WASTE DISCHARGE LICENCE 166-07 MONITORING REPORT 1 NOVEMBER 2024 to 31 OCTOBER 2025 PINE CREEK PROJECT AREA

AGNICO EAGLE

Version	Prepared by	Submission Date	Licence Expiry Date
1	NT Mining Operations	31 October 2025	1 November 2032
2	AENT	20 July 2026	1 November 2032

CERTIFICATION DETAILS

I James Hill, have reviewed this report and I confirm that to the best of my knowledge and ability all the information provided in the report is true and accurate.

Signature:	James Hill
Date:	Jul 22, 2026

EXECUTIVE SUMMARY

This report presents the findings of the environmental monitoring program for Pine Creek Project Area (PCPA), operated by Agnico Eagle NT Pty Ltd (AENT). This program is conducted under the conditions of Waste discharge license 166-07, which regulates the discharge of treated mine water and requires ongoing environmental monitoring and reporting. The licence commenced on 31 October 2022 and remains in effect until 1 November 2032. The reporting period primarily referenced in this report is from 1 November 2024 to 31 October 2025.

The 2024-2025 monitoring results for PCPA showed water discharge, treatment efforts, rainfall patterns and surface water quality. A total of 2455.24 ML of treated water was discharged from PCPWD into Copperfield Creek across nine authorised events, all conducted in accordance with regulatory requirements. Approximately 2000 kilo litres of Milk of Lime was used in water treatment processes, reflecting AENT's commitment to mitigating environmental impacts. Rainfall during the period totalled 1,458.4 mm, consistent with the region's monsoonal climate, and played a key role in influencing creek flow.

This reporting period illustrated the progress made by the sluice gate installation and milk of lime treatment at PCPWD. Surface water quality at PCCK16 remained below PCCK06 trigger values, confirming PCPWD as the primary source of contamination. PCCK22 showed fewer exceedances, though zinc remained elevated. At PCCK06, zinc concentrations declined compared to the previous year, indicating partial treatment success. Although exceedances occurred during the reporting period, the severity of the zinc concentrations decreased substantially. Average dissolved zinc concentration during the January-April 2025 was approximately 60% lower than the 2024 reporting period.

Ecotoxicology results at PCCK06 showed improved cladoceran survival and reproduction during non-discharge conditions. Sediment monitoring revealed nickel exceedance at PCCK06, but neutral pH across all sites indicated a low risk of nickel becoming bioavailable. Continued monitoring is required to assess the influence on PCCK06 during periods of discharge.

Macroinvertebrate and sediment monitoring indicated that aquatic ecosystem health upstream and downstream of the authorised discharge location remained stable. Whilst metal concentrations in sediment and fish diversity was affected by its proximity to the discharge location. Electrofishing occurred in addition to the annual sediment and macroinvertebrate sampling. The initial results highlighted that fish biota were more impacted at monitoring sites closer to PCPWD, as fish biota recovered at downstream sites. Continued electrofishing analysis is essential to confirm long-term trends. While reduced PET richness and fish diversity were observed at PCCK06, recovery of both macroinvertebrate and fish communities was evident further downstream at PCCK22, indicating that any impacts associated with discharge activities were spatially limited and not observed throughout the wider Copperfield Creek system.

The report concludes that continued monitoring remains essential to support ecological health, assess the persistence of any residual toxicity, and guide water management during the site's care and maintenance phase. The data collected during this period provides a strong foundation for informed decision-making and reinforces the commitment to responsible environmental management. Overall, the monitoring results indicate that the current management measures are improving discharge quality and reducing environmental risk, although ongoing monitoring and adaptive management strategies remains necessary to address contaminant inputs from legacy mine infrastructure.

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Glossary

Definition	Abbreviation
Cosmo Howley Project Area	PCPA
Agnico Eagle NT Pty Ltd	AENT
Trigger Value	TV
Waste Discharge License	WDL
Waste Rock Dumps	WRD

1. INTRODUCTION

1.1 General

Agnico Eagle NT Pty Ltd (AENT), formerly NT Mining Operations Pty Ltd, are responsible for the management of the Pine Creek Project Area (PCPA). Mining at the PCPA ceased in late 1995, and Agnico Eagle Mines Pty Ltd, the parent company of NT Mining Operations, assumed ownership of the site via merger with Kirkland Lake Gold in 2022. There is currently no mining occurring at PCPA, with the site under care and maintenance according to AENT's PCPA Mining Management Plan. To regulate water levels and maintain the safe operation of critical infrastructure at the site (e.g. Tailings Storage Facilities, Waste Rock Dumps, Process Water Dam), AENT hold Waste Discharge Licence WDL 166-07, permitting discharge at one location, PCPWD, with compliance monitoring undertaken at site PCCK06.

1.2 Monitoring Report

The monitoring report has been submitted in accordance with Schedule 1 Item 13 (condition 39) of WDL166-07. Table 1 shows requirements of this monitoring report.

TABLE 1 MONITORING REPORT REQUIREMENTS

Requirement	Section
Condition 37. The Licensee must keep records of all contraventions with this licence. These records must be adequate to enable the Licensee to comply with the notification and reporting conditions of this licence.	Refer to Monitoring Results Section 3.10
Condition 38. The Annual Return is due on: (a) each Anniversary Date; and (b) the Expiry Date of this licence, for the preceding 12 month period.	Refer to Attachment C: PCPA Annual Return 2025
Condition 39. The Annual Return is due on (a) each Anniversary Date; and (b) the Expiry Date pf this licence; and (c) in the event the licensee applies to renew the licence, 90 days prior to the Expiry Date.	Monitoring Report Due on 31 October 2025
Condition 40.1. The Monitoring Report is prepared in accordance with the requirements of the Administering Agency 'Guideline for Reporting on Environmental Monitoring' (or any other guideline as adopted by the Administering Agency from time to time).	Monitoring Report is prepared in accordance with the requirements of the Administering Agency 'Guideline for Reporting on Environmental Monitoring'.
Condition 40.2. The Monitoring Report includes a tabulation, in Microsoft ® Excel ® format or another format requested by the Administering Agency, of all monitoring data required to be collected in accordance with this licence for the preceding 12-month period.	Refer to Attachment A: Pine Creek Raw Data 2025
Condition 40.3. The Monitoring Report includes a tabulation of monthly and annual contaminant loads discharged from the authorised discharge points for the preceding 12-month period. Contaminant loads must be calculated for metals, metalloids, nutrients and other parameters (excluding field parameters) listed in the monitoring program. The calculations must be based on the daily discharge volume and the concentration of contaminant present in the discharge on that day. On the days when a sample was not taken then the concentration of the contaminant must be estimated using Linear Interpolation methodology.	Refer to Attachment B: PCPWD Contamination Loadings 2025
Condition 40.4. The Monitoring Report includes long term trend analysis of monitoring data to demonstrate any environmental impact associated with the Licensed Action over a minimum period of three years (of part thereof);	Refer to Monitoring Results Section 3.
Condition 40.5. The Monitoring Report includes a summary of any investigations undertaken by the Licensee in accordance with this licence for the preceding 12-month period; and	Refer to Monitoring Results Section 3.7
Condition 40.6. The Monitoring Report includes an assessment of environmental impact from the Licensed Action.	Refer to Appendix 1:Ecotoxicology Report 2025 Refer to Appendix 3: Biological and Sediment Monitoring 2025

2. MONITORING OBJECTIVES AND METHOD

2.1 Surface Water Monitoring Points

The authorised discharge, compliance and monitoring points during the reporting period (as detailed in WDL166-07) are shown in Table 2 and Figure 1. Schedule 1, Item 5 outlines the authorised discharge point, while Schedule 1, Item 6 identifies the source of waste. Additionally, Schedule 1, Item 8 specifies the compliance point.

TABLE 2 AUTHORISED DISCHARGE AND MONITORING POINTS

Point	Description	Location	
		Latitude	Longitude
Authorised Discharge Point			
Pine Creek Process Water Dam (PCPWD)	Captures mine affected wastewater before discharge at the southern end of the Dam to Copperfield Creek.	-13.84693	131.83456
Compliance Monitoring Point			
Pine Creek Copperfield Creek 06 (PCCK06)	Downstream of PCPWD discharges.	-13.862	131.833
Environmental Monitoring Point			
Pine Creek Copperfield Creek 16 (PCCK16)	Upstream of mine influence discharge at Jindare/Umbrawarra Road Crossing (reference site).	-13.862	131.820
Pine Creek Copperfield Creek 22 (PCCK22)	Located downstream 26km of compliance monitoring point located on Bonrook Stations driveway.	-14.011	131.917

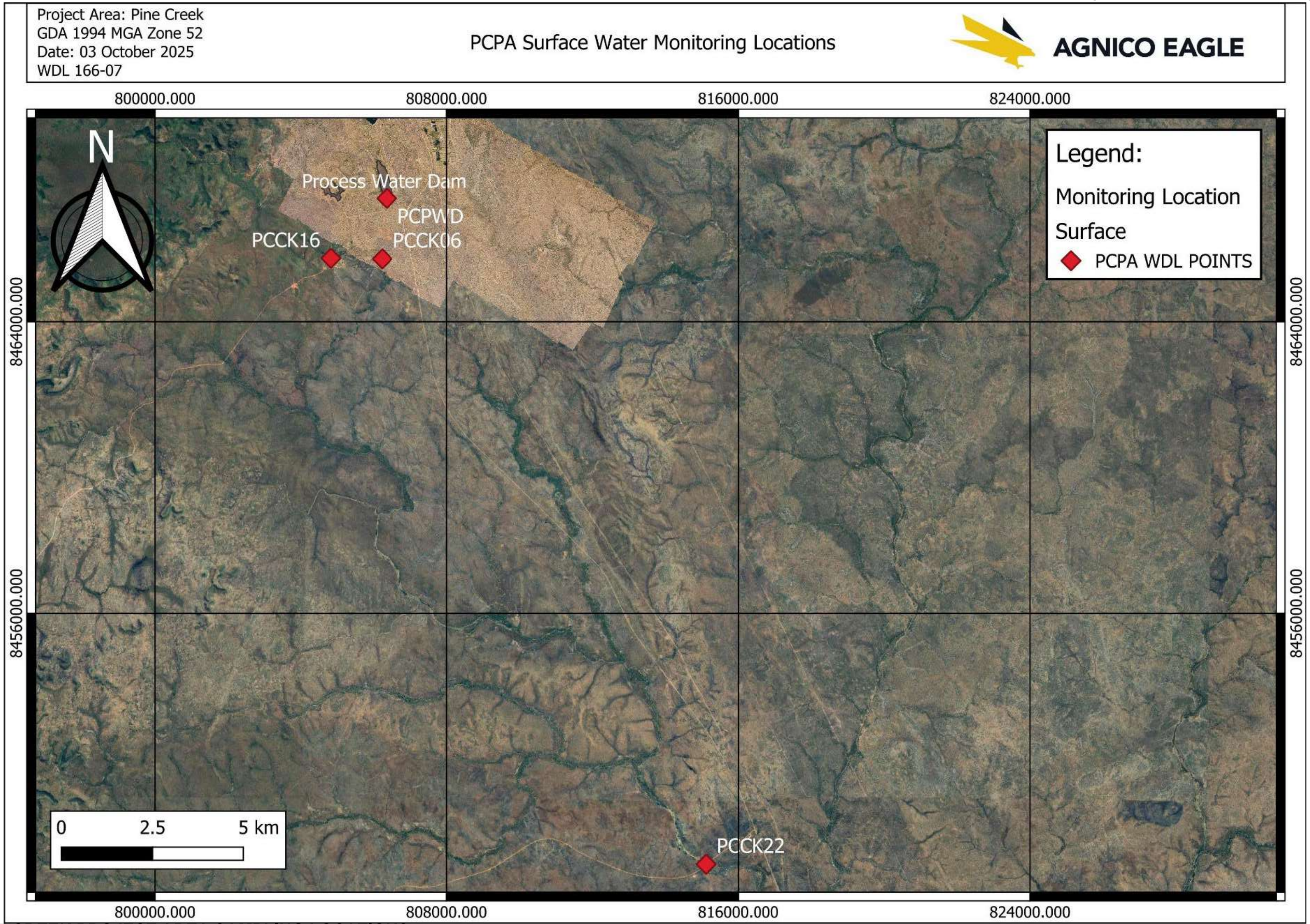

FIGURE 1 PINE CREEK PROJECT AREA SAMPLING LOCATIONS

2.2 Compliance Points and Trigger Values

WDL 166-07 and Table 3 detail trigger values for compliance point PCCK06. Trigger value compliance is assessed against schedule 1 Item 10 below:

Item 10 relating to notifiable incidents (conditions 25 and 26):

a) *An exceedance of a trigger value of a limit specified in item 7 (trigger values) at the compliance point on three consecutive sampling occasions;*

b) *A measurement outside the range for pH and DO specified in Item 7 (trigger values) at the compliance point on three consecutive sampling occasions;*

c) *An exceedance of three or more times a trigger value specified in Item 7(trigger values) at the compliance point;*

d) *A discharge at a point not specified in Item 5;*

e) *A discharge from a source not specified in Item 6; or*

f) *A failure to comply with condition 23.*

TABLE 3 COMPLIANCE POINT AND SSTVS

				Copperfield Creek
	Site Code			PCCK06
Parameter	Abbreviation	Units	Analysis	Trigger value
Environmental Field Data				
pH	pH	pH units	In situ	6.0 – 8.0[1]
Electrical Conductivity	EC	µS/cm		250[3]
Dissolved Oxygen	DO	% saturation		57-120[4]
Turbidity	NTU	NTU		15[3]
Metals and Metalloids				
Aluminium	Al	µg/L	Filtered 0.45 µm	150[4]
Arsenic (total)	As			42[1]
Cadmium	Cd			0.4[1]
Cobalt	Co			1.4[2]
Copper	Cu			1.8[1]
Iron	Fe			830[4]
Lead	Pb			5.6[1]
Manganese	Mn			2500[1]
Nickel	Ni			13[1]
Zinc	Zn			15[1]
Major Chemistry				
Total Suspended Solids	TSS	mg/L	Unfiltered	20[3]

µS/cm = microSiemens per centimetre, µg/L = micrograms per litre, mg/L = milligrams per litre

[1]ANZG (2018) 90% species protection, freshwater.
[2]ANZG (2018) interim trigger value.
[3]ANZECC (2000) default trigger values for slightly disturbed ecosystems in lowland rivers within tropical Australia.
[4] 80th percentile of background data for surface water at PCCK16.

2.3 Monitoring Program

Water quality results of these monitoring programs are used to understand the influence of treated mine water discharge from the project area to the receiving environment in Copperfield Creek. The results of the monitoring programs assist in identifying trends and assess the success of the various surface water management measures implemented by AENT.

Schedule 1 Item 11 of WDL166-07 outlines AENT's monitoring requirements which can be found below.

Schedule 1 Item 11. Monitoring Program

The Monitoring Program includes:

(a) Surface water monitoring in accordance with Appendix 3 in WDL166-07;

(b) Sediment monitoring in accordance with Appendix 4; and

(c) Biota monitoring in accordance with Appendix 5.

2.4 Mine Affected Water Sources

Figure 2 illustrates legacy infrastructure associated with historical mining activity including waste rock dumps (WRDs) and tailing storage facilities (TSF). Figure 3 shows the conceptual model of water movement within the PCPA, highlighting PCPWD is the primary catchment of elevated concentrations of metals through seepage and surface water runoff from the main WRD located at the north-western corner of the dam and the TSF. The primary source (main WRD) contributes 95% of the total metal concentrations into PCPWD whilst 5% is contributed via the secondary source (eastern side of TSF).

Hydrological analysis estimates that WRD seepage alone contributes approximately 2000-2500ML of highly acidic water under average annual rainfall to the system, which reduces the PCPWD water to a highly acidic pH of 3.0 to 4.0.

This legacy acidic leaching results in elevated dissolved metal loads. Exceedances at PCCK06 are predominantly linked to dissolved zinc, but also include dissolved cobalt, cadmium, copper, nickel, turbidity, and electrical conductivity.

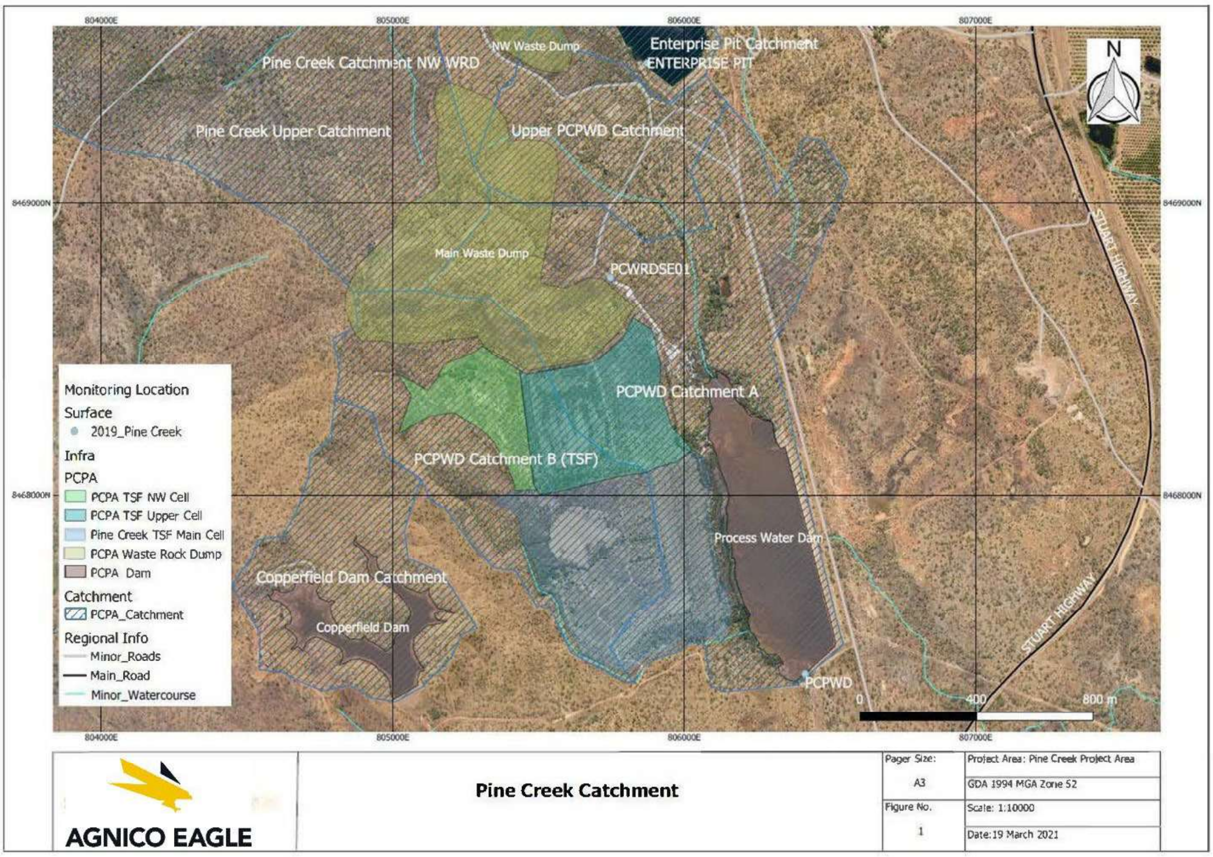

FIGURE 2 PROCESS WATER DAM CATCHMENT

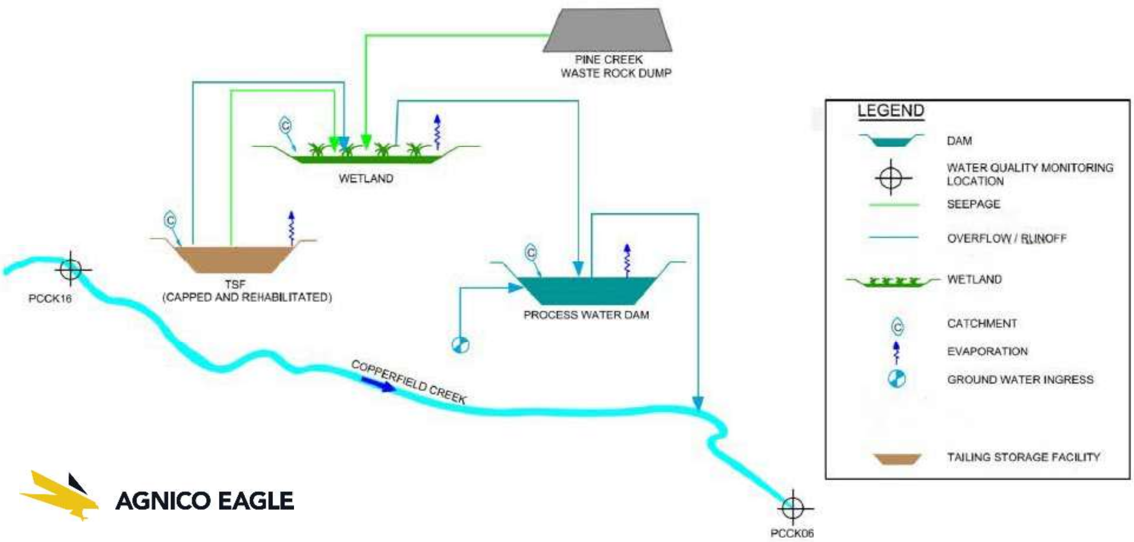

FIGURE 3 PINE CREEK PROJECT AREA WATER MANAGEMENT SCHEMATIC

3. MONITORING RESULTS

3.1 Authorised Discharge Summary

Table 4 details the authorised discharges from PCPWD into the receiving waters at Copperfield Creek for the reporting period. During this time, approximately 2455.24 ML of water was discharged into Copperfield Creek.

TABLE 4 PCPWD AUTHORISED DISCHARGE SUMMARY

Release ID	Release start	Release End	Total Release (ML)
1	20/12/24	26/12/24	171.4
2	06/01/25	06/01/25	5.5
3	08/01/25	08/01/25	5.5
4	06/02/2025	07/02/2025	42.4
5	10/02/2025	22/02/2025	1391.4
6	26/02/2025	28/02/2025	76.9
7	11/03/2025	14/03/2025	120.9
8	22/03/2025	31/03/2025	358.5
9	08/04/2025	12/04/2025	282.8

3.2 Water Treatment

During the reporting period, water generated on-site was treated with Milk of Lime in PCPWD. A total of 2,000 kilo litres of Milk of Lime was used between the 13th of January to the 9th May in 2025.

3.3 Rainfall

The Copperfield Creek catchment is characterised by a monsoonal climate regime, with clearly defined wet and dry seasons. These climatic conditions significantly influence the natural environment in the vicinity around the project area. During the dry season months, the PCCK06 compliance point in Copperfield Creek began to flow in early December 2024. A total of 1,458.4 mm of rainfall was captured from the Wandie Creek Station (014224) during the reporting period. Figure 4 presents rainfall for 2024-25 reporting period, against the 2023-24 reporting period and the mean rainfall from 1983 to 2025.

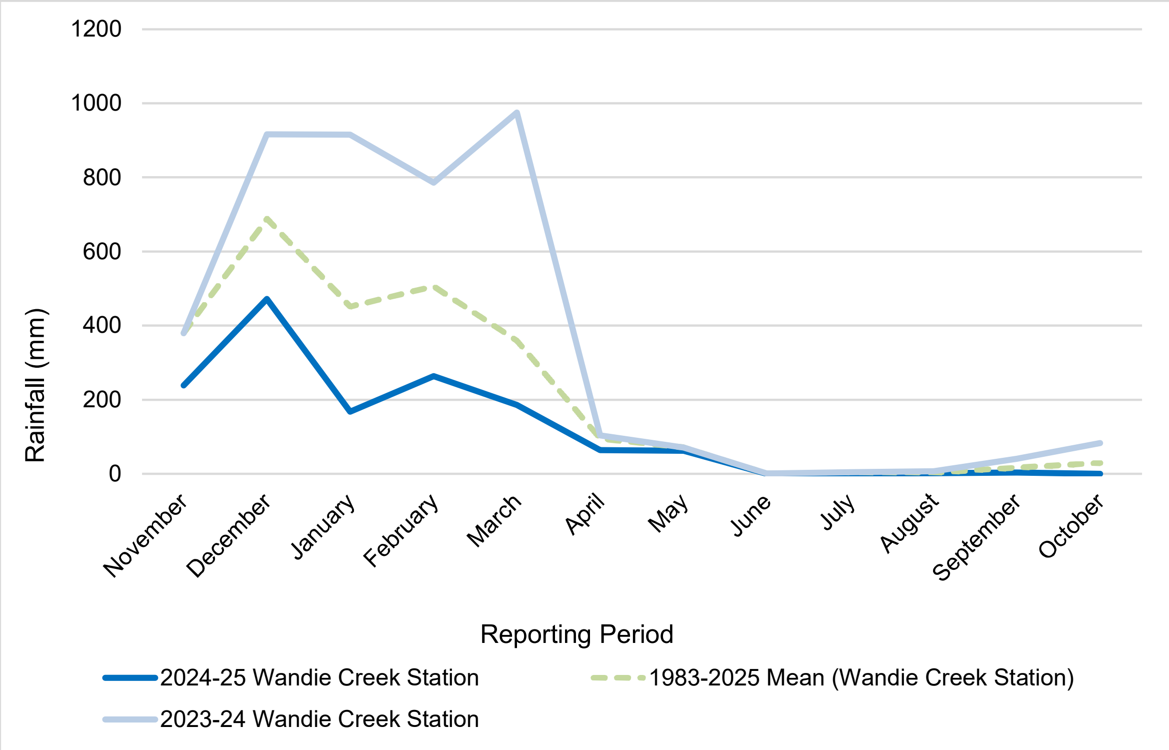

FIGURE 4 PINE CREEK PROJECT AREA RAINFALL

3.4 Contaminant Loads

The contaminant loading estimates presented in Table 5 include annual data from authorised discharge point PCPWD for the reporting period. The contaminant loads have been calculated based on daily discharge volumes and concentrations of contaminants present in the discharge. For days when samples were not taken, concentrations were estimated using linear interpolation methodology. This approach ensures a comprehensive assessment of the contaminant loads, accounting for natural variability and measurement limitations. The detailed calculations and supporting data are presented in Attachment B.

TABLE 5 ESTIMATED CONTAMINANT LOADS FROM PCPWD

Parameter	Unit	PCPWD
Authorised Discharge Volumes	ML	2455.24
Dissolved Al	kg	1705.9
Total As	kg	21.6
Dissolved Cd	kg	59.6
Dissolved Co	kg	942.9
Dissolved Cu	kg	122.8
Dissolved Fe	kg	437.1
Dissolved Pb	kg	9.5
Dissolved Mn	kg	17549.7
Dissolved Ni	kg	499.8
Dissolved Zn	kg	42872.1
TSS	tonne	32.3
Bicarbonate	tonne	19.7
Carbonate	tonne	6.1
Ca	tonne	95.5
Mg	tonne	175.0
K	tonne	10.1
Na	tonne	101.7
Cl	tonne	17.0
SO4	tonne	1223.3

3.5 Tabulation of Monitoring Data

The PCPA raw data can be found in Attachment A.

3.6 Copperfield Creek Catchment Surface Water Quality

Surface water quality data was collected from authorised discharge point PCPWD, environmental monitoring points PCCK06, PCCK22 and compliance point PCCK06. During this reporting period, only the authorised discharge point PCPWD was utilised.

Water quality results are included in the tables and figures below. Water quality data has been separated by catchment and monitoring site. Trigger values were assessed for each monitoring event at the compliance point, with median exceedances primarily highlighted. Median concentrations were used to represent central tendency because water chemistry data are commonly skewed and may contain occasional elevated results. Unlike the arithmetic mean, the median is less influenced by extreme values and therefore provides a more robust estimate of typical water chemistry condition (Singh, 2013). All other data has been included for comparison purposes.

Monitoring Location PCCK16

The results for PCCK16 are shown Table 6 and Figure 5. All parameters were within their respective trigger values, except for turbidity, where the maximum result (32 NTU) exceeded the PCCK06 TV (15 NTU).

TABLE 6 PCCK16 WATER QUALITY RESULTS 2024-25

Analyte	Units	PCCK06 TV	Count	Minimum	Median	Maximum
Environmental Field Data						
pH	pH units	6.0 – 8.0	18	6.41	6.70	7.54
EC	µS/cm	250[3]	18	29.3	38.9	47.3
Turbidity	NTU	15[3]	18	0.05	8	32
DO	% saturation	57 – 120[4]	18	75.5	91.3	100
Metal and Metalloids						
Al	µg/L	150[4]	18	5	20	100
As (total)		42[1]	18	0.5	0.5	2
Cd		0.4[1]	18	0.05	0.05	0.05
Co		1.4[2]	18	0.5	0.5	0.5
Cu		1.8[1]	18	0.5	0.5	0.5
Fe		830[4]	18	60	190	330
Pb		5.6[1]	18	0.5	0.5	0.5
Mn		2,500[1]	18	2.5	5.5	23
Ni		13[1]	18	0.5	0.5	5
Zn		15[1]	18	0.5	1	9
Major Chemistry						
TSS	mg/L	20[3]	18	5	5	18

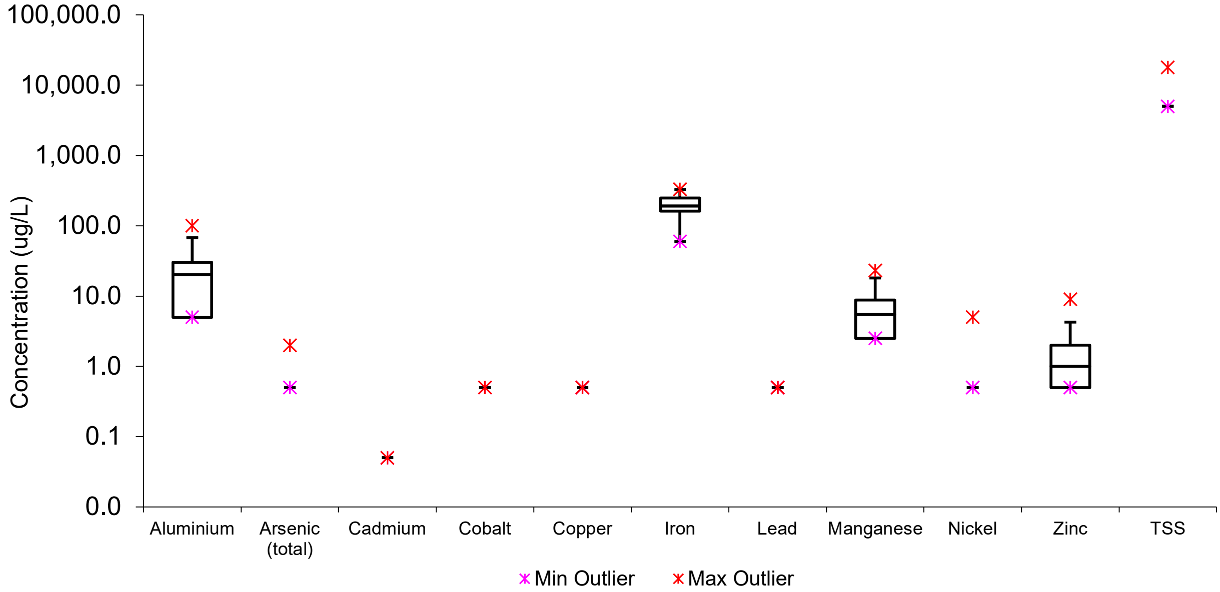

FIGURE 5 PCCK16 METALS, METALLOID AND TOTAL SUSPENDED SOLIDS RESULTS

Monitoring Location PCCK22

The results for PCCK22, as presented in Table 7, indicated the maximum value of pH (8.05 pH units) slightly exceeded the PCCK06 TV (8.0 pH units). The maximum turbidity (91 NTU) exceeded the PCCK06 TV (15 NTU). The median zinc result (50 µg/L) exceeded the PCCK06 TV (15 µg/L). The maximum value (79 mg/L) of TSS exceeded the PCCK06 TV (20 mg/L), however Figure 6 showed it was an outlier.

TABLE 7 PCCK22 WATER QUALITY RESULTS 2024-25

Analyte	Units	PCCK06 TV	Count	Minimum	Median	Maximum
Environmental Field Data						
pH	pH units	6.0 – 8.0	18	6.34	6.77	8.05
EC	µS/cm	250[3]	18	29.9	57.3	125.1
Turbidity	NTU	15[3]	18	1.9	14	91
DO	% saturation	57 – 120[4]	18	70.6	98.9	113
Metal and Metalloids						
Al	µg/L	150[4]	18	5	20	130
As (total)	µg/L	42[1]	18	0.5	0.5	1
Cd	µg/L	0.4[1]	18	0.05	0.05	0.3
Co	µg/L	1.4[2]	18	0.5	0.5	0.5
Cu	µg/L	1.8[1]	18	0.5	0.5	0.5
Fe	µg/L	830[4]	18	30	100	210
Pb	µg/L	5.6[1]	18	0.5	0.5	0.5
Mn	µg/L	2,500[1]	18	6	39.5	84
Ni	µg/L	13[1]	18	0.5	0.5	10
Zn	µg/L	15[1]	18	8	50	390
Major Chemistry						
TSS	mg/L	20[3]	18	5	8.5	79

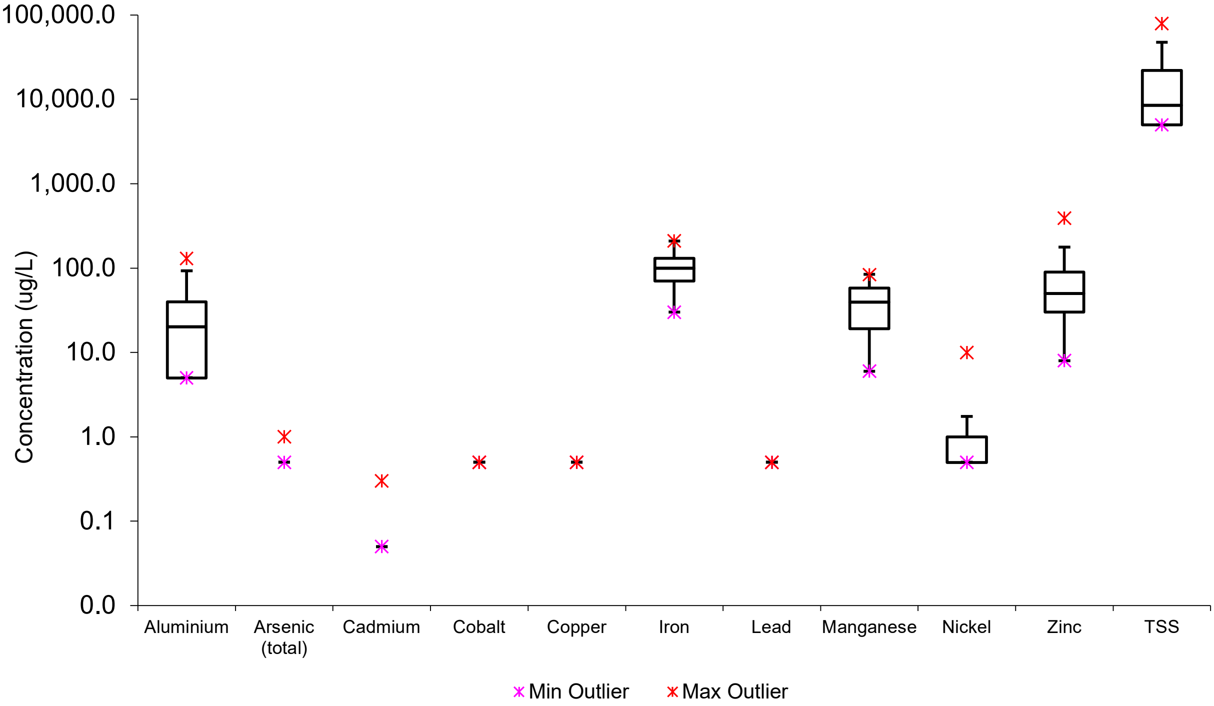

FIGURE 6 PCCK22 METALS, METALLOID AND TOTAL SUSPENDED SOLIDS RESULTS

Authorised Discharge Location PCPWD

Table 8 presents the water quality results for PCPWD. The minimum (4.28 pH units) and median (5.01 pH units) concentration of pH were below the lower PCCK06 TV (6.0 pH units). All electrical conductivity measurements exceeded the PCCK06 TV (250 µS/cm). The maximum value of turbidity (16 NTU) slightly exceeded the PCCK06 TV (15 NTU). The minimum concentrations for cadmium (10µg/L), cobalt (140µg/L), manganese (3600 µg/L), nickel (51 µg/L) and zinc (2400 µg/L) exceeded the PCCK06 TV (0.4 µg/L, 1.4 µg/L, 2500 µg/L, 13 µg/L and 15 µg/L). The median concentration of aluminium (920 µg/L) and copper (56 µg/L) remained above the PCCK06 TV (150 µg/L and 1.8 µg/L). The maximum concentration of iron (1700 µg/L) and lead (11 µg/L) exceeded the PCCK06 TV (830 µg/L and 5.6 µg/L), however Figure 7 showed that the iron value was an outlier. The maximum concentration of TSS (25 mg/L) slightly exceeded the PCCK06 TV (20 mg/L).

TABLE 8 PCPWD WATER QUALITY RESULTS 2024-25

Analyte	Units	PCCK06 TV	Count	Minimum	Median	Maximum
Environmental Field Data						
pH	pH units	6.0 – 8.0	22	4.28	5.01	6.67
EC	µS/cm	250[3]	22	485.4	1398	2987
Turbidity	NTU	15[3]	21	0.05	1	16
DO	% saturation	57 – 120[4]	22	47.30	98.35	114.8
Metals and Metalloids						
Al	µg/L	150[4]	21	5	920	2600
As (total)		42[1]	21	3	9	32
Cd		0.4[1]	21	10	25	48
Co		1.4[2]	21	140	390	1100
Cu		1.8[1]	21	1.6	56	110
Fe		830[4]	21	5	60	1700
Pb		5.6[1]	21	0.5	5	11
Mn		2,500[1]	21	3600	8100	35000
Ni		13[1]	21	51	220	760
Zn		15[1]	21	2400	19000	64000
Major Chemistry						
TSS	mg/L	20[3]	21	5	5	25

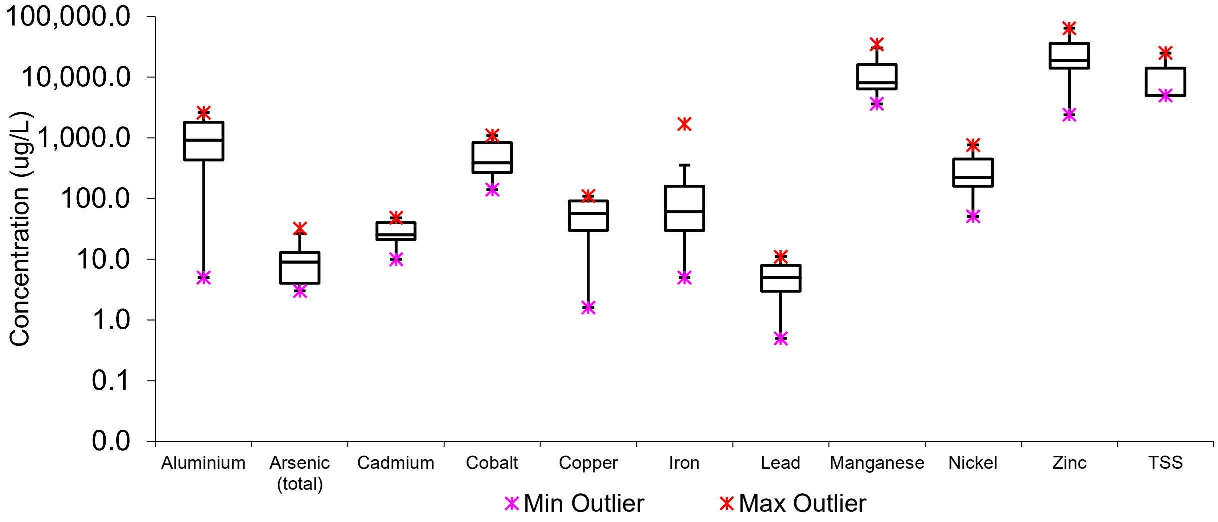

FIGURE 7 PCPWD METALS, METALLOID AND TOTAL SUSPENDED SOLIDS RESULTS

Compliance Location PCCK06

One sampling event scheduled for 29 January 2025 was undertaken however due to the absence of sufficient observable flow and water at the compliance point, no sample was collected (Attachment A).

The PCCK06 results were shown in Table 9. Maximum field concentrations that exceeded PCCK06 trigger values were observed for electrical conductivity (285.6 µS/cm; TV: 250 µS/cm) and turbidity (25 NTU; TV: 15 NTU). Cobalt had a median concentration (2 µg/L) that exceeded the PCCK06 TV (1.4 µg/L), while Figure 8 revealed that the maximum concentration (57 µg/L) was an outlier. Cadmium, copper and nickel had maximum concentrations (3.8 µg/L, 4.1 µg/L, 32 µg/L) that exceeded the PCCK06 TV (0.4 µg/L, 1.8 µg/L and 13 µg/L), these values were also outliers. All zinc concentrations exceeded the PCCK06 TV (15 µg/L). The maximum concentration of TSS (40 mg/L) exceeded the PCCK06 TV (20 mg/L), however this result was an outlier.

TABLE 9 PCCK06 WATER QUALITY RESULTS 2024-25

Analyte	Units	PCCK06 TV	Count	Minimum	Median	Maximum
Environmental Field Data						
pH	pH units	6.0 – 8.0	17	6.13	6.5	7.27
EC	µS/cm	250[3]	17	23.5	53.7	285.6
Turbidity	NTU	15[3]	17	2.8	9.1	25
DO	% saturation	57 – 120[4]	17	81.59	92.80	105.1
Metals and Metalloids						
Al	µg/L	150[4]	17	5	10	60
As (total)		42[1]	17	0.5	1	2
Cd		0.4[1]	17	0.05	0.2	3.8
Co		1.4[2]	17	0.5	2	57
Cu		1.8[1]	17	0.5	0.5	4.1
Fe		830[4]	17	20	110	240
Pb		5.6[1]	17	0.5	0.5	0.5
Mn		2,500[1]	17	24	91	1400
Ni		13[1]	17	0.5	2	32
Zn		15[1]	17	23	170	2600
Major Chemistry						
TSS	mg/L	20[3]	17	5	5	40

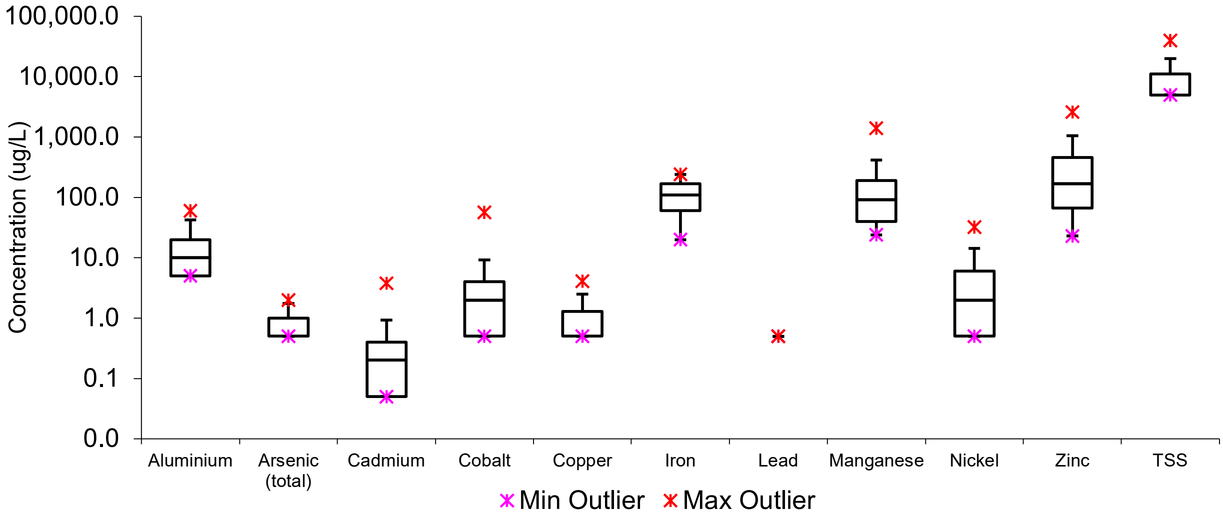

FIGURE 8 PCCK06 METALS, METALLOID AND TOTAL SUSPENDED SOLIDS RESULTS

Copperfield Creek Electrical Conductivity, pH and Turbidity

Figure 9 illustrates the pH variability for all the creek catchments over the reporting period. PCCK06 exhibits pH levels between approximately 6.13 and 7.27 pH units. PCCK06, PCCK16 and PCCK22 display the highest pH level during a period that coincides with dry season. The maximum value of pH at PCCK22 (8.05 pH units) slightly exceeded the PCCK06 TV (8.0 pH units).

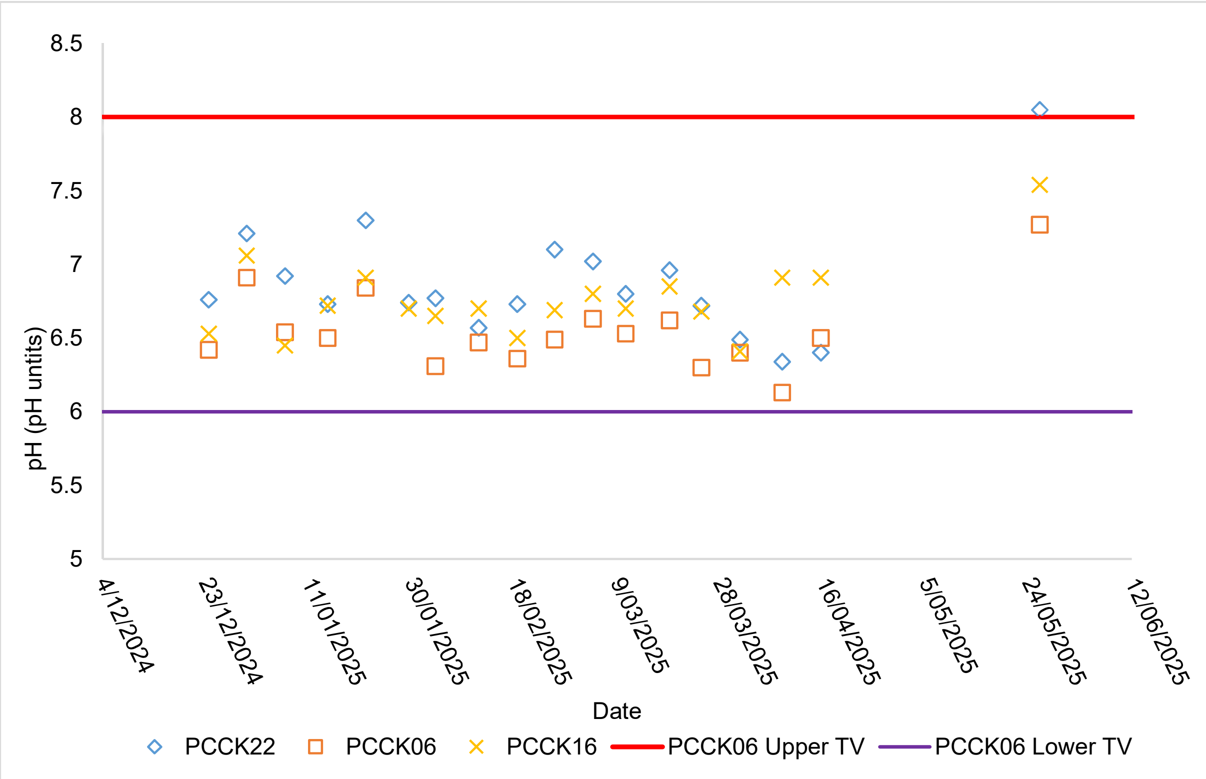

FIGURE 9 PINE CREEK PROJECT AREA CREEK PH FOR 2024-25

Figure 10 illustrates the variability for EC across all creek catchments during the reporting period. PCCK22 and PCCK16 remain below the PCCK06 TV, throughout the reporting period however PCCK06 shows variability throughout the wet season, with one instance above 250 µS/cm.

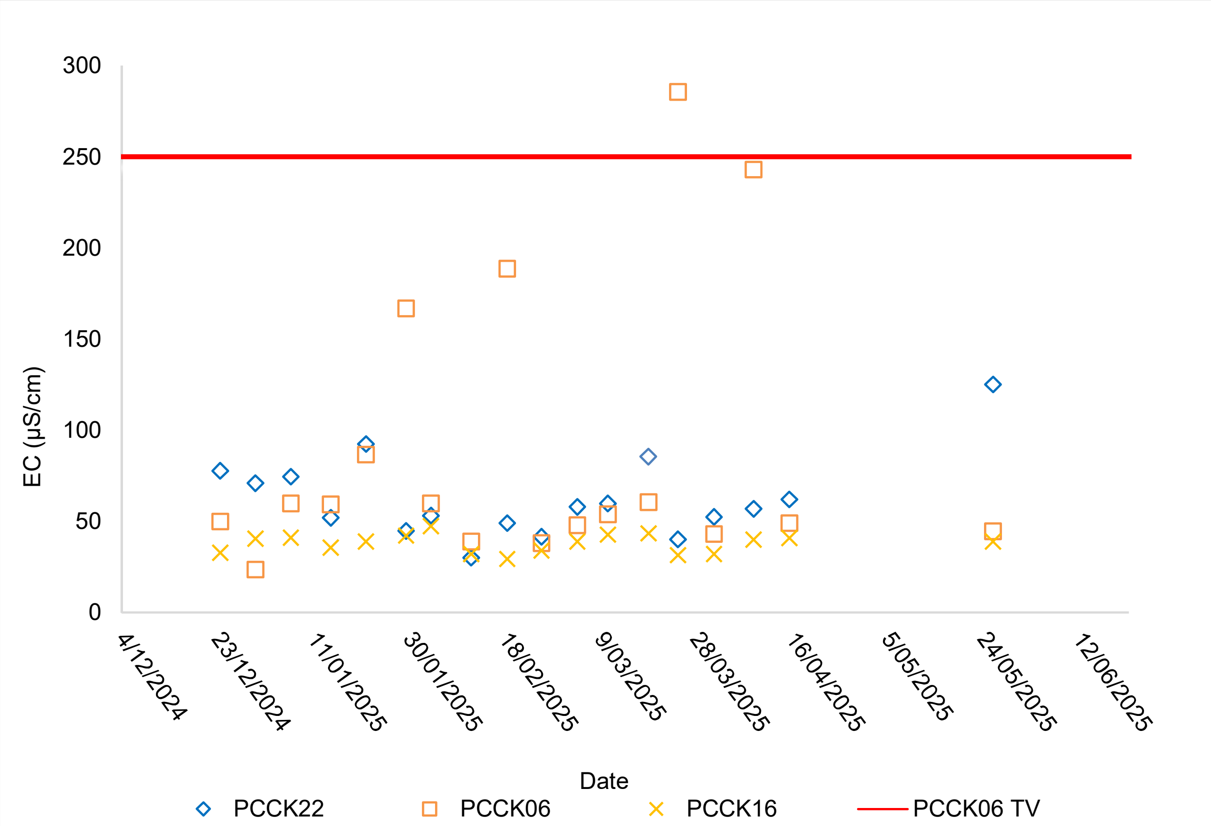

FIGURE 10 PINE CREEK PROJECT AREA CREEK ELECTRICAL CONDUCTIVITY FOR 2024-25

Figure 11 shows turbidity concentrations across the 2024-25 reporting period. PCCK22 has the highest range, from approximately 1.5 to 95 NTU, exceeding the PCCK06 TV between January and April. PCCK06 and PCCK16 exceeded the PCCK06 TV during December, February and March.

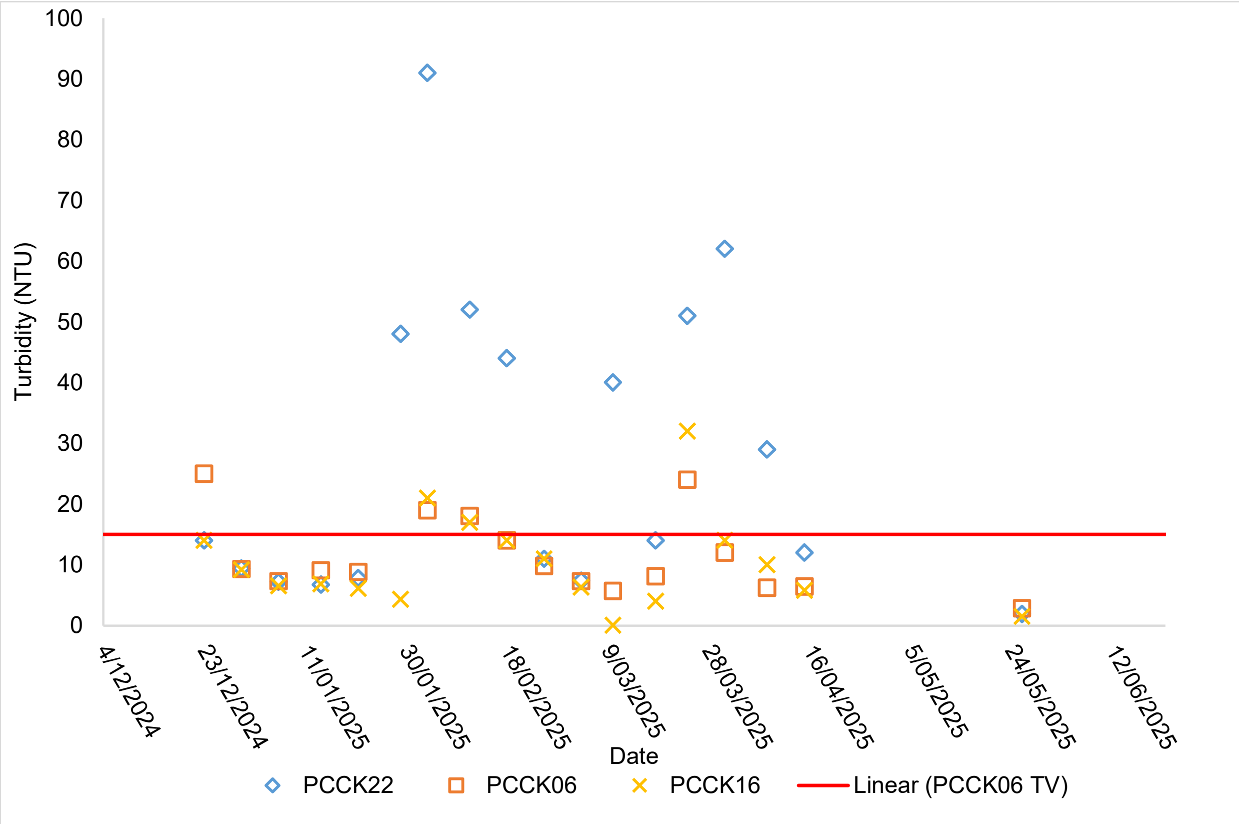

FIGURE 11 PINE CREEK PROJECT AREA CREEK TURBIDITY FOR 2024-15

PCCK06 Long Term Monitoring Data

The long-term water quality for PCCK06, based on median values from the 2018-19 to 2024-25 reporting periods, is summarised in Table 10. Electrical conductivity decreased from 189.5 µS/cm in the 2023-24 reporting period to 53.7 µS/cm this reporting period. In the 2019-20 and 2021-22 reporting periods, turbidity peaked (19.5 NTU, 18 NTU), subsequently exceeding the PCCK06 TV (15 NTU). Since 2021-22, concentrations continued to decline, reaching 9.1 NTU in 2024-25. Arsenic, lead and copper concentrations from 2018 to 2025 remain consistently below the trigger value. While cadmium concentrations exceeded the trigger value in 2023-24, the current reporting period showed concentrations below the trigger value. While manganese remained varied over the years, it consistently stayed below the trigger value. Nickel concentrations exceeded in 2023-24 with a value of 15.5 µg/L, while the 2024-25 value has dropped to 2 µg/L. Zinc concentrations have consistently been above the PCCK06 TV (15 µg/L), however decreased from 1350 µg/L in 2023-24 to 170 µg/L this reporting period. TSS was consistently below the PCCK06 TV (20 mg/L), decreasing from 11.5 mg/L in 2023-24 to 5 mg/L in this reporting period.

TABLE 10 PCCK06 LONG TERM WATER QUALITY RESULTS

Analyte	Units	PCCK06 TV	Median Result						
			2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Environmental Field Data									
pH	pH units	6.0 – 8.0	6.5	6.6	6.6	6.4	7.2	6.4	6.5
EC	µS/cm	250[3]	62.7	63.9	131.7	46.7	191.7	189.5	53.7
Turbidity	NTU	15[3]	9.9	19.5	11	18	13	10.5	9.1
DO	% saturation	57 – 120[4]	69.8	73.0	74.9	78.4	98.3	87.3	92.8
Metals and Metalloids									
Al	µg/L	150[4]	10	30	10	50	10	15	10
As (total)		42[1]	2	2	2	1.5	2	1	1
Cd		0.4[1]	0.05	0.05	0.80	0.05	0.1	1.85	0.2
Co		1.4[2]	0.5	0.5	10	0.5	1.5	15.5	2
Cu		1.8[1]	0.5	0.5	1	0.5	0.5	1.75	0.5
Fe		830[4]	250	290	54	280	60	30	110
Pb		5.6[1]	0.5	0.5	0.0	0.5	0.5	0.5	0.5
Mn		2,500[1]	44.5	30.5	770	28.5	99	580	91
Ni		13[1]	0.5	0.8	11	0.5	3	15.5	2
Zn		15[1]	36	50	750	31	165	1350	170
Major Chemistry									
TSS	mg/L	20[3]	5.0	7.5	0.0	12.5	8	11.5	5.0

3.7 Exceedances

During the reporting period, all water quality results collected at PCCK06 were compared to the relevant trigger values in WDL166-07. Any results beyond the trigger values at these compliance locations were investigated to determine the contributing factors and potential environmental risk. Factors investigated included:

- Whether authorised discharge was occurring at the time;
- Other potential contributions;
- Comparison to water quality results at upstream control site PCCK16.

During the reporting period, there were 41 instances where measured concentrations exceeded the trigger value, as detailed in Table 11. The majority of exceedances were linked to elevated concentrations of dissolved zinc, with additional exceedances observed for dissolved cobalt, dissolved cadmium, dissolved copper, dissolved nickel, turbidity and electrical conductivity.

Figure 3 shows the water pollution pathway for the monitoring locations and compliance points. The primary source of contamination at PCCK06 is PCPWD, which receives surface runoff and seepage from the legacy Main Enterprise WRD (primary source), the TSF, and former heap leach pads. The main WRD is the dominant source of dissolved metal loading, contributing 95% of total mental concentrations entering PCPWD, while the eastern portion of the TSF contributes the remaining 5%.

Hydrological analysis estimates that WRD seepage alone contributes approximately 2000-2500ML of highly acidic water under average annual rainfall to the system, which reduces the PCPWD water to a highly acidic pH of 3.0 to 4.0. This legacy acidic leaching resulting in elevated dissolved metal loads. Exceedances at PCCK06 are predominantly linked to dissolved zinc, but also involve dissolved cobalt, cadmium, copper, nickel, turbidity, and electrical conductivity.

Samples taken during periods when no discharge was occurring, generally resulted in fewer trigger value exceedances. During periods of authorised discharge, higher concentrations of cobalt, copper, turbidity, nickel and cadmium were recorded, reflecting the influence of AMD-affected water stored within the PCPWD. Exceedances may be intensified during periods of low flow in Copperfield Creek, when evaporative losses and reduced surface water inflows limit natural dilution. Under these conditions, residual metals from previous releases can become increasingly concentrated as they move through the system.

There were 25 notifiable events amongst the total exceedances. In accordance with Schedule 1 Item 10 of the WDL, any water quality results that triggered a notifiable incident required formal notification and submission of an investigation report to NT DEPWS. These requirements were met for all 25 notifiable incidents.

TABLE 11 EXCEEDANCE RESULTS AGAINST WDL 166-07 TVS

Date	Analyte Result								Occurred During Authorised Discharge ?	Notifiable Incident Triggered?
Parameter	EC	Cd	Co	Cu	Ni	Zn	TSS	Turbidity		
	μs/m	μg/L	μg/L	μg/L	μg/L	μg/L	mg/L	NTU		
TV	250[3]	0.4[1]	1.4[2]	1.8[1]	13[1]	15[1]	20[3]	15[3]		
23/12/2024	-	-	-	-	-	250	23	25	Yes	Zn notifiable event as per Item 10 (c) emailed on 09/01/2025
30/12/2024	-	-	4	-	-	290	-	-	No	Zn notifiable event as per Item 10 (c) emailed on 09/01/2025
06/01/2025	-	-	2	-	-	170	-	-	Yes	Zn notifiable event as per Item 10 (a) and (c) emailed on 16/01/2025
14/01/2025	-		2	-	-	260	-	-	No	Zn notifiable event as per Item 10 (a) and (c) emailed on 24/01/2025
21/01/2025	-		4	-	-	460	-	-	No	Zn notifiable event as per Item 10 (a) and (c), Co notifiable event as per Item 10 (a) emailed on 03/02/2025
03/02/2025	-	2.1	15	2.5	-	1900	-	-	No	Zn notifiable event as per Item 10 (a) and (c), Cd notifiable event as per Item 10 (c), Co notifiable event as per Item 10 (a) and (c) emailed on 04/03/2025
11/02/2025	-	-	-	-	-	67	-	18	Yes	Zn notifiable event as per Item 10 (a) and (c) emailed on 19/02/2025
19/02/2025	-	2.5	45	3.3	24	2100	-	-	Yes	Cd notifiable event as per Item 10 (c), Co notifiable event as per Item (c), Zn notifiable event as per Item 10 (a) and (c) emailed on 26/02/2025
25/02/2025	-	-	-	-	-	40	-	-	No	Zn notifiable event as per Item 10 (a) emailed on 07/03/2025
04/03/2025	-	-	-	-	-	49	-	-	No	Zn notifiable event as per Item 10 (a) emailed on 12/03/2025
10/03/2025	-	-	-	-	-	84	-	-	No	Zn notifiable event as per Item 10 (a) and (c) emailed on 20/03/2025
18/03/2025	-	-	-	-	-	110	40	-	No	Zn notifiable event as per Item 10 (a) and (c) emailed on 25/03/2025
24/03/2025	285.6	3.8	57	4.1	32	2600	-	24	Yes	Cd notifiable event as per Item 10 (c), Co notifiable event as per Item 10 (c), Zn notifiable event as per Item 10 (a) and (c) emailed on 09/04/2025
31/03/2025	-	-	-	-	-	99	-	-	Yes	Zn notifiable event as per Item 10 (a) and (c) emailed on 14/04/2025
08/04/2025	-	2.6	30	1.9	20	1600	-	-	Yes	Cd notifiable event as per Item 10 (c), Co notifiable event as per Item 10 (c), Zn notifiable event as per Item 10 (a) and (c) emailed on 16/04/2025
15/04/2025	-	-	-	-	-	55	-	-	No	Zn notifiable event as per Item 10 (a) and (c) emailed on 24/04/2025

3.8 Ecotoxicology Results

As outlined in WDL166-07, an annual ecotoxicology program is required to assess the potential impacts of mine wastewater to Copperfield Creek.

To evaluate water quality, screening bioassays were conducted at PCCK06 and PCPWD. Assessments used undiluted water samples from each site and compared the results to controls including PCCK16 and a laboratory water control sample. A result showing greater than 80% successful reproduction or growth in test organisms, relative to the controls indicate no significant toxicity in the tested water.

The cladoceran (*Ceriodaphnia dubia*) was selected for chronic screening due to its known sensitivity to treated mine water, as demonstrated in previous ecotoxicity programs conducted at PCPA.

Results Summary

PCCK06: Cladoceran reproduction and survival rates were 60% and 14%, respectively, indicating chronic and acute toxicity. These results represent a marked improvement compared to the 2024 outcomes, which showed 0% reproduction and survival.

The screening of PCPWD water showed that despite elevated dissolved metals, the EC10 and EC50 results for reproduction and survival were identical to 2024. Furthermore, sensitive cladoceran reproduction bioassays observed no toxicity at zinc concentrations of 220 µg/L and 240 µg/L.

For detailed findings, refer to the Ecotoxicological Report in Appendix 1.

3.9 Macroinvertebrate and Sediment Results

As outlined in WDL166-07, an annual Macroinvertebrate and Sediment program is required to assess the potential impacts of mine wastewater to Copperfield and Pine Creek. AENT engages Aquatic Ecology Services to undertake biological monitoring following the 2024-2025 wet season.

Sediment monitoring results help assist with the interpretation of macroinvertebrate data by providing an integrated assessment of long-term impacts from mine water, while also contributing to identifying any improvements resulting from rehabilitation. Sediment results are compared to available default guideline values (ANZG 2025). Univariate macroinvertebrate indices assessed in the program were relative abundance, taxa richness, PET richness (more sensitive taxa) and SIGNAL-2. An assessment of the differences in community composition was also undertaken (NMDS ordination). In addition, this year, electrofishing was trialled to collect quantitative data to investigate the majority of fish taxa present.

Results Summary

All acid-extractable metal concentrations at PCCK06 were equal to or below the long-term medians, except the nickel concentration. Zinc concentrations were reduced from 2024 levels. At PCCK22, most metal concentrations had reduced to levels similar to those observed at the PCCK16. Water quality at PCCK16, PCCK22, PCPWD and PCCK06 showed pH was neutral.

Although PET richness decreased directly downstream of the PCPA (PCCK06) and was slightly below the long-term median, recovery was observed further downstream in Copperfield Creek at PCCK22 (Figure 7, Appendix 3). Other health metrics (Relative abundance, taxa richness and average SIGNAL-2) were all recorded above the long-term median at the downstream site PCCK06. There were no statistically significant differences between upstream and downstream sites for PET richness in Copperfield Creek in 2025 (Table 11, Appendix 3).

Electrofishing results indicated lower fish species diversity observed at PCCK06, directly downstream of the ADP (Table 7, Appendix 3) when compared to upstream PCCK16. This trend was similar to that recorded in PET richness results.

While one metric sitting slightly below the long-term median in a single year may point to some effect on macroinvertebrates, it should be viewed alongside the broader set of results, which didn’t follow the same trend. Recovery of both fish and macroinvertebrate community results were observed downstream at PCCK22. The reduced PET taxa numbers and fish community results suggest that any biota impacts linked to active discharge from the PCPA were spatially limited close to the authorised discharge point on Copperfield Creek in 2025.

For detailed findings, refer to the Biological and Sediment Monitoring Report in Appendix 3.

4. PERFORMANCE IMPROVEMENT REPORT

To improve the quality of water discharged into Copperfield Creek, AENT continued to implement several management strategies focused on improved water management, water treatment and monitoring during the 2024-25 reporting period.

A sluice gate was installed at the PCPWD in 2024 to enable precise, manual control over discharge events. Discharges are now managed strategically via water height observations, prioritising releases during high creek flow conditions to maximize natural dilution. Over the 2024-25 wet season, all staff completed competency training to ensure correct operation in accordance with site procedures.

A total of 2000 kilo litres of Milk of Lime was dosed between January to May. This interim water treatment was aimed at reducing the zinc levels, which are historically elevated. Water quality results pre- and post-treatment indicated a reduction in zinc concentrations. To further support discharge management algorithms, localised weather tracking is being enhanced via the installation of a new rainfall gauge at Pine Creek Camp and telemetry stations at PCCK06 and PCPWD (slated for November 2025). Preparatory work has commenced, with infrastructure installed to assist collecting localised weather data at PCPA. The results of this improvement are discussed in the 2025-26 WDL report, refer to Appendix 2 for further details.

These measures are intended to improve operational control of discharges, reduce contaminant concentrations in stored water and strengthen site monitoring capabilities, thereby contributing to ongoing improvements in discharge water quality and reducing the risk of future trigger value exceedances.

5. QA/QC EVALUATION

Results presented in this report have been reviewed for data completeness, accuracy, and precision. AENT staff adhere to internal standard operating procedures that support consistent surface water sampling across all operational areas, with appropriate quality assurance and quality control (QA/QC) measures in place. Surface water sampling is conducted as per the guidelines outlined in AS/NZS 5667.1:1998 (Standards Australia/Standards New Zealand, 1998).

The collection and dispatch process for all samples is conducted the same for every surface water sample. This includes the correct labelling of each bottle, including its contents, date, author and location of sample. Samples are kept in a monitored fridge which is set at 4^{o}C, until dispatch which occurs approx. 1-3 days after collection. As samples are dispatched, they are kept in an esky with freezer blocks to obtain a cool environment. All sample results are taken by qualified environmental scientists and results are logged both digitally and manually, these records are kept on file. The water quality probes are calibrated every week before undertaking the sampling round, for each new Project Area visited the probe is recalibrated. The calibration results are set within the standards of solution containers, if the results are not met then the probe is recalculated until the results are within an acceptable range. The results captured are accordance to the standard set out by the WDL.

Where samples could not be collected due to sampling limitations (for example access to a sample site after high rainfall, presence of crocodiles or other hazards), sampling was undertaken in the next possible opportunity by AENT staff. Samples are consistently taken at same sample point as per WDL requirements and samples are dispatched to an external accredited water analysis laboratory.

Envirolab Services undertakes the external water analysis. Envirolab Services has a large NATA scope of accreditation - Accreditation number 2901. AENT receives a certificate of analysis for each set of samples and is reviewed against standards set out in the WDL TVs and uploaded to internal data software INX Inviron.

5.1 Sampling Event Alignment with Discharge

An analysis of the monitoring data for the reporting period confirms that out of the 18 weekly samples collected, 7 coincided with active discharge from the Pine Creek Process Water Dam (PCPWD). This ratio is a direct result of balancing a fixed weekly sampling schedule with the intermittent, weather-dependent nature of our discharge operations.

Fixed Weekly Sampling Constraints: In accordance with the monitoring program under WDL166-07, sampling at compliance point PCCK06 and surrounding locations is conducted on a strict weekly schedule during the wet season. A fixed schedule (e.g., sampling every Tuesday) is standard environmental practice to ensure consistent data intervals, manage personnel logistics, and align with laboratory holding times and courier availabilities.

Intermittent and Controlled Discharge Events: Unlike continuous passive discharges, active discharge from the PCPWD is highly controlled. Following the installation of the sluice gate, AENT manages releases strategically. Discharge is only undertaken when the site water balance dictates it is necessary, and releases are specifically timed to coincide with high-flow events in Copperfield Creek to maximize natural dilution.

Despite this, the monitoring program captured seven sampling events that successfully aligned with active discharge events to provide a statistically significant and representative dataset of the physicochemical conditions and dissolved metal loads entering the receiving environment during release periods. The remaining eleven samples collected during non-discharge periods are equally critical to the monitoring program. They establish the baseline conditions of Copperfield Creek and demonstrate the creek's capacity to flush and recover from elevated metal concentrations between pulsed discharge events. This allows for a comprehensive assessment of cumulative environmental impacts over the wet season.

AENT considers the combination of discharge and non-discharge monitoring datasets to provide a comprehensive assessment of the influence of PCPWD discharges on Copperfield Creek during the reporting period. To further improve alignment between monitoring and discharge events, AENT will review operational procedures and, where safe and practicable, undertake supplementary monitoring during extended discharge events that do not coincide with the routine weekly sampling schedule.

6. DISCUSSION

Monitoring results for Copperfield Creek during the 2024–2025 reporting period provided a comprehensive overview of water discharge, treatment, rainfall and surface water quality. The authorised discharge of 2455.24 ML from PCPWD into Copperfield Creek was managed through nine separate events, with discharge volumes and timing influenced by below average rainfall (1458.4 mm). The installation of a sluice gate at PCPWD improved control of discharge rates and volumes. Additionally, the application of approximately 2000 kilo litres of Milk of Lime for water treatment demonstrated a significant effort to reduce metal concentrations and mitigate environmental impacts.

Surface water quality at upstream reference site PCCK16 remained within PCCK06 trigger values, confirming PCPWD as the primary source of contamination. Downstream site PCCK22 showed fewer PCCK06 TV exceedances, suggesting effective dilution. However, zinc concentrations at PCCK22 remained elevated, highlighting the need for further mitigation. At PCCK06, zinc remained a key concern due to consistent exceedances, however, concentrations decreased compared to the previous year, suggesting the treatment program has a positive effect. Historically elevated zinc concentrations at PCPWD also declined during this reporting period, further supporting the effectiveness of the treatment. Despite the continuation of exceedance events, the severity of the zinc concentrations has markedly decreased. The average dissolved zinc concentration during the January-April 2025 wet season was 577 µg/L, compared to 1,476 µg/L during the same period in 2024. This represents an approximate 60% improvement in compliance water quality year-on-year. The primary driver of non-compliance at PCCK06 remains the legacy Main WRD, which contributes up to 95% of the highly acidic, metalliferous seepage entering the PCPWD.

Ecotoxicology results at PCCK06 showed improved cladoceran survival and reproduction (60% and 14%), when compared to the 2023-24 results. While toxicity was still present, the improvement was attributed to low electrical conductivity. The 2023-24 sample was collected during an active discharge, whereas the 2024-25 sample was taken during no discharge. The screening of PCPWD water showed that despite elevated dissolved metals, the EC10 and EC50 results for reproduction and survival were identical to 2024. Furthermore, sensitive cladoceran reproduction bioassays observed no toxicity at zinc concentrations of 220 µg/L and 240 µg/L.

The 2025 AES report concluded that there are no significant differences in the macroinvertebrate communities between sites upstream and downstream of the PCPA. This indicates that the creek community recovers over a short distance, and the ongoing zinc exceedances at PCCK06 are not translating into downstream ecological degradation. Sediment monitoring results at PCCK06 revealed a nickel exceedance, however, the neural pH observed across all monitoring sites suggested a low risk of nickel becoming bioavailable. Zinc concentrations in sediment declined compared to the 2024 results and were also below the long-term median, indicating a positive response to the treatment. At PCCK22, most sediment metal concentrations reduced to concentrations similar to PCCK16, supporting the conclusion that effective dilution occurred downstream. Macroinvertebrate metrics remained stable at PCCK06, except for PET richness. Electrofishing results highlighted fish biota were more impacted at PCCK06, but fish biota recovered at PCCK22.

The 60% reduction in average zinc concentrations and the preservation of downstream macroinvertebrate health directly validate the effectiveness of our current interim management measures:

- In-Situ Milk of Lime Dosing: Between January and May 2025, 2000 ton of Milk of Lime was manually dosed into the PCPWD. While this batch-treatment method did not entirely eliminate exceedances due to the sheer volume of legacy seepage, it successfully buffered the dam's pH and precipitated enough dissolved zinc to drastically reduce the toxicity of the water prior to release.

- Controlled Sluice Gate Operations: The recent installation of a sluice gate allowed AENT to manually control the 9 authorized discharge events (totalling 2,455 ML) during the 2024-2025 wet season. By restricting discharges to periods of high flow in Copperfield Creek, we maximized natural dilution and minimized the duration of exposure for downstream aquatic receptors.

7. CONCLUSION

The 2024-2025 monitoring period demonstrated measurable progress in environmental management at PCCK06. The influence of discharge on ecological recovery at PCCK06 was investigated through water, sediment and biological monitoring. Although exceedances occurred during the reporting period, the severity of the zinc concentrations has markedly decreased. The average dissolved zinc concentration during the January-April 2025 decreased substantially, reducing by 60%. The implementation of Milk of Lime treatment and sluice gate infrastructure contributed to reductions in dissolved zinc concentrations within both PCPWD and the receiving environment. These improvements were supported by reduced zinc concentrations in sediment and improved ecotoxicology outcomes compared to the previous reporting period.

Ecotoxicology results confirmed environmental conditions at the site are more stable without influences from PCPWD. Sediment and biological monitoring supported the conclusion that impacts are localised near PCPWD, with downstream PCCK22 recovery visible in macroinvertebrate communities. The reduction in zinc concentrations in both water and sediment, alongside cladoceran survival suggest that current treatment effort and partially effective. A key finding from PCCK06 sediment samples, highlighted a reduction in zinc concentrations, suggesting water treatment and sluice gate infrastructure are having a positive effect. While reduced PET richness and fish diversity were observed at PCCK06, recovery of macroinvertebrate and fish communities was evident at PCCK22, indicating that impacts were spatially limited and not apparent throughout the wider Copperfield Creek system.

Currently, the monitoring results indicate that the current management measures are improving discharge quality and reducing environmental risk, although ongoing monitoring and adaptive management strategies remain essential to mitigating elevated metal concentrations and continuous water, sediment and biological monitoring will be critical to confirming long-term trends.

8. REFERENCES

Standards Australia/Standards New Zealand. (1998). *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*. Standards Australia/Standards New Zealand.

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