



Our ref: DP050561Ab

17th January 2017

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

For the attention of Helen Hurring

Dear Madam

COMPLIANCE MONITORING – DP050561AB – 808 WAITANGI ROAD

Following up on compliance monitoring of the above resource consent for the 2015/16 year, I have compiled your report.

The report identifies some non-compliance and this is reflected in the report's overall grading. Please ensure that all required actions made in the report are responded to and undertaken.

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 consent. An account for this monitoring year will be sent after 30 June 2017.

Please contact me should you need to discuss any issues raised in the report.

Yours faithfully



ANDREW GASS
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Compliance Monitoring Report

Consent Holder	Ravensdown Fertiliser Co-operative Limited	Consent No	DP050561Ab
Client Address	Private Bag 6012 Hawke's Bay Mail Centre NAPIER 4142	Site Address	808 Waitangi Road, Awatoto
Contact Name	Helen Hurring	Phone	(06) 834 1769
Job Code	456007	Mobile	021 900 457
		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

1-Apr-15	Monitoring Report Sent	Officer	Barbara McKenzie
10-Apr-16	Monitoring Inspection	Officer	Andrew Gass

2015-2016 Statement of Compliance and Overall Grades:

Grade Date	10-Oct-16
Environmental Grade	Non Compliance
Technical Grade	Non Compliance

Overall Comments:

This report applies to the period 1 April 2015 to 30 June 2016.

The non-compliance relates to conditions 6, 8, 24, 37, 49, 53 & 59. Sulphur was stored outside for two days (between 1/7/15 - 3/7/15) as the infeed was repaired during a sulphur shipment arrival. The sulphur was moved inside as soon as this was fixed. Dust generation risk from this pile was very low.

A leaking duct caused a number of exceedances of the ambient SO₂ 350 µg/m³ ten-minute average limit. The acid plant was taken down three days after notification of the leak.

There has been one minor exceedance of the pH 2.7 standard. On 19/11/15 the Side 2 den stack had a pH 2.68.

There was a period of three weeks in August 2015 where no stack tests took place due to safety concerns with the sampling platform. Sampling is now carried out at the lower platform, as agreed by Council.

Per Condition 43 & 44, please provide the audit results carried out by the independent suitably qualified person.

Previous Statement of Compliance and Overall Grades:

Grade Date	21-Apr-15
Environmental Grade	Non Compliance
Technical Grade	Non Compliance

Overall Comments:

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

The non-compliance relates to conditions 6, 7, 8, 34 & 37. Sulphur was stored outside during the monitoring period. Only phosphate rock is consented for outside storage. However, the situation was such that outside sulphur storage could not be avoided and the control measures put in place were sufficient to avoid any discharge to air.

The 7-day average concentration of fluoride at the RFC NW monitoring location was exceeded on two occasions:

17 December 2014 = 5.52µg/m³ (minor breach as result rounds to 5.5 - 1dp - as per Condition 34);

14 January 2015 = 6.93µg/m³.

A second monitor has been installed at this site due to erratic readings being recorded recently to ensure the results are real and not due to instrument error.

There has been two occasions during the monitoring period where pH has been less than 2.7 from the den stacks:

On 29/5/14 side 1 had a pH of 2.58.

On 5/6/14, side 1 had a pH of 2.69 (minor breach as result rounds to 2.7 - 1dp - as per Condition 37).

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	14-Apr-15 Works and structures were maintained. Ongoing upgrades continue to take place. At the next shutdown period, the burner and two molten sulphur tanks will be replaced.
	Compliance	10-Oct-16 Works and structures have been maintained. The upper sampling platform on the manufacture stacks is unsafe. However, the lower platform is suitable for sampling from, as agreed by Council.
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	14-Apr-15 Compliance based on as-built plans, producer statement and visual observations on site.
	Compliance	10-Oct-16 Compliance based on as-built plans, producer statement and visual observations on site.
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	14-Apr-15 No complaints relating to particulate matter have been received during the monitoring period.
	Compliance	06-Oct-16 No dust complaints from this site have been received during the monitoring period.
4.	Environmental	There shall be no discharge of odour that causes an offensive or

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		objectionable effect beyond the boundary of the site.
	Compliance	14-Apr-15 No confirmed complaints have been received during the monitoring period relating to offensive or objectionable odour from this site. No offensive or objectionable odours have been detected at the time of any site visits.
	Compliance	06-Oct-16 No odour complaints from this site have been received during the monitoring period.
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	14-Apr-15 No confirmed complaints of noxious or dangerous levels of gases have been received during the monitoring period. One complaint was received during the cold start-up in November 2014. This was unconfirmed and the various monitoring did not show any issues.
	Compliance	10-Oct-16 Council is not aware of any noxious or dangerous levels of gases beyond the property boundary during the monitoring period.
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.
	Non Compliance	14-Apr-15 No phosphate rock has been stored outside during the monitoring period. There was one instance where a sulphur shipment was stored outside for a short time during the monitoring period due to the high water content in the shipment. After viewing the stockpile and measures in place to prevent any particulate discharges to air, I was kept updated as to the stockpile's status and timeframes for transfer into the store.
	Non Compliance	10-Oct-16 Sulphur has been stored outside for two days (between 1/7/15 - 3/7/15) as the infeed was repaired during a sulphur shipment arrival. The sulphur was moved inside as soon as this was fixed. No other outside storage has taken place during the monitoring period.
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.
	Non Compliance	14-Apr-15 No phosphate rock has been stored outside during the monitoring period.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<p>A part shipment of sulphur has been stored outside during the monitoring period for a short time due to the high water content.</p> <p>This was stored near to the dispatch sheds where it was sheltered from the wind and water draining from the pile could be captured.</p> <p>While technically non-compliant, the measures in place to prevent particulate discharges were adequate for the short period of time it was stored outside.</p>
	Compliance	<p>10-Oct-16</p> <p>No outside storage of phosphate rock has occurred during the monitoring period.</p>
8.	Technical	<p>At least 10 working days prior to the use of outside product storage the Consent Holder shall notify the Council that product shipments will be arriving which cannot be stored inside. Notification shall include the following:</p> <ol style="list-style-type: none"> A summary of why alternative covered storage is not possible; and The product type to be stored outside; and The likely volume of product to be stored outside; and The estimated date of arrival and the time it will take to place product at the outside location; and Estimated duration that the product will be stored outside.
	Non Compliance	<p>14-Apr-15</p> <p>No phosphate rock has been stored outside during the monitoring period.</p> <p>Notification of the sulphur shipment stored outside was received as soon as it became apparent it could not be stored inside. Relevant information was provided with this notification and a site visit undertaken to observe the sulphur stockpile.</p> <p>No complaints were received for this site during this time.</p>
	Non Compliance	<p>10-Oct-16</p> <p>Sulphur has been stored outside for two days (between 1/7/15 - 3/7/15) as the infeed was repaired during a sulphur shipment arrival. The sulphur was moved inside as soon as this was fixed. Notification was provided to Council when this problem occurred, why Sulphur had to be outside, mitigation in place for potential dust and timeframes for fixing the infeed.</p> <p>No other outside storage has taken place over the monitoring period.</p>
9.	Environmental	<p>No outside unloading, pile forming or loading shall occur when average hourly wind speed exceeds 5 metres per second (m/s). The wind speed shall be determined by an onsite meteorological station in accordance with Condition 42 of this consent.</p>
	Compliance	<p>14-Apr-15</p> <p>No phosphate rock was stored outside during the monitoring period.</p> <p>It is understood the sulphur stockpile was loaded into the store under appropriate weather conditions. Two weather stations are maintained on site.</p>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	10-Oct-16 No outside storage of phosphate rock has taken place during the monitoring period. Sulphur has been stored outside for two days (between 1/7/15 - 3/7/15) as the infeed was repaired during a sulphur shipment arrival. Conditions at the time did not cause any dust issues.
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	14-Apr-15 There has been no outside storage of phosphate rock. Some sulphur has been stored outside due to its high water content. This was stored in a sheltered location and moved inside as soon as it was dry enough to be moved. No dust issues were identified after observation of the pile and no complaints received. The roadways are swept at least monthly and more frequently if required, to minimise dust build-up.
	Compliance	06-Oct-16 There has been no outside storage of phosphate rock during the monitoring period. Some sulphur has been stored outside due to a problem with the infeed during a shipment arrival. This was stored in a sheltered location and moved inside as soon as the infeed was repaired. No dust issues were identified and no complaints received. The roadways are swept at least monthly and more frequently if required, to minimise dust build-up.
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	14-Apr-15 No outside storage of phosphate rock has occurred. The sulphur stored outside was wet and moved inside as soon as it was dry enough to be shifted.
	Compliance	06-Oct-16 No outside storage of phosphate rock has taken place during the monitoring period. There were no dust issues with the sulphur pile between 1/7/15 - 3/7/15.
12.	Environmental	The consent holder shall ensure regular sweeping of yard and road areas using mechanical cleaning to minimise dust emissions.
	Compliance	14-Apr-15 Dust levels are monitored and the yard and road areas are swept at least monthly.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	06-Oct-16 Regular sweeping of yard and road areas takes place. A sweeper comes through monthly and dust suppression is used when required. Dust levels are routinely monitored for PM10 and depositions.
13.	Technical	The consent holder shall ensure that the product storage pile does not exceed 4 metres in height.
	Compliance	14-Apr-15 The sulphur product storage pile was less than 4 metres in height.
	Compliance	22-Jul-15 The sulphur pile did not exceed 4m in height.
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	15-Apr-15 Except for those described in this condition, all emissions are from the stack as required.
	Compliance	06-Oct-16 All discharges, except those listed, are from the stack as described in this condition.
15.	Environmental	The emission rate of Sulphur Dioxide (SO ₂) measured by continuous monitoring in the acid plant stack shall not exceed 1.5 kilograms (kg) per minute (two minute average) and 60 kg/hour (one-hour average) at any time.
	Compliance	15-Apr-15 SO ₂ emissions are continuously monitored and recorded at the acid plant and alarms set should any exceedance occur. The data provided shows no exceedances have occurred during the monitoring period.
	Compliance	22-Jul-15 The start up carried out 20/7/15 had a maximum peak of 57.9 kg/hr. There have been no exceedances of the SO₂ limits during the monitoring period.
16.	Environmental	Notwithstanding Condition 15, the combined discharge rate of SO ₂ , Sulphur Trioxide (SO ₃) and Sulphuric Acid (H ₂ SO ₄) from the sulphuric acid production process shall not exceed 60 kg/hr, expressed as SO ₂ .
	Compliance	15-Apr-15 Combined sulphur emissions are continuously monitored as per this condition. The emissions are recorded and displayed at the acid plant and alarms set should any exceedance occur. The data provided shows no exceedances have occurred during the monitoring period.
	Compliance	10-Oct-16 The combined discharge rate as described in this condition has not been exceeded during the monitoring period.
17.	Environmental	An Acid Plant cold start up sulphur ignition shall not occur:

1 **Type of Condition** **Consent Condition and Compliance Assessment**

- 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 15-Apr-15

Cold starts occurred during appropriate conditions over the monitoring period as below:

24/8/14 sulphur ignition at 2pm. Wind direction was approximately 180°.

3/11/14 sulphur ignition at 10:40am. Wind was in the south-west quarter.

Compliance 10-Oct-16

During the acid plant cold start on 20/7/15, sulphur ignition occurred at 13:45 with wind in a northerly direction.

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 kg/hr as a 1-hour average at any time;

b. 0.5 kg/hr for at least 50% of fixed 1-hour averages in any 3 month period.

Compliance 15-Apr-15

Data provided in the annual report and monthly reports, shows compliance with this condition.

Compliance 10-Oct-16

Monthly and annual report data shows the limits listed in this condition have not been exceeded.

19. Environmental 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 October 2012. A suitably qualified independent person approved by Council 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 30th November 2012.

Not applicable 15-Apr-15

This condition is historical.

Not applicable 06-Oct-16

This condition is historical.

20. Environmental 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.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	15-Apr-15 Off-site observations and during site visits have shown the acid plant stack discharge to be clear at all times.
	Compliance	10-Oct-16 No complaints relating to this site have been received by Council. The Council Officer has not observed a visible plume from the acid plant stack during the monitoring period.
21.	Environmental	The discharge from the acid plant may contain up to 150 milligrams per cubic metre (mg/m ³) at NTP SO ₃ / H ₂ SO ₄ expressed as SO ₃ 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.
	Compliance	16-Apr-15 Testing carried out during the cold starts over the monitoring period show compliance with this condition. Peaks of 73 kg/hr SO ₂ (continuous monitoring) and 51.8 kg/hr (manual USEPA method 8) were reached on 24/8/14. A peak of 24.5kg/hr (continuous monitoring) was reached during the 3/11/14 cold start and 68.6 mg/m ³ SO ₃ (manual USEPA method 8). As per the latest cold-start report, please would you provide SO ₃ readings in mg/m ³ going forward.
	Compliance	22-Jul-15 Results from USEPA method 8 analyses during the cold start on 20/7/15 varied from 0.015 to 0.047 mg/m³ SO₃. No other cold starts have occurred during the monitoring period.
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 3 m/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 3 m/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 metres 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	16-Apr-15 There have been no shutdowns of the acid plant due to weather conditions during the monitoring period. When the designated conditions occur, as described in this condition, an alarm is triggered in the acid plant control room. Operators then assess the conditions and determine if and when a

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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discharge cease is required. All information is recorded and logged.

Compliance 10-Oct-16

Weather conditions are recorded at the weather station and monitored in the acid plant den. Should the conditions arise that trigger this condition, an alarm sounds in the acid plant den, warning operators to cease the discharge. No stops have been reported during the monitoring period.

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 sulphuric acid production process does not exceed Conditions 15 and 16.

Compliance 16-Apr-15
The automatic shut-off valve is maintained.

Compliance 10-Oct-16
An automatic shut-off valve is maintained.

24. Technical

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; and

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.

Compliance 16-Apr-15
SO₂ concentrations are monitored at the two ambient monitoring sites.

SO₂ concentrations were above the 10-minute average during the following periods:
"Winstones S" on two occasions in July 2014. These were explained via fitters using a gas plant to heat solid sulphur out of a pump being repaired.

"Winstones S" on 55 occasions in August 2014. This related to the cold start-up.

"Archimedes" on three occasions in September 2014. Explanations were a gas torch used on a sulphur pump in the workshop and two unexplained reasons. These have been attributed to work undertaken in the acid plant workshop.

Both "Winstones S" (6 times) & "Archimedes" (17 times) in November 2014. The Archimedes exceedances were attributed to the acid plant cold start. The Winstones exceedances were due to a fire in the melter tank and a small yard fire.

"Winstones S" had one exceedance in February 2015 due to a fire in the

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		acid plant sulphur storage tank. Hot weather has been attributed to the cause.
	Non Compliance	<p>10-Oct-16</p> <p>Two ambient SO₂ monitors are maintained and results reported to Council as required.</p> <p>There were 55 exceedances of the 350 µg/m³ limit (10 minute average) between the two sites over a three-day period due to a leaking duct. A maximum of 2119 µg/m³ was reached on 24/11/15. The plant was taken down to repair the duct.</p> <p>The non-compliance relates to the action not being immediately taken to reduce SO₂ concentrations to below 350 µg/m³ as a ten minute average.</p>
25.	Environmental	Discharge from the Auxiliary Boiler shall be via an emission stack of 15.8 metres above ground level.
	Compliance	<p>16-Apr-15</p> <p>The discharge from the auxiliary boiler is from the stack. This has not changed since the last monitoring period.</p>
	Compliance	<p>10-Oct-16</p> <p>The auxiliary boiler stack has not changed since the previous monitoring period.</p>
26.	Environmental	The diesel oil burning rate in the auxiliary boiler shall not exceed 580 litres per hour.
	Compliance	<p>16-Apr-15</p> <p>Diesel burning rate is a maximum of 430L/h as per manufacturer's specifications.</p>
	Compliance	<p>06-Oct-16</p> <p>Diesel burning rate is a maximum of 430L/h as per manufacturer's specifications.</p>
27.	Environmental	The auxiliary boiler and the pre-heater shall only burn diesel oil having a maximum sulphur content of 0.005% by weight. Documents showing fuel analysis shall be provided to the Council on request.
	Compliance	<p>16-Apr-15</p> <p>This is a NZ standard. Quality notifications provided with the diesel deliveries confirm it meets the required specifications.</p>
	Compliance	<p>06-Oct-16</p> <p>This is a NZ standard. Documents are provided with diesel deliveries.</p>
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 2 minutes in each hour of operation.
	Compliance	<p>16-Apr-15</p> <p>Ringelmann tests carried out on 18/8/14 and 3/10/14 had results of Shade 0 for the test duration on both occasions.</p>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	22-Jul-15 Observations on 13/7/15 by Ravensdown laboratory staff of the Auxiliary boiler found emission opacity to be no greater than Ringelmann Shade 0.
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	16-Apr-15 H ₂ S testing carried out 12-19 January 2015 showed a maximum peak of <4µg/m ³ (1 hr average). This peak occurred when the wind direction was from Bio Rich.
	Unable to be assessed	10-Oct-16 Council undertook the monitoring between 20/4/16 and 27/4/16. While there were several high H₂S readings well in excess of the limit, the wind direction was from the general direction of the neighbouring site. Placement of the H₂S trailer will be re-assessed for the next round of monitoring due to potential wind disruption by surrounding structures.
30.	Environmental	Discharges from each den scrubber shall be via stacks with a height of no less than 38 metres above ground level.
	Compliance	16-Apr-15 Discharges from the den scrubbers are via stacks with the required heights. These have not changed since the previous monitoring period.
	Compliance	06-Oct-16 The den scrubber stacks have not changed since the previous monitoring period.
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	16-Apr-15 Discharges from the hygiene scrubber are via a stack with the required height. The stack has not changed since the previous monitoring period.
	Compliance	06-Oct-16 The hygiene scrubber stack has not changed since the previous monitoring period.
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	16-Apr-15 This condition is historical.
	Compliance	06-Oct-16 All emissions from the superphosphate manufacturing process are discharged through the den or hygiene stacks.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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	16-Apr-15 The 7-day average fluoride concentration has not exceeded 1.7 µg/m ³ during the monitoring period. The highest concentration reached was 0.44µg/m ³ in February / March 2015.
	Compliance	10-Oct-16 There have been no exceedances of the 1.7 µg/m³ fluoride limit at the 'back paddock' site during the monitoring period.
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 5.5 µg/m ³ .
	Non Compliance	16-Apr-15 The 7-day average concentration of fluoride at this location was exceeded on two occasions: 17 December 2014 = 5.52µg/m ³ (minor breach as result rounds to 5.5 - 1dp - as per consent) 14 January 2015 = 6.93µg/m ³ . A second monitor has been installed at this site due to erratic readings being recorded recently to ensure the results are real and not due to instrument error. This condition will be re-assessed once the investigation results have been received.
	Compliance	10-Oct-16 There have been no exceedances of the 5.5 µg/m³ fluoride limit at the 'front paddock' site during the monitoring period.
	35.	Environmental
	Compliance	16-Apr-15 Testing undertaken shows compliance with this condition.
	Compliance	10-Oct-16 The rate of particulate matter discharged from the Bradley mills has been well below the prescribed limits.
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	16-Apr-15 Data provided in the annual report and monthly reports, shows compliance with this condition.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	10-Oct-16 The sum of fluoride compounds discharged (one hour average) during the monitoring period reached a maximum of 0.702 kg/hr in November 2015.
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.
	Non Compliance	16-Apr-15 There have been two occasions during the monitoring period where pH has been less than 2.7: On 29/5/14 side 1 had a pH of 2.58. On 5/6/14, side 1 had a pH of 2.69 (minor breach as result is effectively 2.7 when rounded to 1dp, as per the condition).
	Non Compliance	10-Oct-16 A system is in place. There has been one minor exceedance of the pH 2.7 standard. On 19/11/15 the Side 2 den stack had a pH of 2.68.
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	16-Apr-15 A water deluge system is in place. One tonne of water is available to be dropped into the mixer to free up the mixing process should it get stuck.
	Compliance	10-Oct-16 A water deluge system is in place. One tonne of water is available to be dropped into the mixer to free up the mixing process should it get stuck.
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 m/s and the wind direction is between 030-155 degrees (i.e. on-shore) the manufacture of fertiliser shall only occur when either: a. the temperature at the site is less than 22 C; and b. the manufacturing stack plume is "OK" as indicated in the chart attached as Appendix "A". OR c. the temperature at the site is 22 C or more; and d. it is daylight; and e. the relative humidity at the site is less than 70%; and f. there is no fog; and g. the manufacturing stack plume is 'OK' as indicated in the chart attached as Appendix "A".

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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.
	Compliance	16-Apr-15 A dosing system is in place. When this is not in use an automatic shutdown system will take effect if the relevant conditions arise for a period greater than 10 minutes.
	Compliance	10-Oct-16 A system is in place to control the pH of the discharge. When this is not in use, an automatic shutdown system will take effect if the relevant conditions arise for a period greater than 10 minutes.
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	20-Apr-15 Fluoride concentration in ambient air measured at both sites has been <0.1 throughout the monitoring period.
	Compliance	10-Oct-16 Fluoride in ambient air has not exceeded 0.1 µg/m³ (7 day average) at the sites located in horticultural production areas during the monitoring period.
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	16-Apr-15 The cooling towers are regularly dosed with micro-biocides.
	Compliance	06-Oct-16 The evaporative cooling towers are regularly dosed with micro-biocides. Microbial test results are provided in the monthly reports.
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	16-Apr-15 Two weather stations are maintained and data displayed and recorded as per this condition.
	Compliance	06-Oct-16 A meteorological data collection station is maintained and records the required information.
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

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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	20-Apr-15 Sampling and surveys are carried out by qualified providers. EAM NZ carries out stack testing and the lab staff undertake acid plant and ambient fluoride testing. The site maintains ISO accreditation and is scheduling an audit by K2 Environmental Ltd.
	Compliance	10-Oct-16 Sampling and surveys are completed by appropriate providers. EAM NZ carries out stack testing and the lab staff undertake acid plant and ambient fluoride testing. The site maintains ISO accreditation. Please provide the audit results carried out by the independent suitably qualified person.
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.
	Compliance	20-Apr-15 ARL is accredited for the analyses they carry out. Council is satisfied with the analyses the site laboratory carries out. An audit of the testing processes and procedures will be undertaken in the near future.
	Compliance	10-Oct-16 ARL is accredited for the analyses they carry out. Council is satisfied with the analyses the site laboratory carries out. Please provide a copy of the latest audit results of the testing processes and procedures.
45.	Technical	The consent holder shall continuously (i.e. at intervals not exceeding 1 minute) measure the rate of 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 kg/hr as both 1-minute and 1-hour averages.
	Compliance	20-Apr-15 The SO2 discharge rate is continuously measured and reported as required. The SO2 analyser is an approved method for the measurement of ambient SO2 in accordance with US statutes and is industry standard.
	Compliance	10-Oct-16 SO2 is measured continuously and recorded at 1 minute intervals. The SO2 analyser is an approved method for the measurement of ambient SO2 in accordance with US statutes and is industry standard.
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.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		a. From 1st November 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.
	Compliance	20-Apr-15 A report reviewing the various options available for continuous in-stack monitoring, as per this condition, was received 16/9/14.
	Compliance	06-Oct-16 A report was received on 29/2/16, prepared by Opus Consultants. At this point in time, it has been determined that continuous monitoring is not required. However, if problems continue on a reasonably regular (annual) basis, then further consideration of this type of monitoring would help in those situations and for systems control in general.
47.	Technical	The consent holder shall measure the rate of discharge of the SO ₂ , SO ₃ and H ₂ SO ₄ 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	20-Apr-15 The required testing takes place and is reported in the monthly reports.
	Compliance	10-Oct-16 The rate of discharge of SO₂, SO₃, and H₂SO₄ is measured twice per week in accordance with the listed method.
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 SO ₂ .
	Compliance	20-Apr-15 The required testing takes place and is reported in the monthly reports.
	Compliance	10-Oct-16 A continuous record of the rate of sulphur compounds discharged, expressed as SO₂, is maintained. Both methods described by this condition are compared and monitored.
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.
	Compliance	20-Apr-15 EAM NZ carries out the testing required by this condition. Results are reported in the monthly reports. Two tests per week have not always been carried out due to plant breakdowns or weather conditions making testing unsafe.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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Non Compliance 10-Oct-16

The discharge rate of fluoride in the emissions from the den and hygiene stacks is measured in accordance with this condition. There was a period of three weeks in August 2015 where no stack tests took place due to safety concerns with the sampling platform. Sampling is now carried out at the lower platform, as agreed by Council.

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 chromatographic method, or an alternate method approved in writing by the Council. The monitoring shall be carried out for a period of at least seven 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 20-Apr-15

Hydrogen sulphide monitoring was undertaken by Council between 12/1/2015 - 19/1/2015 (see Condition 29 comments).

Compliance 10-Oct-16

Council undertakes the monitoring. H2S monitoring was completed between 20/4/16 - 27/4/16.

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 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 2-hours continuous, and at least three samples shall be collected. Results shall be adjusted to 0 C, 101.3 kilopascals, on a dry gas basis, and as a mass emission from each stack expressed as kg/hr.

Compliance 20-Apr-15

Sampling of the rate of particulate matter from each mill has taken place as required. Results have been provided in the relevant monthly reports.

Compliance 10-Oct-16

The rate of particulate matter has been recorded at the required frequencies in accordance with the listed method.

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 20-Apr-15

The mills have sensors that are integrated into the computer system. An alarm sounds if any issues occur and prevents the plant from starting.

Baghouses are inspected daily and any maintenance recorded.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	10-Oct-16 Sensors on the mills are integrated into the computer system. An alarm sounds if any issues occur and prevents the plant from starting. Baghouses are inspected daily and maintenance is recorded.
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	20-Apr-15 pH of condensate from each of the stacks is measured in tandem with the fluoride (Condition 49). Two tests are not always carried out due to plant breakdowns or weather conditions.
	Non Compliance	10-Oct-16 pH of the condensate from den and hygiene scrubbers is measured as required. There was a period of three weeks in August 2015 where no stack tests took place due to safety concerns with the sampling platform. Sampling is now carried out at the lower platform, as agreed by Council.
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 ($\mu\text{g}/\text{m}^3$) over that 7-day sample period. Measurements shall be taken at no less than five sites, within 4 kilometres (km) of the plant, including those listed in Table 1 below; Table 1: Ambient fluoride monitoring sample sites – see table in consent document The location of the sites may be modified with the written approval of the Council. [Note: Approval from property owners/occupiers for the placement and operation of monitors is required.]
	Compliance	20-Apr-15 Ambient fluoride has been measured throughout the monitoring period and results provided monthly.
	Compliance	10-Oct-16 Ambient fluoride is measured continuously in accordance with the monitoring plan.
55.	Technical	Ambient fluoride 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.
	Compliance	20-Apr-15 Ambient fluoride is undertaken in accordance with this condition.
	Compliance	10-Oct-16 Ambient fluoride is measured in accordance with this condition.
56.	Technical	The consent holder shall ensure ambient fluoride measurement is undertaken in accordance with AS3580.13.2 – 1991 ("Method 13.2:

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		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	20-Apr-15 Ambient fluoride monitoring is undertaken as required.
	Compliance	10-Oct-16 Ambient fluoride is measured in accordance with the listed standard.
57.	Technical	Concentrations of SO2 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 Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NES) for SO2 shall be reported as soon as it is known.
	Compliance	20-Apr-15 Watercare services carries out this monitoring and results are reported monthly.
	Compliance	10-Oct-16 Watercare services carries out this monitoring and results are reported monthly.
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 NES, 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 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	20-Apr-15 Watercare services carries out this monitoring and results are reported monthly.
	Compliance	10-Oct-16 Watercare services carries out this monitoring and results are reported monthly.
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.
	Compliance	20-Apr-15 Bulk material has not been stored outside during the monitoring period.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		A small pile of sulphur was stored outside for a short time due to its water content. This was stored in a sheltered location and the risk of discharge to air, minimal.
	Non Compliance	06-Oct-16 Sulphur has been stored outside for two days (between 1/7/15 - 3/7/15) as the infeed was repaired during a sulphur shipment arrival. This was stored in a sheltered location and the risk of discharge to air, minimal. The sulphur was moved inside as soon as the infeed was repaired. Continuous monitoring was not undertaken due to the short period of time outside storage took place and the low risk of any dust producing potential.
60.	Technical	Every 24 months, from the commencement of this consent, the consent holder shall review the available methodology for measuring acid deposition at no less than two sites in horticultural areas within 4 km 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.
	Not applicable	20-Apr-15 The next report is due 25/2/2016.
	Compliance	06-Oct-16 A report completed by Plant & Food Research Ltd was received on 29/2/16. The conclusions in this report were considered fair and monitoring of pH at source is still the most practicable option at this point in time.
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 km 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	20-Apr-15 The last report was carried out in 2014. Opus undertook the initial glass monitoring and BRANZ provided further analysis into the cause of any etching. It was concluded the majority of deposits causing etching of glass was from salt and road emissions.
	Compliance	06-Oct-16 Opus Consultants Ltd undertake the glass survey. No property owners within the 1 km radius of Ravensdown accepted the offer of a survey. Letters were sent on 9 November 2015 and responses required by 23 November 2015. As such, a survey was not completed on this occasion.
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	21-Apr-15 Advice has been provided to Council whenever there has been a planned warm or cold acid plant start.

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	22-Jul-15 Council was advised of the planned cold start on 20/7/15.
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	21-Apr-15 Monthly reports are provided at the required frequencies.
	Compliance	06-Oct-16 Monthly reports have been provided to Council as required.
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; and b. the fluoride and foliar monitoring report; and c. the impact of odour and H2S discharges from the site; and d. a description of any potential and actual effects that have been identified; and e. identification of trends of monitoring information; and f. a summary of system modifications; and g. recommendations for system improvements; and h. the monthly fluoride content of phosphate rock blends. <p>The annual report shall be prepared for the period beginning July and ending June of the following year and provided to the Council before 31 October each year.</p>
	Compliance	21-Apr-15 The annual report was received 8 October 2014 for the period July 2013 - June 2014.
	Compliance	06-Oct-16 Annual reports have been provided as required. The 2015 report was received 29/9/15. The 2016 report was received 7/9/16.
65.	Technical	The consent holder shall maintain a log of all complaints received directly from the public. The log shall include; <ul style="list-style-type: none"> a. the date, time, and nature of the complaint; and b. the telephone number, and address of the complainant (as provided); and c. weather information (including an estimate of wind speed and direction); and

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
		<p>d. details of key operating parameters at the time of the complaint; and</p> <p>e. the remedial action taken, as appropriate, to prevent further incidents.</p> <p>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	<p>21-Apr-15</p> <p>A complaints log is kept. No complaints have been received during the monitoring period.</p>
	Compliance	<p>06-Oct-16</p> <p>No complaints for this site have been received during the monitoring period.</p>
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. The programme shall provide for the following matters:</p> <p>a. A visual assessment of vegetation; and</p> <p>b. A determination of foliar fluoride concentrations; and</p> <p>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); and</p> <p>d. The monitoring methodology which shall be agreed in writing by the Council; and</p> <p>e. The location of any monitoring, including but not limited to the following sites (Table 2):</p> <p>Table 2: Fluoride monitoring sample sites – see table in consent document.</p> <p>Provided that the location of the monitoring sites may be modified as appropriate with the written agreement of the Council.</p> <p>f. The requirement for the initial crop assessment to be completed within 12 months of the commencement of this consent; and</p> <p>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;</p> <p>Provided that any amendments to the monitoring programme shall only occur with the written agreement of the Council.</p>
	Compliance	<p>21-Apr-15</p> <p>The 2014 report was received 7 July 2014. The 2015 report is not yet due.</p>
	Compliance	<p>10-Oct-16</p> <p>The 2014-2015 fluoride monitoring report was received 26/6/15. The 2015-2016 report was received 17/6/16. The programme was undertaken in accordance with this condition in both instances.</p>
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</p>

Condition No.	Type of Condition	Consent Condition and Compliance Assessment
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shall include but not be limited to the management of the following matters:

- a. Dust including particulate; and
- b. Outside phosphate rock storage; and
- c. Sulphur dioxide; and
- d. Acidic discharges; and
- e. Fluoride; and
- f. 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 agreement of the Council.

Compliance	21-Apr-15	An updated Monitoring and Management Plan was received 14 January 2015.
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Compliance	06-Oct-16	An updated management plan was received on 14/1/15.
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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 monitoring matters:</p> <ul style="list-style-type: none"> a. Manufacturing stack monitoring requirements; and b. Acid plan stack monitoring requirements; and c. Dust monitoring requirements; and d. Ambient SO₂, particulate matter and H₂S monitoring; and e. Off site ambient fluoride monitoring requirements; and f. Off site crop fluoride monitoring requirements; and g. Sampling methods; and h. Analytical methods; and i. Reporting requirements; and j. Sampling locations; and k. Sampling frequencies; and l. Auditing and peer review. <p>The consent holder shall update the Monitoring Plan at least once every two years, and otherwise where necessary, with the written agreement of the Council.</p>
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Condition No.	Type of Condition	Consent Condition and Compliance Assessment
	Compliance	21-Apr-15 An updated Monitoring and Management Plan was received 14 January 2015.
	Compliance	06-Oct-16 An updated monitoring plan was received on 14/1/15.

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.