Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L5089/1989/9
Licence Holder	Kwinana Chlor Alkali Pty Ltd
ACN	130 483 395
Instrument Number	INS-0001177
Premises	Kwinana Chlor Alkali Pty Ltd Mason Road KWINANA BEACH WA 6167 Legal description – Part Lot 22 on Diagram 88339 As defined by the coordinates in Schedule 2 of the revised licence.
Date of Report	28 May 2026
Decision	Revised licence granted

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1. Decision summary

Licence L5089/1989/9 is held by Kwinana Chlor Alkali Pty Ltd (Licence Holder) for the Kwinana Chlor Alkali Pty Limited (the Premises), located at Part Lot 22 on Diagram 88339, Mason Rd Kwinana Beach. Kwinana Chlor Alkali Pty Ltd is an inorganic chemicals manufacturer located in Kwinana Beach. The premises is situated within TRONOX (formerly Tiwest pigment plant). The premises manufactures chlorine gas (Cl_2).

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Licence L5089/1989/9 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 18 December 2025, the Licence Holder submitted an application to the department to amend licence L5089/1989/9 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The licence holder is seeking authorisation to install four additional hydrochloric acid (32%) storage tanks, each with a capacity of 125 m³, and to construct a new concrete containment bund and install a pump.

To accommodate this infrastructure, a decommissioned brine settler tank is to be demolished, and the reverse osmosis (RO) plant is to be relocated to the east of the proposed bund. In addition, existing groundwater monitoring bore MB 05 is to be relocated to the west of the proposed bund.

Additionally, the licence holder has requested amendments to better reflect current operations at the premises. This includes the addition of groundwater monitoring bore MB06 to the licence, inclusive of associated monitoring requirements, and the removal of emission point A2 (Lurgi HCl synthesis vent), as the infrastructure has been decommissioned and is no longer in use.

Relocation and addition of monitoring bores, and removal of emission points are considered administrative and have not been risk assessed in this Amendment Report.

2.3 Consolidation of Licence

As part of this amendment package the department has consolidated the licence by incorporating changes made under the Amendment Notices as summarised in Table 1.

Table 1: Licences consolidated in this amendment

Instrument	Issued	Summary of approval
L5089/1989/9	14/07/2011	Licence granted

Instrument	Issued	Summary of approval
L5089/1989/9	26/04/2016	Notice of Amendment of Licence Expiry Dates
L5089/1989/9	16/05/2022	Notice of Amendment of Licence Reporting Requirements

The obligations of the Licence Holder have not changed in consolidating the licence. The department has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

In consolidating the licence, the CEO has:

- updated the format and appearance of the Licence;
- deleted the redundant AACR form set out in schedule 1 of the previous licence and advise the Licensee to obtain the form from the department's website; and
- revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency.

The full consolidation of licence conditions as they relate to this Revised Licence are detailed in Section 5.1.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Amendment Report are detailed in

Table 2 below.

Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Tank installation inclusive of construction of new concrete containment bund (inclusive of concrete mixing and pouring)	Air / windborne pathway	Water spraying will be conducted to wet down unsealed areas, with water being sprayed continuously at impact point
Noise		Air / windborne pathway	Construction scheduled to avoid sensitive times Selection of construction equipment with noise dampening features

Emission	Sources	Potential pathways	Proposed controls
Operation			
Impacted stormwater (HCl)	Storage and transfers of HCl	Loss of containment leading to runoff and seepage to soil and groundwater	Tanks will be fitted with automatic shut off valves actuated via distribution control system (DCS) Tanks are designed according to BS EN 13121 Tanks and containment bund will be stored and handled as per Australian standard AS3780:2023 *The storage and handling of corrosive substances.*
HCl vapours		Air / windborne pathway	Storage tank vents will be connected to the existing Lurgi scrubber (10AP01), which vents via the existing licensed emission point (A1).

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential Area	2.1 km south east of the boundary
Industrial premises	TRONOX and CSBP Limited: Directly adjacent Nufarm: 170m east
Environmental receptors	**Distance from prescribed activity**
Remnant Native vegetation	70 m from boundary
Cockburn Sound	1.48 km west of premises boundary
Groundwater	~ 2 – 3 m bgl

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L5089/1989/9 that accompanies this Amendment Report authorises emissions associated with construction and the operation of the Premises i.e. installation and operation of the chemical storage tanks.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Construction								
Construction and installation of: • Four 125m^3 chemical storage tanks; • Concrete bund; • 1 transfer pump; • Monitoring bore 5; and relocation of the RO plant.	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 2.1 km south east of the boundary Directly adjacent Industrial premises	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	Condition 14	The delegated officer has considered that given the separation distances to sensitive receptors (distance to closest residential receptor >2km) and the location of the works within the Kwinana Industrial Area (zoned industrial) dust, noise and vibration emissions from the proposed works, anticipated to occur over a period of approximately 4 weeks (Coogee Chlor Alkali, 2025), are unlikely to result in unreasonable impacts to sensitive receptors. The applicants proposed control of wetting down unsealed areas during earthworks has been conditioned as a construction requirement. Additionally the Environmental Protection (Noise) Regulations 1997 also apply.
	Noise and vibration			Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	N/A	
Operation								
Storage and transfers of HCL	HCL and Contaminated stormwater	Loss of containment leading to seepage to soil and groundwater	Underlying soils Groundwater ~ 2 - 3m bgl Cockburn sound	Refer to Section 3.1	C = Moderate L = Rare **Low Risk**	Y	Condition 14	The Delegated Officer considers that the applicant's proposed controls are appropriate to mitigate the risk of loss of containment. This includes construction of the tanks in accordance with BS EN 13121 to ensure they are fit for purpose, and the design and construction of a new bund for the four tanks in accordance with measures consistent with Australian Standard AS 3780:2023, a nationally recognised standard for the storage and handling of corrosive substances, including the provision of secondary containment. These controls collectively reduce the likelihood of containment failure and limit potential impacts to sensitive receptors. Accordingly, these measures have been imposed through Condition 14, together with other proposed controls identified in Section 3.1, as construction and installation requirements for all chemical storage tanks.
	Acid gas (HCl	Air/windborne	Residences	Refer to	C = Moderate	Y	Condition 14	The Delegated Officer considers the applicant's proposal

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
	vapours)	pathway causing impacts to health and amenity	2.1 km south east of the boundary Directly adjacent Industrial premises	Section 3.1	L = Unlikely **Medium Risk**			to connect the new storage tank vents to the existing Lurgi scrubber (10AP01) to be appropriate to manage potential emissions to air associated with the additional storage of HCl. As routing gaseous emissions to the scrubber ensures treatment prior to discharge this has been included as a requirement under the construction /installation requirements.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).
Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Local Government Authority (City of Kwinana) advised of proposal on 27 January 2026	No comments received	N/A
Department of Local Government, Industry Regulation and Safety (LGIRS) advised of proposal on 27 January 2026	No comments received	N/A
Licence Holder was provided with draft amendment on 10 April 2026	Comments received have been summarised in Appendix 1	See Appendix 1

5. Decision

The delegated officer has determined the proposal to construct and operate four additional chemical storage tanks at the premises for storage of hydrochloric acid (32%) does not pose an unacceptable risk of impacts to identified sensitive receptors. This determination is based on the following:

- Tanks will be constructed in accordance with BS EN 13121, ensuring they are fit for purpose, and a containment bund is to be constructed consistent with Australian Standard AS 3780:2023 *The storage and handling of corrosive substances*, to manage potential loss of containment; and
- Hydrochloric acid vapours will be directed to and treated by an existing scrubber prior to discharge.

The licence holders containment and operational controls are considered critical to maintaining an acceptable level of risk of environmental impacts, and in accordance with the Guidance Statement: Setting Conditions (DER 2015) have been imposed on licence as infrastructure controls for construction and installation per condition 14.

Additionally, since the construction of the new bund and additional storage tanks requires relocation of groundwater monitoring bore MB05, the delegated officer has determined to include additional requirements for the monitoring wells to ensure they are constructed to the appropriate standards to facilitate the ongoing groundwater monitoring program per Condition 5 of the amended licence.

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of

implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
Cover Page	Updated expiry date from Bulk Notice of Amendment of Licence Expiry Dates
Licence History and Interpretation	Inclusion of history table and standard interpretation notes.
2	Updated to reflect current emissions and discharge points at the premises.
3	Amended table to remove permitted time periods of exceedances of 5 ppm
4	Amended to specify discharge point locations and include the CEMS code as the monitoring method.
5	Updated numbering to reflect labels on premises map and MB05R, and MB06
6	New condition for process monitoring requirements
7	New standard record conditions regarding complaints and books.
8	
9	
15	Inclusion of construction requirements for chemical storage tanks and monitoring bore
16 and 17	Inclusion of standard reporting conditions
Definitions	Inclusion of standard definitions including: ACN, AACR, annual period, biennially, books, department, discharge, emission, EP Act, EP Regulations, licence, licence holder, premises, prescribed premises, waste; and non-standard definitions including ASTM D5092/D5092M-16, AS 1726 AS/NZS 5667.1:1998 and CEMS Code
Schedule 1: Premises Map	Update of the premises map style
Schedule 1 Figure 2	Update of discharge point map to show discharge and monitoring point locations
Schedule 1 Figure 3	New map illustrating locations of new chemical storage tanks
Schedule 2	Inclusion of premises boundary coordinates

Table 7: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Cover Page	Cover Page	Updated to current template
N/A	Definitions	Table 9	New numbering and update to tabular format.
1(a) and 1(b)	Exceedance Reporting	Condition 10 and 11	New numbering and minor update to wording format.

Existing condition	Condition summary	Revised licence condition	Conversion notes
2	Authorised discharges	Condition 2 Table 2	Update to tabular format.
3(a)	Air emission monitoring	Condition 4 Table 4	Revised to current licensing format (tabular format).
3(b)	Records of monitoring	N/A	Redundant condition, due to inclusion of standard record keeping condition (9).
3(c)	Monitoring systems requirements	Condition 6	Removed as integrated into Condition 4 under method
4	Emission limits	Condition 3	New numbering and update to wording format.
5 and 6	HCL synthesis requirements	Condition 1	New numbering and update to tabular format for infrastructure requirements.
7,8 and 9	Groundwater monitoring	Condition 5	New numbering and update to tabular format, combining requirements.
10	Annual Audit Compliance Report	12	New numbering and update to wording format
11 and 12	Environmental Report	Condition 13 Table 7	New numbering and update to reporting requirements as per the 2022 Notice of amendment.
Attachment 3	Monitoring bore locations	Figure 2	Monitoring bore locations are seen in Figure 2
Attachment 4	Annual Audit Compliance Report Form	N/A	Redundant attachment. Deleted from Licence Forms accessed at www.dwer.wa.gov.au

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
1	Licence holder provided additional requested information clarifying site infrastructure and equipment and various associated maintenance and capability requirements	The delegated officer has determined to include descriptions of the existing site infrastructure within Condition 1, however has not imposed the applicant's nominated controls or operational requirements, as this scope of this amendment did not extend to assessing their suitability. The Delegated Officer notes the applicant's desire to ensure consistency across instruments and encourages the applicant to include this request in any future amendment application.
2	Licence holder provided additional requested information clarifying discharge point locations and has noted that the steam boiler chimney emission point has been decommissioned.	Table 2 has been amended to more accurately reflect discharges from the premises. Note no additional discharges have been authorised via this change.
3	The licence holder has requested the removal of time-specific chlorine limits, proposing a single maximum limit of 5 ppm, with no exceedances above this value permitted for any period of time. Noting this aligns with their Kemerton plants operational licence L6036/1988/13.	The delegated officer notes that this represents a more conservative limit, as no exceedances above 5 ppm are permitted, and has amended Table 3 accordingly.
4	The licence holder has requested that the CEMS code be listed as the method for continuous monitoring of Cl_2	The CEMS code has been specified as the method for CL_2 monitoring and a definition has been included in the definitions table. Subsequently condition 6 has been removed relating to availability of the monitoring system as provisions for system availability are set out in the Continuous Emission Monitoring System (CEMS) Code (DEC, 2016).
N/A	The licence holder has proposed a new condition for process monitoring at the Lurgi and Conve plants.	Proposed process monitoring has been included in Condition 6 of the works approval as requested, with a requirement to report a summary of monitoring data in the Biennial Report under Condition 13.
5	The licence holder provided updated labels for the monitoring bore network and provided an updated site layout.	Monitoring wells have been labelled accordingly and Figure 2 of Schedule 1 updated.