Monthly EM&A Report
(March 2022)

Contract No.	**:**	DPW 01/2020
Contract Name	**:**	Environmental Team for Drainage Improvement Works at Ngong Ping (Contract No. DC/2019/06)
Report No.	**:**	0118/20/ED/0458
EP No.	**:**	EP-456/2013/B

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Drainage Services Department
45/F, Revenue Tower,
5 Gloucester Road,
Wan Chai, Hong Kong

Attention: Mr. Dave CHOI (Engineer/ Drainage Projects 14)

13 April 2022

Dear Dave,

Drainage Improvement Works at Ngong Ping
Monthly EM&A Report for March 2022

I refer to the email from the Environmental Team concerning the captioned. I have no adverse comment on the updated Monthly Environmental Monitoring and Audit Report for March 2022 with report number 0118/20/ED/0458 and verify the report according to Conditions 1.9 and 4.4 of Environmental Permit with permit number EP-456/2013/A.

Yours faithfully,

F.C. Tsang
Independent Environmental Checker

cc. ETL – Calvin Leung

Document Control

Document Information

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Client	Drainage Services Department
Client Address	45/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
Client Contact	Mr. Dave Choi

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00	Rev. 0	Rex Chow Tommy Ho	Rex Chow	Calvin M.P. Leung	07 April 2022

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EXECUTIVE SUMMARY

i. This is the 15th monthly EM&A Report which summaries the results and findings of the EM&A programme required for the Project from 1 March to 31 March 2022.

Breaches of Action and Limit Levels

Noise

ii. No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

Water Quality

iii. No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

Complaint log

iv. No Complaint was recorded in the reporting period.

Notifications of Summons and Successful Prosecutions

v. No notifications of Summon and Successful Prosecution was recorded in the reporting period.

Reporting Change

vi. There was no reporting change required in the reporting period.

Future Key Issues

vii. During the next three month reporting period, the principal work activities within the site included:

Portion A

- Receiving Pit excavation
- TBM operation
-

Portion B

- Excavation of box culvert
- Launching pit excavation
- TBM operation

Portion C

- Receiving Pit excavation
- TBM operation

viii. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

1. INTRODUCTION

1.1 Background

1.1.1 To enhance the capacity of the trunk drainage system and reduce the flood risk in Ngong Ping, long term drainage improvement works are proposed to be implemented under "PWP Item No. 4163CD – Drainage Improvement Works at Ngong Ping" (hereafter referred to as "the Project").

1.1.2 The Project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap.499). An Environmental Impact Assessment (EIA) Report together with an Environmental Monitoring and Audit (EM&A) Manual (hereafter referred to as the "approved EM&A Manual") (Register No. AEIAR-169/2013 was prepared for the Project and approved by Environmental Protection Department (EPD) on 21 April 2013. A Variation of an Environmental Permit (Application No. VEP-599/2021) EP-456/2013/B was issued on 26 August 2021 and it is the current permit for the Project. These documents are available through the EIAO Register.

1.1.3 Fugro Technical Services Limited (FTS) has been appointed as the Environmental Team (ET) by Drainage Services Department (DSD) to implement the EM&A programme in accordance with the EP No. EP-456/2013/B and the approved EM&A Manual.

1.1.4 The construction phase and EM&A programme of the Project commenced on 2 January 2021.

1.1.5 This is the 15th monthly EM&A Report which summaries the results and findings of the EM&A programme required for the Project from 1 March to 31 March 2022.

1.2 Project Organization and Management Structure

1.2.1 The environmental Project Organization and Management Structure is shown in Appendix A. The key personnel contact names and numbers are summarized in Table 1.1.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone
Drainage Services Department, HKSAR (DSD)	Engineer	Mr. Dave Choi	2594 7348
Acuity Sustainability Consulting Limited (ASC)	IEC	Mr. F.C. Tsang	2698 8060
Contractor (Ming Hing)	Environmental Officer	Mr. Martin Cheng	9449 8621
Fugro Technical Services Limited (FTS)	ET Leader	Mr. Calvin Leung	3565 4441

1.3 Construction Programme and Activities

1.3.1 The construction phase of the Project under the EP commenced on 2 January 2021.

1.3.2 The construction programme of the Project is shown in Appendix B1.

1.4 Works Undertaken During the Month

1.4.1 During this reporting period, the principal work activities within the site included:

Portion A

- Receiving Pit excavation
- TBM operation
-

Portion B

- Excavation of box culvert
- Launching pit excavation
- TBM operation

Portion C

- Receiving Pit excavation
- TBM operation

1.4.2 Illustrations of works undertaken during the reporting period are shown in Appendix B2.

1.5 Waste Management Status

1.5.1 The amount of wastes generated within the Project during the reporting period is shown in Appendix B4.

2. ENVIRONMENTAL STATUS

EP No. EP-456/2013/B Conditions

2.1.1 Status of EP No. EP-456/2013/B Conditions are summarized in Appendix C1.

Mitigation Measures Implementation

2.1.2 Implementation of environmental mitigation measures are summarized in Appendix C2.

Environmental Licences, Notification and Permits

2.1.3 A summary of the relevant permits, licences and/or notifications on environmental protection for this Contract is presented in Table 2.1.

Table 2.1 Environmental Licences, Notification and Permits Summary

Permit / Notification / License	Ref No	Valid From	Valid Till
Environmental Permit	EP-456/2013/B	26/08/2021	N/A
Notification pursuant to Air Pollution (Construction Dust) Regulation	462432	01/12/2020	N/A
Billing Account	7038098	26/08/2020	N/A
Chemical Waste Producer	5213-941-M2935-04	05/05/2021	N/A

Project Area, Environmental Sensitive Receivers and Locations of Monitoring and Control Stations

2.1.4 Project location, Environmental sensitive receivers and locations of the monitoring and control stations are shown in Figure 1, 2a-2c.

3. SUMMARY OF EM&A REQUIREMENTS

3.1 Monitoring Parameters

3.1.1 Detailed of monitoring parameters are shown in Section 5.3.

3.2 Environmental Quality Performance Limits (Action and Limit Levels)

3.2.1 The monitoring parameters action and limit levels are shown in Appendix D.

3.3 Event and Action Plans

3.3.1 The Event and Action Plans are shown in Appendix E.

3.4 Environmental Mitigation Measures as Recommended in the EIA Report

3.4.1 Implementation of environmental mitigation measures are summarized in Appendix C2.

3.5 Environmental Requirements in Contract Documents

3.5.1 In order to ensure the works are in compliance with the contractual requirements, all method statements of major works should be submitted by the Contractor to the Engineer and the ET for vetting so as to ensure whether sufficient environmental protection and pollution control measures have been incorporated. Detailed ET's vetting contract documents in reporting period are summarized in Table 3.1:

Table 3.1 ET's vetting Contract Documents Summary

ET's vetting Contract Documents	**Status**
NIL	

3.6 Site Inspection

3.6.1 Site inspections should be conducted regularly to ensure that appropriate environmental protection and pollution control mitigation measures are properly implemented for the construction works activities associated with the drainage improvement works at Ngong Ping.

3.6.2 A summary of the ET's site inspection in the reporting period is presented in Table 3.2.

Table 3.2 Site Inspection Date Summary

Inspection Date
Weekly Site Inspection
01/03/2022
08/03/2022
18/03/2022
22/03/2022
29/03/2022
Landscape and Visual
08/03/2022
22/03/2022
Cultural Heritage
29/03/2022
Post-transplantation Works
22/03/2022
Floral Protection Measures
22/03/2022

3.6.3 Detailed site inspections summary is presented in Appendix C3.

3.7 Ecology

3.7.1 The EIA has recommended that an EM&A for ecology is undertaken during the construction and operational / post-construction phases of the project. Certain construction phase mitigation measures and EM&A, such as surveys and subsequent transplantation of floral species would need to be undertaken in the pre-construction phase, or baseline phase of the works.

3.7.2 The construction phase ecological audit is concerned with checking the effectiveness of the implementation of the ecology transplantation/translocation and protection measures, together with auditing the effectiveness of the overall ecological site mitigation.

3.7.3 Refer to the EM&A Manual Table 5.2, the EM&A requirement in construction phase are summarized as below:

~ Weekly audit of Enhancement planting and construction run-off.
~ Monthly audit of the implementation of Floral Protection Plan.
~ Monthly audit of the transplanted species for the first 12 months after the transplantation.
~ Quarterly audit the transplanted species between months 12 to 24 after the transplantation.

3.7.4 A summary of the ET's site inspection in the reporting period is presented in Table 3.2 and the detailed site inspections is presented in Appendix C3.

3.7.5 To avoid uprooting and washing away of remaining transplanted floral species of conservation importance during adverse weather, preventive measure such as enhanced visual checking of the soil stability during advance notice of adverse weather conditions (i.e. Typhoon Signal Nos. 8 to 10 and Black, Red, and Yellow Rainstorm) is recommended.

3.7.6 Implementation of environmental mitigation measures are summarized in Appendix C2.

3.8 Landscape and Visual Impact

3.8.1 The EIA has recommended that EM&A for landscape and visual resources is undertaken during the construction and operational phases of the project. The design, implementation and maintenance of landscape mitigation measures is a key aspect of this and should be checked to ensure that they are fully realised and that potential conflicts between the proposed landscape measures and any other project works and operational requirements are resolved at the earliest possible date and without compromise to the intention of the mitigation measures. In addition, the implementation of the mitigation measures recommended by the EIA will be monitored through the site audit programme.

3.8.2 Site inspections should be undertaken at least once every two weeks throughout the construction period and once every two months during the operational phase.

3.8.3 A summary of the ET's site inspection in the reporting period is presented in Table 3.2 and the detailed site inspections is presented in Appendix C3.

3.8.4 Implementation of environmental mitigation measures are summarized in Appendix C2.

3.9 Cultural Heritage

3.9.1 The EIA has recommended that the EM&A for cultural heritage resources is undertaken during the construction phase of the project. Implementation of the mitigation measures recommended by the EIA will be monitored through the site audit programme.

3.9.2 All measures undertaken by the Contractor during the construction phase in the vicinity of the six heritage resources shall be audited by a qualified building surveyor, as a member of the Environmental Team (ET), on a monthly basis to ensure compliance with the intended aims of the recommended mitigation measures.

3.9.3 A summary of the ET's site inspection in the reporting period is presented in Table 3.2 and the detailed site inspections is presented in Appendix C3.

3.9.4 Crack monitoring devices was installed at NP-10 and NP-11.

3.9.5 Implementation of environmental mitigation measures are summarized in Appendix C2.

3.10 Waste Management

3.10.1 With the proper handling, storage and disposal of wastes arising from the construction works as recommended in the Environmental Mitigation Implementation Schedule in Appendix A of this EM&A Manual, the potential for adverse environmental impacts would be minimised. During site inspections, the Engineer and ET should pay special attention to the issues relating to the waste management and check whether the Contractor has implemented the recommended good site practices and other mitigation measures.

3.10.2 The amount of wastes generated within the Project during the reporting period is shown in Appendix B4.

3.10.3 A summary of the ET's site inspection in the reporting period is presented in Table 3.2 and the detailed site inspections is presented in Appendix C3.

3.10.4 Implementation of environmental mitigation measures are summarized in Appendix C2.

4. IMPLEMENTATION STATUS

4.1.1 The implementation status of environmental protection and pollution control/ mitigation measures as recommended in the EIA report/ EM&A Manual in the reporting period were updated and shown in Appendix C2.

5. MONITORING RESULTS

5.1 Monitoring Methodology

Noise

5.1.1 The monitoring methodology and the QA/QC procedures are as follows:

- The monitoring station will set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground.
- The battery condition will check to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
  - frequency weighting : A
  - time weighting : Fast
  - measurement time : continue 5 minutes interval
- Prior to and after noise measurement, the meter will be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will be considered invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- The wind speed at the monitoring station will check with the portable wind meter. Noise monitoring shall be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s.
- Noise measurement shall be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- The supplementary information for data auditing and statistical results (e.g. L10 and L90), shall be obtained for reference.

Maintenance / Calibration

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory or the manufacturer.

5.1.2 The weather conditions during the reporting period are shown in Appendix J.

Water Quality

5.1.3 In accordance with the recommendations of the EIA, construction phase water quality EM&A is required. Water quality parameters comprising: (i) suspended solids (SS); (ii) turbidity in Nephelometric Turbidity Units (NTU); (iii) dissolved oxygen (DO) in mg/L; and (iv) pH, shall be measured by the Environmental Team (ET) at locations which are within the potential influence of construction works at least three times per week to ensure that any deteriorating water quality could be readily detected and timely action be taken to rectify the situation. The first parameter, SS, shall be determined in the laboratory, with the other parameters measured in-situ using direct reading instrumentation.

5.1.4 In association with the water quality parameter measurements, relevant data shall also be measured, including the monitoring location/position, time, water depth, water temperature, salinity, DO saturation, weather conditions if appropriate, and any special phenomena and work underway at the construction site.

5.1.5 Only one sampling depth will be required for the streams, which shall be collected at mid depth. Replicates (2 samples) in-situ from each independent sampling event are required for all parameters to ensure a robust statistically interpretable data set.

5.1.6 In addition, duplicated water samples for suspended solid analysis shall be collected at all the above stations and delivered to the HOKLAS accredited laboratory for analysis. Results for suspended solids shall be received back from the laboratory within 24hour of the receipt of the samples.

5.1.7 The Impact Monitoring shall be taken at the designated monitoring stations when construction works in the relevant Works Sections, designated working area (WA) and stockpiling area (SA) is ongoing. The monitoring shall be conducted at least 3 times a week and the interval between two sets of monitoring shall not be less than 36 hours. The parameters to be monitored, the monitoring procedures and equipment shall be the same as the Baseline Monitoring. The Impact Monitoring at a particular Works Section shall not be ceased with the ER, IEC and EPD agreement.

5.1.8 The weather conditions during the reporting period are shown in Appendix J.

5.2 Laboratory and Equipment Used and Calibration

Noise

5.2.1 Table 5.1a summarizes the noise monitoring equipment model used for this project.

Table 5.1a Noise Monitoring Equipment

Manufacturer/ Brand	Model	Equipment	Quantity
Casella	CEL-63X Series	Sound Level Meter	1
	CEL-120/1	Sound Calibrator	1

5.2.2 Relevant calibration certificates are provided in Appendix F1.

Water Quality

5.2.3 Analysis of suspended solids was carried out in HOKLAS environmental testing laboratory (Registration No.: HOKLAS 015) to this parameter.

5.2.4 Table 5.1b summarizes the water quality monitoring equipment model used for this project.

Table 5.1b Water Quality Monitoring Equipment

Manufacturer/ Brand	Model	Equipment	Quantity
In-Situ	YSI EXO-3	Multi-parameter Water Quality Meter	2

5.2.5 Relevant calibration certificates are provided in Appendix F2.

5.3 Parameters, Monitoring Date, Time, Frequency and Duration

Noise

5.3.1 Table 5.2 presents the noise monitoring parameters, frequencies and period.

Table 5.2 Monitoring Parameters and Frequencies of Noise Monitoring

Parameter	Frequency and Period
LAeq $_{(30\ min)}$ in normal weekdays and (L_{10} and L_{90} will be recorded for reference)	0700-1900 on normal weekdays at a frequency of once a week

5.3.2 The schedule of noise monitoring in reporting period is provided in Appendix G.

Water Quality

5.3.3 In accordance with the recommendations of the EIA, water quality parameters comprising: (i) suspended solids (SS); (ii) turbidity in Nephelometric Turbidity Units (NTU); (iii) dissolved oxygen (DO) in mg/L; and (iv) pH, shall be measured by the Environmental Team (ET).

5.3.4 In association with the water quality parameter measurements, relevant data shall also be measured, including the monitoring location/position, time, water depth, water temperature, salinity, DO saturation, weather conditions if appropriate, and any special phenomena and work underway at the construction site.

5.3.5 The Impact Monitoring shall be taken at the designated monitoring stations when construction works in the relevant Works Sections, designated working area (WA) and stockpiling area (SA) is ongoing. The monitoring shall be conducted at least 3 times a week and the interval between two sets of monitoring shall not be less than 36 hours. The parameters to be monitored, the monitoring procedures and equipment shall be the same as the Baseline Monitoring. The Impact Monitoring at a particular Works Section shall not be ceased with the ER, IEC and EPD agreement.

5.3.6 The schedule of water quality monitoring in reporting period is provided in Appendix G.

5.4 Monitoring Locations

Noise

5.4.1 The noise monitoring locations are summarised in Table 5.3 and shown in Figure 2a-2b.

Table 5.3 Noise Monitoring Locations and Type of Measurement

NSRs*	Monitoring Location	Type of Measurement#
NSR1	Columbarium of Po Lin Monastery	Free-field
NSR5	Village House No. 49A	Free-field
NSR8	Village House No. 34	Façade

* NSRs: Noise Sensitive Receivers

#For Free-field measurement, +3dB(A) should be added to the measured results.

Water Quality

5.4.2 The water quality monitoring locations are shown in Table 5.4 and Figure 2c.

Table 5.4 Water Quality Monitoring Locations

Station	Type	Easting	Northing	Relevant Works Section*	Remark
WS1-R1	Upstream reference	808664	813130	WS1/SA1	R2 in EIA
WS1-I1	Downstream impact	808535	813094	WS1/SA1	
WS1-R2	Upstream reference	808524	813134	WS1	W2 in EIA
WS1-I2	Downstream impact	808528	813101	WS1	
WS4-R3	Upstream reference	808214	813003	WS4/SA2	
WS4-I3	Downstream impact	808196	813042	WS4/SA2	
WS5-R4	Upstream reference	808096	813076	WS5/SA3	
WS5-I4	Downstream impact	808055	813115	WS5/SA3	
WS6-R5	Upstream reference	807983	813158	WS6/WA3	
WS6-I5	Downstream impact	807919	813155	WS6/WA3	
WS6-C1	Intermediate Control	807813	813214	WS6/SA4	W8 in EIA
WS6-R6	Upstream reference	807727	813249	WS6/WA4	
WS6-I6	Downstream impact	807762	813285	WS6/WA4	W9 in EIA

* Please refer to Figures 2.9a-2.9g of the EIA Report for the relevant Works Section (WS), and/or designated works area (WA) and stockpiling area (SA).

5.5 Results and Observations

Noise

5.5.1 The monitoring data are summarized in Table 5.5. Detailed monitoring data and graphical presentations are shown in Appendix H1.

Table 5.5 Summary of Noise Monitoring Results

NSR	Monitoring Results (Range)[2][3]	Action Level	Limit Level[1]
NSR1 Columbarium of Po Lin Monastery	47.0 - 65.7 dB(A)	When one documented complaint is received.	70 dB(A)
NSR5 Village House No. 49A	53.2 - 59.3 dB(A)		75 dB(A)
NSR8 Village House No. 34	51.4 - 62.7 dB(A)		75 dB(A)

Note:
(1) 75 dB(A) for residential premises and 70 dB(A) for educational institutions, kindergartens, nurseries and all others where voice communication.
(2) $Leq_{(30min)}$ in dB(A), 0700-1900 hrs in normal weekdays.
(3) Free-field correction applied at NSR1 & NSR5.

Water Quality

5.5.2 The monitoring data are summarized in Table 5.6. Detailed monitoring data and graphical presentations are shown in Appendix H2.

Table 5.6 Summary of Water Quality Monitoring Results

Parameter(s) / Station(s)	DO in mg/L			Turbidity in NTU			pH			Suspended Solids in mg/L		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
WS1-R1	8.52	8.52	8.52	2.3	2.3	2.3	6.60	6.60	6.60	1.0	1.0	1.0
WS1-I1	7.60	9.07	8.32	0.50	4.50	2.11	6.80	6.90	6.84	1.00	8.00	2.36
WS1-R2	7.50	9.03	8.28	1.00	4.90	2.36	6.80	7.40	6.95	1.00	9.50	2.04
WS1-I2	8.76	8.76	8.76	1.60	1.60	1.60	6.80	6.80	6.80	1.00	1.00	1.00
WS4-R3												
WS4-I3												
WS5-R4	6.80	9.22	7.82	3.60	63.40	12.71	6.90	7.40	7.10	2.00	18.50	5.45
WS5-I4	6.93	7.67	7.20	5.00	65.80	25.77	6.80	7.10	6.97	4.00	20.50	10.33
WS6-R5	7.03	7.03	7.03	6.80	6.80	6.80	7.00	7.00	7.00	4.00	4.00	4.00
WS6-I5	6.79	6.79	6.79	6.50	6.50	6.50	7.00	7.00	7.00	4.00	4.00	4.00
WS6-C1	5.22	7.44	6.53	1.10	8.90	2.99	5.80	7.20	6.82	1.00	6.50	2.11
WS6-R6	6.71	8.06	7.25	0.60	3.80	2.01	6.70	7.10	6.98	1.00	2.00	1.10
WS6-I6	6.60	8.05	7.04	0.50	3.80	2.01	6.60	7.10	6.89	1.00	2.00	1.28

Remark:
1) Monitoring location dried up and detailed refer to Appendix H2.

Other factor influencing the monitoring results

Noise

5.5.3 There were no other noticeable external factors generally affecting the monitoring results in this reporting period.

Water Quality

5.5.4 The monitoring results may influence by the vicinity of the monitoring station or changes in the ambient conditions (e.g. rainstorms in the wet season).

5.6 Comparisons of Monthly EM&A Data with the EIA Predictions

Noise

5.6.1 The EM&A data was compared with the EIA predictions as summarized in Tables 5.7.

Table 5.7 Comparison of Noise Monitoring Data with EIA Predictions

NSR	Predicted Mitigated Construction Noise Levels (1)		Monitoring Results (Range)		
NSR1 Columbarium of Po Lin Monastery	55 - 70	dB(A)	47.0	- 65.7	dB(A)
NSR5 Village House No. 49A	48 - 86	dB(A)	53.2	- 59.3	dB(A)
NSR8 Village House No. 34	51 - 73	dB(A)	51.4	- 62.7	dB(A)

Note
(1) Predicted Mitigated Construction Noise Levels refer to EIA Report Table 4.11.

5.6.2 The monitoring results in the reporting period in NSR1, NSR5 and NSR8 were within or below the ranges of the predicted mitigated construction noise levels in the EIA Report.

Water Quality

5.6.3 As no water quality prediction in EIA report, the ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

6. NON-COMPLIANCE, COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTION

6.1 Non-compliance (Exceedances)

Noise

6.1.1 No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

Water Quality

6.1.2 No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

6.2 Complaints Received

6.2.1 No complaints, were received in the reporting period.

6.3 Notification of Summons and Successful Prosecution

6.3.1 No notification of summons or successful prosecutions were received in the reporting period.

6.3.2 The Cumulative exceedances, complaint log, notification of summons and successful prosecutions are presented in Appendix I.

7. FUTURE KEY ISSUES

7.1 Construction Works for Next Three Month

7.1.1 During the next three month reporting period, the principal work activities within the site included:

Portion A
- Receiving Pit excavation
- TBM operation

Portion B
- Excavation of box culvert
- Launching pit excavation
- TBM operation

Portion C
- Receiving Pit excavation
- TBM operation

7.1.2 The anticipated impact of principal work activities within the site and the recommended mitigation measures are shown in Appendix B3.

7.2 Monitoring Schedules for Next Three Month

7.2.1 The tentative schedules for environmental monitoring for next three month are provided in Appendix G.

8. COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

Effectiveness and Efficiency of Mitigation Measures

8.1.1 The regularly site inspections and environmental impact monitoring ensured that all the environmental mitigation measures recommended in EM&A Manual were effectively implemented. Despite the deficiencies found during site audits, the Contractor had taken appropriate actions to rectify deficiencies within a reasonable timeframe, and no exceedance related to the project was observed. Therefore, the effectiveness and efficiency of the mitigation measures were considered satisfactory for most of the time.

Improvement in the EM&A Programme

8.1.2 The EM&A programme was considered successfully and adequately conducted in the reporting period.

Conclusions

8.1.3 This is the 15th monthly EM&A Report which summaries the results and findings of the EM&A programme required for the Project from 1 March and 31 March 2022.

Noise

8.1.4 No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

Water Quality

8.1.5 No Action or Limit Level Exceedance of monitoring was recorded in the reporting period.

Complaint, Notifications of Summons and Successful Prosecutions

8.1.6 No complaints were received in the reporting period.

8.1.7 No notification of summons or successful prosecutions were received in the reporting period.

8.1.8 There was no reporting change required in the reporting period.

8.1.9 Potential environmental impacts due to the construction activities will be monitored or reviewed. The ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

Figure 1 Project Location

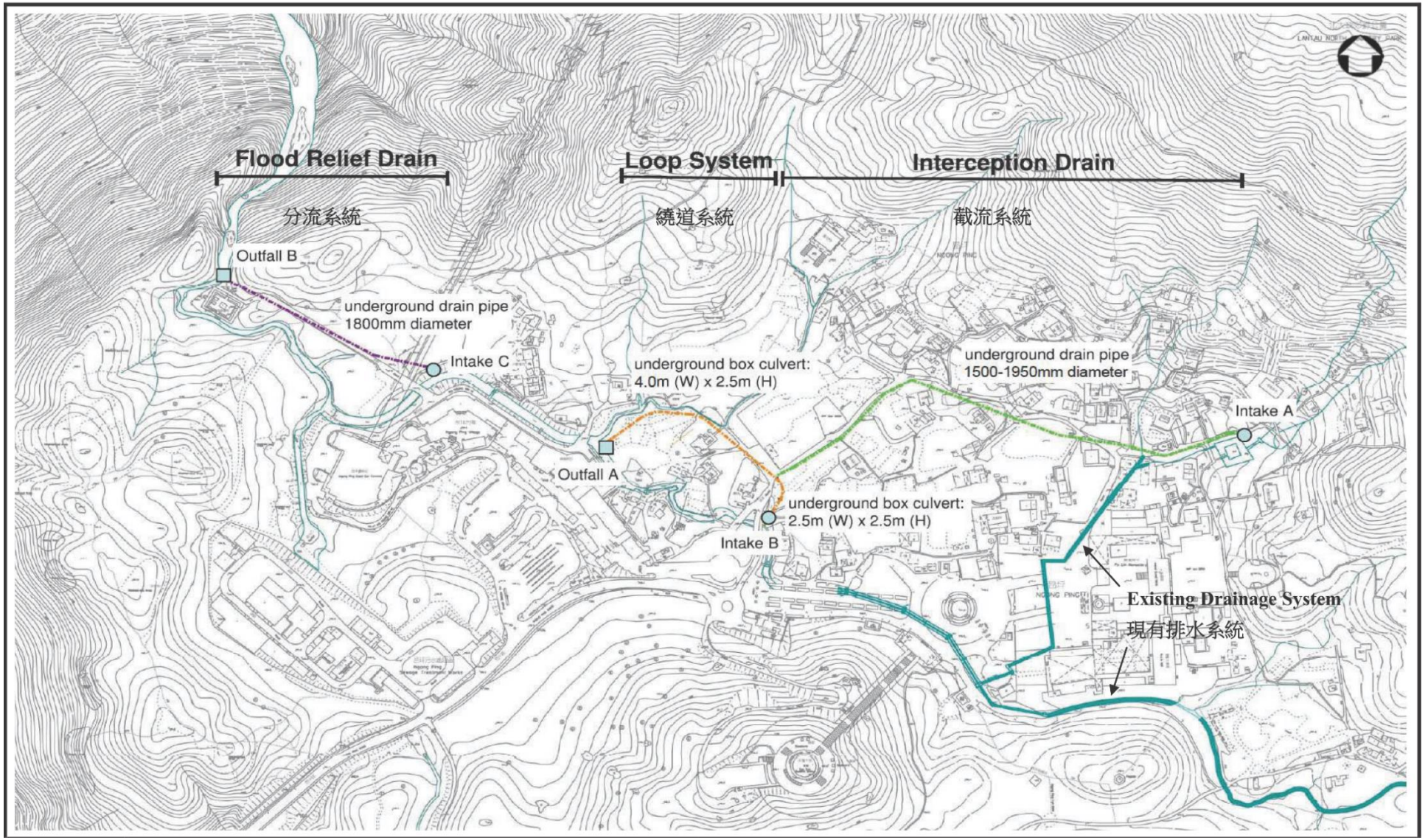


Figure 2a Noise Monitoring Locations (Part 1)

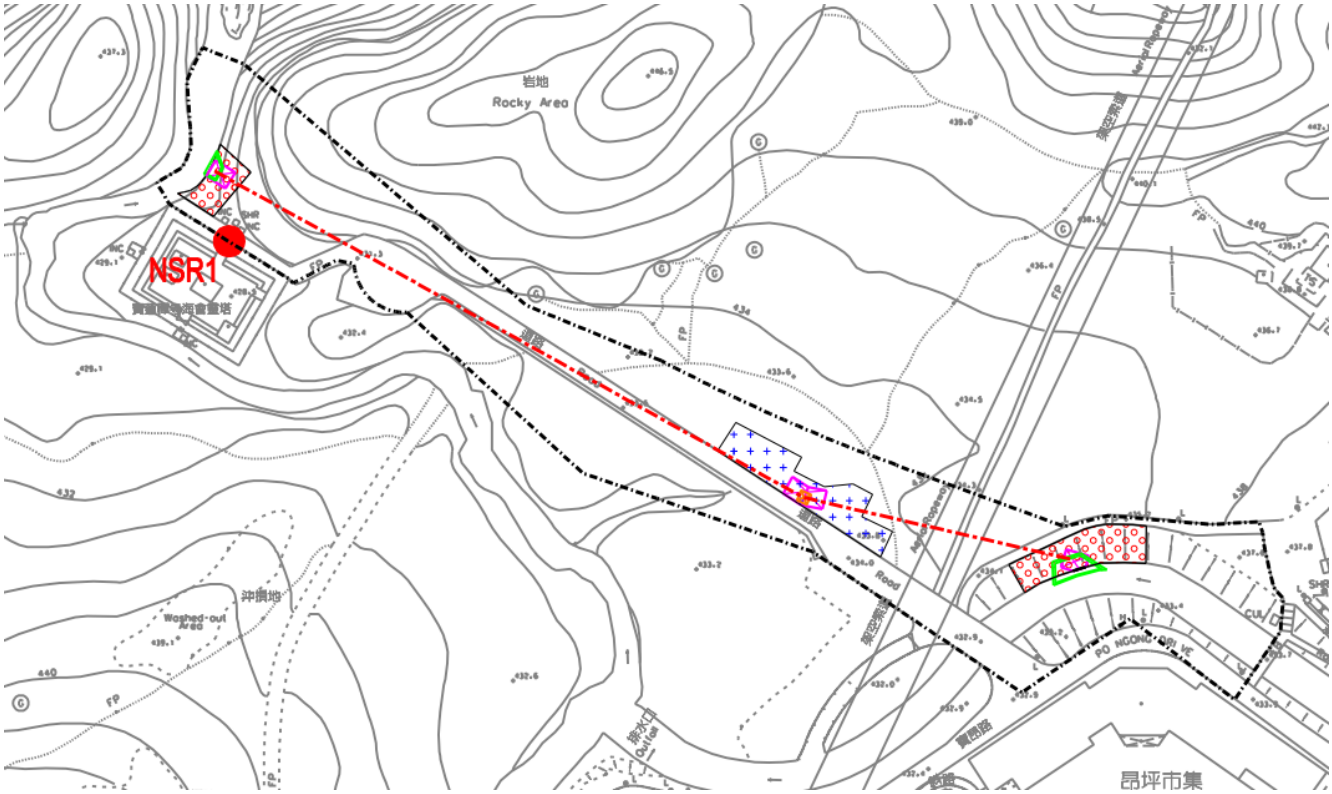
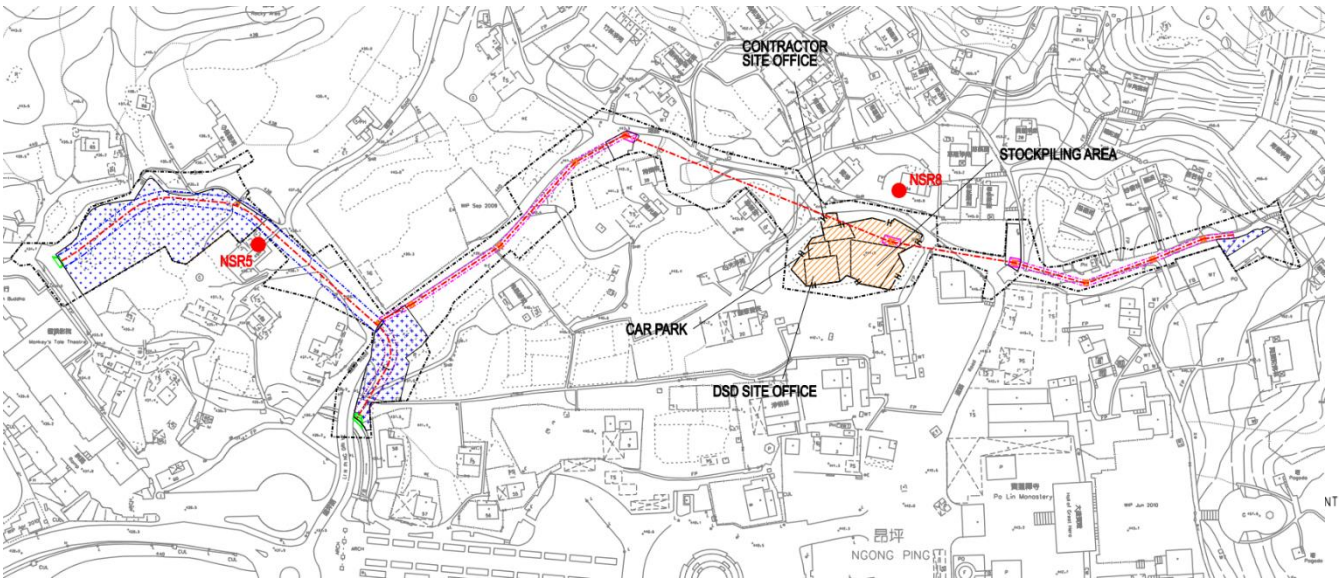


Figure 2b Noise Monitoring Locations (Part 2)

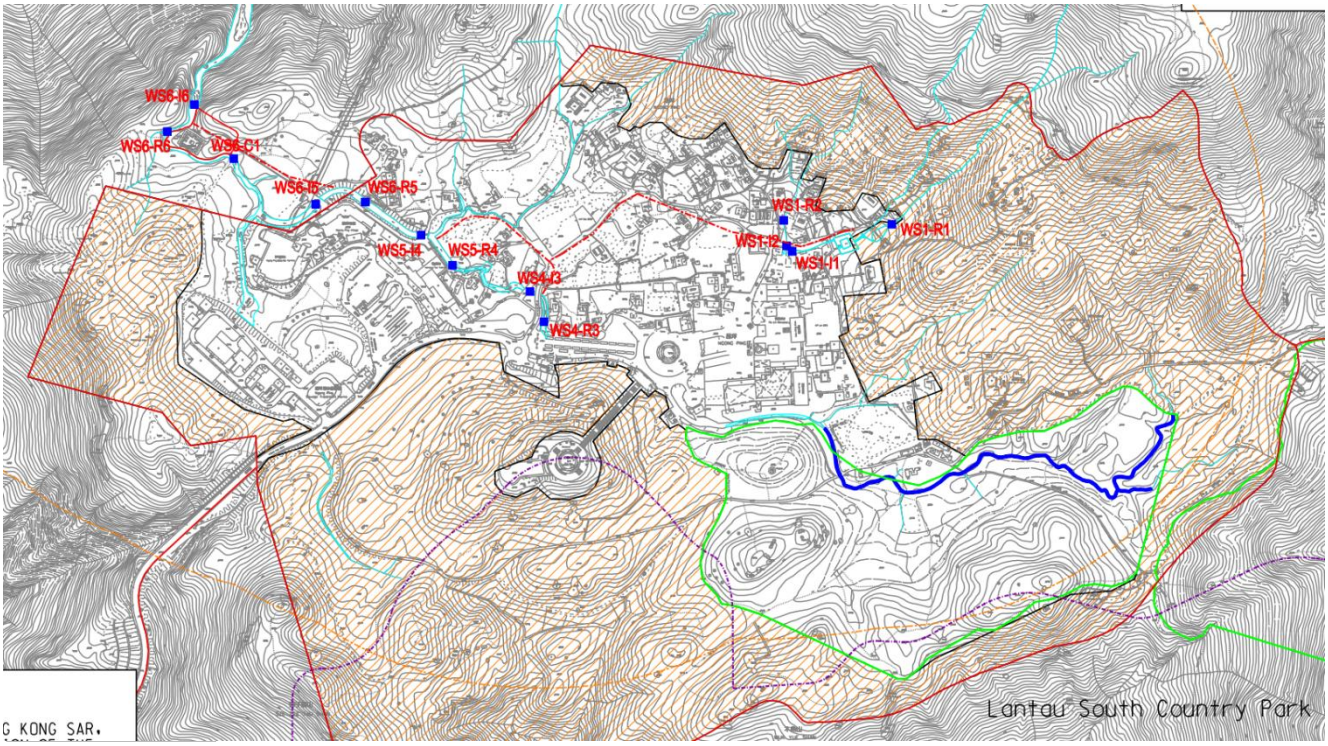


NSRs*	Monitoring Location	Type of Measurement#
NSR1	Columbarium of Po Lin Monastery	Free-field
NSR5	Village House No. 49A	Free-field
NSR8	Village House No. 34	Façade

* NSRs: Noise Sensitive Receivers

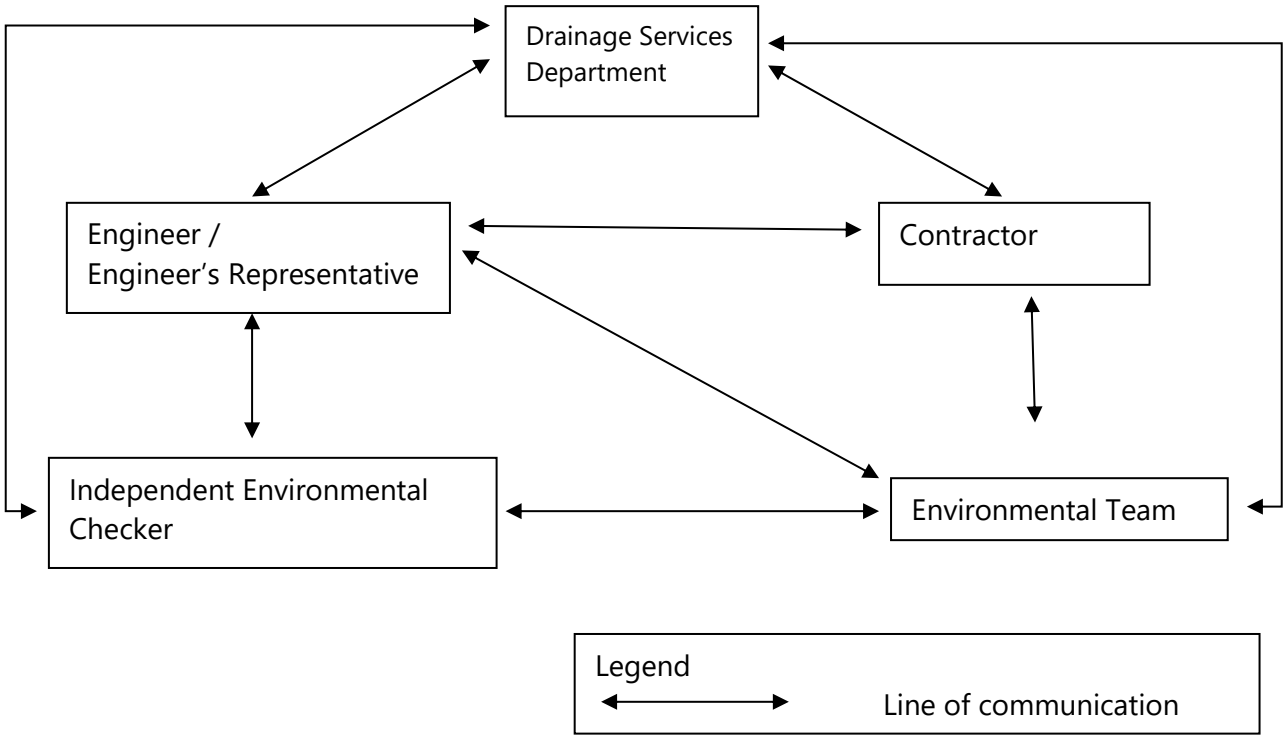
\# For Free-field measurement, +3dB(A) should be added to the measured results.

Figure 2c Water Quality Monitoring Locations



Station	Type
WS1-R1	Upstream reference
WS1-I1	Downstream impact
WS1-R2	Upstream reference
WS1-I2	Downstream impact
WS4-R3	Upstream reference
WS4-I3	Downstream impact
WS5-R4	Upstream reference
WS5-I4	Downstream impact
WS6-R5	Upstream reference
WS6-I5	Downstream impact
WS6-C1	Intermediate Control
WS6-R6	Upstream reference
WS6-I6	Downstream impact

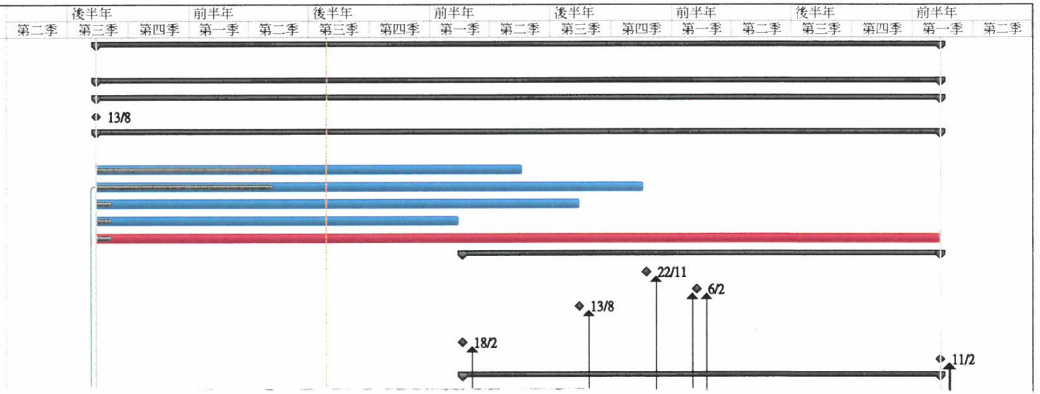
Appendix A Project Organization and Management Structure



Note: Detailed key personnel contact names and telephone numbers refer to Table 1.1.

Appendix B1 Construction Programme

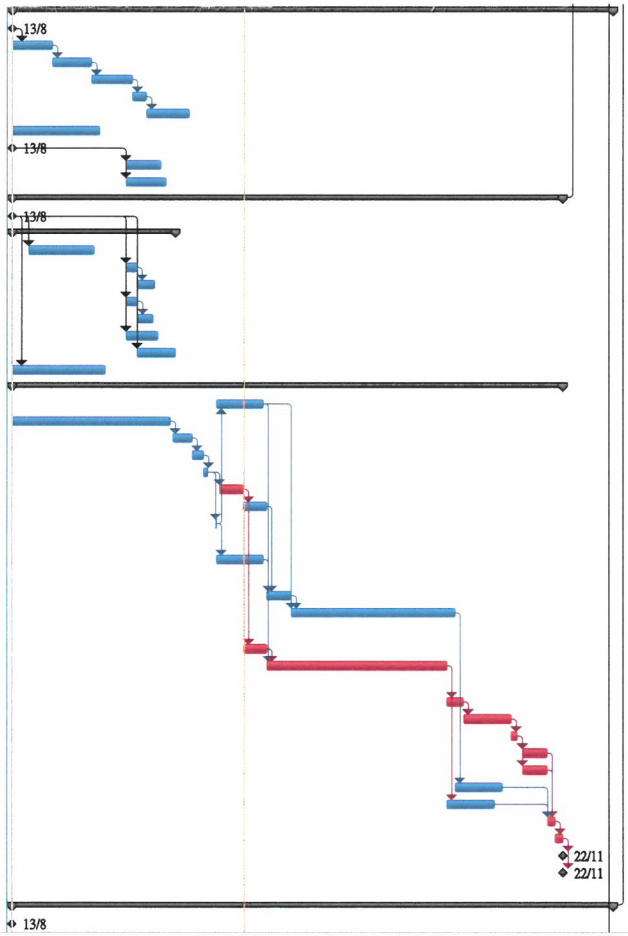
識別碼	Task Name	工期	開始時間	完成時間	前置任務	後續任務
1	**DC/2019/06 Revised Programme of 13 Apr 2021 (Submitted DSD)**	**1038 days**	**13/8/2020**	**11/2/2024**		
2	**CONTRACT KEY DATES**	**1038 days**	**13/8/2020**	**11/2/2024**		
3	**Clause X5 Sectional Completion Date Data**	**1038 days**	**13/8/2020**	**11/2/2024**		
4	**DC/2019/06 Starting Date**	**0 days**	**13/8/2020**	**13/8/2020**		
6	**Duration of Sectional Works in Calendar Days After Starting Date**	**1038 days**	**13/8/2020**	**11/2/2024**		
7	Works Duration of Section 1 (Portion 3A)	520 days	13/8/2020	18/5/2022		
8	Works Duration of Section 2 (Portion 3B & 3C)	672 days	13/8/2020	17/11/2022		597SS+225 days
9	Works Duration of Section 3 (Portion 1C, 1D, 1E & 1F)	593 days	13/8/2020	13/8/2022		
10	Works Duration of Section 4 (Portion 1A & 1B)	445 days	13/8/2020	12/2/2022		
11	Works Duration of Section 5 (Portion 2A & 2B)	1038 days	13/8/2020	11/2/2024		
12	**Completion Date of Sectional Works**	**588 days**	**18/2/2022**	**11/2/2024**		
13	Date of Completion of Works under Section 1 (Portion 3A)	0 days	22/11/2022	22/11/2022	472	19
14	Date of Completion of Works under Section 2 (Portion 3B & 3C)	0 days	6/2/2023	6/2/2023	509,624	20
15	Date of Completion of Works under Section 3 (Portion 1C, 1D, 1E & 1F)	0 days	13/8/2022	13/8/2022	204,274,289,296	21
16	Date of Completion of Works under Section 4 (Portion 1A & 1B)	0 days	18/2/2022	18/2/2022	124	22
17	Date of Completion of Works under Section 5 (Portion 2A & 2B)	0 days	11/2/2024	11/2/2024	306,453	23
18	**Project Completion Date**	**588 days**	**19/2/2022**	**11/2/2024**		



Project: DC/2019/06 Revised Progra
Date: 28/7/2021

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

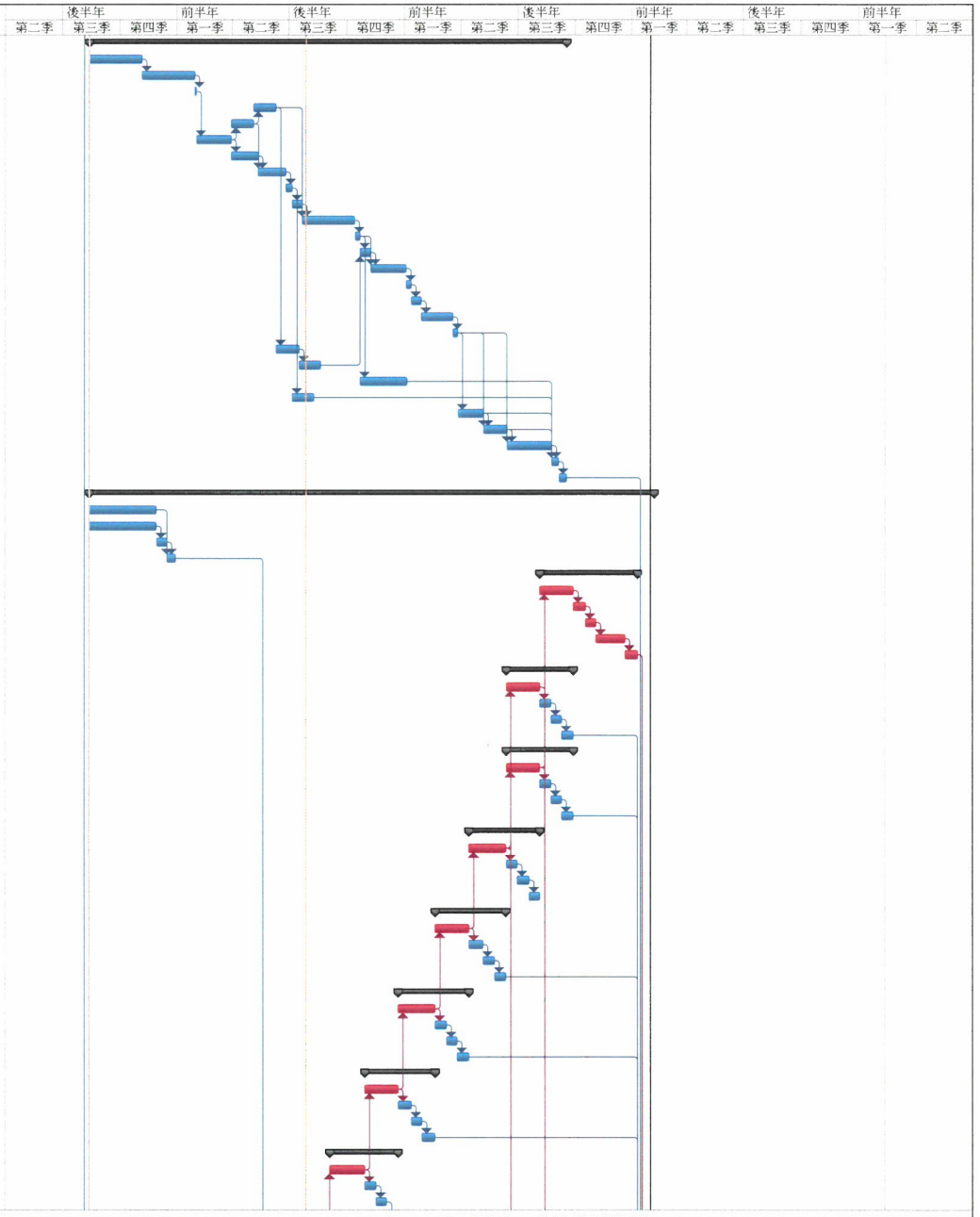
識別碼	Task Name	工期	開始時間	完成時間	前置任務	後續任務
461	**LOCATION L3 - NGONG PING**	**735 days**	**13/8/2020**	**6/2/2023**		
462	***Access date***	***0 days***	13/8/2020	13/8/2020		463
463	Preparation works	50 days	13/8/2020	12/10/2020	462	464
464	Subletting and design for PM's accommodation (MIC)	50 days	13/10/2020	10/12/2020	463	465
465	Fabrication of PM's accommodation off site	50 days	11/12/2020	10/2/2021	464	466
466	Site hoarding/chain link fence and project signboard at works area	15 days	11/2/2021	3/3/2021	465	467
467	Erection of PM's accommodation (subject to PM's agreement)	50 days	4/3/2021	6/5/2021	466	
468	**Works Area 3B**	**110 days**	13/8/2020	22/12/2020		
469	***Access date***	***0 days***	13/8/2020	13/8/2020		470FS+141 days,471
470	Preparation works	42 days	1/2/2021	24/3/2021	469FS+141 days	
471	Site hoarding/chain link fence	49 days	1/2/2021	1/4/2021	469FS+141 days	
472	**PORTION 3A - DN1800**	**676 days**	**13/8/2020**	**22/11/2022**		**13**
473	***Access date***	***0 days***	13/8/2020	13/8/2020		475FS+21 days,476F
474	**Preparation Works for Portion 3A and 3B**	**198 days**	**13/8/2020**	**15/4/2021**		
475	Subletting and procurement	82 days	7/9/2020	14/12/2020	473FS+21 days	
476	Preparation works	12 days	1/2/2021	17/2/2021	473FS+141 days	477
477	Application of Lantau closed road permits	22 days	18/2/2021	15/3/2021	476	
478	Initial survey	13 days	1/2/2021	18/2/2021	473FS+141 days	479
479	Tree survey	20 days	19/2/2021	13/3/2021	478	
480	Underground utilities detection	39 days	1/2/2021	20/3/2021	473FS+141 days	
481	Liaison with representatives of Ngong Ping Village, Po Lin Monastery & NP 360	45 days	18/2/2021	15/4/2021	473FS+153 days	
482	Establishment of ET and IEC & baseline monitoring	116 days	13/8/2020	31/12/2020	473	
483	**DN1800 by TBM (approx. 200m)**	**676 days**	**13/8/2020**	**22/11/2022**		
484	Establishing method statement and obtaining approval	60 days	16/6/2021	25/8/2021	491	494,496
485	Obtain approval of CEDD & AFCD for Transplantation of cherry trees	191 days	13/8/2020	7/4/2021		486FS+3 days
486	Transplant cherry trees at L305	24 days	12/4/2021	10/5/2021	485FS+3 days	487
487	installation of settlement monitoring points and baseline monitoring works	14 days	11/5/2021	27/5/2021	486	488
488	Trial pit excavation	5 days	28/5/2021	2/6/2021	487	489,491
489	Construction of launching pit at L305	30 days	21/6/2021	26/7/2021	488	495,490
490	Construction of receiving pit at L305A	30 days	27/7/2021	30/8/2021	489	493
491	Received CE No. 007 regarding revised design of proposed DN1800 drainage between L305 & Intake No. 3	1 day	15/6/2021	15/6/2021	488	492,484
492	Tendering & Re-tendering of revised design between L305 & Intake No.3 [CE No. 007]	60 days	16/6/2021	25/8/2021	491	493
493	Setting up for hand digging at MHL305A	30 days	31/8/2021	6/10/2021	490,492	494
494	Trenchless by using hand digging between L305A to Outfall No.2 (40m approx, 0.2m/day)	200 days	7/10/2021	13/6/2022	493,484	502
495	Setting up for hand digging at MHL305	30 days	27/7/2021	30/8/2021	489	496
496	Trenchless by using hand digging between L305 to Intake No.3 (40m approx, 0.2m/day)	220 days	31/8/2021	31/5/2022	495,484	503,497
497	Setting up of TBM at Launching Pit at MHL305	21 days	1/6/2022	25/6/2022	496	498
498	TBM pipe jacking between L305 to L305A (120m approx, 2m/day)	60 days	27/6/2022	5/9/2022	497	499
499	Extraction of TBM from L305A	7 days	6/9/2022	14/9/2022	498	500FS+7 days,501FS
500	Construction of MH L305	30 days	23/9/2022	29/10/2022	499FS+7 days	504
501	Construction of MH L305A	30 days	23/9/2022	29/10/2022	499FS+7 days	504
502	Construction of Outfall No. 2	60 days	14/6/2022	23/8/2022	494	504
503	Construction of Intake No.3	60 days	1/6/2022	11/8/2022	496	504
504	Reinstatement works	10 days	31/10/2022	10/11/2022	502,503,500,501	505
505	Final site clearance	10 days	11/11/2022	22/11/2022	504	506,507
506	**Planned completion date of Section 1 (Portion 3A)**	0 days	22/11/2022	22/11/2022	505	
507	**Sectional Completion of Section 1 (Portion 3A)**	**0 days**	22/11/2022	22/11/2022	505	
508						
509	**PORTION 3B - DN1500 & Box Culvert team C**	**735 days**	**13/8/2020**	**6/2/2023**		**14**
510	***Access date***	***0 days***	13/8/2020	13/8/2020		



Project: DC/2019/06 Revised Progra
Date: 28/7/2021

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

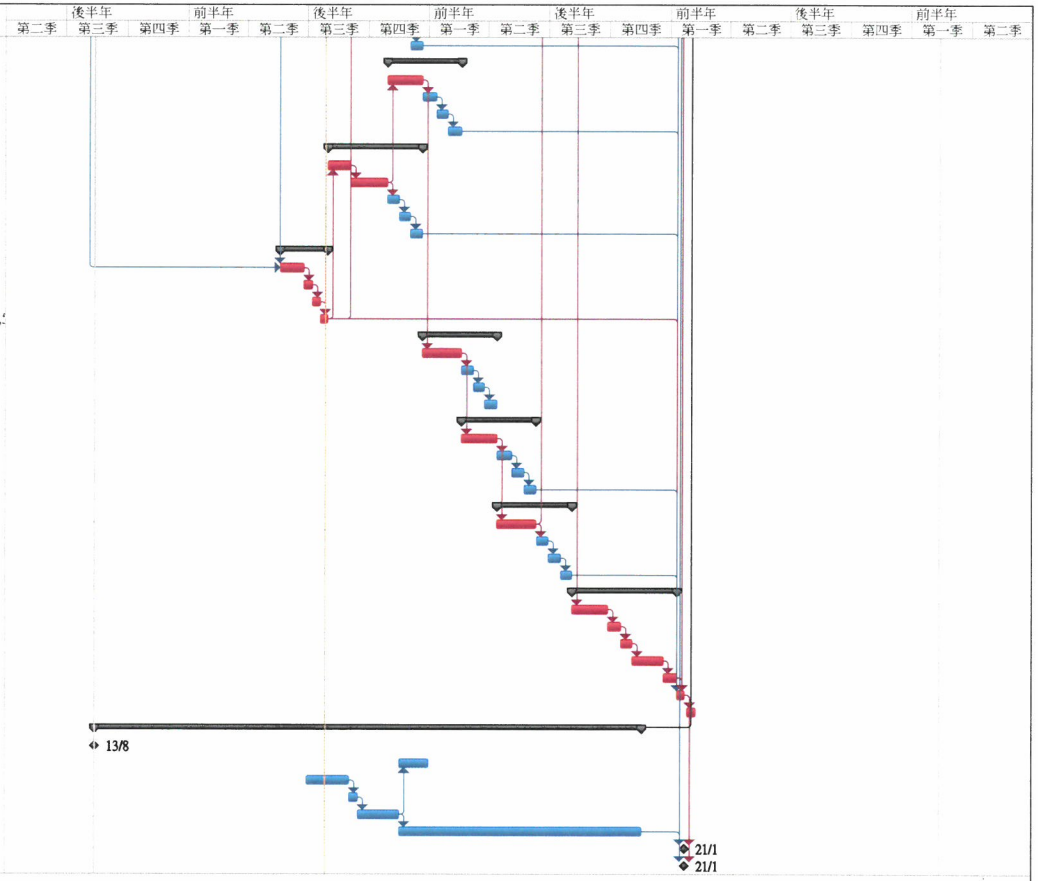
識別碼	Task Name	工期	開始時間	完成時間	前置任務	後續任務
511	**DN1500 by TBM (approx. 440m)**	**621 days**	**13/8/2020**	**16/9/2022**		
512	Establishing method statement and obtaining approval	70 days	13/8/2020	5/11/2020		513
513	Set up of enviromental mitigation measures	70 days	6/11/2020	29/1/2021	512	514
514	Trial pit excavation	2 days	30/1/2021	1/2/2021	513	517
515	Construction of receiving pit at L304A	30 days	5/5/2021	9/6/2021	516	522,530
516	Construction of receiving pit at L303	26 days	30/3/2021	4/5/2021	517	519,515
517	Construction of jacking pit at L302	45 days	2/2/2021	29/3/2021	514	516,518
518	Setting up of TBM at L302	32 days	30/3/2021	11/5/2021	517	519
519	Trenchless construction by TBM (approx. 120m from L302 to L303, 2m/day)	37 days	12/5/2021	25/6/2021	518,516	520
520	Extraction of TBM at L303	7 days	26/6/2021	5/7/2021	519	521,533
521	Setting up of TBM at L303	14 days	6/7/2021	21/7/2021	520	522
522	Trenchless construction by TBM (approx. 140m from L303 to L304A, 2m/day)	70 days	22/7/2021	13/10/2021	521,515	523
523	Extraction of TBM from L304A	7 days	15/10/2021	22/10/2021	522	525,532,524
524	Setting up of TBM at L302	14 days	23/10/2021	8/11/2021	531,523	525
525	Trenchless construction by TBM (approx. 90m from L302 to L301, 2m/day)	45 days	9/11/2021	3/1/2022	524,523	526
526	Extraction of TBM at L301	7 days	4/1/2022	11/1/2022	525	527
527	Setting up of TBM at L301	14 days	12/1/2022	27/1/2022	526	528
528	Trenchless construction by TBM (approx. 80m from L301 to Intake no.1, 2m/day)	40 days	28/1/2022	18/3/2022	527	529
529	Extraction of TBM from Intake No. 1	7 days	19/3/2022	26/3/2022	528	536,535,534
530	Construction of receiving pit at Intake No.1	30 days	10/6/2021	16/7/2021	515	531
531	Construction of the jacking pit at L301	30 days	17/7/2021	20/8/2021	530	524
532	Construction of manholes L304	60 days	23/10/2021	4/1/2022	523	537
533	Construction of manholes L303	30 days	6/7/2021	9/8/2021	520	537
534	Construction of manholes L302	30 days	28/3/2022	6/5/2022	529	537,535
535	Construction of manholes L301	30 days	7/5/2022	13/6/2022	529,534	537,536
536	Construction of Intake No.1	60 days	14/6/2022	23/8/2022	529,535	537
537	Final reinstatement works	10 days	24/8/2022	3/9/2022	532,533,534,535	538
538	Final site clearance	10 days	5/9/2022	16/9/2022	537	631,632
539	**Box Culvert (approx. 252m)**	**735 days**	**13/8/2020**	**6/2/2023**		
540	Set up of enviromental mitigation measures	90 days	13/8/2020	28/11/2020		543
541	Submission of method statement for construction of box culvert & approval	90 days	13/8/2020	28/11/2020		542
542	installation of settlement monitoring points and baseline monitoring works	14 days	30/11/2020	15/12/2020	541	543
543	Trial pit excavation	10 days	16/12/2020	29/12/2020	540,542	597
544	**CH205 - CH219**	**130 days**	**5/8/2022**	**10/1/2023**		
545	Excavation and Erection of ELS	45 days	5/8/2022	27/9/2022	556	546
546	Make good the foundation and construction of base slab	15 days	28/9/2022	17/10/2022	545	547
547	Construction of wall & top slab	15 days	18/10/2022	3/11/2022	546	548
548	Construction of Outfall No.1	40 days	4/11/2022	20/12/2022	547	549
549	Backfilling and reinstatement works	15 days	21/12/2022	10/1/2023	548	622
550	**CH190 - CH205**	**90 days**	**13/6/2022**	**27/9/2022**		
551	Excavation and Erection of ELS	45 days	13/6/2022	4/8/2022	612	552,617
552	Make good the foundation and construction of base slab	15 days	5/8/2022	22/8/2022	551	553
553	Construction of wall & top slab	15 days	23/8/2022	8/9/2022	552	554
554	Backfilling and reinstatement works	15 days	9/9/2022	27/9/2022	553	622
555	**CH175 - CH190**	**90 days**	**13/6/2022**	**27/9/2022**		
556	Excavation and Erection of ELS	45 days	13/6/2022	4/8/2022	561	557,545
557	Make good the foundation and construction of base slab	15 days	5/8/2022	22/8/2022	556	558
558	Construction of wall & top slab	15 days	23/8/2022	8/9/2022	557	559
559	Backfilling and reinstatement works	15 days	9/9/2022	27/9/2022	558	622
560	**CH160 - CH175**	**90 days**	**14/4/2022**	**4/8/2022**		
561	Excavation and Erection of ELS	45 days	14/4/2022	11/6/2022	566	562,556
562	Make good the foundation and construction of base slab	15 days	13/6/2022	29/6/2022	561	563
563	Construction of wall & top slab	15 days	30/6/2022	18/7/2022	562	564
564	Backfilling and reinstatement works	15 days	19/7/2022	4/8/2022	563	
565	**CH145 - CH160**	**90 days**	**19/2/2022**	**11/6/2022**		
566	Excavation and Erection of ELS	45 days	19/2/2022	13/4/2022	571	567,561
567	Make good the foundation and construction of base slab	15 days	14/4/2022	5/5/2022	566	568
568	Construction of wall & top slab	15 days	6/5/2022	24/5/2022	567	569
569	Backfilling and reinstatement works	15 days	25/5/2022	11/6/2022	568	622
570	**CH130 - CH145**	**90 days**	**22/12/2021**	**13/4/2022**		
571	Excavation and Erection of ELS	45 days	22/12/2021	18/2/2022	576	572,566
572	Make good the foundation and construction of base slab	15 days	19/2/2022	8/3/2022	571	573
573	Construction of wall & top slab	15 days	9/3/2022	25/3/2022	572	574
574	Backfilling and reinstatement works	15 days	26/3/2022	13/4/2022	573	622
575	**CH115 - CH130**	**90 days**	**30/10/2021**	**18/2/2022**		
576	Excavation and Erection of ELS	45 days	30/10/2021	21/12/2021	581	577,571
577	Make good the foundation and construction of base slab	15 days	22/12/2021	11/1/2022	576	578
578	Construction of wall & top slab	15 days	12/1/2022	28/1/2022	577	579
579	Backfilling and reinstatement works	15 days	29/1/2022	18/2/2022	578	622
580	**CH100 - CH115**	**90 days**	**4/9/2021**	**21/12/2021**		
581	Excavation and Erection of ELS	45 days	4/9/2021	29/10/2021	600FS+30 days	582,576
582	Make good the foundation and construction of base slab	15 days	30/10/2021	16/11/2021	581	583
583	Construction of wall & top slab	15 days	17/11/2021	3/12/2021	582	584



Project: DC/2019/06 Revised Progra
Date: 28/7/2021

Task | Summary | External Milestone | Inactive Summary | Manual Task Rollup | Finish-only | Critical Split
Split | Project Summary | Inactive Task | Manual Task | Manual Summary | Deadline | Progress
Milestone | External Tasks | Inactive Milestone | Duration-only | Start-only | Critical

識別碼	Task Name	工期	開始時間	完成時間	前置任務	後續任務
584	Backfilling and reinstatement works	15 days	4/12/2021	21/12/2021	583	622
585	**CH85 - CH100**	**90 days**	**30/10/2021**	**18/2/2022**		
586	Excavation and Erection of ELS	45 days	30/10/2021	21/12/2021	592	587,602
587	Make good the foundation and construction of base slab	15 days	22/12/2021	11/1/2022	586	588
588	Construction of wall & top slab	15 days	12/1/2022	28/1/2022	587	589
589	Backfilling and reinstatement works	15 days	29/1/2022	18/2/2022	588	622
590	**CH70 - CH85**	**120 days**	**31/7/2021**	**21/12/2021**		
591	Tree felling & Noise Barrier Erection	30 days	31/7/2021	3/9/2021	600	592
592	Excavation and Erection of ELS	45 days	4/9/2021	29/10/2021	591	593,586
593	Make good the foundation and construction of base slab	15 days	30/10/2021	16/11/2021	592	594
594	Construction of wall & top slab	15 days	17/11/2021	3/12/2021	593	595
595	Backfilling and reinstatement works	15 days	4/12/2021	21/12/2021	594	622
596	**CH60 - CH70**	**60 days**	**20/5/2021**	**30/7/2021**		
597	Excavation and Erection of ELS	30 days	20/5/2021	24/6/2021	8SS+225 days,54	598
598	Make good the foundation and construction of base slab	10 days	25/6/2021	7/7/2021	597	599
599	Construction of wall & top slab	10 days	8/7/2021	19/7/2021	598	600
600	Backfilling and reinstatement works	10 days	20/7/2021	30/7/2021	599	581FS+30 days,622,5
601	**CH45 - CH60**	**90 days**	**22/12/2021**	**13/4/2022**		
602	Excavation and Erection of ELS	45 days	22/12/2021	18/2/2022	586	603,607
603	Make good the foundation and construction of base slab	15 days	19/2/2022	8/3/2022	602	604
604	Construction of wall & top slab	15 days	9/3/2022	25/3/2022	603	605
605	Backfilling and reinstatement works	15 days	26/3/2022	13/4/2022	604	
606	**CH30 - CH45**	**90 days**	**19/2/2022**	**11/6/2022**		
607	Excavation and Erection of ELS	45 days	19/2/2022	13/4/2022	602	608,612
608	Make good the foundation and construction of base slab	15 days	14/4/2022	5/5/2022	607	609
609	Construction of wall & top slab	15 days	6/5/2022	24/5/2022	608	610
610	Backfilling and reinstatement works	15 days	25/5/2022	11/6/2022	609	622
611	**CH15 - CH30**	**90 days**	**14/4/2022**	**4/8/2022**		
612	Excavation and Erection of ELS	45 days	14/4/2022	11/6/2022	607	613,551
613	Make good the foundation and construction of base slab	15 days	13/6/2022	29/6/2022	612	614
614	Construction of wall & top slab	15 days	30/6/2022	18/7/2022	613	615
615	Backfilling and reinstatement works	15 days	19/7/2022	4/8/2022	614	622
616	**CH0 - CH15**	**130 days**	**5/8/2022**	**10/1/2023**		
617	Excavation and Erection of ELS	45 days	5/8/2022	27/9/2022	551	618
618	Make good the foundation and construction of base slab	15 days	28/9/2022	17/10/2022	617	619
619	Construction of wall & top slab	15 days	18/10/2022	3/11/2022	618	620
620	Construction of Intake No.2	40 days	4/11/2022	20/12/2022	619	621
621	Backfilling and reinstatement works	15 days	21/12/2022	10/1/2023	620	622
622	Final reinstatement works	10 days	11/1/2023	21/1/2023	615,549,554,559,	623,631,632
623	Final site clearance	10 days	26/1/2023	6/2/2023	622	
624	**PORTION 3C**	**672 days**	**13/8/2020**	**17/11/2022**		**14**
625	***Access date***	***0 days***	13/8/2020	13/8/2020		
626	Subletting and procurement	36 days	18/11/2021	31/12/2021	629	
627	Preparation Works	55 days	30/6/2021	2/9/2021		628
628	Coordination with DSD sewage treatment plant	11 days	3/9/2021	15/9/2021	627	629
629	Planting of trees for compensation (subject to PM's instruction)	51 days	16/9/2021	17/11/2021	628	630,626
630	Establishment works for planted trees	296 days	18/11/2021	17/11/2022	629	631,632
631	**Planned completion date of Section 1 (Portion 3B & 3C)**	**0 days**	21/1/2023	21/1/2023	622,630,538	
632	**Sectional Completion of Section 1 (Portion 3B & 3C)**	**0 days**	21/1/2023	21/1/2023	622,630,538	



Project: DC/2019/06 Revised Progra
Date: 28/7/2021

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only	Critical Split
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline	Progress
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Critical	

Appendix B2 Works Undertaken Illustrations

Portion A	**Portion B**
	
- TBM operation (L305)	- Excavation Works (L304A)
Portion C	
	
- TBM operation (L301)	

Appendix B3 Proactive Environmental Protection or Control Measures for Next Three Month

Activity / Impact	Excavation of Trench or Pit	Pipe Lining	Installation of Drainage Pipe	Box culvert	TBM	Control Measures
Air Pollution Nuisance	✓	✓	✓	✓	✓	– Use of regular watering to reduce dust emissions – Open stockpiles shall be avoided or covered.
Noise Nuisance	✓	✓	✓		✓	– Use of quieter plant (QPME) – Use suitable acoustic enclosure. – Installation of a fixed noise barrier.
Water Nuisance		✓		✓	✓	– Intercept the surface runoff by sand bag or etc. – Treat the wastewater before discharge.
Waste Nuisance		✓	✓		✓	– The site and surroundings shall be kept tidy and litter free. – General refuse arising on-site should be stored in enclosed bins separately from C&D and chemical wastes – Recycle as many C&D materials as possible on-site
Ecology	✓	✓	✓	✓		– avoid damage and disturbance to the remaining and surrounding natural habitat – construction activities should be restricted to the proposed works boundary

Moreover, the ET will continue to implement the environmental monitoring & audit programme in accordance with the EM&A Manual and Environmental Permit requirements. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

Appendix B4 Waste Flow Table

Name of Department: DSD Contract No.: DC/2019/06

Monthly Summary Waste Flow Table for 2022

Contract Title: Drainage Improvement Works in Northern Territories (remaining works), Southern Hong Kong Island & Ngong Ping
Location: L3 - Ngong Ping

Month	Quantities of Inert C&D Materials Generated						Quantities of Non-inert C&D Materials Generated				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastic (see Note 3)	Chemical Waste	Other, e.g. General Refuse
	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)
January	1555.34	0.00	0.00	0.00	1554.33	0.00	0.00	0.00	0.00	0.00	1.01
February	554.11	0.00	0.00	0.00	554.11	0.00	0.00	0.00	0.00	0.00	0.00
March	2300.12	0.00	0.00	0.00	2295.71	0.00	0.00	0.00	0.00	0.00	4.41
April	0.00										
May	0.00										
June	0.00										
Sub-total	4409.57	0.00	0.00	0.00	4404.15	0.00	0.00	0.00	0.00	0.00	5.42
July	0.00										
August	0.00										
September	0.00										
October	0.00										
November	0.00										
December	0.00										
Yearly Total	4409.57	0.00	0.00	0.00	4404.15	0.00	0.00	0.00	0.00	0.00	5.42

Monthly Forecast of Total Quantities of C&D Materials to be Generated from the Contract (for April 2022)										
Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastic (see Note 3)	Chemical Waste	Other, e.g. General Refuse
(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)	(0.00tonne)
1205.00	0.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	5.00

Notes: (1) The performance targets are given in PS Clause 1.104(14).

(2) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material

Appendix C1 EP-456/2013/B Conditions

Summary Table for Status of Compliance / Required Submission

EP Conditions	Submission(s)	Submission Date	Approval Status
2.6	Landscape Plan (Rev. G)	02/03/2021	Approved on 23/03/2021
2.7	Landscape as-built drawing(s)	At least one month before the Project commences operation	*
2.8	Updated Baseline Vegetation Survey Report (Rev. E)	19/02/2021	*
	Floral Protection Plan (Rev. J)	04/04/2021	*
	Floral Transplantation Plan (Rev. E)	11/12/2020	*
2.10	Aquatic Fauna Translocation Plan (Rev. H)	24/12/2020	*
2.11	Aquatic Fauna Translocation Survey Report (Rev. B)	02/03/2021	*
4.3	Noise Baseline Monitoring Report (Rev. A)	30/10/2020	*
	Water Quality Baseline Monitoring Report (Rev. D)	29/01/2021	*
4.4	Monthly EM&A Report (December 2022)	14/12/2021	*

*Remarks: * Approval not required in EP-456/2013/B*

Appendix C2 Mitigation Measures Implementation (Construction Phase)

Environmental Protection Measures (Construction Phase) [1]	Status
A) Air Quality	--
Watering once per hour for 12 hours a day at **exposed soil in all active works areas and paved haul roads** to reduce dust emissions by 91.7%. The amount of water to be applied would be 0.25L/m^2 for the respective watering frequency.	N/O
Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:	--
■ Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather;	N/O
■ Use of frequent watering for particularly dusty construction areas and areas close to ASRs;	N/O
■ Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines;	^
■ Open stockpiles shall be avoided or covered. Prevent placing dusty material storage piles near ASRs;	^
■ Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations;	^
■ Establishment and use of vehicle wheel and body washing facilities at the exit points of the site;	^
■ Imposition of speed controls for vehicles on unpaved site roads, 8 km per hour is the recommended limit;	^
■ Routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs;	^
■ Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;	N/O
■ Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; and	N/O
■ Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system.	N/O
B) Noise	--
The use of quieter plant (QPME) is specified for the list of equipment:	--
■ Tracked excavator fitted with hydraulic rock breaker; ■ Concrete lorry mixer; ■ Tracked mobile crane (132kW, 55t);	^
■ Dump Truck; ■ Tracked excavator (14t); ■ Generator, Super Silenced, 70 dB(A) at 7m; ■ Poker vibratory;	
■ Hand Held Electric Circular Saw, 150mm Blade with SWL of 103dB(A) or less;	
■ Electric Chain-Saw, Hand-held; and ■ Water Pump, Submersible (Electric).	
For the Columbarium (NSR1), the vertical gaps along of edge of the solid boundary wall facing the works area WA4 should be covered with acoustic fabric or small barrier for noise screening.	N/A
The use of temporary noise barrier / enclosure are specified for the list of equipment:	--
■ Bar Bender and Cutter (Electric) - Noise Enclosure	^
■ Tracked excavator fitted with hydraulic rock breaker - Temporary Noise barrier;	
■ Tracked excavator (14t) - Temporary Noise barrier	
■ Generator, Super Silenced, 70 dB(A) at 7m - Noise Enclosure; and	
■ Hand Held Electric Circular Saw, 150mm Blade - Noise Enclosure.	
Installation of a fixed noise barrier of 3m in height between the NSR5 and the open cut trench (Activities 4 and 4+ at Works Section 5)	N/A
Implementation of further good site practices:	--
■ Only well-maintained plant should be operated on- site and PME should be serviced regularly during the construction programme;	^
■ Silencers or mufflers on construction equipment should be utilised and properly maintained throughout the construction programme;	^
■ Any mobile PME should be sited as far from NSRs as possible;	^
■ Machines and PME that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;	^
■ PME known to emit noise strongly in one direction should be orientated to direct away from the nearby NSRs;	^
■ Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities;	^
■ Use of acoustic enclosure, in accordance with EPD's A Practical Guide for the Reduction of Noise from Construction Works; and	^
■ Re-scheduling of works should be considered to ameliorate the residual impact.	^
C) Water Quality	--
In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN 1/94), construction phase mitigation measures shall include the following:	^
■ At the establishment of Site Office (**SO**), works area (**WA1 and WA2**) and stockpiling areas (**SA1, SA2, SA3 and SA4**; ~~(see Figures 2.9a-2.9g)~~, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities. The **design of the temporary on-site drainage system** will be undertaken by the Contractor prior to the commencement of construction;	^
■ Dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a site/sediment trap. Sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates;	^

Environmental Protection Measures (Construction Phase) (1)	**Status**
■ While ProPECC PN 1/94 requires construction works should be programmed to minimise surface excavation works during **rainy seasons** (April to September). By the nature of the pipe laying works, it is considered not practicable to avoid excavation works in the wet season as this would substantially affect the overall construction programme. However, for works at areas that directly interface with the existing watercourses, excavation works shall avoid the rainy season as far as possible. These include **Intake A** interfacing the stream, **Intake B** interfacing the U channel, **Outfall A** interfacing the gabion channel, **Intake C/RP3** interfacing the gabion channel and **Outfall B/RP4** interfacing Ngong Ping Stream ~~(see Figures 2.9a-2.9g).~~ For the works in the above listed areas, an impermeable **cofferdam or similar barrier** to the level above the stream bank shall be erected to completely enclose these areas before any works are undertaken. This will ensure that any contaminated runoff from the works areas will not get into the ambient watercourses. These barriers shall not be removed until the interfacing works and the relevant upstream connected drains have been completed. All exposed earth areas should be completed and vegetated as soon as possible after the earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable;	^
■ Exposed slope surfaces should be covered by tarpaulin or other means during the rainy season;	^
■ The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/sand traps should be 5 minutes under maximum flow conditions. The sizes may vary depending upon the flow rate, but for a flow rate of 0.1m^3/s, a sedimentation basin of 30m^3 would be required and for a flow rate of 0.5m^3/s the basin would be 150m^3. The detailed design of the sand/silt traps should be undertaken by the contractor prior to the commencement of construction;	^
■ The overall slope of works sites should be kept to a minimum to reduce the erosive potential of surface water flows, and all trafficked areas and access roads should be protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during the prolonged periods of inclement weather and the reduction of surface sheet flows;	^
■ All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure their proper and efficient operation at all times particularly following rainstorms. Deposited silts and grits should be removed regularly and disposed of proper waste receiving facilities. As the area is within the water gathering grounds, on-site disposal of silts/grits shall not be allowed;	^
■ Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet season is inevitable, they should be dug and backfilled in short sections wherever practicable. The water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;	^
■ Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers;	^
■ Precautions to be taken at any time of the year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted and during or after rainstorms, are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes;	^
■ All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at the exit of every construction site where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel- washing bay to public roads should be paved with sufficient backfall toward the wheel-washing bay to prevent vehicle tracking of soil and silty water to public roads and drains;	^
■ Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources. Oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for oil interceptors to prevent flushing during heavy rain;	**N/O**
■ Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust and surface run off. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system;	^
■ Major stockpiled areas shall be sited outside of the country parks area (Works Section 6) and away from stream courses as far as practicable. For the stockpiling area SA4 within the country park area, stockpiling of earthed material shall be minimised and excavated soil from Works Section 6 shall be delivered to the Site Office as soon as possible. Similarly, overnight stockpiling of earthed material along the exposed trench shall be minimised as far as possible and the excavated soil shall be transferred to the designated stockpiling area as soon as possible;	**N/O**
■ The Contractor shall comply with WSD's General Conditions for Working within Water Gathering Grounds as applicable;	^
■ The construction solid waste, debris and rubbish on-site should be collected, handled and disposed of properly to avoid causing any water quality impacts. The requirements for solid waste management are detailed in Section 9 of this EIA report; and	^
■ All fuel tanks and chemical and bentonite storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching the nearby WSRs.	^
There is a need to apply to the EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS. It should particularly noted that the TM-DSS specifically **prohibits** the discharge of the following substances into the inland waters:	**N/O**
■ polychlorinated biphenyls (PCB); ■ polyaromatic hydrocarbon (PAH); ■ fumigant, pesticide or toxicant ;	
■ radioactive substances ; ■ chlorinated hydrocarbons; ■ flammable or toxic solvents ;	
■ petroleum oil or tar; ■ calcium carbide; ■ wastes liable to form scum, deposits or discoloration;	
■ sludge or solid refuse of any kind; and ■ detergents in Group A inland waters only.	
The beneficial uses of the treated effluent for other on- site activities such as dust suppression, wheel washing and general cleaning etc, can minimise water consumption and reduce the effluent discharge volume and shall be encouraged. If monitoring of	**N/O**

Environmental Protection Measures (Construction Phase) [1]	**Status**
the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the WPCO license.	
In addition to compliance with the discharge licence requirement, to prevent bank side erosion, the discharge of site effluents shall be either at existing storm drains or artificial channels. No effluent or treated surface runoff shall be allowed to discharge at natural stream course.	**N/O**
The use of bentonite slurries shall be minimised as far as possible. In addition to the requirement of a peripheral bunds and drainage system for the WA4 and SO, where the bentonite slurries will be used, to prevent any accidental release of bentonite slurry from getting into the surrounding environment, the following specific control measures shall be followed to reduce the risk and impacts of accidental spillage:	**--**
■ All bentonite slurry should be stored in a container that resistant to corrosion, maintained in good conditions and securely closed;	**^**
■ The container should be labelled in English and Chinese and note that the container is for storage of bentonite slurry only;	**^**
■ The storage container should be placed on an area of impermeable flooring and bunded with capacity to accommodate 110% of the volume of the container size or 20% by volume stored in the area and enclosed with at least 3 sides; and	**N/O**
■ Sufficiently covered to prevent rainfall entering the container or bunded area (water collected within the bund must be tested and disposed of as chemical waste, if necessary).	**^**
In order to reduce the possibility of frac-out, detailed ground investigation shall be undertaken to evaluate the likelihood of frac-out and if necessary advanced ground treatment applied before the commencement of the pipe jacking works. A member of the Contractor's site staff shall, also, be dedicated to closely monitor the ground surface above the pipe jacking head for any frac-outs release. The pipe jacking works and application of bentonite shall immediately stop if frac- outs are observed. Any frac-out shall be immediately cleaned or bunded to prevent spreading of the bentonite slurry. The Contractor shall immediately notify the Engineer and propose rectification measures to prevent further frac-out to the satisfaction of the Engineer before pipe jacking works resume. An emergency clean up kit shall be readily available at Works Section 2 and 6 where pipe jacking will be undertaken.	**N/O**
The handling and disposal of bentonite slurries should be undertaken in accordance within ProPECC PN 1/94. Surplus bentonite slurries used in construction works shall be reconditioned and reused wherever practicable. Residual bentonite slurry shall be disposed of from the site as soon as possible as stipulated in Clause 8.56 of the General Specification for Civil Engineering Works. The Contractor should explore alternative disposal outlets for the residual bentonite slurry (dewatered bentonite slurry to be disposed to a public filling area and liquid bentonite slurry if mixed with inert fill material to be disposed to a public filling area) and disposal at landfill should be the last resort.	**^**
The contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	**^**
Any maintenance facilities should be located outside Works Section 6 in the Lantau North Country Park. Such facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges. All maintenance activities which may generate chemical waste shall be undertaken in the Site Office area, as far as possible.	**N/O**
Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows:	**--**
■ Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;	**^**
■ Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents; and	**^**
■ Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.	**^**
In order to minimise the risk of accidental spillage, the use and storage of oils/chemicals/waste should be limited to absolute minimum volume and are to be removed from sites at the earliest opportunity. However, all chemical waste, fuels and oils shall be stored at the Site Office (SO), to minimise impact to the Lantau North Country Park and water gathering grounds.	**^**
In order to protect against an accidental spillage of fuel or oil, the Contractor will be required to prepare a **spill response plan** to the satisfaction of AFCD, EPD, FSD, HyD, Police, TD and WSD to define procedures for the control, containment and clean-up of any spillage that could occur on the construction site.	**^**
At all times, the Contractor shall comply with WSD's General Conditions for Working within Water Gathering Grounds as applicable.	**^**
The sewage of the site office will be connected the existing sewer networks and be treated at the Ngong Ping STW. Portable chemical toilets and sewage holding tanks are recommended for the handling of the construction sewage generated by the workforce at other works area. The use of temporary toilets within the water gathering ground, however, is also subject to the approval of Water Services Department. **A licensed contractor** should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance	**^**
The Outfall A and Intake C and associated works areas are within the gabion channel, the construction and operation of which was previously governed by the Environmental Permit EP-192/2004. While the EP was surrendered in May 2007, the currently proposed works at these locations shall, also, comply with the specific conditions of the EP ~~(see Section 2.7 of this Report)~~ as far as possible and in particular avoid works in the rainy period between April and September so as to minimise potential water quality pollution to the lowest possible.	**^**

Environmental Protection Measures (Construction Phase) [1]	**Status**
D) Ecology	**--**
Good construction practice measures which should be implemented and should include:	**--**
■ avoid damage and disturbance to the remaining and surrounding natural habitat;	**^**
■ placement of equipment in designated areas within the existing disturbed land;	**^**
■ spoil heaps should be covered at all times;	**N/O**
■ construction activities should be restricted to the proposed works boundary; and	**^**
■ disturbed areas to be reinstated immediately after completion of the works.	**N/O**
Landscape compensatory planting is recommended as mitigation for the loss of landscape and habitat. Recommended Planting Species included:	**--**
Tree	**--**
Cinnamomum burmannii, *Elaeocarpus sylvestris* *Ficus microcarpa* *Pongamia pinnata* *Schefflera heptaphylla* *Sapium discolor*	**N/A**
Minimisation mitigation measures required to protect water quality and the three aquatic faunal species of conservation would comprise controlling surface runoff:	**--**
■ All works on the banks of the natural stream should be undertaken within the dry season, where practical;	**N/A**
■ Perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented;	**N/O**
■ Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided to divert the stormwater to silt removal facilities;	**^**
■ Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources;	**N/O**
■ Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust and surface run off;	**^**
■ Overnight stockpiling of earthed material along the exposed trench shall be minimised as far as possible and excavated soil shall be transferred to the designated stockpiling area as soon as possible;	**N/O**
■ All bentonite slurry shall be suitably stored in accordance with Section 5.8.8 of this EIA Report to minimise the chance of spillage;	**N/O**
■ All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils; and	**^**
■ Pipe jacking areas shall be closely monitored for frac-outs release of bentonite and frac-out area immediately cleaned if they occur.	**^**
The particular measures to protect the ecology of the Lantau North Country Park are summarised below:	**--**
■ Major stockpiled areas shall be sited outside of the country parks area (Works Section 6) and away from stream courses as far as practicable;	**^**
■ All backfilling material and cement required for this Works Section 6 shall be delivered daily and only the quantity required;	**N/O**
■ No storage of chemicals and waste in Works Section 6; and	**N/O**
■ No construction plant maintenance facilities in Works Section 6.	**N/O**
Treated site drainage shall be discharged via the existing drainage system or diverted to the artificial channel to prevent stream bank erosion and directly affect the stream ecology. No site drainage shall be allowed to be discharged at the natural stream bank.	**^**
E) Landscape and Visual	**--**
To maximize protection of existing resources including watercourses existing trees, ground vegetation and the associated understory habitats a "No-intrusion Zone" will be designated to various areas within and along the site boundary with rigid and durable fencing for each individual no-intrusion zone. Regular checks will be carried out to ensure that the work site boundaries are not exceeded, hoarding is properly maintained and that no damage is being caused to these protected areas.	**^**
A temporary screen hoarding shall be erected around the north side of the Site Office (SO) area to screen activities from local receivers. It shall be designed and to be compatible with the existing rural context, with visually unobtrusive design and colours where appropriate.	**^**
No night time work shall be programmed avoiding light pollution to visual receivers.	**^**
F) Cultural Heritage	**--**
Four built heritage resources have been identified as being located in close proximity to the proposed works areas, namely, NP-19, NP-20, NP-21 and NP-26, as detailed in Appendix G1 and shown in Figures 8.12, 8.13 and 8.15 of the EIA Report. The structures may be damaged by contact with machinery and equipment. The recommended mitigation measures for each resource are as follows:	**--**
■ A buffer zone of a minimum of 5 metres in size (or if due to site/engineering constraints, as large as possible buffer zone should be provided) should be marked out for NP-19, NP-20, NP-21 and NP-26 by temporary fencing and placed around the structures 2 weeks prior to the construction works commencing.	**^**
Three built heritage resources have been identified as being in close proximity to an excavation area (NP-10, NP-11 and NP-19), a condition survey must be carried out by a qualified building surveyor or engineer one month in advance of works commencing near the buildings that may be affected by ground borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring (including frequency of monitoring) and precautionary measures that are recommended. The Contractor must implement the approved monitoring and precautionary measures.	**^**

Environmental Protection Measures (Construction Phase) [1]	**Status**
■ Vibration monitoring should be undertaken for the duration of the construction works based upon the recommendations of the approved Condition Survey Report, which will also define the frequency of monitoring required. The maximum acceptable level of vibration will be set at 15 mm/s. Based upon the findings of the condition survey, this limit may be revised for sensitive structures. The location of monitoring points should be situated on the structure closest to the construction works, unless the maximum level is set lower than the standard 15 mm/s, in which case monitoring points should be located on each affected structure. Installation of monitoring points must not damage the historic building fabric. The location of monitoring points (and access to the property for purposes of measurement) must be agreed with the property owner prior to installation.	^
G) Waste Management	--
The requirements as stipulated in the ETWB TC(W) No.19/2005 Environmental Management on Construction Sites and the other relevant guidelines should be included in the Particular Specification for the Contractor as appropriate.	
The future Contractor should be requested to submit a Waste Management Plan (WMP), which becomes part of the Environmental Management Plan (EMP), prior to the commencement of construction work, in accordance with the ETWB TC(W) No.19/2005 so as to provide an overall framework of waste management and reduction. The WMP should include:	^
■ Waste management policy; ■ Record of generated waste; ■ Waste reduction target; ■ Waste reduction programme;	
■ Role and responsibility of waste management team; ■ Benefit of waste management; ■ Analysis of waste materials;	
■ Reuse, recycling and disposal plans; ■ Transportation process of waste products; and ■ Monitoring and action plan.	
A trip-ticket system should be established in accordance with DevB TC(W) No. 6/2010 and Waste Disposal (Charges for Disposal of Construction Waste) Regulation to monitor the disposal of public fill and solid wastes at public filling facilities and landfills, and to control fly-tipping. A trip-ticket system would be included as one of the contractual requirements for the Contractor to strictly implement. The Engineer would also regularly audit the effectiveness of the system.	^
A recording system for the amount of waste generated, recycled and disposed (locations) should be established. The future Contractor should also provide proper training to workers regarding the appropriate concepts of site cleanliness and waste management procedures, e.g. waste reduction, reuse and recycling all the time.	^
The CEDD should be timely notified of the estimated volumes of excavated materials to be generated and the Public Fill Committee should be notified and agreement sort on the disposal of surplus inert C&D materials. Wherever practicable, C&D materials should be segregated from other wastes to avoid contamination and to ensure acceptability at public filling areas or reclamation sites.	^
Recommendations for good site practices:	--
■ The site and surroundings shall be kept tidy and litter free;	^
■ No waste shall be burnt on-site;	^
■ Make provisions in contract documents to allow and promote the use of recycled aggregates where appropriate;	^
■ The Contractor will be prohibited to dispose of C&D materials within the proposed site and at any sensitive locations including Lantau North Country Park, the Lantau South Country Park, the Ngong Ping Site of Special Scientific Interest, the Lantau Peak Special Area and Site of Special Scientific Interest and the Conservation Area, etc. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation;	^
■ Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust and surface run off;	^
■ Major stockpiled areas shall be sited outside of the country parks area (Works Section 6) and away from stream courses as far as practicable. For the stockpiling area SA4 within the country park area, stockpiling of earthed material shall be minimised and excavated soil from Works Section 6 shall be delivered to the Site Office as soon as possible. Similarly, overnight stockpiling of earthed material along the exposed trench shall be minimised as far as possible and the excavated soil shall be transferred to the designated stockpiling area as soon as possible;	**N/O**
■ Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation;	^
■ Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads;	**N/O**
■ Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork or plastic facing for construction works should also be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should be carefully planned in order to avoid over-ordering and wastage;	^
■ The Contractor should recycle as many C&D materials as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities; and	^
■ Subject to agreement with Water Service Department, adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them. Night soil should be regularly collected by licensed collectors.	^
Recommendations for waste reduction measures:	--
■ General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. General refuse shall be removed from Works Section 6 within the country park on the regular basis. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared regularly and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited;	^
■ All waste containers shall be in a secure area on hardstanding;	^

Environmental Protection Measures (Construction Phase) (1)	**Status**
■ Aluminium cans are usually collected and recovered from the waste stream by individual collectors if they are segregated and easily accessible. Separately labelled bins for their deposition should be provided as far as practicable;	**^**
■ Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on- site; and	**^**
■ Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	**^**
Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows:	**--**
■ Suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed;	**^**
■ Having a capacity of <450L unless the specifications have been approved by the EPD;	**N/A**
■ Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations;	**^**
■ Clearly labelled and used solely for the storage of chemical wastes;	**^**
■ Enclosed with at least 3 sides;	**^**
■ Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest;	**^**
■ Adequate ventilation;	**^**
■ Sufficiently covered to prevent rainfall from entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary);	**^**
■ Incompatible materials are adequately separated;	**^**
■ All chemical waste, fuels and oils shall be stored at the Site Office area, to minimise impacts to the Country Park and water gathering grounds;	**^**
■ All maintenance activities which may generate chemical waste shall be undertaken in Site Office area, as far as possible;	**N/O**
■ The Contractor shall comply with WSD's General Conditions for Working within Water Gathering Grounds as applicable; and	**^**
■ Waste oils, chemicals or solvents shall not be disposed of to drain.	**^**

Remark:

^	Compliance of mitigation measure in the reporting period.
#	Recommendations were made in the reporting period but has not yet been improved/rectified by the Contractor.
X	Non-compliance of mitigation measure in the reporting period.
N/A	Not Applicable in the reporting period.
N/O	Not observed in the reporting period.
(1)	Detailed EIA report and EM&A Manual reference refer to the Appendix A of approved EM&A Manual.

Appendix C3 Summary of Site Inspection

Inspection Date	Observations/ Reminders/ Recommendations	Follow Up Action	Completion Date
Follow Up action(s) of last reporting month	NIL.	N.A	
Weekly Site Inspection			
01/03/2022	**Observation** 1) Drip tray shall be provided for chemicals to prevent chemical leakage. (L301)	1) Drip tray was provided afterwards.	01/03/2022
08/03/2022	**Observation** 1) Housekeeping, the site area shall be keep tidy and clean. (Site office, L302) **Reminder** 1) Regular check and maintenance of tree branches is recommended. (L301)	1) Dusty material was removed afterwards. --	08/03/2022 --
18/03/2022	**Observation** 1) Please separate the stockpile area and the oil storage area. (Site office, L302) 2) Please remove and clean the leakage oil. (L301)	1) Chemical containers were removed afterwards. 2) Chemical container was removed afterwards.	18/03/2022 18/03/2022
22/03/2022	**Observation** 1) Please provide drip tray for empty chemical containers / chemicals to prevent chemical leakage. (L301)	1) Empty containers were removed afterwards.	22/03/2022
29/03/2022	**Observation** 1) Please replace or repair the broken sand bags. (Box Culvert, Bay 3)	1) Damaged sand bag was replaced afterwards.	22/03/2022
Landscape and Visual			
08/03/2022	**Observation** Please provide regular tree maintenance check for interfering branches with work and remove where necessary.	1) Branches was removed afterwards.	09/03/2022
22/03/2022	--	--	--
Cultural Heritage			
29/3/2022	**Observation** 1) The notice posted near NP-26 was found missing. Replacement is needed.	--	--
Quarterly Post-transplantation Works			
22/03/2022	--		
Monthly Floral Protection Measures			
22/03/2022	--		

Cultural Heritage

FUGRO

Contract No. DPW 01/2020 –
Environmental Team for Drainage Improvement Works at Ngong Ping (DC/2019/06)

Date: 29/3/2022 Weather: **Sunny / Fine / Overcast / Rainy / Hazy** Wind: **Calm / Light / Breeze / Strong**

Time: 10:00 a.m. Temperature: 18.5°C Humidity: **High / Moderate / Low**

Monthly Environmental Site Audit

Observations/ Reminders/ Recommendations / Follow-up:

Follow-up of previous observation(s)

Nil.

Observation(s)

(1) The notice posted near NP-26 was found missing (Photo 12). Replacement is needed.

Reminder(s)

(1) Replace the notice at NP-26 within 3 days.

Inspected by Qualified Building Surveyor (ET):	FUNG KAI YAN STEPHEN		29/3/2022
Acknowledged by representatives of the ER:	C.T. WONG AIOW/D7		29/3/2022
Agreed with Main Contractor:	Kelvin LEUNG		29/3/2022

Photo Record (29/03/2022)

		
Photo 1: General View of NP-10	Photo 2: Reflective targets for settlement monitoring were installed on the fence wall at NP-10.	Photo 3: Tell-tales for crack monitoring were installed at NP-10.
		
Photo 4: General View of NP-11	Photo 5: Ground settlement marker for settlement monitoring was installed at the entrance of NP-11.	Photo 6: Tell-tale for crack monitoring was installed at NP-11.

Photo Record (29/03/2022)

		
Photo 7: NP-19 has been fenced off in accordance to EM&A Manual.	Photo 8: Construction works in close proximity of NP-19	Photo 9: Access to NP-20 & NP-21 has been fenced off in accordance to EM&A Manual.
		
Photo 10: Access to NP-20 & NP-21 has been fenced off in accordance to EM&A Manual.	Photo 11: No temporary fence has been erected around NP-26 in mutual agreement with the villagers.	Photo 12: The notice at NP-26 was found missing. Replacement is required.

No.	Environmental Protection Measures (Construction Phase) (1)	Location & (Implementation Agent)	Yes (✓),No (×) N/A, N/O	Remark(s)
	F) Cultural Heritage			
F1	Four built heritage resources have been identified as being located in close proximity to the proposed works areas, namely, NP-19, NP-20, NP-21 and NP-26, as detailed in Appendix G1 and shown in Figures 8.12, 8.13 and 8.15 of the EIA Report. The structures may be damaged by contact with machinery and equipment. The recommended mitigation measures for each resource are as follows: ■ A buffer zone of a minimum of 5 metres in size (or if due to site/engineering constraints, as large as possible buffer zone should be provided) should be marked out for NP-19, NP-20, NP-21 and NP-26 by temporary fencing and placed around the structures 2 weeks prior to the construction works commencing. Three built heritage resources have been identified as being in close proximity to an excavation area (NP-10, NP-11 and NP-19), a condition survey have been carried out by a qualified building surveyor in advance of works commencing near the buildings that may be affected by ground borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring (including frequency of monitoring) and precautionary measures that are recommended. The Contractor must implement the approved monitoring and precautionary measures. ■ Vibration monitoring should be undertaken for the duration of the construction works based upon the recommendations of the approved Condition Survey Report, which will also define the frequency of monitoring required. The maximum acceptable level of vibration will be set at 15mm/s. Based upon the findings of the condition survey, this limit may be revised for sensitive structures. The location of monitoring points should be situated on the structure closest to the construction works, unless the maximum level is set lower than the standard 15 mm/s, in which case monitoring points should be located on each affected structure. Installation of monitoring points must not damage the historic building fabric. The location of monitoring points (and access to the property for purposes of measurement) must be agreed with the property owner prior to installation.	All relevant built heritage resources (Contractor and Sub-contractors)	✓ ✓	Replace the notice at NP-26 within 3 days.

Note:

(1) Detailed EIA report and EM&A Manual reference refer to the Appendix A of approved EM&A Manual.

N/A: Not Available, N/O: Not Observed.

Monthly Floral Protection Measures

Contract No. DPW 01/2020 –
Environmental Team for Drainage Improvement Works at Ngong Ping (DC/2019/06)

Date: 22 March 2022 Weather: **Sunny / Fine / Overcast / Rainy / Hazy** Wind: **Calm / Light / Breeze / Strong**

Time: 09:30 Temperature: 21 °C Humidity: **High / Moderate / Low**

Monthly Environmental Site Audit for Floral Protection Measures

Observations/ Reminders/ Recommendations / Follow-up:

Follow-up of previous observation(s)

N.A.

Observation(s)

Protection Measures	Location	Actions to be Taken			Remarks
		Retain	Replace	Repair	
Post Indicating Prohibition of Access					
1	In Outfall B		✓		Post should be installed according to the location shown in the approved FPP
2	West of Columbarium		✓		The post is nowhere to be found
Solid Fencing Around Plant Species					
1	Near Outfall B			✓	Post should be refixed properly
2	/				

	Location	Retain	Replace	Repair	Remarks
Solid Fencing at Access Entrance					
1	Across Outfall B				The fencing should be removed to tally with the approved FPP
2	Near Waterfall of WA4			✓	
3	Behide WA4	✓			Avoid tying the fencing to the plants
4	Behide WA4 (near road to Columbarium)			✓	Avoid tying the fencing to the plants
Warning Signposts/Labels					
Gleditsia 1	Along storm drain pipe alignment	✓			
Ehretia 2	Along storm drain pipe alignment			✓	Post should be refixed properly
Ehretia 3	Along storm drain pipe alignment (closer to SA4)		✓		The signpost is no where to be found
Ehretia 4	In SA4			✓	Post should be refixed properly

Reminder(s)

	Name	Signature	Date
Inspected by Representative from ET:	Jhomar Tillo		22 March 2022
Acknowledged by representatives of the ER:	C. T. WONG		22-3-2022
Agreed with Main Contractor:	Martin Cheng		22-3-2022
Checked by IEC:			

Quarterly Post-transplantation Work

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Contract No. DPW 01/2020 –
Environmental Team for Drainage Improvement Works at Ngong Ping (DC/2019/06)

Date: 22 March 2022 Weather: **Sunny / Fine / (Overcast) / Rainy / Hazy** Wind: **Calm / Light / (Breeze) / Strong**

Time: 09:30 Temperature: 21 °C Humidity: **High / (Moderate) / Low**

Quarterly Environmental Site Audit for Post-transplantation Works

Observations/ Reminders/ Recommendations / Follow-up:

Follow-up of previous observation(s)

To increase watering frequency

Observation(s)

Post-transplantation Works	Individuals						
	B28	B29	B30	B31	B32	B33	B34
Species	*Camellia euryoides*						
Growth condition	Poor		Poor	Poor	Poor	Poor	Poor
Trunk/Stem	Fair		Fair	Fair	Fair	Fair	Poor
Branches	Fair		Fair	Fair	Poor	Fair	Poor
Foliage	Poor		Poor	Poor	Poor	Poor	Poor
Root	Fair		Fair	Fair	Fair	Fair	Poor
Any arboricultural problem/s						Decay on the base trunk	
Remedial measure/s							
Injuries/damages							
Remarks	Dead branches; Buds did not fully develop and are dried	The individual was not found on site and is suspected to be washed away during the black rainstorm on 28 June 2021	Dead branches; Buds did not fully develop and are dried	Dead branch; Buds did not fully develop and are dried	Expose roots; Dead branches; Buds did not fully develop and are dried	Dead branches; Buds did not fully develop and are dried	Dead

FUGRO

Post-transplantation Works	Individuals				
	I12	I13	I14	I29	I31
Species	*Rhododendron farrerae*				
Growth condition	Poor	Fair	Poor	Poor	Poor
Trunk/Stem	Fair	Good	Poor	Poor	Poor
Branches	Fair	Fair	Poor	Poor	Poor
Foliage	Poor	Fair	Poor	Poor	Poor
Root	Fair	Good	Poor	Poor	Fair
Any arboricultural problem/s		Wilted leaves			
Remedial measure/s		Need more watering	Need more watering		Need more watering
Injuries/damages					
Remarks	Some branches are dry	Recovered		Dead	

Reminder(s)

	Name	Signature	Date
Inspected by Representative from ET:	Thomar Tillo	[signature]	22 March 2022
Acknowledged by representatives of the ER:	C. T. WONG A/ow/D7	[signature]	22-3-2022
Agreed with Main Contractor:	Martin Cheng	[signature]	22-3-2022
Checked by IEC:			

Appendix D Monitoring Parameters Action and Limit Levels

Noise

Action and Limit Levels for Impact Monitoring

Time Period	Monitoring Location No.	Action Level	Limit Level*
$Leq_{(}$,dB(A) (0700-1900 hrs in normal weekdays)(1)	NSR1 Columbarium of Po Lin Monastery	When one documented complaint is received.	70 dB(A)
	NSR5 Village House No. 49A	When one documented complaint is received.	75 dB(A)
	NSR8 Village House No. 34	When one documented complaint is received.	75 dB(A)

Note:
*75 dB(A) for residential premises and 70 dB(A) for educational institutions, kindergartens, nurseries and all others where voice communication
(1) Any general construction work carried out during restricted hours is controlled by Construction Noise Permit (CNP) under the NCO.

Water Quality

Action and Limit Levels for Impact Monitoring

Parameter(s)	DO in mg/L		Turbidity in NTU		pH		Suspended Solids in mg/L	
Station(s)	AL	LL	AL	LL	AL	LL	AL	LL
WS1-R1								
WS1-I1	7.36	7.32	15.8(5)	17.3(6)	< 6.5(3)or>6.9(4)	<6.5 or >8.5	14(5)	14(6)
WS1-R2								
WS1-I2	7.19	7.11	16.4(5)	18.4(6)	< 6.5(3)or>6.9(4)	<6.5 or >8.5	10(5)	14(6)
WS4-R3								
WS4-I3	7.29	7.28	22.9(5)	31.2(6)	< 6.9(3)or>7.2(4)	<6.5 or >8.5	13(5)	13(6)
WS5-R4								
WS5-I4	6.75	6.64	24.7(5)	28.2(6)	< 6.6(3)or>7.1(4)	<6.5 or >8.5	9(5)	9(6)
WS6-R5								
WS6-I5	6.31	6.23	12.6(5)	13.2(6)	< 6.6(3)or>7.0(4)	<6.5 or >8.5	10(5)	10(6)
WS6-C1								
WS6-R6								
WS6-I6	6.57	6.38	21.7(5)	23.7(6)	< 6.9(3)or>7.1(4)	<6.5 or >8.5	12(5)	13(6)

Note:
AL: Action Level, LL: Limit Level
(3) Or 80% of upstream control station.
(4) Or 110% of upstream control station.
(5) Or 120% of upstream control station of the same day.
(6) Or 130% of upstream control station of the same day.

Appendix E Event and Action Plans

Event and Action Plan for Construction Noise Monitoring

EVENT	ACTION			
	ET[1]	IEC[1]	Engineer	Contractor
Action Level	1. Notify the IEC and Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the Engineer accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to the IEC. 2. Implement noise mitigation proposals.
Limit Level	1. Notify the IEC, Engineer, EPD and Contractor. 2. Identify sources. 3. Repeat measurements to confirm findings. 4. Increase monitoring frequency. 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 6. Inform the IEC, Engineer and EPD the causes and action taken for the exceedances. 7. Assess the effectiveness of the Contractor's remedial action and keep the IEC, EPD and Engineer informed of the results. 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst the Engineer, ET and Contractor on the potential remedial action. 2. Review the Contractor's remedial action whenever necessary to assure their effectiveness and advise the Engineer accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what portion of work is responsible and instruct the Contractor to stop that portion of works until the exceedance is abated.	1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial action to the IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problems still not under control. 5. Stop the relevant portion of works as determined by the Engineer until the exceedance is abated.

Note: (1) ET - Environmental Team, IEC - Independent Environmental Checker;
(2) According to EM&A Manual Table 3.4.

Event and Action Plan for Water Quality Monitoring (Part 1)

EVENT	ACTION			
	ET[1]	IEC[1]	ER[1]	Contractor
Action Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor; 4. Check monitoring data, all plant, equipment and the Contractor's working methods; 5. Discuss mitigation measures with the IEC and the Contractor; 6. Repeat measurement on next day of exceedance.	1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures	1. Discuss with the IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented.	1. Inform the ER and confirm notification of the non- compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ES and the IEC and propose mitigation measures to the IEC
Action Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC and the Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC and the Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily;	1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3 Access the effectiveness of the implemented mitigation measures.	1. Inform the ER and confirm notification of the non- compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ES and the IEC and propose mitigation measures to the IEC and ER within 3 working days; 6. Implement the agreed mitigation

Event and Action Plan for Water Quality Monitoring (Part 2)

EVENT	ACTION			
	ET[1]	IEC[1]	ER[1]	Contractor
Limit Level being exceeded by one consecutive sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and the DEP; 4. Check monitoring data, all plant, equipment and the Contractor's working methods; 5. Discuss mitigation measures with the IEC, the ER and the Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level.	1. Discuss with the ES and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures.	1. Discuss with the IEC, the ES and the Contractor on the proposed mitigation measures; 2. Request the Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Access the effectiveness of the implemented mitigation measures.	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ES, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; 6. Implement the agreed mitigation measures.
Limit Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and DEP; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with the IEC, the ER and the Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Access the effectiveness of the implemented mitigation measures.	1. Discuss with the IEC, the ES and the Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Access the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works until no exceedance of Limit Level.	1. Inform the ER and confirm notification of the non- compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ES, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the ER, slow down or stop all or part of the construction activities.

Note: (1) ET - Environmental Team, IEC - Independent Environmental Checker;
(2) According to EM&A Manual Table 4.4.

Event / Action Plan for Ecological Monitoring

Action Level	ET[1]	IEC[1]	ER[1]	Contractor
Non-conformity on one occasion	Identify Source Inform the IEC and the ER Discuss remedial actions with the IEC, the ER and the Contractor Monitor remedial actions until rectification has been completed	Check report Check the Contractor's working method Discuss with the ET and the Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial measures. Check implementation of remedial measures.	Notify Contractor Ensure remedial measures are properly implemented Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works in the case of a serious non-conformity until situation rectified.	Amend working methods Rectify damage and undertake any necessary replacement
Repeated Non conformity	Identify Source Inform the IC(E) and the ER Increase monitoring frequency Discuss remedial actions with the IC(E), the ER and the Contractor Monitor remedial actions until rectification has been completed If exceedance stops, cease additional monitoring	Check monitoring report Check the Contractor's working method Discuss with the ES and the Contractor on possible remedial measures Advise the ER on effectiveness of proposed remedial measures Supervise implementation of remedial measures	Notify the Contractor Ensure remedial measures are properly implemented Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the works in the case of a serious non-conformity until situation rectified.	Amend working methods Rectify damage and undertake any necessary replacement

Note: (1) ET - Environmental Team, IEC - Independent Environmental Checker;
(2) According to EM&A Manual Table 5.4.

Event / Action Plan for Construction/Operational Phase for Ecology Issues (Landscape and Visual)

Action Level	ET[1]	IEC[1]	ER[1]	Contractor
Non-conformity on one occasion	1. Identify Source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures.	1. Notify Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement
Repeated Non-conformity	1. Identify Source 2. Inform the IEC and the ER 3. Increase monitoring frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring	1. Check monitoring report 2. Check the Contractor's working method 3. Discuss with the ET and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures.	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement

Note: (1) ET - Environmental Team, IEC - Independent Environmental Checker;
(2) According to EM&A Manual Table 6.4.

Event / Action Plan for Construction Phase for Heritage Issue

Action Level	ET[1]	IEC[1]	ER[1]	Contractor
Non-conformity on one occasion	1. Identify Source 2. Inform the IEC and the ER 3. Discuss remedial actions with the IEC, the ER and the Contractor 4. Monitor remedial actions until rectification has been completed	1. Check report 2. Check the Contractor's working method 3. Discuss with the ES and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures. 5. Check implementation of remedial measures.	1. Notify Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement
Repeated Non-conformity	1. Identify Source 2. Inform the IEC and the ER 3. Increase monitoring frequency 4. Discuss remedial actions with the IEC, the ER and the Contractor 5. Monitor remedial actions until rectification has been completed 6. If exceedance stops, cease additional monitoring	1. Check monitoring report 2. Check the Contractor's working method 3. Discuss with the ES and the Contractor on possible remedial measures 4. Advise the ER on effectiveness of proposed remedial measures 5. Supervise implementation of remedial measures.	1. Notify the Contractor 2. Ensure remedial measures are properly implemented	1. Amend working methods 2. Rectify damage and undertake any necessary replacement

Note: (1) ET - Environmental Team, IEC - Independent Environmental Checker;
(2) According to EM&A Manual Table 7.

Appendix F1 Equipment Calibration Certificates (Noise Monitoring)

Noise Monitoring Equipment Record

Monitoring Date	Model	Equipment	Serial No.
1 March 2022	CEL-63X Series	Sound Level Meter	1488293
	CEL-120/1	Sound Calibrator	2983982
8 March 2022	CEL-63X Series	Sound Level Meter	1488293
	CEL-120/1	Sound Calibrator	3321858
15 March 2022	CEL-63X Series	Sound Level Meter	2206937
	CEL-120/1	Sound Calibrator	2092809
22 March 2022	CEL-63X Series	Sound Level Meter	1488295
	CEL-120/1	Sound Calibrator	3321858
29 March 2022	CEL-63X Series	Sound Level Meter	1488272
	CEL-120/1	Sound Calibrator	2092809

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 212769CA212463(1)

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.
Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter
Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No. :	CEL-63X	CE-251	CEL-495
Serial No. :	1488272	03876	002752

Equipment ID : N/A
Next Calibration Date : 27-Oct-2022
Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -
Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID. : R-108-1

Date of Calibration : 28-Oct-2021
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	1.8	2.6 to -0.6
	2000Hz	1.5	2.8 to -0.4
	1000Hz	0.2	1.1 to -1.1
	500Hz	-3.2	-1.8 to -4.6
	250Hz	-8.7	-7.2 to -10.0
	125Hz	-16.1	-14.6 to -17.6
	63Hz	-26.2	-24.7 to -27.7
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5 The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of :

Checked by : _____ Date : 3-11-2021 Certified by : K.T. Leung Date : 4-11-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 212769CA211755 Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.
Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.
Project : Calibration Services
Details of Unit Under Test, UUT

Description : Sound Level Meter
Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No. :	CEL-63X	CE-251	CEL-495
Serial No. :	1488293	04064	004061

Equipment ID : N/A
Next Calibration Date : 25-Jul-2022
Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -
Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID. : R-108-1

Date of Calibration : 26-Jul-2021
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	1.0	2.6 to -0.6
	2000Hz	1.2	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.4	-1.8 to -4.6
	250Hz	-8.7	-7.2 to -10.0
	125Hz	-16.2	-14.6 to -17.6
	63Hz	-26.1	-24.7 to -27.7
	31.5Hz	-38.9	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.3	± 0.6
	104dB-114dB	-0.3	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
4. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
5. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
6. The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : Date : 30-7-2021 Certified by : Date : 30-7-2021

CA-R-297 (22/07/2009) Leung Kwok Tai (Assistant Manager)

** End of Report **

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FUGRO TECHNICAL SERVICES LIMITED
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5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 212769CA212069(2) Page 1 of 1

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.
Address : Room 723 & 725, 7/F., Block B Profit Industrial Building, 1-15 Kwai Fung Crescent, Kwai Chung, N.T.
Project : Calibration Services
Details of Unit Under Test, UUT

Description : Sound Level Meter
Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	1488295	01163	004064

Equipment ID : N-54
Next Calibration Date : 25-Aug-2022
Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -
Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID. : R-108-1

Date of Calibration : 26-Aug-2021
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	2.3	2.6 to -0.6
	2000Hz	1.5	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.4	-1.8 to -4.6
	250Hz	-8.8	-7.2 to -10.0
	125Hz	-16.3	-14.6 to -17.6
	63Hz	-26.3	-24.7 to -27.7
	31.5Hz	-39.0	-37.4 to -41.4
Differential level linearity	94dB-104dB	0.1	± 0.6
	104dB-114dB	0.1	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The expanded uncertainty is 0.3 dB with a coverage factor of 2 at a confidence level of 95%.
4. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast
5. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
6. The values given in this Calibration Certificate only relate to unit under test and the values measured at the time of the test. Any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : Date : 27-8-2021 Certified by : Date : 27-8-2021
Leung Kwok Tai (Assistant Manager)

CA-R-297 (22/07/2009)

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Hong Kong

Report no.: 212769CA213126(1)

CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.
Project : Calibration Services
Details of Unit Under Test, UUT

Description : Sound Level Meter
Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No.	CEL-63X	CE-251	CEL-495
Serial No.	2206937	4926	4597

Equipment ID : N-77
Next Calibration Date : 19-Dec-2022
Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -
Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)
Equipment ID. : R-108-1
Date of Calibration : 20-Dec-2021
Calibration Location : Calibration Laboratory of FTS
Method Used : By direct comparison
Ambient Temperature : 20±2 °C
Relative Humidity : <80% R.H.

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)
A-weigthing frequency response	4000Hz	-0.6	2.6 to -0.6
	2000Hz	0.7	2.8 to -0.4
	1000Hz	0.0	1.1 to -1.1
	500Hz	-3.2	-1.8 to -4.6
	250Hz	-8.5	-7.2 to -10.0
	125Hz	-15.9	-14.6 to -17.6
	63Hz	-25.9	-24.7 to -27.7
Differential level linearity	94dB-104dB	0.0	± 0.6
	104dB-114dB	0.0	± 0.6

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast.
4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.
5 The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : Date : 28-12-2021 Certified by : Date : 28-12-2021

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Leung Kwok Tai (Assistant Manager)

** End of Report **

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FUGRO TECHNICAL SERVICES LIMITED
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5 Lok Yi Street, Tai Lam
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Report no.: 203258CA210118

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	2092809
Equipment ID	:	N/A

Next Calibration Date : 09-Apr-2022

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-2

Date of Calibration : 10-Apr-2021

Calibration Location : Calibration Laboratory of FTS

Ambient Temperature : 20±2 °C

Method Used : By direct comparison

Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit
94dB	0.2 dB	±0.4dB
114dB	0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The unit under test complies with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : William Date : 12-4-2021 Certified by : K.T. Leung Date : 13-4-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

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Hong Kong

Report no.: 212769CA220043(1)

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	2383982
Equipment ID	:	N/A
Next Calibration Date	:	05-Jan-2023
Specification Limit	:	EN 60942: 2003 Class 1

Laboratory Information

Description	: Reference Sound level meter		
Equipment ID.	: R-119-1		
Date of Calibration	: 06-Jan-2022	Ambient Temperature	: 22 °C
Calibration Location	: Calibration Laboratory of FTS	Relative Humidity	: <80% R.H.
Method Used	: By direct comparison		

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.0 dB	±0.4dB
114dB	-0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The equipment does comply with the specification limit.
4. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : _____ Date : 10-1-2022 Certified by : K.T. Leung Date : 11-1-2022

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA211142(1)

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	3321858
Equipment ID	:	N/A

Next Calibration Date : 27-May-2022

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-2

Date of Calibration : 28-May-2021

Calibration Location : Calibration Laboratory of FTS

Ambient Temperature : 20±2 °C

Method Used : By direct comparison

Relative Humidity : <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	-0.2 dB	±0.4dB
114dB	-0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.
2. The mean value is the average of four measurements.
3. The unit under test complies with the specification limit.
4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : Date : 1-6-2021 Certified by : Date : 1-6-2021

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **

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Appendix F2 Equipment Calibration Certificates (Water Quality Monitoring)

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342

Report on Calibration of YSI EXO-3 Multi-parameter Water Quality Meter

Information Supplied by Client

Client	:	Fugro Technical Services Limited (MCL)
Client's address	:	13/F, Fugro House – KCC2, No. 1 Kwai On Road, Kwai Chung, N.T., H.K.
Sample description	:	One YSI EXO-3 Multi-parameter Water Quality Meter
Client sample ID	:	Serial No. 19E100633
Test required	:	Calibration of the YSI EXO-3 Multi-parameter Water Quality Meter

Laboratory Information

Lab. sample ID	:	WA220342/1
Date sample received	:	23/02/2022
Date of calibration	:	28/02/2022
Next calibration date	:	27/05/2022
Test method used	:	In-house comparison method

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342

Results :

A. pH calibration

pH reading at 25°C for Q.C. solution(6.86) and at 25°C for Q.C. solution(9.18)		
Theoretical	Measured	Deviation
9.18	9.17	-0.01
6.86	6.93	+0.07

B. Salinity calibration

Salinity, ppt			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
1	1.00	0.00	± 0.1
10	9.95	-0.05	± 0.5
20	20.03	+0.03	± 1.0
30	30.02	+0.02	± 1.5
40	39.93	-0.07	± 2.0

C. Dissolved Oxygen calibration

Trial No.	Dissolved oxygen content, mg/L	
	By Titration	By D.O. meter
1	8.44	8.60
2	8.46	8.60
3	8.74	8.61
Average	8.55	8.60

Differences of D.O. Content between Wrinkler Titration and D.O. meter should be less than 0.2 mg/L.

Certified by : _____
Approved Signatory : HO Kin Man, John
Assistant General Manager – Laboratories

Date : 28/3/2022

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342

Results :

D. Temperature calibration

Thermometer reading, °C	Meter reading, °C
20.2	20.515

E. Turbidity calibration

Turbidity, N.T.U.			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
4	4.49	+0.49	± 0.6
8	8.60	+0.60	± 0.8
40	40.78	+0.78	± 3.0
80	79.16	-0.84	± 4.0

Certified by :
Approved Signatory : HO Kin Man, John
Assistant General Manager – Laboratories

Date : 28/3/2022

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342(1)

Report on Calibration of YSI EXO-3 Multi-parameter Water Quality Meter

Information Supplied by Client

Client	:	Fugro Technical Services Limited (MCL)
Client's address	:	13/F, Fugro House – KCC2, No. 1 Kwai On Road, Kwai Chung, N.T., H.K.
Sample description	:	One YSI EXO-3 Multi-parameter Water Quality Meter
Client sample ID	:	Serial No. 19E100634
Test required	:	Calibration of the YSI EXO-3 Multi-parameter Water Quality Meter

Laboratory Information

Lab. sample ID	:	WA220342(1)/1
Date sample received	:	23/02/2022
Date of calibration	:	28/02/2022
Next calibration date	:	27/05/2022
Test method used	:	In-house comparison method

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342(1)

Results :

A. pH calibration

pH reading at 25°C for Q.C. solution(6.86) and at 25°C for Q.C. solution(9.18)		
Theoretical	Measured	Deviation
9.18	9.08	-0.10
6.86	6.86	0.00

B. Salinity calibration

Salinity, ppt			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
1	1.01	+0.01	± 0.1
10	9.97	-0.03	± 0.5
20	20.02	+0.02	± 1.0
30	29.98	-0.02	± 1.5
40	40.04	+0.04	± 2.0

C. Dissolved Oxygen calibration

Trial No.	Dissolved oxygen content, mg/L	
	By Titration	By D.O. meter
1	8.41	8.54
2	8.41	8.46
3	8.36	8.44
Average	8.39	8.48

Differences of D.O. Content between Wrinkler Titration and D.O. meter should be less than 0.2 mg/L.

Certified by : _____
Approved Signatory : HO Kin Man, John
Assistant General Manager – Laboratories

Date : 28/3/2022

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report No. : 142626WA220342(1)

Results :

D. Temperature calibration

Thermometer reading, °C	Meter reading, °C
22.8	22.515

E. Turbidity calibration

Turbidity, N.T.U.			
Theoretical	Measured	Deviation	Maximum acceptable Deviation
4	4.38	+0.38	± 0.6
8	8.18	+0.18	± 0.8
40	40.96	+0.96	± 3.0
80	80.72	+0.72	± 4.0

Certified by :
Approved Signatory : HO Kin Man, John
Assistant General Manager – Laboratories

Date : 28/3/2022

** End of Report **

Note : This report refers only to the sample(s) tested and the result(s) applied to the sample(s) as received.

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Appendix G Environmental Monitoring Schedules

Project: **Contract No. DPW 01/2020 –**
Environmental Team for Drainage Improvement Works at Ngong Ping

Impact Monitoring Schedule (March 2022)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 W & N	2	3 W	4	5 W
6	7	8 W & N	9	10 W	11	12 W
13	14	15 W & N	16	17 W	18	19 W
20	21	22 W & N	23	24 W	25	26 W
27	28	29 W & N	30	31 W		

Remarks

1. W: Impact Water Quality Monitoring.
2. N: Impact Noise Monitoring.
3. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition, etc.

Project: **Contract No. DPW 01/2020 –**
Environmental Team for Drainage Improvement Works at Ngong Ping

Tentative Impact Monitoring Schedule (April 2022)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 W
3	4	5 W	6	7 W & N	8	9 W
10	11	12 W & N	13	14 W	15	16 W
17	18	19 W & N	20	21 W	22	23 W
24	25	26 W & N	27	28 W	29	30 W

Remarks

1. W: Impact Water Quality Monitoring.
2. N: Impact Noise Monitoring.
3. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition, etc.

Project: **Contract No. DPW 01/2020 –**
Environmental Team for Drainage Improvement Works at Ngong Ping

Tentative Impact Monitoring Schedule (May 2022)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3 W & N	4	5	6	7 W
8	9	10 W & N	11	12 W	13	14 W
15	16	17 W & N	18	19 W	20	21 W
22	23	24 W & N	25	26 W	27	28 W
29	30	31 W & N				

Remarks

1. W: Impact Water Quality Monitoring.
2. N: Impact Noise Monitoring.
3. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition, etc.

Project: **Contract No. DPW 01/2020 –**
Environmental Team for Drainage Improvement Works at Ngong Ping

Tentative Impact Monitoring Schedule (June 2022)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 W	3	4 W
5	6	7 W & N	8	9 W	10	11 W
12	13	14 W & N	15	16 W	17	18 W
19	20	21 W & N	22	23 W	24	25 W
26	27	28 W & N	29	30 W		

Remarks

1. W: Impact Water Quality Monitoring.
2. N: Impact Noise Monitoring.
3. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition, etc.

Appendix H1 Noise Monitoring Data and Graphical Presentations

Monitoring Location :	**NSR1 Columbarium of Po Lin Monastery**					
Date	Weather	Wind Speed (m/s)	Start Time	Noise Monitoring (in dB(A))		
				$Leq_{(30\ min)}$	$L90_{(30\ min)}$	$L10_{(30\ min)}$
01-03-2022	Fine	0.0	10:45	47.0	42.5	49.5
08-03-2022	Fine	0.4	10:06	54.0	53.5	55.5
15-03-2022	Fine	0.2	9:02	64.4	53.5	68.0
22-03-2022	Fine	0.6	11:16	61.5	59.5	62.5
29-03-2022	Cloudy	0.6	9:05	65.7	58.5	67.5

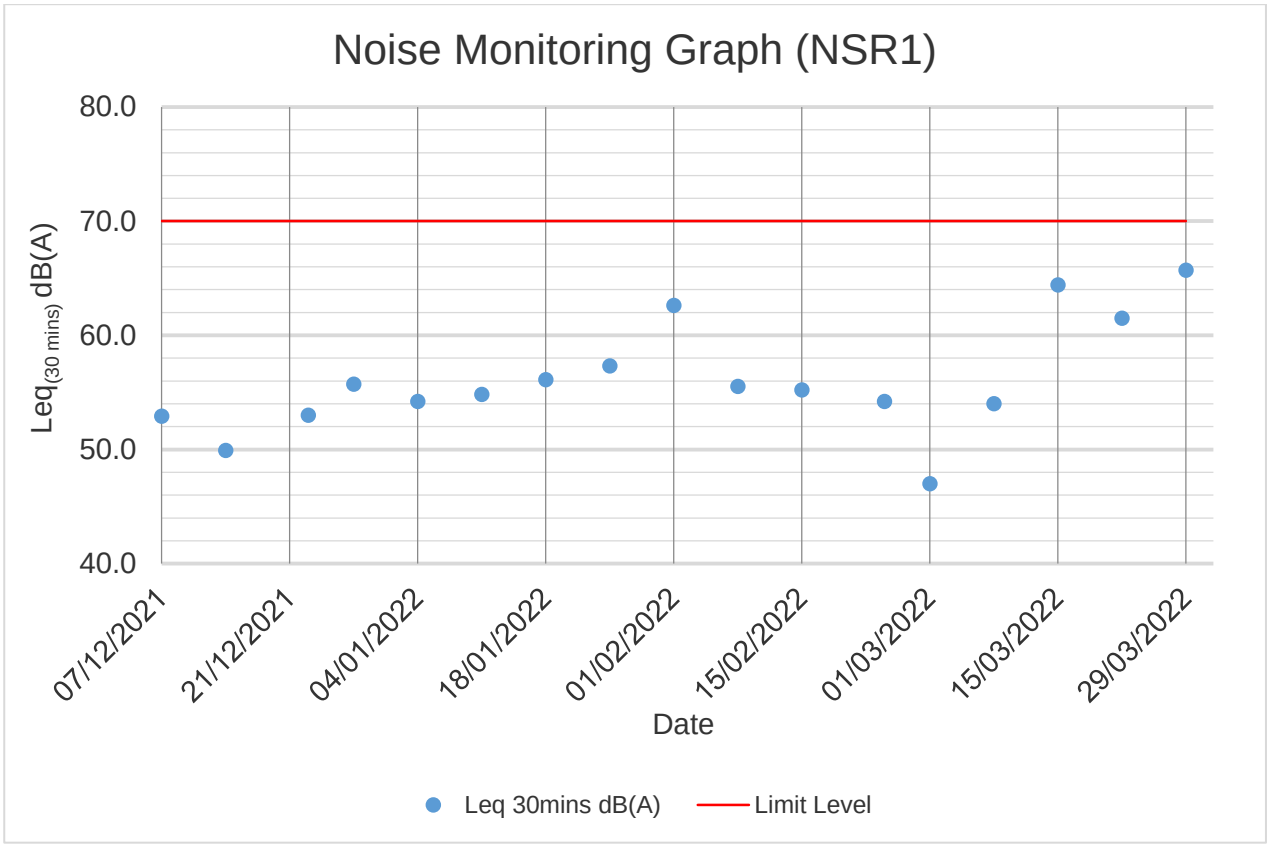
Monitoring Location :	**NSR5 Village House No. 49A**					
Date	Weather	Wind Speed (m/s)	Start Time	Noise Monitoring (in dB(A))		
				$Leq_{(30\ min)}$	$L90_{(30\ min)}$	$L10_{(30\ min)}$
01-03-2022	Fine	0.0	10:08	56.5	53.0	60.0
08-03-2022	Fine	0.4	10:48	53.7	53.0	56.5
15-03-2022	Fine	0.3	9:40	53.2	52.0	54.5
22-03-2022	Fine	0.8	10:36	59.3	58.0	62.0
29-03-2022	Cloudy	0.3	10:02	56.2	53.0	58.5

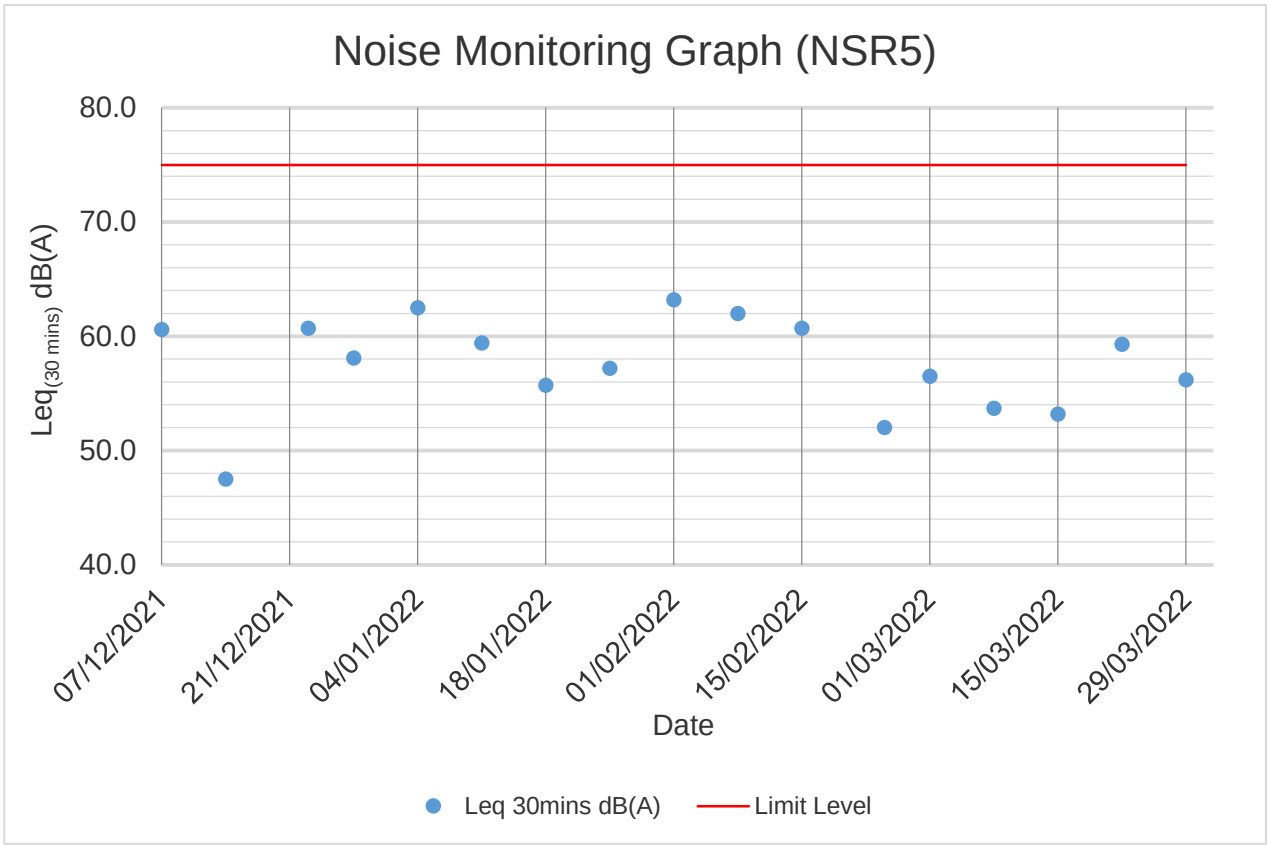
Monitoring Location :	**NSR8 Village House No. 34**					
Date	Weather	Wind Speed (m/s)	Start Time	Noise Monitoring (in dB(A))		
				$Leq_{(30\ min)}$	$L90_{(30\ min)}$	$L10_{(30\ min)}$
01-03-2022	Fine	0.0	9:30	52.6	43.0	56.0
08-03-2022	Fine	0.4	11:31	51.4	50.5	55.0
15-03-2022	Fine	0.2	12:12	56.7	50.7	57.8
22-03-2022	Fine	0.7	9:28	62.7	59.5	63.5
29-03-2022	Cloudy	0.4	12:31	54.7	51.5	58.0

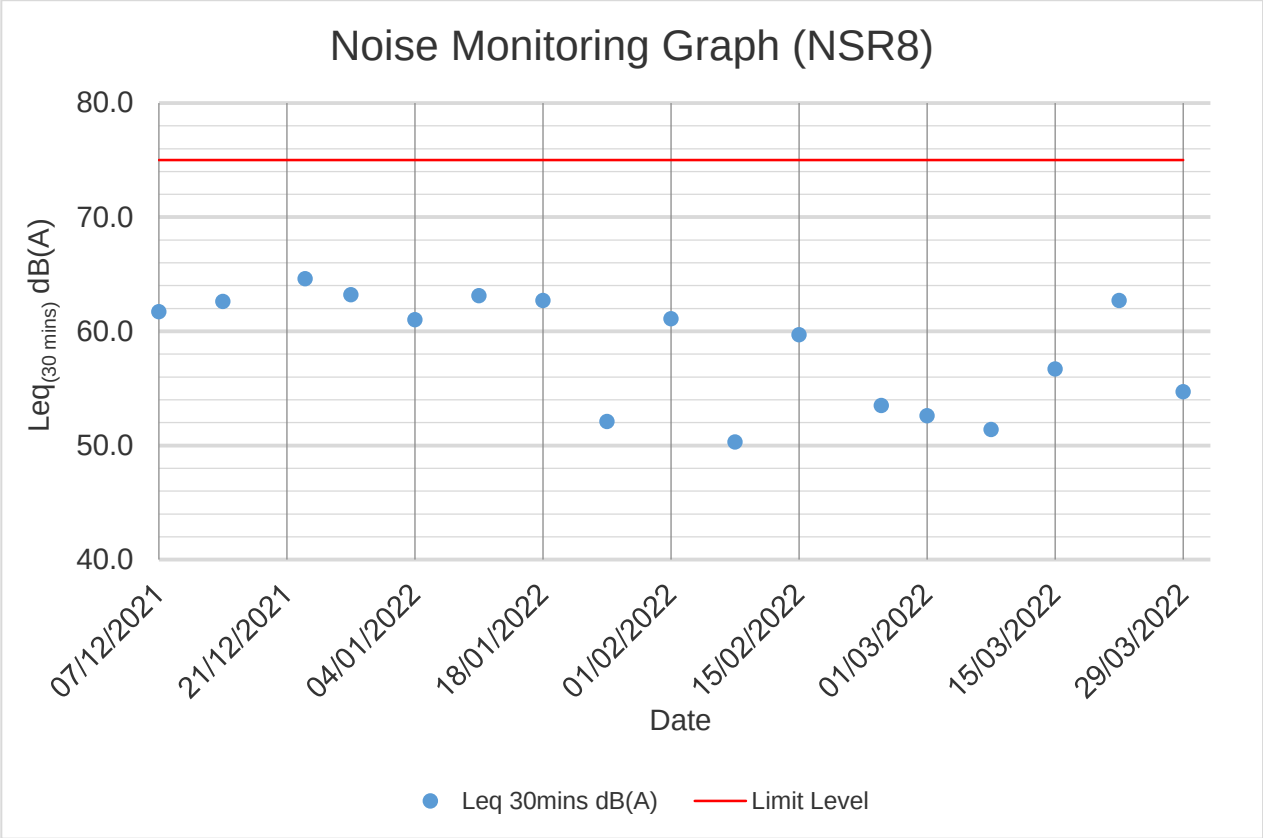
	Noise Monitoring (in dB(A))	
	Min $Leq_{(30\ min)}$	Max $Leq_{(30\ min)}$
NSR1	47.0	65.7
NSR5	53.2	59.3
NSR8	51.4	62.7

Remarks:

1) NSR1 & NSR5 noise results were calculated by +3 dB (A) correction for free-field measurement.


Noise Monitoring Graph (NSR1)
80.0
70.0
60.0
50.0
40.0
Leq(30 mins) dB(A)
07/12/2021
21/12/2021
04/01/2022
18/01/2022
01/02/2022
15/02/2022
01/03/2022
15/03/2022
29/03/2022
Date
Leq 30mins dB(A)
Limit Level


Noise Monitoring Graph (NSR5)
80.0
70.0
60.0
50.0
40.0
Leq(30 mins) dB(A)
07/12/2021
21/12/2021
04/01/2022
18/01/2022
01/02/2022
15/02/2022
01/03/2022
15/03/2022
29/03/2022
Date
Leq 30mins dB(A)
Limit Level



Note:

1) Major activities being carried out on site during the reporting period refer to section 1.4.
2) The other factors influencing the monitoring results refer to section 5.5.3.
3) The QA/QC procedures and detection Limits refer to section 5.1 and 5.2.

Appendix H2 Water Quality Monitoring Data and Graphical Presentations

Monitoring Results Summary

Parameter(s) / Station(s)	DO in mg/L					Turbidity in NTU					pH					Suspended Solids in mg/L				
	Min	-	Max	(Mean)		Min	-	Max	(Mean)		Min	-	Max	(Mean)		Min	-	Max	(Mean)	
WS1-R1	8.52	-	8.52	(8.52)		2.3	-	2.3	(2.3)		6.60	-	6.60	(6.60)		1.0	-	1.0	(1.0)	
WS1-I1	7.60	-	9.07	(8.32)		0.50	-	4.50	(2.11)		6.80	-	6.90	(6.84)		1.00	-	8.00	(2.36)	
WS1-R2	7.50	-	9.03	(8.28)		1.00	-	4.90	(2.36)		6.80	-	7.40	(6.95)		1.00	-	9.50	(2.04)	
WS1-I2	8.76	-	8.76	(8.76)		1.60	-	1.60	(1.60)		6.80	-	6.80	(6.80)		1.00	-	1.00	(1.00)	
WS4-R3																				
WS4-I3																				
WS5-R4	6.80	-	9.22	(7.82)		3.60	-	63.40	(12.71)		6.90	-	7.40	(7.10)		2.00	-	18.50	(5.45)	
WS5-I4	6.93	-	7.67	(7.20)		5.00	-	65.80	(25.77)		6.80	-	7.10	(6.97)		4.00	-	20.50	(10.33)	
WS6-R5	7.03	-	7.03	(7.03)		6.80	-	6.80	(6.80)		7.00	-	7.00	(7.00)		4.00	-	4.00	(4.00)	
WS6-I5	6.79	-	6.79	(6.79)		6.50	-	6.50	(6.50)		7.00	-	7.00	(7.00)		4.00	-	4.00	(4.00)	
WS6-C1	5.22	-	7.44	(6.53)		1.10	-	8.90	(2.99)		5.80	-	7.20	(6.82)		1.00	-	6.50	(2.11)	
WS6-R6	6.71	-	8.06	(7.25)		0.60	-	3.80	(2.01)		6.70	-	7.10	(6.98)		1.00	-	2.00	(1.10)	
WS6-I6	6.60	-	8.05	(7.04)		0.50	-	3.80	(2.01)		6.60	-	7.10	(6.89)		1.00	-	2.00	(1.28)	

Laboratory Duplicate, Quality Assurance/Quality Control Summary extract form Lab test report

	Total suspended solids dried at 103°C – 105°C					
Sampling Date	Detection Limit	Blank	Spike recovery (%)	Original result	Duplicate result	RPD%
01/03/2022	1mg/L	<1	98.05	9.45	9.40	0.53
03/03/2022	1mg/L	<1	99.45	7.35	6.80	7.77
05/03/2022	1mg/L	<1	98.80	2.55	2.75	7.55
08/03/2022	1mg/L	<1	100.10	3.80	3.95	3.87
10/03/2022	1mg/L	<1	99.10	4.80	4.40	8.70
12/03/2022	1mg/L	<1	99.82	1.62	1.49	8.48
15/03/2022	1mg/L	<1	97.70	1.50	1.66	10.13
17/03/2022	1mg/L	<1	97.18	1.44	1.37	4.98
19/03/2022	1mg/L	<1	97.35	0.16	0.18	11.76
22/03/2022	1mg/L	<1	105.50	0.16	0.18	9.16
24/03/2022	1mg/L	<1	98.00	14.07	15.15	7.39
26/03/2022	1mg/L	<1	100.35	2.06	2.20	6.57
29/03/2022	1mg/L	<1	99.05	3.86	3.64	5.87
31/03/2022	1mg/L	<1	100.95	1.62	1.76	8.28

Parameter Exceedance Summary

Monitoring Date	Monitoring Location	Exceedance Parameter	Monitoring Results	Action Level(AL)	Limit Level(LL)	Project-related?
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Monitoring Location Dried up Summary

Date / Location	WS1-R1	WS1-I1	WS1-R2	WS1-I2	WS4-R3	WS4-I3	WS5-R4	WS5-I4	WS6-R5	WS5-I5	WS6-C1	WS6-R6	WS6-I6
1-Mar-22	12			Dried Up	Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
3-Mar-22	12	Dried Up		Dried Up		Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
5-Mar-22	12	Dried Up			Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
8-Mar-22	10	Dried Up			Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
10-Mar-22	12	Dried Up			Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
12-Mar-22	12	Dried Up			Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		
15-Mar-22	6	Dried Up			Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up		Dried Up
17-Mar-22	6	Dried Up			Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up		Dried Up
19-Mar-22	6	Dried Up			Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up		Dried Up
22-Mar-22	6	Dried Up			Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up	Dried Up		Dried Up
24-Mar-22	14	Dried Up			Dried Up	Dried Up	Dried Up			Dried Up	Dried Up		
26-Mar-22	14	Dried Up			Dried Up	Dried Up	Dried Up			Dried Up	Dried Up		
29-Mar-22	18	Dried Up			Dried Up	Dried Up	Dried Up						
31-Mar-22	12	Dried Up			Dried Up	Dried Up	Dried Up		Dried Up	Dried Up	Dried Up		

Note:

1) Major activities being carried out on site during the reporting period refer to section 1.4.
2) The other factors influencing the monitoring results refer to section 5.5.4.
3) The QA/QC procedures and detection Limits refer to section 5.1 and 5.2.

Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	01-Mar-22	Fine	09:22	19	1	6.4	6.6	0.02	0.02	16.7	16.7	87.7	87.5	8.53	8.52	2.2	2.3	<1	1.0	NA
					2	6.8		0.02		16.7		87.3		8.51		2.3		<1		
WS1-I1			09:38	18	1	6.8	6.8	0.02	0.02	16.7	16.7	88.4	88.6	8.60	8.59	2.1	2.1	<1	1.0	NA
					2	6.8		0.02		16.7		88.7		8.57		2.1		<1		
WS1-R2			09:57	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I2			10:14	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:31	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			12:40	18	1	7.4	7.4	0.06	0.06	18.1	18.1	79.2	79.2	7.48	7.47	15.9	15.8	9	9.5	NA
					2	7.4		0.06		18.1		79.1		7.46		15.8		10		
WS5-I4			12:57	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			12:06	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:23	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:14	22	1	7.0	7.0	0.07	0.07	18.4	18.4	72.1	71.6	6.78	6.77	3.8	3.8	2	2.0	NA
					2	7.0		0.07		18.3		71.1		6.76		3.8		2		
WS6-R6			11:33	14	1	7.1	7.1	0.07	0.07	17.1	17.1	78.8	78.1	7.44	7.42	1.7	1.6	<1	1.0	NA
					2	7.1		0.07		17.1		77.4		7.39		1.5		<1		
WS6-I6			11:50	16	1	7.0	7.0	0.07	0.07	16.8	16.8	73.6	73.6	7.14	7.14	1.2	1.1	<1	1.0	NA
					2	7.0		0.07		16.8		73.5		7.13		1.1		<1		

Note: 1. ND: Not Detected
2. NA: Not Applicable
3. TBC: To Be Confirm
4. Yellow Highlight equal to exceed Action Level
5. Red Highlight equal to exceed Limit Level

Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	03-Mar-22	Cloudy	10:19	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			10:36	16	1	6.9	6.9	0.04	0.04	17.3	17.3	88.1	88.0	8.46	8.45	2.6	2.6	1	1.0	NA
					2	6.9		0.04		17.3		87.9		8.44		2.6		<1		
WS1-R2			10:02	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I2			11:08	22	1	6.8	6.8	0.02	0.02	17.1	17.1	90.2	90.1	8.77	8.76	1.6	1.6	<1	1.0	NA
					2	6.8		0.02		17.1		90.0		8.75		1.6		<1		
WS4-R3			11:24	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			11:41	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			13:19	18	1	7.1	7.1	0.06	0.06	18.6	18.6	98.6	98.5	9.22	9.22	10.7	10.7	7	6.5	NA
					2	7.1		0.06		18.6		98.4		9.21		10.7		6		
WS5-I4			13:36	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			12:49	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			13:03	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:59	18	1	6.7	6.7	0.08	0.08	18.7	18.7	79.8	79.7	7.45	7.44	1.5	1.5	<1	1.0	NA
					2	6.7		0.08		18.7		79.5		7.43		1.5		<1		
WS6-R6			12:18	14	1	6.7	6.7	0.07	0.07	17.5	17.5	73.3	73.2	7.01	7.00	1.0	1.0	<1	1.0	NA
					2	6.7		0.07		17.5		73.1		6.99		1.0		<1		
WS6-I6			12:33	15	1	6.6	6.6	0.07	0.07	17.2	17.2	67.6	67.5	6.63	6.62	0.9	0.8	<1	1.0	NA
					2	6.6		0.07		17.2		67.4		6.61		0.8		<1		

Note: 1. ND: Not Detected
2. NA: Not Applicable
3. TBC: To Be Confirm
4. Yellow Highlight equal to exceed Action Level
5. Red Highlight equal to exceed Limit Level

Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	05-Mar-22	Fine	09:58	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			10:16	18	1	6.9	6.8	0.02	0.02	17.9	17.9	89.3	89.4	8.48	8.49	1.1	1.1	2	2.0	NA
					2	6.8		0.02		17.9		89.5		8.50		1.1		2		
WS1-R2			10:33	20	1	7.0	7.0	0.02	0.02	17.8	17.8	87.5	87.6	8.50	8.51	1.3	1.3	<1	1.0	NA
					2	7.0		0.02		17.9		87.6		8.51		1.2		<1		
WS1-I2			10:49	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			11:06	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			11:22	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			13:01	18	1	7.1	7.1	0.08	0.08	19.1	19.4	91.3	91.4	8.46	8.47	4.0	4.0	3	3.0	NA
					2	7.1		0.08		19.8		91.4		8.47		4.0		3		
WS5-I4			13:16	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			12:29	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:45	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:39	17	1	6.8	6.8	0.09	0.09	18.8	18.8	68.5	68.4	6.24	6.24	2.4	2.4	2	2.0	NA
					2	6.8		0.09		18.8		68.3		6.23		2.3		2		
WS6-R6			11:57	16	1	7.0	7.0	0.08	0.08	17.4	17.4	89.0	89.6	8.09	8.06	0.6	0.6	<1	1.0	NA
					2	7.0		0.08		17.4		90.1		8.02		0.6		<1		
WS6-I6			12:13	14	1	7.0	7.0	0.08	0.08	17.5	17.5	82.2	82.3	8.04	8.05	0.5	0.5	<1	1.0	NA
					2	7.0		0.08		17.5		82.3		8.05		0.5		<1		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	08-Mar-22	Fine	09:20	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:36	18	1	6.7	6.8	0.04	0.04	14.8	14.8	89.5	89.6	9.06	9.07	4.5	4.5	8	8.0	NA
					2	6.8		0.03		14.8		89.7		9.08		4.6		8		
WS1-R2			09:59	16	1	6.9	6.9	0.02	0.03	14.9	14.8	89.1	89.3	9.02	9.03	2.7	2.7	9	9.5	NA
					2	6.9		0.03		14.8		89.4		9.04		2.7		10		
WS1-I2			10:16	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:39	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:54	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:16	16	1	7.2	7.2	0.07	0.08	15.0	15.0	82.6	82.4	8.31	8.30	4.3	4.4	4	4.0	NA
					2	7.2		0.08		15.1		82.1		8.29		4.4		4		
WS5-I4			11:33	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			11:48	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:07	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			12:24	17	1	7.2	7.2	0.08	0.09	15.6	15.6	71.1	70.8	7.07	7.04	8.9	8.9	7	6.5	NA
					2	7.2		0.09		15.5		70.5		7.00		8.9		6		
WS6-R6			12:40	18	1	7.0	7.0	0.09	0.09	15.1	15.1	74.5	74.4	7.29	7.28	1.4	1.4	<1	1.0	NA
					2	7.0		0.09		15.1		74.2		7.26		1.5		<1		
WS6-I6			12:59	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	10-Mar-22	Fine	10:01	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			10:17	17	1	6.9	6.9	0.02	0.03	14.6	14.5	89.4	89.6	8.77	8.79	2.2	2.2	<1	1.0	NA
					2	6.9		0.03		14.4		89.7		8.80		2.2		<1		
WS1-R2			10:38	16	1	6.9	6.9	0.02	0.03	16.5	16.5	89.0	88.7	8.70	8.66	4.9	4.9	2	2.0	NA
					2	6.9		0.03		16.5		88.3		8.62		4.8		2		
WS1-I2			10:57	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			11:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			12:04	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:14	16	1	7.1	7.1	0.07	0.08	19.8	19.8	100.4	100.4	9.17	9.17	5.6	5.6	5	4.5	NA
					2	7.1		0.08		19.7		100.4		9.17		5.6		4		
WS5-I4			11:31	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			12:19	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:36	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			12:54	20	1	7.0	7.0	0.10	0.11	17.7	17.7	70.2	70.3	6.69	6.70	2.8	2.8	1	1.0	NA
					2	7.0		0.11		17.7		70.4		6.71		2.8		1		
WS6-R6			13:10	16	1	6.9	6.9	0.08	0.08	16.4	16.4	72.4	72.4	6.84	6.84	1.5	1.5	<1	1.0	NA
					2	6.9		0.08		16.4		72.3		6.84		1.5		<1		
WS6-I6			13:27	18	1	6.7	6.7	0.09	0.09	16.4	16.4	70.2	70.4	6.72	6.75	2.2	2.2	<1	1.0	NA
					2	6.7		0.09		16.4		70.5		6.78		2.3		<1		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	12-Mar-22	Fine	10:25	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			10:41	16	1	6.9	6.8	0.02	0.02	17.5	17.5	90.4	90.4	8.64	8.63	1.4	1.4	4	4.0	NA
					2	6.8		0.02		17.5		90.3		8.62		1.4		4		
WS1-R2			11:01	18	1	7.0	7.0	0.02	0.02	17.5	17.5	90.3	90.5	8.60	8.64	2.1	2.1	2	2.0	NA
					2	7.0		0.02		17.5		90.6		8.68		2.0		2		
WS1-I2			11:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			11:33	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			11:48	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			13:19	17	1	7.0	7.0	0.07	0.07	20.2	20.2	72.0	72.1	6.77	6.80	3.9	3.9	2	2.0	NA
					2	7.0		0.07		20.2		72.2		6.82		4.0		2		
WS5-I4			13:36	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			12:49	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			13:03	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			12:02	18	1	6.8	6.8	0.13	0.07	19.3	19.3	75.2	75.2	6.95	6.63	1.5	1.5	2	2.0	NA
					2	6.9		0.01		19.3		75.1		6.30		1.5		2		
WS6-R6			12:17	14	1	7.1	7.1	0.08	0.08	17.2	17.2	69.2	69.2	6.71	6.71	1.3	1.3	<1	1.0	NA
					2	7.1		0.08		17.2		69.1		6.70		1.3		<1		
WS6-I6			12:33	16	1	7.0	6.9	0.08	0.08	17.2	17.2	66.4	66.5	6.58	6.60	1.1	1.1	<1	1.0	NA
					2	6.9		0.08		17.2		66.7		6.62		1.2		<1		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	15-Mar-22	Fine	09:02	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:17	15	1	6.8	6.8	0.04	0.04	19.2	19.2	90.7	90.6	8.37	8.37	2.7	2.7	<1	1.0	NA
					2	6.8		0.04		19.2		90.5		8.36		2.7		1		
WS1-R2			09:36	16	1	6.9	6.9	0.02	0.02	19.1	19.1	91.3	91.0	8.42	8.41	4.3	4.3	<1	1.0	NA
					2	6.9		0.02		19.1		90.6		8.39		4.3		<1		
WS1-I2			09:55	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:38	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			10:54	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-I4			11:10	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			11:24	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			11:39	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:54	18	1	6.9	6.9	0.16	0.16	21.2	21.2	74.1	74.0	6.58	6.49	2.1	2.0	2	2.0	NA
					2	6.9		0.15		21.2		73.9		6.40		2.0		2		
WS6-R6			12:12	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I6			12:26	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		

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						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	17-Mar-22	Fine	09:07	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:21	14	1	6.8	6.8	0.03	0.04	19.6	19.6	87.7	87.5	7.98	7.96	1.8	1.9	<1	1.0	NA
					2	6.8		0.04		19.6		87.3		7.93		1.9		<1		
WS1-R2			09:35	14	1	6.9	6.9	0.02	0.03	20.1	20.1	88.8	88.6	8.05	8.03	2.6	2.7	<1	1.0	NA
					2	6.9		0.03		20.1		88.4		8.01		2.7		<1		
WS1-I2			09:52	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:09	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:36	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			10:54	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-I4			11:07	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			11:20	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			11:36	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:55	16	1	6.6	6.6	0.17	0.18	21.0	21.0	59.5	59.3	5.30	5.28	1.1	1.1	1	1.0	NA
					2	6.6		0.18		21.0		59.0		5.25		1.1		1		
WS6-R6			12:13	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I6			12:30	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	19-Mar-22	Fine	09:37	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:56	16	1	6.9	6.9	0.02	0.03	20.3	20.3	88.5	87.9	7.99	7.92	2.7	2.8	<1	1.0	NA
					2	6.9		0.03		20.3		87.3		7.84		2.8		<1		
WS1-R2			10:12	17	1	6.9	6.9	0.04	0.04	20.2	20.2	88.4	88.7	8.00	8.01	1.0	1.0	<1	1.0	NA
					2	6.9		0.03		20.2		89.0		8.02		1.1		<1		
WS1-I2			10:29	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:43	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:59	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:13	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-I4			11:30	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			11:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:03	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			12:16	14	1	7.0	7.0	0.17	0.18	23.0	23.0	74.3	74.2	6.36	6.36	1.6	1.6	<1	1.0	NA
					2	7.0		0.18		23.0		74.1		6.35		1.6		<1		
WS6-R6			12:29	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I6			12:45	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		

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5. Red Highlight equal to exceed Limit Level

Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	22-Mar-22	Fine	09:31	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:46	15	1	6.8	6.8	0.02	0.02	20.8	20.8	84.8	84.7	7.60	7.60	0.5	0.5	8	8.0	NA
					2	6.8		0.02		20.8		84.6		7.59		0.5		8		
WS1-R2			10:02	18	1	6.8	6.8	0.02	0.02	20.7	20.7	84.7	84.6	7.57	7.56	1.7	1.8	2	2.0	NA
					2	6.8		0.02		20.7		84.5		7.54		1.8		2		
WS1-I2			10:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:33	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			12:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-I4			12:32	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			11:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:02	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			11:02	20	1	6.6	6.6	0.16	0.16	20.5	21.5	56.4	56.1	4.87	5.22	3.2	3.1	3	3.0	NA
					2	6.6		0.16		22.5		55.8		5.56		3.1		3		
WS6-R6			11:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I6			11:32	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	24-Mar-22	Cloudy	09:30	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			09:41	12	1	6.9	6.9	0.02	0.02	17.7	17.7	89.0	89.1	8.48	8.49	1.1	1.1	<1	1.0	NA
					2	6.9		0.02		17.7		89.1		8.49		1.1		<1		
WS1-R2			09:57	22	1	7.4	7.4	0.02	0.02	17.3	17.3	88.2	88.3	8.47	8.48	1.4	1.3	<1	1.0	NA
					2	7.4		0.02		17.3		88.4		8.49		1.3		<1		
WS1-I2			10:15	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			13:38	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:40	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:09	19	1	7.0	7.0	0.07	0.07	18.6	18.6	75.0	74.9	7.88	7.79	63.1	63.4	15	18.5	NA
					2	7.0		0.07		18.6		74.8		7.69		63.8		22		
WS5-I4			11:24	26	1	7.0	7.0	0.07	0.07	18.7	18.7	73.0	73.0	7.68	7.67	65.8	65.8	19	20.5	NA
					2	7.0		0.07		18.7		72.9		7.65		65.7		22		
WS6-R5			11:30	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			10:45	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			10:20	41	1	7.1	7.1	0.07	0.07	18.7	18.7	76.5	76.4	7.13	7.12	2.7	2.7	1	1.0	NA
					2	7.1		0.07		18.7		76.3		7.11		2.7		1		
WS6-R6			10:36	36	1	7.0	7.0	0.06	0.06	17.8	17.8	73.6	73.6	7.00	7.00	3.5	3.4	1	1.0	NA
					2	7.0		0.06		17.8		73.5		6.99		3.4		1		
WS6-I6			10:49	42	1	6.8	6.8	0.06	0.06	17.8	17.8	72.2	72.2	6.86	6.86	3.4	3.4	1	1.5	NA
					2	6.8		0.06		17.8		72.2		6.86		3.4		2		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	26-Mar-22	Cloudy	09:48	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			10:09	14	1	6.9	6.8	0.02	0.03	20.9	20.9	85.5	85.9	7.64	7.68	3.6	3.6	2	2.0	NA
					2	6.8		0.04		20.9		86.3		7.72		3.6		2		
WS1-R2			10:24	16	1	6.9	6.9	0.02	0.03	20.8	20.8	84.0	83.9	7.51	7.50	3.0	3.0	1	1.0	NA
					2	6.9		0.03		20.8		83.7		7.48		3.1		1		
WS1-I2			10:40	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:58	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			11:16	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:29	17	1	6.9	6.9	0.06	0.07	21.2	21.2	79.4	79.1	6.92	6.94	3.6	3.6	2	2.0	NA
					2	6.9		0.07		21.2		78.7		6.95		3.7		2		
WS5-I4			11:43	16	1	6.8	6.8	0.06	0.06	21.3	21.3	79.3	79.3	7.01	7.01	5.0	5.0	6	6.5	NA
					2	6.8		0.05		21.3		79.2		7.00		5.0		7		
WS6-R5			12:01	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			12:17	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			12:26	19	1	6.9	6.9	0.11	0.12	22.0	22.0	62.8	62.7	5.48	5.47	2.1	2.1	<1	1.0	NA
					2	6.9		0.12		22.0		62.5		5.46		2.1		<1		
WS6-R6			12:54	18	1	6.9	6.9	0.08	0.09	21.4	21.4	80.8	80.8	7.04	7.04	1.8	1.9	<1	1.0	NA
					2	6.9		0.09		21.4		80.7		7.04		1.9		<1		
WS6-I6			13:16	18	1	7.0	7.0	0.08	0.08	21.5	21.5	77.3	77.4	6.73	6.75	2.0	2.0	<1	1.0	NA
					2	7.0		0.08		21.5		77.5		6.76		2.1		<1		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	29-Mar-22	Cloudy	9:10	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			9:27	16	1	6.8	6.8	0.02	0.03	17.4	17.4	88.8	88.6	8.51	8.50	0.9	0.9	<1	1.0	NA
					2	6.8		0.03		17.4		88.4		8.48		0.9		<1		
WS1-R2			9:46	14	1	6.9	6.9	0.02	0.03	17.4	17.4	89.5	89.5	8.58	8.57	1.5	1.5	2	2.0	NA
					2	6.9		0.03		17.4		89.4		8.56		1.5		2		
WS1-I2			10:09	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			10:26	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			10:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			11:01	16	1	7.1	7.1	0.05	0.06	18.1	18.1	74.3	74.0	7.02	6.99	6.6	6.6	2	2.5	NA
					2	7.1		0.06		18.1		73.6		6.96		6.6		3		
WS5-I4			11:19	16	1	7.1	7.1	0.05	0.05	18.0	18.0	73.5	73.3	6.95	6.93	6.5	6.5	4	4.0	NA
					2	7.1		0.05		18.1		73.0		6.91		6.6		4		
WS6-R5			11:32	14	1	7.0	7.0	0.05	0.06	18.0	18.0	74.7	74.4	7.05	7.03	6.8	6.8	4	4.0	NA
					2	7.0		0.06		18.0		74.1		7.01		6.8		4		
WS6-I5			11:55	17	1	7.0	7.0	0.07	0.08	18.0	18.0	71.9	71.7	6.80	6.79	6.5	6.5	4	4.0	NA
					2	7.1		0.08		18.0		71.4		6.77		6.5		4		
WS6-C1			12:13	18	1	5.8	5.8	0.07	0.08	18.1	18.0	78.2	78.4	7.39	7.36	5.1	5.2	4	4.0	NA
					2	5.8		0.08		18.0		78.6		7.33		5.2		4		
WS6-R6			12:29	15	1	7.1	7.0	0.07	0.07	17.7	17.7	84.0	83.7	8.00	7.97	3.8	3.8	1	1.0	NA
					2	7.0		0.06		17.7		83.4		7.93		3.7		1		
WS6-I6			12:45	18	1	6.9	6.9	0.07	0.08	17.6	17.6	78.1	78.0	7.46	7.45	3.8	3.8	2	2.0	NA
					2	6.9		0.08		17.6		77.9		7.43		3.8		2		

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Monitoring Location	Date	Weather	Time	Water Depth (cm)	Replicate	In-situ Measurement												Laboratory Analysis		Remarks
						pH		Salinity (ppt)		Temperature (ºC)		DO Saturation (%)		DO (mg/L)		Turbidity (NTU)		Total suspended solids dried at 103 - 105 (ºC), mg/L		
						Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	
WS1-R1	31-Mar-22	Cloudy	12:34	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS1-I1			12:49	16	1	6.9	6.9	0.02	0.02	20.2	20.2	87.8	87.7	7.95	7.94	2.1	2.1	1	1.0	NA
					2	6.9		0.02		20.2		87.5		7.93		2.1		1		
WS1-R2			12:02	25	1	6.9	6.9	0.02	0.02	20.2	20.2	87.7	87.7	7.96	7.95	1.7	1.7	<1	1.0	NA
					2	6.9		0.02		20.2		87.6		7.94		1.7		<1		
WS1-I2			12:18	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-R3			11:32	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS4-I3			11:47	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS5-R4			14:26	14	1	7.1	7.1	0.06	0.06	21.1	21.1	75.5	75.4	7.02	7.01	9.1	9.1	2	2.0	NA
					2	7.1		0.06		21.1		75.3		7.00		9.1		2		
WS5-I4			14:41	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-R5			13:51	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-I5			14:09	0	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Lack of Suface Runoff
					2	NA		NA		NA		NA		NA		NA		NA		
WS6-C1			13:04	22	1	7.1	7.1	0.09	0.09	22.8	22.8	86.5	86.4	7.44	7.33	3.2	3.2	2	2.0	NA
					2	7.1		0.09		22.8		86.2		7.22		3.2		2		
WS6-R6			13:19	13	1	7.1	7.1	0.11	0.11	21.3	21.3	81.2	81.3	7.21	7.22	3.6	3.6	2	2.0	NA
					2	7.1		0.11		21.3		81.4		7.22		3.6		2		
WS6-I6			13:36	16	1	7.1	7.1	0.11	0.11	21.2	21.2	80.2	80.1	7.16	7.16	3.2	3.2	2	2.0	NA
					2	7.1		0.11		21.2		80.0		7.15		3.2		2		

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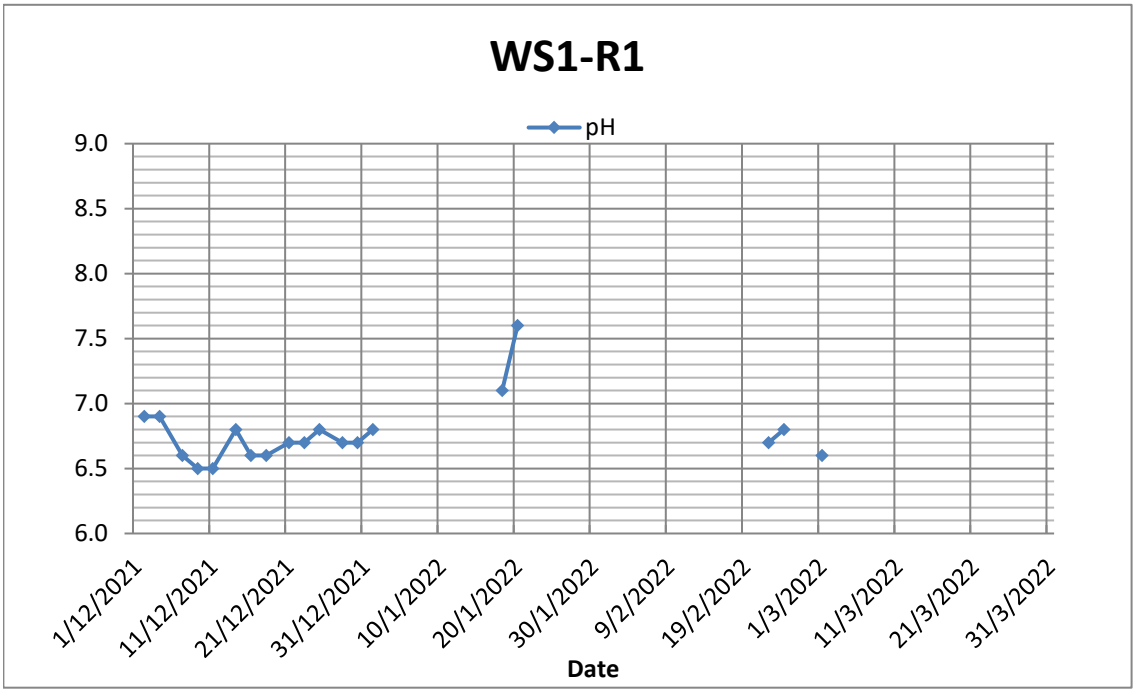
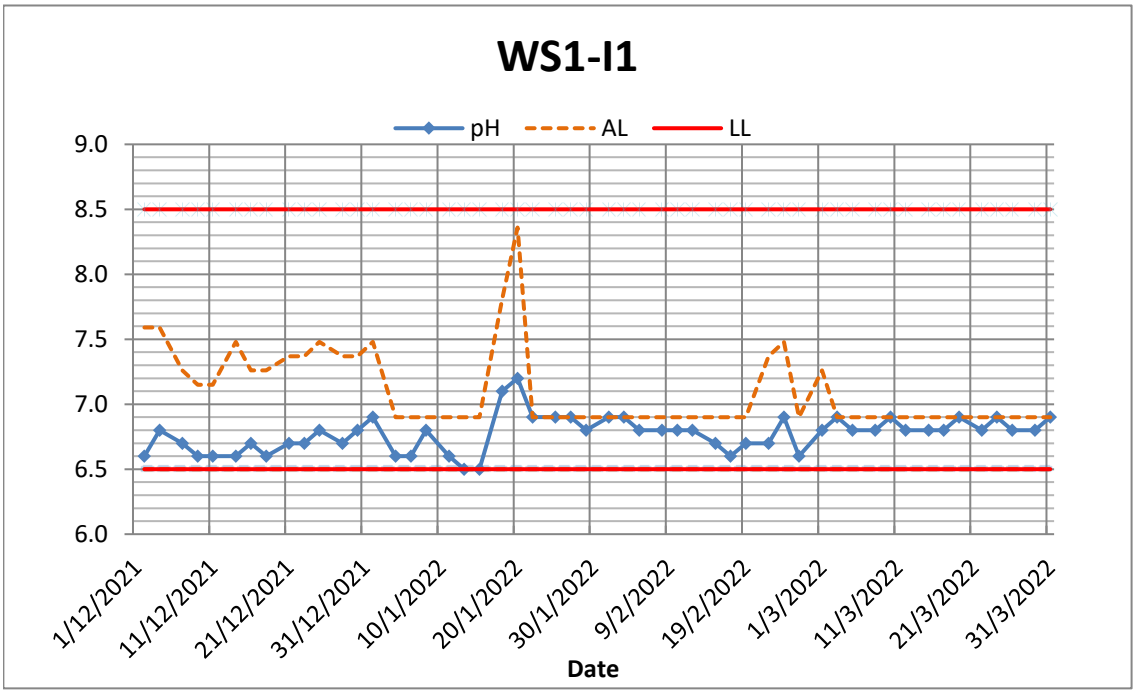
5. Red Highlight equal to exceed Limit Level


WS1-R1
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS1-I1
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
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9/2/2022
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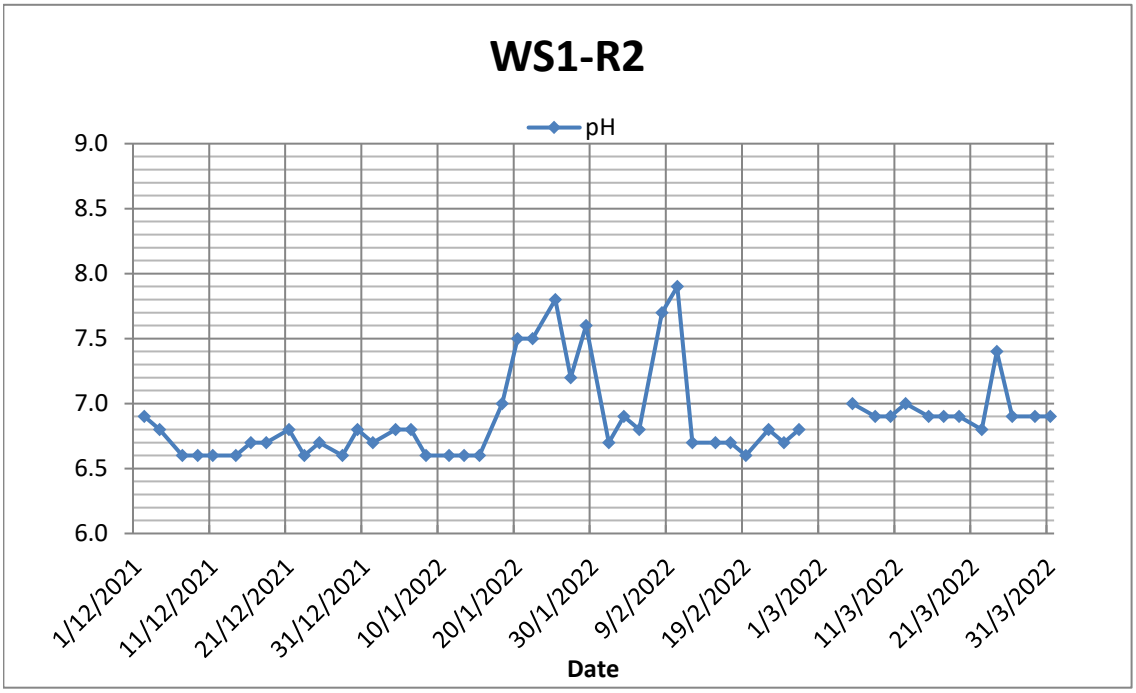
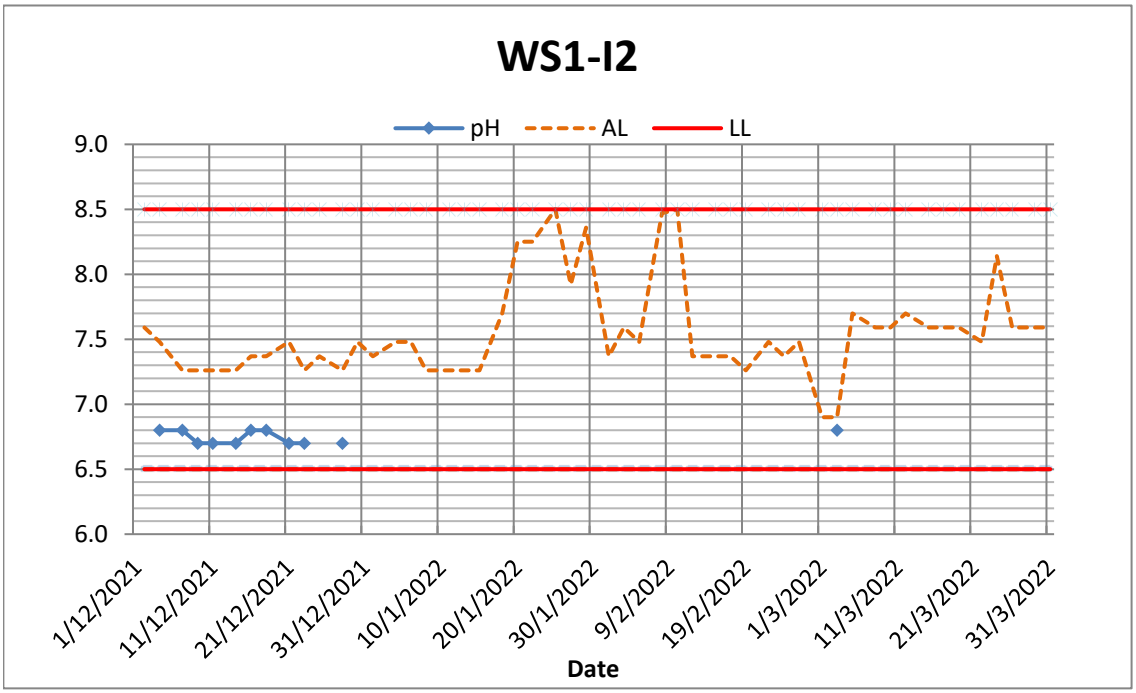
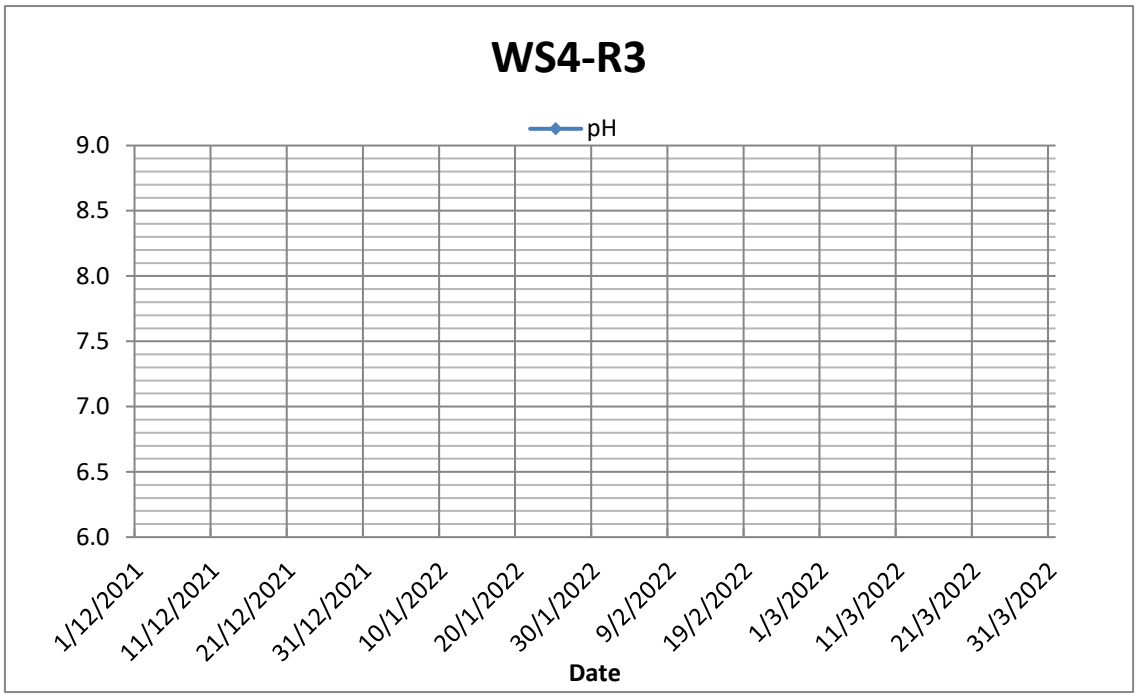
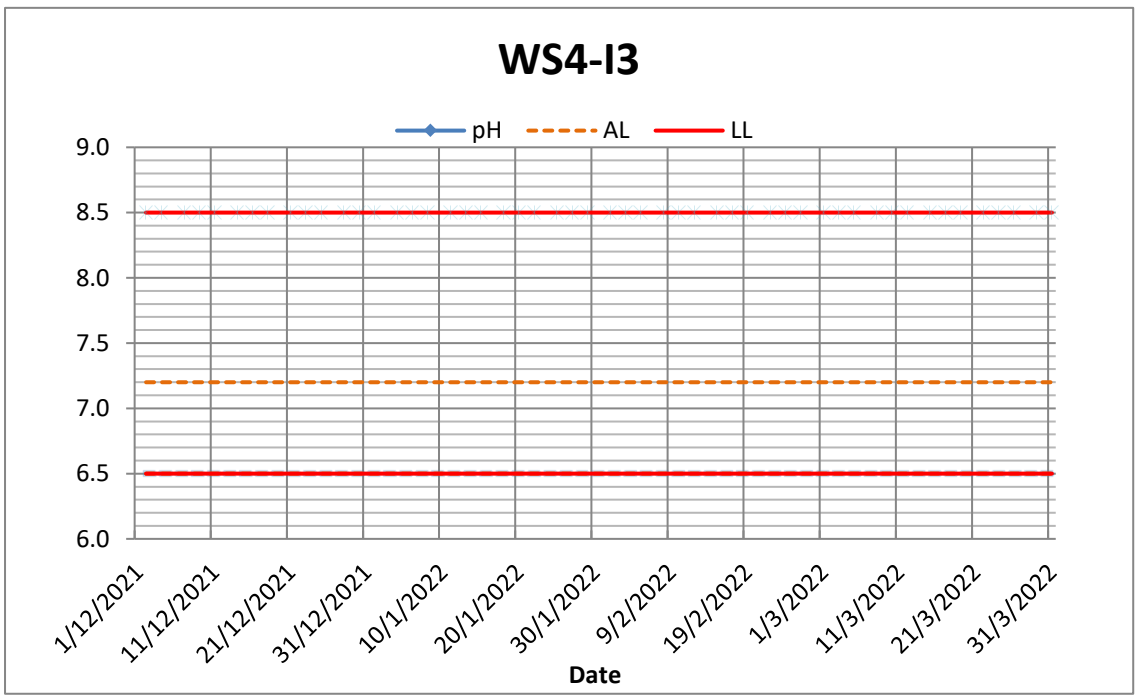
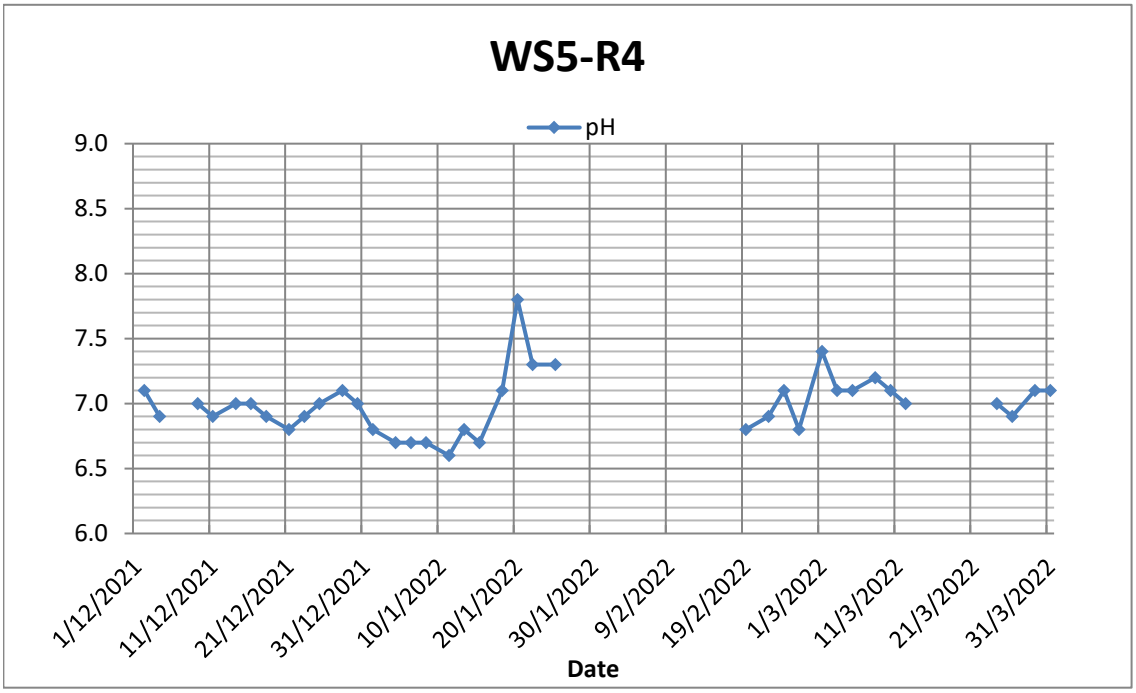
21/3/2022
31/3/2022
Date

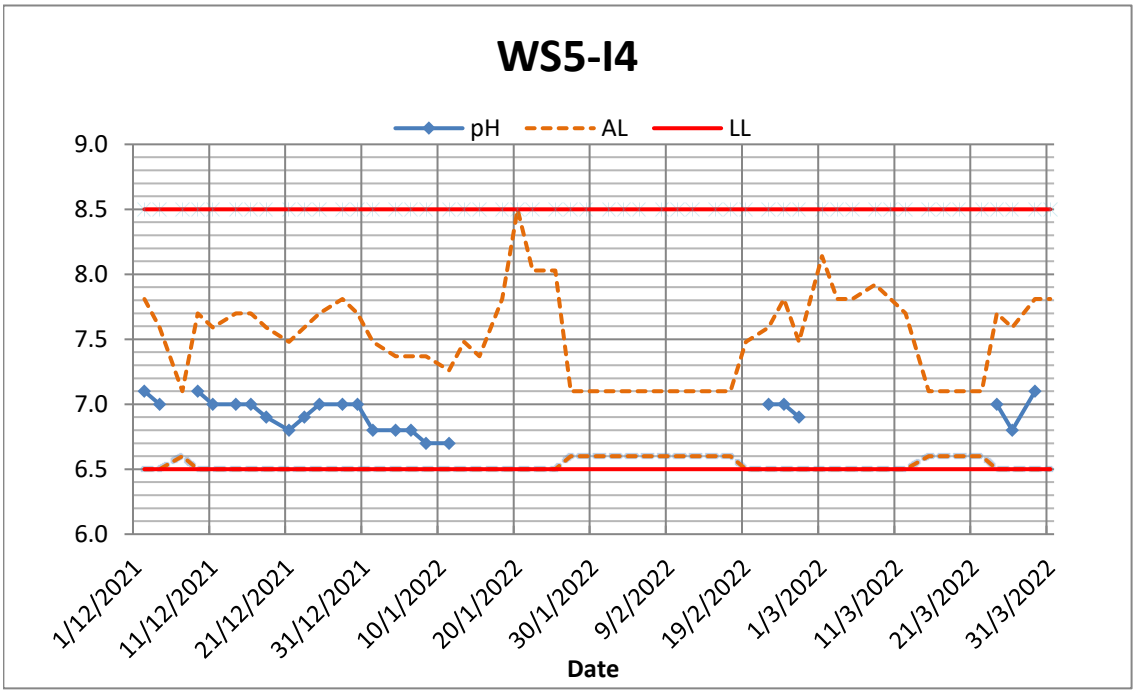

WS1-R2
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

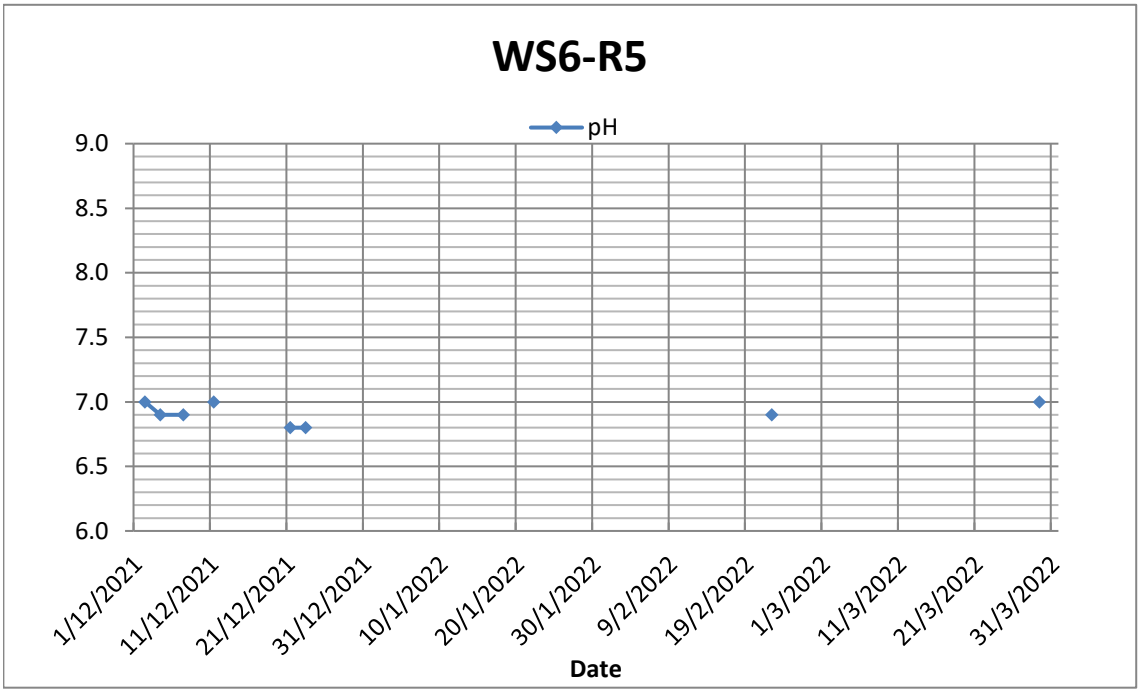

WS1-I2
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

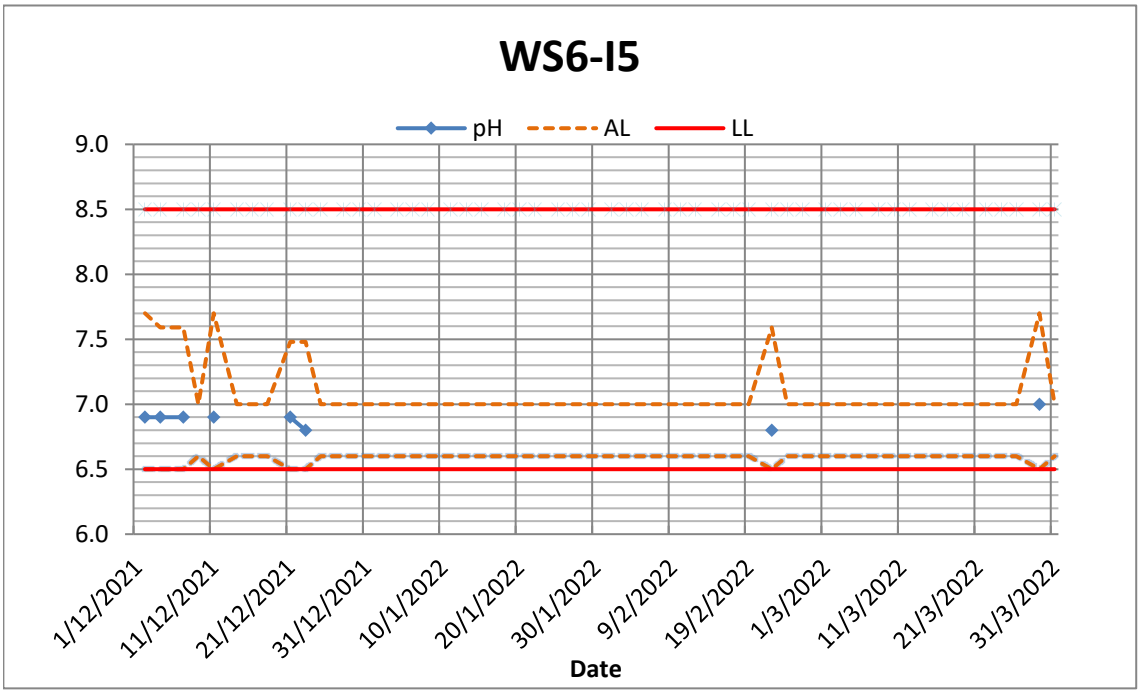

WS4-R3
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

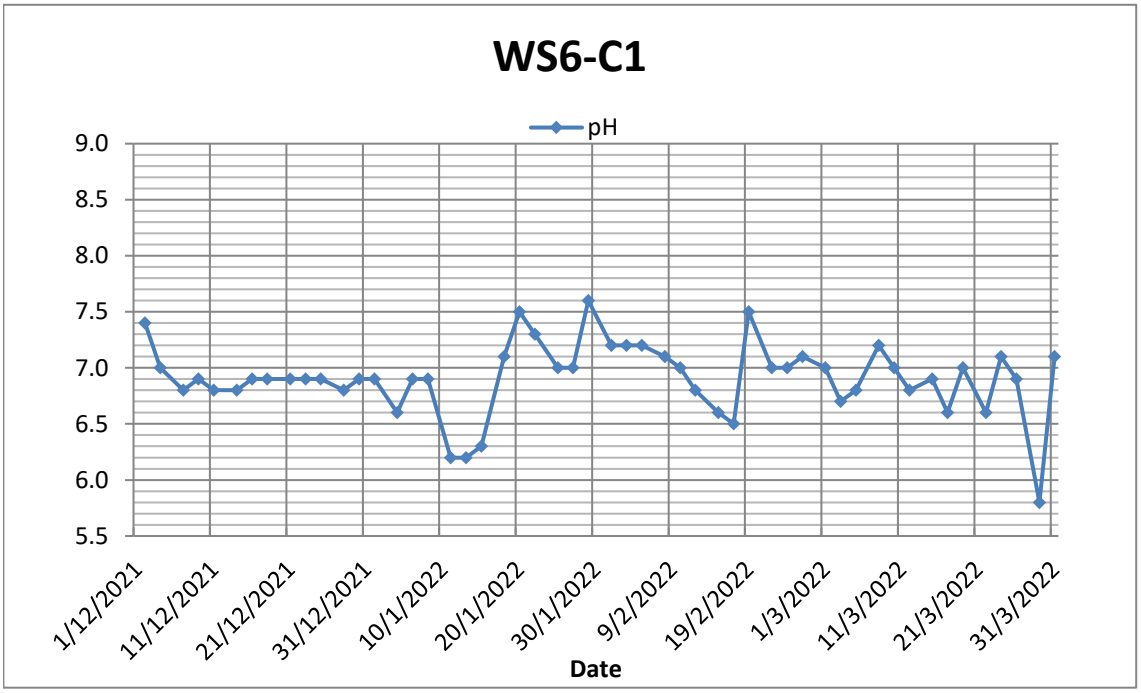

WS4-I3
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

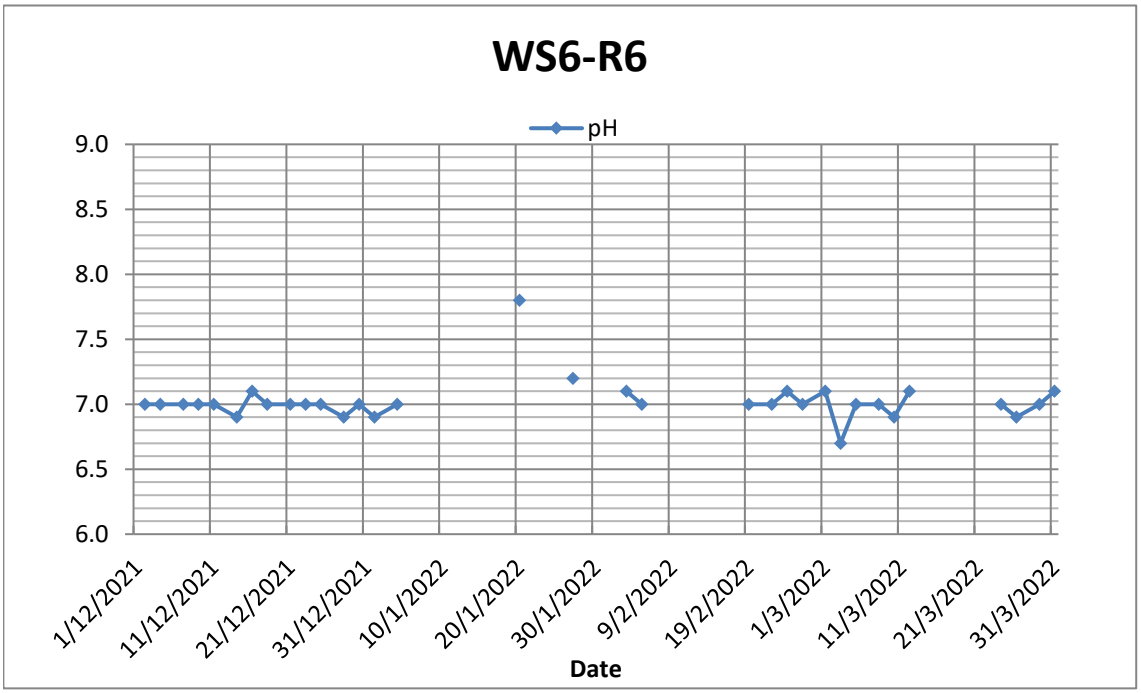

WS5-R4
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

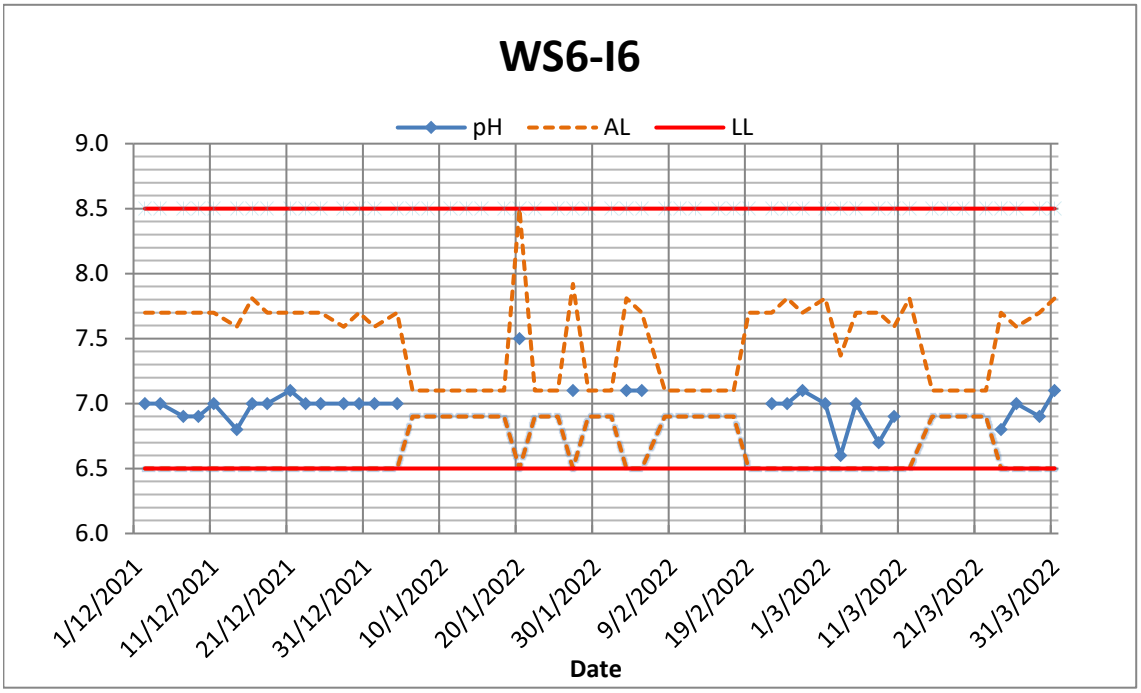

WS5-I4
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

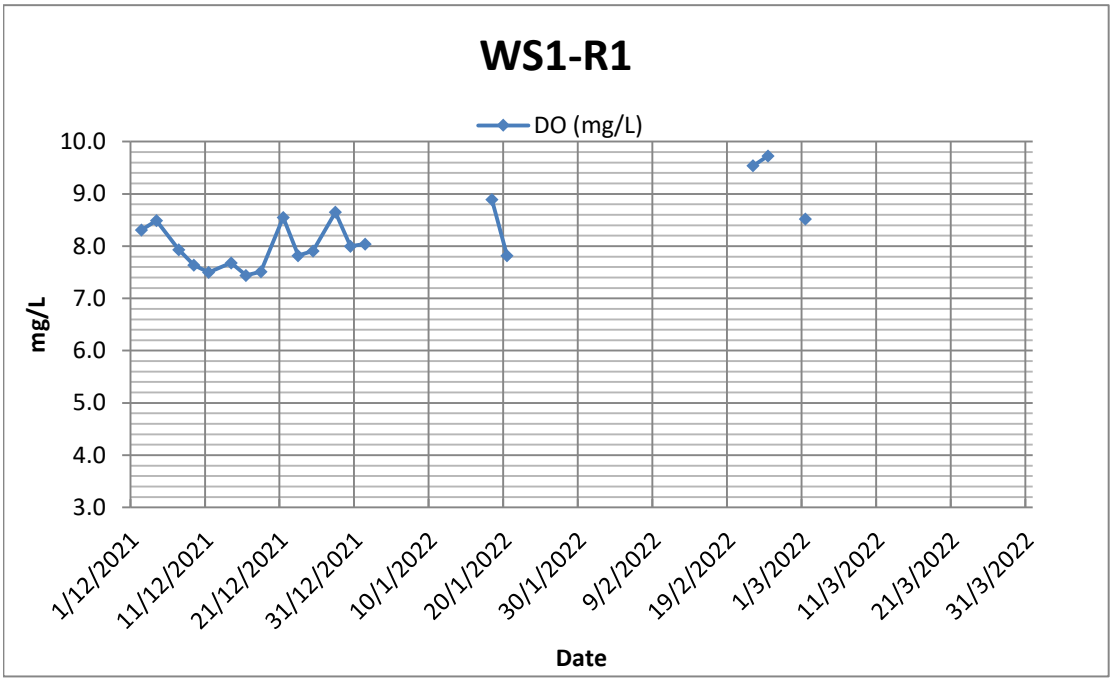

WS6-R5
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

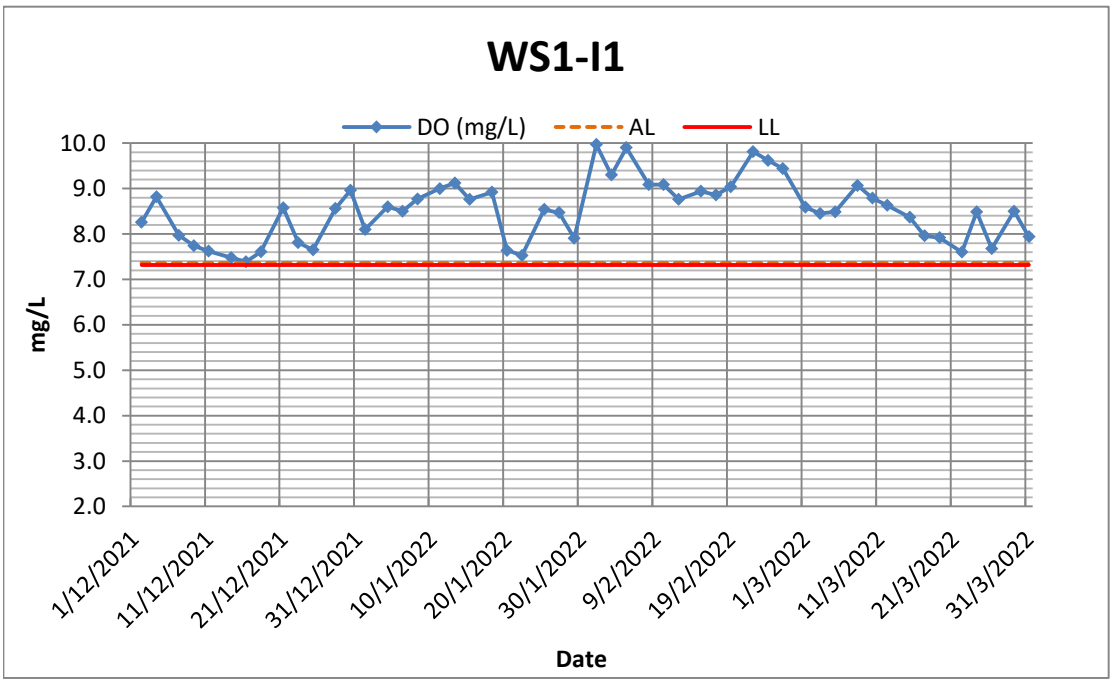

WS6-I5
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

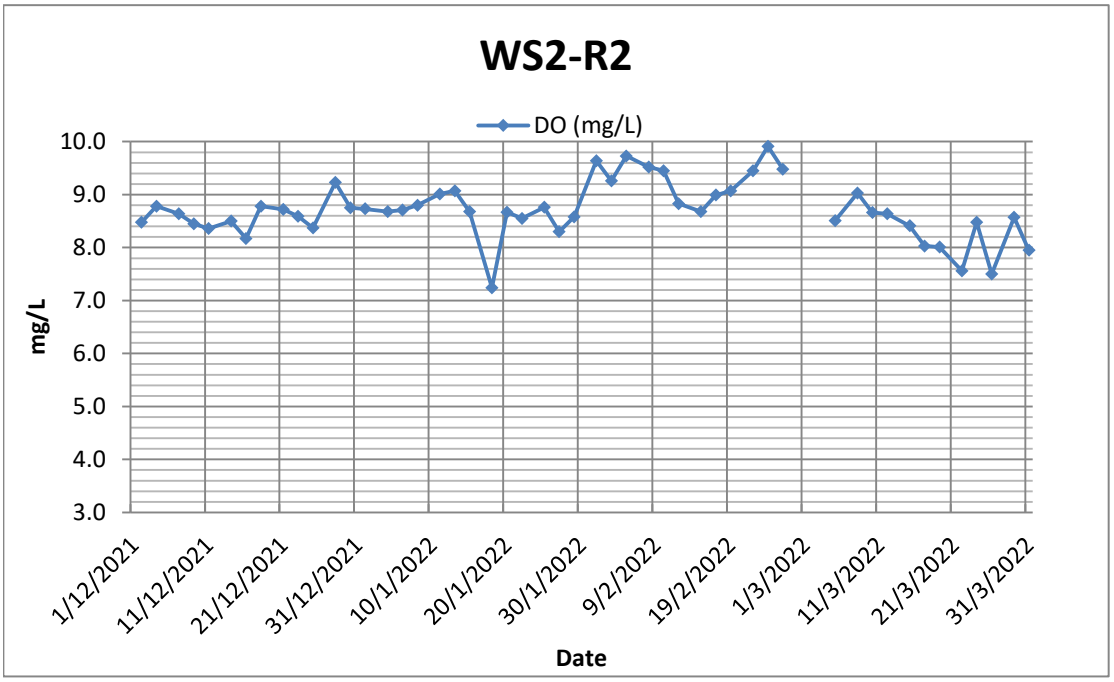

WS6-C1
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

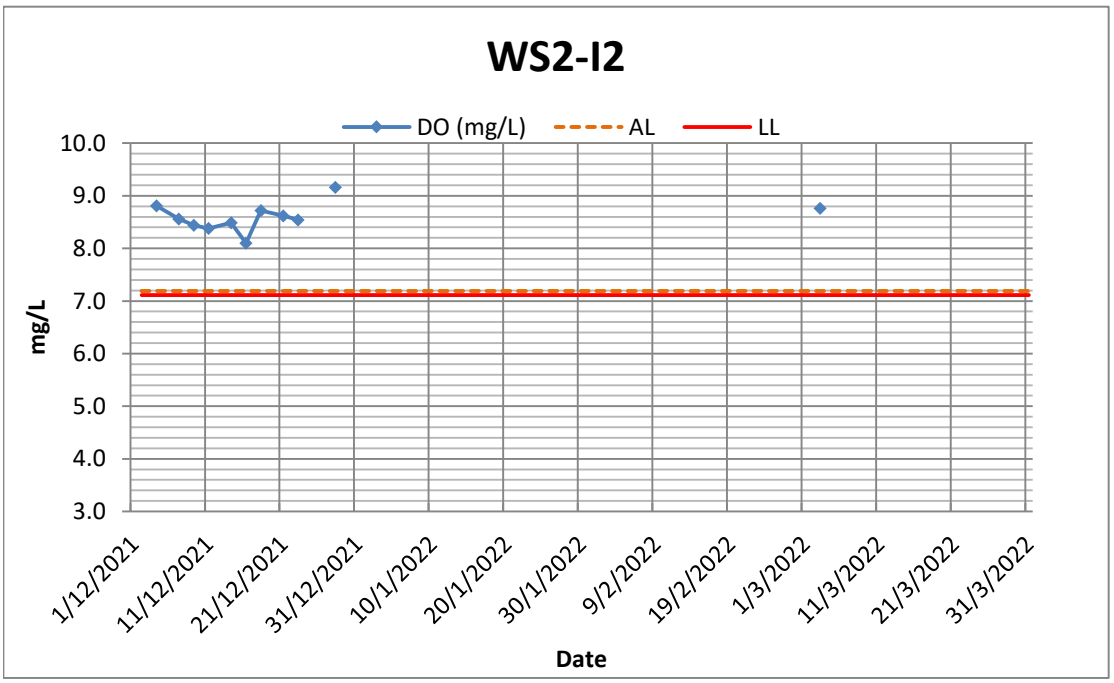

WS6-R6
pH
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

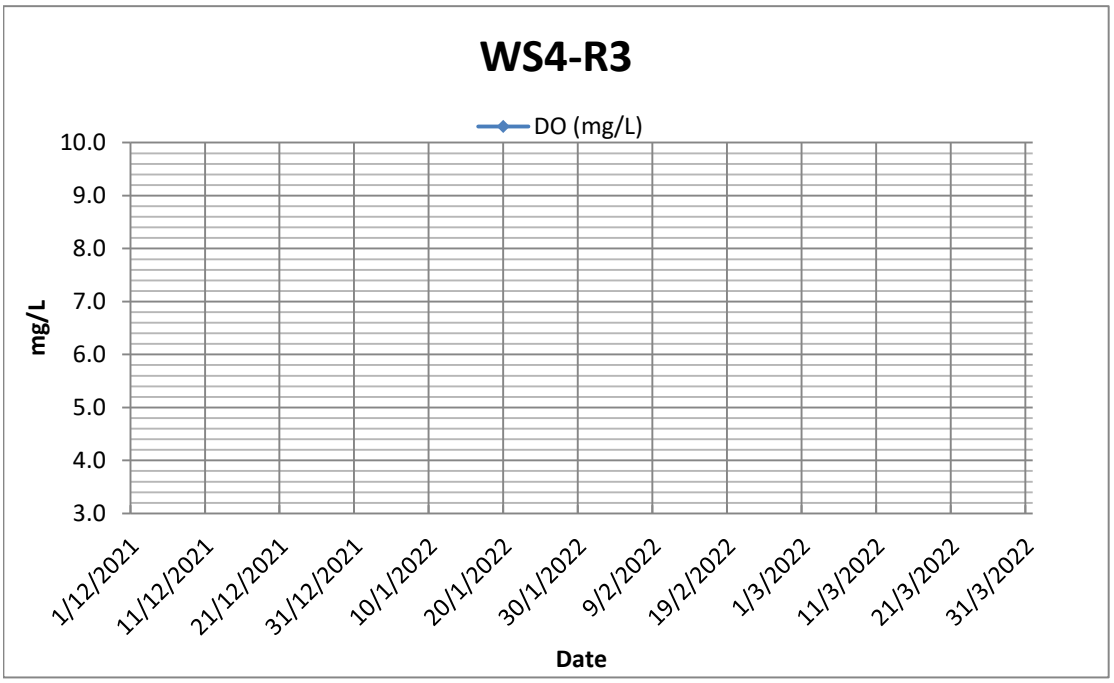

WS6-I6
pH
AL
LL
9.0
8.5
8.0
7.5
7.0
6.5
6.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS1-R1
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS1-I1
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS2-R2
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS2-I2
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS4-R3
DO (mg/L)
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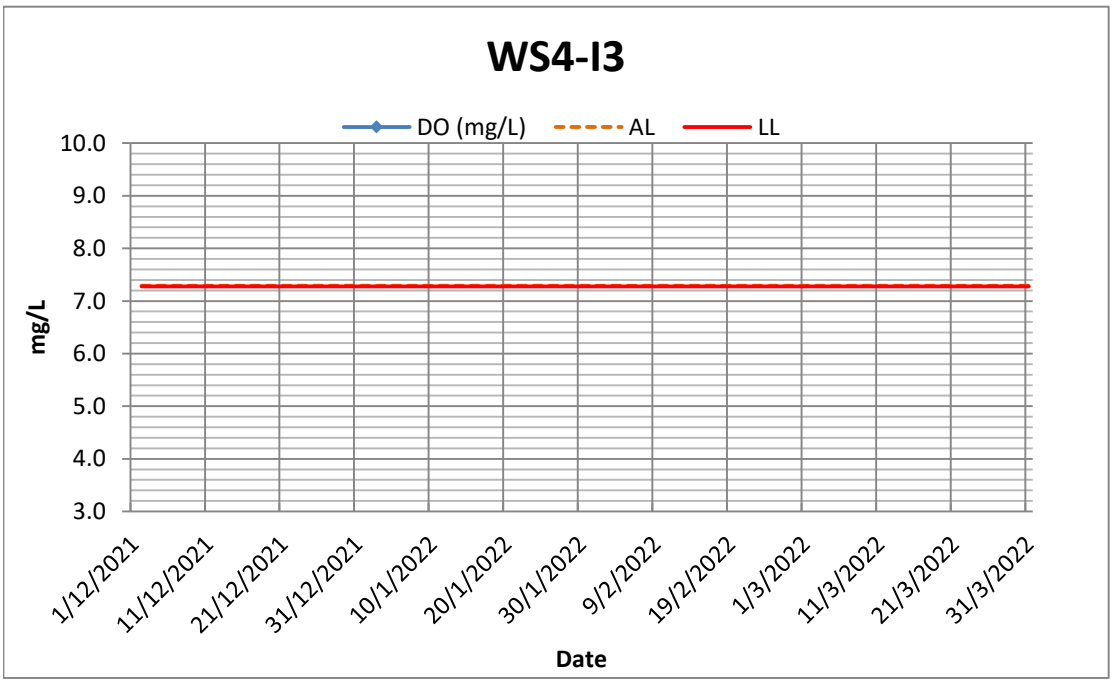
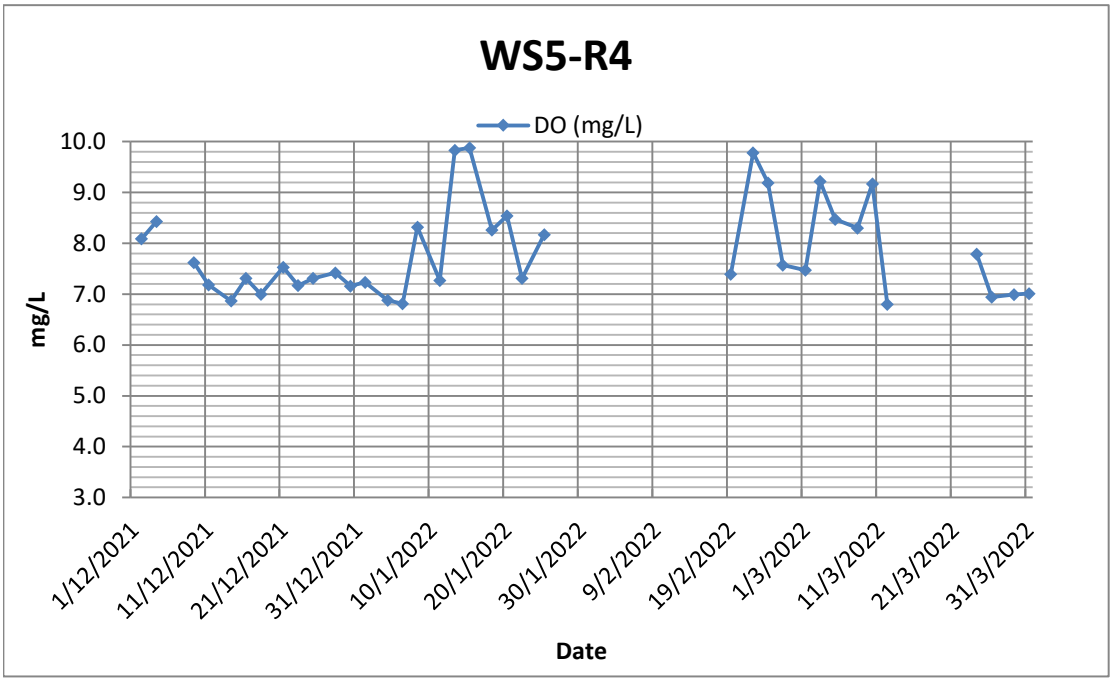
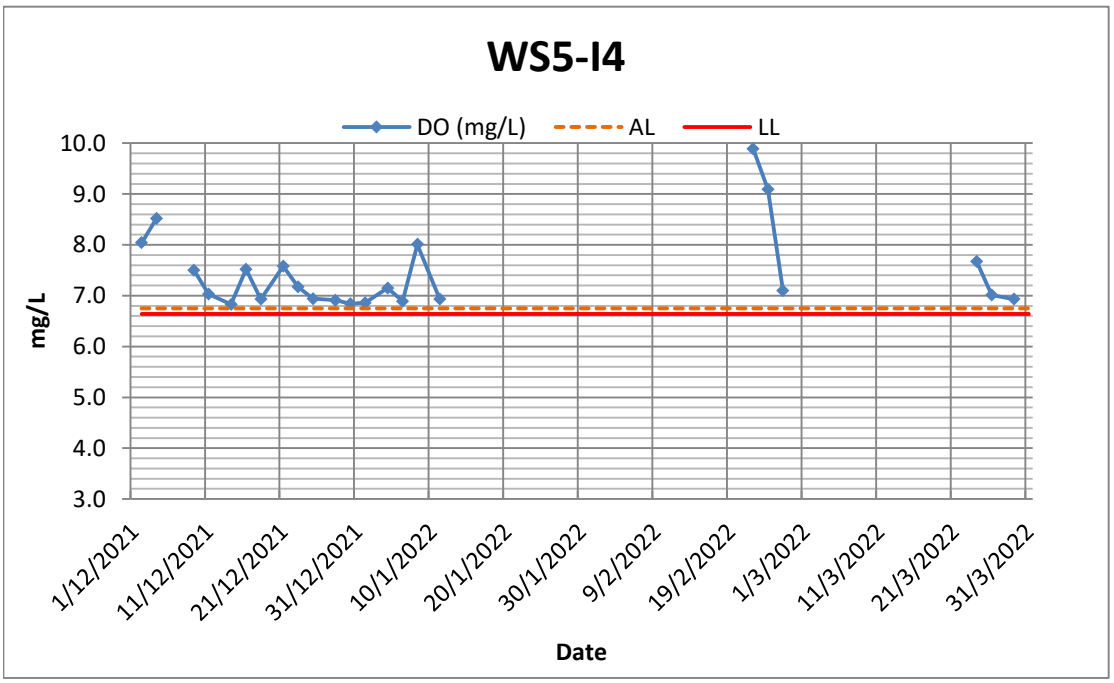
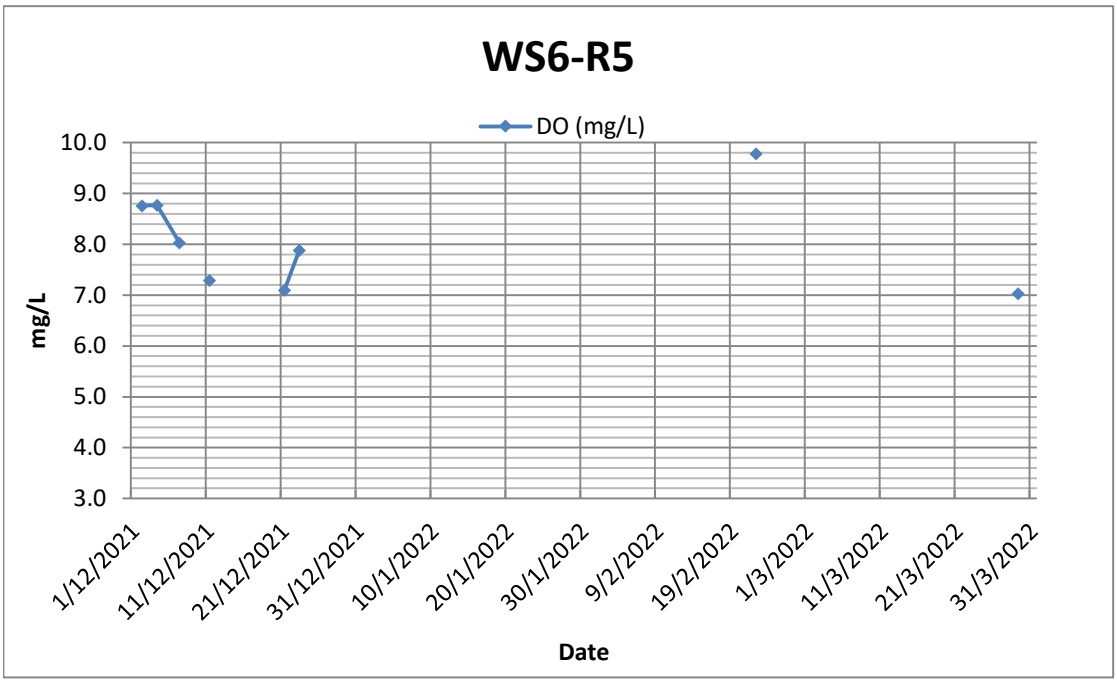
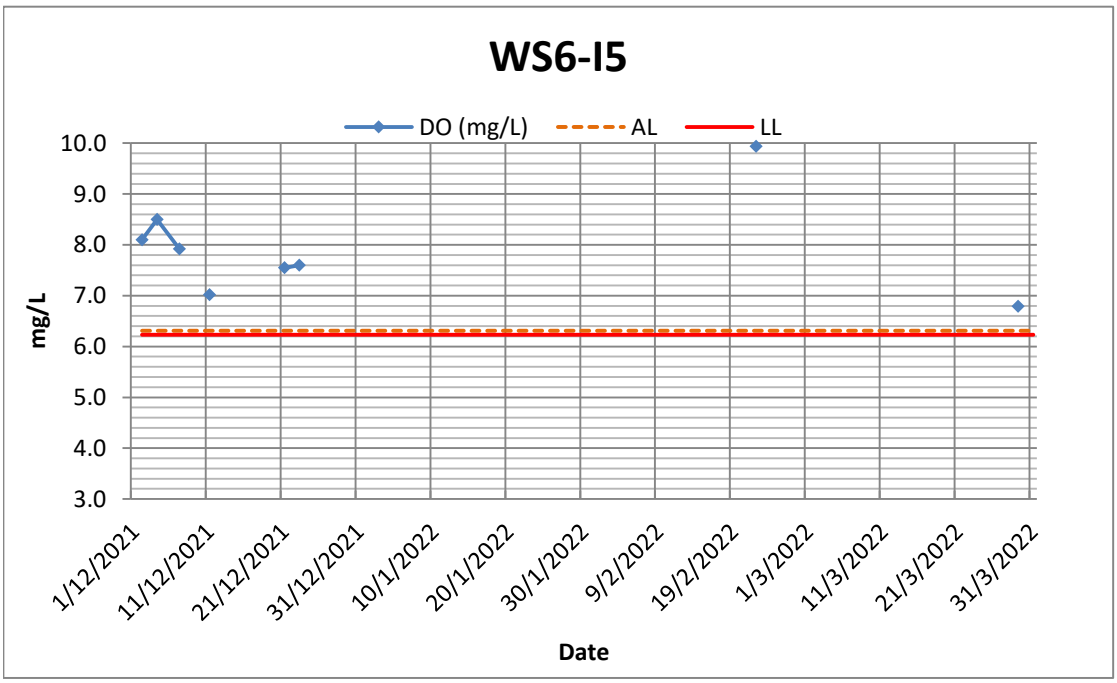
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

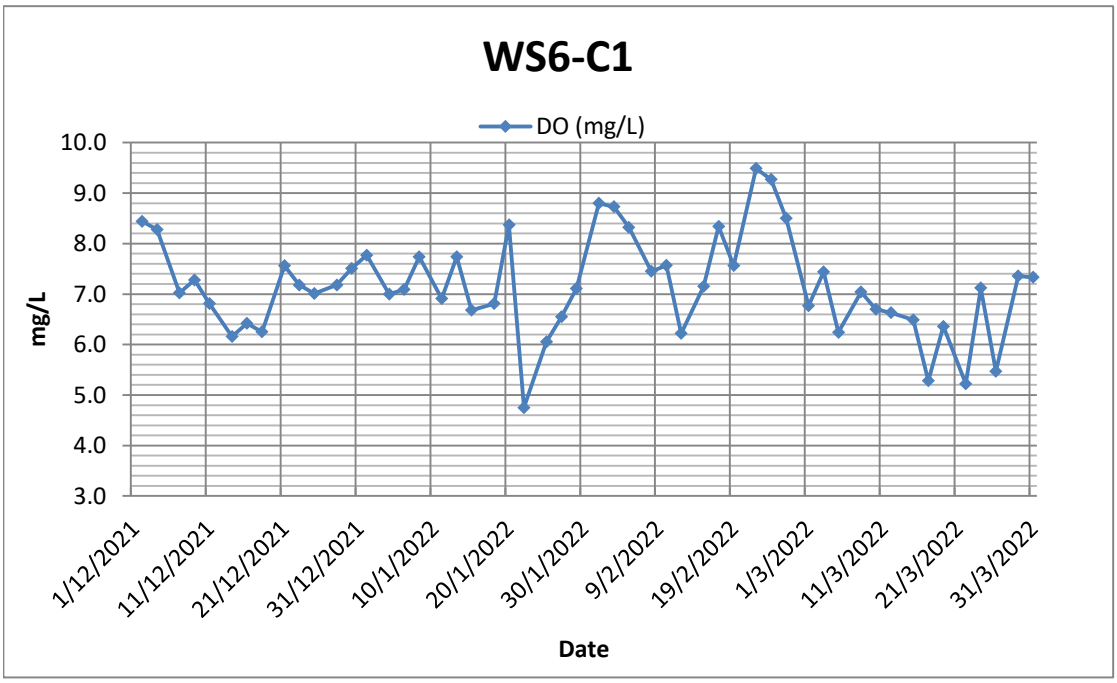

WS4-I3
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

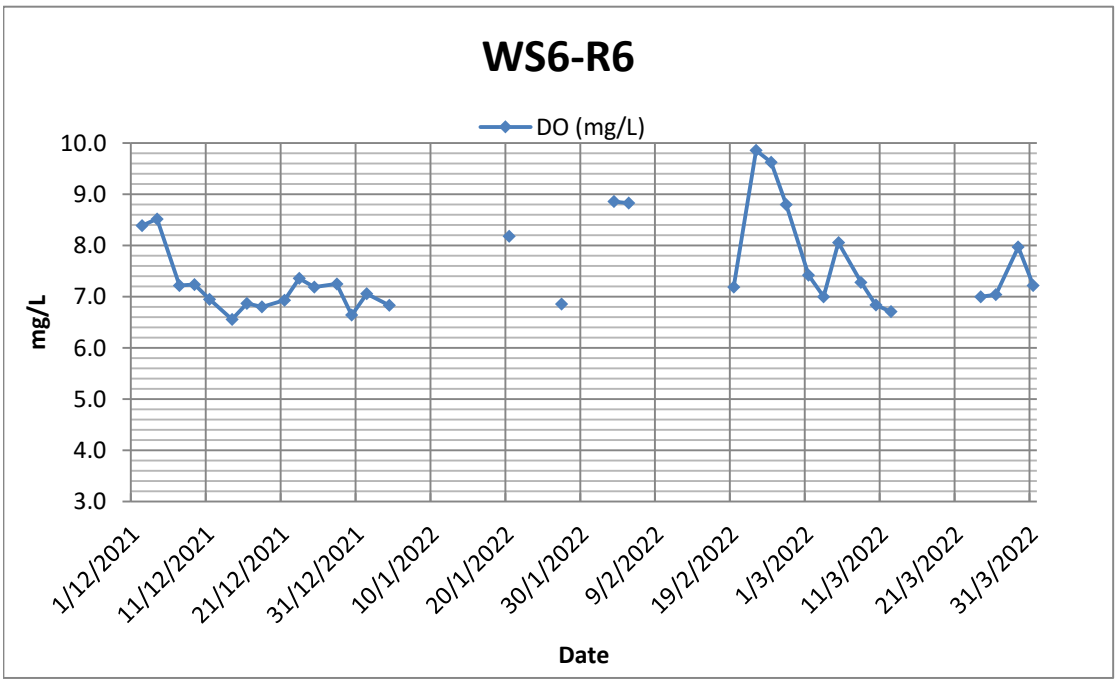

WS5-R4
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

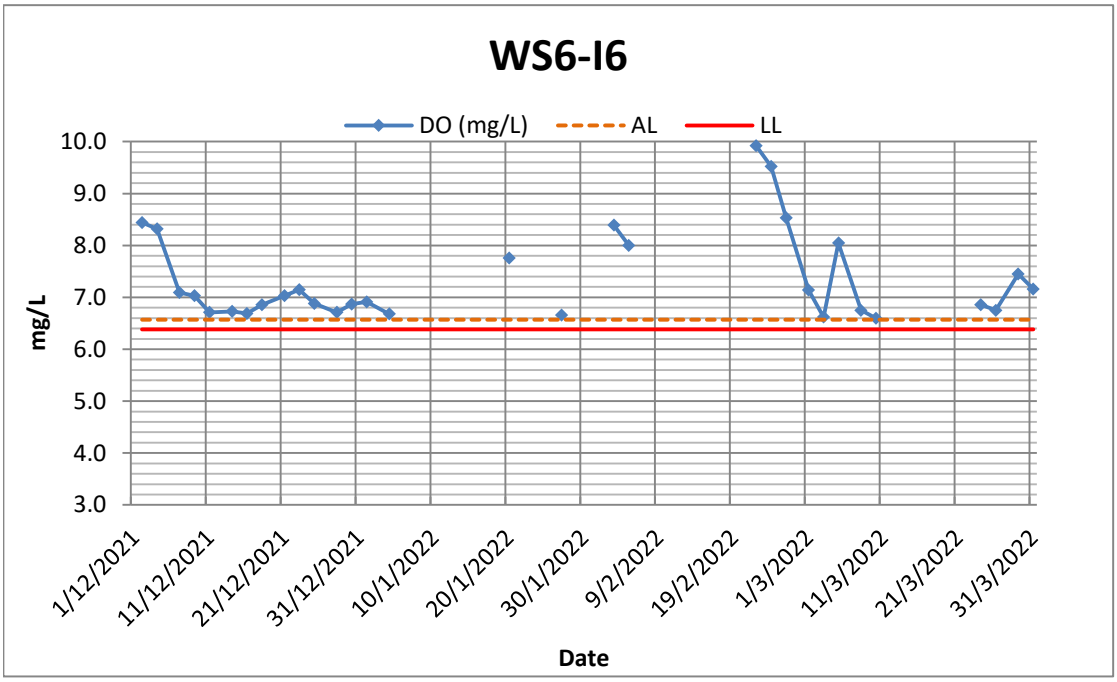

WS5-I4
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

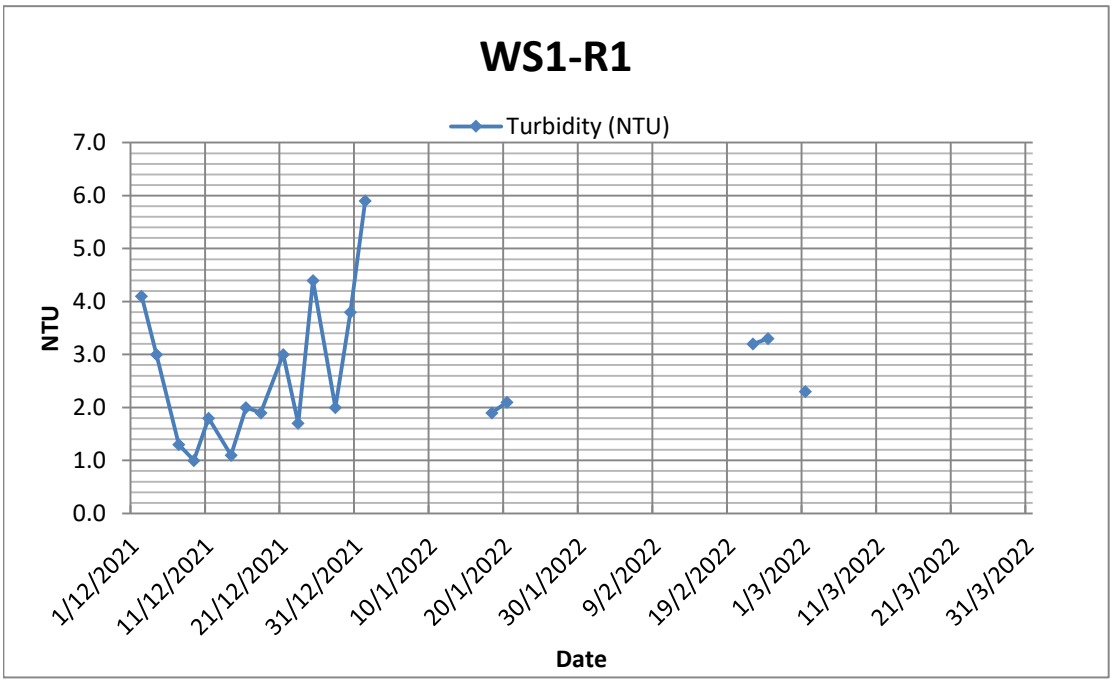

WS6-R5
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

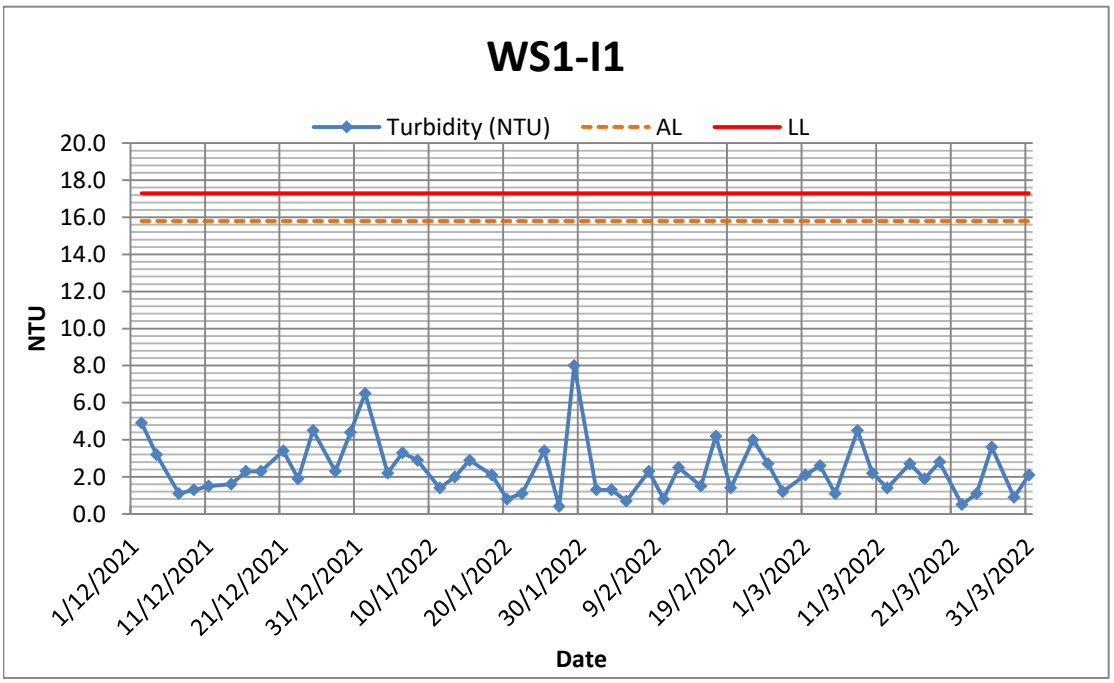

WS6-I5
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

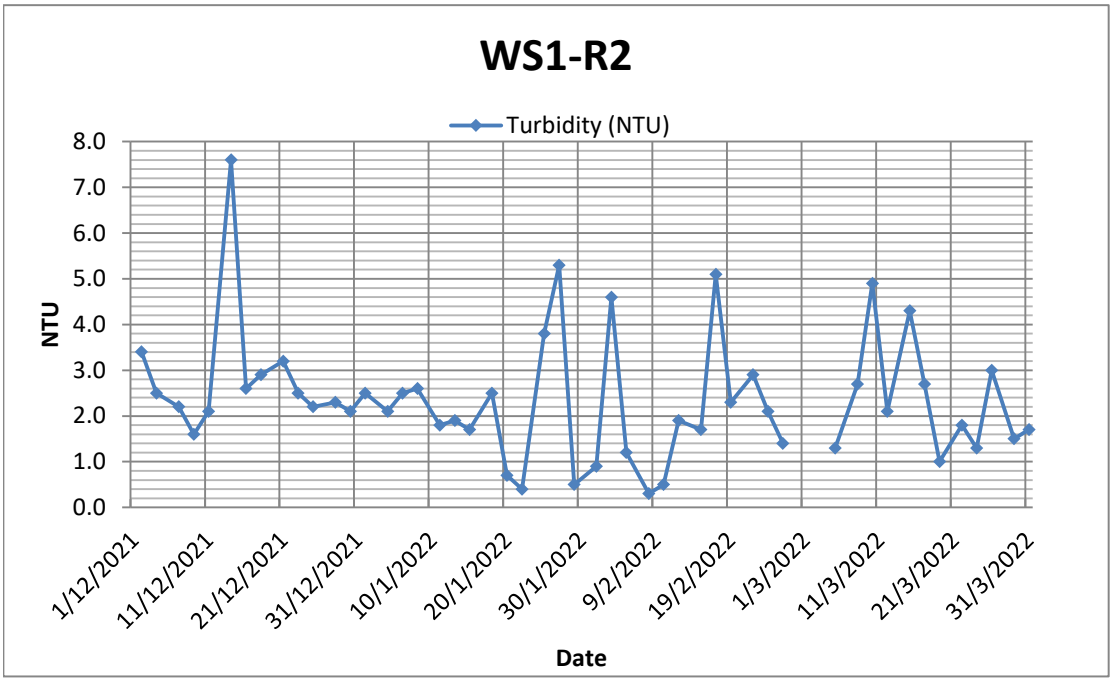

WS6-C1
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

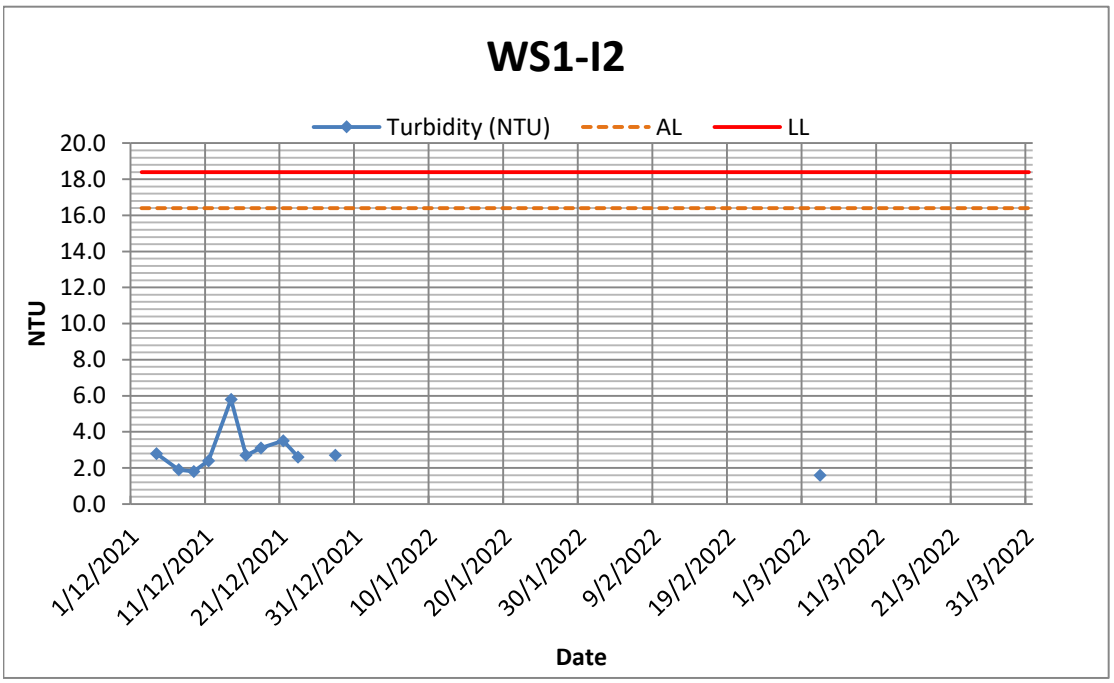

WS6-R6
DO (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

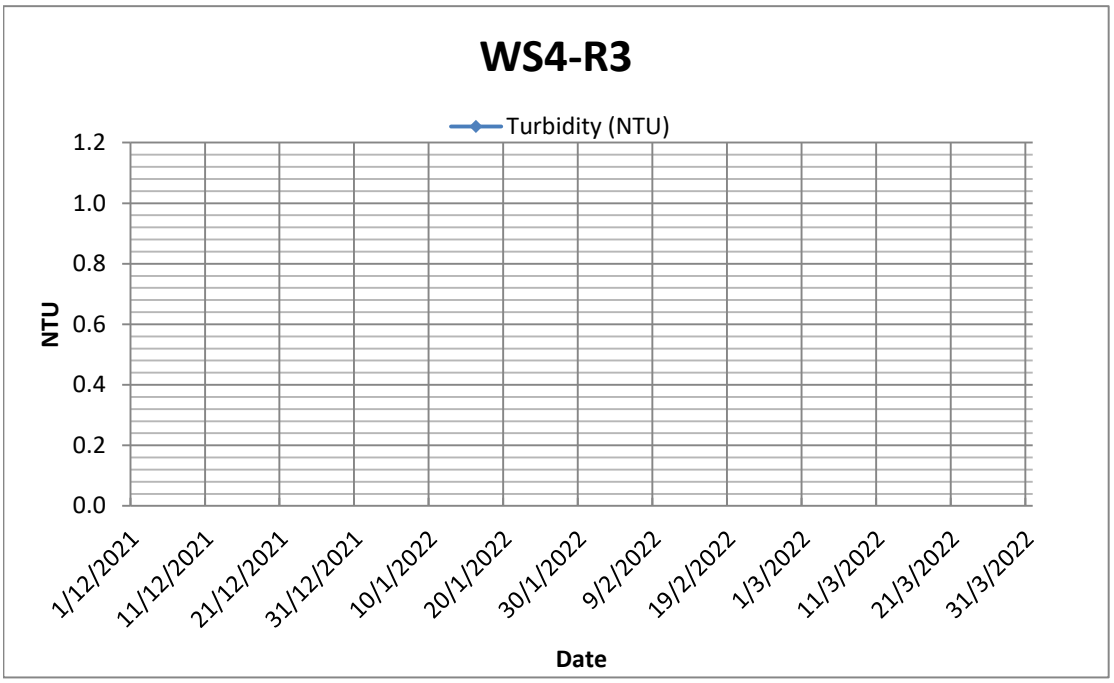

WS6-I6
DO (mg/L)
AL
LL
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

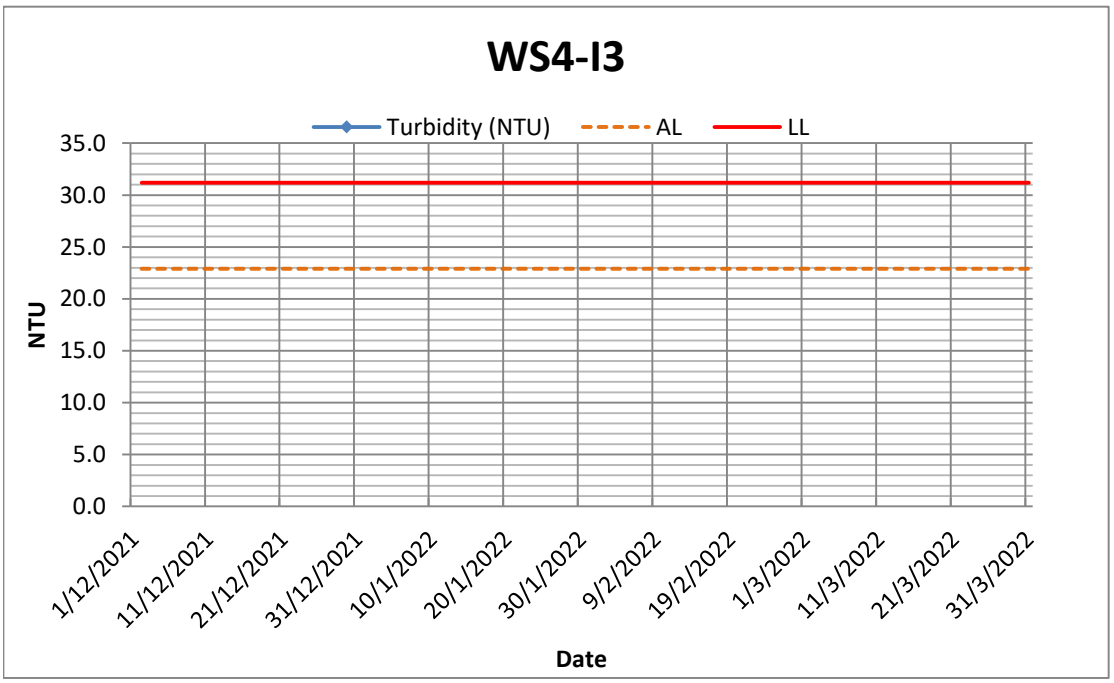

WS1-R1
Turbidity (NTU)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

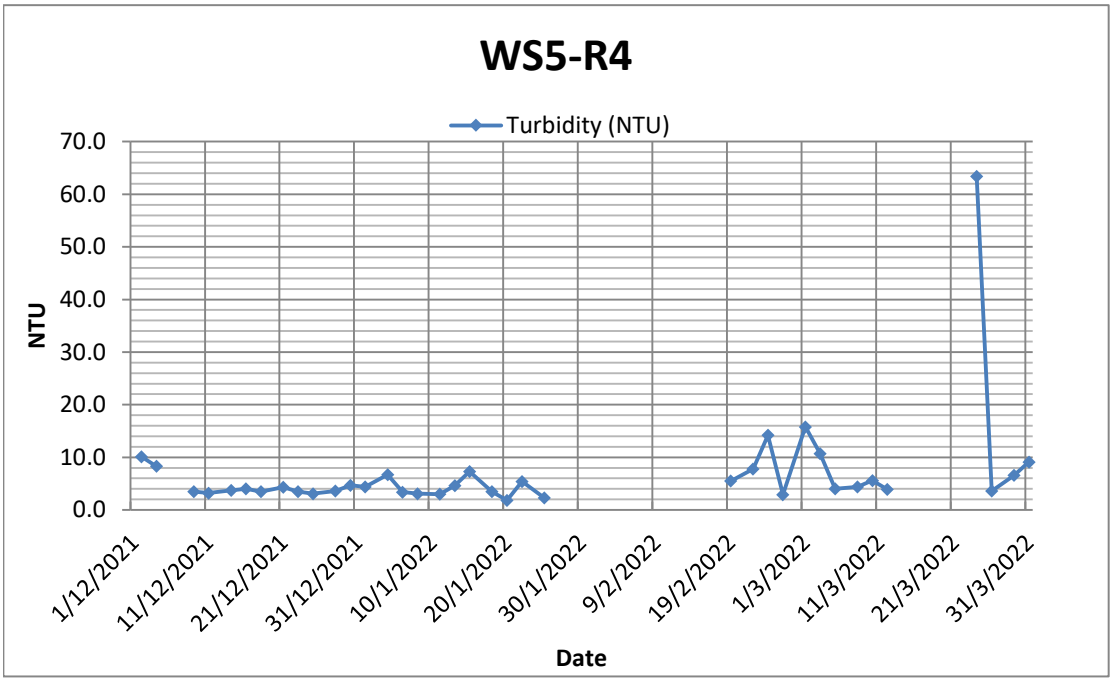

WS1-I1
Turbidity (NTU)
AL
LL
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

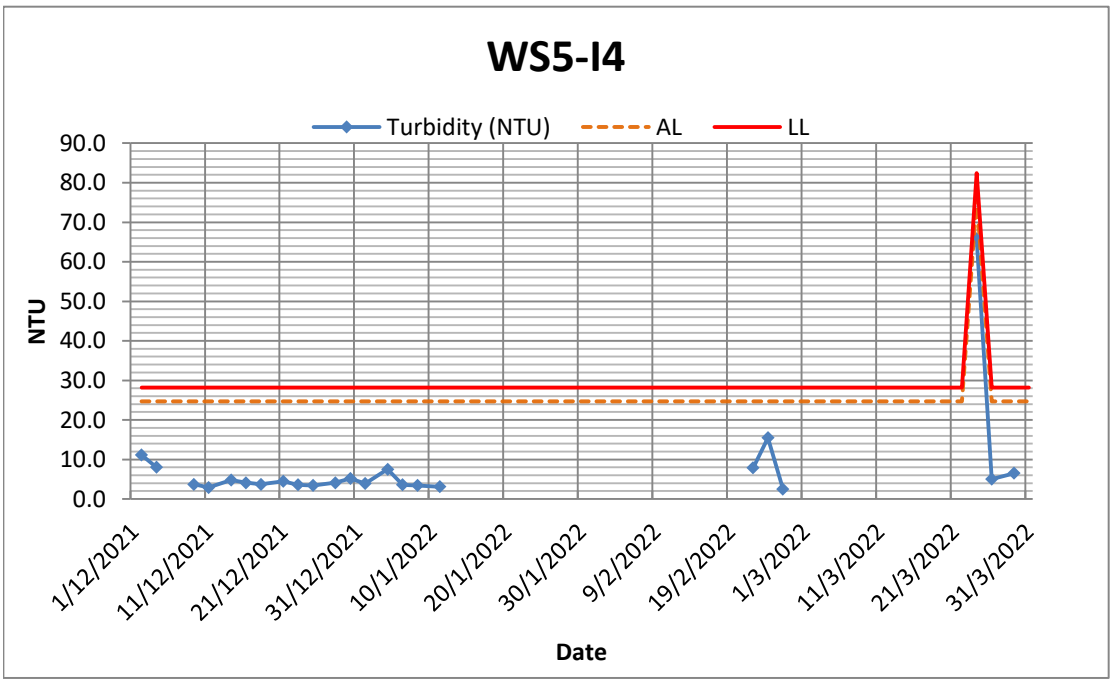

WS1-R2
Turbidity (NTU)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

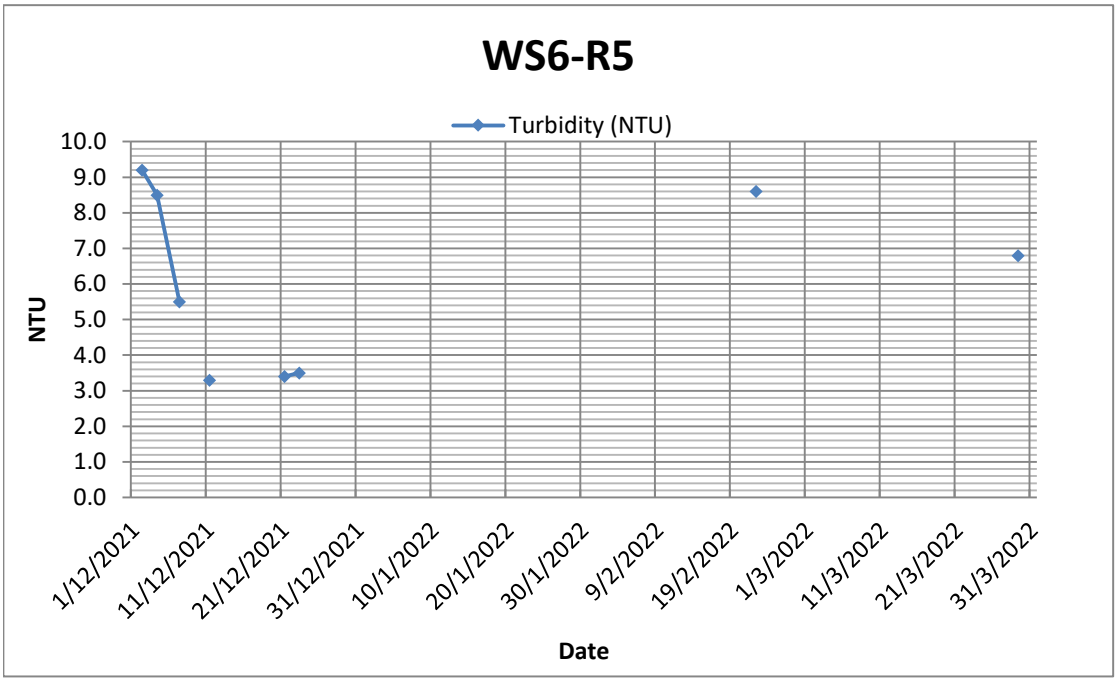

WS1-I2
Turbidity (NTU)
AL
LL
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

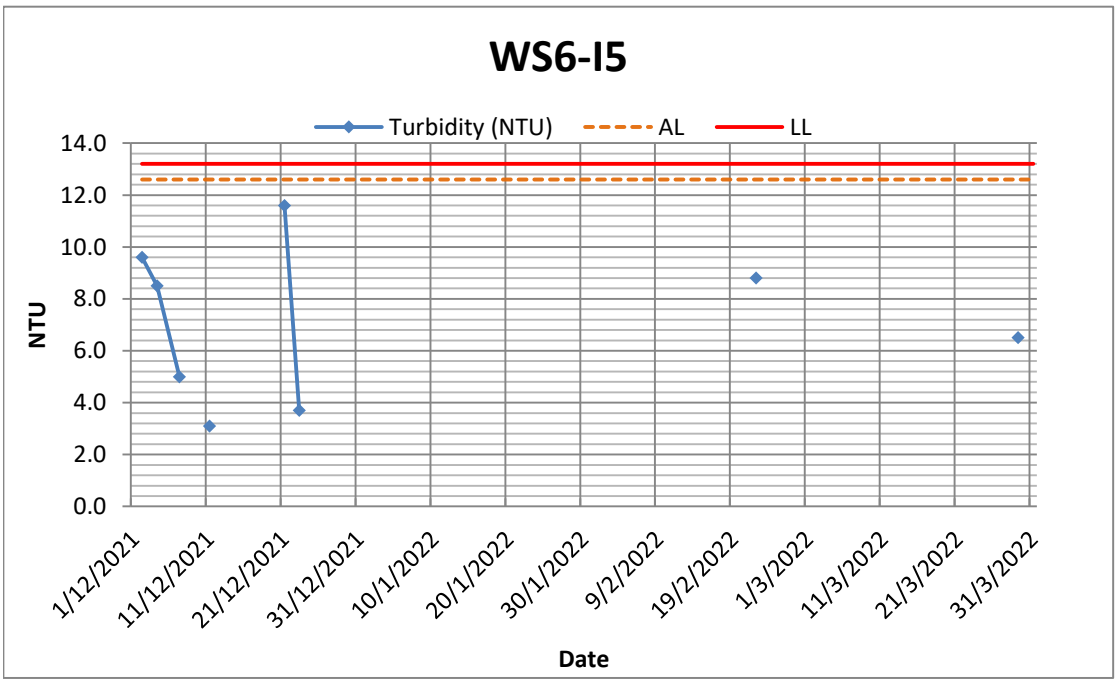

WS4-R3
Turbidity (NTU)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

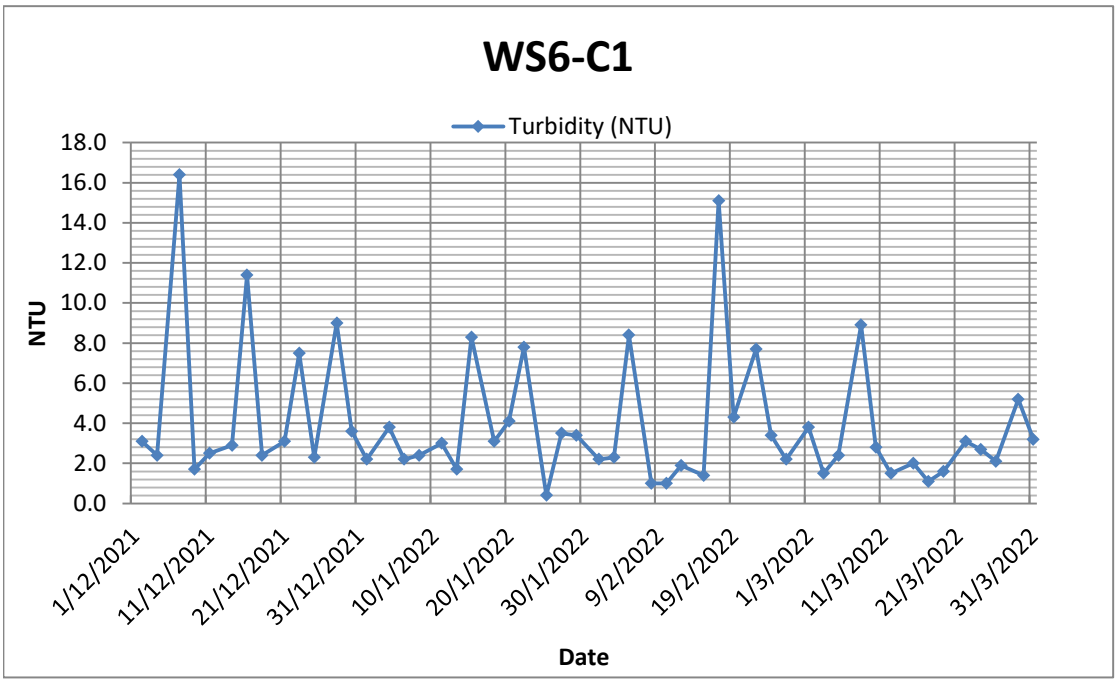

WS4-I3
Turbidity (NTU)
AL
LL
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

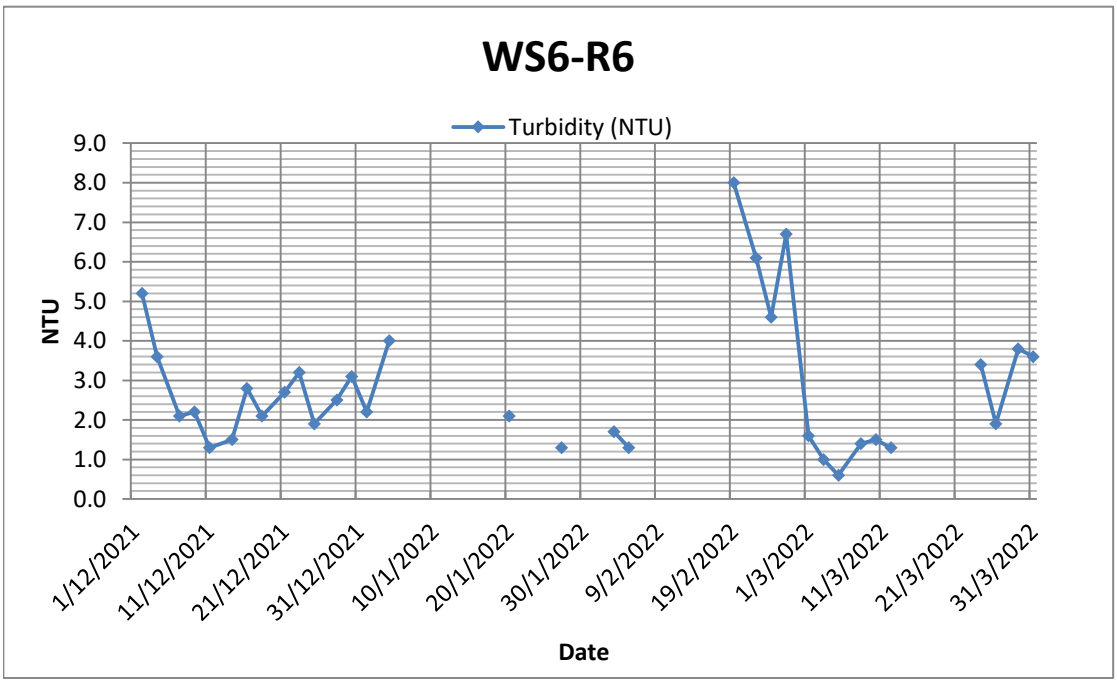

WS5-R4
Turbidity (NTU)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

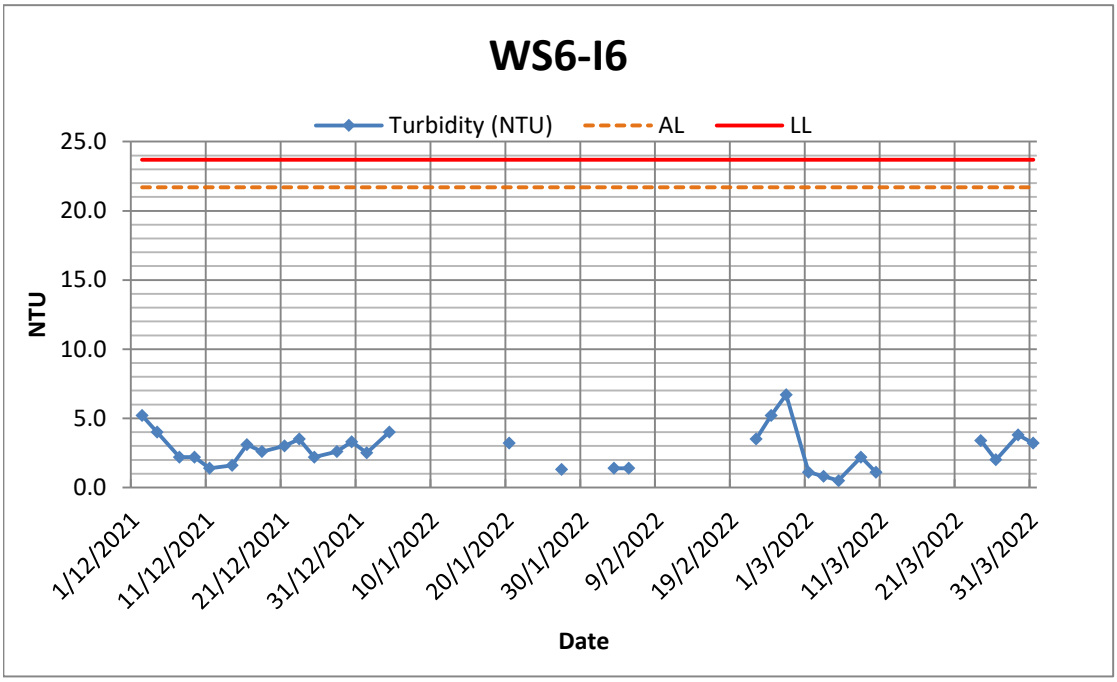

WS5-I4
Turbidity (NTU)
AL
LL
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

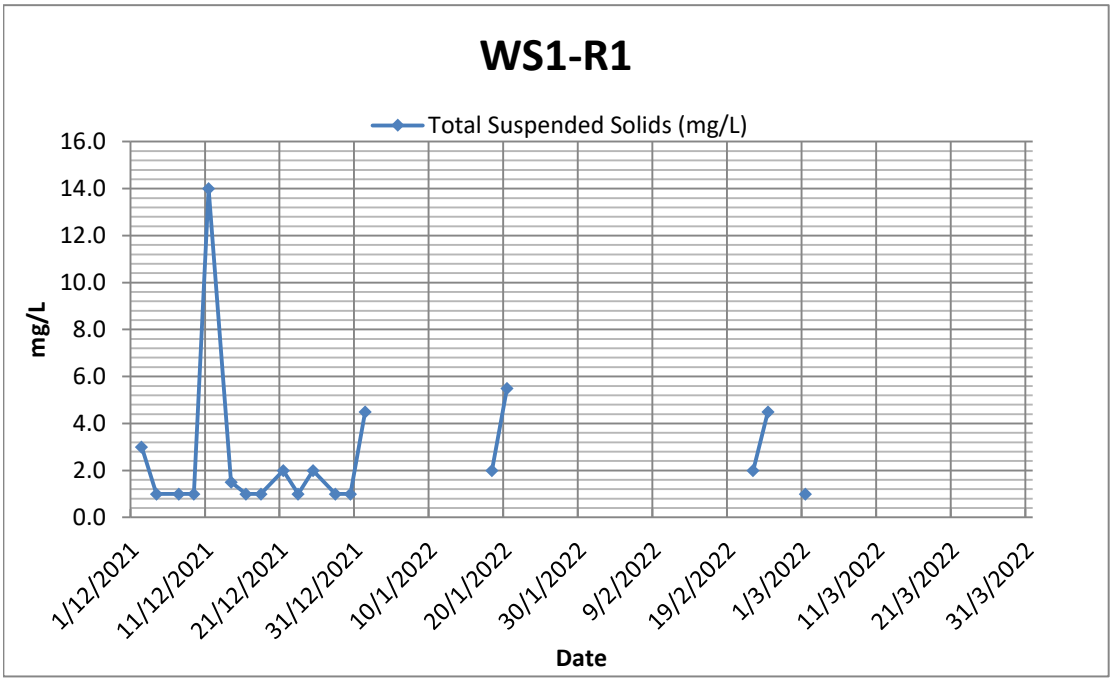

WS6-R5
Turbidity (NTU)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

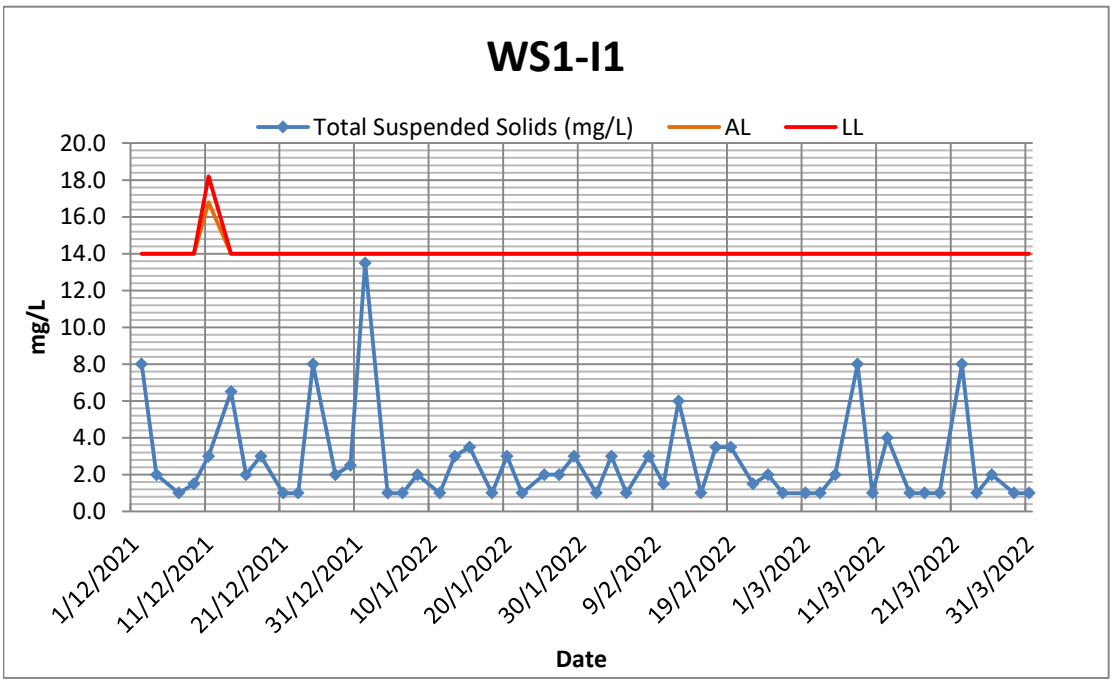

WS6-I5
Turbidity (NTU)
AL
LL
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

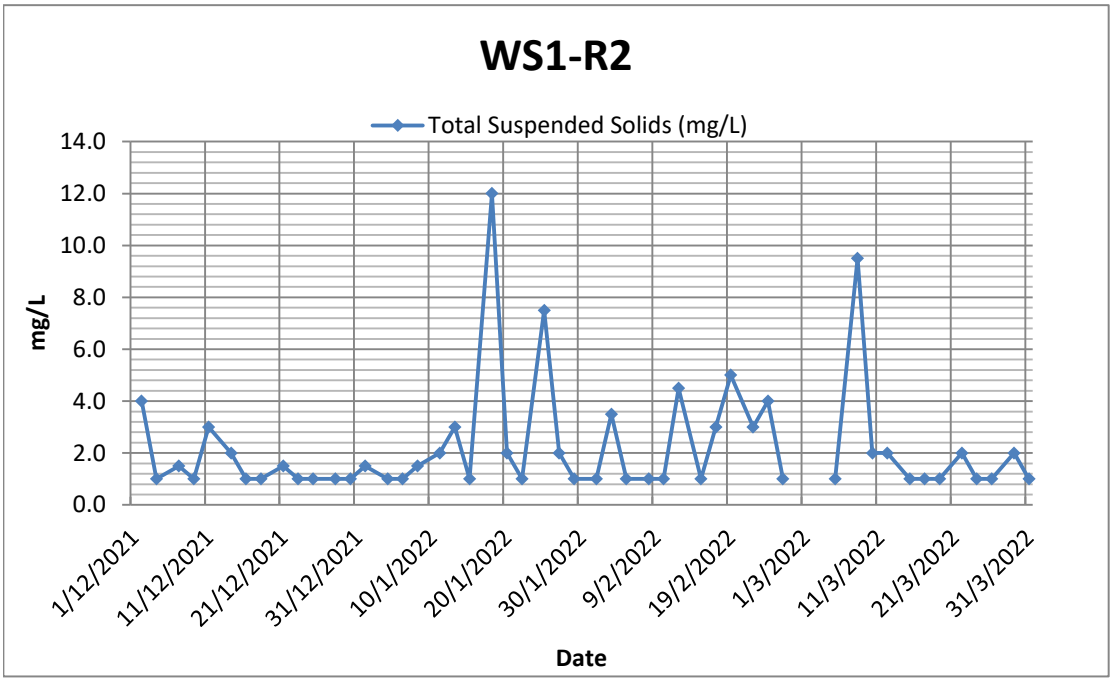

WS6-C1
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

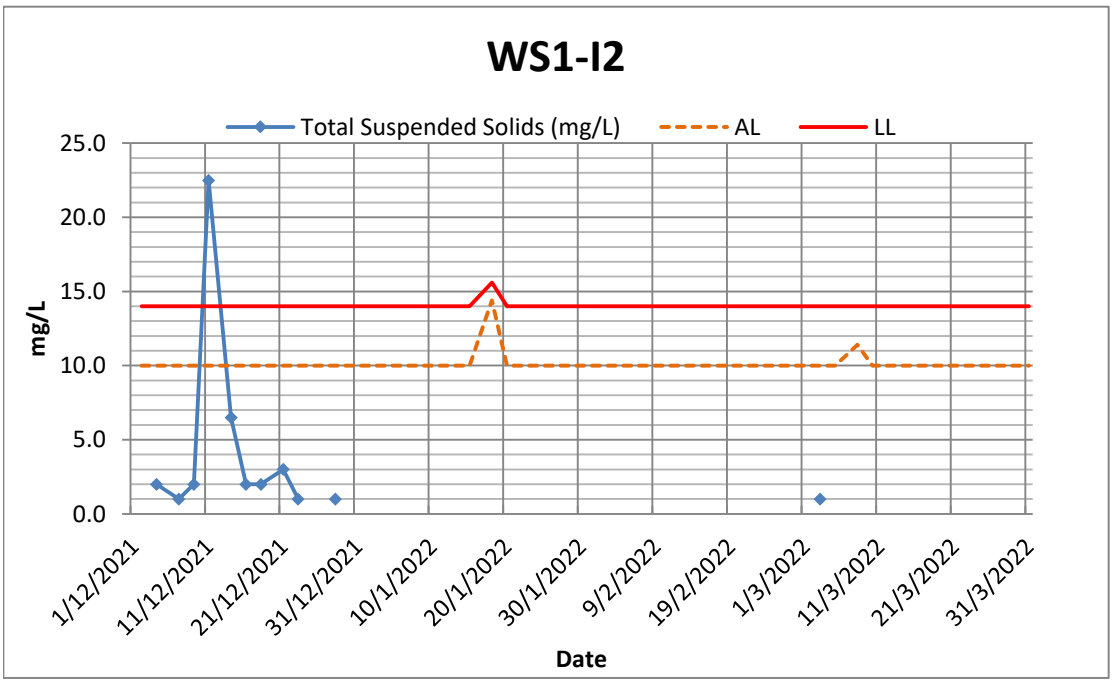

WS6-R6
Turbidity (NTU)
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

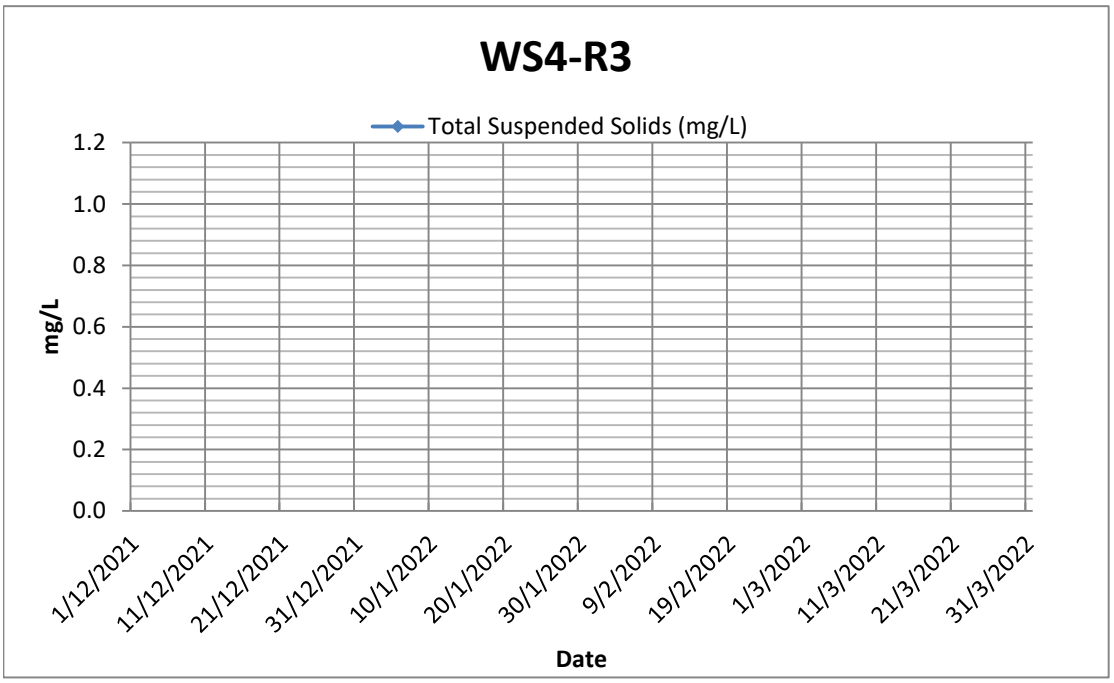

WS6-I6
Turbidity (NTU)
AL
LL
25.0
20.0
15.0
10.0
5.0
0.0
NTU
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

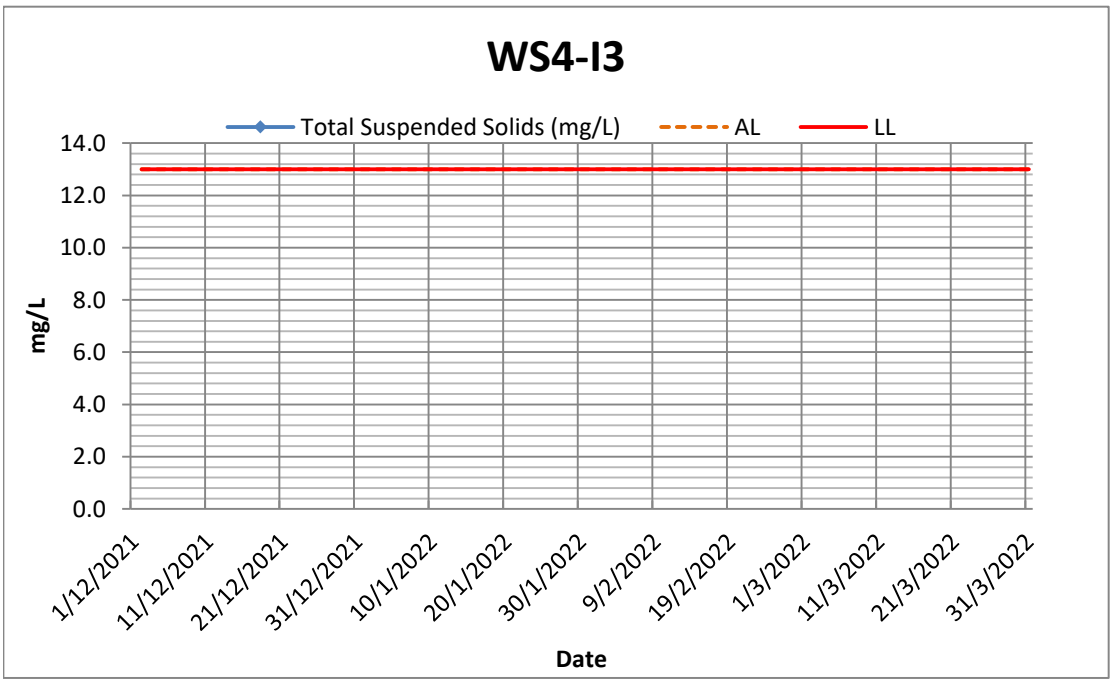

WS1-R1
Total Suspended Solids (mg/L)
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

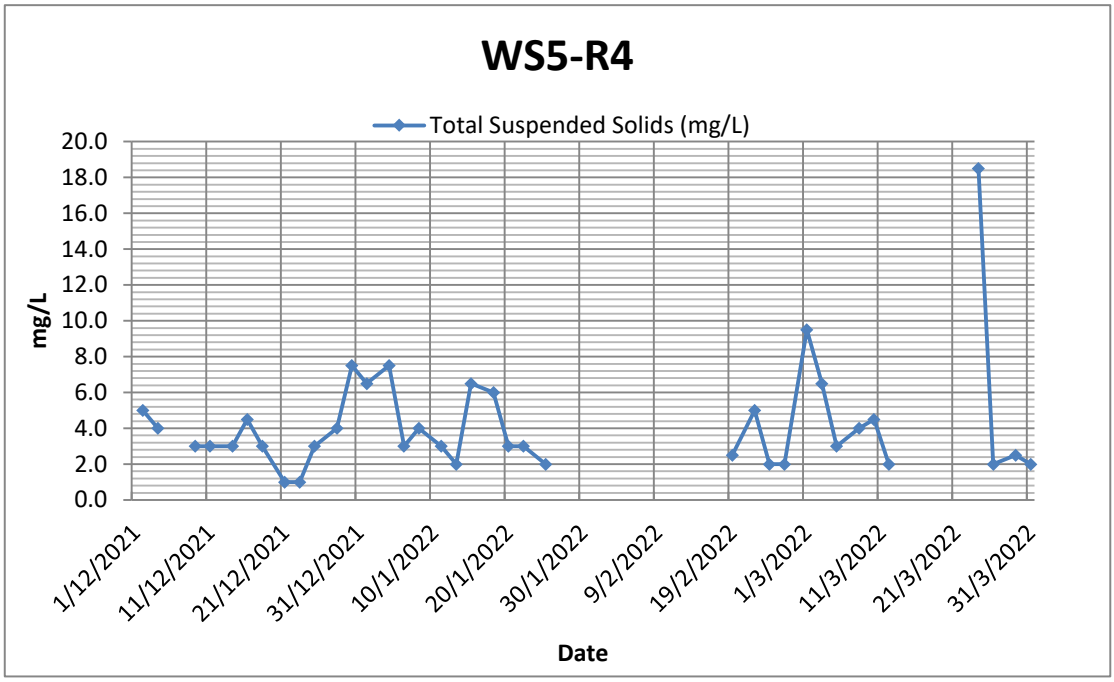

WS1-I1
Total Suspended Solids (mg/L)
AL
LL
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

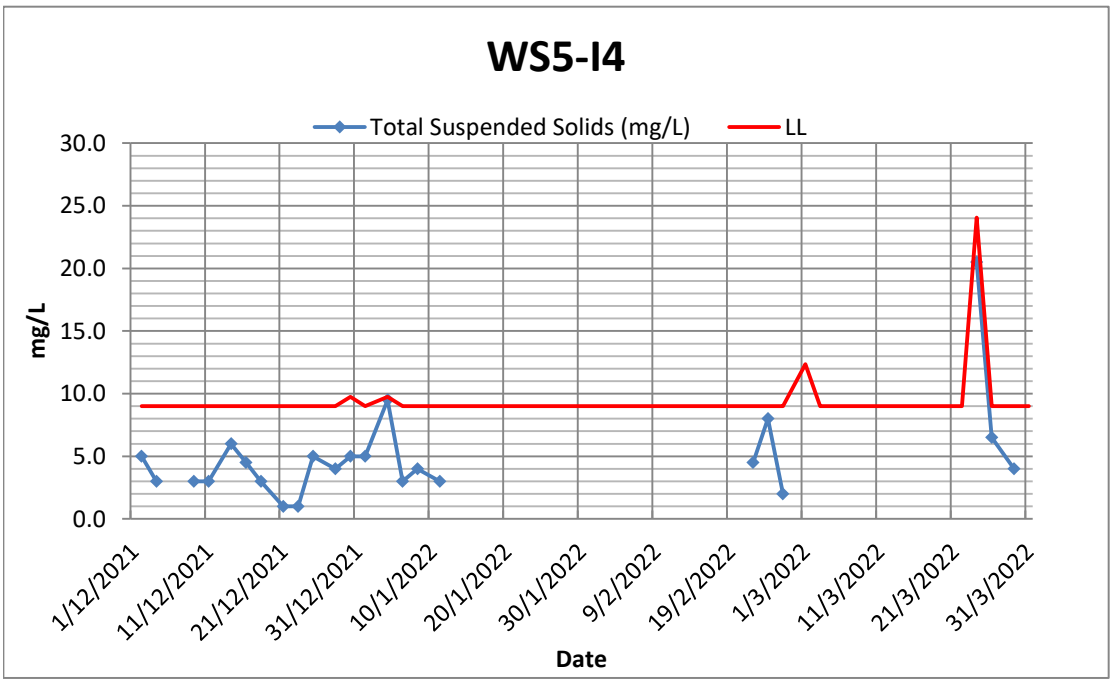

WS1-R2
Total Suspended Solids (mg/L)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

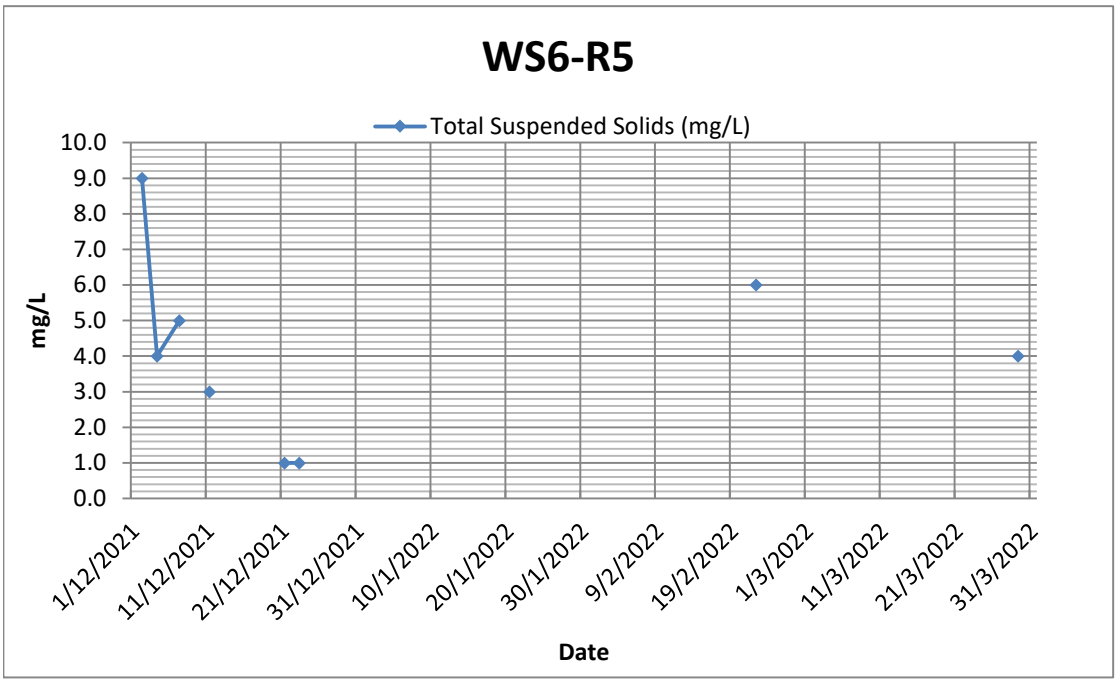

WS1-I2
Total Suspended Solids (mg/L)
AL
LL
25.0
20.0
15.0
10.0
5.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

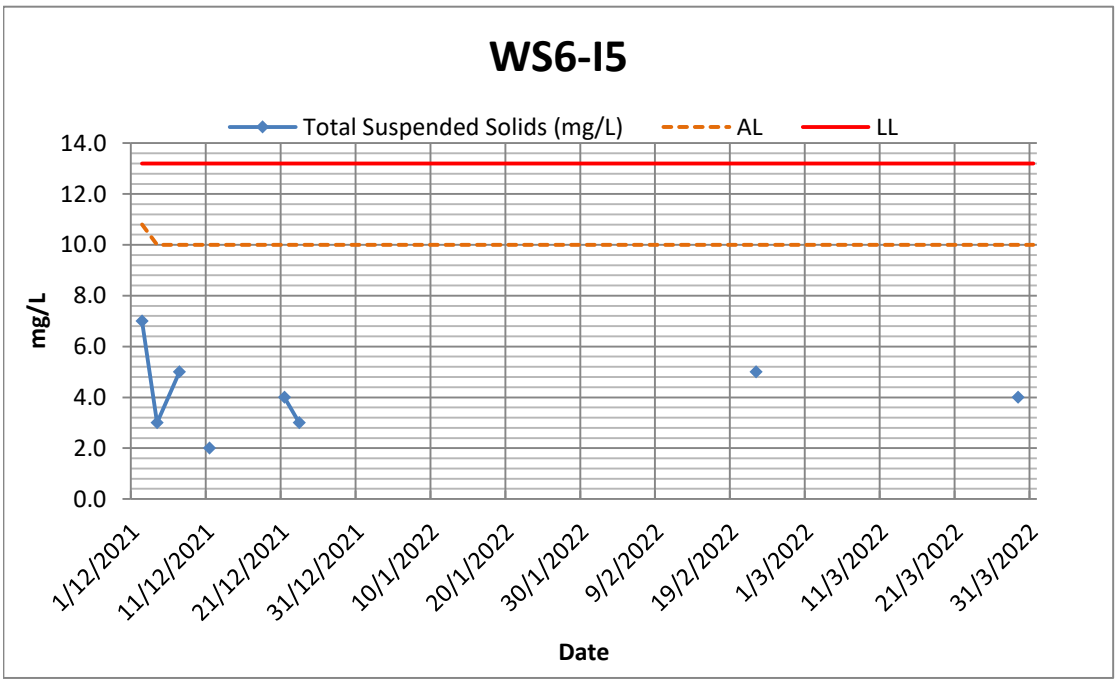

WS4-R3
Total Suspended Solids (mg/L)
1.2
1.0
0.8
0.6
0.4
0.2
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

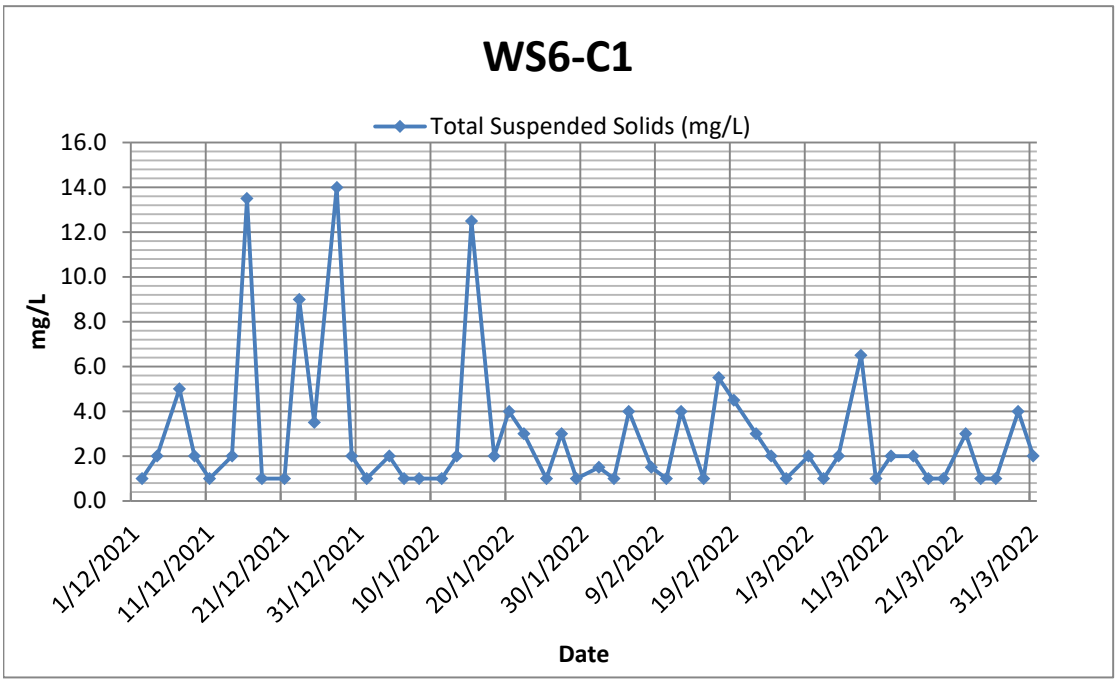

WS4-I3
Total Suspended Solids (mg/L)
AL
LL
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

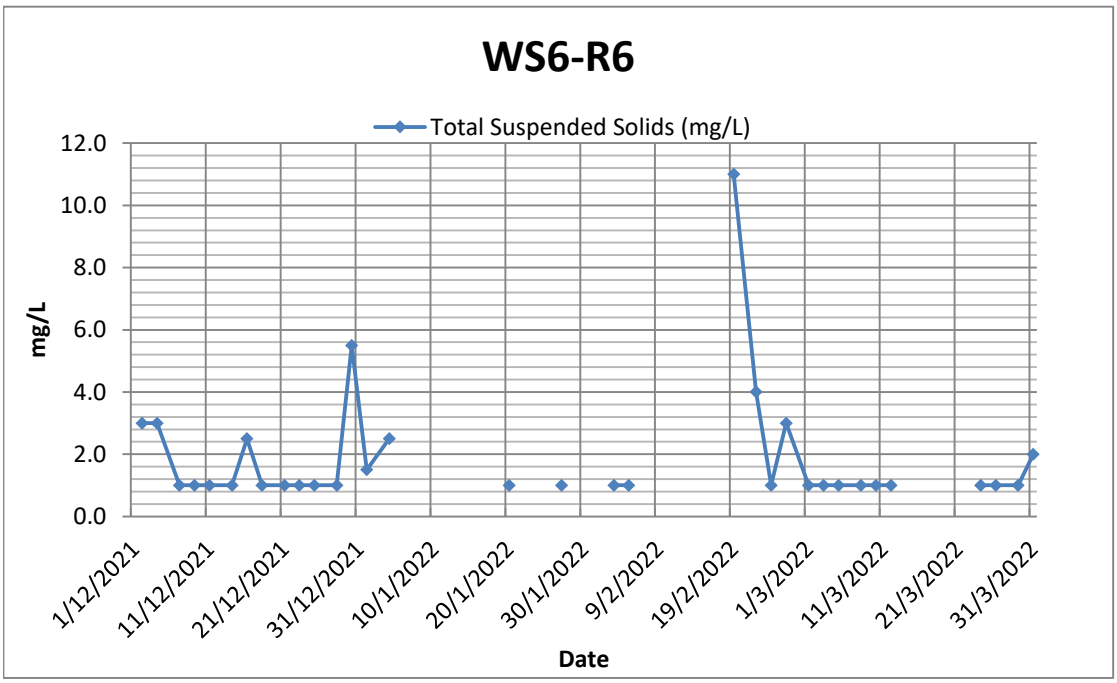

WS5-R4
Total Suspended Solids (mg/L)
mg/L
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

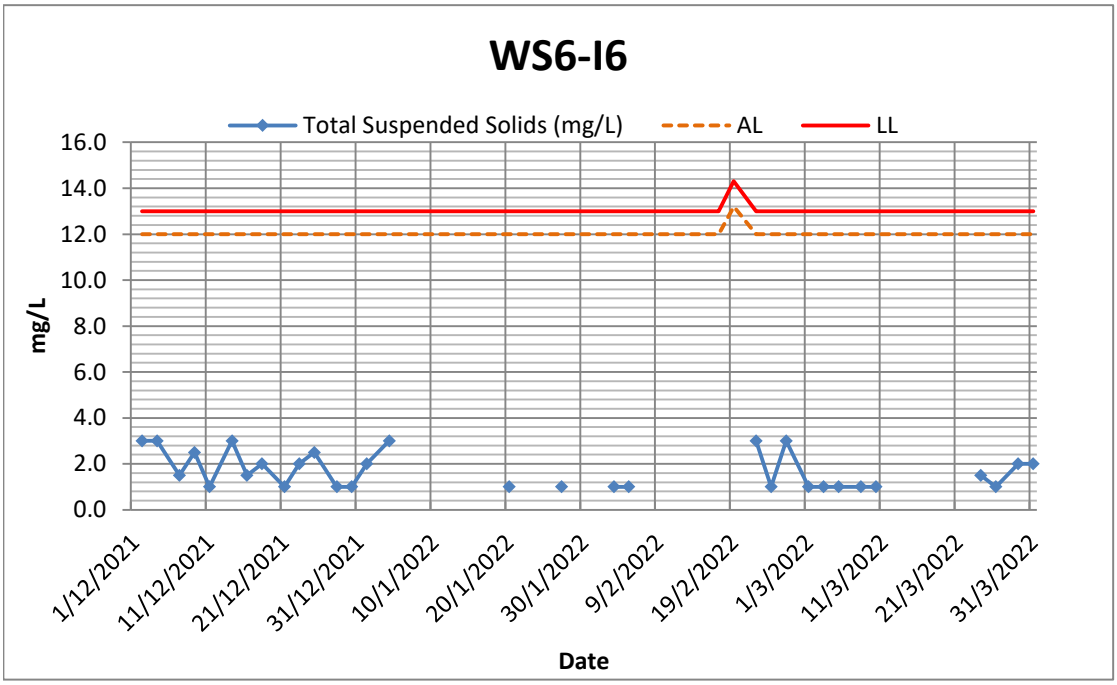

WS5-I4
Total Suspended Solids (mg/L)
LL
mg/L
30.0
25.0
20.0
15.0
10.0
5.0
0.0
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS6-R5
Total Suspended Solids (mg/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS6-I5
Total Suspended Solids (mg/L)
AL
LL
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS6-C1
Total Suspended Solids (mg/L)
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS6-R6
Total Suspended Solids (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date


WS6-I6
Total Suspended Solids (mg/L)
AL
LL
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
mg/L
1/12/2021
11/12/2021
21/12/2021
31/12/2021
10/1/2022
20/1/2022
30/1/2022
9/2/2022
19/2/2022
1/3/2022
11/3/2022
21/3/2022
31/3/2022
Date

Appendix I Statistics on Exceedances, Complaints, Notifications of Summons and Prosecutions

Statistics on Monitoring Exceedance (Reporting Month)

Reporting Period			No. of Exceedance AL	No. of Exceedance LL
No. of Exceedance This Month	Noise		0	0
	Water Quality	pH	0	0
		DO	0	0
		Turbidity	0	0
		Suspended Solids	0	0

Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Complaints	Notifications of Summons	Successful Prosecutions
No. of Complaints , Notifications of Summons and Successful Prosecutions This Month	0	0	0
Cumulative Project-to-Date	**0**	**0**	**0**

Environmental Complaints Log

Complaint Log No.	Date of Complaint Received	Received From	Received By	Nature of Complaint	Investigation/Mitigation Action	Status
NIL	**--**	**--**	**--**	**--**	**--**	**--**

Remark:

(1) No Complaints, Notifications of Summons or Successful Prosecutions was received in the reporting period.

Appendix J Weather Condition

Date	Mean Pressure (hPa)	Air Temperature			Mean Dew Point (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)
		Absolute Daily Max (deg. C)	Mean (deg. C)	Absolute Daily Min (deg. C)				
March 2022								
1	1016.9	26.3	22.0	19.1	17.6	77	56	-
2	1017.2	26.1	20.7	18.1	17.5	83	47	-
3	1017.2	22.6	19.5	17.4	15.0	76	56	-
4	1014.6	26.6	21.3	18.8	17.0	77	34	-
5	1013.5	24.6	20.6	17.9	17.8	84	41	-
6	1015.7	21.3	19.1	17.6	15.0	77	84	-
7	1017.2	24.6	19.8	16.8	13.6	70	62	4.8
8	1018.2	21.6	17.5	15.0	7.5	53	14	-
9	1017.2	24.3	18.7	15.1	9.7	57	14	-
10	1015.8	25.0	20.7	17.9	12.5	60	27	-
11	1014.0	26.9	22.1	18.8	16.5	71	40	-
12	1013.6	26.0	22.3	19.8	15.7	68	53	-
13	1012.8	27.7	23.6	21.0	18.8	75	47	0.1
14	1011.9	29.0	24.1	21.4	19.9	78	30	-
15	1010.8	28.4	23.8	21.1	19.9	80	43	-
16	1011.7	24.7	22.3	21.2	18.4	79	87	Trace
17	1009.4	27.7	24.3	22.1	21.5	85	79	Trace
18	1008.8	28.7	24.4	21.3	21.4	84	61	-
19	1009.9	25.8	23.3	22.3	20.6	85	75	-
20	1012.6	22.9	21.0	19.9	18.9	88	88	Trace
21	1012.9	23.7	22.1	21.0	20.2	89	88	Trace
22	1012.8	25.1	23.0	21.2	21.7	93	95	Trace
23	1014.7	21.6	17.7	16.3	16.6	94	91	54.8
24	1014.3	18.5	17.6	16.3	16.1	91	93	1.8
25	1010.4	26.7	23.1	18.1	21.3	90	92	0.7
26	1010.4	28.7	26.4	24.9	23.9	86	88	0.1
27	1013.4	25.4	21.9	19.1	18.9	83	88	Trace
28	1017.4	19.2	17.5	16.4	15.6	89	88	30.3
29	1017.2	21.2	19.1	17.4	15.8	82	86	0.1
30	1015.9	26.1	22.4	19.5	17.5	74	82	-
31	1016.3	29.3	24.4	21.9	18.2	69	56	Trace

Trace means rainfall less than 0.05 mm

Source: Hong Kong Observatory

Rainstorm Warning Signals

Searching period: [01/03/2022 – 31/03/2022]
Signal colour: [All colours]
No Rainstorm Warning Signals issued during that period.

Source: Hong Kong Observatory