

Licence

Environmental Protection Act 1986, Part V

Licensee: Nufarm Australia Limited

Licence: L6092/1972/11

Registered office: 103-105 Pipe Road

Laverton North VICTORIA 3026

ACN: 004 377 780

Premises address: Nufarm Australia Limited

1 Mason Road KWINANA WA 6167

Being Part Lot 51 on Diagram 46722 as depicted in Schedule 1.

Issue date: Monday, 13 October 2014

Commencement date: Tuesday, 14 October 2014

Expiry date: Sunday, 13 October 2019

Prescribed premises category

Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
32	Pesticides manufacturing: premises on which herbicides, insecticides or pesticides are manufactured by a chemical process.	Not applicable	125,000 tonnes per annual period

Conditions

This Licence is subject to the conditions set out in the attached pages.

Officer delegated under section 20 of the Environmental Protection Act 1986

Environmental Protection Act 1986 Licence: L6092/1972/11 File Number: DEC10716



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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 monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements 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 to the environment 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. Legislation 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.

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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

Nufarm Australia Limited is a large herbicide and fungicide manufacturer located within the heavy industrial area of Kwinana. Nufarm Australia Limited has occupied the Kwinana premises since 1985, after purchasing the location from Chemical Industries Kwinana (CIK). Some contamination was present at the site at the time of purchase. The contamination of the soil includes herbicides 2, 4-D, 2, 4, 5-T and chlorinated phenols. The site is classified *possibly contaminated – investigation required* under the *Contaminated Sites Act 2003*.

Historically, CIK installed a Deep Well Injection System (DWI) to discharge wastewater into a confined Aquifer (Cockleshell Gully Coal Seam, a highly saline aquifer) at about 1.4km depth.

When Nufarm Australia Limited took over the site, the use of the DWI for the discharge of wastewater continued, this included wastewater with a very high level of salts (as a result of the Trifluralin synthesis process).

Although geological and engineering studies previously indicated DWI to be a safe and acceptable method of disposal at the time, DWI is not considered a preferred method of discharge. Since 2003 Nufarm Australia Limited has done several reviews on alternative ways to treat the wastewater and also has been reducing the amount of wastewater and the pollutants that were previously disposed of down the DWI.

Nufarm Australia Limited made a commercial decision to cease the synthesis of Trifluralin and Diuron on the Kwinana Premises and therefore will decommission the DWI.

The decommissioning of the DWI will not be immediate as Nufarm Australia Limited needs to make changes to the wastewater treatment and choose a more appropriate method of disposal of their wastewater.

The licence has been amendmed to include the BIP plant as per works approval W5780 issued on 26 February 2015 and amendments to include monitoring of potential emisions from the wastewater treatment plant that will be installed under works approval W5853. Works relating to W5780 are complete and the works approval is now closed.

Works approval W5853 was granted on the 7 August 2015 and was for the installation of a wastewater treatment plant for the bi-product water from the esterification process. The treated water discharges to the stormwater treatment plant where it is treated again and then discharged to the infiltration pond on site. The wastewater will contain trace levels of:

- 2-ethyl hexanol (2-EH);
- 2,4-dichlorophenoxyacetic acid (2,4-D); and
- 2-methyl-4-chlorophenoxyacetic acid (MCPA).



Due to the wastewater having trace levels of these chemicals the licence has been updated to include monitoring for these chemicals both prior to discharge to the infiltration pond and during groundwater monitoring. The environmental risk assessment has determined monitoring is appropriate and other regulatory controls are not required for ongoing operation of the wastewater treatment plant, once installed. Compliance with the works approval will be assessed under the W5853 instrument.

The licences and works approvals issued for the Premises since 30/09/2000 are:

Instrument log		
Instrument	Issued	Description
L6092/1972/4	30/09/2000	Reissue of licence
L6092/1972/5	14/10/2001	Reissue of licence
L6092/1972/6	14/10/2002	Reissue of licence
L6092/1972/7	14/10/2002	Reissue of licence
L6092/1972/8	14/10/2003	Reissue of licence
L6092/1972/9	14/10/2004	Reissue of licence
L6902/1972/10	8/10/2009	Reissue of licence
L6902/1972/11	13/10/2014	Reissue of licence
W5780/2014/1	2/03/2015	BIPs Plant installation
W5853/2015/1	7/10/2015	Esterification Wastewater treatment plant installation

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;

'AHD' means the Australian height datum;

'annual period' means the inclusive period from 1 July until 30 June 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 or target 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 Environmental Protection Act 1986
Locked Bag 33

CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: info@der.wa.gov.au

'controlled waste' has the definition in Environmental Protection (Controlled Waste) Regulations 2004:

'hardstand' means a surface with a permeability of 10⁻⁹ metres/second or less;

'Licence' means this Licence numbered L6092/1972/11 and issued under the Act;

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

'MBA' means Methylene Blue Active substance;

'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;



'NHMRC, NRMMC (2011) Australian Drinking Water Guidelines' means the NHMRC, NRMMC (2011) Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy. National Health and Medical Research Council and Natural Resource Management Ministerial Council, Commonwealth of Australia, Canberra (Version 2.0, Updated December 2013) or the most current version;

'normal operating conditions' means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

'**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 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March;

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

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

'shut-down' means the period when plant or equipment is brought from normal operating conditions to inactivity;

'six monthly' means the 2 inclusive periods from 1 April to 30 September and 1 October to 31 March in the following year;

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

'start-up' means the period when plant or equipment is brought from inactivity to normal operating conditions;

'USEPA' means United States (of America) Environmental Protection Agency;

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

'µS/cm' means microsiemens per centimetre.

- 1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the 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 operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective 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.

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of Section 2 of this Licence.

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emis	Table 2.2.1: Emission points to air					
Emission point reference	Emission point reference on Map of emission points	Emission Point	Source, including any abatement			
A1	S1-SC-01	Synthesis #1 stack	Glyphosate Synthesis via Wet Scrubber			
A2	S2-SC-01	Synthesis #2 stack	Esterification Synthesis via Wet Scrubber			
А3	S3-SC-03	Synthesis #3 stack	Trifluralin melting fume and neutralisation tank via Wet Scrubber			
A4	В	Boiler stack	Boiler which uses natural gas			
A5	F1-SC-01	Formulation #1 vent stack	Formulation #1 area via an activated carbon column			
A6	F2-SC-01	Formulation #2 vent stack	Formulation #2 area via an activated carbon column			
A7	BI-SC-28	BIP formulation plant vent stack	BIP formulation via wet scrubber			

2.3 Point source emissions to groundwater

2.3.1 The Licensee shall ensure that where waste is emitted to groundwater from the emission point in Table 2.3.1 it is done so in accordance with the conditions of this Licence.

Table 2.3.1: Emission points to groundwater					
Emission point	Description Source including abatement				
reference	e				
G1	Deep Well Injection Bore	Process Wastewater after treatment via the onsite wastewater treatment plant			

2.3.2 The Licensee shall not cause or allow point source emissions to groundwater greater than the limits listed in Table 2.3.2.

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Table 2.3.2: Point source emission limits to groundwater					
Emission point	Parameter	Limit	Averaging period		
reference		(including units)			
	Phenoxy Compounds (Chlorophenols, 2,4-D, MCPA & Dicamba)	50 kg/year			
	Triazines (Atrazine, Prometryn, Simazine & Terbutryn)	20 kg/year			
G1	Substituted Ureas (Diuron & Fluometuron)	50 kg/year	Annual		
	Molinate	10 kg/year			
	Trifluralin	30 kg/year			
	Anionic surfactants	200 kg/year			
	Volume of wastewater injected	80 m ³ /day	Day		

2.3.3 The Licensee shall cease disposal of wastewater via emission point G1 when the annulus pressure is less than, or equal to, 50kPa or greater than, or equal to, 750kPa.

2.4 Emissions to land

2.4.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.4.1 it is done so in accordance with the conditions of this Licence.

Table 2.4.1: Emis	Table 2.4.1: Emissions to land				
Emission point reference	Description	Source including abatement			
L1	Infiltration pond	Stormwater and process wastewater after treatment via the onsite wastewater treatment plant.			

2.4.2 The Licensee shall not cause or allow emissions to land that do not meet the limits listed in Table 2.4.2.

Table 2.4.2: Emission limits to land						
Emission point	Parameter	Limit	Averaging period			
reference		(including units)				
	pН	5 - 9				
	Total dissolved solids	Less than 2000 mg/L				
	Anionic surfactants (as MBAs)	Less than 5 mg/L				
	Total phenol	Less than 1.0 mg/L				
L1	Herbicides and fungicides manufactured or processed onsite including but not limited to: - Triazine compounds (Atrazine, Simazine and Terbutryne); - Trifluralin; - 2,4-D; and - Diuron.	Less than 10 times the concentrations given in the NHMRC, NRMMC (2011) Australian Drinking Water Guidelines.	Each batch of wastewater discharged to infiltration pond			



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 sampling is conducted in accordance with AS/NZS 5667.10;
 - (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
 - all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.
- 3.1.2 The Licensee shall ensure that:
 - (a) monthly monitoring is undertaken at least 15 days apart;
 - (b) quarterly monitoring is undertaken at least 45 days apart;
 - (c) six monthly monitoring is undertaken at least 5 months apart; and
 - (d) annual monitoring is undertaken at least 9 months apart.

3.2 Monitoring of point source emissions to groundwater

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Emission point reference	Parameter ¹	Units	Frequency
G1	Phenoxy Compounds (Chlorophenols, 2,4-D, MCPA & Dicamba) Triazines (Atrazine, Prometryn, Simazine & Terbutryn) Substituted Ureas (Diuron &	mg/L	Daily representative samples, bulked to representative monthly samples only when being
	Fluometuron) Molinate	kg _	discharged
	Trifluralin		
	Anionic surfactants		

Note 1 Analysis may be performed by staff of Nufarm Australia Limited

- 3.2.2 The Licensee shall install and maintain equipment that continuously monitors the following performance parameters of emission point G1:
 - (i) pH at the injection well head;
 - (ii) pipeline pressure at the injection head;
 - (iii) injected water temperature; and
 - (iv) bore casing annulus pressure.



3.3 Monitoring of emissions to land

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: Mon	itoring of emissions to land		
Emission point	Parameter ¹	Units	Frequency
reference			
	Total Volume	m ³	
	рН	N/A	
	Total dissolved solids		
	Anionic surfactants (as MBAS)		
	Total phenols		
	Herbicides and fungicides		
	manufactured or processed		
	onsite including but not limited		Each batch of
L1	to:		wastewater discharge
	- Triazine compounds	mg/L	to infiltration pond
	(Atrazine, Simazine and		
	Terbutryne);		
	- Trifluralin;		
	- 2,4-D; and		
	- Diuron.		
	2-EH		
	MCPA		

Note 1 Sampling may be done by staff of Nufarm Australia Limited

3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.

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Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
	Standing water level	m(AHD)		Monthly
	рН	-		
	Electrical conductivity	μS/cm		Annual
	Total Recoverable Hydrocarbons Total Phenols			Six-monthly
Bore No. 1,	Anionic surfactants (as MBAs) Atrazine	-	Spot sample	
Bore No. 2, Bore No. 3, Bore No. 4,	Simazine MCPA			
Bore No. 5,	2,4-D			
Bore No. 6,	2,4,5-T			
Bore No. 7 and	2,4,6-T	mg/L		
Bore No. 8	Dicamba			
	Diuron			Annual
	Molinate			7
	Fluometuron	_		
	Prometryn			
	Trifluralin			
	Terbutryn			
	Total Dissolved			
	Solids			
	Total Suspended			
	Solids			
	Glyphosate			
	2 -EH			

4 Improvements

4.1 Improvement program

- 4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.
- 4.1.2 The Licensee, for improvements not specifically requiring a written submission, shall write to the CEO stating whether and how the Licensee is compliant with the improvement within one week of the completion date specified in Table 4.1.1.

Table 4.1.1: Improvement program				
Improveme nt reference	Improvement	Date of completion		
IR3	The Licensee shall cease the use of the deep well injection bore for the discharge of any wastewater.	01/01/2016		
IR4	The Licensee shall decommission the deep well injection bore in accordance with the decommissioning plan submitted to DER 19 August 2014.	01/07/2016		



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 waters.
- 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 annual period.
- 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 an Annual Environmental Report within 28 calendar days after 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 form ¹				
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified				
Table 3.2.1	Results of the sampling of wastewater discharged to emission point G1	GR1 or Excel Spreadsheet				
Table 3.3.1	Results of the sampling of all batches of water discharged into the infiltration pond L1	LR1 or Excel Spreadsheet				
Table 3.4.1	Groundwater monitoring results	None specified				
5.1.3	Compliance	Annual Audit Compliance Report (AACR)				
5.1.4	Complaints summary	None specified				

Note 1: Forms are in Schedule 2

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- 5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits.
- 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 CEO's request	As received by the Licensee from third parties			

5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements						
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²			
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1			

Note 1: Forms are in Schedule 2

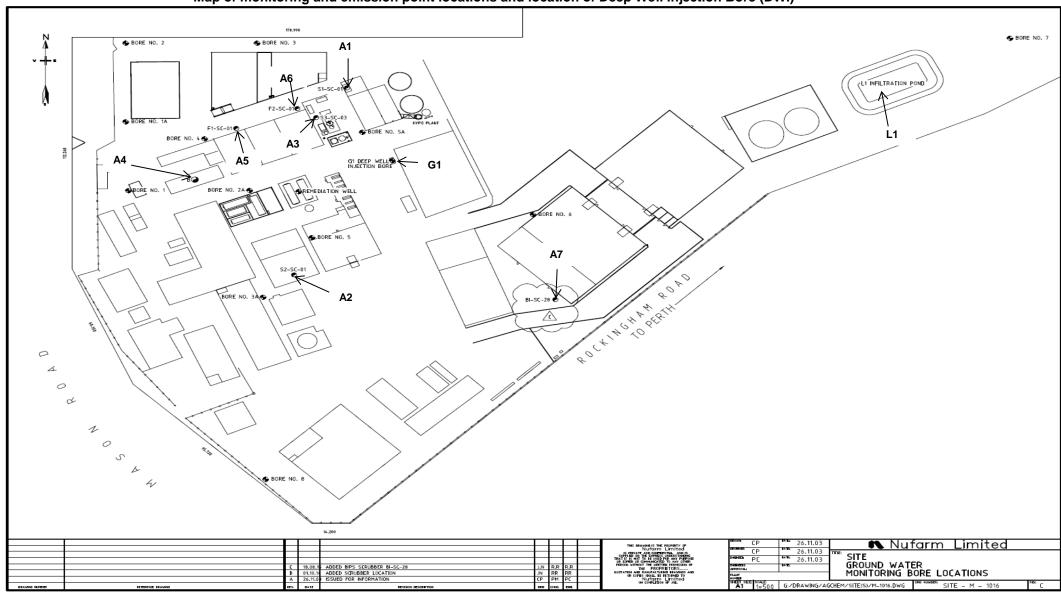


Schedule 1: Maps Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary.



Map of monitoring and emission point locations and location of Deep Well Injection Bore (DWI)





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 CONDITION 1. Were all conditions of the Licence complied with within t box)	
	Yes ☐ Please proceed to Section C
	No ☐ Please proceed to Section B
Each page must be initialled by the person(s) who signs Sec (AACR).	ction C of this Annual Audit Compliance Report
Initial:	



SECTION B

DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that w	as 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?:	
Yes Reported to DER verbally Date Reported to DER in writing Date	□ No
d) Has DER taken, or finalised any action in relation to the non cor	npliance?:
e) Summary of particulars of the non compliance, and what was th	e environmental impact:
f) If relevant, the precise location where the non compliance occurr	red (attach map or diagram):
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects	s of the non compliance:
i) Action taken or that will be taken to prevent recurrence of the nor	n compliance:
Each page must be initialled by the person(s) who signs Section C of	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		by the individual licence holder, or
An individual		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		by the principal executive officer of the licensee; or
unincorporated company		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.
		by affixing the common seal of the licensee in accordance with the Corporations Act 2001; or
		by two directors of the licensee; or
		by a director and a company secretary of the licensee, or
A corporation		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		by the principal executive officer of the licensee; or
A public authority (other than a local government)		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		by the chief executive officer of the licensee; or
a local government		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)	



Licensee: Nufarm Australia Limited

Form: GR1 Period :

Name: Monitoring of point source emissions to groundwater

Form GR1:	Form GR1: Monitoring of point source emissions to groundwater						
Emission point	Parameter	Limit/ Target	Result	Result	Averaging period	Method	Sample date & times
G1	Phenoxy Compounds (Chlorophenols, 2,4- D, MCPA & Dicamba)		mg/L	kg	Month		
G1	Triazines (Atrazine, Prometryn, Simazine & Terbutryn)		mg/L	kg	Month		
G1	Substituted Ureas (Diuron & Fluometuron)		mg/L	kg	Month		
G1	Molinate		mg/L	kg	Month		
G1	Trifluralin		mg/L	kg	Month		
G1	Anionic surfactants		mg/L	kg	Month		

Signed on behalf of Nufarm Australia Limite	d:Date:
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Licence: L 6092/1972/11 Licensee: Nufarm Australia Limited

Form: LR1

Name: Monitoring of emissions to land

Licensee: Nufarm Australia Limited Period :

imission oint	Parameter	Limit	Result	Result	Averaging period	Method	Sample date & times
	Total Volume		L/s	m³/day			
	рН						
1	Total dissolved solids		mg/L				
	Anionic surfactants (as MBA's)		mg/L				
	Total phenols		mg/L				
I	Herbicides and fungicides manufactured or processed onsite including but not limited to: - Triazine compounds (Atrazine, Simazine and Terbutryne); - Trifluralin; - 2,4-D; and - Diuron.		mg/L		Spot sample		

Signed on hehalf of Nufarm Australia Limited:	Date:
Signed on behalf of Nulann Australia Linnieu	Date

Licence: L6092/1972/11 Licensee: Nufarm Australia Limited

Form: N1 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit		
Emission point reference/ source		
Parameter(s)		
Limit		
Measured value		
Date and time of monitoring		
Measures taken, or intended to		
be taken, to stop the emission		

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to	
prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify,	
limit or prevent any pollution of the environment which has been or may be caused by the emission.	
which has been of may be caused by the chinssion.	
The dates of any previous N1 notifications for the	
Premises in the preceding 24 months.	
Name	
Post	
Signature on behalf of	
Nufarm Australia Limited	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Nufarm Australia Limited Proponent:

Licence: L6092/1972/11

Registered office: 103-105 Pipe Road

> Laverton North VICTORIA 3026

ACN: 004 377 780

Premises address: Nufarm Australia Limited

> 1 Mason Road KWINANA WA 6167

Being part Lot 51 on Diagram 46722

Issue date: Monday, 13 October 2014

Commencement date: Tuesday, 14 October 2014

Expiry date: Sunday, 13 October 2019

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

Richard Wilson Decision Document prepared by:

Licensing Officer

Decision Document authorised by: Lauren Trott

A/Manager Licensing - Process Industries

Environmental Protection Act 1986 Decision Document: L6092/1972/11 File Number: DEC10716

Page 1 of 14 Amendment date: 11 September 2015



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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 New Licence Licence amendment Works Approval amendment			□ □ ⊠ ent □
	Category	number(s)	Assessed design capacity
Activities that cause the premises to become prescribed premises	32: Pestic Manufactu			125,000 tonnes per annual period
Application verified	Date: NA			
Application fee paid	Date: NA			
Works Approval has been complied with	Yes	No	N//	$A \boxtimes$
Compliance Certificate received	Yes□	No□	N/A	$A \boxtimes$
Commercial-in-confidence claim	Yes□	No⊠		
Commercial-in-confidence claim outcome				
Is the proposal a Major Resource Project?	Yes	No⊠		
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the Environmental Protection Act 1986?	Yes□	No⊠	Mana	rral decision No: aged under Part V essed under Part IV
			Minis	sterial statement No:
Is the proposal subject to Ministerial Conditions?	Yes	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 Departme	No⊠ nt of Wate	er cons	sulted Yes 🗌 No 🖂
Is the Premises within an Environmental Protection Environmental Protection (Kwinana) (Atmospheric	• •	•	Yes⊠	No
Is the Premises subject to any EPP requirements?	Yes□	No⊠		

Environmental Protection Act 1986 Decision Document: L6092/1972/11 File Number: DEC10716

3 Executive summary of proposal and assessment

Nufarm Australia Limited is a large herbicide and fungicide manufacturer located within the heavy industrial area of Kwinana. Nufarm Australia Limited has occupied the Kwinana premises since 1985, after purchasing the location from Chemical Industries Kwinana (CIK). Some contamination was present at the site at the time of purchase. The contamination of the soil includes herbicides 2, 4-D, 2, 4, 5- T and chlorinated phenols. The site is classified *possibly contaminated – investigation required* under the *Contaminated Sites Act 2003*.

Historically, CIK installed a Deep Well Injection System (DWI) to discharge wastewater into a confined Aquifer (Cockleshell Gully Coal Seam, a highly saline aquifer) at about 1.4km depth. When Nufarm Australia Limited took over the site, the use of the DWI for the discharge of wastewater continued, this included wastewater with a very high level of salts (as a result of the Trifluralin synthesis process).

Although geological and engineering studies previously indicated DWI to be a safe and acceptable method of disposal at the time, DWI is now considered an inappropriate method of discharge. Since 2003 Nufarm Australia Limited has done several reviews on alternative ways to treat the wastewater and also has been reducing the amount of wastewater and the pollutants that were previously disposed of down the DWI.

Nufarm Australia Limited made a commercial decision to cease the synthesis of Trifluralin and Diuron on the Kwinana Premises and therefore will decommission the DWI. The decommissioning of the DWI will not be immediate as Nufarm Australia Limited needs to make changes to the wastewater treatment and choose a more appropriate method of disposal of their wastewater.

This Licence is the successor to licence L6902/1972/10.

The licence has been amended as a result of works approval W5780 granted on 26 February 2015 and Works Approval W5853 granted on the 7 August 2015.

Works Approval W5780 was for the relocation of the Bipyridyls Formulation Plant (BIPs Plant) from the proponents premises in Welshpool to the premises located at 1 Mason Road in Kwinana Beach. Nufarm has decided to close the Welshpool premises and relocate the BF Plant to continue the production of BIPs at the Kwinana Beach premises.

The BIPs Plant had been in operation at the Welshpool premises for a long period of time (since 1988 to end of 2014) under licence L6153/1988/11. Works relating to W5780 are complete and the works approval is now closed.

Works approval W5853/2015/1 was granted on the 7 August 2015 and was for the installation of a wastewater treatment plant for the bi-product water from the esterification process. The treated water discharges to the stormwater treatment plant where it is treated again and then discharged to the infiltration pond on site. The wastewater will contain trace levels of:

- 2-ethyl hexanol (2-EH);
- 2,4-dichlorophenoxyacetic acid (2,4-D); and
- 2-methyl-4-chlorophenoxyacetic acid (MCPA).

Due to the wastewater having trace levels of these chemicals the licence has been updated to include monitoring for these chemicals both prior to discharge to the infiltration pond and during groundwater monitoring.

As this is a Licence amendment only the conditions or part conditions being amended have been reassessed. The amendments mainly pertain to the monitoring of potential contaminants, the removal of targets from the licence and removal of improvement conditions that DER considers have been complied with.



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 TABI	-E		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General Conditions	Previously 1.2.2	Emission Description Emission: Contaminated stormwater flowing off site or into the environment. Impact: Contamination of groundwater and/or soil. Controls: All materials likely to contaminate stormwater are stored in sealed containers within buildings. Stormwater is collected from the sites hardstand areas and directed to a wastewater treatment plant. Risk Assessment Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low Regulatory Controls General provisions of the Environmental Protection 1986 Act. Waste water is tested to ensure it is acceptable for discharging to the infiltration pond on site at discharge point L1. Licence condition 2.4.2 set the discharge limits for treated stormwater from L1. Residual Risk Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	



DECISION TAB	LE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to air including monitoring	L= Licence L2.2.1	Operation The below risk assessment is for the BIPs plant only. This plant was assessed under works approval W5780 issued on 26 February 2015. Emissions from other sources on site have not been reassessed. Emission Description: Normal Operation Emission: Pyridine emissions from the process exiting through the stack under normal operating conditions i.e. scrubber operating as designed. Impact: Nuisance odour from the pyridine effecting neighbouring businesses. Controls: All waste gases from the processing area are treated by the packed bed scrubber which uses a 5-7% strength Phosphoric Acid solution and has a calculated efficiency of 99.4%. Pyridine in the waste gas will react with the Phosphoric Acid and any potential Paraquat and Diquat will readily be dissolved in the liquid of the scrubber resulting in little to no emissions. Stack testing conducted on the BIPs plant when operating in Welshpool shows Pyridine emissions below detection level of 0.0083mg/m³ and average concentrations of phosphoric acid of <0.62mg/m³ and <0.13mg/m³. The concentration of the Phosphoric acid is checked daily and there are process safeguards such as interlocks which will ensure that if the scrubber pump fails the processes are stopped. Interlocks also ensure that the process is not able to operate if the scrubber is not functional. These controls are expected to result in very low level impacts occurring in most cases.	Application supporting documentation
		DER notes that there were no complaints received regarding the operation of the BIP plant at the previous location in Welshpool. Industrial receptors were located about 50m	

DECISION TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		from the old premises compared to about 100m on this site.	
		Risk Assessment Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	
		Regulatory Controls The licensee will be subject to the general provisions of the Act.	
		Residual Risk Consequence: Insignificant Likelihood: Unlikely Residual Risk Rating: Low	
		Emission Description: Upset Operation Emission: Scrubber for the BIPs plant malfunctioning resulting in potential emissions of Phosphoric Acid, Pyridine, Diquat and Paraquat.	
		Impact: Due to the chemical characteristics Diquat and Paraquat they will be dissolved in liquid in the reaction vessel and are unlikely to volatilise and be released during upset conditions. Pyridine could be emitted, however the concentration used within the processing area is not considered to be harmful to human health but may cause regional attention and localised impacts due to odour.	
		Controls: Nufarm controls any potential emissions with the use of the packed bed Phosphoric Acid scrubber. Nufarm checks the concentration of the Phosphoric acid daily and there are process safeguards with regards to the scrubber pump, which will ensure that as soon as the scrubber pump fails that the processes are stopped. The process is	

DECISION TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		automatically disabled if the scrubber is not functional.	
		Concentrations of pyridine during normal operations at the intake for the scrubber are expected to be between 0.007 and 0.023 mg/m³. If additional loading from packaging stations and a safety factor is applied, the maximum concentration is expected to be 0.05 mg/m³. The odour threshold of pyridine is quoted as 0.10 mg/m³.	
		These controls are expected to result in very low level impacts occurring in most cases or emissions for a very short period of time due to the automatic safeguards in the system.	
		Risk Assessment Consequence: Minor Likelihood: Rare Risk Rating: Low	
		Regulatory Controls Condition L1.2.1 requires that the maintenance of the pollution control equipment is sufficient for the scrubber operation. The BIPs plant Emission point A7 (BI-SC-28) has been added to the licence as an authorised emission point.	
		Residual Risk Consequence: Minor Likelihood: Rare Residual Risk Rating: Low	



DECISION TABL	.E		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point Source Emissions to Groundwater	Previously 2.3.3	As per the risk assessment below condition 2.3.3 has been removed. This condition set both monthly and annual targets for emissions to groundwater through emission point G1: deep well injection (DWI) bore. Reporting for the 2014-2013 annual period shows that emissions are consistently below the monthly targets. The highest result recorded was 20 times lower than the monthly target. Due to Nufarm Kwinana ceasing the production of Trifluralin and Diuron it was determined that DWI will no longer be required so the licence requires that all discharges via the DWI bore cease prior to 1 January 2016. This means there will be approximately 3-4 months of emissions to the DWI from the issuing of this amended licence. Given the amount of contaminants in waste water produced and there will only be 3-4 months of discharge it is unlikely there will be an impact from continuing to discharge to the DWI for this period of time. Licence condition 2.3.2 places limits on the emissions from the DWI bore for the year. Emission Description: Normal Operation Emission: Trace levels of contaminants discharged to the DWI bore Impact: Treated wastewater being injected into the confined aquifer. Which is highly saline and believed to discharge 10's of kilometres off the coast in an area of well mixed ocean. Controls: The licensee treats water prior to discharge to the DWI bore and monitors the level of contaminants to ensure they are within the limits set within the licence.	



DECISION TABL	.E		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Risk Assessment Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low Regulatory Controls The licence contains annual limits of contaminants discharged to the DWI bore. Due to Nufarm Kwinana ceasing the production of Trifluralin and Diuron it was determined that DWI will no longer be required so the licence requires that all discharges via the DWI bore cease prior to 1 January 2016. The Licensee continues to be subject to the general provisions of the act. Residual Risk Consequence: Insignificant Likelihood: Unlikely Residual Risk Rating: Low	
Point Source Emissions to Land	3.4.1 3.8.1	Operation Emission Description Emission: Treated wastewater from the esterification process discharging to the existing infiltration pond from licensed emissions point L1. Impact: waste water discharging from the premises and potentially contaminating soil and groundwater. Controls: Water entering the treatment system is tested and will only be put through the system if it passes quality control requirements. If water does not meet quality control it is disposed of by a third party contractor.	

DECISION TABI	LE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Treated wastewater is sampled and analysed from the batch release tank on site to ensure it is below the required limits on the licence prior to its discharge to the stormwater treatment system. Where it will undergo further treatment and will be tested again to ensure it is within the limits specified in the licence.	
		If treated wastewater does not meet the specifications for discharge to the stormwater treatment system it will be pumped from the batch tanks into empty IBCs and stored in a quarantine area. An unusual incident report will be raised and an investigation carried out and a decision made to either pass the water back through the wastewater treatment system again or dispose of the water by a licensed third party contractor.	
		The licence limits for discharge to the environment have been set at 10 times the drinking water level outlined in the NHMRC, NRMMC (2011) Australian Drinking Water Guidelines these levels have previously been determined to be acceptable by DER. These guidelines do not specify a guideline level for 2-EH, however trials conducted by Nufarm show that the concentration of 2-EH in the discharge water is expected to be below detection limit (1mg/L).	
		Note DER has not re-assessed the applicability of current licence limits in this assessment.	
		Risk Assessment Consequence: Insignificant Likelihood: Possible Risk Rating: Low	
		Regulatory Controls Condition 3.3.1 has been updated to include the monitoring of 2-EH and MCPA prior to	

DECISION TAE	BLE		
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		discharge to L1 as there is a potential for trace quantities of these substances to pass through the wastewater treatment plant and stormwater treatment plant and be discharged to the infiltration pond.	
		Condition 3.4.1 has been updated to include 2-EH during groundwater monitoring. Residual Risk Consequence: Insignificant Likelihood: Possible Residual Risk Rating: Low	
Fugitive emissions	Previously 2.5.1	The licence previously contained condition 2.5.1 that required the licensee to minimise dust emissions from the premises. As the activities on site are not considered particularly dusty this condition has been removed and can be regulated under the general provisions of the EP Act. Emission Description Emission: Dust emissions from the premises operations. Impact: Nuisance dust impacts on neighbouring businesses and residences. Controls: The site is located in an industrial complex and the nearest residence to the site is over 1.5km away. The site does not use any materials that are likely to cause dust emissions with materials being appropriately contained and stored within buildings. The site is hardstand and is not likely to have dust lift off from outdoor areas.	

DECISION TABLE							
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents				
		Risk Assessment					
		Consequence: Insignificant					
		Likelihood: Unlikely					
		Risk Rating: Low					
		Regulatory Controls					
		General provisions of the Environmental Protection 1986 Act					
		Residual Risk					
		Consequence: Insignificant					
		Likelihood: Unlikely					
		Risk Rating: Low					
Odour	N/A	Pyridine is added to the process as a stenching agent. Pyridine emissions have been risk assessed under point source emissions to air above which considers odour.					
Noise	N/A	The Premises is located within the heavy industrial area of Kwinana. The proposal will not significantly add to the noise from this premises due to the fact that the main processes are inside a building. The <i>Environmental Protection (Noise) Regulations 1997</i> apply.	Environmental Protection (Noise) Regulations 1997				
Monitoring	3.5.1 3.8.1	As per the point source emission to land section above, conditions 3.5.1 and 3.8.1 have been updated to ensure monitoring captures trace substances in treated wastewater being discharge to emission point L1, the infiltration pond.					
Notification	Part 5.3.1	Part of condition 5.3.1 has been changed so under the licence the licensee is not required to notify DER of any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution. This is covered by the requirements under section 72 of the EP Act.	N/A				
Improvements	Previously IR1 and IR2	The requirements of improvement conditions IR1 and IR2 on the licence have been satisfied. These conditions have been removed. The information provided by IR1 and IR2 will be assessed by DER and licence amended if required.	N/A				
Licence Duration	N/A	The licence duration has not been reassessed and has not changed.	N/A				

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
08/09/2015	Proponent sent a copy of draft instrument	No comments received	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	