



ANNEX F1

SURFACE WATER QUALITY MONITORING
RESULTS

TABLE F1.1 SURFACE WATER QUALITY MONITORING RESULTS AT DP3

Date	Time	Weather Condition	Water Appearance	Water Condition	Water Temperature (°C)	Ammoniacal-nitrogen (mg/L)	COD	Suspended Solids (SS) (mg/L)	Remarks
5 Jan 2024	10:00	Sunny	Unable to collect water sample due to insufficient flow						-
2 Feb 2024	10:05	Sunny	Unable to collect water sample due to insufficient flow						-
8 Mar 2024	09:53	Sunny	Unable to collect water sample due to insufficient flow						-
12 Apr 2024	09:42	Sunny	Unable to collect water sample due to insufficient flow						-
6 May 2024	09:48	Sunny	-	-	25.2	1.38	16	3.6	-
16 May 2024	14:30	Unable to collect water sample due to insufficient flow							Repeat measurement
30 May 2024	14:18	Cloudy	Below Limit Level	-	25.0	0.18	-	-	Below Limit Level
12 Jun 2024	09:15	Sunny	Unable to collect water sample due to insufficient flow						-
9 Jul 2024	09:50	Sunny	Unable to collect water sample due to insufficient flow						-
7 Aug 2024	10:20	Sunny	Unable to collect water sample due to insufficient flow						-
11 Sep 2024	11:19	Sunny	Colourless	Clear	29.3	0.07	9	3.1	-
9 Oct 2024	10:00	Cloudy	Unable to collect water sample due to insufficient flow						-
8 Nov 2024	09:37	Sunny	Unable to collect water sample due to insufficient flow						-
3 Dec 2024	09:29	Sunny	Unable to collect water sample due to insufficient flow						-
					Average	0.54	12.5	3.4	-
					Min	0.07	9	3.1	-
					Max	1.38	16	3.6	-

TABLE F1.2 SURFACE WATER QUALITY MONITORING RESULTS AT DP3

Date			6 May 24	30 May 24	30 May 24	11 Sep 24	11 Sep 24
		Limit Level (DP3)	DP3	DP3	DP3 (Duplicate)	DP3	DP3 (Duplicate)
On-site Measurement							
pH Value	pH Unit	6 - 9	8.4	7.6	7.6	8.3	8.3
Electrical Conductivity	µS/cm	-	891	912	910	913	911
Dissolved Oxygen	mg/L	-	7.5	7.4	7.4	7.2	7.6
Volume Discharge	m ³	-	6340	2170	2170	104	104
Laboratory Analysis							
Bicarbonate	mg/L	-	154	-	-	236	235
Carbonate	mg/L	-	6	-	-	<1	<1
Suspended Solids (SS)	mg/L	30	3.6	-	-	3.1	3.9
Ammonia-nitrogen	mg/L	0.5	1.38	0.18	0.16	0.07	0.11
Chloride	mg/L	-	73	-	-	68	66
Nitrite-nitrogen	mg/L	-	0.39	-	-	0.01	0.02
Phosphate	mg/L	5	0.04	-	-	<0.01	<0.01
Sulphate	mg/L	-	134	-	-	143	140
Sulphide	mg/L	2.5	<0.1	-	-	<0.1	<0.1
Total Kjeldahl Nitrogen(TKN)	mg/L	-	2.5	-	-	0.3	0.4

Date			6 May 24	30 May 24	30 May 24	11 Sep 24	11 Sep 24
		Limit Level (DP3)	DP3	DP3	DP3 (Duplicate)	DP3	DP3 (Duplicate)
Nitrate-nitrogen	mg/L	-	2.42	-	-	0.44	0.43
Total Nitrogen(TN)	mg/L	50	5.3	-	-	0.8	0.8
Biochemical Oxygen Demand	mg/L	20	<2	-	-	<2	<2
Chemical Oxygen Demand	mg/L	80	16	-	-	9	8
Oil & Grease	mg/L	20	<5	-	-	<5	<5
Total Organic Carbon	mg/L	-	5	-	-	5	4
Boron	µg/L	1100	160	-	-	280	290
Calcium	mg/L	-	90	-	-	97.7	99.3
Mercury	µg/L	1	<0.20	-	-	<0.20	<0.20
Magnesium	mg/L	-	7.97	-	-	12.1	11.9
Sodium	mg/L	-	57	-	-	63.7	64.6
Iron	mg/L	3	<0.04	-	-	<0.04	<0.04
Potassium	mg/L	-	12.7	-	-	14.4	14.4
Cadmium	µg/L	1	<0.2	-	-	<0.2	<0.2
Chromium	µg/L	300	2	-	-	<1	<1
Copper	µg/L	300	2	-	-	1	1
Lead	µg/L	300	<1	-	-	<1	<1

Date			6 May 24	30 May 24	30 May 24	11 Sep 24	11 Sep 24
		Limit Level (DP3)	DP3	DP3	DP3 (Duplicate)	DP3	DP3 (Duplicate)
Manganese	µg/L	-	6	-	-	15	15
Nickel	µg/L	300	<1	-	-	<1	<1
Zinc	µg/L	-	<10	-	-	<10	<10

TABLE F1.3 SURFACE WATER QUALITY MONITORING RESULTS AT DP4

Date	Time	Weather Condition	Water Appearance	Water Condition	Water Temperature (°C)	Ammoniacal-nitrogen (mg/L)	COD	Suspended Solids (SS) (mg/L)	Remarks
5 Jan 2024	10:16	Sunny	Unable to collect water sample due to insufficient flow						-
2 Feb 2024	10:11	Sunny	Unable to collect water sample due to insufficient flow						-
8 Mar 2024	09:47	Sunny	Unable to collect water sample due to insufficient flow						-
12 Apr 2024	09:46	Sunny	Unable to collect water sample due to insufficient flow						-
6 May 2024	10:06	Sunny	Unable to collect water sample due to insufficient flow						-
12 Jun 2024	10:08	Sunny	Yellowish	Milky	30.4	0.12	7	396	-
24 Jun 2024	14:45	Sunny	Unable to collect water sample due to insufficient flow						Repeat measurement
5 Jul 2024	09:30	Sunny	Unable to collect water sample due to insufficient flow						Repeat measurement
9 Jul 2024	09:55	Sunny	Unable to collect water sample due to insufficient flow						Repeat measurement
18 Jul 2024	13:30	Sunny	Colourless	Clear	32.2	-	-	11.8	Below Limit Level
7 Aug 2024	10:23	Sunny	Unable to collect water sample due to insufficient flow						-
11 Sep 2024	10:47	Sunny	Unable to collect water sample due to insufficient flow						-
9 Oct 2024	09:55	Cloudy	Unable to collect water sample due to insufficient flow						-
8 Nov 2024	09:41	Sunny	Unable to collect water sample due to insufficient flow						-
3 Dec 2024	09:35	Sunny	Unable to collect water sample due to insufficient flow						-
					Average	-	-	203.9	-
					Min	-	-	11.8	-
					Max	-	-	396	-

TABLE F1.4 SURFACE WATER QUALITY MONITORING RESULTS AT DP4

Date			12 Jun 24	18 Jul 24
		Limit Level (DP4 & DP6)	DP4	DP4
On-site Measurement				
pH Value	pH Unit	6 - 9	9.3	8.5
Electrical Conductivity	µS/cm	-	282	282
Dissolved Oxygen	mg/L	-	7	5.9
Volume Discharge	m ³	-	20	20
Bicarbonate	mg/L	-	104	-
Carbonate	mg/L	-	24	-
Suspended Solids (SS)	mg/L	20	395	11.8
Ammonia-nitrogen	mg/L	7.1	0.12	-
Chloride	mg/L	-	28	-
Nitrite-nitrogen	mg/L	-	0.05	-
Phosphate	mg/L	5	<0.01	-
Sulphate	mg/L	-	51	-
Sulphide	mg/L	2.5	<0.1	-
Total Kjeldahl Nitrogen(TKN)	mg/L	-	0.4	-
Nitrate-nitrogen	mg/L	-	0.52	-
Total Nitrogen(TN)	mg/L	50	0.9	-

Date			12 Jun 24	18 Jul 24
		Limit Level (DP4 & DP6)	DP4	DP4
Biochemical Oxygen Demand	mg/L	20	<2	-
Chemical Oxygen Demand	mg/L	30	7	-
Oil & Grease	mg/L	20	<5	-
Total Organic Carbon	mg/L	-	4	-
Boron	µg/L	1100	60	-
Calcium	mg/L	-	29.6	-
Mercury	µg/L	1	<0.20	-
Magnesium	mg/L	-	1.35	-
Sodium	mg/L	-	17.6	-
Iron	mg/L	3	<0.04	-
Potassium	mg/L	-	5.8	-
Cadmium	µg/L	1	<0.2	-
Chromium	µg/L	300	2	-
Copper	µg/L	300	1	-
Lead	µg/L	300	<1	-
Manganese	µg/L	-	<1	-
Nickel	µg/L	300	<1	-
Zinc	µg/L	-	<10	-

TABLE F1.5 SURFACE WATER QUALITY MONITORING RESULTS AT DP6

Date	Time	Weather Condition	Water Appearance	Water Condition	Water Temperature (°C)	Ammoniacal-nitrogen (mg/L)	COD	Suspended Solids (SS) (mg/L)	Remarks
5 Jan 2024	09:55	Sunny	Unable to collect water sample due to insufficient flow						-
2 Feb 2024	10:15	Sunny	Unable to collect water sample due to insufficient flow						-
8 Mar 2024	09:45	Sunny	Unable to collect water sample due to insufficient flow						-
12 Apr 2024	09:52	Sunny	Unable to collect water sample due to insufficient flow						-
6 May 2024	10:13	Sunny	-	-	25.8	0.02	11	22	-
16 May 2024	14:45	Sunny	Unable to collect water sample due to insufficient flow						Repeat measurement
30 May 2024	14:27	Cloudy	-	-	25.1	-	-	34.3	Repeat measurement
5 Jun 2024	14:22	Cloudy	Colourless	Clear	24.8	-	-	5.4	Below Limit Level
12 Jun 2024	10:08	Sunny	Yellowish	Milky	28.2	<0.01	3	10.6	-
9 Jul 2024	10:01	Sunny	Unable to collect water sample due to insufficient flow						-
7 Aug 2024	10:30	Sunny	Unable to collect water sample due to insufficient flow						-
11 Sep 2024	10:54	Sunny	Unable to collect water sample due to insufficient flow						-
9 Oct 2024	09:51	Cloudy	Unable to collect water sample due to insufficient flow						-
8 Nov 2024	09:45	Sunny	Unable to collect water sample due to insufficient flow						-
3 Dec 2024	09:41	Sunny	Unable to collect water sample due to insufficient flow						-
					Average	0.02	7	18.1	-
					Min	<0.01	3	5.4	-
					Max	0.02	11	34.3	-

TABLE F1.6 SURFACE WATER QUALITY MONITORING RESULTS AT DP6

Date			6 May 24	6 May 24	30 May 24	12 Jun 24	12 Jun 24
		Limit Level (DP4 & DP6)	DP6	DP6 (Duplicate)	DP6	DP6	DP6 (Duplicate)
On-site Measurement							
pH Value	pH Unit	6 - 9	7.8	7.8	8.1	7.9	7.9
Electrical Conductivity	µS/cm	-	289	290	313	278	277
Dissolved Oxygen	mg/L	-	6.8	6.9	9.1	8.3	8.3
Volume Discharge	m ³	-	- (a)	- (a)	27	28	28
Laboratory Analysis							
Bicarbonate	mg/L	-	70	71	-	76	75
Carbonate	mg/L	-	<1	<1	-	<1	<1
Suspended Solids (SS)	mg/L	20	22	26.3	34.3	10.6	10.1
Ammonia-nitrogen	mg/L	7.1	0.02	0.02	-	<0.01	<0.01
Chloride	mg/L	-	26	25	-	25	25
Nitrite-nitrogen	mg/L	-	0.03	0.03	-	<0.01	<0.01
Phosphate	mg/L	5	0.01	<0.01	-	<0.01	<0.01
Sulphate	mg/L	-	32	32	-	18	18
Sulphide	mg/L	2.5	<0.1	<0.1	-	<0.1	<0.1
Total Kjeldahl Nitrogen(TKN)	mg/L	-	0.3	0.3	-	<0.1	<0.1

Date			6 May 24	6 May 24	30 May 24	12 Jun 24	12 Jun 24
		Limit Level (DP4 & DP6)	DP6	DP6 (Duplicate)	DP6	DP6	DP6 (Duplicate)
Nitrate-nitrogen	mg/L	-	0.67	0.66	-	0.26	0.26
Total Nitrogen(TN)	mg/L	50	1	1	-	0.3	0.3
Biochemical Oxygen Demand	mg/L	20	<2	<2	-	<2	<2
Chemical Oxygen Demand	mg/L	30	11	10	-	3	3
Oil & Grease	mg/L	20	<5	<5	-	<5	<5
Total Organic Carbon	mg/L	-	2	3	-	2	2
Boron	µg/L	1100	40	40	-	50	50
Calcium	mg/L	-	29.6	30.6	-	30	29.9
Mercury	µg/L	1	<0.20	<0.20	-	<0.20	<0.20
Magnesium	mg/L	-	2.26	2.33	-	1.49	1.49
Sodium	mg/L	-	17.6	19.7	-	17	17
Iron	mg/L	3	<0.04	<0.04	-	<0.04	<0.04
Potassium	mg/L	-	6.93	7.21	-	6.34	6.27
Cadmium	µg/L	1	<0.2	<0.2	-	<0.2	<0.2
Chromium	µg/L	300	<1	<1	-	<1	<1
Copper	µg/L	300	<1	<1	-	<1	<1
Lead	µg/L	300	<1	<1	-	<1	<1

Date			6 May 24	6 May 24	30 May 24	12 Jun 24	12 Jun 24
		Limit Level (DP4 & DP6)	DP6	DP6 (Duplicate)	DP6	DP6	DP6 (Duplicate)
Manganese	µg/L	-	2	6	-	5	4
Nickel	µg/L	300	<1	<1	-	<1	<1
Zinc	µg/L	-	<10	213	-	<10	<10

Note:

(a) The flow meter of DP6 is under maintenance.