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Our ref: DP050561Aa, DP040143W

1st February 2012

Ravensdown Fertiliser Co-operative Ltd Private Bag 6012 Hawke's Bay Mail Centre **NAPIER 4142**

Dear Sir/Madam

COMPLIANCE MONITORING - DP050561AA & DP040143W - 808 WAITANGI ROAD

Following up on compliance monitoring of the above resource consents for the 2011/12 year, I have compiled your reports.

The reports identify that compliance has been gained. Thank you for your efforts to achieve full compliance with your consent conditions. I look forward to seeing this standard maintained.

Please note that under Section 36 of the Resource Management Act 1991 you will be charged for the actual and reasonable costs involved in monitoring the resource consents. An account for this monitoring year will be sent after 30 June 2012.

Please contact me should you have any questions.

Yours faithfully

JIM MAY

ENVIRONMENTAL OFFICER - COMPLIANCE

RESOURCE MANAGEMENT GROUP

Email:

Phone: (06) 833 8030 jim@hbrc.govt.nz

Enc: H2S graphs x2



Compliance Monitoring Report

Consent Holder

Ravensdown Fertiliser Co-

operative Limited

Consent No DP040143W

Client Address

Private Bag 6012

Site Address 808 Waitangi Road, Awatoto

Hawke's Bay Mail Centre

NAPIER 4142

Phone

(06) 834 1760

Contact Name

Kevin Gettins

Mobile

021 900 292

Job Code

456006

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).

07-Dec-10

Monitoring Report Sent

Officer

Barbara McKenzie

28-Oct-11

Monitoring Inspection

Officer

Jim May

01-Feb-12

Monitoring Report Sent

Officer

Barbara McKenzie

2011-2012 Statement of Compliance and Overall Grades:

Grade Date

30-Jan-12

Environmental Grade

Compliance

Technical Grade

Compliance

Overall Comments:

Condition 8 will be assessed when Ravensdown submit the survey report required by Condition 6. Full compliance with all the other conditions.

Previous Statement of Compliance and Overall Grades:

Grade Date

01-Dec-10

Environmental Grade

Compliance

Technical Grade

Compliance

Overall Comments:

To date, full compliance with the conditions has been achieved.

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	01-Dec-10
		Observed to be the case.
	Compliance	30-Jan-12
		Observed to be the case.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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	01-Dec-10 Observed to be the case.
	Compliance	30-Jan-12
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	01-Dec-10
		This is understood by the consent holder.
	Compliance	30-Jan-12 The mixing zone specified in the consent should be confirmed.
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.
		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:
		$\hfill \Box$ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 30 mg/litre for more than 95% of the time;
		$\hfill \Box$ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 35 mg/litre for more than 99% of the time.

v) total aluminium

vi) total sulphur

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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.
		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).
		 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).
		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.
	Compliance	01-Dec-10 A sampling station is available.
	Compliance	30-Jan-12 Results are contained in the monthly reports.
6	Technical	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:
		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.
		b) sediment quality to determine sediment health, and potential accumulation of contaminants within the sediments.
		Sediments should be analysed for:
		- total copper
		- total cadmium
		- total chromium
		- total zinc
		- fluoride
		- total phosphorus
		- sulphur
		- sediment composition
		- nickel

Metal□□

Detection Limit□□

Condition No.

Type of Condition

Consent Condition and Compliance Assessment

Total Copper□□	
2 mg/kg (screen)□□	
Total Cadmium□□	
0.1 mg/kg (screen)□□	
Total Chromium□□	
2 mg/kg (screen)□□	
Total Zinc□□	
4 mg/kg (screen)□□	
Total Mercury□□	
0.1 mg/kg (screen)□□	
Total Nickel□□	
2 mg/kg (screen)□□	
c) receiving water quality to determine whether contaminants of concern are present and in what concentrations.	е
Receiving water should be analysed for:	
- Temperature	
- Salinity	
- Dissolved oxygen	
- pH	
- Susended Solids	
- Chlorophyll a	
- Ammoniacal Nitrogen	
- Nitrate Nitrogen	
- Nitrite Nitrogen	
- Nitrate + Nitrite Nitrogen	

0.00008 mg/l (trace)□□

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		0.0
		Nickel□□
		0.0005 mg/l (trace)□□
		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.
	Not applicable	01-Dec-10 Next monitoring due June 2011
	Compliance	30-Jan-12
		This survey was conducted in 2011 by EAM. The consent holder has not yet received the survey report.
7	Technical	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.
	Not applicable	01-Dec-10
		Next monitoring due June 2011
	Compliance	30-Jan-12
		This monitoring was agreed to by Council, prior to the survey.
8	Technical	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.
	Not applicable	01-Dec-10 Next monitoring due June 2011
	Not applicable	30-Jan-12
		The consent holder has not received this report yet.
9	Technical	The consent holder shall prepare an annual report for the period of July to June each year, and by the end of July and submit it to the Hawke's Bay Regional Council. The report shall summarise monitoring and compliance to the consent conditions and discuss any non-compliance and recommended necessary actions to achieve compliance.
	Not applicable	01-Dec-10 The next annual report is due after June 2011 for this whole season.

No.	Condition	Consent Condition and Compliance Assessment
	Compliance	30-Jan-12
		Council received the annual report in November 2011.

Grading Information

Each consent condition has been classified as either a Environmental or Technical condition.

Environmental conditions:

Environmental conditions set standards/performance limits for a resource consent, or, mitigates an environmental impact of exercising a resource consent.

Examples of environmental conditions are:

- Installation of up-gradient cut-off drains/ placement of disposal fields
- Dvolume limits of discharges
- Dwater take rates and maximum volumes
- Discharge or receiving water contaminant limits

Technical conditions:

Technical conditions sets out technical requirements that allows a consent holder to demonstrate or measure that they meet the Environmental performance required by a resource consent, or help specify the activity authorised.

Examples of technical conditions are:

- Dsampling effluent/ recording discharge volumes / collating submitting data
- providing of reports/ plans/ designs specifications
- Inotifications, accreditation, authorities submissions for approval by ER Manager
- Dinstallation and maintenance of a water meter

You need to comply with all conditions regardless of whether it's a Environmental or Technical condition.

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Compliance Monitoring Report

Consent Holder

Ravensdown Fertiliser Co-

operative Limited

Consent No DP050561Aa

Client Address

Private Bag 6012

Site Address 808 Waitangi Road, Awatoto

Hawke's Bay Mail Centre

NAPIER 4142

Phone

(06) 835 9227

Contact Name

Carla Pell

Mobile

021 227 4175

Job Code

456007

Consent Type

Discharge Permit

Activity Description:

To discharge contaminants into the air from the operation of the company's fertiliser manufacturing plant at Awatoto, including the following processes:

- The manufacture of sulphuric acid,

- The manufacture of superphosphate fertiliser.

- The storage, blending and dispatch of bulk and bagged fertilisers and sulphuric acid.

- The receipt and storage (inside and outside) of raw materials and imported fertiliser.

- □ General site operations

28-Oct-11

Monitoring Inspection

Officer

Jim May

07-Nov-11

Monitoring Inspection

Officer

Jim May

01-Feb-12

Monitoring Report Sent

Officer

Barbara McKenzie

2011-2012 Statement of Compliance and Overall Grades:

Grade Date

01-Feb-12

Environmental Grade Compliance

Technical Grade

Compliance

Overall Comments:

Condition 28 could not be assessed because the Ringlemann test was not conducted during the warm up period. Full compliance with all the other conditions.

Previous Statement of Compliance and Overall Grades:

Grade Date

06-Dec-10

Environmental Grade

Non Compliance

Technical Grade

Non Compliance

Overall Comments:

The consent holder is addressing the issues with the conditions where significant non-compliance has been assessed. Council is processing an application to vary a number of conditions in this consent.

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	06-Dec-10
		Full compliance with this condition.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	01-Feb-12
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	06-Dec-10 The consent holder understands this requirement.
	Compliance	01-Feb-12
3	Environmental	There shall be no discharge of particulate matter (including dust) that causes an offensive or objectionable effect beyond the boundary of the site. Compliance with Conditions 6 to 13 does not automatically result in compliance with this condition.
	Compliance	06-Dec-10 There have not been any complaints so far this season.
	Compliance	01-Feb-12 There have not been any complaints for particulate matter from this site.
4	Environmental	There shall be no discharge of odour that causes an offensive or objectionable effect beyond the boundary of the site.
	Compliance	06-Dec-10 There have not been any complaints so far this season.
	Compliance	01-Feb-12 There have not been any odour complaints.
5	Environmental	Notwithstanding any other condition of this consent, there shall be no noxious or dangerous levels of gases, airborne liquid or other airborne contaminants beyond the legal boundary of the site, that are likely to cause adverse effects on human health, ecosystems or property. Note: for the purpose of this condition the term 'property' shall mean 'land and all assets on it'.
	Compliance	06-Dec-10 There have not been any complaints so far this season.
	Compliance	01-Feb-12 There have not been any complaints for noxious or dangerous contaminants beyond the site boundary.
6	Environmental	All bulk raw materials stored on site shall be kept in enclosed buildings, with the exception of phosphate rock which must otherwise be securely contained to minimise particulate being discharged into air.
	Compliance	06-Dec-10 All bulk materials have been stored inside enclosed buildings.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	01-Feb-12 All bulk raw materials were stored inside enclosed buildings. A new store is being constructed at this time.
7	Environmental	The consent holder shall use its best endeavours to avoid outside storage of phosphate rock. Any outside storage shall be undertaken in accordance with the Investigation and Management Plan, as required by Condition 67 of this consent. Outside storage, excluding the management of spills, shall only be undertaken in the area to the south of the Acid Plant.
	Compliance	06-Dec-10 To date, there has not been any phosphate rock stored outside. The consent holder is aware of the requirements.
	Compliance	01-Feb-12 There was nothing stored outside.
8	Technical	At least 10 working days prior to the use of outside product storage the Consent Holder shall notify the HBRC that product shipments will be arriving which cannot be stored inside. Notification shall include the following:
		a) A summary of why alternative covered storage is not possible
		b) The product type to be stored outside
		c) The likely volume of product to be stored outside
		d) The estimated date of arrival and the time it will take to place product at the outside location
		e) Estimated duration that the product will be stored outside.
	Compliance	06-Dec-10 The consent holder is aware of this requirement.
	Not applicable	01-Feb-12
	angle of controls. So if we have a profession demonstrates according	There was nothing stored outside.
9	Environmental	No outside unloading, pile forming or loading shall occur when average hourly wind speed exceeds 5 m/s. The wind speed shall be determined by an onsite meteorological station in accordance with Condition 42 of this consent.
	Compliance	06-Dec-10
		To date, there has not been any phosphate rock stored outside. The consent holder is aware of this requirement.
	Not applicable	01-Feb-12 There was nothing stored outside.
10	Environmental	The consent holder shall carry out the suppression of dust with use of water through various methods that include, but are not limited to, spraying with water cart or sprinkler system to minimise the discharge of all visible dust beyond the site boundary, particularly during the loading, transfer and stockpiling of product. The control of dust discharges from stockpile areas shall include night-time and weekend hours.
	Compliance	06-Dec-10 The site is regularly swept.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	01-Feb-12
		Dust was controlled on site.
11	Environmental	Notwithstanding Condition 10 the consent holder shall establish and maintain an automated dust suppression sprinkler system that covers all outside storage piles, except for the working face while being worked, which will activate and remain operational for the duration of outside product pile storage, including unloading and loading. The sprinkler system shall have a capacity in terms of volume and layout that will ensure adequate dampening down of the stockpile in all possible wind conditions.
	Compliance	06-Dec-10
		There has not been any bulk product stored outside.
	Not applicable	01-Feb-12
		There was nothing stored outside.
12	Environmental	The consent holder shall ensure regular sweeping of yard and road areas using mechanical cleaning to minimise dust emissions.
	Compliance	06-Dec-10
		The site is regularly swept.
	Compliance	01-Feb-12
		The site is swept monthly.
13	Environmental	The consent holder shall ensure that the product storage pile does not exceed 4 m in height.
	Compliance	06-Dec-10
		There has not been any bulk product stored outside. The consent holder is aware of this requirement.
	Not applicable	01-Feb-12
		There was nothing stored outside.
14	Environmental	Except for discharges from the auxiliary boiler, furnace stack, economiser stacks and other minor vents, all discharges from the acid plant shall be via an emission stack with a height no less than 55 metres above ground level.
	Compliance	06-Dec-10
		There has not been any change to the stack heights this year.
	Compliance	01-Feb-12
		The replacement acid plant stack is the same height as the previous stack.
15	Environmental	The emission rate of SO2 measured by continuous monitoring in the acid plant stack shall not exceed 1.5 kg per minute (two minute average) and 60 kg per hour (one-hour average) at any time.
	Compliance	06-Dec-10
		The monthly reports to date confirm compliance with this requirement.
	Compliance	01-Feb-12
		Reported data confirms compliance with this requirement.
16	Environmental	Notwithstanding Condition 15, the combined discharge rate of SO2, SO3 an

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		H2SO4 from the sulphuric acid production process shall not exceed 60 kg per hour (60 kg/hr), expressed as SO2.
	Compliance	06-Dec-10
		The monthly reports to date confirm compliance with this requirement.
	Compliance	01-Feb-12
		The acid plant automatically shuts down if this level is likely to be reached.
17	Environmental	An Acid Plant cold start up sulphur ignition shall not occur:
		a) between the hours of 1:00 am and 10:00 am on clear still mornings when the wind speed is less than 2 m/s and there is no cloud; and
		b) when the wind direction is between 030 and 155 degrees (onshore winds).
		Note: For the purposes of this consent, an acid plant cold start refers to starting the acid plant from cold, this occurs following a complete shutdown when the acid plant is starting from ambient temperatures and diesel is used to pre-heat the plant. An acid plant warm start refers to starting the acid plant when the plant is already warm, this occurs following a short plant stop, usually less than 8 hours, when the temperature in the acid plant has been maintained above a critical limit.
	Compliance	06-Dec-10
		The monthly reports to date confirm compliance with this requirement.
	Compliance	01-Feb-12 The acid plant cold start was planned to achieve compliance with this condition.
18	Environmental	Subject to condition 21, the combined discharge rate of SO3 and H2SO4 (expressed as SO3) from the sulphuric acid production process shall not exceed:
		a) 2 kilograms per hour as a 1-hour average at any time.
		b) 0.5 kilograms per hour for at least 50% of fixed 1-hour averages in any 3 month period.
	Compliance	06-Dec-10
		The monthly reports to date confirm compliance with this requirement.
	Compliance	01-Feb-12
		Reported data confirms compliance with this requirement.
19	Technical	The existing final acid plant absorbing tower shall be replaced with a new tower containing a high efficiency distribution system, high efficiency packing and high efficiency mist eliminators that reduces the acidity of emissions from the acid plant to ensure compliance with the conditions of this consent at all times. The new tower shall be installed and commissioned by 30th July 2012. A suitably qualified independent person approved by Council (Manager Compliance) shall certify in writing that the new absorbing tower, as installed and operated, is capable of meeting the conditions of this consent. This certification shall be provided to the Council by 31st August 2012.
	Significant Non	Compliance 06-Dec-10 The timeframe for this system was 21 October 2009. Council is processing a variation for this condition.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Not applicable	01-Feb-12
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	This condition does not apply until 31 August 2012.
20	Technical	The discharge from the acid plant stack shall be clear at all times, except that a visible white plume may occur within four hours of igniting sulphur in the case of a cold start up and within one hour in the case of a warm start up.
	Compliance	06-Dec-10 Changes to condition 19 will affect the wording of this condition.
	Compliance	01-Feb-12
		Observed to be the case.
21	Environmental	The discharge from the acid plant may contain up to 150 mg/m3 at NTP SO3 / H2SO4 expressed as SO3 for not more than 4 hours after igniting sulphur in the case of a cold start and not more than 1 hour in the case of a warm start up. This shall be measured in accordance with USEPA method 8 or another method as approved by Council.
	Not applicable	06-Dec-10 This condition does not apply until the SO3/H2SO4 monitor required in condition 46 has been commissioned. Council is processing a variation that will affect the wording of this condition.
	Compliance	01-Feb-12
	•	The data provided demonstrates compliance with this requirement.
22	Environmental	The discharge from the acid plant shall not occur during wind directions between 030 and 155 (onshore winds) between the months of September to May inclusive, when either of the following meteorological conditions occur
		a) The relative humidity measured on-site at 10 metres above ground level is 92% or greater, wind speed at 10 metres above ground level is 3m/s or less and it is not raining; or
		b) The relative humidity measured on-site at 10 metres above ground level is 95% or greater, wind speed at 10 metres above ground is greater than 3m/s and it is not raining.
		Acid plant discharge shall cease within 30 minutes of the above meteorological conditions being detected and shall not recommence until these conditions have not occurred for a period of at least 30 minutes. Plant operators shall be alerted when the measured relative humidity at 10 m above ground during onshore winds (030-155 degrees) exceeds 90%, and careful observation of meteorological conditions and the visible plume discharge shall occur during such conditions. A record shall be kept of the dates, time periods and meteorological conditions when the acid plant operation ceases according to this condition. This record shall be provided to the Council on request and otherwise annually.
	Compliance	06-Dec-10
		The plant shut-downs for the specified criteria, are recorded in the monthly reports.
	Compliance	01-Feb-12
		Reports provided show that the plant did not have to shut down due to these conditions.
23	Environmental	A system shall be installed that automatically shuts off the sulphur feed to the burner so that the discharge to air rate of SO2, SO3 and H2SO4 from the

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		sulphuric acid production process does not exceed Conditions 15 and 16.
	Compliance	06-Dec-10
	Compliance	01-Feb-12
		A system has been installed.
24	Technical	a)a The consent holder shall install and operate at least two ambient SO2 monitors around the acid plant in order to detect fugitive SO2 emissions. The monitoring sites shall be located at or about the southern boundary of the Winstones site, as described in Condition 57, and at or about the engineering store compound, to the western side of the acid plant. The concentration of SO2 in ambient air shall be monitored continuously (at least every minute) by UV fluorescence analysis or an alternative method agreed to in writing by the Council.
		b) In the event that ambient concentrations of SO2 measured at either the monitoring sites described by Condition 24(a) or the monitoring site described by Condition 57 exceed 350 μg/m3 as a 10-minute average, immediate action shall be taken to ensure that measured SO2 concentrations are reduced to less than 350 μg/m3 as a 10 minute average. A record shall be kept of all occurrences when measured SO2 concentrations exceed this limit and the corrective action taken. This record shall be provided to the Council on request and otherwise annually.
	Significant Non	Compliance 06-Dec-10 Two SO2 monitors have been installed. Council is processing a variation to this condition.
	Compliance	01-Feb-12
		The monitors have been installed.
25	Environmental	Discharge from the Auxiliary Boiler shall be via an emission stack of 15.8 metres above ground level.
	Compliance	06-Dec-10 There has been no change to the stack height.
	Compliance	01-Feb-12
		This stack has not been altered.
26	Environmental	The diesel oil burning rate in the auxiliary boiler shall not exceed 580 litres per hour.
	Compliance	06-Dec-10
		The boiler is rated not to exceed this value.
	Compliance	01-Feb-12
		The burning rate has not changed.
27	Environmental	The auxiliary boiler and the pre-heater shall only burn diesel oil having a maximum sulphur content of 0.005 percent by weight. Documents showing fuel analysis shall be provided to the Council on request.
	Compliance	06-Dec-10 Observed to be the case.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	01-Feb-12 Documents on site show that the maximum sulphur content of the diesel is below the required level. (All NZ diesel is now below this level).
28	Environmental	The opacity of emissions from the auxiliary boiler and pre-heater stacks shall not be darker than Ringelmann Shade 1 as determined in accordance with the New Zealand Standard 5201:1973, except for a period not exceeding two minutes in each hour of operation.
	Compliance	06-Dec-10 Council tests confirm compliance with this requirement.
	Unable to be as	The Ringlemann test was not conducted. However, there were no complaints for these discharges during the warm up procedure and visually there was no issue with the discharge.
29	Environmental	The concentration of hydrogen sulphide (H2S) shall be measured in accordance with Condition 50 and shall not exceed 7 µg/m3 (with a 1 hour averaging time) in the ambient air at or beyond the boundary of the premises as a result of emissions from the consent holder's property.
	Compliance	06-Dec-10 Council tests to date confirm this requirement.
	Compliance	01-Feb-12 The hydrogen sulphide levels were continuously monitored 8 to 14 November 2011. The levels detected were well below the required limit. (Graph attached).
30	Environmental	Discharges from each den scrubber shall be via stacks with a height of no less than 38 metres above ground level.
	Compliance	06-Dec-10 The stack heights have not been altered.
	Compliance	01-Feb-12 The height of these stacks has not changed.
31	Environmental	Discharges from the hygiene scrubber shall be via a stack with a height of no less than 36 metres above ground level.
	Compliance	06-Dec-10 The stack height has not been altered.
	Compliance	01-Feb-12 The height of this stack has not changed.
32	Technical	All emissions from the superphosphate manufacturing process shall be discharged through either the den stacks or the hygiene stack. Within 12 months of the commencement of this consent a report shall be provided by an independent suitably qualified person (approved by the Council) that certifies that all necessary remedial work to the ventilation and extraction system has been undertaken such that fugitive contaminant emissions from the manufacturing plant building have been eliminated as far as practicably possible. This ventilation and extraction system shall be maintained and operated at all times during the manufacturing of superphosphate.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Not applicable	06-Dec-10 This condition is now historical.
	Not applicable	01-Feb-12 This condition is now historical.
33	Environmental	The 7-day average concentration of fluoride measured at the RFC SW monitoring site (location as detailed in Condition 54), shall not exceed 1.7 μ g/m3.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
34	Environmental	The 7-day average concentration of fluoride measured at the RFC NW monitoring site (location as detailed in Condition 54), shall not exceed 5.5µg/m3.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
35	Environmental	The rate of particulate matter discharged from any Bradley mill shall not exceed 1 kg/hr per mill, and 2 kg/hr in total when two or more mills are in operation.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
36	Environmental	The sum of the fluoride compounds discharged from the den stacks and the hygiene stack measured in the samples taken in accordance with Condition 49 expressed as fluoride on a one hour average basis, shall not exceed:
		a) a maximum discharge rate of 1.5 kg/hr; and
	Compliance	b) 1 kg/hr in more than 50% of samples taken in any 12-month period 06-Dec-10
		Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
37	Environmental	A treatment system that reduces the acidity of emissions from the manufacturing plant shall be installed such that after 3 months from the commencement of this consent the pH of the condensate from the den and hygiene stacks shall be no lower than 2.7. The method by which the condensate is to measured shall be approved in writing by the Council.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	06-Dec-10
		Monthly report data this season, confirms compliance with this requirement.
	Compliance	01-Feb-12
		Data contained in monthly reports demonstrates compliance with this requirement.
38	Environmental	An automated water deluge system for the manufacturing den mixer shall be installed and maintained such that contaminant discharges are prevented in the event of failure of the mixing process.
	Compliance	06-Dec-10
	Compliance	01-Feb-12
	•	The manufacturing system has been upgraded to one line now.
39	Environmental	Until such time as the pH of the discharge from the manufacturing plant is consistently above 2.7, as required by Condition 37,when the wind speed at the site is no more than 3 metres per second and the wind direction is between 030-155 degrees (i.e. on-shore) the manufacture of fertiliser shall only occur when either:
		a)
		i) the temperature at the site is less than 22 C; and
		ii) the manufacturing stack plume is "OK" as indicated in the chart attached as Appendix "A"; or
		b)
		i) the temperature at the site is 22 C or more; and
		ii) it is daylight; and
		iii) the relative humidity at the site is less than 70%; and
		iv) there is no fog; and
		v) the manufacturing stack plume is 'OK' as indicated in the chart attached as Appendix "A"
		The time and duration of manufacturing plant stoppages due to meteorological conditions shall be recorded. These records shall be provided to the Council on request.
	Not applicable	06-Dec-10
		The pH adjustment system is operational.
	Compliance	01-Feb-12 Monthly reports indicate that the manufacturing plant has not had to stop due to these conditions.
40	Environmental	The concentration of fluoride in ambient air measured in accordance with Condition 54 shall not exceed 0.8 µg/m3 (7 day average) at areas used for horticultural production (including Brookfields Orchard and Plumpton Park (locations as detailed in Condition 54)).

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
41	Environmental	The evaporative cooling towers shall be regularly dosed with micro-biocides to maintain the concentration of the micro-biocide in the cooling water at the level recommended by the supplier that prevents the establishment of Legionella bacteria. Records shall be kept to demonstrate compliance with this condition and shall be provided to the Council on request.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
42	Technical	The consent holder shall operate a meteorological data collection station in a location that reasonably represents meteorological conditions on the site. The station shall continuously record, wind speed, wind direction, temperature and relative humidity, and display them in real time in the manufacturing control room and the acid plant control room. The site location and the resolution, accuracy and averaging time of monitoring equipment shall be agreed in writing by the Council. All processed data shall be archived and made available to the Council on request.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 The consent holder has made meteorological data available to Council from this station.
43	Technical	All sampling and surveys shall be carried out by an independent suitably qualified person, or by the consent holder or its representative where the Council has agreed to this in writing. Where the consent holder or its representative carries out testing or monitoring, an independent suitably qualified person shall audit the monitoring and testing methodology at least once per year, unless otherwise agreed in writing by the Council, and shall provide a written report describing the extent of compliance with the required protocol. A copy of this report shall be provided to the Council.
	Compliance	06-Dec-10 The consent holder has contracted EAM staff for this monitoring.
	Compliance	01-Feb-12 EAM consultants conduct a number of the tests for the site and the Laboratory has accreditation.
44	Technical	All analyses in accordance with conditions on the consent shall be carried out by an independently accredited laboratory to ISO/IEC Guide 25, or to the satisfaction of the Council (Manager: Regulation).
	Compliance	06-Dec-10 As required.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment	
	Compliance	01-Feb-12	
	• *************************************	Both the site laboratory and ARL has accreditation.	
45	Technical	The consent holder shall continuously (i.e. at intervals not exceeding 1 minute) measure the rate of sulphur dioxide (SO2) discharge in the emissions from the acid plant stack. The method of measurement shall be in accordance with ISO7935:1992 (E) (Stationary source emissions – Determination of the mass concentration of sulphur dioxide – performance characteristics of automated measuring methods) or an alternative method, approved in writing, by the Council. Testing results shall be reported as a mass emission rate in units of kilograms per hour as both one minute and hourly averages.	
	Compliance	06-Dec-10	
		Observed to be the case.	
	Compliance	01-Feb-12	
	_	EAM consultants conduct the manual tests and calibration checks are conducted by the laboratory.	
46	Technical	All options for a continuous in-stack SO3/H2SO4 monitoring system shall be reviewed and analysed every 18 months by a suitably qualified independent person. The independent reviewer shall prepare a written report detailing the viability and estimated cost of all monitoring options internationally available. This information shall be provided to the Council no later than one month after the time of review. a) From 1st August 2012 continuous opacity measurements shall be	
		undertaken in the acid plant stack at all times to provide an indication of acid mist emissions for operational purposes. Records of these measurements shall be kept and made available to Council on request.	
	Significant Non Compliance 06-Dec-10		
		The equipment trialled has proven unsatisfactory. Council is processing an application to vary this condition.	
	Not applicable	01-Feb-12	
		Options are to be reviewed next year.	
47	Technical	The consent holder shall measure the rate of discharge of the SO2, SO3 and H2SO4 in the emissions from the acid plant stack, at least twice per week. This monitoring shall be undertaken in accordance with USEPA Method 8 (Determination of sulphuric acid mist and sulphur dioxide emissions from stationary sources) or an alternative method that is approved, in writing, by the Council.	
	Compliance	06-Dec-10 Observed to be the case.	
	Compliance	01-Feb-12	
		Data contained in monthly reports demonstrates compliance with this requirement.	
48	Technical	The discharge rate of the total sulphur compounds obtained in accordance with Condition 47 shall be used in conjunction with the continuous record of sulphur dioxide obtained in accordance with Condition 45 to determine a continuous record of the rate of sulphur compounds discharged, expressed as SO2.	

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	06-Dec-10
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
49	Technical	The consent holder shall measure the discharge rate of fluoride in the emissions from each of the den stacks and the hygiene stack, at least twice per week using wet chemistry methods. The measurement is to be carried out during superphosphate manufacture and no test may commence within one hour of starting acidulation. The method of measurements shall be in accordance with USEPA Method 13B (Total fluoride specific ion electrode) or an alternative method approved, in writing, by the Council (Manager: Regulation).
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
50	Technical	Concentrations of hydrogen sulphide in ambient air shall be monitored in accordance with the method of measurement (AS 3580.8.1 1990). The methods for sampling and analysis shall be automatic intermittent sampling gas chromotographic method, or an alternate method approved in writing by the Council. The monitoring shall be carried out for a period of at least 7 complete days at least twice per year. The location of the monitoring shall be agreed upon with the Council at the time of installation of the monitoring equipment. Results shall be reported as 1-hour averages.
	Compliance	06-Dec-10 Council is processing a variation for this condition.
	Compliance	01-Feb-12
		Council conducted continuous monitoring for Hydrogen Sulphide 8-14 November 2011. There was full compliance with this condition.
	Technical	The rate of particulate matter discharged from each mill shall be measured at least once every 3 months. The method of sampling and analysis shall comply with US Environmental Protection Agency (USEPA) Method 5 or Method 17, ISO 9096:2003 or ASTM D3685-98, or a similar iso-kinetic method to the satisfaction of the Council. The testing time for each sample shall be two hours continuous, and at least three samples shall be collected. Results shall be adjusted to zero degrees Celsius, 101.3 kilopascals, on a dry gas basis, and as a mass emission from each stack expressed as kilograms per hour.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12
	Filmille	Data contained in monthly reports demonstrates compliance with this requirement.
52	Technical	Pressure and particulate in the baghouses serving the Bradley mills shall be continuously monitored and recorded to detect broken bags in the Bradley mills. A central alarm system shall be operated to warn the plant operator of a bag breakage or any change in pressure that may indicate a broken filter

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		bag. The bag filters serving the Bradley mills shall also be manually inspected on a regular basis and shall be replaced where the inspection reveals excessive wear. Records shall be kept of bag filter pressure, Bradley mill shutdowns, manual inspections and filter bag replacements. These records shall be provided to the Council on request.
	Compliance	06-Dec-10
	Compliance	01-Feb-12
53	Technical	The pH of the condensate from the den scrubbers and the hygiene scrubber stacks shall be measured at least twice each week. The method by which the condensate is to be measured shall be approved in writing by the Council.
	Compliance	06-Dec-10 Monthly report data confirms compliance with this requirement.
	Compliance	01-Feb-12
		Data contained in monthly reports demonstrates compliance with this requirement.
54	Technical	The consent holder shall continuously measure ambient fluoride, in accordance with the monitoring plan required by Condition 68 and based on 7-day filter exposures and results reported as average concentration (µg/m3) over that 7-day sample period. Measurements shall be taken at no less than five sites, within 4 km of the plant, including those listed in the resource consent document. The location of the sites may be modified with the written approval of the Council (Manager: Regulation).
		[Note: Approval from property owners/occupiers for the placement and operation of monitors is required]
	Compliance	06-Dec-10 Observed to be the case.
	Compliance	01-Feb-12 Data contained in monthly reports demonstrates compliance with this requirement.
55	Technical	Ambient fluoride (F) measurement undertaken in accordance with Condition 54 shall occur at a height of 2.4 metres above ground level with no obstruction above 2 metres high in the direction of the RFC plant for 50 metres, unless otherwise approved in writing by the Council (Manager: Regulation).
	Compliance	06-Dec-10 Observed to be the case.
	Compliance	01-Feb-12
56	Technical	The consent holder shall ensure ambient fluoride (F) measurement is undertaken in accordance with AS3580.13.2 — 1991 (Method 13.2: Determination of fluorides – Gaseous and acid soluble particulate fluorides – Manual, double filter paper sampling) or an alternative method approved, in writing, by the Council.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	06-Dec-10 Understood to be the case.
	Compliance	01-Feb-12 Understood to be the case.
57	Technical	Concentrations of sulphur dioxide in ambient air shall be monitored continuously according to the method of measurement ((AS3580.4.1 – 1990) Method 4.1: Determination of sulphur dioxide – direct reading instrumental method), or an alternative method agreed to in writing by the Council. The monitoring shall begin within 3 months of commencement of this consent. The monitoring site shall be located at or about the southern boundary of the Winstones site, to the southeast of the den stacks, and in an area agreed to in writing by the Council prior to establishment. Results shall be provided as 1 hour and 24 hour averages. Any exceedance of the NES for SO2 shall be reported as soon as it is known.
	Compliance	06-Dec-10 Observed to be the case.
	Compliance	01-Feb-12 There is stack monitoring in place. Observed to be the case.
58	Technical	Concentrations of PM10 in ambient air shall be monitored continuously according to a method of measurement that complies with the monitoring requirements in the National Environmental Standards (Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004, or an alternative method agreed to in writing by the Council (Manager: Regulation). The monitoring shall begin within 3 months of commencement of this consent. The monitoring site shall be located at or about the southern boundary of the Winstones site, to the southeast of the den stacks, and shall be agreed in writing by the Council prior to establishment. Results shall be provided as a 24 hour average. Any exceedance of the NES for PM10 shall be reported as soon as it is known.
	Compliance	06-Dec-10 This data is presented in the Awatoto Air Shed Report.
	Compliance	01-Feb-12 Air Shed Monitoring is undertaken by WaterCare Services.
59	Technical	Continuous monitoring of total suspended particulate matter shall be undertaken at two locations at all times that bulk material is stored outside. The monitoring sites shall be at the eastern boundary at a location most affected by bulk material dust discharges and at a reference location at the northern end of the site. The monitoring shall have an averaging period of 24-hours or less and the method of monitoring shall be approved in writing by the Council. Monitoring results shall be provided to the Council within two months of the cessation of bulk material storage and otherwise at least annually.
	Not applicable	06-Dec-10 The consent holder has not stored any bulk material outside, but understands the requirements of this condition.
	Not applicable	01-Feb-12 There was no outside storage this year. A new store is being constructed at present.
60	Technical	Every 24 months, from the commencement of this consent, the consent

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		holder shall review the available methodology for measuring acid deposition at no less than two sites in horticultural areas within 4km of the plant and this information shall be provided to the Council. Any new methodologies will be reviewed against the current vegetation monitoring programme, as per Condition 66. The deposition monitoring protocol shall be determined in conjunction with and agreed to in writing by the Council prior to the commencement of monitoring.
	Unable to be ass	The testing methods employed by Plant & Food on behalf of the consent holder, have proven meaningless to date. Council is processing an application to vary this requirement.
	Not applicable	01-Feb-12 To be reviewed next year.
61	Technical	The consent holder shall undertake a survey every two years of the effects of fluoride etching on all properties (where the owner accepts the offer of a survey) within 1 kilometre of the site using the methodology outlined in the BRANZ report DCZ059 (25 June 2004). Any windows found to be affected to 'pen test level 3' or where Light Gloss Units (LGU) are equal or less than 115 as described in BRANZ report DCZ059, shall be replaced by the consent holder if the property owner wishes the glass to be replaced.
	Compliance	06-Dec-10 The consent holder has let a contract for this survey to be conducted this year.
	Compliance	01-Feb-12 Council has received a copy of this survey report.
62	Technical	The consent holder shall advise the Council at least 24 hours in advance of a planned warm or cold start up of the acid plant. The Council shall be advised of the time when sulphur will be ignited and the person in charge of the procedure.
	Compliance	06-Dec-10 Council has received notifications from the consent holder as required.
	Compliance	01-Feb-12 Council received notice well beyond the required time specified.
63	Technical	At monthly intervals the consent holder shall provide the Council with copies of all information (including test results, reports and records) required to be collected in accordance with the conditions of this consent during the previous month, unless the condition specifically allows the information to be provided at a different interval. This information shall be provided in a report format, and shall comment on site performance and compliance with consent conditions.
	Compliance	06-Dec-10 Council has received the monthly reports.
	Compliance	01-Feb-12 Council has received monthly reports.
64	Technical	The consent holder shall produce a report every year (the 'annual report') that presents and summarises all information on the monitoring required by this consent. The report shall include, but not necessarily be limited to:

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		a) quantification of and assessment of the impact of discharges of dust, PM10, SO2, fluoride and acidic compounds
		b) the fluoride and foliar monitoring report
		c) the impact of odour and H2S discharges from the site
		d) a description of any potential and actual effects that have been identified
		e) identification of trends of monitoring information
		f) a summary of system modifications
		g) recommendations for system improvements
		h) the monthly fluoride content of phosphate rock blends.
		The annual report shall be based on a July to June year and provided to the Council before 31 October each year.
	Not applicable	06-Dec-10
		The next annual report is due October 2011.
	Compliance	01-Feb-12 Council has received the annual report.
65	Technical	The consent holder shall log all complaints received directly from the public. The log shall include the date, time, and nature of the complaint and the telephone number, and address of the complainant (as provided), weather information (including an estimate of wind speed and direction), details of key operating parameters at the time of the complaint and the remedial action taken, as appropriate, to prevent further incidents. Complaints shall be reported to the Council within 12 hours of receipt and the log of complaints shall be made available to the Council on request.
	Compliance	06-Dec-10 There have not been any complaints to date but the consent holder is aware of this requirement.
	Compliance	01-Feb-12
		The site has a formal complaints register.
66	Technical	The consent holder shall undertake a vegetation monitoring programme that has been approved by the Council in accordance with Condition 68 of this consent, and the programme shall provide for the following matters:
		a) A visual assessment of vegetation
		b) A determination of foliar fluoride concentrations
		c) The timing of the vegetation monitoring programme (which shall occur during the months of September to May inclusive for the duration of the consent, unless otherwise agreed in writing by the Council)
		d) The monitoring methodology which shall be agreed in writing by the Council
		e) The location of any monitoring, including but not limited to the following sites: (see resource consent document)
		Provided that the location of the monitoring sites may be modified as appropriate with the written approval of the Council (Manager: Regulation).

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		f) The requirement for the initial crop assessment to be completed within 12 months of the commencement of this consent.
		g) The requirement for the consent holder to provide a report to the Council upon the completion of the first two years of vegetation monitoring, to determine whether the monitoring programme may be amended or modified as necessary
		Provided that any amendments to the monitoring programme shall only occur with the written approval of the Council.
	Compliance	06-Dec-10 Plant & Food is conducting this monitoring.
	Compliance	01-Feb-12 Council has received the 2010 - 2011 Report.
67	Technical	The consent holder shall prepare and submit to the Council for approval within two months of the date of commencement of this consent, a Management Plan that details how all discharges to air from the site and their effects shall be measured, assessed and managed. The Management Plan shall be complied with at all times during the exercise of this consent, and shall include but not be limited to the following matters:
		□ Dust including particulate
		□ Outside phosphate rock storage
		□ Sulphur dioxide
		□ Acidic discharges
		□ Fluoride
		□ Odour
		The Management Plan shall specify all actions necessary to ensure ongoing compliance with all conditions of this consent. The consent holder shall update the Management Plan at least once every two years, and otherwise where necessary, with the written approval of the Council.
	Compliance	06-Dec-10
		Council has received a copy of the Management Plan.
	Compliance	01-Feb-12 Council has received this Management Plan.
68	Technical	The consent holder shall prepare and submit to the Council for approval within two months of the date of commencement of this consent, a Monitoring Plan that monitors the impact of discharges to air from the site. The Monitoring Plan must be complied with at all times during the exercise of this permit, and shall include but not be limited to the following matters:
		☐ Manufacturing stack monitoring requirements
		□ Acid plan stack monitoring requirements
		☐ Dust monitoring requirements
		□ Ambient SO2, particulate matter and H2S monitoring
		☐ Off site ambient fluoride monitoring requirements

No.	Condition	Consent Condition and Compliance Assessment
		☐ Off site crop fluoride monitoring requirements
		□ Sampling methods
		□ Analytical methods
		□ Reporting requirements
		□ Sampling locations
		☐ Sampling frequencies
		□ Auditing and peer review.
		The consent holder shall update the Monitoring Plan at least once every two years, and otherwise where necessary, with the written approval of the Council.
	Compliance	06-Dec-10
		This requirement is reported on in the annual report.
	Compliance	01-Feb-12
		Council has received this plan.

Grading Information

Condition

Type of

Each consent condition has been classified as either a Environmental or Technical condition.

Environmental conditions:

Environmental conditions set standards/performance limits for a resource consent, or, mitigates an environmental impact of exercising a resource consent.

Examples of environmental conditions are:

- Installation of up-gradient cut-off drains/ placement of disposal fields
- Dvolume limits of discharges
- □water take rates and maximum volumes
- Discharge or receiving water contaminant limits

Technical conditions:

Technical conditions sets out technical requirements that allows a consent holder to demonstrate or measure that they meet the Environmental performance required by a resource consent, or help specify the activity authorised.

Examples of technical conditions are:

- Dsampling effluent/ recording discharge volumes / collating submitting data
- providing of reports/ plans/ designs specifications
- Inotifications, accreditation, authorities submissions for approval by ER Manager
- Dinstallation and maintenance of a water meter

You need to comply with all conditions regardless of whether it's a Environmental or Technical condition.









