

Compliance Monitoring Report

Consent Holder	Ravensdown Fertiliser Co-operative Limited	Consent No	DP040143Wa
Client Address	Private Bag 6012 Hawke's Bay Mail Centre NAPIER 4142	Site Address	808 Waitangi Road, Awatoto
Contact Name	Helen Hurring	Phone	(06) 834 1769
Job Code	456006	Mobile	021 900 457
		Consent Type	Discharge Permit

Activity Description:

to discharge contaminants into water for the purpose of disposing of stormwater, cooling water from air compressors and a hydraulic drive, water from drinking fountains and a truck wash, water from cooling towers and high pressure boilers, and rinse water from a boiler water treatment plant into the Tutaekuri River (Waitangi Estuary)

16-Apr-14	Monitoring Report Sent	Officer	Barbara McKenzie
01-Apr-15	Monitoring Inspection	Officer	Andrew Gass
21-Apr-15	Monitoring Report Sent	Officer	Barbara McKenzie

2014-2015 Statement of Compliance and Overall Grades:

Grade Date	13-Apr-15
Environmental Grade	Non Compliance
Technical Grade	Compliance

Overall Comments:

This report applies to the period 16 April 2014 to 1 April 2015.

The non-compliance relates to Condition 4, parts a), e) & f).
pH was below the required standard on at least three occasions during the monitoring period (data is provided as a month minimum, average and maximum). The minimum pH figures recorded were:
April 2014 = 6.2
July 2014 = 6.4
August 2014 = 5.8

Total phosphorous was exceeded on at least 3 occasions since April 2014:
19.7 in April 2014
23.8 in May 2014
24.8 in September 2014.

From the data provided, total phosphorous has been exceeded for both the 95% and 99% limits in any 12 month period for the whole monitoring period.

SRP was exceeded on four occasions since April 2014, reaching:
19.5 in April 2014
23.4 in May 2014
17.8 in June 2014
24.8 in September 2014.

From the data provided, SRP has been exceeded for both the 95% and 99% limits in any 12 month period for the whole monitoring period.

Reasons for the exceedances have been explained through the installation of two swale drains at the south end of the acid plant to prevent unconsented discharges to the Waitangi Waterway. A Stormwater Management Plan is in the process of development to reduce high TP and SRP concentrations.

Previous Statement of Compliance and Overall Grades:

Grade Date 15-Apr-14
Environmental Grade Non Compliance
Technical Grade Compliance

Overall Comments:

This report applies to the period between 31 July 2013 and 15 April 2014.

The non-compliance relates to condition 4, the discharge has had several exceedences for both Total Phosphorous and Soluble Reactive Phosphorous. Reasons have been provided as to the cause of the exceedences and measures put in place to mitigate them. Improvements have been made to the drainage network to better contain stormwater.

Refer to back page for grading information

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
1	Technical	All works and structures relating to this resource consent shall be designed and constructed to conform to the best engineering practices and at all times maintained to a safe and serviceable standard.
	Compliance	15-Apr-14 Compliance based on as-built plans, producer statement and visual observations on site. Stormwater diversion drains have been installed alongside the road by the acid plant to the settling pond.
	Compliance	13-Apr-15 Works and structures were maintained.
2	Technical	The consent holder shall undertake all operations in accordance with any drawings, specifications, statements of intent and other information supplied as part of the application for this resource consent. If a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail.
	Compliance	15-Apr-14 Compliance based on as-built plans, producer statement and visual observations on site.
	Compliance	13-Apr-15 Compliance based on as-built plans, producer statement and visual observations on site.
3	Environmental	For the purposes of this consent, the zone of reasonable mixing of the discharge, to which the Class AE (HB) receiving water quality standards does not apply, shall be the Ravensdown Drain and 90 m down the Awatoto Drain (GPS Co-ordinates N6175341, E2846875).
	Compliance	15-Apr-14
	Compliance	13-Apr-15 Mixing zone description only.
4	Environmental	The consent holder shall ensure that the discharge complies with the following standards at the outlet of the settling pond, as shown on Figure 3 submitted with the application and attached: a) pH to be within 6.5 – 8.5.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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b) Fluoride not to exceed 30 mg/litre.

c) Suspended Solids not to exceed 100 mg/litre.

d) Rate of discharge not to exceed 265 litres /second.

e) Total phosphorus:

From the date of the commencement of this consent until 30 June 2012:

Over any 12 month period the concentration of total phosphorus shall not exceed 35 mg/litre for more than 95% of the time;

Over any 12 month period the concentration of total phosphorus shall not exceed 40 mg/litre for more than 99% of the time.

From the 1st of July 2012:

Over any 12 month period the concentration of total phosphorus shall not exceed 17 mg/litre for more than 95% of the time;

Over any 12 month period the concentration of total phosphorus shall not exceed 22 mg/litre for more than 99% of the time.

f) Soluble Reactive Phosphorus:

From the date of the commencement of this consent until 30 June 2012:

Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 30 mg/litre for more than 95% of the time;

Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 35 mg/litre for more than 99% of the time.

From the 1st of July 2012:

Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 15 mg/litre for more than 95% of the time;

Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 20 mg/litre for more than 99% of the time.

Non Compliance

15-Apr-14

The discharge complies with parts a-d of this condition.

The discharge has exceeded the standards for parts e) and f).

Total phosphorous had 5 of 52 samples >17 mg/l and 2>22mg/l.

SRP had 5 of 52 samples >15mg/l.

An explanation was provided for the exceedences and measures have been put in place so the discharge meets the required standards.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
Non Compliance	13-Apr-15	<p>The non-compliance relates to parts a), e) & f). pH was below the required standard on three occasions during the monitoring period. The minimum pH figures recorded were: April 2014 = 6.2 July 2014 = 6.4 August 2014 = 5.8</p> <p>Total phosphorous was exceeded on at least 3 occasions since April 2014, reaching: 19.7 in April 2014 23.8 in May 2014 24.8 in September 2014. From the data provided, total phosphorous has been exceeded for both the 95% and 99% limits in any 12 month period for the whole monitoring period.</p> <p>SRP was exceeded on four occasions since April 2014, reaching: 19.5 in April 2014 23.4 in May 2014 17.8 in June 2014 24.8 in September 2014. From the data provided, SRP has been exceeded for both the 95% and 99% limits in any 12 month period for the whole monitoring period.</p> <p>Reasons for the exceedances have been explained through the installation of two swale drains at the south end of the acid plant to prevent unconsented discharges to the Waitangi Waterway. A Stormwater Management Plan is in the process of development to reduce high TP and SRP concentrations.</p>
5	Technical	<p>The consent holder shall carry out the following monitoring programme at the consent holders expense:</p> <p>a) A sampling station shall be maintained at the outlet of the settlement pond and be accessible to the Council officers, or its agents at all times.</p> <p>b) A representative, flow-proportional, composite sample (sampled continuously over a period of 24 hours) shall be collected from the sampling station, referred to in Condition 5a, at least once per week and tested for the following parameters:</p> <ul style="list-style-type: none"> i) pH; ii) total phosphorus; iii) soluble reactive phosphorus; iv) fluoride; v) suspended solids <p>Results shall be recorded on a mass per unit volume of discharge basis and the volume of discharge shall also be recorded. The records shall be forwarded to the Council at monthly intervals, along with an assessment of compliance against condition 4.</p> <p>c) A representative, flow-proportional, composite sample (sampled continuously over a period of one week) shall be collected from the sampling station, referred to in Condition 5a, at six monthly intervals and tested for the following parameters:</p>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<p>i) total copper</p> <p>ii) total zinc</p> <p>iii) total cadmium</p> <p>iv) total chrome</p> <p>v) total aluminium</p> <p>vi) total sulphur</p> <p>Results shall be taken on a mass per unit volume of discharge basis and the volume of discharge taken shall also be recorded. The records shall be forwarded to the Council at six monthly intervals.</p> <p>d) All sampling and surveys shall be carried out by a person suitably qualified and experienced in this field and authorised by the Council (Manager: Regulation).</p> <p>e) All analyses in accordance with conditions of this consent shall be carried out by an independently IANZ accredited laboratory and authorised by the Council (Manager: Regulation).</p> <p>f) The consent holder shall calibrate and operate any meters required for monitoring in accordance with the manufacturer's specifications, or to the reasonable satisfaction of the Chief Executive of the Hawke's Bay Regional Council.</p>
	Compliance	<p>15-Apr-14</p> <p>A sampling station is maintained.</p> <p>The required sampling is carried out by a suitably qualified person and results provided as required.</p> <p>Samples are analysed at ARL, an IANZ accredited laboratory.</p>
	Compliance	<p>13-Apr-15</p> <p>Samples have been collected as required and results provided to Council with the monthly reports.</p> <p>The sampling station was observed to be maintained.</p>
6	Technical	<p>Every fourth year starting from the commencement of this consent, the consent holder shall monitor the following components in the receiving environment at their expense:</p> <p>a) the structure of macrofaunal communities to determine both temporal and spatial changes in the community composition. Species diversity, richness, abundance and evenness shall be determined for the benthic macrofauna, and data should be subjected to appropriate multi-variate analyses in relations to chemical and physical measurements.</p> <p>b) sediment quality to determine sediment health, and potential accumulation of contaminants within the sediments.</p> <p>Sediments should be analysed for:</p> <ul style="list-style-type: none"> - total copper - total cadmium

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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- total chromium
- total zinc
- fluoride
- total phosphorus
- sulphur
- sediment composition
- nickel

As per table in consent document:

c) Cancelled.

d) chlorophyll a concentrations as an indicator of potential nutrient enrichment.

e) presence/absence of fish species.

f) periphyton biomass and taxonomy as an indicator of potential nutrient enrichment.

g) undertake Whole Effluent Toxicity Testing to determine the effects of the combined discharge on organisms in the receiving environment on three test species at 100: 1 dilution.

h) Every month¹, starting from the commencement date of this consent, the consent holder shall monitor, at their expense, at the locations indicated by a green star in Appendix 2, receiving water quality to determine whether contaminants of concern are present and in what concentrations.

Receiving water should be analysed for:

- Temperature
- Salinity
- Dissolved oxygen
- pH
- Suspended Solids
- Chlorophyll a
- Ammoniacal Nitrogen
- Nitrate Nitrogen
- Nitrite Nitrogen
- Nitrate + Nitrite Nitrogen
- Total Nitrogen
- SRP

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<ul style="list-style-type: none"> - TP - Sulphur - Fluoride - Metals (Al, Cd, Cr, Cu, Zn and Ni) <p>As per table in consent document:</p> <p>1For the avoidance of doubt it is acknowledged that monitoring can only occur when there is flow present in the Waitangi Drain. If there is no or very low flows in Waitangi Drain the consent holder must inform the Council (Manager Resource Use) that they have been unable to undertake the required sampling as soon as practicable, and within 7 days of trying to undertake the sampling. Evidence (eg. photos of flows in the drain at the time) should be provided to confirm this.</p> <p>i)Each year, on two occasions (one during either January or February, and one during June, July or August) the consent holder shall monitor stormwater discharged in the "first flush" of a rainfall event. Samples shall be taken at the locations indicated by a red star in Appendix 2 and analysed for the same contaminants and at the same detection limits as specified in condition 6 (h) except for chlorophyll a which samples do not need to be analysed for.</p>
	Compliance	<p>15-Apr-14</p> <p>The four yearly monitoring is not due until 2015.</p> <p>The required monthly sampling is carried out as per this condition.</p>
	Compliance	<p>13-Apr-15</p> <p>The four yearly monitoring is currently underway and being undertaken by Aquanet consulting.</p> <p>The monthly sampling is undertaken by EAM NZ Ltd. Sample results have been received up to January 2015. The stormwater sampling component of this condition is unable to be assessed until the results are updated. If no sample was collected in January or February please provide an explanation for this.</p>
7	Technical	<p>The consent holder shall submit a monitoring program, designed to meet the requirements of Condition 6, to the satisfaction of the Council (Manager: Environmental Regulation), prior to the receiving environment monitoring occurring in accordance with Condition 7.</p>
	Compliance	<p>15-Apr-14</p> <p>The monitoring program was submitted.</p>
	Compliance	<p>13-Apr-15</p> <p>A monitoring program was submitted and approved by Council. Regular updates have been provided where any deviation from the program has occurred.</p>
8	Technical	<p>Within three months of the receiving environment monitoring taking place in accordance with Condition 7, the consent holder shall submit a report to the Hawke's Bay Regional Council detailing results and analysis of the monitoring, and a summary of conclusions.</p>

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