EXTERNAL INDEPENDENT
WATER USE LICENCE AUDIT
EXXARO COAL (PTY) LTD: GROOTEGELUK AND REDUCTANTS INTEGRATED WATER USE LICENCE
MAY 2023

CONDUCTED BY

inlexso
INNOVATIVE LEGAL SOLUTIONS

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EXXARO COAL (PTY) LTD: GROOTEGELUK AND REDUCTANTS INTEGRATED WATER USE LICENCE

Water Use Licence No: 01/A42J/GB/6418

File No: 27/2/2/A942/4/4

Issued: 5 July 2018

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1. EXECUTIVE SUMMARY

1.1. The Grootegeluk and Reductants Water Use licence authorises Exxaro Coal (Pty) Ltd: Grootegeluk Mine to use water for the following activities:

- The taking of groundwater in cubic meters per annum (m3/a) from dewatering boreholes and Grootegeluk In-Pit sumps on properties as listed in Table 2;
- Storage of twenty-one thousand and four hundred and seventy-two cubic meters (21 472 m3) volume of raw water at the Voëltjie dam, for purposes of game watering; Construction activities related to the Stockyards and Reductants facility; and
- Removal or dewatering a maximum quantity of water on the properties and with a purpose as indicated in Table 6.
- Disposal of waste or water containing waste into the containment facilities as indicated in Table 3.

1.2. The findings in this Report are based on the physical / actual on-site observations by Inlexso (Pty) Ltd at all areas that are subject to compliance with the conditions of this licence, which was conducted on 16 – 17 May 2023, as well as a desktop audit exercise conducted by Selvan Subroyen.

1.3. This report constitutes an assessment of the Mine's compliance with its applicable WUL namely:

Water Use Licence No: 01/A42J/GB/6418
File No: 27/2/2/A942/4/4

Exxaro Coal (Pty) Ltd: Grootegeluk and Reductants Integrated WUL

Issued: 5 July 2018

1.4. The Audit was necessitated by the fact that the Mine's current, abovementioned WUL requires an external water use licence audit to be conducted on an annual basis by virtue of Condition 11 of Appendix I which

states: "*The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalisation of the audit."*

1.5. This audit report comprises of an **Audit Compliance Matrix**, which represents a working document which was populated with comments as provided by the Mine during the abovementioned Audit.

1.6. As part of Inlexso's mandate, non – compliances with the WUL are highlighted and thereafter proposed rectification and/or preventative measures are proposed. The findings and observations contained in this report represent the state of affairs on 16-17 May 2023.

1.7. Selvan Subroyen has 15 years environmental auditing expertise and holds the following degrees: LLB, University of South Africa; BSc Honours in Environmental Science, University of KwaZulu Natal and B Paed (Geography), University of Durban-Westville.

Andy Kabeng has 7 years environmental auditing expertise and holds the following degrees: Bcom Law, University of Pretoria. LLB (UNISA). ISO 45001 Auditor (PECB).

1.8. Selvan Subroyen was accompanied and assisted during the audit by Sethudi Lesufi (Practitioner Environment); Anthony Dikgale (GGC Environmental Specialists) and Filomaine Swanepoel (Senior Environmental Specialist). The team also assisted by providing Inlexso with additional or supplemental information as and when required as part of the audit. They also served as a liaison official between the Mine and Inlexso. This Report is accordingly submitted to Exxaro Coal (Pty) Ltd ("Exxaro") via Filomaine Swanepoel.

1.9. Copyright subsists in the contents and format of this Report. Any unauthorised use, re – production, editing or publication of the contents and/or format of this Report are acts of copyright infringement and makes the infringer liable for civil law copyright infringement and may in certain circumstances make the infringer liable to criminal prosecution in terms of Section 27 of the Copyright Act 98 of 1978.

2. FINDINGS

2.1. Presentation of findings

2.1.1 The Audit Compliance Matrix, which is found in this Report, contains a list of all commitments in respect of the WUL.

2.1.2 Each listed commitment in the Audit Compliance Matrix is accompanied by three columns: a column indicating the level of compliance, a column containing the comments by the Inlexso audit team and a column indicating action or proposed rectification measures to be taken (if any).

2.1.3 Findings were rated in terms of the following classification and colour coding:

2.1.3.1 **Green:** indicates compliance with the relevant WUL commitment;

2.1.3.2 **Red:** indicates non–compliance with the relevant WUL commitment; and/or

2.1.3.3 **Blue:** indicates that the relevant condition is merely a comment in the WUL which is duly noted by the Mine or the condition is not applicable to the mine.

2.1.4 The final findings are presented in the form of a percentage so as give a

clear indication of the Mine's level of compliance with the WUL commitments.

3. SUMMARY OF NON – COMPLIANCE FINDINGS

The non – compliance findings are more fully set out in **the Audit Compliance Matrix**, but it is prudent for purposes of the summary thereof to highlight the non – compliance findings for ease of reference.

The following non – compliance issues are therefore highlighted as non – compliances (in no particular order of importance) in respect of the WUL. All partial compliances are treated as non-compliances in law:

3.1. **Appendix IV (Condition 2.1):** *The Licensee is authorized to dispose of waste or water containing waste into the containment facilities as indicated in Table 3.*

Finding: There are various of the listed water uses in Tabel 3 that needs to be amended so that the details in the license is in line with the current activities. The final amendment documents were submitted via e-WULAAS on 17 Feb 2023. However due to a lack of design reports for the bench 13 and 11 in pit sumps and various other misunderstanding the application was rejected by DWS on 22 March 2023.

Recommendation: The following uses in the licence thus still needs to be amended:

- The Bench 11 pit area capacity has been reduced due to siltation within the area.
- The final footprint of Dump 4&5 also needs to be amended to correlate with the final rehab design submitted as part of the Environmental Authorisation in December 2020.

- The backfill quantities are to be updated to consider the updated LOM plan.
- Dust suppression quantities indicated an increase in usage and should be updated.

Currently the Mine is in the process of addressing the issues raised by DWS as reasons for the rejection and a clarification session with the case officer is planned for July 2023 with the hope of resuming the application process.

3.2. **Appendix IV (Condition 2.3):** The *Licensee shall ensure that dirty storm water is not released into a sensitive environment and must be contained on a dirty water containment facility.*

Finding: The storm water infrastructure is in place however the following non-compliance were observed:

- The area at the north of the current discard dump area lacks measures to contain dirty water from entering the surrounding environment on the northern side of the Dump 4 area. (This will be addressed with rehabilitation; however, the Mine is currently in the process of going into a redesign of the original Dump 4&5 closure plan).
- Storm water management around the Diesel Workshop area and HDV Wash bay remains a concern. Project for adressing this is underway however implementation is still required.
- Although licenced the Dam North of Dump 6 is unlined and received dirty run-off from the Diesel workshop area. (This will be addressed with the Buffer Dam Capital project that is scheduled for implementation in 2025, BFS recently approved).
- The coal trucks parking at the access gate are causing carbonaceous material spills that ends up in the clean stormwater area.

Recommendation: It is advised that the capital project that has been registered to address the storm water non-compliances on site be implemented according to the set project plans.

3.3. **Appendix IV (Condition 6.1):** *The impact of the activities of the mine on groundwater shall not exceed the water quality limits as indicated in Table 5 and will form part of the updated Monitoring plan for Grootegeluk.*

Finding: 2021 Annual Ground Water Report, page 22, Point 5 Exceedance Report showed that various variables such as EC, Na. Ca, Cl, Mg and SO4 exceeded the water quality limits specified in Table 5 of the IWUL

Recommendation: It was noted that Grootegeluk has appointed WSP to update the Groundwater Flow Transport model on an annual basis so as to better understand the current exceedances experienced. The mine is also advised to review its ground water strategy and to implement the strategy over the long-term.

3.4. **Appendix IV (Condition 8.1):** Storm water leaving the Licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises.

Finding: The storm water infrastructure is in place however the following non-compliance were observed.

- The area at the north of the current discard dump area lacks measures to contain dirty water from entering the surrounding environment on the northern side of the Dump 4 area. (This will be addressed with rehabilitation; however, the Mine is currently in the process of going into a redesign of the original Dump 4&5 closure plan).

- Storm water management around the Diesel Workshop area and HDV Wash bay remains a concern. Project for adressing this is underway however implementation is still required.
- Although licenced the Dam North of Dump 6 is unlined and received dirty run-off from the Diesel workshop area. (This will be addressed with the Buffer Dam Capital project that is scheduled for implementation in 2025, BFS recently approved).
- The coal trucks parking at the access gate are causing carbonaceous material spills that ends up in the clean stormwater area.

Recommendation: It is advised that the capital project that has been registered to address the storm water non-compliances on site be implemented according to the set project plans.

4. CONCLUSION

4.1. The Mine's WUL **contain approximately 127 conditions**. This total figure represents the listed conditions in the Mine's WUL and does not take into account any possible repetition or duplication of the conditions.

4.2. **17** conditions of the WUL were **noted.**

4.3. **6** conditions of the WUL were **not applicable**.

4.4. **4** conditions of the WUL were **non-compliant.**

4.5. Overall, the Mine is **compliant with 96%** of the applicable WUL conditions**.** This total was achieved by excluding those conditions found to be noted and not applicable from the total number of conditions.

5. AUDIT COMPLIANCE MATRIX - See table that follows hereunder

GROOTEGELUK AND REDUCTANTS INTEGRATED WATER USE LICENCE
File Number: 27/2/2/A942/4/4
License No: 01/A42J/GB/6418
Issued: 05 JULY 2018

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
Appendix I	General Conditions for the License							
1	This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998).	Noted		This was noted that Section 19 of the NWA was being adhered with where the licensee needs to implement prevention and remedying effects of pollution.				
2	The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.	Compliant	Licence 07/A42J/A/5319 dated 19 April 2021.	The licence was issued to Exxaro Coal (Pty) Ltd., and responsibility of complying with the licence lies with Exxaro Coal (Pty) Ltd. – Conditions Manages by GG Environmental Specialists – S Mashele & A Dikgale.				
3	The Licensee must immediately inform the Regional Head of any change of name, address, premises and/or legal status.	Compliant	Licence 07/A42J/A/5319 dated 19 April 2021.	No name change, address or legal status occurred. Licensee: Exxaro Coal Property Limited Postal address: P.O. Box 9229, Pretoria, 0001				
4	If the property in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Regional Head of the Department within sixty (60) days of the said change taking place.	Compliant	Inspection of Deeds Web title deed available, Confirmation that all properties listed in the IWUL belongs to Exxaro Coal (Pty) Ltd.	At the time of the audit, it was found that no change in property occurred within Grootegeluk Coal Mine area.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
5	If a water user association does exist or is established in terms of the NWA to manage water from the relevant water resource from which the Licensee receives or may receive water, membership of this association may be made compulsory by the responsible authority.	Compliant	Registration letter is in place. Auditor had sight of the August 2016 letter received from the Mokolo water user association.	GG is part of the Mokolo Water Users Association, in 2023 an interim management committee was established, and GG is part of that committee.				
6	The Licensee must pay all water use charge or levies imposed from time to time by a responsible authority in terms of the Pricing Strategy for Raw Water Use Charges, Waste Discharge Charges and Water Resource Management Charge of the Department, or any other water use charges as per water supply agreements or levies that might be imposed in terms of appropriate legislation	Compliant	Auditor had sight of: Proof of payment notice-GG & Thabametsi Levies 19 April 2023	Levies are being paid as invoices are received.				
7	While effect must be given to the Reserve as determined in terms of the Act, where a desktop determination of the Reserve has been used in issuance of a licence, when a comprehensive determination of the Reserve has finally been made; it shall be given effect to.	Noted	Visual inspection of Government Gazette 16669, published 14 January 2022 - Mokolo and Matlabas catchments' Reserves.	The Reserve for the Mokolo and Matlabas catchments was published				
8	The licence must not be construed as exempting the Licensee from compliance with the provisions of any other applicable Act, Ordinance, Regulation or By law.	Compliant	Auditor had site of all relevant license – GG Authorization Folder.	GG holder all other relevant Environmental Authorizations, EMPR, EA, WL, AEL etc. All other applicable Acts, Ordinances, Regulations and By-laws are adhered to by Exxaro.				
9	The licence and amendment of this licence are also subject to all the applicable procedural	Noted		At the time of the audit this condition is noted, and no action required by the Licensee.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	requirements and other applicable provisions of the Act, as amended from time to time.							
10	The Licensee must conduct an annual internal audit on compliance with the conditions of licence. A report on the audit shall be submitted to the Provincial Head within one month of the finalisation of the audit.	Compliant	Internal Water Use Licence Audit for Exxaro (Pty) Ltd, Grootegeluk 2022 – Submitted 4 Jan 2023, *GG.DWS.019.2022 - Internal IWUL Compliance Report for 2022*	An internal audit was conducted for this WUL and submitted to the Provincial Head within one month of the finalisation of the audit.				
11	The Licensee must appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within 3 (three) months of the date this licence is issued and a report on the audit shall be submitted to the Provincial Head within one month of finalisation of the audit.	Compliant	Proof of Submission In place: *GG.DWS.011.2022 - Submission of the 3rd Party IWUL Audit Report - 19 Jul 2022*	The External Audit for 2022 was conducted by Inlexso in May 2022 and submitted 19 Jul 2022. The report was submitted a month after the report was finalized. Inlexso was appointed to conduct the 2023 External Audit 14 -16 May 23				
12	Flow metering, recording and integrating devices must be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request.	Compliant	Visual inspection of: • Flowmetrix, Meter Calibration Verification report for Grootegeluk Exxaro Mine (Certificate no 2020112571 for Meter Serial no SN60108139) dated 27 October 202. • Visual inspection of Water Meter Verification form for all 21(a) abstraction boreholes that are active - WB33, WB38, WB39, WB41, WB45, WB46, WB54 • N1 Calibration Certificate: 24/06/2022.	• At the time of the audit, it was found that abstraction boreholes WB33, WB38, WB39, WB41, WB45, WB46, WB54 calibration certificates were renewed/verified during 12 January 2022. - Abstraction Meters to be verified again by Oct 2022 N1 Meter measuring inflow to the pit was replaced in Dec 2022. Calibration / Verification was done 7 Apr 2022				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
13	Any incident that causes or may cause water pollution must be reported to the Provincial Head or his/her designated representative within 24 hours	Compliant	Excel GG 2022 Environmental Incidents Report Sheet. Visual inspection of Grootegeluk Standard Practice Instruction SHEC Related, SPI/GG/H01.003 dated 11 December 2018 with revision date of 11 December 2021. - GG.DWS.015.2021 – Will be revised in 2025	No reportable incidents since the last audit held in May 2022				
14	When compulsory licensing is implemented for the water resource in respect of which this licence was issued, the water use authorised in this licence could be subject to appropriate reduction.	Noted		At the time of the audit, this condition was noted, and no action is required from the Licensee.				
15	The Licensee must establish and implement a continuous process of raising awareness amongst its employees, agents and stakeholders for the need for Water Conservation and Water Demand Management	Compliant	Auditor had sight of: March 2023 Sustainability Theme. World water day. STI Target Memo	Exxaro constantly raises awareness amongst its employees, agents and stakeholders for WC/WDM aspects. March 2023 Theme – Accelerate the change to solve water and sanitation crisis. Water Management is also part of the annual inductions. Water intensity and water saving is supported by the GG Northstar strategy. STI water Intensity Target for the mine is part of the Performance Rating as of 2023.				
16	The Licensee must apply water conservation measure to meet all requirements in terms of WC and WDM guidelines of the responsible authority as follows: 16.1. The Licensee shall put into practice water efficient devices or apply techniques for the re-use of water containing waste, in an endeavour to conserve water	Compliant	Grootegeluk & Reductants Water Conservation and Demand Management Plan (WCDMP). 2021 – 2022 compiled by Charles Linstrom.	Exxaro meets the requirements in terms of the WC/WDM guidelines specified in this licence condition by utilising water efficient devices and applying techniques for the re-use of water containing waste in an endeavour to conserve water. WC/WDM plan has been reviewed in 2022.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	always. 16.2. The Licensee shall include the progress and status of these investigations into the annual updated Integrated Water and Waste Management Plan.			The WC/WDM plan has been updated. Water intensity and water targets are linked to performance targets and feedback is given monthly at water and energy Steercom. Since 2018, the mine has installed water recirculation tanks at the wash bay where the raw water used for washing equipment is captured and reused for cleaning.				
17	Where necessary, notices prohibiting unauthorised persons from entering certain areas, as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence(s) of these areas.	Compliant	Grootegeluk Standard Practice Instruction (SPI) General, SPI/GG/A01.001, dated 1 Augustus 2016 relating to Access Control – Exxaro Grootegeluk Complex. Fencing of Dam facilities inspected during the site visit. 	At the time of the audit, it was found that notices prohibiting unauthorised persons from entering were in place at Grootegeluk.				
18	This licence supersede licence 01/A41J/G/4157 issued on 4 February 2017.	Noted		At the time of the audit this condition is noted, and no action is required by Licensee.				
Appendix II	**Section 21(a) of the Act: Taking water from a water Resource**							

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
1	The license authorises the taking of groundwater in cubic meters per annum (m3/a) from dewatering boreholes and Grootegeluk In-Pit sumps on properties as listed in Table 2: Abstraction of groundwater from Borehole WB 33 for process water. Abstraction of groundwater from Borehole WB 35 for process water. Abstraction of groundwater from Borehole WB 36A for process water. Abstraction of groundwater from Borehole WB 38 for process water. Abstraction of groundwater from Borehole WB 39A for process water. Abstraction of groundwater from Borehole WB 41 for process water. Abstraction of groundwater from Borehole WB 42 for process water Abstraction of groundwater from Borehole WB 43 for process water Abstraction of groundwater from Borehole WB 45 for process water Abstraction of groundwater from Borehole WB 46 for process water Abstraction of groundwater from Borehole WB 49 for process water Abstraction of groundwater from Borehole WB 50 for process water Abstraction of groundwater from Borehole WB 51 for process water	Compliant	Annexure 1- GG Monthly Abstraction Boreholes result Jan - Dec 2022	Abstraction figures confirmed, no other abstraction is taking place except for the boreholes that are licensed.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	Abstraction of groundwater from Borehole WB 52 for process water Abstraction of groundwater from Borehole WB 53 for process water Abstraction of groundwater from Borehole WB 54 for process water Abstraction of groundwater from Borehole WB 55 for process water Abstraction of groundwater from Borehole WB 56 for process water Abstraction of groundwater from Borehole WB 57 for process water Abstraction of groundwater from Borehole WB 59 for process water Abstraction from the Grootegeluk In-Pit sumps							
2	This licence authorises the taking of a maximum quantity of two million four hundred thousand (2 400 000) cubic metres (m^3) per annum of groundwater from dewatering boreholes and in-pit sumps as indicated in Table 2 to be used for mining activities.	Compliant	Annual Abstraction Report – Jan -Dec 2022 was sighted by the auditor. (GG.DWS.003.2023 - Bi-annual Abstraction water report 25 Jan 2023)	At the time of the audit, it was found that groundwater dewatering from boreholes and Grootegeluk In-Pit sumps does take place as indicated on Table 2. A total volume 2.3 mil abstracted as of end Dec 2022.				
3	A maximum quantity of water abstracted, for mining purposes from the de-watering boreholes on any one day shall not exceed six thousand six hundred cubic metres per day (6 600 m^3/day).	Compliant	Annual Abstraction Report – Jan -Dec 2022 was sighted by the auditor. (GG.DWS.003.2023 - Bi-annual Abstraction water report 25 Jan 2023)	At the time of the audit, it was found that the de-watering boreholes do not exceed the 6 600 m3/day abstraction rate.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
4	The Minister may for good reason change the water resource from which is made available to the Licensee. The Licensee must further note that the Minister does not guarantee the quality of the water provided and the Licensee must make provision for this aspect in its operations.	Noted		At the time of the audit this condition was noted, and no action is required by the Licensee.				
5	The Licensee must at own cost provide for sufficient storage capacity, duly authorised beforehand in terms of the NWA, and maintain it, with a minimum live storage of 18 days of its average annual daily volume of water as authorised in this licence. This storage may only be utilised for emergencies and extended planned maintenance on the bulk water supply system	Noted	Visual inspection of Grootegeluk Integrated Water Management Strategy (GGIWMS) presentation. 	Currently there is sufficient water inside the GGC pit to use for this 18-day allocation. The mine is however also intending to move this water to an external facility as part of the GG Integrated Water Management Strategy Project. Bankable Feasibility studies have been approved. It was noted during the audit that the Olifantskop dam was being lined.				
6	Additional licence(s) for any other water uses by the Licensee, as defined in section 21 of the NWA must be applied for in good time by the Licensee In order to be considered by the Minister, and only if approved, commencement of the specific	Compliant	Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated 2020. 2022 IWWMP was finalized ad submitted as part of GG WUL Amendment Application.	The amendment for the c&i licence was issued 17 Feb 2023. Grootegeluk is in the process of amending the current Grootegeluk and Reductants License,				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	other uses(s) will be lawful. The unlawful commencement of any water uses by the Licensee may result in this licence being suspended or withdrawn as provided for in the NWA.		Inspection of the area during the site visit.					
7	The quantity of water authorised to be taken in terms of this licence may not be exceeded without any prior written authorisation from the Minister.	Compliant	Annual Abstraction Report – Jan -Dec 2022 was sighted by the auditor.	At the time of the audit, it was found that groundwater dewatering from boreholes and Grootegeluk In-Pit sumps does take place as indicated on Table 2. A total volume 2.3 mil abstracted as of end Dec 2022.				
8	This licence does not imply any guarantee that the said quantities and qualities of water will be available at present or at any time in the future.	Noted		At the time of the audit this condition was noted, and no action is required by the Licensee.				
9	The above-mentioned volumes may be amended when the licence is reviewed.	Noted		At the time of the audit this condition was noted, and no action is required by the Licensee.				
10	The Licensee shall investigate new and emerging technologies, which shall include the treatment of water for the re-use for mining purposes if deemed necessary as follows:	Compliant	Review of the Grootegeluk & Reductants Water Conservation and Demand Management Plan _2022 - 2023 - Final Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated 2022. Grootegeluk Integrated Water Management Strategy (GGIWMS) Presentation Mar 2022.	Grootegeluk constantly investigates new and emerging technologies and implement water use efficiency methods and devices to conserve water. They also have a WCDM Plan in place. Grootegeluk Integrated Water Management Strategy (GGIWMS) is in the process of looking at alternative options for the storage of process water that currently ends up in the GG pit. The 5 projects currently underway Olifantskop dam is currently being lined and will be completed in March 2024				
	10.1 The licensee shall put into practice water efficient devices or apply techniques for the re-use of water containing waste, in an endeavour to conserve water at all times.							
	10.2 The Licensee shall include the progress and status of these investigations in the annual Integrated Water and Waste Management Plan.							

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
				GGC – 000827 PIT Water Management Strategy BFS GGC-000825 Clean and Dirty Water Separation BFS GGC Water Management Optimization (Buffer dam) BFS MCWAP2 changeover infrastructure (PFS)				
11	All water taken from the resource shall be measured, recorded and reported as follows:	Compliant						
11.1	the daily quantity of water taken must be metered or gauged and the total recorded at the last day of each month; and		Annexure 1- GG Monthly Abstraction Boreholes result Jan - Dec 2022 Spreadsheet of Annual Abstraction Report Jan 22 (GG.DWS.003.2023 - Bi-annual Abstraction water report 25 Jan 2023)	At the time of the audit, it was found that daily quantity of water was measured,				
11.2	the Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Provincial Head on or before 25 January and 25 July of each year.		Grootegeluk Coal Mine, Abstraction Report dated Jan – Dec 2022 GG.DWS.003.2023 – Bi-Annual Abstraction water report - Jan 23 signed	Bi-Annual reports for 2022 was submitted to the DWS within the stipulated time frames.				
12	No water taken may be pumped, stored, diverted, or alienated for purposes other than intended in this licence, without written approval by the Minister or his/her delegated nominee.	Compliant	Water Balance for 2022 & GGC IWWMP May 2022	At the time of the audit, it was found that the water is pumped, stored and diverted for the purpose as intended in this WUL.				
13	The Licensee shall install and monitor appropriate water measuring equipment to measure the amount of water abstracted from dewatering boreholes and in pit sumps as applicable to the infrastructure.	Compliant	Visual inspection of Water Meter Verification form for all 21(a) abstraction boreholes that are active - WB33, WB38, WB39, WB41, WB45, WB46, WB54.	At the time of the audit, it was found that abstraction boreholes calibration certificates were renewed/verified.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
14	The department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of: 14.1 shortage of water; 14.2 inundation or flood; 14.3 siltation of the resource; and 14.4 required reserve releases	Noted		At the time of the audit this condition was noted, and no action is required by the Licensee.				
15	The Licensee shall ensure that all measuring devices are properly maintained and in good working order and must be easily accessible. This shall include a programme of checking, calibration, and/or renewal of measuring devices.	Compliant	Visual inspection of Water Meter Verification form for all 21(a) abstraction boreholes that are active - WB33, WB38, WB39, WB41, WB45, WB46, WB54.	At the time of the audit, it was found that abstraction boreholes calibration certificates were renewed/verified.				
16	The Licensee shall establish an Information Management System, which maintains a database on water supply, distribution and delivery infrastructure.	Compliant	Visual inspection of SCADA dashboard PowerPoint presentation to the Environmental Steering committee meeting dated Aug 21	The Supervisory control and data acquisition (SCADA) system (water flow information) is incorporated with the excel Water Quality information.				
Appendix III	**Section 21 (b): Storing Water**							
1	**Storage of Water**							
1.1	The Licence authorizes storage of twenty-one	Compliant	Google image for coordinates of Voëltjie	Voëltjie Dam is situated at coordinates S23° 40' 45.74" and				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	thousand and four hundred and seventy-two cubic meters (21 472 m3) volume of raw water at the voeltjie dam, for purposes of game watering. The geographical location of the activity is at the coordinates S23º40'45.74" and E27º33'31.83" on portion of the Farm Turfvlakte 463LQ in the Limpopo Water Management Area.		Dam. MS PowerPoint presentation dated 29 May 2017 where the survey of the Voëltjie Dam was included. Voëltjie dam volumes calculator - Jan to April 2023	E27° 33' 31.83" on portion 0 of the Farm Turfvlakte 463 LQ. The survey capacity for Voëltjie Dam on 30 April 2023 – 1233m3. Although the total capacity of Voëltjie Dam has been listed as 21 536.49 m3, the dam is being managed at a much lower level.				
1.2	The Licensee must obtain and priority rights of servitude at his/her own cost.	Compliant	Title Deeds indicate the Exxaro Coal owns the property.	The dam is located on Turfvlakte which is a property of Exxaro. This condition is noted, and no action is required by Licensee.				
1.3	The Licensee is not indemnified from any detrimental effect that the dam(a) may have on other properties. The Department does not accept any responsibility or liability for any damage or losses that may be suffered by any other party as a result of the construction and utilization of the dam.	Noted		At the time of the audit this condition was noted, and no action is required by the Licensee.				
1.4	No additional water storage facilities can be constructed on the property without prior written consent of the Minister or responsible authority.	Compliant	Visual inspection of Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated 2022	No other clean water storage facilities are located on this property without consent of the Minister or responsible authority.				
2	**Monitoring Requirements**							
2.1	Suitable measurements must be constructed upstream and downstream of the dams to measure the flow entering and leaving the dam and this information must be available on request.	N/A	Visual inspection of Voëltjie dam area.	The Voëltjie Dam is an old quarry which is used for game watering purposes. It has no up and down stream inflows. Piped raw water is measured via flow meter R81. .				
2.2	The Licensee shall establish a monitoring programme and the date and time of monitoring in respect of each sample taken	Compliant	Water monitoring programme under reference	Voeltjie dam is monitored as part of the Grootegeluk programme monthly.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	shall be recorded together with the results of the analysis as well as the significant information (Low flow, flooding, pollution incident etc)		OPI/GG/H03.103 dated 13 May 2021 (updated required on 13 May 2024). Grootegeluk Mine Annual SWQR - Jan 2022 to Dec 2022. (Aquatico)	Currently Exxaro captures all information on the EQUIS system / surface water sampling sheet. The date and time of the monitoring information has been listed for Voëltjie Dam.				
2.3	The quantity of the water stored shall be recorded at the last day of each month.	Compliant	Visual inspection of Excel Voëltjie dam quantities. – Last recorded volume – 30 Apr 2023	Currently this is measured at the end of each month. The mine will also be amending this condition to address the wording as it likes to the last day of the month.				
3	**Construction**							
3.1	Government reserves the right to construct storage works as any time in any stream and to store all surplus water reaching the dam(s) and to control the allocation of such water.	Noted		At the time of the audit this condition is noted, and no action is required by Licensee.				
Appendix IV	**Section (g) of the Act: disposing of waste in a manner that may be detrimentally impact on a water resource**							
1	**Construction and Operation**							
1.1	The Licensee must carry out and complete all the activities, including the construction and operation of the facilities indicated in Table 3 according to the Report and according to the final plans as approved by the Provincial Head.	Noted		At the time of the audit, it was found that construction of several facilities listed within **Table 3** have taken place, however the compliance of the operation and construction of these facilities according to the Report has been noted.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
1.2	The construction of the stockyards indicated in Table 3 must be carried out under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990), as approved by the designer.	Compliant	GG6 Professional Engineer from BVI: Andre Greyling Pr. Eng 20080025	Construction of the stockyards of GG6 was completed end 2021. All construction is supervised by a professional engineer. The drawings with the professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990), was observed.				
1.3	The Licensee must ensure that the disposal of the mining waste and polluted water and the operation and maintenance of the system are done according to the provisions in the Report as submitted by the Licensee.	Compliant	Polluted water and mining waste is only disposed inside the licences facilities as indicated in Table 3. Visual inspection of the areas.	The disposal of the wastewater and the operation and maintenance of the system are done in accordance to the licenced requirements.				
1.4	The Licensee must as well submit a set of as-built drawings to the Provincial Head after the completion of the waste water facilities listed on Table 3.	Compliant	As-built drawings for the GG6 Stockyards, reference GG.DWS.004.2022 - As-Built Drawing Grootegeluk GG6 Stockyard – 9 Feb 22. DWS confirmed receipt 14 Feb 22.	Grootegeluk does have as-built drawings which were submitted to the Provincial Head. The most recent being the GG6 Stockyard drawings.				
1.5	The waste water facilities listed on Table 3 shall be operated and maintained to have a minimum free board of 0.8 above supply level and all other water systems related thereto shall be operated in such a manner that it is always capable of handling the 1:50 year flood line event on top of its mean operating level.	Compliant	Visual Inspection of the PCDs	All storage facilities did have a minimum freeboard of 0.8 above supply level. However, the siltation in the Cyclic Bonds, Bosbok and Mamba dams needs to be addressed.				
1.6	The Licensee must use acknowledged methods for sampling, date, time and sampler must be indicated for each sample.	Compliant	Grootegeluk Mine Annual SWQR - Jan 2022 to Dec 2022. (Aquatico)	The method of sampling, date, time and sampler information in respect of each sample (ground and surface water) taken are recorded.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
1.7	The operation of all the facilities must be carried out under the supervision of competent appointees by the manager. However, modifications to any facilities must be conducted under the supervision of a professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990).	Compliant	Visual inspection of appointment letter for Aaron Mulaudzi (manager of coal and beneficiation) & Risimati Chauke head of operations Beneficiation. Signed drawings from the professional Civil Engineer, registered under the Engineering Profession of South Africa Act, 1990 (Act 114 of 1990), were observed.	Competent Managers have been appointed. The construction of the stockyards, as listed in Table 3, has been completed at Grootegeluk.				
1.8	Within 30 days after the completion of the activities referred here in accordance with the relevant provisions of this licence, the Licensee must in writing; under reference 27/2/2/A941/2/9 inform the Provincial Head thereof. This must be accompanied by a signature of approval from the designer referred to above that the construction was done according to the design plans referred to in the Report.	Compliant	As-built drawings for the GG6 Stockyards, reference GG.DWS.004.2022 - As-Built Drawing Grootegeluk GG6 Stockyard – 9 Feb 22. DWS confirmed receipt 14 Feb 22.	The GG6 Stockyard was completed end 2021. The letter form professional engineers BVI – dated 25 Jan 2022, was submitted with As-built drawings in Feb 2022.				
1.9	This Reductants concrete lined tank shall be operated in a manner that will not allow any leakage and/or overflow to the surrounding environment. The domestic waste water stored in this tank must be continually pumped into the Grootegeluk waste water treatment facility as indicated by the Report. Measures must be put in place to ensure that no domestic waste water reaches the clean environment during the course of storage and pumping of such domestic waste water.	Compliant	This was verified on site. 	The concrete tank was found to be in working order. The facility has not been operational since Mar 2018.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
1.10	During construction activities on Grootegeluk the contents of the chemical toilets and any waste water shall be disposed at the existing Grootegeluk wastewater treatment facility or via a registered sewage disposal company. All general waste shall be disposed of in a legally authorized waste disposal facility.	Compliant	Verified on site	This is the practice and requirement on site.				
1.11	Coal delivered into the char plant via a conveyor belt must be temporarily stockpiled in the lined and compacted kidney stockpile area as indicated in the report. Any runoff from this stockpile must be contained in the lined water pollution dam.	Compliant	Visual inspection of the stockpile was undertaken and runoff reports to the lined water pollution dam. 	The stockpiling of coal outside of the lined areas have been stopped and both the feed stockpile area and products stockpile area has been cleaned. The remaining stockpiles is on the lined Kidney area as required by the license. The area will only be put back into use once lined according to the license requirements. (Capital Project for this has been registered).				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
1.12	Flow metering devices on the main water supply lines must be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than once in two years. Calibration certificates must be available for inspection by the Provincial Head or his/her representative upon request.	Compliant	Visual inspection of Flowmeter Verification report 2020112571 issued from FlowMetrix for Serial PCU1130H_M. -dated 12-Dec-2022.	Measuring devices are properly maintained and in good working order. A programme of checking measuring devices is in place at the meter reading buildings. Unit was recalibrated in Dec 2022.				
2	**Disposal of Waster of Water containing**							
2.1	The Licensee is authorized to dispose of waste or water containing waste into the containment facilities as indicated in Table 3.	Non-compliant	e-WULAAS submission of technical report – DWS rejection letter dated 22 March 2023 and the technical documents as part of phase 3 WU24394.	The water uses listed in Table 3 are associated with Grootegeluk Coal Mine. It should be noted that the following however need to be amended: - The Bench 11 pit area capacity has been reduced due to siltation within the area. - The final footprint of Dump 4&5 also needs to be amended to correlate with the final rehab design submitted as part of the Environmental Authorisation in December 2019 - The backfill quantities are to be updated to consider the updated LOM plan. - Dust suppression quantities indicated an increase in usage and should be updated. Application process was kicked off on e-WULAAS end Mar 2022.	GCS was appointed as the EAP for the application Final Phase 3 Submission on e-WULAAS was completed on 17 Feb 2023. However due to a lack of design reports for the bench 13 and 11 in pit sumps and various other misunderstanding the application was rejected by DWS on 22 March 2023. Currently the Mine is in the process of addressing the issues raised by DWS as reasons for the rejection and a clarification session with the case officer is planned for August 2023 with the hope of resuming the application process.	F. Swanepoel	A Zide	29 Dec 2023

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
2.2	The Licensee shall ensure that all newly constructed stockpiles are lined with the HDPE geomembrane liner of 1.5 mm minimum thickness or a DWS suitably approved lining system to capture all dirty and seepage water emanating from these facilities.	Compliant	Visual inspection of approval from DWS for GG2-6 liner requirements under BVI Consulting engineers report dated May 2015.	All newly constructed stockpile area is line with the liner requirements as stated in the condition.				
	2.2.1 Any changes to the accepted liner system needs to be approved by the Department and should be submitted to the Provincial Head for acknowledgement and final written approval before construction commences. 2.2.2 All the existing stockpiles must be monitored for possibility of contamination and should that possibility detected; the Licence must improve the existing facilities through the implementation of the liner requirements subject to approval by the Department.		Golder pollution source characterization report- May 2020, GG: Contaminant Transport Modelling report 2018, 2019. Visual inspection of water monitoring programme under reference OPI/GG/H03.103 -13 May 2021 – To be revised 24 May 2024	Where required the approval of changes to the accepted liner system has been obtained from DWS. All the existing stockpiles are monitored for possible contamination as documented in the pollution source pathway report as well as Ground water model of 2018 & 2019. Ground water is monitored on a bi-annual basis.				
2.3	The Licensee shall ensure that dirty storm water is not released into a sensitive environment and must be contained on a dirty water containment facility.	Non-compliant	Storm Water Regional Master Plan, P13050 Grootegeluk Mine dated April 2015. Water and Salt balance report for Grootegeluk Mine, dated October 2022. Visual inspection of water monitoring programme under reference OPI/GG/H03.103 dated 8 October 2018 (updated required on 8 October 2021). Grootegeluk Complex, Integrated	**The storm water infrastructure is in place however the following non-compliances were observed:** The area at the north of the current discard dump area lacks measures to contain dirty water from entering the surrounding environment on the northern side of the Dump 4 area. (This will be addressed with rehabilitation; however, the mine is still waiting for the approval of its EA).	Internal ROD submitted to the DMRE, indicating that the DWS does not support the mines proposed cover design and thus also not the issuance of the Waste Licnese was received - 28 March 2022. The mine is in the process of establishing a way forward so as to determine the next steps. Based on this, a new plan will be established with new due dates that will be shared with the Department. Only once the Authorization is in place can the project approval process continue to Bankable Feasibility & the Implementation stage. (12 Months).	F Swanepoel	A Zide	TBC

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
			Water and Waste Management Plan (IWWMP) dated 2022	Although licenced the Dam North of Dump 6 is unlined and receives dirty run-off from the Central workshop areas. The mine hope to address this with the GGC-000826 GGC Water Management Optimization BFS project.	The project will focus on motivating the proposed solution form the PFS, confirming the dimensions and size of infrastructure required including the Buffer dam facility that is to be constructed on the footprint area of the old "buffer dam" and "low laying area North of Dump 6". Licensing of the new facility will also be part of this BFS.	T. Mokwena	N. Mntambo	Approval of BFS-31-Dec-24
				Storm water management around the Diesel Workshop area and HDV Wash bay remains a concern. Project for addressing this is underway however implementation is still required	The project will consider: 1) the long-term drainage of the storm water to the low laying areas for both the Diesel & HDV Workshop areas. 2) the upgrading the on ramp to the Diesel workshops to reflect the design used at the New HDV. 3) Putting a permanent ramp at the HDV wash bay to prevent water running into the environment.	M. Ntshangase	N. Mntambo	31-Dec-23.
				The coal trucks parking at the access gate is causing carbonaceous material spills that ends up in the clean storm water area. Which is a clean area.	Although the Plant Road sweeper is currently cleaning the road truck parking area weekly, due to the large amount of trucks the clean dirty water separation in this area remains a concern. This area has thus been added GGC-000825 Dirty and Clean Water separation project BFS project.	T. Mokwena	N. Mntambo	31-Dec-24
2.4	The Licensee shall submit within a period of six months from the date of issuance of this license to the Provincial Head for approval a concise report in which all possible sources of pollution are identified, the engineered mitigating measures formulated and a programme for the implementation.	Compliant	Original submission per e-mail dated 24 June 2016 and hand delivered to DWS dated 24 June 2016 under reference GG.DWS.014.2016. Integrated Water and Waste Management Plan (IWWMP) dated 2021 Submitted October 2022	The source pathway assessment was updated in Nov 2018 and again in Nov 2019 as part of the Dump 4&5 Rehab project and was submitted to DWS in Mar 2020, as part of the BA/WL approval process. Currently this is part of the IWWMP and has submitted as an Annexure since 2018				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
2.5	The Licensee must indicate how the existing designed channels and the new channels around the cyclic ponds and return water dam are sealed to effectively prevent seepage of pollutants into the ground water regime.	Compliant	Design Drawing of the PCD's & Cyclic ponds were verified.	The channels around the cyclic ponds and return water dam were constructed with cement and leachate detection systems to effectively prevent seepage of pollutants into the groundwater regime. There is a project in place for the lining of the Olifantskop Dam which will also prevent seepage of pollutants into the groundwater regime.				
2.6	Short term stockpile liner to be aligned with the liner systems approved for the new product stockpiles at Grootegeluk.	Compliant	Visual inspection of approval from DWS for GG2-6 liner requirements under BVI Consulting engineers report dated May 2015.	The Stockyard Phase 2 and GG6 Stockyards– High value stockpile has been constructed. This liner at this facility is in line with the approval provided by DWS.				
2.7	Short term stockpiles to be decommissioned and rehabilitated after 5 years.	Non - Compliant	DWS reply on request to move facility to a permanent state. 27/2/2/A942/4/4, WUL 01/A42J/GB/6418 dated 11 August 2020. eWULAAS submission of technical report – DWS rejection letter dated 22 March (WU24394). Provincial Head (MD Nethengwe)	Phase 1 Short term Stock yard is being reclaimed; activities stopped in Feb 2023 (end of 5 year period). For thePhase 2, short term lay down area stockpile, Exxaro applied for the temporary stockpiles to become permanent. The Provincial Head replied back to inform Exxaro that they could continue with the use of short-term stockpile but that moving the use from a short to long term stockpile in the license needs to form part of the water use amendment. It was observed that this is part of the current amendment that is underway.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
2.7.1	Should the mine require these stockpiles to become permanent, written permission needs to be requested from DWS motivating the change.		GG.DWS.010.2020 - Submission of request related to the Phase 2 Strategic Stockpile (10 Jun 2020) Response form DWS 11 Aug 2020 - D Nethengwe.	At the time of the audit, it was found that Exxaro applied for the temporary stockpiles to become permanent. The Provincial Head reacted back to inform Exxaro that they need to apply for an amendment of this condition.				
3	**Quality of Waste Water to be Disposed**							
3.1	The quality of waste water effluent disposed of into the surrounding environment must not exceed the following limits as indicated in **Table 4** and shall form part of the Monitoring plan for Grootegeluk.	N/A		The condition is not applicable since currently the waste water is managed in a closed loop. No water is intentionally released into the clean water environment. This condition is to be amended to only consider water in the Waste water facilities as is indicated in the heading on Table 4.				
4	**Monitoring and Water Resource Protection**							
4.1	The Licensee must establish a comprehensive surface water monitoring plan and submit them to the Provincial Head as part of a Monitoring plan for Grootegeluk.	Compliant	OPI/GG/H03.103 dated 13 May 2021 (update required on 13 May 2024). Water monitoring programme part of IWWMP. EQUIS system dashboard.	There is a comprehensive surface water monitoring plan that was submitted to the Provincial Head as part of the IWWMP on an annual basis.				
4.2	The Licensee must establish additional boreholes to monitor groundwater around the cyclic pond project area to identify the impacts on the groundwater resource as part of a Monitoring plan for Grootegeluk.	Compliant	OPI/GG/H03.103 dated 13 May 2021 (update required on 13 May 2024). Visual inspection of Grootegeluk Coal	An additional borehole (WBR49) to monitor groundwater around the cyclic pond project area has been identified, drilled and incorporated into the water monitoring programme. All groundwater information is available and analysed by Water lab.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
4.3	The Licensee must submit the description and the coordinates for the existing and additional borehole to the Provincial Head as part of a Monitoring plan for Grootegeluk.	Compliant	Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) 2021 OPI/GG/H03.103 dated 13 May 2021 (update required on 13 May 2024). Visual inspection of Grootegeluk Coal	An additional borehole (WBR49) to monitor groundwater around the cyclic pond project area has been identified, drilled and incorporated into the water monitoring programme. All groundwater information is available and analysed by Water lab.				
4.4	The Licensee must undertake regular water level monitoring to measure the groundwater drawdown around the mine area as part of a Monitoring plan for Grootegeluk.	Compliant	EQUIS dashboard where the water level of boreholes is captured. Visual inspection of Excel based water levels of boreholes under reference water_level 11 – 15 April 2022, 24-26 October 2022	The levels of the monitoring boreholes are undertaken on a bi-annual basis. Spreadsheet indicting the levels are available on site.				
4.5	The date, time and monitoring point in respect of each sample taken must be recorded together with the results of the analysis as part of a Monitoring plan for Grootegeluk.	Compliant	Field Observation Sheets & Ground Water Spreadsheet 2022	The method of sampling, date, time and sampler information in respect of each sample (ground and surface water) taken is recorded.				
4.6	Monitoring points must not be changed prior to notification to and written approval by the Provincial Head and will then form part of the updated Monitoring plan for Grootegeluk.	Compliant	OPI/GG/H03.103 dated 13 May 2021 (update required on 13 May 2024). Monitoring plan & Annual Surface water report 2022	The monitoring points have not been changed in the last 12 months.				
4.7	The Licensee must ensure that alternative water supply is provided to groundwater users that are impacted on.	Noted		No complaints indicating that the mine was required to supply water to external users was recorded.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
4.8	Water quality testing to be performed on the Pollution Control Dams on a quarterly basis in order to determine the risks to the receiving environment. The data gathered in the investigation must be reported annually to the Provincial Head. If any concentrations levels as specified above are exceeded, the Licensee must institute an investigation to determine the cause of poor water quality. Furthermore, the Licensee must undertake geochemical assessment on Coal Slurry.	Compliant	4th Quarter Water Quality Report- GG.DWS.006.2023 - 2022 fourth quarter water quality report submitted 10 March 2023 Pollution Source Term characterisation to support Groundwater model update at Grootegeluk - Preliminary Report, 1786935-322974-1, dated May 2020, compiled by Golder Associates Africa (Pty) Ltd.	Water quality testing is performed on the Pollution Control Dams on a monthly basis & the analysis results is reported quarterly as part of the Waste Quality Report. The source term characterization conducted during 2020 included the update of the Exxaro existing numerical groundwater flow and mass transport model to reflect the potential effects on the local groundwater from all the identifiable contamination sources within the overall mine site, particularly related to the mining residue deposits as well as the processing plant and associated infrastructure areas.				
4.9	Water quality testing must be conducted monthly on the wastewater stream from the water return dam when returned back to the mine for use as process water and will then form part of the updated Monitoring plan for Grootegeluk.	Compliant	4th Quarter Water Quality Report- GG.DWS.006.2023 - 2022 fourth quarter water quality report submitted 10 March 2023. Visual inspection of water monitoring programme under reference OPI/GG/H03.103 dated 13 May 21 (updated required on 13 May 24).	The water quality testing was conducted monthly on the wastewater stream from the water return dam when returned to the mine for use as process water. This return water dam also forms part of the updated Monitoring plan for Grootegeluk.				
4.10	The Licensee shall participate in any initiative such as Direct Estimation of Ecological Effect Potential (DEEEP) to determine the toxicity of complex tailings waste discharges. Both acute and chronic toxicity must be addressed and at least three taxonomic groups must be present when toxicity tests are performed.	Compliant	4th Quarter Water Quality Report- GG.DWS.006.2023 - 2022 fourth quarter water quality report submitted 10 March 2023-Annexure 2 Visual inspection of Toxicology report AQS-GGM-A-23_TOX compiled by Biotox Lab dated March 2023 for both acute and chronic toxicity testing.	The mine is conducting the required DEEEP analysis which includes, acute and chronic toxicity of at least three taxonomic groups.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
4.11	The methods for the measurement of specific substances and parameters in any wastewater must be carried out by a laboratory that has been accredited under the South African National Accreditation System (SANAS) in terms of SASS Code 0259 for that method.	Compliant	Schedule of Accreditation for Aquatico Laboratories (Pty) Ltd., Facility T0685, expiring 24 March 2025). Visual inspection of Schedule of Accreditation for Waterlab (Pty) Ltd., Facility T0391, expiring 22 September 2023).	The analysis is carried out in accordance with methods prescribed by SANAS Accredited Testing Laboratory (No T0685 for Aquatico and T0391 for Waterlab).				
4.12	The methods of analysis shall not be changed without prior notification to and written approval by the Minister and shall then be included into the Monitoring plan for Grootegeluk.	Compliant	Schedule of Accreditation for Aquatico Laboratories (Pty) Ltd., Facility T0685, expiring 24 March 2025). Visual inspection of Schedule of Accreditation for Waterlab (Pty) Ltd., Facility T0391, expiring 22 September 2023).	The methods of analysis were not changed.				
5	**Incident Monitoring**							
5.1	In the event that the emergency incident results in pollution of water resource, the Licensee must monitor the water quality and the incident report must be submitted to the Provincial Head within fourteen (14) days.	Compliant	Excel GG 2022 Environmental Incidents Report Sheet.	No incidents since the last audit in May 2022				
6	**Water Resource Protection**							
6.1	The impact of the activities of the mine on groundwater shall not exceed the water quality limits as indicated in Table 5 and will form part of the	Non-compliant	Auditor viewed: 2021 Annual Ground Water Report, page 22, Point 5 Exceedance report.	The annual Ground Water Report for 2021 was availible during the audit the 2022 Report was still outstanding although monitoring was done and data was availible.	Grootegeluk has appointed WSP to update the Groundwater Flow Transport model on an annual basis so as to better understand the current exceedances experienced.	F. Swanepoel	A Zide	30-Nov-23

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	updated Monitoring plan for Grootegeluk.		EC, Na. Ca, Cl, Mg and SO4 was exceeded at various monitoring boreholes across the site. Water monitoring programme under reference OPI/GG/H03.103 dated 13 May 21 (updated required on 13 May 24).	It was found that some variables such as EC, Na. Ca, Cl,Mg and SO4 exceeded the water quality limits specified in Table 5 of the IWUL The mine is also advised to review its ground water strategy and to implement the strategy over the long-term.	The mine will review the Grootegeluk ground water strategy and put actions in place to implement the strategy over the long-term.	F. Swanepoel & R Reyneke	A Zide	31-Dec-23
6.2	The licensee shall ensure that dirty storm water is not released into the natural environment and must be contained in a dirty water containment facility.	N/A	Repeat Condition 2.3 above					
7	**Incident Reporting**							
7.1	The Licensee shall update the water balance annually and calculate the loads of waste emanating from the activities. The Licensee shall determine the contribution of their activities to the mass balance for the water resource and must furthermore co-operate with other water users in the catchment to determine the mass balance for the water resource reserve compliance point.	Compliant	Water and Salt balance report for Grootegeluk Mine, dated October 2022. Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated 2021 - Submitted 21 October 2022	Water Balance model was finalized in October 2022, the information is currently being updated annually which includes the salt-balance. Water Balance is updated annually and submitted with IWWMP.				
7.2	The Licensee shall submit the results of analysis for the monitoring requirements to the Provincial Head on a quarterly basis under Reference number 27/2/2/A941/2/9, Monitoring plan for Grootegeluk.	Compliant	4th Quarter Water Quality Report- GG.DWS.006.2023 - 2022 fourth quarter water quality report submitted 10 March 2023.	The results of analysis for the monitoring requirements have been submitted to the DWS under reference number 27/2/2/A942/4/4.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
7.3	The Licensee shall submit the nature and the quality of the waste water disposed into the Pollution Control dams within the Monitoring plan for Grootegeluk.	Compliant	4th Quarter Water Quality Report- GG.DWS.006.2023 - 2022 fourth quarter water quality report submitted 10 March 2023.	Water quality testing was conducted monthly on surface water dams such as the PCD.				
8	**Stormwater Management**							
8.1	Storm water leaving the Licensee's premises shall in no way be contaminated by any substance, whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises.	Non-compliant	Storm Water Regional Master Plan, P13050 Grootegeluk Mine dated April 2015. Water and Salt balance report for Grootegeluk Mine, dated October 2020. Visual inspection of water monitoring programme under reference OPI/GG/H03.103 dated 8 October 2018 (updated required on 8 October 2021). Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated 2020	**The storm water infrastructure is in place however the following non-compliances were observed:** The area at the north of the current discard dump area lacks measures to contain dirty water from entering the surrounding environment on the northern side of the Dump 4 area. (This will be addressed with rehabilitation; however, the mine is still waiting for the approval of its EA).	Internal ROD submitted to the DMRE, indicating that the DWS does not support the mines proposed cover design and thus also not the issuance of the Waste Licnese was received - 28 March 2022. The mine is in the process of establishing a way forward so as to determine the next steps. Based on this, a new plan will be established with new due dates that will be shared with the Department. Only once the Authorization is in place can the project approval process continue to Bankable Feasibility & the Implementation stage. (12 Months).	F Swanepoel	A Zide	TBC
				Although licenced the Dam North of Dump 6 is unlined and receives dirty run-off from the Central workshop areas. The mine hope to address this with the GGC-000826 GGC Water Management Optimization BFS project.	The project will focus on motivating the proposed solution form the PFS, confirming the dimensions and size of infrastructure required including the Buffer dam facility that is to be constructed on the footprint area of the old "buffer dam" and "low laying area North of Dump 6". Licensing of the new facility will also be part of this BFS.	T. Mokwena	N. Mntambo	Approval of BFS- 31-Dec-24
				Storm water management around the Diesel Workshop area and HDV Wash bay remains a concern. Project for addressing this is underway however implementation is still required	The project will consider: 1) the long-term drainage of the storm water to the low laying areas for both the Diesel & HDV Workshop areas. 2) the upgrading the on ramp to the Diesel workshops to reflect the design used at the New HDV. 3) Putting a permanent ramp at the HDV wash bay to prevent water running into the environment.	M. Ntshangase	N. Mntambo	31-Dec-23.

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
				The coal trucks parking at the access gate is causing carbonaceous material spills that ends up in the clean storm water area. Which is a clean area.	Although the Plant Road sweeper is currently cleaning the road truck parking area weekly, due to the large amount of trucks the clean dirty water separation in this area remains a concern. This area has thus been added GGC-000825 Dirty and Clean Water separation project BFS project.	T. Mokwena	N. Mntambo	31-Dec-24
8.2	Increase runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the stream.	N/A		It should be noted that there are no steams occurring on GG. The closes river is the Sandloop spruit - 5km away from the mine				
8.3	Storm-water shall be diverted from the mine complex site and roads and shall be managed in such a manner as to disperse runoff and concentrating the storm-water flow.	Compliant	This was confirmed on the Visual inspection of mining area.	It was found that storm water is contained on site and water from the plant complex is diverted into the N1 channel system to the pit for reuse.				
8.4	Where necessary works must be constructed to attenuate the velocity of any storm-water discharge and to protect the banks of the affected watercourses.	N/A		This condition was noted since no affected watercourse exists on Grootegeluk. No formalised storm water discharge occurs and there was no need for the construction of structures to attenuate the velocity of storm water discharge within the mining area. It is recommended that this condition be amended since no affected watercourses occur on the Grootegeluk mining area.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
8.5	Storm-water control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.	Compliant	JJ Trading as Debar Cleaning is responsible for cleaning the storm water within Grootegeluk mining areas.	The storm water control works were maintained and operated sufficiently through a channel system within the Grootegeluk mining area. In general, there is several plant channels which require maintenance due to excess silt or vegetation growth within the channel.				
8.6	All storm-water that would naturally run across the pollution areas shall be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood.	Compliant	Map Exxaro Storm Water System design for GG1-6 Plant area layout dated 10 December 2013. map Exxaro Storm Water System design for Clean water area around the east of stockpiles area layout dated 4 December 2013. Visual inspection of Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) 2021	The maps and reports have been compiled to indicate the design of the storm water channels and drains. Design reports for the channels in the plant were available. Only the main channels can contain a 1:50 year flood. The remaining channels were designed for a 1:25 year flood but can contain a 1:50 flood if the road ways are included in the calculation as was the design intent. Thus, the system can contain a 1:50 year flood as per the requirements of GN R. 704.				
8.7	The polluted storm water system shall be designed and implemented to provide suitable routing and pumping capacity for contaminated storm water from the individual facilities to the respective storm water dams in accordance with the design specifications as contained in the Integrated Water Use Licence Application report.	Compliant	Routes and Pumps are in place as part of the plant reticulation system See Mine Reticulation Plan.	The polluted storm water system was designed and implemented to provide suitable routing and pumping capacity.				
9	**Plant and Conveyances**							
9.1	Pollution caused by spills from the conveyances must be prevented through proper maintenance and effective protective measures.	Compliant	During the site visit no spills from the conveyance was observed.	GG conveyances are continuously cleaned and spills addressed by the cleaning contractor.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
9.2	All reagent storage tanks and reaction units must be supplied with a bunded area built to the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system must be maintained in a state of good repair and standby pumps must be provided.	Compliant	Visual Inspection of Workshop bunded areas & Hazardous Waste storage area 	The observed reagent storage tanks, and reaction units were within bunded areas. Standby pumps are available for areas to be maintained to return the spilled material back into the system.				
9.3	Any hazardous substances must be handled according to the relevant legislation relating to the transport, storage and use of the substance.	Compliant	Safe Disposal Certificate for EnviroServ Waste Management (Pty) Ltd., is available on site Visual inspection of Waste transporter Oilkol (Pty) Ltd., delivery note 4414254 dated 28 April 2022 for the removal of old oil.	All hazardous substances observed were handled according to the relevant legislation.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
10	**Access Control**							
10.1	Strict access procedures must be followed in order to gain access to the properties.	Compliant	SPI GG A01.001 Access control GGC Rev 6	Access to site is strictly controlled.				
10.2	Access to the pollution control dams, coal slurry discard dumps, storm water dam and return water dam must be limited to authorised employees of the Licensee and their Contractors only.	Compliant	Inspection of Exxaro main entrance access gate.	The is strict access control procedures were implemented to gain access to the properties.				
10.3	Notices prohibiting unauthorised persons from entering controlled access areas as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.	Compliant	Inspection of the fenced of PCD areas & Notice boards	All PCD'd have been suitably fenced and the new notice boards have been put in place. It was observed that the attenuation dams have not been fenced and that signage is also required.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	.							
11	**Contingencies**							
11.1	Accurate and up-to-date records shall be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records shall be available for inspection by the Provincial Head upon request. Such malfunctions shall be tabulated under the following headings with a full explanation of all the contributory circumstances: 11.1.1 operating errors 11.1.2 mechanical failures (including design, installation or maintenance) 11.1.3 environmental factors (e.g. flood) 11.1.4 loss of supply services (e.g. power failure) and 11.1.5 Other causes	Compliant	SAP system and Engineering services job cards system 2022 was reviewed and shows that malfunctions and servicing of infrastructure is approved. Auditor had site of job cards for maintenance, replacement of valves and pumps addressing leaks.	Acceptable construction, maintenance and operational practices are followed through the SAP system to ensure the consistent, effective and safe performance of the groundwater removal system.				
11.2	The Licensee must, within 24 hours, notify the Provincial Head of the occurrence or potential occurrence of any	Compliant	Excel GG 2022 Environmental Incidents Report Sheet.	No reportable incidents since the last Audit in May 2022.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	incident which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or which is a contravention of the licence conditions.							
11.3	The Licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the satisfaction of the Provincial Head of measures taken to:	Compliant	Excel GG 2022 Environmental Incidents Report Sheet.	No reportable incidents since the last Audit in May 2022.				
	11.3.1 correct the impacts resulting from the incident							
	11.3.2 prevent the incident from causing any further impacts and							
	11.3.3 prevent a recurrence of similar incidents.							
12	**Integrated Water and Waste Management**							
12.1	The licensee must update an Integrated Water and Waste Management Plan (IWWMP), which must together with the updated Water Balance be submitted to the Provincial Head for approval within one (1) year from the date of issuance of this licence.	Compliant	Submissions of the annual IWWMP annual update which includes the Water balance from 2011 to 2022.	The IWWMP and Water Balance are updated annually				
12.2	The IWWMP and water balance shall thereafter be updated and submitted to the Provincial Head for approval, annually.	Compliant	Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) 2021. Proof of submission to the Provincial Head dated 21	IWWMP for 2021 and water balance for 2022 were compiled and were submitted to the Department.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
			October 2022. Visual inspection of Water and Salt balance report for Grootegeluk Mine, dated 21 October 2022.					
12.3	The Licensee must at least 180 days prior to the intend closure of any facility or any portion thereof, notify the Provincial Head of such intention and submit any final amendments to the IWWMP and RSIP Rehabilitation Strategy and Implementation Programme (RSIP) as well as a final Closure Plan, for approval.	Noted		Will comply once authorization for the rehab of Dump 4&5 is in place				
12.4	The Licensee shall make full financial provision for all investigations, designs, constructions, operations and maintenance for a water treatment plant should it become a requirement as a long-term water management strategy.	Compliant	Closure Cost Spreadsheet GG – End Dec 2022	Water Liability form part of the Financial Closure funding and is updated annually. R25.1 million is provides for (2022) -GG Closure liability review.				
12.5	The Licensee shall at all times implement measures that prevent and minimize the acid mine drainage generation.	Compliant	GG AMD Strategy compiled 2020	AMD Strategy is in place and was submitted to the Department in 2021				
12.6	The Licensee shall ensure that the negative water balance is achieved during the operation of the mine and after the closure of the mine.	Compliant	Water & Salt Balance report, Grootegeluk Mine, Exxaro Resources dated October 2022	The water Balance do show a 0 balance on average except for the summer months that have excessive rain.				
13	**Site Specific Conditions**							
13.1	13.1.1 Major ions (Ca, Mg, Na, 504, N03, Cl, F). 13.1.2 pH. 13.1.3 Electrical Conductivity (EC). 13.1.4 Total Alkalinity	Compliant Inspection of the 2021 Annual Quarterly Report	All listed parameters were included into the reporting to the Provincial Head. All water sampling is captured in the EQUIS					

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	These should be recorded on a data sheet. It is proposed that the data should be entered into an appropriate computer database and reported to the Department of Water and Sanitation as part of the Quarterly Quality Report for Grootegeluk.	compiled by Aquatico (Report Number: GGE/AR1/2021/AB) & Quarterly Reports	system and available on the dashboard.					
13.2	For the Cyclic Ponds facility quarterly groundwater sampling must be done to establish database of plume movement trends, to aid eventual mine closure as part of the Monitoring plan for Grootegeluk	Compliant	Tox Spreadsheet - Cyclic ponds 2022	The boreholes have been identified to establish a database for the plume movement for the cycling ponds facility. The Cyclic Ponds facility information (boreholes WBR3, WBR4 WBR24 and WBR49) were included into the quarterly report to the DWS. The plume movement trends around the Cyclic Ponds facility were determined up to the year 2051.				
13.3	The Licensee must ensure in advance that alternative water supply for external water users is provided to these users should groundwater resources be impacted.	Compliant	Excel GG 2022 & 2023 Environmental Incidents Report Sheet.	The mines complaints register is in place (Part of the Incident register) to capture any complaints, where after an investigation is conducted to make sure that the complaint is valid. The complaints register forms part of the incident list at Exxaro. No complaints indicating that the mine was required to supply water to external users was recorded.				
13.4	A proper ground and surface water monitoring network should be established to monitor the quality and quantity of groundwater as per the comprehensive Monitoring Plan for Grootegeluk ensuring that water used by other water users are safeguarded in accordance to chapter 14 of the National Water Act, 1998.	Compliant	Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) – 2021	The ground and surface water monitoring network were compiled to monitor the quality and quantity of groundwater as per the WUL and to ensure that water used by other water users are safeguarded in accordance with chapter 14 of the National Water Act, 1998.				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
13.5	The cyclic ponds return water dam must be designed in such a manner that any spillage can be contained and reclaimed within surrounding environment, a plan must be in place to stop overflowing in a dam in case of rainy seasons	Compliant	Visual inspection of the Cyclic ponds RWD emergency spillage channel in the audit document	The cyclic ponds consist of two facilities of which one facility is operated empty always to ensure that no spillage occur. Emergency spillage infrastructure has been constructed and approved by the DWS to flow into the surrounding environment, however barriers do occur to prevent any spillages				
13.6	The Licensee shall ensure that dirty storm water is not released into a natural environment and must be contained on a dirty water containment facility.	N/A	Repeat Condition 6.2 above	The storm water infrastructure is in place however the following non-compliance were observed. - The area at the north of the current discard dump area lacks measures to contain dirty water from entering the surrounding environment on the northern side of the Dump 4 area. (This will be addressed with rehabilitation; however, the mine is still waiting for the approval of its EA). - The re-construction of the inflow at the cement dam at the slimes dam facility where the cement barrier has been damaged has been approved as a capital project. - There are still areas where silt for wash bays is stored on open areas. - Although licenced the Dam North of Dump 6 is unlined and received dirty run-off from the Diesel workshop area. (This will be addressed with the Buffer Dam Capital project that is scheduled for implementation in 2025, BFS recently approved.)				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
				The coal trucks parking at the access gate is causing carbonaceous material spills that ends up in the clean storm water area. Which is a clean area.				
13.7	The Licensee shall ensure that Pollution Control Dam, Water return dam and Cyclic Ponds System are lined with the HDPE geomembrane liner of 1,5mm minimum thickness to capture all dirty and seepage water emanating from the slimes dam area	Compliant	Inspection of as-built drawings from SRK under drawing reference G0158099.07 dated 23 April 2014 for the cyclic pond liner. Visual inspection of liner placed at Cyclic ponds system (2014).	The mines PCD,'s RWD and Cyclic Ponds System is lined with the HDPE geomembrane liner of 1.5 mm minimum thickness to capture all dirty and seepage water emanating from the slimes dam area.				
13.8	The Licensee is authorized to construct a silt trap of height 1.3 m, surface area of 122 m^3 and capacity of 242 m^3.	Noted		This silt trap at the Char Plant 2 area has not been constructed yet and therefore this condition is noted.				
13.9	The Licensee is authorised to erect a concrete lined tank with surface are 138 m2• a wall height of 2.83 m and capacity to hold 112 m^3 with reserve capacity to accommodate potential short to medium term increases as indicated in the report. The tank shall only be used for storage of domestic waste water referred to in the Report.	Compliant	Visual inspection of Kumba Resources Sintel Char Plan Sewer Ratification Sewer Pump sump and Concrete layout & Details under drawing number G0153522 dated 18 January 2007.	This concrete lined tank is the sewage water sump. The surface area of the facility is in line with the licence as indicated on the design drawings. This tank is only used for storage of domestic wastewater referred to in the Report.				
13.10	The revised design for the proposed lining of the new product stockpiles / yards as presented in May 2015 and subsequent meetings by BVI Consulting engineers is accepted on condition that a Construction Quality Assurance (CQA) plan be implemented and the results thereof confirm construction in accordance with the approved design. This confirmation is to be forwarded to the	Compliant	Professional Engineer confirmation letter & Integrity testing certificates are availible and was viewed.	All newly constructed stockpile areas are lined with the appropriate class C liner. The confirmation that the CQA plan was implemented was submitted – 11 Feb 2022. DWS Acknowledged 14 Feb 2022				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	department in writing prior to the disposal of waste.							
13.11	Appropriate ground water monitoring needs to be designed to monitor any adverse impacts on groundwater resources.	Compliant	Grootegeluk Complex, Integrated Water and Waste Management Plan (IWWMP) dated October 2022 Water monitoring programme under reference OPI/GG/H03.103 dated 13 May 21. Visual inspection of EQUIS system dashboard.	Grootegeluk has a ground monitoring network that was established to monitor the quality and quantity of groundwater. Grootegeluk is capturing all information on the EQUIS system.				
13.12	Ground water level trends and ground water quality needs to be monitored on a bi-annual basis and form part of the Monitoring Plan for Grootegeluk.	Compliant	EQUIS dashboard where the water level of boreholes is captured	The water level monitoring forms part of the monitoring programme and is part of the EQUIS programme.				
13.13	The Licensee shall maintain and manage the drainage systems of the existing stockpiles as per the design intent. Monitoring of the SO4 plume in terms of migration and concentrations during operations and post closure should continue.	Compliant	Pollution Source Term characterisation to support Groundwater model update at Grootegeluk - Preliminary Report, 1786935-322974-1, dated May 2020, compiled by Golder Associates Africa (Pty) Ltd. Grootegeluk Mine dump 4 and 5 waste facility: Contaminant Transport Modelling, report 19-0141 dated August 2019, compiled by GCS (Pty) Ltd. Water monitoring programme under reference OPI/GG/H03.103 dated 14 May 21	The monitoring of the sulphate plume is part of the ground water model. Drainage systems of the existing stockpiles are managed, and no change occurred within the audit period. The Ground Water monitoring results supports the model. Ground Water model review planned for 2023				
13.13.1	Should the pollution be detected in the existing stockyards, the Licensee shall re-line the existing stockyard	Noted		It is noted that no condition 13.19 exists within this WUL. This condition is noted. It is recommended to update the				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	and conduct monitoring as indicated in condition 13.19.			condition reference with an amendment process.				
APPENDIX V	**Section 21 (j) of the Act: Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people**							
1	**Removal of water found underground**							
1.1	The Licensee is authorized to remove or dewater a maximum quantity of water on the properties and with a purpose as indicated in **Table 6.**	Compliant	Annual Abstraction report submission to the Provincial; Head under reference GG.DWS.003.2022 -. submitted 23 Jan 2023. (Jan – Dec 2022)	The Dewatering volume from the pit Dewatering end Dec 2021 - 1,606 million m3. which are in line with the abstraction volumes allowed.				
1.2	The quantity of the water authorised to be removed and disposed of into the storage dams and process plants in terms of this licence may not be exceeded without prior authorisation by the Minister.	Compliant	Grootegeluk Coal Mine, Abstraction Report Jan-Jun 2022 Annexure 1 - prepared by S Mashele.	The current as dewatering volumes adheres to the quantities in the licence.				
1.3	The Licensee shall provide any water user whose water supply is impacted by the water use with potable water.	Compliant	Excel GG 2022 & 2023 Environmental Incidents Report Sheet. Visual inspection of Grootegeluk Standard Practice Instruction SHEC Related, SPI/GG/H01.003 dated 11 December 2018 with revision date of 11 December 2021.	A complaints register is in place to capture any complaints where after an investigation is conducted to make sure that the complaint is valid. The complaints register forms part of the incident list at Exxaro. No complaint requiring the mine to supply water to external users was recorded.				
1.4	The quantity of water removed from underground must be metered and recorded on a daily basis.	Compliant	DAILY READING 2022	Currently the water removed from underground is minimal, the in - and out flow into of process water into the pit is however metered and recorded daily, from where the quantity of groundwater is calculated and recorded.				
1.5	The groundwater levels surrounding the Pit area must be monitored every six (6)	Compliant	EQUIS dashboard where the water level of	At the time of the audit, it was found that groundwater levels				

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	months (once in the beginning of the dry season and once in the beginning of the wet season).		boreholes are captures. Nov 2021 Levels	around the pit area are monitored every six (6) months				
1.6	Suitable measuring structures must be installed, to measure the flows entering and leaving the delivery lines.	Compliant	Visual inspection of: N1 Calibration Certificate: 001/04/2022.	N1 Meter measuring inflow to the pit was replaced in Dec 2022. Calibration / Verification was done 7 Apr 2022				
1.7	The methods for the measurement of specific substances and parameters in any wastewater must be carried out by a laboratory that has been accredited under the South African National Accreditation System (SANAS) in terms of SASS Code 0259 for that method.	Compliant	Schedule of Accreditation for Aquatico Laboratories (Pty) Ltd., Facility T0685, expiring 24 March 2025).	The analysis is carried out in accordance with methods prescribed by SANAS Accredited Testing Laboratory (No T0685 for Aquatico).				
1.8	The methods of analysis, as discussed within the Monitoring Plan for Grootegeluk, shall not be changed without prior notification to the Licensee and written approval by the Minister or his/her delegated nominee.	Compliant	Accreditation for Aquatico Laboratories (Pty) Ltd., Facility T0685 where methods of sampling are being described (expiring 24 March 2025).	The method of analysis has not changed and were included into the Monitoring Plan for Grootegeluk.				
1.9	The Provincial Head must be informed of any incident that may lead to groundwater being disposed of contrary to the provisions of this licence, by submitting a report containing the following information:	Compliant	Excel GG 2022 & 2023 Environmental Incidents Report Sheet.	No incidents took place which may lead to groundwater disposed of contrary to the provisions of the licence. Where necessary, the relevant information is captured on the SAP Job card system.				
	1.9.1 Nature of the incident (e.g. operating malfunctions, mechanical failures, environmental factors, loss of supply services, etc.);							
	1.9.2 Actions taken to rectify the situation and to prevent pollution or any other damage to the environment; and							

Reference	Conditions	Compliant / Non-Compliant	Proof of Compliance	Comments and plan of action	Agreed to Management Response	Responsible Person	Accountable Person	Action Date
	1.9.3 Measures to be taken to prevent re-occurrence of any similar incident.							
1.10	The Licensee must follow acceptable construction, maintenance and operational practices to ensure the consistent, effective and safe performance of the groundwater removal system.	Compliant	SAP system and Engineering services job cards system 2022 was reviewed and shows that malfunctions and servicing of infrastructure is approved. Auditor had site of job cards for maintenance, replacement of valves and pumps addressing leaks.	Acceptable construction, maintenance and operational practices are followed through the SAP system to ensure the consistent, effective and safe performance of the groundwater removal system.				
1.11	Reasonable measures must be taken to provide for mechanical, electrical or operational failures and malfunctions of the underground water removal system.	Compliant	SAP system and Engineering services job cards system 2022 was reviewed and shows that malfunctions and servicing of infrastructure is approved. Auditor had site of job cards for maintenance, replacement of valves and pumps addressing leaks.	Grootegeluk captures all the failures and malfunctions of the underground water removal system were captured in the SAP system. Reasonable measures are taken to ensure that mechanical, electrical or operational personnel are available and on standby at all times.				

I, **Risimati Chauke** (name and surname), , as the **Acting General Manager** of **Exxaro Coal (Pty) Ltd. - Grootegeluk**, confirm that I have read and understand the contents of this audit report.

Signed at …**Grootegeluk, Lephalale** … (place), on 17/07/23 (date)

Signed by:Risimati Chauke
Signed at:2023-07-30 21:28:18 +02:00
Reason:I approve this document Risimati

Acting General Manager

Signed by:Ayanda Zide
Signed at:2023-07-17 13:51:25 +02:00
Reason:I approve this document Ayanda

Ayanda Zide

Manager Sustainability (Witness)