

Consent Holder	Ravensdown Fertiliser Co-operative Limited	Consent No	DP050561A
Client Address	Private Bag 6012 Hawke's Bay Mail Centre NAPIER 4142	Site Address	808 Waitangi Road, Awatoto
Contact Name	Kevin Gettins	Phone	(06) 834 1760
Job Code	456-07	Mobile	021 900 292
		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.

07-Jul-09	Monitoring Report Sent	Officer	Vicky Bloomer
12-Feb-10	Incident Inspection	Officer	Ian Lilburn
06-May-10	Incident Inspection	Officer	Heli Polonen

2009-2010 Statement of Compliance and Overall Grades:

Grade Date **30-Nov-10**
Environmental Grade **Non Compliance**
Technical Grade **Non Compliance**

Overall Comments:

The conditions that relate to the significant non-compliance are under review by Council as the consent holder has applied for variations. There was no site visit for this year but the report is based on monitoring information provided in the monthly reports and the annual report submitted by the consent holder.

Previous Statement of Compliance and Overall Grades:

Grade Date **26-Jun-09**
Environmental Grade **Non Compliance**
Technical Grade **Non Compliance**

Overall Comments:

Non-compliance with Conditions 24 & 46 is the reason for full compliance not being achieved. Council is aware of the reasons why the consent holder has been unable to comply with these conditions.

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	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10 All plant on site has been designed and constructed to conform with best engineering practices.
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	26-Jun-09
	Compliance	30-Nov-10 This is understood by the consent holder.
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	26-Jun-09
	Compliance	30-Nov-10 There were not any complaints for offensive and objectionable dust.
4	Environmental	There shall be no discharge of odour that causes an offensive or objectionable effect beyond the boundary of the site.
	Compliance	26-Jun-09
	Compliance	30-Nov-10 There were no odour complaints for the year.
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	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09
	Compliance	30-Nov-10 All bulk materials have been stored in enclosed buildings.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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	26-Jun-09
	Compliance	30-Nov-10 There has not been any outside storage of phosphate rock to date.
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.
	Not applicable	26-Jun-09 No product has been stored outside.
	Not applicable	30-Nov-10 Refer Condition 7 comments
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.
	Not applicable	26-Jun-09 No product has been stored outside.
	Compliance	30-Nov-10
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	26-Jun-09
	Compliance	30-Nov-10 The site is regularly swept.
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

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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.
	Not applicable	26-Jun-09 No product has been stored outside.
	Not applicable	30-Nov-10 There was no product stored outside the enclosed store buildings.
12	Environmental	The consent holder shall ensure regular sweeping of yard and road areas using mechanical cleaning to minimise dust emissions.
	Compliance	26-Jun-09
	Compliance	30-Nov-10 The site is regularly swept.
13	Environmental	The consent holder shall ensure that the product storage pile does not exceed 4 m in height.
	Not applicable	26-Jun-09 No product has been stored outside.
	Not applicable	30-Nov-10 Refer to condition 7 comments.
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	26-Jun-09
	Compliance	30-Nov-10 There has not been any change to the stack heights.
15	Environmental	The emission rate of SO ₂ 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	26-Jun-09
	Compliance	30-Nov-10 The monthly and Annual Reports confirm compliance with this requirement.
16	Environmental	Notwithstanding Condition 15, the combined discharge rate of SO ₂ , SO ₃ and H ₂ SO ₄ from the sulphuric acid production process shall not exceed 60 kg per hour (60 kg/hr), expressed as SO ₂ .
	Compliance	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10 The monthly and Annual Reports confirm compliance with this requirement.
17	Environmental	Except where a continuous SO ₃ /H ₂ SO ₄ in-stack monitoring system demonstrates compliance with Condition 18 at all times, sulphur ignition and the period extending for up to 4 hours after acid plant start up shall not occur: a) between the hours of 5:00 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).
	Compliance	26-Jun-09
	Compliance	30-Nov-10 The monthly and Annual Reports confirm compliance with this requirement. Council has received an application to vary this condition.
18	Environmental	Subject to condition 21, the combined discharge rate of SO ₃ and H ₂ SO ₄ (expressed as SO ₃) 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	26-Jun-09
	Compliance	30-Nov-10 The monthly and annual Reports confirm compliance with this requirement.
19	Environmental	A tail gas scrubber and mist elimination system that reduces the acidity of emissions from the acid plant to ensure compliance with conditions of this consent shall be installed and commissioned within 12 months from the commencement of this consent, and shall be operated at all times that the acid plant is operating.
	Not applicable	26-Jun-09 Not applicable until October 2009. Council has received notice from the consent holder that this date is unlikely to be met.
	Unable to be assessed	07-Jul-09 Technical issues in regard to the design & installation of an acidity reducing tail gas scrubber are being worked through at present.
	Significant Non Compliance	30-Nov-10 The timeframe for this system was 21 October 2009. The consent holder has applied to vary this condition.
20	Environmental	The discharge from the acid plant stack shall be clear at all times, except that prior to Condition 19 being satisfied, 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. After condition 19 is satisfied a visible white plume may occur.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	26-Jun-09
	Compliance	30-Nov-10 Any changes for condition 19 will reflect on the wording of this condition.
21	Environmental	After the continuous in-stack SO ₃ /H ₂ SO ₄ monitoring system required by Condition 46 has been commissioned and until Condition 19 is satisfied, the discharge from the acid plant may contain up to 150 mg/m ³ at NTP SO ₃ / H ₂ SO ₄ expressed as SO ₃ for up to 4 hours after igniting sulphur in the case of a cold start and for up to 1 hour in the case of a warm start up.
	Not applicable	26-Jun-09
	Not applicable	30-Nov-10 This condition does not apply until the SO₃/H₂SO₄ monitor required in condition 46 has been commissioned. The consent holder has applied to vary this condition.
22	Environmental	From the date of commencement of this consent until 6 months after the installation of the tail gas scrubber as required by Condition 19 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	26-Jun-09
	Unable to be assessed	07-Jul-09
	Compliance	30-Nov-10 Acid Plant shutdowns are recorded on the Ravensdown Monthly Reports. The consent holder has applied to vary this condition.
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 SO ₂ , SO ₃ and H ₂ SO ₄ from the sulphuric acid production process does not exceed Conditions 15 and 16.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	26-Jun-09
	Compliance	30-Nov-10
24	Environmental	2
		<p>a))Within 6 months of the date of this consent the consent holder shall install and operate at least four ambient SO2 monitors around the acid plant in order to detect fugitive SO2 emissions. These monitors shall be located around the acid plant at or near Ravensdown's boundary. 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.</p> <p>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.</p>
	Significant Non Compliance	26-Jun-09
		While the site selection has been agreed to with Council, at this stage only the instrument at the Winstone site has been installed. The installation project is underway.
	Significant Non Compliance	30-Nov-10
		Two SO2 monitors have been installed. The consent holder has applied to Council for a variation to the requirement for four monitors.
25	Environmental	Discharge from the Auxiliary Boiler shall be via an emission stack of 15.8 metres above ground level.
	Compliance	26-Jun-09
	Compliance	30-Nov-10
		Confirmed to be the case.
26	Environmental	The diesel oil burning rate in the auxiliary boiler shall not exceed 580 litres per hour.
	Compliance	26-Jun-09
	Compliance	30-Nov-10
		Design criteria
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	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10
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	26-Jun-09
	Compliance	30-Nov-10 This was tested by Council's Environmental Officer and the result confirmed compliance.
29	Environmental	The concentration of hydrogen sulphide (H ₂ S) shall be measured in accordance with Condition 50 and shall not exceed 7 µg/m ³ (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	26-Jun-09
	Compliance	30-Nov-10 Council staff have monitored the H₂S levels from the melter at the boundary. The results confirm compliance with this requirement.
30	Environmental	Discharges from each den scrubber shall be via stacks with a height of no less than 38 metres above ground level.
	Compliance	26-Jun-09
	Compliance	30-Nov-10 There has not been any changes to the heights of the stacks.
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	26-Jun-09
	Compliance	30-Nov-10 The stack height has not been altered.
32	Environmental	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.
	Not applicable	26-Jun-09 Does not apply until October 2009

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10 Fugitive Emissions Report received 17 Dec 2009.
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 µg/m ³ .
	Compliance	26-Jun-09
	Compliance	30-Nov-10
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/m ³ .
	Compliance	26-Jun-09
	Compliance	30-Nov-10 Monthly reports confirm compliance with this condition.
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	26-Jun-09
	Compliance	30-Nov-10 Monthly reports confirm compliance with this condition.
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 b) 1 kg/hr in more than 50% of samples taken in any 12-month period
	Compliance	26-Jun-09
	Compliance	30-Nov-10 Monthly reports confirm compliance with this condition.
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 be measured shall be approved in writing by the Council.
	Compliance	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Non Compliance	30-Nov-10 There were 3 results in March 2010 where the pH was < 2.7. The follow-up tests showed 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	26-Jun-09
	Compliance	30-Nov-10
39	Environmental	<p>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:</p> <p>a)</p> <p>i) the temperature at the site is less than 22 C; and</p> <p>ii) the manufacturing stack plume is "OK" as indicated in the chart attached as Appendix "A"; or</p> <p>b)</p> <p>i) the temperature at the site is 22 C or more; and</p> <p>ii) it is daylight; and</p> <p>iii) the relative humidity at the site is less than 70%; and</p> <p>iv) there is no fog; and</p> <p>v) the manufacturing stack plume is 'OK' as indicated in the chart attached as Appendix "A"</p> <p>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.</p>
	Compliance	26-Jun-09
	Not applicable	30-Nov-10 The pH adjustment on the discharge is operational.
40	Environmental	The concentration of fluoride in ambient air measured in accordance with Condition 54 shall not exceed 0.8 µg/m ³ (7 day average) at areas used for horticultural production (including Brookfields Orchard and Plumpton Park (locations as detailed in Condition 54)).
	Compliance	26-Jun-09
	Compliance	30-Nov-10

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09 It has been recommended that the weather vane pole be raised another 2 meters.
	Compliance	30-Nov-10 Meteorological data is presented in the "Air Shed Monthly Reports."
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	26-Jun-09
	Compliance	30-Nov-10 Observed to be the case.
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	26-Jun-09
	Compliance	30-Nov-10
45	Technical	The consent holder shall continuously (i.e. at intervals not exceeding 1 minute) measure the rate of sulphur dioxide (SO ₂) 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,

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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	26-Jun-09
	Compliance	30-Nov-10 Observed to be the case.
46	Technical	Within 6 months of the commencement of consent a continuous in-stack SO3/H2SO4 monitoring system shall be installed and operated to the satisfaction of the Council.
	Significant Non Compliance	26-Jun-09 The meter trialled proved not suitable to satisfy compliance with this condition. The consent holder has informed Council that it is searching to find an appropriate instrument
	Significant Non Compliance	30-Nov-10 This equipment has proven unsatisfactory and Council has received an application to change this condition.
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	26-Jun-09
	Compliance	30-Nov-10
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.
	Compliance	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10
50	Technical	Concentrations of hydrogen sulphide in ambient air shall be monitored continuously in accordance with the method of measurement (AS 3580.8.1 1990). The methods for sampling and analysis shall be automatic intermittent sampling - gas chromatographic method, or an alternate method approved in writing by the Council. The monitoring shall begin within 3 months of the date of commencement of this consent. The monitoring site shall be located at or about the southern boundary of the site, and in an area agreed to in writing by the Council. Results shall be reported as 1-hour averages.
	Compliance	26-Jun-09 The condition specified site is incorrect. The correct & approved location where this instrument has been installed is by the Archimedes E2846803N6175819
	Compliance	30-Nov-10 Ravensdown has applied to have this condition varied. Council has monitored H2S levels for this site.
51	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	26-Jun-09
	Compliance	30-Nov-10
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 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	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
Compliance	30-Nov-10	
54	Technical	<p>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 ($\mu\text{g}/\text{m}^3$) 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 below.</p> <p>Site Easting/Northing</p> <p>(NZMS:V21)□□</p> <p>Direction from den stack (NZMS:V21)□□</p> <p>Distance from den stacks (m)□□</p> <p>□□</p> <p>Brookfields Orchard</p> <p>2845270 6174882 □□</p> <p>WSW□□</p> <p>2520□□</p> <p>□□</p> <p>Plumpton Park</p> <p>2844886 6177027 □□</p> <p>WNW□□</p> <p>2010□□</p> <p>□□</p> <p>RFC SW monitoring site</p> <p>2846500 6175782 □□</p> <p>WSW□□</p> <p>300□□</p> <p>□□</p> <p>RFC NW monitoring site</p> <p>2846730 6176142 □□</p> <p>WNW□□</p> <p>187□□</p> <p>□□</p> <p>Winstone Aggregates</p> <p>2846946 6176226 □□</p>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		NNE□□ 280□□ □□ 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	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09
	Compliance	30-Nov-10
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.
	Compliance	26-Jun-09
	Compliance	30-Nov-10
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	26-Jun-09
	Compliance	30-Nov-10
58	Technical	Concentrations of PM10 in ambient air shall be monitored continuously

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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	26-Jun-09 Council is discussing the possibility of moving this instrument to another site. This instrument will then become the monitor for the Awatoto Air Shed.
	Compliance	30-Nov-10 The monitoring by Ravensdown for this condition is used as data for the Awatoto Air Shed Monitoring.
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	26-Jun-09 No product stored outside.
	Compliance	30-Nov-10 No bulk material has been stored outside, however, the particulate monitoring by the consent holder would confirm compliance with this requirement.
60	Technical	Within 12 months of the commencement of this consent the consent holder shall provide a suitable methodology that will measure acid deposition at no less than two sites in horticultural areas within 4 km of the plant. The deposition monitoring protocol shall be agreed to in writing by the Council prior to the commencement of monitoring.
	Not applicable	26-Jun-09 Methods being developed
	Unable to be assessed	30-Nov-10 Deposition tests have been installed & trialled by Plant & Food Research. To date these have proven unsuitable to provide meaningful results. The consent holder has applied to vary this condition.
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.
	Not applicable	26-Jun-09 Does not apply until 2010

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	30-Nov-10 A survey is planned for this year (2010).
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	26-Jun-09
	Compliance	30-Nov-10 Council has been informed of planned acid plant start-ups.
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	26-Jun-09
	Compliance	30-Nov-10
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: <ul style="list-style-type: none"> 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. <p>The annual report shall be based on a July to June year and provided to the Council before 31 October each year.</p>
	Not applicable	26-Jun-09 Does not apply until October 2009
	Compliance	30-Nov-10
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

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<p>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.</p>
	Compliance	26-Jun-09
	Compliance	30-Nov-10
66	Technical	<p>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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Site Location <input type="checkbox"/><input type="checkbox"/> Site Easting/Northing (NZMS:V21)<input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> Brookfields Orchard, Kings Road <input type="checkbox"/><input type="checkbox"/> 2845407 6175251<input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> Plumpton Park Orchard, Awatoto Road <input type="checkbox"/><input type="checkbox"/> 2844864 6177075<input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> Simkin Orchard, Awatoto Road <input type="checkbox"/><input type="checkbox"/> 2844899 6177531<input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> Steiner Apollo Orchard, Willowbank Road <input type="checkbox"/><input type="checkbox"/> 2845130 6177681<input type="checkbox"/><input type="checkbox"/> <input type="checkbox"/><input type="checkbox"/> Apollo Orchard, Tannery Road <input type="checkbox"/><input type="checkbox"/> 2843161 6178732<input type="checkbox"/><input type="checkbox"/>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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Mr Apple Orchard, Meeanee Road □□

2843358 6177127□□

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Johnny Appleseed Orchard, Meeanee □□

2844016 6174605□□

□□

Wells Orchard, McLeod Road □□

2845551 6176688□□

□□

Dewer Orchard, Awatoto Road □□

2845361 6176994□□

□□

Provided that the location of the monitoring sites may be modified as appropriate with the written approval of the Council (Manager: Regulation).

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	26-Jun-09
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Compliance	30-Nov-10
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This survey is being undertaken by Plant & Food staff

67	Technical	<p>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:</p> <ul style="list-style-type: none"> a) Dust including particulate b) Outside phosphate rock storage c) Sulphur dioxide d) Acidic discharges
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Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<p>e) Fluoride</p> <p>f) Odour</p> <p>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.</p>
	Compliance	26-Jun-09
	Compliance	30-Nov-10
68	Technical	<p>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:</p> <p>a) Manufacturing stack monitoring requirements</p> <p>b) Acid plan stack monitoring requirements</p> <p>c) Dust monitoring requirements</p> <p>d) Ambient SO₂, particulate matter and H₂S monitoring</p> <p>e) Off site ambient fluoride monitoring requirements</p> <p>f) Off site crop fluoride monitoring requirements</p> <p>g) Sampling methods</p> <p>h) Analytical methods</p> <p>i) Reporting requirements</p> <p>j) Sampling locations</p> <p>k) Sampling frequencies</p> <p>l) Auditing and peer review.</p> <p>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.</p>
	Compliance	26-Jun-09
		The consent holder has decided that is monitoring will be reported on annually.
	Compliance	30-Nov-10

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
- volume 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:

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

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

