

Government of Western Australia Department of Water and Environmental Regulation

# **Annual Audit Compliance Report Form**

Environmental Protection Act 1986, Part V Division 3

Once completed, please submit this form either via email to <u>info@dwer.wa.gov.au</u>, or to the below postal address:

Department of Water and Environmental Regulation Locked Bag 10 Joondalup DC WA 6919

Section A – Licence details			
Licence number:	L5089/1989/9	Licence file number:	2010/004609
Licence holder name:	Kwinana Chlor Alkali Pty. Ltd.		
Trading as:	Kwinana Chlor Alkali Pty. Ltd.		
ACN:	130 483 395		
Registered business address:	Pt Lot 22 on Diagram 883 6167	339 Mason Road (Tronox	Site), Kwinana Beach, WA,
Reporting period:	01/05/2021 <b>to</b>	30/04/2022	

#### Section B – Statement of compliance with licence conditions

Did you comply with all of your licence conditions during the reporting period? (please tick the appropriate box)

 $\Box$  Yes – please complete:

- section C;
- section D (if required); and
- sign the declaration in Section F.

 $\boxtimes$  No – please complete:

- section C;
- section D (if required);
- section E; and
- sign the declaration in Section F.

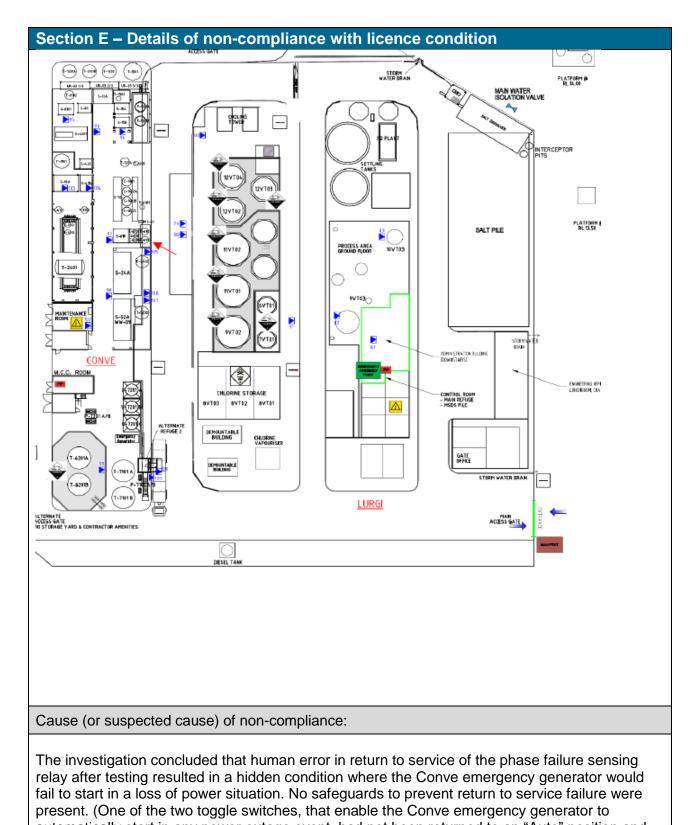
### Section C – Statement of actual production

Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.

Prescribed premises category	Actual production quantity
Category 31 – Chemical Manufacturing	Chlorine 33,529mt – Caustic Soda 38,638mt

Section D – Statement of actual Part 2 waste discharge quantity		
Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.		
Prescribed premises category	Actual Part 2 waste discharge quantity	
Category 31 – Chemical Manufacturing	Refer to section E – Details of non-compliance	

Section E – Deta	ils of non-compliance w	ith licence condition	n
Please use a separ at a time during the	ate page for each condition reporting period.	with which the licence	holder was non-compliant
Condition no:	4. Unauthorised discharge	Date(s) of non- compliance:	27/12/2021
Details of non-comp	bliance:		
supply issue. On th	The KCA Conve plant lost be is occasion the Conve emerg ower to the emergency scrub	gency generator failed	to start which resulted a
	ubber pump is backed up by d operation, so there was nc		
The reduction in the emergency scrubber recirculation and pulsating flow (absence of normal recirculation pump with backup diaphragm pump functioning) resulted in inadequate removal of chlorine from the purge gases in the emergency scrubber C-6102 and a release of chlorine from the Conve scrubber stack at 14m over approximately 5-minute period. we estimate that up to 30 kg of chlorine may have been released from the scrubber stack which dissipated over the following 20 minutes.			
site muster and cor	ted by multiple chlorine dete stacted the downwind site. Th d the chlorine dispersed with	nere has been no impa	
either of the chlorin	n we identified that the short e detectors in the Conve sta ied this prior to re-starting th	ck. We then investigate	
	al (or suspected) environmer n maps or diagrams to provide e.	•	•
No discernible envi	ronmental impact and chlorir	ne release dispersed o	nsite.
In the photo below,	the Red arrow shows the loo	cation of the Conve sta	ck.



automatically start in any power outage event, had not been returned to an "Auto" position and remained in an "Off" position after 2 yearly preventative maintenance conducted on the emergency generator on 14<sup>th</sup> Nov 2021.)

The chlorine stack detector failed to register chlorine during the short duration event due to lack of sample draw from the stack due to air ingress from fittings and sample water knock out pot.

Section E – Details of non-compliance with licence condition			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the			
non-compliance:			
<ol> <li>Change the toggle switch so that the position can be verified and displayed by the DCS. Consider whether this should be an interlock before the electrolyser can be energised</li> </ol>			
<ol><li>Create a test procedure for the testing of the phase failure sensing relay, including success criteria</li></ol>			
<ol> <li>Review whether other controls could be similarly bypassed during testing without safeguards and identify potential solutions</li> </ol>			
4. Install second rotameter on chlorine stack detector to confirm that there is no dilution air draw through the sampling arrangement			
<ol> <li>Consider the practicality and reliability of installing a low flow alarm to chlorine stack detectors sampling stream</li> </ol>			
6. Transfer learnings to other Coogee facilities by Lessons Learnt			
Please note, due to the public holidays during the last week of Dec 2021 and the first week of Jan 2022, the written report was submitted first followed by the verbal report. (a voice message was also left during the last week of Dec 2021 prior to submission of the written report)			
We then received an email from Pollution Watch on 8/02/2022 confirming that "The department is satisfied that appropriate action was taken by Coogee in relation to the incident on 27 December 2021 and preventative action has been taken for the future".			
Was this non-compliance previously reported to DWER?			
Yes, and			
Reported to DWER verbally Date: 04/01/2022			
Reported to DWER in writing Date: 31/12/2021			

## **Section F – Declaration**

I / We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>1</sup>.

I / We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

Signature <sup>2</sup> :		Signature:	
Name: (printed)		Name: (printed)	
Position:		Position:	
Date:	10-06-2022	Date:	10-06-2022
Seal (if signing under seal):			

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.

06:00 hours 1/05/2021 to 06:	:00 hours 01/05/2022	
Production Chlorine	Production 100% Basis	LMT
Lurgi		
Opening Stock	34.50	
Transferred to Tiwest	15336.04	
Used in HCI	0.00	
Used in Hypo	543.29	
Closing Stock	43.82	
Production	<mark>15892.63</mark>	
Conve		
Transferred to Tiwest (gross)	13,404.99	
100% Transferred to Tiwest	13,257.47	
Used in HCI	2,484.39	
Used in Hypo	1,891.91	
Production	<mark>17,636.21</mark>	
Нуро		
Opening Stock	147,018	
Lurgi Produced	3,990,287 **	
Conve Produced	14,018,140 **	
Total Produced	18,008,430	
Closing Stock	218,922	
Sales	14,681,440	
HCI		
Opening Stock 32%	29.71	92.83
Lurgi Produced	0.00	
Conve Produced	2540.68	
Sales 32%	1906.47	
Closing Stock 32%	16.77	52.40
Internal Consumption	896.16	
Opening Stock 26%	55.68	214.16
Closing Stock 26%	40.93	157.43
Sales 26%	628.37	

# Period Plant Performance Report 06:00 hours 1/05/2021 to 06:00 hours 01/05/2022

\*\* Calculated via Method 2

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NaOH Tank Farm (all figures in DMT)	Production 100% Basis	LMT
33% Opening Stock	52.37	163.65
33% to Tiwest	305339.80	
33% Truck Sales	232.03	
33% Closing	60.32	188.51

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33% Produced (Total)	3708.34	
50% Opening Stock	173.24	346.48
50% to Coogee	21079.43	
50% Truck Sales	8020.91	
50% Closing	252.39	504.78
50% Produced (Total)	29114.78	
Lurgi		
100% NaOH Produced	<mark>17,512.63</mark>	
100% NaOH used internally	646.66	
100% NaOH transferred to T2402	14,280.60	
100% NaOH transferred to 9VT02	2,585.36	
Conve		
100% NaOH Produced	<mark>21,125.53</mark>	
100% NaOH used internally	3,422.88	
100% NaOH Evaporated	30,732.00	
100% NaOH transferred to 9VT02	1,162.05	
Reconciliation	1.10	
Plant Performance Data		
Lurgi		
Electrolyser availability (%)	89.85	
Average current (kA)	48.47	
Median corrected cell voltage (volts)	4.03	
Energy consumption (DC MWHr)	43123.31	
Specific energy (DC MWhr / tonne Cl2)	2.71	
Specific energy (DC MWhr / tonne NaOH)	2.46	
Chlorine current efficiency (%)	95.74	
Caustic current efficiency (%)	93.50	
Production unit ratio	1.10	
Auxiliary Power Usage	3666.89	
Auxiliary Unit Ratio	0.21	
Total DC Power	43897.35	
T/R Efficiency	0.98	
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Conve	
Electrolyser availability (%)	92.81
Average current (kA)	13.02
Median corrected cell voltage (volts)	
Energy consumption (DC MWHr)	43841.23
Specific energy (DC MWhr / tonne Cl2)	2.49
Specific energy (DC MWhr / tonne NaOH)	2.08
Chlorine current efficiency (%)	95.47
Caustic current efficiency (%)	115.32
Production unit ratio	1.20
Auxiliary Power Usage	5651.15
Auxiliary Unit Ratio	0.27
Total DC Power	44031.11

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T/R Efficiency

#### Production

100% HCl produced (water flow) (tonne)     0.0	- 
100% HCl produced (chlorine flow) (tonne)0.0	0
100% NaOH to Tiwest (transfer log) (tonne) 305339.8	30
100% NaOH to Tiwest (FI-9-305) (tonne) 3439.1	.9 *
Wet NaOH to Tiwest (transfer log) (tonne) 938425.0	0
Wet NaOH to Tiwest (FI-9-305) (tonne) 10747.4	5 *
Wet NaOH to Coogee Chemicals (tonne) 42249.9	94

### \* For cross check only, value not used in calculations.

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