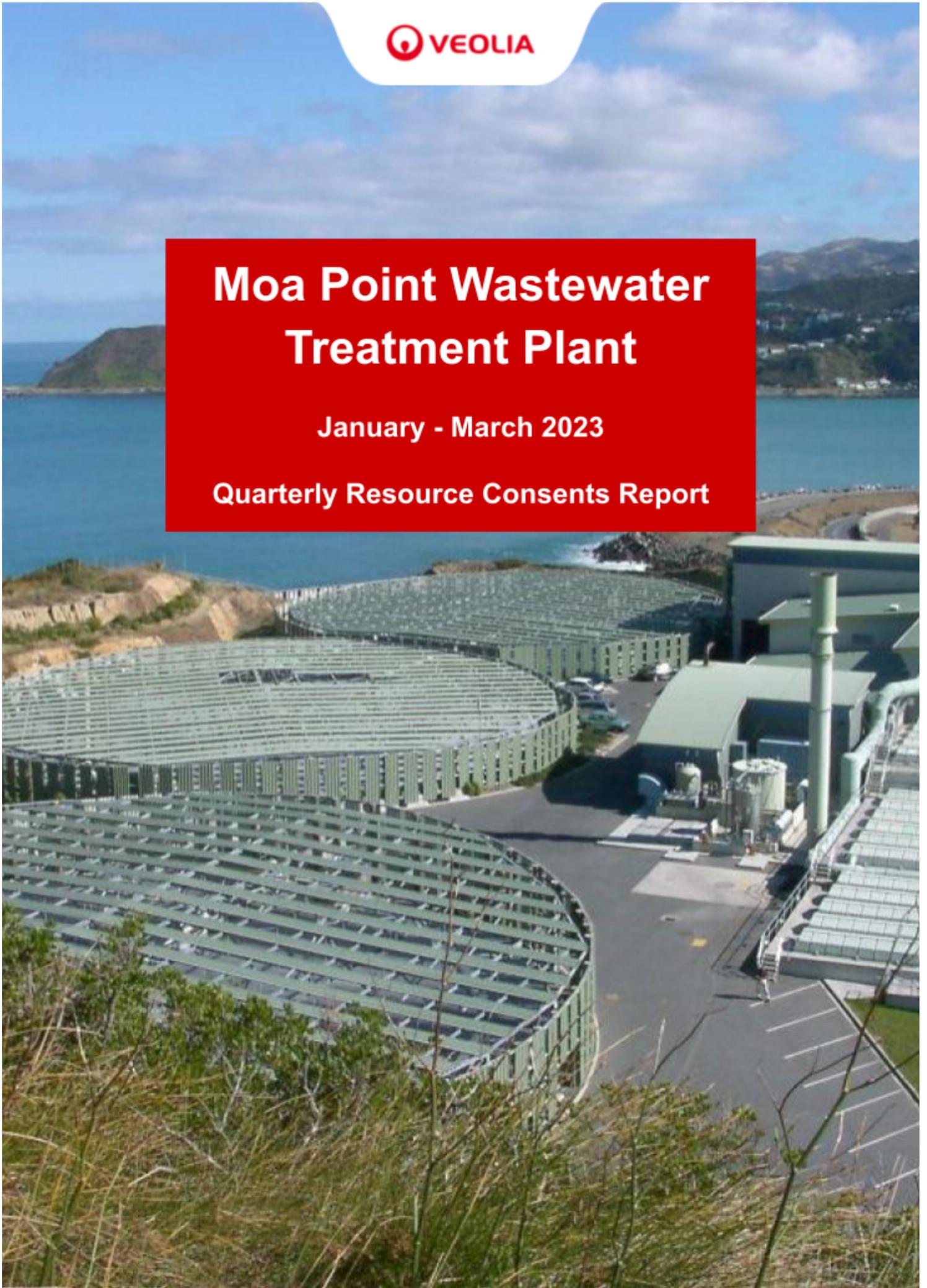


# Moa Point Wastewater Treatment Plant

January - March 2023

Quarterly Resource Consents Report



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## CONTROL SHEET

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**Document Title:** Moa Point Wastewater Treatment Plant January - March 2023 Quarterly Resource Consents Report

**Prepared by:** Julian Villada

**Reviewed by:** Nico Robins

**Authorised by:** Alex Phelan

## DOCUMENT CONTROL REGISTER

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Version	Status	Date	Details of Revision
0	Draft	24/04/2023	Original version for review.
1	Final	24/04/2023	Internally reviewed.

## EXECUTIVE SUMMARY

The following report was prepared by Veolia on behalf of the Wellington City Council (WCC) for the Greater Wellington Regional Council (GWRC). This report includes results and observations that satisfy the reporting requirements of the following Moa Point Inlet Pump Station (IPS) and Wastewater Treatment Plant (WWTP) resource consents:

### WGN080003 [31505]

Effluent discharge from the Moa Point WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN8003 [31505]. In general, the consent allows the continuous discharge of up to 260,000 cubic metres per day of secondary treated and disinfected wastewater from Moa Point Wastewater Treatment Plant into coastal marine area via an existing submarine outfall.

The report will cover the quarterly period from January - March 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
Condition 6	Compliant
Condition 9 a)	Compliant
Condition 9 b)	Compliant
Condition 10	Non-compliant
Condition 11	Compliant
Condition 12	Compliant
Condition 13	Compliant
Condition 14	Compliant
Condition 18	Compliant
Condition 19	Compliant

Table 1: WGN080003 [31505] Resource Consent Condition Compliance

### WGN080003 [35047]

The discharge from the Moa Point WWTP is governed by another resource consent under the Greater Wellington Regional Council consent file number WGN8003 [35047]. In general, the consent allows the discharge up to 4500 litres per second of mixed disinfected secondary treated and milli-screened wastewater to the coastal marine area via an existing submarine outfall during and/or immediately after heavy rainfall, when the quantity of wastewater arriving at the Moa Point Wastewater Treatment Plant exceeds 3000 litres per second. The report will cover the quarterly period from January - March 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
Condition 8	Compliant
Condition 10	Compliant
Condition 16	Compliant
Condition 18	Compliant

Table 2: WGN080003 [35047] Resource Consent Condition Compliance

## WGN080003 [26182]

The outfall pipeline from the Moa Point WWTP is governed by the resource consent under the Greater Wellington Regional Council consent file number WGN8003 [26182]. In general, the WCC is allowed to occupy the foreshore and seabed of the coastal marine area with an existing submarine outfall pipeline.

The report will cover the quarterly period from January - March 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
Condition 3	Compliant

**Table 3: WGN080003 [26182] Resource Consent Condition Compliance**

## WGN080003 [26183]

Emissions from the Moa Point WWTP are governed by the resource consent under the Greater Wellington Regional Council consent file number WGN8003 [26183]. In general, the WCC is allowed to continuously discharge contaminants (including odour) to air from the Moa Point Wastewater Treatment Plant ventilation system.

The report will cover the quarterly period from January - March 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
Condition 7	Compliant
Condition 8	Compliant
Condition 9	Compliant
Condition 10	Compliant
Condition 13	Compliant

**Table 4: WGN080003 [26183] Resource Consent Condition Compliance**

## WGN960094 [1471]

Emissions from the Moa Point Inlet Pump Station (IPS) are governed by the resource consent under the Greater Wellington Regional Council consent file number WGN960094 [1471]. In general, the WCC is allowed to continuously discharge contaminants (including odour) to air from Moa Point IPS ventilation system.

The report will cover the quarterly period from January - March 2023 as requested in this resource consent. The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant/Non-Compliant/Not Applicable
Condition 11	Compliant
Condition 13	Compliant

**Table 5: WGN960094 [1471] Resource Consent Condition Compliance**

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## Condition 6

The permit holder shall continuously monitor and record the flow rate and volume of treated wastewater entering the submarine outfall pipeline, to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council. A summary of the records listing the daily discharge volumes and average and maximum flow rates shall be forwarded to the Manager, Environmental Regulation, Wellington Regional Council at quarterly intervals, in accordance with condition 19 of this permit.

The following tables list the daily total effluent volume, average daily effluent flow rate, and maximum daily effluent flow rate from the Moa Point WWTP from January - March 2023.

Day	January 2023			February 2023			March 2023		
	Average flow	Peak flow	Total Volume	Average flow	Peak flow	Total Volume	Average flow	Peak flow	Total Volume
	L/s	m <sup>3</sup> /h	m <sup>3</sup>	L/s	m <sup>3</sup> /h	m <sup>3</sup>	L/s	m <sup>3</sup> /h	m <sup>3</sup>
1	1015	5,241	87,655	1340	6,694	115,734	1322	7,085	114,228
2	1044	5,269	90,192	1277	6,205	110,357	1320	6,677	114,035
3	1069	5,419	92,329	1233	6,156	106,496	1297	6,720	112,061
4	1119	5,410	96,724	1236	5,860	106,830	1317	8,001	113,820
5	1244	6,172	107,486	1575	9,725	136,057	1520	9,521	131,316
6	1288	6,729	111,311	1367	6,614	118,120	1324	7,328	114,436
7	1848	10,437	159,630	1357	6,609	117,227	1301	7,075	112,434
8	1310	8,687	113,165	1355	6,759	117,090	1277	6,982	110,322
9	1234	6,372	106,648	1269	6,867	109,664	1322	6,876	114,203
10	1225	6,017	105,812	1200	5,999	103,642	1296	6,433	111,950
11	1620	10,024	140,011	1175	6,032	101,493	1234	6,542	106,608
12	1310	6,523	113,212	1173	5,735	101,325	1246	6,395	107,669
13	1234	6,528	106,630	1377	8,525	118,977	1101	9,329	95,169
14	1185	6,389	102,353	2203	10,736	190,349	705	5,067	60,944
15	1179	6,147	101,858	2066	10,447	178,508	802	10,866	69,017
16	1205	6,155	104,081	1875	10,794	161,451	802	4,659	69,295
17	1246	5,890	107,686	1423	7,346	122,905	965	7,073	83,343
18	1295	6,240	111,893	1346	7,342	116,261	722	4,860	62,385
19	1329	6,446	114,836	1329	6,212	114,792	694	4,385	59,933
20	1324	6,534	114,361	1339	7,083	115,670	892	6,871	77,090
21	1275	6,544	110,194	1285	6,918	110,992	1013	6,885	87,528
22	1235	6,393	106,712	1667	9,656	144,070	807	5,700	69,730
23	1268	6,141	109,525	1583	8,984	136,810	717	4,687	61,944
24	1283	6,697	110,847	1296	7,447	111,998	705	4,540	60,900
25	1289	6,864	111,351	1671	9,737	144,348	674	4,608	58,214
26	1275	6,488	110,201	1508	8,993	130,260	678	4,357	58,546
27	1401	7,687	121,083	1365	6,890	117,927	709	4,139	61,228
28	1621	9,401	140,030	1332	7,330	115,127	1292	7,064	111,657
29	1351	6,622	116,739	-	-	-	1011	7,168	87,325
30	1342	6,370	115,926	-	-	-	836	4,633	72,245
31	1362	6,502	117,644	-	-	-	749	4,672	64,721
<b>Limit</b>	<b>N/A</b>	<b>N/A</b>	<b>260,000</b>	<b>N/A</b>	<b>N/A</b>	<b>260,000</b>	<b>N/A</b>	<b>N/A</b>	<b>260,000</b>

Table 6: Effluent Flow Rates

## Condition 9 a)

The permit holder shall obtain daily representative 24-hour flow-proportioned composite samples of the treated wastewater discharged from the treatment plant to the outfall. These samples shall be analysed for total suspended solids and 5-day carbonaceous biochemical oxygen demand (cBOD5).

The effluent cBOD5 and suspended solids results from daily representative 24-hour flow-proportioned composite samples can be found under resource consent WGN080003 [31505] Condition 10 a) and b).

## Condition 9 b)

The permit holder shall between the hours of 9:00 am and 5:00 pm each day, obtain a representative grab sample of the treated wastewater discharged from the treatment plant to the outfall. This sample shall be analysed for faecal coliforms.

The effluent faecal coliforms results from daily representative grab samples can be found under resource consent WGN080003 [31505] Condition 10 c).

## Condition 10

The wastewater discharged from the Moa Point Wastewater Treatment Plant to the coastal waters shall comply with the following effluent quality criteria:

a. cBOD5

The geometric mean of 90 consecutive daily sampling results shall not exceed 20 g/m<sup>3</sup> and no more than 10% of 90 consecutive sample results shall exceed 45 g/m<sup>3</sup>.

b. Suspended solids

The geometric mean of 90 consecutive daily sampling results shall not exceed 30g/m<sup>3</sup> and no more than 10% of 90 consecutive daily values shall exceed 68g/m<sup>3</sup>.

c. Faecal Coliforms

The geometric mean of 90 consecutive daily sampling results shall not exceed 200 colony forming units per 100mL and no more than 10% of 90 consecutive sample results shall exceed 950 colony forming units per 100mL.

Compliance with the effluent quality criteria shall be determined from the results of wastewater monitoring undertaken in accordance with conditions (9)(a) and (9)(b) of this permit, with a running geometric mean and ninetieth percentile calculated following each sampling event using the preceding 90 consecutive sample results.

### a) 5-Day Carbonaceous Biochemical Oxygen Demand

The following is a summary of the daily results, geometric mean, and ninetieth percentile for carbonaceous biochemical oxygen demand.

Day	January 2023			February 2023			March 2023		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	g/m <sup>3</sup>								
1	5	20	61	—	11	43	6	7	12
2	6	20	61	14	11	43	6	7	12
3	11	19	54	10	10	39	7	7	12
4	6	19	54	152	11	43	4	7	11
5	6	19	54	7	11	39	8	7	11
6	6	19	54	5	10	35	8	7	10
7	8	18	54	5	10	31	5	7	10
8	5	18	54	6	10	31	6	7	10
9	6	17	54	7	10	29	6	7	10
10	6	17	54	5	9	25	5	7	10
11	6	17	53	3	9	22	6	7	10
12	5	17	53	5	9	20	6	7	10
13	5	16	53	6	9	19	8	7	10
14	6	16	53	11	8	18	8	7	9
15	5	16	53	7	8	17	9	7	9
16	6	15	53	9	8	17	7	7	9
17	7	15	53	8	8	16	16	7	9
18	7	15	53	6	8	15	10	7	9
19	5	14	53	6	8	15	9	7	9
20	6	14	52	6	8	14	9	7	9
21	5	14	52	6	8	13	13	7	10
22	5	13	52	12	8	13	7	7	10
23	6	13	52	8	8	13	9	7	10
24	5	13	52	8	7	13	7	7	10
25	5	12	48	10	7	12	5	7	10
26	5	12	48	6	7	12	6	7	10
27	6	12	45	8	7	12	7	7	10
28	8	12	45	7	7	12	22	7	10
29	4	11	44	-	-	-	15	7	10
30	5	11	44	-	-	-	9	7	10
31	4	11	44	-	-	-	12	7	11
Limits	N/A	20	45	N/A	20	45	N/A	20	45

Table 7: 5-Day Carbonaceous Biochemical Oxygen Demand Results, Geometric Mean, and 90th Percentile

Please note that analytical results highlighted in amber are above the 20g/m<sup>3</sup> geometric mean limit. Analytical results highlighted in red are above the 45g/m<sup>3</sup> percent compliance limit. This does not affect the compliance with the resource consent.

Please note that samples on 1st of February could not be collected due to a fire at the Moa Point WWTP. The building had to be evacuated.

## b) Suspended Solids

The following is a summary of the daily results, geometric mean, and ninetieth percentile for the suspended solids.

Day	January 2023			February 2023			March 2023		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	g/m <sup>3</sup>								
1	49	52	140	—	30	100	24	21	32
2	19	51	140	28	29	100	29	21	30
3	19	50	140	23	29	92	19	20	28
4	16	50	140	204	29	100	17	20	27
5	9	49	140	22	29	92	26	20	27
6	20	49	140	18	28	90	17	20	26
7	19	48	140	21	28	88	16	20	26
8	15	47	140	26	27	72	18	20	26
9	8	46	140	26	27	65	21	19	26
10	17	46	140	19	26	58	11	19	26
11	15	45	122	17	26	55	14	19	26
12	11	44	122	25	25	52	17	19	26
13	13	43	122	24	25	50	25	19	26
14	17	42	122	21	24	49	24	19	26
15	10	41	120	23	24	46	19	19	26
16	17	40	120	19	23	44	23	19	26
17	22	39	120	19	23	44	39	19	26
18	24	39	120	21	23	44	36	20	26
19	19	38	120	19	23	44	28	20	26
20	23	37	120	19	23	44	23	20	26
21	27	37	120	17	23	42	29	20	27
22	26	36	120	32	22	41	27	20	27
23	25	36	120	17	22	41	26	20	27
24	16	35	120	20	22	40	16	20	27
25	18	34	120	25	21	40	16	20	27
26	19	34	120	13	21	39	20	20	27
27	13	33	111	21	21	39	86	20	28
28	18	32	111	21	21	34	69	21	28
29	12	32	102	-	-	-	51	21	29
30	12	31	102	-	-	-	33	21	30
31	16	30	102	-	-	-	36	21	32
Limits	N/A	30	68	N/A	30	68	N/A	30	68

Table 8: Suspended Solids Results, Geometric Mean, and 90th Percentile

Please note that analytical results highlighted in amber are above the 30g/m<sup>3</sup> geometric mean limit. Analytical results highlighted in red are above the 68g/m<sup>3</sup> percent compliance limit. This does not affect the compliance with the resource consent.

Please note that samples on 1st of February could not be collected due to a fire at the Moa Point WWTP. The building had to be evacuated.

### c) Faecal Coliforms

The following is a summary of the daily results, geometric mean, and ninetieth percentile for faecal coliforms.

Day	January 2023			February 2023			March 2023		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL	cfu/100mL
1	100	136	1758	—	60	734	24	44	173
2	100	137	1758	22	63	736	224	44	184
3	10	135	1758	140000	68	811	71	44	184
4	17	134	1758	10	68	811	100	45	184
5	100	132	1758	74	68	811	10	44	184
6	100	135	1758	265	68	811	20	44	184
7	173	138	1758	30	70	811	17	43	184
8	14	132	1758	14	66	736	37	42	173
9	10	128	1758	224	64	633	200	42	181
10	100	128	1758	96	62	561	95	43	181
11	10	124	1758	10	59	441	10	43	181
12	10	121	1758	47	58	441	395	45	203
13	32	117	1758	30	56	393	14	44	203
14	10	113	1758	210	55	350	100	44	203
15	10	107	1678	10	52	310	49	45	203
16	10	101	1678	1990	53	350	980	47	214
17	110	98	1532	100	51	310	63	48	214
18	141	95	1460	235	52	310	329	50	224
19	141	93	1460	67	52	310	520	52	226
20	100	87	1331	24	52	310	134	53	226
21	63	86	1331	57	51	276	63	54	226
22	100	86	1331	42	50	265	200	55	226
23	72	83	1114	167	48	244	2793	59	241
24	45	79	1054	173	48	227	648	62	277
25	10	75	973	63	47	214	3924	65	342
26	1844	75	973	49	46	214	374	68	378
27	17	72	790	39	45	214	141	68	378
28	10	71	790	161	45	184	346	70	378
29	10	69	790	-	-	-	283	71	378
30	14	66	790	-	-	-	2245	74	420
31	17	64	790	-	-	-	200	77	420
Limits	N/A	200	950	N/A	200	950	N/A	200	950

Table 9: Faecal Coliform Results, Geometric Mean, and 90th Percentile

Please note that analytical results highlighted in amber are above the 200cfu/100mL geometric mean limit. Analytical results highlighted in red are above the 950cfu/100mL percent compliance limit. This does not affect the compliance with the resource consent.

Please note that samples on 1st of February could not be collected due to a fire at the Moa Point WWTP. The building had to be evacuated.

## Condition 11

The permit holder shall at least once every three months obtain a sample of the treated wastewater discharged from the treatment plant to the outfall. This sample shall be analysed for and not exceed the following:

Total arsenic	0.26 g/m <sup>3</sup>
Total cadmium	0.08 g/m <sup>3</sup>
Total chromium	0.48 g/m <sup>3</sup>
Total copper	0.14 g/m <sup>3</sup>
Total lead	0.48 g/m <sup>3</sup>
Total mercury	0.01 g/m <sup>3</sup>
Total nickel	0.77 g/m <sup>3</sup>
Total zinc	1.65 g/m <sup>3</sup>
Phenol	0.80 g/m <sup>3</sup>
Cyanide as CN	0.10 g/m <sup>3</sup>

This sample shall also be analysed for:

pH  
Ammoniacal Nitrogen  
Oil and Grease

Below is a summary of the quarterly metals and other specified compounds analytical results. The results can be found in Appendix i: Heavy Metals Analysis.

Compound	Units	Limit	27/01/2023
<b>Total Arsenic</b>	<b>g/m<sup>3</sup></b>	<b>0.26</b>	0.00200
<b>Total Cadmium</b>	<b>g/m<sup>3</sup></b>	<b>0.08</b>	0.00100
<b>Total Chromium</b>	<b>g/m<sup>3</sup></b>	<b>0.48</b>	0.00100
<b>Total Copper</b>	<b>g/m<sup>3</sup></b>	<b>0.14</b>	0.00400
<b>Total Lead</b>	<b>g/m<sup>3</sup></b>	<b>0.48</b>	0.00100
<b>Total Mercury</b>	<b>g/m<sup>3</sup></b>	<b>0.01</b>	0.00100
<b>Total Nickel</b>	<b>g/m<sup>3</sup></b>	<b>0.77</b>	0.00100
<b>Total Zinc</b>	<b>g/m<sup>3</sup></b>	<b>1.65</b>	0.02900
<b>Phenol</b>	<b>g/m<sup>3</sup></b>	<b>0.80</b>	0.01000
<b>Cyanide as CN</b>	<b>g/m<sup>3</sup></b>	<b>0.10</b>	0.04300
<b>pH</b>	--	--	7
<b>Ammoniacal Nitrogen</b>	<b>g/m<sup>3</sup></b>	--	13
<b>Oil and Grease</b>	<b>g/m<sup>3</sup></b>	--	4

Table 10: Analytical Results for Quarterly Metals and other Specified Compounds

## Condition 12

The results of monitoring undertaken in accordance with conditions 9a, 9b and 11 of this permit shall be forwarded to the Manager, Environmental Regulation, Wellington Regional Council on a quarterly basis, in accordance with condition 19 of this permit.

All monitoring performed at the Moa Point WWTP has been provided in the previous sections of this report under the designated resource consent conditions. A summary of the monitoring parameters, the resource consent condition the data is listed under, the monitoring frequency, the limits for each parameter, and compliance with the resource consent can be found under WGN080003 [31505] Condition 19.

## Condition 13

The permit holder shall notify the Manager, Environmental Regulation, Wellington Regional Council immediately in the event that a running geometric mean and/or ninetieth percentile effluent quality value or other value calculated following each wastewater quality sampling event exceeds the criteria stipulated in conditions 10 and 11 of this permit for more than three consecutive sampling events. Such a notification shall include the likely reason for exceedance, and measures to be undertaken by the permit holder to remedy the situation.

The permit holder shall also immediately notify the Medical Officer of Health of any such event.

There were no exceedances for the calculated values generated from the analytical results for the January - March 2023 reporting period.

## Condition 14

The discharge shall not result in any of the following effects beyond a 100-metre radius of the discharge point (described in condition 3 of this permit):

- a. The production of any conspicuous oil or grease films, scums or foams or floatable or suspended material;
- b. Any conspicuous change in colour or visual clarity;
- c. Any emission of objectionable odour; or
- d. Any significant adverse effects on aquatic life.

None of the effects listed in the condition above were reported for the January - March 2023 reporting period.

## Condition 18

The permit holder shall keep a record of any complaints that are received. The record shall contain the following details, where practicable:

- a. Name and address of the complainant;
- b. Identification of the nature of the complaint;
- c. Date and time of the complaint and of the alleged event;
- d. Weather conditions at the time of the complaint; and
- e. Any measures taken to address the cause of the complaint.

The permit holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of any complaints relating to the exercise of this permit within 24 hours of being received by the permit holder or the next working day.

No complaints were received regarding this resource consent for the January - March 2023 reporting period.

## Condition 19

A quarterly monitoring report for each three-month period ending 31 March, 30 June, 30 September and 31 December shall be provided to the Manager, Environmental Regulation, Wellington Regional Council within 30 days of the end of each three month period.

The quarterly report shall include, but not be limited to, the following:

- a. The results of all monitoring undertaken, as required by conditions 9a, 9b and 11 of this permit. These results shall be provided in an electronic format and a hard-copy format;
- b. An assessment of compliance with conditions 10, 11 and 14 of this permit; and
- c. Reasons for any non-compliance and subsequent actions undertaken to remedy any non-compliance.

All monitoring performed at the Moa Point WWTP has been provided in the previous sections of this report under the designated resource consent conditions. The following is a summary of the monitoring parameters, the resource consent condition the data is listed under, the monitoring frequency, the limits for each parameter, and compliance with the resource consent:

Monitoring Parameters	WGN080003 [31505] Condition	Monitoring Frequency	Limits	Compliance
Carbonaceous Biochemical Oxygen Demand	9a	Daily	--	Compliant
	10a		Geometric Mean < 20g/m <sup>3</sup> 90th Percentile < 45g/m <sup>3</sup>	Non-compliant
Suspended Solids	9a	Daily	--	Compliant
	10b		Geometric Mean < 30g/m <sup>3</sup> 90th Percentile < 68g/m <sup>3</sup>	Non-compliant
Faecal Coliforms	9b	Daily	--	Compliant
	10c		Geometric Mean < 200cfu/100mL 90th Percentile < 950cfu/100mL	Non-compliant
Total arsenic	11	Quarterly	0.26g/m <sup>3</sup>	Compliant
Total cadmium		Quarterly	0.08 g/m <sup>3</sup>	Compliant
Total chromium		Quarterly	0.48g/m <sup>3</sup>	Compliant
Total copper		Quarterly	0.14g/m <sup>3</sup>	Compliant
Total lead		Quarterly	0.48g/m <sup>3</sup>	Compliant
Total mercury		Quarterly	0.01g/m <sup>3</sup>	Compliant
Total nickel		Quarterly	0.77g/m <sup>3</sup>	Compliant
Total zinc		Quarterly	1.65g/m <sup>3</sup>	Compliant
Phenol		Quarterly	0.80g/m <sup>3</sup>	Compliant
Cyanide as CN		Quarterly	0.10g/m <sup>3</sup>	Compliant
pH		Quarterly	--	Compliant
Ammoniacal Nitrogen		Quarterly	--	Compliant
Oil and Grease		Quarterly	--	Compliant

**Table 11: Analytical Results for Quarterly Metals and other Specified Compounds**

## Condition 8

The permit holder shall monitor and record the flow rate, total volume and duration of any bypass discharge from the Moa Point Wastewater Treatment Plant to the long outfall, and calculate and record a dilution ratio (secondary treated: screened effluent) for each bypass event based on average rates of flow during that event. The results of this monitoring shall be forwarded to the Manager, Environmental Regulation, Wellington Regional Council, within 10 working days of the bypass discharge occurring.

Date	Date of Notification	Duration	Average Flow Rate	Total Volume Treated Effluent During Overflow	Total Volume of Bypass	Dilution Ratio	Consented	Cause	Monitoring Results
dd/mm/yyyy	dd/mm/yyyy	hrs/min	L/s	m <sup>3</sup>	m <sup>3</sup>	--	Y/N	--	--
8/01/2023	8/01/2023	1:07:00	2009.65	10748	80.84	133:1	N	Heavy rain	High flow rate into the WWTP due to wet weather. Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.
11/01/2023	11/01/2023	03:14:00	1555	1675	38	44:1	N	Heavy rain	High flow rate into the WWTP due to wet weather. Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.
5/02/2023	5/02/2023	00:45:00	486	2030	2030	1:1	N	Electrical failure on one of the UV lamp banks	Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.
14/02/2023	14/02/2023	56:24:00	1717	429454	20679	21:11	N	Heavy rain	High flow rate into the WWTP due to wet weather. Signs opened along the shoreline, notifications submitted, and sampling campaign initiated.

Table 12: Bypass Events

## Condition 10

During a bypass discharge (if during normal working hours) and on days one, two and three after the discharge, the permit holder shall take a grab sample of coastal water at each of the following locations, providing safe access is available:

- Dorrie Leslie Park at boat ramp;
- Hue Te Taka Peninsula;
- Tarakena Bay Beach at boat ramp;
- Tarakena Bay Beach, Western side;
- Hue te Taka Peninsula, Western side;
- Moa Point Road, opposite number 49;
- Lyall Bay Beach, Eastern side;
- Dorrie Leslie Park, South side of boat ramp;
- Dorrie Leslie Park, West of boat ramp;
- Peninsula at Queens Drive and The Esplanade;
- Houghton Bay, Western side;
- Marine Centre, Island Bay, Eastern side;
- Island Bay, Western side

Each sample shall be analysed for faecal coliforms and enterococci.

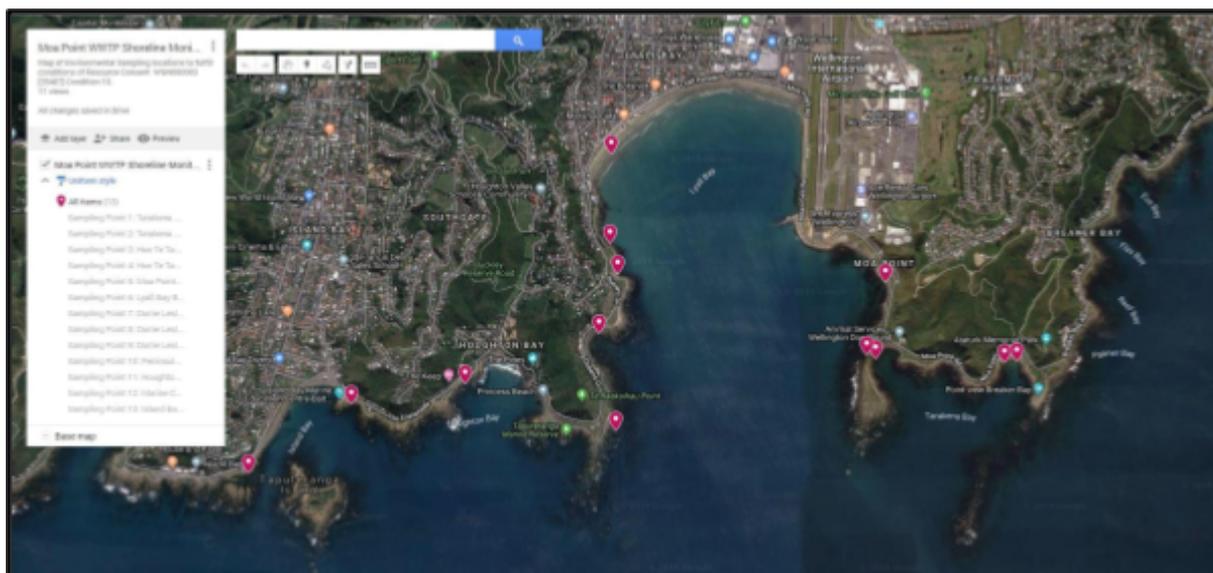
The permit holder shall identify and record the location of the sampling points (including map references) and supply this information to the Manager, Environmental Regulation, Wellington Regional Council, within three months of the commencement of this permit.

The details of the monitoring programme, as outlined in the Overflow Contingency Plan (required under condition 12 of this permit), shall be to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

*Note: These sample locations have been selected to act as audit sites to determine if the results obtained from the modelling undertaken in regards to public health risks from bypass discharges are substantiated by sample results.*

The resource consent WGN080003 [35047], Condition 10 was amended on 13 December 2017 to add another ten (10) shoreline monitoring sites. This additional shoreline monitoring sites are located near storm water discharges which may affect the monitoring results.

The following map displays the (13) sites for shoreline sampling:



**Figure 1: Moa Point WWTP Shoreline Monitoring Sites**

The following is a summary of the grab samples taken on days one, two, and three of the discharges during this reporting period.

### Dorrie Leslie Park

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	2100	5800
09-Jan-23 08:06:00	27	120
10-Jan-23 08:10:00	45	530
12-Jan-23 07:57:00	10	20
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:22:00	140	120
06-Feb-23 08:16:00	140	220
07-Feb-23 08:03:00	220	40
14-Feb-23 15:11:00	120	20
15-Feb-23 08:01:00	140	10
16-Feb-23 07:41:00	160	40
17-Feb-23 08:07:00	50	70
18-Feb-23 12:15:00	30	10
19-Feb-23 08:30:00	20	20

### Hue te Taka Peninsula

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	150	180
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	10	30
12-Jan-23 07:57:00	10	20
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 14:46:00	130	120
06-Feb-23 07:36:00	100	70
07-Feb-23 07:27:00	45	10
14-Feb-23 14:32:00	55	20
15-Feb-23 07:23:00	320	120
16-Feb-23 06:55:00	70	20
17-Feb-23 07:30:00	30	50
18-Feb-23 12:15:00	20	10
19-Feb-23 07:53:00	10	20

### Dorrie Leslie Park - West End

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	280	360
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	10	10
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:16:00	150	140
06-Feb-23 08:10:00	36	30
07-Feb-23 07:57:00	260	10
14-Feb-23 15:06:00	10	10
15-Feb-23 07:55:00	27	10
16-Feb-23 07:36:00	20	10
17-Feb-23 08:01:00	40	10
18-Feb-23 12:15:00	10	10
19-Feb-23 08:24:00	10	10

### Hue te Taka Peninsula - Western Side

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	150	180
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	10	30
12-Jan-23 07:57:00	10	20
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 14:51:00	100	50
06-Feb-23 07:42:00	73	80
07-Feb-23 07:33:00	10	10
14-Feb-23 14:38:00	10	10
15-Feb-23 07:30:00	120	10
16-Feb-23 07:03:00	50	60
17-Feb-23 07:36:00	20	50
18-Feb-23 12:15:00	10	10
19-Feb-23 08:00:00	20	10

### Dorrie Leslie Park - South End

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	310	700
09-Jan-23 08:06:00	10	240
10-Jan-23 08:10:00	10	10
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:30:00	100	120
06-Feb-23 08:25:00	55	70
07-Feb-23 08:10:00	64	10
14-Feb-23 15:16:00	140	40
15-Feb-23 08:07:00	500	120
16-Feb-23 07:50:00	280	110
17-Feb-23 08:13:00	160	50
18-Feb-23 12:15:00	10	10
19-Feb-23 08:36:00	20	10

### Tarakena Bay

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	530	520
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	10	10
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 14:35:00	73	60
06-Feb-23 07:25:00	36	40
07-Feb-23 07:15:00	45	30
14-Feb-23 14:26:00	130	60
15-Feb-23 07:16:00	330	110
16-Feb-23 06:47:00	10	20
17-Feb-23 07:22:00	60	60
18-Feb-23 12:15:00	10	10
19-Feb-23 07:46:00	20	10

### Tarakena Bay - North End

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	390	110
09-Jan-23 08:06:00	10	90
10-Jan-23 08:10:00	10	10
12-Jan-23 07:57:00	10	20
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 14:40:00	150	100
06-Feb-23 07:31:00	160	100
07-Feb-23 07:21:00	36	30
14-Feb-23 14:20:00	150	20
15-Feb-23 07:10:00	1800	1200
16-Feb-23 06:40:00	50	70
17-Feb-23 07:15:00	90	40
18-Feb-23 12:15:00	20	30
19-Feb-23 07:40:00	10	10

### Waitaha Cove Southern End

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	360	460
09-Jan-23 08:06:00	18	100
10-Jan-23 08:10:00	10	170
12-Jan-23 07:57:00	200	200
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:10:00	82	80
06-Feb-23 08:02:00	150	90
07-Feb-23 07:56:00	120	10
14-Feb-23 15:00:00	73	20
15-Feb-23 07:49:00	2400	1800
16-Feb-23 07:30:00	20	10
17-Feb-23 07:55:00	10	40
18-Feb-23 12:15:00	10	10
19-Feb-23 08:18:00	20	30

### 49 Moa Road

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	240	330
09-Jan-23 08:06:00	18	20
10-Jan-23 08:10:00	10	10
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 14:57:00	64	80
06-Feb-23 07:50:00	110	60
07-Feb-23 07:38:00	10	6000
14-Feb-23 14:46:00	10	10
15-Feb-23 07:36:00	500	150
16-Feb-23 07:13:00	50	10
17-Feb-23 07:41:00	190	80
18-Feb-23 12:15:00	20	10
19-Feb-23 08:06:00	10	10

### Houghton Bay - Western Side

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	220	190
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	18	50
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:41:00	55	30
06-Feb-23 08:35:00	160	140
07-Feb-23 08:18:00	10	10
14-Feb-23 15:21:00	36	20
15-Feb-23 08:16:00	1300	1700
16-Feb-23 08:03:00	190	120
17-Feb-23 08:22:00	230	80
18-Feb-23 12:15:00	10	20
19-Feb-23 08:44:00	10	10

### Eastern End of Lyall Bay

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	300	440
09-Jan-23 08:06:00	36	90
10-Jan-23 08:10:00	10	480
12-Jan-23 07:57:00	18	10
13-Jan-23 08:01:00	10	10
14-Jan-23 02:00:00	10	10
05-Feb-23 15:03:00	55	120
06-Feb-23 07:50:00	73	130
07-Feb-23 07:43:00	160	10
14-Feb-23 14:51:00	150	10
15-Feb-23 07:41:00	110	10
16-Feb-23 07:22:00	210	50
17-Feb-23 07:47:00	420	350
18-Feb-23 12:15:00	10	10
19-Feb-23 08:11:00	10	60

### Island Bay - Marine Centre

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	550	300
09-Jan-23 08:06:00	18	10
10-Jan-23 08:10:00	36	70
12-Jan-23 07:57:00	280	300
13-Jan-23 08:01:00	1800	4000
14-Jan-23 02:00:00	10	10
05-Feb-23 15:47:00	64	120
06-Feb-23 08:41:00	45	260
07-Feb-23 08:24:00	170	6000
14-Feb-23 15:37:00	2700	1200
15-Feb-23 08:22:00	1900	1600
16-Feb-23 08:10:00	1700	1000
17-Feb-23 08:27:00	70	10
18-Feb-23 12:15:00	10	10
19-Feb-23 08:51:00	20	40

## Island Bay - Western End

Date	Enterococci	Faecal Coliforms
dd/mm/yyyy	cfu/100mL	cfu/100mL
08-Jan-23 08:01:00	220	160
09-Jan-23 08:06:00	10	10
10-Jan-23 08:10:00	18	160
12-Jan-23 07:57:00	10	10
13-Jan-23 08:01:00	1500	6000
14-Jan-23 02:00:00	630	2800
05-Feb-23 15:53:00	150	60
06-Feb-23 08:46:00	110	110
07-Feb-23 08:30:00	100	30
14-Feb-23 15:30:00	2000	1200
15-Feb-23 08:28:00	3700	1600
16-Feb-23 08:16:00	1500	500
17-Feb-23 08:32:00	310	450
18-Feb-23 12:15:00	30	10
19-Feb-23 08:57:00	20	10

## Condition 16

The permit holder shall provide suitable wastewater sampling locations for monitoring the quality of:

- a. the bypass flows; and
- b. secondary treated wastewater (i.e. both wastewater streams prior to mixing) during bypass discharges.

The permit holder shall obtain grab samples of both wastewater streams within the first two hours of a bypass discharge occurring during normal working hours or as soon as practicable for those events occurring outside normal working hours. These samples shall be analysed for:

- cBOD5
- suspended solids
- faecal coliform
- pH
- ammoniacal nitrogen
- oil and grease

and on at least one bypass event each year these samples shall also be analysed for the following indicator contaminants:

- Total cadmium
- Total chromium
- Total copper
- Total lead
- Total nickel
- Total zinc

The wastewater quality results, together with the results of wastewater flow monitoring shall be used to calculate, by mass balance, the quality of the wastewater discharge after both wastewater streams have mixed. The mass balance calculation for a contaminant (a) is:

$$C_{\text{mixed}(a)} = (C_{\text{tr}(a)} * Q_{\text{tr}} + C_{\text{by}(a)} * Q_{\text{by}}) / Q_{\text{mixed}}$$

Where:

C is contaminant concentration

Q is the flow rate (litres/sec)

*tr* subscript relates to parameter of the secondary treated wastewater stream

*by* subscript relates to parameter of the bypassed wastewater stream

*mixed* subscript relates to parameter of the mixed secondary treated and bypassed wastewater streams

The calculated mixed wastewater discharge quality results shall be reported to the Manager, Environmental Regulation, Wellington Regional Council, within 10 working days of the overflow event occurring.

The following is a summary of the discharge dilution calculation for all the discharges that were listed under WGN080003 [35047], Condition 8.

### Screened Wastewater Sample

Date	cBOD <sub>5</sub>	Suspended Solids	Fecal Coliform	pH	Ammoniacal Nitrogen	Oil and Grease
dd/mm/yy	g/m <sup>3</sup>	g/m <sup>3</sup>	cfu/100mL	--	g/m <sup>3</sup>	g/m <sup>3</sup>
8/01/2023	35	81	60000	7.7	6.65	5
11/01/2023	39	75	6000000	7.6	12.7	6
14/02/2023	332	332	3000000	6.4	12.1	55

Date	Total Cadmium	Total Chromium	Total Copper	Total Lead	Total Nickel	Total Zinc
dd/mm/yy	g/m <sup>3</sup>					
8/01/2023	0.001	0.003	0.025	0.004	0.001	0.066
11/01/2023	0.001	0.001	0.019	0.002	0.001	0.04
14/02/2023	0.001	0.004	0.078	0.009	0.006	0.21

Table 14: Screened Wastewater Sample

### Effluent Sample

Date	cBOD <sub>5</sub>	Suspended Solids	Fecal Coliform	pH	Ammoniacal Nitrogen	Oil and Grease
dd/mm/yy	g/m <sup>3</sup>	g/m <sup>3</sup>	cfu/100mL	--	g/m <sup>3</sup>	g/m <sup>3</sup>
8/01/2023	4	6	400	7	2.17	5
11/01/2023	3	9	10	7	5.48	5
14/02/2023	22	35	1000	6.4	14.9	5

Date	Total Cadmium	Total Chromium	Total Copper	Total Lead	Total Nickel	Total Zinc
dd/mm/yy	g/m <sup>3</sup>					
8/01/2023	0.001	0.001	0.005	0.001	0.001	0.03
11/01/2023	0.001	0.001	0.005	0.001	0.002	0.04
14/02/2023	0.001	0.002	0.018	0.002	0.002	0.043

Table 15: Effluent Sample

### Calculated Mixed Effluent Results

Date	cBOD <sub>5</sub>	Suspended Solids	Fecal Coliform	pH	Ammoniacal Nitrogen	Oil and Grease
dd/mm/yy	g/m <sup>3</sup>	g/m <sup>3</sup>	cfu/100mL	--	g/m <sup>3</sup>	g/m <sup>3</sup>
8/01/2023	4.23	6.56	844.95	7	2	5
11/01/2023	3.80	10.46	133109.60	7	6	5
14/02/2023	36.242	48.644	138776.338	6.400	14.771	7.297

Date	Total Cadmium	Total Chromium	Total Copper	Total Lead	Total Nickel	Total Zinc
dd/mm/yy	g/m <sup>3</sup>					
8/01/2023	0.0010	0.001	0.005	0.0010	0.001	0.030
11/01/2023	0.0010	0.001	0.005	0.0010	0.002	0.040
14/02/2023	0.001	0.002	0.021	0.002	0.002	0.051

**Table 16: Calculated Mixed Effluent Results**

## Condition 18

The permit holder shall keep a record of any complaints that are received. The record shall contain the following details, where practicable:

- a. Name and address of the complainant;
- b. Identification of the nature of the complaint;
- c. Date and time of the complaint and of the alleged event;
- d. Weather conditions at the time of the complaint; and
- e. Any measures taken to address the cause of the complaint.

The permit holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of any complaints relating to the exercise of this permit, within 24 hours of being received by the permit holder or the next working day. The permit holder shall forward to the Manager, Environmental Regulation, Wellington Regional Council a copy of any complaints recorded annually.

No complaints were received regarding this resource consent for the January - March 2023 reporting period.

## WGN080003 [26182]

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## Condition 3

The permit holder shall undertake an annual physical assessment of the condition of the outfall pipeline. This assessment shall include, but not be limited to, the following:

- a. An assessment of the structural condition of the pipeline;
- b. An inspection of the diffuser ports;
- c. An assessment of the erosion or scour around exposed sections of the pipeline; and
- d. Recommend any maintenance that is required.

The results of the assessment shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council no later than three months after the assessment has been undertaken.

The outfall pipeline was inspected in March 2023 and the subsequent report was submitted to WWL for review. There was a recommendation regarding Cathodic protection of the pipeline. Next inspection will be performed next calendar year.

## WGN080003 [26183]

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## Condition 7

The permit holder shall monitor air quality in the vicinity of the plant to confirm the absence of faecal coliforms and salmonella originating from the plant. Sampling is to be carried out at least once every six months.

The sampling method and locations are to be agreed with the Manager, Environmental Regulation, Wellington Regional Council within three months of the granting of this permit. Tests are to be carried out at a minimum of three sites downwind and three sites upwind of the plant, with at least one in the vicinity of Air New Zealand kitchens and one at a level of Kekerenga Street. The other sites are to be located outside of/and within 100 metres of the site boundary. The results shall be provided annually in the annual report required under condition 14 of this permit, or on request. Should the presence of faecal coliforms or salmonella be measured at any time, the Wellington Regional Council may direct that the applicant sample at least once every month for six months before returning to the six monthly sampling regime.

The air quality monitoring was performed in February 2023. The report can be found in Appendix ii: Ambient Microbe Monitoring.

## Condition 8

**Hydrogen sulphide (H<sub>2</sub>S)** and other reduced sulphur compounds shall be monitored in the deodorised gas discharge. Monitoring shall be undertaken in the stack leading from the chemical scrubber system on a monthly basis.

The results shall be provided annually in the annual report required under condition 14 of this permit, or on request.

The hydrogen sulphide (H<sub>2</sub>S) concentration in the deodorised gas discharged from the Moa Point WWTP scrubber system is continuously monitored by an online analyser. To meet the requirements of this consent condition, the daily maximum value is recorded for each day. The maximum of these values is reported as the monthly maximum H<sub>2</sub>S concentration. For all the maximum values please see Appendix iii: H<sub>2</sub>S and TRS Concentrations.

The total reduced sulphur compounds (TRS) concentration are measured once a month by an independent contractor. The reports can be found in Appendix iii: H<sub>2</sub>S and TRS Concentrations.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	ppm	ppm
January 2023	0.001	0.002
February 2023	0.001	0.002
March 2023	0.006	0.017
<b>Limit</b>	<b>0.01</b>	<b>0.05</b>

Table 16: H<sub>2</sub>S and TRS Concentrations

## Condition 9

The discharge to air from the chemical scrubber system shall contain no more than **0.01ppm hydrogen sulphide (H<sub>2</sub>S)** and no more than **0.05ppm total reduced sulphur** compounds (including H<sub>2</sub>S).

The limits have been included in the table listed under WGN080003 [26183] Condition 8 and Appendix iii: H<sub>2</sub>S and TRS Concentrations.

## Condition 10

The permit holder shall undertake **smoke testing** of the Moa Point wastewater treatment plant and ventilation system. The smoke tests are to be carried out on an **annual** basis between the months of August and November.

The results of the smoke test shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council within one month of the testing being carried out by the permit holder. A copy of the analysed results shall also be provided to Community Liaison Group, if requested.

The smoke testing of the Moa Point WWTP was conducted in November 2022 and a report was submitted to WWL. The report can be found in Appendix iv: Smoke Test of Moa Point WWTP.

## Condition 13

The permit holder shall keep a permanent record of any complaints received alleging adverse effects from the permit holder's operations. The complaints record shall contain the following where practicable:

- a. The name and address of the complainant, if supplied;
- b. Identification of the nature of the complaint;
- c. Date and time of the complaint and alleged event;
- d. Weather conditions at the time of the alleged event;
- e. Results of the permit holder's investigations; and
- f. Any mitigation measures adopted.

The permit holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of any complaints relating to the exercise of this permit, within twenty-four hours of being received by the permit holder or the next working day.

The permit holder shall forward to the Manager, Environmental Regulation, Wellington Regional Council a copy of any complaints recorded in the annual report required by condition 14 of this permit.

Date	Complaints	Details	Actions Taken
10/02/2023	Odour complaint	Strong odour from Moa Point Wastewater Plant	Due to the fire at the Moa Point WwTP on 1 Feb, the lids above the Blower gallery were opened for ventilation and, unfortunately, one of the lids was dropped and damaged. Currently, there's a plastic cover while a new lid is delivered.
10/02/2023	Odour complaint	Caller reports noxious smell coming from moa Pint Treatment Plant. Has been going on for 3 days but particularly worse today (Friday)	
11/02/2023	Odour complaint	Caller has phoned wanting to find out if there are any issues with the wastewater treatment plant as there is a very bad odor at their property and this has been an issue in the past. They are not able to open their windows at the moment as the smell is very bad. Please investigate and contact the customer.	
22/03/2023	Odour complaint	There are really strong odours coming from the Moa Point Wasterwater plant again. I complained on the 10/2/23 [ #SR-587052]. My complaint was forwarded to Wellington Water who provided no response. It was then forwarded to GWRC. Apart from being appointed a case officer on the 12/2/23 no other response has been provided. The odour has been bad on several days since then but it is particularly strong today (22/2/23).	Veolia performed an odour assesment by Stewart Duff dr, around the Miramar Golf club, No odour was detected. Then drove by Bunker way in Strathmore Park and could not detect any odour. Checking on SCADA, it was noticed that the H2S levels at the INLET of the Scrubber at the WwTP were particularly high on the dates when the complaints were raised (10 Feb and 22 Feb). The inlet H2S is contained within the building, however, due to the fire at the WwTP on 1 Feb, the lids above the Blower gallery were opened for ventilation and, unfortunately, one of the lids was dropped and damaged. Currently, there's a plastic cover while a new lid is delivered, however, the H2S contained within the building could presumably leak out of the building when the H2S levels were high.
23/02/2023	Odour complaint	Stench coming from the Moa Point WWTP.	Due to the fire at the WwTP on 1 Feb, the lids above the Blower gallery were opened for ventilation and, unfortunately, one of the lids was dropped and damaged. Currently, there's a plastic cover while a new lid is delivered
27/03/2023	Odour complaint	This afternoon the sewage plant in Moa Point is giving a bad smell that can be smelt outside my door.	

## Condition 11

The following monitoring shall be carried out and the results shall be forwarded to the Wellington Regional Council:

- a. The pumping station stack shall be tested for hydrogen sulphide and total reduced sulphur compounds. The concentrations shall not exceed 0.01ppm and 0.05ppm respectively. This testing shall be carried out monthly for the first six months of operation of the pumping station. The Regional Council shall then review the frequency. The method of testing shall be agreed to with the Wellington Regional Council.
- b. Records of the pH and the Oxidation Reduction potential of the scrubber solutions shall be kept by the consent holder and made available to the Wellington Regional Council. The form of these records shall be agreed to with the Wellington Regional Council prior to commissioning of the pumping station.

### a) H<sub>2</sub>S and TRS

The H<sub>2</sub>S concentration in the deodorised air discharged from the Moa Point IPS scrubber system is continuously monitored by an online analyser. To meet the requirements of this consent condition, the daily maximum value is recorded for each day. The maximum of these values is reported as the monthly maximum H<sub>2</sub>S concentration. For all the maximum values please see Appendix iii: H<sub>2</sub>S and TRS Concentrations.

The total reduced sulphur compounds (TRS) concentration are measured once a month by an independent contractor. The reports can be found in H<sub>2</sub>S and TRS Concentrations.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	ppm	ppm
January 2023	0.001	0.002
February 2023	0.003	0.002
March 2023	0.003	0.002
<b>Limit</b>	<b>0.01</b>	<b>0.05</b>

Table 17: H<sub>2</sub>S and TRS Concentrations

### b) pH and Oxidation Reduction Potential

This information has not been requested by GWRC.

## Condition 13

The consent holder shall keep a record of any complaints they receive. The complaints shall be forwarded to the Wellington Regional Council within twenty-four hours of being received by the consent holder.

There have been no complaints received regarding this resource consent during the period of January - March 2023.

## **Appendix i: Heavy Metals Analysis**

**Food & Water Testing**  
**ANALYTICAL REPORT**

<b>REPORT CODE</b>	<b>AR-23-NW-004882-01</b>	<b>REPORT DATE</b>	<b>07/02/2023</b>
<b>Attention</b>	Veolia Water - Wellington Julian Villada Wastewater Treatment Plant P.O. Box 14744 WELLINGTON 6041 Wellington NEW ZEALAND		
<b>Phone</b>	(04) 388 0067	<b>Copy to:</b> Shibu (ann.shibu@veolia.com), Robins (nico.robins@veolia.com), Vachova (petra.vachova@veolia.com), Lawlor (rik.lawlor@veolia.com),	
<b>Email</b>	julian.villada@veolia.com		
<b>Contact for your orders:</b>	Deb Bottrill	<b>Order code:</b>	EUNZWE-00105537
<b>Contract:</b>	Moa Point	<b>Purchase Order Number:</b>	7300221237
<b>Submission Reference:</b>	Moa Effluent Grab Quarterly		
<b>SAMPLE CODE</b>	<b>812-2023-00011011</b>		
<b>Sampling Point code:</b>	MOA_EFF_G_1Q	<b>Sampling Point name:</b>	Moa Effluent Grab 1Quarterly
<b>Reception Date &amp; Time:</b>	27/01/2023 11:00	<b>Analysis Ending Date:</b>	07/02/2023
<b>Analysis Start Date &amp; Time:</b>	27/01/2023 12:03	<b>Sampler(s)</b>	Customer
<b>Sampled Date &amp; Time</b>	27/01/2023 08:40		
RESULTS		LOQ	
<b>NW179 Ammonia Nitrogen</b>			
Ammoniacal nitrogen (N)	9.19	mg/l	0.01
<b>NW00U Chlorophenols</b>			
2,3,4,6-Tetrachlorophenol	<0.01	mg/l	0.01
2,4-Dichlorophenol	<0.01	mg/l	0.01
2,6-Dichlorophenol	<0.02	mg/l	0.2
2-Chlorophenol (o-chlorophenol)	<0.01	mg/l	0.01
3,4,5-Trichlorophenol	<0.01	mg/l	0.01
4-Chloro-3-cresol	<0.01	mg/l	0.01
Pentachlorophenol	<0.005	mg/l	0.005
Phenol	<0.01	mg/l	0.01
Total of 2,4,5 & 2,4,6-Trichlorophenol	<0.02	mg/l	0.02
<b>NW679 Cyanide</b>			
Cyanide	0.043	mg/l	0.005
<b>NW192 Oil &amp; Grease</b>			
Total Oil and Grease	<4	mg/l	4
<b>NW195 pH</b>			
pH	7.0		0.1
<b>NW149 Total Arsenic</b>			
Arsenic (As)	<0.002	mg/l	0.002
<b>NW154 Total Cadmium</b>			
Cadmium (Cd)	<0.001	mg/l	0.001
<b>NW157 Total Chromium</b>			
Chromium (Cr)	<0.001	mg/l	0.001
<b>NW159 Total Copper</b>			
Copper (Cu)	0.004	mg/l	0.002

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**Food & Water Testing**

	RESULTS		LOQ
<b>NW161 Total Lead</b>			
Lead (Pb)	<0.001	mg/l	0.001
<b>NW165 Total Mercury</b>			
Mercury (Hg)	<0.001	mg/l	0.001
<b>NW167 Total Nickel</b>			
Nickel (Ni)	0.001	mg/l	0.001
<b>NW177 Total Zinc</b>			
Zinc (Zn)	0.029	mg/l	0.005

LIST OF METHODS	
NW00U <b>Chlorophenols:</b> LLE followed by LC-MS/MS	NW149 <b>Total Arsenic:</b> APHA Online Edition 3125 B mod.
NW154 <b>Total Cadmium:</b> APHA Online Edition 3125 B mod.	NW157 <b>Total Chromium:</b> APHA Online Edition 3125 B mod.
NW159 <b>Total Copper:</b> APHA Online Edition 3125 B mod.	NW161 <b>Total Lead:</b> APHA Online Edition 3125 B mod.
NW165 <b>Total Mercury:</b> APHA Online Edition 3125 B mod.	NW167 <b>Total Nickel:</b> APHA Online Edition 3125 B mod.
NW177 <b>Total Zinc:</b> APHA Online Edition 3125 B mod.	NW179 <b>Ammonia Nitrogen:</b> APHA Online Edition 4500-NH3 H
NW192 <b>Oil &amp; Grease:</b> APHA Online Edition 5520 B mod.	NW195 <b>pH:</b> APHA Online Edition 4500-H B
NW679 <b>Cyanide:</b> APHA Online Edition 4500-CN C & E	

## Signature



Jennifer Mont Supervisor



Amitesh Kumar Supervisor



Divina Cunanan Lagazon Supervisor



Gordon McArthur Senior Laboratory Analyst



Ganesh Ilancko Supervisor



Ivan Imamura Laboratory Analyst

**EXPLANATORY NOTE**

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
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- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited

N/A means Not applicable

**Not Detected** means not detected at or above the Limit of Quantification (LOQ)  
**LOQ** means Limit of Quantification and the unit of LOQ is the same as the result unit

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**END OF REPORT**

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**Appendix iii: H<sub>2</sub>S and TRS  
Concentrations**

## Daily Maximum H<sub>2</sub>S Concentrations from the Moa Point IPS and WWTP

Day	January 2023		February 2023		March 2023	
	IPS	WWTP	IPS	WWTP	IPS	WWTP
	ppm		ppm		ppm	
1	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
2	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
3	0.0001	0.0002	0.0000	0.0002	0.0000	0.0002
4	0.0001	0.0002	0.0000	0.0001	0.0000	0.0002
5	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
6	0.0022	0.0002	0.0000	0.0001	0.0000	0.0002
7	0.0011	0.0002	0.0000	0.0001	0.0000	0.0002
8	0.0000	0.0001	0.0000	0.0001	0.0000	0.0001
9	0.0000	0.0002	0.0000	0.0002	0.0000	0.0001
10	0.0000	0.0002	0.0000	0.0002	0.0000	0.0001
11	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
12	0.0000	0.0001	0.0000	0.0001	0.0000	0.0001
13	0.0000	0.0002	0.0000	0.0002	0.0000	0.0002
14	0.0000	0.0002	0.0000	0.0001	0.0000	0.0002
15	0.0000	0.0002	0.0000	0.0002	0.0000	0.0001
16	0.0000	0.0002	0.0000	0.0001	0.0000	0.0002
17	0.0900	0.0002	0.0000	0.0002	0.0000	0.0001
18	0.0000	0.0001	0.0000	0.0002	0.0000	0.0002
19	0.0000	0.0001	0.0000	0.0001	0.0000	0.0002
20	0.0000	0.0002	0.0000	0.0001	0.0000	0.0002
21	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
22	0.0000	0.0001	0.0000	0.0001	0.0000	0.0001
23	0.0000	0.0002	0.0000	0.0002	0.0000	0.0002
24	0.0000	0.0002	0.0000	0.0001	0.0000	0.0001
25	0.0000	0.0001	0.0000	0.0002	0.0000	0.0002
26	0.0000	0.0002	0.0000	0.0001	0.0000	0.0002
27	0.0000	0.0002	0.0000	0.0002	0.0000	0.0002
28	0.0000	0.0001	0.0000	0.0002	0.0000	0.0001
29	0.0000	0.0001	-	-	0.0000	0.0001
30	0.0000	0.0001	-	-	0.0000	0.0002
31	0.0000	0.0002	-	-	0.0000	0.0002
Limit	0.01					

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All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

12 January 2023

ST1095 Volia TRS Results January 2023

**Veolia, Moa Point Wastewater Treatment Plant Total Reduced Sulphide Monitoring, January 2023**

**Total Reduced Sulphur Compounds as H<sub>2</sub>S**

Sampling Run	Sampling Date	Sampling Period	Volume Sampled (m <sup>3</sup> ) <sup>a</sup>	Mass TRS as H <sub>2</sub> S (mg)	Conc. TRS as H <sub>2</sub> S (mg/m <sup>3</sup> ) <sup>a</sup>	Conc. TRS as H <sub>2</sub> S (ppbv) <sup>b</sup>	Limit (ppbv) <sup>b</sup>
Main Scrubber	5/01/2023	11:50 - 14:50	0.297	<0.001	<0.003	<2	<50
Pump Station	5/01/2023	8:23 - 11:23	0.309	<0.001	<0.003	<2	<50

- a. Corrected to 0° C, one atmosphere pressure, dry gas basis  
 b. Parts per million by volume

**Sampling Methodology**

Contaminant	STNZ Standard Test Methods	Detection Limit
Total Reduce Sulphur Compounds	USEPA Method 16A Determination of Total Reduced Sulphur Compounds from Stationary Sources (Impinger Technique)	0.001 mg/sample

**Analyst's Comments**

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Key Technical Person



**Matthew Newby, CAQP**

Senior Air Quality Scientist

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20 February 2023

ST1100 Volia TRS Results February 2023

**Veolia, Moa Point Wastewater Treatment Plant Total Reduced Sulphide Monitoring, February 2023**

**Total Reduced Sulphur Compounds as H<sub>2</sub>S**

Sampling Run	Sampling Date	Sampling Period	Volume Sampled (m <sup>3</sup> ) <sup>a</sup>	Mass TRS as H <sub>2</sub> S (mg)	Conc. TRS as H <sub>2</sub> S (mg/m <sup>3</sup> ) <sup>a</sup>	Conc. TRS as H <sub>2</sub> S (ppbv) <sup>b</sup>	Limit (ppbv) <sup>b</sup>
Main Scrubber	17/02/2023	11:55 - 14:55	0.279	<0.001	<0.004	<2	<50
Pump Station	17/02/2023	8:35 - 11:35	0.298	0.001	0.003	2	<50

- a. Corrected to 0° C, one atmosphere pressure, dry gas basis  
 b. Parts per million by volume

**Sampling Methodology**

Contaminant	STNZ Standard Test Methods	Detection Limit
Total Reduce Sulphur Compounds	USEPA Method 16A Determination of Total Reduced Sulphur Compounds from Stationary Sources (Impinger Technique)	0.001 mg/sample

**Analyst's Comments**

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29 March 2023

ST1114 Volia TRS Results March 2023

**Veolia, Moa Point Wastewater Treatment Plant Total Reduced Sulphide Monitoring, March 2023**

**Total Reduced Sulphur Compounds as H<sub>2</sub>S**

Sampling Run	Sampling Date	Sampling Period	Volume Sampled (m <sup>3</sup> ) <sup>a</sup>	Mass TRS as H <sub>2</sub> S (mg)	Conc. TRS as H <sub>2</sub> S (mg/m <sup>3</sup> ) <sup>a</sup>	Conc. TRS as H <sub>2</sub> S (ppbv) <sup>b</sup>	Limit (ppbv) <sup>b</sup>
Main Scrubber	28/03/2023	11:45 - 14:10	0.235	0.006	0.026	17	<50
Pump Station	28/03/2023	8:05 - 11:05	0.335	<0.001	<0.003	<2	<50

- a. Corrected to 0° C, one atmosphere pressure, dry gas basis  
 b. Parts per million by volume

**Sampling Methodology**

Contaminant	STNZ Standard Test Methods	Detection Limit
Total Reduce Sulphur Compounds	USEPA Method 16A Determination of Total Reduced Sulphur Compounds from Stationary Sources (Impinger Technique)	0.001 mg/sample

**Analyst's Comments**

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