



Application for Licence Amendment

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

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|-----------------------|--|
| Licence Number | L5320/1988/14 |
| Licence Holder | Tronox Management Pty Ltd |
| ACN | 009 343 364 |
| File Number | DER2016/000329-1 |
| Premises | Tronox Kwinana Pigment Plant Lot 22 on Diagram 088339 Mason Road KWINANA BEACH WA 6167 As defined by the coordinates in Schedule 2 of the Revised Licence |
| Date of Report | 14 July 2023 |
| Decision | Revised licence granted |

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1. Decision summary

Licence L5320/1988/14 is held by Tronox Management Pty Ltd (licence holder), previously known as Tiwest Pty Ltd, for the Tronox Kwinana Pigment plant (the premises), located at Lot 22 on Diagram 088339 Mason Road in Kwinana Beach.

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 ongoing operation of the premises. As a result of this assessment, revised L5320/1988/14 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 29 March 2023, the licence holder submitted an application to the department to amend licence L5320/1988/14 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The licence holder is seeking to update the licence to reflect upgrades to the sand scour system infrastructure conducted under works approval W6701/2022/1, including:

- installation of a new additional baghouse and stack (S3047)
- updates to the authorised emission points of the licence to reflect these changes.

Works approval W6701/2022/1 was granted 20 September 2022 to authorise the staged construction of upgrades to the scour sand system, replacing the existing system with a ceramic bead system. During the first stage of upgrades, an additional baghouse and stack (S3047) were installed and commissioned. An Environmental Compliance Report and Commissioning Compliance Report were submitted by Tronox to demonstrate compliance with works approval conditions for that stage. The department reviewed the reports submitted and confirmed that the infrastructure was installed and commissioned in adherence with works approval conditions, and that the air emissions profile demonstrated during commission was in line with predicted emissions. This licence amendment application relates to the authorisation of ongoing operations of the new baghouse and stack.

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 |
|-------------------|---------------|--|
| L5320/1988/14 | 12/07/2011 | Licence granted |
| | 26/04/2016 | Notice of amendment of Licence expiry dates |
| | 16/05/2022 | Notice of amendment and schedule of licences with amended reporting conditions |

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 of the previous licence and advise the licence holder to obtain the form from the department's website;*
- *revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and*
- *corrected clerical mistakes and unintentional errors.*

The full consolidation of licence conditions as they relate to this revised licence are detailed in Section 6.1. Previously issued Amendment Notices will remain on the department's website for future reference and will act as a record of the department's decision making.

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 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 |
|--------------------------------------|---|------------------------|---|
| Air emissions – particulates and NOx | Operation of upgraded scour bead system | Air/ windborne pathway | <p>Bags filters installed in baghouses have a design performance of 25 mg/Nm³</p> <p>Incidents or community complaints will be managed under existing operator procedures.</p> <p>Baghouse operated and maintained as per manufacturer’s specifications.</p> <p>Bag filters checked and replaced as per manufacturer’s specifications.</p> <p>Baghouse operating parameters continuously monitored by plant control system.</p> <p>Baghouse has alarms to identify when non normal operating conditions occur, including broken bags.</p> <p>S3047 stack will be built 11 mabgl.</p> <p>A port will be fitted to the S3047 stack to allow periodic sampling.</p> <p>During operations if emission exceedances or unplanned emissions and/or discharges occur the feed will be reduced until satisfactory conditions are reached.</p> |
| Noise | | | Exhaust fans for new baghouse has a sound power level of 75 dB at 1 m from the casing. |

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 the 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 |
|--|--|
| <p>Closest residential receptors</p> <p>Medina</p> <p>East Rockingham</p> | <p>2.4 km from eastern edge of the premises boundary</p> <p>3.9 km from the south southwestern edge of the premises boundary</p> |
| <p>Industrial receptors</p> <p>BP Refinery Kwinana</p> | 50 m from the western edge of the premises boundary |

| | |
|------------------------------------|---|
| Premium Grain Holdings Pty CSBP | 56 m from the eastern edge of the premises boundary' 280 m from the southwest edge of the premises boundary |
| Covalent Lithium Pty Ltd | 770 m north from the eastern edge of the premises boundary |
| Cleanaway Co Pty Ltd | 220 m from the northern edge of the premises boundary. |

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 L5320/1988/14 that accompanies this amendment report authorises emissions associated with the operation of the premises. 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 operation

| Risk Event | | | | | Risk rating ¹ | Licence holder's controls sufficient? | Conditions ² of licence | Justification for additional regulatory controls |
|--|---|---|--|---------------------------|---|---------------------------------------|------------------------------------|--|
| Source/Activities | Potential emission | Potential pathways and impact | Receptors | Licence holder's controls | C = consequence L = likelihood | | | |
| Operation of upgraded scour bead system (S3047 baghouse and stack) | Gas emissions including particulates, SO ₂ and NO _x | Air/windborne pathway causing impacts to health and amenity | Residential dwellings approx. 2.4 km east and 3.9 km southwest of premises boundary. Industrial premises 50 to 220m in all directions from premises boundary. | Refer to Section 3.1 | C = Minor L = Unlikely Medium Risk | Y | Condition 1 | While the applicant presented minimal information in the context of cumulative site wide emission contribution, the delegated officer considered that this stage of works was limited to the addition of one new baghouse and point source installed as part of an emissions reduction upgrade. The isolated conservative screening predictions for these two sources (entire upgrade project, including both stages) were negligible (<3%) compared to the Kwinana EPP standards and draft Guideline: Air Emissions recommended guideline values. As the licence holder installed the pollution control equipment as proposed, and emissions during commissioning were validated against predictions, the delegated officer considers any changes to cumulative emission are likely to be marginal. There are no expected changes to the premises air emissions risk profile. Related licence amendments were limited to the inclusion of the new baghouse as an authorised air emissions point and an update to the corresponding authorised emissions points map. |
| | Noise | Air/windborne pathway causing impacts to amenity | | | C = Slight L = Unlikely Low Risk | Y | N/A | The delegated officer considered information provided by the applicant including noise sources and controls. The delegated officer considered that changes to the existing noise emission profile from the upgraded scour bead system are expected to be negligible and have been risk assessed as low following the implementation of the applicant's construction controls under works approval W6701/2022/1. |

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 |
|--|--|---|
| Application advertised on the department's website from 14 June to 6 July 2022 | None received | N/A |
| Local Government Authority advised of proposal on 15 July 2022 | None received | N/A |
| Licence holder was provided with draft amendment on 22/06/2023 | The licence holder provided comment on the draft documents on 5 July 2023. The comments were related to matters that were administrative in nature including formatting and typographical corrections. | Formatting and typographical errors were corrected. |

5. Decision summary

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.

In addition to the incorporating the scour sand system infrastructure upgrades into the revised licence, the Delegated Officer has also determined to:

- update the format and appearance of the licence;
- remove redundant definitions and conditions and add new definitions as required;
- include conditions considered necessary for the effective administration of the licence (i.e. record keeping and reporting requirements); and
- transfer all relevant existing regulatory controls and conditions to the renewed licence.

As the existing licence is due to expire in July 2025 and will be subject to a comprehensive risk assessment during any future licence renewal process, the delegated officer has determined that this amendment will be limited in scope to only the scour sand system upgrades and any necessary formatting and administrative changes.

6. Conclusion

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.

6.1 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: Consolidation of licence conditions in this amendment

| Existing condition | Condition summary | Revised licence condition | Conversion notes |
|--------------------|---|--|--|
| Front page | Licence holder name, ACN, and business address | N/A | Licence holder name, ACN and business address updated to reflect historic changes |
| N/A | Expiry Date: 11 July 2016 | Expiry Date: 11 July 2025 | In accordance with the Notice of Amendment of Licence Expiry Dates (29/04/2016) |
| N/A | Interpretation and definitions | N/A Interpretation section and Table 6: Definitions | Interpretation section added and definitions revised to current licensing format. Relevant existing and additional terms and definitions applied. |
| 1 | Reporting requirement – six monthly report | 36 | New numbering. Moved to Records and Reporting section. |
| 2 | Reporting requirement – annual report | 40 | New numbering and updated wording format. No change to licence holder obligations. Moved to Records and Reporting section. |
| 3 | AACR requirement | 41 | New numbering and updated wording format. No change to licence holder obligations. Moved to Records and Reporting section. |
| 4 and 5 | Reporting of exceedance of licence limits | 42 and 43 | New numbering. Moved to Records and Reporting section. |
| 6 and 7 | Monitoring Equipment Reliability | 8 and 9 | New numbering, Moved to Monitoring section. |
| 8 | Atmospheric Discharge Points | 1 | New numbering. Moved to Emissions and Discharges section. New emission point added. |
| 9 | Stack sampling | 10 | New numbering, Moved to Monitoring section. |
| 10 and 11 | Air Emission Monitoring | 11 and 12 | |
| 12, 13, 14, and 15 | Ambient Chlorine Monitors | 15, 16, 17 and 18 | |
| 16 | Emissions Limits | 2 | New numbering. Moved to Emissions and Discharges section. |
| 17 | Sulfur Dioxide Discharge Limits - Plant | 3 | |
| 18 | Discharge Through Vent Stack Monitoring | 4 | |
| 19 | Waste process gas discharge reporting condition | 5 | |

| Existing condition | Condition summary | Revised licence condition | Conversion notes |
|--------------------|---|---|--|
| 20 and 21 | Sulfur Dioxide Monitoring Requirements of EPP | 13 and 14 | New numbering, Moved to Monitoring section. |
| 22 and 23 | Reporting Requirements of EPP | 37 and 38 | New numbering. Moved to Records and Reporting section |
| 24 and 25 | Ambient Sulfur Dioxide Monitoring | 19 and 20 | New numbering, Moved to Monitoring section. |
| 26 and 27 | Meteorological Monitoring | 21 and 22 | |
| 28, 29 and 30 | Reporting of Meteorological and Ambient Sulfur Dioxide Monitoring Data | 33, 34, 35 | New numbering. Moved to Records and Reporting section |
| 31 | Wastewater discharge point | 6 | New numbering. Moved to Emissions and Discharges section. |
| 32, 33, 34 and 35 | Wastewater monitoring requirements - sampling | 23, 24, 25, and 26 | New numbering, Moved to Monitoring section. |
| 36 | Wastewater discharge limits | 7 | New numbering. Moved to Emissions and Discharges section. |
| 37 | Sediment monitoring programme – Cockburn Sound | 27 | New numbering. Moved to Monitoring section. |
| 38 and 39 | Wastewater monitoring requirements – Australian Standard/NATA accreditation | 28 and 29 | |
| 40, 41, 42 | Groundwater monitoring requirements | 30, 31, 32 | |
| N/A | Records and Reporting: Complaints condition | 39 | Standard current format complaints condition has been applied. |
| N/A | N/A | 44 and 45 | Standard current licence template condition set for maintaining accurate and auditable books have been applied. |
| Schedule 1: Maps | Premises map | Schedule 1: Maps | Updated map to combine premises map and authorised emission points map. |
| Attachment 3 | Annual Audit Compliance Report form | N/A | Redundant attachment. Deleted from Licence Forms accessed at www.dwer.wa.gov.au |
| N/A | Premises boundary coordinates | Schedule 2: Premises boundary coordinates | Premises boundary coordinates provided by licence holder have been incorporated. |

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. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Risk Assessments*, Perth, Western Australia.