

2018 Independent Environmental Audit Findings

Table 1: Action Plan to resolve the non-compliances.

Audit Section	Audit finding	Action	Due Date	Progress
Schedule 3 - Condition 5(f) - <i>Operating Conditions</i>	The 2016 Annual Review provides for Management Measures investigated and implemented during the reporting period, however it does not report on the effectiveness of these measures.	TGO to include a section on the effectiveness of noise mitigation measures in the next Annual Review.	1/03/2020	Ongoing Section included in 2019 Annual Review
Schedule 3 - Condition 6(a) - <i>Noise Management Plan</i>	This is set out in section 2.4 'Consultation' of the NMP, however there are no appendices to the NMP showing what consultation was undertaken, if any comments were received or how they were addressed in the NMP. Approval of the NMP was sighted during the previous IEA in an email dated 17 June 2013.	TGO will ensure that consultation that has occurred with the EPA, Council and DPE are attached as an appendix to the NMP for future reference. Any comments provided will also be addressed	31/08/2019	Ongoing TGO has submitted letters to both Council and EPA regarding the NMP. Council have replied with no concerns and TGO are still awaiting a response from EPA. Following EPA's response TGO will amend the NMP and resubmit to DPIE for approval.



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Schedule 3 - Condition 20 (b) - <i>Meteorological Monitoring</i>	An email dated 27/04/15 from the supplier of the meteorological station was sighted which states that it complies with a) and not b) of this condition. The previous IEA recommended that TGO seek approval from the Director General (now Secretary) following consultation with the EPA, regarding whether the TGO weather station is a suitable alternative for continuous real time temperature lapse rate. An email letter submitted to the EPA on 30/12/15 explaining the situation and "confirming that TGO considers the use of the sigma-theta method to measure temperature lapse rate a suitable alternative to direct measurement". It was reported that the EPA did not respond and the DPE has not been notified.	TGO will contact the EPA for a response to the request for agreement with the change in monitoring. TGO will then write to DPE requesting an exemption for item b of this condition	31/08/2019	Ongoing TGO has submitted a letter to EPA requesting agreement with the change in monitoring and are awaiting a response. Following the EPA's agreement, TGO will then write to DPE requesting an exemption for item b of this condition.



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Schedule 3 - Condition 23 (a + b) - <i>Water Discharges</i>	<p>TGO only discharged once during the audit period which occurred on 2 December 2017. The pre-rain checklist that is required to be completed prior to a rain event was sighted for this particular discharge event dated 26/11/17. The incident report sent to the EPA, DPE, NSC and DRG on 11/12/17 was sighted. The sampling results for surface water on this date were also sighted which show exceedances of the limits within the EPL.</p> <p>Section 3.3 Dirty Water of the WMP states that "Sediment basins are designed to manage sediment-laden runoff generated by the 10 day, 90th percentile rainfall event".</p> <p>The water discharge in December 2017, that was a non-compliance with the EPL, was the result of a high intensity rain. The dirty water dams on site reached capacity and subsequently discharged water off-site that had a pH exceeding the EPL discharge quality conditions. It is likely that on occasions that high intensity rainfall events will again result in the discharge of waters that could exceed the water quality limits specified in the EPL. It is recommended that TGO consider discussing with the EPA an amendment to the EPL that takes into account very high intensity rainfall event that result in the site dirty water dam capacities being exceeded.</p>	TGO has implemented a variety of controls including pumping infrastructure installation and pre and post rainfall inspections for all sediment ponds as to ensure no further water discharges occur.	-	No further action



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Schedule 3 - Condition 32 - <i>Water Management Plan</i>	<p>Consultation is set out in section 1.3 of the WMP which states that consultation has occurred with the relevant authorities, however this consultation is not attached as an appendix and so it is unclear what consultation took place or if there were any comments provided to be addressed in the WMP. The previous IEA stated that this correspondence was included as Appendix 2 of the WMP. Evidence of DP&E approval of the Groundwater consultant was sighted in the previous IEA. TGO prepared a WMP and submitted it to the DP&E on 18 July 2013. The WMP was not approved as it did not include six months of baseline groundwater monitoring data.</p> <p>TGO advised that the updated WMP was referred to agencies including the DPE. DPE never formally replied to TGO. A copy of an email to DPE from TGO following up on the approval of the WMP was sighted and nothing further has been received by DPE.</p> <p>Note that the auditor considers that TGO has met the intent of this Condition.</p> <p>Comments provided from DPIW and EPA were also sighted, TGO has made reference comments in the DPIW document only to acknowledge the changes have been made in the WMP. However, final signoff by the Secretary is outstanding.</p>	<p>TGO has engaged GHD to update the Water Management Plan as to address all IEA findings.</p> <p>TGO will submit the updated Water Management Plan to all relevant agencies for consultation which will then be attached as appendices, all comments will also be addressed.</p>	31/08/2019	<p>Ongoing</p> <p>TGO submitted the Draft Water Management Plan in February 2020 to relevant agencies for review and approval and is awaiting responses.</p>
Schedule 3 - Condition 32 (b)(iii)- <i>Water Management Plan</i>	<p>Design objectives and performance criteria for the design and management of final voids was not identified in the SWMP. Design and management of water storages is included in 6.1 'Storage capacity assessment' including design objectives of revised capacity volumes. Process water and residue storage facility is set out in section 3.5. Performance criteria of water storages does not appear to be included in the SWMP.</p> <p>Performance criteria for the control of any water pollution from the rehabilitated areas of the site could not be identified in the SWMP.</p>	<p>TGO has engaged GHD to update the Water Management Plan as to address all IEA findings.</p>	31/08/2019	<p>Ongoing</p> <p>TGO submitted the Draft Water Management Plan in February 2020 to relevant agencies for review and approval and is awaiting responses.</p>



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Schedule 3 - Condition 32 (b)(iv)- <i>Water Management Plan</i>	The monitoring program is outlined in Section 5 of the SWMP which states that site inspections are undertaken on a weekly basis of all water management structures however the SWMP does not address the effectiveness of the water management system. Section 5 does not make reference to a program to monitor potential leakage or spillage from on-site pipelines. Gundong Creek monitoring is highlighted in section 5.2.1 of the SWMP however stream health and channel stability isn't referenced.	TGO has engaged GHD to update the Water Management Plan as to address all IEA findings.	31/08/2019	Ongoing TGO submitted the Draft Water Management Plan in February 2020 to relevant agencies for review and approval and is awaiting responses.
Schedule 3 - Condition 32 (b)(v)- <i>Water Management Plan</i>	The SWMP includes plans to respond to exceedances of trigger values however it does not include a plan to mitigate and/or offset any adverse surface water impacts.	TGO has engaged GHD to update the Water Management Plan as to address all IEA findings.	31/08/2019	Ongoing TGO submitted the Draft Water Management Plan in February 2020 to relevant agencies for review and approval and is awaiting responses.
Schedule 3 - Condition 33- <i>Biodiversity Offset</i>	The Biodiversity Offset Strategy states that "Consultation with OEH and LLS resulted in modified offset area agreed for a Conservation Property Vegetation Plan (PVP)". A PVP has been developed in consultation with NSW Office of Environment and Heritage (OEH) and approved by Local Land Services (LLS) as the framework under which TGO will manage and provide long-term security for the Biodiversity Offset Area. It is noted that the offset areas within the agreed PVP are larger than those in this condition, however because the Department of Planning are yet to approve the PVP, this is a NC. It is further noted that email evidence of TGO submitting the PVP to the DPE for comment was sighted.	TGO will contact the DPE and seek approval of the PVP in writing.	31/08/2019	Ongoing TGO has contacted the DPIE seeking written approval of the PVP and are awaiting a response.



Audit Section	Audit finding	Action	Due Date	Progress
Schedule 3 - Condition 37 (a) - <i>Biodiversity Management Plan</i>	Compliant as per GHD IEA. Section 4 of the BMP 'Consultation' details the consultation undertaken with OEH and Local Land Services for the preparation of the BMP. Appendix 1 of the BMP provides full details of the consultation undertaken. TGO have sent the BMP to the DPE for approval (email evidence sighted) however are yet to receive formal response from DPE approving the plan.	TGO will address the IEA actions within the Biodiversity Management Plan and then submit to DPE for approval.	30/11/2019	Ongoing Draft Biodiversity Management Plan completed and waiting for review and approval from DPIE
Schedule 3 - Condition 37 (c) - <i>Biodiversity Management Plan</i>	Section 6.2 of the BMP provides details of the management strategies that will be implemented to manage remnant vegetation and habitat within the Biodiversity Offset Area, however it does not include measures for the site. These management strategies are classified as 'short-term', 'mid-term' and 'long' term. Managing habitat integrity is set out in section 6.3.3 of the BMP. Performance criteria are included in Section 11 of the BMP. However completion criteria are not provided within the BMP. A Property Vegetation Plan (PVP) has been developed in consultation with NSW Office of Environment and Heritage (OEH) and approved by Local Land Services (LLS) as the framework under which TGO will manage and provide long-term security for the Biodiversity Offset Area. The PVP is attached as Appendix 2 to the BMP.	TGO will include detailed completion criteria during the next review of the BMP.	30/11/2019	Ongoing Draft Biodiversity Management Plan completed and waiting for review and approval from DPIE
Schedule 3 - Condition 37 (d) - <i>Biodiversity Management Plan</i>	Table 7 of the BMP details the response actions to managing identified risks in the biodiversity offset area. Performance criteria are included in Section 11 of the BMP. However completion criteria are not provided within the BMP.	TGO will include completion criteria for evaluating the performance of the biodiversity offset strategy during the next review of the BMP.	30/11/2019	Ongoing Draft Biodiversity Management Plan completed and waiting for review and approval from DPIE



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Schedule 3 - Condition 37 (e)(iii) - <i>Biodiversity Management Plan</i>	Procedures for natural regeneration is addressed in Section 7 'Flora Management'. This section states "Natural regeneration is occurring readily and propagation and supplementary planting efforts are likely to be used for species that are not naturally regenerating or have notably reduced local populations. To this end natural regeneration has been highly successful and this requirement may not be required". Detailed description of procedures to be implemented for restoring native vegetation through focusing on: targeted vegetation establishment and the introduction of naturally scarce fauna habitat features could not be identified in the BMP. Fauna habitat is set out in Section 8 'Fauna Management' of the BMP.	TGO will include a description of procedures to be implemented for restoring native vegetation through focussing on; targeted vegetation establishment and the introduction of naturally scarce fauna habitat features during the next review of the BMP.	30/11/2019	Ongoing Draft Biodiversity Management Plan completed and waiting for review and approval from DPIE
Schedule 3 - Condition 39 (e)(ii) - <i>Heritage Management Plan</i>	No information is included in the CHMP for the storage of salvaged historic heritage items.	TGO will include a strategy for the storage of any heritage items salvaged onsite, both during the project and long term during the next review of the HMP.	30/11/2019	Ongoing
Schedule 3 - Condition 48 (c) - <i>Hazardous Materials Management Plan</i>	Section 3.1.1 of the HMMP states that 'the third modification to PA 09_0155 (MOD 3) was approved by DPE in July 2016 which was after the commencement of mining operations. It is also noted that in the previous IEA (2015), "No evidence of correspondence with the DG was sighted to confirm submission and/or approval". An email sent to DPE on 22/06/17 requesting approval of the HMMP was sighted.	DPE are currently reviewing this Management Plan	-	Awaiting DPIE
Schedule 3 - Condition 53 (l) - <i>Rehabilitation Management Plan</i>	No evidence was found in the MOP A2 that backfilling of Caloma Two void has been considered. Section 7.2.8 states that "Cal2 Open Cut will be retained as a void in the final landform". TGO advised that there is consultation regarding this and	TGO will update the next MOP with CL2 backfilling options. Currently the site does not have sufficient	2021	Ongoing



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	should be in the most recent version of the MOP, however this could not be identified.	waste rock onsite to fill the void.		
Schedule 5 - Condition 1 (e)(v) - <i>Environmental Management Strategy</i>	Section 7.3.1 'Project Induction' states that induction addresses emergency plans, however the EM Strategy does not describe the procedures that would be implemented to respond to emergencies. TGO do have an Emergency Management Plan that was sighted however it is not referenced within the Strategy.	TGO will revise the EM Strategy as to include a section on 'Emergency Response' procedures or reference the Emergency Management Plan and where to locate it.	30/11/2019	Ongoing
Schedule 5 - Condition 3 (c) - <i>Management Plan Requirements</i>	Incident reporting, corrective actions and mitigation measures are provided for in most management plans. Some Management Plans also include Trigger Action Response Plans.	TGO will update the relevant Management Plans (BLMP and NMP) (AQGHGMP is currently under review by DPE) as to include specific actions to manage any unpredicted impacts and their consequences during the next review of the corresponding MP.	30/11/2019	Ongoing



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Schedule 5 - Condition 5 - <i>Revision Strategies, Plans and Programs</i>	<p>The Revision Control Chart at the start of every Management Plan includes details of revisions.</p> <p>Document review requirements are not included in the EM Strategy.</p> <p>Some of the individual management plans include reference to some of the review requirements in this condition. For example, the NMP does not reference revision after the submission of an incident report. The BLMP does not reference any review requirements. The BMP and CHMP only make reference to review after modification of projects approvals.</p>	<p>TGO will update the EMS as to include a Management Plan review table.</p> <p>TGO will update individual Management Plans during the next review as to include both a trigger for review and a review table.</p>	30/11/2019	Ongoing
Schedule 5 - Condition 7 - <i>Incident Reporting</i>	<p>The requirement is provided for in section 2.1.2 'Notification of Authorities' and 3.2 Incident Report' in the Pollution Incident Response Management Plan (PIRMP). Environment incidents are reported and responded to in accordance with the TGO Incident Report which is completed as part of the Incident Investigation.</p> <p>Most management plans state that the DP&E will be notified of the incident and that a report will be provided within 7 days however the PIRMP does not make reference to the DP&E within section 2.1.2 'Notification of Authorities'.</p>	<p>TGO will update the PIRMP to include reference to the DPE being notified as per the condition, during the next review.</p>	9/11/2019	<p>No further action.</p> <p>TGO have reviewed and updated the PIRMP as to comply with this condition</p>
Appendix 8 - Statement Of Commitments - Section 4.4 - <i>Noise</i>	<p>Responses to real time monitoring are set out in sections 5.3.1 and 5.3.2 of the NMP.</p> <p>TGO advised that due to traffic noise it is not possible for TGO to act on real time noise data. Real time data is reviewed by Muller Acoustic consulting. A sample of reports was sighted.</p>	<p>TGO will update the NMP as to include actual onsite practices during the next scheduled review.</p>	31/08/2019	<p>Ongoing</p> <p>TGO are awaiting a response from the EPA in regards to the NMP, once received TGO will update the NMP accordingly.</p>



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Appendix 8 - Statement Of Commitments - Section 5.4 - Surface Water	This was observed as adequate in most instances. There was one instance where some fuel drums (having just been delivered) were sitting on a pallet bund that was not compliant.	TGO implements a Hazardous Materials Management Plan which states that all hazardous materials will be stored and handled in accordance with "AS/NZ 4452 - Storage and Handling of Toxic Substances". (Transit storage - between 12hr and 3 working days)	-	No Further Action
Appendix 8 - Statement Of Commitments - Section 5.5 - Surface Water	There was one instance where some fuel drums (having just been delivered) were sitting on a pallet bund that was not compliant.	TGO implements a Hazardous Materials Management Plan which states that all hazardous materials will be stored and handled in accordance with "AS/NZ 4452 - Storage and Handling of Toxic Substances". (Transit storage - between 12hr and 3 working days)	-	No Further Action



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EPL20169 Condition L1.1 - <i>Pollution of waters</i>	<p>The following items were observed during the inspection:</p> <ol style="list-style-type: none"> 1. Used batteries were located on the ground unbunded. 2. Surface contamination (oil) of soils in the maintenance workshop. It is noted that this area will be de-contaminated during Mine Closure. 3. Petroleum drums on non-compliant banded pallets. 4. TGO have only discharged once in the audit period which occurred on 2 December 2017. The pre-rain checklist that is required to be completed prior to a rain event was sighted for this particular discharge event dated 26/11/17. The incident report sent to the EPA, DPE, NSC and DRG on 11/12/17 was sighted. The sampling results for surface water on this date were also sighted which show exceedances of the limits within the EPL. <p>Each of these issues have the potential to breach section 120 of the Protection of the Environment Operations Act 1997.</p>	TGO implements a Hazardous Materials Management Plan which states that all hazardous materials will be stored and handled in accordance with "AS/NZ 4452 - <i>Storage and Handling of Toxic Substances</i> ". (<i>Transit storage - between 12hr and 3 working days</i>)	-	No Further Action
EPL20169 Condition L2.2 - <i>Concentration Limits</i>	Annual Return 2015 showed PH sample values of 10.74, 8.92, 10.05, 9.61. Annual Return 2016 showed a PH sample of 9.71 which are over the limit range from 6.5-8.5.	TGO has engaged GHD to update the Water Management Plan as to address all IEA findings	31/08/2019	Ongoing
EPL20169 Condition M4.1 - <i>Environmental Monitoring</i>	<p>This is set out in section 2.1 of the NMA.</p> <p>Details of noise assessment results are detailed for each location listed in condition L4.1 except for R1. TGO noted that R1 is not included in the monitoring because TGO own the property. However, because R1 is still listed in the EPL, monitoring must be undertaken. As TGO owns the property, it is recommended Appx IE that TGO seek a licence amendment from the EPA, if they want to stop monitoring at that location.</p>	TGO to include R1 in the next round of monitoring as per the licence condition.	-	Complete