Independent Environmental Audit of Project Approval Conditions 10_0054 MOD 4 EP&A Act

Dargues Gold Mine, Majors Creek NSW

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Document Information

Independent Environmental Audit of Project Approval Conditions 10_0054 MOD 4 EP&A Act,
Dargues Gold Mine, Majors Creek NSW

Prepared by:
Senversa Pty Ltd
ABN: 89 132 231 380
Level 24, 1 Market Street, Sydney NSW 3000
tel: + 61 3 9606 0070; fax: + 61 3 9606 0074
www.senversa.com.au

Prepared for:
Big Island Mining Pty Ltd
920 Majors Creek Road
Majors Creek NSW 2622

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Project Manager: Michelle Agnew

Project Director: Jason Clay

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Senversa acknowledges the traditional custodians of the land on which this work was created and pay our respect to Elders past and present.

Executive Summary

Project Approval 10_0054 under Section 75J of the *Environmental Planning and Assessment Act 1979* for the Dargues Reef Gold Project (now the Dargues Gold Project) was issued on 7 February 2012 by the Land and Environment Court to Big Island Mining Pty Ltd (BIM) for the development and operation of an underground gold mine in Majors Creek, NSW. Since the approval of the mine, a number of modifications have been made to reduce environmental impact and improve operations. The NSW Planning Assessment Commission approved Modification 4 in May 2019 with revised conditions of approval issued.

Site works commenced on 11 February 2013, suspended by BIM in December 2013 when the mine was placed under care and maintenance. Recommencement of construction of the mine occurred on 27 March 2017 and mine production commenced in late May 2020.

Condition 5 of Schedule 5 of the Project Approval requires an Independent Environmental Audit, originally every two, and now, every three years from the commencement of construction. The objectives of the audit are to undertake the works to assess compliance with Project Approval, Environment Protection Licence, Mining Lease and EPBC[1] approval conditions since the completion of the previous Independent Environmental Audit, from 30 September 2019 to 30 June 2021, in accordance with the following relevant requirements and Australian Standards:

- DPIE[2] Independent Audit – Post approval requirements, May 2020.
- AS/NZS ISO[3] 19011:2014 Guidelines for auditing management systems.

The audit scope included assessment of the adequacy of environmental management strategies and plans. Consultation on the requirements of the audit was undertaken with stakeholder agencies and mine site personnel were interviewed during the site inspection conducted on 22 and 13 February 2022.

The audit identified 11 non-compliances with the conditions of the approvals and licence. Recommendations have been made to rectify these and improve the overall environmental performance of the project. These non-compliances are largely minor. In addition, recommendations for improvement related to 13 conditions have been provided where the operational intent was compliant.

[1] *Environment Protection and Biodiversity Conservation Act 1999.*
[2] NSW Department of Planning, Industry and Environment.
[3] Australian Standard/New Zealand Standard International Standard Organisation.

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Appendices

List of Acronyms

Acronym	Definition
AHMP	Aboriginal Heritage Management Plan
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
AQGGMP	Air Quality and Greenhouse Gas Management Plan
ASLP	Australia Standard Leaching Procedure
BioMP	Biodiversity Management Plan
BIM	Big Island Mining
BMP	Blast Management Plan
CCC	Community Consultative Committee
CEMP	Construction Environmental Management Plan
DPE	Department of Planning and Environment (NSW)
DPIE	Department of Planning, Industry and Environment (NSW)
DPI	Department of Planning and Infrastructure (NSW)
DRG	Division of Resources and Geoscience
DSEWPC	Department of Sustainability, Environment, Water, Population and Communities (NSW)
EA	Environmental Assessment
EC	Electrical Conductivity
EMS	Environmental Management System
EPA	Environment Protection Authority (NSW)
EP&A Act	*Environmental Planning & Assessment Act (1997)*
EPBC Act	*Environment Protection and Biodiversity Conservation Act (1999)*
EPL	Environment Protection Licence
g/m^2/month	Grams per Meter Cubed per Month

Acronym	Definition
IBC	Intermediate Bulk Container
LEC	Land and Environment Court (NSW)
ML	Mining Lease
ML/yr	Mega Litres per Year
m	Metres
mm	Millimetres
MOP	Mining Operations Plan
NC	Non-Compliance
NMP	Noise Management Plan
NSW	New South Wales
OEH	Office of Environment and Heritage (NSW)
PAC	Planning Assessment Commission
PRIMP	Pollution Incident Response Management Plan
PM_{10}	Particulate Matter < 10 µm
RMP	Rehabilitation Management Plan
ROM	Run-of-Mine
SB02	Sediment Basin 2
SWP1	Storm Water Pond 1
TARP	Trigger Action Response Plan
TMP	Traffic Management Plan
TSF	Tailings Storage Facility
WMP	Water Management Plan
WasteMP	Waste Management Plan

1.0 Introduction and Objectives

1.1 Background

Senversa Pty Ltd was engaged by Aurelia Metals Ltd (Aurelia), to conduct an Independent Environmental Audit (audit) of its Dargues Gold Mine. Dargues Gold Mine is located in New South Wales (NSW), north of the village of Majors Creek and approximately 60 kilometres southeast of Canberra.

The Dargues Gold Project, comprising the development and operation of an underground gold mine, was assessed under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) with further assessment undertaken by the NSW Department of Planning and Infrastructure's (DPI) Planning Assessment Commission (PAC) following the repeal of Part 3A. The PAC approved the construction and operation of the mine on 2 September 2011. Following the settling of two appeals against the mine, the Land and Environment Court (LEC) granted final approval of the mine under Section 75J of the EP&A Act on 7 February 2012 to Big Island Mining Pty Ltd (BIM), a wholly owned subsidiary of Aurelia. Conditions under Project Approval 10_0054 and commitments were set based on environmental assessment of the project.

Since the approval of the mine, a number of modifications have been made to reduce environmental impact and improve operations. The following approvals and licences relate to the audit:

- DPI Project Approval Number 10_0054, dated 8 February 2012 (modified 23 May 2019) (10_0054-MOD04).
- NSW Environment Protection Authority (EPA) Environment Protection Licence (EPL) Number 20095, dated 18 May 2012 (Licence Variation Notice Number 1611449, dated 6 December 2021)[4].
- Department of Planning and Environment (DPE) – Division of Resources and Geoscience (DRG) Mining Lease (ML) Number 1675, dated 1 February 2012 (renewed 8 December 2017).
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) EPBC[5] Approval number 2010/5770, dated 27 September 2011.
- DSEWPC EPBC Approval number 2015/7539, dated 17 February 2017.

Site establishment activities commenced on 11 February 2013 and included construction of the site access road and intersection from Majors Creek Road; development of the box cut, portal and decline for the underground mine; development of a run-of-mine (ROM) pad, temporary and waste rock emplacement; and establishment of surface water and groundwater harvesting infrastructure. In December 2013, development was suspended, and the mine was placed under care and maintenance. Recommencement of construction of the mine occurred on 27 March 2017, and mine production commenced in late May 2020.

The recommencement of construction triggered Schedule 5 Condition 8 of the Project Approval Conditions which require an independent audit of the project as follows:

'8. Within 3 months of re-commencing construction on the site, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:

a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;

[4] The EPL to apply under the audit period is Licence Variation Notice Number: 1591280, dated 12 March 2020.
[5] *Environment Protection and Biodiversity Conservation Act 1999.*

b) include consultation with the relevant agencies;

c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);

d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and

e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.

1.2 Audit Objectives

The objectives of the works were to undertake an Independent Environmental Audit under Schedule 5 Condition 8 of the Project Approval Conditions – Modification 4 to assess the environmental performance of the project including assessment of compliance with the requirements under the Project Approval, EPL, ML and EPBC Approvals, and review the adequacy of management strategies and plans.

1.3 Audit Scope

The land subject to the audit is identified in Appendix 1 of the Project Approval.

The scope of work for the Independent Environmental Audit comprised:

- Department of Planning Industry and Environment (DPIE) approval of the audit team.
- Consultation with relevant stakeholder agencies.
- Desktop review of available information relating to the Project Approval conditions, EPL, SML, EPBC Approvals, and associated environmental management plans and monitoring programs.
- Site inspection and interviews with staff.
- Preparation of this Independent Environmental Audit report detailing the findings of the audit.

1.4 Guidelines

The Independent Environmental Audit was undertaken in accordance with the following auditing standards and guidance:

- AS/NZS ISO[6] 19011 (2014), Guidelines for Auditing Management Systems.
- DPIE (2020), Independent Audit Post-Approval Requirements, May 2020.

[6] Australian Standard/New Zealand Standard International Standard Organisation.

1.5 Audit Period

The following previous Independent Environmental Audits have been undertaken:

- Trevor Brown & Associates (2014), Independent Environmental Audit Dargues Gold Mine, March 2014.
- Senversa (2016), Independent Compliance Audit of Approval Conditions EPBC 2010/5770, Dargues Gold Mine, Majors Creek prepared for Big Island Mining Pty Ltd (Ref: S12334_004_RPT_Rev1) 19 December 2016.
- Senversa (2017), Independent Environmental Audit of Project Approval Conditions 10_0054 MOD 3 EP&A Act, Dargues Gold Mine, Majors Creek prepared for Big Island Mining Pty Ltd (Ref: S12334_005_RPT_final) 27 June 2017.
- Senversa (2020), Independent Environmental Audit of Project Approval 10_0054 MOD 4 EP&A Act, Dargues Gold Mine, Majors Creek prepared for Big Island Mining Pty Ltd (Ref: S17380_001_RPT_Rev0) 4 February 2020.

The findings of these audits have not been included in this Independent Environmental Audit report.

This Independent Environmental Audit addresses development activities undertaken since the last Independent Environmental Audit, which was completed up to 30 September 2019, and covers up to 30 June 2021. The audit timeframe has been adjusted to coincide with the Annual Review reporting periods completed by Aurelia.

2.0 Methodology

2.1 Audit Team

The audit team comprising of Mr Jason Clay and Dr Andrei Woinarski of Senversa Pty Ltd, and Mr Mark Bridges of Bridges Acoustics, who were approved by the Acting Director of the DPIE on 20 September 2021 as possessing the required skills and experience to undertake the Independent Environmental Audit. The audit team was assisted by Ms Michelle Agnew of Senversa. DPIE's response, details of the audit team qualifications and experience, and Declarations of Independence are included in **Appendix A.**

2.2 Audit Methodology

The audit involved consultation with stakeholder agencies, review of project documentation and records and the conduct of a site inspection by members of the audit team on 21 and 22 February 2022. Management and operations personnel were interviewed as part of the audit. The findings of the audit have been documented in this report and the Independent Audit Report Declaration is provided in **Appendix A**.

2.2.1 Stakeholder Consultation

The stakeholder agencies consulted, and their responses, are presented in **Table 2-1**.

Table 2-1: Stakeholder Agency Consultation

Stakeholder Agency	Response
Department of Planning, Industry and Environment	See response in **Appendix B.**
NSW Resources Regulator	See response in **Appendix B.**
NSW EPA	No response.
Queanbeyan-Palerang Regional Council	See response in **Appendix B.**
Dargues Gold Mine Community Consultative Committee (CCC)	See response in **Appendix B.**

The elements of the approvals and licences requested to be addressed by stakeholders have been covered in the audit.

2.2.2 Project Documentation

Project documentation and records reviewed as part of the audit are listed in the audit review tables in **Tables 1 to 6**. Adequacy of documentation was assessed by review against the Project Approval conditions and comparison with site records, where appropriate.

2.2.3 Site Personnel Interviews

Site personnel interviewed are presented in **Table 2-2**.

Table 2-2: Site Personnel Interviews

Position	Name	Audit Elements
Sustainability Manager	Chase Dingle	Environmental Management
Site Environmental Lead	Enzo Guarino	Environmental Management

2.2.4 Site Inspection

A site inspection was conducted by Jason Clay and Michelle Agnew on 21 and 22 February 2022. All required areas were accessible for the inspection.

2.2.5 Compliance Ratings

The compliance ratings used to record the level of compliance of the Dargues Gold Project with the approval and licence conditions at the time of the audit are summarised in **Table 2-3**.

Table 2-3: Compliance Status Descriptors

Rating	Compliance Status
Compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit.
Non-compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent of one or more specific elements of the regulatory approval has not been complied with within the scope of the audit.
Not triggered	A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection, therefore a determination of compliance could not be made.

3.0 Previous Audit Findings

The previous Independent Environmental Audit (Senversa, 2020) conducted for the period 30 March 2017 to 20 September 2019 concluded that the development was generally in accordance with the project description and environmental outcomes predicted in the Environmental Assessment and demonstrated compliance with the Project Approval, EPL and ML conditions.

Recommendations made by Senversa (2020) are presented in **Table 3-1**.

Table 3-1: Recommendations of 2019 Independent Environmental Audit (Senversa, 2020)

Condition	Comment/Audit Findings	Compliance Status	2021 Status
Schedule 2 Condition 11 Planning Agreement	**Recommendation** Update the agreement date. Update the agreement figures in relation to changes in the consumer price index.	Non-Compliant	**Complete** The Planning Agreement with Council was updated with a revised agreement date and payment amounts.
Schedule 3 Condition 5 Noise Management Plan	**Recommendation** The next revision of the Noise Management Plan (NMP) should state the specific operating hours in Section 7.2 Operating Hours and Conditions rather than refer to Project Approval Condition 3(3).	Compliant	**Complete** The NMP has been updated with this detail.
Schedule 3 Condition 11 Blast Management Plan	**Recommendation** Section 6.3 of the Blast Management Plan (BMP) should be updated to include Facebook and website details for notification to the public of up-to-date information including blasting schedule.	Compliant	**Complete** The BMP has been updated with this detail.
Schedule 3 Condition 12 Odour	**Recommendation** Once use of potassium amyl xanthate has commenced, emission of offensive odours is to be closely monitored.	Compliant	**Ongoing**
Schedule 3 Condition 20 Water Supply	**Recommendation** Although there is currently sufficient water to service operations, BIM should increase its raw water capacity through construction of further harvestable right dams in preparation for the compensatory baseflow offset requirements for Majors Creek. Alternatively update the Water Management Plan (WMP) to reflect that as water is predominantly sourced from the mine, which is not impacting water levels in Majors Creek, the remainder of the harvestable rights dams are not required but should be kept as a contingency rather than a requirement.	Compliant	**Complete** Two harvestable rights dams were constructed during the audit period and the groundwater model was updated[7] to review the project water supply.

[7] AGE (2021) Dargues Reef Gold Mine Groundwater Model Update, July 2021.

Condition	Comment/Audit Findings	Compliance Status	2021 Status
Schedule 3 Condition 22 **Baseflow Offsets**	The water management plan describes a trigger level of 3.2 L/s flow in Majors Creek. Current monitoring results indicate BIM is very close to this threshold and in September 2019 dropped below this trigger value. However, the proponent suggests that monitoring bore groundwater levels in the vicinity of the Creek indicate that drawdown is not occurring. This would indicate the flow rate is reduced potentially as a result of climate conditions. We have considered the water balance and current groundwater level data and conclude that it is plausible that the baseflow levels are correlated with climate conditions.	Compliant	**Complete** The conclusion of the previous audit has been supported by the updated Groundwater Model completed by AGE (Sep 2021).
Schedule 3 Condition 24 **Tailings Storage Facility**	**Recommendation** Confirm the construction report states that the design has been built appropriately prior to tailings storage facility (TSF) becoming operational.		**Complete** TSF construction report completed prior to operation.
Schedule 3 Condition 27 **Water Management Plan**	**Recommendation** Update the WMP and site water balance to include discussion and monitoring of off-site water discharges.	Compliant	**Complete** The WMP has been updated with this detail.
Schedule 3 Condition 33 **Biodiversity Offsets**	**Recommendation:** Records of spraying schedule should be kept.	Compliant	**Not complete**
Schedule 5 Condition 1 **Environmental Management Strategy**	**Recommendation** The Environmental Management Strategy (EMS) should be updated following the approval of the revised WMP.	Compliant	**Not Complete**
Schedule 5 Condition 10 **Access to Information**	**Recommendation** Provide baseflow data on the website.	Non-Compliant	**Complete** Baseflow data was available on the Aurelia website at the time of this audit.
Appendix 5 Commitment 5.2 **Ecology**	**Recommendation** Add a section discussing fertiliser to the Grazing Management Plan (30/01/2019).	Compliant	**Not Complete**

Condition	Comment/Audit Findings	Compliance Status	2021 Status
Appendix 5 Commitment 6.4d and 6.4e **Groundwater**	**Recommendation** Update the groundwater model and make pump test contingent, with the model to define when the pump test should be necessary. Review of the groundwater model every two years.	Non-compliant	**Complete** AGE (2021) Dargues Reef Gold Mine Groundwater Model Update was completed addressing this non-compliance. The model recommended the incorporation of further hydraulic conductivity data in future model iterations, informed by slug and packer testing. The model should be reviewed every two years.
Appendix 5 Commitment 15.7 **Environmental Monitoring**	This condition is in contradiction to the environmental monitoring described in the EPL. Laboratory analysis of groundwater is currently undertaken quarterly, as per condition M2.3 of the EPL. **Recommendation** Consult with the relevant authorities to revise this commitment.	Compliant	**Not complete**

4.0 Environmental Management

Various conditions under the Project Approval 10_0054 and EPL 20095 specify the requirements for environmental management plans for the project. A review and assessment of any revisions to the various management plans since the last Independent Environmental Audit and overall adequacy with consideration of site conditions has been undertaken and is presented in this section.

Schedule 5 Condition 1 of Project Approval 10_0054 requires the preparation and implementation of an Environmental Management Strategy (EMS) for the project. The EMS provides the strategic framework for environmental management of the project and includes various management plans as required by the Project Approval.

The EMS was submitted to DPI and approved on 21 September 2012, however has since been revised. Revision 5 of the EMS, dated 22 August 2019, requires Department/Secretary approval. A review of the overall adequacy of the EMS management plans is summarised in **Table 4-1.**

Table 4-1: Environmental Management Plans Summary

Management Plan	Project Approval conditions	Rev last issued to DPE	Rev last approved by DPE	Audit findings
Aboriginal Heritage Management Plan (AHMP) **(Rev 6, 22/8/19)**	Schedule 3 Condition 37	Rev 4, 16/1/2017	Rev 4, 16/1/2017	Schedule 3 Condition 37 requires that the AHMP be approved by the Secretary prior to construction.
Air Quality & Greenhouse Gas Management Plan (AQGGMP) **(Rev 5, 22/08/2019)**	Schedule 3 Conditions 12 to 17	Rev 2, 30/01/2013	Rev 2, 30/01/2013	Schedule 3 Condition 17 requires that the AQGGMP be approved by the Secretary prior to construction.
Biodiversity Management Plan (BioMP) **(Rev 5, 17/2/17)**	Schedule 3 Conditions 32 to 35	Rev 4, 17/2/2017	Rev 4, 17/2/2017	Inclusive of: Grazing Management Plan Weed Management Plan Wombat Management Plan Schedule 3 Condition 35 requires that the BioMP be approved by the Secretary prior to construction.
Blast Management Plan (BMP) **(Rev 6, 22/8/2019)**	Schedule 3 Conditions 6 to 11	Rev 5, 16/01/2017	Rev 5, 16/01/2017	Schedule 3 Condition 17 requires that the AQGGMP be approved by the Secretary prior to blasting on-site.
Bushfire Management Plan **(Rev 5, 22/8/2019)**	Schedule 3 Conditions 49 and 50	Rev 4, 16/1/2017	Rev 4, 16/1/2017	Schedule 3 Condition 50 requires the Bushfire Management Plan be approved by the Secretary prior to construction.

Management Plan	Project Approval conditions	Rev last issued to DPE	Rev last approved by DPE	Audit findings
Construction and Environment Management Plan (CEMP) **(11/12/2018)**	-	-	-	Condition 2 of the EPBC 2015 7539 Approval requires the CEMP be approved by the Minister prior to construction. The CEMP will require revision prior to future construction works.
Second Mining Operations Plan (MOP) **(16/3/17)**	Schedule 3 Conditions 51 to 53	16/3/2017	16/3/2017	The MOP incorporates the Rehabilitation Management Plan.
Noise Management Plan (NMP) **(Rev 7, 11/6/2020)**	Schedule 3 Conditions 1 to 5	Rev 5, 24/7/2017	Rev 5, 24/7/2017	Schedule 3 Condition 5 requires that the NMP be approved by the Secretary prior to construction.
Pollution Incident Response Management Plan (PRIMP) **(Rev 9, 30/6/2021)**	-	-	-	-
Traffic Management Plan (TMP) **(Rev 5, 22/08/2019)**	Schedule 3 Conditions 38 to 43	Rev 4, 7/11/2016	Rev 4, 7/11/2016	Schedule 3 Condition 43 requires that the TMP be approved by the Secretary prior to construction.
Waste Management Plan (WasteMP) **(Rev 5, 22/8/19)**	Schedule 3 Conditions 47A to 48	Rev 4, 23/1/2017	Rev 4, 23/1/2017	-
Water Management Plan (WMP) **(Rev 9, 23/4/2020)**	Schedule 3 Conditions 19 to 31	Rev 9, 23/4/2020	Rev 9, 23/4/2020	-

5.0 Environmental Performance

5.1 Complaints

A complaints register is maintained on the Aurelia website, and complaints were reported in the Annual Review reports. Aurelia demonstrated use of an internal database system ('INX') for storing and tracking complaints. Site personnel were also interviewed regarding actions taken for complaints. Recommendations regarding the complaints register are detailed in **Section 6.0**.

During the 2019-2020 Annual Review period, 289 complaints were received:

- 280 Noise complaints:
- In response to the noise complaints, the EPA and DPIE undertook noise monitoring at several locations independent of the mine. Aurelia reported that this monitoring did not indicate any non-compliances with the noise assessment criteria included in the EPL and the Project Approval, consistent with routine monitoring results. Noise levels were also lower than those predicted in the Environmental Assessment (EA).
- 4 Visual amenity complaints.
- 4 Traffic complaints.
- 1 blast/vibration complaint.

During the 2020-2021 Annual Review period, 402 complaints were received:

- 394 Noise complaints:
- Aurelia has committed to undertaking a Noise Investigation Report. The EPA and DPIE have been consulted on the project. The works are expected to be completed in quarter 2 financial year 2022.
- 7 Visual amenity complaints.
- 1 Traffic complaint.

5.2 Incidents

A heavy vehicle movement incident occurred at 8:20am on 29 June 2020 under the direction of Hill & Co. delivering diesel, in non-compliance with Project Approval Schedule 3 Condition 41. The incident was reported to the EPA, Resources Regulator and DPIE on 11 May 2021 following an environmental compliance review associated with company acquisition. A notification letter was provided to these agencies on 12 May 2021. In response to the incident, the site Drivers Code of Conduct was reiterated to site and contract drivers.

An area initially established for soil stockpiling by Diversified Minerals Pty Ltd in late 2018/early 2019 as part of the site establishment works was used as a laydown area for construction material and equipment following relocation of soil material to the Waste Rock Emplacement area. This area has continued to be used as a laydown yard and is potentially not in accordance with the Project Approval. Aurelia notified the DPIE by letter on 22 April 2021 and have advised the audit team that an application to modify the Project Approval will be submitted to include this laydown area or incorporate the area into a future dam development.

There were no notifiable surface water incidents during the audit period. Two discharge events were reported, however were assessed to result in negligible environmental harm. The first event related to discharge of sediment-laden water from the TSF construction area to Spring Creek on 10 March 2020 due to disconnection of a Plasson compression fitting on the TSF water diversion pumping system. A

notification letter was provided to the EPA, DPIE and Resources Regulator dated 17 March 2020 which noted that these stakeholders were also notified immediately of the event.

The second water discharge event occurred on 23 to 25 March 2021 from Storm Water Pond 1 (SWP1) and Sediment Basin 2 (SB02) due to a significant rainfall event. The event was notified by phone to the EPA within 7 days and an email detailing the incident was sent to the EPA on 15 May 2021. Aurelia's assessment of downstream water quality following the events indicated negligible environmental impact, reported in the Annual Review.

There were no notifiable air quality incidents during the audit period. Exceedances of the dust assessment criterion of 4 grams per meter cubed per month (g/m^2/month) were recorded throughout the audit period, however remained on average below the criteria. In four instances the 2 g/m^2/month increase limit was exceeded, assessed by Aurelia to be the result of regional bushfires and not site generated.

5.3 Notices

DPE issued a $15,000 Penalty Notice to Aurelia in February 2020 for the discharge of sediment-laden water from the TSF to Spring Creek on 17 September 2019. This incident was reported in the previous audit.

DPIE issued a $15,000 Penalty Notice to Aurelia in July 2020 for utilisation of water from the Bungendore Sewage Treatment Plant to support operations following significant delays to key construction activities. Aurelia advised that an application to modify the Project Approval will be submitted to include this potential water source should the project need arise in the future. Prior to this, community consultation and a water security options analysis will occur to investigate potential water sourcing options.

5.4 Rehabilitation

During the audit period, progressive rehabilitation was completed on three previously disturbed sites (historic drill pads). Aurelia advised that due to the current mining footprint, further rehabilitation was not possible. Aurelia intends to complete a conceptual rehabilitation plan to address legacy shafts and exploration sites. Additionally, Aurelia has commenced revision of the MOP and anticipates that a revision, including the Rehabilitation Management Plan (RMP), will be submitted to the relevant agencies in June 2022, as reported in the latest Annual Review.

During the site inspection, the audit team assessed the current extent of operations and considered this rehabilitation approach appropriate.

5.5 Performance against Environmental Assessment Predictions

An Environmental Assessment (EA) (R.W. Corkery, 2010[8]) was completed in support of project approval under Part 3A of the *Environmental Planning and Assessment Act 1979.* Assessment of the compliance between actual and predicted impacts documented in the EA was undertaken in each of the Annual Reviews.

Dust levels consistently exceeded the EA prediction of 2.5 g/m^2/month during the audit period, however remained on average below the monthly prediction. Aurelia concluded that the elevated concentrations were the result of regional events including bushfire over this period and unlikely to be significantly site-derived.

[8] R.W. Corkery & Co. (2010), *Environmental Assessment, Dargues Reef Gold Project*, Rev 752/04 September 2010.

A number of groundwater Trigger Level exceedances were recorded for pH and electrical conductivity (EC) during the audit period. Copper exceeded Trigger Levels in all wells, and arsenic in TSFMB03A. A number of parameters were reported above the Trigger Levels in TSF monitoring bores 1B, 3A and 4B. Readings outside trigger levels were investigated in accordance with the Trigger Action Response Plan (TARP). All monitoring results were comparative to historical sampling data or directly related to seasonal variation, flow conditions or sampling error. No significant quality changes as a result of the mining operations were detected.

A number of surface water Trigger Level exceedances were reported for total soluble salts, pH and EC during the audit period. Elevated levels were investigated in accordance with the TARP and found to remain consistent with historical monitoring and elevated levels were primarily a result of seasonal or localised natural influences following a period of above average rainfall. All readings returned to baseline levels and no environmental harm was observed. No trend or significant water quality changes as a result of the mining operations were detected.

Loss of baseflow to Majors Creek and Spring Creek was reassessed by AGE (2021) as part of the groundwater model update. Overall, the updated model simulated lower groundwater inflow rates and a reduced drawdown footprint compared to previous model predictions. Baseflow impact predictions were modelled to peak at 5 mega litres per year (ML/yr) (cumulatively for Spring Creek, Majors Creek, North Creek, and Shingle Hut Creek), compared to the EA prediction of 66.2 ML/yr. Aurelia advised that works to remove the requirement for a compensatory flow program to be discharged to Majors Creek will be undertaken during the next reporting period, as the review of the groundwater impact model has shown the project is having a negligible impact on stream flows in Majors Creek.

6.0 Audit Findings

Compliance of the project has been assessed against the Project Approval, EPL, ML and EPBC conditions, presented in **Tables 1 to 6.** The findings of the independent noise expert engaged by Senversa, Mark Bridges, are included in **Appendix D**, and have been incorporated into **Tables 1-6.**

A summary of the main findings and recommendations is presented in **Table 6-1.**

Since the draft (Rev0) version of this report, additional documents were provided to the auditor to support amendment of Environment Protection Licence condition M5.2 to 'compliant'. These included demonstration of the internal complaint database system ('INX'), an example complaint report, and an example complaint response email. These additional documents were considered by the auditor to sufficiently demonstrate compliance with this condition and the compliance status was updated.

Table 6-1: Summary of Compliance with Approval and Licence Conditions

Condition	Comment/Audit Finding/Recommendation	Compliance Status
Schedule 2 Condition 2 **Terms of Approval** **Schedule 3 Condition 20** **Water Supply**	DPIE issued a $15,000 Penalty Notice to Aurelia in July 2020 for utilisation of water from the Bungendore Sewage Treatment Plant to support operations following significant delays to key construction activities. Aurelia have advised an application to modify the Project Approval will be submitted to include this potential water source should the project need arise in the future. Prior to this, community consultation and a water security options analysis will occur to investigate potential water sourcing options. **Recommendation**: Submit an application to amend the Project Approval to include contingency water sources.	Non-Compliant (NC2)
Schedule 3 Condition 1 **Noise Criteria**	Noise compliance survey not completed in December 2019 due to bushfires (2019-2020 Annual Review, Section 6.2 p 15). There is no reason to suspect a non-compliance with noise criteria, therefore this is considered an administrative non-compliance only. All noise monitoring results complied with the criteria.	Non-Compliant (NC1)
Schedule 3 Condition 2 **Traffic Noise Impact Assessment Criteria**	Road traffic noise measurements indicated measured levels (from all noise sources) above the criteria in the last 6 quarters of the period. The consultant's reports noted other sources were primary contributors and therefore project-related traffic noise complied with the criteria, although no evidence is provided to justify this assertion. **Recommendation**: Modify the traffic noise survey procedure (possibly including the monitoring location) to reliably obtain representative project-related traffic noise measurement data.	Compliant

Condition	Comment/Audit Finding/Recommendation	Compliance Status
Schedule 3 Condition 5 **Noise Management Plan**	**Recommendations:** 1. Amend Figure 1 in the NMP to include symbols at all noise monitoring locations (missing symbols at R20, R27, R29). 2. Amend Table 8.1 to include the unattended traffic monitoring location. 3. Amend Section 8.2.3 to include tonal and low frequency noise assessments. 4. Either remove requirements in Section 8.2.3 to report operator's name, temperature, humidity, cloud cover, or require consultants to include these details in the monitoring reports. 5. Either remove references to plant and equipment operating logs and mining locations for inclusion in the monitoring reports, or require consultants reports to include these data.	Compliant
Schedule 3 Condition 14 **Air Quality Criteria**	Individual month dust exceedances were reported throughout the audit period, however remained on average below the monthly assessment criteria. Aurelia concluded that the elevated concentrations were the result of regional events including bushfire over this period and unlikely to be significantly site derived. **Recommendation**: Include detail in future Annual Review reports to justify the conclusion that elevated results are due to regional events and not site-derived or refer to monitoring reports where this is detailed.	Compliant
Schedule 3 Condition 22 **Baseflow Offsets**	**Recommendation**: Compliance with the Majors Creek flow trigger level should be reported in Annual Reviews.	Compliant
Schedule 3 Condition 26 **Water Management Plan**	**Recommendation**: Update the WMP with the findings of the updated groundwater model (AGE 2021). For example, Section 7.9 includes trigger levels for baseflow in Majors Creek, but not Spring Creek. This is inconsistent with the groundwater model conclusions which identified baseflow impact predominantly localised to Spring Creek.	Compliant
Schedule 3 Condition 28A **Water Management Plan** **EPBC Approval 2015 7539** **2. Project Area**	**Recommendation**: Update the CEMP to include staged construction of the TSF prior to commencement of TSF Stage 3 works.	Compliant
Schedule 3 Condition 35 **Biodiversity Management Plan**	**Recommendation**: Review phreatophytic vegetation monitoring data to develop trigger values and mitigation measures in the next version of the BioMP. Append the Wombat, Weed and Grazing Management Plans to the BioMP.	Compliant

Condition	Comment/Audit Finding/Recommendation	Compliance Status
Schedule 3 Condition 41 **Transport Operating Conditions**	Operations generally complied with this condition, with the exception of a truck which was reported to have passed through the site gate at 8:20am on 29/6/2020. The incident was reported to the EPA, Resources Regulator and DPIE on 11/5/2021 following an environmental compliance review associated with company acquisition. A notification letter was provided to these agencies on 12/5/2021. The site Drivers Code of Conduct was reiterated to site and contract drivers. **Recommendation**: Append the Drivers Code of Conduct to the next revision of the TMP and provide to all transport contractors.	Non-Compliant (NC3)
Schedule 3 Condition 47A **Waste Performance Measures – Paste Fill** **Statement of Commitments** **6.13: Paste Fill**	There is currently insufficient data to assess if paste fill used to fill mine voids complied with the general solid waste criteria. **Recommendation**: The paste fill monitoring program outlined in the approved WasteMP must be adhered to and reported in Annual Review reports. The next version of the WasteMP should consider reassessing the method of paste fill testing to also include Australian Standard Leaching Procedure (ASLP) analysis. Consider also assessing leachate against the Australian and New Zealand Guidelines (ANZG)[9] criteria.	Non-Compliant (NC4)
Schedule 3 Condition 47B **Waste Paste Fill Trials and Testing**	Trial results reported in the WasteMP Rev 5 indicate the paste fill meets the performance measures in Condition 47A. The WasteMP outlines a program for ongoing testing. **Recommendation**: Include paste fill ongoing testing results detailed in Section 5.2.3 of the WasteMP in Annual Review reports. Include the paste fill general monitoring results detailed in Section 5.4 of the WasteMP in Annual Review reports. Results of the paste fill trial are included in the WasteMP. Details of the assessment (e.g., Trial Report including calculation of the 95% upper confidence level) should be appended to the next revision of the WasteMP. Compare the testing results against those presented in Dargues Reef Paste Fill Test Work and Design (Revell, 2010) in the next version of the WasteMP.	Compliant
Schedule 3 Condition 47 **Waste Operating Conditions** **Statement of Commitments** **6.5: Minimisation of Groundwater Contamination**	During the site inspection, 200 L drums and intermediate bulk containers (IBCs) were observed adjacent to the mechanical workshop without appropriate bunding. Construction of a concrete bund was noted next to the workshop and Aurelia advised this will be utilised for raw material and waste storage and handling. **Recommendation**: All chemicals and wastes should be stored within a bunded and ideally roofed area; waste should be disposed of appropriately.	Non-Compliant (NC5)
Schedule 5 Condition 4 **Revision of Strategies, Plans and Programs** **EPBC 2015 7539** **8. Project Area**	**Recommendation**: Clarify document control sections for each management plan to differentiate between document reviews, revisions and submissions to stakeholders. A number of management plans are Non-Compliant for approval from the Department/Secretary following the latest revisions.	Non-Compliant (NC6)

[9] ANZG 2018, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.*

Condition	Comment/Audit Finding/Recommendation	Compliance Status
Schedule 5 Condition 10 **Access to Information** **EPBC 2015 7539** **8. Project Area**	**Recommendation**: Provide the following documents on the website: EPBC approvals. Current Confirmation of Cover. Ecology monitoring data. Incident investigation reports. Environmental Management Strategy. Construction Environmental Management Plan. Cardno (2011) Aquatic Ecological Assessment.	Non-Compliant (NC7)
Statement of Commitments **2: Area of Activities**	Soil stockpile area used as a laydown area for construction material and equipment following relocation of soil material to the Waste Rock Emplacement area. Aurelia notified the DPIE by letter on 22 April 2021. Project Approval modification application to be submitted. **Recommendation**: Apply to modify the Project Approval.	Non-Compliant (NC8)
Statement of Commitments **13.1 to 13.5: Maintenance of Soil Value**	Aurelia advised that a site disturbance permit is required for all soil works on site, which limits soil stripping to 120 millimetres (mm). This is less than specified in Table 2.2 of the EA and therefore considered in compliance. **Recommendation**: Amend the Site Disturbance Permit to align with the soil stripping advice in the EA Table 2.2 i.e., 300 mm, and to include the additional requirements in this commitment.	Compliant
Statement of Commitments **15.7: Ongoing Monitoring** **Environment Protection Licence: M2.3**	This condition is in contradiction to the environmental monitoring described in the EPL. Laboratory analysis of groundwater was undertaken quarterly, as per condition M2.3 of the EPL. **Recommendation:** Consult with the relevant authorities to revise this commitment.	Compliant
Statement of Commitments **15.12A: Ongoing Monitoring**	Aurelia advised that real-time pH and EC monitors have not yet been installed as part of the Surface Water Monitoring Program. However, quotes have been received and works have been delayed by access constraints and personnel shortages. **Recommendation**: Clarify this commitment in the WMP, including listing the locations to be monitored. Monitoring results to be included on the website in the Annual Review reports.	Non-Compliant (NC9)
Environment Protection Licence: L2.3-4	**Recommendation**: Noise monitoring reports should include parameters measured at 10 metres (m) above the ground as reported by the on-site weather station, not as observed by the operator at perhaps 1.5 m above the ground.	Non-Compliant (NC10)
Environment Protection Licence: L2.5	**Recommendation:** Noise monitoring reports should justify the selected monitoring locations.	Compliant

Condition	Comment/Audit Finding/Recommendation	Compliance Status
Environment Protection Licence: L2.6	**Recommendation**: Noise monitoring reports should include modifying factors (particularly tonal and low frequency noise) as required by the NSW Industrial Noise Policy (and its successor the Noise Policy for Industry)	Non-Compliant (NC11)
Environment Protection Licence: M5.2	**Recommendation:** In the complaints control system, include the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant. If no action was taken by the licensee, the reasons why no action was taken.	Compliant
Environment Protection Licence: R1.7	**Recommendation**: Ensure completed Annual Return Forms are retained and signed.	Compliant

7.0 Conclusion

An Independent Environmental Audit has been undertaken as a result of two years passing since the last Dargues Gold Mine Independent Environmental Audit, as per the requirements of under Schedule 5 Condition 8 of the Project Approval. It is noted that the audit frequency has been extended to three years.

The audit assessed the environmental performance of the project against the conditions of the Project Approval, EPL, ML and EPBC approvals and the adequacy of management strategies and plans currently in place. Project documentation and records provided by Aurelia were reviewed and a site inspection was conducted as part of the audit on 21 and 22 February 2022.

This audit reviewed activities undertaken since the last Independent Environmental Audit was completed, from 30 September 2019 until 30 June 2021. Recommendations from the previous Independent Environmental Audit have in most cases been adequately addressed. Outstanding recommendations from the previous audit have been retained.

Consultation was undertaken with stakeholder agencies. Responses were received from the DPIE NSW Resources Regulator, Dargues Gold Mine CCC and Council. The issues requested to be addressed were consistent with requirements under the Project Approval and have been incorporated in the audit.

The EMS and associated environmental management plans that form the strategy have been reviewed and assessed as being generally adequate to address the approval and licence requirements, with some recommended revisions. All revisions of the plans will require Department/Secretary approval prior to implementation.

A review of compliance with the approval and licence conditions was undertaken in accordance with the DPIE (2020) *Independent Audit Post Approval Requirements* and identified 11 non-compliances. In addition, recommendations for improvement for 13 conditions have been provided where the intent of the condition was compliant.

8.0 Principles and Limitations of Investigation

This Independent Environmental Audit report was prepared for Aurelia in accordance with the EP&A Act. The audit report has been prepared to demonstrate that the conditions of approval under the EP&A Act for the site have been complied with or to demonstrate where this is not the case.

The scope of work performed as part of the audit process may not be appropriate to satisfy the needs of any other person. Any other person's use of, or reliance on, the audit document and report, or the findings, conclusions, recommendations or any other material presented to them, is at that person's sole risk.

The audit is based on a review of the condition of the site at the time of assessment and as described in the supporting documentation viewed as part of the audit and site inspections conducted by the audit team.

The audit and this report are limited by and rely upon the review's scope, the information provided to the audit team through the documents listed herein. The auditors' conclusions presented in this report are therefore based on the information made available and on observations made during the audit. The auditors used reasonable care to avoid reliance upon data and information that may be inaccurate.

Table 1: Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Blue type represents July 2012 modification

Red type represents October 2013 modification

Green type represents August 2016 modification

Purple type represents May 2019 modification

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
SCHEDULE 2 ADMINISTRATIVE CONDITIONS					
Obligation to Minimise Harm to the Environment					
1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the project.	-	Assessed below.	-	
Terms of Approval					
2	The Proponent shall carry out the project: (a) generally in accordance with the Environmental Assessment (EA) and statement of commitments; and (b) in accordance with the conditions of this approval. *Notes:* • The general layout of the project is shown in Appendix 2; and • The statement of commitments is reproduced in Appendix 5.	-	Section 4.5.5.3 of the EA titled "Water Sources" lists groundwater from mining operations, surface water from harvestable rights dams and groundwater from historic workings as the sources of water for mining operations. There is no reference to external water supplies to be used for operational mining purposes. Water was carted from an external source for operational mining purposes during June and July 2020 in breach of this condition. **Recommendation**: Submit an application to amend the Project Approval to include contingency water sources. Compliance with the remaining conditions of this approval are assessed below.	Non-Compliant	NC2
3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	-	Assessed below.	-	
4	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: (a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this approval; (b) any reports, reviews or audits commissioned by the Department regarding compliance with this approval; and (c) the implementation of any actions or measures contained in these documents.	-	Assessed below.	-	
Limits on Approval					
5	The Proponent may carry out mining operations on the site until 30 June 2025. *Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of both the Secretary and the Secretary Industry. Consequently, this approval will continue to apply in all other respects - other than the right to conduct mining operations - until the rehabilitation of the site and these additional undertakings have been carried out satisfactorily.*	-	Applicable upon cessation of mining activities.	Not Triggered	
6	The Proponent shall not: (a) process more than 355 000 tonnes of ore at the site in a calendar year; (b) process more than 1.6 million tonnes of ore at the site over the life of the project; (c) use any cyanide or mercury on site to process or extract gold from the project; or (d) process or smelt any ore other than that extracted from the site.	Annual Reviews. Monthly KPI sheet sighted which records processing tonnage.	The following ore processing tonnages were reported: June 2018- June 2019: 0 T June 2019-June 2020: 26,162 T June 2020-June 2021: 324,101 T It is noted that an application is planned to increase the processing capacity in MOD5.	Compliant	
6A	The Proponent shall only store ore concentrate on the site within a covered, concreted-sealed and bunded area within the processing plant.	Sighted during site inspection.	-	Compliant	
Structural Adequacy					
7	The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. *Notes:* • Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works; • Part 8 of the EP&A Regulation sets out the requirements for the certification of the project; and • Under the Dams Safety Act 1978, the Proponent will require a further approval for the project's tailings dam.	Knight Piesold (2021) Tailings Storage Facility Stage 2 Construction Report (Rev A 20/5/2021). Processing Plant Construction Certificate CC.022.19, dated 12/2/2019.	-	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

<table>
<tr><th>Approval ID</th><th>Requirement</th><th>Evidence</th><th>Comments / Audit Findings / Recommendations</th><th>Compliance Status</th><th>Unique Identification on Noncompliance</th></tr>
<tr><td colspan="2">Demolition</td><td></td><td></td><td></td><td></td></tr>
<tr><td>8</td><td>The Proponent shall ensure that demolition of all built structures is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.</td><td>-</td><td>Aurelia advised no demolition was undertaken during the audit period.</td><td>Not Triggered</td><td></td></tr>
<tr><td colspan="2">Operation of Plant and Equipment</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">9</td><td>The Proponent shall ensure that all the plant and equipment used on site, or to transport concentrate from the site, is:</td><td rowspan="3">Maintenance records and system sighted.</td><td rowspan="3">-</td><td rowspan="3">Compliant</td><td rowspan="3"></td></tr>
<tr><td>(a) maintained in a proper and efficient condition; and</td></tr>
<tr><td>(b) operated in a proper and efficient manner.</td></tr>
<tr><td colspan="2">Updating & Staging OF STRATEGIES, PLANS OR PROGRAMS</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="6">10</td><td>With the approval of the Secretary, the Proponent may submit any strategy, plan or program required by this approval on a progressive basis.</td><td rowspan="6">Personnel interviews.</td><td rowspan="6">Aurelia advised that a number of plans are currently under revision.</td><td rowspan="6">Compliant</td><td rowspan="6"></td></tr>
<tr><td>To ensure these strategies, plans or programs are updated on a regular basis, the Proponent may at any time submit revised strategies, plans or programs to the Secretary for approval.</td></tr>
<tr><td>With the agreement of the Secretary, the Proponent may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this approval.</td></tr>
<tr><td>Notes:</td></tr>
<tr><td>• While any strategy, plan or program may be submitted on a progressive basis, the Proponent must ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.</td></tr>
<tr><td>• If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.</td></tr>
<tr><td colspan="2">Planning agreement</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">11</td><td>Within 12 months of the date of this approval, unless otherwise agreed by the Secretary, the Proponent shall enter into a planning agreement with Council in accordance with Division 6 of Part 4 of the EP&A Act, that provide for contributions to Council for:</td><td rowspan="4">Deed of Amendment to Planning Agreement, dated 23/4/2021.

Annual Reviews.</td><td rowspan="4">The Amended Planning Agreement is consistent with this condition and Appendix 6 (values revised in amended agreement). Contributions to various community enhancement projects were detailed in the Annual Reviews.</td><td rowspan="4">Compliant</td><td rowspan="4"></td></tr>
<tr><td>• upgrades of Council's road infrastructure affected by the project; and</td></tr>
<tr><td>• general community enhancement to address social amenity and community infrastructure requirements arising from the project.</td></tr>
<tr><td>The contributions shall be consistent with the terms of the offer made in the Proponent's letter dated 24 September 2010, and summarised in Appendix 6.</td></tr>
<tr><td colspan="2">SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">NOISE</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Noise Criteria</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="5">1</td><td>The Proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</td><td rowspan="5">Annual Reviews.

Quarterly Noise Monitoring Reports.</td><td rowspan="5">Noise compliance survey not completed in December 2019 due to bushfires (2019-2020 Annual Review, Section 6.2 p 15). There is no reason to suspect a non-compliance with noise criteria, therefore this is considered an administrative non-compliance only. All noise monitoring results complied with the criteria.</td><td rowspan="5">Non-Compliant</td><td rowspan="5">NC1</td></tr>
<tr><td>Table 1: Noise Criteria dB(A) $L_{Aeq\ (15min)}$
<table>
<tr><th rowspan="2">Location</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr>
<tr><th>$L_{Aeq\ (15min)}$</th><th>$L_{Aeq\ (15min)}$</th><th>$L_{Aeq\ (15min)}$</th><th>$L_{A1\ (1\ min)}$</th></tr>
<tr><td>All privately owned land</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
</table></td></tr>
<tr><td>Note: Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.</td></tr>
<tr><td>However, these criteria do not apply if the Proponent has a written agreement with the relevant landowner to exceed the criteria, and the Proponent has advised the Department in writing of the terms of this agreement.</td></tr>
</table>

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Traffic Noise Impact Assessment Criteria					
2	The Proponent shall take all reasonable and feasible measures to ensure that the traffic noise generated by the project does not exceed the traffic noise impact assessment criteria in Table 2. **Table 2: Traffic noise impact assessment criteria dB(A)** ***Road*** | ***Day*** $L_{Aeq(1\ hour)}$ = 55 | ***Evening*** $L_{Aeq(1\ hour)}$ = 50 Majors Creek Road, Araluen Road, Captains Flat Road, Coghill Street and Wallace Street *Note: Traffic noise generated by the project is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy.*	Annual Reviews. Quarterly Noise Monitoring Reports.	Road traffic noise was not measured during the first two quarters of the audit period, therefore compliance could not be determined for these quarters. Road traffic noise measurements indicated measured levels (from all noise sources) above the criteria in the last 6 quarters of the period. Consultant's reports noted other sources were primary contributors and therefore project-related traffic noise complied with the criteria, although no evidence is provided to justify this assertion. **Recommendation**: Modify the traffic noise survey procedure (possibly including the monitoring location) to reliably obtain representative project-related traffic noise measurement data.	Compliant	
Operating Hours					
3	The Proponent shall comply with the operating hours in Table 3. **Table 3: Operating hours** ***Activity*** | ***Operating Hours*** Vegetation clearing, topsoil stripping, construction of the box cut and rehabilitation | Day Remainder of construction operations | Day / evening / night Mining, paste filling, maintenance and processing operations | Day / evening / night Crushing operations (including operation of front-end-loader) | 7am-7pm, 7 days per week Transportation | Day / evening *Note:* • Crushing operations may be undertaken outside of these hours on a maximum of 20 days per year. • Condition 41 includes additional restrictions on transportation times. • Conditions 6 and 7 include restrictions on blasting times.	Personnel interviews. Annual Reviews.	All operations were undertaken during the specified operational hours.	Compliant	
Operating Conditions					
4	The Proponent shall: (a) implement best practice noise management, including all reasonable and feasible noise mitigation measures to minimise the operational and road traffic noise generated by the project; (b) investigate ways to minimise the noise generated by the project, including any reversing alarms on machinery or vehicles; (c) minimise noise impacts during temperature inversions; and (d) report on these investigations and the implementation and effectiveness of these measures in the Annual Review, to the satisfaction of the Secretary.	Noise Management Plan (NMP) (Rev 7, 11/6/2020). Annual Reviews. Personnel interviews.	No noise exceedances were reported, however complaints were received throughout the audit period, as detailed below. Consequently, Aurelia advised that a noise investigation is currently underway in consultation with the EPA and DPIE. The report is anticipated in the second quarter 2022. Noise mitigation works were reported in the Annual Reviews.	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

<table>
<tr><th>Approval ID</th><th>Requirement</th><th>Evidence</th><th>Comments / Audit Findings / Recommendations</th><th>Compliance Status</th><th>Unique Identification on Noncompliance</th></tr>
<tr><td colspan="2">Noise Management Plan</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="6">5</td><td>The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:</td><td rowspan="6">Noise Management Plan (NMP) (Rev 7, 11/6/2020).</td><td>Consultation was sought with the Council and the EPA.

The NMP Rev 5 was approved by DPE on 24/07/2017. Evidence of approval of the latest version, Rev 7 dated 11/6/2020, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 6 and 7 since approval. This is addressed in Schedule 5 Condition 4.</td><td rowspan="6">Compliant</td><td rowspan="6"></td></tr>
<tr><td>(a) Be prepared in consultation with EPA and Council, and submitted to the Secretary for approval prior to the commencement of construction;</td><td></td></tr>
<tr><td>(b) Describe the noise mitigation measures that would be implemented to ensure compliance with conditions 1-4 of this schedule; and</td><td>Section 7: Noise management measures.
The 2018-2019 audit recommendation to include operating hours has been included in this section.</td></tr>
<tr><td>(c) Include a noise monitoring program that:</td><td rowspan="2">Section 8: Noise-related monitoring.

Recommendations: 1. Amend Figure 1 in the NMP to include symbols at all noise monitoring locations (missing symbols at R20, R27, R29). 2. Amend Table 8.1 to include the unattended traffic monitoring location. 3. Amend Section 8.2.3 to include tonal and low frequency noise assessments. 4. Either remove requirements in Section 8.2.3 to report operator's name, temperature, humidity, cloud cover, or require consultants to include these details in the monitoring reports. 5. Either remove references to plant and equipment operating logs and mining locations for inclusion in the monitoring reports, or require consultants reports to include these data.</td></tr>
<tr><td>• Uses a combination of unattended and attended monitoring to evaluate the performance of the project; and</td></tr>
<tr><td>• Includes a protocol for determining exceedances of the relevant conditions of this approval.</td></tr>
<tr><td colspan="2">BLASTING</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Blasting Criteria</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="7">6</td><td>The proponent shall ensure that the blasting on site does not cause exceedances of the criteria in Table 4.
Table 4: Blast impact criteria
<table>
<tr><th>Location</th><th>Time of Blasting</th><th>Airblast overpressure (dB(Lin Peak))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr>
<tr><td rowspan="4">Residence on privately-owned land</td><td>Any time</td><td>120</td><td>10</td><td>0%</td></tr>
<tr><td>Day</td><td>115</td><td>5</td><td rowspan="3">5% of the total number of blasts over a period of 12 months</td></tr>
<tr><td>Evening</td><td>-</td><td>2</td></tr>
<tr><td>Night, and all day on Sundays and public holidays</td><td>-</td><td>1</td></tr>
</table>
Note: All blasts are to be designed by a suitably qualified and experienced blasting engineer.</td><td rowspan="7">Annual Reviews.

Personnel interviews.</td><td rowspan="7">No blast exceedances were reported during the audit period.</td><td rowspan="7">Compliant</td><td rowspan="7"></td></tr>
<tr><td colspan="2">Blasting Hours</td></tr>
<tr><td rowspan="5">7</td><td>The Proponent shall comply with the blasting hours in Table 5.
Table 5: Blasting hours
<table>
<tr><th>Activity</th><th>Blasting Hours</th></tr>
<tr><td>Surface blasting</td><td>9am – 5pm Monday – Friday, excluding public holidays</td></tr>
<tr><td>Underground blasting</td><td>Anytime</td></tr>
</table></td></tr>
<tr><td colspan="2">Property Inspections</td></tr>
<tr><td rowspan="4">8</td><td>If the Proponent receives a written request from the owner of any privately-owned land within 2 kilometres of blasting operations for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection report updated, then within 2 months of receiving this request the Proponent shall:</td><td rowspan="4">Personnel interviews.</td><td rowspan="4">No requests were received during the audit period.</td><td rowspan="4">Not Triggered</td><td rowspan="4"></td></tr>
<tr><td>(a) Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary to:</td></tr>
<tr><td>• Establish the baseline condition of the buildings and/or structures on the land or update the previous property inspection report; and
• Identify any measures that should be implemented to minimise the potential blasting impacts of the project on these buildings and/or structures.</td></tr>
<tr><td>(b) Give the landowner a copy of the new or updated property inspection report.</td></tr>
</table>

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Property Investigations					
9	If any landowner of privately-owned land within 2 kilometres of blasting operations, or any other landowner nominated by the Secretary claims that buildings and/or structures on his/her land have been damaged as a result of blasting at the project, the Proponent shall within 3 months of receiving this request: (a) Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to investigate the claim; and (b) Give the landowner a copy of the property investigation report. If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damages to the satisfaction of the Secretary. If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.	Personnel interviews.	No requests were received during the audit period.	Not Triggered	
Operating Conditions					
10	During mining operations on site, the Proponent shall implement best **blasting** practice to: (a) Protect the safety of people, property, public infrastructure, and livestock; (b) Protect items of Aboriginal and non-indigenous cultural heritage significance; (c) Minimise the dust and fume emissions from blasting at the project; and (d) Operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the satisfaction of the Secretary.	Annual Reviews. Blast Management Plan (BMP) (Rev 6, 22/8/2019).	No blast exceedances were reported during the audit period. It is noted that the blast schedule is currently provided to the public through the BMP published on the website only.	Compliant.	
Blast Management Plan					
11	The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the Secretary. This plan must: (a) Be prepared in consultation with EPA and Council, and submitted to the Secretary for approval prior to undertaking any blasting on-site; (b) Describe the blast mitigation measures that would be implemented to ensure compliance conditions 6-10 of this schedule; (c) Describe the measures that would be implemented to ensure the public can get up-to-date information on the proposed blasting schedule on site; and include a blast monitoring program to evaluate the performance of the project.	Blast Management Plan (BMP) (Rev 6, 22/8/2019).	Consultation was sought with the EPA and Council. The BMP Rev 5 was approved by DPE sometime after 16/01/2017. Evidence of approval of the latest version, Rev 6 dated 22/8/2019, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 6 since approval. This is addressed in Schedule 5 Condition 4. Section 6.2: Blast mitigation measures. Section 6.3: Public information regarding blasting operation. This section has been updated with the 2018-2019 audit recommendation to include website and Facebook notification details. Section 7: Blast-related monitoring.	Compliant	
AIR QUALITY & GREENHOUSE GAS					
Odour					
12	The Proponent shall ensure that no offensive odours are emitted from the site, as defined under the POEO Act.	Annual Reviews. Site inspection.	No odour complaints were received during the audit period. No project-related odours were detected beyond the project boundary during the site inspection.	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

<table>
<tr><th>Approval ID</th><th>Requirement</th><th>Evidence</th><th>Comments / Audit Findings / Recommendations</th><th>Compliance Status</th><th>Unique Identification on Noncompliance</th></tr>
<tr><td colspan="2">Greenhouse Gas Emissions</td><td></td><td></td><td></td><td></td></tr>
<tr><td>13</td><td>The Proponent shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Secretary.</td><td>Annual Reviews.

Air Quality and Greenhouse Gas Management Plan (AQGGMP) (Rev 5, 22/8/2019).

Maintenance records sighted.</td><td>-</td><td>Compliant</td><td></td></tr>
<tr><td colspan="2">Air Quality Criteria</td><td></td><td></td><td></td><td></td></tr>
<tr><td>14</td><td>The Proponent shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the particulate emissions generated by the project do not exceed the criteria listed in Tables 6, 7 and 8 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.

Table 6: Long term criteria for particulate matter
<table><tr><th>Pollutant</th><th>Averaging period</th><th>[d] Criterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>[a]90 µg/m^3</td></tr><tr><td>Particulate matter < 10 µm (PM_{10})</td><td>Annual</td><td>[a]30 µg/m^3</td></tr></table>
Table 7: Short term criterion for particulate matter
<table><tr><th>Pollutant</th><th>Averaging period</th><th>[d] Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM_{10})</td><td>24 hour</td><td>[a] 50 µg/m^3</td></tr></table>
Table 8: Long term criteria for deposited dust
<table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total [1] deposited dust level</th></tr><tr><td>[c]Deposited dust</td><td>Annual</td><td>[b]2 g/m^2/month</td><td>[a]4 g/m^2/month</td></tr></table>
Notes for Tables 6-8:
• a) Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to other sources);
• b) Incremental impact (i.e. incremental increase in concentrations due to the project on its own);
• c) Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and
• d) Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents, illegal activities or any other activity agree to by the Secretary in consultation with EPA.</td><td>Annual Reviews.</td><td>Individual month dust exceedances were reported throughout the audit period, however remained on average below the monthly assessment criteria. Aurelia concluded that the elevated concentrations were the result of regional events including bushfire over this period and unlikely to be significantly site derived.

Recommendation:
Include detail in future Annual Review reports to justify the conclusion that elevated results are due to regional events and not site-derived, or refer to monitoring reports where this is detailed.</td><td>Compliant</td><td></td></tr>
<tr><td>15</td><td>The Proponent shall ensure compliance with any pollutant limits in the EPL set after further assessment of the potential air quality impacts associated with the gold smelting process (refer to Condition 17 below).</td><td>-</td><td>Assessed in Table 3: EPL Conditions.</td><td>-</td><td></td></tr>
<tr><td colspan="2">Operating Conditions</td><td></td><td></td><td></td><td></td></tr>
<tr><td>16</td><td>The Proponent shall:

(a) Implement best practice air quality management on site, including all reasonable and feasible measures to minimise the off-site odour, fume and dust emissions generated by the project;

(b) Minimise any visible air pollution generated by the project;

(c) Regularly assess the air quality monitoring and meteorological forecasting data, and relocate, modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval; and

(d) Take all practical measures to minimise dust emissions from the tailings dam,

to the satisfaction of the Secretary.</td><td>Annual Reviews.

Air Quality and Greenhouse Gas Management Plan (AQGGMP) (Rev 5, 22/8/2019).

Site inspection.</td><td>Management measures detailed in the AQGGMP which were observed on-site included use of water carts, speed limit enforcement, road delineation and design of the processing plant to limit dust including conveyor belts and shed enclosures.</td><td>Compliant</td><td></td></tr>
</table>

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Air Quality & Greenhouse Gas Management Plan					
17	The Proponent shall prepare and implement a detailed Air Quality & Greenhouse Gas Management Plan for the project to the satisfaction of the Secretary. This plan must:	Air Quality and Greenhouse Gas Management Plan (AQGGMP) (Rev 5, 22/8/2019)	Consultation sought with the EPA and Council. The AQGGMP Rev 2 was approved by DPI dated 30/1/2013. Evidence of approval of the latest version, Rev 5 dated 22/8/2019, was not available. This is addressed in Schedule 5 Condition 4.	Compliant	
	(a) Be prepared in consultation with EPA and Council, and submitted to the Secretary for approval prior to construction;				
	(b) Include an assessment of the potential air quality impacts of the project associated with the gold smelting process;		Section 5: Existing environment. It is noted that smelting is not undertaken on-site; this condition has been interpreted to include impacts associated with the project as a whole.		
	(c) Describe the measures that would need to be implemented to ensure compliance with conditions 12-16 of this schedule;		Section 6: Management measures.		
	(d) Include a program for the implementation of the measures referred to in (c) above; and				
	(e) Include an air quality monitoring program, that uses a combination high volume samplers and dust deposition gauges to evaluate the performance of the project and includes a protocol for determining exceedances with the relevant conditions of this approval.		Section 7: Air quality monitoring. Section 8: Evaluation of compliance. An on-site weather station is operated by ALS and data are provided on the website.		
METEOROLOGICAL MONITORING					
18	During the life of the project, the Proponent shall ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline.	Site inspection. Website.	An on-site weather station is operated by ALS and data are provided on the website.	Compliant	
SOIL & WATER					
Water Licences					
19	The Proponent shall obtain all necessary water licences for the project under the *Water Act 1912* or the *Water Management Act 2000*.	10WA119513 and WAL39281 10WA119515 and WAL39282 10WA119519 and WAL39287 10WA119517 and WAL39292 Annual Reviews.	-	Compliant	
Water Supply					
20	The Proponent shall ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of mining operations to match supply of water, to the satisfaction of the Secretary.	Water balance records. Annual Reviews. Water Management Plan (WMP) (Rev 9, 23/4/2020) Environmental Assessment (EA), September 2010.	The site water balance is detailed in Section 5 of the Water Management Plan. DPIE issued a $15,000 Penalty Notice to Aurelia in July 2020 for utilisation of water from the Bungendore Sewage Treatment Plant to support operations following significant delays to key construction activities. Aurelia have advised an application to modify the Project Approval will be submitted to include this potential water source should the project need arise in the future. Prior to this, community consultation and a water security options analysis will occur to investigate potential water sourcing options. Water sources are described in the WMP and water balance records are maintained monthly to comply with this condition. 2 harvestable right dams and installation of a water extraction pump from Snobs bore were commissioned during the audit period. 3 harvestable rights dams and 2 groundwater bores are currently operational. Groundwater modelling presented in Section 4.4.4 of the Environmental Assessment and Section 4.2 of the Environmental Assessment – Modification 1 indicated that sufficient water is available for processing and mining-related purposes. **Recommendation**: Submit an application to amend the Project Approval to include contingency water sources.	Non-Compliant	NC2

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Water Discharges					
21	The Proponent shall ensure that all surface water discharges from the site comply with section 120 of the POEO Act, unless an EPL authorises otherwise.	Annual Reviews. Dargues Gold Mine - Notification - Sediment Discharge Event, letter dated 17/3/2020. Information Request - Significant Rainfall Event March 2021, email dated 12/5/2021. Personnel interviews.	A sediment release incident occurred on 10/3/2020 from a broken fitting directing water from the TSF. The event was notified to the Department, Resources Regulator and the EPA immediately and a notification letter sent within 7 days. The notification letter detailed incident response as outlined in the PIRMP. A water release event occurred on 23-25/3/2021 from Storm Water Pond 1 (SWP1) and Sediment Basin 2 (SB02) due to a significant rainfall event. The event was notified by phone to the EPA within 7 days and an email detailing the incident was sent to the EPA on 15/5/2021. Aurelia's assessment of downstream water quality following the events indicated negligible environmental impact. As such, these events were not classified as notifiable incidents.	Compliant	
Baseflow Offsets					
22	The Proponent shall offset the combined loss of any baseflow to Majors and Spring Creeks caused by the project to the satisfaction of the Secretary. This condition does not apply if the Secretary subsequently determines that the loss of baseflow is negligible. *Note: The proposed discharge point for the baseflow offset shall be as identified in the Water Management Plan.*	Water Management Plan (WMP) (Rev 9, 23/4/2020). Annual Reviews. Website flow data. AGE (2021) Dargues Reef Gold Mine Groundwater Model Update, September 2021.	Majors Creek average flows during the audit period were above the trigger level of 3.2 L/s, however dropped below the trigger level in December 2020. Therefore no compensatory flow was discharged to Majors Creek. Aurelia advised that works to remove the requirement for a compensatory flow program will be undertaken during the next reporting period, as the updated groundwater impact model has shown the project is having a negligible impact on stream flows in Majors Creek. The model also concluded that potential baseflow loss in Spring Creek would be within acceptable limits. WMP Section 5.5. lists the proposed discharge points. **Recommendation**: Compliance with the Majors Creek flow trigger level should be reported in Annual Reviews.	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Compensatory Water Supply					
23	The Proponent shall provide a compensatory water supply to any owner of privately-owned land whose water entitlements are adversely impacted (other than an impact that is negligible) as a result of the project, in consultation with DPI Water, and to the satisfaction of the Secretary.	Water Management Plan (WMP) (Rev 9, 23/4/2020). Annual Reviews.	No compensatory water supply was required during the audit period. Addressed in Section 9.7.2.1 of the Water Management Plan.	Compliant	
	The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.				
	If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.				
	If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent shall provide alternative compensation to the satisfaction of the Secretary.				
Tailings Storage Facility					
24	The Proponent shall ensure that:	Tailings Storage Facility Final Design Update (Rev 1, Nov 2016). NSW Dams Safety Committee, letter dated 9/12/16.	TSF design was reviewed during the previous audit period and found to be compliant.	Compliant	
	(a) The permeability of the tailings storage facility is designed to meet the requirements of the Environmental Guidelines – Management of Tailings Storage Facilities (VIC DPI, 2004) and that the permeability of the walls, floor and final capping of the tailings storage facility is designed to be equivalent to 600mm clay of permeability <1 x 10-8m/s;				
	(b) The design of the tailings storage facility conforms to:				
	• DSC3A – Consequence Categories for Dams (Dams Safety Committee of New South Wales); and				
	• DSC3F – Tailings Dams (Dams Safety Committee of New South Wales); and				
	(c) The latest meteorological data from both the Majors Creek and Braidwood weather stations is used during the design of the tailings storage facility and that the design is adjusted, as required to meet the requirements of the Dams Safety Committee of New South Wales, based on whichever dataset provides the worst case scenario.				
25	The Proponent shall ensure that the Mine Water Settlement Dam and Tailings Storage Facility Seepage Collection Pond are suitably lined to be equivalent to 1000mm clay of permeability < 1 x 10-9 m/s.	-	The Mine Water Settlement Dam and TSF Seepage Collection Pond designs were reviewed during the previous audit period.	Compliant	
25A	The clean water diversion around the northern side of the tailings storage facility shall be designed, constructed and maintained to prevent the probable maximum flood from the catchment upstream of the facility from entering the facility.	Site inspection. Tailings Storage Facility Final Design Update (Rev 1, Nov 2016).	Section 6.3 of the Tailings Storage Facility Final Design Update specifies design parameters for the diversion drains, sighted during the site inspection.	Compliant	
	Note: The general layout of the project is shown in Appendix 2.				
Water Management Plan					
26	The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:	Water Management Plan (WMP) (Rev 9, 23/4/2020) DPIE WMP letter of approval, dated 24/4/2020. Construction Environmental Management Plan Dargues Gold Mine WRE (SEEC, 27/9/19)	Consultation was sought with Council, EPA, DPIE and the CCC. The plan was originally prepared by RW Corkery & Co Pty Ltd, with contributions from various specialists, approved by the DPE.	Compliant	
	(a) Be prepared in consultation with ESC, Council, EPA, DoI – Lands & Water and DPI Fisheries by suitably qualified and experienced persons whose appointment has been approved by the Secretary;				
	(b) Be submitted to the Secretary for approval prior to the commencement of construction; and				
	(c) Include:				
	• A Site Water Balance;		Section 5.2: Site water balance.		
	• An Erosion and Sediment Control Plan;		Section 6: Erosion and sediment control.		
	• A Surface Water Monitoring Program;		Section 7: Surface water monitoring program.		
	• A Groundwater Monitoring Program; and		Section 9: Groundwater monitoring program.		
	• A Surface and Ground Water Response Plan;		Section 7.8: Surface water quality - triggers, actions and response plan. Section 7.9: Majors Creek baseflow - triggers, actions and response plan. Section 9.7: Groundwater quality - triggers, action and response plan		
	(d) Include detailed design of the Spring Creek heavy vehicle crossing;		The Spring Creek heavy vehicle crossing was completed prior to this revision of the plan.		
	(e) Be targeted to deal with the particular stages of the project that are being implemented; and		The WMP was last updated in April 2020 to target the current phase of operations.		

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
	(f) Remain in place for the life of the project, from the commencement of construction until the rehabilitation of the site is complete.		Section 1.		
	Note: the effectiveness of the Water Management Plan is to be reviewed and audited in accordance with the requirements in Schedule 5. Following this review and audit, the plan is to be revised to ensure it remains up to date (see Condition 4 of Schedule 5).		**Recommendation**: Update the WMP with the findings of the updated groundwater model (AGE 2021). For example, Section 7.9 includes trigger levels for baseflow in Majors Creek, but not Spring Creek. This is inconsistent with the groundwater model conclusions which identified baseflow impact predominantly localised to Spring Creek.		
26A	The Proponent shall revise and submit to the Secretary for approval the Water Management Plan, prior to constructing any of the following project components: eastern waste rock emplacement, tailings dam, waste rock haulage roads or the Spring Creek heavy vehicle crossing.	-	Prior to audit period.	Compliant	
27	**The Site Water Balance must:**	Water Management Plan (WMP) (Rev 9, 23/4/2020)		Compliant	
	(a) Include details of:		Section 5.2.2: Water sources and storages. Section 5.8: Security of water supply.		
	• Sources and security of water supply;				
	• Water use on site;		Section 5.2.3: Project related water demands.		
	• Water management on site, including transfers between all water storage infrastructure (including clean water dams, sediment dams, mine process water storages, underground workings and the tailings storage facility) and relevant design criteria;		Section 5.3: Water storage and management.		
	• Off-site water discharges (including uncontrolled discharges from sediment dams), including volume, timing and release point infrastructure requirements;		Section 5.4: Water disposal methodology. Section 5.5: Compensatory flow.		
	• Reporting procedures;		Section 10: Reporting and evaluation of compliance.		
	(b) Use the latest meteorological data from both the Majors Creek and Braidwood weather stations; and		Section 5.2.1: Data sources and inputs.		
	(c) Describe what measures would be implemented to minimise potable water use on site.		Section 5.6: Potable water use.		
28	**The Erosion and Sediment Control Plan must:**	Water Management Plan (WMP) (Rev 9, 23/4/2020) Construction Environmental Management Plan (CEMP) Dargues Gold Mine WRE (SEEC, 11/12/2018) Tailings Storage Facility Erosion & Sediment Control Plan (5/3/2019)		Compliant	
	(a) Be consistent with the requirements of the *Managing Urban Stormwater: Soils and Construction Manual* (Landcom 2004, or its latest version);		Section 6.4: Erosion and sediment control plans.		
	(b) Identify the size and management of sediment dams for construction and operational stages to satisfy the requirements of Condition 21 of Schedule 3, including an assessment of discharges against NSW water quality objectives for the receiving waters;		Section 6.4.4: Sediment basins. Details sediment basin size and operation. Section 5.3.7: Sediment basins. Details sediment basin TARPs, including discharge assessment.		
	(c) Include a program for undertaking regular auditing of the performance of the erosion and sediment control measures on the site (including audits following major construction milestones and/or rainfall events);		Erosion and sediment control audits are detailed in the CEMP and undertaken during the construction phase of the project.		
	(d) Identify activities that could cause soil erosion and generate sediment;		Section 6.3: Activities with the potential to cause erosion and sedimentation.		
	(e) Describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;		Section 6.4.5 to 6.4.7.		
	(f) Describe the location, function, and capacity of erosion and sediment control structures; and		No specific structures are detailed.		
	(g) Describe what measures would be implemented to maintain the structures over time.		No specific structures are detailed.		
28A	**The auditing program referred to in 28(c) above must:**	Element Environment, Erosion and Sediment Audit Report (14/11/2019) Construction Environmental Management Plan (CEMP) Dargues Gold Mine - Waste Rock Emplacement (SEEC, 11/12/2018)		Compliant	
	(a) Be prepared and undertaken by a suitably qualified and experienced independent expert in surface water management approved by the Secretary;				
	(b) Assess the performance of the erosion and sediment control system, including whether it is complying with the Water Management Plan, the EPL or Mining Lease; and				
	(c) Include provisions for reporting the outcomes of the audit findings to the Department, EPA and DPI and implementing any recommendations made by the independent expert.				
	The auditing program shall be undertaken during the construction of the eastern waste rock emplacement, tailings dam, waste rock haulage roads and the Spring Creek heavy vehicle crossing and until such time as the expert is satisfied that the erosion and sediment control system is performing effectively and can be maintained during operations, or as otherwise agreed by the Secretary.		**Recommendation**: Update the CEMP to include staged construction of the TSF prior to commencement of TSF Stage 3 works.		

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
29	**The Surface Water Monitoring Program must include:**	Water Management Plan (WMP) (Rev 9, 23/4/2020) Eco Logical (2020) Dargues Gold Mine Aquatic Ecology Monitoring 2020, 29/1/2021. Environmental Assessment (EA), 15/09/2010.		Compliant	
	(a) Detailed baseline data on surface water flows and quality in creeks and other waterbodies that could be affected by the project (including Majors and Spring Creeks);		Section 7.3: Existing surface water environment. More detailed information presented in the EA Part 4: Surface Water Assessment.		
	(b) Stream health assessment criteria that includes representative baseline survey of aquatic life in Majors Creek, upstream and downstream (to the confluence with Araluen Creek) of the mine site prior to commencement of construction and annually thereafter until all mining and rehabilitation activities are completed (Note: The design of the survey must be in consultation with Fisheries NSW and the results must be included in the Annual Review. The frequency of future annual surveys may be amended by the Secretary);		Aurelia advised that the 2021 aquatic ecology report is underway.		
	(c) Surface water quality criteria for a range of parameters, including salinity, heavy metals, suspended sediment, pH, hardness and biological oxygen demand;		Section 7.8: Surface water quality - triggers, actions and response plan. Section 7.9: Majors Creek baseflow - triggers, actions and response plan.		
	(d) A program to undertake monthly monitoring of:				
	· Surface water flows, quality, and impacts on water users;				
	• Potential acid rock drainage, including suitable monitoring both within and downstream of the tailings storage facility;		Section 7.4: Water quality monitoring program. Section 7.7: Acid rock drainage monitoring program.		
	• Potential leakage or spillage from tailings, mineral concentrate or effluent pipelines;		Section 7.6: Tailings pipeline monitoring program.		
	• Potential seepage / leachate from waste rock material on the surface, including the monitoring of pH levels;				
	(e) A program to undertake bi-annual monitoring of stream health and channel stability in Spring and Majors Creeks using replicated AUSRIVAS or equivalent methodology;		Section 8.5: Aquatic ecology monitoring program		
	(f) A program for the ongoing verification and refinement of the surface water model; and		Section 5.2: Site water balance.		
	(g) Reporting procedures for the results of the monitoring program and model verification.		Section 10: Reporting and evaluation of compliance.		
30	**The Groundwater Monitoring Program must include:**	Water Management Plan (WMP) (Rev 9, 23/4/2020) Environmental Assessment (EA), 15/09/2010.	Section 9.2: Existing groundwater quality environment. More detailed information presented in the EA Part 3: Groundwater Assessment.	Compliant	
	(a) Detailed baseline data of groundwater levels, yield and quality in the region, and particularly any groundwater bores, springs and seeps that may be affected by the project;				
	(b) Test bores downstream of the site, including test bores located down-gradient of the tailings storage facility to monitor seepage;		Section 9.3: Monitoring locations. 6 bores are located down-gradient of the TSF to monitor seepage.		
	(c) Groundwater assessment criteria for both groundwater levels and quality including privately-owned bores;		Section 9.7.1: Trigger values - Groundwater quality. Section 9.7.2: Trigger values - groundwater level.		
	(d) A program to monitor:				
	• Impacts on the groundwater supply of potentially affected landowners;				
	• Impacts on springs or groundwater dependent ecosystems (including stygofauna);				
	• The volume of groundwater inflow into the underground mine workings;		Section 9.4: Groundwater level monitoring program. Section 9.5: Groundwater quality monitoring program.		
	• Regional groundwater levels and quality in all potentially affected aquifers;				
	• Potential groundwater quality impacts from paste fill operations;				
	• Potential acid rock drainage;				
	• The seepage/leachate from tailings dams;				
	(e) A program for the ongoing verification and refinement of the groundwater model; and		Section 9.6: Groundwater model review and refinement.		
	(f) Reporting procedures for the results of the monitoring program and model verification.		Section 10: Reporting and evaluation of compliance.		
31	**The Surface and Ground Water Response Plan must include:**	Water Management Plan (WMP) (Rev 9, 23/4/2020)		Compliant	
	(a) Trigger levels for investigating any potential adverse surface water, stream health and groundwater impacts of the project, and taking action to avoid exceedances of the relevant criteria in the surface water and groundwater monitoring program;				
	(b) A protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health, and groundwater assessment criteria;				
	(c) A protocol for investigating, evaluating and providing the baseflow offsets required under condition 22 above;		Section 7.8: Surface water quality - triggers, actions and response plan. Section 7.9: Majors Creek baseflow - triggers, actions and response plan. Section 8.6: Stream health - triggers, actions and response plan. Section 9.7: Groundwater quality - triggers, action and response plan.		
	(d) Measures to mitigate and/or compensate potentially affected landowners in accordance with the compensatory water supply requirements in condition 23 above;				

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	(e) A protocol for providing advance warning and water supply measures for landowners of privately-owned land that are predicted to exceed the surface and groundwater impact assessment criteria at some stage during the project life; and (f) The procedures that would be followed to determine any appropriate action to be taken to mitigate or offset any surface or groundwater impacts caused by the project that constitute material harm to the environment.				
Biodiversity					
Biodiversity Offset					
32	The Proponent shall implement the offset strategy outlined in Table 9, described in the EA, and shown in Appendix 4 to the satisfaction of the Secretary. **Table 9: Biodiversity Offset** Community Type / Area (ha) Ribbon Gum Forest* 8.7 Fragmented Ribbon Gum Forest* 7.1 Regenerating wattles 7.6 Exotic vegetation 5.1 Natural Temperate Grassland** 0.2 Native – dominated pasture 265.7 Exotic pasture 2.5 Largely disturbed land 3.9 River Peppermint Open Forest 1.3 TOTAL 302.1 * Listed as an EEC under the *Biodiversity Conservation Act 2016* ** Listed as a Critically Endangered Ecological Community (CEEC) under the Environment Protection and Biodiversity Conservation Act, 1999	Biodiversity Management Plan (BioMP) (Rev 5, 22/08/2019) DPIE Biodiversity Offset Strategy Letter of Extension, dated 12/3/2021. Personnel interviews.	Aurelia requested an extension for the offset strategy until August 2022. Approved by the DPIE on 12/3/2021. Aurelia advised that they are in the tender process for sourcing offset land and will be seeking a further extension for this condition.	Not Triggered	
33	The Proponent shall ensure that the offset area is managed in a manner that would ensure the regeneration of native grassland, which is consistent with the Natural Temperate Grassland EEC.	-	As above.	Not Triggered	
34	The Proponent shall make suitable arrangements to provide appropriate long-term security for the offset area in the strategy to the satisfaction of the Secretary.	Biodiversity Management Plan (BioMP) (Rev 5, 22/08/2019)	Section 6.3: Securing the on-site biodiversity offset strategy. This section notes that due to a change in the Biodiversity Conservation Act 2016, the Biodiversity Conservation Division have indicated that their preference is for a Biodiversity Stewardship Agreement to secure Biodiversity Offsets (rather than a Property Vegetation Plan). Aurelia advised that consultation regarding biodiversity offset options has been ongoing.	Not Triggered	
Biodiversity Management Plan					
	The Proponent shall prepare a Biodiversity Management Plan for the project to the satisfaction of the Secretary. This plan must:		Consultation was sought with the OEH. The BioMP Rev 4 was approved by DPE on 7/02/2017. Evidence of approval of the latest version, Rev 5 dated 22/8/2019, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 5 since approval. This is addressed in Schedule 5 Condition 4.		
	(a) Be prepared in consultation with OEH, and submitted to the Secretary for approval prior to construction;				
	(b) Include:				
	• An assessment of the potential impacts of groundwater drawdown on groundwater dependent (phreatophytic) vegetation, including the Tableland Basalt Forest EEC and Araluen Scarp Grassy Forest EEC in the Majors Creek State Conservation Area using suitable methodology;		Section 5.2: Anticipated groundwater impacts. Section 5.3: Anticipated impacts on phreatophytic vegetation.		
	• Detailed baseline data on the health status of the Tableland Basalt Forest EEC within the project site;		Section 5.3.1.1: Health status of the tableland basalt forest EEC.		
	• Mitigation and/or offsetting measures if adverse impacts on phreatophytic vegetation are predicted;		Section 5.4: Phreatophytic vegetation monitoring program. The BioMP commits to preparing trigger values and response plans following completion of 2 years of phreatophytic vegetation monitoring. Monitoring		

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
35	• Timing for the implementation of mitigation and/or offsetting measures;	Biodiversity Management Plan (BioMP) (Rev 5, 22/08/2019)	[illegible] commenced in March-June 2018 and has been ongoing for 2 years. **Recommendation**: Review phreatophytic vegetation monitoring data to develop trigger values and mitigation measures in the next version of the BioMP. Append the Wombat, Weed and Grazing Management Plans to the BioMP.	Compliant	
	• Scheduling for the implementation of the biodiversity offset;		Section 6.3: Securing the on-site biodiversity offset strategy. See Condition 34. Aurelia advised that consultation regarding biodiversity offset options has been ongoing. Section 7.3: Biodiversity offset timing and implementation.		
	• Detailed performance and completion criteria for the implementation of the biodiversity offset;		Section 7: Biodiversity offset monitoring, completion criteria and timing.		
	• A detailed description of the measures that would be implemented to manage the remnant vegetation and habitat within the offset area, and ensure the biodiversity offset is suitably implemented, including the procedures for:		Section 6.4: Management measures.		
	▪ Revegetating or regenerating parts of the offset area, if required;				
	▪ Managing or improving the quality of existing vegetation in the offset area;				
	▪ Controlling weeds, feral pests and access;				
	▪ Managing bushfires; and				
	• Details of who would be responsible for monitoring, reviewing and implementing the plan.		Section 14: Roles and responsibilities.		
Conservation Bond					
36	Within 3 months of the approval of the Biodiversity Management Plan, the Proponent shall lodge a conservation bond with the Department to ensure that the biodiversity offset is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan. The sum of the bond shall cover the full cost of implementing the Biodiversity Offset Strategy and be verified by a suitably qualified rehabilitation expert or quantity surveyor.	Biodiversity Management Plan (BioMP) (Rev 5, 22/08/2019)	Submitted 2013.	Compliant	
	If the biodiversity offset is implemented to the satisfaction of the Secretary, the Secretary will release the conservation bond.				
	If the offset strategy is not implemented to the satisfaction of the Secretary, the Secretary will call in all or part of the conservation bond, and arrange for the satisfactory implementation of the biodiversity offset.				
HERITAGE					
Aboriginal Heritage Management Plan					
37	The Proponent shall prepare and implement an Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. The Plan must:	Aboriginal Heritage Management Plan (AHMP) (Rev 6, 22/8/2019)	Consultation was recorded with the OEH and the Aboriginal community. The AHMP Rev 4 was approved by DPE on 12 May 2017. Evidence of approval of the latest version, Rev 6 dated 22/8/2018, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 5 and 6 since approval. This is addressed in Schedule 5 Condition 4.	Compliant	
	(a) Be prepared in consultation with OEH and the Aboriginal community;				
	(b) Be submitted to the Secretary for approval prior to construction; and				
	(c) Include a:				
	• Program for fencing identified Aboriginal sites;				
	• Program for the recording, salvage and surface collection of any Aboriginal objects/sites that may be encountered within the project area, including a program for the recording, salvage and surface collection of sites GT OS1 and GT OS2 prior to disturbance;				
	• Description of the measures that would be implemented if any Aboriginal skeletal remains are discovered during the project; and				
	• Protocol for the ongoing consultation and involvement of the Aboriginal community in the conservation and management of the Aboriginal heritage of the objects/sites.				

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
TRANSPORT					
Access Road Construction					
38	The Proponent shall construct the site access road and the intersection of the access road and Majors Creek Road prior to the commencement of construction of the mine-related infrastructure.	2018-2019 Audit Report.	Completed prior to audit period.	Compliant	
39	The intersection of the site access road and Majors Creek Road shall be constructed to a BAR/BAL treatment for rural turn lanes in accordance with the RTA *Road Design Guide* and to the satisfaction of Council.				
39A	Prior to the commencement of transportation of ore from the site, the left-hand road shoulder on Majors Creek Road between the entrance of the mine site and the top of the hill shall be strengthened to the satisfaction of Council.				
Monitoring of Concentrate Transport					
40	The Proponent shall: (a) Keep accurate records of the: • Amount of concentrate transported from the site (on a monthly basis); and • The date and time of loaded truck movements from the site; and (b) Provide the Secretary with a summary of these truck movements on a quarterly basis.	Vehicle tracking sheet sighted. Quarterly concentrate transport summaries for Q2 2020 to Q3 2021.	Vehicle tracking sheets included load weight, date and time. Quarterly summary letters provided to the DPIE were available from Q2 2020 after the processing plant was commissioned, to Q3 2021 at the end of the audit period. Aurelia advised that quarterly concentrate transport summaries for the audit period were submitted to the Department some time after the reporting quarter.	Compliant	
Operating Conditions					
41	The Proponent shall ensure that: (a) A maximum of 4 concentrate trucks exit the site per hour; (b) The dispatch of concentrate from the site is limited to between the hours of 7am to 10pm Monday to Saturday and 8am-10pm Sundays and Public Holidays; (c) All heavy vehicle movements to or from the site are prohibited between the hours of 7am - 8.30am and 3pm-5pm on school days; (d) A bus is operated from Braidwood to offer mine workers transport to and from the site each day; and (e) All reasonable and feasible measures are implemented to minimise the project's contribution to the traffic on Majors Creek Road, Araluen Flat Road, Captains Flat Road, Coghill Street and Wallace Street.	Personnel interviews. Dargues Gold Mine - Notification - Non-Compliance with Consent 10_0054, Condition 41, dated 12/5/2021.	Operations generally complied with this condition, with the exception of a truck which was reported to have passed through the site gate at 8:20am on 29/6/2020. The incident was reported to the EPA, Resources Regulator and DPIE on 11/5/2021 following an environmental compliance review associated with company acquisition. A notification letter was provided to these agencies on 12/5/2021. The site Drivers Code of Conduct was reiterated to site and contract drivers. **Recommendation**: Append the Drivers Code of Conduct to the next revision of the TMP and provide to all transport contractors.	Non-Compliant	NC3
Transport Route					
42	Once the site access road and its intersection with Majors Creek Road are complete, the Proponent shall ensure that, except in emergency situations, no project-related heavy vehicles access the site from the south or via Monga Lane.	Personnel interviews.	No heavy vehicles have been observed to access the site from the south or via Mong Lane during the audit period.	Compliant	
Traffic Management Plan					
43	The Proponent shall prepare and implement a Traffic Management Plan to the satisfaction of the Secretary. The plan shall focus on traffic management along Majors Creek Road to minimise potential conflicts between road users and to ensure that the intersection of the site access road and Majors Creek Road is operating effectively. The plan must be developed in consultation with the Council and the CCC and must be submitted for the approval of the Secretary prior to the commencement of construction of any mine-related infrastructure.	Traffic Management Plan (TMP) (Rev 5, 22/08/2019)	Consultation was sought with the Council and CCC. The TMP Rev 4 was approved by DPE on 7/11/2016. Evidence of approval of the latest version, Rev 5 dated 22/8/2019, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 5 since approval. This is addressed in Schedule 5 Condition 4.	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
VISUAL					
(a) Visual Amenity and Lighting					
44	The Proponent shall: (b) Minimise the visual impacts, and particularly the off-site lighting impacts, of the project; (c) Take all practicable measures to further mitigate off-site lighting impacts from the project; and (d) Ensure that all external lighting associated with the project complies with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting, to the satisfaction of the Secretary.	Personnel interviews. Complaints register.	A visual amenity bund has been constructed along the southern and western sides of the ROM pad to reduce the visual impact of the process plant and surface operations. All external lighting contains LED bulbs and are directed downward. Some visual amenity complaints were received during the audit period, most within first few months of Processing Plant commissioning. Aurelia advised that in response, higher level lighting was removed from the hopper and necessary lighting put on timers. Torches and timed lights are utilised for required inspections. The generator flashing light on the TSF was removed.	Compliant	
Additional Visual Mitigation Measures					
45	The Proponent shall construct an amenity bund on the southern and western crest of the ROM pad as described in the EA and rehabilitate the bund in accordance with Condition 51 below.	Site inspection.	ROM bunds observed. Rehabilitation not yet triggered.	Compliant	
46	Upon receiving a written request from the owner of any residence on privately-owned land which has, or would have, significant direct views of the mining operations on site, the Proponent shall implement visual mitigation measures (such as landscaping treatments or vegetation screens) on the land in consultation with the landowner. These measures must be reasonable and feasible, and directed toward minimising the visibility of the mining operations from the residence. If within 3 months of receiving this request from the owner, the Proponent and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.	Personnel interviews.	One request was received for visual mitigation of direct views of the mining operations. Aurelia conducted an inspection and assessed there to be no significant direct views from the property.	Compliant	
WASTE					
Performance Measures – Paste Fill					
47A	The Proponent shall ensure that any paste fill used to fill mine voids on site: (a) Complies with the leachable concentration (TCLP) criteria and specific contaminant concentration (SCC) criteria for general solid waste (non-putrescible); and (b) Is not classified as a liquid waste, under the Waste Classification Guidelines (EPA, 2009), or its latest version.	Waste Management Plan (WasteMP) (Rev 5, 22/8/2019).	Trial results reported in the WasteMP Rev 5 indicate the paste fill meets the performance measures in Condition 47A. The WasteMP outlines a program for ongoing testing including testing every 10 hours of operation during processing plant commissioning, followed by every 100 hours of paste plant operation during regular operations (or at the commencement of processing of ore from a different lode). Samples were to be tested for contaminants of concern and compared against General Solid Waste T1 criteria. No testing results were available since paste plant commissioning in April 2020. There is currently insufficient data to assess if paste fill used to fill mine voids complied with the general solid waste criteria. **Recommendation**: The paste fill monitoring program outlined in the approved WasteMP must be adhered to and reported in Annual Review reports. ANZG criteria are probably more relevant to environmental protection than waste classification guidelines and should be considered in the next version of the WasteMP. The next version of the WasteMP should consider reassessing the method of paste fill testing to also include Australian	Non-Compliant	NC4
Paste Fill Trials and Testing					
47B	Prior to the commencement of paste fill operations on site, the Proponent shall commission a suitably qualified expert, whose appointment has been endorsed by the Director General, to: (a) Carry out further trials and testing to clarify the physical characteristics of the paste fill; (b) Undertake further bench tests of the paste fill to determine the leaching characteristics; (c) Prepare a program for the ongoing testing of the paste fill to ensure it meets the performance measures in condition 47B; and (d) Compare the results of the additional trials and testing against the results presented in *Dargues Reef Paste Fill Test Work and Design* (Revell, 2010),to the satisfaction of the Director General.	Waste Management Plan (WasteMP) (Rev 5, 22/8/2019).	Trial results reported in the WasteMP Rev 5 indicate the paste fill meets the performance measures in Condition 47A. The WasteMP outlines a program for ongoing testing. **Recommendation**: Include paste fill ongoing testing results detailed in Section 5.2.3 of the WasteMP in Annual Review reports. Include the paste fill general monitoring results detailed in Section 5.4 of the WasteMP in Annual Review reports. Results of the paste fill trial are included in the WasteMP. Details of the assessment (e.g. Trial Report including calculation of the 95%UCL) should be appended to the next revision of the WasteMP. Comparison of testing results against those presented in *Dargues Reef Paste Fill Test Work and Design* (Revell, 2010) in the next version of the WasteMP.	Compliant	

Table 1 - Project Approval 10_0054 MOD 4 Conditions dated 23 May 2019

Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Operating Conditions					
47	The Proponent shall: (a) Minimise the waste generated by the project; (b) Ensure that the waste generated by the project is appropriately stored, handled and disposed of; and (c) Manage on-site sewage treatment and disposal in accordance with the requirements of Council, to the satisfaction of the Secretary.	Site inspection. Annual Reviews.	During the site inspection, 200 L drums and intermediate bulk containers (IBCs) were observed adjacent to the mechanical workshop without appropriate bunding. Construction of a concrete bund was noted next to the workshop and Aurelia advised this will be utilised for raw material and waste storage and handling. **Recommendation**: All chemicals and wastes should be stored within a bunded and ideally roofed area; waste should be disposed of appropriately.	Non-Compliant	NC5
48	The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Secretary. This plan must be submitted to the Secretary prior to construction.				
BUSHFIRE MANAGEMENT					
49	The Proponent shall: (a) Ensure that the project is suitably equipped to respond to any fires on-site; and (b) Assist the emergency services as much as possible if there is a fire on-site during the project.	Bushfire Management Plan (Rev 5, 22/8/2019). Site inspection.	The site is equipped with firefighting equipment as detailed in Section 5.3.1 of the Bushfire Management Plan. Section 5.4 addresses the advising of relevant government agencies including the Rural Fire Service of activities on-site. The site emergency response team is trained in fire control. Consultation was sought with the local Rural Fire Service. The Bushfire Management Plan Rev 4 was approved by DPE on 16/1/2017. Evidence of approval of the latest version, Rev 5 dated 22/8/2019, was not available. Aurelia advised that the plan had been reviewed rather than revised in Rev 5 since approval. This is addressed in Schedule 5 Condition 4.	Compliant	
50	Prior to construction, the Proponent shall prepare and implement a Bushfire Management Plan for the site to the satisfaction of the Secretary. The plan must be prepared in consultation with the local Rural Fire Service.				
Rehabilitation					
Rehabilitation Objectives					
51	The Proponent shall rehabilitate the site to the satisfaction of the Secretary Industry. This rehabilitation must be generally consistent with the proposed rehabilitation strategy described in the EA, however the: (a) Area to be returned to native woodland vegetation must be increased further to the west of the existing Spring Creek vegetation corridor as shown in Appendix 4; (b) Box cut must be rehabilitated to result in an outcome that is consistent with the final landform (Appendix 3); and (c) Upper surface of the tailings storage facility must be capped with a suitable material to prevent surface water infiltration into the post-mining landform.	-	Applicable upon cessation of mining operations.	Not Triggered	
Progressive Rehabilitation					
52	The Proponent shall carry out the rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.	Site inspection. Annual Reviews.	Progressive rehabilitation undertaken during the audit period is outlined in the Annual Reviews and included: -Rehabilitation of 3 historic drill pads, indicated in the 2020-2021 Annual Review.	Compliant	
Rehabilitation Management Plan					
53	The Proponent shall prepare and implement a Rehabilitation Management Plan for the project to the satisfaction of the Secretary Industry. This plan must: (a) Be prepared in consultation with the Department, EPA, DPI Water and the CCC; (b) Be prepared in accordance with any relevant DRE guideline; (c) Build, to the maximum extent practicable, on the other management plans required under this approval; and (d) Be submitted to the Secretary Industry for approval prior to construction.	Second Mining Operations Plan (MOP) (16/3/2017) NSW Resources Regulator MOP Letter of Extension, dated 5/2/2021.	The Rehabilitation Plan is incorporated into the Second MOP. Consultation was sought with DPIE and the CCC. It is noted that the Rehabilitation Management Plan is currently under revision.	Compliant	

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
SCHEDULE 4 ADDITIONAL PROCEDURES					
NOTIFICATION OF LANDOWNERS					
1	At least 2 months prior to carrying out any blasting on site, the Proponent shall notify in writing the owners of any privately-owned land within 2 kilometres of the approved blasting on site that they are entitled to ask for an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated.	-	Prior to audit period.	Not Triggered	
2	As soon as practicable after obtaining monitoring results showing: (a) Exceedances of the relevant criteria in Schedule 3, the Proponent shall notify the affected landowners and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the project is complying with the relevant criteria again; and (b) Exceedances of the relevant air quality criteria in Schedule 3, the Proponent shall send the affected landowners and tenants (including the tenants of any mine-owned land) a copy of the NSW Health fact sheet entitled "*Mine Dust and You*" (as may be updated from time to time).	-	No exceedances were reported during the audit period. Elevated concentrations were measured for a number of monitored media, triggering the relevant TARPs, however subsequent monitoring did not identify exceedances of criteria in Schedule 3 related to the project.	Compliant	
Independent Review					
3	If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land. If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Proponent shall: (a) Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to: • Consult with the landowner to determine his/her concerns; • Conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and • If the project is not complying with these criteria then: ▪ Determine if more than one mine is responsible for the exceedance, and if so the relative share of each mine towards the impact on the land; and ▪ Identify the measures that could be implemented to ensure compliance with the relevant criteria; and (b) Give the Secretary and landowner a copy of the independent review.	-	No requests for an independent review were received during the audit period.	Not Triggered	
4	If the independent review determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Secretary. If the independent review determines that the project is not complying with the relevant impact assessment criteria in Schedule 3, then the Proponent shall: (a) Implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the project complies with the relevant criteria; or (b) Secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Secretary.				

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING					
ENVIRONMENTAL MANAGEMENT					
Environmental Management Strategy					
1	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy must:	Environmental Management Strategy (EMS) (Rev 5, 22/8/2019).	The EMS Rev 2 was approved by DPE on 21 September 2012. Evidence of approval of the latest version, Rev 5 dated 22/8/2019, was not available. This is addressed in Schedule 5 Condition 4.	Compliant	
	(a) Be submitted to the Secretary for approval prior to construction;				
	(b) Provide the strategic framework for environmental management of the project;				
	(c) Identify the statutory approvals that apply to the project;				
	(d) Describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;				
	(e) Describe the procedures that would be implemented to:				
	• Keep the local community and relevant agencies informed about the operation and environmental performance of the project;				
	• Receive, handle, respond to, and record complaints;				
	• Resolve any disputes that may arise during the course of the project;				
	• Respond to any non-compliance;				
	• Respond to emergencies; and				
	(f) Include:				
	• Copies of any strategies, plans and programs approved under the conditions of this approval; and				
	• A clear plan depicting all the monitoring required to be carried out under the conditions of this approval.				
Management Plan Requirements					
2	The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	Management Plans as referenced in the audit report.	All management plans were found to contain the required elements in accordance with this condition.	Compliant	
	(a) Detailed baseline data;				
	(b) A description of:				
	• The relevant statutory requirements (including any relevant approval, licence or lease conditions);				
	• Any relevant limits or performance measures/criteria;				
	• The specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;				
	(c) A description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;				
	(d) A program to monitor and report on the:				
	• impacts and environmental performance of the project;				
	• effectiveness of any management measures (see c above);				
	(e) A contingency plan to manage any unpredicted impacts and their consequences;				
	(f) A program to investigate and implement ways to improve the environmental performance of the project over time;				
	(g) A protocol for managing and reporting any:				
	• Incidents;				
	• Complaints;				
	• Non-compliances with statutory requirements; and				
	• Exceedances of the impact assessment criteria and/or performance criteria; and				
	(h) a protocol for periodic review of the plan.				
	Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.				

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
Annual Review					
3	By the end of each year following the commencement of construction, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must: (a) Describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year; (b) Include a comprehensive review of the monitoring results and complaints records of the project over the past year, which includes a comparison of these results against the • The relevant statutory requirements, limits or performance measures/criteria; • The monitoring results of previous years; and • The relevant predictions in the EA; (c) Identify any non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance; (d) Identify any trends in the monitoring data over the life of the project; (e) Identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and (f) Describe what measures will be implemented over the next year to improve the environmental performance of the project.	2019-2020 Annual Review. 2020-2021 Annual Review.	It is noted that paste monitoring results were not included in the 2020-2021 Annual Review; this has been addressed under Schedule 3 Condition 47B.	Compliant.	
Revision of Strategies, Plans and Programs					
4	Within 3 months of: (a) The submission of an annual review under Condition 3 above; (b) The submission of an incident report under Condition 6 below; (c) The submission of an audit report under Condition 8 below; and (d) Any modification to the conditions of this approval, (unless the conditions require otherwise), the Proponent shall review, and if necessary, revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review, the revised document must be submitted to the Secretary for approval. *Note: This condition ensures that strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the project.*	Management Plans as referenced in the audit report.	**Recommendation**: Clarify document control sections for each management plan to differentiate between document reviews, revisions and submissions to stakeholders. A number of management plans are Non-Compliant for approval from the Department/Secretary following the latest revisions.	Non-compliant	NC6
Community Consultative Committee					
5	The Proponent shall establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary and in accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version). This CCC must be operating at least 3 months prior to the commencement of construction on site. *Notes:* • The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval; and • The Committee should be comprised of an independent chair and appropriate representation from the Proponent, Council, one representative from ESC, recognised environmental groups and the local community.	CCC Meeting Minutes.	Meeting minutes from the latest meeting in June 2021 report attendance by the independent Chair, and representatives from Aurelia, Council, ESC and the local community.	Compliant	

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
REPORTING					
Incident Notification					
6	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Proponent becomes aware of an incident. The notification must identify the project (including the application number and the name of the project if it has one), and set out the location and nature of the incident.	Dargues Gold Mine - Notification - Sediment Discharge Event, letter dated 17/3/2020. Information Request - Significant Rainfall Event March 2021, email dated 12/5/2021.	Notification letters were provided for the following incidents: -Sediment discharge event 10/3/2020. -Dam overtopping event 23-25/3/2021.	Compliant	
Non-Compliance Notification					
6A	The Department must be notified in writing to compliance@planning.nsw.gov.au within 7 days after the Proponent becomes aware of any non-compliance with the conditions of this approval. The notification must identify the project and the application number for it, set out the condition of approval that he project is non-compliant with, the way in which it does not comply and the reasons for non-compliance (if known) and what actions have been done, or will be, undertaken to address the non-compliance.	Dargues Gold Mine - Notification - Potential Non-Compliance, letter dated 22/4/2021. Dargues Gold Mine - Notification - Non-Compliance with Consent 10_0054, Condition 41, letter dated 12/5/2021.	Notification documents were provided for the following non-compliances: -Use of a soil stockpile area for material laydown. -Vehicle movement during curfew event 29/6/2020.	Compliant	
Regular Reporting					
7	The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.	Website	-	Compliant	
INDEPENDENT ENVIRONMENTAL AUDIT					
8	Within 3 months of re-commencing construction on the site, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must: (a) Be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) Include consultation with the relevant agencies; (c) Assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); (d) Review the adequacy of strategies, plans or programs required under the abovementioned approvals; and (e) Recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals. *Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Secretary, including (at least) an independent expert in surface water management.*	2019-2021 Independent Environmental Audit. DPIE Letter of Audit Team Approval., dated 20/9/2021.	-	Compliant	
9	Within 6 weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.				

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Approval ID	Requirement	Evidence	Comments / Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
ACCESS TO INFORMATION					
10	Prior to the commencement of construction on site, the Proponent shall: (a) Make copies of the following publicly available on its website: • The documents referred to in Condition 2 of Schedule 2; • All current statutory approvals for the project; • All approved strategies, plans and programs required under the conditions of this approval; • The monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; • A complaints register, updated on a monthly basis; • Minutes of CCC meetings; • The annual reviews of the project; • Any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; • Any other matter required by the Secretary; • Any incident report referred to in Condition 6 of Schedule 5; • A certificate of currency of public liability insurance held by the Proponent as in force from time to time; and (b) Keep this information up-to-date, within a reasonable period, and in any event no later than 28 days after the above information becomes available, to the satisfaction of the Secretary.	Website. Emjay Insurance Brokers, Confirmation of Cover, valid to 30/4/2021.	**Recommendation**: Provide the following documents on the website: EPBC approvals. Current Confirmation of Cover. Ecology monitoring data. Incident investigation reports. Environmental Management Strategy. Construction Environmental Management Plan. Cardno (2011) Aquatic Ecological Assessment (as stated in the WMP Section 8).	Non-compliant	NC7

Table 2: Statement of Commitments

Table 2 - Statement of Commitments

<table>
<tr><td colspan="3">2 AREA OF ACTIVITIES</td><td></td><td></td><td></td></tr>
<tr><td>All approved activities are undertaken generally in the location(s) nominated on the figures shown in Sections 2 and 4.</td><td>Mark, and where appropriate, survey the boundaries of the areas of proposed disturbance.</td><td>Prior to the commencement of the relevant activity.</td><td>Soil stockpile area used as a laydown area for construction material and equipment following relocation of soil material to the Waste Rock Emplacement area. Aurelia notified the DPIE by letter on 22 April 2021 . Project Approval modification application to be submitted.

Recommendation:
Apply to modify the Project Approval.</td><td>Non-Compliant</td><td>NC8</td></tr>
<tr><td colspan="3">4 NOISE AND BLASTING</td><td></td><td></td><td></td></tr>
<tr><td rowspan="10">Noise generated by operational activities does not exceed EPA nominated criteria nor significantly impacts on neighbouring landowners and/or residents.</td><td>Site Establishment Noise Controls</td><td rowspan="3">Continuous during site establishment operations.</td><td></td><td></td><td></td></tr>
<tr><td>4.2 Maintain the on-site road network to limit body noise from empty trucks travelling on internal roads.</td><td>Aurelia advised that a full time grader operator is engaged to maintain roads. Roads appeared in good condition during the site inspection.</td><td>Compliant</td><td></td></tr>
<tr><td>4.3 Maintain an open dialogue with the surrounding community and neighbours to ensure any concerns over noise or vibration are addressed.</td><td>Open dialogue has been observed through the complaints phone line and project Facebook page.</td><td>Compliant</td><td></td></tr>
<tr><td>Operational Noise Controls</td><td rowspan="3">Prior to and continuous during mining operations.</td><td rowspan="2">The crusher has been enclosed within a shed, engineered to achieve 12dB reduction.</td><td rowspan="2">Compliant</td><td rowspan="2"></td></tr>
<tr><td>4.4 Place and operate the crusher within an enclosure engineered to achieve a noise reduction of at least 12dB.</td></tr>
<tr><td>4.5 Ensure that the grinding circuit is rubber lined.</td><td>Transfers between segments of the processing are rubber lined, implemented following a trial period.</td><td>Compliant</td><td></td></tr>
<tr><td>4.6 Place and operate the ventilation fan at least 10m below ground level rather than at the surface. The interim ventilation fan would be placed within the deepest section of the box cut until the final fan is commissioned. The interim fan may be retained as a backup ventilation system in the event of failure of the final fan.</td><td>The ventilation fan was observed at around 60 m below ground surface during the site inspection.</td><td>Compliant</td><td></td></tr>
<tr><td>4.9a Ensure that Frequency Modulated Reversing Alarms are fitted to all mobile equipment that require such alarms.</td><td>Continuous during the life of the Project</td><td>Aurelia advised that mobile plant are fitted with frequency modulated reversing alarms.</td><td>Compliant</td><td></td></tr>
<tr><td>All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.</td><td>4.11 Ensure, where practicable, that all Project employees and contractors enter and exit the Project Site in a courteous manner and without causing undue traffic noise.</td><td>Continuous during transportation operations.</td><td>Aurelia advised that the Drivers Code of Conduct is included in heavy vehicle induction.</td><td>Compliant</td><td></td></tr>
<tr><td rowspan="6">All activities are undertaken in such a manner as to reduce the noise level generated and minimise impacts on surrounding landholders and/or residents.</td><td>Other Noise and Vibration Controls</td><td rowspan="6">Continuous during mining operations.</td><td>3 new CAT 730s have replaced 3 Volvo A30 trucks.</td><td>Compliant</td><td></td></tr>
<tr><td>4.14 Ensure that equipment with lower sound power levels is used in preference to more noisy equipment.</td><td>Addressed above.</td><td>Compliant</td><td></td></tr>
<tr><td>4.15 Maintain an open dialogue with the surrounding community and neighbours to ensure any concerns over noise or vibration are addressed.</td><td rowspan="4">No noise monitoring is carried out within this area, however noise monitoring at closer locations to the mine indicate compliance with the criteria.</td><td rowspan="4">Compliant</td><td rowspan="4"></td></tr>
<tr><td>4.16 Ensure that the noise generated by the project does not exceed the criteria below on more than 25% of land within the Majors Creek State Conservation Area.
<table>
<tr><th>Day</th><th>Evening</th><th>Night</th><th></th></tr>
<tr><td>LAeq (15min)</td><td>LAeq (15min)</td><td>LAeq (15min)</td><td>LA1 (1 min)</td></tr>
<tr><td>35</td><td>35</td><td>35</td><td>45</td></tr>
</table>
Note: Noise generated by the project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy</td></tr>
</table>

	4.17 Ensure that the blasting on site does not cause exceedances of the criteria in the table below. ***Airblast overpressure*** / ***(dB(Lin Peak))*** — ***Ground vibration*** / ***(mm/s)*** — ***Allowable exceedance***: 120 / 10 / 0% Note: All blasts are to be designed by a suitably qualified and experienced blasting engineer.		No blasting exceedances reported during the audit period.	Compliant	
5 ECOLOGY					
Management of disturbance within the Project Site to minimise impact on fauna of conservation value.	5.1 Ensure that, with the exception of the Return Air Rise, Fresh Air Rise and associated infrastructure, no ground disturbing activities are undertaken within areas of identified Ribbon Gum Forest and Fragmented Ribbon Gum Forest.	Continuous during the life of the project.	-	Compliant	
	5.1a Implement reasonable and feasible measures to ensure that fauna, including birds, do not enter the Tailings Storage Facility and monitor the facility for such use.		A fauna proof fence, and 12hrly inspection of TSF for fauna have been implemented. Ducks regularly enter the TSF, however impacts are considered negligible.	Compliant	
	5.1b Conduct annual late winter surveys for the presence of active Little Eagle nests within the project site for the life of the Project. In the event that one or more nests are identified, prepare and implement an appropriate management plan in consultation with OEH.		Autumn and spring flora and fauna monitoring was undertaken by Eco Logical in 2020 and 2021, considered generally compliant with this condition. Aurelia advised that the 2021 late-winter ecology report is still being prepared. **Recommendation**: Ensure that ecology monitoring reports specify monitoring for active Little Eagle nests and are conducted in late winter.	Compliant	
Maintenance and improvement of the biodiversity value of the Project Site and surrounding areas.	5.2 Avoid the use of phosphate-based fertiliser in pasture areas to encourage the regeneration of native grasses.	Continuous during the life of the Biodiversity Strategy.	Aurelia advised that no fertilisers are used on site.	Compliant	
	5.3 Manage grazing operations, including stocking rates and fencing, in a manner to sustain and facilitate the spread of native grass species.		Grazing is managed in the surrounding biodiversity offset area in accordance with the Grazing Management Plan, incorporated in the Biodiversity Management Plan.	Compliant	
	5.4 Fence all areas of Ribbon Gum Forest and Fragmented Ribbon Gum Forest to exclude stock.		Fenced.	Compliant	
	5.4a Manage all areas of Ribbon Gum Forest and Fragmented Ribbon Gum Forest to maintain to improve biodiversity values.		-	Compliant	
	5.5 Ensure that areas of habitat suitable for the Majors Creek Leek Orchid are appropriately identified and fenced with a 20m buffer and access restricted. Ensure no disturbance occurs within the fenced areas.		The BioMP concluded that the habitat is highly disturbed and would be unlikely to support the Majors Creek Leek Orchid. No Leek Orchid areas are currently fenced and no Leek Orchids were reported during this monitoring period.	Compliant	
	5.6 Prepare a management plan to ensure that Common Wombat are not harmed during establishment of the tailings storage facility. This plan may include the following. ▪ Mark all wombat burrows prior to the commencement of ground disturbing activities. ▪ Commence ground disturbing activities on the upper slopes of creek banks a few days before disturbing the identified hollows to allow individual wombats time to vacate their burrows at night when equipment is not operating. ▪ Inspect all burrows to ensure that common wombats have vacated the proposed area of disturbance. ▪ Any remaining wombats would be relocated in consultation with a suitably qualified and experienced wildlife carer, fauna ecologist and/or local wombat expert.		Wombat Management Plan Rev 5 27/5/2019.	Compliant	

	5.8 Ensure that dead fallen and standing timber are not removed or disturbed to preserve fauna habitat.		-	Compliant	
Maintenance and improvement of the biodiversity value of the Project Site and surrounding areas. (Cont'd)	5.9a Identify and implement an offsite biodiversity strategy that would: ▪ Ensure the protection and enhancement of a minimum of 35.5ha of Tableland Basalt Forest in similar condition to that community within the project site; ▪ Include a Biodiversity Offset Area within the vicinity of the project site but outside the area of predicted groundwater drawdown; ▪ Be implemented in perpetuity; and ▪ Be described in the Biodiversity Management Plan for the project, as amended. ▪ Alternatively, ensure that funding to an equivalent amount that would have been required under the abovementioned offsite Biodiversity Offset Strategy is made available in perpetuity for the management of Tableland Basalt Forest matters in the vicinity of the project site.	Within 12 months of the commencement of construction.	Aurelia requested an extension for the offset strategy until August 2022. Approved by the DPIE on 12/3/2021. Aurelia advised that they are in the tender process for sourcing offset land and will be seeking a further extension for this condition.	Not-Triggered	
	5.9b Extend the offset strategy to be implemented under conditions 32 and 33 in schedule 3 of the Project Approval as follows: ▪ The extended biodiversity offset area will be as described in the following table and as shown in Appendix 4; ▪ Those portions of the approved Biodiversity Areas identified in Appendix 4 (Combined Biodiversity Offset Area) as either Ribbon Gum Forest or Fragmented Ribbon Gum Forest, or any area within the Combined Biodiversity Offset Area where it is appropriate to re-establish the Endangered Ecological Community Tableland Basalt Forest, will be managed in a manner that would ensure the regeneration of that community; and ▪ The remainder of the Combined Biodiversity Area, where appropriate, will be managed in a manner that would ensure the regeneration of native grassland which is consistent with the Natural Temperate Grassland EEC.	Continuous during the life of the Project.	As above.	Not-Triggered	
	Table: Extended Biodiversity Offset Area				
	Community Type / **Area (ha)** Ribbon Gum Forest* / 17.8 ha Woody Weeds Shrubland / 2.3 ha Native – dominated pasture / 8 ha **TOTAL** / **28.1** * Listed as an EEC under the Threatened Species Conservation Act, 1995				
	5.10 Prepare a Biodiversity Management Plan in consultation with the relevant government agencies and the community consultative committee. That plan would: ▪ Specify biodiversity-related actions to be undertaken during the life of the Project and for several years after the site has been decommissioned; ▪ Incorporate the above commitments; ▪ Include a program to determine the condition of Araluen Scarp Grassy Forest EEC adjacent to Majors Creek within the Majors Creek State Conservation Area, including ongoing monitoring: ▪ Include a program to identify any groundwater dependent (phreatophytic) vegetation within and outside the zone of groundwater drawdown, including an assessment of soil moisture; ▪ Specify that the required monitoring of phreatophytic vegetation should include pre-dawn measurement of water potential and transpiration by means of porometry at a series of measurement sites across the drawdown cone (not limited to the project site, but at 2 metres at the outermost). Monitoring to include monitoring of bore depth and rainfall, at least 4 times a year in August, November, January and March; ▪ Include a program to identify and monitor stygofauna within and surrounding the project site, including a program to collate onsite baseline data utilising the existing groundwater monitoring network; ▪ Describe management of the proposed biodiversity area(s); ▪ require the collection, appropriate storage and recording of native seed within the project site to supply amelioration and rehabilitation activities;	Within 12 months of the commencement of construction.	Biodiversity Management Plan (BioMP) (Rev 5, 22/08/2019).	Compliant	

	▪ Describe the proposed revegetation and amelioration program, including identification of areas to be revegetated/ameliorated and the species to be used; and				
	▪ Involve, where practicable, local community groups in management of biodiversity with in the Project Site.				
	5.11 Construct the proposed water pipelines in a manner that would not disturb any Ribbon Gum Forest nor any vegetation over 3m height.	During pipeline construction.	Pipelines that coincide with the ribbon gum area utilise the Spring Creek truck crossing.	Compliant	
	5.13 Ensure that all in-ground infrastructure in the vicinity of living native trees that comprise a component of the Ribbon Gum Forest or Fragmented Ribbon Gum Forest are installed in accordance with AS4970-2009 – Protection of Trees on Development Sites. In particular, ensure that such infrastructure is installed outside any Tree Protection Zone established by the standard.	During construction of in-ground infrastructure.	Spring Creek truck crossing completed prior to audit period.	Compliant	
6 GROUNDWATER					
Compensate for anticipated reduced groundwater discharges to surface water.	6.3 Release water sourced primarily from the harvestable rights dams at the rates identified in **Table 4.20** of the *Environmental Assessment* into Majors Creek at the confluence of Majors and Spring Creeks. These environmental discharges are to continue from the commencement of mining operations until the loss of baseflow is negligible, as determined under condition 22 in schedule 3 of the Project Approval.	From commencement of mining operations until the loss of baseflow is negligible, as determined under condition 22 in schedule 3 of the Project Approval.	No releases were undertaken during the audit period due to negligible loss of baseflow caused by mining operations.	Compliant	
	6.4a Ensure that water extracted from the historic workings is used for mining-related and compensatory release purposes only. Any release of water from the historic workings for the purpose of compensatory release will comply with the trigger levels identified in the protocol referred to in condition 31(a) in schedule 3 of the Project Approval that is required to be contained in the Surface and Ground Water Response Plan.	Continuous during the Life of the Project.	-	Compliant	
Confirm the accuracy of the groundwater model and anticipated impacts.	6.4d Undertake, in consultation with NOW, a pump test to confirm the assumed hydrological parameters used in the groundwater model. The pump test should be in the vicinity of the mine where the fracture density and hydraulic conductivity is likely to be high.	As soon as practicable and during the life of the Project.	The groundwater model was last updated by AGE in September 2021 and did not consider pump testing to be required as part of model update.	Compliant	
	6.4e Undertake a review of the numerical groundwater model, including: ▪ Further detailed baseline data inputs, as required by the conditions of the approval; ▪ A statistical comparison of the Braidwood and Majors Creek rainfall data to determine the significance of choice of input; ▪ Rain fall data from the weather station within the project site (if determined to be relevant): ▪ Pumping tests of relevant bores; ▪ A comprehensive sensitivity and uncertainty analysis of groundwater model outputs; ▪ Measurement of baseflow in Majors and Spring Creeks; and ▪ Investigation of the water quality arising from the mine backfilling including modelling of dissolution associated with changes in hydrology, groundwater flow and the nature of the aquifer matrix. In the event that the actual impacts are significantly greater than those presented in AGE (2010), then the Proponent would consult with NOW in relation the revised modelling results and would develop appropriate management and mitigation measures to address those impacts	Prior to commencement of mining operations and every two years following commencement of those operations.	AGE (2021) Dargues Reef Gold Mine Groundwater Model Update, September 2021.	Compliant	

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Minimisation of groundwater contamination.	6.5 Store all hydrocarbon and chemical products within a bunded area complying with the relevant Australian Standard.	Continuous during the life of the Project.	During the site inspection, 200 L drums and intermediate bulk containers (IBCs) were observed adjacent to the mechanical workshop without appropriate bunding. Construction of a concrete bund was noted next to the workshop and Aurelia advised this will be utilised for raw material and waste storage and handling.	Non-Compliant	NC5
	6.6 Refuel all equipment within designated, sealed areas of the Project Site, where practicable.		Refuelling bay in maintenance area.	Compliant	
	6.7 Undertake all maintenance works involving hydrocarbons, where practicable, within designated areas of the Project Site such as the maintenance workshop.		Maintenance works undertaken in workshop.	Compliant	
	6.8 Direct all water from wash-down areas and workshops to oil/water separators and containment systems.		2 oil/water separators are located on-site associated with the wash down bay and mechanical workshop.	Compliant	
	6.11 Ensure that the upper surface of the proposed Tailings Storage Facility is capped with a suitable clay or artificial liner in consultation with the relevant government agency.	During rehabilitation operations.	-	Not Triggered	
	6.12 Cap the tailings storage facility during final shaping and rehabilitation to minimise the potential for infiltration of surface water into the facility. The nature of the cap is to be determined in consultation with the relevant government agencies during preparation of the *Rehabilitation Management Plan* .	During final rehabilitation.	-	Not Triggered	
Ensure that the properties of the paste are appropriately understood and managed.	6.13 Undertake further testing of the tailings material to confirm the results of test work undertaken prior to the commencement of mining operations and the proposed paste fill operational, management and mitigation measures.	Following commencement of processing operations and prior to the commencement of paste fill operations.	There is currently insufficient data to assess if paste fill used to fill mine voids complied with the general solid waste criteria.	Non-Compliant	NC4
7 SURFACE WATER					
Minimise the volume of water required to be used for mining-related purposes.	7.2 Ensure that the site access road is treated using chemical dust suppressants or similar to ensure that regular watering is not required.	Continuous during the life of the Project.	Aurelia confirmed that all roads sprayed with chemical dust suppressants.	Compliant	
Prevention of contamination of surface waters.	**Water Quality Measures**	Continuous during the life of the Project.	ROM pad constructed prior to audit period. Sediment basins catch flow from waste rock areas and ROM pad.	Compliant	
	7.19 Ensure that no low-grade ore material is used to construct the ROM Pad or is stored in areas where potentially low-pH leachate may flow to natural drainage.				
	7.20 Ensure waste rock material to be used during site establishment operations is tested for acid generation potential and any potentially acid generating material is appropriately managed.		Prior to audit period.	Compliant	
Prevention of contamination of surface waters.	7.21 Ensure that all water with the potential to contain processing reagents, hydrocarbons, other chemicals or lowered pH is contained within a bunded Contaminated Water Management Area and that all surface waters within the that area retained and pumped to the Process Water Tank for use within the processing plant.	Continuous during the life of the Project.	Water Management Plan (WMP) (Rev 9, 23/4/2020). Process water goes to process water pond. Surface water drainage goes to the ROM basin.	Compliant	

8 ABORIGINAL HERITAGE					
Site activities are undertaken without impacting upon any Aboriginal heritage items.	8.3 If items of suspected Aboriginal heritage significance are identified throughout the life of the Project, the following procedures would be implemented.	Continuous during the life of the Project.	No items of suspected Aboriginal heritage significance were identified during the audit period.	Compliant	
	Step 1 – No further earth disturbing works would be undertaken in the vicinity of the suspected item of Aboriginal heritage significance.				
	Step 2 – A buffer of 20m x 20m would be established around the suspected item of Aboriginal heritage significance. No unauthorised entry or earth disturbance would be allowed with this buffer zone until the area has been assessed.				
	Step 3 – A qualified archaeologist or the OEH would be contacted to make an assessment of the discovery and prepare an assessment report, including recommended mitigation measures. The draft report would then be provided to representatives of the local Aboriginal community (including registered Aboriginal stakeholders identified during the preparation of the EA and subsequently) by way of consultation in accordance with the requirements of Stage 4 of *Aboriginal cultural heritage consultation requirements for proponents – April 2010* (or subsequent versions).				
	8.4a Consult with the local Aboriginal community representatives in relation to sites or items of actual or suspected Aboriginal heritage significance and ways in which the Proponent and community can work co-operatively for the benefit of both.		Aboriginal Heritage Management Plan (AHMP) (Rev 6, 22/8/2019).	Compliant	
10 TRAFFIC AND TRANSPORTATION					
Achieve safe and efficient transport operations.	10.6 Establish a speed limit of 40km/hr on the site access road for heavy vehicles, 60km/hr for light vehicles and 20km/hr for all vehicles in the operational sections of the Project Site.		-	Compliant	
	10.8 Develop and enforce a Code of Conduct for all drivers for all heavy vehicles that travel to and from the Project Site regularly. The Code of Conduct would stipulate safe driving practices must be maintained at all times. The code would also include specific requirements for practices to be adopted during periods of fog, such use of headlights / fog lights and adopting vehicle speeds appropriate to the conditions as required, as well as limiting noisy driving practices in the vicinity of residences.		Driver Code of Conduct Rev 3, 14/5/2021. Aurelia advised that the Drivers Code of Conduct is included in inductions for heavy vehicle operators.	Compliant	
12 VISUAL AMENITY					
Limit the visibility of operational areas from nearby residences and Majors Creek Road.	12.3 Continuation of the existing tree planting program to limit views of the Project Site from areas to the southwest, south and southeast of the Project Site.	During progressive rehabilitation operations.	No tree planting was undertaken during the audit period. Trees previously planted along the noise bund didn't take very well; more bunding trees will be planted.	Compliant	
	12.4 Construction of the processing plant and other infrastructure within the Project Site from non-reflective, neutral-coloured material.	During site establishment operations.	-	Compliant	
	12.6 Consider any reasonable request by a potentially affected resident for assistance to create a visual screen adjacent to their residence through planting of fast-growing vegetation and/or landscaping where such a screen would effectively reduce the visual impact of the Proponent's activities during the life of the Project.	Continuous during the life of the Project.	One request was received for visual mitigation of direct views of the mining operations. Aurelia conducted an inspection and assessed there to be no significant direct views from the property.	Compliant	

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13 SOILS AND LAND CAPABILITY					
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion.	13.1 Strip soil materials to the depths identified in Table 2.2 of the *Environmental Assessment* .	During site establishment operations.	Aurelia advised that a site disturbance permit is required for all soil works on site, which limits soil stripping to 120 mm. This is less than specified in Table 2.2 of the EA. Aurelia advised that all available soil material is recovered, consistent with the EA. Aurelia advised that these maintenance measures are carried out during soil works. **Recommendation**: Amend the Site Disturbance Permit to align with the soil stripping advice in the EA Table 2.2 i.e. 300 mm, and to include the additional requirements in this commitment.	Compliant	
Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion. (Cont'd)	13.2 Strip soil materials only when they are moderately moist to preserve soil structure.	During site establishment operations.			
	13.3 Stockpile topsoil and subsoil materials separately.				
	13.4 Construct soil stockpiles as low, flat, elongated mounds on slopes of less than 1:10 (V:H). Topsoil stockpiles would be less than 2m high and subsoil stockpiles would be less than 3m high.				
	13.5 Ensure that soil stockpiles and rehabilitated areas achieve a 70% vegetative cover within 10 days of formation. This may be achieved through use of recycled organic material.	During site establishment operations.			
Maximising the potential for successful rehabilitation of disturbed sections of the Project Site.	13.6 Place soil material in areas to be rehabilitated in the same stratigraphic order in which they were removed. Topsoils of one soil landscape unit may be mixed with topsoils soils of the other landscape unit. Similarly, subsoils of one soil landscape unit may be mixed with subsoils soils of the other landscape unit.	During rehabilitation operations.	Applicable during remediation.	Not Triggered.	
14 SOCIO-ECONOMIC					
Maximise the positive impacts and minimise any actual or perceived adverse impacts on the social fabric or facilities available to the community surrounding the Project Site.	14.1 Engage each of the communities surrounding the Project Site in regular dialogue in relation to the proposed and ongoing operation of the Project and maintain an "open door" policy for any member of those communities who wishes to discuss any aspect of the Project.	Prior to, during and following the life of the Project.	Facebook group and phone line are active.	Compliant	
	14.2 Proactively and regularly consult with those residents most likely to be adversely impacted by the Project, particularly those within the Majors Creek and Araluen Communities.		-	Compliant	
	14.3 Continue to support community organisations, groups and events, as appropriate, and review any request by a community organisation for support or assistance throughout the life of the Project. Particular emphasis would be placed on providing support to those organisations, groups or events that service the communities in Majors Creek, Araluen or Braidwood.		The community grants program is active as displayed on the website and Facebook group, and reported in the Annual Reviews.	Compliant	
	14.4 Form and maintain a Community Consultative Committee (CCC), including representative members of the community, Palerang Council and one representative from Eurobodalla Shire Council. It is noted that the Proponent has previously consulted with the Majors Creek Community Liaison Committee. The Proponent would continue to do so, either as part of the CCC or separately		Meeting minutes from the latest meeting in June 2021 report attendance by the independent Chair, and representatives from Aurelia, Council, ESC and the local community.	Compliant	
	14.6 Advertise and maintain a community Information line 1800 732 002.		Phone line active and advertised on the Company website.	Compliant	
	14.7 Give preference when engaging new employees, where practicable, to candidates who are part of the Majors Creek, Araluen or Braidwood communities over candidates with equivalent experience and qualifications based elsewhere and ensure that the mining and other contractors do so as well.		Aurelia advised that hiring has been compliant with this commitment.	Compliant	
	14.8 Encourage the involvement of the local Aboriginal community in the workforce.		-	Compliant	
	14.9 Encourage and support participation of locally based employees and contractors in appropriate training or education programs that would provide skills and qualifications that may be of use to encourage and further develop economic activity within the surrounding communities following completion of the Project.		Apprenticeships offered for locally based employees.	Compliant	
	14.10 Give preference, where practicable, to suppliers of equipment, services or consumables located within the Palerang LGA.		-	Compliant	
	14.11 Assist community members and others, as appropriate, to establish complimentary businesses within the Palerang LGA where those businesses would provide a benefit to the community through increased economic activity or development.		Mabelle cleaners	Compliant	
	14.12 Assist Palerang Council to promote and encourage economic development that would continue beyond the life of the Project.		-	Compliant	
	14.13 Ensure that infrastructure and services installed for the Project, including the electricity transmission facilities, road improvements and water supply bores, remain available for alternative uses during and/or following completion of the Project.		Applicable upon cessation of operations.	Not Triggered	

	14.14 Encourage and support, in consultation with the local community, the provision of services to the community. These may include health, education, transportation and other services.		Consultation is sought through the CCC and community grants program to support community services.	Compliant	
	14.16 Ensure that the land capability of those sections of the final landform to be used for agricultural purposes is similar to the current land capability.		Applicable upon cessation of operations.	Not Triggered	
15 ENVIRONMENTAL MONITORING					
Ongoing monitoring and reporting of Project-related environmental impacts.	15.7 Monthly monitoring in the laboratory of groundwater in the bores, exploration holes and workings identified in **Table 4.21** of the *Environmental Assessment* for the following parameters. ▪ Alkalinity. ▪ Major cations and anions. ▪ Nutrients – (ammonia, nitrate, nitrite). ▪ Metals – (iron, lead, chromium, cadmium, zinc, arsenic, copper and nickel). Collection of those samples for laboratory analysis will reasonably coincide with the surface monitoring as described in commitment 15.12.	Prior to, during and following the life of the Project until relevant government agencies agree that further monitoring is not required.	This condition is in contradiction to the environmental monitoring described in the EPL. Laboratory analysis of groundwater was undertaken quarterly, as per condition M2.3 of the EPL. **Recommendation** Consult with the relevant authorities to revise this commitment.	Compliant	
	15.11A The monitoring program to be prepared as part of the Groundwater Monitoring Program pursuant to condition 30(d) in schedule 3 of the approval is to be a monitoring program during the life of the project and until the conclusion of rehabilitation, where appropriate.	During the life of the project and until the conclusion of rehabilitation, where appropriate.	-	Compliant	
	Surface Water 15.12 Undertake monthly surface water monitoring at the following locations (**Figure 4.3** of the EA). ▪ Location 1 – Majors Creek upstream of the confluence of Spring & Major's Creek. ▪ Location 2 – Majors Creek downstream of the confluence of Spring & Major's Creek. ▪ Location 3 – downstream of the tailings storage facility. It is noted that this sampling location would be incorporated into the Tailings Management Plan. ▪ Location 4 – Spring Creek downstream of main Project infrastructure and sediment basin outlets. ▪ At a range of locations downstream of the Majors Creek State Conservation Area. ▪ Discharge point for the compensatory flows (sampling to be undertaken initially daily for the first three months of the program, with the frequency to be increased in consultation with the relevant government agency after that period).	Prior to, during and following the life of the Project.	Monthly monitoring was reported in the Annual Reviews and data provided on the Company website.	Compliant	

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Ongoing monitoring and reporting of Project-related environmental impacts. (Cont'd)	15.12A The monitoring program to be prepared as part of the Surface Water Monitoring Program pursuant to condition 29(d) in schedule 3 of the approval is to include a program to monitor pH and electrical conductivity, in real time, from at least three locations, including locations within and downstream of the tailings storage facility.	Prior to, during and following the life of the Project.	Aurelia advised that real-time pH and electrical conductivity monitors have not yet been installed as part of the Surface Water Monitoring Program. However, quotes have been received and works have been delayed by access and personnel issues. **Recommendation**: Clarify this commitment in the WMP, including listing the locations to be monitored. Monitoring results to be included on the website in the Annual Review reports.	Non-Compliant	NC9
	15.12B Install two gauging stations on Majors Creek, one upstream and one downstream of the confluence with Spring Creek, capable of continuous measurement of stream flow.		Installed and data available on the Company website.	Compliant	
	15.12C The Water Management Plan should include provision for:	Within 12 months of the commencement of construction.		Compliant	
	▪ The installation of a V-notch weir on Spring Creek downstream of the mine and below the confluence with a major gully coming in from the east (approximate coordinates 749275E, 6064175N (MGA, Zone 56));		Completed.		
	▪ The investigation of the hydrogeology of the tailings storage facility and the installation of monitoring bores around the tailings storage facility;		6 TSF monitoring bores have been installed. Results summarised in Annual Review and data on the website.		
	▪ The installation of a monitoring bore to the south-east where the sensitivity analysis indicates a possible extension of the 1m drawdown contour (approximate coordinates: depending on landholder approval – 750900E, 6064100N (MGA, Zone 56), or alternative location within the project site – 750350E, 6064550N (MGA, Zone 56));		DRWB12 and 13 were installed.		
	▪ The installation of monitoring bores DRWB 09 and DRWB 10;		Completed.		
	▪ The installation of a pair of bores adjacent to Spring Creek at the mapped intersection of the dominant lineament (fault) trending south east towards and along Majors Creek (approximate coordinates 749350E, 6064175N (MGA, Zone 56)).		Completed.		
Ongoing monitoring and reporting of Project-related environmental impacts. (Cont'd)	15.13A The monitoring program to be prepared as part of the Surface Water Monitoring Program pursuant to condition 29(d) in schedule 3 of the approval is to be a monitoring program during the life of the project and until the conclusion of rehabilitation, where appropriate.	During the life of the project and until the conclusion of rehabilitation, where appropriate.	-	Compliant	
	Notification	Prior to, during and following the life of the Project.			
	15.13B The protocol for the investigation, notification and mitigation of any exceedances of the surface water, stream health and groundwater assessment criteria, which is to be included in the Surface and Ground Water Response Plan (condition 31(b) in schedule 3 of the approval), is to include provision for the notification of ESC of any such exceedances within 7 days of the exceedance being detected, and subsequently, once an appropriate response has been identified with the relevant government agencies, any other water user downstream of the Project Site who registers their interest to be notified.		Provision for notification of ESC has been included in Section 15 of the Water Management Plan and referenced in the relevant TARPs. Provision has also been made for notification via social media for interested downstream users.	Compliant	
	Water Management Plan (incorporating Surface Water Monitoring Program, Groundwater Monitoring Program and Surface and Ground Water Response Plan)				
	15.13C The objectives of the abovementioned programs and plans which are required under the approval, are to generally include, but are not limited to:		-	Compliant	
	▪ Ensuring that the disposal of material in the tailings storage facility, and management of that facility, does not cause material harm to the environment;				
	▪ Taking all necessary measures to protect the quality of the water, as drinking water, for existing downstream users, including the water supply for the Eurobodalla Shire; and				
	▪ Implementing appropriate monitoring and response measures to ensure that action is taken to promptly mitigate any adverse impacts of the project on surface water and groundwater so that drinking water of acceptable quality continues to be available to downstream users, including Eurobodalla Shire.				

Ongoing monitoring and reporting of Project-related environmental impacts. (Cont'd)	**Eurobodalla Shire Council**	During active mining operations and until the completion of rehabilitation operations.	No request was made to update the Water Management Plan or undertake a peer review of the Annual Review.	Not Triggered	
	15.14A The Proponent shall pay Eurobodalla Shire Council the following contribution each calendar year:				
	• The reasonable costs, up to a maximum of $10,000, of Eurobodalla Shire Council engaging its own expert to:				
	▪ Undertake a review of the Water Management Plan required under the approval; and				
	▪ Undertake a peer review of the Annual Review carried out by the Proponent pursuant to condition 3 in Schedule 5 of the approval.				
	As part of these reviews undertaken by Eurobodalla Shire Council's expert, the Proponent will provide that expert with reasonable access to the tailings storage facility.				
	A copy of the draft report produced by Eurobodalla Shire Council's expert pursuant to each of the abovementioned reviews must be made available to the Proponent for its review and comment prior to the report being finalised by Eurobodalla Shire Council's expert.				
	This contribution must be indexed according to the CPI at the time of each payment.				
	15.14B The surface water quality criteria to be included in the Surface Water Monitoring Program pursuant to condition 29(c) in schedule 3 of the approval is to take into account, among other things, that the surface water sources are located within the drinking water catchment for the Eurobodalla Shire.		-	Compliant	
17 OTHER					
Insurance.	17.1 The Proponent shall effect and maintain a public liability insurance policy to the amount of $60,000,000.	During active processing operations until the completion of rehabilitation operations.	-	Compliant	
	The policy maintained under this commitment must name Eurobodalla Shire Council as an interested party and a beneficiary to the policy to the extent of the acts or omissions of the Proponent, for the purposes of s48 of the Insurance Contracts Act 1984 (Cth).				

Table 3: Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

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Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
1 ADMINISTRATIVE CONDITIONS					
A1 What the licence authorises and regulates					
A1.1	This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2. There are a number stages to the scheduled development works of which the following stages are authorised by this licence: Note: All construction timeframes commence with notification of recommencement of the project by the Licensee and are general in nature. Project Month 1 – 14: • Ground disturbing activities, including: ▪ Topsoil and subsoil stripping and stockpiling. ▪ Importing of earth materials for ground conditioning and surface preparation. ▪ Excavation and extraction of earth materials for construction and processing. • Construction of built infrastructure. Project Month 1 – 3: • Construction of surface infrastructure including: ▪ Administration and mine support buildings. ▪ Various workshops and stores sheds. • Commencement of construction of the Spring Creek Crossing and Waste Rock Emplacement. • Commencement of underground mining. Project Month 4 – 14: • Construction of the Process Plant. • Construction of Stage 1 of the Tailings Storage Facility.	Completed	Completed	Compliant	
A1.2	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. **Scheduled Activity** / **Fee Based Activity** / **Scale** Crushing, Grinding or Separating / Crushing, grinding or separating / 100,000 - 500,000 T annual processing capacity Mining for Minerals / Mining for minerals / 100,000 - 500,000 T annual production capacity	Annual Reviews. Internal monthly reporting sighted.	Annual Reviews. Internal monthly reporting sighted.	Compliant	
A2 Premises or plant to which this licence applies					
A2.1	The licence applies to the following premises: Premises Details DARGUES GOLD MINE MAJORS CREEK ROAD MAJORS CREEK NSW 2622 LOT 1 DP 136801, LOT 2 DP 136801, LOT 3 DP 755934, LOT 82 DP 755934, LOT 83 DP 755934, LOT 113 DP 755934, LOT 114 DP 755934, LOT 143 DP 755934, LOT 193 DP 755934, PART LOT 210 DP 755934, LOT 1 DP 986483, LOT 4 DP 986483, LOT 5 DP 986483, LOT 104 DP 1100849, LOT 102 DP 1170553, LOT 103 DP 1170553, LOT 105 DP 1170553, LOT 106 DP 1170553, LOT 104 DP 1180508 DARGUES REEF GOLD MINE. PREMISES ALSO INCLUDES THE FOLLOWING: LOT 2 DP 986483, LOT 3 DP 986483, LOT 102 755934,	-	-	Compliant	

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

<table>
<tr><th>Condition no.</th><th>EPL Condition</th><th>Evidence</th><th>Audit Findings / Recommendations</th><th>Compliance Status</th><th>Unique Identification on Noncompliance</th></tr>
<tr><td colspan="2">A3 Information supplied to the EPA</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="4">A4.1</td><td>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.</td><td rowspan="4">-</td><td rowspan="4">-</td><td rowspan="4">Compliant</td><td rowspan="4"></td></tr>
<tr><td>In this condition the reference to "the licence application" includes a reference to:</td></tr>
<tr><td>a) The applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and</td></tr>
<tr><td>b) The licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</td></tr>
<tr><td colspan="2">2 Discharges to Air and Water and Applications to Land</td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="2">P1 Location of monitoring/discharge points and areas</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="8">P1.1</td><td>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.
<table>
<tr><th>EPA identification no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr>
<tr><td>38</td><td>Dust Deposition Gauge</td><td></td><td>At the location marked as "DD-1" on the map labelled "Figure 1.4 Surrounding Residences and Air Quality Monitoring Locations" of the “EPL 20095 Sampling Locations for the Dargues Gold Mine” for the premises dated 22 March 2017 (EPA reference DOC17/187905).</td></tr>
<tr><td>39</td><td>Dust Deposition Gauge</td><td></td><td>At the location marked as "DD-2" on the map labelled "Figure 1.4 Surrounding Residences and Air Quality Monitoring Locations" of the “EPL 20095 Sampling Locations for the Dargues Gold Mine” for the premises dated 22 March 2017 (EPA reference DOC17/187905).</td></tr>
<tr><td>40</td><td>Dust Deposition Gauge</td><td></td><td>At the location marked as "DD-3" on the map labelled " Figure 1.4 Surrounding Residences and Air Quality Monitoring Locations" of the “EPL 20095 Sampling Locations for the Dargues Gold Mine” for the premises dated 22 March 2017 (EPA reference DOC17/187905).</td></tr>
<tr><td>41</td><td>Dust Deposition Gauge</td><td></td><td>At the location marked as "DD-4" on the map labelled " Figure 1.4 Surrounding Residences and Air Quality Monitoring Locations" of the “EPL 20095 Sampling Locations for the Dargues Gold Mine” for the premises dated 22 March 2017 (EPA reference DOC17/187905).</td></tr>
<tr><td>42</td><td>Dust Deposition Gauge</td><td></td><td>At the location marked as "DD-5" on the map labelled " Figure 1.4 Surrounding Residences and Air Quality Monitoring Locations" of the “EPL 20095 Sampling Locations for the Dargues Gold Mine” for the premises dated 22 March 2017 (EPA reference DOC17/187905).</td></tr>
<tr><td>77</td><td>High volume air sampling</td><td></td><td>South west of the project site boundary at the location marked as "R108" on the map labelled "Figure 1 Surrounding residences and air quality monitoring locations" of the amended Air Quality and Greenhouse Gas Management Plan (DOC18/487069-04)</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table></td><td rowspan="8">Annual Reviews.</td><td rowspan="8">DD1 has been relocated; EPL has been amended in the latest version.</td><td rowspan="8">Compliant</td><td rowspan="8"></td></tr>
</table>

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.				
	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or setting of limits for the emission of noise from the point.				

Water and Land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
47	Groundwater Monitoring - Regolith Aquifer		At the location marked "DRWB05" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
48	Groundwater Monitoring – Alluvium		At the location marked "DRWB06" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
49	Groundwater Monitoring - Alluvium		At the location marked "DRWB07" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
50	Groundwater Monitoring - Alluvium		At the location marked "DRWB08" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
51	Groundwater Monitoring - Alluvium		At the location marked "DRWB09" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
52	Groundwater Monitoring - Alluvium		At the location marked "DRWB10" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
53	Water Quality Monitoring - Spring Creek Upstream		At the location marked "SW-1" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
54	Water Volume and Quality Monitoring - Spring Creek Onsite		At the location marked "SW-2" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
55	Water Quality Monitoring - Spring Creek Downstream		At the location marked "SW-3" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)
56	Water Volume and Quality Monitoring - Majors Creek Upstream		At the location marked "SW-4" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)

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Condition no.	EPL Condition				Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
P1.3	57	Water Quality Monitoring - Majors Creek		At the location marked "SW-5" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)	Annual Reviews.	-	Compliant	
	58	Water Volume and Quality Monitoring - Majors Creek Downstream		At the location marked "SW-6" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	59	Water Quality Monitoring - Majors Creek Downstream		At the location marked as "SW-7" on the map labelled "Figure 1.1 Regional Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	61	Groundwater Monitoring - Alluvium		At the location marked as "DRWB12" as located in the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	62	Groundwater Monitoring - Granodiorite Aquifer		At the location marked as "DRWB13" as located in the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	74	Water Quality Monitoring - Spillway of Sediment Basin 2		At the location marked "SB02-1" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	75	Water Quality Monitoring - Spillway of Storm Water Pond 1		At the location marked "SWPO1-1" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	78	Water Quality Monitoring - Waste Rock Emplacement Sediment Basin 1		At the location marked "WRESB01-1" as located on the map labelled "Figure 1.2 Site Surface Water Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 22 March 2017 (EPA reference DOC17/187905)				
	79	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB01A" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	80	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB01B" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	81	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB02A" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	82	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB02B" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				

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Condition no.	EPL Condition				Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
	83	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB03A" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	84	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB03B" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	85	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB04A" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	86	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB04B" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	87	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB05A" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				
	88	Tailings Storage Facility Monitoring Bore		At the location marked "TSFMB05B" as located on the map labelled "Figure 1.3 Project Site Groundwater Monitoring Locations" of the "EPL 20095 Sampling Locations for Dargues Gold Mine" for the premises dated 16 July 2021 (EPA reference DOC21/878618)				

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Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
P1.4	The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises. ***Noise*** **EPA identic- fication no.** / **Type of monitoring point** / **Location description** 43 / Noise monitoring / Any residential premises 44 / Noise monitoring / Majors Creek State Conservation Area	-	-	Compliant	
3 Limit Conditions					
L1 Pollution of waters					
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Annual Reviews.	-	Compliant	
L2 Noise limits					
L2.1	Noise from the premises must not exceed the sound pressure level (noise) limits presented in the Table below. Note that the limits apply to the operation of the project and represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table below. **Sound Pressure Level (Noise) Limits (dB(A))** **Location** / **Day LAeg (15 minute)** / **Evening LAeg (15 minute)** / **Night LAeg (15 minute)** / **Night LA1 (1 minute)** Any residential premises / 35 / 35 / 35 / 45 Majors Creek State Conservation Area (when in use by any person) / 35 / 35 / 35 / 45	Annual Reviews. Noise Monitoring Reports. Noise Management Plan (NMP) (Rev 7, 11/6/2020).	Noise compliance survey not completed in December 2019 due to bushfires (2019-2020 Annual Review, Section 6.2 p 15). There is no reason to suspect a non-compliance with noise criteria during this period. All reported noise monitoring results complied with the criteria.	Compliant	
L2.2	For the purpose of Noise Limit Conditions above: 'Day' is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays; 'Evening' is defined as the period from 6pm to 10pm on any day; and 'Night' is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.		-	Compliant	
L2.3	The noise emission limits identified in the table above apply under meteorological conditions of: a) Wind speeds up to 3 m/s at 10m above ground level; or b) temperature inversion conditions of up to 3 °C/100m and wind speeds up to 2 m/s at 10m above ground level		Noise monitoring reports do not report temperature inversion strength, however this parameter is difficult to measure directly. Consultants' reports include wind speed and direction noted by the operator, not measured at a height of 10 m above the ground. **Recommendation**: Require consultants reports to include parameters measured at 10 m above the ground as reported by the on-site weather station, not as observed by the operator at perhaps 1.5 m above the ground.	Non-Compliant	NC10
L2.4	For the purpose of the Condition L4.3: a) The meteorological data to be used for determining meteorological conditions is the data recorded by the meteorological weather station established at the premises for the purposes of this Environment Protection Licence (“Point 59” as outlined in Weather Monitoring conditions below) b) Stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the *New South Wales Industrial Noise Policy* (EPA 2000).				

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Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
L2.5	**Determining Compliance** To determine compliance: a) With the Leq(15 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located: i) Approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or ii) Within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable iii) Within approximately 50 metres of the boundary of a National Park, Nature Reserve or State Conservation Area. b) With the LA1(1 minute) noise limits in the Noise Limits table, the noise measurement equipment must be located within 1 metre of a dwelling façade. c) With the noise limits in the Noise Limits table, the noise measurement equipment must be located: i) At the most affected point at a location where there is no dwelling at the location; or ii) At the most affected point within an area at a location prescribed by part (a) or part (b) of this condition.		Consultants reports (Figure 1 in each report) indicate monitoring locations adequately represent nearest receptors, however do not justify each monitoring location in relation to this condition. **Recommendation**: The noise monitoring reports should justify the selected monitoring locations.	Compliant	
L2.6	For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.		**Recommendation**: Require all noise monitoring reports to report on modifying factors (particularly tonal and low frequency noise) as required by the NSW Industrial Noise Policy (and its successor the Noise Policy for Industry)	Non-Compliant	NC11
L2.7	A breach of this licence will still occur where noise generated from the premises in excess of the appropriate limit is measured: i) At a location other than an area prescribed in part (a) and part (b) of Condition L4.5; and/or ii) At a point other than the most affected point at a location.		Noise survey locations include the closest and potentially most affected residences in each direction from the project site. Compliance at the monitoring locations therefore strongly implies compliance at all noise sensitive locations.	Compliant	

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Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
L3 Blasting					
L3.1	Surface blasting operations at the premises may only take place between 9.00am and 5.00pm Monday to Friday, excluding public holidays. (Where compelling safety reasons exist, the Authority may permit a blast to occur outside the abovementioned hours. Prior written (or facsimile) request for any such blast must be made to the Authority).	Personnel interviews.	No surface blasting was undertaken during the audit period.	Not triggered	
L3.2	The overpressure level from blasting operations at the premises must not exceed 120 dB (Lin Peak) at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	Annual reviews. Blast Management Plan (BMP) (Rev 6, 22/8/2019).	No blasting exceedances were reported during the audit period.	Compliant	
L3.3	The overpressure level from blasting operations at the premises must not exceed 115 dB (Lin Peak) for more than 5% of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.				
L3.4	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10 mm/s at any time or 1 mm/s during the Night or at any time on Sundays or Public Holidays. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.				
L3.5	Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5 mm/s during the Day or 2 mm/s during the Evening for more than 5% of the total number of blasts over for each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.				
L3.6	To determine compliance with condition(s) L5.2 to L5.5: a) Airblast overpressure and ground vibration must be measured and electronically recorded at the locations marked as "R27", "R29" and "R108" on the map labelled "Figure 1 ENVIRONMENTAL MONITORING LOCATIONS" of the Environmental Management Strategy for the premises dated 3 April 2012 (EPA reference DOC12/14651) for all blasts carried out in or on the premises; and b) Instrumentation used to measure the airblast overpressure and ground vibration must meet the requirements of Australian Standard AS 2187.2-2006.				
L3.7	For the purpose of Blasting Limit Conditions above: 'Day' is defined as the period from 7am to 6pm Monday to Saturday; 'Evening' is defined as the period from 6pm to 10pm on any day; and 'Night' is defined as the period from 10pm to 7am Monday to Saturday.				
4 Operating Conditions					
O1 Activities must be carried out in a competent manner					
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) The processing, handling, movement and storage of materials and substances used to carry out the activity; and b) The treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Second Mining Operations Plan (MOP) (16/3/2017).	-	Compliant	
O2 Maintenance of plant and equipment					
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) Must be maintained in a proper and efficient condition; and b) Must be operated in a proper and efficient manner.	Maintenance records sighted.	-	Compliant	
O3 Dust					
O3.1	All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.	Annual Reviews. Air Quality and Greenhouse Gas Management Plan (AQGGMP) (Rev 5, 22/8/2019)	-	Compliant	

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Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
O4 waste management					
O4.1	The tailings storage facility must have a basal barrier or impermeable liner with an equivalent permeability of 600mm clay of permeability 1x10 $^{-8}$ metres per per second.	Knight Piesold (2021) Tailings Storage Facility Stage 2 Construction Report (Rev A 20/5/2021).	-	Compliant	
O4.2	The seepage collection pond, leachate collection ponds, processing collection ponds and any other ponds holding contaminated water must have a basal barrier or impermeable liner with an equivalent permeability of 900mm clay of permeability 1x10 $^{-9}$ metres per second.	-	Collection Pond designs were reviewed during the previous audit period.	Compliant	
5 Monitoring and Recording Conditions					
M1 Monitoring records					
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Monitoring records sighted.	-	Compliant	
M1.2	All records required to be kept by this licence must be:				
	a) In a legible form, or in a form that can readily be reduced to a legible form;				
	b) Kept for at least 4 years after the monitoring or event to which they relate took place; and				
	c) Produced in a legible form to any authorised officer of the EPA who asks to see them.				
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence:				
	a) The date(s) on which the sample was taken;				
	b) The time(s) at which the sample was collected;				
	c) The point at which the sample was taken; and				
	d) The name of the person who collected the sample.				
M2 Requirement to monitor concentration of pollutants discharged					
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:				
M2.2	Air Monitoring Requirements				
	Point 38,39,40,41,42				
	Pollutant / **Units of measure** / **Frequency** / **Sampling Method**	Annual Reviews.	Locations were monitored.	Compliant	
	Particulates - Deposited Matter / grams per square metre per month / Monthly / AM-19				
	Point 77	Annual Reviews.	Locations were monitored.	Compliant	
	Pollutant / **Units of measure** / **Frequency** / **Sampling Method**				
	PM10 / micrograms per cubic metre / Every 6 days / AM-18				
	Water and/or Land Monitoring Requirements	Annual Reviews. EPL Returns.	No sample was collected from EPL ID 59 in Nov 2020, Apr 2021 & May 2021 due to access constraints. Downstream samples were collected. The monitoring point location has been amended in the latest version of the EPL.	Compliant	
	Point 47,48,49,50,51,52,53,54,55,56,57,58,59,61,62,79,80,81,82,83,84,85,86,87,88				
	Pollutant / **Units of measure** / **Frequency** / **Sampling Method**				
	Dissolved Oxygen / milligrams per litre / Monthly / Probe				
	Electrical conductivity / microsiemens per centimetre / Monthly / Probe				
	pH / pH / Monthly / Probe				

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
	Point 47,48,49,50,51,52,61,62,79,80,81,82,83,84,85,86,87,88	Annual Reviews. EPL Returns.	This condition is in contradiction to the environmental monitoring described in Project Approval Commitment 15.7. Laboratory analysis of groundwater was undertaken quarterly, as per condition M2.3 of the EPL. Hexavalent chromium was not sampled on all occasions due to an error on the chain of custody which has since been rectified.	Compliant	

Pollutant	**Units of measure**	**Frequency**	**Sampling Method**		
Aluminium	micrograms per litre	Quarterly	Representative sample		
Arsenic	micrograms per litre	Quarterly	Representative sample		
Cadmium	micrograms per litre	Quarterly	Representative sample		
Calcium	milligrams per litre	Quarterly	Representative sample		
Chloride	milligrams per litre	Quarterly	Representative sample		
Chromium	micrograms per litre	Quarterly	Representative sample		
Cobalt	micrograms per litre	Quarterly	Representative sample		
Iron	micrograms per litre	Quarterly	Representative sample		
Lead	micrograms per litre	Quarterly	Representative sample		
Magnesium	micrograms per litre	Quarterly	Representative sample		
Manganese	micrograms per litre	Quarterly	Representative sample		
Mercury	micrograms per litre	Quarterly	Representative sample		
Nickel	micrograms per litre	Quarterly	Representative sample		
Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Quarterly	Representative sample		
Phosphorus (dissolved reactive)	milligrams per litre	Quarterly	Representative sample		
Phosphorus (total)	milligrams per litre	Quarterly	Representative sample		
Potassium	milligrams per litre	Quarterly	Representative sample		
Redox potential	milligrams per litre	Quarterly	Representative sample		
Sodium	milligrams per litre	Quarterly	Representative sample		
Sulfate	milligrams per litre	Quarterly	Representative sample		
Temperature	degrees Celsius	Quarterly	Probe		

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition							Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
M2.3	Total Kjeldahl Nitrogen	milligrams per litre	Quarterly	Representative sample							
	Zinc	micrograms per litre	Quarterly	Representative sample							
	Point 53,54,55,56,57,58,59										
	Pollutant	**Units of measure**	**Frequency**								
	Alkalinity (as calcium carbonate)	milligrams per litre	Monthly								
	Aluminium	micrograms per litre	Monthly								
	Arsenic	micrograms per litre	Monthly								
	Cadmium	micrograms per litre	Monthly								
	Calcium	milligrams per litre	Monthly								
	Chloride	milligrams per litre	Monthly								
	Chromium (hexavalent)	micrograms per litre	Monthly								
	Cobalt	micrograms per litre	Monthly								
	Iron	micrograms per litre	Monthly								
	Lead	micrograms per litre	Monthly								
	Magnesium	micrograms per litre	Monthly								
	Manganese	micrograms per litre	Monthly								
	Mercury	micrograms per litre	Monthly								
	Nickel	micrograms per litre	Monthly					Annual Reviews. EPL Returns.	Hexavalent chromium was not sampled on all occasions due to an error on the chain of custody which has since been rectified.	Compliant	
	Nitrate + nitrite (oxidised nitrogen)	milligrams per litre	Monthly								
	Phosphorus (dissolved reactive)	milligrams per litre	Monthly								
	Phosphorus (total)	milligrams per litre	Monthly								
	Potassium	milligrams per litre	Monthly								
	Redox potential	milligrams per normalised cubic metre	Monthly								
	Sodium	milligrams per litre	Monthly								
	Sulfate	milligrams per litre	Monthly								
	Temperature	degrees Celsius	Monthly								
	Total Kjeldahl Nitrogen	milligrams per litre	Monthly								

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition							Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
	Total suspended solids	milligrams per litre	Monthly								
	Zinc	micrograms per litre	Monthly								
	Point 74,75,78										
	Pollutant	**Units of measure**	**Frequency**	**Sampling Method**				Annual Reviews. EPL Returns.	Field measurements were not undertaken daily during the water discharge event which occurred on 23-25/3/2021 from Storm Water Pond 1 (SWP1) and Sediment Basin 2 (SB02) due to a significant rainfall event. Sampling results which were recorded during and after the event were provided to the EPA.	Compliant	
	Electrical conductivity	micro siemens per centimetre	Daily during any discharge	Probe							
	pH	pH	Daily during any discharge	Probe							
	TSS	milligrams per litre	Daily during any discharge	Probe							
	Turbidity	nephelometric turbidity units	Daily during any discharge	Probe							
M3 Testing methods - concentration limits											
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) Any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) If no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) If no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".							Air Quality and Greenhouse Gas Management Plan (AQGGMP) (Rev 5, 22/8/2019).	-	Compliant	
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.							Water Management Plan (WMP) (Rev 9, 23/4/2020).	-	Compliant	

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
M4 Weather monitoring					
M4.1	The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in this section. M4.	ALS weather station data on website. ALS weather summary reports.	-	Compliant	
M4.2	For each monitoring point specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency opposite in the other columns.				
	Point 58 - Automated Weather Station				
	Parameter / **Units of Measure** / **Frequency** / **Averaging Period** / **Sampling Method**				
	Air temperature at 2m / °C / Continuous / 15 minute / AM-4				
	Wind direction / ° / Continuous / 15 minute / AM-2 & AM-4				
	Wind speed / m/s / Continuous / 15 minute / AM-2 & AM-4				
	Sigma theta / ° / Continuous / 15 minute / AM-2 & AM-4				
	Rainfall / mm / Continuous / 15 minute / AM-4				
	Relative humidity / % / Continuous / 15 minute / AM-4				
	Air temperature at 10m / °C / Continuous / 15 minute / AM-2 & AM-4				
M5 Recording of pollution complaints					
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Complaints register.	-	Compliant	
M5.2	The record must include details of the following: a) The date and time of the complaint; b) The method by which the complaint was made; c) Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) The nature of the complaint; e) The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) If no action was taken by the licensee, the reasons why no action was taken.	Complaints register. Complaint control system 'INX' example report. Example of complaint response email to complainant.	Records of complaints were found from February 2020 to current. **Recommendation**: In the complaints control system, include the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant. If no action was taken by the licensee, the reasons why no action was taken.	Compliant	
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Complaints register.	-	Compliant	
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.				
M6 Telephone complaints line					
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Telephone complaints line.	Tested- operational.	Complaint	
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	Website.	-	Compliant	
M6.3	The preceding two conditions do not apply until after the date of the issue of this licence.	-	-	-	

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
M7 Other monitoring and recording conditions					
	Noise Compliance Monitoring	Noise Monitoring Assessment 5/5/2020 MAC.	Operations commenced 23/4/2020 i.e. operation of the processing plant.	Compliant	
M7.1	A noise compliance assessment must be submitted to the EPA within three months of commencement of operations at the premises. The assessment shall be prepared by a suitably qualified and experienced acoustic consultant and must assess compliance with noise limits in this licence.				
6 Reporting Conditions					
R1 Annual return documents					
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:	EPA Annual Return forms 2019-2020 2020-2021	-	Compliant	
	1. a Statement of Compliance;				
	2. a Monitoring and Complaints Summary,				
	3. a Statement of Compliance – Licence Conditions,				
	4. a Statement of Compliance – Load based Fee,				
	5. a Statement of Compliance – Requirements to Prepare Pollution Incident Response Management Plan,				
	6. a Statement of Compliance – Requirement to Publish Pollution Monitoring Data; and				
	7. a Statement of Compliance – Environmental Management Systems and Practices.				
	At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.				
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.				
	Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.				
R1.3	Where this licence is transferred from the licensee to a new licensee:	-	-	Not Triggered	
	a) The transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and				
	b) The new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.				
	Note: An application to transfer a licence must be made in the approved form for this purpose.				
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:	-	-	Not Triggered	
	a) In relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or				
	b) In relation to the revocation of the licence - the date from which notice revoking the licence operates.				
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	-	-	Compliant	
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	-	-	Compliant	

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
R1.7	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) The licence holder; or b) By a person approved in writing by the EPA to sign on behalf of the licence holder.	Annual Returns. Personnel interviews.	Could not be verified as the retained copies of the Annual Returns are not signed. Site personnel confirmed that forms were signed as required. **Recommendation**: Ensure completed Annual Return Forms are retained and signed.	Compliant	
R2 Notification of environmental harm					
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Personnel interviews.	Aurelia advised that calls were made to advise the EPA and relevant authorities immediately after reported incidents.	Compliant	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Dargues Gold Mine - Notification - Sediment Discharge Event, letter dated 17/3/2020. Information Request - Significant Rainfall Event March 2021, email dated 12/5/2021. Dargues Gold Mine - Notification - Potential Non-Compliance, letter dated 22/4/2021. Dargues Gold Mine - Notification - Non-Compliance with Consent 10_0054, Condition 41, letter dated 12/5/2021.	Written details were provided within 7 days of Aurelia becoming aware of incidents or potential non-compliances.	Compliant	
R3 Written report					
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) Where this licence applies to premises, an event has occurred at the premises; or b) Where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	-	Written reports referenced in R2.2 were produced in consultation with the EPA.	Compliant	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.				

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
R3.3	The request may require a report which includes any or all of the following information:	-	-	Compliant	
	a) The cause, time and duration of the event;				
	b) The type, volume and concentration of every pollutant discharged as a result of the event;				
	c) The name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;				
	d) The name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;				
	e) Action taken by the licensee in relation to the event, including any follow-up contact with any complainants;				
	f) Details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and				
	g) Any other relevant matters.				
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.				
7 General Conditions					
G1 Copy of licence kept at the premises or plant					
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	-	Sighted.	Compliant	
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.				
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.				
G2 Contact number for incidents and responsible employees					
G2.1	The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:	Personnel interviews.	-	Compliant	
	a) Respond at all times to incidents relating to the premises; and				
	b) Contact the licensee's senior employees or agents authorised at all times to:				
	i) Speak on behalf of the licensee; and				
	ii) Provide any information or document required under this licence.				
G2.2	The licensee is to inform the EPA in writing of the appointment of any subsequent contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.	-	No changes.	Not Triggered	
8 Pollution Studies and Reduction Programs					
U1 Ambient Water Quality Assessment for the Receiving Waters of the Compensatory Flow Discharge Point					
U1.1	Part 1 - The licensee must prepare an "Ambient Water Quality Assessment for the Receiving Waters of the Compensatory Flow Discharge Point" prior to commissioning of the compensatory flow discharge. The intent of the EPA is to utilise the assessment to develop appropriate water quality performance criteria for compensatory flow discharges to Majors Creek that will achieve environmental objectives and environmental values of Majors Creek.				
	Part 2 - The assessment must include but not be limited to the following matters:				
	· Identify the Water Quality Objectives (WQO) for the receiving waters of Majors Creek in accordance with the guideline (http://www.environment.nsw.gov.au/ieo/index.htm) and describe the state of Majors Creek and relate this to the relevant WQO to determine whether the WQO are being achieved. Issues to include in the description of the receiving waters may include: specific human uses such as drinking water off-takes; sensitive ecosystems or species conservation values; historic river flow data where available for the receiving waters and monitoring data collected by the licensee.				
	• Undertake water quality monitoring of the receiving waters of Majors Creek across a range of flow variability, seasonal variation and weather conditions to determine ambient concentrations of potential pollutants including total suspended solids and electrical conductivity.				

Table 3 - Environment Protection Licence No. 20095 issued 28 April 2017, latest version 01 June 2019 Condition

Condition no.	EPL Condition	Evidence	Audit Findings / Recommendations	Compliance Status	Unique Identification on Noncompliance
U1.2	· Provide details of the compensatory flow that are essential for predicting and assessing impacts to Majors Creek, including the quantity and physio-chemical properties of potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to WQO in the ambient waters (as defined at www.environment.nsw.gov.au/ieo), and using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000 (ANZECC Guidelines).	Annual Reviews.	No compensatory flows discharged	Not Triggered	
	• Identify the indicators and associated trigger values or criteria for the identified environmental values (sourced from the ANZECC Guidelines).				
	• Outline the nature and degree of impact that any proposed discharges will have on the receiving environment. Impacts should be assessed against the relevant ambient water quality outcomes and there should be a demonstration of how the proposal will be designed and operated to: protect the WQO of Majors Creek where the WQO are currently being achieved; and contribute towards achievement of the WQO over time where they are not currently being achieved.				
	• Demonstrate how (procedures, controls etc.) water discharged to Majors Creek will ensure the ANZECC Guidelines water quality criteria for relevant chemical and non-chemical parameters (particularly electrical conductivity and total suspended solids) are met at the edge of the initial mixing zone of the discharge.				
	• The EPA acknowledges all previous ambient water quality data collection and assessment work that has been undertaken by the licensee and considers that the previous work should be utilised in the assessment.				
	• Recommend discharge limits based on the findings of the assessment.				
U1.3	Part 3 - Submit the Ambient Water Quality Assessment to the "Manager, South East Region of the EPA" at PO BOX 622 Queanbeyan 2620 OR Queanbeyan@environment.nsw.gov.au prior to commissioning of the Compensatory Flow Discharge.				

Table 4: Mining Lease 1675 Conditions

Table 4 - Mining Lease 1675 Conditions

	b) If there are ten or more landholders affected, the lease holder may serve the notice by publication in a newspaper circulating in the region where the lease area is situated. The notice must indicate that this lease has been granted/renewed; state whether the lease includes the surface and must contain an adequate plan and description of the lease area				
2	**rehabilitation**				
2.1	Any disturbance resulting from the activities carried out under this mining lease must be rehabilitated to the satisfaction of the Minister.	-	Triggered following mining operations.	Not Triggered	
3.	**Mining Operations Plan and Annual Rehabilitation Report**				
3.1	a) The lease holder must comply with an approved Mining Operations Plan (MOP) in carrying out any significant surface disturbing activities, including mining operations, mining purposes and prospecting. The lease holder must apply to the Minister for approval of a MOP. An approved MOP must be in place prior to commencing any significant surface disturbing activities, including mining operations, mining purposes and prospecting.	Second Mining Operations Plan (MOP) (16/3/2017).	Extension on the Second MOP granted.	Compliant	
	b) The MOP must identify the post mining land use and set out a detailed rehabilitation strategy which:	Second Mining Operations Plan (MOP) (16/3/2017). NSW Resources Regulator MOP Letter of Extension, dated 5/2/2021.	Progressive rehabilitation covered in the Annual Reviews and Rehabilitation Report for the site not yet triggered.	Compliant	
	(i) Identifies areas that will be disturbed;				
	(ii) Details the staging of specific mining operations, mining purposes and prospecting;				
	(iii) Identifies how the mine will be managed and rehabilitated to achieve the post mining land use;				
	(iv) Identifies how mining operations, mining purposes and prospecting will be carried out in order to prevent and or minimise harm to the environment; and				
	(v) Reflects the conditions of approval under:				
	• The Environmental Planning and Assessment Act 1979;				
	• The Protection of the Environment Operations Act 1997; and				
	• Any other approvals relevant to the development including the conditions of this mining lease.				
	(c) The MOP must be prepared in accordance with the ESG3: Mining Operations Plan (MOP) Guidelines September 2013 published on the Department's website at www.resourcesandenergy.nsw.qov.au/miners-and-explorers/rules-and- forms/pgf/environmental-guidelines				
	(d) The lease holder may apply to the Minister to amend an approved MOP at any time.				
	(e) It is not a breach of this condition if:				
	(i) the operations which, but for this condition 3(e) would be a breach of condition 3(a), were necessary to comply with a lawful order or direction given under the Environmental Planning and Assessment Act 1979, the Protection of the Environment Operations Act 1997, the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 or the Work Health and Safety Act 2011; and Work Health and Safety Regulation 2011				
	(ii) the Minister had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out.				
	(f) The lease holder must prepare a Rehabilitation Report to the satisfaction of the Minister. The report must:				
	(i) provide a detailed review of the progress of rehabilitation against the performance measures and criteria established in the approved MOP;				
	(ii) be submitted annually on the grant anniversary date (or at such other times as agreed by the Minister); and				

	(iii) be prepared in accordance with any relevant annual reporting guidelines published on the Department's website at www.resourcesandenerqy.nsw.gov.au/miners-and- explorers/rules-and-forms/pgf/environmental-guidelines *Note: The Rehabilitation Report replaces the Annual Environmental Management Report .*				
4	**NON-COMPLIANCE REPORTING**				
4.1	(a) The lease holder must notify the Department upon becoming aware of any breaches of the conditions of this mining lease or breaches of the Mining Act or Regulations; (b) Notifications under condition 4(a) must be provided in the form specified on the Department's website within seven (7) days of the mining lease holder becoming aware of the breach.	Personnel interviews.	Aurelia advised that the Department, and other required agencies, were notified immediately upon becoming aware of any breaches of the conditions.	Compliant	
5	**ENVIRONMENTAL INCIDENT REPORT**				
5.1	The lease holder must provide environmental incident notifications and reports to the Secretary no later than seven (7) days after those environmental incident notifications and reports are provided to the relevant authorities under the Protection of the Environment Operations Act 1997.	Dargues Gold Mine - Notification - Sediment Discharge Event, letter dated 17/3/2020. Information Request - Significant Rainfall Event March 2021, email dated 12/5/2021. Dargues Gold Mine - Notification - Potential Non-Compliance, letter dated 22/4/2021. Dargues Gold Mine - Notification - Non-Compliance with Consent 10_0054, Condition 41, letter dated 12/5/2021.	Notifications and reports were provided to the Department within 7 days.	Compliant	
6	**RESOURCE RECOVERY**				
6.1	The lease holder must optimise recovery of the minerals that are the subject of this mining lease to the extent economically feasible.	Second Mining Operations Plan (MOP) (16/3/2017).	-	Compliant	
7	**SECURITY**				
7.1	The lease holder is required to provide and maintain a security deposit to secure funding for the fulfilment of obligations of all or any kind under the mining lease, including obligations of all or any kind under the mining lease that may arise in the future. The amount of the security deposit to be provided has been assessed by the Minister at $2,904,000.00	Second Mining Operations Plan (MOP) (16/3/2017).	Summary rehabilitation cost calculation appended to the MOP.	Compliant	

Table 5: EPBC Approval 2010/5770 issued 27 September 2011 Conditions

Table 5 - EPBC Approval 2010/5770 issued 27 September 2011 Conditions

Disturbance Area						
2.	Project activities must not impact on more than 0.2 hectares of the endangered ecological community *'Natural Temperate Grasslands of the Southern Tablelands of NSW and the Australian Capital Territory '*.	Ongoing	Limit disturbance to 0.2ha of the identified community	0.2 ha has been disturbed as part of the TSFconstruction as approved.	Compliant	
Groundwater and Surface Water Management and Monitoring						
3.	To avoid any residual downstream risk to matters of national environmental significance (i.e. the Araluen Gum *Eucalyptus kartzoffiana),* the proponent must develop and implement an adaptive surface water and groundwater monitoring and modelling program that at a minimum: specifies details of preliminary groundwater monitoring that must be undertaken within and surrounding the project site; uses groundwater data collected through existing monitoring bores and other project activities to feed back into the existing groundwater model; specifies measures to confirm the accuracy of the groundwater model against data collected during the project life. This assessment must occur prior to commencement of mining operations and then every six months after that date; specifies actions to be implemented should the assessment required for condition 3c indicate significant divergence between the predicted and observed groundwater impacts; specifies detailed baseline data on surface water flows and quality in creeks and other water bodies that could be affected by the project (including Majors and Spring Creeks); is undertaken in a manner relevantly consistent with items 6, 7, 15 and 16 of the proponent's Statement of Commitments; includes the final parameters to be included in the monitoring program including a rationale for the trigger levels developed from the baseline data (based on ANZECC guidelines); specifies mechanisms for the continuous monitoring of seepage and leachate from the tailings storage facility; specifies measures for the early detection of surface water and groundwater pollution, particularly as a result of any leaching from the tailings storage facility; and specifies measures for the immediate remediation of polluted surface and groundwater.	Prior to construction	Prepare and implement a *Water Management Plan* that complies with the conditional requirements.	Water levels are an issue because of drought conditions rather than reduced groundwater conditions as a result of mining.	Compliant	
4.	At a minimum, the surface water monitoring program must include the following. (a) pH, turbidity, total suspended solids, total dissolved solids, total nitrogen, total phosphorous, dissolved oxygen, salinity and temperature data; (b) toxicant data such as heavy metals and metalloids (at least arsenic, iron, manganese and zinc); (c) macroinvertebrate species assemblages, compositions and assessment results; (d) data averages, standard deviation and number of samples; (e) test and reference site locations; (f) sampling and analytical methods; and (g) quality control and quality assurance data.	Ongoing	Undertake the surface water monitoring program as identified.	See Annual Reviews.	Compliant	
5.	The adaptive surface water and groundwater monitoring and modelling program must be developed and implemented prior to commencement of mining operations and provided to the department on request.	Prior to the commencement of mining operations	Develop and implement the required monitoring program	Groundwater model which was updated 27/7/21.	Compliant	
Management Measures						
6.	The proponent must offset the reduction in base flow to the Moruya Catchment by releasing water to Majors Creek as described in Section 2.10.2.6 of the Environmental Assessment. Prior to the commencement of mining operations, the proponent must also prepare and implement a surface water and groundwater response protocol. This protocol must be provided to the department on request. At a minimum, the protocol must: (a) specify investigation and response procedures in the event that baseline surface water offsets required in this condition are unlikely to be met; (a) response procedures to be followed if any impacts on surface or groundwater are detected during the project; (b) specify notification procedures to the department in the event that impacts on surface or groundwater are detected during the project.	Ongoing Prior to the commencement of mining	Undertake a complying compensatory release program Prepare and implement a surface water and groundwater response protocol	see above	Compliant	
7.	Prior to commencement of mining operations, the proponent must confirm the assumed hydrological parameters used in the groundwater model by an industry recognised method.	Prior to commencement of mining	Confirm the assumed hydrological parameters used in the groundwater model	GW model which was updated 27/7/21	Compliant	
8.	If field investigations do not confirm that the assumed hydrological parameters used in the groundwater model are correct, then the proponent must notify the department within five business days to discuss an adaptive remedy.	Following review of model parameters/ assumptions	Notify the Department within 5 five business day.	GW model which was updated 27/7/21	Compliant	
9.	If the hydrological parameters under condition 7 cannot be verified, the Minister may under condition 25 require the proponent to undertake further modelling (or other measures as required) to demonstrate that no unacceptable impacts to matters of national environmental significance will occur as a result of the action.	Following direction by Minister	Revision of groundwater model	GW model which was updated 27/7/21	Compliant	
Bushfire Management						
10.	Prior to commencement, the proponent must prepare and implement a Bushfire Management Plan that at a minimum. (a) specifies controls, procedures and mitigation measures to ensure management of potential ignition sources from project activities; (b) demonstrates that the project site is suitably equipped to respond to any fires.	Prior to construction	Prepare and implement a complying *Bushfire Management Plan*	Rev 5 22/8/19 needs to be approved by the DPIE.	Compliant	

Table 5 - EPBC Approval 2010/5770 issued 27 September 2011 Conditions

Revegetation and Amelioration Program						
11.	The proponent must undertake a revegetation and amelioration program. At a minimum the program must investigate re-establishing the endangered ecological community '*Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory*' in areas disturbed by project activities.	Ongoing	Undertake a revegetation and amelioration program within the grassland community	The indicative program is identified in the Biodiversity Management Plan (BioMP); however, a detailed plan will be developed as part of the rehabilitation plan (yet to be developed) for the Project. Progress of implementation is documented in the Annual Review Reports.	Compliant	
12.	The revegetation and amelioration program must be developed prior to commencement of mining operations and provided to the department on request.	Prior to mining operations	Revegetation and amelioration program to be developed	See current BioMP and as above.	Compliant	
13.	The Minister may direct the proponent to undertake revegetation of the ecological community *'Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory'* in accordance with the revegetation and amelioration program.	Following direction by Minister	Implement the required revegetation program	See current BioMP and as above.	Compliant	
Rehabilitation						
14.	Rehabilitation must be undertaken in accordance with Section 2.14 of the Environmental Assessment.	Ongoing	Implement rehabilitation as indicated	Second Mining Operations Plan (MOP) (16/3/2017).	Compliant	
15.	The proponent must implement a progressive approach to rehabilitation. Where mining-related activities in a specific area are complete, rehabilitation at that site must commence within a timeframe agreed with the department.	Ongoing	Implement progressive rehabilitation	Progressive rehabilitation reported in the Annual Reviews. However, all areas of disturbance continue to be used for mining operations currently.	Compliant	
16.	The tailings storage facility must be capped in accordance with the Environmental Assessment to prevent surface water infiltration into the post-mining landform.	Post closure	Cap Tailings Storage Facility as indicated	Triggered at the end of mining operations.	Not-triggered	
Tailings Management						
17.	The proponent must design, build, maintain and rehabilitate the tailings storage facility to meet the requirements of the Dams Safety Committee under the *NSW Dams Safety Act 1978*.	During and following construction of the Tailings Storage Facility	Design, build, maintain and rehabilitate the Tailings Storage Facility as identified	Construction consistent with the Design Report PE16-01023-Final- Design-Rev-01, reviewed by the Dam Safety Committee. Knight Piesold (2021) Tailings Storage Facility Stage 2 Construction Report (Rev A 20/5/2021).	Compliant	
18.	The proponent must notify the department within five business days in the event of discovering non-compliance with a requirement of the Dams Safety Committee (DSC).	Ongoing	Notify the Department within five business days.	No non-compliances with requirements of the DSC were reported during the audit period.	Not-triggered	
19.	The proponent must ensure that the tailings storage facility is lined in a manner consistent with the Environmental Guidelines - Management of Tailings Storage Facilities (VIC DPI, 2004).	During construction of the Tailings Storage Facility	Line the Tailings Storage Facility as identified	As above, the lining exceeds the requirements of Vic DPI 2004.	Compliant	
Notification of Commencement						
20.	Within 10 business days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	Within 10 business days after the commencement	Notify the Department		Compliant	

Table 5 - EPBC Approval 2010/5770 issued 27 September 2011 Conditions

Record Keeping						
21.	The proponent must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement all plans, programs and activities covered by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	Ongoing	Maintain accurate records	See Annual Reviews and information published on the Company website.	Compliant	
22.	By 30 September each year, the proponent must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any plans, programs or activities as specified in these conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.	Annually following commencement	Publish a report outlining compliance with this approval and place on Company website. Concurrently provide evidence of publication to the Department	See Annual Reviews and EPBC Compliance Reports, published on the Company website.	Compliant	
Auditing						
23.	Upon the direction of the Minister, the proponent must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Following direction by Minister	Undertake an independent audit	No direction issued.	Not-triggered	
Request for Variation of Plans, Programs or Activities by Proponent						
24.	If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, programs or activities as specified in these conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan, program or activity. The varied activity shall not commence until the Minister has approved the variation in writing. The Minister will not approve a varied plan, program or activity unless the revision would result in an equivalent or improved environmental outcome over time. If the Minister approves the revision then that plan, program or activity must be implemented in place of the plan, program or activity as specified in these conditions.	Ongoing	Seek approval for activities that differ from those identified by the approved documentation	No variations have been requested.	Not-triggered	
Revisions to a Plan, Program or Activity by the Minister						
25.	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and ecological communities, the Minister may request that the person taking the action make specified revisions to a plan, program or activity specified in these conditions and submit the revised plan, program or activity for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan, program or activity must be implemented. Unless the Minister has approved the revised plan, program or activity, then the person taking the action must continue to implement the plan, program or activity, as specified in these conditions.	Following direction by Minister	Revise documentation as requested	No revisions have been requested.	Not-triggered	
26.	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all plans referred to in these conditions of approval on their website. Each plan must be published on the website within 1 month of being finalised.	Ongoing	Publish documentation once finalised and approved by the NSW Department of Planning.	See Company website.	Compliant	

Table 6: EPBC Approval 2015/7539 issued 17 February 2017 Conditions

Table 6 - EPBC Approval 2015/7539 issued 17 February 2017 Conditions

2.	For the protection of downstream listed threatened species and communities, the person taking the action must prepare a Construction Environmental Management Plan (CEMP). The person taking the action must not commence construction until the CEMP has been approved by the Minister. Once approved, the approved CEMP must be implemented. The CEMP must: (a) be prepared by a suitably qualified expert (b) Include measurable performance indicators and limits for protecting, conserving and managing listed threatened species and communities from sedimentation impacts and construction activities (c) Include management actions and measures to be implemented, including those in the sediment and erosion plans. (d) Be consistent with the Surface Water Assessment (Strategic Environment and Engineering Consulting, 2015a) and NSW Sedimentation and Erosion Guidelines. (e) Include indicative contingency responses, corrective actions and remediation actions that will be implemented should performance indicators and limits not be achieved. (f) a monitoring program that measures sediment loads in Spring Creek and Majors Creek during construction activities. The monitoring program must: i. include methods, control sites, baseline data and frequency of sampling ii. be designed to detect any changes to the sediment loads associated with significant rainfall events iii. be designed to inform adaptive management (g) Include a self audit program that evaluates and reports on the monitoring program, achievement of the objectives, the effectiveness of management actions, and contingency responses and corrective actions. (h) Specify the timing and frequency of management actions, reporting and implementation of contingency responses and corrective actions, and the person/s responsible.	Prior to construction	Prepare and implement a *Construction Environmental Management Plan* that complies with the conditional requirements.	CEMP Final 11/12/2018 prepared by SEEC. **Recommendation**: Update the CEMP to include staged construction of the TSF prior to commencement of TSF Stage 3 works.	Compliant	
3.	For the protection of downstream listed threatened species and communities, the person taking the action must prepare a Water Management Plan (WMP). The person taking the action must not commence operation until the plan has been approved by the Minister. Once approved, the approved WMP must be implemented. The WMP must: (a) be prepared by a suitably qualified expert. (b) include measurable performance indicators and limits for protecting, conserving, and managing listed threatened species and communities from sedimentation impacts. (c) include management actions to be implemented, including those in the sediment and erosion control plans (d) ensure all measures, equipment and facilities specified in the sediment and erosion control plans are maintained to be fully effective for the life of the mine, including during mine decommissioning and site rehabilitation (e) be consistent with the Surface Water Assessment (Strategic Environment and Engineering Consulting, 2015a) and New South Wales Sedimentation and Erosion Guidelines (f) include indicative contingency responses, corrective actions and remediation actions that will be implemented should performance indicators and limits not be achieved (g) include a monitoring program that measures sediment loads in Spring Creek and Majors Creek during operation activities. The monitoring program must: i. include methods, control sites, baseline data, and frequency of sampling ii. be designed to detect sediment loads within Spring Creek and Majors Creek (including any changes to sediment loads associated with significant rainfall events) iii. be designed to inform adaptive management The monitoring program must be undertaken over a minimum of two (2) years from the period of which operation activities begin. After two (2) years, the person taking the action may apply to the Minister for approval to cease the monitoring program if the monitoring program demonstrates that management actions are effective, as measured against the approved performance indicators and limits. (h) include a self-audit program that evaluates and reports on the monitoring program, achievement of the objectives, the effectiveness of management actions, and contingency responses and corrective actions (i) specify the timing and frequency of management actions, monitoring, auditing, reporting and implementation of contingency responses and corrective actions, and the person/s responsible.	Prior to construction	Prepare and implement a WMP that complies with the conditional requirements.	Water Management Plan (WMP) (Rev 9, 23/4/2020).	Compliant	
4.	The person taking the action must notify the Department in writing of any potential noncompliance with any condition of this approval within seven business days of the detection of the potential non-compliance.	Ongoing	Notification of the Department within 7 days following the detection of a potential non-compliance.	No non-compliances were reported during the audit period.	Not Triggered	
5.	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plans and monitoring programs required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be published through the general media.	Ongoing	Maintain accurate records	See Annual Review and audit reports.	Compliant	
6.	By 30 September each year for the period which the approval has effect, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans and monitoring programs as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Annually following commencement	Publish a report outlining compliance with this approval and place on Company website. Concurrently provide evidence of publication to the Department.	See Annual Review and EPBC Compliance Reports.	Compliant	
7.	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The person taking the action must not commence the audit until the independent auditor and audit criteria have been approved by the Minister in writing. The audit report must address the criteria to the satisfaction of the Minister.	Following direction by Minister	Undertake an independent audit.	No direction issued.	Not Triggered	

Table 6 - EPBC Approval 2015/7539 issued 17 February 2017 Conditions

8.	The person taking the action may choose to revise a management plan or monitoring program approved by the Minister under conditions 2 and 3 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan or monitoring program would not be likely to extend the timeframe for plan objectives, reduce conservation outcomes or have a new or increased impact. If the person taking the action makes this choice they must: (a) notify the Department in writing that the approved plan or program has been revised and provide the Department, at least four weeks before implementing the revised plan, with: i. with an electronic copy of the revised plan or program ii. an explanation of the differences between the revised plan and the approved plan iii. the reasons the person taking the action considers that the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact.	Ongoing	Notify the Department in writing four weeks prior to implementing a revised plan.	Revised management plans must be submitted to the Department.	Non-Compliant	NC6
9.	The person taking the action may revoke their choice under condition 8 at any time by notice to the Department. If the person taking the action revokes the choice to implement a revised plan or monitoring program without approval under section 143A of the EPBC Act, the plan or monitoring program approved by the Minister must be implemented.			See above		
10.	If the Minister gives a notice to the person taking the action that the Minister is satisfied that the taking of the action in accordance with the revised plan or program would be likely to have a new or increased impact, then: i. condition 8 does not apply, or ceases to apply, in relation to the revised plan or program ii. the person taking the action must implement the plan or program approved by the Minister. To avoid any doubt, this condition does not affect any operation of conditions 8 and 9 in the period before the day the notice is given. At the time of giving the notice the Minister may also notify that, for a specified period of time, condition 8 does not apply for one or more specified plans or programs required under the approval.			See above		
11.	If, at any time after five (5) years from the date of this approval, the person taking the action has not commenced construction, then the person taking the action must not commence the action without the written agreement of the Minister.	17 February 2022	Commence construction within required timeframe.	Construction commended.	Not Triggered	
12.	Conditions 8, 9 and 10 are not intended to limit the operation of section 143A of the EPBC Act, which allows the approval holder to submit a revised plan or program to the Minister for approval.				Noted	
13.	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all management plans and monitoring programs referred to in these conditions of approval on its website. Each management plan and monitoring programs must be published on the website within 1 month of being approved by the Minister or being submitted under Condition 8.	Ongoing	Publish documentation within one month of being approved.	**Recommendation**: Provide the following documents on the website: EPBC approvals. Construction Environmental Management Plan.	Non-Compliant	NC7

Table 7: Proponent Response Table

Table 7: Proponent Response

Condition	Comment/Audit Finding/Recommendation	Compliance Status	Unique Identification on Noncompliance	Proponent Response	Proposed Action Due Date
Schedule 3 Condition 1 Noise Criteria	Noise compliance survey not completed in December 2019 due to bushfires (2019-2020 Annual Review, Section 6.2 p 15). There is no reason to suspect a non-compliance with noise criteria, therefore this is considered an administrative non-compliance only. All noise monitoring results complied with the criteria.	Non-Compliant	NC1	Noted. No further action required.	N/A
Schedule 3 Condition 2 Traffic Noise Impact Assessment Criteria	Road traffic noise measurements indicated measured levels (from all noise sources) above the criteria in the last 6 quarters of the period. The consultant's reports noted other sources were primary contributors and therefore project-related traffic noise complied with the criteria, although no evidence is provided to justify this assertion. **Recommendation**: Modify the traffic noise survey procedure (possibly including the monitoring location) to reliably obtain representative project-related traffic noise measurement data.	Compliant		Noted. The Noise Management Plan outlines the sensitive receptors as well as a prescribed traffic noise monitoring program at 600 Majors Ck road.	N/A
Schedule 3 Condition 5 Noise Management Plan	**Recommendations**: 1. Amend Figure 1 in the NMP to include symbols at all noise monitoring locations (missing symbols at R20, R27, R29).	Compliant		Noted.	N/A
Schedule 3 Condition 14 Air Quality Criteria	Individual month dust exceedances were reported throughout the audit period, however remained on average below the monthly assessment criteria. Aurelia concluded that the elevated concentrations were the result of regional events including bushfire over this period and unlikely to be significantly site derived. **Recommendation**: Include detail in future Annual Review reports to justify the conclusion that elevated results are due to regional events and not site-derived or refer to monitoring reports where this is detailed.	Compliant		Noted. The annual rolling average is 4g/m2. The development consent excludes extradorinary events such as bushfires as agreed by the Secretary in consultation with the EPA.	N/A
Schedule 3 Condition 20 Water Supply	DPIE issued a $15,000 Penalty Notice to Aurelia in July 2020 for utilisation of water from the Bungendore Sewage Treatment Plant to support operations following significant delays to key construction activities. Aurelia have advised an application to modify the Project Approval will be submitted to include this potential water source should the project need arise in the future. Prior to this, community consultation and a water security options analysis will occur to investigate potential water sourcing options. **Recommendation**: Submit an application to amend the Project Approval to include contingency water sources.	Non-Compliant	NC2	Noted. Modification 5 to Project Approval 10_0054 (Mod 5) includes an additional water storage facility and emergency trucking of water from a secondary source. Big Island Mining Pty Ltd anticipates that Mod 5 wil be submitted to the Department of Planning & Environment in June 2022.	N/A
Schedule 3 Condition 22 Baseflow Offsets	**Recommendation**: Compliance with the Majors Creek flow trigger level should be reported in Annual Reviews.	Compliant		Noted.	N/A
Schedule 3 Condition 26 Water Management Plan	**Recommendation**: Update the WMP with the findings of the updated groundwater model (AGE 2021). For example, Section 7.9 includes trigger levels for baseflow in Majors Creek, but not Spring Creek. This is inconsistent with the groundwater model conclusions which identified baseflow impact predominantly localised to Spring Creek.	Compliant		Noted. The WMP will be updated to reflect AGE model.	N/A
Schedule 3 Condition 28A Water Management Plan **EPBC Approval 2015 7539 2. Project Area**	**Recommendation**: Update the CEMP to include staged construction of the TSF prior to commencement of TSF Stage 3 works.	Compliant		The CEMP applied to the project prior to the commencement of operations. The project now operates under the approved operational Water Management Plan, which includes the size and management of sediment dams. The TSF Stage 3 works will be managed with existing sediment dams.	N/A

Table 7: Proponent Response

Condition	Comment/Audit Finding/Recommendation	Compliance Status	Unique Identification on Noncompliance	Proponent Response	Proposed Action Due Date
Schedule 3 Condition 35 Biodiversity Management Plan	**Recommendation:** Review phreatophytic vegetation monitoring data to develop trigger values and mitigation measures in the next version of the BioMP. Append the Wombat, Weed and Grazing Management Plans to the BioMP.	Compliant		Noted.	N/A
Schedule 3 Condition 41 Transport Operating Conditions	Operations generally complied with this condition, with the exception of a truck which was reported to have passed through the site gate at 8:20am on 29/6/2020. The incident was reported to the EPA, Resources Regulator and DPIE on 11/5/2021 following an environmental compliance review associated with company acquisition. A notification letter was provided to these agencies on 12/5/2021. The site Drivers Code of Conduct was reiterated to site and contract drivers. **Recommendation**: Append the Drivers Code of Conduct to the next revision of the TMP and provide to all transport contractors.	Non-Compliant	NC3	BIM notes that the Drivers Code of Conduct is accessible via the proponents website. ACTION: Review the Traffic Management Plan and append the Drivers Code of Conduct.	30-Jun-22
Schedule 3 Condition 47A Waste Performance Measures – Paste Fill **Statement of Commitments 6.13: Paste Fill**	There is currently insufficient data to assess if paste fill used to fill mine voids complied with the general solid waste criteria. **Recommendation**: The paste fill monitoring program outlined in the approved WasteMP must be adhered to and reported in Annual Review reports. The next version of the WasteMP should consider reassessing the method of paste fill testing to also include Australian Standard Leaching Procedure (ASLP) analysis. Consider also assessing leachate against the Australian and New Zealand Guidelines (ANZG)[1] criteria.	Non-Compliant	NC4	ACTION: Review the waste management plan and include relevant information to comply with this condition.	31-Aug-22
Schedule 3 Condition 47B Waste Paste Fill Trials and Testing	Trial results reported in the WasteMP Rev 5 indicate the paste fill meets the performance measures in Condition 47A. The WasteMP outlines a program for ongoing testing. **Recommendation**: Include paste fill ongoing testing results detailed in Section 5.2.3 of the WasteMP in Annual Review reports. Include the paste fill general monitoring results detailed in Section 5.4 of the WasteMP in Annual Review reports. Results of the paste fill trial are included in the WasteMP. Details of the assessment (e.g., Trial Report including calculation of the 95% upper confidence level) should be appended to the next revision of the WasteMP. Compare the testing results against those presented in Dargues Reef Paste Fill Test Work and Design (Revell, 2010) in the next version of the WasteMP.	Compliant		Noted.	
Schedule 3 Condition 47 Waste Operating Conditions **Statement of Commitments 6.5: Minimisation of Groundwater Contamination**	During the site inspection, 200 L drums and intermediate bulk containers (IBCs) were observed adjacent to the mechanical workshop without appropriate bunding. Construction of a concrete bund was noted next to the workshop and Aurelia advised this will be utilised for raw material and waste storage and handling. **Recommendation**: All chemicals and wastes should be stored within a bunded and ideally roofed area; waste should be disposed of appropriately.	Non-Compliant	NC5	Note: All waste is disposed of through an appropriate licensed contractor. ACTION: All chemicals will be stored within a bunded area.	31-May-22
Schedule 5 Condition 4 Revision of Strategies, Plans and Programs **EPBC 2015 7539 8. Project Area**	**Recommendation**: Clarify document control sections for each management plan to differentiate between document reviews, revisions and submissions to stakeholders. A number of management plans are Non-Compliant for approval from the Department/Secretary following the latest revisions.	Non-Compliant	NC6	ACTION: BIM shall review, and where necesary revise, the management plans required under the Project Approval. The revised documents will be submitted to the Secretary for approval.	Within 3 months of the submission of the audit report
Schedule 5 Condition 10 Access to Information **EPBC 2015 7539 8. Project Area**	**Recommendation:** Provide the following documents on the website: EPBC approvals. Current Confirmation of Cover. Ecology monitoring data. Incident investigation reports. Environmental Management Strategy. Construction Environmental Management Plan. Cardno (2011) Aquatic Ecological Assessment.	Non-Compliant	NC7	ACTION: BIM will upload the documents to the company website	30-Jun-22

Table 7: Proponent Response

Condition	Comment/Audit Finding/Recommendation	Compliance Status	Unique Identification on Noncompliance	Proponent Response	Proposed Action Due Date
Statement of Commitments 2: Area of Activities	Soil stockpile area used as a laydown area for construction material and equipment following relocation of soil material to the Waste Rock Emplacement area. Aurelia notified the DPIE by letter on 22 April 2021. Project Approval modification application to be submitted. **Recommendation**: Apply to modify the Project Approval.	Non-Compliant	NC8	Noted. MOD 5 is in preparation and we anticipate it will be submitted FY22.	N/A
Statement of Commitments 13.1 to 13.5: Maintenance of Soil Value	Aurelia advised that a site disturbance permit is required for all soil works on site, which limits soil stripping to 120 millimetres (mm). This is less than specified in Table 2.2 of the EA and therefore considered in compliance. **Recommendation**: Amend the Site Disturbance Permit to align with the soil stripping advice in the EA Table 2.2 i.e., 300 mm, and to include the additional requirements in this commitment.	Compliant		Noted.	N/A
Statement of Commitments 15.7: Ongoing Monitoring **Environment Protection Licence: M2.3**	This condition is in contradiction to the environmental monitoring described in the EPL. Laboratory analysis of groundwater was undertaken quarterly, as per condition M2.3 of the EPL. **Recommendation**: Consult with the relevant authorities to revise this commitment.	Compliant		Noted.	N/A
Statement of Commitments 15.12A: Ongoing Monitoring	Aurelia advised that real-time pH and EC monitors have not yet been installed as part of the Surface Water Monitoring Program. However, quotes have been received and works have been delayed by access constraints and personnel shortages. Recommendation: Clarify this commitment in the WMP, including listing the locations to be monitored. Monitoring results to be included on the website in the Annual Review reports.	Non-Compliant	NC9	ACTION: Install realtime EC and pH meters as part of the weir replacement program. ACTION: Revise the WMP and include any relevant information to comply with this statement of commitment.	Within 3 months of the submission of the audit report
Environment Protection Licence: L2.3-4	**Recommendation**: Noise monitoring reports should include parameters measured at 10 metres (m) above the ground as reported by the on-site weather station, not as observed by the operator at perhaps 1.5 m above the ground.	Non-Compliant	NC10	ACTION: Ensure noise monitoring reports include parametrs at 10m above the ground.	30-Jun-22
Environment Protection Licence: L2.5	**Recommendation:** Noise monitoring reports should justify the selected monitoring locations.	Compliant		Noted.	
Environment Protection Licence: L2.6	**Recommendation**: Noise monitoring reports should include modifying factors (particularly tonal and low frequency noise) as required by the NSW Industrial Noise Policy (and its successor the Noise Policy for Industry)	Non-Compliant	NC11	ACTION: Noise monitoring reports will include modifying factors (tonal and low frequency).	30-Jun-22
Environment Protection Licence: M5.2	**Recommendation**: Include the complaint method, complainant, and action taken for complaints in the complaints registers. Retain for at least 4 years.	Non-Compliant		BIM notes that complaint method, complainant and action taken for complaints are stored in the complaint register in INX. Extracts and screenshots have been supplied.	N/A
Environment Protection Licence: R1.7	**Recommendation**: Ensure completed Annual Return Forms are retained and signed.	Compliant		BIM notes that these forms are completed electronically via the portal.	N/A

Appendix A: Audit Team Supporting Documents

Mr Chase Dingle
Sustainability Manager
Dargues Gold Mine
Aurelia Metals Ltd
920 Majors Creek Road
MAJORS CREEK NSW 2622

20/09/2021

Dear Mr Dingle

Dargues Gold – MP10_0054 (as modified)
Independent Environmental Audit Noise Expert endorsement

I refer to your request (MP10_0054-PA-26) submitted on 20 September 2021 to the Department of Planning, Industry and Environment (the Department), requesting the Planning Secretary's approval of a suitably qualified noise expert to assist in the Independent Environmental Audit (the Audit) for Dargues Gold (the project) in accordance with Schedule 5 Condition 8 of MP10_0054, as modified, (the approval).

Having considered the qualifications and experience of Mr Mark Bridges of Bridges Acoustics, the Planning Secretary endorses the appointment of Mr Bridges as the noise expert to assist in undertaking the Audit in accordance with Schedule 5, Condition 8 of the approval. This endorsment is conditional on Mr Bridges being independent of the project.

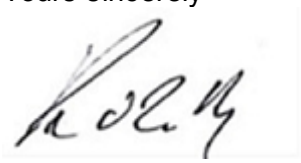
The Secretary notes that Senversa are confident that they satisfy the requirement for a groundwater expert with the qualifications and experience of the original endorsed Audit team of Dr Woinarski and Jason Clay.

Please ensure that Dr Woinarski, Mr Jason Clay and Mr Bridges sign a written declaration form establishing how they meet the independence requirements and these are appended to the Audit Report.

Lastly please ensure this correspondence is appended to the Audit Report.

If you wish to discuss the matter further, please contact me on 0429400261.

Yours sincerely



Katrina O'Reilly
Team Leader - Compliance
Compliance
As nominee of the Planning Secretary

Appendix E – Independent Audit Report Declaration Form Template

Independent Audit Report Declaration Form	
Project Name	Independent Environmental Audit Dargues Gold Mine
Consent Number	10_0054 MOD 4
Description of Project	Independent Environmental Audit
Project Address	920 Majors Creek Road, Majors Creek NSW 2622
Proponent	Aurelia Metals Ltd
Title of Audit	Independent Environmental Audit of Project Approval Conditions 10_0054 MOD 4 EP&A Act
Date	18/3/2022

I declare that I have undertaken the Independent Audit and prepared the contents of the attached Independent Audit Report and to the best of my knowledge:

i. the audit has been undertaken in accordance with relevant condition(s) of consent and the *Independent Audit Compliance Requirements (Department 2019)*;
ii. the findings of the audit are reported truthfully, accurately and completely;
iii. I have exercised due diligence and professional judgement in conducting the audit;
iv. I have acted professionally, objectively and in an unbiased manner;
v. I am not related to any proponent, owner or operator of the project neither as an employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the audit, or by relationship as spouse, partner, sibling, parent, or child;
vi. I do not have any pecuniary interest in the audited project, including where there is a reasonable likelihood or expectation of financial gain or loss to me or spouse, partner, sibling, parent, or child;
vii. neither I nor my employer have provided consultancy services for the audited project that were subject to this audit except as otherwise declared to the Department prior to the audit; and
viii. I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from payment for auditing services) from any proponent, owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

Notes:

a) Under section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000; and
b) The *Crimes Act 1900* contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both)

Name of Auditor	Jason Clay
Signature	
Qualification	NSW EPA Site Auditor, IEMA Principal Auditor
Company	Senversa Pty Ltd
Company Address	Level 24, 1 Market Street, Sydney, NSW 2000

6. Appendices

Appendix A – Declaration of Independence Form Template

Declaration of Independence - Auditor	
Project Name	Independent Environmental Audit Dargues Gold Mine
Consent Number	10_0054 MOD 4
Description of Project	Independent Environmental Audit
Project Address	920 Majors Creek Road, Majors Creek NSW 2622
Proponent	Aurelia Metals Ltd
Date	7/3/2022

I declare that:

i. I am not related to any proponent, owner, operator or other entity involved in the delivery of the project. Such a relationship includes that of employer/employee, a business partnership, sharing a common employer, a contractual arrangement outside an Independent Audit, or that of a spouse, partner, sibling, parent, or child;

ii. I do not have any pecuniary interest in the project, proponent or related entities. Such an interest includes where there is a reasonable likelihood or expectation of financial gain (other than being reimbursed for performing the audit) or loss to the auditor, or their spouse, partner, sibling, parent, or child;

iii. I have not provided services (not including independent reviews or auditing) to the project with the result that the audit work performed by themselves or their company, except as otherwise declared to the Department prior to the audit;

iv. I am not an Environmental Representative for the project; and

v. I will not accept any inducement, commission, gift or any other benefit from auditee organisations, their employees or any interested party, or knowingly allow colleagues to do so.

Notes:

a) Under section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an

approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000; and

b) The *Crimes Act 1900* contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both)

Name of Proposed Auditor	Jason Clay
Signature	
Qualification	NSW EPA Site Auditor, IEMA Principal Auditor
Company	Senversa Pty Ltd

6. Appendices

Appendix A – Declaration of Independence Form Template

Declaration of Independence - Auditor	
Project Name	Independent Environmental Audit Dargues Gold Mine
Consent Number	10_0054 MOD 4
Description of Project	Independent Environmental Audit
Project Address	920 Majors Creek Road, Majors Creek NSW 2622
Proponent	Aurelia Metals Ltd
Date	

I declare that:

i. I am not related to any proponent, owner, operator or other entity involved in the delivery of the project. Such a relationship includes that of employer/employee, a business partnership, sharing a common employer, a contractual arrangement outside an Independent Audit, or that of a spouse, partner, sibling, parent, or child;

ii. I do not have any pecuniary interest in the project, proponent or related entities. Such an interest includes where there is a reasonable likelihood or expectation of financial gain (other than being reimbursed for performing the audit) or loss to the auditor, or their spouse, partner, sibling, parent, or child;

iii. I have not provided services (not including independent reviews or auditing) to the project with the result that the audit work performed by themselves or their company, except as otherwise declared to the Department prior to the audit;

iv. I am not an Environmental Representative for the project; and

v. I will not accept any inducement, commission, gift or any other benefit from auditee organisations, their employees or any interested party, or knowingly allow colleagues to do so.

Notes:

a) Under section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an

approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000; and

b) The *Crimes Act 1900* contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both)

Name of Proposed Auditor
Signature
Qualification
Company

6. Appendices

Appendix A – Declaration of Independence Form Template

Declaration of Independence - Auditor	
Project Name	Independent Environmental Audit Dargues Gold Mine
Consent Number	10_0054 MOD 4
Description of Project	Independent Environmental Audit
Project Address	920 Majors Creek Road, Majors Creek NSW 2622
Proponent	Aurelia Metals Ltd
Date	7/3/2022

I declare that:

i. I am not related to any proponent, owner, operator or other entity involved in the delivery of the project. Such a relationship includes that of employer/employee, a business partnership, sharing a common employer, a contractual arrangement outside an Independent Audit, or that of a spouse, partner, sibling, parent, or child;

ii. I do not have any pecuniary interest in the project, proponent or related entities. Such an interest includes where there is a reasonable likelihood or expectation of financial gain (other than being reimbursed for performing the audit) or loss to the auditor, or their spouse, partner, sibling, parent, or child;

iii. I have not provided services (not including independent reviews or auditing) to the project with the result that the audit work performed by themselves or their company, except as otherwise declared to the Department prior to the audit;

iv. I am not an Environmental Representative for the project; and

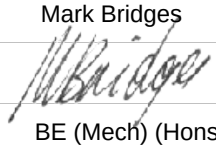
v. I will not accept any inducement, commission, gift or any other benefit from auditee organisations, their employees or any interested party, or knowingly allow colleagues to do so.

Notes:

a) Under section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an

approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000; and

b) The *Crimes Act 1900* contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both)

Name of Proposed Auditor	Mark Bridges
Signature	
Qualification	BE (Mech) (Hons) MAAS
Company	Bridges Acoustics

IEMA Transforming the world to sustainability

Certificate of Registration

This is to certify that

Jason Clay

is registered as a

Principal Environmental Auditor

of IEMA

Valid from March 2003

SHAUN McCARTHY OBE
CHAIR OF PROFESSIONAL STANDARDS COMMITTEE

Valid with proof of relevant current membership of IEMA

Jason Clay

Senior Principal, Site Auditor, Expert Witness

Qualifications & Certifications

BSc(Hons): Environmental Science, 1991
MSc: Water Environment, 1994

Career Profile

Jason Clay is a Senior Principal in the Sydney office of Senversa. He has been an environmental consultant for more than 25 years and specialises in environmental auditing and risk-based assessment and remediation of soil and groundwater contamination.

Jason is a state accredited Contaminated Site Auditor in NSW and WA and is a Certified Environmental Practitioner and Specialist in Contamination (CEnvP SC). Jason is a registered Principal Environmental Auditor (EARA UK). He has since gained significant experience in chlorinated solvents, PFAS and hydrocarbons on sites in Australia, New Zealand, Europe, Asia and South America. Jason has lived in Australia since 2004.

Jason has been an accredited Contaminated Site Auditor since 2006 and since that time has completed more than 100 successful site audits. Audits have included major infrastructure projects such as metropolitan rail links and stadiums, offshore oil and gas facilities, service stations, asbestos impacts, tailings dams, major manufacturing sites, landfills and airports/bases.

Jason is currently auditing the closure and rehabilitation of a number of former gold mine batteries in Western Australia. These are Lake Darlot, Mulline, Bamboo Creek and Twenty Mile Creek gold mines. The audit includes assessment the status of tailings dams and reviewing mine closure and rehabilitation planning. The audit is conducted in conjunction with the requirements of the Department of Water and Environmental Regulation (DWER) WA on behalf of the Department of Mines, Industry Regulation and Safety (DMIRS) WA.

Jason has acted as expert witness in NSW Land and Environmental Court on behalf of Transport of NSW, the NSW Minister for Planning, Penrith City Council, Liverpool City Council, Wollondilly Shire Council and Lawrence Dry Cleaners. He has also acted as expert in Environment Court, Wellington, New Zealand on behalf of Exide Batteries.

Jason recently conducted the State Significant Development post approval audit for Pace Chickens in West Wyalong and was endorsed by the Department of Planning and Environment to do so.

Jason has completed previous Dargues mine SD, LEC and EPBC compliance audits in December 2016, June 2017 and February 2020.

Jason has published many papers on the assessment of the impact of chemicals in the environment on health and environment.

Senversa has a SafeWork NSW, class B, non-friable asbestos removal licence (AD212847) and Jason is the SafeWork nominated supervisor.

Expertise

Environmental auditing.

Statutory contaminated site auditing

Risk based land and groundwater contamination assessment, management and remediation

Key Industry Sectors

Mining

Property

Manufacturing

Legal and finance

Employment History

Aug 2015 (current): Senversa Pty Ltd

Aug 2009 to Aug 2015: AECOM Australia Pty Ltd

Aug 2004 to Aug 2009: ERM Australia Pty Ltd

Dec 1997 to Aug 2004: Dames & Moore/URS

1993-997 Parkman and HMIP

Memberships

NSW EPA Accredited Site Auditor
WA DWER Accredited Contaminated Sites Auditor
Certified Environmental Practitioner Specialist in Contamination (CEnvP SC)
Principal Environmental Auditor (EARA)
Fellow of the Institute of Environmental Assessment and Management (FIEMA).
Fellow of the Chartered Institute of Water and Environmental Management (FCIWEM)
Chartered Environmentalist (CEnv.)
Chartered Scientist (CSci.)
Member of the Australasian College of Toxicology and Risk Assessment
NSW Justice of the Peace
Graduate of the Australian Institute of Company Directors (GAICD)

Professional Training & Development

- Battelle International Conference on Remediation of Chlorinated and Recalcitrant Compounds 2016, 2014, 2012
- Clean-up 2017, 2015, 2013, 2011, 2009, 2007
- Eco-Forum 2018, 2014, 2012, 2010
- Todd Wiedemeier – Monitored Natural Attenuation two-day ACLCA course
- Steve Wilson – Landfill Gas two-day ACLCA course.
- 24 Hour Hazwoper, (27-29 Nov 2002) plus numerous 8-hour refreshers
- Baseline Security Clearance 31 October 2014 (652950)
- NSW Health and Safety Induction (White Card) (29 March 2004)
- Asbestos Awareness (17 April 2007)
- Tropical Basic Offshore Safety Induction and Emergency Training (TBOSIET) 23-24 June 2014.

Project Experience

- **Site Auditing**. – Jason has successfully completed over 100 site audits and is currently involved in more than 30 on-going. Jason has successfully audited major infrastructure projects, leaking UST sites, landfills, industrial complexes, market gardens and major oil and gas infrastructure.
- **Department of Mines Industry Regulation and Safety (WA)** – Four gold mine audits are currently underway. These are Lake Darlot, Mulline, Bamboo Creek and Twenty Mile Creek gold mines. The audit includes assessment of the status of tailings dams and reviewing mine closure planning for largely derelict state battery sites associated with historic gold mines.
- **Public Transport Authority-Perth Airport Link** - WA DER contaminated site auditor for this major piece of tunnel infrastructure linking the CBD of Perth to the airport. The audit includes significant PFAS issues related to impacts at the airport.
- **Fire and Emergency Services Australia** – WA DER contaminated site auditor for the demolition and redevelopment of a major fire station in Perth CBD contaminated with PFAS as a result of contamination with AFFF. Impacts have migrated off-site creating significant stakeholder consultation issues as part of this audit.
- **Minister for Planning** – Expert witness in NSW LEC on the proposals to remediate 5,000 m^3 of illegally dumped material in Western Sydney.
- **WestConnex Delivery Authority** – Expert witness on the contamination aspects of the compulsory purchase of the Alexandria Landfill, St Peters, for use for construction of the St Peters Interchange.
- **Exide Power Systems** - Expert Witness in Environment Court, Wellington, New Zealand. Represented Exide Power systems on a resource consent hearing relating to the health impacts of fugitive lead emissions from a lead smelter.
- **Lawrence Dry Cleaners**. Director of an Enhanced In-situ bioremediation (EISB) of PCE DNAPL in the Botany Sands aquifer in Sydney. This project is highly successful, is currently meeting the requirements of the Management Order and is one of the first schemes of its kind in Australia. Expert witness in NSW Land and Environment Court (LEC) for the first appeal of an EPA Management Order.
- **British Gas - Coxside Gasworks Remediation**. Site engineer on a 12-month remediation project for a 4-hectare gas works site in Plymouth UK. Remediation of three tar wells and four infilled gas holder bases was complicated by UK waste laws. Remediation included groundwater treatment and soil solidification. The site was eventually re-developed into a Multiplex cinema.
- **Reckitt Benckiser** - Director of the investigation, remediation and decommissioning of a former pesticide manufacturing facility in Sydney contaminated with chlorinated solvents and TPH.
- **Petronas Malaysia.** Investigation and remedial feasibility studies at an ethylene dichloride (EDC) manufacturing plant in Malaysia contaminated with chlorinated solvents including vinyl chloride.
- **TRW Automotive** – Adelaide. TCE DNAPL/plume remediation. Directed a project to assess and remediate a plume of chlorinated solvents in a South Australian sand aquifers using In-Situ Chemical Oxidation.
- **Ecolab** – Hale St, Botany. Directed the risk assessment of chlorinated solvent plume in the Botany Aquifer to derive remedial criteria for a steam injection system.
- **3M** St Marys. Directed the risk-based remediation of a site contaminated by TPH and fire-retardant materials.
- **Dana** – Director of the $4M remediation of a manufacturing facility in western Sydney. Remediation involved excavation under a building to remove spilled oil and chlorinated compounds and gained a Site Audit Statement at the end of the process.
- **Syngenta** – Pendle Hill, Sydney. A former chlorinated compound manufacturing facility in Sydney was remediated using a combination of techniques including thermal desorption and ex-situ bioremediation. Risk-based screening levels were derived to allow remedial compliance to be tested for a number of pesticide derivatives in groundwater.

- **Syngenta – Asia.** Jason has assisted Syngenta with a number of issues on sites in India, Korea, Indonesia and China. Issued have included compliance auditing, soil and groundwater contamination and remedial engineering.
- **Hunters Hill Radium Hill Company**. Expert advice provided in relation to the radiological contamination of private residences located adjacent to a former radium processing plant.
- **Boliden Mining - Los Frailes Environmental disaster, Seville, Spain**. Setting risk based remedial objectives and designing the sampling strategy to monitor subsequent remedial compliance over 800 hectares of land contaminated with mine tailings.

Publications

- Clay, J. (1997). Portsmouth Problem Investigated – Contaminated Land Investigation and Risk Assessment. Environmental Excellence Vol. 4, No.2, June 1997.
- Clay, J. (1997). Groundwater Risk Assessment Model Aberaman Phurnacite Works. In Yong, R. N.; Thomas, H. R.; (Eds). Geo-environmental Engineering, Contaminated Ground: Fate of Pollutants and Remediation, Conference Proceedings 514 - 520.
- Clay, J., MacKay, S., Enright, J., Loose, H.; (2001). The Implications of the Current Contaminated Land Regime on the Water Industry. Report 01/WW/24/1. UKWIR, London.
- Clay, J. (2006). The Australian risk-based approach to assessing and remediating MGPs. Land Contamination & Remediation, Vol. 14 No. 2. EPP Publications.
- Clay, J., Harris, M.E. (2002) Risk Based Corrective Action of Hydrocarbon Contamination at a former Major Urban Petroleum Storage Site in the U.K. Soil and Sediment Contamination, 11(5):701-718. AEHS
- Clay, J., Ellis, W., Lavelle, P. (2006). The risk-based remediation of a site contaminated with 2,4,5-T, 2,4-D and organochlorine pesticides. Enviro-06, Proceedings. Melbourne.
- Clay, J and Thompson B.A.W. (2007). Issues in Contaminated Land Management Risk Assessment Toxicology. *Journal of Toxicology and Environmental Health. Part A, 70: 1635-1637.*
- Clay, J; Illing, P. and Perrett K. (2007). The Applicability of Traditional Health Risk Analysis and Ill-Health Models in the Investigation of Medically Unexplained Physical Symptoms. *Journal of Toxicology and Environmental Health. Part A 70, 1664-01669.*
- Thompson, B.A.W & Clay, J (2007) Human health risk assessment of mercury impacts at a former thermometer factory in India: a probabilistic approach. Proceedings Contamination CleanUp07, Hilton Hotel Adelaide, 24-28 June.
- Clay, J, Thompson, B.A.W & Chau A. (2007). Review and Promotion of Risk-Based Remediation Goals as Contaminated Land Standards for Hong Kong. Proceedings Contamination CleanUp07, Hilton Hotel Adelaide, 24-28 June.
- Mc Keown, S; Clay, J. (2007) Remediation of a Chlorinated Solvent Contaminated Site in South Australia Using In-Situ Chemical Oxidation (ISCO). Proceedings Contamination CleanUp07, Hilton Hotel Adelaide, 24-28 June.
- Clay, J. (2007) A Peculiar Incident at Melbourne Airport – A Case of Environmental Related Illness or Mass Psychogenic Illness? Proceedings Contamination CleanUp07, Hilton Hotel Adelaide, 24-28 June.
- Perrett K.; Illing, P. and Clay, J (2007). An unusual problem in a primary school: a case of idiopathic environmental illness? *Chemical Hazards and Poisons Report. Chemical Hazards and Poisons Division, May 2007, Issue 9.* Health Protection Agency, London.
- Clay, J. (2008). Removing solvents in sand aquifers. Water Engineering Australia. Volume 2, Number 4, June 2008

Dr Andrei Woinarski

Principal, CEnvP SC

Qualifications & Certifications

Certified Environmental Practitioner (Contamination Specialist)
Doctor of Philosophy, University of Melbourne, 2004
Bachelor of Engineering (Environmental; Hons 1), University of Wollongong, 1999

Career Profile

Andrei Woinarski is an environmental engineer / hydrogeologist approaching 20 years' experience working in the contaminated land management / remediation and research industry. Andrei has been largely based in Sydney, though has worked on projects throughout Australia, southeast Asia and California, USA

As a consultant, he has fulfilled the role of project manager, hydrogeologist, technical or project director on hundreds of small to large scale contaminated land assessment projects, with a particular focus on conceptual site model development and contaminant hydrogeology. These have included a range of natural site settings and media, and contaminants including: chlorinated hydrocarbons, petroleum hydrocarbons; heavy metals; nutrients; asbestos; and, recalcitrant compounds such as per- and poly-fluorinated alkyl substances.

Andrei has been involved as the hydrogeologist or managed assessment and remediation works including the large-scale hydraulic containment systems at Orica Botany, *in situ* geochemical fixation, containment walls/cells, soil excavation, *in situ* bioremediation, natural source zone depletion, natural attenuation, chemical oxidation and numerous small-scale pump-and-treat systems. With his scientific and engineering background, he has a diverse skillset and range of experience, often providing internal technical support to projects and external advice to clients across a range of environmental issues for pre-purchase and divestment due diligence purposes, including identification of liabilities and opportunities, provision of management strategies and probabilistic cost estimation.

Andrei has worked across most industry sectors including infrastructure, industrial, mining and minerals processing, defence, land development and petroleum sectors in Australia. Examples include assessment of contamination issues at a portfolio of properties for Suez, Orica Botany groundwater clean-up and mercury remediation, Orica Kooragang Island arsenic and nutrient assessment and remediation, Port Kembla Copper, Chatree Goldmine risk advice, and Glencore Townsville Copper Refinery assessment and closure planning.

More recently, Andrei has provided technical peer review or independent advice, including: supporting Audits of former Akzo Nobel site at Camellia, Nyrstar Port Pirie, various sites at Kwinana, WA and Veranus Island, WA; assessment of Pasminco Cockle Creek liabilities; expert witness support in Land and Environment Court NSW proceedings.

Expertise

Contamination land assessment

Contaminant hydrogeology

Contamination management/remediation

Technical auditing and peer review

Key Industry Sectors

Mining and Minerals Processing

Industrial / Manufacturing

Land Development & Infrastructure

Petroleum

Government – local, State, Federal

Employment History

Jun 2016 (current): Senversa Pty Ltd

Jul 2014 to May 2016: JBS&G Australia Pty Ltd

Feb 2010 to Jun 2014: Golder Associates Pty Ltd

2008 to Jan 2010: URS Corporation (USA)

2004 to 2008: URS Australia Pty Ltd

2000 to 2002: Australian Antarctic Division and Queens University

Memberships

Australian Land and Groundwater Association (ALGA)

ALGA Special Interest Group – Groundwater Fate and Transport

International Association of Hydrogeologists (IAH)

Professional Training & Development

- HAZWOPER 24 Hour Health and Safety Training, 2004
- General construction OHS training, SafeWork NSW, 2004 (White Card)
- Peer reviewer for various publications, including Cold Regions Science and Technology

Project Experience

CONTAMINANT FATE AND TRANSPORT

Andrei has been responsible for and/or provided technical direction in developing conceptual site models and undertaking contaminant hydrogeology and geochemistry assessments at numerous sites to support risk assessment and management/remediation. These have considered contamination by heavy metals, arsenic, hexavalent chromium, recalcitrant organic compounds (including solvents), petroleum hydrocarbons and nutrients. Key projects include:

- **Busselton, WA (2019):** Technical direction for development of a hydrogeological conceptual model and preliminary fate and transport modelling for contaminants associated with a landfill.
- **Robertson Barracks, NT (2017-ongoing):** Internal peer review of hydrogeological assessment plans and documentation of interpretations, and provision of technical support to field staff conducting works, for a large-scale PFAS assessment at the Defence site.
- **RAAF Base East Sale, VIC (2016):** Internal hydrogeological review and technical support to field staff in assessing and interpreting hydrogeology and geochemistry for a large-scale PFAS assessment at the Defence site.
- **Technical peer review, various sites (2016- ongoing):** Provided contaminant hydrogeology expert advice supporting Site Auditor / Technical Advisor reviews for multiple projects. This has included peer review of: groundwater modelling and conceptual site model (CSM) for RAAF Base Pearce; nutrient assessment and modelling and remediation planning/design at Bis Industries, Kwinana WA; CSM for Alcoa refinery, Kwinana WA; Iluka Narngulu fate and transport model (for B, NH_4^+, TDS); LNAPL fate and transport at retail petroleum sites in Armadale WA, Caltex Brighton SA, BP Frankston South VIC; hydrogeology and LNAPL behaviour at Veranus Island and Barrow Island, WA; review of background soil and groundwater concentrations and application in assessing ecological risks at Barrow Island, WA.
- **Nyrstar, Port Pirie, SA (2016-ongoing)**: Assisting the audit of contamination assessment and remediation program at the operating smelter by providing technical review of documents in relation to source characterisation, hydrogeology, hydrology, contaminant fate and transport, and water treatment/management. Contaminants included zinc, lead, cadmium and acidic groundwater, with key issues relating to groundwater migration, assimilative capacity of the aquifer and groundwater – surface water interactions.
- **Former gasworks, Newcastle, NSW (2016)**: Contaminant hydrogeologist with responsibility to develop a CSM and conduct a Tier 1/2 environmental risk assessment associated with potential migration of contaminants in groundwater and discharge into a surface water system for the former gasworks to meet requirements of a VMP and support remediation planning.
- **Chatree goldmine, Thailand (2014-2015)**: Conducted a technical review of environmental and community health monitoring data, site inspections and an audit of the monitoring program at an operating gold mine in Thailand. The objectives of the work were to assess whether arsenic in the local community/environment was related to mine activities, which had resulted in forced mine closure. Developed a program of works to assess community health, and worked with the client's community consultation team to communicate actual risks. Involved leading technical aspects of collaborative work with the client, Thai universities and health experts, with particular consideration of Thai political and social frameworks, within a high-pressure work environment.
- **Orica Kooragang Island, Newcastle, QLD (2010-2014)**: Former operations at the facility had resulted in arsenic and ammonium nitrate impacts to groundwater. Acted in various roles either acting as technical lead/peer review on behalf of the client or providing technical direction as a hydrogeologist and remediation engineer:
  - Assessment of fate and transport mechanisms of arsenic in the subsurface at the ammonium nitrate manufacturing facility. This included: developing or reviewing site investigation and remediation feasibility assessment programs; conducting and reviewing monitoring programs; assessment of geochemistry, assimilative capacity, and groundwater – surface water interactions.
  - Responsible for the assessment of fate and transport mechanisms of nutrients and acids in the subsurface at the facility.
  - Reviewed numerical groundwater flow and solute transport models.
  - Responsible for, and key author of, a CSM for arsenic and nutrient contamination at the site. The model has been used to support subsequent risk assessments, remediation works and ongoing management of contamination issues.
- **Xstrata/Glencore copper refinery, Townsville, QLD (2012-2013)**: Project manager / principal investigator in work supporting closure planning of a copper refinery in North Queensland. Tasks and roles included:
  - Characterisation and assessment of contamination sources, fate and transport of heavy metals, arsenic, ammonium and other contaminants as part of a program of site investigation and closure planning.
  - Developing a CSM for metals, nutrients and other physicochemical vectors.

Project Experience

- **Orica Botany, NSW (2006-ongoing)**: Long-term site hydrogeologist assisting the client to assess and manage various groundwater contamination issues associated with former operations at the Orica Botany chemical manufacturing facility. Roles and works in relation to fate and transport have included:
  - Prepared a CSM focusing on hydrogeology, fate and transport of DNAPL, soil and dissolved phase chlorinated compounds and mercury to support risk assessments, investigations and remediation planning (most recent version in Sep 2017).
  - Hydrogeological assessment of aquifer assimilation capacity for chlorinated compounds, including fate and transport mechanisms.
  - Reviewed groundwater flow and solute (chlorinated solvents, mercury) transport models prepared by other consultants.
  - Conducted contaminant mass and flux assessments.
- **Former RailCorp site, Turrella, NSW (2015)**: Developed a CSM for a PCE/TCE contaminated site leased as a chemical distribution facility to assist RailCorp with their corporate risk management and meet regulator expectations.
- **Orica Yarraville, VIC (2011)**: Hydrogeologist who was one of two key authors in preparing a CSM for a large chemical/industrial site with DNAPL, soil and dissolved phase pesticides, nitrogenated organics and chlorinated compounds. The model was used to support the CUTEP process.
- **Modelling (various projects)**: Reviewed groundwater flow and solute transport models at various sites, and have undertaken basic fate and transport or geochemical models/tools (e.g. PHREEQC, BIOCHLOR, BIOPLUME, BIOSCREEN, SourceDK) and aquifer tests (Aqtesolve).

REMEDIATION

Andrei has been involved with numerous groundwater remediation projects typically as project manager, remediation engineer and/or hydrogeology lead, particularly at the front-end of projects (i.e. strategy, planning and design phases). In recent years, Andrei has also acted as project director. Key projects include:

- **Former gasworks, Wollongong NSW (2018-ongoing)**: Technical direction for the project to conduct site investigations, a HHERA, remediation trial (stabilisation) and develop a RAP. Also directed remediation works for stockpiled legacy materials. The site is subject to a site audit.
- **Former industrial waste disposal site, Lucas Heights, NSW (2017-ongoing)**: Provision of technical hydrogeological and remediation support via review of documents, participating in workshops to develop remedial and procurement strategies. Documents reviewed have included monitoring plans, responses to Auditor comments, and options assessments.
- **Former industrial facility, Wickham NSW (2017-ongoing)**: Project manager of investigation and groundwater monitoring works in relation to remediation of metals and petroleum hydrocarbon impacts for redevelopment of the former warehousing and wool store site. The project is made more complex by the presence of LNAPL impacts associated with off-site sources, and additional work has included review of third-party reports and provision of technical advice in relation to project risks from the LNAPL.
- **Lawrence Dry Cleaners, NSW (2016-ongoing)**: Project manager and remediation engineer for an enhanced *in situ* bioremediation system to remediate chlorinated solvent impacts associated with a former dry-cleaning facility. Responsible for all aspects of the project including: operation and maintenance of a pump and treat system; surface water, groundwater, soil vapour, ambient air and personnel monitoring; key author for all reports; stakeholder engagement including the client, client's legal team, tenant's and regulators; targeted site investigations; *in situ* bioremediation works and remediation trials. The site is subject to regulation by the EPA.
- **Port Kembla Copper, NSW (2017-ongoing):** Remediation engineer supporting works assessing residual contamination in surface water, stormwater, sediments and shallow groundwater to support closure of the former smelter and associated slag landfills. This has included acting as project manager and developing, in conjunction with the project director: surface water, groundwater and soil assessment work plans and subsequent implementation; monitoring programs; data review; and assessment of remedial/management options. The site is subject to regulation by EPA.
- **Technical peer review, various sites (2016- ongoing):** Provided remediation expert advice supporting Site Auditor / Technical Advisor reviews for multiple projects. This has included peer review of: remediation planning/design at Bis Industries, Kwinana WA; review of RAP for former Akzo Nobel site at Camelia NSW; LNAPL pumping tests and analyses at Varanus Island, WA; review of LNAPL remediation system and costing at Wickham, NSW; groundwater remediation and management plans at Nyrstar Port Pirie, SA.
- **Western Sydney Stadium, NSW (2017)**: Provided due diligence advice to Lend Lease in relation to contamination liabilities with the site and development for their bid. Reviewed the RAP and validation SAQP, and ongoing involvement in troubleshooting and auditor engagement. The site is subject to a site audit.

Project Experience

- **Former fire-fighting training facility, VIC (2016-2017):** Reviewed site information in relation to PFAS impacts at a large-scale former fire-fighting training facility. On the basis of this, **c**onducted a desktop remedial options feasibility assessment following USEPA CERCLA and State guidance to identify a preferred remedial/management approach – this approach has been applied by the client at other sites across Victoria. This has supported further remediation planning and design work for a containment type remediation approach. The site was subject to a site audit and EPA involvement.
- **Carpet manufacturing site, VIC (2016 - ongoing):** Strategic review of management/remediation approaches for a former carpet manufacturing site in Melbourne impacted with PCE in soil and groundwater, and subject to a site audit. Developed a remediation/management approach and conducted probabilistic cost estimation using Monte Carlo methods to assess likely costs.
- **Australian Technology Park, NSW (2015-2016)**: Project director for project providing remediation planning and approvals due diligence advice at the client's bid stage; and directed/reviewed subsequent contamination investigation, quantitative risk assessment and RAP for the redevelopment of the former industrial site. Developed an approach that saved significant remediation costs which enabled the client to win the development project tender. Remediation consists of on-site retention of impacted materials. The site was subject to a site audit.
- **Former Orica site, Villawood NSW (2014-2015):** Project director for remediation validation, asbestos clearance and monitoring services for a large-scale DDX, VOC, mercury and asbestos soil remediation (on-site thermal desorption) project at the former pesticide manufacturing facility. Key author for the draft remediation validation report.
- **Former Email site, Pagewood NSW (2014):** Project manager for the finalisation of a RAP, supporting contamination assessments and provision of ad-hoc advice in relation to remedial for a proposed redevelopment at a former PCE/TCE impacted industrial site.
- **Barangaroo Central, Sydney NSW (2014)**: Assisted in providing advice to BDA for site contamination issues and assistance with remediation planning and tendering process for Barangaroo Central.
- **Boral Nelsons Ridge, NSW (2014)**: Project manager and finalisation of remediation planning documents and supporting soil, groundwater and soil vapour assessments of VOC and TPH impacts for site redevelopment. Also responsible for auditor engagement.
- **Former Akzo Nobel site, Sydney NSW (2012-2014):** Project manager and remediation engineer for various projects managing issues associated with hexavalent chromium and chlorinated hydrocarbon contamination in soil, groundwater and stormwater at a former industrial facility. Tasks/roles included: review of site information and provision of technical advice to support long-term site management and property divestment strategies; managing and conducting operation and maintenance of a groundwater treatment plant; managing compliance monitoring of stormwater, groundwater and treatment plant discharge.
- **Xstrata/Glencore copper refinery, Townsville QLD (2012-2013)**: Project manager / principal investigator in work supporting closure planning of a copper refinery in North Queensland. Remediation tasks and roles included:
  - Assessing current remediation systems, which included a containment cell, and pump and treatment system.
  - Developing cost forecasts for various remedial/management scenarios.
  - Supported the client's environment team in internally communicating the findings of this project and closure planning.
- **Integral Energy depot, Fairfield NSW (2010):** Project managed targeted site investigations of soil, soil vapour and groundwater and prepared a RAP for creosote soil contamination beneath residential properties associated with a former adjacent electrical substation depot.
- **Orica Botany, NSW (2005-2016)**:
  - **2012-ongoing**: Presenter and participant in various stakeholder workshops/seminars, and collaborative work with client and their specialist consultants/contractors. Assisted client in developing long-term groundwater remediation.
  - **2005-2016:** Hydrogeologist/engineer managing collection and assessment of pumping data, treatment plant flow data, and data from loggers / pressure transducers and provision of hydrogeological advice to assist in optimisation of the pump-and-treat system and system troubleshooting.
  - **2012-ongoing:** Ongoing consulting advice and technical review in relation to works associated with development of long-term chlorinated solvent contamination remediation strategies and management for the Orica Botany site.
  - **2010:** Conducted a trial of groundwater injection and recovery system. Tasks include well rehabilitation, aquifer tests, monitoring, well fouling mitigation and injection trials.
  - **2005-2008:** Hydrogeologist for several large-scale chlorinated solvent DNAPL remediation projects in the conceptual design and field and/or laboratory feasibility trial phases, including: managing site investigations; collection of DNAPL, soil and groundwater samples for trial purposes; preparing DSI reports; providing site information to, and reviewing, third-party

Project Experience

reports from remediation vendors. DNAPL remediation technologies assessed included direct recovery, in-situ chemical oxidation and thermal treatment technologies.

- **2004-2012:** Oversight of construction and commissioning of a large (>120 extraction and monitoring wells) hydraulic containment barrier system (subsurface components). Ongoing role conducting well rehabilitation, including chemical, physical and biological assessment, at production bores with biological and physical fouling.

- **Orica Kooragang Island, Newcastle NSW (2011-2014)**:
  - Seconded with the client to provide advice, strategy and planning input, technical review of deliverables from client's other consultants, and preparation of reports for issue to regulators in relation to various arsenic (*in situ* fixation, containment, PRBs, MNA, pump-and-treat) and nutrient contamination remediation projects at an ammonium nitrate manufacturing facility.
  - Acted as a contaminant hydrogeologist and key report author for a treatability study and feasibility assessment of *in situ* geochemical fixation remediation for arsenic impacted groundwater.
  - Concept design of a containment system for arsenic impacts.
  - Directed site assessment, remediation planning, system design and implementation of a pump and treat system for a nitric acid plume.
- **Former ChlorAlkali Plant, Botany NSW (2011-2013):** Remediation engineer / hydrogeologist and key author for a feasibility assessment of soil and groundwater mercury remediation options, and preparation of RAP for a containment approach for the former ChlorAlkali Plant. The feasibility assessment and RAP were subject to peer review by an international expert and Site Auditor.
- **Ammonium nitrate and cyanide production facility, Gladstone QLD (2011):** Managed a remediation project for cyanide, ammonia and nitrate impacted groundwater and stormwater including: remedial options review, advice for the selection of a preferred approach and design of a hydraulic containment system. Also conducted a review of *ex situ* treatment and reuse options for cyanide impacted soil.
- **Trans Bay Cable Project, CA USA (2009)**: Provided environmental oversight of construction and hazardous waste management for a construction project at a former gasworks site in San Francisco.
- **Golden Eagle Refinery, CA USA (2008-2009):** Field engineer assisting with management and troubleshooting for the operation and maintenance of a large-scale (>30 pumping wells and 1 km of piping) LNAPL recovery system. Role involved task management, subcontractor management, health and safety oversight, system inspections, remediation system design, LNAPL recovery tests.
- **Antarctica, Sub-Antarctic and Arctic (2000-2004)**: PhD related work with University of Melbourne and Australian Antarctic Division included investigation and pilot trial of remediation strategies such as pump-and-treat, PRBs and in-situ chemical oxidation for management of several petroleum, heavy metal and PCB contaminated sites at Casey and Wilkes Stations in Antarctica, Macquarie Island and Resolution Island, Canada. This involved working with a diverse team of scientists, engineers and managers in all aspects of the project from design, planning, laboratory and field studies to implementation.

ENVIRONMENTAL SITE ASSESSMENTS

Andrei has conducted or been responsible for the delivery and project management of numerous Brownfields environmental site assessments in Australia. These have ranged from small (<$50k) to several large (>$500k) projects typically used to support contamination management, meet regulatory requirements, property transactions and land redevelopment. Andrei has also acted as lead contaminant hydrogeologist on a number of these projects. Key projects in addition to those mentioned above include:

- **Multiple Dulux industrial facilities, NSW (2017-ongoing)**: Technical director for contamination assessment, and surface water and groundwater monitoring programs at Dulux's NSW sites. Also prepared management plans and monitoring programs.
- **PFAS assessment – large industrial facility, NSW (2016-2017)**: Project manager for a groundwater and soil seepage PFAS investigations at a large heavy industrial facility in NSW to support internal due diligence and legal advice in relation to PFAS liabilities.
- **Portfolio of waste processing facilities, Australia (2016)**: Peer review of deliverables for a project providing due diligence services to a client to support the sale of a portfolio of industrial facilities across Australia. Deliverables included documentation of preliminary and limited detailed (soil, groundwater, surface water, soil vapour) assessments.
- **Commercial/industrial site investigation, Marrickville NSW (2016)**: Project manager of a preliminary desktop and detailed site investigation (soil, soil vapour and groundwater) and reporting at a mixed use commercial and industrial site at Carrington Road, Marrickville. The investigations were conducted to inform remediation planning and master planning for development of the site.

Project Experience

- **Former Koltex site, Leichhardt NSW (2015-2016)**: Project manager and hydrogeologist for a project to undertake site investigations (soil, soil vapour and groundwater), development a conceptual site model, preparation of remediation work plans, waste classifications and stakeholder liaison to support remediation and audit of the development site.
- **Former Taubmans site, St Peters NSW (2015-2016)**: Project manager and directed provision of due diligence advice, site investigations (soil, soil vapour and groundwater), development an initial conceptual site model, engagement with EPA to support contamination aspects of the development planning. Issues were related to chlorinated solvents in groundwater, and other contamination issues common to urban industrial sites.
- **Multiple former commercial/industrial brownfield sites, NSW (2004-ongoing)**: Acted variously as project director, project manager or oversight of field programs for environmental investigations (soil, soil vapour and groundwater) at other properties in Sydney, Newcastle and ACT - typically related to due diligence assessments, property transactions or contamination management at former industrial sites and retail petroleum sites. These include BlueScope Erskine Park NSW, RMS Matraville NSW, illegal filling at Kentlyn NSW, various Mobil sites in ACT and NSW.
- **Orica Kooragang Island, NSW (2010-2014):** Project manager for site investigations in relation to assessment of nutrients and nitric acid impacts. Also was the author for groundwater monitoring programs, an environment management plan and conducted groundwater monitoring in relation to arsenic groundwater impacts.
- **Xstrata/Glencore copper refinery, Townsville QLD (2010-2013)**: Project manager and principal investigator for environmental contamination investigations at the site. This included a program of soil bores, groundwater wells, well repair/redevelopment, groundwater and surface water monitoring and reporting. The investigations supported development of a CSM and data gaps assessment for closure planning.
- **Orica Botany, NSW (2004-2009)**: Acted as the project manager or lead field investigator for a series of DNAPL source area assessments and large-scale chemical and hydraulic monitoring programs (>100 monitoring locations) to characterise geology, hydrology, contaminant fate and transport, and inputs into assessment of risks to environment and human health from chlorinated hydrocarbons in the subsurface associated with a large chemical industrial site. Roles and responsibilities consisted of:
  - Project management of monitoring programs.
  - Key author for groundwater monitoring and assessment programs.
  - Oversight of installation of a large network of bundled piezometers and monitoring wells.
  - Conducted DNAPL source area field investigations.
  - Hydraulic well and aquifer tests (slug, DNAPL recovery) and interpretation.
  - Conducted intrusive and down-hole geophysical testing.
  - Installation and maintenance of a hydraulic monitoring system of pressure transducers and loggers.
  - Key author of reports, including hydrogeological and geochemical components and interpretations.
- **Resolution Island / Queens University, Canada (2001):** Provided scientific advice, field analytical services, remediation oversight and health and safety supervision for a large remediation project at a DEW-line site with sediments and groundwater contaminated with PCBs.

DUE DILIGENCE AND EXPERT OPINION / SUPPORT

In addition to providing technical support and peer review to site audits, Andrei has provided due diligence advice to support property or company acquisitions or purchase of development rights of industrial and brownfield sites. These have typically involved review of third party information (and occasionally supporting site investigations). For advice relating to land development, consideration of development constraints and opportunities has been made. Andrei has also provided independent review of available information to support client's internal risk management and help with community communications in the upstream oil and gas and mining sectors. Examples include:

- **Paramatta Light rail, Transport for NSW (2018-ongoing):** Provision of expert support to the site auditor for the remediation of solvents, hexavalent chromium and asbestos at the former Akzo Nobel site. Remediation comprises a containment wall system and integrated capping system.
- **Hydro Aluminium Smelter, Kurri Kurri NSW (2018-ongoing):** Assessment of long-term liabilities and associated financial assurance associated with a proposed containment cell to support NSW Department of Environment and Planning project approvals.
- **Pasminco Cockle Creek, NSW (2018-ongoing)**: Assessment of long-term liabilities and associated financial assurance associated with the containment cell to support NSW Department of Environment and Planning project approvals.

Project Experience

- **Expert support, Land and Environment Court (2017):** Provided expert evidence to support proceedings involving illegal waste disposal at a site in western Sydney. The waste had principally impacted on Aboriginal heritage and environmental values.
- **Various industrial brownfield Sites, NSW (2014-ongoing)**: Provided due diligence advice in relation to acquisition of industrial, commercial and brownfield properties for redevelopment. Clients have included major land developers, industrial companies and retail companies. The sites typically were potentially impacted with chlorinated solvents, petroleum hydrocarbons, asbestos and metals. Site have included various properties in Redfern, St Peters, Marrickville, Kings Park, Hurstville, Sydney Olympic Park. These have often led to further assessment, involvement in structure planning, remediation planning and remediation works.
- **Confidential LNG Site, PNG (2015)**: Technical review / due diligence assessment of environmental and process information to assist client in assessing risks associated with a condensate release at a gas processing facility.
- **Orica Kooragang Island, Newcastle NSW (2014-2015)**: Management and preparation of reports required for PRPs under an EPL for a public/regulatory audience. Involved working with client engineers and management to distil technical process/engineering information from a broad range of process plant cleaner-production projects into a document suitable for the targeted audience.

WATER TREATMENT & MANAGEMENT

Andrei has been involved in water treatment and management projects in conjunction with contaminated site assessments. These have included at the front end of projects assisting clients in developing strategies to manage wastewater at industrial sites, and being responsible for concept design, and operation and maintenance, of small to mid-sized groundwater treatment plants for organic contaminants, cyanide, chromium, low pH and nutrients. Key projects include:

- **PFAS water treatment option feasibility review, VIC (2017)**: Assisted in review of PFAS water treatment technologies and initial feasibility assessment for a former fire training facility.
- **Groundwater pump and treat systems, various sites NSW (2010-ongoing**): Project manager or principal engineer for the operation, maintenance and monitoring of groundwater pump and treat systems – including: PCE impacted groundwater at Lawrence Dry Cleaners, NSW; chromium (VI) and chlorinated methanes at for AkzoNobel site, Camellia NSW; acidic groundwater at Orica Kooragang Island, NSW; metals and PCE impacted groundwater former Koltex site, NSW; TCE impacted groundwater at a metals manufacturing facility, Penrith NSW. Have also been responsible for overall concept design, procurement and commissioning for the plant at the former Koltex site.
- **Orica Yarwun AN and Cyanide Production Facility, QLD (2010-2013)**:
  - **2013**: Project Manager and engineering consultation to assess stormwater management and treatment options for cyanide and nutrients (see below). This also included working with hydraulic engineers and modellers for stormwater capture and retention system design, assessment of runoff hydrographs and water quality, review and development of nutrient and cyanide treatment options, including trial of cyanide biological treatment.
  - **2010-2012:** Project Manager and engineer for an ongoing project to assist the client in managing industrial effluent issues at the facility, and potential integration with groundwater remediation systems. This involved developing management strategies, characterisation of effluent system and waste streams, identification of preferred treatment options, a feasibility assessment, treatability trials, costing and design. Constituents include ammonia, nitrate, cyanide, metals and phosphates. Also involved compliance monitoring and licensing.
- **Selenium Water Treatment, Port Kembla Copper, NSW (2011):** Review of performance of water runoff capture systems, a water treatment plant and desktop feasibility study of treatment alternatives for selenium at a former copper smelter being decommissioned.
- **University of Melbourne, VIC (2000-2003):** In PhD related work conducted research into using ion exchange resins and zeolites for treatment of heavy metals in waters.

Publications

REFEREED JOURNAL ARTICLES

- Woinarski, A.Z. et al. A natural zeolite permeable reactive barrier to treat heavy-metal contaminated waters in Antarctica: Fixed-bed ion exchange studies. Process Safety and Environmental Protection, 84(2) (2006), 109-116.
- Ferguson, S.H., A.Z. Woinarski et al. A Field Trial of In Situ Chemical Oxidation (ICO) to Remediate long-term Diesel Contaminated Antarctic Sediments. Cold Regions Science and Technology, 40 (2004), 47-60.
- Woinarski, A.Z. The effects of cold temperature on copper ion exchange by natural zeolite for use in a permeable reactive barrier in Antarctica. Cold Regions Science and Technology, 37(2) (2003), 159-168.

OTHER

- Eleventh International Conference on Remediation of Chlorinated and Recalcitrant Compounds ('Battelle'), April 8-12 2018 - *Insights on Risk-Reduction Mechanisms from 12 Years' Operation of a Pump-and-Treat System at the Botany Chlorinated Hydrocarbon 'Mega-Site'*. G. Dasey, A. Woinarski, and S. Corish
- Eleventh International Conference on Remediation of Chlorinated and Recalcitrant Compounds ('Battelle'), April 8-12 2018 - *Evolution of a Conceptual Site Model for the Botany Chlorinated Hydrocarbon 'Mega-Site' Clean-Up Project*. A. Woinarski, G. Dasey, and J. Stening
- Stevens, G.W, A.Z Woinarski et al. *Penguins, pollution and chemical engineering in Antarctica*, The Chemical Engineer. 2004
- Woinarski, A.Z. 2004. *Development of a natural zeolite permeable reactive barrier for the treatment of contaminated waters in Antarctica*. PhD Thesis, Department of Chemical and Biomolecular Engineering, University of Melbourne

BRIDGES ACOUSTICS

ABN: 73 254 053 305

78 Woodglen Close
P.O. Box 61
PATERSON NSW 2421

Phone: 02 4938 5866
Mobile: 0407 38 5866
E-mail: bridgesacoustics@bigpond.com

CURRICULUM VITAE

Name:	Mark Leslie BRIDGES.	
Address:	78 Woodglen Close, PATERSON NSW 2421	
Qualifications:	Bachelor of Mechanical Engineering (Hons), awarded May 1991.	
Affiliations:	Member of the Australian Acoustical Society, admitted February 1999.	
Employment:	Since Feb 2000:	Principal, Bridges Acoustics.
	Oct 1998 to Feb 2000:	A/Manager, Caleb Smith Consulting.
	Nov 1995 to Oct 1998:	Senior Acoustic Engineer, Caleb Smith Consulting.
	Feb 1995 to Nov 1995:	Acoustic Engineer, Caleb Smith Consulting.

Experience: Over 26 years as a professional acoustical consultant specialising in environmental noise measurement, prediction and control for the mining industry. Published two professional papers on best practise environmental noise reduction in the open cut coal mining industry.

Completed over 150 noise impact statements and more than 200 other environmental noise assessments in the mining, industrial commercial, domestic, utilities and services sectors.

Prepared expert evidence and appeared in the Land & Environment Court or the Liquor Licensing Court on over 15 occasions, for a variety of clients including local government.

Assisted lead auditors in Independent Environmental Audits, mainly for mining and quarrying operations. Completed acoustic audits include:

- Ulan Coal Mine 2013;
- Ulan Coal Mine 2016;
- Chain Valley Bay Colliery 2016;
- Wambo Coal Mine 2017;
- Stratford Coal Mine 2018;
- Duralie Coal Mine 2018;
- Mt Owen Coal Mine 2018;
- Glendell Coal Mine 2018;
- Mangoola Coal Mine 2019;
- Hunter Valley Operations 2019;
- Emirates One&Only Wolgan Valley Resort (helicopter noise) 2019; and
- Karuah Quarry 2020.

Appendix B: Consultation with Agencies

Michelle Agnew

From: Jason Clay
Sent: Tuesday, 1 February 2022 9:22 AM
To: queanbeyan@epa.nsw.gov.au; cau@planning.nsw.gov.au; Jackie.taylor@environment.nsw.gov.au; Compliance@planning.nsw.gov.au; katrina.oreilly@planning.nsw.gov.au; matthew.rizzuto@epa.nsw.gov.au; david.carswell@qprc.nsw.gov.au
Cc: Michelle Agnew
Subject: 19145 - Dargues Mine Audit

Dear All

Senversa has been recommissioned to undertake the Dargues Mine Independent Audit. We are writing to inform you that we intend to conduct the audit on and around 21 February. This will be our third/fourth audit of the facility.

The audit is of EP&A Act 1979, EPL and mining lease approval conditions. The audit questionnaire remains the same as the previous one, as we understand that there have been no updates to the approvals since the last audit.

We would be very grateful if you could let us know if you have comments or issues that you would like us to focus on, especially any matters arising since the last audit or have any further questions or queries that you would like raised with Aurelia Metals.

Regards

senversa

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)

M: **+61 410 431 674**
E: **jason.clay@senversa.com.au**
Jason Clay is on Teams

www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia
+61 2 8252 0000

Senversa acknowledges the traditional custodians of the lands and waters upon which we conduct our work, and pay our respect to the elders, past, present and those to come.

Michelle Agnew

From: Jason Clay
Sent: Friday, 4 February 2022 7:43 AM
To: Michelle Agnew
Subject: FW: 19145 - Dargues Mine Audit

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)
M: **+61 410 431 674**
Jason Clay is on Teams
www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: Katrina O'Reilly <Katrina.OReilly@planning.nsw.gov.au>
Sent: Thursday, 3 February 2022 2:43 PM
To: Jason Clay <jason.clay@senversa.com.au>
Subject: RE: 19145 - Dargues Mine Audit

Thankyou Jason.

Areas to focus on include:

Surface water and ground water management and monitoring;
Water use on site (site water balance management ensuring enough water on site for the project);
Compensatory water issues;
Biodiversity monitoring and management and offsets status;
Aboriginal heritage management;
noise and air monitoring and pollution generating activities (particularly the crusher and processing plant and vehicles moving throughout the site);
heavy vehicle/truck movements recording and management;
tailings management;
complaints handling and management;
community engagement and
erosion and sediment control measures on site.

Regards
Katrina

Katrina O'Reilly
Team Leader Compliance

Planning & Assessment | Department of Planning and Environment
T 02 6229 7909 | **M** 0429 400261| **E** katrina.oreilly@planning.nsw.gov.au
PO Box 5475 | Level 1 11 Farrer Place Queanbeyan NSW 2620
www.dpie.nsw.gov.au

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically

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From: Jason Clay <jason.clay@senversa.com.au>
Sent: Tuesday, 1 February 2022 9:22 AM
To: EPA RSD Queanbeyan Mailbox <queanbeyan@epa.nsw.gov.au>; RRD OCI Central Assessment Unit Mailbox <cau@planning.nsw.gov.au>; Jackie Taylor <Jackie.Taylor@environment.nsw.gov.au>; DPE PSVC Compliance Mailbox <compliance@planning.nsw.gov.au>; Katrina O'Reilly <Katrina.OReilly@planning.nsw.gov.au>; Matthew Rizzuto <Matthew.Rizzuto@epa.nsw.gov.au>; david.carswell@qprc.nsw.gov.au
Cc: Michelle Agnew <michelle.agnew@senversa.com.au>
Subject: 19145 - Dargues Mine Audit

Dear All

Senversa has been recommissioned to undertake the Dargues Mine Independent Audit. We are writing to inform you that we intend to conduct the audit on and around 21 February. This will be our third/fourth audit of the facility.

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We would be very grateful if you could let us know if you have comments or issues that you would like us to focus on, especially any matters arising since the last audit or have any further questions or queries that you would like raised with Aurelia Metals.

Regards

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)

M: **+61 410 431 674**
E: **jason.clay@senversa.com.au**
Jason Clay is on Teams

www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia
+61 2 8252 0000

Senversa acknowledges the traditional custodians of the lands and waters upon which we conduct our work, and pay our respect to the elders, past, present and those to come.

Michelle Agnew

From: Jason Clay
Sent: Tuesday, 1 February 2022 12:47 PM
To: Michelle Agnew
Subject: FW: 19145 - Dargues Mine Audit

FYI

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)
M: **+61 410 431 674**
Jason Clay is on Teams
www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: Graeme Harlor <Graeme.Harlor@qprc.nsw.gov.au>
Sent: Tuesday, 1 February 2022 12:01 PM
To: Jason Clay <jason.clay@senversa.com.au>
Cc: Michael Thompson <Michael.Thompson@qprc.nsw.gov.au>; David Carswell <David.Carswell@qprc.nsw.gov.au>; Natasha Abbott <Natasha.Abbott@qprc.nsw.gov.au>
Subject: RE: 19145 - Dargues Mine Audit

Hello Jason,

Thanks for your email. I can confirm that the Development Consent has not been recently amended, however Council understands that the rate of extraction may have increased and also has the degree of material processing on site.
We anticipate receiving a modification application in this regard shortly.

Regards

Graeme Harlor
Service Manager - Development

Queanbeyan-Palerang Regional Council
Tel: (02) 6285 6244
Web: www.qprc.nsw.gov.au
Mail: PO Box 90 Queanbeyan NSW 2620

From: David Carswell <David.Carswell@qprc.nsw.gov.au>
Sent: Tuesday, 1 February 2022 9:34 AM
To: Graeme Harlor <Graeme.Harlor@qprc.nsw.gov.au>; Natasha Abbott <Natasha.Abbott@qprc.nsw.gov.au>
Cc: Michael Thompson <Michael.Thompson@qprc.nsw.gov.au>
Subject: FW: 19145 - Dargues Mine Audit

Graeme/Tash

Seems to be one for either of you.

David Carswell
Service Manager - Land-Use Planning
Tel: (02) 6285 6128 **Mob:** 0448 224 260

From: Jason Clay <jason.clay@senversa.com.au>
Sent: Tuesday, 1 February 2022 9:22 AM
To: queanbeyan@epa.nsw.gov.au; cau@planning.nsw.gov.au; Jackie.taylor@environment.nsw.gov.au; Compliance@planning.nsw.gov.au; katrina.oreilly@planning.nsw.gov.au; matthew.rizzuto@epa.nsw.gov.au; David Carswell <David.Carswell@qprc.nsw.gov.au>
Cc: Michelle Agnew <michelle.agnew@senversa.com.au>
Subject: 19145 - Dargues Mine Audit

Dear All

Senversa has been recommissioned to undertake the Dargues Mine Independent Audit. We are writing to inform you that we intend to conduct the audit on and around 21 February. This will be our third/fourth audit of the facility.

The audit is of EP&A Act 1979, EPL and mining lease approval conditions. The audit questionnaire remains the same as the previous one, as we understand that there have been no updates to the approvals since the last audit.

We would be very grateful if you could let us know if you have comments or issues that you would like us to focus on, especially any matters arising since the last audit or have any further questions or queries that you would like raised with Aurelia Metals.

Regards

senversa

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)

M: **+61 410 431 674**
E: **jason.clay@senversa.com.au**
Jason Clay is on Teams

www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia
+61 2 8252 0000

Senversa acknowledges the traditional custodians of the lands and waters upon which we conduct our work, and pay our respect to the elders, past, present and those to come.

Michelle Agnew

From: Jason Clay
Sent: Friday, 4 February 2022 7:47 AM
To: Michelle Agnew
Subject: FW: AREQ0025018 | Dargues Gold Mine | Enquiry (external) | Other Enquiry | 01 Feb 2022 10:52:08
Attachments: Senversa_Dargues Gold Mine_2022.pdf

senversa

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)
M: **+61 410 431 674**
Jason Clay is on Teams
www.senversa.com.au
Level 24, 1 Market St,
Djubuguli, Eora Country
Sydney, NSW, 2000, Australia

From: Resources Regulator <nswresourcesregulator@service-now.com>
Sent: Thursday, 3 February 2022 2:13 PM
To: Jason Clay <jason.clay@senversa.com.au>
Cc: jenny.ehmsen@planning.nsw.gov.au
Subject: AREQ0025018 | Dargues Gold Mine | Enquiry (external) | Other Enquiry | 01 Feb 2022 10:52:08

Dear Mr Clay,

Please find attached the Regulator's response to your request for consultation for the independent audit of the Dargues Gold Mine.

Regards,

Jenny Ehmsen
Principal Compliance Auditor
MAI - Enforcement | Resources Regulator
T 4063 6443 M 0438 735 010

NSW GOVERNMENT | Regional NSW

The Department of Regional New South Wales acknowledges that it stands on Country which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

Ref:MSG0606409_QOYSgnOU6fW6hzAlBZfB

AREQ0025018

Mr Jason Clay
Senversa Pty Ltd
Level 24, 1 Market Street
Sydney NSW 2000

By email: jason.clay@senversa.com.au

Dear Mr Clay

Subject: Dargues Gold Mine – Independent Environmental Audit

Thank you for your email and letter dated 1 February 2022 requesting consultation on the independent audit to be undertaken of the Dargues Gold Mine which is covered by mining lease ML1675 (1992).

The Resources Regulator requires that the following issues be addressed in independent environmental audits undertaken in accordance with a planning consent condition.

- Review relevant mining leases and exploration licences as agreed with Resources Regulator
- Undertake an assessment of compliance against the conditions of title related to environmental management
- Verify that there is a current Mining Operations Plan (MOP) in place and it has been approved by the Regulator – review compliance against any conditions of approval of the MOP
- Undertake a critical review of the MOP, including an assessment of its compatibility with the description of operations contained in the planning approval. In particular:
    - Review the rehabilitation strategy as outlined in the MOP to determine if it is consistent with the Project Approval in terms of progressive rehabilitation schedule; and proposed final land use(s)
    - Review the rehabilitation objectives and completion criteria as outlined in the MOP to determine if they have been developed in accordance with the proposed final land use(s) as outlined in the Project Approval

- Review the development and implementation of any rehabilitation monitoring programs to assess performance against the nominated objectives and completion criteria – verified by reviewing monitoring reports and rehabilitation inspection records
- Determine if a rehabilitation care and maintenance program has been developed and implemented based on the outcomes of monitoring program – verified by reviewing Annual Rehabilitation Programs or similar documentation
- Confirm that mining operations are being conducted in accordance with the approved MOP (production, mining sequence etc.), including within the designated MOP approval boundary – to be verified by site plans and site inspection
- Confirm that rehabilitation progress is consistent with the approved MOP as verified by site plans and a site inspection. This should include an evaluation against rehabilitation targets and whether the final landform is being developed in accordance with conceptual final landform in the Project Approval
- Based on a visual inspection, determine if there are any rehabilitation areas that appear to have failed or that have incurred an issue that may result in a delay in achieving the successful rehabilitation outcomes.
- Review the progress made in addressing the issues raised in relation to the management and rehabilitation of the tailings storage facility as outlined in the Regulator's letter dated 7 May 2020 with reference no. LETT0004287.

In addition to the above, the audit should note observations where rehabilitation procedures, practices and outcomes represent best industry practice.

It would be appreciated if a copy of the final audit report could be sent to the Regulator at nswresourcesregulator@service-now.com upon completion of the audit.

Yours sincerely

Jenny Ehmsen
Principal Compliance Auditor

3 February 2022

Michelle Agnew

From: Brian Weir <brian_weir1@hotmail.com>
Sent: Monday, 21 February 2022 1:09 PM
To: Jason Clay
Cc: Michelle Agnew; Chase Dingle; Enzo Guarino
Subject: Re: 19145 - Dargues Mine Audit

Dear Jason,
thank you for your email of Feb 1 re the undertaking of the Independent Audit.
I believe the Dargues Gold Mine Community Consultative Committee (CCC) operates in accordance with the Guidelines of the NSW Department of Planning Industry and Environment and fulfils the Guidelines' Purpose as a "forum for discussion".
The Committee consists of Members who have a strong interest in the mine operations, the interests of the nearby communities, and the environment. The CCC Meeting Minutes reflect that level of interest and wide-ranging discussion.
There is community engagement both formally through the CCC and informally between the respective parties and the general community.
The CCC Minutes are displayed on the Company website and reflect this.
Accordingly, I have no specific issues I wish to bring to your notice.
Regards
Brian Weir PSM
Independent Chairman
Dargues Gold Mine Community Consultative Committee.

From: Jason Clay <jason.clay@senversa.com.au>
Sent: Tuesday, 1 February 2022 11:31 AM
To: brian_weir1@hotmail.com <brian_weir1@hotmail.com>
Cc: Michelle Agnew <michelle.agnew@senversa.com.au>; Chase Dingle <Chase.Dingle@aureliametals.com.au>; Enzo Guarino <enzo.guarino@aureliametals.com.au>
Subject: FW: 19145 - Dargues Mine Audit

Brian

See my email below to the Dargues regulatory community letting them know about the timing for the Independent Environmental Audit.

If there are any issues you think I should be aware of I'd appreciate an update before the audit commences. Traditionally, Dargues has requested that any CCC audit related issues are communicated through the chair of the CCC, which I think is easiest for managing the flow of communications.

The date of the audit will actually be 24-25 February.

Thanks

senversa

Jason Clay
Senior Principal, Contaminated Sites Auditor (NSW and WA)

M: **+61 410 431 674**
Jason Clay is on Teams
www.senversa.com.au

Level 24, 1 Market St,
Djubuguli, Eora Country

Sydney, NSW, 2000, Australia

From: Jason Clay
Sent: Tuesday, 1 February 2022 9:22 AM
To: queanbeyan@epa.nsw.gov.au; cau@planning.nsw.gov.au; Jackie.taylor@environment.nsw.gov.au; Compliance@planning.nsw.gov.au; katrina.oreilly@planning.nsw.gov.au; matthew.rizzuto@epa.nsw.gov.au; david.carswell@qprc.nsw.gov.au
Cc: Michelle Agnew <Michelle.Agnew@senversa.com.au>
Subject: 19145 - Dargues Mine Audit

Dear All

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Regards

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Appendix C: Site Photographs

Photo 1. Ventilation fan

Photo 2. Chemical storage adjacent mechanical workshop (NC5)

Photo 3. Bund construction adjacent mechanical workshop

Photo 4. Laydown area (NC8)

Appendix D: Acoustic Audit Report

BRIDGES ACOUSTICS

ABN: 73 254 053 305

78 Woodglen Close
P.O. Box 61
PATERSON NSW 2421

Phone: 02 4938 5866
Mobile: 0407 38 5866
E-mail: bridgesacoustics@bigpond.com

17 March 2022
Ref: J0260-01-L1

Senversa Pty Ltd
Level 24, 1 Market Street
SYDNEY NSW 2000

Attn: Mr Jason Clay

Dear Jason,

RE: DARGUES GOLD MINE - INDEPENDENT ENVIRONMENTAL AUDIT

This report describes outcomes from a partial Independent Environmental Audit (IEA) of Dargues Gold Mine (Dargues) operated by Big Island Mining Limited (BIML), with a focus on acoustics. This acoustic audit report was commissioned by Senversa Pty Ltd to accompany and form part of a more complete IEA of Dargues.

The acoustic audit was completed according to the Independent Audit Guideline (NSW Government, October 2015) and other requirements specified by Senversa. The audit covers a two year period from September 2019 to September 2021.

AUDIT SCOPE

The acoustic audit described in this report included:

- A desktop review of various documents. The primary documents include:
  - Development consent or project approval;
  - Environment Protection License;
  - Noise Management Plan;
  - Noise monitoring data for the audit period, described in Annual Reviews prepared by BIML and noise monitoring reports prepared by independent consultants;
- Identification of any non-compliances and investigation of any noise and vibration incidents and issues;
- Review of compliance with any directives or directions from regulators;
- Recommendation of any changes or updates to management procedures or management plans where appropriate; and
- Preparation of a table of responses related to compliance with noise related project approval and licence conditions identified by Senversa. Any recommendations or other audit outcomes were also included in the table of responses.

A site visit was not included in the scope of the acoustic audit. Senversa audit personnel visited the site to obtain relevant data, inspect noise mitigation measures and obtain any additional required information.

COMPLIANCE WITH PROJECT APPROVAL AND ENVIRONMENT PROTECTION LICENCE CONDITIONS

Outcomes from the acoustic audit indicated general compliance with Project Approval 10_0054Mod4 and Environment Protection Licence 20095 acoustic related conditions. The following sections present additional information regarding compliance, non-compliance or recommendations regarding these conditions.

Schedule 3 Condition 1 Noise Criteria

EPL Condition L2.1 Noise Limits

EPL Condition L2.6 Modifying Factors

Dargues complied with the noise criteria specified in Condition 1 at all monitoring locations, as evidenced by noise monitoring data obtained from Annual Reviews and consultant's reports in all quarters except October to December 2019 in which no noise survey was completed. The 2019-2020 Annual Review stated the reason for omission of the noise compliance survey was the extensive bushfires occurring at that time which prevented safe travel to the region and access to monitoring locations for noise monitoring personnel.

The lack of a noise compliance survey in the October to December 2019 quarter does not imply noise levels from Dargues exceeded relevant noise criteria in that quarter. Given compliance with the noise criteria in previous and more recent noise surveys, compliance with the criteria is considered highly likely.

Nevertheless, **noise from Dargues was not measured in this time period as required by Condition 1 which is considered a non-compliance** with the Condition. As this non-compliance was caused by exceptional circumstances, no related recommendations are included.

A detailed review of the noise monitoring reports indicated no assessment of 'modifying factors' defined in the relevant noise policy and mentioned in PA Condition 1 and EPL Condition L2.6, which is considered a non-compliance with these conditions.

Recommendation: Require consultants completing all noise compliance surveys to assess and report on modifying factors defined in the *Noise Policy for Industry* (NPI) that may be produced by Dargues, specifically tonal noise and low frequency noise.

Schedule 3 Condition 2 Traffic Noise Criteria

Traffic noise on Majors Creek Road is measured for a period of up to 24 hours as part of the quarterly noise compliance surveys, beginning in May 2020. All consultants reports state total measured noise levels in the vicinity of Majors Creek Road were primarily affected by other sources including non-project related traffic, birds and insects. While traffic noise levels over the noise criteria appear unlikely, recent noise monitoring reports do not clearly demonstrate compliance with Condition 2.

Recommendation: Amend the Noise Management Plan to achieve more representative traffic noise measurement data for more reliable comparison with relevant criteria. Amendments to the traffic noise measurement procedure may include an alternative monitoring location or other changes to the current procedure to more definitively separate project-related traffic noise from other noise sources and permit the level of traffic noise produced by project-related vehicles to be quantified with reasonable accuracy. Require consultants completing the traffic noise surveys to follow the amended procedures.

Schedule 3 Condition 4 Operating Conditions

Condition 4 requires Dargues to incorporate best practice noise management measures, investigate ways to minimise noise generated by the project, minimise noise impacts during temperature inversions and report on these actions in Annual Reviews.

BIML has commissioned a consultant to complete an in-depth review of acoustic issues including on-site equipment noise monitoring, environmental noise monitoring, noise modelling and related components to comprehensively address this condition. The report is expected in the months following the end of the audit period and should be subject to careful review, including actions taken in response to the report, in the next IEA.

Schedule 3 Condition 5 Noise Management Plan

Condition 5 requires preparation of a Noise Management Plan including procedures to achieve and demonstrate compliance with noise related conditions in the Project Approval. The current version of this Plan was reviewed and is considered sufficient to satisfy this condition, although a number of recommendations have been made to improve the Plan.

Recommendations:

1. Amend the Plan, particularly Section 8.2.3, to include assessment of modifying factors such as tonality and low frequency noise as defined in the NPI and recommended in relation to PA Condition 1 and EPL Condition L2.6.

2. Amend the Plan, particularly Section 8.7, to describe a monitoring and assessment procedure that results in project-related traffic noise measurement data to reliably determine traffic noise levels and compliance or otherwise with Condition 2.

3. Amend Figure 1 in the Plan to include noise monitoring location symbols at all monitoring locations including the traffic noise monitoring location, particularly to indicate the actual monitoring locations where such locations are not adjacent to residences. Symbols are not currently included for locations R20, R27 and R29, or for traffic noise measurements.

4. Amend Table 8.1 in the Plan to include the traffic noise monitoring location.

5. Rationalise the reporting requirements listed in Section 8.2.3 or require all consultants reports to report all nominated data. Data such as operator's name, temperature, humidity, cloud cover, operating shift logs and operating mining equipment locations are not currently reported.

6. Amend Section 8.2.3 to require all meteorological conditions to be reported as required in PA Condition 1 and EPL Condition L2.4a, specifically to report meteorological conditions measured by the site weather station at a height of 10 m above the ground. Reported conditions must include temperature inversion, as required by EPL Condition L2.4b.

7. Amend Section 8.2.3 to include monitoring locations that comply with EPL L2.5 or to justify any departures from this condition required to practically complete the noise surveys without undue interference to residents.

Appendix 5 Commitments

Commitments 4.2 to 4.16 require a number of noise mitigation measures to control construction and operational noise, primarily in response to noise related risks identified during the project's approval process. Information obtained by Senversa during the site visit indicated compliance with these commitments.

EPL Condition L2.3 Valid Meteorological Conditions

This Condition specifies the range of meteorological conditions under which the noise limits apply. Consultants reports note relevant meteorological conditions although the conditions are not measured according to EPL Condition L2.4 and temperature inversion strength is not estimated or reported. This omission is considered a non-compliance with this condition.

Recommendation: Require consultants reports to include atmospheric conditions determined according to Condition L2.3.

EPL Condition L2.4 Determination of Meteorological Conditions

This Condition specifies the method of determining meteorological conditions. Review of consultants reports during the audit period indicate this Condition is not generally complied with, particularly in later quarters, as meteorological conditions noted by the acoustic engineer at a height of approximately 1.5 m above the ground are reported in lieu of the conditions measured by the on-site weather station at a height of 10 m above the ground. Temperature inversion strength is not estimated or reported as required by this condition. This omission is considered a non-compliance with this condition.

Recommendation: Require consultants reports to include atmospheric conditions determined according to Condition L2.4.

EPL Condition L2.5 Noise Monitoring Locations

This condition includes standard requirements for selection of noise monitoring locations in relation to sensitive locations, typically residences. The standard requirements include noise monitoring no more than 30 m from a residence to determine LAeq,15min noise levels and no more than 1 m from a bedroom window to determine LA1,1min noise levels.

The intent of this condition is for noise measurement data to accurately represent noise levels from the project at the residence or other sensitive location. Complying exactly with this condition will usually cause undue disturbance to residents, particularly for noise surveys completed at night when residents are typically asleep. The EPA recognises this practical difficulty and does not typically require exact compliance with this condition, however does require careful selection of noise monitoring location to comply with the intent of this condition.

A review of the noise monitoring locations indicated in Figure 1 in each monitoring report indicates appropriate locations have been selected, therefore the intent of this condition has been complied with. However, the Noise Management Plan and noise monitoring reports do not include a discussion of this issue and justification of each monitoring location in relation to this condition.

The response to PA Schedule 3 Condition 5 includes a recommendation to amend the Noise Management Plan to more completely address this condition.

REGULATORY REQUIREMENTS AND COMPLAINTS

In response to numerous complaints regarding noise during the audit period and in consultation with regulators, BIML has commissioned a detailed acoustic review of Dargues. The acoustic review includes on-site equipment noise monitoring, additional received noise monitoring and noise modelling to determine any additional noise mitigation measures or other recommendations to ensure compliance with relevant criteria and minimise acoustic impacts to the community. The acoustic review report was expected to be received by BIML within a few months after the end of the audit period.

In general, noise related complaints are loosely correlated with predicted or demonstrated exceedances of noise criteria at receptors. The lack of a stronger correlation is due to a number of factors including significant variation in the response to noise of individual community members and variation in the level of background noise which affects the audibility of project noise from time to time.

It is considered likely that at least some of the noise complaints relate to periods of project noise that, while complying with the criteria, are significantly above the background noise levels and are therefore clearly audible. Human hearing primarily responds to differences in noise level, rather than absolute noise level, which causes relatively low project noise levels to appear excessively loud at otherwise quiet times. It is noted from noise monitoring reports that background noise levels regularly drop below 25 dBA and sometimes drop below 20 dBA, particularly at night, which are very low levels compared to the 35 LAeq,15min project noise criteria. This can be difficult to resolve with community members that perceive what are, to them, clearly audible and therefore excessive noise emissions from the project.

A combination of a sympathetic, factual and transparent discussion of this issue with affected residents, and implementing all reasonable and feasible noise mitigation measures particularly during otherwise quiet periods at night, is likely to be the optimum method to address noise related complaints.

CONCLUSION

This acoustic audit, as part of the larger Independent Environmental Audit completed by Senversa, has indicated general compliance with acoustic related Project Approval and Environment Protection Licence conditions.

Identified non-compliances with acoustic conditions relate to relatively minor reporting and assessment issues, not with actual exceedances of relevant noise or other performance criteria. The identified non-compliances therefore do not represent significant environmental or community impact and do not require substantial rectification work.

Yours faithfully,

BRIDGES ACOUSTICS

MARK BRIDGES BE (Mech) (Hons) MAAS
Principal Consultant

Senversa Pty Ltd

ABN 89 132 231 380
www.senversa.com.au
enquiries@senversa.com.au
LinkedIn: Senversa
Facebook: Senversa