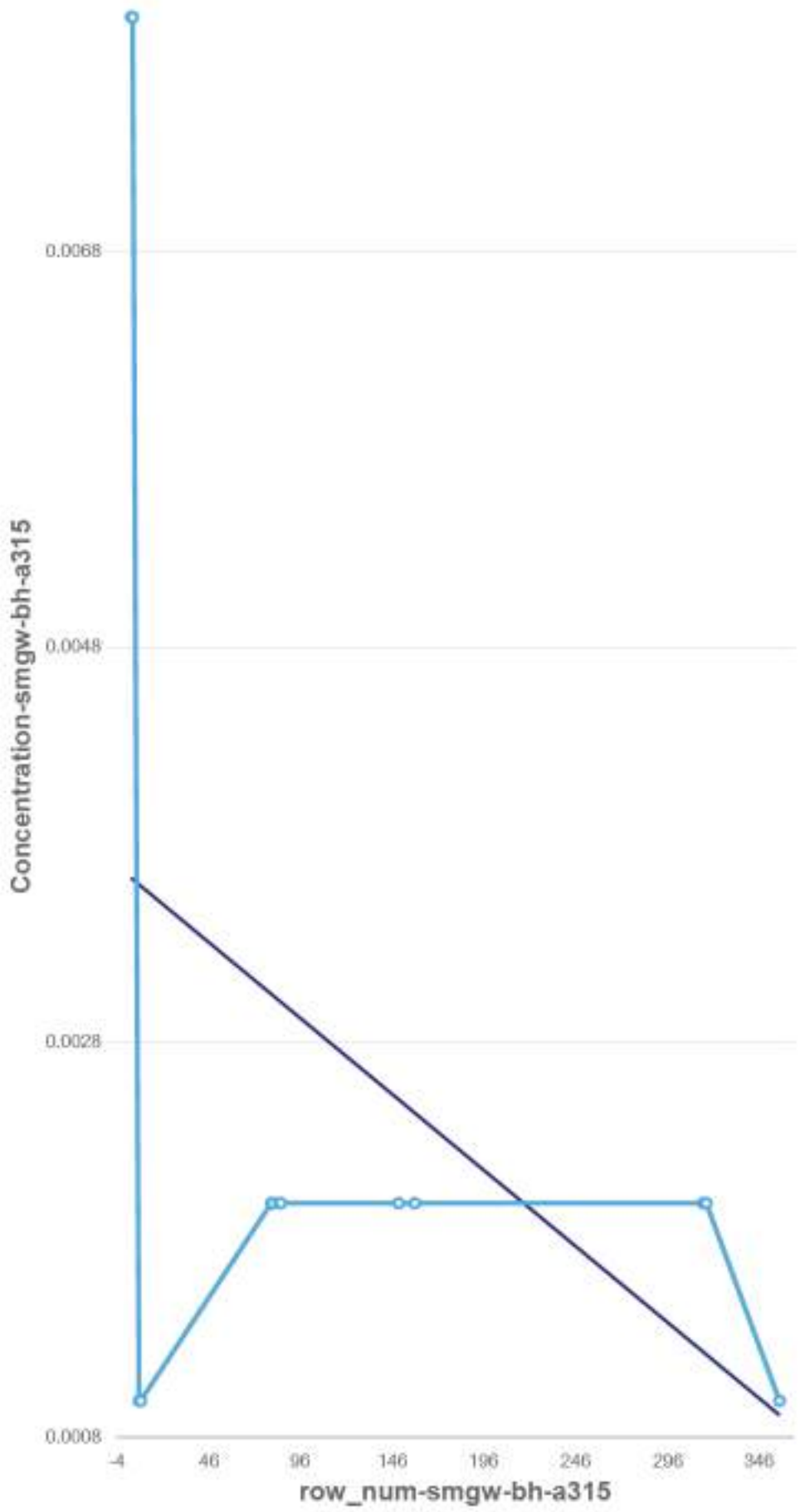


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0020

Insufficient statistical evidence of a significant trend at the specified level of significance.

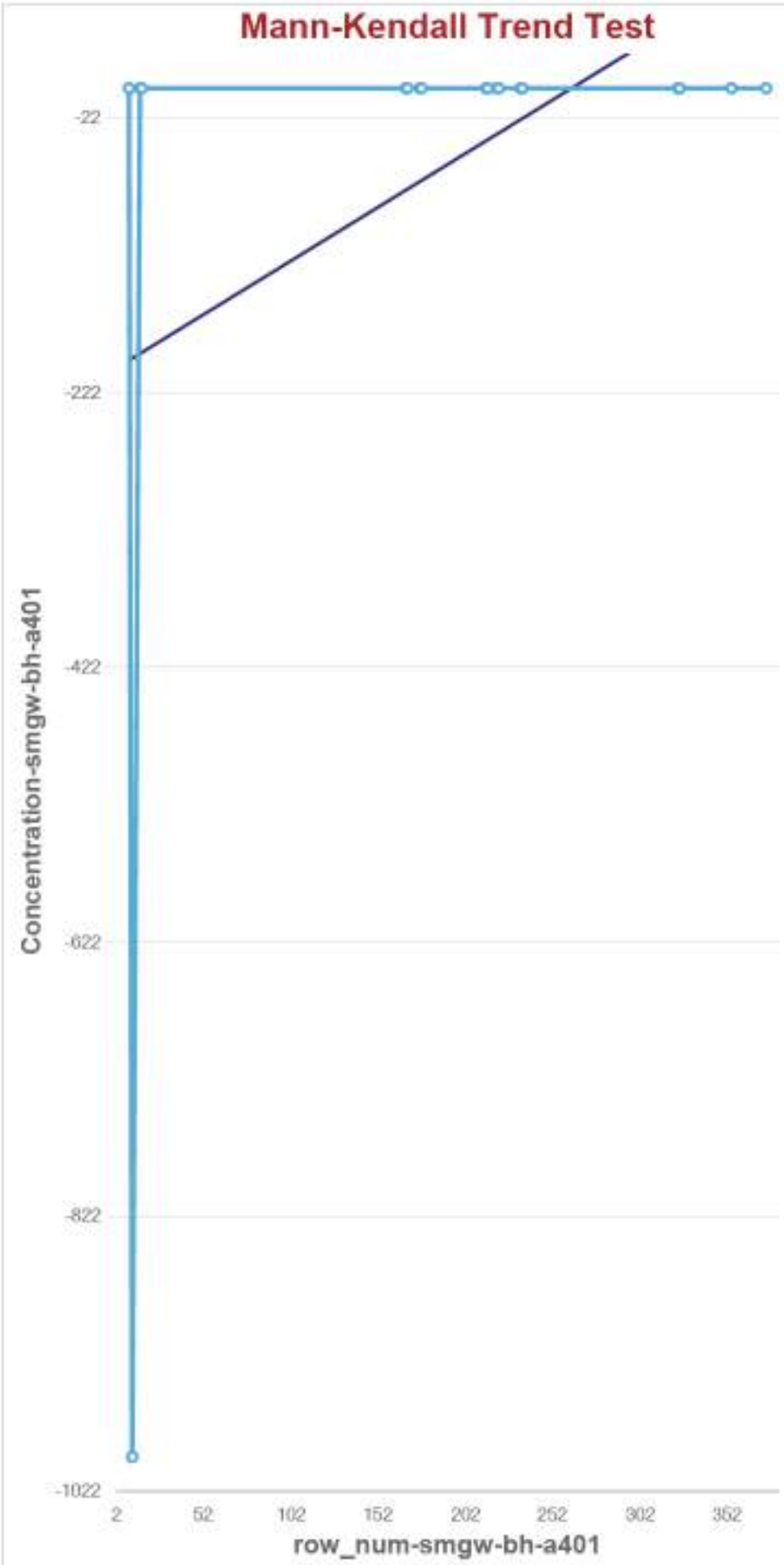
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	13
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.0949
Standardized Value of S	-0.9223
M-K Test Value (S)	-14
Tabulated p-value	0.2180
Approximate p-value	0.1782

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0037

Insufficient statistical evidence of a significant trend at the specified level of significance.



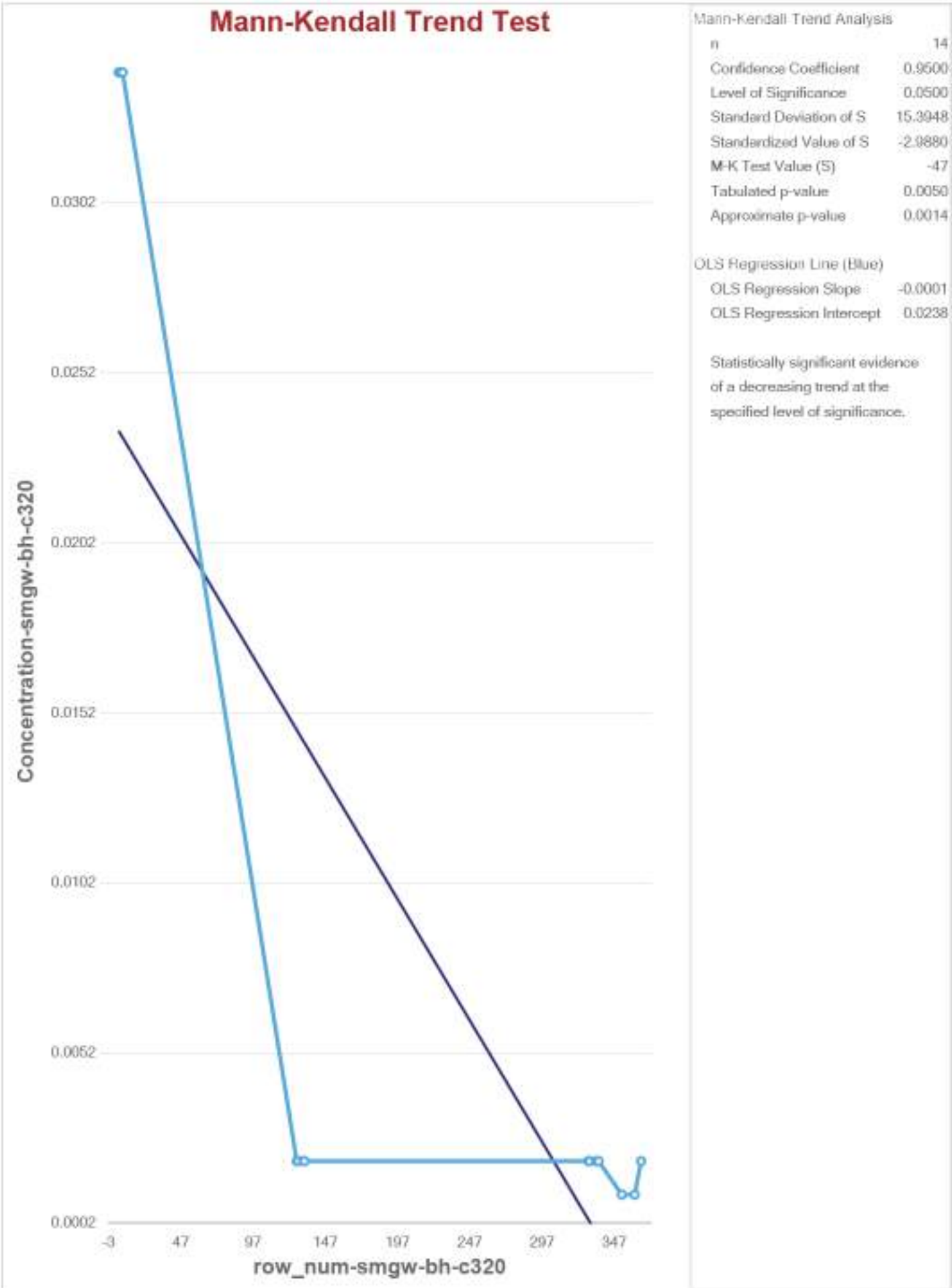
Mann-Kendall Trend Analysis

n	18
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.2712
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5000
Approximate p-value	0.5000

OLS Regression Line (Blue)

OLS Regression Slope	0.7854
OLS Regression Interoept	-206.3953

Insufficient statistical evidence of a significant trend at the specified level of significance.



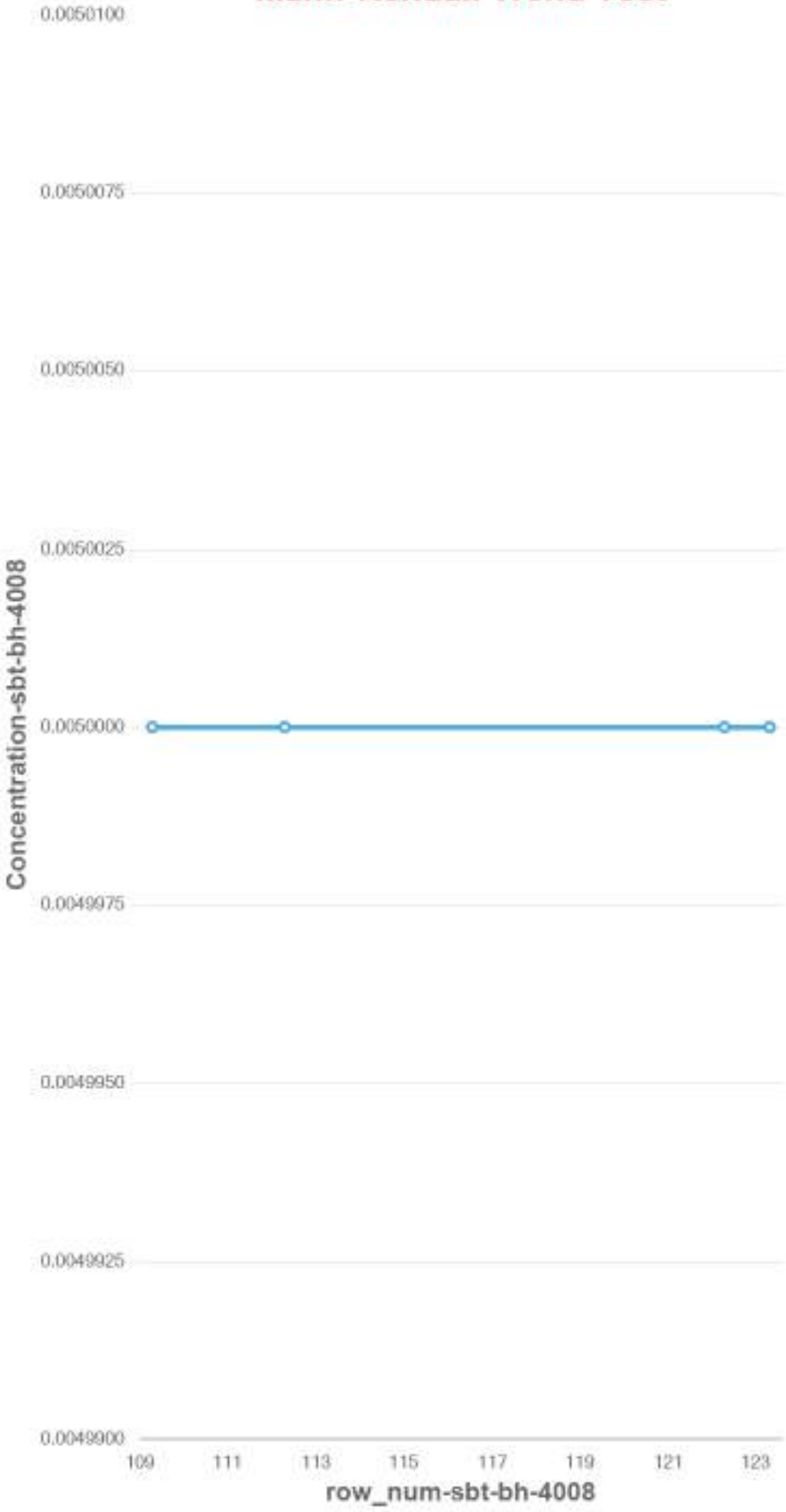
Mann-Kendall Trend Analysis	
n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	15.3948
Standardized Value of S	-2.9880
M-K Test Value (S)	-47
Tabulated p-value	0.0050
Approximate p-value	0.0014

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0238

Statistically significant evidence of a decreasing trend at the specified level of significance.

F.12 TRICHLOROETHENE

Mann-Kendall Trend Test

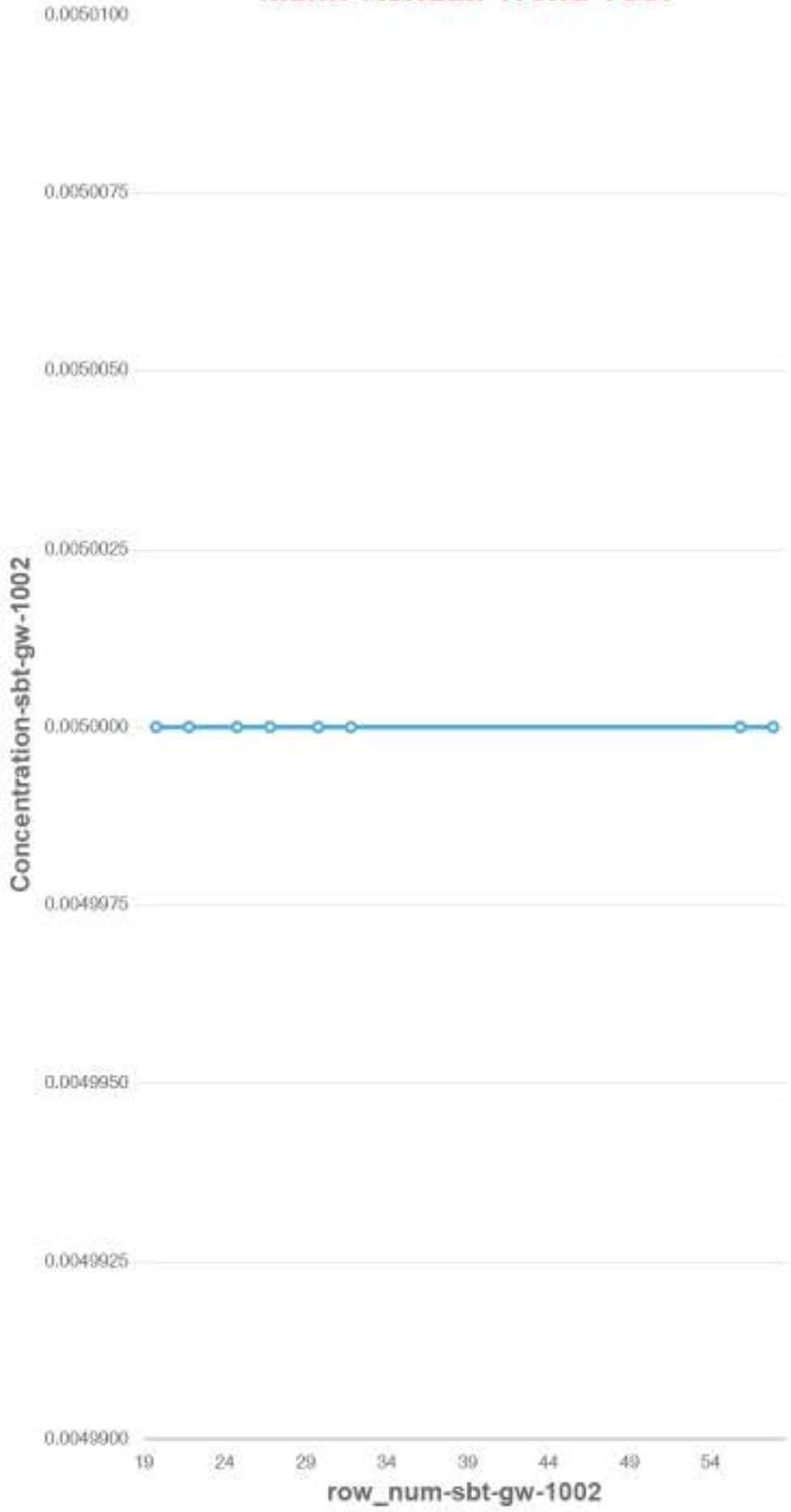


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

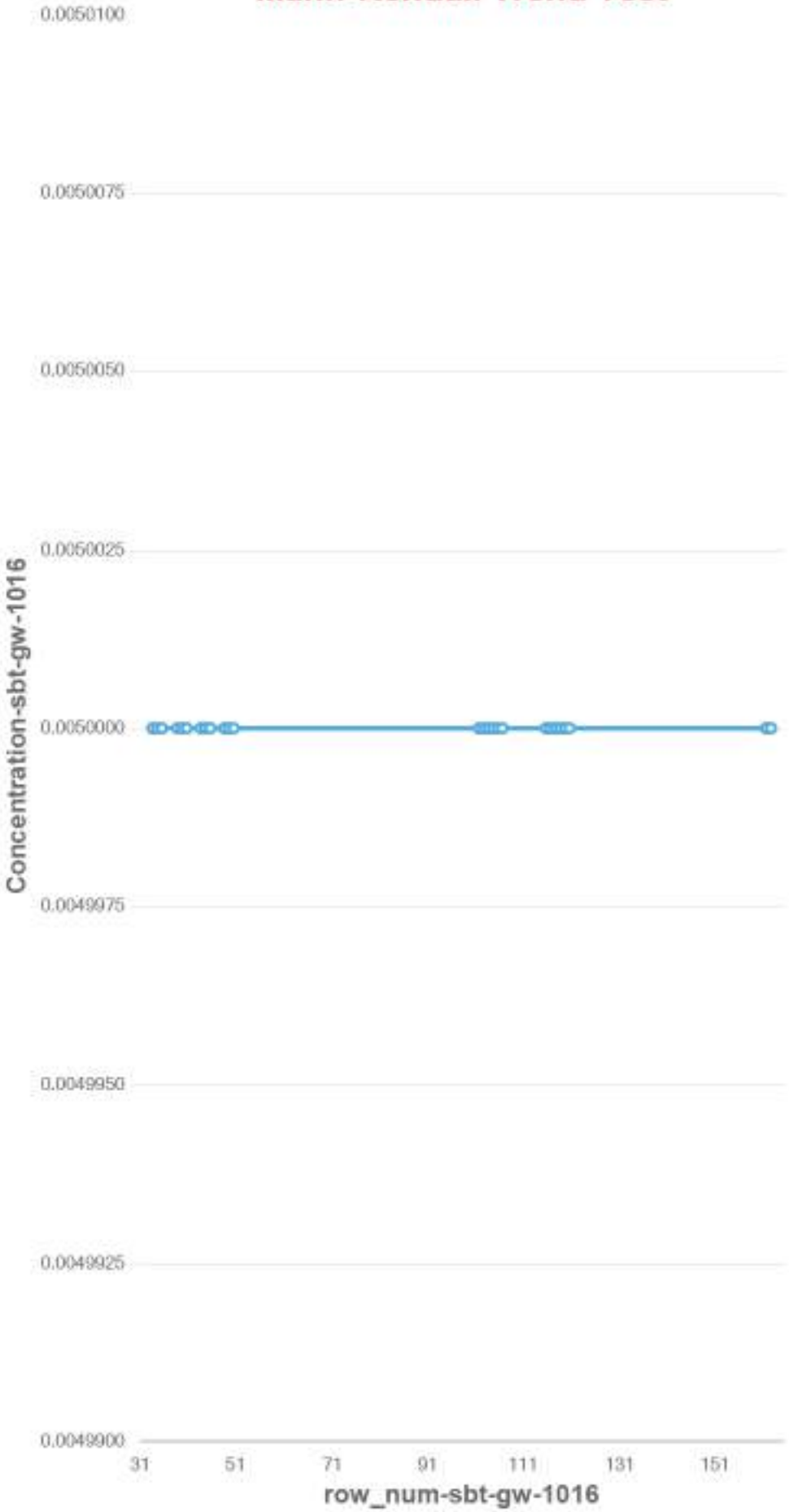


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5480
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

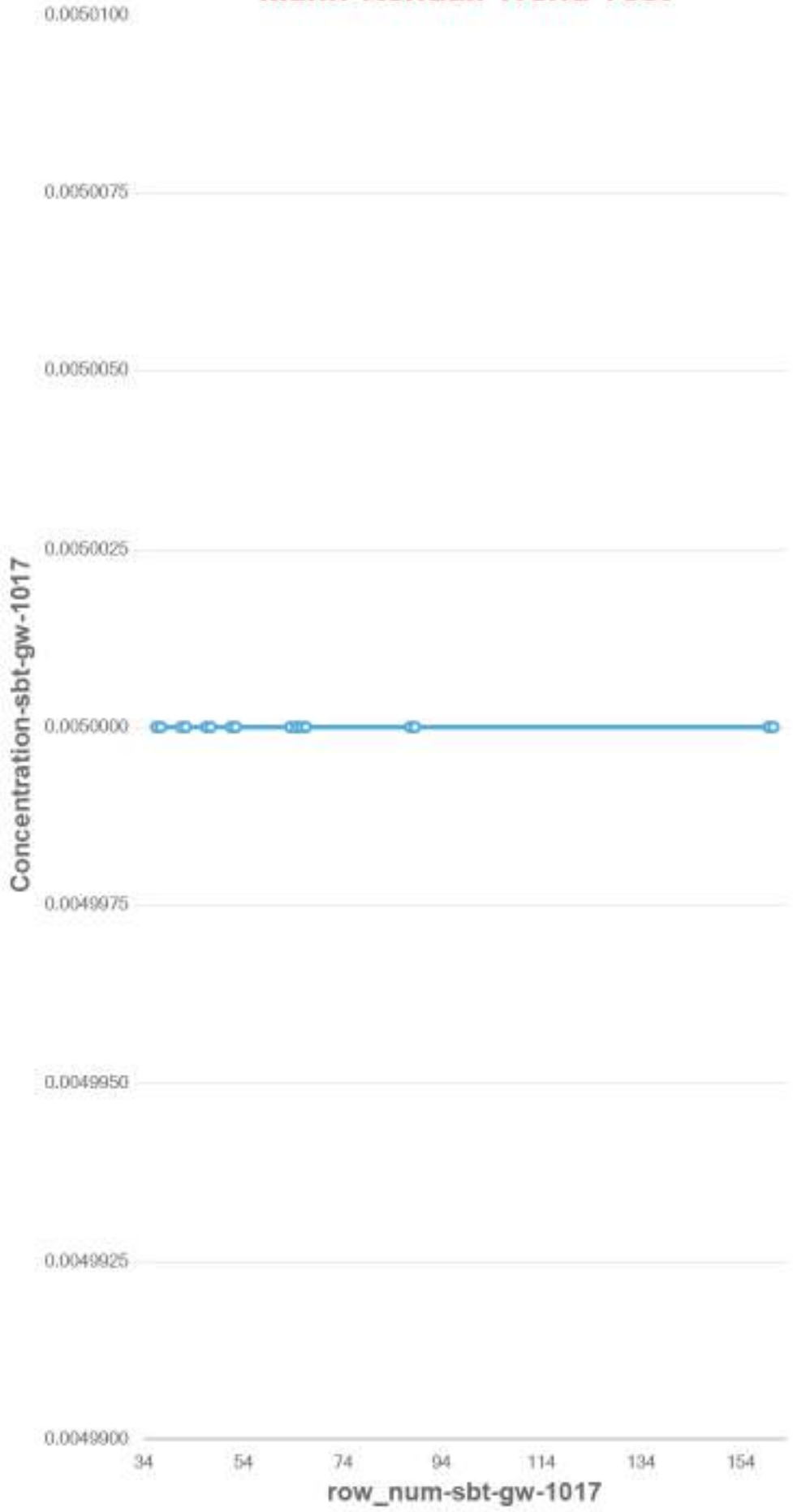


Mann-Kendall Trend Analysis	
n	26
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Appx. Critical Value (0.05)	
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

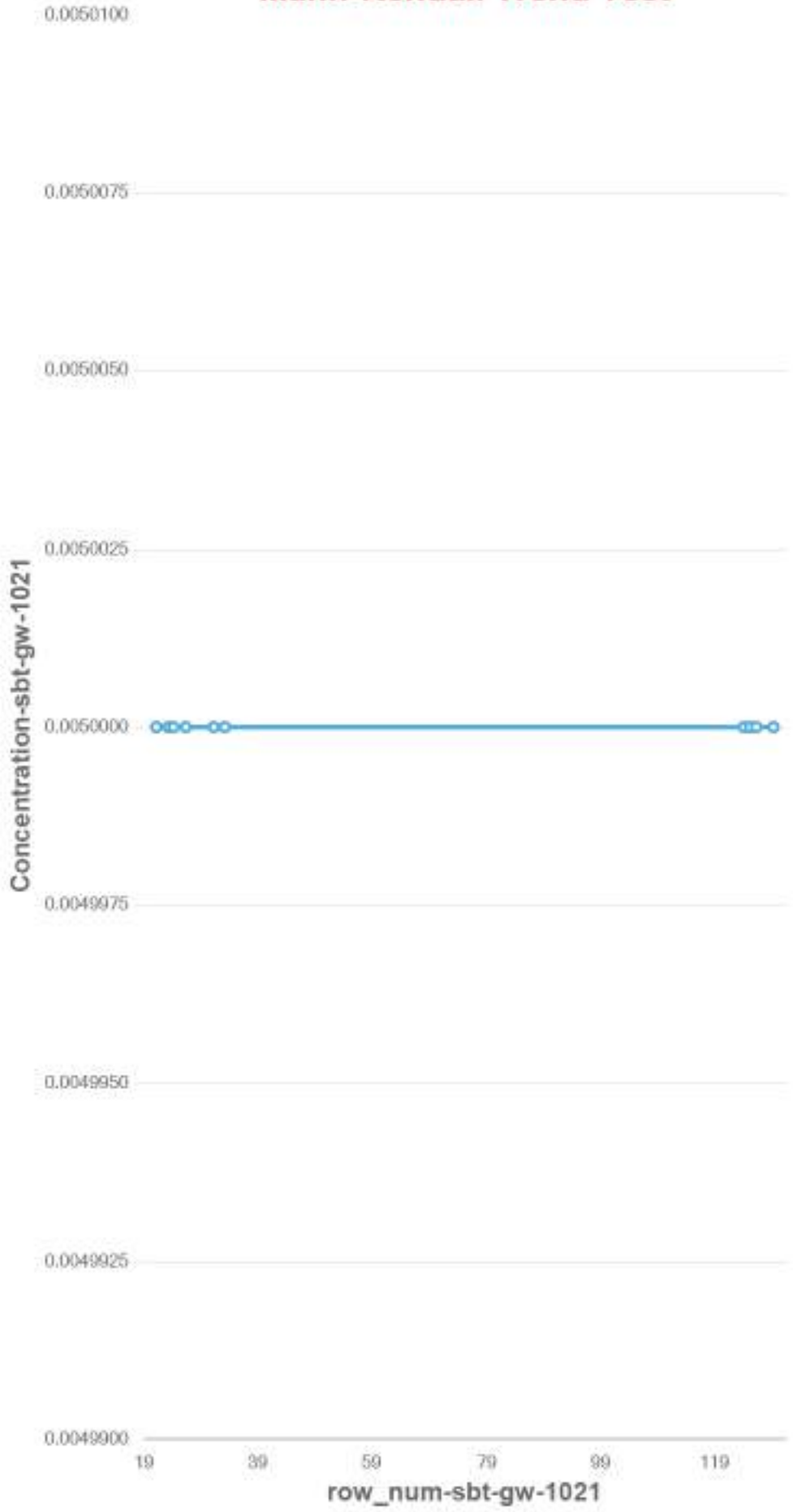


Mann-Kendall Trend Analysis	
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5180
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

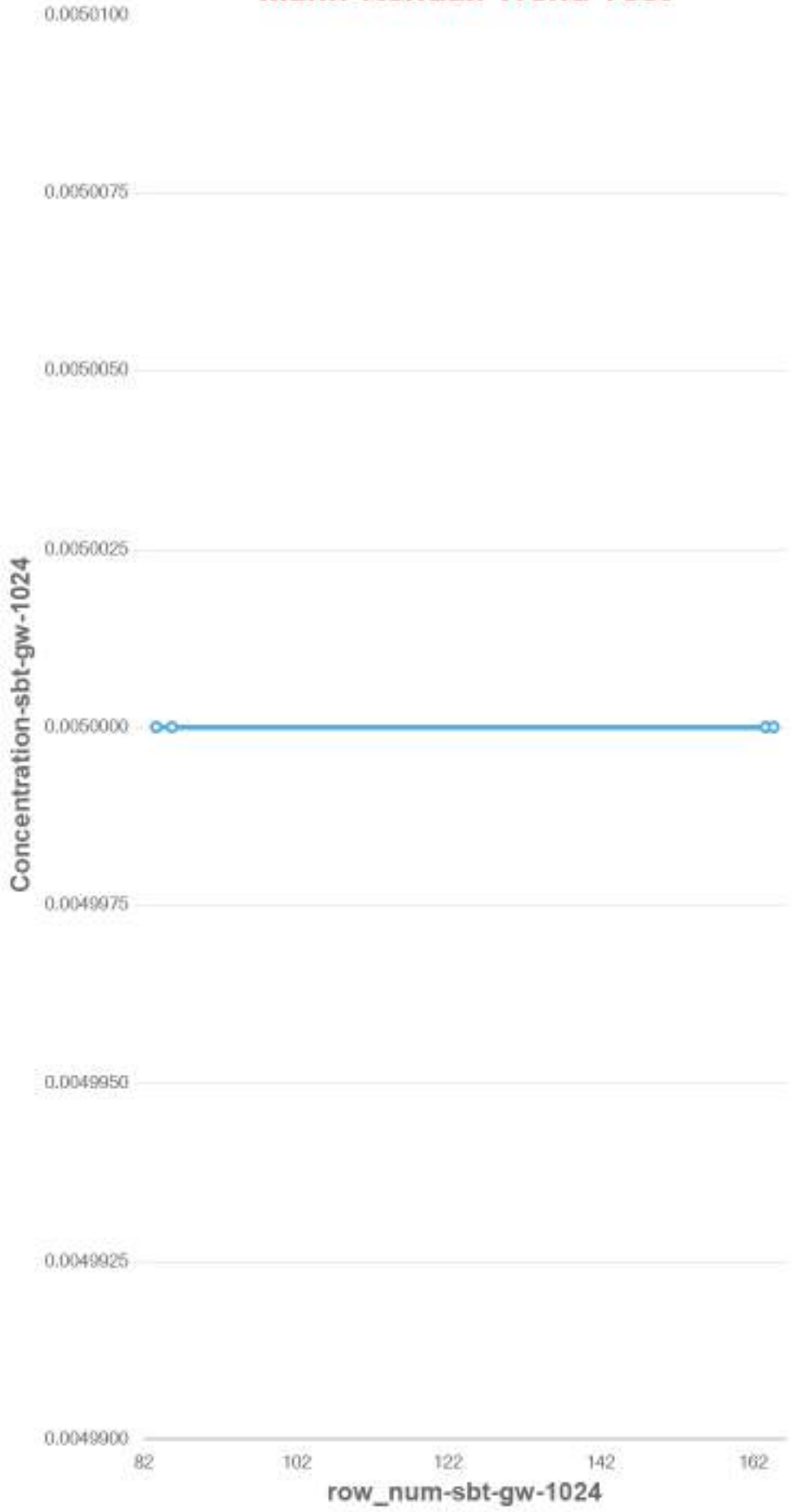


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

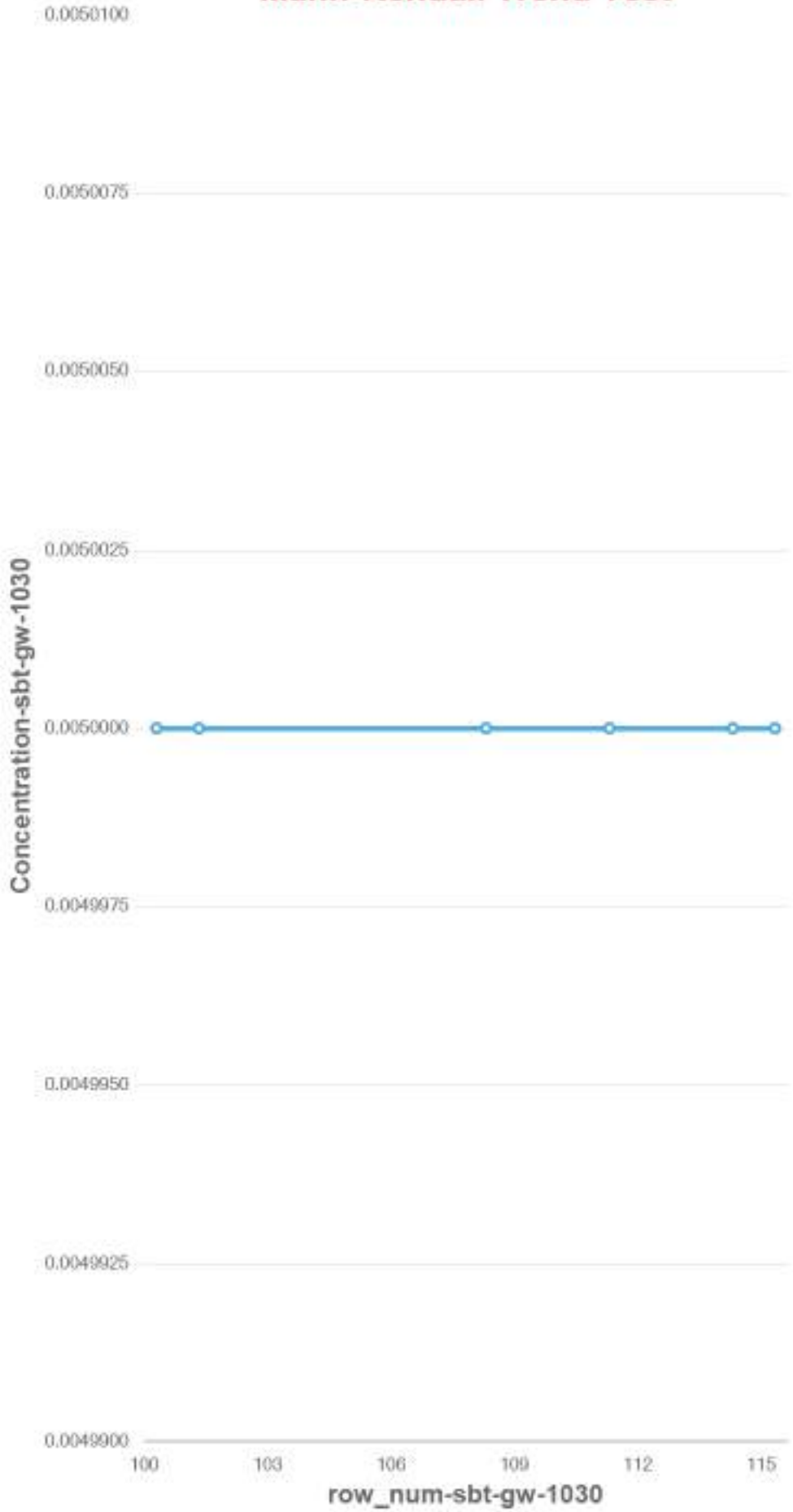


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

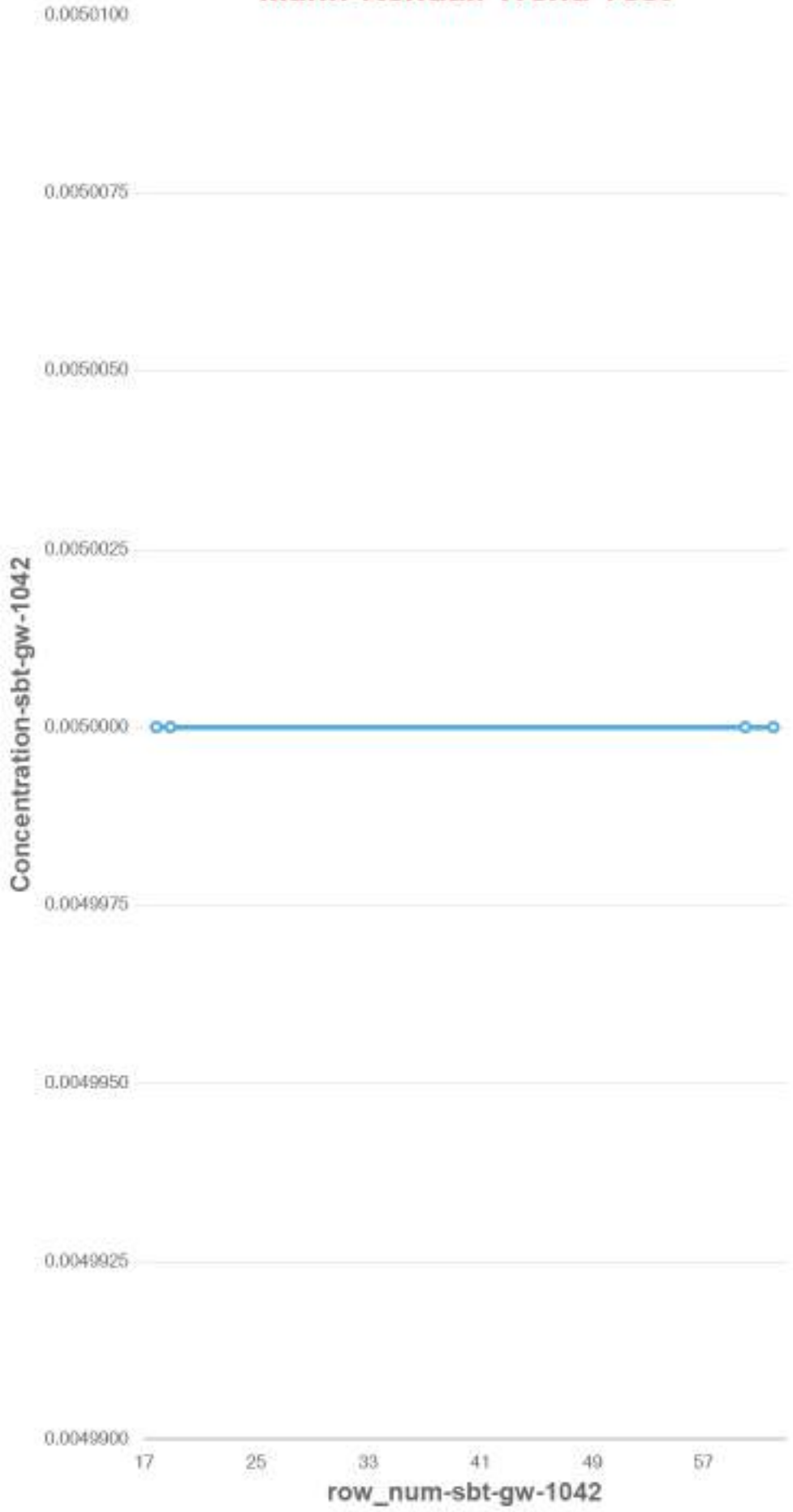


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

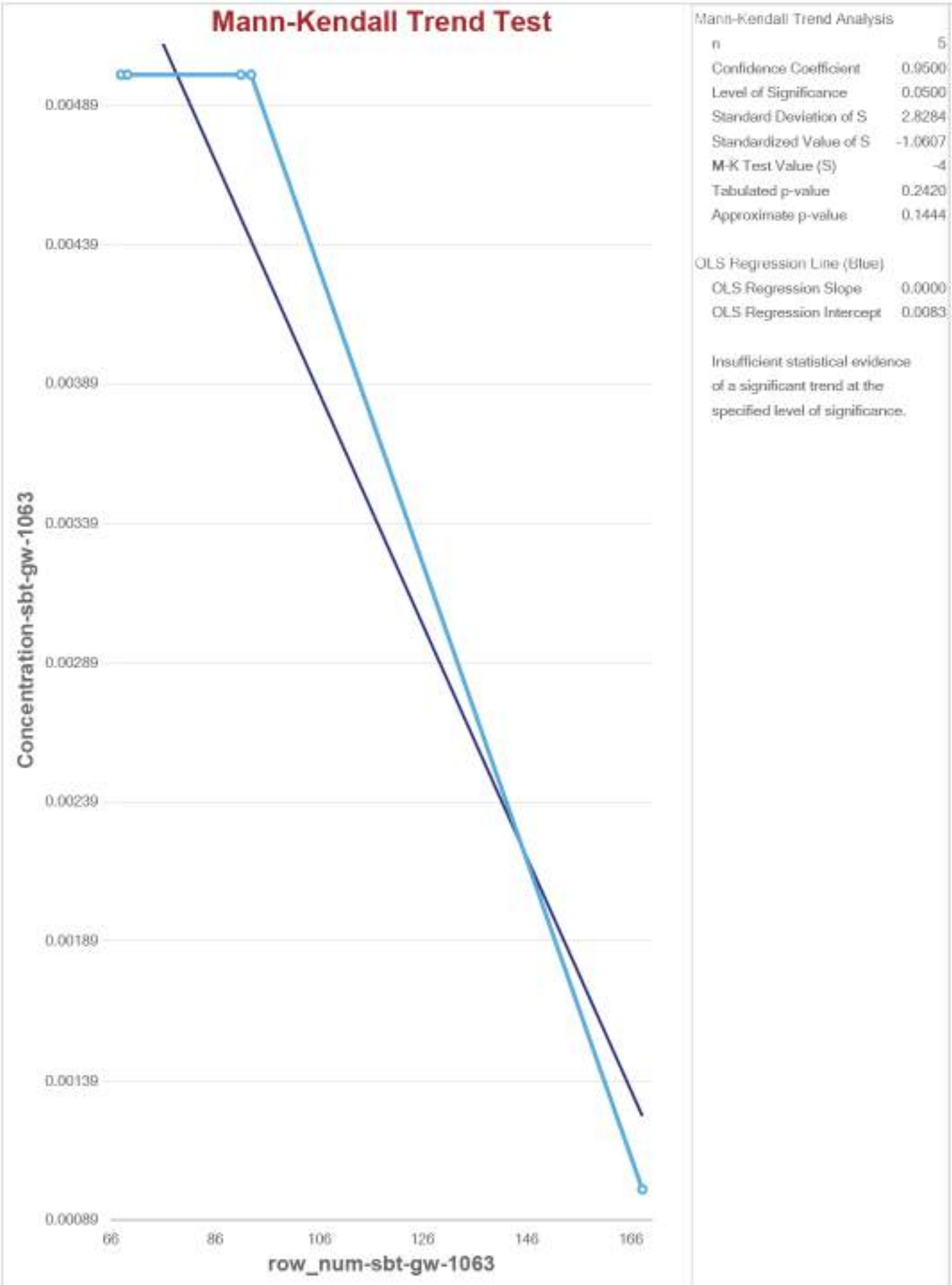
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

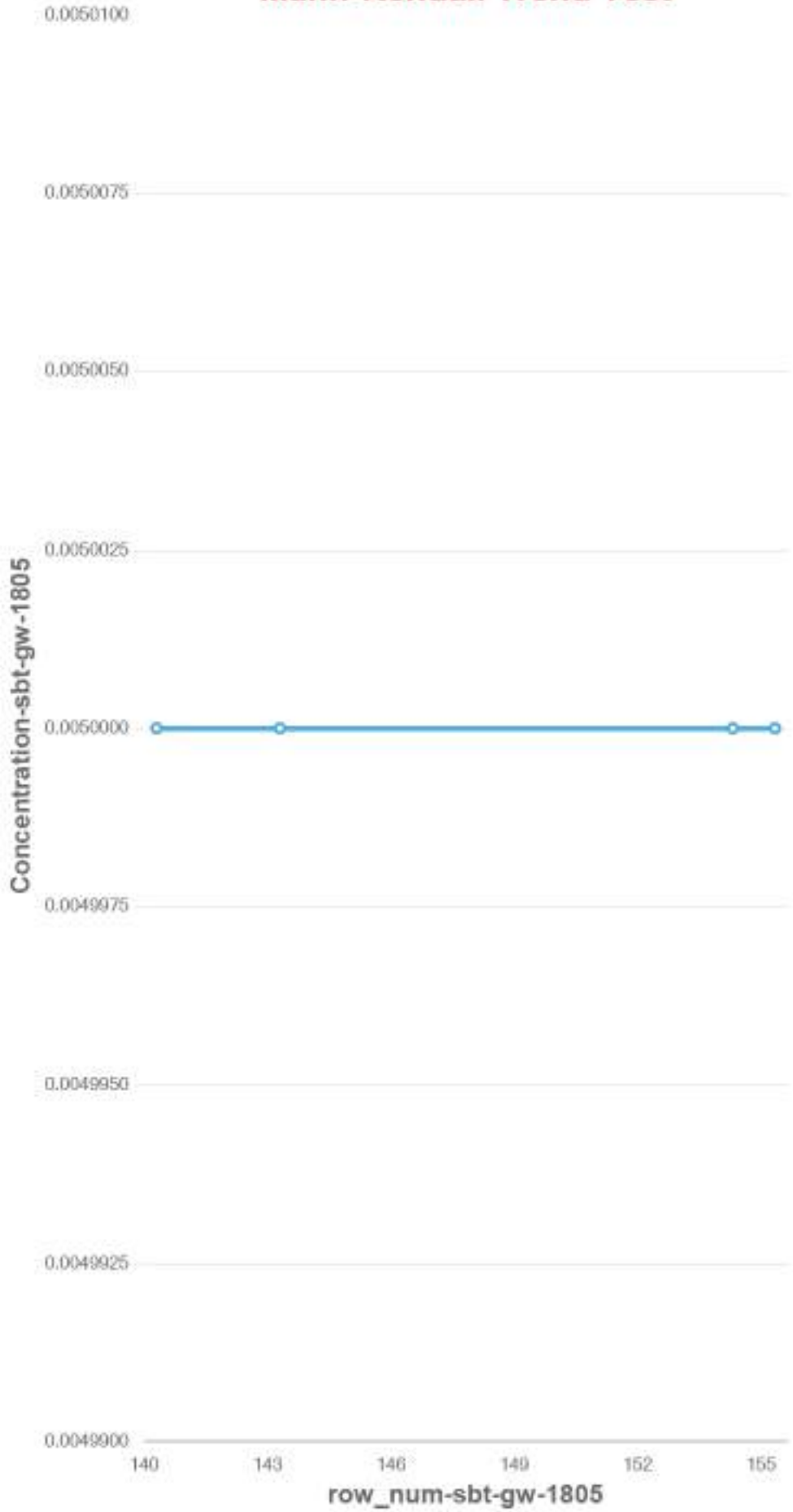


Mann-Kendall Trend Analysis	
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.8284
Standardized Value of S	-1.0607
M-K Test Value (S)	-4
Tabulated p-value	0.2420
Approximate p-value	0.1444

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0083

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

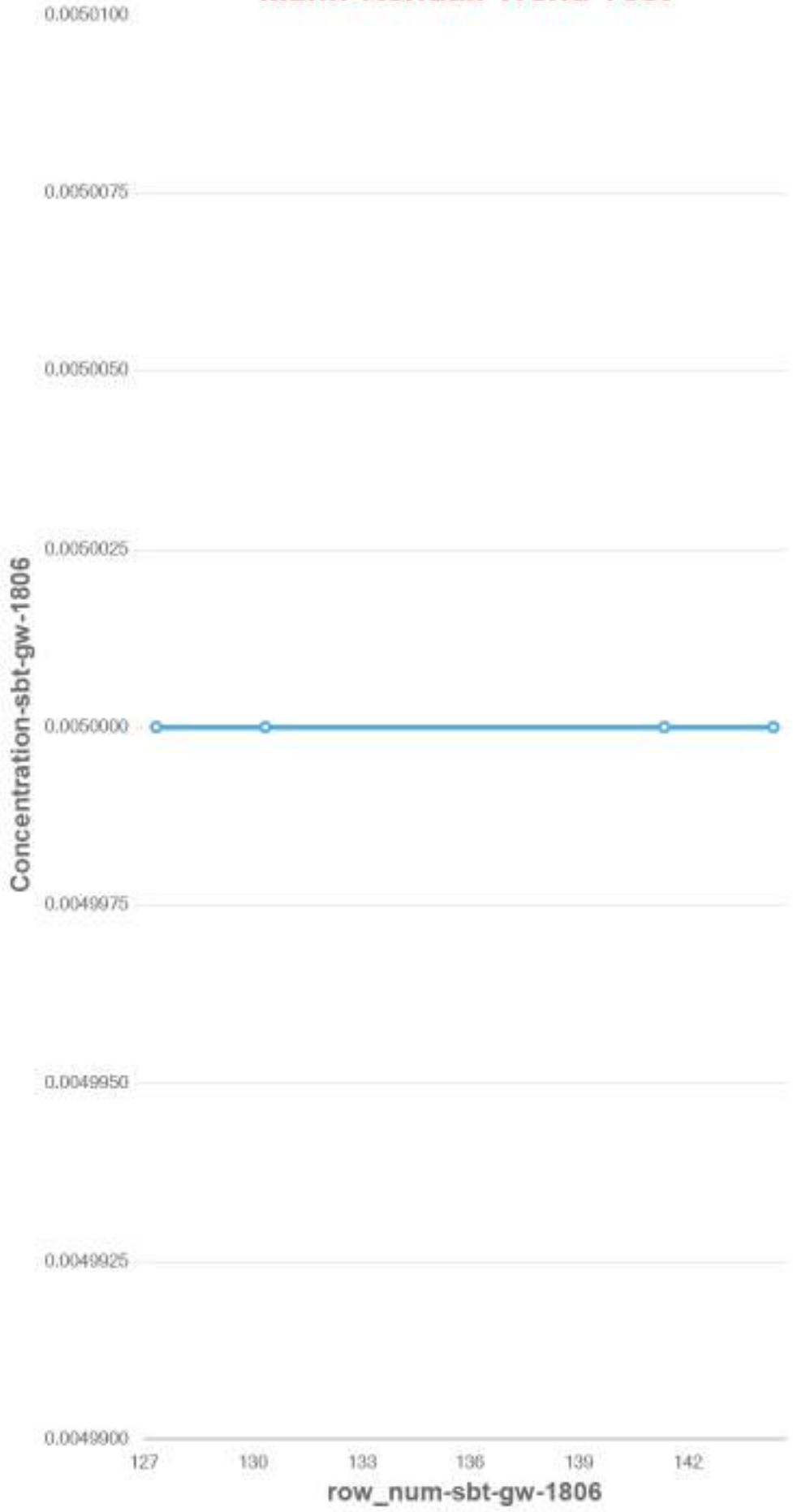


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

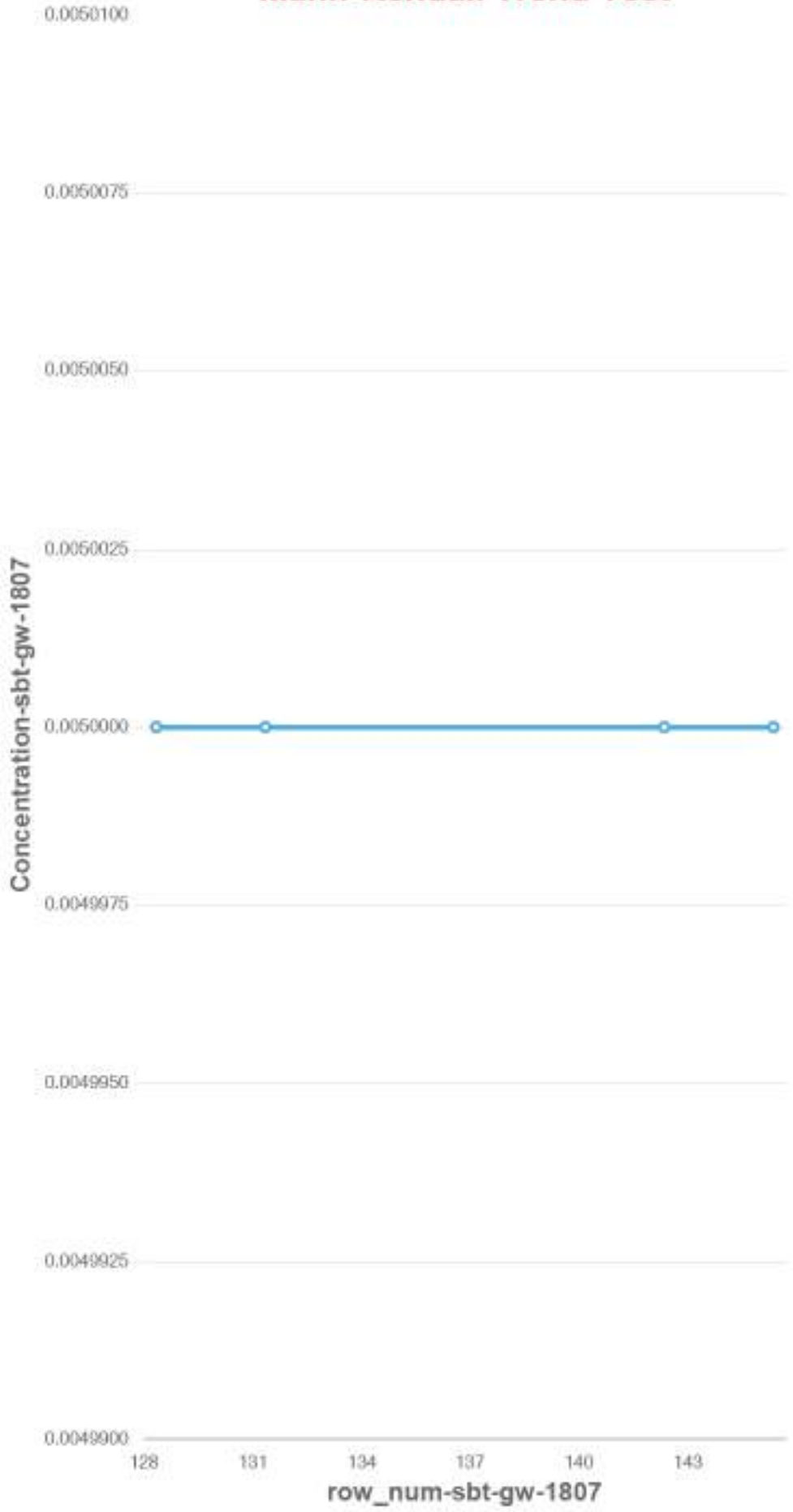


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

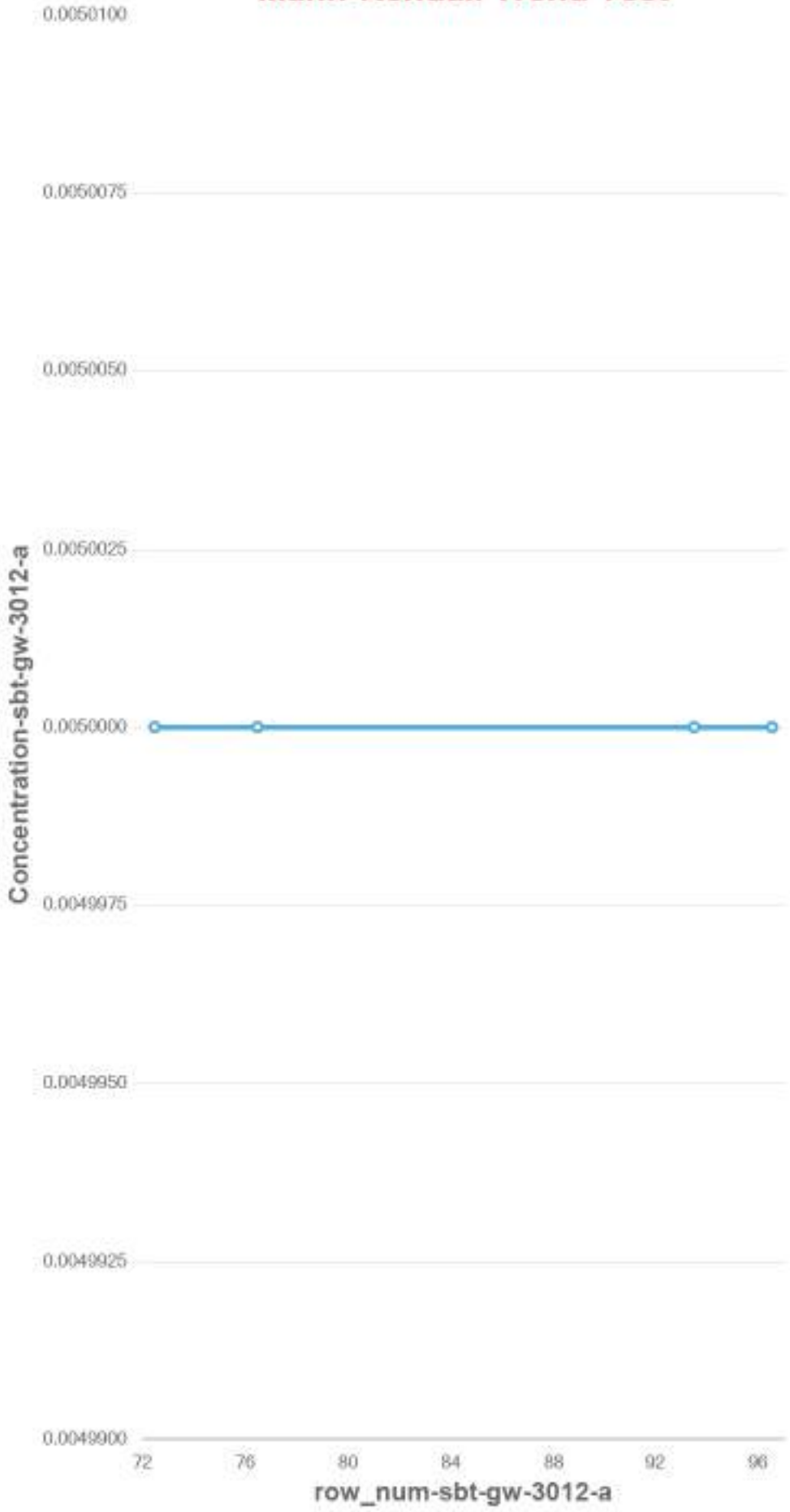


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

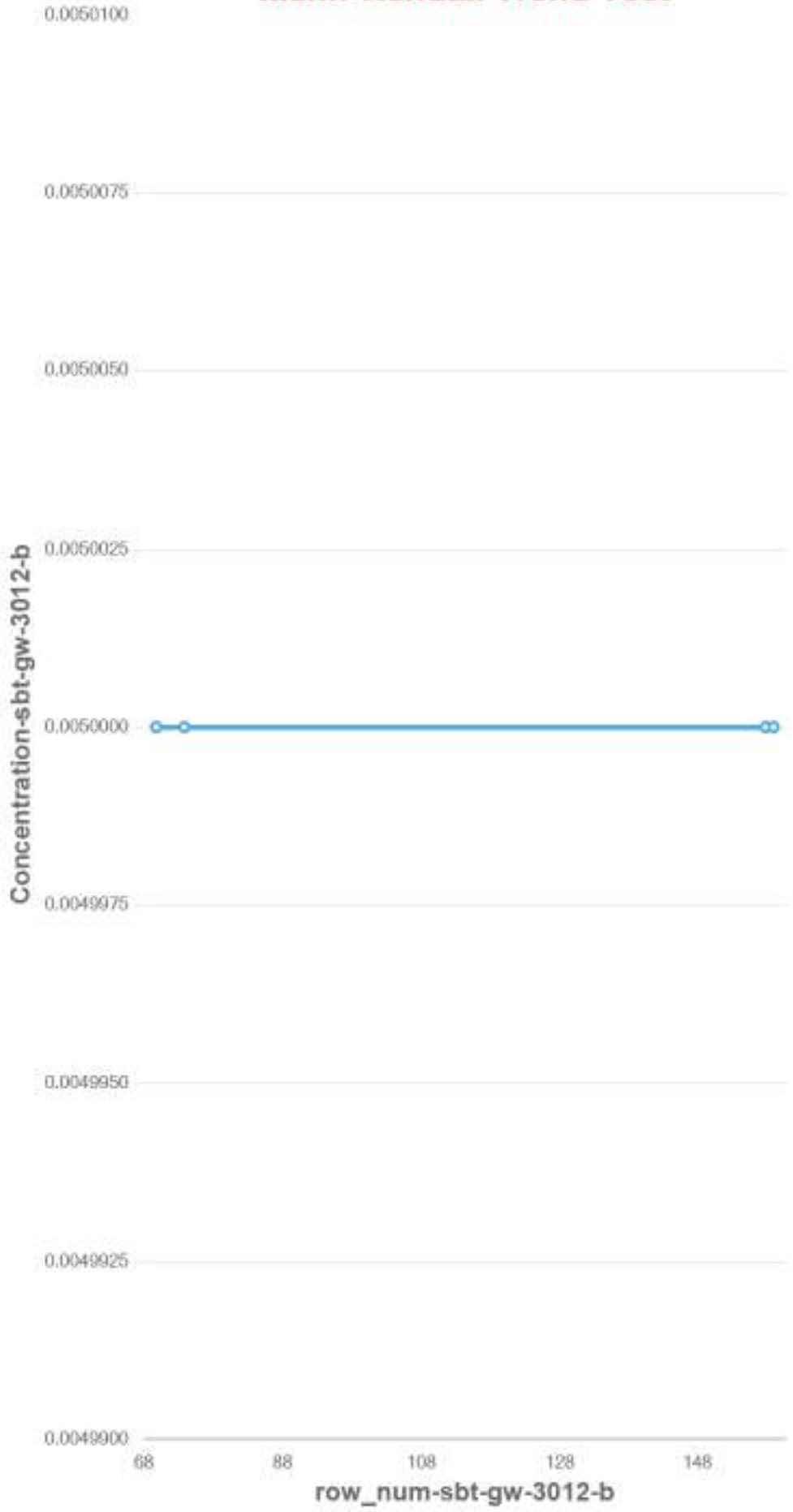


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

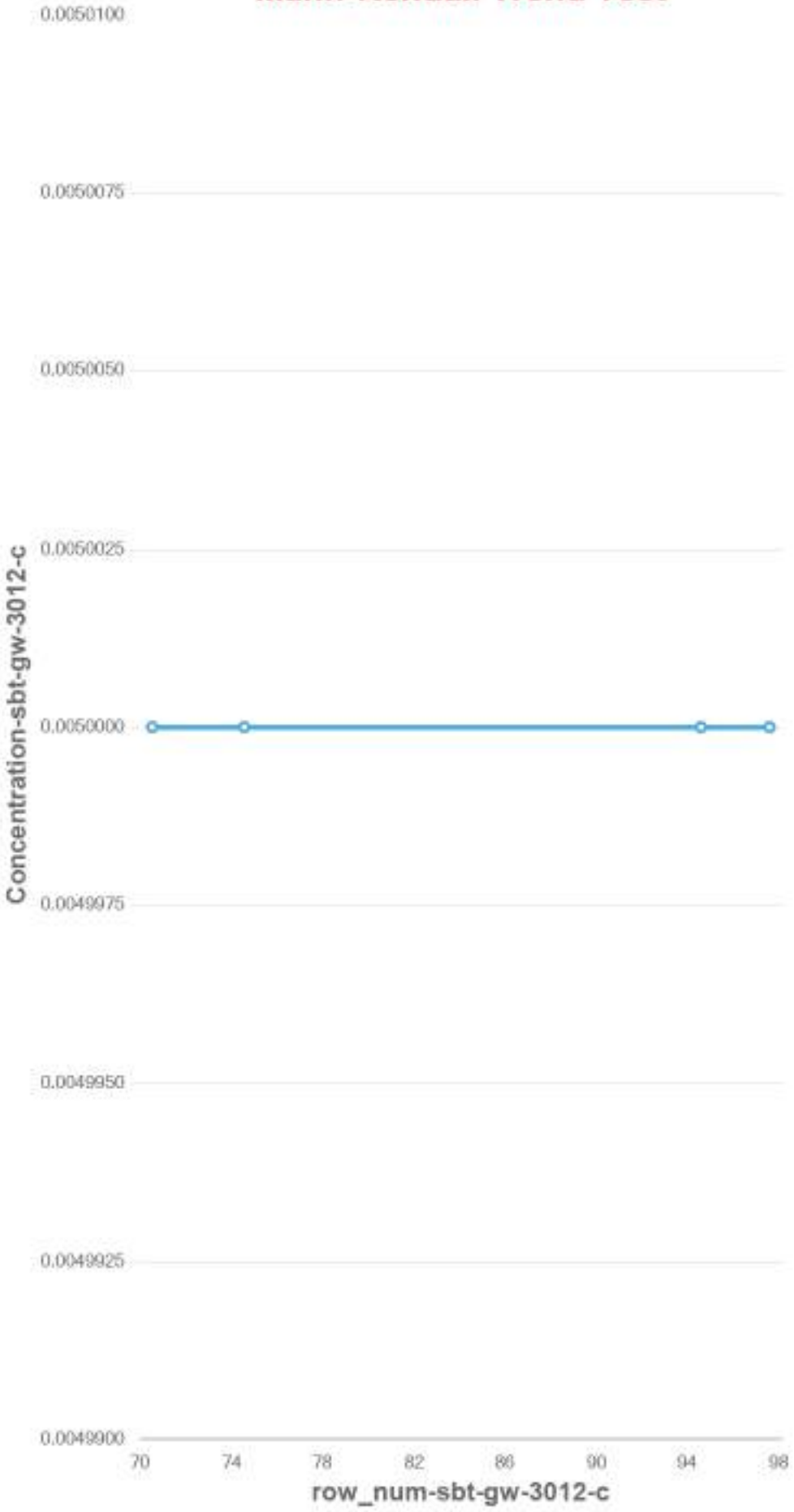


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

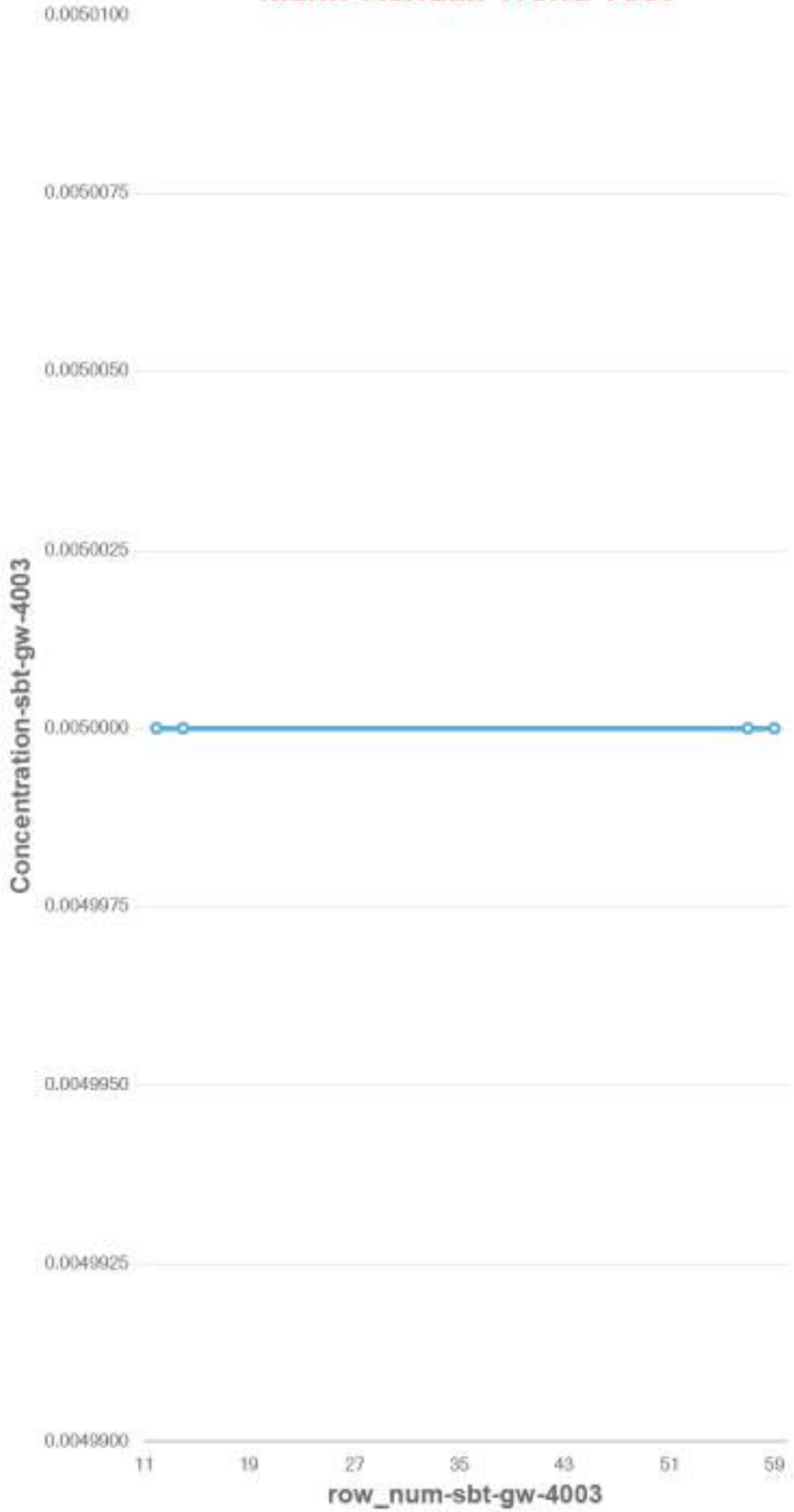


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

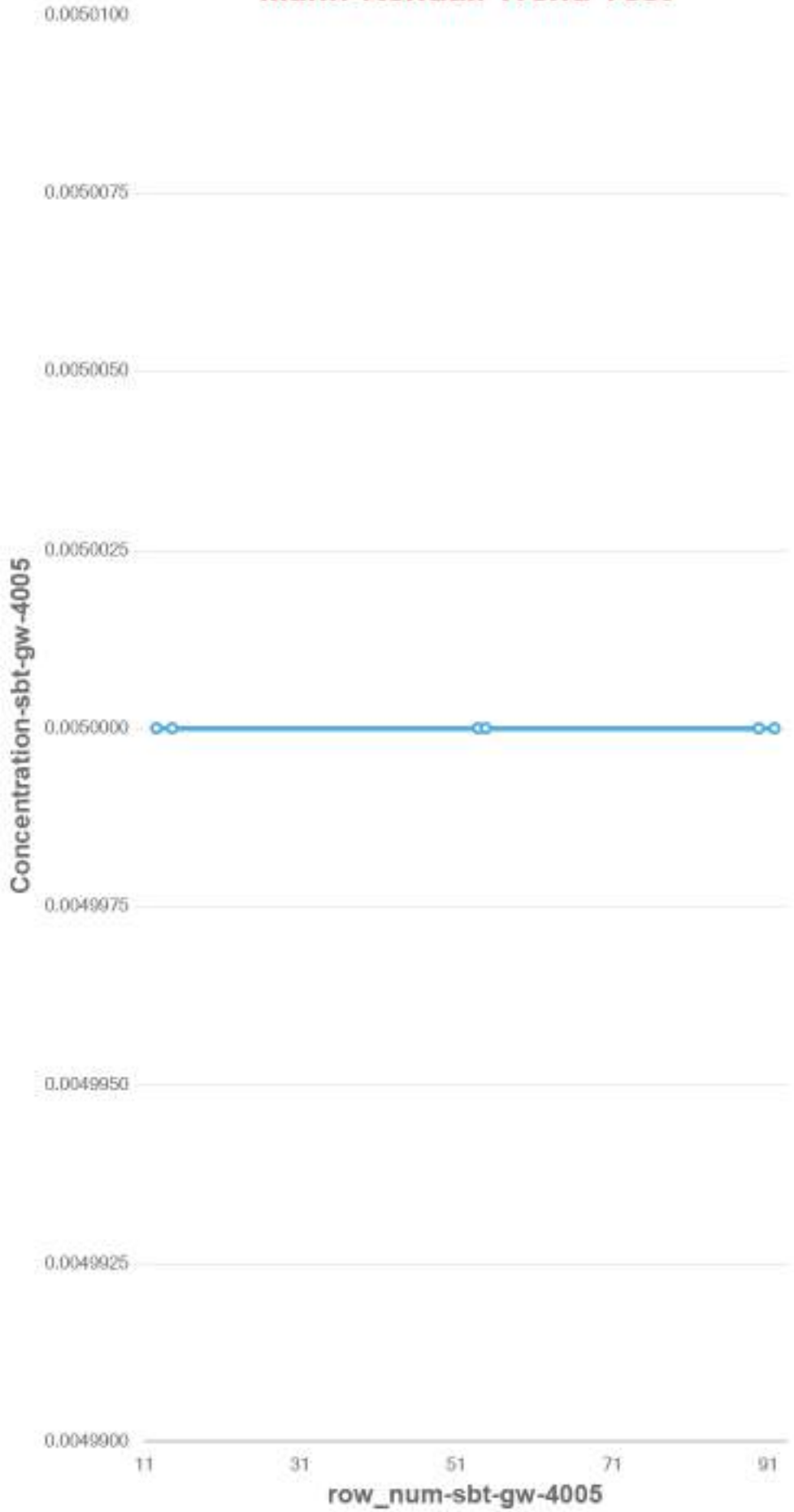


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

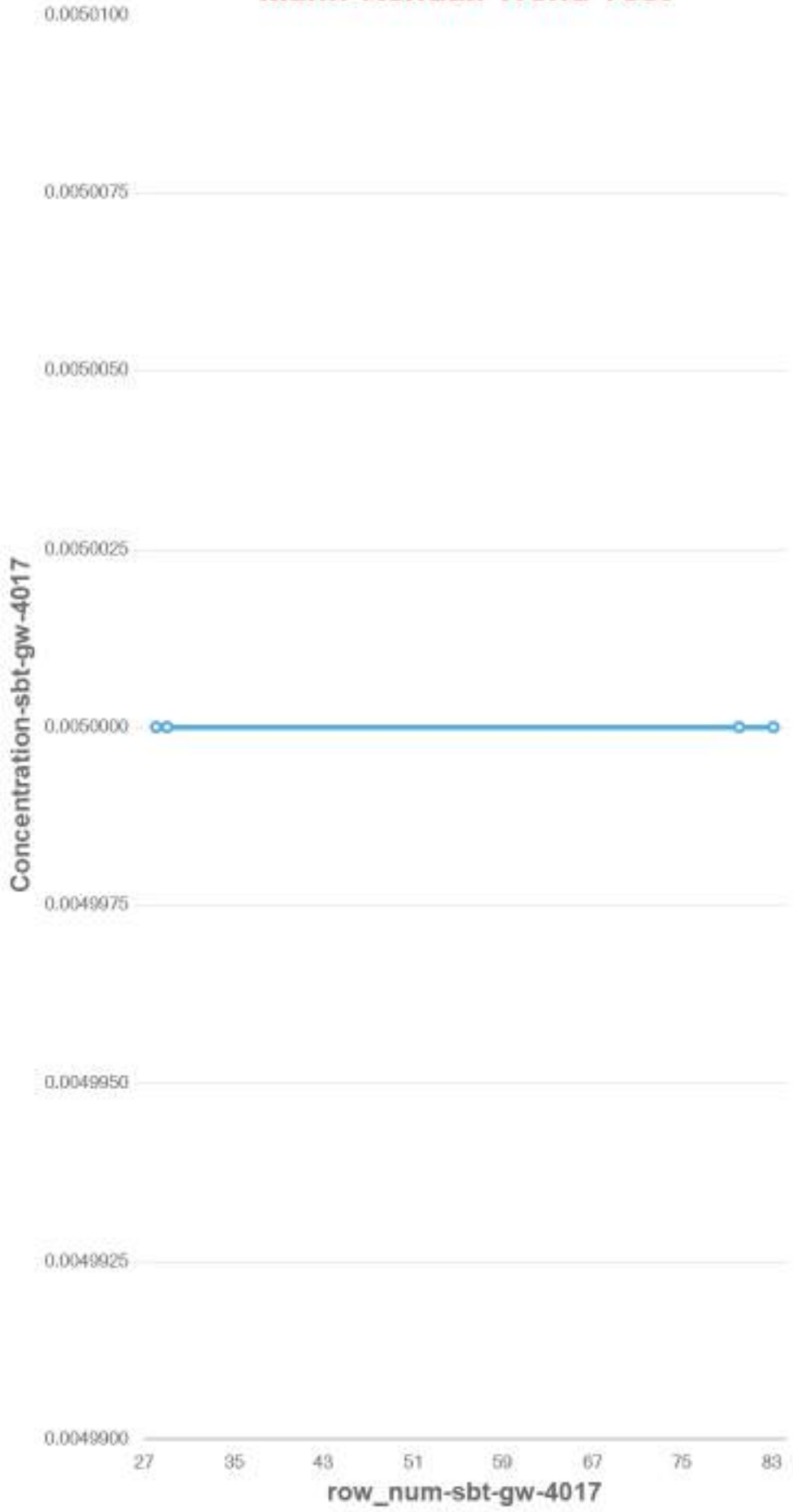


Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.5000
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

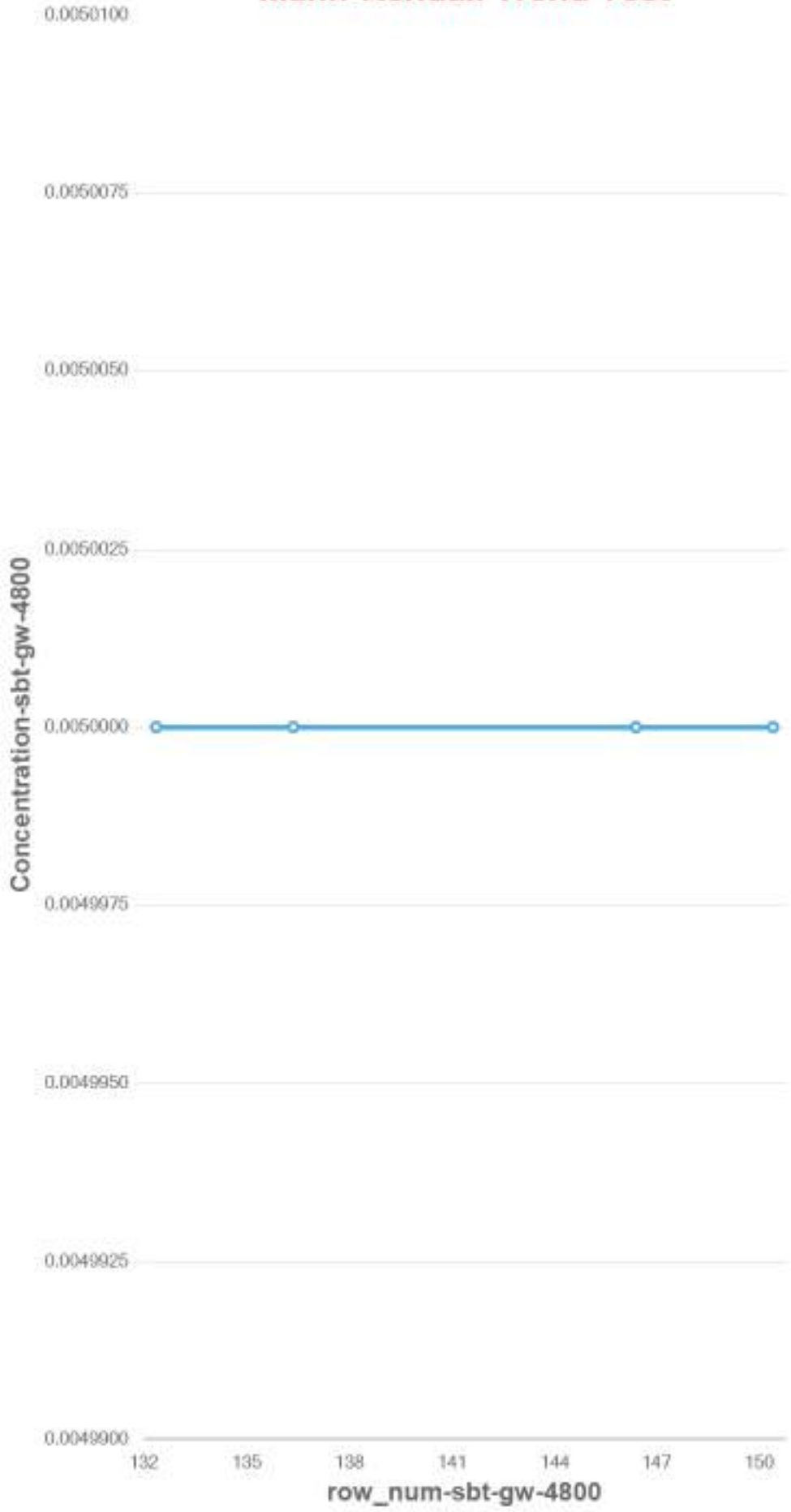


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

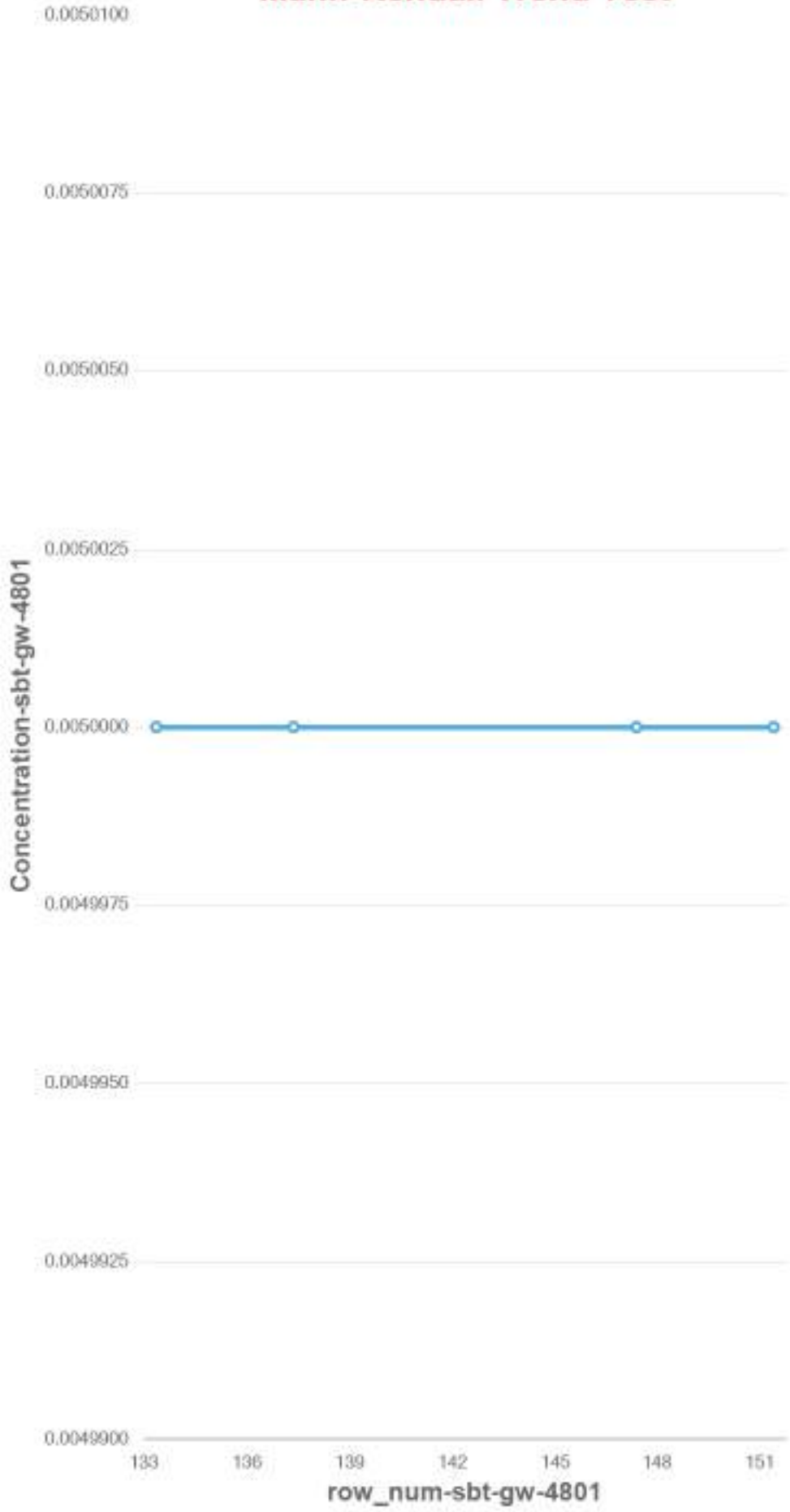


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

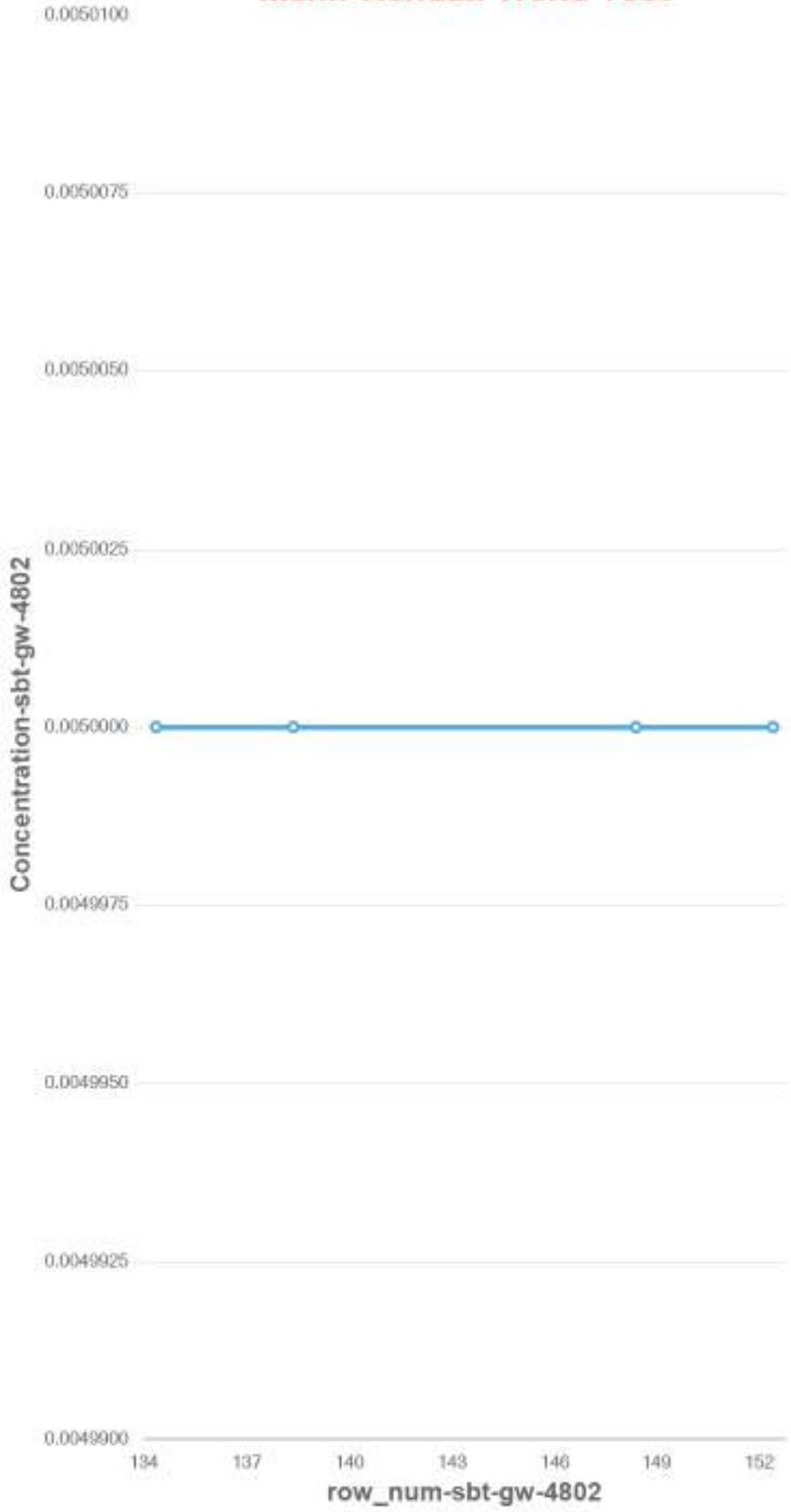


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

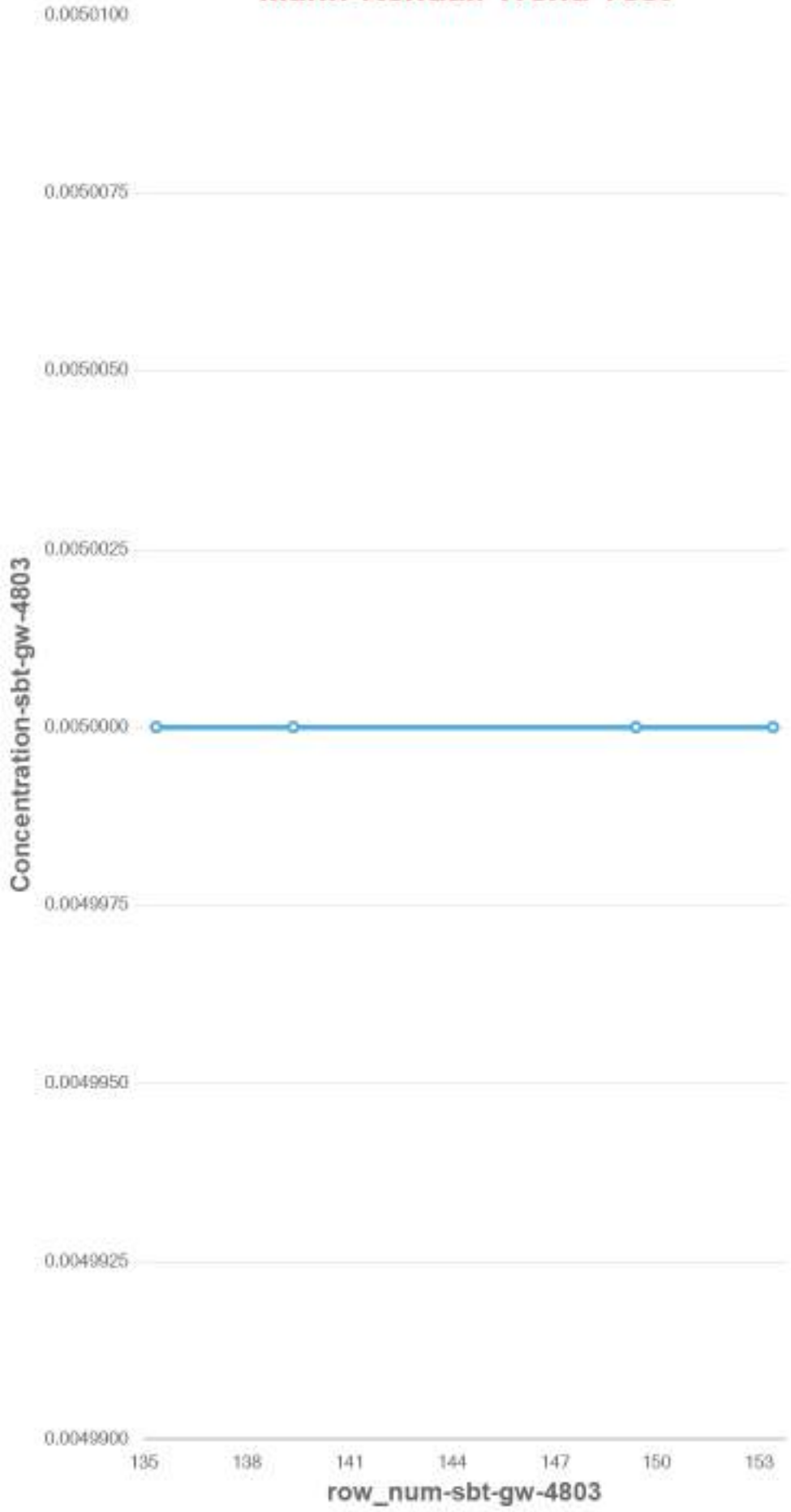


Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

Insufficient statistical evidence of a significant trend at the specified level of significance.

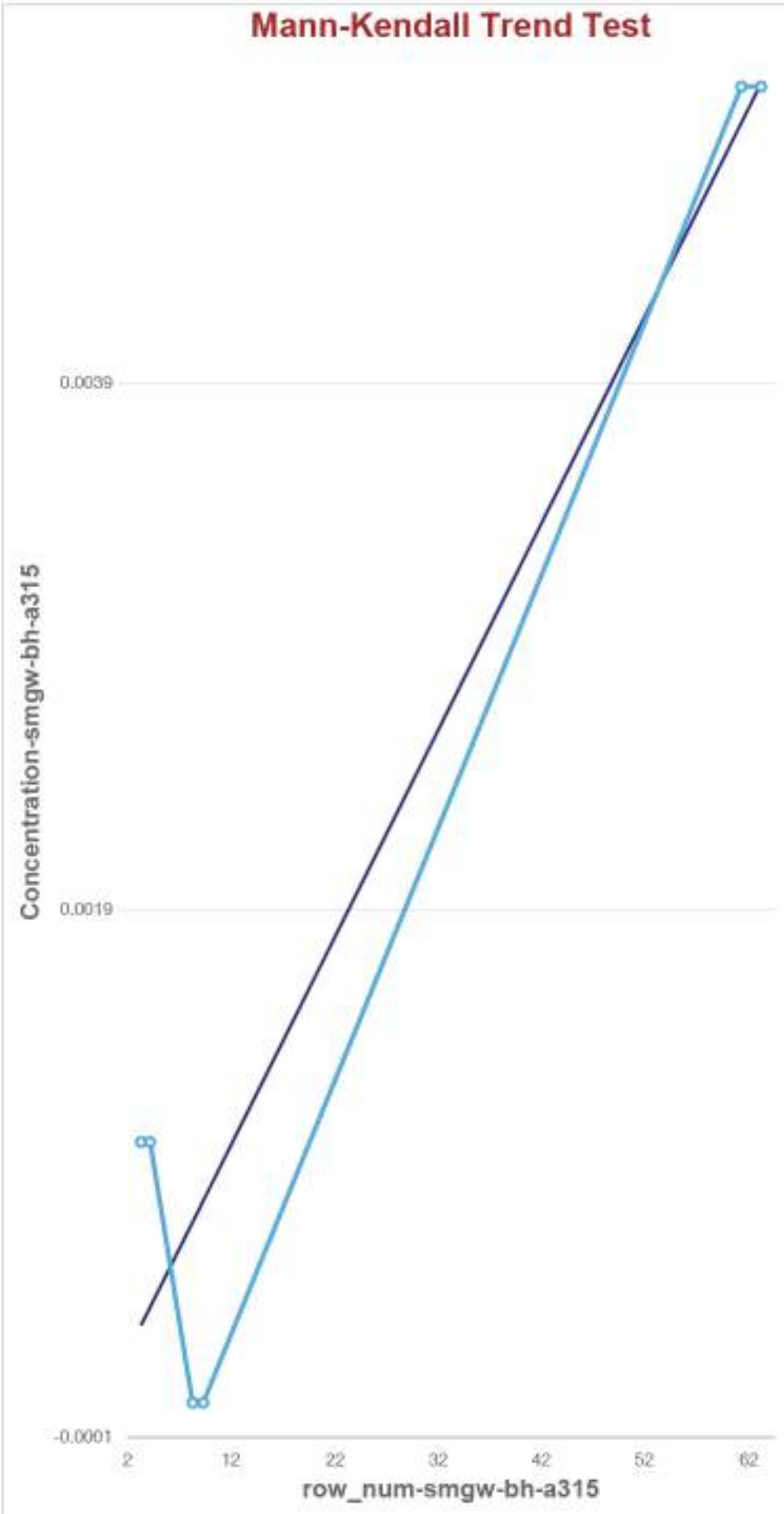
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	0.0000
Standardized Value of S	
M-K Test Value (S)	0
Tabulated p-value	0.6250
Approximate p-value	

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0050

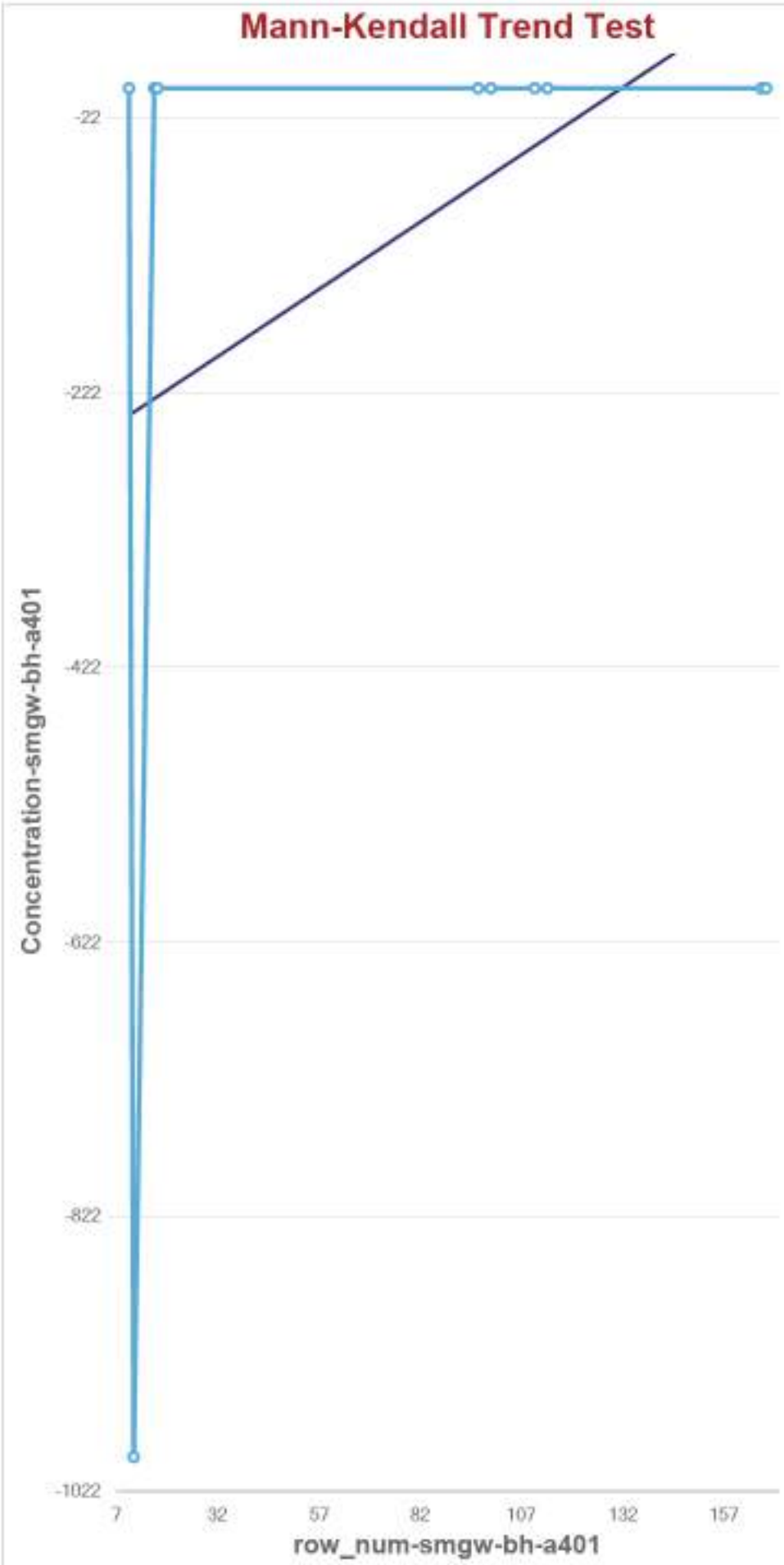
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	0.5960
M-K Test Value (S)	4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.0001

Insufficient statistical evidence of a significant trend at the specified level of significance.



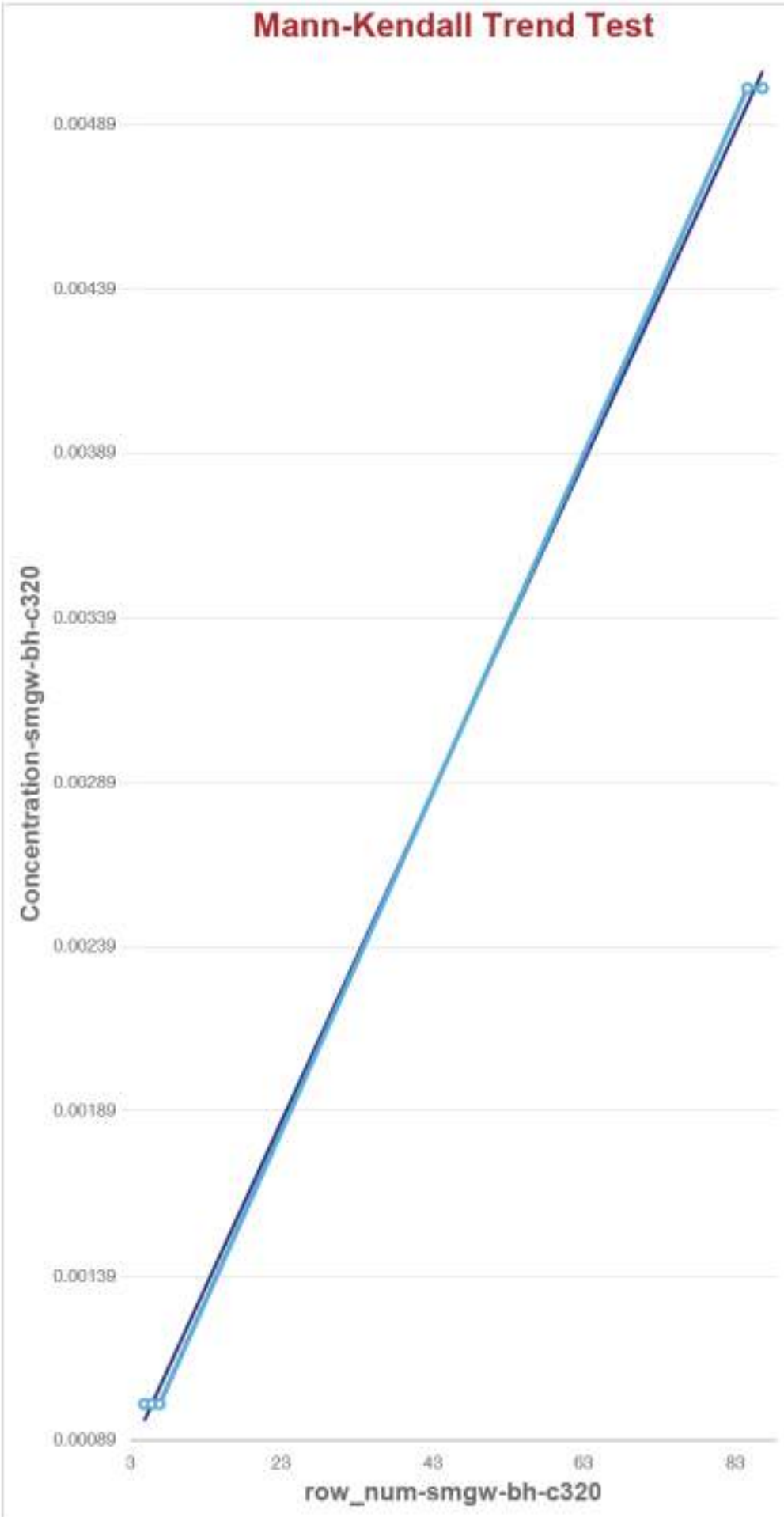
Mann-Kendall Trend Analysis

n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.7446
Standardized Value of S	1.0445
M-K Test Value (S)	7
Tabulated p-value	0.3000
Approximate p-value	0.1481

OLS Regression Line (Blue)

OLS Regression Slope	1.9632
OLS Regression Interoept	-257.7369

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

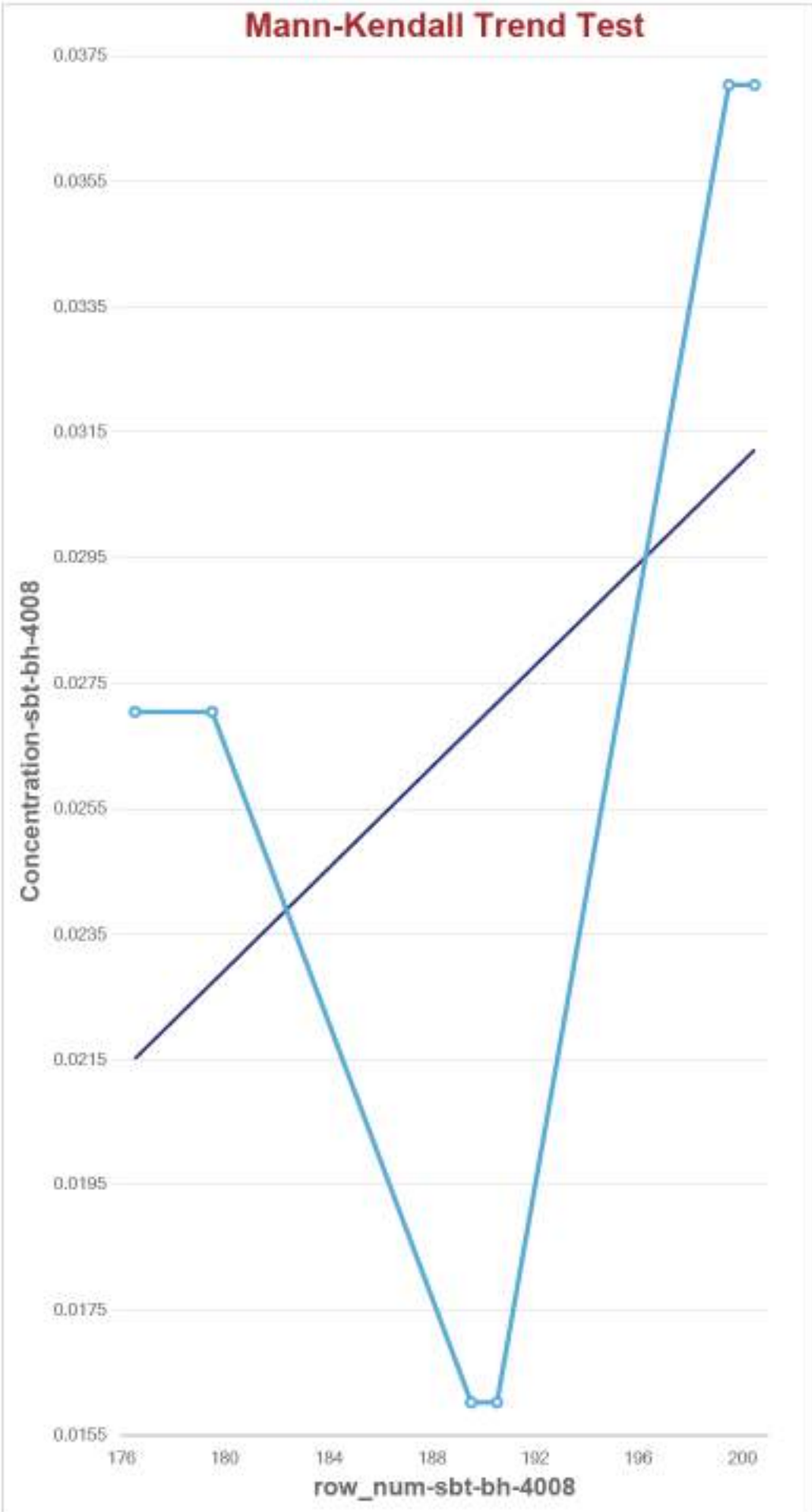
n	5
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	3.4641
Standardized Value of S	1.4434
M-K Test Value (S)	6
Tabulated p-value	0.1170
Approximate p-value	0.0745

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0007

Insufficient statistical evidence of a significant trend at the specified level of significance.

F.13 ZINC (FILTERED)



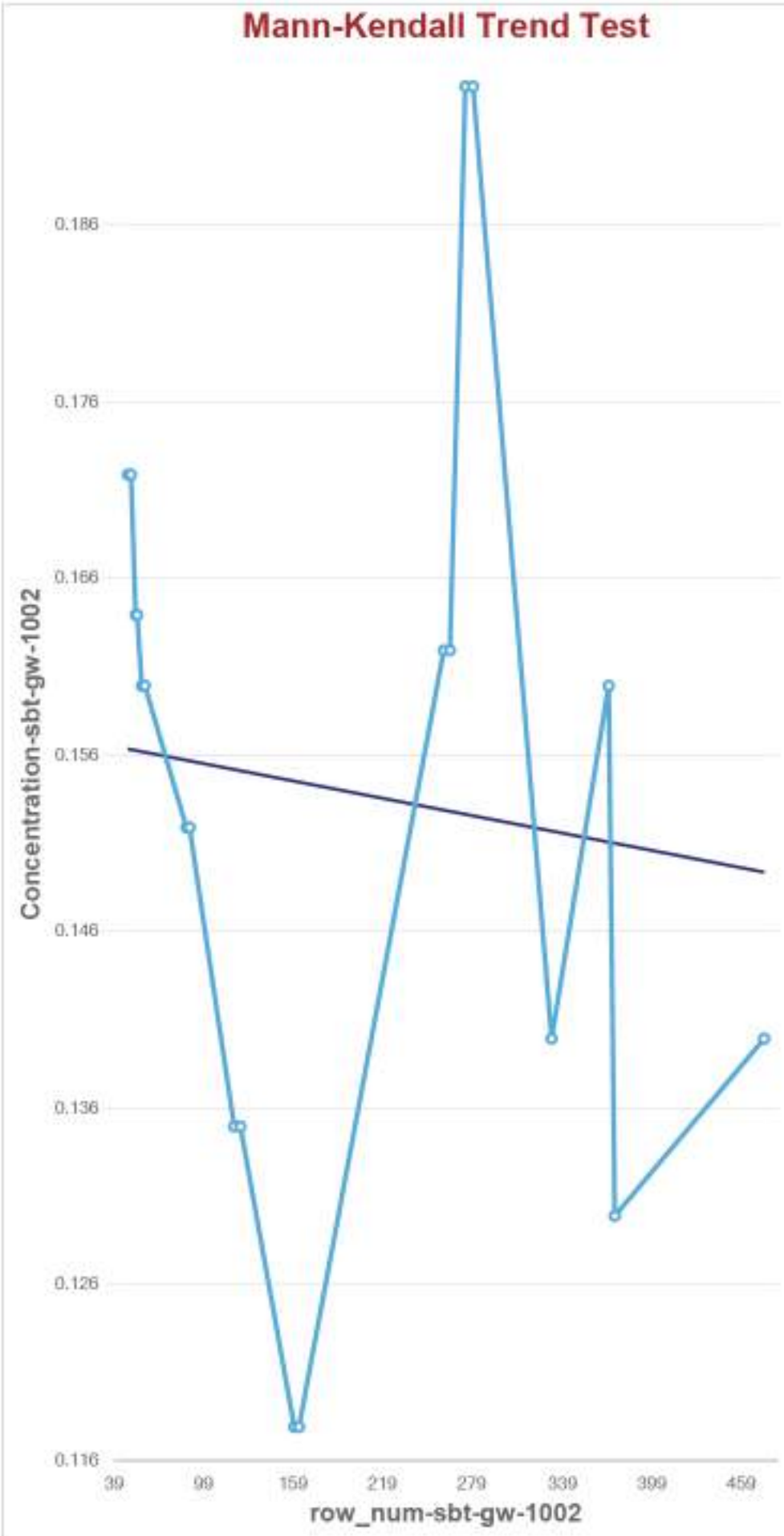
Mann-Kendall Trend Analysis

n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.0332
Standardized Value of S	0.5960
M-K Test Value (S)	4
Tabulated p-value	0.2350
Approximate p-value	0.2756

OLS Regression Line (Blue)

OLS Regression Slope	0.0004
OLS Regression Intercept	-0.0502

Insufficient statistical evidence of a significant trend at the specified level of significance.

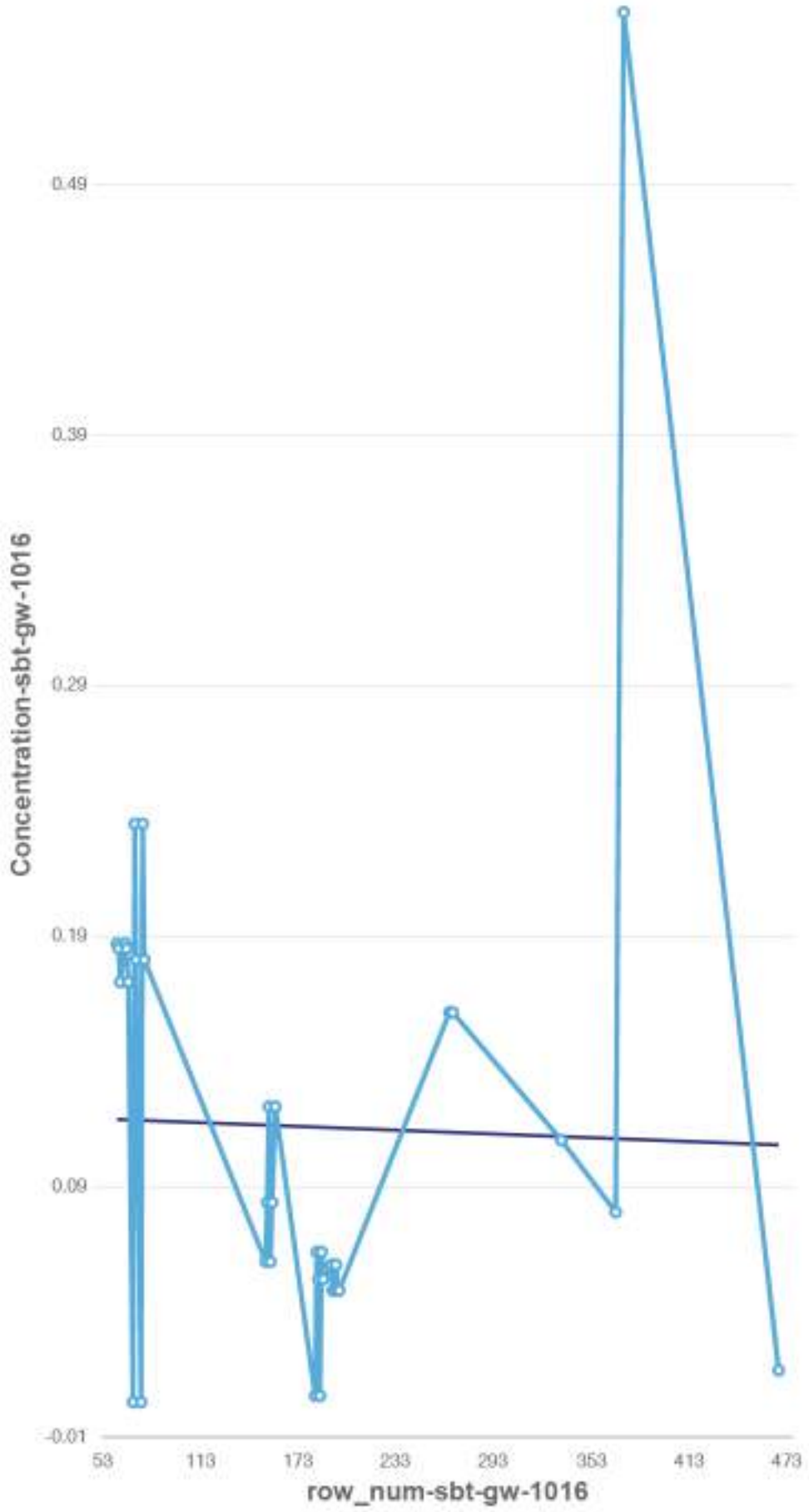


Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6322
Standardized Value of S	-1.7628
M-K Test Value (S)	-55
Tabulated p-value	0.0430
Approximate p-value	0.0390

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1573

Statistically significant evidence of a decreasing trend at the specified level of significance.

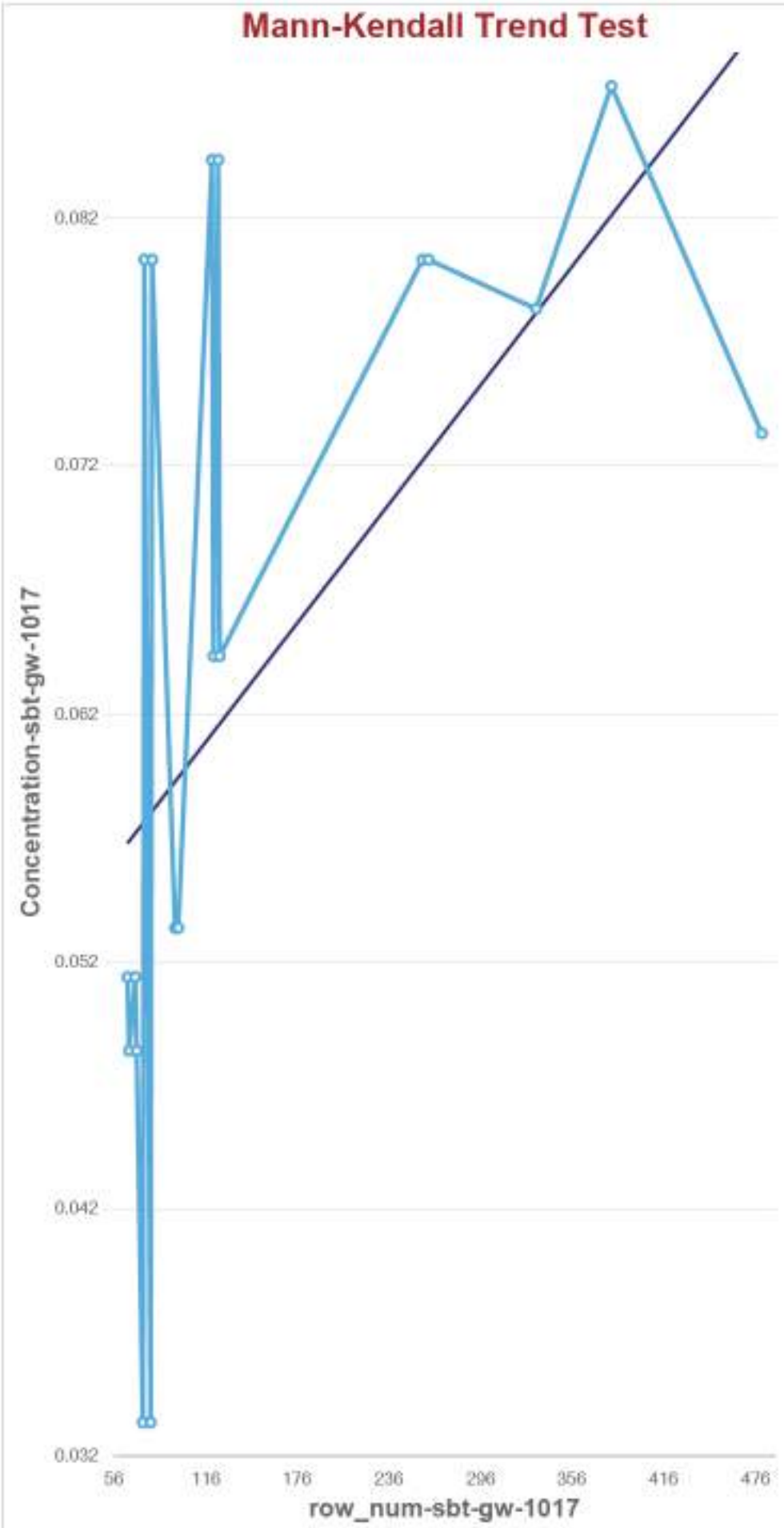
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	36
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	73.2621
Standardized Value of S	-2.5252
M-K Test Value (S)	-186
Appx. Critical Value (0.05)	-1.6449
Approximate p-value	0.0058

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.1194

Statistically significant evidence of a decreasing trend at the specified level of significance.

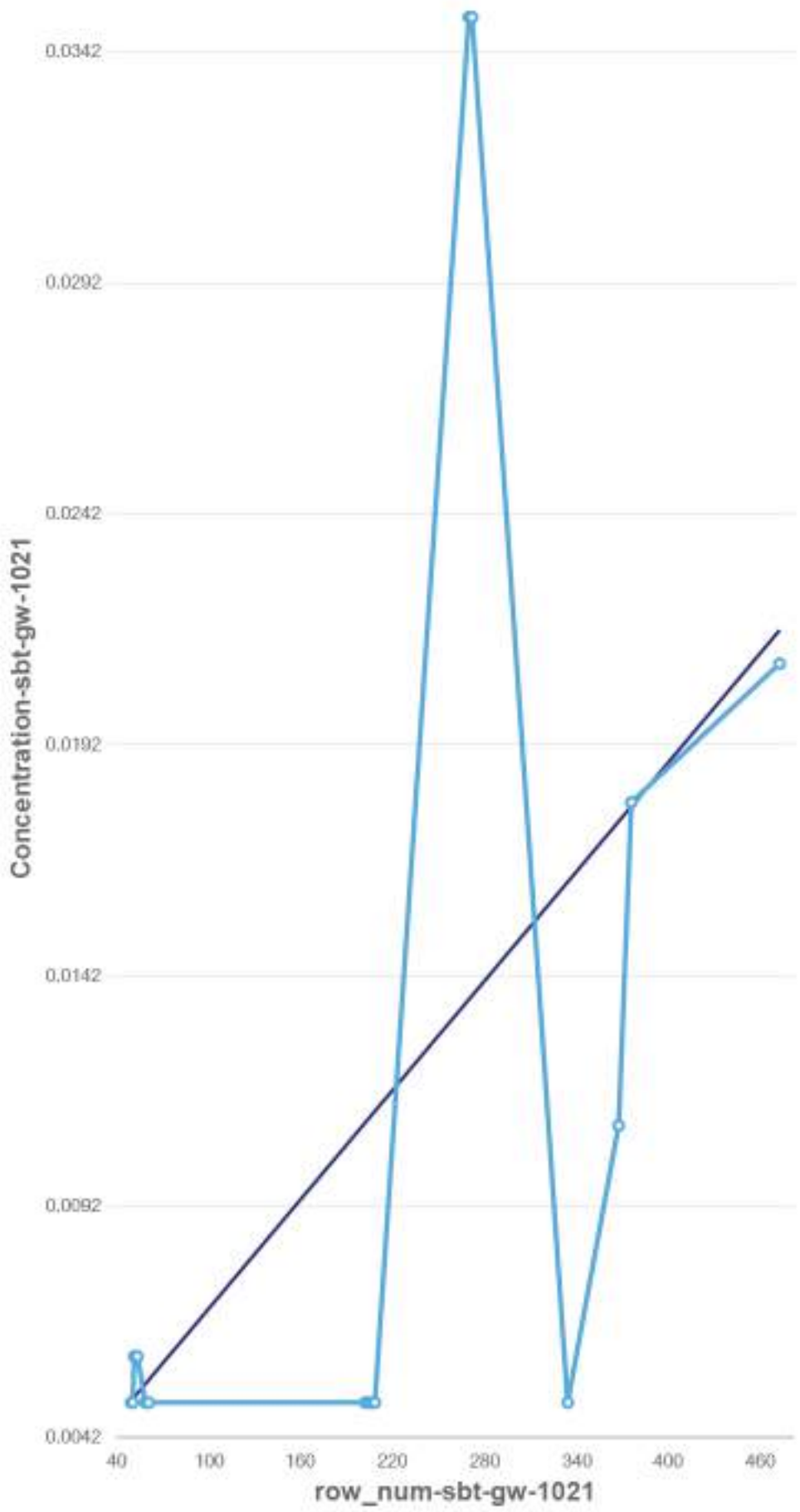


Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.7770
Standardized Value of S	3.1119
M-K Test Value (S)	103
Tabulated p-value	0.0010
Approximate p-value	0.0009

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.0512

Statistically significant evidence of an increasing trend at the specified level of significance.

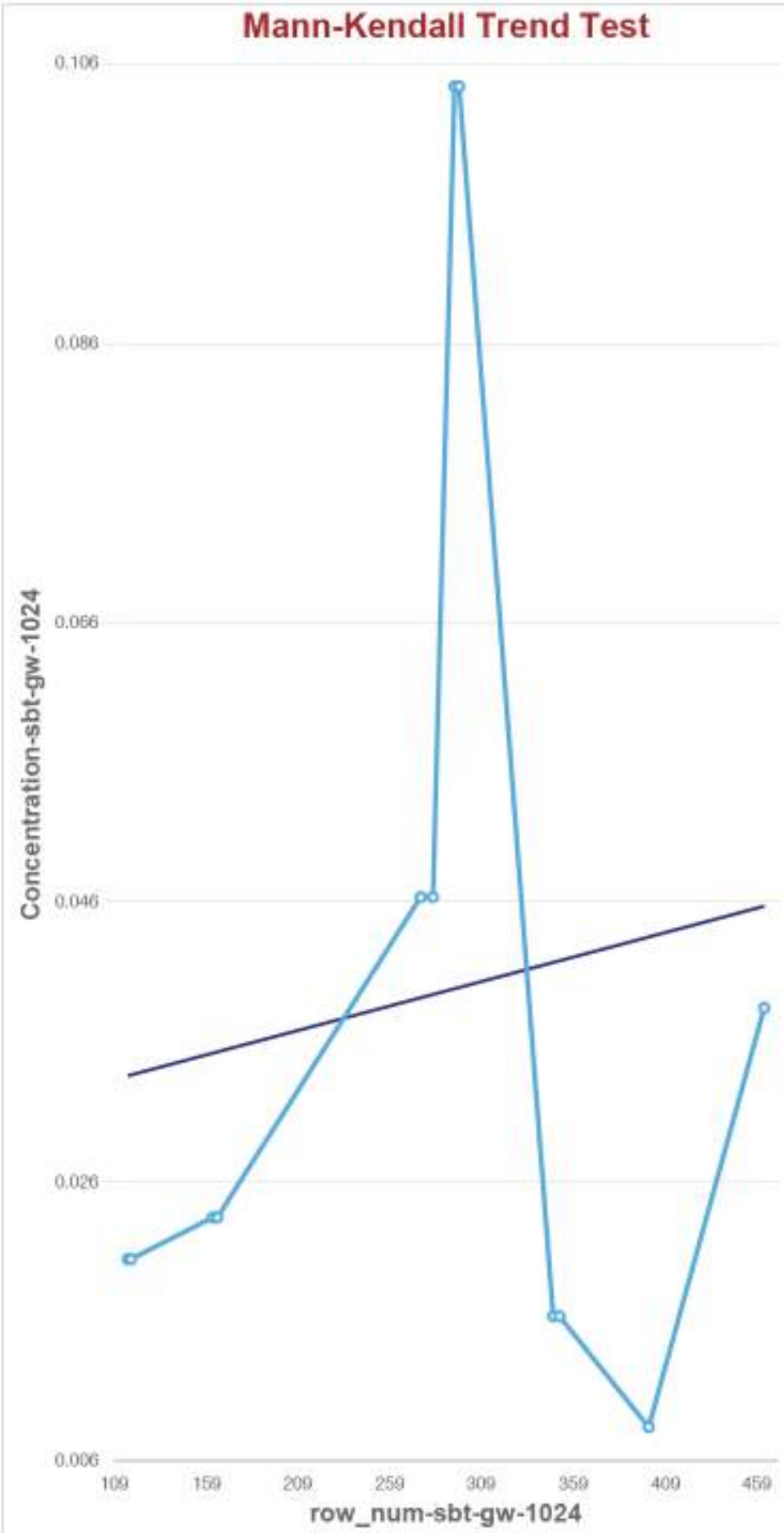
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	16
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.9833
Standardized Value of S	1.8515
M-K Test Value (S)	38
Tabulated p-value	0.0480
Approximate p-value	0.0320

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0031

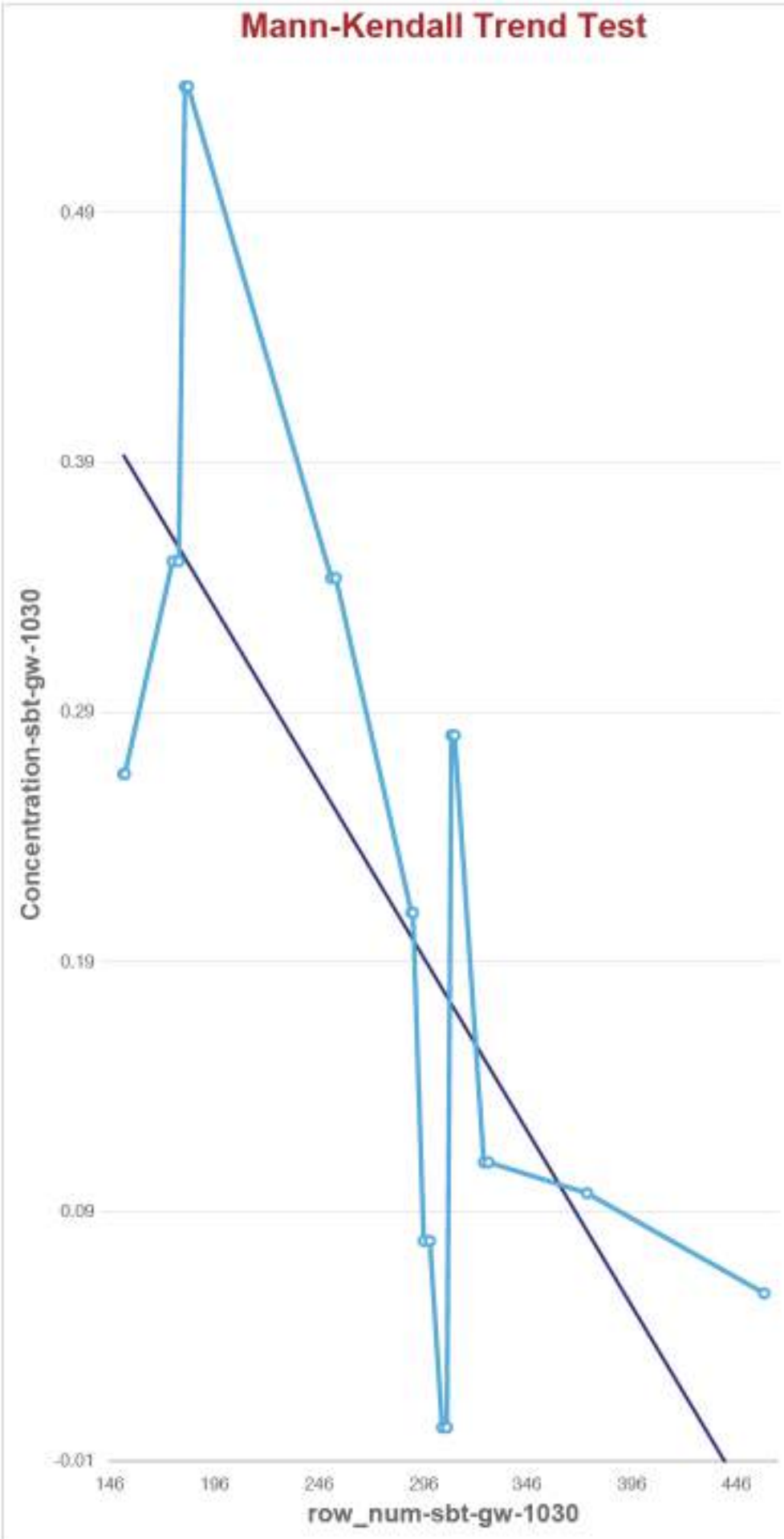
Statistically significant evidence of an increasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4106
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5270
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0292

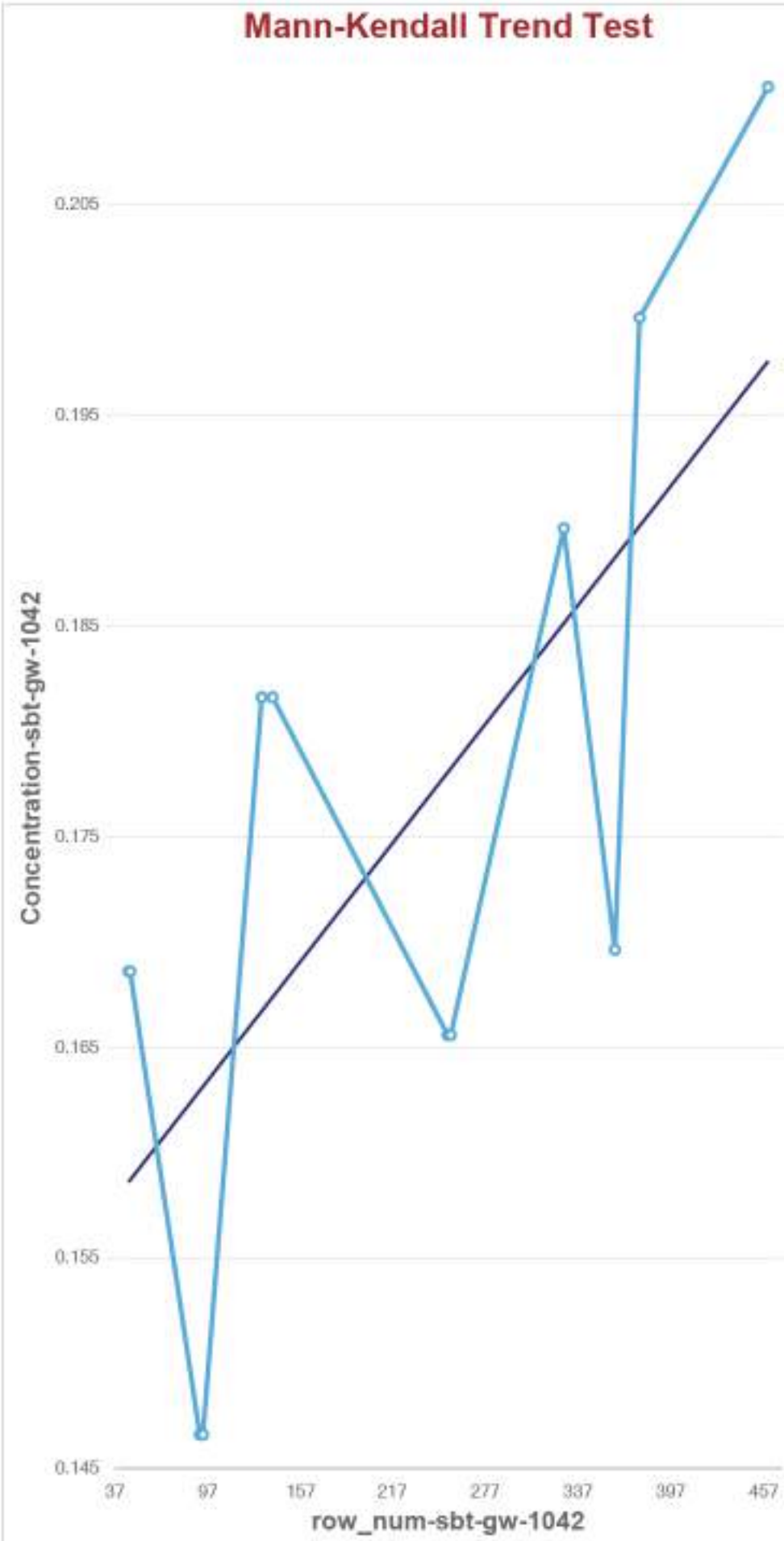
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.6757
Standardized Value of S	-2.8687
M-K Test Value (S)	-89
Tabulated p-value	0.0020
Approximate p-value	0.0021

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0014
OLS Regression Intercept	0.6068

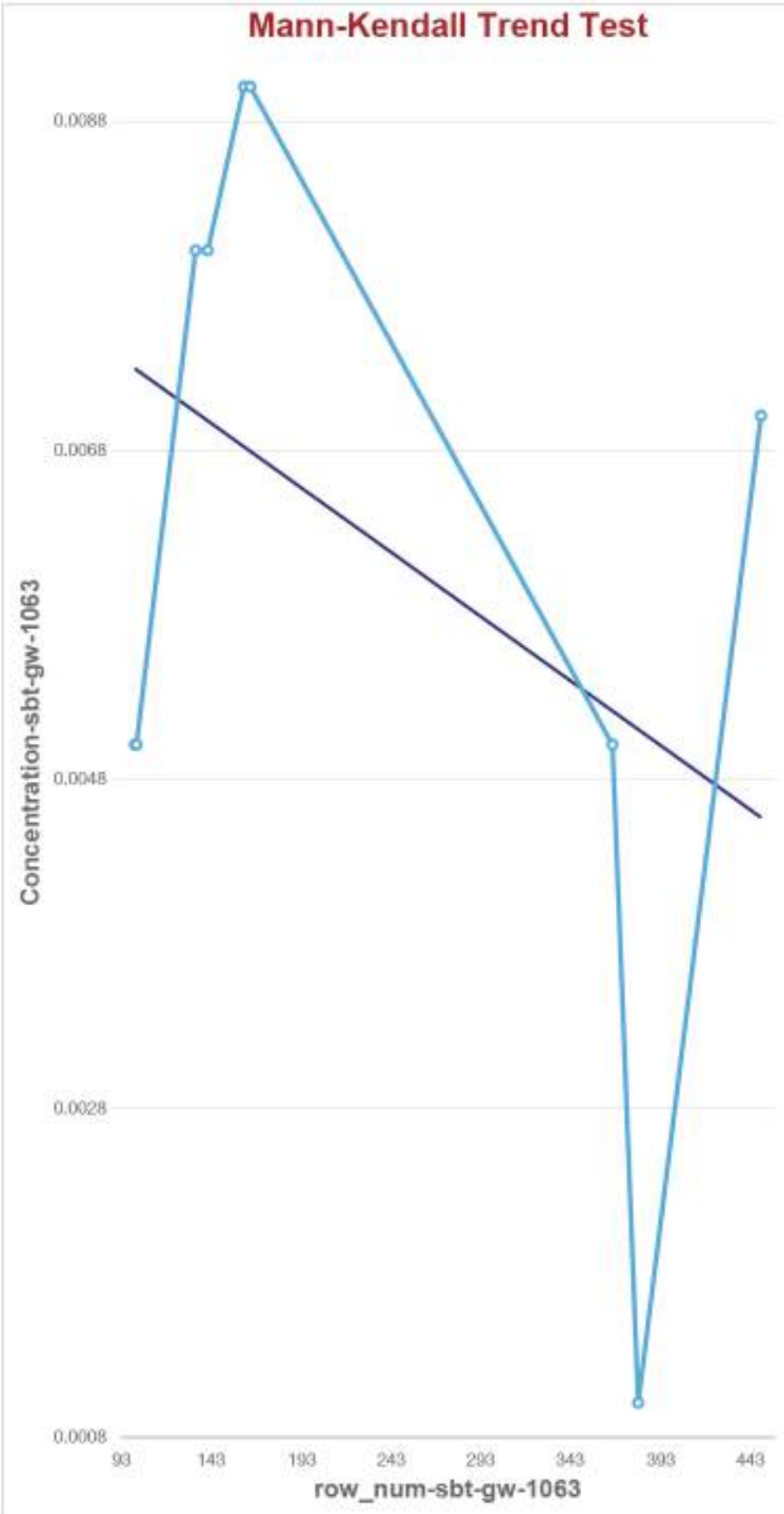
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.4453
Standardized Value of S	2.1460
M-K Test Value (S)	32
Tabulated p-value	0.0160
Approximate p-value	0.0159

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.1547

Statistically significant evidence of an increasing trend at the specified level of significance.

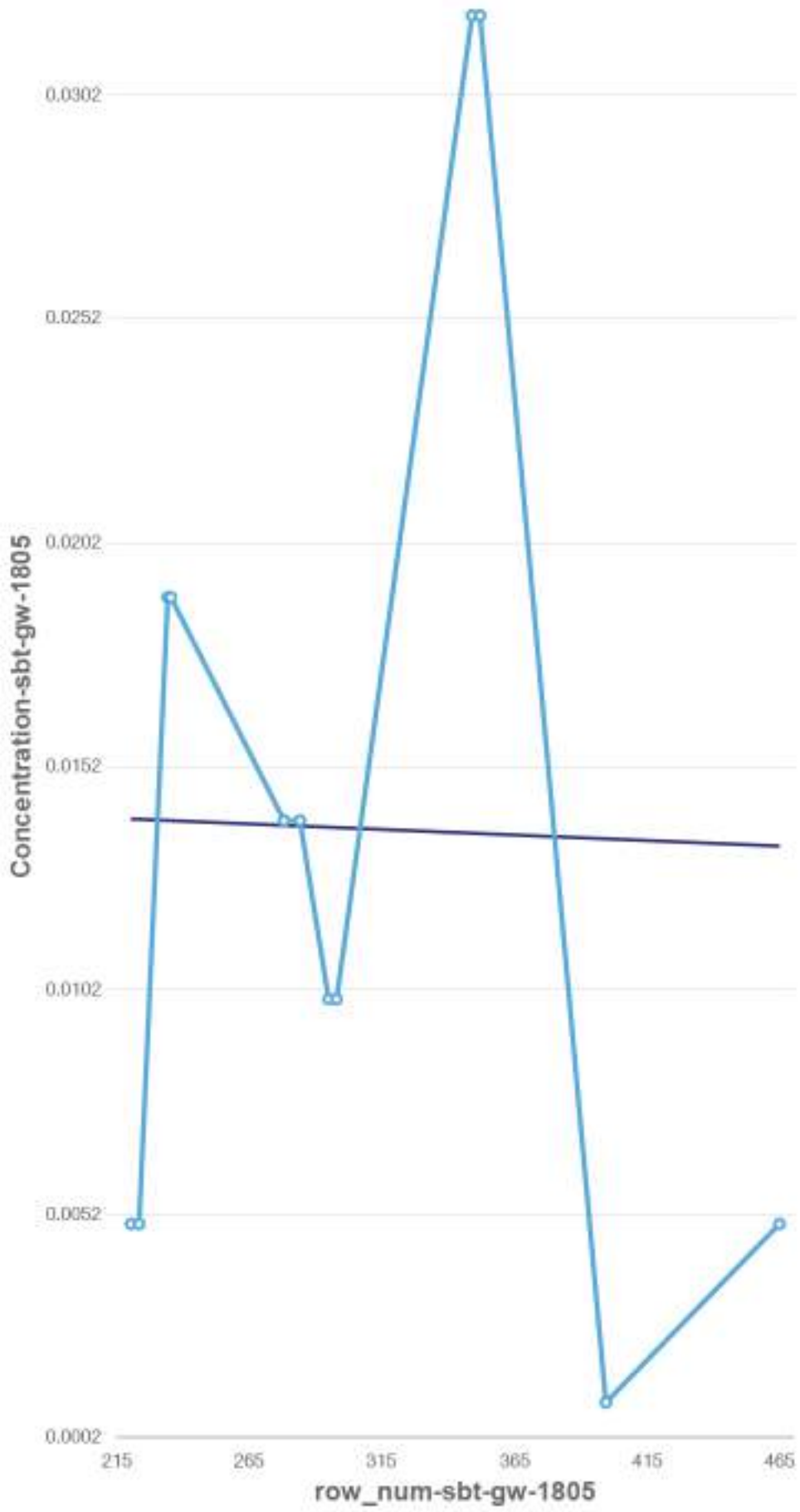


Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.2916
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5400
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0081

Insufficient statistical evidence of a significant trend at the specified level of significance.

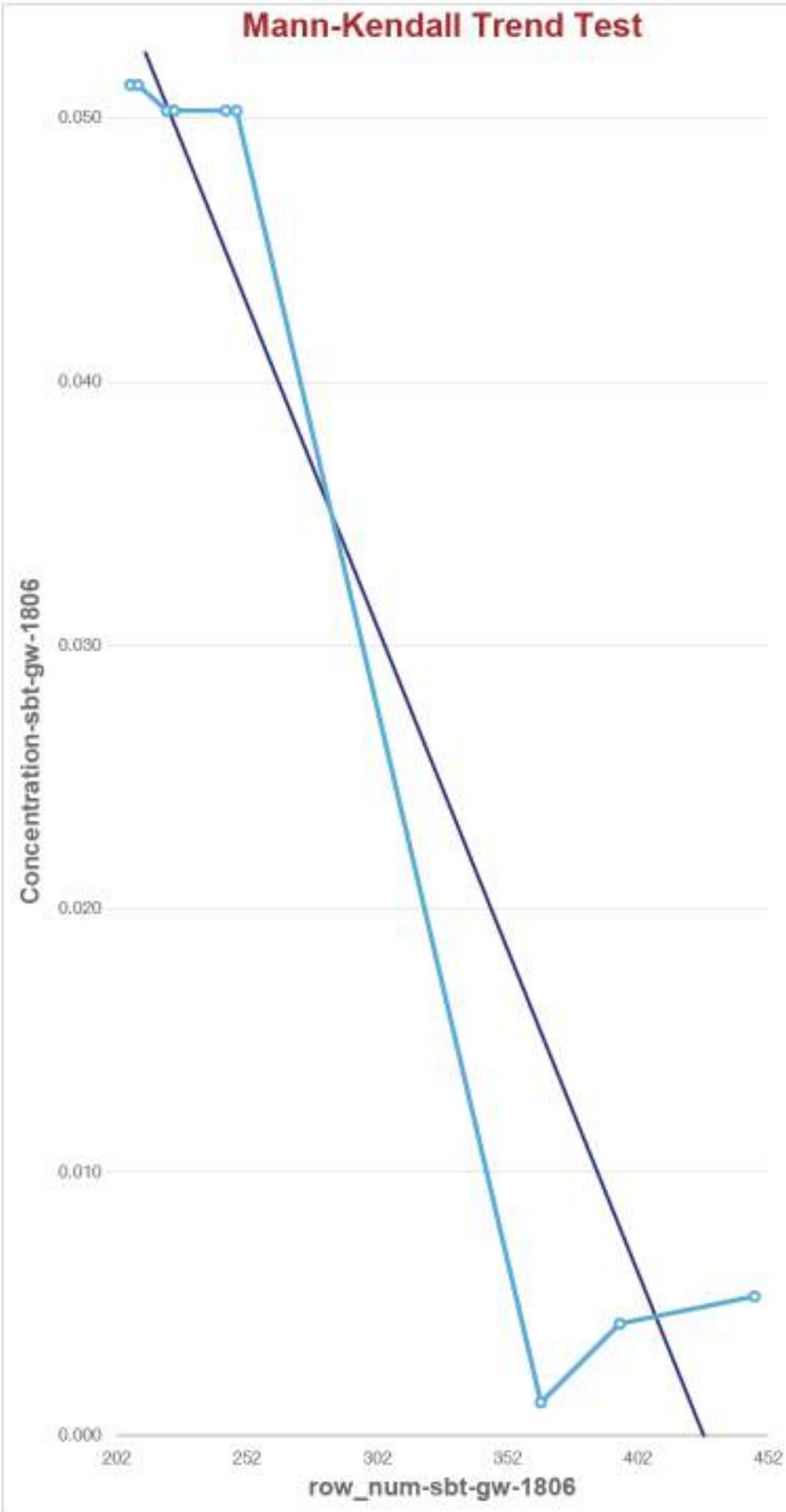
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.3178
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	0.5270
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0146

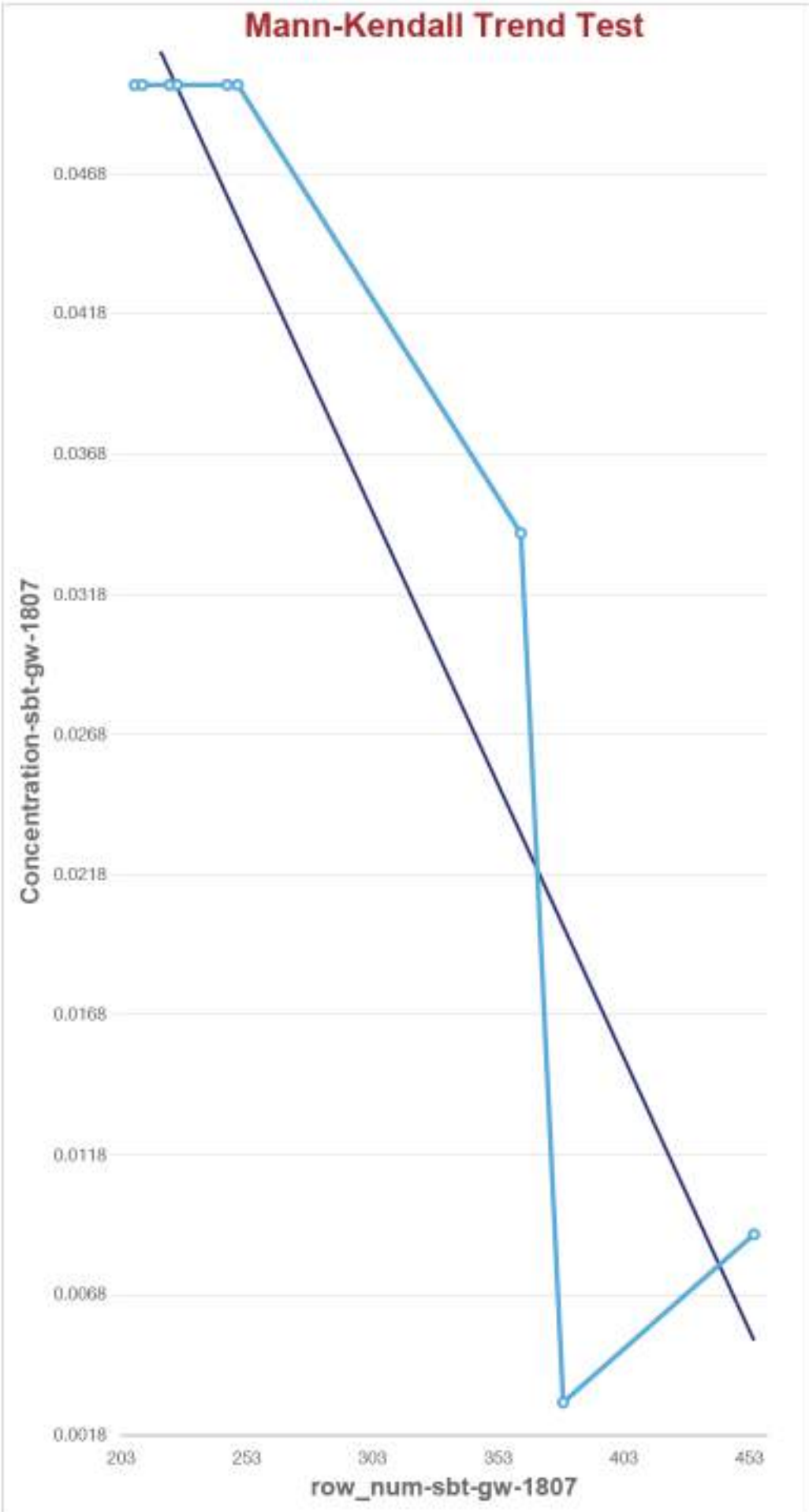
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.0738
Standardized Value of S	-2.4246
M-K Test Value (S)	-23
Tabulated p-value	0.0120
Approximate p-value	0.0077

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0002
OLS Regression Intercept	0.1043

Statistically significant evidence of a decreasing trend at the specified level of significance.



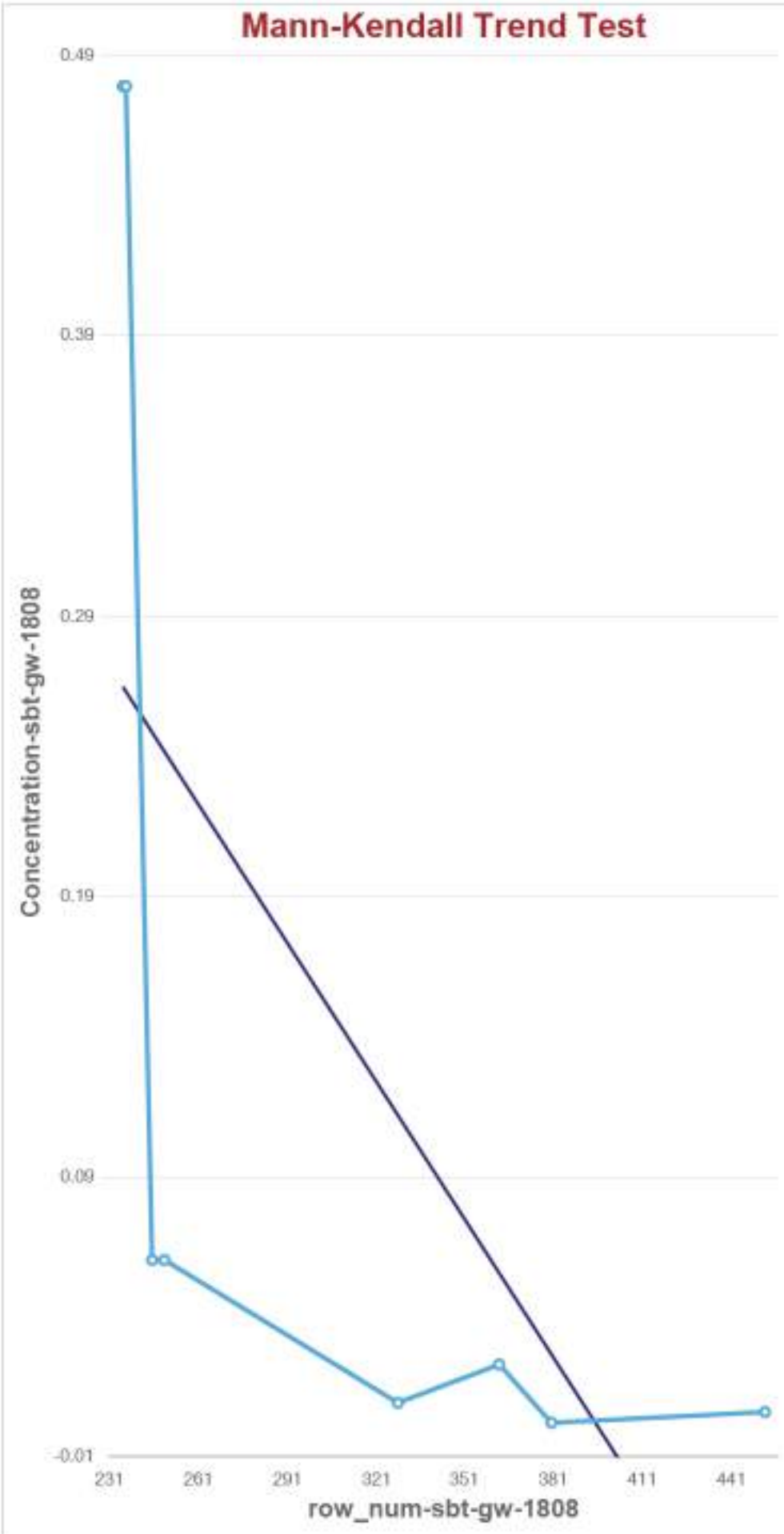
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9791
Standardized Value of S	-2.2559
M-K Test Value (S)	-19
Tabulated p-value	0.0380
Approximate p-value	0.0120

OLS Regression Line (Blue)

OLS Regression Slope	-0.0002
OLS Regression Intercept	0.0936

Statistically significant evidence of a decreasing trend at the specified level of significance.

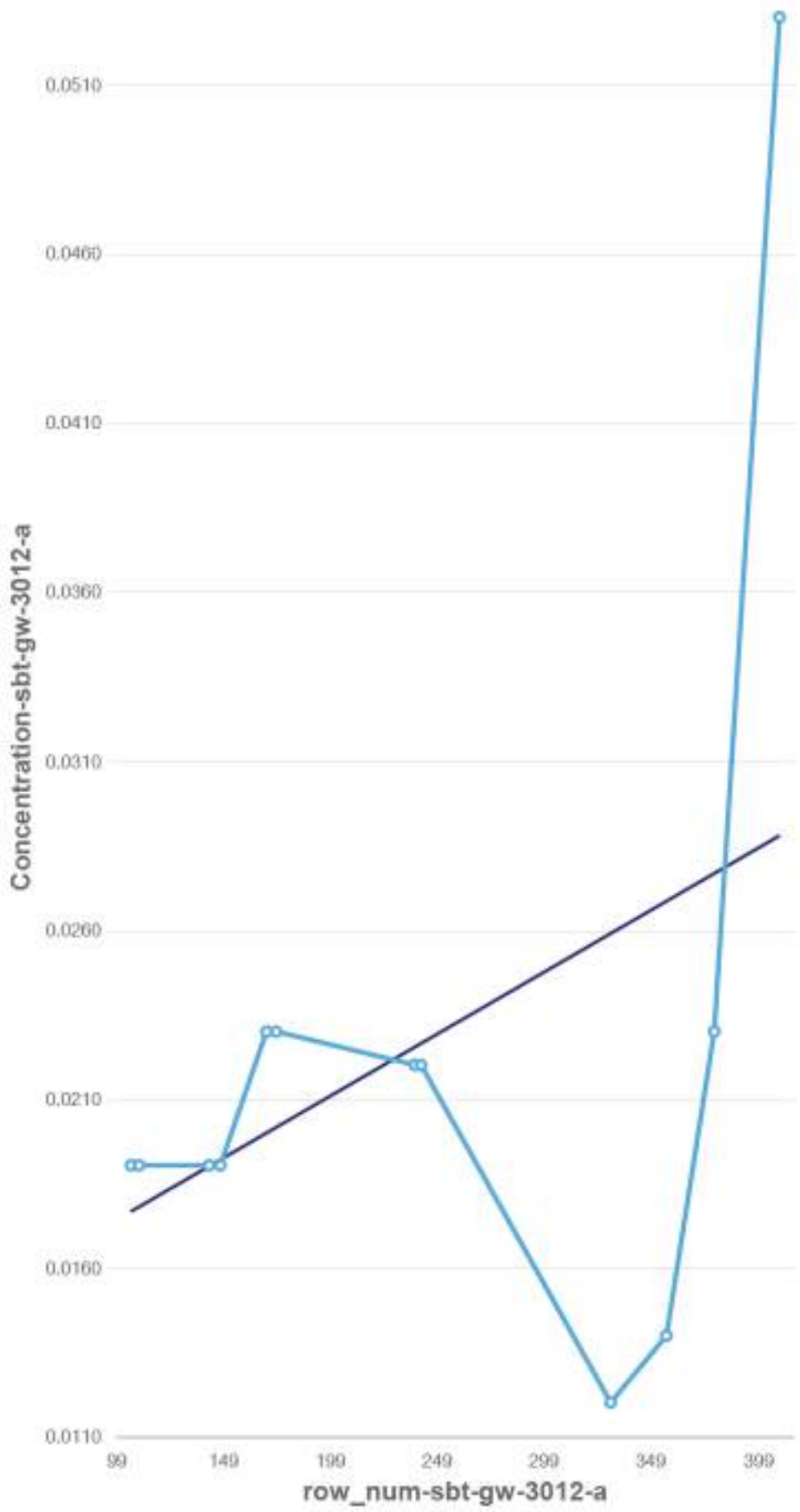


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	7.9582
Standardized Value of S	-2.6388
M-K Test Value (S)	-22
Tabulated p-value	0.0020
Approximate p-value	0.0042

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0016
OLS Regression Intercept	0.6520

Statistically significant evidence of a decreasing trend at the specified level of significance.

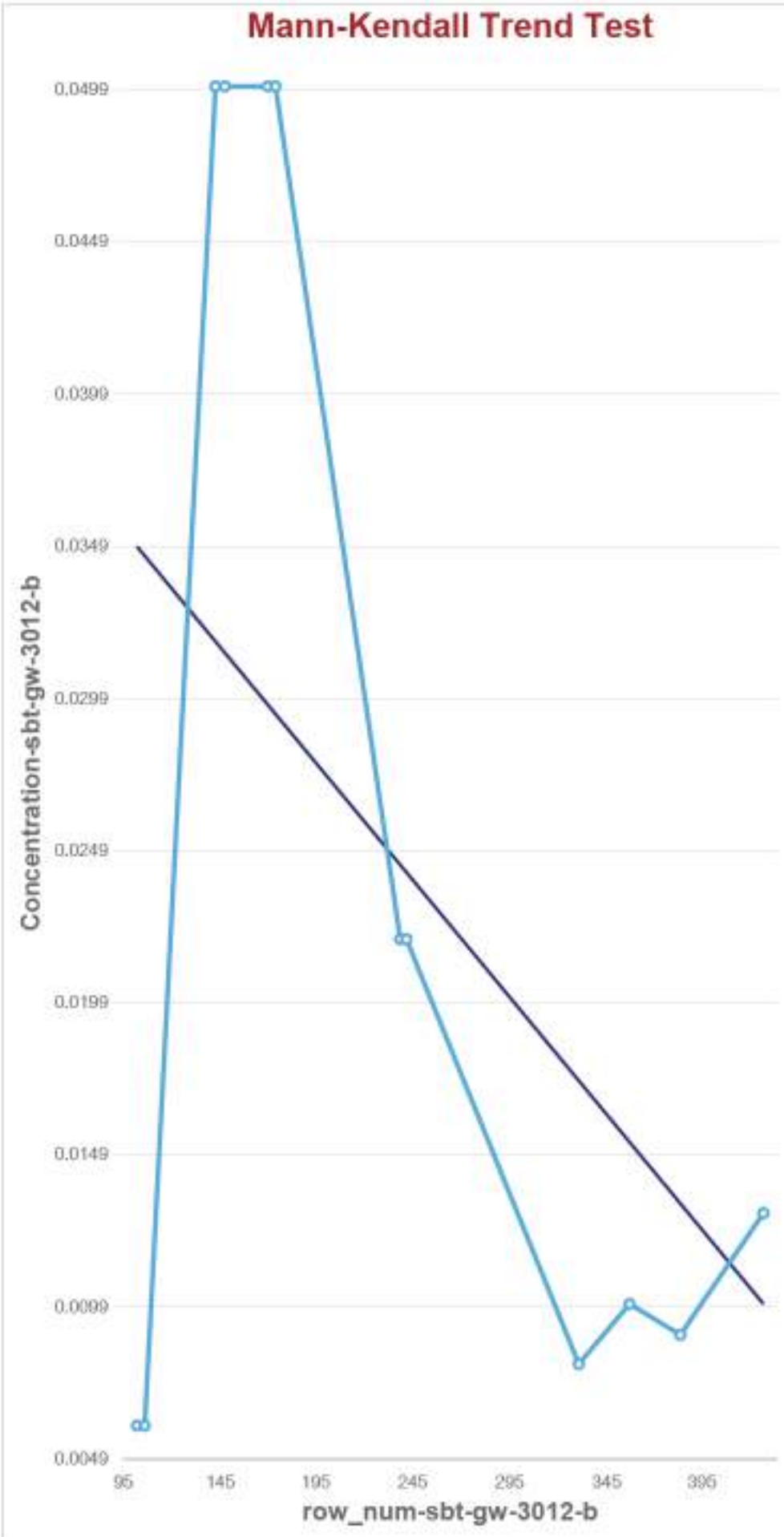
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.1185
Standardized Value of S	1.0624
M-K Test Value (S)	16
Tabulated p-value	0.1550
Approximate p-value	0.1440

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0138

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis

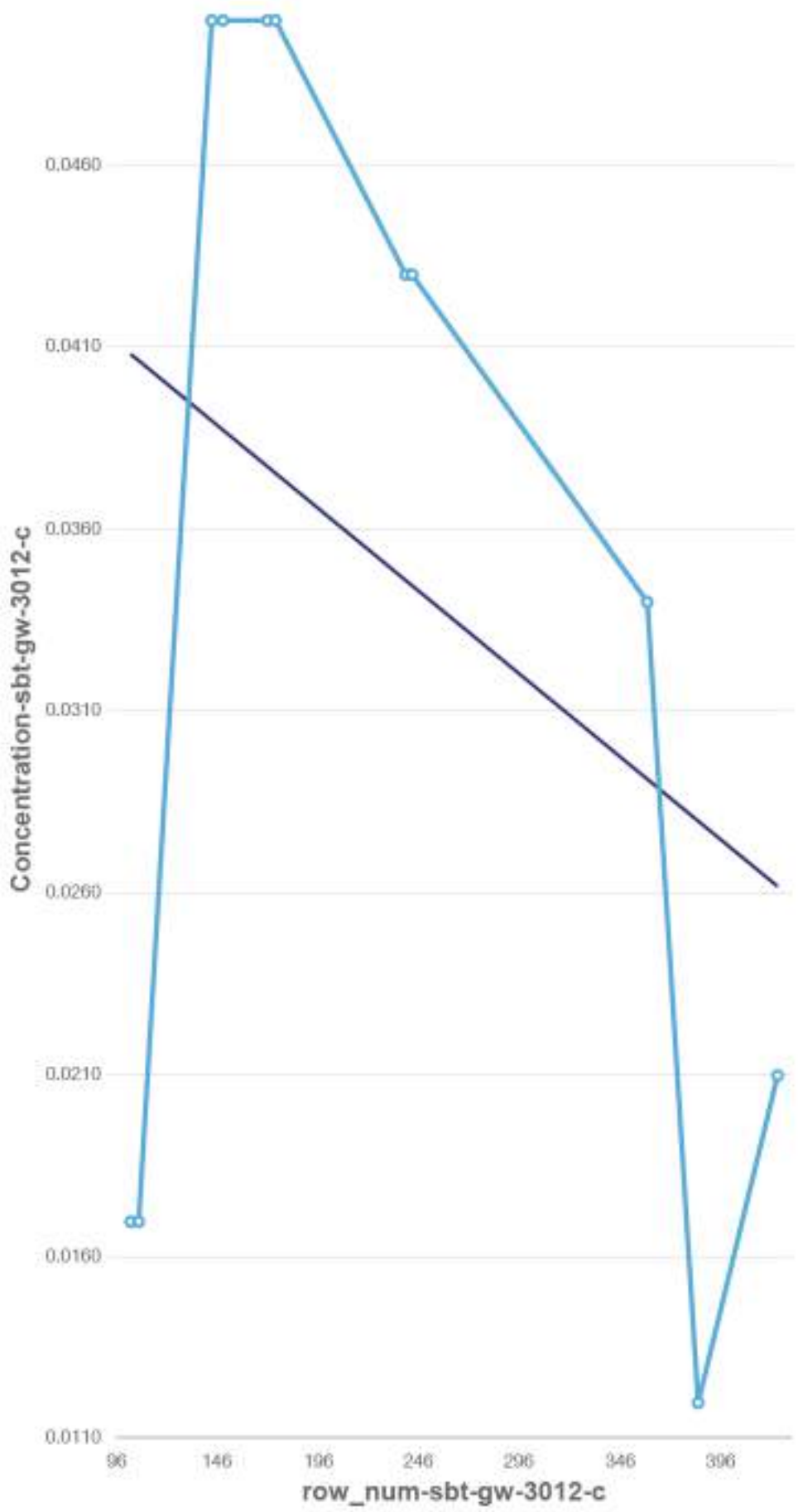
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.2127
Standardized Value of S	-0.4925
M-K Test Value (S)	-8
Tabulated p-value	0.3190
Approximate p-value	0.3112

OLS Regression Line (Blue)

OLS Regression Slope	-0.0001
OLS Regression Intercept	0.0427

Insufficient statistical evidence of a significant trend at the specified level of significance.

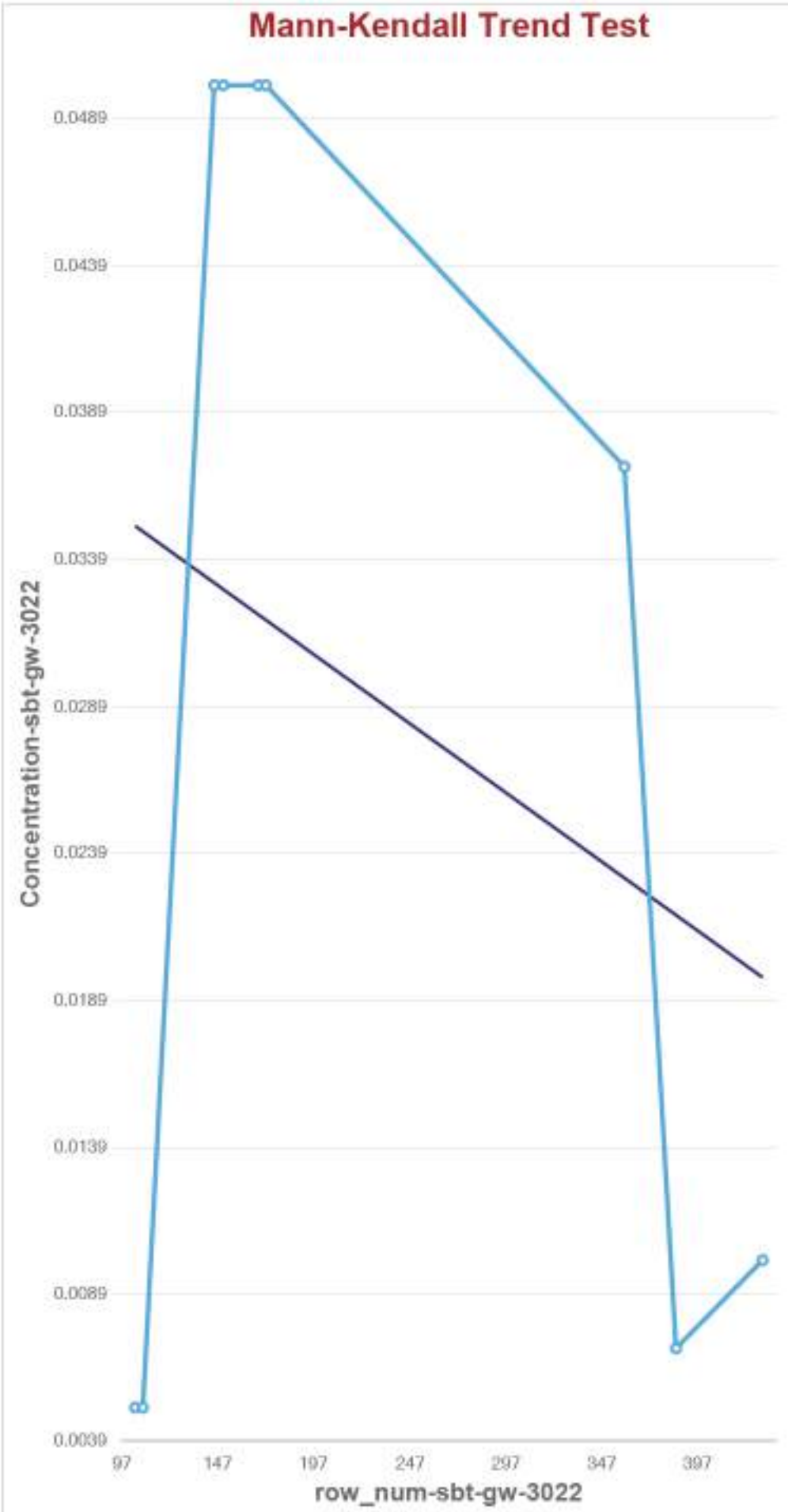
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.4231
Standardized Value of S	-0.9659
M-K Test Value (S)	-13
Tabulated p-value	0.1790
Approximate p-value	0.1670

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0455

Insufficient statistical evidence of a significant trend at the specified level of significance.



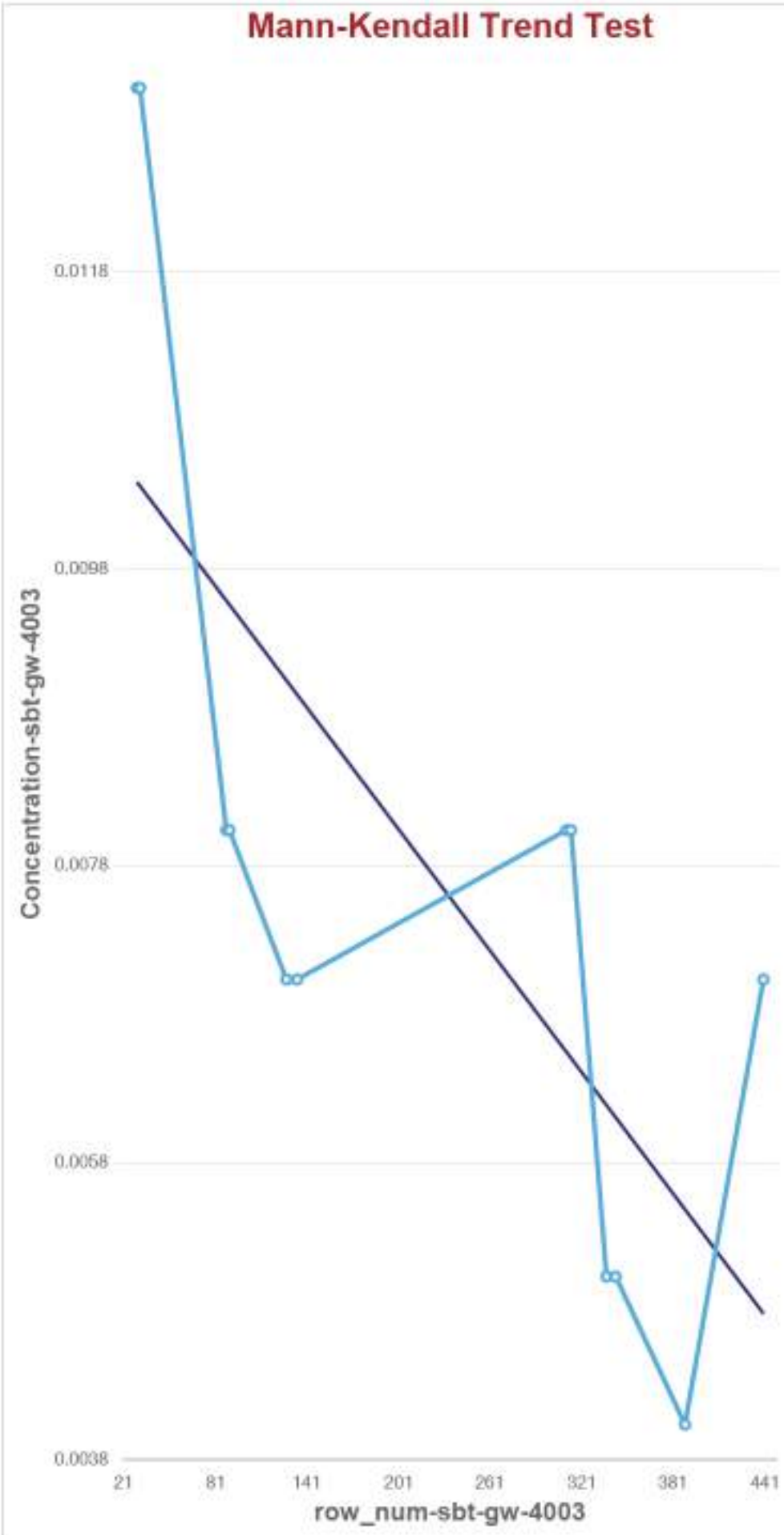
Mann-Kendall Trend Analysis

n	9
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	9.0738
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.5400
Approximate p-value	0.5000

OLS Regression Line (Blue)

OLS Regression Slope	0.0000
OLS Regression Intercept	0.0399

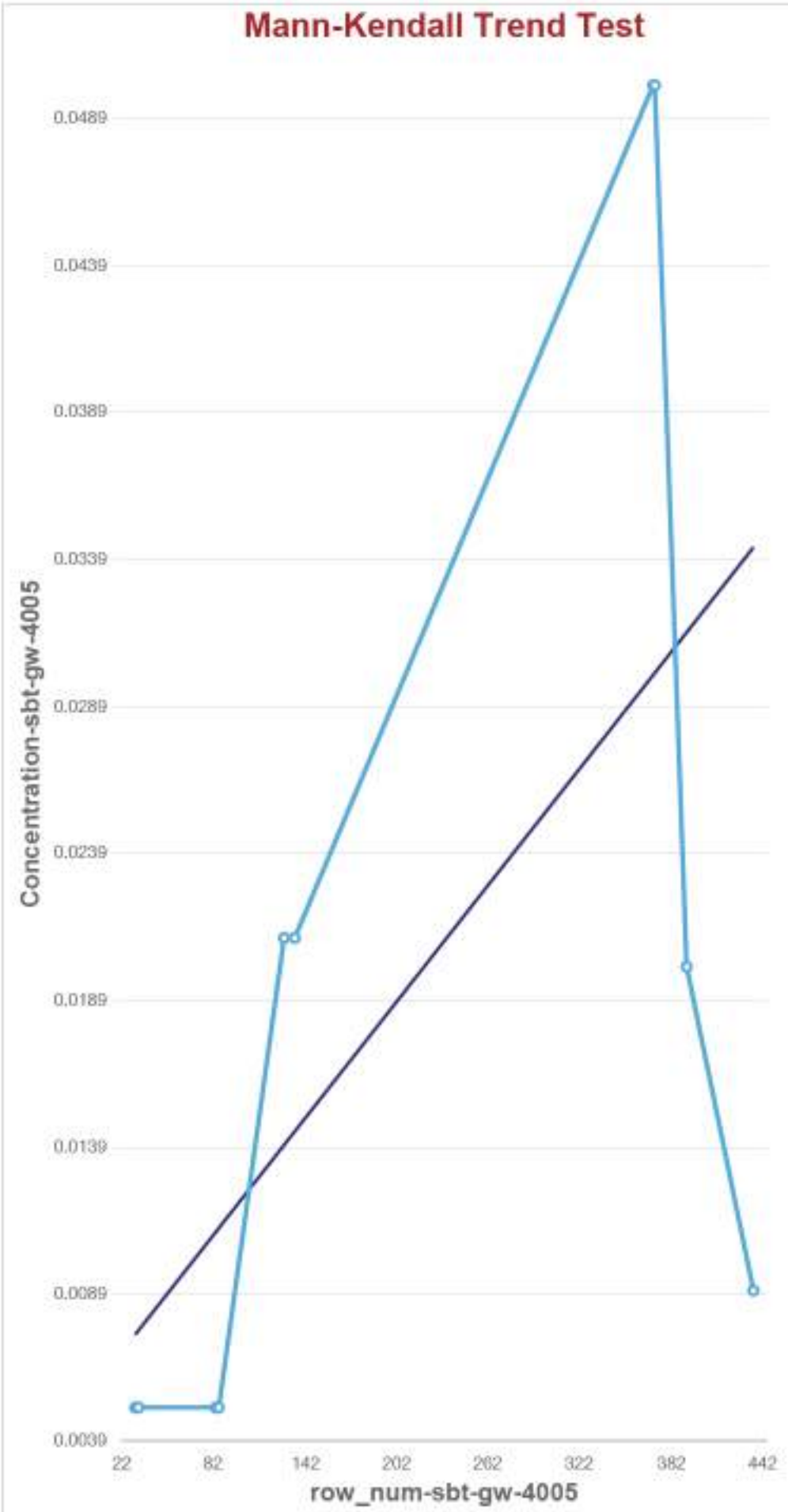
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	12
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	14.0831
Standardized Value of S	-2.8403
M-K Test Value (S)	-41
Tabulated p-value	0.0030
Approximate p-value	0.0023

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0107

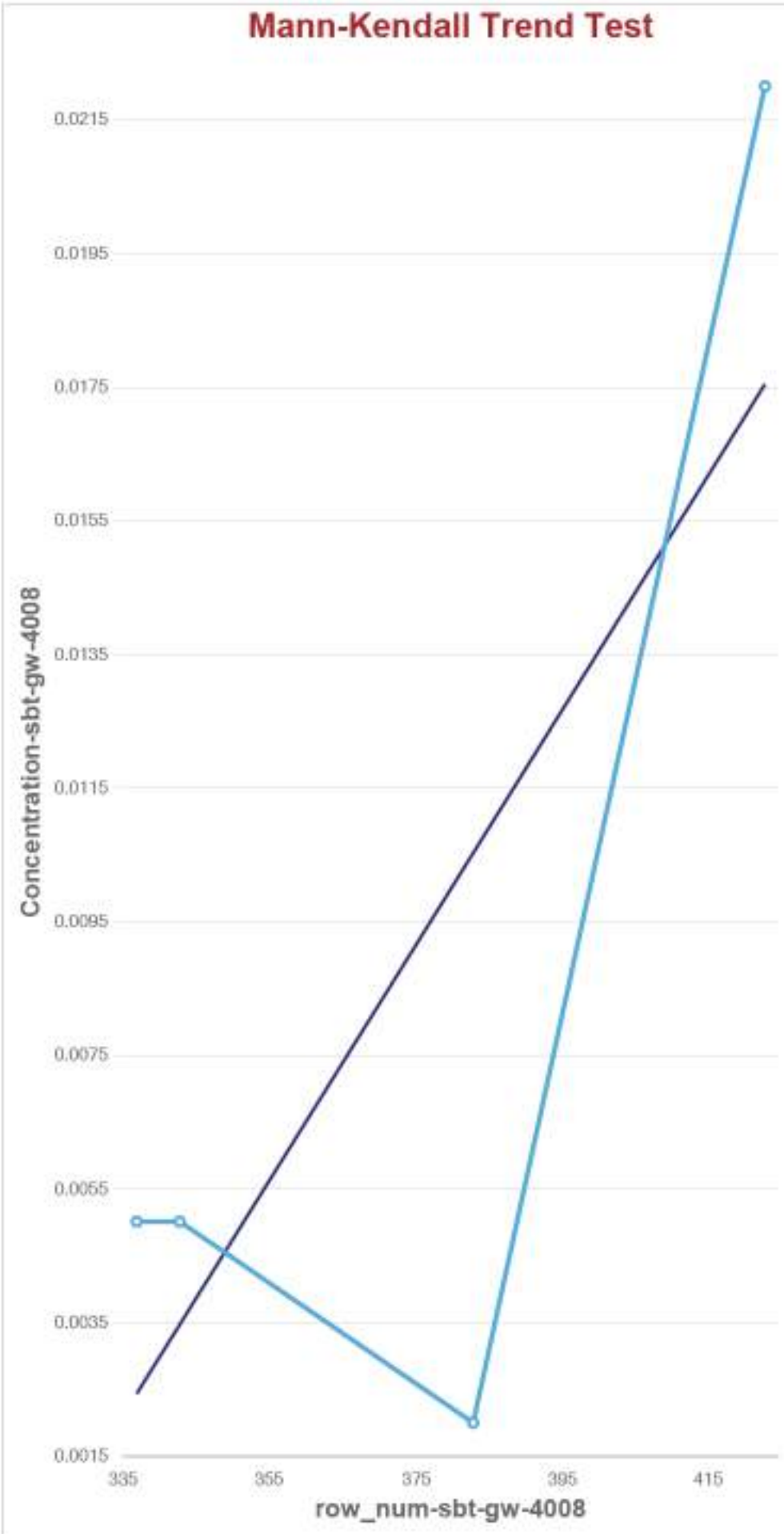
Statistically significant evidence of a decreasing trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.6927
Standardized Value of S	1.6834
M-K Test Value (S)	19
Tabulated p-value	0.0540
Approximate p-value	0.0461

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	0.0054

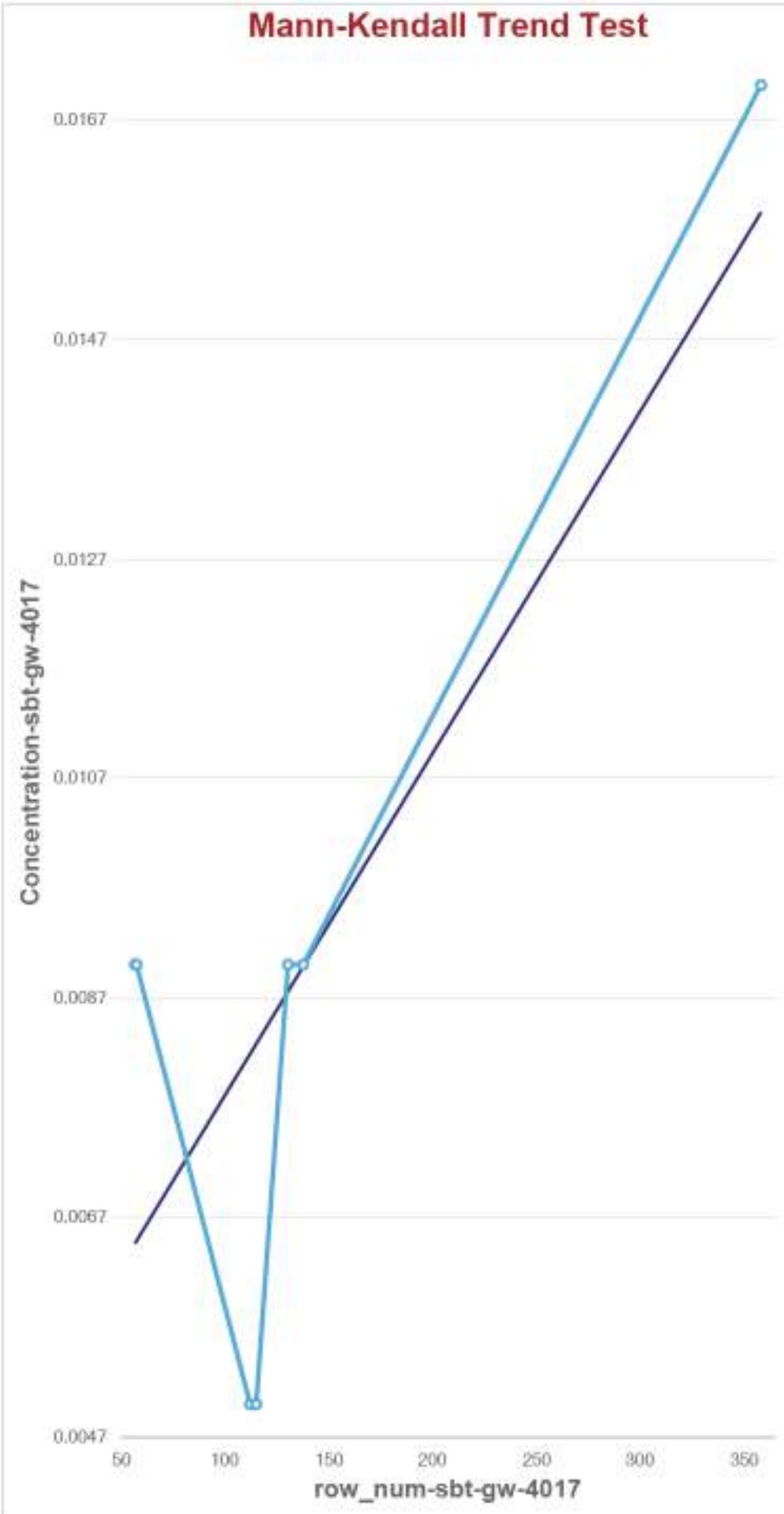
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	4
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	2.7689
Standardized Value of S	0.0000
M-K Test Value (S)	1
Tabulated p-value	0.6250
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	0.0002
OLS Regression Intercept	-0.0568

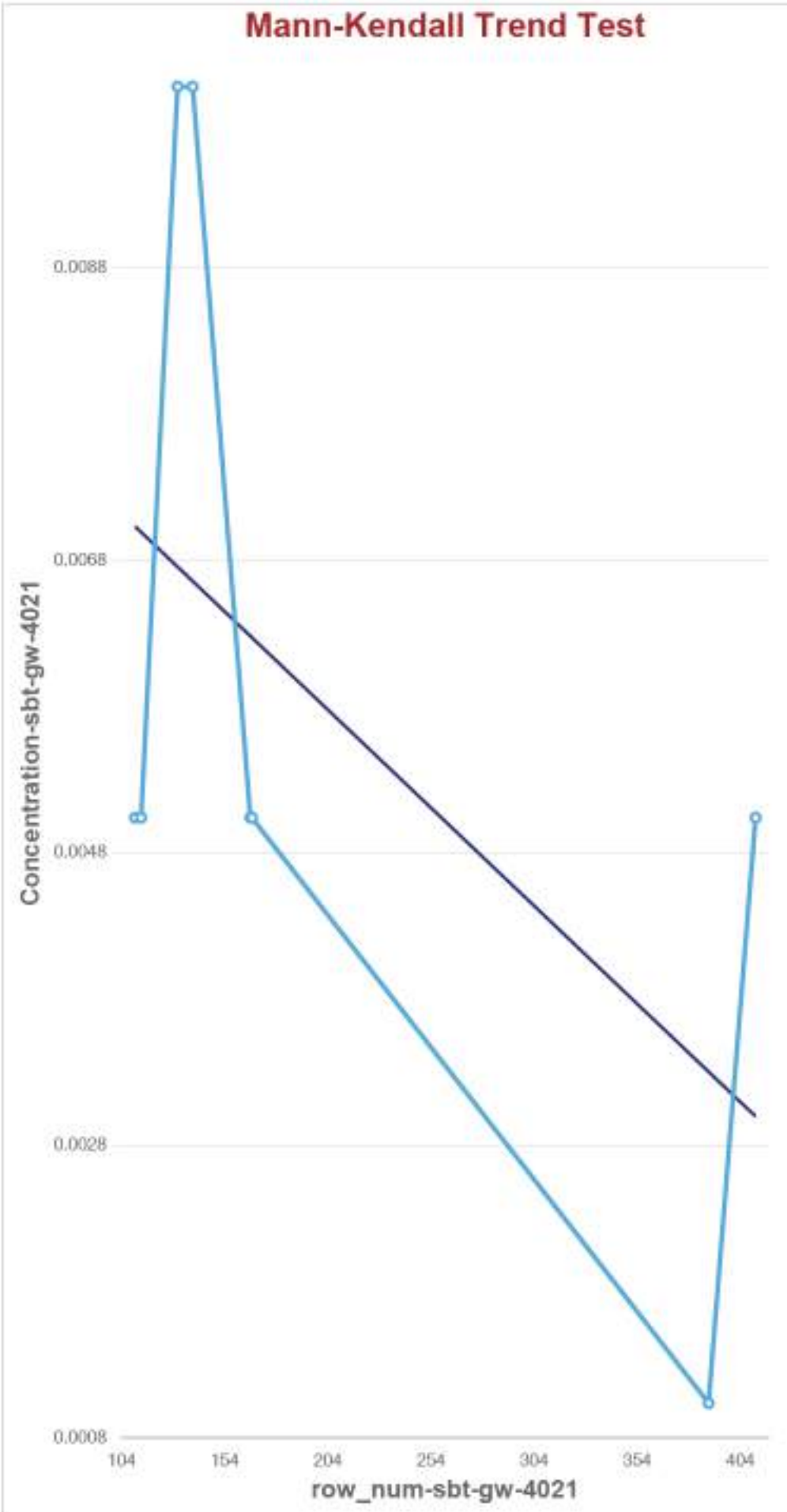
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	7
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	5.8878
Standardized Value of S	0.8492
M-K Test Value (S)	6
Tabulated p-value	0.1910
Approximate p-value	0.1979

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0047

Insufficient statistical evidence of a significant trend at the specified level of significance.

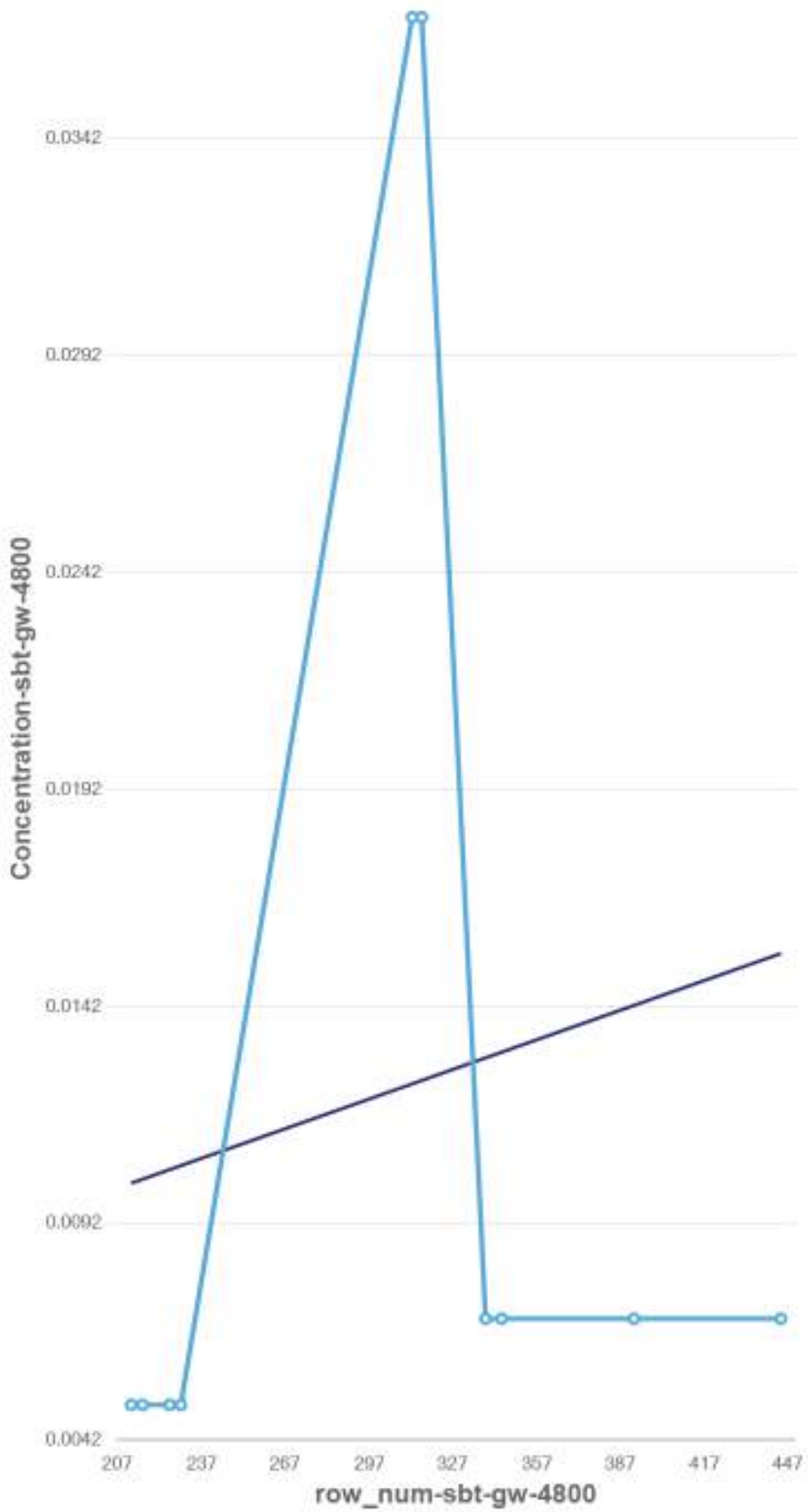


Mann-Kendall Trend Analysis	
n	8
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	6.9041
Standardized Value of S	-0.8690
M-K Test Value (S)	-7
Tabulated p-value	0.2740
Approximate p-value	0.1924

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0085

Insufficient statistical evidence of a significant trend at the specified level of significance.

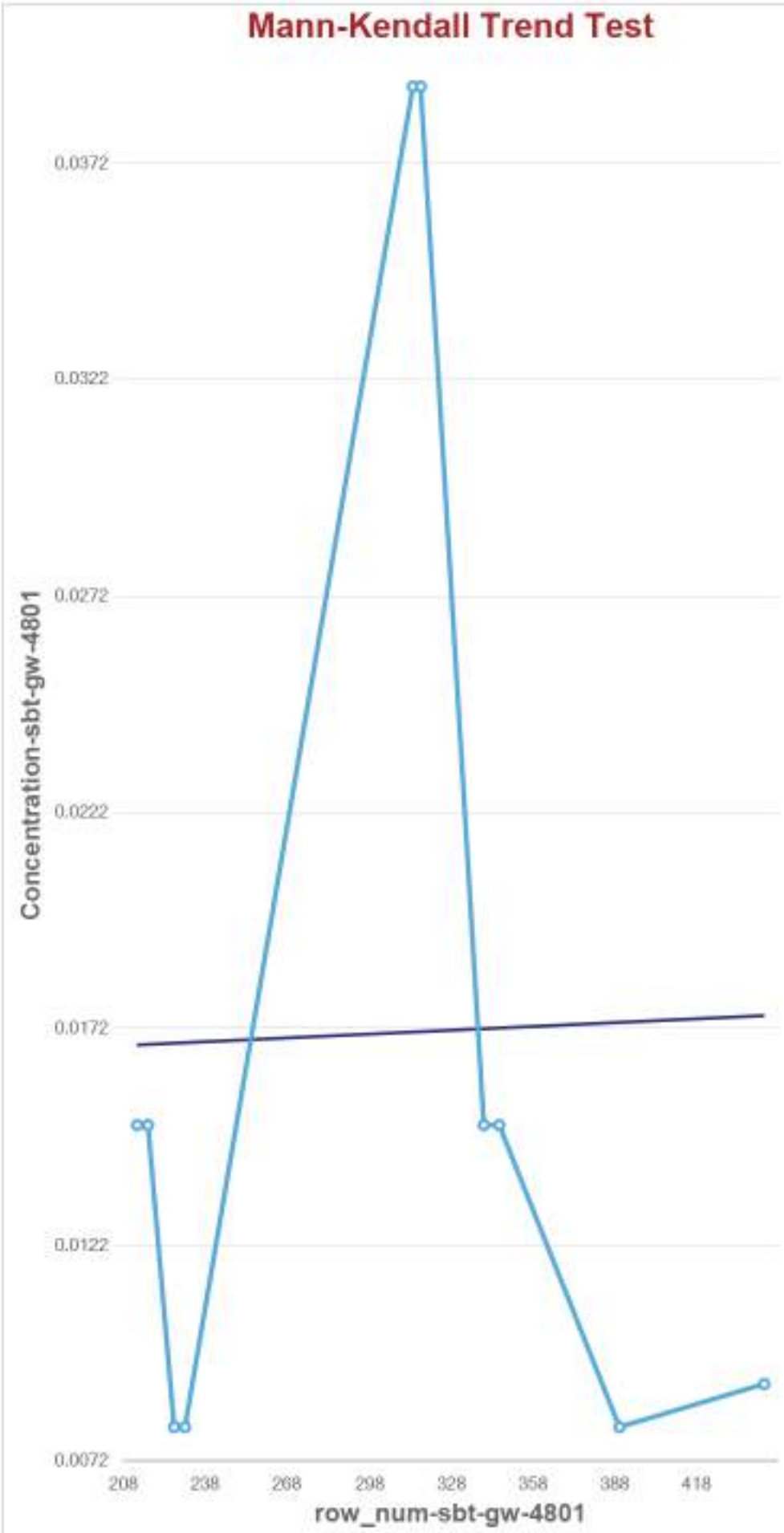
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.3280
Standardized Value of S	1.4524
M-K Test Value (S)	16
Tabulated p-value	0.0780
Approximate p-value	0.0732

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0053

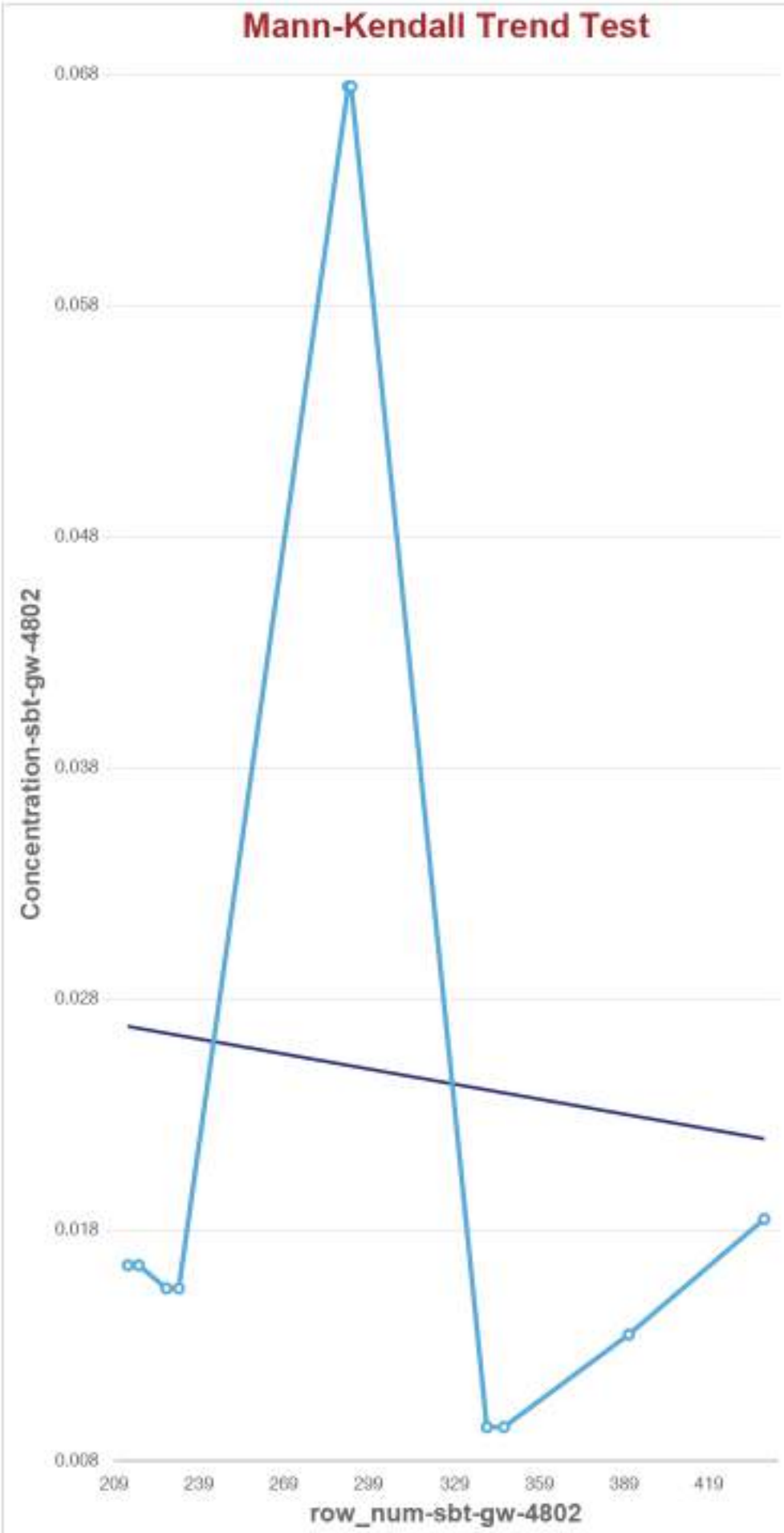
Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	10.5672
Standardized Value of S	-0.3785
M-K Test Value (S)	-5
Tabulated p-value	0.3640
Approximate p-value	0.3525

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0162

Insufficient statistical evidence of a significant trend at the specified level of significance.

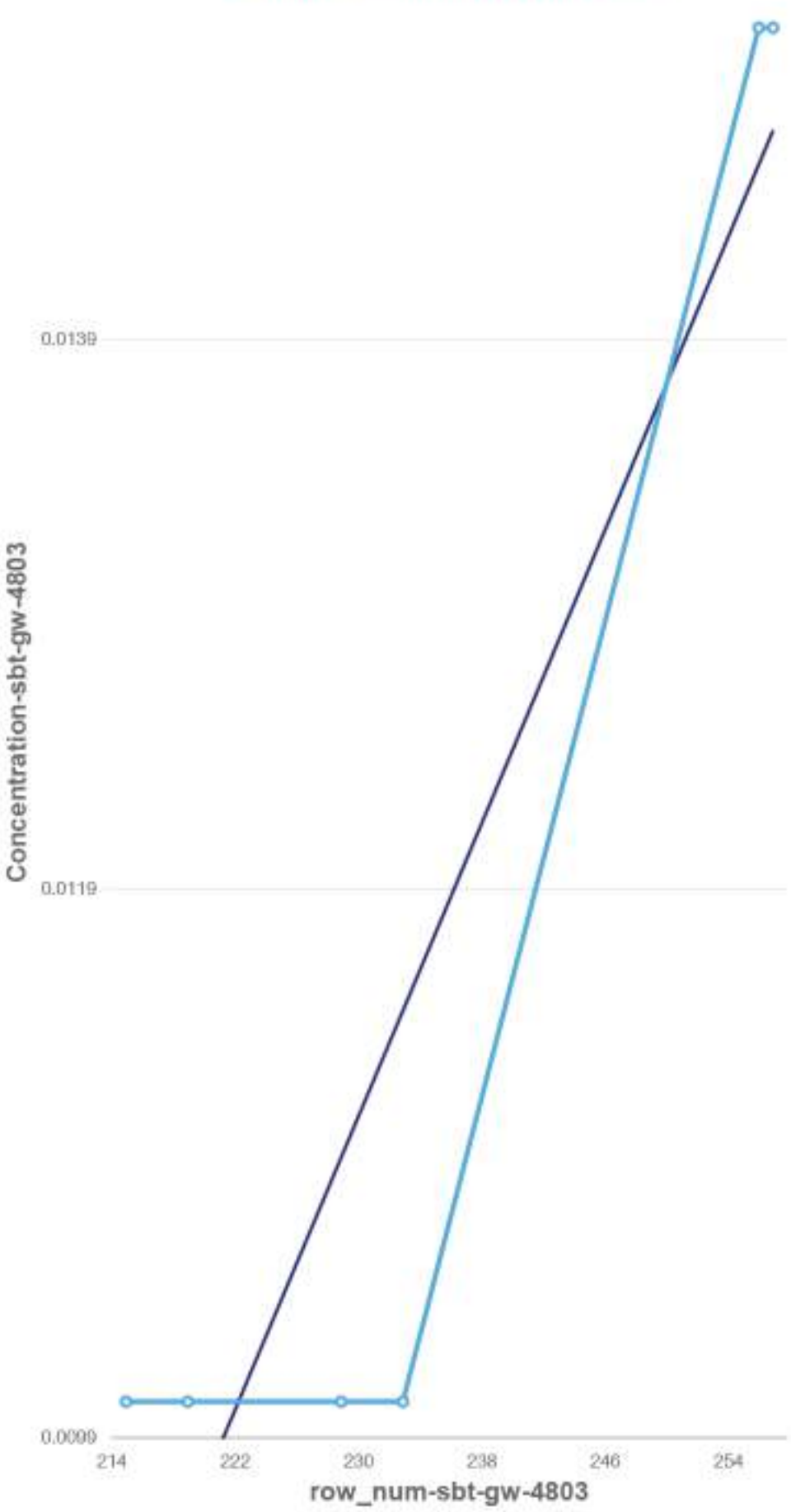


Mann-Kendall Trend Analysis	
n	10
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	11.0000
Standardized Value of S	-0.5455
M-K Test Value (S)	-7
Tabulated p-value	0.3000
Approximate p-value	0.2927

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0309

Insufficient statistical evidence of a significant trend at the specified level of significance.

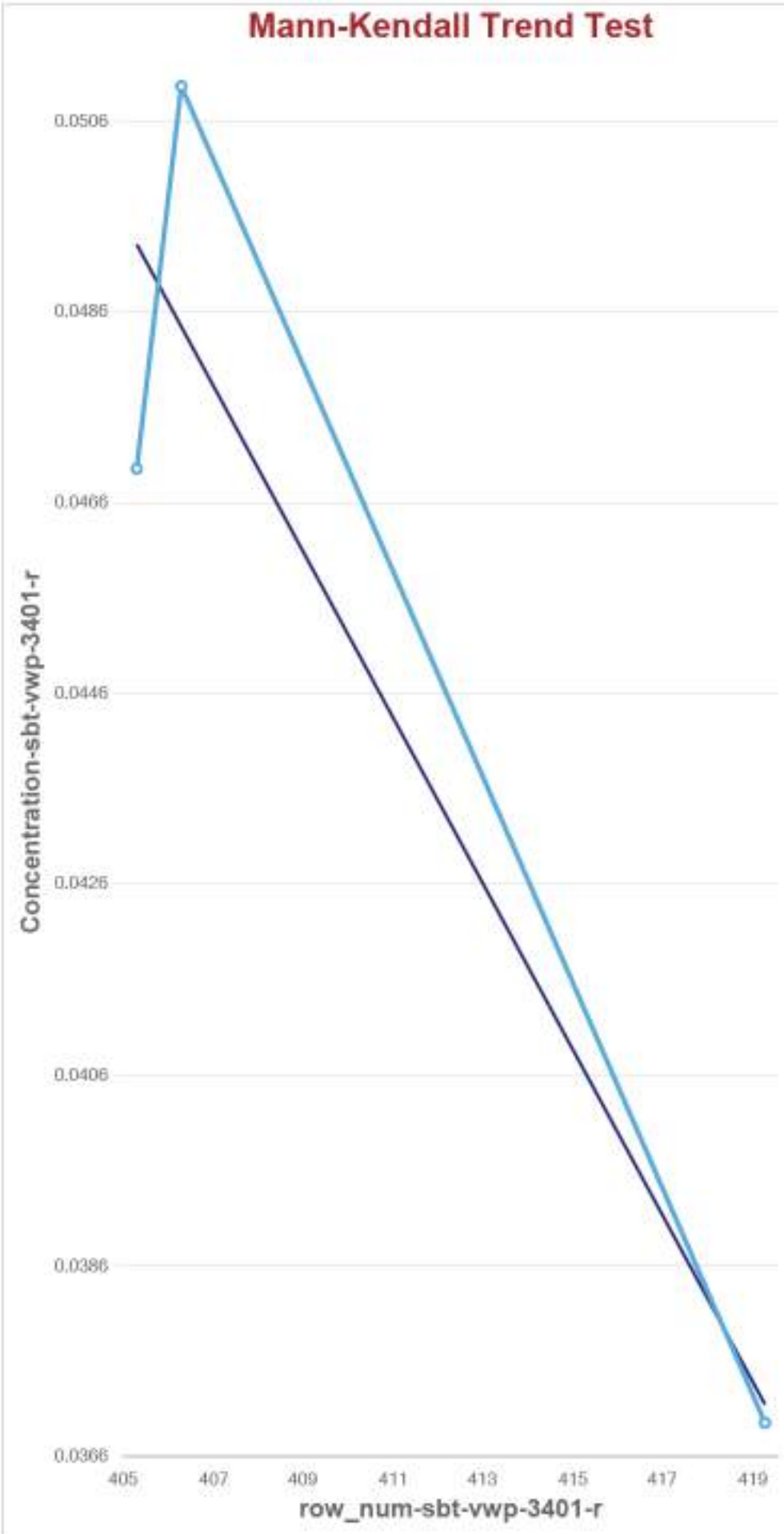
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	6
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	4.3205
Standardized Value of S	1.6202
M-K Test Value (S)	8
Tabulated p-value	0.0680
Approximate p-value	0.0526

OLS Regression Line (Blue)	
OLS Regression Slope	0.0001
OLS Regression Intercept	-0.0197

Insufficient statistical evidence of a significant trend at the specified level of significance.

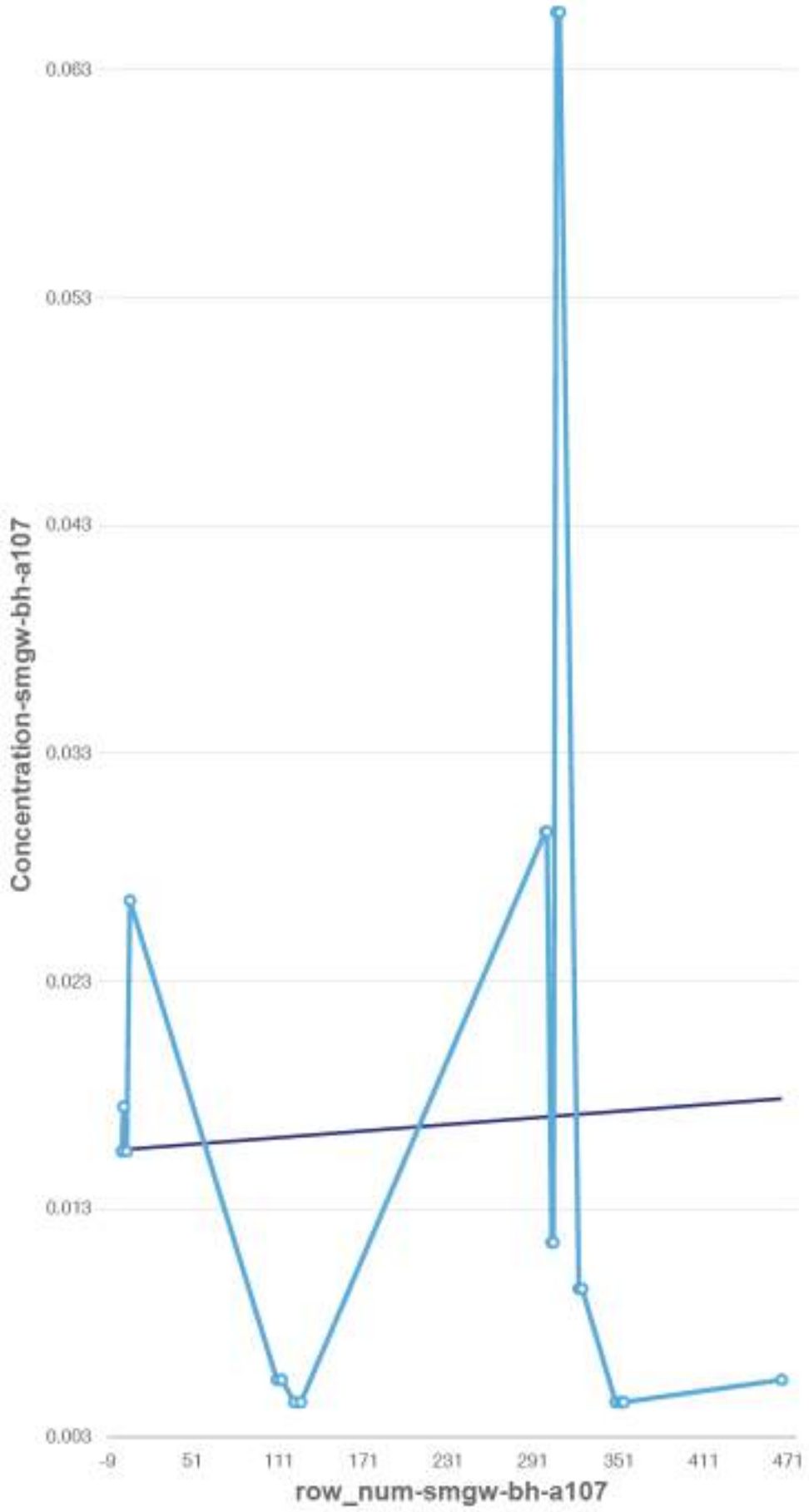


Mann-Kendall Trend Analysis	
n	3
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	1.9149
Standardized Value of S	0.0000
M-K Test Value (S)	-1
Tabulated p-value	
Approximate p-value	0.5000

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0009
OLS Regression Intercept	0.4012

Insufficient statistical evidence of a significant trend at the specified level of significance.

Mann-Kendall Trend Test

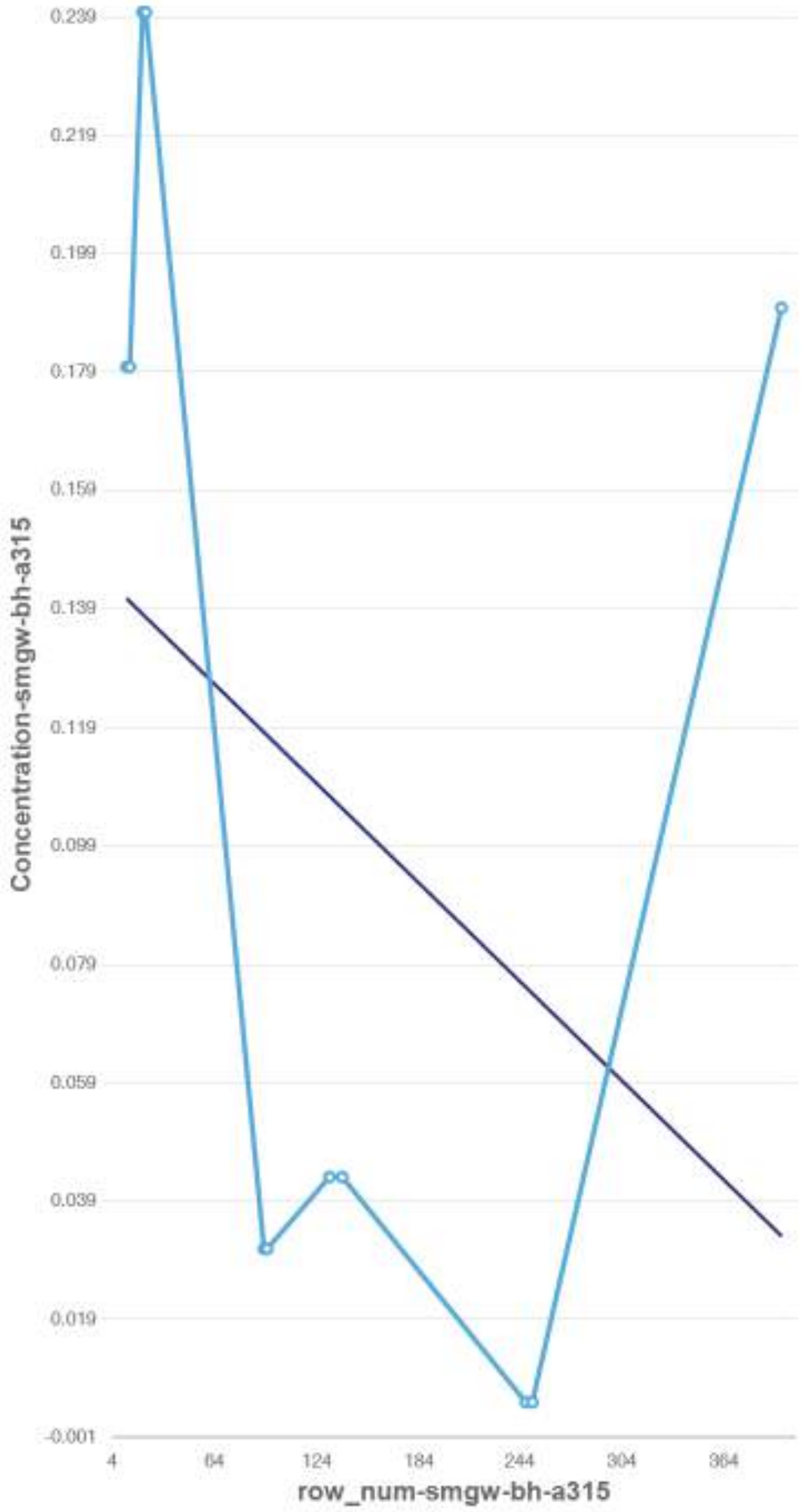


Mann-Kendall Trend Analysis	
n	21
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	32.5525
Standardized Value of S	-1.6589
M-K Test Value (S)	-55
Tabulated p-value	0.0550
Approximate p-value	0.0486

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0161

Insufficient statistical evidence of a significant trend at the specified level of significance.

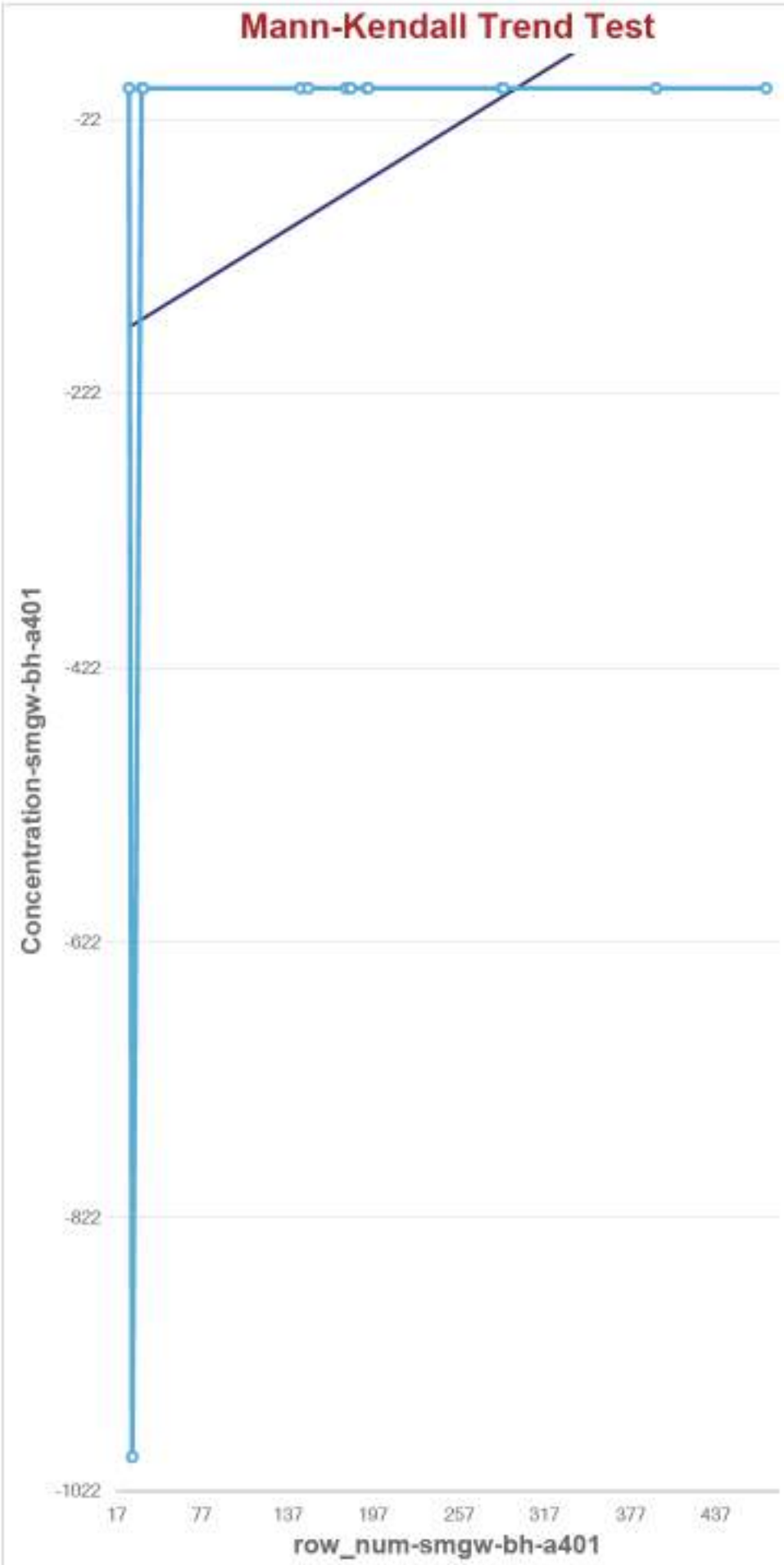
Mann-Kendall Trend Test



Mann-Kendall Trend Analysis	
n	11
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	12.6491
Standardized Value of S	-1.3440
M-K Test Value (S)	-18
Tabulated p-value	0.0820
Approximate p-value	0.0895

OLS Regression Line (Blue)	
OLS Regression Slope	-0.0003
OLS Regression Intercept	0.1443

Insufficient statistical evidence of a significant trend at the specified level of significance.



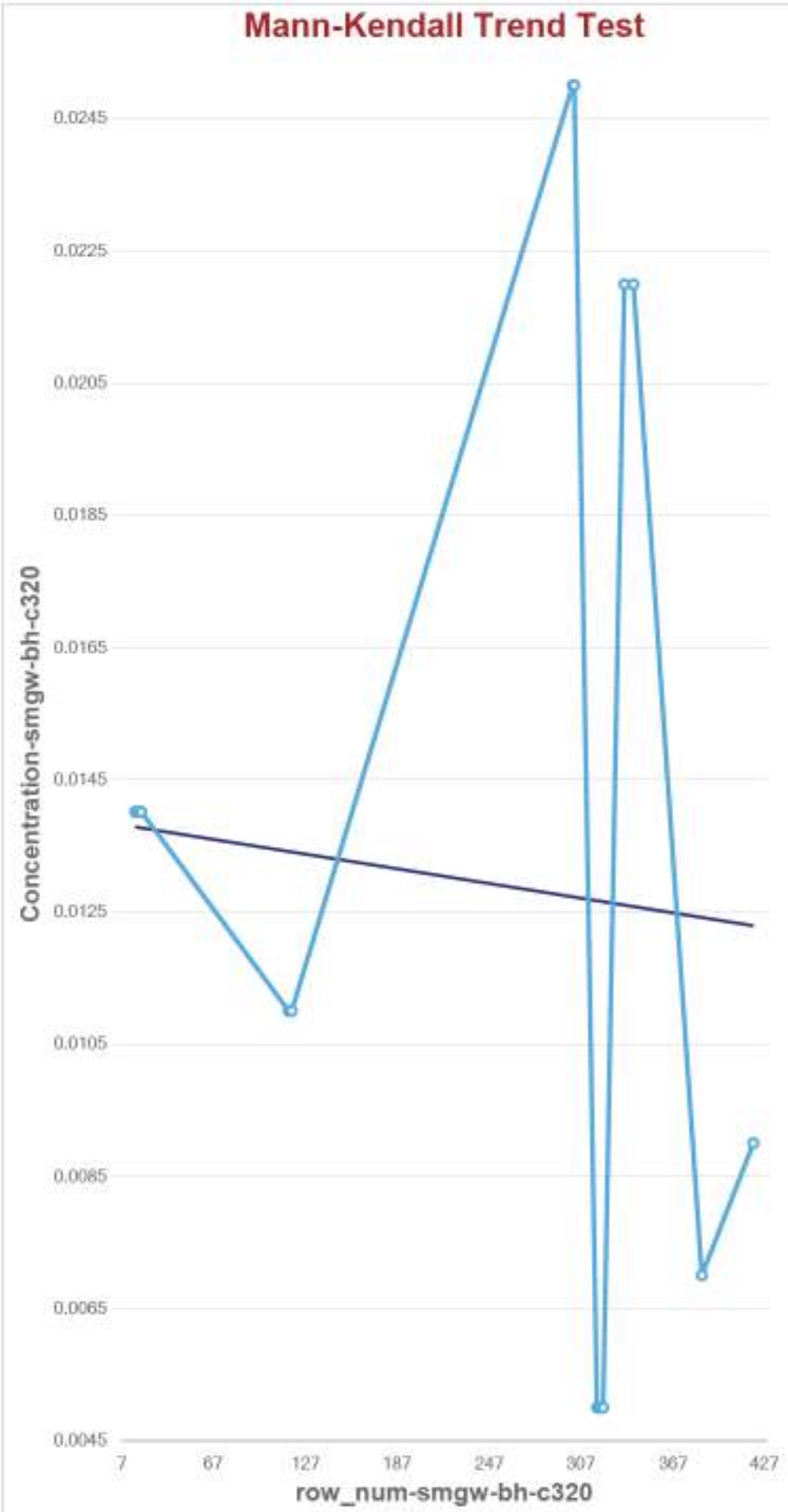
Mann-Kendall Trend Analysis

n	14
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	17.9444
Standardized Value of S	-1.1703
M-K Test Value (S)	-22
Tabulated p-value	0.1170
Approximate p-value	0.1209

OLS Regression Line (Blue)

OLS Regression Slope	0.6451
OLS Regression Interoept	-190.9340

Insufficient statistical evidence of a significant trend at the specified level of significance.



Mann-Kendall Trend Analysis	
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	19.8242
Standardized Value of S	-0.9080
M-K Test Value (S)	-19
Tabulated p-value	0.1900
Approximate p-value	0.1819

OLS Regression Line (Blue)	
OLS Regression Slope	0.0000
OLS Regression Intercept	0.0138

Insufficient statistical evidence of a significant trend at the specified level of significance.

APPENDIX G: ANALYTICAL LABORATORY CERTIFICATES

CERTIFICATE OF ANALYSIS

Work Order	: **ES2603043**	Page	: 1 of 17
Amendment	: **2**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	:	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 30-Jan-2026 16:15
Order number	: 754 SYDEN274937	Date Analysis Commenced	: 30-Jan-2026
C-O-C number	: 93576	Issue Date	: 07-Apr-2026 15:45
Sampler	: ELLIOT WOOD, Geoffrey Merchant		
Site	754-SYDEN374937 30.01.26		
Quote number	: ES25COFENV0011		
No. of samples received	15		
No. of samples analysed	: 15		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
* = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP005: LOR raised for TOC on various samples due to matrix interference.
- EG020: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.
- EG035: Positive Mercury result ES2603043 #6 has been confirmed by reanalysis.
- It has been noted that Nitrite is greater than NOx, however this difference is within the limits of experimental variation.
- TDS by method EA-015 sample 8 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Amendment (7/04/2026): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EG020F and EG020T metals as additionally requested.
- Amendment (4/03/2026): This report has been amended as a result of a request to change sample identification numbers (IDs) received from Elliot Wood for sample 14. All analysis results are as per the previous report.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	SBT-GW-3003-B-R	SBT-GW-3003-C-R	SBT-GW-3006-R	SBT-GW-3012-B	SBT-GW-3022
			Sampling date / time	30-Jan-2026 13:41	30-Jan-2026 14:01	30-Jan-2026 11:07	30-Jan-2026 10:04	30-Jan-2026 12:13
Compound	CAS Number	LOR	Unit	ES2603043-001	ES2603043-002	ES2603043-003	ES2603043-004	ES2603043-005
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	---	0.01	pH Unit	7.78	7.84	8.27	7.82	7.79
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	---	1	µS/cm	30700	18100	15600	27200	22000
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	---	10	mg/L	23000	13500	10900	20100	15900
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	958	728	340	1290	1150
Total Alkalinity as CaCO3	---	1	mg/L	958	728	340	1290	1150
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1080	307	44	1550	971
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	10200	6190	5430	8630	6480
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	362	160	259	261	235
Magnesium	7439-95-4	1	mg/L	982	537	129	1130	700
Sodium	7440-23-5	1	mg/L	5930	3220	2880	4870	4060
Potassium	7440-09-7	1	mg/L	36	51	48	48	40
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	0.03	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	0.004	0.005	0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.019	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	<0.001	0.005	<0.001	0.020	0.005
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3003-B-R	SBT-GW-3003-C-R	SBT-GW-3006-R	SBT-GW-3012-B	SBT-GW-3022
				Sampling date / time	30-Jan-2026 13:41	30-Jan-2026 14:01	30-Jan-2026 11:07	30-Jan-2026 10:04	30-Jan-2026 12:13
Compound	CAS Number	LOR	Unit		ES2603043-001	ES2603043-002	ES2603043-003	ES2603043-004	ES2603043-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	0.013	0.010
Manganese	7439-96-5	0.001	mg/L		1.61	0.131	<0.001	0.113	0.059
Iron	7439-89-6	0.05	mg/L		2.96	0.22	<0.05	<0.05	0.07
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		2.13	8.63	0.22	1.20	8.73
Arsenic	7440-38-2	0.001	mg/L		0.007	0.016	0.001	0.001	0.012
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.006	0.017	0.013	0.002	0.023
Copper	7440-50-8	0.001	mg/L		0.009	0.038	<0.001	0.005	0.010
Cobalt	7440-48-4	0.001	mg/L		0.006	0.020	<0.001	0.004	0.024
Nickel	7440-02-0	0.001	mg/L		0.008	0.033	<0.001	0.014	0.022
Lead	7439-92-1	0.001	mg/L		0.005	0.017	<0.001	0.003	0.023
Zinc	7440-66-6	0.005	mg/L		0.083	0.529	<0.005	0.020	0.170
Manganese	7439-96-5	0.001	mg/L		1.65	0.718	0.079	0.176	0.431
Iron	7439-89-6	0.05	mg/L		13.2	26.5	0.86	2.66	16.0
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.39	4.46	4.76	0.07	1.85
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	1.50	<0.01	1.19	0.02
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		<0.01	1.50	<0.01	1.19	0.02

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3003-B-R	SBT-GW-3003-C-R	SBT-GW-3006-R	SBT-GW-3012-B	SBT-GW-3022
				Sampling date / time	30-Jan-2026 13:41	30-Jan-2026 14:01	30-Jan-2026 11:07	30-Jan-2026 10:04	30-Jan-2026 12:13
Compound	CAS Number	LOR	Unit		ES2603043-001	ES2603043-002	ES2603043-003	ES2603043-004	ES2603043-005
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		1.4	4.9	5.0	0.3	2.5
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		1.4	6.4	5.0	1.5	2.5
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.97	0.42	0.06	0.11	0.61
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	0.02	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		329	196	161	301	226
ø Total Cations	---	0.01	meq/L		358	194	150	319	247
ø Ionic Balance	---	0.01	%		4.13	0.51	3.49	2.84	4.43
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		67	10	5	<4	5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		----	----	----	<20	<20
C10 - C14 Fraction	---	50	µg/L		----	----	----	<50	<50
C15 - C28 Fraction	---	100	µg/L		----	----	----	<100	<100
C29 - C36 Fraction	---	50	µg/L		----	----	----	<50	<50
^ C10 - C36 Fraction (sum)	---	50	µg/L		----	----	----	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	----	----	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	----	----	<20	<20
>C10 - C16 Fraction	---	100	µg/L		----	----	----	<100	<100
>C16 - C34 Fraction	---	100	µg/L		----	----	----	<100	<100
>C34 - C40 Fraction	---	100	µg/L		----	----	----	<100	<100
^ >C10 - C40 Fraction (sum)	---	100	µg/L		----	----	----	<100	<100

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3003-B-R	SBT-GW-3003-C-R	SBT-GW-3006-R	SBT-GW-3012-B	SBT-GW-3022
				Sampling date / time	30-Jan-2026 13:41	30-Jan-2026 14:01	30-Jan-2026 11:07	30-Jan-2026 10:04	30-Jan-2026 12:13
Compound	CAS Number	LOR	Unit		ES2603043-001	ES2603043-002	ES2603043-003	ES2603043-004	ES2603043-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	---	---	<100	<100
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	---	---	<1	<1
Toluene	108-88-3	2	µg/L		---	---	---	<2	<2
Ethylbenzene	100-41-4	2	µg/L		---	---	---	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	---	---	<2	<2
ortho-Xylene	95-47-6	2	µg/L		---	---	---	<2	<2
^ Total Xylenes	---	2	µg/L		---	---	---	<2	<2
^ Sum of BTEX	---	1	µg/L		---	---	---	<1	<1
Naphthalene	91-20-3	5	µg/L		---	---	---	<5	<5
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		---	---	---	**124**	**118**
Toluene-D8	2037-26-5	2	%		---	---	---	**109**	**107**
4-Bromofluorobenzene	460-00-4	2	%		---	---	---	**110**	**109**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	SBT-GW-3012-C	SMGW-BH-C320	SBT-GW-3012-A	SBT-GW-4403	SBT-GW-4014-R
			Sampling date / time	30-Jan-2026 09:45	30-Jan-2026 08:13	29-Jan-2026 08:53	29-Jan-2026 08:00	29-Jan-2026 10:46
Compound	CAS Number	LOR	Unit	ES2603043-006	ES2603043-007	ES2603043-008	ES2603043-009	ES2603043-010
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	---	0.01	pH Unit	7.63	7.83	7.79	8.85	7.84
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	---	1	µS/cm	26500	26900	22800	1840	15000
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	---	10	mg/L	20900	19900	19700	1090	10200
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	19	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	581	902	242	119	1230
Total Alkalinity as CaCO3	---	1	mg/L	581	902	242	137	1230
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	18	678	73	71	468
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	8640	8620	7900	484	4810
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	521	319	468	10	234
Magnesium	7439-95-4	1	mg/L	525	846	252	9	462
Sodium	7440-23-5	1	mg/L	4890	4920	4150	365	2680
Potassium	7440-09-7	1	mg/L	71	11	58	7	44
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	0.50	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.012	0.085	0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.002	0.003	<0.001
Nickel	7440-02-0	0.001	mg/L	0.036	0.006	0.009	<0.001	0.011
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3012-C	SMGW-BH-C320	SBT-GW-3012-A	SBT-GW-4403	SBT-GW-4014-R
				Sampling date / time	30-Jan-2026 09:45	30-Jan-2026 08:13	29-Jan-2026 08:53	29-Jan-2026 08:00	29-Jan-2026 10:46
Compound	CAS Number	LOR	Unit		ES2603043-006	ES2603043-007	ES2603043-008	ES2603043-009	ES2603043-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.021	0.009	0.053	0.037	0.049
Manganese	7439-96-5	0.001	mg/L		0.448	0.581	0.226	0.002	1.47
Iron	7439-89-6	0.05	mg/L		0.59	0.33	0.21	0.11	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		90.2	1.31	1.52	4.00	6.42
Arsenic	7440-38-2	0.001	mg/L		0.090	0.002	0.018	0.102	0.004
Cadmium	7440-43-9	0.0001	mg/L		0.0004	0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.252	0.002	0.010	0.005	0.012
Copper	7440-50-8	0.001	mg/L		0.403	0.003	0.006	0.018	0.008
Cobalt	7440-48-4	0.001	mg/L		0.154	0.007	0.005	0.005	0.016
Nickel	7440-02-0	0.001	mg/L		0.224	0.007	0.016	0.007	0.018
Lead	7439-92-1	0.001	mg/L		0.144	0.002	0.004	0.003	0.020
Zinc	7440-66-6	0.005	mg/L		0.969	0.023	0.074	0.227	0.062
Manganese	7439-96-5	0.001	mg/L		3.21	0.835	0.219	0.133	2.56
Iron	7439-89-6	0.05	mg/L		233	3.09	3.93	4.18	23.2
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		0.0003	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		1.91	0.06	8.27	0.25	0.87
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.03	<0.01	0.02	0.01	0.24
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		11.5	0.95	1.14	<0.01	2.36
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		11.5	0.95	1.16	<0.01	2.60

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3012-C	SMGW-BH-C320	SBT-GW-3012-A	SBT-GW-4403	SBT-GW-4014-R
				Sampling date / time	30-Jan-2026 09:45	30-Jan-2026 08:13	29-Jan-2026 08:53	29-Jan-2026 08:00	29-Jan-2026 10:46
Compound	CAS Number	LOR	Unit		ES2603043-006	ES2603043-007	ES2603043-008	ES2603043-009	ES2603043-010
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		2.5	0.3	8.3	0.9	1.1
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		14.0	1.2	9.5	0.9	3.7
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.97	0.12	0.21	0.16	0.22
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	0.01	0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		256	275	229	17.9	170
ø Total Cations	---	0.01	meq/L		284	300	226	17.3	167
ø Ionic Balance	---	0.01	%		5.19	4.27	0.68	1.63	0.77
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		3	<4	7	5	3
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		----	<20	----	<20	----
C10 - C14 Fraction	---	50	µg/L		----	<50	----	<50	----
C15 - C28 Fraction	---	100	µg/L		----	<100	----	<100	----
C29 - C36 Fraction	---	50	µg/L		----	<50	----	<50	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		----	<50	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	<20	----	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	<20	----	<20	----
>C10 - C16 Fraction	---	100	µg/L		----	<100	----	<100	----
>C16 - C34 Fraction	---	100	µg/L		----	<100	----	<100	----
>C34 - C40 Fraction	---	100	µg/L		----	<100	----	<100	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		----	<100	----	<100	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3012-C	SMGW-BH-C320	SBT-GW-3012-A	SBT-GW-4403	SBT-GW-4014-R
				Sampling date / time	30-Jan-2026 09:45	30-Jan-2026 08:13	29-Jan-2026 08:53	29-Jan-2026 08:00	29-Jan-2026 10:46
Compound	CAS Number	LOR	Unit		ES2603043-006	ES2603043-007	ES2603043-008	ES2603043-009	ES2603043-010
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	<100	---	<100	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	<1	---	<1	---
Toluene	108-88-3	2	µg/L		---	<2	---	<2	---
Ethylbenzene	100-41-4	2	µg/L		---	<2	---	<2	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	<2	---	<2	---
ortho-Xylene	95-47-6	2	µg/L		---	<2	---	<2	---
^ Total Xylenes	---	2	µg/L		---	<2	---	<2	---
^ Sum of BTEX	---	1	µg/L		---	<1	---	<1	---
Naphthalene	91-20-3	5	µg/L		---	<5	---	<5	---
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		---	<0.02	---	---	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		---	<0.01	---	---	<0.01
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		---	<0.01	---	---	<0.01
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		---	<0.1	---	---	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		---	<0.02	---	---	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		---	<0.02	---	---	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		---	<0.02	---	---	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		---	<0.01	---	---	<0.01
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		---	<0.05	---	---	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		---	<0.05	---	---	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		---	<0.05	---	---	<0.05

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-3012-C	SMGW-BH-C320	SBT-GW-3012-A	SBT-GW-4403	SBT-GW-4014-R
				Sampling date / time	30-Jan-2026 09:45	30-Jan-2026 08:13	29-Jan-2026 08:53	29-Jan-2026 08:00	29-Jan-2026 10:46
Compound	CAS Number	LOR	Unit		ES2603043-006	ES2603043-007	ES2603043-008	ES2603043-009	ES2603043-010
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		----	<0.05	----	----	<0.05
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	<0.01	----	----	<0.01
Sum of PFAS (WA DER List)	---	0.01	µg/L		----	<0.01	----	----	<0.01
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	**120**	----	**114**	----
Toluene-D8	2037-26-5	2	%		----	**110**	----	**113**	----
4-Bromofluorobenzene	460-00-4	2	%		----	**128**	----	**125**	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		----	**94.1**	----	----	**94.5**
13C8-PFOA	---	0.02	%		----	**97.1**	----	----	**97.7**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-4017-R	SBT-GW-4021	SBT-GW-4803-R	SBT-GW-4008	SBT-VWP-3401 add
				Sampling date / time	29-Jan-2026 11:27	29-Jan-2026 10:04	29-Jan-2026 13:20	30-Jan-2026 08:51	29-Jan-2026 14:16
Compound	CAS Number	LOR	Unit		ES2603043-011	ES2603043-012	ES2603043-013	ES2603043-014	ES2603043-015
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit		7.81	7.34	7.64	6.95	7.87
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm		16700	2520	20500	2120	26600
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L		10800	1720	15200	1250	18900
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		1140	163	1050	141	873
Total Alkalinity as CaCO3	---	1	mg/L		1140	163	1050	141	873
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		363	73	977	104	1090
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		5540	706	6840	558	8710
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		261	16	453	5	307
Magnesium	7439-95-4	1	mg/L		425	22	985	22	896
Sodium	7440-23-5	1	mg/L		3190	487	3220	393	5110
Potassium	7440-09-7	1	mg/L		39	3	38	8	29
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	0.10	3.17	0.03	0.91
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.003	<0.001	0.018
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	0.010	<0.001	0.002
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	0.004	0.002	<0.001
Nickel	7440-02-0	0.001	mg/L		0.005	0.001	0.018	0.012	0.017
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	0.008	<0.001	0.003

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-4017-R	SBT-GW-4021	SBT-GW-4803-R	SBT-GW-4008	SBT-VWP-3401 add
				Sampling date / time	29-Jan-2026 11:27	29-Jan-2026 10:04	29-Jan-2026 13:20	30-Jan-2026 08:51	29-Jan-2026 14:16
Compound	CAS Number	LOR	Unit		ES2603043-011	ES2603043-012	ES2603043-013	ES2603043-014	ES2603043-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.016	0.005	0.061	0.022	0.037
Manganese	7439-96-5	0.001	mg/L		0.144	0.376	2.35	0.067	1.65
Iron	7439-89-6	0.05	mg/L		<0.05	0.07	8.49	<0.05	7.36
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		5.28	159	6.59	11.6	1.93
Arsenic	7440-38-2	0.001	mg/L		0.003	0.013	0.005	0.012	0.023
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0005	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.009	0.133	0.016	0.014	0.003
Copper	7440-50-8	0.001	mg/L		0.029	0.267	0.018	0.040	0.015
Cobalt	7440-48-4	0.001	mg/L		0.009	0.115	0.020	0.015	0.025
Nickel	7440-02-0	0.001	mg/L		0.013	0.133	0.023	0.038	0.027
Lead	7439-92-1	0.001	mg/L		0.020	0.130	0.010	0.015	0.006
Zinc	7440-66-6	0.005	mg/L		0.068	0.484	0.079	0.114	0.059
Manganese	7439-96-5	0.001	mg/L		0.769	5.45	2.33	0.302	1.64
Iron	7439-89-6	0.05	mg/L		24.1	177	13.3	17.9	8.26
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		2.49	0.14	0.24	0.08	0.78
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.03	<0.01	0.02	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.05	<0.01	0.44	9.45	0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		0.08	<0.01	0.46	9.45	0.01

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-4017-R	SBT-GW-4021	SBT-GW-4803-R	SBT-GW-4008	SBT-VWP-3401 add
				Sampling date / time	29-Jan-2026 11:27	29-Jan-2026 10:04	29-Jan-2026 13:20	30-Jan-2026 08:51	29-Jan-2026 14:16
Compound	CAS Number	LOR	Unit		ES2603043-011	ES2603043-012	ES2603043-013	ES2603043-014	ES2603043-015
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		2.6	1.3	0.8	2.5	1.3
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		2.7	1.3	1.3	12.0	1.3
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.67	0.31	0.35	0.42	0.11
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		187	24.7	234	20.7	286
ø Total Cations	---	0.01	meq/L		188	23.9	245	19.4	312
ø Ionic Balance	---	0.01	%		0.31	1.69	2.18	3.40	4.39
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		<4	24	<4	5	10
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	---	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	---	100	µg/L		190	----	----	----	----
C29 - C36 Fraction	---	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		190	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	---	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	---	100	µg/L		190	----	----	----	----
>C34 - C40 Fraction	---	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		190	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-4017-R	SBT-GW-4021	SBT-GW-4803-R	SBT-GW-4008	SBT-VWP-3401 add
				Sampling date / time	29-Jan-2026 11:27	29-Jan-2026 10:04	29-Jan-2026 13:20	30-Jan-2026 08:51	29-Jan-2026 14:16
Compound	CAS Number	LOR	Unit		ES2603043-011	ES2603043-012	ES2603043-013	ES2603043-014	ES2603043-015
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		<100	---	---	---	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	---	---	---	---
Toluene	108-88-3	2	µg/L		<2	---	---	---	---
Ethylbenzene	100-41-4	2	µg/L		<2	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	---	---	---	---
ortho-Xylene	95-47-6	2	µg/L		<2	---	---	---	---
^ Total Xylenes	---	2	µg/L		<2	---	---	---	---
^ Sum of BTEX	---	1	µg/L		<1	---	---	---	---
Naphthalene	91-20-3	5	µg/L		<5	---	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	---	---	---	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	---	---	---	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	---	---	---	---
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	---	---	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	---	---	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	---	---	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	---	---	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	---	---	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	---	---	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	---	---	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	---	---	---	---

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-4017-R	SBT-GW-4021	SBT-GW-4803-R	SBT-GW-4008	SBT-VWP-3401 add
				Sampling date / time	29-Jan-2026 11:27	29-Jan-2026 10:04	29-Jan-2026 13:20	30-Jan-2026 08:51	29-Jan-2026 14:16
Compound	CAS Number	LOR	Unit		ES2603043-011	ES2603043-012	ES2603043-013	ES2603043-014	ES2603043-015
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	----	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		122	----	----	----	----
Toluene-D8	2037-26-5	2	%		110	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		124	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		96.1	----	----	----	----
13C8-PFOA	---	0.02	%		97.2	----	----	----	----

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP231S: PFAS Surrogate			
13C4-PFOS	---	50	120
13C8-PFOA	---	50	120

QUALITY CONTROL REPORT

Work Order	: **ES2603043**	Page	: 1 of 14
Amendment	: **2**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 30-Jan-2026
Order number	: 754-SYDEN274937	Date Analysis Commenced	: 30-Jan-2026
C-O-C number	: 93576	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant		
Site	: 754-SYDEN374937 30.01.26		
Quote number	: ES25COFENV0011		
No. of samples received	: 15		
No. of samples analysed	: 15		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005P: pH by PC Titrator (QC Lot: 7167244)									
ES2603043-008	SBT-GW-3012-A	EA005-P: pH Value	---	0.01	pH Unit	7.79	7.75	0.5	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 7167243)									
ES2603043-009	SBT-GW-4403	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	1840	1830	0.6	0% - 20%
ES2603047-005	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	<1	<1	0.0	No Limit
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7170222)									
ES2602359-001	Anonymous	EA015H: Total Dissolved Solids @180°C		10	mg/L	22	25	13.9	No Limit
ES2603002-011	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	227	238	4.5	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7176260)									
EN2601571-002	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	2950	3070	4.0	0% - 20%
ES2603016-003	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	3330	3320	0.6	0% - 20%
ES2603043-005	SBT-GW-3022	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	15900	15400	2.9	0% - 20%
EW2600507-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	112	94	16.9	0% - 50%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7176270)									
ES2602506-006	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	905	880	2.8	0% - 20%
ES2603293-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	2020	2030	0.2	0% - 20%
EW2600539-003	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	104	98	5.9	0% - 50%
EW2600544-005	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	97	104	7.4	0% - 50%
ED037P: Alkalinity by PC Titrator (QC Lot: 7167245)									
ES2603043-001	SBT-GW-3003-B-R	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 7167245) - continued									
ES2603043-001	SBT-GW-3003-B-R	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	958	960	0.2	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	958	960	0.2	0% - 20%
ES2603043-008	SBT-GW-3012-A	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	242	240	0.9	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	242	240	0.9	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 7167246)									
ES2603043 009	SBT GW 4403	ED037-P: Hydroxide Alkalinity as CaCO3		1	mg/L	1	1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	19	19	0.0	0% - 50%
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	119	124	4.1	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	137	142	3.7	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7167519)									
ES2602941-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1550	1660	7.1	0% - 20%
ES2603043-008	SBT-GW-3012-A	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	73	75	2.2	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 7167520)									
ES2602941-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	11800	11600	1.6	0% - 20%
ES2603043-008	SBT-GW-3012-A	ED045G: Chloride	16887-00-6	1	mg/L	7900	7500	5.2	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 7174571)									
ES2603016-005	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	1	1	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	13	13	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	256	256	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	3	3	0.0	No Limit
ES2603043-007	SMGW-BH-C320	ED093F: Calcium	7440-70-2	1	mg/L	319	323	1.4	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	846	860	1.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	4920	5060	2.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	11	11	0.0	0% - 50%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7174572)									
ES2603016-005	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.041	0.040	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.009	0.009	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.060	0.061	0.0	0% - 50%
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.15	0.15	0.0	0% - 50%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	3.12	3.11	0.4	0% - 20%

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7174572) - continued									
ES2603043-007	SMGW-BH-C320	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.581	0.585	0.7	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.006	0.005	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.009	0.009	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.33	0.34	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 7174533)									
ES2603015-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.008	0.004	64.7	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.008	0.003	80.3	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	0.006	0.002	91.2	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.010	0.006	46.7	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.008	0.004	62.1	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.236	0.239	1.2	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.014	0.009	40.1	0% - 50%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.031	0.028	10.7	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	1.36	1.16	15.8	0% - 20%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	2.11	2.10	0.0	0% - 20%
ES2603043-006	SBT-GW-3012-C	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0004	0.0005	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.090	0.092	2.0	0% - 20%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.252	0.253	0.0	0% - 20%
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	0.154	0.156	1.7	0% - 20%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.403	0.415	2.9	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.144	0.144	0.0	0% - 20%
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	3.21	3.23	0.7	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.224	0.230	2.7	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.969	0.995	2.6	0% - 20%
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	90.2	89.5	0.7	0% - 20%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	233	234	0.6	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 7174570)									
ES2603043-004	SBT-GW-3012-B	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2602937-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7174515)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7174515) - continued									
EN2601563-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603043-006	SBT-GW-3012-C	EG035T: Mercury	7439-97-6	0.0001	mg/L	0.0003	0.0004	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 7177418)									
ES2603027-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.03	0.0	No Limit
ES2603043-009	SBT-GW-4403	EK055G: Ammonia as N	7664-41-7	0.01 (0.10)*	mg/L	0.25	0.24	5.1	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 7167521)									
ES2602941-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603043-008	SBT-GW-3012-A	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.02	0.02	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 7177419)									
ES2603027-001	Anonymous	EK059G: Nitrite + Nitrate as N	—	0.01	mg/L	0.32	0.32	0.0	0% - 20%
ES2603043-009	SBT-GW-4403	EK059G: Nitrite + Nitrate as N	—	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7177414)									
ES2603027-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	—	0.1 (0.2)*	mg/L	1.1	1.1	0.0	No Limit
ES2603043-010	SBT-GW-4014-R	EK061G: Total Kjeldahl Nitrogen as N	—	0.1	mg/L	1.1	1.1	0.0	0% - 50%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7177415)									
ES2603027-001	Anonymous	EK067G: Total Phosphorus as P	—	0.01	mg/L	0.13	0.12	0.0	0% - 50%
ES2603043-010	SBT-GW-4014-R	EK067G: Total Phosphorus as P	—	0.01	mg/L	0.22	0.22	0.0	0% - 20%
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 7167518)									
ES2602941-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.07	0.06	0.0	No Limit
ES2603043-008	SBT-GW-3012-A	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.01	0.01	0.0	No Limit
EP005: Total Organic Carbon (TOC) (QC Lot: 7171242)									
ES2602976-001	Anonymous	EP005: Total Organic Carbon	—	1	mg/L	49	49	0.0	0% - 20%
ES2603043-001	SBT-GW-3003-B-R	EP005: Total Organic Carbon	—	1	mg/L	67	61	9.7	0% - 20%
EP005: Total Organic Carbon (TOC) (QC Lot: 7171243)									
ES2603043-011	SBT-GW-4017-R	EP005: Total Organic Carbon	—	1 (4)*	mg/L	<4	<4	0.0	No Limit
ES2603229-003	Anonymous	EP005: Total Organic Carbon	—	1	mg/L	6	5	23.2	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7170516)									
ES2602842-001	Anonymous	EP080: C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	No Limit
ES2602958-001	Anonymous	EP080: C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7185395)									
ES2603804-001	Anonymous	EP080: C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	No Limit
ES2603804-004	Anonymous	EP080: C6 - C9 Fraction	—	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7170516)									
ES2602842-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2602958-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7185395)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7185395) - continued									
ES2603804-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2603804-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 7170516)									
ES2602842-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2602958-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108 88 3	2	µg/L	2	2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP080: BTEXN (QC Lot: 7185395)									
ES2603804-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2603804-004	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2603578-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.13	0.12	0.0	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7183513) - continued									
ES2603578-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	0.08	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2603578-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	0.09	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2603578-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA005P: pH by PC Titrator (QCLot: 7167244)								
EA005-P: pH Value	---	---	pH Unit	---	4 pH Unit	99.2	98.8	101
				---	7 pH Unit	99.7	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 7167243)								
EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	<1	220 µS/cm	100	89.9	110
				<1	2100 µS/cm	102	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7170222)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	98.0	87.0	109
				<10	293 mg/L	99.8	75.2	126
				<10	2510 mg/L	100	83.0	124
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7176260)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	98.1	87.0	109
				<10	293 mg/L	104	75.2	126
				<10	2510 mg/L	101	83.0	124
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7176270)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	98.1	87.0	109
				<10	293 mg/L	102	75.2	126
				<10	2510 mg/L	95.8	83.0	124
ED037P: Alkalinity by PC Titrator (QCLot: 7167245)								
ED037-P: Total Alkalinity as CaCO3	---	---	mg/L	---	200 mg/L	104	81.0	115
				---	50 mg/L	106	80.0	128
ED037P: Alkalinity by PC Titrator (QCLot: 7167246)								
ED037-P: Total Alkalinity as CaCO3	---	---	mg/L	---	200 mg/L	105	81.0	115
				---	50 mg/L	106	80.0	128
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7167519)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	105	82.0	122
				<1	500 mg/L	101	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 7167520)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	100.0	80.9	127
				<1	1000 mg/L	100.0	80.9	127
ED093F: Dissolved Major Cations (QCLot: 7174571)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	104	80.0	114

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Acceptable Limits (%)
				Result	Concentration	LCS	Low	High
ED093F: Dissolved Major Cations (QCLot: 7174571) - continued								
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	104	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	101	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	100	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 7174572)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	106	80.0	116
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	108	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	104	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	107	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	107	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	109	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	104	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	105	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	111	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	107	82.0	112
EG020T: Total Metals by ICP-MS (QCLot: 7174533)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	104	82.0	120
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	107	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	106	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	104	86.0	116
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	104	84.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	107	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	103	85.0	115
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	104	85.0	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	105	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	107	79.0	117
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	108	85.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 7174570)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.7	83.0	105
EG035F: Dissolved Mercury by FIMS (QCLot: 7174573)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.6	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7174515)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.2	77.0	111
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7177418)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	110	90.0	114

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7167521)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	104	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7177419)								
EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	0.5 mg/L	104	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7177414)								
EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	<0.1	5 mg/L	85.0	69.0	123
				<0.1	2.5 mg/L	118	70.0	123
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7177415)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	93.9	71.3	126
				<0.01	0.5 mg/L	89.6	71.3	126
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7167518)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	101	85.0	117
EP005: Total Organic Carbon (TOC) (QCLot: 7171242)								
EP005: Total Organic Carbon	---	1	mg/L	<1	10 mg/L	97.0	72.0	120
EP005: Total Organic Carbon (TOC) (QCLot: 7171243)								
EP005: Total Organic Carbon	---	1	mg/L	<1	10 mg/L	94.0	72.0	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7167540)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	65.3	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	65.1	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	66.7	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7170516)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	91.5	75.0	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7183281)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	65.1	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	79.0	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	88.0	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7185395)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	86.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7167540)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	65.8	53.9	96.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	64.3	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	66.4	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7170516)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	93.7	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7183281)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7183281) - continued								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	70.8	53.9	95.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	74.1	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	88.8	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185395)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	88.4	75.0	127
EP080: BTEXN (QCLot: 7170515)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	100	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	115	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	100	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	104	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	108	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	96.7	75.5	124
EP080: BTEXN (QCLot: 7185395)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	109	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	114	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	110	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	108	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	111	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	111	75.5	124
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7183513)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	83.1	72.0	130
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	97.5	68.0	131
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	98.8	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7183513)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	103	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7183513)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	106	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	87.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	82.4	67.0	138

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7183513) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	107	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7167519)							
ES2602941-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 7167520)							
ES2602941-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	# Not Determined	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 7174572)							
ES2603016-006	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	104	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	97.8	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	102	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	103	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	102	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	100	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	101	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	106	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 7174533)							
ES2603015-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	102	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	104	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	102	70.0	130
		EG020A-T: Cobalt	7440-48-4	1 mg/L	102	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	107	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	101	70.0	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	104	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	104	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	105	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 7174570)							
ES2602937-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	96.1	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 7174573)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035F: Dissolved Mercury by FIMS (QCLot: 7174573) - continued							
ES2603043-015	SBT-VWP-3401 add	EG035F: Mercury	7439-97-6	0.01 mg/L	83.3	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7174515)							
EN2601563-002	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	84.8	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7177418)							
ES2603027-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.5 mg/L	97.7	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7167521)							
ES2602941-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	101	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7177419)							
ES2603027-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.5 mg/L	104	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7177414)							
ES2603043-001	SBT-GW-3003-B-R	EK061G: Total Kjeldahl Nitrogen as N	---	5 mg/L	94.0	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7177415)							
ES2603043-001	SBT-GW-3003-B-R	EK067G: Total Phosphorus as P	---	1 mg/L	113	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7167518)							
ES2602941-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	95.8	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 7171242)							
ES2602976-002	Anonymous	EP005: Total Organic Carbon	---	100 mg/L	99.7	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 7171243)							
ES2603058-002	Anonymous	EP005: Total Organic Carbon	---	100 mg/L	99.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7170516)							
ES2602842-001	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	89.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7185395)							
ES2603804-001	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	76.0	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7170516)							
ES2602842-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	89.8	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185395)							
ES2603804-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	75.8	70.0	130
EP080: BTEXN (QCLot: 7170516)							
ES2602842-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	95.9	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	110	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	114	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	113	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	120	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 7170516) - continued							
ES2602842-001	Anonymous	EP080: Naphthalene	91-20-3	25 µg/L	119	70.0	130
EP080: BTEXN (QCLot: 7185396)							
ES2603804-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	101	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	97.0	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	103	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	100	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	102	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	99.6	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	84.1	72.0	130
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	89.1	68.0	131
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	84.4	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	107	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	124	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	103	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	104	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.5	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	99.7	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	92.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	102	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	80.8	71.4	144

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2603043**	Page	: 1 of 16
Amendment	: **2**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 30-Jan-2026
Site	: 754-SYDEN374937 30.01.26	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant	No. of samples received	: 15
Order number	: 754-SYDEN274937	No. of samples analysed	: 15

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2602941--001	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**
ED045G: Chloride by Discrete Analyser	ES2602941--001	Anonymous	**Chloride**	16887-00-6	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural							
SBT-GW-3012-A,	SBT-GW-4403,	---	---	---	30-Jan-2026	29-Jan-2026	1
SBT-GW-4014-R,	SBT-GW-4017-R,						
SBT-GW-4021,	SBT-GW-4803-R,						
SBT-VWP-3401 add							
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved							
SBT-GW-4403,	SBT-GW-4017-R	09-Feb-2026	05-Feb-2026	4	---	---	---
Amber Glass Bottle - Unpreserved							
SMGW-BH-C320		09-Feb-2026	06-Feb-2026	3	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved							
SBT-GW-4403,	SBT-GW-4017-R	09-Feb-2026	05-Feb-2026	4	---	---	---
Amber Glass Bottle - Unpreserved							
SMGW-BH-C320		09-Feb-2026	06-Feb-2026	3	---	---	---

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
Dissolved Mercury by FIMS	EG035F	2	21	9.52	10.00	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	16	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
TRH - Semivolatile Fraction	EP071	0	16	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA005P: pH by PC Titrator								
Clear Plastic Bottle - Natural (EA005-P)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**30-Jan-2026**	29-Jan-2026	✖
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (EA005-P)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**30-Jan-2026**	30-Jan-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**30-Jan-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (EA010-P)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**30-Jan-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-3012-A,	SBT-GW-4403	**29-Jan-2026**	---	---	---	**03-Feb-2026**	05-Feb-2026	✓
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-4014-R,	SBT-GW-4017-R,	**29-Jan-2026**	---	---	---	**05-Feb-2026**	05-Feb-2026	✓
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**05-Feb-2026**	06-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**30-Jan-2026**	12-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (ED037-P)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**30-Jan-2026**	13-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**31-Jan-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (ED041G)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**31-Jan-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**31-Jan-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (ED045G)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**31-Jan-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**04-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**04-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**04-Feb-2026**	28-Jul-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**04-Feb-2026**	29-Jul-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	**04-Feb-2026**	28-Jul-2026	✓	**04-Feb-2026**	28-Jul-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	**04-Feb-2026**	29-Jul-2026	✓	**04-Feb-2026**	29-Jul-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**05-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**05-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**06-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**06-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**05-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**05-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
SBT-GW-3012-A, SBT-GW-4014-R, SBT-GW-4021, SBT-VWP-3401 add, SBT-GW-4403, SBT-GW-4017-R, SBT-GW-4603-R,	**29-Jan-2026**	---	---	---	**31-Jan-2026**	31-Jan-2026	✓
Clear Plastic Bottle - Natural (EK057G)							
SBT-GW-3003-B-R	**30-Jan-2026**	---	---	---	**30-Jan-2026**	01-Feb-2026	✓
Clear Plastic Bottle - Natural (EK057G)							
SBT-GW-3003-C-R, SBT-GW-3012-B, SBT-GW-3012-C, SBT-GW-4008, SBT-GW-3006-R, SBT-GW-3022, SMGW-BH-C320,	**30-Jan-2026**	---	---	---	**31-Jan-2026**	01-Feb-2026	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SBT-GW-3012-A, SBT-GW-4014-R, SBT-GW-4021, SBT-VWP-3401 add, SBT-GW-4403, SBT-GW-4017-R, SBT-GW-4603-R,	**29-Jan-2026**	---	---	---	**05-Feb-2026**	26-Feb-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SBT-GW-3003-B-R, SBT-GW-3006-R, SBT-GW-3022, SMGW-BH-C320, SBT-GW-3003-C-R, SBT-GW-3012-B, SBT-GW-3012-C, SBT-GW-4008	**30-Jan-2026**	---	---	---	**05-Feb-2026**	27-Feb-2026	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SBT-GW-3012-A, SBT-GW-4014-R, SBT-GW-4021, SBT-VWP-3401 add, SBT-GW-4403, SBT-GW-4017-R, SBT-GW-4603-R,	**29-Jan-2026**	**05-Feb-2026**	26-Feb-2026	✓	**05-Feb-2026**	26-Feb-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SBT-GW-3003-B-R, SBT-GW-3006-R, SBT-GW-3022, SMGW-BH-C320, SBT-GW-3003-C-R, SBT-GW-3012-B, SBT-GW-3012-C, SBT-GW-4008	**30-Jan-2026**	**05-Feb-2026**	27-Feb-2026	✓	**05-Feb-2026**	27-Feb-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK067G: Total Phosphorus as P by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	**05-Feb-2026**	26-Feb-2026	✓	**05-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	**05-Feb-2026**	27-Feb-2026	✓	**05-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**31-Jan-2026**	31-Jan-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Clear Plastic Bottle - Natural (EK071G)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**31-Jan-2026**	01-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							
EP005: Total Organic Carbon (TOC)								
Amber TOC Vial - Sulfuric Acid (EP005)								
SBT-GW-3012-A,	SBT-GW-4403,	**29-Jan-2026**	---	---	---	**05-Feb-2026**	26-Feb-2026	✓
SBT-GW-4014-R,	SBT-GW-4017-R,							
SBT-GW-4021,	SBT-GW-4803-R,							
SBT-VWP-3401 add								
Amber TOC Vial - Sulfuric Acid (EP005)								
SBT-GW-3003-B-R,	SBT-GW-3003-C-R,	**30-Jan-2026**	---	---	---	**05-Feb-2026**	27-Feb-2026	✓
SBT-GW-3006-R,	SBT-GW-3012-B,							
SBT-GW-3022,	SBT-GW-3012-C,							
SMGW-BH-C320,	SBT-GW-4008							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-4403,	SBT-GW-4017-R	29-Jan-2026	09-Feb-2026	05-Feb-2026	×	10-Feb-2026	21-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-3012-B,	SBT-GW-3022	30-Jan-2026	02-Feb-2026	06-Feb-2026	✓	03-Feb-2026	14-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071) SMGW-BH-C320		30-Jan-2026	09-Feb-2026	06-Feb-2026	×	10-Feb-2026	21-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-4403,	SBT-GW-4017-R	29-Jan-2026	10-Feb-2026	12-Feb-2026	✓	10-Feb-2026	12-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-3012-B,	SBT-GW-3022	30-Jan-2026	04-Feb-2026	13-Feb-2026	✓	04-Feb-2026	13-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SMGW-BH-C320		30-Jan-2026	10-Feb-2026	13-Feb-2026	✓	10-Feb-2026	13-Feb-2026	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-4403,	SBT-GW-4017-R	29-Jan-2026	09-Feb-2026	05-Feb-2026	×	10-Feb-2026	21-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-3012-B,	SBT-GW-3022	30-Jan-2026	02-Feb-2026	06-Feb-2026	✓	03-Feb-2026	14-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071) SMGW-BH-C320		30-Jan-2026	09-Feb-2026	06-Feb-2026	×	10-Feb-2026	21-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-4403,	SBT-GW-4017-R	29-Jan-2026	10-Feb-2026	12-Feb-2026	✓	10-Feb-2026	12-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-3012-B,	SBT-GW-3022	30-Jan-2026	04-Feb-2026	13-Feb-2026	✓	04-Feb-2026	13-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SMGW-BH-C320		30-Jan-2026	10-Feb-2026	13-Feb-2026	✓	10-Feb-2026	13-Feb-2026	✓
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-4403,	SBT-GW-4017-R	29-Jan-2026	10-Feb-2026	12-Feb-2026	✓	10-Feb-2026	12-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-3012-B,	SBT-GW-3022	30-Jan-2026	04-Feb-2026	13-Feb-2026	✓	04-Feb-2026	13-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SMGW-BH-C320		30-Jan-2026	10-Feb-2026	13-Feb-2026	✓	10-Feb-2026	13-Feb-2026	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) SBT-GW-4014-R,	SBT-GW-4017-R	29-Jan-2026	06-Feb-2026	28-Jul-2026	✓	10-Feb-2026	28-Jul-2026	✓
HDPE (no PTFE) (EP231X) SMGW-BH-C320		30-Jan-2026	06-Feb-2026	29-Jul-2026	✓	10-Feb-2026	29-Jul-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) SBT-GW-4014-R,	SBT-GW-4017-R	29-Jan-2026	06-Feb-2026	28-Jul-2026	✓	10-Feb-2026	28-Jul-2026	✓
HDPE (no PTFE) (EP231X) SMGW-BH-C320		30-Jan-2026	06-Feb-2026	29-Jul-2026	✓	10-Feb-2026	29-Jul-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
SBT-GW-4014-R, SBT-GW-4017-R	**29-Jan-2026**	**06-Feb-2026**	28-Jul-2026	✓	**10-Feb-2026**	28-Jul-2026	✓
HDPE (no PTFE) (EP231X)							
SMGW-BH-C320	**30-Jan-2026**	**06-Feb-2026**	29-Jul-2026	✓	**10-Feb-2026**	29-Jul-2026	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
SBT-GW-4014-R, SBT-GW-4017-R	**29-Jan-2026**	**06-Feb-2026**	28-Jul-2026	✓	**10-Feb-2026**	28-Jul-2026	✓
HDPE (no PTFE) (EP231X)							
SMGW-BH-C320	**30-Jan-2026**	**06-Feb-2026**	29-Jul-2026	✓	**10-Feb-2026**	29-Jul-2026	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	3	27	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	21	9.52	10.00	×	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	1	20	5.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	10	98	10.20	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	4	33	12.12	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	16	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	4	27	14.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	3	20	15.00	8.33	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	21	9.52	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	13	98	13.27	12.50	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	20	15.00	15.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	20	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	21	9.52	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	98	5.10	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	21	9.52	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Organic Carbon	EP005	2	33	6.06	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	16	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of 'filterable' residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. Auto Titrator) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G. Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* FN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510. 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG15-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY

COC#: 93576 *ALS Laboratory:* ES Sydney Environmental

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME: 30/1/26 1615	DATE TIME:	DATE TIME:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759635

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	SBT-GW-3003-B-R		30/01/2026 01:41 PM	WATER	ALS: 5 Non ALS: 0	No	X			
002	SBT-GW-3003-C-R		30/01/2026 02:01 PM	WATER	ALS: 5 Non ALS: 0	No	X			
003	SBT-GW-3008-R		30/01/2026 11:07 AM	WATER	ALS: 5 Non ALS: 0	No	X			
004	SBT-GW-3012-B		30/01/2026 10:04 AM	WATER	ALS: 8 Non ALS: 0	No	X	Partial 1/6		
005	SBT-GW-3022		30/01/2026 12:13 PM	WATER	ALS: 8 Non ALS: 0	No	X	Partial 1/6		
006	SBT-GW-3012-C		30/01/2026 09:45 AM	WATER	ALS: 5 Non ALS: 0	No	X			
007	SMGW-BH-C320		30/01/2026 08:13 AM	WATER	ALS: 5 Non ALS: 0	No	X			

HT

Environmental Division Sydney

Work Order Reference

ES2603043

Telephone : +61-2-8784 8555

CHAIN OF CUSTODY

COC#: **93576** *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	SBT-GW-3012-A		29/01/2026 08:53 AM	WATER	ALS: 5 Non ALS: 0	No	X			
009	SBT-GW-4403		29/01/2026 08:00 AM	WATER	ALS: 5 Non ALS: 0	No	X			
010	SBT-GW-4014-R		29/01/2026 10:46 AM	WATER	ALS: 5 Non ALS: 0	No	X			
011	SBT-GW-4017-R		29/01/2026 11:27 AM	WATER	ALS: 5 Non ALS: 0	No	X			
012	SBT-GW-4021		29/01/2026 10:04 AM	WATER	ALS: 5 Non ALS: 0	No	X			
013	SBT-GW-4803-R		29/01/2026 01:20 PM	WATER	ALS: 5 Non ALS: 0	No	X			
014	SBT-GW-4000 add		30/01/2026 08:51 AM	WATER	ALS: 5 Non ALS: 0	No	X			

CHAIN OF CUSTODY

COC#: **93576** *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	SBT-VWP-3401 add		29/01/2026 02:16 PM	WATER	ALS: 5 Non ALS: 0	No	X			

CHAIN OF CUSTODY

COC#: 93578 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759635

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
004	SBT-GW-3012-B	QC WATER	WATER	- W-04 TRH/BTEXN
005	SBT-GW-3022	QC WATER	WATER	- W-04 TRH/BTEXN

CHAIN OF CUSTODY

COC#: 93576 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547567 SAMPLER MOBILE: 0417758835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	SBT-GW-3003-B-R	Clear Plastic Bottle - Natural	500 mL	00070325166303	Green	No	
001	SBT-GW-3003-B-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004425	Red	Yes	
001	SBT-GW-3003-B-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004410	Red	No	
001	SBT-GW-3003-B-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122907	Purple	No	
001	SBT-GW-3003-B-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021350	Purple	No	
002	SBT-GW-3003-C-R	Clear Plastic Bottle - Natural	500 mL	00070325166225	Green	No	
002	SBT-GW-3003-C-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004429	Red	Yes	
002	SBT-GW-3003-C-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004430	Red	No	
002	SBT-GW-3003-C-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122893	Purple	No	
002	SBT-GW-3003-C-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021323	Purple	No	
003	SBT-GW-3006-R	Clear Plastic Bottle - Natural	500 mL	00070325166236	Green	No	
003	SBT-GW-3006-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004821	Red	Yes	
003	SBT-GW-3006-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004825	Red	No	
003	SBT-GW-3006-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122961	Purple	No	
003	SBT-GW-3006-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021341	Purple	No	
004	SBT-GW-3012-B	Clear Plastic Bottle - Natural	500 mL	00070325166260	Green	No	
004	SBT-GW-3012-B	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004751	Red	Yes	
004	SBT-GW-3012-B	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004754	Red	No	
004	SBT-GW-3012-B	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123039	Purple	No	
004	SBT-GW-3012-B	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021349	Purple	No	
004	SBT-GW-3012-B	Amber Glass Bottle - Unpreserved	100 mL	00400324006078	Orange	No	
004	SBT-GW-3012-B	Amber VOC Vial - Sulfuric Acid	40 mL	00180925030283	Purple	No	
004	SBT-GW-3012-B	Amber VOC Vial - Sulfuric Acid	40 mL	00180925030281	Purple	No	
005	SBT-GW-3022	Amber Glass Bottle - Unpreserved	100 mL	00400324006117	Orange	No	
005	SBT-GW-3022	Amber VOC Vial - Sulfuric Acid	40 mL	00180925030279	Purple	No	
005	SBT-GW-3022	Amber VOC Vial - Sulfuric Acid	40 mL	00180925030282	Purple	No	

CHAIN OF CUSTODY

COC#: 93576 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN374937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

035	SBT-GW-3022	Clear Plastic Bottle - Natural	500 mL	00070325166205	Green	No	
035	SBT-GW-3022	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004756	Red	Yes	
035	SBT-GW-3022	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004748	Red	No	
035	SBT-GW-3022	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122943	Purple	No	
035	SBT-GW-3022	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021352	Purple	No	
036	SBT-GW-3012-C	Clear Plastic Bottle - Natural	500 mL	00070325166261	Green	No	
036	SBT-GW-3012-C	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004438	Red	Yes	
036	SBT-GW-3012-C	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004427	Red	No	
036	SBT-GW-3012-C	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123033	Purple	No	
036	SBT-GW-3012-C	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021401	Purple	No	
037	SMGW-BH-C320	Clear Plastic Bottle - Natural	500 mL	00070325166306	Green	No	
037	SMGW-BH-C320	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004443	Red	Yes	
037	SMGW-BH-C320	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004469	Red	No	
037	SMGW-BH-C320	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122963	Purple	No	
037	SMGW-BH-C320	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021330	Purple	No	
038	SBT-GW-3012-A	Clear Plastic Bottle - Natural	500 mL	00070325166229	Green	No	
038	SBT-GW-3012-A	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004791	Red	Yes	
038	SBT-GW-3012-A	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004780	Red	No	
038	SBT-GW-3012-A	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122861	Purple	No	
038	SBT-GW-3012-A	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021342	Purple	No	
039	SBT-GW-4403	Clear Plastic Bottle - Natural	500 mL	00070325166217	Green	No	
039	SBT-GW-4403	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004817	Red	Yes	
039	SBT-GW-4403	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004815	Red	No	
039	SBT-GW-4403	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122847	Purple	No	
039	SBT-GW-4403	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021359	Purple	No	
010	SBT-GW-4014-R	Clear Plastic Bottle - Natural	500 mL	00070325166310	Green	No	
010	SBT-GW-4014-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004778	Red	Yes	

CHAIN OF CUSTODY

COC#: 93576 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

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EMAIL REPORTS TO:

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TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417758835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		C	
Other comments:			

010	SBT-GW-4014-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004771	Red	No	
010	SBT-GW-4014-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122877	Purple	No	
010	SBT-GW-4014-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021389	Purple	No	
011	SBT-GW-4017-R	Clear Plastic Bottle - Natural	500 mL	00070325166389	Green	No	
011	SBT-GW-4017-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004775	Red	Yes	
011	SBT-GW-4017-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004776	Red	No	
011	SBT-GW-4017-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122911	Purple	No	
011	SBT-GW-4017-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021322	Purple	No	
012	SBT-GW-4021	Clear Plastic Bottle - Natural	500 mL	00070325166271	Green	No	
012	SBT-GW-4021	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004770	Red	Yes	
012	SBT-GW-4021	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122964	Purple	No	
012	SBT-GW-4021	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021382	Purple	No	
012	SBT-GW-4021	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004772	Red	No	
013	SBT-GW-4803-R	Clear Plastic Bottle - Natural	500 mL	00070325166208	Green	No	
013	SBT-GW-4803-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004783	Red	Yes	
013	SBT-GW-4803-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004826	Red	No	
013	SBT-GW-4803-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122926	Purple	No	
013	SBT-GW-4803-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021581	Purple	No	
014	SBT-GW-4000 add	Clear Plastic Bottle - Natural	500 mL	00070325166305	Green	No	
014	SBT-GW-4000 add	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004819	Red	Yes	
014	SBT-GW-4000 add	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004779	Red	No	
014	SBT-GW-4000 add	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122887	Purple	No	
014	SBT-GW-4000 add	Amber TOC Vial - Sulfuric Acid	40 mL	00180326021370	Purple	No	
015	SBT-VWP-3401 add	Clear Plastic Bottle - Natural	500 mL	00070325166262	Green	No	
015	SBT-VWP-3401 add	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004753	Red	Yes	
015	SBT-VWP-3401 add	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004752	Red	No	
015	SBT-VWP-3401 add	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122882	Purple	No	

CHAIN OF CUSTODY

COC#: **93576** *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937 30.01.26

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard Info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

016	SBT-VWP-3401 add	Amber TOC Vial - Sulfuric Acid	40 mL	0018032502353	Purple	No	

Total Bottle Count: ALS: 81, Non ALS: 0

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2603043**		
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: David.Mcfadden@tetratech.com	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 754-SYDEN374937	Page	: 1 of 3
Order number	754-SYDEN274937	Quote number	ES2025COFENV0011 (ES25COFENV0011)
C-O-C number	93576	QC Level	NEPM 2013 B3 & ALS QC Standard
Site	: 754-SYDEN374937 30.01.26		
Sampler	ELLIOT WOOD, Geoffrey Merchant		

Dates

Date Samples Received	: 30-Jan-2026 16:15	Issue Date	: 04-Mar-2026
Client Requested Due Date	: 12-Feb-2026	Scheduled Reporting Date	: **12-Feb-2026**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: 2	Temperature	: 4.5°C, 8.9°C & 18.3°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 15 / 15

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- [4/03/2026] This is an updated SRN which indicates the updated ID for sample #14.
- Updated SRN is for adding in bottles and analysis to samples 7,9,10 & 11.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA065P pH (Auto Titrator)	WATER - EA010P Electrical Conductivity (Auto Titrator)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EP005 Total Organic Carbon (TOC)	WATER - NT-064 Total Nitrogen + NO2 + NO3 + NH3 + Total P +	WATER - W-02 B Metals	WATER - W-02T B metals (Total)
ES2603043-001	30-Jan-2026 13:41	SBT-GW-3003-B-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-002	30-Jan-2026 14:01	SBT-GW-3003-C-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-003	30-Jan-2026 11:07	SBT-GW-3006-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-004	30-Jan-2026 10:04	SBT-GW-3012-B	✓	✓	✓	✓	✓	✓	✓
ES2603043-005	30-Jan-2026 12:13	SBT-GW-3022	✓	✓	✓	✓	✓	✓	✓
ES2603043-006	30-Jan-2026 09:45	SBT-GW-3012-C	✓	✓	✓	✓	✓	✓	✓
ES2603043-007	30-Jan-2026 08:13	SMGW-BH-C320	✓	✓	✓	✓	✓	✓	✓
ES2603043-008	29-Jan-2026 08:53	SBT-GW-3012-A	✓	✓	✓	✓	✓	✓	✓
ES2603043-009	29-Jan-2026 08:00	SBT-GW-4403	✓	✓	✓	✓	✓	✓	✓
ES2603043-010	29-Jan-2026 10:46	SBT-GW-4014-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-011	29-Jan-2026 11:27	SBT-GW-4017-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-012	29-Jan-2026 10:04	SBT-GW-4021	✓	✓	✓	✓	✓	✓	✓
ES2603043-013	29-Jan-2026 13:20	SBT-GW-4803-R	✓	✓	✓	✓	✓	✓	✓
ES2603043-014	30-Jan-2026 08:51	SBT-GW-4008	✓	✓	✓	✓	✓	✓	✓
ES2603043-015	29-Jan-2026 14:16	SBT-VWP-3401 add	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - W-04 TRH/BTEXN
ES2603043-001	30-Jan-2026 13:41	SBT-GW-3003-B-R		✓	
ES2603043-002	30-Jan-2026 14:01	SBT-GW-3003-C-R		✓	
ES2603043-003	30-Jan-2026 11:07	SBT-GW-3006-R		✓	
ES2603043-004	30-Jan-2026 10:04	SBT-GW-3012-B		✓	✓
ES2603043-005	30-Jan-2026 12:13	SBT-GW-3022		✓	✓
ES2603043-006	30-Jan-2026 09:45	SBT-GW-3012-C		✓	
ES2603043-007	30-Jan-2026 08:13	SMGW-BH-C320	✓	✓	✓
ES2603043-008	29-Jan-2026 08:53	SBT-GW-3012-A		✓	
ES2603043-009	29-Jan-2026 08:00	SBT-GW-4403		✓	✓

			WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - VI-04 TRH/BTEX/N
ES2603043-010	29-Jan-2026 10:46	SBT-GW-4014-R	✓	✓	
ES2603043-011	29-Jan-2026 11:27	SBT-GW-4017-R	✓	✓	✓
ES2603043-012	29-Jan-2026 10:04	SBT-GW-4021		✓	
ES2603043-013	29-Jan-2026 13:20	SBT-GW-4803-R		✓	
ES2603043-014	30-Jan-2026 08:51	SBT-GW-4008		✓	
ES2603043-015	29-Jan-2026 14:16	SBT-VWP-3401 add		✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALL INVOICE

- A4 - AU Tax Invoice (INV)	Email	ap@coffey.com

David McFadden

- *AU Certificate of Analysis - NATA (COA)	Email	David.Mcfadden@tetratech.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	David.Mcfadden@tetratech.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	David.Mcfadden@tetratech.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	David.Mcfadden@tetratech.com
- Chain of Custody (CoC) (COC)	Email	David.Mcfadden@tetratech.com
- EDI Format - ESDAT (ESDAT)	Email	David.Mcfadden@tetratech.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2603450**	Page	: 1 of 23
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	:	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 03-Feb-2026 16:00
Order number	: 754 SYDEN274937	Date Analysis Commenced	: 04-Feb-2026
C-O-C number	: 93705	Issue Date	: 07-Apr-2026 16:17
Sampler	: ELLIOT WOOD, Geoffrey Merchant		
Site	754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	18		
No. of samples analysed	: 18		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
* = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EG020: It has been confirmed by re-digestion and re-analysis that dissolved concentration for Nickel is higher than total concentration for sample ES2603450-#008 and #016. For all other elements where filtered results are greater than total results, the difference is within experimental variation of the methods.
- EG035: Positive Mercury result ES2603450 #9 has been confirmed by reanalysis.
- EK055G/EK061G: It has been noted that ammonia is greater than TKN, however this difference is within the limits of experimental variation.
- TDS by method EA-015 may bias high for various samples due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- EN055: Ionic Balance out of acceptable limits for various samples due to analytes not quantified in this report.
- Amendment (7/04/2026): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EG020F and EG020T additional metals as requested, where results are confirmed.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A107	SBT-GW-1030	SBT-GW-1024	SBT-GW-1805	SBT-GW-1806
				Sampling date / time	03-Feb-2026 14:11	03-Feb-2026 08:10	03-Feb-2026 11:24	03-Feb-2026 11:33	02-Feb-2026 10:35
Compound	CAS Number	LOR	Unit		ES2603450-001	ES2603450-002	ES2603450-003	ES2603450-004	ES2603450-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit		7.85	7.03	7.41	6.39	7.73
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm		1980	2400	3660	1240	26700
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L		1360	1430	2220	1600	20300
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		294	115	162	33	384
Total Alkalinity as CaCO3	---	1	mg/L		294	115	162	33	384
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		27	202	185	54	643
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		500	614	997	714	9340
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		166	22	56	86	490
Magnesium	7439-95-4	1	mg/L		5	16	40	48	723
Sodium	7440-23-5	1	mg/L		212	265	577	285	4730
Potassium	7440-09-7	1	mg/L		6	7	14	8	28
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.06	0.22	0.06	0.02	<0.01
Arsenic	7440-38-2	0.001	mg/L		0.002	0.002	0.002	0.002	0.002
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.003	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	0.003	0.004	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		0.007	0.008	0.006	0.011	0.004
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A107	SBT-GW-1030	SBT-GW-1024	SBT-GW-1805	SBT-GW-1806
				Sampling date / time	03-Feb-2026 14:11	03-Feb-2026 08:10	03-Feb-2026 11:24	03-Feb-2026 11:33	02-Feb-2026 10:35
Compound	CAS Number	LOR	Unit		ES2603450-001	ES2603450-002	ES2603450-003	ES2603450-004	ES2603450-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.006	0.059	0.038	<0.005	<0.005
Manganese	7439-96-5	0.001	mg/L		0.074	0.197	0.286	0.630	0.637
Iron	7439-89-6	0.05	mg/L		0.16	2.85	0.08	3.97	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		4.34	50.8	3.05	20.2	1.02
Arsenic	7440-38-2	0.001	mg/L		0.004	0.030	0.004	0.008	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0010	0.0001	0.0003	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.014	0.075	0.010	0.104	0.003
Copper	7440-50-8	0.001	mg/L		0.028	0.311	0.014	0.062	0.006
Cobalt	7440-48-4	0.001	mg/L		0.002	0.186	0.011	0.025	0.018
Nickel	7440-02-0	0.001	mg/L		0.011	0.233	0.013	0.037	0.014
Lead	7439-92-1	0.001	mg/L		0.005	0.222	0.004	0.045	0.002
Zinc	7440-66-6	0.005	mg/L		0.037	2.88	0.191	0.512	0.032
Manganese	7439-96-5	0.001	mg/L		0.102	2.91	0.445	0.863	0.509
Iron	7439-89-6	0.05	mg/L		3.87	161	3.46	40.8	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.39	4.46	0.18	0.34	0.40
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	0.01	<0.01	<0.01	0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	0.22	0.18	1.91	0.98
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		<0.01	0.23	0.18	1.91	0.99

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A107	SBT-GW-1030	SBT-GW-1024	SBT-GW-1805	SBT-GW-1806
				Sampling date / time	03-Feb-2026 14:11	03-Feb-2026 08:10	03-Feb-2026 11:24	03-Feb-2026 11:33	02-Feb-2026 10:35
Compound	CAS Number	LOR	Unit		ES2603450-001	ES2603450-002	ES2603450-003	ES2603450-004	ES2603450-005
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		3.5	5.6	0.6	2.7	0.5
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		3.5	5.8	0.8	4.6	1.5
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.34	0.79	0.21	1.02	<0.01
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		0.10	0.01	0.02	0.13	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		20.5	23.8	35.2	21.9	285
ø Total Cations	---	0.01	meq/L		18.1	14.1	31.5	20.8	290
ø Ionic Balance	---	0.01	%		6.40	25.6	5.50	2.53	1.02
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		28	15	5	21	4
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		----	----	<20	----	<20
C10 - C14 Fraction	---	50	µg/L		----	----	<50	----	<50
C15 - C28 Fraction	---	100	µg/L		----	----	<100	----	<100
C29 - C36 Fraction	---	50	µg/L		----	----	<50	----	<50
^ C10 - C36 Fraction (sum)	---	50	µg/L		----	----	<50	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	----	<20	----	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	----	<20	----	<20
>C10 - C16 Fraction	---	100	µg/L		----	----	<100	----	<100
>C16 - C34 Fraction	---	100	µg/L		----	----	<100	----	<100
>C34 - C40 Fraction	---	100	µg/L		----	----	<100	----	<100
^ >C10 - C40 Fraction (sum)	---	100	µg/L		----	----	<100	----	<100

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A107	SBT-GW-1030	SBT-GW-1024	SBT-GW-1805	SBT-GW-1806
				Sampling date / time	03-Feb-2026 14:11	03-Feb-2026 08:10	03-Feb-2026 11:24	03-Feb-2026 11:33	02-Feb-2026 10:35
Compound	CAS Number	LOR	Unit		ES2603450-001	ES2603450-002	ES2603450-003	ES2603450-004	ES2603450-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	---	<100	---	<100
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	---	<1	---	<1
Toluene	108-88-3	2	µg/L		---	---	<2	---	<2
Ethylbenzene	100-41-4	2	µg/L		---	---	<2	---	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	---	<2	---	<2
ortho-Xylene	95-47-6	2	µg/L		---	---	<2	---	<2
^ Total Xylenes	---	2	µg/L		---	---	<2	---	<2
^ Sum of BTEX	---	1	µg/L		---	---	<1	---	<1
Naphthalene	91-20-3	5	µg/L		---	---	<5	---	<5
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		---	<0.02	<0.02	<0.02	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		---	**0.01**	**0.04**	**0.01**	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		---	<0.01	**0.06**	**0.01**	---
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		---	<0.1	**0.2**	<0.1	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		---	**0.02**	<0.02	<0.02	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		---	<0.02	<0.02	<0.02	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		---	<0.02	<0.02	<0.02	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		---	**0.02**	<0.01	<0.01	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		---	<0.05	<0.05	<0.05	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		---	<0.05	<0.05	<0.05	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		---	<0.05	<0.05	<0.05	---

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A107	SBT-GW-1030	SBT-GW-1024	SBT-GW-1805	SBT-GW-1806
				Sampling date / time	03-Feb-2026 14:11	03-Feb-2026 08:10	03-Feb-2026 11:24	03-Feb-2026 11:33	02-Feb-2026 10:35
Compound	CAS Number	LOR	Unit		ES2603450-001	ES2603450-002	ES2603450-003	ES2603450-004	ES2603450-005
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		----	<0.05	<0.05	<0.05	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	**0.01**	**0.10**	**0.02**	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		----	**0.05**	**0.30**	**0.02**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	----	**118**	----	**124**
Toluene-D8	2037-26-5	2	%		----	----	**110**	----	**110**
4-Bromofluorobenzene	460-00-4	2	%		----	----	**103**	----	**119**
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		----	**111**	**116**	**115**	----
13C8-PFOA	---	0.02	%		----	**109**	**111**	**107**	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1807	SBT-GW-1808	SMGW-BH-A315-R	SBT-GW-1063	SBT-GW-1042
				Sampling date / time	02-Feb-2026 13:55	02-Feb-2026 13:40	02-Feb-2026 11:30	02-Feb-2026 10:52	03-Feb-2026 10:00
Compound	CAS Number	LOR	Unit		ES2603450-006	ES2603450-007	ES2603450-008	ES2603450-009	ES2603450-010
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit		7.66	6.83	6.95	7.26	4.77
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm		28500	6970	6830	4580	14400
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L		20900	8960	4450	2740	9180
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		731	213	122	254	<1
Total Alkalinity as CaCO3	---	1	mg/L		731	213	122	254	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		741	23	226	191	169
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		9950	4400	2130	1250	5120
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		281	23	15	31	5
Magnesium	7439-95-4	1	mg/L		862	256	322	81	302
Sodium	7440-23-5	1	mg/L		4120	1860	2530	775	2720
Potassium	7440-09-7	1	mg/L		17	7	11	5	4
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.01	0.04	0.04	0.06	2.04
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.001	0.001	0.009	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	0.0002
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.002	<0.001	<0.001	<0.001	0.014
Nickel	7440-02-0	0.001	mg/L		0.012	0.010	0.049	0.005	0.094
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	0.009

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1807	SBT-GW-1808	SMGW-BH-A315-R	SBT-GW-1063	SBT-GW-1042
				Sampling date / time	02-Feb-2026 13:55	02-Feb-2026 13:40	02-Feb-2026 11:30	02-Feb-2026 10:52	03-Feb-2026 10:00
Compound	CAS Number	LOR	Unit		ES2603450-006	ES2603450-007	ES2603450-008	ES2603450-009	ES2603450-010
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.009	<0.005	0.584	0.007	0.211
Manganese	7439-96-5	0.001	mg/L		0.404	----	----	0.537	0.196
Iron	7439-89-6	0.05	mg/L		0.20	----	5.16	2.07	0.21
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		1.83	7.50	3.04	27.8	5.32
Arsenic	7440-38-2	0.001	mg/L		0.001	0.002	0.003	0.041	0.005
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0001	<0.0001	0.0008	0.0002
Chromium	7440-47-3	0.001	mg/L		0.003	0.013	0.011	0.063	0.006
Copper	7440-50-8	0.001	mg/L		0.006	0.022	0.016	0.217	0.022
Cobalt	7440-48-4	0.001	mg/L		0.004	----	----	0.034	0.189
Nickel	7440-02-0	0.001	mg/L		0.009	0.011	0.027	0.055	0.097
Lead	7439-92-1	0.001	mg/L		0.003	0.012	0.009	0.079	0.015
Zinc	7440-66-6	0.005	mg/L		0.011	0.082	3.11	0.587	0.217
Manganese	7439-96-5	0.001	mg/L		0.551	----	----	0.850	0.264
Iron	7439-89-6	0.05	mg/L		3.47	----	5.40	29.8	7.73
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	0.0002	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		1.05	0.15	0.05	0.56	0.19
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		0.27	<0.01	<0.01	<0.01	0.02
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.13	<0.01	<0.01	<0.01	113
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		0.40	<0.01	<0.01	<0.01	113

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1807	SBT-GW-1808	SMGW-BH-A315-R	SBT-GW-1063	SBT-GW-1042
				Sampling date / time	02-Feb-2026 13:55	02-Feb-2026 13:40	02-Feb-2026 11:30	02-Feb-2026 10:52	03-Feb-2026 10:00
Compound	CAS Number	LOR	Unit		ES2603450-006	ES2603450-007	ES2603450-008	ES2603450-009	ES2603450-010
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		1.1	84.0	0.8	5.5	0.5
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		1.5	84.0	0.8	5.5	114
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.05	15.7	0.09	0.44	<0.01
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	1.09	<0.01	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		311	129	67.2	44.3	148
ø Total Cations	---	0.01	meq/L		265	103	138	42.1	144
ø Ionic Balance	---	0.01	%		8.01	11.0	34.4	2.62	1.52
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		5	37	7	17	18
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		----	----	<20	----	----
C10 - C14 Fraction	---	50	µg/L		----	----	<50	----	----
C15 - C28 Fraction	---	100	µg/L		----	----	<100	----	----
C29 - C36 Fraction	---	50	µg/L		----	----	<50	----	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		----	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	----	<20	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	----	<20	----	----
>C10 - C16 Fraction	---	100	µg/L		----	----	<100	----	----
>C16 - C34 Fraction	---	100	µg/L		----	----	<100	----	----
>C34 - C40 Fraction	---	100	µg/L		----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		----	----	<100	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1807	SBT-GW-1808	SMGW-BH-A315-R	SBT-GW-1063	SBT-GW-1042
				Sampling date / time	02-Feb-2026 13:55	02-Feb-2026 13:40	02-Feb-2026 11:30	02-Feb-2026 10:52	03-Feb-2026 10:00
Compound	CAS Number	LOR	Unit		ES2603450-006	ES2603450-007	ES2603450-008	ES2603450-009	ES2603450-010
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	---	<100	---	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	---	<1	---	---
Toluene	108-88-3	2	µg/L		---	---	<2	---	---
Ethylbenzene	100-41-4	2	µg/L		---	---	<2	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	---	<2	---	---
ortho-Xylene	95-47-6	2	µg/L		---	---	<2	---	---
^ Total Xylenes	---	2	µg/L		---	---	<2	---	---
^ Sum of BTEX	---	1	µg/L		---	---	<1	---	---
Naphthalene	91-20-3	5	µg/L		---	---	<5	---	---
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		---	---	<0.02	---	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		---	---	<0.01	---	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		---	---	<0.01	---	---
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		---	---	<0.1	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		---	---	<0.02	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		---	---	<0.02	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		---	---	<0.02	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		---	---	<0.01	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		---	---	<0.05	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		---	---	<0.05	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		---	---	<0.05	---	---

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1807	SBT-GW-1808	SMGW-BH-A315-R	SBT-GW-1063	SBT-GW-1042
				Sampling date / time	02-Feb-2026 13:55	02-Feb-2026 13:40	02-Feb-2026 11:30	02-Feb-2026 10:52	03-Feb-2026 10:00
Compound	CAS Number	LOR	Unit		ES2603450-006	ES2603450-007	ES2603450-008	ES2603450-009	ES2603450-010
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		----	----	<0.05	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	----	<0.01	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		----	----	<0.01	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	----	**129**	----	----
Toluene-D8	2037-26-5	2	%		----	----	**119**	----	----
4-Bromofluorobenzene	460-00-4	2	%		----	----	**108**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		----	----	**120**	----	----
13C8-PFOA	---	0.02	%		----	----	**108**	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	SBT-GW-1048-R	SBT-GW-4003	SBT-GW-4005	SBT-GW-4801	SBT-GW-4802
			Sampling date / time	02-Feb-2026 14:23	02-Feb-2026 08:35	02-Feb-2026 07:38	02-Feb-2026 08:58	02-Feb-2026 08:14
Compound	CAS Number	LOR	Unit	ES2603450-011	ES2603450-012	ES2603450-013	ES2603450-014	ES2603450-015
				Result	Result	Result	Result	Result
EA005P: pH by PC Titrator								
pH Value	---	0.01	pH Unit	6.06	7.66	7.77	7.72	7.57
EA010P: Conductivity by PC Titrator								
Electrical Conductivity @ 25°C	---	1	µS/cm	31000	19300	26500	17000	27200
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	---	10	mg/L	23300	13800	19600	11700	20600
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	39	1050	960	652	841
Total Alkalinity as CaCO3	---	1	mg/L	39	1050	960	652	841
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	566	721	1200	801	1200
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	9560	6090	8960	5630	9190
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	53	157	407	280	442
Magnesium	7439-95-4	1	mg/L	929	549	881	415	930
Sodium	7440-23-5	1	mg/L	4840	2780	4810	3000	4850
Potassium	7440-09-7	1	mg/L	6	20	51	28	48
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.83	<0.01	<0.01	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	0.001	<0.001	0.003	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.003	<0.001	0.001	0.001
Nickel	7440-02-0	0.001	mg/L	0.322	0.010	0.052	0.015	0.023
Lead	7439-92-1	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1048-R	SBT-GW-4003	SBT-GW-4005	SBT-GW-4801	SBT-GW-4802
				Sampling date / time	02-Feb-2026 14:23	02-Feb-2026 08:35	02-Feb-2026 07:38	02-Feb-2026 08:58	02-Feb-2026 08:14
Compound	CAS Number	LOR	Unit		ES2603450-011	ES2603450-012	ES2603450-013	ES2603450-014	ES2603450-015
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.229	0.007	0.009	0.009	0.018
Manganese	7439-96-5	0.001	mg/L		7.98	0.263	0.093	0.600	0.572
Iron	7439-89-6	0.05	mg/L		29.1	0.08	0.20	0.05	0.16
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		3.01	3.07	2.11	5.36	5.32
Arsenic	7440-38-2	0.001	mg/L		0.003	0.013	0.012	0.006	0.006
Cadmium	7440-43-9	0.0001	mg/L		0.0011	<0.0001	0.0001	0.0001	0.0001
Chromium	7440-47-3	0.001	mg/L		0.006	0.004	0.005	0.007	0.008
Copper	7440-50-8	0.001	mg/L		0.015	0.010	0.017	0.029	0.020
Cobalt	7440-48-4	0.001	mg/L		0.706	0.008	0.014	0.021	0.018
Nickel	7440-02-0	0.001	mg/L		0.373	0.017	0.046	0.032	0.029
Lead	7439-92-1	0.001	mg/L		0.007	0.005	0.004	0.014	0.010
Zinc	7440-66-6	0.005	mg/L		0.717	0.027	0.053	0.064	0.048
Manganese	7439-96-5	0.001	mg/L		11.6	0.414	0.178	1.01	0.773
Iron	7439-89-6	0.05	mg/L		33.7	6.91	4.77	17.8	12.6
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.25	0.62	4.46	1.36	1.27
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	0.12	0.05	0.01	0.04
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	0.47	<0.01	0.01	7.48
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		<0.01	0.59	0.05	0.02	7.52

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1048-R	SBT-GW-4003	SBT-GW-4005	SBT-GW-4801	SBT-GW-4802
				Sampling date / time	02-Feb-2026 14:23	02-Feb-2026 08:35	02-Feb-2026 07:38	02-Feb-2026 08:58	02-Feb-2026 08:14
Compound	CAS Number	LOR	Unit		ES2603450-011	ES2603450-012	ES2603450-013	ES2603450-014	ES2603450-015
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		0.4	17.2	4.6	1.6	1.5
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		0.4	17.8	4.6	1.6	9.0
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		0.03	4.49	0.39	0.27	0.14
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	0.12	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		282	208	297	189	301
ø Total Cations	---	0.01	meq/L		290	174	303	179	311
ø Ionic Balance	---	0.01	%		1.32	8.72	1.07	2.50	1.60
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		6	5	2	<1	<1
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		----	<20	----	----	----
C10 - C14 Fraction	---	50	µg/L		----	<50	----	----	----
C15 - C28 Fraction	---	100	µg/L		----	<100	----	----	----
C29 - C36 Fraction	---	50	µg/L		----	<50	----	----	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		----	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		----	<20	----	----	----
>C10 - C16 Fraction	---	100	µg/L		----	<100	----	----	----
>C16 - C34 Fraction	---	100	µg/L		----	<100	----	----	----
>C34 - C40 Fraction	---	100	µg/L		----	<100	----	----	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		----	<100	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1048-R	SBT-GW-4003	SBT-GW-4005	SBT-GW-4801	SBT-GW-4802
				Sampling date / time	02-Feb-2026 14:23	02-Feb-2026 08:35	02-Feb-2026 07:38	02-Feb-2026 08:58	02-Feb-2026 08:14
Compound	CAS Number	LOR	Unit		ES2603450-011	ES2603450-012	ES2603450-013	ES2603450-014	ES2603450-015
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	<100	---	---	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	<1	---	---	---
Toluene	108-88-3	2	µg/L		---	<2	---	---	---
Ethylbenzene	100-41-4	2	µg/L		---	<2	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	<2	---	---	---
ortho-Xylene	95-47-6	2	µg/L		---	<2	---	---	---
^ Total Xylenes	---	2	µg/L		---	<2	---	---	---
^ Sum of BTEX	---	1	µg/L		---	<1	---	---	---
Naphthalene	91-20-3	5	µg/L		---	<5	---	---	---
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		---	<0.02	---	---	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		---	<0.01	---	---	---
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		---	<0.01	---	---	---
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		---	<0.1	---	---	---
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		---	<0.02	---	---	---
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		---	<0.02	---	---	---
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		---	<0.02	---	---	---
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		---	<0.01	---	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		---	<0.05	---	---	---
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		---	<0.05	---	---	---
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		---	<0.05	---	---	---

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1048-R	SBT-GW-4003	SBT-GW-4005	SBT-GW-4801	SBT-GW-4802
				Sampling date / time	02-Feb-2026 14:23	02-Feb-2026 08:35	02-Feb-2026 07:38	02-Feb-2026 08:58	02-Feb-2026 08:14
Compound	CAS Number	LOR	Unit		ES2603450-011	ES2603450-012	ES2603450-013	ES2603450-014	ES2603450-015
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		----	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	<0.01	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		----	<0.01	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		----	113	----	----	----
Toluene-D8	2037-26-5	2	%		----	114	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		----	131	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		----	102	----	----	----
13C8-PFOA	---	0.02	%		----	101	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	DUP01_020626	DUP02_030226	SBT-GW-4800	----	----
				Sampling date / time	02-Feb-2026 07:40	03-Feb-2026 11:28	02-Feb-2026 09:29	----	----
Compound	CAS Number	LOR	Unit		ES2603450-016	ES2603450-017	ES2603450-018	--------	--------
					Result	Result	Result	----	----
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit		7.01	7.43	7.72	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm		6920	3480	16300	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		4670	2140	11200	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	----	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		122	166	1270	----	----
Total Alkalinity as CaCO3	----	1	mg/L		122	166	1270	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		230	183	667	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		2180	977	5260	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		15	55	178	----	----
Magnesium	7439-95-4	1	mg/L		333	41	552	----	----
Sodium	7440-23-5	1	mg/L		2600	607	2950	----	----
Potassium	7440-09-7	1	mg/L		11	15	26	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.04	0.06	<0.01	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.002	0.002	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	0.004	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L		0.049	0.007	0.013	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	DUP01_020626	DUP02_030226	SBT-GW-4800	----	----
				Sampling date / time	02-Feb-2026 07:40	03-Feb-2026 11:28	02-Feb-2026 09:29	----	----
Compound	CAS Number	LOR	Unit		ES2603450-016	ES2603450-017	ES2603450-018	--------	--------
					Result	Result	Result	----	----
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		0.567	0.040	0.007	----	----
Manganese	7439-96-5	0.001	mg/L		0.329	0.286	0.426	----	----
Iron	7439-89-6	0.05	mg/L		4.68	0.08	1.38	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		4.17	2.38	8.83	----	----
Arsenic	7440-38-2	0.001	mg/L		0.003	0.004	0.015	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	0.0002	----	----
Chromium	7440-47-3	0.001	mg/L		0.014	0.009	0.012	----	----
Copper	7440-50-8	0.001	mg/L		0.018	0.011	0.044	----	----
Cobalt	7440-48-4	0.001	mg/L		0.057	0.011	0.019	----	----
Nickel	7440-02-0	0.001	mg/L		0.028	0.013	0.032	----	----
Lead	7439-92-1	0.001	mg/L		0.010	0.003	0.018	----	----
Zinc	7440-66-6	0.005	mg/L		3.16	0.171	0.105	----	----
Manganese	7439-96-5	0.001	mg/L		0.286	0.396	0.921	----	----
Iron	7439-89-6	0.05	mg/L		7.03	2.52	28.6	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		0.05	0.18	0.45	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		0.01	0.20	<0.01	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		0.01	0.20	<0.01	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	DUP01_020626	DUP02_030226	SBT-GW-4800	----	----
				Sampling date / time	02-Feb-2026 07:40	03-Feb-2026 11:28	02-Feb-2026 09:29	----	----
Compound	CAS Number	LOR	Unit		ES2603450-016	ES2603450-017	ES2603450-018	--------	--------
					Result	Result	Result	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		0.9	0.5	0.4	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		0.9	0.7	0.4	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		0.08	0.18	0.52	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	0.02	<0.01	----	----
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		68.7	34.7	188	----	----
ø Total Cations	----	0.01	meq/L		142	32.9	183	----	----
ø Ionic Balance	----	0.01	%		34.6	2.64	1.17	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	----	1	mg/L		8	5	2	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	<100	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	DUP01_020626	DUP02_030226	SBT-GW-4800	----	----
				Sampling date / time	02-Feb-2026 07:40	03-Feb-2026 11:28	02-Feb-2026 09:29	----	----
Compound	CAS Number	LOR	Unit		ES2603450-016	ES2603450-017	ES2603450-018	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	<100	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	----	----	----
Toluene	108-88-3	2	µg/L		<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	<2	----	----	----
^ Total Xylenes	----	2	µg/L		<2	<2	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	<5	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	<0.01	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	<0.01	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	<0.01	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	DUP01_020626	DUP02_030226	SBT-GW-4800	----	----
				Sampling date / time	02-Feb-2026 07:40	03-Feb-2026 11:28	02-Feb-2026 09:29	---	---
Compound	CAS Number	LOR	Unit		ES2603450-016	ES2603450-017	ES2603450-018	--------	--------
					Result	Result	Result	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	<0.01	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	<0.01	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**132**	**119**	----	----	----
Toluene-D8	2037-26-5	2	%		**120**	**109**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**111**	**101**	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**115**	**114**	----	----	----
13C8-PFOA	---	0.02	%		**108**	**105**	----	----	----

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP231S: PFAS Surrogate			
13C4-PFOS	---	50	120
13C8-PFOA	---	50	120

QUALITY CONTROL REPORT

Work Order	: **ES2603450**	Page	: 1 of 20
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 03-Feb-2026
Order number	: 754-SYDEN274937	Date Analysis Commenced	: 04-Feb-2026
C-O-C number	: 93705	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant		
Site	: 754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	: 18		
No. of samples analysed	: 18		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005P: pH by PC Titrator (QC Lot: 7176203)									
ES2603450-001	SMGW-BH-A107	EA005-P: pH Value	---	0.01	pH Unit	7.85	7.89	0.5	0% - 20%
ES2603450-010	SBT-GW-1042	EA005-P: pH Value	---	0.01	pH Unit	4.77	4.67	2.1	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 7176204)									
ES2603458-003	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	340	341	0.0	0% - 20%
ES2603450-001	SMGW-BH-A107	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	1980	1950	1.4	0% - 20%
ES2603450-010	SBT-GW-1042	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	14400	14800	2.5	0% - 20%
ES2603468-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	981	1000	1.9	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7179048)									
ES2603287-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	138	158	13.7	0% - 50%
ES2603287-011	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	152	165	8.7	0% - 50%
ES2603287-021	Anonymous	EA015H: Total Dissolved Solids @180°C		10	mg/L	151	147	2.8	0% - 50%
ES2603476-002	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	9700	9470	2.4	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7179497)									
EN2601720-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	4700	4720	0.5	0% - 20%
ES2603219-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	67	72	7.9	No Limit
ES2603450-007	SBT-GW-1808	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	8960	8820	1.5	0% - 20%
EW2600580-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	97	95	2.1	No Limit
ED037P: Alkalinity by PC Titrator (QC Lot: 7176205)									
ES2603450-001	SMGW-BH-A107	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 7176205) - continued									
ES2603450-001	SMGW-BH-A107	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	294	284	3.3	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	294	284	3.3	0% - 20%
ES2603450-010	SBT-GW-1042	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037 P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	2	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	<1	2	0.0	No Limit
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7175672)									
ES2603303-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2	2	0.0	No Limit
ES2603450-006	SBT-GW-1607	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	741	753	1.6	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7175676)									
ES2603450-017	DUP02_030226	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	183	183	0.0	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 7175673)									
ES2603303-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	3	3	0.0	No Limit
ES2603450-006	SBT-GW-1607	ED045G: Chloride	16887-00-6	1	mg/L	9950	9950	0.1	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 7175677)									
ES2603450-017	DUP02_030226	ED045G: Chloride	16887-00-6	1	mg/L	977	841	15.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 7180677)									
ED2600120-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	2	2	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	1	1	0.0	No Limit
		ED093F: Potassium	7440-09-7	1	mg/L	<1	<1	0.0	No Limit
ES2603183-007	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	20	20	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	8	8	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	85	85	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	12	12	0.0	0% - 50%
ED093F: Dissolved Major Cations (QC Lot: 7180680)									
ES2603450-008	SMGW-BH-A315-R	ED093F: Calcium	7440-70-2	1	mg/L	15	15	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	322	323	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	2530	2520	0.3	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	11	11	0.0	0% - 50%
ES2603665-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	35	37	6.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	25	26	6.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	68	72	5.6	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	7	7	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7180676)									
ED2600120-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7180676) - continued									
ED2600120-001	Anonymous	EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.010	0.010	0.0	0% - 50%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.022	0.023	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.40	0.40	0.0	0% - 20%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.27	0.27	0.0	No Limit
ES2603183-007	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.021	0.021	0.0	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7180679)									
ES2603450-008	SMGW-BH-A315-R	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.357	0.351	1.7	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.049	0.048	0.0	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.584	0.593	1.7	0% - 20%
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	5.16	4.96	3.9	0% - 20%
ES2603665-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.131	0.139	5.8	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7180679) - continued									
ES2603665-001	Anonymous	EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 7180555)									
ES2603257-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.015	0.016	7.8	0% - 50%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.14	0.17	18.0	0% - 50%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	3.83	4.09	6.4	0% - 20%
ES2603450-005	SBT-GW-1806	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.003	0.002	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	0.018	0.019	0.0	0% - 50%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.509	0.506	0.6	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.014	0.013	0.0	0% - 50%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.032	0.031	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	1.02	0.95	7.2	0% - 20%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	1.77	1.61	9.2	0% - 20%
EG020T: Total Metals by ICP-MS (QC Lot: 7180556)									
ES2603450-015	SBT-GW-4802	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0001	0.0002	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.006	0.005	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.008	0.008	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	0.018	0.019	0.0	0% - 50%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.020	0.020	0.0	0% - 50%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.010	0.010	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.773	0.770	0.3	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.029	0.029	0.0	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.048	0.048	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	5.32	4.94	7.4	0% - 20%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	12.6	12.2	2.9	0% - 20%
EW2600551-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 7180566) - continued									
EW2600551-001	Anonymous	EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.186	0.186	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.004	0.003	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.005	<0.005	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-T: Iron	7439-89-6	0.05	mg/L	0.08	0.07	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 7180678)									
ES2603450-002	SBT-GW-1030	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603450-010	SBT-GW-1042	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7176476)									
ES2603300-022	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603450-007	SBT-GW-1808	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7176477)									
ES2603450-017	DUP02_030226	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 7180997)									
ES2603258-025	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.04	0.0	No Limit
ES2603450-009	SBT-GW-1063	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.56	0.57	0.0	0% - 20%
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 7181283)									
EN2601601-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.05	0.0	No Limit
ES2603364-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	3.28	3.22	2.0	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 7175669)									
ES2603303-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603450-006	SBT-GW-1807	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.27	0.27	0.0	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 7175674)									
ES2603450-017	DUP02_030226	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 7180998)									
ES2603258-025	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	4.99	4.99	0.0	0% - 20%
ES2603450-009	SBT-GW-1063	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 7181284)									
EN2601601-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	0.09	0.09	0.0	No Limit
ES2603364-002	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7180994)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7180994) - continued									
ES2603450-008	SMGW-BH-A315-R	EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	0.8	0.8	0.0	No Limit
ES2603258-023	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1 (0.2)*	mg/L	1.7	1.6	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7181280)									
EN2601601-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1 (0.5)*	mg/L	2.4	2.5	5.7	No Limit
ES2603379-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	0.7	1.2	44.1	0% - 50%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7180993)									
ES2603450-008	SMGW-BH-A315-R	EK067G: Total Phosphorus as P	---	0.01	mg/L	0.09	0.08	17.5	No Limit
ES2603258-023	Anonymous	EK067G: Total Phosphorus as P	---	0.01	mg/L	0.11	0.10	12.1	0% - 50%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7181279)									
EN2601601-001	Anonymous	EK067G: Total Phosphorus as P	---	0.01 (0.05)*	mg/L	6.18	6.06	1.9	0% - 20%
ES2603379-001	Anonymous	EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7181281)									
ES2603478-002	Anonymous	EK067G: Total Phosphorus as P	---	0.01	mg/L	0.04	0.03	40.9	No Limit
ES2603487-004	Anonymous	EK067G: Total Phosphorus as P	---	0.01	mg/L	0.26	0.24	6.4	0% - 20%
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 7175671)									
ES2603303-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603450-006	SBT-GW-1807	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 7175675)									
ES2603450-017	DUP02_030226	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.02	0.02	0.0	No Limit
EP005: Total Organic Carbon (TOC) (QC Lot: 7177256)									
EN2601729-002	Anonymous	EP005: Total Organic Carbon	---	1	mg/L	4	4	0.0	No Limit
ES2603450-010	SBT-GW-1042	EP005: Total Organic Carbon	---	1	mg/L	18	18	0.0	0% - 50%
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7178999)									
ES2603450-003	SBT-GW-1024	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
ES2603450-008	SMGW-BH-A315-R	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7185017)									
ES2602355-006	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
ES2603939-014	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7178999)									
ES2603450-003	SBT-GW-1024	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2603450-008	SMGW-BH-A315-R	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7185017)									
ES2602355-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2603939-014	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 7178999)									
ES2603450-003	SBT-GW-1024	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 7178999) - continued									
ES2603450-003	SBT-GW-1024	EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2603450-008	SMGW-BH-A315-R	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP080: BTEXN (QC Lot: 7185017)									
ES2602355-006	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	2	2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2603939-014	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7176085)									
ED2600133-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01 (0.05)*	µg/L	0.63	0.55	14.4	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01 (0.05)*	µg/L	0.79	0.71	9.5	0% - 50%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02 (0.05)*	µg/L	6.96	7.42	6.4	0% - 20%
ED2600133-002	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01 (0.05)*	µg/L	0.20	0.23	10.7	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01 (0.05)*	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02 (0.05)*	µg/L	7.16	7.25	1.2	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.04	0.03	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7183513) - continued									
ES2603652-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2603578-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.13	0.12	0.0	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	0.08	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7176085)									
ED2600133-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01 (0.05)*	µg/L	4.66	4.40	5.8	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02 (0.05)*	µg/L	2.10	2.14	1.9	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02 (0.05)*	µg/L	3.84	3.89	1.1	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02 (0.05)*	µg/L	0.72	0.75	3.6	0% - 50%
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1 (0.2)*	µg/L	<0.2	<0.2	0.0	No Limit
ED2600133-002	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01 (0.05)*	µg/L	0.40	0.39	3.9	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02 (0.05)*	µg/L	2.36	2.58	8.9	0% - 20%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02 (0.05)*	µg/L	3.59	3.93	6.9	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02 (0.05)*	µg/L	0.41	0.39	4.4	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1 (0.2)*	µg/L	2.2	2.5	16.8	0% - 50%
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2603578-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	0.09	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7176085)									
ED2600133-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	0.99	1.01	1.9	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	0.08	0.07	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ED2600133-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.11	73.8	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7176085) - continued									
ED2600133-002	Anonymous	EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	0.08	0.08	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7183513)									
ES2603652-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2603578-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA005P: pH by PC Titrator (QCLot: 7176203)								
EA005-P: pH Value	---	---	pH Unit	---	4 pH Unit	99.2	98.8	101
				---	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 7176204)								
EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	<1	220 µS/cm	103	89.9	110
				<1	2100 µS/cm	101	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7179048)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	101	87.0	109
				<10	293 mg/L	94.5	75.2	126
				<10	2510 mg/L	99.8	83.0	124
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7179497)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	98.0	87.0	109
				<10	293 mg/L	106	75.2	126
				<10	2510 mg/L	96.1	83.0	124
ED037P: Alkalinity by PC Titrator (QCLot: 7176205)								
ED037-P: Total Alkalinity as CaCO3	---	---	mg/L	---	200 mg/L	100	81.0	115
				---	50 mg/L	98.6	80.0	128
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7175672)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	101	82.0	122
				<1	500 mg/L	96.7	82.0	122
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7175676)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	99.6	82.0	122
				<1	500 mg/L	92.8	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 7175673)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	110	80.9	127
				<1	1000 mg/L	94.2	80.9	127
ED045G: Chloride by Discrete Analyser (QCLot: 7175677)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	108	80.9	127
				<1	1000 mg/L	96.0	80.9	127
ED093F: Dissolved Major Cations (QCLot: 7180677)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	92.9	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	98.4	90.0	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED093F: Dissolved Major Cations (QCLot: 7180677) - continued								
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	92.7	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	94.8	85.0	113
ED093F: Dissolved Major Cations (QCLot: 7180680)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	97.1	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	103	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	98.4	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	104	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 7180676)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	96.8	80.0	116
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	101	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.3	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.3	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	97.0	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	96.0	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	98.8	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	99.9	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	97.6	82.0	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 7180679)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	104	80.0	116
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	105	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	105	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	102	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	107	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	102	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	98.8	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	105	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	107	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	102	82.0	112
EG020T: Total Metals by ICP-MS (QCLot: 7180555)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	98.3	82.0	120
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.6	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	102	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	99.6	86.0	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 7180555) - continued								
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	98.5	84.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.4	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	98.5	85.0	115
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	99.0	85.0	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	99.4	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	98.3	79.0	117
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	101	85.0	117
EG020T: Total Metals by ICP-MS (QCLot: 7180556)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	102	82.0	120
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	106	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	105	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	102	86.0	116
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	104	84.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	102	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	103	85.0	115
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	103	85.0	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	104	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	103	79.0	117
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	107	85.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 7180678)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	103	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7176476)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	100	77.0	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7176477)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	99.1	77.0	111
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7180997)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	101	90.0	114
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7181283)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	102	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7175669)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	98.3	82.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7175674)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	97.2	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7180998)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Laboratory Control Spike (LCS) Report: Spike Recovery (%): LCS	Laboratory Control Spike (LCS) Report: Acceptable Limits (%): Low	Laboratory Control Spike (LCS) Report: Acceptable Limits (%): High
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7180998) - continued								
EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	0.5 mg/L	104	91.0	113
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7181284)								
EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	0.5 mg/L	99.1	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7180994)								
EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	<0.1	5 mg/L	93.2	69.0	123
				<0.1	2.5 mg/L	88.3	70.0	123
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7181280)								
EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	<0.1	5 mg/L	92.9	69.0	123
				<0.1	2.5 mg/L	90.3	70.0	123
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7180993)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	97.3	71.3	126
				<0.01	0.5 mg/L	87.6	71.3	126
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7181279)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	97.3	71.3	126
				<0.01	0.5 mg/L	79.8	71.3	126
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7181281)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	96.9	71.3	126
				<0.01	0.5 mg/L	86.8	71.3	126
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7175671)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	96.4	85.0	117
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7175675)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	91.8	85.0	117
EP005: Total Organic Carbon (TOC) (QCLot: 7177256)								
EP005: Total Organic Carbon	---	1	mg/L	<1	10 mg/L	105	72.0	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7175421)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	70.0	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	88.8	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	91.7	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7178999)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	99.4	75.0	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7183281)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	65.1	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	79.0	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	88.0	58.3	120

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7186017)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	116	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7175421)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	77.4	53.9	95.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	91.7	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	99.4	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7178999)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	99.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7183281)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	70.8	53.9	95.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	74.1	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	88.8	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185017)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	107	75.0	127
EP080: BTEXN (QCLot: 7178999)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	113	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	102	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	101	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	103	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	104	75.5	124
EP080: BTEXN (QCLot: 7185017)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	102	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	103	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	110	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	109	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	108	75.5	124
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7176085)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	80.2	72.0	130
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	94.5	68.0	131
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	79.9	65.0	140
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7183513)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	83.1	72.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7183513) - continued								
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	97.5	68.0	131
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	98.8	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7176085)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	80.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	79.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	83.6	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	80.4	71.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7183513)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	103	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	100	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7176085)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	80.5	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	72.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	80.9	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	92.9	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7183513)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	108	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	87.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	82.4	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	107	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7175672)							
ES2603303-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	95.2	70.0	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7175676)							

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7175676) - continued							
ES2603450-017	DUP02_030226	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 7175673)							
ES2603303-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	129	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 7175677)							
ES2603450-017	DUP02_030226	ED045G: Chloride	16887-00-6	250 mg/L	91.2	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 7180676)							
ED2600120-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	101	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	103	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	101	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	100	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	106	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	103	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	102	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	103	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 7180679)							
ES2603450-007	SBT-GW-1808	EG020A-F: Arsenic	7440-38-2	1 mg/L	107	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	98.3	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	94.0	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	99.6	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	96.9	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	92.9	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	99.7	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	99.0	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 7180555)							
ES2603257-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	99.7	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	103	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	99.5	70.0	130
		EG020A-T: Cobalt	7440-48-4	1 mg/L	98.1	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	101	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	105	70.0	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	98.9	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	99.5	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	99.2	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 7180556)							
ES2603450-016	DUP01_020626	EG020A-T: Arsenic	7440-38-2	1 mg/L	110	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	104	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 7180556) - continued							
ES2603450-016	DUP01_020626	EG020A-T: Chromium	7440-47-3	1 mg/L	100.0	70.0	130
		EG020A-T: Cobalt	7440-48-4	1 mg/L	105	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	99.2	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	106	70.0	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	99.5	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	97.2	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	100	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 7180678)							
ES2603450-001	SMGW-BH-A107	EG035F: Mercury	7439-97-6	0.01 mg/L	103	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7176476)							
ES2603300-023	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	98.1	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7176477)							
ES2603450-018	SBT-GW-4800	EG035T: Mercury	7439-97-6	0.01 mg/L	95.1	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7180997)							
ES2603258-025	Anonymous	EK055G: Ammonia as N	7664-41-7	0.5 mg/L	106	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7181283)							
EN2601601-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.5 mg/L	105	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7175669)							
ES2603303-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	115	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7175674)							
ES2603450-017	DUP02_030226	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	111	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7180998)							
ES2603258-025	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.5 mg/L	# Not Determined	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7181284)							
EN2601601-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.5 mg/L	105	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7180994)							
ES2603258-024	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	10 mg/L	95.3	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7181280)							
ES2603137-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	5 mg/L	79.2	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7180993)							
ES2603258-024	Anonymous	EK067G: Total Phosphorus as P	---	1 mg/L	93.9	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7181279)							
ES2603137-001	Anonymous	EK067G: Total Phosphorus as P	---	1 mg/L	84.0	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7181281)							
ES2603478-003	Anonymous	EK067G: Total Phosphorus as P	---	1 mg/L	85.9	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7175671)							
ES2603303-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	102	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7175675)							
ES2603450-017	DUP02_030226	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	102	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 7177256)							
ES2603450-001	SMGW-BH-A107	EP005: Total Organic Carbon	---	100 mg/L	96.7	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7178999)							
ES2603450-003	SBT-GW-1024	EP080: C6 - C9 Fraction	---	325 µg/L	74.5	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7185017)							
ES2602355-006	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	123	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7178999)							
ES2603450-003	SBT-GW-1024	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	71.9	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185017)							
ES2602355-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	117	70.0	130
EP080: BTEXN (QCLot: 7178999)							
ES2603450-003	SBT-GW-1024	EP080: Benzene	71-43-2	25 µg/L	96.1	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	87.7	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	87.6	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	87.6	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	87.7	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	90.9	70.0	130
EP080: BTEXN (QCLot: 7185017)							
ES2602355-006	Anonymous	EP080: Benzene	71-43-2	25 µg/L	94.4	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	101	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	104	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	111	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	110	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	102	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7176085)							
ED2600133-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	105	72.0	130
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	72.1	68.0	131
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	66.8	65.0	140

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	84.1	72.0	130
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	89.1	68.0	131
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	84.4	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7176085)							
ED2600133-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.0	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	72.7	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	90.9	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	103	71.0	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	107	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	124	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	103	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	104	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	96.5	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7176085)							
ED2600133-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	88.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	67.5	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	77.7	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	78.1	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7183513)							
ES2603652-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	99.7	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	92.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	102	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	80.8	71.4	144

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2603450**	Page	: 1 of 16
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 03-Feb-2026
Site	: 754-SYDEN374937	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant	No. of samples received	: 18
Order number	: 754-SYDEN274937	No. of samples analysed	: 18

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2603450--017	DUP02_030226	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Ar	ES2603258--025	Anonymous	**Nitrite + Nitrate as N**	—	Not Determined	—	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural							
SBT-GW-1806,	SBT-GW-1807,	—	—	—	04-Feb-2026	02-Feb-2026	2
SBT-GW-1808,	SMGW-BH-A315-R,						
SBT-GW-1063,	SBT-GW-1048-R,						
SBT-GW-4003,	SBT-GW-4005,						
SBT-GW-4801,	SBT-GW-4802,						
DUP01_020626,	SBT-GW-4800						
Clear Plastic Bottle - Natural							
SMGW-BH-A107,	SBT-GW-1030,	—	—	—	04-Feb-2026	03-Feb-2026	1
SBT-GW-1024,	SBT-GW-1805,						
SBT-GW-1042,	DUP02_030226						

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
		QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
TRH - Semivolatile Fraction	EP071	0	19	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
TRH - Semivolatile Fraction	EP071	0	19	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for **VOC in soils** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA005P: pH by PC Titrator								
Clear Plastic Bottle - Natural (EA005-P)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**04-Feb-2026**	02-Feb-2026	✖
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Natural (EA005-P)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**04-Feb-2026**	03-Feb-2026	✖
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**04-Feb-2026**	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Natural (EA010-P)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**04-Feb-2026**	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-4005,	DUP01_020626	**02-Feb-2026**	---	---	---	**05-Feb-2026**	09-Feb-2026	✓
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**06-Feb-2026**	09-Feb-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4801,							
SBT-GW-4802,	SBT-GW-4800							
Clear Plastic Bottle - Natural (EA015H)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**06-Feb-2026**	10-Feb-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**04-Feb-2026**	16-Feb-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Natural (ED037-P)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**04-Feb-2026**	17-Feb-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**04-Feb-2026**	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Natural (ED041G)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**04-Feb-2026**	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
SBT-GW-1806,	SBT-GW-1807,	02-Feb-2026	---	---	---	04-Feb-2026	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Natural (ED045G)								
SMGW-BH-A107,	SBT-GW-1030,	03-Feb-2026	---	---	---	04-Feb-2026	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
SBT-GW-1806,	SBT-GW-1807,	02-Feb-2026	---	---	---	06-Feb-2026	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
SMGW-BH-A107,	SBT-GW-1030,	03-Feb-2026	---	---	---	06-Feb-2026	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SBT-GW-1806,	SBT-GW-1807,	02-Feb-2026	---	---	---	06-Feb-2026	01-Aug-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SMGW-BH-A107,	SBT-GW-1030,	03-Feb-2026	---	---	---	06-Feb-2026	02-Aug-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	**06-Feb-2026**	01-Aug-2026	✓	**06-Feb-2026**	01-Aug-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	**06-Feb-2026**	02-Aug-2026	✓	**06-Feb-2026**	02-Aug-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**09-Feb-2026**	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**09-Feb-2026**	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
SBT-GW-1806,	SBT-GW-1807,	**02-Feb-2026**	---	---	---	**06-Feb-2026**	02-Mar-2026	✓
SBT-GW-1808,	SMGW-BH-A315-R,							
SBT-GW-1063,	SBT-GW-1048-R,							
SBT-GW-4003,	SBT-GW-4005,							
SBT-GW-4801,	SBT-GW-4802,							
DUP01_020626,	SBT-GW-4800							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
SMGW-BH-A107,	SBT-GW-1030,	**03-Feb-2026**	---	---	---	**06-Feb-2026**	03-Mar-2026	✓
SBT-GW-1024,	SBT-GW-1805,							
SBT-GW-1042,	DUP02_030226							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
SBT-GW-4801, DUP01_020626,	SBT-GW-4802, SBT-GW-4800	02-Feb-2026	---	---	---	06-Feb-2026	02-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
SBT-GW-1805, SBT-GW-1808, SBT-GW-1063, SBT-GW-4003,	SBT-GW-1807, SMGW-BH-A315-R, SBT-GW-1048-R, SBT-GW-4005	02-Feb-2026	---	---	---	09-Feb-2026	02-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
DUP02_030226		03-Feb-2026	---	---	---	06-Feb-2026	03-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
SMGW-BH-A107, SBT-GW-1024, SBT-GW-1042	SBT-GW-1030, SBT-GW-1805,	03-Feb-2026	---	---	---	09-Feb-2026	03-Mar-2026 ✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
SBT-GW-1805, SBT-GW-1808, SBT-GW-1063, SBT-GW-4003, SBT-GW-4801, DUP01_020626,	SBT-GW-1807, SMGW-BH-A315-R, SBT-GW-1048-R, SBT-GW-4005, SBT-GW-4802, SBT-GW-4800	02-Feb-2026	---	---	---	04-Feb-2026	04-Feb-2026 ✓
Clear Plastic Bottle - Natural (EK057G)							
SMGW-BH-A107, SBT-GW-1024, SBT-GW-1042,	SBT-GW-1030, SBT-GW-1805, DUP02_030226	03-Feb-2026	---	---	---	04-Feb-2026	05-Feb-2026 ✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SBT-GW-1808, SBT-GW-4802, SBT-GW-4800	SBT-GW-4801, DUP01_020626,	02-Feb-2026	---	---	---	06-Feb-2026	02-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SBT-GW-1806, SMGW-BH-A315-R, SBT-GW-1048-R, SBT-GW-4005	SBT-GW-1807, SBT-GW-1063, SBT-GW-4003,	02-Feb-2026	---	---	---	09-Feb-2026	02-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SMGW-BH-A107,	DUP02_030226	03-Feb-2026	---	---	---	06-Feb-2026	03-Mar-2026 ✓
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SBT-GW-1030, SBT-GW-1805,	SBT-GW-1024, SBT-GW-1042	03-Feb-2026	---	---	---	09-Feb-2026	03-Mar-2026 ✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SBT-GW-1806, SBT-GW-1807, SBT-GW-1808, SMGW-BH-A315-R, SBT-GW-1063, SBT-GW-1048-R, SBT-GW-4003, SBT-GW-4005	**02-Feb-2026**	**06-Feb-2026**	02-Mar-2026	✓	**06-Feb-2026**	02-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SBT-GW-4801, SBT-GW-4802, DUP01_020626, SBT-GW-4800	**02-Feb-2026**	**06-Feb-2026**	02-Mar-2026	✓	**07-Feb-2026**	02-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SMGW-BH-A107, SBT-GW-1030, SBT-GW-1024, SBT-GW-1805, SBT-GW-1042	**03-Feb-2026**	**06-Feb-2026**	03-Mar-2026	✓	**06-Feb-2026**	03-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
DUP02_030226	**03-Feb-2026**	**06-Feb-2026**	03-Mar-2026	✓	**07-Feb-2026**	03-Mar-2026	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
SBT-GW-1806, SBT-GW-1807, SBT-GW-1808, SMGW-BH-A315-R, SBT-GW-1063, SBT-GW-1048-R, SBT-GW-4003, SBT-GW-4005	**02-Feb-2026**	**06-Feb-2026**	02-Mar-2026	✓	**06-Feb-2026**	02-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
SBT-GW-4801, SBT-GW-4802, DUP01_020626, SBT-GW-4800	**02-Feb-2026**	**06-Feb-2026**	02-Mar-2026	✓	**07-Feb-2026**	02-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
SMGW-BH-A107, SBT-GW-1030, SBT-GW-1024, SBT-GW-1805, SBT-GW-1042	**03-Feb-2026**	**06-Feb-2026**	03-Mar-2026	✓	**06-Feb-2026**	03-Mar-2026	✓
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
DUP02_030226	**03-Feb-2026**	**06-Feb-2026**	03-Mar-2026	✓	**07-Feb-2026**	03-Mar-2026	✓
EK071G: Reactive Phosphorus as P by discrete analyser							
Clear Plastic Bottle - Natural (EK071G)							
SBT-GW-1806, SBT-GW-1807, SBT-GW-1808, SMGW-BH-A315-R, SBT-GW-1063, SBT-GW-1048-R, SBT-GW-4003, SBT-GW-4005, SBT-GW-4801, SBT-GW-4802, DUP01_020626, SBT-GW-4800	**02-Feb-2026**	---	---	---	**04-Feb-2026**	04-Feb-2026	✓
Clear Plastic Bottle - Natural (EK071G)							
SMGW-BH-A107, SBT-GW-1030, SBT-GW-1024, SBT-GW-1805, SBT-GW-1042, DUP02_030226	**03-Feb-2026**	---	---	---	**04-Feb-2026**	05-Feb-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP005: Total Organic Carbon (TOC)							
Amber TOC Vial - Sulfuric Acid (EP005)							
SBT-GW-1806, SBT-GW-1807, SBT-GW-1808, SMGW-BH-A315-R, SBT-GW-1063, SBT-GW-1048-R, SBT-GW-4003, SBT-GW-4005, SBT-GW-4801, SBT-GW-4802, DUP01_020626, SBT-GW-4800	02-Feb-2026	---	---	---	06-Feb-2026	02-Mar-2026	✓
Amber TOC Vial - Sulfuric Acid (EP005)							
SMGW-BH-A107, SBT-GW-1030, SBT-GW-1024, SBT-GW-1805, SBT-GW-1042, DUP02_030226	03-Feb-2026	---	---	---	06-Feb-2026	03-Mar-2026	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-1806, SMGW-BH-A315-R, DUP01_020626	02-Feb-2026	04-Feb-2026	09-Feb-2026	✓	06-Feb-2026	16-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-4003	02-Feb-2026	09-Feb-2026	09-Feb-2026	✓	10-Feb-2026	21-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	10-Feb-2026	✓	06-Feb-2026	16-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-1806, SMGW-BH-A315-R, DUP01_020626	02-Feb-2026	06-Feb-2026	16-Feb-2026	✓	06-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-4003	02-Feb-2026	09-Feb-2026	16-Feb-2026	✓	09-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-1024, DUP02_030226	03-Feb-2026	06-Feb-2026	17-Feb-2026	✓	06-Feb-2026	17-Feb-2026	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-1806, SMGW-BH-A315-R, DUP01_020626	02-Feb-2026	04-Feb-2026	09-Feb-2026	✓	06-Feb-2026	16-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-4003	02-Feb-2026	09-Feb-2026	09-Feb-2026	✓	10-Feb-2026	21-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)							
SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	10-Feb-2026	✓	06-Feb-2026	16-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-1806, SMGW-BH-A315-R, DUP01_020626	02-Feb-2026	06-Feb-2026	16-Feb-2026	✓	06-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-4003	02-Feb-2026	09-Feb-2026	16-Feb-2026	✓	09-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SBT-GW-1024, DUP02_030226	03-Feb-2026	06-Feb-2026	17-Feb-2026	✓	06-Feb-2026	17-Feb-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-1806, DUP01_020626	SMGW-BH-A315-R,	02-Feb-2026	06-Feb-2026	16-Feb-2026	✓	06-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-4003		02-Feb-2026	09-Feb-2026	16-Feb-2026	✓	09-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-1024,	DUP02_030226	03-Feb-2026	06-Feb-2026	17-Feb-2026	✓	06-Feb-2026	17-Feb-2026	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
SMGW-BH-A315-R,	DUP01_020626	02-Feb-2026	04-Feb-2026	01-Aug-2026	✓	06-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-4003		02-Feb-2026	06-Feb-2026	01-Aug-2026	✓	10-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-1030, SBT-GW-1805,	SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	02-Aug-2026	✓	06-Feb-2026	02-Aug-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
SMGW-BH-A315-R,	DUP01_020626	02-Feb-2026	04-Feb-2026	01-Aug-2026	✓	06-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-4003		02-Feb-2026	06-Feb-2026	01-Aug-2026	✓	10-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-1030, SBT-GW-1805,	SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	02-Aug-2026	✓	06-Feb-2026	02-Aug-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
SMGW-BH-A315-R,	DUP01_020626	02-Feb-2026	04-Feb-2026	01-Aug-2026	✓	06-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-4003		02-Feb-2026	06-Feb-2026	01-Aug-2026	✓	10-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-1030, SBT-GW-1805,	SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	02-Aug-2026	✓	06-Feb-2026	02-Aug-2026	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
SMGW-BH-A315-R,	DUP01_020626	02-Feb-2026	04-Feb-2026	01-Aug-2026	✓	06-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-4003		02-Feb-2026	06-Feb-2026	01-Aug-2026	✓	10-Feb-2026	01-Aug-2026	✓
HDPE (no PTFE) (EP231X)								
SBT-GW-1030, SBT-GW-1805,	SBT-GW-1024, DUP02_030226	03-Feb-2026	04-Feb-2026	02-Aug-2026	✓	06-Feb-2026	02-Aug-2026	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	4	34	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	4	34	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	3	25	12.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	8	80	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	22	13.64	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	4	34	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	6	58	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	31	12.90	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	4	22	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	3	36	8.33	8.33	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	22	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	10	80	12.50	12.50	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	6	36	16.67	15.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	6	58	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	19	10.53	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	4	80	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	3	58	5.17	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	19	10.53	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	25	8.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	22	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Organic Carbon	EP005	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	3	58	5.17	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	31	6.45	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of 'filterable' residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. Auto Titrator) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G. Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* FN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510. 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG15-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME: FADR 4/2/26 9:50	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		C	
Other comments:			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	SMGW-BH-A107		03/02/2025 02:11 PM	WATER	ALS: 5 Non ALS: 0	No	X			
002	SBT-GW-1030		03/02/2025 08:10 AM	WATER	ALS: 7 Non ALS: 0	No	X	Partial 1/6		
003	SBT-GW-1024		03/02/2025 11:24 AM	WATER	ALS: 10 Non ALS: 0	No	X	Partial 2/6		
004	SBT-GW-1805		03/02/2025 11:33 AM	WATER	ALS: 7 Non ALS: 0	No	X	Partial 1/6		
005	SBT-GW-1806		02/02/2025 10:35 AM	WATER	ALS: 8 Non ALS: 0	No	X	Partial 1/6		
006	SBT-GW-1807		02/02/2025 01:55 PM	WATER	ALS: 5 Non ALS: 0	No	X			
007	SBT-GW-1808		02/02/2025 01:40 PM	WATER	ALS: 5 Non ALS: 0	No	X			

HT

Environmental Division Sydney

Work Order Reference ES2603450

Telephone: +61-2-8784 8555

CHAIN OF CUSTODY

COC#: 93705 *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	SMGW-BH-A315-R		02/02/2026 11:30 AM	WATER	ALS: 10 Non ALS: 0	No	X	Partial 2/8		
009	SBT-GW-1063		02/02/2026 10:52 AM	WATER	ALS: 5 Non ALS: 0	No	X			
010	SBT-GW-1042		03/02/2026 10:00 AM	WATER	ALS: 5 Non ALS: 0	No	X			
011	SBT-GW-1048-R		02/02/2026 02:23 PM	WATER	ALS: 5 Non ALS: 0	No	X			
012	SBT-GW-4003		02/02/2026 08:36 AM	WATER	ALS: 5 Non ALS: 0	No	X			
013	SBT-GW-4005		02/02/2026 07:36 AM	WATER	ALS: 5 Non ALS: 0	No	X			
014	SBT-GW-4001		02/02/2026 08:58 AM	WATER	ALS: 5 Non ALS: 0	No	X			

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH: 0401547587 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	SBT-GW-4602		02/02/2026 08:14 AM	WATER	ALS: 5 Non ALS: 0	No	X			
016	DUP01_020626		02/02/2026 07:40 AM	WATER	ALS: 10 Non ALS: 0	No	X	Partial 2/6		
017	DUP02_030226		03/02/2026 11:28 AM	WATER	ALS: 10 Non ALS: 0	No	X	Partial 2/6		
018	SBT-GW-4600		02/02/2026 09:29 AM	WATER	ALS: 5 Non ALS: 0	No	X			

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Eliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
002	SBT-GW-1030	QC WATER	WATER	- EP231 PFAS - Short Suite (12 analytes)
003	SBT-GW-1024	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)
004	SBT-GW-1805	QC WATER	WATER	- EP231 PFAS - Short Suite (12 analytes)
005	SBT-GW-1806	QC WATER	WATER	- W-04 TRH/BTEXN
008	SMGW-BH-A315-R	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)
016	DUP01_020626	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)
017	DUP02_010226	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)

CHAIN OF CUSTODY

COC#: 93705 *ALS Laboratory:* ES Sydney Environmental

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	SMGW-BH-A107	Clear Plastic Bottle - Natural	500 mL	00070325166255	Green	No	
001	SMGW-BH-A107	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004455	Red	Yes	
001	SMGW-BH-A107	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004441	Red	No	
001	SMGW-BH-A107	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123043	Purple	No	
001	SMGW-BH-A107	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021386	Purple	No	
002	SBT-GW-1036	Clear Plastic Bottle - Natural	500 mL	00070325166247	Green	No	
002	SBT-GW-1036	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121124064051	Red	Yes	
002	SBT-GW-1036	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123007	Purple	No	
002	SBT-GW-1036	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021343	Purple	No	
002	SBT-GW-1036	HDPE (no PTFE)	20 mL	00352309063303	Grey	No	
002	SBT-GW-1036	HDPE (no PTFE)	20 mL	00352309062580	Grey	No	
002	SBT-GW-1036	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121124064045	Red	No	
003	SBT-GW-1024	Amber Glass Bottle - Unpreserved	100 mL	00400324005874	Orange	No	
003	SBT-GW-1024	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030307	Purple	No	
003	SBT-GW-1024	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030308	Purple	No	
003	SBT-GW-1024	HDPE (no PTFE)	20 mL	00352309062739	Grey	No	
003	SBT-GW-1024	HDPE (no PTFE)	20 mL	00352309062755	Grey	No	
003	SBT-GW-1024	Clear Plastic Bottle - Natural	500 mL	00070325166291	Green	No	
003	SBT-GW-1024	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121124064043	Red	Yes	
003	SBT-GW-1024	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121124064058	Red	No	
003	SBT-GW-1024	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021351	Purple	No	
003	SBT-GW-1024	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122616	Purple	No	
004	SBT-GW-1805	HDPE (no PTFE)	20 mL	00352309063215	Grey	No	
004	SBT-GW-1805	HDPE (no PTFE)	20 mL	00352309063056	Grey	No	
004	SBT-GW-1805	Clear Plastic Bottle - Natural	500 mL	00070325166243	Green	No	
004	SBT-GW-1805	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004483	Red	Yes	

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417758835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard Info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

004	SBT-GW-1805	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004451	Red	No	
004	SBT-GW-1805	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122837	Purple	No	
004	SBT-GW-1805	Amber TOC Vial - Sulfuric Acid	40 mL	00160325021390	Purple	No	
005	SBT-GW-1806	Amber Glass Bottle - Unpreserved	100 mL	00400324008143	Orange	No	
005	SBT-GW-1806	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030350	Purple	No	
005	SBT-GW-1806	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030338	Purple	No	
005	SBT-GW-1806	Clear Plastic Bottle - Natural	500 mL	00070325166226	Green	No	
005	SBT-GW-1806	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004767	Red	Yes	
005	SBT-GW-1806	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004743	Red	No	
005	SBT-GW-1806	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123022	Purple	No	
005	SBT-GW-1806	Amber TOC Vial - Sulfuric Acid	40 mL	00160326021410	Purple	No	
006	SBT-GW-1807	Clear Plastic Bottle - Natural	500 mL	00070325166264	Green	No	
006	SBT-GW-1807	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004763	Red	Yes	
006	SBT-GW-1807	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004792	Red	No	
006	SBT-GW-1807	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122862	Purple	No	
006	SBT-GW-1807	Amber TOC Vial - Sulfuric Acid	40 mL	00160325021380	Purple	No	
007	SBT-GW-1808	Clear Plastic Bottle - Natural	500 mL	00070325166294	Green	No	
007	SBT-GW-1808	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121026004781	Red	Yes	
007	SBT-GW-1808	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004790	Red	No	
007	SBT-GW-1808	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122797	Purple	No	
007	SBT-GW-1808	Amber TOC Vial - Sulfuric Acid	40 mL	00160325021403	Purple	No	
008	SMGW-BH-A315-R	Amber Glass Bottle - Unpreserved	100 mL	00400324008965	Orange	No	
008	SMGW-BH-A315-R	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030319	Purple	No	
008	SMGW-BH-A315-R	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030309	Purple	No	
008	SMGW-BH-A315-R	HDPE (no PTFE)	20 mL	00352309052537	Grey	No	
008	SMGW-BH-A315-R	HDPE (no PTFE)	20 mL	00352309052575	Grey	No	
008	SMGW-BH-A315-R	Clear Plastic Bottle - Natural	500 mL	00070325166224	Green	No	

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

PROJECT MANAGER: David McFadden CONTACT PH: 0401547587 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

009	SMGW-BH-A315-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004762	Red	Yes	
009	SMGW-BH-A315-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004761	Red	No	
009	SMGW-BH-A315-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122795	Purple	No	
009	SMGW-BH-A315-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021372	Purple	No	
009	SBT-GW-1063	Clear Plastic Bottle - Natural	500 mL	00070325166220	Green	No	
009	SBT-GW-1063	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004787	Red	Yes	
009	SBT-GW-1063	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004789	Red	No	
009	SBT-GW-1063	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122908	Purple	No	
009	SBT-GW-1063	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021383	Purple	No	
010	SBT-GW-1042	Clear Plastic Bottle - Natural	500 mL	00070325166263	Green	No	
010	SBT-GW-1042	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025054839	Red	Yes	
010	SBT-GW-1042	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025054843	Red	No	
010	SBT-GW-1042	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122681	Purple	No	
010	SBT-GW-1042	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021411	Purple	No	
011	SBT-GW-1048-R	Clear Plastic Bottle - Natural	500 mL	00070325166272	Green	No	
011	SBT-GW-1048-R	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004785	Red	Yes	
011	SBT-GW-1048-R	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004788	Red	No	
011	SBT-GW-1048-R	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725123041	Purple	No	
011	SBT-GW-1048-R	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021392	Purple	No	
012	SBT-GW-4003	Clear Plastic Bottle - Natural	500 mL	00070325166372	Green	No	
012	SBT-GW-4003	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004820	Red	Yes	
012	SBT-GW-4003	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004818	Red	No	
012	SBT-GW-4003	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122900	Purple	No	
012	SBT-GW-4003	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021413	Purple	No	
013	SBT-GW-4005	Clear Plastic Bottle - Natural	500 mL	00070325166347	Green	No	
013	SBT-GW-4005	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004411	Red	Yes	
013	SBT-GW-4005	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004412	Red	No	

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547587 SAMPLER MOBILE: 0417759635

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

013	SBT-GW-4005	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122841	Purple	No	
013	SBT-GW-4005	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021320	Purple	No	
014	SBT-GW-4801	Clear Plastic Bottle - Natural	500 mL	00070325166216	Green	No	
014	SBT-GW-4801	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004448	Red	Yes	
014	SBT-GW-4801	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004450	Red	No	
014	SBT-GW-4801	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122822	Purple	No	
014	SBT-GW-4801	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021331	Purple	No	
015	SBT-GW-4802	Clear Plastic Bottle - Natural	500 mL	00070325166211	Green	No	
015	SBT-GW-4802	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004750	Red	Yes	
015	SBT-GW-4802	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004742	Red	No	
015	SBT-GW-4802	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122826	Purple	No	
015	SBT-GW-4802	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021412	Purple	No	
016	DUP01_020626	Clear Plastic Bottle - Natural	500 mL	00070624062794	Green	No	
016	DUP01_020626	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004447	Red	Yes	
016	DUP01_020626	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004439	Red	No	
016	DUP01_020626	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122668	Purple	No	
016	DUP01_020626	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021339	Purple	No	
016	DUP01_020626	Amber Glass Bottle - Unpreserved	160 mL	00405324008047	Orange	No	
016	DUP01_020626	Amber VOC Vial - Sulfuric Acid	40 mL	00180825030320	Purple	No	
016	DUP01_020626	Amber VOC Vial - Sulfuric Acid	40 mL	00180825030339	Purple	No	
016	DUP01_020626	HDPE (no PTFE)	20 mL	00352306063124	Grey	No	
016	DUP01_020626	HDPE (no PTFE)	20 mL	00352306063324	Grey	No	
017	DUP02_030226	Amber VOC Vial - Sulfuric Acid	40 mL	00180825030305	Purple	No	
017	DUP02_030226	Amber VOC Vial - Sulfuric Acid	40 mL	00180825030290	Purple	No	
017	DUP02_030226	HDPE (no PTFE)	20 mL	00352306063289	Grey	No	
017	DUP02_030226	HDPE (no PTFE)	20 mL	00352306062997	Grey	No	
017	DUP02_030226	Clear Plastic Bottle - Natural	500 mL	00070325166270	Green	No	

CHAIN OF CUSTODY

COC#: 93705 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

017	DUP02_030226	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004457	Red	Yes	
017	DUP02_030226	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004464	Red	No	
017	DUP02_030226	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122891	Purple	No	
017	DUP02_030226	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021393	Purple	No	
017	DUP02_030226	Amber Glass Bottle - Unpreserved	100 mL	00400324006166	Orange	No	
018	SBT-GW-4800	Clear Plastic Bottle - Natural	500 mL	00070325166806	Green	No	
018	SBT-GW-4800	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004816	Red	Yes	
018	SBT-GW-4800	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004823	Red	No	
018	SBT-GW-4800	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122516	Purple	No	
018	SBT-GW-4800	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021333	Purple	No	

Total Bottle Count: ALS: 117, Non ALS: 0

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2603450**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: David.Mcfadden@tetratech.com	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 754-SYDEN374937	Page	: 1 of 3
Order number	: 754-SYDEN274937	Quote number	: ES2025COFENV0011 (ES25COFENV0011)
C-O-C number	: 93705	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 754-SYDEN374937		
Sampler	: Elliot Wood, Geoffrey Merchant		

Dates

Date Samples Received	: 03-Feb-2026 16:00	Issue Date	: 06-Feb-2026
Client Requested Due Date	: 11-Feb-2026	Scheduled Reporting Date	: **11-Feb-2026**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: 2	Temperature	: 8.6°C, 9.0°C, 7.3°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 18 / 18

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- [06/02/26]: This is an updated SRN which indicates the addition of TRH/BTEXN and PFAS analysis for additional samples as requested by Client.
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA065P pH (Auto Titrator)	WATER - EA010P Electrical Conductivity (Auto Titrator)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EP005 Total Organic Carbon (TOC)	WATER - NT-064 Total Nitrogen + NO2 + NO3 + NH3 + Total P +	WATER - W-02 B Metals	WATER - W-02T B metals (Total)
ES2603450-001	03-Feb-2026 14:11	SMGW-BH-A107	✓	✓	✓	✓	✓	✓	✓
ES2603450-002	03-Feb-2026 08:10	SBT-GW-1030	✓	✓	✓	✓	✓	✓	✓
ES2603450-003	03-Feb-2026 11:24	SBT-GW-1024	✓	✓	✓	✓	✓	✓	✓
ES2603450-004	03-Feb-2026 11:33	SBT-GW-1805	✓	✓	✓	✓	✓	✓	✓
ES2603450-005	02-Feb-2026 10:35	SBT-GW-1806	✓	✓	✓	✓	✓	✓	✓
ES2603450-006	02-Feb-2026 13:55	SBT-GW-1807	✓	✓	✓	✓	✓	✓	✓
ES2603450-007	02-Feb-2026 13:40	SBT-GW-1808	✓	✓	✓	✓	✓	✓	✓
ES2603450-008	02-Feb-2026 11:30	SMGW-BH-A315-R	✓	✓	✓	✓	✓	✓	✓
ES2603450-009	02-Feb-2026 10:52	SBT-GW-1063	✓	✓	✓	✓	✓	✓	✓
ES2603450-010	03-Feb-2026 10:00	SBT-GW-1042	✓	✓	✓	✓	✓	✓	✓
ES2603450-011	02-Feb-2026 14:23	SBT-GW-1048-R	✓	✓	✓	✓	✓	✓	✓
ES2603450-012	02-Feb-2026 08:35	SBT-GW-4003	✓	✓	✓	✓	✓	✓	✓
ES2603450-013	02-Feb-2026 07:38	SBT-GW-4005	✓	✓	✓	✓	✓	✓	✓
ES2603450-014	02-Feb-2026 08:58	SBT-GW-4801	✓	✓	✓	✓	✓	✓	✓
ES2603450-015	02-Feb-2026 08:14	SBT-GW-4802	✓	✓	✓	✓	✓	✓	✓
ES2603450-016	02-Feb-2026 07:40	DUP01_020626	✓	✓	✓	✓	✓	✓	✓
ES2603450-017	03-Feb-2026 11:28	DUP02_030226	✓	✓	✓	✓	✓	✓	✓
ES2603450-018	02-Feb-2026 09:29	SBT-GW-4800	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - W-04 TRH/BTEXN
ES2603450-001	03-Feb-2026 14:11	SMGW-BH-A107		✓	
ES2603450-002	03-Feb-2026 08:10	SBT-GW-1030	✓	✓	
ES2603450-003	03-Feb-2026 11:24	SBT-GW-1024	✓	✓	✓
ES2603450-004	03-Feb-2026 11:33	SBT-GW-1805	✓	✓	
ES2603450-005	02-Feb-2026 10:35	SBT-GW-1806		✓	✓
ES2603450-006	02-Feb-2026 13:55	SBT-GW-1807		✓	

			WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - VI-04 TRH/BTEX/N
ES2603450-007	02-Feb-2026 13:40	SBT-GW-1806		✓	
ES2603450-008	02-Feb-2026 11:30	SMGW-BH-A315-R	✓	✓	✓
ES2603450-009	02-Feb-2026 10:52	SBT-GW-1063		✓	
ES2603450-010	03-Feb-2026 10:00	SBT-GW-1042		✓	
ES2603450-011	02-Feb-2026 14:23	SBT-GW-1048-R		✓	
ES2603450-012	02-Feb-2026 08:35	SBT-GW-4003	✓	✓	✓
ES2603450-013	02-Feb-2026 07:38	SBT-GW-4005		✓	
ES2603450-014	02-Feb-2026 08:58	SBT-GW-4801		✓	
ES2603450-015	02 Feb 2026 08:14	SBT GW 4802		✓	
ES2603450-016	02-Feb-2026 07:40	DUP01_020626	✓	✓	✓
ES2603450-017	03-Feb-2026 11:28	DUP02_030226	✓	✓	✓
ES2603450-018	02-Feb-2026 09:29	SBT-GW-4800		✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALL INVOICE

A4 - AU Tax Invoice (INV)	Email	ap@coffey.com

David McFadden

- *AU Certificate of Analysis - NATA (COA)	Email	David.Mcfadden@tetratech.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	David.Mcfadden@tetratech.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	David.Mcfadden@tetratech.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	David.Mcfadden@tetratech.com
Chain of Custody (CoC) (COC)	Email	David.Mcfadden@tetratech.com
- EDI Format - ESDAT (ESDAT)	Email	David.Mcfadden@tetratech.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2603584**	Page	: 1 of 14
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: 8/12 MARS ROAD LANE COVE WEST NSW, AUSTRALIA 2066	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 754 SYDEN374937	Date Samples Received	: 04-Feb-2026 17:30
Order number	: 754-SYDEN274937	Date Analysis Commenced	: 04-Feb-2026
C-O-C number	93773	Issue Date	: 07-Apr-2026 15:48
Sampler	ELLIOT WOOD, Geoffrey Merchant		
Site	: 754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	: 8		
No. of samples analysed	8		

ilac-MRA NATA
Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
* = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG035: LOR raised for Mercury due to sample matrix.
- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- TDS by method EA-015 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Amendment (7/04/2026): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EG020F and EG020T metals additionally requested.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit		4.03	3.81	7.41	6.69	6.72
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm		25900	8730	11400	5700	1820
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L		20900	6440	7950	4340	1710
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		<1	<1	259	33	26
Total Alkalinity as CaCO3	---	1	mg/L		<1	<1	259	33	26
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		355	199	340	242	715
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		9010	3030	3760	1610	90
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		30	<1	105	42	28
Magnesium	7439-95-4	1	mg/L		739	156	319	199	15
Sodium	7440-23-5	1	mg/L		4550	1490	1830	853	324
Potassium	7440-09-7	1	mg/L		15	3	33	3	7
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		3.44	1.49	<0.01	0.01	0.04
Arsenic	7440-38-2	0.001	mg/L		0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.012	0.011	0.002	0.005	0.002
Nickel	7440-02-0	0.001	mg/L		0.089	0.032	0.003	0.001	0.005
Lead	7439-92-1	0.001	mg/L		0.006	0.006	<0.001	<0.001	<0.001

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.350**	**0.140**	**0.008**	**0.018**	**0.021**
Manganese	7439-96-5	0.001	mg/L		**0.511**	**0.016**	**0.059**	**0.072**	**0.018**
Iron	7439-89-6	0.05	mg/L		**0.45**	**0.11**	<0.05	**0.17**	<0.05
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**121**	**15.7**	**1.42**	**2.01**	**2.34**
Arsenic	7440-38-2	0.001	mg/L		**0.050**	**0.013**	**0.001**	**0.002**	**0.013**
Cadmium	7440-43-9	0.0001	mg/L		**0.0016**	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.098**	**0.032**	**0.003**	**0.003**	**0.006**
Copper	7440-50-8	0.001	mg/L		**0.343**	**0.041**	**0.009**	**0.054**	**0.012**
Cobalt	7440-48-4	0.001	mg/L		**0.791**	**0.108**	**0.004**	**0.135**	**0.007**
Nickel	7440-02-0	0.001	mg/L		**0.477**	**0.046**	**0.006**	**0.060**	**0.008**
Lead	7439-92-1	0.001	mg/L		**0.169**	**0.034**	**0.006**	**0.023**	**0.005**
Zinc	7440-66-6	0.005	mg/L		**1.79**	**0.183**	**0.029**	**0.148**	**0.063**
Manganese	7439-96-5	0.001	mg/L		**3.63**	**0.059**	**0.084**	**0.308**	**0.058**
Iron	7439-89-6	0.05	mg/L		**136**	**22.7**	**1.78**	**2.68**	**7.01**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.31**	**0.07**	**0.02**	**0.32**	**0.01**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	**0.03**	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	**0.09**	**0.74**	<0.01	**4.71**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		<0.01	**0.09**	**0.77**	<0.01	**4.71**

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		29.3	5.0	1.3	2.6	1.5
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		29.3	5.1	2.1	2.6	6.2
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		3.79	1.20	0.10	0.46	0.14
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		262	89.6	118	51.1	17.9
ø Total Cations	---	0.01	meq/L		261	77.7	112	55.7	16.9
ø Ionic Balance	---	0.01	%		0.18	7.10	2.77	4.25	2.99
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		23	16	8	3	7
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		----	----	----	----	<1.0
2-Chlorophenol	95-57-8	1.0	µg/L		----	----	----	----	<1.0
2-Methylphenol	95-48-7	1.0	µg/L		----	----	----	----	<1.0
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		----	----	----	----	<2.0
2-Nitrophenol	88-75-5	1.0	µg/L		----	----	----	----	<1.0
2.4-Dimethylphenol	105-67-9	1.0	µg/L		----	----	----	----	<1.0
2.4-Dichlorophenol	120-83-2	1.0	µg/L		----	----	----	----	<1.0
2.6-Dichlorophenol	87-65-0	1.0	µg/L		----	----	----	----	<1.0
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		----	----	----	----	<1.0
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		----	----	----	----	<1.0
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		----	----	----	----	<1.0
Pentachlorophenol	87-86-5	2.0	µg/L		----	----	----	----	<2.0
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	---	20	µg/L		---	---	---	<20	---
C10 - C14 Fraction	---	50	µg/L		---	---	---	<50	---
C15 - C28 Fraction	---	100	µg/L		---	---	---	<100	---
C29 - C36 Fraction	---	50	µg/L		---	---	---	<50	---
^ C10 - C36 Fraction (sum)	---	50	µg/L		---	---	---	<50	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		---	---	---	<20	---
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		---	---	---	<20	---
>C10 - C16 Fraction	---	100	µg/L		---	---	---	<100	---
>C16 - C34 Fraction	---	100	µg/L		---	---	---	<100	---
>C34 - C40 Fraction	---	100	µg/L		---	---	---	<100	---
^ >C10 - C40 Fraction (sum)	---	100	µg/L		---	---	---	<100	---
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		---	---	---	<100	---
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		---	---	---	<1	---
Toluene	108-88-3	2	µg/L		---	---	---	<2	---
Ethylbenzene	100-41-4	2	µg/L		---	---	---	<2	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		---	---	---	<2	---
ortho-Xylene	95-47-6	2	µg/L		---	---	---	<2	---
^ Total Xylenes	---	2	µg/L		---	---	---	<2	---
^ Sum of BTEX	---	1	µg/L		---	---	---	<1	---
Naphthalene	91-20-3	5	µg/L		---	---	---	<5	---
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		---	---	---	<0.02	---
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		---	---	---	<0.01	---

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		----	----	----	<0.01	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		----	----	----	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		----	----	----	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		----	----	----	0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		----	----	----	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		----	----	----	<0.01	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		----	----	----	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		----	----	----	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		----	----	----	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		----	----	----	<0.05	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		----	----	----	<0.01	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		----	----	----	<0.01	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		----	----	----	----	18.4
2-Chlorophenol-D4	93951-73-6	1.0	%		----	----	----	----	42.7
2,4,6-Tribromophenol	118-79-6	1.0	%		----	----	----	----	70.5
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		----	----	----	----	41.6
Anthracene-d10	1719-06-8	1.0	%		----	----	----	----	42.4
4-Terphenyl-d14	1718-51-0	1.0	%		----	----	----	----	60.8
EP080S: TPH(V)/BTEX Surrogates									

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SBT-GW-1001-S	SBT-GW-1002	SBT-GW-1005-S	SBT-GW-1016	SBT-GW-1021
				Sampling date / time	04-Feb-2026 11:30	04-Feb-2026 10:48	04-Feb-2026 12:14	04-Feb-2026 08:17	04-Feb-2026 10:11
Compound	CAS Number	LOR	Unit		ES2603584-001	ES2603584-002	ES2603584-003	ES2603584-004	ES2603584-005
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
1.2-Dichloroethane-D4	17060-07-0	2	%		----	----	----	125	----
Toluene-D8	2037-26-5	2	%		----	----	----	117	----
4-Bromofluorobenzene	460-00-4	2	%		----	----	----	122	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		----	----	----	97.4	----
13C8-PFOA	---	0.02	%		----	----	----	98.5	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A401	TS_040226	TB_040226	----	----
				Sampling date / time	04-Feb-2026 09:28	02-Feb-2026 09:12	02-Feb-2026 09:13	---	---
Compound	CAS Number	LOR	Unit		ES2603584-006	ES2603584-007	ES2603584-008	--------	--------
					Result	Result	Result	---	---
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit		6.55	----	----	----	----
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm		2180	----	----	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L		1900	----	----	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L		<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		158	----	----	----	----
Total Alkalinity as CaCO3	---	1	mg/L		158	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		70	----	----	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		573	----	----	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		19	----	----	----	----
Magnesium	7439-95-4	1	mg/L		26	----	----	----	----
Sodium	7440-23-5	1	mg/L		381	----	----	----	----
Potassium	7440-09-7	1	mg/L		6	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.19	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		0.439	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		0.005	----	----	----	----
Lead	7439-92-1	0.001	mg/L		0.002	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A401	TS_040226	TB_040226	----	----
				Sampling date / time	04-Feb-2026 09:28	02-Feb-2026 09:12	02-Feb-2026 09:13	---	---
Compound	CAS Number	LOR	Unit		ES2603584-006	ES2603584-007	ES2603584-008	--------	--------
					Result	Result	Result	---	---
EG020F: Dissolved Metals by ICP-MS - Continued									
Zinc	7440-66-6	0.005	mg/L		**0.852**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.021**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**0.12**	----	----	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**32.8**	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		**0.009**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0001**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**0.228**	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**5.62**	----	----	----	----
Cobalt	7440-48-4	0.001	mg/L		**0.029**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.064**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.103**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**1.88**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.243**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**45.6**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0005	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.14**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.02**	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**0.02**	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		**0.04**	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A401	TS_040226	TB_040226	----	----
				Sampling date / time	04-Feb-2026 09:28	02-Feb-2026 09:12	02-Feb-2026 09:13	---	---
Compound	CAS Number	LOR	Unit		ES2603584-006	ES2603584-007	ES2603584-008	--------	--------
					Result	Result	Result	---	---
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		**16.2**	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		**16.2**	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		**4.51**	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	----	----	----	----
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		**20.8**	----	----	----	----
ø Total Cations	---	0.01	meq/L		**19.8**	----	----	----	----
ø Ionic Balance	---	0.01	%		**2.37**	----	----	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		**19**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	---	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	---	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	---	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	---	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	---	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	---	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		<100	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A401	TS_040226	TB_040226	----	----
				Sampling date / time	04-Feb-2026 09:28	02-Feb-2026 09:12	02-Feb-2026 09:13	---	---
Compound	CAS Number	LOR	Unit		ES2603584-006	ES2603584-007	ES2603584-008	--------	--------
					Result	Result	Result	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	17	<1	----	----
Toluene	108-88-3	2	µg/L		<2	15	<2	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	16	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	16	<2	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	18	<2	----	----
^ Total Xylenes	---	2	µg/L		<2	34	<2	----	----
^ Sum of BTEX	---	1	µg/L		<1	82	<1	----	----
Naphthalene	91-20-3	5	µg/L		<5	20	<5	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		0.07	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		0.06	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		0.01	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	SMGW-BH-A401	TS_040226	TB_040226	----	----
				Sampling date / time	04-Feb-2026 09:28	02-Feb-2026 09:12	02-Feb-2026 09:13	---	---
Compound	CAS Number	LOR	Unit		ES2603584-006	ES2603584-007	ES2603584-008	--------	--------
					Result	Result	Result	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.02**	----	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		**0.16**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		**116**	**102**	**110**	----	----
Toluene-D8	2037-26-5	2	%		**105**	**96.9**	**101**	----	----
4-Bromofluorobenzene	460-00-4	2	%		**111**	**98.5**	**106**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**97.0**	----	----	----	----
13C8-PFOA	---	0.02	%		**98.4**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP231S: PFAS Surrogate			
13C4-PFOS		60	120
13C8-PFOA	---	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2603584**	Page	: 1 of 12
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: 8/12 MARS ROAD LANE COVE WEST NSW, AUSTRALIA 2066	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 04-Feb-2026
Order number	: 754-SYDEN274937	Date Analysis Commenced	: 04-Feb-2026
C-O-C number	: 93773	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant		
Site	: 754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	: 8		
No. of samples analysed	: 8		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005P: pH by PC Titrator (QC Lot: 7177158)									
ES2603490-001	Anonymous	EA005-P: pH Value	---	0.01	pH Unit	7.25	7.23	0.3	0% - 20%
ES2603515-002	Anonymous	EA005-P: pH Value	---	0.01	pH Unit	6.95	6.94	0.3	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 7177157)									
EW2600642-008	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	4300	4220	1.7	0% - 20%
ES2603490-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	326	327	0.0	0% - 20%
ES2603515-002	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	2150	2150	0.0	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7188135)									
EN2601747-017	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	203	184	9.8	0% - 20%
ES2603533-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	800	808	1.0	0% - 20%
ES2603621-002	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	284	274	3.6	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 7177156)									
ES2603490-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	56	58	2.1	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	56	58	2.1	0% - 20%
ES2603515-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	33	32	0.0	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	33	32	0.0	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7179557)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7179557) - continued									
ES2603515-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	76	74	2.3	0% - 20%
ES2603611-006	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	8	8	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 7179558)									
ES2603515-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	633	623	1.5	0% - 20%
ES2603611-006	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	29	29	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 7187765)									
EN2601938-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	562	559	0.6	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	1120	1110	0.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	4170	4090	1.8	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	29	29	0.0	0% - 20%
ES2603669-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	19	20	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	11	11	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	101	102	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	6	6	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7187766)									
EN2601938-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0002	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.779	0.780	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.009	0.008	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.011	0.009	23.6	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.40	0.40	0.0	No Limit
ES2603669-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.034	0.035	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.008	0.009	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.007	0.007	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.17	0.17	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 7187710)									
ES2603507-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 7187710) - continued									
ES2603507-001	Anonymous	EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.001	0.002	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.023	0.023	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.001	0.002	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.012	0.013	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	1.42	1.59	11.3	0% - 20%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	1.80	2.05	12.8	0% - 20%
ES2603507-004	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.15	0.15	0.0	0% - 50%
		EG020A-T: Iron	7439-89-6	0.05	mg/L	0.73	0.73	0.0	0% - 50%
EG035F: Dissolved Mercury by FIMS (QC Lot: 7187767)									
EN2601938-004	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603501-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7187727)									
ES2603584-003	SBT-GW-1005-S	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603775-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 7189894)									
ES2603507-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603584-001	SBT-GW-1001-S	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.31	0.32	0.0	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 7179555)									
ES2603515-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603611-006	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 7189895)									
ES2603507-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	0.06	0.05	0.0	No Limit
ES2603584-001	SBT-GW-1001-S	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7189890)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7189890) - continued									
ES2603316-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1 (2.0)*	mg/L	92.5	94.5	2.1	0% - 20%
ES2603507-008	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	0.4	0.3	0.0	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7189891)									
ES2603316-002	Anonymous	EK067G: Total Phosphorus as P	---	0.01 (0.20)*	mg/L	25.2	25.2	0.2	0% - 20%
ES2603507-008	Anonymous	EK067G: Total Phosphorus as P	---	0.01	mg/L	0.03	0.04	36.3	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 7179556)									
ES2603515-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2603611-006	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP005: Total Organic Carbon (TOC) (QC Lot: 7180461)									
ES2603570-001	Anonymous	EP005: Total Organic Carbon	---	1	mg/L	4	3	0.0	No Limit
ES2603570-011	Anonymous	EP005: Total Organic Carbon	---	1	mg/L	3	3	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7181274)									
ES2603501-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
ES2603606-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7181274)									
ES2603501-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2603606-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 7181274)									
ES2603501-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2603606-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7184960)									
ES2603722-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2603722-003	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7184960) - continued									
ES2603722-003	Anonymous	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7184960)									
ES2603722-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2603722-003	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7184960)									
ES2603722-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2603722-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA005P: pH by PC Titrator (QCLot: 7177158)								
EA005-P: pH Value	---	---	pH Unit	---	4 pH Unit	99.2	98.8	101
				---	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 7177157)								
EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	<1	220 µS/cm	106	89.9	110
				<1	2100 µS/cm	100	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7188136)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	95.4	87.0	109
				<10	293 mg/L	99.5	75.2	126
				<10	2510 mg/L	93.4	83.0	124
ED037P: Alkalinity by PC Titrator (QCLot: 7177156)								
ED037-P: Total Alkalinity as CaCO3	---	---	mg/L	---	200 mg/L	95.9	81.0	115
				---	50 mg/L	97.9	80.0	128
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7179557)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	101	82.0	122
				<1	500 mg/L	93.1	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 7179558)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	103	80.9	127
				<1	1000 mg/L	91.8	80.9	127
ED093F: Dissolved Major Cations (QCLot: 7187765)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	95.0	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	99.9	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	101	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	98.0	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 7187766)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	97.1	80.0	116
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	92.3	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	89.6	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	92.1	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.9	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	91.2	83.0	111
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	88.1	82.0	110

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 7187766) - continued								
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.9	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	97.3	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	90.7	82.0	112
EG020T: Total Metals by ICP-MS (QCLot: 7187710)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	105	82.0	120
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.4	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	92.5	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	95.8	86.0	116
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	97.4	84.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.0	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	96.4	85.0	115
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	97.4	85.0	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	98.1	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	98.5	79.0	117
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	108	85.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 7187767)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	96.4	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7187727)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	92.4	77.0	111
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7189894)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	107	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7179556)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	97.5	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7189895)								
EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	0.5 mg/L	103	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7189890)								
EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	<0.1	5 mg/L	96.5	69.0	123
				<0.1	2.5 mg/L	99.4	70.0	123
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7189891)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	99.4	71.3	126
				<0.01	0.5 mg/L	90.6	71.3	126
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7179556)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	91.9	85.0	117
EP005: Total Organic Carbon (TOC) (QCLot: 7180461)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP005: Total Organic Carbon (TOC) (QCLot: 7180461) - continued								
EP005: Total Organic Carbon	---	1	mg/L	<1	10 mg/L	100	72.0	120
EP075(SIM)A: Phenolic Compounds (QCLot: 7177831)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	34.4	24.5	61.9
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	69.2	52.0	90.0
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	65.5	51.0	91.0
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	68.2	44.0	88.0
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	65.3	48.0	100
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	71.3	49.0	99.0
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	65.4	53.0	105
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	73.3	57.0	105
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	65.5	53.0	99.0
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	101	50.0	106
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	71.5	51.0	105
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	48.7	10.0	95.0
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7177830)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	62.6	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	87.2	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	96.8	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7181274)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	79.6	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7177830)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	58.1	53.9	95.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	98.7	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	103	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7181274)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	81.7	75.0	127
EP080: BTEXN (QCLot: 7181274)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	96.2	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	83.7	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	89.0	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	89.9	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	95.3	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	101	75.5	124

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Laboratory Control Spike (LCS) Report: Spike Recovery (%): LCS	Laboratory Control Spike (LCS) Report: Acceptable Limits (%): Low	Laboratory Control Spike (LCS) Report: Acceptable Limits (%): High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7184960)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	94.7	72.0	130
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	88.2	68.0	131
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	91.3	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7184960)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	106	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	114	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	106	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	112	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	101	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7184960)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	101	53.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	89.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	92.5	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	87.9	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7179557)							
ES2603515-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 7179558)							
ES2603515-002	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	80.4	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 7187766)							
EN2601938-003	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	113	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	102	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	102	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	107	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	114	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	99.9	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	106	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	105	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 7187710)							
ES2603507-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	93.9	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	90.4	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	95.1	70.0	130
		EG020A-T: Cobalt	7440-48-4	1 mg/L	95.0	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	93.8	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	111	70.0	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	94.5	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	97.1	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	93.9	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 7187767)							
EN2601938-006	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	89.1	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7187727)							
ES2603584-005	SBT-GW-1021	EG035T: Mercury	7439-97-6	0.01 mg/L	81.8	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7189894)							
ES2603507-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.5 mg/L	116	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7179555)							
ES2603515-002	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	99.5	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7189895)							
ES2603507-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.5 mg/L	106	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7189890)							
ES2603316-003	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	5 mg/L	100	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7189891)							
ES2603316-003	Anonymous	EK067G: Total Phosphorus as P	---	1 mg/L	# Not Determined	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7179556)							
ES2603515-002	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	87.0	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 7180461)							
ES2603570-001	Anonymous	EP005: Total Organic Carbon	---	100 mg/L	92.5	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7181274)							
ES2603501-001	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	72.7	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7181274)							
ES2603501-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	72.7	70.0	130
EP080: BTEXN (QCLot: 7181274)							
ES2603501-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	83.6	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	77.2	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 7181274) - continued							
ES2603501-001	Anonymous	EP080: Ethylbenzene	100-41-4	25 µg/L	83.7	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	82.9	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	88.0	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	83.6	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7184960)							
ES2603722-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.1	72.0	130
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	89.2	68.0	131
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	88.1	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7184960)							
ES2603722-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	110	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	117	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	107	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	109	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7184960)							
ES2603722-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	103	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	82.0	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	92.0	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	91.0	71.4	144

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2603584**	Page	: 1 of 11
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 04-Feb-2026
Site	: 754-SYDEN374937	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD, Geoffrey Merchant	No. of samples received	: 8
Order number	: 754-SYDEN274937	No. of samples analysed	: 8

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EA041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2603515--002	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EK067G: Total Phosphorus as P by Discrete Analyser	ES2603316--003	Anonymous	**Total Phosphorus as P**	---	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	10	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	10	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA005P: pH by PC Titrator								
Clear Plastic Bottle - Natural (EA005-P)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**04-Feb-2026**	04-Feb-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EA010P: Conductivity by PC Titrator								
Clear Plastic Bottle - Natural (EA010-P)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**04-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**10-Feb-2026**	11-Feb-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**04-Feb-2026**	18-Feb-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**06-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**06-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**10-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**10-Feb-2026**	03-Aug-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	**10-Feb-2026**	03-Aug-2026	✓	**10-Feb-2026**	03-Aug-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**12-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**12-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**11-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural (EK057G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**05-Feb-2026**	05-Feb-2026	✓
SBT-GW-1021								
Clear Plastic Bottle - Natural (EK057G)								
SBT-GW-1005-S,	SBT-GW-1016,	**04-Feb-2026**	---	---	---	**06-Feb-2026**	06-Feb-2026	✓
SMGW-BH-A401								
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK059G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**11-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK061G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	**10-Feb-2026**	04-Mar-2026	✓	**10-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EK067G: Total Phosphorus as P by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	**10-Feb-2026**	04-Mar-2026	✓	**10-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**06-Feb-2026**	06-Feb-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							
EP005: Total Organic Carbon (TOC)								
Amber TOC Vial - Sulfuric Acid (EP005)								
SBT-GW-1001-S,	SBT-GW-1002,	**04-Feb-2026**	---	---	---	**09-Feb-2026**	04-Mar-2026	✓
SBT-GW-1005-S,	SBT-GW-1016,							
SBT-GW-1021,	SMGW-BH-A401							

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)A: Phenolic Compounds								
Amber Glass Bottle - Unpreserved (EP075(SIM))								
SBT-GW-1021		04-Feb-2026	05-Feb-2026	11-Feb-2026	✓	05-Feb-2026	17-Mar-2026	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071)								
SMGW-BH-A401		04-Feb-2026	05-Feb-2026	11-Feb-2026	✓	06-Feb-2026	17-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)								
SBT-GW-1016		04-Feb-2026	05-Feb-2026	11-Feb-2026	✓	10-Feb-2026	17-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	18-Feb-2026	✓	09-Feb-2026	18-Feb-2026	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber Glass Bottle - Unpreserved (EP071)								
SMGW-BH-A401		04-Feb-2026	05-Feb-2026	11-Feb-2026	✓	06-Feb-2026	17-Mar-2026	✓
Amber Glass Bottle - Unpreserved (EP071)								
SBT-GW-1016		04-Feb-2026	05-Feb-2026	11-Feb-2026	✓	10-Feb-2026	17-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	18-Feb-2026	✓	09-Feb-2026	18-Feb-2026	✓
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)								
TS_040226,	TB_040226	02-Feb-2026	09-Feb-2026	16-Feb-2026	✓	09-Feb-2026	16-Feb-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	18-Feb-2026	✓	09-Feb-2026	18-Feb-2026	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	03-Aug-2026	✓	11-Feb-2026	03-Aug-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	03-Aug-2026	✓	11-Feb-2026	03-Aug-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	03-Aug-2026	✓	11-Feb-2026	03-Aug-2026	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X)								
SBT-GW-1016,	SMGW-BH-A401	04-Feb-2026	09-Feb-2026	03-Aug-2026	✓	11-Feb-2026	03-Aug-2026	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	3	28	10.71	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	29	10.34	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	10	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	3	28	10.71	8.33	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	29	17.24	12.50	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	20	15.00	15.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	28	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	5	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	10	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of 'filterable' residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. Auto Titrator) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G. Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* FN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270. Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK057	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510. 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY

COC#: 93773 *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME: 4/2/26 1730	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden

PRIMARY SAMPLER: Elliot Wood

EMAIL REPORTS TO:

EMAIL INVOICES TO:

CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

Environmental Division Sydney

Work Order Reference

ES2603584

Telephone : +61-2-8784 8555

SAMPLE DETAILS							ANALYSIS REQUIRED				
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Additional analytes WATER	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	SBT-GW-1001-S		04/02/2026 11:30 AM	WATER	ALS: 5 Non ALS: 0	No		X			
002	SBT-GW-1002		04/02/2026 10:48 AM	WATER	ALS: 5 Non ALS: 0	No		X			
003	SBT-GW-1005-S		04/02/2026 12:14 PM	WATER	ALS: 5 Non ALS: 0	No		X			
004	SBT-GW-1016		04/02/2026 08:17 AM	WATER	ALS: 10 Non ALS: 0	No		X	Partial 2/6		
005	SBT-GW-1021		04/02/2026 10:11 AM	WATER	ALS: 6 Non ALS: 0	No	Partial 1/3	X			
006	SMGW-BH-A401		04/02/2026 09:26 AM	WATER	ALS: 10 Non ALS: 0	No		X	Partial 2/6		
007	TS_040226		04/02/2026 09:12 AM	WATER	ALS: 1 Non ALS: 0	No			Partial 1/6		

CHAIN OF CUSTODY

COC#: 93773 ALS Laboratory: ES Sydney Environmental

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED				
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Additional analytes WATER	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
009	TB_040226		04/02/2026 09:13 AM	WATER	ALS: 1 Non ALS: 0	No			Partial 1/6		

CHAIN OF CUSTODY

COC#: 93773 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417758635

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		C	
Other comments:			

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
004	SBT-GW-1016	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)
005	SBT-GW-1021	Additional analytes WATER	WATER	- EP075 SIM Phenols only SIM - Phenols only
006	SMGW-BH-A401	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)
007	TS_040226	QC WATER	WATER	- EP080 BTEXN
008	TB_040226	QC WATER	WATER	- EP080 BTEXN

CHAIN OF CUSTODY

COC#: 93773 *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759836

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard Info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	SBT-GW-1001-S	Clear Plastic Bottle - Natural	500 mL	0007032516628 4	Green	No	
001	SBT-GW-1001-S	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	0012102506571 0	Red	Yes	
001	SBT-GW-1001-S	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	0012102506570 5	Red	No	
001	SBT-GW-1001-S	Clear Plastic Bottle - Sulfuric Acid	60 mL	0010072514380 5	Purple	No	
001	SBT-GW-1001-S	Amber TOC Vial - Sulfuric Acid	40 mL	0018032502140 0	Purple	No	
002	SBT-GW-1002	Clear Plastic Bottle - Natural	500 mL	0007032516625 3	Green	No	
002	SBT-GW-1002	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	0012092402181 1	Red	Yes	
002	SBT-GW-1002	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	0012092405725 8	Red	No	
002	SBT-GW-1002	Clear Plastic Bottle - Sulfuric Acid	60 mL	0010072612302 0	Purple	No	
002	SBT-GW-1002	Amber TOC Vial - Sulfuric Acid	40 mL	0018032502133 2	Purple	No	
003	SBT-GW-1005-S	Clear Plastic Bottle - Natural	500 mL	0007032516622 7	Green	No	
003	SBT-GW-1005-S	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	0012102505513 4	Red	Yes	
003	SBT-GW-1005-S	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	0012102505512 3	Red	No	
003	SBT-GW-1005-S	Clear Plastic Bottle - Sulfuric Acid	60 mL	0010072514384 6	Purple	No	
003	SBT-GW-1005-S	Amber TOC Vial - Sulfuric Acid	40 mL	0018032502140 2	Purple	No	
004	SBT-GW-1016	Amber Glass Bottle - Unpreserved	100 mL	0040324006050	Orange	No	
004	SBT-GW-1016	Amber VOC Vial - Sulfuric Acid	40 mL	0018032503031 2	Purple	No	
004	SBT-GW-1016	Amber VOC Vial - Sulfuric Acid	40 mL	0018032503030 8	Purple	No	
004	SBT-GW-1016	HDPE (no PTFE)	20 mL	0035203906306 6	Grey	No	
004	SBT-GW-1016	HDPE (no PTFE)	20 mL	0035203906240 4	Grey	No	
004	SBT-GW-1016	Clear Plastic Bottle - Natural	500 mL	0007032516637 1	Green	No	
004	SBT-GW-1016	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	0012102505464 1	Red	Yes	
004	SBT-GW-1016	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	0012102500444 5	Red	No	
004	SBT-GW-1016	Clear Plastic Bottle - Sulfuric Acid	60 mL	0010072514397 1	Purple	No	
004	SBT-GW-1016	Amber TOC Vial - Sulfuric Acid	40 mL	0018032502139 1	Purple	No	
005	SBT-GW-1021	Amber Glass Bottle - Unpreserved	100 mL	0040324006064	Orange	No	

CHAIN OF CUSTODY

COC#: 93773 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401647597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

005	SBT-GW-1021	Clear Plastic Bottle - Natural	500 mL	0070325186212	Green	No	
005	SBT-GW-1021	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121124064063	Red	Yes	
005	SBT-GW-1021	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121124094054	Red	No	
005	SBT-GW-1021	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122696	Purple	No	
005	SBT-GW-1021	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021361	Purple	No	
006	SMGW-BH-A401	Amber Glass Bottle - Unpreserved	100 mL	00400324060041	Orange	No	
006	SMGW-BH-A401	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030310	Purple	No	
006	SMGW-BH-A401	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030292	Purple	No	
006	SMGW-BH-A401	HDPE (no PTFE)	20 mL	00352309062897	Grey	No	
006	SMGW-BH-A401	HDPE (no PTFE)	20 mL	00352309062900	Grey	No	
006	SMGW-BH-A401	Clear Plastic Bottle - Natural	500 mL	0070325186348	Green	No	
006	SMGW-BH-A401	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025004465	Red	Yes	
006	SMGW-BH-A401	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025004458	Red	No	
006	SMGW-BH-A401	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122992	Purple	No	
006	SMGW-BH-A401	Amber TOC Vial - Sulfuric Acid	40 mL	00180325021379	Purple	No	
007	TS_040226	Amber VOC Vial - Sulfuric Acid	40 mL	00160925046909	Purple	No	
008	TB_040226	Amber VOC Vial - Sulfuric Acid	40 mL	00160925046946	Purple	No	

Total Bottle Count: ALS: 43, Non ALS: 0

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2603584**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: 8/12 MARS ROAD LANE COVE WEST NSW, AUSTRALIA 2066	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: David.Mcfadden@tetratech.com	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 754-SYDEN374937	Page	: 1 of 3
Order number	: 754-SYDEN274937	Quote number	: ES2025COFENV0011 (ES25COFENV0011)
C-O-C number	: 93773	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 754-SYDEN374937		
Sampler	: Elliot Wood, Geoffrey Merchant		

Dates

Date Samples Received	: 04-Feb-2026 17:30	Issue Date	: 04-Feb-2026
Client Requested Due Date	: 12-Feb-2026	Scheduled Reporting Date	: **12-Feb-2026**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 10'C, 18.7'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 8 / 8

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA065P pH (Auto Titrator)	WATER - EA010P Electrical Conductivity (Auto Titrator)	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - EP005 Total Organic Carbon (TOC)	WATER - NT-064 Total Nitrogen + NO2 + NO3 + NH3 + Total P +	WATER - W-02 B Metals	WATER - W-02T B metals (Total)
ES2603584-001	04-Feb-2026 11:30	SBT-GW-1001-S	✓	✓	✓	✓	✓	✓	✓
ES2603584-002	04-Feb-2026 10:48	SBT-GW-1002	✓	✓	✓	✓	✓	✓	✓
ES2603584-003	04-Feb-2026 12:14	SBT-GW-1005-S	✓	✓	✓	✓	✓	✓	✓
ES2603584-004	04-Feb-2026 08:17	SBT-GW-1016	✓	✓	✓	✓	✓	✓	✓
ES2603584-005	04-Feb-2026 10:11	SBT-GW-1021	✓	✓	✓	✓	✓	✓	✓
ES2603584-006	04-Feb-2026 09:28	SMGW-BH-A401	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP075 SIM Phenols only SIM - Phenols only	WATER - EP080 BTEXN	WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - W-04 TRHBTEXN
ES2603584-001	04-Feb-2026 11:30	SBT-GW-1001-S				✓	
ES2603584-002	04-Feb-2026 10:48	SBT-GW-1002				✓	
ES2603584-003	04-Feb-2026 12:14	SBT-GW-1005-S				✓	
ES2603584-004	04-Feb-2026 08:17	SBT-GW-1016			✓	✓	✓
ES2603584-005	04-Feb-2026 10:11	SBT-GW-1021	✓			✓	
ES2603584-006	04-Feb-2026 09:28	SMGW-BH-A401			✓	✓	✓
ES2603584-007	02-Feb-2026 09:12	TS_040226		✓			
ES2603584-008	02-Feb-2026 09:13	TB_040226		✓			

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALL INVOICE

- A4 - AU Tax Invoice (INV)	Email	ap@coffey.com

David McFadden

- *AU Certificate of Analysis - NATA (COA)	Email	David.Mcfadden@tetratech.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	David.Mcfadden@tetratech.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	David.Mcfadden@tetratech.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	David.Mcfadden@tetratech.com
- Chain of Custody (CoC) (COC)	Email	David.Mcfadden@tetratech.com
- EDI Format - ESDAT (ESDAT)	Email	David.Mcfadden@tetratech.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2603707**	Page	: 1 of 8
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	:	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 05-Feb-2026 18:55
Order number	: 754 SYDEN374937	Date Analysis Commenced	: 06-Feb-2026
C-O-C number	: 93821	Issue Date	: 07-Apr-2026 16:21
Sampler	: ELLIOT WOOD		
Site	754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
* = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP080: Batch ES2603707-1 result has been confirmed by re-analysis.
- EK067G: LOR raised for TP due to sample matrix.
- EK061G: LOR raised for TKN due to sample matrix.
- TDS by method EA-010 may bias high due to the presence of fine particulate matter, which may pass through the prescribed GF/C paper.
- Amendment (7/04/2026): This report has been amended and re-released to allow the reporting of additional analytical data, specifically method EG020F and EG020T metals as additionally requested, where results could be confirmed.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SBT-GW-1017	----	----	----	----
				Sampling date / time	05-Feb-2026 06:04	---	---	---	---
Compound	CAS Number	LOR	Unit	ES2603707-001	--------	--------	--------	--------	
				Result	---	---	---	---	
EA005P: pH by PC Titrator									
pH Value	---	0.01	pH Unit	**5.77**	----	----	----	----	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	---	1	µS/cm	**24600**	----	----	----	----	
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	---	10	mg/L	**17700**	----	----	----	----	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	----	----	----	----	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**56**	----	----	----	----	
Total Alkalinity as CaCO3	---	1	mg/L	**56**	----	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**662**	----	----	----	----	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	**8330**	----	----	----	----	
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	**15**	----	----	----	----	
Magnesium	7439-95-4	1	mg/L	**528**	----	----	----	----	
Sodium	7440-23-5	1	mg/L	**3850**	----	----	----	----	
Potassium	7440-09-7	1	mg/L	**2**	----	----	----	----	
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	**0.05**	----	----	----	----	
Arsenic	7440-38-2	0.001	mg/L	**0.001**	----	----	----	----	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----	
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----	
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----	
Cobalt	7440-48-4	0.001	mg/L	**0.203**	----	----	----	----	
Nickel	7440-02-0	0.001	mg/L	**0.067**	----	----	----	----	

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SBT-GW-1017	----	----	----	----
				Sampling date / time	05-Feb-2026 06:04	---	---	---	---
Compound	CAS Number	LOR	Unit		ES2603707-001	----------	----------	----------	----------
					Result	---	---	---	---
EG020F: Dissolved Metals by ICP-MS - Continued									
Lead	7439-92-1	0.001	mg/L		**0.001**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.073**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**5.58**	----	----	----	----
Iron	7439-89-6	0.05	mg/L		**35.8**	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.111**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0005**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**2.36**	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**1.60**	----	----	----	----
Cobalt	7440-48-4	0.001	mg/L		**1.74**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**1.48**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		**1.61**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**3.58**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**17.7**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.08**	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	----	----	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	---	0.01	mg/L		<0.01	----	----	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SBT-GW-1017	----	----	----	----
				Sampling date / time	05-Feb-2026 06:04	---	---	---	---
Compound	CAS Number	LOR	Unit		ES2603707-001	--------	--------	--------	--------
					Result	---	---	---	---
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser - Continued									
Total Kjeldahl Nitrogen as N	---	0.1	mg/L		<2.0	----	----	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	---	0.1	mg/L		<2.0	----	----	----	----
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	---	0.01	mg/L		<0.50	----	----	----	----
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	----	----	----	----
EN055: Ionic Balance									
ø Total Anions	---	0.01	meq/L		250	----	----	----	----
ø Total Cations	---	0.01	meq/L		212	----	----	----	----
ø Ionic Balance	---	0.01	%		8.27	----	----	----	----
EP005: Total Organic Carbon (TOC)									
Total Organic Carbon	---	1	mg/L		5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	---	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	---	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	---	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	---	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	---	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	---	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	---	100	µg/L		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	---	100	µg/L		<100	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SBT-GW-1017	----	----	----	----
				Sampling date / time	05-Feb-2026 06:04	---	---	---	---
Compound	CAS Number	LOR	Unit		ES2603707-001	--------	--------	--------	--------
					Result	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	---	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	---	1	µg/L		1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L		<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L		<0.01	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L		<0.01	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L		<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L		<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L		<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L		<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L		<0.01	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SBT-GW-1017	----	----	----	----
				Sampling date / time	05-Feb-2026 06:04	---	---	---	---
Compound	CAS Number	LOR	Unit		ES2603707-001	--------	--------	--------	--------
					Result	---	---	---	---
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	----	----	----	----
Sum of PFAS (WA DER List)	---	0.01	µg/L		<0.01	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		**97.2**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**125**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**137**	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	---	0.02	%		**99.0**	----	----	----	----
13C8-PFOA	---	0.02	%		**111**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP231S: PFAS Surrogate			
13C4-PFOS	---	50	120
13C8-PFOA	---	50	120

QUALITY CONTROL REPORT

Work Order	: **ES2603707**	Page	: 1 of 12
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 05-Feb-2026
Order number	: 754-SYDEN374937	Date Analysis Commenced	: 06-Feb-2026
C-O-C number	: 93821	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD		
Site	: 754-SYDEN374937		
Quote number	: ES25COFENV0011		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA005P: pH by PC Titrator (QC Lot: 7180428)									
EW2600674-005	Anonymous	EA005-P: pH Value	---	0.01	pH Unit	6.77	6.82	0.7	0% - 20%
EW2600659-001	Anonymous	EA005-P: pH Value	---	0.01	pH Unit	8.03	7.97	0.8	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 7180427)									
EW2600659-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	2030	2060	1.3	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 7190810)									
ED2600162-001	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	4920	4840	1.6	0% - 20%
ES2603816-002	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	117	122	4.8	0% - 50%
ES2603921-009	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	452	440	2.7	0% - 20%
ES2604060-003	Anonymous	EA015H: Total Dissolved Solids @180°C	---	10	mg/L	399	384	3.8	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 7180429)									
EW2600659-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	---	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	1100	1100	0.1	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	---	1	mg/L	1100	1100	0.1	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 7184034)									
ES2603707-001	SBT-GW-1017	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	662	648	2.0	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 7184032)									
ES2603687-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	40	40	0.0	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 7194558)									
ES2603964-004	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	4	3	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED093F: Dissolved Major Cations (QC Lot: 7194558) - continued									
ES2603964-004	Anonymous	ED093F: Magnesium	7439-95-4	1	mg/L	5	5	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	666	629	5.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	7	7	0.0	No Limit
EN2602283-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	7	6	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	6	5	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	27	26	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	4	4	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 7194556)									
ES2603843-007	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.051	0.052	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.008	0.008	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.05	0.05	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.22	0.22	0.0	No Limit
EN2602283-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.056	0.054	2.7	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.020	0.020	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.10	0.10	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 7194488)									
ES2603782-002	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 7194488) - continued									
ES2603782-002	Anonymous	EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.315	0.311	1.2	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.013	<0.005	85.5	No Limit
EN2602283-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.061	0.061	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.032	0.029	7.7	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 7194555)									
EN2601985-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2603907-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 7194674)									
ED2600162-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EN2602283-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 7191246)									
ED2600162-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.04	0.0	No Limit
ES2603823-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 7184033)									
ES2603893-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.01	0.01	0.0	No Limit
ES2603707-001	SBT-GW-1017	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 7191247)									
ED2600162-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	0.10	0.09	11.7	0% - 50%
ES2603823-002	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	9.09	9.26	1.9	0% - 20%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 7191251)									
ES2603823-004	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	0.2	0.2	0.0	No Limit
ES2603595-001	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	1.4	1.2	13.7	0% - 50%
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 7191250)									
ES2603595-001	Anonymous	EK067G: Total Phosphorus as P	---	0.01 (0.10)*	mg/L	<0.10	<0.10	0.0	No Limit
ES2603829-001	Anonymous	EK067G: Total Phosphorus as P	---	0.01 (0.50)*	mg/L	65.4	66.3	1.3	0% - 20%
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 7184030)									
ES2603687-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
EP005: Total Organic Carbon (TOC) (QC Lot: 7181063)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP005: Total Organic Carbon (TOC) (QC Lot: 7181063) - continued									
ES2603707-001	SBT-GW-1017	EP005: Total Organic Carbon	---	1	mg/L	5	5	0.0	No Limit
EW2600681-001	Anonymous	EP005: Total Organic Carbon	---	1	mg/L	3	3	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 7185549)									
ES2603595-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
ES2603823-009	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 7185549)									
ES2603595-001	Anonymous	EP080 C6 C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2603823-009	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 7185549)									
ES2603595-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	1	1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2603823-009	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	2	2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	5	5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 7187165)									
ES2603917-032	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2603881-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.69	0.69	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.37	1.28	6.6	0% - 20%
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.05	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7187165)									
ES2603917-032	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2603881-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	0.05	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 7187165) - continued									
ES2603881-005	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 7187165)									
ES2603917-032	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2603881-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA005P: pH by PC Titrator (QCLot: 7180428)								
EA005-P: pH Value	---	---	pH Unit	---	4 pH Unit	99.2	98.8	101
				---	7 pH Unit	100	99.2	101
EA010P: Conductivity by PC Titrator (QCLot: 7180427)								
EA010-P: Electrical Conductivity @ 25°C	---	1	µS/cm	<1	220 µS/cm	102	89.9	110
				<1	2100 µS/cm	99.4	90.2	111
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 7190810)								
EA015H: Total Dissolved Solids @180°C	---	10	mg/L	<10	2000 mg/L	103	87.0	109
				<10	293 mg/L	101	75.2	126
				<10	2510 mg/L	106	83.0	124
ED037P: Alkalinity by PC Titrator (QCLot: 7180429)								
ED037-P: Total Alkalinity as CaCO3	---	---	mg/L	---	200 mg/L	105	81.0	115
				---	50 mg/L	102	80.0	128
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7184034)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	106	82.0	122
				<1	500 mg/L	99.2	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 7184032)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	97.4	80.9	127
				<1	1000 mg/L	98.6	80.9	127
ED093F: Dissolved Major Cations (QCLot: 7194558)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	94.5	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	96.5	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	97.7	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	104	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 7194556)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	103	80.0	116
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.7	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	93.0	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.0	85.0	111
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	93.9	82.0	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	94.8	83.0	111

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 7194556) - continued								
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	96.2	82.0	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	93.9	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	96.7	81.0	117
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	97.7	82.0	112
EG020T: Total Metals by ICP-MS (QCLot: 7194488)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.8	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.8	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	100	86.0	116
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	96.1	84.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.5	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	97.5	85.0	115
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	97.9	85.0	113
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	97.8	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	100	79.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 7194555)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	102	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7194674)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.1	77.0	111
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7191246)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	1 mg/L	101	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7184033)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	103	82.0	114
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7191247)								
EK059G: Nitrite + Nitrate as N	---	0.01	mg/L	<0.01	0.5 mg/L	101	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7191251)								
EK061G: Total Kjeldahl Nitrogen as N	---	0.1	mg/L	<0.1	5 mg/L	95.3	69.0	123
				<0.1	2.5 mg/L	96.0	70.0	123
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7191250)								
EK067G: Total Phosphorus as P	---	0.01	mg/L	<0.01	2.21 mg/L	98.8	71.3	126
				<0.01	0.5 mg/L	93.5	71.3	126
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7184030)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	97.9	85.0	117
EP005: Total Organic Carbon (TOC) (QCLot: 7181063)								
EP005: Total Organic Carbon	---	1	mg/L	<1	10 mg/L	105	72.0	120

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7180689)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	400 µg/L	62.5	53.7	97.0
EP071: C15 - C28 Fraction	---	100	µg/L	<100	600 µg/L	89.1	63.3	107
EP071: C29 - C36 Fraction	---	50	µg/L	<50	400 µg/L	100	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7185549)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	260 µg/L	86.2	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7180689)								
EP071: >C10 - C16 Fraction	---	100	µg/L	<100	500 µg/L	61.4	53.9	95.5
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	700 µg/L	98.5	57.8	110
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	300 µg/L	90.0	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185549)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	86.3	75.0	127
EP080: BTEXN (QCLot: 7185549)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	102	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	120	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	110	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	106	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	100	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	104	75.5	124
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7187165)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	74.9	72.0	130
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	78.0	68.0	131
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	73.8	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7187165)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	88.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.1	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	110	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	96.8	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7187165)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	120	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	118	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	118	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	72.9	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 7184034)							
ES2603707-001	SBT-GW-1017	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 7184032)							
ES2603687-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	119	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 7194556)							
EN2601985-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	109	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	108	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	117	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	112	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	114	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	109	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	116	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	112	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	112	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 7194488)							
EN2602283-002	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	98.6	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	102	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	102	70.0	130
		EG020A-T: Cobalt	7440-48-4	1 mg/L	101	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	99.9	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	107	70.0	130
		EG020A-T: Manganese	7439-96-5	1 mg/L	102	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	99.6	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	99.3	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 7194555)							
EN2601985-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	99.6	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 7194674)							
ED2600162-002	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	86.1	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 7191246)							
ED2600162-001	Anonymous	EK055G: Ammonia as N	7664-41-7	1 mg/L	121	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 7184033)							
ES2603707-001	SBT-GW-1017	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	106	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 7191247)							
ED2600162-001	Anonymous	EK059G: Nitrite + Nitrate as N	---	0.5 mg/L	98.0	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 7191251)							
ES2603595-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	---	5 mg/L	102	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 7191250)							
ES2603595-002	Anonymous	EK067G: Total Phosphorus as P	---	1 mg/L	89.8	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 7184030)							
ES2603687-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	95.9	70.0	130
EP005: Total Organic Carbon (TOC) (QCLot: 7181063)							
EW2600628-005	Anonymous	EP005: Total Organic Carbon	---	100 mg/L	94.0	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 7185549)							
ES2603595-001	Anonymous	EP080: C6 - C9 Fraction	---	325 µg/L	74.4	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 7185549)							
ES2603595-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	71.8	70.0	130
EP080: BTEXN (QCLot: 7185549)							
ES2603595-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	92.0	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	97.6	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	103	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	98.9	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	97.0	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	95.9	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 7187165)							
ES2603917-033	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	78.2	72.0	130
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	75.7	68.0	131
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	79.8	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 7187165)							
ES2603917-033	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	96.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	92.6	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	93.5	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	107	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.5	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 7187165)							
ES2603917-033	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	109	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	102	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	119	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	79.1	71.4	144

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2603707**	Page	: 1 of 10
Amendment	: **1**		
Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Telephone	: +61-2-8784 8555
Project	: 754-SYDEN374937	Date Samples Received	: 05-Feb-2026
Site	: 754-SYDEN374937	Issue Date	: 07-Apr-2026
Sampler	: ELLIOT WOOD	No. of samples received	: 1
Order number	: 754-SYDEN374937	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2603707-001	SBT-GW-1017	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	---	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EA005P: pH by PC Titrator						
Clear Plastic Bottle - Natural SBT-GW-1017	---	---	---	06-Feb-2026	05-Feb-2026	1

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Analytical Methods	Method	Count: QC	Count: Regular	Rate (%): Actual	Rate (%): Expected	Quality Control Specification
Laboratory Duplicates (DUP)						
TRH - Semivolatile Fraction	EP071	0	8	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
TRH - Semivolatile Fraction	EP071	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EA005P: pH by PC Titrator							
Clear Plastic Bottle - Natural (EA005-P) SBT-GW-1017	05-Feb-2026	---	---	---	06-Feb-2026	05-Feb-2026	×
EA010P: Conductivity by PC Titrator							
Clear Plastic Bottle - Natural (EA010-P) SBT-GW-1017	05-Feb-2026	---	---	---	06-Feb-2026	05-Mar-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA015: Total Dissolved Solids dried at 180 ± 5 °C							
Clear Plastic Bottle - Natural (EA015H) SBT-GW-1017	05-Feb-2026	---	---	---	11-Feb-2026	12-Feb-2026	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P) SBT-GW-1017	05-Feb-2026	---	---	---	06-Feb-2026	19-Feb-2026	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G) SBT-GW-1017	05-Feb-2026	---	---	---	09-Feb-2026	05-Mar-2026	✓
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G) SBT-GW-1017	05-Feb-2026	---	---	---	09-Feb-2026	05-Mar-2026	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) SBT-GW-1017	05-Feb-2026	---	---	---	12-Feb-2026	05-Mar-2026	✓
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) SBT-GW-1017	05-Feb-2026	---	---	---	12-Feb-2026	04-Aug-2026	✓
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T) SBT-GW-1017	05-Feb-2026	13-Feb-2026	04-Aug-2026	✓	13-Feb-2026	04-Aug-2026	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F) SBT-GW-1017	05-Feb-2026	---	---	---	13-Feb-2026	05-Mar-2026	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) SBT-GW-1017	05-Feb-2026	---	---	---	13-Feb-2026	05-Mar-2026	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G) SBT-GW-1017	05-Feb-2026	---	---	---	11-Feb-2026	05-Mar-2026	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G) SBT-GW-1017	05-Feb-2026	---	---	---	07-Feb-2026	07-Feb-2026	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G) SBT-GW-1017	05-Feb-2026	---	---	---	11-Feb-2026	05-Mar-2026	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G) SBT-GW-1017	05-Feb-2026	11-Feb-2026	05-Mar-2026	✓	11-Feb-2026	05-Mar-2026	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK067G: Total Phosphorus as P by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK067G) SBT-GW-1017	05-Feb-2026	11-Feb-2026	05-Mar-2026	✓	11-Feb-2026	05-Mar-2026	✓
EK071G: Reactive Phosphorus as P by discrete analyser							
Clear Plastic Bottle - Natural (EK071G) SBT-GW-1017	05-Feb-2026	---	---	---	07-Feb-2026	07-Feb-2026	✓
EP005: Total Organic Carbon (TOC)							
Amber VOC Vial - Sulfuric Acid (EP005) SBT-GW-1017	05-Feb-2026	---	---	---	09-Feb-2026	05-Mar-2026	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-1017	05-Feb-2026	06-Feb-2026	12-Feb-2026	✓	09-Feb-2026	18-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-1017	05-Feb-2026	10-Feb-2026	19-Feb-2026	✓	11-Feb-2026	19-Feb-2026	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) SBT-GW-1017	05-Feb-2026	06-Feb-2026	12-Feb-2026	✓	09-Feb-2026	18-Mar-2026	✓
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-1017	05-Feb-2026	10-Feb-2026	19-Feb-2026	✓	11-Feb-2026	19-Feb-2026	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) SBT-GW-1017	05-Feb-2026	10-Feb-2026	19-Feb-2026	✓	11-Feb-2026	19-Feb-2026	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) SBT-GW-1017	05-Feb-2026	09-Feb-2026	04-Aug-2026	✓	11-Feb-2026	04-Aug-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) SBT-GW-1017	05-Feb-2026	09-Feb-2026	04-Aug-2026	✓	11-Feb-2026	04-Aug-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) SBT-GW-1017	05-Feb-2026	09-Feb-2026	04-Aug-2026	✓	11-Feb-2026	04-Aug-2026	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) SBT-GW-1017	05-Feb-2026	09-Feb-2026	04-Aug-2026	✓	11-Feb-2026	04-Aug-2026	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	10	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	8	0.00	10.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	8	25.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	6	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	2	8	25.00	8.33	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
pH by Auto Titrator	EA005-P	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	6	33.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	5	37	13.51	12.50	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	20	15.00	15.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Conductivity by Auto Titrator	EA010-P	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Organic Carbon	EP005	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Organic Carbon	EP005	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	8	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH by Auto Titrator	EA005-P	WATER	In house: Referenced to APHA 4500 H+ B. This procedure determines pH of water samples by automated ISE. This method is compliant with NEPM Schedule B(3)
Conductivity by Auto Titrator	EA010-P	WATER	In house: Referenced to APHA 2510 B. This procedure determines conductivity by automated ISE. This method is compliant with NEPM Schedule B(3)
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of 'filterable' residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM Schedule B(3)
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. Auto Titrator) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS). FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G. Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* FN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)
Total Organic Carbon	EP005	WATER	In house: Referenced to APHA 5310 B, The automated TOC analyzer determines Total and Inorganic Carbon by IR cell. TOC is calculated as the difference. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510. 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG15-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY

COC#: 93821 *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME: 5/2/26 1855	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Base analytical suite WATER	QC WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	SBT-GW-1017		05/02/2026 06:04 AM	WATER	ALS: 10 Non ALS: 0	No	X	Partial 2/6		

HT

Environmental Division Sydney

Work Order Reference

ES2603707

Telephone : +61-2-8784 8555

CHAIN OF CUSTODY

COC#: 93821 *ALS Laboratory:* ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE	SAMPLE NAME	PARTIAL ANALYSIS GROUP NAME	MATRIX	SELECTED ANALYSIS NAME
001	SBT-GW-1017	QC WATER	WATER	- W-04 TRH/BTEXN - EP231 PFAS - Short Suite (12 analytes)

CHAIN OF CUSTODY

COC#: 93821 ALS Laboratory: ES Sydney Environmental

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:

CLIENT: COFENV - TETRA TECH COFFEY PTY LTD

PROJECT: 754-SYDEN374937

SITE: 754-SYDEN374937

ORDER NO: 754-SYDEN274937

PROJECT MANAGER: David McFadden CONTACT PH: 0401547597 SAMPLER MOBILE: 0417759835

PRIMARY SAMPLER: Elliot Wood QUOTE NO: ES25COFENV0011 / ES2025COFENV0011

EMAIL REPORTS TO:

EMAIL INVOICES TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt:		°C	
Other comments:			

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	SBT-GW-1017	Amber Glass Bottle - Unpreserved	100 mL	00400324005052	Orange	No	
001	SBT-GW-1017	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030280	Purple	No	
001	SBT-GW-1017	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030276	Purple	No	
001	SBT-GW-1017	Amber VOC Vial - Sulfuric Acid	40 mL	00160925030274	Purple	No	
001	SBT-GW-1017	HDPE (no PTFE)	20 mL	00352309062916	Grey	No	
001	SBT-GW-1017	HDPE (no PTFE)	20 mL	00352309062569	Grey	No	
001	SBT-GW-1017	Clear Plastic Bottle - Natural	500 mL	00070325166219	Green	No	
001	SBT-GW-1017	Clear Plastic Bottle - Nitric Acid; Filtered	60 mL	00121025055721	Red	Yes	
001	SBT-GW-1017	Clear Plastic Bottle - Nitric Acid; Unfiltered	60 mL	00121025055122	Red	No	
001	SBT-GW-1017	Clear Plastic Bottle - Sulfuric Acid	60 mL	00100725122999	Purple	No	

Total Bottle Count: ALS: 10, Non ALS: 0

ALS Compass
SAMPLING *Intelligence*

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 374937 **Client:** tetra tech canada

Project Manager: David McFadden
Phone: ( )

ALS Compass COC Reference: **# Samples:** 1

Sampler:
Phone: ( )

Turnaround Requirements: (Standard) _____ Urgent _____

Special Instructions:	ALS Use Only			
	Custody seal intact?	YES	NO	(N/A)
	Free ice / frozen ice bricks upon receipt?	(YES)	NO	N/A
	Random sample temperature on receipt?	9.1	°C	

Custody:

Relinquished by:	Received by:	Relinquished by:	Received by:
Elliot Wood	Jackie Chau		
Date / Time: 5/2/26 14:00	Date / Time: 5/2/26 14:00	Date / Time:	Date / Time: 5/2/26 1855

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2603707**

Client	: **TETRA TECH COFFEY PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: David McFadden	Contact	: Sandy Phan
Address	: LEVEL 19, TOWER B- CITADEL TOWER 799 PACIFIC HIGHWAY CHATSWOOD NSW, AUSTRALIA 2067	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: David.Mcfadden@tetratech.com	E-mail	: sandy.phan@alsglobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 754-SYDEN374937	Page	: 1 of 2
Order number	: 754-SYDEN374937	Quote number	: ES2025COFENV0011 (ES25COFENV0011)
C-O-C number	: 93821	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 754-SYDEN374937		
Sampler	: Elliot Wood		

Dates

Date Samples Received	: 05-Feb-2026 18:55	Issue Date	: 05-Feb-2026
Client Requested Due Date	: 13-Feb-2026	Scheduled Reporting Date	: **13-Feb-2026**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not intact.
No. of coolers/boxes	: 1	Temperature	: 9.1'C, 10.3'C, 9.5'C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA065P pH (Auto Titrator)	WATER - EA010P Electrical Conductivity (Auto Titrator)	WATER - EP005 Total Organic Carbon (TOC)	WATER - EP231 PFAS - Short Suite (12 analytes)	WATER - W-02 8 Metals	WATER - W-02T 8 metals (Total)	WATER - W-04 TRH/BTEX N
ES2603707-001	05-Feb-2026 06:04	SBT-GW-1017	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EA015H Total Dissolved Solids - Standard Level	WATER - NT-01 & 02 Ca, Mg, Na, K, Chloride, SO4, Alkalinity	WATER - NT-08A Total Nitrogen + NO2 + NO3 + NH3 + Total P +
ES2603707 001	05 Feb 2026 06 04	SBT GW 1017	✓	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALL INVOICE

A4 - AU Tax Invoice (INV)	Email	ap@coffey.com

David McFadden

- *AU Certificate of Analysis - NATA (COA)	Email	David.Mcfadden@tetratech.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	David.Mcfadden@tetratech.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	David.Mcfadden@tetratech.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	David.Mcfadden@tetratech.com
Chain of Custody (CoC) (COC)	Email	David.Mcfadden@tetratech.com
- EDI Format - ESDAT (ESDAT)	Email	David.Mcfadden@tetratech.com

APPENDIX H: CALIBRATION CERTIFICATES

Oil / Water Interface Meter

Instrument Geotech Interface Meter (30M)
Serial No. 3908

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: Aidan David

Calibration date: 21/01/2025

Next calibration due: 20/02/2025

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 18J104314

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00 (pH)		7.00		426181	7.01
2. pH 4.00 (pH)		4.00		429462	4.01
3. ORP (mV)		231.14		A426086/B435258	231.5
4. EC (mS)		2760		433489	2760
5. D.O		0.0%		412773	0.1%
6. Temp (°C)		21.6		MultiTherm	21.3

Calibrated by: Miriam Poyitt

Calibration date: 30/01/2025

Next calibration due: 2/03/2025

APPENDIX I: DATA VALIDATION REPORT

APPENDIX I – QUALITY ASSURANCE AND QUALITY CONTROL ASSESSMENT

1. INTRODUCTION

All groundwater quality monitoring was undertaken by Tetra Tech Coffey Pty Ltd (Tetra Tech) trained personnel and completed in accordance with the methodology as detailed in Section 7 of the GMP.

Quality assurance (QA) and quality control (QC) measures adopted during the sampling and field data collection process to assess data integrity are outlined as follows:

- Use of NATA accredited laboratories for sample analysis.
- Use of Chain of Custody (CoC) procedures between sample collection in the field and subsequent reception of the sample by the laboratory. CoC documentation included the sample type and code, analysis required, collection data, sampler and sample receiver(s).
- Appropriate sample handling and storage including using laboratory supplied containers, keeping samples chilled during storage and transport, ensuring samples are received in good condition within specified holding times by the laboratory.
- A consistent program of quality control sampling was adopted for fieldwork, including:
  - Collection of duplicate and triplicate samples at an average frequency of one sample per twenty primary samples (an overall ratio of 1:10 where PFAS sampled in accordance with NEMP 2.0).
  - Collection of rinsate blanks to measure the effectiveness of decontamination procedures.
  - Collection of trip blanks to assess the adequacy of sample storage and transport procedures in preventing cross contamination.

2. QUALITY CONTROL

The steps in the sampling and analysis process are subject to natural and inherent variability, and this can affect the results produced, and the overall quality of the data sets generated. To minimise the effect of this, standard procedures are used for works carried out in the field, and in the laboratory. The use of such procedures represents one aspect of the quality assurance process. To measure the effectiveness of the quality assurance process, quality control samples can be tested, and other quality control tests can be conducted during the analysis of samples taken in the field.

Quality control (QC) samples and tests can be used to assess both the accuracy, and the precision of the results produced.

Measures of ACCURACY provide information on how close the reported result is to the true result. For practical reasons, measures of accuracy are usually confined to the laboratory steps in the overall process.

Measures of PRECISION provide information on the variability in the results. Precision can be assessed as:

- “repeatability” or intra-laboratory variation – the degree of variation in a result when the same laboratory analyses a sample (or blind replicate) several times, and;
- “reproducibility” or inter-laboratory variation – the degree of variation in a result when a different laboratory separately analyses a sample.

In addition, blank samples can be used to assess whether extraneous materials and factors have contributed to the results obtained from the sampling and analysis process.

QC testing can be conducted for all steps of the sampling and analysis process (referred to as Field QC in this report), or just one portion of the process, such as the laboratory steps (referred to as Laboratory QC in this report).

2.1 FIELD QUALITY CONTROL

Precision of the sample collection, transport and analysis process is measured by the relative percent difference (RPD) between duplicate and triplicate results.

As detailed in the Section 7.7 of the GMP, the relative percentage difference (RPD) acceptance limits adopted were:

- No limit - analytical results <10 times Level of reporting (LOR)
- 50% - analytical results 10-20 times LOR
- 30% - analytical results >20 times LOR.

2.2 LABORATORY QUALITY CONTROL

Laboratories are accredited by the National Association of Testing Authorities, Australia (NATA) on the basis of their ability to provide quantitative evidence of their ability and competence to produce reliable results against recognised benchmarks. Both the primary laboratory Australian Laboratory Services (ALS) and secondary laboratory Eurofins are accredited by the National Association of Testing Authorities (NATA).

NATA accredited laboratories are able to demonstrate the ability to produce reliable, repeatable results for a range of parameters within a range of sample matrices. Each laboratory method used undergoes a validation process before it is adopted by the laboratory and accredited by NATA. As part of the validation process, the precision and accuracy of the method are established.

In addition, laboratories conduct their own quality control testing to indicate their performance on each reported batch of samples. The results of this testing are compared with the validated precision and accuracy.

Precision of results is measured by the RPD between replicate samples selected at the laboratory.

Accuracy of results is assessed in several ways:

- **Method blanks:** An analyte free matrix, which is carried through the complete preparation and analytical procedure.
- **Matrix spikes**: Known amounts of targeted analytes are added to the samples to be analysed, and the spiked samples are processed through the analytical process. The recoveries of the spiked analytes are evaluated to determine accuracy in a given matrix.
- **Surrogate spikes:** Known amounts of chemical compounds with similar properties to the targeted analytes are added to the samples to be analysed, and the spiked samples are processed through the analytical process. The recoveries of the surrogate spikes are evaluated to determine extraction efficiency.
- **Laboratory control samples (LCS)**: A clean matrix (not containing any of the analyte of interest) spiked with known concentrations of the analytes of interest. LCS samples are analysed to determine if the procedure is working within established control limits where matrix interference is not an issue.

Schedule B(3) of the National Environment Protection Measure (NEPM) for contaminated sites states that, in general, at least 70% recovery should be achievable from a reference method. Additionally, standard methods prepared by international agencies such as the US EPA and APHA, frequently have performance data such as expected spike recovery incorporated within the method. Where these vary from 70% as indicated in NEPM, they are noted in the discussion of results.

A default acceptable range of 70% - 130% for metals and inorganics, and 60% - 140% for organics, was adopted for matrix spike recovery results (Table F-1).

2.3 SUMMARY OF DATA QUALITY ACCEPTANCE TARGETS FOR GROUNDWATER QC SAMPLES

Data quality acceptance targets for groundwater field and laboratory QC samples are summarised in Table 2-1 below.

Table 2-1: Data quality acceptance targets for field and analytical results for groundwater water samples

QC sample type	Acceptance limit
Duplicate (applies to both field and lab duplicates)	Relative Percentage Difference (RPD) within 50% for groundwater.
Spike and surrogate recoveries	Spike and surrogate recoveries between the laboratory lower control limit and upper control limit and where not defined the following range to be adopted: 70% - 130% for inorganics / metals; and 60% - 140% for organics.
Lab control samples	Refer to internal laboratory control limits
Blanks	Analytes not detected, i.e. below the level of reporting (LOR).

2.4 ANALYTICAL LABORATORY PROCESSES

Table 2-2: Summary of analytical laboratory processes

Analytical laboratory processes	YES	NO
1. Was a NATA registered laboratory used?	☒	☐
2. Did the laboratory perform the requested analysis?	☒	☐
3. Were the laboratory methods adopted NATA endorsed?	☒	☐
4. Were the appropriate test procedures followed?	☒	☐
5. Were the reporting limits satisfactory?	☒	☐
6. Was the NATA seal on the reports?	☒	☐
7. Were the reports signed by an authorised person?	☒	☐

COMMENTS

Nil.

Precision/Accuracy of the Laboratory Report		
Satisfactory ☒	Partially Satisfactory ☐	Unsatisfactory ☐

2.5 SAMPLE HANDLING PROCEDURES

Table 2-3: Summary of sample handling procedures

Sample handling	YES	NO
1. Were the sample holding times met for COPC?	☐	☒
2. Were the samples in proper custody between the field and laboratory?	☒	☐
3. Were the samples properly and adequately preserved? (This includes chilling the samples where appropriate)	☒	☐
4. Were the samples received by the laboratory in good condition?	☒	☐

COMMENTS

Sample Handling Procedure		
Satisfactory ☒	Partially Satisfactory ☐	Unsatisfactory ☐

Analysis Holding Time Outliers

- Batch ES2603043 reported a holding time breach for pH for all samples within the batch. The holding time breach was only 1 day.
- Batch ES2603450 reported a holding time breach for pH for all samples within the batch. The holding time breach was up to 2 days.
- Batch ES2603707 reported a holding time breach for one sample within the batch. The holding time breach was 1 day.

3. FIELD QA/QC SAMPLING AND PROCEDURES

The GME occurred over 6 days between 29 January and 4 February 2026. A summary of QC samples collected during the GME is provided in Table 3-1, and results for primary to QC samples RPDs are presented in Table I1.

Table 3-1: QA/QC sample summary

Sample Type	QC sample frequency requirements	Number of samples required	Number of samples collected
Primary Samples		-	39
QA/QC Samples	Field Duplicate pairs (1 in 20 primary samples)	2	2
	Field Triplicate pairs (1 in 20 primary samples)	2	0
	Trip Blanks (1 / sample batch)	4	1
	Field Blanks (1 / sampling event)	4	1

	Equipment Rinsates (1 / day where non-disposable equipment used for sampling)	4 (if non-disposable equipment used)	0

3.1 FIELD QA/QC SUMMARY

Field replicates collected over the monitoring period are summarised in Table 3-2.

Table 3-2: QA/QC Samples

Primary sample ID	Duplicate IDs (ALS)	Triplicate ID (Secondary Lab)
SMGW-BH-A315-R	DUP01_020626	-
SBT-GW-1024	DUP02_030226	-

	YES	NO	N/A
1. Were an adequate number of field replicates analysed for each chemical?	☐	☒	☐
2. Were RPD's for replicate samples within control limits?	☐	☒	☐

Where RPDs were outside the acceptable range, sampling procedures, laboratory analytical methods and laboratory results were investigated. The results of this review are presented in Table 3-3.

Table 3-3: Replicate RPD exceedance summary

Primary Sample	Duplicate / Triplicate Sample ID	Lab report	Analyte	RPD %	See Comment
SBT-GW-1024	DUP02_030226	ES2603450	Iron	31	1
			Sum of PFAS (WA DER List)	187	3
			Perfluorohexane sulfonic acid (PFHxS)	120	3
			Perfluorooctanesulfonic acid (PFOS)	143	3
			Perfluorobutanoic acid (PFBA)	67	3
			Sum (PFHxS + PFOS)	164	3
SMGW-BH-A315-R	DUP01_020626	ES2603450	Aluminium	31	2

Comments

1) RPDs reported outside the acceptable range are where the primary result is higher than the duplicate/triplicate reported result.
2) RPDs reported outside the acceptable range are where the primary result is lower than the duplicate/triplicate reported result.
3) Poor RPDs are attributed to concentrations <10X LOR

In total 7 of 164 (5%) duplicate pairs of analysis exceeded adopted RPD acceptance limits. The precision of the field investigation is not considered to be materially affected by non-compliant RPDs, as the highest concentration reported in QC replicates pairs has been adopted for interpretation, and most of the RPD

exceedances are attributed to concentrations of PFAS compounds being <10X LOR. As the reported concentrations for both primary and duplicate sample were typically below the adopted criteria, the RPD exceedances are not considered to alter the assessment results.

3.2 FIELD BLANKS SUMMARY

Blank field quality control samples include trip blanks, field blanks and equipment rinsates.

Trip blanks are used to assess whether sample storage and transport procedures minimised the introduction of contamination during storage and transport. Trip blanks are typically collected and analysed where volatile contaminants of concern are being assessed in the sample batch.

Trip blanks are laboratory prepared vials of distilled water that remained with the sample containers during sampling and transport to the laboratory. At no time during these procedures are the blanks opened.

Trip spikes are used to assess whether sample storage and transport procedures minimised the loss of volatiles during storage and transport. Trip spikes are typically collected and analysed where volatile contaminants of concern are being assessed in the sample batch.

Trip spikes are laboratory prepared vials of distilled water spiked with a known concentration of BTEX that remained with the sample containers during sampling and transport to the laboratory. At no time during these procedures are the blanks opened.

Equipment rinsates are collected to assess if procedures for decontamination of non-disposable sampling equipment were adequate to minimise for cross-contamination between sampling points.

Rinsate samples are prepared in the field using laboratory supplied bottles and the distilled water used for the cleaning of non-disposable sampling equipment. Rinsate samples are typically collected at a rate of one per field operator per day where non-disposable sampling equipment was used.

Trip Blanks and Spikes

	Yes	No (see comment)
Were an adequate number of trip blanks and spikes collected?	☐	☒
Were trip blanks free of contaminants?	☒	☐

Comments

Although the number of trip blanks collected was non-compliant, as volatile contaminants have not been identified as a significant COPC along the alignment, apart from St Marys where there is a targeted mitigation monitoring program and appropriate QC samples have been taken, the lack of trip blanks and spikes collected for the six monthly monitoring program is not considered to have impacted the useability of the dataset.

Rinsates

	Yes	No (See comment)
Were an adequate number of rinsate blanks collected?	☐	☒
Were rinsate blanks free of contaminants?	☐	☐ N/A

Comments

Although no rinsate blank were collected during sampling events this is not considered to have affected the quality of data collected as no sampling equipment was re-used between sampling locations, therefore the potential for cross-contamination is negligible.

Blanks and Rinsate Sampling and Analysis		
Satisfactory ☐	Partially Satisfactory ☒	Unsatisfactory ☐

4. LABORATORY QUALITY CONTROL PROCEDURES

As noted in Section 2.2, laboratories conduct their own quality control testing to indicate their performance on each reported batch of samples. An assessment of the adequacy of these procedures is provided in Table 4-1 and Table 4-2.

Table 4-1: Acceptability of laboratory quality controls

	YES	NO
Were laboratory method blanks free of contamination?	☒	☐
Were the matrix spike recoveries within control limits?		☒ See comment
Were the Lab control samples within control limits?	☒	☐
Were the RPD's of the laboratory duplicates within control limits?	☐	☒ See comment
Were the surrogate recoveries within laboratory control limits?	☒	☐

Table 4-2: Summary of laboratory quality controls results

Sample Type	Total Number of Analyses	Number of Identified Issues	% of Analyses with Identified Issues	Comment/Issues Identified
Method blank	109	0	0%	All results <LOR
Matrix spike % recovery	64	7	10.9%	Sulfate analysis was outside laboratory control limits
Laboratory control sample % recovery	184	0	0%	-
Laboratory duplicates	204	0	0%	-
Surrogate % recovery	43	0	0%	-
Total	**604**	**7**	**1.12%**	-

Most of the RPD exceedances were reported where concentrations were < 10X LOR, and are therefore not an issue. Based on the low percentage of non-compliant matrix spikes, the data set is considered to be acceptable for use.

5. FIELD DATA USEABILITY

Overall, of the 768 individual analyses conducted in association with the quality assessment, issues were identified in 14 analyses (1.8%). A summary of the total analyses and proportion with issues is provided in Table 5-1.

Table 5-1: Quality Control Program Summary

Sample Type	Total Number of Analyses	Number of Identified Issues	% of Analyses with Identified Issues	Issues Identified
Field Duplicate/ Triplicates samples	164	7	4.3%	RPDs outside acceptable range
Field quality control samples (rinsates, field blanks and trip blanks)	-	-	-	Number of rinsate and trip blank samples was non-compliant, but is not considered to have affected useability of dataset based on COPCs
Internal laboratory analyses	604	7	1.12%	Laboratory quality control results outside of control limits
Total	**768**	**14**	**1.8%**	

Recommendations for interpretation and future monitoring events include:

- Collect sufficient triplicate, rinsate blanks and include trip blanks to be in line with the GMP requirements.

Overall, the percentage of issues identified in the quality assessment (1.8%) is considered acceptable, and therefore the data is considered to be of appropriate quality for use.

				Physical Parameters			Alkalinity				Ions								Nutrients			
				Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	pH (lab)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Calcium (filtered)	Chloride	Magnesium (filtered)	Potassium (filtered)	Sodium (filtered)	Sulfate as SO4 - Turbidimetric (filtered)	Anions Total	Cations Total	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)
				µS/cm	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L
EQL				1	10	0.01	1	1	1	1	1	1	1	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Field ID	Date	Matrix Type	Lab Report Number																			
SMGW-BH-A31S-R	02 Feb 2026	Water	ES2603450	6,830	4,450	6.95	122	<1	122	<1	15	2,130	322	11	2,530	226	67.2	138	0.05	<0.01	<0.01	<0.01
DUP01_020626	02 Feb 2026	Water	ES2603450	6,920	4,670	7.01	122	<1	122	<1	15	2,180	333	11	2,600	230	68.7	142	0.05	0.01	0.01	<0.01
RPD				1	5	1	0	0	0	0	0	2	3	0	3	2	2	3	0	0	0	0
SBT-GW-1024	03 Feb 2026	Water	ES2603450	3,660	2,220	7.41	162	<1	162	<1	56	997	40	14	577	185	35.2	31.5	0.18	0.18	0.18	<0.01
DUP02_030226	03 Feb 2026	Water	ES2603450	3,480	2,140	7.43	166	<1	166	<1	55	977	41	15	607	183	34.7	32.9	0.18	0.20	0.20	<0.01
RPD				5	4	0	2	0	2	0	2	2	2	7	5	1	1	4	0	11	11	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 50 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

														Metals								
				Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Phosphorus total	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium	Chromium (filtered)	Cobalt	Copper	Copper (filtered)	Iron	Iron (filtered)	Manganese	Manganese (filtered)	Mercury	Mercury (filtered)	Nickel
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.1	0.1	0.01	0.001	0.001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.05	0.05	0.001	0.001	0.0001	0.0001	0.001
Field ID	Date	Matrix Type	Lab Report Number																			
SMGW-BH-A31S-R	02 Feb 2026	Water	ES2603450	0.8	0.8	0.09	0.003	0.001	<0.0001	<0.0001	0.011	<0.001	-	0.016	<0.001	5.40	5.16	-	-	<0.0001	<0.0001	0.027
DUP01_020626	02 Feb 2026	Water	ES2603450	0.9	0.9	0.08	0.003	<0.001	<0.0001	<0.0001	0.014	<0.001	0.057	0.018	<0.001	7.03	4.68	0.286	0.329	<0.0001	<0.0001	0.028
RPD				12	12	12	0	0	0	0	24	0	-	12	0	26	10	-	-	0	0	4
SBT-GW-1024	03 Feb 2026	Water	ES2603450	0.8	0.6	0.21	0.004	0.002	0.0001	<0.0001	0.010	<0.001	0.011	0.014	0.004	3.46	0.08	0.445	0.286	<0.0001	<0.0001	0.013
DUP02_030226	03 Feb 2026	Water	ES2603450	0.7	0.5	0.18	0.004	0.002	<0.0001	<0.0001	0.009	<0.001	0.011	0.011	0.004	2.52	0.08	0.396	0.286	<0.0001	<0.0001	0.013
RPD				13	18	15	0	0	0	0	11	0	0	24	0	31	0	12	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs
***Interlab Duplicates are matched on a per compound basis as methods vary b

										Inorganics	BTEX									Total Rec		
				Nickel (filtered)	Lead	Lead (filtered)	Zinc	Zinc (filtered)	Aluminum	Aluminum (filtered)	Reactive Phosphorus as P (Orthophosphate as P) (filtered)	Benzene	Ethylbenzene	Toluene	Xylenes Total	Xylene (o)	Xylenes (m & p)	Total BTEX	Naphthalene (VOC)	F1 (C6-C10)	F1 (C6-C10) less BTEX	F2 (C10-C16 Hydrocarbons)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.001	0.001	0.001	0.005	0.005	0.01	0.01	0.01	0.001	0.002	0.002	0.002	0.002	0.002	0.001	0.005	0.02	0.02	0.1
Field ID	Date	Matrix Type	Lab Report Number																			
SMGW-BH-A31S-R	02 Feb 2026	Water	ES2603450	0.049	0.009	<0.001	3.11	0.584	3.04	0.04	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.02	<0.02	<0.1
DUP01_020626	02 Feb 2026	Water	ES2603450	0.049	0.010	<0.001	3.16	0.567	4.17	0.04	<0.01	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.02	<0.02	<0.1
RPD				0	11	0	2	3	31	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT-GW-1024	03 Feb 2026	Water	ES2603450	0.006	0.004	<0.001	0.191	0.038	3.05	0.06	0.02	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.02	<0.02	<0.1
DUP02_030226	03 Feb 2026	Water	ES2603450	0.007	0.003	<0.001	0.171	0.040	2.38	0.06	0.02	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005	<0.02	<0.02	<0.1
RPD				15	29	0	11	5	25	0	0	0	0	0	0	0	0	0	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs
***Interlab Duplicates are matched on a per compound basis as methods vary b

				Recoverable Hydrocarbons				Total Petroleum Hydrocarbons					Organic	Per and polyfluoroalkyl substances								
				F3 (C16-C34 Hydrocarbons)	C34-C40	C10 - C40 (Sum of total)	F2 C10-C16 (minus Naphthalene)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	Total Organic Carbon (TOC)	Sum of PFAS (WA DER List)	Perfluorobutane sulfonic acid (PFBS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.1	0.1	0.1	0.1	0.02	0.05	0.1	0.05	0.05	1	0.01	0.00002	0.00001	0.00001	0.0001	0.00002	0.00002	0.00002	0.00001
Field ID	Date	Matrix Type	Lab Report Number																			
SMGW-BH-A31S-R	02 Feb 2026	Water	ES2603450	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	7	<0.01	<0.00002	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00001
DUP01_020626	02 Feb 2026	Water	ES2603450	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	8	<0.01	<0.00002	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00001
RPD				0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
SBT-GW-1024	03 Feb 2026	Water	ES2603450	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5	0.30	<0.00002	0.00004	0.00006	0.0002	<0.00002	<0.00002	<0.00002	<0.00001
DUP02_030226	03 Feb 2026	Water	ES2603450	<0.1	<0.1	<0.1	<0.1	<0.02	<0.05	<0.1	<0.05	<0.05	5	<0.01	<0.00002	<0.00001	<0.00001	<0.0001	<0.00002	<0.00002	<0.00002	<0.00001
RPD				0	0	0	0	0	0	0	0	0	0	187	0	120	143	67	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs
***Interlab Duplicates are matched on a per compound basis as methods vary b

				4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum (PFHxS + PFOS)
				mg/L	mg/L	mg/L	mg/L	mg/L
EQL				0.00005	0.00005	0.00005	0.00005	0.00001
Field ID	Date	Matrix Type	Lab Report Number					
SMGW-BH-A31S-R	02 Feb 2026	Water	ES2603450	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
DUP01_020626	02 Feb 2026	Water	ES2603450	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
RPD				0	0	0	0	0
SBT-GW-1024	03 Feb 2026	Water	ES2603450	<0.00005	<0.00005	<0.00005	<0.00005	0.00010
DUP02_030226	03 Feb 2026	Water	ES2603450	<0.00005	<0.00005	<0.00005	<0.00005	<0.00001
RPD				0	0	0	0	164

*RPDs have only been considered where a concentration is greater than 1 times
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs
***Interlab Duplicates are matched on a per compound basis as methods vary b

					BTEX							
					Benzene	Ethylbenzene	Toluene	Xylenes Total	Xylene (o)	Xylenes (m & p)	Total BTEX	Naphthalene (VOC)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.001	0.002	0.002	0.002	0.002	0.002	0.001	0.005
Sample Type	Field ID	Date	Matrix Type	Lab Report Number								
Trip_B	TB_040226	02 Feb 2026	Water	ES2603584	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.005