



Licence

Environmental Protection Act 1986, Part V

Licensee: Macrofertil Australia Pty Ltd

Licence: L8642/2012/2

Registered office: Level 14
644 Chapel Street
SOUTH YARRA VIC 3141

ACN: 166 370 976

Premises address: 580 Sims Street
CHADWICK WA 6450
Being Lot 580 on Plan 69001 as depicted in Schedule 1

Issue date: Thursday, 25 July 2013

Commencement date: Tuesday, 30 July 2013

Expiry date: Friday, 29 July 2018

Prescribed premises category
Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Premises production or design capacity
33	Chemical blending or mixing: premises on which chemicals or chemical products are mixed, blended or packaged in a manner that causes or is likely to cause a discharge of waste in the environment.	500 tonnes or more per year	45 000 tonnes per year

Conditions of licence

Subject to the conditions of the licence set out in the attached pages.

Ed Schuller
Senior Manager Industry Regulation (Process Industries)
Officer delegated under Section 20
of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitor and audit compliance with works approvals and licence conditions, take enforcement action as appropriate and develop and implement licensing and industry regulation policy.

Licence requirements

This licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the premises/licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. These can be accessed through the State Law Publisher website using the following link: <http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the premises to comply with the assigned noise levels set out in the Regulations.



You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non-payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your premises.

Ministerial conditions

If your premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and licence summary

Macrofertil Esperance Shed has been assessed as ‘prescribed premises’ category 33: Chemical blending or mixing and is owned by Macrofertil Australia Pty Ltd (Macrofertil). Until late 2013, the plant was run and owned by Ravensdown Fertiliser Co-operative Limited (Ravensdown). Ravensdown had been operating the Esperance Shed since 1999, with the facility having been established without a works approval. It was subsequently identified as a prescribed premises in December 2011 and was first licensed in July 2012. Ravensdown was sold to Macrofertil on 13 December 2013.

The Esperance Shed premises occupies approximately two hectares located at Sims Street, Esperance, in an area primarily zoned ‘Industrial - general’. The nearest land zoned ‘residential’ is 600 m to the south west, with the nearest residential suburb, Nulsen, 1.2 km south west of the premises. The premises is situated approximately 3 km north-west of the Esperance Port, from which imported fertilisers are received and trucked to the premises, with additional supplies transported by road from Kwinana. Bulk products received are blended or mixed at the Esperance Shed with the end products sold as blended fertiliser. In addition, some chemicals are handled on the premises. All fertilisers handled on site are in the form of granulated solids, crystalline solids or crystalline powder and are water soluble.

The main emissions of the facility are a result of spilt fertiliser and fertiliser dust being generated from the premises and potentially being discharged to land and/or water, and noise generated by the operation of blending equipment, frontend loaders and delivery trucks. The facility currently has several procedures in place, such as housekeeping procedures (sweeping up spilt product, blowing down trucks to remove fertiliser), use of dust suppression additives, and rumble strips to minimise the potential discharges.

This amendment includes changes to the controls for fugitive dust and an update to the current licence template. The licences and works approvals issued for the premises are:

Instrument log		
Instrument	Issued	Description
L8642/2012/1	26/07/2012	New licence
L8642/2012/2	25/07/2013	Licence reissue
L8642/2012/2	25/07/2013	Licence transferred and amended with administrative changes
L8642/2012/2	29/10/2015	Licence amendment and update to current template

Severance

It is the intent of these licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these



conditions shall nevertheless be valid to the extent that they are within the power of this licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 January until 31 December in the following year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environment Protection Act 1986
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

'fertiliser product' means all fertiliser components incoming and outgoing;

'Licence' means this Licence numbered L8642/2012/2 and issued under the *Environmental Protection Act 1986*;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;



'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'quarterly' means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, and 1 October to 31 December;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken; and

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.

- 1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.
- 1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.
- 1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
- (a) pollution;
 - (b) unreasonable emission;
 - (c) discharge of waste in circumstances likely to cause pollution; or
 - (d) being contrary to any written law.

1.2 General conditions

- 1.2.1 The Licensee shall maintain all pollution control and monitoring equipment to the manufacturer's specification or any internal management system.
- 1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.3 The Licensee shall:
- (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.¹

Note1: The Environmental Protection (Unauthorised Discharges) Regulations 2004 make it an offence to discharge certain materials into the environment.



2 Emissions

2.1 Emissions to land

2.1.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.1.1 it is done so in accordance with the conditions of this Licence.

Table 2.1.1: Emission points to land

Emission point reference and location on Premises map and map of monitoring locations	Description	Source including abatement
S1	Soak well	Contaminated stormwater
S2	Soak well	Contaminated stormwater

3 Monitoring

3.1 General monitoring

3.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all wastewater samples are collected in accordance with AS/NZS 5667.10;
- (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11
- (d) all samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured.

3.1.2 The licensee shall ensure that :

- (a) monthly monitoring is undertaken at least 15 days apart; and
- (b) quarterly monitoring is undertaken at least 45 days apart;

3.1.1 The Licensee shall record production or throughput data and any other process parameters relevant to any monitoring undertaken.

3.2 Monitoring of emissions to land

3.2.1 The licensee shall undertake the monitoring specified in Table 3.5.1 according to the specifications in that table.

Table 3.2.1: Monitoring of emissions to land

Emission point reference and location on Premises map and map of monitoring locations	Parameter	Units	Frequency
S1 - Within the premises drainage channel at a location closest to where drainage of the channel discharges water to the soak well.	Chemical Oxygen Demand Total Phosphorus Filterable reactive phosphorus Total Nitrogen Nitrate-nitrogen Ammonia nitrogen Total Suspended Solids Copper Cobalt Zinc Total Dissolved Solids	mg/L	Monthly ¹
	pH		
S2 – Within the premises drainage	Chemical Oxygen Demand	mg/L	Monthly ¹



channel at a location closest to where drainage of the channel discharges water to the soak well.	Total Phosphorus Filterable reactive phosphorus Total Nitrogen Nitrate-nitrogen Ammonia nitrogen Total Suspended Solids Copper Cobalt Zinc Total Dissolved Solids		
	pH	-	

¹ Sample to be collected when sufficient rainfall occurs to enable a sample to be taken

3.3 Monitoring of inputs and outputs

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of inputs and outputs

Input/output	Units	Averaging period
Fertiliser product	Tonnes	Annual

3.4 Ambient environmental quality monitoring

3.4.1 The licensee shall undertake the monitoring specified in Table 3.4.1

Table 3.4.1: Monitoring of ambient groundwater quality

Monitoring point reference and location on Premises map and map of monitoring locations	Parameter	Units	Averaging period	Frequency
Bore 1 Bore 2 Bore 3 Bore 4	Standing water level (SWL)	mBGL	Spot Sample	Quarterly
	Electrical conductivity	dS/m		
	pH	-		
	Total Dissolved Solids	mg/L		
	Dissolved Oxygen			
	Cobalt			
	Copper			
	Zinc			
	Total Nitrogen			
	Nitrate-nitrogen			
	Ammonia Nitrogen			
	Total Phosphorus			
	Filterable reactive phosphorus			
	Total Recoverable Hydrocarbons			

4 Improvements

The Licensee shall complete the improvements in Table 4.1.1 by the dates specified.

Table 4.1.1: Improvement programme

Improvement reference	Improvement	Date of completion
IR1	The Licensee shall submit to the CEO a Dust Management	31/12/2015



	Plan prepared in accordance with section 6.2 of 'Esperance Fertiliser Shed – Supporting Documentation for P4 Application', Envine Consulting Pty Ltd, dated 27/02/15.	
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5 Information

5.1 Records

- 5.1.1 All information and records required by the licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or groundwater.
- 5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the premises is aware of the conditions of the licence and has access at all times to the licence or copies thereof; and
 - (b) any person who performs tasks on the premises is informed of all of the conditions of the licence that relate to the tasks which that person is performing.
- 5.1.3 The licensee shall complete an Annual Audit Compliance Report indicating the extent to which the licensee has complied with the conditions of the licence, and any previous licence issued under Part V of the Act for the premises for the previous year.
- 5.1.4 The licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the premises and any action taken in response to the complaint.

5.2 Reporting

- 5.2.1 The licensee shall submit to the CEO at the contact address an annual environmental report within 60 calendar days after of the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.



Table 5.2.1: Annual environmental report		
Condition or table (if relevant)	Parameter	Format or form¹
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the year and any action taken	None specified
Table 3.2.1	Monitoring of emissions to land for all parameters listed in Table 3.2.1	None specified
Table 3.3.1	Monitoring of fertiliser product inputs and outputs	Tables and graphical format
Table 3.4.1	Monitoring of groundwater quality for all parameters listed in Table 3.4.1	Tables and graphical format
5.1.3	Compliance	AACR
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 5.2.2 The licensee shall ensure that the annual environmental report also contains:
- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
 - (b) an assessment of the information contained within the report against previous monitoring results

5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

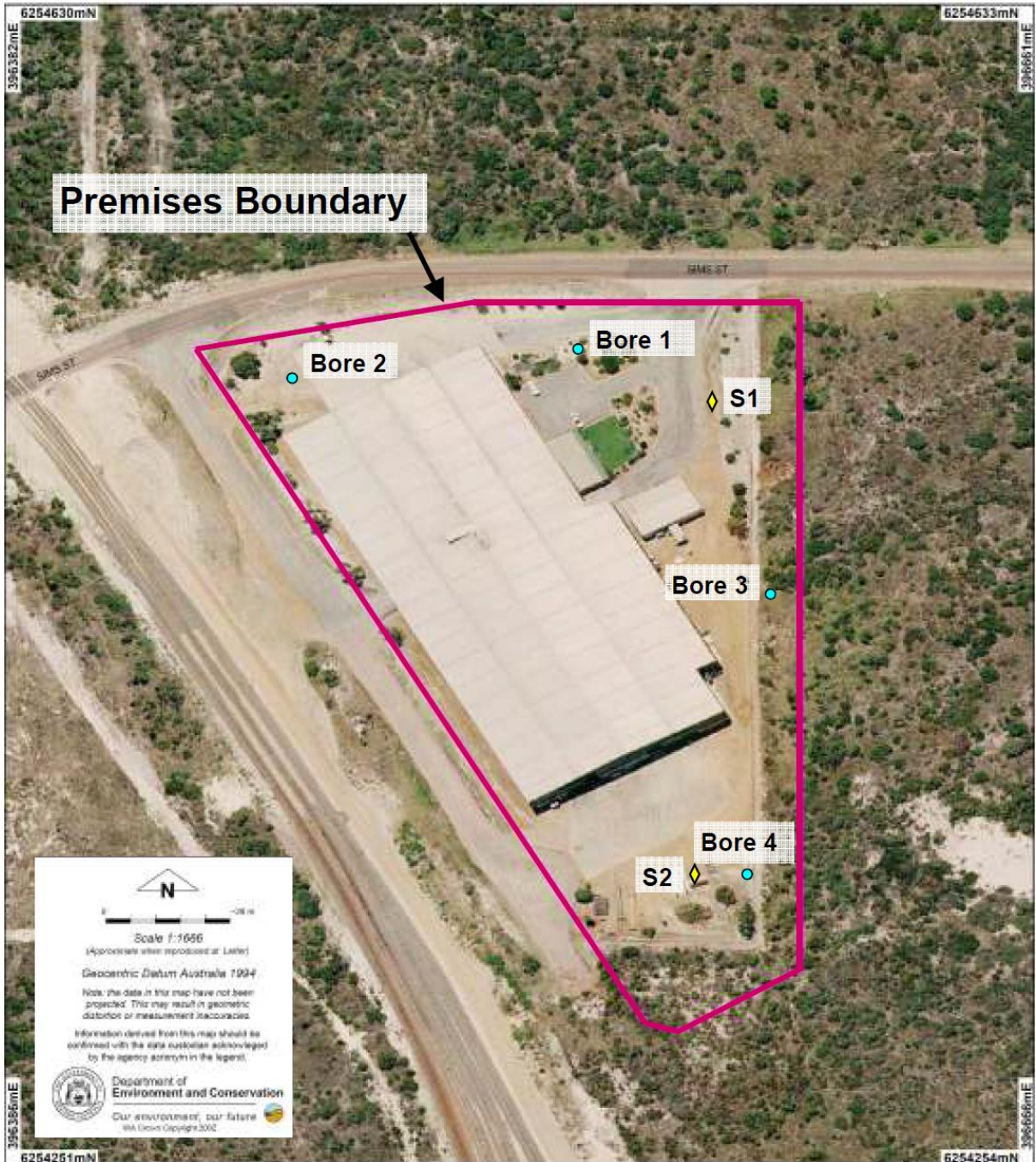
Table 5.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties



Schedule 1: Maps

Premises map and map of monitoring locations

The premises is shown in the map below. The pink line depicts the premises boundary. The location of the emission points in Table 2.1.1 and locations of the monitoring points defined in Tables 3.2.1 and 3.4.1 are shown below.





Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes Please proceed to Section C

No Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



SECTION B DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Decision Document

Environmental Protection Act 1986, Part V

Licensee: Macrofertil Australia Pty Ltd

Licence: L8642/2012/2

Registered office: Level 14
644 Chapel Street
SOUTH YARRA VIC 3141

ACN: 166 370 976

Premises address: 580 Sims Street
CHADWICK WA 6450

Issue date: Thursday, 25 July 2013

Commencement date: Tuesday, 30 July 2013

Expiry date: Friday, 29 July 2018

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue an amended licence. DER considers that in reaching this decision it has taken into account all relevant considerations.

Decision Document prepared by: Jonathan Bailes
Delegated Officer

Decision Document authorised by: Ed Schuller
Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	33	45 000 tonnes per year
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>	



Administrative details

Is the Premises within an Environmental Protection Policy (EPP) Area Yes No

Is the Premises subject to any EPP requirements? Yes No

3 Executive summary of proposal and assessment

The Esperance Shed premises occupies approximately two hectares located at Sims Street, Esperance, in an area primarily zoned 'Industrial - general'. The nearest land zoned 'residential' is 600 m to the south west, with the nearest residential suburb, Nulsen, 1.2 km south west of the premises. The premises is situated approximately 3 km north-west of the Esperance Port, from which imported fertilisers are received and trucked to the premises, with additional supplies transported by road from Kwinana. Bulk products received are blended or mixed at the Esperance Shed with the end products sold as blended fertiliser. In addition, some chemicals are handled on the premises. All fertilisers handled on site are in the form of granulated solids, crystalline solids or crystalline powder and are water soluble.

The main emissions of the facility are a result of spilt fertiliser and fertiliser dust being generated from the premises and potentially being discharged to land and/or water, and noise generated by the operation of blending equipment, frontend loaders and delivery trucks. The facility currently has several procedures in place, such as housekeeping procedures (sweeping up spilt product, blowing down trucks to remove fertiliser), use of dust suppression additives, and rumble strips to minimise the potential discharges.

The Licensee submitted an application to DER regarding an amendment to improvement program requirement IR3 within the current operating licence (L8642/2012/2). This improvement program requirement states:

'The Licensee shall;

- (a) Seal all conveyors and transfer points;
- (b) Install a dust extraction system including filters and dust extraction hoods over all hoppers with the intended outcome that all fertiliser dust will be prevented from leaving the shed; and
- (c) Upon completion of the works described in 1.3.3 (a) and 1.3.3 (b) submit to the Director a completion report providing photographic and other evidence that the works have been completed and provide an assessment as to their effectiveness in preventing dust emissions.'

The proposed amendment is to remove IR3 as alternative dust control measures have been implemented to limit potential contamination from the fertiliser unloading, blending and subsequent loading operations. DER has considered whether the risk profile of emissions and discharges from the premises has significantly changed since the previous licence was granted. No significant changes have occurred and therefore DER has not amended conditions relating to emissions and discharges apart from dust.

As part of this amendment the licence has also been updated to the current template and obsolete conditions have been removed.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises operation	L1.3.1 (previous condition)	Condition 1.3.1 has been removed as it duplicates the requirements of general condition 1.2.2 to clean up any spills of materials outside an engineered containment system.	N/A
Fugitive emissions	L2.6.1 (previous condition)	Generic fugitive dust emissions have been removed from the licence. For DER's assessment please refer to Appendix A.	Application supporting information
Ambient quality monitoring	L3.4.1	Baseline groundwater monitoring requirements have been removed from the licence as this monitoring has been completed. Quarterly groundwater monitoring requirements remain on the licence.	Macrofertil Esperance Shed 2014 Annual Environmental Report
Monitoring of inputs and outputs	L3.3.1	A requirement to monitor annual tonnage inputs/outputs of fertiliser has been included to allow a comparison against the premises production or design capacity to be made. This is consistent with the licence for Macrofertil's Albany Shed licence.	L8638/2012/2
Improvements	IR1 – IR2	Improvement program requirements IR1 and IR2 have been removed as they have been completed. Surface water monitoring is continuing and stormwater management actions will be reviewed after November 2015 as detailed in the Licensee's submission against IR2. IR3 has been removed and replaced by new requirement IR1. For DER's assessment refer to Appendix A.	Macrofertil Esperance Shed 2014 Hydrogeological Assessment Report Jim Davies & Associates Pty Ltd report dated 2 July 2014 (J5740a).
Licence Duration	N/A	No significant changes to the risk profile of emissions and discharges from the premises has occurred as a result of this amendment, therefore DER has not amended the licence duration.	N/A



Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
08/10/2015	Proponent sent a copy of draft instrument	No comments to add	N/A



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High



Appendix A

Fugitive emissions of dust

The facility is a handling and storage shed licensed for a maximum rate of throughput of 45,000 tonnes per annum (tpa). The shed contains a number of storage bays, a conveyor system and a purpose built blending system. Trucks deliver product to the facility via the entrance (the northeast side of the shed) and a front end-loader is used to push the products into large stacks within the storage bays prior to loading or blending. The shed (approx. 140m x 60m) is fully enclosed other than the entrance and exit (the southwest side of the shed).

The process flow for blended products is as follows:

- 1) Trucks enter the shed via the northeastern side of the premises and along to the weighbridge to be loaded.
- 2) For a blended product, components of the blend are moved by front-end loader from the relevant storage bays to hoppers, which are then fed into the blending plant and mixed to the required specification.
- 3) Blended products are moved via a 12m high elevator with an enclosed chute which drops the blended product directly into the waiting truck.
- 4) Once loaded, the truck is weighed and then moves out via the exit on the southwestern side of the shed.

The process flow for non-blended products is as follows:

- 1) Trucks enter the shed via the northeastern side of the premises and along to the weighbridge to be loaded.
- 2) For a straight, non-blended product, a front-end loader picks this product from the relevant storage bays and drops it directly into a hopper which feeds into the Totor.
- 3) The product then moves through an enclosed elevator into a vibrating screen deck and then along an open 7m conveyor to be dropped into a waiting truck.
- 4) Once loaded, the truck is weighed and moves out via the southwestern side of the shed.

All blending and loading operations take place close to the center of the shed, which is approximately 30m from either the entry or the exit of the enclosed shed. Note, there are doors on the northern and southern ends of the shed, however these are closed during operational periods.

As part of the loading process, the Licensee adds a polymer ('Pearl') to the fertiliser or blend. This is an organic oil-based product that encapsulates the fertiliser granules to reduce dust generation from the loading activity. Accumulated waste fertiliser on the shed floor (e.g. spills) is swept regularly and sold as fertiliser 'sweepings'. Lime sand is generally used to soak up any moist product that has collected on the shed floor, particularly during the winter months when trucks track water into the shed. This waste material is swept up, stored separately and taken from site.

Truck loads generally vary between 12 and 60 tonnes (depending on trailer capacity and client requirements). The design capacity of the loading system is rated at 120 tph. Once trucks are loaded and weighed, drivers slowly move out of the shed with the load uncovered, to subsequently cover outside the shed. The external covering is due to the very high risk of pedestrian contact with mobile vehicles and machinery within the shed.

Loading operations within the shed generally occur for 5 months of the year as per the following:

- General period – February (e.g. approx. 50-70 tpd or around 1-2 trucks per day);
- Peak period – March to June (e.g. approx. 350-400 tpd or around 8-10 trucks per day); and
- Closed for maintenance during off-season – July to January (negligible quantities of fertiliser unloaded, blended or loaded).



Fugitive dust emissions remain the main emission from the facility. The licence contained generic fugitive dust conditions and an improvement program requirement to:

- (a) Seal all conveyors and transfer points; and
- (b) Install a dust extraction system including filters and dust extraction hoods over all hoppers with the intended outcome that all fertiliser dust will be prevented from leaving the shed.

The Licensee has undertaken a review of dust control measures and has requested that the above requirements are removed and has proposed alternative controls. The request for removal of the requirements is based on the following:

- (a) *Seal all conveyors and transfer points* – all loading chutes are enclosed, most hoppers are partially enclosed without compromising loading, and augers are used where possible to transfer product in an enclosed manner. The main conveyor is 7m long and not enclosed, however product is most at risk from dust generation at both ends of the conveyor (loading and unloading) rather than the length of the conveyor itself. This risk is mitigated by the enclosed loading chute at the unloading end of the conveyor (Figure 4b) which substantially reduces dust. It is not practical to enclose or seal hoppers in the blending plant given the large quantities of product that are regularly placed in the facility, however the large auger below the blending plant that leads to an enclosed elevator substantially reduces the risk of dust being generated once products are blended and moved towards truck loading.
- (b) *Install a dust extraction system including filters and dust extraction hoods over all hoppers with the intended outcome that all fertiliser dust will be prevented from leaving the shed* – the installation of a dust extraction system and filters within the shed is problematic given the non-compatibility of phosphorus and nitrogenous fertilisers loaded by Macrofertil. Any extraction and filtration system would require continual unclogging as phosphorus and nitrogen dust particles would readily form a congealed mass. This system would not be successful in mitigating dust produced in the shed and therefore would also not be a cost-effective solution. In addition, all blending and unloading works take place in the center of the shed and the only openings are the entry and exit. This substantially reduces the risk of dust migrating outside of the shed given prevailing wind conditions are effectively north/south and the shed is only open on the east and west sides. In addition, polymers such as 'Pearl' are added to the products as a coating to further limit the creation of dust through movement and blending operations.

Emission Risk Assessment – Operations

Emission Description

Emission: Fugitive dust from shed operations including blending, loading, and deposition from truck tyres tracking through shed.

Impact: Elevated nutrient levels in stormwater potentially contaminating groundwater once percolated into the soil. Dust being deposited on surrounding vegetation. Health impacts and nuisance to people within surrounding industrial and residential areas.

Controls:

The Licensee currently implements the following in-shed dust controls:

- Purchase of fertiliser product that meets specification requirements such as large particle size, minimal fines, and consistent uniformity of product to reduce the requirement for screening;
- Daily sweeping of spills and dust within the shed during operational periods;
- One-way traffic control whereby empty trucks enter via the north entrance and exit when loaded via the south exit;
- Completely enclosed shed other than the entrance and exit;
- Entrance and exit on opposite sides of the morning and afternoon prevailing wind direction;
- Enclosed chute to load trucks;



- Immediate spill response;
- Low tip heights into hoppers by front-end loaders; and
- Augering product into hoppers where possible.

The Licensee currently implements the following outside-shed dust controls:

- All areas surrounding the shed exit are hardstand (bitumen);
- Stormwater is directed to detention swales on each side of the shed;
- Regular sweeping of inside shed by bobcat with road sweeper;
- All roof stormwater runoff is directed to the southern detention basin;
- Regular monitoring of surface water (when possible) and groundwater as per licence requirements;
- Immediate spill response;
- Regular sweeping of hardstand areas, particularly where loaded trucks park to cover up; and
- Large area of vegetated buffer on the southern side of the property, reducing the impact of prevailing winds in the afternoon.

Risk Assessment

Consequence: Moderate

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

DER has reviewed the controls used by the Licensee and has witnessed the implementation of them during a site visit in October 2015. DER is satisfied that the current requirements of improvement program requirement IR3 are not practical to implement and that other suitable control measures are being used by the Licensee. The Licensee has proposed to prepare a Dust Management Plan (DMP), which will formalise the dust management process and ensure that all employees and contractors are aware of the control strategies in place. Therefore improvement program requirement IR3 has been removed and replaced by IR1 which requires the submission of the DMP. Generic fugitive dust conditions (L2.6.1) have been removed from the licence as the risk can be adequately controlled through the DMP and regulated by the general provisions of the *Environmental Protection Act 1986*.

Residual Risk

Consequence: Moderate

Likelihood: Possible

Risk Rating: Moderate