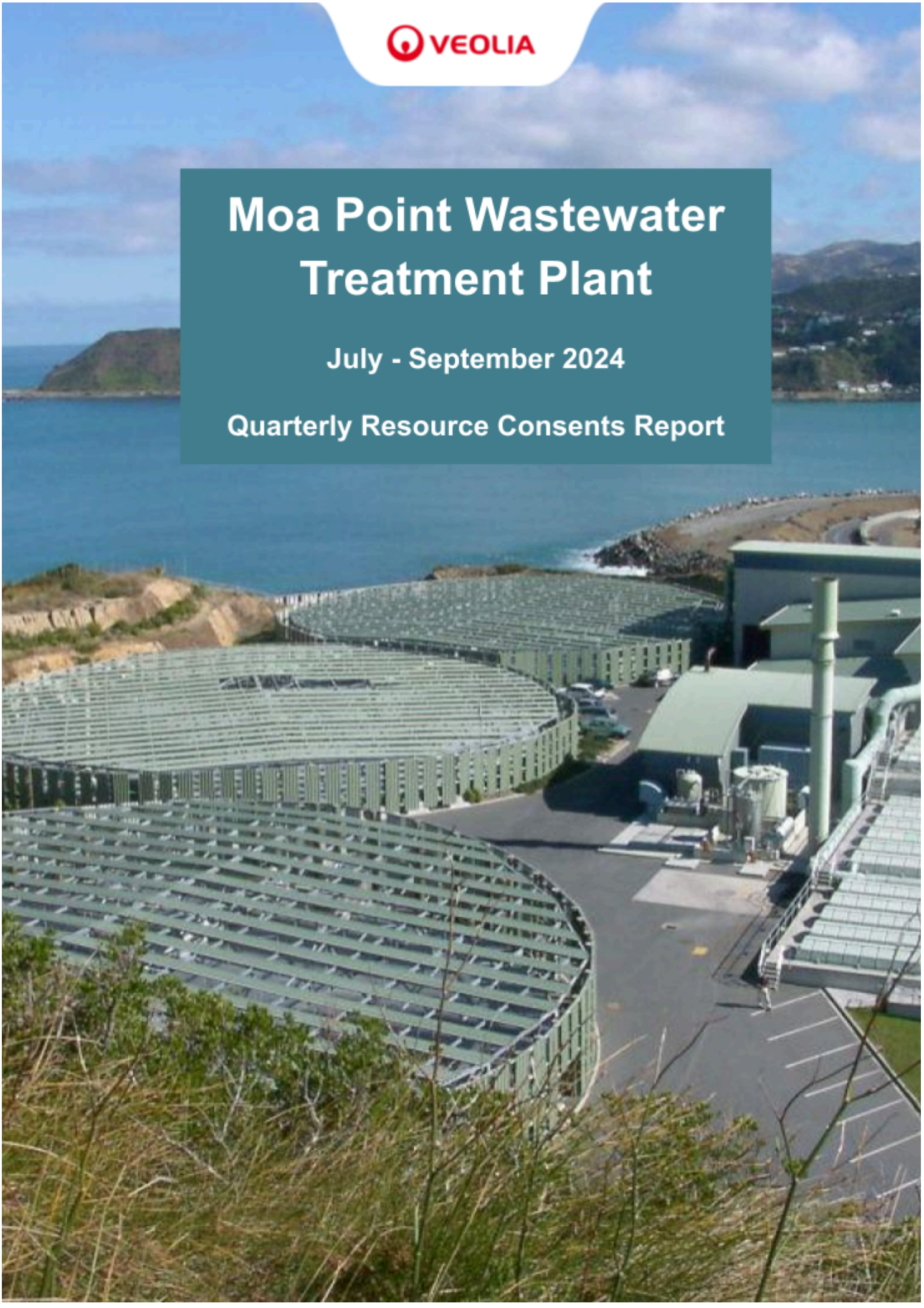

Moa Point Wastewater Treatment Plant

July - September 2024

Quarterly Resource Consents Report

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Document Title:	Moa Point Wastewater Treatment Plant Quarterly Resource Consents Report - July - September 2024
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Version	Status	Date	Details of Revision
0	Draft	30 October 2024	Original version for review.
1	Final	31 October 2024	Internal review.
2	Amended	11 November 2024	Amendments in response to errors / omissions identified by WW.

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 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
Condition 6	Compliant
Condition 9 a)	Non-Compliant
Condition 9 b)	Non-Compliant
Condition 10 a)	Compliant
Condition 10 b)	Non-Compliant
Condition 10 c)	Non-Compliant
Condition 11	Compliant
Condition 12	Compliant
Condition 13	Compliant
Condition 14	Compliant
Condition 18	Compliant
Condition 19	Compliant

Tables 1 & 2 : WGN080003 [31505] & WGN080003 [35047] 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 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
Condition 8	Non-Compliant
Condition 10	Non-Compliant
Condition 16	Compliant
Condition 18	Compliant

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 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
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 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
Condition 7	Compliant
Condition 8	Compliant
Condition 9	Compliant
Condition 10	Not applicable
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 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
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.

Day	July 2024			August 2024			September 2024		
	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	Average Daily Flow Rate	Maximum Daily Flow Rate
	L/s	m^3/hour	m^3	L/s	m^3/hour	m^3	L/s	m^3/hour	m^3
1	1319	2706	113,919	1079	1592	93,200	1117	1761	96,509
2	991	1720	85,591	884	1676	76,417	900	1347	77,753
3	785	1677	67,824	786	1379	67,925	1561	2594	134,853
4	747	1665	64,541	757	1401	65,406	1031	1704	89,042
5	726	1743	62,683	764	1462	66,010	889	1795	76,820
6	705	1671	60,925	731	1576	63,187	807	1596	69,764
7	689	1400	59,535	719	1355	62,145	859	1573	74,185
8	683	1371	59,020	789	1367	68,183	795	1373	68,716
9	690	1424	59,588	709	1398	61,277	885	1597	76,502
10	678	1722	58,572	711	1712	61,416	847	1828	73,157
11	680	3053	58,774	680	1603	58,748	766	1583	66,203
12	683	1628	59,026	695	1356	60,046	758	1569	65,453
13	660	1638	56,990	698	1387	60,274	865	1800	74,734
14	654	1286	56,480	683	1358	59,039	910	1651	78,584
15	717	1262	61,951	667	1349	57,407	831	1634	71,786
16	766	1683	66,203	660	1358	57,044	2030	3057	175,381
17	731	1680	63,119	723	1365	62,442	1272	2232	109,870
18	722	1612	62,405	1940	3111	167,632	977	1752	84,379
19	717	1694	61,969	1189	2205	102,713	889	1766	76,838
20	992	2127	85,737	870	1400	75,139	864	1870	74,662
21	812	1702	70,122	778	1382	67,201	795	1637	68,691
22	794	1701	68,605	752	1372	64,957	815	1566	70,424
23	746	1726	64,420	817	1373	70,630	818	1574	70,694
24	722	1640	62,346	761	1392	65,709	810	1612	70,000
25	709	1335	61,269	956	2557	82,571	783	1581	67,633
26	669	1510	57,804	1649	2766	142,514	872	1575	75,329
27	657	1417	56,798	1408	2743	121,685	795	1601	68,655
28	729	1337	62,974	978	1772	84,539	725	1587	62,603
29	785	1831	65,737	1019	1790	88,074	688	1227	56,937
30	1231	2672	106,350	827	1706	71,442	847	1594	45,998
31	1480	2300	80,387	1221	2186	66,304			
Limit	**260,000**	**N/A**		**260,000**	**N/A**		**260,000**	**N/A**	

Table 6: Effluent Flow Rate

Condition 9 a)

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).

The effluent cBOD5 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)

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^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	July 2024			August 2024			September 2024		
	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	16	14	35	19	14	35	46	13	38
2	12	14	35	10	14	35	5	13	38
3	9	14	35	5	14	35	71	13	41
4	6	14	35	6	14	35	17	13	41
5	6	14	35	6	14	35	3	13	41
6	8	14	35	6	14	35	4	13	41
7	No data[1]	14	35	5	13	35	9	13	41
8	9	14	35	4	13	35	39	13	41
9	9	14	35	4	13	35	20	13	41
10	7	13	35	5	13	35	7	13	41
11	7	13	34	7	13	35	16	13	41
12	6	13	32	6	13	35	6	12	38
13	15	13	32	20	13	35	41	12	40
14	14	13	32	23	13	35	33	12	40
15	38	13	34	6	13	35	22	13	40
16	19	13	34	9	13	35	74	13	43
17	13	13	34	30	13	35	15	13	43
18	12	13	34	197	14	37	5	13	43
19	20	13	34	25	13	35	5	12	43
20	110	13	35	6	13	34	7	12	43
21	8	13	35	6	13	34	7	13	43
22	11	13	35	7	13	35	6	12	43
23	11	13	35	6	13	35	6	12	43
24	9	13	35	5	13	35	12	12	43
25	7	13	35	30	13	35	8	12	43
26	12	13	35	74	13	35	7	12	43
27	6	13	35	35	13	35	20	12	43
28	6	13	35	7	13	35	13	12	43
29	14	13	35	27	13	35	6	12	43
30	76	13	35	5	13	35	7	12	43
31	103	14	35	63	13	37			
Limits	**N/A**	**20**	**45**	**N/A**	**20**	**45**	**N/A**	**20**	**45**

[1] There was no data received from the lab for this date causing us to go non compliant on this condition.

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. This does not affect the compliance with the resource consent.

b) Suspended Solids

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

Day	July 2024			August 2024			September 2024		
	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	40	39	87	47	33	88	117	30	102
2	29	39	87	15	33	88	19	30	102
3	29	38	84	10	33	88	170	30	117
4	23	37	84	8	32	88	48	30	117
5	17	37	84	9	32	88	12	30	117
6	17	37	84	8	31	88	12	29	117
7	No data[2]	37	85	7	31	88	11	29	117
8	11	37	85	8	30	88	25	28	102
9	15	36	85	6	30	88	98	28	104
10	19	36	85	7	29	88	23	28	104
11	10	35	85	20	29	88	38	28	104
12	10	34	81	10	29	88	10	27	96
13	30	34	81	46	28	88	94	28	96
14	30	34	81	52	28	88	101	28	99
15	88	34	85	13	28	88	69	28	99
16	95	34	87	20	28	88	92	28	99
17	50	34	87	77	28	88	53	29	99
18	22	34	87	383	30	93	20	29	99
19	52	34	87	63	29	89	19	29	99
20	252	35	88	15	27	88	22	29	99
21	22	34	88	15	28	88	32	29	99
22	23	34	88	13	28	88	23	29	99
23	31	34	88	21	28	88	21	28	99
24	19	34	88	9	28	88	40	29	99
25	13	34	88	95	28	89	27	29	99
26	9	33	88	288	28	93	30	29	99
27	12	33	88	87	29	93	55	29	99
28	13	33	88	20	29	93	43	30	99
29	33	33	88	75	29	93	15	29	99
30	235	33	88	18	29	93	20	29	99
31	228	34	89	223	30	95			
Limits	**N/A**	**30**	**68**	**N/A**	**30**	**68**	**N/A**	**30**	**68**

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

[2] There was no data received from the lab for this date causing us to go non compliant on this condition.

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. This does not affect the compliance with the resource consent.

c) Faecal Coliforms

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

Day	July 2024			August 2024			September 2024		
	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	693	267	6496	10	272	8575	15000	443	20498
2	245	268	6496	10	263	8575	1649	448	20498
3	116	275	6496	30	255	8575	6588	463	20498
4	837	276	6496	663	248	6818	90	467	20498
5	1308	279	6496	1697	260	6818	3795	487	20498
6	14832	287	6818	14	257	6818	363	487	20498
7	4290	290	6818	5865	271	6818	2345	490	20498
8	5477	307	6818	748	282	6818	10	456	20498
9	351	314	6818	20976	292	8575	21448	476	21023
10	6325	331	6818	1039	297	8575	10	464	21023
11	10	317	6818	17493	300	9855	55857	487	21466
12	24495	327	8566	50000	329	14147	57446	536	21661
13	88	323	8566	42426	350	14836	735	543	21661
14	30	310	8566	57446	364	15129	3834	568	21661
15	21909	322	9304	3162	372	15129	17292	607	21661
16	197	309	8575	110	352	14836	35777	645	22168
17	1918	315	8575	120	335	14836	14	616	22168
18	938	318	8575	14491	337	14836	230	620	22426
19	917	321	8575	3464	332	14836	10	599	22426
20	88	317	8575	24	330	14836	21909	647	22426
21	No data[3]	322	8664	4936	350	14836	5648	651	22426
22	10	306	8664	32	344	14836	56480	667	25253
23	10	294	8664	15000	362	14879	10	667	25253
24	1400	294	8754	11489	383	14879	60000	735	29027
25	10	283	8754	32000	403	15249	60000	744	32755
26	141	282	8754	28284	424	17841	7266	801	32755
27	28	271	8754	20445	452	20498	20857	873	32755
28	294	279	8754	14491	479	20498	53	889	32755
29	1766	292	8754	10	441	20498	9487	916	32755
30	71	284	8754	10	420	20498	18330	961	32755
31	120	289	8754	112	408	20498			
Limits	**N/A**	**200**	**950**	**N/A**	**200**	**950**	**N/A**	**200**	**950**

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

[3] There was no data received from the lab for this date causing us to go non compliant on this condition.

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.

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^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

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	24/07/2024
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**	0.008
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**	0.020
Phenol	**g/m^3**	**0.80**	0.01
Cyanide as CN	**g/m^3**	**0.10**	0.005
pH	**--**	**--**	6.7
Ammoniacal Nitrogen	**g/m^3**	**--**	20.5
Oil and Grease	**g/m^3**	**--**	16

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.

Moa Point WWTP was compliant with both the BOD5 90-day percentile and 90-day geomean for the period covered by this report. The Total Suspended Solids 90-day geomean became compliant on 8 August and remained so for the duration of this report. The Total Suspended Solids 90-day percentile and Faecal Coliforms have been non-compliant throughout the reporting period July - September 2024.

Operational and qualitative data analysis indicates that the non-compliances were caused by a combination of various factors.

The operational capacity of the aeration basins has been increased with the 3rd aeration train brought online to allow for a longer retention time in the process. Over time, this should improve the settleability characteristics of the sludge and improve the performance of the Clarifiers, leading to a reduction in the BOD and Suspended Solid levels within the final effluent.

For the faecal coliforms, issues with the UV system are ongoing. The lamp cleaning schedule has been increased to daily, and ongoing repairs and investigations are trying to get to the root cause of the issue. Increased concentrations of suspended solids in the final effluent also have a negative effect on the UV disinfection system performance. Both factors have resulted in decreased faecal coliform removal.

Process adjustments are ongoing, and improvement in some daily trends has been observed. However, there are still regular spikes in the plant performance data leading to non-compliant results.

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.

Nothing to report.

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.

There were no complaints received regarding this resource consent for the 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^3 90th Percentile < 45g/m^3	Compliant
Suspended Solids	9a	Daily	--	Non-compliant
	10b		Geometric Mean < 30g/m^3 90th Percentile < 68g/m^3	Non-compliant
Faecal Coliforms	9b	Daily	--	Non-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: 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	Duration	Average Inlet Flow	Peak Inlet Flow	Average Discharge Flow	Peak Discharge Flow	Total Volume of Discharge	Dilution Ratio	Consented	Cause	Monitoring Results
d/m/y	hr:min	L/s	L/s	L/s	L/s	m^3	--	Y/N		
01/07/2024	17:25	2367	2710	169	461	1850	12:1	N	Reduced capacity of due to the repair works on clarifier #2	Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.

Date	Duration	Average Inlet Flow	Peak Inlet Flow	Average Discharge Flow	Peak Discharge Flow	Total Volume of Discharge	Dilution Ratio	Consented	Cause	Monitoring Results
d/m/y	hr:min	L/s	L/s	L/s	L/s	m^3	--	Y/N		
18/08/2024	2:50	2946	3087	37	161	379	79:1	Y	High rain	Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.

Date	Duration	Average Inlet Flow	Peak Inlet Flow	Average Discharge Flow	Peak Discharge Flow	Total Volume of Discharge	Dilution Ratio	Consented	Cause	Monitoring Results
d/m/y	hr:min	L/s	L/s	L/s	L/s	m^3	--	Y/N		
16/09/2024	3:35	2847	3057	2	58	26	1431:1	Y	High rain	Signs opened along the shoreline, notifications submitted, and a sampling campaign initiated.

Table 12 - 14: Discharges

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. These 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:

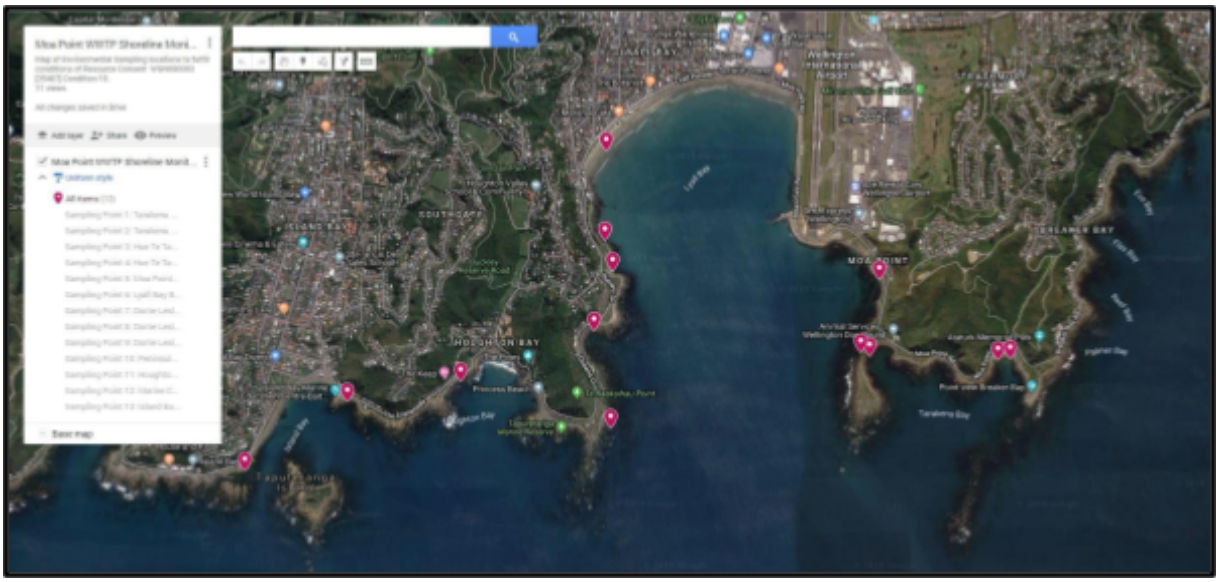

Figure 1: Moa Point WWTP Shoreline Monitoring Sites

Shoreline Monitoring

The following is a summary of the shoreline monitoring performed as part of resource consent WGN080003 [35047], Condition 10 for the July event.

Discharge of partially treated wastewater through the long outfall occurred on 1 July. Due to repair works on clarifier #2 treatment capacity of the plant was reduced to 2200 L/s. Flow exceeding this value is considered to be a discharge since it by-passes the biological treatment. According to the Resource consent, any discharge that occurs during the inlet flows being below 3000 L/s is unconsented and, therefore, this event was unconsented.

Dorrie Leslie Park

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	60	10	S	Moderate	Low	Flood
03/07/2024	10	10	S	Strong	Low	Ebb
04/07/2024	40	10	S	Strong	Low	Ebb

Table 15: Shoreline Monitoring

Dorrie Leslie Park - West End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	10	10	S	Moderate	Low	Flood
03/07/2024	10	20	S	Strong	Low	Ebb
04/07/2024	40	20	S	Strong	Low	Ebb

Table 16: Shoreline Monitoring

Dorrie Leslie Park - South End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	10	10	S	Moderate	Low	Flood
03/07/2024	10	30	S	Strong	Low	Ebb
04/07/2024	20	20	S	Strong	Low	Ebb

Table 17: Shoreline Monitoring

Hue te Taka Peninsula

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	10	10	S	Moderate	Low	Flood
03/07/2024	30	20	S	Strong	Low	Ebb
04/07/2024	20	10	S	Moderate	Low	Ebb

Table 18:Shoreline Monitoring

Hue te Taka Peninsula - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	20	20	S	Moderate	Low	Flood
03/07/2024	20	20	S	Strong	Low	Ebb
04/07/2024	20	10	S	Moderate	Low	Ebb

Table 19: Shoreline Monitoring

Tarakena Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	50	20	S	Moderate	Low	Flood
03/07/2024	30	10	S	Strong	Low	Ebb
04/07/2024	30	10	S	Moderate	Low	Ebb

Table 20: Shoreline Monitoring

Tarakena Bay - North End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	50	10	S	Moderate	Low	Flood
03/07/2024	20	10	S	Strong	Low	Ebb
04/07/2024	10	20	S	Moderate	Low	Ebb

Table 21: Shoreline Monitoring

49 Moa Road

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	10	10	S	Moderate	Low	Flood
03/07/2024	20	20	S	Strong	Low	Ebb
04/07/2024	10	10	S	Moderate	Low	Ebb

Table 22: Shoreline Monitoring

Eastern End of Lyall Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	90	170	S	Moderate	Low	Flood
03/07/2024	140	70	S	Strong	Low	Ebb
04/07/2024	60	40	S	Strong	Low	Ebb

Table 23: Shoreline Monitoring

Waitaha Cove Southern End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	90	130	S	Moderate	Low	Flood
03/07/2024	60	20	S	Strong	Low	Ebb
04/07/2024	20	40	S	Strong	Low	Ebb

Table 24: Shoreline Monitoring

Houghton Bay - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	40	10	S	Moderate	Low	Flood
03/07/2024	50	10	S	Strong	Low	Ebb
04/07/2024	10	10	S	Strong	Low	Ebb

Table 25: Shoreline Monitoring

Island Bay - Marine Centre

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	300	280	S	Moderate	Low	Flood
03/07/2024	140	70	S	Strong	Low	Ebb
04/07/2024	70	30	S	Strong	Low	Ebb

Table 26: Shoreline Monitoring

Island Bay - Western End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
02/07/2024	40	10	S	Moderate	Low	Flood
03/07/2024	1000	340	S	Strong	Low	Ebb
04/07/2024	200	170	S	Strong	Low	Ebb

Table 27: Shoreline Monitoring

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
	cfu/100mL	cfu/100mL
Enterococci	140	280
Faecal Coliforms	260	550

Table28: Shoreline Monitoring Guidelines

Shoreline Monitoring

The following is a summary of the shoreline monitoring performed as part of resource consent WGN080003 [35047], Condition 10 for the August event.

Dorrie Leslie Park

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	20	70	NW	Light	Mid	Ebb
20/08/2024	10	100	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 29: Shoreline Monitoring

Dorrie Leslie Park - West End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	180	200	NW	Light	Mid	Ebb
20/08/2024	10	30	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 30: Shoreline Monitoring

Dorrie Leslie Park - South End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	60	100	NW	Light	Mid	Ebb
20/08/2024	10	40	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 31: Shoreline Monitoring

Hue te Taka Peninsula

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	30	10	NW	Light	Low	Ebb
20/08/2024	10	20	S	Light	Mid	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 32:Shoreline Monitoring

Hue te Taka Peninsula - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	30	200	NW	Light	Low	Ebb
20/08/2024	10	20	S	Light	Mid	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 33: Shoreline Monitoring

Tarakena Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	10	10	NW	Light	Low	Ebb
20/08/2024	10	10	S	Light	Mid	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 34: Shoreline Monitoring

Tarakena Bay - North End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	20	10	NW	Light	Low	Ebb
20/08/2024	10	10	S	Light	Mid	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 35: Shoreline Monitoring

49 Moa Road

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	20	10	NW	Light	Low	Ebb
20/08/2024	10	20	S	Light	Mid	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 36: Shoreline Monitoring

Eastern End of Lyall Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	10	30	NW	Light	Mid	Ebb
20/08/2024	10	10	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 37: Shoreline Monitoring

Waitaha Cove Southern End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	100	110	NW	Light	Mid	Ebb
20/08/2024	10	60	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 38: Shoreline Monitoring

Houghton Bay - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	20	30	NW	Light	Mid	Ebb
20/08/2024	10	10	S	Light	High	Ebb
21/08/2024	10	10	N	Light	High	Ebb

Table 39: Shoreline Monitoring

Island Bay - Marine Centre

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	400	240	NW	Light	Mid	Ebb
20/08/2024	20	40	S	Light	High	Ebb
21/08/2024	30	40	N	Light	High	Ebb

Table 40: Shoreline Monitoring

Island Bay - Western End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
19/08/2024	230	120	NW	Light	Mid	Ebb
20/08/2024	80	120	S	Light	High	Ebb
21/08/2024	40	10	N	Light	High	Ebb

Table 41: Shoreline Monitoring

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
	cfu/100mL	cfu/100mL
Enterococci	140	280
Faecal Coliforms	260	550

Table 42: Shoreline Monitoring Guidelines

Shoreline Monitoring

The following is a summary of the shoreline monitoring performed as part of resource consent WGN080003 [35047], Condition 10 for the September event.

Dorrie Leslie Park

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	50	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	20	NW	Mid	High	Ebb

Table 29: Shoreline Monitoring

Dorrie Leslie Park - West End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	40	20	N	Light	Low	Ebb
18/09/2024	10	20	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 30: Shoreline Monitoring

Dorrie Leslie Park - South End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	20	SW	Light	High	Ebb
19/09/2024	10	20	NW	Mid	High	Ebb

Table 31: Shoreline Monitoring

Hue te Taka Peninsula

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 32:Shoreline Monitoring

Hue te Taka Peninsula - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	20	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 33: Shoreline Monitoring

Tarakena Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 34: Shoreline Monitoring

Tarakena Bay - North End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 35: Shoreline Monitoring

49 Moa Road

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 36: Shoreline Monitoring

Eastern End of Lyall Bay

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	10	N	Light	Low	Ebb
18/09/2024	10	10	SW	Light	High	Ebb
19/09/2024	10	10	NW	Mid	High	Ebb

Table 37: Shoreline Monitoring

Waitaha Cove Southern End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	20	N	Light	Low	Ebb
18/09/2024	10	20	SW	Light	High	Ebb
19/09/2024	10	20	NW	Mid	High	Ebb

Table 38: Shoreline Monitoring

Houghton Bay - Western Side

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	10	20	N	Light	Low	Ebb
18/09/2024	10	20	SW	Light	High	Ebb
19/09/2024	10	30	NW	Mid	High	Ebb

Table 39: Shoreline Monitoring

Island Bay - Marine Centre

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	30	10	N	Light	Low	Ebb
18/09/2024	90	170	SW	Light	High	Ebb
19/09/2024	80	70	NW	Mid	High	Ebb

Table 40: Shoreline Monitoring

Island Bay - Western End

Date	Enterococci	Faecal Coliforms	Wind Direction	Wind Strength	Tide	Sea Conditions
dd/mm/yyyy	cfu/100mL	cfu/100mL	--	--	--	--
17/09/2024	40	10	N	Light	Low	Ebb
18/09/2024	40	120	SW	Light	High	Ebb
19/09/2024	80	50	NW	Mid	High	Ebb

Table 41: Shoreline Monitoring

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
	cfu/100mL	cfu/100mL
Enterococci	140	280
Faecal Coliforms	260	550

Table 42: Shoreline Monitoring Guidelines

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

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 16 is not applicable since the short outfall discharges bypass the full treatment process.

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 reporting period.

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 inspection was conducted on 21st March 2024 and the subsequent report was submitted to GWRC for review. The next inspection is scheduled for early January 2025.

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 September 2024. The report can be found in Appendix iii: Ambient Microbe Monitoring.

Condition 8

> **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.

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 total reduced sulphur compounds (TRS) concentration are measured once a month by an independent contractor. The reports can be found in Appendix ii: H_2S and TRS Concentrations.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	**ppm**	**ppm**
July 2024	0.015	0.003
August 2024	0.001	0.003
September 2024	0.001	0.003
Limit	**0.01**	**0.05**

Table 16: H_2S and TRS Concentrations

Condition 9

> 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 listed under WGN080003 [26183] Condition 8 and Appendix ii: H_2S and TRS Concentrations. Hydrogen sulphide concentration has met the requirements given in Condition 9.

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 the Community Liaison Group, if requested.

Smoke testing of the Moa Point WWTP was not undertaken in this reporting period but is scheduled to be undertaken in November.

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.

There have been no complaints received regarding this resource consent during the reporting period.

WGN960094 [1471]

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_2S and TRS

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. The reports can be found in H_2S and TRS Concentrations.

Date	Hydrogen Sulphide	Total Reduced Sulphur Compound
MMM YYYY	**ppm**	**ppm**
July 2024	0	0.002
August 2024	0	0.003
September 2024	0	0.003
Limit	**0.01**	**0.05**

Table 17: H_2S 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 reporting period.

Appendix i: Heavy Metals Analysis

eurofins | Food & Water Testing

ANALYTICAL REPORT

REPORT CODE	AR-24-NW-045224-01	REPORT DATE	31/07/2024

Attention Veolia Water - Wellington
Petra Vachova
Wastewater Treatment Plant
P.O. Box 14744
WELLINGTON 6041
Wellington
NEW ZEALAND

Phone (04) 388 0067
Email petra.vachova@veolia.com

Copy to: Robins (nico.robins@veolia.com), Lawlor (rik.lawlor@veolia.com), Mundwa (tichafara.mundwa@veolia.com), Admin

Contact for your orders: Deb Bottrill
Contract: Moa Point Regular Testing

Order code: EUNZWE-00195912
Purchase Order Number: 7300375606

SAMPLE CODE **812-2024-00106912**

Sampling Point code: MOA_EFF_G_1Q
Sampling Point name: Moa Effluent Grab 1Quarterly
Reception Date & Time: 24/07/2024 11:59
Analysis Started on: 25/07/2024
Analysis Ending Date: 31/07/2024
Product Type Waste water
Sampled Date & Time 24/07/2024 08:20
Sampler(s) Garth Fabbro
Sampled by Eurofins No

		RESULTS		LOQ	SPECIFICATIONS
NW676	**Ammonia Nitrogen**				
	Ammonia nitrogen	20.5	mg/l	0.01	
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 ✓ National Guideline
	Total of 2,4,5 & 2,4,6 -Trichlorophenol	<0.02	mg/l	0.02	
NW679	**Cyanide**				
	Cyanide	<0.005	mg/l	0.005	<0.10 mg/L mg/l ✓ National Guideline
NW192	**Oil & Grease**				
	Total Oil and Grease	16	mg/l	4	
NW195	**pH (Tested beyond 15 minute APHA holding time)**				
	pH	6.7		0.1	
NW149	**Total Arsenic**				
	Arsenic (As)	<0.002	mg/l	0.002	<0.26 mg/L mg/l ✓ National Guideline
NW154	**Total Cadmium**				
	Cadmium (Cd)	<0.001	mg/l	0.001	<0.08 mg/L mg/l ✓ National Guideline
NW157	**Total Chromium**				
	Chromium (Cr)	<0.001	mg/l	0.001	<0.48 mg/L mg/l ✓ National Guideline
NW159	**Total Copper**				
	Copper (Cu)	0.008	mg/l	0.002	<0.14 mg/L mg/l ✓ National Guideline

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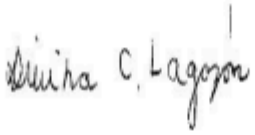
		RESULTS		LOQ	SPECIFICATIONS		
NW161	**Total Lead**						
	Lead (Pb)	<0.001	mg/l	0.001	<0.48 < mg/L mg/l	✓	National Guideline
NW165	**Total Mercury**						
	Mercury (Hg)	<0.001	mg/l	0.001	<0.01 mg/L mg/l	✓	National Guideline
NW167	**Total Nickel**						
	Nickel (Ni)	0.001	mg/l	0.001	<0.77 mg/L mg/l	✓	National Guideline
NW177	**Total Zinc**						
	Zinc (Zn)	0.020	mg/l	0.005	<1.65 mg/L mg/l	✓	National Guideline

LIST OF METHODS

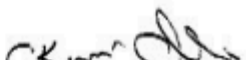
NW00U **Chlorophenols:** Internal Method, LC-MS/MS
NW149 **Total Arsenic:** APHA Online Edition 3125 B mod.
NW154 **Total Cadmium:** APHA Online Edition 3125 B mod.
NW157 **Total Chromium:** APHA Online Edition 3125 B mod.
NW159 **Total Copper:** APHA Online Edition 3125 B mod.
NW161 **Total Lead:** 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

Jennifer Mont Supervisor Eurofins ELS Limited



Divina Cunanan Lagazon Supervisor Eurofins ELS Limited



Gordon McArthur Senior Laboratory Analyst Eurofins ELS Limited

Ganesh Ilancko Supervisor Eurofins ELS Limited

Gabriela Carvalhaes Manager Chemistry

Cody Forbes Laboratory Analyst 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
④ Test is subcontracted outside Eurofins group and is accredited
⑤ Test is subcontracted outside Eurofins group and is not accredited
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
⑨ Test is RLP accredited
⑩ 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

All test method Quality Controls including method blanks, reference samples, spikes, surrogates, and duplicate sample testing, have passed and are within the control limits.

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Appendix ii: Daily Maximum H2S Concentrations

Daily Maximum H_2S Concentrations from the Moa Point IPS and WWTP

Day	July 2024		August 2024		September 2024	
	IPS	WWTP	IPS	WWTP	IPS	WWTP
	ppm		ppm		ppm	
1	0.0900	0.0001	0.0000	0.0001	0.00	0.0001
2	0.0084	0.0001	0.0000	0.0001	0.00	0.0001
3	0.0001	0.0002	0.0000	0.0001	0.00	0.0001
4	0.0012	0.0002	0.0000	0.0002	0.00	0.0001
5	0.0018	0.0002	0.0000	0.0001	0.00	0.0001
6	0.0015	0.0002	0.0000	0.0015	0.00	0.0001
7	0.0016	0.0002	0.0000	0.0001	0.00	0.0001
8	0.0011	0.0002	0.0000	0.0002	0.00	0.0001
9	0.0000	0.0001	0.0000	0.0002	0.00	0.0001
10	0.0001	0.0001	0.0000	0.0001	0.00	0.0001
11	0.0001	0.0002	0.0000	0.0002	0.00	0.0002
12	0.0000	0.0002	0.0000	0.0001	0.00	0.0002
13	0.0000	0.0002	0.0000	0.0002	0.00	0.0001
14	0.0000	0.0001	0.0000	0.0001	0.00	0.0001
15	0.0000	0.0002	0.0000	0.0002	0.00	0.0002
16	0.0000	0.0002	0.0001	0.0001	0.00	0.0001
17	0.0000	0.0001	0.0000	0.0002	0.00	0.0001
18	0.0000	0.0001	0.0000	0.0001	0.00	0.0001
19	0.0000	0.0135	0.0000	0.0002	0.00	0.0001
20	0.0000	0.0347	0.0000	0.0002	0.00	0.0001
21	0.0000	0.0082	0.0000	0.0001	0.00	0.0001
22	0.0000	0.0001	0.0000	0.0002	0.00	0.0001
23	0.0000	0.0002	0.0000	0.0001	0.00	0.0001
24	0.0000	0.0002	0.0000	0.0001	0.00	0.0001
25	0.0000	0.0002	0.0000	0.0001	0.00	0.0000
26	0.0000	0.0068	0.0000	0.0001	0.00	0.0000
27	0.0000	0.0050	0.0000	0.0001	0.00	0.0000
28	0.0000	0.0139	0.0000	0.0001	0.00	0.0000
29	0.0000	0.0174	0.0000	0.0001	0.00	0.0000
30	0.0000	0.0085	0.0000	0.0001	0.00	0.0000
31	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000
Limit	0.01					

Appendix iii: Ambient Microbe Monitoring