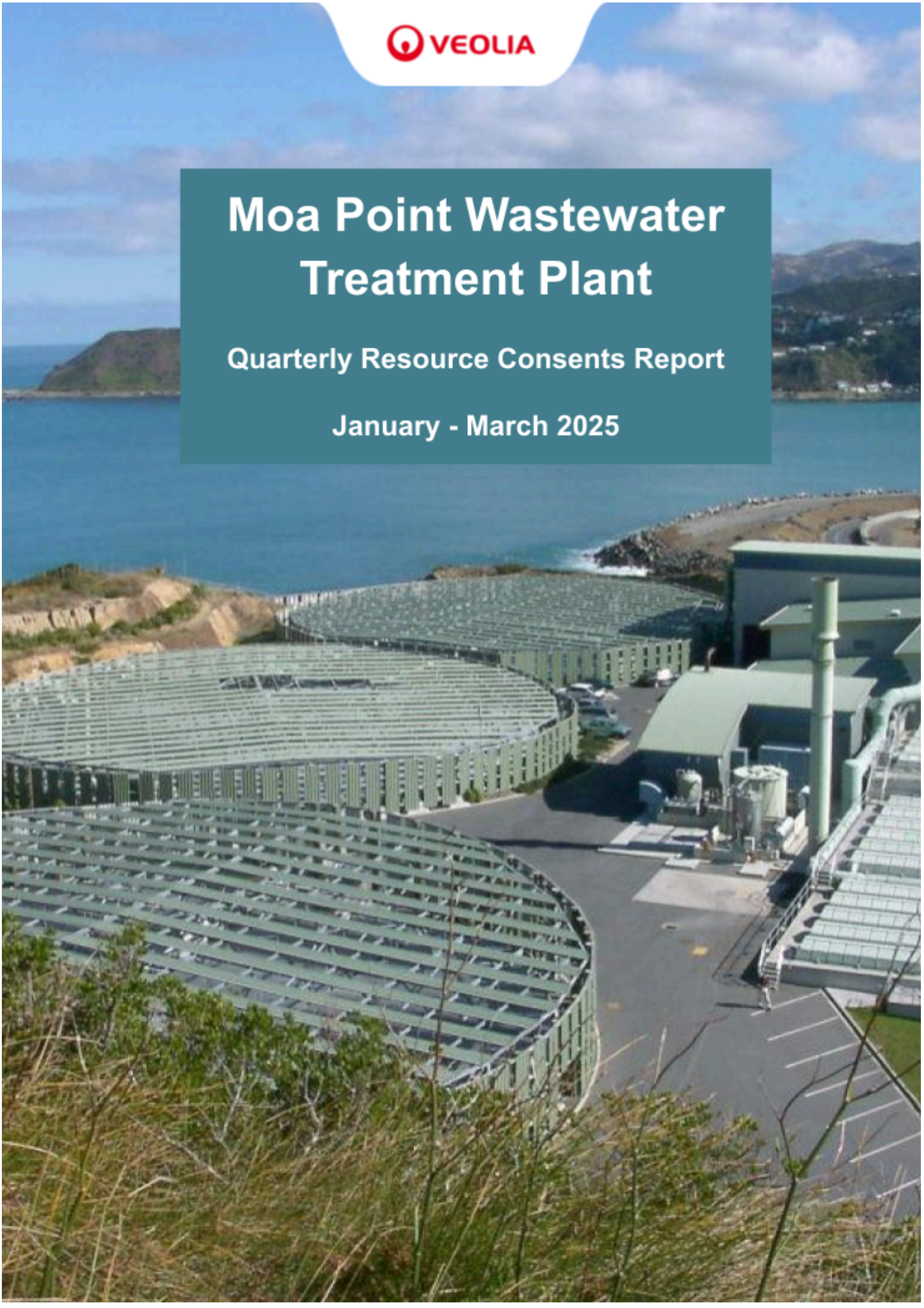

Moa Point Wastewater Treatment Plant

Quarterly Resource Consents Report

January - March 2025

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Document Title:	Moa Point Wastewater Treatment Plant Quarterly Resource Consents Report - January - March 2025
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Document Control Register

Version	Status	Date	Details of Revision
0.1	Draft	24 April 2025	Original version for review.
0.2	Review	24 April 2025	Internal review.
0.3	Revise	01 May 2025	Post review edits
1.0	Final	01 May 2025	Final and Publish

Executive Summary

The following report was prepared by Veolia on behalf of the Wellington City Council (WCC) and Wellington Water 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:

Discharge to the Coastal Marine Area - 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 following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition		Compliant / Non-Compliant / Not Applicable
Monitoring flow rates and volume - Condition 6		Compliant
Daily Composite - TSS and BOD - Condition 9a		Compliant
Daily Grab - Faecal Coliform - Condition 9b		Compliant
Effluent Quality Criteria - Condition 10	5-Day Carbonaceous Biochemical Oxygen Demand - Condition 10a	Compliant
	Suspended Solids - Condition 10b	Non-Compliant
	Faecal Coliforms - Condition 10c	Non-Compliant
Analysis for metals and other - Condition 11		Compliant
Monitoring Results' Reporting - Condition 12		Compliant
Notification of Non Compliant Effluent - Condition 13		Compliant
Noticeable Effects Beyond the Discharge Point - Condition 14		Compliant
Complaints - Condition 18		Compliant
Quarterly Reporting - Condition 19		Compliant

Table 1 WGN080003 [31505] Resource Consent Condition Compliance

Occasional Weather Induced Discharges - WGN080003 [35047]

Discharges from the Moa Point WWTP are governed by 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.

Note that weather-induced discharges during the period were outside the conditions as the WWTP was operating at reduced full treatment capacity due to the Clarifier refurbishment works.

The following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant / Non-Compliant / Not Applicable
Reporting Bypass Discharges - Condition 8	Compliant
Shoreline Monitoring Sites - Condition 10	Compliant
Monitoring of Bypass Discharges - Condition 16	Compliant
Complaints - Condition 18	Compliant

Table 2 WGN080003 [35047] Resource Consent Condition Compliance

Occupying foreshore and seabed with outfall pipeline - 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.

Resource Consent Condition	Compliant / Non-Compliant / Not Applicable
Annual Outfall Inspection and Assessment - Condition 3	Compliant

Table 3: WGN080003 [26182] Resource Consent Condition Compliance

Discharge to Air - 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 following is a brief overview of the compliance with the consent conditions:

Resource Consent Condition	Compliant / Non-Compliant / Not Applicable
Monitoring - Condition 7	Compliant
Monitoring of Hydrogen Sulphide (H_2S) - Condition 8	Non compliant
H2S and TRS Concentrations Limits - Condition 9	Non compliant
Smoke Testing - Condition 10	Complaint
Complaints - Condition 13	Compliant

Table 4: WGN080003 [26183] Resource Consent Condition Compliance

Discharge to Air - Moa Point Inlet Pumping Station - 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 2024 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
Monitoring of Hydrogen Sulphide (H_2S) - Condition 11	Compliant
Complaints - Condition 13	Compliant

Table 5: WGN960094 [1471] Resource Consent Condition Compliance

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WGN080003 [31505] - Discharge to the Coastal Marine Area

Condition 6 - Monitoring flow rates and volume

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.

Condition met - 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.

Day	January 2025			February 2025			March 2025		
	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume
	L/s	L/s	m^3	L/s	L/s	m^3	L/s	L/s	m^3
1	1,293	2,225	111,697	629	1,067	54,340	600	1,158	51,874
2	727	1,405	62,803	625	1,252	54,013	608	1,127	52,557
3	1,161	2,608	100,325	638	1,072	55,087	651	1,351	56,259
4	750	1,460	64,817	587	901	50,675	768	1,248	66,333
5	669	1,520	57,833	594	934	51,352	687	1,167	59,399
6	678	1,140	58,606	584	1,053	50,432	639	1,093	55,224
7	683	1,136	59,002	603	968	52,086	627	1,111	54,160
8	681	1,198	58,809	600	944	51,822	616	1,076	53,247
9	656	1,078	56,670	596	917	51,492	627	1,066	54,142
10	651	1,075	56,295	604	928	52,170	613	1,051	52,967
11	630	1,115	54,419	609	935	52,624	624	1,017	53,897
12	633	1,191	54,688	614	1,103	53,068	623	1,183	53,829
13	659	1,057	56,975	606	937	52,348	599	1,080	51,734
14	663	1,088	57,319	603	1,229	52,094	583	1,098	50,359
15	657	1,074	56,776	583	1,154	50,391	594	1,089	51,294
16	635	1,083	54,839	600	939	51,837	584	1,048	50,436
17	618	1,120	53,357	626	1,110	54,109	600	1,097	51,805
18	585	1,074	50,512	735	1,550	63,464	708	1,246	61,147
19	560	1,041	48,402	821	1,170	67,911	1,014	2,583	87,604
20	587	870	50,735	593	888	55,466	684	1,240	59,083
21	652	1,007	56,310	722	1,652	62,414	609	1,145	52,590
22	642	1,040	55,510	612	1,162	52,874	607	1,122	52,418
23	652	951	56,362	604	1,111	52,201	613	1,159	52,958
24	596	898	51,471	610	1,105	52,713	645	1,360	55,707

Day	January 2025			February 2025			March 2025		
	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume	Average Daily Flow Rate	Maximum Daily Flow Rate	Daily Total Volume
	L/s	L/s	m^3	L/s	L/s	m^3	L/s	L/s	m^3
25	627	913	54,137	644	875	55,589	609	1,317	52,647
26	725	1,060	62,659	619	1,090	53,473	608	1,157	52,548
27	704	1,155	60,841	620	1,164	53,559	718	1,809	62,056
28	600	892	51,791	595	1,036	51,407	766	1,728	66,179
29	635	1,023	54,893				625	1,325	54,023
30	667	1,105	57,625				612	1,221	52,840
31	597	1,056	51,598				609	1,043	52,465
Limit			**260,000**			**260,000**			**260,000**

Table 6: Effluent Flow Rate

Condition 9 a) - Daily Composite - TSS and BOD

The permit holder shall obtain daily representative 24-hour flow-proportional 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).

Condition met - the effluent $cBOD_5$ and suspended solids results from daily representative 24-hour flow-proportional composite samples can be found under resource consent WGN080003 [31505] Condition 10 a) and b).

Condition 9 b) - Daily Grab - Faecal Coliform

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.

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

Condition 10 - Effluent Quality Criteria

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^3 and no more than 10% of 90 consecutive sample results shall exceed 45 g/m^3.

b. Suspended solids
The geometric mean of 90 consecutive daily sampling results shall not exceed 30g/m^3 and no more than 10% of 90 consecutive daily values shall exceed 68g/m^3.

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 2025			February 2025			March 2025		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	g/m³	g/m³	g/m³	g/m³	g/m³	g/m³	g/m³	g/m³	g/m³
1	6	10	17	6	7	17	8	7	15
2	6	10	17	7	7	17	7	7	14
3	20	10	19	8	7	17	6	7	14
4	6	10	19	8	7	17	8	7	13
5	6	10	19	6	7	17	9	7	13
6	3	10	19	6	7	17	7	7	12
7	3	10	19	6	7	17	6	7	12
8	3	9	19	6	7	17	6	7	11
9	6	9	19	8	7	17	6	7	11
10	4	9	19	8	7	15	6	7	11
11	3	9	17	12	7	15	6	7	11
12	3	9	17	6	7	15	9	7	11
13	5	9	17	10	7	15	7	7	10
14	4	9	17	10	7	15	6	7	10
15	6	9	17	10	7	15	6	6	10
16	4	9	17	11	7	15	10	6	10
17	4	9	17	13	7	15	6	6	10
18	3	8	17	9	7	15	7	6	10
19	5	8	17	8	7	15	8	6	10
20	3	8	17	9	7	15	8	6	9
21	5	8	17	10	7	15	7	6	9
22	3	8	17	8	7	15	6	6	9
23	6	8	17	8	7	15	8	6	9
24	6	8	17	8	7	15	13	6	10
25	6	8	17	9	7	15	6	6	10
26	6	8	17	9	7	15	9	6	10
27	6	8	17	9	7	15	8	6	10
28	6	8	17	9	7	15	19	7	10
29	6	8	17				16	7	10
30	6	8	17				15	7	10
31	6	7	17				12	7	10
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^3 geometric mean limit. Analytical results highlighted in red are above the 45g/m^3 percent compliance limit.

b) Suspended Solids

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

Day	January 2025			February 2025			March 2025		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3
1	29	34	72	29	29	61	35	31	61
2	7	34	72	308	30	62	26	31	60
3	67	34	72	27	30	62	22	30	58
4	10	34	72	25	30	62	28	30	55
5	9	33	72	33	30	62	34	30	55
6	17	33	72	33	30	62	10	29	49
7	25	33	72	28	30	62	23	29	49
8	10	33	72	26	30	62	17	29	46
9	14	33	72	39	31	62	21	28	46
10	20	33	72	40	30	62	24	28	44
11	14	31	69	41	31	62	19	28	43
12	26	31	69	34	31	62	20	28	42
13	26	31	69	38	31	62	22	27	41
14	22	32	69	40	31	62	19	27	41
15	39	32	69	38	31	62	19	26	40
16	18	32	69	41	31	62	22	26	40
17	23	32	69	43	31	61	13	26	40
18	26	32	69	29	30	61	25	26	39
19	37	31	69	35	30	61	22	25	39
20	16	31	67	30	30	61	19	25	39
21	14	30	65	36	31	61	15	25	38
22	24	30	62	30	31	61	9	25	38
23	25	29	61	26	31	61	19	24	38
24	29	29	61	29	31	61	28	24	38
25	32	29	61	37	31	61	12	24	38
26	29	29	61	38	31	61	24	24	38
27	33	29	61	20	31	61	30	24	38
28	17	29	61	32	31	61	41	24	39

Day	January 2025			February 2025			March 2025		
	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile	Daily Results	Geometric Mean	90th Percentile
	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3	g/m^3
29	21	29	61				24	24	39
30	25	29	61				33	25	39
31	23	29	61				26	25	39
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 $30g/m^3$ geometric mean limit. Analytical results highlighted in red are above the $68g/m^3$ percent compliance limit.

c) Faecal Coliforms

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

Day	January 2025			February 2025			March 2025		
	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	39	868	31479	449	224	5,444	218	149	1,839
2	42	800	30456	938	225	5,444	100	146	1,839
3	10	739	30456	1,960	236	5,444	392	146	1,839
4	35	684	25522	1,691	245	5,444	1,010	143	1,705
5	22	633	25522	22	240	5,444	1,265	147	1,705
6	48	611	25522	1,897	253	5,444	63	140	1,662
7	17	569	25522	10	242	5,444	442	139	1,662
8	10	517	15478	10	239	5,444	280	139	1,662
9	30	475	11899	148	243	5,444	115	136	1,662
10	160	455	11899	14	225	4,362	46	132	1,662
11	499	432	11541	2,345	221	4,014	92	130	1,662
12	292	407	10678	14,457	225	4,362	10	126	1,662
13	190	412	10678	990	221	4,014	10	120	1,662
14	49	395	10678	25,826	237	4,362	155	118	1,662
15	85	404	10678	30	223	4,014	75	115	1,662
16	73	383	10153	92	210	3,279	28	112	1,662
17	569	381	10153	1,658	208	3,279	60	111	1,662
18	60	356	8530	1,833	200	2,632	318	114	1,662
19	49	329	6585	92	187	2,368	10	114	1,662
20	214	322	6585	53	178	1,998	10	112	1,662
21	20	297	5634	63	174	1,998	79	112	1,662

Day	January 2025			February 2025			March 2025		
	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
22	95	281	5484	42	168	1,998	1,057	117	1,662
23	1487	278	5484	14	159	1,904	97	116	1,662
24	1241	280	5484	175	153	1,839	69	113	1,662
25	290	280	5484	263	148	1,711	214	113	1,662
26	164	280	5484	3,429	157	1,839	225	117	1,662
27	60	276	5484	170	153	1,839	310	121	1,662
28	14	264	5484	7,000	153	1,839	299	125	1,662
29	84	252	5484				135	128	1,662
30	14	244	5484				290	132	1,662
31	24	232	5484				224	136	1,662
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.

Condition 11 - Analysis for metals and other

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

This sample shall also be analysed for:
- pH
- Ammoniacal Nitrogen
- Oil and Grease

Condition met - see table below.

Compound	Units	Limit	22/01/2025
Total Arsenic	**g/m^3**	**0.26**	<0.002
Total Cadmium	**g/m^3**	**0.08**	<0.001
Total Chromium	**g/m^3**	**0.48**	<0.001
Total Copper	**g/m^3**	**0.14**	0.005
Total Lead	**g/m^3**	**0.48**	<0.001
Total Mercury	**g/m^3**	**0.01**	<0.001
Total Nickel	**g/m^3**	**0.77**	<0.001
Total Zinc	**g/m^3**	**1.65**	0.033
Phenol	**g/m^3**	**0.80**	<0.01
Cyanide as CN	**g/m^3**	**0.10**	0.019
pH	**--**	**--**	7.0
Ammoniacal Nitrogen	**g/m^3**	**--**	15.9
Oil and Grease	**g/m^3**	**--**	<4

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

Condition 12 - Monitoring Results' Reporting

> 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.

Condition met - 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 - Notification of Non Compliant Effluent

> 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.

Moa Point WWTP was compliant with both the BOD_5 90-day percentile and 90-day geometric mean for the reporting period.

The Total Suspended Solids 90-day geomean became non compliant on 24 October and remained so for the duration of that reporting period (quarter ended 31 December 2024). In **this reporting period**, this parameter became compliant on 21 January, but was non-compliant between 9 February - 2 March. On 3 March this parameter fell within the compliance limit and remained compliant for the remainder of the reporting period. The Total Suspended Solids 90-day percentile was non-compliant throughout the previous reporting period but became compliant on 20 January 2025 and remained compliant for the remainder of the reporting period.

The Faecal Coliforms geomean were non-compliant throughout the previous reporting period and this state continued until 18 February, when it became compliant, which was maintained for the remainder of the reporting period. The Faecal Coliforms 90th percentile was also non-compliant throughout the previous reporting period and this reporting period. However, the results in this period showed a trend towards compliance.

Greater Wellington requested an explanation for Non-compliant effluent on 20 December 2024. A response provided in February 2025 sets out the actions currently in train to remedy the situation.

Condition met - the non compliances were notified as required by the condition..

Condition 14 - Noticeable Effects Beyond the Discharge Point

> 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.

Condition met - nothing to report.

Condition 18 - Complaints

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.

Condition met - there were no complaints received regarding this resource consent for the reporting period.

Condition 19 - Quarterly Reporting

A quarterly monitoring report for each three-month period ending 31 March, 30 June, 30 December 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.

This condition is met by providing this report.

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 table below 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^3 90th Percentile < 45g/m^3	Compliant
Suspended Solids	9a	Daily	--	Compliant
	10b		Geometric Mean < 30g/m^3 90th Percentile < 68g/m^3	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^3	Compliant
Total cadmium		Quarterly	0.08 g/m^3	Compliant
Total chromium		Quarterly	0.48g/m^3	Compliant
Total copper		Quarterly	0.14g/m^3	Compliant
Total lead		Quarterly	0.48g/m^3	Compliant
Total mercury		Quarterly	0.01g/m^3	Compliant
Total nickel		Quarterly	0.77g/m^3	Compliant
Total zinc		Quarterly	1.65g/m^3	Compliant
Phenol		Quarterly	0.80g/m^3	Compliant
Cyanide as CN		Quarterly	0.10g/m^3	Compliant
pH		Quarterly	--	Compliant
Ammoniacal Nitrogen		Quarterly	--	Compliant
Oil and Grease		Quarterly	--	Compliant

Table 11: Summary of Parameters' Compliance

WGN080003 [35047] - Occasional Weather Induced Discharges

Condition 8 - Reporting Bypass Discharges

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.

Condition met - Discharges were notified after each event and further details are set out below:

Date	Duration	Inlet Flow		Discharge Flow			Dilution Ratio	Consented	Cause
		Average	Peak	Average	Peak	Total Volume			
d/m	hr:min	L/s	L/s	L/s	L/s	m^3	--	Y/N	
01/01	00:14	1993	2254	No flows were recorded due to the size of the discharge. The discharge was enough to set off alarm but was too small to be detected by the flow meter			NA	N	High rainfall within the catchment leading to higher inflows than the Plant's existing (i.e. reduced) capacity, but was outside the allowance in the consent for wet weather events.
03/01	00:08	2527	2921	322	673	155	6.7:1	N	
19/03	00:12	1978	2971	150	730	108	12.8:1	N	

Tables 12 - 13: Discharges

Note that during the period, the WWTP was operating at reduced full treatment capacity due to the Clarifier refurbishment works.

Condition 10 - Shoreline Monitoring Sites

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. These additional shoreline monitoring sites are located near storm water discharges which may affect the monitoring results.

Condition met - the following map displays the (13) sites for shoreline sampling:

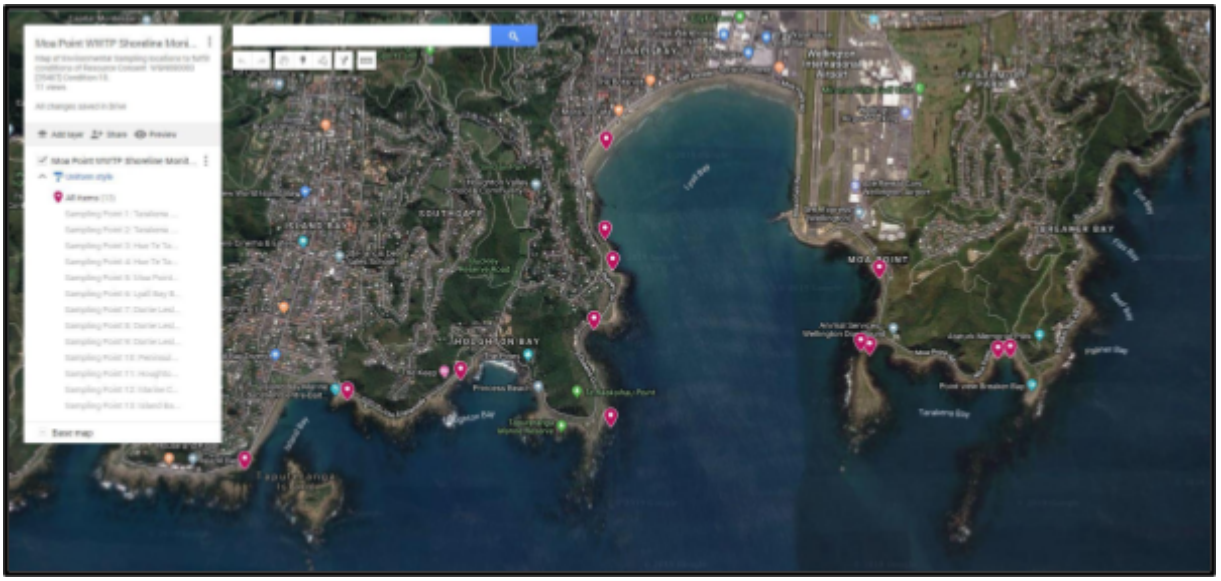

Figure 1: Moa Point WWTP Shoreline Monitoring Sites

Shoreline Monitoring

The following is a summary of the shoreline monitoring performed as part of resource consent WGN080003 [35047], Condition 10 for the events set out above (Condition 9 refers).
Please note:

- The tests for enterococci and faecal in shoreline monitoring were analysed by the contract laboratory.
- Bathing beach guidelines were used to generate the colouring for the Enterococci samples.
- Fresh water guidelines were used to generate the colouring for the Faecal Coliform samples.

Bacterial Species	Amber Limit	Red Limit
Enterococci	140	280
Faecal Coliforms	260	550

Table 14: Shoreline Monitoring Guidelines

Tarakena Bay Beach at Boat Ramp			Tarakena Bay Beach, Western Side		Hue te Taka Peninsula	
Date	**Enterococci**	**Faecal Coliforms**	**Enterococci**	**Faecal Coliforms**	**Enterococci**	**Faecal Coliforms**
dd/mm	**cfu/100mL**		**cfu/100mL**		**cfu/100mL**	
01/01	40	10	<10	<10	<10	<10
02/01	10	<10	300	110	80	20
03/01	70	180	<10	<10	<10	<10
04/01	10	<10	120	80	<10	40
05/01	40	<10	50	<10	<10	10
06/01	<10	<10	<10	10	<10	<10
20/03	<10	20	<10	<10	<10	<10
21/03	<10	10	<10	<10	<10	30
22/03	30	20	<10	30	<10	<10

Table 15: Shoreline Monitoring

Hue te Taka Peninsula - Western Side			49 Moa Road		Lyall Bay Beach, Eastern Side	
Date	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms
dd/mm	cfu/100mL		cfu/100mL		cfu/100mL	
01/01	<10	<10	10	<10	30	20
02/01	280	70	320	120	10	10
03/01	10	10	110	310	<10	50
04/01	10	40	80	80	100	440
05/01	<10	10	<10	<10	10	<10
06/01	<10	10	10	10	10	<10
20/03	30	<10	10	<10	50	600
21/03	40	300	10	<10	<10	<10
22/03	<10	<10	<10	<10	1900	800

Table 16: Shoreline Monitoring

Peninsula at Queens Drive and the Esplanade			Dorrie Leslie Park					
			At boat ramp		West of boat ramp		South side of boat ramp	
Date	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms
dd/mm	cfu/100mL		cfu/100mL		cfu/100mL		cfu/100mL	
01/01	30	<10	10	<10	<10	<10	<10	<10
02/01	400	360	50	50	50	30	40	<10
03/01	<10	<10	20	80	<10	80	40	<10
04/01	10	30	160	200	250	700	370	50
05/01	<10	<10	<10	<10	<10	<10	30	<10
06/01	20	10	<10	<10	<10	<10	300	10
20/03	30	<10	10	10	<10	<10	<10	<10
21/03	<10	<10	10	50	<10	<10	<10	<10
22/03	<10	<10	<10	<10	<10	<10	10	<10

Table 17: Shoreline Monitoring

Houghton Bay - Western Side			Marine Centre, Island Bay, Eastern Side		Island Bay - Western Side	
Date	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms	Enterococci	Faecal Coliforms
dd/mm	cfu/100mL		cfu/100mL		cfu/100mL	
01/01	<10	<10	80	40	50	<10
02/01	60	40	560	380	20	10
03/01	120	320	70	360	<10	<10
04/01	110	150	140	30	130	30
05/01	80	10	50	50	10	<10
06/01	10	10	20	20	10	10
20/03	<10	20	40	<10	90	10
21/03	<10	<10	30	50	60	70
22/03	<10	10	10	80	10	20

Table 18: Shoreline Monitoring

Conditions at Time of Sampling - All Sites									
Date	**Time**	Wind Direction	Wind Strength	Weather	Tide Height	Tide Ebb / Flow	Rain in last 24 Hrs	Discolouration	Visible Surface Debris
01/01	11:50 - 12:57	S	Moderate	Rain	Low	Ebb	Y	None	N
02/01	05:30 - 06:34	S	Light	Rain	High	Flood	Y	None	N
03/01	05:30 - 06:37	S	Light	Overcast	Mid	Flood	Y	None	N
04/01	05:35 - 06:41	S	Strong	Overcast	Mid	Flood	Y	None	N
05/01	05:30 - 06:36	S	Strong	Overcast	Low	Flood	Y	None	N
06/01	05:35 - 06:42	S	Strong	Overcast	Low	Flood	Y	None	N
20/03	06:25 - 07:23	SW	Mod	Cloudy	Low	Flood	Y	None	N
21/03	06:32 - 07:23	S	Light	Overcast	Low	Flood	Y	Some at Dorrie Park, none elsewhere	N
22/03	06:01 - 06:58	NW	Mod	Overcast	Low	Flood	Y	None	N

Table 19: Shoreline Monitoring Conditions

Condition 16 - Monitoring of bypass discharges

1. 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.

2. 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

3. 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: $C_{mixed(a)} = (C_{tr(a)} * Q_{tr} + C_{by(a)} * Q_{by}) / Q_{mixed}$

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.

Condition met:

1. Sampling locations are set out above - see Condition 10 (above) for this Consent.
2. Samples were taken on the day of each discharge and the following two days.

Condition 18 - Complaints

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.

Condition met - no complaints were received regarding this resource consent for the reporting period.

WGN080003 [26182] - Occupying foreshore and seabed with outfall pipeline

---

Condition 3 - Annual Outfall Inspection and Assessment

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.

Condition met - the outfall pipeline inspection was conducted late in the period (March 2025) but as the resulting report isn't yet available it will be provided in the next period.

WGN080003 [26183] - Discharge to Air (WWTP)

Condition 7 - Monitoring

> 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.

Condition met - Source Testing New Zealand Ltd (STNZ) was commissioned by Veolia to undertake ambient microbe monitoring in the vicinity of Moa Point WWTP. The air quality monitoring was performed in February 2025. Excerpts of the report can be found in Appendix iii: Ambient Microbe Monitoring. The full report is available on request.

Condition 8 - Monitoring of Hydrogen Sulphide (H_2S)

> **Hydrogen sulphide (H_2S)** 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.

Condition not met as explained below. The hydrogen sulphide (H_2S) 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_2S concentration. For all the maximum values please see Appendix ii: H_2S and TRS Concentrations. The Moa Point analyser was not operating during part of the reporting period due to lack of consumables (tape) for the equipment. The analyser is an aged piece of equipment; the tape, which is an essential component, is sourced from Europe and due to the age of the equipment is difficult to obtain.

The total reduced sulphur compounds (TRS) concentration are measured once a month by an independent contractor.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	**ppm**	**ppm**
January 2025	0.0001	**0.149**
February 2025	0.0000	**0.368**
March 2025	0.0000	**0.488**
April 2025		0.008
Limit	**0.01**	**0.05**

Table 20: H_2S and TRS Concentrations

Condition 9 - H2S and TRS Concentrations Limits

> The discharge to air from the chemical scrubber system shall contain no more than **0.01ppm hydrogen sulphide** (H_2S) and no more than **0.05ppm total reduced sulphur** compounds (including H_2S).

The limits have been included in the table under WGN080003 [26183] Condition 8 and Appendix ii: H_2S and TRS Concentrations. Hydrogen sulphide concentration met the requirements given in Condition 9 for part of the period only, therefore is non compliant for the period of the report.

Condition not met as Total Reduced Sulphur exceeded the condition limit. GWRC issued a "Please Explain" (PX) email to Wellington Water (WW) and Veolia on 4 March 2025 regarding this issue. A response (by return email) was submitted on 24 March. **While outside the reporting period, the April test showed TRS was within consent limits.**

Condition 10 - Smoke Testing

> 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 the Community Liaison Group, if requested.

Condition met - Smoke testing of the Moa Point WWTP was undertaken on 23 November 2024 (i.e. in the previous reporting period), however wasn't available at the time of completion of that report.

The report has since been provided to GWRC.

Condition 13 - Complaints

> 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.

Condition met - there was one complaint on 21 March. Veolia responded but no odour was detected.

WGN960094 [1471] - Discharge to Air - Moa Point Inlet Pumping Station

Condition 11 - Monitoring of Hydrogen Sulphide (H_2S)

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_2S and TRS

Condition met - the H_2S 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_2S concentration. For all the maximum values please see Appendix ii: H_2S and TRS Concentrations.

The total reduced sulphur compounds (TRS) concentration are measured once a month by an independent contractor.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	**ppm**	**ppm**
January 2025	0.0018	<0.002
February 2025	0.0000	<0.002
March 2025	0.0000	<0.002
Limit	**0.01**	**0.05**

Table 21: H_2S and TRS Concentrations

b) pH and Oxidation Reduction Potential

This information has not been requested by GWRC.

Condition 13 - Complaints

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.

Condition met - No complaints in the period.

Appendix i: Heavy Metals Analysis

The heavy metals sampling for Consent WGN080003 [31505] Condition 11 was conducted on 22 January 2025.

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ANALYTICAL REPORT

REPORT CODE	AR-25-NW-007777-01	REPORT DATE	04/02/2025

Attention Veolia Water - Wellington
COA Email
Wastewater Treatment Plant
P.O. Box 14744
WELLINGTON 6041
Wellington
NEW ZEALAND
Phone (04) 388 0067
Email anz.eurofins.coa.all.groups@veolia.com

Contact for your orders: Deb Bottrill
Contract: Moa Point Regular Testing
Order code: EUNZWE-00228851
Purchase Order Number: 7300429025

SAMPLE CODE **812-2025-00010752**

Sampling Point code: MOA_EFF_G_1Q
Sampling Point name: Moa Effluent Grab 1Quarterly
Reception Date & Time: 22/01/2025 14:40
Analysis Started on: 22/01/2025
Analysis Ending Date: 04/02/2025
Product Type Waste water
Sampled Date & Time 22/01/2025 08:40
Sampler(s) GF
Sampled by Eurofins No

ORGANICS	RESULTS		LOQ	SPECIFICATIONS
NW00U Chlorophenols				
2,3,4,6-Tetrachlorophenol	<0.01	mg/l	0.01	
2,4-Dichlorophenol	<0.01	mg/l	0.01	
2,6-Dichlorophenol	<0.2	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	<0.80 mg/L mg/l ✓ Client Specification
Total of 2,4,5 & 2,4,6 -Trichlorophenol	<0.02	mg/l	0.02	

	RESULTS		LOQ	SPECIFICATIONS
NW676 Ammonia Nitrogen				
Ammonia nitrogen	15.9	mg/l	0.01	
NW679 Cyanide				
Cyanide	0.019	mg/l	0.005	<0.10 mg/L mg/l ✓ Client Specification
NW192 Oil & Grease				
Total Oil and Grease	<4	mg/l	4	
NW195 pH (Tested beyond 15 minute APHA holding time)				
pH	7.0		0.1	
NW149 Total Arsenic				
Arsenic (As)	<0.002	mg/l	0.002	<0.26 mg/L mg/l ✓ Client Specification
NW154 Total Cadmium				
Cadmium (Cd)	<0.001	mg/l	0.001	<0.08 mg/L mg/l ✓ Client Specification
NW157 Total Chromium				
Chromium (Cr)	<0.001	mg/l	0.001	<0.48 mg/L mg/l ✓ Client Specification
NW159 Total Copper				

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		RESULTS		LOQ	SPECIFICATIONS		
NW159	**Total Copper**						
	Copper (Cu)	0.005	mg/l	0.002	<0.14 mg/L mg/l	✓	Client Specification
NW161	**Total Lead**						
	Lead (Pb)	<0.001	mg/l	0.001	<0.48 < mg/L mg/l	✓	Client Specification
NW165	**Total Mercury**						
	Mercury (Hg)	<0.001	mg/l	0.001	<0.01 mg/L mg/l	✓	Client Specification
NW167	**Total Nickel**						
	Nickel (Ni)	<0.001	mg/l	0.001	<0.77 mg/L mg/l	✓	Client Specification
NW177	**Total Zinc**						
	Zinc (Zn)	0.033	mg/l	0.005	<1.65 mg/L mg/l	✓	Client Specification

LIST OF METHODS

NW00U	**Chlorophenols:** Internal Method, LC-MS/MS	NW149	**Total Arsenic:** APHA Online Edition 3125 B mod.
NW154	**Total Cadmium:** APHA Online Edition 3125 B mod.	NW157	**Total Chromium:** APHA Online Edition 3125 B mod.
NW159	**Total Copper:** APHA Online Edition 3125 B mod.	NW161	**Total Lead:** APHA Online Edition 3125 B mod.
NW165	**Total Mercury:** APHA Online Edition 3125 B mod.	NW167	**Total Nickel:** APHA Online Edition 3125 B mod.
NW177	**Total Zinc:** APHA Online Edition 3125 B mod.	NW192	**Oil & Grease:** APHA Online Edition 5520 B mod.
NW195	**pH (Tested beyond 15 minute APHA holding time):** APHA 24th Edition 4500-H B	NW676	**Ammonia Nitrogen:** Internal Method, Spectrophotometry (DA)
NW679	**Cyanide:** APHA Online Edition 4500-CN C & E		

Signature

Marylou Cabral Laboratory Manager
Eurofins ELS Limited

Ganesh Ilancko Supervisor Eurofins ELS Limited

Gabriela Carvalhaes Business Unit Manager

Cody Forbes Technical Specialist
Technical Specialist

EXPLANATORY NOTE

❶ Test is not accredited
❷ Test is subcontracted within Eurofins group and is accredited
❸ Test is subcontracted within Eurofins group and is not accredited
❹ Test is subcontracted outside Eurofins group and is accredited
❺ Test is subcontracted outside Eurofins group and is not accredited
❻ Test result is provided by the customer and is not accredited
❼ Tested at the sampling point by Eurofins and is not accredited
❽ Tested at the sampling point by Eurofins and is accredited
❾ Test is RLP accredited
❿ Test is subcontracted within Eurofins group and is RLP 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
✗ (Unsatisfactory) means does not meet the specification
✓ (Satisfactory) means meets the specification
MAV means Maximum Allowable Value

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Appendix ii: H_2S and TRS Concentrations

Daily Maximum H_2S Concentrations from the Moa Point IPS and WWTP

Day	January 2025		February 2025		March 2025	
	IPS	WWTP	IPS	WWTP	IPS	WWTP
	ppb		ppb		ppb	
1	0.11	0.0000	0.0000	0.0000	0.0001	0.00
2	0.11	0.0000	0.0000	0.0000	0.0001	0.00
3	0.11	0.0000	0.0000	0.0000	0.0001	0.00
4	0.11	0.0000	0.0000	0.0000	0.0001	0.00
5	0.11	0.0000	0.0000	0.0000	0.0007	0.00
6	0.11	0.0000	0.0000	0.0000	0.0001	0.00
7	0.16	0.0000	0.0000	0.0000	0.0001	0.00
8	0.11	0.0000	0.0000	0.0000	0.0001	0.00
9	0.11	0.0000	0.0000	0.0000	0.0001	0.00
10	0.11	0.0000	0.0000	0.0000	0.0001	0.00
11	0.12	0.0000	0.0000	0.0000	0.0001	0.00
12	0.11	0.0000	0.0000	0.0000	0.0001	0.00
13	0.11	0.0000	0.0000	0.0000	0.0001	0.00
14	0.18	0.0000	0.0000	0.0000	0.0001	0.00
15	0.12	0.0000	0.0000	0.0000	0.0001	0.00
16	0.00	0.0000	0.0000	0.0000	0.0001	0.00
17	0.00	0.0000	0.0000	0.0000	0.0001	0.00
18	0.00	0.0000	0.0000	0.0000	0.0001	0.00
19	0.00	0.0000	0.0000	0.0000	0.0001	0.00
20	0.00	0.0000	0.0000	0.0000	0.0001	0.00
21	0.00	0.0000	0.0000	0.0000	0.0002	0.00
22	0.00	0.0000	0.0000	0.0000	0.0001	0.00
23	0.00	0.0000	0.0000	0.0000	0.0005	0.00
24	0.00	0.0000	0.0000	0.0000	0.0003	0.00
25	0.00	0.0000	0.0000	0.0000	0.0001	0.00
26	0.00	0.0000	0.0001	0.0000	0.0001	0.00
27	0.00	0.0000	0.0001	0.0000	0.0001	0.00
28	0.00	0.0000	0.0024	0.0000	0.0001	0.00
29	0.00	0.0000			0.0002	0.00
30	0.00	0.0000			0.0005	0.00
31	0.00	0.0000			0.0001	0.00
Limit	0.0100 ppm (= 10 ppb)					

Appendix iii: Ambient Microbe Monitoring

Source Testing New Zealand Ltd (STNZ) was commissioned by Veolia to undertake ambient microbe monitoring in the vicinity of Moa Point WWTP. This is required under Condition 7 of Resource Consent (WGN080003 (26183]). Below are excerpts from the STNZ report. The full report is available on request.

5. Ambient Microbe Monitoring Results

5.1 Ambient Microbe Monitoring Results

The results of the Moa Pt WWTP ambient microbe monitoring performed on 27 February 2025 are presented in Table 8 with the raw sampling data and analytical report presented in Appendix's B and C respectively.

- **Table 8: Moa Point Wastewater Treatment Plant Ambient Microbe Monitoring Results, 27 February 2025**

Site	Total Count (CFU/m³)[1]	Filter 1 Breakdown of Total Count					Filter 2		Filter 3		
		Total Bacteria (CFU/m³)[1]	Total Actinomycettes (CFU /m³)[1]	Total F/Fungi[2] (CFU /m³)[1]	Total Yeasts (CFU/m³)[1]	*Aspergillus Fumigatus*[3] (CFU /m³)[1]	Gram Negative (CFU/m³)[1]	Enterococci (CFU /m³)[1]	Salmonella Present/Absent	Total Coliforms Present/Absent	Faecal Coliforms Present/Absent
Site 1	424	6	2	410	6	<2	<2	<2	Absent	Absent	Absent
Site 2	469	14	<2	450	5	<2	<2	<2	Absent	Absent	Absent
Site 3	912	160	8	730	14	<3	<3	<3	Absent	Absent	Absent
Site 4	1,088	78	3	990	17	<3	<3	<3	Absent	Absent	Absent
Site 5	216	2	<2	210	4	<2	<2	<2	Absent	Absent	Absent
Site 6	2,776	46	120	2,400	210	<2	<2	<2	Absent	Absent	Absent

1. CFU/m³ = Colony forming units per cubic meter of air at actual temperature and pressure
2. F/Fungi = Filamentous Fungi
3. Aspergillus fumigatus count is included in the Total Fungi count

5.2 Summary

The results of the Moa Pt WWTP ambient microbe monitoring conducted on 27 February 2025 confirms the absence of *Salmonella* and Faecal Coliforms. The microbiological counts at all sites were within the guidelines for a wastewater treatment plant (Biodet Data Base) with no *Aspergillus Fumigatus,* Gram-negative, or Enterococci identified.

While the levels of microbes were within the guidelines, the concentrations at Site 6 were second highest recorded with only the sample collected prior to relocating being higher due to the presence of a new chicken coup. Sites 3 and 4 were also elevated compared to the remaining site. The results were significantly higher than observed in April and August 2024, with Sites 4 & 6 consistently elevated compared to the remaining sites.

The results of the Moa Pt WWTP ambient microbe monitoring appear to indicate the levels at the majority of sites have increased since the beginning of 2024 which correlates with the start of the construction of the Sludge Minimisation Facility (SMF). Site 6 has had the greatest increases while the Air New Zealand kitchens site (Site 5) remains consistent with previous years. Site 6 is on Kekerenga Street (Site 6) and was selected to assess the local community experience and the data suggest the level of exposure has increased since the construction of the SMF commenced.