



Regional District of
Kitimat-Stikine

2021 QUEENSWAY SEWER ANNUAL REPORT

January 2022

Prepared for:

British Columbia Ministry of
Environment & Climate Change
Strategy
EnvAuthorizationsReporting@gov.bc.ca

Prepared by:

Regional District of Kitimat-Stikine
Suite 300 - 4545 Lazelle Avenue
Terrace, BC V8G 4E1

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1.0 Overview

Queensway Sewer is authorized to discharge under Ministry of Environment and Climate Change Strategy Authorization Number 12645. The most recent update to the authorization was conducted on May 23, 2017.

The authorized point of discharge of the Queensway Sewer Facility is to exfiltration lagoon Number 3 or lagoon Number 4 (site reference discharge E220346), shown on Figure 1. No effluent was discharged to the overflow outfall to the Skeena River (site reference discharge E220347) during 2021. Queensway Sewer facility is authorized to discharge an average of 800 m³/day and a maximum of 1500 m³/day. Queensway Sewer facility discharged a total of 82,492 m³ of effluent into the exfiltration lagoons during 2021, with a daily maximum of 290.30 m³/day in December and an annual average of 225.84 m³/day. Daily blower hours in 2021 ranged from 20.64 to 21.40 hours per day, with an average of 21.22 hours per day.

Effluent discharge volume is continually measured. In-situ field parameters and laboratory samples are collected monthly. Laboratory sample collection and in-situ sampling is conducted from the manhole access point between the outlet of the Aerated Lagoon Cell #2 prior to discharge to one of the exfiltration lagoons. Sampling was conducted in accordance with the “British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Sample, 2013 Edition”.

Samples and field parameters were not collected from the Queensway Sewer Facility in June 2021, as access to the site was restricted by flooding of the Skeena River. There was no breach of the sewage lagoons during this flooding event.

Authorization 12645 stipulates discharge parameters are not to exceed 60 mg/L for total suspended solids, and 45 mg/L for 5-day biochemical demand. Queensway Sewer experienced two (2) exceedances for 5-day biochemical oxygen demand (BOD) during 2021; see Section 3.0 for a detailed explanation of exceedance events. There were no exceedances of the permit discharge parameters for total suspended solids during 2021.

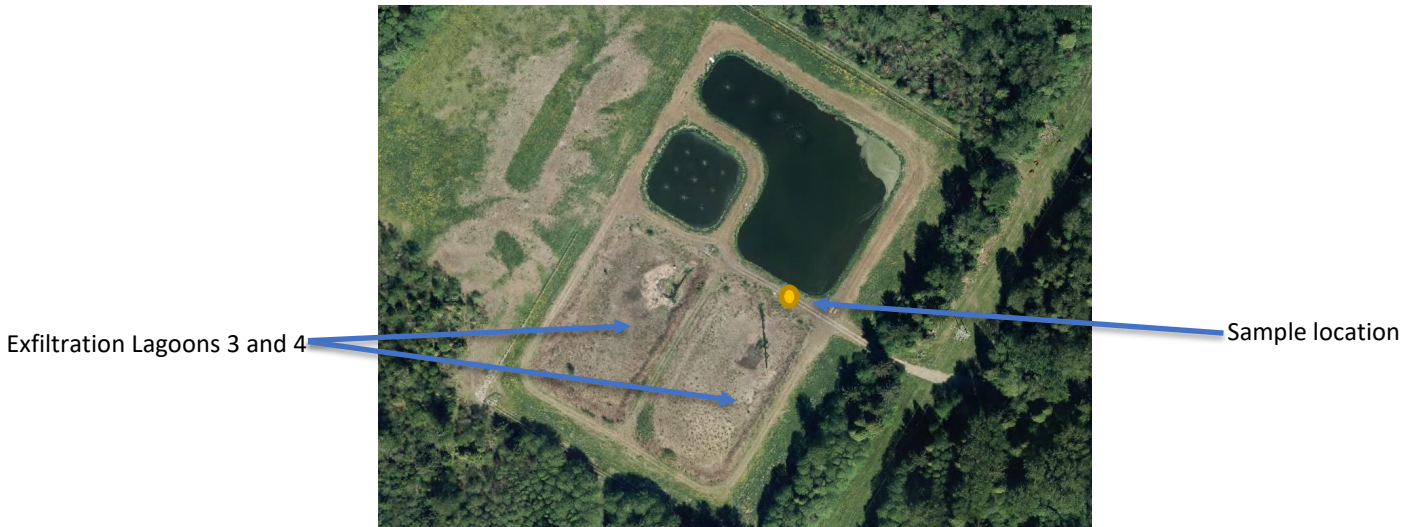


Figure 1. Overview of Queensway Sewer Treatment Facility

2.0 Queensway Sewer Laboratory and Field Data

Table 1 Queensway Sewer Monthly Data

Sample Date	Temperature (°C) (Field)	DO (mg/L) (Field)	pH (Field)	Conductivity (uS/cm)	pH (Lab)	BOD ₅ (mg/L)	CBOD (mg/L)	TSS (mg/L)	Ammonia (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Phosphorus (mg/L)	Blower Hours (hours/day)	Influent Discharge (m ³ /day) (Monthly average)	Influent Discharge (m ³ /month) (Monthly average)
11-Jan-21	2.6	7.3	7.7	278	7.5	12	8.5	15.0	25.5	24.1	3.69	21.26	248.97	7718.07
08-Feb-21	2.7	7.4	6.8	281	7.5	18	7.2	19.0	26.9	28.6	4.13	20.64	215.85	6043.80
08-Mar-21	2.7	4.8	7.5	284	7.4	12	9.1	8.8	28.8	28.0	3.22	21.28	249.96	7748.76
06-Apr-21	6.7	14.2	8.1	281	8.1	15	9.2	27.0	23.2	28.1	4.16	21.27	284.75	8542.50
10-May-21	13.7	5.2	7.6	374	7.6	21	19.0	17.0	26.4	31.2	5.06	21.35	230.61	7148.91
2021-06-14 ^a	*	*	*	*	*	*	*	*	*	*	*	21.28	210.20	6306.00
12-Jul-21	22.7	6.3	7.7	316	7.2	14	11.0	26.0	29.3	30.4	4.24	21.32	193.39	5995.09
09-Aug-21	19.5	1.7	7.9	480	7.2	110	8.2	23.0	26.1	25.7	4.37	21.40	186.25	5773.75
07-Sep-21	16.2	1.2	7.4	447	7.2	81	5.8	33.0	26.3	14.2	4.33	21.27	186.89	5606.70
25-Oct-21	8.7	9.5	7.7	361	7.8	110	7.8	20.0	27.1	29.0	4.96	21.00	221.16	6855.96
15-Nov-21	5.8	8.5	3.04 ^b	336	7.7	19	8.4	10.0	28.1	31.6	4.82	21.23	191.80	5754.00
13-Dec-21	1.5	10.6	7.7	507	7.3	10	6.5	5.7	27.6	29.6	4.32	21.32	290.30	8999.30
Total Discharge:														82492.84

Notes:

Analysis conducted by Northern Laboratories Ltd.

a. Queensway Sewer was not sampled or monitored in June 2021 due to access issues related to flooding of the Skeena River. The sewage lagoons were not breached during this flooding event. Influent flowrate and blower hours were noted for June.

b. The field pH reading for November was inaccurate, as the YSI Multimeter pH probe required repair and calibration at the time of sampling.

Bold red text indicates exceedances of specified parameters.



3.0 Non-Compliance

The Queensway Sewer facility had three exceedances of 5-day biochemical oxygen demand (BOD) during 2021. The exceedances occurred in August, September, and October, with BOD concentrations of 110 mg/L, 81 mg/L, and 110 mg/L, respectively. During these events, all other in-situ and ex-situ parameters were compliant.

It is suspected that BOD concentration exceedances were due to an increased volume of effluent containing elevated concentrations of organic matter entering the facility, as well as a seasonal bloom of *Lemnaceae spp.* (Duck weed). It was inferred that the high oxygen demand of *Lemnaceae* exacerbated already high BOD concentrations. Since the blowers for the treatment system were already near maximum operating hours, clean water for the purpose of dilution was added to the system at one of the lift stations. The surface of the water was also skimmed to remove the floating mat of *Lemnaceae* present in the lagoon. Resampling after the exceedance events in October confirmed BOD levels were corrected to compliance levels.

The Regional District of Kitimat-Stikine is reviewing the treatment facility operations to determine if additional aeration or other measures may be required to mitigate future BOD exceedances.

Document prepared by:

Hannah Shinton, BSc.
Environmental Technician
Regional District of Kitimat-Stikine
300 – 4545 Lazelle Avenue
Terrace, BC V8G 4E1
hshinton@rdks.bc.ca

Document reviewed by:

Nicki Veikle, BSc., A.Sc.T., A.Ag.
Environmental Coordinator
Regional District of Kitimat-Stikine
300 – 4545 Lazelle Avenue
Terrace, BC V8G 4E1
nveikle@rdks.bc.ca

Appendix A – Laboratory Analytical Results

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21A050

RECEIVED: 12-Jan-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 23-Feb-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21A050

LAB #	N21A050-01
SAMPLED DATE	11-Jan-21
SAMPLED TIME	11:15
SAMPLE ID	Lagoon

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.5
Biochemical Oxygen Demand / BOD	4.0 mg/L	12
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	8.5
Solids, Total Suspended / TSS	1.0 mg/L	15
Ammonia (total as N)	0.03 mg/L	25.5
Nitrogen, Total Kjeldahl	0.500 mg/L	24.1
Phosphorus (total)	0.05 mg/L	3.69

Field Data (Water)

Conductivity (field)	1.0 uS/cm	278
Dissolved Oxygen (field)	0.10 mg/L	7.30
pH (field)	1.00 -	7.66
Temperature (field)	0.0 °C	2.6

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21B040

RECEIVED: 09-Feb-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 07-Mar-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21B040

LAB # N21B040-01
 SAMPLED DATE 08-Feb-21
 SAMPLED TIME 11:45
 SAMPLE ID Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.5
Biochemical Oxygen Demand / BOD	4.0 mg/L	18
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	7.2
Solids, Total Suspended / TSS	1.0 mg/L	19
Ammonia (total as N)	0.03 mg/L	26.9
Nitrogen, Total Kjeldahl	0.500 mg/L	28.6
Phosphorus (total)	0.05 mg/L	4.13

Field Data (Water)

Conductivity (field)	1.0 uS/cm	281
Dissolved Oxygen (field)	0.10 mg/L	7.40
pH (field)	1.00 -	6.84
Temperature (field)	0.0 °C	2.7

Glossary of Terms

MRL Method Reporting Limit
 °C Degrees Celsius
 mg/L Milligrams per Litre
 pH units pH units
 uS/cm Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21C046

RECEIVED: 09-Mar-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 19-Apr-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21C046

LAB #	N21C046-01
SAMPLED DATE	08-Mar-21
SAMPLED TIME	11:30
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.4
Biochemical Oxygen Demand / BOD	4.0 mg/L	12
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	9.1
Solids, Total Suspended / TSS	1.0 mg/L	8.8
Ammonia (total as N)	0.03 mg/L	28.8
Nitrogen, Total Kjeldahl	0.500 mg/L	28.0
Phosphorus (total)	0.05 mg/L	3.22

Field Data (Water)

Conductivity (field)	1.0 uS/cm	284
Dissolved Oxygen (field)	0.10 mg/L	4.80
pH (field)	1.00 -	7.51
Temperature (field)	0.0 °C	2.7

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21D024

RECEIVED: 07-Apr-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 08-Jun-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21D024

LAB #	N21D024-01
SAMPLED DATE	06-Apr-21
SAMPLED TIME	10:15
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	8.1
Biochemical Oxygen Demand / BOD	4.0 mg/L	15
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	9.2
Solids, Total Suspended / TSS	1.0 mg/L	27 [1]
Ammonia (total as N)	0.03 mg/L	23.2
Nitrogen, Total Kjeldahl	0.500 mg/L	28.1
Phosphorus (total)	0.05 mg/L	4.16

Field Data (Water)

Conductivity (field)	1.0 uS/cm	281
Dissolved Oxygen (field)	0.10 mg/L	14.2
pH (field)	1.00 -	8.06
Temperature (field)	0.0 °C	6.7

Special Notes

1 = Sample was analyzed outside of the recommended holding time.

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21E052

RECEIVED: 11-May-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 16-Jul-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21E052

LAB #	N21E052-01
SAMPLED DATE	10-May-21
SAMPLED TIME	12:00
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.6
Biochemical Oxygen Demand / BOD	4.0 mg/L	21
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	19
Solids, Total Suspended / TSS	1.0 mg/L	17
Ammonia (total as N)	0.03 mg/L	26.4
Nitrogen, Total Kjeldahl	0.500 mg/L	31.2
Phosphorus (total)	0.05 mg/L	5.06

Field Data (Water)

Conductivity (field)	1.0 uS/cm	374
Dissolved Oxygen (field)	0.10 mg/L	5.20
pH (field)	1.00 -	7.60
Temperature (field)	0.0 °C	13.7

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21G077

RECEIVED: 13-Jul-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 23-Sep-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21G077

LAB # N21G077-01
 SAMPLED DATE 12-Jul-21
 SAMPLED TIME 10:15
 SAMPLE ID Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.2
Biochemical Oxygen Demand / BOD	4.0 mg/L	14
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	11
Solids, Total Suspended / TSS	1.0 mg/L	26
Ammonia (total as N)	0.03 mg/L	29.3
Nitrogen, Total Kjeldahl	0.500 mg/L	30.4
Phosphorus (total)	0.05 mg/L	4.24

Field Data (Water)

Conductivity (field)	1.0 uS/cm	316
Dissolved Oxygen (field)	0.10 mg/L	6.30
pH (field)	1.00 -	7.65
Temperature (field)	0.0 °C	25.9

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21H043

RECEIVED: 10-Aug-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 22-Sep-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21H043

LAB #	N21H043-01
SAMPLED DATE	09-Aug-21
SAMPLED TIME	11:40
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.2
Biochemical Oxygen Demand / BOD	4.0 mg/L	110
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	8.2
Solids, Total Suspended / TSS	1.0 mg/L	23
Ammonia (total as N)	0.03 mg/L	26.1
Nitrogen, Total Kjeldahl	1.00 mg/L	25.7
Phosphorus (total)	0.05 mg/L	4.37

Field Data (Water)

Conductivity (field)	1.0 uS/cm	480
Dissolved Oxygen (field)	0.10 mg/L	1.70
pH (field)	1.00 -	7.87
Temperature (field)	0.0 °C	19.5

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N211047

RECEIVED: 08-Sep-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 20-Nov-2021

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N211047

LAB # N211047-01
 SAMPLED DATE 07-Sep-21
 SAMPLED TIME 11:15
 SAMPLE ID Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.2
Biochemical Oxygen Demand / BOD	4.0 mg/L	81
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	5.8
Solids, Total Suspended / TSS	1.0 mg/L	33
Ammonia (total as N)	0.03 mg/L	26.3
Nitrogen, Total Kjeldahl	0.250 mg/L	14.2
Phosphorus (total)	0.05 mg/L	4.33

Field Data (Water)

Conductivity (field)	1.0 uS/cm	447
Dissolved Oxygen (field)	0.10 mg/L	1.20
pH (field)	1.00 -	7.36
Temperature (field)	0.0 °C	16.2

Glossary of Terms

MRL Method Reporting Limit
 °C Degrees Celsius
 mg/L Milligrams per Litre
 pH units pH units
 uS/cm Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21J158

RECEIVED: 26-Oct-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 10-Jan-2022

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21J158

LAB #	N21J158-01
SAMPLED DATE	25-Oct-21
SAMPLED TIME	13:20
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.8
Biochemical Oxygen Demand / BOD	4.0 mg/L	110
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	7.8
Solids, Total Suspended / TSS	1.0 mg/L	20 [1]
Ammonia (total as N)	0.03 mg/L	27.1
Nitrogen, Total Kjeldahl	0.500 mg/L	29.0
Phosphorus, Total (as P)	0.100 mg/L	4.96 [2]

Field Data (Water)

Conductivity (field)	1.0 uS/cm	361
Dissolved Oxygen (field)	0.10 mg/L	9.50
pH (field)	1.00 -	7.65
Temperature (field)	0.0 °C	8.7

Special Notes

- 1 = Sample was analyzed outside of the recommended holding time.
- 2 = The sample was prepared and/or analyzed past the recommended holding time.

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21K086

RECEIVED: 16-Nov-2021

Project: Queensway
Project Number: -
Project Manager: Nicki Veikle

REPORTED: 10-Jan-2022

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21K086

LAB #	N21K086-01
SAMPLED DATE	15-Nov-21
SAMPLED TIME	11:30
SAMPLE ID	Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.7
Biochemical Oxygen Demand / BOD	4.0 mg/L	19
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	8.4
Solids, Total Suspended / TSS	1.0 mg/L	10
Ammonia (total as N)	0.03 mg/L	28.1
Nitrogen, Total Kjeldahl	0.500 mg/L	31.6
Phosphorus, Total (as P)	0.100 mg/L	4.82

Field Data (Water)

Conductivity (field)	1.0 uS/cm	336
Dissolved Oxygen (field)	0.10 mg/L	8.50
pH (field)	1.00 -	3.04
Temperature (field)	0.0 °C	5.8

Glossary of Terms

MRL	Method Reporting Limit
°C	Degrees Celsius
mg/L	Milligrams per Litre
pH units	pH units
uS/cm	Micro Siemens per centimeter

ANALYTICAL REPORT

Regional District of Kitimat Stikine
300 - 4545 Lazelle Avenue
Terrace BC, V8G 4E1
nveikle@rdks.bc.ca

Work Order: N21L057

RECEIVED: 14-Dec-2021

Project: Queensway

Project Number: -

Project Manager: Nicki Veikle

REPORTED: 11-Jan-2022

All analyses were performed in accordance with standard procedures published by BC MoE, Health Canada, Environment Canada, the American Public Health Association, or the US EPA.

Northern Laboratories (2010) Ltd.



Jesse Newton
Laboratory Manager

ANALYTICAL REPORT

Regional District of Kitimat Stikine

Work Order: N21L057

LAB # N21L057-01
 SAMPLED DATE 13-Dec-21
 SAMPLED TIME 11:45
 SAMPLE ID Queensway Sewer

MRL Units

General Parameters (Water)

pH	1.0 pH units	7.3
Biochemical Oxygen Demand / BOD	4.0 mg/L	10
Carbonaceous Biochemical Oxygen Demand / CBOD	4.0 mg/L	6.5
Solids, Total Suspended / TSS	1.0 mg/L	5.7
Ammonia (total as N)	0.03 mg/L	27.6
Nitrogen, Total Kjeldahl	1.25 mg/L	29.6
Phosphorus, Total (as P)	0.100 mg/L	4.32

Field Data (Water)

Conductivity (field)	1.0 uS/cm	507
Dissolved Oxygen (field)	0.10 mg/L	10.6
pH (field)	1.00 -	7.72
Temperature (field)	0.0 °C	1.5

Glossary of Terms

MRL Method Reporting Limit
 °C Degrees Celsius
 mg/L Milligrams per Litre
 pH units pH units
 uS/cm Micro Siemens per centimeter