



Licence Number L7294/1998/11

Licence Holder Esperance Meat Exports Pty Ltd

ACN 619 073 317

File Number: DER2016/001700

Premises
Esperance Meat Exports Pty Ltd
Lot 21 on Plan 180121 and Lot 1043 on Plan 152576
Coolgardie-Esperance Highway
MYRUP WA 6450

Date of Amendment 20 February 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Date signed: 20 February 2018

Paul Byrnes

Manager Licensing (Process Industries)
REGULATORY SERVICES (ENVIRONMENT)

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AER	Annual Environment Report
Amendment Notice	refers to this document
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info-der@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Esperance Meat Exports Pty Ltd
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited to an amendment of groundwater licence limits and groundwater monitoring. No other changes have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Decision Making (February 2017); and*
- *Guidance Statement: Risk Assessment (February 2017)*

Amendment description

The Licence Holder submitted an amendment application on 30 October 2017, requesting the removal of groundwater licence limits for total dissolved solids (TDS), aluminium and monitoring requirements for chlorine residuals. The application states the limits are unachievable given the Premises locality and background concentrations of these contaminants. The Licence Holder also states processes on site have changed and as a result chlorine and aluminium are no longer potential contaminants.

Amendment history

Table 2 provides the amendment history for L7294/1998/11.

Table 2: Licence amendments

Issued	Amendment
17/12/2015	Licence amendment to remove category 61 and allow general infrastructure upgrades.
29/04/2016	Amendment by notice to extend licence expiry date.
23/03/2017	Amendment Notice 1. Amendment to conditions and increase in category 15 approved premises design capacity.
3/11/2017	Licence Transfer. Transfer of occupier from Shark Lake Food Group Pty Ltd to Esperance Meat Exports Pty Ltd. Contents of Amendment Notice 1 consolidated in transferred licence.
20/2/2018	Amendment Notice 2. Removal of groundwater licence limits for TDS, aluminum and monitoring of chlorine residuals.

Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 3: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Shark Lake Townsite - zoned special industry	Approximately 650m south west measured from processing area
Resident – zoned rural	Approximately 1.3km south-south east measured from processing area, 850m from wastewater ponds.
Government services/office – zoned public purpose	Approximately 1.6km south east measured from processing area, 500m from wastewater ponds.

Table 4 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Melijinup Creek – listed as a significant stream which feeds into the Lake Warden System	Runs through the premises and surrounding area subject to inundation.
Lake Warden – part of the Lake Warden System. The Lake Warden System is a wetland of international significance under the Ramsar Convention	2.9km south measured from activity boundary. Lake Warden provides habitat to many threatened and endangered fauna.
Esperance Groundwater Area	Premises is in the Esperance Groundwater Area, gazette under the Rights in Water and Irrigation Act 1914.
Pink Lake	5.9km south west. Premises is located above a direct groundwater transport zone flowing to Pink Lake and the Lake Warden System.
Shark Lake	850m north west measured from activity boundary.

Decision

Based on advice regarding groundwater quality in the region, historical monitoring results and changes to site operations, the Delegated Officer has granted the amendment and removed licence limits for TDS, aluminium and removed the monitoring requirement for chlorine residuals. The requirement to monitor for TDS and aluminium is retained on the licence to ensure the Department is aware of any significant changes in groundwater quality.

The Delegated Officer considers the removal of the licence limits for TDS and aluminium and monitoring requirement for chlorine residuals does not change the risks associated with other emissions and discharges from the Premises.

Basis of the Decision

The Delegated Officer has considered historical monitoring results provided by the Licence Holder in their 2017 Annual Environmental Report. In the absence of evidence to substantiate the advisors (consultant and other personnel as quoted in the Application) as subject matter experts, no consideration can be given to the opinion provided in the Licence Holders amendment application regarding groundwater quality in the local area.

TDS

The existing limit of 1500mg/L for TDS in groundwater appears to have been transferred from a limit on final effluent prior to irrigation in previous licences. The Licence Holder is no longer permitted to irrigate wastewater and any impacts on groundwater quality are likely a result of leaking wastewater ponds or unauthorised discharges.

The most recent Annual Environmental Report applies to the 2016-2017 licence period and includes graphical representation of historical monitoring data for TDS concentrations at monitoring bores GQ1 to GQ5 up until August 2015. TDS monitoring results obtained since 2015 are consistent with those prior to this period in that they are highly variable. TDS concentrations are lowest, generally less than 1000mg/L, at GQ1 which is located on the western side of the processing area and approx. 300m from Melijinup Creek. Due to its location, this bore is not influenced by operations on site.

Monitoring bores series EPB1 to EPB5 are new bores installed during the 2014-2015 licencing period near the new evaporation ponds which were constructed during the same period. Results from the EPB series are generally more stable than the GQ series which is likely due

to their increased distance from Melijinup Creek and higher topography. The highest TDS concentrations of 5170-9550mg/L are obtained at EPB2 which is on the eastern boundary north of the evaporation ponds. EPB2 and EPB5 are considered background bores, therefore indicate high TDS concentrations in groundwater upgradient of the Premises.

The Esperance area has variable hydrogeology with the presence of four distinct aquifer settings; Fractured Rock, semi-confined/unconfined superficial aquifers overlying tertiary sediments, perched aquifers in duplex soils and perched aquifers in seep sand sheets and dunes (PB, 2007). Groundwater salinity is also variable in the region although generally increases away from the Esperance coast. Groundwater on the sand plain ranges from 400-5000 mg/L TDS and up to 14,000mg/L in Mallee areas (Worley Parsons, 2010). Based on this information the Delegated Officer considers that the TDS levels recorded at the licence monitoring bores are consistent with those throughout the region.

Since the elimination of wastewater irrigation, the potential pathway for groundwater contamination with TDS is via loss of containment or leaking wastewater ponds. Based on the variable TDS levels in groundwater throughout the region the Delegated Officer considers the risk of TDS contamination is adequately regulated by groundwater monitoring only and the licence limit may be removed.

Chlorine Residual

The monitoring requirement for free chlorine was previously applied to the licence to detect any impacts from irrigation of wastewater. Sodium hypochlorite (the source of chlorine) is used as a cleaning agent at the Premises. The Licence Holder states that field testing of free chlorine would only provide semi-quantitative results. Accurate monitoring of free chlorine is possible although the Delegated Officer notes the equipment required may not be reasonable. Given the Occupier no longer irrigates wastewater, the Delegated Officer considers the risk of free chlorine impacting environmental receptors via groundwater to be low.

Aluminium

An alum dosing flocculant was previously added to wastewater to reduce phosphorus prior to irrigation. This practice previously returned unacceptably high concentrations of aluminium from effluent sampling points. Monitoring data presented in the 2017 Annual Environmental Report indicate that Aluminium was less than 5mg/L, which is well below the current licence limit of 20mg/L, at all monitoring bores throughout the 2016-2017 licence period.

Given the Licence Holder is no longer approved to irrigate treated wastewater, the Delegated Officer considers the risk of aluminium impacting environmental receptors via groundwater to be low.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 24 January 2018. No comments were provided.

Details of the Amendment

- Table 3.5.2 of the Licence is amended by deletion of the text shown in strikethrough below:

Table 3.5.2: Monitoring of ambient groundwater quality					
Monitoring point reference and location on Map of monitoring locations	Parameter/ Substance	Limits	Units	Averaging period	Frequency
GQ1, GQ2, GQ3, GQ4, GQ5, EPB1, EPB2, EPB3, EPB4 and EPB5	Standing water level(SWL) ^{1,2}		<u>mbgl</u>	Spot sample	Quarterly
	pH ²		-		
	Electrical conductivity	N/A	µS/cm		
	Boron	40	mg/L	Spot sample	Annually
	Cadmium	0.02			
	Chlorine residuals	-			
	Copper	20			
	Lead	0.1			
	Mercury	0.01			
	Zinc	30			
	Total Dissolved Solids	1500			
	Total Nitrogen	-			
	Total Phosphorus	-			
	Total Aluminium	20			
				Quarterly	

Note 1: Excluding extraction bore GQ1

Note 2: In situ non-NATA accredited analysis permitted

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Licence amendment application, Esperance Meat Exports, 30 October 2017	Amendment Application	DWER records (A1553603)
2.	DEC, March 2011. Salinity Licence Limits – Shark Lake Food Group, Internal Technical Advice		DWER records (A385988)
3.	DEC, December 2012. Letter to Shark Lake Food Group – <i>Elevated Aluminium in wastewater concerns and proposed amendment to licence</i> , Department of Environment and Conservation.		DWER records (A466537)
4.	DER, July 2015. Guidance Statement: Regulatory principles. Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
5.	DER, November 2016. Guidance Statement: Risk Assessments. Department of Environment Regulation, Perth.	DER 2016b	
6.	DER, November 2016. Guidance Statement: Decision Making. Department of Environment Regulation, Perth.	DER 2016c	
7.	SLFG AER, October 2017. Annual Environmental Report for the 2016-2017 licencing period, Shark Lake Food Group.	Annual Environmental Report	DWER records (A1564899)
8.	PB, 2007. <i>Identification of Groundwater Dependent Ecosystems, Esperance Groundwater Area (Draft)</i> , Parsons Brinkerhoff Australia Pty Ltd.	PB, 2007	DWER records (1594864)
9.	Worley Parsons, 2010. <i>Shark Lake Groundwater Abstraction Licence Extension, H1 Level Hydrogeological Assessment</i> , Worley Parsons Resources and Energy.	Worley Parsons, 2010	