



**Western
Bay of Plenty**
District Council



**Mā tō tātou takiwā
For our District**



**Central
Comprehensive
Stormwater Consent**

Annual Report

November 2025

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1. Introduction

In July 2020, Bay of Plenty Regional Council (BOPRC) granted Western Bay of Plenty District Council (WBOPDC) six new consents relating to a Central Comprehensive Stormwater Consent:

- Consent RM17-0121-BC.01 Disturb Lake or River
- Consent RM17-0121-BC.02 Beds Damming and Diversion
- Consent RM17-0121-CC.01 Coastal Dredging
- Consent RM17-0121-CC.02 Occupy Coastal Space
- Consent RM17-0121-DC.01 Discharge to Water
- Consent RM17-0121-LC.01 Earthworks or Excavation

This report examines conditions required for Consent RM17-0121-DC.01 Discharge to Water, which expires 30 May 2055.

2. Purpose of this report

Condition 9.5 of consent RM17-0121-DC.01 requires the consent holder to submit an annual report to BOPRC in November of each year covering:

- a) A summary report of any monitoring undertaken including an analysis of the monitoring results;
- b) Any stormwater network or stormwater infrastructure upgrade works undertaken;
- c) Any stormwater induced erosion, flood risk alleviation, or stormwater quality mitigation measures implemented;
- d) Any incidents resulting in unanticipated contaminants entering the stormwater network, the investigation of the cause of the incidents and any remedial actions implemented to avoid a repeat occurrence of the incident;
- e) An updated Asset Register; and
- f) Any new structures to be included in the consent (Asset Register).

3. Monitoring

Monitoring Plans were developed and approved by BOPRC in August and October 2022.

The following report presents an overview of the monitoring results for the Central stormwater network, with a reporting period from 1st October 2024 to 30th September 2025. This includes the results and the findings from laboratory analysis and field observations for water quality, at the two monitoring locations within the catchment, along with the Sediment and Ecology monitoring report prepared by SLR Consulting New Zealand (Appendix A).

Stormwater monitoring began at the end of November 2024 and includes event-based (heavy rainfall) monitoring and annual monitoring (sediment & ecology) to determine the effect of the discharge on the receiving environment.

Discharge monitoring for both catchments was conducted during the first 30 minutes of a storm event occurring, or no later than 60 minutes after. For the Te Puna catchment, sampling additionally took place within two hours before or after high tide.

Due to difficulties with the timing of the rainfall events and high tide requirement for Te Puna catchment, it was noted that during the November 2024 sampling, no sampling was able to be undertaken at locations TWQ Discharge and TWQ2 Receiving environment.

3.1 Minden Catchment

3.1.1 Water quality laboratory analysis

An overview of the results of water quality monitoring for Minden catchment are presented below. Where applicable, the dark red line represents the consented trigger value. For some parameters, two graphs are presented – one includes the trigger value line and another without it, to better illustrate the results where appropriate.

For the purpose of analysis, results below the lab accredited default detection limit were conservatively graphed to be equal to the default detection limit

(e.g. <0.01 mg/L is reports as 0.01 mg/L).

Trigger levels only apply to the downstream sites, after reasonable mixing. However, these trigger values have been applied to all graphs to assess whether upstream samples also exceeded these levels

There are two sampling locations, M1 and M2 within Minden catchment, categorized as follows:

- **Upstream Sites:** (M1-US & M2-US): Upstream monitoring sites. 2m upstream from the point of discharge
- **Discharge Points:** (M1-Dis & M2-Dis): Point of discharge for each sampling site.
- **Downstream Sites:** (M1-DS & M2-DS): Downstream monitoring sites. 10m downstream of the point of discharge.

Microbiological

In general, except for M1-US and M2-US results on 04 June 2025, all other E.coli samples exceeded the trigger value of 900 g/m³. The highest downstream exceedance of 20,000 cfu/100 mL occurred on 16 December 2024 at site M2-DS; however, the corresponding upstream site recorded an even higher result of 56,000 cfu/100 mL.

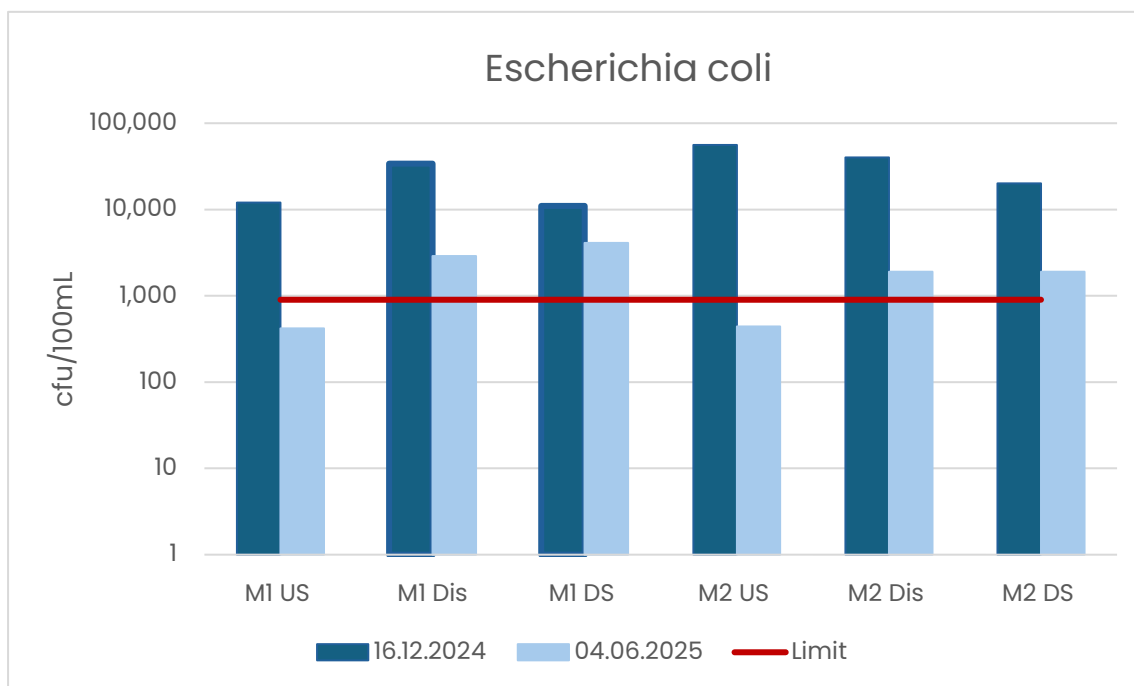


Figure 1. E.coli results

Water Clarity

Parameter	Trigger Value
Turbidity NTU	>20% increase on upstream turbidity
Total Suspended Solids (TSS) g/m ³	>20% increase on upstream TSS

Table 1. Trigger Values, Freshwater Receiving Environments for Turbidity and TSS

Date	M1 Turbidity Upstream	Trigger Value (20% increase)	M1 Turbidity Discharge	M1 Turbidity Downstream
16.12.2024	13.90	16.68	15.3	47
04.06.2025	30.00	36.00	440	420

Table 2: M1 Upstream turbidity, Trigger Value 20% increase, Discharge and Downstream turbidity results

Date	M2 Turbidity Upstream	Trigger Value (20% increase)	M2 Turbidity Discharge	M2 Turbidity Downstream
16.12.2024	40	48	38	42
04.06.2025	18.8	22.56	14.9	9.4

Table 3: M2 Upstream turbidity, Trigger Value 20% increase, Discharge and Downstream turbidity results

The results show at site M1, turbidity in the downstream samples significantly exceeded the trigger value, which is defined as a 20% increase from the M1 upstream readings of 16.68 NTU in 2024 and 36 NTU in 2025. With the M1 downstream results for 2025 being significantly higher than 2024. In contrast, at site M2, downstream turbidity remained below the trigger value and significantly decreased from 2024 to 2025.

Date	TSS M1 Upstream	Trigger Value (20% increase)	TSS M1 Discharge	TSS M1 Downstream
16.12.2024	17	20.4	94	270
04.06.2025	71	85.2	510	1090

Table 4: M1 Upstream Total Suspended Solids, Trigger Value 20% increase, Discharge and Downstream Total Suspended Solids results

Date	TSS M2 Upstream	Trigger Value (20% increase)	TSS M2 Discharge	TSS M2 Downstream
16.12.2024	101	121.2	290	210
04.06.2025	53	34.8	20	11

Table 5: M2 Upstream Total Suspended Solids, Trigger Value 20% increase, Discharge and Downstream Total Suspended Solids results

The results show that Total Suspended Solids (TSS) exceeded the trigger value of a 20% increase from the upstream concentration at both sampling sites in 2024. In 2025, a significant exceedance was recorded at the M1 downstream site, while the M2 downstream sample measured 11 g/m³ remaining below the trigger value of 34.8 g/m³.

Electrical Conductivity

Results show that downstream and upstream values from December 2024 to June 2025 have increased significantly at both M1 and M2. The highest downstream value of 12.6 Ms/m occurred on 4 June 2025 at site M1-DS. There is no trigger value for Conductivity.

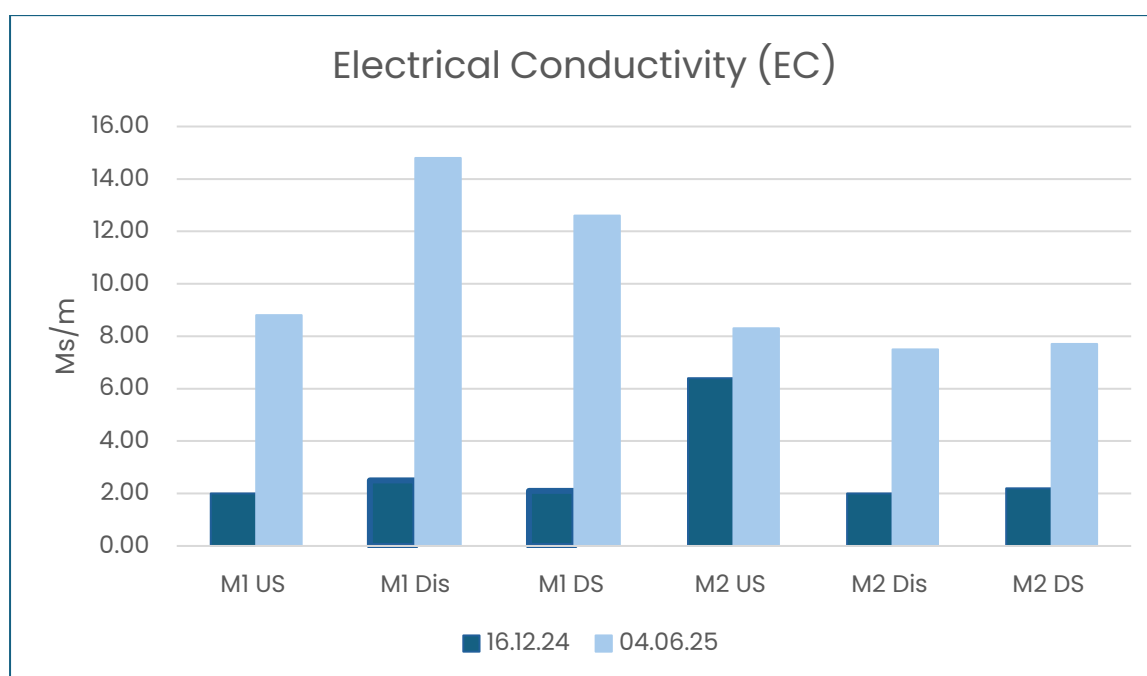


Figure 2. Electrical Conductivity (EC) results

Nutrients

Results show that:

- All Ammonia concentrations were below the trigger value.
- All Nitrate results are well below the trigger value

Parameter	Trigger Value
Total Ammoniacal-N	0.39
Nitrate	3.4

Table 6. Trigger Values, Freshwater Receiving Environments for Ammonia and Nitrate

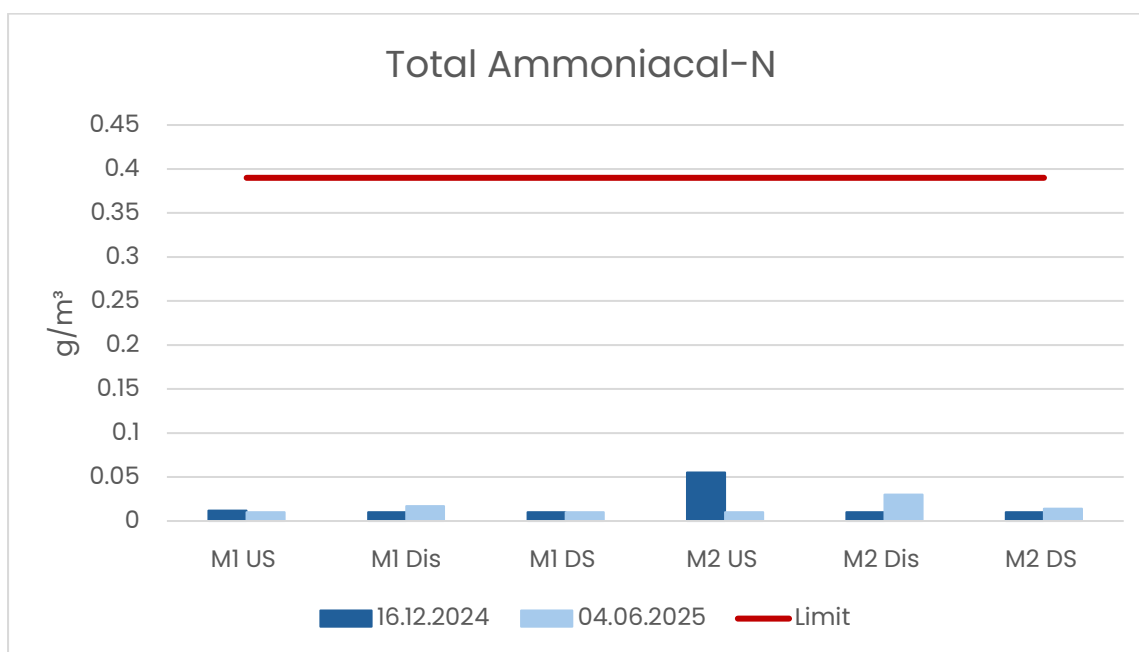


Figure 3a. Total Ammoniacal-N results

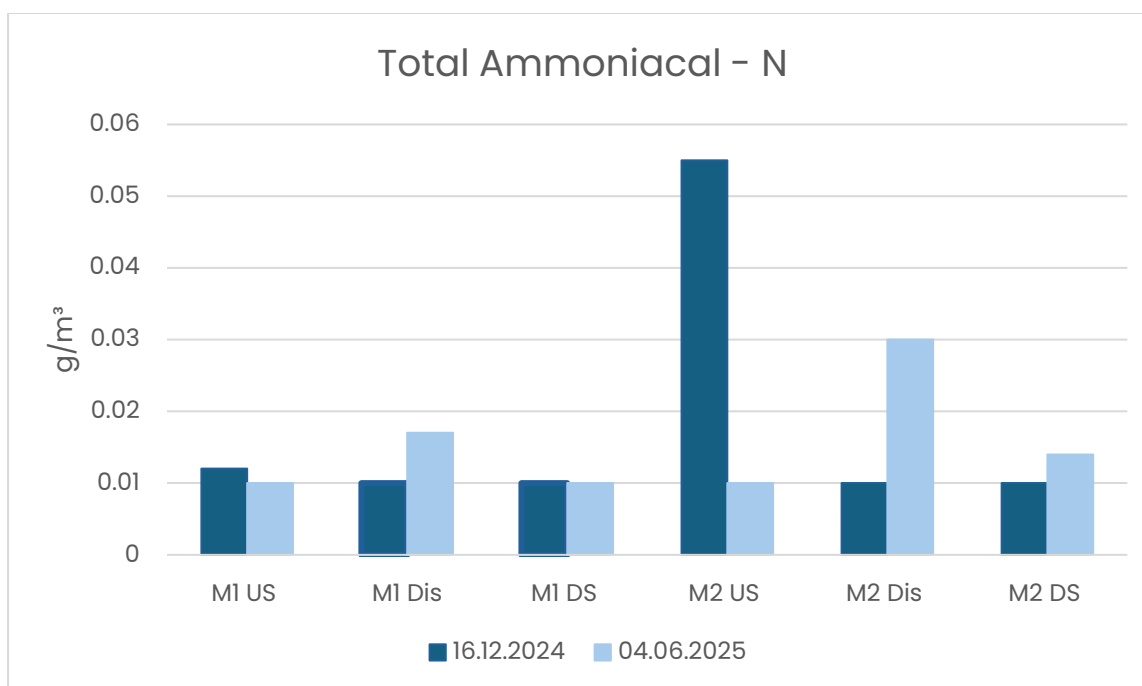


Figure 3b. Total Ammoniacal-N results with trigger value (Limit) removed

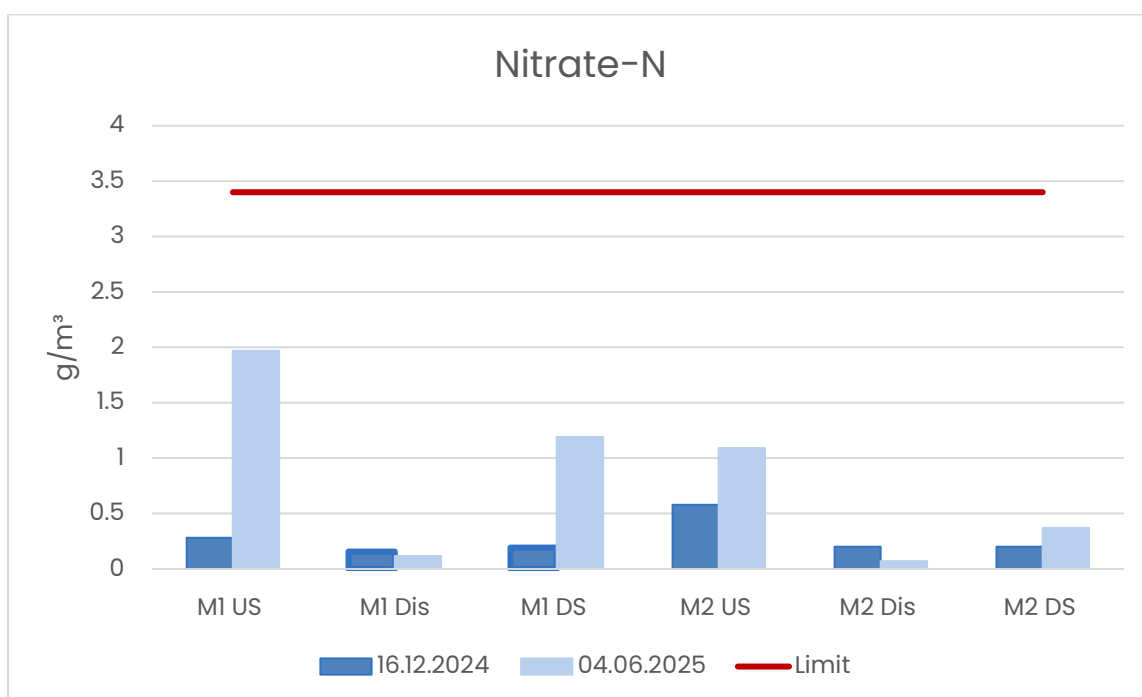


Figure 4. Nitrate Results

Metals

Parameter	g/m ³
Cadmium	0.0004
Chromium	0.006
Copper	0.0018
Lead	0.0056
Mercury	0.0019
Zinc	0.015

Table 7. Trigger Values for toxicants in Freshwater Receiving Environments.

Results show that cadmium concentrations were below the trigger value on all sampling occasions.

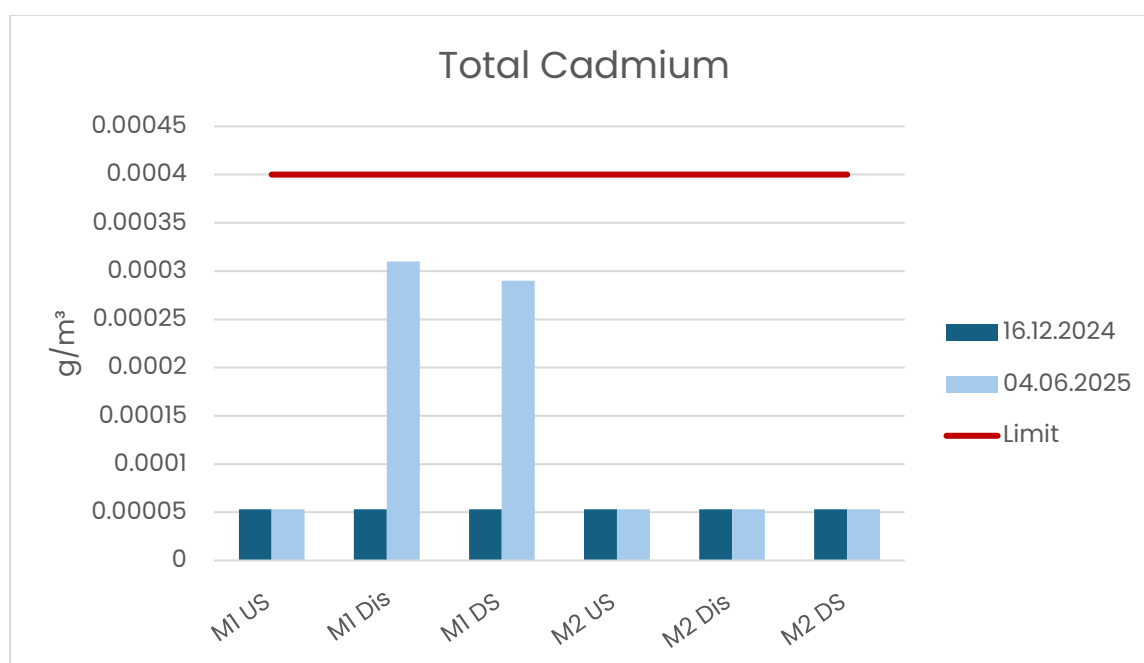


Figure 5. Cadmium results

Results show that chromium concentrations were below the trigger value at nearly all sampling locations. Apart from exceedances at downstream site M1-DS with a result of 0.0134g/m³ and M1-Dis of 0.014g/m³ during June 2025.

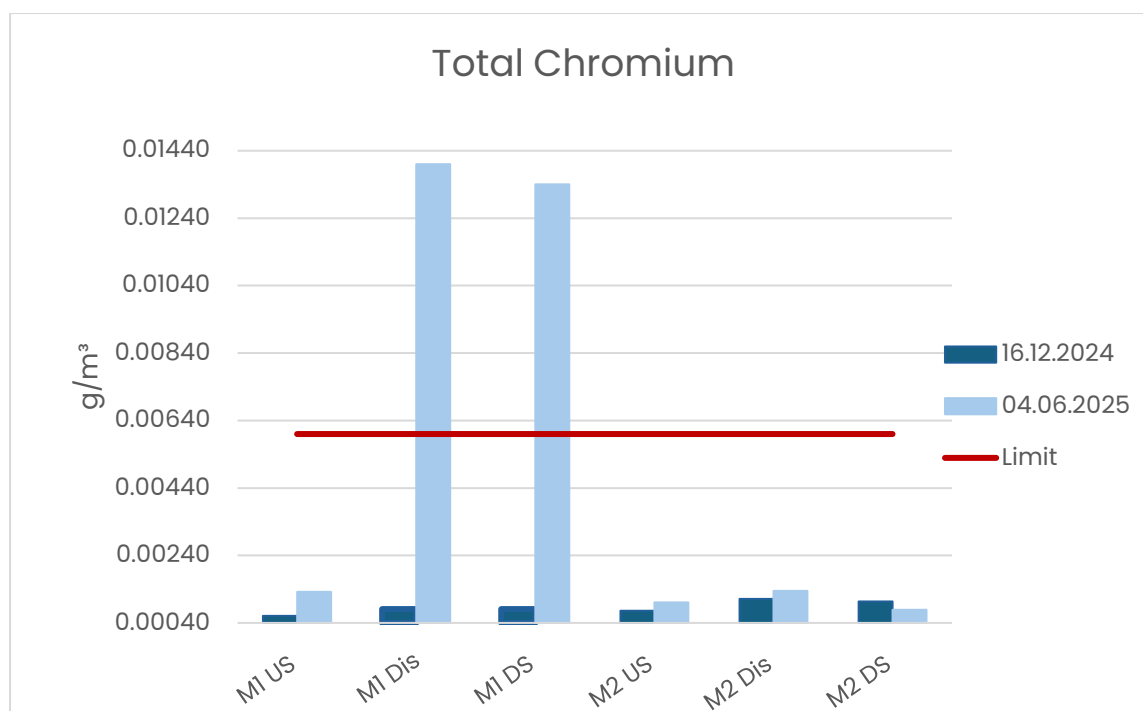


Figure 6. Chromium results

Results show that copper concentrations exceeded the trigger value at nearly all sampling locations. Apart from upstream site M1-US with a result of 0.00179 g/m³ during June 2025 sampling. The largest downstream exceedance occurred June 2025 at site M1-DS with a value of 0.027g/m³.

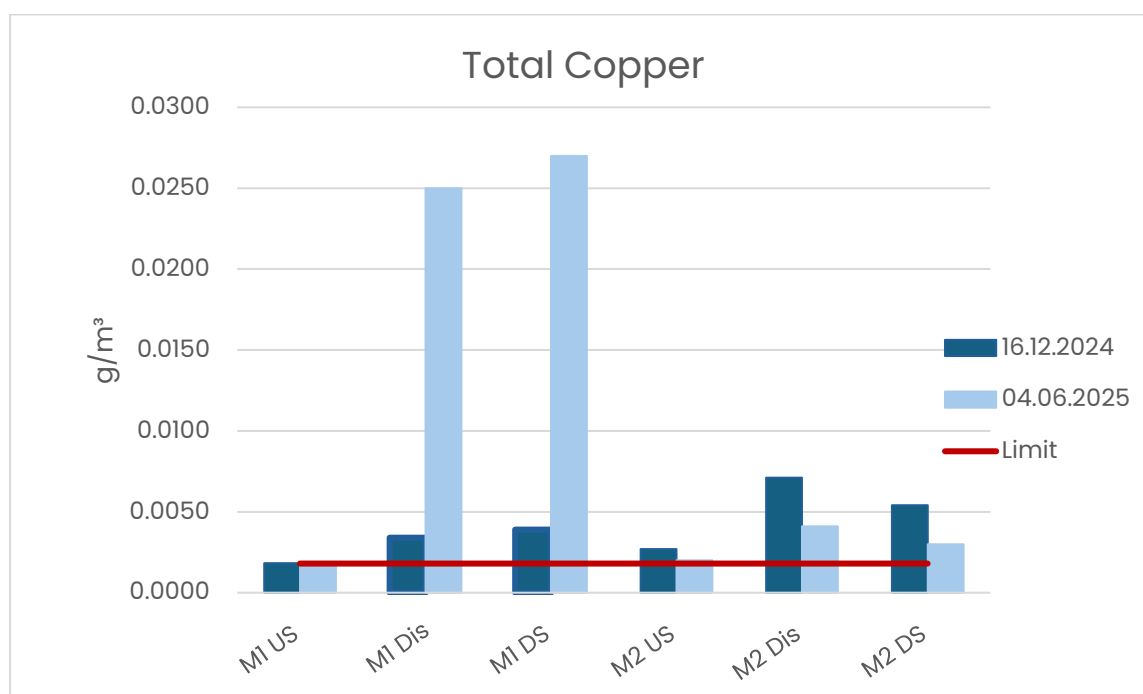


Figure 7. Copper results

Results show that total lead concentrations sampled in December 2024 and all M2 sampling sites remained below the trigger value. In contrast, measurements

in June 2025 showed exceedances above the trigger value at the M1 discharge point of 0.0182 g/m³ and downstream site of 0.027 g/m³.

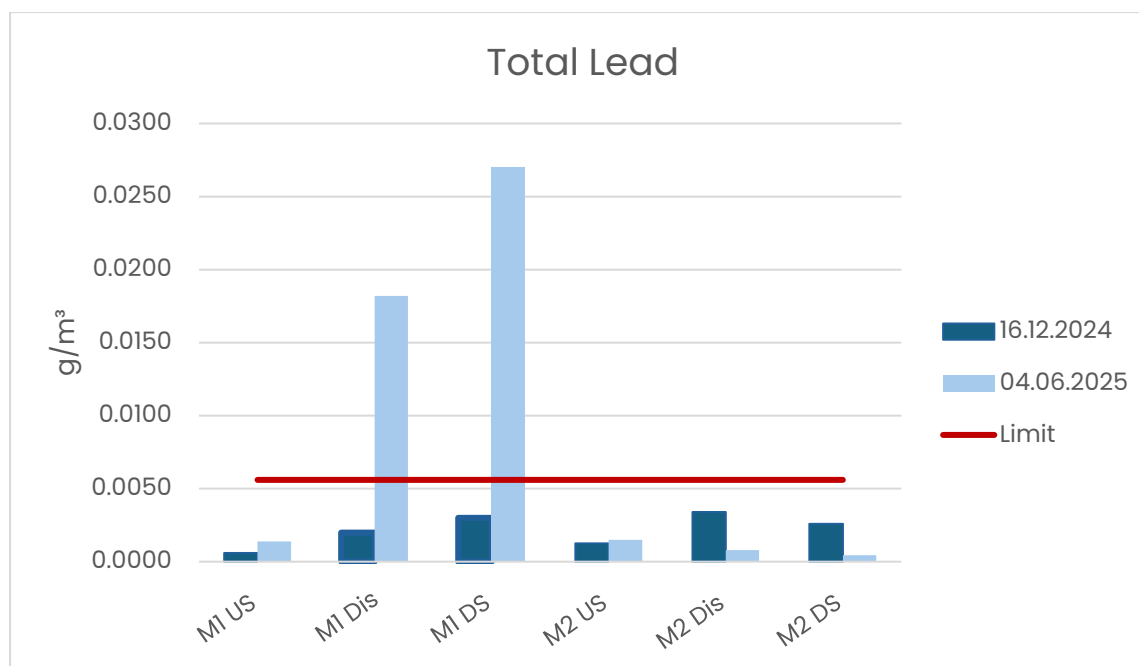


Figure 8. Lead results

Results show that all mercury concentrations remained below the trigger value of 0.0019 g/m³.

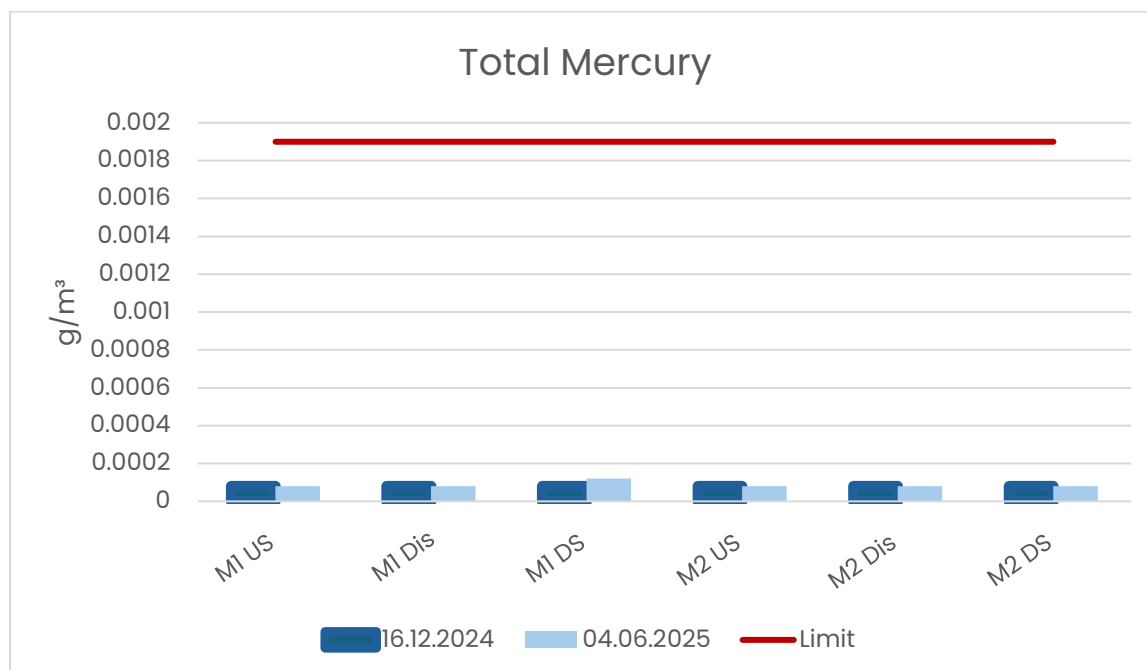


Figure 9a. Mercury results

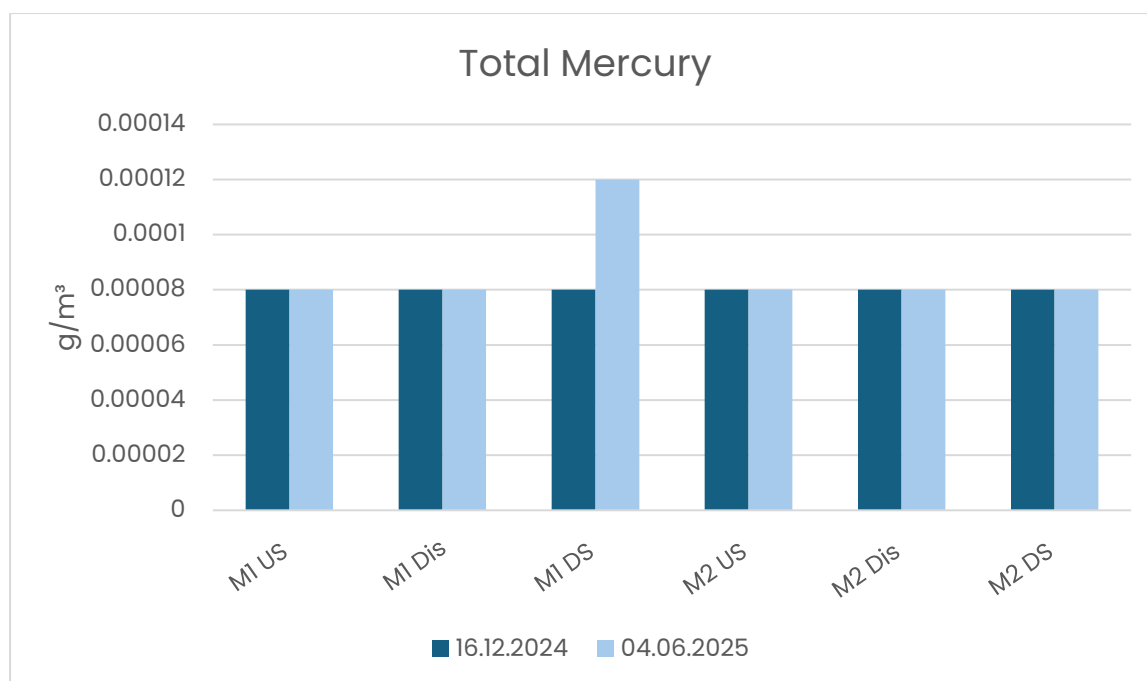


Figure 9b: Mercury results with trigger value (Limit) removed.

Results show that zinc concentrations exceeded the trigger value at nearly all sampling locations. Except the upstream sites during both 2024 and 2025 sampling periods. While zinc levels at M2-DS showed a decrease from 2024 to 2025, M1-DS recorded a substantial increase from the 2024 to 2025 period with a result of 0.31 g/m³ from 0.082g/m³.

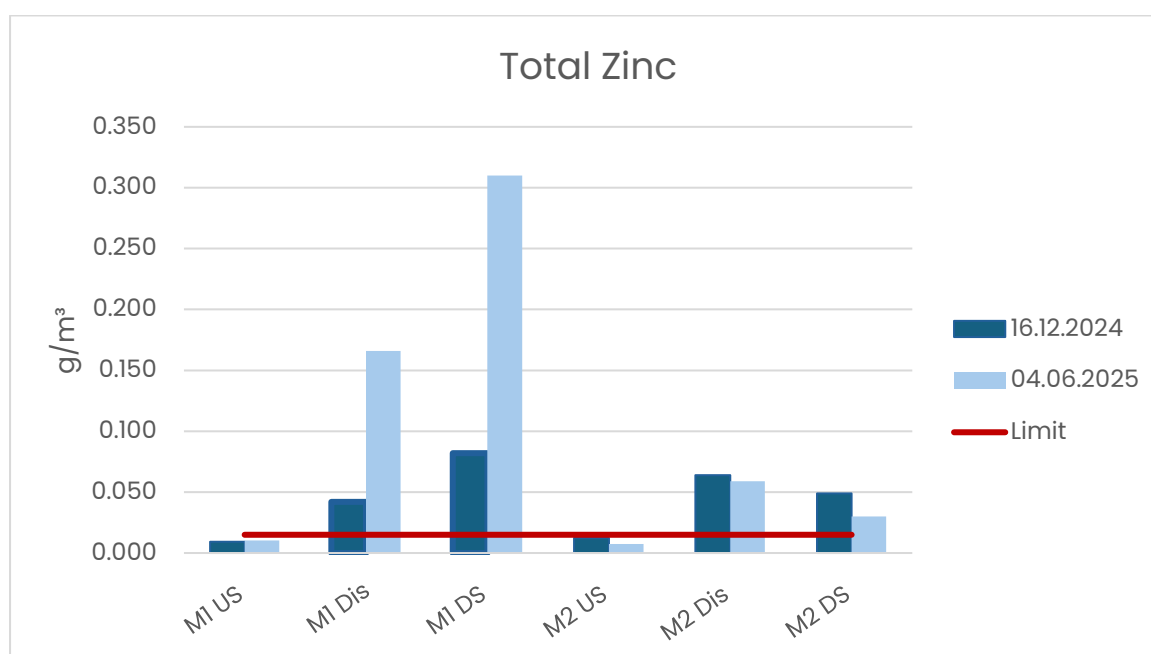


Figure 10. Zinc results

Hydrocarbons

Results show that all Total Petroleum Hydrocarbons (TPH) concentrations were within the guideline value of 15 g/m³.

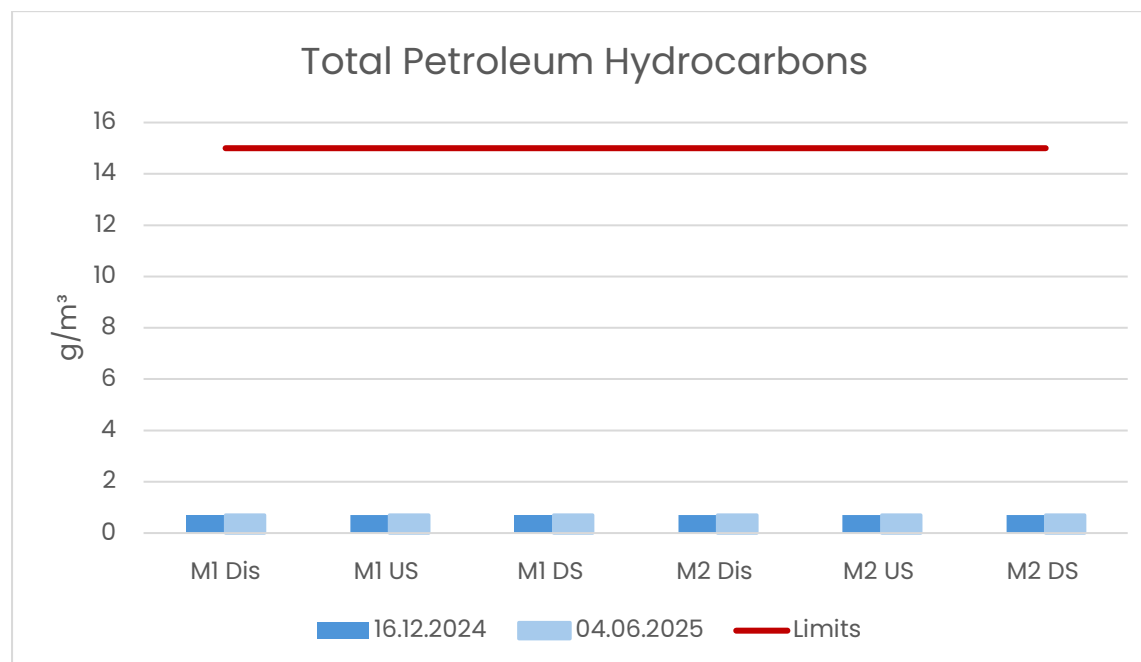


Figure 11. Total Petroleum Hydrocarbons (TPH)

Chemical Oxygen Demand

All Chemical Oxygen Demand (COD) concentrations were within the guideline value of 250 g/m³.

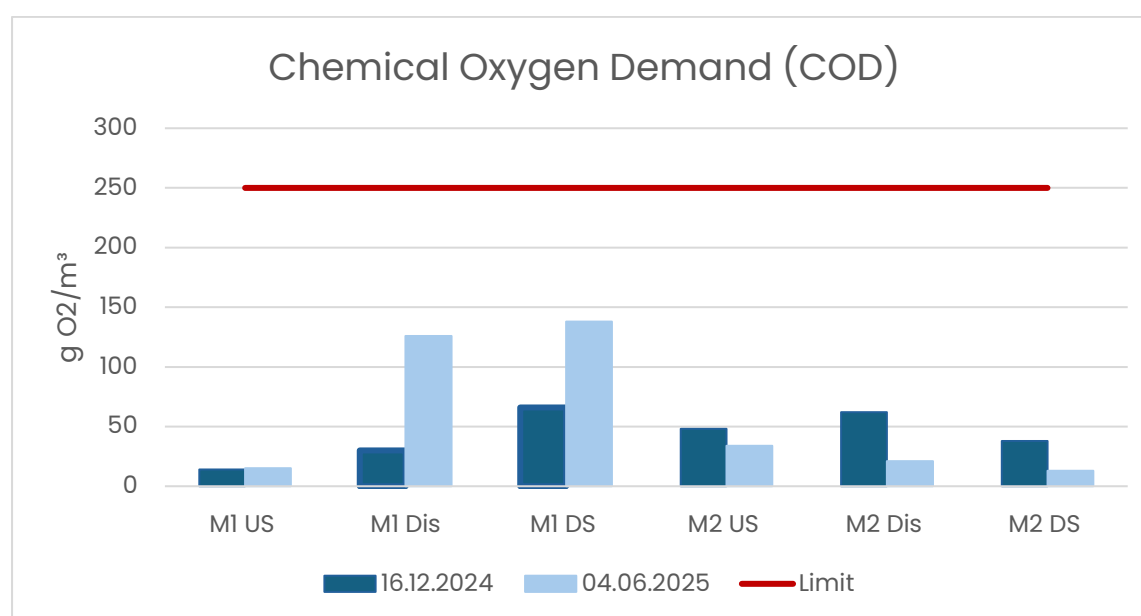


Figure 12. Chemical Oxygen Demand (COD) Results

3.1.2 Water quality field analysis and observations

Water quality field analysis results and observations are presented in this section.

Parameter	Trigger Value
Temperature	3°C difference from upstream
pH	Below 6 and above 9
Dissolved Oxygen	Below 5 g/m ³

Table 8. Trigger Values for pH, Temperature and Dissolved Oxygen in Freshwater Receiving Environments.

Date	M1 Temperature Upstream	M1 Trigger Value (+3°C)	M1 Temperature Discharge	M1 Temperature Downstream
16.12.2024	17.7	20.7	17.5	17.5
04.06.2025	12.3	15.3	12	12.6

Table 9. M1 Upstream Temperature, Upstream with increase by 3°C, Discharge and M1 Downstream temperature results.

Date	M2 Temperature Upstream	M2 Trigger Value (+3°C)	M2 Temperature Discharge	M2 Temperature Downstream
16.12.2024	15.7	18.7	19.4	19.2
04.06.2025	13.9	16.9	13.1	13.1

Table 10. M2 Upstream temperature, Upstream with increase by 3°C, Discharge and M2 Downstream temperature results.

All pH results were within the trigger value across all sampling occasions.

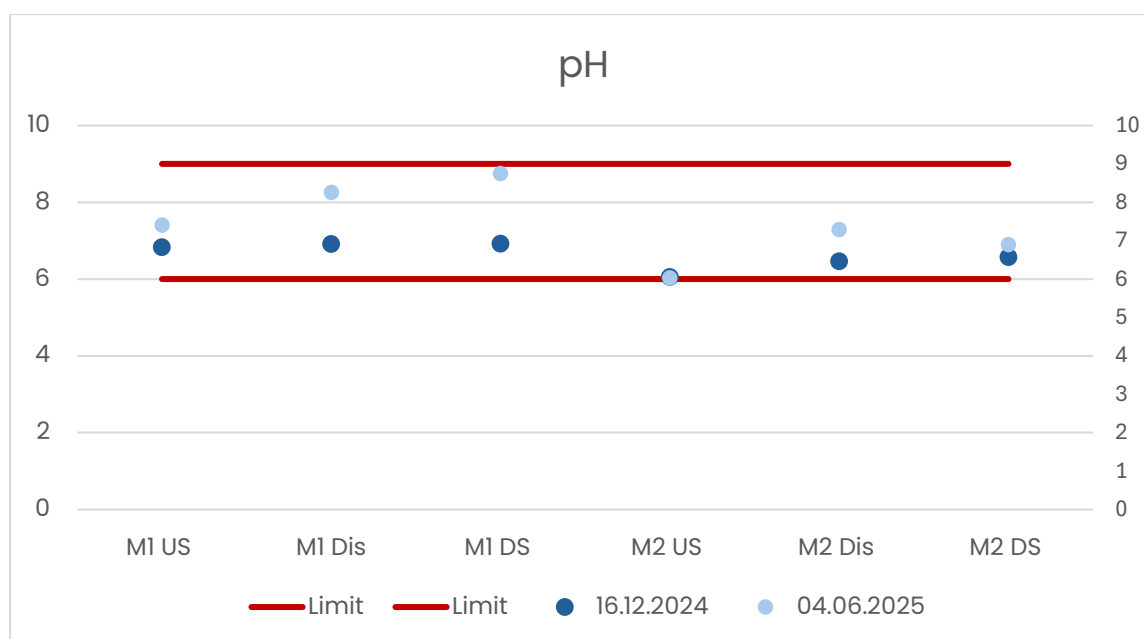


Figure 13. pH results

Dissolved oxygen results show that all sites complied with the trigger value of $<5\text{g/m}^3$, with concentrations increasing at both upstream and downstream locations over the 2024–2025 period.

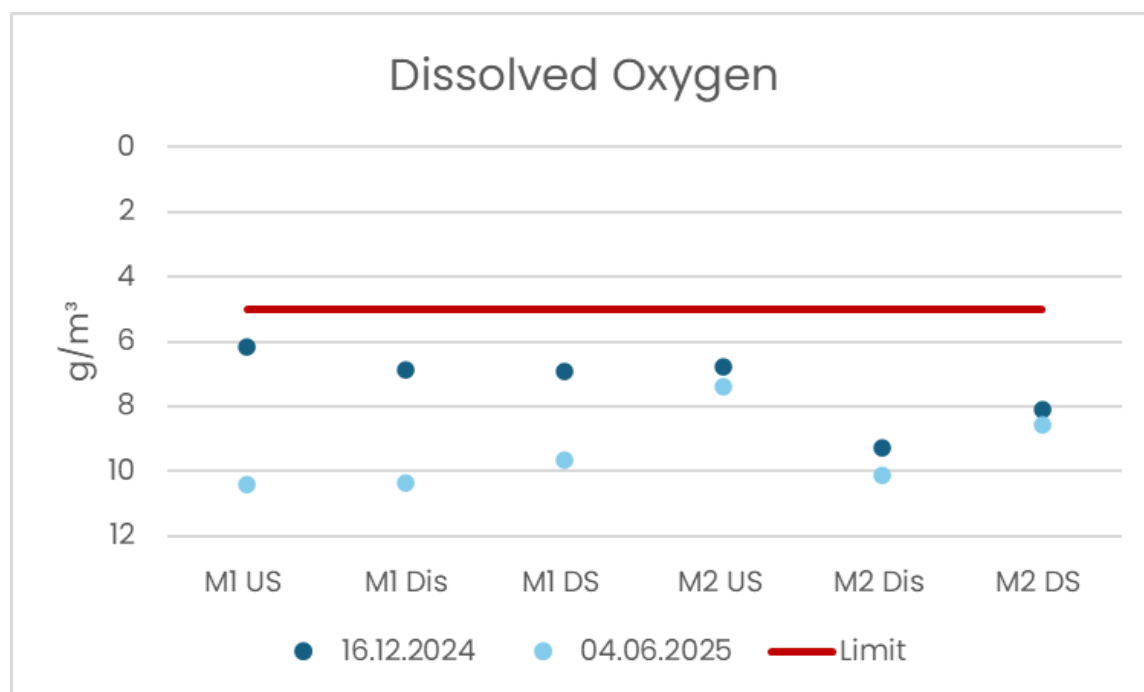


Figure 14. Dissolved Oxygen results

Tables 11 and 12 below show the field readings and visual observations conducted at each sampling location.

During the visual observations, most sites were slightly brown in colour and had medium to low flow. A very slight odour upstream and downstream was observed during the June 2025 sampling at both M1 and M2 locations.

Site	M1-US	M1-DIS	M1-DS	M2-US	M2-DIS	M2-DS
Temperature	17.7	17.5	17.5	15.7	19.4	19.2
Dissolved Oxygen (%)	64.8	72	72.4	68.2	101.1	87.7
Dissolved Oxygen (g/m ³)	6.18	6.88	6.92	6.78	9.3	8.1
pH	6.83	6.91	6.92	6.05	6.46	6.57
Salinity (0/00)	0.01	6.01	0.01	0.04	0.01	0.01
Conductivity (us/cm)	20.6	26.3	21.1	67.8	28.3	31
Specific Cond'tivity (us/cm)	24	30.7	24.6	82.4	31.7	34.8
Visual Check: Colour, Clarity, Odour	Clear, Nil odour	Very slight brown colour, Nil odour	Very slight brown colour, Nil odour	Very slight brown colour, Nil odour	Very slight brown colour, Nil odour	Slight brown colour, some suspended material, Nil odour
NOTES:	Minden					

Table 11. Results from sampling for Temperature, PH, Dissolved Oxygen, Salinity, Conductivity and a visual inspection on 16/12/2024.

Site	M1-US	M1-DIS	M1-DS	M2-US	M2-DIS	M2-DS
Temperature	12.3	12	12.6	13.9	13.1	13.1
Dissolved Oxygen (%)	97.4	96.3	91.1	71.8	96.4	81.6
Dissolved Oxygen (g/m ³)	10.41	10.37	9.68	7.41	10.14	8.57
pH	7.41	8.26	8.75	6.03	7.29	6.9
Salinity (0/00)	0.05	0.04	0.05	0.04	0.04	0.04
Conductivity (us/cm)	77.9	63.3	87.8	66.6	54.3	62.4
specific Cond'tivity (us/cm)	102.8	84.2	115.1	84.6	76.8	80.7
Visual Check: Colour, Clarity, Odour	Very slight brown colour, very slight odour	Brown colour, very slight odour	Brown colour, very slight odour	Slight brown colour, very slight odour	Very slight brown colour, very slight odour	Very slight brown colour, very slight odour
NOTES:	Minden					

Table 12. Results from sampling for Temperature, pH, Dissolved Oxygen, Salinity, Conductivity and a visual inspection on 04/06/2025

3.2 Te Puna Catchment

3.2.1 Water quality laboratory analysis

An overview of the results of water quality monitoring for Te Puna West catchment is presented below. Where applicable, the dark red line represents the consented trigger value. For some parameters, two graphs are presented. One includes the trigger value line and another without it, to better illustrate the results where appropriate.

For the purpose of analysis, results below the lab accredited default detection limit were conservatively graphed to be equal to the default detection limit (e.g. <0.01 mg/L is reports as 0.01 mg/L).

Trigger values only apply to the receiving environment, after reasonable mixing. However, these trigger values have been applied to all graphs to assess whether background samples also exceeded these levels.

There are three sampling locations within Te Puna catchment, categorized as follows:

- **Background Sites:** (TBG1–3): Upstream site, used to provide point of reference for the receiving environment results.
- **Discharge Points:** (TWQ1–3 Discharge) – Point of discharge for each TWQ site.
- **Receiving Environment Sites:** (TWQ1–3): Downstream water quality monitoring sites.

As previously mentioned, due to challenges in aligning the timing of rainfall events with the high tide requirement for Te Puna catchment, no sampling was able to be undertaken at locations TWQ Discharge and TWQ2 receiving environment during the 30 November 2024 sampling event.

Microbiological

Enterococci results from 2025 showed that concentrations at receiving environment sites TWQ1 and TWQ3 were below the trigger value, while TWQ2 exceeded the trigger value with a concentration of 6,800cfu/100 mL. In contrast, during the 2024 sampling period, all receiving environment sites

exceeded the trigger value of 900 cfu/100 mL.

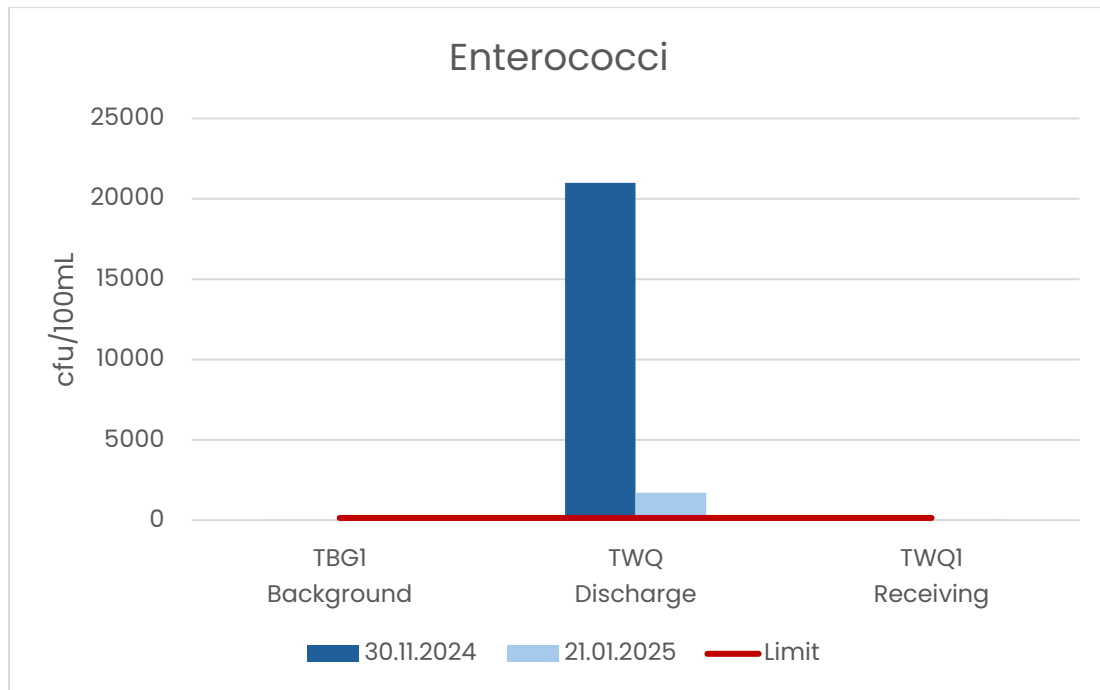


Figure 15a. T1 Enterococci results

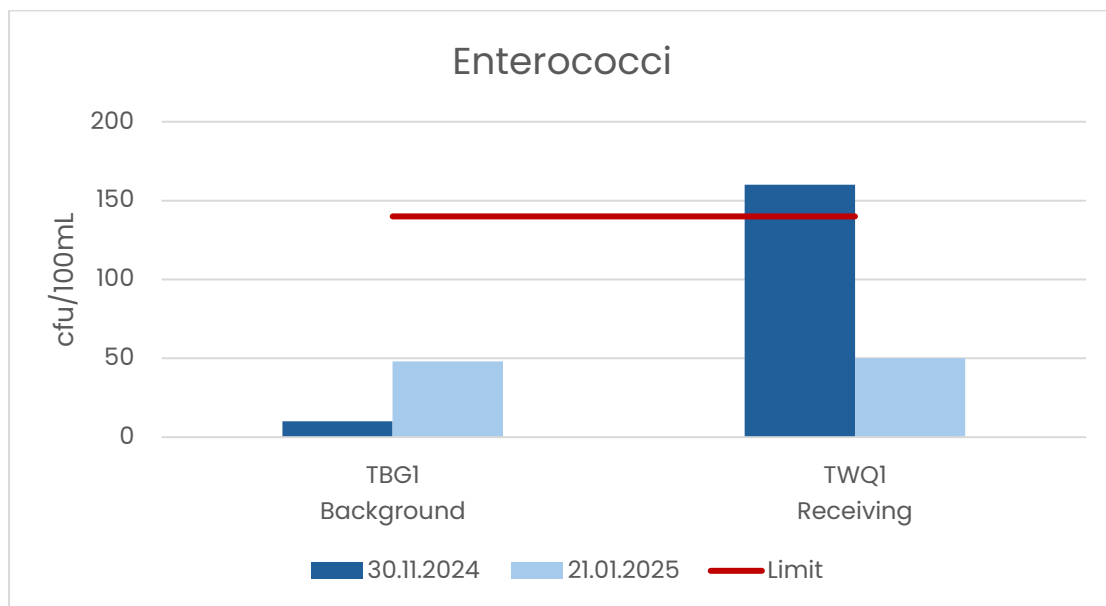


Figure 15b. T1 Enterococci results with (TWQ1 Discharge) removed.

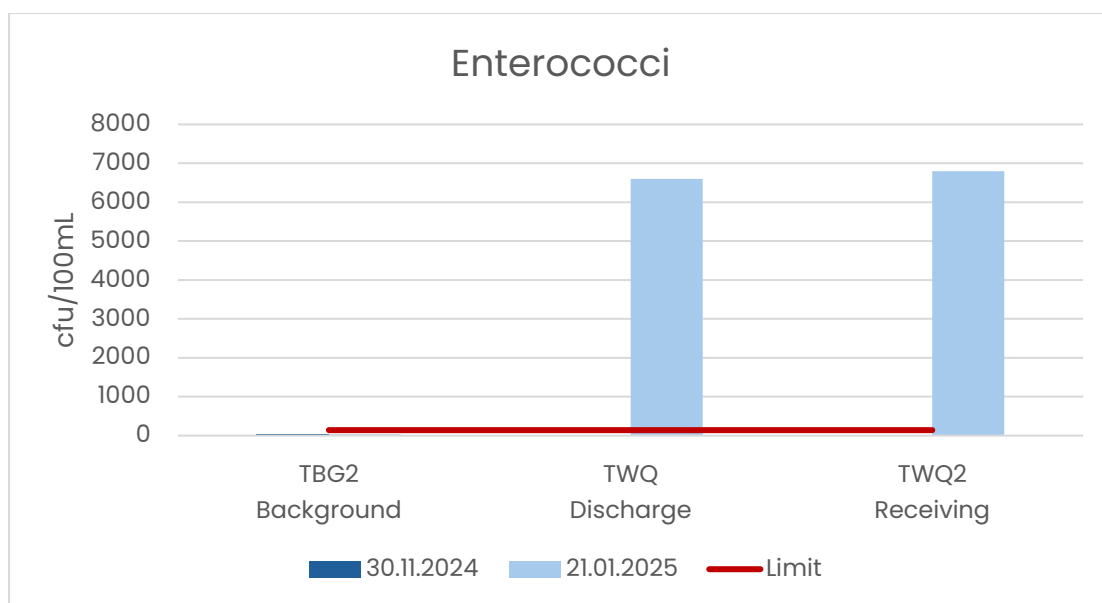


Figure 16. T2 Enterococci results

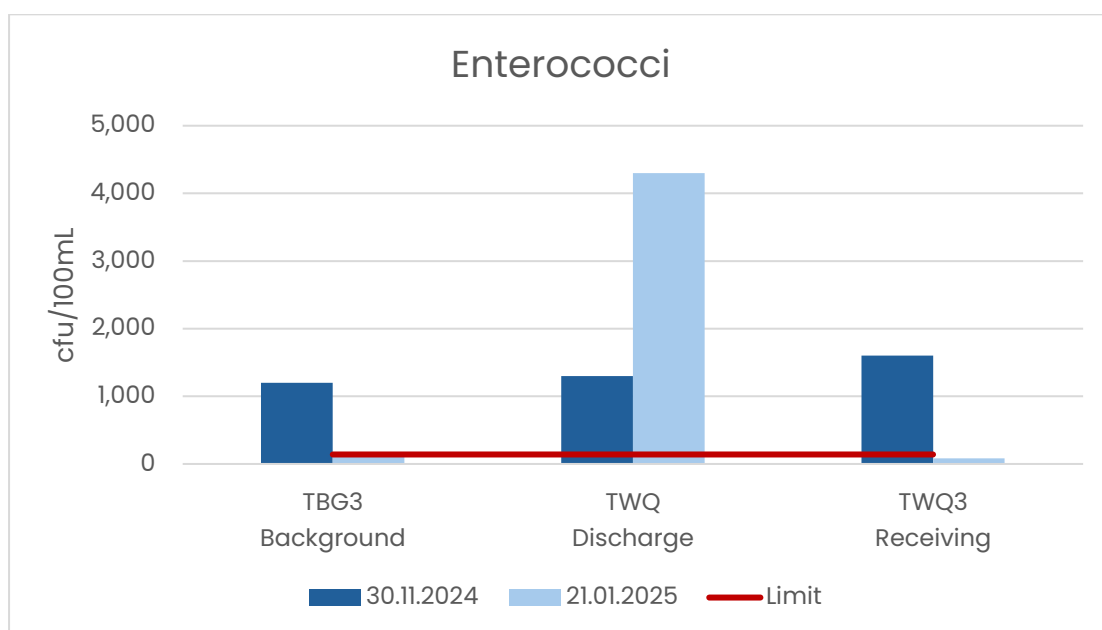


Figure 17. T3 Enterococci results

Water Clarity

Parameter	Trigger Value
Turbidity NTU	>20% increase in turbidity from the mean of the three background sites
Total Suspended Solids (TSS) g/m ³	>20% increase in TSS from the mean of the three background sites

Table 13. Trigger Values, Freshwater Receiving Environments for Turbidity and Total Suspended Solids

Date	TBG1 Turbidity	TBG2 Turbidity	TBG3 Turbidity	Mean	Trigger Value 20% increase
30.11.2024	2.8	4.9	7.8	5.2	6.2
21.01.2025	3.2	13.5	5.1	7.3	8.72

Table 14: TBG background sites. Turbidity and Trigger Value 20% increase from mean of the three background sites.

Date	Trigger Value 20% increase	TWQ1 Turbidity	TWQ2 Turbidity	TWQ3 Turbidity
30.11.2024	6.2	7		56
21.01.2025	8.72	10	12.9	5.2

Table 15: Turbidity Trigger Value 20% increase from mean of the three background sites & TWQ Receiving Environments.

Table 14 presents the turbidity calculations required to present the >20% increase in turbidity from the mean of the three background sites, which is analysed against the receiving environment present in Table 15.

The results show that turbidity over all receiving environments were above the 20% trigger value of 6.2 g/m³ in 2024, while TWQ3 receiving environment was below the trigger value at 8.72 g/m³ in 2025.

Date	TBG1 TSS	TBG2 TSS	TBG3 TSS	Mean	Trigger Value 20% increase
30.11.2024	13	25	23	20	24
21.01.2025	10	43	13	22	26

Table 16: TBG background sites Total Suspended Solids (TSS) and Trigger Value 20% increase from mean of the three background sites.

Date	Trigger Value 20% increase	TWQ1 TSS	TWQ2 TSS	TWQ3 TSS
30.11.2024	24.4	41		127
21.01.2025	26.4	23	22	14

Table 17: Turbidity Trigger Value 20% increase from mean of the three background sites & TWQ Receiving Environments.

Table 16 presents the total suspended solids calculations required to present the >20% increase in turbidity from the mean of the three background sites, which is analysed against the receiving environment present in Table 17.

In general, results show that the Total Suspended Solids (TSS) concentrations exceed the trigger value of 24.4g/m³ during 2024 at all receiving environments, while in 2025 all were below the trigger value of 26.4g/m³.

Electrical Conductivity

Results indicate that Electrical conductivity was similar at background and receiving sites, with a slight decrease from November 2024 to January 2025. In 2025, conductivity at all discharge sites was lower than at background and receiving sites. No trigger value exists for conductivity.

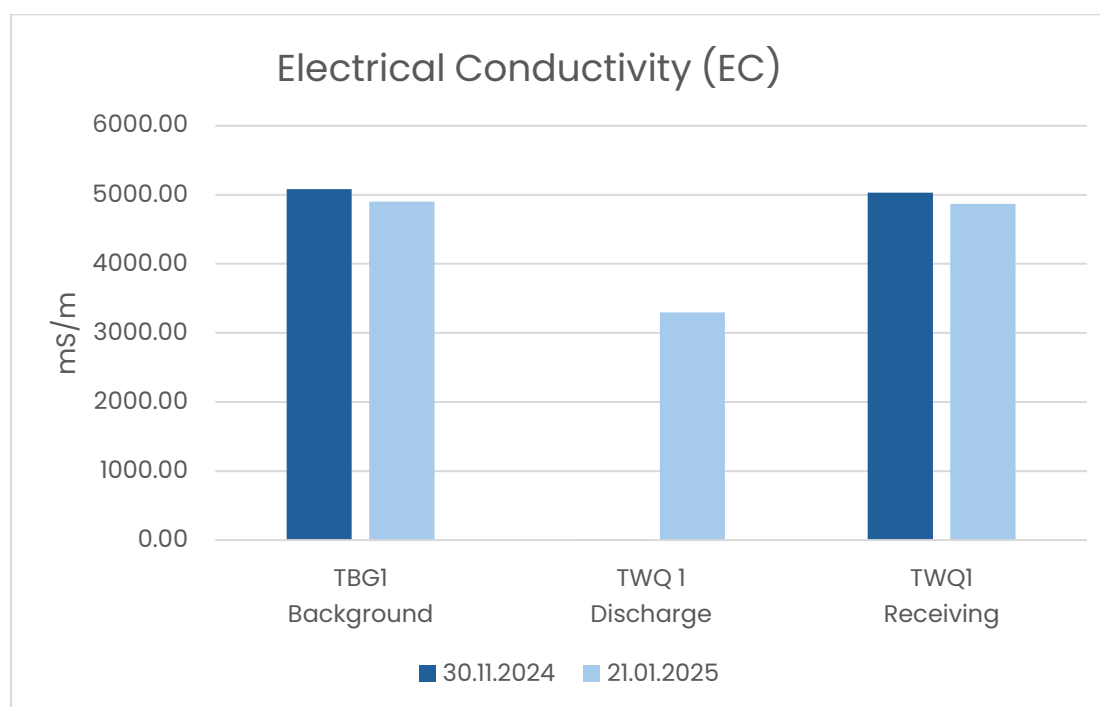


Figure 18. T1 Electrical Conductivity (EC) results

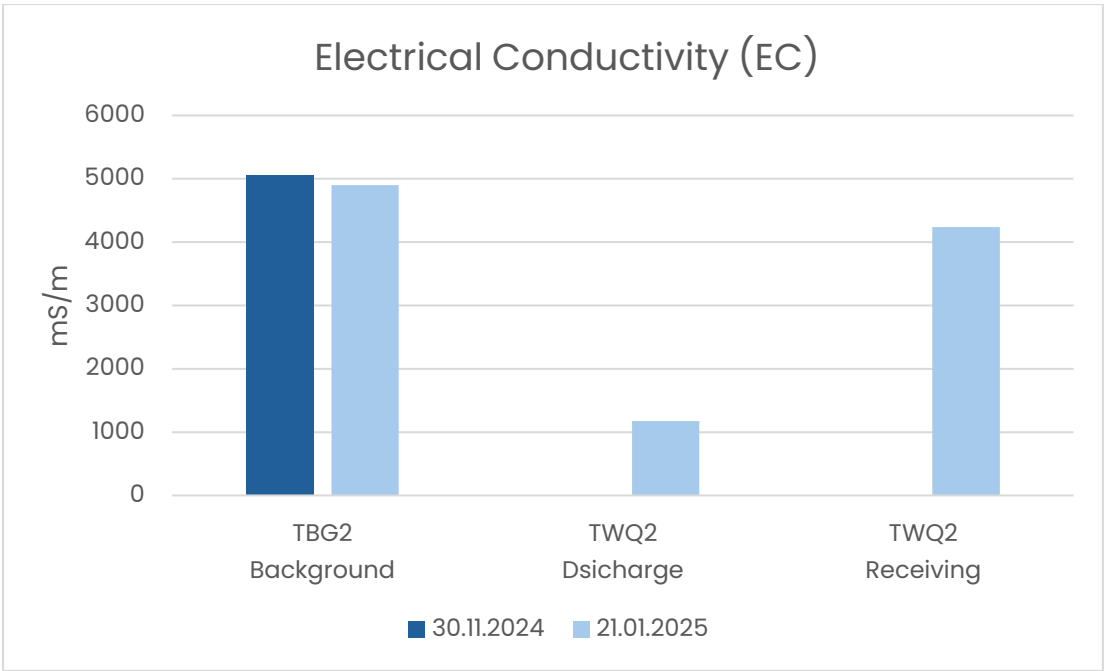


Figure 19. T2 Electrical Conductivity (EC) results

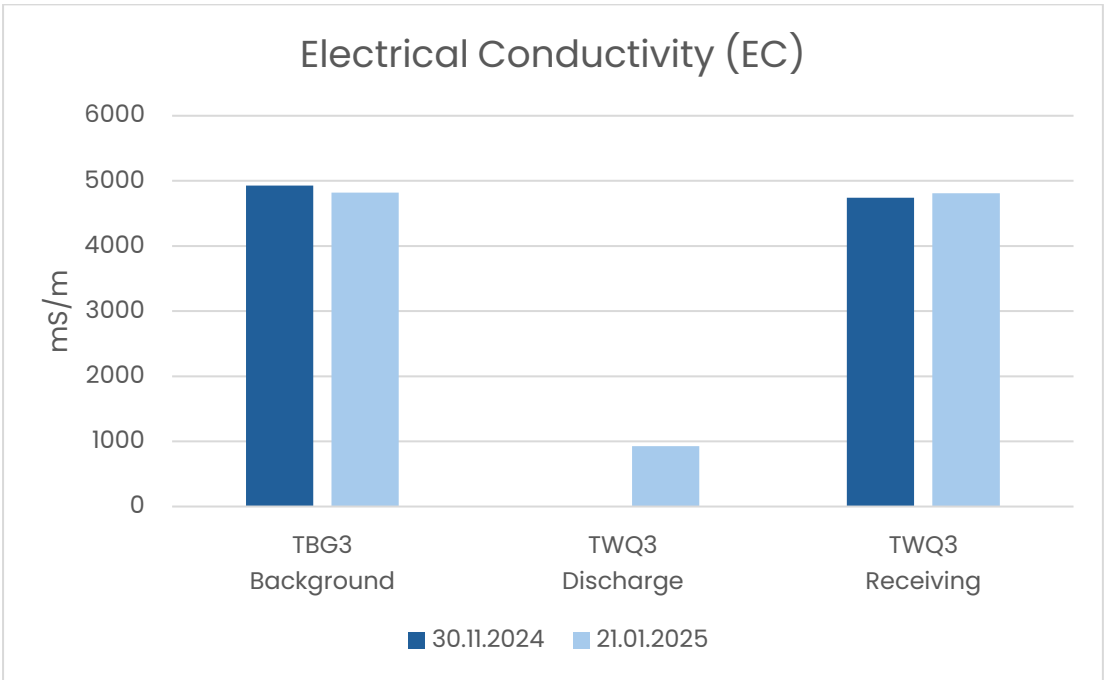


Figure 20. T3 Electrical Conductivity (EC) results

Nutrients

Results show that all Ammoniacal-N concentrations were below the trigger value.

Parameter	Trigger Value
Total Ammoniacal-N	1.2

Table 18. Trigger Values, Freshwater Receiving Environments for Ammoniacal-N

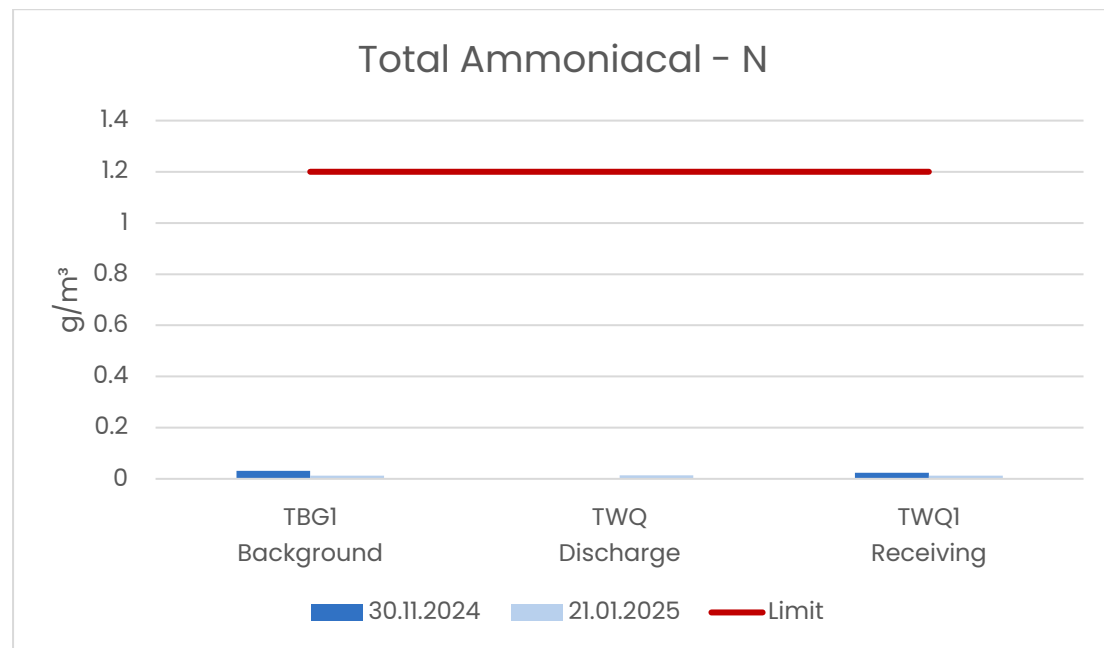


Figure 21a. T1 Total Ammoniacal-N results

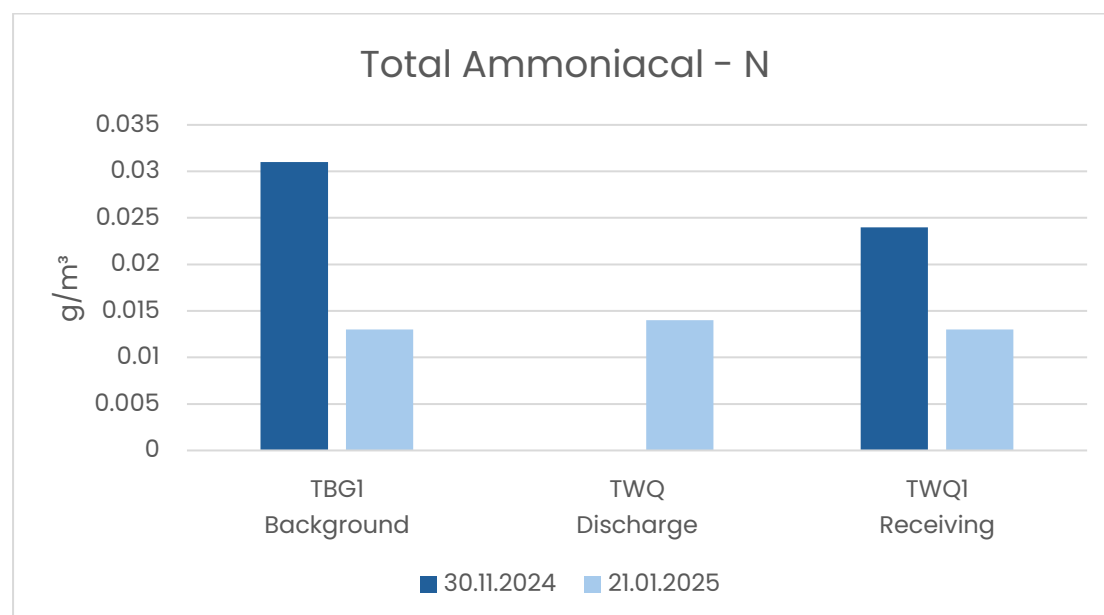


Figure 21b. T1 Total Ammoniacal-N results with trigger value (limit) removed.

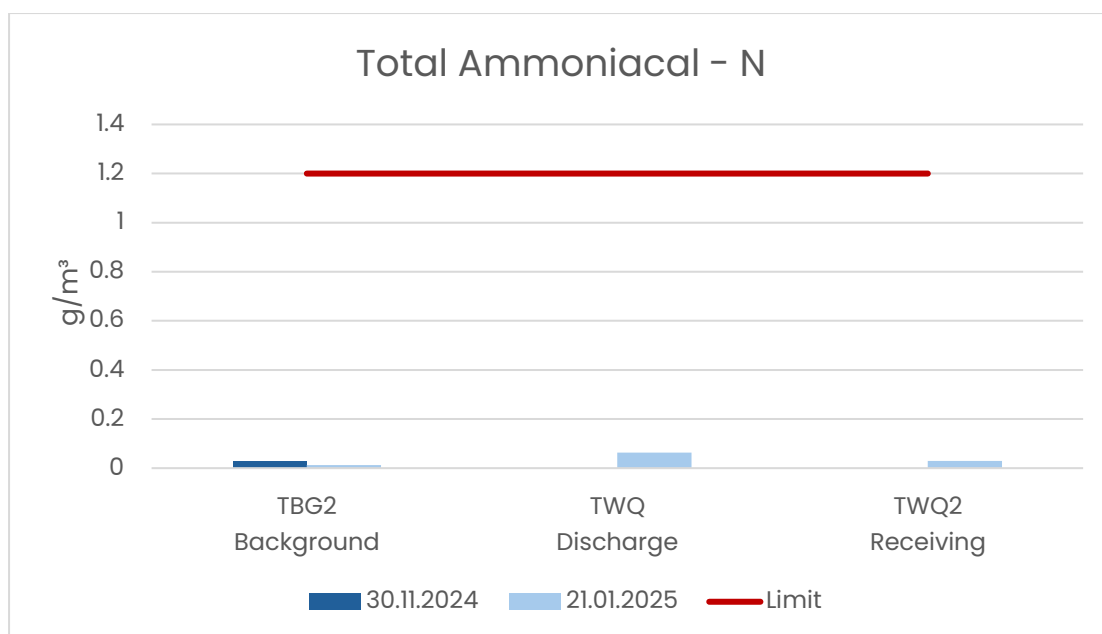


Figure 22a. T2 Total Ammoniacal-N results

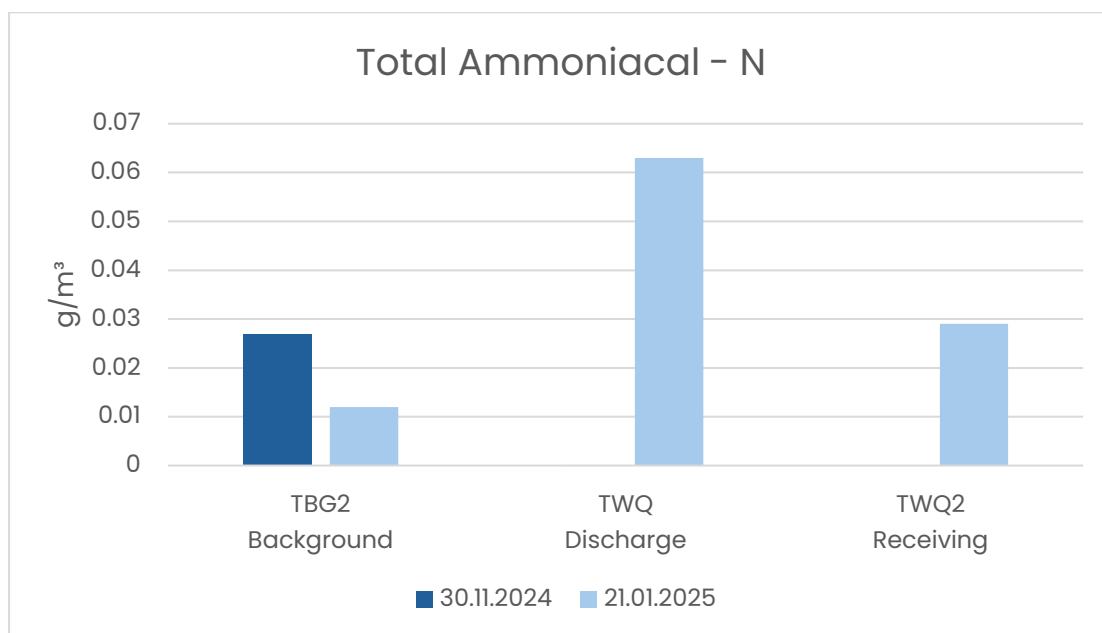


Figure 22b. T2 Total Ammoniacal-N results with trigger value (limit) removed.

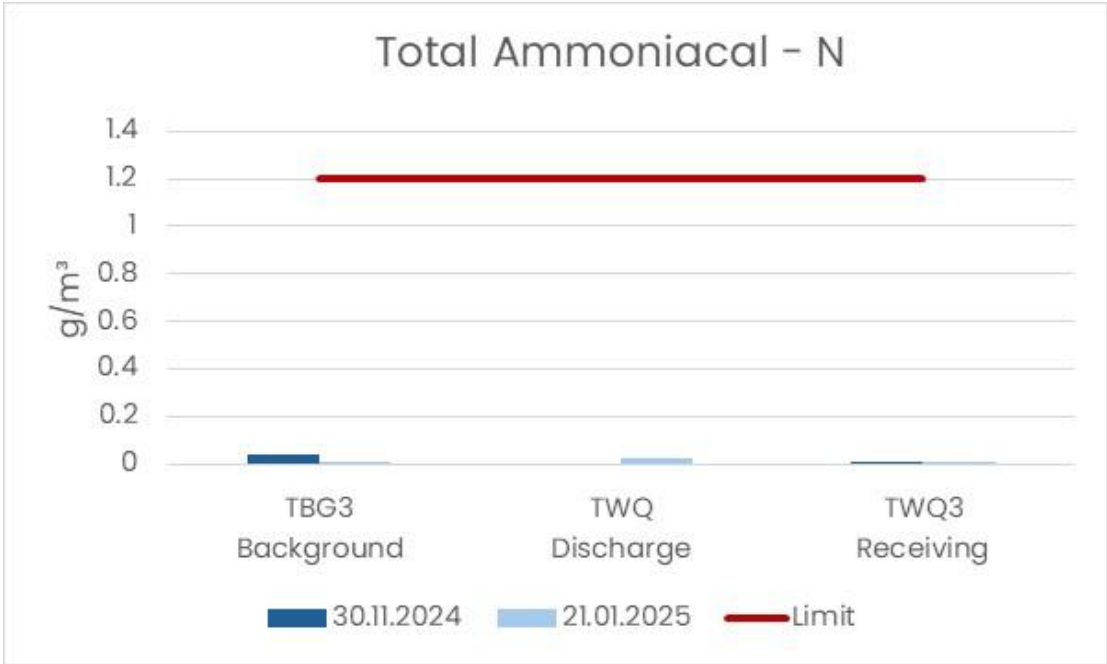


Figure 23a. T3 Total Ammoniacal-N results

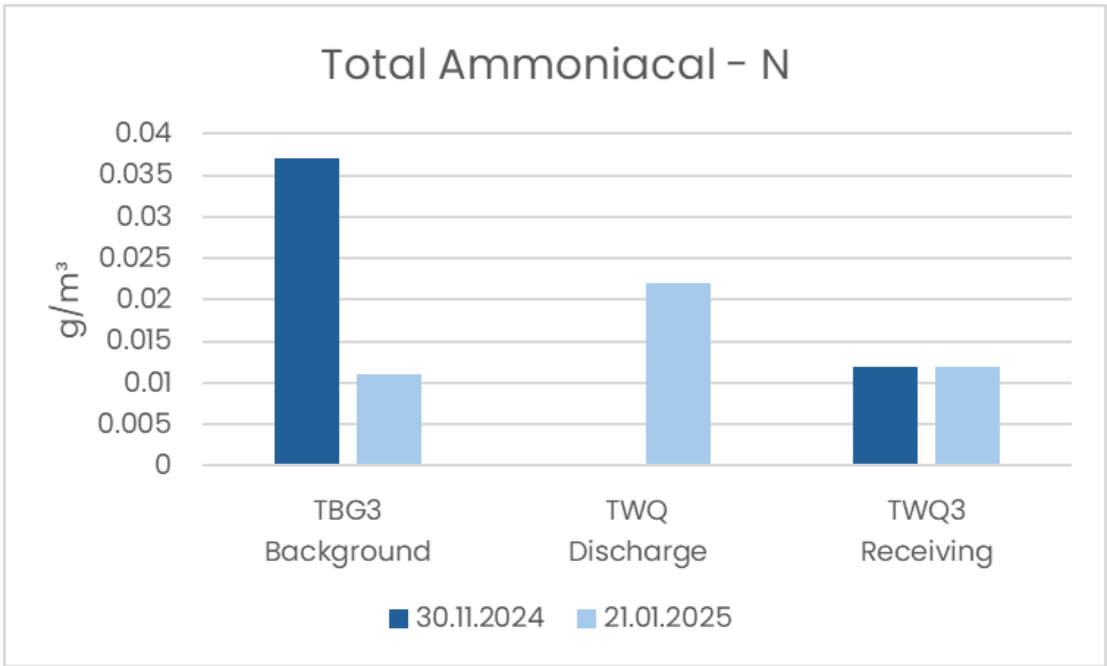


Figure 23b. T3 Total Ammoniacal-N results with trigger value (limit) removed.

Metals

Parameter	g/m ³
Cadmium	0.014
Chromium	0.02
Copper	0.003
Lead	0.0066
Mercury	0.0007
Zinc	0.023

Table 19. Trigger Values for toxicants in Freshwater Receiving Environments.

- Results show that Cadmium concentrations were below the trigger value on all sampling occasions.

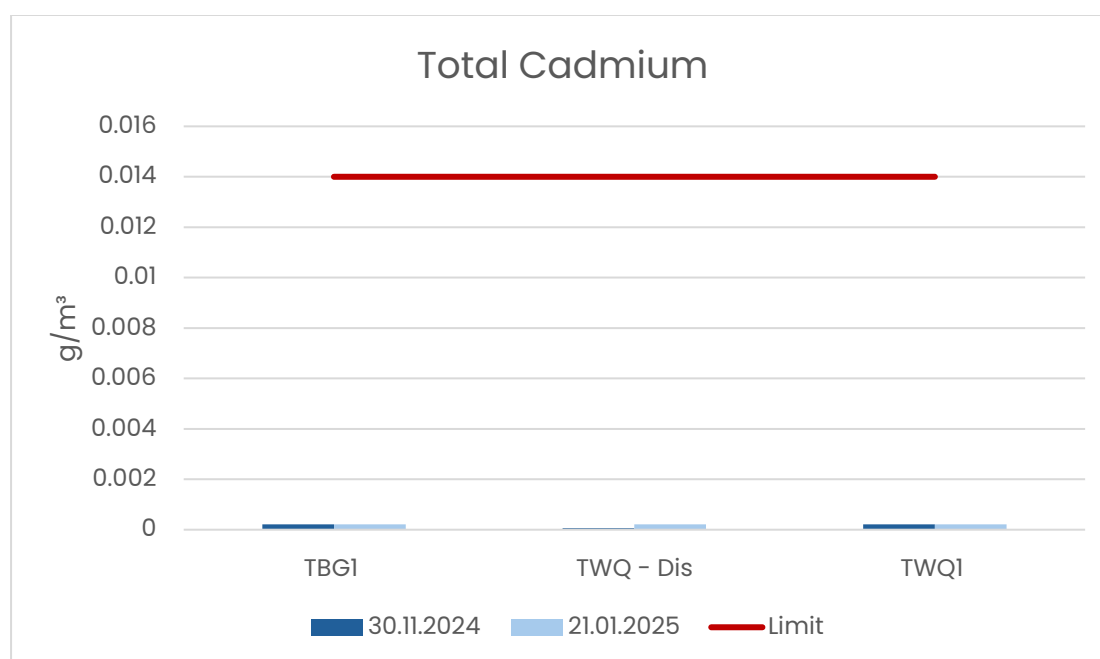


Figure 24a. T1 Cadmium results

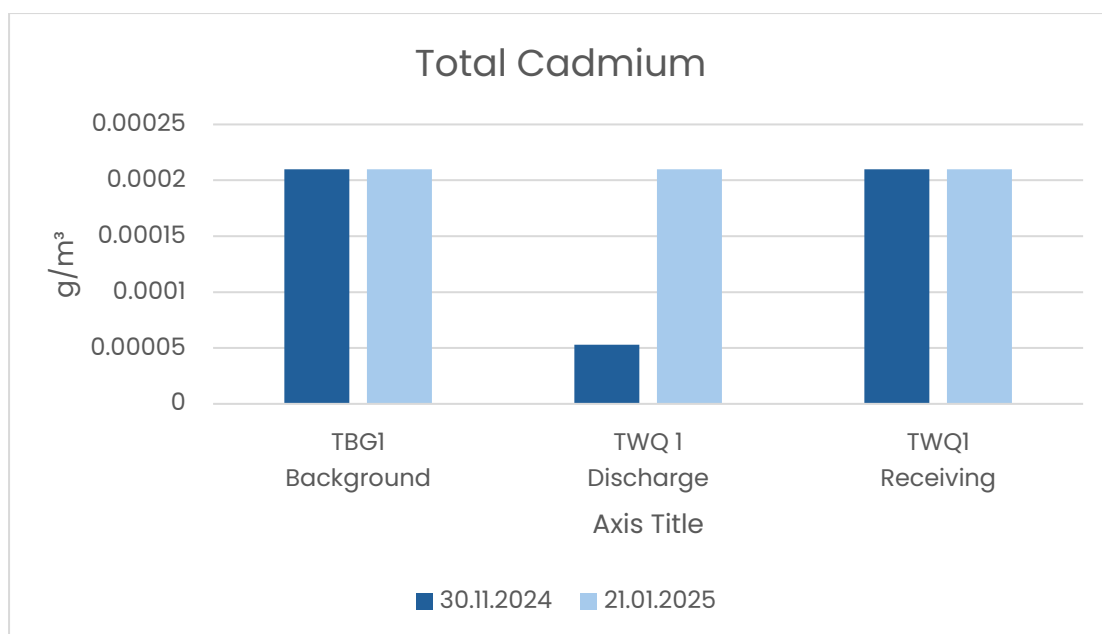


Figure 24b. T1 Cadmium results with trigger value (Limit) removed

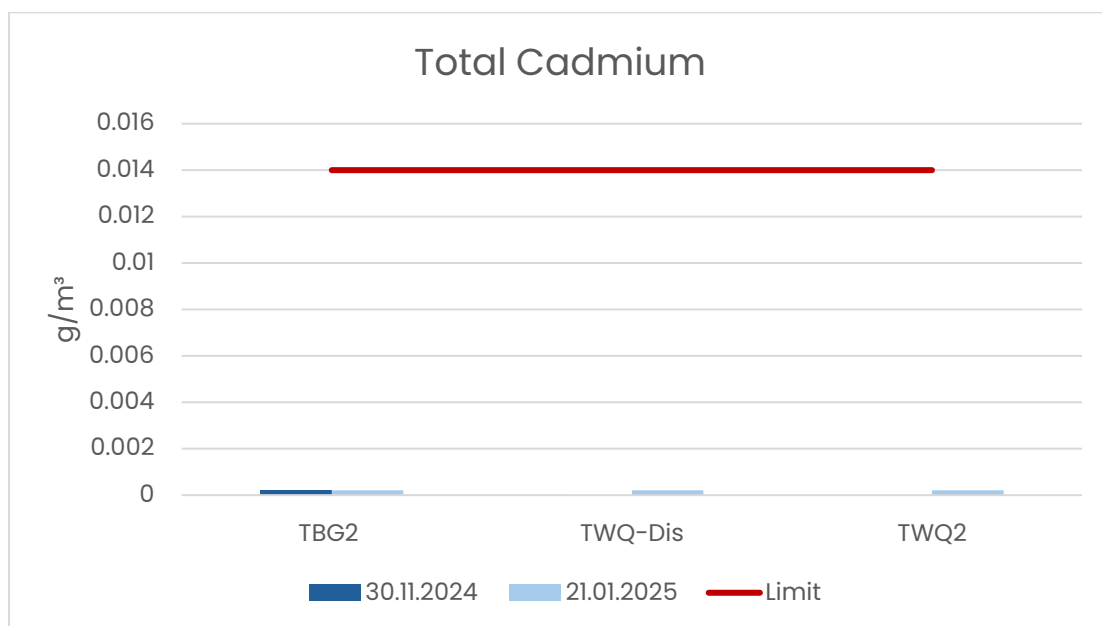


Figure 25a. T2 Cadmium results

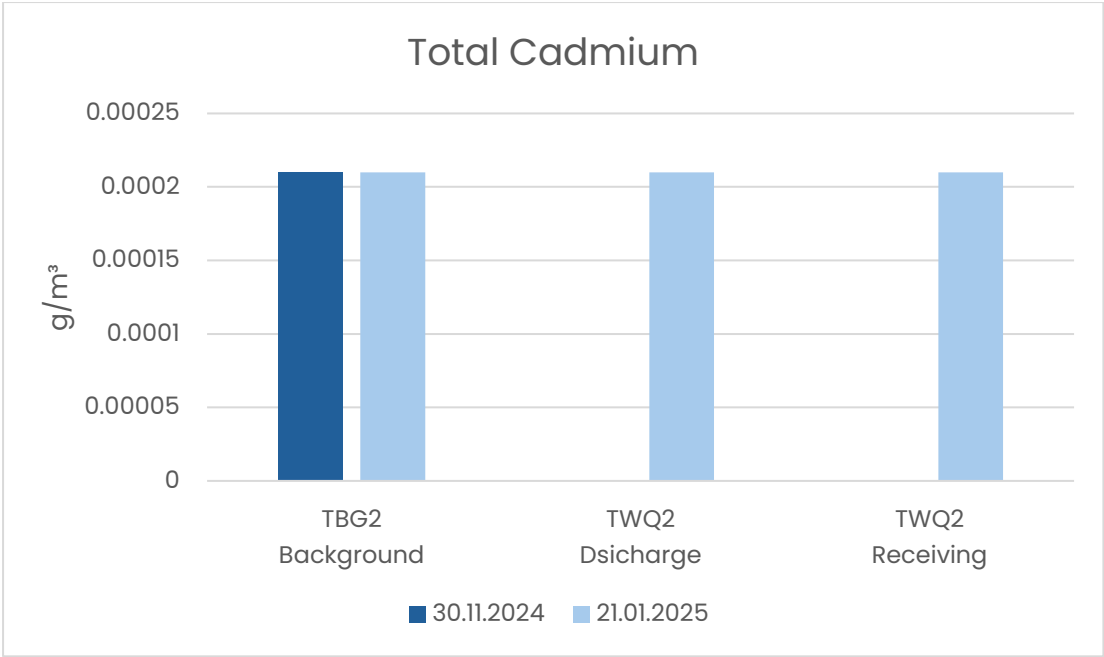


Figure 25b. T2 Cadmium results with trigger value (Limit) removed

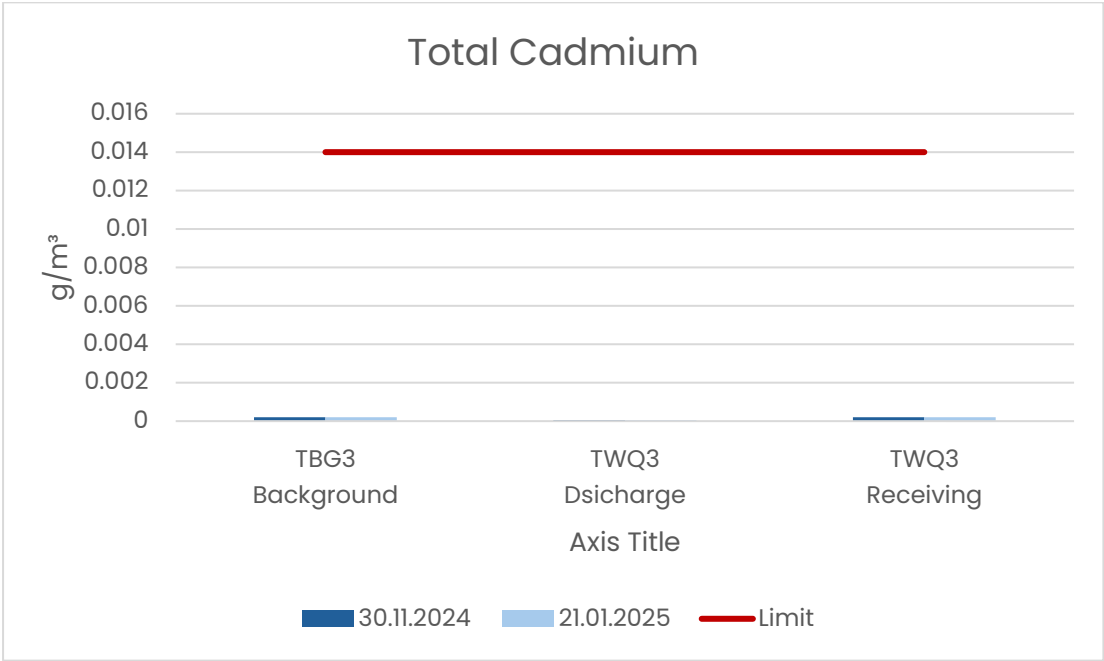


Figure 26a. T3 Cadmium results

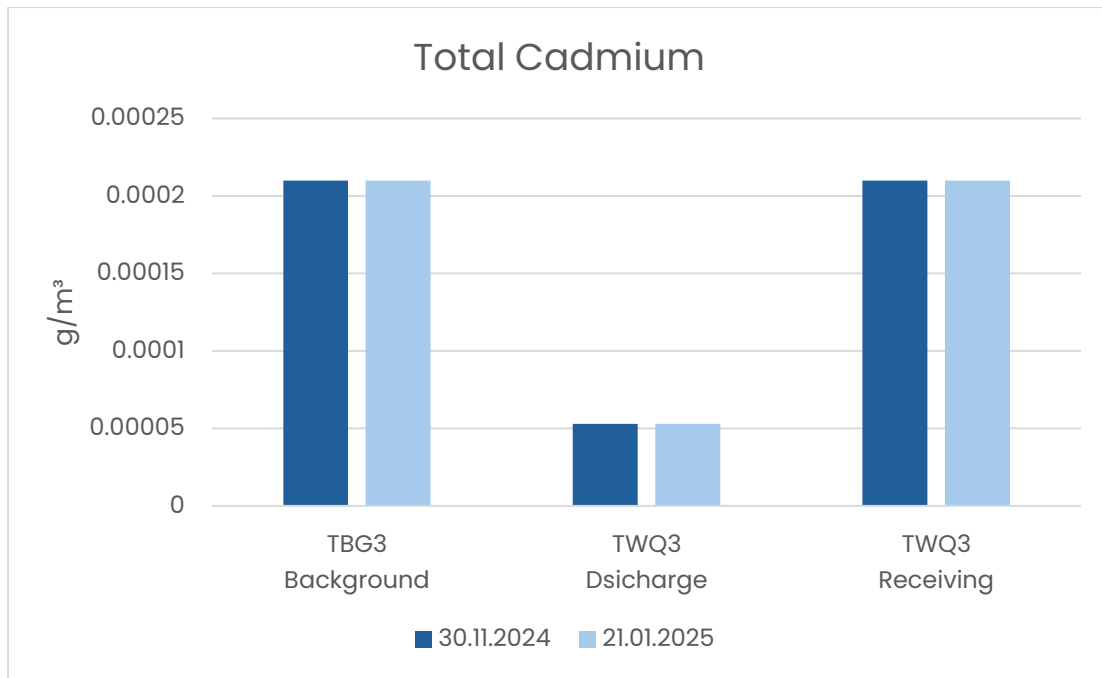


Figure 26b. T3 Cadmium results with trigger value (Limit) removed

Results show that Chromium concentrations were below the trigger value on all sampling occasions.

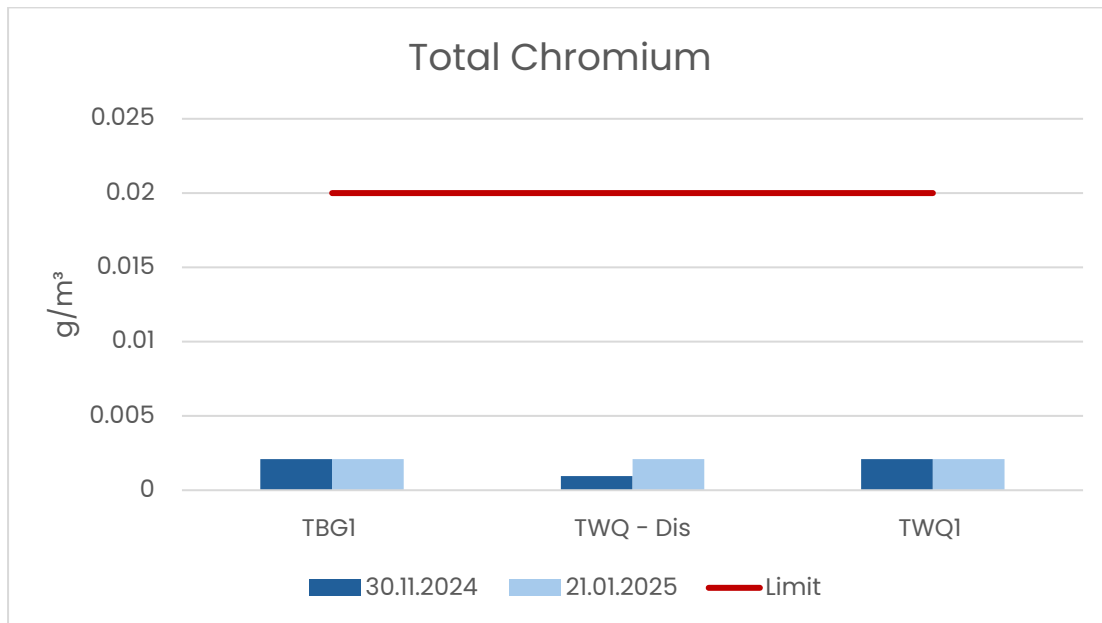


Figure 27a: T1 Chromium results

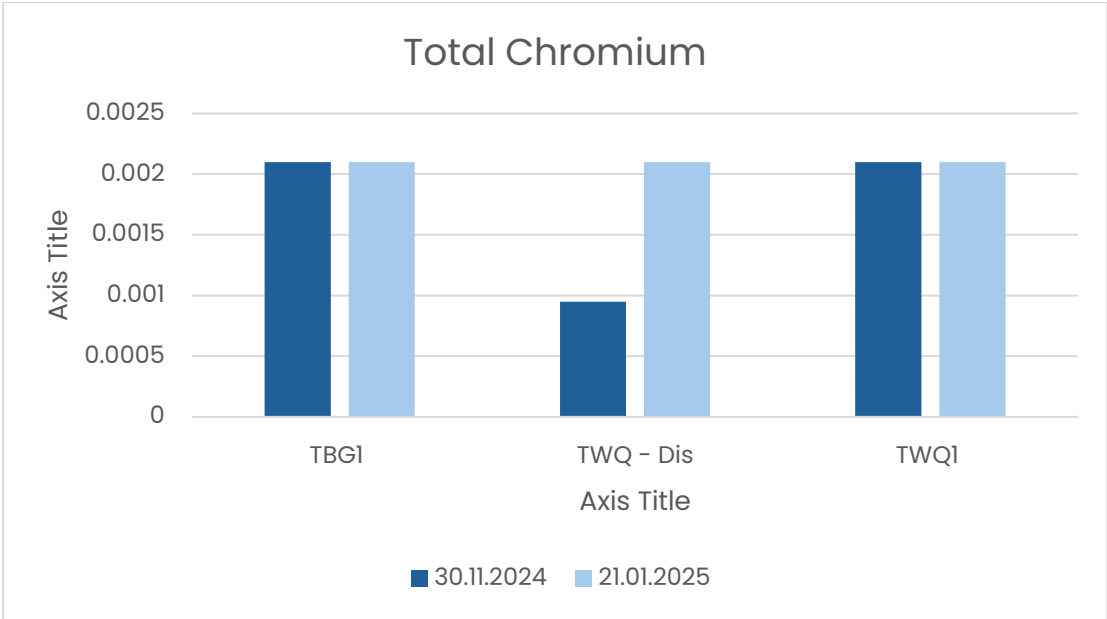


Figure 27b. T1 Chromium results with trigger value (Limit) removed

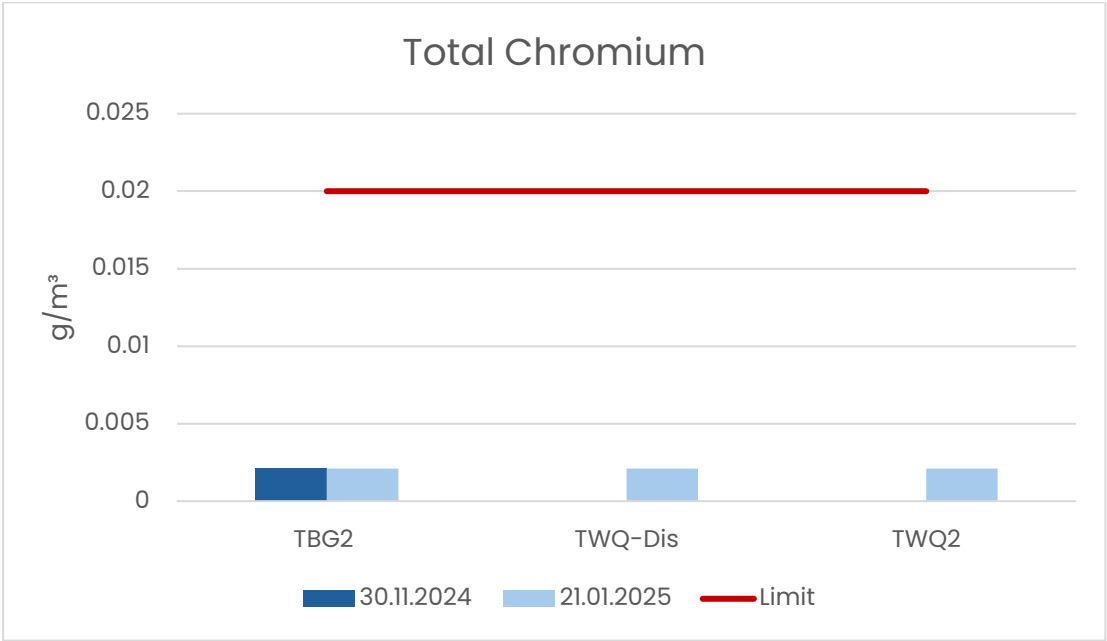


Figure 28a: T2 Chromium results

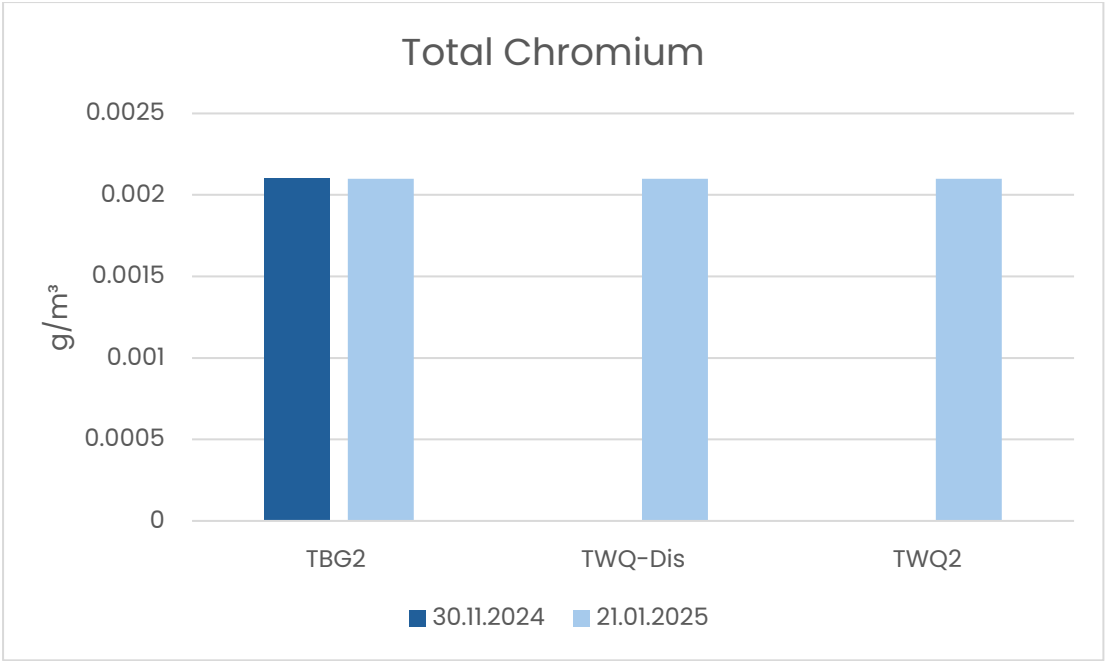


Figure 28b. T2 Chromium results with trigger value (Limit) removed

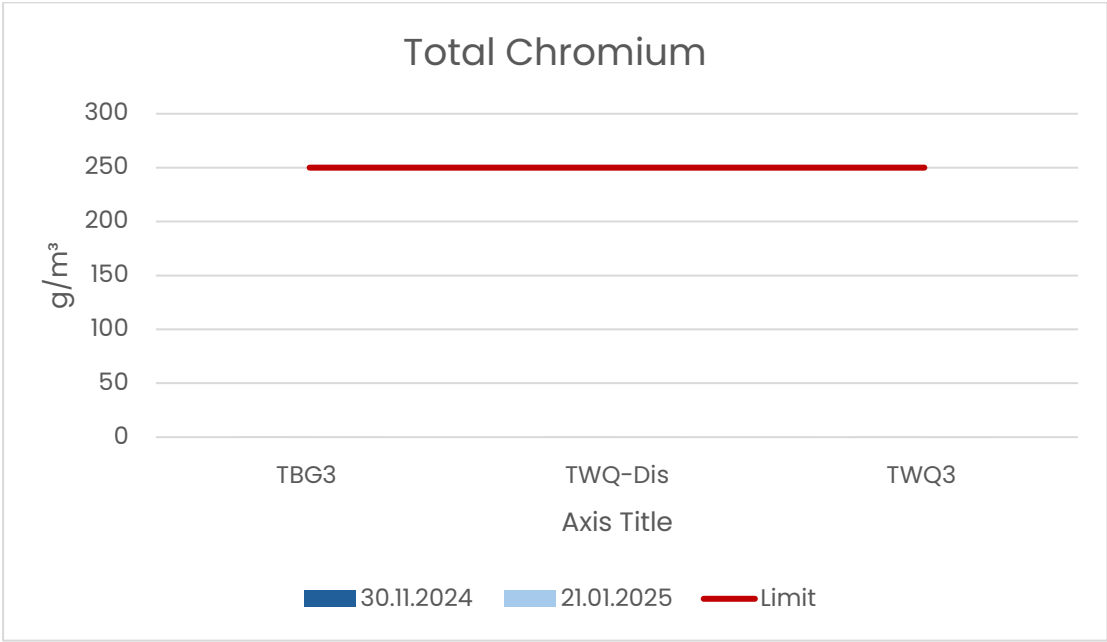


Figure 29a. T3 Chromium results

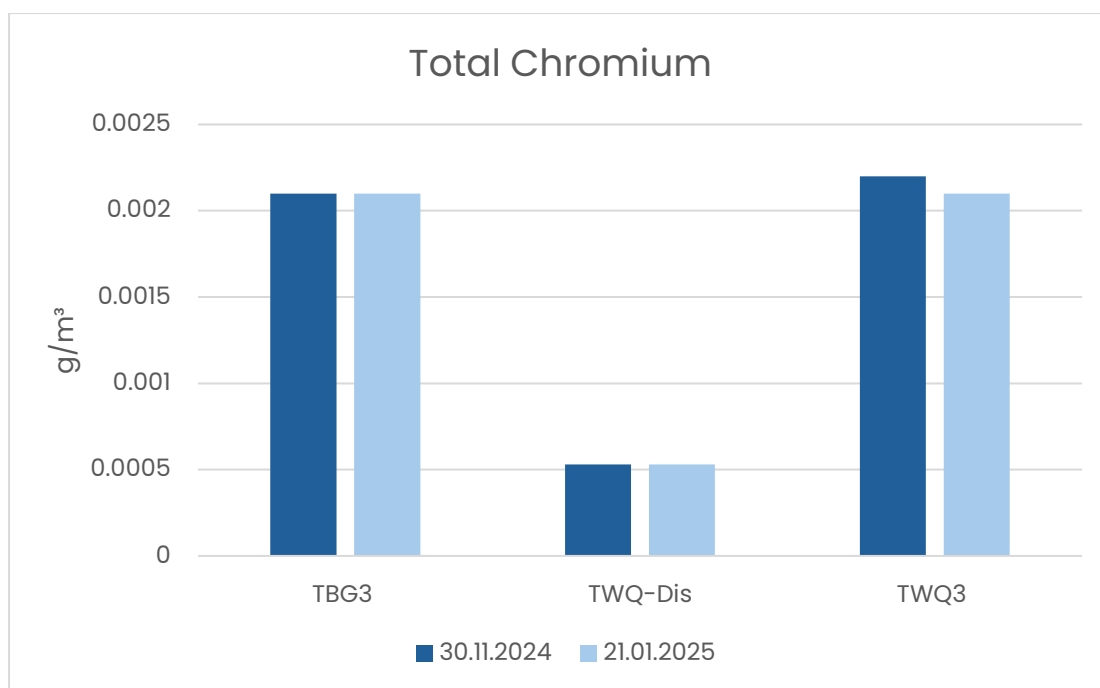


Figure 29b. T3 Chromium results with trigger value (Limit) removed

Results show that Copper concentrations at the background and receiving environments stayed well below the 0.003 g/m³ trigger value on all sampling occasions. While discharge samples exceeded the trigger value in both 2024 and 2025.

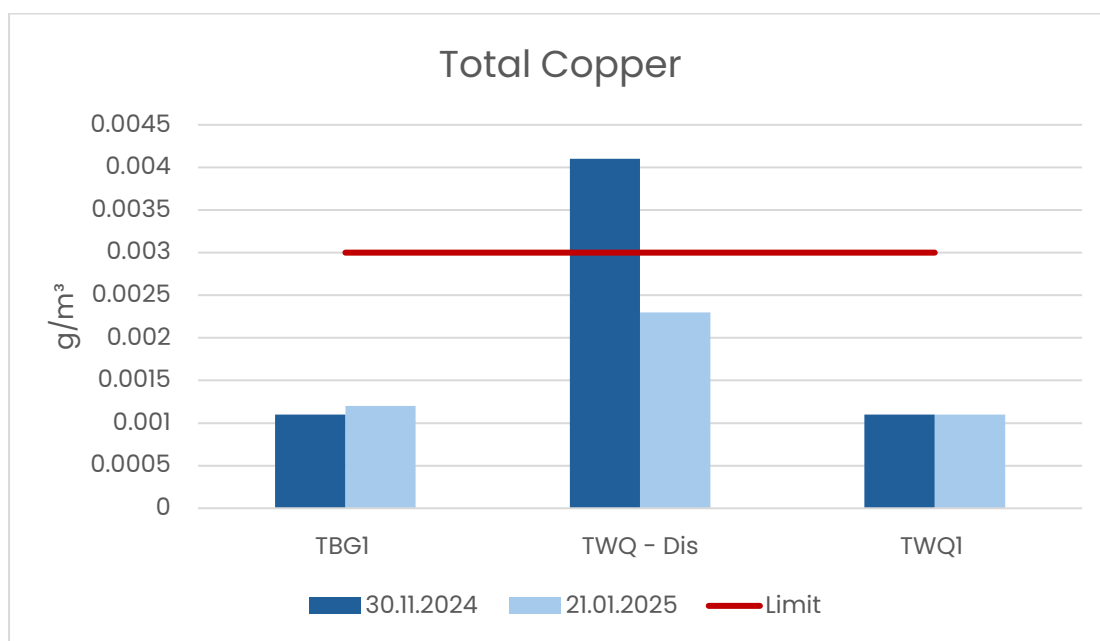


Figure 30. T1 Copper results

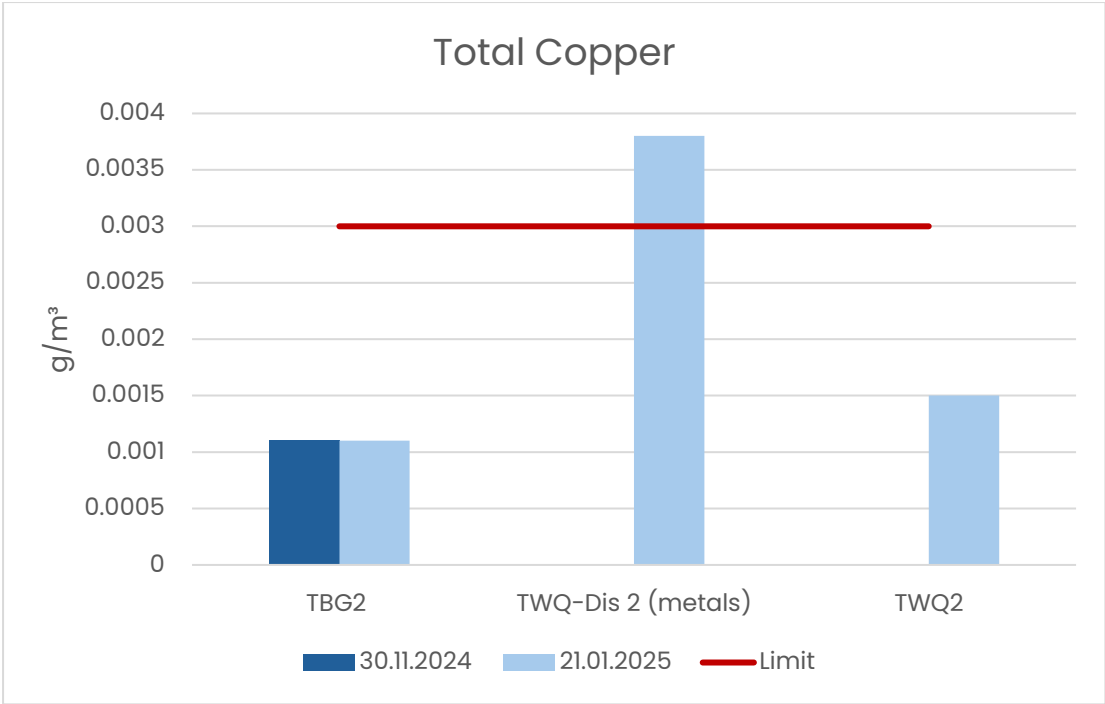


Figure 31. T2 Copper results

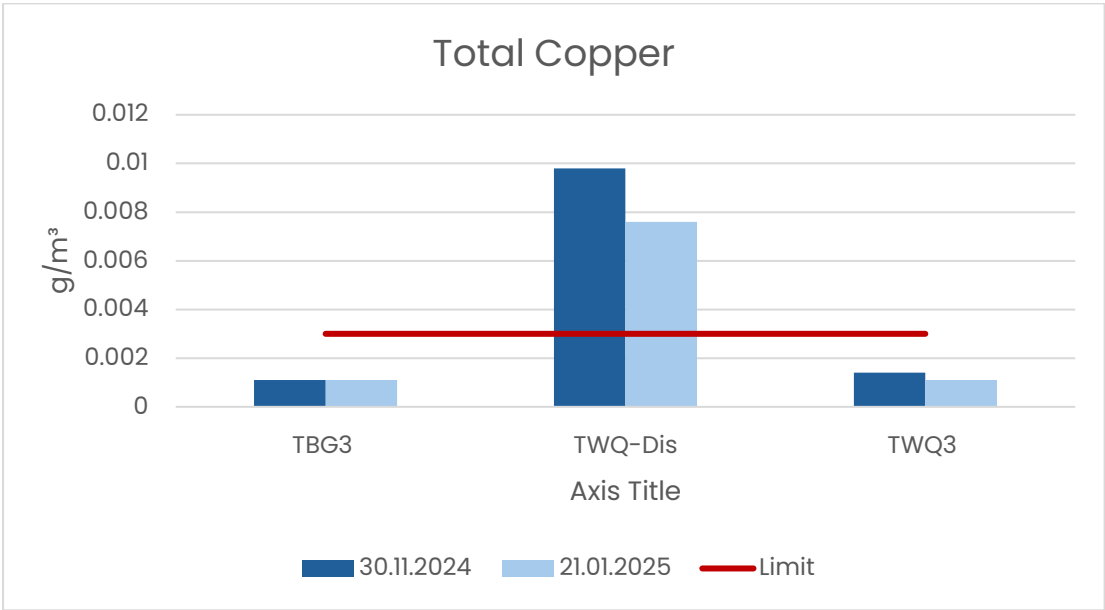


Figure 32. T3 Copper results

Results show that Lead concentrations were below the trigger value on all sampling occasions.

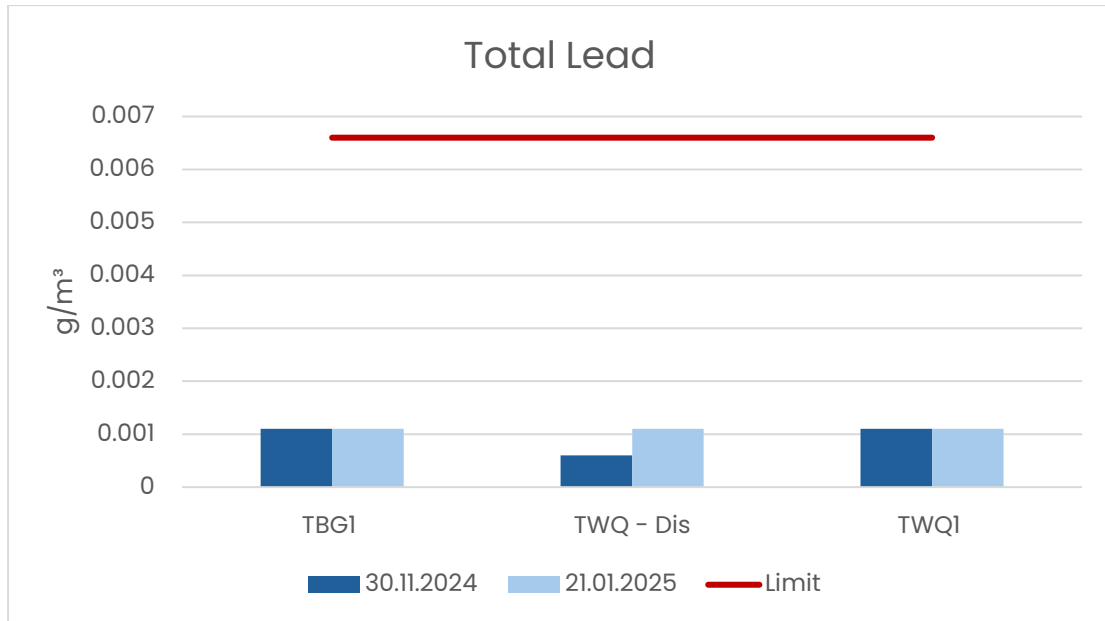


Figure 33. T1 Lead results

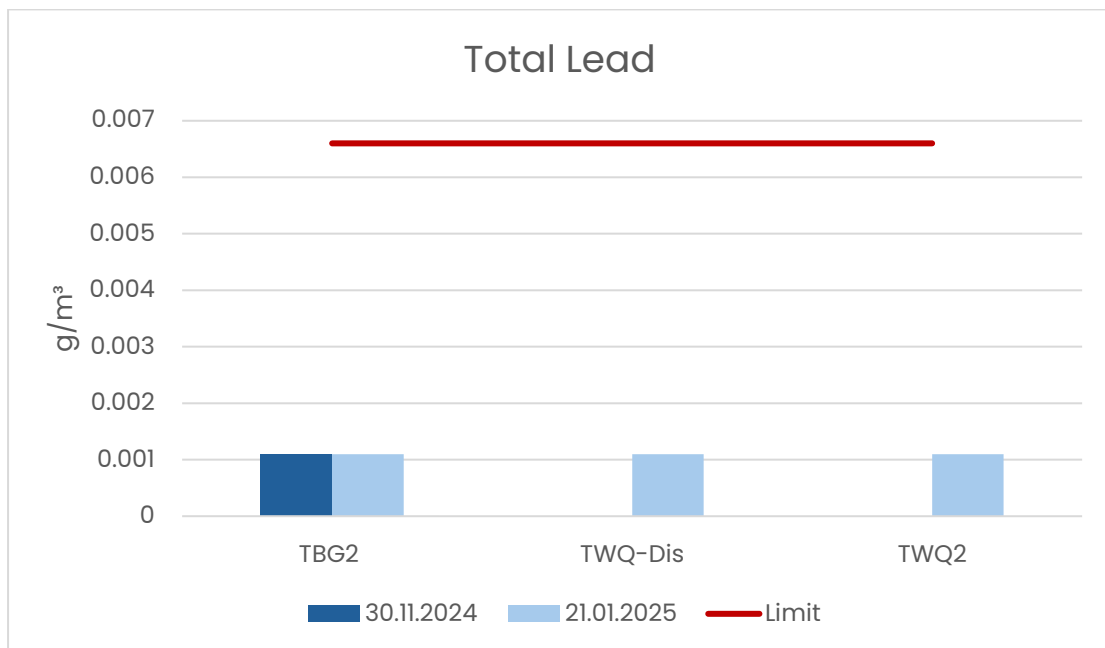


Figure 34. T2 Lead results

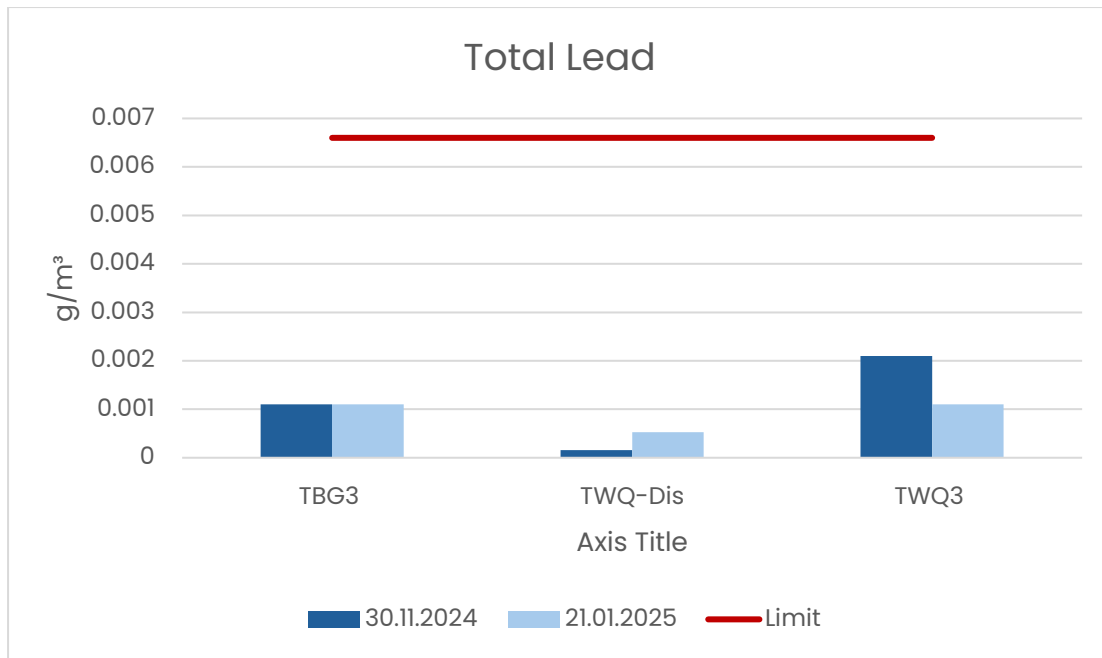


Figure 35. T3 Lead results

Results show that All Mercury concentrations remained below the lab default detection limit at $<0.00008 \text{ g/m}^3$ and below the trigger value of 0.0007 g/m^3 .

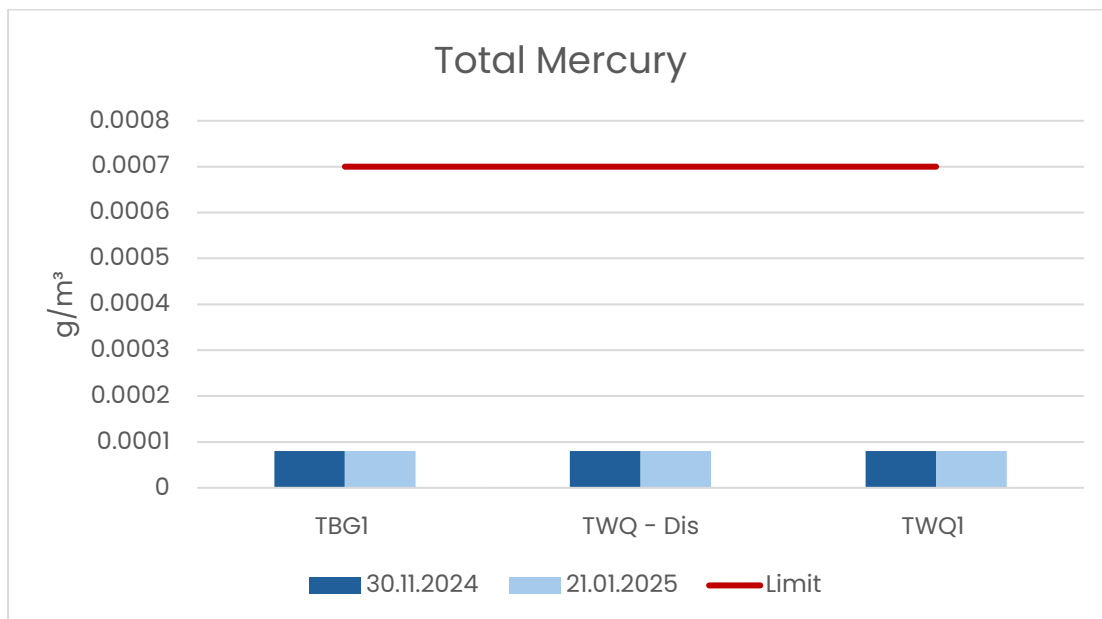


Figure 36. T1 Mercury results

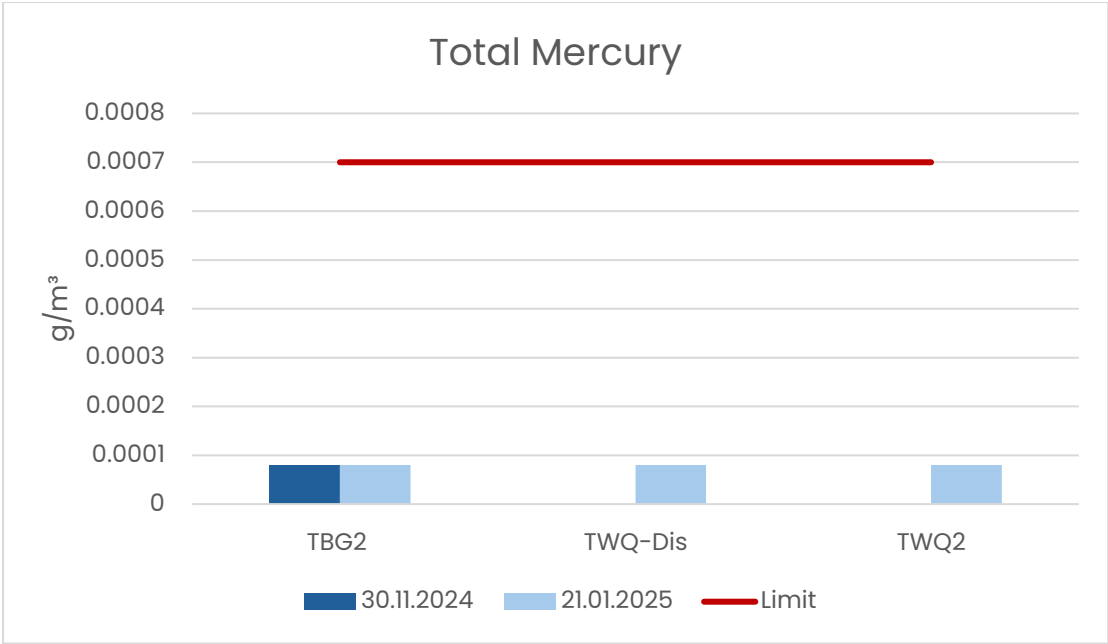


Figure 37. T2 Mercury results

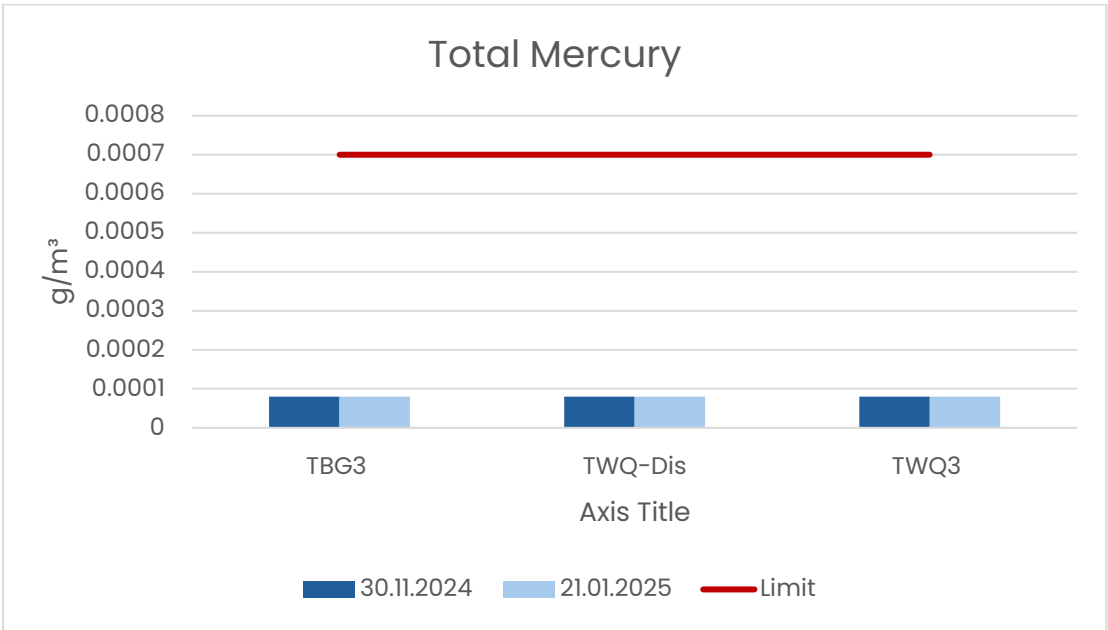


Figure 38. T3 Mercury results

Results show that Zinc Concentrations at the background and receiving environments stayed below the 0.023 g/m³ trigger value on all sampling occasions. While discharge samples at TWQ3-Dis exceeded the trigger value in both 2024 and 2025 and TWQ2-Dis during 2025.

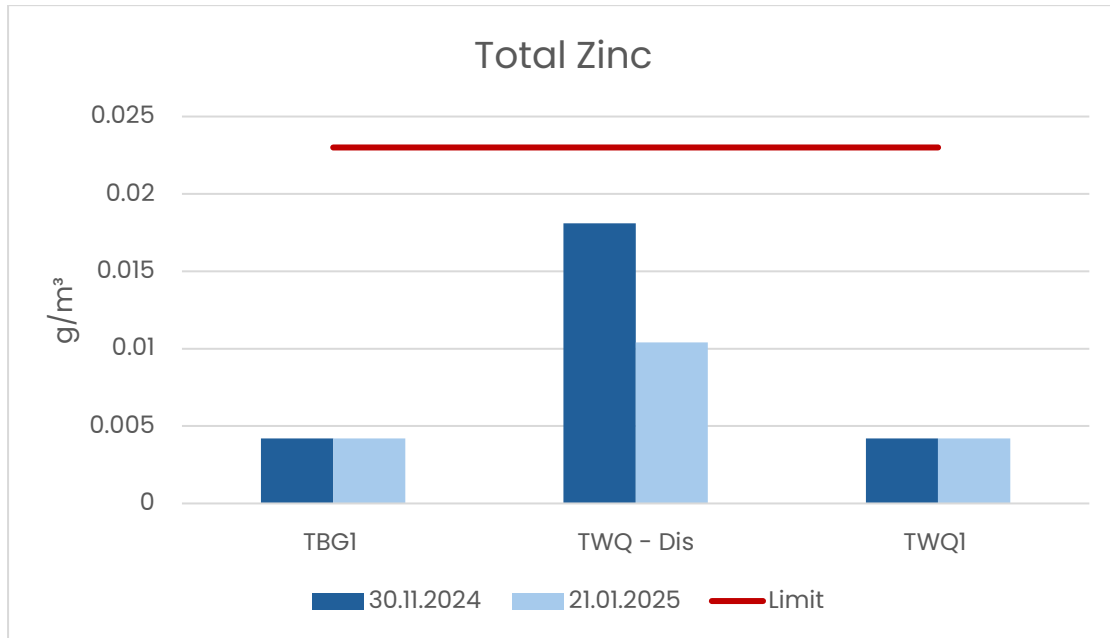


Figure 39. T1 Zinc results

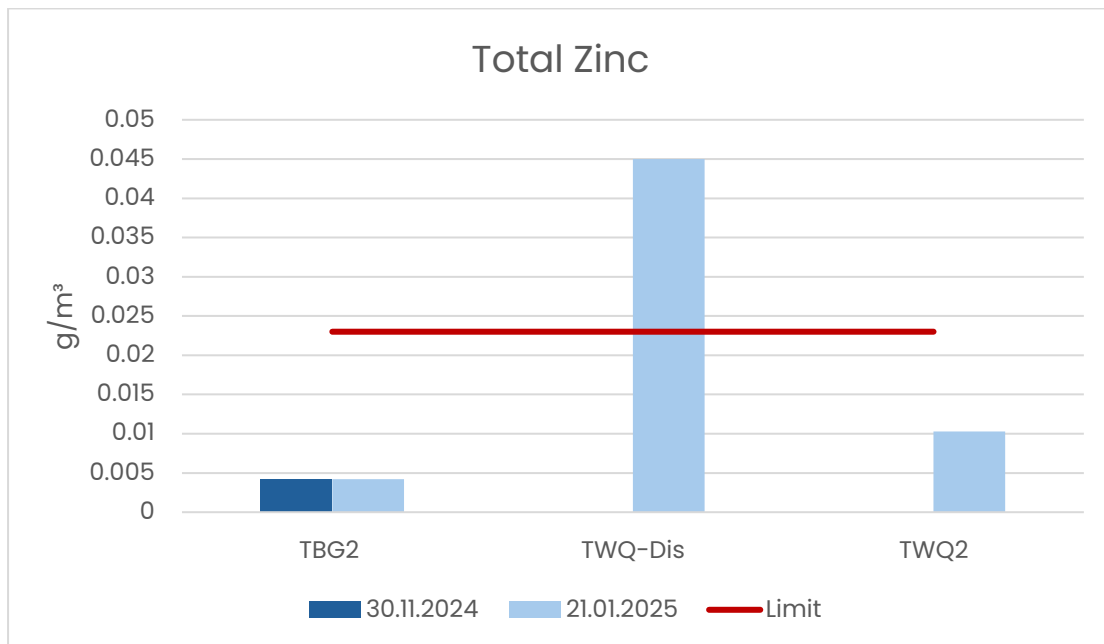


Figure 40. T2 Zinc results

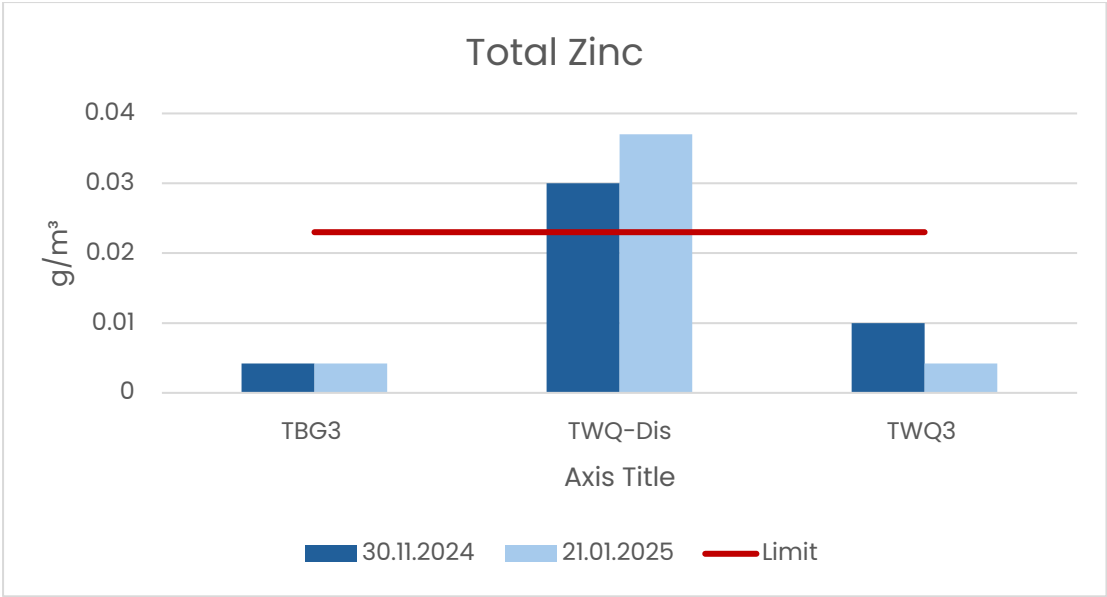


Figure 41. T3 Zinc results

Hydrocarbons

Results show that all Total Petroleum Hydrocarbons (TPH) concentrations were below the guideline value of 15 g/m³.

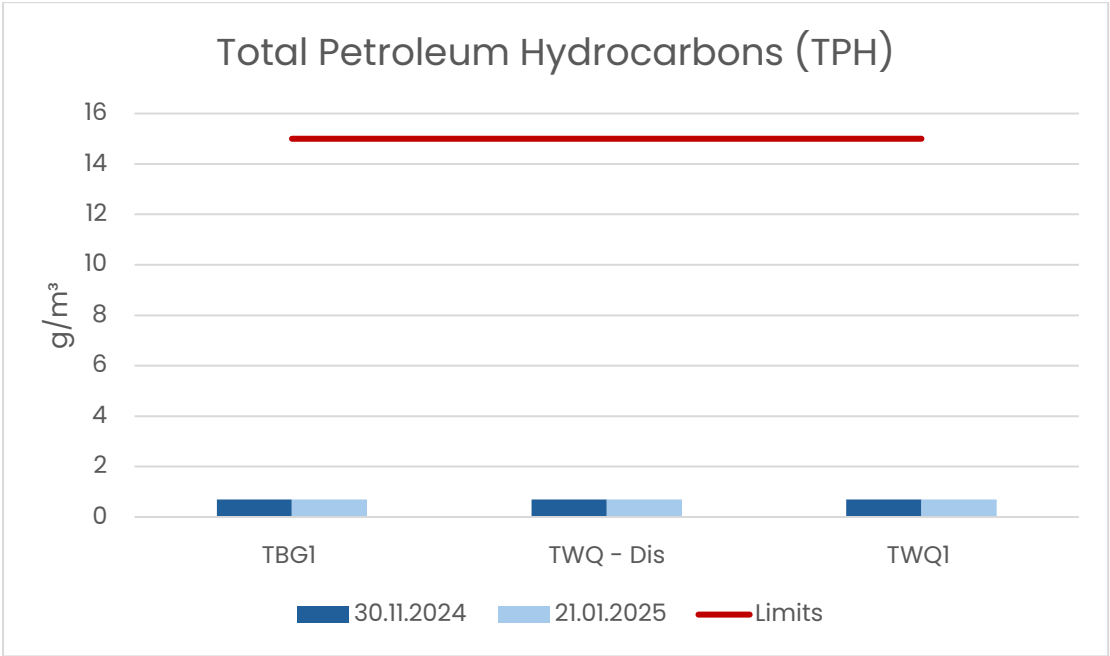


Figure 42a. Total Petroleum Hydrocarbons (TPH)

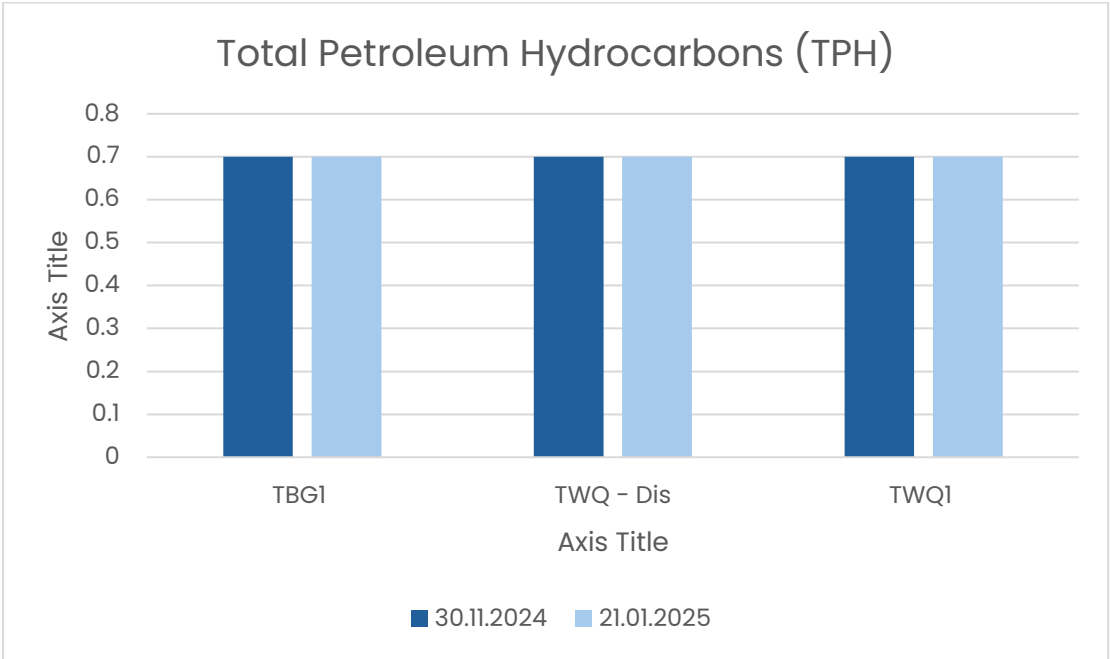


Figure 42b. Total Petroleum Hydrocarbons (TPH) with trigger value (limits) removed

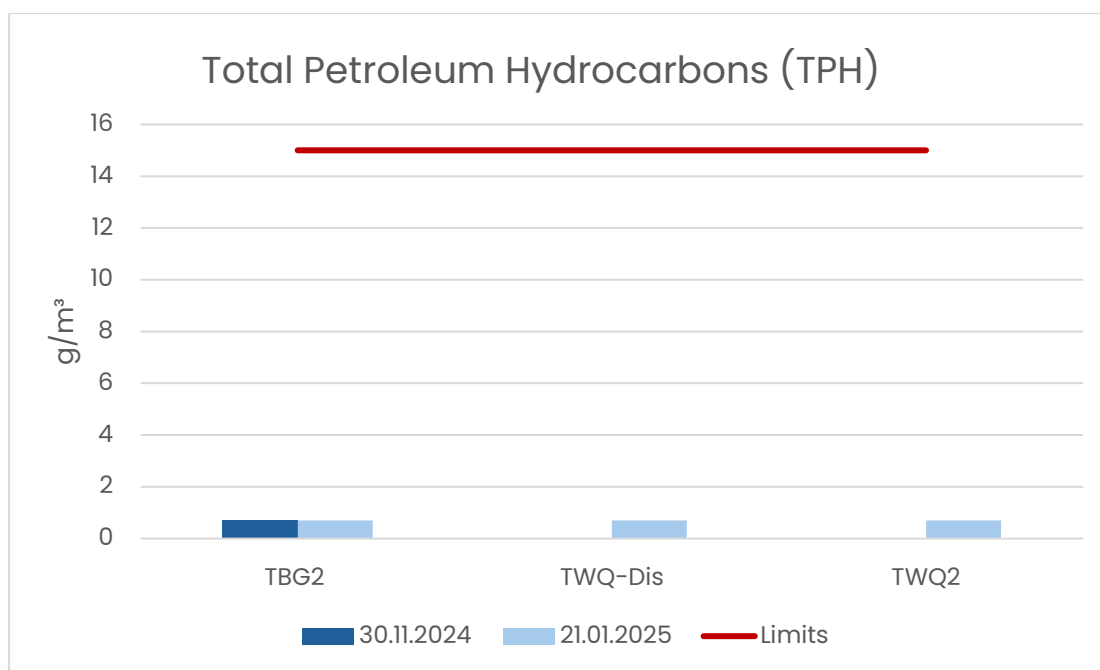


Figure 43a. Total Petroleum Hydrocarbons (TPH)

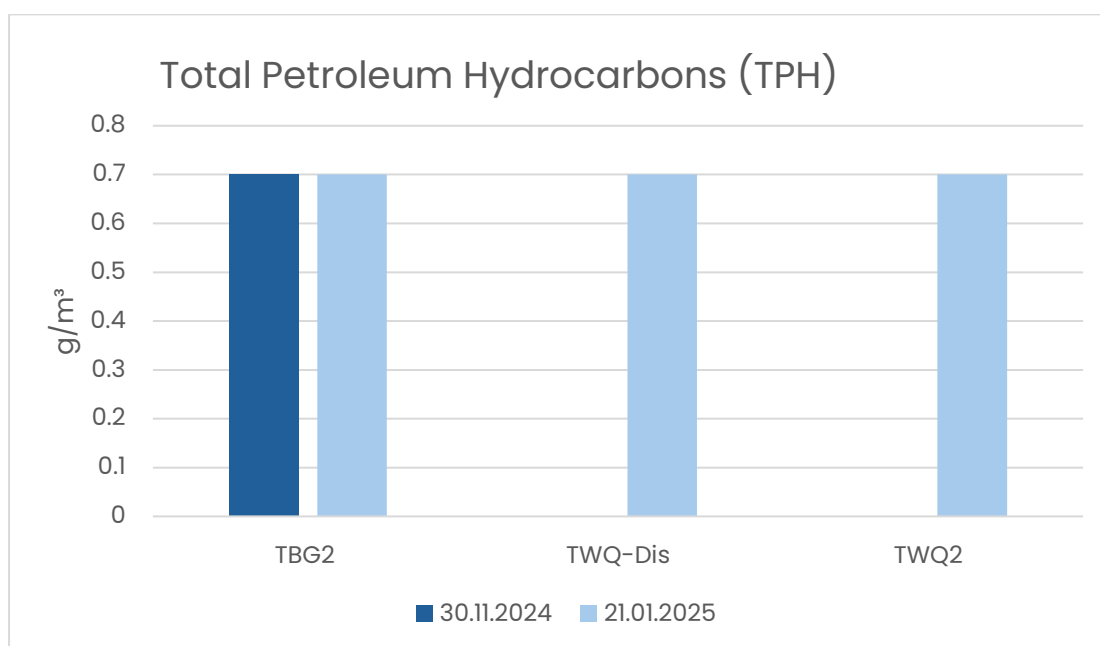


Figure 43b. Total Petroleum Hydrocarbons (TPH) with trigger value (limits) removed

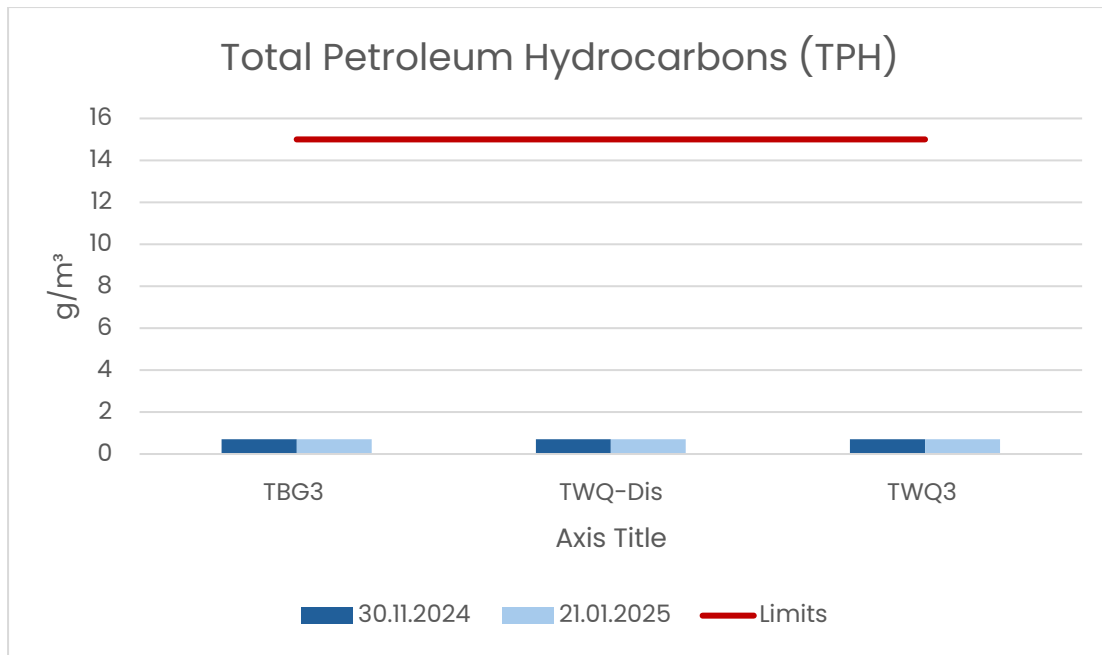


Figure 44a. Total Petroleum Hydrocarbons (TPH)

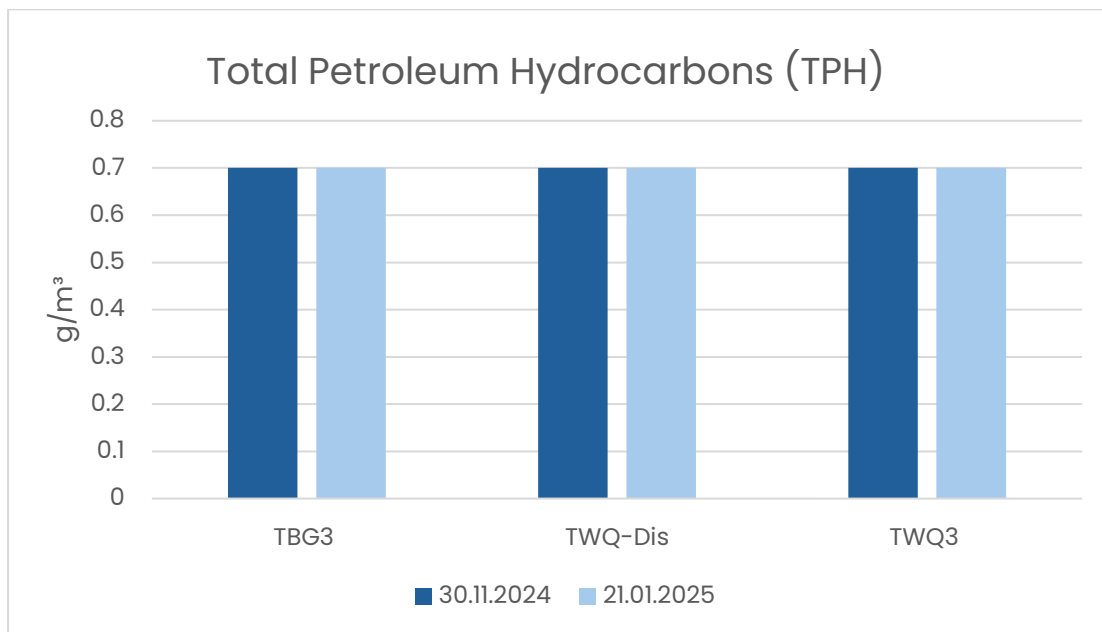


Figure 44b. Total Petroleum Hydrocarbons (TPH) with trigger value (limits) removed

Chemical Oxygen Demand

During 2024, Chemical Oxygen Demand (COD) concentrations at TGB1 and TGB3 background, as well as all receiving environments exceeded the trigger value of 250 g/m³.

However, in 2025 COD concentrations across all receiving environments were below the trigger value and showed a significant decrease compared

to the 2024 levels.

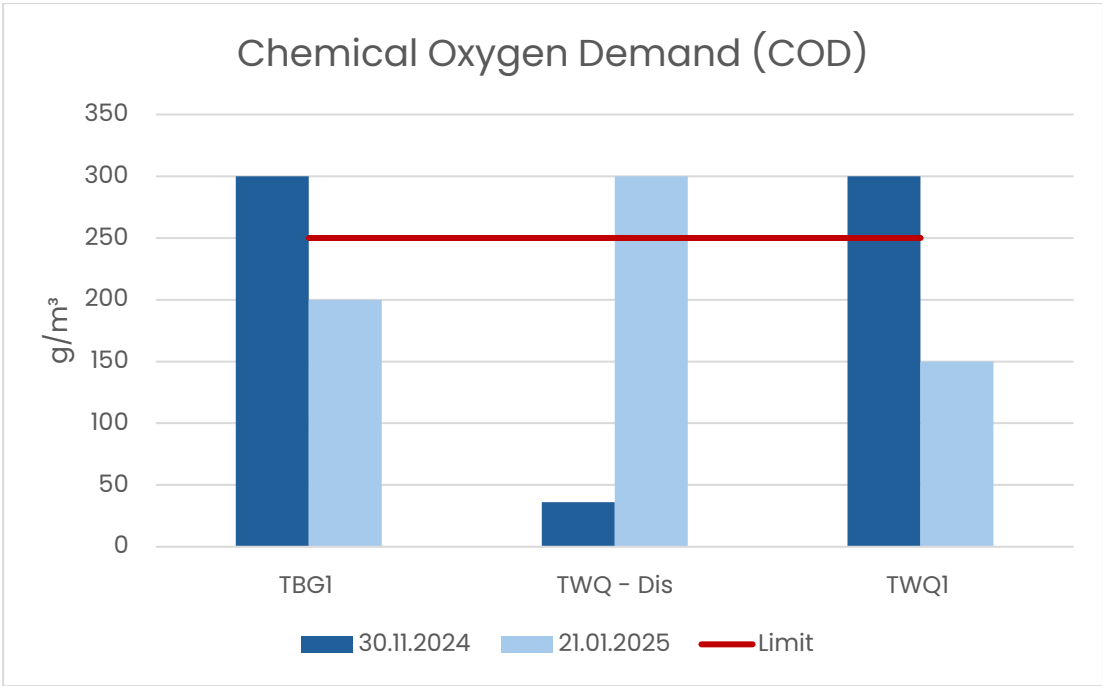


Figure 45. T1 COD Results

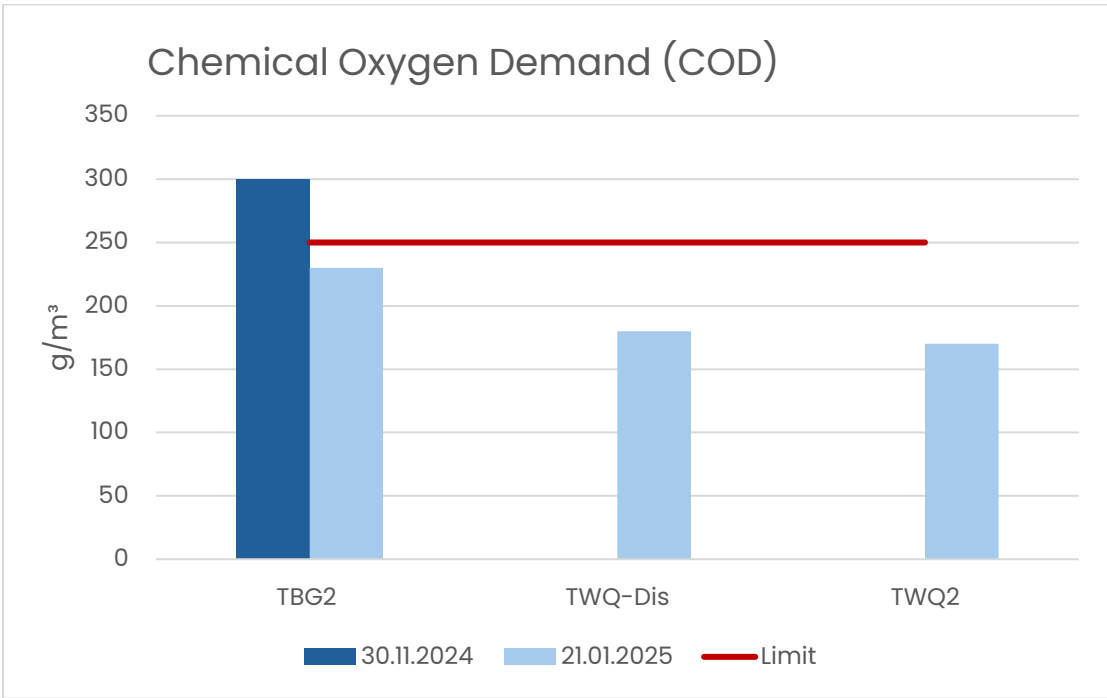


Figure 46. T2 COD Results

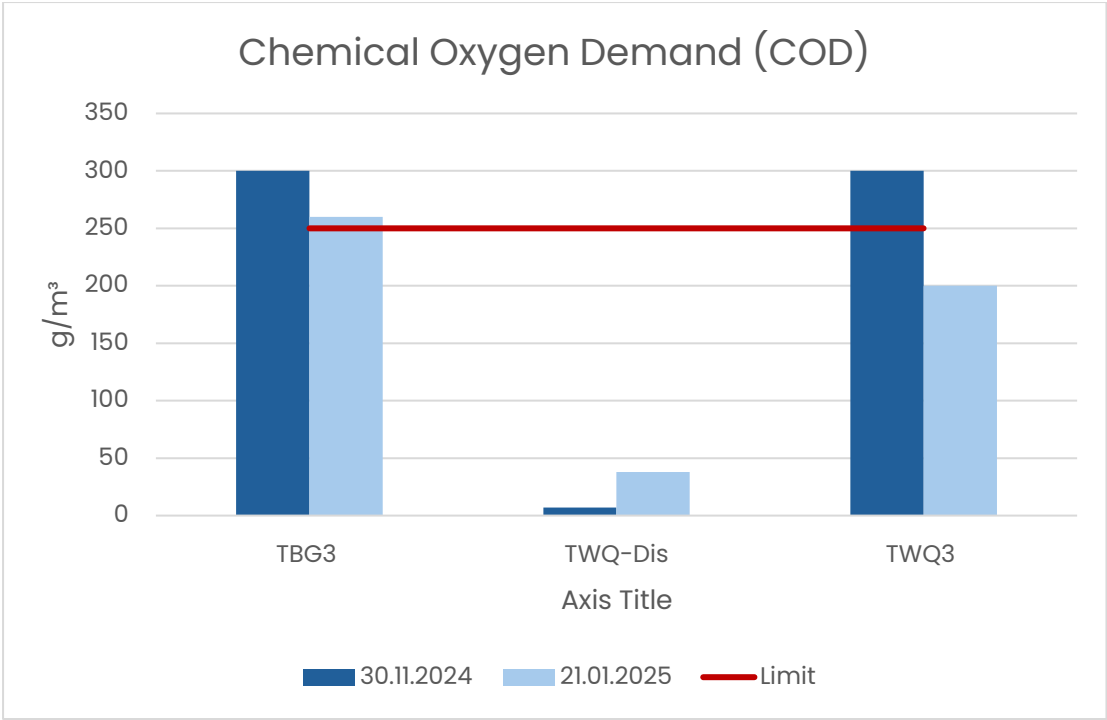


Figure 47. T3 COD Results

3.1.2 Water quality field analysis and observations

Water quality field analysis results and observations are presented in this section.

Parameter	Trigger Value
Temperature	>3°C difference from background
pH	<6 and >9
Dissolved Oxygen (%)	<80%

Table 20. Trigger Values for PH, Temperature and Dissolved Oxygen in Freshwater Receiving Environments.

Date	T1 Temperature Background	T1 Trigger Value (+3°C)	T1 Temperature Receiving
30.11.2024	18.5	21.6	18.4
21.01.2025	20.4	23.4	20.6

Table 21. T1 Background temperature, Background with increase by 3°C and T1 Receiving temperature results.

Date	T2 Temperature Background	T2 Trigger Value (+3°C)	T2 Temperature Receiving
30.11.2024	18.3	21.3	
21.01.2025	19.9	22.9	19.3

Table 22. T2 Background temperature, Background with increase by 3°C and T2 Receiving temperature results

Date	T3 Temperature Background	T3 Trigger Value (+3°C)	T3 Temperature Receiving
30.11.2024	18.3	21.3	21
21.01.2025	19.5	22.5	19.8

Table 23. T3 Background temperature, Background with increase by 3°C and T3 Receiving temperature results

Results show that all temperatures remained below the trigger values at the receiving environment locations. background and receiving environment temperatures were similar, showing slight decreases overall, except in 2024 when the TWQ3 receiving environment site at 21°C was warmer than the TBG3 background site at 18.3°C.

In general, results show that all pH concentrations were within the trigger values on all sampling occasions.

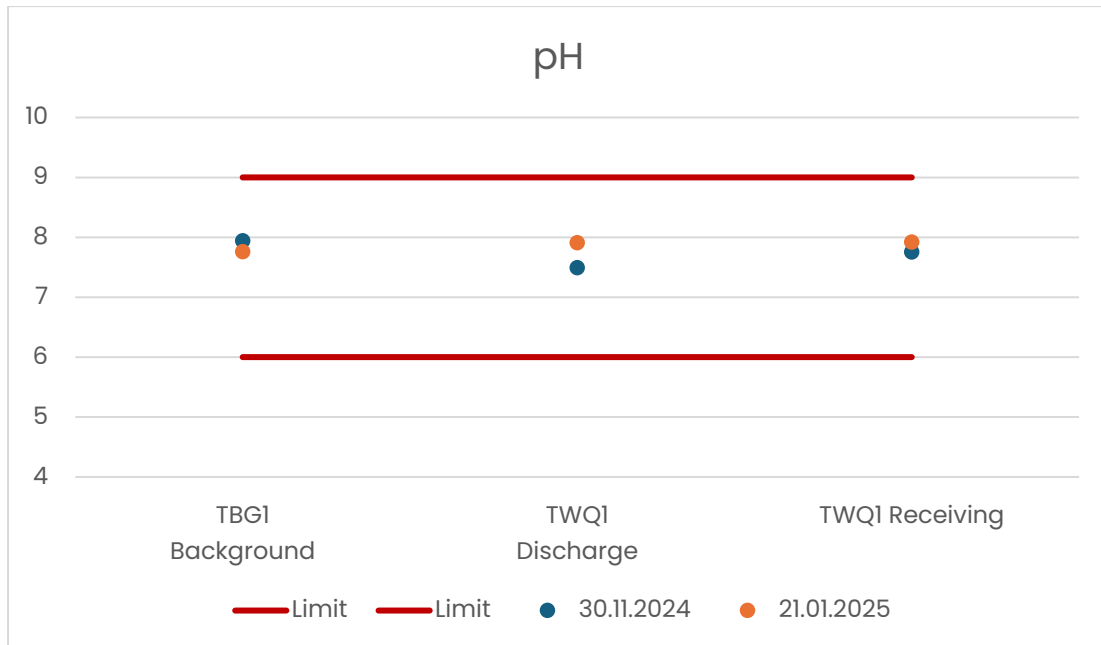


Figure 48. T1 pH results

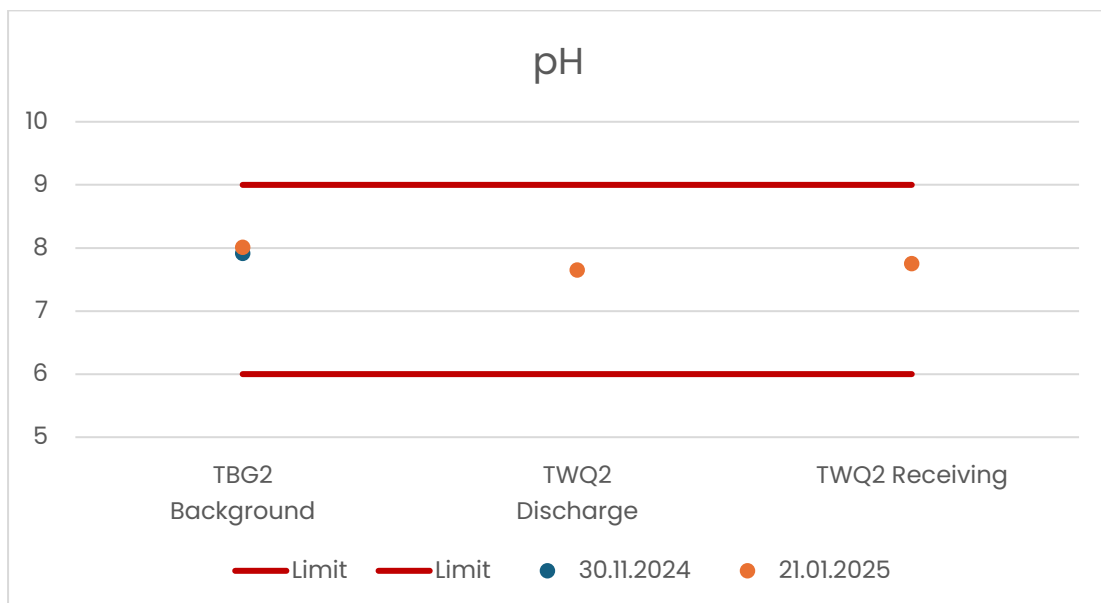


Figure 49. T2 pH results

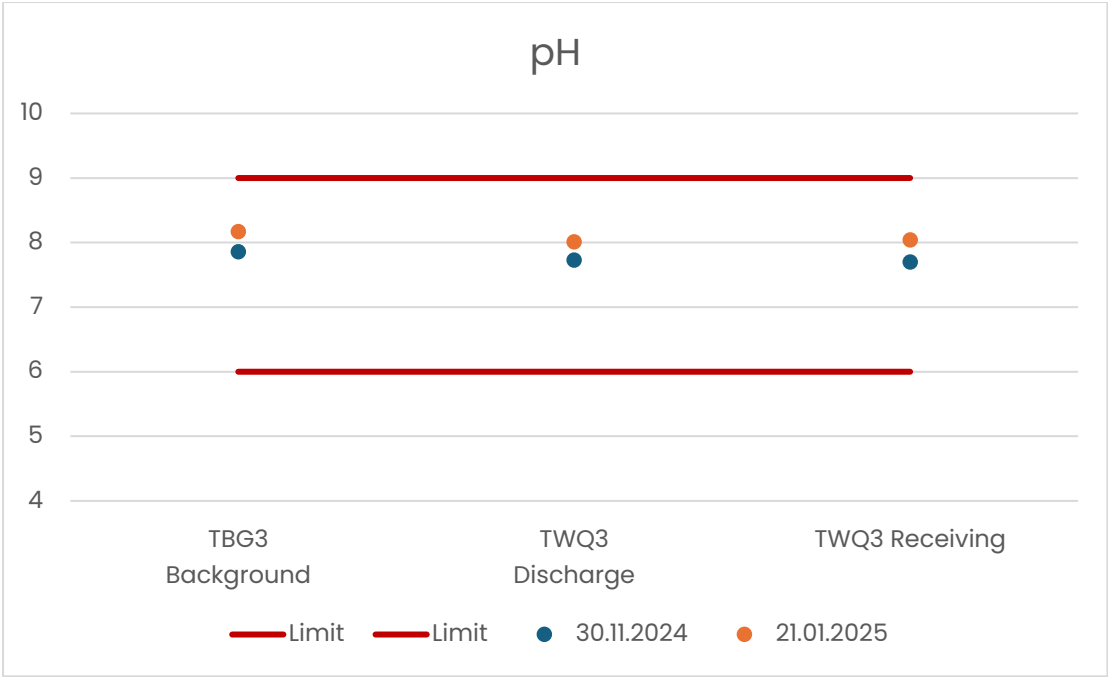


Figure 50. T3 pH results

Dissolved oxygen levels in the receiving environment complied with the trigger value of <80% in 2024. While all levels exceeded the trigger value in 2025, apart from TBG2 which complied at 100%. There was a notable drop in dissolved oxygen at TWQ1 And TWQ3 receiving environments between November 2024 and January 2025.

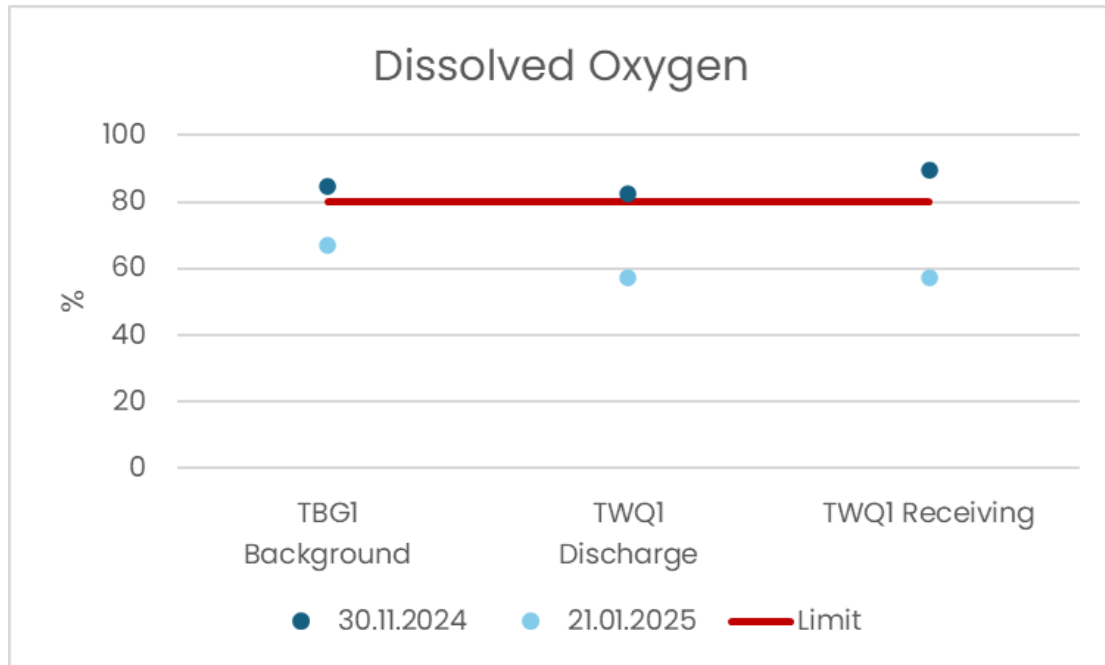


Figure 51. T1 Dissolved Oxygen results

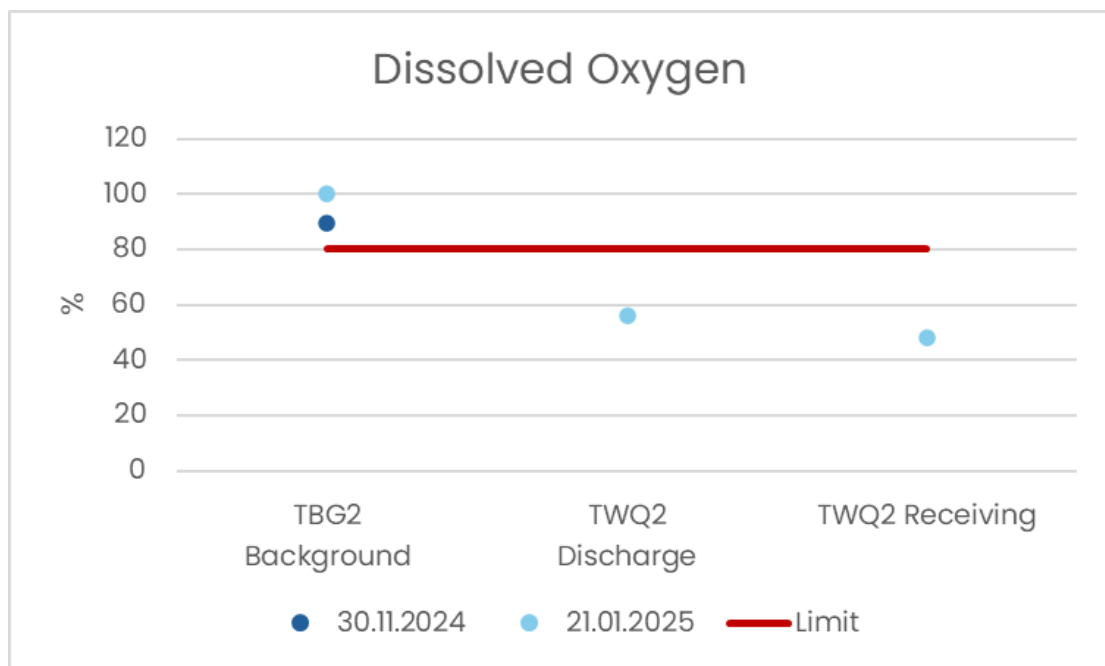


Figure 52. T2 Dissolved Oxygen results

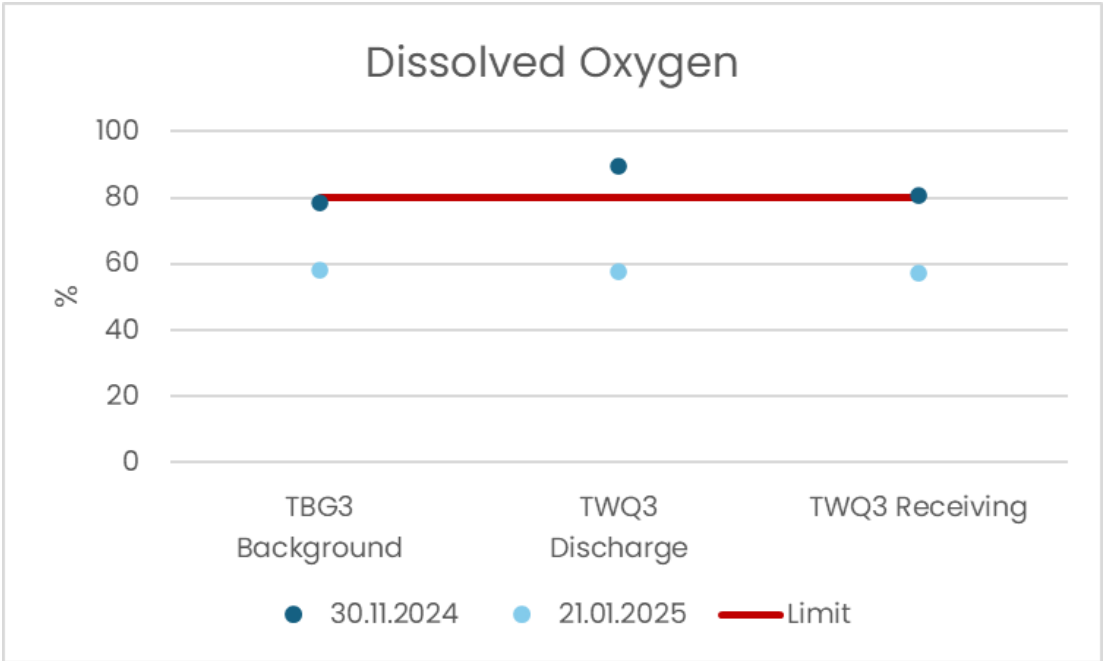


Figure 53. T3 Dissolved Oxygen results

Tables 24-25 below show the field readings and visual observations conducted at each sampling location.

During the visual observations, most sites were mostly clear. With no odour apart from at TWQ2-Dis which has a slight odour on 21 January 2025.

Central Comprehensive Stormwater Consent – Annual Report

Site	TBG1 Background	TWQ1 Discharge	TWQ1 Receiving	TBG2 Background	TWQ2 Discharge	TWQ2 Receiving	TBG3 Background	TWQ3 Discharge	TWQ3 Receiving
Temperature (°C)	18.6	18	18.4	18.3	No sampling.		18.3	17.6	21
pH	7.94	7.49	7.75	7.91			7.86	7.73	7.7
DO (%)	84.9	82.4	89.42	89.4			78.3	89.4	80.9
Conductivity (us/cm)	44756	52.3	44503	44380			42867	3630	41030
Visual Check	Clear, Nil odour	Slightly Brown colour, Nil odour	Clear, Nil odour	Clear, Nil odour			Clear, Nil odour	Clear, Nil odour, trickle discharge	Clear, No odour

Table 24. Results from sampling for Temperature, PH, Dissolved Oxygen, Salinity, Conductivity and a visual inspection on 30/11/2024.

Central Comprehensive Stormwater Consent – Annual Report

Site	TBG1 Background	TWQ1 Discharge	TWQ1 Receiving	TBG2 Background	TWQ2 Discharge	TWQ2 Receiving	TBG3 Background	TWQ3 Discharge	TWQ3 Receiving
Temperature (°C)	20.4	20.4	20.6	19.9	20.3	19.3	19.5	19.8	19.8
pH	7.76	7.91	7.92	8.01	7.65	7.75	8.17	8.01	8.04
DO (%)	64.1	57.3	57.2	100.1	55.9	48.3	58.3	57.8	57.1
Conductivity (us/cm)	45553	41804	46044	44896	4901	41529	17494	44092	44163
Visual Check	Clear, Nil odour	Slight brown colour, some suspended material, nil odour	Clear, Nil odour	Clear, Nil odour	Very slight brown colour, turbid, very slight odour	Turbid, nil odour	Clear, nil odour	Very slight brown colour, nil odour	Clear, Nil odour

Table 25. Results from sampling for Temperature, PH, Dissolved Oxygen, Salinity, Conductivity and a visual inspection on 21/01/2025.

4. Network or infrastructure upgrade works

There have been no upgrade works undertaken during this monitoring period.

5. Erosion, flood risk alleviation, and stormwater quality mitigation measures

No stormwater induced erosion, flood risk alleviation, or stormwater quality mitigation measures have been implemented during this reporting period.

After four sampling events within the Minden catchment, there have been exceedances in zinc, copper, lead and e.coli. As per the consent condition 9.3 a draft source investigation report was undertaken by Beca last year. Regional Council has granted WBOPDC a year extension to gather further data, to determine potential mitigation measures towards stormwater quality. This is currently still in progress.

6. Stormwater related incidents

No stormwater related incidents occurred during the reporting period.

7. Updated Asset Register

Pursuant to the requirements of Consent Condition 9.4(e), please refer to Appendix (A) which includes additions to the asset register during the monitored period October 2024 to September 2025.

8. New structures to be included in the consent (asset register)

There are no new structures to be included in the consent.

Appendix A – Updates to the asset register

Appendix B – All Monitoring Results