

Decision Document

Environmental Protection Act 1986, Part V

Proponent:	Wesfarmers LPG Pty Ltd
Licence:	L6306/1989/11
Registered office:	40 The Esplanade PERTH WA 6000
ACN:	009 214 831
Premises address:	Donaldson Road Kwinana WA 6167 Being Part of Lot 102 on Plan 73740
Issue date:	Friday, 07 November 2014
Commencement date:	Sunday, 09 November 2014
Expiry date:	Friday, 08 November 2019

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:

Chris Malley A/Senior Licensing 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 Ap New Licer Licence ar Works Ap	nce mendmen	-	□ □ ≥nt
Activities that cause the premises to become prescribed premises	Category	number(s)	Assessed design capacity
	34			420,000 tonnes per annum
Application verified	Date: 04/1	2/2015		
Application fee paid	Date: N/A			
Works Approval has been complied with	Yes	No	N//	$A \boxtimes$
Compliance Certificate received	Yes	No	N//	$A \boxtimes$
Commercial-in-confidence claim	Yes	No⊠		
Commercial-in-confidence claim outcome	N/A			
Is the proposal a Major Resource Project?	Yes	No⊠		
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes	No⊠	Man	erral decision No: aged under Part V 🛛 essed under Part IV 🗍
Is the proposal subject to Ministerial Conditions?	Yes⊠	No		sterial statement No: 000556 Report No: 993
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		sulted Yes 🗌 No 🖂
Is the Premises within an Environmental Protection The premises is located within Area A of the Enviro Policy 1999				
Is the Premises subject to any EPP requirements?	Yes	No⊠		



3 Executive summary of proposal and assessment

Wesfarmers LPG Pty Ltd (the Licensee) has owned and operated a manufacturing plant within the Kwinana Industrial Area (about 30km south of Perth) since 1988. The site is located within the Kwinana Industrial Area and located in proximity to other industry including Major Hazard Facilities. The south-east corner of the premises boundary is approximately 900 m from the commencement of a Bush Forever site located to the south-east. The coastal shoreline for the Cockburn Sound is approximately 1.7 km to the west of the premises boundary. The nearest residential receptors are in the suburb of Medina located approximately 2.1 km south-east of the premises boundary. The Licensee is located on the majority of the land parcel as Air Liquide lease a northern portion, which the Licensee has delineated by a fence line. The Air Liquide lease area is not part of the licensed premises.

The site produces both Liquefied Petroleum Gas (LPG) and Liquefied Natural Gas (LNG) with all plants designed to run on a continuous basis. The site has three types of stack emissions for which oxides of nitrogen (NOx) is the key emission parameter. These are explained below:

- (i) Flares: There is one continuously operated LPG flare, one continuously operated LNG flare, and one standby back-up LPG flare on site. These flares are required by Licensee as an essential safety control which need to be available at all times for the safe management of unsteady periods of plant operation, during ship loading, or emergency release scenarios.
- (ii) Gas turbine exhausts: The LPG train 1, LPG train 2 and LNG plants all produce NOx emissions as a result of combustion of fuel gas (natural gas) in gas-fired turbines which drive the compressors. There is one gas turbine in LPG train 1, one in LPG train 2, and one in the LNG plant. Routine planned maintenance is conducted to ensure the gas turbines are running at optimum performance. This also aides in NOx emissions being maintained at relatively consistent levels. NOx emissions are also steady during start-up and shutdowns.
- (iii) **Start-up heater:** The start-up heater is only required to be operated to provide an initial heat load if the LPG plant is shut down for an extended period of time (and heat is lost from the plant).

The Licensee also has a discharge of reverse osmosis (RO) reject water which is irrigated to lawn and grass areas on site. Scheme water is the source for RO treatment. RO reject water is stored in a sump pending irrigation. The Licensee has submitted an application for a licence amendment in relation to a proposal to cease irrigation of reject water. The water will instead be directed to an existing containment pond used for firefighting purposes. The containment pond has historically been topped up using bore water and the redirection of reject water will reduce the amount of bore water consumed. Licence L6306/1989/11 contains conditions that allow the emission of RO reject water to land with water quality sampling conditions. The Licensee has also requested a number of other administrative changes and corrections which are summarised in Appendix A. The Licensee's proposal to redirect RO reject water to an existing containment pond and cease irrigation to land changes the emissions to land risk profile but is not expected to change the risk profile for other emissions.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986* (EP Act), 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. *Note: Referenced condition numbers are pre-amendment unless otherwise specified.*

DECISION TABI	.E		
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.3	Condition 1.2.1 has been moved from section 1.2 (general conditions) to section 1.1 (interpretation) in the amended licence. The change is a DER administrative change and does not impact on the risk profile of any emissions.	N/A
Premises operation	L1.3.1	As per the 'Emissions to land' risk assessment, the amended licence will include condition 1.3.1 specifying the containment infrastructure for storing materials. Reverse osmosis reject water will be required to be stored in the containment pond that will be referenced on the map in Schedule 1 of the licence.	Application supporting documentation.
Emissions to land including monitoring	L1.3.1 L2.5.1 L3.5.1	Emission Description Emission: The reverse osmosis plant purifies scheme water for use within the plant. Fluoride and electrical conductivity (EC) are the two main parameters considered slightly higher than concentrations specified in the Australian Drinking Water Guidelines 2011 (ADWG). Monitoring has shown conductivity to be around 1430 µS/cm or lower (approximate equivalent total dissolved solids concentration of 915 mg/L compared to the ADWG concentration of 600 mg/l set for good palatability) and the fluoride ranging between 1.7-2.4mg/l (ADWG value is 1.5 mg/L). Reject water was previously irrigated to grassed areas on the premises. However the Licensee has submitted a licence amendment application to redirect water into an existing containment pond used for storing bore water for potential firefighting purposes. There will be no further emission to land.	Application supporting documentation Australian Drinking Water Guidelines (2011), NHMRC

Amendment date: Thursday, 31 December 2015

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DECISION TABLE							
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents				
		Impact: The cessation of irrigation means there are no further potential impacts on groundwater quality through emissions to land. The premises is located within the Kwinana industrial area and not within a drinking water catchment. Cockburn Sound is located approximately 1.7 km from the premises boundary. Controls: Reverse osmosis reject water will not be irrigated. Water will be stored in a containment pond and used for emergencies in the event of a fire.					
		<u>Risk Assessment</u> <i>Consequence</i> : Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low					
		<u>Regulatory Controls</u> Condition 2.5.1 relating to emissions to land has been deleted as there will be no further irrigation of reverse osmosis reject water. Condition 3.5.1 has been deleted as the cessation of irrigation removes the need for water quality monitoring. As reject water will now be directed to an existing containment pond, the amended licence will include condition 1.3.1 specifying the containment infrastructure.					
		Residual Risk Consequence: Insignificant Likelihood: Rare Risk Rating: Low					
Fugitive emissions	L2.6.1	Emission Description Emission: Dust lift off from vehicle movements on site. Impact: Reduction of local air quality and nuisance impacts. Controls: Specific Licensee controls are not known. The site has extensive grassed areas on site in addition to the use of mulch cover, Bluemetal stone and hardstand operational areas.	Environmental Protection Act 1986 – Part V				

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DECISION TAE	BLE		
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Risk Assessment Consequence: Minor Likelihood: Unlikely Risk Rating: Moderate Regulatory Controls	
		The generic fugitive dust condition in condition 2.6.1 has been deleted as the Licensee is required to comply with the general provisions of the EP Act. <u>Residual Risk</u> <i>Consequence</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate	
Monitoring general	L3.1.1 L3.1.2 L3.1.3	 As per the 'emissions to land' risk assessment, condition 2.5.1 that allowed permitted irrigation of RO reject water has been deleted from the amended licence as has condition 3.5.1 specifying a water quality monitoring programme. The following amendments have been made to general monitoring conditions: Parts (a) and (b) of condition 3.1.1 that specify water sampling methods have been deleted; and Part (a) of condition 3.1.2 defining the period of six monthly sampling has been deleted. 	Application supporting documentation
		An amendment has also been made to condition 3.1.3 to remove reference to continuous emission monitoring systems (CEMS) as no CEMS requirements are specified in the licence.	
Information	Table 5.2.1	The requirement to report emissions to land monitoring data in the annual environmental report has been deleted from Table 5.2.1 in condition 5.2.1 in response to the 'emissions to land' risk assessment.	Application supporting documentation
Licence Duration	N/A	The licence expires on 8 November 2019. The licence duration has not been altered as a result of this amendment.	N/A

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DECISION TABL	.E		
Works Approval / Licence section	Condition number L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Administrative Changes	L1.1.2 L3.2.1 L5.3.1	 DER made the following administrative changes in the amended licence unrelated to the licensee's application: deletion of any conditions that state words to the effect 'there are no specified conditions relating to [x] in this section'; deletion of any condition headings or numbers retained for numbering purposes; deletion of condition 5.3.1 as it required the Licensee to report matters which they would otherwise be required to report to the CEO under section 72 of the EP Act; deletion and modification of definitions in condition 1.1.2 that were not specified in the licence or required update; The 'registered office' address associated with the ACN was corrected; and The legal land description was corrected to be consistent with DER's cadastral spatial data. These changes do not change the risk profile of emissions from the premises. DER made the following administrative changes and corrections in the amended licence that were requested by the Licensee (refer to summary in Appendix A): deletion of definitions relating to the 'emission to land' risk assessment'; modification of the 'annual period' definition from 1 September until 31 August to 1 July until 31 June; deletion of 'Note 3' in Table 3.2.1 of condition 3.2.1 as it is a typographical error and there is no emission point A5; 	Environmental Protection Act 1986 – Section 72 Application supporting documentation

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5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
14/01/2015	Licensee sent notification of proposed licence changes with a supporting decision document.	 The Licensee submitted a consultation waiver subject to some comments and track changes. The Licensee's comments and requested changes are summarised as follows: 1. Licensee confirmed registered office details were correct; 2. Licensee confirmed legal land description was correct; 3. Licensee provided revised wording for the 'premises description and licence summary' section; 4. 'NATA accredited' is mentioned in condition 3.2.3 therefore, the definition should remain; 5. The proposed change to condition 3.2.2 means the Licensee is unable to comply with the condition due to removal of the phrase 'or any other sampling point that is representative of actual emissions.' The Licensee provided a copy of correspondence from the Manager Licensing (Process Industries) which formed the basis for including that particular phrase in the condition; 6. The Licensee pointed out several minor typographical errors. 	 DER considered the comments and suggested changes with the following outcomes: Noted; Noted; DER did not object to the revised wording that was adopted in the amended licence; The removal of both the 'NATA' and 'NATA accreditation' definitions was in error and both have been retained in the amended licence; The basis for the specific wording is acknowledged and the phrase 'or any other sampling point that is representative of actual emissions' was retained in the licence. Reference to the CEMS code remained deleted. Typographical errors noted by the Licensee were corrected in the amended licence.
04/01/2016	Decision to grant an amended licence advertised in the West Australian newspaper	N/A	N/A

Environmental Protection Act 1986 Decision Document: L6306/1989/11 File Number: DEC5371

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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 - Summary of Licensee's requested licence changes

Wesfarmers LPG Licence Conditions (L6306/1989/11) Suggested Ch			Suggested Change		
'annual period' means the inclusive period from 1 September until 31 August in the following year from 1 July ur in the following					
'Australian Drin	king Water Guidel	ines"		Remove definition.	
emission points	in Table 2.5.1 and	l identified on the ma	ap of emission	Remove from licence	
Table 2.5.1: Emiss Emission point reference	Emission point reference on Map	Description	Source including abatement		
L1	L1	Collection sump for irrigation area consisting of grass land	Reject water from the reverse osmosis plant treatment of scheme		
	'annual period' August in the for 'Australian Drin 'Australian Drin The Licensee sh emission points points in Sched licence. Idol@2000000000000000000000000000000000000	'annual period' means the inclusi August in the following year 'Australian Drinking Water Guidel 'Australian Drinking Water Guidel The Licensee shall ensure that wheemission points in Table 2.5.1 and points in Schedule 1 it is done so in licence. Table 2.5:1: Emissions to land Emission point reference on Map of emission point of emission point	'annual period' means the inclusive period from 1 Sep August in the following year 'Australian Drinking Water Guidelines" 'Australian Drinking Water Guidelines" The Licensee shall ensure that where waste is emitted emission points in Table 2.5.1 and identified on the ma points in Schedule 1 it is done so in accordance with the licence. Table 2.6:1: Emissions to land Emission point reference Description Table 2.6:1: Emissions to land emission point reference on Map of emission point Description	'annual period' means the inclusive period from 1 September until 31 August in the following year 'Australian Drinking Water Guidelines" 'Australian Drinking Water Guidelines" The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.5.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence. Table 2.5:1: Emissions to land Emission point reference on Map of emission points	

Condition number	Wesfarm	39/11)	Suggested Change				
Condition 3.1.1	AS (b) a AS (c) All lab	water sar /NZS 566 Il wastewa /NZS 566 laborator	nples are 7.1; ater samp 7.10; ry sample vith curre	collected and p ling is conducte s are submitted	ed in accord		Remove condition
Condition 3.1.2		thly monit	oring is u	t: indertaken at le 'taken is undert		Con Can (CO) • Alle 21 A 170, 281 (181,294)	Remove a) Six monthly monitoring is undertaken at least 5 months apart
Table 3.2.1		Monitoring of Parameter	of point sour Units ^{1, 5, 4}	ce emissions to air Averaging period	Frequency ²	Method	Update Note 3 to reference A1-A3.
	A1 – A3	NOx	mg/m³ g/s	Stack Test (minimum 30 minute average)	Annual	USEPA Method 7E	
	Note 2: Monit produ Note 3: Conc Note 4: Emist	entration units fo	dertaken to refle r A5 are reference	ct normal operating conditions to $15\% O_2$. plying the mass flow rate st			



3.5.1	The Licensee in that table. Table 3.5.	shall u 1: Mon	sions to land ndertake the monitoring in Table :	3.5.1 acco	ording to		Remove condition			
	Table 3.5. Emission		itoring of emissions to land			the specification:	5			
	Emission		itoring of emissions to land							
		point		Table 3.5.1: Monitoring of emissions to land						
			Parameter	Units	Frequ	ency				
	L1		рН	pH unit	Six mo	onthly				
	L1		Electrical Conductivity	µS/cm	Six mo					
	L1		Chloride, Aluminium, Arsenic, Barium, Cadmium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Selenium, Silver, Zinc, Boron, Iron, Mercury, Hexavalent Chromium, Fluoride, Nitrite as N and Nitrate as N.	mg/L	Six mo	onthly				
Table 5	2 1: Annual E	Environ	mantal Papart				Remove reference to			
Conditio	on or table				1	Format or form	Table 3.5.1			
3.2.1	The Licensee shall report the results of stack testing, required by Condition 3.2.1. The Licensee shall also provide in the annual report an accurate estimate of the total mass of NOx discharged in the previous twelve month period.									
-		control have or taken	equipment and any environmental courred during the annual period as	incidents nd any act	that tion	None specified				
	Barium, Cadmitum, Cobait, Copper, Lead, Manganese, Molybdenum, Nickel, Selenium, Silver, Zinc, Boron, Iron, Mercury, Hexavalent Chromium, Fluoride, Nitrite as N				_R1					
5.1.3	Compliance Annual Audit Compliance Report				rt					
5.1.4	Torma ara in Ca	Compla	ints summary							
	i ne Licensee	shall e	insure that the Annual Environm	ental Rep	ort also	contains an	Remove reference to			
r	esults and th	e wate	r sampling results from emission	point L 1	against	the Australian	the Australian Drinking			
I	Drinking Wate	er Guid	elines.		-30	are noor and f	Water Guidelines and			
	Conditie (if relev: 3.2.1 Table 3. 5.1.3 5.1.4 Note 1: 1 5.2.2	Table 5:241: Annual Condition or table (if relevant) 3.2.1 - Table 3:5.1 5.1.3 5.1.4 Note 1: Forms are in St 5.2.2 The Licensee assessment a results and th	Table Sizeri: Annual Environ Condition or table Parametric (if relevant) 3.2.1 Te Lic require provide total ma month r - Summe control have or taken Table 3.5.1 pH, ele Barium Molybd 5.1.3 Complia 5.1.4 Note 1: Forms are in Schedule 2 5.2.2 The Licensee shall e assessment of the in results and the wate	Control and the set of the s	Table 3.5.1 Parameter Table 3.5.1 pH, electrical conductivity, Chloride, Aluminum, Siver, Zinc, Boron, Iron, Mercury, Heavalent Condition or table Parameter 2.1 The Licensee shall report the results of stack testing, required by Condition 3.2.1. The Licensee shall als provide in the annual report an accurate estimate of total mass of NOX discharged in the previous twelve month period. - Summary of any failure or malfunction of any polluti control equipment and any environmental incidents have occurred during the annual period and any act taken Table 3.5.1 pH, electrical conductivity, Chloride, Aluminium, Siver, Zinc, Boron, Mercury, Heavalent Chromium, Fluoride, Nitrite as and Nitrate as N. 5.1.3 Compliance 5.1.4 Compliants summary Nute 1: Forms are in Schedule 2 5.2.2 The Licensee shall ensure that the Annual Environmental Reparaseessment of the information contained within the report agaresults and the water sampling results from emission point L1	Table 5:2:1: Annual Environmental Report Ingr Ingr <td>Image: Image: <thimage:< th=""> <thimage:< th=""> Image:</thimage:<></thimage:<></td>	Image: Image: <thimage:< th=""> <thimage:< th=""> Image:</thimage:<></thimage:<>			

Condition number	Wesfarmers LPG Licence Conditions (L6306/1989/11)			Suggested Change water sampling results from emission point L1	
Condition 5.3.1	 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. 				Remove reference to N1 form
	Table 5.3.1: Notification requirements				
	Condition or table (if relevant)	Parameter	Notification requirement	Format or form ²	
	-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	As soon as practicable	N1	
	Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act Note 2: Forms are in Schedule 2				
Schedule 1	Schedule 1				Update Schedule 1
Form LR1	Form LR1				Remove from Licence
Form N1	Form N1				Remove from Licence