



Tronox Management Pty Ltd – EGL23
Post-Audit & Post-Review Implementation Plans
Audit & Review Period: 1 November 2016 to 31 October 2021

Post Audit & Post Review Implementation Plans	Authorisation	Name	Position	Date
Prepared By (licensee)	[REDACTED]	Shayne Ashworth	Supply Chain Director Australia	11/05/2022

1. POST AUDIT IMPLEMENTATION PLAN – ADDRESSING AUDIT NON-COMPLIANCES

REF ¹	LICENCE OBLIGATION	NON-COMPLIANCE	RECOMMENDATION	ACTION TO BE TAKEN	BY WHO (Position)	WHEN
105	<p>Electricity Industry Act 2004 - Licence Condition 4.2.1</p> <p>A licensee must pay the prescribed licence fees to the ERA according to clauses 6, 7 and 8 of the <i>Economic Regulation Authority (Licensing Funding) Regulations 2014</i>.</p>	<p>As the Licensee did not have effective compliance processes and lacked awareness to the impact to late payment, Tronox did not pay the prescribed licence fees to the ERA in accordance with the obligations, for 50% of the 21 invoices received during the audit period relating to Standing Data Charges. The late payment of annual licence fee in 2021 was also made. All other prescribed payments were made in accordance with the <i>Economic Regulation Authority (Licensing Funding) Regulations 2014</i>. The</p>	<p>01/2021 – To ensure the licence obligation is embedded in the Licensee's processes and ongoing compliance with requirements the Licensee should:</p> <ul style="list-style-type: none"> • Develop a Cogeneration Facility Compliance Manual and RACI matrix for required compliance tasks. The compliance manual should form the basis for an internal audit guideline to assess ongoing compliance and achieve continual improvement. • Ensure the obligation to pay Standing Data charges is incorporated in the Compliance Process. • Further review the effectiveness of the corrective actions implemented to ensure ongoing compliance processes in relation to payment of prescribed fees and embed into normal business practices. • Include the requirement as a routine in accounts or similar software, specific budgeting reference to ensure compliance is monitored and does not rely just on tacit knowledge. • Create an email rule to copy communication from the ERA accounts department to another individual 	<p>Develop a Cogeneration Facility Compliance Manual and RACI matrix for all Cogen requirements.</p> <p>Develop critical vendors list for payments and issue system reminders and alerts.</p>	<p>Director Supply Chain Australia</p> <p>Manager Finance Pigment</p>	<p>31 Dec 2022</p> <p>31 Dec 2022</p>

REF ¹	LICENCE OBLIGATION	NON-COMPLIANCE	RECOMMENDATION	ACTION TO BE TAKEN	BY WHO (Position)	WHEN
124	<p>Electricity Industry Act 2004 - Licence Condition 4.5.1</p> <p>A licensee must provide the ERA, in the manner prescribed, with any information that the ERA requires in connection with its functions under the Electricity Industry Act.</p>	<p>During the audit period the Licensee submitted the Annual Compliance Report late 2016-2017 and the 2020-2021 reporting years. The Licensee made late payment of Standing Charges Data Invoices on 10 occasions and the late payment of the annual licence fee on 1 occasion. Submission of standing data charges was not able to be determined if compliant for the 2017 and 2020 reporting years and was non-compliant for 2018 and 2019. The Control Procedures in relation to the correct collection and handling of data that the Licensee supplies to ERA and/or compliance related activities were not adequate to ensure accurate and timely reporting of information to the ERA.</p>	<ul style="list-style-type: none"> A review of personnel charged with the role and change management processes should be considered to ensure compliance task assigned to employees leaving the business are captured by new positions or reassigned as required 	<p>Develop a Cogeneration Facility Compliance Manual and RACI matrix for all Cogen requirements.</p> <p>Utilise RACI matrix to develop email distribution lists and accountabilities at role position level in job descriptions of key roles.</p>	<p>Director Supply Chain Australia</p>	<p>31 Dec 2022</p>

2. POST REVIEW IMPLEMENTATION PLAN – ADDRESSING ASSET MANAGEMENT REVIEW DEFICIENCIES

REF ²	ASSET MANAGEMENT PROCESS & EFFECTIVENESS CRITERA	CONTROLS DEFICIENCY	RECOMMENDATION	ACTION TO BE TAKEN	BY WHO (Position)	WHEN
1.1	ASSET PLANNING Asset management plan covers the processes in this table	Although, [REDACTED] has developed an AMP, as contractually required by Tronox, Tronox has not developed its own AMP which completes and/or integrates with the Cogen Facility asset management processes. As such elements of the AMP were not documented such as implementation of a systemic risk-based approach to asset operations and maintenance and an effective monitoring and management review process.	<ul style="list-style-type: none"> • 02/2021 - Tronox Management should: <ul style="list-style-type: none"> ○ <i>Develop an AMP</i> - Formally document their AMS in an AMP, where there is an overlap in function the Tronox AMP should refer to the [REDACTED] process and detail the internal audit and monitoring processes established by Tronox to verify the requirements of the AMS are effectively implemented. ○ <i>Internal Monitoring</i> - Establish a process for internal review of [REDACTED] AMS incorporating the AMP, the O&M Agreement to determine the assessment of the Asset Management processes and effectiveness criteria and verify the integrity of the reporting processes. ○ <i>Management Review</i> - Develop management review processes (i.e., internal audits) for the AMP and AMS to verify the effectiveness of the Contractors AMS and mitigate the Licensee's risk in compliance with its Generation Licence and the maintenance and operation of the Cogeneration Facility. ○ <i>Collaboratively undertake Risk Assessment</i> - Liaise with [REDACTED] to document risks, ensure they are intrinsic to the Cogeneration facility and linked to process/project improvements detailed in the AMP, incorporate risks in the AMP and risk appetites, tolerances and objectives are aligned. 	Develop AMP which will include AMS and incorporate Mono's AMP	Manager Technology & Innovation - Kwinana	15 March 2023
1.3	Service levels are defined in the Asset Management Plan	Service levels were defined in the [REDACTED] AMP and O&M Service Agreement from 2017. There were comprehensive reporting and review requirements on a weekly and monthly basis, however there were no monitoring, processes to assess the effectiveness or accuracy of the reports or the adequacy of the actions, processes and policies employed by [REDACTED]	<ul style="list-style-type: none"> ○ <i>Management Review</i> - Develop management review processes (i.e., internal audits) for the AMP and AMS to verify the effectiveness of the Contractors AMS and mitigate the Licensee's risk in compliance with its Generation Licence and the maintenance and operation of the Cogeneration Facility. ○ <i>Collaboratively undertake Risk Assessment</i> - Liaise with [REDACTED] to document risks, ensure they are intrinsic to the Cogeneration facility and linked to process/project improvements detailed in the AMP, incorporate risks in the AMP and risk appetites, tolerances and objectives are aligned. 	To be included in the AMP	Manager Technology & Innovation - Kwinana	15 March 2023
1.8	Likelihood and consequences of asset failure are predicted	In the absence of the application of a formalised risk assessment process, a systemic approach to the way prediction of asset failure likelihood and consequences of the asset failure was not able to be determined from the AMP. Performance of the Cogen Facility was largely attributed to the Contractor's extensive operational experience, competency and dedication of personnel and driven by the incentives and KPI Scorecard of the O&M Agreement. It was noted the AMP made reference to risk assessments being currently under review utilising Tronox Assessment Tool. This did not eventuate within the	<ul style="list-style-type: none"> ○ <i>Collaboratively undertake Risk Assessment</i> - Liaise with [REDACTED] to document risks, ensure they are intrinsic to the Cogeneration facility and linked to process/project improvements detailed in the AMP, incorporate risks in the AMP and risk appetites, tolerances and objectives are aligned. 	Risk Assessments and Risk registers to be referenced & Included in the AMP. AMP to include Contingency plan	Manager Technology & Innovation - Kwinana	15 March 2023

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		review period. The AMP also noted the Operational Strategy (i.e., 2021 AMP section 10.2) incorporated identification of hazards through risk assessments, inspections and audits carried out by [REDACTED] personnel. The use of risk assessment was not verified.	<ul style="list-style-type: none"> ○ <i>Align risks with improvement plans</i> - Document risks and ensure they are intrinsic to Cogeneration Facility and linked to process/project improvements by evaluating the KMK Outage Reports, Project Improvements, FMEA Reports, Audit Reports, Contingency Plans, etc and determine if all the risks are captured, and the treatment plans/control measures effectively executed. In effect, reverse engineering the risk register by linking the “incident database” to the risk register; and ○ <i>Further Develop Contingency Plans</i> - Develop long term contingency plans for the Cogen facility and ensure the contingency plans are tested and continual improvement processes applied where applicable. Identification of asset related risks that could result in a disruption to the continuity of the asset management should also be considered. 			
1.9	Asset management plan is regularly reviewed and updated	The [REDACTED] AMP was reviewed annually and updated by the Contractor. However, Tronox did not undertake a critical management review process of the AMP against the requirements of the O&M Agreement or verify the integrity of the reporting process during the audit period. It was noted aspects of the AMP referred to obsolete processes.	<ul style="list-style-type: none"> • [REDACTED] should: <ul style="list-style-type: none"> ○ <i>Review AMP</i> - Review the AMP to ensure all sections of the document are updated and reflect the elements of the O&M that could reasonably be attributed to an AMP such as IT and Cyber Security, disposal of obsolete 	Formalise review process of the AMP	Manager Technology & Innovation - Kwinana	15 March 2023
4.1	ENVIRONMENTAL ANALYSIS Opportunities and threats in the asset management system environment are assessed	In respect to the Cogeneration Facility, Tronox and [REDACTED] had different risk appetites, risk tolerances and risk management objectives. As such separate processes to identify, address and treat the risk may not be the most effective way to ensure that opportunities and threats in the asset management system environment are assessed and mitigated. Additionally, a recommendation to integrate a full risk-based assessment of items of plant into the asset management plan was made by the external Auditor in the 2016 KMK Cogen Asset Management Plan Review and this was not actioned by the Contractor or Licensee during the review period	<ul style="list-style-type: none"> • [REDACTED] should: <ul style="list-style-type: none"> ○ <i>Review AMP</i> - Review the AMP to ensure all sections of the document are updated and reflect the elements of the O&M that could reasonably be attributed to an AMP such as IT and Cyber Security, disposal of obsolete 	Document & review Contingency Plans & Incorporate Contingency Plans in the AMP	Manager Technology & Innovation - Kwinana	15 March 2023

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5.2	ASSET OPERATIONS Risk management is applied to prioritise operations tasks	The application of systemic risk-based management to prioritise operational tasks so operational service levels could be consistently achieved was not evident. The Contractors AMP referenced that the Operational Strategy (i.e., 2021 AMP section 10.2) incorporated identification of hazards through risk assessments, inspections and audits carried out by [REDACTED] personnel. The use of risk assessment was not verified. Additionally, a recommendation to integrate a full risk-based assessment of items of plant into the asset management plan was made by the external Auditor in the 2016 KMK Cogen Asset Management Plan Review and this was not actioned by the Contractor during the review period.	equipment, risk management processes, plant change control processes, training, etc. <ul style="list-style-type: none"> o <i>Collaboratively undertake Risk Assessment</i> - Liaise with Tronox to document risks and ensure they are intrinsic to the Cogeneration facility and linked to process/project improvements, incorporate risks in the AMP and risk appetites, tolerances and objectives are aligned. o <i>Document Contingency Plans</i> - Incorporate Contingency Plans in the AMP; and o <i>Document operational and maintenance controls</i> - Formally document operational and maintenance processes where required i.e., in the absence of an existing process or control procedure 	Document Risk Impact assessment as part of the contingency planning and document in the AMP.	Manager Technology & Innovation - Kwinana	15 March 2023
6.5	ASSET MAINTENANCE Risk management is applied to prioritise maintenance tasks	The explicit application of risk management to prioritise maintenance tasks was not evidenced. The AMP also noted the Maintenance Strategy (i.e., 2021 AMP section 10.3) was to continue to maintain the long-term integrity of the plant by controlling risk, identifying new risks and proposing cost-effective engineering solutions. The use of systemic risk assessment was not verified. Additionally, a recommendation to integrate a full risk-based assessment of items of plant into the asset management plan was made by the external Auditor in the 2016 KMK Cogen Asset Management Plan Review and this was not actioned by the Contractor during the review period.		Finalise risk-based assessment of items of plant into the asset management plan	Manager Technology & Innovation - Kwinana	15 March 2023

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8.1	RISK MANAGEMENT Risk management policies and procedures exist and are applied to minimise internal and external risks	Risk management systems were established by both parties, however, the Risk Registers looked at the incidents from different perspectives and they both had different risk appetites (i.e., different risk matrices and as such differing prescribed likelihood and consequences). Neither risk register was comprehensive in identifying all the Cogen Facility risks nor were they intrinsic to the risk management of the Cogen Facility risks.		Update the Cogen facility risk register to identify and list all key risks and align (where appropriate) with that identified by the contracted operator.	Manager SHEQ Kwinana	31 Dec 2022
8.2	RISK MANAGEMENT Risks are documented in a risk register and treatment plans are implemented and monitored	Operational and maintenance risks were not clearly documented in the risk register provided. The risks were well known by the Contactor and managed as reflected by Cogen Facility Performance. However, the use of risk assessment as an intrinsic management tool was not undertaken. Risk assessment was not referenced in the Contractors AMP.		Document facility risks into risk register. For identified risks develop treatment plans, implement, and monitored	Manager SHEQ Kwinana	31 Dec 2022
9.1	CONTINGENCY PLANNING Contingency plans are documented understood and tested to confirm their operability and to cover higher risks	There was no evidence provided to verify the testing of contingency plans developed by Tronox. Long term contingency plans were not considered. ██████████ Contingency Plans were tested (i.e. monthly EDG test) but not documented in the AMP as contingency plans.		Refer 5.2 – contingency plans to be documented in the AMP.	Manager Technology & Innovation - Kwinana	15 March 2023

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12.1	REVIEW OF AMS A review process is in place to ensure the asset management plan and the asset management system described in it remain current	There was no critical review process of the AMP undertaken by Tronox other than acknowledgement the provision was as required by the O&M Agreement.	<p>03/2021 – In order to address the asset management deficiencies identified in relation to the compliance:</p> <ul style="list-style-type: none"> • Tronox Management should: <ul style="list-style-type: none"> ○ <i>Leadership and accountability</i> - Improve leadership and accountability through the establishment of an asset management committee or team and designate a role for an asset management champion with the existing responsibilities which span the full asset life cycle to provide effective leadership and accountability and ensure they have sufficient control over the asset management resources to drive the system forward. Undertake a review of the relevant personnel 	Document review periods and independent review frequency	Manager Technology & Innovation – Kwinana	15 March 2023
12.2	REVIEW OF AMS Independent reviews (e.g. internal audit) are performed of the asset management system	During the review period there were no independent reviews performed of the AMS.		Document review periods and independent review frequency	Manager Technology & Innovation – Kwinana	15 March 2023
2.5	ASSET CREATION AND ACQUISITION Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood	Compliance processes were not fully effective in relation to the obligations of EGL23 due to fragmentation of management responsibilities for the Cogeneration Facility assets over their life cycle. There were several instances where the obligations were not well assigned or understood and as such non-compliances occurred resulting in inaccurate and incomplete reporting information was provided to the ERA.		Utilise RACI matrix to develop email distribution lists and accountabilities at role position level in job descriptions of key roles.	Director Supply Chain Australia	31 Dec 2022
4.3	ENVIRONMENTAL ANALYSIS Compliance with statutory and regulatory requirements	Compliance with the requirements of the generation licence was not well demonstrated with respect to awareness, authorities and communication of requirements.		Develop Compliance Processes - Develop a compliance manual and RACI matrix for the Cogeneration Facility.	Manager SHEQ Kwinana	31 Dec 2022

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5.6	ASSET OPERATIONS Staff resources are adequate and staff receive training commensurate with their responsibilities.	Tronox staff training and awareness of responsibilities/compliance requirements of the generation licence obligations were not well demonstrated in some areas as noted by the root cause of non-compliances raised within this report relating primarily to the Control Environment. A leadership and accountability role to facilitate collaboration and ensure the effectiveness of the AMS was not established.	<p>position descriptions to ensure adequate for responsible and accountabilities</p> <ul style="list-style-type: none"> Develop <i>Compliance Processes</i> - Develop a compliance manual and RACI matrix for the Cogeneration Facility. The Compliance manual would support the internal audit process (Refer Recommendation 01/2021). Undertake <i>Training Needs Analysis</i> - Assess the training needs, resources required for the effective management of the Cogeneration Facility (including the requirements of the generation licence and the O&M Agreement) 	Review Training Needs Analysis Matrix for T&I team	Manager Technology & Innovation – Kwinana	15 March 2023
7.7	ASSET MANAGEMENT INFORMATION SYSTEM Management reports appear adequate for the licensee to monitor licence obligations	There were no specific management reports prepared that detailed or monitored compliance with the generation licence requirements, other than the reporting prepared by the Contractor detailing the asset management activities in accordance with O&M Agreement. Compliance and monitoring processes (i.e., internal audit) were not established in relation to the generation licence obligations.	<ul style="list-style-type: none"> Include <i>Legal Obligations compliance in management reports</i> – Develop management reports to communicate compliance with the generation licence requirements., Link the reports to monitoring processes (i.e., internal audit) to be established. 	<p>Define internal audit requirements and</p> <p>Undertake an audit in relation to the generation licence obligations.</p>	Manager Technology & Innovation - Kwinana	15 March 2023
7.1	ASSET MANAGEMENT INFORMATION SYSTEM Adequate system documentation for users and IT operators	████████████████████ ████████████████████ ████████████████████ ████████	<p>04/2021 – To ensure Tronox has established adequate system documentation for users and IT operators' consideration of the following is recommended:</p> <ul style="list-style-type: none"> Review the Australian Energy Sector Cyber Security Framework (AESCSF) and assessment of Tronox and ██████████ systems for suitability. (For specific detail refer to AEMO AESCSF framework and resources). Consider legislative requirements and Asset Management Information System 	████████████████████ ████████████████████ ████████████████████ ████████████████████ ████████████████████ ████████████████████	Kwinana Co-gen Site Manager & Director Regional IT Australia)	15 March 2023

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			requirements in the AMP, risk assessment and Tronox control procedures and policies. <ul style="list-style-type: none"> o [REDACTED] o Review the <i>Security Legislation Amendment (Critical Infrastructure) Act 2021</i> for gaps to compliance and use requirements as a benchmark for IT management practices. o Assessment of [REDACTED] IT security process as required by the O&M Agreement and with consideration legislative and 2019 Audit and Review Guidelines – Electricity and Gas Licences requirements is recommended. o Subject to the determination of a potential exemption ensure critical infrastructure compliance and reporting requirements are adhered to. 	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]		
7.5	ASSET MANAGEMENT INFORMATION SYSTEM Data backup procedures appear adequate, and backups are tested	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	05/2021 – [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED]	Kwinana Co-gen Site Manager & Director Regional IT Australia)	15 March 2023

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7.8	ASSET MANAGEMENT INFORMATION SYSTEM Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	[REDACTED] Site Manager and Tronox IT personnel interviewed confirmed that their systems had a high level of security measures to protect asset management data from external threats. [REDACTED] [REDACTED] [REDACTED] [REDACTED]	06/2021 – [REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED]	Director Regional IT Australia	15 March 2023